



**City of Port Orchard:**



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Scope of Assistance:

Prior to the meeting, the Port Orchard staff, PSAT staff and AHBL agreed on a scope of services for the regulations to be reviewed. The following are the tasks that the City staff directed the consultant team to complete:

- ◆ Review of Port Orchard Zoning Ordinance
- ◆ Review of Road Construction Standards
- ◆ Review of Title 16 POMC – Subdivisions
- ◆ Prepare a memo outlining current status and potential code challenges

This direction resulted in review of the following Port Orchard codes and standards by the consultant team:

- ◆ Port Orchard Zoning Ordinance – emphasis on Landscaping, Tree Retention & Parking Lot Standards
- ◆ Developers Handbook – emphasis on Road Construction Standards
- ◆ Title 16 POMC – Subdivisions

The policy review meeting with the City of Port Orchard staff occurred on July 7, 2006. At the meeting, City staff directed the consultant team on the content of the desired technical assistance. This direction resulted in the preparation of several work products to be reviewed by the City at the regulatory amendments meeting on November 17, 2006. An outline of these work products is presented below in a topical manner with the full text of the updates attached separately.

Work Products:

1. ROW and Parking Details

The consultant team prepared the following eight new standard drawings for the City of Port Orchard:

- a. LID1, LID Private Road Standard – 20' drivable surface within a 28' ROW
- b. LID2, LID Bioretention Detail – LID ROW bioretention facility showing requirements for depths and soils
- c. LID3, LID Pervious Paving Detail – Variety of pervious paving applications
- d. LID4, Tree Box Parking – Alternative for installation of tree boxes in parking strip
- e. LID5, LID Recessed Tree Box – Detail for preferred tree box placement
- f. LID6, LID Bulbed Tree Box – Alternative tree box placement for existing ROWs
- g. LID7, LID Parking Options – Detail of bioretention areas within parking lots
- h. LID8, LID Parking Bed – Bioretention facilities within parking lots in section view
- i. LID 9, LID Curb Inlet Detail – Section detail of curb inlet from LID road standards
- j. LID10, LID Tree Box Detail – Detail of tree box filter in section view

2. Title 18 – Clear and Grade Ordinance

The City requested during the policy review meeting that the consultant team prepare draft regulations for clearing and grading that would be based on the CTED Model Clearing and Grading Ordinance. The



consultant team prepared a Clearing and Grading Ordinance for the City of Port Orchard based on the CTED Model, including references to:

- a. Best Management Practices found in the Washington State Department of Community Trade and Economic Development's Technical Guidance Document for Clearing and Grading in Western Washington (2005)
- b. Various Integrated Management Practices found in the Puget Sound Action Team's Low Impact Development Technical Guidance Manual (2005)

### 3. Tree Canopy Standards

City staff expressed an interest in tree canopy preservation options during the July 7<sup>th</sup> meeting. The consultant team prepared tree canopy standards that require all sites to provide specific canopy coverage within a reasonable number of years. By requiring a certain threshold of tree canopy coverage, rather than requiring a certain number of trees, the City can more accurately achieve its goal of creating canopy coverage to reduce stormwater runoff. These standards were tailored not only for LID projects, but for less progressive developments as well. The final work products associated with tree canopy standards for the City of Port Orchard include a series of tables and graphs illustrating the proposed canopy credit system; memos explaining the contents of the tables; and a final tree canopy conservation chapter.

### 4. Planned Low Impact Development Chapter

During the first meeting City staff and the consultant team discussed the possible addition of a Planned Low Impact Development (PLID) Chapter to the Port Orchard Municipal Code. The consultant team prepared a draft PLID Chapter for the regulatory amendments meeting that establishes objective design requirements for projects applying for LID status. The included standards contain minimum requirements for native vegetation preservation and replanting, impervious surface, native soil preservation and amendment, and design standards for stormwater systems. The chapter allows developers to use the LID Technical Guidance Manual (Puget Sound Action Team, 2005) and to meet the standards of the current edition of the Department of Ecology's Stormwater Management Manual for Western Washington.

### 5. Transfer of Residential Density Credits for Low Impact Developments

The City of Port Orchard requested for the consultant team to provide a draft chapter establishing standards for the transfer of density credits (TDC) for LID projects. Included in the chapter are requirements for the sending and receiving sites, as well as guidelines for the transfer. Unlike transfer of residential density credit chapters found in other jurisdictions, this chapter would pertain only to low impact development projects.

### 6. Additional Work Products

- a. LID incentives – The package includes a table displaying various LID incentives. Many jurisdictions are choosing to offer one or more of these options for projects meeting the PLID standards.
- b. PSAT Impervious Surface Comparison – a spreadsheet prepared by AHBL that compares the established impervious surface maximum limits across all eight 2006 participating local governments.



## 7. Supplemental Information

- a. Green Roofs – The City staff requested further information on three specific areas of low impact development: green roofs, pervious pavement, and recommended native tree species. The consultant team provided the following studies:
  - ◆ “Ecoroof: Questions & Answers” (2000, City of Portland Environmental Services)  
Portland’s Ecoroof Program Questions and Answers package is designed for interested parties in either the building field or the general public. While this document does not contain detailed sample information it does provide a general overview of green roof information.
  - ◆ “Stormwater Monitoring Two Ecoroofs in Portland, Oregon, USA” (2003, Hutchinson, Abrams, et. al.)  
The second packet of information is an evaluation of two green roofs in Portland, Oregon. The study confirmed that ecoroofs can be an effective tool in efficient urban stormwater management.
  - ◆ “Vegetated Roof Cover” (2000, Environmental Protection Agency)  
The third packet is a brief summary from the EPA addressing a vegetated roof in Philadelphia, Pennsylvania. This document gives a brief summary of the green roof as well as some general conclusions.
- b. LID Cost Research – In 2004, AHBL evaluated the relative construction costs between eight conventional development systems and their respective LID Best Management Practices. The report illustrates that the difference in installation cost between the techniques, and was made with the best available cost information at the time. The consultant team provided this report to the City of Port Orchard.

### Findings:

Port Orchard staff have plans to update both their zoning codes and stormwater management standards. Currently, standards for zoning and land use have not been codified and are still in an ordinance form. This posed a challenge for the consultant team in that sections proposed to be amended or changed by the consultant team may be altered in the near future anyway.