I-205 Southbound: I-84 Eastbound to Powell Boulevard
Freeway Improvement Performance Evaluation

THE CHALLENGE:

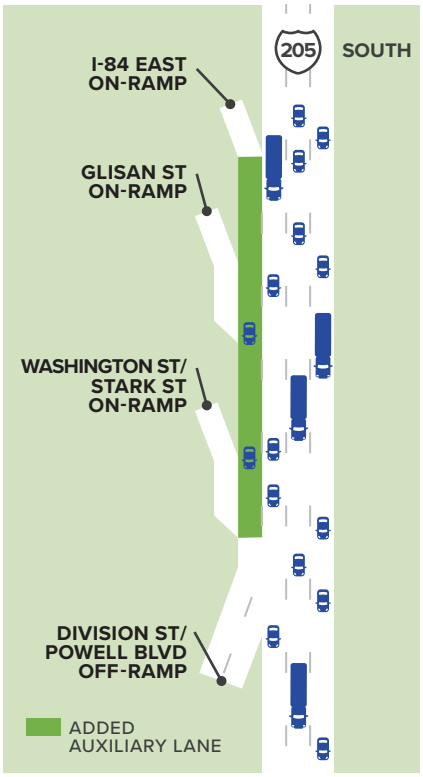
The stretch of southbound I-205 between I-84 eastbound and Powell Boulevard had reached its vehicle capacity. High traffic volumes and short merging distances caused speeds to drop below 10 miles per hour during peak travel times. The worst congestion started at the Powell Boulevard interchange and extended more than five miles north to Airport Way. Without improvements, congestion and related crashes were anticipated to increase in the area.

IMPROVEMENTS MADE:

The selection of the following improvements was guided by ODOT's objective to invest in operational enhancements that preserve reliable travel times.

- Added an auxiliary lane on I-205 southbound connecting the I-84 eastbound on-ramp to the Division Street/ Powell Boulevard off-ramp.
- Installed ODOT RealTime signs displaying traffic flow and roadway conditions, enabling drivers to make better informed travel decisions. These new signs will assist in reducing crashes, improve travel time reliability, and enhance transit operations throughout the project area.

LANE CONFIGURATION AFTER IMPROVEMENTS:



WHAT IS AN AUXILIARY LANE?

An auxiliary lane typically provides a direct connection on the freeway from one interchange ramp to another. The purpose is to allow the mixing of different traffic speeds that are entering and exiting the freeway. The lane separates the slower movements from the freeway mainline, reducing conflicts that cause congestion and improving safety and traffic flow at the freeway interchanges.

PROJECT CORRIDOR:

LENGTH: 0.9 mi

POSTED SPEED: 55 mph

CONSTRUCTION DATE: 2017 – Apr 2019

COST: $6.8M[1]

[1] Only includes costs directly associated with the southbound auxiliary lane (i.e., does not include northbound work or paving outside the extents of the auxiliary lane)

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RESULTS:

This project included improvements to a segment, just under one-mile long, along southbound I-205. However, because the congestion caused by this bottleneck extended far to the north, the benefits are summarized over an approximately six-mile segment on I-205 (approximately Foster Road to the Columbia River), as well as over the I-84 ramps feeding into I-205, to capture the full impact of improvements.

RELIABLE TRAVEL TIME (MIN):

↓ 11%

RELIABLE TRAVEL TIMES **IMPROVED BY 11 PERCENT** ON I-205 SOUTHBOUND DURING THE WEEKDAY A.M. PEAK PERIOD (6-9 A.M.), **REDUCING BY ONE MINUTE** THE TIME NEEDED TO CONFIDENTLY TRAVEL THROUGH THIS AREA.

VEHICLE HOURS OF DELAY:

↓ 24%

THE NUMBER OF VEHICLE HOURS OF DELAY EXPERIENCED ON AN AVERAGE WEEKDAY DECREASED BY 460 VEHICLE HOURS–**A 24 PERCENT DECREASE**–FROM 1,915 VEHICLE HOURS TO 1,455 VEHICLE HOURS.

HOURS OF CONGESTION:

↓ 2 HRS 45 MIN

THE DURATION OF THE CONGESTED PERIOD DURING AN AVERAGE WEEKDAY WAS **REDUCED BY TWO HOURS AND 45 MINUTES—A 35 PERCENT DECREASE**—FROM 7.75 HOURS TO 5 HOURS.

VALUE OF TIME SAVED:

$3M

AS A RESULT OF THE REDUCED CONGESTION FROM 2017 TO 2019, THE VALUE OF TIME SAVED FOR THE TRAVELING PUBLIC TOTALS $3 MILLION—**A 24 PERCENT REDUCTION** IN THE ANNUAL COST OF CONGESTION—FROM $12.9 MILLION TO $9.9 MILLION.