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Introduction
Adopted by Resolution 36763 in 2010, the Portland Bicycle Plan for 2030 is the guiding document for the City of Portland’s policies, programs, and projects related to bicycle transportation. One of the plan’s recommended policies - since adopted as city policy 9.20 - is to make bicycling more attractive than driving for trips of three miles or less. This is in service to the overarching goal that a minimum of 25% of all trips by Portlanders be by bicycle. To achieve this ambitious mode share goal, which is also stated in Portland’s Comprehensive Plan and Climate Action Plan, the Bicycle Plan for 2030 identified strategies that can generally be grouped into three categories.

1. **Adopt a strong policy framework** that supports bicycling and gives City staff the tools they need to advocate for better bike projects and programs.

2. **Build a dense and cohesive bikeway network** that attracts users of all ages and abilities by building the highest quality bike facilities possible.

3. **Implement encouragement and education programs** that break down barriers to bicycling.

With the adoption of the Bicycle Plan for 2030, City Council resolved that a report be made at one and five years post-adoption regarding progress on immediate action items and progress on setting performance measures and benchmarks; and to make a report to the Council five years after adoption of the plan regarding progress in meeting benchmarks. - Resolution adopting Portland Bicycle Plan for 2030

**WHAT IS THE BICYCLE PLAN FOR 2030?**

The Portland Bicycle Plan for 2030 identified 223 action items. This graphic shows their breakdown by progress made.

<table>
<thead>
<tr>
<th>Status</th>
<th>Action Items</th>
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<tbody>
<tr>
<td>COMPLETE</td>
<td>59</td>
</tr>
<tr>
<td>ONGOING</td>
<td>88</td>
</tr>
<tr>
<td>CURRENT EFFORTS</td>
<td>35 (16%)</td>
</tr>
<tr>
<td>PROGRESS MADE; NO CURRENT EFFORTS</td>
<td>20 (9%)</td>
</tr>
<tr>
<td>INCOMPLETE; NOT STARTED</td>
<td>21 (9%)</td>
</tr>
</tbody>
</table>

147 of 223, or roughly 66%, of action items are complete or ongoing.
Policy Framework
TRANSPORTATION POLICY UPDATES

Portland completed an update of both its Comprehensive Plan and Transportation System Plan (TSP) in 2018. Though the Bicycle Plan for 2030 was adopted by Resolution in 2010, the policies and recommendations in the Plan only became “law of the land” through the 2018 adoption of the Comprehensive Plan and TSP. These updates included: a policy for people movement that puts active modes first (Comp Plan 9.6); new bicycle classifications, including the addition of major city bikeways and bicycle districts (TSP); a policy calling for a bicycle network that appeals to people of all ages and abilities (Comp Plan 9.21); a policy calling for making bicycling more attractive than driving (Comp Plan 9.20); an updated list of projects and programs (TSP); aggressive mode split targets (Comp Plan 9.49); and a policy directing staff to use traffic calming, diversion, and other available tools to ensure comfortable cycling conditions on neighborhood greenways (Comp Plan 9.46).

STRATEGY FOR PEOPLE MOVEMENT

“Collaborate with other City bureaus and Metro to work toward adopting a ‘Green Transportation Hierarchy’ that prioritizes planning and investing in green transportation modes to elevate the relative importance of non-motorized modes”
- Portland Bicycle Plan action item

Portland’s Transportation Strategy for People Movement (Comprehensive Plan Policy 9.6) supports a multi-modal network where modes are prioritized in the order shown at right, with pedestrians, bicyclists, and transit riders first and single occupancy vehicles after other modes.

BICYCLE CLASSIFICATIONS

Denser, more cohesive network

Addition of Major City Bikeways Classification

Addition of Bicycle Districts
VISION ZERO

“Work with ODOT and the Oregon State Legislature to achieve local control in setting speed limits”
- Portland Bicycle Plan action item

20 MPH is Portland’s new speed limit on residential streets

Slower driving speeds help prevent crashes and, when crashes occur, reduce the harm that results.

SAFETY PROJECTS

Vision Zero is the goal to eliminate all traffic deaths and serious injuries in order to ensure safe, healthy, and equitable streets for all. PBOT is spending $55 million on safety fixes for the High Crash Network in 2017 and 2018. Many of these safety projects involve adding protected bicycle facilities or crossings that benefit pedestrians as well as bicyclists.
BIKE PARKING CODE UPDATE

“Seek changes to regulations to ensure all land uses provide ample bike parking and end-of-trip facilities.” - Portland Bicycle Plan action item

PBOT has been undergoing a process to update the Bicycle Parking Code (Title 33.266.200). The focus of this update is to ensure that new development and major redevelopment provide adequate, secure and convenient short- and long-term bicycle parking. While these changes have not been adopted as of the finalization of this report, proposed recommendations include:

- **Enhance security standards to help prevent bike theft.** During early public outreach, staff heard that bike theft and security are of great concern to Portlanders. Tightening the security requirements and removing some of the stand-alone options that are available in current code are intended to help ensure higher security in long-term bicycle parking.

- **Increase options for space saving racks.** Current code only addresses standards for horizontal (floor-mounted) rack placement and spacing. However, there are many rack designs that allow better use of space. Narrower spacing allows for greater flexibility in accommodating more bicycle parking in smaller areas.

- **Usability for a variety of types of bicycles and people of all abilities.** Portland is seeing an increase in the use of electric bicycles and non-traditional sized bikes, including cargo bikes and recumbent tricycles. Proposed code amendments would require parking that accommodates these bicycles and considers users of various abilities.

- **Update the minimum required amounts of short- and long-term bicycle parking.** Most of the code-required minimums for required bicycle parking have not been updated since 1996. Staff used a data driven formula based on data points, like average square footage per employee (long-term rates); visitation rates (short-term rates); and target bicycle mode split rates.

- **Expand the use of geographic tiers to all Use Categories.** While Portland has a citywide goal of 25% bicycle mode split for all trips, staff recognize that bicycle use will vary in different city pattern areas. Meeting the citywide goal will reflect higher rates in some areas and lower rates elsewhere.

- **Reduce the in-unit allowance for required long-term bicycle parking.** The proposed code amendments represent a compromise position to limit the amount of required bicycle parking in a residential unit.
Bikeway Network
BIKEWAY NETWORK OVER THE YEARS

“Create a system of low-stress bicycle routes throughout all Portland neighborhoods” - Portland Bicycle Plan action item

The Bicycle Plan for 2030 identified an additional 681 miles of bicycle facilities needed to develop a cohesive, dense network throughout Portland. This additional 681 miles, coupled with the existing network in 2009 amounted to an envisioned network of 962 bikeway miles by 2030. These 681 miles of projects were broken down into implementation strategies identified as “Immediate”, “80%”, and “World Class”. The categories were defined based on factors that included potential for required funding and expected community support.

Fifty eight percent of the Immediate and 80% Strategy network miles are either complete or funded, meaning we are on track to complete the 80% strategy by the year 2030.

Immediate Strategy - focuses on developing shared roadway bikeways - mainly neighborhood greenways - in the initial five years after the Plan’s adoption

80% Strategy - completion of the 80% strategy will result in at least 80% of Portland residents being within one-quarter mile of a developed low-stress bikeway

World Class Strategy - completion of the entire network, creating a truly world-class system of bikeways

The Bicycle Plan for 2030 identified

<table>
<thead>
<tr>
<th>FACILITY TYPE</th>
<th>MILES BEFORE 2010</th>
<th>MILES IN JULY 2019</th>
<th>MILES FUNDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected Bike Lane</td>
<td>.4</td>
<td>8</td>
<td>28.5</td>
</tr>
<tr>
<td>Buffered Bike Lane</td>
<td>3.6</td>
<td>29.9</td>
<td>15.5</td>
</tr>
<tr>
<td>Standard Bike Lane</td>
<td>173</td>
<td>161.4</td>
<td>10.2</td>
</tr>
<tr>
<td>Greenway/Enhanced Shared Roadway</td>
<td>33.8</td>
<td>103.8</td>
<td>30.7</td>
</tr>
<tr>
<td>Trail</td>
<td>77.7</td>
<td>85.1</td>
<td>5.6</td>
</tr>
<tr>
<td>Total Miles</td>
<td>289.8</td>
<td>388.2</td>
<td>90.5</td>
</tr>
</tbody>
</table>

Since 2009 adoption, we have

Meaning we have built and funded
PROTECTED & BUFFERED BIKEWAYS

Numerous studies from around the world, as well as our experience and the experience of other cities have confirmed that providing protected bicycle lanes on busy streets is a key element to addressing people’s concerns about bicycling on busy roadways. When the Portland Bicycle Plan for 2030 was adopted, protected bicycle lanes were not widely used in the United States and the recommended bikeway network map did not differentiate between standard, buffered, and protected facilities, grouping them all together as “separated in-roadway bikeways.”

Since 2015, PBOT has used protected bicycle lanes as the preferred design where separation is appropriate. PBOT is finalizing its “Portland Protected Bicycle Lane Planning and Design Guide” that identifies 499 miles of roadways requiring separated facilities. Portland currently has 82 miles of protected and buffered bikeways either on the ground or funded for construction in the near future. Of these 82 miles, 21 were existing unprotected bike lanes that were upgraded with either a painted buffer or physical separation by means of bollards, parked cars, planters, or other vertical elements.

“Identify funding and potential partners for the development of bicycle design guidelines”
- Portland Bicycle Plan action item

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Year</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected Lane</td>
<td>'09</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>'10</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>'11</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>'12</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>'13</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>'14</td>
<td>250</td>
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<td></td>
<td>'15</td>
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<td></td>
<td>'16</td>
<td>350</td>
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<tr>
<td></td>
<td>'17</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>'18</td>
<td>450</td>
</tr>
</tbody>
</table>

499 MILES OF SEPARATED FACILITIES WHEN BIKE PLAN IS COMPLETED

21 MILES OF STANDARD BIKE LANES WITH PROTECTION OR BUFFER ADDED SINCE 2009

34 MILES OF PROTECTED AND BUFFERED BIKEWAYS COMPLETED SINCE 2009

82 TOTAL MILES OF PROTECTED AND BUFFERED BIKEWAYS EXISTING AND FUNDED TODAY
BIKEWAY NETWORK 2009

In 2009, Portland’s bike network was sparse and highly concentrated in the inner neighborhoods of the East side. There were only a few buffered or protected bike lanes and a handful of neighborhood greenways that did not extend to East Portland or Southwest Portland.
Today, Portland’s bike network includes a much more dense array of neighborhood greenways and buffered or protected facilities. Connectivity in the inner core of the city is better and there are numerous projects funded for construction to bring this same connectivity to the neighborhoods east of I-205. In November of 2018, the Central City in Motion plan was adopted by City Council, identifying 18 projects for construction in the Central City over the next 10 years. Funded projects in this map outside of Central City in Motion projects are slated for construction by 2021. Central City in Motion projects identified on this map are on the 1-5 year Central City in Motion list and will be constructed by 2023.
If Portland’s 357,258 commuters got to work the same ways they did in the past, this is what it would have looked like...

The commuting population has increased by 86,000 since 2000 and 68,000 since 2009. Since 2000, biking and working from home have driven the decline in the percentage of people choosing to drive to work alone.

If Portlanders commuted today like we did in 2000, there would be 24,000 more people driving to work every day. Instead, 16,000 additional people have chosen to bicycle to work and 15,000 additional people now work from home. These two modes account for the majority of the 8% decrease in the rate of driving alone since 2000.

If we commuted today like we did in 2009, there would be 17,000 more people driving to work every day. Instead, 2,000 additional people have chosen to bicycle to work and 10,000 additional people now work from home. While there was a dramatic increase in the number of people leaving their cars for bicycles between 2000 and 2017, far fewer people did so between 2009 and 2017, with a much greater proportion of the public switching to working from home.
In 2009 before the adoption of the Bike Plan for 2030, American Community Survey data showed that 5.8% of Portlanders biked to work. American Community Survey data for 2016 estimates that 6.3% of Portlanders biked to work and Portland saw a peak in bike commute mode share in 2014 with 7.2% of Portlanders biking to work.

The maps at right show an increase and decentralization of bike commuters, from a much higher concentration only in inner northeast and southeast Portland in 2009 to higher bike commute rates in neighborhoods further from the Central City in 2016. As the City’s network of low-stress bikeways (neighborhood greenways, protected bicycle lanes, and off street paths) have expanded to outer neighborhoods, an increasing number of people seem to feel comfortable and confident enough to ride.

Bike Commute to Work Mode Share

- Greater than 15%
- 7% - 15%
- 4% - 7%
- 1% - 4%
- Less than 1%
BICYCLE COUNTS

Annually since 2006, PBOT enlists dozens of volunteers to manually count people on bikes at a growing number of locations across the city. The data collected - including bicycle turn movements, gender, and helmet use - contributes to a robust data set that helps PBOT staff understand who is using the bikeway network and invest limited resources.

Counts occur from June through September each year on Tuesdays, Wednesdays, and Thursdays with good weather (no rain or extreme heat). As the bike network grows, more count locations are added each year.

<table>
<thead>
<tr>
<th>In 2009 we counted</th>
<th>In 2018 we counted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>22,219</strong> BIKES</td>
<td><strong>49,091</strong> BIKES</td>
</tr>
<tr>
<td><strong>136</strong> LOCATIONS</td>
<td><strong>277</strong> LOCATIONS</td>
</tr>
<tr>
<td><strong>77%</strong> WORE HELMETS</td>
<td><strong>83%</strong> WORE HELMETS</td>
</tr>
<tr>
<td><strong>69%</strong> MALE RIDERS</td>
<td><strong>68%</strong> MALE RIDERS</td>
</tr>
<tr>
<td><strong>31%</strong> FEMALE RIDERS</td>
<td><strong>32%</strong> FEMALE RIDERS</td>
</tr>
</tbody>
</table>

“Continue and expand annual bicycle counts”
- Portland Bicycle Plan action item
The above chart displays the total number of bikes counted at locations where counts were conducted for all years, by three-year average. While counts at specific locations vary year to year due to uncontrollable elements like weather, the general trend when averaged over three years is upward in all areas of the city, with a 27% increase overall.

