

Orientation Boards

Where do you live and work?



Why are we doing this study?

145th Street is a key regional connection to I-5, Lake City Way (SR522), and Aurora (SR99) in North King County and cities to the north via SR522.

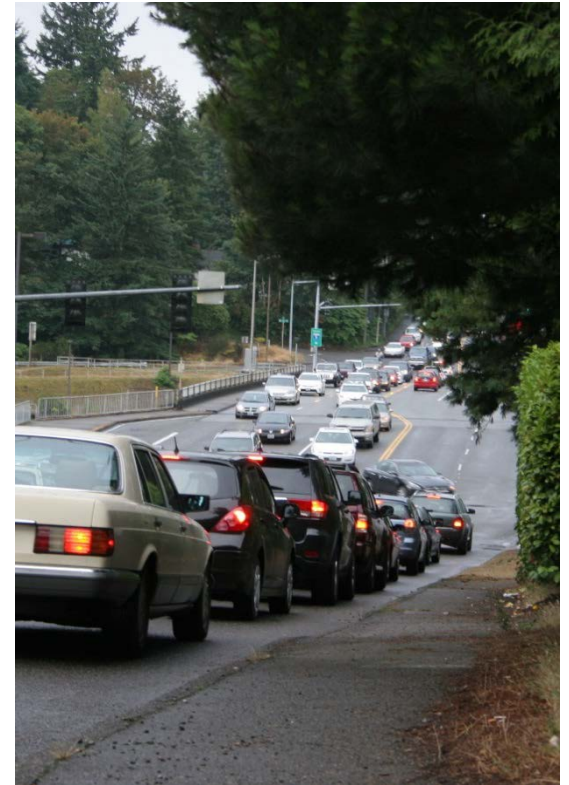
With a light rail station coming, the need for safe and reliable travel in the corridor becomes even more critical.

145th Street is also a principal arterial connecting Shoreline and Seattle neighborhoods, businesses, parks and services.



What's the problem?

- Bad and deteriorating traffic congestion
- Deficient pedestrian and bike environment
- Few buses (few bus routes exist on the corridor due to congestion and poor pedestrian facilities)
- Light rail station coming but people can't get there easily
- Collision records show unsafe conditions for cars, bikes, and pedestrians



What's the problem?



Bad and deteriorating traffic congestion / deficient pedestrian and bike environment



Non-ADA accessible pathways / many pedestrian barriers

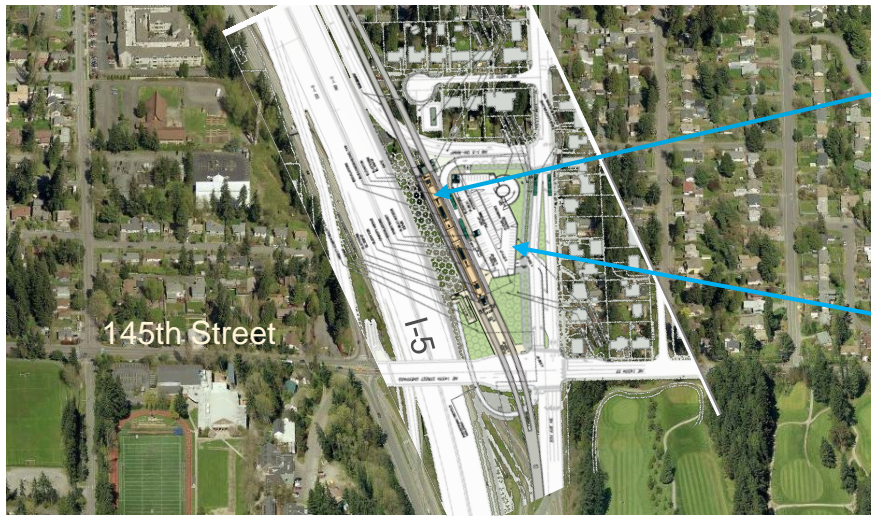


Lack of transit and bus stop facilities due to congestion and poor pedestrian facilities



Poor sight distance and lack of left-turn management contribute to safety concerns

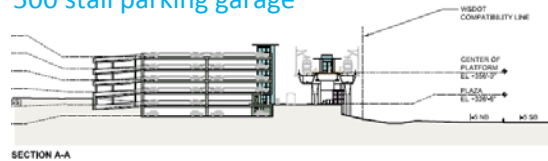
What's the problem?



Station with 6,000 weekday boardings



500 stall parking garage



Light rail station coming to 145th Street, but people can't get there easily



One of 300 poles centered in sidewalks on 145th Street



Pedestrians walking along 1st Ave NE – a roadway without pedestrian or bike facilities within a block of the 145th station



Pedestrians walking along 145th Street

What are the main goals for the project?

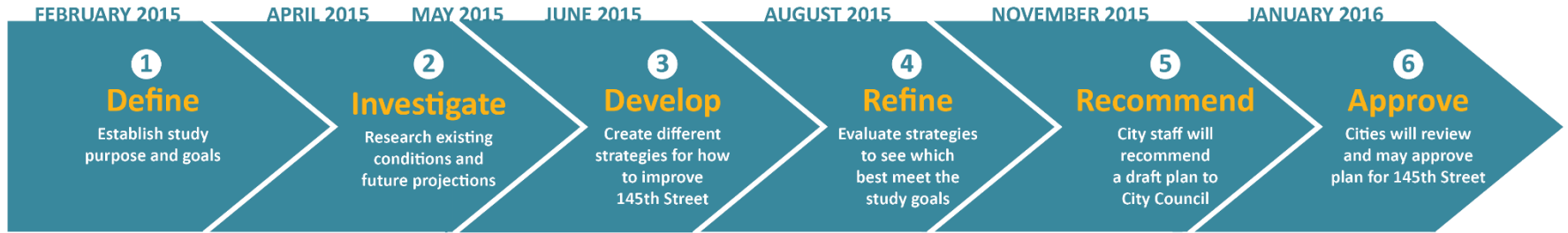
Ensure we can walk, bike, bus, or drive safely and reliably along and across the corridor.

And:

Develop transportation improvements that:

- Support the local economy
- Protect the environment
- Support a vibrant community

What's the process to get there?

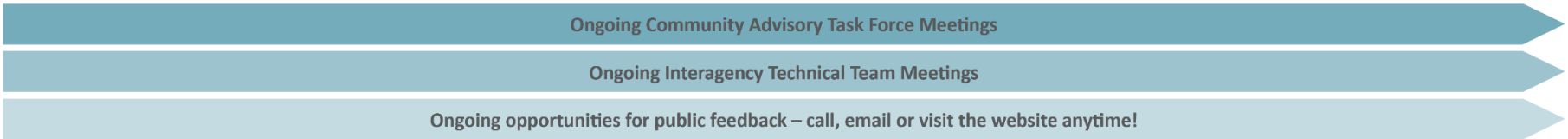


We are here

Open House #1:
Learn about the study process and share your knowledge of the 145th Street corridor

Open House #2:
Review the ideas for improving 145th Street and give your feedback

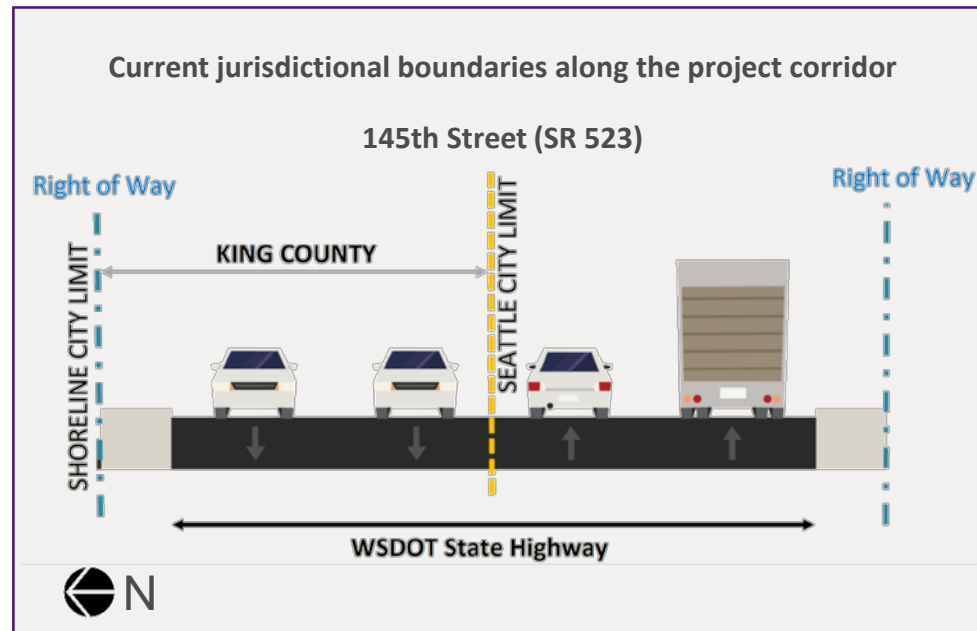
Open House #3:
Learn about the recommended plan for 145th Street and give your feedback



We are here



Project Partners



What are key project challenges?

