

PBOT

PORTLAND BUREAU OF TRANSPORTATION

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Steve Novick Commissioner **Leah Treat** Director

Memorandum

To: Planning and Sustainability Commissioners (PSC)

From: Denver Igarta, Portland Bureau of Transportation (PBOT)

Subject: TSP Stage 2: Amendments for Work Session April 12, 2016

Background

The Transportation System Plan (TSP) Stage 2 Proposed Draft was published on December 18, 2015. PSC had a briefing on February 9 and two public hearings (March 8 and March 22). Public testimony closed Friday, March 25, 2016. PSC will hold a Work Session and Recommendation on April 12, 2016.

Based on public testimony, PSC discussion, and staff review we are recommending the attached amendments to the Proposed Draft.

Testimony

PBOT staff reviewed nearly 200 pieces of written testimony submitted to the PSC, over 100 bicycle classification testimonies submitted through the MapApp, and oral testimony from the PSC public hearings on March 8 and March 22.

The topics that received the most testimony included the following:

- Classification of NE 7th or 9th Avenues as a Major City Bikeway
- Concerns about a City Bikeway designation in the Proposed Draft along Hayden Bay (an acknowledged mis-designation and proposed consent agenda amendment)
- Concerns regarding the adopted TSP bicycle classification through a manufactured home community on Hayden Island from the Hayden Island Plan in 2009
- Transportation Demand Management (TDM)
- A number of additional issues and suggestions were raised in the testimony to the PSC, from parking to street safety.



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April 6, 2016

Amendments

PBOT Staff divided comments and amendments into a Consent List, a Discussion List and a No Change List. The Consent List includes minor amendments that staff identified could be changed and PSC can vote on as one package. PSC members can pull an item from Consent to move to the Discussion List in order to have a discussion at the PSC Work Session on April 12. The Discussion List includes a staff recommendation and one or more other options for the PSC to consider. The No Changes List includes items that staff does not support to change at this time, but would consider at a later date through subsequent planning process, such as Stage 3 of the TSP Update. PSC members may move items from the No Change List to the Discussion List.

Consent List

There are ten items on the Consent List – refer to page 3. Each item has an Attachment that illustrates the changes.

Discussion List

There are seven items on the Discussion List – refer to page 4. Each item has a Staff Recommendation and an Attachment that explains the changes and the recommendation.

No Change List

The No Change List (refer to page 5) includes items that staff does not support to change at this time, but would consider at a later date through other planning and public involvement processes. Most of the items are related to Objectives, Major City Bikeway designations, and mode split targets.

Process

PSC members should notify PBOT and BPS staff by **Friday, April 8 at 4:00** if there are any items that they want moved from Consent to Discussion or No Change to Discussion, or if there are any new items to add to the Discussion List.

Please contact Denver Igarta at Denver.igarta@portlandoregon.gov or 503/823-1088 if you have questions.

CONSENT AMENDMENTS LIST

No.	Amendment	Section	Source/Sponsor	Staff response	Attach
1	TSP Objectives (revisions)	Sect. 2 (p. 5)		Staff supports revisions to Objectives 6.23.J and 6.28.F	A
2	Community Involvement Objectives add equity language	Sect. 3 (p.3)	PBOT	Staff proposes language changes to the Community Involvement objectives proposed by staff to include additional equity and inclusion language.	B
3	Bicycle Classification Description and Objectives Amendment	Sect. 4 (p. 3)	ODOT	Staff supports adding "property dedication" to list of alternative approaches. Staff supports revisions to Objectives 6.26.A, 6.27.D, 6.27.E	C
4	Hayden Island pathway – remove bicycle classification along Hayden Bay and Waterside Marina	Sect. 5 (p.7)	Numerous testimony	Staff supports amending the Proposed Draft (per 3/3/16 staff memo) to remove the City Bikeway classification from the Waterside Marina and Hayden Bay path to be consistent with the amended version of Exhibit C of the Hayden Island Plan passed in 2009 (ORD 183124).	D
5	Street Design Classification Description Amendments	Sect. 6	PSC, PBOT	Staff supports remove Urban Highway classification, revise Urban Throughway description.	E
6	Street Design Classification Map Amendments	Sect. 7	Various testimony, PBOT	Staff supports minor amendments including reclassification of Urban Highways to Urban Throughways.	F
7	Mode share targets for all trips	Sect. 10 (p. 3)		Staff supports adding an objective referencing the 70% daily mode share and pattern area targets. (Objective 11.13)	G
8	Glossary amendments	Sect. 11	Various testimony, PBOT	Staff supports minor amendments	H
9	Projected ODOT "Hot Spot" Locations Refinement Plan	Sect. 12 (p. 77)	ODOT	Staff supports modifications proposed by ODOT in Fall 2015 to the hot spots refinement studies are supported by staff. Missed adding the changes in the last draft.	I
10	NW District Access and Circulation Plan	Sect. 12 (p. 79)	NWDA, PBOT	Staff supports replacing "Northwest District Street Decoupling Feasibility Study" with "Northwest District Access and Circulation Study", with broader scope looking at access and circulation for all modes and connections to/from Central City.	J

DISCUSSION AMENDMENTS LIST

No.	Amendment	Section	OPTION A	OPTION B	OPTION C	Staff Recommends	Attach
1	Autonomous Vehicles Objectives and Glossary	Sect. 2	Add Objectives to Sect. 2 and Sect. 11	Address in Stage 3		B	K
2	Neighborhood greenways traffic calming: "Use traffic calming tools and other available tools" Objectives 6.13.G	Sect. 2	Add "traffic diversion" Objectives 6.13.G, Sect 4.	No Change		A	L
3	NE 7th/9th Neighborhood Greenways	Sect. 5	Move MCB designation to NE 7th	Retain MCB on NE 9 th and extend to Holman St. Extend the CB on NE 7th Ave north to Sumner St.	Downgrade NE 9 th from MCB to CB (leaving both 7 th and 9 th as City Bikeways)	B	M
4	Bicycle Classification Map – "Major" Amendments	Sect. 5	Amend bicycle classifications	No change to classification until there is additional public process		B	N
5	Bicycle Classification Map – "Minor" Amendments	Sect. 5	Amend bicycle classifications	No change to classification until there is additional public process		A	O
6	Hayden Island pathway – retain adopted TSP bicycle classification	Sect. 5 (p.7)	Remove bicycle classification along the northern edge of Hayden Island	No changes to Council adopted TSP bicycles classification maps (2009 Hayden Island Plan ORD 183124)		B	P
7	Transportation Demand Management Title 17.106 Amendment	Sect. 14 (p. 3)	Recommend proposed 17.106 language to clarify TDM plan elements (attachment Q.1)	No action (goes to Council without PSC recommendation).		A	Q

