



COLUMBIA

LOMBARD

RECOMMENDED DRAFT

MOBILITY CORRIDOR PLAN



PBOT
PORTLAND BUREAU OF TRANSPORTATION

AREA + PROJECT PLANNING

PORTLAND CITY COUNCIL

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TRANSPORTATION GROWTH MANAGEMENT

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COLUMBIA LOMBARD

MOBILITY CORRIDOR PLAN

JUNE 2021

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CHAPTER 01

VISION: IMPROVING CORRIDOR COORDINATION

Improving safety, connectivity and access along and across the Columbia and Lombard corridors

Introduction

The Columbia Lombard Mobility Corridor Plan is a collection of recommendations and implementation strategies for these parallel corridors in North Portland. They aim to make it safer to use and cross the corridors and increase safe and comfortable access to employment, services, and recreational opportunities while maintaining travel time predictability.

The **recommendations in the plan are the result of a two-year, community driven planning process** that identified deficiencies and needs along the corridors and how the City of Portland should prioritize investment. The plan makes recommendations for improvements both along the corridor, as well as north-south crossings and parallel east-west routes for people biking. It also identifies needed changes to policy or other plans. The strategy for implementation aims to leverage existing funding opportunities and be well-positioned to compete for future opportunities. Implementing these recommendations will ensure the corridors continue to facilitate the movement of people and freight, but also improve safety for all road users and increase access to the areas employment and recreational opportunities.

NOTE ABOUT CORRIDOR NAMES

As both corridors are known by multiple names (N/NE Columbia Boulevard and N/NE Lombard Street, NE Portland Highway, US 30 Bypass, and NE Killingsworth Street), for the purposes of this plan they are designated as the Columbia and Lombard corridors. A funded project is underway to rename these streets to improve clarity and reduce confusion. Learn more about the Columbia Lombard Wayfinding Project at www.portland.gov/transportation/pbot-projects/construction/columbia-lombard-wayfinding-project.

Introduction and Goals

The Columbia Lombard Mobility Corridor Plan originated out of a collective recognition that these corridors are not functioning as they should. Some of the well-known issues include unsafe and unpredictable road conditions, limited access to jobs and services, constraints to efficient freight movement, unclear prioritization of travel and a lack of investment in maintenance.

The goal of the Columbia Lombard Mobility Corridor Plan is to identify and prioritize projects and strategies that will improve safety, connectivity and access for people walking and biking, and improve the reliability of freight movement along and across these corridors.

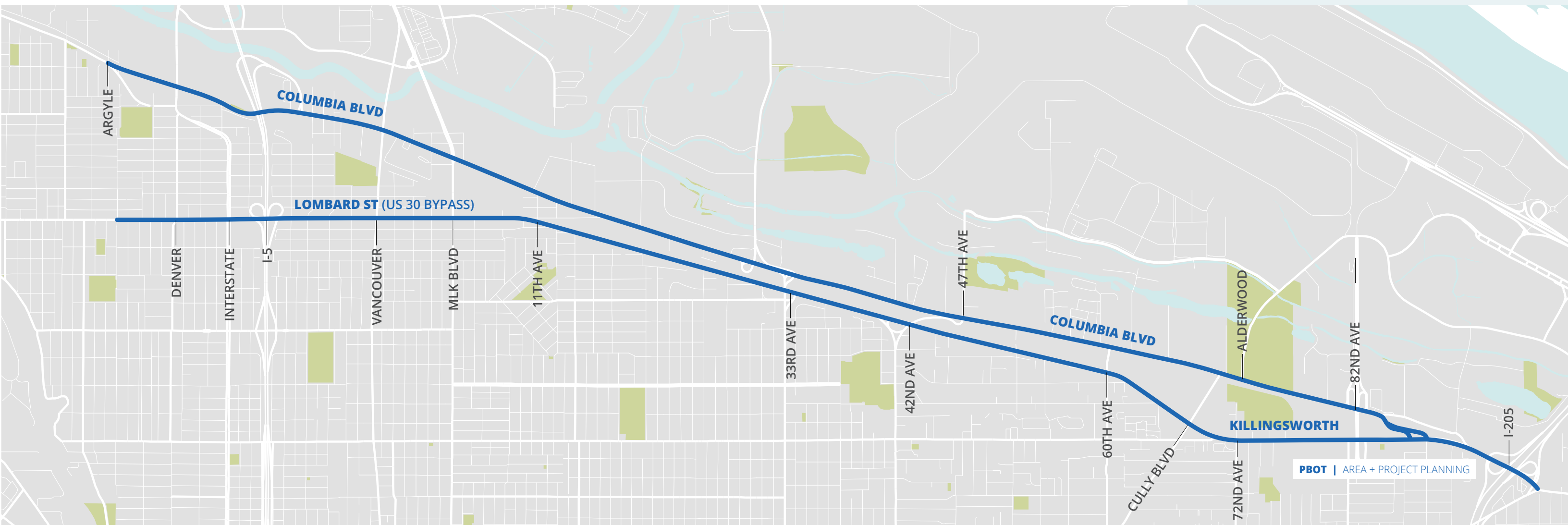
This plan is funded by a Transportation and Growth Management (TGM) grant through the Oregon Department of Transportation (ODOT). The plan identifies current corridor issues, provides a vision for the corridors and how to make improvements, and prioritizes implementation by need and funding availability.

“We need more predictability”

While parallel, the Columbia and Lombard corridors function and serve different uses and users. However, one common refrain heard repeatedly during the planning process is the **need for more predictability** on both corridors. The framework of this plan identifies safe and efficient routes for all modes using or crossing these corridors. Implementation of these recommendations will **improve travel time reliability, designate safe space and routes for people walking and biking, eliminate confusing infrastructure, and ensure the corridors function as they should.**

STUDY AREA

The focus of this corridor plan is N/NE Columbia Boulevard between N Argyle Way and Interstate 205, and on the parallel US 30 Bypass (portions of N/NE Lombard Street, NE Portland Highway, and NE Killingsworth) between N Delaware Avenue and Interstate 205. Where applicable, the project team also looked at east-west or north-south connections within a half mile of the corridors.



CHAPTER 02

THE COLUMBIA AND LOMBARD CORRIDORS TODAY

Context, issues, and existing conditions on the Columbia and Lombard Corridors

Problem statement

The Columbia and Lombard corridors are not functioning as well as they should to ensure safe and efficient movement of people and goods both along and across the corridors. The corridors suffer from aging infrastructure, gaps and deficiencies in the multi-modal network, growing traffic congestion and freight movement, and designs contributing to unsafe speeds. And although they are parallel, Columbia Boulevard and Lombard Street serve different purposes and users.

The following chapter identifies some of the key issues and deficiencies along and adjacent to these corridors related to infrastructure, safety, land use, and policy designation. It also identifies where there is demand for better connectivity and access, and highlights specific safety issues on both corridors.

EXISTING CONDITIONS REPORT

A complete report on the Existing Conditions (including a review of previous planning efforts) can be found as Appendix A.

A selection of community comments and concerns

"We need more landscaping and aesthetic treatments."

"We need safer, more accessible pedestrian routes to transit."

"There is a lack of transit stops outside of businesses."

"It's difficult to make a left turn here."

"It is difficult for pedestrians, bikes to cross the intersection."

"Longer merging lanes are needed to mitigate difficult merge points."

"Lots of people speeding."

Speeding vehicles create unsafe conditions on the corridor as well as for those entering or exiting it.

Driver behavior around trucks and buses, such as illegal passing and sudden pull-outs, make it unsafe.

Traffic congestion impedes access to businesses, and contributes to unsafe driver behavior at intersections

Pedestrian and Bicycle facilities and lighting are needed to facilitate access to businesses and improve safety and visibility.

Vehicles entering/exiting driveways creates conflicts and often results in crashes, which reduce business access.

Better and more transit is needed at off-peak times for non-traditional schedules and between the Cully and industrial areas.

"A bottleneck at the bus stop and Fred Meyer creates unsafe driver behavior."

"Safety laws need to be enforced"

"A traffic light is needed here."

"We need safer sidewalks and a separated bike path."

"COLUMBIA & 33RD AVE"

"It's dangerous to make left turns."

"Better signage needed."

"There is heavy congestion in this area."

"A signal at Cully and Columbia is needed."

"We need better access to Cully park."

"Repaving needed."

"Need better bike access to I-205 path."

LOMBARD & I-5/ INTERSTATE

LOMBARD & 11TH AVE

CULLY

I-205



Corridor context

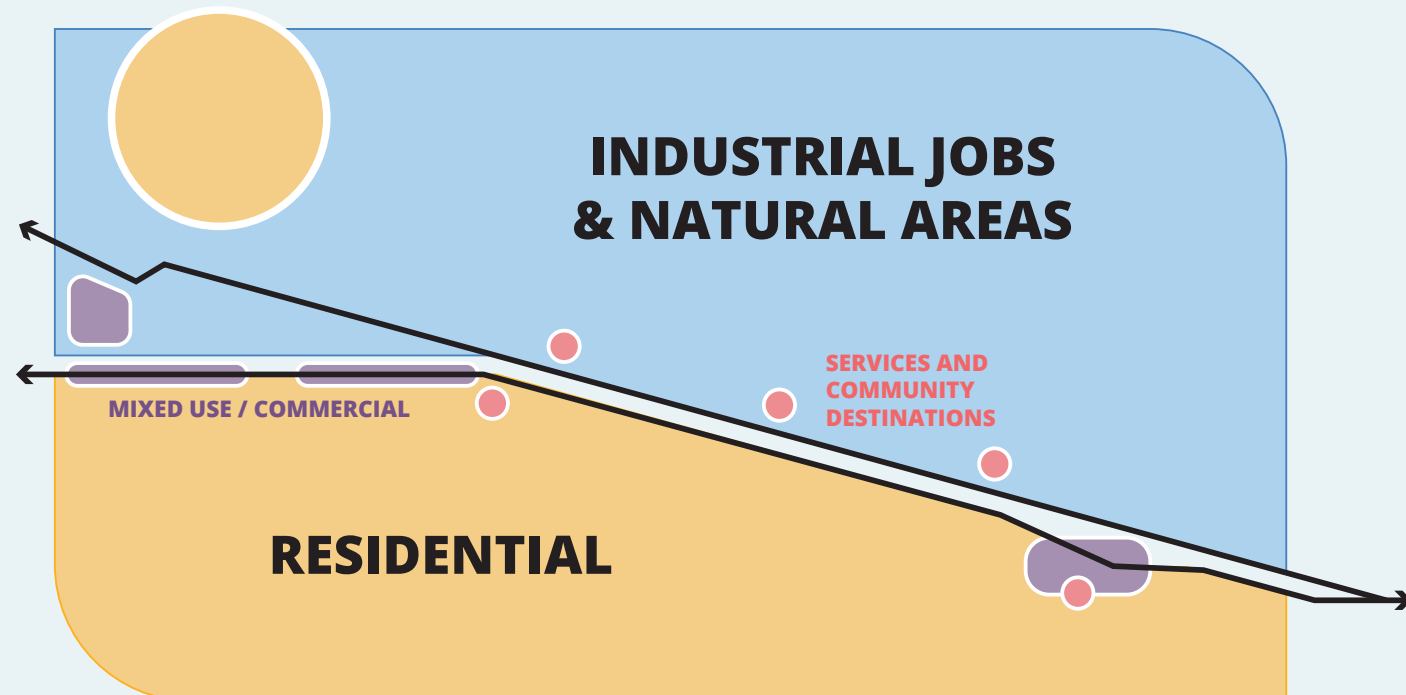
The Columbia and Lombard corridors being studied cover almost 6 miles with a variety of land use and activity contexts.

Columbia Boulevard serves as a spine of industrial activity, facilitating first/last mile pick-ups and deliveries as well as movement of goods from across the City and region to and from the Portland International Airport. With the continuing increase in on-time freight, predictable and reliable travel times are becoming more critical. Additionally, **the corridor is home to several key community institutions** including the Oregon Humane Society and the Native American Youth and Family Center (NAYA), as well as recreational opportunities including Catkin Marsh Natural Area, Whitaker Ponds Nature Park, and the Columbia Slough trail. **Better access is needed for people walking, biking and taking transit** to these services and the industrial sector jobs and recreational opportunities on and north of the corridor.

The Lombard corridor character changes throughout the corridor despite functioning as the US 30 Bypass. West of MLK Jr Boulevard the corridor is classified as a Civic Main Street/Corridor, with a **mix of housing, services, restaurants and stores**. To the east the corridor is classified as an Industrial Road, and is bounded by the Union Pacific railroad to the north and housing/neighborhoods to the south. In the east, the **corridor intersects the Cully neighborhood and Cully Park** before merging with NE Columbia Boulevard near I-205. There is a **need for more crossings, as well as improved safety along the corridor that address the variety of land uses**.



CORRIDOR CONCEPTUAL MAP

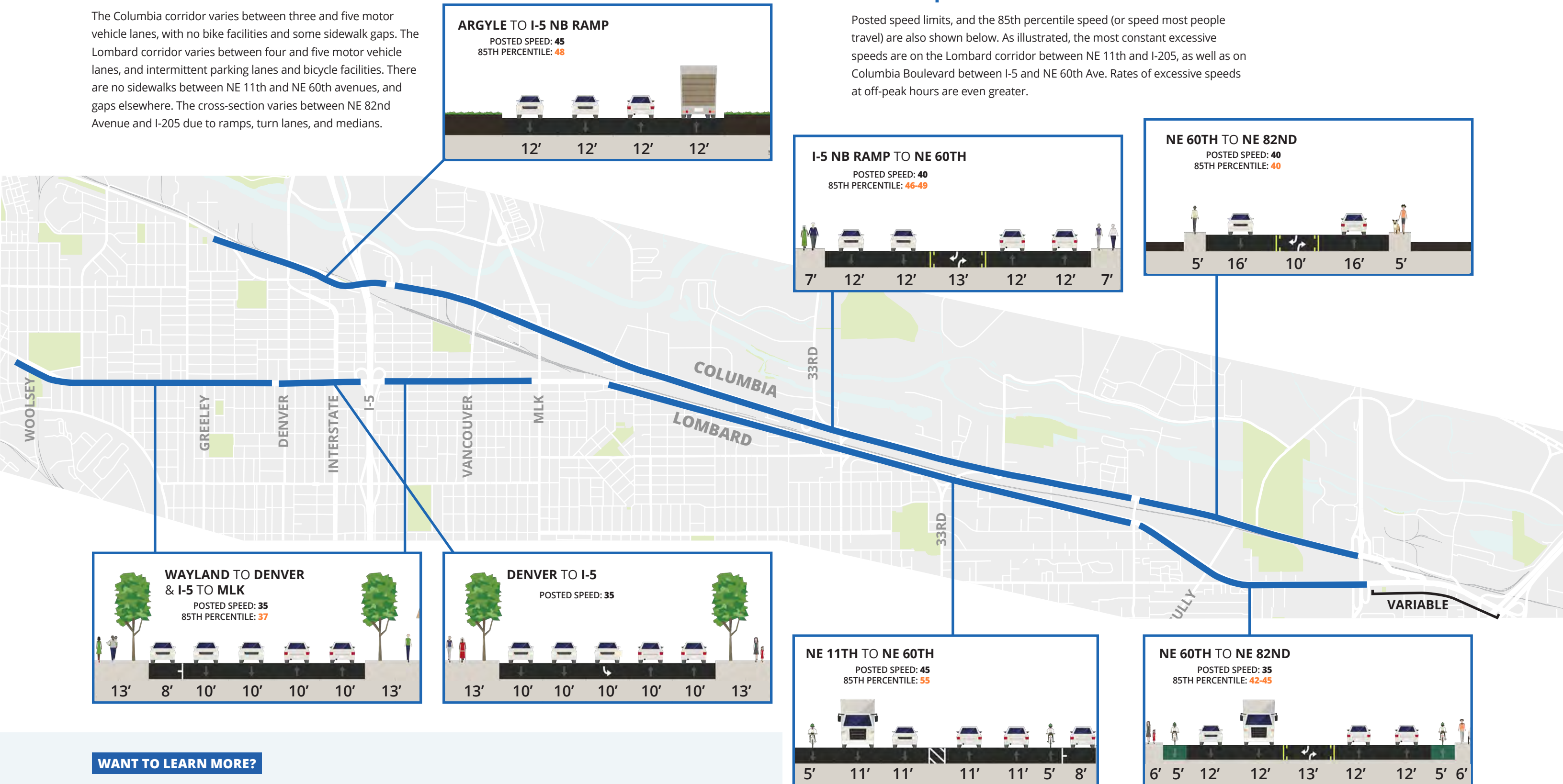


Corridor street cross sections

The Columbia corridor varies between three and five motor vehicle lanes, with no bike facilities and some sidewalk gaps. The Lombard corridor varies between four and five motor vehicle lanes, and intermittent parking lanes and bicycle facilities. There are no sidewalks between NE 11th and NE 60th avenues, and gaps elsewhere. The cross-section varies between NE 82nd Avenue and I-205 due to ramps, turn lanes, and medians.

Corridor speeds

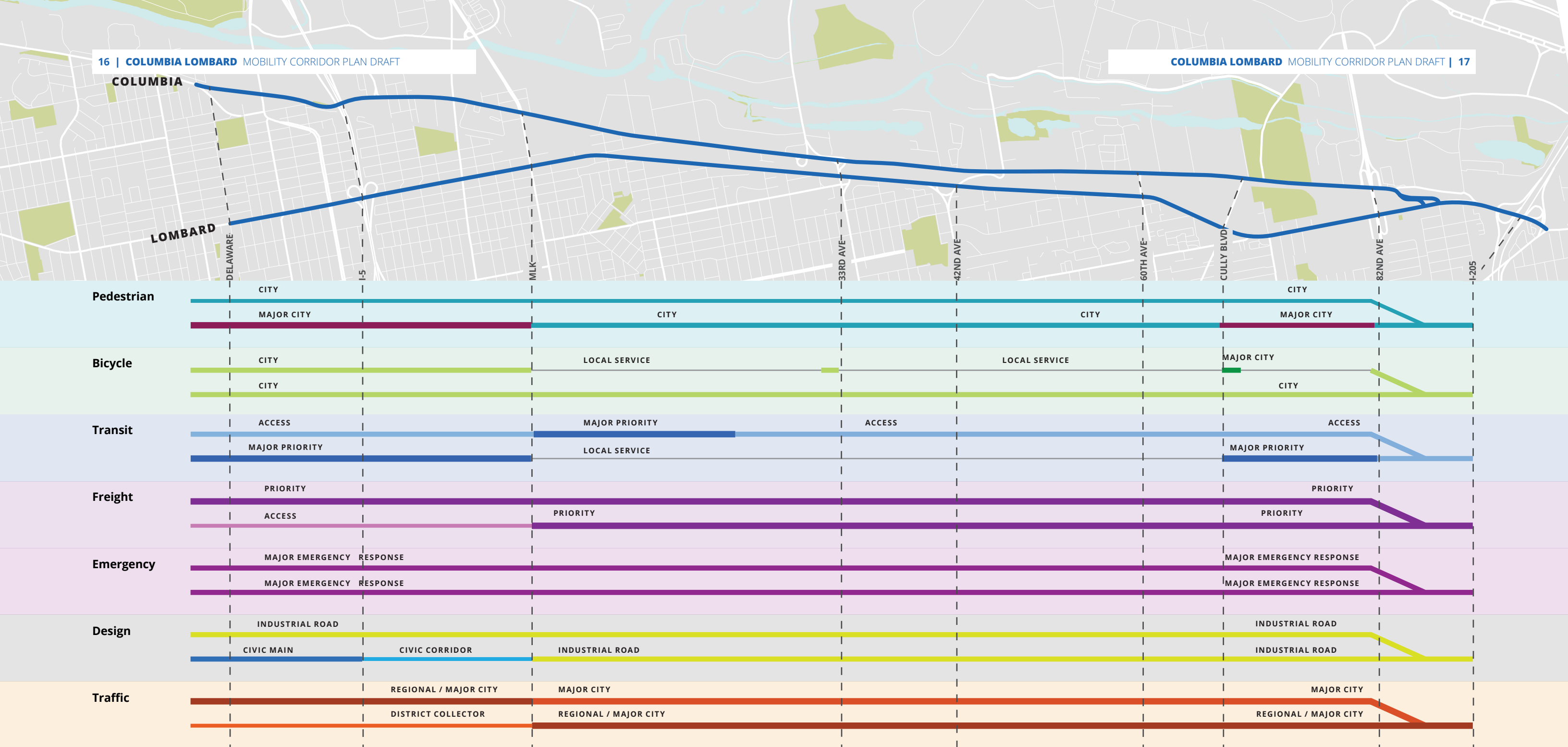
Posted speed limits, and the 85th percentile speed (or speed most people travel) are also shown below. As illustrated, the most constant excessive speeds are on the Lombard corridor between NE 11th and I-205, as well as on Columbia Boulevard between I-5 and NE 60th Ave. Rates of excessive speeds at off-peak hours are even greater.



WANT TO LEARN MORE?

Check out the "Columbia-Lombard Mobility Corridor Plan: Existing Conditions" document completed at the beginning of this planning process in 2019. It can be found as Appendix A.

* sidewalk presence is intermittent on the south side



Street Classifications

Portland’s Transportation System Plan (TSP) guides the City’s transportation policies and investments. The TSP’s street classifications outline how streets and areas are intended to serve various transportation modes. The lines above identify the Columbia and Lombard corridor’s different classifications for each mode and how they change. In general, for each mode a “priority” or “major” classification indicates that a high level of this

type of activity is present or expected. As such, these modes should try to be accommodated in that section of the corridor. The majority of both corridors are priority freight routes, with some portions of the corridors also priority routes for pedestrians and transit.