- Multiple owners and multiple decision makers. 145th Street is owned by multiple agencies and will require close coordination.
- More funding needed. A portion of the project is currently funded through preliminary design and will potentially require millions of dollars to construct.
- A desire to complete quickly. At minimum, the project will take 3 to 4 years to complete. Light Rail is coming in 2023. To be most effective, corridor improvements would need to be completed by 2023.

Potential Funding Sources

- Surface Transportation Program (STP) Grants
- Congestion Mitigation and Air Quality (CMAQ)
- Federal Transit Administration (FTA)
- Local legislative appropriations
- Transportation Improvement Board (TIB)
- Regional Mobility Grant (WSDOT)
- Pedestrian / Bicycle Safety Program (WSDOT)
- Traffic Safety Grant (WSDOT)
- Freight Mobility Strategic Investment Board (FMSIB)
- King County Metro
- Sound Transit
- Utilities (SCL, SPU, Telecoms)
- Public Works Trust Fund Loan
- Stormwater Grants
- Developer Mitigation
- Transportation Benefit District

** City's goal is to fund 20% of the project from local funds, similar to the Aurora project*

Project challenges - constrained right of way



Study corridor: 145th Street Shoreline/Seattle

- Traffic Volume: 27,000-31,000 ADT*
- Width: 60 feet



Example peer street: Rainier Avenue Seattle

- Traffic Volume: 29,000-35,000 ADT*
- Width: 80 feet



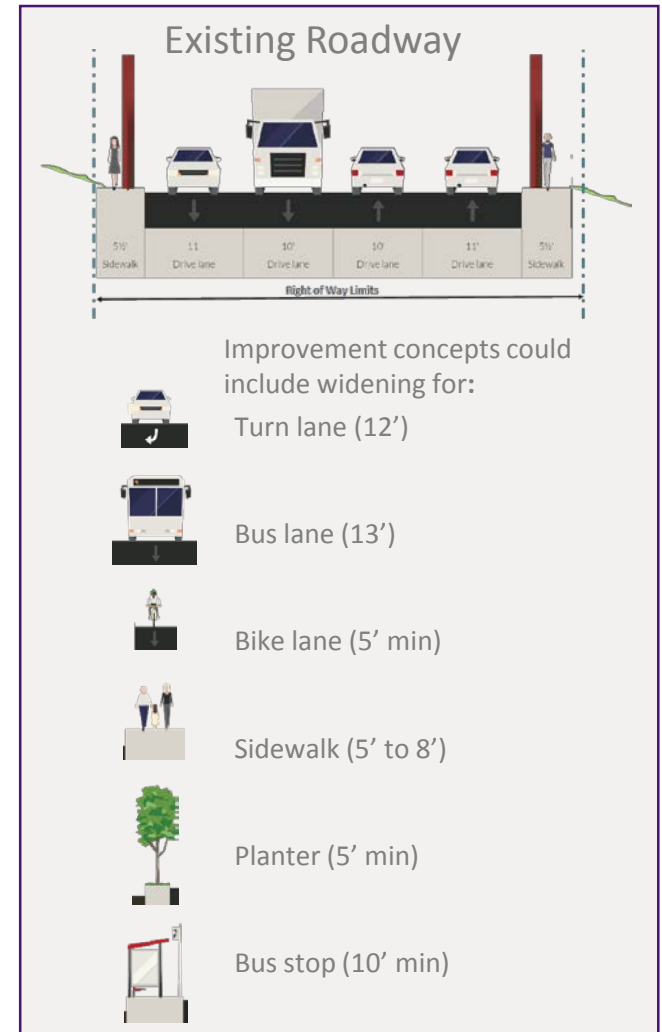
Example peer street: 148th Avenue NE Bellevue

- Traffic Volume: 24,000-40,000 ADT*
- Width: 102 feet



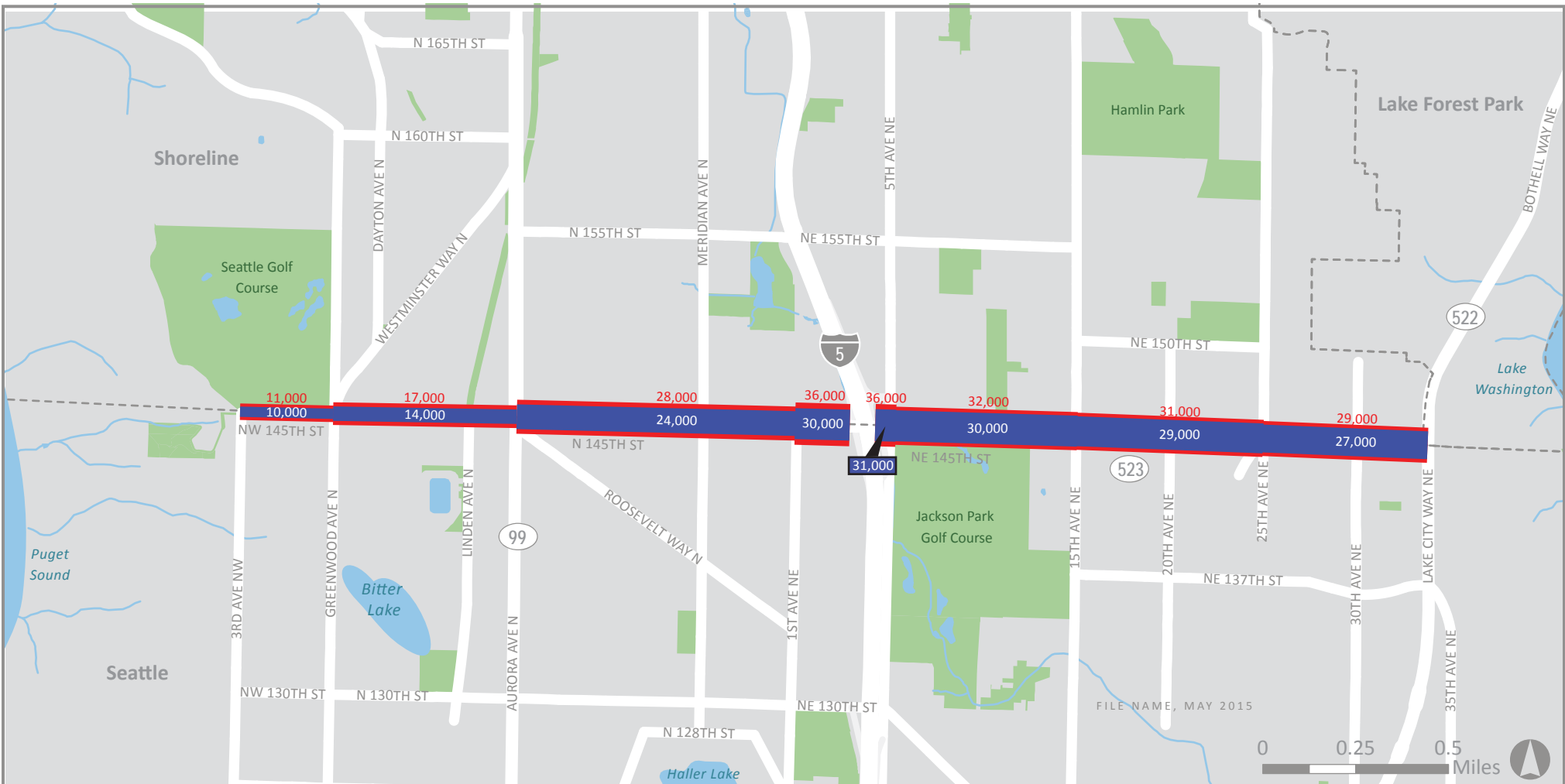
Example peer street: Aurora Avenue Shoreline






