

CONGESTION RELIEF TASK FORCE

A Technical Review of Transportation Infrastructure Options

The problem today

With traffic levels hampering downtown circulation, and long delays in west Salem, policy makers are evaluating potential transportation infrastructure, programs, and policies.



Commercial St. at Division St. and Front St.



Wallace Rd. at Glen Creek Rd.



Court St. at Front St.

As the population of Salem increases, traffic and congestion will increase.

+20%

GROWTH IN
SALEM'S
POPULATION

predicted, 2018 to 2038

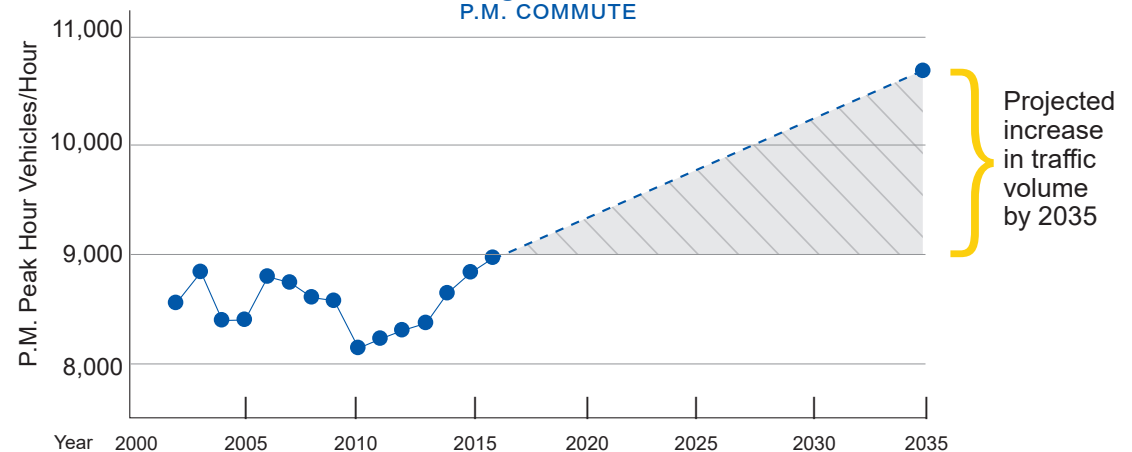


+1% per year

AVERAGE
GROWTH IN
TRAFFIC VOLUME

predicted, 2016 to 2035*

Salem Bridges Traffic Volume P.M. COMMUTE



Note: 2002-2016 data based on ODOT Traffic Recorders Data

*2035 PM peak hour volume based on data from the PSU Population Research Center forecasts

Composed of the Mayor and three City Councilors, the Salem Congestion Relief Task Force investigated potential ways for the City to relieve congestion and advise the City on policies and actions to improve traffic flow.

CONGESTION RELIEF TASK FORCE

A Technical Review of Transportation Infrastructure Options

What causes morning and evening congestion?

Traffic jams on weekday mornings and evenings are caused by bottlenecks at the Center Street and Marion Street bridges. During morning and evening commutes, traffic on the bridges nears or exceeds capacity in many areas.

