

TRANSPORTATION IMPACT ANALYSIS PROCEDURES & REQUIREMENTS

(Revised 2/6/2020)

PURPOSE:

These procedures are intended to outline and regulate the requirements for performing Transportation Impact Analysis (TIA) for all developments in Osceola County.

PROCEDURES:

- a) Prior to conducting a Tier 2 or Tier 3 study, a written methodology statement shall be prepared by the applicant and submitted for review and approval by the County Traffic Operations Engineer (CTOE). Written methodologies are not required for Tier 1 studies. The purpose of the methodology statement is to establish agreed upon methodologies and assumptions prior to the start of the study. The methodology statement will be first reviewed by the CTOE or duly designated representative, if necessary, through a methodology meeting (or correspondence) with the applicant's consultant. The CTOE may require the inclusion of proposed or anticipated traffic signals in the future year condition that may not exist in the "existing condition". The applicant's consultant will then revise the statement based upon agreed upon methodologies. The applicant shall ensure the consultant does not prepare a traffic study without an approved methodology statement signed by the CTOE or their designee.
- b) The requirement for TIAs are based on the net external AM or PM peak hour trips for the project, whichever is greatest, and must be submitted at the designated time during the development review process as determined by **Table 1**. For multi-phase developments, the trip thresholds are based on project buildout, not per phase.
- c) The level of analysis and the analysis elements are dependent upon whichever is greater of the estimated total net external AM or PM peak hour trips for the project as established in these procedures. Net external AM and PM Peak Hour Trips shall be defined as those two-way trips within the AM peak hours of 7-9 AM or the PM Peak Hours of 4-6 PM that are considered new trips to the project and do not include pass-by trips.
- d) An evaluation of alternate modes of transportation such as transit, bicycles, and sidewalks for pedestrians, etc., shall be included to measure and monitor the functional effectiveness of these alternative modes of transportation.
- e) The Transportation & Transit Department shall be responsible for the review and approval of Methodologies and TIAs.
- f) In cases of redevelopment, external trips shall be based upon the new or proposed land use as compared to the land use existing at the time of redevelopment. Credit for prior use must be utilized in connection with a redevelopment of the site within two (2) years following the demolition of the existing structure or termination of the existing use, whichever first occurs.

Table 1. TIA Requirements

	Tier 1	Tier 2 - "Minor Development Traffic Study"	Tier 3 - "Major Development Traffic Study"
Maximum AM or PM Peak Hour Two Way Net New Trips	≤50	51 to 99	>99
Committed improvements	5-Year TIP/WP/CIP/CIE		
Signed by Florida PE	Yes	Yes	Yes
FDOT Review	No	Yes, if the project trips are >5% on a state roadway and more than 3% on SIS	Yes, if the project trips are >5% on a state roadway and more than 3% on SIS
Segment Analysis	No	All segments within a 1-mile radius and as directed by the CTOE	All segments within a 2-mile radius and as directed by the CTOE
Review Area/Study Roadways	Adjacent Streets	All roadways within a 1-mile radius and as directed by the CTOE	All roadways within a 2-mile radius and as directed by the CTOE
Study Intersections	Driveway Access Points	All Signalized and Major Unsignalized within a 1-mile radius and as directed by the CTOE	All Signalized and Major Unsignalized within a 2-mile radius and as directed by the CTOE
Background Traffic	Current Year Existing Traffic	Background traffic from available AADT data from County/FDOT and growth rates will be calculated from County/FDOT AADT historical growth rate or a 5% (whichever is greater). Include any vested trips within the buildout year. These assumptions must be agreed in the Methodology.	
Methodology Letter/ Statement	No	<ul style="list-style-type: none"> -Project description and purpose. -Level of TIA being presented. -Site Location map. -Map of the area of influence/study area. -Site plan of the proposed development that shows the proposed access locations. -Anticipated buildout year for single phase developments and planned development phasing for multi-phase developments. -Table of proposed trip generation including pass-by trips and internal trip capture listing: Land Use description, ITE Codes, trip rates or formulas and data used in the calculations from ITE Trip Generation Manual, latest edition. -Proposed trip distribution in the area of influence/study area, and include backup calculations. -List of roadways that fall within the area of influence/study area. -Identify any critical issues related to the project. -Proposed growth rate for calculation of future traffic (if project is phased or anticipated to take more than one year to complete). -Date of any traffic counts used in the analysis. -Multimodal Assessment: Transit, Bicycle and Pedestrian. 	

