

PBOT

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CITY TRAFFIC ENGINEER DIRECTIVE

Number	Supersedes	Effective Date	Cancellation Date
LW 004		January 9, 2020	(n/a)
Subject	Issuer		
New vision clearance guidelines at uncontrolled approaches to crosswalks	Lewis Wardrip, P.E., City Traffic Engineer		

Purpose

The following memo establishes new design guidelines for vision clearance/on-street parking setbacks at uncontrolled approaches to marked and unmarked crosswalks along Major City Walkways, City Walkways, Neighborhood Walkways, and on the High Crash Network.

Vision clearance guidelines are intended to serve as a guide for paving and capital projects moving forward and will be implemented incrementally as new right-of-way improvements are delivered. No retrofits outside of capital projects are proposed at this time. Public outreach regarding potential parking impacts will occur in conjunction with project-specific outreach.

New Vision Clearance Requirements on Approaches to Crosswalks

To improve safety for all modes at street intersections and crossings, the City Traffic Engineer hereby updates PBOT practices regarding intersection vision clearance as follows:

- **At Un-Controlled Approaches to Intersections/Crossings** (intersections with no traffic signal, stop sign, or yield sign): Along Major City Walkways, City Walkways, Neighborhood Walkways, and on the High Crash Network, on-street parking will be set back a minimum of 20 feet from the approaches to all crosswalks (marked and unmarked), as measured from the edge of the crosswalk. Parking setback requirements do not automatically apply at intersections/crossings with traffic signals, stop signs, or yield signs, but do apply at crosswalks with pedestrian-actuated flashing beacons.

Methods for setting back parking from marked and unmarked crossing approaches include providing curb extensions long enough to effectively meet the minimum parking setback, and/or by providing (or adjusting the location of) signs prohibiting parking on the approach to the crosswalk. Visually permeable uses may be provided within this required vision clearance zone. This could include low-use bicycle or motorcycle parking, stormwater management facilities, etc.



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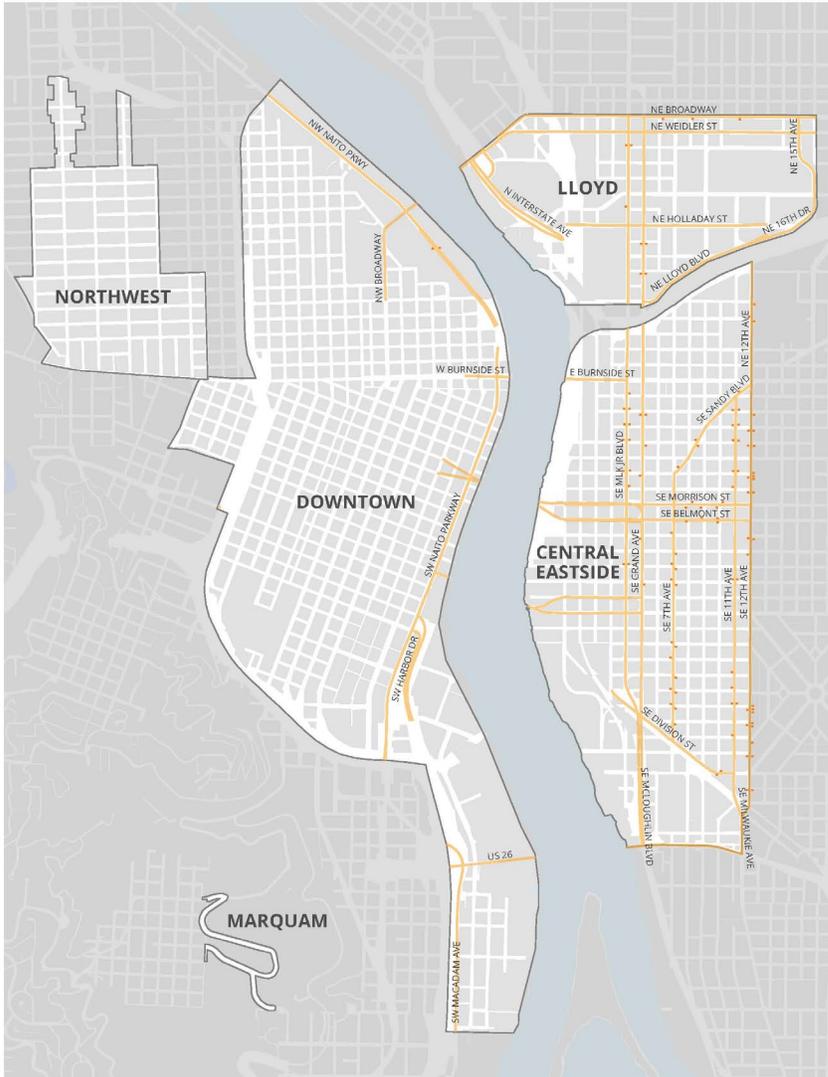
The traffic engineer may determine that parking should be removed for greater than 20 feet on the approach to crosswalk as needed due to geometric conditions and/or on higher speed roadways).

