City of Jurupa Valley Traffic Impact Analysis Guidelines

Methodologies and Requirements
for
General Plan Compliance Analysis
and
CEQA VMT Analysis

November 2020

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A. Introduction

The purpose of Transportation Impact Analysis (TIA) Guidelines is to provide general instructions for analyzing the potential transportation impacts of proposed development projects (e.g., general plan Amendments and zoning changes). These guidelines present the recommended format and methodology that should generally be utilized in the preparation of TIAs. These recommendations are based on City of Jurupa Valley General Plan Standards with updates to comply with the California Environmental Quality Act (CEQA) expectations prompted by Senate Bill 743 (SB 743). These recommendations are general guidelines. The TIA requirements may be modified based on the unique characteristics of a particular project at the discretion of the Planning Director and the Director of Public Works.

For transportation projects, the City of Jurupa Valley maintains Level of Service (LOS) as the preferred metric for determining local transportation impacts outside of CEQA review.

The City reserves the right to modify the TIA Guidelines requirements based on the unique characteristics of a particular project. Any person completing a VMT assessment should have sufficient background knowledge of SB 743 requirements and travel demand forecasting models to update the information as needed to complete an accurate assessment.

B. Need for Transportation Impact Analysis

The need for a TIA may stem from CEQA compliance, general plan consistency, and/or determination of local transportation impacts. All discretionary actions require CEQA review, but what type and extent of TIA is required, if any, depends on the findings of the initial study and the potential for the project to cause a significant impact. General Plan consistency is required for all discretionary actions. The City of Jurupa Valley development review processes are used to determine whether a TIA is required and what type of analysis would need to be prepared with respect to CEQA compliance and General Plan consistency.

Need to Complete LOS as Part of the TIA Analysis

The City of Jurupa Valley has two processes for reviewing a proposed project's traffic impacts, including a Focused Transportation Assessment (FTA) and a Transportation Impact Analysis (TIA). Generally, projects that will generate between 50 and 100 peak hour trips will be required to conduct a FTA, while larger projects are required to conduct a TIA. The primary differences between the two types of transportation review are the type and level of detail in the analyses.

Traffic Impact Analysis

The following activities may not require a full TIA that includes LOS analysis. This presumption is based on the activities associated with the project or the limited trip generation of the project:

- All residential parcel maps;
- Single family residential tracts of less than 100 dwelling units;
- Apartments and multi-family projects of less than 150 units;
- Plot plan and conditional use cases for projects of one acre or less;
- Preschools;
- Local serving churches, community centers, neighborhood parks and community parks;
- Mini storage yards;
- Congregate care facilities that contain significant on-site special services, such as medical facilities, dining facilities, recreation facilities and support retail services;
- Any other use which can demonstrate trip generation of less than 100 vehicle trips during any hour of the day.

Focused Transportation Analysis

For development projects generating traffic at a level below the threshold for a TIA, the City of Jurupa Valley reserves the right to require an applicant to prepare an FTA based on:

- Proximity to an existing intersection with poor operating conditions;
- Presence of an existing or potential safety problem;
- Location of the development in an environmentally or otherwise sensitive area, or in an area that is likely to generate public controversy;
- Presence of a nearby intersection or street with an existing substandard design;
- Need to address site access/on-site operational issues;
- Request from an affected agency, such as Caltrans or adjacent City; if the request is deemed reasonable and appropriate.

An FTA may be required for projects generating between 50 and 99 trips during any hour of the day and meets any of the above criteria. The scope of the focused transportation analysis shall be determined by the Planning Director and the Director of Public Works.

Need to Complete VMT as part of the TIA Analysis

For purposes of SB 743 compliance, a VMT analysis should be conducted for land use projects as deemed necessary by the Planning Director and the Director of Public Works and would apply to projects that have the potential to increase the average VMT per capita (for residential projects) or per employee (for office or industrial projects) or net increase in VMT (for other uses).

The first step of SB 743 assessment will be to provide initial project screening to determine if a full VMT analysis is required:

1. Does the project have the potential to reduce VMT?
2. Is the project consistent with the Regional Transportation Plan (RTP) / Sustainable Communities Strategy's (SCS)?

Depending on this screening, the analysis requirements will differ for each proposed project. The following activities generally will not require a TIA that includes a detail project level VMT assessment. This presumption is based on the OPR Technical Advisory supporting SB 743 implementation or is related to projects that are local serving which, by definition, would decrease the number of trips or the distance those trips travel to access the development (and are VMT-reducing projects).

1. Projects located in a Transit Priority Areas (TPA) (as defined later in this guidance)
2. Projects located in a low-VMT generating area (as defined later in this guidance)
3. Day care centers
4. Local-serving retail centers, gas stations, and banks
5. Local-serving restaurants, including with drive-thru
6. Local-serving hotels (e.g. non-destination hotels)

7. Projects generating less than 250 daily vehicle trips[1]

Coordination with the Planning Department and Other Local Agencies

To streamline the TIA preparation and review process, the TIA preparer shall solicit input and approval for the City of Jurupa Valley Planning Department prior to the preparation of a Project Scoping Form and preparation and submittal of a draft TIA document. A TIA Project Scoping Form (see attachments) shall be prepared by the Engineer and submitted to the Planning Department for approval prior to the preparation of a draft TIA. The Project Scoping Form provides for agreement of the following key points before initiating the TIA. Projects located close to a City boundary, State highway, or have an expected service area large enough to substantially extend into adjacent jurisdictions, may be required to solicit input from those other affected agencies as to required elements that will be required to be included in the TIA. The TIA Scoping Agreement Form shall include, but not limited to, the following information:

- Determination of study area, intersections, and roadway links to be analyzed.
- Project trip generation, distribution, and assignment.
- Project trip pass-by and internal trip projections and assignments.
- Presentation of screening criteria used to screen the project from VMT assessment or proposed methodology/metrics that will be applied to estimate VMT.
- Use of other approved projects for background traffic, traffic growth assumptions, or integration with RIVTAM or RIVCOM[2] travel demand model.
- Coordination with adjacent agencies.
- For projects within one mile of a state highway, or any project that may add traffic on the state highway, the Engineer shall also coordinate with Caltrans.

