
TECHNICAL MEMORANDUM

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From: Jason Pack, PE and Delia Votsch, PE

Subject: SB 743 Implementation Thresholds Assessment

OC18-0585

This technical memorandum summarizes the consultant team assessment of potential VMT thresholds for land use projects and land use plans to comply with SB 743. For all transportation projects, lead agencies have the discretion to select their own metrics and thresholds, consistent with CEQA, and no change to current practice is required. Hence, the remainder of this memo will focus on land use thresholds and is organized into four sections.

- Section 1 - Background on CEQA Thresholds
- Section 2 - OPR VMT Threshold Recommendations
- Section 3 - Recommendations for SBCTA member agencies

Section 1 – Background on CEQA Thresholds

Establishing thresholds requires complying with the new statutes added by SB 743 and traditional guidance contained in CEQA Guidelines Section 15064.7 and new language being proposed as part of the *Proposed Updates to the CEQA Guidelines*, December 2018, California Governor's Office of Planning and Research (see excerpts below).

§ 15064. Determining the Significance of the Environmental Effects Caused by a Project.

(a) Determining whether a project may have a significant effect plays a critical role in the CEQA process.

(1) If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, the agency shall prepare a draft EIR.

(2) When a final EIR identifies one or more significant effects, the lead agency and each responsible agency shall make a finding under Section 15091 for each significant effect and may need to make a statement of overriding considerations under Section 15093 for the project.

(b) **(1)** The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area.

(2) Thresholds of significance, as defined in Section 15064.7(a), may assist lead agencies in determining whether a project may cause a significant impact. When using a threshold, the lead agency should briefly explain how compliance with the threshold means that the project's impacts are less than significant. Compliance with the threshold does not relieve a lead agency of the obligation to consider substantial evidence indicating that the project's environmental effects may still be significant.

Source: http://resources.ca.gov/ceqa/docs/2018_CEQA_FINAL_TEXT_122818.pdf

§ 15064.7. Thresholds of Significance.

~~(a) Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects.~~ A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.

(b) Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects. Thresholds of significance to be adopted for general use as part of the lead agency's environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence. **Lead agencies may also use thresholds on a case-by-case basis as provided in Section 15064(b)(2).**

(c) When adopting **or using** thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

(d) Using environmental standards as thresholds of significance promotes consistency in significance determinations and integrates environmental review with other environmental program planning and regulation. Any public agency may adopt or use an environmental standard as a threshold of significance. In adopting or using an environmental standard as a threshold of significance, a public agency shall explain how the particular requirements of that environmental standard reduce project impacts, including cumulative impacts, to a level that is less than significant, and why the environmental standard is relevant to the analysis of the project under consideration. For the purposes of this subdivision, an "environmental standard" is a rule of general application that is adopted by a public agency through a public review process and that is all of the following:

(1) a quantitative, qualitative or performance requirement found in an ordinance, resolution, rule, regulation, order, plan or other environmental requirement;

(2) adopted for the purpose of environmental protection;

(3) addresses the environmental effect caused by the project; and,

(4) applies to the project under review.

In summary, this threshold setting guidance emphasizes the need to use substantial evidence¹ to help determine when a project will cause an unacceptable environmental condition or outcome. For SB 743, the specific outcome of focus is the change a project will cause in vehicle miles of travel (VMT). Since VMT is already used to determine air quality, energy, and greenhouse gas (GHG) impacts as part of CEQA compliance², the challenge for lead agencies is to answer the question, **“What type or amount of change in VMT constitutes a significant impact solely for transportation purposes?”**

Section 2 - OPR VMT Threshold Recommendations

SB 743 includes the following two legislative intent statements, which were used to help guide OPR’s VMT threshold decisions.

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

The threshold recommendations are found in the *CEQA Guidelines* and the *Technical Advisory*. Specific excerpts and threshold highlights are provided below.

CEQA Guidelines Section 15064.3

(b) Criteria for Analyzing Transportation Impacts.

(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 considered 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.

¹ Per the CEQA Guidelines Section 15384, substantial evidence must be based in fact, rather than conclusions or base assertions.

² The methodology used to calculate VMT for GHG purposes should be reviewed to confirm if it is consistent with SB 743 guidance and requirements. For example, if VMT calculated for GHG emissions is truncated at a model’s jurisdictional boundaries, that may require modifications for SB 743 purposes.