The TSP classifications also inform the type of design that’s needed on the road to accommodate certain types of vehicles. Both the Columbia and Lombard corridors are generally designated as “Major Emergency

Response” routes and “Industrial Roads,” meaning the street design should be able to accommodate large vehicles and quick emergency response times. However, Lombard changes west of Martin Luther King Boulevard to a Civic Main Street/Corridor, meaning in this section of the corridor the street should be designed to emphasize multi-modal access to activity centers.

The TSP also indicates the level of motor vehicle traffic expected on the City’s streets. Sections of both

the Columbia and Lombard corridors are designated as Regional traffic routes intended to serve regional traffic, or Major City routes intended to serve as the principal routes for intercity traffic. On both of these route designations, safety is the highest priority.

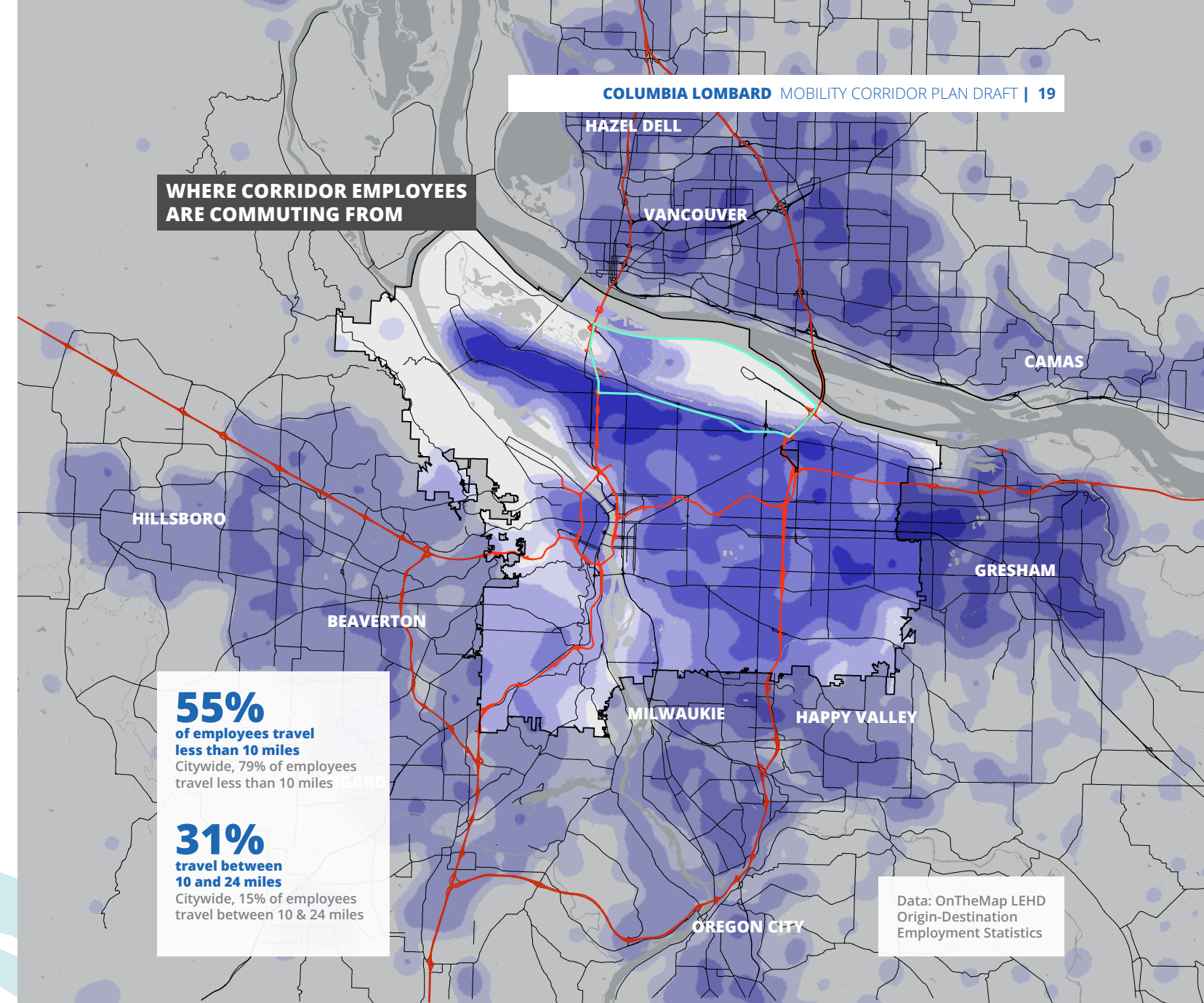
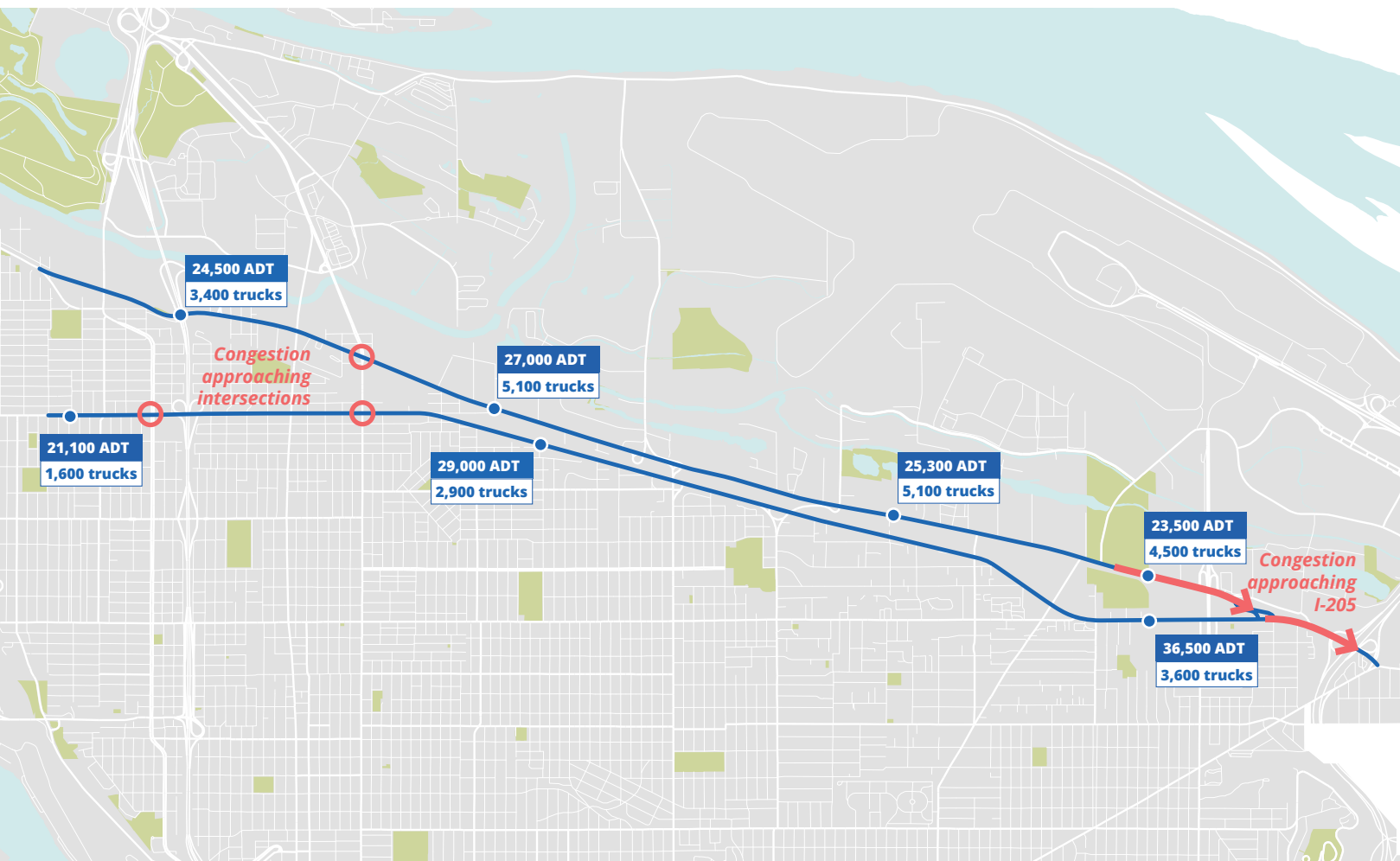
For more information about street classifications, consult the Portland 2035 Transportation System Plan.

Traffic patterns and congestion

Both Columbia Boulevard and Lombard Street are key routes that move people and goods along the corridor as well as to locations locally and beyond. Traffic volumes generally peak during the morning and evening commutes but are fairly steady between 6am and 6pm.

The percentage of trucks using the road is higher on both streets than Portland in general, although Columbia Boulevard has much higher percentages (14-20%) than Lombard Street (8-10%). Truck volumes are relatively steady on both corridors from 6am until 3pm, when they start to decline. So while overall traffic volumes are highest during the afternoon commute, the morning hours are when truck traffic overlaps with general commute traffic.

Pockets of congestion occur on the corridor during peak times, including near major intersections such as I-5, Martin Luther King Jr. Boulevard, and I-205. However, these congestion areas do not add much delay to the overall trip time. The greatest delay is on Columbia Boulevard between NE 47th and NE 82nd avenues, which causes a two-minute addition to overall travel times (see "Existing Conditions Report," page 18).



To better understand commute patterns, an analysis identified where employees that work in the project area commute from. As seen on the map, **employees working this area travel from all over the region.**

This dispersion of employees means commute trips are on average longer than others in Portland. Almost a third of employees travel between 10 and 24 miles. With limited transit options, most of these trips to employment opportunities must be taken by motor vehicle. However, there are also large numbers of

employees that live directly west, south and east of the corridors.

More generally, for those traveling along the Columbia or Lombard corridors in an automobile, the average trip length is approximately 10 miles. Of that trip, around 2 miles occur on either N/NE Columbia Boulevard or N/NE Lombard Street. With each corridor roughly 6.5 miles in length, this means that most of those accessing the corridor by automobile are using approximately one-third of the corridor as part of their trip.

Jobs and access

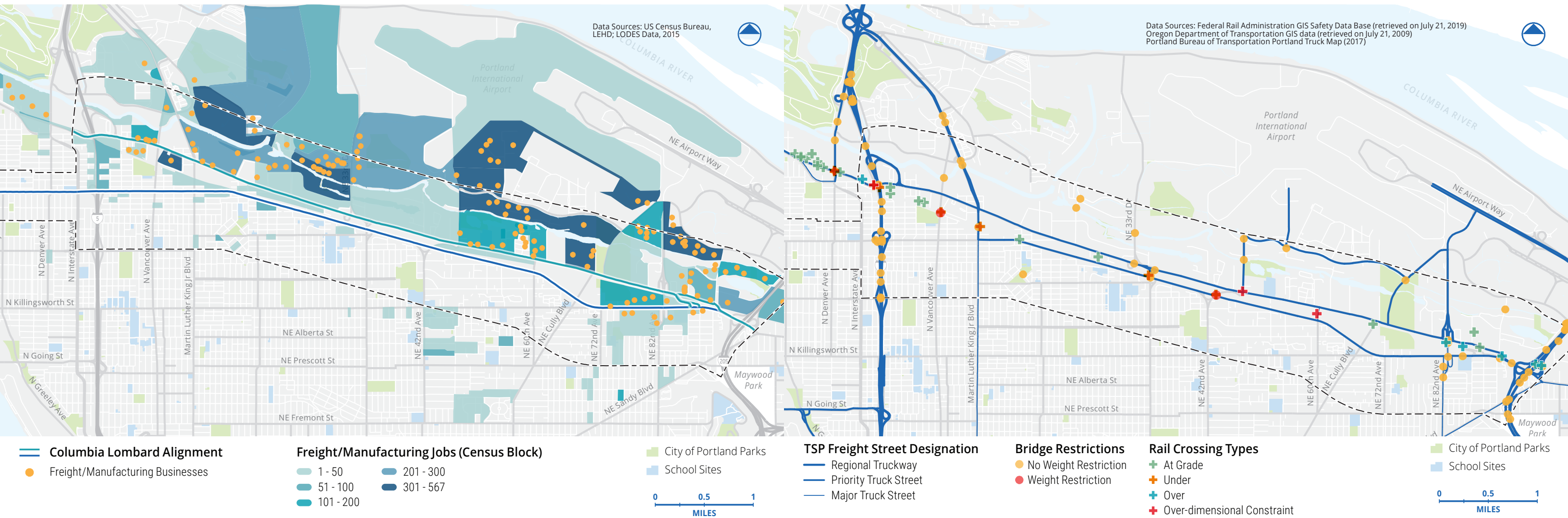
The figure below shows the location of freight/transportation/manufacturing related jobs along and near the Columbia and Lombard corridors. **There are 144 freight generators within the study area, with high rates of jobs in the census tracts adjacent to the corridors.** Many of these job opportunities are clustered north of Columbia Boulevard between NE Martin Luther King Jr. Boulevard and NE 33rd Avenue, and NE 47th Avenue and I-205. Another cluster of these freight related job opportunities are to the north and south of NE Killingsworth Street between NE 72nd Avenue and NE Columbia Parkway.

The Columbia and Lombard corridors support the movement of goods from these freight generators to regional routes, and also support employees getting to and from the jobs in the area.

Freight movement

Much of regional good movement is by truck, and Columbia Boulevard and Lombard Street are critical connections, because they provide access to intermodal facilities, PDX, rail yards, sea ports and higher order truck routes, such as I-5 and I-205. The air-cargo growth rate, by tonnage and value, is the highest of any freight mode, and the Columbia/Lombard corridors provide a critical connection to PDX. **The corridors provide connections, either directly or indirectly, to all of these freight modes. The study area experiences a concentration of flow movement because of its role as a freight hub.**

Columbia Boulevard and Lombard Street are part of the international gateway and domestic freight hub within the region. Metro's 2018 *Regional Freight Strategy* states the region will see increased freight demand due to forecasted population and job growth – an additional 670,400 residents and 420,200 jobs by 2040 – and the associated boost in the consumption of goods and services.



Bicycle network connectivity

It is currently difficult to travel by bike along and across the corridors, especially on low-stress bicycle facilities. The map below illustrates green “islands” where the level of traffic stress (LTS) is low enough that someone could bike within comfortably. South of Lombard Street and north of Columbia Boulevard there are several small areas of low-stress facilities, but they are not connected with only a few places to cross the Columbia and Lombard corridors. The goal is to connect all of these “islands” with enough safe crossings so there is only one green circle. **Many crossing barriers exist in the area due to the high speeds and traffic on the Columbia and Lombard corridors as well as Interstate 5 and NE 82nd Avenue.** The map below highlights some existing crossings as well as other possible connections that could reduce the number of islands in the study area and improve bicycle connectivity. These would better connect neighborhoods to one another and the recreational and employment opportunities along and near the corridors.

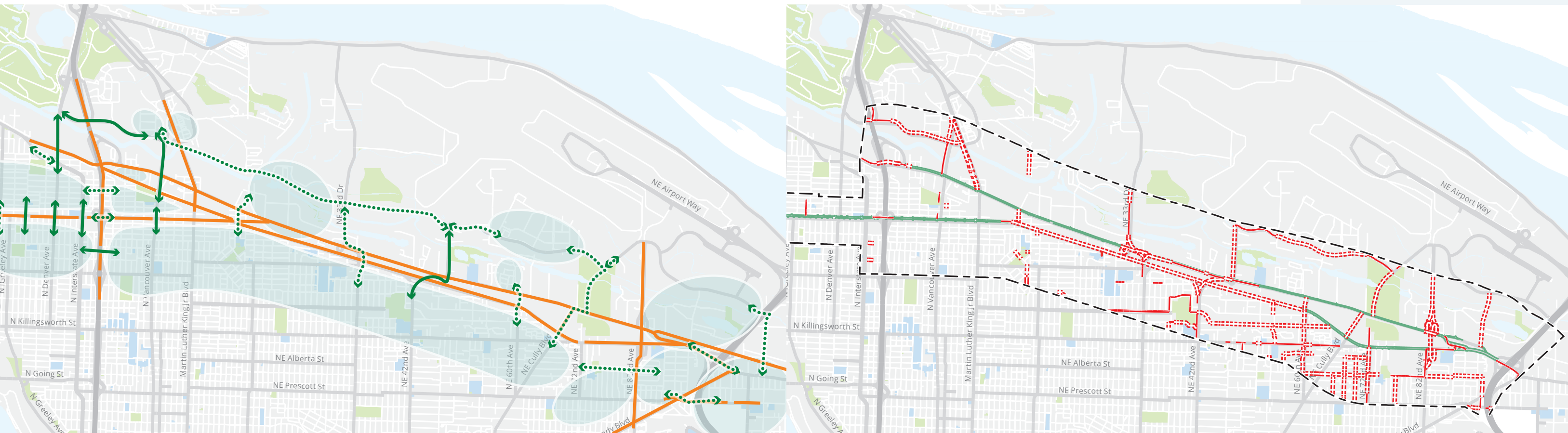
Pedestrian network gaps

The Columbia and Lombard corridors both have a number of sidewalk gaps, seen in the map below. Columbia Boulevard has multiple locations where sidewalk is missing on both sides of the street, which often overlap with areas of transit service and/or high conflict areas such as near NE 33rd Avenue, NE 82nd Avenue and the I-5 ramp. A major section of NE Lombard Street (between NE 11th and NE 60th avenues) has no sidewalk, and is missing sidewalk on the north side of the street as it intersects I-5. There are also significant gaps in the sidewalk network on the streets intersecting with the Columbia and Lombard corridors. Additionally, in many locations where sidewalks are provided, they lack a furnishing zone and instead are against the curb immediately adjacent to vehicular travel lanes. This creates an uncomfortable walking environment.

On both corridors there is also too much distance between pedestrian crossing opportunities, according to the City’s PedPDX Pedestrian Plan. This means people walking must travel long distances out-of-direction or try to cross at unsignalized locations.

WANT TO LEARN MORE?

Check out Appendix C “Mobility and Access Need Analysis” to learn more about corridor deficiencies.



- Barrier
- Existing / funded connection
- LTS “Islands”
- ⋯→ Potential connection

- City of Portland Parks
- School Sites



- #### Sidewalk Inventory
- Existing Sidewalk
 - Sidewalk Missing on Both Sides
 - Sidewalk Missing on One Side

- City of Portland Parks
- School Sites

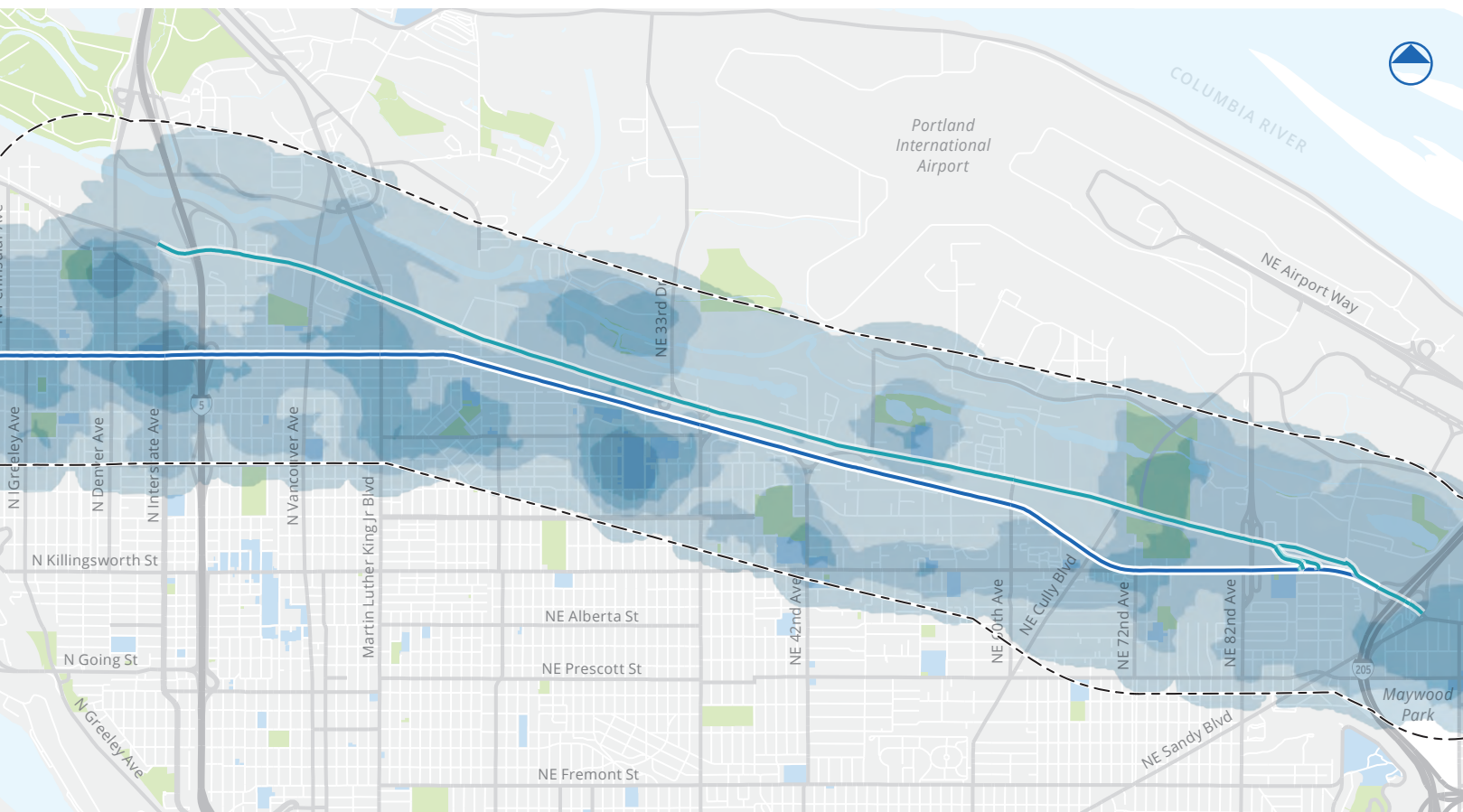


Where there is demand to travel in the corridor

The composite demand map below shows the combined distribution of residents, employment, recreational opportunities, schools, retail/services, and transit service. The darker shades of blue indicate a high demand for access by walking and biking based on the volume and density of trip generators and attractors.

