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INTERIM TRANSPORTATION IMPACT ANALYSIS GUIDELINES

City of Clovis, CA

July 1, 2020

1. INTRODUCTION

The Interim Transportation Impact Analysis Guidelines document provides guidance to City of Clovis (City) staff, applicants, and consultants on the requirements to evaluate transportation impacts for projects in the City for purposes of determining impacts under the California Environmental Quality Act (CEQA). The Interim Transportation Impact Analysis Guidelines are intended:

- to promote conformance with applicable City and State regulations;
- to provide evaluation consistent with the California Environmental Quality Act (CEQA);
- to ensure consistency in preparation of studies by applicants and consultants; and
- provide predictability in content for staff and the public in reviewing studies.

Although these guidelines are intended to be comprehensive, not all aspects of every transportation analysis can be addressed within this framework. City staff reserve the right to use judgement to request exemptions and/or to modify requirements for specific projects at the time of the review application.

1.1. BACKGROUND

The Interim Transportation Impact Analysis Guidelines specifically address the requirements of California Senate Bill (SB) 743 which mandated specific types of CEQA analysis of transportation projects effective July 1, 2020.

1.1.1. SB 743 Requirements

Prior to implementation of SB 743, CEQA transportation analyses of individual projects typically determines impacts on the circulation system in terms of roadway delay (i.e. congestion) and/or capacity usage at specific locations, such as street intersections or freeway segments. Senate Bill 743 (SB 743), signed into law in September 2013, required changes to the guidelines for CEQA transportation analysis. The changes include the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining transportation impacts. The purpose of SB 743 is to promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.

Under SB 743, a project's effect on automobile delay shall not constitute a significant environmental impact under CEQA. Therefore, level of service (LOS) and other similar vehicle delay or capacity metrics may no longer serve as transportation impact metrics for CEQA analysis. The California Office of Planning and Research (OPR) has updated the CEQA Guidelines and provided a final technical advisory (December 2018), which recommends vehicle miles traveled (VMT) as the most appropriate measure of transportation impacts under CEQA. The California Natural Resources Agency certified and adopted the CEQA Guidelines including the Guidelines section implementing SB 743. The changes have been approved by the Office of the Administrative Law and are now in effect.

LOS analysis is still appropriate and necessary to determine consistency with General Plan policies as they relate to LOS. More specifically, Appendix G of the CEQA Guidelines asks whether a project would "Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?" As the City's currently adopted General Plan Circulation Element includes a LOS standard, in order to ensure that a project is consistent with the GP policy it would require a LOS analysis. Any improvements necessary to ensure LOS standards are met would be presented as "Conditions of Approval" as opposed to mitigation.

1.1.2. Local Transportation Analysis

It shall be noted that revisions to CEQA transportation analysis requirements do not preclude the application of local general plan policies, municipal and zoning codes, conditions of approval, or any other planning requirements through a city's planning approval process to ensure adequate operation of the transportation system in terms of transportation congestion measures related to vehicular delay and roadway capacity. As such, the City of Clovis continues to apply congestion-related transportation impact analysis and mitigation for land development projects through planning approval processes outside of the CEQA Guidelines. These requirements are discussed in Section 3, Local Transportation Analysis.

1.2. TRANSPORTATION IMPACT ANALYSIS REPORTS

A Transportation Impact Analysis (TIA) report would normally consist of two types of analysis, which this manual provides guidance for:

1. CEQA Analysis
2. Local Transportation Analysis

Not all projects would require all components of a CEQA analysis and a local transportation analysis. For example, a project could meet the screening criteria for being located in a high-quality transit area and be exempt from the preparation of a detailed CEQA VMT analysis. Such a project may only be required to provide a local transportation analysis.

1.2.1. CEQA Analysis

A CEQA analysis of transportation impacts consist of evaluation measures including conflicts with circulation policies, VMT, hazards and emergency access. The quantitative methodology, significance thresholds and mitigation measures for conducting the transportation analysis in accordance with the requirements of SB 743 are primarily based on VMT metrics. The CEQA analysis is part of the environmental review process and must meet CEQA requirements.

1.2.2. Local Transportation Analysis

The City can require local non-CEQA analysis to address traffic operations, safety issues and needed project design features related to a proposed land use project, as well as to analyze site access and internal circulation. The local transportation analysis may be used to assess transportation impacts in relation to the City's policies in the General Plan and other planning documents.

2. CEQA ANALYSIS REQUIREMENTS

This section discusses the requirements for conducting analyses for projects under environmental review, consistent with requirements from SB 743. Under CEQA, a lead agency has the authority to determine its own significance thresholds and methodologies for technical analysis, taking into account its own development patterns, policy goals and context. Lead agencies can make their own specific decisions regarding methodology and thresholds, presuming their choices are supported by substantial evidence.

The CEQA Appendix G Environmental Checklist Form identifies the following four impact types for transportation:

a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?
b) Would the project conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) (requirement to use VMT)?
c) Would the project substantially increase hazards due to a geometric feature or incompatible uses?
d) Would the project result in inadequate emergency access?

Consistent with State CEQA Guidelines section 15064.3, the City of Clovis has adopted thresholds of significance to determine when a project will have a significant transportation impact based on VMT. The City has developed screening criteria to streamline the analysis for projects that meet certain criteria, referred to as *project screening*.

2.1. LAND USE PROJECTS

This section provides information for analyzing individual land use projects, including the process to aid in deciding if a detailed VMT analysis is needed for a land use project. Figure 1 presents a flow chart depicting how a land use project would be analyzed under VMT-based metrics.

2.1.1. Project Screening

A project will require a detailed VMT analysis unless it meets at least one of the city's five screening criteria:

1. Small projects
2. Provision of affordable housing
3. Local-serving retail
4. Project located in a High-Quality Transit Area (HQTA)
5. Project located in low VMT area

Figure 1: Land Use Projects VMT Analysis

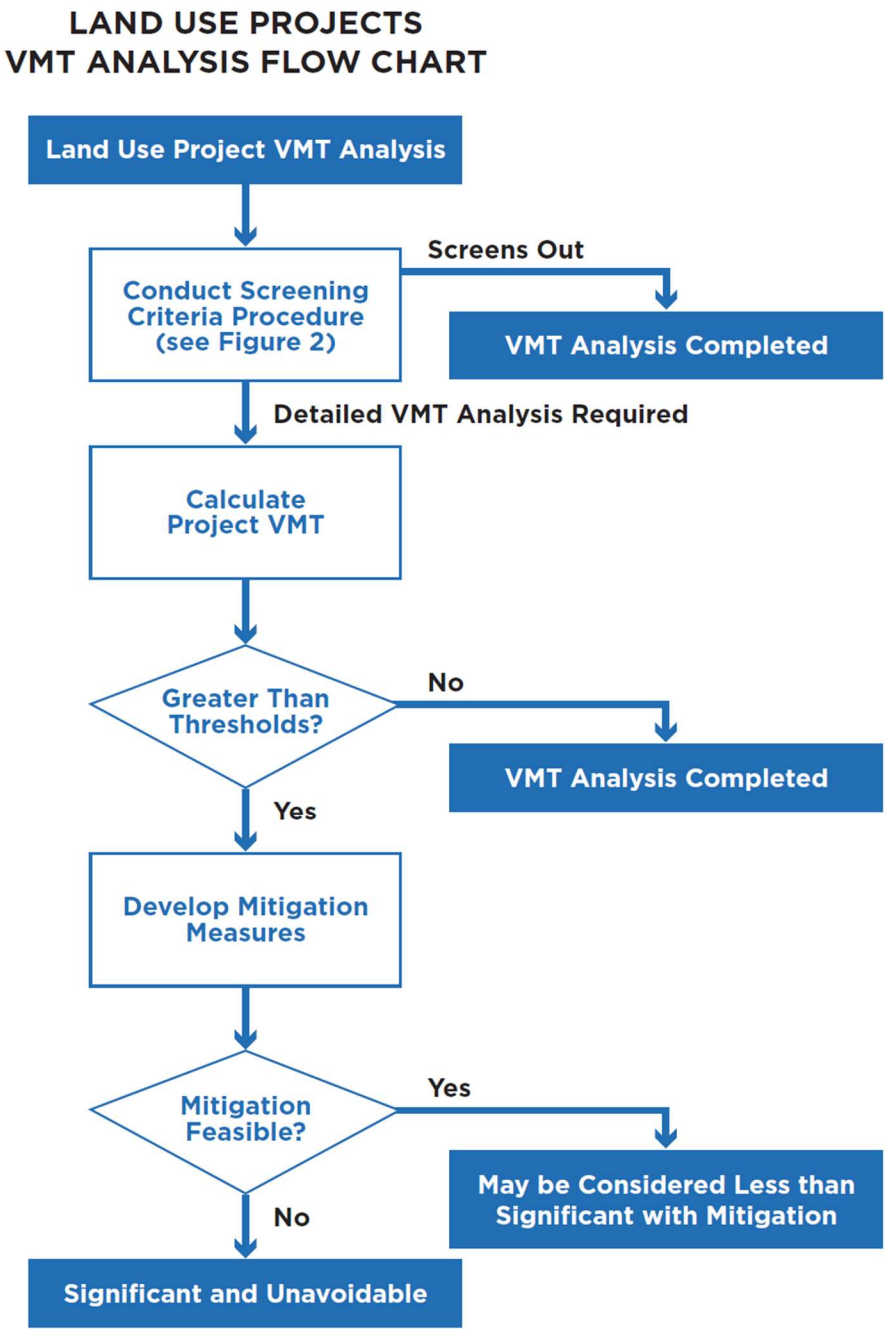


Figure 2 presents a chart depicting how a land use project would be analyzed under the proposed screening criteria. A project that meets at least one of the screening criteria would have a less than significant VMT impact due to project or location characteristics.

