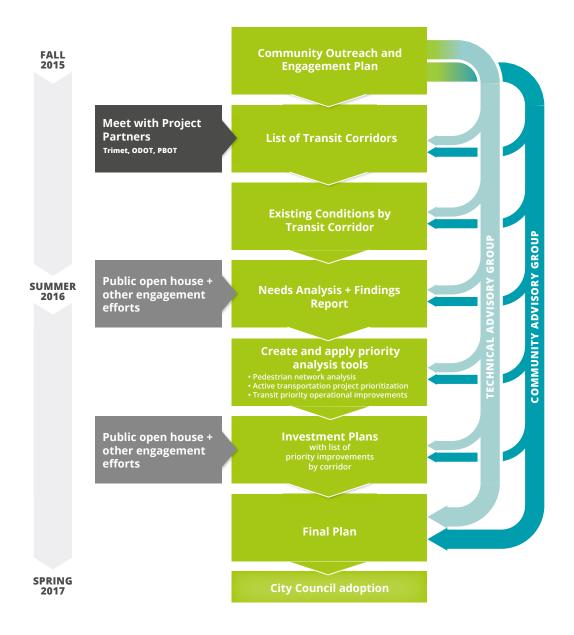


PLANNING PROCESS

The planning process began in Fall 2015 and included planning for community outreach and engagement, selecting the corridors for the scope of the project, reviewing existing conditions, conducting a needs analysis, creating and applying analysis tools to identify priority projects, developing investment plans with a list of priority improvements by corridor, and compiling and vetting the final recommended GTC Plan. The last step was presenting the GTC Plan to City Council for their review, public hearing, and adoption in Summer 2017. The adopting Resolution is located in Appendix D. The following process graphic displays the steps in the planning process that are described in more depth throughout this chapter.



COMMUNITY OUTREACH AND ENGAGEMENT PLAN

The three selected transit corridors trace through 14 different neighborhood boundaries, ten of which are in East Portland. From a demographic and socioeconomic standpoint, East Portland is very different from the rest of Portland-it is more ethnically and racially diverse, less affluent, and has a greater proportion of both children and seniors. Staff developed a Community Outreach and Engagement Plan to guide and shape public involvement during the planning process and tailored it to the surrounding community. The planning process included convening of a Community Advisory Group that met throughout the planning process to review materials and provide feedback. The community engagement activities are further described throughout this chapter during the relevant steps in which the community feedback informed the planning process.



CORRIDOR SELECTION

Staff identified the corridors that are the focus of this plan in a multistep selection process. PBOT Staff determined there were resources to properly study three Candidate Corridors during the planning process given funding resources. The preliminary screening of potential candidate corridors identified all existing bus lines in the City of Portland that 1) have less than Frequent Service at the time of analysis, and 2) were planned for future improved service frequency in a TriMet Service Enhancement Plan.

All transit lines/corridors

in the City of Portland

Candidate corridors

Selected corridors

Corridors:

- with high projected residential density
- with best access to opportunity (job centers, educational institutions)
- with higher concentrations of historically disadvantaged populations
- with bike and pedestrian networks with more gaps
- with future planned land use patterns that are mixed-use and dense
- with a strong need for further planning to improve access to transit
- that in combination with the other slected corridors represent a diversity of street network types; land use intensities and mixes; and street design - in order to generate a variety of solutions that can be used in a variety of similar contexts throughout the City

