



City of Palo Alto

City Council Staff Report

(ID # 11333)

Report Type: Study Session

Meeting Date: 5/18/2020

Summary Title: Senate Bill 743 Implementation

Title: Update to the City's Transportation Analysis Methodology to Comply With Senate Bill 743, Including Use of Vehicle Miles Traveled (VMT) for CEQA Review and Level of Service (LOS) Standard for Local Transportation Analysis (Continued From May 4, 2020)

From: City Manager

Lead Department: Transportation Department

Recommendation

Staff recommends that the City Council receive a presentation on:

1. Updating the City's transportation analysis methodology to implement Vehicle Miles Traveled (VMT) as the metric for conducting analyses of projects, pursuant to the California Environmental Quality Act (CEQA); and
2. Adopting a Council Policy that establishes a standard for vehicular Level of Service (LOS) analyses, consistent with Program T2.3.1 of the Comprehensive Plan Transportation Element.

No formal action is requested at this time. Staff will return to Council in June 2020 with a request for action on a VMT threshold of significance for CEQA analyses and a Level of Service Policy for local-level analyses.

Executive Summary

This staff report provides background information and summarizes key options staff is considering in developing the City's compliance with changes to CEQA. The focus of CEQA transportation analyses has shifted due to California Senate Bill (SB) adoptions in 2013 and 2018 (SB 743 and SB 375). The previous focus was on driver delay (Level of Service) at intersections. The new focus is on the reduction of greenhouse gas emissions, creation of multimodal transportation networks, and promotion of a mix of land uses that reduces the need to drive. Palo Alto must adopt an official policy regarding the impact threshold criteria to

be applied in CEQA analyses of local development projects by July 1, 2020. Staff is tasked to consider what VMT reduction level to recommend as a CEQA threshold of significance for Council adoption. For reasons stated herein, including consistency with current state guidance, staff anticipates recommending 15 percent below baseline (existing development) VMT as the CEQA VMT reduction threshold for residential and office projects.

Background

Senate Bill 743 (2013)

Senate Bill (SB) 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA guidelines with respect to the analysis of potential transportation impacts using an alternative metric to Level of Service (LOS). The legislative intent of this change is to better balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and greenhouse gas (GHG) emission reduction targets per SB 375. The California Air Resources Board (CARB) adopted the State's current GHG reduction targets at the March 22, 2018 Board Hearing.

In late 2018, after more than five years of development and public comment, the California Natural Resources Agency adopted OPR's recommended updates to the CEQA Guidelines. The updated Guidelines became effective on December 28, 2019. The Guidelines now require agencies to use vehicle miles traveled (VMT) as the metric for CEQA transportation analyses by July 1, 2020. Agencies in California may no longer use LOS as a threshold of significance for performing a CEQA analysis of a proposed project after July 1, 2020, although LOS can still be analyzed for other purposes if desired.

OPR has posted video presentations explaining the rationale for the move away from LOS and towards VMT. Staff encourages Councilmembers to view these videos in order as they provide an excellent introduction to this topic:

- Problems with LOS – <https://tinyurl.com/Problems-with-LOS>
- Benefits of VMT – <https://tinyurl.com/Benefits-of-VMT>
- Methods for Land Use Projects – <https://tinyurl.com/Methods-for-Land-Use-Projects>

Level of Service and TIRE Index Methods

The City of Palo Alto currently uses LOS as the primary method for analyzing potential CEQA transportation impacts for all development projects. The City's CEQA documents also consider the potential for increases in traffic on roadway segments near projects, known as the Traffic Infusion on Residential Environment (TIRE) index. To comply with SB 743, the City, in collaboration with Fehr & Peers (a subconsultant to City's consultant AECOM), is reviewing existing local and state planning documents and policies. While staff considers appropriate VMT thresholds of significance for CEQA analyses, staff is also considering the appropriate LOS standards to analyze a project's consistency with City policy.

Greenhouse Gas Emission Reduction

The State of California is focused on VMT to achieve the reduction of GHG emissions over time. Recently, the California Air Resources Board (CARB) found that emissions from statewide passenger vehicle travel per capita were increasing. CARB determined that it will not be possible to achieve the State’s 2030 and post-2030 emissions goals without changes to how communities and transportation systems are planned, alongside reductions in single-occupancy vehicle travel and reductions in VMT.¹

The SB 375 greenhouse gas reduction targets for our region (the Metropolitan Transportation Commission/Association of Bay Area Governments) were set in 2013 and 2018 as follows:

SB 375 Regional Plan Climate Targets

| MPO | Targets Through September 30, 2018 | | Targets Beginning October 1, 2018 | |
|----------|------------------------------------|------|-----------------------------------|------|
| | 2020 | 2035 | 2020 | 2035 |
| MTC/ABAG | -7% | -15% | -10% | -19% |

To achieve a 19 percent GHG reduction, the State is promoting the creation of multimodal transportation networks and a finer mix of land uses. And, as noted, the State is requiring jurisdictions to establish a VMT threshold prior to July 1, 2020. Council must establish a VMT threshold of significance for CEQA analyses; however, the Comprehensive Plan directs staff to retain Level of Service as a factor in the City’s consideration of development projects, separate from CEQA.

VMT Reduction Threshold and Sustainability and Climate Action Plan

Based on the OPR technical advisory document and consistent with other jurisdictions, staff anticipates recommending 15 percent (below existing development VMT) as the CEQA VMT reduction threshold for residential and office projects. Staff’s likely recommendations for initial VMT thresholds to be applied as of July 1, 2020 are consistent with current State guidance. VMT threshold adoption is a necessary first step in a series of Council actions related to transportation in the coming year.

¹ California Air Resources Board (Nov. 2018) 2018 Progress Report on California’s Sustainable Communities and Climate Protection Act, pp. 4, 5, 28 available at https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf.

Following the 2020 Sustainability and Climate Action Plan (S/CAP) Update, Council will have a chance to again review and adjust the CEQA thresholds to align with S/CAP goals or policies. More detailed information on the S/CAP Update Process is available in a Staff Report to Council in April 2020 (CMR #11201; <https://tinyurl.com/SCAP-Update-SR>). After Council adopts VMT thresholds in compliance with SB 743 and a Level of Service policy, staff intends to embark upon step 2. That is, staff will bring forward a Transportation Demand Management (TDM) Ordinance, which will include mitigation policies and a menu of mitigation measures for Council consideration. The TDM Ordinance will define VMT reduction and monitoring approaches consistent with CEQA and the City's Comprehensive Plan.

Discussion

To assist agencies in establishing a significance threshold and metrics for VMT analysis, OPR issued a guidance document, *Technical Advisory on Evaluating Transportation Impacts in CEQA* (<https://bit.ly/3e32RU9>). Staff derived many of the options for establishing a VMT threshold in the City of Palo Alto from this technical advisory document. Staff requests Council consideration in three key areas: methodology/metrics, screening criteria, and thresholds.

A Note about Methodology and Metrics

Staff has explored options for establishing methodologies and metrics to analyze transportation impacts under CEQA after July 1, 2020. A methodology is the way VMT will be calculated and metrics are the way VMT is measured and reported. Council will not be required to adopt a specific methodology or VMT metric for every CEQA analysis. That is, because the most appropriate methodology or metric varies depending on the proposed land use or type of project, a methodology or metric for a land use plan would be different than for a specific development project. Furthermore, different development projects could require different methodologies and metrics. The information presented at the end of this report provides Council with an understanding of how staff would approach most development projects including residential, office, and retail uses. More detailed information on methodology and metrics can be found in Attachment A.

