

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE: Discussion of the Preferred Concept for the 175th Street (Stone Avenue N to I-5) Project

DEPARTMENT: Public Works

PRESENTED BY: Tricia Juhnke, City Engineer
Leif Johansen, Capital Project Manager

ACTION: ☐ Ordinance ☐ Resolution ☐ Motion
 ☒ Discussion ☐ Public Hearing

PROBLEM/ISSUE STATEMENT:

The 2021-2026 Capital Improvement Plan identifies a project along N 175th Street from Stone Avenue N to Interstate 5. The project will maintain levels of service and promote safety by widening the roadway, constructing multi-modal improvements along the full length of the corridor, revising traffic channelization and providing intersection improvements at N 175th Street and Meridian Avenue N.

Over the last two years, staff have completed the preliminary phases of public outreach and developed design concepts. Tonight, staff is presenting a project update and is seeking Council's support of the preferred design concept. In conjunction with Council's decision regarding the preferred design concept, staff is looking for direction on the recommendation to include undergrounding of existing overhead utilities as part of the preferred concept. If Council supports this direction, the Project would advance undergrounding design to the 30% design phase.

RESOURCE/FINANCIAL IMPACT:

The 2021-2026 Capital Improvement Program includes the summary of funding for the project:

EXPENDITURES**Design**

Staff and Other Direct Expenses	\$400,000.00
Preliminary Design Contract	\$1,492,912.00
Final Design Contract	\$2,800,000.00

Right of Way	\$6,000,000.00
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Construction	\$32,300,000.00
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TOTAL	\$42,992,912.00
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REVENUE

WSDOT Surface Transportation Program (STP)	\$3,546,500.00
Transportation Impact Fees (TIF)	\$11,285,218.30
Future Funds	\$28,161,193.70
TOTAL	\$42,992,912.00

The project design is fully funded by an STP grant, which will provide 86.5% of the cost, with TIF funding picking up the remaining 13.5%. Right-of-way costs are expected to be funded with TIF funds as well, and the construction phase is unfunded with TIF available to match for grants.

RECOMMENDATION

No action is required tonight; this item is for discussion purposes only. Staff is seeking Council direction or confirmation on the recommended preferred design concept for 175th Street (Stone Avenue N to I-5) project including proceeding with undergrounding as part of the design.

Approved By: City Manager **DT** City Attorney **MK**

BACKGROUND

The N 175th Street project, from Stone Avenue N to Interstate 5 (see Attachment A, Project Vicinity Map) is intended to support growth and promote safety by widening the roadway, constructing multi-modal improvements along the full length of the corridor, revising traffic channelization, and providing intersection improvements at N 175th Street and Meridian Avenue N. This project is also designated as one of seven growth projects in the City's Transportation Master Plan and is eligible to utilize Transportation Impact Fees (TIF) for local funding match against grant funds.

The N 175th Street Project will provide mobility and safety improvements to pedestrians, cyclists and drivers using this corridor. Planned improvements may include reconstruction of the existing street to provide two traffic lanes in each direction; medians and turn pockets; bicycle lanes; a multi-use path; curb, gutter, and sidewalk with planter strip where feasible; illumination; landscaping; and retaining walls. Intersections with high accident rates will also be improved as part of this project.

On June 4, 2018, Council authorized the City to enter into an agreement with Washington State Department of Transportation (WSDOT) to accept \$3,456,500 in federal grant funds for the design of this project. The staff report for this Council action can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2018/staffreport060418-7d.pdf>.

On January 28, 2019, Council authorized the City Manager to enter into an agreement for engineering consultant services with Perteet, Inc. for analysis, design, assistance in community outreach and stakeholder engagement, preparation of cost estimates, and identification and procurement of right-of-way. The staff report for this Council action can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2019/staffreport012819-7d.pdf>.

On July 13, 2020, staff presented a project update to the City Council which include a summary of the initial phase of project public outreach (Phase 1 Public Outreach) and presentation of the draft design concepts. The staff report for this Council presentation can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2020/staffreport071320-9b.pdf>.

Undergrounding

In addition to the transportation and safety improvements, staff are evaluating undergrounding of the existing overhead power lines as part of the Project. The City has policies supporting undergrounding of overhead power and communications utilities on City projects in the Comprehensive Plan (Comp Plan), the Shoreline Municipal Code (SMC), and the Seattle City Light (SCL) franchise agreement. The Comp Plan calls for the City to "promote the undergrounding of new and existing electric distribution lines... as streets are improved and/or areas are redeveloped..."

SMC Section 13.20.050 designates that undergrounding will occur when (portion relevant to this issue):

- A. The City Council designates for undergrounding a capital improvement or public works project, including sidewalk project and roadway projects, which will disturb existing facilities or will facilitate the installation of a trench for undergrounding facilities.

On March 16, 2020 Council discussed and defined criteria to use in evaluating projects for undergrounding of overhead utilities. The March 16, 2020 staff report can be found at the following link:

<http://cosweb.ci.shoreline.wa.us/uploads/attachments/cck/council/staffreports/2020/staffreport031620-9a.pdf>.

DISCUSSION

As noted earlier in this report, the design team used feedback received during the Phase 1 Public Outreach process to establish the community's priorities for the corridor. These priorities were combined with technical analysis of existing conditions and traffic flow to develop two draft design concepts for the roadway corridor and two draft concepts for the 175th Street and Meridian Avenue N intersection. These design concepts were presented to the community during Phase 2 Public Outreach. Public input during Phase 2 was collected to determine how well each of the draft design concepts met the community's priorities.

The draft design concepts included in Phase 2 Public Outreach are as follows:

- Corridor Design Concept A - Shared-Use Path
- Corridor Design Concept B - Buffered Bike Lanes
- Intersection Design Concept - Roundabout Intersection
- Intersection Design Concept - Signalized Intersection

The design concepts were evaluated against the criteria developed from Phase 1:

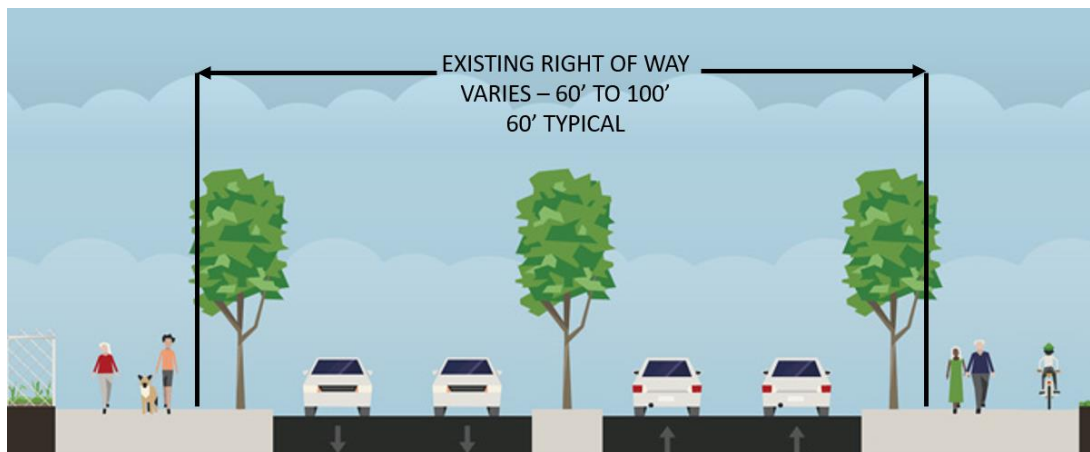
- Improving pedestrian walkability,
- Improving bus transportation,
- Improving bike facilities,
- Improving traffic flow,
- Improving transportation safety,
- Improving landscaping character, and
- Creating a sense of place.

