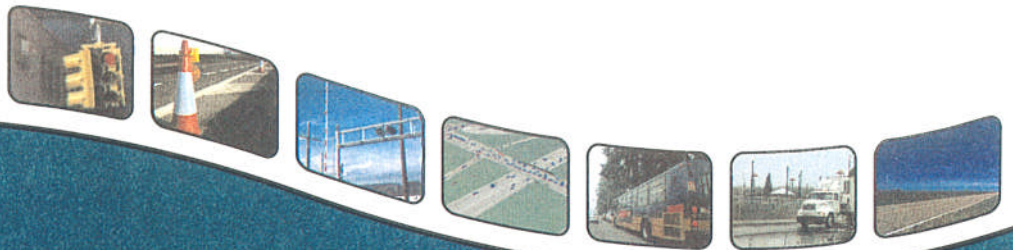


# *Arborwood Development*

*Transportation Impact Analysis*

*December 2007*



Transportation Impact Analysis

# ARBORWOOD DEVELOPMENT

Prepared for:

Olympic Property Group

December 2007

Prepared by:

The Transpo Group, Inc.

11730 118<sup>th</sup> Avenue NE, Suite 600

Kirkland, WA 98034-7120

Phone: 425.821.3665

Fax: 425.825.8434

[www.thetranspogroup.com](http://www.thetranspogroup.com)

© 2007 The Transpo Group

## Executive Summary

This report summarizes the transportation impact analysis (TIA) conducted for the proposed Arborwood development. The Arborwood development is located 1.5 miles southwest of the Kingston community in Kitsap County. The site is a quarter mile south of W Kingston Road and just west of S Kingston Road. The project proposes two access locations that would provide access to S Kingston Road from a new western leg at the Taree Drive intersection and at a southern access shared with the Whitehorse development. The project consists of 661 single-family and 104 condominium dwelling units, and 20,000 gsf of neighborhood retail space. Full build-out for this project is estimate for year 2015.

Intersection operational standards for Kitsap County and the Washington State Department of Transportation (WSDOT) roadways are LOS C in rural areas, and LOS D in urban areas. Under existing conditions only one intersection does not meet LOS standards, SR 104/Hansville Road operates at LOS D under existing conditions. The safety analysis showed that within the study area, the SR 104/307 corridor is listed as a WSDOT HAC (High Accident Corridor), and four of the study intersections along this corridor have reported accidents that exceed engineering safety thresholds.

Baseline conditions are based on the estimated roadway conditions for the future year of 2015. Traffic conditions are based on forecast traffic volumes and planned roadway improvement projects. The 2015 baseline traffic volumes were estimated by increasing existing traffic volumes by an annual rate of two percent (2%) and adding traffic from pipeline projects (approve projects not yet constructed). Also recently completed roadway capacity improvement projects, planned by either WSDOT or Kitsap County, were identified for the intersections of W Kingston Road/Miller Bay Road, Gunderson Road/Miller Bay Road, and Indianola Road/Miller Bay Road. A safety study with spot improvements for the SR 104/307 corridor is also planned. Under future baseline conditions the intersection of SR 104/Hansville Road degrades from LOS D to LOS E.

Project trip generation estimates are based on 661 single-family homes and 104 condominium dwelling units, and 20,000 gsf of neighborhood retail space using the average rates in Trip Generation (7<sup>th</sup> Edition) and internal capture methodology in Trip Generation Handbook (2<sup>nd</sup> Edition) as published by the Institute of Transportation Engineers. The project is expected to generate 7,358 weekday daily trips with 551 occurring during the weekday AM peak hour and 747 occurring during the weekday PM peak hour. The trips were distributed to the surrounding roadway network based on results of a select-zone analysis from the Kitsap County travel demand model and field travel time data.

Project-generated traffic volumes cause three intersections' levels of service to degrade when comparing with-project to baseline conditions. The intersection of SR 104/Hansville Road degrades from LOS E to LOS F, the intersection of W Kingston Road/Miller Bay Road degrades from LOS B to LOS D, and the intersection of S Kingston Way/W Kingston Road degrades from LOS C to LOS F. Proposed mitigation for each intersection is as follows:

- **SR 104/Hansville Road:** Mitigation at this intersection includes the construction of eastbound and southbound right-turn lanes.
- **W Kingston Road/Miller Bay Road:** Mitigation at this intersection includes the construction of a northbound right-turn lane.
- **S Kingston Road/W Kingston Road:** Mitigation at this intersection includes the installation of a new signal and a westbound right-turn lane. Under year 2015 with-project conditions this intersection meets signal Warrants 1 (Eight-Hour Volume), 2 (Four-Hour Volume), and 3 (Peak Hour) of the MUTCD.

To mitigate the impacts to the existing High Accident corridor (SR 104/307), the project would also need to contribute a proportionate share to the planned safety improvements/study along the SR 104/307 corridor. This would be based on the relative percentage of project traffic compared to the total traffic volumes along this corridor. The proportionate share obligation should not exceed ten percent of the safety study costs.

Site access traffic operations were also reviewed. The southern S Kingston Road access should operate well as a stop controlled intersection. Most of the project-generated traffic volumes are expected to access S Kingston Road at the Taree Drive intersection. This intersection will operate at LOS A as a signal with a southbound right-turn lane. It would also operate at LOS A as a single-lane roundabout.