

82nd Avenue Transit Project

Final Initial Purpose and Need Statement -

May 25, 2023

BACKGROUND

The 82nd Avenue corridor is a major route for the region connecting key destinations and communities in Clackamas County and Portland, Oregon (See Figure 1) and supporting the movement of people and goods in a diverse and growing area. The corridor disproportionately serves BIPOC, limited English proficiency, and low-income communities. 82nd Avenue was once the primary north-south highway for the area before the Interstate 205 was opened in 1983. Since then, the primary function of 82nd Avenue as a regional throughway has diminished, but its importance as a transit and pedestrian corridor has grown. The roadway continues to carry a substantial amount of freight, auto, and bus traffic.

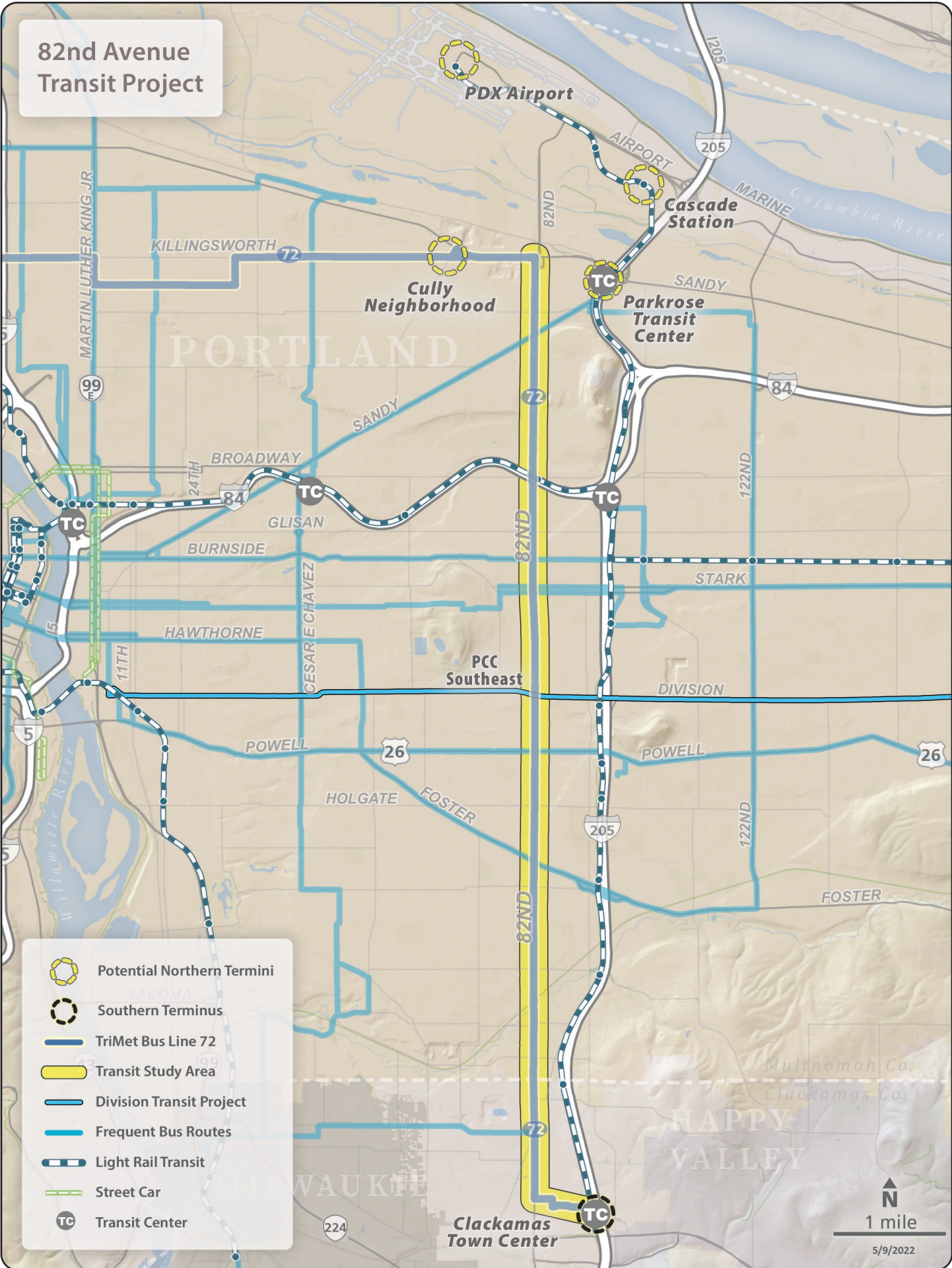
TriMet's Line 72 Killingsworth/82 serves the 82nd Avenue corridor and is the highest ridership bus line in TriMet's system¹, exceeding that of the Orange or Yellow Max light rail lines. However, unlike light rail transit, the bus runs in mixed traffic and is often delayed. Line 72 is a frequent service route connecting riders to major destinations, high-capacity transit lines (the new Division FX2 and the MAX Green, Blue, and Red Lines), and over 20 bus routes just in the corridor. It is a workhorse with high ridership all day and weekends and saw relatively high retention of riders during the pandemic.