PBOT collects 24/7 pneumatic tube counts on the Hawthorne, Steel, Sellwood and Broadway bridges and uses manual counts to extrapolate annual volumes on the Morrison and Burnside bridges (Tilikum counts are conducted by TriMet). The above chart shows an upward trend 2009-2016 with a slight downtick in 2017.

* Burnside, Sellwood, & Morrison counts extrapolated from 2-hour peak counts; all other counts based on 24-hour hose counts. Broadway Bridge closed for construction during much of 2015/2016 counts. Morrison Bridge first open to summer bike traffic in 2012, Tilikum Crossing open in September 2015.
BIKETOWN launches with
1000 BIKES
100 STATIONS

BIKETOWN For All launches. As of July 2019,
495 MEMBERS AVERAGE 73 TRIPS/YEAR

Adaptive BIKETOWN launches. As of July 2019, there have been
343 RIDES

Survey data shows that 28% of BIKETOWN trips replace vehicle trips

Service area expansion of
70% TOTALING 19.3 SQ. MILES

BIKETOWN celebrates 3 years. As of July 2019 there have been
1,034,000 RIDES
1,750,000 MILES RIDDEN
SAFE ROUTES TO SCHOOL

Portland’s Safe Routes to School program focuses its work around six E’s - encouragement, education, enforcement, evaluation, engineering, and equity. For the 2018-2019 school year, staff worked with 107 schools on programming that includes walking school buses, bicycle and pedestrian safety education in the classroom, reducing vehicle speeding around schools, improving infrastructure, and reducing health and wealth disparities among children.

As of the 2018-2019 school year, the Safe Routes to School program serves almost every elementary, K-8, and middle school in the city, and has plans to add programming for high school students in the future.

FIXING OUR STREETS PARTNERSHIP

In 2016 when Portland voters approved Measure 26-173 for a ten-cent local gas tax, they created the Fixing Our Streets program and a major new funding source for Portland’s Safe Routes to School initiative. In 2017, PBOT staff went to neighborhoods across the city and talked with parents and kids about how they got to school and how journeys could be made safer. The result of this outreach was a detailed map of primary investment routes to school and safety projects along those routes that will help families safely get to school for generations to come. PBOT has already started building some projects, and will finish installing funded projects by 2020. Portland will also be working to identify more funding to build additional projects.

“Offer a comprehensive Safe Routes to School program to all Portland schools” - Portland Bicycle Plan action item

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELEMENTARY SCHOOLS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PARTICIPATING IN SRTS</td>
<td>72</td>
<td>92</td>
</tr>
<tr>
<td>MIDDLE SCHOOLS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PARTICIPATING IN SRTS</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>% STUDENTS BIKING*</td>
<td>12</td>
<td>17</td>
</tr>
</tbody>
</table>

* When surveyed, this is the percent of students who biked to school for at least one trip in one week

1245 PROJECTS IDENTIFIED

$8 MILLION IN FUNDING SECURED

91 PROJECTS FOR CONSTRUCTION IN 2018-2020
Next Steps
WE CAN DO MORE

Since the adoption of the Portland Bicycle Plan for 2030 in 2010, bicycling in Portland has come a long way. However, there remains a long way to go to reach Portland’s goals of combating congestion and climate change, and improving the safety of all road users.

Since 2009, we have added 99 new miles of bikeways, with 90 more funded in the next five years, worked on encouragement and education programs, and enacted new policies that support bicycle ridership and yet the percentage of people who report biking to work has only jumped from 5.8% to 6.3%. Portland saw a peak in bicycle ridership in 2014 with a 7.2% bike to work mode share, but this number has been declining since. That being said, the number of people biking to work continues to grow despite the percentage remaining relatively flat.

What can be done in the future to achieve our goal of 25% of Portlanders regularly biking for all trips? If Portland continues to grow as expected and new residents continue to drive at current rates, the transportation system will fail. There is simply not room to add travel lanes without having a devastating impact on the form and character of existing and upcoming development.

Therefore, the best way to combat congestion, achieve climate goals, and make the roadway safer for all users is by making bicycling the easiest choice for short trips. This report recommends an elevated focus on the following three strategies:

1. “Develop design guidelines for new bicycle facilities that will attract riders of all ages and abilities.” PBOT will work with partner agencies to build protected bikeways and safer intersection designs throughout the city.

2. “Build as much of the bicycle transportation system as possible, as quickly as possible.” Fast implementation of a dense, high-quality network is important to give more Portlanders access to destinations they can ride a bike to.

3. “Continue to raise the awareness of bicycling and reinforce safe bicycling behaviors.” Many Portlanders are simply unaware of the benefits of bicycling and don’t know how to use the infrastructure provided. Improved transportation demand management campaigns are needed to educate the public and leverage new investments.

* For 2035 target, work at home is calculated separately from other mode targets to account for people who only work from home part of their work week.
The highest quality and safest bicycle facility types include off-street paths, protected bicycle lanes on busy streets and neighborhood greenways on local streets. A dense network of these low-stress bikeways will play a key role in growing Portland’s bicycle to work mode share by helping Portlanders feel that bicycling is a safe and convenient option.

**PROTECTED BIKEWAYS**

In 2015, former PBOT Director Leah Treat issued a directive stating that protected bicycle lanes should be the preferred design for all retrofit and new construction roadway projects. Since this directive was issued, PBOT has built a handful of protected bikeways, but has many more in the pipeline in the coming years, as well as a new *Portland Protected Bikeway Planning and Design Guide* that will ensure that new designs are standardized and easily understood by both people bicycling and people driving.

Now that Portland has design guidance for protected bikeway facilities, identifying design solutions for safer intersections will be a key area of focus for PBOT staff. Between 2006 and 2015, 76% of bicycle-involved crashes occurred at intersections. Roadway space is often more limited at intersections, forcing bikeways to narrow and vertical protection to disappear, even on some of Portland’s otherwise most comfortable bikeways. PBOT will work in the near future to develop and implement solutions to decrease crash risk and increase comfort for people bicycling at these conflict points. Some of the designs will involve separate signal phases for bikes with no right on red for vehicles. Another concept often seen in European cities that Portland has yet to fully build and test is the protected intersection, which further physically separates people bicycling from those driving at intersections.

To further refine bikeway designs at intersections, Portland researchers are currently leading a National Institute for Transportation and Communities (NITC) pool-funded project to provide contextual guidance at intersections for protected bicycle lanes. This report is expected in 2019.

“Develop design guidelines for new bicycle facilities that will attract riders of all ages and abilities.”
- *Portland Bicycle Plan for 2030 Recommendation*
NEIGHBORHOOD GREENWAYS

In 2015, PBOT staff authored the Neighborhood Greenways Assessment Report. This report provided an assessment of where existing greenways were working well and where they were not, created an understanding of the role neighborhood greenways play in Portland’s transportation system, and offered recommendations on policy guidance and performance guidelines to expand and improve the neighborhood greenways system. The Neighborhood Greenways Assessment Report established the following performance guidelines for neighborhood greenways:

- Vehicle speeds of 20 mph, measured as 85th percentile speed
- Automobile volume target of 1,000 Average Daily Traffic (ADT), with 1,500 ADT acceptable and 2,000 ADT maximum
- Bicycle and pedestrian crossing opportunities measured as a minimum of 50 crossing opportunities per hour, with 100 crossing opportunities per hour the preferred level of service

The 2015 report also identified six existing greenways that were in need of operational improvements. Most of these improvements have either been completed or are underway, and several new neighborhood greenways are expected to be constructed in the coming years, including the 100’s, 130’s, and 150’s greenways.

In the years since the report was authored, Portland’s population has grown and with that growth has come increased vehicle volumes on these greenways. An updated Neighborhood Greenway Assessment Report is needed to identify the next round of improvements to expand and improve upon Portland’s network of low-stress neighborhood greenways.

PARTNER AGENCIES

PBOT is not the sole road authority for streets within city limits. While PBOT may be applying best practice bikeway designs, it does not control design where it is not the road authority. This results in discontinuities in the provision of all ages and abilities facilities. That is why it will be important to develop strategies that will create conditions where best practice bicycle designs can be provided on all roadway segments within Portland.
BUILDING MORE, QUICKLY

CURRENT FUNDING AND PROJECTS
In recent years, PBOT has received more capital funding for projects than it has seen in decades. Planning and design for a multitude of new projects has been happening over the past several years and Portland will see a lot of construction to build out the bike, pedestrian, and transit networks in upcoming years.

PBOT’s Portland “in Motion” projects include area plans for biking, walking, and transit infrastructure in all quadrants of the city. East Portland in Motion was the first of these plans, adopted in 2012, and PBOT and partner agencies have allocated over $255 million to implementation of these projects. Central City in Motion was adopted in November of 2018 and includes an implementation plan identifying $72 million of investments over the next 10 years in the Central City ($35.7 million has been identified for the first five years of investments, with the remaining amount still to be identified). Northwest and Southwest in Motion plans are currently under development, and PBOT is seeking funding for North and Southeast Portland plans.

In addition, the Safe Routes to School program allocated $8 million of Fixing our Streets funding to provide bicycle and pedestrian improvements along major routes to schools. The Vision Zero program allocated $55 million to safety fixes on the High Crash Corridor in 2017 and 2018. It is important that PBOT continues to seek funding sources to build out its adopted plans and designs for the bicycle transportation network more quickly.

“Build as much of the bicycle transportation system as possible, as quickly as possible.”
- Portland Bicycle Plan for 2030 Recommendation

MEASURE 26-173
(FIXING OUR STREETS)
On May 17th, 2016, Portland voters passed Measure 26-173, Portland’s first local funding source dedicated to fixing our streets. Measure 26-173 will raise an estimated $64 million over four years. In the same month, the Portland City Council passed the Heavy Vehicle Use Tax, a measure that will generate an estimated additional $8 million over four years. Fixing Our Streets Program funds can only be used to pay for basic transportation safety and maintenance needs. The ordinance that placed the measure before the voters includes language requiring 56 percent of the funds to be invested in street maintenance and 44 percent on safety improvements. Many of these projects include bike elements or add pedestrian crossings that improve safety for bikes as well.
PROCESS IMPROVEMENTS
Before the Bike Plan for 2030 was adopted, bicycle infrastructure projects were small and had little dedicated funding, and typically leveraged paving projects to add striped bike lanes. Today, the vast majority of PBOT’s capital projects are either first and foremost bicycle network improvement projects or have bicycle elements included in their scope.

With an ever-growing list of work to be done, PBOT’s Planning, Policy, and Projects group needed to develop an improved processes for scoping and delivering these projects in a streamlined and organized manner. These new processes ensure that more of Portland’s roadways are scopted as complete streets and require early public engagement to avoid setbacks that can delay implementation. New capital projects must now go through a detailed project development checklist and stage-gate process that helps project managers ensure that project scopes align with City policies, guidelines, and standards and identify potential issues early on. This new organizational structure is already helping plans become realities much faster than before.

PUBLIC ENGAGEMENT
These process improvements also include better tools and protocols for stakeholder engagement. For many communities, particularly low-income and communities of color, PBOT’s engagement in the past has been too little, too late. Learning from past mistakes, PBOT is working on better strategies to engage those whose voices are often left unheard in the transportation world.

The Lloyd to Woodlawn Neighborhood Greenway project is an example of how PBOT public engagement can and should be conducted in the future. PBOT staff reacted to broadly shared concerns about the project from Black community members and organizations and made an effort to elevate those concerns through focus groups, door to door outreach, and partnerships with local community groups and organizations. The project plan represents a compromise between two parallel biking and walking routes and two passionate groups of community members that has seen an overall positive reception from the public.
RAISING AWARENESS

“One continue to raise the awareness of bicycling and reinforce safe bicycling behaviors.”
- Portland Bicycle Plan for 2030 Recommendation

One of the more difficult elements needed to achieve Portland’s mode split goal is changing behavior to shift single occupancy vehicle trips to bicycle trips. An important aspect of changing transportation behavior is normalizing the behavior and educating people about the benefits of active transportation. There are numerous studies about the health, economic, and environmental benefits of cycling that can be used to create marketing campaigns and change Portland’s driving culture to a multimodal culture.

The PBOT Vision Zero “Struck” campaign (image above) is a good example of using marketing to change behavior and educate the public. The campaign included videos and images that were displayed online and on billboards and buses to promote safe driving habits and discourage distracted driving. Marketing the many benefits of bicycling and the ease with which it’s possible to bicycle in Portland could help leverage investments in bicycle infrastructure and encourage more people to ride.

PBOT’s SmartTrips program has done outreach to new Portlanders every year since 2005, delivering incentives and transportation options information by bike. For the first time this year, SmartTrips is using research from the psychology field called the “stages of change model” to implement surveys and individualized marketing campaigns. By understanding individuals’ perceptions about certain modes, PBOT staff can hand-pick materials for people depending on their current relationship to biking, walking, and taking transit. The program will also pilot a Bicycle Action Plan tool to aid people interested in making bicycling their mode of choice.

PBOT SmartTrips has also applied for funding to partner with capital project managers to do targeted outreach in conjunction with major bikeway projects. This outreach could include before/after implementation rides and walks, geographically targeted social media campaigns, and games and incentives encouraging people to bike in their neighborhoods.
CHALLENGES

There are numerous challenges that Portland and other municipalities face in an effort to increase bicycle mode share. Some of the biggest challenges that Portland faces are closely related to the opportunities outlined in this section; bikeway design, fast implementation, and behavior change.

BIKEWAY DESIGN

High quality bikeways require a more right-of-way than standard bicycle lanes. This additional space is typically gained by removing travel lanes and parking. Acquiring right-of-way to build high-quality facilities while maintaining vehicle and transit travel times, as well as parking spaces can be costly and often impractical due to existing building frontages. Reallocation of space in the right-of-way to implement all ages and abilities bikeways represents a change that requires political and public support. The future of Portland’s bicycling culture depends on having strong political leadership, an active community of advocates, and an educated public that understands the importance of a multi-modal city and the tradeoffs associated with building out the network of a world-class bicycling city.