NO CHANGE TO PROPOSED DRAFT (STAGE 2) RECOMMENDED LIST

No.	Item	Staff response
1	New TSP Objectives (e.g. autonomous vehicles and stormwater objectives):	Staff's preference is to wait until Stage 3. Many of the new Comp Plan policies do not yet have TSP objectives, e.g. the Transportation Strategy for People Movement, Streets as public spaces, Corridors, Trails, etc. Some may not need to have them. No public involvement or review regarding these proposals. Would give staff and stakeholders additional time to craft the language. Staff supports the ideas and concepts, but would prefer additional outreach and discussion that moving them to Stage 3 will allow.
2	Street Design Classification changes on BH Hwy and Thurman	In the development of TSP Stage 2, BPS and PBOT staff agreed that new Main Street designations would be applied where Civic or Neighborhood Corridors are also within a Center as shown on the Recommended Comprehensive Plan map. SW B-H Hwy around SW 30 th Ave and NW Thurman St west of NW 25 th Ave are not within Centers and therefore do not meet the agreed-upon criteria. Staff's preference is to use clear and consistent criteria for the expansion of Main Streets, therefore we recommend against these changes.
3	Hayden Island Bridge Street Classifications	City Council is expected to vote later this year on a package of amendments to the TSP Major Projects list, which includes a new collector-level bridge to Hayden Island. Staff's preference is to wait until this amendment is adopted by City Council before proposing street classifications as part of Stage 3. If adopted, staff anticipates the bridge would carry a Regional Corridor street design classification. Other TSP street classifications would need to be developed as well.
4	"Work at Home" mode share target	PSC can direct PBOT to consider a "work at home" mode share target be added to the Chapter 10 list of performance measures we will consider in Stage 3.
5	"Auto Ownership" targets	We are starting by proposing an auto ownership target for mixed use zone buildings since many will be located in areas with more options, and some will have low or no parking requirements, thus lessening the likelihood of owning a car. We could evaluate expanding the target in our Stage 3 performance measures work.

Section 2: TSP OBJECTIVES

Objective 11.10 (Street Design and Right of Way Improvements)

- E. Use a variety of transportation resources in developing and designing projects for all City streets, such as the City of Portland's Pedestrian Design Guide, Bicycle Master Plan-Appendix A, NACTO Urban Bikeway Design Guide, NACTO Urban Street Design Guide, Portland Parks and Recreation Trail Design Guidelines, Designing for Truck Movements and Other Large Vehicles ~~Design Guide for Truck Streets~~, and City of Portland Green Street Policy, **Stormwater Management Manual** and Design Guide for Public Street Improvements.

Objective 6.28.F (Travel Management)

- F. Require institutions and ~~other large employers~~ **new development** to participate in programs to reduce single-occupant automobile trips.

Section 3: Community Involvement Objectives

Objective 6.1

- F. Provide funding that is adequate to carry out **equity driven** public involvement **best practices**.
- G. Foster a culture of **equitable** public involvement across **all** divisions within PBOT.

Section 4: Bicycle Classification Descriptions and Other Bicycle Objectives

Bicycle Classification Descriptions

Objective 6.7. A-C

A. Major City Bikeways

Major City Bikeways form the backbone of the city's bikeway network and are intended to serve high volumes of bicycle traffic and provide direct, seamless, efficient travel across and between transportation districts.

- Land Use. Major City Bikeways should support 2040 land use types.
- Improvements. Major City Bikeways should be designed to accommodate large volumes of bicyclists, to maximize their comfort and to minimize delays by emphasizing the movement of bicycles. Build the highest quality bikeway facilities. Motor vehicle lanes and on-street parking may be removed on Major City Bikeways to provide needed width for separated-in-roadway facilities where compatible with adjacent land uses and only after performing careful assessments analysis to determine potential impacts to the essential movement of all modes. Where improvements to the bicycling environment are needed but the ability to reallocate road space is limited, consider alternative approaches that include property acquisition **or dedication**, parallel routes and/or less desirable facilities. On Major City Bikeways developed as shared roadways, use all appropriate tools to achieve recommended performance guidelines. Where conditions warrant and where practical, Major City Bikeways should have separated facilities for bicycles and pedestrians.

B. City Bikeways

City Bikeways are intended to establish direct and convenient bicycle access to significant destinations, to provide convenient access to Major City Bikeways and to provide coverage within three city blocks of any given point.

- Land Use. City Bikeways should support 2040 land use types and residential neighborhoods.
- Improvements. City Bikeways emphasize the movement of bicycles. Build the highest quality bikeway facilities. Motor vehicle lanes and on-street parking may be removed on City Bikeways to provide needed width for separated-in-roadway facilities where compatible with adjacent land uses and only after taking into consideration the essential movement of all modes. Where improvements to the bicycling environment are needed but the ability to reallocate road space is limited, consider alternative approaches that include property acquisition **or dedication**, parallel routes and/or less desirable facilities. On City Bikeways developed as shared roadways, use all appropriate tools to achieve recommended performance guidelines.

C. Local Service Bikeways

Local Service Bikeways are intended to serve local circulation needs for bicyclists and provide access to adjacent properties.

- **Classification.** All streets not classified as City Bikeways or ~~Off-Street Paths~~ **Major City Bikeways**, with the exception of Regional Trafficways not also classified as Major City Traffic Streets, are classified as Local Service Bikeways.
- **Improvements.** Consider the following design treatments for Local Service Bikeways: shared roadways, traffic calming, bicycle lanes, and extra-wide curb lanes. Crossings of Local Service Bikeways with other rights-of-way should minimize conflicts.
- **On-Street Parking.** On-street parking on Local Service Bikeways should not be removed to provide bicycle lanes.
- **Operation.** Treatment of Local Service Bikeways should not have a side effect of creating, accommodating, or encouraging automobile through-traffic.

Other Bicycle Objectives

Objective 6.23

- J. Support bike-sharing programs aimed at **residents, employees, and visitors** ~~visitors, tourists, employees, and residents~~ to increase access to bicycles and to provide last-mile connections from transit.

