Draft Analysis Methodology and Performance Measures Memorandum

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To: TSP Advisory and Technical Committees

From: Kittelson & Associates, Inc.

Project: Milwaukie Transportation System Plan

Subject: Analysis Methodology and Performance Measures Memorandum

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INTRODUCTION

Oregon Administrative Rule (OAR) 660-012, also known as the Transportation Planning Rule (TPR) provides requirements for Oregon jurisdictions creating and updating transportation system plans. The TPR was updated by the Oregon Department of Land Conservation and Development (DLCD) in 2022 and 2023 to implement the Climate-Friendly and Equitable Communities (CFEC) program. The CFEC program expanded upon the previous transportation system planning requirements, placing new emphasis on equity-based engagement efforts, and requiring a new performance-based transportation planning approach to help Oregon achieve its climate pollution goals.

As a component in the development of a new Milwaukie Transportation System Plan (TSP), this memorandum contains the following:

- Summation of the new performance-based planning requirements contained within the new CFEC rules. In particular, the new rules require the selection of performance standards for selecting and prioritizing the various modal-based transportation planning projects.
- Preliminary recommendations for specific performance standards that should be considered as part of the new TSP.
- Documentation of the intended methodology and assumptions that will be used to complete the various technical components of the TSP. This information is summarized primarily for review purposes by partnering agencies prior to beginning the technical analysis in the upcoming Transportation System Conditions and Needs/Gaps Analysis. Given the mainly informative and technical nature of this information, the methodology and assumptions are included in *Appendix A*.

PERFORMANCE-BASED APPROACH TO TSP DEVELOPMENT

Recent changes to the (TPR) (OAR 660-012) require a performance-based approach to TSP development in metropolitan areas. The performance-based approach is rooted in the need to ensure local and regional transportation planning efforts are helping Oregon achieve its goals for reducing climate pollution. For Milwaukie's new TSP, this includes:

1. Supporting the performance measures and targets from an approved regional scenario plan developed to address OAR 660-044 greenhouse gas reduction target requirements. Cities, counties and Metro must report progress towards achieving the targets. (-0900, 0905 and -0910)
2. Identifying and applying local performance measures and/or evaluation criteria based on the jurisdiction's goals and objectives to identify needs, evaluate alternatives, and develop the modal plans. These should include performance measures the jurisdiction is considering to adopt as performance standards.
3. Adopting two or more performance standards to apply to subsequent comprehensive plan amendments (including TSP updates) and land use decisions (including site development). These shall be supportive of achieving the performance targets from the approved regional scenario plan.
4. Prioritizing projects utilizing a framework that incorporates prioritization factors established in the TPR and considering local evaluation criteria. (-0155, -0520, -0620, -0720, -0820)

Table 1 defines terms related to the performance-based approach for implementing the TPR. Following the table definition summary is a more detailed explanation of the terms and how they apply to the Milwaukie TSP update effort. *Appendix B* includes the OARs most frequently referenced in this memorandum.

Table 1. Definitions for the Performance-Based Approach to TSP Development

Term	Definition	Application to the Milwaukie TSP
Performance Measures	Indicators used to evaluate the performance of the transportation system under existing and future conditions. They can be used to establish baselines, forecast performance of the planned system, and to track progress over time.	Milwaukie will be required to report progress on performance measures identified in Metro's *2023 Regional Transportation Plan under the Climate Smart Strategy performance measures.* The required performance measures can be supplemented with local performance measures and/or evaluation criteria based on TSP goals and objectives to inform development of the TSP.
Performance Targets	Future year targets set for performance measures to compare against reported annual progress.	Performance targets must be set by Milwaukie at levels that are reasonably likely to achieve the regional greenhouse gas (GHG) reduction targets. In Milwaukie's case, the Metro 2023 *Regional Transportation Plan* has already identified targets for each of the selected performance measures. These are identified later in this memorandum (see Table 2).

Term	Definition	Application to the Milwaukie TSP
Performance Standards	An adopted performance standard based on performance measures used to develop the TSP and containing specified thresholds that are used to determine transportation deficiencies and to review comprehensive plan and land use regulation amendments.	Milwaukie must adopt at least two transportation performance standards. At least one transportation performance standard must support increasing transportation options and avoiding principal reliance on the automobile. Performance standards can be selected by the City, but shall be supportive of achieving the Metro performance measures and targets in the Metro *2023 Regional Transportation Plan*.
Thresholds	Performance level set for a Performance Standard to determine adequacy and if the standard is met.	Thresholds can be set for different facility types, location, or other factors.
Evaluation Criteria	Used to compare alternatives, select and prioritize projects	Milwaukie will set these based on TSP goals and objectives.
Prioritization Factors	Factors specified in the TPR that shall be used for prioritizing projects by mode, in specific areas, and systemwide.	Milwaukie must prioritize specific types of projects to improve access, equity, and safety, among other factors. These can be supplemented with local prioritization factors.