THE CORRIDOR SELECTION CRITERIA

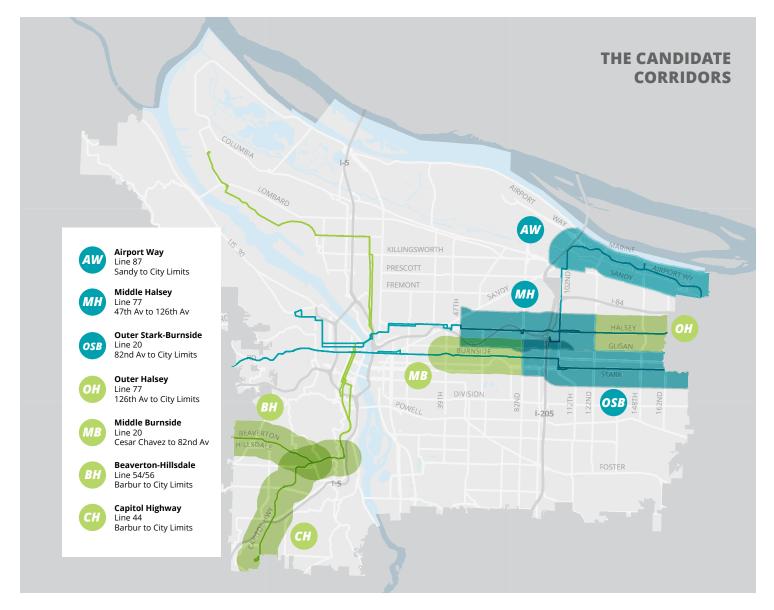
Corridors were selected to help grow transit communities where the built environment is not vet supportive of Frequent Transit but where the land use patterns and planned growth in the Comprehensive Plan would support future Frequent Service.

SELECTING THE CORRIDORS

The intent of the GTC Plan is to help grow transit communities where the land use pattern and planned growth in the Comprehensive Plan support future Frequent Service yet the current built environment is not supportive of transit and remains a barrier. Therefore, the City removed transit corridors and segments of corridors that already exhibit the qualities of a transit-oriented community (e.g., compact mixed-use development, exiting TriMet Frequent Service. high ridership, and a highly connected ped/bike network). This exercise eliminated portions of corridors near Portland's Central City and inner neighborhoods from consideration for the GTC plan. Initial candidate corridors that met the above criteria were:

- BH—Beaverton-Hillsdale Hwy (Line 54)
- CH—Capitol Hwy (Line 44)
- MH—Middle Halsey (Line 77)
- OH—Outer Halsey (Line 77)
- MB—Middle Burnside (Line 20)
- OSB—Outer Stark/Burnside (Line 20)
- AW—Airport Way (Line 87)

To produce corridors of more similar size and internally consistent development pattern, Burnside/Stark and Halsey were both split into two sections each.



SELECTING THE CORRIDORS

STEP 1: SCREENING FOR TRANSIT-ORIENTED COMMUNITY POTENTIAL

The potential for each corridor to host transit-oriented communities in the future was the first criteria evaluated. These criteria represent factors that are either highly correlated with transit ridership (housing and job density, land use pattern, demographics) or represent barriers to transit use that would benefit from an investment plan (sidewalk gaps, bikeway gaps, disconnected street grid). The criteria were:

- 1. **Residential Density**. Projected household density based on the Comprehensive Plan Growth Scenarios Report.
- Opportunity. Provides access to opportunity, including educational institutions and concentration of jobs.
- Equity. Serves concentrations of historically underserved and disadvantaged populations and people more likely to depend upon transit.
- Access. Known pedestrian and bicycle network gaps/deficiencies that limit access to transit.
- Mixed-use Land Patterns. The corridor has a transit supportive pattern of mixed-use zoning and density in the proposed Comprehensive Plan Update.

Staff created maps to help evaluate the Candidate Corridors and scored Corridors on a five level scale using a multiple-account valuation method.



CANDIDATE CORRIDOR STEP 1 EVALUATION CRITERIA

Rather than adding up scores and choosing whichever corridors scored the highest (which might result in overly similar corridors) the first step in the evaluation was to eliminate any corridors which scored very low.

37314

SELECTING THE CORRIDORS

STEP 2: DETERMINING VALUE OF ADDITIONAL PLANNING

The second step in the evaluation process was to determine whether there was a strong need for additional planning in each corridor. Candidate corridor screening included an evaluation of planning need, which determined whether the GTC Plan would bring added value beyond plans already completed or soon to be underway. Lists were developed of existing or upcoming plans relating to each corridor that made it through Step One screening.

STEP 3: DIVERSIFYING THE CORRIDOR TYPOLOGIES

This planning process itself intends to serve as a model that can be replicated in other corridors –even corridors in other cities– so that they too are better able to identify and prioritize improvements that would make getting to and using the bus, a safer and more convenient option.

