Town of Moraga	Agenda Item
Resolutions, Ordinances and Requests for Action	10. B.

Meeting Date: September 14, 2022

TOWN OF MORAGA **STAFF REPORT**

To: **Honorable Mayor and Councilmembers**

From: **Afshan Hamid, Planning Director**
Barry Miller, Barry Miller Consulting
Ellen Poling, Fehr and Peers

Subject: **Receive Report on New Vehicle Miles Traveled (VMT) Standards for Evaluating Transportation Impacts and Provide Direction to Staff**

Request

Receive an informational report on new Vehicle Miles Traveled (VMT) State requirements for the evaluation of transportation impacts under the California Environmental Quality Act (CEQA). These requirements were established by Senate Bill 743 and became effective statewide on July 1, 2020. As part of the Comprehensive Advanced Planning Initiative, the Town of Moraga will be adopting local standards that are consistent with the State requirements while responding to local conditions. The Town Council is asked to provide direction to staff regarding the local standards.

Background

The Town is in the process of undertaking a Comprehensive Advanced Planning Initiative (Initiative), including an update of the Moraga Housing Element, zoning amendments to meet State requirements, application of zoning and General Plan designations in the Bollinger Canyon Study Area, and an Environmental Impact Report to comply with the California Environmental Quality Act (CEQA). The Initiative includes focused updates to the Moraga General Plan to maintain internal consistency and respond to State laws affecting transportation and public safety. This report addresses one of those laws---Senate Bill 743 (SB 743), which affects transportation.

The intent and purpose of Senate Bill 743 (SB 743) is to tie transportation planning with land use and to balance congestion management goals with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions (GHG). SB 743 aligns transportation planning with the GHG reduction programs being implemented by the California Air Resources Board (CARB) and the State Office of Planning and Research (OPR). The underlying objective is to streamline transit-oriented development, infill housing, centrally located offices, local-

serving retail projects, transit projects, bike projects, pedestrian enhancements, livability enhancements, and street safety improvements (road diets and street calming). Applying "vehicle miles traveled" (VMT) standards is intended to support walkable neighborhoods with access to everyday amenities.

SB 743 requires all cities, towns, and counties to use a particular methodology when evaluating and mitigating the transportation impacts of projects subject to CEQA. The law applies to environmental review for development projects, transportation projects, long-range plans, and other projects with potentially significant environmental impacts.

Historically, cities have used "Level of Service" (LOS) to measure the impacts of new projects on the transportation system. LOS applies a letter grade (from "A" to "F") to define the acceptable level of delay at intersections or along road segments during the peak hours. When an intersection or road segment falls below the adopted standard, physical improvements such as turning lanes or signal adjustments may be programmed to restore traffic conditions. LOS standards for intersections and road segments are included in the Growth Management Element of the Moraga General Plan (adopted in 2002) and have been used in the environmental review of proposed development projects since the 1980s. LOS was also the official method of analysis prescribed by CEQA until changes were made at the State level in 2013.

Although SB 743 was signed nine years ago, it did not become effective until 2020. This allowed transportation planning agencies to interpret and apply the requirements at the local level. Since July 1, 2020 the only acceptable way of determining the significance of transportation impact in CEQA environmental review documents are the methods listed in CEQA Guidelines Section 15064.3 along with CEQA Guidelines Appendix G. The new law means that transportation impacts must be measured by the change in VMT.

The law requires a shift in traffic analysis methodology from LOS to VMT. VMT is a measurement of the number of miles traveled by all vehicles in a given geographic area over a given period of time. It is often expressed on a per capita basis. The goal of using VMT is to reduce the number of miles driven rather than to increase the speed of travel. The intent is to reduce the vehicle-related GHG emissions that contribute to climate change. Shifting to VMT means that projects are evaluated based on how much driving they induce rather than how much congestion they generate. VMT streamlines projects that are near transit, projects where more trips can be made on foot or a bicycle, and projects that reduce the distance one must travel to get to work, school, or services.

In simple terms, VMT requires calculating the origin and destination of trips to and from a project. This can be estimated using a travel demand model. Unlike LOS, VMT does not assess a project's impacts on a local intersection or road/highway segment. Rather, it assesses the effects of the project on regional traffic and use of transit and non-motorized travel.

The differences between LOS and VMT are summarized in Table 1 below.

Table 1: Comparison of LOS and VMT

	Level of Service (LOS)	Vehicle Miles Traveled (VMT)
Use	Was the common CEQA threshold from 1980s until 2020	As of July 1, 2020—now the required CEQA threshold
Purpose	Reduce congestion	Reduce greenhouse gas emissions
Scale	Local	Regional
Measures	Travel Delay during peak hour	Distance driven in an average day
Metric	Letter Grade (A through F)	Miles per capita
Mitigation	Increase road capacity	Reduce number and length of car trips

Contra Costa Transportation Authority's (CCTA) is the County's designated Congestion Management Agency and is responsible for transportation planning and project development at the regional level. CCTA has developed a new travel demand model (the "countywide model") for Contra Costa County, which is already in use by many of the county's cities. The CCTA travel demand model uses a number of different transportation engineering methods to estimate VMT. These estimates are validated based on specific community conditions, as well as assumptions regarding future land use and growth. Because it is focused on travel distance, VMT tends to increase as density decreases and travel becomes more reliant on the use of motor vehicles. Conversely, infill development in locations such as the Moraga Center and Rheem Center tends to reduce per capita VMT, since it is less auto dependent and accommodates shorter average trip lengths.

Prior to the COVID-19 pandemic, the average VMT per capita in the Bay Area was about 20 to 25 miles per day[1]. New development projects near BART stations and in higher density walkable neighborhoods with transit tend to have a per capita VMT rate that is below the regional average. New low-density residential projects, suburban office parks, and other auto-dependent uses tend to have a per capita VMT rate that is above the regional average.