The 2010 High Capacity Transit (HCT) System Plan, the 2018 Regional Transportation Plan (RTP), and the 2018 Regional Transit Strategy all call for a major transit investment in the corridor. The 2018 RTP identified the corridor for transit. In 2019, Metro's Transportation Funding Task Force selected 82nd Avenue as a Tier 1 priority to include a bus rapid transit project.

The need is urgent with an unprecedented opportunity for an 82nd Avenue bus rapid transit project to leverage and complement a \$185 million investment that the City of Portland, the State of Oregon, and regional partners are making as part of the 82nd Avenue jurisdictional transfer. These investments provide the opportunity to transform and reimagine the corridor to improve safety and pedestrian facilities in conjunction with high-quality, frequent, reliable Bus Rapid Transit service. The City of Portland and ODOT are already making near-term safety, paving, and maintenance fixes that will improve access to transit. A second phase of that work is underway through the City's Building a Better 82nd Avenue program to identify additional improvements within Portland for the corridor that are being coordinated closely with the transit project.

¹ The Line 72 continues west of 82nd Avenue to Swan Island. However, the 82nd Avenue segment accounts for 77 percent of rides (2022) and 82 percent of the passenger delay (2019).

82nd Avenue Transit Project



-  Potential Northern Termini
-  Southern Terminus
-  TriMet Bus Line 72
-  Transit Study Area
-  Division Transit Project
-  Frequent Bus Routes
-  Light Rail Transit
-  Street Car
-  Transit Center

PURPOSE

The purpose of the 82nd Avenue Transit Project is to improve transit speed, reliability, capacity, safety, comfort, and access on 82nd Avenue, which is one of the most important transit corridors in the region. The project seeks to address the needs of people who live, work, learn, shop, and travel within the corridor both today and in the future – in particular, BIPOC and low-income individuals – through context-sensitive transit improvements in a constrained corridor.

NEED

The 82nd Avenue Transit Project would address five major needs in the corridor:

1. **Transit speed and reliability:** need to provide faster and more reliable transit service to improve access to destinations and the ability for people to rely on transit to meet their needs
2. **Constrained corridor:** need to serve the high travel demand in a constrained corridor
3. **Safety:** need to improve safe access to transit and bus stop amenities in a high injury corridor
4. **Transit-dependent communities:** need to provide safe, accessible, efficient, and reliable transit service to meet the needs of the high concentration of communities who rely on transit
5. **Climate change:** need to increase transit ridership to help reduce reliance on single-occupant vehicles, vehicle miles traveled, energy consumption and greenhouse gas emissions in our region.

The following subsections provide more information on each need.

Transit speed and reliability

Line 72 has slow travel times and reliability issues which reduce travelers' ability to access destinations, make transit transfers, and plan trips. Travel times and reliability are cited as key reasons people choose not to ride transit².

82nd Avenue is extremely busy with high volumes of cars³, freight, and bus traffic on weekdays and weekends. The Line 72 runs in mixed traffic with little transit priority and is subject to daily congestion, which is worst in the midday and evenings. Line 72 travel time variability and lengths are increased by the many signals, frequent bus stops, and long bus dwell times. Current bus stop spacing is very close together (every 850 feet on average) which is closer than TriMet's current spacing standards (1,000-1,600 feet apart depending on context). Consequently, average bus travel time is 12 miles per hour and run times vary significantly by time of day. A northbound trip from Clackamas Town Center to Cully Boulevard takes 53 percent longer (21 minutes) during the evening rush hour compared to early morning (see Table 1). In addition, transit travel times are approximately twice as long as driving during the evening peak hour (see Table 2).