Screening

OPR recommends a screening process for project types known to be low VMT generators. Projects that meet screening criteria can be determined to have a less than significant VMT impact without conducting a quantitative VMT analysis unless there is information indicating that the project is unique in some way that determines it may not be a low VMT generator. The City could choose to screen out some, or all, of these project types to enable only a qualitative discussion in their associated CEQA documents. This assumes that cumulative VMT impacts are consistent with long-term air pollution and GHG reduction expectations. This screening approach would enable project streamlining by eliminating the need to prepare a quantitative analysis for low VMT-generating projects that meet the screening criteria. OPR's

Technical Advisory document includes the following list of project types presumed to have a 'less than significant' impact on VMT and that the City may choose to screen:

- Small Projects – Projects that generate or attract fewer than 110 trips per day. Based on research for small project triggers, this may equate to nonresidential projects of 10,000 square feet or less and residential projects of 20 units or less.
- Projects Located in Low-VMT Areas – Residential and office projects located in low-VMT areas 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 similar, low VMT.
- Projects in Proximity to a Major Transit Stop – Projects that are located within a half mile of an existing or planned high-quality transit corridor or major transit station. This includes the existing Downtown Palo Alto Caltrain station, the California Avenue Caltrain station, and bus stops for bus routes with headways of 15 minutes or less. OPR identifies additional criteria that must be met to make this determination, including high density (minimum floor area ratio of 0.75), parking supply (i.e., less than required based on City code), consistency with *Plan Bay Area 2040* (<http://2040.planbayarea.org/>), and no effect on existing affordable residential housing.
- Affordable Housing – Residential projects containing a specific amount of affordable housing (based on local circumstances and substantial evidence as determined by the City); this is on the basis that affordable housing generates less VMT than market-rate housing. Affordable housing located within infill locations generally improves job-housing balance and may thus result in shorter commutes for low-income workers.
- Local-Serving Retail Projects – The City of Palo Alto may also screen local-serving retail projects of less than 50,000 square feet, on the basis that they attract trips that would otherwise travel longer distances. Staff would evaluate both the project characteristics and the context of the project location to determine whether a given retail project is local-serving. Regional-serving retail projects would not be subject to screening.
- Transportation Projects – Transit projects, bicycle and pedestrian projects, and roadway projects that do not result in an increase in vehicle capacity or VMT.

When staff returns to Council in June, the Council will need to determine which, if any, of the above screening conditions could apply to future development projects, exempting them from quantitative VMT analyses that will likely show a less-than-significant impact. Screening of such projects would be supported by a qualitative discussion of the project, including its site and location characteristics. The discussion would support the conclusion that a given

project is a low VMT generator and can be screened from a quantitative VMT assessment.

Threshold

OPR's technical advisory document recommends thresholds that vary by project and land use type. The thresholds are generally based on applying Total VMT or VMT efficiency metrics. For residential and office projects, OPR indicates that a "per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold." The recommended OPR thresholds are based on substantial evidence that aligns CEQA transportation analysis to meet statewide targets for GHG emission reductions. This overarching goal is consistent with the City's Comprehensive Plan 2030. The Comp Plan includes several goals and policies that strive to reduce GHG emissions and air quality impacts, reduce single-occupancy vehicle use, and encourage multi-modal transportation. The City's Sustainability and Climate Action Plan (S/CAP) Framework has GHG emission reduction goals that are more aggressive than state goals. The 15 percent VMT reduction target could be refined in the future to reflect GHG emission reduction goals in the S/CAP that will be completed in 2021. In order to align the City with current state VMT reduction targets before July 1, 2020, staff anticipates recommending Council adopt initial thresholds consistent with OPR's recommendations. For individual land use projects that are not screened out and require a quantitative VMT assessment, this would mean the following:

- Residential Projects – A proposed project exceeding a level of 15 percent below existing (baseline) home-based VMT per resident would indicate a significant transportation impact.
- Office Projects – A proposed project exceeding a level of 15 percent below existing (baseline) regional home-based work VMT per employee would indicate a significant transportation impact.
- Retail projects – A proposed project that results in a net increase in total VMT would indicate a significant transportation impact.
- Mixed-Use Projects – The City will apply one of the above residential, office, or retail thresholds for mixed-use projects with a dominant use. If there is more than one primary land use type, each of the primary land uses would be evaluated independently by applying the relevant threshold above.
- Other Project Types – The City will either develop an ad hoc (i.e., project-specific) VMT threshold for a unique land use type or apply the most applicable of the above thresholds depending on project characteristics.
- Redevelopment Projects – Where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would cause a less

than significant VMT impact. If the redevelopment project leads to a net overall increase in VMT, it would cause a significant VMT impact.

When applying the above thresholds, a project’s VMT is compared to a baseline VMT value that is typically either a citywide or regional average for a land use type. The baseline VMT represents existing conditions and estimated changes over time. The values presented below represent conditions of the 2015 baseline year. As VMT assessments are conducted over the coming years, the VMT baseline values will be updated.

VTA has provided baseline VMT data from the VTA travel demand model for residential and office uses at both the Palo Alto citywide and Santa Clara countywide scales. This data provides an indication of VMT characteristics for residential and office uses in the city, compared to the county average, which is similar to the regional average. As seen in the table below, residential uses in Palo Alto generate about 29 percent less VMT per capita than the county (or regional) average. Office uses in Palo Alto generate similar VMT per employee as the county (or regional) average. Consistent with the Council’s stated objective to facilitate the implementation of new housing and integration of jobs, staff anticipates recommending that the VMT baseline for residential uses be measured against the regional VMT per capita, and offices uses be measured against the regional VMT per employee. This recognizes that residential uses in Palo Alto are generally low VMT generators because it places housing in closer proximity to jobs, and therefore would be less likely to result in a significant VMT impact.

| 2015 Baseline VMT | Palo Alto | Santa Clara County |
|-----------------------------------|------------------|---------------------------|
| Home-Based VMT Per Capita | 9.48 | 13.33 |
| Employment-Based VMT Per Employee | 16.71 | 16.64 |

The City is currently preparing an update to its S/CAP. As a leader in climate action, the City of Palo Alto is likely to update its S/CAP to establish more stringent targets for GHG and air emission reductions beyond the state targets. Because of the pressing state deadline for establishing a VMT threshold, and because the City’s S/CAP update is still in progress, staff anticipates returning to Council before July 1, 2020 and recommending that Council adopt thresholds that are consistent with the state’s recommendations. However, upon completion of the S/CAP, staff would return to the Council. Council could then determine if the City’s VMT thresholds should be revised to better align with the City GHG reduction goals, based on the target reductions identified in CEQA analysis for the S/CAP and the adopted S/CAP.

Mitigation Options

If a project is determined to result in a significant VMT impact, it requires the identification of mitigation measures to avoid or substantially reduce these effects.

The most common strategies for mitigating VMT impact are to: 1) change the project land use mix or density, 2) reduce proposed vehicle parking supply levels, 3) implement on-site or off-site capital improvements for transit, bicycle, or pedestrian travel, and/or 4) implement trip reduction programs as described in a Transportation Demand Management (TDM) program. TDM programs can include several components such as telecommuting, transit subsidies, shuttles, carpool matching, parking cash-out programs, and unbundled parking.

Mandated in the City's current Municipal Code and further defined in the City's Comprehensive Plan Policy T1.2.3, is the following TDM requirement for certain projects:

A project is subjected to a specific percentage reduction in peak hour motor vehicle trips using TDM measures if the project:

- generates 50 or more net new peak hour trips, or
- claims a reduction in net new trips due to proximity to public transit, or
- requests a parking reduction.

After adoption of changes in the City's transportation analysis methodology and process to comply with SB 743, staff will return to Council with a TDM Ordinance. The ordinance will include mitigation measures designed to effectively reduce VMT and a monitoring structure to ensure projects with TDM plans remain compliant with CEQA.