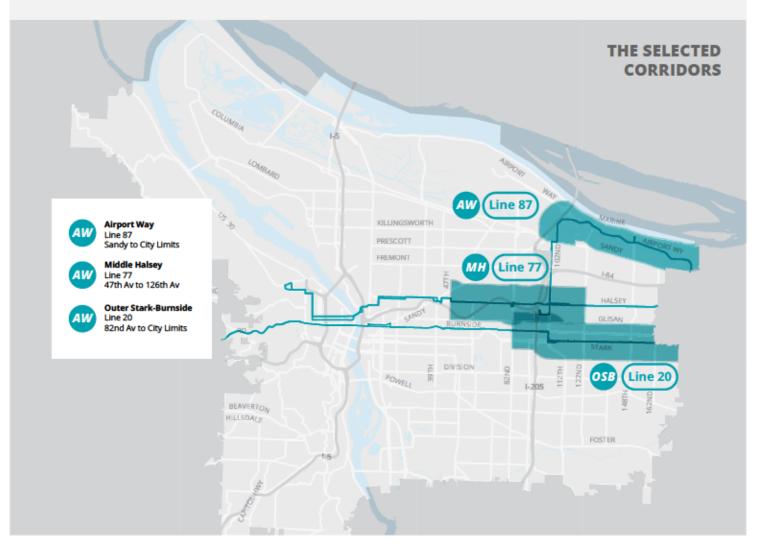
The last candidate corridor evaluation step reviewed the typologies of each corridor in terms of street network connectivity, land use intensity, land use mix, and street design. The focus on different typologies allowed the GTC Plan to develop different kinds of solutions for different kinds of places, and therefore be a more useful model for future planning efforts by the City and other jurisdictions.

Through these three steps, the Candidate Corridors were narrowed to the three corridors that best met the above criteria and reflected a diverse mix of corridor typologies. The follow three corridors were advanced for further study during the planning process:

- MH—Middle Halsey (Line 77)
- OSB—Outer Stark/Burnside (Line 20)
- AW—Airport Way (Line 87)

For additional detail about the Transit Corridor Selection process, please refer to the full Transit Corridor Selection Report.

CORRIDOR **TYPOLOGIES** STREET NETWORK MOSTLY COMPLETE GRID FRAGMENTED COLLECTOR & LAND USE INTENSITY 1000 a litta di CONTINUOUS OSB 1 Г -Н NODAL СН ΜН Ti 10 DISPERSED AW BH ОН Ш in a



37314

CORRIDOR EXISTING CONDITIONS AND NEEDS

Staff assessed the three corridor study areas for deficiencies, compiled projects and needs identified from past plans, and gathered lots of public feedback on potential projects that would make it safer and more convenient for people to get to and from the bus or walk and bike in the project areas. The public also provided feedback on how all the candidate projects should be evaluated for prioritization.

EXISTING CONDITIONS

For each of the selected corridors, project staff examined policy context, the physical transportation network, existing land use, future land use and growth, as well as transit use and corridor-wide travel patterns. These findings are explored in detail in the Policy Background and Existing Conditions Report. The existing conditions and policy review showed the character of each corridor while uncovering their deficiencies and needs. These existing conditions helped to form the base map for each corridor.

REVIEWING PLANS

For each of the three selected GTC corridors, staff reviewed many Portland plans looking for projects that had the potential to help improve access to transit and safety along the corridors.

- Portland Transportation System Plan (classifications and project lists) [2007]
- Portland Pedestrian Master Plan [1998]
- Portland Bicycle Plan for 2030 [2010]
- Halsey/Weidler Commercial District Investment Strategy [2014]
- Hollywood and Sandy Plan [2000]
- East Portland in Motion [2012]
- Eastside MAX Station Communities Project [2009]
- 82nd Avenue of the Roses Implementation Plan [in Progress]

- Sacramento Elementary Safe Routes to School Engineering Report [2008]
- Vestal Elementary Safe Routes to School Engineering Report [2006]
- Gateway Street Plan [2009]
- Airport Way Street Plan [1995]
- Division-Midway Neighborhood Street Plan [2015]
- TriMet Eastside and North/Central Service Enhancement Plans [2016]

Staff mapped projects that were relevant to safety and access to transit from the plans in preparation for identifying gaps in the planned transportation network.

GAP IDENTIFICATION

With the projects mapped in each corridor, staff found gaps in existing and planned networks and generated conceptual design solutions for some of the gaps. Mapping new gap-filling projects was supplemented by observations from field visits.