2.1.1.1. Small Projects

Projects that generate or attract fewer than 500 vehicle trips per day are presumed to cause a less-than-significant VMT impact. Projects that typically generate 500 vehicle daily trips are shown in .

Table 1: Sample Small Projects (less than 500 daily trips)

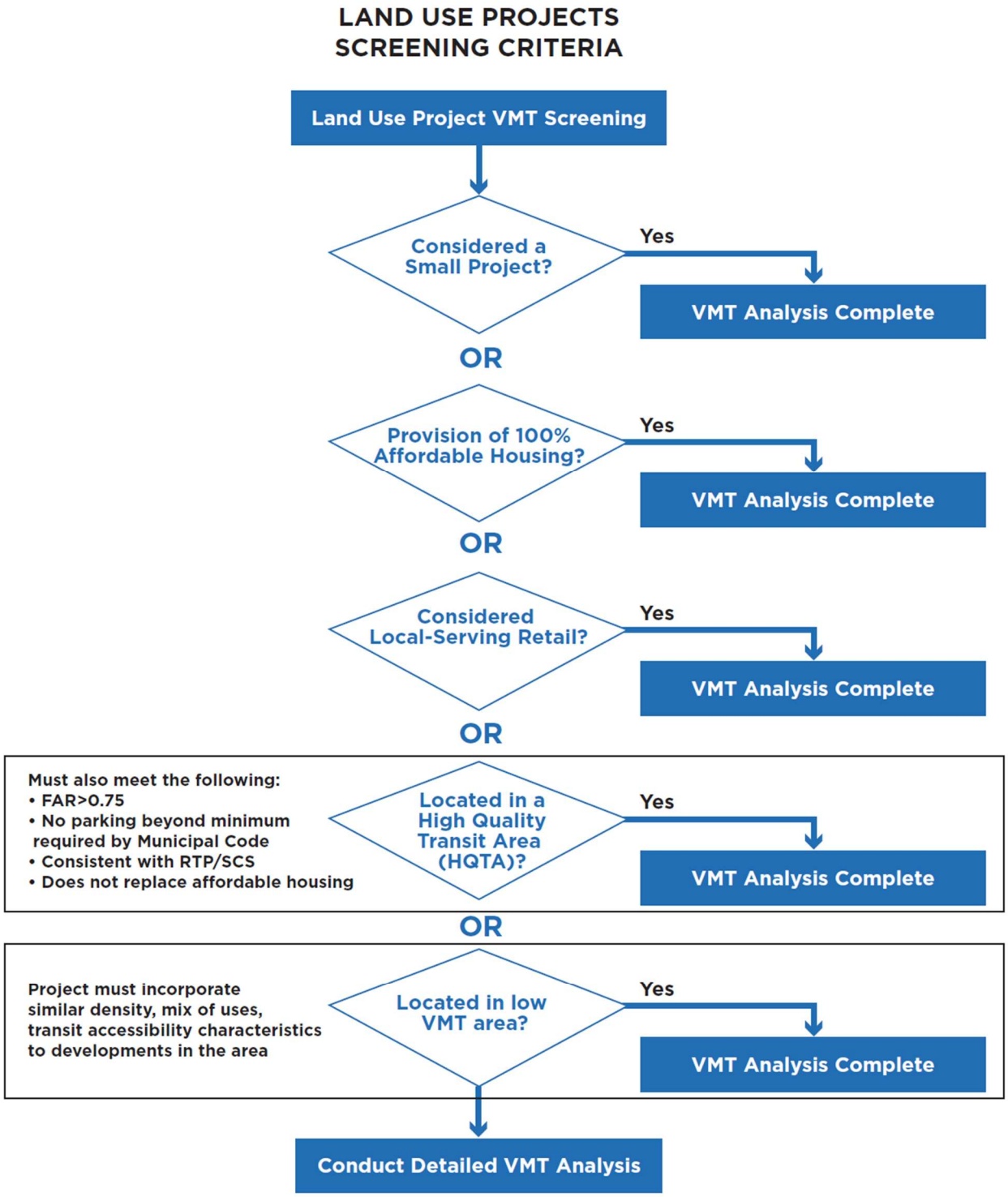
Land Use Type	Number of Units/ Square Feet
Single Family Residential	53 Dwelling Units
Townhome/Attached Residential	68 Dwelling Units
Retail	13,250 SF
Light Industrial	100,800 SF

Note: trips calculated trip rates from the ITE Trip Generation Manual 10th Edition.

2.1.1.2. Affordable Housing

Affordable housing would be designated as for sale or rent housing below market-rate. Residential projects with 100 percent deed restricted affordable housing are presumed to have a less-than-significant transportation impact. If a project contains less than 100 percent affordable housing, the portion that is affordable should be screened out of needing a detailed VMT analysis. Projects can only be screened out if they are located in an area supported by high-quality transit or with a quality walking and biking network with nearby retail and employment opportunities.

Figure 2 - Land Use Projects Screening Criteria Flow Chart



2.1.1.3.

2.1.1.3. Local-Serving Retail and Public Facilities

Projects that are locally serving retail with 100,000 square feet gross floor area or less are presumed to have a less-than-significant impact. This applies to the entirety of a retail project; for a mixed-use project, this screening criteria should be applied to the retail/commercial component separately to determine if that portion of the project screens out of a detailed VMT analysis.

The determination of local-serving retail would be based on its location, the characteristics of the project and the vicinity of the site, as well as the envisioned goods and services the retail development would provide. Generally, local-serving retail would primarily provide goods and services that most people need on a regular basis and are purchased close to where people live. Groceries, medicines, fast food and casual restaurants, fitness and beauty services are typical goods and services provided by local-serving retail centers.

The City may require a project applicant to provide a market analysis to demonstrate that the project meets the characteristics of a neighboring retail development based on the goods and services provided relative to the geographic location, the customer base and other nearby retail uses.

Public services (e.g., police, fire stations, public utilities, neighborhood parks[1]) do not generally generate substantial amounts of trips and VMT. Instead, these land uses are often built in response to development from other land uses (e.g., office and residential). Therefore, these land uses can be presumed to have less than-significant impacts on VMT. However, this presumption would not apply if the project is sited in a location that would require employees or visitors to travel substantial distances and may require a detailed VMT analysis.

2.1.1.4. High-Quality Transit Area (HQTA)

Projects that are located in a high-quality transit area would not require a detailed VMT analysis. However, this presumption does not apply if the project:

- has a floor area ratio (FAR) of less than 0.75;
- includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- is inconsistent with the applicable Fresno Council of Governments (Fresno COG) Sustainable Communities Strategy (SCS), as determined by the city; or
- replaces affordable residential units with a smaller number of moderate- or high-income residential units.

[1] For the purpose of conducting VMT analyses, neighborhood parks are defined which typically includes playground equipment, playfields, and picnic facilities and range in size up to 30 acres, serve as a social and recreational focal points for neighborhoods.

The existing High Quality Transit Areas in the City are provided in Attachment A.

2.1.1.5. Project Located in Low VMT Areas

Residential and employment projects that are proposed in areas that generate VMT below adopted City thresholds are presumed to have a less-than-significant VMT impact and thus can be screened out. The City provides screening maps based on transportation analysis zones (TAZs) and results from the Fresno COG travel model. The following types of projects may be screened out of detailed VMT analysis using this criterion:

- Residential projects proposed in TAZs with total daily resident-based VMT per capita that is 13% less than the 2019 average baseline level for Fresno County
- Office or the employment portions of other non-residential uses with total daily employee-based VMT per employee that is 13% less than the 2019 average baseline level for Fresno County

The TAZs that fall into these categories are shown in green in the maps provided in Attachment B.