[1] This threshold ties directly to the OPR technical advisory and notes that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2)). City experience is that projects approximately twice this size do not show a substantially different impact assuming a linear rate of trip growth. Typical project types for which trip generation increases relatively linearly with building footprint or number of units (i.e., residential, general office building, single tenant office building, office park, and business park) generate or attract an additional 220-250 trips per 20,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 250 or fewer daily trips could be considered not to lead to a significant impact.

[2] Note – RIVCOM is currently under development. Once finalized, RIVCOM should be utilized for all forecasting activity. The preparer should coordinate with WRCOG to ensure that they are utilizing the most recent travel demand forecasting model.

C. Level of Service Assessment for General Plan Consistency

The City of Jurupa Valley continues to use LOS as the primary metric for determining compliance with the City's General Plan.

Methodologies

The following LOS analysis is required to meet with general plan consistency requirements.

Intersections

The most recent version of the *Highway Capacity Manual* (Transportation Research Board) should be utilized for both signalized and unsignalized intersections. The following parameters should be included in the analysis.

- Peak-hour and daily traffic count data used in the analyses shall be no more than 2 years old or newer if the study area has experienced, or is expected to experience prior to the Project opening, substantial development activity. Any conversion of peak-hour traffic count data to daily traffic volumes shall be verified using other current data collected proximate to the project site.
- In areas where there is, or expected to be, regular pedestrian and bicycle activity, bicycle and pedestrian counts shall also be collected.
- Saturation Flow Rate consistent with field measurements *or* 1,900 passenger cars/hour/lane
- Heavy Vehicle Factor based on count data or provided either by the City of Jurupa Valley or collected during traffic counts; analyst may use a Passenger Car Equivalent (PCE) conversion to reflect heavy vehicles in the volume *or* incorporate the heavy vehicle factor in the capacity calculation consistent with HCM requirements and as directed by the Director of Public Works.
- Grade based on existing or proposed grade of the facility.
- Cycle lengths, green time, and other signal parameters should be based on existing signal timings (timing sheets provided by the City, other agencies, or collected in the field).
- Lost time should be based on existing signal timings or consistent with the recommendations from the HCM.
- Peak-hour factors should be based on count data; future peak hour factor should be 0.95
- Intersections must be evaluated with HCM-consistent software; for locations where closely spaced intersections occur or queues build over space and time (extending to upstream or downstream intersections), microsimulation should be utilized to accurately evaluate the intersections as a system. This may require inclusion of freeway facilities. When microsimulation analysis is used, actual heavy vehicle percentages shall be used versus PCE volumes.

- When signalized intersections are closely spaced or new intermediate traffic signals are proposed, a progression analysis shall be provided to indicate the level of traffic signal coordination that can be provided.

When developing mitigation, the following recommendations should be considered.

- Exclusive left-turn lanes should be considered when peak hour volumes exceed 100 vph.
- Dual left-turn lanes should be considered when peak hour volumes exceed 300 vph.
- Protected left-turn phasing should be considered when the peak hour left turn volume exceeds 240 vph.
- When protected left turn phasing is proposed, the use of protected-permissive left-turn phasing should be considered to reduce intersection delay.
- In areas with regular pedestrian activity, the use of leading pedestrian intervals to assist pedestrians should be considered. In addition, when regular pedestrian activity is expected, the use of dual right-turn lanes crossing pedestrian approaches shall not be used.

Roundabout Assessment

At intersections with Caltrans facilities and/or at intersections identified by the Director of Public Works, the analyst shall conduct a roundabout analysis using current Caltrans standards and guidelines.

Roadway Segment Assessment

Roadway segment evaluation, in addition to intersection analysis, shall be conducted for segments identified by the Director of Public Works. In those instances, roadway segment capacity should be based on criteria as documented in the City of Jurupa Valley General Plan and General Plan EIR.

Study Area Boundaries for LOS assessment

In general, the minimum area to be studied should include any intersection of "Collector" or higher classification street, with "Collector" or higher classification streets; at which the proposed project will add 50 or more peak-hour trips. Analysis of intersections where the project will not generate between 25 and 49 peak-hour trips will be reviewed on a case-by-case basis. In general, the study area should not exceed a 5-mile radius from the project site unless evidence is available to justify a larger area. Note that the study area may be expanded or contracted based on the discretion of the Director of Public Works.

Analysis Scenarios

At a minimum, the following study scenarios shall be included for the intersection capacity analysis:

a) Existing Conditions.

b) Opening Year Background Conditions Without Project – Defined as Project Opening Year Conditions with traffic from approved projects in the area that are expected to be occupied by the Project's opening year (note, if there are no or limited approved projects in the area of the project, an ambient growth rate could be considered in lieu of assigning traffic from approved projects in the area). However, proximate large-scale development projects may need to be added separately if they are expected to have a substantial effect on area traffic volumes. The Project Opening year must be realistically developed and account for project approval and

construction timelines. This scenario should also include conditioned transportation improvements from those background projects included.

c) Opening Year Background Conditions Plus Project – Defined as background conditions (Scenario B above) plus traffic from the proposed project.

d) Opening Year Background Plus Project Plus Cumulative Project Conditions – Defined as background conditions plus traffic from the proposed project (Scenario C above) plus traffic from approved and pending projects in the area not expected to be occupied by the Proposed Project's opening date.

e) Cumulative Horizon Year No Project Conditions[3] – Defined as ambient growth to the Cumulative Horizon (typically coinciding with the forecast horizon of the RIVTAM/RIVCOM travel demand forecasting model) that includes traffic from approved and pending projects in the area.

e) Cumulative Horizon Year Plus Project Conditions[3] – Defined as Cumulative No Project Conditions plus traffic from the proposed project.

Phased Projects

Phased projects can be evaluated in three ways:

- The analyst can identify which phase of a project triggers a needed improvement based on the comparison of Background Conditions to Background Plus Project Conditions, or
- They can provide a phased assessment looking at opening years of each phase, or
- For large phased projects, the project as a whole can be evaluated initially; however, subsequent traffic studies would have to be completed for each proposed phase implementation to ensure that improvements are implemented when they are needed.