Respondents were not asked to rate concepts for creating sense of place. Staff will ask for feedback on streetscape design elements in future public engagement.

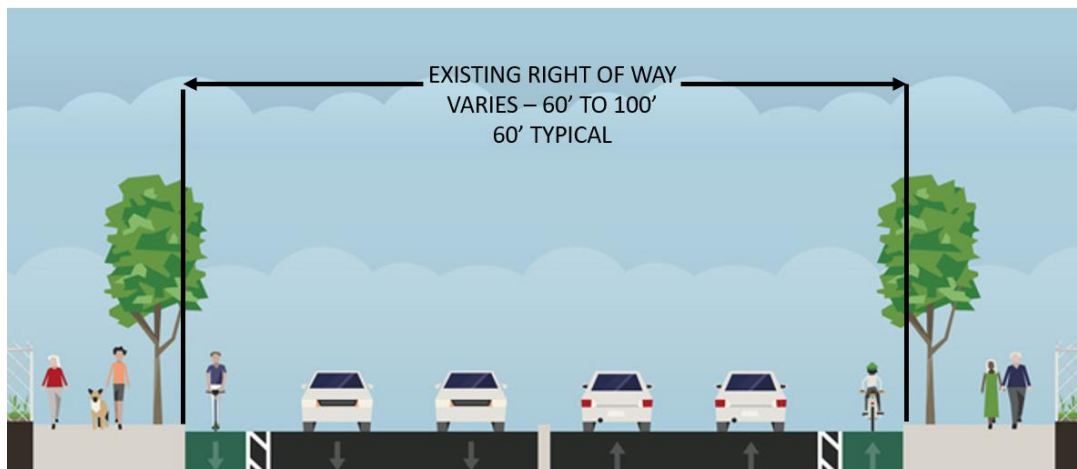
A summary of the Phase 2 Public Outreach can be found at the following link:

[175th Street Corridor Improvements Project Phase 2 Outreach Summary](#). The following section of this report provides the outcome of Phase 2 Public Outreach and the preferred concept design by section.

Corridor Design Concepts



Corridor Design Concept A - Shared-Use Path



Corridor Design Concept B - Buffered Bike Lanes

The Phase 2 Public Outreach results of the two corridor design concepts can be found in Attachment B to this staff report. These results rank the design concepts against the evaluation criteria noted above. As can be seen in the results, both corridor design concepts' evaluation criteria were seen as "just right" by a majority of respondents, with some criteria favoring Corridor Design Concept A and some criteria favoring Corridor Design Concept B. The exception to this is the criteria for improving bike facilities for Corridor Design Concept B – Buffered Bike Lanes, where 49% of respondents stated it was "just right" and 45% of respondents stated it was "too much".

Common themes in the written responses specific to Corridor Design Concept A included:

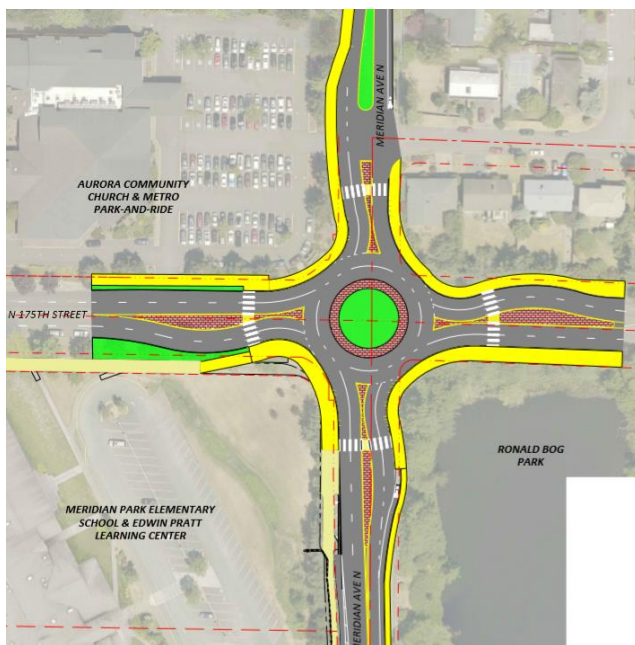
- Concern about people walking, pushing a stroller, or using a wheelchair being in the same space as people biking and the overall safety of a shared-use path.
- Support for the shared use path in Concept A to encourage families to bike off of the road and to reduce vehicle and cyclist conflicts.
- Concern specifically around the shared use path on the hill with higher speed cyclists sharing space with children around the school.

- Support for the center median and the separation it provides for oncoming traffic.
- Concern that the center median is not an efficient use of space and creates landscape maintenance issues.
- Concern over high project costs.
- Belief that the sidewalks for both draft corridor design concepts are too wide.

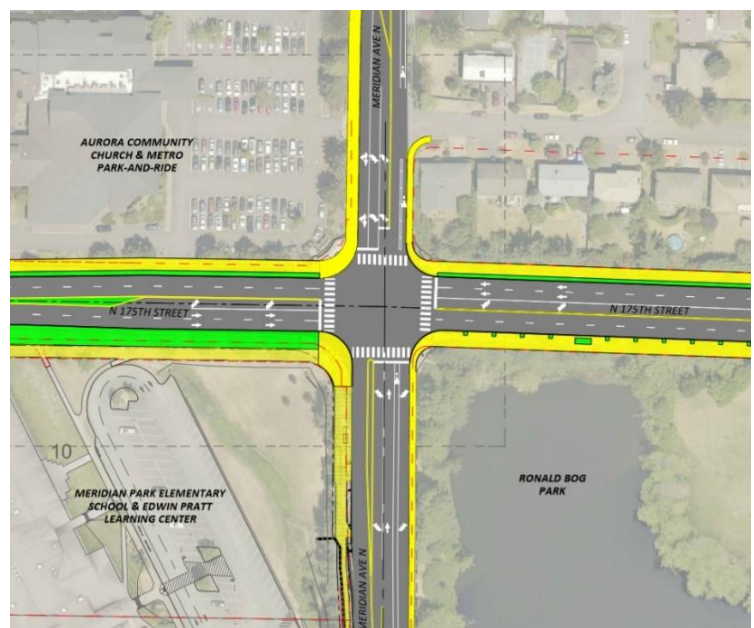
Common themes in the written responses specific to Corridor Design Concept B included:

- Support of the separation of people biking from people walking, pushing a stroller, or using a wheelchair.
- Opposition of adding bike lanes to the corridor.
- Support for a physical barrier between cyclists and vehicles in the buffer area.
- Concern that cyclists have too much exposure to vehicle traffic with the buffered bike lane.
- Concern over high project costs.
- Belief that the sidewalks for both draft corridor design concepts are too wide.

Intersection Design Concepts



Design Concept - Roundabout Intersection



Design Concept - Signalized Intersection

The Phase 2 Public Outreach results of the two intersection design concepts can be found in Attachment C to this staff report. Similar to the corridor design concepts, these results rank the intersection design concepts against the Project evaluation criteria. Over 70% of respondents marked the signalized intersection design concept as “just right” for each evaluation criterion. Responses varied on ranking evaluation criteria, however, about 40 – 50% of respondents marked the concept regarding the evaluation criteria as “just right” for the roundabout concept.