MAPS OF CANDIDATE PROJECTS

Based on the above efforts, staff developed maps of candidate projects to address needs and deficiencies in each corridor. The maps also included projects in the corridor that were recently completed and funded.



COMMUNITY ENGAGEMENT

Staff shared the maps of candidate projects with the community for feedback on whether staff had selected the projects that best addressed the existing community's needs for improved access to transit and safety. This involved a physical and virtual open house, an online survey, a community walk, several visits to community organizations and neighborhood associations, and regular meetings with a Community Advisory Group with community members from the three selected corridors. Staff gathered additional candidate projects based on community feedback. Staff also collected input on the criteria to be used for prioritizing projects, described more in the next section.

The following community outreach and engagement activities informed the early planning process:

- GTC Community Advisory Group meetings: November 16, 2015; April 6, 2016; February 3, 2016; April 6, 2016; June 6, 2016
- GTC Technical Advisory Group meetings: August 26, 2015; April 18, 2016
- Developed an interested parties email list with 497 contacts
- JOIN, Montavilla Neighborhood Association and Oregon Walks: Community Walk near NE Halsey/80th and 82nd MAX station: October 26, 2015
- Rose City Park Neighborhood Association: Partnered with BPS for targeted engagement to resolve neighborhood concerns about Comp Plan up-zoning: January 21 and February 18 of 2016 (plus flyer door-to-door canvassing in the neighborhood for event outreach)
- East Portland Neighborhood Organization: Jan 2016
- East Portland Youth Advocates: Feb. 4
- Portland Commission on Disability, Accessibility in the Built Environment Committee: Feb. 8
- Drive Oregon event at the Rosewood Initiative: Feb. 16
- Companion Animal Resource Fair at the Rosewood Initiative: Feb. 28
- Juvenile Court Safety Committee: Mar. 3
- Bus line 87 rider intercept surveying: Apr. 15
- Pedestrian Advisory Committee: Apr. 19
- Targeted postal mailing for survey and open house invitation: 23,000+ residences and businesses via US Postal Service mail carrier routes around study area corridors. Key information on the flyer was translated into

Spanish, Russian and Vietnamese, including a number to call to request interpreters. See Appendix A.

- East Portland Neighborhood Association News (EPNAN) advertisement for survey and open house: printed newsletter delivered to approximately 58,000 addresses in East Portland around April 15, 2016. Paper flyer handout for distribution through CAG members, interested parties and canvasing. See Appendix B
- Sent 10 interested parties emails (so far) with updates about the Plan and engagement opportunities throughout the planning process
- Facebook advertising for online survey: PBOT, Apr. 4 – Apr. 17; TriMet, Apr. 27 – May 4 in 2016
- Facebook advertising for open house: Apr. 19 Apr. 26 in 2016
- Email to the BPS Planning District Liaisons, ONI and the plan interested parties list with an encouragement to forward the announcement to their distribution lists.
- TriMet emails to line 20, 77 & 87 riders by zip code and to TriMet Rider Panel by zip code.
- GTC Plan Open House #1 at Floyd Light Middle School: Apr. 26, 2016
- Multnomah Education Service District (MESD) brown bag: June 8, 2016
- MESD Wellness Summit: Parkrose High School: Aug. 22, 2016
- Youth engagement at East Portland Community Center afterschool program: September 8, 2016
- Online survey #1 with 698 responses

CREATE AND APPLY PRIORITY ANALYSIS TOOLS

During this phase of the planning process, City staff developed a suite of corridor-level tools to evaluate and prioritize the needs and candidate projects identified in the previous phase. The intent was to identify the projects that would provide the most benefit in the three Plan corridors based on what is most important to the community. This phase of the planning process informed and shaped the recommended investment plans developed for each corridor.