The Planning and Engineering Departments must be consulted to identify which approach is most appropriate for a proposed project if phasing is proposed; however, the first option noted above is recommended for most phased projects.

Data Collection, Project Trip Generation, and Forecasting Methodologies

Traffic Counts

Data for existing traffic conditions should be collected for the Project using the following guidelines.

- Peak period turning movement counts at all study intersections, roadway segments (if required) and/or driveways, including bicycle and pedestrian counts at intersections with regular non-motorized activity, should be collected as directed by the Director of Public Works. For intersections with high percentages of heavy vehicles, classification counts shall be provided.

[3] Note that the Cumulative Horizon Year analyses are only required for those projects that are requesting a change in zoning or other approvals that are not consistent with the Jurupa Valley General Plan.

- Average Daily Traffic (ADT) volumes are to be collected for all major roadways within study area and vehicle classification counts in areas with a high percentage of heavy vehicle use, as directed by the Director of Public Works.
- Traffic counts should not be used if more than two year old without prior approval.
- Traffic data should not be collected on weeks that include a holiday and non-school session time periods unless approved by the Director of Public Works.
- Traffic data should not be collected between Thanksgiving and the first week of the following January 1st without prior approval.
- Traffic counts should be conducted on Tuesdays, Wednesdays, or Thursdays. For most retail Projects, Saturday midday traffic counts are also required.
- For congested conditions, back of queue data by approach (and turning movement) should be collected every 15 minutes (i.e., verify and calibrate modelled queue lengths).

Unless directed otherwise by the Director of Public Works, counts should be collected during the following time frames presuming the time period captures the beginning and end times of any congested conditions.

- Morning (6:30 a.m. to 9:00 a.m.).
- Afternoon/evening (3:30 p.m. to 6:00 p.m.).
- Midday, Saturday, and "School-Release" peak hours – If directed by the Director of Public Works.
- Other peak hours, off-peak, weekend or special event, may also be required depending on the project location and type of proposed use.

Count data shall be included in the study appendices and provided to the City in electronic database or spreadsheet format.

Trip Generation

Trip generation data may be determined using the Institute of Transportation Engineers (ITE) Trip Generation Manual (latest edition). Other trip generation sources may be used for estimating project trip generation with approval of the Director of Public Works.

For land uses either not included or with limited sample sites in the ITE manual, collection of local trip generation data is recommended. Use of the ITE trip generation rates may be allowed for limited survey sites or land uses with poor data fitment, but limitations of the data must be fully disclosed especially related to land use context. If required, local trip generation surveys should be conducted for at least three similar project sites following the methodology contained in the ITE Trip Generation Handbook.

Trip generation for high truck-generating uses such as high cube warehouses, logistics space, fulfillment centers, etc. shall be determined with City staff input on a case-by-case basis. The proposed trip generation shall be listed in the scoping form for review and approval prior to study initiation.

Truck trip generation rates and percentages shall be developed using locally collected surveys conducted for the Project, recently collected regional data for similar developments, truck percentage prepared by

AQMD, or by other regional agencies (e.g., WRCOG, other cities, etc.) no more than 7 years old, unless approved by the City Engineer.

Internal trip capture for mixed-use developments (if applicable) should be calculated using state of the practice methodologies. These may include the US Environmental Protection Agency's (EPA) mixed-use trip generation (MXD) methodology, ITE's mixed use trip generation method, or other state of the practice method and must be approved by the Director of Public Works prior to use in any studies. Trip capture calculations (including gross trips, net trips after capture, and MXD input assumptions (such as intersection density, Transit-Oriented Development (TOD) assumptions, acres, etc.) must be clearly documented in the TIA.

For projects that anticipate the generation of significant truck traffic, all truck trips may be converted into passenger car equivalents (PCE) for the capacity analysis or the analyst should adjust the heavy vehicle percentage in the capacity assessment appropriately. The PCE conversion shall be as follows:

- 2-Axle = 1.5 PCE
- 3-Axle = 2.0 PCE
- 4+-Axle = 3.0 PCE

For microsimulation analyses, the measured and/or projected heavy truck percentages shall be used and not the PCE values.

In lieu of converting traffic volumes to PCEs, the use of a Heavy Vehicle Factor (HVF) may be based on count data to reflect heavy vehicles in the volume. If a HVF is used, it must be based on the segregated count data and be consistent with HCM requirements.

All trip generation information shall be provided in the Scoping Agreement.

Trip Distribution

The project's trip distribution should be based on expected origin-destination patterns related to the project's land uses. Preferred methods include the use of mobile device data measuring trip distribution for similar sites or land uses (a minimum of three locations) or a select zone assignment from the RIVTAM/RIVCOM. Other data may be used to help refine trip distribution patterns including the relative location of population, commercial, recreational and employment centers; existing peak-hour link and turning movement volumes; ADT volumes; proximity to regional transportation corridors; and knowledge of local and regional traffic circulation. A preliminary trip distribution pattern map shall be submitted in the scoping form for review and approval by the Director of Public Works. The trip distribution may be further refined, after consultation with City staff.

Trip Forecasts

For Cumulative Conditions, RIVTAM/RIVCOM should be used to develop future traffic volume forecasts for the cumulative horizon year. Prior to running the model, the preparer should review the land use growth allocations in the study area to verify that the allocations are representative of the available land supply created by previously approved projects, the general plan, and applicable zoning.

Intersection Operating Requirements for General Plan Consistency

Signalized Intersection Operating Requirements

- The City's General Plan defines the minimum acceptable intersection LOS as LOS D[4]. Any signalized study intersection operating at an acceptable LOS without project traffic in which the addition of project traffic causes the intersection to degrade to a LOS E or F shall identify improvements to improve operations to LOS D or better. LOS E may be deemed acceptable by the City Council in designated planning areas and for multimodal mobility corridors that include facilities for at least three transportation modes in addition to motor vehicles, and that support transit-oriented development and walkable communities. LOS F is not considered an acceptable level of service for other than the horizon year unless previously adopted for that intersection in the City's General Plan.
- Any signalized study intersection that is operating at LOS E or F without project traffic where the project increases delay by 3.0 or more seconds shall identify improvements to offset the increase in delay. Note that no changes in the traffic signal operations between the Background and "With-Project" conditions shall be included when determining the project's impact at the intersection unless changes are being proposed as part of the project's mitigation program.