Objective 6.26

- A. Support land uses in existing and emerging regional centers, town centers, **neighborhood centers**, and main streets with an adequate supply of on-street parking spaces while emphasizing grouped bicycle parking in the street.

Objective 6.27

- D. Support changes to regulations to ensure that all land uses provide an ample quantity of short- and long-term bicycle parking **for a variety of bicycle types** and end-of-trip facilities consistent with an increasing bicycle mode share.
- E. Encourage owners of existing residential or commercial buildings to supplement and upgrade off-street long-term and short-term bicycle parking **for a variety of bicycle types.**



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Steve Novick Commissioner **Leah Treat** Director

Memorandum

To: Planning and Sustainability Commissioners
From: Zef Wagner, Portland Bureau of Transportation
Date: 03/03/2016
Subject: Hayden Island Bicycle Classification Map in TSP Proposed Draft

Background

On December 18, 2015, the Portland Bureau of Transportation (PBOT) issued the Proposed Draft of the Transportation System Plan (TSP). Section 5: Bicycle Classification Maps, page 7, shows the proposed Bicycle Classifications for Hayden Island and the surrounding area. This map shows a City Bikeway along the edge of Hayden Bay, along what is now a privately-owned path along the waterfront. This proposed classification has raised concerns among property owners around Hayden Bay, who expected this path to remain pedestrian-only.

When developing the Proposed Draft of the TSP, PBOT staff reviewed previously adopted area plans to inform the proposed street classifications. Exhibit C on page 28 of the published Hayden Island Plan, available on the City of Portland website and marked as adopted by Portland City Council on August 19, 2009, shows a bicycle classification along Hayden Bay.

Staff Response

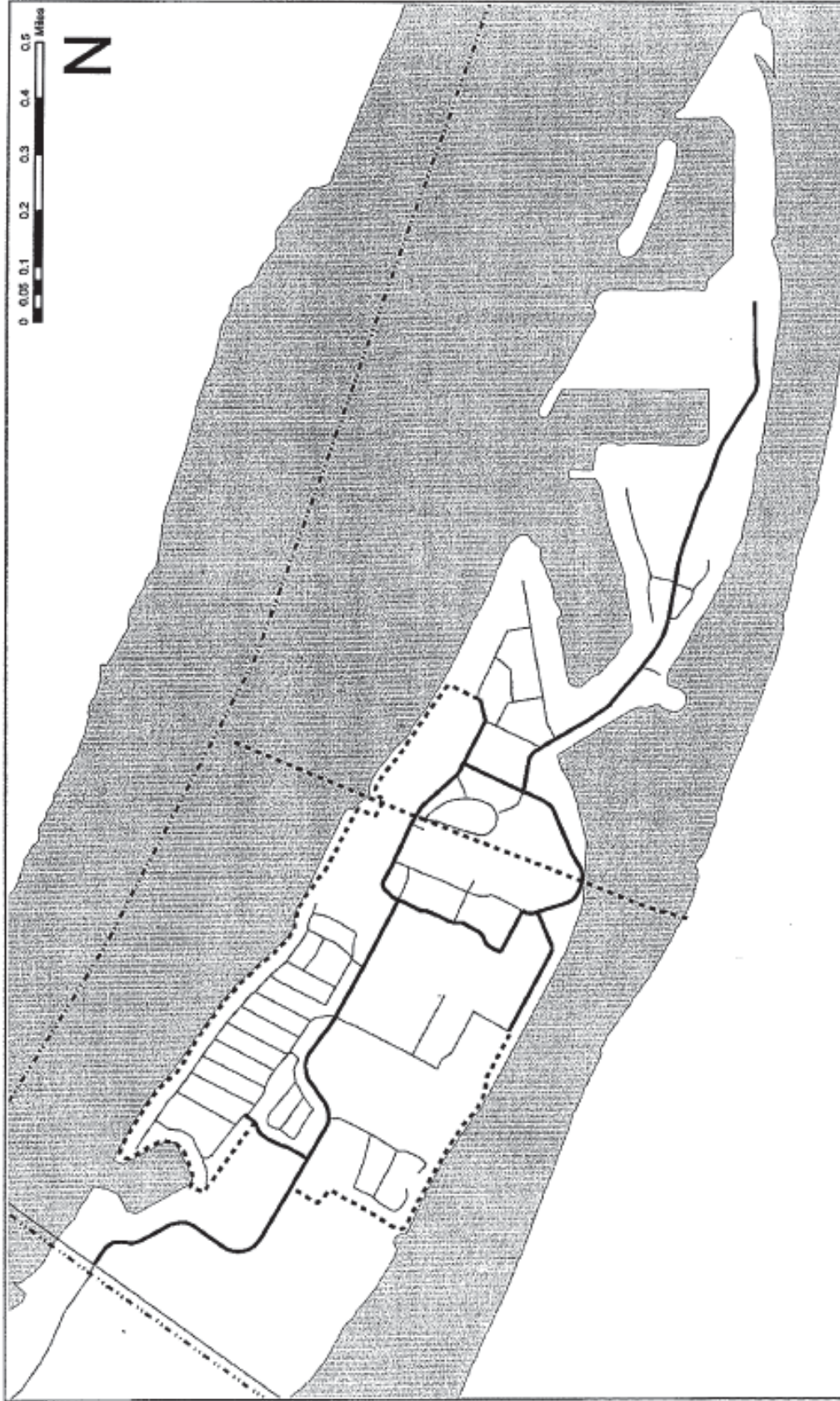
In response to recent concerns from residents and property owners around Hayden Bay, PBOT staff did additional research into the history of the Hayden Island Plan adoption process. It was discovered that an amendment to the Hayden Island Plan was passed by City Council to amend Exhibit C to delete the bicycle classification from the path around Hayden Bay and instead added a short connection to the local street system at N Hayden Island Dr. (near N Jantzen Beach Ave) between the Red Lion Hotel and the Waterside Marina. The bicycle classification was retained to the west of that connection, but was deleted to the east of the connection and around Hayden Bay.

PBOT staff recommends that the PSC amend the Proposed Draft of the TSP to remove the City Bikeway classification from the Waterside Marina and Hayden Bay path to be consistent with the amended version of Exhibit C of the Hayden Island Plan passed in 2009 (ORD 183124 - see amended map, next page).