Table 1. TIA Requirements. Continued

	Tier 1	Tier 2 - "Minor Development Traffic Study"	Tier 3 - "Major Development Traffic Study"
<p>TIA Requirements</p>	<p>Trip Generation (Daily and PM Peak Hour) Driveway Peak Hour Analysis</p>	<ul style="list-style-type: none"> -Introduction -Executive Summary -Existing Roadway Segments and Intersection Conditions -Trip Generation including New Trips, Internal Capture Estimates and Transit Capture -Trip Distribution & Assignment -A map showing the trip distribution percentages on each of the links in the study area. -Roadway Segment LOS Analysis (V/C Ratio) & Impacts -Intersection LOS Analysis & Impacts - Analysis of future scenario/conditions per development phasing (based on projected AM/PM Peak-hour trips) -Multimodal Assessment: Transit, Bicycle and Pedestrian -Driveway Control/Access -Determination of Off-Site Improvements -Recommended/Warranted transportation improvements per development phasing (based on projected AM/PM Peak-hour trips) -Mitigation Strategies & Time-line -Conclusion & Recommendation -Appendix: Approved Methodology, Traffic count data, Site Plan, Capacity Analysis Summary Sheets: Existing Conditions, Future Conditions, Trip Distribution Plot from the Travel Demand Model and all other pertinent data to support the TIA. 	<ul style="list-style-type: none"> -Introduction to include: Purpose of the project, Project Description, Site Location. Site Plan, Study Area/Area of Influence, Planned and Programmed Improvements and Committed Development in the area -Existing Roadway & Intersection Conditions: Pertinent existing roadway information, Existing roadway segment geometry, Existing intersection geometry, Existing traffic volumes and Existing LOS -Future Roadway & Intersection Conditions: Pertinent Future Roadway Information, Future Roadway Segment Geometry and Future Intersection Geometry -Future Traffic Conditions (if appropriate): Background Traffic, Trip Generation, Trip Distribution and Assignment and Future Traffic Volumes -Transportation Assessment: Segment Analysis (V/C ratio), Intersection Analysis, Turn Lane Analysis and Access Analysis, Analysis of future scenario/conditions per development phasing (based on projected AM/PM Peak-hour trips) -Multimodal Assessment: Transit, Bicycle and Pedestrian -Determination of Off-site improvements -Recommended/Warranted transportation improvements per development phasing (based on projected AM/PM Peak-hour trips) -Mitigation Strategies: Recommended Improvements, and Proportionate Share Calculations -Summary/Conclusions: Brief discussion to highlight the reason for the TIA Tier classification, Methodology Followed, General Results of the Analysis and Action Requested (e.g., approval of mitigation strategy) of the local government -Appendix: Approved Methodology, Traffic count data, Site Plan, Capacity Analysis Summary Sheets: Existing Conditions, Future Conditions, Trip Distribution Plot from the Travel Demand Model, Methodology Meeting Minutes and all other pertinent data to support the TIA.

ANALYSIS REQUIREMENTS:

1. Traffic Data:

- a) Intersection turning movement and roadway segment volume traffic data used in analysis that is not provided by the County shall be less than 12 months old. The 12-month timeframe for use of traffic count data is from the date that the methodology receives approval from the County. Tube counts shall be required for all roadway segment volume traffic data. If authorized by the County Engineer or designee, other sources of traffic count data may be used for the TIA.
- b) The latest Edition of the ITE Trip Generation Manual shall be used for calculation of project trips. If authorized by the CTOE or designee, trip generation data from other sources may be utilized in the analysis.
- c) For non- residential properties, local streets shall be included in the driveway control portion of the analysis if access is proposed from those segments.
- d) Roadway capacities will be provided by Osceola County. In the event the information is not available from the County, FDOT generalized level-of-service standards may be used upon confirmation by the CTOE. Roadway improvements programmed within the County's adopted Capital Improvement Program (CIP) may be utilized as long as the improvement is scheduled for construction consistent with the proposed buildout year for the development.
- e) Projected background traffic based on phasing buildout years shall utilize historical growth rates, model background traffic, a minimum 5% growth factor, or if authorized by the County Engineer or designee, variations in the growth factors for intersection and roadway traffic volumes may be utilized. The projected background traffic for all intersections and roadway segments shall be reviewed and approved by Community Development Department and Transportation and Transit staff for reasonableness of future conditions.
- f) Osceola County will provide historical traffic volume, truck percentage, and crash data if available.

