

REPLINGER & ASSOCIATES LLC
TRANSPORTATION ENGINEERING

December 28, 2009

Ms. Nancy Kraushaar, PE
City of Oregon City
PO Box 3040
Oregon City, OR 97045

SUBJECT: REVIEW OF PEDESTRIAN CROSSINGS IN THE VICINITY OF 7TH AND HIGH STREETS

Dear Nancy:

In response to your request, I have reviewed the existing pedestrian crossings in the vicinity of 7th and High Streets and 7th Street and Singer Hill adjacent to City Hall.

Existing Conditions

The first crosswalk in question consists of a marked crosswalk with ladder style markings that is an extension of the south sidewalk along 7th Street. This crosswalk crosses High Street and measures 30 feet from curb to curb. There are no other traffic control devices, such as a STOP sign, at this location. The nearside of the crosswalk is five feet from the nearest on-street parking space on the east side of High Street.

The second crosswalk is an unmarked crosswalk that is an extension of the west sidewalk of Singer Hill. This crosswalk crosses 7th Street. The crossing measures between 35 and 40 feet. Traffic control consists of a STOP sign facing the eastbound 7th Street approach to Singer Hill. The crosswalk connects to the curbside sidewalk at the northwest corner. The unmarked crossing provides access to a planting area behind the curb at the southwest corner of the intersection. The two crosswalks are illustrated in Figure 1.



7th and High Crosswalk
(First Crosswalk)

7th Street and Singer Hill
Crosswalk (Second Crosswalk)

Analysis and Recommendations

The first crosswalk provides good access from City Hall and from 7th Street to the west side of High Street and the Elevator. The principal problem with this is the limited visibility afforded to pedestrians and oncoming motorists in the event that cars are parked in the on-street spaces on the east side of High Street. As indicated above, parking is permitted within 5 feet of the crosswalk. I judge sight distance to be inadequate for northbound motorists. Sight distance for westbound motorists is relatively unrestricted and is not problematic.

Using AASHTO's *Geometric Design of Streets and Highways*, 82 feet is the stopping sight distance for a 15-mph design speed and a 6 percent downgrade. Based on a 7-foot parking space width, I calculate this sight distance could be achieved by prohibiting parking within 38 feet of the crosswalk. This would require removal of the first two parking spaces on the east side of High Street nearest the crosswalk. Given the high demand for parking at this location, removal of two spaces may not be reasonable. Speeds are moderate on this section of street due to the 90-degree turn at this location and the STOP sign at Singer Hill. Thus, speeds are likely lower than 15 mph, so removal of the one parking space nearest the crosswalk may be adequate. I estimate removal of one parking space would increase sight distance to approximately 53 feet. With removal of one space, a pedestrian a few feet from the curb becomes much more readily visible to the on-coming motorist. I recommend removal of the parking space nearest the crosswalk.

The second crosswalk along Singer Hill at 7th Street is handy for pedestrians coming from the stairway that provides access up and down the bluff. Sight distance is not a problem at this crosswalk. The problems with this crosswalk include the absence of curb cuts at both corners, the relatively steep slope across 7th Street, and the absence of a sidewalk connection at the southwest corner.

The slope across 7th Street may be steep enough that wheelchair users might be unable to use it safely and might better use the crosswalk at High and 7th Streets discussed above. Nevertheless, installing a sidewalk through or adjacent to the existing planting area at the northwest corner of the intersection and curb cuts at both ends would make the crosswalk more useful and inviting. I recommend installing sidewalks and curb ramps as funding permits. Pavement markings for the crosswalk are optional.

Figure 2 illustrates the recommendations.



Recommendation 3. Add curb cuts at northwest and southwest corners for access to crosswalk.

Recommendation 2. Add sidewalk at southeast corner of 7th Street and Singer Hill (select appropriate orientation and location)

Recommendation 1. Remove first parking space nearest existing marked crosswalk.

Conclusions and Summary

I think both crosswalks serve useful functions. Both can be improved. My recommended first priority is the elimination of the on-street parking space on the east side of High Street nearest the crosswalk. This will improve sight distance significantly. As a second priority, I suggest constructing a sidewalk through the landscape area at the southwest corner of 7th Street and Singer Hill to give access to the existing unmarked crosswalk. I would judge the addition of curb ramps serving this crosswalk to be a third priority.

Thanks for letting me be of service to you on this analysis. If you have any questions or need any further information, please contact me at replinger-associates@comcast.net.

Sincerely,

John Replinger, PE
Principal