WEEKDAY MORNING RUSH HOUR TRAFFIC CONGESTION

Measures Of Road Capacity Used During Weekday Morning Peak Traffic Hours



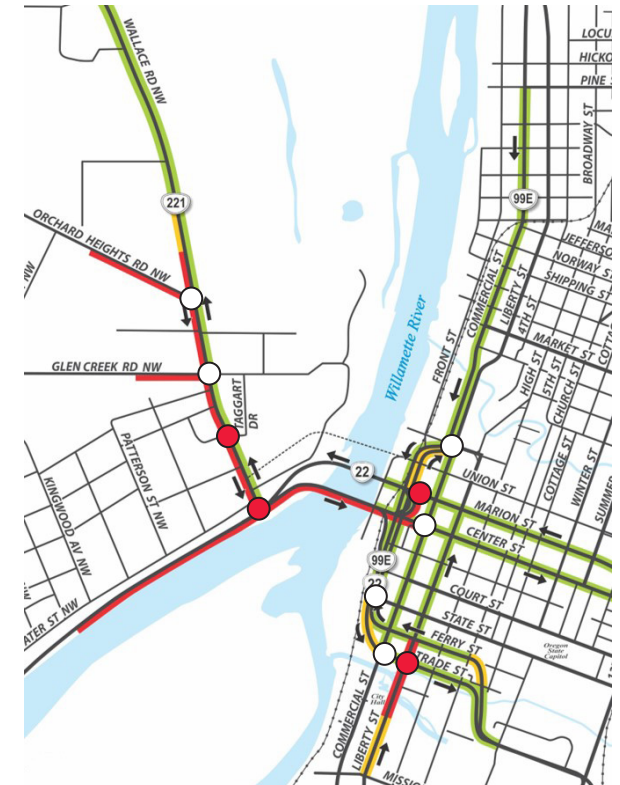
Center Street Bridge | A.M. COMMUTE

- At or over capacity
- Near capacity
- Below capacity

Capacity is the maximum number of vehicles that a street can accommodate based on street design characteristics like number and width of lanes, driveway locations, traffic controls (signals, stop signs, etc.), intersection spacing, etc.

Standards for the streets and intersections in the study area are set by ODOT and the City of Salem, and range from 85% to 95% of available capacity and an average intersection delay of up to 80 seconds.

Morning Intersection Operations



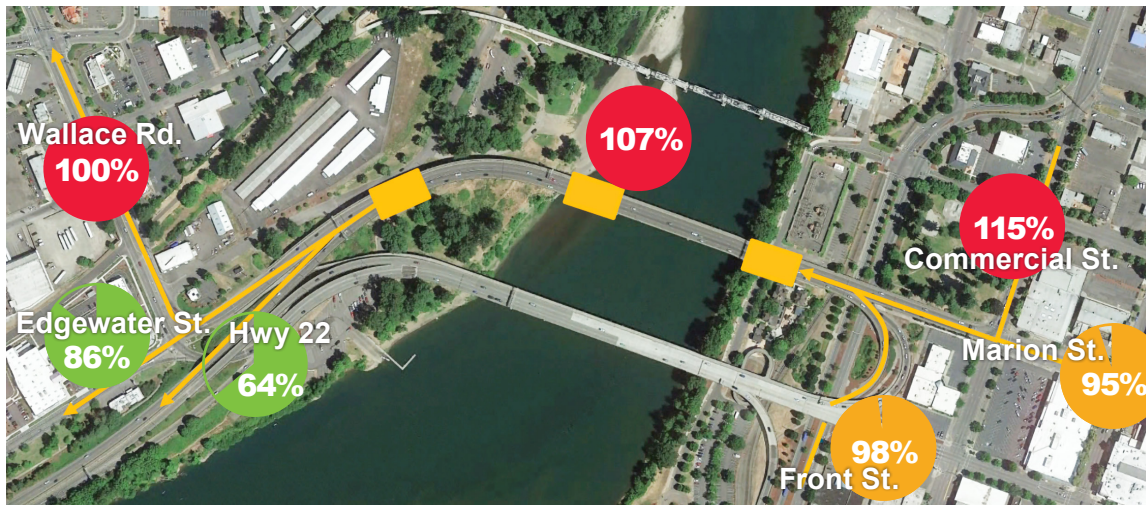
- Fails to meet standards
- At or near standards
- Vehicle queuing (back-ups) during peak traffic hours

CONGESTION RELIEF TASK FORCE

A Technical Review of Transportation Infrastructure Options

WEEKDAY EVENING RUSH HOUR TRAFFIC CONGESTION

Measures Of Road Capacity Used During Weekday Evening Peak Traffic Hours



Marion Street Bridge | P.M. COMMUTE

- At or over capacity
- Near capacity
- Below capacity

Capacity is the maximum number of vehicles that a street can accommodate based on street design characteristics like number and width of lanes, driveway locations, traffic controls (signals, stop signs, etc.), intersection spacing, etc.

Standards for the streets and intersections in the study area are set by ODOT and the City of Salem, and range from 85% to 95% of available capacity and an average intersection delay of up to 80 seconds.

Evening Intersection Operations



- Fails to meet standards
- At or near standards
- Vehicle queuing (back-ups) during peak traffic hours

CONGESTION RELIEF TASK FORCE

A Technical Review of Transportation Infrastructure Options

Salem Bridges Are Key Connectors

Due to the lack of alternative routes, Salem bridges are essential connectors for regional travelers, freight, and residents.

The nearest alternative crossings are far from Salem.