² <https://www.ecolane.com/blog/7-reasons-why-people-stop-using-public-transit>

³ Average daily traffic counts in 2019 ranged between 14,000 and 31,000 vehicles in different segments

Table 1. Bus travel time by time of day, in minutes (Fall 2019 average weekday)

Direction	Early AM	AM peak	Midday	PM peak	PM peak delay (vs. early AM)
Northbound (CTC > Cully)	40	48	54	61	21
Southbound (Cully > CTC)	46	51	57	59	13

CTC = Clackamas Town Center

Source: TriMet 2019

Table 2. PM peak travel time difference between driving and bus*

Direction	Car travel time	Bus travel time	Difference (minutes)	Difference (%)
Northbound	31	61	30	97%
Southbound	30	59	29	97%

Source: Based on Regional Integrated Transportation Information System/INRIX travel time data from 2019 PM peak period compared with 2019 Line 72 travel times.

Line 72 has the highest cumulative passenger travel delay⁴ of any bus route in the TriMet system. The 82nd Avenue portion of the line accounts for 82 percent of the delay. The average delay per bus trip is approximately 15 minutes resulting in an average of 22 hours of cumulative passenger delay per trip. Cumulative passenger delay accounts for the number of passengers subject to the delay.

Transit travel times are projected to increase by 2040, especially in the evening peak period with increased traffic congestion. Comparing 2022 to 2040 between Alberta Street and 82nd Avenue in the northern part of the terminus and Clackamas Town Center bus travel times are expected to increase between 22 and 24 percent in the PM peak period.

Table 1. Projected growth in bus travel time (2021 versus 2040)

Direction	2021 Travel Times		2040 Travel Times		Difference minutes (%)	Difference Minutes (%)
	AM peak	PM peak	AM Peak	PM peak	AM peak	PM peak
Northbound (CTC > Alberta)	40	49	44	61	4.4 (11%)	12 (24%)
Southbound (Alberta > CTC)	38	47	41	57	3.2 (9%)	10 (22%)

Source: DKS calculated based on Synchro/SimTraffic models and validated with existing Line 72 travel times

Note: travel times are rounded

Constrained corridor

82nd Avenue is a high-demand corridor for all travel modes but is constrained by limited right-of-way and development adjacent to the roadway. This condition makes adding travel lanes for car traffic an unlikely option. To accommodate future growth and meet the region's climate change goals, more trips will need to be made on transit, which can carry more people than cars in the

⁴ Delay is defined as the difference between the 80th percentile and 20th percentile run time. These numbers are based on TriMet 2019 data.

same space. The corridor study area includes approximately 70,000 people and 65,000 jobs in 2015 which is anticipated to grow to 94,000 people and 92,000 jobs in 2040.⁵

Today, there is insufficient capacity to accommodate anticipated growth in travel demand. The MAX Green Line operates parallel to 82nd Avenue but serves regional trips and would not be able to support local trips and destinations directly along 82nd Avenue. Increased frequency of service, faster travel times and larger vehicles are all strategies that would increase the transit carrying capacity.

Safety

The 2018 Regional Transportation Safety Strategy (RTSS) identified 82nd Avenue as a regional high injury corridor⁶, and the City of Portland identified 82nd Avenue as part of its high-crash network. According to the RTSS, 82nd Avenue had the tenth highest rate of serious crashes⁷ per mile out of the 181 corridors identified. Crash data for the six-year period from 2015 through 2020 for the full length of the corridor showed 2,698 injury crashes, of which 15 resulted in a fatality.⁸ Pedestrian and bicycle crashes are over-represented in more serious crashes, making up two-thirds of fatal crashes and approximately one-quarter of serious injury crashes. Many pedestrian crashes are happening near transit stops.

All transit riders are pedestrians for some part of their trip. Infrastructure is essential for a safe pedestrian environment. The corridor has many missing and substandard sidewalks, limited safe crossing locations and no continuous, protected bicycle facilities. Signalized pedestrian crossings are spaced on average over 1,000 feet apart. Within the City of Portland over half of the sidewalk ramps are not Americans with Disabilities Act compliant. In addition, the lighting along the corridor is inconsistent making pedestrians less visible to drivers.