- **Parking Meter Districts:** Parking setback guidelines will be applied with no engineering analysis required at approaches to crosswalks on Major City Walkways, City Walkways, Neighborhood Walkways, and on High Crash Corridors within parking meter districts only on streets that are posted 30 mph or greater. On all other streets within parking meter districts (including pedestrian classified streets and High Crash Corridors posted less than 30 mph), changes to on-street parking for vision clearance will require an engineering analysis, and will be based upon a safety determination of a PBOT traffic engineer using objective data and other evidence that shall be the basis for changes or modifications.

Figure 1 shows a map of Major City Walkways, City Walkways, Neighborhood Walkways, and High Crash Corridors within parking meter districts where posted speeds are 30 mph or greater, where future capital projects may eventually propose change.

- **At Signal or Stop Controlled Approaches:** Visibility conditions at approaches to controlled pedestrian crossings will continue to be evaluated on a one-by-one basis; vision clearance/parking setback requirements will not automatically apply at crossing approaches controlled with traffic signals, stop signs, or yield signs, with the following notes/exceptions:
 - **Safe Routes to School (SRTS):** Identified walking routes to school may require higher order design treatments, and the SRTS program may establish design guidelines for school walking routes that include parking setbacks on controlled approaches to crosswalks.

Figure 1: Corridors within parking meter districts where posted speeds are 30 mph or greater, where future capital projects may eventually propose change.



Impacts of Proposed Vision Clearance Standard within Meter Districts

- Posted speed 30 mph or greater
- Parking space within 20' of approach to uncontrolled crossing

Parking spaces on high speed arterials potentially impacted (in conjunction with capital projects):