Moraga's daily VMT is higher than the Bay Area average, since the community has minimal transit, is relatively low density, has a large number of residents commuting out of the town for work, and has a college with many students and faculty commuting in from other communities. Most of Moraga's future development will likely have lower VMT than existing development in the Town, as it will be denser and more walkable. However, the Town has limited mass transit and will likely remain car-dependent, meaning that VMT in general may remain above the regional average.

One important distinction is that SB 743 only applies to CEQA. The new requirements do not preclude cities and counties from continuing to use LOS for planning purposes. In other words, the Town of Moraga may still include adopted LOS standards in its General Plan Growth Management Element and may use these standards for planning improvements to the roadway system. However, during CEQA analysis, VMT will be the applied tool. Impacts to LOS can also be used in connection with the collection of

[1] Sources: MTC Vital Signs dashboard, DEIR for Plan Bay Area 2050

transportation impact fees, provided these fees are linked to planned transportation improvements listed in the General Plan.

Another important distinction is that SB 743 does not preclude the Town from requiring traffic studies to be prepared when new development projects are proposed. Even projects that may be exempt from VMT analysis may still be required to evaluate their potential traffic impacts. These traffic studies may be simplified, however, and focused on the localized impacts of an individual project rather than regional or systemwide impacts. Local traffic analysis would focus on issues such as ingress and egress, traffic safety, and pedestrian and bicycle access.

Discussion

The Town's transportation planning consultant, Fehr and Peers, developed a technical Memorandum (Memo) on the new VMT methodology in December 2021. This was presented to the Planning Commission in January 2022. The Fehr and Peers Memorandum is included with this report as Attachment A. The Town Council will be asked to provide feedback on several key questions raised in this Memorandum. This feedback will be used to craft a new General Plan Circulation Element policy, as well as guidance that will be used in future environmental review.

Much of the direction provided by the Memo reflects guidance from CCTA based upon the methodology for VMT they created for member jurisdictions, including Moraga. This includes a process for evaluating the VMT impacts of future projects. CCTA's guidance gives local governments discretion on how to implement certain aspects of the new VMT requirements.

Fehr and Peers Technical Memorandum (Memo)

The Memo begins with an overview of SB 743 and the California Office of Planning and Research's (OPR) Technical Advisory for evaluating VMT impacts. The Technical Advisory suggests that residential projects and employment-generating projects (office, etc.) would be found to have "less than significant" impacts if their VMT per capita was no more than 85 percent of the Bay Area average.

The "85 percent" benchmark has become a standard that has been widely adopted by transportation agencies and communities across the state, although it is sometimes applied at the county or city level, rather than the regional average. In a community such as Moraga, a higher-density project that is connected by sidewalks and bike paths to shops, services, schools, and workplaces, is much more likely to meet this 85 percent standard than a low-density project on the edge of the Town many miles away from services.

The VMT standard for retail projects, per the guidance from OPR and CCTA, relates to whether a project would increase VMT in the region. A retail project would generally be

expected to reduce regional VMT if it provides goods and services, such as a convenience store or bike shop, that are not currently available in the Town, since residents will not have to drive elsewhere for those goods and services. The OPR Technical Advisory document suggests that retail uses of 50,000 square feet or less, such as a grocery store, may be assumed to be local-serving and thus have a less than significant impact on VMT (see Attachment A, page 3). Similarly, multi-family housing located in the Moraga Center and Rheem Center areas would likely have a VMT that is lower than the Town's per capita average, since it may result in shorter commutes for the local workforce, and shorter trip lengths for shopping and services.

The CCTA travel demand model has been used to identify the characteristics of "low VMT" and "high VMT" projects. This has enabled CCTA to develop "screening criteria" that allow certain types of projects to be presumed to have a less than significant impact with respect to VMT. For example, CCTA recommends that projects with 20 or fewer housing units and projects with less than 10,000 square feet of non-residential space be screened out, as the model found their impact on VMT was less than significant. Projects may also be screened out if they are in "low VMT areas" (for instance, around a transit station) or in designated "transit priority areas." The Council could use the CCTA criteria, or it could consider additional screening criteria - such as those described in the previous paragraph for multi-family housing in the two commercial centers.

For projects that are <u>not</u> screened out, the Fehr and Peers Technical Memo identifies requirements for traffic modeling and thresholds to determine whether a project has a significant impact on the environment under CEQA. Different thresholds apply to residential projects, employment projects, region-serving projects, mixed use projects (combining housing and commercial, for example), and other project types.

For projects found to have a potentially significant impact, a menu of mitigation measures may be applied. These measures may include redesigning the project so it is more walkable and less car-dependent or implementing "trip reduction" measures such as ridesharing, bicycle parking, shuttles to transit, car-sharing, and other programs that may reduce the amount of driving or length of trips the project will create. The benefits of different measures have been quantified using a variety of modeling tools. Here again, the Town Council has the discretion to identify additional mitigation measures—or identify those measures which are the "best fit" for Moraga (see Attachment A, page 11). Mitigation may include transportation demand management (TDM) or physical design measures to reduce VMT (or GHG emissions), such as electric vehicle charging stations, car-sharing services, or new bike lanes.

The Memo further identifies the process for approving a project in the event that the mitigation measures are insufficient to reduce VMT below the threshold. Such projects may be found to have a "significant unavoidable impact" on transportation under CEQA and would be subject to a finding of overriding considerations if they are approved.

The three primary questions for Town Council consideration are:

- Should the Town follow CCTA guidance to determine if an impact is "significant" under CEQA? Staff recommends that the Town follow CCTA's guidance.
- What projects should be "screened out" (in other words, deemed to have a less than significant impact) from VMT analysis requirements? CCTA recommends, and staff concurs, that projects with 20 or fewer housing units and projects with less than 10,000 square feet of non-residential space be screened out. Staff recommends that the Council consider screening out grocery stores and other local serving non-residential uses of less than 25,000 square feet. Staff further recommends that multi-family and mixed-use residential projects located in the Moraga Center and Rheem Center areas be screened out.
- What measures to mitigate VMT impacts make the most sense for Moraga? Staff recommends bicycle parking, car-sharing, shuttles to transit and similar measures (see Attachment A, page 11-12).