Transit-dependent communities

The 82nd Avenue corridor is one of the most diverse parts of our region. It serves many BIPOC communities, limited English proficiency speakers, and low-income communities. It contains seven census tracts identified as areas of persistent poverty by the U.S. Department of Transportation and car ownership is lower than the regional average through much of the corridor. In addition, most of the corridor has been identified as being Equity Focus Areas due to high concentrations of people of color, low-income people, and and/or people with limited English proficiency. There are census tracts with some of the highest BIPOC concentrations in the state. Thirty-two percent of the population is low income compared to 24 percent for the regional average; and 11 percent of the population has limited English proficiency compared to 8 percent of the region⁹. In addition, there is a higher percentage of zero car households and people living with a disability in the corridor than

⁵ Study area is half-mile from 82nd Avenue and includes the area around Clackamas Town Center in the south and the four potential termini in the north. Source: MetroScope, Metro Oregon.

⁶ Metro. [High Injury Corridors & Intersections Report](#). April 2017.

⁷ Serious injuries = fatalities and incapacitating injuries

⁸ ODOT. 2015-2020.

⁹ Source: 2016-2020 American Community Survey

in the region as a whole. These groups are more likely to depend on transit for their daily needs than the general population.

Transit travel time and reliability are equity issues for people that need to be at work or other places on time. BIPOC, low-income people, and women are more likely to fill “essential worker” jobs requiring workers to be in-person with a fixed start time. Consequently, these groups are more likely to have a longer commute and often need to take an early bus to avoid being late. In addition, ridership on the Line 72 is higher mid-day than in the morning peak hour. This generally indicates that a lot of trips are for other needs than a typical “8 to 5” commute rather being used by people trying to get to appointments, school, and essential jobs that have later start times. In addition, the Line 72 had the third highest ridership retention rate among TriMet’s frequent service lines in Spring 2022 relative to Fall 2019 (pandemic drop), demonstrating its importance as an essential transit service line.

Bus stop area infrastructure and amenities are lacking in the corridor making it less safe and comfortable to access transit. The stop area infrastructure includes narrow, aging, or missing sidewalks in many places; poor and inconsistent lighting; and bus stops closer than TriMet’s standards. Along 82nd Avenue, 36 percent of bus stops have shelters, 57 percent have seating, 65% have signalized crossings nearby, and only 83% have lighting which is inconsistent and often does not meet standards. Respondents to the City of Portland’s Building a Better 82nd Avenue survey conducted in 2022, stated desire for improved bus stop quality, access to bus stops, better transfers, and shorter wait times.

Climate Change

In Oregon, the transportation sector is a significant contributor to statewide greenhouse gas (GHG) emissions. According to the Oregon Global Warming Commission's 2022 Biennial Report, the transportation sector accounts for 40 percent of the state's total GHG emissions, making it the largest source of emissions in Oregon.¹⁰ In 2010, the Oregon Legislature passed Senate Bill 1059, requiring the Oregon Transportation Commission (OTC) to adopt a statewide transportation strategy to reduce GHG emissions from transportation to 75 percent below 1990 levels by 2050. The existing transportation strategy requires the OTC to coordinate with Metro, state agencies, local governments, and stakeholders to achieve the state's emissions reduction goals.¹¹ Each agency involved in the 82nd Avenue Transit Project has developed a climate action plan supporting this priority.

The climate plans and policies for the metro region, City of Portland, Clackamas County, Multnomah County, ODOT, and TriMet all recognize public transit as a primary tool to reduce energy consumption and greenhouse gas emissions in our region. These plans call for increased transit mode share and active transportation to help address the climate crisis. Metro’s Climate Smart Strategy which was adopted by all the regional partners¹² also aims to reduce the region’s per

¹⁰ Oregon Department of Energy. [2022 Biennial Energy Report](#)

¹¹ Oregon Department of Transportation. [Statewide Transportation Strategy](#)

¹² Joint Policy Advisory Committee on Transportation (JPACT) members Multnomah County, Washington County, Clackamas County, City of Portland, Cities of Multnomah County, Cities of Washington County, Cities of

capita greenhouse gas emissions from 2010 by at least 20 percent by 2035 by making transit convenient, frequent, accessible and affordable. The City of Portland’s Council adopted ambitious goals for reducing carbon emissions, much of which depends on a large reduction in vehicle miles traveled. PBOT’s Transportation System Plan aims to achieve these reductions through a significant shift in modes traveled by 2035, including a 25% commute transit mode split.¹³ Multnomah County’s target is also a 25% transit mode share for work trips but by 2030.¹⁴ The first strategy in the TriMet Climate Action Plan is to reduce regional traffic-related emissions by increasing transit ridership and supporting nondriving travel options.¹⁵ Clackamas County calls for increasing transit use as a key tool to meet its goal of being carbon neutral by 2050.¹⁶

Marginalized and vulnerable populations, such as BIPOC communities and low-income people, are often disproportionately affected by the adverse effects of climate change. In greater Portland, communities of color and low-income communities are disproportionately exposed to extreme heat because they are more likely to live in areas with less tree canopy cover and more pavement while also having less access to air conditioning or community shelters.¹⁷ Throughout the region, BIPOC communities and low-income individuals are also disproportionately exposed to pollutants from diesel exhaust and live in the highest flooding risk areas.¹⁸ Reducing GHG emissions is critical to addressing the effects of climate change and ensuring a viable, sustainable future for the region.