Bridges in Salem

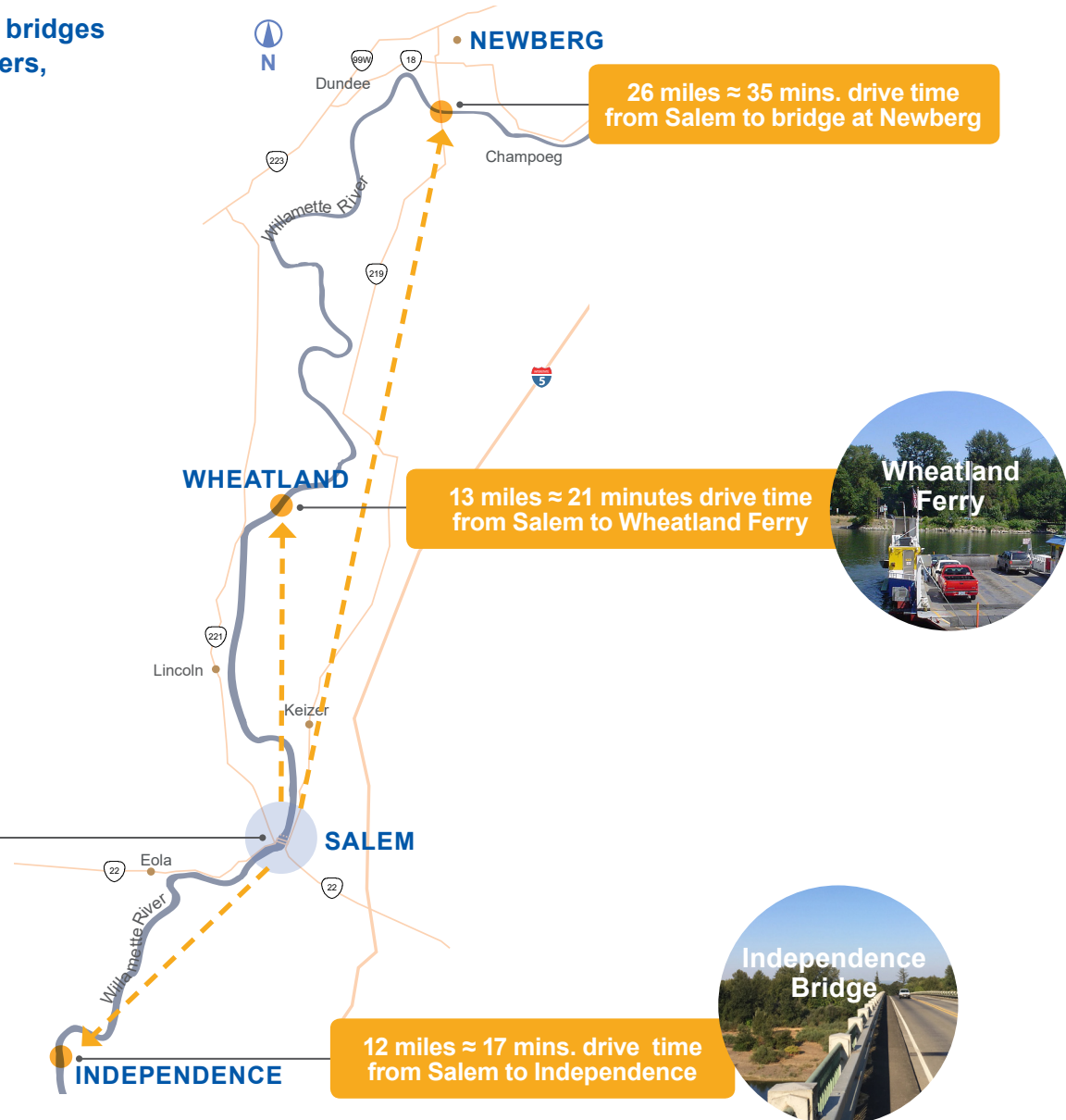


Photo credits: Marion St. Center St. Bridges: M.O. Stevens - Own work, CC BY-SA 3.0, commons.wikimedia.org/w/index.php?curid=4706428 & 4707249. Union St. Bike Bridge: Cjdanield - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=6750546>

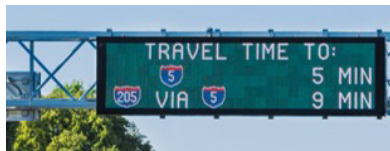
CONGESTION RELIEF TASK FORCE

A Technical Review of Transportation Infrastructure Options

Short Term Actions Recommended by the Task Force



1. Optimize **signal timing** and investigate Adaptive Signal Timing; this could include increasing pedestrian delays at signalized intersections during peak periods.