Technical Advisory on Evaluating Transportation Impacts in CEQA (page 10)

*Based on OPR's extensive review of the applicable research, and in light of an assessment by the California Air Resources Board quantifying the need for VMT reduction in order to meet the State's long-term climate goals, **OPR recommends that a per resident or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold.***

Technical Advisory on Evaluating Transportation Impacts in CEQA (page 18)

*As with projects, agencies should analyze VMT outcomes of land use plans across the full area over which the plan may substantively affect travel patterns, including beyond the boundary of the plan or jurisdiction's geography. And as with projects, VMT should be counted in full rather than split between origin and destination. (Emissions inventories have sometimes spit cross-boundary trips in order to sum to a regional total, but CEQA requires accounting for the full impact without truncation or discounting). **Analysis of specific plans may employ the same thresholds described above for projects. A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office, or retail land uses would in aggregate exceed the respective thresholds recommended above.***

Technical Advisory on Evaluating Transportation Impacts in CEQA – Rural Projects Outside of MPOs (page 19)

*In rural areas of non-MPO counties (i.e., areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and **significance thresholds may be best determined on a case-by-case basis.** Note, however, that clustered small towns and small town main streets may have substantial VMT benefits compared to isolated rural development, similar to the transit oriented development described above.*

These (and the other) threshold recommendations in the *Technical Advisory* rely on the following evidence associated with the state's GHG reduction goals and targets in combination with environmental case law.

- Assembly Bill 32 (2006) requires statewide greenhouse gas reductions to 1990 levels by 2020 and continued reductions beyond 2020.
- Senate Bill 32 (2016) requires at least a 40 percent reduction in greenhouse gas emissions by 2030.
- Pursuant to Senate Bill 375 (2008), the California Air Resources Board establishes greenhouse gas reduction targets for metropolitan planning organizations (MPOs) to achieve based on land use patterns and transportation systems specified in Regional Transportation Plans and Sustainable

Community Strategies. Current targets for the largest metropolitan planning organizations range from 13% to 16% reductions by 2035.

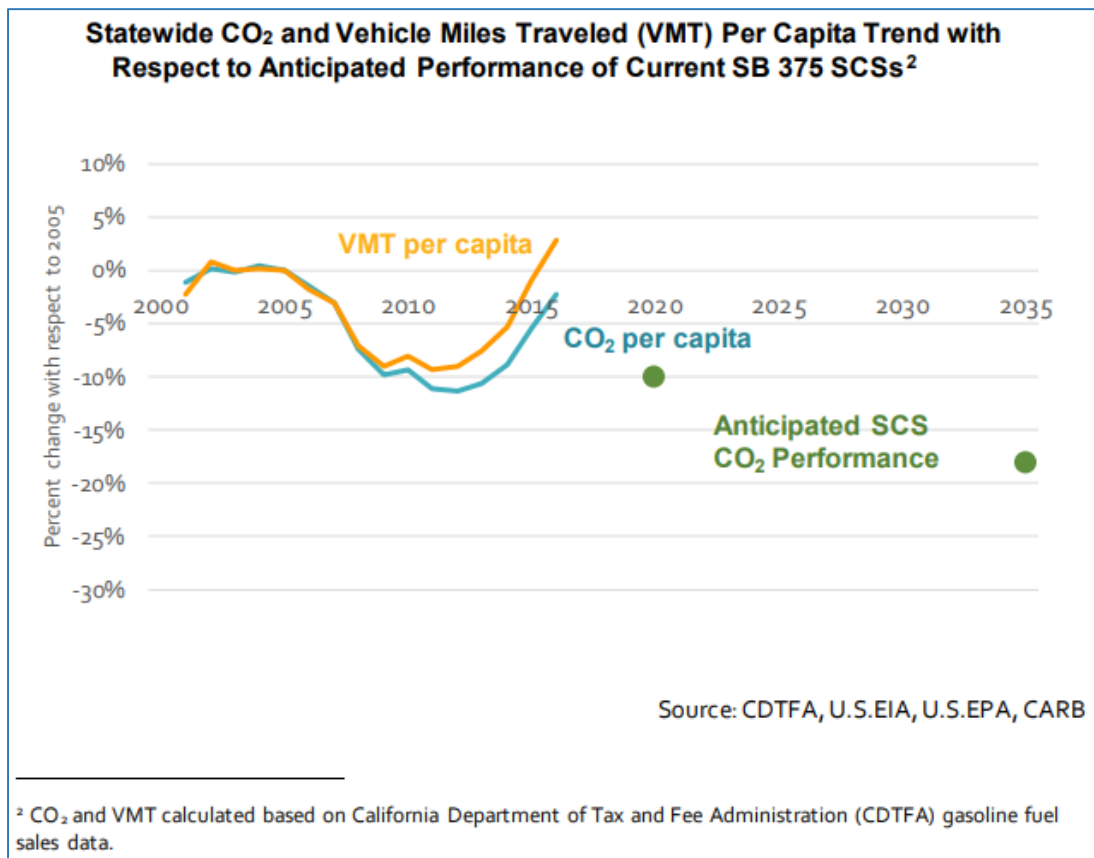
- Executive Order B-30-15 (2015) sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030.
- Executive Order S-3-05 (2005) sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.
- Executive Order B-16-12 (2012) specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.
- Senate Bill 391 requires the California Transportation Plan to support 80 percent reduction in GHGs below 1990 levels by 2050.
- The California Air Resources Board Mobile Source Strategy (2016) describes California's strategy for containing air pollutant emissions from vehicles and quantifies VMT growth compatible with achieving state targets.
- The California Air Resources Board's 2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target describes California's strategy for containing greenhouse gas emissions from vehicles and quantifies VMT growth compatible with achieving state targets.
- The Caltrans Strategic Management Plan (2015) calls for a 15 percent reduction in VMT per resident compared to 2010 levels, by 2020.
- California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals (2019) identifies a 16.8 percent reduction in automobile VMT per resident below existing (2018) levels to achieve statewide GHG reduction goals.