Level of Service (LOS) Analysis

Palo Alto's Comprehensive Plan Program T2.3.1 states, "When adopting new CEQA significance thresholds for VMT for compliance with SB 743 (2013), adopt standards for vehicular LOS analysis for use in evaluating the consistency of a proposed project with the Comprehensive Plan, and also explore desired standards for MMLoS, which includes motor vehicle LOS, at signalized intersections."

While agencies may no longer use LOS as a threshold for CEQA analysis, the City intends to retain LOS as a metric for analyzing projects subject to CEQA in conformance with Policy T2.3 and Program T2.3.1. For more background information on LOS, the Council had a study session in 2016 on LOS (<https://www.cityofpaloalto.org/civicax/filebank/documents/53796>)

Currently, the City follows methods and metrics for analyzing LOS like those set forth in VTA's Congestion Management Program (CMP). Staff will return to Council in June with this information together with a proposed LOS policy for the Council's consideration, while staff presents recommended VMT screening criteria and significance thresholds under CEQA.

VMT Methodology and Metrics

Methodology

This section is provided as background to understanding VMT methodology and metrics. Aside from screening, Council will not be asked to approve methodology or metrics since these may vary from project to project. CEQA requires environmental analyses to reflect a “good faith effort at full disclosure.” Lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries. For example, agencies should not fail to count the portion of a trip that falls outside the jurisdiction or discount the VMT from a trip that crosses a jurisdictional boundary. Thus, where existing methodologies can estimate the full extent of vehicle travel from a project, CEQA specifies that a lead agency should apply them to do so. The following describes both a **screening methodology** and a **quantitative** VMT evaluation methodology.

- **Screening Methodology:** To identify projects that could be screened from a quantitative VMT analysis, the Santa Clara Valley Transportation Authority (VTA) is leading the development of a web-based, Santa Clara Countywide VMT Estimation Tool. This tool will provide the basis for identifying Palo Alto land uses that are low VMT generators and/or within a transit priority area. Such uses could thus be screened out from preparing a quantitative VMT analysis. For projects that are screened out, the City would provide a qualitative discussion of the project characteristics. The qualitative discussion would form the basis for determining that the project is presumed to have a less than significant VMT impact. The VTA’s estimation tool is an effort to streamline the process by determining whether a project is likely to result in significant VMT impacts. Staff anticipates the tool will be complete and available for use by July 1, 2020. More information on the VMT Estimation Tool can be found in Attachment B.
- **Quantitative Methodology:** For larger or more unique land development projects that are not screened out, a travel demand model of regional scope should be used to develop quantitative VMT forecasts. A model allows for a more complete accounting of all vehicle trips and trip lengths. A model can produce estimates for the project’s cumulative impacts on VMT that account for changes in behavior. These models can also account for the potential induced travel effects of a project on VMT. For Palo Alto, this would mean using either the Santa Clara Valley Transportation Authority (VTA) or Metropolitan Transportation Commission (MTC) travel models. The VTA model has a substantially more refined transportation network in the City of Palo Alto than the MTC model does. Therefore, the VTA tool would be a preferred tool for most projects.

Due to the level of effort involved in creating and maintaining its own forecasting model, staff anticipate utilizing:

- The VTA travel model for preparing quantitative VMT forecasts for large or unique projects, and
- The VTA VMT estimation tool for screening land use projects that would be low VMT generators and/or projects located in a transit priority area and thus presumed to have a less than significant impact.

Metrics

The City may assess projects based on a preferred form of the VMT metric. The following section discusses two options for measuring VMT and several options for reporting VMT where a quantitative estimate of VMT is required for a project. The metric that will be applied for CEQA studies will depend on the type of project evaluated, its scale, and characteristics.

There are two options for measuring or calculating VMT: project-generated VMT (which measures total or partial amount of travel to and from the project) and project's effect on VMT (which measures how the project changes travel in a given geographic area, typically at a city, county, or regional scale, also known as "boundary VMT"). Each VMT metric typically requires the use of a travel forecast model.

Project-generated VMT measures the amount of vehicle travel generated by a project (i.e., number of vehicle trips multiplied by their corresponding trip lengths). These calculations are usually performed using outputs from a travel forecasting model. A total project-generated VMT metric is often calculated for land use projects as a key input to CEQA analyses of air quality, GHG, and energy impacts. A partial project-generated VMT metric is often used for screening of certain land use types such as residential and office uses.

Project's effect on VMT is measured by comparing all VMT on roadways within a selected area or boundary (i.e., city, county, or region) for scenarios without and with a project or plan. It is forecasted using a travel demand model and provides a more complete evaluation of the potential effects of land use projects or a land use plan. It captures the combined effect of new VMT, shifting of existing VMT to/from other neighborhoods, and/or shifting of existing VMT to alternate travel routes or modes. Projects' effect on VMT would be evaluated for retail uses and large development projects that would result in a significant change in the city's jobs-housing balance. A project's effect would be evaluated to measure potential VMT impacts for transportation projects that add roadway capacity or otherwise induced vehicle travel. It is also the approach that would be used where a cumulative analysis of VMT is required, likely for office or regional-serving commercial uses.

There are also several options for reporting VMT:

- total VMT,
- partial VMT (i.e., only light duty vehicles, by trip purpose), and
- VMT as an efficiency metric (i.e., VMT per capita).

New land use projects accommodate population and employment growth; this growth generates new VMT (i.e., a new office building resulting from a land use rezone will generate new vehicle trips and VMT). Whether a project contributes to a more efficient land use pattern (i.e., one that requires less vehicle travel compared to similar land uses) can be determined by using a VMT efficiency metric. Efficiency metrics express this total increase in VMT relative to the increase in residents and employees (VMT per resident, or VMT per worker).

Total VMT metrics include all types of VMT captured by a travel forecasting model, regardless of the type of vehicle or the trip's purpose. In practice, this means the metric includes visitor trips, medium-duty and heavy-duty vehicles, public transit buses, and other types of vehicle miles, miles that might not be captured in the most common partial VMT metrics. Total VMT is a metric that would be estimated for retail and potentially large mixed-use projects, land use plans (i.e., Comprehensive Plan, Specific Plans, etc.), and transportation projects. Such projects would require a quantitative VMT assessment and have the potential to influence vehicle travel associated with neighboring land uses and/or displace other existing trips within the region.

Partial VMT is a metric that involves combining only a subset of the VMT generated by vehicle trips, vehicle types, land uses, and/or trip purposes associated with a land development project. Examples include accounting only for:

- light-duty vehicles (as recommended by OPR for residential and office uses),
- trips made between home and work (as recommended by OPR for office uses), or
- trips associated with a dominant land use type for a multi-use project.

The following VMT efficiency metrics (i.e., VMT per capita) are recommended by OPR for residential and office projects. The VTA's VMT tool provides existing VMT values for the following VMT efficiency metrics by city. The VTA model can be used to provide a project specific estimation of these VMT metrics for future projects in Palo Alto.

- **Home-based VMT per resident (residential projects)** reflects how close households are to common destinations, as well as the available transportation options. The trip type is specific to local residents, and it helps to compare residential projects across different locations. This method answers the question, "Do people living here drive more or less on average compared to other places?"

- **Home-based VMT per employee (office projects)** reflects how close a workplace is to places where employees live. The trip type is specific to work trips, and it helps to compare employment projects across different locations. This method answers the question, “Do people working here drive more or less during their commutes compared to workers in other places?”

For most single-use projects, using a VMT efficiency metric is the most straightforward way to analyze project VMT, and is the metric recommended by OPR in its technical advisory document.

Policy Implications

The City’s Comprehensive Plan 2030 already acknowledged and incorporated the regulatory changes mandated by SB 743. While the Comprehensive Plan noted that VMT would be used as the metric for analyzing potential transportation impacts under CEQA, the Plan directed staff to adopt LOS standards (and consider multi-modal LOS standards) to analyze the potential for local-level project impacts.

