

GROWING TRANSIT COMMUNITIES

IMPROVING SAFETY AND ACCESS TO TRANSIT ALONG LINES 20, 77, AND 87 IN EAST PORTLAND

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GROWING TRANSIT COMMUNITIES

6	Executive summary
10	Introduction
22	Recommendations
22	Corridor investment plans
70	Implementation action items
74	Not recommended projects
81	Connections across private property
83	Programs and other initiatives
89	Recommendations for future study
91	Planning process
92	Community Outreach & Engagement Plan
93	Corridor selection
98	Corridor existing conditions and needs
100	Create and apply priority analysis tools
106	Final plan recommendations
107	Appendices - see separate document
107	A. Pedestrian network analysis
112	B. Active Trans Priority Tool
115	C. Active Trans Prioritization Tool score results
120	D. Adopting Resolution
Website	E. Selected recommended project materials



EXECUTIVE SUMMARY



Community members and project staff walk the mid-Halsey corridor

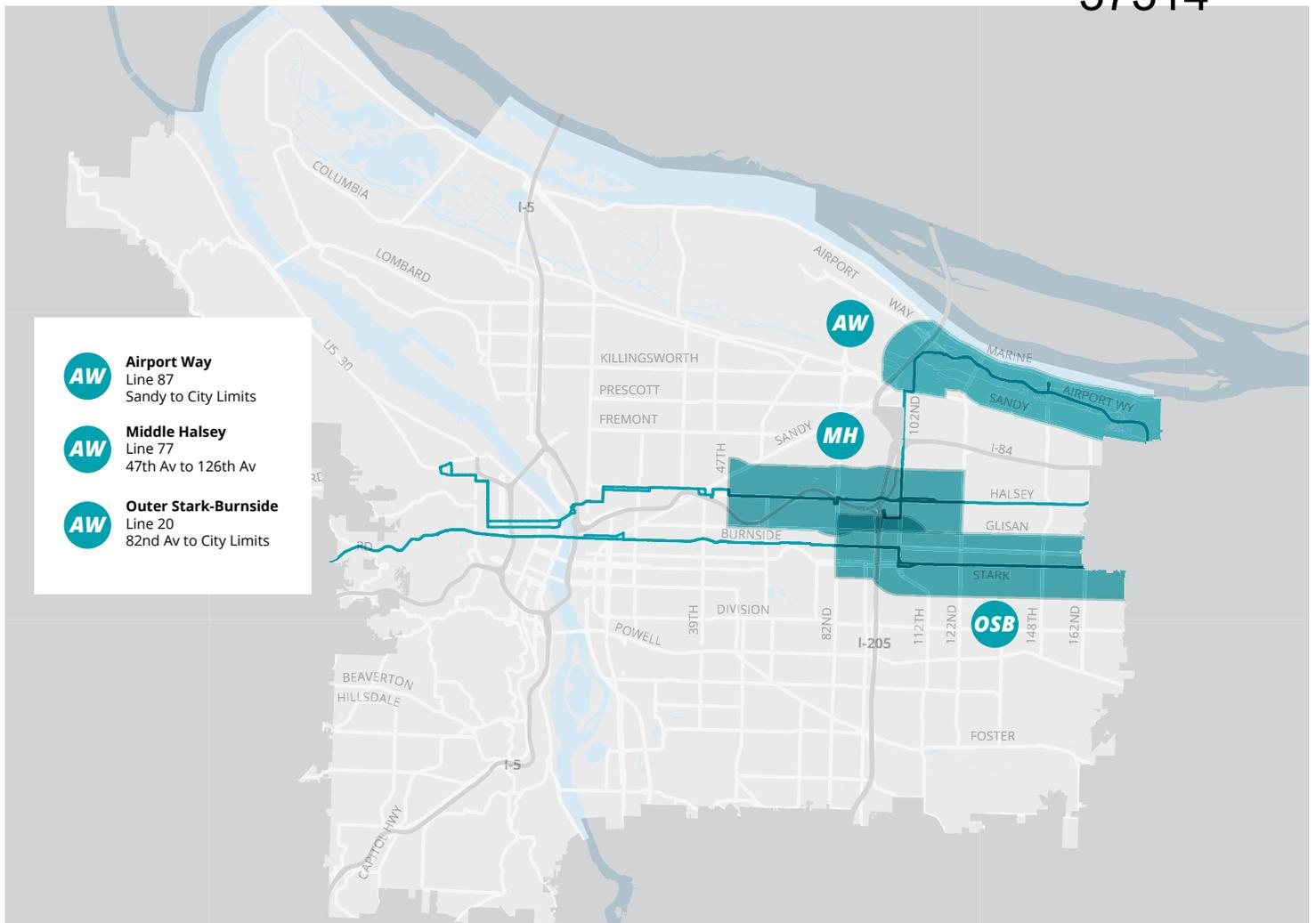
Photo by April Bertelsen, PBOT

The Growing Transit Communities Plan is an effort to identify and prioritize the most beneficial improvements that would make getting to the bus and using the bus a safer and more convenient option along sections of bus lines 87, 77, and 20.

The purpose of the Growing Transit Communities Plan (GTC Plan) is to determine a package of transportation investments on a corridor level that would best create transit-oriented neighborhoods, places where transit (along with walking and bicycling for short trips) is truly the mode of choice for getting to and from work, school, shops, or other destinations. Frequent transit service is one essential component of a transit-oriented community, but other components include safe access to transit, bus stop quality, sidewalk and bikeway network connections, crossings of

busy streets, and the overall built environment. Deficiencies in these other factors often lead to lower ridership, and make frequent service less viable to implement.

By 2035, the City of Portland is expected to grow by nearly 120,000 households (about 280,000 people) and add almost 150,000 jobs. The Portland Plan and the Climate Action Plan have established a mode split goal of 25% of all trips on transit by 2035, and the 2035 Regional Transportation Plan includes a goal of tripling transit mode share over 2005 levels. Increasing transit service frequency and targeted investments in access to transit are ways to increase transit ridership. Implementing this Plan will help the City reach these policy goals and accommodate future growth.



WHY THESE THREE CORRIDORS?

The GTC Plan focuses on these three corridors because they have potential to become transit-oriented communities, though each have barriers. More specifically, these corridors have transit service that is not yet frequent and barriers in the walking and biking environment, yet the 2035 Portland Comp Plan includes planned growth and service improvements in TriMet Service Enhancement Plans.

Through careful analysis and evaluation of potential candidate corridors citywide, sections of bus lines 87, 77, and 20 were selected for the scope of this plan. The following additional selection criteria were used to select the three corridors:

- Residential Density
- Opportunity: Jobs and Education
- Equity
- Access
- Mixed-use Land Patterns



CORRIDOR INVESTMENT PLANS

The investment plans for each corridor include a map and list of the most beneficial improvements that would make getting to the bus and using the bus a safer and more convenient option in the study area for each corridor. Many of the projects are organized into “bundles.” Staff bundled projects together into meaningful groupings of projects based on geographic proximity, shared purpose, or likelihood of being implemented at the same time. While individual projects often could be implemented separately, these bundles show the value of multiple investments in a single area working together to form a transit-supportive community. Once staff developed bundles, projects within each bundle were sorted into Tier 1 and Tier 2 projects to reflect relative priority levels based on Growing Transit Community criteria. These priority tiers will help staff, decision-makers, and community members to decide which projects to focus on first.

The priority projects in this Plan have been vetted by the community and filtered through a set of criteria and technical analysis. The three most important criteria based on community input were weighted more heavily when evaluating and prioritizing projects, including **transportation safety, making it easier to get to bus stops, and equity.**

TIER 1 RECOMMENDED PROJECTS, BY THE NUMBERS

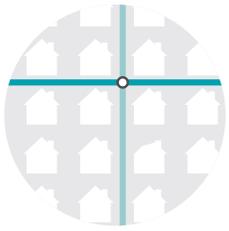
- 9 Bikeway projects
- 13 Sidewalk projects
- 13 Traffic signal projects
- 3 Corridor safety projects
- 4 Trail projects
- 38 Crossing projects
- 20 Pedestrian improvements on local streets
- 10 Neighborhood Greenway projects



DEVELOPMENT OF THIS PLAN

Each step of the planning process was guided with input from a Community Advisory Group, Technical Advisory Committee, and broader public outreach in each corridor with efforts to include youth, seniors, people with disabilities, people with limited English proficiency, and communities of color. The planning process started in Fall 2015 and ended in Spring 2017. A summary of key community engagement opportunities include:

- 2 public open houses
- 2 online surveys
- 8 Community Advisory Group meetings
- Tabling at events in each corridor and presentations to various committees and community groups



INTRODUCTION

The Growing Transit Communities Plan is an effort to identify and prioritize the most beneficial improvements that would make getting to the bus and using the bus, a safer and more convenient option along sections of bus lines 87, 77, and 20. The GTC Plan focuses on these three corridors because they have potential to become transit-oriented communities, though each have barriers. More specifically, these corridors have transit service that is not yet frequent and barriers in the walking and biking environment, yet the 2035 Portland Comp Plan includes planned growth and service improvements in TriMet Service Enhancement Plans. The main plan goals and objectives are listed in the box on the right.

WHY THIS PLAN IS NEEDED

By 2035, the City of Portland is expected to grow by nearly 120,000 households (about 280,000 people) and almost 150,000 jobs. The Portland Plan and the Climate Action Plan have established a mode split goal of 25% of all trips on transit by 2035, and the 2035 Regional Transportation Plan includes a goal of tripling transit mode share over 2005 levels. Data from Metro's 2011 Travel Activity Survey indicates that 6.6% of trips in Portland are currently on transit, increasing only 20% between 1994 and 2011. The City needs additional support for transit, as the current growth trend is not aggressive enough to meet mode share targets and accommodate the transportation needs of expected population and employment growth.

The City of Portland recently updated its Comprehensive Plan, which will prioritize transit-oriented centers and corridors to accommodate expected population and employment growth while minimizing traffic growth. TriMet is also developing its Service Enhancement Plans to present long-term visions for the future development of the transit system. These two planning efforts combined can work together to provide high-frequency and high-capacity transit to areas identified for high-density residential and employment land uses. This coordination can result in a concentration of compact, 20-minute neighborhoods where transit is the mode of choice for longer trips to other parts of the City or region.

PLAN GOALS AND OBJECTIVES

- Provide safe and convenient walking, biking, and public transportation opportunities to support land use goals and recommended comprehensive plan designations.
- Increase transit ridership and focus frequent transit network investment by linking land use and infrastructure improvements, policies, and programs.
- Increase bicycle and pedestrian access to transit by addressing network gaps and barriers.
- Increase transit-supported development along existing and future high-frequency transit lines.

What is a 20-Minute Neighborhood?

The 20-minute neighborhood concept represents the range of accessibility by walking in different parts of the city. Beyond proximity to amenities, the concept takes into account factors that make walking more and less difficult, such as existence of sidewalks, slope, and highways.

Transit and higher density zoning alone are not sufficient to produce the levels of development and transit use to meet regional goals. Without safe pedestrian and bicycle access to transit, high-quality transit stops, fast and reliable transit operations, parking management, and effective demand management, the automobile will likely be the preferred mode. TriMet prioritizes future investment and improving and expanding the frequent transit network based on the level of local access investments, transit-supportive policies, and priority treatments. TriMet and the City will work together to update corridors with transit-supportive investments to help support both frequent transit service and transit-oriented development.

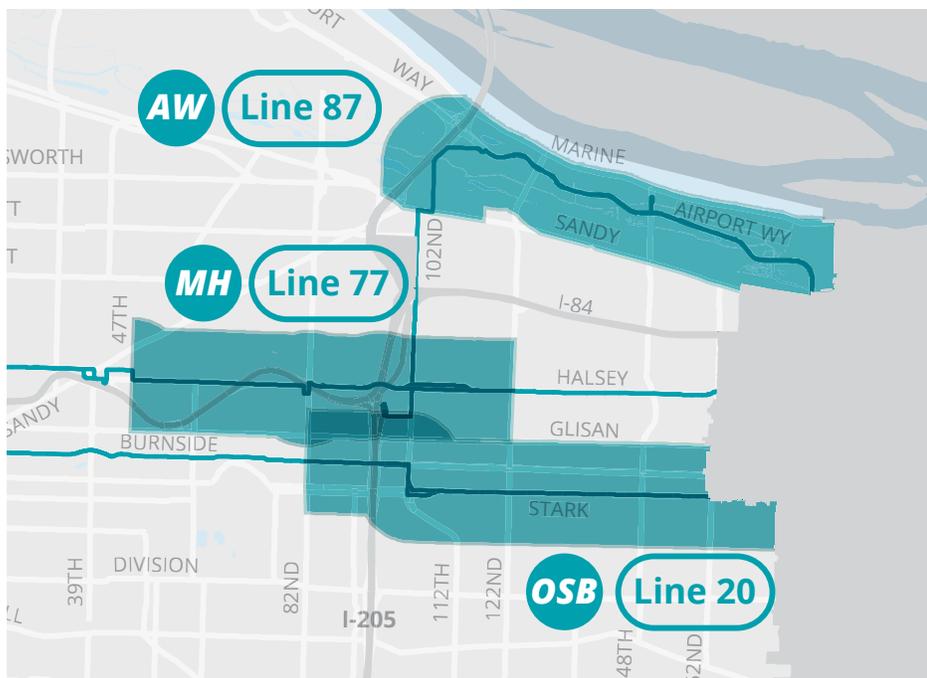
Targeted investments in access to transit, stop amenities, transit priority treatments, and

demand management are ways to increase transit ridership. This project will help the City reach the adopted Climate Action Plan goal of achieving a 25% transit mode share by 2035. Making early investments before anticipated development will ensure future residents and employees find transit to be an attractive travel choice when they are moving or changing jobs and are most receptive to a change in mode choice.

Investments that improve pedestrian and bicycle networks in the areas around a transit line allow transit to be used by a wider population. These investments will also help corridors meet TriMet's criteria for frequent service expansion, allowing the City to invest in bike and pedestrian access improvement in exchange for increased transit service hours.

THREE CORRIDOR STUDY AREAS

The following sections of bus lines 87, 77, and 20 were selected for this plan through careful analysis and evaluation of potential candidate corridors as described in the Planning Process chapter. The study area for each corridor extends half a mile in each direction from the transit line along the following segments:



Middle Halsey - line 77

- NE Halsey St: 47th - 126th

Outer Stark-Burnside - line 20

- E Burnside: 82nd - 102nd
- SE 102nd: Burnside - Stark
- SE Stark: 102nd - 162nd

Airport Way - line 87

- NE 105th: Sandy - Holman
- NE Holman: 105th - Airport Wy
- Airport Wy: Holman - City Limits

MIDDLE HALSEY - LINE 77

TriMet line 77 serves the Middle Halsey corridor between NE 47th Avenue to 122nd Avenue. Line 77 travels through Portland's inner neighborhoods and downtown to the west while continuing east beyond the City limits, through northern Gresham and ending in Troutdale. The Middle Halsey corridor has a mostly complete street grid with nodes of more intense land use at regular intervals; the corridor is anchored on its eastern and western ends by the Hollywood neighborhood/commercial district and the commercial center at NE 122nd Avenue; the corridor passes through nodes of higher land use intensity at 82nd Avenue and at Gateway/Halsey-Weidler.

I-84 weaves through the Middle Halsey corridor creating a barrier in multiple places that separates and limits access between the neighborhoods north and south of the freeway. This increases the importance of the roads that do cross I-84 for all modes.

The western half of the corridor has a regular street grid and completed sidewalks common throughout inner Portland, while the corridor east of I-205 has a less fine-grained street network and fewer completed sidewalks; this discrepancy between the street grid and sidewalk networks is a result of Portland development and annexation.

The bicycle network is sparse, with just a single incomplete east-west route paralleling Halsey St and infrequent north-south connections across the corridor.

Transit use is robust near the corridor activity centers; the most active pair of stops (at the 82nd Ave MAX station) with over 800 riders getting on and off each weekday.

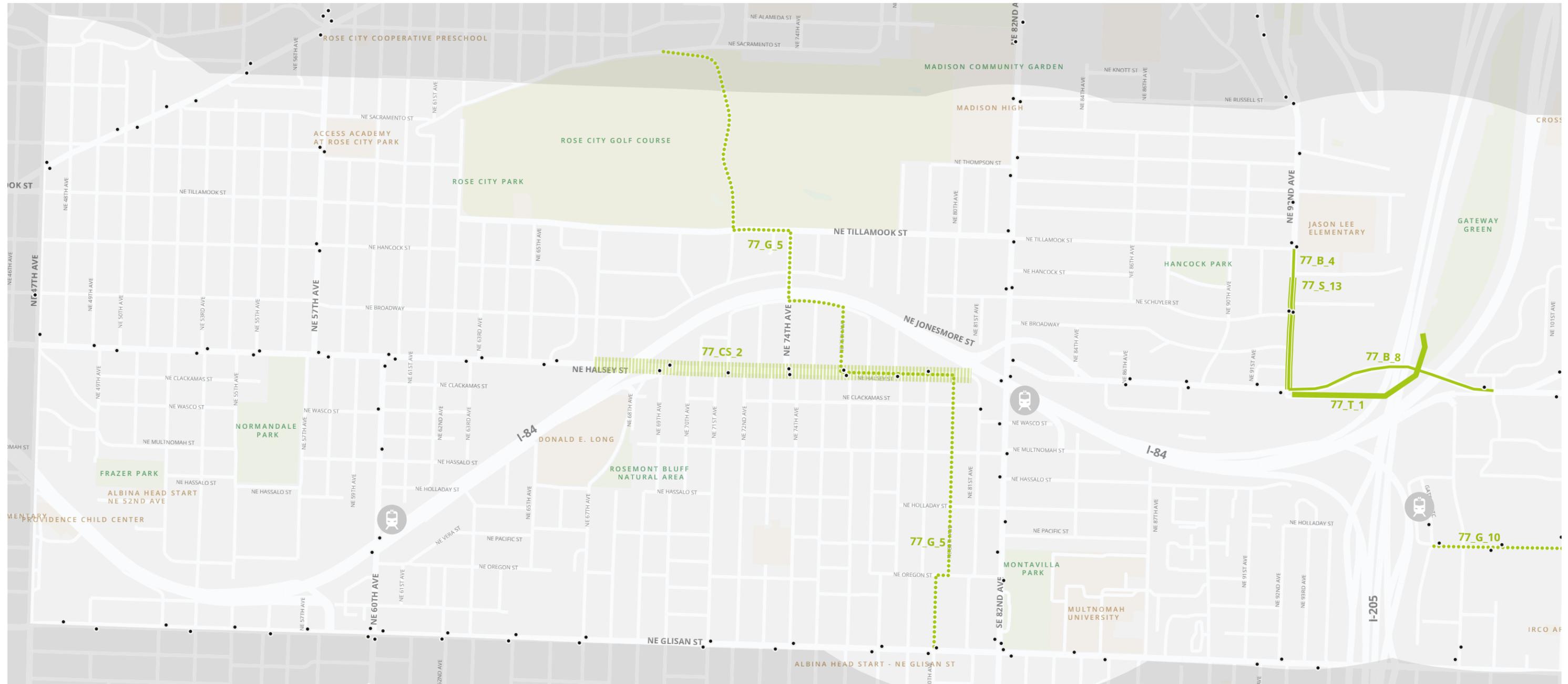
The corridor has a net influx of people commuting to jobs in the corridor (22,909 in and 13,332 out). The majority of those employed in the corridor travel from the south and west, while most of those living in the corridor commute west into downtown for work.

Funded projects**Seventies Neighborhood Greenway (77_G_5)**

This neighborhood greenway will provide a low-stress bicycle route with traffic calming and crossing improvements from NE Sacramento St to SE Flavel St using various streets along the "70s" Avenues as well as SE/NE 80th Ave in some segments. This will provide a needed route to access destinations along 82nd Ave, which it closely parallels, and fills a major gap in the bike network between the 50s and 80s Neighborhood Greenways. This project includes a lane reconfiguration and addition of bike lanes on NE Halsey St from 67th to 80th to help facilitate the transition of the greenway from 74th to 80th. The project design phase will include consideration of extending bike lanes farther west and will carefully analyze traffic impacts and safety benefits prior to implementation. The project has been awarded federal funding through the ODOT Enhance program, with local match coming from System Development Charges, and will be designed and constructed in the 2019 to 2021 timeframe.

I-205 Undercrossing (77_T_1)

This project will construct a multi-use path connection under I-205 from NE Halsey St & 92nd Ave to the I-205 Path. The path will provide a new walking and bicycling connection from inner NE Portland to the I-205 Path and East Portland as well as to the future Gateway Green park, currently under construction. The project also includes roadway widening, sidewalk infill, and bike lanes on 92nd Ave from Halsey to Tillamook, to connect the path to the Tillamook Neighborhood Greenway. The project has been awarded federal funding through the ODOT Enhance program, with local match coming from Transportation System Development Charges. The City will design and construct it in the 2019 to 2021 timeframe.



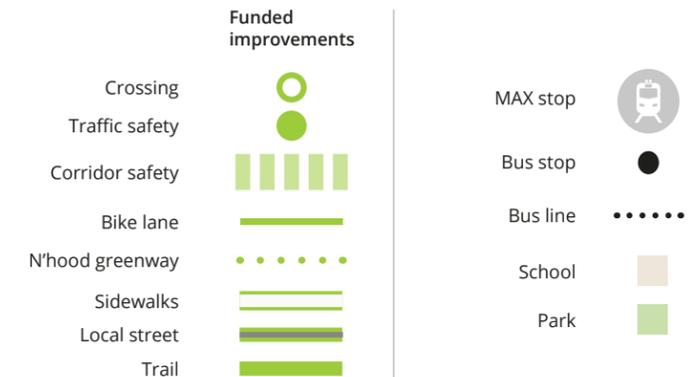
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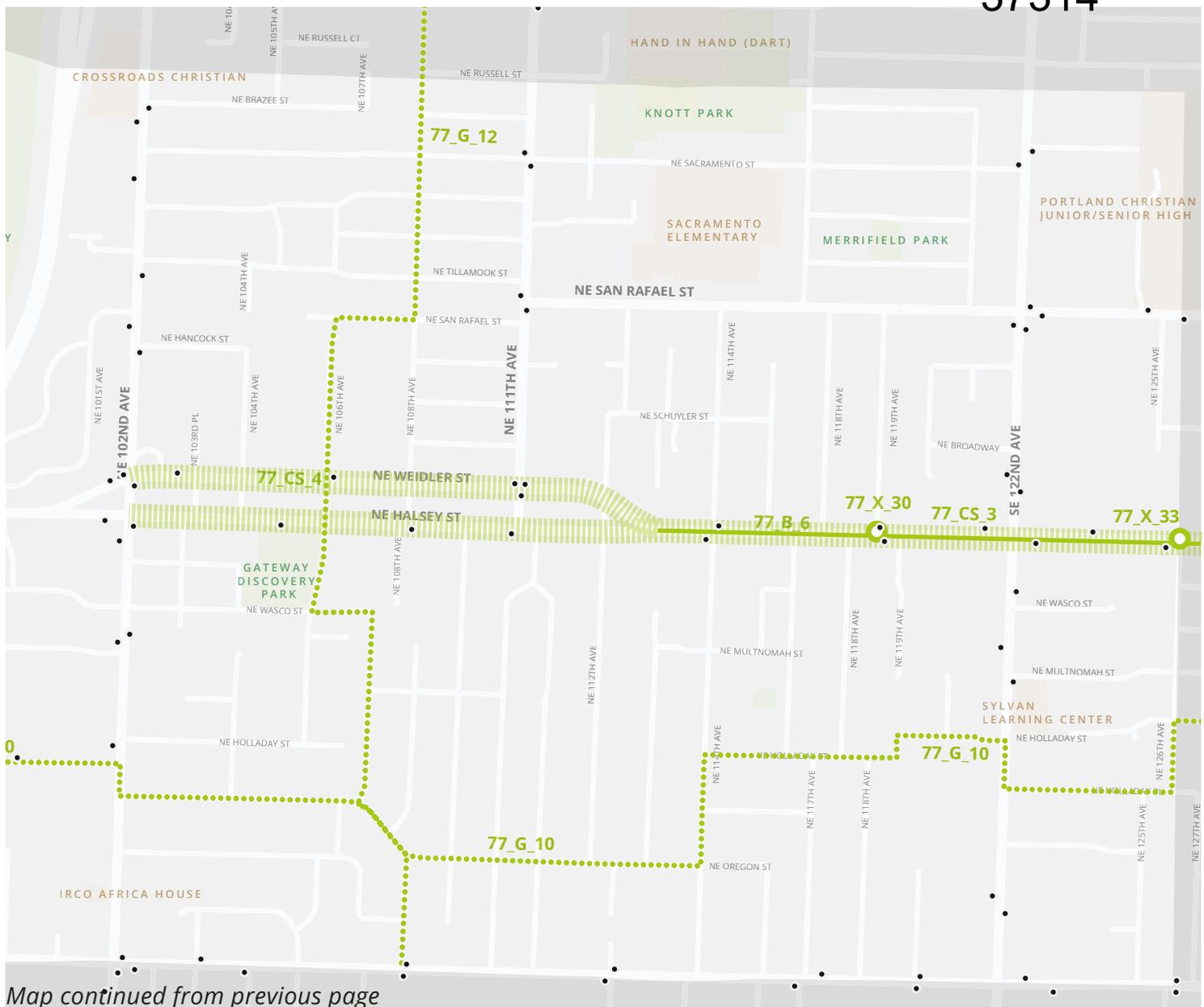
100s Neighborhood Greenway (77_G_12)

This neighborhood greenway project will provide a low-stress bicycle route with traffic calming and crossing improvements from I-84 to Powell in the “100s” Avenues, providing a needed north-south route between 102nd and 122nd. It will run along 106th Ave as it crosses the NE Halsey/Weidler couplet in Gateway, and will include new rapid flashing beacon crossings to cross the major streets. This greenway received federal funding through the Regional Economic Opportunity Fund (REOF) as part of a larger set of projects called East Portland Access to Education & Employment (EPAEE). This larger EPAEE project also includes a new pedestrian hybrid beacon crossing at NE Halsey St & 114th Ave, within the GTC corridor. EPAEE is currently in the design phase and will be constructed in the 2017 to 2018 timeframe.