2. Install **travel time signs**.
3. Develop and implement a **commute trip reduction plan** by working with employers to develop flexible or staggered work hours.
4. Work with employers to develop and implement **incentives for employees** to bike, walk, transit, and carpool.



5. Improve **guide signs** leading up to and on the bridges.

6. Construct **Marine Drive**.

7. On **Wallace Road**, limit left turns either by installing a median barrier or by instituting peak-hour turn restrictions.

8. At intersection of Wallace Road and **Taggart Drive**, add additional through and/or right turn lanes on the east and westbound Taggart Dr. approaches. Consider prohibiting left turns during peak congestion periods.

9. Install electronic **variable speed limit signs** on Highway 22.

10. Provide **park and walk/bike/shuttle services** at Wallace Marine Park.

11. Implement downtown **parking management** strategies.

12. Provide downtown **circulator bus or trolley**.

13. Improve **response to emergencies** on the bridges.

14. Close the **north crosswalk** at Front St./ Court St.

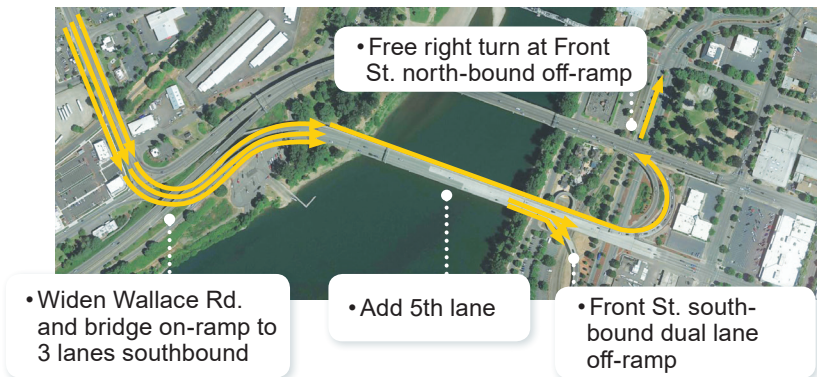


15. Remove the barrier on **Musgrave Avenue** east of Wallace Road to allow traffic to access Wallace Marine Park.

Longer-Term Options

The Task Force evaluated several packages of potential improvements. The most promising packages are described below. The Task Force did not reach consensus and therefore are not recommending these for further study.

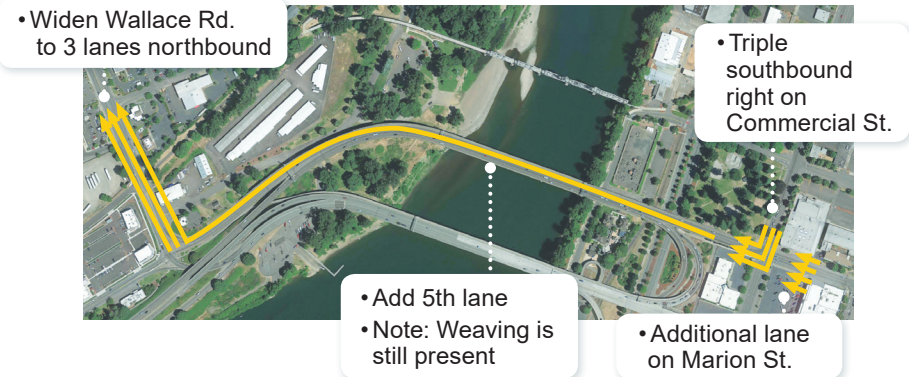
Center Street Bridge Package



Summary

- Improves Wallace Rd. and Front St.
- Bottlenecks still exist at both Commercial St./Front St. intersections
- Project Cost: \$100–\$137 million

Marion Street Bridge Package



Summary

- Improves Commercial St., Marion St., and Wallace Rd.
- Weaving (lane-changing) on bridge still occurs, and with five lanes
- No improvements for Front St. on-ramp to bridge
- Project Cost: \$55–\$65 million

Considerations

- Solution packages are beyond current available revenue.
- Based on the existing analysis, the benefits may not be long lived. Travel times initially could be reduced by as much as 50%, while some areas may not see any reduction. Travel times could return to preconstruction levels within 10 years.
- Making a single improvement, rather than implementing the whole package, could help in the immediate area, but it would either move the problem to a different spot, or fail to relieve overall congestion in the area.