2. Analysis:

- a) **Existing scenario** is defined as the analysis of existing traffic on the existing network. The existing network includes all existing roads, major roads under construction by a non- governmental party, plus all improvements for which construction contracts have been executed by government agencies at the time the proposed transportation methodology statement is initially submitted.
- b) **Future scenario** is defined as the analysis of existing traffic, plus background traffic (derived from growth rates, vested trips, or combination of both), plus the project's traffic placed on the existing network, plus all improvements funded for construction within the first three years of the local jurisdiction's adopted CIP and/or adopted TIP. For multiphase developments include analysis of future scenario/conditions with recommended/warranted transportation improvements per development phasing.
- c) If signalization is proposed as a mitigation measure, Florida DOT signal warrant summary worksheets and a Step 1 roundabout screening worksheet shall be provided for the location(s) proposed for signalization.
- d) **Future scenario with mitigation** is defined as analysis of the Future Scenario with the inclusion of any other improvements that are required for mitigation. This analysis scenario will be required only if mitigation is required as the result of the future scenario analysis.
- e) **Multimodal Assessment** If the development is located in a present or future urbanized area, as determined by the CTOE, an evaluation of present and programmed bike, pedestrian and transit mobility options is necessary. A system assessment of sidewalks, bikeways and existing transit routes should be documented. The site plan should also address how walking, bicycling and transit

ridership will be encouraged through one or more of the following:

- Safe, adequately lit and well-maintained pathways
 - Shelters along sidewalks
 - Bicycle Parking facilities
 - Identifiable crosswalks
 - Transit bus stops & transit stop amenities (i.e., bench, bus shelter, etc.)
 - Phased traffic signals to accommodate pedestrian movements
 - Removal of natural and/or built barriers that discourage walking
 - Compliance with American's with Disabilities Act requirements
 - Buffering between vehicular areas and sidewalks
 - Linkage to existing or future walkway and/or bikeway network and transit route
- f) Transportation Impact Analysis Methodology meetings are mandatory for Tier 3 TIAs and a transportation impact analysis methodology shall be provided prior to the meeting for County review. The methodology shall be approved by the County and will require the CTOE or designee to sign off on the methodology in the form of a response letter. Methodology can include provision to revise the CIP projects should the programmed and planned funding change during the traffic impact analysis review. Minutes of the methodology meeting shall be submitted with the draft and final reports in the appendix. If authorized by the CTOE or designee, the requirement for the TIA Methodology meeting may be waived.
- g) Additional traffic software may be used for evaluation of intersection operations, determination of roadway capacities and LOS determination of roadway segments.
- h) Traffic modeling utilizing the currently approved and calibrated Central Florida Regional Planning Model (CFRPM) computer traffic model shall be required for all Tier 3 traffic impact analyses, unless an exemption is provided by the CTOE. The County reserves the right to request modifications to the Traffic Analysis Zone socioeconomic data within the CFRPM traffic model or any other computer traffic model that is utilized. If authorized by the CTOE or designee, a different computer traffic model, including proprietary models, may be utilized.

3. Report:

- a) TIA report shall be provided in the order and format outlined in **Table 1**. Use of maps and graphical representations and illustrations are encouraged for ease of comprehension.
- b) A draft report containing all elements shall be provided for review with the corresponding application submittal. County Transportation & Transit Department staff, or designee, shall review the report and provide comments through the Development Review process.
- c) The final approved TIA report shall be signed & sealed by a qualified Florida registered professional engineer.
- d) One (1) signed & sealed electronic copy in PDF format of the final, approved TIA shall be uploaded to the County's permitting system (Accela), along with all backup traffic analysis, modeling files, and associated approved Methodology. This record upload is required for any development application requiring receipt of a permit. This record upload is also required for any future development application revisions requiring receipt of a new permit, and/or for any future development applications related to the overall project buildout of the traffic study (i.e. multi-phase developments)
- e) The transportation impact analysis report and associated documents shall remain valid for the life of the application through which the report was originally submitted.