Key findings from the composite demand map and the overall analysis include the following:

- In general, the Columbia/Lombard corridors bisect clusters of demand to the north and south of the analysis area. **In particular, the corridor separates dense areas of residents to the south and dense areas of employment and recreational opportunities to the north.**
- The **N Lombard Street and N Interstate Avenue** intersection, and the streets that surround it, represent the **largest general area of demand** in the analysis area.
- The Concordia University/Faubion Elementary campus area represents a more concentrated node of demand. Unfortunately, Concordia University recently closed.
- **N Interstate Avenue, NE Martin Luther King Jr. Boulevard, and NE Sandy Boulevard** are corridors representing moderate-to-high demand that establish north-south connections to the Columbia/Lombard corridors.



The Oregon Humane Society has thousands of visitors and volunteers a year but is challenging to access by foot or bike.



Many people walk and bike on the I-205 multi-use path that intersects with NE Killingsworth/NE Sandy Boulevard.

The transit center near Lombard/Interstate is an area with high pedestrian activity.

CRASH ANALYSIS SUMMARY

Columbia Corridor

From 2012 to 2016 there were **762 total crashes, four fatal crashes, and 12 serious injury crashes** on Columbia Boulevard. The locations of the fatal and serious injury crashes, as well as relative total crash density, are shown below. There is a high density of crashes near the I-205 ramp termini, as well as at high-volume intersections along the corridor. Fatal and serious injury crashes are distributed throughout Columbia Boulevard, though a cluster occurred at NE 33rd Avenue. Most of the crashes involving bicyclists or pedestrians occurred at intersections with other streets such as Interstate Avenue and NE 42nd Avenue, with a cluster of crashes around I-205.

While a majority of less serious crashes on the corridor were rear-end or turning movement crashes, **a majority of the fatal/serious crashes were the result of running into a fixed/other object** (such as a tree or utility pole). **All of the fatal crashes on Columbia Boulevard involved alcohol and speeding**, as well as almost all the crashes involving pedestrians or bicyclists.



WANT TO LEARN MORE?

Check out Appendix B "Columbia and Lombard Crash Analysis" to learn more about the crash history and trends on these corridors.

COLUMBIA BOULEVARD - TOTAL, FATAL, SERIOUS INJURY, PEDESTRIAN AND BICYCLIST CRASHES BY LOCATION

Junction Type	Intersection Type	Total Crashes	Fatal Crashes	Serious Injury Crashes	Pedestrian Crashes	Bicyclist Crashes
Intersection	Total	444	0 (0%)	4 (1%)	3	4
	Signalized	333	0	4	2	3
	Unsignalized	111	0	0	1	1
Segment	-	318	4 (1%)	8 (3%)	3	3



CRASH ANALYSIS SUMMARY

Lombard Corridor

There were a total of **958 all severity crashes, six fatal crashes, and 15 serious injury crashes on Lombard Street** in the study area between 2012 and 2016. **This amounts to an average of four crashes per week.**

Crash density was highest on Lombard Street west of NE Martin Luther King Jr. Boulevard and east of NE 82nd Avenue. **Fatal and serious injury crashes were clustered west of Interstate 5 and from NE 33rd Avenue to NE 60th Avenue.** During this time, there were **48 crashes involving pedestrians or bicyclists**, most densely concentrated to the west of Interstate 5. Most of these involved turning movements.

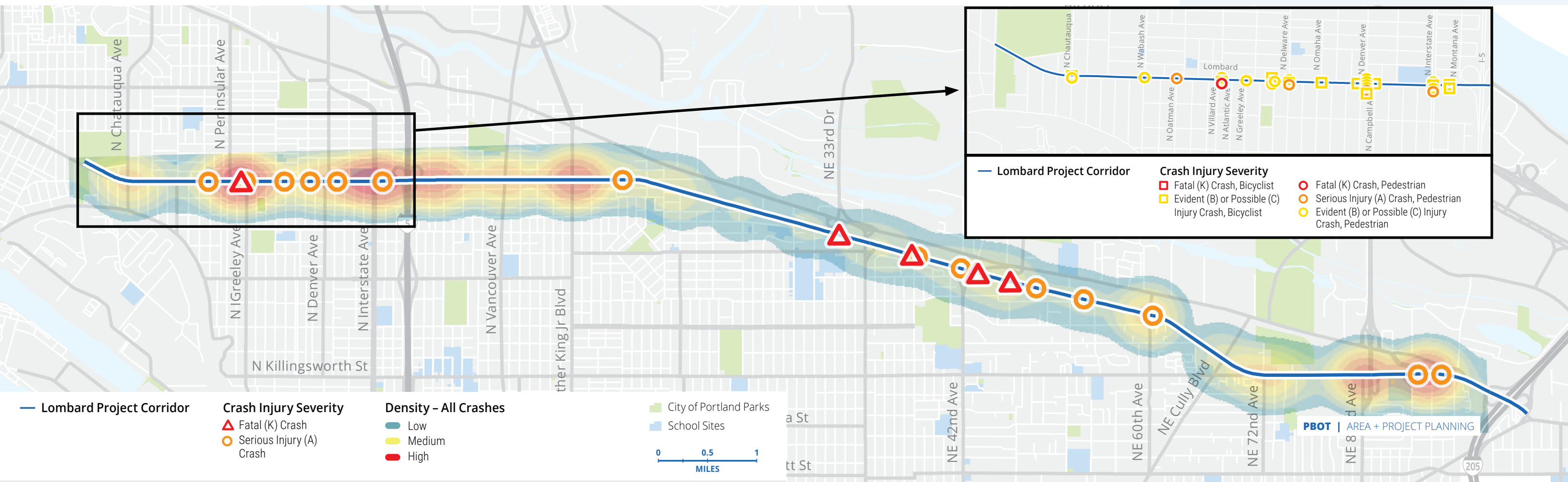
A majority (73%) of the crashes occurred at intersections rather than along the corridor, including those involving a pedestrian or bicyclist (70%). The location with the highest number of crashes was the intersection of Lombard Street and N Interstate Avenue. **The majority of crashes due to driver error were attributed to failure to avoid stopped or parked vehicles.** Compared to Columbia Boulevard, a smaller percentage of fatal and serious crashes on Lombard Street involved either speeding or alcohol.

LOMBARD STREET - TOTAL, FATAL, SERIOUS INJURY, PEDESTRIAN, AND BICYCLIST CRASHES BY LOCATION

Junction Type	Intersection Type	Total Crashes	Fatal Crashes	Serious Injury Crashes	Pedestrian Crashes	Bicyclist Crashes
Intersection	Total	590	0 (0%)	10 (2%)	20	15
	Signalized	356	0	5	16	9
	Unsignalized	234	0	5	4	6
Segment	-	368	6 (2%)	5 (1%)	5	8

CRASHES SINCE 2016

On Lombard Street since 2016, there have been eight additional fatalities. While specific details are not yet available, six of these involved people in motor vehicles while two involved people walking.



CHAPTER 03

PLAN PROCESS & COMMUNITY ENGAGEMENT

PBOT engaged with hundreds of businesses, community members, and organizations during the Columbia Lombard planning process. The input received directly influenced the project recommendations.

To have a consistent community presence throughout the project, we established a community advisory committee and renewed relationships with community organizations like NAYA, the Oregon Humane Society, Verde / Living Cully. We also engaged organizations and neighborhoods along and adjacent to the corridor community throughout the project in various ways.

Generally, **there was consensus about the issues and needs on the corridor. Common requests were to improve safety, better manage speeds and corridor access, and increase predictability.** The feedback about needs, specific problem areas, and potential solutions was used to develop the plan's project and policy recommendations. And by engaging consistently with the plan's community advisory committee and the city's various modal committees, we could hear recommendations about how best to accommodate all modal users along and across these corridors.

The **following pages outline the planning process and provide details about the plan's engagement methods.** It also highlights the type of feedback received, and how this was used to develop project recommendations.

PUBLIC INVOLVEMENT SUMMARY

To learn more about the public involvement process during this planning process, two summary documents are available on the project website.

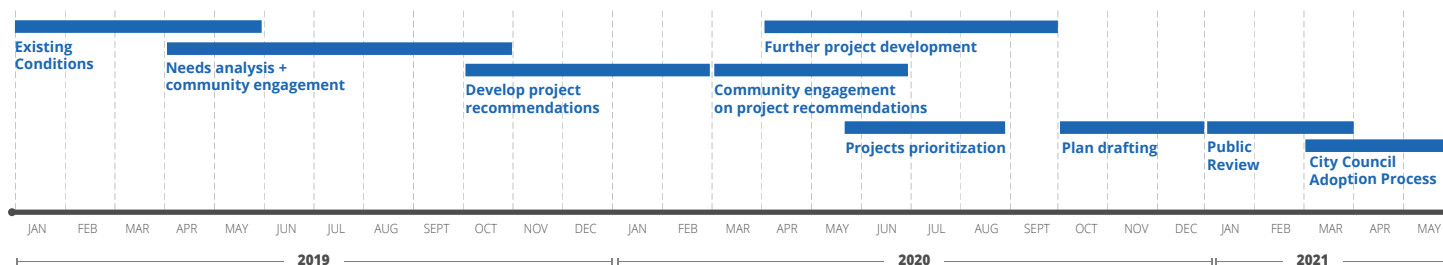
Project Timeline and Process

In early 2019, the Columbia Lombard Mobility Corridor Plan Stakeholder Advisory Committee was formed and work began evaluating the current conditions in the corridor. In the spring, PBOT shared an online map that asked residents to identify corridor issues and deficiencies. Additionally, meetings were held throughout the summer with a variety of neighborhood and area stakeholder groups, as well as door-to-door canvassing and multiple site visits.

After learning about the issues and needs, in the fall and winter of 2019 we developed a **list of project recommendations intended to address the issues identified by the community and analysis of existing conditions**. These projects were shared with the public in the spring of 2020. Due to COVID-19, in-person engagement was not possible. But comments and feedback about the projects and priorities were made through an online open house, webinars, and other online engagement events.

This feedback was used to more fully develop specific project concepts, determine a prioritized list of projects for implementation, and incorporate the recommendations into this plan. The timeline below outlines the plan process, and the following pages identify the process of engagement.

PROJECT TIMELINE



Engagement Methods and Resources

Throughout the project, we met with the community to learn about the needs and concerns of residents in the areas around the Columbia Lombard corridors. The following summarizes how we shared news about the project, and learned about needs and issues in the area:

- Project website:** The website provided continual news about the project.
 - share about the project, advertise the survey, and hear about issues.
- Mailings:** Two mailings were sent to approximately 18,000 nearby residents and businesses. The first announced the project and first survey, while the second advertised the project and open house. The mailing was in both English and Spanish.
 - Project committee announcements:** Advertised by multiple stakeholder groups and businesses along the corridor, including the Humane Society, NAYA, Verde, Air National Guard, USPS, Waste Management, and the Oregon Food Bank.
- Stakeholder email announcement:** Periodic emails were sent to approximately 700 project stakeholders.
 - Presentations to the following groups:** Concordia Neighborhood Transportation, North Portland Transportation Partnership, Oregon Walks, Concordia Neighborhood Association Land Use and Transportation Committee, Air National Guard, Portland Freight Committee and Pedestrian Advisory Committee
- Social Media:** The project and survey were advertised on PBOT's Twitter and Facebook accounts, along with advertisements on Facebook targeted to reach traditionally underrepresented populations. Announcements were also posted on Nextdoor to relevant neighborhoods.
 - Tabling at:** Good in the Hood, Explorando el Slough, Hacienda CDC Transportation Fair, Portland in the Streets
- Community Advisory Committee:** An advisory committee met eight times throughout the planning process to provide feedback and recommendations.
 - Utilizing previous planning efforts:** The "Living Cully Community Mobility Needs Assessment" and "Living Cully Walks and Active Transportation in Cully" documents were used to identify projects and priorities.
- Door to door canvassing:** The project team visited businesses and organizations in the project area to
 - share about the project, advertise the survey, and hear about issues.



Stakeholder mapping at the first Stakeholder Advisory Committee meeting in March 2019



A photo of a deficient sidewalk in the corridor captured during a May 2019 field visit

Engagement Phase 1 | Spring/Summer 2019

What we heard and how it was used

In this round of engagement, **the most consistent theme we heard was the need to improve safety**. A survey and online map asked respondents to identify issues and needs along the corridor. Many felt that improvements were needed for all travel modes, specifically to improve predictability among road users. Key themes and recommendations are listed below. This input was used, along with the analysis of existing conditions, to develop the project recommendations.

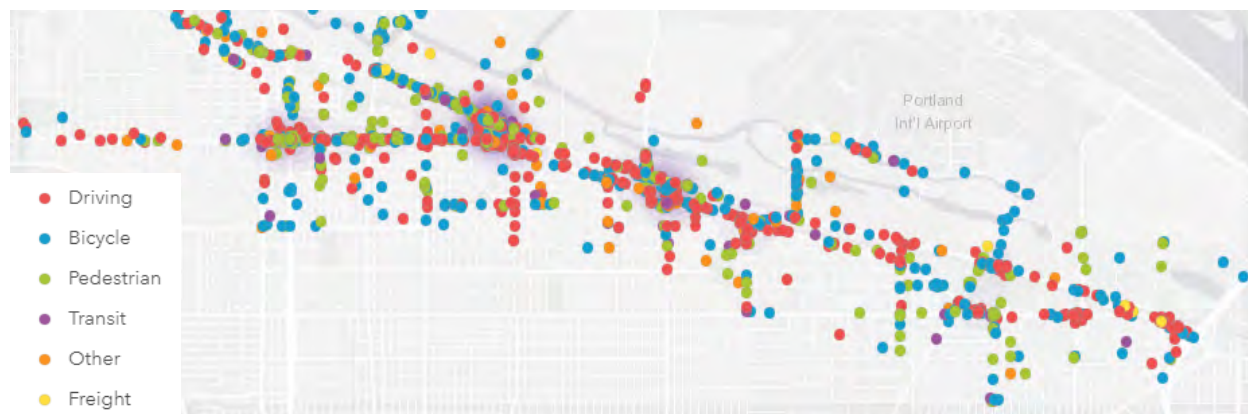
KEY TAKEAWAYS

Some general recommendations that were shared:

- Make it **safer to enter/exit**, improve signals/signs, **lower speeds**, add more enforcement, improve road conditions, improve freight routes.
- Add **more pedestrian crossings and lighting**, improve sidewalk condition, and add more frequent transit service with better stops
- Create more dedicated, **safe bicycle facilities** and improve crossings.

The locations most frequently suggested for change:

- NE 11th Avenue and NE Lombard Street/NE Columbia Boulevard
- NE 33rd Avenue
- NE Lombard Street at I-5/N Interstate Avenue



Feedback from the online interactive mapping tool with participants identifying corridor issues

Engagement Phase 2 | Spring 2020

Getting feedback on project recommendations

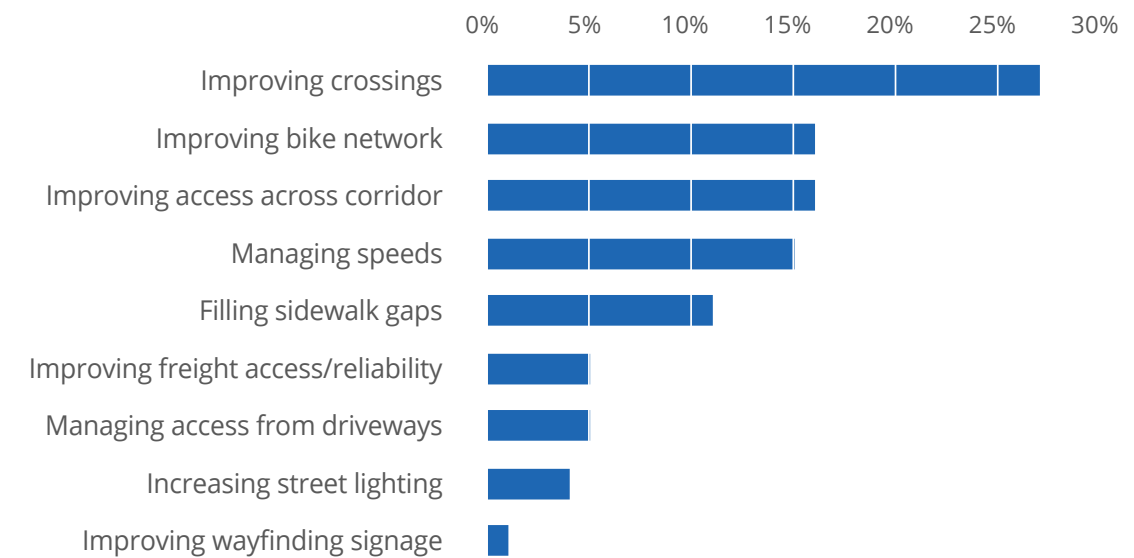
Using feedback from the community, and the recommendations of the advisory committee, we developed a comprehensive list of projects intended to address the identified needs. These projects were shared with the public in the spring of 2020 to confirm they appropriately meet the needs for the corridors. The following highlights this engagement and what we learned.

KEY TAKEAWAYS

More than 400 people filled out the survey after viewing the project recommendations. Key themes we heard from this phase of outreach:

- General consensus that the **proposed recommendations met the needs** of each corridor segment
- Continued interest in improving the area around NE 11th Avenue, NE 33rd Avenue, and the I-5 interchange
- **A desire to make it easier to walk and bike in the area**, and support for more crossings and separated facilities
- Recommendations for **better speed management and more access**

Online survey responses on what corridor-wide issue is most important to address.



CHAPTER 04

PROJECT RECOMMENDATIONS

Identifying how the corridors should function ensures they develop appropriately to meet the needs of all users and the broader community.

General project recommendations

The Columbia and Lombard corridors in this plan area cover almost 6 miles with a variety of land use and activity contexts. To address the unique characteristics, the project recommendations are broken up into **six different corridor segments**. Additionally, there are recommendations specific to **improving conditions for travel adjacent to the corridors**.

In general, this plan recommends the following:

- **Better delineate Columbia Blvd as a freight corridor**, improving travel time reliability while improving access and safety
- **Improve the safety of NE Lombard Street** by better managing speeds, improving walking/biking facilities, and adding crossings without significantly impacting traffic operations.
- **Improve north-south connectivity**, specifically for those walking and biking, to access jobs and recreation opportunities
- **Provide low-stress east-west bicycle routes**
- **Improve travel time predictability**

IMPROVEMENTS UNDERWAY

In addition to the projects recommended here, there are a number of projects on and adjacent to Columbia and Lombard already funded and/or in design or construction. You can find these projects on pages 86-87.

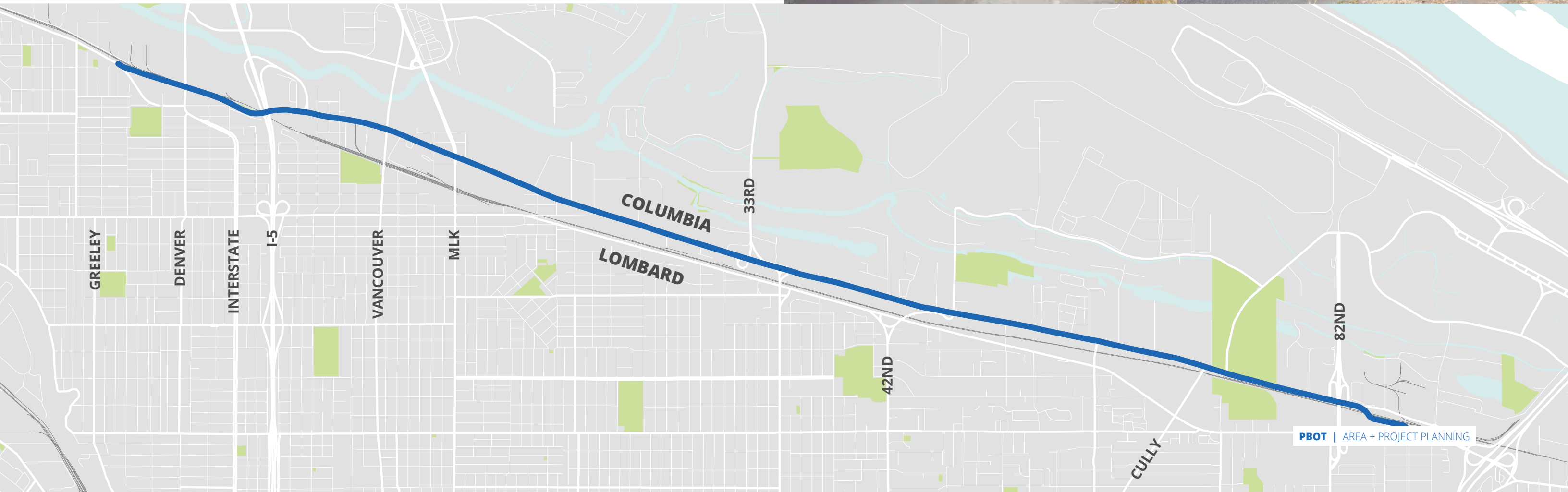
PROJECT RECOMMENDATIONS

Columbia Corridor

Columbia Boulevard serves as a spine of industrial activity, facilitating first/last mile pick-ups and deliveries as well as movement of goods from across the City and region to and from the Portland International Airport. With an increase in on-time freight, predictable and reliable travel times are becoming more critical. Rail freight also moves parallel to the corridor utilizing the Union Pacific railroad.

Additionally, the corridor is home to several key community institutions including the Oregon Humane Society, Native American Youth and Family Center (NAYA), and Verde. Better access for people walking, biking and taking transit to these services and the industrial sector jobs and recreational opportunities along and north of the corridor, is critical.

