COMMUNITY PLANNING AND DEVELOPMENT
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TRAFFIC IMPACT ANALYSIS GUIDELINES

The applicant shall provide a traffic impact analysis prepared by a traffic engineer addressing the following existing and future transportation/parking impacts associated with the proposed project. A traffic impact analysis (TIA) is a study of the potential traffic impacts of a development on the surrounding transportation system. The purpose of the study is to identify and document the impacts as required by city and state law and to recommend mitigation for those impacts.

SCOPE OF ANALYSIS

TIAs are normally required for proposed developments that generate 10 or more peak hour trips. For any proposed development, the City Engineer may require a TIA if existing safety or operational issues are known to exist. The analysis should cover the AM (7-9) and PM (4-6) peak hours, but may need to include the mid-day, weekend or evening peak hours based on the characteristics of the proposed land uses. The TIA should capture the peak operation of the expected uses and during the peak travel times of the roadway system. The scope of the analysis is defined by:

a. Concurrency intersections (intersections of two arterial roadways) impacted by 10 or more peak hour trips. The City Engineer may require analysis of additional concurrency intersections where operational issues are known to exist.
b. Nearby intersections impacted by 10 or more peak hour trips.
c. All driveways that serve the proposed site.

For proposed developments that generate 10 to 19 peak hour trips, an abbreviated trip generation, trip distribution and assignment analysis may be performed to determine if additional analysis of concurrency intersections is required. Proposed developments that generate 20 or more peak hour trips are required to complete a full TIA as described in the following sections.

TRAFFIC IMPACT ANALYSIS AND REPORT

The analysis shall generally include the following sections:

INTRODUCTION

a. Purpose of TIA and study objectives.
b. Site plan, site location, and study vicinity map.
c. Project description
    1. Lot size and description.
    2. Existing land use.
    3. Proposed land use.
    4. Proposed project opening year.
    5. Any proposed project phasing.

EXISTING CONDITIONS

a. Identification of study area and intersections.
b. Existing traffic controls and geometrics for study intersections.

c. Description of nearby roadway characteristics, including classification, number of lanes, etc.

d. Description of nearby pedestrian and bicycle facilities.

e. Description of nearby transit services.

f. Existing traffic volumes – AM and PM peak hour intersection turning movements counts should be collected for all study intersections. Counts conducted within the last three (3) years may be used if reflective of current conditions. Other peak hour counts may need to be collected based on the scope of the analysis.

g. Intersection LOS – Calculate intersection operations for each study intersection for the AM and PM peak hours and other peak hours based on the scope of the analysis. The analysis will use the latest version of Highway Capacity Manual methodology.

FUTURE TRAFFIC CONDITIONS

a. Baseline Traffic Conditions (Future without Project)

1. Street Improvements - Identify roadway, intersection, non-motorized and transit improvements that are included in the analysis of baseline future conditions. Identify the source of the information such as the City's 6-year Transportation Improvement Program. Improvement assumptions should be verified with City staff.
2. Growth Rate - Identify the assumed growth in traffic applied to existing volumes to forecast the future traffic volumes. A growth rate of 0.5 percent per year should be used outside the town center and 1.5 percent per year should be used in the town center.
3. Pipeline Development – Identify the location and description of other approved or proposed development projects. Add the volumes from the proposed developments to calculate the traffic volumes, and intersection LOS for the future year conditions without the proposed project. The City will provide a list of development projects to include in the analysis.
4. Intersection LOS – Calculate operations for each study intersection for the AM and PM peak hours and other peak periods as determined by the scoping process.

b. Project Traffic

1. Trip Generation – Estimate the number of new vehicle trips following the rates and methodologies outlined in *Trip Generation Manual*, latest edition, published by the Institute of Transportation Engineers (ITE). Other sources require prior approval by the City Engineer. Some unique types of uses may not have rates published by ITE. In this case, a trip generation study may be conducted at similar existing facilities (minimum 3) in order to determine acceptable trip generation rates to be used in the study.
2. Other factors affecting trip generation (pass-by trips, diverted trips, internal trips, or modal choice) shall be clearly documented in the report – These adjustments to trip generation require prior approval by the City Engineer and should be based on accepted traffic engineering documentation such as the Trip Generation Manual or other recognized research. The pass-by and diverted trips subtracted from the overall trip generation should be included in the analysis of project driveways and intersection(s) adjacent to the project site as appropriate.
3. Trip distribution and assignment – Identify a trip distribution for each peak hour that reflects city-wide travel patterns and the land uses in the proposed development. Exhibits showing the percentages and volumes of the projected traffic should be provided.