2.1.1.6. Consistency with RTP/ SCS

If a proposed project is inconsistent with the adopted Fresno COG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), the City will evaluate whether that inconsistency may result in a significant impact on transportation. Therefore, projects that are inconsistent with the RTP/SCS would not qualify for screening out of a detailed VMT analysis.

2.1.2. Significant Impact Thresholds

For projects which do not meet any of the screening criteria, the City of Clovis has adopted VMT thresholds for land use development based on a review of long range plans and policies for the City and for the metropolitan planning organization for the region, the Fresno County Council of Governments (Fresno COG)[2]. Fresno COG[3] has set a goal to reduce GHG emissions by 13% per capita by 2035 as a target for the Fresno region. The intent of SB 743 is to bring CEQA transportation analyses into closer alignment with other statewide policies regarding GHG, complete streets, and smart growth. Therefore, using a threshold of 13% below average VMT for residential and office projects is consistent with established regional GHG emission goals.

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[2] SB 375 Greenhouse Emission Reduction Target for the Fresno County Region, Fresno Council of Governments, April 25, 2017.

[3] SB 375 Greenhouse Emission Reduction Target for the Fresno County Region, Fresno Council of Governments, April 25, 2017.

The OPR technical advisory recommends comparing a project's estimated VMT/capita or VMT/employee to average values on a regional or citywide basis. For retail projects, total VMT within the area affected by the project is measured.

The significance thresholds and specific VMT metrics used to indicate a significant transportation are described by land use type in Table 2.

2.1.3. VMT Analysis Methodology

Projects that do not meet the screening criteria must include a detailed evaluation of the VMT generated by the project.

2.1.3.1. Regional Average VMT

- Regional average VMT per capita and VMT per employee values are determined using the Fresno COG regional travel model. The travel demand model is a set of mathematical procedures and equations that represent the variety of transportation choices people make, and how those choices result in trips on the transportation network. The Fresno COG is an activity-based model that simulate the County's population and model the daily activity patterns of each simulated individual along with resulting travel demand. The model includes socio-economic data aggregated in traffic analyses zones (TAZs) as well as the County's circulation network. A simulated travel tour might consist of, for example, travel from the home to the gym to work to supermarket to home in a typical weekday. OPR guidelines recommend using a tour-based approach whenever possible. The VMT per capita includes all trips made by residents, including their trips while away from home, but does not include trips visiting residences (such as delivery vans).
- The VMT per employee includes trips made by employees to and from their workplaces, including trips to and from points other than the employees' homes, but does not include visitors to the employment sites.

2.1.3.2. VMT per Capita or per Employee

For residential or employment land uses where VMT/capita or VMT/employee are used to determine impacts, the following analysis methods are available:

- The VMT/capita or VMT/employee may be looked up using the latest screening maps (Attachment B) and the TAZ (or TAZs) containing the project site.
- If the value for the TAZ is zero or significantly different than the values in surrounding TAZs due to a lack of land use data in the 2019 condition for the project TAZ, the City may allow the VMT/capita or VMT/employee to be based on an average of surrounding TAZs.
- If a proposed project would affect the balance of residential and non-residential land uses in an area and is a relatively large project, it is recommended that the Fresno COG model be rerun to include the proposed project, and VMT/capita and VMT/employee be recalculated.

Table 2: Impact Thresholds by Land Use Type

Land Use Type	**Impact Threshold**
Residential	A proposed project exceeding a level of 13 percent below existing (2019) average VMT/ capita in Fresno County. Regional Average: 16.1 VMT/capita Impact Threshold: 14.1 VMT/capita
Office	A proposed project exceeding a level of 13 percent below existing average VMT per employee in Fresno County. Regional Average: 25.6 VMT/employee Impact Threshold: 22.3 VMT/ employee
Retail	A net increase in total VMT. The total VMT for the region without and with the project is calculated. The difference between the two scenarios is the net change in total VMT that is attributable to the project.
Other land uses	The City will make a determination of the applicable thresholds on a case-by-case basis based on the land use type, project description and setting. Research and development, medical offices, assisted living, and industrial projects may be evaluated similar to office projects using the VMT/employee metric. Projects such as religious institutions, regional parks, hotels, private schools and medical offices may be evaluated using the net VMT criteria similar to retail projects.
Mixed-Use Projects	Evaluate each component of a mixed-use project independently and apply the significance threshold for each land use type. Alternatively, the evaluation would apply only the project's dominant use.

2.1.3.3. Exclusion of Truck VMT

It shall be noted that SB 743 does not apply to goods movement (i.e. trucks). Section 15064.3 of the CEQA Guidelines states that VMT for transportation impacts refers to. "… the amount and distance of automobile travel…". Therefore the VMT associated with trucks and the movement of goods is not required to be analyzed and mitigated for the evaluation of transportation impacts under CEQA. Projects that generate a substantial amount of truck traffic also generate automobile trips, project-related automobile trips would be subject to VMT analysis and mitigation. The VMT for all vehicles including heavy trucks related to a project will still be calculated as input for air quality, GHG, noise and energy impact analyses to be evaluated in non-transportation parts of the environmental analysis. The local transportation analysis requires an evaluation of truck traffic in terms of roadway and intersection operations, as discussed in Section 3.

2.1.4. Redevelopment Projects

If a project results in a net decrease in overall VMT, it may be presumed that the project would result in a less-than-significant impact.

If a project replaces existing uses and the project leads to a net overall increase in VMT compared to the previous uses, then the thresholds for the new land uses should apply. If net VMT increases, then the appropriate VMT metrics and thresholds should be applied. For example, if a residential project replaces an office project resulting in a net increase in VMT, the project's VMT/capita should be compared with the thresholds for residential projects. If the project is a mixed-use project, then the recommended approach for analyzing mixed-use projects should be applied to analyze each individual use.

2.1.5. Cumulative Impacts

Per Section 15064 (h) (1) of the CEQA code, "when assessing whether a cumulative effect requires an Environmental Impact Report (EIR), the lead agency shall consider whether the cumulative impact is significant and whether the effects of the project are cumulatively considerable."

An analysis of cumulative impacts generally would fall under two categories:

1. VMT per capita or per employee
2. Total VMT

These are described below.

2.1.5.1. VMT per Capita or per Employee

For land uses evaluated under an efficiency metric (VMT/capita for residential or VMT/employee for office/employment), if a project falls below the threshold, it would also result in less than

significant cumulative impacts. In other words, a project that falls below an efficiency-based threshold would have no cumulative impact distinct from the project impact.

2.1.5.2. Total VMT

For land uses evaluated using total VMT (retail, hotels, etc.), when absolute VMT metrics (such as total VMT recommended for retail and transportation projects) are used, a cumulative VMT impact analysis may be appropriate. Projects must demonstrate consistency with the City of Clovis General Plan to address cumulative impacts. A determination for consistency with the General Plan or RTP/SCS would be made by City public works or planning staff and would be based on factors such as density, design, and consistency with the City's General Plan goals and policies. Inconsistencies may be identified if the proposed land use quantities are beyond the designation for the project site in the General Plan or RTP/SCS, in which case the project may result in higher VMT compared to the applicable plan.

If a project is consistent with the General Plan or RTP/SCS, it will be considered as part of the cumulative condition to meet the General Plan's long-range transportation goals, and therefore will result in a less-than-significant cumulative impact. If a project is not consistent with the General Plan, a cumulative impact analysis would be required to determine if the project would result in a net increase in VMT.

2.1.6. Mitigation

If a project would result in significant impacts, CEQA requires feasible mitigation measures to be implemented to reduce or mitigate an impact. Mitigation includes 4:
(a) Avoiding the impact altogether by not taking a certain action or parts of an action.
(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
(c) Rectifying the impact by repairing, rehabilitating, or restoring the impacted environment.
(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
(e) Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements.

For VMT impacts, a combination of measures from several VMT reduction strategies may be implemented – project characteristics, multimodal improvements, parking, and Transportation Demand Management (TDM). VMT is reduced by implementing strategies that reduce the number of automobile trips generated by the project, shift more trips from automobile to non-automobile modes, and/or reduce the distances that people drive. Generally, these reductions can be achieved

[4] According to CEQA code Section 15370

by the implementation of TDM strategies. TDM strategies are designed to change travel behavior in order to reduce the demand for roadway travel and increase the overall efficiency of a local or regional transportation system. This is accomplished by encouraging mode shifts away from the Single Occupant Vehicle (SOV) and auto trips away from peak periods. TDM strategies typically involve some form of incentives for employers and residents in order to reduce driving and encourage transit, walking, biking, and carpooling. These incentives can include, but are not limited to supplying transit passes, rideshare programs, parking cash out, and guaranteed ride home programs. The implementation of TDM measures outcomes include increase in transit use and non-motorized travel, reduce in VMT, reduce roadway congestion, and reduce parking demand.