The **recommendations proposed for this corridor are intended to reduce the high rate of serious crashes for people driving, especially crashes that occur due to excessive speeding. They also aim to provide better access for people walking/biking to opportunities along/across the corridor while ensuring freight can move safely and efficiently** by redirecting non-essential traffic to NE Lombard Street or other parallel routes.





COLUMBIA N ARGYLE to MLK BLVD

GOAL FOR SEGMENT

Reduce the high rate of serious crashes for people driving; provide a safe and predictable pedestrian and bicycle network; and ensure freight can move safely and efficiently.






RECOMMENDED IMPROVEMENTS

To improve safety and visibility, lighting should be added on the north side of the street and a median or rumble strips installed to reduce head-on collisions. Wide intersections, like at Columbia Boulevard and I-5, should be narrowed by adding truck aprons. Improvements are also recommended at the intersections of Columbia and Interstate Avenue, Vancouver Avenue, and Martin Luther King Jr. Boulevard, to improve traffic operations and pedestrian safety. Gaps in the sidewalk network should be filled, and crossings should be added at bus stops when planned service begins. A new, higher railroad bridge is needed to facilitate over-dimensional freight.

Better predictability is needed for people biking. The intersection of NE Argyle and Columbia should be improved to better route people biking east to planned/existing facilities on NE Argyle and N Denver streets.

Finally, speed reader boards should be added to manage excessive speeds, especially during off-peak hours. Automated enforcement should be considered based on crash history.

SPOT IMPROVEMENTS

-  Improve intersection geometry
-  Add/upgrade signal
-  Resurface roadway
-  Railroad improvement
-  fill sidewalk gaps on one or both sides

SEGMENT-WIDE IMPROVEMENTS

- Use access management to reduce head-on and left-turn collisions
- Add lighting
- Add crossings that coincide with future bus service stop locations
- Manage excessive speeding using speed reader boards. Consider automated enforcement based on crash history.

COLUMBIA BLVD. AT NE ARGYLE ST

Safety at the intersection of N Argyle Street/Way and NE Columbia should be improved by eliminating the eastbound right turn slip lane and using the space to provide a better connection for people biking and walking. This will provide a better connection from the path on N Columbia Boulevard to recommended bicycle facilities on N Argyle Way.



UNION PACIFIC RAILROAD BRIDGE

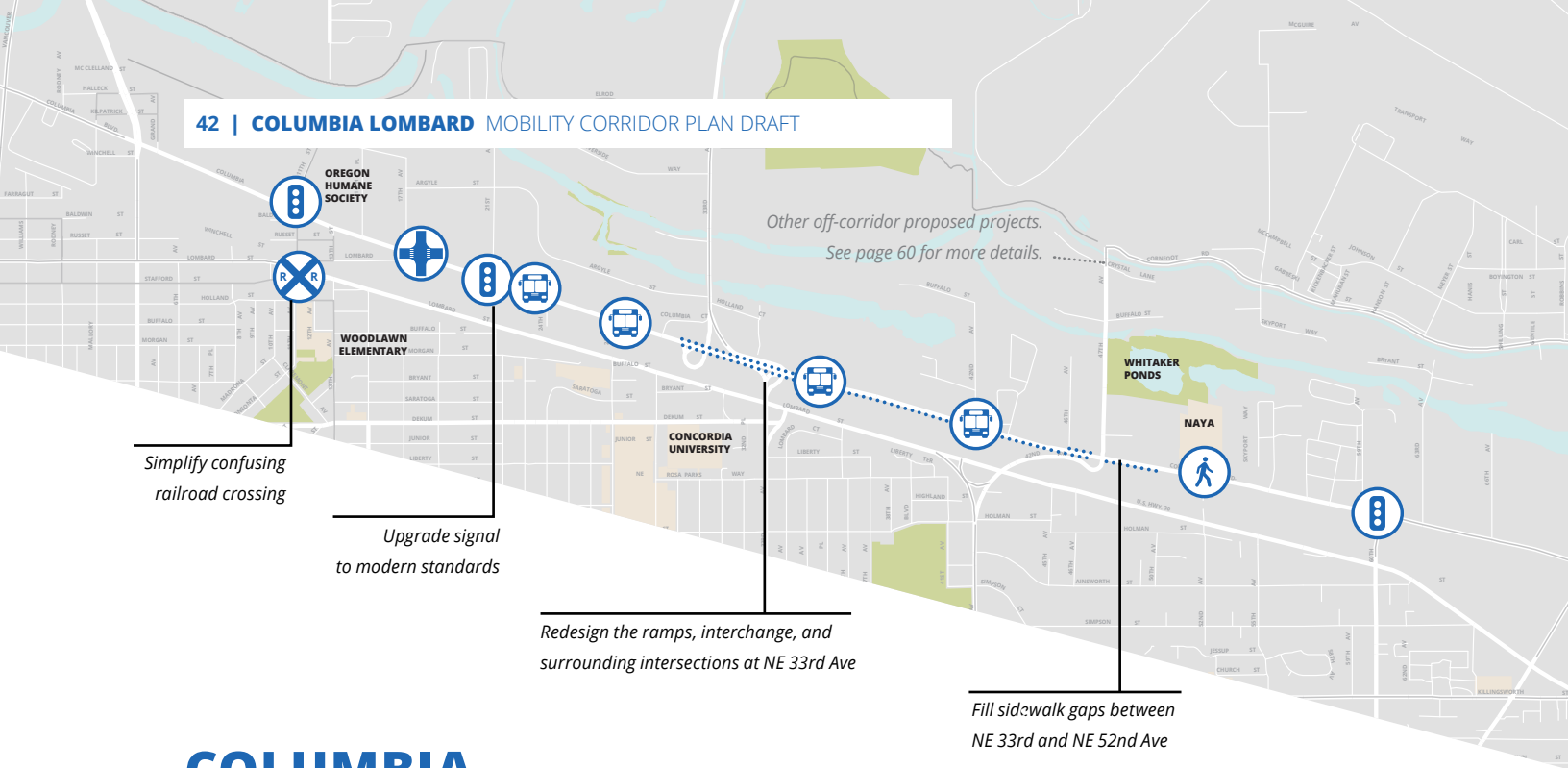
The current Union Pacific railroad bridge does not have sufficient clearance for over-dimensional (extra-tall) freight trucks. Raising the clearance would likely require a new double track bridge to accommodate a future second main line track. While recommended for freight operations, this would be very expensive and would not prevent normal freight from using Lombard Street. To reduce freight traffic on Lombard, a new connection to the St. John's bridge or US 30/NE St. Helens Road that reduces out-of-direction travel for freight should be analyzed further. See also page 72, "Planning for Regional Freight Movement."



MLK AND COLUMBIA

This intersection was recently improved, with the addition of a right-turn lane on the northeast corner. However, additional upgrades are still needed. These include improving the bus-stop location and amenities, adjusting the signal timing (potentially adding leading pedestrian intervals), and adding turn pockets on the northwest and southeast corners with truck aprons.





COLUMBIA MLK BLVD to NE 60TH AVE

GOAL FOR SEGMENT

Ensure reliable freight service while improving multi-modal access to community destinations such as the Oregon Humane Society and NAYA. Address significant safety issues, fill sidewalk gaps, and improve crossing opportunities.

RECOMMENDED IMPROVEMENTS

At NE Columbia Boulevard and NE 11th Avenue, a new signal is recommended as well as adding pedestrian/bike facilities on NE 11th. This will provide neighborhood access to the Oregon Humane Society and improve the safety of the intersection. Signal upgrades are also recommended at NE 21st and NE 60th avenues. The sidewalk gaps between NE 33rd and NE 47th avenues should be filled, with better crossings at all transit stops. Transit stops should be evaluated to determine if consolidation is feasible.

At NE 33rd Avenue and NE Columbia Boulevard, there are both immediate and longer-term recommendations (see next page).

Throughout the segment, additional lighting is needed. Improvements to signals and signage are also recommended to optimize traffic flow and better designate the route as a freight priority corridor. To reduce high speeds, speed reader boards or automated enforcement should be considered based on crash history.

LEGEND

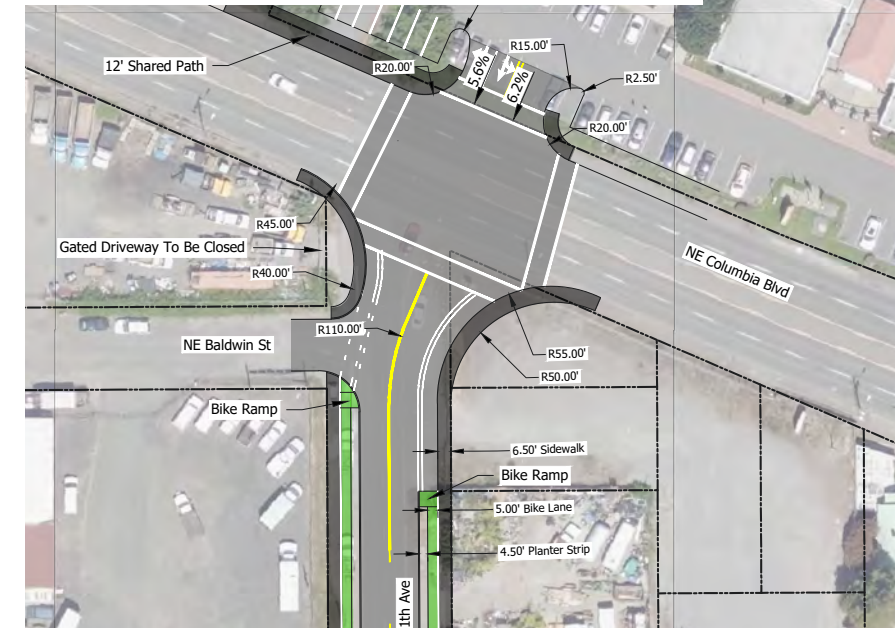
- Improve intersection geometry
- Add/upgrade signal
- Add/upgrade pedestrian crossing
- Upgrade railroad crossing
- Improve bus stop/ped crossing
- fill sidewalk gaps on one or both sides

SEGMENT-WIDE IMPROVEMENTS

- Make signal and signage improvements between NE 47th and NE 60th avenues to improve traffic flow. Concentrate left turns at signalized intersections.
- Expand transit service on Columbia and co-locate bus stops and new crossings
- Add lighting
- Fill sidewalk gaps and improve condition of existing sidewalks, especially between NE 33rd and NE 52nd avenues

NE 11TH AND COLUMBIA

To provide safe access to the Oregon Humane Society for people walking, biking, and driving, a new signal is recommended. Along with improvements to NE 11th Avenue and the intersection of NE Lombard and NE 11th Avenue, the new signal will provide easier and safer access. It will also allow traffic to use NE 11th Avenue to shift from Columbia to Lombard, rather than using NE 11th Place/Boulevard. The design shown is a concept to be further refined.



NE 33RD AVE NEAR TERM IMPROVEMENTS

In the very near term, signing and striping changes should be made to reduce conflicts, particularly around Holland Court, and improve bicycle safety from NE 33rd Drive to 33rd Avenue. Additionally, more analysis and engineering should determine if access from northbound on NE 33rd Avenue to westbound Columbia Boulevard can be closed with vehicles rerouted to instead use NE Columbia Court, which would become stop-controlled (see concept at the right). For traffic traveling south on NE 33rd, a stop sign would be added for vehicles at Columbia Boulevard and the slip lane modified.

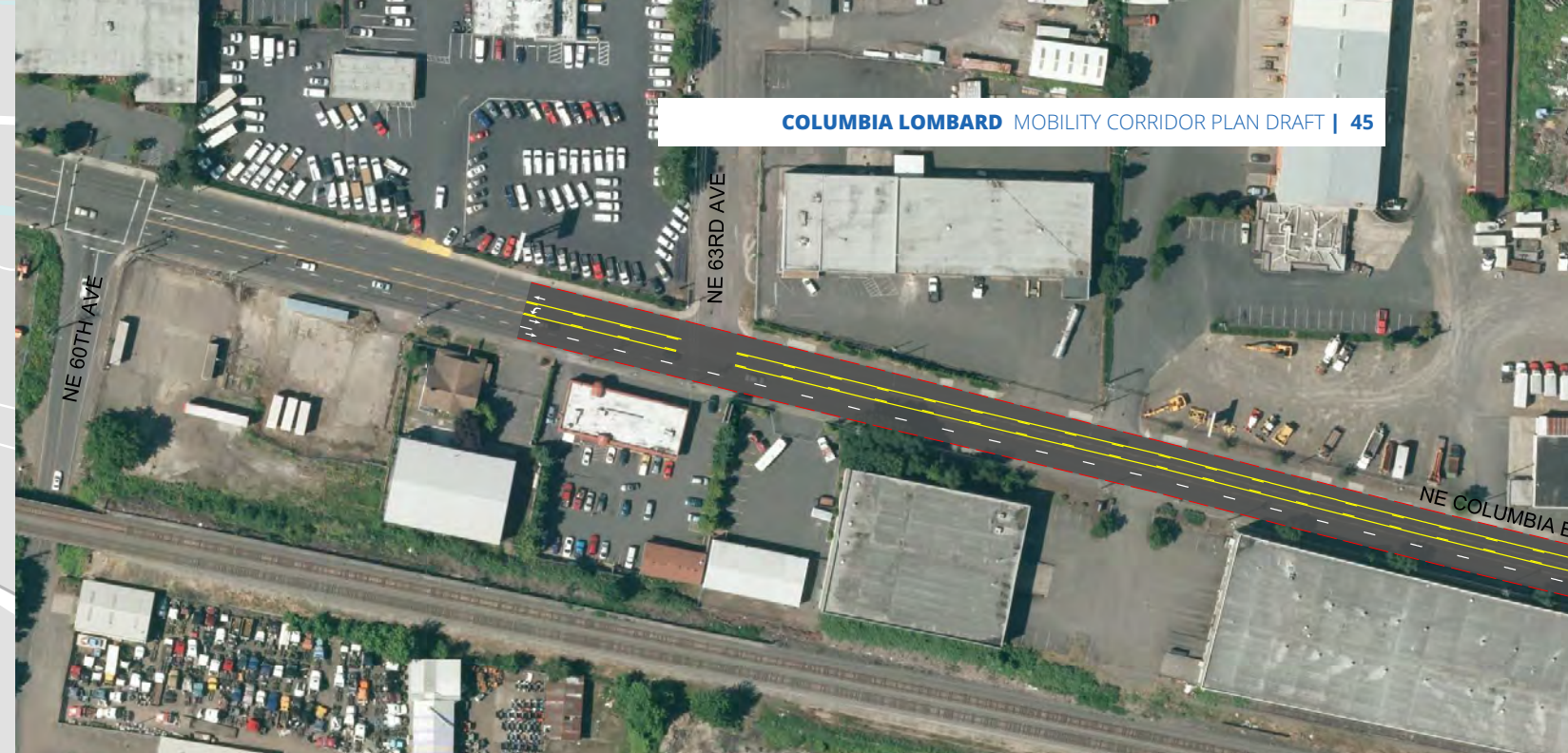
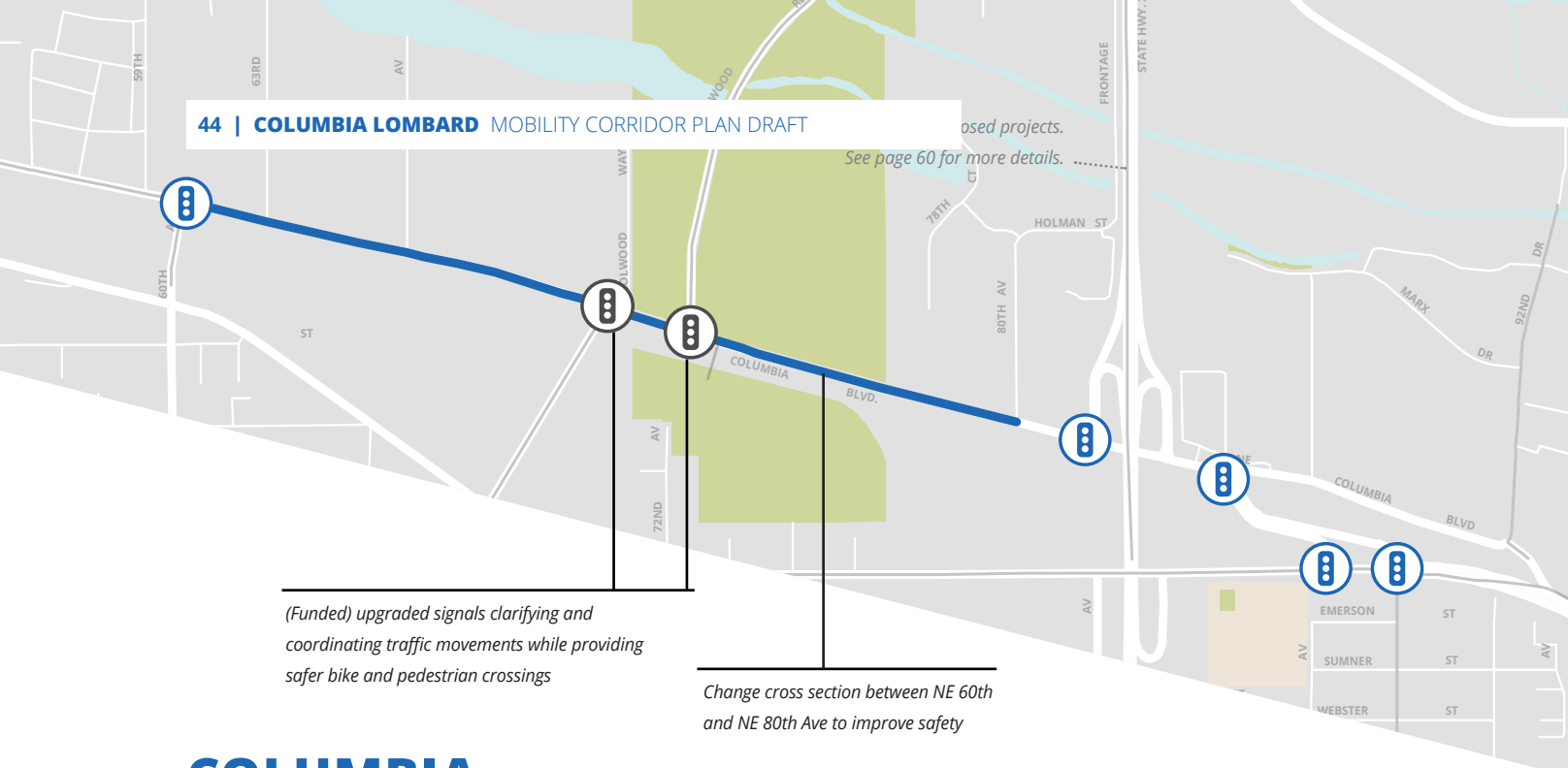


NE 33RD AVE FUTURE IMPROVEMENTS

Though the improvements above improve safety, the NE 33rd structure over Columbia Boulevard* is structurally deficient and in need of replacement. In the future, the new structure should create an at-grade intersection at NE 33rd Avenue and NE Columbia Boulevard. While this project would be expensive and have substantial right-of-way impacts, it would also simplify traffic movements, allow for continuous bicycle/pedestrian facilities, and open up new land for industrial redevelopment.

*Part of the structure (over US 30 Bypass) was replaced in 2006.





COLUMBIA NE 60TH AVE to KILLINGSWORTH

GOAL FOR SEGMENT


Improve travel time predictability, and provide bicycle and pedestrian access across the corridor as the road moves through the Cully neighborhood.

In this corridor segment the road changes from five to three lanes, and experiences increased congestion and unpredictable travel times. To improve travel time reliability in the near term, it could be possible to add a travel lane in one direction (see next page). This would allow more time to study the impacts and need of widening the road to five-lanes.

Additionally, upgrades to the signal at NE 60th are needed, with facilities for people walking/biking on NE 60th south of Columbia Boulevard. A funded project will soon signalize/improve the intersections at NE Cully Boulevard and NE Alderwood. Better north/south facilities for people biking and walking should be analyzed on NE Cully and NE Alderwood, as well as along NE 82nd Avenue, NE 92nd Avenue, and between Cully Park and Colwood Golf Center (see page 60). While speed limits were recently reduced, speed reader boards should be added to help manage speeds. Lighting is needed on the north side of the street.

Improvements are also needed to reduce head-on/left-turn collisions by restricting left-turns at non-signalized intersections and managing access on/off the street where possible.

SPOT IMPROVEMENTS

 Add/upgrade signal

SEGMENT-WIDE IMPROVEMENTS

- Install crossings at new bus stops if/when bus service is added
- Concentrate left turns at signalized intersections
- Add lighting to meet current guidelines
- Use access management to prevent head-on and left-turn collisions
- ITS signal upgrades should be added, as well as signage, to better designate the route as a freight priority corridor.

COLUMBIA BOULEVARD - NE 60TH TO NE 80TH

Widening Columbia Boulevard between NE 60th and NE 82nd avenues has been identified as a need in the City's Transportation System Plan as well as many other area and regional plans. However, no sustained efforts have been made to secure the necessary right-of-way for such a project, and the impacts of doing so would be high. While potentially necessary in the long-term, it is recommended that in the near-term the existing three lane cross-section be modified to four-lanes. To maximize efficiency, the cross-section should alternate between two lanes eastbound (between NE 60th and NE Cully) and then two lanes westbound (between NE Alderwood and NE 80th), with one lane in the other direction and a continuous median. The transition between eastbound and westbound lanes would occur between NE Cully and NE Alderwood, as part of planned improvements to these two intersections.