Halsey / Weidler Corridor Improvements (77_CS_4)

This project will add enhanced crossings, pedestrian-scaled lighting, and protected bike lanes to the NE Halsey/Weidler couplet commercial main street area from 102nd to 113th. These improvements were developed with the community through the Halsey-Weidler Commercial District Investment Strategy, led by the Portland Development Commission (PDC), and funding was allocated through the Gateway Urban Renewal Area. PBOT later worked with PDC and community groups to add protected bike lanes to the scope of the project and extend a two-way bikeway west across I-205 to 92nd Ave. PBOT also agreed to provide additional Transportation System Development Charge funding. The project is currently in design and will be constructed in 2017.





Outer Halsey Corridor

PBOT developed this in 2016 as a Vision Zero project to address the high number of serious injury, fatality, and ped/bike crashes along the corridor. The project will add enhanced crossings, improve traffic safety, enhance the existing bike lanes, improve lighting, and construct some missing sidewalks on NE Halsey St from 114th to 148th. In the GTC segment of the corridor, the project will build enhanced crossings at 119th and 126th in addition to enhancing bike lanes and improving overall traffic safety. The improvements have been funded through a combination of City General Fund and Transportation System Development Charge revenue. The City will construct it in the 2017 to 2018 timeframe.

HOP Neighborhood Greenway

This project will provide a low-stress bicycle route with traffic calming and crossing improvements running east-west from Gateway Transit Center to 131st Ave between Halsey and Glisan. This greenway will fill a major gap in the bike network and provide a low-stress alternative to busy streets in East Portland. It includes two sections of street paving and pedestrian/bicycle crossings of 102nd and 122nd. The project was funded through the PBOT Fixing Our Streets program and will be completed in the 2017 to 2019 timeframe.

OUTER STARK-BURNSIDE - LINE 20

Line 20 serves the Outer Stark-Burnside corridor east from 82nd Ave and Stark St, south on NE 102nd Ave to Stark St, then east along Stark St to the City limits. Line 20 travels from Gresham west through downtown Portland to Beaverton. The Outer Stark-Burnside corridor has a fragmented street grid with continuous moderate-intensity land use; this corridor passes through Montavilla, Gateway, 122nd, Glenfair, and Rosewood.

The Stark-Burnside corridor has a coherent network of arterials and collectors, but the same jurisdictional, historical, and developmental forces which left the eastern half of the Middle-Halsey Corridor with an incomplete sidewalk network have created a street grid in the Stark-Burnside corridor with few sidewalks. Many local streets are good for accessing homes but not for walking to other destinations.

The Stark-Burnside corridor also has one east-west bike route along Burnside street and regular but infrequent north-south routes across the corridor.

Transit is consistently well-used the entire length of the corridor, which is remarkable given the MAX Blue Line runs parallel just ¼ mile north of Line 20. The highest activity stop is at Burnside and 82nd Avenue, with nearly 800 people getting on and off Line 20 on a typical weekday.

The corridor has a net outflux of people during the commute to work (12,322 in - 14,841 out). Of those who leave the Stark-Burnside corridor for work, many work in the Portland Central City, while people working in the corridor tend to come from points south and east.

Funded projects

100s Neighborhood Greenway (20_G_4)

This neighborhood greenway project will provide a low-stress bicycle route with traffic calming and crossing improvements from I-84 to Powell in the "100s" Avenues, providing a needed north-south route between 102nd and 122nd. It will run along

106th and 108th Aves as it crosses the Stark/Washington couplet in Gateway. This greenway received federal funding through the Regional Economic Opportunity Fund (REOF) as part of a larger set of projects called East Portland Access to Education & Employment (EPAEE). This larger EPAEE project also includes sidewalk infill and bike lanes on Cherry Blossom south of Washington St, within the GTC corridor. EPAEE is currently in the design phase and will be constructed in the 2017 to 2018 timeframe.

130s Neighborhood Greenway (20_G_6)

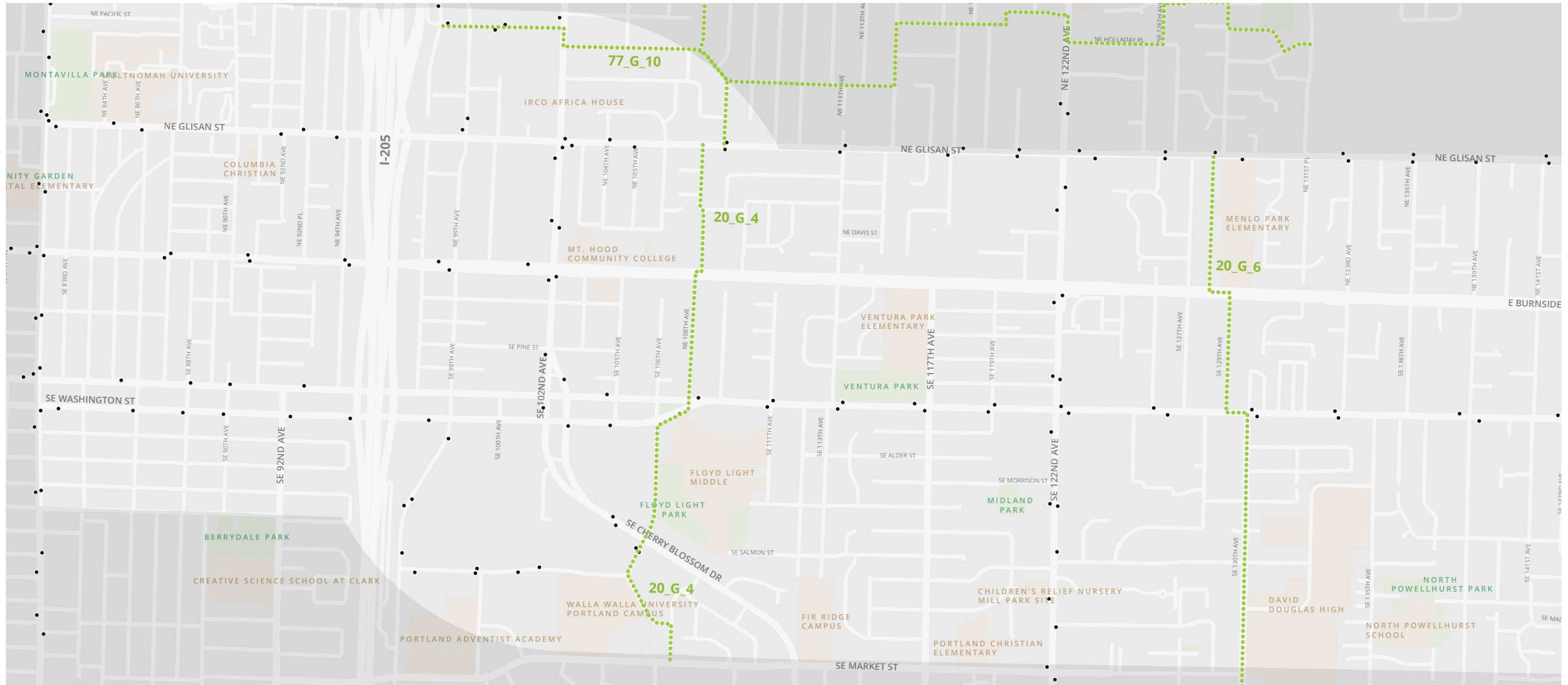
This neighborhood greenway project will provide a low-stress bicycle route with traffic calming and crossing improvements in the "130s" Avenues from I-84 to Powell in East Portland, providing a needed north-south route between 122nd and 148th. It will run along 129th north of Stark and 130th south of Stark, serving multiple destinations including David Douglas High School. This greenway received Regional Flexible Fund Allocation (RFFA) as a set of projects called East Portland Access to Transit. The project is currently in the design phase and will be constructed in the 2017 to 2018 timeframe.

150s Neighborhood Greenway

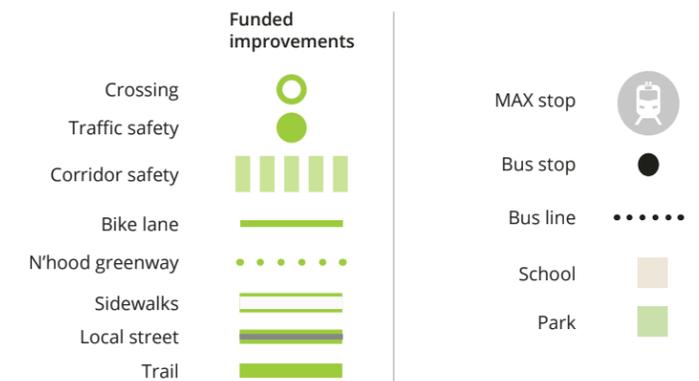
This neighborhood greenway project will provide a low-stress bicycle route with traffic calming and crossing improvements from Halsey to Powell in the "150s" Avenues, providing a needed north-south route between 148th and 162nd. It will run along 155th Ave as it crosses the Stark, and will serve multiple parks and schools. This greenway received federal funding through the Regional Economic Opportunity Fund (REOF) as part of a larger set of projects called East Portland Access to Education & Employment. EPAEE is currently in the design phase and will be constructed in the 2017 to 2018 timeframe.

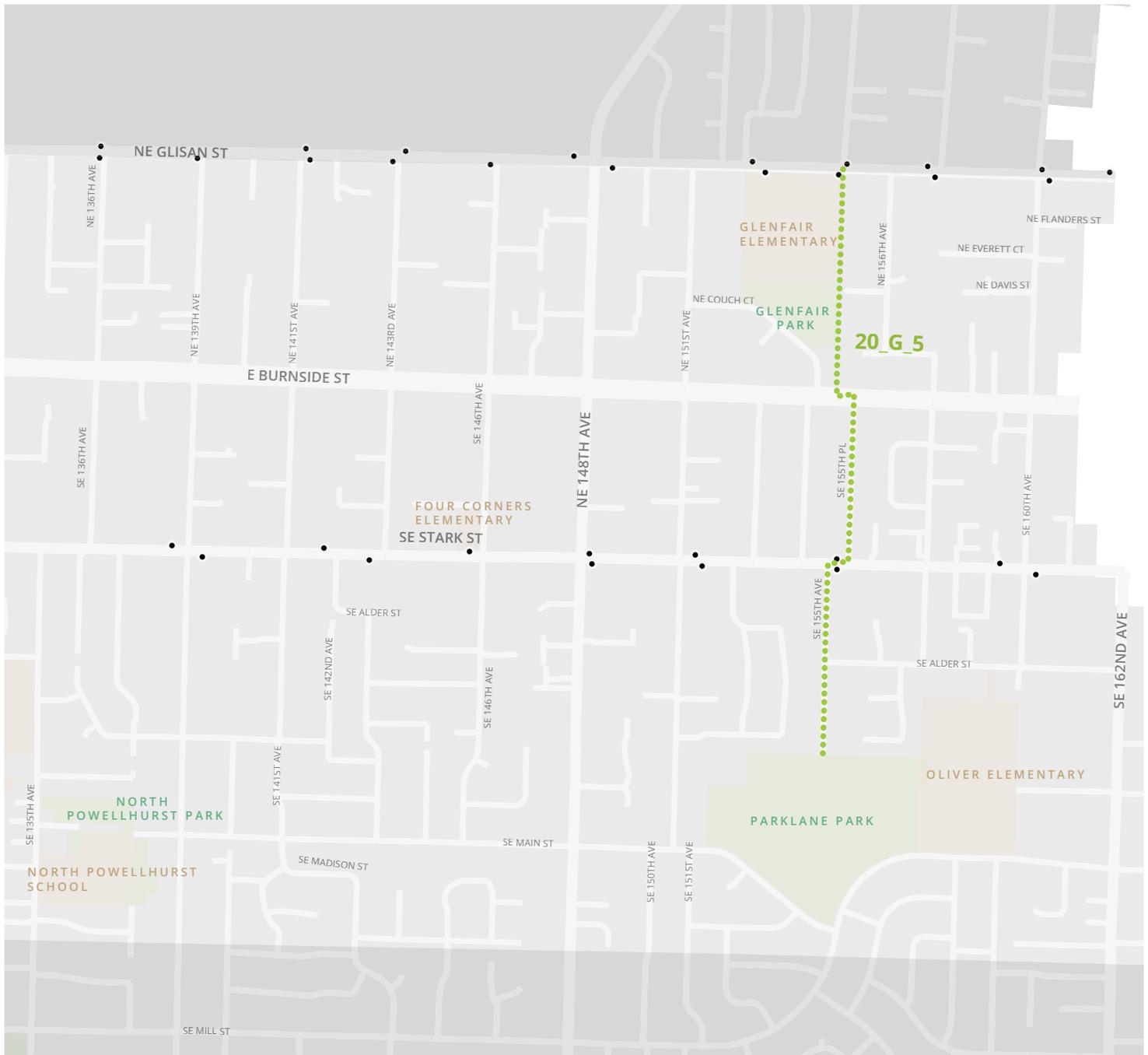
LINE 20 - OUTER STARK-BURNSIDE FUNDED PROJECTS

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AIRPORT WAY - LINE 87

Line 87 serves the Airport Way corridor. The majority of streets loop between Airport Way and industrial and business parks; only a few streets Line 87 serves the corridor, running north along NE 105th Avenue connecting to Airport Way at Holman St, and running east four miles to the City limits and to Rockwood and Gresham; to the west, Line 87 runs south to Gateway and the Gateway Transit Center.

The corridor is almost entirely employment-focused, with a net influx of employees during the work day (20,859 in - 1,573 out). The street network is well-suited to large trucks moving in and out of its industrial areas but not to reaching these areas by foot.

Airport Way itself has nearly continuous sidewalks. However, most side streets lack continuous sidewalks on both sides, including NE 105th Avenue where the Line 87 operates.

The Airport Way corridor has significant stretches of off-street pathways for walking or cycling, but few of them serve transit stops. Airport Way itself has 5-foot bike lanes its entire length, though with a speed limit of up to 45 miles per hour, these are not sufficient to create a safe and comfortable all-ages biking environment.

Transit use along Airport Way is low, and the most active stop pair has 80 people a day get on and off. This may be due to Line 87's low frequency, even during peak commute times.

The Airport Way Corridor does not have any funded projects in it that were identified through the Growing Transit Communities planning process.

SUMMARY OF IDENTIFIED NEEDS

All three corridors have crossing safety issues; Airport Way has many instances of more than a quarter mile between marked or enhanced crossings. Additionally, all three corridors have sidewalk gaps on crucial connecting side streets. In accordance with Middle Halsey's clustered activity centers, its needs surrounded relatively focused areas (around NE 60th Ave, NE 82nd Ave, and the Halsey-Weidler couplet) while those of the other corridors were spread fairly evenly throughout.

RELEVANT PLANS

[2035 Comprehensive Plan](#) (City of Portland, 2016): the plan for how and where to develop land and build infrastructure projects to prepare for and respond to population and job growth in the City of Portland through the year 2035.

[North/ Central Service Enhancement Plan](#) (TriMet, 2016): A future vision for transit service in North Portland, Northwest Portland, Northeast Portland west of I-205, Southeast Portland west of I-205 and north of Division, and downtown.

[Eastside Service Enhancement Plan](#) (TriMet, 2016): A long-term vision that will guide the expansion of bus service in East Portland, Gresham, Troutdale, Fairview, and Wood Village.

[Climate Action Plan](#) (City of Portland, 2015): Portland's Climate Action Plan (CAP) is a strategy to put Portland and Multnomah County on a path to achieve a 40% reduction in carbon emissions by 2030 and an 80% reduction by 2050 (compared to 1990 levels).

[Transportation System Plan](#) (City of Portland, 2016): Long-range plan guiding transportation investments in the City.

Area and Refinement Plans

Projects identified in the following City of Portland plans helped inform the Needs Inventory of this planning process.

- [Hollywood and Sandy Plan](#) (2000)
- [Eastside MAX Station Communities Project](#) (2009)
- [Gateway Street Plan](#) (2009)
- 60th Ave Station Community Project (2011)
- [East Portland in Motion](#) (2012)
- [Halsey-Weidler Commercial Corridor Plan](#) (2014)



RECOMMENDATIONS



City staff share plan recommendations with GTC stakeholders during a mid-January 2017 open house

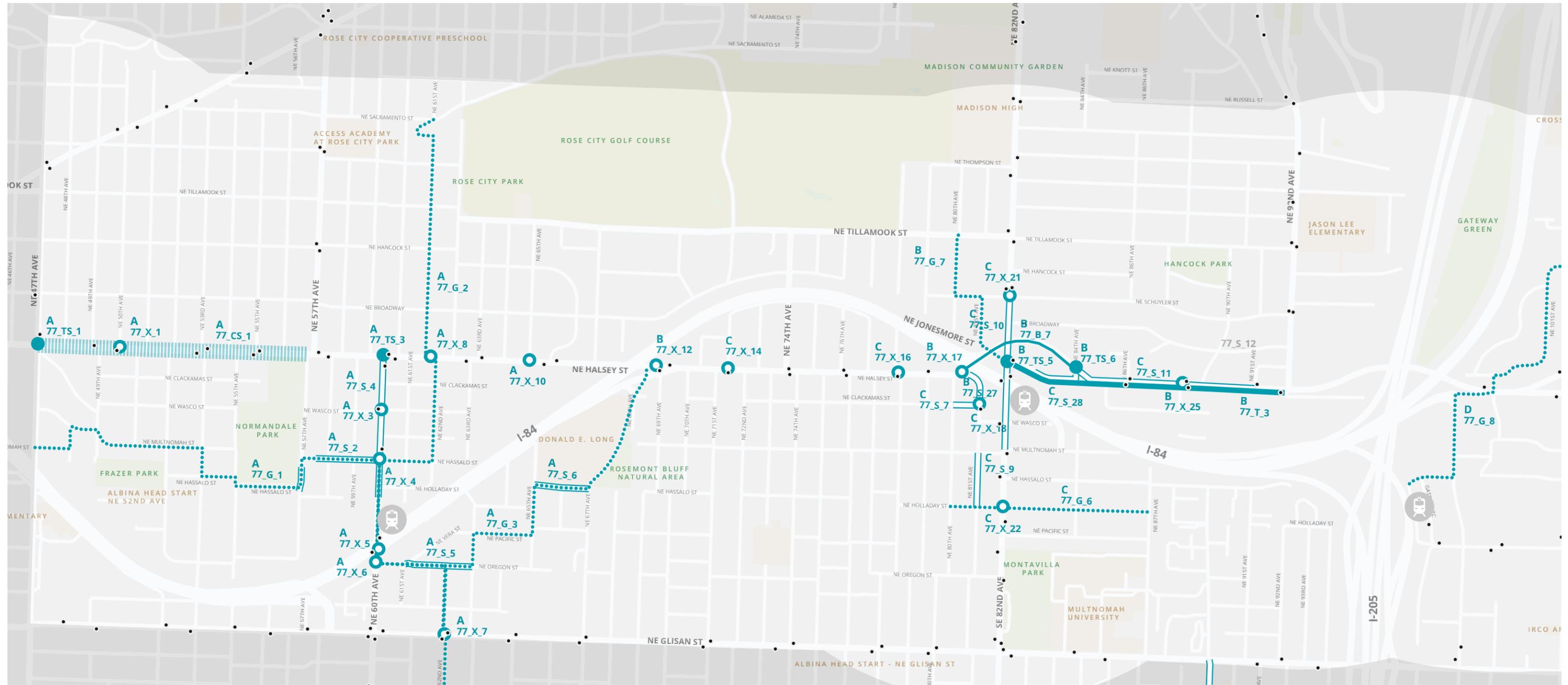
Photo by Shane Valle, PBOT

CORRIDOR INVESTMENT PLANS

This section describes the projects that will help grow transit-oriented communities. Staff created bundles or packages of projects based on geographic area, shared project purpose, or because they are likely to be implemented together. The recommended project bundles will be added to the Transportation System Plan (TSP) Major Projects list and the City could use this list to develop grant applications for federal/state funding or prioritize for local funding. While these bundles would ideally be funded in their entirety, funding is often limited and the City would need to choose between individual projects. For this reason, the GTC Plan also recommends priority levels (Tier 1 (higher) and Tier 2 (lower)) for individual projects, so staff and decision-makers can choose the highest-priority projects within each bundle.

Additional materials for some recommended projects - including conceptual designs - are located in Appendix E to help inform implementation.

LINE 77 - MIDDLE HALSEY RECOMMENDED PROJECTS

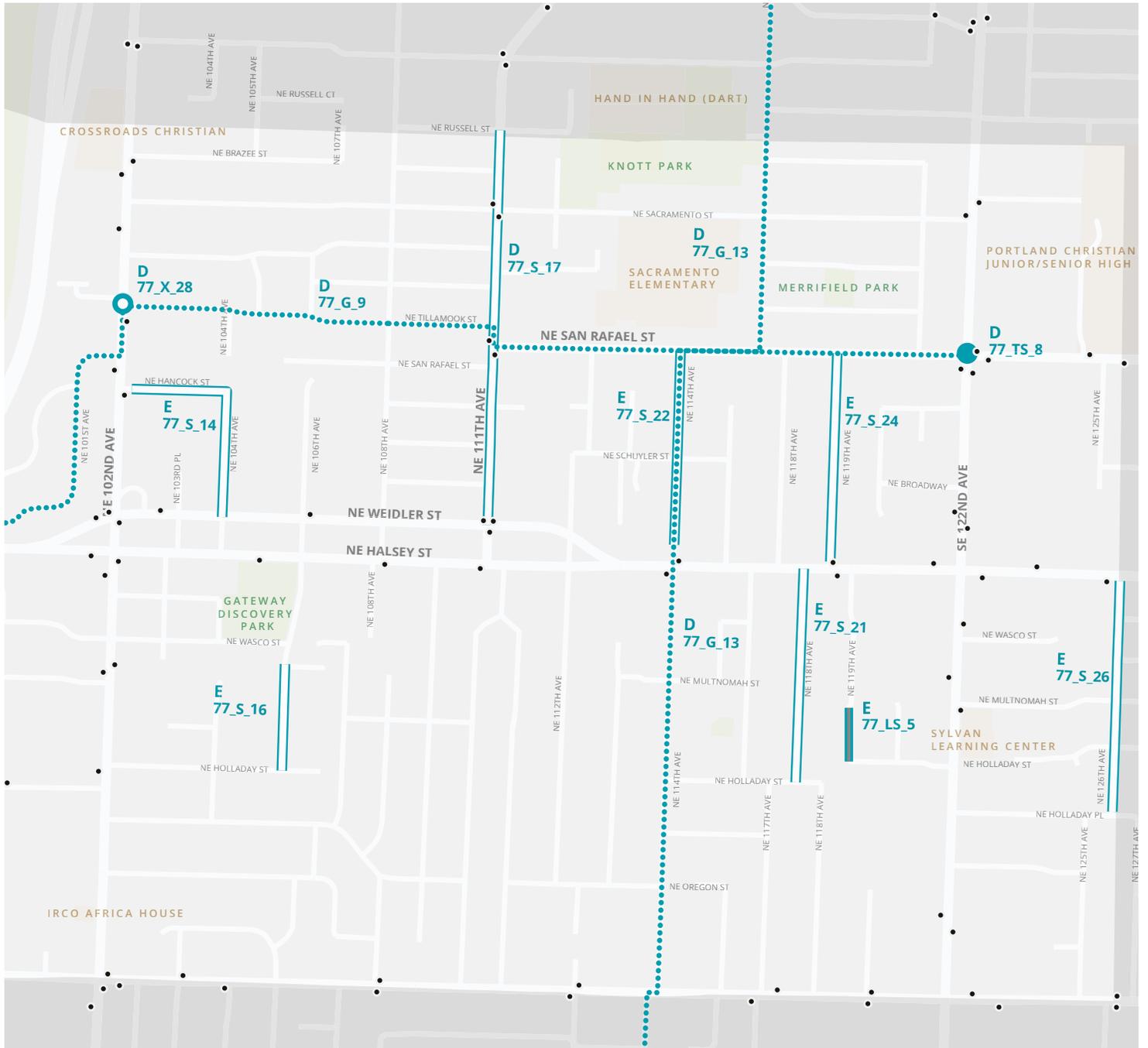


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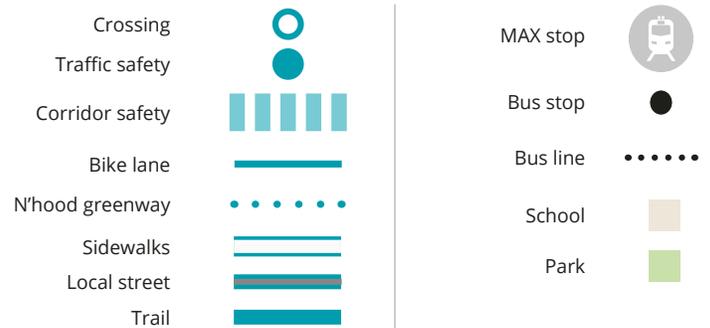
The Middle Halsey Corridor has six bundles of recommended projects:

- A** 60th MAX Station Area Improvements
- B** NE Halsey St Safety and Access to Transit
- C** 82nd MAX Station Area Improvements
- D** Halsey-Weidler Safety and Access to Transit
- E** Outer Halsey Local Street Improvements
- F** 122nd Ave Corridor Improvements

Recommended improvements	
Crossing	
Traffic safety	
Corridor safety	
Bike lane	
N'hood greenway	
Sidewalks	
Local street	
Trail	
MAX stop	
Bus stop	
Bus line	
School	
Park	



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60TH MAX STATION AREA IMPROVEMENTS LINE 77 - MIDDLE HALSEY

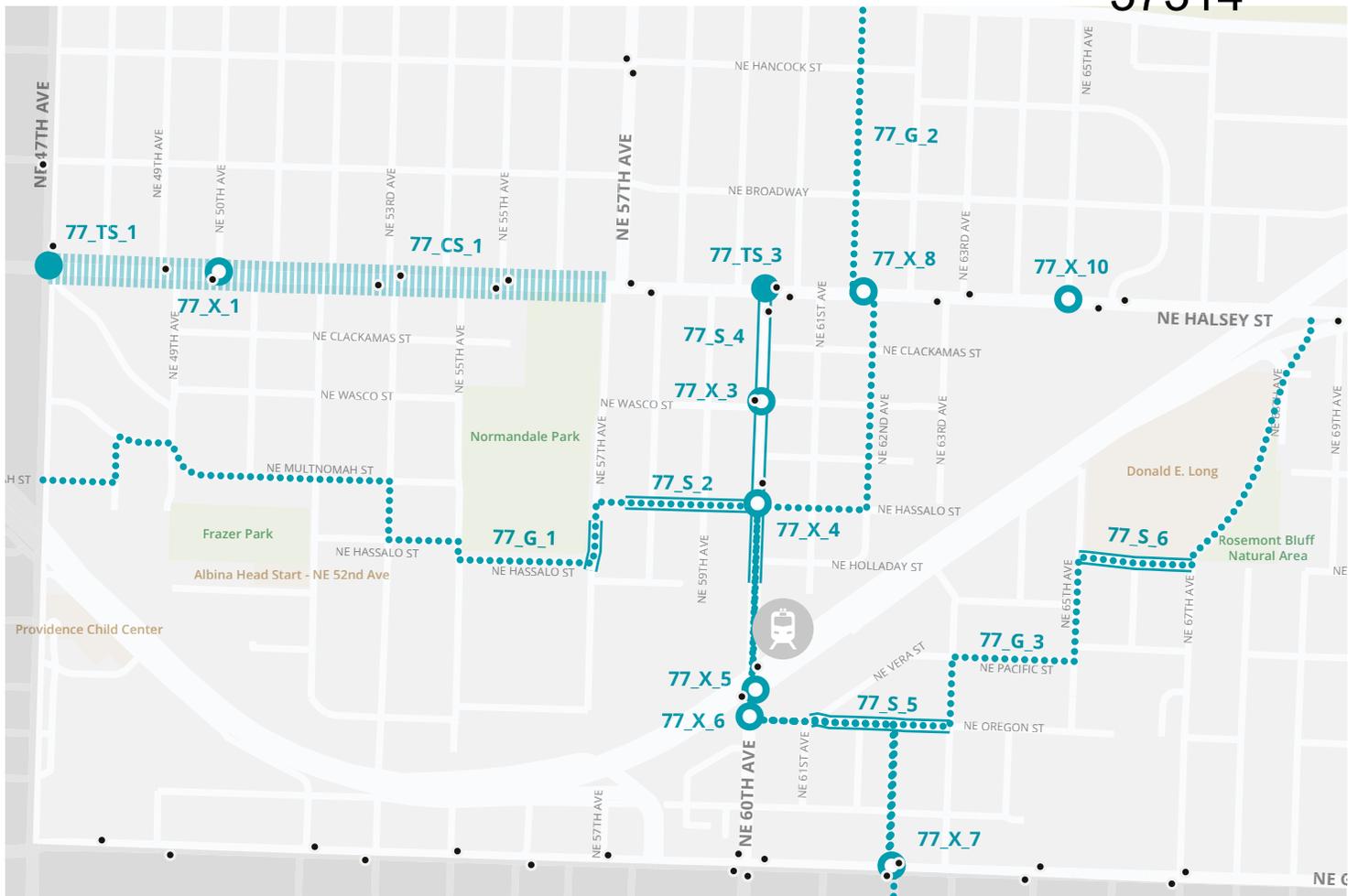


DESCRIPTION

This set of projects will provide a variety of walking, biking, and access to transit improvements in the area near NE Halsey St & 60th Ave where the Line 77, Line 71, and MAX service all come together. Despite having so many transit options, this area has many sub-standard or missing sidewalks, few enhanced crossings, limited bicycle connectivity, and out-of-date traffic signals. The improvements will enhance access to transit, improve safety, and promote walking and biking around the neighborhood. They will also help to improve walking and biking access across I-84, which has acted as a major barrier between neighborhoods for decades.

IMPLEMENTATION STRATEGY

PBOT has already begun project development work for the 60th Ave Sidewalk Widening project and associated crossings and bike lanes, with the intention of leveraging System Development Charge funding in conjunction with a paving project scheduled for summer 2018. PBOT staff will be working with community members and property owners in 2017 to scope the project details and develop an acceptable design. Other projects, such as neighborhood greenways, crossings and re-striping on Halsey, and signal improvements, would be competitive candidates for future rounds of federal funding, state funding, or regional funding because they are within a regionally-significant Station Area and achieve many of the stated goals of available grant programs. Local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). Sidewalks and other street improvements may qualify for Local Transportation Infrastructure Charge (LTIC) funding and may present good opportunities to establish Local Improvement Districts (LIDs).



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
77_X_6	Crossings	NE 60th Ave at Oregon St	Add an enhanced pedestrian/bicycle crossing.	1
77_X_5	Crossings	NE Willow St at 60th Ave (east leg)	Add an enhanced pedestrian crossing.	1
77_X_7	Crossings	NE Glisan St at 62nd Ave	Add an enhanced pedestrian/bicycle crossing.	1
77_X_10	Crossings	NE Halsey St at 65th Ave	Add an enhanced pedestrian crossing.	1
77_X_4	Crossings	NE 60th Ave at Hassalo St	Add an enhanced pedestrian/bicycle crossing.	1
77_X_8	Crossings	NE Halsey St at 61st Ave	Add an enhanced pedestrian/bicycle crossing.	1
77_G_2	Neighborhood Greenways	NE 60s Aves (Sacramento - Davis)	Provide a neighborhood greenway, with traffic calming and crossings as needed. Includes bike lanes on 60th across freeway.	1
77_S_4	Sidewalks on Busy Streets	NE 60th Ave (Holladay - Halsey)	Widen sidewalks, rebuild curb ramps, and add curb extensions.	1
77_TS_1	Traffic Signals	NE Halsey St & 47th Ave	Rebuild signal and add protected turns from 47th to Halsey.	1
77_TS_3	Traffic Signals	NE Halsey St & 60th Ave	Modify or rebuild signal and add protected turns from Halsey to 60th.	1
77_CS_1	Corridor Safety	NE Halsey St (47th - 57th)	Reconfigure lanes to improve safety for all modes. Evaluate potential for extending lane reconfiguration east to 60th.	2
77_X_1	Crossings	NE Halsey St at 50th Ave	Add an enhanced pedestrian crossing.	2
77_X_3	Crossings	NE 60th Ave at Wasco St	Add an enhanced pedestrian crossing.	2
77_G_3	Neighborhood Greenways	NE Oregon/Hassalo/68th (60th/Oregon - 68th/Halsey)	Provide a neighborhood greenway, with traffic calming and crossings as needed. Includes climbing bike lane on 68th.	2
77_G_1	Neighborhood Greenway	NE Wasco/Multnomah/Hassalo St (47th - 60th)	Provide a neighborhood greenway, with traffic calming and crossings as needed.	2
77_S_6	Local Street Improvements	NE Hassalo St (65th - 67th)	Add sidewalk behind existing curb.	2
77_S_2	Local Street Improvements	NE Hassalo St (57th - 60th)	Add sidewalk behind existing curb.	2
77_S_5	Local Street Improvements	NE Oregon St (61st - 63rd)	Improve street with curb and sidewalk.	2

NE HALSEY ST SAFETY AND ACCESS TO TRANSIT LINE 77 - MIDDLE HALSEY

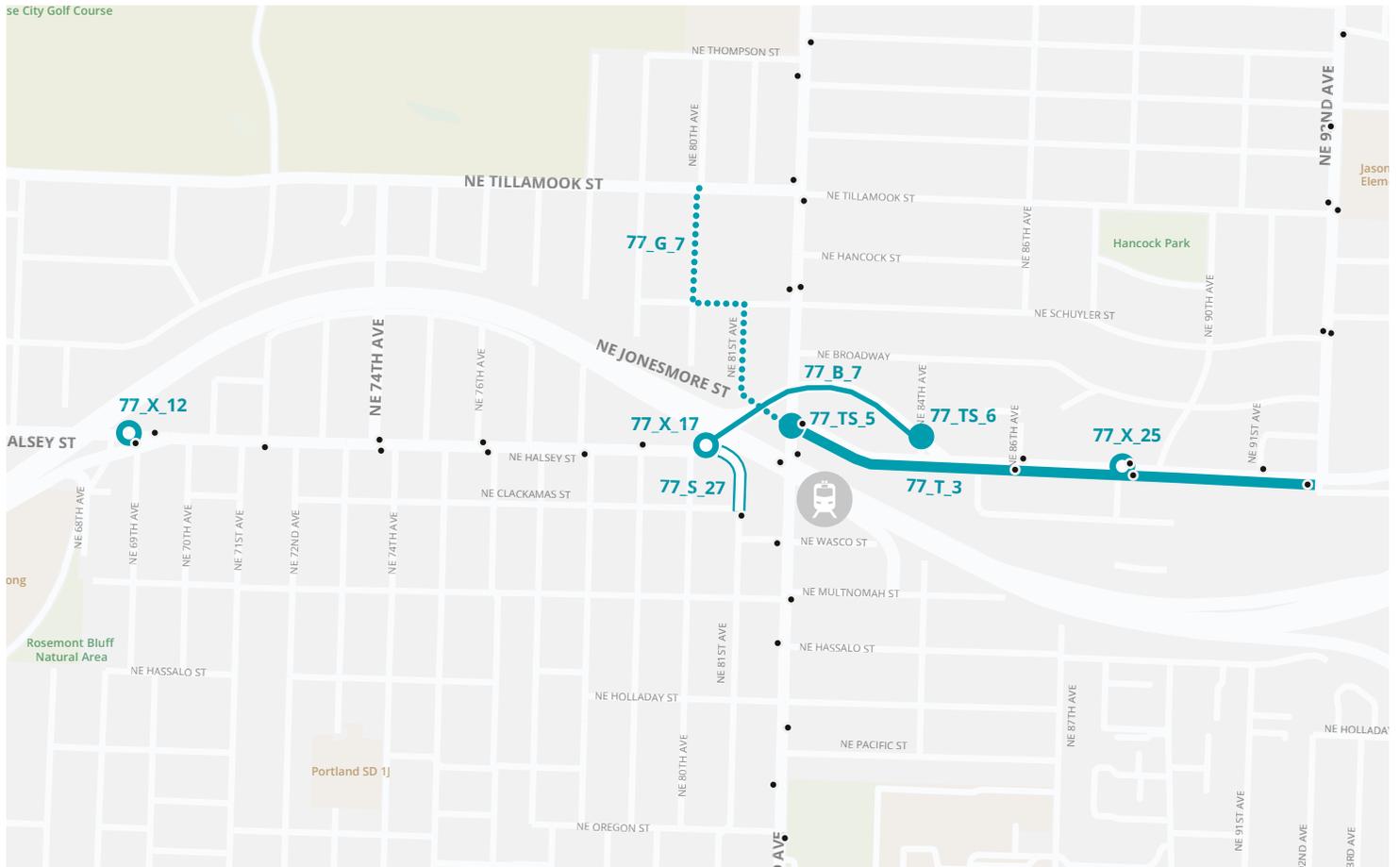


DESCRIPTION

This set of projects will provide a variety of walking, biking, and access to transit improvements along NE Halsey St from 67th Ave to 92nd Ave. Despite being a major transit hub where the Line 77 meets the 82nd Ave MAX Station, this stretch of Halsey does not feel transit-oriented because it includes multiple freeway overcrossings, no bicycle facilities, few pedestrian crossings, and major sidewalk gaps. The improvements will enhance access to transit, improve safety, and promote walking and biking along this corridor. Intersection redesigns will improve safety for all modes at major transit stops and destinations, signal improvements will enhance pedestrian safety and transit operations, and a continuous walking and biking route will be provided for the length of the corridor, ultimately connecting people across I-205 to Gateway Green and the Gateway Regional Center.

IMPLEMENTATION STRATEGY

PBOT recently submitted this package of projects to Metro for a Regional Flexible Funds Allocation (RFFA) grant, which was approved and will provide federal funding for design and construction in the 2019-2021 timeframe. Local match will come from System Development Charge revenue. The project received the highest score in the region in Metro's technical evaluation, received positive feedback during a recent public comment period, and is a top priority project for the City of Portland. The Growing Transit Communities Plan process was critical to developing this project and getting it funded.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
77_X_12	Crossings	NE Halsey St at 68th/70th Ave	Redesign intersection to provide enhanced pedestrian/bicycle crossings and improve safety for all modes.	1
77_X_25	Crossings	NE Halsey St at 88th Ave	Add an enhanced pedestrian crossing.	1
77_X_17	Crossings	NE Halsey St at 80th/81st Ave	Redesign intersection to provide enhanced pedestrian/bicycle crossings and improve safety for all modes.	1
77_T_3	Trails	Jonesmore/Halsey (82nd - 92nd) Trail	Multi-use path connection on south side of Jonesmore and Halsey.	1
77_G_7	Neighborhood Greenways	NE 80th/81st Ave (Tillamook - 82nd/Jonesmore): Neighborhood Greenway	Provide a neighborhood greenway, with traffic calming and crossings as needed. Enhance existing path under overpass with lighting and other improvements.	1
77_B_7	Bikeways	NE Halsey St (82nd Ave overpass)	Add a two-way bikeway on the south side of the overpass.	1
77_S_27	Sidewalks	NE 81st Ave (Halsey - Clackamas): Sidewalk infill	Sidewalk infill behind existing curb.	1
77_TS_5	Traffic Signals	NE 82nd Ave & Jonesmore St: Improve safety	Modify signal to improve pedestrian/bicycle safety and reduce transit delay.*	1
77_TS_6	Traffic Signals	NE Halsey St & Jonesmore St: Improve safety and reduce transit delay	Modify signal to improve pedestrian/bicycle safety and reduce transit delay.	1

*Coordinate with ODOT. Any changes will have to receive approval from ODOT Region 1.

82ND MAX STATION AREA IMPROVEMENTS LINE 77 - MIDDLE HALSEY

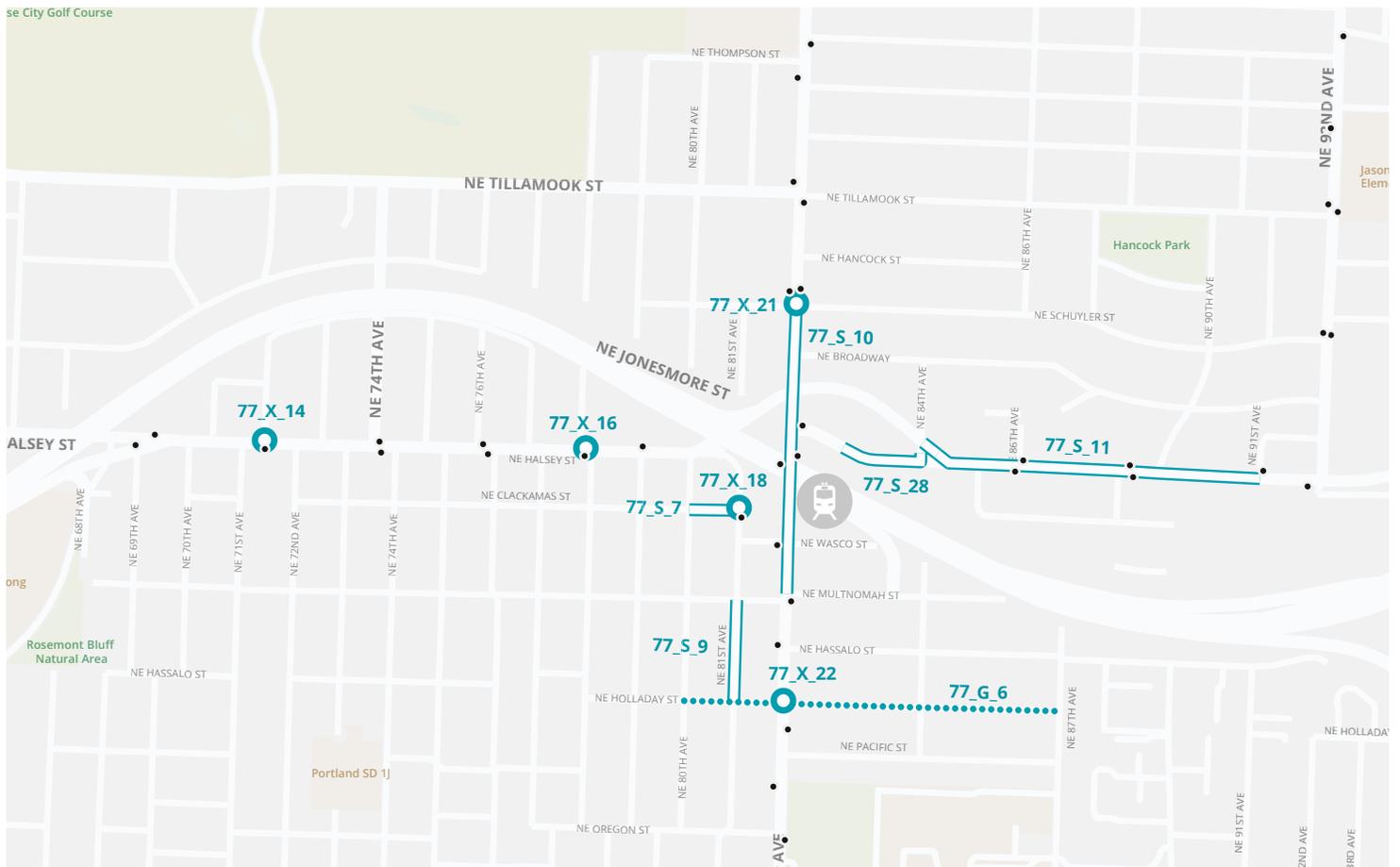


DESCRIPTION

This set of projects will provide a variety of walking, biking, and access to transit improvements in the area near NE Halsey St and 82nd Ave where the Line 77, Line 72, and MAX service all come together. Despite having so many transit options, this area has many sub-standard or missing sidewalks, few enhanced crossings, limited bicycle connectivity, and out-of-date traffic signals. The listed improvements will enhance access to transit, improve safety, and promote walking and biking around the neighborhoods on either side of I-84. They will also enhance a stretch of 82nd Ave that currently does not feel pedestrian-friendly or transit-oriented despite being a major transit hub and transfer point.

IMPLEMENTATION STRATEGY

This package of projects, including neighborhood greenways, crossings, sidewalk infill, and streetscape improvements, would be competitive for future rounds of federal funding, state funding, or regional funding because the projects are within a regionally-significant Station Area and achieve many of the goals of available grant programs. Projects along 82nd Ave are recommended for inclusion in the 82nd Ave of the Roses Plan, currently being developed by ODOT in partnership with PBOT, and are recommended to be considered for ODOT and PBOT funding through dedicated 82nd Ave funding sources such as Fixing Our Streets. Other local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). Sidewalks and other street improvements may qualify for Local Transportation Infrastructure Charge (LTIC) funding and may present good opportunities to establish Local Improvement Districts (LIDs).



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
77_X_14	Crossings	NE Halsey St at 72nd Ave	Add an enhanced pedestrian crossing.	1
77_X_22	Crossings	NE 82nd Ave at Holladay St	Add an enhanced pedestrian/bicycle crossing.*	1
77_G_6	Neighborhood Greenways	NE Holladay St (80th - 87th)	Provide a neighborhood greenway, with traffic calming and crossings as needed.	1
77_S_10	Sidewalks on Busy Streets	NE 82nd Ave (Multnomah - Schuyler)	Streetscape improvements including pedestrian-scaled lighting, wider sidewalk corridors, improved transit stops, and other amenities.*	1
77_S_28	Sidewalks on Busy Streets	NE Jonesmore St (82nd - 84th)	Add sidewalk behind existing curb.	1
77_X_18	Crossings	NE 81st Ave at Clackamas	Add an enhanced pedestrian crossing.	2
77_X_21	Crossings	NE 82nd Ave at Schuyler St	Add an enhanced pedestrian crossing.	2
77_X_16	Crossings	NE Halsey St at 78th Ave	Add an enhanced pedestrian crossing.	2
77_S_11	Sidewalks on Busy Streets	NE Halsey St (84th - 92nd)	Add sidewalks on north side of the street by narrowing roadway width.	2
77_S_9	Local Street Improvements	NE 81st Ave (Multnomah - Holladay)	Improve street with curbs and sidewalks, or consider curbside street with separated walkway or shared street design.	2
77_S_7	Local Street Improvements	NE Clackamas St (80th - 81st)	Improve street with curbs and sidewalks, or consider curbside street with separated walkway or shared street design.	2

*Coordinate with ODOT. Any changes will have to receive approval from ODOT Region 1.

HALSEY-WEIDLER SAFETY AND ACCESS TO TRANSIT LINE 77 - MIDDLE HALSEY

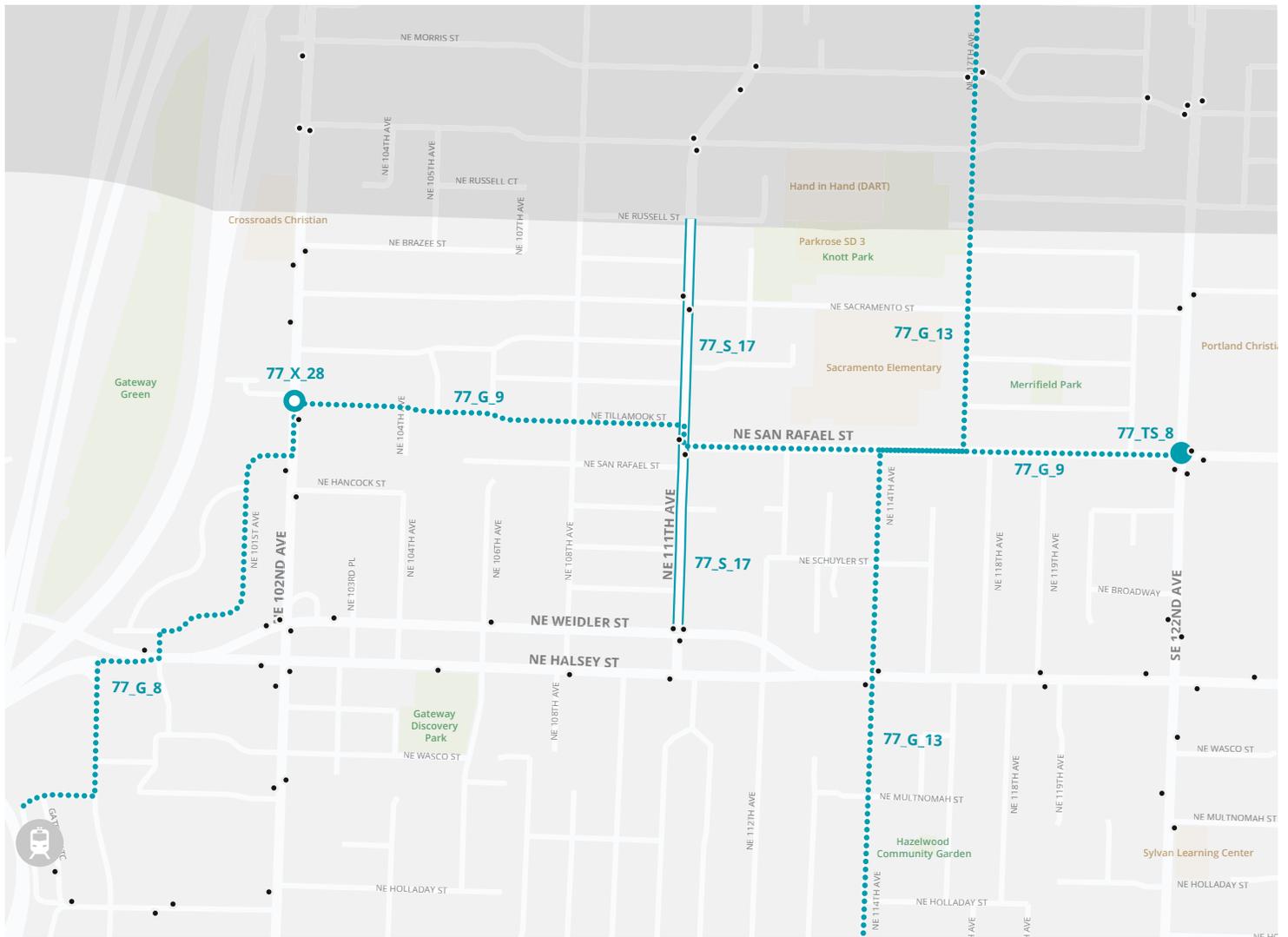


DESCRIPTION

This set of projects will provide a variety of walking, biking, and access to transit improvements around the Halsey-Weidler couplet area of Gateway. PBOT and PDC have already funded improvements to the couplet itself, including protected bike lanes and crossings, so these projects are focused on improved access to the district from surrounding neighborhoods. In addition to supporting Line 77 bus service on Halsey/Weidler and Line 23 bus service on 111th, the improvements will also benefit access to Sacramento Elementary, a Title 1 school in the Parkrose School District.