Common themes in the written responses specific to the Roundabout Design Concept included:

- Most responses were in opposition to a roundabout.
- Concerns about a roundabout disrupting the flow of traffic.
- Concern that a roundabout will not provide safe pedestrian crossings for the elementary school students.
- Support for a roundabout and the traffic calming and improved traffic capacity benefits.

Common themes in the written responses specific to the Signalized Design Concept included:

- General support for the signalized concept.
- Desire to see longer turn lanes.
- Desire to see more right turn only lanes.

Phase 2 Public Outreach Key Takeaways

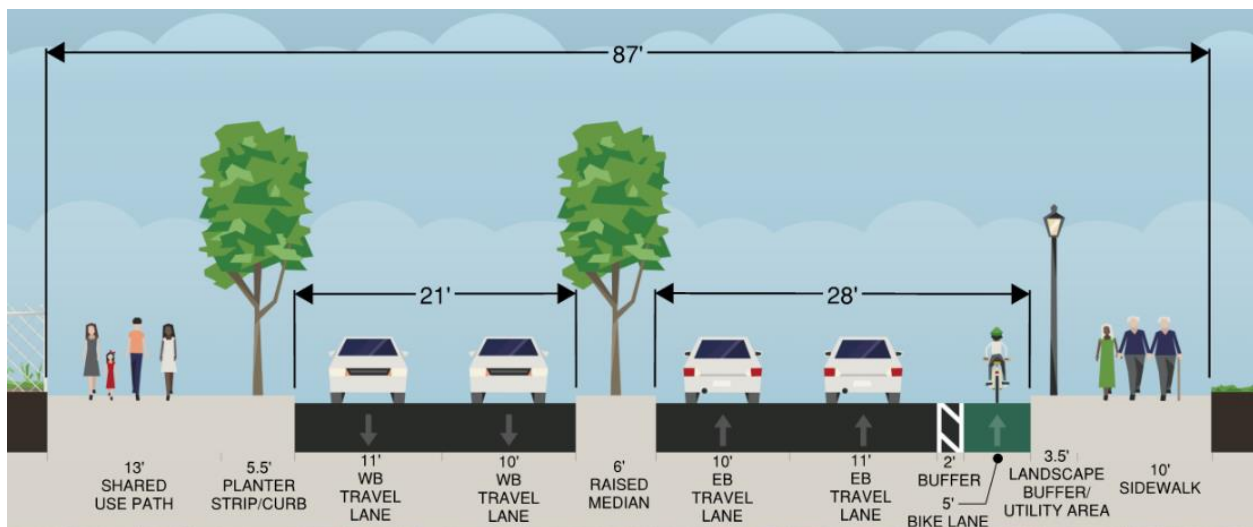
- The community's top three priorities for the corridor are pedestrian walkability, flow of traffic, and transportation safety.
- On average, users selected "just right" for Corridor Design Concept A 69.4% of the time and Corridor Design Concept B 70.5% of the time when weighed against the evaluation criteria with the exception of bikes, which were more divisive.
- There is concern that cyclists will not use the corridor due to the steep slopes and a current lack of bikes using the corridor.
- There is support for saving the existing trees on the corridor and concern over the maintenance of landscaping.
- Most users were against a roundabout due to perceived issues with travel speed, flow of traffic on the corridor, and pedestrian safety.
- The public had several traffic concerns, including a belief that projected future traffic volumes were underestimated and that the concepts do not do enough to improve traffic flow. Conversely, several members of the public raised concern about vehicles speeding along the corridor.

Preferred Design Concept

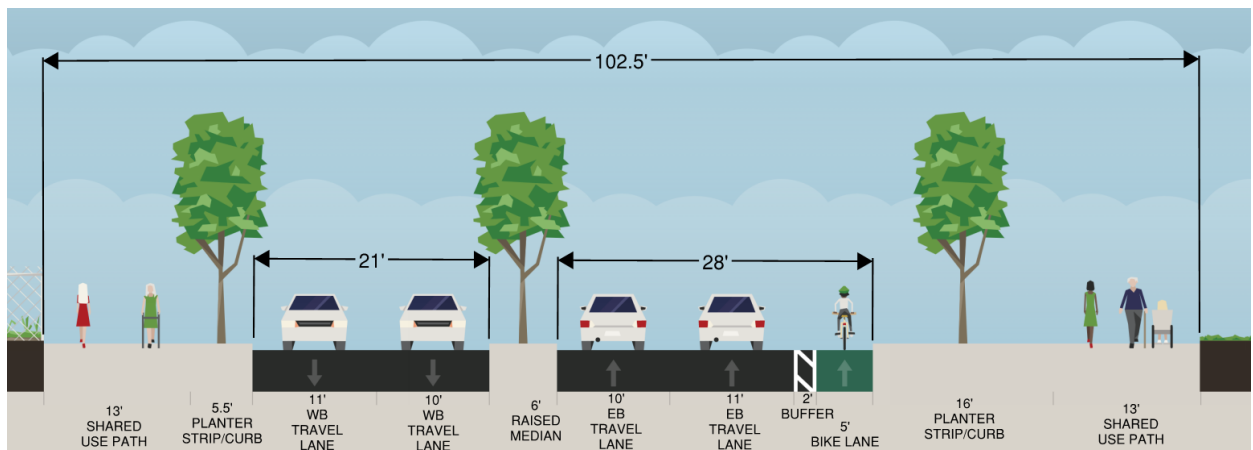
The design team used the public's feedback from Phase 2, combined with technical analysis from the design team, to develop a preferred concept, which is depicted in Attachment D to this staff report. The preferred concept breaks the corridor into three segments, in addition to the intersection at Meridian Avenue N. Details of the preferred concept for the three segments are detailed below.

Stone Avenue N to Meridian Avenue N – Hybrid of Concept A and B

The preferred concept combines Concepts A and B by providing a shared use path in the westbound (uphill) direction and a buffered bike lane on the eastbound (downhill) direction. This addresses both feedback from the public outreach with technical concerns. The hybrid design is represented with the following figures:



Preferred Design Concept Between Stone Avenue N and Wallingford Avenue N



Preferred Design Concept Between Wallingford Avenue N and Meridian Avenue N

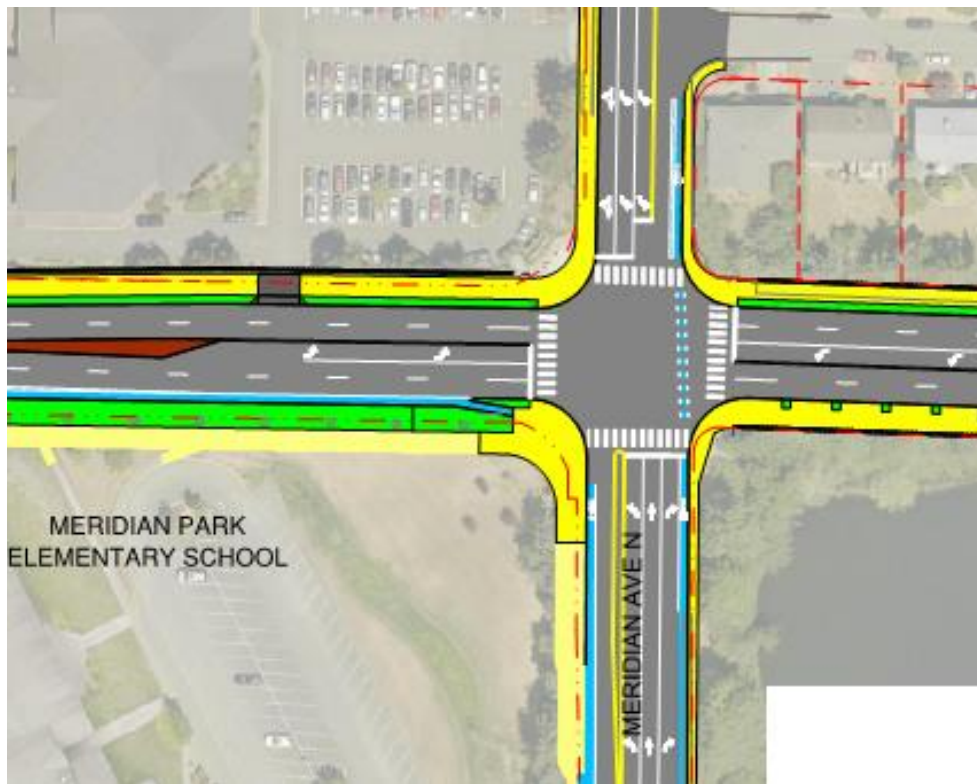
The hybrid includes or addresses the following:

- The eastbound buffered bike lane allows for more experienced or faster cyclists to be separated from pedestrians, especially adjacent to the school. With the westbound shared use path there are fewer concerns with speed differential as a result of the steep hill.
- Allows for a new pedestrian crossing at Ashworth Avenue N.
- The landscape buffer, or amenity zone, between the roadway and sidewalk will vary from 3.5 feet between Stone and Wallingford to 16 feet adjacent to Meridian Park Elementary. This wider amenity zone utilizes the existing sidewalk build recently as part of the school project while attempting to protect the existing trees along this segment.
- The project needs to extend to the West and provide connectivity for cyclists between the project and the Interurban Trail at Midvale Avenue N. This could include the widening of sidewalks and construction of new ramps.
- The specifics of plantings or other treatments in the median or amenity zones will be determined as the design progresses.

Intersection of Meridian Avenue N and N 175th Street – Signalized Intersection

The preferred concept for the intersection is to replace and update the traffic signal rather than constructing a roundabout. Staff still strongly supports and encourages roundabouts because they typically perform better operationally and they significantly improve safety for all users. While improving traffic flow, transportation safety and improving pedestrian walkability are all key objectives of this Project, the traffic signal is the preferred alternative for the following reasons:

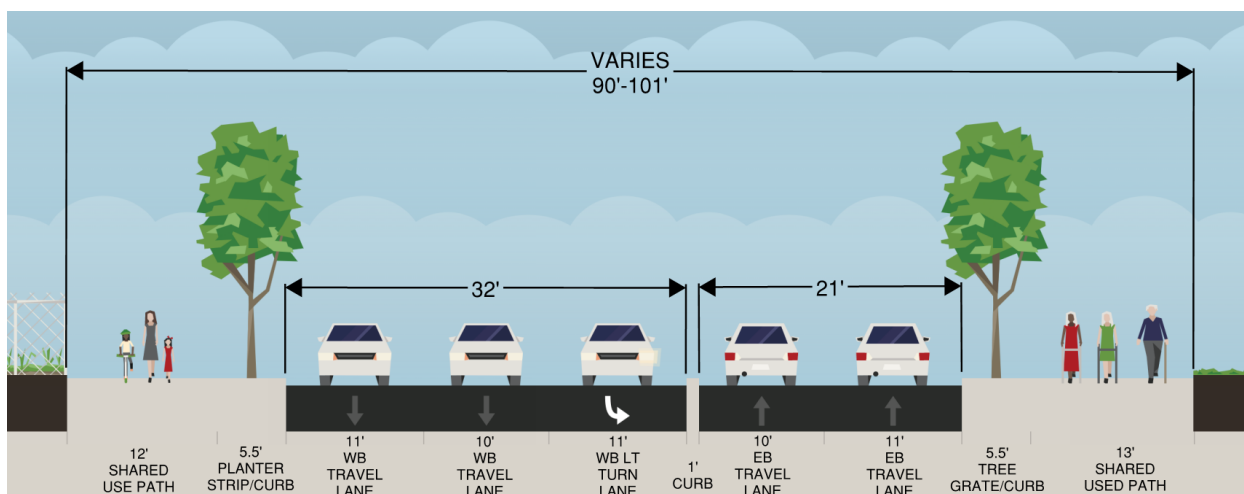
- Minimize impacts to Ronald Bog – a roundabout requires additional space and thus greater impacts to Ronald Bog, which presents challenges from an environmental/sensitive area perspective and would require replacement of the park property. The signal still creates some impacts to the Bog, but they are significantly less than a roundabout.
- Utilizes the shared use path recently constructed adjacent to the school; the traffic signal can be designed and constructed without impacting the new sidewalk constructed within the last two years. The roundabout configuration would require a significant portion of the sidewalk to be reconstructed.
- Proximity to elementary school and bus stop; a signal is more familiar and comfortable to both bicycles and pedestrians in this high use area.



Preferred Design Concept - Signalized Intersection

Meridian Avenue N to I-5 Interchange – Concept A - Shared-Use Path

In this segment, staff recommends that the preferred concept only utilize a shared use path due to potential conflicts with the I-5 on-ramp and as a transition to the I-5 underpass, where there are currently no on-street bicycle facilities as shown below:



Preferred Design Concept Between Meridian Avenue N and I-5

Right-of-Way Acquisition and Construction Cost Estimate

The cost estimates have not been updated for the hybrid alternative but the difference in cost estimate between Corridor Concept A and Corridor Concept B were not significantly different for this phase of design. Staff anticipates the project will need to be constructed in phases. A summary of the cost to complete the project based on three phases are as follows:

Right of Way Cost

Stone Avenue N to Meridian Avenue N	\$ 4,000,000
Intersection of Meridian Avenue N and N 175 th Street	\$ 1,000,000
Meridian Avenue N to I-5 Interchange	\$ 1,000,000

Construction Cost

Stone Avenue N to Meridian Avenue N	\$ 12,000,000
Intersection of Meridian Avenue N and N 175 th Street	\$ 8,300,00
Meridian Avenue N to I-5 Interchange	\$ 12,000,000

Total Cost	\$38,300,000
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Undergrounding

The undergrounding criterion discussed with the City Council on March 16, 2020 has been applied for the N 175th Project with the Project separated into two segments – Stone Avenue N to Meridian Avenue N and Meridian Avenue N to I-5. Table 1 summarizes the information. The criteria are not weighted but provide a visual for discussion.

Takeaways from the criterion and project features include:

- The Project meets the City's requirements for undergrounding.
- The Project is eligible to use the City's SCL franchise agreement for undergrounding.
- The project will require relocation of the existing overhead utilities.

- The project will require trenching for (at a minimum) the installation of stormwater conveyance.
- The project is not within an area anticipating re-development, but the segment between Stone Avenue N and Meridian Avenue N has mix of uses including single and multi-family residential, a school, City property and a church.
- The project would continue the undergrounding completed as part of the Aurora project that terminates at City Hall.
- The segment from Meridian Avenue N to I-5 is known to have underlying peat adjacent to Ronald Bog, which may have technical challenges in undergrounding utilities.

