Request for Travel Demand Model Run

Background

Travel demand models are used for transportation project development, transportation planning and land use planning. Models are adapted to represent the project/development characteristics and report on the areas affected by the project. Project data is used to update transportation networks and related land use changes. *A request can take up to three weeks to complete depending on the complexity of the work and the number of requests in our queue.* This request form is designed to reduce the time required to assemble the information needed to start the model run, which will reduce your wait time. Please be prepared to discuss details related to your request. This may take place as a phone call or a meeting, depending on the complexity of the request.

Before the model run preparation can begin, detailed and complete information is needed from the requesting agency/firm. This form is designed to collect the following:

- The project opening year and design year;
- The project study area to be included in model run outputs;
- Network and land use changes (employment changes, housing developments, new retail development, etc.) in the project area to be included in model runs;
- A list of other projects to be included or removed from the network.

Please submit requests to: ModelingRequestsTPAU@odot.state.or.us.

A copy of model networks and TAZs are available upon request. All model settings requested must be identified in terms of the model: link from-to nodes, zone numbers, etc. Street names, addresses and physical landmarks are not sufficient to identify location of changes.

Please provide a complete and detailed description of the changes to be made for the model run, including changes to network attributes (capacity, speed, turn restrictions, new lanes, new or deleted links) and land use data (employment, population). Changes to land use must include a narrative detailing related assumptions associated with such changes. For large changes to land use assumptions, please refer to the Modeling Procedures Manual for Land Use Changes.

Methods used for post-processing model output should conform to specifications provided within the ODOT Analysis Procedures Manual.

Requestor Contact Information: Date submitted: 2/23/18

Name: Peter Schuytema Organization: ODOT -TPAU

Address: 555 13th St NE, Suite 2

Phone: 503-986-4110 Email: peter.l.schuytema@odot.state.or.us

Project Description:

Client being served: ○ ODOT Region ○ County/MPO ◉ City ○ Private Developer

Model Year(s) Requested: 2035 Summer Model Name: Astoria V2

For some cases ODOT may request reimbursement for services rendered. Estimates of labor cost will be provided in advance of the work.

Provide the name and a brief description of the Project.

Describe the goals and objectives of the analysis using model output. What questions do you seek to answer using this information?

This request is to investigate the impacts of potentially widening the Young's Bay Bridge from two to four lanes between Astoria and Warrenton to reduce future congestion in this segment and to allow greater employment growth in the Warrenton area. This request also contains a companion commercial expansion to test the ability to have greater opportunities in Warrenton without causing undue capacity issues on US101.

Network Description

Describe the project boundaries. Include a street-network map of the study area with this request which clearly identifies locations requiring traffic data. If this is a focus area analysis, include details related to the area. For network changes, provide the from-to nodes. Indicate whether changes are for the **transit** network or **highway/street** network.

Widening of US101 is from OR202 (roundabout) to Marlin Drive; between Nodes 1811-1542. See attached map.

Land Use Description

Provide a transportation analysis zone map of the study area identifying the zones to be changed. Provide spreadsheet containing zone attributes (e.g., employment, households, population, dwelling units) to be changed.*

The affected zone is TAZ 151 (see attached map). Add 150 retail, 50 service, and 20 government employees to TAZ 151.

☐ *If access to confidential employment data within the model base reference year is required, you must complete the Oregon Employment Department (OED) Confidentiality Form. We can provide a copy of the form upon request to: ModelingRequestsTPAU@odot.state.or.us. Please submit this form directly to OED and Cc ODOT. Once you obtain permission, please forward a copy of the signed OED approval. We cannot provide the data without this signed form on file.

Remarks/Special Conditions

Select Link location shown on attached map.
Unconstrained demand volumes also requested so desired paths can be shown regardless of capacity restrictions.

Output Requested from Model Run Request:

Menu of Standard Travel Demand Model Outputs			
Select Output Format:	☐ Shape Files	☒ PDF	☐ Databank
Time of Day:	☐ Daily	☒ Peak Hour	
☐ **Volume Bars**			
☒ Link Volume			
☒ Select Link Volume (Need to specify locations)			
☐ Select Zone Volume (Need to specify zones)			
☒ Demand to Capacity Ratio			
☐ Absolute Volume Difference			
☐ Relative Volume Difference			
☐ Origin-Destination Matrices			
☒ Unconstrained demand volumes			
☐ Other:			

Definitions

For more information on methods, procedures and definitions, see the Analysis Procedures Manual.

- Link Volume - The peak hour (or daily if requested) traffic using each link (street) for a requested area or for the entire model network.
- Select Link or Zone Volume (also called "flow bundles" by ptv-VISUM) - Represents the traffic using a given link or zone or group of links or zones. They graphically represent the origins and destinations of select links and/or zones and display all of the travel patterns associated with the selected locations.
- Demand to Capacity Ratio - This is a ratio of the model volume (usually hourly volume, although daily can be requested) to the model capacity. The capacity is the model capacity, which represents a mid-block capacity. Capacity is a function of facility type and speed. Note that the model capacity is not a saturation flow; the model capacity needs to account for the capacity reductions due to intersections.
- Volume Difference, Absolute & Relative - Absolute Volume difference is the subtraction of the volume that results from the model run requested verses a reference (or base) run, usually the finically constrained future year run, but it can be any reference case desired by the requestor. Relative volume would be the percentage change from the requested run and the reference run specified by the requestor.
- O & D Matrix - The full Origin - Destination Matrix that the model uses to assign trips to the network is available. TPAU will also help with Aggregated O & D Matrices to the district level, which can be plotted graphically along with select links or zones. If desired, TPAU will work with the requestor to help answer traffic flow questions that require O & D matrices or District-to-District plotting.
- Volume Bar - The link volume can be represented graphically with a bar where thickness is directly related to the volume of the link, meaning that the larger the volume the thicker the bar
- Unconstrained Demand Volumes - traffic volumes that are not constrained by network capacity; illustrates the desired routes if congestion were not an issue.


Add 150 Retail, 50 Service, 20 Government employees to TAZ 151
Select-link location
Youngs Bay
Warrenton-Astoria Hwy
Marlin Dr
101
Airport Rd
Airport Dike Trail
Taylor Ave
202
Erie St
Nehalem Hwy
Glasgow Ave
Pleasant Ave
Extent of 4-lane widening project – from Nodes 1811 to 1542