Lead agencies should note that the OPR recommended VMT thresholds are almost exclusively based on GHG and air pollution reduction goals. While this is one of the SB 743 legislative intent objectives, a less clear connection is made to the other legislative intent objectives to encourage infill development and promote active transportation. And, as noted above, GHG impacts are already addressed in another CEQA section.

Another important distinction within the Technical Advisory is how projects within different land use contexts are treated. The general expectation that a 15 percent reduction below that of existing development may be reasonable is proposed for projects within metropolitan planning organizations (MPOs). For rural areas outside MPOs, the Technical Advisory recognizes that VMT mitigation options are limited so thresholds may need to be set on a case-by-case basis.

The recognition that land use context matters when it comes to the potential VMT mitigation options and effectiveness is important. The MPO boundary distinction is not relevant to the feasibility of VMT mitigation. A rural or suburban area inside or outside an MPO boundary will have very similar limitations when it comes to the feasibility of VMT reduction options. As such, land use context and not MPO status

should be the defining criteria for setting threshold expectations. The land use context is also relevant to the potential range of effectiveness associated with VMT reduction strategies. The Technical Advisory relies on the *Quantifying Greenhouse Gas Mitigation Measures*, CAPCOA, 2010 resource document to help justify the 15 percent reduction threshold stating, "...fifteen percent reduction in VMT are achievable at the project level in a variety of place types...". A more accurate reading of the CAPCOA document is that a fifteen percent is the **maximum** reduction when combining multiple mitigation strategies for the suburban center place type. For suburban place types, 10% is the maximum and requires a project to contain a diverse land use mix, workforce housing, and project-specific transit. It is also important to note that the maximum percent reductions were not based on data or research comparing the actual performance of VMT reduction strategies in these place types. Instead, the percentages were derived from a limited comparison of aggregate citywide VMT performance for Sebastopol, San Rafael, and San Mateo where VMT performance ranged from 0 to 17 percent below the statewide VMT/resident average based on data collected prior to 2002. Little to evidence exists about the long-term performance of similar TDM strategies in different land use contexts. As such, VMT reductions from TDM strategies cannot be guaranteed in most cases.



California VMT Trends

Source: 2018 Progress Report California's Sustainable Communities and Climate Protection Act, California Air Resources Board, 2018

Section 3 - Recommendations for SBCTA member agencies

How should lead agencies approach VMT threshold setting given their discretion? Since an impact under CEQA begins with a change to the existing environment, a starting level for potential thresholds would be the baseline (i.e., existing condition) VMT, VMT per resident, VMT per employee, or VMT per service population³. Since VMT will increase or fluctuate with population and employment growth, changes in economic activity, and expansion of new vehicle travel choices (i.e., Uber, Lyft, Chariot, autonomous vehicles, etc.), expressing VMT measurement in an efficiency metric form allows for more direct comparisons to baseline conditions⁴ when it comes to land use projects, land use plans, and transportation projects. Establishing a threshold such as baseline VMT per service population would be essentially setting an expectation that future land uses perform similar to existing land uses. If this is the floor, then expectations for VMT reduction can increase depending on a community's values related to vehicle use and its associated effects on mobility, economic activity, and environmental consequences. Working towards the 15-percent reduction recommended in the Technical Advisory becomes more feasible as the land use context becomes more urban with higher densities and high-quality transit systems. In central cities, the 15-percent reduction can be surpassed because of the close proximity of land uses and the multiple options for accessing destinations by walking, using bicycles or scooters, sharing vehicles, and using transit.