Downtown - 2 NW - 0
 Marquam - 0 Lloyd - 10
 Central East - 93

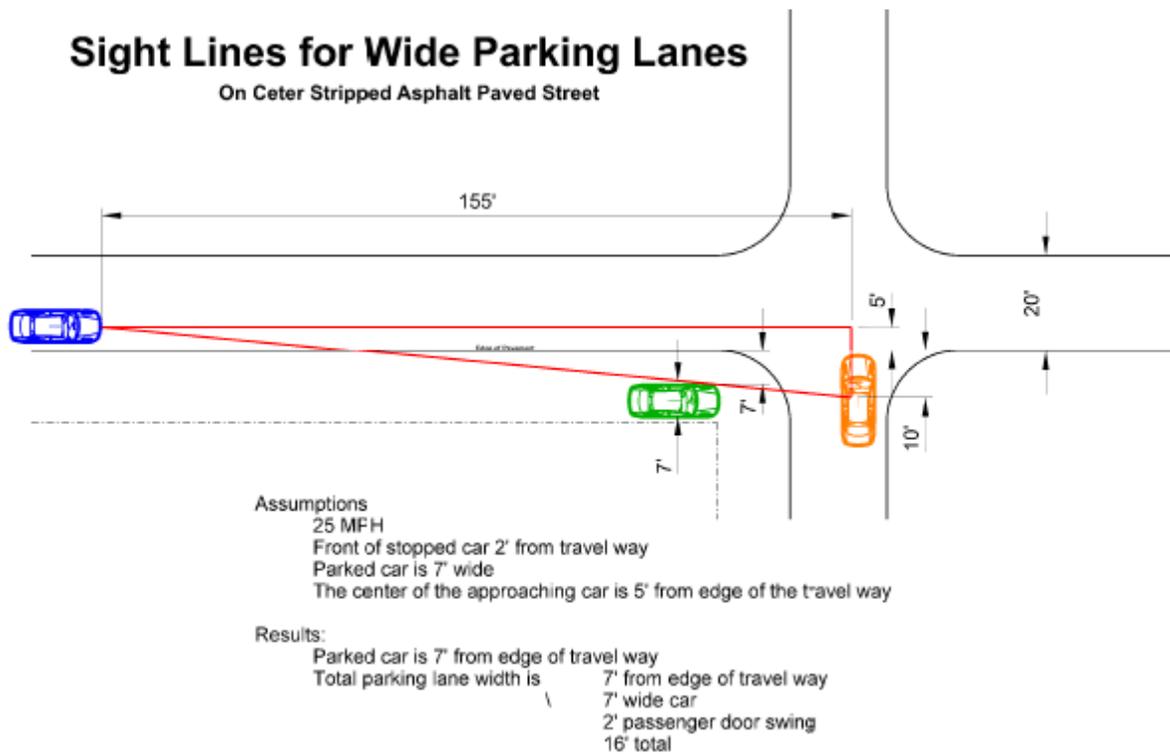
Implementation

There is currently no budget set aside to retroactively adjust parking setbacks across all city streets (costs would include moving signs and/or painting yellow curbs). Furthermore, the community impacts of a single, citywide retrofit effort would likely be difficult.

Vision clearance guidelines are intended to serve as a guide for paving and capital projects moving forward and will be implemented incrementally as new right-of-way improvements are delivered. No retrofits outside of paving and capital projects are proposed at this time. Moving forward, PBOT will implement updated parking-setback guidelines as follows:

- **PBOT capital projects.** New PBOT capital projects impacting crossings, corners, and/or on-street parking will implement new vision clearance guidelines on the uncontrolled approaches to crosswalks along Major City Walkways, City Walkways, Neighborhood Walkways, and on the High Crash Network. Public outreach regarding potential parking impacts will occur in conjunction with project-specific outreach.
- **Maintenance Operations Paving projects.** PBOT parking control will regularly review the list of roadways to be repaved by PBOT Maintenance Operations and will submit work orders to adjust parking as needed on repaved roadways in compliance with this directive.
- **PBOT-reviewed private development activity.** PBOT’s development review group will implement updated vision clearance guidelines in conjunction with private development reviews. For any land use application submitted after October 1, 2018, the vision clearance guidelines will be applied as part of the Public Works Permit process. Private development that has already gone through concept approval will be grandfathered.
- **No changes are proposed for parking meter districts.** For capital projects within meter districts, on-street parking removal will only be subject to a site-specific engineering safety analysis of intersection visibility conditions, as opposed to applying the baseline standard (same as current practice). Changes to parking setbacks within parking meter districts will be in response to documented visibility/safety issues as determined by a PBOT traffic engineer using objective data and other supporting evidence.
- **Community requests (outside of capital projects):** PBOT Traffic Investigations will adjust on-street parking in compliance with this directive in response to 823-SAFE requests. Traffic Investigations will continue current practice of conducting engineering analysis for 823-SAFE requests made within parking meter districts.
- **Roadways without curbs (roadways with “center strip paving”):**
 - Engineering judgement is required on roadways with “center strip paving” and no curbs. In lieu of automatically applying the vision clearance guidelines, a PBOT traffic engineer will review the corridor and determine parking removal needs.
 - On “center strip paved” roadways with unpaved shoulders where the unpaved shoulder is 16 feet wide or greater and vehicles are parked approximately 7’ or more from edge of travelway, no parking removal is required. The width of the shoulder provides for adequate stopping sight distance around the parked vehicle. (See Figure 2 below).