Measures to reduce VMT have been documented by several sources. The most commonly referred to are the California Air Resources Board (CARB) list of transportation and land use strategies for reducing greenhouse gas emissions[5]the California Pollution Control Offices Association (CAPCOA) report on quantifying the greenhouse gas mitigation measures[6], , and the SANDAG Mobility Management VMT Reduction Calculator Tool – Design Document. The City recommends the use of these sources to select and apply mitigation measures and appropriate VMT reductions. THe project applicant will be required to provide evidence for identifying specific values for mitigations.

Projects for which impacts are determined to be significant are required to propose a list of VMT reduction measures and document the associated percent reduction in VMT supported by substantial evidence. Project VMT is calculated by applying the percent reduction. Project VMT is then compared to the threshold of significance to evaluate the project's CEQA transportation impact. The City will review and approve the proposed mitigation and the calculated VMT percentage reductions.

VMT mitigation fees, mitigation banks, and mitigation exchange programs are potential future methods for handling mitigation. Cities have been exploring the establishment of programs such as mitigation banking and VMT exchanges. VMT exchange banks would allow program-level mitigation to take place for projects located in high VMT areas where mitigation at the project level alone may not be effective. A considerable amount of effort is needed to set up these types of programs, which are setup in advance and independent of conducting environmental review for a specific land development project. The City would as a first step need to identify mitigation strategies that would be feasible for the City or individual projects to implement. This can include determining the physical feasibility of infrastructure projects or implementation feasibility of programs that would contribute to development of regional pedestrian, bicycle/scooter, and transit projects and possibly TDM actions aimed at changing travel behavior.

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[5] https://ww3.arb.ca.gov/cc/sb375/policies/policies.htm

[6] Quantifying Greenhouse Gas Mitigation Measures, California Pollution Control Officers Association 2010.

2.2. TRANSPORTATION PROJECTS

This section provided information for analyzing transportation projects on roads within the City's jurisdiction.

2.2.1. Determining Need for Detailed VMT Analysis

The City of Clovis requires an analysis of transportation projects if they are expected to increase VMT, primarily projects that encourage the use of single-occupancy automobile such as the addition of through travel lanes. However, transportation projects that have already been specifically analyzed in a citywide plan (such as a General Plan update) may be exempt from a detailed VMT analysis. This exemption may be granted if the necessary VMT analysis and potential mitigations would have already been calculated and identified at the plan level.

Conversely, projects that would likely not lead to an increase in vehicle travel, which promote use of transit and active transportation, as opposed to having a vehicle travel focus, should not require a VMT analysis. Project types that would not likely lead to a substantial or measurable increase in vehicle travel and generally should not require a VMT analysis includes:

- road rehabilitation
- safety projects
- auxiliary lanes less than one mile in length
- turning lanes
- conversion to managed or transit lanes
- road diets
- removal or relocation of parking spaces
- addition of non-motorized, transit, and active transportation facilities.

A full list is provided in Attachment C.

This approach is consistent with the intent of SB 743 by promoting that VMT-reducing projects will be streamlined and projects that have the potential to increase VMT will be thoroughly assessed and mitigated as appropriate.

2.2.2. Thresholds for Transportation Projects

Projects that have already been included and evaluated in the General Plan or the RTP/SCS are presumed to have a less-than-significant impact.

For projects that have not been included in the General Plan or RTP/SCS or are modifications and replacements, any growth in VMT attributable to the transportation project could result in a significant impact. For example, a transportation project that replaces a project included in the General Plan and would generate less VMT compared to the project included in the General Plan

would have a less than significant impact. Projects not included in the General Plan or RTP/SCS would have a significant impact if they cause a net increase in VMT.

2.2.3. VMT Analysis Methodology and Tools

For transportation projects that require a detailed VMT analysis (e.g., increasing vehicular throughput or not included in a citywide plan), the City should require analysis using the most current travel demand model (Fresno COG's) to estimate changes to citywide VMT due to rerouted trips. To capture long-term effects, an induced demand assessment should be required using the following formula:

[% increase in lane miles] x [existing VMT] x [elasticity] = [VMT resulting from the project]

The City requires total VMT in the city as the appropriate VMT metric, with the impact threshold being any increase in total VMT. The analysis shall be performed for the long-range horizon year, normally 20 years out. This approach would discourage induced demand impacts by requiring that a baseline level of VMT in the City not be exceeded.

2.2.4. Mitigation for Transportation Projects

Mitigation measures for transportation projects generally seek to reduce VMT by discouraging more single passenger automobile travel or funding TDM measures. The following potential mitigation measures for transportation projects are listed as examples for consideration, the City may pursue other mitigation measures supported by substantial evidence:

- Tolling new lanes to encourage carpools and fund transit improvements;
- Converting existing general purpose lanes to HOV or HOT lanes;
- Implementing or funding off-site travel demand management; and
- Implementing Intelligent Transportation Systems (ITS) strategies to improve passenger throughput on existing lanes.

3. LOCAL TRANSPORTATION ANALYSIS

3.1. PURPOSE

A local transportation analysis (LTA) may be required for land use projects in addition to the CEQA analysis to evaluate the effects of a development project on the circulation network, primarily on local access and circulation in the proximity of a project site. The LTA ensures that the project provides safe connections for cyclists, pedestrians and transit users. This analysis is required to address operational and safety potential issues for all transportation modes, and identify improvements needed with project implementation consistent with city policies. These guidelines are provided to establish general procedures and requirements for the preparation of LTAs associated with development within the City of Clovis. The City recognizes that every development project and study context is unique. Therefore, emphasis is placed on the term "guidelines" and not every aspect of the guideline is necessarily applicable to all projects. These guidelines are intended as a checklist for study preparers to be sure they have not missed any common study items. They are not intended to be prescriptive to the point of eliminating professional judgment.

Unless waived by the City Engineer, a LTA will be required by the City to adequately assess the impacts of development projects on the existing and/or planned street system when the following thresholds are met:

1. When project-generated traffic is expected to be greater than 100 vehicle trips during any peak hour.
2. When a project includes a General Plan Amendment (GPA) which changes the use to a designation that has a potential to generate a higher number of vehicle trips than the existing, or originally planned land use designation.
3. When the project traffic will substantially affect an intersection or roadway segment already identified as operating at an unacceptable level of service.
4. When the project will substantially change the offsite transportation system or connection to it as determined by the City Engineer.

A LTA requires updating when two or more years have passed since the preparation of the study with no activity. After two years with no activity, a LTA is considered antiquated and irrelevant. In cases where a master traffic impact study is prepared for a large development, the specific phases will generally not require supplemental analyses, as long as, the master traffic impact study analyzed the large development in phases and the specific phases are consistent with the master traffic study.

3.2. STUDY AREA

The intersections and roadway segments to be covered by transportation impact studies will be determined on a case-by-case basis and shall be sufficient in size to include existing and planned streets and intersections that may be impacted by the proposed development. The scope of the LTA, including the study area, proposed trip distribution, and trip generation shall be reviewed and approved by the Traffic Engineering Manager or designee prior to preparation of the study.

The following provides guidelines to determine the extents of the study area for the local transportation analysis:

- Pedestrian, bicycle and transit facilities within ½ mile distance from the project site boundary
- All intersections that would provide direct access to the project
- All signalized intersections within ½ mile of the project site boundary where the project would add 50 or more peak hour trips, and signalized intersections beyond ½ mile where the project would add 100 or more peak hour trips
- All unsignalized intersections within ½ mile of the project site boundary where the project would add more than 50 peak hour trips
- All freeway ramp intersections where a project would add 50 or more peak hour trips

Local transportation analyses shall provide sufficient detail regarding existing pedestrian, bicycle, and transit facilities. This could include identification of deficient facilities, existing and planned bicycle facilities, and existing and planned transit routes and facilities.

The study report preparer , and/or City staff, shall consult with the State of California Department of Transportation (Caltrans) to determine traffic impacts on Caltrans' state facilities. This consultation should include a request to Caltrans for their concurrence with the scope of analysis for Caltrans' state facilities, or a recommendation from Caltrans for specific modifications to the scope. This analysis must follow the most current Caltrans guidance to analyze transportation impacts from development projects on the state highway system. The consultation should also include a review of recommendations to reduce any impacts to Caltrans' state facilities.

The study report preparer , and/or City staff, shall consult with the County of Fresno to determine the levels of significance with regard to traffic impacts on County roadway facilities. Correspondence with the County shall be provided to the City Engineering Department.