Table 1 – Evaluation of Undergrounding Criteria

Undergrounding Criterion N 175 th Street (Stone Avenue N to I-5)		Stone Avenue N – Meridian Avenue N	Meridian Avenue N – I-5
1.	Meet City Code?		
	a. Is there an associated capital project?	Y	Y
	b. Electrical carrying facilities over 35kV?	N	N
2.	Eligible for use of SCL UG Agreement?	Y	Y
3.	Sufficient size?		
	a. Length greater than 500' or one block?	Y	Y
	b. Estimated cost over \$1.5M?	Y	Y
4.	Estimated surcharge cost to Shoreline residents		
	a. Project surcharge less than \$1.00/mo.?	\$0.92 - \$1.29 (\$0.0011/KWH - \$0.0016/KWH)	
	b. Cumulative surcharge less than \$10.00/mo.?	\$6.47 - \$6.84 (\$0.0080/KWH - \$0.0085)/KWH)	
5.	Support redevelopment?		
	a. Within or adjacent to a high-density zoning?	N	N
	b. Is the project on a principal or minor arterial?	Principal	Principal
	c. Facilitate structures closer to the property line?	N	N
	d. Will it support needed electrical system upgrades?	N/A	N/A
6.	Other reasons to support or preclude undergrounding?		
	a. Can the project schedule accommodate undergrounding?	Y	Y
	b. Adjacent to roadways with no overhead utilities?	Y	N
	c. Opportunity to coordinate with other undergrounding projects	Y	N
	d. Other items for consideration?	None	Y (see note 2)

Note 1: The coloring in the table provides a visual cue to help show where the criterion supports or does not support moving forward with undergrounding. Green color coding signifies strong support, yellow signifies medium support and red signifies low or no support.

Note 2: "Other items" include technical challenges (e.g. undergrounding in peat near Ronald bog)

Projected Undergrounding Cost

While the cost of undergrounding is difficult to estimate at this phase of pre-design, staff has worked with SCL to develop a cost estimate based on the concept plans. The estimate provided by SCL contains multiple contingencies and risk factors resulting in a

wide range of \$5,700,000 – \$7,900,000. Calculation of the rate surcharge shown in the Table 2 below represents a “middle of the road” estimate based on the estimates provided by SCL. The total increase on each ratepayer bill will be approximately \$1.10. A better estimate will be available at the 30% design milestone for the Project. This estimated increase would result in a cumulative surcharge of \$6.66 through December 2032 when the existing surcharge for North City sunsets.

Table 2 – Seattle City Light Undergrounding Project Cost Estimate

Project	Surcharge (\$/KWh)	Avg Residential Charge	Sunset Date	Estimated Cumulative Surcharge after Sunset	Estimated Average Cumulative Residential Charge	Estimated Cumulative Surcharge after Sunset (w/ 175 th)	Estimated Average Cumulative Residential Charge (w/ 175 th)
Total (at implementation)	0.0083		NA	0.0069	\$5.55	0.0083	\$6.66
North City Undergrounding	0.0007	\$0.56	Dec-32	0.0062	\$4.99	0.0076	\$6.09
Aurora Phase 1 Undergrounding	0.0017	\$1.37	May-33	0.0045	\$3.62	0.0059	\$4.73
Aurora Phase 2 Undergrounding	0.0018	\$1.45	Dec-37	0.0027	\$2.17	0.0041	\$3.28
Aurora Phase 3A Undergrounding	0.0005	\$0.40	Jul-40	0.0022	\$1.77	0.0036	\$2.87
Aurora Phase 3B Undergrounding	0.0022	\$1.77	Dec-41			0.0014	\$1.10
175 th (Stone to I-5) Undergrounding	0.0014	\$1.10	Dec-50				

Note 1: This table assumes average power consumption used in the March 2020 Staff Report; staff is seeking updated data from SCL.

Note 2: The Estimated Average Cumulative Monthly Surcharge is the amount after the project rolls off (e.g. with 175th Street included, in December 2032, the surcharge drops from \$6.66 to \$6.09, then drops to \$4.73 in May 2033).

Based on the findings of the review of the undergrounding criteria, including the potential cost and impact to Shoreline SCL rate payers, staff recommends that undergrounding be included in the 30% design phase of the Project. This will allow staff to better understand the true cost and impact on this component of the Project.

Council Direction Tonight

Tonight, staff is presenting a project update and is seeking Council's support of the preferred design concept. In conjunction with Council's decision regarding the preferred design concept, staff is looking for direction on the recommendation to include undergrounding of existing overhead utilities as part of the preferred concept. If Council supports this direction, the Project would advance undergrounding design to the 30% design phase.

COUNCIL GOAL(S) ADDRESSED

This project supports Council Goal 2: “Improve Shoreline’s infrastructure to continue the delivery of highly-valued public service,” and Council Goal 3: “Continue preparation for regional mass transit in Shoreline.”

RESOURCE/FINANCIAL IMPACT

The 2021-2026 Capital Improvement Program includes the summary of funding for the project:

EXPENDITURES

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RECOMMENDATION

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ATTACHMENTS




Attachment A: Project Vicinity Map

Attachment B: Phase 2 Corridor Design Concepts Evaluation Criteria Rating













Attachment C: Phase 2 Intersection Design Concepts Evaluation Criteria Rating
Attachment D: Depiction of Preferred Concept