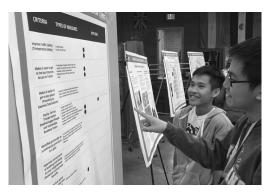
PRIORITIZING CRITERIA

PBOT staff developed criteria for evaluating and prioritizing candidate projects. Each criterion represents a value, or what is important to the community. Many of the criteria reflect existing City policy. Staff gathered public feedback on the criteria and which were most important for evaluating all the candidate projects. Based on feedback from the public, our Technical Advisory Committee, and Community Advisory Group, three criteria were identified as most important, or the highest priority the plan should address. The three most important criteria are highlighted in **bold** below. In acknowledgement of their importance, these three criteria were more heavily weighted in the technical analysis. Therefore, candidate projects that scored high on these criteria received higher total scores and performed better in the overall ranking of projects. Criteria:

- Transportation safety
- Makes it easier to get to bus stops/Improves Access to Transit
- Equity: Benefits people of color, low income households, people with disabilities, etc.
- Makes it easier to get to key places; school, park, grocery store, clinic, daily services/Proximity to Essential Destinations
- Identified previously as a community priority/Identified in a Plan or Prioritized Previously
- Improves convenience of walking and biking in your neighborhood/Network Connectivity Benefit
- Improves bus speed and reliability
- Has public support/ stakeholder input
- Serves the most people nearby

Staff considered two scenarios for evaluating projects: one where none of the criteria were weighted and one where the three criteria most important to the community were weighted twice the others in the Active Trans Priority Tool described below. Ultimately, the weighted scenario was used in the scoring of candidate projects.









MEASURES

PBOT Staff identified measures and datasets for each criteria to objectively evaluate, score and compare how well the candidate projects met the criteria. The measures associated with each criteria are described in the table below.

Most of the measures involved data that has been mapped in each of the corridor study areas. The next step involved using the spatial buffer analysis in Geographic Information System (GIS) mapping software to calculate a score for each measure. Spatial buffer analysis allows the user to determine which projects are within a particular proximity to the specified measures. After this analysis the scores for the different projects were attributed into a table and then plugged into the Active Trans Priority Tool described below.

	Criteria	Active Trans Category	Types of Measures	Data Source	What Counts	Analysis Buffers
1	Transportation Safety	Safety	Crash history	State crash data points	# of Ped and Bike fatalities (double weight), Serious Injuries (double weight), All Injuries	# within 250 ft radius buffer
			High Crash Network	Vision Zero analysis layer	On a High Crash Corridor	Y/N: 100 ft radius buffer
			High Crash Intersection	Vision Zero analysis layer	Near High Crash intersection	250 ft radius buffer
			Crash risk factors	Vision Zero analysis layer	Crash Factor Average Score	250 ft radius buffer
2	Improves Access to Transit	Access to Transit	Proximity of project to bus stop or MAX line and ability to improve access to the stop.	TriMet transit stop layer	# of bus and MAX stops	250 ft radius buffer
			Average Daily MAX and Bus Ridership (Weekly average ons/offs at nearby bus stop)	TriMet 2015 Passenger Census	# of ons and offs	250 ft radius buffer
			Monthly Average Bus Ramp Deployment	TriMet 2015 Passenger Census	# of ramp deployments	250 ft radius buffer
3	Proximity to Essential Destinations	Demand	Number of nearby essential destinations. Community Centers (GIS Enterprise Layers), Grocery Stores (GIS Enterprise Layers), Clinics (see email from Neil), and Hospitals (GIS Enterprise Layers), Parks (GIS Enterprise Layers), and Schools (GIS Enterprise Layers)	GIS Enterprise Layers	# of destinations	500 ft buffer

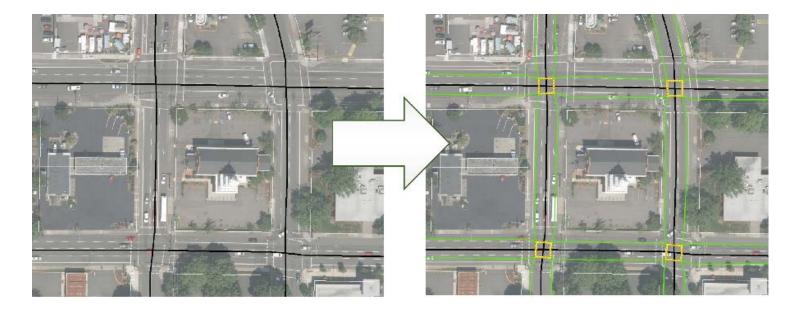
Criteria for Evaluating and Scoring Candidate Projects in the Active Trans Tool