Council feedback on the questions will be used to draft a VMT policy that will be included in the Draft General Plan Amendments to be considered by the Planning Commission and Town Council later this year.

As noted earlier in this report, screening out a project from VMT analysis does not preempt the Town from requiring a local traffic analysis for a project. Regardless of the responses to the three questions above, the Town may still require an applicant to evaluate a project's impacts on local streets and related issues such as safety, emergency vehicle access, and evacuation.

Fiscal Impact

The adoption of VMT standards is a policy matter and does not have a direct fiscal impact on the Town. The policy would not preclude the Town from collecting transportation impact fees or requiring a project to make road and traffic improvements needed for public safety as a condition of approval.

CEQA

Once the Town adopts new VMT thresholds and procedures, these requirements will be used in all future environmental review documents. This includes the EIR for the Comprehensive Advanced Planning Initiative, which will provide CEQA clearance for future projects that are consistent with the General Plan.

Recommendation

Receive report and provide direction to staff.

Reviewed by: **Cynthia Battenberg, Town Manager**
Karen Murphy, Assistant Town Attorney

Attachments:

A. Fehr and Peers Technical Memorandum on VMT and LOS for Moraga

ATTACHMENT A

Fehr and Peers Technical Memorandum on VMT and LOS for Moraga

FEHR PEERS

Memorandum

Date: December 9, 2021

To: Afshan Hamid, Town of Moraga

From: Ellen Poling and Ashlee Takushi, Fehr & Peers

Subject: VMT-Based Impact Evaluation: An Overview

WC21-3827

Introduction

Fehr & Peers is supporting the Town of Moraga in the preparation of updates to the Town General Plan and Housing Element, and associated CEQA review. The CEQA review will comply with the requirements of SB 743, which shifts transportation impact evaluation from congestion-based analysis to analysis of the vehicle miles of travel (VMT) generated by new development. The Contra Costa Transportation Authority (CCTA) has developed guidance on VMT methodology, metrics, and significance thresholds for its member agencies. This memo provides an overview of the shift to VMT-based impact analysis under CEQA, a summary of the CCTA's guidance, and points for Moraga staff and decision-makers to consider as the Town applies these analysis methods to the Housing Element and General Plan CEQA review.

Background

SB 743 and CEQA Impact Analysis Changes

SB 743, signed by the governor in 2013, is changing the way transportation impacts are identified under CEQA. Specifically, the legislation directed the Office of Planning and Research (OPR) to consider different metrics for identifying transportation impacts under the California Environmental Quality Act (CEQA). OPR released its *Technical Advisory on Evaluating Transportation Impacts in CEQA*[1] in December 2018 in conjunction with the formal adoption of

[1] http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

the CEQA Guidelines requiring VMT analysis for the CEQA Transportation section after July 1, 2020.

The updated guidelines include revised Appendix G Checklist questions for transportation impact evaluation. The four questions are:

Would the project:

1. *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*
2. *Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*
3. *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*
4. *Result in inadequate emergency access?*

Criteria 2 is the implementation of the SB 743 requirement. CEQA Guidelines section 15064.3(b) reads, in part, as follows:

(1) Land Use Projects. Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

(2) Transportation Projects. Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

(3) Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

(4) Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to

> *reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.*

The *Technical Advisory* outlines a number of suggested screening criteria for land use and transportation infrastructure projects in addition to CEQA thresholds of significance for residential, office, and retail projects. The document suggests the home-based VMT per resident generated by residential projects that is no more than 85 percent of the regional average, and home-work VMT per employee generated by employment projects that is no more than 85 percent of the regional average, may be considered to have a less than significant impact with respect to VMT. The regional average has most recently been interpreted by OPR to be the Metropolitan Planning Organization region in which the project is located —for Moraga, this is the nine-county Bay Area region represented by ABAG/MTC. The document also suggests that retail uses of 50,000 square feet or less may be assumed to be local-serving and thus have a less than significant impact on VMT. Certain other projects, including small residential projects and projects located in a Transit Priority Area (within one-half mile of a transit station or high-quality transit corridor defined as a bus corridor or intersection of two bus routes with a minimum 15-minute headways during peak commute hours), with certain restrictions, would be presumed to have a less than significant impact on VMT. Such projects could be "screened out" from a VMT impact analysis. This is discussed further below.

Projects meeting the screening criteria would not be subject to a VMT analysis for the purposes of the CEQA Transportation section; however, a project's effect on VMT, or the VMT generated by the project, would still be studied as part of the CEQA Air Quality, Greenhouse Gas, and/or Energy sections, as applicable.

The information provided in the *Technical Advisory* is non-binding; lead agencies retain the right to set their own CEQA thresholds and, by extension, screening criteria. There are also a number of other land use project types that do not fit within the residential, office, and retail categories, and these projects will typically be subject to some level of VMT-based CEQA analysis (assuming the projects are not screened out). The Town could consider how these projects should be analyzed in the future to align with their priorities related to land development, sustainability, CEQA document defensibility, and other goals.

Effect on Congestion Analysis (Level of Service)

It is important to note that SB 743 does not prevent a jurisdiction from continuing to analyze delay or LOS for other transportation planning or analysis purposes (i.e., general plans, impact fee programs, corridor studies, congestion mitigation, or ongoing network monitoring).

LOS can continue to be assessed relative to the Town's standards during development review, to promote the Town's interest in maintaining and operating a functional roadway network. The assessment can be performed as part of a General Plan consistency assessment. Town planning and traffic engineering staff may define the scope and methodology for project-level of service analysis as part of the development review process.