While OPR has developed specific recommended VMT impact thresholds for project-related impacts, current practice has not sufficiently evolved where a clear line can be drawn between 'acceptable' and 'unacceptable' levels of VMT change for the sole purpose of determining a significant transportation impact especially when considering land use context. Furthermore, OPR's Guidance is only a recommendation and not binding law. Until SB 743, VMT changes were viewed through an environmental lens that focused on the relationship to fuel consumption and emissions. For transportation purposes, VMT has traditionally been used to evaluate whether land use or transportation decisions resulted in greater dependency on vehicle travel. Trying to determine whether a portion of someone's daily vehicle travel is unacceptable or would constitute a significant transportation impact is generally not clear to lead agencies.

Another consideration in threshold setting is how to address cumulative VMT impacts and whether addressing them in the general plan EIR is advantageous for streamlining the review of subsequent land use and transportation projects given CEQA relief available through SB 375 or CEQA Guidelines Section 15183. This section of the Guidelines may relieve a project of additional environmental review if the

³ Service population is defined as the sum of residents and employees

⁴ Baseline conditions are typically defined as the year when a Notice of Preparation for an EIR is issued, rather than a specific year

environmental impact was adequately addressed in the general plan EIR, if there are no project-specific significant effects which are specific to the project on its site, and if the project is consistent with the general plan (see below).

15183. PROJECTS CONSISTENT WITH A COMMUNITY PLAN OR ZONING

(a) CEQA mandates that projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.

The use of Section 15183 also addresses cumulative impacts as acknowledged in Section 15130(e).

15130. DISCUSSION OF CUMULATIVE IMPACTS

(e) If a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact, as provided in Section 15183(j).

For cities in the San Bernardino County region, addressing VMT impacts in general plan EIRs could be useful in understanding how VMT reduction should be balanced against other community values when it comes to setting new VMT impact thresholds for SB 743.

Given this information, lead agencies have at least five options for setting thresholds as outlined below. Under any option, the lead agency must develop its own substantial evidence to support their preferred threshold and should consider multiple perspectives. These perspectives include those from the community in general as well as specific stakeholder perspectives from the development community and environmental protection groups. A threshold that is too stringent could lead to a permanent significant and unavoidable VMT impact finding increasing the cost of environmental review for developers. Conversely, a threshold that does not result in any significant impacts could lead to missed opportunities to reasonably reduce VMT and related environmental impacts. In either case, attracting the attention of specific stakeholder groups can lead to CEQA challenges, which are often determined based on the strength of substantial evidence supporting lead agency decisions.

OPTION 1 – Rely on the OPR Technical Advisory Thresholds

The first option is to simply rely on the threshold recommendations contained in the OPR Technical Advisory. As noted above, the general expectation is that land use projects should be measured against a 15 percent reduction below that of existing baseline conditions. Specific VMT thresholds for residential, office (work-related), and retail land uses are summarized below.

- Residential projects – A proposed project exceeding a level of 15 percent below existing (baseline) VMT per resident may indicate a significant transportation impact. Existing VMT per resident may be measured as regional VMT per resident or as city VMT per resident.
- Office projects – A proposed project exceeding a level of 15 percent below existing (baseline) regional VMT per employee may indicate a significant transportation impact.
- Retail projects – A net increase in total VMT may indicate a significant transportation impact.

For land use plans (i.e., a general plan, area plan, or community plan), a significant impact would occur if the respective thresholds above were exceeded in aggregate. This means that new population and employment growth combined the planned transportation network would need to generate future VMT per resident or VMT per worker that is less than 85 percent of the baseline value to be considered less than significant. Land use project and land use plans would also need to be consistent with the applicable RTP/SCS.

A potential limitation of the OPR recommendations is that the substantial evidence used to justify the thresholds is largely based on the state's air quality and GHG goals. Four main issues arise from this reliance.

- The OPR recommended threshold does not establish a level of VMT reduction that would result in the state meeting its air quality and GHG goals according to the *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* (2019). This may create confusion with air quality and GHG impact analysis in environmental documents, which should already address the influence of VMT.
- The OPR recommended thresholds do not directly reflect expectations related to the other SB 743 objectives related to statewide goals to promote public health through active transportation, infill development, multimodal networks, and a diversity of land uses. Recommending a reduction below baseline levels is consistent with these objectives, but the numerical value has not been tied to specific statewide values for each objective or goal.