	Criteria	Active Trans Category	Types of Measures	Data Source	What Counts	Analysis Buffers
4	Equity. Serves Transportation Disadvantaged People and Vulnerable Roadway Users	Equity	 Minority population Low-income population Limited English Proficiency (LEP) population Senior population Youth population People with disabilities Limited vehicle access households Low and medium wage jobs Affordable housing units Key retail/human/social services 	TriMet's Transit Equity Index/ Communities of Concern	Average Score for Intersecting Census Tracts	
5	Identified in a Plan or Prioritized Previously	Stakeholder Input	In the Portland Transportation System Plan (TSP), Bicycle Plan 2030, Pedestrian Master Plan, East Portland In Motion (EPIM), Eastside Station Areas Plan, etc.		Number of plans	
6	Network Connectivity Benefit/ Convenience	Connectivity	Increases convenience, connectivity and access. Reduces out of direction travel along streets and reduces delay waiting to cross streets.	Pedestrian Network Analysis	Increase in access from all addresses to all addresses through reduced impedance.	½ mile buffer
			Scoring bikeway projects: Increase connectivity for cycling.	Methodology: <u>3 points</u> if it fills a major network gap, particularly if it crosses a major barrier (like a freeway) or completes a couplet (SE Washington is the main example) <u>2 points</u> if it fills a network gap but there are other available routes (no major barriers) 1 point if it is addressing a deficiency in existing facilities		
7	Improves Transit Service and Operations	Transit Ops	Reduces delay to buses.		# of recognized delays	
8	Public Support	Stakeholder Input	Based on public comment during the planning process.		# of public comments about need or support	
9	Serve the most people nearby	Demand	Forecasted Housing Density in 2035		# of Units	1000 ft radius buffer
			Forecasted Job Density in 2035		# of Jobs	1000 ft radius buffer
	Personal Security	Discontinued – Not scored in this analysis	Crime report history from Portland Police Bureau	Crime data points	Number of crime reports near bus stop	100 ft radius buffer
			Reports of locations with unsafe activity, reported to TriMet, Police or PBOT (if data is available)	Ask TriMet for data		

PEDESTRIAN NETWORK ANALYSIS

To better understand the convenience, connectivity and access benefit for sidewalk and crossing projects, City staff developed a routable pedestrian network model in Geographic Information System (GIS) mapping software to do a pedestrian network analysis. This was a collaborative effort with PBOT, BPS, and community volunteers Scott Parker, Ellen Vanderslice and other members of Oregon Walks. A routable pedestrian network was built in GIS to reflect the existing built environment, including missing gaps in the sidewalk network, public multi-use paths, every marked and enhanced crosswalks, and unmarked crosswalks. The model assesses the impedance, measured in weighted distance, to pedestrian travel caused by out of direction travel along streets and delay waiting to cross streets. The model is sensitive to the number of vehicle lanes on a street and posted speed limit. Therefore, busy, wide streets with higher posted speed limits have a higher impedance value, simulating that such streets are more difficult to cross or walk along if there are no enhanced crossings or no sidewalks.

Once the model was built, pedestrian projects were modeled to score the pedestrian access benefit of each project. The model measured the increase in access from all addresses to all addresses through reduced impedance provided by modeling the project. The score indicated the difference in access with and without the project. Staff used the score from this ped network model as the measure for the criteria "Improves convenience of walking and biking in your neighborhood," to score pedestrian-related candidate projects. This score was then used for the Active Trans Priority Tool describedon the next page.



37314

ACTIVE TRANS PRIORITY TOOL

City staff used the Active Trans Priority Tool to help score and rank pedestrian and bicycle candidate projects and identify which ones best met the measures for the criteria. Selecting tools to assist with the scoring and ranking of the projects required finding tools that could compare a number of different criteria for each project. At the same time there was need for a tool that could be easily adjusted based on the feedback received through the public participation process. Given these requirements, the team ultimately decided to use the Active Trans Priority Tool (NCHRP Report 803: Pedestrian and Bicycle Transportation Along Existing Roads - Active Trans Priority Tool).