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189124



HAYDEN ISLAND

Transportation System Plan

Exhibit C

LEGEND

- | | | |
|---------------|---------------------------|--------------------------------|
| | City of Portland Boundary | Bicycle Classifications |
| [Hatched Box] | Major Rivers | —— City Bikeway |
| | | Off-Street Path |
| | | ----- Local Service Bikeway |

A. Urban Throughways

Urban Throughways are designed to ~~emphasize long-distance mobility provide high-speed travel for longer-~~ motor vehicle, freight, and transit trips throughout the region.

- Land Use. Urban Throughways ~~emphasize motor vehicle travel and~~ connect major activity centers, industrial areas, and intermodal facilities. Adjacent land uses ~~do not~~ **sometimes** orient directly to Urban Throughways.
- Number of Lanes. Urban Throughways usually have four to six vehicle lanes, with additional lanes in some situations. **Dedicated high-occupancy-vehicle, freight-only, or transit-only lanes may be provided to support more efficient use of Urban Throughways.**
- Function. Urban Throughways ~~exclusively~~ **primarily** serve a mobility function, with **little or no local access provided along the street.**
- Separation. Urban Throughways ~~are~~ **may be** completely divided, with no left turns, **or they may be mostly divided, with limited opportunities for left turns.** Street connections may occur at separated grades, with access controlled by ramps, **or there may be limited street connections at grade. If designed as a grade-separated freeway, pedestrian and bicycle crossings should be provided on overpasses or underpasses, and pedestrian and bicycle facilities along the corridor should be provided on parallel pathways. If designed as a limited-access highway or expressway, pedestrian and bicycle crossings should be either grade-separated or signalized, and pedestrian and bicycle facilities should be separated from motor vehicle traffic.**
- Design Elements. Urban Throughway design typically includes vehicle lanes, **grade-separated or signalized** pedestrian and bicycle crossings ~~on overpasses or underpasses,~~ parallel pathways **or separated facilities** for pedestrian and bicycle travel, clear sightlines, median barriers, shoulders, and motor vehicle lane widths that accommodate freight movement. Where appropriate, transit priority treatments should be used to enhance transit speed and reliability. ~~Urban Throughway design shall consider the need for high vehicle speeds, pedestrian crossings on overpasses, parallel facilities for bicycles, and motor vehicle lane widths that accommodate freight movement and high-speed travel.~~ Encourage the Oregon Department of Transportation to maintain a continuous landscape along Urban Throughways that reduces the visual impacts of the throughway on motorists and adjacent land uses.
- ~~Dual Classification. A street with dual Urban Throughway and Urban Highway classifications should retain the operational characteristics of an Urban Highway and respond to adjacent land uses.~~
- Connections. A ramp that connects to an Urban Throughway is classified as an Urban Throughway up to its intersection with a ~~lower~~ differently-classified street. **An interchange between an Urban Throughway and a differently-classified street should be designed to safely accommodate all modes and provide the least possible disruption to the surrounding modal networks. Connections should be provided across Urban Throughways at closely-spaced intervals to provide greater street connectivity.**

Explanation: The Urban Throughway classification encompasses both of Metro's Throughway designs: Freeways and Highways.

B. Urban Highways

Urban Highways are designed to emphasize mobility for motor vehicle, freight, and transit trips that traverse the region while also accommodating other modes and providing some local access.

- ~~Land Use. Urban Highways link major activity centers, industrial areas, and intermodal facilities. Adjacent land uses sometimes orient to the Urban Highway.~~
- ~~Number of Lanes. Urban Highways usually consist of four travel lanes, with separate turning lanes in some locations. Dedicated high-occupancy vehicle, freight-only, or transit-only lanes may be provided as needed to support efficient use of the roadway.~~
- ~~Function. Urban Highways primarily serve a mobility function, with limited local access provided along the street.~~
- ~~Curb zone. The curb zone along Urban Highways primarily serves mobility functions such as vehicle lanes or bike lanes. The curb zone may be used for access functions such as parking and loading at limited locations if needed to support adjacent land use.~~
- ~~Separation. Urban Highways have limited street connections that may occur at same grade or separate grades. Pedestrian and bicycle crossings should be grade-separated or signalized, and pedestrian and bicycle facilities should be separated from motor vehicle traffic.~~
- ~~Design Elements. Urban Highway design typically includes vehicle lanes, pullouts for bus stops, transit priority treatments, separated pedestrian and bicycle facilities, and improved pedestrian crossings located on overpasses, underpasses, or signalized at-grade intersections.~~

Street Design Map Amendments

Map ID #	Description	Explanation
1	NW Yeon Ave / St Helens Rd (Nicolai – City Limits): Change to Urban Throughway	Consistent with proposed amendment to eliminate Urban Highway classification.
2	N Martin Luther King, Jr Blvd (Columbia – I-5): Change to Urban Throughway	Consistent with proposed amendment to eliminate Urban Highway classification.
3	SE McLoughlin Blvd (17 th – City Limits): Change to Urban Throughway	Consistent with proposed amendment to eliminate Urban Highway classification.
4	SW Multnomah Blvd to Terwilliger Blvd connection: Change to Community Corridor	Retains Urban Throughway designation on ODOT-owned freeway ramps, but more appropriately designates PBOT-owned connection from Multnomah to Terwilliger as Community Corridor.

OBJECTIVES 11.13

G. By 2035, reduce the number of miles Portlanders travel by car to 11 miles per day on average and 70 percent of commuters walk, bike, take transit, carpool, or work from home at approximately the following rates:

- Transit 25%
- Bicycle 25%
- Walk 7.5%
- Carpool 10%

H. By 2035, increase the mode share of daily non-drive alone trips to 70% citywide and to the following in the five pattern areas:

<u>Central City</u>	<u>87%</u>
<u>Inner Neighborhoods</u>	<u>71%</u>
<u>Western Neighborhoods</u>	<u>65%</u>
<u>Eastern Neighborhoods</u>	<u>65%</u>
<u>Industrial and River</u>	<u>55%</u>

I. By 2025, increase the percentage of new mixed use zone building households not owning an automobile from approximately 13% (2014) to 25%, and reduce the percentage of households owning two automobiles from approximately 24% to 10%.

J. By 2035, reduce Portland's transportation-related carbon emissions to 50% below 1990 levels, at approximately 934,000 metric tons.

Section 11: Glossary

Congestion

A condition characterized by unstable traffic flows that prevents movement on a transportation facility at optimal legal speeds.

A condition characterized by unstable traffic flows that prevents reliable movement on a transportation facility.