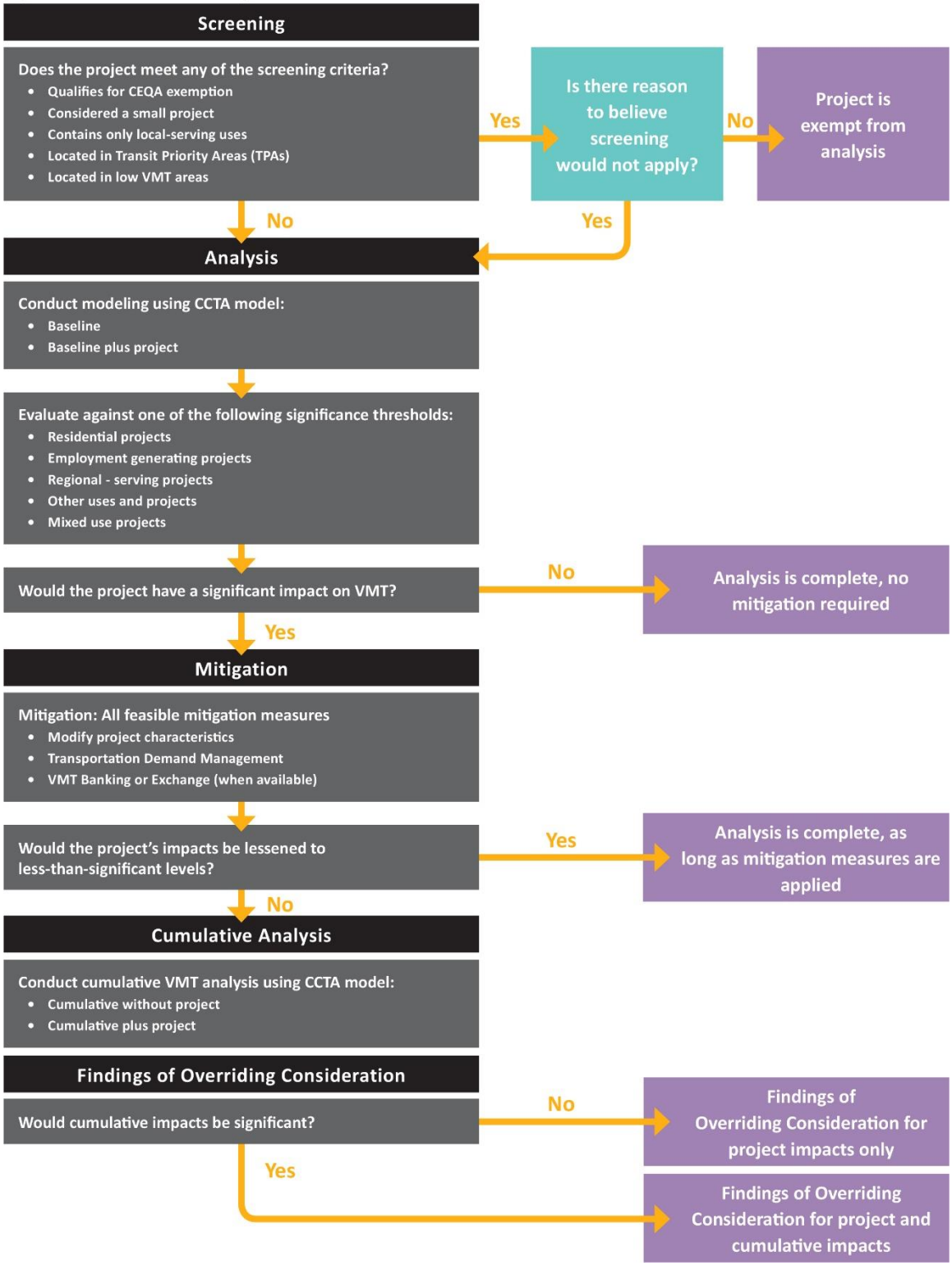
CCTA Recommended VMT Evaluation Methodology

The CCTA has developed guidance for member jurisdictions to use in developing their own VMT analysis methods, metrics, and thresholds of significance. The Technical Memorandum, *VMT Analysis Methodology for Land Use Projects in Contra Costa, GMTF Review Draft*, Fehr & Peers, July 2020 (CCTA Recommended Methodology) describes the recommendations. The figure on the following page illustrates the CCTA's recommended CEQA VMT analysis process.

The methods outlined by CCTA primarily rely on the CCTA travel demand forecasting model (referred to as the "CCTA Model" and sometimes also referred to as "The Countywide Model") to generate estimates of trip length and VMT for different land use types in different locations. Simple single-use projects may not require a new application of the CCTA model and may only need to refer to maps and tables of model outputs available from CCTA. Most projects will require the application of the model to represent the proposed project's land use and location characteristics, and to prepare a robust analysis of a project's effect on VMT. The following summarizes the CCTA Recommended Methodology; more detail is provided in the full document.

Project Screening

There are five screening criteria agencies can apply to omit projects from a project-level VMT analysis. Even if a project satisfies one or more of the screening criteria, lead agencies may still require a VMT analysis if there is evidence the project has characteristics that might lead to a significant amount of VMT.


Screening
Does the project meet any of the screening criteria?
Qualifies for CEQA exemption
Considered a small project
Contains only local-serving uses
Located in Transit Priority Areas (TPAs)
Located in low VMT areas
Yes
Is there reason to believe screening would not apply?
No
Project is exempt from analysis
No
Yes
Analysis
Conduct modeling using CCTA model:
Baseline
Baseline plus project
Evaluate against one of the following significance thresholds:
Residential projects
Employment generating projects
Regional - serving projects
Other uses and projects
Mixed use projects
Would the project have a significant impact on VMT?
No
Analysis is complete, no mitigation required
Yes
Mitigation
Mitigation: All feasible mitigation measures
Modify project characteristics
Transportation Demand Management
VMT Banking or Exchange (when available)
Would the project's impacts be lessened to less-than-significant levels?
Yes
Analysis is complete, as long as mitigation measures are applied
No
Cumulative Analysis
Conduct cumulative VMT analysis using CCTA model:
Cumulative without project
Cumulative plus project
Findings of Overriding Consideration
Would cumulative impacts be significant?
No
Findings of Overriding Consideration for project impacts only
Yes
Findings of Overriding Consideration for project and cumulative impacts

2.1: CEQA Exemption. Any project that is exempt from CEQA is not required to conduct a VMT analysis.