IMPLEMENTATION STRATEGY

This package of projects, including neighborhood greenways, crossings, and sidewalks, would be competitive for future rounds of federal funding, state funding, or regional funding because the projects would provide safe routes to a Title 1 school, improve access to major transit lines on Halsey and 122nd, and achieve many of the goals of available grant programs. Some project elements may also be appropriate for Fixing Our Streets program funding dedicated to Parkrose School District safe routes to school. PBOT is currently in the early stages of a major public outreach effort related to this Fixing Our Streets funding, including a needs inventory and project prioritization. Other local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). Sidewalks and other street improvements may qualify for Local Transportation Infrastructure Charge (LTIC) funding and may present good opportunities to establish Local Improvement Districts (LIDs).



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
77_G_8	Neighborhood Greenways	Woodland Park Neighborhood Greenway (Gateway TC - Tillamook/108th)	Provide a neighborhood greenway, with traffic calming and crossings as needed. Add pedestrian-scaled lighting at key locations. Includes pathway connection to Gateway Transit Center.	1
77_X_28	Crossings	NE 102nd Ave at Tillamook St	Add an enhanced pedestrian/bicycle crossing.	1
77_S_17	Sidewalks on Busy Streets	NE 111th Ave (Halsey - Russell)	Improve street with curbs and sidewalks.	1
77_G_13	Neighborhood Greenways	110s Neighborhood Greenway (I-84 to Holladay)	Provide a neighborhood greenway, with traffic calming and crossings as needed.	1
77_G_9	Neighborhood Greenways	San Rafael / Tillamook (108th - 122nd)	Provide a neighborhood greenway, with traffic calming and crossings as needed. Consider alternate route on Sacramento.	2
77_TS_8	Traffic Signals	NE 122nd Ave & San Rafael St	Modify existing signal to enable a safe and comfortable neighborhood greenway crossing.	2

OUTER HALSEY LOCAL STREET IMPROVEMENTS

LINE 77 - MIDDLE HALSEY

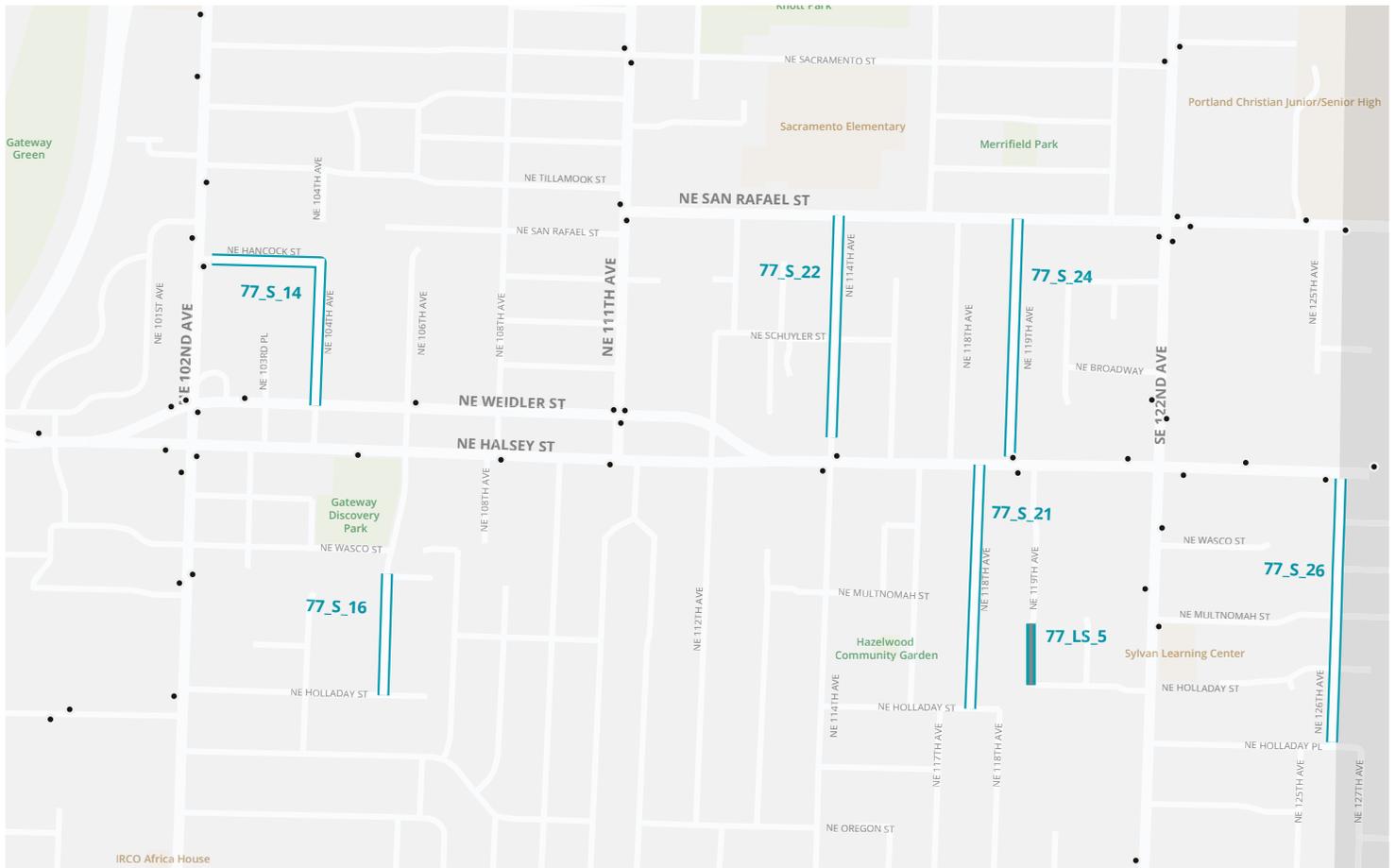


DESCRIPTION

Most local streets in the the Halsey corridor east of I-205 lack sidewalks completely or in some cases have major sidewalk gaps. This can make it difficult for residents of adjacent neighborhoods to access destinations along Halsey or Line 77 bus stops. Because funding for improving local streets has historically been very limited, it is important to prioritize which streets are most in need of investment and would provide the most benefit. This package of projects represents the highest-priority local streets in need of pedestrian improvements based on Growing Transit Communities criteria. Pedestrian improvements on local streets can take a variety of forms that need to be context-sensitive to address the most pressing needs on any given street. For example, a street with more traffic or higher-density land use may require full sidewalks, but a street with low traffic or lower-density housing may only need traffic calming or a paved sidepath. Determining these street design treatments is beyond the scope of this plan. The City will need follow-up analysis before implementation to determine appropriate improvements and design.

IMPLEMENTATION STRATEGY

This package of projects is unlikely to be competitive for federal, state, or regional funding because they are improvements to local streets that are not considered to be regionally significant. They are also unlikely to be eligible for dedicated safety funding such as Fixing Our Streets, because documented safety issues are very rare on local streets. Because of this, other local funding sources and creative partnerships will be needed to implement these improvements. In recent years, PBOT has established a Neighborhood Streets Program dedicated to paving and improving local streets with a focus on alternative low-cost street designs. Funding for the program comes from a combination of General Fund support, General Transportation Revenue (GTR), and the Local Transportation Infrastructure Charge (LTIC). Local Improvement Districts (LIDs) have also been a major source of funding for local street improvements, typically with full curb and sidewalks included. Because the cost per household can be high, LIDs in residential areas are often more successful when PBOT is able to provide some funding subsidy using Transportation System Development Charge (TSDC) revenue or other sources.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
77_S_21	Local Street Improvements	NE 118th Ave (Holladay - Halsey)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	1
77_S_26	Local Street Improvements	NE 126th Ave (Holladay - Halsey)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	1
77_S_14	Local Street Improvements	NE 104th Ave (Hancock - Weidler)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	1
77_S_24	Local Street Improvements	NE 119th Ave (Halsey - San Rafael)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	2
77_S_22	Local Street Improvements	NE 114th Ave (Halsey - San Rafael)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	2
77_LS_5	Local Street Improvements	NE 119th Ave (Holladay to the north)	Improve gravel street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	2
77_S_16	Local Street Improvements	NE 106th Ave (Holladay - Wasco)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	2

122ND AVE CORRIDOR IMPROVEMENTS LINE 77 - MIDDLE HALSEY

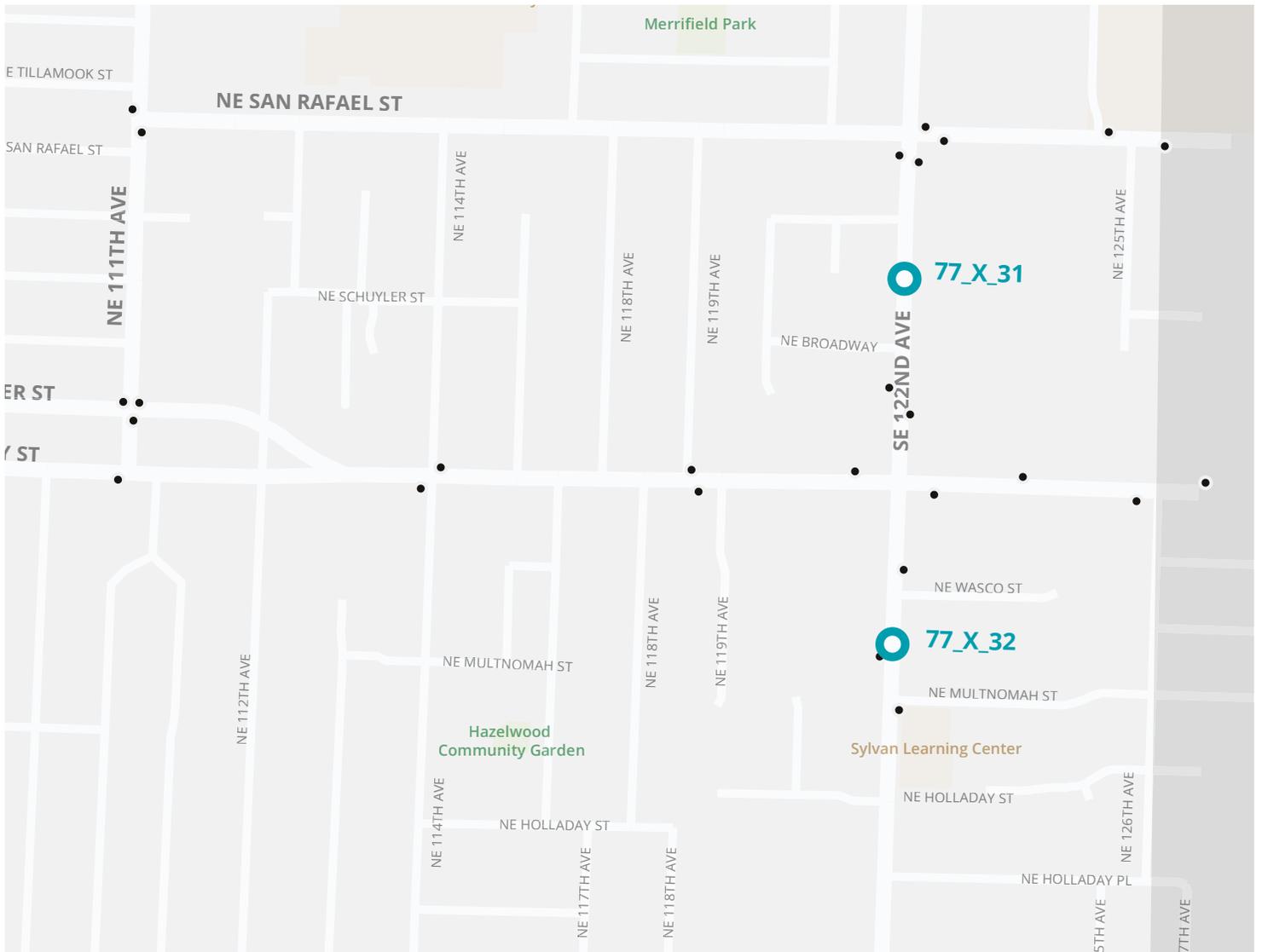


DESCRIPTION

The area around NE Halsey St and 122nd Ave (where the Line 73 and 77 cross) contains multiple commercial destinations, including grocery stores, pharmacies, restaurants, and health clinics. However, most of these destinations have front doors behind large surface parking lots far from the signalized intersection and are hard to reach from transit stops. Introducing new enhanced pedestrian crossings at mid-block locations on 122nd will improve access for transit riders to destinations and it will be easier to access multiple transit stops. While this plan identified these two crossing locations as high priorities to support the Line 77, the City will need to consider them in the context of a major upcoming investment in 122nd Ave from Prescott to Foster to support the Line 73, and balanced with other investments in the corridor.

IMPLEMENTATION STRATEGY

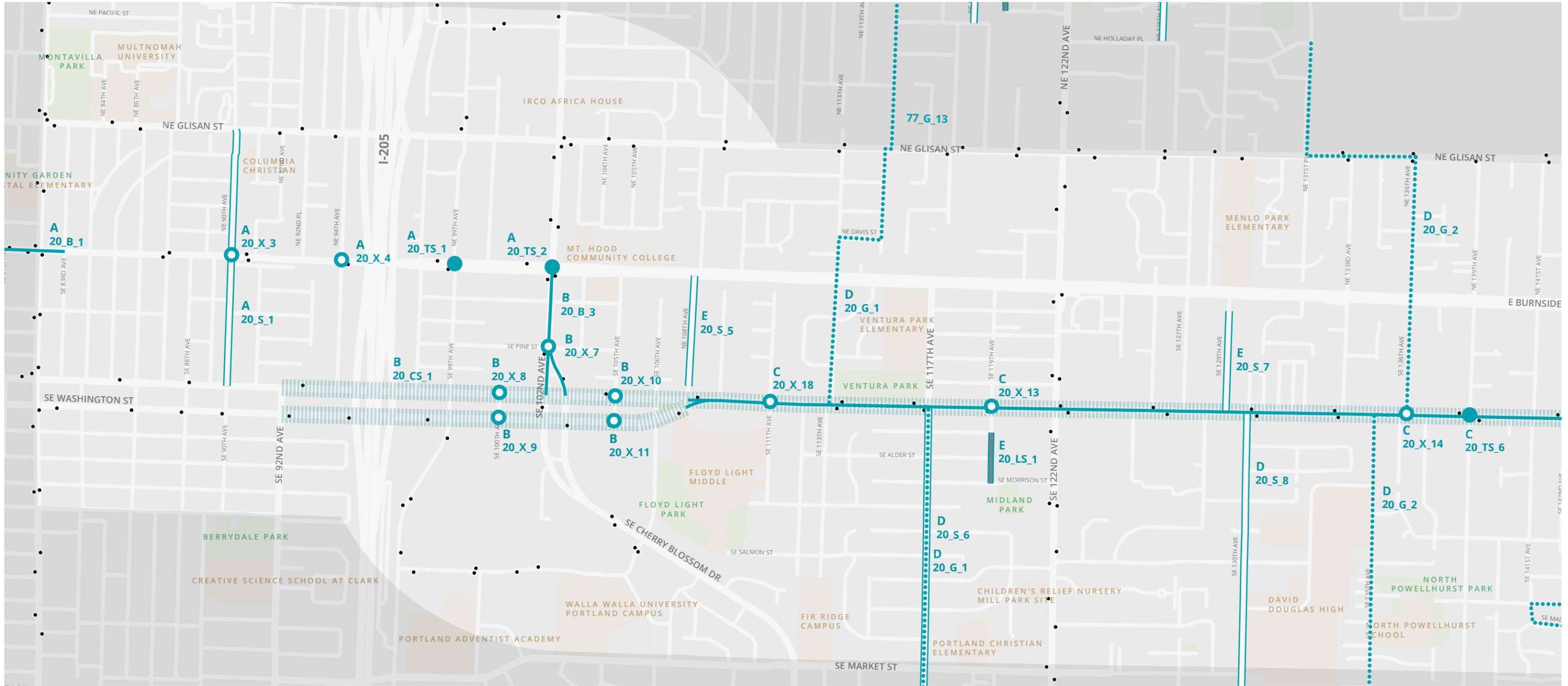
PBOT has been making access to transit investments in 122nd Ave to support increased frequency for the Line 73 for several years, and is now preparing for another round of investment made possible by more than \$2 million allocated for 122nd through the Fixing Our Streets program. A planning process will kick off in 2017 to determine how PBOT will spend this money along the 122nd Ave corridor. These two crossings should be considered within that planning process since the Growing Transit Communities Plan project showed a high level of benefit.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
77_X_32	Crossings	NE 122nd Ave between Multnomah and Wasco	Add an enhanced pedestrian crossing.	1
77_X_31	Crossings	NE 122nd Ave between Broadway and Hancock	Add an enhanced pedestrian crossing.	2

LINE 20 - OUTER STARK-BURNSIDE RECOMMENDED PROJECTS

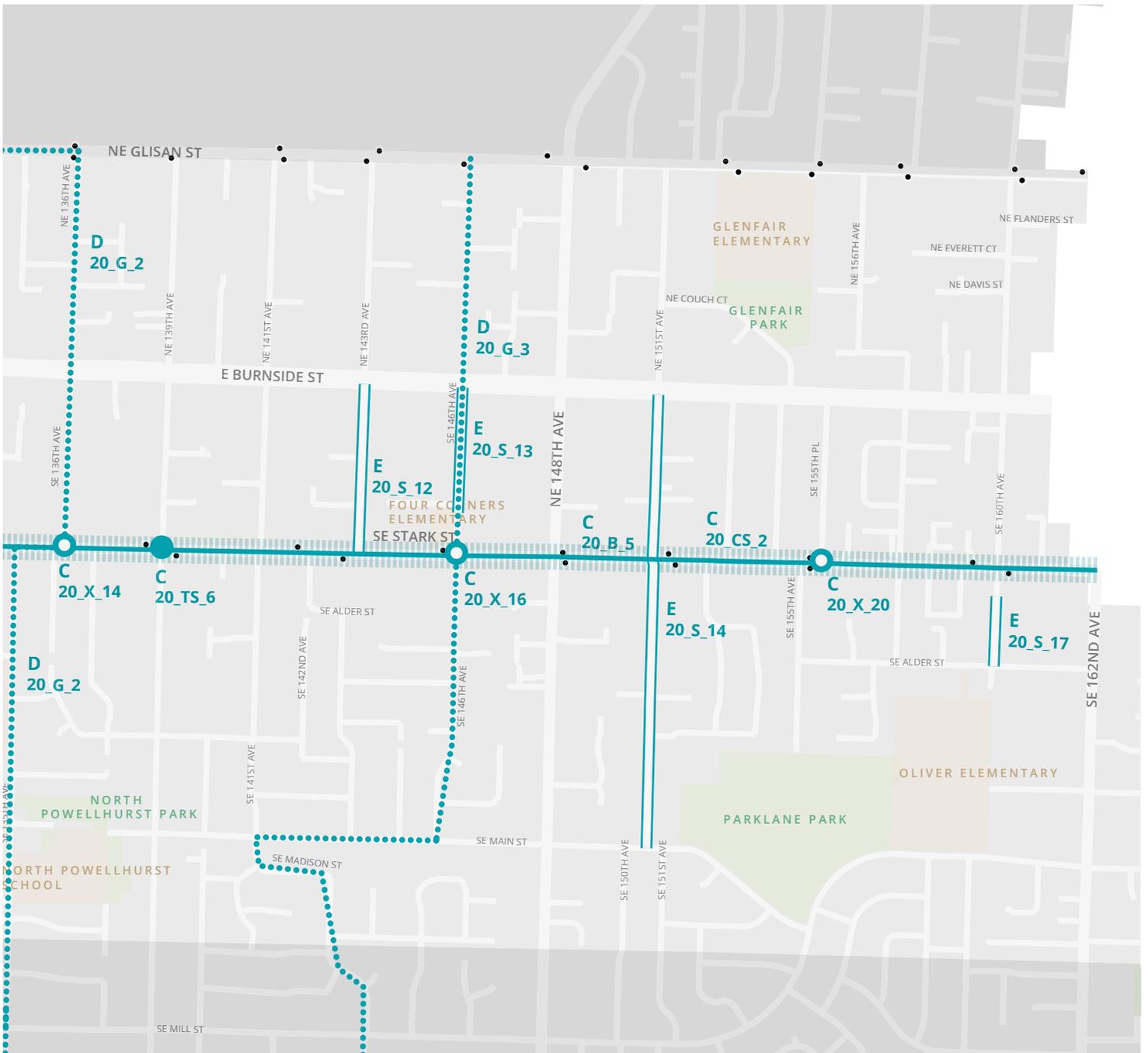


Map continues on next page →

The Outer Stark-Burnside Corridor has five bundles of recommended projects:

- A** East Burnside Safety and Access to Transit
- B** Stark/Washington Corridor Improvements
- C** Outer Stark Safety and Access to Transit
- D** Division-Midway Connected Centers
- E** Outer Stark Local Street Improvements

Recommended improvements	
Crossing	
Traffic safety	
Corridor safety	
Bike lane	
N'hood greenway	
Sidewalks	
Local street	
Trail	
MAX stop	
Bus stop	
Bus line	
School	
Park	



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EAST BURNSIDE SAFETY AND ACCESS TO TRANSIT LINE 20 - OUTER STARK-BURNSIDE



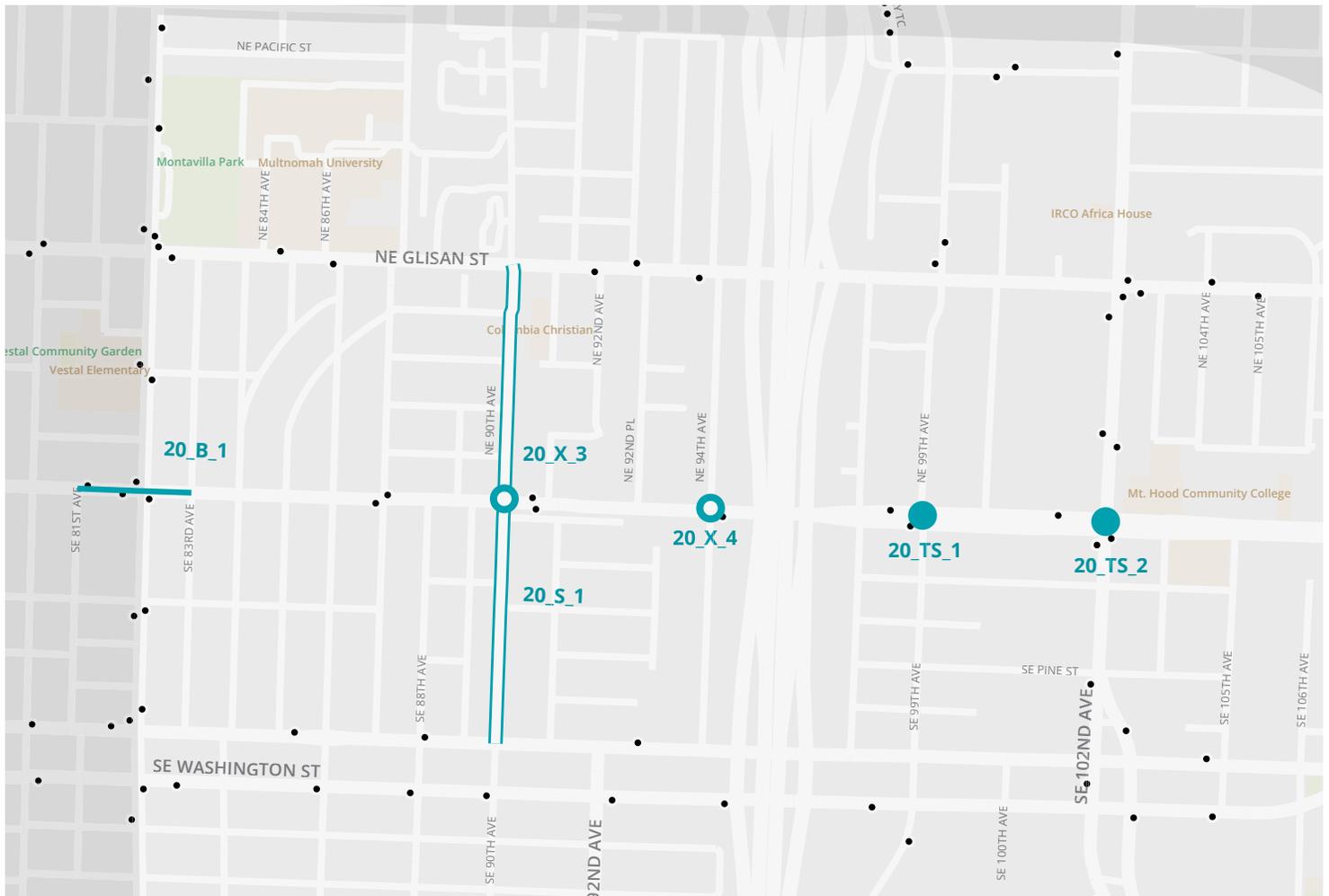
DESCRIPTION

This set of projects will provide a variety of walking, biking, and access to transit improvements along E Burnside from 82nd Ave to 102nd Ave. This section of Burnside has a major bike lane gap crossing 82nd Ave, a major transit delay point at 82nd Ave, missing sidewalks on most local streets, few crossings, and sub-standard curb ramps. The listed improvements will enhance access to transit, improve safety, and promote walking and biking around the neighborhood. While many local streets lack sidewalks, the GTC project evaluation process clearly identified 90th Ave as the north-south connection offering the most access to transit benefit.