Unsignalized Intersection General Plan Consistency Requirements

Consistent with the acceptable LOS for the Jurupa Valley General Plan[4], the City considers the following unsignalized intersection criteria when identifying operational deficiencies:

An operational improvement would be required if the study determines that either section a) or both sections b) and c) occur:

a) The addition of project related traffic causes the intersection to degrade from an acceptable LOS D or better to LOS E or F.

   OR

b) The project adds 5.0 seconds or more of delay to an intersection that is already projected to operate without project traffic at a LOS E or F,

   AND

c) The intersection meets the peak-hour traffic signal warrant after the addition of project traffic.

If the conditions above are satisfied, improvements should be identified that achieve the following:

- LOS D or better for case a) above or to pre-project LOS and delay for case b) above.

4 City of Jurupa Valley California 2017 General Plan; September 2017.

Roadway Segment General Plan Consistency Requirements

While intersections typically provide the transportation constraint on vehicle capacity, in some instances, roadway segment evaluation is appropriate and may be requested. Consistent with the acceptable LOS for the City of Jurupa Valley, the following roadway segment requirements should be considered and improvements recommended if the project exceeds the operational goals:

- Any study roadway segment operating at a LOS D or better without project traffic in which the addition of project traffic causes the segment to degrade to an LOS E or F should identify improvements to achieve at least LOS D.
- Any roadway segment that operates unacceptably in the no-project scenario where the project adds traffic in excess of 5% of the roadway capacity (e.g. a volume-to-capacity ratio increase of 0.05) should identify improvements to add capacity to the segment.

Table 1: Roadway Segment Capacities [1]

Type of Roadway	Number of Lanes	Maximum Two-Way Daily Traffic Volume (ADT)[2]		
		LOS C	LOS D	LOS E
Local	2	2,500	2,800	3,100
Collector	2	9,900	11,200	12,500
Industrial Collector	2	10,400	11,300	12,500
Secondary	4	20,700	23,300	25,900
Major	4	27,300	30,700	34,100
Arterial [3]	2	14,400	16,200	18,000
Arterial	4	20,000	22,500	25,000
Urban Arterial	4	30,000	33,800	37,500
Urban Arterial	6	45,000	50,600	56,300
Expressway	4	32,700	36,800	40,900
Expressway	6	49,000	55,200	61,300

** - Maximum Average Daily Traffic (ADT)*
(1) – These roadway capacities are "rule of thumb" estimates for planning purposes. The LOS "E" service volumes are estimated maximum daily capacity for respective classifications. Capacity is affected by such factors as intersections (spacing, configuration, and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic), and pedestrian and bicycle traffic.
(2) – Maximum two-way ADT values are based on the County of Riverside General Plan Circulation Element and the Riverside County Congestion Management Program.
(3) – Two-lane roadways designated as future arterials that conform to arterial design standards for vertical and horizontal alignment are analyzed as arterials.

Site Access, Safety, and Other Analyses

A project's TIA should analyze site access and safety around the project and on adjacent streets. The recommended analyses are summarized below.

Site Access Analysis

The following analyses shall be provided to improve the project's access and circulation and to limit driveways on arterial streets and restrict, if necessary, local street access:

a) **Intersection Sight Distance –** All on-site roadway intersections, project access driveways or streets connecting to public roadways shall provide adequate sight distance. Adequate intersection sight distance should be determined using the Caltrans Highway Design Manual.

b) **Driveway Length and Gated Entrance –** Primary project driveways should have a throat of sufficient length to allow at least 2 vehicles to enter the project area without causing subsequent vehicles to back out onto the public street system. Where stacking of entering traffic may occur at the project entrance, a deceleration/right-turn lane may be required.

c) **Limit Driveway Impacts –** Driveways and local streets access on arterial streets shall be limited to minimize the impacts on arterial streets. Driveways shall be located so as to maintain a reasonable distance from an adjacent intersection and/or driveway. Whenever possible, driveways should be consolidated with adjacent properties. Where driveways are proposed proximate to intersections, a queueing analysis shall be provided to verify that street traffic will not be impeded by vehicles turning out of the project driveway.

d) **Corner Clearance –** A driveway shall be a sufficient distance from a signalized intersection so that right-turn egress movements do not interfere with the right-turn queue at the intersection. In addition, every effort should be made to provide right-turn egress movements with sufficient distance to enter the downstream left-turn pocket at the adjacent intersection.

e) **Right-Turn Lanes at Driveways –** If the project right-turn peak hour volume is 50 or more vehicles, a right-turn deceleration lane should be reviewed for appropriateness on all driveways accessing arterial, collector, and secondary streets. The length of any right-turn lanes should be sufficient to allow a vehicle traveling at the posted speed to decelerate before entering the driveway as outlined in the Caltrans Highway Design Manual.

f) **Pedestrian Access –** The adequacy of pedestrian facilities to/from the project site providing convenient and direct access for those users.

g) **Bicycle Access –** The accessibility from existing and proposed nearby bike facilities to the project site. Bicycle access shall be coordinated with the City's Pedestrian and Bicycle Master Plan.

h) **Transit Access –** The accessibility from adjacent transit stops to/from the project site providing convenient and direct access for those users.

Traffic Signal Warrant Analysis

A traffic signal warrant analysis should be performed for all unsignalized study intersections for the project opening year (if applicable) and build-out year conditions. Traffic signal warrant analysis should be performed using the latest edition of the California MUTCD. All warrant analyses must be included in the study appendices.

In determining the location of a new traffic signal on an arterial street or approaching an arterial street, traffic progression and simulation analysis may be required using Synchro/SimTraffic software or equivalent at the direction of the local agency, especially in corridors where progressive traffic signal operations are required.