Performance Measures

Consistent with -0900, 0905 and -0910, the City of Milwaukie will be required to coordinate its planning process with Metro's Climate Smart Strategy performance measures documented in the *Metro 2023 Regional Transportation Plan*. The following Table 2 documents the current implementation and performance monitoring results from the Metro 2023 *Regional Transportation Plan*.

These measures should be considered or evaluated, if needed, during the existing and future conditions analysis to establish baselines for the performance measures, establish targets for the -0905 performance measures if a target has not been set already, and identify needs. They should influence modal plan development and be used to evaluate future performance of the system.

Table 2. Metro 2023 RTP Climate Smart Strategy Implementation and Performance Monitoring

	Climate Smart Strategy Baseline (2010)	Climate Smart Strategy Monitoring Target (2035)	2023 RTP Base Year (2020)	RTP 23 +STS Target Scenario Constrained (2045)
1. Implement the 2040 Growth Concept and local adopted land use and transportation plans				
a. Share of households living in a walkable mixed used development in the UGB	26%	37%	29%	37%
b. New residential units built through infill and redevelopment in the UGB[1]	58%	65%	TBD	75%
c. New residential units built on vacant land in the UGB[1]	42%	35%	TBD	25%
d. Acres of urban reserves[1]	Not applicable	12,000	Not applicable	TBD
e. Daily vehicle miles per capita	19	17	15	10
2. Make transit convenient, frequent, accessible and affordable				
a. Daily transit service revenue hours (excluding C-TRAN service hours)	4,900	9,400	7,390	10,192
b. Share of households within 1/4-mile all day frequent transit service	30%	37%	44%	41%
c. Share of low-income households within 1/4-mile all day frequent transit service	39%	49%	74%	82%
d. Share of employment within 1/4-mile all day frequent transit service	41%	52%	64%	67%
3. Make biking and walking safe and convenient				
a(1). Daily trips made walking	505,000	768,000	1,416,311	2,129,413
a(2). Daily trips made biking	179,000	280,000	91,000	121,552
b(1). Per capita biking miles per week	2.1	3.4	1.1	1.3
b(2). Per capita pedestrian miles per week	1.3	1.8	2.8	3.3
c(1 and 2). See 4a(2) and 4a(3) below	See 4a(2) and 4a(3) below			
d(1). New miles of bikeways[2]	623 existing miles	421	626 existing miles	76
d(2). New miles of sidewalks[2]	5072 existing miles	Data not available	TBD	59

	Climate Smart Strategy Baseline (2010)	Climate Smart Strategy Monitoring Target (2035)	2023 RTP Base Year (2020)	RTP 23 +STS Target Scenario Constrained (2045)
d(3). New miles of regional trails[2]	229 existing miles	140	247 existing miles	80
4. Make streets and highways safe, reliable				
a(1). Fatal and severe injury crashes - motor vehicles[3]	398	199	433	No forecast data
a(2). Fatal and severe injuries – pedestrians[3]	63	32	78	No forecast data
a(3). Fatal and severe injuries - bicyclists[3]	35	17	26	No forecast data
b. Change in travel time and reliability in regional mobility corridors	Data not available	Not evaluated	Data not available	No forecast data
c. Share of freeway lanes blocking crashes cleared within 90 minutes	Data not available	100%	Data not available	No forecast data
5. Use technology to actively manage the transportation system				
a. Share of arterial delay reduced by traffic management strategies	10%	35%	Data not available	No forecast data
b. Share of regional transportation system covered with system management/TSMO	Data not available	Data not available	Data not available	No forecast data
6. Provide information and incentives to expand the use of travel options				
a. Share of households participating in individual marketing	9%	45%	0.3%	0.6%
b. Share of workforce participating in commuter programs	20%	30%	17%	14%
7. Manage parking to make efficient use of vehicle parking and land dedicated to parking				
a(1). Share of work trips occurring in areas with actively managed parking	13%	30%	TBD	TBD
a(2). Share of non-work trips occurring in areas with actively managed parking	8%	30%	TBD	TBD
8. Support transition to cleaner low carbon fuels, efficient fuels and pay-as-you-go insurance				
a(1). Share of registered passenger cars that are electric or plug-in-hybrid electric	1%	8%	3%	48%

	Climate Smart Strategy Baseline (2010)	Climate Smart Strategy Monitoring Target (2035)	2023 RTP Base Year (2020)	RTP 23 +STS Target Scenario Constrained (2045)
a(2). Share of registered light trucks that are electric or plug-in-hybrid electric	1%	2%	2%	9%
b. Share of households using pay-as-you-go insurance	1%	40%	6%	91%
9. Secure adequate funding for transportation investments				
a. Address local, regional, and state transportation funding gap	Not evaluated		Regional funding discussions are ongoing	
10. Demonstrate leadership on climate change				
a. Region-wide annual tons per capita greenhouse gas emissions (MTCO2e) from household light-duty vehicles within the Target Rule area	Not evaluated		2.3	0.36
b. Region-wide annual tons per capita greenhouse gas emissions (MTCO2e) from all vehicles within the Target Rule area	Not evaluated		TBD	

Table Notes:

1. Data is derived from the 2018 Urban Growth Report adopted by the Metro Council in Dec. 2018.
2. Climate Smart Strategy target reflects number of miles of new bikeways, sidewalks and trails for projects in the 2014 RTP. 2023 RTP values reflect number of miles of new bikeways, sidewalks and trails for projects on planned regional networks in the 2023 RTP.
3. Climate Smart Strategy target reflects the 50 percent reduction target adopted in 2014 RTP. The 2023 RTP includes a target of zero fatal and severe injury crashes by 2035. The region does not currently have a safety predictive model to forecast this information, but will track progress toward the target through periodic RTP updates as required by federal transportation performance management requirements. Data shown for 2023 RTP Base Year (2020) reflects the annual average number of fatal and severe injury crashes reported by the Oregon Department of Transportation for the years 2016-2020.

Source: Metro 2023 *Regional Transportation Plan Draft Climate Smart Strategy Implementation and Performance Monitoring*

Performance Standards

Performance standards are selected from performance measures used to develop the TSP and contain specified thresholds. Performance standards are adopted metrics used to review comprehensive plan and land use regulation amendments and analyze transportation impacts as part of development review.

OAR 660-012-0215(3) requires Milwaukie to adopt at least two transportation performance standards. Historically, performance standards have been heavily focused on the accommodation of vehicular travel such as level of service (a vehicular delay-based standard) or volume to capacity (a roadway/intersection-based capacity standard). Under the new rules, at least one of the new transportation performance standards must support increasing transportation options and avoiding principal reliance on the automobile. The performance standards must also support achieving the targets for the performance measures from the Climate Smart Strategy section of the Metro 2023 Regional Transportation Plan developed to address OAR 660-044 greenhouse gas reduction requirements. Additionally, the performance standards must evaluate at least two of the following objectives for the transportation system, for any or all modes of transportation:

1. Reducing climate pollution: creating feasible transportation options that reduce carbon emissions
2. Equity: consideration for existing or proposed transportation-related disparities and barriers experienced by historically underserved populations
3. Safety: providing a transportations system that reduces injuries and fatalities and that people feel comfortable using
4. Network connectivity: modal networks that provide route options to users and minimize out-of-direction travel
5. Accessibility: the ease of reaching (and interacting with) destinations or activities distributed in space
6. Efficiency: the maximization of transportation services at the lowest possible cost
7. Reliability: dependably provides users with a consistent range of predictable travel times
8. Mobility: the ability to move freely and easily

The performance standards could be based on a measure from the Metro Climate Smart Strategy or measures identified based on the city's TSP goals and objectives. While multiple performance measures will be considered during the development of the TSP, two or more need to be adopted as standards.

Table 3 shows the performance measures that have been included in a toolkit in ODOT's Analysis Procedures Manual to identify and select performance standards to meet the TPR requirements in OAR 660-12-0215. Jurisdictions may adopt performance standards based on different measures; however, these have been identified as good candidates for the City of Milwaukie based on their ability to document incremental changes impacted by projects, plan amendments, site developments and mitigations, their overall flexibility, ease of application and potential data availability. Table 3 also identifies the OAR 660-012-0215(3) objectives that the potential performance standards could have a primary impact upon (the two adopted standards must collectively address two or more of these) and which potential performance

standards would support increasing transportation options and avoiding principal reliance on the automobile (at least one performance standard must meet this criteria). Additional information on each of these potential performance standards is included in ODOT's Analysis Procedures Manual.

Table 3. Candidate Performance Measures for Adopting as Performance Standards

Performance Measures	**OAR 660-012-0215(3) Objectives with Primary Impact**	**Supports increasing transportation options and avoiding principal reliance on the automobile?**
Accessibility to key destinations	Accessibility, Equity	Yes
Accessibility to employment	Accessibility, Equity	Yes
Accessibility to transit	Accessibility, Equity	Yes
Bicycle level of traffic stress (BLTS)	Accessibility	Yes
Pedestrian level of traffic stress (PLTS)	Accessibility	Yes
System completeness	Network Connectivity, Accessibility	Yes
Bicycle crash risk	Safety	Yes
Pedestrian crash risk	Safety	Yes
Walking and biking facility condition	Accessibility	Yes
Pedestrian crossing spacing	Network Connectivity, Accessibility	Yes
AADT/capacity	Efficiency, Mobility	No
Hours of congestion/Duration of congestion	Efficiency, Reliability, Mobility	No
Level of service	Efficiency, Reliability, Mobility	No
Queuing	Mobility	No
Existing and predicted total crashes	Safety	No
Travel speed	Efficiency, Mobility	No
Vehicle hours traveled (VHT)	Reducing Climate Pollution	No
Household-based vehicle miles traveled (VMT) per capita	Reducing Climate Pollution	No
Volume-to-capacity ratio (V/C) at Intersections	Efficiency, Mobility	No
V/C for roadway links	Efficiency, Mobility	No

When selecting measures to adopt as performance standards, the City of Milwaukie needs to consider the following criteria:

- Does the standard help support progress for at least one of the OAR 660-012-0215(3) objectives? If so, which ones?
- Does the standard support increasing transportation options and avoiding principal reliance on the automobile? (One of the two measures must meet this criterion.)
- Can the City support the staff time or consultant time and expense to report on the standard or review the impact of the standard for transportation projects and land use and development applications?
- Does the City have the data available? If not, can they collect the necessary data and will they have the resources needed to do so?
- Does the standard support progress towards the TSP goals and objectives and support achieving the targets for the performance measures from the Metro Regional Transportation Plan? If so, which ones? Greater consideration could be given to standards that address multiple goals and performance measures.
- What will the thresholds be for the standard and will they create outcomes desired by the community?
- What standards do partner and neighboring agencies use and is there a benefit in coordinating standards? How will the two or more selected standards work together? Per OAR 660-012-0215(3), updated Transportation System Plans "must clearly establish how to apply the multiple performance standards to a proposal that meets some, but not all, of the transportation performance standards."

Recommended City of Milwaukie Performance Standards

The City of Milwaukie currently has a level of service (LOS) D standard[1] during the peak operating conditions for all intersections that fall within the City's jurisdiction. Keeping LOS as a performance standard or switching to a volume to capacity-based standard[2] will help the City to continue to support the goals of efficiency, reliability, and mobility by monitoring the degradation of intersection delay/capacity and identify the need for future development projects to maintain that standard.

The non-vehicular-based performance measures documented in Table 4 are recommended for consideration as part of development of the new TSP process. These performance standards would equip the city with tools to review and address comprehensive plan amendments, land use regulation amendments, and development applications while supporting the broader goals of network connectivity, accessibility, and equity.

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[1] LOS D refers to a stable flow of traffic where vehicular volumes are near capacity at an intersection and the density of traffic restricts maneuverability and slows speeds. A LOS D standard indicates that intersections must be designed to operate at this level or better during peak traffic conditions.

[2] Volume to capacity standards compare how many vehicles use an intersection compared to how many vehicles could use the intersection over a time period.

Table 4. Potential Performance Standards Supporting Increasing Transportation Options

Potential Performance Standard	OAR 660-012-0215(3) Objectives with Primary Impact	Key Considerations
System Completeness	Network Connectivity, Accessibility	System completeness is often reviewed at the system-wide level but can be viewed at the facility level. This metric is easily understood by the public and can support a broad range of goals. The TSP will include modal maps and identify gaps in the system as well as information about total miles of pedestrian and bicycle facility and the number of transit routes and stops in the City.
Bicycle Level of Traffic Stress (BLTS)	Accessibility	BLTS is well suited for high-level plans and has a direct connection to roadway characteristics. Most of the data points needed to calculate BLTS are readily available in the City's dataset for most roads. Data collection overlaps with PLTS and could be completed in tandem. BLTS 2 is often used as a target because it appeals to the majority of the potential bike-riding population. BLTS 1 is desired within ¼ mile of schools, The TSP will evaluate the percentage of collector and arterial streets that are rated BLTS 1 or 2.
Pedestrian Level of Traffic Stress (PLTS)	Accessibility	PLTS is well suited for high-level plans and has a direct connection to roadway characteristics. Most of the data points needed to calculate PLTS are readily available in the City's dataset for most roads. Data collection overlaps with BLTS and could be completed in tandem. PLTS 2 is often used as a target because it appeals to the majority of users. PLTS 1 is the preferred target within ¼ miles of schools and in land uses including downtown cores, medical facilities, areas near assisted living/retirement centers, and within ¼ mile of transit stops. The TSP will evaluate the percentage of collector and arterial streets that are rated PLTS 1 or 2.
Accessibility to Transit	Accessibility, Equity	Accessibility to transit helps to compare transit system alternatives. Developing a complete and usable and that includes scheduling and routing data can be cumbersome, so partnership with TriMet would be needed to establish base data for evaluation. Common distances used as analysis factors for walking and biking to/from transit stops are ¼ mile and 1 mile, respectively. The TSP will evaluate the percentage of the City that is within ½ and ¼ mile of transit.

Additional details on the strength and limitations of these, and other, potential performance standards are included in *Appendix C: Draft Performance Measure and Performance Standard Application Guidance*.

Prioritization Framework

In Milwaukie, the TPR includes requirements for how to prioritize projects within each modal plan, in specific areas, and for the system as a whole. An approach is to prioritize the projects in each modal plan first, assess whether the required priorities in specific areas are met, and then develop the financially-constrained project list for all modes and verify that it prioritizes the required systemwide outcomes.

Step 1: Mode Specific Prioritization Factors

Pedestrian and Bicycle System Prioritization Factors (-0520 and -0620)

When prioritizing pedestrian and/or bicycle system projects systemwide, higher prioritization shall be given to projects that:

- Are located in climate-friendly areas.
- Are located in areas with concentrations of underserved populations.
- Are located in areas with pedestrian and/or bicycle safety risk factors such as roadways with high speeds and high traffic volumes.
- Are located in areas with reported crashes involving serious injuries and deaths to pedestrians and/or people riding bicycles.
- Provide access to key pedestrian and/or bicycle destinations identified as provided in OAR 660-012-0360.
- Connect to, fill gaps in, and expand the existing pedestrian and/or bicycle system networks.
- Implement, where applicable, the adopted regional scenario plan developed to address OAR 660-044 greenhouse gas reduction targets.