If a consultant is performing work in an adjacent agency and analyzing circulation and transportation facilities and infrastructure within the City of Clovis, contact the City of Clovis City Engineer for review of your scope of work. Also send a completed document for comment to the City Engineer.

3.3. LEVELS OF SERVICE

All city intersections and roadway segments shall operate at a LOS D or better under the near-term conditions, unless a finding of overriding consideration was adopted in the General Plan EIR. Under

long-term conditions, all city intersections and roadway segments shall operate at a LOS D or better, except for the roadway segments adopted in the General Plan EIR to operate at LOS E or F. Exceptions to this standard may be allowed on a case by case basis where lower levels of service would result in other public benefits, such as:

- Preserving agriculture or open space land
- Preserving the rural/historic character of a neighborhood
- Preserving or creating a pedestrian-friendly environment in Old Town or mixed-use village districts
- Avoiding adverse impacts to pedestrians, cyclists, and transit riders
- Where right-of-way constraints would make capacity expansion infeasible

The LOS shall be based on average delay for signalized and unsignalized intersections and Florida Tables for roadway segments. Average delay for study intersections shall be summarized in a table. The traffic analysis methodologies for the facility types indicated below will be accepted without prior consultation:

- Signalized Intersections1 – Highway Capacity Manual (most current edition) using Synchro, Vistro, Highway Capacity Software (HCS), or other software approved by the City Traffic Engineer.
- The procedures in the Highway Capacity Manual do not explicitly address operations of closely spaced signalized intersections. Under such conditions, several unique characteristics must be considered, including spill-back potential from the downstream intersection to the upstream intersection, effects of downstream queues on upstream saturation flow rate, and unusual platoon dispersion or compression between intersections. An example of such closely spaced operations is signalized ramp terminals at urban interchanges. Queue intersections between closely spaced intersections may seriously distort the procedures in the HCM. In this case simulation of the study area may be necessary as determined by the City Engineer.
- Unsignalized Intersections – Highway Capacity Manual (most current edition) and MUTCD using Synchro, Vistro, HCS or other software approved by the City Engineer
- Signal Warrants – MUTCD Signal Warrants*

SIDRA does not account for chaining of two roundabouts and the queues associated between the roundabouts. Simulation with proper assumptions is the only way this analysis can be done correctly. The consultant shall discuss methodology with City staff prior to performing the work for roundabout analysis. The consultant will need a conceptual design of the roundabout for the analysis. The analysis should reflect USA and Clovis/Fresno driver behavior

While the City of Clovis does not officially advocate the use of any software, Synchro is the software used by City staff. The analysis shall use the latest published version of the HCM. The LOS analysis at study intersections shall be conducted using the following default values as applicable:

- Use of signal timing plans, if available. If not available, then:
    - Minimum split time for protected left-turn phase shall not be less than 12 seconds.
    - Minimum pedestrian times should be satisfied on all phases with pedestrian phase for signals modeled as coordinated signals.
    - For study intersections modeled as actuated uncoordinated signals, the intersections shall be evaluated with at-least 10 pedestrian calls per hour in the Existing + Project and long-range conditions, if pedestrian projections are not available.
    - If existing cycle lengths are available they should be utilized. In instances were existing cycle lengths are not available, LOS calculations should be conducted using the natural cycle lengths. The cycle lengths should remain constant for comparison purposes unless the project is changing the character of the intersection and it is noted in the report.
    - In instances where signalized intersections are coordinated, coordinated cycle lengths should be determined based on the natural cycle lengths of the coordinated signals and shall be used for evaluation purposes.
    - Minimum All-Red time(s) shall equal 1.0 seconds (2.0 seconds when dual left turn lanes are used).
    - Minimum Yellow time shall equal 3.5 seconds, or greater based upon the approach speeds (3.0 seconds for left turn phases).
- Where existing traffic volumes are collected and peak hour factors are available, then LOS calculations for Existing Condition scenarios and the near-term scenario should use available counted peak hour factors provided the traffic counts are included in the Appendix. For all cumulative scenarios and existing conditions where peak hour factors are not available, default factors as per the HCM shall be used and shall be consistent throughout the cumulative scenarios and peak hours.
- Existing storage lengths shall be entered as input data if LOS calculations are conducted using Synchro.
- All assumptions and defaults used shall have proper citation and justification for their use in the LTS.

3.4. TRAFFIC ANALYSIS SCENARIOS

The following scenarios shall be included in the traffic impact study:

A. For projects requiring a General Plan Amendment, intersection LOS analysis and calculation work sheets, as well as figures showing turning volumes and lane configurations shall be included in the report for the following traffic scenarios.
    a) Existing Conditions – Current year traffic volumes and peak hour LOS analysis
    b) Existing plus Project Conditions – Trip generation and trip distribution added to the previous scenario and LOS analysis

c) Near Term Analysis (Existing plus Approved and Pending Projects plus Proposed Project Conditions) – Trip generation and trip distribution added to the previous scenario and LOS analysis
d) Cumulative Long-Range Conditions – Long-Range conditions (20 years from existing conditions and/or consistent with the latest Fresno COG model)
e) Cumulative Long-Range Conditions – Project traffic added to the previous scenario
f) If any phasing is to take place then such phasing should be studied at its appropriate build out year in addition to the above scenarios.
g) Trip traces to affected Caltrans freeway interchanges shall be performed for the current General Plan land use and the land use proposed per the GPA.

B. For projects with planned land uses consistent with the General Plan, intersection LOS analysis and calculation work sheets, as well as figures showing turning volumes shall be included in the report for the following traffic scenarios.
   a) Existing Conditions – Current year traffic volumes and peak hour LOS analysis
   b) Existing plus Project Conditions – Trip generation and trip distribution added to the previous scenario and LOS analysis
   c) Near Term Analysis (Existing plus Approved and Pending Projects plus Proposed Project Conditions) – Trip generation and trip distribution added to the previous scenario and LOS analysis
   d) If any phasing is to take place then such phasing should be studied at its appropriate build out year in addition to the above scenarios.
   e) Trip distribution to affected Caltrans freeway interchanges shall be performed for the proposed project.

"No Project" scenarios do not require analyses for improvements. For the proposed project, no physical improvements shall be assumed to be implemented unless there is a Capital Improvement Project already identified and fully funded. If the improvement is identified in an impact fee program and the improvement is fully funded than that improvement can be assumed under Cumulative Analysis scenarios. However, the “project” may be conditioned with constructing the assumed improvement.

Cumulative Long-Range Conditions traffic volumes shall be projected based on the method documented by Fresno County Council of Governments (COG) model steering committee using procedures such as the increment method. The methodology for developing the forecasts shall be clearly documented in the report and model runs provided by Fresno COG included in the appendix. The following scenarios shall be requested from Fresno COG staff to perform this forecasting correctly:

Current Year Model Run (Existing Conditions Model),

Cumulative Long-Range No Project Model Run (Cumulative Conditions Model), Cumulative Long-Range Project

SelectZone FRATAR Model Run, and Near-term opening year model run if necessary.

Contact Fresno COG staff and/or review the Fresno COG webpage for the correct use of the model to forecast Cumulative volumes.

Consultants should work with Fresno COG staff to prepare a model scope of work request for a basic traffic impact study and if the study is more involved it may need additional information. The minimum will include reviewing the existing land uses assumed in the model, potentially splitting the TAZs as necessary to more accurately reflect driveways and land uses, a review of roadway circulation in the model near the project site. If the consultant is not familiar with the Fresno COG model and the assumptions and information that went into validating the model, the consultant is encouraged to schedule some time with the Fresno COG staff to become an expert on the model as the information provided from the model is the basis for the analysis. The consultant should take ownership and will be accountable for the information provided by Fresno COG.

The consultant should also provide, in the appendix, the request for modeling services to Fresno COG and the response provided by Fresno COG when the data is returned. An email response from Fresno COG staff is sufficient.

All assumptions shall have proper citation and justification for their use in the LTA.

3.5. TRAFFIC COUNTS

Traffic counts should be collected and included in the Appendix. Available existing counts can be used if they are less than twelve (12) months old and the traffic volumes have not been significantly changed due to more recent development in the vicinity. The City Engineer or the designee shall approve all requests to use other available traffic counts.

Common rules for conducting traffic counts include but are not limited to:

- Peak hour turning movement volumes shall be conducted on Tuesdays, Wednesdays, or Thursdays during weeks not containing a holiday. Counts shall be conducted in favorable weather conditions.
- Counts shall be collected when schools and colleges are in session, but not during the first two weeks that the schools and colleges are in session. Counts collected when schools and colleges are not in session shall be approved by the City Engineer, including a methodology for adding historical school traffic volumes into the analysis.