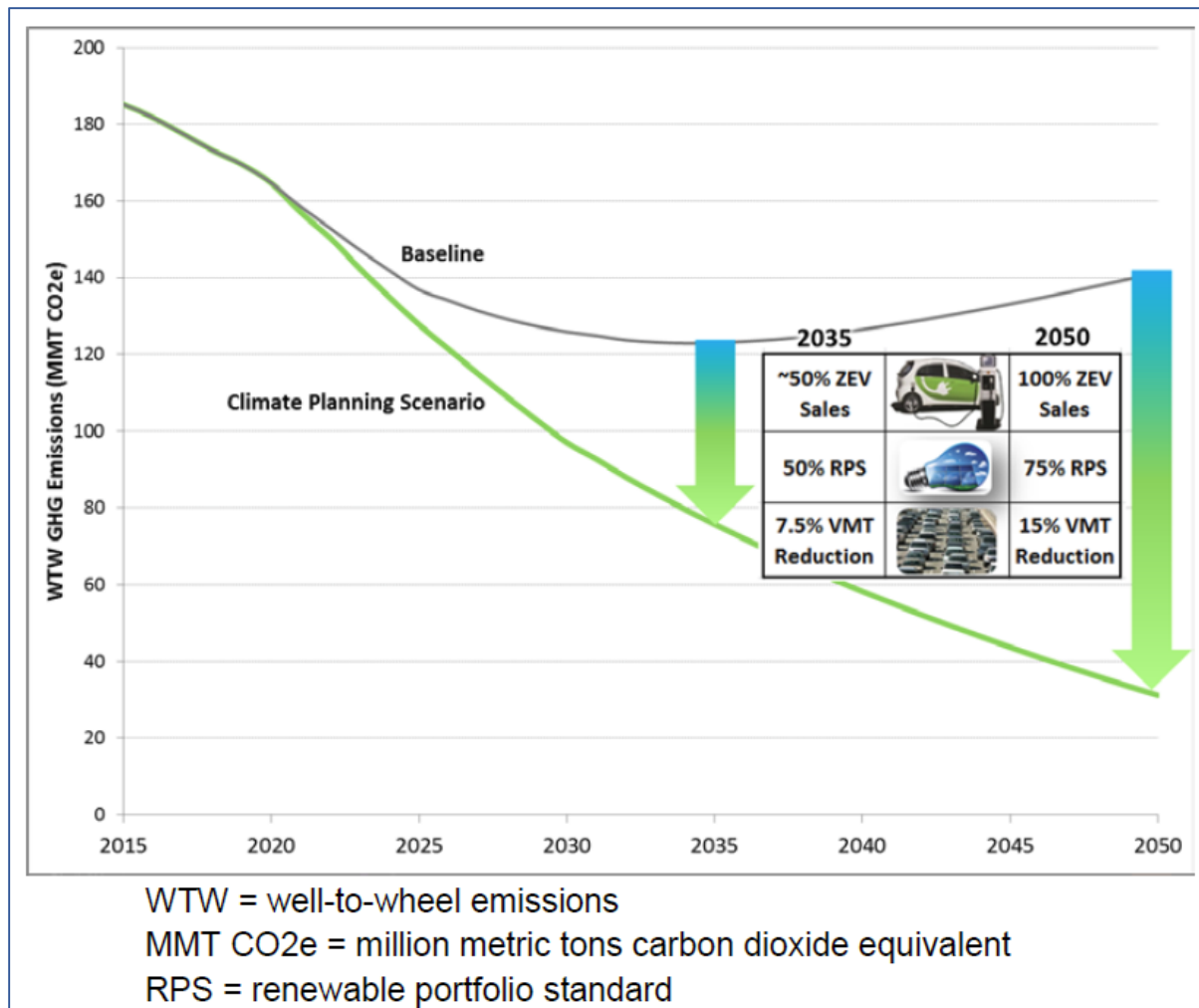
- State expectations for air quality and GHG may not align with local/lead agency expectations. Using state expectations for a local lead agency threshold may create inconsistencies with local city or county general plans.
- Each agency relying upon OPR's recommended threshold should still develop and set forth the substantial evidence explaining why OPR's recommendation is appropriate for the individual agency adopting it.

OPTION 2 – Set Thresholds Consistent with Lead Agency Air Quality, GHG Reduction, and Energy Conservation Goals

This option sets a threshold consistent with a lead agency's air quality, GHG reduction, and energy conservation goals. A local agency would have to provide substantial evidence justifying why any threshold would meet statewide GHG goals. This approach requires that local air quality and GHG reduction goals in general plans, climate action plans, or GHG reduction plans comply with the legislation and associated plans described above on pages 5 and 6. In general, most of the expectations set through legislation are related to the state's GHG reduction goals that were originally captured in EO S-3-05.

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

SB 32 expanded on these goals and added the expectation that the state should reach 40 percent below 1990 levels by 2030 followed by SB 391 that requires the California Transportation Plan to support 80 percent reduction in GHGs below 1990 levels by 2050. With respect to the land use and transportation sectors, SB 375 tasked ARB with setting specific GHG reduction goals through the RTP/SCSs prepared by MPOs. The ARB *Scoping Plan* and *Mobile Source Strategy* provide analysis related to how the state can achieve the legislative and executive goals while the Caltrans *Strategic Management Plan* and *Smart Mobility Framework* provide supportive guidance and metrics. An important recognition of the ARB *Scoping Plan* and *Mobile Source Strategy* is that the initial SB 375 targets were not aggressive enough. The state needs to achieve a reduction of 7 percent below projected 2030 VMT levels and 15 percent below projected 2050 VMT levels associated with the first round of RTP/SCSs (see chart below).