N 175th St Stone Ave N to I-5

Map Feature

-  N 175th St Project
-  Other City Park
-  City of Shoreline Park

Landmark

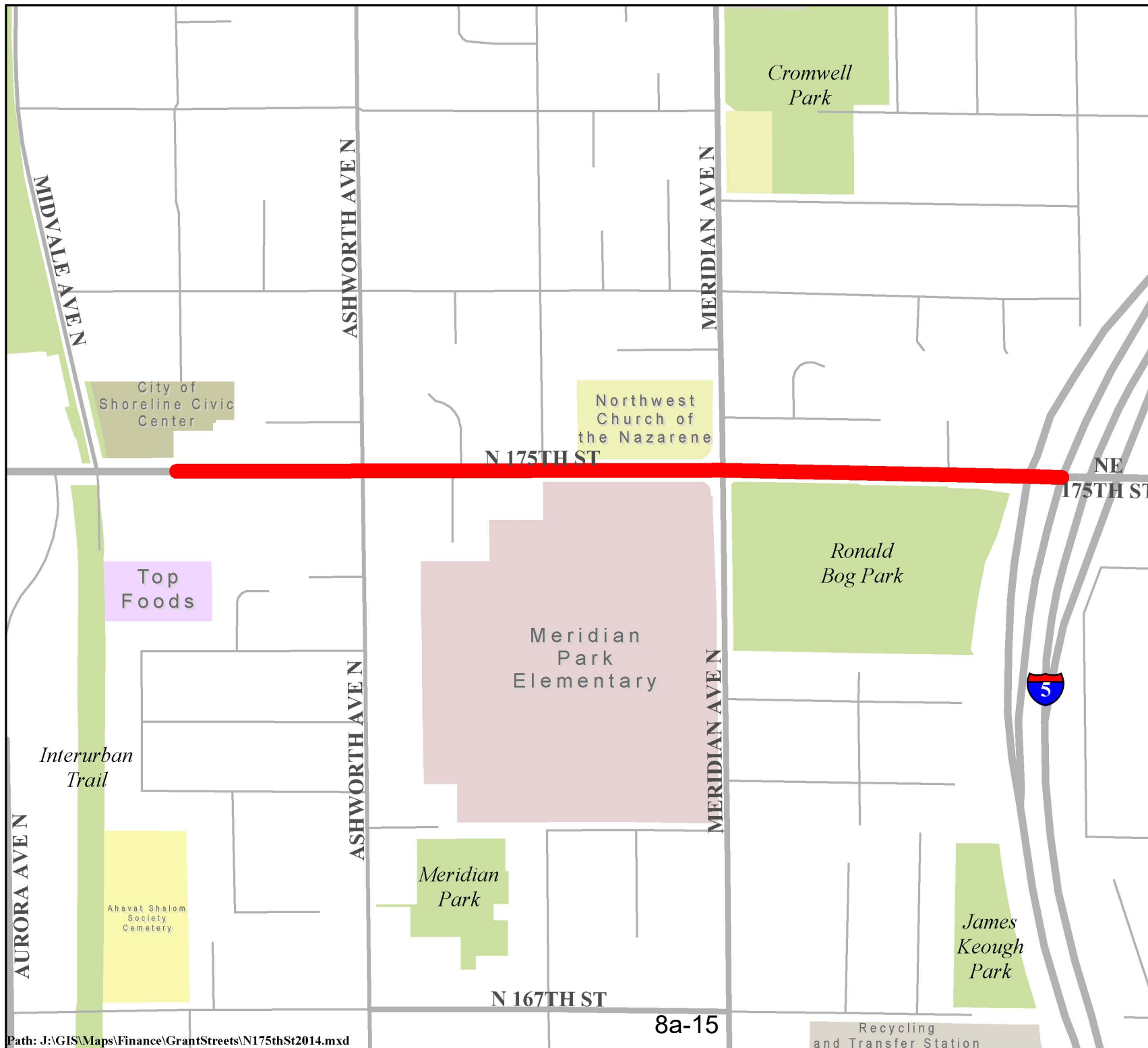
-  Cemetery
-  Commercial
-  Facility
-  Golf Course
-  Government
-  Library
-  Open Space
-  Other
-  Recreation
-  Religious
-  School
-  Transportation

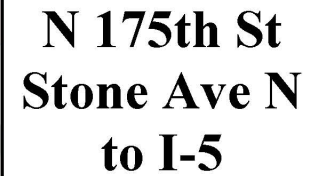
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Date: 3/11/2014















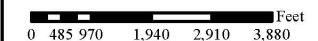


Map Feature

-  N175th St Project
 Other City Park
 City of Shoreline Park

Landmark

- | | |
|---|----------------|
|  | Cemetery |
|  | Commercial |
|  | Facility |
|  | Golf Course |
|  | Government |
|  | Library |
|  | Open Space |
|  | Other |
|  | Recreation |
|  | Religious |
|  | School |
|  | Transportation |