- Counts shall be collected during AM (7:00 a.m. to 9:00 a.m.) and PM (4:00 p.m. to 6:00 p.m.) peak periods, unless otherwise specified (such as midday or weekend peak periods). Counts should include the peak hour factor calculation.
- A qualified traffic analyst shall observe each study intersection during peak hours of analysis and document their observations such as lane utilization, delay, queue lengths in the field, adjacent intersection queues affecting study intersection capacity, etc.

3.6. TRIP GENERATION

Trip generation should be based on one or more of the following:

- Institute of Transportation Engineers (ITE) Trip Generation Manual (most current edition).
    - Rates should be calculated using the average weight or weighted average formula when applicable
    - Special consideration should be given for ITE rates based on old data or a small sample and may require additional data collection to determine the appropriate trip generation
- New rates should be generated using community examples for uses not updated or included in the ITE Trip Generation Manual.
- No pass-by trip reductions are allowed unless justified and approved by the City Engineer.
- All assumptions shall have proper citation and justification for their use in the LTA.

Projected daily trips, AM and PM peak hour trips for the approved, pending and proposed project shall be summarized in the table. Trip generation rates, factors and source should be provided. The totals for the inbound and outbound trips shall be provided in the table. Trip generation should be summarized in a table form as follows:

Proposed Trip Generation for Weekday

		Daily		A.M. Peak					P.M. Peak Hour				
	Size	*		*		In	Out	Total	*		In	Out	Total
Retail	4 ksf	120	480	4	60:40	12	8	19	1	50:50	26	26	53
Townhomes	32 Apts	7.5	240	10	35:65	8	16	24	1	65:35	16	8	24
Senior	100 Unit	3.6	360	12	40:60	17	26	43	1	60:40	26	17	43
Total Trips			**1080**			**37**	**49**	**86**			**68**	**52**	**120**

* = Rate

3.7. TRIP DISTRIBUTION

Trip distribution shall be based on existing travel patterns, locations of complimentary land uses, and/or information derived from the Fresno COG travel model such as a “select zone” analysis).

A figure illustrating the percentage of peak hour traffic going to and from various destinations along the transportation network shall be provided. A figure illustrating peak hour project only trips at the driveways, study intersections and roadway segments shall be provided based on the trip distribution. If the trip distribution is different between existing, near-term, and cumulative conditions then a figure needs to be provided for each different trip distribution with supporting discussion and justification.

The travel model should be used for a general trip distribution to and from the North, South, East, and West, however the project trips should be manually distributed to the driveways, intersections, and roadway segments. Do not rely on the travel model to distribute project trips to specific intersection and driveway turn movements.

For General Plan Amendments, the local transportation analysis shall include a trip distribution to affected Caltrans freeway interchanges for both the current General Plan land use and the proposed land use per the GPA. All assumptions shall have proper citation and justification for their use.

3.8. APPROVED AND PENDING PROJECTS

Approved and pending projects located within the vicinity of the project (i.e. developments generating vehicle trips that would impact study intersections and/or roadway segments) or as determined by the City Engineer, that can reasonably be expected to be in place by the project's build out year must be included in the analysis. Related projects shall include all approved, pending, or constructed projects that are not occupied at the time of the existing traffic counts. A list of approved and pending projects shall be submitted to the Engineering Division for review and approval along with the scope of work. Engineering staff will work with consultants to develop the list if necessary.

A table summarizing the approved and pending projects with their locations, and trip generation shall be provided. If conditional use permit/parcel map/tract numbers are available then they should be provided in the table. Pending projects are defined as those projects that have been accepted for processing by the City of Clovis Planning and Development Department.

Capital Improvement Projects (CIP) should be identified and documented with funding source and anticipated completion year. For information on CIP projects near your project please contact the City Engineering staff.

3.9. SITE ACCESS AND CIRCULATION

Site access and circulation analysis shall be conducted and recommendations shall be included in the local transportation analysis to address safe and acceptable traffic operations. A figure illustrating the proposed site plan with proposed primary access points should be provided. Discussion on the location and distance of the access points from nearby intersections shall also be provided. The proposed site plan shall illustrate access points and peak hour project only trips at the access points. For projects that are anticipated to generate truck traffic, truck operations shall also be evaluated to ensure adequacy of site design to satisfy truck loading demand on-site and on the vicinity of the project site, and that traffic operations on roadways and intersection are satisfactory.

The local transportation analysis should calculate anticipated queues and minimum required throat depth (MRTD) at the project access points and summarize in a table. The analysis should also evaluate the proposed site plan for sight distance and other unsafe traffic conditions and provide recommendations to mitigate them.

The local transportation analysis shall also conceptually address safe pedestrian paths of travel from:

- residential developments to school sites;
- public streets to commercial and residential areas; and
- nearby bus stops to project sites.

3.10. QUEUING AT STUDY INTERSECTIONS

Queuing analysis for study intersections shall be conducted and documented in the local transportation analysis based on the LOS calculations. Recommendations for queues under existing conditions or projected to exceed the available storage shall be provided. Recommendations such as but not limited to extending existing storage, addition of exclusive turn-lanes, innovative techniques shall be considered and recommended.

3.11. TRAFFIC OPERATIONS THRESHOLDS

For study intersections, a traffic operations issue is identified if the addition of the traffic generated from the proposed project results in any one of the following:

- Triggers an intersection operating at acceptable LOS to operate at unacceptable levels of service
- Increases the average delay for a study intersection that is already operating at unacceptable LOS

3.12. ANALYSIS DISCUSSION

The local transportation analysis should discuss conclusions regarding the transportation issues caused by the proposed project on the roadway system. If the traffic generated by this and other projects requires improvements that are not covered by current impact fees, then the project's fair share percentage shall be calculated using peak-hour volumes and provided in the local transportation analysis.

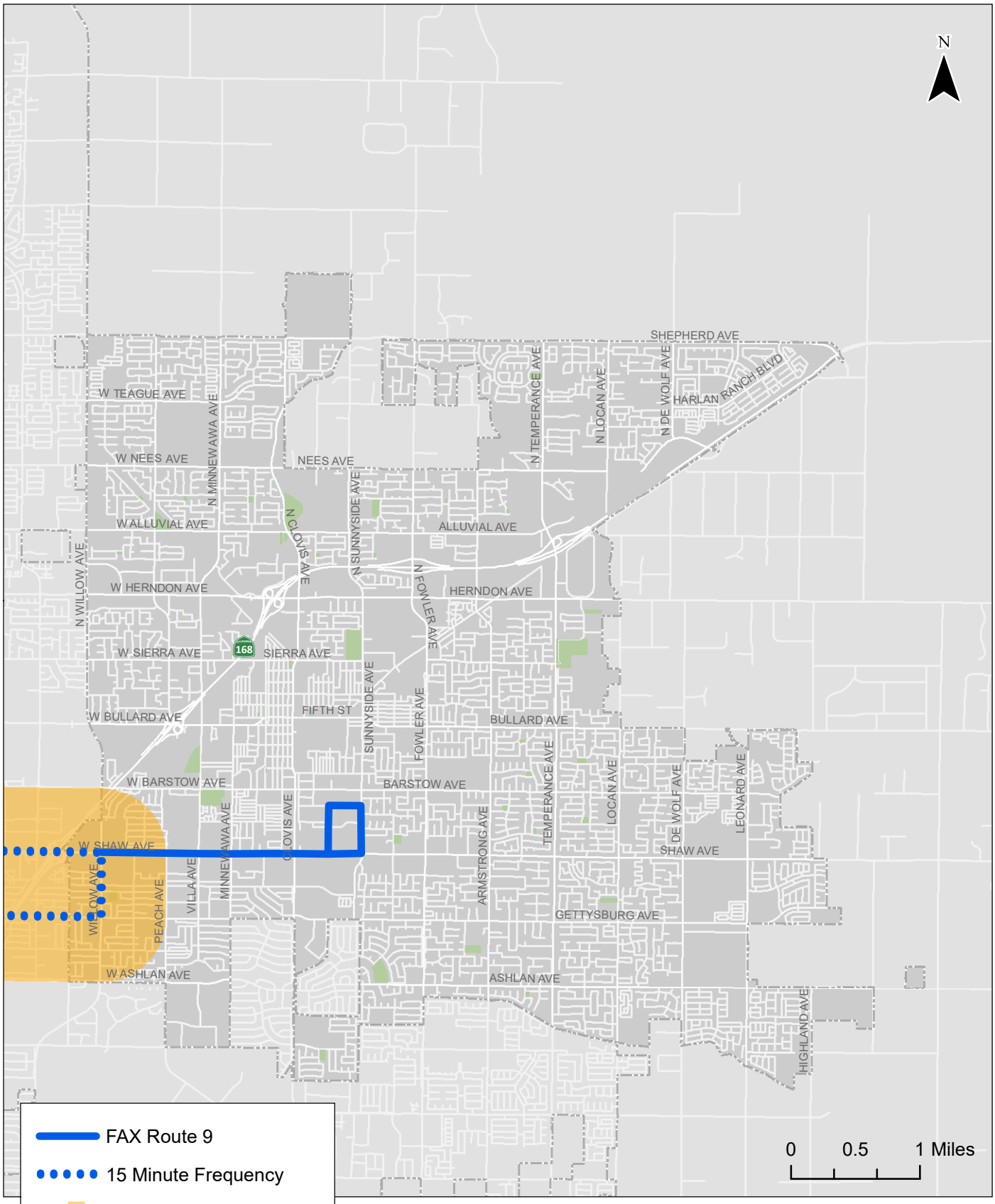
For all recommendations to increase the number of travel lanes on a street or at an intersection as an improvement, the report must clearly identify the impacts associated with such a change such as whether or not additional right of way will be required and whether it is feasible to acquire the right of way based on the level of development of the adjacent land and buildings (if any). All improvements should be reviewed in the field to make sure that they can be accommodated. If they cannot be accommodated or are not feasible, those findings need to be included in the local transportation analysis.