Bicycle Boulevard

See Neighborhood Greenway.

~~A street with low traffic volumes where the through movement of bicycles is given priority over motor vehicle travel. (Source: Portland Bicycle Master Plan)(see City Greenway)~~

High-capacity Transit

High-capacity transit is public transit **that bypasses congestion by making full or partial use of that has an** exclusive right of way, a non-exclusive right of way, **using transit priority** or a combination. Vehicles make fewer stops, travel at higher speeds, have more frequent service, and carry more people than local service transit such as typical bus lines. High-capacity transit can be provided by a variety of vehicle types including light rail, commuter rail, streetcar, and bus.

Streetcar

Fixed guide-way ~~transit~~ service ~~mixed in traffic~~ for locally oriented trips within or between higher density mixed-use centers.

Section 12: Refinement Plans and Studies

ODOT Hot Spots

Projected ODOT “Hot Spot” Locations **Refinement Plan**

This analysis ~~would~~**will** identify plan-level solutions for locations with safety and/**current or** projected capacity problems on or near State Highways. The study **refinement plan** will also **develop and** evaluate alternative performance measures, **including alternative mobility targets for State Highways, consistent with Action 1F3 of the Oregon Highway Plan, in collaboration with the Oregon department of Transpiration.**

Through modeling and analysis, PBOT and ODOT have identified multiple locations with potential safety and/or projected capacity problems. The agencies have agreed that PBOT will **identify feasible actions for addressing these safety and/or capacity programs along with a financially feasible implementation program, the appropriate micro- or meso scale modeling and analysis tools based on the results of the alternative performance measures work**, analyze potential alternative performance measures. After analyzing the locations based on the results of the alternative performance measure work, PBOT will recommend whether and what types of solutions are appropriate for each location **for inclusion in the City’s TSP. PBOT will also with ODOT to develop and recommend alternative State Highway mobility targets for adoption by the City and the Oregon Transportation Commission. This refinement plan will be completed no later than the next major TSP update.**

Section 12: Refinement Plans and Studies NW District Circulation

Northwest District Access and Circulation Study

Prepare an access and circulation study for the NW District neighborhood. Consider street reconfigurations and improvements including pedestrian and bicycle safety and access, travel directions, travel lanes, traffic control, and transit mobility and circulation. Identify and recommend changes to street classifications and identify near-term projects to improve safety, access, and circulation for all modes.

Northwest District Street Decoupling Feasibility Study

This study will assess the feasibility of decoupling the Everett/Glisan St and 18th/19th Ave couplets within the NW District. These streets are classified as Local Service Traffic Streets in the Transportation System Plan, and community members have questioned whether the streets are appropriate as one-way couplets. This study will examine the costs, benefits, and overall feasibility of decoupling, taking into account the needs of all modes of transportation.

Section 2/Section 11: Autonomous Vehicles

TSP Objectives (Section 2)

A. Consider regulation, pricing or incentives to:

- encourage deployment of autonomous vehicles in a shared mobility model
- minimize miles traveled by passenger vehicles with no passengers on board
- encourage multiple passengers in autonomous vehicles
- make benefits of autonomous mobility available on an equitable basis to all segments of the community
- use connected vehicles, with appropriate privacy controls, to measure the performance of the transportation system

B. Support the deployment of vehicle automation that improves safety (example: forward collision avoidance systems).

C. Consider investments in wayside communication systems that facilitate connected or autonomous vehicles more effectively achieving Comprehensive Plan and Transportation System Plan policies and objectives.

D. Consider a role for Portland as a test site for connected or autonomous vehicle technologies that further Comprehensive Plan and Transportation System Plan policies and objectives.

Glossary (Section 2)

Autonomous Vehicle -The U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) defines five levels of vehicle automation:

1. **No-Automation (Level 0):** The driver is in complete and sole control of the primary vehicle controls – brake, steering, throttle, and motive power – at all times.
2. **Function-specific Automation (Level 1):** Automation at this level involves one or more specific control functions. Examples include electronic stability control or pre-charged brakes, where the vehicle automatically assists with braking to enable the driver to regain control of the vehicle or stop faster than possible by acting alone.
3. **Combined Function Automation (Level 2):** This level involves automation of at least two primary control functions designed to work in unison to relieve the driver of control of those functions. An example of combined functions enabling a Level 2 system is adaptive cruise control in combination with lane centering.
4. **Limited Self-Driving Automation (Level 3):** Vehicles at this level of automation enable the driver to cede full control of all safety-critical functions under certain traffic or environmental conditions and in those conditions to rely heavily on the vehicle to monitor for changes in those conditions requiring transition back to driver control. The driver is expected to be available for occasional control, but with sufficiently comfortable transition time. The Google car is an example of limited self-driving automation.
5. **Full Self-Driving Automation (Level 4):** The vehicle is designed to perform all safety-critical driving functions and monitor roadway conditions for an entire trip. Such a design anticipates that the driver will provide destination or navigation input, but is not expected to be available for control at any time during the trip. This includes both occupied and unoccupied vehicles.

Connected Vehicle -A vehicle that communicates with the Internet, other vehicles, wayside systems and/or passenger.

Section 4: Traffic Calming Objective

Objective 6.13 G (Traffic Calming)

G. Use traffic calming tools, **traffic diversion**, and other available tools and methods to create and maintain sufficiently low automotive volumes and speeds on neighborhood greenways to ensure a comfortable cycling environment on the street.

Memorandum

To: Planning and Sustainability Commissioners
From: Zef Wagner, Portland Bureau of Transportation
Date: 03/31/2016
Subject: NE 7th and 9th Ave Bikeway Classifications in TSP Proposed Draft

Background

Over the last six months, PBOT and Commissioner Novick have received letters from several organizations advocating for traffic calming and diversion to reduce cut-through traffic and improve conditions for bicycling on NE 7th Ave from Broadway to Sumner, with a particular focus on the segment from Broadway to Fremont where the traffic volumes are highest. These organizations include the Irvington Community Association, Eliot Neighborhood Association, King Neighborhood Association, the Broadway-Weidler Alliance, and the Bicycle Transportation Alliance.

The advocates listed above argue that NE 7th Ave is carrying high traffic volumes despite being classified as a local street, and that this causes safety and livability concerns. Furthermore, they argue this is a well-used bike route and has been identified in City plans as a future neighborhood greenway, but that the route does not meet our standards for traffic speeds and volumes. The advocates are asking the City to prioritize establishment of a neighborhood greenway on 7th rather than on 9th, which is also shown in the Bike Plan and is currently shown in the TSP Major Projects List Recommended Draft.