FAST IMPLEMENTATION

Protected bikeways can be costly to implement (although not nearly as much as most improvements for motor vehicle travel). For years, Portland has built paint only or “paint and post” bikeways using temporary, low-cost materials. More expensive materials like concrete traffic separators, and sidewalk-level bikeways can be beyond the reach of typical bikeway capital improvement budgets. Often when projects get delayed by many years, inflation and other external forces drive the total cost of materials and labor up, so fast implementation is of utmost importance in keeping costs down.

With a bigger influx of funding and projects than PBOT has had in a long time, PBOT is facing a shortage of staff availability to deliver these projects, from planners to project managers and engineers to the Maintenance and Operations staff who build the projects. This has created an immense backlog, making it extremely difficult to deliver projects on time and on budget. While PBOT has hired a great deal of staff in recent years, more still needs to be done to get the staff support necessary to maintain existing roadways and build out new projects.
Yet another challenge that PBOT faces in quick implementation is a lack of political and community support for bikeway projects. There have been numerous cases of bikeway projects getting delayed for years or ending up with substandard facilities because the community and political support to make important tradeoffs was not strong enough. While our Transportation System Plan, Climate Action Plan, Bicycle Plan for 2030, and numerous other documents have strong policy language in support of bicycle network expansion, it is extremely important that the community at large and those in political power are also supportive of bicycling and understand the tradeoffs necessary to achieve climate, congestion, public health, and other citywide goals.

**BEHAVIOR CHANGE**

Forming new habits and changing behaviors are extremely difficult, even when people view the new behavior as inherently good. Convincing the public that bicycling is the safest, most convenient, and fastest option will take time, individualized marketing, and a dramatic change in Portland’s driving culture. It will also take a lot of work on the part of individual advocates and advocacy organizations. In the United States, a general mistrust of government is often an obstacle for education and encouragement programs coming from City governments. Messaging from a trusted source, such as a friend or local organization, can sometimes be more effective, highlighting the importance of PBOT’s continued and growing relationships with bicycle advocacy organizations and businesses.

With busy schedules and technological information overload that people face every day, it can also be very difficult to reach the public via traditional outreach strategies. Finding new ways to reach people, whether it be strong social media presence, paid advertising, or presence at large events is going to be very important in educating and encouraging the traveling public about active modes of transportation.
## 2.1 A BROAD POLICY CONTEXT

### 2.1 A. Put green transportation first

<table>
<thead>
<tr>
<th>Action</th>
<th>Priority</th>
<th>Responsibility</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work to achieve the bicycle mode split and funding goals in the City of Portland and Multnomah County's Climate Action Plan 2009</td>
<td>Immediate</td>
<td>Transportation; Planning &amp; Sustainability; Multnomah County</td>
<td>The 2015 Climate Action Plan and 2035 Comprehensive Plan maintain a 25% bicycle work commute mode share goal. We are currently at a 6.3% bike to work mode share and are working to grow that number further.</td>
</tr>
<tr>
<td>Collaborate with other City bureaus and Metro to work toward adopting a 'Green Transportation Hierarchy' that prioritizes planning and investing in green transportation modes to elevate the relative importance of non-motorized modes</td>
<td>Immediate</td>
<td>Transportation; Planning &amp; Sustainability; Metro</td>
<td>Policy 9.6 of the Comprehensive Plan – “Transportation strategy for people movement,” prioritizes modes in the following order: walking, biking, transit, taxi/commercial transit/shared vehicles, zero emission vehicles, and other single-occupant vehicles.</td>
</tr>
<tr>
<td>As part of future modifications to the TSP, consider identifying ‘home zones’ or similar area-wide car-light zones integrated with the overall bicycle network</td>
<td>Immediate</td>
<td>Transportation; Planning &amp; Sustainability</td>
<td>The Comprehensive Plan identifies “Centers and Corridors” where growth will be focused to promote walkability and bikeability.</td>
</tr>
<tr>
<td>Collaborate with regional, state and federal partners to reform system performance measures and mobility standards to reflect the movement of persons rather than vehicles and favor green transportation modes</td>
<td>Medium-term</td>
<td>City of Portland; Metro; ODOT</td>
<td>TSP policies reflect priority to move people walking/biking/taking transit over moving people in single occupancy vehicles. PBOT continues to engage with Metro and regional partners to update performance measures and mobility standards.</td>
</tr>
<tr>
<td>Collaborate with regional, state and federal partners to develop transportation models and forecasting tools to accurately predict bicycle travel demand generated by capital and programmatic improvements and to model system performance that includes bicycling</td>
<td>Medium-term</td>
<td>City of Portland; Metro; ODOT</td>
<td>As part of the 2018 Regional Transportation Plan, the model was updated but there is still room for improvement and continued work.</td>
</tr>
</tbody>
</table>

### 2.1 B. Fully integrate bicycling into the Portland Plan project.

<table>
<thead>
<tr>
<th>Action</th>
<th>Priority</th>
<th>Responsibility</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>Designate a set of current and future 20-minute neighborhood centers and designate a set of continuous multi-modal mobility corridors interconnecting these neighborhood centers, Region 2040 Town and Regional Centers and the Central City as priorities for separated in-roadway bikeways, coordinated, to the extent possible, with the Portland Streetcar System Concept Plan</td>
<td>Medium-term</td>
<td>Planning &amp; Sustainability; Transportation</td>
<td>The Comprehensive Plan identifies “Centers and Corridors” where growth will be focused to promote walkability and bikeability.</td>
</tr>
<tr>
<td>Task</td>
<td>Timeframe</td>
<td>Responsible Departments</td>
<td>Status</td>
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</tr>
<tr>
<td>Consider whether all Region 2040 Town Centers should be classified as bicycle districts</td>
<td>Medium-term</td>
<td>Planning &amp; Sustainability; Transportation</td>
<td>COMPLETE</td>
</tr>
<tr>
<td>Analyze space devoted to motor vehicles and bicycle parking in the public right-of-way, in commercial parking facilities and in accessory parking to all types of land uses, and recommend policies to ensure that space is allocated appropriately between vehicle types to accommodate parking needs while to the extent possible reducing the total square footage required for parking</td>
<td>Long-term</td>
<td>Planning &amp; Sustainability; Transportation</td>
<td>ONGOING</td>
</tr>
<tr>
<td>Conduct research to evaluate the impact of bicycling infrastructure and mode share on property values and make recommendations on the viability of value-capture funding methods such as Local Improvement Districts and Tax-Increment Financing for bicycle improvements</td>
<td>Long-term</td>
<td>Planning &amp; Sustainability; Transportation</td>
<td>CURRENT EFFORTS BEING MADE TO COMPLETE</td>
</tr>
<tr>
<td>Identify opportunities for zoning changes that will support retail centers to be located along appropriate identified bikeways</td>
<td>Medium-term</td>
<td>Transportation; Planning &amp; Sustainability</td>
<td>PROGRESS MADE, NO CURRENT EFFORTS</td>
</tr>
<tr>
<td>Establish 'eco-districts' as neighborhood developments that emphasize sustainability by combining high performance buildings and infrastructure that reduce greenhouse gas emissions, promote efficient energy and water use and offer residents access to essential services without need for an automobile</td>
<td>Medium-term</td>
<td>Transportation; Planning &amp; Sustainability</td>
<td>INCOMPLETE, NOT STARTED</td>
</tr>
<tr>
<td>Ensure all neighborhoods have adequate low-stress bicycle facilities connecting to neighborhood commercial corridors and centers so that local residents can safely and comfortably access them by bicycle or on foot</td>
<td>Immediate</td>
<td>Transportation; Bureau of Planning &amp; Sustainability;</td>
<td></td>
</tr>
<tr>
<td>Capitalize on implementation of streetcar and light rail lines to foster development that supports bicycling and walking</td>
<td>Ongoing</td>
<td>Transportation; Bureau of Planning &amp; Sustainability;</td>
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<tr>
<td>Central City and Gateway were classified as bicycle districts in the most recent Transportation System Plan update.</td>
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<tr>
<td>Work is currently beginning for Streets 2035, which may include this type of analysis. In the Transportation System Plan, the space formerly referred to as the parking zone is now being called the &quot;curb zone,&quot; recognizing that this space can serve multiple functions aside from parking.</td>
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</tr>
<tr>
<td>City of Portland's LID program currently administers many right-of-way improvement projects, a number of which include bicycle infrastructure. While this is not directly tied to any City of Portland-backed research, some research has been done linking increased property values to bicycle infrastructure.</td>
<td></td>
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<tr>
<td>Gateway, Lents, South Waterfront, Lloyd District, and South Market/PSU neighborhoods are all formal eco-districts.</td>
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</tr>
<tr>
<td>Since 2010, PBOT has added roughly 70 miles of neighborhood greenways and 30 miles of protected and buffered bike lanes, with many more miles planned and funded. As these miles of bikeways increase, many more households will be within ¼ to ½ mile of a low-stress bike facility.</td>
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<tr>
<td>Since the adoption of the Bike Plan for 2030, the A and B loops of the Portland Streetcar running along MLK and across the Tilikum and Broadway Bridges have opened, spurring development along those corridors. The MAX Orange Line has also opened, providing more connectivity to inner Southeast Portland.</td>
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</tbody>
</table>
Provide opportunities for high-density, mixed-use development along identified bikeways with adequate end-of-trip bicycle facilities and consider the creation of district-specific development standards such as improved bicycle parking requirements and amenity bonuses to promote bicycling and walking.

Introduce new residents to their '20-minute neighborhood' with maps, coupons and other incentives to promote nearby services and amenities.

2.1 C. Further integrate support for bicycling into existing City policies.

Identify opportunities for revisions to existing City policies to ensure greater support for bicycling in Portland.

2.2 BICYCLE POLICY RECOMMENDATIONS

2.2 A. Adopt a bicycle transportation policy to create conditions that make bicycling more attractive than driving for trips three miles or less and integrate support for bicycling into other Transportation System Plan (TSP) policies.

Incorporate proposed policy and classification language into the next draft of the TSP update as outlined in Appendix B.

2.2 B. Revise existing parking policies to include bicycle parking.

Incorporate new proposed language and objectives to TSP Policies 6.26 On-Street Parking Management and 6.27 Off-Street Parking as outlined in Appendix B.

2.3 STREET CLASSIFICATIONS FOR BICYCLE TRAVEL

2.3 A. Expand to a functional hierarchy of bicycle classifications.

New bike parking code requirements are currently in progress. These new requirements would dictate the amount and type of bike parking that is required with new development. Bike parking requirements will be tied to target bicycle mode share per Comprehensive Plan Pattern Area.

The SmartTrips program offers new residents maps, coupons, and other incentives to promote walking, biking, transit, and carpooling.

The update of the TSP incorporates several policies, including many from the 2030 Bike Plan that ensure greater support for bicycling in Portland.

These objectives were amended by the PSC to include consideration for various types of bicycles and ensure bicycle parking at high-demand locations.
### 2.3 B. Classify a fine-grained bicycle network.

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Responsible Parties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorporate new bicycle classifications and classification descriptions into the next update of the Transportation System Plan (TSP)</td>
<td>Immediate</td>
<td>Transportation; City Council</td>
<td>The update of the TSP incorporates these changes.</td>
</tr>
<tr>
<td>Examine the merits of classifying the South Waterfront District as a Bicycle District as part of the update of the TSP</td>
<td>Medium-term</td>
<td>Transportation; Planning and Sustainability</td>
<td>Gateway Town Center and Central City were the only Bicycle Districts included in this update of the TSP. Metro’s Regional Active Transportation Plan, however, identifies many bicycle districts, including South Waterfront.</td>
</tr>
</tbody>
</table>

### 2.3 C. Develop refinement plans for key areas and facilities.

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Responsible Parties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modify the bicycle classifications of streets shown on the maps that follow by incorporating these recommended changes into the next update of the TSP</td>
<td>Immediate</td>
<td>Transportation; City Council</td>
<td>Street classifications were updated to reflect Bike Plan for 2030 recommended designations.</td>
</tr>
<tr>
<td>Identify targeted corridors where uncertainty or disagreement exists as to appropriate design treatment or alignment</td>
<td>Immediate</td>
<td>Transportation; City Council</td>
<td>This is undertaken on a case-by-case basis as projects gain funding for development and implementation. Alignment adjustments occur frequently, and exact design is determined through various outreach measures.</td>
</tr>
<tr>
<td>Work with agency partners, neighborhood and business associations to refine alignments and recommended design treatments for identified corridors</td>
<td>Ongoing</td>
<td>Transportation</td>
<td>This is undertaken on a case-by-case basis as projects gain funding for development and implementation. Alignment adjustments occur frequently, and exact design is determined through various outreach measures.</td>
</tr>
</tbody>
</table>

### 3.1 EXPANDING THE BICYCLE NETWORK

#### 3.1 A. Provide a fine-grained bikeway network that serves key destinations.

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Responsible Parties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prioritize bikeway improvements that serve regional and town centers, main streets, employment centers, commercial districts, transit centers and stations, institutions, schools, parks and recreational destinations</td>
<td>Immediate</td>
<td>Transportation</td>
<td>These factors are considered when selecting projects for funding.</td>
</tr>
<tr>
<td>Maintain an up-to-date list of existing system gaps, with conceptual design treatments and cost estimates needed to complete them</td>
<td>Ongoing</td>
<td>Transportation</td>
<td>While this is not an actively maintained dataset, we are able to identify gaps within the current network using existing datasets. A prioritized list with specific design treatments is not currently maintained, apart from the TSP and other project-specific plans.</td>
</tr>
</tbody>
</table>
Annually assess the list of existing bicycle network gaps and set priorities for their completion

Work closely with the Oregon Department of Transportation, Portland Parks & Recreation and adjacent jurisdictions to complete and maintain identified bicycle network improvements and provide bicycle access in areas where the opportunity to provide on-street bikeways is constrained

Create a system of low-stress bicycle routes throughout all Portland neighborhoods

Refine the bicycle transportation projects shown on the project maps and listed in Appendix A and work to amend the Transportation System Plan to include them

3.2 BICYCLE FACILITY DESIGN AND ENGINEERING

3.2 A. Develop design guidelines for new bicycle facilities that will attract riders of all ages and abilities.

Experiment with and evaluate new facility types identified in the Bikeway Facility Design: Survey of Best Practices (Appendix D) that are applicable to Portland to improve operating conditions and safety for bicyclists

Explore opportunities to collaborate with other cities to share experiences and best practices with innovative bicycle facilities

Identify funding and potential partners for the development of bicycle design guidelines

The Bike Network Completion Program identifies gaps for funding on an annual basis.