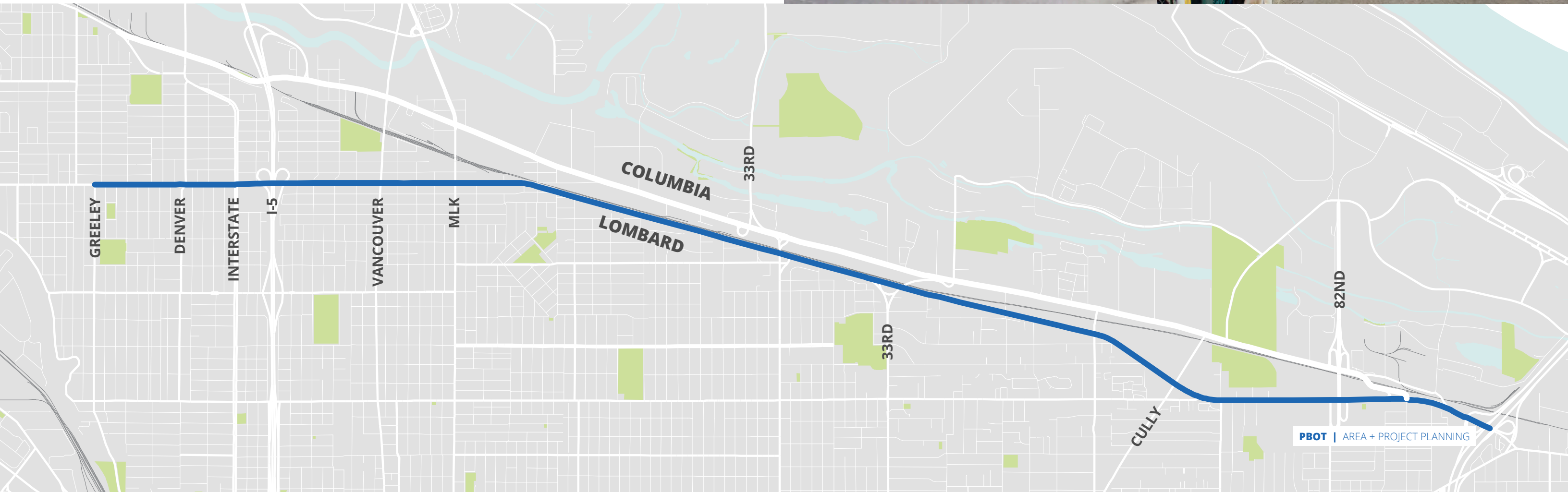
These modifications will reduce the peak hour impact and queue at NE 60th Ave, and provide better traffic operations for eastbound travel to the airport, and westbound traffic to NE Cully Boulevard. Additional traffic design and analysis is needed to determine whether these lane modifications can occur within the existing right-of-way, or whether additional right-of-way and road width is necessary.

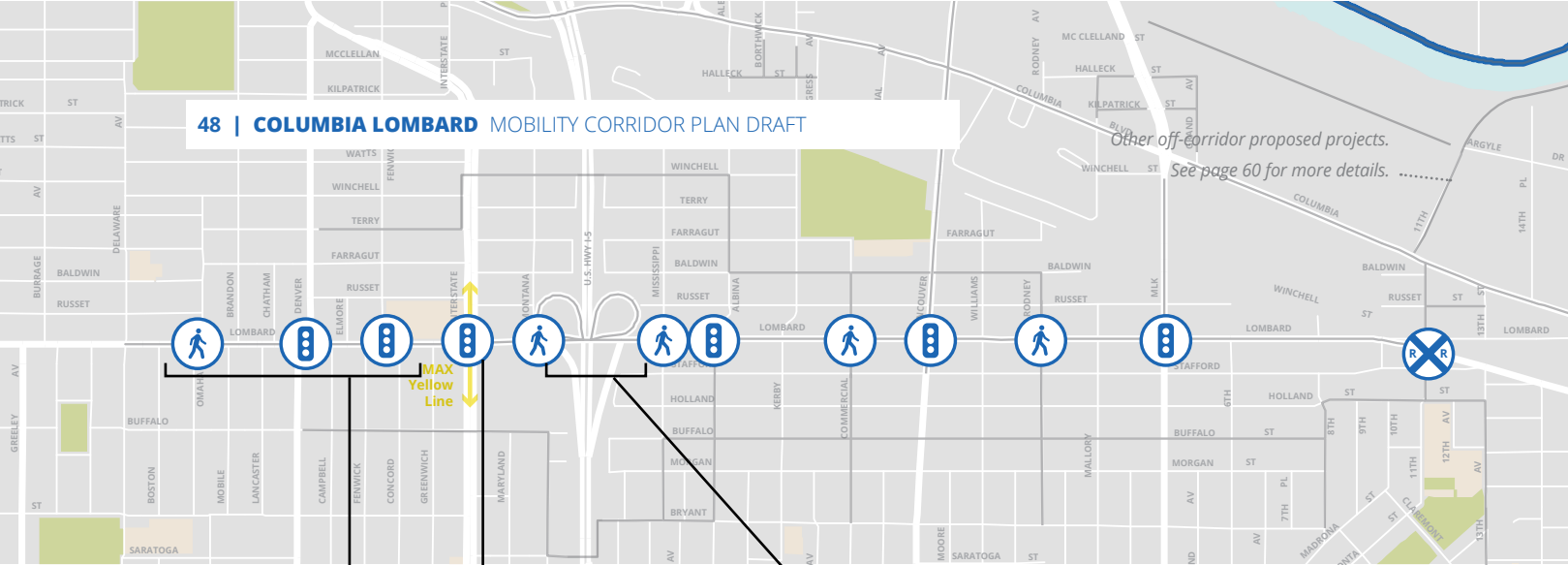
PROJECT RECOMMENDATIONS

Lombard corridor

The **Lombard corridor** functions as US 30 Bypass and is maintained by ODOT, but the road characteristics vary throughout the corridor. West of Martin Luther King Jr Boulevard the corridor is classified as a Civic Main Street/Corridor, with a mix of housing, services, restaurants and stores. Between Martin Luther King Jr. Boulevard and NE 60th Avenue the corridor is classified as an Industrial Road, and is bounded by the Union Pacific railroad to the north and housing/ neighborhoods to the south. East of NE 60th Avenue, the corridor intersects the Cully neighborhood and Cully Park before merging with NE Columbia Boulevard.

The general recommendations for this corridor are to **reduce high-end speeding, add/improve bicycle facilities along most of the corridor, fill existing sidewalk gaps, and provide additional safe crossing opportunities for all users.** The corridor should continue to operate efficiently for people driving, but excessive speeds must be better managed with safer accomodations for people biking. The corridor also must accomodate over-dimensional freight traffic until/unless height improvements are made to Columbia Boulevard.





Extend the road diet and bike lanes from Delaware to Denver or the Fenwick-Concord Greenway.

Transit stop improvements. Add a Leading Pedestrian Interval and restrict right turns during red lights.

Provide an at-grade accessible pedestrian crossing of southbound I-5 ramp. Consider reconfiguring interchange and sidewalks to improve safety



LOMBARD N DELAWARE to NE 11TH AVE

GOAL FOR SEGMENT





Address high crash rates in this busy, mixed use area with more frequent pedestrian crossings and a safer cross section.

A funded project on Lombard to reduce motor vehicle lanes and add bike lanes should continue further east to N. Denver Avenue or, if possible, the Fenwick/Concord neighborhood greenway (see next page). Additionally, the N. Denver Avenue intersection should be redesigned. Between N Albina Avenue and Martin Luther King Jr. Boulevard, parking should be removed and the road restriped with either three motor vehicle lanes and bike lanes or a buffered median (see pages 50-51).

More crossings are needed to improve the safety of people crossing on foot or bike. A left-turn lane pocket is recommended at N Albina Avenue, and signals need to be rebuilt in multiple locations. In the long-term, sidewalk is needed on the north side of the Interstate 5 on-ramp, and a study should consider removing the clover-leaf ramps and signaling the ramps on the south side of the corridor.

The pavement condition also needs to be improved to ensure safe and efficient travel, and the railroad crossing improved at NE 11th Avenue (see page 53).

SPOT IMPROVEMENTS

-  Improve intersection geometry
-  Add/upgrade signal
-  Add/upgrade pedestrian crossing
-  Upgrade railroad crossing

SEGMENT-WIDE IMPROVEMENTS

- Improve pavement condition

LOMBARD LANE MODIFICATION EXTENSION

ODOT has a funded project that will modify the travel lanes and improve pedestrian crossings on N Lombard between N Fiske and N Boston avenues. It will reduce the current two vehicle lanes in each direction to one, and add a center turn lane and buffered bike lanes. It is recommended these lane changes be extended further to the east to better connect with existing bike facilities at N Denver or the planned improvements to the Fenwick/Concord neighborhood greenway. The intersection of N Denver Avenue should also be reconfigured to improve visibility of people walking and biking and reduce unpredictable travel movements. The photo above shows the current conditions of the N Denver Avenue/N Lombard Street intersection.

I-5 RAMP IMPROVEMENTS

Improving safety near the I-5 on-ramp is a major need, especially for pedestrians, since there is currently no facility on the north side of the street. It is recommended that the pedestrian ramp structure over I-5 southbound ramp be removed and replaced with an at-grade crossing. The entrance ramp will need to be modified to reduce turn speeds, and a flashing beacon should be installed. This improvement may require closure of the northbound right-turn lane from Fred Meyer, but more analysis is needed. More analysis is needed to determine whether a pedestrian crossing at N Montana Avenue could be added.





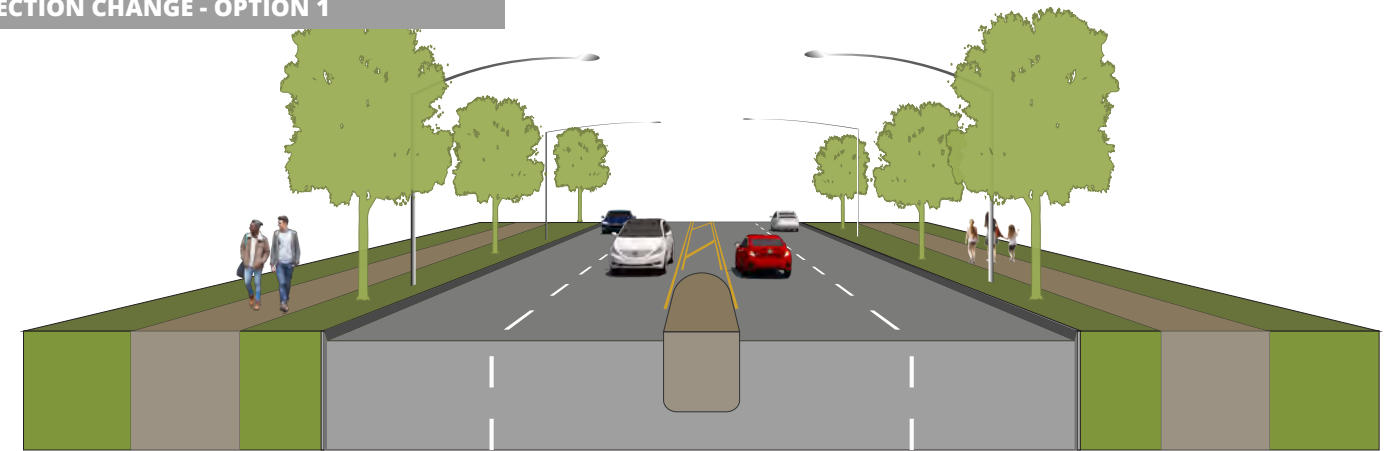
POSSIBLE CROSS SECTION CHANGES EAST OF I-5

Lombard Street between NE Mississippi Avenue and NE Martin Luther King Jr. Boulevard has a history of crashes, and many people have requested changes to the existing cross-section of four vehicle lanes and parking on the north side of the street. The travel lanes are narrow and parking is not frequently used. To improve safety, two options are recommended. The City and ODOT should continue conversations with residents to determine a final design. One recommendation (Option 1 on page 51) is to remove the parking on the north side of the street and add a wider striped center-line. This reconfiguration would help prevent cross-over and fixed object crashes, while allowing for continued access to residents living along NE Lombard Street. However, the outside vehicle lanes would remain close to the curb and adjacent homes and would not have a significant impact on speeds.

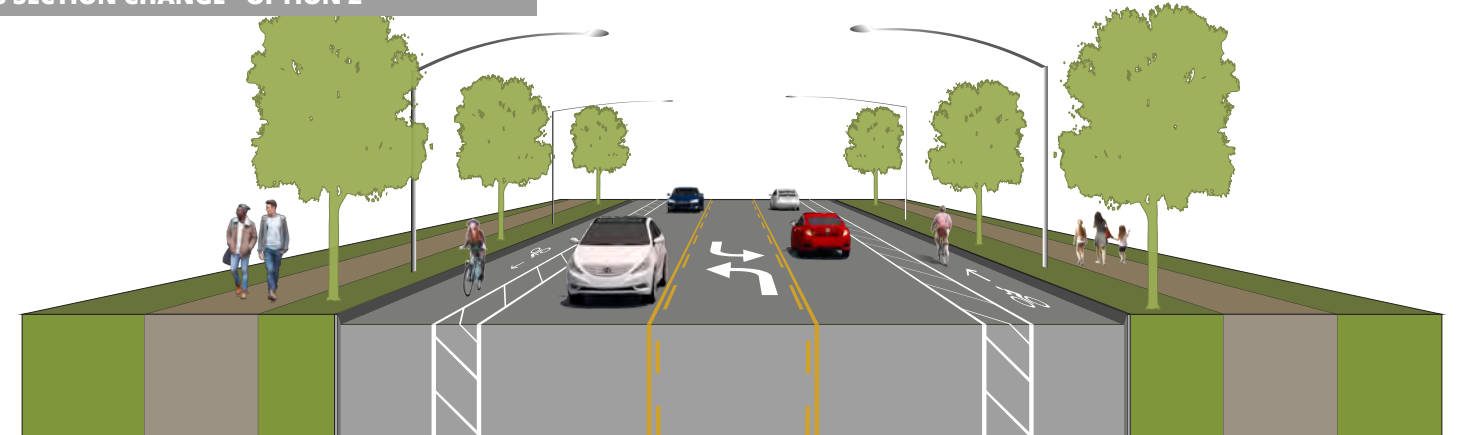
Another option (Option 2 on page 51) is to reduce the number of lanes from four to three and add bike lanes or retain parking. This could improve safety, reduce speeds, and allow for more crossings, but based on current traffic volumes (~13,000 vehicles in each direction) could have a high impact on travel times and parallel routes. The bike facilities would also have limited connectivity to other routes.

The City and ODOT should continue conversations with residents to determine a final design. Additionally, left-turn pockets should be added at NE Albina Avenue and other locations where appropriate.

CROSS SECTION CHANGE - OPTION 1



CROSS SECTION CHANGE - OPTION 2





LOMBARD 11TH AVE to CULLY BLVD

GOAL FOR SEGMENT




Reduce serious and fatal crashes resulting from high-speeds and intersection design, and improve conditions for people walking and biking.

In this segment motorists travel at extremely high speeds (posted speed: 45; 85th percentile speed: 55). These speeds, and skewed intersections, make it challenging to enter or exit the corridor. The cross section should be modified to better manage speeds and improve conditions for walking/ biking while maintaining reliable travel times. These recommendations are discussed on the next pages.

Regardless of cross-section modifications, skewed intersections should be redesigned or closed with traffic routed to signals. The intersection at NE 11th Avenue, NE Lombard Street, and NE Lombard Place should be modified to reduce conflicts, as well as the interchanges with NE 33rd and NE 42nd avenues. A new traffic signal at NE 15th Avenue should be evaluated and the existing signals upgraded at NE 27th and NE 60th avenues.

Sidewalks should be added to the south side of the street, bike facilities improved and lighting upgraded to meet standards. Speed reader signs should also be installed, and the road resurfaced.

LEGEND

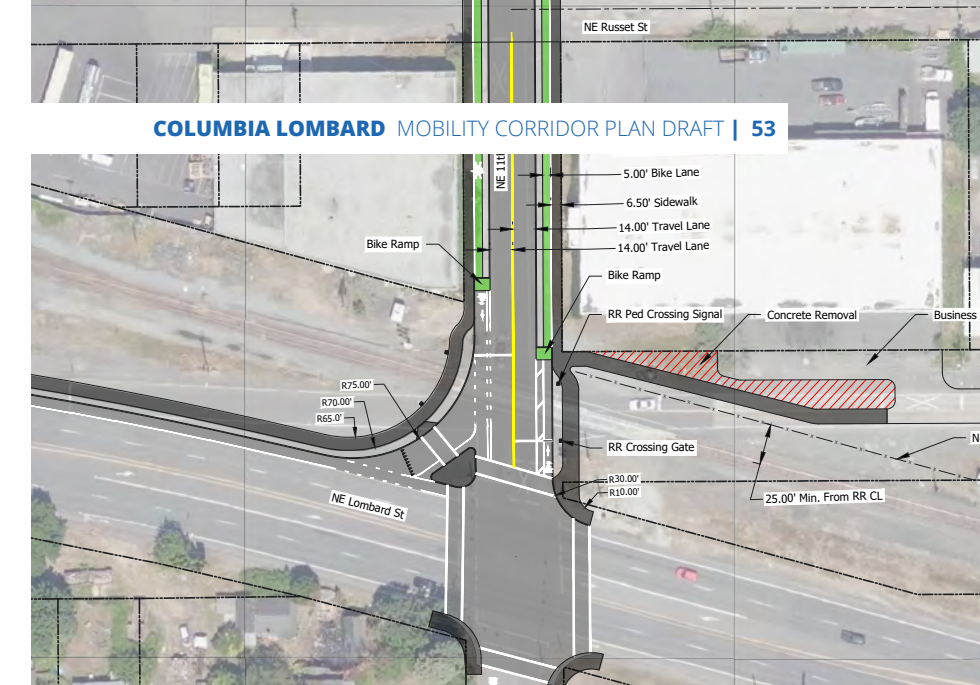
-  Improve intersection geometry
-  Add/upgrade signal
-  fill sidewalk gaps on one or both sides

SEGMENT-WIDE IMPROVEMENTS

- Add separation to existing bike lanes to increase separation between bicyclists and fast-moving traffic. Add green conflict striping through intersections.
- Concentrate left turns at signalized intersections and improve safety through access management.
- Improve geometry of angled intersections with local streets
- Add lighting to meet current guidelines for safe lighting levels
- Add travel speed feedback signs

NE 11TH AND LOMBARD

To reduce conflicts at this location, the intersection of NE Lombard Place/Court be closed prior to NE 11th Avenue. Doing so would eliminate the need for stop signs at the railroad and provide clarity concerning who has the right-of-way. To facilitate freight/vehicle movement that previously used NE Lombard Place/Court, the intersection of NE Columbia Boulevard and NE 11th Avenue needs to be improved with a signal, as well as local access streets. The design at the right shows a concept of this design, which will be further developed as the project is funded and moves into design.



NE 33RD AVE AND LOMBARD

Moving between NE Lombard Street and NE 33rd Avenue is currently challenging and confusing. To improve predictability and safety, the ramp from NE 32nd Avenue should be closed, and instead routed to a new signal at the ramp to the east of NE 33rd Avenue. In the short-term, access to NE Lombard Street from NE Bryant Street should be restricted to reduce the skew and number of conflicts.



NE 42ND AND LOMBARD

At this intersection, cars exit NE Lombard onto NE 42nd Avenue using an off-ramp that encourages continued high rates of speed through the neighborhood. To reduce speeding, the intersection should be redesigned with a new traffic signal. Sidewalks should also be added from NE 42nd Avenue to NE Lombard Street.



Lombard Cross Section Changes NE 11th Avenue to NE 60th Avenue

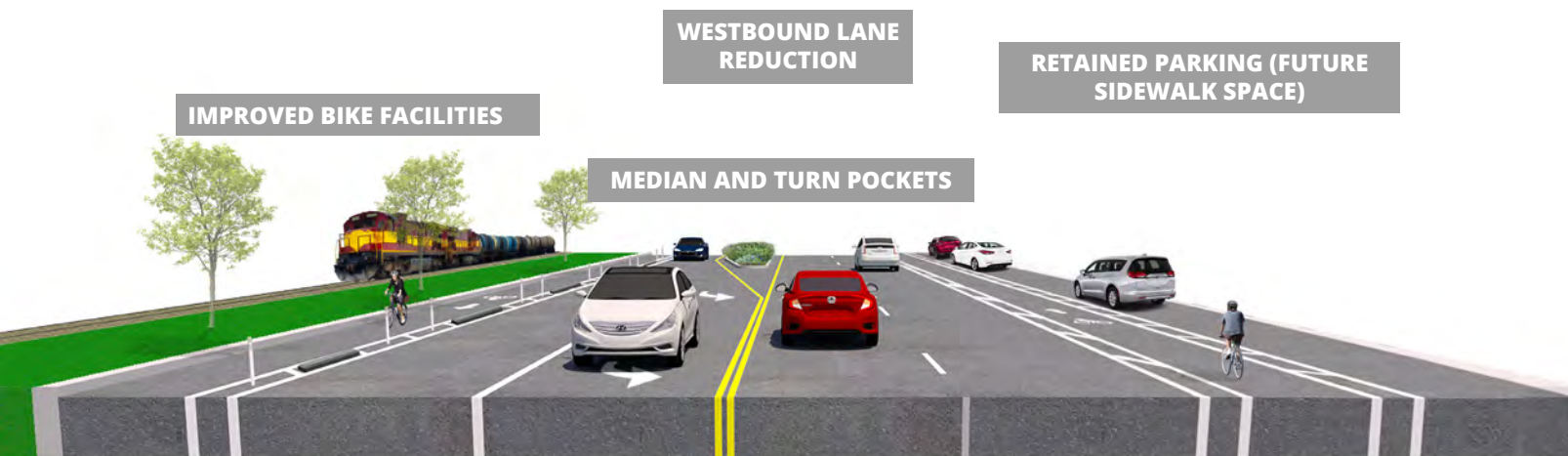
The section of NE Lombard Street between NE 11th and NE 60th avenues experiences extremely excessive speeds and high rates of speed-involved crashes that have resulted in serious and fatal injuries. However, the corridor also carries large traffic volumes, and as US 30 Bypass is a key connection between I-5 and I-205. The design of this corridor must account for these vehicle traffic volumes while improving the safety of the corridor, especially at non-busy travel times when most of these crashes occur.