Transit System Prioritization Factors (-0720)

When prioritizing transit system projects, higher prioritization shall be given to projects that:

- Are located in climate-friendly areas
- Are located in areas with concentrations of underserved populations
- Provide access to key public transportation destinations identified as provided in OAR 660-012-0360
- Connect to, fill gaps in, and expand the existing public transportation network
- Implement, where applicable, the adopted regional scenario plan developed to address OAR 660-044 greenhouse gas reduction targets.

Street and Highway System Prioritization Factors (-0820)

When prioritizing street and highway system projects, higher prioritization shall be given to projects that:

- Reallocate right-of-way from facilities dedicated to moving motor vehicles to those for use by the pedestrian, bicycle, and public transportation systems, particularly in climate-friendly areas, areas with concentrations of underserved populations, and areas with reported crashes involving serious injuries and deaths.
- Fill gaps in the existing street network.
- Implement, where applicable, the adopted regional scenario plan developed to address OAR 660-044 greenhouse gas reduction targets or help meet the performance targets per -0910.

Step 2: Area Specific Prioritization Factors

Jurisdictions should review the priority projects in the areas described below to verify that the required priorities for these areas and priority users are addressed.

- Within CFA's
    - Agencies shall prioritize pedestrian, bicycle, and public transportation facilities and services and ensure planned facilities are safe, low stress, and comfortable for people of all ages and abilities.
- In areas with concentrations of underserved populations
    - Agencies shall prioritize projects addressing historic and current marginalization and work to rectify previous harms and prevent future harms from occurring.
- In industrial areas, along routes accessing key freight terminals, and other areas where accommodations for freight are needed
    - Agencies must consider the needs of freight users. Pedestrian, bicycle, and public transportation system connections must be provided in industrial areas at a level that provides safe access for workers.
- In areas near schools or areas with expected concentrations of children, older people, or people with disabilities
    - Agencies must prioritize safe, protected, and continuous pedestrian and bicycle networks connecting to key destinations, including transit stops.

Step 3: TPR Required Prioritization Factors (-0155(3))

Jurisdictions should develop their combined prioritized project list for their financially-constrained plan and verify that it prioritizes the these systemwide outcomes

- Meeting greenhouse gas reduction targets
- Improving equitable outcomes for underserved populations
- Improving safety, particularly reducing or eliminating fatal and serious injuries
- Improving access for people with disabilities
- Improving access to key destinations
- Completing the multimodal transportation network (filling gaps, making connections)
- Supporting the economies of the community, regional, and state
- Other local factors

Connection Between Prioritization Factors and the TSP Goals

Table 5 connects the prioritization framework above to the goals identified in Milwaukie's current Vision, Goals, and Policies memorandum. These performance measures will be used to evaluate existing and future conditions, identify needs and solutions, and will influence project prioritization.

Table 5. Prioritization Factors and TSP Goals

Goal	Goal Statement	Prioritization Factor
Safety	Improve the safety and comfort of the multimodal transportation network.	• Improve safety, particularly reducing or eliminating fatalities and serious injuries • Pedestrian and/or bicycle system projects are prioritized if they are located in areas with pedestrian and/or bicycle safety risk factors such as roadways with high speeds and high traffic volumes and/or are located in areas with reported crashes involving serious injuries and deaths to pedestrians and/or people riding bicycles
Active, Healthy, Transportation Choices	Establish and/or complete a network of multimodal facilities that make walking, biking, and rolling an attractive, comfortable, healthy, and convenient choice for people of all ages and abilities.	• Complete the multimodal transportation network, including filling gaps and making connections • Projects in an industrial area create or improve pedestrian, bicycle, and public transportation system connections at a level that provides safe access for workers • Pedestrian and/or bicycle projects that connect to, fill gaps in, and expand the existing pedestrian and/or bicycle system networks • Projects in Climate Friendly Areas that iimprove existing or provide new pedestrian, bicycle, and public transportation facilities and services, or create safe, low stress, and comfortable travel via walking, rolling, cycling, and public transportation for people of all ages and abilities with minimal interference from motor vehicle traffic
Mobility, Accessibility, and Connectivity	Provide an efficient and well-connected multimodal transportation system that works to connect the community to key destinations.	• Improve access for people with disabilities • Improve access to destinations, particularly key destinations as identified in OAR 660-012-0360 • Projects in areas near schools or other locations with expected concentrations of children or areas with expected concentrations of older people or people with disabilities that provide safe, protected, and continuous pedestrian and bicycle networks connecting to key destinations, including transit stops • Pedestrian and/or bicycle system projects that provide access to key pedestrian and/or bicycle destinations identified as provided in OAR 660-012-0360
Coordination with Local, Regional, and State Partners	Foster and maintain relationships with public and private partners in the common interest of enhancing the city's transportation network.	*Prioritization factors do not directly relate to this goal, however local, regional, and state partners will be engaged in the TSP development process.*
Resiliency	Develop a multimodal transportation system that provides travel options during normal conditions, natural disasters, or emergencies.	
Parking	Reduce land used for parking to achieve local, state and regional parking goals while also managing parking impacts.	
Fiscal Stewardship and System Management	Make the most of transportation resources by leveraging available funding opportunities, preserve existing infrastructure, and reduce system maintenance costs.	• Align with the functional classification of planned or existing transportation facilities or segments
Economic Vitality	Develop a transportation system that supports and facilitates economic activity through the efficient movement of people, goods, and services.	• Support the economies of the community, region, and state • Projects in Industrial Areas, along routes accessing key freight terminals, and other areas where accommodations for freight are needed that consider the needs of freight users
Equity	New investments in Milwaukie's transportation system are distributed fairly to reduce or eliminate transportation-related barriers and disparities, especially those experienced by marginalized or underserved populations.	• Improve equitable outcomes for underserved populations, as identified in OAR 660-012-0125 • Projects in areas with high concentrations of underserved populations that address historic and current marginalization and/or work to rectify previous harms and prevent future harms from occurring. These areas may have suffered from disinvestment or harmful investments, including transportation system investments. Such harms include but are not limited to displacement, increased exposure to pollutants,