Resource Impact

This work to develop SB 743 methodology, thresholds, and TDM/mitigation measures is funded through the current S/CAP consultant contract with AECOM. (Fehr & Peers is subconsultant to AECOM.) Transitioning to the use of the VMT metric and thresholds would likely involve the use of the forthcoming VTA VMT estimation tool and staff training. Along with other jurisdictions in Santa Clara County, the City paid additional Congestion Management Program (CMP) dues to VTA in Fiscal Year 2020 (FY20) toward development of the VMT tool and will pay VTA for a license to use the VMT tool. Training costs would be absorbed by the Office of Transportation and Planning and Development Services Department. The cost of performing VMT and other environmental analysis under CEQA for private development projects would be billed to applicants in accordance with the City’s standard application review cost recovery process.

Timeline

Staff will work with its consultant to further study VMT thresholds. Staff will return to Council before July 1, 2020 with a recommendation and resolution to adopt screening criteria and VMT thresholds in compliance with SB 743 and a LOS policy. The timeline for Council review and discussions of a Transportation Demand Management Ordinance and mitigation measures will follow in the fall. Following S/CAP Update adoption, staff will return to Council for direction on whether to adjust CEQA thresholds to align with S/CAP policies.

Environmental Review

The adoption of a new transportation threshold of significance under the California

Environmental Quality Act (CEQA) in accordance with CEQA Guidelines Section 15064.7 does not require environmental review and is not a “project” pursuant to State CEQA Guidelines Sections 15060 (c)(3) and 15378. The establishment and implementation of a VMT threshold is a state-mandated requirement under SB 743 and Section 15064.3 of the CEQA Guidelines.

Attachments:

Attachment A: SB 743 Summary Memo for Council Study Session (PDF)

Attachment B: Santa Clara Countywide VMT Estimation Tool (PDF)

Memorandum

Date: April 17, 2020

To: Sylvia Star-Lack and Joanna Chan, City of Palo Alto

From: Bob Grandy, Daniel Rubins, and Teresa Whinery, Fehr & Peers

Subject: Summary of Key Decisions for SB 743 Implementation in the City of Palo Alto – for May 4 City Council Study Session

SF20-1094

This memorandum summarizes the key decisions that are required for implementation of Senate Bill (SB) 743 within the City of Palo Alto. SB 743 eliminates the use of automobile delay from the CEQA environmental review process and the determination of CEQA transportation impacts. The new metric required by the CEQA Guidelines is vehicle-miles traveled (VMT). The shift from automobile delay to VMT changes the focus of transportation impact analysis in CEQA from measuring impacts *to* drivers, to measuring the impact *of* driving.

SB 743 takes full effect on July 1, 2020; after that time, all transportation impact analysis for CEQA must rely on VMT. CEQA Statute Section 21099(b)(2) states that upon certification of the 2018 CEQA Guidelines, LOS shall not be considered a significant impact on the environment. CEQA transportation studies should continue to evaluate the effect of a project on transit, pedestrian, and bicycle service or facilities as well as safety.

As described in this memorandum, SB 743 has ramifications for a range of City processes, including but not limited to the CEQA process, the entitlements review process, and the traffic impact fee.

Key Decisions for SB 743 Implementation

Changing the metric used to determine significant transportation impacts requires the City to provide guidance to project sponsors and environmental consultants on the following items:

- **Metrics**, or how VMT is presented;
- **Screening**, or determining which projects require quantitative or qualitative VMT analysis;



- **Methods**, or how VMT will be calculated;
- **Thresholds**, or how much VMT is determined to have a significant impact on the environment; and,
- **Mitigation Options**, or how project sponsors can address significant VMT impacts related to their projects.

In addition, each of the above decisions must include guidance related to three separate project types:

- **Land Use Projects**, including development projects for a variety of land uses;
- **Land Use Plans**, including future Comprehensive Plan updates and future Specific Plans, Area Plans, and Precise Plans; and,
- **Transportation Projects**, including infrastructure changes, lane additions or removals, bicycle and pedestrian facilities, etc.

This memorandum describes alternative approaches to applying VMT as a CEQA transportation metric because the most appropriate method, metric, screening approach, threshold, and mitigation varies depending on the land use or type of project. The information presented provides an understanding of how the City of Palo Alto would approach most land use project types including residential, office, and retail land use projects.

Metrics

The City of Palo Alto may assess projects based on a preferred form of the VMT metric. There are two options for measuring VMT (project-generated VMT and the project's effect on VMT) and several options for reporting VMT, includes total VMT, partial VMT (such as VMT disaggregated by trip purpose), or VMT as an efficiency metric (such as VMT per resident).

There are two primary metrics for measuring VMT of a given project or geographic area: project-generated VMT, or the total amount of travel to and from the project, and the project's effect on VMT, or the way a project changes travel in a given geographic area (this is also known as "boundary VMT"). A more detailed description of each metric is provided below. **Figure 1** illustrates the difference between these two types of VMT.

Project-generated VMT measures the amount of all vehicle type travel generated by a project (i.e., number of vehicle trips multiplied by their corresponding trip lengths). This is the VMT metric that is currently calculated for land use projects as a key input to CEQA air quality, GHG, and



energy assessments. This VMT metric will be measured to determine transportation impacts for certain land use types such as residential and office uses, as well as provide inputs to a project's air quality, GHG, and energy assessments.

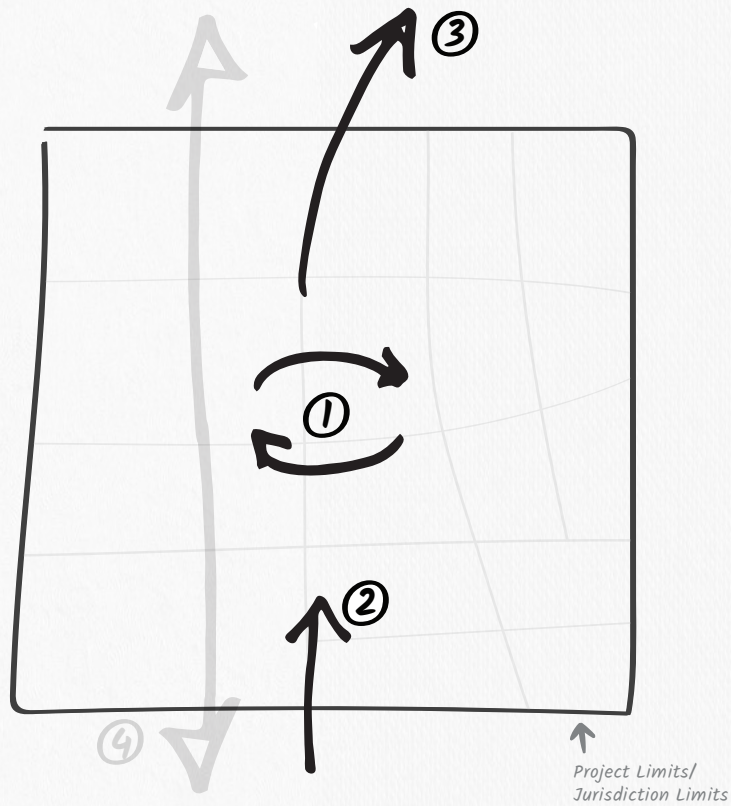
Project's effect on VMT is measured by comparing all VMT on roadways within a selected area or boundary for scenarios without and with a project or plan. It is forecast using a travel demand model and provides a more complete evaluation of the potential effects of certain land use projects or an area plan because it captures the combined effect of new VMT, shifting of existing VMT to/from other neighborhoods, and/or shifting of existing VMT to alternate travel routes or modes. Project effect on VMT would be evaluated for retail uses and large development projects that would result in a significant change in the city's jobs-housing balance. It would be evaluated to measure potential VMT impacts for transportation projects that add roadway capacity. It is also the approach that would be used where a cumulative analysis of VMT is required, likely for office or regional-serving commercial uses. This metric the effect a project would have on the way all people travel in a selected area (i.e., either a citywide, countywide, or regional scale). It can also provide an indication of whether there would be a net increase or net decrease in VMT if a land use project was built in a different location.