- Traffic Volume: 35,000-43,000 ADT*
- Width: 110 feet



*ADT = average daily traffic

Technical Boards

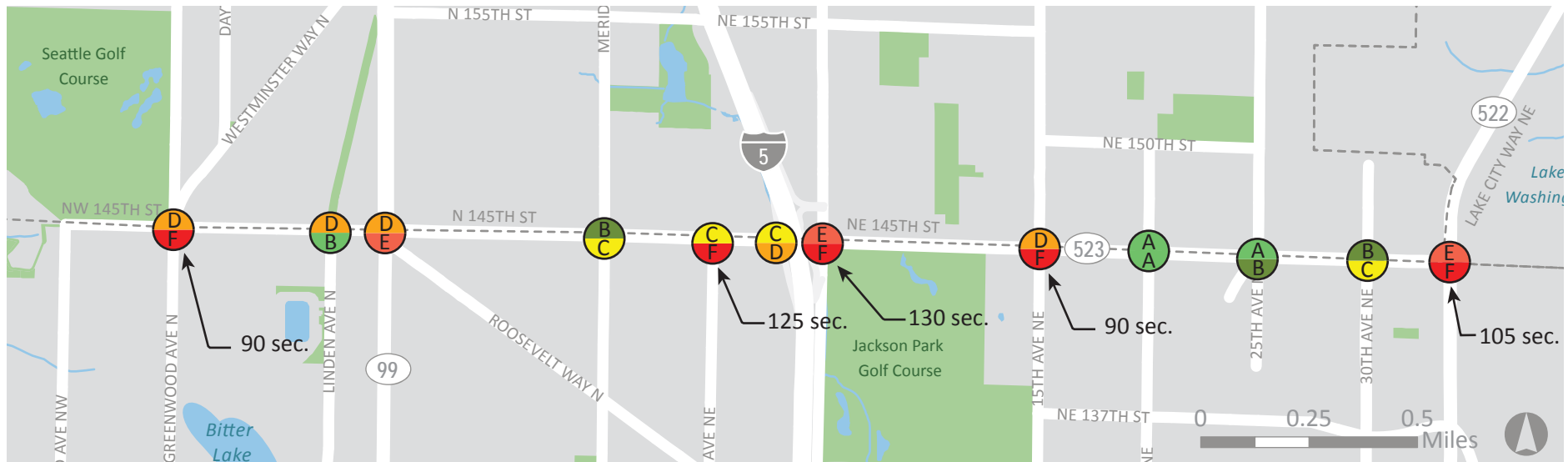


-  Waterbody
-  Park
-  City Boundary
-  2015 Average Daily Traffic Volumes (Per Segment Location)
-  2035 Average Daily Traffic Volumes (Per Segment Location)

AVERAGE DAILY TRAFFIC VOLUMES

145TH STREET
Multimodal Corridor Study

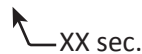


- Waterbody
- Park
- City Boundary



2015 Existing LOS
2035 No Build LOS



Average vehicle delay
at LOS F locations

The City of Shoreline adopted Level of Service standard is to maintain LOS D or better at signalized intersections.

PM PEAK HOUR LEVEL OF SERVICE SIGNALIZED INTERSECTIONS

145TH STREET
Multimodal Corridor Study



Level of service (LOS) examples

LOS A:

*Free flow traffic.
Average delay < 10 seconds*



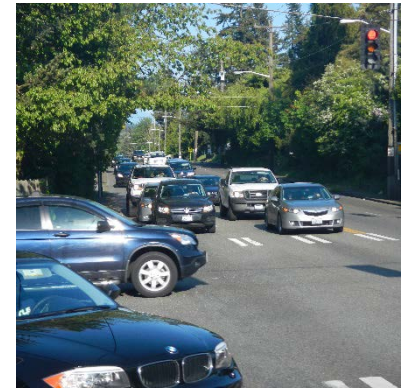
LOS B:

*Stable flow, light delay.
Average delay 11 - 20 seconds*



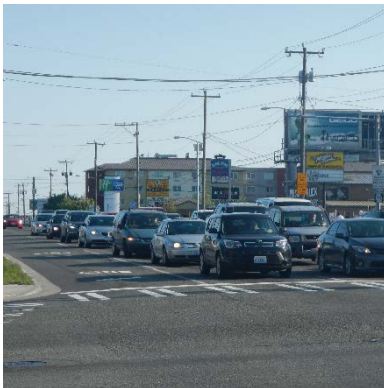
LOS C:

*Stable flow with acceptable delay.
Average delay 21 - 35 seconds*



LOS D:

*Approaching unstable flow, speeds reduced, more vehicles stop and may wait through more than one signal cycle.
Average delay 36 - 55 seconds*



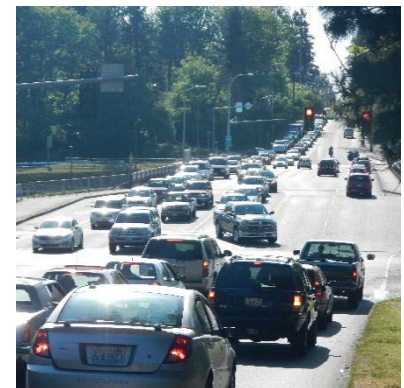
LOS E:

*Unstable flow, speeds reduced and highly variable, many vehicles have to wait through more than one signal cycle.
Average delay 56 - 80 seconds*

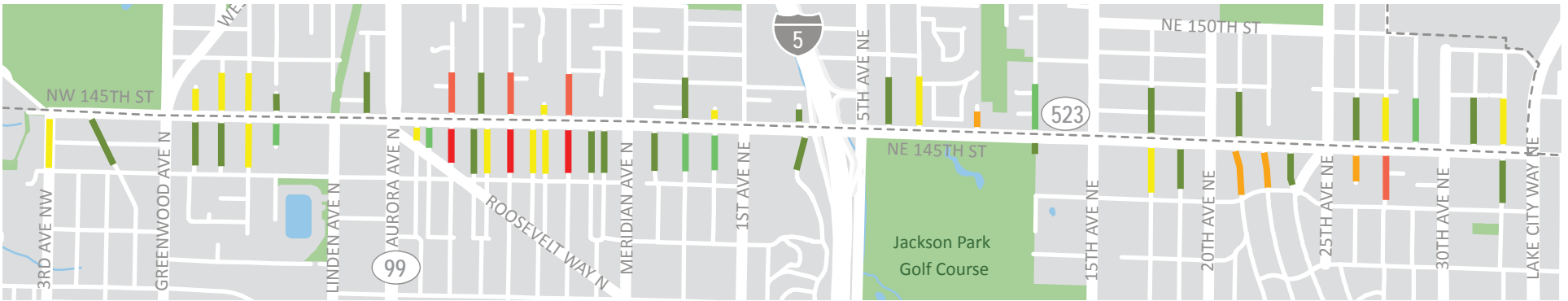


LOS F:

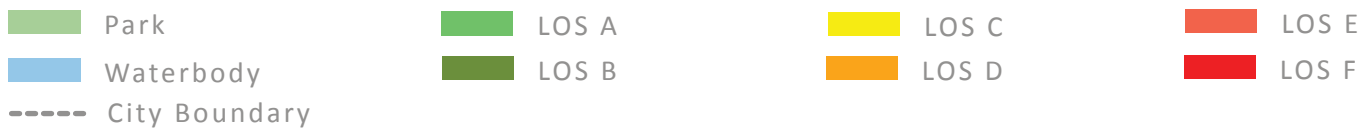
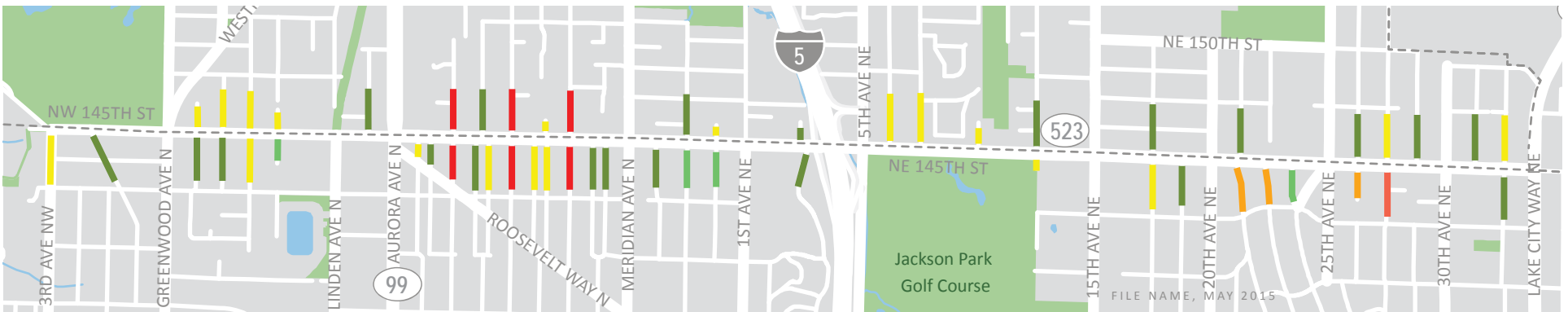
*Forced flow, jammed conditions. Long queues occur that do not clear, most vehicles wait through multiple signal cycles.
Average delay > 80 seconds*



