

Traffic Signal Warrants

The City conducted traffic signal warrants for the unsignalized study intersections that were not expected to meet operational standards in the 2040 base case. Table 23 lists the intersections that were found to meet the traffic volume warrants for signalization under existing (2015) and base case (2040). On arterial streets, signals should generally be spaced at least 1,000 feet apart for efficient operation, but signalizing some of the intersections that meet signal warrants would result in shorter spacing. The City will conduct a detailed traffic engineering evaluation to evaluate site conditions, signal spacing, and all warrants before installing any traffic signals. The City should follow City and ODOT signal design and signal phasing guidelines for all new traffic signal installations. ODOT typically requires an 8-hour warrant to be met, along with other improvement considerations such as channelization prior to installing a signal. New signals on ODOT facilities are subject to state traffic engineer approval, and even if an intersection meets a signal warrant, it is not a guarantee for approval.

Table 23: Signal Warrant Analysis Results

Intersection	Warrant Met for Existing (2015) ¹ ?	Warrant Met for Future Base Case (2040) ² ?
Willamette Drive/Arbor Drive	No	No
Willamette Drive/Jolie Pointe Road	No	No
Willamette Drive/Pimlico Drive	No	Yes
Willamette Drive/Holmes Street	No	No
Willamette Drive/Burns Street	Yes	Yes
Willamette Drive/Willamette Falls Drive	Yes	Yes
Willamette Falls Drive/Sunset Avenue/Chestnut Street	No	Yes
Rosemont Road/Carriage Way	No	No
Rosemont Road/Hidden Springs Road	No	Yes
10 th Street/8 th Avenue-Court	No	Yes
Willamette Falls Drive / 10 th Street	Yes	Yes
Salamo Road/Parker Road	No	No
Blankenship Road/Tannler Drive	No	Yes
Willamette Falls Drive/12 th Street	No	Yes
Willamette Falls Drive/Dollar Street East	No	No
Willamette Falls Drive/Ostman Road	No	No
Willamette Falls Drive/Dollar Street West	No	No

1. Traffic volumes within West Linn are generally lower today than they were in 2006 and are projected to be lower in 2040 than they were projected to be in 2030. Therefore, use of the existing and projected future traffic volumes from the 2008 TSP to evaluate existing (2015) and future (2040) traffic conditions is a conservative estimate, and may overestimate vehicle demand.

Highway 43 Corridor

The city of West Linn, in coordination with ODOT, developed the West Linn OR 43 Conceptual Design Plan dated ~~January 4, 2008~~ **June 6, 2016** and adopted it as part of ~~the 2008~~ **this amended** TSP. The Plan identifies needs, deficiencies, and solutions ~~(such as pedestrian crossings, street trees, landscaping, transit stops, and lighting~~ to better support the needs of all roadway users and adjacent land uses) for

the portion of Highway 43 between the north City limits and McKillican Holly Street. Attachment "A" contains the 2008 2016 OR 43 Conceptual Design Plan.

The 2008 2016 OR 43 Conceptual Design Plan includes improvements such as adding left turn lanes to the median and traffic control in some locations to increase capacity maintaining a three lane cross section and adding cycle tracks. However, due to the stated constraints, several certain locations are not likely to meet performance standards and will require ODOT design exceptions. Table 24 summarizes projects identified in the current OR 43 Conceptual Design Plan. The City identified all projects associated with the OR 43 Plan as a high priority based on the project evaluation criteria. with the exception of the Arbor Drive intersection, which is identified as medium priority. The City is currently refining the OR 43 Conceptual Design Plan in an effort to resolve discrepancies between the planned roadway cross section and available right-of-way width in the corridor and to improve safety for pedestrians and bicyclists. The final design of OR 43 is subject to ODOT approval.

Upon approval of the updated 2016 OR 43 Conceptual Design Plan, the 2008 OR 43 Conceptual Design Plan contained in Attachment "A" of this TSP will be replaced with replaces the updated previous 2008 OR 43 Conceptual Design Plan. The City will also update all applicable sections of this TSP to reflect the findings of the updated Plan.