To balance these considerations, the cross-section should be modified to better separate east and west motor vehicles and improve conditions for people walking and biking. Two options are proposed for further analysis prior to implementation. ODOT's recently released "Blueprint for Urban Design" provides guidance on how to make changes on state-maintained corridors like Lombard. That guidance should be used to evaluate and further refine these two options.

CROSS-SECTION: OPTION 1 - LANE REALLOCATION

The first option converts one of the westbound travel lanes to a left-turn lane. Where left-turns/access are not needed a center median could be added to prevent cross-over crashes. While this reduces the capacity of the road for motor vehicles, it still allows traffic to flow consistently at most times of the day. This cross-

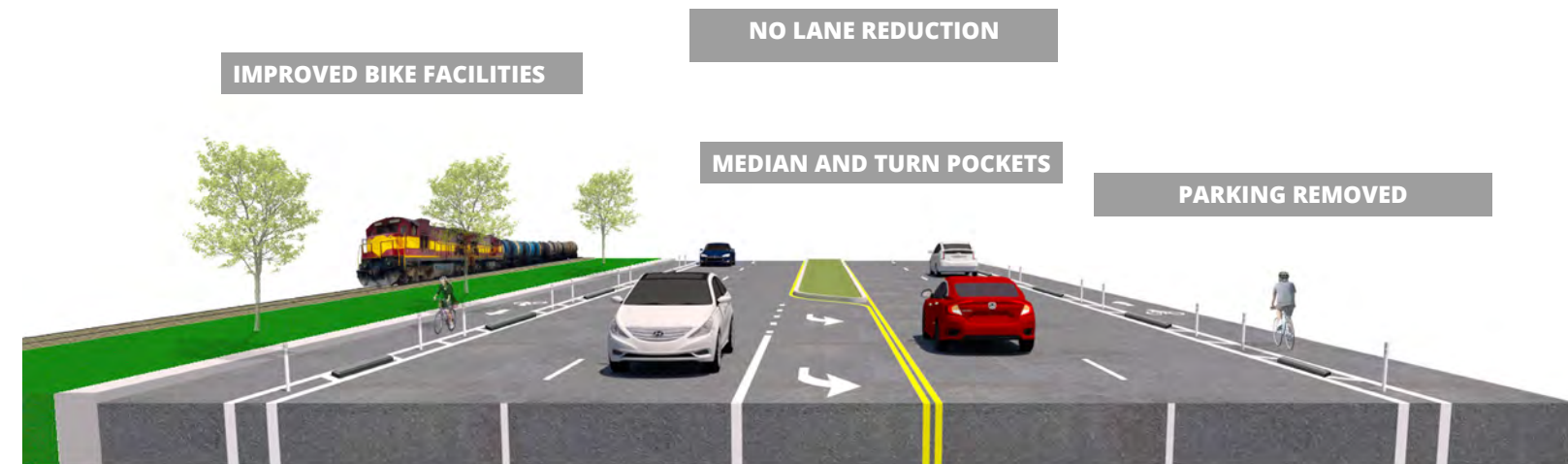
section preserves parking in the short-term, and could be implemented quickly with minimal funding. In the future and/or if funds allow, the parking space should be converted to sidewalk and the bicycle lanes should be elevated to curb level with a furnishing zone and street trees.



CROSS SECTION: OPTION 2 - LANE ADDITION

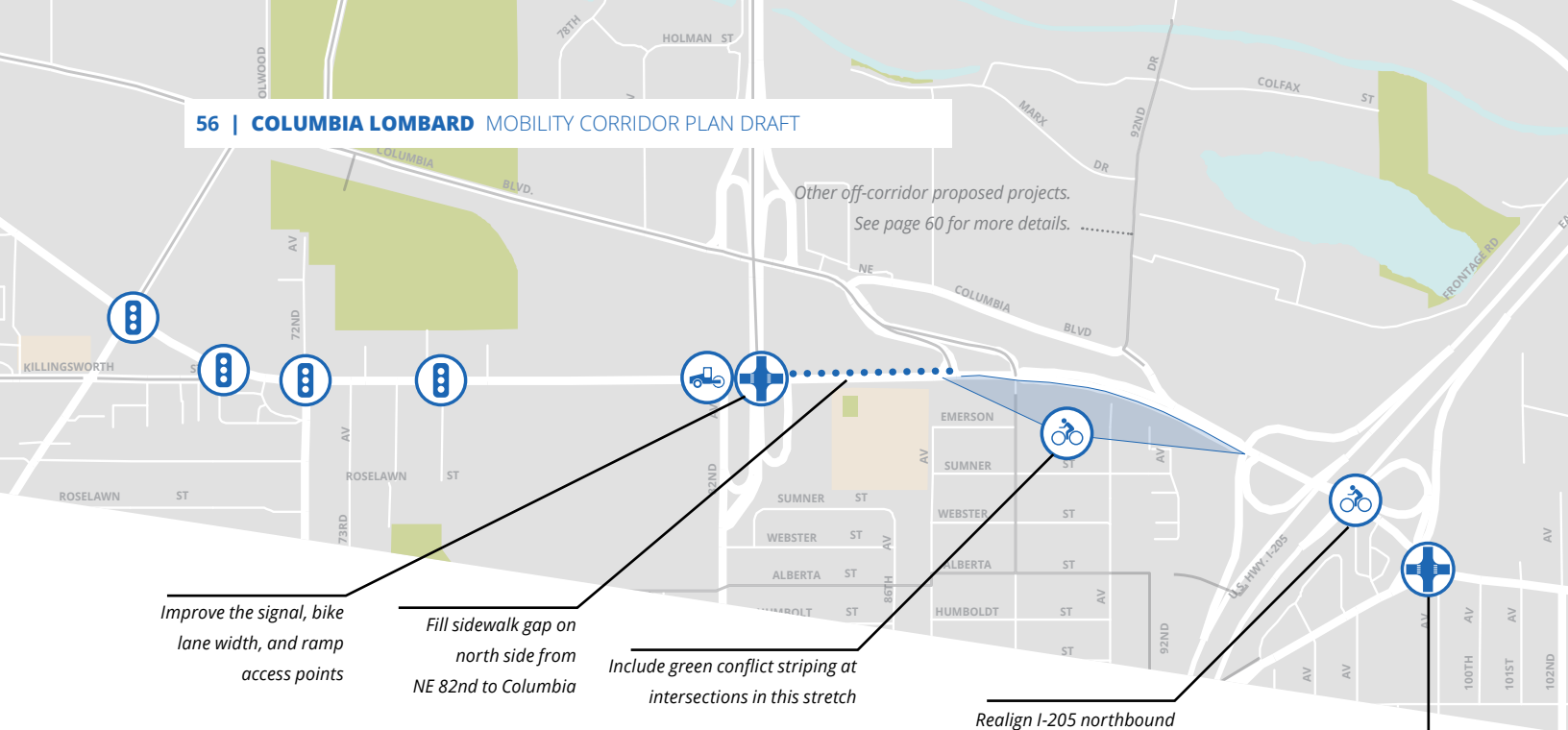
If it is determined that lane reduction is not possible, the other cross-section option is to add an additional median/left-turn lane while maintaining two motor vehicle lanes in each direction. In this option, the median is critical to prevent cars crossing into oncoming travel, and allow for left-turns to be channeled at locations where there is a signal and/or less conflicts. Street trees along the corridor could be added in the median to improve the character of the roadway and encourage

appropriate speeds. Adding the median/left-turn lane would unfortunately require removal of the existing parking, and make it more difficult to add sidewalks in the future. In this scenario, it is even more critical to separate bike facilities from traffic and reduce the high rates of speed through additional signals, adjusting signal timing, and managing speeds with tools like speed reader boards.



ADDITIONAL IMPROVEMENTS

With either cross-section option, additional signals should be installed on the corridor and access from minor and skewed intersections reduced. Gaps in the sidewalk network should be filled. Additionally, the bicycle facilities should be improved by protecting the lanes with vertical elements where possible, especially on the north side of the street where there are no driveways or turn conflicts. Green paint should be added at conflict points, and a better north side connection is needed under the overcrossing at NE 42nd Avenue. Street trees or other enhancements should be added to improve the character of the roadway and encourage appropriate speeds. Automated enforcement of speeding and red-light running should be considered based on crash history.



Improve the signal, bike lane width, and ramp access points

Fill sidewalk gap on north side from NE 82nd to Columbia

Include green conflict striping at intersections in this stretch

Realign I-205 northbound offramp to address bike lane conflict point

Improve the I-205 path connection across Killingsworth

KILLINGSWORTH CULLY BLVD to I-205

GOAL FOR SEGMENT

Improve pedestrian safety and crossing opportunities through the Cully neighborhood, and improve safety and predictability for people driving, walking and biking near I-205.






Between NE Cully Boulevard and I-205, travel lanes should be narrowed along with a center median where feasible. Crossings at bus stops should be enhanced, and traffic signals upgraded. Bicycle lanes should be enhanced where possible (see next page). A new signal and/or enhanced crossing should be added at NE Lombard Street/NE Portland Highway and NE Killingsworth Street. Additionally, a shared use path should be added on the south side of the road between NE Killingsworth Street and NE 72nd Avenue to connect to the planned multi-use path on NE 72nd Avenue.

Left turns should be concentrated to signalized intersections and, where possible, access managed with a median. A new signal should be added at NE 75th Avenue with sidewalks on NE 75th Avenue to serve as the new entrance to Cully Park.

At eastbound Killingsworth Street to northbound NE 82nd Avenue, the turn radius should be reduced and replaced with a turn turning apron with enhanced striping. At the interchange of I-205 and Killingsworth Street, the ramps should be reconfigured to reduce conflicts and improve the connection between the I-205 path. ODOT should also conduct a more comprehensive analysis of how to improve safety and

efficiency at this interchange. Finally, lighting upgrades should be made.

LEGEND

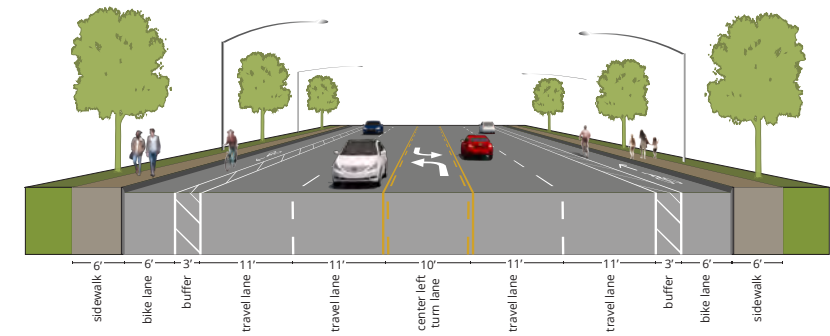
-  Improve intersection geometry
-  Add/upgrade signal
-  Improve bicycle safety
-  Improve pavement condition
-  fill sidewalk gaps on one or both sides

SEGMENT-WIDE IMPROVEMENTS

- Use access management and medians to reduce head-on and left-turn collisions
- Improve existing bike lanes to increase comfort and separation
- Add enhanced crossings at bus stops
- Add lighting to meet current guidelines for safe lighting levels

NE PORTLAND HIGHWAY AND NE KILLINGSWORTH

The image on the right is an example of the cross-section improvements that should occur east of NE 72nd Avenue. Restriping the lanes to be 11-foot wide would provide adequate space for buffered/protected bike lanes. This would also help keep speeds more consistent and reduce confusion. Where possible, access should be managed with a median to reduce turning and cross-over crashes.



I-205 RAMP AND NE KILLINGSWORTH

Improving the interchange of NE Killingsworth and I-205 requires further study, but short term improvements can still be made. In the near-term, the I-205 off-ramp should be modified to eliminate the northbound-to-westbound free-flow movement, which would remove the conflict between westbound bicyclists and the free-flow vehicle movement.

The sidewalk on the south side of Killingsworth Street should also be widened to improve the connection between the I-205 multi-use path, and enhancements made to the intersection and signals at NE Sandy Boulevard and NE Killingsworth to improve visibility and safety of people walking and biking.



PARKROSE-SUMNER TRANSIT CENTER BICYCLE AND PEDESTRIAN BRIDGE

To improve the connection between the Sumner neighborhood and the transit center, a new crossing of I-205 is recommended. The new bicycle and pedestrian bridge would provide access to transit for residents and eliminate the need to travel along Sandy Boulevard or NE Killingsworth Street. It would also better connect the neighborhoods west of I-205 to the I-205 multi use path.



PROJECT RECOMMENDATIONS

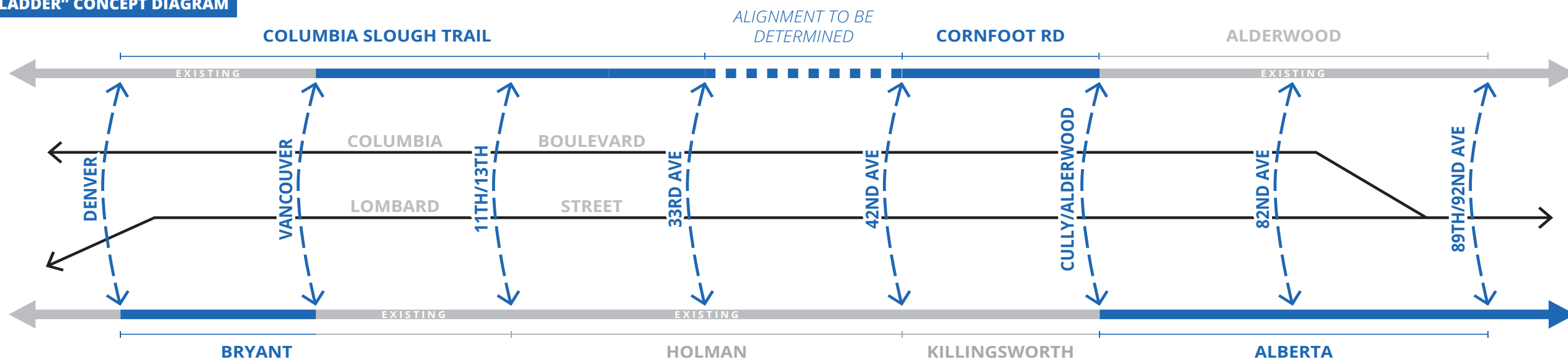
Corridor Connections and Crossings

In addition to the recommendations for the Columbia and Lombard corridors, improvements are also recommended to corridor crossings and parallel/adjacent routes. These improvements would provide safe, alternative transportation options to the jobs and recreational opportunities in the area and also increase the economic vitality and environmental health of the area.

Many of these recommendations focus on north-south connectivity for people walking and biking, as well as providing alternative east-west travel routes. When implemented, these routes will provide a “ladder” of connectivity as seen in the illustration below. Additionally, improvements are needed to local streets within the Columbia corridor to better manage stormwater runoff and improve the road condition for freight movement. These recommendations are further illustrated and described on the map on the next page.

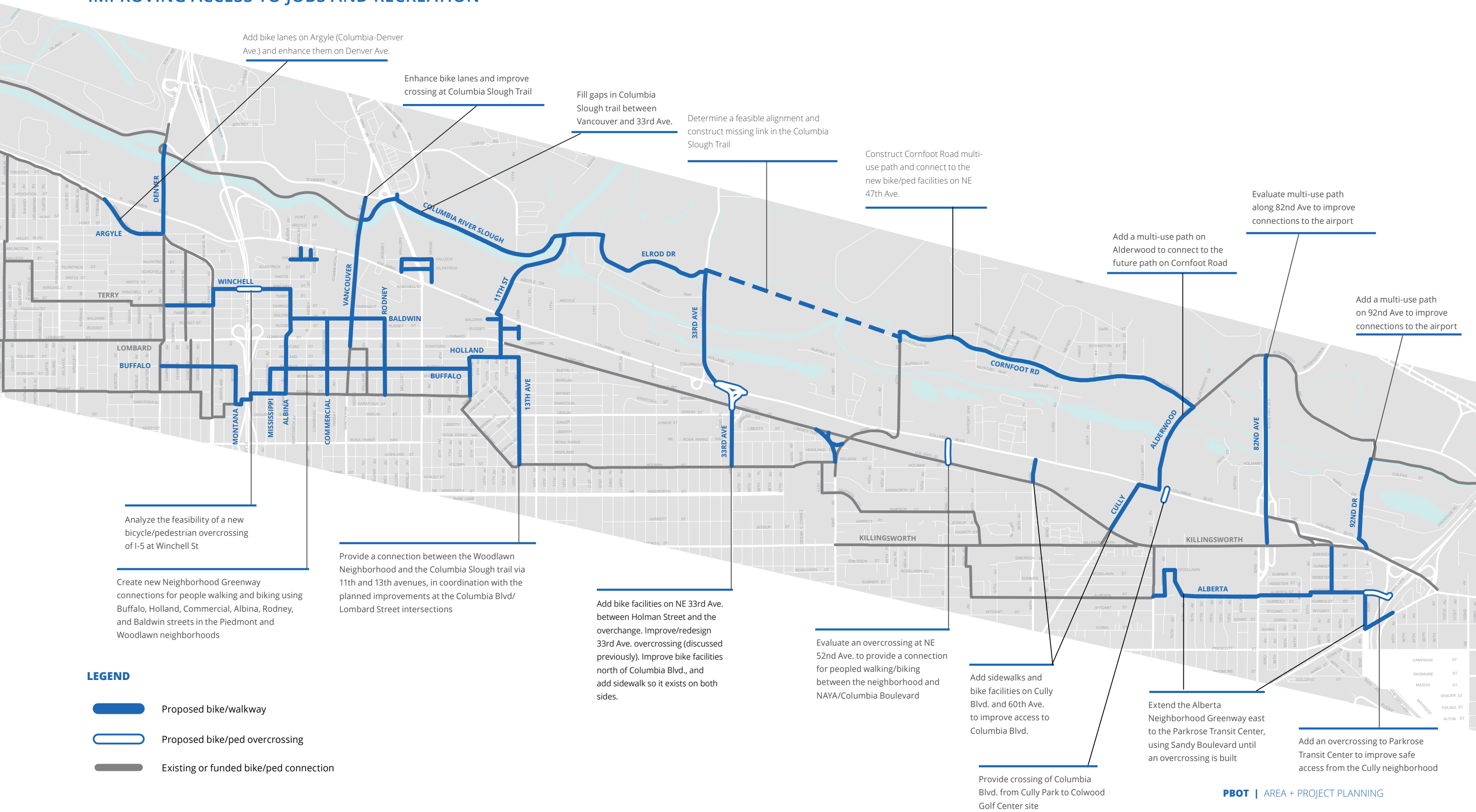


“LADDER” CONCEPT DIAGRAM



OTHER NETWORK RECOMMENDATIONS

IMPROVING ACCESS TO JOBS AND RECREATION



Add bike lanes on Argyle (Columbia-Denver Ave.) and enhance them on Denver Ave.

Enhance bike lanes and improve crossing at Columbia Slough Trail

Fill gaps in Columbia Slough trail between Vancouver and 33rd Ave.

Determine a feasible alignment and construct missing link in the Columbia Slough Trail

Construct Cornfoot Road multi-use path and connect to the new bike/ped facilities on NE 47th Ave.

Evaluate multi-use path along 82nd Ave to improve connections to the airport

Add a multi-use path on Alderwood to connect to the future path on Cornfoot Road

Add a multi-use path on 92nd Ave to improve connections to the airport

Analyze the feasibility of a new bicycle/pedestrian overcrossing of I-5 at Winchell St

Provide a connection between the Woodlawn Neighborhood and the Columbia Slough trail via 11th and 13th avenues, in coordination with the planned improvements at the Columbia Blvd/ Lombard Street intersections

Create new Neighborhood Greenway connections for people walking and biking using Buffalo, Holland, Commercial, Albina, Rodney, and Baldwin streets in the Piedmont and Woodlawn neighborhoods

Add bike facilities on NE 33rd Ave. between Holman Street and the overchange. Improve/redesign 33rd Ave. overcrossing (discussed previously). Improve bike facilities north of Columbia Blvd., and add sidewalk so it exists on both sides.

Evaluate an overcrossing at NE 52nd Ave. to provide a connection for people walking/biking between the neighborhood and NAYA/Columbia Boulevard

Add sidewalks and bike facilities on Cully Blvd. and 60th Ave. to improve access to Columbia Blvd.

Extend the Alberta Neighborhood Greenway east to the Parkrose Transit Center, using Sandy Boulevard until an overcrossing is built

Add an overcrossing to Parkrose Transit Center to improve safe access from the Cully neighborhood

Provide crossing of Columbia Blvd. from Cully Park to Colwood Golf Center site

LEGEND

- Proposed bike/walkway
- Proposed bike/ped overcrossing
- Existing or funded bike/ped connection

CHAPTER 05

ADDITIONAL RECOMMENDATIONS

In addition to project recommendations, there are also policy improvements and other ways to improve conditions on the Columbia and Lombard corridors.

Introduction

In addition to the infrastructure recommendations outlined in the previous chapter, there are additional ways to improve conditions for travel along the corridors. The following pages summarize the proposed recommendations to changes in the Transportation System Plan (TSP), as well as general policy or corridor-wide improvements that should be instituted.

Some of these require coordination with other bureaus and/or changes to existing policies. They also may require additional planning, analysis, and public engagement.

OTHER RECOMMENDATIONS

Proposed TSP Changes and Classification Updates

The Columbia Lombard Corridor Plan is recommending a set of updates to the Transportation System Plan (TSP) street classifications and list of major projects, to be incorporated into the next update of the TSP. These updates will go through additional public outreach and legislative process as part of that update, and may change as a result of that process.