EXISTING CONDITIONS

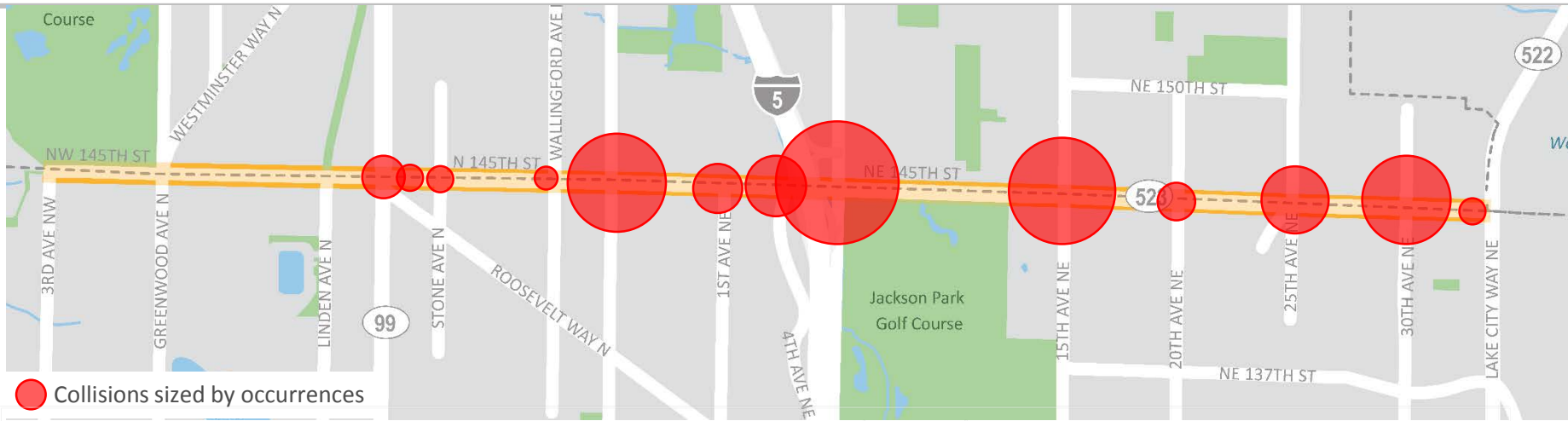


2035 NO BUILD

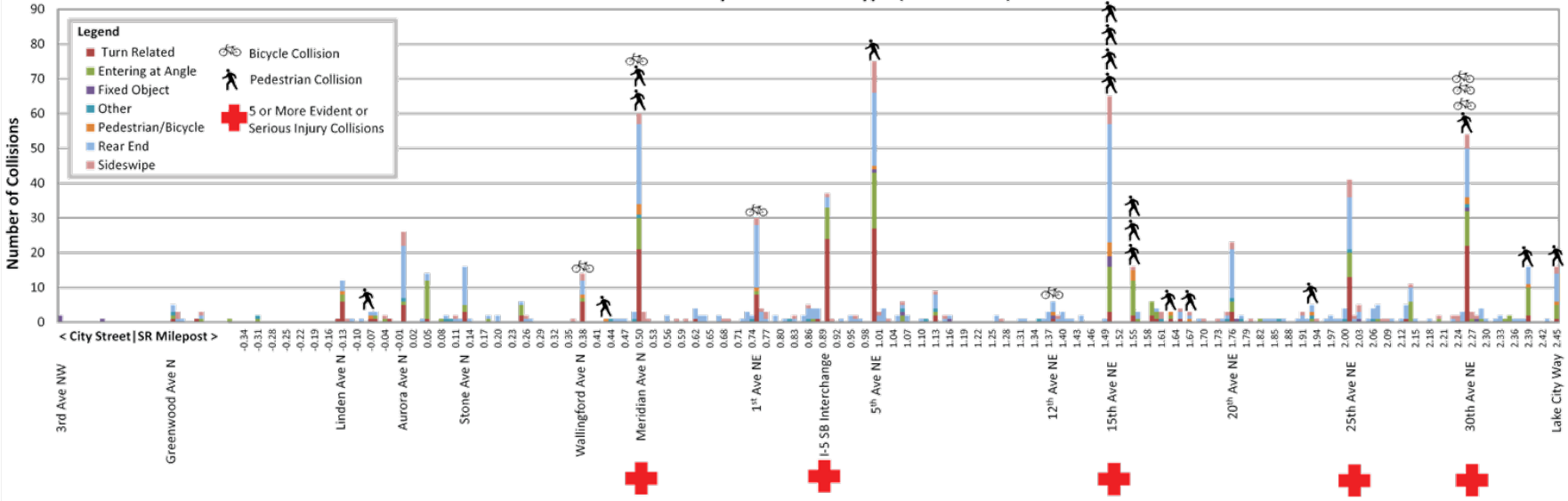


PM PEAK HOUR LEVEL OF SERVICE UNSIGNALIZED INTERSECTIONS

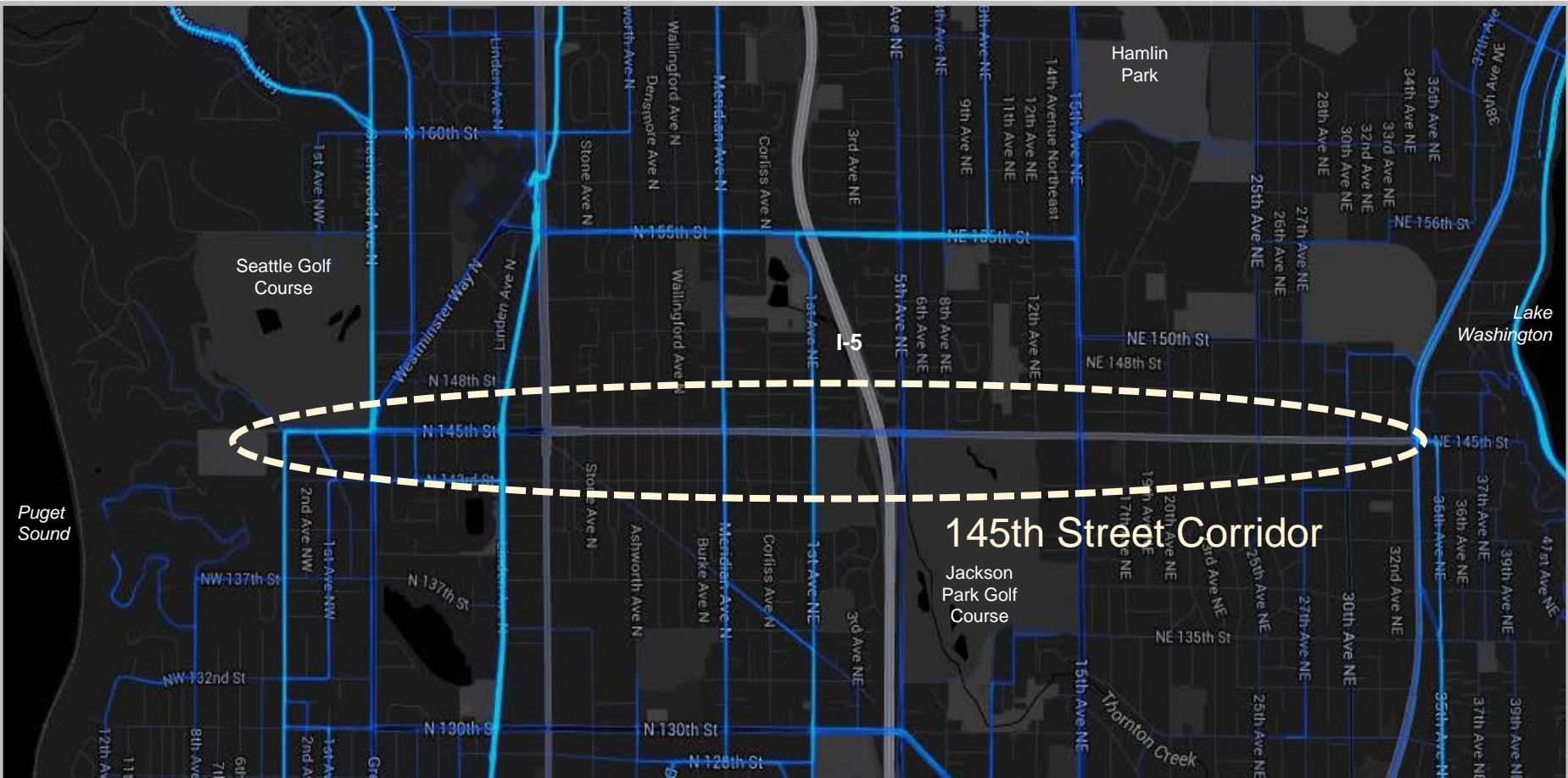




Collisions by Location and Type (2010 - 2014)