There are also several ways to report VMT. New land use projects accommodate population and employment growth; this growth generates new VMT (e.g., a new office building resulting from a land use rezone will generate new vehicle trips and VMT). Whether a project contributes to a more efficient land use pattern (i.e., one that requires less vehicle travel compared to similar land uses) can be determined by using a VMT efficiency metric. Efficiency metrics express this total increase in VMT relative to the increase in residents and employees (VMT per resident, or VMT per worker). Total project-generated VMT as a stand-alone metric tends to be more relevant as an input to air quality, GHG, and energy consumption impact analysis.

Total VMT is a metric that would be estimated for retail and potentially large mixed-use projects, land use plans (i.e., Comprehensive Plan, Specific Plans, etc.), and transportation projects that require a quantitative VMT assessment and have the potential to influence vehicle travel associated with neighboring land uses and/or displace other existing trips within the region.

Partial VMT is a metric that involves combining only a subset of the VMT generated by vehicle trips, vehicle types, land uses, and/or trip purposes associated with a land development project. Examples include accounting only for light-duty vehicles (as recommended by OPR for residential and office uses), only for trips made between home and work (as recommended by OPR for office uses), or only for trips associated with a dominant land use type for a mixed-use project.

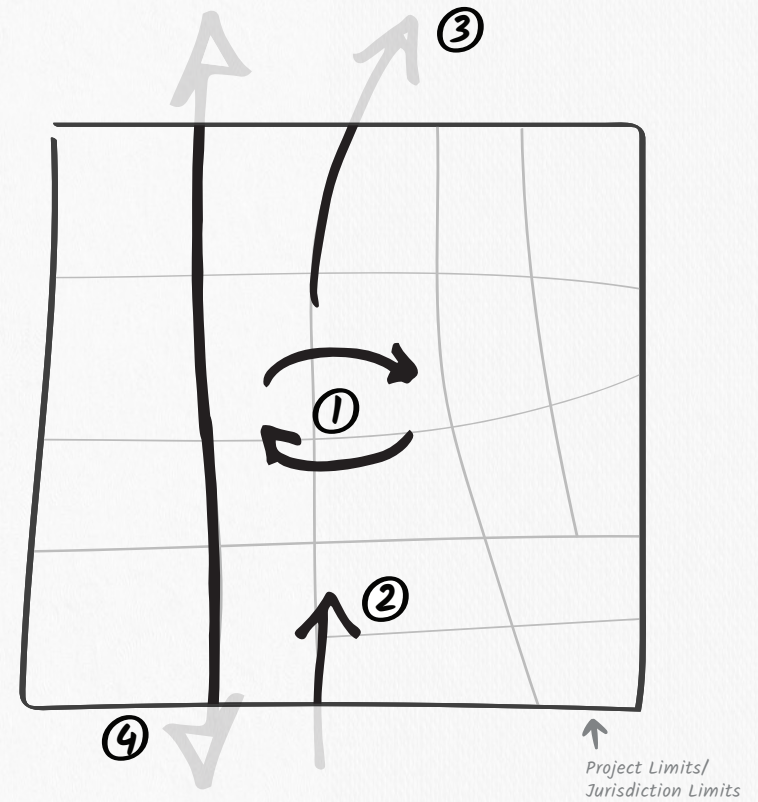
Project Generated VMT



- ① 2x Internal to Internal (2xII) VMT
- ② External to Internal (XI) VMT
- ③ Internal to External (IX) VMT
- ④ External to External (XX) VMT

Notes: External to External (XX) trips are excluded from this VMT metric.
Adjustments to project generated VMT made to include the full length of trips that leave the jurisdiction to capture inter-jurisdiction travel.

Project Effect on VMT (Boundary VMT)



- ① Internal to Internal VMT
- ② External to Internal (XI) VMT
- ③ Internal to External (IX) VMT
- ④ External to External (XX) VMT

Notes: Boundary VMT is all the VMT on the streets within the Project Limits / Jurisdiction Limits.



Figure 1
Measuring Vehicle Miles Traveled (VMT)



VMT efficiency metrics can be further disaggregated into specific types of VMT and populations, such as considering only the VMT generated by residents making trips to and from home. Each of the VMT efficiency metrics listed below addresses a slightly different question in terms of impact analysis.

- **Home-based VMT per resident** reflects how close households are to common destinations, as well as the available transportation options. Because the trip type is specific to local residents, it helps compare residential projects across different locations. However, it omits many different trip types and is considered a “partial” VMT metric.

Answers the question: Do people living here drive more or less on average compared to other places?

- **Home-based work VMT per employee** reflects how close a workplace is to places where employees live. Because the trip type is specific to work trips, it helps compare office or other employment projects across different locations. However, it omits many different trip types, and is considered a “partial” VMT metric.

Answers the question: Do people working here drive more or less during their commutes compared to workers in other places?

- **Total project-generated VMT per service population** provides a more comprehensive understanding of VMT than the home-based or home-based work partial VMT metrics. By taking the total VMT to and from a project or zone and dividing it by the total number of residents *plus* the total number of employees, we can compare how VMT intensive the project is as a whole. One caveat for total VMT per service population is that employment-based uses generate more total VMT than non-employment uses, so projects with more employment may have a higher VMT rate by this metric. Further, the VMT associated with employees also includes VMT generated by visitors and customers. Retail and commercial land uses, therefore, generate disproportionately higher levels of VMT per employee.

Answers the question: Is this area or project as a whole more or less VMT intensive than other places?

For most single-use projects, using one of the partial VMT efficiency metrics (home-based trips per resident, for example) is the simplest way to analyze the VMT generated by a project for screening purposes. This is also the method recommended by the Office of Planning and Research (OPR) in its *Technical Advisory*.¹ If a project is not screened out of VMT impact analysis and thereby determined to result in a less than significant VMT impact, then a complete VMT analysis should be performed.

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



Screening

OPR recommends a screening process for project types known to be low VMT generators. The City of Palo Alto may choose to screen projects based on one or more of the OPR criteria described in more detail below, requiring only a qualitative discussion in the CEQA document. This screening approach would enable project streamlining by eliminating the need to prepare a quantitative VMT analysis for low VMT-generating projects that meet the screening criteria. This is most appropriate for projects that are consistent with the Comprehensive Plan and/or those that would reduce VMT based on their characteristics. As with all CEQA screening, an impact presumption of less-than-significant should be based on substantial evidence for the project.

The OPR *Technical Advisory* includes suggested methods for screening projects to quickly identify when a project should be expected to cause a less than significant VMT impact without conducting a detailed VMT analysis. The OPR *Technical Advisory* suggests that lead agencies may screen out VMT impacts for small projects, residential and office projects located in low-VMT areas, projects located in proximity to a major transit stop, affordable housing developments, local-serving retail projects of less than 50,000 square feet, and transportation projects that would not result in an increase to vehicle capacity. Since land use plans affect a larger area and serve as the basis for environmental analysis of future projects, all land use plans (including the Comprehensive Plan, Precise Plans, and Specific Plans) should conduct a quantitative VMT analysis and not utilize screening.

Screening for Small Projects

The City of Palo Alto may choose to screen projects that generate or attract fewer than 110 trips per day. Based on research for small project triggers, this may equate to nonresidential (e.g., office) projects of 10,000 square feet or less and residential projects of 20 units or less.