To respond to this issue, Cevero Gonzalez in PBOT communications helped convene a community meeting on the topic on Monday, March 14th. The meeting was attended by roughly 50 people, mostly residents of the three adjacent neighborhoods. The audience feedback was generally in favor of a neighborhood greenway on NE 7th Ave, though some concern was expressed about traffic impact to MLK, 8th, and 9th Avenues and people stressed that improvements or mitigations would be needed on those streets as well.

Since the community meeting, a number of residents along NE 8th and 9th Avenues have been writing letters in opposition to the idea of diverters on 7th, expressing strong concern about potential cut-through traffic on their smaller, quieter neighborhood streets. They tend to acknowledge that 7th has too much traffic, but object to the City taking measures that may increase traffic on those adjacent streets.



Public Testimony on TSP Proposed Draft

A high volume of public testimony was submitted on the issue of 7th vs 9th. Many supporters of 7th request that 7th be upgraded from a City Bikeway to a Major City Bikeway and extended north from Skidmore to Sumner, with 9th Ave downgraded from Major City Bikeway to City Bikeway. Many supporters of 9th ask that the PSC retain the bicycle classifications as proposed. Much of the testimony does not mention bicycle classifications at all, instead focusing on the benefits or drawbacks of a neighborhood greenway with diverters on one street or the other.

Below is a summary of testimony received:

- Support for neighborhood greenway on NE 7th Ave
 - 3 neighborhood associations (Eliot, Irvington, King)
 - 42 individuals
- Support for neighborhood greenway on NE 9th Ave and/or opposition to diverters on NE 7th Ave
 - 23 individuals
 - One letter with petition signed by 74 individuals
 - 9 of these are duplicates who already submitted individual testimony

Staff Response

The potential project in question is not funded or scoped in any detail. To properly study the effects of various diverter treatments on traffic patterns in the area in question, PBOT would need to do a detailed traffic analysis. PBOT would also need to conduct a full public process to assess various options and weigh the benefits and impacts to residents and businesses in the area as well as to the wider transportation system. All of this work would require funding for a project, which we do not have at this time. PBOT does consider the NE 7th/9th Neighborhood Greenway to be a high priority and is looking into funding opportunities, but as is typical with most neighborhood greenway projects we would prefer to have the flexibility to determine the exact alignment during the project design phase after funding is obtained. For this reason, we recommend maintaining existing Bicycle Classifications and extending the City Bikeway classification on NE 7th Ave north to Sumner St. We also would like to clarify the intent to develop a north-south Major City Bikeway within the 7th/9th corridor all the way north to Holman, so we recommend extending the Major City Bikeway Classification on NE 9th Ave from Mason to Holman.

PBOT staff recommends that the PSC amend the Proposed Draft of the TSP to add a City Bikeway classification to NE 7th Ave from Skidmore St to Sumner, and upgrade NE 9th Ave from City Bikeway to Major City Bikeway from Mason to Holman.

Bicycle Classification Map – “Major” Amendments

Map ID #	Description	Explanation
1	NE Going/Alberta: Upgrade to Major City Bikeway and downgrade parallel Mason/Skidmore route to City Bikeway	Going/Alberta is operating as a Major City Bikeway already and would provide better connection to I-205 Path with extension to the east.
2	NE Sandy Blvd (Hollywood to City Limits): Upgrade to Major City Bikeway	Provides a more direct route than alternatives. Consistent with RATP.
3	E Burnside St (41st - 71st): Upgrade to Major City Bikeway and downgrade parallel Davis/Everett route to City Bikeway	Provides a more direct route than alternatives. Consistent with RATP.
4	SE Foster Rd (Powell - Lents): Upgrade to Major City Bikeway	Provides a more direct route than alternatives. Consistent with RATP.

Bicycle Classification Map – “Minor” Amendments

Map ID #	Description	Explanation
1	NE 70s Neighborhood Greenway: Extend City Bikeway	Needed to connect to Cully Park entrance. Consistent with TSP Project List.
2	NE Sacramento St (53rd - 61st): Add City Bikeway	Consistent with project that has already been implemented.
3	NW 20th/21st/22nd Ave (Flanders - Front): Add City Bikeway	Provides north-south mobility through NW District, including upcoming project to extend NW 20th Ave under Hwy 30.
4	NE Oregon/Multnomah/Wasco/68th (30th - Halsey): Add City Bikeway	Provides east-west mobility along corridor between Glisan and Halsey.
5	NE/SE 45th Ave (Glisan - Powell): Add City Bikeway	Provides direct north-south mobility through multiple neighborhoods.
6	SE Harrison St (12th - Ladd): Add City Bikeway	Consistent with SE Quadrant Plan.
7	Lower I-405 Path: Add City Bikeway	Fills a gap in the network. Consistent with TSP Project List and RATP.

PBOT

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Steve Novick Commissioner Leah Treat Director

Memorandum

To: Planning and Sustainability Commissioners
 From: Denver Igarta, Portland Bureau of Transportation
 Date: 04/06/16
 Subject: Hayden Island Trail along the Columbia River

Background

We have received public testimony (on the TSP Stage 2 Proposed Draft) opposing a pathway along the northern edge of the island, include from residents Hayden Island Manufactured Home Community who are concerned about the possible impacts on existing manufactured homes and general affordable housing on the island.

Staff Response

PBOT staff recommend no change to the alignment of bicycle routes on Hayden Island, which were adopted in 2009 into the Transportation System Plan by City Council Ordinance (ORD 183124) with the Hayden Island Plan.

The Transportation System Plan designates pedestrian and bicycle classifications on numerous routes citywide where missing connections across private property are needed to complete the planned future active transportation network, for example along the Swan Island trail, Willamette Greenway trail and some Southwest trails. The requirement to construct a trail as a condition of redevelopment involves negotiations to secure easements or dedicate property and approve the design of the trail. The requirement for the developer to construct the trail is only enforced when the City determines there is a “nexus” (connection) and “roughly proportional” to the projected impacts that the development is creating.

What are the prospects for improving the Hayden Island pathway along the northern riverbank?