2.2: Small Projects. Small projects are presumed to cause a less than significant VMT impact. Small projects are defined as having 10,000 square feet or less of non-residential space, 20 residential units or fewer, or otherwise generate less than 836 VMT per day.[2]

2.3: Local-Serving Uses. Projects that consist of local-serving uses can generally be presumed to have a less than significant impact absent substantial evidence to the contrary, since these types of projects will primarily draw users and customers from a relatively small geographic area that will lead to short-distance trips and trips that are linked to other destinations. (Note that the agency and analysts should provide substantial evidence to support the finding that a use is local-serving, such as a market study, studies of similar uses elsewhere, survey of other similar uses within the project's market area, etc.)

2.4: Projects Located in Transit Priority Areas (TPAs). Projects located within a TPA can be presumed to have a less than significant impact absent substantial evidence to the contrary. This exemption would not apply if the project:

1. Has a floor area ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees than required by the lead agency (if the agency allows but does not require the project to supply a certain amount of parking);
3. Is inconsistent with the applicable Sustainable Communities Strategy (SCS) (as determined by the lead agency, with input from the Metropolitan Transportation Commission (MTC)); or
4. Results in a net reduction in multi-family housing units.

2.5: Projects Located in Low VMT Areas. Residential and employment-generating projects located within a low VMT-generating area are presumed to have a less than significant impact absent substantial evidence to the contrary.

[2] This threshold ties directly to the OPR Technical Advisory which notes that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Using statewide average data from the California Statewide Household Travel Survey (CHTS), the amount of daily VMT associated with 10,000 square feet of non-residential space is 836 VMT. Also using statewide average CHTS data, this level of VMT is associated with 20 housing units. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 20 housing units or 10,000 square feet of non-residential space could be considered not to lead to a significant impact.

A low VMT area is defined as follows:

- *For housing projects*: Cities and unincorporated portions within CCTA's five subregions[3] that have existing home-based VMT per capita that is 85% or less of the existing countywide average.
- *For employment-generating projects*: Cities and unincorporated portions of CCTA's five subregions that have existing home-work VMT per worker that is 85% or less of the existing regional average.

There is no definition of a low VMT area for regional-serving and other project types, since these projects will always require a VMT analysis.

Mixed-use projects may qualify for the use of this screening criterion if they include only housing, employment-generating uses and local-serving uses, and can reasonably be expected to generate VMT per resident and/or per worker that is similar to the existing land uses in the low VMT area.

Further considerations for screening criteria and potential modifications or exceptions for the Town of Moraga are included in **Appendix 1**.

Projects Requiring VMT Analysis

A project not excluded from VMT analysis through the screening process described above shall be subject to a VMT analysis to determine if it has a significant VMT impact.

Analysis Scenarios

The following scenarios should be addressed in the VMT analysis:

- Baseline conditions: The current version of the baseline CCTA model should be used to determine baseline VMT for the transportation analysis zone (TAZ) in which the project is located. This information is available from the VMT screening maps on the CCTA website.
- Baseline plus project: If the project is a simple, single-use project similar to other developments that already exist in that TAZ, then the analyst may conclude the project generated home-based VMT per capita or the home-work VMT per worker will be the same as the existing VMT per capita or per worker in that TAZ; in that instance, a separate baseline plus project model run would not be required. However, if the project contains one or more uses, or a mix of uses, that do not exist in the TAZ, then a model run is required. In this case, the proposed land use(s) should be added to the baseline condition for the relevant TAZ, or a separate TAZ should be created in the CCTA model to contain the project land uses. A full baseline model run should then be performed. The analyst

[3] Lamorinda is one of the five CCTA subregions.

should review the model output to confirm reasonableness of the results and to check production and attraction balancing to ensure the project's effect is being captured.

VMT Metrics and Significance Thresholds

The output from each model run will include total VMT per service population, home-based VMT per capita, and home-work VMT per worker, which should be analyzed as described below. In addition, the analyst would define a VMT study area and the VMT occurring on all network links inside that study area should be summed to calculate the total study area VMT.

The following describes the specific VMT metrics and significance thresholds that should be used in evaluating different project types:[4]

Residential Projects should use the home-based VMT per capita metric to evaluate their project generated VMT. The project generated home-based VMT per resident constitutes a significant impact if it is higher than 85% of the home-based VMT per resident in the subject municipality or unincorporated CCTA subregion (for areas outside of municipalities), or 85% of the existing countywide average home-based VMT per resident, whichever is less stringent.

Employment-Generating Projects should use the home-work VMT per worker metric for their project generated VMT estimates. The project generated home-work VMT per worker constitutes a significant impact if it is higher than 85% of the home-work VMT per worker in the subject municipality or unincorporated CCTA subregion (for areas outside of municipalities), or 85% of the existing Bay Area region-wide average home-work VMT per worker, whichever is less stringent.

Regional-Serving Projects should use the metric of total study area VMT and should define a VMT study area over which to evaluate that metric. The project generated VMT constitutes a significant impact if the baseline project generated total VMT per service population is higher than 85% of the existing countywide average total VMT per service population.

[4] The metrics of "home-based VMT per capita" and "home-work VMT per worker" are taken from the production-attraction trip matrices in the CCTA model, which is a stage of the modeling process in which trips are still categorized by purpose. This stage of the modeling process does not yet include truck trips so these VMT metrics do not include VMT associated with trucks. This is consistent with guidance from the OPR *Technical Advisory*, which interprets Section 15064.3 language referring to automobile VMT as being focused on light-duty passenger vehicles. The "total VMT per service population" metric is taken from the final origin-destination trip matrices in the CCTA model and therefore it does include the VMT associated with trucks. Per the OPR guidance it is acceptable to include truck VMT when needed for modeling convenience, as long as the analyst ensures there is an apples-to-apples comparison by using the same vehicle types in each step of the analysis process.

Other Uses and Projects need to be analyzed using a methodology developed by the lead agency specifically for the project, prepared and documented based on available data, and taking into account the specific methodologies and thresholds identified in this document.