To minimize the use of traffic signals at intersections that meet signal warrant thresholds for only 1 or 2 hours of a day, devices such as roundabouts or other alternative traffic control shall be considered where practical.

Improvements for Transportation Impacts

As part of the final acceptance of a TIA, the City will review and approve any required improvements and/or fair share contributions necessary to improve the transportation-related deficiencies caused by the proposed development. These will then be included as part of the conditions of approval and Mitigation Monitoring Program and may be in addition to other improvements required by the City of Jurupa Valley or other agencies. Any transportation improvements based on the traffic analyses may be in addition to any other fees related to the existing fee programs (unless the needed improvement is already included in an existing fee program (such as TUMF).

Transportation improvements required in a TIA and subsequently listed in the conditions of approval along with any identified and required fair share payments shall be completed prior to occupancy.

Level of Service Improvements

Improvements for project level impacts should focus on providing operations that offset the project impact (e.g. achieve a "no project" level of service). Improvements could consist of signal timing improvements, lane restriping, or new lanes to study facilities that are approved by the Director of Public Works.

Cumulative deficiencies should include a fair-share contribution toward achieving acceptable levels of service as noted below. Alternatively, if a cumulative location is included in an existing traffic impact fee program (such as TUMF) as a fundable item, payment of those fees would constitute an appropriate contribution.

For improvements that are needed where the applicant is not solely responsible, a fair share computation shall be computed and reported for each such mitigation. The fair share amount should be calculated using the following formula:

$$\text{Fair share} = \frac{\text{project trips}}{\text{project trips + future cumulative development trips}}$$

Trips noted above should correspond to either the peak hour where the deficiency occurs for intersection assessment or daily trips for roadway segment impacts and/or projects that generate a large percentage of their trips during off-peak hours. If a project degrades operations during both more than one peak hour, then the analysis should identify the peak hour for fair share assessment that has the highest project burden for fair share contribution.

Mitigation costs shall be developed based on an Engineer's Estimate of the full costs for the required mitigation adjusted to the proposed project's opening year.

D. CEQA Assessment - VMT Analysis

The following process shall be used in determining a project's VMT impact and mitigation requirements for various land use project's TIAs.

Analysis Methodology

For purposes of SB 743 compliance, a VMT analysis shall be conducted for land use projects as deemed necessary by the Planning and Public Works Departments and applies to projects that have the potential to increase the average VMT/SP (e.g. population plus employment) compared to the City's baseline VMT/SP rate. These guidelines are based on the WRCOG Implementation Pathway Study[5].

Project Screening

There are three screening steps to be followed to screen projects from project-level assessment. These screening steps are outlined in **Table 2**.

[5] Additional information related to the Implementation Pathway Study can be found at https://www.fehrandpeers.com/wrcog-sb743/ or https://www.fehrandpeers.com/wp-content/uploads/2019/12/WRCOG-SB743-Document-Package.pdf

Table 2: VMT Impact Thresholds		
Methods	**Project Threshold**	**Cumulative Threshold**
Land Use Projects		
• Transit Priority Area (TPA) screening	Presumed less than significant VMT impact for projects located in TPAs.	Project presumption applies under cumulative conditions as long as project is consistent with RTP/SCS.
• Low VMT Area Screening	Presumed less than significant VMT impact for projects located in low VMT generating model traffic analysis zones (TAZs) and land use is consistent with existing uses. These TAZs generate total daily VMT rates that are less than the baseline levels for the City.	Project presumption applies under cumulative conditions as long as project is consistent with RTP/SCS.
• Project Type Screening	Local serving retail projects (Per OPR's Technical Advisory) and other neighborhood uses are presumed to have a less than significant VMT impact.	Project presumption applies under cumulative conditions as long as project is consistent with RTP/SCS.
• VMT Analysis Using Model Forecast of Total Daily VMT Rates (for residential, office and employment centers) and Total Daily VMT (for retail and other developments).	For residential projects, in the Baseline Plus Project scenario its net VMT per capita exceeds the City's average VMT per capita. For office and industrial projects its net VMT per employee exceeds the City's average VMT per employee. For all other uses, a net increase in VMT within the city would be considered a significant impact.	A significant impact may occur if the project is determined to be inconsistent with the RTP/SCS. A significant impact would occur if the project causes total daily VMT within the City to be higher than the no-project alternative under cumulative conditions.
Transportation Projects (thresholds may apply for SB 743 or GHG purposes)		
• Lane-mile elasticity (short-term) based on opening year no build vs. build	A significant impact would occur if the project increased the baseline VMT within the City.	N/A
• Consistency with RTP/SCS	N/A	A significant impact may occur if the project is determined to be inconsistent with the RTP/SCS.
• Forecast of total daily VMT	A significant impact would occur if the project increased the baseline VMT within the City.	A significant impact would occur if the project caused total daily VMT within the City to be higher than the no build alternative under cumulative conditions.

Step 1: Transit Priority Area (TPA) or High Quality Transit Area (HQTA) Screening

Projects located within a TPA or HQTA[6] may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may ***NOT*** be appropriate if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the project is required to supply parking);
3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the Planning Department, with input from RCTC); or
4. Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Step 2: Low VMT Area Screening

Residential and office projects consistent with the City's General Plan and located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, other employment-related and mixed-use projects may qualify for the use of screening if the project can reasonably be expected to generate VMT per capita or per employee that is consistent with the existing land uses in that low VMT generating area and is consistent with RTP/SCS assumptions or the project improves VMT per capita or per employee compared to the RTP/SCS.

For this screening in the City of Jurupa Valley, daily VMT per capita and per employee have been estimated for each Transportation Analysis Zone (TAZ). Note that this presumption may not be appropriate if the project land uses would alter the existing built environment in such a way as to increase the rate or length of vehicle trips.

To identify if the project is in a low VMT-generating area, the analyst should review the WRCOG screening tool and apply the appropriate threshold (identified later in this chapter) within the tool. Additionally, as noted above, the analyst must identify if the project is consistent with the existing land use within that TAZ and identify that there is nothing unique about the project that would otherwise be misrepresented utilizing the data from the travel demand model.