- There are no recommended projects identified for improving the pathway in either the adopted Portland Bicycle Plan for 2030 (adopted in 2010) nor in the proposed Transportation System Plan, which guides the City’s transportation investment for the next 20 years.
- Trail improvement would not likely occur unless a property redevelops.



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Steve Novick Commissioner **Leah Treat** Director

Attachment Q

April 6, 2016

To: Portland Planning and Sustainability Commissioners

From: Judith Gray, Transportation Planning Supervisor
Peter Hurley, Senior Transportation Policy Planner

RE: Recommended TSP Transportation Demand Management (TDM) Actions

Request

PBOT requests that the PSC:

1. Recommend to Council Title 17.106 as proposed in the TSP Proposed Draft and modified in response to public testimony, as show in Attachment Q.1;
2. Support a stakeholder engagement process that will inform the PSC Mixed Use Zone and Central City 2035 hearings and City Council Comprehensive Plan and TSP hearings, as shown in Attachment Q.2.

1. Title 17.106 Action (Attachment Q.1)

In order to cost-effectively meet job and residential growth, mode share, and climate targets, PBOT is proposing to expand Transportation Demand Management (TDM) requirements. TDM includes providing information, such as new resident/employee walk/bike/transit maps, and incentives, such as low-cost transit passes.

City code does not specify what elements should be in a TDM plan. To improve certainty for applicants, interested parties, and staff, PBOT is proposing to add a new chapter to Title 17 that would identify the six elements in a TDM plan. The proposed new chapter was included in the TSP Proposed Draft released in December 2015.

In response to PSC hearing comments, primarily requesting more detail be added to code, PBOT is proposing six changes to the language in the Proposed Draft. These are included in Attachment A.

- A. Performance Targets. Clarifies that the performance targets identified for TDM plans are the 2035 mode split targets adopted by Council in the TSP. This change also specifies the method for calculating interim year performance targets, e.g. a 2020 or 2025 interim target.



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- B. Current TDM Plans. Clarifies that if a site meets 2035 performance targets, PBOT will support ongoing use of a current TDM plan.
- C. Approval. This language has been deleted because the Bureau of Development Services or the Hearings Officer approves development applications.
- D. Modifying Performance Targets. Clarifies that an applicant can request a modified performance target and identifies which factors would be considered to evaluate the modification request.
- E. Chapter. Uses consistent terminology.
- F. Enforcement. Specifies that enforcement applies to implementation of a TDM plan, not performance results. The strategies in TDM plans will be designed to meet performance targets; the City will enforce whether the strategies and performance monitoring in the plan are being implemented.

2. Stakeholder Advisory Committee and Outreach (Attachment Q.2)

While there is considerable support for TDM expansion, more details about program requirements and administration are needed. To that end, PBOT is proposing a scope and schedule for on-going technical analysis, policy development, and stakeholder engagement. The proposed schedule illustrates an intention to complete the TDM program details in time for policy approval by Council and the PBOT director before the end of 2016.

17.106 Transportation and Parking Demand Management

17.106.010 Purpose.

Providing residents, employees, and visitors information and incentives to walk, bicycle, ride transit, carpool, and otherwise reduce the need to own and use automobiles can be a relatively quick, inexpensive, and effective strategy to achieve city goals and prevent traffic and parking impacts. Requiring transportation and parking demand management (TDM) is intended to prevent, reduce, and mitigate the impacts of development on the transportation system, neighborhood livability, safety, and the environment while reducing transportation system costs.

17.106.020 Required Elements of a Transportation and Parking Demand Management Plan. A TDM Plan shall include, at a minimum, the following elements:

- A. Site and proposed development descriptions; baseline information and analysis, including proposed auto and bicycle parking;
- B. Performance Targets;
 - 1. Performance targets from the Transportation System Plan;
 - 2. Interim performance targets may be determined as a straight line projection from the base year to 2035;
- C. TDM Strategies likely to achieve the performance targets;
 - 1. If a site meets 2035 performance targets prior to application for approval of a TDM plan, the strategies in the site's previously approved plan may form the basis of the updated plan;
- D. Automobile parking demand reduction strategies;
- E. Performance Monitoring plan;
- F. Ongoing participation and Adaptive Management plan;

17.106.030 Approval Required.

The TDM Plan, approved in writing by the Portland Bureau of Transportation, is required prior to development approval.

Modifying Performance Targets.

Applicants may propose modified targets. Approval factors for target modification include:

- a. The relative availability of bicycle, transit, bike share, and car share infrastructure and services;
- b. Whether the site has implemented documented high-effectiveness TDM strategies;
- c. Travel characteristics, including schedules, of employees, residents, and visitors;
- d. Best practices and performance of comparable sites in Portland and comparable cities.

17.106.040 Ongoing Participation.

The development shall be required to commit to ongoing participation in the TDM Plan in its deeds, Codes, Covenants, and Restrictions.

17.106.050 Enforcement and Penalties.

It shall be a violation of this Chapter for any entity or person to fail to comply with the requirements of this Chapter section or to misrepresent any material fact in a document required to be prepared or disclosed by this Chapter. Any building owner, employer, tenant, property manager, or person who fails, omits, neglects, or refuses to comply with the provisions

of this Chapter shall be subject to a civil penalty of up to \$1,000 for every 7 day period during which the violation continues. **If an entity or person is fully implementing all other elements of this Chapter, failing to meet performance targets alone shall not be an enforcement violation.**

F

17.106.060 Administrative Rule Authority.

City Council authorizes the Director of the Bureau of Transportation to adopt administrative rules for Transportation and Parking Demand Management consistent with City codes Title 33 and Title 17.

17.106.070 Fees.

The City may charge fees for Transportation and Parking Demand Management goods and services provided, including but not limited to application review, incentives and education, performance monitoring, adaptive management, and compliance and enforcement.

Commentary on proposed amendments A-F, which respond to questions and/or testimony.

- A** Performance Targets. Clarifies that the mode share performance targets identified for TDM plans are the 2035 mode split targets adopted by Council in the TSP. This change also specifies the method for calculating interim year performance targets, e.g. a 2020 or 2025 interim target.
- B** Current TDM Plans. Clarifies that if a site meets 2035 performance targets, PBOT will support ongoing use of a current TDM plan.
- C** Approval. This language has been deleted because the Bureau of Development Services or the Hearings Officer approves development applications.
- D** Modifying Performance Targets. Clarifies that an applicant can request a modified performance target and which factors would be considered to evaluate the modification request.
- E** Chapter. Uses consistent terminology.
- F** Enforcement. Specifies that enforcement applies to implementation of a TDM plan, not performance results. The strategies in TDM plans will be designed to meet performance targets; the City will enforce whether the strategies and performance monitoring in the plan are being implemented.