IMPLEMENTATION STRATEGY

The project to fill the bike lane gap and reduce transit delay on Burnside crossing 82nd Ave is largely an operational change, mostly signage and striping with little to no capital construction required. However, it will require coordination and agreement among PBOT and ODOT staff and decision-makers. This project is therefore recommended for near-term analysis and potential implementation in conjunction with the

82nd Ave of the Roses Plan, which is looking at this section of 82nd Ave to plan improvements. The signal modification at 102nd Ave is also a relatively simple operational change to signal timing, and has already been completed by PBOT staff using existing staff time. Most other project elements would be competitive candidates for future rounds of federal funding, state funding, or regional funding because Burnside is recognized as part of the regional pedestrian and bicycle networks. These projects also would achieve many of the stated goals of available grant programs. Improvements on 90th Ave may be more challenging to fund with these sources since it is a local street, so additional local funding may need to be identified for that project element. Local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). Sidewalks and other street improvements may qualify for Local Transportation Infrastructure Charge (LTIC) funding and may present good opportunities to establish Local Improvement Districts (LIDs).



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
20_X_3	Crossings	E Burnside St at 90th Ave	Redesign intersection to provide enhanced pedestrian crossing and improve safety for all modes.	1
20_X_4	Crossings	E Burnside St at 94th Ave	Add an enhanced pedestrian/bicycle crossing.	1
20_B_1	Bikeways	E Burnside St (81st - 83rd)	Modify traffic signal operations and striping at 82nd Ave in order to fill bike lane gap and reduce transit delay.*	1
20_TS_2	Traffic Signals	E Burnside St & 102nd Ave: Improve safety and transit operations	Modify signal timing to improve safety and reduce transit delay.	1
20_S_1	Local Street Improvements	NE/SE 90th St (Stark - Glisan)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	2
20_TS_1	Traffic Signals	E Burnside St & 99th Ave: Improve safety and accessibility	Update curb ramps and pedestrian push buttons to improve accessibility. Review signal timing for additional safety improvements.	2

*Coordinate with ODOT. Any changes will have to receive approval from ODOT Region 1.

STARK-WASHINGTON CORRIDOR IMPROVEMENTS

LINE 20 - OUTER STARK-BURNSIDE

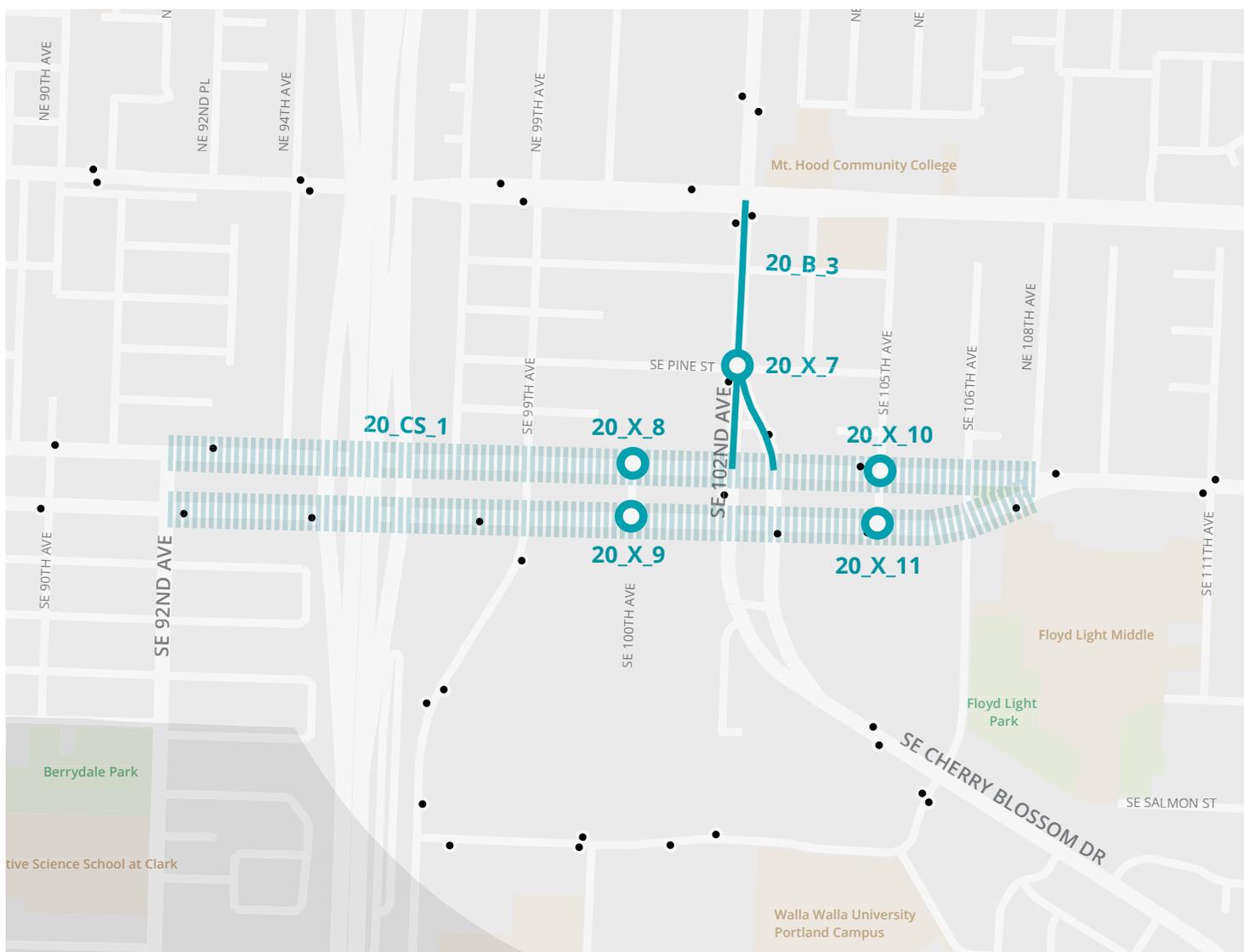


DESCRIPTION

This set of projects will provide a variety of walking, biking, and access to transit improvements along the Stark-Washington couplet in Gateway from 92nd to 108th, along with some improvements on 102nd. This section of Stark-Washington includes the Line 20 and Line 15, with a nearby MAX station on Burnside, but is also auto-oriented and intimidating for people walking and biking. The couplet has three to four traffic lanes in each direction, with widely-spaced signals and narrow bike lanes. NE 102nd Ave north of the couplet recently received improvements, but still lacks continuous bike lanes and has a marked crosswalk that could benefit from improvement. The list of recommended projects will lower traffic speeds, shorten and enhance pedestrian crossings, construct traffic signals, add protected bike lanes, expand on-street parking, and improve bus reliability for both the Line 15 and Line 20.

IMPLEMENTATION STRATEGY

The project to fill the bike lane gap on 102nd Ave was recently prioritized by PBOT staff for funding through Missing Links, a program that funds small bikeway projects, to be implemented in 2017 or 2018 in conjunction with a scheduled paving project on 102nd. Most other project elements are more costly and would be competitive candidates for future rounds of federal funding, state funding, or regional funding because Stark-Washington and 102nd are recognized as parts of the regionally-significant street network. These projects would also achieve many of the stated goals of available grant programs. Local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). Another source of funding could be the Gateway Urban Renewal Area, though most remaining funding is planned to go toward additional improvements in the Halsey-Weidler area.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
20_CS_1	Corridor Safety	SE Stark-Washington Couplet (92nd - 108th)	Corridor safety improvements: lane reconfiguration, protected bike lanes, pedestrian islands, transit islands, bus lanes, and lighting.	1
20_X_10	Crossings	SE Stark St at 105th Ave	Add a signalized pedestrian crossing.	1
20_X_11	Crossings	SE Washington St at 105th Ave	Add a signalized pedestrian crossing.	1
20_B_3	Bikeways	SE 102nd Ave (Burnside - Stark)	Add bike lanes to fill in gaps.	1
20_X_8	Crossings	SE Stark St at 100th Ave	Add a signalized pedestrian crossing.	2
20_X_9	Crossings	SE Washington St at 100th Ave	Add a signalized pedestrian crossing.	2
20_X_7	Crossings	SE 102nd Ave at Pine St	Add an enhanced pedestrian crossing.	2

OUTER STARK SAFETY AND ACCESS TO TRANSIT LINE 20 - OUTER STARK-BURNSIDE



DESCRIPTION

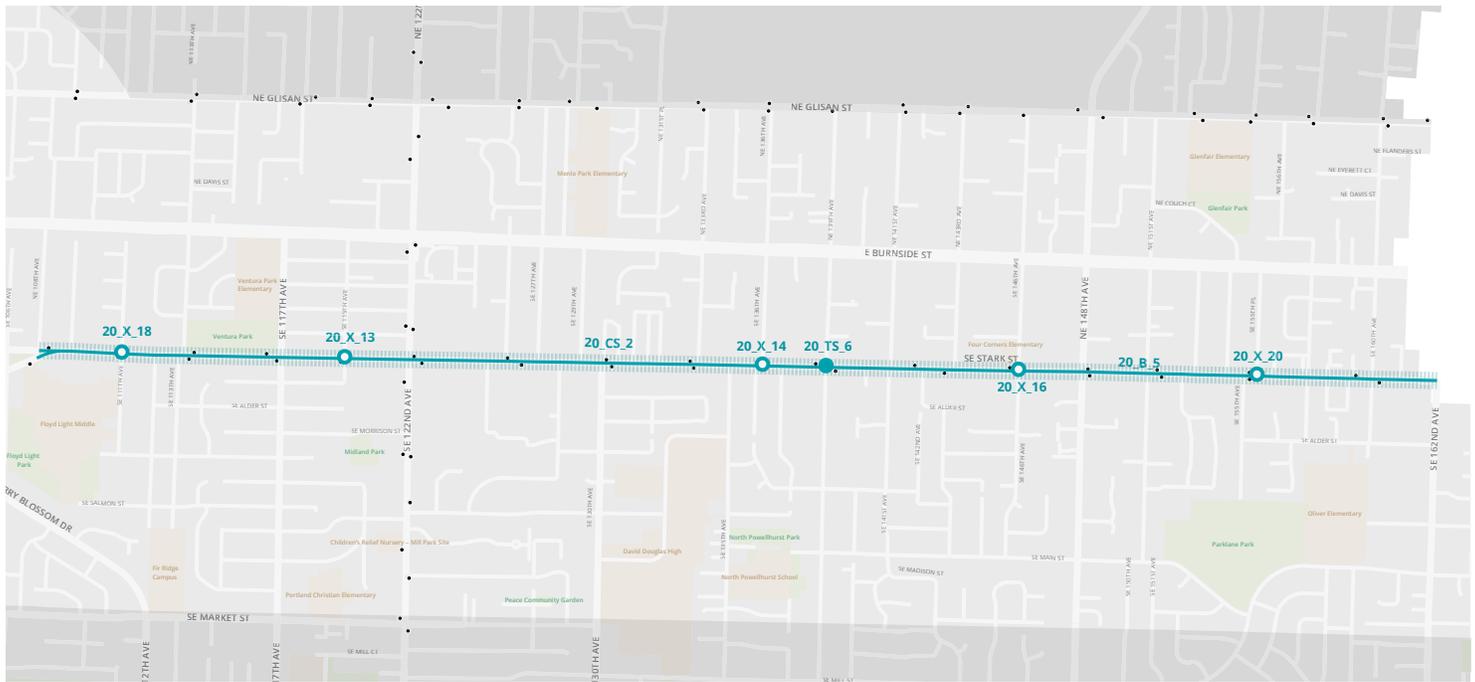
This set of projects will provide a variety of walking, biking, and access to transit improvements along SE Stark St from 108th to the City Limits with Gresham near 162nd Ave. This section of Stark is auto-oriented and intimidating for people walking and biking. It is a 5-lane street with high-speed traffic, no bike lanes, narrow sidewalks, and long gaps between enhanced crossings. Despite the recent addition of several rapid flashing beacons along the corridor, it remains a high-crash street and requires more substantial safety improvements. The list of recommended projects includes a roadway redesign to lower traffic speeds and reduce crash severity, protected bike lanes, potential expansion of on-street parking, improved lighting, and multiple new pedestrian crossings at bus stops. While this project list only includes new crossings, the GTC Plan also recommends that PBOT work in the coming years to improve existing crossings with larger median refuge islands (ideally with trees or other plantings), lighting enhancements, and mast-arms for the rapid flashing beacons.

IMPLEMENTATION STRATEGY

Because of its width and underutilized space (8 feet on either side that is mostly marked “no parking”), Outer Stark offers a major opportunity to re-allocate roadway space to serve multiple modes and improve traffic safety. With a lane reconfiguration, there may be space for transit

islands with shelters (difficult to provide on narrow sidewalks), pedestrian islands, protected bike lanes, transit queue jumps, and expanded on-street parking. However, more capacity would likely be needed at major intersections, and there could be trade-offs in terms of traffic flow and travel times. A focused round of public process and analysis to develop a corridor plan for Stark was beyond the scope of the GTC Plan, but staff strongly recommend developing a plan in the near future. PBOT could independently develop the corridor plan to prepare the project for a funding request, or it could be part of the design phase after a project is funded.

This package of projects would be a competitive candidate for future rounds of federal funding, state funding, or regional funding because Stark is recognized as part of the regionally significant street network. These projects would also achieve many of the stated goals of available grant programs. Local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). One crossing listed, at Stark & 155th, has already been funded through the upcoming East Portland Access to Transit project, with construction planned in the 2017 to 2018 timeframe. There is also a near-term opportunity to fund one or two crossings through the Fixing Our Streets program with funding dedicated to Safer Access to Bus Stops.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
20_CS_2	Corridor Safety	SE Stark St (108th - 162nd)	Corridor safety improvements: lane reconfiguration, access management, protected bike lanes, curb extensions, transit islands, lighting.	1
20_B_5	Bikeways	SE Stark St (108th - 162nd)	Add protected bike lanes.	1
20_X_16	Crossings	SE Stark St at 146th Ave	Add an enhanced pedestrian/bicycle crossing.	1
20_X_20	Crossings	SE Stark & 155th Pl	Add an enhanced pedestrian/bicycle crossing.	1
20_X_13	Crossings	SE Stark St at 119th Ave	Add an enhanced pedestrian crossing.	2
20_X_18	Crossings	SE Stark St & 111th Ave	Add an enhanced pedestrian crossing.	2
20_X_14	Crossings	SE Stark St at 136th Ave	Add an enhanced pedestrian/bicycle crossing.	2
20_TS_6	Traffic Signals	SE Stark & 139th Ave	Modify signal to improve pedestrian/bicycle safety and reduce transit delay.	2

DIVISION-MIDWAY CONNECTED CENTERS
LINE 20 - OUTER STARK-BURNSIDE



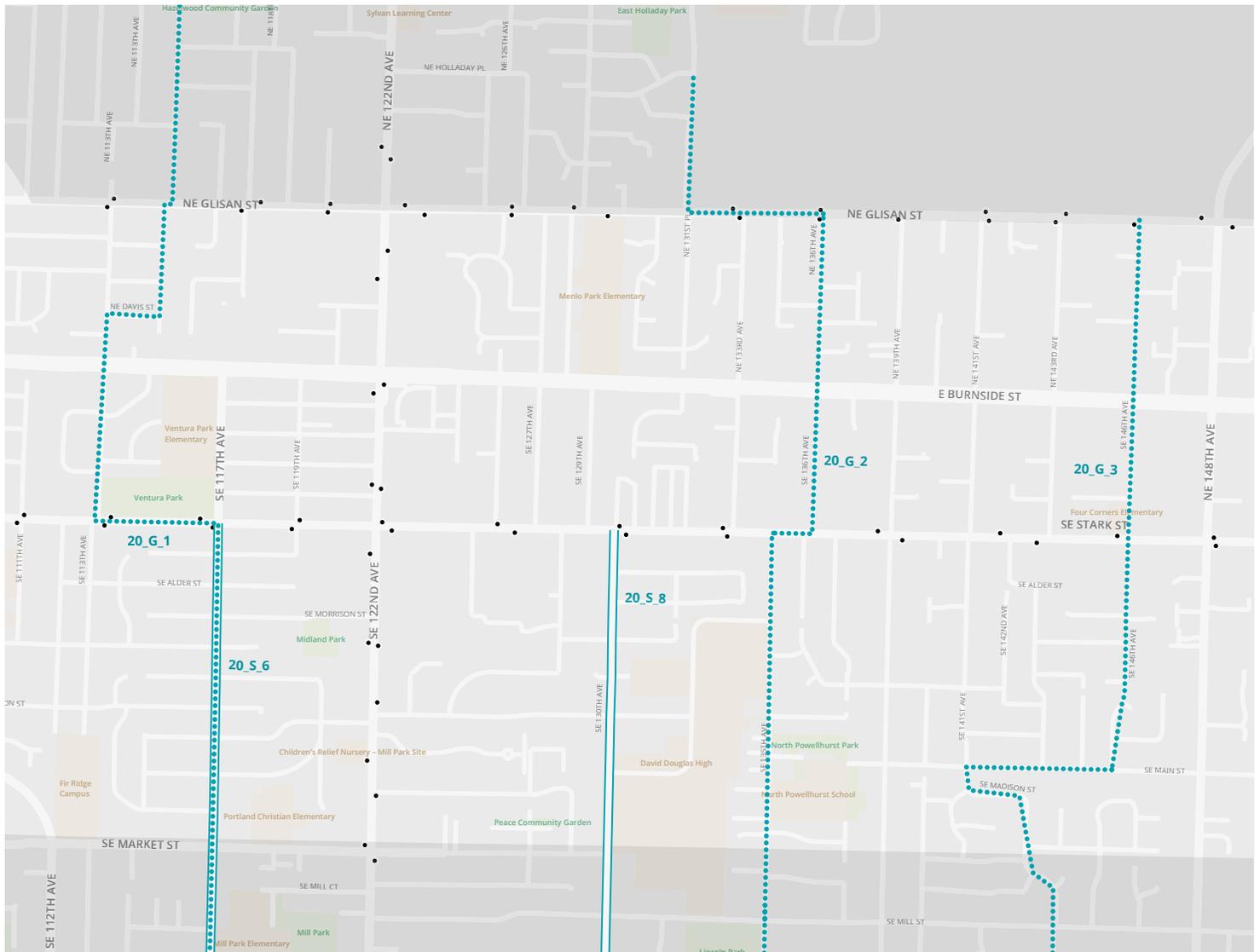
DESCRIPTION

This set of projects will provide low-stress pedestrian and bicycle routes serving the northern portion of the Division-Midway Town Center area, complementing other planned investments from the TSP and the Division-Midway Neighborhood Street Plan. This includes sidewalks on several neighborhood collector streets that have sidewalk gaps or no sidewalks at all, as well as several north-south neighborhood greenways. The projects would also directly serve David Douglas High School and several Title 1 elementary schools.

IMPLEMENTATION STRATEGY

Sidewalk infill on 130th Ave was recently included in a larger grant application for Regional Flexible Funds Allocation (RFFA) federal funding through Metro. Unfortunately, the project did not score well on the technical evaluation and was not recommended for funding in this round. However, this package of projects could still be a competitive

candidate for future rounds of federal funding, state funding, or regional funding because they serve Title 1 schools and provide improved access to a designated Town Center. Local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). Sidewalks and other street improvements may qualify for Local Transportation Infrastructure Charge (LTIC) funding and may present good opportunities to establish Local Improvement Districts (LIDs). A potential source of near-term local funding is the Fixing Our Streets allocation for safe routes to school projects in the David Douglas School District. Sidewalk infill on 130th Ave, in particular, may be an attractive candidate because it involves building sidewalk behind existing curb (much less expensive than building new curb and stormwater systems) and because the project is scalable (filling gaps on the east side from Stark to David Douglas High School would provide substantial benefit).



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
20_G_2	Neighborhood Greenways	Mid 130s Aves (Pacific - Division)	Provide a neighborhood greenway, with traffic calming and crossings as needed.	1
20_S_8	Sidewalks on Busy Streets	SE 130th Ave (Stark - Division)	Add sidewalk behind existing curb.	1
20_S_6	Sidewalks on Busy Streets	SE 117th Ave (Stark - Division)	Construct curb and sidewalk on one or both sides of the street, depending on feasibility and available funding.	2
20_G_3	Neighborhood Greenways	140s Aves (Glisan - Powell)	Provide a neighborhood greenway, with traffic calming and crossings as needed.	2
20_G_1	Neighborhood Greenways	110s Aves (Oregon - Powell)	Provide a neighborhood greenway, with traffic calming and crossings as needed. Consider alternate routes between SE Stark and SE Division.	2

OUTER STARK LOCAL STREET IMPROVEMENTS LINE 20 - OUTER STARK-BURNSIDE



DESCRIPTION

Many local streets in the the Outer Stark corridor east of Gateway lack sidewalks completely or in some cases have major sidewalk gaps. This can make it difficult for residents of adjacent neighborhoods to access destinations along Stark or access Line 20 bus stops. Because funding for improving local streets has historically been very limited, it is important to prioritize which streets are most in need of investment. This package of projects represents the highest-priority local streets in need of pedestrian improvements based on Growing Transit Communities criteria. Pedestrian improvements on local streets can take a variety of forms that need to be context-sensitive to address the most pressing needs on any given street. For example, a street with more traffic or higher-density land use may require construction of full sidewalks, but a street with low traffic or lower-density housing may only need traffic calming or a paved sidepath. Determining these street design treatments is beyond the scope of this plan, so follow-up analysis will be needed before implementation to determine appropriate improvements.

