



## TRAFFIC IMPROVEMENTS

Traffic volumes throughout the Puget Sound region continue to grow, placing an ever-increasing demand on our transportation system. While the regional transit system will provide additional capacity to accept a share of the traffic growth, our state highways and arterial systems will have to bear much of the upcoming growth, and the Aurora corridor is no exception. Maintaining traffic flow and optimizing the system were major goals of the Aurora Corridor Pre-Design Study and are integrated into the improvements.

### CROSS-STREET ACCESS

Access across Aurora Avenue, as well as movement along the corridor, is addressed in the Aurora Corridor Project. Improvements are provided in the form of additional turn lanes at intersections to separate conflicting movements and will also be provided through improved signal timing plans that move traffic more efficiently. Growth patterns in the region indicate that traffic along Aurora Avenue will grow at a higher rate than traffic across Aurora Avenue. To improve service to cross-street traffic, additional turn lanes are provided to store vehicles more closely to the intersection, which allows more vehicles to move through the intersection in a shorter period of time. In addition to adding lanes to existing signalized intersections, the addition of new signalized intersections along the corridor will provide greater opportunity to traverse Aurora Avenue in a signal-controlled situation, which is safer and more time-efficient for cross-street traffic than unsignalized movements. For the future, these improvements will also provide a better balance of cross-street access and eliminate the concentration of traffic on the few neighborhood streets that currently have signalized access to Aurora Avenue.

### BUSINESS ACCESS AND TRANSIT LANES AND FOCUSED LEFT- AND U-TURN LANES



Aurora Avenue North is a five-lane roadway through the City of Shoreline consisting of two general-purpose lanes in each direction and a two-way left-turn lane. The roadway will be expanded by an additional business-access and transit (BAT) lane. Through much of the corridor this means turning the existing paved shoulder into a traffic lane. The purpose of the new lane is to provide a place for vehicles to turn in and out of businesses without disrupting the mainline traffic flow and for transit vehicles to move through the corridor free of congestion.

The business-access and transit lane increases both the vehicle capacity and the person capacity of the roadway by helping to improve transit service.

## TRANSIT IMPROVEMENTS

In combination with the BAT lane, the existing two-way left-turn lane will be converted into a series of focused left-turn and u-turn lanes located every 800 to 1,000 feet. Raised curbing between the lanes will eliminate many of the crossing conflicts that occur with the existing two-way left-turn lane. The focused left-turn and u-turn lanes will preserve access to businesses while greatly improving the safety of the roadway. Based on national statistics, accidents are expected to immediately be reduced by over 20 percent with the new lane configuration. The lane changes that are included with the Aurora Corridor Project, by providing better separation between through and turning movements will reduce what is referred to as “traffic turbulence”. Traffic turbulence is created when traffic moves at different speeds, causing drivers to react by braking or abruptly changing lanes. Both of these reactions interrupt the traffic flow and degrade traffic operations and service. Adding lane capacity allows traffic to operate more efficiently and reliably.

## SIGNAL TIMING PROGRESSION AND TRANSIT SIGNAL PRIORITY



Coordinating a group of successive signals increases the capacity of a roadway section. The objective of coordination is having good progression along the major route. With coordinated progression, vehicles along the major route will receive a green light as they approach each intersection. With good progression, a group of vehicles (called a platoon) moves continually at a planned optimal speed. Achieving optimal timing progression requires that signals be regularly spaced. Irregular distances between signals can disrupt the platoon and upset efficient traffic flow, resulting in more total delay. The Aurora Corridor Project includes the addition of signalized intersections at key locations to improve the regularity of signals and to provide additional pedestrian crossing opportunities.

In addition to improved signal timing progression and new signals, the Aurora Corridor Project will provide transit signal priority to help minimize transit delay at intersections. Transit currently carries 20 to 25 percent of trips in the corridor during the peak hour. By 2020 this percentage will rise as transit supports a larger share of trips. Transit signal priority works by detecting a transit vehicle prior to the intersection and providing it a green phase as soon as possible once the vehicle reaches the intersection. Reducing transit delay with signal priority will reduce person delay for a large percentage of travelers in the Aurora corridor.

## FOR ADDITIONAL INFORMATION

For more information on the Aurora Corridor Project please contact Anne Tonella-Howe, City of Shoreline at (206) 546-1700.