10th Street Interchange Area

The 10th Street Interchange Area consists of the segment of 10th Street located between Blankenship-Salamo Road and Willamette Falls Drive, the I-205 northbound and southbound on- and off-ramps, and three local street connections: 8th Avenue, 8th Court, and Tannler Drive. Several intersections located within the Interchange Area currently exceed their respective mobility standards during the weekday p.m. peak hour. Several more intersections currently experience significant queues that extend beyond striped storage lanes and disrupt traffic flow. Traffic volume projections included in Metro's current travel demand model indicate that these conditions are expected to continue in the future. To address the problem of the closely spaced intersections, the solutions listed below will, in part, be relied upon to improve operations rather than fully reconstructing the interchange as proposed in the 2008 TSP. Therefore, the City and ODOT identified several improvements to address the issues, such as widening along 10th Street to provide additional travel lanes and several intersection modifications.

The following provides a summary of the improvements identified by the City and ODOT for the 10th Street Interchange Area.

- Widen 10th Street between the I-205 NB Ramps and the I-205 SB Ramps to provide two through lanes in each direction.

MOTOR VEHICLE PLAN

In addition to the Highway 43 and 10th Street corridor improvements identified above, Table 24 includes additional intersection and roadway projects throughout the city of West Linn. Figure 16 shows these projects. The cost estimates shown in Table 24 were developed based on information provided in the previous TSP and direction from city staff and therefore, should be considered planning level estimates. More detailed cost estimates will be required as projects are pursued.

Table 24: Motor Vehicle Plan Projects

Project Number	Location	Description	Priority	Cost (\$1,000)
City of West Linn Facility Projects				
M1	Rosemont Road/ Hidden Springs Road	Install a traffic signal with northbound/southbound left turn lanes on Rosemont Road when warranted	Medium	\$800
M2	Tannler Street Realignment	Realign Tannler Street at Blankenship Road to align with the driveway located approximately 350 feet west	Medium	\$900
M3	Willamette Falls Drive/12 th Street	Install a traffic signal when warranted	Medium	\$300
M4	Willamette Falls Drive/14 th Street	Install all way stop control when warranted	Medium	\$20
M5	Willamette Falls Drive/Ostman Road	Install all-way stop-control when warranted.	Medium	\$20
M6	8 th Avenue	Modify Dollar Street connection to reconnect to 8 th Avenue, and provide alternative route for local trips.	Low	\$90
M7	8 th Avenue	Upgrade from 10 th Street to 14 th Street	Low	\$300
M8	Fairview Way	Extend Fairview Way to Lazy River Drive	Low	\$400
M9	Willamette Falls Drive	Upgrade from Tualatin River bridge to Dollar Street	Medium	\$1,000
M10	Ostman Road/ Blankenship Road	Upgrade to current city standards from Johnson Road to Willamette Falls Drive	Low	\$1,100
M11	Ridge Lane	Extend Ridge Lane to Ireland Lane	Low	\$300
M12	Rosemont Road/ Carriage Way	Install a center median on Rosemont Road to allow two-stage left turns from Carriage Way	Low	\$1,500
M13	Salamo Road/ Parker Road	Install a traffic signal when warranted	Low	\$300
M14	Shady Hollow Way	Extend Shady Hollow Way to Lazy River Drive	Low	\$300
M15	Territorial Drive	Extend Territorial Drive to River Street	Low	\$300
M16	Willamette Falls Drive/19 th Street	Install all way stop control when warranted	Low	\$20
M17	Willamette Falls Drive/Sunset Avenue	Install a traffic signal when warranted	Low	\$300
ODOT Facility Projects (10th Street Interchange)¹				
M18	10 th Street Preliminary Design	Prepare a preliminary design for the 10 th Street interchange area improvement projects M19 – M24 shown in Figure 15.	High	\$50
M19	8 th Court	Establish a crossover easement from the 8 th Court terminus to Willamette Falls Drive when development occurs to preserve ingress and egress for existing and future development and provide relief to the 8 th Court/10 th Street intersection and secondary emergency access.	Medium	\$0 (to be completed by the developer)
M20	10 th Street	Install dual eastbound left-turn lanes at the 10 th Street/Willamette Falls Drive intersection.	Medium	\$40 \$48