Below is a summary of the recommended changes:

- Pedestrian and bicycle classification updates are recommended to better reflect priority walking and biking routes and identified projects developed through this plan, including new connections within neighborhoods and across major barriers.
- Transit classification updates are recommended to reflect planned TriMet bus service expansion along Columbia Blvd and in the Kenton area.
- Traffic, Freight, and Emergency Response classification updates are recommended to correct a number of errors and to reflect planned changes as a result of recommended projects, for example changes in circulation around NE 11th Ave and NE Lombard Place.
- Street Design classification updates are recommended to better reflect the character of certain streets, taking into account planned changes.
- The TSP Major Projects list is recommended to be updated to reflect the Columbia Lombard Corridor Plan project list by adding new projects and modifying existing ones, as well as removing projects that have been completed or are no longer needed.

See Appendix E for a full list of the recommended changes.

OTHER RECOMMENDATIONS

Policy/Auxiliary Recommendations

Distinct from individual projects, the following programmatic or policy recommendations are not directly related to infrastructure or beyond the scope of this plan. However, they are still important to improve safety and operations.

LIST OF ADDITIONAL RECOMMENDATIONS

- | | |
|---|--|
| 1 Manage driveway access and gates on corridor | 5 Improve over-dimensional freight permit process |
| 2 Integrate stormwater management in redevelopment | 6 Study highway interchange improvements |
| 3 Improve sidewalk condition and standards | 7 Plan for regional freight movement |
| 4 Reduce noise and other environmental pollution | 8 Increase transit service along Columbia Boulevard |

RECOMMENDATION #1

Manage Driveway/Gate Access

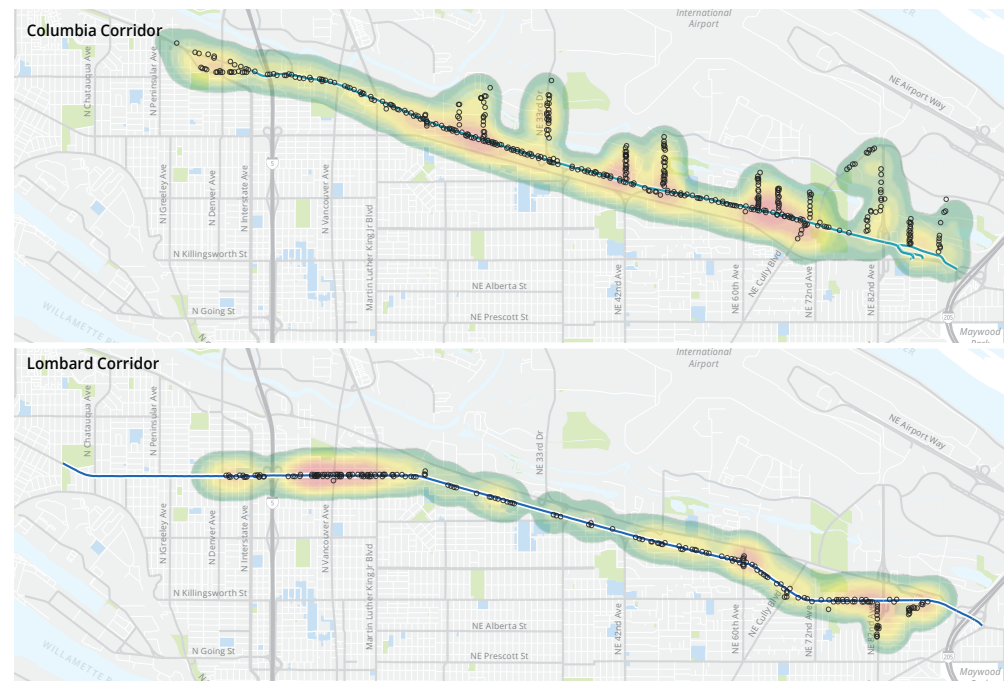
Both the Columbia and Lombard corridors have high driveway densities, though the context and use differs. On Columbia Boulevard most driveways are for commercial use, with a consistently high concentration throughout the corridor. On Lombard Street the greatest concentration of driveways is between Martin Luther King Jr. Boulevard and Vancouver Avenue, a largely residential section.

High driveway densities create a number of safety issues. They increase the number of conflict points, add unpredictability, and make it difficult to add medians. While access to residences and businesses is needed, the number of driveways should be better consolidated along these corridors. Especially around major intersections driveway access should be restricted or limited to right-turn only. While it is difficult to require driveway closures, as new or redevelopment occurs access should be limited to a single point of ingress/ egress and/or rerouted off of the Columbia/Lombard corridors if possible.

Additionally, gates immediately adjacent to the Columbia and Lombard corridors cause safety issues when there is not room to pull a vehicle off of the corridor. Development standards should be updated to require gates be set back at least 20' if primarily accessed by a personal motor vehicle, and 65' if primarily accessed by a freight vehicle.

ACTION STEPS

- Manage driveway access, especially near major intersections
- Limit access with new/redevelopment
- Require gate setbacks to accommodate safer access



To learn more, see the "Mobility and Access Needs Analysis" in [Appendix X](#).

RECOMMENDATION #2

Integrate Stormwater Management

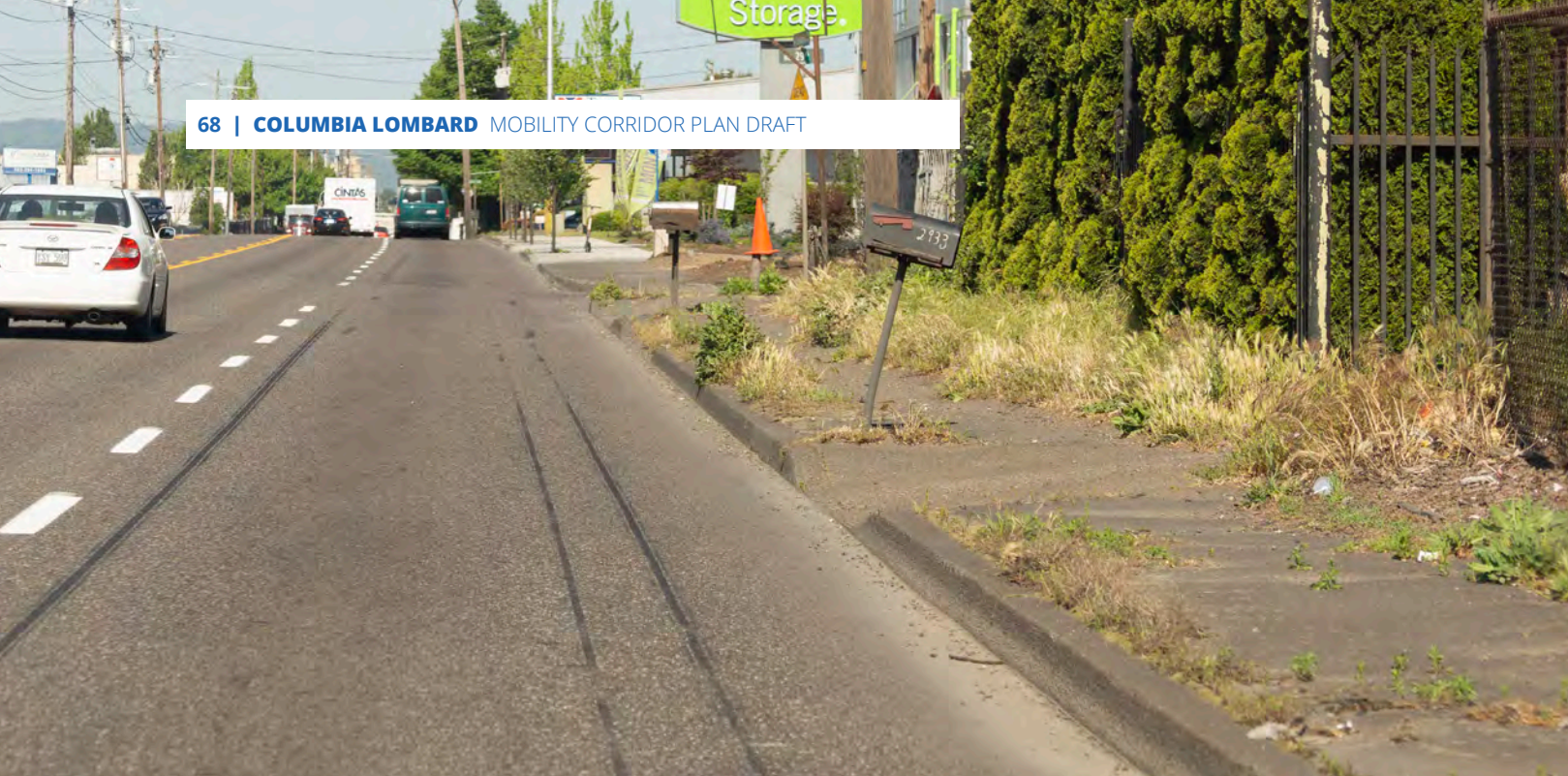
Managing stormwater from the Columbia/Lombard corridors and adjacent areas is important to ensure the health of the nearby Columbia Slough watershed. As redevelopment occurs on the Columbia and Lombard corridors, stormwater best management practices should be incorporated into the project and complement sidewalk expansion.

There is also the need to address particulate runoff from industrial sites adjacent to the corridors, especially Columbia Boulevard. As proposed in this plan's project recommendations, LID's (local improvement districts) are one way roads in the area can be brought up to appropriate standards with the costs shared between property owners and the city. Doing so can better manage stormwater and particulates into treatment facilities. Another way is to encourage single-site improvements through other incentives or fees. Additionally, PBOT should coordinate with BES on improvements in the area that benefit both stormwater runoff and the local transportation network.

ACTION STEPS

- Continue to partner with BES on transportation/stormwater projects
- Use LIDs to better manage stormwater runoff
- Review public right-of-way sites that could be used to capture and treat stormwater





RECOMMENDATION #3

Improve Sidewalks

The Columbia and Lombard corridors carry heavy traffic volumes moving at high speeds, and a significant volume of freight activity. Appropriately separating pedestrians from moving motor vehicles is important for improving both safety and comfort.

The Project Recommendations in Chapter 4 identified locations where new sidewalks are needed along the corridors to fill gaps. When new sidewalks are constructed, they should meet the requirements defined in the new Pedestrian Design Guide. This will likely require at least 12 foot sidewalks along the Columbia and Lombard corridors. Stormwater management should also be incorporated where possible.

Additionally, the condition of existing sidewalks needs to be addressed on the corridors. It is the responsibility of property owners in the City of Portland to keep sidewalks in good repair, but especially on Columbia Boulevard there are many locations where sidewalk condition has deteriorated. A systematic review of sidewalks on both corridors should be conducted and, where necessary, property owners notified of their need to make improvements.

ACTION STEPS

- Fill sidewalk gaps using the new Pedestrian Design Guide
- Review existing sidewalk conditions and notify owners where improvements are needed

RECOMMENDATION #4

Reduce Noise and Other Pollutants

During this planning process, many residents and stakeholders expressed a desire to reduce area noise levels and other pollutants. Some of the noise complaints were about the train/railroad, while others brought up the sound of heavy truck/car volumes. Additionally, there is a desire to improve the level of particulates and other emissions from vehicles and industrial businesses.

In many instances reducing pollutants in the area will require state or federal regulations, but some changes can be made at the corridor level. One opportunity to reduce noise pollution is for the city to explore making this section of the railroad a Quiet Zone. Doing so would require coordination with the Federal Railroad Administration and Union Pacific Railroad. Another option to reduce vehicle noise is to add trees and vegetation along the north side of Lombard Street between NE 11th Ave and NE 47th Avenue, and other locations where possible, to reduce road noise and improve overall area aesthetics.

To reduce particulate run-off, better stormwater treatment is recommended (see Recommendation #2). And to reduce air pollution, the city should continue to work with the freight community and the Port of Portland on projects that improve intermodal freight transportation, reduce idling, and explore ways to incentivize phasing out older trucks and replacing them with newer, cleaner models.

ACTION STEPS

- Explore feasibility of Quiet Zone at crossings of NE 11th and NE 60th avenues
- Work with ODOT and UPRR to add trees between Lombard Street and the railroad
- Identify projects adjacent to the Columbia corridor that improve intermodal freight transportation and reduce idling
- Develop strategies to incentivize cleaner trucks

RECOMMENDATION #5

Improve Freight Permit Process

Both Columbia Boulevard and Lombard Street/US 30 Bypass are designated as Regional Over-Dimensional Truck Corridors in Metro’s “Over-Dimensional Truck Study” (2016). Over-dimension variance permits are needed when a hauler’s vehicle combination (cab and trailer) exceeds maximum size and/or weight limits. However, Lombard is maintained by ODOT and Columbia by the city, which makes it difficult to coordinate and track movement of these loads. And due to height constraints on both Columbia Boulevard (at the Union Pacific bridge near I-5 and George Middle School) and Lombard Street (at the NE 42nd Avenue bridge) many O-D loads must use both streets.

As recommended in the “Over-Dimensional Truck Study”, improvements should be made to the permit process to improve tracking of O-D loads and make the process for trucking companies more simple and efficient. ODOT and PBOT should work to develop a unified permit process to handle both daily and annual permits within the City of Portland limits.

ACTION STEPS

- Develop a PBOT/ODOT working group to establish a new permit process
- Get feedback from trucking companies about how to improve the permit process

Summary: Approximately 5296 STP permits were issued for a 3-year period for US30 Bypass from US30 to MP 14.67 (near 165th Ave.).

Note: These counts do not reflect loads operating under an annual Continuous Trip Permit.

Overall Width	Number of Permits Issued
8’6” or less (legal width)	498
8’7” to 10’00”	861
10’01” to 11’00”	1081
11’01” to 12’00”	2204
12’01” to 13’00”	333
13’01” to 14’00”	225
Over 14’00”	94

From Metro’s Regional Over-Dimensional Truck Route Study

RECOMMENDATION #6

Study Highway Interchange Improvements

During the planning process, there was a strong desire to address the freeway interchanges that intersect with the corridors. The scope of this project did not allow for a detailed analysis of the interchanges, but it is recommended that a more comprehensive analysis be done at the following locations:

- Killingsworth and I-205 ramps: Conduct a study of ramp operations that considers ways to reduce congestion and improve reliability. As part of this study, analyze the feasibility of freight-only access lanes and how to improve access to and from the I-205 Multi-Use Path for people walking and biking.
- I-5 and Lombard ramps: Analyze the feasibility and cost-benefit of removing the cloverleaf ramps on the north side of the street and making the ramps on the southbound side of the street signalized intersections. With this study, examine how to improve conditions for people walking and biking on Lombard Street over I-5.

ACTION STEPS

- Seek funding to conduct a study of these two interchanges
- Identify these as locations as issues in the Freight2040 Plan



RECOMMENDATION #7

Plan for Regional Freight Movement

During this plan process, we repeatedly heard concerns about the regional movement of goods and issues related to congestion and freight reliability. We heard that often movement of goods along Columbia Boulevard was not as much of an issue as getting to or from the corridor on other regional roads and highways. We also heard a strong desire to remove freight traffic off of Lombard Street, especially through the St. John's, Kenton, Arbor Lodge and Piedmont neighborhoods.

With an increase in e-commerce and on-demand shipping, and the critical movement of goods between Washington County and Port of Portland facilities, reliable routes to move freight are critical. At the same time, population in the region continues to expand. To complement the goal of the city to lower the number of single-occupancy vehicle trips, a regional plan for freight movement should be developed to prioritize investments and improve regional collaboration. Metro, ODOT, and surrounding jurisdictions should work together to determine collective issues and priorities related to freight movement. They should coordinate on funding the necessary investments to ensure the region continues to remain economically competitive and better separates freight movement from local neighborhoods.

ACTION STEPS

- Encourage regional partners to initiate a regional freight planning process
- Coordinate on regional freight projects that can compete for federal funding



	2015	(in tons)	2045
Truck	11.5 billion	44%	16.5 billion
Rail	1.7 billion	24%	2.1 billion
Waterborne	835 million	38%	1.2 billion
Air	7 million	234%	24 million

From the USDOT's 2040 Beyond Traffic National Freight Strategy

RECOMMENDATION #8

Increase Transit Service

A lack of consistent and continuous transit service along Columbia Boulevard makes it difficult for residents without a vehicle to access the area's jobs, services, and recreational opportunities. It is recommended that transit service provide more transportation options in the area and reduce the need for car access. Fortunately, such transit improvements in the area are currently being planned.

Multnomah County is planning a free shuttle service to the area south of the Portland International Airport. Currently named the "Alderwood-Cornfoot-Columbia Job Connector Shuttle," this shuttle will help people connect to jobs in the Airport Way Industrial Area from existing TriMet and C-Tran transit service and nearby neighborhoods. Planning for the shuttle is underway to identify the route and the days and hours of operation. The shuttle service is planned to begin later in 2021.

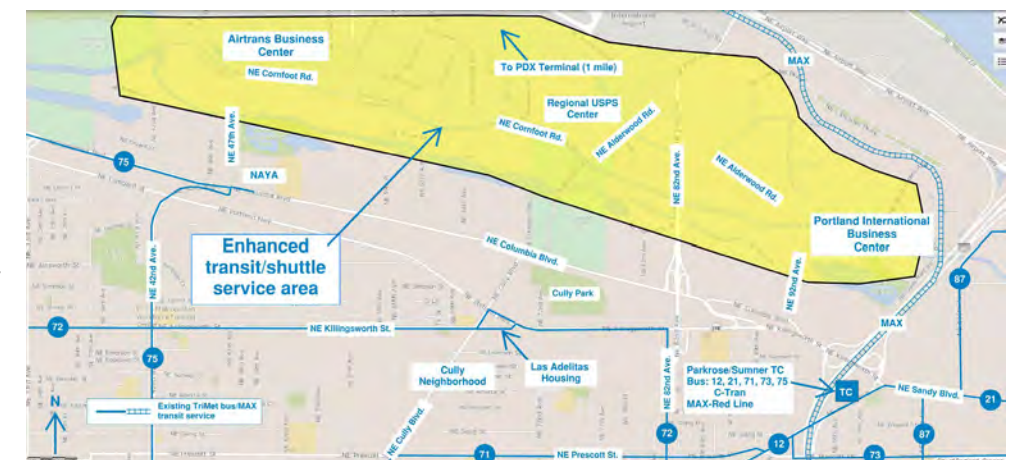
Additionally, TriMet is currently constructing a new bus base facility at NE Columbia Boulevard and NE 47th Avenue. When complete, TriMet has indicated plans for a continuous Columbia service between St. Johns and the Parkrose Transit Center. This service would provide 2 MAX connections and 9 bus connections, and add new service on Columbia Boulevard between Portland Road and Vancouver Avenue. This service is planned to begin in 2024/2025 in conjunction with the opening of the new bus base.

In anticipation of these improvements, the city should coordinate with TriMet and the County to make the improvements to Columbia Boulevard recommended in this plan that facilitate safe and comfortable conditions for people walking prior to or in conjunction with these new transit services.

ACTION STEPS

- Continue to advance the jobs connector shuttle
- Work with TriMet to plan and implement safe and consistent bus service on Columbia Boulevard

Planning area for the "Alderwood-Cornfoot-Columbia Job Connector Shuttle." To learn more visit <https://multco.us/transit-services/alderwood-cornfoot-columbia-job-connector-shuttle>



CHAPTER 06

IMPLEMENTATION AND NEXT STEPS

Implementing all the recommended projects on and across these corridors will take time. To provide clarity and focus for PBOT and ODOT, this chapter identifies the projects most ready for funding/implementation, and others that need more project development or consideration.

Moving Project Recommendations to Implementation

The previous chapters identified a comprehensive list of project and policy recommendations, providing a long-term system improvement plan. However, **building all of these projects would require significantly more resources, revenue, and capacity than is currently available.**

To help ensure quick implementation, this chapter highlights the projects that can and/or should be addressed in the near-term and others that need more project development, feasibility analysis, and/or planning. The projects are categorized as “high-readiness,” “medium-readiness,” or “low-readiness.” The readiness level does not mean one project is necessarily better than the other, but rather which projects are ready for funding versus which ones need more work/coordination. It does not mean that a project all “high-readiness” projects will be built before the “medium” or “low” projects if there is sudden momentum or funding that develops for one of these projects. But this chapter will provide the city and bureau direction in how to phase improvements and position the bureau’s work to competitively seek funding opportunities.

The typical life of a project



Conception of a project - Timeline: 1-2 years

A need is identified and a project idea is generated to address the need. The current Columbia Lombard Mobility Corridor planning process is working to develop and prioritize these projects and identify potential funding sources.



Secure funding for project - Timeline: 1-20 years

Depending on the size, complexity, and cost of a project, finding funding can take an uncertain amount of time. Generally, the more expensive the project, the longer finding funding for it takes. Money can come through grants, System Development Charges, gas taxes, and other federal, state and local sources.



Development and design project - Timeline: 1-2 years

Depending on the complexity of the project and how developed the project design was before it received funding, this can be a short or more extended phase of the life of a project



Project construction - Timeline: 1-2 years

Most projects can be built within 1 to 2 years, depending on their scale and complexity

Projects Ready for Implementation

The project recommendations made in previous chapters are presumably all worthwhile projects that together would comprehensively improve the Columbia and Lombard corridors. It is not feasible for all of the projects to be implemented simultaneously, however, and some of the projects are more ready or needed than others. To better manage expectations, and provide a focused understanding of priorities for PBOT and ODOT, the recommended projects have been grouped into three categories: “high-readiness,” “medium-readiness,” or “low-readiness.”

Projects in the “high-readiness” category are the most likely to be implemented first due to a number of factors. These projects:

- Address an identified safety need
- Do not need additional project design or refinement
- Can be implemented quickly
- Have a clearly identified source of funding

Projects in the medium-readiness category also address an identified safety need, but might need additional development/refinement or need to find a suitable funding source. If a funding source becomes available, or there is a possibility to leverage other work begin done, a “medium-readiness” project could be constructed before a “high-readiness” project.