Screening for Projects Located in Low-VMT Areas

The City of Palo Alto may choose to screen residential and office projects located in low-VMT areas 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.

Screening for Projects in Proximity to a Major Transit Stop

The City of Palo Alto may choose to screen projects that are located within a half mile of an existing or planned high-quality transit corridor or major transit station. Proximity to transit is



explicitly listed in the CEQA Guidelines as a reason to presume a project has no significant impacts based on VMT. In Palo Alto, this includes the existing Downtown Palo Alto Caltrain station and at stops for bus routes with headways of 15 minutes or less.

The OPR *Technical Advisory* notes that a presumption of less than significant should not be applied, and a VMT analysis should be performed, if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75
- Includes more parking than required by the City of Palo Alto
- Is inconsistent with Plan Bay Area
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units

If any of the above conditions apply, a detailed VMT analysis should be conducted to determine whether the project exceeds the VMT thresholds.

Screening for Affordable Housing

The City of Palo Alto may choose to screen residential projects containing a particular amount of affordable housing (based on local circumstances and substantial evidence as determined by the City) on the basis that affordable housing generates less VMT than market-rate housing. Affordable housing located within infill locations generally improves jobs-housing balance and may thus result in shorter commutes for low-income workers.

Screening for Local-Serving Retail

The City of Palo Alto may choose to screen local-serving retail projects of less than 50,000 square feet, on the basis that they attract trips that would otherwise travel longer distances. Staff would evaluate both the project characteristics and the context of the project location to make a determination as to whether a given retail project is local serving. Regional-serving retail projects would not be subject to screening.

Screening for Transportation Projects

The City of Palo Alto 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.



Methods

The City of Palo Alto has discretion to select its preferred method for calculating VMT. The method used for setting VMT impact thresholds must be the same method used for project impact analysis.

CEQA requires environmental analyses to reflect a “good faith effort at full disclosure.” Lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries, for example, by failing to count the portion of a trip that falls outside the jurisdiction or by discounting the VMT from a trip that crosses a jurisdictional boundary. Thus, where methodologies exist that can estimate the full extent of vehicle travel from a project, CEQA specifies that a lead agency should apply them to do so. The following describes both a screening methodology and a quantitative VMT evaluation method.

- To identify projects that could be screened from a quantitative VMT analysis, the Santa Clara Valley Transportation Authority (VTA) is leading the development of a web-based countywide Santa Clara Countywide VMT Estimation Tool. This tool will provide the basis for identifying land uses in Palo Alto that are low VMT generators and/or would be located in a transit priority area and could thus be screened out from preparing a quantitative VMT analysis. For projects that are screened out, the City would provide a qualitative discussion of the project characteristics that form the basis for determining that the project is presumed to have a less than significant VMT impact. The VTA’s estimation tool is an effort to streamline the process by determining whether a project is likely to result in significant VMT impacts. It is anticipated to be complete and available for use by July 1, 2020.
- For larger or more unique land development projects that are not screened out, a travel demand model of regional scope should be used to develop quantitative VMT forecasts because it allows for a more complete accounting of all vehicle trips and trip lengths, and can produce estimates for the project’s cumulative impacts on VMT that account for changes in behavior. These models can also account for the potential induced travel effects of a project on VMT. For Palo Alto, this would mean using either the Santa Clara Valley Transportation Authority (VTA) or Metropolitan Transportation Commission (MTC) travel models. The VTA model has a substantially more refined transportation network in the City of Palo Alto than the MTC model does and would therefore be a preferred tool for most projects.



The VTA travel model may be used to calculate the VMT metrics described above if the project is large enough for the model to be sensitive to changes in land use.² Ideally, this would consist of calculating total project-generated VMT, total Citywide or County VMT, and VMT per employee/resident/service population for model scenarios with and without the project. Impacts could be assessed based on both efficiency metrics (e.g., home-based VMT per resident) as well as the project's effect on VMT (the total change between no project and plus project scenarios). Because Palo Alto is located near the edge of the model boundaries, VMT reported by the model should be adjusted to account for VMT that extends beyond the model limits (e.g., from Palo Alto to San Rafael, which is outside the VTA boundary). These adjustments should include adding an average trip length for vehicle trips leaving the model area based on data from the California State Travel Demand Model, the California Household Travel Survey, mobile devices, or the US Census Bureau.

Mixed-use projects should be analyzed using the VTA travel model to assess the project's effect on VMT and report home-based VMT per resident and home-based work VMT per employee for residential and office components, respectively. Home-based VMT per resident may also be useful for other uses with similar travel characteristics, such as hotels or group quarters. Home-based work VMT per employee may be useful for other uses similar to employment, such as schools, universities, etc.

Some land use components (retail, restaurant, entertainment) may be assessed qualitatively if they serve primarily local trips. Particularly for retail uses, a qualitative discussion of how the uses would primarily serve local trips may be adequate to determine the project's effect on VMT. Otherwise, based on guidance in the OPR *Technical Advisory*, retail projects should be assessed based on the project's effect on VMT.

Some projects may not be large enough for the VTA travel model to be sensitive to the changes they represent, but too large to qualify for small project screening. In these cases, spreadsheet-based methods based on a VMT generation rate for the project's TAZ may be useful. This method works well when the proposed project is similar to the types of land uses already present in the TAZ (for instance, adding a new multi-family development to a residential zone). If the project is

² Model calibration and sensitivity testing should occur as part of any analysis involving travel demand model runs.



small, and somewhat unique for the area in which it is proposed, additional data may need to be collected.

Other alternatives for assessing the VMT effects of smaller projects are to further validate a sub-area travel model (which requires additional time and effort for analysis and may be expensive), or to use a sketch planning tool such as CalEEMod or MXD+ that have been modified to reflect trip generation rates and trip lengths consistent with the VTA travel model used to set thresholds.

The determination of whether a project requires a qualitative, sketch-level, or model-level assessment will need to be made during the environmental scoping process.

Thresholds

OPR's technical advisory document recommends thresholds that vary by project and land use type. The thresholds are generally based on applying Total VMT or VMT efficiency metrics. The City of Palo Alto has discretion to set its own VMT impact thresholds for land use and transportation projects. A key question that must be addressed as part of choosing this threshold is whether the City's expectations for VMT reduction align with state goals. State goals are tied directly to greenhouse gas (GHG) reduction goals, which may or may not be shared with the City. Since thresholds must be supported by substantial evidence, the City will need to carefully review state guidance from OPR and CARB about VMT thresholds before making a determination. Further, the Caltrans endorsement of the OPR thresholds is likely to establish the expectation that a state threshold has been set for land use projects that add VMT to the state highway system.

The CEQA Guidelines encourage local jurisdictions to adopt significance thresholds intended for general use by resolution or ordinance as part of a public process. Lead agencies also have the option to establish thresholds on a project-by-project basis. The City of Palo Alto will need to identify VMT impact thresholds for land use projects, land use plans, and transportation projects. Adopting these thresholds through a public process improves transparency and can be used to help educate the public and project applicants about the City's expectations.

VMT goals that the City sets should be consistent with other adopted plans. Adopting a VMT threshold is a discretionary action and should be consistent with the Comprehensive Plan in particular. VMT reduction is often a part of policies related to reducing air quality impacts, reducing greenhouse gas emissions, or improving energy efficiency. The City should also reconcile how its adopted VMT threshold would contribute to state goals for GHG reduction and discuss how it is helping to meet these goals.