Mixed-Use Projects may be analyzed using a combination of techniques described above, as follows:

- Mixed use projects that contain a combination of housing, employment-generating and regional-serving uses may choose to evaluate each use separately using the metrics and significance thresholds described above for those uses.
- Mixed use projects that include a local-serving component may ignore that component for analysis purposes and analyze only the remaining uses. Note that it may be more beneficial to the project to conduct a full analysis that takes account of on-site local-serving uses, since this analysis can take credit for reductions in trips resulting from the on-site mix.

In all cases, the analyst should consider whether that approach will effectively capture the likely interactions between the different uses. Other analytical options that would capture interactions between different uses are analyzing the project by conducting a full run of the CCTA model, or using a sketch planning tool designed to estimate the trip generation effects of a mixed-use project.

VMT Mitigation Strategies

If the conclusion is that the project would have the potential to cause a significant VMT impact per one or more of the significance thresholds defined above, then mitigation is required. CEQA requires that all feasible measures be implemented to reduce identified impacts to less than significant levels.

Method of Calculating Mitigation Reductions

The analyst, working with the lead agency and applicant, shall specify a series of mitigation measures, each of which shall have a specific percent level of VMT reduction assigned to it. Reduction levels may be taken from the table in the CCTA Recommended Methodology or from other defensible sources. In each case, the analyst shall explain the basis for the reduction applied, and shall also consider any interactions among the mitigation measures that make them cumulatively less effective than they are by themselves.

Each reduction shall be applied to the overall VMT associated with the project until the total VMT is reduced to a less than significant level or all feasible mitigation reductions have been applied.

Required Levels of Mitigation

In order to reduce impacts to less than significant levels, the proposed mitigation measures must reduce VMT to the relevant threshold as defined above.

Types of Mitigation

To mitigate VMT impacts, the following actions could be taken:

- Modify the project's characteristics to reduce VMT generated by the project. This may involve changing the density or mixture of land uses on the project site or changing the project's location to one that is more accessible by transit or other travel modes. The effectiveness of such changes should be modeled using the analysis techniques described above.
- Implement transportation demand management (TDM) or physical design measures to reduce VMT generated by the project. A description of such options is included below.
- Participate in a CCTA-approved VMT impact fee program and/or VMT mitigation exchange/banking program. CCTA will be developing such a program in Contra Costa County in the near future.

VMT Reductions from TDM and Physical Design Measures

TDM and physical design measures that could potentially be applicable in Contra Costa County are summarized in the table below (note this table reflects updated guidance from the California Air Pollution Control Officers Association (CAPCOA), relative to what was available when the *CCTA Recommended Methodology* was adopted). A complete description of each measure is provided in the *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity: Designed for Local Governments, Communities, and Project Developers,* CAPCOA, August 2021 (CAPCOA Handbook).It should be noted that the understanding of the availability, applicability, and effectiveness of VMT mitigation measures is continuing to evolve, and the evaluation of TDM measures should be updated periodically. Any evaluation of the effectiveness of VMT reduction measures should recognize that many TDM strategies are dependent on factors likely to change over time, such as the level of priority a building tenant places on achieving trip reductions, or the frequency of nearby transit services. As such, actual real-time VMT reduction cannot be reliably predicted, and ongoing monitoring should be considered to ensure mitigation expectations are being met.

Code	Strategy	GHG Mitigation Potential
Land Use		
T-1	Increase Residential Density	Up to 30.0%
T-2	Increase Job Density	Up to 30.0%
T-3	Provide Transit-Oriented Development	Up to 31.0%
T-16	Improve Street Connectivity	Up to 30.0%
Trip Reduction Programs		
T-4	Implement Commute Trip Reduction Program (Voluntary)	Up to 4.0%
T-5	Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring)	Up to 26.0%
T-6	Implement Commute Trip Reduction Marketing	Up to 4.0%
T-7	Provide Ridesharing Program	Up to 8.0%
T-8	Implement Subsidized or Discounted Transit Program	Up to 5.5%
T-9	Provide End-of-Trip Bicycle Facilities	Up to 4.4%
T-10	Provide Employer-Sponsored Vanpool	Up to 20.4%
T-11	Price Workplace Parking	Up to 20.0%
T-12	Implement Employee Parking Cash-Out	Up to 12.0%
T-22	Provide Community-Based Travel Planning	Up to 2.3%
Parking or Road Pricing/Management		
T-13	Provide Electric Vehicle Charging Infrastructure	Up to 11.9%
T-14	Limit Residential Parking Supply	Up to 13.7%
T-15	Unbundle Residential Parking Costs from Property Cost	Up to 15.7%
T-23	Implement Market Price Public Parking (On-Street)	Up to 30.0%
Neighborhood Design		
T-17	Provide Pedestrian Network Improvement	Up to 6.4%
T-18-A	Construct or Improve Bike Facility	Up to 0.8%
T-18-B	Construct or Improve Bike Boulevard	Up to 0.2%
T-19	Expand Bikeway Network	Up to 0.5%
T-20-A	Implement Conventional Carshare Program	Up to 0.15%
T-20-B	Implement Electric Carshare Program	Up to 0.18%
T-21-A	Implement Pedal (Non-Electric) Bikeshare Program	Up to 0.02%
T-21-B	Implement Electric Bikeshare Program	Up to 0.06%
T-21-C	Implement Scootershare Program	Up to 0.07%
Transit		
T-24	Extend Transit Network Coverage or Hours	Up to 4.6%
T-25	Increase Transit Service Frequency	Up to 11.3%

Code	Strategy	GHG Mitigation Potential
T-26	Implement Transit-Supportive Roadway Treatments	Up to 0.6%
T-27	Reduce Transit Fares	Up to 1.2%
Clean Vehicles and Fuels		
T-28	Use Cleaner-Fuel Vehicles	Up to 100%

Source: *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity: Designed for Local Governments, Communities, and Project Developers*, CAPCOA, August 2021.

