

LID ELEMENT #8: INCREASE STREET BLOCK SPACING

OBJECTIVE

Minimize the amount of impervious surfaces associated with streets resulting from block spacing requirements.

BACKGROUND

The City of Olympia regulations (Engineering Design & Development Standards 2.040.B) define maximum street block spacing standards. With the exception of the Chambers Basin (R4CB) (which allows larger block perimeters of up to 5,300 feet), block perimeters are restricted to a maximum of between 1,800 and 2,200 feet in residential and commercial zones. These block configurations result in development served by a network of closely spaced blocks that facilitate route choices for motorists, enhanced emergency response, and more inviting conditions for walking and pedestrians. Tight block spacing results in more streets but these streets tend to be narrow compared to bigger blocks and their associated wider streets.

CONSIDERATIONS

This paper focuses on issues specifically related to an increase in street block spacing. Impervious area associated with development within each block is addressed in separate papers including: Element 1 (Minimize Site Disturbance), Element 2 (Retain and Plant Native Vegetation), Element 3 (Zoning and Bulk Standards), Element 5 (Reduce Impervious Surface Associated with On-site Parking), Element 12 (Stormwater Use of Landscaping), and Element 14 (Require Permeable Pavement Where Feasible).

RELATED ELEMENTS

Element 4: Restrict Maximum Impervious Surface Coverage

TRADITIONAL APPROACH TO STREET BLOCK SPACING

The focus of street block spacing is connectivity, travel distance, pedestrian and bicycle access, etc. In other words, the focus is on the function of the street network and the street users – vehicles, pedestrians, bicycles, transit and emergency services. The impact of block spacing on imperviousness and its effect on stormwater is typically not a factor in determining block spacing.

“A well-connected road or path network has many short links, numerous intersections, and minimal dead ends. As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations, create a more accessible and resilient system.”

TDM Encyclopedia – Roadway Connectivity – Creating more connected roadway and pathway networks

CODES AND STANDARDS REVIEWED

- Engineering Design and Development Standards (EDDS) 2.040.B (Streets and Alleys)
- City of Olympia Comprehensive Plan Transportation Section, December 2014

BENEFITS OF INCREASING BLOCK SPACING

Many of the benefits related to reducing the impervious surfaces associated with increased street block spacing are the same as those of Element 4 (Restrict Maximum Impervious Surface Coverage). Reduced impervious area allows opportunities for increased green space that enhances infiltration, and greater opportunities to retain mature trees that facilitate transpiration and evaporation.

OLYMPIA CODE ANALYSIS

Street block spacing requirements are specified in the EDDS in Section 2.040.B.3E. The following spacing is specified:

- Residential zoning districts: Not to exceed a block perimeter of 1,800 feet
- Co-housing: Same as residential districts, but one block may have a perimeter up to 2,200 feet
- R-4 district: Not to exceed a block perimeter of 2,200 feet
- Chambers Basin District (R4CB): Not to exceed 5,300 feet, but must contain a mid-block pathway
- Commercial districts: Not to exceed a block perimeter of 2,200 feet

Modifications to spacing requirements are allowed for the development of facilities such as parks and schools that require a large site uninterrupted by a street. It must be demonstrated that the required street would make the site unviable for the proposed use.

Modifications to block spacing requirements are allowed for development of facilities such as parks and schools that require a large site uninterrupted by a street.

HURDLES TO INCREASING STREET BLOCK SPACING

Increasing street block spacing within the City presents the following challenges:

Benefits of Small Blocks – Small blocks provide many benefits:

- Short, direct routes for all users (vehicles, pedestrians, bicyclists, emergency vehicles, transit)
- Tighter spacing allows streets to be narrow creating a more human-scale street system and contributing to lower vehicle speeds as well as less impervious surface.
- Increased availability of alternative routes in case of street blockages
- Reduced vehicle miles traveled – smaller blocks allow for more direct routes of travel
- Decreased pollution with fewer miles traveled
- Inviting conditions for walking, biking, and transit use resulting in reduced pollution

Drawbacks of Large Blocks - Large blocks have the following drawbacks:

- Fewer streets concentrate traffic and result in the need for more lanes on many streets
- Longer travel distances for vehicles, including emergency vehicles. More driving would result in more potential for water quality contamination.
- Mid-block crossings for pedestrians and bikes which can present safety challenges
- Increased traffic volumes at intersections

Meets One Goal of the Comprehensive Plan at the Expense of Many Other Goals – The transportation section of the City of Olympia Comprehensive Plan includes the following value statements and goals:

- Olympians want a transportation system that can move people and goods through a community safely while conserving energy and with minimal environmental impacts. We want to connect to our homes, businesses and gathering spaces and promote healthy neighborhoods.
- Build streets in a grid pattern of small blocks to allow streets to be narrow and low volume, encourage walking and provide travelers with a choice of routes.
- Use innovative designs to reduce or eliminate runoff.

The goal of providing small blocks, and resulting increase in impervious area, makes the goal of reducing or eliminating stormwater runoff from City streets more difficult to achieve. Most goals specified within the transportation section of the Comprehensive Plan are focused on the functionality of the transportation system, accessibility and safety, efficient delivery of goods and services, and the creation of a well-connected grid system that allows short and direct trips. Increasing block spacing would be inconsistent with most of the transportation goals of the City of Olympia Comprehensive Plan.



Increasing block spacing would not be in concert with most of the transportation goals in the City of Olympia Comprehensive Plan.

OPTIONS CONSIDERED

The following options were considered:

- Option 1: Keep current block spacing standards – no change
- Option 2: Increase block perimeters in residential areas to 2,200 feet

ANALYSIS

Option 1 (no change) would maintain the status quo. A lot of work has been done by the City to establish the current spacing requirements. Updates occurred in 1988, 1994 and 2005. The current block spacing is necessary for a successful transportation system in the City. Increases will continue to be allowed for specific sites with special circumstances. The other transportation goals of the Comprehensive Plan would be maintained including providing alternative routes, efficient movement of goods and services, and increased connectivity.

Implementation of Option 2 (increase block perimeter of residential areas to 2,200 feet) will require updates to EDDS 2.040.B.3E to increase the allowed block perimeter length of residential areas to 2,200 feet. This could have small, incremental changes in the amount of streets and resulting impervious area. However, with fewer streets, there is less connectivity and greater distances to travel. This could increase traffic on some streets and could create the need for additional lanes on collector streets, further reducing the impervious surface reductions achieved by increasing block spacing. If driving increases because of fewer direct routes, so would water quality contamination. Street functionality, connectivity, access and a myriad of other functions served by the street system could be compromised if block spacing is too large.

RECOMMENDATION

Staff recommends Option 1. The City has spent much time and study establishing the current required block spacing. Given this and the goals of the Comprehensive Plan, further reductions are not warranted for the potential limited reduction in impervious area.