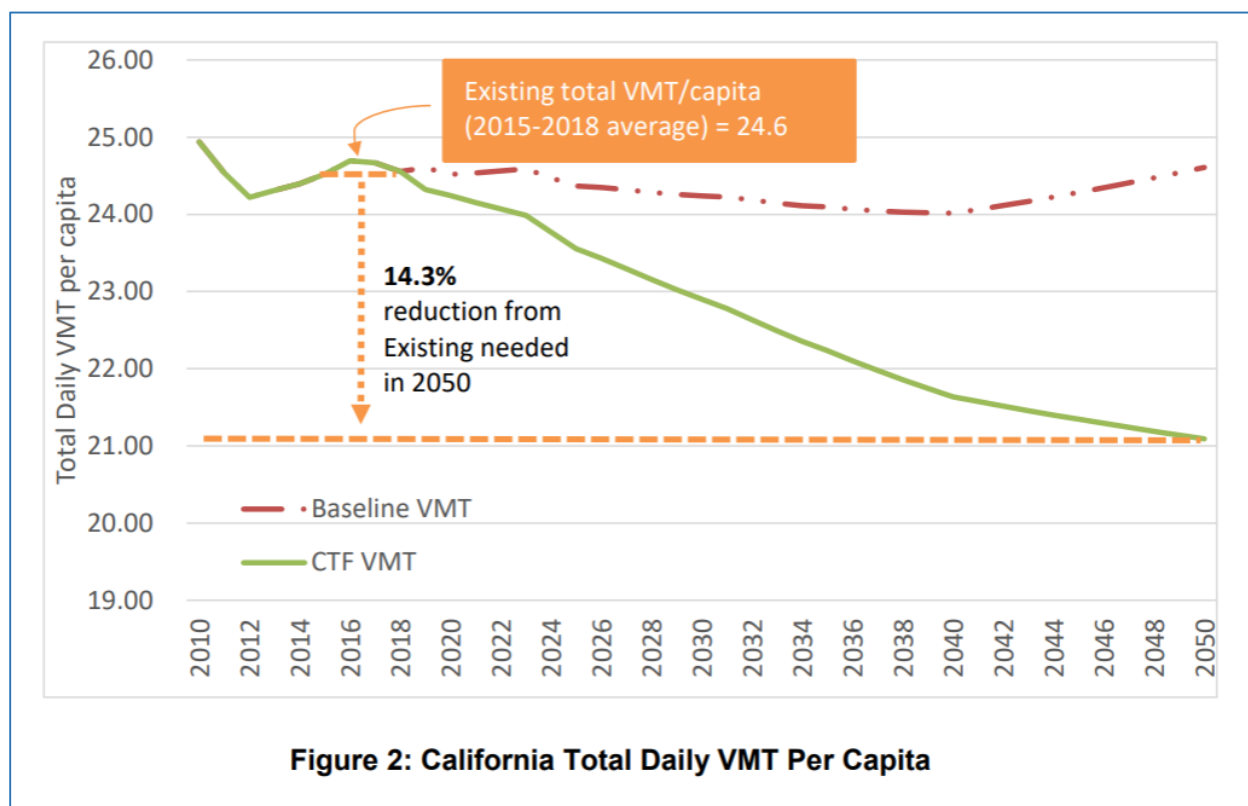
Statewide On-Road GHG Emissions

Source: https://www.arb.ca.gov/cc/sb375/final_staff_proposal_sb375_target_update_october_2017.pdf (pg. 12)

Note that the baseline trend in the chart did not consider key disruptive trends such as transportation network companies (TNCs) and autonomous vehicles (AVs) so it is possible that baseline VMT may be higher. Further, the climate planning scenario did not consider the recently issued Governor's Executive Order (EO) B-55-18 that establishes the goal to achieve carbon neutrality no later than 2045. Consideration of these factors would increase the level of VMT reduction needed to achieve the State's climate goals.

The most recent ARB analysis contained in *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, January 2019 recommends project specific VMT reduction thresholds of 16.8 percent reduction from baseline for light-duty vehicle VMT (i.e., passenger cars and light trucks) or a 14.3 percent reduction for total VMT (i.e., all vehicles) – see excerpt below. These reductions are dependent on MPO RTP/SCS targets being met, which may not be a reasonable assumption for CEQA purposes given the information presented above from the *2018 Progress Report*

California's Sustainable Communities and Climate Protection Act. Also, ARB does not provide details about whether the VMT values should be compared against jurisdictional or regional baseline values. Since the analysis was based on statewide data, it may be reasonable to presume that the reduction expectation is a fair-share expectation for all jurisdictions.