The WRCOG screening tool can be accessed at the following location:

http://gis.fehrandpeers.com/WRCOGVMT/

[6] A TPA is defined as a ½ mile radius around an existing or planned major transit stop or an existing stop along a high quality transit corridor. An HQTA is defined as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. A map of HQTAs can be reviewed on SCAG's website. (http://gisdata.scag.ca.gov/Pages/GISStaticMaps.aspx.)

Step 3: Project Type Screening

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

In addition to local serving retail, the following uses can also be presumed to have a less than significant impact absent substantial evidence to the contrary as their uses are local serving in nature:

- Local parks
- Day care centers
- Local-serving retail centers, gas stations, and banks
- Local-serving restaurants, including with drive-thru
- Local-serving hotels (e.g. non-destination hotels)
- Local serving community colleges that are consistent with the assumptions noted in the RTP/SCS
- Projects generating less than 250 daily vehicle trips[7]

VMT Assessment for Non-Screened Development

Projects that are not screened out through the steps above but are consistent with the general plan can typically tier from the City's General Plan EIR and won't need an independent VMT analysis. Other projects not consistent with the General Plan may be required to complete a full VMT analysis and forecasting using RIVTAM/RIVCOM to determine if they have a significant VMT impact. This analysis should include 'project generated VMT' and 'project effect on VMT' estimates for the project TAZ (or TAZs) under the following scenarios:

- **Baseline *(Notice of Preparation Year)*** conditions – Year 2012 conditions data is already available in the web screening map, but shall be interpolated to reflect the Notice of Preparation (NOP) Baseline Year.

- **Baseline Plus Project** for the project - The project land use would be added to the project TAZ or a separate TAZ would be created to contain the project land uses. A full base year model run would be performed and VMT changes would be isolated for the project TAZ and across the full model network. The model output must include reasonableness checks of the production and

[7] This threshold ties directly to the OPR technical advisory and notes that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2)). City experience is that projects approximately twice this size do not show a substantially different impact assuming a linear rate of trip growth. Typical project types for which trip generation increases relatively linearly with building footprint or number of units (i.e., residential, general office building, single tenant office building, office park, and business park) generate or attract an additional 220-250 trips per 20,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 250 or fewer daily trips could be considered not to lead to a significant impact.

attraction balancing to ensure the project effect is accurately captured. If this scenario results in a less-than-significant impact, then additional cumulative scenario analysis may not be required (more information about this outcome can be found in the Thresholds Evaluation discussion later in this chapter).

- **Cumulative No Project** - This data is available from WRCOG.

- **Cumulative Plus Project** - The project land use would either be added to the project TAZ or a separate TAZ would be created to contain the project land uses. The addition of project land uses should be accompanied by a reallocation of a similar amount of land use from other TAZs; especially if the proposed project is significant in size such that it would change other future developments. Land use projects will generally not change the cumulative no project control totals for population and employment growth. Instead, they will influence the land use supply through changes in general plan land use designations and zoning. If project land uses are simply added to the cumulative no project scenario, then the analysis should reflect this limitation in the methodology and acknowledge that the analysis may overestimate the project's effect on VMT.

The model output should include total VMT, which includes all vehicle trips and trip purpose, and VMT per capita for residential projects and VMT per employee for office and industrial projects. Total VMT (by speed bin) can be used as an input for air quality, greenhouse gas (GHG) and energy impact analysis, while VMT per capita or per employee is recommended for transportation impact analysis. In other words, the model output should include all automobile VMT home-based production totals (row total) for residential projects and should include all automobile VMT home-based work attraction totals (column total) for employment-related projects.

Both "plus project" scenarios noted above will summarize two types of VMT: (1) project generated VMT per capita or per employee and comparing it back to the appropriate benchmark noted in the thresholds of significance, and (2) the project effect on VMT, comparing how the project changes VMT on the network looking at Citywide VMT per and comparing it to the no project condition.

A detailed description of this process is attached to these guidelines.

CEQA VMT Impact Thresholds

The City of Jurupa Valley has adopted the following VMT significance criteria.

Project VMT Impacts

A project would result in a significant project-generated VMT impact if:

a) For residential projects, in the Baseline Plus Project scenario its net VMT per capita exceeds the City's average VMT per capita.

b) For office and industrial projects its net VMT per employee exceeds the City's average VMT per employee.

c) For all other uses, a net increase in total VMT within the city would be considered a significant impact.

The City's existing average VMT per capita or per employee shall be the metric that is in effect at the time the Notice of Preparation is published, or if no Notice of Preparation is required, at the time the environmental analysis is commenced.

Cumulative VMT Impacts

If a project is consistent with the regional RTP/SCS, then the cumulative impacts shall be considered less than significant subject to consideration of other substantial evidence. If it is not consistent with the RTP/SCS, a project would result in a significant VMT impact if:

a) For residential projects its cumulative project-generated VMT per capita exceeds the average VMT per capita for Jurupa Valley in the RTP/SCS horizon-year.

b) For office and industrial projects its cumulative project-generated VMT per employee exceeds the average VMT per employee for Jurupa Valley in the RTP/SCS horizon year.

c) For all other land development project types, a net increase in total VMT in the Cumulative Plus Project scenario versus the RTP/SCS Without Project horizon-year would be considered a significant impact.

VMT Mitigation Measures

Once a significant impact is identified, measures to reduce the project's VMT impact should be identified to reduce the VMT levels to a level at or below the City's existing levels. Mitigation should consist of Transportation Demand Management (TDM) measures analyzed under a VMT-reduction methodology consistent with Chapter 7 of the California Air Pollution Control Officers Association (CAPCOA) Quantifying Greenhouse Gas Mitigation Measures (August 2010) and approved by the Planning Director and Director of Public Works (as applicable). To mitigate VMT impacts, the following choices may be available to the applicant:

A. Modify the project's built environment characteristics to reduce VMT generated by the project;

B. Implement Transportation Demand Management (TDM) measures to reduce VMT generated by the project; and/or

C. Participate in a VMT fee program and/or VMT mitigation exchange/banking program to reduce VMT from the project or other land uses to achieve acceptable levels.