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Steve Novick Commissioner **Leah Treat** Director

Transportation Demand Management Stakeholder Engagement, Policy Development and Adoption

Transportation System Plan Update

Proposed Scope of Work

This proposed scope of work provides establishes the Portland Bureau of Transportation's (PBOT's) intended process and outcomes for the expanded Transportation Demand Management (TDM) program described in the Transportation System Plan (TSP) Update. This is a preliminary scope and is likely to be revised based on feedback from internal and external stakeholders, as well as potential consultant or other PBOT resources.

These activities are planned to take place concurrent with the hearing and adoption processes for the Comprehensive Plan Update and Central City 2035 plans. Council hearings are planned to begin in fall 2016 and be completed before December 31, 2016. Once the Comprehensive Plan update is adopted by Council, there will be a need for additional administrative work by all bureaus before the new policies will be fully implemented. An early schedule anticipated full implementation will be in 2018.

Task 1. Stakeholder and Community Engagement

A Stakeholder Advisory Committee will form the core of the engagement process. Additional outreach will be conducted as appropriate. To the extent feasible, these efforts will be integrated with other outreach activities associated with the Comprehensive Plan, Central City 2035, Transportation System Plan update, or other related activities.

- Convene a stakeholder advisory committee (SAC, including representatives from various interests including developers, campuses & institutions, neighborhoods, environmental, relevant service providers, and bicycle, pedestrian, and transit representatives.
- Identify technical staff from PBOT and other city bureaus to provide advice and coordination regarding issues including: development review; land use and economic development policies; affordable housing; parking policies and operations; systems development charges and other developer paid fees.



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- Identify a subcommittee from the SAC and technical staff to work through implementation issues related to the development review and permitting processes, and others issues specific to fees and administration.

Key Deliverables

- An early estimate is that the SAC will meet between 5 and 7 times. The final scope for the SAC will be developed after the second meeting.

Task 2. Baseline: Review Current Requirements and Development Costs/Contributions

This task will set a baseline of current requirements as they relate to Transportation Demand Management and private sector contributions to multimodal transportation infrastructure. This task is not intended to provide a comprehensive analysis of the topic, but rather to establish a shared general understanding of related private costs and contributions.

- Current TDM programs in Portland, including current City code requirements; DEQ-mandated TDM requirements; and voluntary programs.
- A review of current developer transportation fees, including System Development Charges (SDCs), Local Improvement Districts (LIDs), and other funding mechanisms.

Key Deliverables

- These items will be summarized in a technical memorandum and/or presented at a SAC meeting and will be considered in the analysis of potential TDM requirements.

Task 3. Policy and Technical Analysis & Recommendations

A framework for expanded TDM requirements is included in Section 14 of the TSP Proposed Draft Update. More detail is needed regarding specific TDM program requirements, costs, and service delivery. Task 3 includes the technical, policy, service, and financial analysis needed to develop detailed requirements for the expanded TDM programs.

The Recommended Draft includes options for either a “pre-approved” plan or a custom plan (typically used by large institutions and campuses). Staff are also evaluating a “menu” approach for the custom plan. The intent is to provide a clear and objective way to evaluate TDM plans for development review.

- Specify requirements in the pre-approved TDM plan for certain Mixed Use Zones and Central City zones development.
- Develop final requirements and implementation details for major TDM plan components:
 - Multimodal financial incentives
 - Information, education, and encouragement services
 - Parking management & pricing
 - Credits for Systems Development Charges or other developer fees
 - Affordable housing considerations
 - Development review requirements, evaluation, mitigations

- Develop a clear and objective approach for developing and evaluating custom TDM Plans. An example is a menu-based plan.

Key Deliverables

- The technical and policy analyses and recommendations will be summarized in memoranda and presented at SAC meetings, for inclusion in the code and administrative rules.

Task 4. Code and Administrative Rule Development

Final TDM policies and implementation guidelines will be in the Title 17, Title 33, or PBOT administrative rules. This task will consider whether additional amendments are needed to Title 17 and/or Title 33; this task will also develop the final Administrative Rule for program implementation.

- Title 33 contains the land use thresholds that would trigger a requirement for a TDM plan, specifically for developments within the new Campus & Institution Zone, Mixed Use Zone, and Central City Zones.
- Title 17 describes the elements in a TDM, if triggered by Title 33.
- Title 17 identifies the performance targets for the TSP, by reference to the adopted performance targets from the Comprehensive Plan.
- The administrative rule will provide the details needed for implementation. At this time, it is expected that the administrative rules will likely include the following:
 - Process for consideration of individualized performance targets.
 - A pre-approved TDM plan, which will identify specific actions for developers of residential and commercial uses in the MUZ and Central City.
 - A “menu-based” TDM guide for development and evaluation of a custom TDM Plan or evaluation of potential mitigations.
 - Review fees, service fees, schedules, and other specific implementation requirements.

Key Deliverables

- Proposed Title 17 amendments, if needed.
- Proposed Title 33 amendments, if needed.
- Administrative Rule document outlining detailed requirements and guidance including the menu-based TDM plan guidance, and Off-the-Shelf TDM Plan.

Task 5. Adoption Process

Adoption of administrative rules will be a combination of PBOT director authority and council actions. Council adoption is required for new fees. Given the potentially significant change represented by the proposed expanded TDM program, PBOT proposes to bring major elements of the draft administrative rules for Council approval, if recommended by the SAC.

- New fee requirements, other financial obligations to developers, proposed SDC credits, or related financial items will be brought to Council for approval, with required notification.
- Administrative rule items related to bureau systems and program implementation, including service provision, will be approved by the Bureau Director.
 - These items will be brought to Council for approval if recommended by the SAC and/or the Transportation Commissioner. However, the Transportation Commissioner may direct the director to approve the Administrative Rule without Council approval.

Key Deliverables

- *(Optional deliverable, depending on PSC Officer's interest and schedule availability).* Presentation to the Planning and Sustainability Commission for recommendation to Council.
- Ordinance to be considered by Council for adoption of any new fee requirements or other issues requiring Council.
- Presentation to Council of the overall TDM program and administrative rule in a briefing or hearing, depending on the recommendation of the SAC and advice of the Transportation Commissioner.