M21	10 th Street	Widen 10 th Street between Blankenship-Salamo Road and Willamette Falls Drive to provide two lanes in each direction. This project includes completing sidewalks and enhanced bicycle facilities.	Medium	\$875 ² -\$1,050
M22	10 th Street/8 th Avenue-Court	Install channelization at the intersection to restrict the eastbound left, eastbound-through, northbound left, and westbound-through movements.	Medium	\$10 ² -\$12
M23	10 th Street/Blankenship Road	Widen Blankenship-Salamo Road to provide dual left-turn lanes at the westbound and northbound approaches to the intersection. Also, add a second exclusive right-turn lane at the eastbound approach to the intersection to address queuing.	Medium	\$500 ² -\$600
M24	10 th Street/Willamette Falls Drive	Install a traffic signal when warranted	Medium	\$75 ² -\$90
ODOT Facility Projects (OR 43 Conceptual Design Plan Improvements)¹				
M25	North City Limit to Maryhurst Drive -Hidden Springs	Highway 43 Improvements including pedestrian and enhanced bicycle facilities per the OR 43 Conceptual Design Plan	High \$1,290	\$760 ² -\$4,300
M26	Maryhurst Drive to Hidden Springs Road to Dillow Drive	Highway 43 Improvements including pedestrian and enhanced bicycle facilities per the OR 43 Conceptual Design Plan	High \$1,020	\$1,090 ² -\$3,400
M27	Hidden Springs Road to Pimlico Drive-Dillow Drive to Failing Street	Highway 43 Improvements including pedestrian and enhanced bicycle facilities per the OR 43 Conceptual Design Plan	High \$1,170	\$1,400 ² -\$3,900
M28	Pimlico Drive to Buck Street-Failing Street to Holly Street	Highway 43 Improvements including pedestrian and enhanced bicycle facilities per the OR 43 Conceptual Design Plan	High \$1,470	\$865 ² -\$4,900
M29	West A Street to Webb Street-Holly Street to Willamette Falls Drive	Highway 43 Improvements including pedestrian and enhanced bicycle facilities per the OR 43 Conceptual Design Plan	High	\$535 ² -\$TBD
M30	Webb Street to Hood-McKillican Street	Highway 43 Improvements including pedestrian and enhanced bicycle facilities per the OR 43 Conceptual Design Plan	High	\$495 ²
M31	Highway 43/Cedar Oak Drive	Modify per OR 43 Conceptual Design Plan	High	\$130 ²
M32	Highway 43/Pimlico Drive	Add a traffic signal when warranted	High \$90	\$65 ² -\$300
M33	Highway 43/Willamette Falls Drive	Install a traffic signal when warranted. Coordinated with adjacent signal at I-205 NB Off Ramps	High	\$300 ²
M34	Highway 43/Arbor Drive	Install left turn lanes on Highway 43 (cost included in Highway 42 segment cost, listed below)	Medium	\$0
M35	Highway 43/Hidden Springs Road and Highway 43/I-205 SB	Conduct a refinement plan to address the projected 2040 unmet mobility standard at Highway 43/Hidden Springs Road and Highway 43/I-205 SB (See Table 22).	Low	\$20
TOTAL High Priority Costs				\$5,690 ² -\$5,390
TOTAL Medium Priority Costs				\$4,540 ² -\$4,840
TOTAL Low Priority Costs				\$4,930
TOTAL Program Costs (25 years)				\$15,160

1. ODOT’s financial participation in projects on state facilities determined through the STIP. The West Linn TSP does not obligate ODOT to financially participate in any of the project listed on their facilities.

2. This cost represents the estimated local City contribution to overall project cost (25-30 percent).