Providing a reliable bus rapid transit line with safe pedestrian access on 82nd Avenue promotes transit ridership consistent with the region’s goals to decrease single occupancy vehicles trips and reduce emissions.

Clackamas County, Oregon Department of Transportation, TriMet, Oregon Department of Environmental Quality, Metro Council, Washington State Department of Transportation, City of Vancouver, and Clark County,

¹³ PBOT. [Strategic Plan 2019-2022](#)

¹⁴ Multnomah County. [2015 Climate Action Plan](#)

¹⁵ TriMet. [2022 Climate Action Plan](#)

¹⁶ Clackamas County. [Draft Clackamas County Climate Action Report](#)

¹⁷ Lidar, [Metro Research Center](#)

¹⁸ US EPA National Air Toxics Assessment

82nd Avenue Transit Project

Goals and Objectives

Goals	Objectives
The project improves the travel experience for transit riders, in particular BIPOC and low-income communities	<ul style="list-style-type: none"> • Reduce transit travel time • Improve transit reliability today and in the future • Improve physical safety and access to stations • Improve amenities and comfort at stations
The project improves transit mobility in a congested and constrained corridor	<ul style="list-style-type: none"> • Improve transit passenger capacity • Improve transit reliability and travel times • Provide transit access to key destinations and the broader transit network
The project advances adopted state, regional, and local goals and objectives related to land use, transportation, equity, and climate	<ul style="list-style-type: none"> • Increase transit ridership • Support land use and transportation objectives • Support equity objectives • Support climate objectives • Support efficient movement of people and access to services • Supports regional and local Vision Zero objectives
The project supports the community, in particular transit riders and BIPOC communities	<ul style="list-style-type: none"> • Community members serve on the decision-making body for the transit concept • Community members, in particular BIPOC and historically-disadvantaged communities, provide input on project design outcomes • Provide transparent, balanced, and objective information about project analyses, tradeoffs, and community opportunities to influence decision making
The project is feasible to fund, construct and operate	<ul style="list-style-type: none"> • Cost-effective transit operations • Competitive for FTA capital grant funding • Project cost is supported by project partners and documented in a financing plan • Project design can meet necessary approval requirements
The project is coordinated with other planned investments in the corridor	<ul style="list-style-type: none"> • Leverage opportunities to efficiently fund improvements in the corridor • Compatible with other investments to improve access and safety in the corridor • Context-sensitive design improves transit while supporting other community priorities
The project is able to move into the next phase, Project Development	<ul style="list-style-type: none"> • Identify funding for Project Development phase

The Draft Goals and Objectives have been reviewed for racial equity and other equity considerations. Comments focused on the need for project performance measures being designed demonstrate the potential benefits and harms that may impact BIPOC, low income, and other vulnerable groups. The project team will incorporate this feedback as we develop performance measures tied to the objectives. An example comment was to recognize different groups have different perspectives on what increases physical safety with many BIPOC groups feeling less safe with police presence. The performance measures for physical safety would recognize this and focus on implementing countermeasures for crashes such as lighting, crossings, and sidewalks.

These 82nd Avenue Transit Project goals and objectives are the focused on the development of a high-quality transit project. As the project alternatives are developed and evaluated, the project team must be cognizant of community values and the special need not to conflict with the Building a Better 82nd Avenue program while working in the same geography (between Clatsop and Lombard streets in Portland). Therefore, specific considerations and objectives that are important for the Building a Better 82nd Avenue program related to the area will be fleshed out and included for consideration as we move forward. In addition, the community values adopted by the 82nd Avenue Community Coalition will be considered and are attached.

Building a Better 82nd Objectives to consider will be provided by the City of Portland in the future.

- *Discussions have centered around a safe and comfortable walking environment, urban forestry, travel to North Portland, and the transit project fitting with a holistic set of street improvements.*

Attachment: 82nd Avenue Coalition's Values Statements

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