Any CEQA impact threshold should be supported by substantial evidence, which in turn should consist of facts, reasonable assumptions based on facts, and expert opinions supported by facts. The discussion below focuses on the relative substantial evidence available for various threshold options the City may consider. Regardless of the specific threshold the City selects, Palo Alto will still need to consider other substantial evidence related to VMT impacts when analyzing specific projects and making determinations of VMT impact significance.³

Thresholds – Land Use Projects and Plans

The state’s guidance on thresholds is presented in the OPR *Technical Advisory* and the CARB *California Air Resources Board 2017 Scoping Plan – Identified VMT Reductions and Relationship to State Climate Goals*. The OPR threshold generally requires land use projects to achieve a VMT reduction of 15 percent below the city or regional (e.g., Bay Area or Santa Clara County) baseline average depending on the type of land use. The CARB analysis indicates that this threshold would need to be 16.8 percent for automobile only VMT to achieve state GHG reduction goals.

For residential and office projects, OPR indicates that a “per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold.” The recommended OPR thresholds are based on substantial evidence that aligns CEQA transportation analysis to meet statewide targets for GHG emission reductions. This overarching goal is consistent with the City’s Comprehensive Plan 2030. The Comp Plan includes several goals and policies that strive to reduce GHG emissions and air quality impacts, reduce single-occupancy vehicle use, and encourage multi-modal transportation. The City’s current S/CAP has GHG emission reduction goals that are more aggressive than state goals. The 15 percent VMT reduction target may need to be refined to reflect GHG emission reduction goals in the updated S/CAP scheduled for adoption in 2021. In order to align the City with current state VMT reduction targets by July 1, 2020, the City may adopt an initial set of VMT thresholds that are consistent with OPR’s recommendations and update those thresholds later as needed. For individual land use projects that are not screened out and require a quantitative VMT assessment, this would mean the following:

³ One example of this evidence may be the SB 150 report provided by the California Air Resources Board (CARB), which provides evidence that statewide VMT per capita is increasing rather than decreasing. https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf



- Residential projects – A proposed project exceeding a level of 15 percent below existing (baseline) home-based VMT per resident would indicate a significant transportation impact.
- Office projects – A proposed project exceeding a level of 15 percent below existing (baseline) regional home-based work VMT per employee would indicate a significant transportation impact.
- Retail projects – A net increase in total VMT would indicate a significant transportation impact. This metric reflects the nature of most local-serving retail to distribute existing vehicle trips, rather than generate or induce new vehicle trips.
- Mixed-use projects – The City will apply one of the above residential, office, or retail thresholds for mixed-use projects with a dominant use. If there is more than one primary land use type, each of the primary land uses would be evaluated independently by applying the relevant threshold above.
- Other project types – The City will either develop an Ad Hoc (i.e., project-specific) VMT threshold for a unique land use type or apply the most applicable of the above thresholds depending on project characteristics.
- Redevelopment projects – Where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would cause a less than significant VMT impact. If the redevelopment project leads to a net overall increase in VMT, it would cause a significant VMT impact.

When applying the above thresholds, project's VMT is compared to a baseline VMT value that is typically either a citywide or regional average for a land use type. The baseline VMT represents existing conditions and estimated changes over time. The values presented below are for current conditions. As VMT assessments are conducted over the coming years, the VMT Baseline values will be updated.

The 15 percent reductions specified in the Technical Advisory are based on light-duty vehicle project generated VMT (i.e., passenger cars and light trucks). They were also included before completion of CARB modeling of MPO regional transportation plan/sustainable communities strategies (RTP/SCSs). The CARB *Scoping Plan* and *Mobile Source Strategy* identifies that a 14.3 percent reduction in total VMT or a 16.8-percent reduction in light-duty vehicle VMT per capita from 2018 baseline levels is necessary to meet state GHG reduction goals by 2050. These reduction values are based on a fair share estimate of new development's responsibility for VMT reduction and presume that all 2050 California residents will be performing at the reduced VMT



levels. If existing residents (those present in 2018) do not change their travel behavior and the full reduction in VMT was allocated to new growth, then the reduction goal would be much higher. Further, if VMT per capita trends continue to increase as noted in the *2018 Progress Report California's Sustainable Communities and Climate Protection Act*, California Air Resources Board, November 2018, then these reduction percentage values will have to increase. Also, the recommendation above for mixed-use projects to rely on the "dominant use" in VMT analysis may present new challenges. The term "dominant use" is not defined in the CEQA statute or CEQA Guidelines.

One other agency threshold to consider is Caltrans. The Local Development-Intergovernmental Review (LD-IGR) Branch at Caltrans (<https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/local-development-intergovernmental-review>) has responsibility to reduce potential adverse impacts of local development on the state transportation system. As part of its responsibilities, each district branch performs reviews of CEQA environmental documents for local land use projects. These reviews include providing expectations for transportation impact analysis such as metrics and thresholds.

Caltrans released a *VMT-Focused Transportation Impact Study Guide* (February 28, 2020) that recommends use of the OPR thresholds for land use projects and plans. This guidance did not specify whether to use the 15.0 or 16.8 percent threshold value (both values are included in the OPR Technical Advisory). The Caltrans Guide also mentions that Caltrans may request additional analysis for transportation projects; standards for those projects are discussed in the section below.

Setting a threshold lower than the 15-percent reduction recommended by OPR in their *Technical Advisory* is likely legally defensible, so long as the threshold is supported by substantial evidence. The substantial evidence is critical in the threshold setting process and should explain why the OPR-recommended threshold is not appropriate for the lead agency or project, and why another threshold was selected. This evidence will be the basis for supporting the recommended threshold and should carefully consider the definition of substantial evidence contained Section 15384 of the CEQA Guidelines. Additionally, while this approach would likely result in a more modest (and therefore more feasible) VMT reduction target, feasibility of mitigating an impact is not sufficient justification for setting an impact threshold.

Setting a threshold higher than the 15-percent reduction recommended by OPR would be consistent with forecasts in the CARB SB 150 report, which includes evidence that VMT per capita is increasing and, as a result, so are GHG per capita emissions. The thresholds published by CARB



and OPR are based on a number of assumptions about future outcomes related to VMT generation of current residents, fuels, electric vehicles, that may not qualify as reasonably foreseeable under CEQA and do not consider the influence of transportation network companies (e.g., Uber and Lyft) and autonomous vehicles (AV) on travel behavior. These sorts of travel trends, if they continue, may contribute to 'other substantial evidence' that higher VMT reduction levels must be considered and discussed when making a significance finding.

Each of the thresholds above uses a nexus between VMT and GHG to establish substantial evidence. However, future court decisions may indicate that VMT as a metric may be more analogous to prior LOS analysis (i.e., allowing communities to determine what level of VMT change would result in effects that the *community* finds to be significant, including effects such as increased traffic and noise). If VMT thresholds are treated more like LOS thresholds, then lead agencies would have a similar level of discretion to establish thresholds based on context (i.e., sensitivity to the amount of vehicle travel). Past practice allowed lead agencies to set LOS thresholds based largely on the local community's sensitivity to travel delay. For example, rural areas that were more sensitive were allowed to establish LOS thresholds that equated to lower levels of delay. Using this analogy, a lead agency could set VMT thresholds based on a community's sensitivity to the amount of vehicle travel or its associated effects.

Thresholds – Transportation Projects

OPR and Caltrans recommend that a net increase in total VMT may indicate a significant impact for transportation projects. A net decrease or no change in VMT would be evidence of a less than significant VMT impact.

Projects that reduce or have no impact on VMT include most active transportation projects, road diets, and minor operational changes to local roadways. However, capacity increases (i.e., lane additions) on arterial roadways or roadways that carry regional traffic have the potential to induce new vehicle traffic, and therefore new VMT. As an example, adding an additional lane on an arterial roadway that reduces delay, may make driving even more competitive than walking, and shift some trips from walking to driving.