The Active Trans Priority Tool is an Excel spreadsheet based tool. The raw scores for each of the individual measures from the GIS spatial analysis described in the section above were input into the Active Trans Priority Tool spreadsheet and used to calculate a total score and rank the projects in order. The tool allows the user to normalize scores across multiple measures that had greatly varying values and ranges. The tool also allows the user to change the weighting for different criteria, which changes the total score and ranking of projects. This enabled staff to adjust the criteria weighting based on the priorities of the community. See the Appendix for more about this tool.

City staff gave the Technical Advisory Committee, Community Advisory Group and general public the opportunity to review the project total scores and rank for the weighted and unweighted scenarios. Staff made a few corrections and adjustments based on feedback to ensure the scores better reflected the benefit of the candidate projects.

The final output from this tool was a total score and ranking for each project, categorized by project type in each of the three corridors. The project ranking number served as the starting point for prioritizing projects. The additional considerations described below were also factored into the final recommended priorities and investment plans for each corridor.

Appendix C contains tables of the project scores and ranking output from the Active Trans Priority Tool organized by corridor and project type.

ADDITIONAL CONSIDERATIONS

The results from the Active Trans Priority Tool provided insight on how the projects stacked up against one another, but there were additional factors that contributed to the final recommendations made in this plan and how they were bundled. These additional considerations include the following:

Community / Political Support - Is the project a very high priority for communities along the corridor and/or their elected representatives?

Funding Opportunities - Does the project have clearly identified potential opportunities for funding, and meet the criteria for those opportunities?

Cost Considerations - Is the project a relatively low-cost improvement that could be funded and built in the next five to ten years and could be reasonably tied to transit service levels?

Technical Feasibility - What is the degree of technical feasibility and complexity? What are the impacts?

Bundling - Are projects related so that it makes sense to bundle projects together?





FINAL PLAN RECOMMENDATIONS INVESTMENT PLANS, AND IMPLEMENTATION STRATEGIES

The final stage of the planning process was to develop investment plans for each corridor, identify other programs and implementation strategies for meeting the plan objectives and draft a plan conveying the final recommendations. The results of this phase form the Recommendations chapter.

Based on the project evaluation results from the above analysis tools, additional considerations and consultation with community and technical advisory groups, staff developed investment plans for each corridor. Projects were first sorted into "recommended" and "not recommended" categories. The "recommended" projects provided the most benefit to the corridor. Then projects were bundled together into meaningful groupings 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 bundles were developed, projects within each bundle were sorted into Tier 1 and Tier 2 projects to reflect relative priority level and benefit based on GTC criteria. These priority tiers will help staff, decision-makers, and community members to decide which projects to focus on if funding is limited.

The following additional community outreach and engagement activities informed the Investment More detail about outreach can be found in the community outreach status report. Plans and list of priority improvements by corridor:

- GTC Community Advisory Group meetings: September 12, 2016; Dec. 7, 2016; March 1, 2017
- GTC Technical Advisory Group meetings: August 3, 2016; Dec. 15, 2016

- Pedestrian Advisory Committee: Dec. 20, 2016
- Bicycle Advisory Committee: January 10, 2017
- GTC Plan Open House #2 at Montavilla United Methodist Church: Jan 25, 2017
- Online open house & story map
- Online survey #2 with 53 responses: Jan. 19 Feb. 28, 2017
- Open house flyer distribution (English, Spanish, Russian, Vietnamese): Jan. 19 Feb. 25, 2017
- Facebook advertising in English, Spanish, Russian, and Vietnamese to promote open house: Jan. 19 – Feb. 25, 2017
- Facebook advertising in English to promote online open house/ survey (reaching almost 10,000 people, 460 clicks, 571 people took action on the post, shared 34 times): Jan. 30 – Feb. 13, 2017
- Emails to 500+ member interested parties list: Feb. 23, 2017; Feb. 14, 2017; Feb. 8, 2017; Jan. 25, 2017; Jan. 20, 2017; Jan. 18, 2017; Jan. 12, 2017; Dec. 2, 2016; Nov. 29, 2016
- ODOT 82nd Ave email distribution list promoting open house and online open house/ survey: Jan. 23, 2017
- North Tabor Neighborhood Association: February 21, 2017
- Rosewood Initiative: Feb. 28, 2017
- Juvenile Justice Center: Mar. 2, 2017
- Madison South Neighborhood Association: April 6, 2017
- Rose City Park Neighborhood Association: Spring 2017