As part of the WRCOG Implementation Pathway Study, key TDM measures that are appropriate to the region were identified. Specific strategies that are accepted in the City of Jurupa Valley must be coordinated with the Planning Department.

If a regional program is available to reduce VMT a fair share payment toward that program may be deemed acceptable. These may include the

- TUMF transit improvement projects
- TUMF bike & ped improvement projects

- Project funded TDM program

Any initial study prepared for a proposed project would consider and address the above threshold of significance, in addition to the other questions presented in the Initial Study checklist. If the project exceeds the threshold, it would normally be determined that the proposed project would have a significant impact on the environment, thereby requiring VMT reduction measures. Various Transportation Demand Management (TDM) strategies have been reviewed and their effectiveness for reducing VMT. Given Jurupa Valley's mix of land uses and the surrounding regional context, the following key strategies provide the best opportunities to reduce VMT:

To mitigate VMT impacts, the following choices are available to the applicant:

A. Project-level mitigation includes measures such as site design, location efficiency, and building operations.
B. Increase diversity of land uses - This strategy focuses on inclusion of mixed uses within projects or in consideration of the surrounding area to minimize vehicle travel in terms of both the number of trips and the length of those trips.
C. Provide pedestrian network improvements - This strategy focuses on creating a pedestrian network with the project and connecting to nearby destinations.
D. Provide traffic calming measures and low-stress bicycle network improvements - Traffic calming creates networks with low vehicle speeds and volumes that are more conducive to walking and bicycling. Building a low-stress bicycle network produces a similar outcome.
E. Implement car-sharing program - This strategy reduces the need to own a vehicle or reduces the number of vehicles owned by a household by making it convenient to access a shared vehicle for those trips where vehicle use in essential.
F. Increase transit service frequency and speed - This strategy focuses on improving transit service convenience and travel time competitiveness with driving. New forms of low-cost demand-responsive transit service could be provided.
G. Encourage telecommuting and alternative work schedules. This strategy relies on effective internet access and speeds to individual project sites/buildings to provide the opportunity for telecommuting.
H. Provide ride-sharing programs - This strategy focuses on encouraging carpooling and vanpooling by project site/building tenants and has similar limitations as the strategy above.

Evaluation of VMT reductions should be evaluated using state-of-the-practice methodologies recognizing that many of the TDM strategies are dependent on building tenant performance over time. As such, to verify actual VMT reductions on-going monitoring may be necessary to gauge performance related to mitigation expectations.

E. CEQA Assessment - Active Transportation and Public Transit Analysis

Potential impacts to public transit, pedestrian facilities and travel, and bicycle facilities and travel shall be evaluated using the following criteria.

- A significant impact occurs if the project conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decreases the performance or safety of such facilities.

Therefore, the TIA shall include analysis of a project to examine if it is inconsistent with adopted policies, plans, or programs regarding active transportation or public transit facilities, or otherwise decreases the performance or safety of such facilities and make a determination as to whether it has the potential to conflict with existing or proposed facilities supporting these travel modes.

F. Transportation Impact Analysis Report Format

The recommended TIA format is as follows:

1. Executive Summary
    a. Table summarizing significant impacts and mitigation measures
2. Introduction
    a. Purpose of the TIA and study objective
    b. Project location and vicinity map (Exhibit)
    c. Project size and description
    d. Existing and proposed land use and zoning
    e. Site plan and proposed project (Exhibit)
    f. Proposed project opening year and analysis scenarios
3. Methodology and Impact Thresholds
4. Existing Conditions
    a. Existing roadway network
    b. Existing traffic control and intersection geometrics (Exhibit)
    c. Existing traffic volumes – Peak-Hour and ADT (Exhibit)
    d. Existing level of service (LOS) at intersections (Table)
    e. Existing bicycle facilities (Exhibit)
    f. Existing transit facilities (Exhibit)
    g. Existing pedestrian facilities
5. Project Traffic
    a. Trip generation (Table) (Provide internal capture, if any, calculations is Appendix)
    b. Trip distribution and assignment (Exhibit)
    c. Project peak-hour turning movements and ADT (Exhibit)
    d. Project pass-by trip assignments (Exhibit)
6. Background Conditions (Opening Year) Analysis (E+(A or C1))
    a. No Project analysis
        i. Committed (fully-funded) roadway improvements
        ii. Approved background project trip generation (Table, if required)

iii. Approved background project trip assignment and distribution (Exhibit, if required)
iv. Peak turning movement and ADT (Exhibit)
v. Intersection level of service (Table)
vi. Roadway segment level of service (Table)

b. Plus Proposed Project analysis (Include Project Phasing if required) (E+(A or C1)+P)
i. Plus Project peak turning movements and ADT (Exhibit)
ii. Intersection level of service (Table)
iii. Roadway segment level of service (Table)
iv. Identification of intersection and roadway segment deficiencies

7. Cumulative Opening Year Analysis (E+(A or C1)+P+C2)
a. Plus Project Analysis
i. Plus Project peak turning movement and ADT (Exhibit)
ii. Intersection level of service (Table)
iii. Roadway segment level of service (Table)
iv. Identification of intersection and roadway segment deficiencies
8. Cumulative Horizon Year Analysis (General Plan Horizon Year, if required)
a. No Project analysis
i. Committed (fully-funded) roadway improvements
ii. Pending projects and verification of how they are included in the travel demand forecasting model
iii. Cumulative Horizon Year peak turning movement and ADT (Exhibit)
iv. Intersection level of service (Table)
v. Roadway segment level of service (Table)
b. Plus Project Analysis
i. Plus Project peak turning movement and ADT (Exhibit)
ii. Intersection level of service (Table)
iii. Roadway segment level of service (Table)
iv. Identification of intersection and roadway segment deficiencies
9. Traffic Signal Warrant Analysis
10. Site Access Analysis
11. Safety and Operation Improvement Analysis
12. Active Transportation and Public Transit Analysis
13. Improvements and Recommendations
a. Proposed improvements at intersections
b. Proposed improvements at roadway segments

c. Recommended Improvements categorized by whether they are included in fee plan or not. (Identify if these improvements are included in an adopted fee program)
d. Identification of project fair share contributions.