The effectiveness of each strategy will vary depending on the context in which it is implemented and the types of trips to which it applies. It is the analyst's responsibility to review the available research and suggest a level of VMT reduction that is reasonable to apply to the project being studied, considering the project's specific characteristics and the context in which it would be constructed.

It should also be noted that the incremental benefit of each VMT reduction strategy will diminish as strategies are combined. Therefore, the analyst should carefully document the interaction between TDM strategies. The CAPCOA Handbook provides guidance on how to account for combinations of strategies.

Significant and Unavoidable Impacts, Cumulative Analysis and Findings of Overriding Consideration

Findings of Overriding Consideration

If the lead agency includes all feasible measures described above and those measures are not sufficient to fully mitigate the impact, then the VMT impact will be classified as significant and unavoidable. The lead agency may still approve the project, as allowed by CEQA, by making a finding of overriding consideration.

Before making such a finding and approving the project, the lead agency must also conduct a cumulative VMT analysis for the project, as described below.[5]

Cumulative Analysis

Projects that are unable to mitigate their project-specific VMT impacts to less than significant levels require a cumulative VMT analysis.

The cumulative analysis of a project involves understanding the project's effect on overall VMT within its study area. This analysis is needed to address circumstances where an individual project might affect travel patterns from other developments in the broader area: this might happen for a

[5] As per OPR's guidance, cumulative VMT analysis is not necessary for projects that are found to have a less than significant impact on VMT at the project level.

variety of reasons; for example, the project offers different housing, employment, or other opportunities than would otherwise exist in the area and that causes other users to change their travel decisions, or because the drivers and transit users generated by the project take up available system capacity and cause other users to change their travel routes or modes.

The project's effect on VMT should be measured by defining a VMT study area and calculating the total VMT occurring on all network links inside that study area, in both the cumulative without project and cumulative with project scenarios. To allow for a reasonable comparison between those two scenarios, the total study area VMT should be normalized in some fashion to reflect that there are different numbers of people within the study area (i.e., because the project has added people to the study area compared to the without project scenario). If the project adds residents to the study area, it would be reasonable to present the VMT results as total study area VMT divided by number of study area residents. If the project adds employees to the study area, it would be reasonable to use total study area VMT divided by number of study area employees. The exact method for normalizing the VMT number is not critical; what is essential is that the same method be used for both the cumulative without project and cumulative with project scenarios, to allow for an apples-to-apples comparison between the two scenarios.

Specific steps in the process are defined below:

Model Runs. The Cumulative VMT analysis will be based on two CCTA Model runs:

- Cumulative without project: The current version of the horizon year of the CCTA model. If development similar to that found in the proposed project is already foreseen in the subject TAZ in the "cumulative without project" model, this development should be subtracted from the "cumulative without project" scenario before this model run is conducted.
- Cumulative with project: Unless development similar to that found in the proposed project is already foreseen in the subject TAZ in the "cumulative without project" model, the proposed land use(s) should be added to the "cumulative without project" condition for the TAZ, or a separate TAZ should be created to contain the proposed land use(s). The analyst should also consider whether it would be advisable to offset the addition of these proposed land uses by lessening projected development increases in other TAZs, particularly if the proposed project is substantial in size such that it might change the distribution of future developments. This recognizes that individual land use projects will generally not change the regionwide totals for population and employment growth but will influence localized land use and VMT impacts.

Cumulative Threshold. Cumulative VMT impacts should be considered significant if there is a net increase in the total study area VMT normalized to the number of people within the study area, when comparing cumulative no project to cumulative plus project conditions.

Additional Significant Impact and Findings of Overriding Consideration. If the cumulative VMT analysis finds a significant impact, this impact shall be considered to be significant and unavoidable, and must therefore be called out in the project's EIR and subject to the Finding of Overriding Consideration described earlier in this section.

Conclusion

Fehr & Peers recommends that the Town of Moraga consider the overview above, and the CCTA Recommended Methodology guidance for VMT analysis, for use in the CEQA review of the Housing Element and General Plan update, and contact us with any questions.

Attachment:

Appendix 1 -- Screening Criteria and Potential Modifications or Exceptions for Consideration

Appendix 1

Screening Criteria and Potential Modifications or Exceptions for Consideration

The following section outlines certain screening criteria presented in the *CCTA Recommended Methodology or the Technical Advisory*, along with potential modifications or changes that could be made to ensure the criteria are applicable to Town of Moraga conditions.

The screening criteria are in addition to other CEQA exemptions unchanged by SB 743, including CEQA exemptions for projects consistent with an adopted General or Specific Plan (CEQA Guidelines §15183). As part of the Housing Element Update, Fehr & Peers will prepare a transportation impact assessment for the Phase One ADEIR, which includes a VMT analysis that allows future projects consistent with the amended General Plan to tier off the VMT analysis. The Town may also choose to require an informational VMT analysis to prove that a project is consistent (on a VMT basis) with the land uses previously environmentally cleared as part of an adopted Specific Plan or General Plan. This approach is similar to the approach taken when CEQA Transportation section impacts were evaluated on the basis of delay and level of service, whereby a project applicant would be required to provide a trip generation memorandum prepared by a qualified consultant to demonstrate that a project adds a negligible amount of trips to the roadway system.

Absent substantial evidence that the project in question might generate a potentially significant level of VMT, projects that meet at least one of the following screening criteria would be presumed to cause a less than significant VMT impact and would not require VMT analysis in order to address the following question on the Appendix G CEQA checklist: "Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?"

Screening for Small Projects

CCTA Recommended Methodology Criteria: The Town of Moraga may choose to screen projects that have 10,000 square feet of less of non-residential space or 20 residential units or less, or otherwise generate less than 836 VMT per day. A VMT analysis may still be required to provide inputs for the air quality, greenhouse gas, and energy CEQA analyses.

Potential Modifications to Criteria: A reduction in the 836 VMT per day threshold could be considered for parts of the Town where substantially larger than average trip lengths (difference to be determined by the Town) would occur due to their geographic location and/or lack of proximity to complementary land uses.