COLLISION HISTORY 2010-2014

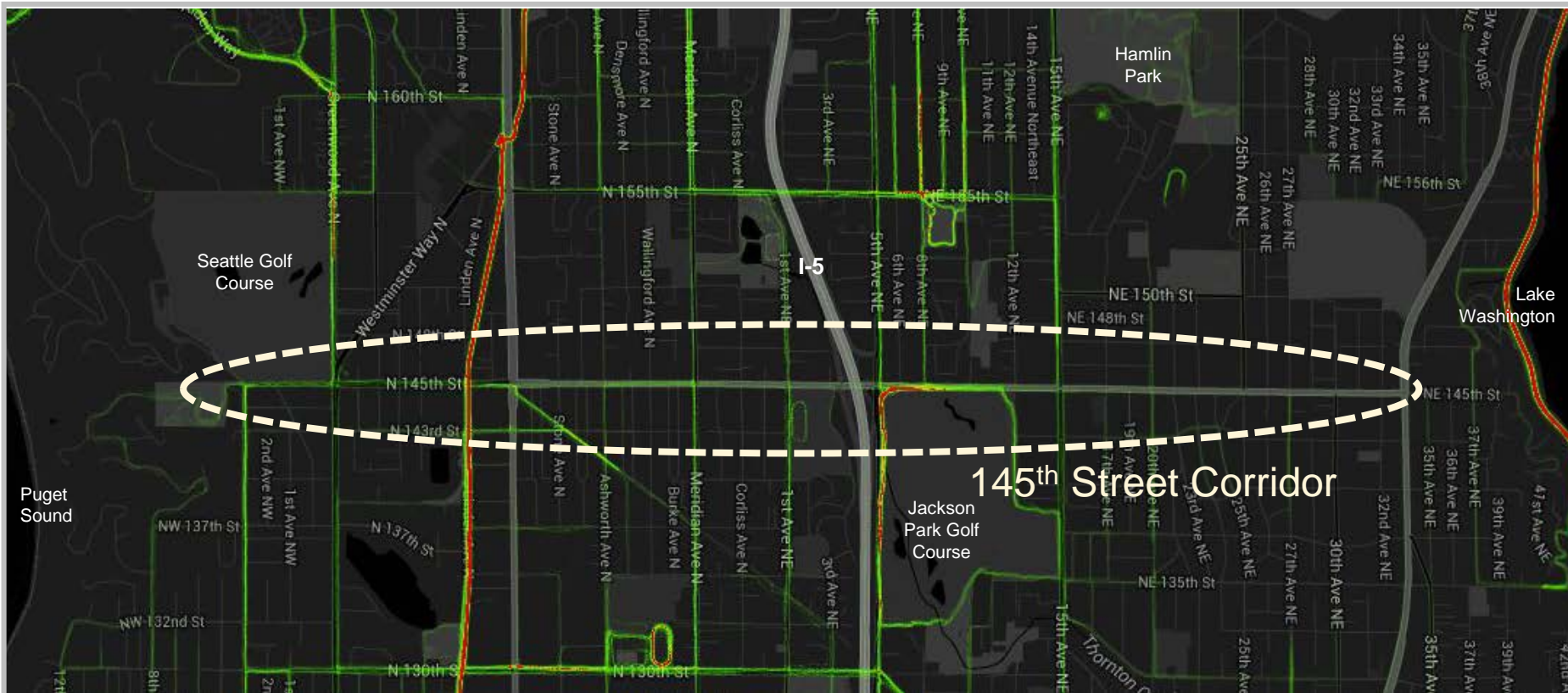


Source: Strava.com

LEGEND – BIKE ACTIVITY



BIKING ACTIVITY MAP



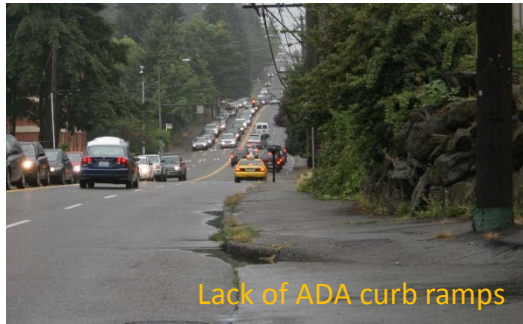
Source: Strava.com

LEGEND – JOGGING ACTIVITY



PEDESTRIAN ACTIVITY:
JOGGING/RECREATION INTENSITY

Example conditions for pedestrians on 145th Street



Lack of ADA curb ramps



Narrow pathways



Non-accessible pathways



Lack of ADA curb ramps



Narrow sidewalks adjacent to traffic



Utility poles block access

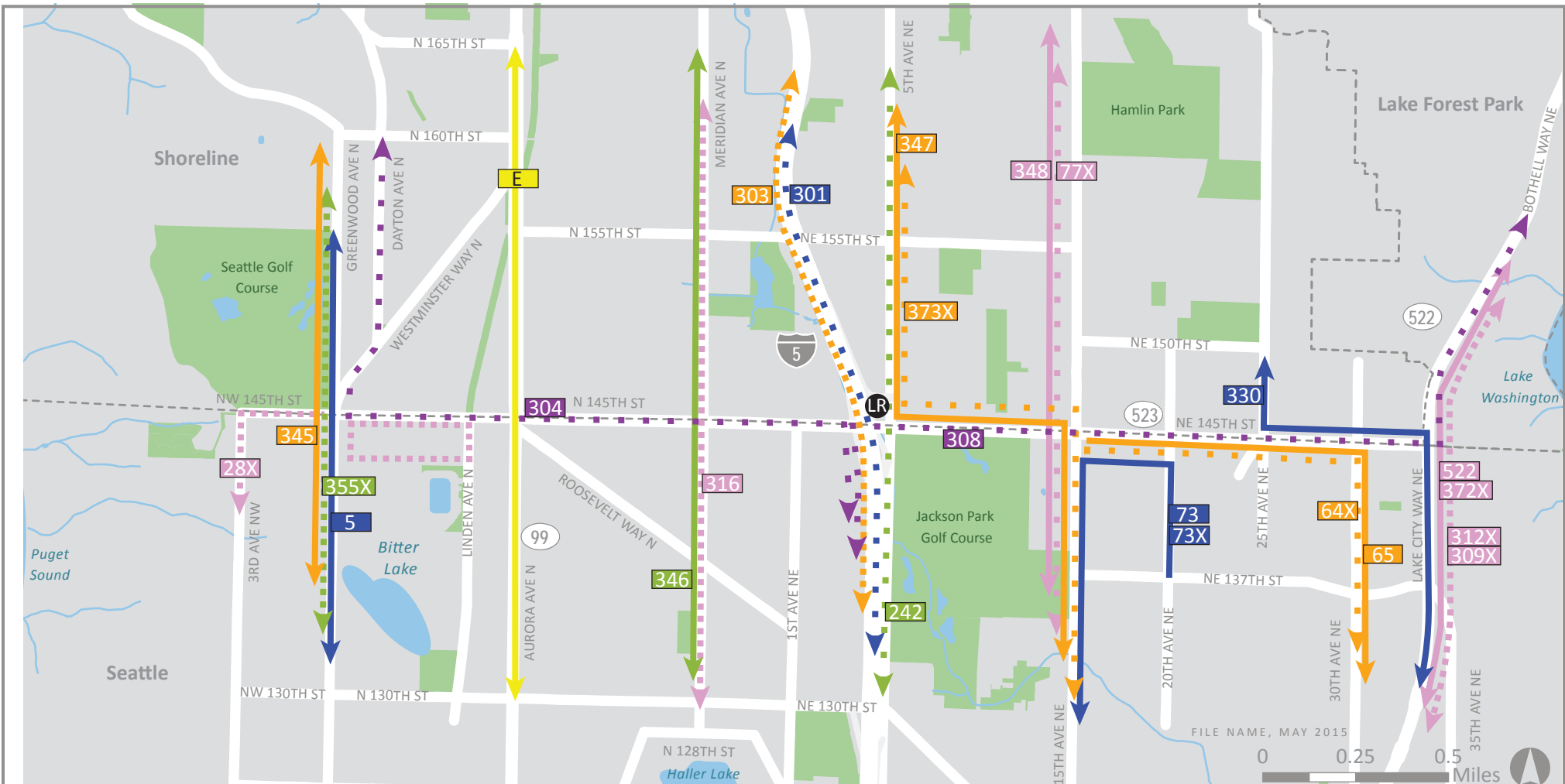


Crosswalks



Unmarked crosswalks at I-5





Waterbody
Park
City Boundary

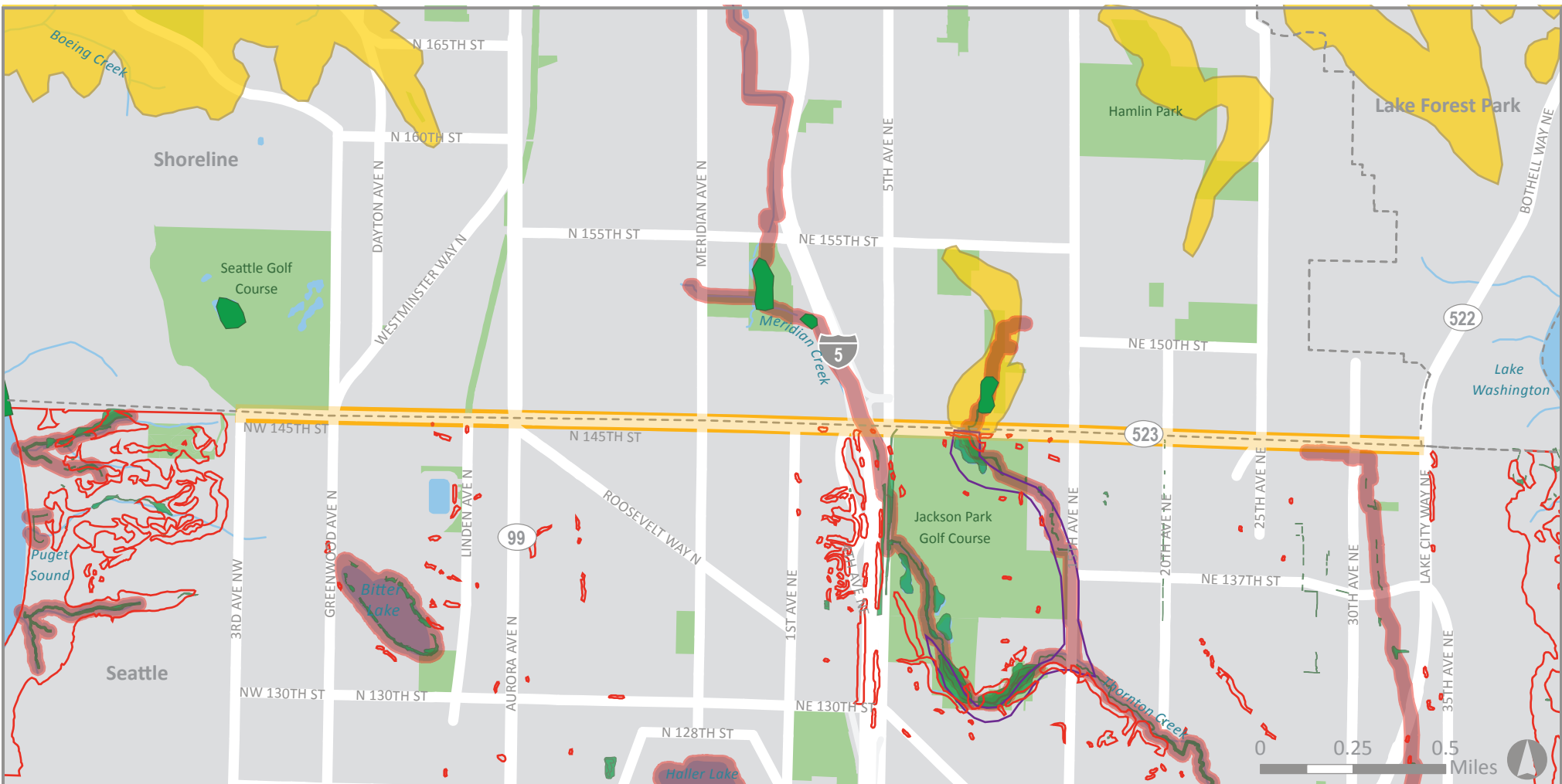
LR Link Light Rail Station
000 Transit Route Number










Transit Routes
 — All Day Service
 - - - - Peak Period Service ≤ 15min. headways
 · · · Peak Period Service > 15min. headways

EXISTING TRANSIT ROUTES

Example of bus stop conditions on 145th Street





- | | | | | |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
|  Study Corridor |  Park |  Steep Slope (40%) |  Wetland |  Erosion Hazard Area |
|  Waterbody |  City Boundary |  Liquefaction Zone |  Riparian Corridor | |

CRITICAL AREAS

145TH STREET
Multimodal Corridor Study




Evaluation Criteria

What is important to you?

Evaluation criteria define how improvement concepts are measured against other concepts

How well does the alternative ...

- support safer travel by all modes and alleviate existing problems?
- improve transit performance in the corridor?
- support pedestrian and bike connectivity?
- improve traffic flow?
- provide benefits to freight-related system users?
- integrate with other capital projects including the proposed light rail station and future improvements to the I-5 interchange?
- provide for opportunities to upgrade facilities to manage stormwater runoff and upgrade stormwater quality?
- support the community's vision for adjacent neighborhoods?

How well does the alternative ...

- provide for opportunities to improve existing utilities?
- minimize impacts to critical areas or mitigate unavoidable impacts?
- reduce air pollutants including greenhouse gas emissions and other pollutants?
- encourage and support private reinvestment in the corridor through improvements such as landscaping, upgraded utilities and enhanced aesthetics?
- minimize impacts to property and business owners?
- support the ability to compete for grant funding or secure direct funding?