This is undertaken on a case-by-case basis as needed.

Since 2010, PBOT has added roughly 70 miles of neighborhood greenways and 30 miles of protected or buffered bike lanes, with many more miles planned and funded.

The update to the Transportation System Plan has included many of the proposed projects in Appendix A.

Since the adoption of the Bike Plan for 2030, we have implemented bike boxes, green paint at conflict zones, scramble signals, diversion, and recently finished the Portland Protected Bicycle Lane Planning and Design Guide.

Lead on Cities for Cycling project (NACTO) to develop urban bikeway design manual. Participate regularly in national conferences and meetings that help advance bikeway design and policy (National Bike Summit, Pro Walk Pro Bike, NACTO Cities for Cycling events).

PBOT recently finished Portland’s Protected Bicycle Lane Planning and Design Guide, which will guide designs for new protected bicycle facilities. Portland’s Neighborhood Greenway Assessment Report serves a similar role for neighborhood greenway design and evaluation.
Collaborate with Portland Streetcar and TriMet to develop design guidelines for areas where streetcar or light rail facilities intersect, or are in close proximity to bicycle facilities

Immediate Transportation; Portland Streetcar; TriMet

This is conducted on a project by project basis.

Develop bicycle facility design guidelines for freight districts that consider the operational needs of both bicycles and trucks

Immediate Transportation

This is conducted on a project by project basis.

Work with ODOT, FHWA and other applicable agencies to streamline and accelerate design, testing and authorization of innovative bicycle facility designs

Medium-term Transportation

This is conducted on a project by project basis.

Develop a system for evaluating bicycle facility designs and improvements that compares vehicular mobility with bicycle access

Medium-term Transportation

Not completed.

Use all available traffic management tools and methods to create and maintain sufficiently low automotive volumes and speeds on bicycle boulevards to promote a comfortable bicycling environment

Immediate Transportation

Neighborhood Greenway Assessment Report identified thresholds for when intervention is required to lower speeds/volumes on neighborhood greenways. The report also identified adopted policy changes to the TSP to make implementation of neighborhood greenways more feasible. Greenways are evaluated periodically as funding becomes available.

Design improvements to meet multiple objectives, such as accommodating storm drainage, bicyclists and pedestrians

Immediate Transportation

The Alternative Pedestrian Walkways Design Guide is being developed for low-cost interim solutions to create safe space for pedestrians and bikes. Frequently, paint and flex posts are used as an interim solution while waiting for funding for more robust protected bikeway design.

Develop specific interim improvement designs that can be implemented where the preferred improvement is not immediately feasible

Immediate Transportation

This is conducted on a project by project basis.

Develop new designs for safe, comfortable and attractive bikeways that can carry more bicyclists

Immediate Transportation

The Neighborhood Greenway Assessment Report and Portland Protected Bicycle Lane Planning & Design Guide identify design standards for neighborhood greenways and protected bicycle lanes. These designs are implemented on a project by project basis as appropriate.
### 3.3 BICYCLE PARKING

#### 3.3 A. Seek changes to regulations to ensure all land uses provide ample bike parking and end-of-trip facilities.

<table>
<thead>
<tr>
<th>Description</th>
<th>Timeframe</th>
<th>Department</th>
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</thead>
<tbody>
<tr>
<td>Amend Portland’s zoning code to increase short and long-term bicycle parking requirements, including prohibiting space within dwelling units, balconies or required open spaces not specifically designed for bicycle parking from counting towards long-term bicycle parking requirements</td>
<td>Immediate</td>
<td>Transportation; Sustainability; Planning &amp; Development Services; City Council</td>
</tr>
<tr>
<td>Work with local, national and international transportation research entities to thoroughly and scientifically evaluate new designs</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
<tr>
<td>Work with emergency service providers to develop traffic calming techniques on emergency access routes that allow appropriate emergency response times</td>
<td>Long-term</td>
<td>Transportation; Fire &amp; Rescue Bureau</td>
</tr>
</tbody>
</table>

We frequently work with TREC at PSU on research related to bikeway design. Most recently, PBOT staff has worked with PSU researchers to evaluate the effectiveness of cross bike treatments. This is conducted on a project by project basis. Fire friendly speed humps are a tool that is frequently used to traffic calm streets on emergency response routes.

**3.3 B. Anticipate and provide adequate bicycle parking, especially at high-demand locations.**

<table>
<thead>
<tr>
<th>Description</th>
<th>Timeframe</th>
<th>Department</th>
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<tbody>
<tr>
<td>Amend Portland’s zoning code to increase minimum short and long-term bicycle parking requirements at light rails stations and transit centers to reflect levels articulated in TriMet’s Bicycle Parking Design Guidelines</td>
<td>Immediate</td>
<td>Transportation; Planning &amp; Sustainability; Development Services; TriMet; Metro; City Council</td>
</tr>
<tr>
<td>Amend Portland’s zoning code to require higher levels of short and long-term bicycle parking and shower/change facilities in high-demand areas, such as Bicycle Districts</td>
<td>Immediate</td>
<td>Transportation; Planning &amp; Sustainability; Development Services; City Council</td>
</tr>
</tbody>
</table>

This process is currently underway. A public discussion draft was released August 2018 and is accepting feedback until October 1st, 2018. This draft proposes dramatically reducing the amount of space in units that can be counted towards bike parking areas.

The 2018 Bicycle Parking Code proposes doubling the amount of required spaces for light rail stations and increasing the required amount for transit centers more than fivefold. In addition, there are several notable investments that have occurred in recent years at light rail stations and high demand transit locations. These include a planned large-scale bike parking facility at Gateway, inclusion of 400+ bike parking locations along the Orange Line, and small-scale bike parking at the Goose Hollow MAX station.

The forthcoming Bicycle Parking Code Update will require higher levels of short and long-term bicycle parking for almost all categories of land uses. Further, new geographic tiers will be included. Higher level tiers include bicycle districts and identified pattern areas to develop standards for amount of bicycle parking. The proposed code does not require shower/change facilities outside of South Waterfront district.
Work with local business associations and other stakeholders to develop short and long term plans to address immediate and future bicycle parking needs

Immediate Transportation

Finalize policy and facility requirements for the approval and funding of on-street grouped bicycle parking facilities in metered and non-metered areas

Immediate Transportation

Develop programs and funding mechanisms to increase bicycle parking at public institutions (schools, campuses, civic centers and parks)

Immediate Transportation; Portland Parks & Recreation; Portland Public Schools; Multnomah County

Provide additional short term and covered bicycle parking at rail platforms and high demand bus stops in City of Portland right-of-ways and work with partner agencies to ensure adequate bicycle parking provision in non right-of-way locations

Immediate Transportation; TriMet

Amend Title 17 (17.28.065.A) of the city code to allow the City Engineer to require that public improvement and streetscape plans provide grouped bicycle parking facilities in the right-of-way when demand merits

Immediate Transportation; Planning & Sustainability; Development Services; City Council

Develop incentives to encourage private building owners to purchase, obtain permit and install bicycle racks in the public right-of-way

Immediate Transportation; Development Services

Develop strategies to increase the amount of covered and secure bicycle parking in City of Portland owned and privately owned parking garages in employment districts

Immediate Transportation

Currently, businesses and local business associations can acquire new bike parking facilities on a case by case basis. The current model requires businesses to initiate a request. Development of a comprehensive strategy to assess parking needs and develop new communication streams between PBOT and businesses is planned to kick off in the fall of 2018.

PBOT adopted a standard drawing for bike corrals and is currently installing additional bike corrals in metered areas.

Proposed Bicycle Parking Code Update draft includes increased required amounts for schools (k-12). Campus and Institutional Zone Transportation Demand Management requirements also incentivize better bike parking facilities for large school and medical campuses.

PBOT and TriMet have conducted walkthroughs to identify opportunities for more bike parking. There are several notable investments that have occurred in recent years at light rail stations and high demand transit locations. These include a planned large-scale bike parking facility at Gateway, inclusion of 400+ bike parking locations along the Orange Line, and small-scale bike parking at the Goose Hollow MAX station.

This action has not been advanced yet. Businesses can currently request free, city-installed bike racks on demand.

Under development with the renovation of the SmartPark garage at SW 10th and SW Yamhill. This type of redesign can be expanded to other SmartPark locations on a case by case basis.
3.3 C. Ensure a high quality of function and design of bicycle parking.

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<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Responsible Bureaus</th>
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<tbody>
<tr>
<td>Revise special events permitting requirements to allow that large events held in public spaces provide adequate short-term bicycle parking</td>
<td>Immediate</td>
<td>Transportation; Planning &amp; Sustainability; Bureau of Development Services</td>
</tr>
<tr>
<td>Establish City of Portland operated (or private/public collaboration) high capacity, automated bicycle parking facilities in high demand centralized locations</td>
<td>Long-term</td>
<td>Transportation; Planning &amp; Sustainability; Development Services</td>
</tr>
</tbody>
</table>

Currently, this is completed on a case by case basis for major entertainment/civic events. There is room for a streamlined process to be developed. PBOT revised community event permits to include suggested amounts based on total expected attendance. To date bike parking is still not a requirement for a permit.

There have been limited discussions on the feasibility of this type of bike parking facility.

**3.3.3**

**Establish City of Portland operated (or private/public collaboration) high capacity, automated bicycle parking facilities in high demand centralized locations**

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<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Responsible Bureaus</th>
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<tbody>
<tr>
<td>Review and revise existing design guidelines for the placement and design of bicycle parking on private property and within City of Portland rights-of-way, including on-street grouped bicycle parking</td>
<td>Immediate</td>
<td>Transportation; Development Services</td>
</tr>
<tr>
<td>Ensure that guidelines for bicycle parking in the right-of-way address the preservation or enhancement of circulation space in the through pedestrian zone</td>
<td>Ongoing</td>
<td>Transportation</td>
</tr>
<tr>
<td>Review existing City approved rack types and develop guidelines for acceptable rack designs</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
<tr>
<td>Coordinate and communicate bicycle parking permitting requirements with City of Portland bureaus, other agencies and the business community</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
<tr>
<td>Promote innovation in the design of bicycle parking facilities through partnerships with local artists, institutions and City of Portland bureaus</td>
<td>Immediate</td>
<td>Transportation; Regional Arts &amp; Culture Council; Environmental Services</td>
</tr>
<tr>
<td>Assess current levels of bicycle parking signage in Portland right-of-way and rail platforms, and develop a retrofit program for existing facilities</td>
<td>Immediate</td>
<td>Transportation; TriMet</td>
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</tbody>
</table>

The Bicycle Parking Code update provides guidance for secure bike parking in and on private property. Admin Rule 10.09, which regulates placement of bike racks in the right-of-way, was substantially updated to comply with pedestrian design guidelines.

This action was completed with an update to Admin Rule 10.09.

There has been ongoing collaboration with other bureaus, such as the Bureau of Development Services. Overlapping project jurisdictions trigger collaboration between City agencies.

The City of Portland has guidelines and processes for private businesses to install art racks. In addition, PBOT and Regional Arts and Culture Council (RACC) have successfully partnered on several art rack projects.

In partnership with TriMet, PBOT has leveraged opportunities to provide high quality, secure, and accessible long-term bike parking at key locations where bike parking demand is highest. Examples include new/enhanced facilities at Gateway, Goose Hollow, and when SmartPark garages are renovated.
### 3.3 D. Encourage owners of existing buildings to upgrade bicycle parking.

<table>
<thead>
<tr>
<th>Action</th>
<th>Timeframe</th>
<th>Responsible Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop effective strategies to prevent bicycle theft</td>
<td>Immediate</td>
<td>Transportation; Police</td>
</tr>
<tr>
<td>Develop materials and perform outreach to building owners and property managers, with information on potential funding sources, commercial benefits, tax credit opportunities and technical expertise on installation and preferred locations</td>
<td>Immediate</td>
<td>Transportation; Development Services</td>
</tr>
<tr>
<td>Develop a program to work with retail and business interests to increase short-term on-site bike parking in areas of Portland where on-street bike parking would be more than 50 feet from the entrances to major retail venues</td>
<td>Immediate</td>
<td>Transportation; Development Services</td>
</tr>
<tr>
<td>Identify funding opportunities and develop programs to provide financial incentives that promote private party retrofitting of bicycle parking facilities at existing residential and commercial buildings</td>
<td>Medium-term</td>
<td>Transportation</td>
</tr>
</tbody>
</table>

PBOT and the Portland Police Bureau established a bike theft task force. PBOT has regular messaging and communication around bike theft prevention and tools for registering and reporting bikes.

Along with the Bike Parking Code Update, PBOT will be developing a best practice handbook which is proposed to include guidance on design and implementation. PBOT piloted a program in East Portland to provide bike parking at land uses where storefronts are a significant distance from the right-of-way, like where surface parking lots exist. This pilot created precedent for future similar programs if interest is shown. There is currently some funding tied to parking meter district revenue in Northwest and Lloyd that residential and commercial buildings use to provide on-site bicycle parking for residents and employees. These programs are limited to these meter districts and opportunities to expand similar programs citywide should still be further explored.