ARB Recommended Total VMT per Resident Threshold

Source: *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, January 2019

One benefit of relying on ARB or other state agencies for a threshold recommendation is the CEQA Guidelines provision in Section 15064.7(c) highlighted below.

§ 15064.7. Thresholds of Significance.

(a) ~~Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects.~~ A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant.

(b) ~~Each public agency is encouraged to develop and publish thresholds of significance that the agency uses in the determination of the significance of environmental effects.~~ Thresholds of significance to be adopted for general use as part of the lead agency's environmental review process must be adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence. Lead agencies may also use thresholds on a case-by-case basis as provided in Section 15064(b)(2).

(c) When adopting or using thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence.

ARB meets the criteria of being a public agency and having noted expertise in the areas of VMT and emissions analysis. Further, the recommended threshold values above were developed in specific consideration of SB 743 requirements.

One other agency threshold to consider is Caltrans. The Local Development-Intergovernmental Review (LD-IGR) Branch at Caltrans (http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa.html) 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 has published initial guidance related to SB 743 implementation.

- *Local Development – Intergovernmental Review Program Interim Guidance*, Caltrans, November 9, 2016 (<http://www.dot.ca.gov/hq/tpp/documents/RevisedInterimGuidance11092016.pdf>)

An important part of the Caltrans guidance are the following expectations for thresholds and impact findings related to VMT.



A. Comment on Vehicle Miles Traveled associated with the project.

Reviewers should comment on vehicle miles traveled resulting from the land use project, applying local agency thresholds or absent those, thresholds recommended ~~by the most recent draft of in OPR's adopted~~ CEQA Guidelines ~~and~~ or OPR's approved Technical Advisory. If an assessment of VMT is not presented, Caltrans should request it be presented. Though SB 743 clarifies requirements for transportation analysis, a VMT analysis is already needed to meet other CEQA requirements.¹ Methods for assessing VMT should be compared to the methods recommended in the OPR's approved Technical Advisory. Where methods are not consistent with the recommendations in the Technical Advisory, Caltrans should comment on those methods. Where the project exhibits less than threshold VMT, Caltrans comments should acknowledge the project's transportation efficiency. Where the project exhibits greater than threshold VMT, Caltrans should request mitigation. Examples of mitigation measures are included in the OPR Technical Advisory. Contact ~~the~~ Caltrans SB 743 Program Implementation Manager, Alyssa Begley, for assistance with VMT calculation.



Source: <http://www.dot.ca.gov/hq/tpp/documents/RevisedInterimGuidance11092016.pdf>

When Caltrans reviews CEQA documents, they may function as a reviewing agency or a responsible agency. In a responsible agency role, Caltrans has approval authority over some component of the project such as an encroachment permit for access to the state highway system. Comments from Caltrans should be adequately addressed, and special attention should be paid to those comments when Caltrans serves as a responsible agency since an adequate response may be required to obtain their required approval. The interim guidance above does not endorse the *Technical Advisory* recommendations for thresholds; it only requires IGR staff to 'comment' on VMT analysis. However, Caltrans is working to establish specific VMT thresholds per conversations with Alyssa Begley, SB 743 Program Implementation Manager with Caltrans. Further, Caltrans may have already establish GHG thresholds that could also serve as VMT thresholds.

In the draft *Interim Guidance: Determining CEQA Significance For Greenhouse Gas Emissions for Projects on the State Highway System*, California Department of Transportation, 2018, Caltrans recommends that any increase in GHG emissions would constitute a significant impact (see excerpt below).

Scenario 3  		
Compare	Existing to Build, If there is an	Increase
and	No Build to Build, If there is a	Decrease
Generally Considered Significant		

Alternative	CO ₂ e Emissions (Metric Tons/Year)
Existing/Baseline 20XX	400
Future/Design-Year 20XX	
No Build	600
Build Alternative	500

Scenario 4  		
Compare	Existing to Build If there is an	Increase
and	No Build to Build If there is an	Increase
Generally Considered Significant		

Alternative	CO ₂ e Emissions (Metric Tons/Year)
Existing/Baseline 20XX	500
Future/Design-Year 20XX	
No Build	700
Build Alternative	900

Interim Caltrans GHG Thresholds

Source: *Interim Guidance: Determining CEQA Significance For Greenhouse Gas Emissions for Projects on the State Highway System*, California Department of Transportation, 2018

Since any increase in VMT would result in an increase in GHG emissions, lead agencies could rely on this Caltrans threshold for VMT purposes using the same 15064.7(c) provision above. Using this threshold would result in most land use projects and land use plans resulting in significant impacts but it would also result in the maximum feasible mitigation for VMT.