“Low-readiness” projects are not necessarily less important, but will take additional time and resources to better identify a funding source, refine the project, and/or further consider the cost and benefit of the improvement. The following pages highlight the “high-” and “medium-readiness” projects. A list of all projects can be found in the appendix.

Implementing Equity

PBOT is committed to becoming an anti-racist organization. Each plan and decision is an opportunity for the bureau to proactively take steps to address existing inequities in the transportation system and reduce structural barriers.

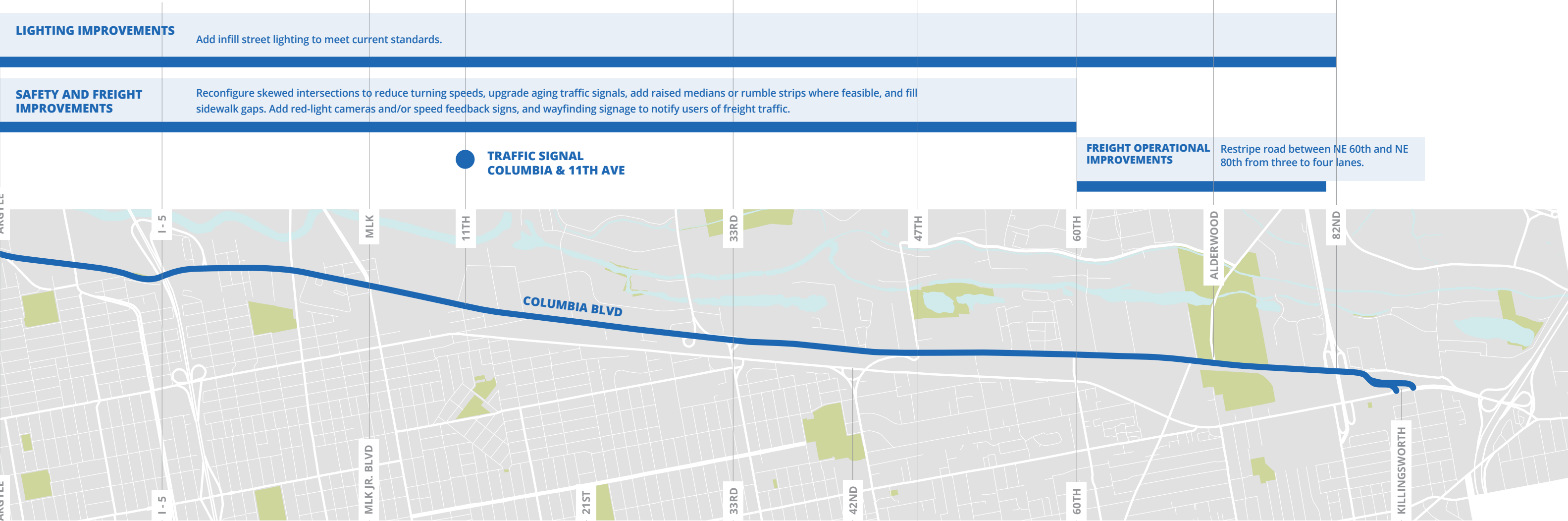
During the planning process, we worked with underrepresented groups to make sure their concerns and needs were addressed with our recommended projects and policies. As a result, **many of our recommendations focus on providing affordable and safe non-automobile access to corridor employment opportunities for BIPOC Portlanders and lower income Portlanders living in nearby neighborhoods like Cully.** This understanding also influenced project sequencing and which projects have been prioritized as high- or medium-readiness projects.

In the future, it is important the Bureau continue to focus on implementing projects that will better connect the people in the Cully neighborhood to jobs in the Columbia corridor while stabilizing them and improving safety in the area.

COLUMBIA PROJECT IMPLEMENTATION

The map below illustrates the projects in the high- or medium-readiness categories for Columbia Boulevard. A full list of projects can be found in Appendix F, and more details on each project can be found in the Recommendations chapter.

High-readiness projects



COLUMBIA BLVD OVER-DIMENSIONAL FREIGHT IMPROVEMENT

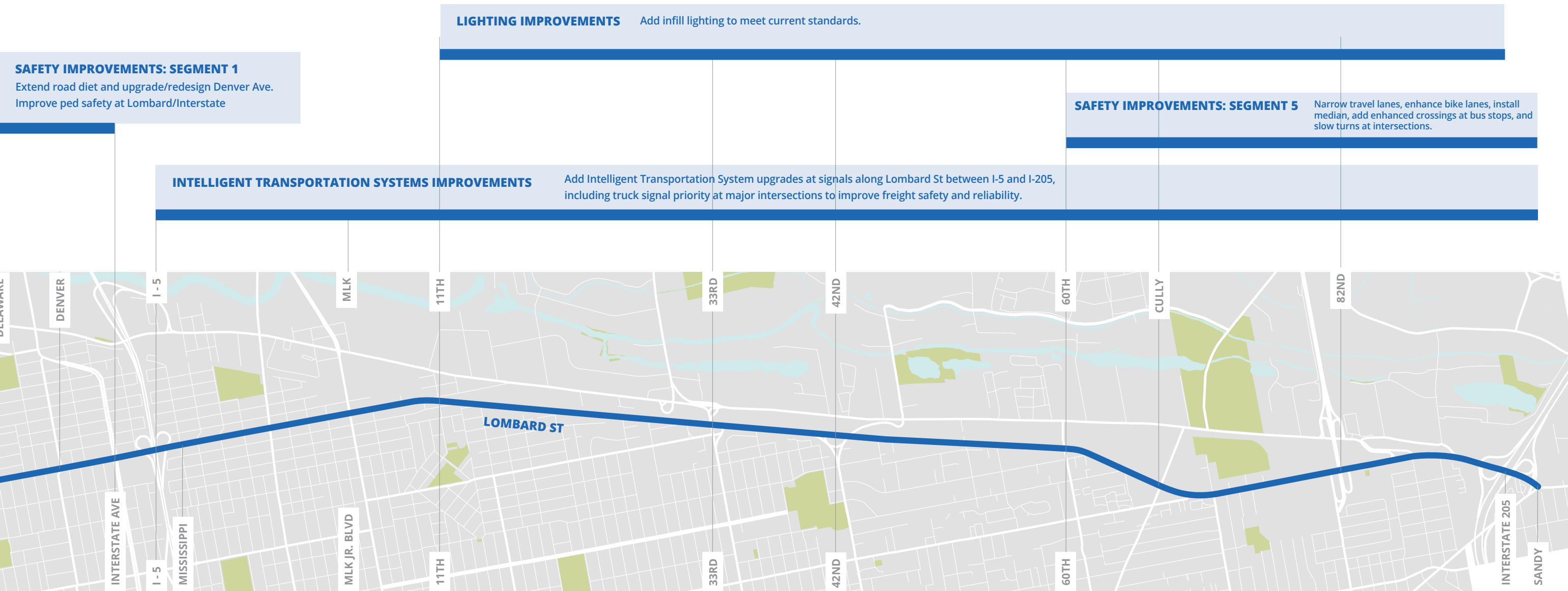
MLK & COLUMBIA IMPROVEMENTS: PHASE 2

Medium-readiness projects

LOMBARD PROJECT IMPLEMENTATION

Below illustrates the projects in the high- or medium-readiness categories for the Lombard corridor. A full list of projects can be found in the Appendix, and more details can be found in the Recommendations chapter.

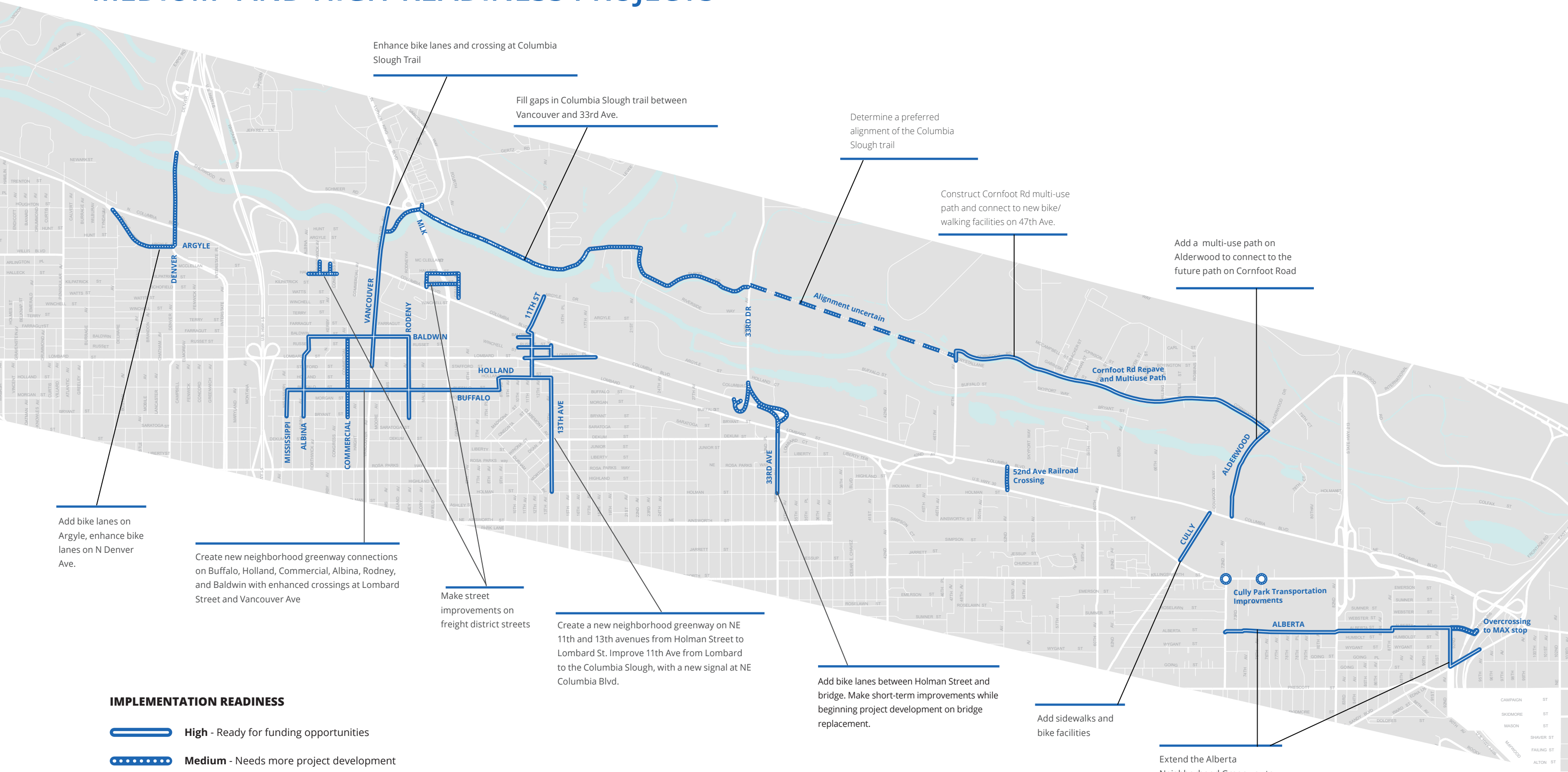
High-readiness projects



Medium-readiness projects

CORRIDOR ACCESS AND CONNECTIVITY MEDIUM- AND HIGH-READINESS PROJECTS

The map below illustrates the high- or medium-readiness projects adjacent to the Columbia and Lombard corridors. A full list of projects can be found in Appendix F.



IMPLEMENTATION READINESS

- High - Ready for funding opportunities
- Medium - Needs more project development

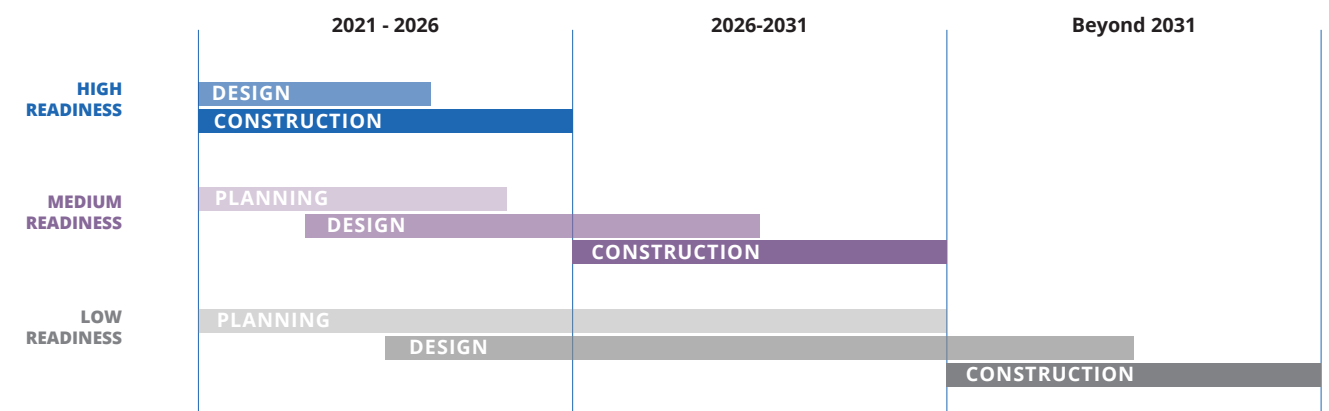
IMPLEMENTATION STRATEGY

To better focus the efforts of PBOT, the project recommendations have been organized in this chapter by their readiness-level. This will help the bureau focus on **advancing the most-ready projects to construction while also making progress on projects that need more planning and project development.**

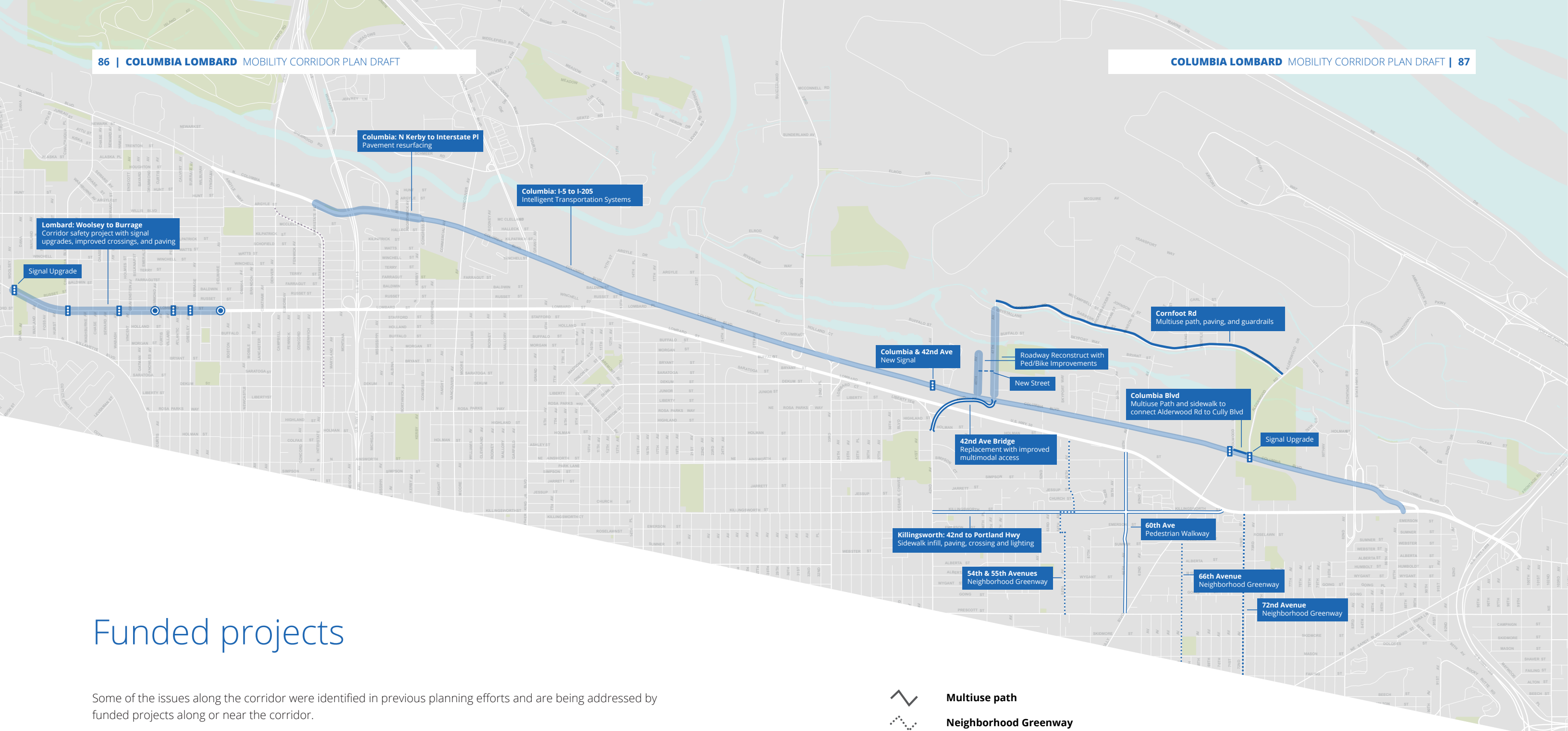
The timeline below illustrates a rough estimate of how these projects could be implemented over the next many years. Funding for the projects in the high-readiness category should be pursued immediately, and any outstanding project development issues addressed. **The medium-readiness projects should also begin or continue project development**, so that the projects can become ready for funding opportunities as they arise. For **the low-readiness projects, more planning or project development work should be done** to determine whether they are necessary and/or to address uncertainties.

To ensure there is continued focus on the area and these projects, the new projects should be incorporated into the next update of the city's Transportation System Plan. The recommendations should also be incorporated in the city's modal plans such as the in-process 2040Freight plan.

IMPLEMENTATION TIMELINE











Note: This timeline is a high-level estimate. Implementation schedules can shift for a number of reasons.



Funded projects

Some of the issues along the corridor were identified in previous planning efforts and are being addressed by funded projects along or near the corridor.

These funded projects include: a safety and multi-modal improvement project on N Lombard Street between N Woolsey Avenue and N Delaware Avenue; a roadway reconstruction project on NE 47th Avenue; a new street connection between NE 46th Avenue and NE 47th Avenue; replacement of the NE 42nd Avenue bridge with improved multi-modal access; a new signal at NE Columbia Boulevard and NE 42nd Ave; a new multi-use path section on NE Elrod Drive west of NE 33rd Avenue and adjacent to NE Cornfoot Road; and a signal upgrade at NE Columbia Boulevard and NE Alderwood Road. Additionally, several funded projects are occurring south of the Lombard corridor in the Cully neighborhood.

-  **Multiuse path**
-  **Neighborhood Greenway**
-  **Sidewalk infill**
-  **Bridge replacement**
-  **Corridor improvement**
-  **New street**
-  **Crossing improvement**
-  **New signal or signal upgrade**

NEXT STEPS

Some projects identified as high readiness are **already in the process of being funded and programmed**. A new bridge at NE 42nd/47th Avenues is funded and under design, as well as improvements on NE 47th Avenue and Cornfoot Road. City staff is beginning to do project development work in the area around NE 11th Avenue and Lombard/Columbia, to facilitate a better and safer connection to the Oregon Humane Society and improve the railroad crossing. ITS improvements will soon be installed on Columbia Boulevard, and new signals at Columbia Boulevard and Cully/Alderwood are being designed. A new shuttle is being planned to connect the Cully and Parkrose neighborhoods to jobs in the Columbia corridor. **These improvements will make it easier to access jobs and services, and move along and across the corridors.**

Other projects identified as high priority should begin as soon as possible, especially ones that improve access to jobs and opportunities for residents in high equity areas. The following are recommendations of immediate next steps for PBOT to begin moving these projects toward implementation:

- **Develop and fund construction of quick-build improvements to NE Columbia Boulevard/NE 33rd Avenue (see pages 42-43).**
- **Finish project development of improvements to NE 11th Avenue between NE Lombard Street and NE Columbia Boulevard, and work with ODOT, Bureau of Environmental Services and property owners to fund construction (see pages 43, 53).**
- **Begin design of bike facilities and sidewalks on Cully Boulevard between NE Portland Highway and NE Columbia Boulevard.**
- **Work with Portland Parks and Recreation, the Port of Portland, and Metro to determine a preferred alignment of the Columbia Slough trail between NE 33rd and NE 47th avenues.**
- **Fund construction of the Alberta neighborhood greenway extending to the Parkrose Transit Center.**
- **Further analyze feasibility of restriping NE Columbia Boulevard between NE 60th and NE 80th avenues as part of the Cully and Alderwood signal project, and pursue necessary funding.**
- **Secure funding for the already designed multi-use path on Cornfoot Road.**

- **Work with ODOT on continued project development and funding for projects along Lombard corridor.**
- **Seek internal quick-build funding for low-cost bikeway network improvements in the Piedmont and Woodlawn neighborhoods.**
- **Work with the Bureau of Environmental Services on additional Freight District street improvement projects that benefit stormwater treatment.**
- **Prioritize Columbia and Lombard for Vision Zero funding for signal improvements, lighting, medians, etc.**

While this plan highlights many projects that will improve **safety, connectivity and access for people walking and biking, and improve the reliability of freight movement along and across these corridors**, it also notes areas in need of additional conversation. To advance the initiatives outlined in the “Additional Recommendations” chapter, the City should provide staff capacity to coordinate with ODOT, TriMet, and other regional partners and ensure these corridors and surrounding area evolve to best meet the needs of our community.

IMPACT OF COVID-19

The impact of COVID-19, locally and globally, has been staggering. The toll on public health and human lives, and the economy, has been devastating and are still bearing out.

The pandemic altered this plan’s public engagement process, as in-person events and meetings had to transition to online open houses and webinars. Many of the projects in this plan assume funding sources that have been impacted and severely reduced over the past year. Depending on federal intervention, **this loss of revenue could limit the amount of investments that are made in the short-term**. However, the range of projects in this plan and scale of investment, are **well positioned to compete for stimulus funds or other economic investment opportunities**.



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