### 3.3 E. Establish a funding stream to fulfill future bicycle parking demand, improvements and maintenance.

<table>
<thead>
<tr>
<th>Action</th>
<th>Timeframe</th>
<th>Responsible Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explore new funding mechanisms to finance increasing bicycle parking capacity throughout the city</td>
<td>Immediate</td>
<td>Transportation; City Council</td>
</tr>
<tr>
<td>Develop a policy and funding mechanism to manage abandoned bicycles in the right-of-way</td>
<td>Medium-term</td>
<td>Transportation</td>
</tr>
<tr>
<td>Develop strategies to ensure that an inventory of City of Portland bicycle parking assets is current and accurate</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
</tbody>
</table>

PBOT leadership has increased funding for City-provided bicycle parking. The abandoned bikes program takes abandoned bikes in the right of way and works with the Community Cycling Center to donate them to people in need. PBOT maintains a GIS database of individual staple racks, bike corrals, and lockers. The GIS database has gaps and there is room for ongoing mapping process improvements.

### 3.4 INTEGRATING BICYCLING WITH OTHER TRAVEL MODES
### 3.4 A. Engage with partners to improve and simplify connections and transfers between bicycling and other travel modes.

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Timeframe</th>
<th>Responsible Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engage TriMet and other transit providers to improve the reliability of ‘bikes-on-board’ options for routes that serve longer distance trips, including trips in future Streetcar and MAX corridors</td>
<td>Medium-term</td>
<td>Transportation; TriMet</td>
</tr>
<tr>
<td>Encourage TriMet and other transit providers to retain capacity for ‘bikes-on-board,’ including during peak hours</td>
<td>Ongoing</td>
<td>Transportation; TriMet</td>
</tr>
<tr>
<td>Collaborate with transit providers to develop additional options, including encouragement programs directed at use of expanded secure parking capacity for longer term expansion of mixed bike/transit trips</td>
<td>Immediate</td>
<td>Transportation; TriMet</td>
</tr>
<tr>
<td>Analyze how bike sharing programs might serve transit trips</td>
<td>Medium-term</td>
<td>Transportation; TriMet</td>
</tr>
<tr>
<td>Encourage Amtrak and other inter-city carriers to add capacity and increase convenience for bringing bicycles on board</td>
<td>Medium-term</td>
<td>Transportation; Amtrak</td>
</tr>
<tr>
<td>Work with Portland International Airport, Union Station and the Greyhound Bus terminal to create bicycle assembly/packing areas</td>
<td>Medium-term</td>
<td>Transportation; Port of Portland; PDC</td>
</tr>
</tbody>
</table>

Ongoing collaboration with TriMet about future solutions, including updating bike racks on buses to include 3 bikes, rather than 2. TriMet and PBOT staff have worked together to clarify locations for long-term storage, signage for utilization of those spaces by cyclists. TriMet has clarified and expanded internal SOP so that staff better understands expectations around bike-on-board following the TriMet Bike Plan.

There is ongoing collaboration with TriMet about future solutions, including updating bike racks on buses to include 3 bikes, rather than 2. TriMet and PBOT staff have worked together to clarify locations for long-term storage and signage for utilization of those spaces by cyclists. TriMet has clarified and expanded internal standard operating procedure so that staff better understands expectations around bikes-on-board following the TriMet Bike Plan.

Some programming has been implemented including bike/ride campaigns. Recently, the “Transportation Wallet” program has sought to provide combined transit and bikeshare subsidy to the Central Eastside. Further expansion of this program to affordable housing developments is currently underway in conjunction with the Housing Bureau.

BIKETOWN and Hop Card integration is currently being studied.

Currently Amtrak allows customers to bring their bikes on board for a $5 per trip fee. Reservations must be made in advance.

In 2014, the Port of Portland updated its Bicycle and Pedestrian Master Plan which documents existing bicycle packing/assembly areas and identifies policies and strategies to continue to add parking/assembly areas as needed. Currently, there is one existing assembling/packing area with another identified in the plan.
Encourage taxi and car share companies to provide bike racks on vehicles

Medium-term Transportation; various taxi providers

Provide sufficient quantities of secure bicycle parking at High Capacity Transit stations

Medium-term Transportation; TriMet

Leverage streetcar signalization investments to assist perpendicular bikeway crossings of the streetcar corridor

Immediate Transportation; TriMet

Fund and perform a study of bicycle-transit links at outlying transit centers and light rail stations to extend the efficient use of bicycles to all areas of the city

Long-term Transportation; PSU; TriMet

Work with Portland International Airport, Union Station and the Greyhound Bus terminal to create more long-term bicycle parking such as lockers or other secure facilities that serve these terminals

Immediate Transportation; Port of Portland; Portland Development Commission

Evaluate the opportunity for a bicycle rental business at Portland International Airport

Medium-term Transportation; Port of Portland

Develop low-stress bicycle connections to targeted light rail stations and transit centers and create stronger bicycle-transit links at outlying transit centers and light rail stations to extend the bicycle access to all Portland neighborhoods

Immediate Transportation

In 2015, Uber launched the “UberPEDAL” program in Portland where customers can request a car equipped with a bike rack. In 2018, Car2Go and ReachNow expanded the share of their fleet of vehicles that are equipped with bike racks to roughly 10% of all vehicles. Many of the vehicles are larger and allow users to put their bike inside as an alternative option.

High capacity secure bike parking is currently being planned for Gateway. With the Orange Line Extension, expansive bike parking facilities were provided. Bike parking at high capacity transit stations is actively monitored by TriMet (per TriMet Bike Plan).

This is completed on a project by project basis.

Not completed.

The 2014 Portland International Airport Bicycle and Pedestrian Master Plan identifies multiple long-term bicycle parking areas at PDX Airport and identifies policies/strategies to add additional parking as needed.

Not completed.

East Portland in Motion (EPIM) outlines a low-stress network of bicycle facilities (including neighborhood greenways and protected bike lanes) that connect to major transit and light rail investments. Additionally, EPIM includes recommendations for bicycle parking at these stations. As part of the MAX Orange Line extension, TriMet and jurisdictional partners included improvements to adjacent trails connections (i.e. a connection to the Springwater Corridor at the Tacoma/Johnson Creek Station).
3.4 B. Explore bike sharing systems.

Ensure that the bikeway network serves High Capacity Transit stations

Ensure that the design of High Capacity Transit stations and transit centers facilitates easy transfer between different modes, including way-finding, signage, pavement striping and curb cuts

Ongoing Transportation; Metro; TriMet

This is completed on a project by project basis as bikeway projects and high capacity transit stations are built.

Many High Capacity Transit stations, including those along the new Orange line include “bike and ride” stations where people can securely store their bikes, as well as signage and markings to identify where bicycle riders can safely cross the tracks.

3.5 A GREEN NETWORK

3.5 A. Collaborate with Metro and other partners to realize a coordinated regional network of greenways.

Prioritize the project development of Portland’s regional trails network

Fund project development of major trail corridors in concert with Metro’s The Intertwine effort so that these projects will be ready for implementation when construction funding becomes achievable in the future

Further the development and enhancement of existing and proposed regional multi-use trails

Immediate Transportation; Parks & Recreation; Metro

Immediate Transportation; Metro; Portland Parks & Recreation

Immediate Parks & Recreation; Transportation; Metro

PBOT is currently working on a number of regional trails projects including Southwest In Motion, the Springwater Gap, and the Portland-Milwaukie Trail.

This happens as funding becomes available. Examples include the North Portland Greenway Trail Alignment Plan and Sullivan’s Gulch Trail Concept Plan.

PBOT builds trails and works with partner agencies to build trails as funding becomes available.

In July 2016, the Portland Bureau of Transportation (in collaboration with Nike) launched the docked bike share program, BIKETOWN. The system has over 100,000 active users and has logged over 670,000 bike trips in its first two years of implementation.

Beginning in the summer of 2018, all Portland State University students will receive free BIKETOWN memberships. In addition to this effort, the “PSU Super Hub” launched in May 2017, which allows BIKETOWN users to park at any designated bike rack free of charge. Efforts to incorporate BIKETOWN and TriMet trips are currently being explored.
<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
<th>Responsible Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocate for regional networks to include Major City Bikeways,</td>
<td>Ongoing</td>
<td>Transportation; Metro</td>
</tr>
<tr>
<td>including bicycle boulevards</td>
<td></td>
<td>2014 Regional Active Transportation Plan uses Portland's bikeway network as a part of its network.</td>
</tr>
<tr>
<td>Ensure that trails and paths on Major City Bikeways are designed</td>
<td>Ongoing</td>
<td>Transportation; Metro; Parks &amp; Recreation</td>
</tr>
<tr>
<td>with appropriate separation between bicyclists and pedestrians</td>
<td></td>
<td>As multi use path projects arise, separation of bicycle riders and pedestrians is always a consideration. The Major City Bikeway classification description states that Major City Bikeways should have separated facilities for bicycles and pedestrians. The Flanders St crossing, for example, will have separate spaces for pedestrians and bicycle riders.</td>
</tr>
<tr>
<td>Coordinate with the Oregon Department of Transportation and others</td>
<td>Ongoing</td>
<td>Transportation; Portland Parks &amp; Recreation; ODOT</td>
</tr>
<tr>
<td>to provide bicycle access in areas where on-street bicycle facilities</td>
<td></td>
<td>PBOT coordinates with ODOT and other City bureaus frequently to provide bicycle access on ODOT or Parks and Recreation property. Examples include Gateway Green and Lloyd to Woodlawn projects.</td>
</tr>
<tr>
<td>are not available or the opportunities for providing them are</td>
<td></td>
<td>constrained</td>
</tr>
</tbody>
</table>

### 3.5 B. Work with advocates for bicycling on natural surface trails and natural resources advocates developing strategies that increase opportunities for bicycling on natural surface trails, while protecting the natural environment and enhancing pedestrian safety.

<table>
<thead>
<tr>
<th>Task</th>
<th>Status</th>
<th>Responsible Agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a map showing potential opportunities and alignments for</td>
<td>Immediate</td>
<td>Transportation; Portland Parks &amp; Recreation</td>
</tr>
<tr>
<td>bicycling on natural surface trails in Portland and the</td>
<td></td>
<td>This is being completed as a part of the Off-Road Cycling Master Plan.</td>
</tr>
<tr>
<td>metropolitan region, integrated with existing and proposed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>recreation and non-motorized transportation facilities, with a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>particular focus on providing opportunities for neighborhoods that</td>
<td></td>
<td></td>
</tr>
<tr>
<td>are underserved by other bicycle facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaluate the potential for parallel natural surface trail</td>
<td>Long-term</td>
<td>Transportation</td>
</tr>
<tr>
<td>alignments on existing or proposed non-motorized</td>
<td></td>
<td>This is being completed as a part of the Off-Road Cycling Master Plan.</td>
</tr>
<tr>
<td>transportation facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Further the development and enhancement of existing and proposed</td>
<td>Immediate</td>
<td>Transportation; Portland Parks &amp; Recreation; Metro; Environmental Services</td>
</tr>
<tr>
<td>natural surface trail facilities, such as the proposed Gateway Green</td>
<td></td>
<td>Gateway Green has been built and continues to grow in size and popularity among residents. More opportunities for natural surface trails may come about as a result of the Off-Road Cycling Master Plan.</td>
</tr>
<tr>
<td>project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formalize relationships with advocacy groups for natural surface</td>
<td>Medium-term</td>
<td>Transportation</td>
</tr>
<tr>
<td>trails and engage them in the planning, development, construction</td>
<td></td>
<td>This is being completed as a part of the Off-Road Cycling Master Plan.</td>
</tr>
<tr>
<td>and on-going maintenance of natural surface trails and facilities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3.5 C. Ensure that green street features and bicycle transportation improvements are mutually supportive.
Refine how bicycle and pedestrian improvements are considered in applying the Stormwater Management Manual

Medium-term Transportation; Bureau of Environmental Services

Develop cost-effective green (stormwater) treatments for bicycle boulevards, such as semi-diverters and curb extensions with bicycle pass-throughs

Medium-term Transportation; Bureau of Environmental Services

Ensure that street improvements meet both stormwater and transportation objectives

Immediate Transportation; Bureau of Environmental Services

Seek innovative ways to integrate traffic calming, pedestrian, bicycle and stormwater designs

Immediate Transportation; Bureau of Environmental Services

Coordinate planned green street improvements with planned bicycle and pedestrian improvements at the pre-planning stage

Immediate Transportation; Bureau of Environmental Services

3.6 OPERATIONS AND MAINTENANCE OF THE BICYCLE NETWORK

3.6 A. Improve and preserve existing bikeways.

Explore opportunities for adding or enhancing bicycle facilities in street rehabilitation and signal maintenance projects

Ongoing Transportation

Develop a strategy for funding a program to maintain special bicycle features and bicycle boulevards on local service traffic streets

Medium-term Transportation

The 2016 update to the Stormwater Management Manual does outline specific pedestrian treatments that should be incorporated in the Green Stormwater management facilities and does provide language about how bike/ped safety goals can be incorporated in stormwater treatments. In addition, the NACTO Urban Street Stormwater Guide (2017) provides specific design guidance for bike and pedestrian facilities.

This is completed on a project-by-project basis; opportunities for incorporating green stormwater management are considered when and where appropriate.

Collaboration with BES is ongoing; PBOT staff continually seeks out opportunities to meet environmental and transportation objectives with each project.

Collaboration with BES is ongoing; PBOT staff continually seeks out opportunities to meet environmental and transportation objectives with each project.

Collaboration with BES is ongoing; PBOT staff continually seeks out opportunities to meet environmental and transportation objectives with each project.

The Neighborhood Traffic Calming Program used to do this until it was discontinued due to insufficient funding. The Neighborhood Greenways Program identified in the TSP will be filling some of the gaps left by the Traffic Calming Program in coming years.
Conduct periodic assessment of signal operation in key bicycle, transit and freight corridors  
Immediate  
Transportation

Maintain street lighting on bicycle facilities and in pedestrian zones to ensure safety  
Medium-term  
Transportation

Maintain roadway shoulders in areas currently lacking other bicycle and pedestrian facilities  
Medium-term  
Transportation

Explore prefabricated street features, including doweled pedestrian islands and medians, assess installation and maintenance costs  
Immediate  
Transportation

Standardize signage and pavement markings for bikeways and develop a strategy and funding for maintaining them  
Medium-term  
Transportation

Formalize a system for ensuring that on-street bicycle parking facilities (such as bicycle parking corrals) are maintained and that maintenance agreements with adjacent businesses are kept current  
Medium-term  
Transportation

Investigate costs and resources needed to ensure that off-street public and privately owned bicycle parking facilities are maintained  
Medium-term  
Transportation

Signal operation projects are conducted as funding becomes available. Some projects in progress right now include MLK Blvd (Transit), Williams/Vancouver (Bike), and Columbia (Freight).