The no net new VMT threshold is the threshold preferred by Caltrans for assessment of impacts to Caltrans facilities and recommended in the OPR *Technical Advisory*. As a threshold, it is also reflective of whether a project simply improves operations for existing users (decreasing delay or improving safety with no change in VMT) or if it also results induces demand for driving.



Mitigation

Trip reduction measures or changes in project land use mix or density are two of the most common strategies for reducing significant VMT impacts at the project site. Longer-term options include program-based approaches such as adopting VMT impact fees, developing a mitigation exchange, or using a mitigation bank. Program-based approaches rely on VMT reduction as the essential nexus and offer the ability to mitigate off-site. Use of transportation demand management (TDM) strategies for mitigation requires monitoring because effectiveness depends on building tenant performance.

The primary methods of mitigating a VMT impact are to either change the project or implement a program designed to reduce VMT, such as a TDM program. VTA has identified the following four VMT mitigation categories.

- Change the project land use mix or density
- Reduce proposed vehicle parking supply levels
- Implement on-site or off-site capital improvements for transit, bicycle, or pedestrian travel
- Implement trip reduction programs as described in a Transportation Demand Management (TDM) program

Project changes may include incorporating a mix of land uses or increasing a project's density. Reduced vehicle parking supply, often in combination with providing increased bicycle parking, can have a substantial effect on reducing vehicle travel or VMT. TDM measures include telecommuting, transit subsidies and/or shuttles, parking strategies to discourage automobile trips (e.g., unbundled parking, paid parking, etc.), promotional programs and incentives (e.g., hosting Bike to Work day or providing transit vouchers), subsidies for commuters using transit or carpooling, and facilities for bicyclists and pedestrians. The TDM programs may be implemented on a project-by-project basis or through a coordinated citywide or countywide program, potentially funded by a future VMT impact fee.

The effectiveness of TDM programs varies widely based on many factors, including participant travel behavior and preferences, the level of investment, project location, and the quality of the multimodal transportation infrastructure. Because of this variation, mitigating a VMT impact using TDM requires a rigorous ongoing monitoring program that measures VMT performance over time until sufficient evidence exists that the VMT reduction goal has been achieved and will be



maintained. This monitoring effort would require additional city staff or project applicant resources and may result in an increased number of projects that have VMT impacts that remain significant and unavoidable even after feasible mitigation.

Considerations for Comprehensive Plan Goals and Policies

Retaining LOS and Other Metrics

The City of Palo Alto may set operational metrics such as delay and LOS as standards in its Circulation Element. Future projects would then be required to conduct traffic studies as part of the entitlement process.

The City of Palo Alto can continue to use vehicle LOS outside of the CEQA process if the City determines it is an important part of the transportation analysis process. For instance, the City may wish to set roadway operating standards based on LOS in the Comprehensive Plan or use LOS to determine a nexus for a transportation impact fee program. Although the City of Palo Alto can also continue to condition projects to build transportation improvements through the entitlement process in a variety of ways, projects that increase roadway capacity would likely be required to conduct a detailed CEQA VMT analysis to measure induced vehicle travel.

Land Use Planning / EIR Tiering

A Comprehensive Plan update can be used to address desired development on parcels outside a screening area, through analyzing the VMT impacts as part of the Comprehensive Plan EIR.

While SB 743 presents new standards for transportation impact assessment, the option to “tier” CEQA analysis from previous environmental review will remain. The tiering process consists of streamlining topics studied for a project if that project was assessed under a previous EIR, such as a single parcel that is consistent with a previously analyzed Specific Plan. In this case, the project would only need to analyze those items which were not previously analyzed. Therefore, if the Specific Plan analyzed VMT in the EIR, then the project may not be required to conduct a detailed VMT analysis. In the near term, this may require investment in plan-area VMT analysis, however it would streamline future projects consistent with an environmentally cleared Comprehensive Plan or Specific Plan that analyzed VMT.

Should the City expect a future Comprehensive Plan to cause a VMT impact, the CEQA review process can be streamlined by reviewing and mitigating projects in the Comprehensive Plan at a citywide level. An updated Comprehensive Plan with a certified EIR identifying the potential VMT



impacts can serve as a starting point for tiered future analysis, and potentially include a framework for developers to contribute to an impact fee program based on VMT reduction as the essential nexus.

Mitigation Programs

Including improvement measures and plans/programs that reduce VMT in the Comprehensive Plan Circulation Element can help establish a nexus for off-site mitigation.

To compensate for limitation of on-site project mitigation, the City can develop off-site mitigation programs as noted above, these types of programs are strengthened when the Comprehensive Plan Circulation Element includes VMT reduction policies and recommends a specific program type considering the other objectives of the Comprehensive Plan. The policies need to consider whether support exists in the community to mitigate in areas not adjacent to the project where the direct impact of new development will be felt the most.

Implications for Future CEQA Transportation Analysis

Once Palo Alto has implemented SB 743 and prepared the needed technical methods, CEQA transportation analyses for small to medium size projects in Palo Alto would likely require be substantially reduced in scope and schedule, allowing for a streamlined approach. Emphasis would be on discussion of transit, bicycle and pedestrian, and safety concerns rather than vehicular delay. For projects that are unable to be screened from a quantitative VMT assessment, there would be an additional analysis cost; however, this would likely remain somewhat less than the cost for assessing LOS impacts.

LOS analysis would not be included in the transportation analysis for CEQA but may be performed independently and used to inform conditions of approval for projects. The City would determine what level of LOS analysis is appropriate, as well as how to assess deficiencies in roadway operations. These criteria will be set in the Circulation Element of the Comprehensive Plan. Critically, this moves the LOS analysis process into the administrative and planning realm; while findings will still be presented to help decision-makers make an informed decision, the potential for litigation based on CEQA adequacy of LOS analysis is removed.

ATTACHMENT B

Santa Clara Countywide VMT Estimation Tool

The Santa Clara Countywide VMT Estimation Tool (SCC VMT Estimation Tool) will screen projects that are exempt from further VMT analysis using project generated VMT thresholds and transportation priority areas, estimate the project generated VMT rate, and estimate VMT reductions for land use projects in Santa Clara County. The types of land use projects addressed include residential, office, and industrial land uses, those land uses in combination with each other, and those land uses with or without local serving retail space. The SCC VMT Estimation Tool will be modular such that Santa Clara Valley Transportation Authority (VTA), along with cities in Santa Clara County and the County of Santa Clara, can include specific VMT screening criteria or model data within the Tool. The Tool will be scalable such that it can be used for a range of project sizes and location within any jurisdiction in Santa Clara County.

The SCC VMT Estimation tool evaluates the VMT for proposed land use projects by determining whether the project is located within a low VMT generating area, estimating the project generated VMT, and evaluating the project generated VMT after potential reduction measures have been applied. The travel forecasting data that the SCC VMT Estimation Tool uses is static, meaning that any data in this tool does not affect the data used from the source travel forecasting model.

The SCC VMT Estimation Tool consists of three separate modules:

- **VMT Screening** – The location of the project is used to determine if the project site is within a low VMT generating area, including low VMT generating traffic analysis zones (TAZ) or parcels and transit priority areas (TPA).
- **Project Generated VMT** – A combination of the project's location and project details is used to estimate VMT generated from the project, which is expressed as a VMT rate (i.e., VMT per population generating the VMT). This process can use the Santa Clara Valley Transportation Authority (VTA)'s parcel-level VMT data or TAZ level VMT generation rates to estimate the project's VMT.
- **VMT Reductions** – A series of VMT mitigation measures are applied to potentially reduce the project generated VMT. The project VMT is compared to the applicable VMT threshold to determine whether it falls below the threshold at the start, or whether it is reduced below the threshold after applying additional VMT reduction measures. The VMT threshold used in this module is calculated in the VMT Screening module