Screening for Small Scale, Local-Serving Retail

OPR Technical Advisory Criteria: While the CCTA Recommended Methodology does not prescribe a local-serving retail project size threshold, the OPR *Technical Advisory* suggests projects of 50,000 square feet or less may be considered to be local-serving. The Town of Moraga may choose to screen local-serving retail projects less than 50,000 square feet in size on the basis that they attract trips that would otherwise travel longer distances. A VMT analysis may still be required to provide inputs for the air quality, greenhouse gas, and energy CEQA analyses.

Potential Modifications to Criteria: Moraga does not have a formal or codified definition of what constitutes a "local-serving" retail use, and some Bay Area agencies feel that the 50,000 square foot limit in the OPR guidance is too large. Reductions in the retail project size cap are being considered by multiple agencies in the Bay Area (e.g., the City of Concord, the City of Walnut Creek, and Redwood City have decided to use a cap of 30,000 square feet). Additionally, multiple agencies in the Bay Area (e.g., Concord and Walnut Creek) are considering not allowing any screening benefits for retail projects with a drive-through component.

Screening for Projects Located in Low-VMT Areas

CCTA Recommended Methodology Criteria: The Town of Moraga may choose to screen residential and office projects located in low-VMT areas as defined in the Recommended Methodology that incorporate similar features to the nearby developments (i.e., density, mix of uses, and transit accessibility) on the basis that the project will exhibit similarly low VMT. Typically, this screening is performed by utilizing data from a travel demand model (e.g., the CCTA travel demand model) and comparing the project's characteristics to land uses currently in the low-VMT area (i.e. one or more Traffic Analysis Zones in the model). A VMT analysis may still be required to provide inputs for the air quality, greenhouse gas and energy CEQA analyses.

Potential Modifications to Criteria: The Town may require a VMT analysis to confirm the CEQA exemption in cases where it would be in the public interest to assess whether the CEQA exemption would be reasonable based on the physical and operating characteristics of the development.

Screening for Affordable Housing

OPR Technical Advisory Criteria: The Town of Moraga may choose to screen residential projects containing a particular amount of affordable housing (based on local circumstances and substantial evidence as determined by the Town) on the basis that affordable housing generates lower VMT than market-rate housing. Furthermore, affordable housing located within infill locations generally improves the jobs-housing balance and may result in shorter commutes for low-income workers. A VMT analysis may still be required to provide inputs for the air quality, greenhouse gas and energy CEQA analyses.

Potential Modifications to Criteria: The Town may require a VMT analysis to confirm the exemption in cases where it would be in the public interest to assess whether the exemption would be reasonable based on the physical and operating characteristics of the development, such as the parking supply provided, availability/proximity of transit, provision of commute services for residents, VMT information from other comparable sites, etc.

Screening for Transportation Projects

OPR Technical Advisory Criteria: The Town of Moraga may choose to screen transit projects, bicycle and pedestrian projects, and roadway projects that do not result in an increase in vehicle capacity or VMT.

Potential Modifications to Criteria: The Town may require a VMT analysis to confirm the exemption in cases where a project may result in a substantial diversion in travel (i.e., longer trip lengths) that cannot be negated through increases in transit ridership, bicycling or walking.

Additional Project Types for Consideration

As noted earlier, the *Technical Advisory* provides suggested CEQA thresholds of significance for residential, office, and retail projects. However, other project types may not fit into these three categories and may not meet the screening criteria discussed previously. The following is a non-exhaustive list of other project types the Town may consider when developing CEQA thresholds of significance (or other analysis approaches):

- Fast food restaurants, with or without drive-throughs: Fast food restaurants would typically exhibit characteristics of retail development (i.e., redistribution of existing trips), unless the restaurant is a specialized or popular draw, whereby the additional restaurant location(s) could induce trips. The addition of drive-throughs would typically amplify the VMT generated by the project by making driving more convenient. The OPR-suggested retail threshold of zero net new VMT could capture the effects of induced VMT caused by new fast food restaurants, as long as the calculation methodology used to quantify VMT for the project would be sensitive to the nuances of operations and market effects of the development.
- Gas stations, with or without convenience store: Gas stations do not typically draw trips on their own; most trips would be characterized as diverted or pass-by trips, and thus would not result in a substantial effect on VMT. Similarly, the retail portion of a gas station could be analyzed or screened out similar to more traditional, local-serving retail developments. The analysis of VMT in other environmental topics may better capture the environmental effects of these developments.
- Senior housing: Senior housing projects exhibit some characteristics of the residential and office (employee) uses. A senior housing-specific threshold using data from Town senior

housing developments could be established, or a combination of the visitor and employee trips could be analyzed using the threshold for residential and office uses.

- Public facilities, including parks, pools, and other recreational uses such as golf courses: Large public facilities or recreational projects may induce new trips from residents, which may require a VMT analysis to quantify the effect of new trips. However, these projects may generate most of their VMT on the weekend, and thus would fall outside the purview of SB 743, which focuses on weekday VMT. Many other types of public facilities, such as neighborhood-scale parks, public utilities, and neighborhood-based public schools, are local-serving and could be screened out of VMT analysis if there is sufficient evidence to support that conclusion. Public facilities projects could be analyzed using thresholds developed on a project-by-project basis, which is allowable under CEQA, provided those thresholds are based on substantial evidence.
- Additional parking supply in areas with parking supply shortages: Large-scale parking supply increases (e.g., new garages) that alleviate severe parking supply shortages such that new trips are being made could result in an increase in VMT. Market research may be needed to demonstrate that the addition of substantial amounts of parking supply would not result in additional VMT.
- Project construction phases: Construction activities are likely to generate VMT, some or all of which may fall under the definitions of VMT that should be analyzed under CEQA. While most construction phase impacts would tend to be less than significant, this is not automatically given. For construction activities anticipated to generate a high amount of VMT for a long period of time, the Town could require that construction phase VMT be analyzed to assess whether the VMT generated fits within the principles of the small project screening criteria discussed previously.