Goal	Goal Statement	Prioritization Factor
		destruction and division of neighborhoods, heat islands, and unsafe conditions for pedestrians, cyclists, transit users, and others. • Pedestrian and/or bicycle system projects that are located in areas with concentrations of underserved populations
Climate Friendly	Develop a transportation system that works to minimize pollution and reduce impacts to the environment and climate change.	• Support meeting greenhouse gas reduction targets, including: • Reduce household-based vehicle miles traveled per capita to meet greenhouse gas reduction targets provided in OAR 660-044-0020 or OAR 660-044-0025[1]; • Support compact, pedestrian-friendly patterns of development in urban areas, particularly in climate-friendly areas; • Reduce single-occupant vehicle travel as a share of overall travel; and • Support meeting performance targets set for required performances measures for reporting (see Performance Measures for Reporting). • Pedestrian and/or bicycle system projects that are located in climate-friendly areas
Transit Forward	Make public transit service more viable.	• Transit elements incorporated in Equity and Mobility, Accessibility, and Connectivity measures.

Next Steps

This memorandum will be reviewed by the Transportation System Plan Technical and Advisory Committees, Transportation Planning Analysis Unit, and Region 1 Traffic Section. After obtaining approval of the analysis methodology the project team will begin the transportation system conditions needs analysis.

APPENDIX A – MILWAUKIE TSP METHODOLOGY AND ASSUMPTIONS

Study Area

The study area for the Milwaukie TSP update is defined as the City of Milwaukie boundaries. The study area does not include areas that are in the Urban Growth Management Areas (Figure 1).

Data

Information contained within the City GIS, Metro Regional Land Information System, or other publicly available databases and imagery will be utilized for the existing transportation system conditions analysis. No new data will be collected for this element of the TSP update.

Analysis Methodology

This section documents the analysis methodology associated with the existing and future conditions analyses.