Modal Improvement Concepts

Sidewalks



Bus Stop Enhancements



Grade-Separated Crossing



Pedestrian Refuge Islands



PEDESTRIAN FACILITIES TOOLBOX

ADA Curb Ramp



Curb Extensions



High-Visibility Crosswalks



Mid-Block Crossing



Enhanced Pedestrian Signals



PEDESTRIAN FACILITIES TOOLBOX

Shared Lane Marking



Bike Lane



Buffered Bike Lane



Cycle Track at Grade



Cycle Track Curb Separated

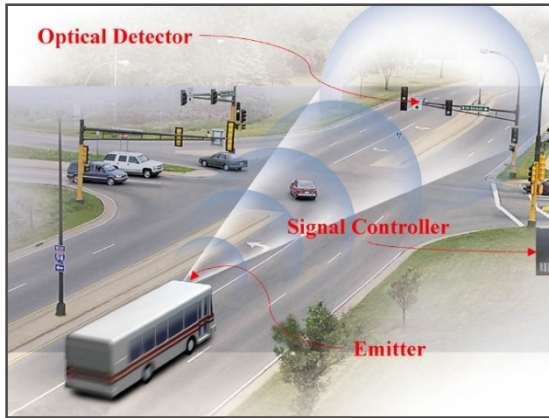


Multi-Use Trail

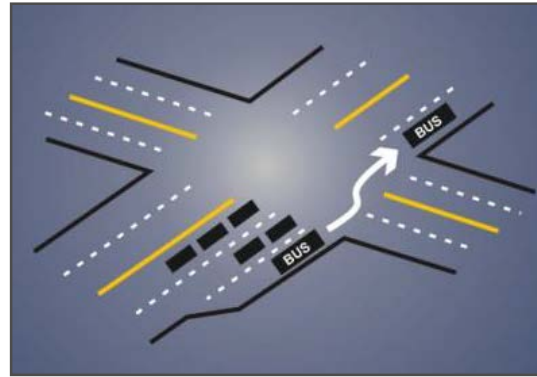


BIKE IMPROVEMENTS TOOLKIT

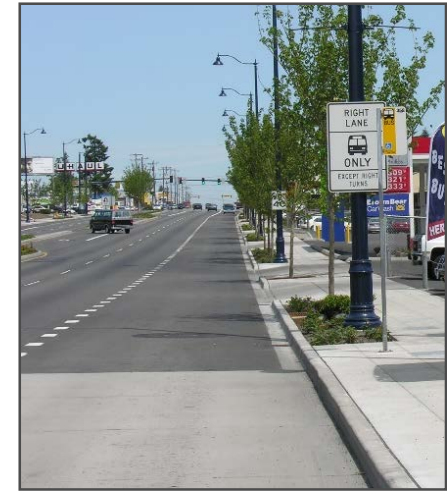
Transit Signal Priority



Queue Jump



BAT Lanes



Off-Board Fare Collection



Bus Stop Amenities



Lighting



TRANSIT IMPROVEMENTS TOOLKIT

**Take home handouts from
open house**



A PARTNERSHIP TO IMPROVE SR 523



TRANSFORMING 145TH STREET INTO A SAFE, VIBRANT CORRIDOR

State Route 523 (145th Street) provides an ideal opportunity to help communities in Seattle, Shoreline and Lake Forest Park flourish in the 21st Century. SR 523 is a key east-west connection for the region between bus rapid transit, future light rail, and I-5. Three locations on this corridor provide once-in-a-generation opportunities to transform into compact, vibrant, transit-oriented communities.



A partnership for improvement

Thoughtful, coordinated investments in this key east-west corridor will support economic growth, enhance safety and access and make the most of major investments in north-south transit upgrades. A well-functioning SR 523 is vital to safe access for the movement of people and goods in the region.

In order to fully understand the necessary improvements, participating agencies, including WSDOT, Sound Transit, King County Metro Transit, and the Cities of Shoreline, Seattle, and Lake Forest Park will need to identify their key investments and priorities. It is anticipated that future improvements will include:

- Enhance safety and accessibility
- Improve capacity
- Improve regional mobility and connectivity
- Implement light rail service/Access to light rail
- Complete light rail station area planning and TOD
- Improve transit operations
- Coordinate utilities upgrades
- Improve I-5 interchange

A design for future generations

Though the exact design of this corridor hasn't yet been developed, it is anticipated the design will consider and attempt to address all of the goals. The design will include new sidewalks separated from the roadway with landscaping strips, turn pockets, lighting, trees, improved and optimized signals, bus stops, pedestrian crosswalks, and will be designed under Green Roads guidelines to minimize environmental impacts and increase sustainability. The finished corridor will be safer, more efficient, carry more people and stimulate investment and redevelopment.

Maximizing transit's potential

Three major north-south transit lines intersect SR 523. Current and planned transit upgrades provide opportunities to make transit far more convenient for people in neighborhoods near SR 523. From west to east:

- MetroTransit RapidRide bus service from Shoreline to Seattle on SR 99 (Aurora Avenue N).
- Near I-5, Sound Transit is planning light rail connecting Lynnwood to Northgate, University District and downtown Seattle.
- On SR 522, Sound Transit and King County Metro provide all day express bus service between Seattle and Woodinville.

Now is the time for action

RapidRide service and light rail station planning are underway. The Aurora Square Community Renewal Area is gaining momentum. Now is the time for local communities to work with WSDOT, Sound Transit, King County Metro and others to develop a clear action plan for 145th Street and to quickly pursue partnerships and funding to make the plan a reality.

We would like WSDOT to help forge a focused, action-oriented coalition. State leadership would send a strong, positive message to other potential partners because the state plays a key role in this corridor, not only due to state routes (SR523/145th Street, SR 99/Aurora Avenue North, I-5 and SR522) but also due to state-controlled land (WSDOT NW Region, Fircrest, Washington State Public Health Labs and Shoreline Community College).

STATE ROUTE 523

Improvement Project



CONNECTIONS

TODAY

State Route 523 is a key multi-modal corridor that serves as an important connection for the region to I-5 and rapid transit. The corridor is in need of significant capital improvement in order to meet the needs of current residents and future transit oriented development.

VISION

Improving State Route 523 supports multimodal connections to light rail and bus rapid transit; facilitating transit oriented development in our community and ensuring transit access to the region's educational, residential, and business districts.

Community Potential & TOD

Shoreline recently designated the 70+ acre Aurora Square a Community Renewal Area (CRA). WSDOT's Northwest Region Headquarters is within the CRA and Shoreline Community College's 83 acre campus is nearby. The City's redevelopment plan envisions a mixture of housing, retail, office, and entertainment uses, with an emphasis on pedestrians, bicycles, and a strong connection to RapidRide service on Aurora and the College.

WSDOT and Aurora Square

4

BRT Connections

On SR 99 (Aurora Avenue North), King County Metro began RapidRide bus service in February 2014. This bus rapid transit service provides fast, frequent trips from Shoreline to downtown Seattle.



Community Potential & TOD

A light rail station at 145th Street near I-5 is included as part of Sound Transit's preferred alternative for the Lynnwood Link Light Rail extension project. The City of Shoreline has identified this as a preferred station location and envisions that the surrounding area will transition to a higher density, transit-oriented community.

Community Potential & TOD

Within walking distance of the potential 145th Street light rail station are 85 acres of State land housing both Fircrest Residential Habilitation Center and the Washington State Public Health Laboratories. If redeveloped, the properties could continue to house these invaluable state institutions while providing additional housing, jobs, and retail to the area.

Washington State Public Health Lab and Fircrest Residential Habilitation

4



Light Rail Coming Soon

Near I-5, Sound Transit is planning light rail connecting Lynnwood to Northgate, University District, downtown Seattle and the eastside.

Bus Connections

On SR 522, Sound Transit and King County Metro provide all day express bus service between Seattle and Woodinville. Sound Transit's long range plan identifies this as a future high capacity transit corridor.



GOALS



1 Make transit connections

King County bus rapid transit service, RapidRide, connects Shoreline to downtown Seattle along SR 99. Express bus service between Seattle and Woodinville runs along 522. Improving SR 523 will create a vital east-west link between the two and provide transit connections to the future light rail system and I-5.



3 Light Rail link for region

The Lynnwood Link light rail extension will benefit the entire Puget Sound region. Improvements to SR 523 can build upon that investment by reducing impacts to I-5 and provide better community linkages to the 145th Street Station.



Enhance safety

Substandard sidewalks, high accident rates and increasing traffic volumes create safety challenges for all users. Improvements are needed to provide a safe environment for motorists, pedestrians and transit users.



Support freight mobility

The safe, efficient movement of freight will remain an important component of design along SR 523. Improvements are needed to allow trucks and goods to continue moving through the corridor.



2 Improve region's I-5 connection

The operation of SR 523, particularly the interchange at I-5, impacts the ability for SR 99, SR 522 and I-5 itself to function optimally. Capacity improvements, revisions to the interchange and improvements that benefit transit, cyclists and pedestrians are all needed.



4 Transit oriented development

Improvements to SR 523 and the I-5 interchange will be an important element to support future development near the future 145th Street light rail station and in the Community Renewal Area at Aurora Square.



Improve ADA accessibility

Currently sidewalks with utility poles, mailboxes and other obstructions significantly interfere with pedestrian mobility on SR 523, particularly for persons with disabilities. Buses are unable to deploy wheelchair lifts at several stops due to obstructions.



Implement sustainable elements

All of the agencies that will be involved in the improvement of SR 523 have demonstrated their commitment to sustainability in past projects or operations and this project will look to be a leader in sustainable/green road design.

