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## KEY OUTCOMES

The following key outcomes are based on information included in Tech Memo 4: Existing Gaps and Deficiencies, Tech Memo 5: Future Needs, and Tech Memo 6: TSP Solutions. These key outcomes represent a sample of the information included in these memos and are intended to provide an understanding of where the project team is in the planning process and where we are headed, in terms of selecting a preferred solution and developing projects for the TSP update.

### OR 213/Toliver Road

The OR 213/Toliver Road intersection currently operates at level of service (LOS) F, but below capacity during the weekday PM peak hour. This is primarily due to the relatively high westbound left-turn volume at the shared approach. The intersection is projected to continue to operate at LOS F and above capacity under year 2040 traffic conditions. Preliminary signal warrants indicate that a traffic signal is **NOT** warranted under existing or forecast traffic conditions.

The OR 213/Toliver Road intersection currently experiences a high rate of crashes. A review of the data indicates that several of the crashes were reported as rear-end crashes and involved vehicles along OR 213 waiting to turn left onto Toliver Road while others were reported as turn crashes and involved vehicles turning from OR 213 to Toliver Road or from Toliver Road onto OR 213.

The solutions being considered include:

- Widen OR 213 to provide separate left-turn lanes at the northbound and southbound approaches – this solution is consistent with the current TSP.
- Widen OR 213 to provide a continuous center two-way left-turn lane through the intersection – this solution may require approval of a design exception from ODOT.
- Install a traffic signal when warranted – this solution may require widening as well as approval from the statewide traffic engineer.

### OR 211/Molalla Avenue

The OR 211/Molalla Avenue intersection currently operates at LOS F, but below capacity during the weekday PM peak hour. This is primarily due to the relatively high volume of through and left-turn movements at the eastbound and westbound approaches. The intersection is projected to continue to operate at LOS F and above capacity under year 2040 traffic conditions. Preliminary signal warrants indicate that a traffic signal **IS** warranted under forecast traffic conditions.

The OR 211/Molalla Avenue intersection currently experiences a high rate of crashes. However, a review of the data indicates there are no trends or patterns.

The solutions being considered include:

- Install enhanced signs with flashing beacons and pavement markings that “SLOW” traffic at the eastbound and westbound approaches.

- Install a traffic signal when warranted – this solution may require approval from the statewide traffic engineer. In addition to the traffic signal:
  - Install separate left-turn lanes at the eastbound and westbound approaches – this solutions would result in the removal of on-street parking
  - Prohibit left-turns during peak periods – this solution would result in reliance on the local street system and out-of-direction travel. This solution is consistent with the preferred solution identified in the OR 211 Streetscape Plan.

## OR 211/Mathias Road

The OR 211/Mathias Road intersection currently operates acceptable and is projected to operate acceptably under year 2040 traffic conditions. However, the intersection currently experiences a high rate of crashes. A review of the data indicates that several of the crashes were reported as turn crashes and involved vehicles turning from OR 211 to Mathias Road.

The solutions being considered include:

- Reduce posted speed limit along OR 211 to 25 mph prior to the intersection.
- Install enhanced signs with flashing beacons and pavement markings that “SLOW” traffic at the westbound approach.
- Widen OR 211 and install a separate left-turn lane at the westbound approach.
- Reconfigure the intersection as a conventional “T” intersection – this improvement is consistent with the current TSP.
- Reconfigure the intersection as a single-lane roundabout – this improvement is consistent with the current TSP.

## Molalla Forest Road

The segment of Molalla Forest Road between OR 211 and Molalla Avenue is identified as an arterial in the current TSP. This designation was primarily based on the notion that Molalla Forest Road would become a downtown bypass and a freight route allowing vehicles and trucks to bypass the downtown. However, the improvements identified in the current TSP have not been completed and based on conversations with City staff, the notion of Molalla Forest Road as a bypass is no longer supported. However, there is still a need to provide east-west connectivity south of OR 211.