Land Use and Population Analysis

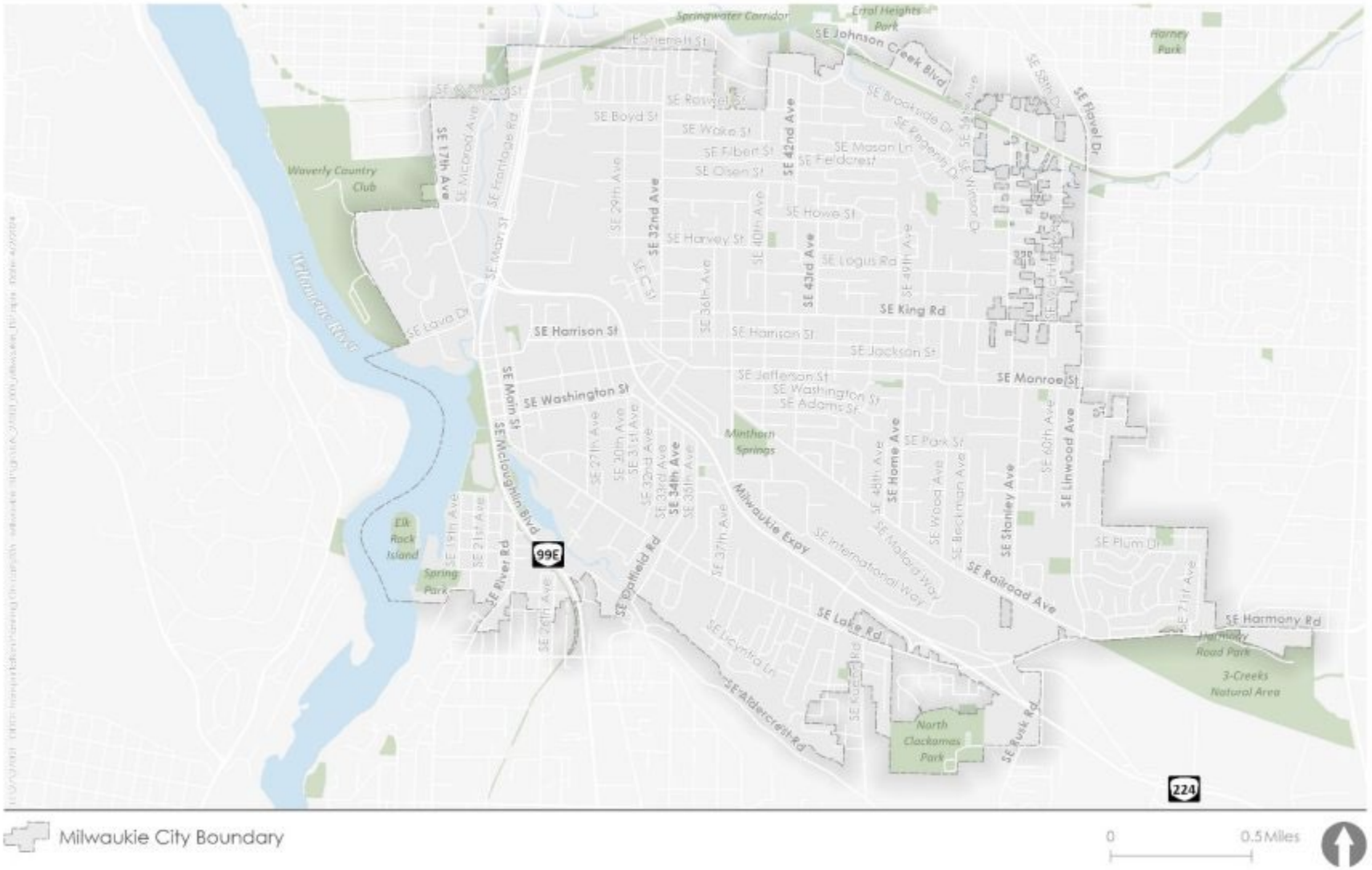
Current population locations and characteristics will be summarized according to most recent American Community Survey data and City GIS data. This will include:

9. Summaries of the locations of underserved and transportation-disadvantaged populations in Task 2.
10. Existing land uses including total land area by Comprehensive Plan Designation and Zoning and the locations and amounts of buildable lands by Comprehensive Plan Designation and Zoning.
11. Maps of identified activity centers and key destinations as identified and provided in GIS by City staff.
12. General characterization of the type of trips and seasonal variations in trips generated by activity centers.

Metro Model Versions/Assumptions

Metro, ODOT, and DKS Associates are currently working on a case study project for Milwaukie that is evaluating how to use the Metro regional travel demand model to comply with CFEC rules for jurisdictions within the region. The case study is anticipated to provide information supporting climate analyses, including greenhouse gas emissions and vehicle miles traveled. The Milwaukie TSP will document the findings of this study pending the timeframe and outcomes of that effort.

Figure 1: Study Area



Enhanced Review Process

Oregon Administrative Rule (OAR) 660-012-0830 requires enhanced review of select roadway projects when preparing a new or updated TSP. The enhanced review process applies to the City of Milwaukie as it is located within Metro. A new step in the preparation of TSPs, the enhanced review process applies specifically to existing planned TSP projects or new proposed TSP projects that fall under one of the following categories:

- New or extended arterial street, highway, or freeway projects that would carry vehicle traffic;
- New or expanded interchanges;
- An increase in the number of general purpose travel lanes for an existing arterial or collector street, highway, or freeway; and
- New or extended freeway auxiliary lanes.

If there are currently planned or anticipated new TSP projects that would meet the enhanced review criteria, the new process would require local agencies to develop new alternative projects to determine if these alternatives could substantially address the identified need without implementation of the roadway projects.

As part of this task, the Project Team, in coordination with ODOT and the Department of Land Conservation and Development (DLCD), has reviewed the list of projects from the existing 2018 *Milwaukie TSP* and the *Metro 2023 Regional Transportation Plan* (RTP). Based on this review, there are no currently planned projects that are likely to trigger enhanced review.

Livable Streets

The livable streets analysis and recommendations will identify standard cross-sections and right-of-way needs based on the land use context for the local street functional classifications.

Livable streets will reflect Metro's *Designing Livable Streets and Trails Guide* and ODOT's *Highway Design Manual*. Recommendations will include recommended changes to the City's Code as needed to support the local street and greenway standards.

Parking

OAR 660-012-0415 identifies that cities with populations over 25,000 within the Portland Metropolitan Area shall set parking maximums in Metro Region 2040 centers. According to the United States Census Bureau, the City of Milwaukie has a population of 21,375 (2022), therefore the requirement to identify parking maximums does not currently apply.