Figure 2: Sight Lines for Wide Parking Lanes on Center Stripped Asphalt Paved Street



Impacts

This new guideline will improve visibility for people attempting to cross pedestrian priority streets and streets within Portland’s High Crash Network at marked and unmarked crosswalks. It will also improve visibility of people walking and biking along neighborhood greenways.

Parking impacts will be limited. At unsignalized four-leg intersections along Major City Walkways, City Walkways, Neighborhood Walkways, and within the High Crash Network, this new guideline may result in up to two parking spaces being removed at a single intersection, if not already prohibited (one parking space at each uncontrolled crosswalk approach). Intersections at controlled approaches (with a signal or stop sign) will not be impacted.

Additional Background

Portland currently has few regulations, polices, or design standards limiting on-street parking at street intersections and crosswalks (marked or unmarked)¹. In many locations throughout the city, vehicles are permitted to park all the way to the edges of street corners. This practice can significantly decrease visibility at street intersections and crossings, making it difficult for people driving to see pedestrians and bicyclists attempting to cross the street. This is a particular concern along busy arterials, and in locations with high pedestrian and bicycle crossing demand (including in neighborhood centers, retail districts, and along neighborhood greenways). While pedestrians and bicyclists are most vulnerable, inadequate vision clearance impacts safety for all modes, as parked cars at street corners can make it difficult for people driving to see oncoming traffic when turning onto or crossing busy streets.

Daylighting uncontrolled approaches to crosswalks (both marked and unmarked) by setting back on-street parking makes people crossing the street and people riding bicycles more visible to people driving. It is also current best practice:

¹ Portland City Code 16.20.130 prohibits parking or stopping a vehicle within 50 feet of an intersection, but only for vehicle that are more than 6 feet in height.

- The National Association of City Transportation Officials (NACTO) Urban Street Design Guide recommends daylighting intersections by removing on-street parking within **20-25 feet** of intersections².
- Oregon state law limits on-street parking in proximity to crosswalks. [ORS 811.550](#) prohibits on-street parking within **20 feet** of a crosswalk at an intersection³. While other sections⁴ of ORS authorize cities to establish local regulations and/or practices which may deviate, many jurisdictions follow this guidance. The City of Eugene has formally adopted ORS 811.550⁵.
- Peer cities also regulate on-street parking at intersections. Among others, Seattle prohibits parking within twenty feet of the approach to a crosswalk⁶, and within 30 feet of a side-mounted traffic control signal or yield sign⁷. Minneapolis prohibits parking within 20 feet of a crosswalk at an intersection, and within 30 feet upon the approach of any flashing school signal stop sign, traffic control signal, or school sign at the side of a roadway⁸.

² See <http://nacto.org/publication/urban-street-design-guide/intersection-design-elements/visibility-sight-distance>. The NACTO guide notes that intersection design should facilitate eye contact between road users. However, wide corners with large sight triangles “may create visibility, but in turn may cause cars to speed through the intersection, losing the peripheral vision they might have retained at a slower and more cautious speed.” Instead of simply taking away parking spaces, NACTO recommends the space be used for bike racks, curb extensions, bioswales, and other traffic calming devices that do not obstruct vision.

³ ORS 811.550 also prohibits parking within 50 feet upon the approach to an official flashing signal, stop sign, yield sign or traffic control device located at the side of the roadway if the standing or parking of a vehicle will obstruct the view of any traffic control device.

⁴ ORS 810

⁵ See [Section 5.225](#) of Eugene Code

⁶ Seattle City Code 11.72.090

⁷ Seattle City Code 11.72.420 and 11.72.480

⁸ Minneapolis Code of Ordinances, [478.90](#)