IMPLEMENTATION STRATEGY

This package of projects is unlikely to be competitive for federal, state, or regional funding because they are improvements to local streets that are not considered to be regionally significant. They are also unlikely to be eligible for dedicated safety funding such as Fixing Our Streets, because documented safety issues are very rare on local streets. Because of this, other local funding sources and creative partnerships will needed to implement these improvements. In recent years, PBOT has established a Neighborhood Streets Program dedicated to paving and improving local streets with a focus on alternative low-cost street designs. Funding for the program comes from a combination of General Fund support, General Transportation Revenue (GTR), and the Local Transportation Infrastructure Charge (LTIC). Local Improvement Districts (LIDs) have also been a major source of funding for local street improvements, typically with full curb and sidewalks included. Because the cost per household can be high, LIDs in residential areas are often more successful when PBOT is able to provide some funding subsidy using Transportation System Development Charge (TSDC) revenue or other sources.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
20_S_7	Local Street Improvements	SE 129th Ave (Burnside - Stark)	Add sidewalk behind existing curb.	1
20_S_14	Local Street Improvements	SE 151st Ave (Burnside - Main)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	1
20_S_17	Local Street Improvements	SE 160th Ave (Stark - Alder)	Add sidewalk behind existing curb.	1
20_S_12	Local Street Improvements	SE 143rd Ave (Burnside - Stark)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	1
20_S_5	Local Street Improvements	SE 108th Ave Sidewalk infill: Burnside - Stark	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	2
20_S_13	Local Street Improvements	SE 146th Ave (Burnside - Stark)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	2
20_LS_1	Local Street Improvements	SE 119th Ave (Washington - Morrison)	Improve street with curbs and sidewalks, or consider curbless street with separated walkway or shared street design.	2

LINE 87 - AIRPORT WAY RECOMMENDED PROJECTS



The Airport Way Corridor has seven bundles of recommended projects:

- A** Cascade Station Trail
- B** NE 105th/Holman Corridor Improvements
- C** NE Marx St Pedestrian Improvements
- D** Airport Way Safety and Access to Transit
- E** Cross Levee Trail
- F** NE 148th Ave Corridor Improvements
- G** NE 158th Ave Corridor Improvements

Recommended improvements	
Crossing	
Traffic safety	
Corridor safety	
Bike lane	
N'hood greenway	
Sidewalks	
Local street	
Trail	

MAX stop	
Bus stop	
Bus line	
School	
Park	



CASCADE STATION TRAIL
LINE 87 - AIRPORT WAY

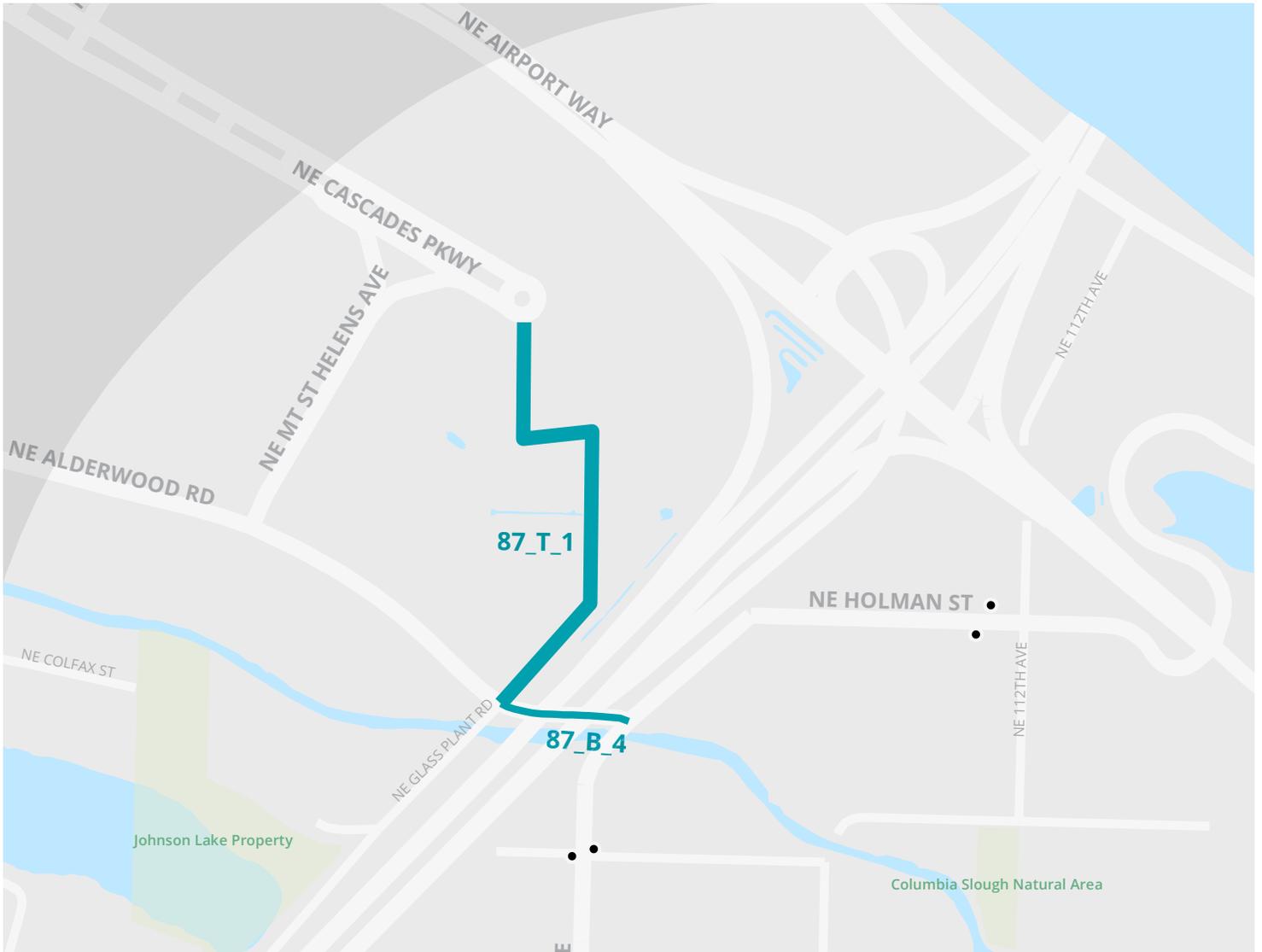


DESCRIPTION

This project would construct a multi-use path connection from Alderwood & I-205 to Cascade Station in the vicinity of the Ikea parking lot. It would partially use an existing roadway, with a new path to connect across Port of Portland property. The project would include filling a bike lane gap on Alderwood connecting under I-205 to the I-205 Path. Currently, people walking or bicycling from the I-205 Path to Cascade Station have to go out of direction and do not have adequate facilities. This project will provide a more direct connection and path between Line 87 and destinations in Cascade Station, including MAX Red Line service. East Portland in Motion (EPIM) previously prioritized the Cascade Station Trail under the name Ikea Trail. In the interim, people can walk or bike along an alternate route on NE Alderwood connecting to NE Mt. St. Helens Ave to NE Cascade Way.

IMPLEMENTATION STRATEGY

Because this project uses an existing Portland Water Bureau access road and a new connection across Port of Portland property, PBOT will need to secure an agreement to move forward with the project. PBOT should also explore partnerships with Ikea or other Cascade Station businesses during project development. The project would also be competitive for federal or state funding since it would provide access to a major jobs area, and is eligible for ConnectOregon funding because it is partially located outside the public right-of-way. Local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR).



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
87_T_1	Trails	Glass Plant Rd (Alderwood - Cascade Station)	Construct a multi-use path from Alderwood to Cascade Station, partially using existing paved roadway. A portion of the trail would run through Port of Portland property.	1
87_B_4	Bikeways	NE Alderwood Rd (Glass Plant Rd - 105th)	Add eastbound bike lane to fill gap.	1

NE 105TH/HOLMAN CORRIDOR IMPROVEMENTS LINE 87 - AIRPORT WAY

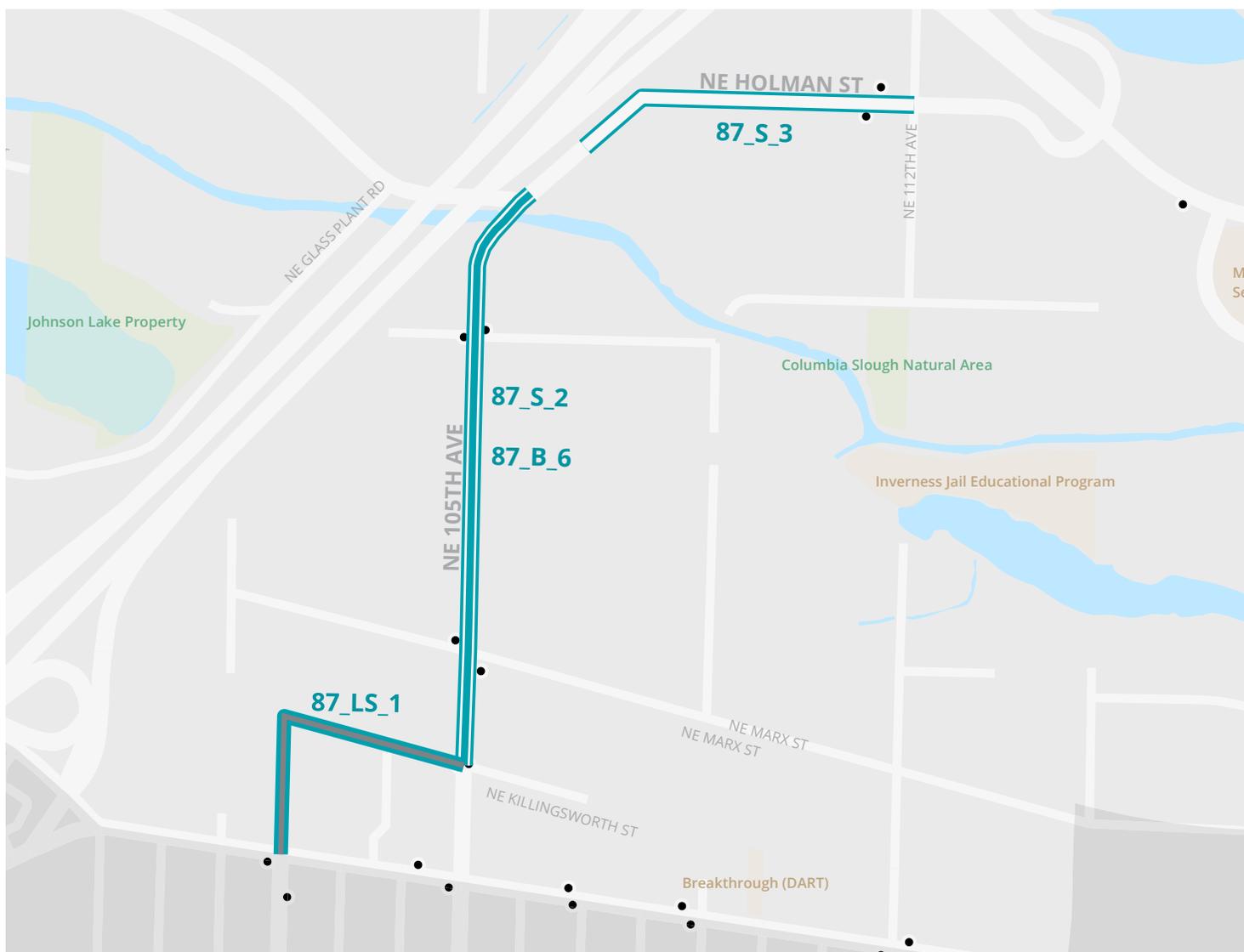


DESCRIPTION

This set of projects would improve NE 105th and Holman from Sandy to Airport Way, improving pavement quality and adding sidewalks and bike lanes to enhance connectivity and access to transit. This roadway is currently sub-standard, with no curb, stormwater system, sidewalks, or bike lanes for most of its length. The pavement is also in poor condition, which leads to drainage issues and potholes that impact bus operations. The project bundle also includes paving on Killingsworth north of Sandy to provide needed bicycle connections from NE 102nd Ave. These projects will improve transit operations, fill a major gap in the pedestrian and bicycle network, and provide accessible bus stops serving a major employment area.

IMPLEMENTATION STRATEGY

As a key portal to the Airport Way corridor for freight, transit, pedestrians, and bicyclists, this set of projects is well positioned for funding despite its high cost. Federal and state funding sources are possibilities, including both ped/bike and freight funding sources. Property owners have submitted complaints to PBOT about street pavement quality and drainage issues, so there may be potential for a Local Improvement District to (LID) to pay for a portion of the project cost. Nearby LIDs on Marx St have been successful, and property owners on 105th and Holman have expressed interest. Other local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). If scope cuts are needed during project development, consideration should be given to building sidewalk on one side of the street with bus stop pads across the street. Another design alternative that should be considered is to build a multi-use path on the west side of 105th (connecting to I-205 Path) rather than bike lanes on both sides.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
87_S_2	Sidewalks on Busy Streets	NE 105th Ave (Killingsworth - Alderwood)	Improve street with curbs and sidewalks.	1
87_B_6	Bikeways	NE 105th Ave (Killingsworth - Alderwood)	Provide protected bike lanes as part of sidewalk project.	1
87_S_3	Sidewalks on Busy Streets	NE Holman St (I-205 - 112th)	Improve street with curbs and sidewalks.	1
87_LS_1	Local Street Improvements	NE Killingsworth St (102nd - 105th Ave)	Improve gravel street, including curb and sidewalk. Add sharrows to provide bikeway access from 102nd to 105th.	2

NE MARX ST PEDESTRIAN IMPROVEMENTS LINE 87 - AIRPORT WAY



DESCRIPTION

This project would add curb, drainage, and sidewalks on NE Marx St from 105th to 112th, providing access from Line 87 to a major jobs area and filling in a key gap in the pedestrian network. Recent Local Improvement District (LID) projects have constructed sidewalks on streets throughout the area, but there are still no sidewalks from 105th to 109th, and sidewalks have only been built on one side from 109th to 112th. This project will ensure that people accessing jobs in this employment area can feel comfortable choosing to take transit.

IMPLEMENTATION STRATEGY

The recent success of LID projects in the 112th and Marx area have created momentum for creating additional LIDs along the rest of Marx St. Property owners have expressed interest and the City has started to explore its potential. However, they City may need additional funding from Transportation System Development Charge (TSDC) or General Transportation Revenue (GTR) to make an LID viable. During project development, the City should consider building sidewalk on one side of the street if scope cuts are needed. This project is unlikely to be competitive for federal or state funding because the street is not identified in the regional pedestrian network.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
87_S_1	Sidewalks on Busy Streets	NE Marx St (105th - 112th)	Construct curbs and sidewalks along Marx St.	1

AIRPORT WAY SAFETY AND ACCESS TO TRANSIT LINE 87 - AIRPORT WAY

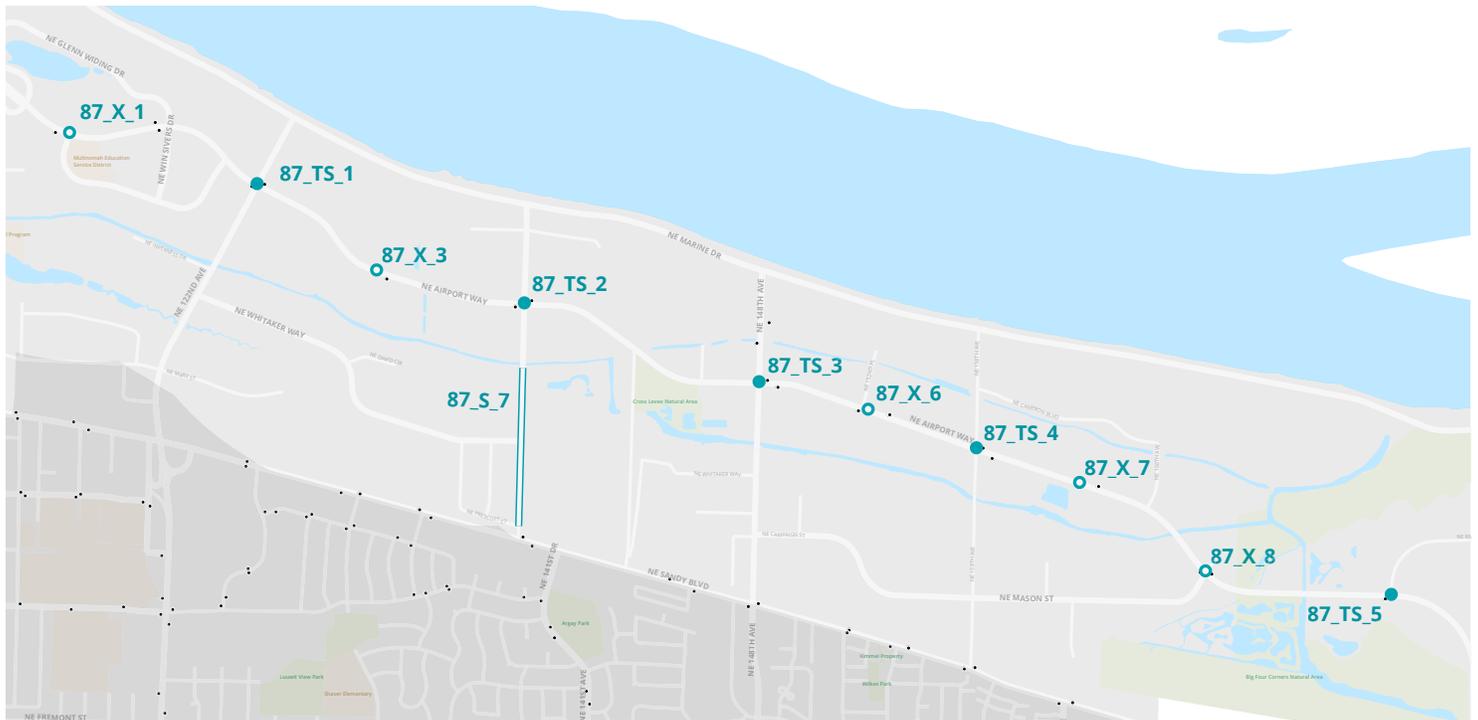


DESCRIPTION

This bundle of projects would add mid-block crossings at bus stops, upgrade signalized intersections to improve safety for all modes, and construct sidewalks and bike lanes on north-south streets. Crossings are currently widely spaced and do not serve all Line 87 bus stops, signalized intersections are auto-oriented and intimidating to people walking and bicycling, and connecting streets have large sidewalk and bike lane gaps. These projects will address these issues and make riding the bus to access jobs a much safer and more attractive prospect.

IMPLEMENTATION STRATEGY

This package of projects would be a competitive candidate for future rounds of federal funding, state funding, or regional funding because Airport Way is recognized as part of the regionally-significant street network. These projects would also achieve many of the stated goals of available grant programs. Local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). Airport Way is also on the Vision Zero High Crash Network, which may make it more likely to be considered for General Fund support.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
87_X_8	Crossings	NE Airport Way at Mason	Add an enhanced pedestrian crossing.	1
87_X_3	Crossings	NE Airport Way at 131st Ave	Add an enhanced pedestrian crossing.	1
87_X_1	Crossings	Airport Way at Ainsworth Circle	Add an enhanced pedestrian crossing.	1
87_TS_1	Traffic Signals	NE 122nd & Airport Way	Provide safety enhancements such as truck aprons, enhancements to pedestrian islands, and bike lane conflict markings through intersection. Adjust signal timing if necessary to improve safety and reduce transit delay.	1
87_TS_2	Traffic Signals	NE 138th & Airport Way	Provide safety enhancements such as truck aprons, enhancements to pedestrian islands, and bike lane conflict markings through intersection. Adjust signal timing if necessary to improve safety and reduce transit delay.	1
87_X_7	Crossings	NE Airport Way at 162nd	Add an enhanced pedestrian crossing.	2
87_X_6	Crossings	NE Airport Way at 152nd	Add an enhanced pedestrian crossing.	2
87_S_7	Sidewalks on Busy Streets	NE 138th Ave (Sandy - Airport Way)	Add sidewalks behind existing curb.	2
87_TS_3	Traffic Signals	NE 148th & Airport Way	Provide safety enhancements such as truck aprons, enhancements to pedestrian islands, and bike lane conflict markings through intersection. Adjust signal timing if necessary to improve safety and reduce transit delay.	2
87_TS_5	Traffic Signals	NE Airport Way & Riverside	Provide safety enhancements such as truck aprons, enhancements to pedestrian islands, and bike lane conflict markings through intersection. Adjust signal timing if necessary to improve safety and reduce transit delay.	2
87_TS_4	Traffic Signals	NE 158th & Airport Way	Provide safety enhancements such as truck aprons, enhancements to pedestrian islands, and bike lane conflict markings through intersection. Adjust signal timing if necessary to improve safety and reduce transit delay.	2

CROSS LEVEE TRAIL
LINE 87 - AIRPORT WAY

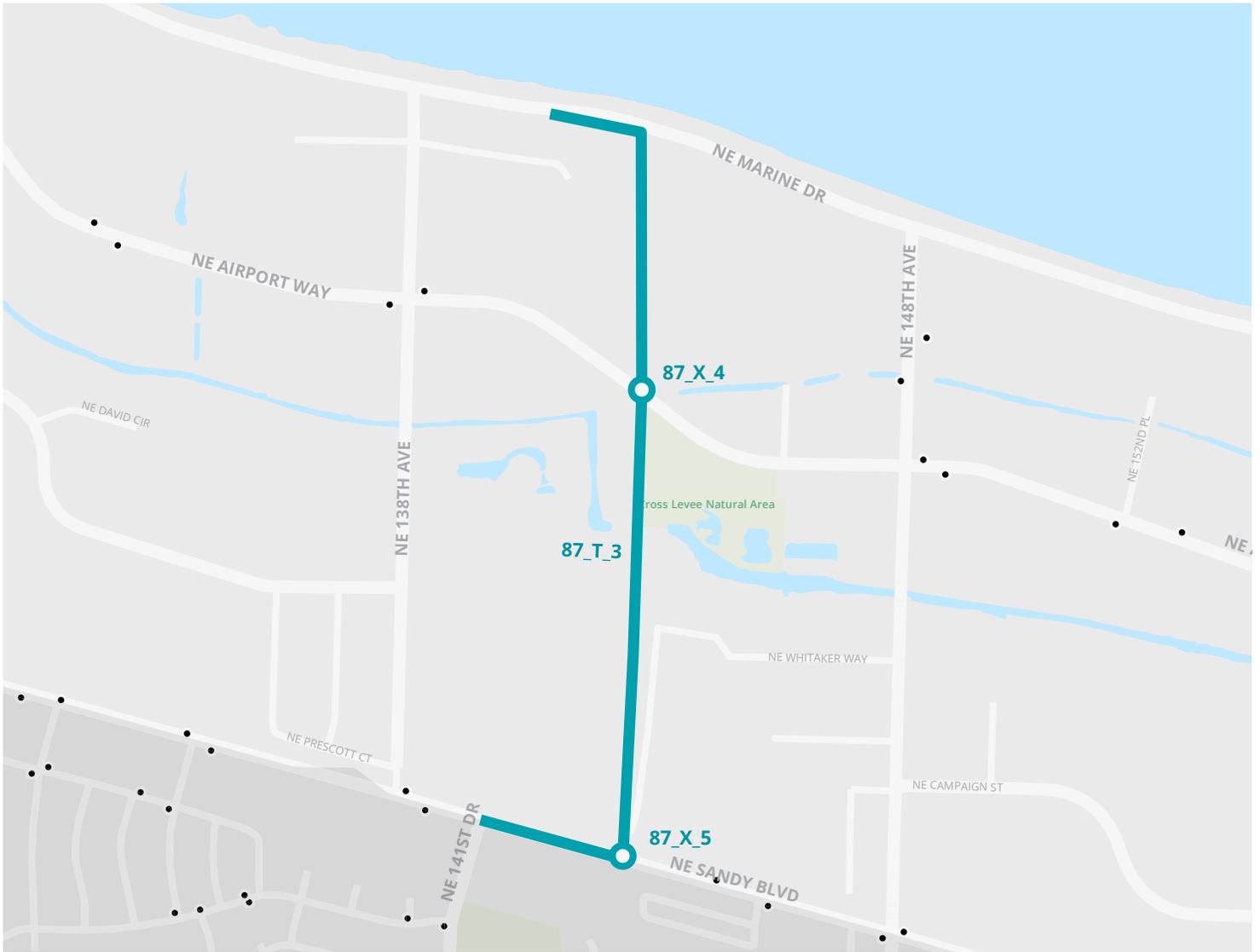


DESCRIPTION

This project would build a multi-use path connection along the Cross Levee, running from Sandy to Marine Dr. It also includes crossings at Sandy and Airport Way and connections to the surrounding street network. This path will fill a gap in north-south pedestrian and bicycle mobility, and will support access to transit and jobs in the Airport Way corridor. East Portland in Motion (EPIM) previously prioritized this project.

IMPLEMENTATION STRATEGY

Because this project uses a levee, PBOT will need to coordinate with the Army Corps of Engineers. The project also involves crossing Sandy Blvd, so PBOT will need to coordinate with ODOT for approval. The project would likely be competitive for federal or state funding since it would provide access to a major jobs area, and is eligible for ConnectOregon funding because it is mostly located outside the public right-of-way. Local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). Because the trail would connect with the Marine Drive Path, there may also be partnership opportunities with the Intertwine Alliance, 40 Mile Loop, and Metro.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
87_T_3	Trails	Cross Levee Trail (Sandy - Marine Dr)	Construct a multi-use path along the Cross Levee from Sandy to Marine Dr, with connections to Marine Dr Trail and Sandy/141st.	1
87_X_5	Crossings	NE Sandy Blvd at Cross Levee Trail	Add an enhanced pedestrian/bicycle crossing.	1
87_X_4	Crossings	Airport Way & Cross Levee Trail	Add an enhanced pedestrian/bicycle crossing.	1

NE 148TH AVE CORRIDOR IMPROVEMENTS LINE 87 - AIRPORT WAY

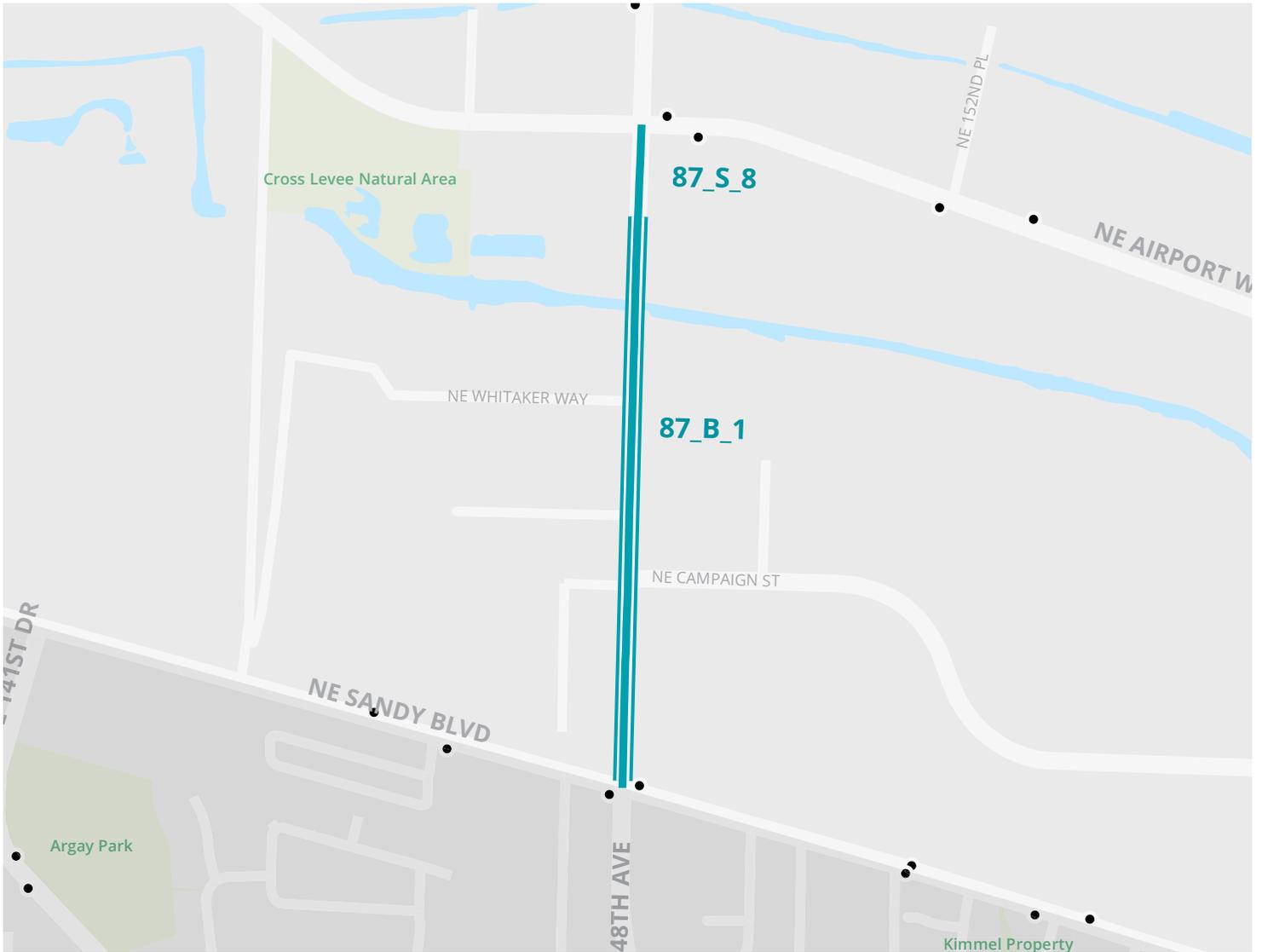


DESCRIPTION

This set of projects would add missing pedestrian and bicycle facilities on NE 148th Ave from Sandy to Airport Way. The project involves constructing curb and drainage, as well as railroad crossing improvements. This connection will link NE neighborhoods to the Airport Way corridor, provide access to transit and jobs, and will support planned future bus service on 148th Ave, identified in the TriMet Service Enhancement Plan. TriMet recently announced that new bus service on 162nd and 158th is a higher priority and will be starting in 2018, so improvements to 148th Ave should be considered a lower priority compared to the 158th Ave improvements described in the next project bundle.