14. Vehicle Miles Traveled (VMT) Analysis
    a. Calculation of Baseline VMT rates
    b. Project effect on VMT for all analysis scenarios
    c. Identification of VMT impacts
    d. Proposed VMT Mitigation Measures
15. Appendix
    a. Approved Scope of Work
    b. Traffic Counts
    c. Project Trip Generation Internal Capture Calculations and Documentation
    d. Intersection Analysis Worksheets
    e. VMT and TDM Calculations
    f. VMT and TDM Mitigation Calculations
    g. Signal Warrant Worksheets
    h. Fair Share Calculations and Cost Estimates

Note: C1 = Cumulative Projects expected to be occupied by the Proposed Project's opening year. C2 = Cumulative Projects expected to be occupied by the Horizon Year 2040.

G. Attachments

A. City of Jurupa Valley Development Project Scoping Form

B. VMT Process Chart

A. City of Jurupa Valley Development Project Scoping Form

This scoping form shall be submitted to the City of Jurupa Valley to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	
Project Address:	
Project Opening Year:	
Project Description:	

	Consultant:	**Developer:**
Name:		
Address:		
Telephone:		
Fax/Email:		

Trip Generation Information:

Trip Generation Data Source: _____

Current General Plan Land Use: _____

Proposed General Plan Land Use: _____

Current Zoning: _____

Proposed Zoning: _____

	Existing Trip Generation			Proposed Trip Generation		
	In	Out	Total	In	Out	Total
AM Trips						
PM Trips						

Internal Trip Capture: ☐ Yes ☐ No (_____% Trip Discount)

Pass-By Allowance: ☐Yes ☐ No (_____% Trip Discount)

Potential Screening Checks

Is your project screened from specific analyses?

Is the project screened from LOS assessment? ☐ Yes ☐ No

LOS screening justification (see Pages 2-3 of the guidelines): _____
_____
_____
_____
_____

Is the project screened from VMT assessment? ☐ Yes ☐ No

VMT screening justification (see Pages 13-16 of the guidelines): _____
_____
_____
_____
_____

Level of Service Scoping

- Proposed Trip Distribution (Attach Graphic for Detailed Distribution):
- Attach list of Approved and Pending Projects that need to be considered (provided by the Planning Department and adjacent agencies)
- Attach list of study intersections/roadway segments
- Attach site plan
- Other specific items to be addressed:
    - Site access
    - On-site circulation
    - Parking
    - Consistency with Plans supporting Bikes/Peds/Transit
    - Other _____
- Date of Traffic Counts _____
- Attach proposed analysis scenarios (years plus proposed forecasting approach)
- Attach proposed phasing approach (if the project is phased)

VMT Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used _____
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

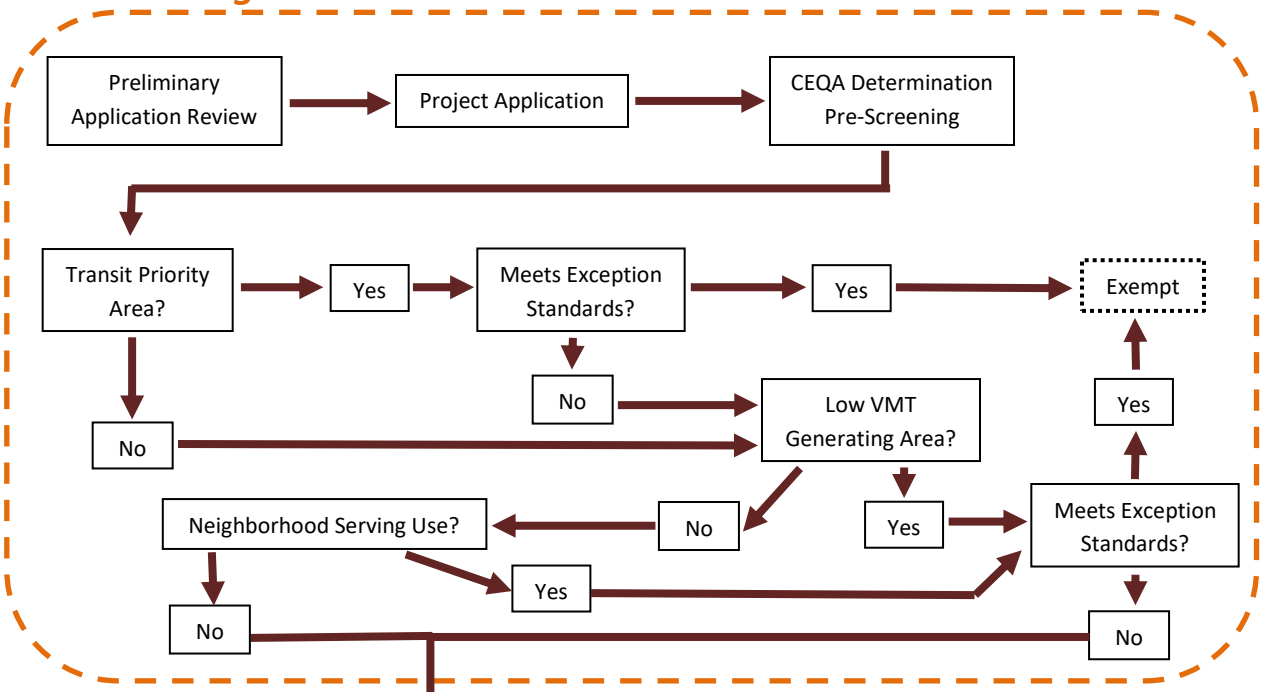
Signatures

TIA Preparer:_____ City (Approved by): _____

Date: _____ Date: _____

B. VMT Process Chart

Pre-Screening Process



VMT Analysis Process