CHALLENGES AND OPPORTUNITIES

Identifying needed improvements

SR 523 is in need of significant capital improvements. Characteristics of this corridor include significant traffic congestion, an extremely overcrowded interchange, poor accessibility for persons with disabilities, cyclists and pedestrians, a collision rate nearly three times that of the region and restricted freight mobility. The need for improvements will increase with additional traffic, bicycle and pedestrian volumes, diversion resulting from tolling of the Lake Washington bridges and the operation of light rail.

SR 523 is four lanes wide along most of its length, being wider at some signalized intersections to accommodate left turn pockets. It carries significant daily traffic, with volumes exceeding 30,000 ADT.

Walkways and ADA Barriers

Poorly constructed and maintained with almost 300 utility poles centered within the sidewalks, and a severe lack of curb ramps at intersections, these walkways fall far short of ADA requirements, restrict pedestrian mobility and limit opportunities for transit service. A 2013 report prepared by WSDOT indicates that the costs to remove ADA barriers and upgrade sidewalks to current standards is \$45 million.

Preservation Needs

Major surface repair including overlays and the installation of curb ramps are not keeping pace with the corridors needs. Although complete overlay of the roadway is scheduled to be performed every 10-15 years, the last one was performed in 2001 and the latest WSDOT projection for resurfacing is 2017 at the earliest.

Congestion

During the peak periods, the I-5 interchange is extremely congested. All intersections are projected to operate at LOS E and F by 2035. Improvements are critical to ensure that buses and freight will be able to travel efficiently through this corridor.

Collisions

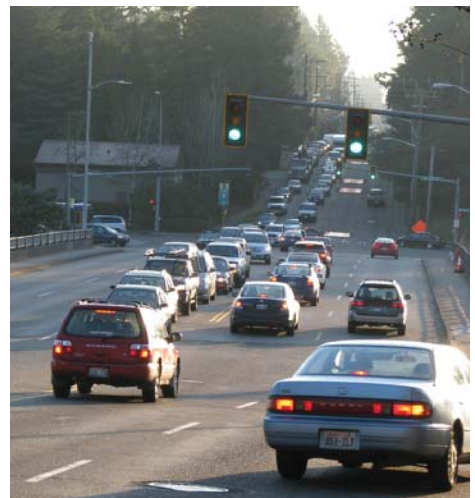
The Collision Rate is 6.03 per Million Vehicle Miles of Travel, which is more than two and a half times higher than the 2010 Northwest Region average collision rate of 2.27 for Urban Principal Arterials.

Transit Service

One of the busiest roadways in the area but currently not a very highly used transit corridor due to its currently congested nature and marginal pedestrian facilities.

Freight mobility

As a T-3 Truck Route, 1,000 trucks carrying almost 3 million tons travel along SR 523 daily. Improving mobility along this corridor will be critical to ensuring trucks can move safely and efficiently to their destinations.



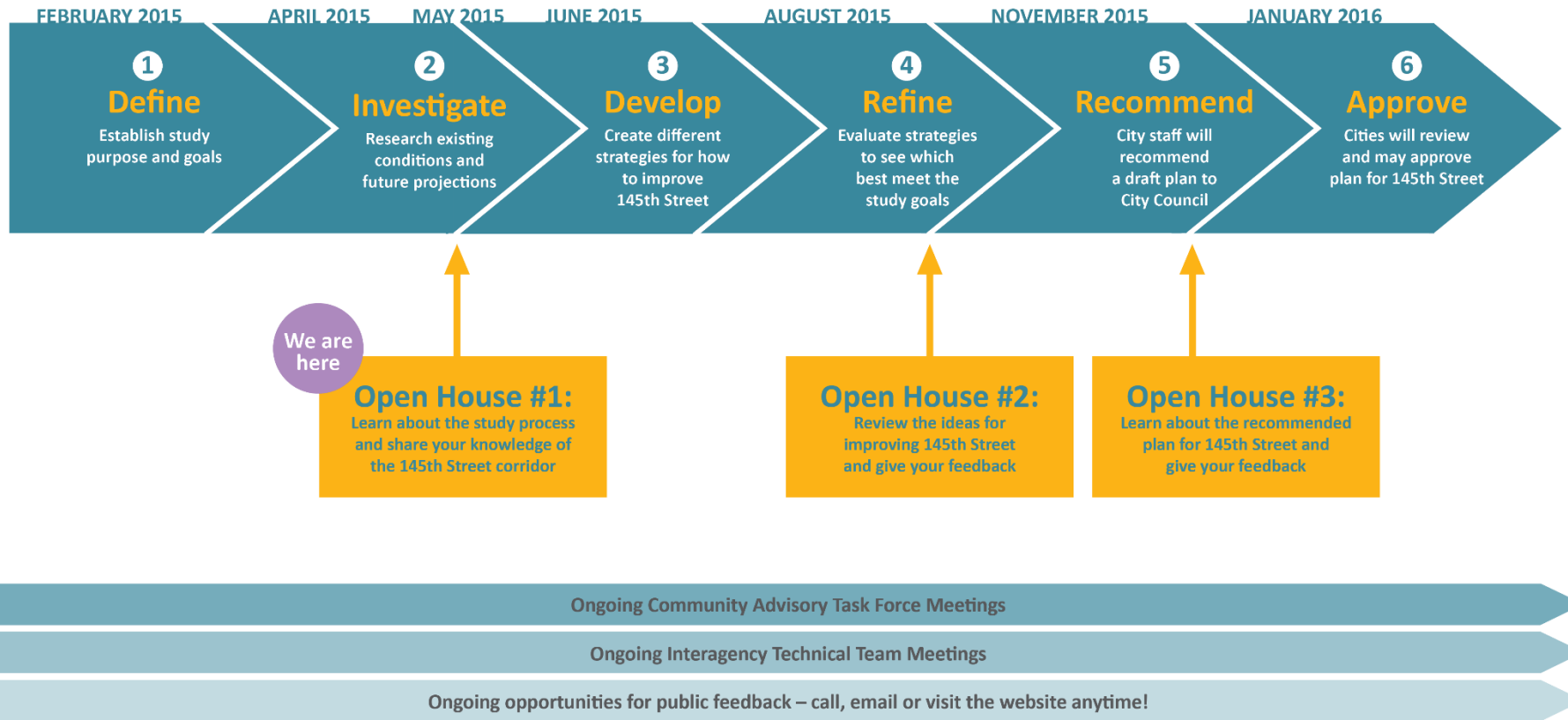
CONTACT

City of Shoreline Transportation Planning Manager

Nytasha Sowers - nsowers@shorelinewa.gov

(206) 801-2483

What's the process to get there?



145TH STREET Multimodal Corridor Study



What is the purpose of this study?

145th Street is both locally and regionally significant serving as a principal arterial connecting Shoreline, Seattle, and Lake Forest Park neighborhoods and as a key regional connection to I-5, Lake City Way, and Aurora Avenue. Improvements have not kept up with growth or potential use, and with a light rail station coming, the need for safe and reliable travel in the corridor becomes even more critical.

What are some of the current conditions?



Traffic congestion on the 145th Street approach to I-5 (and future light rail station)

- 1 Bad and deteriorating traffic congestion which will only get worse as populations grow and a light rail station is built at 145th Street and I-5.
- 2 Deficient pedestrian and bike environment.
- 3 Few existing bus routes on the corridor (due to congestion and poor pedestrian facilities).
- 4 Multiple corridor locations with high collision rates.

What is the process?

This study is in its early stages and specific corridor improvements have not been developed. The focus to date has been on establishing study goals and objectives that will guide decision making and to better understand the problems in terms of traffic safety and multimodal accessibility.

Project Challenges

It is clear that right of way is limited and any improvements will likely need additional width. It is also recognized that there are trade-offs between improved mobility and multimodal access, and potential impacts to adjacent properties and businesses, impacts to the environment (noise, stormwater), capital costs, and economic impacts/benefits.

The outcome of this study should be a “preferred alternative” that will be supported by Shoreline and Seattle councils. This is why your input is important in this process in helping to understand what is important to the community.

What is the timeline beyond this study?

Due to the length of the corridor and funding considerations, it is likely that if any improvements are to be constructed, it would be in phases. If the project was fully funded, the typical timeline could be 1-2 years for environmental documentation, 2 years for design and property acquisition, and 2+ years for construction. Right of way acquisition would occur once the environmental documentation for the project is approved. If constructed in phases, each phase may require these separate steps.



5-foot sidewalk on 145th Street

Stay informed

Visit the project webpage to view additional information and notices for upcoming public involvement:

shorelinewa.gov/145corridor