IMPLEMENTATION STRATEGY

TriMet plans to introduce bus service to 148th in the future, connecting Airport Way to neighborhoods in East Portland. It would be preferable to find funding for this project prior to the introduction of bus service. This package of projects would be a competitive candidate for future rounds of federal funding, state funding, or regional funding because these streets are recognized as part of the regionally-significant street network. These projects would also achieve many of the goals of available grant programs. Local funding could come from Transportation System Development Charge (TSDC) revenue or General Transportation Revenue (GTR). Local Improvement Districts (LIDs) could also raise a portion of needed funding, since the projects would satisfy required frontage improvements along commercial properties.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
87_S_8	Sidewalks on Busy Streets	NE 148th Ave (Sandy - Airport Way)	Improve street with curbs and sidewalks.	1
87_B_1	Bikeways	NE 148th Ave (Airport Way - Sandy)	Provide protected bike lanes as part of sidewalk project.	1

NE 158TH AVE CORRIDOR IMPROVEMENTS LINE 87 - AIRPORT WAY

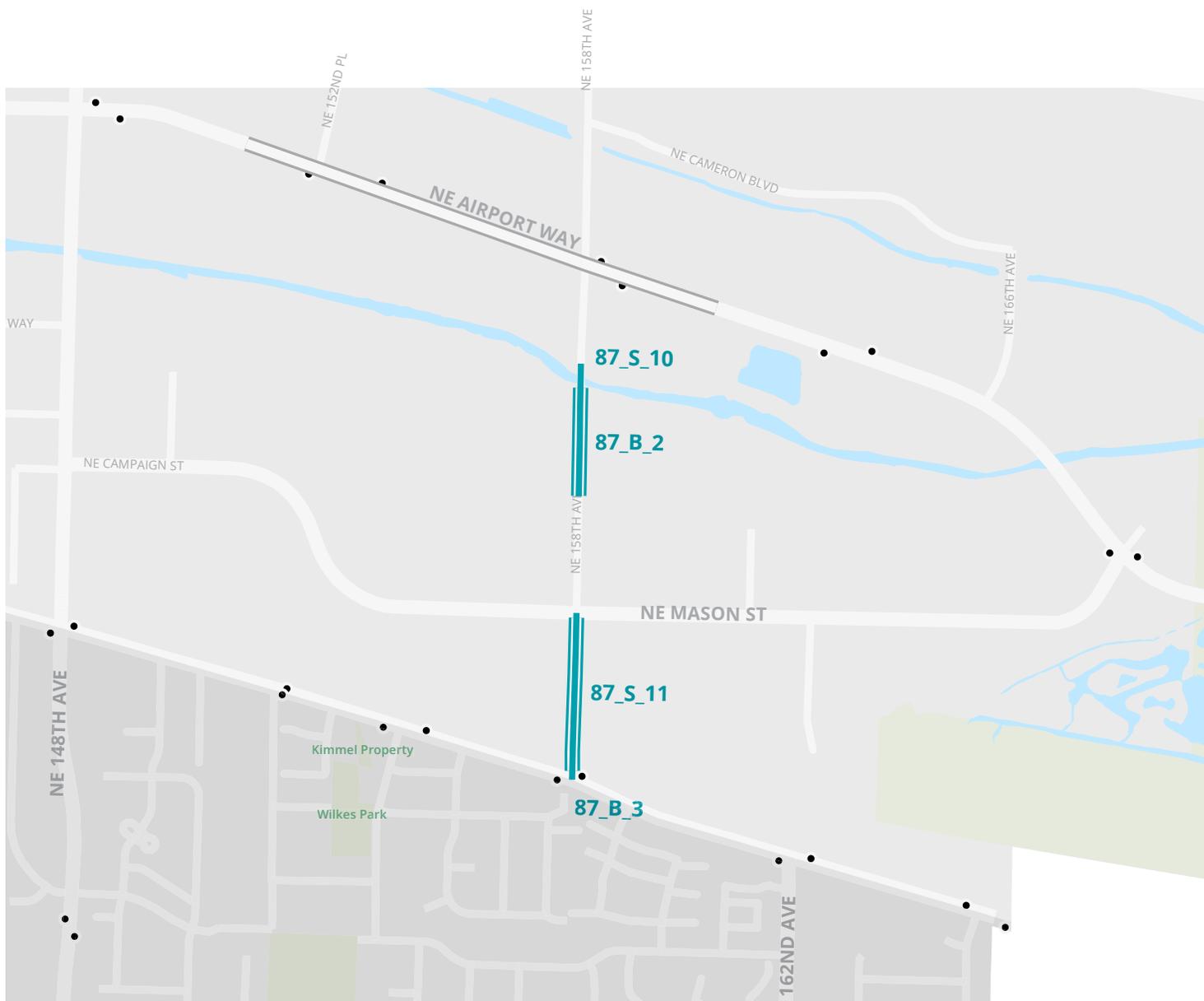


DESCRIPTION

This set of projects would fill pedestrian and bicycle facility gaps on NE 158th Ave from Sandy to Airport Way. This connection will link NE neighborhoods to the Airport Way corridor, provide access to transit and jobs, and will support upcoming bus service on 158th Ave, planned for implementation in 2018. The project involves construction of curb and drainage in one segment, striping modifications, and a railroad crossing improvement.

IMPLEMENTATION STRATEGY

TriMet plans to introduce bus service to 158th in 2018, connecting Airport Way to neighborhoods in East Portland via 162nd south of Sandy. To support this new service, funding should be identified as soon as possible for this project. If PBOT is not able to secure local funding in the near-term, this package of projects would still be a competitive candidate for future rounds of federal funding, state funding, or regional funding because these streets are recognized as part of the regionally-significant street network. These projects would also achieve many of the stated goals of available grant programs. Local funding could come from Transportation System Development Charge (TSDC) revenue, General Transportation Revenue (GTR), or a General Fund request. Local Improvement Districts (LIDs) could also raise a portion of needed funding, since the projects would satisfy required frontage improvements along commercial properties.



INDIVIDUAL PROJECT DETAILS

ID	Type	Location	Description	Tier
87_B_2	Bikeways	NE 158th Ave (Airport Way - Mason)	Widen roadway and add protected bike lanes.	1
87_S_10	Sidewalks on Busy Streets	NE 158th Ave (Airport Way - Mason)	Improve street with curbs and sidewalks.	1
87_B_3	Bikeways	NE 158th Ave (Mason - Sandy)	Provide bike lanes in both directions.	2
87_S_11	Sidewalks on Busy Streets	NE 158th Ave (Mason - Sandy): Sidewalk Infill	Add a pedestrian connection across the railroad tracks on the east side of 158th north of Sandy	2

IMPLEMENTATION ACTION ITEMS

37314

Project Name	Add or revise TSP Project List	Include in RTP project list	Include in TSDC project list	Consider for FOS funding	Consider for future FOS project list	Consider for Vision Zero funding	Add small elements to citywide program reference lists	Explore potential for LID and/or LTIC funding	Explore potential for URA funding
Halsey Corridor									
60th MAX Station Area Improvements	X	X	X		X	X	X	X	
NE Halsey Safety and Access to Transit	X	X	X						
82nd Ave MAX Station Area Improvements	X	X	X		X	X	X	X	
Parkrose Heights Safe Routes to School	X	X	X	X	X		X	X	X
Outer Halsey Local Street Improvements							X	X	
122nd Ave Corridor Improvements	X	X	X	X	X	X	X		
Stark-Burnside Corridor									
E Burnside Safety and Access to Transit	X	X	X		X	X	X	X	X
Stark/Washington Couplet Corridor Improvements	X	X	X		X	X	X		X
Outer Stark Safety and Access to Transit	X	X	X	X	X	X	X		
David Douglas Safe Routes to School	X	X	X	X	X		X	X	
Outer Stark Local Street Improvements							X	X	
Airport Way Corridor									
Cascade Station Trail	X	X	X				X		
NE Holman/105th Corridor Improvements	X	X	X	X	X			X	
NE Marx St Pedestrian Improvements	X	X	X		X			X	
Airport Way Safety and Access to Transit	X	X	X		X	X	X		
Cross Levee Trail	X	X	X						
148th Ave Corridor Improvements	X	X	X					X	
NE 158th Ave Corridor Improvements	X	X	X		X			X	

Project ID	Project Name	Project Location	Project Description	Cost Estimate	Notes
40086	NE Halsey Safety and Access to Transit Halsey St, NE (67th - 92nd)	Construct high-priority improvements along the Halsey corridor, as identified in the Growing Transit Communities Plan. Elements include bicycle facilities on Halsey/82nd overpass, improvements to existing path under Halsey overpass west of MAX station and neighborhood greenway connection to Tillamook, and a multi-use path along Jonesmore and Halsey from 82nd to 92nd.	\$4,980,000	Consolidate TSP projects 40086.1 and 40086.2.	
40115	60th Ave MAX Station Area Improvements	60th Ave MAX Station Area, NE	Construct priority pedestrian and bicycle access to transit improvements in the 60th Ave MAX Station Area, as identified in the Growing Transit Communities Plan.	\$5,000,000	Revise existing TSP project.
40133	Cascade Station Trail	Glass Plant Rd, NE (Cascade Station - Alderwood/105th)	Construct a multi-use path connecting Cascade Station to Alderwood via Glass Plant Rd, and add eastbound bike lane to Alderwood underneath I-205.	\$3,000,000	Add new TSP project.
50009.1	NE 148th Ave Corridor Improvements, Segment 1	148th Ave, NE (Airport Way - Sandy)	Widen roadway and fill gaps in center turn lane, bicycle facilities, curbs, and sidewalks to improve safety and access to transit.	\$3,000,000	Split TSP project 50009 into two segments.
50045	Halsey/Weidler Safety and Access to Transit	101st / Tillamook (Gateway TC - 111th); San Rafael St, NE (111th - 122nd); 117th/114th, NE (Holiday - Klickitat); 111th, NE (Weidler - Morris)	Construct the Halsey/Weidler area active transportation improvements identified in the Growing Transit Communities Plan to provide safe access to schools and transit.	\$5,000,000	Consolidate portions of TSP projects 50037, 50038, 50045, and 80031.
50049	122nd Ave Corridor Improvements	122nd Ave, NE/SE (Sandy - Foster)	Design and implement multimodal improvements to sidewalks, crossings, bicycle facilities, transit stops, striping, and signals to enhance ped/bike safety, access to transit, and transit operations. Includes crossings identified through Growing Transit Communities Plan.	\$3,000,000	Revise existing TSP project.
50055	NE Marx Street Improvements	Marx St, NE (105th - 112th)	Construct sidewalks and street improvements on Marx St to improve access to jobs and transit.	\$4,400,000	Add new TSP project.
50056	NE Airport Way Safety and Access to Transit Airport Way, NE (I-205 - City Limits)	Construct priority pedestrian and bicycle access to transit improvements in the Airport Way corridor, as identified in the Growing Transit Communities Plan.	\$3,000,000	Add new TSP project.	

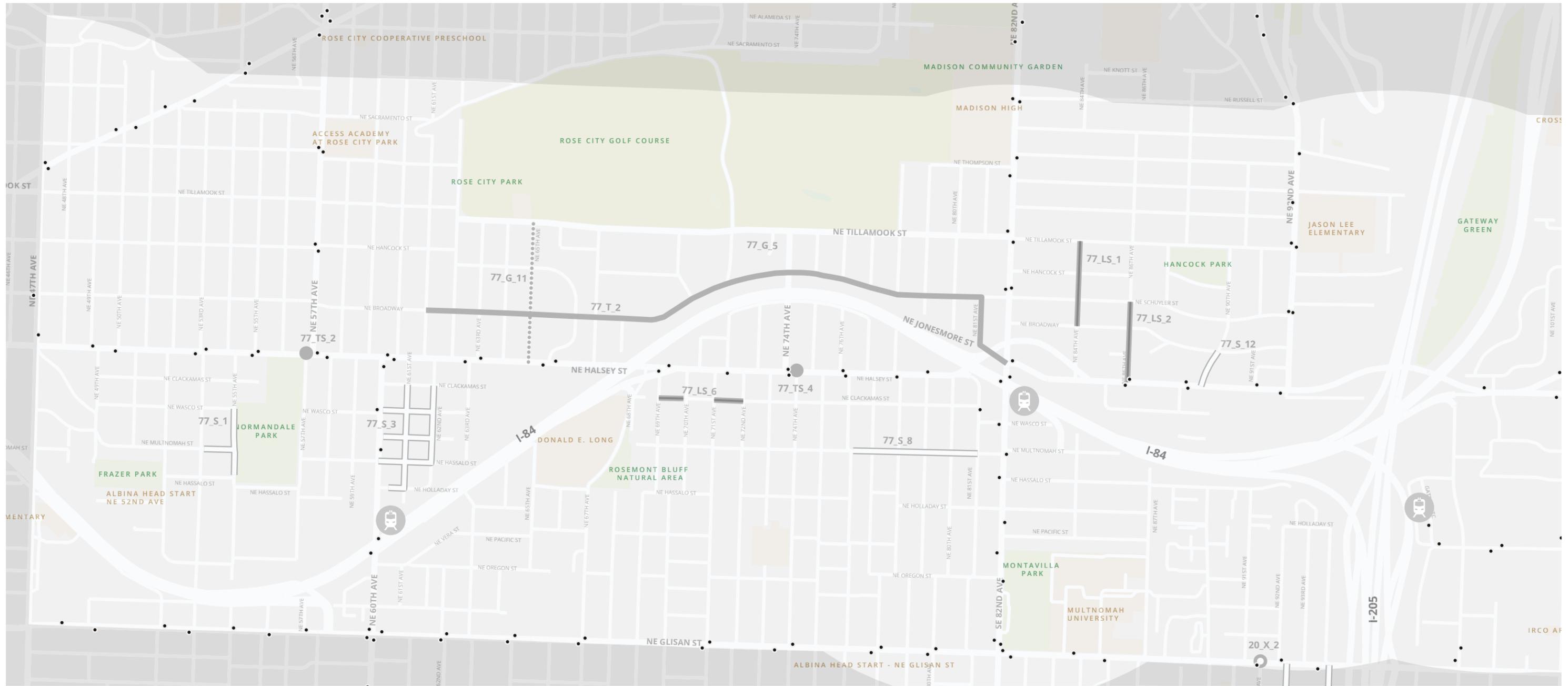
Project ID	Project Name	Project Location	Project Description	Cost Estimate	Notes
50057	NE 105th/Holman Corridor Improvements	Holman/105th, NE (Killingsworth - Airport Way); Killingsworth St; NE (102nd - 105th)	Improve roadway and add pedestrian and bicycle facilities to enhance multimodal safety and access along 105th and Holman. Construct a roadway connection on NE Killingsworth from 102nd to 105th to improve connectivity for all modes.	\$10,000,000	Add new TSP project.
50058	Cross-Levee Trail	Cross-Levee Trail (Sandy - Marine Dr)	Construct a multi-use path, with crossing improvements at Sandy, Airport Way, and Marine Dr.	\$3,000,000	Add new project split off from existing TSP project 40114.
50059	NE 158th Ave Corridor Improvements	158th Ave, NE (Sandy - Airport Way)	Widen roadway and fill gaps in center turn lane, bicycle facilities, curbs, and sidewalks to improve safety and access to transit.	\$2,000,000	Add new TSP project.
70084	82nd Ave MAX Station Area Improvements	82nd Ave MAX Station Area	Construct priority pedestrian and bicycle access to transit improvements in the 82nd Ave MAX Station Area, as identified in the Growing Transit Communities Plan.	\$3,000,000	Add new project split off from existing TSP project 80033.
70085	E Burnside Safety and Access to Transit	E Burnside (81st - 102nd)	Construct priority pedestrian and bicycle access to transit improvements in the E Burnside corridor, as identified in the Growing Transit Communities Plan.	\$3,000,000	Add new TSP project.
80014	Division-Midway Connected Centers Project Division-Midway Town Center; Mill/Main St, SE (130th - 162nd); 117th Ave, SE (Stark - Division); 130th Ave, SE (Stark - Division); 129th/130th (Division - Holgate); Boise (116th - 128th); 110s Aves (Pacific - Springwater); 130s Aves (Pacific - Division); 140s Aves (Glisan - Powell)	Construct priority pedestrian and bicycle improvements within and connecting to Division-Midway Town Center and nearby neighborhood centers, including projects identified in the Division-Midway Neighborhood Street Plan and the Growing Transit Communities Plan.	Consolidate portions of TSP projects 80005, 80014, 80016, 80028, 80029, and 80031.	\$20,000,000	
80017	Outer Stark Safety and Access to Transit	Stark, SE (111th - City Limits)	Construct priority pedestrian and bicycle access to transit improvements in the Outer Stark corridor, as identified in the Growing Transit Communities Plan. Elements include improved pedestrian crossings, enhanced bikeways, transit stop improvements, lighting upgrades, and roadway design changes to improve traffic safety.	\$4,000,000	Revise existing TSP project.
80018	Stark/Washington Multimodal Improvements	Stark/Washington, SE (92nd - 111th)	Build protected bike lanes, pedestrian crossings, and transit improvements in and around the Stark/Washington couplet in Gateway Regional Center, as identified in the Growing Transit Communities Plan.	\$4,000,000	Revise existing TSP project.

NOT RECOMMENDED PROJECTS

This section is focused on the candidate projects that were identified and evaluated during the planning process, but ultimately not recommended as priorities in the GTC Plan, based on GTC Plan criteria and evaluation. On the following pages are maps for each corridor showing the projects and some explanations for why some projects are not recommended.

These projects may remain good candidate projects for other planning processes or programs.

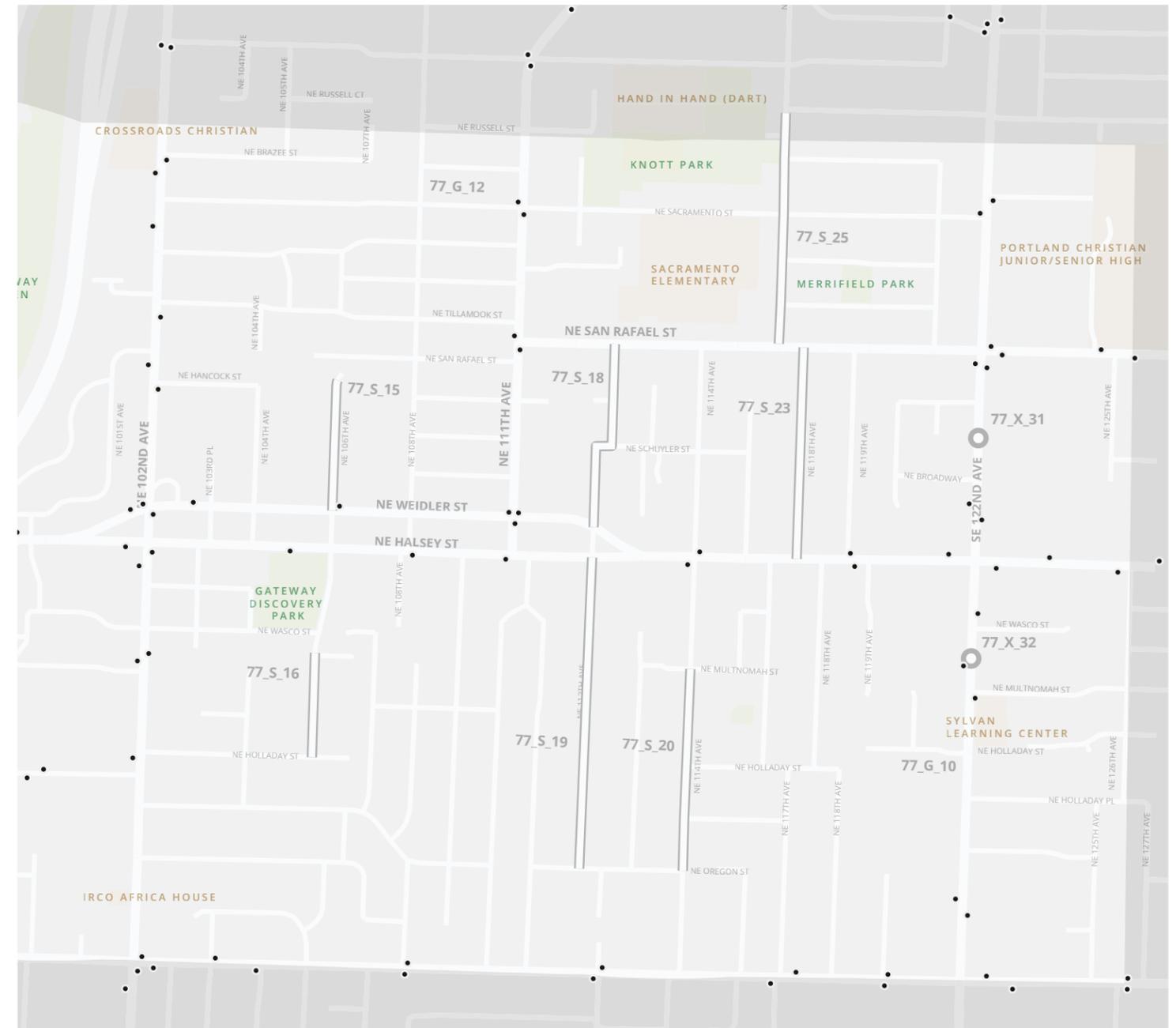
LINE 77 - MIDDLE HALSEY NOT RECOMMENDED PROJECTS



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One project, the Sullivan’s Gulch Trail along Jonesmore St, is already in the Transportation System Plan (TSP) Major Projects list. The project will remain in the TSP, but will not be considered part of the of GTC Plan improvements supporting Line 77 on Halsey.

