City of Duvall
Traffic Impact Analysis Guidelines

To adequately review development proposals, the City of Duvall requires that projects with more than 10 single-family housing units or developments that generate more than 10 PM peak hour trips, provide a Traffic Impact Analysis (TIA). This will allow City staff to determine the need for street, highway, non-motorized, and/or transit improvements to serve the proposed project and address traffic impacts on the city's transportation network.

These TIA requirements coincide with the City of Duvall's Comprehensive Plan goal of ensuring roadways are improved and/or developed to facilitate an efficient and effective road network system. The TIA requirements also coincide with the City's adopted level of service (LOS) standards, transportation concurrency management, and other policies established in the City's Comprehensive Plan Transportation Element and Transportation Plan.

These guidelines are written in stepwise fashion from the perspective of an applicant wishing to understand the transportation review process administered by the City. Guidelines cannot cover all the circumstances that can arise in TIA preparation therefore applicants may be asked to do less or more than is described below. Traffic analysis reports are to be prepared by a firm or individual with experience in traffic engineering and/or transportation planning.

1. PRELIMINARY INFORMATION FOR SCOPING

The applicant is asked to provide the following preliminary information as a memorandum:

- A narrative description of the project.
- Location (vicinity map and site plan).
- Type and size of development (number of residential units and/or building square footage).
- Proposed access locations (including proposed sight distance at egress locations).
- Phasing and timing of development.
- Horizon year (year of completion and full occupancy/build-out).
- Average weekday daily and PM peak hour trip generation (AM, noon or school peak may also apply as directed by the City) as applicable.
    - Trip generation shall be based on the current edition of the *Trip Generation Manual*, Institute of Transportation Engineers (ITE) and the ITE *Trip Generation Handbook*, unless otherwise approved. Assumptions and methodology for internal, link-diverted, or pass-by trips must be provided, as applicable. Provide ITE tables used as appendix.
- Graphic showing project trip distribution percentages and assignment for developments that generate over 30 peak-hour trips.

2. SCOPING PROCESS MEETING

The scoping process is used to discuss the preliminary information provided by the applicant, and to clarify issues surrounding a project or some element of the review process. The scoping process will take place after the City has received the preliminary information described in step 1 above and can take place in person, by phone, or other methods, as agreed to by the City.

3. REVIEW AND EVALUTAION OF PRELIMINARY INFORMATION

The City will review the preliminary information submitted by the applicant to determine if further analysis is needed. If no further analysis is needed, applicants will be required to complete Step 7 only. It should be noted that more analysis is typically needed by projects that generate more than 50 peak-hour trips or projects that impact intersections by 30 or more peak-hour trips. If the City determines that more analysis is needed, steps 4-6 may be required and outlined in a TIA Requirement Memo.

4. SITE ACCESS ROADWAY/DRIVEWAYS AND SAFETY

- Sight distance requirements and adequacy (per AASHTO Requirements).
- Level of service (LOS) analysis.
- Channelization warrants.
- Vehicle storage/queuing analysis.
- Traffic control warrants.
- Accident summary (only required for access to principal and minor arterials, unless otherwise directed by the City).

5. TRAFFIC VOLUMES

- Provide existing intersection peak-hour turning movement counts (less than two years old, unless otherwise directed by the City).
- Future peak-hour intersection turning movement volumes without project traffic based on:
    - Annual background traffic growth factor/rates (cite source/methodology).
    - pipeline traffic from other future development projects (provided by City).
- Forecast peak hour turning movements for with-project conditions.

6. LEVEL OF SERVICE ANALYSIS

Analysis shall be based on the current edition of the *Highway Capacity Manual,* Transportation Research Board and related software, or methods approved by City. The following criteria should be used in the analysis.

- Evaluate arterial/arterial intersections impacted by 30 or more peak-hour trips (or as otherwise identified by the City).
- Evaluate existing and future conditions with and without project – Other planned developments within the City must be factored into the Level of Service (LOS) calculations.

- Note any assumptions/variations to standard analysis default values and provide justification.
- Attach LOS calculation sheets.
- Compare the resulting future with-project LOS to the City's adopted LOS standards.

7. MITIGATION RECOMMENDATIONS

Developments that generate new peak hour trips will be required to pay Traffic Impact Fees as required by DMC 14.58.050. Other mitigation should be identified to address deficiencies related to:

- safety
- LOS deficiencies
- traffic signal warrants
- channelization warrants
- non-motorized facilities/connections
- transit access
- site access
- other, as appropriate.

8. REPORT REQUIREMENTS

- Provide an electronic copy of traffic analysis report, including any appendices or supporting information to the City (the City may request bound reports, if needed)
- Traffic analysis reports submitted to the City should include the sections and figures detailed in the attached traffic analysis report outline. The TIA outline cannot cover all circumstances that may arise; therefore, applicants may be asked to include more or less than is described in the outline.

TIA Outline

Introduction

- Project Description
- Study Area

Existing Conditions

- Roadway Network and Traffic Controls
- Traffic Volumes
- Traffic Operations
- Traffic Safety
- Transit Service
- Pedestrian and Bicycle Facilities

Future Baseline Conditions (without project)

- Planned Improvements
- Traffic Volumes
- Traffic Operations
- Traffic Safety
- Transit Service

Future With-Project Conditions

- Land Use Assumptions
- Trip Generation
- Trip Distribution and Assignment
- Traffic Operations and Project Impacts
- Concurrency Evaluation
- Site Access

Mitigation and Impact Fees

Summary and Conclusions

APPENDIX A: Traffic Count Data

APPENDIX B: Level of Service Calculation Worksheets

APPENDIX C: Detailed Trip Generation Worksheet

Figures