

## LID ELEMENT #7: MINIMIZE STREET WIDTH

### OBJECTIVE

Minimize the amount of impervious surfaces associated with street paving.

### CONSIDERATIONS

In 2006 the City of Olympia reduced required street widths to the minimum necessary to maintain function and safety. Further width reductions are not practical. The following is a discussion of previous City actions.

### RELATED ELEMENTS

Element 4: Restrict Maximum Impervious Surface Coverage

### TRADITIONAL APPROACH TO STREET WIDTHS

Street geometry, including width, is based on the functional requirements of the street and the expected traffic volumes. Widths are based on national standards provided by the American Association of State Highway and Transportation Officials (AASHTO) and the Institute of Transportation Engineers (ITE). The primary consideration for street widths is the safe and efficient movement of vehicles, bicycles, pedestrians, transit uses and larger vehicles such as emergency vehicles and solid waste trucks.

### CODES AND STANDARDS REVIEWED

Engineering Design and Development Standards (EDDS) Chapter 4 (Transportation) and 9 (Green Cove Standards)

### BENEFITS OF REDUCING STREET WIDTH

The benefits of reducing impervious surfaces associated with street widths are the same as those addressed in Element 4 (Restrict Maximum Impervious Surface Coverage). Avoiding construction of streets that are wider than necessary minimizes the amount of native soil converted to impervious surface. Restricting impervious surface helps to reduce stormwater runoff and results in more vegetated land cover. A key component of low impact design is to mimic the pre-disturbance hydrologic processes of infiltration, filtration, and storage. Increased green space allows opportunities to retain mature trees that intercept rainfall and facilitate evapotranspiration.

“Total and effective impervious area can be significantly reduced by determining specific traffic, parking and emergency vehicle access needs and designing for the narrowest width capable of meeting those requirements.”

*Low impact Development  
Technical Guidance Manual for  
Puget Sound (2012)*

## OLYMPIA CODE ANALYSIS

In general, Section 4B.020 of the EDDS addresses design standards for streets. Pavement and right-of-way width depend upon the street function, technically referred to as street classification. The classifications and associated geometry standards are provided in the standard drawings 4-2A-K1. Chapter 9 of the EDDS includes special street standards adopted to protect the hydrology of the Green Cove Basin.

## CURRENT STREET WIDTHS IN THE CITY OF OLYMPIA

In 2006, the City of Olympia conducted a review of lane and street widths. A formal committee was formed that included representatives from the following City departments and other entities: Public Works, Fire, Police, Community Planning and Development, Parks, InterCity Transit, Thurston County Roads and Transportation Services, Olympia Planning Commission, Bicycle Pedestrian Advisory Committee, and community members. The results of the committee's study are as follows:

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**Arterials and Major Collectors** – The standard lane width for arterials and major collectors in the City of Olympia was 11 feet. The City reduced the standard width to 10 feet with an allowed deviation to 11 feet for specific situations such as:

- High frequency transit routes
- High frequency truck traffic
- Unique street alignment
- Skewed intersections
- Lanes adjacent to a curb
- Two-way center turn lanes
- Left-turn lanes

These deviations are allowed to address the concerns such as:

- Solid waste trucks are 9.5 feet with mirrors. InterCity Transit buses and fire trucks are 10.5 feet with mirrors. These larger vehicles require wider lane widths to avoid problems such as truck mirrors being hit by other large/wide vehicles on streets with narrow lane widths.
- A 10 foot lane can cause large vehicles to encroach into the adjacent auto lane, bike lane or impose on sidewalk pedestrians immediately adjacent to the travel lane.

**Neighborhood Collectors** – Neighborhood collector streets had similar lane width modifications, 11 foot lanes to 10 foot lanes with a 7 foot parking lane.

**Local Access Streets** – The standard width for a two-way local access street in the City was 25 feet. The City reduced the standard width to 20 feet. In addition to reducing impervious area, the narrower standard encourages slow speeds and improves safety although it can result in more contact between parked and moving vehicles. The 20 foot width accommodates 2-way traffic as well as emergency vehicles, buses and solid waste vehicles by means of “queuing” (on-coming vehicles take turns).

Eighteen feet wide local access streets are required in the city’s Green Cove Basin. The narrow street requirement was adopted in 2001 as part of a comprehensive low impact development approach for this basin. The 18-foot streets are challenging for residential, as well as emergency and solid waste vehicles. Driveway entry and exits can be difficult. Review of this street width in 2006 suggested its use be limited.

The committee concluded that the street widths adopted in 2006 are the minimum allowable to maintain street function and safety. Therefore, street lane widths in the City of Olympia are already consistent with LID and further modification is not advised. In fact, the Department of Ecology cites Olympia’s street width standards as a model for low impact development.

#### OPTIONS CONSIDERED

The following was considered:

- Option 1: Keep current standards – no change

#### ANALYSIS

The City of Olympia was an early adopter of LID street standards. Street widths were reduced by between two and five feet in 2006, to the minimum allowable to maintain efficient and safe streets.

Additional changes to the design of streets to enhance stormwater management are addressed in Element 11, Bioretention Street Section.



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