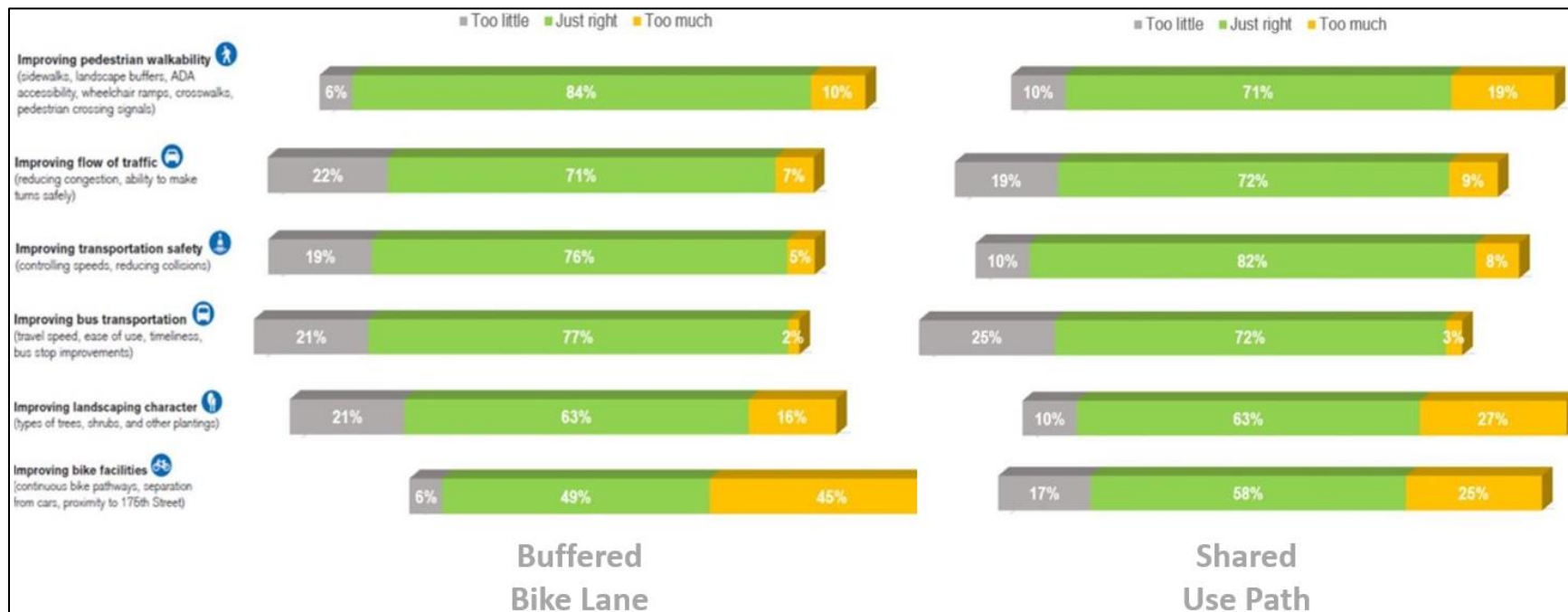


User: jclark

Date: 3/11/2014

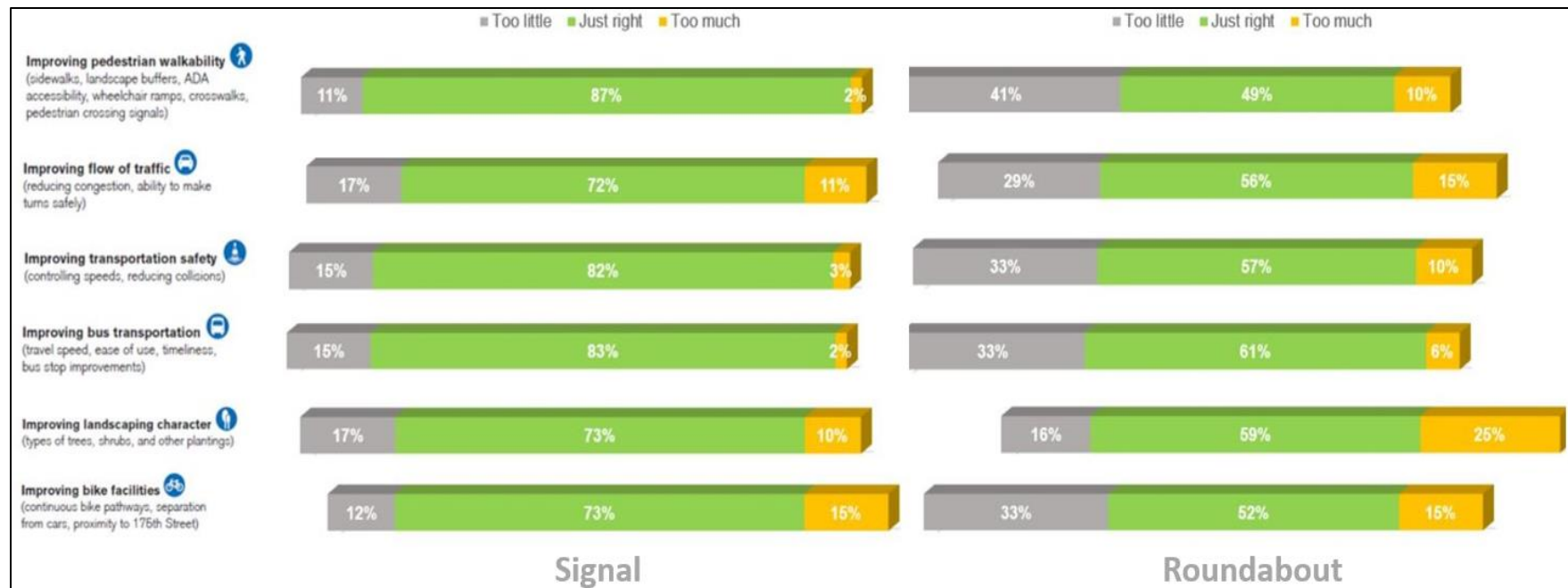
Phase 2 Public Outreach Results:

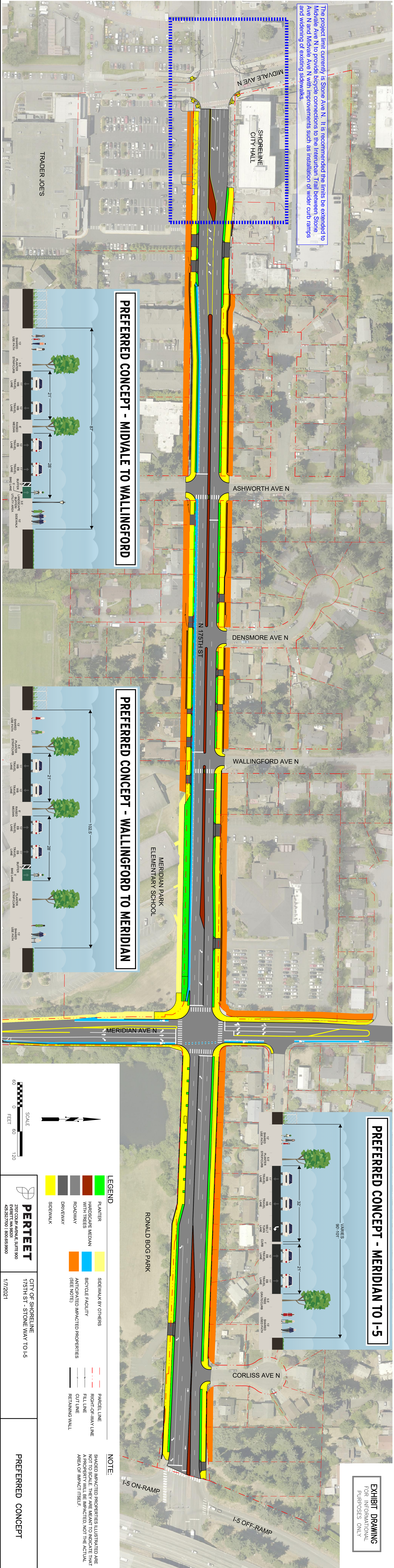
Evaluation Criteria Ratings of Corridor Design Concept A – Shared-Use Path and Corridor Design Concept B – Buffered Bike Lane



Phase 2 Public Outreach Results:

Evaluation Criteria Ratings of Intersection Design Concept - Roundabout and Intersection Design Concept - Signalized