The solutions being considered include:

- Redesignate Molalla Forest Road as a major collector.
- Reconstruct Molalla Forest Road from OR 211 to Molalla Avenue consistent with the City’s standards for a major collector.
- Reconstruct Molalla Forest Road with standards unique to Molalla Forest Road

- Install a shared-use path on the north side of the roadway from OR 211 to Molalla Avenue – this is consistent with the County’s Active Transportation Plan. The shared-use path could also tie into the city’s existing shared-use path and trail system.

## Pedestrian and Bicycle Solutions

Pedestrian and bicycle facilities are the elements of the transportation system that allow residents to travel by foot or bike to local destinations, such as schools, parks, churches, etc. While these facilities are currently provided along many city streets, there are many more streets where these facilities are needed to improve pedestrian and bicycle access and connectivity. The solutions identified to address needs in the pedestrian and bicycle systems reflect the pedestrian level of traffic stress (PLTS) and bicycle level of traffic stress (BLTS) analysis methodologies and results. Both methodologies tend to favor low speed facilities that provide wide sidewalks or bike lanes that are separated from vehicle traffic. Therefore, the pedestrian and bicycle solutions are generally structured to satisfy the requirements for low stress facilities per the methodologies.

The pedestrian solutions generally include:

- Fill in the gaps on one side of the roadway with new sidewalks of appropriate width by filling in and replacing the open ditches with a culvert drainage system.
- Fill in the gaps on both sides of the roadway with new sidewalks of appropriate width by filling in and replacing the open ditches with a culvert drainage system.
- Remove the existing sidewalk and install new sidewalks of appropriate width along both sides of the roadway.
- Evaluate light levels and install street lighting along the full length of the roadway as necessary.

For lower speed facilities, the bicycle solutions generally include:

- Reduce the posted speed limit to 25 mph and remove the roadway centerline stripe
- Reduce the posted speed limit to 25 mph and install shared lane pavement marking and signs

For higher speed facilities, the bicycle solutions generally include:

- Reduce the posted speed limit to 30 mph and install on-street bike lanes on both sides of the roadway by filling in and replacing the open ditches with a culvert drainage system.
- Reduce the posted speed limit to 35 mph and install buffered bike lanes on both sides of the roadway by filling in and replacing the open ditches with a culvert drainage system.
- Maintain the posted speed limit and install separated bike lanes on one or two sides of the roadway by filling in and replacing the open ditches with a culvert drainage system.
- Maintain the posted speed limit and install a shared-use path on one side of the roadway by filling in and replacing the open ditches with a culvert drainage system.

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## Pedestrian Crossings

Enhanced pedestrian crossings are currently provided along the city's arterial and collector streets at major intersections and key mid-block crossing locations near essential destinations. Several additional enhanced pedestrian crossings are identified based on a review of the current TSP and other recent relevant planning documents, based on a review of the transportation system, and input from city staff, the advisory committees, and the general public.

The National Cooperative Highway Research Program (NCHRP) Report 562 *Improving Pedestrian Safety at Unsignalized Crossings* provides a methodology for evaluating appropriate levels of crosswalk protection. The methodology considers existing and project future traffic volumes, travel speeds, and pedestrian crossing volumes as well as a number of other factors. Per the methodology, the minimum number of pedestrian crossings needed to support enhanced pedestrian crossing treatments is 20 along facilities posted 35 mph and below and 14 along facilities posted above 35 mph.

Given that pedestrian crossing volumes are generally unknown at a majority of the crossings, the solution assume the minimum number of pedestrian crossings are present and identify appropriate levels of crosswalk protection based on the existing and projected future traffic volumes and the posted speeds.

The solutions generally include

- Curb extensions
- Median refuge islands
- High visibility pavement markings and signs
- Pedestrian-activated beacons
- Pedestrian signals
- ADA accessible curb-ramps with tactile warning strips.