The local transportation analysis should discuss other possible adverse impacts on traffic. Examples of these are: (1) the limited visibility of access points on curved roadways; (2) the need for pavement widening to provide left-turn and right-turn lanes at access points into the proposed project; (3) the impact of increased traffic volumes on local residential streets; and (4) the need for road realignment to improve sight distance.

Projects which propose to amend the City's General Plan Land Use and substantially increase potential traffic generation must provide an analysis of the project at current planned land use versus proposed land use in the build out condition for the project area, including future cumulative conditions. The purpose of such analysis is to provide decision makers with the understanding of the planned circulation networks ability to accommodate additional traffic generation caused by the proposed General Plan Land Use amendments.

The LTA shall be provided as an electronic PDF copy of the TIS to the City of Clovis City Engineer, according the report format presented in Attachment D.

Attachment A: High Quality Transit Areas Map



FAX Route 9

15 Minute Frequency

High Quality Transit Area

City Boundary

Existing High Quality Transit Areas
City of Clovis VMT Implementation

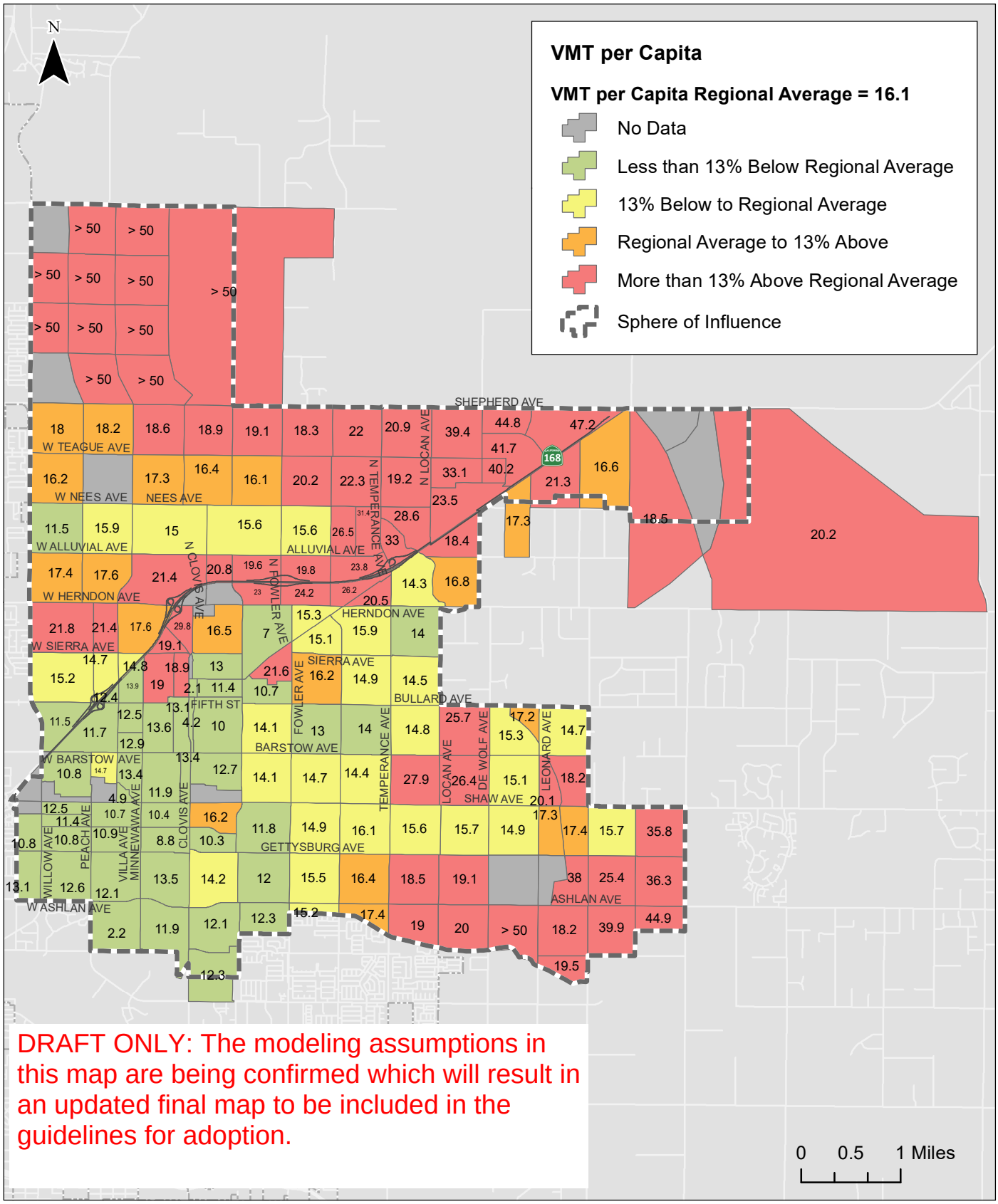
Figure
3

H:\24\24913 - City of Clovis VMT Implementation\gis\High_Quality_Transit - v1.mxd - msahimi - 7:23 PM 5/29/2020

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet
Data Source: City of Clovis

Attachment B: VMT Screening Maps



DRAFT ONLY: The modeling assumptions in this map are being confirmed which will result in an updated final map to be included in the guidelines for adoption.

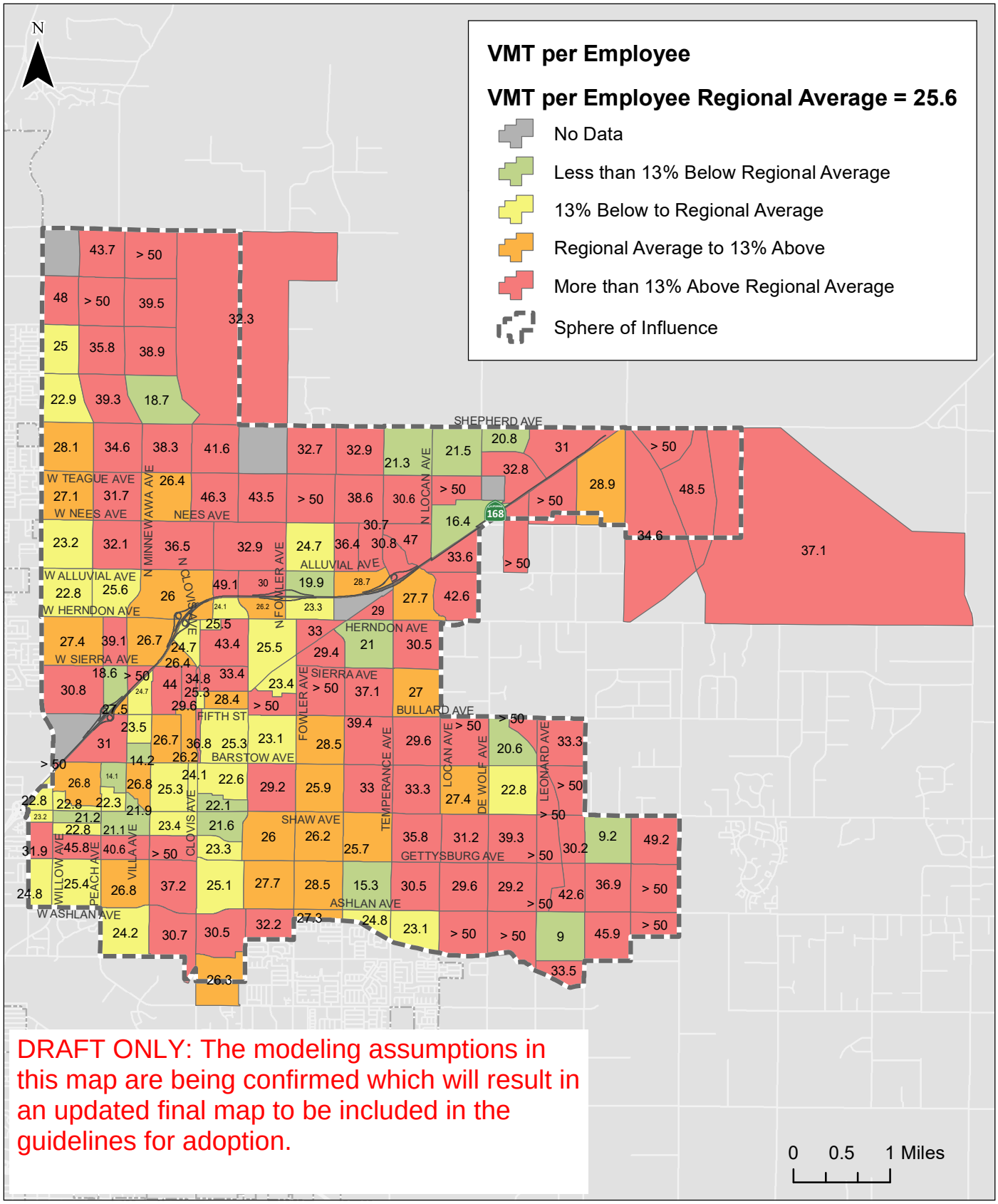
Existing VMT Per Capita (2019)
City of Clovis VMT Implementation