We do this on a project by project basis.

The Alternative Pedestrian Walkways Design Guide includes guidance for pedestrian and bicycle facilities on streets with shoulders. Decisions about keeping shoulders or converting them to bike lanes and alternative treatments are done on a project by project basis.

There has been limited adoption of prefabricated street features as of yet. TSP programming dedicates funding for ‘up-and-over’ bike-friendly transit islands to minimize bike/bus conflicts.

The Oregon Supplement to the Manual on Uniform Traffic Control Devices adopted Portland’s signage and in-roadway wayfinding standards.

Funding for maintenance of on-street bicycle parking facilities is generally billed to the ‘general transportation fund’. Additionally, funding is provided by the “Bike Parking Fund” which draws funding from developers who either cannot or choose not to meet their on-street bike parking requirements with new development. When property owners request racks and corrals, they must sign an agreement to maintain the facility.

When property owners request racks and corrals, they must sign an agreement to maintain the facility. Unmaintained bicycle parking is typically only brought to PBOT attention through formal complaints and bike parking is not actively inspected.
Seek funds to perform tree trimming that will enhance the performance of streetlights on bicycle routes  
Medium-term  Transportation

The Signals and Street Lighting group is currently updating their street lighting guidelines, which are likely to include recommendations to illuminate neighborhood greenways and other high-priority pedestrian and bicycle streets at higher light levels than other streets. Tree trimming is the responsibility of adjacent property owners.

3.6 B. Develop maintenance practices that minimize physical hazards for bicyclists.

When maintaining streets with bike lanes, install needed pavement overlays to cover the entire roadway surface or locate paving seams to align with bike lane striping  
Ongoing  Transportation

We do this on a project by project basis and it is a part of our design standards for paving roadways.

Ensure that drainage grates are bicycle safe through installation and maintenance standards  
Ongoing  Transportation

All new drainage grates are bike-friendly.

Maintain roadside vegetation and drainage facilities such as ditches and swales to forestall hazards for bicyclists and pedestrians  
Ongoing  Transportation

Maintenance and Operations does this as needed.

Create educational materials to inform property owners of their responsibilities to maintain vegetation and gravel driveways on their property  
Medium-term  Transportation

Outreach materials do not currently emphasize active transportation elements, though this is a near term priority for PBOT communications. Currently, PBOT staff are tasked with bike lane maintenance, including mitigation of vegetation that is encroaching into the bike lane. This process is currently complaint driven.

Give priority to streets with bike facilities when recovering gravel following snow and ice events  
Ongoing  Transportation

We have developed streets of citywide significance that include the bike network for recovering gravel streets.

Develop a strategy to fund ongoing maintenance of existing and future bikeways through public parks  
Medium-term  Transportation; Portland Parks & Recreation

No formal strategy or funding mechanism has been identified.

3.6 C. Accommodate bicyclists through construction zones.
Ensure accommodation of safe and direct bicycle traffic as part of construction traffic control plans

Ensure appropriate signing in advance of and through construction zones, including as a condition of street use permits

Provide training on proper bicycle accommodation for right-of-way and construction inspectors

In July 2017, PBOT published the first edition of the Temporary Traffic Control Manual which details a list of prioritized temporary treatments for bicycles through construction zones. This includes the following options (in order by prioritization): 1) Temporary bike lane by shirting/narrowing traffic lanes; 2) providing a temporary bike lane in an existing lane; 3) merging cyclists with adjacent traffic in a shared, low-speed travel lane; 4) directing cyclists onto a shared path with pedestrians; 5) providing a bicycle detour route.


The Temporary Traffic Control Manual provides clear guidance on bicycle accommodation but does not outline specific training requirements.

3.7 BIKEWAYS IN PORTLAND’S CENTRAL CITY

3.7 A. Make Portland’s Central City superlatively bicycle-friendly.

Create Bicycle Districts in downtown, the River District and the Lloyd District

Use existing and innovative engineering tools to create conditions welcoming to bicyclists throughout the Central City

The 2018 Transportation System Plan update includes the Gateway, Central City, and River District as Bicycle Districts.

The Central City in Motion planning process is currently underway. The plan places an emphasis on creating a 'low-stress' bike network in the Central City including contextually sensitive bicycle facility designs such as protected bike lanes, raised bike lanes, and neighborhood greenways. The plan was adopted in November 2018

4.1 ENCOURAGING BICYCLING

4.1 A. Expand the City of Portland’s offering of maps, information and trip planning to encourage new bicyclists and increase convenience for those who are already riding.
<table>
<thead>
<tr>
<th>Action</th>
<th>Timeframe</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offer free transportation options information, such as New Resident SmartTrips, to new Portland residents</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
<tr>
<td>Continue and expand developing bicycle maps in multiple languages</td>
<td>Ongoing</td>
<td>Transportation</td>
</tr>
<tr>
<td>Expand distribution of bicycling and walking maps to airports, transit stations, libraries, grocery stores and hotels</td>
<td>Medium-term</td>
<td>Transportation</td>
</tr>
<tr>
<td>Continue offering free bicycling and walking map updates to residents, businesses and community organizations</td>
<td>Ongoing</td>
<td>Transportation</td>
</tr>
<tr>
<td>Offer more online interactive mapping features</td>
<td>Medium-term</td>
<td>Transportation</td>
</tr>
<tr>
<td>Provide regular updates on detours and traffic along popular bicycling routes</td>
<td>Immediate; ongoing</td>
<td>Transportation; other partners as appropriate</td>
</tr>
<tr>
<td>Collaborate with regional agencies, including TriMet and Metro, to develop an online, interactive bicycle route planning tool</td>
<td>Immediate</td>
<td>Transportation; TriMet; Metro</td>
</tr>
<tr>
<td>Create a single website for accessing bicycle trip planning and customer service and as a repository for information like the City of Portland's bicycle maps</td>
<td>Ongoing</td>
<td>Transportation</td>
</tr>
<tr>
<td>Develop an interactive online map of bicycle parking</td>
<td>Long-term</td>
<td>Transportation</td>
</tr>
</tbody>
</table>

The SmartTrips program reaches out to all new Portland residents and Portlanders who have recently moved to offer them active transportation materials, including bike/walk/transit maps, information about how to get around, and coupons and incentives to try biking, walking, or taking transit.

Portland Bike/Walk maps are currently offered in Spanish, Somali, Nepali, Russian, Burmese, and Arabic.

Portland bike maps are currently distributed at hundreds of locations, including bike shops, hotels, transit stations, libraries, and more.

We continue to offer the SmartTrips program, both to residents and businesses by offering bike/walk maps and other information.

The online version of the Portland Bike Map launched in early 2018.

PBOT social media accounts frequently send out messaging when roads are closed due to construction or other hazards.

TriMet has integrated bike routes into their online map and Google has become the most used tool for navigation via bicycle, but PBOT has not developed a route planning tool itself.

The City of Portland has a bicycling web page that has all of this information and is regularly updated.

This has not been developed yet - GIS layers are available for bike corrals, but not for staple racks or other smaller scale on-street bike parking.
Continue partnerships with current Transportation Management Associations (TMAs) and work with the business community and other organizations to help initiate new TMAs

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term</td>
<td>Transportation; local TMAs</td>
</tr>
</tbody>
</table>

We are not working on any new relationships with TMA’s currently, but continue to work with those that are existing. With our parking management district, we have established new TDM programs (Central Eastside, NW) and are working with those entities in a similar capacity as we would with a TMA.

### 4.1 B. Support programs to increase access to bicycles.

- **Increase City of Portland support, including technical and funding support, to expand programs that help low-income Portland residents gain access to equipment necessary to bicycle safely and comfortably.**
  - **Timeframe:** Medium-term
  - **Sector:** Transportation

  BIKETOWN for All allows people with low incomes to gain access to reduced rates for BIKETOWN memberships. The City of Portland Safe Routes to School program also works extensively with the Community Cycling Center and other organizations to provide low cost bikes and gear to kids in need.

- **Develop and market information and materials to encourage employers to initiate or expand fleet bike programs.**
  - **Timeframe:** Immediate
  - **Sector:** Transportation

  PBOT’s strategy has been more focused on expanding access to BIKETOWN, which can serve the function as a de facto bike fleet.

- **Seek creative methods to engage communities in underserved areas by coupling encouragement and education with facility development.**
  - **Timeframe:** Ongoing
  - **Sector:** Transportation

  PBOT recently partnered with People for Bikes on the Big Jump initiative that provides funding for education and outreach in conjunction with bikeway projects in East Portland.

### 4.1 C. Expand programs that promote long-term changes in the transportation habits of Portland residents by encouraging bicycling.

- **Offer the SmartTrips program to Portland residents every five years.**
  - **Timeframe:** Medium-term
  - **Sector:** Transportation

  The SmartTrips program is offered every year to new residents and residents who change addresses within the City of Portland.

- **Expand SmartTrips employer program to promote bicycling and transportation options to Portland businesses more effectively, and partner with local agencies, such as Metro, TriMet and the Department of Environmental Quality (DEQ) on outreach to Portland employers.**
  - **Timeframe:** Immediate
  - **Sector:** Transportation; Metro; TriMet; DEQ

  The Portland Commute Options program provides employers with resources and information about employee bike parking, transit pass subsidies, tax-deductible investments, and group BIKETOWN memberships.

- **Collaborate with Portland schools to offer SmartTrips programs to all parents of 2nd and 5th grade students.**
  - **Timeframe:** Immediate
  - **Sector:** Transportation; Portland Public Schools

  Safe Routes to School and SmartTrips programs collaborate at the beginning of every school year to deliver active transportation materials to 2nd and 5th graders throughout Portland.
<table>
<thead>
<tr>
<th>Task Description</th>
<th>Timeframe</th>
<th>Domain</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offer SmartTrips programs to 8th and 11th grade students, promoting age-appropriate transportation options and bicycling information</td>
<td>Medium-term</td>
<td>Transportation; Portland Public Schools</td>
<td>PBOT has not done a SmartTrips program for 8th and 11th grade students but is researching ways to reach older students to provide them with information about traveling safely.</td>
</tr>
<tr>
<td>Develop a SmartTrips program for new Portland residents</td>
<td>Immediate</td>
<td>Transportation</td>
<td>The SmartTrips program is offered every year to new residents and residents who change addresses within the City of Portland.</td>
</tr>
<tr>
<td>Support participation in events that encourage bicycling for transportation, or support other goals and policies in the Portland Bicycle Plan for 2030</td>
<td>Ongoing</td>
<td>Transportation</td>
<td>The City of Portland's Sunday Parkways events do this several times per year.</td>
</tr>
<tr>
<td>Develop a pilot program to provide personalized bicycle training opportunities for novice riders</td>
<td>Long-term</td>
<td>Transportation</td>
<td>Portland by Cycle offers introductory group rides regularly throughout the summer months.</td>
</tr>
<tr>
<td>Assess the best methods for developing a Portland citywide personalized training program</td>
<td>Long-term</td>
<td>Transportation</td>
<td>Not completed.</td>
</tr>
<tr>
<td>Explore culturally-specific classes and rides to help novice bicyclists with varied cultural backgrounds get familiar with bicycling in Portland</td>
<td>Immediate</td>
<td>Transportation</td>
<td>Safe Routes to School is in the process of redefining “safety” to include personal safety and security in the right of way to incorporate into bike safety education.</td>
</tr>
<tr>
<td>Develop partnerships with community organizations to provide bicycle training and education to residents with whom the City of Portland does not sufficiently engage</td>
<td>Medium-term</td>
<td>Transportation</td>
<td>PBOT has partnered with Self Enhancement, Inc. (SEI) and Free Bikes 4 Kidz to give away helmets, bikes, and basic education to SEI youth. PBOT is also in conversations with several culturally-specific community-based organizations to include Safe Routes programming as part of their ongoing programs.</td>
</tr>
</tbody>
</table>

4.1 D. Continue to raise the awareness of bicycling and reinforce safe bicycling behaviors.

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Timeframe</th>
<th>Domain</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase outreach staff to meet demand for bicycle and transportation options encouragement and education</td>
<td>Immediate</td>
<td>Transportation</td>
<td>The Active Transportation Division has 41 funded staff positions, some of which are soon to be filled, who work on outreach and encouragement efforts in some way.</td>
</tr>
<tr>
<td>Offer additional Sunday Parkways and create a model for sustainable program funding</td>
<td>Immediate</td>
<td>Transportation</td>
<td>In 2018, Sunday Parkways offered 5 events throughout the city and plans on continuing doing so for years to come. The program has added new rides in East Portland and in the Central City (Green Loop).</td>
</tr>
<tr>
<td>Task Description</td>
<td>Timeframe</td>
<td>Category</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------</td>
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<td>------------------------</td>
<td></td>
</tr>
<tr>
<td>Continue and expand partnerships with organizations promoting bicycling</td>
<td>Ongoing</td>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td>Ensure bicycling remains visible to the public through public campaigns, media coverage and a strong Internet presence</td>
<td>Medium-term</td>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td>Increase support for conferences and research by partnering with organizations and sponsoring bicycling-related academic work</td>
<td>Ongoing</td>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td>Increase partnering with local advocacy groups and support award programs that promote bicycling in Portland</td>
<td>Ongoing</td>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td><strong>4.1 E. Investigate strategies for providing incentives to bicycle.</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourage more employers to offer financial or other incentives to employees who bicycle to work</td>
<td>Immediate</td>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td>Develop marketing materials to educate employers on federal and state credits for energy efficiency efforts, including promoting bicycling</td>
<td>Ongoing</td>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td>Explore the development of a City of Portland business tax credit program for bicycle-related investments</td>
<td>Long-term</td>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td><strong>4.2 SAFETY EDUCATION AND ENFORCEMENT</strong></td>
<td></td>
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</tr>
</tbody>
</table>

We frequently work with the Street Trust, Kaiser Permanente, Bicycle Advisory Committee, Community Cycling Center, Portland Public Schools, and many other private and government organizations to promote bicycling.