OPTION 3 – Set Thresholds Consistent with RTP/SCS Future Year VMT Projections by Jurisdiction or Sub-Region

VMT is a composite metric that is created as an output of combining a community's long-term population and growth projections with its long-term transportation network (i.e., the general plan). Other variables are also in play related to travel behavior, but land use changes and transportation network modifications are the items largely influenced or controlled by cities and counties. As such, every city and county unincorporated area within SBCTA already has a VMT growth budget. This is the amount of VMT that is forecast to be generated from their general plans combined with other travel behavior inputs for the region as captured in the RIVTAM or SCAG regional travel forecasting models as part of regional planning and the RTP/SCS. This VMT growth has already been 'approved' by the community, the region, and the state and could serve as the basis of a VMT threshold expressed as a VMT growth budget or as a VMT efficiency metric based on the future year VMT per resident, VMT per employee, or VMT per service population. The measurement of VMT could occur at the jurisdictional or sub-region level.

Potential limitations of this approach relate to model sensitivity and forecast accuracy/reasonableness. If a general plan includes policies or implementation programs designed to reduce VMT through transportation demand management (TDM) strategies, the regional models did not likely include these effects. Further, current regional models do not capture major disruptive trend effects such as TNCs, AVs, and internet shopping. The regional models may also have other issues with forecasting accuracy or reasonableness due to a disconnect between RTP/SCS expectations and the realities of transportation investments and local agency land use decisions as noted in the *2018 Progress Report California's Sustainable Communities and Climate Protection Act*, California Air Resources Board, November 2018.

OPTION 4 – Set Thresholds Based on Baseline VMT Performance

As noted above, an impact under CEQA begins with a change to the existing or baseline environment. There are a range of approaches to using this starting point for VMT impact analysis. At one end of the spectrum is 'total daily VMT' generated under baseline conditions. Setting this value as the threshold for a jurisdiction could result in a fixed budget that would limit increases such that even small increases could result in a significant impact. Alternatively, the baseline VMT per resident, VMT per employee, or VMT per service population could be used to establish an efficiency metric basis for impact evaluation. Using this form of VMT would mean that future land use projects would be expected to perform no worse than existing land use projects and only projects that cause an increase in the rate of VMT generation would cause significant impacts. Since VMT will increase or fluctuate with population and employment growth, changes in economic activity, and expansion of new vehicle travel choices (i.e., Uber, Lyft, AVs, etc.), expressing VMT measurement in an efficiency metric form allows for more direct comparisons to baseline conditions when it comes to land use projects, land use plans, and transportation projects. Setting a threshold based on baseline levels should consider how the threshold complies with the SB 743 statute provisions described at the beginning of this memo as well as whether VMT reduction strategies are feasible in the jurisdiction.

OPTION 5 – Set Thresholds Based on Maximum Achievable VMT Reduction

Programs and practices designed to reduce VMT are referred to as transportation demand management (TDM) strategies. TDM strategies range from programs such as employers providing subsidized or free transit passes to constructing new infrastructure such as bicycle or pedestrian paths. The VMT reduction associated with different TDM measures has been published in research papers. In August 2010 the California Air Pollution Control Officers Association (CAPCOA) published *Quantifying Greenhouse Gas Mitigation Measures*. This report identified 50 transportation measures, 41 of which are applicable at the building and site level. Of these strategies, only a few are likely to be effective in rural or suburban settings such as those found in San Bernardino County. As such, a threshold could be based on the maximum achievable reduction in VMT, based on the TDM measures that would be feasible in the jurisdiction in which the project is located.

The August 2010 CAPCOA report identified an estimate for the expected reduction associated with each TDM measure. The most current research now suggests that these expected reduction targets are aggressive and not achievable in most areas. Implementation of several TDM measures can vary significantly for similar areas and uses. For example, any TDM measures associated with employment uses are dependent upon the employer. Office buildings in the same neighborhood with different tenants may not achieve the same reduction targets.

The maximum achievable reduction is also influenced by key factors such as urban context, the size of the project, and access to transit. Detailed analysis would be required to determine the feasible mitigation measures for a specific project and location. However, a 15% threshold, as identified by OPR, would not be feasible throughout most of the unincorporated and rural areas of the county. Areas in the West Valley with high quality transit could potentially achieve a reduction between 5% and 10%, while the more rural and unincorporated areas of San Bernardino County would have a lower maximum achievable reduction, likely less than 4%.