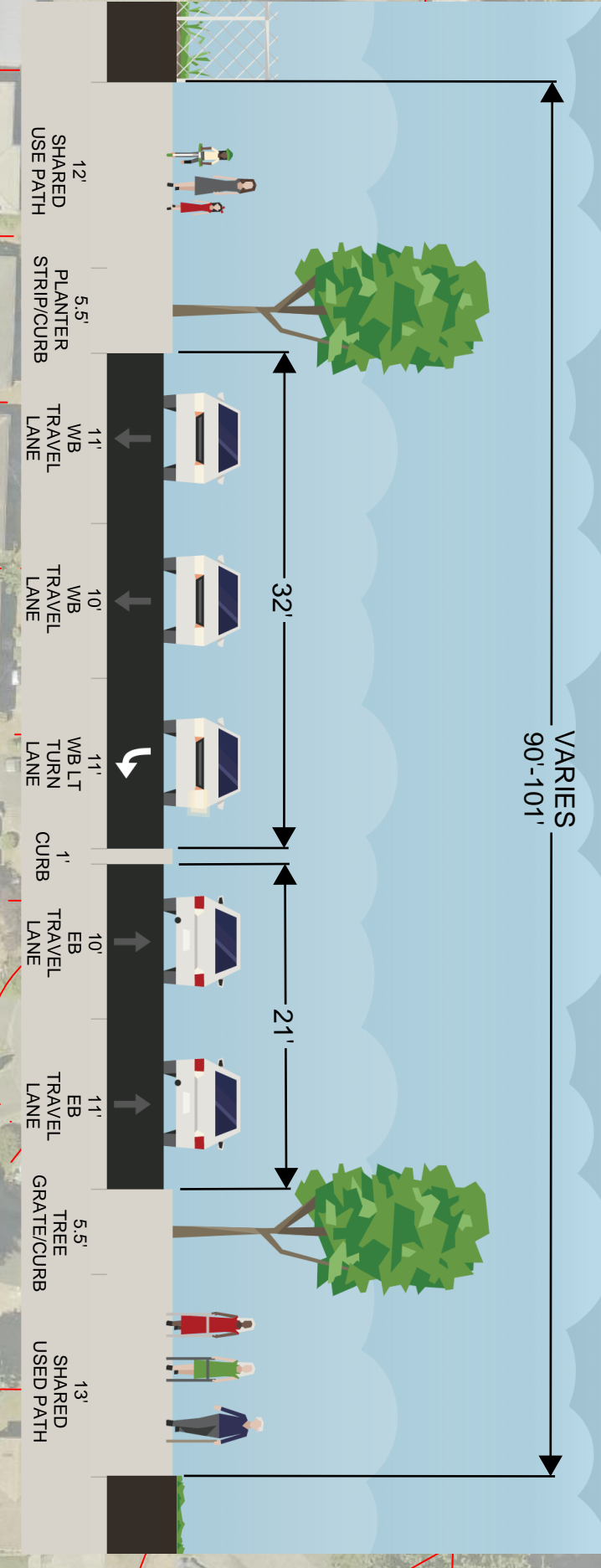
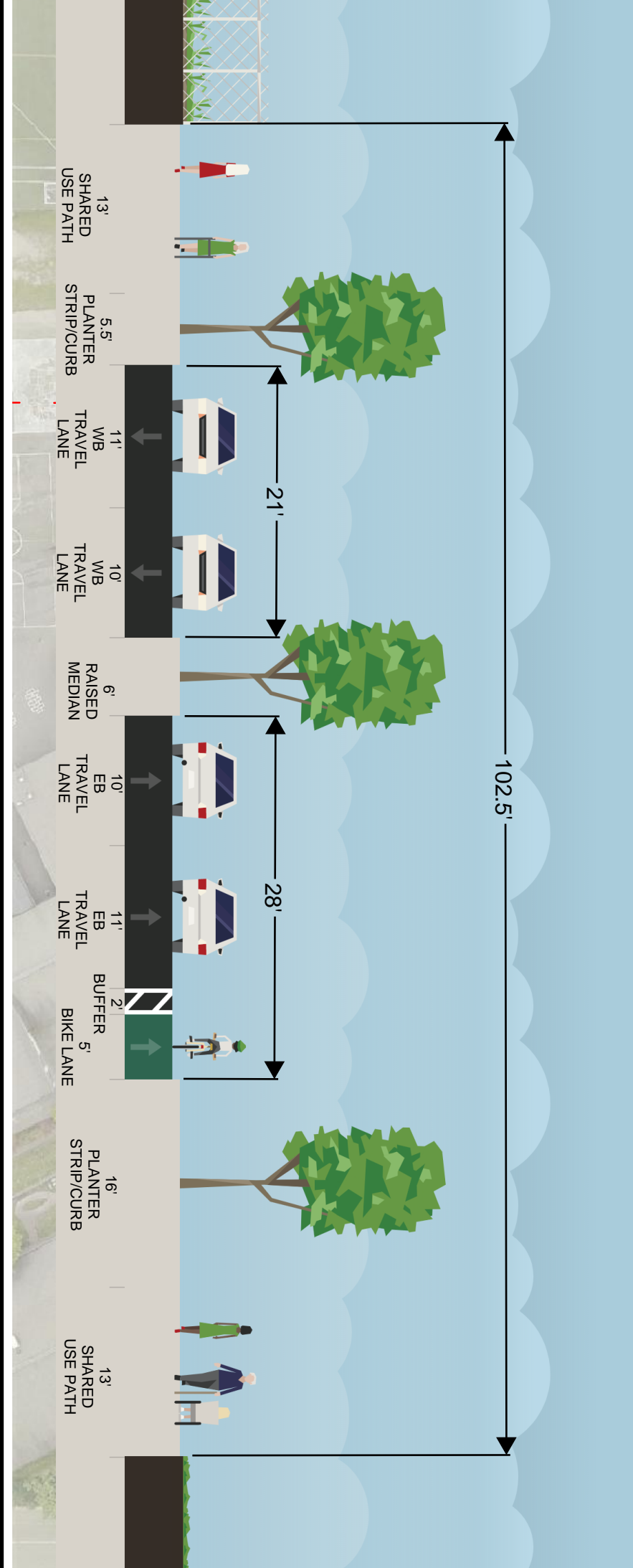
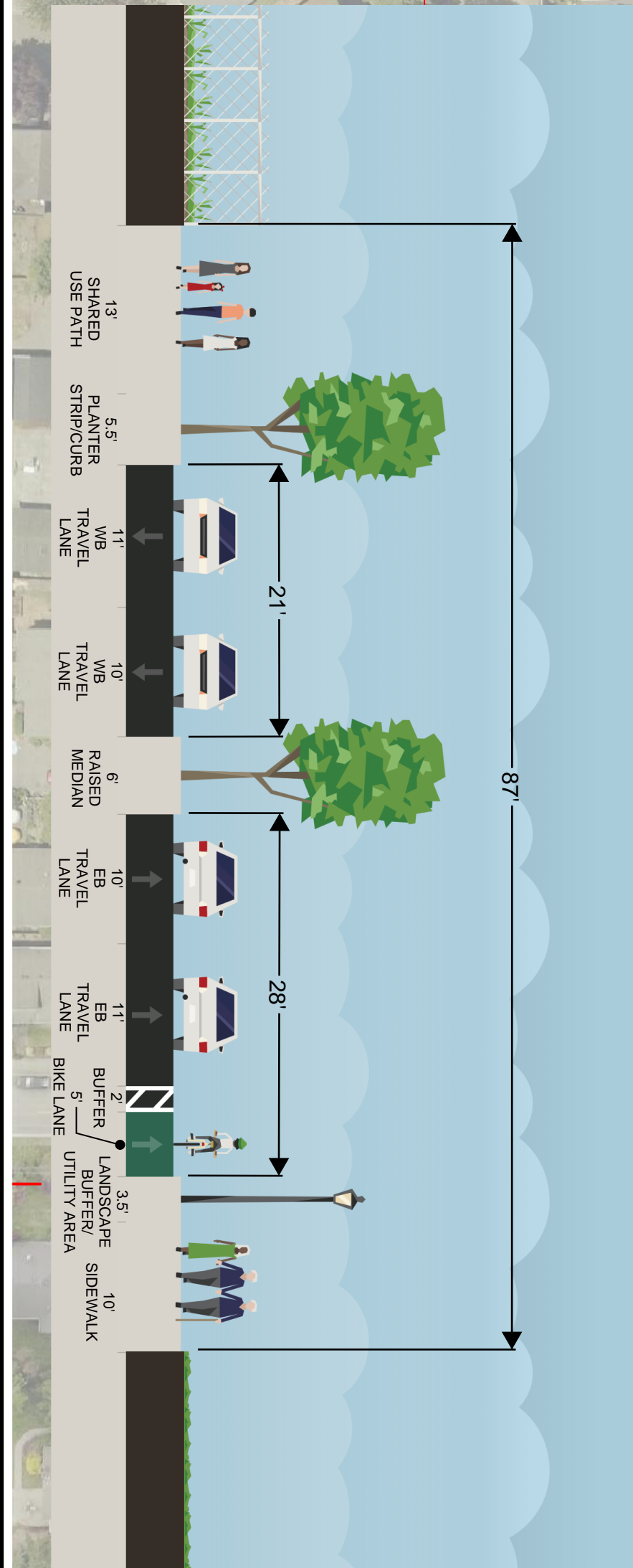
The project limit currently is Stone Ave N. It is recommended the limits be extended to Midvale Ave N to provide bicycle connections to the Interurban Trail between Stone Ave N and Midvale Ave N with improvements such as installation of wider curb ramps and widening of existing sidewalks.

PREFERRED CONCEPT - MIDVALE TO WALLINGFORD

PREFERRED CONCEPT - WALLINGFORD TO MERIDIAN

PREFERRED CONCEPT - MERIDIAN TO I-5

EXHIBIT DRAWING
FOR INFORMATIONAL
PURPOSES ONLY



SCALE

0 60 120 FEET

LEGEND

PLANTER	SIDEWALK BY OTHERS
HARDSCAPE MEDIAN WITH TREES	BICYCLE FACILITY
ROADWAY	ANTICIPATED IMPACTED PROPERTIES (SEE NOTE)
DRIVEWAY	
SIDEWALK	

NOTE:

SHADED IMPACTED PROPERTIES ILLUSTRATED ARE NOT TO SCALE. THEY ARE MEANT TO INDICATE THAT A PROPERTY WILL BE IMPACTED, NOT THE ACTUAL AREA OF IMPACT ITSELF.

CITY OF SHORELINE
175TH ST - STONE WAY TO I-5

PREFERRED CONCEPT