Multimodal communication is the underlying emphasis of all PBOT communications, social media, press releases, and publications. A strong internet presence is maintained through the bureau's website, Instagram, Facebook, and through neighborhood social network sites like Nextdoor.

We are currently contributing to several NITC research projects, including research regarding treatments for protected bicycle facilities, and bike count data research. We also support local and national conferences annually.

PBOT partners with and supports the Street Trust, which promotes the Bike to Work challenge each may (which includes prizes for riding to work).

The City adopted updated campus/institutional zone TDM requirements in 2018. Portland’s large campuses and institutions are required to have substantial TDM plans in place before they are allowed to construct new developments. The Portland Commute Options program also provides information about resources available to employers, such as bike rack installation, and group BIKETOWN memberships.

The Portland Commute Options program provides employers with resources and information about employee bike parking, transit pass subsidies, tax-deductible investments, and group BIKETOWN memberships.
### 4.2 A. Expand the Safe Routes to School program.

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offer a comprehensive Safe Routes to School program to all Portland schools</td>
<td>Medium-term</td>
<td>Transportation</td>
</tr>
<tr>
<td>Support innovative programming for older youth, such as bicycle building workshops, bicycle racing or recreational athletic teams and leadership training to work with younger Safe Routes to School students</td>
<td>Medium-term</td>
<td>Transportation</td>
</tr>
<tr>
<td>Recruit and support parent and school staff volunteers to create more school-specific and culturally-specific encouragement programming</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
</tbody>
</table>

Each Safe Routes to School coordinator has a group of 8-10 focus schools that are designated Title 1. The remaining Portland schools are offered education and encouragement resources but do not receive the same depth of support and engagement. Some previously supported and less vulnerable population schools are transitioning within the newer model.

Some schools are encouraged to participate in one of several “train the trainer” workshop offerings to prepare teachers to run bike safety at their school. We are also offering circulation maps/plans to engaged schools to offer an education tool parents & guardians and address driver behavior around school campuses. There are around 10 schools that should receive this tool before school starts.

Safe Routes staff are always seeking and encouraging “parent champions” to be catalysts in their school communities. Safe Routes is currently working on diversifying their volunteer pool for community bike rides and safety education through partnerships with SmartTrips Ambassador program and the Street Trust.

### 4.2 B. Increase safety education and outreach to encourage safe travel behavior for all travel modes.

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop culturally specific outreach and education programs</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
<tr>
<td>Continue offering the Share the Road safety class and make it available to the general public as a traffic safety educational opportunity</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
</tbody>
</table>

High level materials are translated into multiple languages; Culturally specific outreach is completed on a project by project basis. For example, when developing an outreach strategy for the Outer Division Safety Project, PBOT worked with local community-based organizations (APANO + Jade District) to set up a 'walk and talk' held in multiple languages to educate roadway users about crosswalks and other safety countermeasures. Specifically, as it relates to bikes, there are opportunities to develop more cycling-focused outreach campaigns.

The Share the Road safety class continues to be offered through a partnership with Legacy Health. The course is offered both to roadway users who have received a citation as well as to the general public who is interested in learning more about traffic safety.
<table>
<thead>
<tr>
<th>Issue</th>
<th>Timeframe</th>
<th>Responsible Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expand the Share the Path campaign and focus efforts on high bicycle and pedestrian traffic areas</td>
<td>Immediate</td>
<td>Parks &amp; Recreation; Transportation</td>
</tr>
<tr>
<td>Explore a partnership with other agencies, such as ODOT and Metro, to develop a region-wide traffic safety program that includes classes and other opportunities for road user education</td>
<td>Long-term</td>
<td>Transportation; ODOT; Metro</td>
</tr>
<tr>
<td>Develop more Public Service Announcements to raise awareness about traffic and bicycle safety</td>
<td>Medium-term</td>
<td>Transportation</td>
</tr>
<tr>
<td>Utilize educational tools, such as warnings, diversion-type classes and media coverage, and create an outreach model for education efforts to achieve maximum improvements in bicycle and traffic safety with minimal economic impact to drivers and bicyclists</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
<tr>
<td>Work with ODOT and the Oregon State Legislature to achieve local control in setting speed limits</td>
<td>Immediate</td>
<td>Transportation; ODOT</td>
</tr>
</tbody>
</table>

There is not a Share the Path campaign currently.

Partnerships currently exist with Legacy Health and Portland Police to offer a range of educational opportunities concerned with traffic safety and road user education. Partnership with Metro has been primarily focused on regional policy and planning efforts; less so with specific programming. ODOT develops education and safety materials on occasion (i.e. every intersection is a crosswalk campaign).

A major element of the City of Portland's Vision Zero Action Plan is focused on engagement and communications about traffic safety. Since the adoption of the Vision Zero Action Plan in 2016, there have been numerous successful efforts to raise awareness about traffic and bicycle safety. Efforts include the “20 is Plenty” and “Struck” campaigns.

When PBOT adopts new design tools to improve the comfort and safety of people biking, the communications team supports the dissemination and promotion of this information. This is something PBOT has done with the implementation of “Bike Boxes” and is something that is underway in support of protected bike facilities. Diversion classes are offered to Portland residents who receive speed camera tickets - this service is offered through a partnership with Providence Health.

Gaining statutory authority to regulate the speed limit of locally owned streets is one of PBOT’s top legislative agendas for 2018/2019. During the 2017 legislative session, HB 2682 was passed allowing the City of Portland to lower the speed limit of streets by 5mph in residential areas. This move allowed Portland City Council to reduce the speed limit on local streets from 25mph to 20mph in the spring of 2018. Further effort to gain local control over the speed of non-local streets (collectors and arterials) is an ongoing effort.
Explore partnership possibilities with ODOT and driver's education groups to shape the curriculum

Long-term Transportation; ODOT

Continue educating Portland residents of all ages about proper helmet use and the safety benefits of wearing a helmet

Ongoing Transportation

Educate Portland residents about conspicuity and bicycle light requirements and support programs that work to equip bicycles with appropriate lights

Ongoing Transportation

PBOT is beginning to explore ways in which the bureau can influence driver safety education through the DMV. This includes considerations of the both the frequency of driver education related to licensure, but also adding content related to bike and pedestrian safety. Efforts in this area have not yet begun as of the publication of this progress report, but are expected to be near-term priorities for the bureau.

Public education about helmet use and proper fitting has lived primarily in the realm of Safe Routes to School programming. These efforts include helmet giveaways as well as education about the proper use of helmets. Public information campaigns were included in the launch of BIKETOWN.

PBOT partners with TriMet on coordinated outreach campaigns around ‘conspicuity’ which includes both lighting and highly reflective clothing. During the transition to daylights savings time, coordinated efforts are taken to hand out reflective lights to people walking, biking, and accessing transit on high injury corridors.

4.2 C. Regularly assess road safety data to inform design and engineering improvements.

Bicycle crash data is published and updated annually as part of the Vision Zero Action Plan. This data is used to inform the Bicycle High Crash Network as is publicly available through an interactive map of all crashes. Efforts to increase the accuracy of the data are underway as the current data set is limited to crashes involving vehicles and only recorded when a police report is filed. PBOT is exploring ways to utilize hospital records and other data sets to supplement the ODOT crash data to better account for unreported crashes with the current method of data recording.

The Portland Police Bureau’s “Major Crash Team” is called out for all fatal and severe “Injury A” crashes involving pedestrians and bicyclists.

Work with local and statewide organizations and agencies to ensure bicycle crash data is recorded, accurately catalogued and analyzed to result in safer bicycling and road conditions in Portland

Medium-term Transportation; Police; ODOT

Fully investigate all bicycle, pedestrian and automobile crashes resulting in ambulatory injuries or worse, and investigate all lower severity crashes, whenever possible

Ongoing Transportation; Police; ODOT
Develop and annually update a high-risk location list and a high-risk behavior list in collaboration and communication with the Bureau of Transportation and community groups. (Ongoing) Transportation

Investigate reports from roadway users and local stakeholders about potential safety issues for bicyclists. (Ongoing) Transportation

Clarify the City of Portland's multi-bureau strategies for addressing locations and behaviors with a high risk of injury or death, and for low-crash locations with high levels of concern for livability, community and equity. (Medium-term) Transportation

Consider setting standards for street lighting specific to bicycle boulevards and other key bicycle facilities. (Medium-term) Transportation

PBOT's Vision Zero team annually updates the "High Crash Intersections" based on crash data. The "High Crash Network" and "High Risk Behavior" list is updated on a biannual basis.

Roadway users and stakeholders can report unsafe conditions by calling the safety hotline (823-SAFE) and that information is synthesized and share with traffic engineers on a regular basis. Transportation planners regularly collect qualitative data from the public regarding safety concerns on a project-by-project basis.

Representatives from PBOT, Portland Fire and Rescue, and the Portland Police Bureau convene monthly to discuss enforcement strategies, data collection methods, and public education opportunities. Utilizing a data-driven approach has prioritized a focus on areas with higher crash rates where a known existing problem persists. The Vision Zero team is exploring a method of improving safety where current conditions pose a safety risk, regardless of the presence of crashes. This includes an investigation of intersection typologies where crashes are more prevalent. Additionally, the draft PedPDX safety prioritization framework considers both high-crash locations as well as street typologies where crashes are more likely to occur.

As of December 2018, the Signals and Street Lighting group are currently in the process of updating the standards for street lighting. The lighting guidelines will factor in presence of bike facilities and potentially prioritize neighborhood greenway treatments.

4.2 D. Implement enforcement practices that contribute to the safety and attractiveness of bicycling.

Incorporate multi-modal traffic safety and the enforcement strategy for helping to make bicycling safe and attractive into the daily work of all divisions of the Portland Police Bureau. (Immediate) Police; Transportation

PBOT maintains a partnership primarily with the Traffic Division of PPB. Representatives of PBOT & PPB meet monthly to discuss traffic crash data, identify trends, and collaborate on enforcement strategies.
<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Responsible Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create an outreach model for education missions</td>
<td>Medium-term</td>
<td>Transportation; Police</td>
</tr>
<tr>
<td>Develop an enforcement hierarchy for bicycle safety and enforcement strategies to communicate priorities clearly. In particular, the Portland Police Bureau should:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prioritize enforcement toward motorists, bicyclists and pedestrians based on available data that documents the correlation of specific travel behaviors to potential injury and livability concerns</td>
<td>Immediate</td>
<td>Transportation; Police</td>
</tr>
<tr>
<td>Increase level of enforcement for drivers and bicycle riders who operate while under the influence of intoxicants</td>
<td>Immediate</td>
<td>Transportation; Police</td>
</tr>
<tr>
<td>Clarify operating procedures for enforcement actions at 'high crash' and 'low crash' locations</td>
<td>Medium-term</td>
<td>Transportation; Police</td>
</tr>
<tr>
<td>Create a calendar of bicycle safety-related enforcement activities and update it at regular intervals to communicate with the public about ongoing actions and strategies</td>
<td>Ongoing</td>
<td>Transportation; Police</td>
</tr>
<tr>
<td>Produce an annual report summarizing the Portland Police Bureau's and Portland Bureau of Transportation's bicycle-related activities and results over the past year, set goals for the upcoming year and publish as part of the Portland Police Bureau's existing annual enforcement summary</td>
<td>Ongoing</td>
<td>Transportation; Police</td>
</tr>
<tr>
<td>PBOT organizes 'street teams' of safety advocates and neighborhood residents to strategically engage people walking &amp; biking with information about traffic safety. The location of these events is decided in using a mix data (high crash locations) and neighbor interest.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>As a part of Vision Zero, enforcement has focused primarily on identifying and discouraging high risk behaviors culled from ODOT crash data. Enforcement has thus far been primarily targeted towards motorists.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Vision Zero Action Plan identifies a strategy to increase the number of Drug Recognition Experts. As of 2018, there were two additional DRE's trained. Furthermore, of portion of tax revenues from commercial cannabis sales are dedicated to Vision Zero efforts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic enforcement has been deployed specifically at high crash locations. Enforcement specific to 'low crash' locations has not yet been prioritized.</td>
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<td></td>
</tr>
<tr>
<td>Occasionally, PBOT works with the Police Bureau to conduct traffic enforcement actions, however there is no public facing calendar to alert the public of such enforcement actions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Currently the Portland Police Bureau publishes both annual and quarterly reports summarizing stop data citywide. At the Bureau of Transportation, the Vision Zero Annual Report summarizes progress towards traffic safety efforts (though these goals are more broad and multimodal in nature).</td>
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</tbody>
</table>
Develop a strategy between the Bureau of Transportation, the Portland City Attorney, the Portland Police Bureau, other City of Portland bureaus and community groups to interpret unclear state and city laws pertaining to safe bicycling and develop possible legislative changes to clarify or improve existing laws, including the following considerations:
- Safe passing distance
- When a bicyclist may leave a bike lane
- Stop sign requirements
- Yield requirements
- Bicycle lighting equipment
- Culpability for non-reckless drivers
- Rules and responsibilities on multi-use paths
- Pedestrian use of bike lanes

**4.3 WAYFINDING FOR BICYCLISTS**

**4.3 A. Improve wayfinding for users of Portland's network of bikeways.**

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Status</th>
<th>Responsible Parties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sign and mark all new bikeways</td>
<td>Ongoing</td>
<td>Transportation</td>
</tr>
<tr>
<td>Identify locations where bicycle signage and markings are needed to define the route or direct bicyclists to a destination or other bikeway</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
<tr>
<td>Install bicycle kiosks with maps at strategic locations to direct bicyclists to destinations or along bikeways in a defined geographic area in order to improve the safety, comfort and attractiveness of bicycling routes</td>
<td>Long-term</td>
<td>Transportation</td>
</tr>
<tr>
<td>Investigate the feasibility of developing a route-based wayfinding system to complement Portland's existing destination-based wayfinding system, by conducting a study of best practices in route-based wayfinding and working with stakeholders, including the Bureau of Transportation's Maintenance Operations group, to identify feasible systems</td>
<td>Long-term</td>
<td>Transportation</td>
</tr>
</tbody>
</table>

At the monthly standings meetings held jointly by the Portland Police Bureau and PBOT, there is a space for participants to bring up legislative and/or regulatory issues. Priorities so far include 1) speed safety camera deployment and 2) local regulation over traffic speeds.