Figure **1**

H:\24\24913 - City of Clovis VMT Implementation\gis\Clovis_VMTpercap_(2019).mxd - gcarsky - 10:31 AM 6/15/2020

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet
Data Source: City of Clovis



Existing VMT Per Employee (2019)
City of Clovis VMT Implementation

Figure **2**

H:\24\24913 - City of Clovis VMT Implementation\gis\Clovis_VMTperemp(2019).mxd - gcarsky - 12:41 PM 6/26/2020

KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane California IV FIPS 0404 Feet
Data Source: City of Clovis

Attachment C: VMT-Reducing Transportation Projects

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

- Roadside safety devices or hardware installation such as median barriers and guardrails

- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes

- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety

- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes

- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit

- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel

- Addition of a new lane that is permanently restricted to use only by transit vehicles

- Reduction in number of through lanes

- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles

- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features

- Installation of traffic metering systems, detection systems, cameras, changeable message signs and other electronics designed to optimize vehicle, bicycle, or pedestrian flow

- Timing of signals to optimize vehicle, bicycle, or pedestrian flow

- Installation of roundabouts or traffic circles

- Installation or reconfiguration of traffic calming devices

- Adoption of or increase in tolls

- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase

- Initiation of new transit service

- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes

- Removal or relocation of off-street or on-street parking spaces

- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)

- Addition of traffic wayfinding signage

- Rehabilitation and maintenance projects that do not add motor vehicle capacity

- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way

- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel

- Installation of publicly available alternative fuel/charging infrastructure

- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

Attachment D: Local Transportation Analysis Report Format

COVER PAGE

1. Project address
2. Project name (if applicable)
3. Prepared for
4. Date (month/day/year)
5. Consultant contact information including a contact name
6. Consultant job number (if applicable)
7. Entitlement Number (i.e. Tract or CUP Number)
8. City Planner Name (if known)
9. Stamp and/or signature of qualified engineer or authorized owner/principal of firm stating the study was prepared and reviewed under their supervision and direction.

TABLE OF CONTENTS LIST OF FIGURES LIST OF TABLES

EXECUTIVE SUMMARY

Provide summary of the TIS, project location and size, intersections analyzed, study scenarios, impacts, mitigation and recommendations in a figure and table. Methodology used to analyze the impacts does not need to be included in the executive summary. Document results of LOS analysis, intersections and roadway segments Provide summary of site access and circulation. Results of LOS analysis should be summarized in a table form as follows for both existing and cumulative scenarios:

Summary of Intersection Level of Service

	Existing		***Existing plus Proposed Project***		***Existing plus Approved and Pending plus Proposed Project***	
Intersection	***Delay***	***LOS***	***Delay***	***LOS***	***Delay***	***LOS***

INTRODUCTION

Provide description of the project, location, size and proposed primary access. A vicinity map showing the site location and the study area relative to other transportation systems along with study intersections and roadway segments should be provided. Document study intersections, roadway segments and study scenarios providing brief explanation on each study scenarios. Describe the methodology used to analyze the impacts of the study and the thresholds for determining an impact.

EXISTING CONDITIONS

Provide a description of existing streets and roadways within the project site (if any) and in the surrounding area. Include information on the roadway classifications (per the Clovis General Plan Circulation Element), the number of lanes, posted speed limits, divided/undivided and bike lanes.

Existing daily directional and peak-hour through and turning traffic volumes on the roadways surrounding and/or logically associated with the project site, including major highways and freeways. Local streets affected by the project should also be shown. Each report shall include appendices providing count data used in the preparation of the report. The source and date of the traffic volume information shall be indicated. A figure illustrating the peak hour traffic volumes, lane configurations, and traffic control at the study intersections and roadway segments should be provided.

All assumed roadways and intersections or any other transportation circulation improvements must be identified and discussed. The discussion should include the scope and the status of the assumed improvements including the construction schedule and financing plan.

In addition, any transit facilities within 1,300 feet of the project or study intersections/roadways segments, including the service provider(s), routes, frequency and location/amenities of existing bus stops should be provided.

Existing and planned bicycle and pedestrian facilities adjacent to the project site, utilized by the project, connected to by the project, or impacted by the project should be identified and described in detail.

Results of LOS analysis should be summarized in table (in a format illustrated above) and discussed. If any of the study intersections or roadway segments are operating at unacceptable levels, mitigation measures should be identified.

EXISTING PLUS PROPOSED PROJECT CONDITIONS

This scenario is required by CEQA to show the impacts of the proposed project on the existing conditions. It should include a project description, trip generation and distribution, level of service analysis, and appropriate tables, figures, and recommendations/mitigation as described below.

Project Description

A description of the project, including factors which quantify traffic generators, e.g., dwelling units, square feet of office space, persons to be employed, restaurant seats, acres of raw land, etc. Provide site plan including access, project only trips at the access points, circulation, parking, and loading as applicable.

Trip Generation and Trip Distribution

Provide trip generation and trip distribution as per Section 7.0 and 8.0 of this document. Provide any relevant information, discussion if applicable.

Level of Service Analysis

Provide a figure illustrating peak hour traffic volumes at the study intersections and roadway segments for Existing plus Proposed Project Conditions. Results of LOS analysis should be summarized in table and discussed. If any of the study intersections or roadway segments are projected to operate at unacceptable levels, mitigation measures should be identified.

Site Access and Circulation

Provide site access and circulation analysis and discussion as per the "SITE ACCESS AND CIRCULATION" Section of this document. Provide a figure showing on site and circulation recommendations.

NEAR-TERM ANALYSIS (EXISTING PLUS APPROVED AND PENDING PROJECT PLUS PROPOSED PROJECT CONDITIONS)

Approved and pending projects located within the vicinity of project, (projects that would impact study intersections and/or roadway segments or as determined by Traffic Engineering Manager), that can reasonably be expected to be in place by the project's construction year along with the trip generation should be summarized in a table. A figure illustrating the Existing plus Approved and Pending Projects Plus Proposed Project peak hour traffic volumes should be provided.

Results of LOS analysis should be summarized in table and discussed. If any of the study intersections or roadway segments are projected to operate at unacceptable levels, mitigation measures should be identified.

CUMULATIVE 20-YEAR AND CUMULATIVE 20-YEAR PLUS PROJECT CONDITIONS

Provide similar information for both scenarios as above referenced scenarios. Please discuss in detail how the traffic volume forecasts were developed using the Fresno COG model. This information should be easy to follow and reproducible by a peer consultant.

QUEUING

Discuss and provide recommendations to mitigate unacceptable queues at study intersections under appropriate scenarios as applicable.

SIGNAL WARRANTS

Provide signal warrants analysis and discuss results of the analysis under appropriate scenarios as applicable.

CONCLUSION

MITIGATIONS & RECOMMENDATIONS

Provide objective recommendations in a table or figure and discuss the timing and funding of recommendations.

APPENDIX

Traffic Counts
Fresno COG Model Runs and Turning Movement Forecast outputs
Signal Warrants
References and Bibliography Level Service Calculation Sheets