c. Future Traffic Conditions With Project Traffic

1. Intersection LOS – Calculate operations for each study intersection for the AM and PM peak hours and other peak hours as needed.
2. Site driveways LOS - Calculate operations for all site driveway intersections for the AM and PM peak hours and other peak hours as needed.

3. On-site circulation - Verify that the site plan includes adequate storage for vehicle queues and sufficient turning radii for truck turning movements and backing needs. Conduct entering sight distance calculations as needed.

PARKING

a. Construction parking – Describe the on-site and off-site parking plan to meet construction parking needs.
b. Delivery/loading – Identify the location of passenger and truck delivery loading areas, moving van delivery locations for multi-family uses (apartments/condos), and other drop-off areas. Moving van and truck delivery areas shall be located on the premises and not in public right of way.
c. Project generated parking – Identify the total number of parking spaces which will be provided upon project completion, the total number required by the municipal code, the total number calculated by ITE's Parking Generation, and the maximum parking demands for the proposed project. If shared parking strategies are employed, include an estimate of the "worst case" parking scenario which assumes full use of the site. Identify numbers of standard, compact, and disabled stalls.

MITIGATION MEASURES

The TIA should provide the nexus between the project and the traffic impacts to the City transportation network. LOS shall be calculated for all study scenarios (Existing, Future without Project and Future with Project). The following mitigation will be required:

a. Study intersections included in the City's 6-Year Transportation Improvement Program – The development will contribute a "fair share" contribution towards the total project cost, based on the development's number of peak hour trips divided by the total future with project peak hour trips.
b. Concurrency intersections – The City's LOS standard must be met for any concurrency intersection (an intersection of two arterial streets) impacted by 1 or more peak hour development trips. If a concurrency intersection does not meet the LOS standard, the development must bring the intersection into concurrency, either by improving the intersection to the LOS standard or by reducing the size of the proposed development. If the intersection does not have a project in the 6-year TIP, the development's mitigation responsibility will be to fully fund and construct the improvement.
c. Nearby study intersections (non-concurrency) and site driveways – The traffic study should identify the mitigation action required to either eliminate or bring significant impacts to the level of non-significance. The project may be subject to implementation of direct project mitigation requirements (100% responsibility) and/or contributions toward larger, longer range, improvement projects ("Fair Share"). In addition, the City is concerned with project equity if one project's mitigation is completing a "first phase" (i.e. easier to implement, less expensive improvement, etc.) of an improvement, while a significantly larger improvement burden remains for other future developments. The City will determine if a project's mitigation responsibility should be "direct mitigation", Fair Share contributions, or some combination of the two. It should be noted that Fair Share improvement measures must be developed based on the ultimate area-wide roadway improvements needed.
d. Other Mitigation – The traffic study should describe other measures included as part of the development. Examples may include off-site pedestrian improvements, travel demand management programs or other actions.

FINDINGS AND RECOMMENDATIONS

a. Improvements – List the proposed on-site and off-site mitigation measures to achieve desirable LOS at impacted intersections and roadways (if required). Identify if improvements are scheduled for construction, funded for future implementation by a regional mechanism, or not funded.
b. Provide a table showing the intersection LOS operation before and after the proposed mitigation.

ATTACHMENTS AND APPENDICES

a. Traffic count data – Provide count data used for the analysis.
b. HCM analysis results – Provide HCM summary reports for each study intersection. Separate sections shall be provided for each analysis period.
c. Traffic signal warrant analysis – If a signal is identified as a potential mitigation solution, the development shall complete a signal warrants analysis, justifying a signal at this location.
d. Other – Details of calculations and assumptions used to estimate trip generation, parking demand or other analysis completed for the study.

REVIEW OF TRAFFIC IMPACT ANALYSIS

A peer review of the analysis may be performed by the City's traffic consultant along with review by the City Engineer. All costs associated with the peer review will be the responsibility of the applicant.