Many BIKEtown kiosks include bikeway maps and time-based travel shed options, in many ways replicating the functionality of the "Bike Oasis" pilot installed on SE Hawthorne Blvd. PBOT is also currently investigating the possibility of a cohesive multi-modal wayfinding sign system that integrates walking, biking, and transit routes.

This has not been completed. Current bicycle wayfinding signs are destination-based and compliant with the Oregon Supplement to the Manual on Uniform Traffic Control Devices (MUTCD).
Investigate opportunities for implementing innovative wayfinding designs, such as wayfinding to transit, multi-modal hubs and bicycle parking | Medium-term | Transportation

Coordinate bicycle destination sign networks with neighboring municipalities and standardize signs for bikeways | Medium-term | Transportation

Install bikeway destination signs, boulevard markings and other pavement markings that clearly communicate to bicyclists and motorists expectations for roadway use | Immediate | Transportation

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### 5.1 OVERALL APPROACH TO IMPLEMENTATION

#### 5.1 A. Amend the Transportation System Plan (TSP) to adopt recommended policies and classifications for bicycle transportation.

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify funding, timeline and staffing for an overall update of the TSP</td>
<td>Immediate</td>
<td>Transportation Planning</td>
</tr>
<tr>
<td>In the event that an overall update cannot be completed in a timely fashion, consider undertaking a technical update of the TSP to adopt the recommendations of this plan</td>
<td>Contingent</td>
<td>Transportation Planning</td>
</tr>
<tr>
<td>Use the update of the TSP to develop policy guidance for resolving conflicts between classification</td>
<td>Immediate</td>
<td>Transportation</td>
</tr>
</tbody>
</table>

- The Portland 2035 Transportation System Plan was adopted in summer 2018.
- Not applicable; the updated Transportation System Plan adopted many of the recommendations contained with the 2030 Bike Plan.
- The Transportation System Plan provides guidance for how to resolve conflicts between modes on streets where multiple classifications exist (i.e. providing guidance for additional separation between roadway users on routes that exist both on the bicycle and freight network). Streets 2035 aims to provide further guidance on this subject.

#### 5.1 B. Identify and pursue multiple strategies to increase funding for green transportation.

<table>
<thead>
<tr>
<th>Task</th>
<th>Timeframe</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form a task force to recommend new funding sources for bicycle facilities and other green transportation modes</td>
<td>Immediate</td>
<td>Office of the Mayor; Transportation</td>
</tr>
</tbody>
</table>

- There were multiple committees and task forces that helped explore new funding sources that ultimately helped to make the 10-cent local gas tax increase possible. This gas tax is paying for multiple bike and pedestrian projects.

---
Work with elected leaders to position the City of Portland to receive funding under the federal reauthorization

**5.1 C. Develop a complete street design guide that includes bicycle design guidelines.**

Identify funding, timeline and staffing to produce a new complete street design guide

**5.1 D. Expand encouragement programs that provide services and equipment, support behavior changes, raise awareness and provide incentives that increase bicycling.**

Identify new models, partners and funding for program expansion

Integrate the delivery of programs with projects

**5.1 E. Build as much of the bicycle transportation system as possible, as quickly as possible.**

Prioritize projects that are easily implemented that also improve connectivity, expand coverage and maximize separation from motor vehicle traffic

Be opportunistic and partner with others

We have continued to work with elected leaders to position the City of Portland and our partners to receive funding during federal funding and authorization cycles.

The Streets 2035 complete street design guide is funded and has established a two-year timeline for completion. Initial work will commence toward the end of 2018.

SmartTrips for new residents does this annually. We also work with schools through the Safe Routes to School program, have public information campaigns related to bicycling safety and education, and are continuously open to new opportunities to educate and encourage the public around active transportation.

This happens as funding becomes available. One recent example is the Big Jump, which had funding for education and outreach in conjunction with planned active transportation projects.

Neighborhood Greenways and multiple on street protected facilities have been implemented in recent years (SE Morrison protected bike lane; N Lombard two-way protected bike lanes).

Planning and projects staff are frequently looking for opportunities to partner with other active projects initiated by other City bureaus as well as by private development.
Make incremental improvements by installing interim facilities (such as climbing bike lanes or wide shoulders) or bikeways on parallel routes where projects are not easily implemented in their ultimate configuration; evaluate opportunities for interim facilities in Southwest Portland based on right-of-way needs, stormwater requirements, pedestrian needs and other issues to fill gaps between projects in the 80 percent implementation strategy

Immediate Transportation

Southwest in Motion (SWIM) is a five-year implementation plan that identifies and priorities active transportation planning projects in SW Portland. This planning effort includes alternative, contextually sensitive designs where topography or environmental factors require treatments that are not standard.

Immediate Transportation

Rebranded as “neighborhood greenways”, these types of facilities are developed and implemented on an ongoing basis.

Immediate Transportation

Continue to build new bicycle boulevards

Continue to refine the planned network and facilities to accommodate local preference, especially by:

Funding and developing an East Portland Bicycle Infrastructure Implementation Action Plan that ensures that 80 percent of households will be within a half-mile of a low-stress facility and includes the development of education and activities that will encourage high levels of use by a diverse group of East Portland residents

Immediate Transportation

East Portland in Motion (EPIM), a five-year implementation strategy for active transportation, grew out of a documented need to adapt and refine the recommendations of the 2030 Bike Plan to the unique conditions present in the City of Portland east of 82nd Ave. This plan identifies a prioritized list of projects to improve walking and biking throughout East Portland and includes education and encourage programming recommendations as well. EPIM projects are rapidly being rolled out, but more funding needs to be secured for completion.

Immediate Transportation

As of October 2017, the “20’s Bikeway” is largely complete. This 9.1-mile-long route spans the length of the city from NE Lombard St to the Springwater Corridor. The route is primarily a neighborhood greenway but utilizes striped and protected facilities where high traffic speeds and volumes are present.

Medium-term Transportation

Southwest in Motion (SWIM) is a short-term refinement, prioritization and implementation strategy for active transportation investments in Southwest Portland. This process looks both at currently planned projects and solicits input from the public on potential new projects in SW Portland. The SWIM planning process is scheduled to wrap in in early 2019.

Medium-term Transportation
Develop and implement a list of high priority pilot corridors for separated in-roadway bikeways that can be initially created with ‘software’ (paint, signal timing changes, plastic pylons) rather than ‘hardware’ (concrete, asphalt, new signals) and, based on the results of these pilots, consider prioritizing permanent build-out of these corridors and construction of additional separated facilities

The City of Portland has sought out opportunities to implement on-street separated/protected biking facilities in numerous locations throughout the city. These ‘pilot’ projects include notable examples such as N/NE Rosa Parks Way and the seasonal transformation of Naito Blvd (Better Naito). After the success of Better Naito, the City is currently exploring design options for a permanent protected two-way bike facility adjacent to Waterfront Park.

Continue to install new on-street grouped bicycle parking

On street, grouped bike parking is installed on an ongoing basis when determined necessary.

Improve existing bikeways through area improvement plans

Area improvement plans are frequently referenced or created and usually include enhanced bikeway elements. Some recent examples include the “in Motion” plans such as Central City in Motion, Northwest in Motion, and Southwest in Motion.

PBOT regularly works with other City agencies to coordinate projects in the right-of-way. This is commonly completed when BES needs to do work on a roadway that would require repaving, in which case PBOT would come in and restripe the roadway with bikeway markings.

As part of the PedPDX and Southwest in Motion planning processes, a series of draft alternative pedestrian/bike treatments are currently under development. These include a series of ‘interim’ treatments that provide a higher level of separation and right-of-way allocation for people walking and biking.

5.1 F. Develop strategies to ensure successful delivery of bicycle projects.

Develop an inter-bureau improvement and maintenance project review and evaluation process to make planned bicycle system improvements in conjunction with other public facility improvements

PBOT regularly works with other City agencies to coordinate projects in the right-of-way. This is commonly completed when BES needs to do work on a roadway that would require repaving, in which case PBOT would come in and restripe the roadway with bikeway markings.

As part of the PedPDX and Southwest in Motion planning processes, a series of draft alternative pedestrian/bike treatments are currently under development. These include a series of ‘interim’ treatments that provide a higher level of separation and right-of-way allocation for people walking and biking.

Address pedestrian travel needs when implementing bike lanes or other bicycle facilities on roadways with no sidewalks

Many bicycle projects are frequently development including neighborhood greenways, protected bike facilities, and other bicycle transportation projects.

The Engineering, Capital Delivery, and Planning divisions have been working together to develop better tools and strategies to implement projects in a cost-effective and efficient manner, while ensuring complete streets principles are being applied wherever possible.

Begin project development on multiple bicycle transportation projects

Many bicycle projects are frequently development including neighborhood greenways, protected bike facilities, and other bicycle transportation projects.

Work with the Bureau of Transportation's Engineering & Technical Services group and the Development & Capital Program to develop strategies for project delivery

The Engineering, Capital Delivery, and Planning divisions have been working together to develop better tools and strategies to implement projects in a cost-effective and efficient manner, while ensuring complete streets principles are being applied wherever possible.
### 5.1 G. Fund and construct projects in areas underserved by the bikeway network that score high in indicators of disadvantage.

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<th>Action</th>
<th>Status</th>
<th>Timeline</th>
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<tbody>
<tr>
<td>Assure that implementation criteria include comprehensive measures of equity, including poverty, minority status and age</td>
<td>Immediate Transportation</td>
<td>Equity criteria is contained within the 2030 Bike Plan. The recently adopted bureau-wide Equity Matrix is a tool used by planners and project managers to inform engagement, prioritization and implementation.</td>
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</tr>
<tr>
<td>Establish benchmarks for completing projects in targeted areas</td>
<td>Immediate Transportation</td>
<td>We do not currently have benchmarks, but these targeted areas are receiving a high level of investment at this time.</td>
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<tr>
<td>Regularly update the Equity Gap Analysis to account for changes in the low-stress bikeway network so that the results continue to inform project selection</td>
<td>Ongoing Transportation</td>
<td>Not Completed. This is largely met through our existing facility designs and an equity focused transportation system plan.</td>
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<tr>
<td>Develop a tool for addressing the health and equity effects of planned projects</td>
<td>Medium-term Transportation</td>
<td>Not Completed.</td>
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### 5.5 EVALUATION AND MEASUREMENT

#### 5.5 A. Continue to expand the means of evaluating how well the public is being served by Portland’s bikeways network and the programs that support bicycling.

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<tr>
<td>Refine the performance measures for the bicycle transportation system and set baseline levels and periodic benchmarks to gauge progress toward the objectives of the Portland Bicycle Plan for 2030</td>
<td>Immediate Transportation</td>
<td>Miles of facilities built, and commute mode split have been our performance measures in the past for overall system-wide analysis. The Neighborhood Greenway Assessment Report outlines performance measures related to neighborhood greenways, specifically, but there have not yet been efforts to do this for other types of facilities.</td>
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<tr>
<td>Continue and expand annual bicycle counts</td>
<td>Ongoing Transportation</td>
<td>More bike count locations have been added every year since the inception of the bike counts program. In 2009 before the Bike Plan was adopted, we counted 136 locations and in 2018 we counted 277 locations.</td>
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<tr>
<td>Improve the transparency and availability of annual bicycle counts data, especially by making it available to the public online and integrating it into Transportation’s Traffic Data (TDAT) software</td>
<td>Medium-term Transportation</td>
<td>Count data and annual reports are all available online for the public, but this data has not yet been integrated into TDAT.</td>
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</table>
Expand collection of before and after data associated with encouragement programs and new infrastructure | Ongoing | Transportation

Continue to explore how analysis of geographic information can inform project priorities and improve the equitable delivery of public services | Immediate | Transportation

Expand surveys and evaluation to assess the attributes of the ‘interested but concerned’ population | Medium-term | Transportation

Collaborate with Portland State University’s Center for Transportation Studies and Initiative for Bicycle and Pedestrian Innovation to develop new means of evaluation | Ongoing | Transportation; PSU

Collaborate with other universities and other cities throughout the United States and elsewhere to establish best practices for measuring and sharing information | Ongoing | Transportation

Continue annual SmartTrips evaluations | Ongoing | Transportation

Collaborate with Metro to improve their transportation demand models and forecasting to better reflect bicycle trips | Immediate | Transportation; Metro

Collaborate with Metro to structure the upcoming regional household activity survey so that it provides useful baseline data for targeted bikeway investments | Immediate | Transportation; Metro

SmartTrips and Safe Routes to School programs have annual reports that compare before/after data. We are currently working on better project evaluation metrics for before/after projects are implemented.

PBOT developed an equity matrix that uses geographic census data to identify communities of concern and inform project priorities.

There has been a lot of regional and national academic research on this subject, including Jennifer Dill and Nathan McNeil’s “Revisiting the Four Types of Cyclists” survey analysis. The SmartTrips program is currently evaluating a “stages of change” model to target relevant information to all four types of cyclists.

We are a NACTO City and frequently work with Portland State and other universities across the country on bicycle-related research.

At the end of each program year, SmartTrips completes an evaluation that includes number of households reached, mode shift between control and participant groups, among other factors.

For the 2018 Regional Transportation Plan, the model was updated but there is still room for improvement and continued work.

In 2011, Metro released Travel Behavior Survey. The survey reached 6,450 households (4,800 in Multnomah, Clackamas, and Washington counties plus an additional 1,650 surveys collected in Clark County, WA). The survey has not been updated since implementation and reporting in 2011-2012.