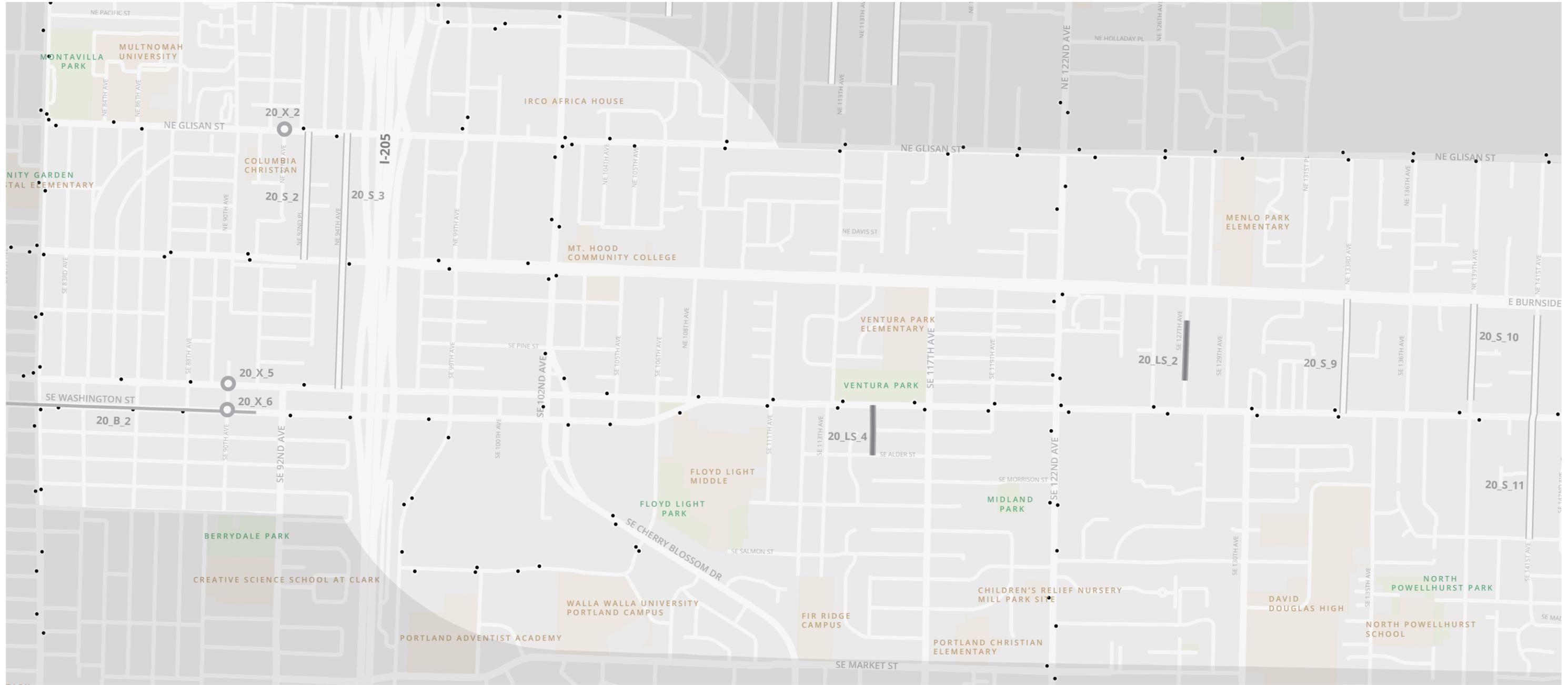
Recommended improvements	
Crossing	
Traffic safety	
Corridor safety	
Bike lane	
N’hood greenway	
Sidewalks	
Local street	
Trail	
MAX stop	
Bus stop	
Bus line	
School	
Park	



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LINE 20 - OUTER STARK-BURNSIDE NOT RECOMMENDED PROJECTS



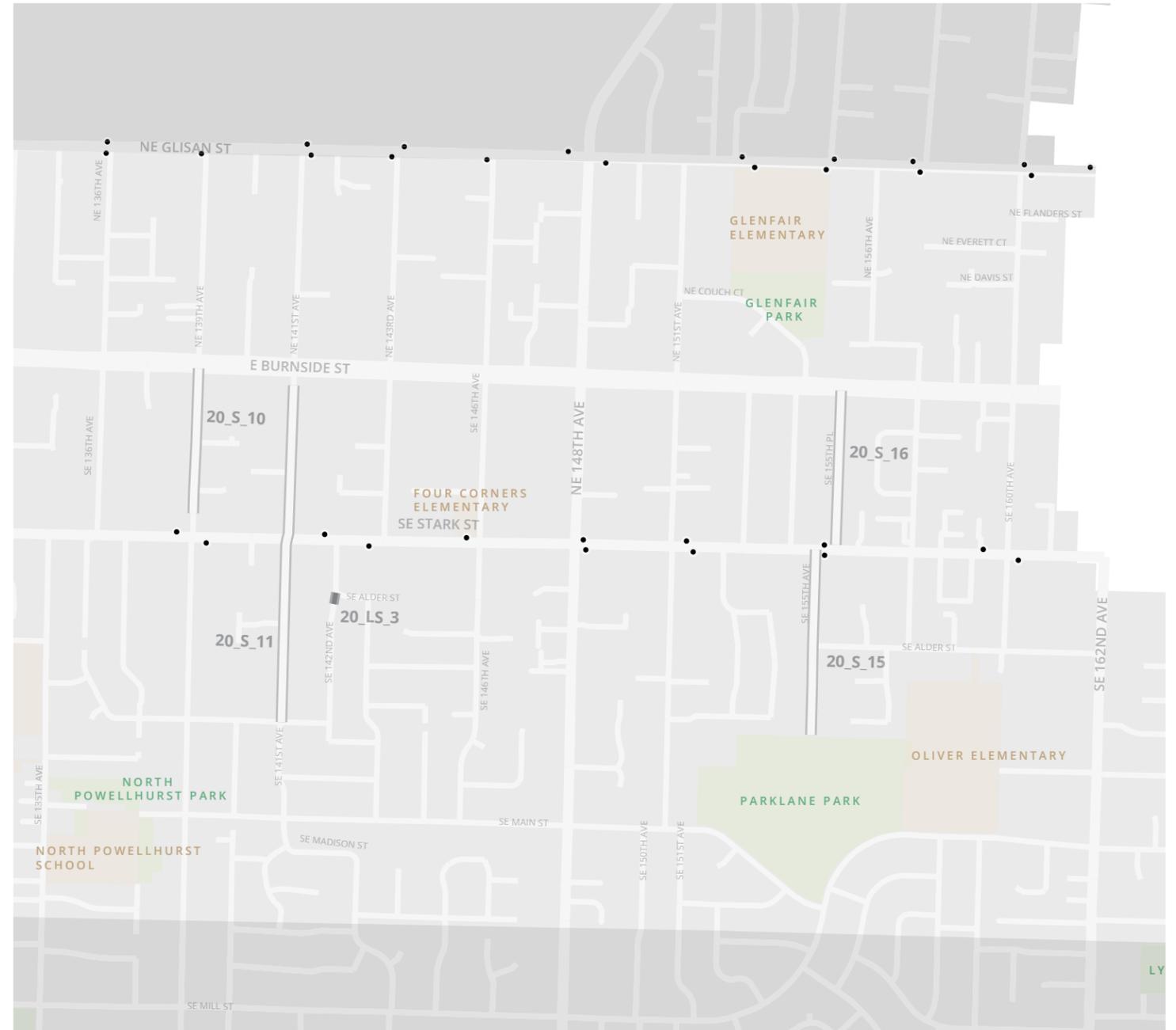
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One project, a crossing at 92nd & Glisan, scored well on the GTC criteria but was determined to be more supportive of the Line 19 on Glisan rather than the Line 20 on Burnside. This project is recommended for inclusion in the Pedestrian Network Completion reference list and the upcoming Pedestrian Master Plan update, but it is not recommended as part of the GTC Plan set of investments. Another project, the bike lane on SE Washington St in Montavilla neighborhood, scored low in this evaluation but is already in the Transportation System Plan and provides other system benefits. The project is recommended to stay in the Transportation System Plan

but is not recommended as part of the GTC Plan set of investments.

This project was recently funded with a Regional Flexible Fund Allocation as a part of the Jade and Montavilla Connected Centers project.





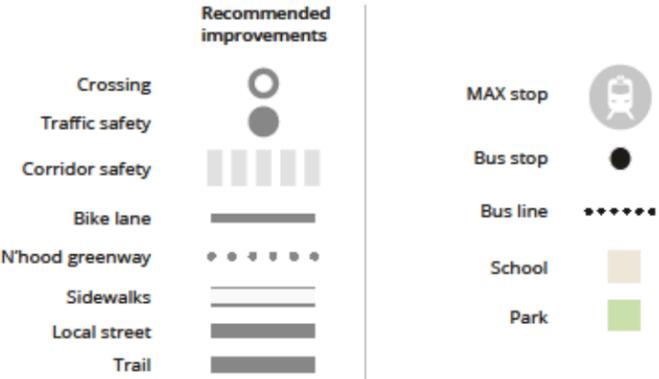
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LINE 87 - AIRPORT WAY NOT RECOMMENDED PROJECTS



Two crossings projects, at Marine Dr & 148th and Marine Dr & 158th, scored well on the GTC criteria but were determined to have little relationship to access to transit for the Line 87. However, they would have benefit for accessing the Marine Dr Trail and are recommended for inclusion in the Transportation System Plan as part of an existing Marine Dr Path improvement project, even though they are not recommended as part of the GTC Plan investments.



CONNECTIONS ACROSS PRIVATE PROPERTY



During the planning process, staff identified a few locations where a transportation connection across existing private property would allow better access to transit and general connectivity to places. Typically, new street connections or pedestrian and bicycle connections are implemented when property is developed or redeveloped through the development review process, either through the land use review process or building permit process.

These new connections could be provided through a dedication of public right-of-way or a public access easement and physical improvements through a public works permit. Pedestrian and bicycle connections through these properties would be most beneficial in these locations.

Establishing these new connections would help implement existing City policy and code. The sites of these new connections currently do not meet regional and local policy connectivity policy for the spacing of streets or pedestrian and bicycle connections. The sites are located in areas of the City that do not have an adopted Master Street Plan. The Portland Transportation System Plan (TSP), updated in 2016, includes policy on street connectivity and master street plans.

TSP Section 9: Master Street Plans states the following regarding "Areas Not Covered by Master Street Plans:"

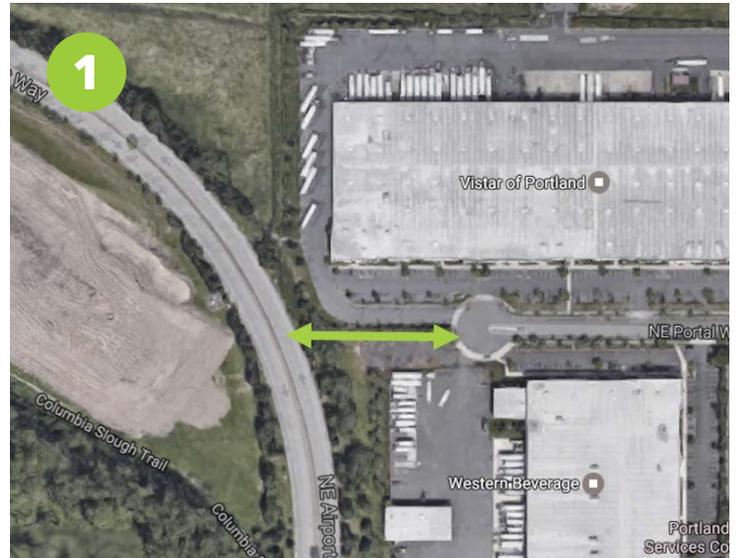
Until such plans are completed, the location and implementation of new street and pedestrian/bicycle connections will be governed by Title 17: Public Improvements, and Title 33: Planning and Zoning, requirements in City Code. Title 17 regulations govern developing or redeveloping sites that do not include a land division, and Title 33 regulations govern developing or redeveloping sites that do include a land division. The spacing standards in each title are 530 feet for full street connections and 330 feet for pedestrian/bicycle connections where full street connections are not feasible.

RECOMMENDATION

Require new public streets or pedestrian and bicycle connections at the time of private redevelopment through the development review process for the following locations and properties:

1) Between NE Airport Way and NE Portal Way across the property identified by:

- Property ID R563914 or R563918
- Alt Account Numbers R649815870 or R710350150
- Split Property Parent number R320234

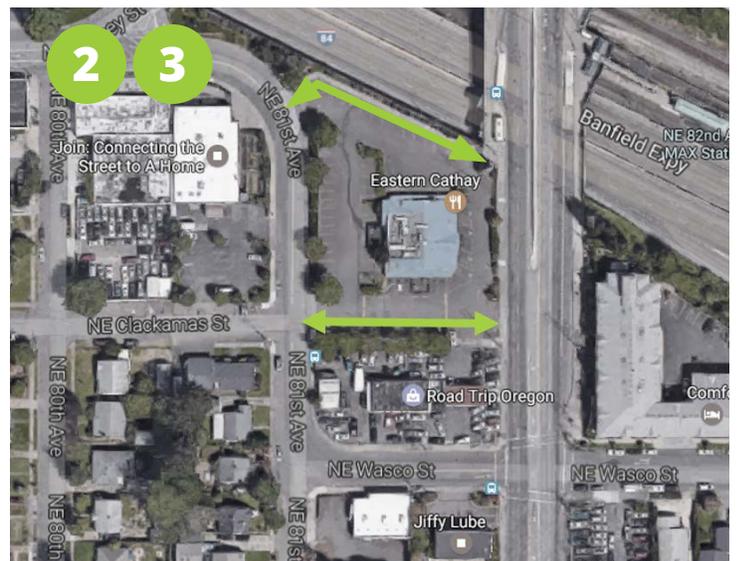


2) Between NE 81st Ave and 82nd Ave at NE Clackamas across the property identified by:

- Property ID R195069 or R195070
- Alt Account Numbers R439604820 or R439604830.

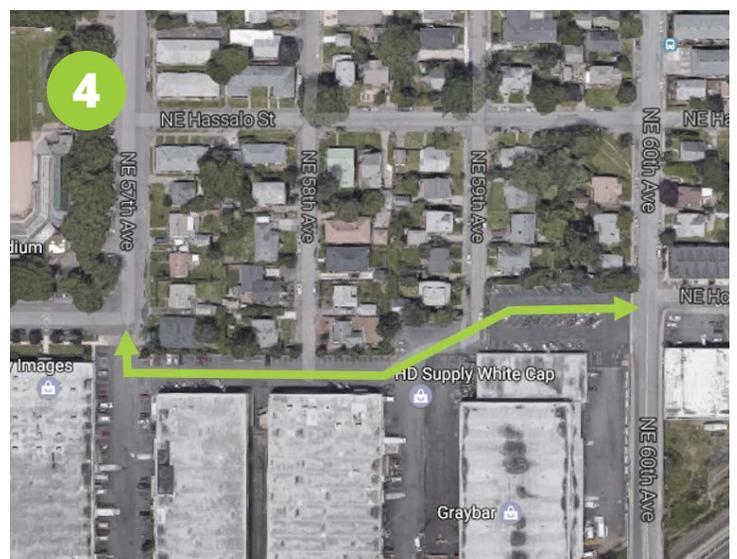
3) Between NE 81st Ave and 82nd Ave at NE Halsey across the property identified by:

- Property ID R194843
- Alt Account Number R439600080.



4) Between NE 57th Ave and 60th Ave at NE Hassalo to NE Holladay across the properties identified by:

- Property ID R192794 and R192795
- Alt Account Numbers R428001710 and R428001750.



Beyond capital investment projects, additional measures may amplify community benefits that make it safer and more convenient for people to get to and from the bus, walk and bike in the study areas, and/ or ultimately increase bus line ridership to help support identified service enhancements. These additional measures, though beyond the scope of this Plan, may be possible through private funds or fundraising, public-private partnerships, community-based grants, and other community-driven efforts. Some concepts raised in this planning process include the following supplemental programs and initiatives:

TRANSPORTATION DEMAND MANAGEMENT

Businesses, agencies, institutions, and organizations in the study area corridors each have the potential to contribute in their own ways towards education and encouraging of walking, biking, and taking transit to and from their locations. The Juvenile Court Safety Committee, for example, identified that if they had an information kiosk in the public entry area, it could serve both visitors and staff, providing them with multi-lingual materials and simplified maps to help them find bus stops, transit connections, and route planning.

Other TDM strategies may include charging for off-street parking, free or subsidized transit passes for employees, secure bike parking and amenities, bike sharing programs, company car sharing, and many more ideas. Such strategies have the opportunity to benefit the businesses, agencies, institutions, or organizations, manage parking and congestion challenges, reduce harmful environmental impacts, and contribute to physical activity, social equity, and greater public health.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (CPTED)

Recommendation 1: Integrate CPTED design principles into the design of the capital projects and project bundles recommended in this Plan.

Recommendation 2: Integrate better lighting into all corridor safety projects, ideally human-scale/pedestrian oriented lighting.

Staff heard in the GTC planning process that “safety” is really two things: traffic safety (i.e. crash safety) and also feeling safe in terms of personal security. The built environment has the opportunity to contribute to both real and perceived personal security. For

What is Transportation Demand Management (TDM)?

Actions to change travel behavior in order to improve the performance of transportation facilities, reduce the need for additional road capacity, and reduce impacts on residential neighborhoods. Examples include encouraging the use of alternatives to single-occupant vehicles (SOVs), ridesharing and vanpools, parking management, and trip-reduction ordinances.

What is Crime Prevention Through Environmental Design (CPTED)?

The proper design, maintenance, and use of the built environment in order to enhance the quality of life and to reduce both the incidence, and the fear, of crime. The steps that management or owners are willing to take to prevent or mitigate problems are incorporated.

this reason, City of Portland policy directs CPTED principles to be applied to all City-funded multi-family housing and to provide CPTED guidance to private development. TriMet also has policies for incorporating CPTED principles into the design and development of their facilities. Further opportunities exist for community members to implement.

Individuals may choose to work together on neighborhood campaigns to identify CPTED opportunities and encourage specific remedies. Activities may include community litter pick-ups, graffiti removal, reporting overgrowth that inhibits visibility in the right-of-way, placemaking, and developing Good Neighbor Agreements, among other approaches.

Staff heard from the public that appropriate, human-scale/ pedestrian-oriented lighting is an important component of increasing personal security in the corridors. Such lighting should be folded into all corridor safety projects. Individuals may also visit the City of Portland Street Light Installation Request web page to submit a request to a night drive list for the City to assess an area to determine if light levels are meeting City street lighting guidelines and whether installing a light on an existing utility pole is feasible. The Street Light Installation Request page contains guidance on how to contact a Crime Prevention Coordinator to have them assess the area in order to determine whether the lack of street lighting is contributing to a crime problem. For more information, members of the public may also contact 503-865-LAMP (5267).

CPTED involves the balanced application of the following five principles:

- A. Natural Surveillance.** Natural surveillance involves design and maintenance elements that ensure full opportunity for people engaged in their normal behavior to observe the space around them, and equally, to minimize the perceived opportunity for concealment or anonymity by a person intending a criminal act. Natural surveillance is generally achieved by the use of appropriate lighting, low or non-opaque fencing or hedges, the removal of areas that offer concealment, and the placement of windows, doors, and walkways to ensure the opportunity for easy observation of surrounding areas by responsible users of property.

What is a Good Neighbor Agreement?

A written document that contains terms agreed upon by two or more parties, usually a neighborhood association and a business, and defines how to resolve problems that may arise. The agreement is voluntary and not legally binding.

- B. Territoriality.** Territoriality is the principle that providing clear delineation between public, private, and semi-private areas makes it easier for pedestrians to understand, and participate in, an area's appropriate use while simultaneously communicating a sense of active "ownership" of an area that can discourage the belief that illegal acts may be committed in the area without concern or consequence. The use of non-opaque screening, low fencing, signage, pavement treatments, or other landscaping elements that visually indicate the transition between areas intended for different uses are examples of the principle of territoriality applied.
- C. Access Control.** Access control is a concept directed primarily at decreasing criminal accessibility, especially into areas where a person with criminal intent would not easily be observed. Passive examples of access control would include a highly visible gate or entry way through which all users of a property must enter. Active examples include appropriate use of door and window locks, security fencing, or similar security barriers, to discourage unwanted access into private space or into dark or unmonitored areas.
- D. Activity Support.** Activity support involves both passive and active efforts to promote the presence of responsible pedestrian users in a given area, thus elevating the perceived community value of the area, while discouraging actions by would-be offenders who desire anonymity for their actions. A basic understanding of the value of activity support can be gained by considering the difference in both perceived and actual safety of a city park, or a sidewalk, that is used rarely as compared to a park or sidewalk that benefits from the routine presence of many responsible users. Passive examples are all manner of design that makes an area appealing to appropriate pedestrian use. Active examples involve event scheduling and similar steps to attract users.
- E. Management and Maintenance.** Proper maintenance of landscaping, lighting and other features is a necessary requirement to ensuring that CPTED elements serve their intended purpose. Unfortunately, failure to maintain property — and its management parallel, the failure to stop harmful use of property by its legal occupants — will rapidly undermine the impact of even the best CPTED design elements. As such, while CPTED principles supplement effective maintenance and management practices, they can not make up for the negative impacts of ineffective management. Damaged fencing, overgrown hedges, graffiti left to weather and age, litter and debris, broken windows, as well as such factors as inattentive, lax, or overly permissive management practices will advertise an environment of permissiveness to would-be offenders and, equally, undermine the desire of responsible users to remain in an area. While effective design is an important part of good crime prevention, following through with consistent maintenance and management practices ensures that the designed-in elements retain their effectiveness. In effect, this is the direct application of what has come to be known as the Broken Window Theory — ensuring that indicators of disorder are corrected promptly in order to prevent the greater disorder they may attract.

LIVABLE STREETS & PLACEMAKING

Recommendation 1: Continue and increase support for PBOT's pursuit of new Livable Streets programming, revision of existing processes for ease of access, and enhanced outreach and marketing of community opportunities to initiate Livable Streets programs.

Recommendation 2: PBOT should pursue the feasibility of implementing a community crosswalk and art bike design program.

Developing a sense of community ownership over public space helps improve feelings of safety and reduces graffiti. Some ways to do this may include community murals on area walls, large street paintings (called "Intersection Repair Projects"), murals on bus shelters, artistic crosswalks, and art-covered utility boxes in the right-of-way. Developing designs, fundraising or seeking small grants, partnering with agencies and organizations, and participating in installation and ribbon-cutting can bring communities together and empower a sense

What is a Liveable Street?

Livable streets is a broad term that can include a range of events, programming, and physical infrastructure to reinforce the idea that public streets are public places. Public spaces can serve community uses other than vehicle movement. Livable Street programs support innovation in the public right of way by opening Portland's streets, parking spaces, plazas, and alleys to new and enhanced programming via public and private partnerships.



of shared community spirit and identity, which may even help foster community protection and maintenance of the artistic asset.

The City of Portland and PBOT have a common aspiration to connect public spaces and celebrate local communities. Some existing PBOT programs, such as block parties, community events, and street seats, already support this vision, but the agency also receives public

Left/middle: Portland SE 122nd and Division art-covered utility boxes

Right: A King County Metro Transit bus stop with murals painted by community members.

requests for more innovative activities in the public right-of-way. To better support this creativity, PBOT has embarked on a journey with staff and community leaders to develop a comprehensive strategy to guide placemaking initiatives throughout the city—the Livable Streets Strategy. PBOT has seven formalized programs and processes for livable streets projects in the public right-of-way:

1. Community Event Program
2. Block Party Program
3. Street Seats Program
4. Intersection Repair Projects
5. Vending Cart Program
6. Sidewalk Cafes Program
7. Adopt-a-Street Program

In addition to these programs/processes, there are other livable streets activities that PBOT has supported in the past even though they do not have a formalized program/process. These include projects such as street enhancements, pocket parks, pedestrian plazas, demonstration projects, community initiated open streets

What is Placemaking?

The collaborative act of identifying current or creating new, distinctive, public environments or places to be experienced by people. These places build on existing assets that include physical, social, or natural characteristics.



A local example: raindrop cross walk art in Old Town/Chinatown

RECOMMENDATIONS FOR FUTURE STUDY

Through the GTC planning process, staff and community members identified need for additional planning that was beyond the scope or ability of the GTC plan to accommodate and complete. The following plans and studies are recommended to be funded and completed in the future. Each has merit and would help support the GTC Plan goals.

OUTER STARK CORRIDOR PLAN

The Growing Transit Communities Plan has identified two options for the Outer Stark Corridor east of Gateway. Option 1 would repurpose the currently-underutilized curbside space to install buffered or protected bike lanes along both sides of the street. Option 2 would remove one traffic lane in each direction to provide parking-protected bike lanes on both sides of the street, with turn pockets added at major intersections where capacity is needed. Option 2 would also provide space for pedestrian and transit islands to shorten crossings and allow for enhanced bus stops. While Option 2 would provide a much higher safety benefit than Option 1, it would also have a greater impact on traffic operations and would be a more “transformative” project for surrounding neighborhoods. Since it was beyond the scope of the GTC planning process to fully analyze traffic and safety impacts, or to engage the community in a corridor planning process, we recommend a follow-up study to develop an agreed-upon corridor redesign.

BURNSIDE & 82ND TRAFFIC CIRCULATION STUDY

The Growing Transit Communities Plan has identified a project concept that would fill the bike lane gap at Burnside and 82nd while also improving transit speed and reliability for the Line 20. The City proposes to prohibit left turns from Burnside to 82nd, allowing removal of the turn pockets to create more space. Prior to implementation, a traffic circulation study is needed to determine impacts to other adjacent streets and develop mitigation measures if needed. Changes to the intersection at 82nd requires ODOT approval given 82nd is under ODOT jurisdiction. PBOT and ODOT have already started investigating this concept and will work together in the coming months to determine project feasibility.

82ND AVENUE STREETSCAPE PLAN

The Growing Transit Communities Plan has identified a need for streetscape improvements and additional enhanced crossings along NE 82nd Ave from Holladay to Schuyler, centered on the 82nd Ave MAX Station. Since it was beyond to scope of the GTC Plan to develop detailed streetscape and crossing treatments, we recommend a follow-up process. Given the limited right-of-way available along 82nd Ave and the presence of several large opportunity sites for redevelopment, a streetscape plan should be developed as soon as possible in order to influence frontage improvements that come with future redevelopment.

AIRPORT WAY & I-205 TRANSIT STUDY

According to TriMet data, bus driver surveys, and feedback received from Line 87 riders, there is a major transit reliability issue for the westbound Line 87 approaching NE Airport Way & Holman St near I-205. During PM peak times, traffic congestion from the Airport Way to I-205 northbound on-ramp often stretches back to 122nd or beyond, sometimes taking up both lanes. Line 87 buses have a difficult time serving stops in the outer lane and then merging to the center to turn left onto Holman St.

While it was beyond the scope of the Growing Transit Communities Plan to develop a preferred solution, many promising ideas emerged from the planning process. One option was to create a center bus lane with a median transit island on Airport Way near Ainsworth Circle, replacing the previous bus stop and allowing the bus to merge to the left lane earlier. Another option would be for the bus route to shift to Glenn Widing Dr to avoid the worst area of congestion. Both of these options require more study to assess potential operational benefits and consider the impacts to service coverage with changed routing or bus stop locations. We recommend that PBOT and TriMet work together to conduct a transit study for this area to answer these questions.