The TSP will include recommendations for locations of parking and charging stations for vehicles and bicycles.

Multimodal Analysis

The existing conditions inventory, needs determination, and solutions assessment will be consistent with the elements required under OAR 600-012-0150. Table 6 documents the "shall" statements required for cities and counties within metropolitan areas, which will be evaluated where there is available data and ability to evaluate based on the project scope and budget. Where there is no available data (e.g. data about the condition of bicycle facilities) or the evaluation goes beyond the project scope and budget, the TSP update will identify the need for additional data collection in the future. Items **bolded** in the table below are anticipated to be evaluated as part of this TSP update based on scope, budget, and available data.

Table 6. Transportation System Needs and Gaps Analysis According to OAR 660-020-0150[3]

Mode	Facility Inventory	Needs Determination	Deficiencies Determination	Developing Solutions
Bicycle	• **Identification of bicycle lanes, bicycle routes, accessways, paths, and other types of bicycle facilities, including pedestrian facilities that may be used by bicycles along bicycle boulevards and along all arterials and collectors within the planning area** • **Identification of bicycle facilities of all types within Climate-Friendly Areas, within Metro Region 2040 centers, within one-quarter mile of all primary and secondary schools, and on bicycle boulevards** • Identification of the width, type, and condition of bicycle facilities • Identification of the consistency of bicycle facilities with applicable state, regional, and local standards • Identification of crash risk factors of inventoried bicycle facilities, including speed, volume, separation, and roadway width • **Location of all reported injuries and deaths of people on bicycles from the most recent 5 years of available data** • **Identification of key bicycle destinations**	• Identification of the local, regional, and state standards for a complete bicycle system for people of all ages and abilities[4] • **Evaluation of gaps and deficiencies in the bicycle network relative to standards, including missing bike lanes**, narrow bike lanes, unmarked crossings, poor surface conditions, poor street lighting, roadway hazards, etc. • **Evaluation of gaps in bicycle access to/from key destinations, including transit stops, schools, shopping areas, medical facilities, civic and recreational uses, and trails** • Analysis of bicycle crash data and risk-based safety issues (see ODOT's Bicycle Safety Implementation Plan for additional information) • **Evaluation of high bicycle fatality and serious injury crash locations**	• **Evaluation of gaps in bicycle access to/from key destinations, including transit stops, schools, shopping areas, medical facilities, civic and recreational uses, and trails, based on future no-build condition and future land use conditions** • Analysis of bicycle risk-based safety issues (see ODOT's Bicycle Safety Implementation Plan for additional information), based on future no-build condition and future land use conditions	• **Completeness of the bicycle network** • **Gaps and deficiencies in the bicycle facilities along all arterials and collectors** • **Gaps and deficiencies in the bicycle facilities along all streets (including local streets) within climate-friendly areas, within Metro Region 2040 centers, within one-quarter mile of all primary and secondary schools, and along designated bicycle boulevards** • **Gaps in the bicycle facilities that would link key community destinations (e.g., major employment centers, schools, parks, transit stops, intermodal facilities, and recreation areas)** • **Known safety issues in the bicycle network (specifically, crash history, noting fatal and severe injury crashes,** or roadway characteristics such as number of lanes, speed, and volume of motor vehicles) • Enhanced facilities (above the minimum bicycle system requirements) where necessary or desirable • Bicycle facility design standards for arterials, collectors, and shared-use paths • **Bicycle projects identified in other relevant state, regional, and local plans** • Bicycle facilities with: – Separated bike lanes (including cycle tracks) – Buffered bike lanes – On-street bike lanes – Shoulder bikeways – Shared roadway pavement marking and signs – Shared use paths • Enhanced bicycle crossings with: – Bike boxes – Two-stage turn queue boxes – Intersection crossing markings – Median diverters

[3] This table was developed based on ODOT's draft Transportation System Plan Guidelines resource (https://www.oregon.gov/odot/Planning/TSP-Guidelines/Pages/Prepare.aspx) – the table is subject to change based on updates to the Transportation System Plan Guidelines.

[4] The pedestrian and bicycle analyses will follow the Pedestrian Level of Traffic Stress (PLTS) and Bicycle Level of Traffic Stress (BLTS) analysis methodologies outlined in the APM. Both PLTS and BLTS methods group facilities into four different stress levels for segments, intersection approaches, and intersection crossings. Facilities with an LTS 1 rating have little to no traffic stress, require less attention, and are suitable for all users. Facilities with an LTS 2 rating have little traffic stress, but require more attention and therefore, may or may not be suitable for small children. Facilities with an LTS 3 rating have moderate traffic stress and are suitable for adults. Facilities with an LTS 4 rating have high traffic stress and are only suitable for able-bodied adults with limited options.

Mode	Facility Inventory	Needs Determination	Deficiencies Determination	Developing Solutions
				– Protected intersections
Pedestrian	• **Identification of sidewalks, crosswalks, shared-use paths, trails, and other types of pedestrian facilities along all arterials and collectors within the planning area** • **Identification of pedestrian facilities of all types within Climate-Friendly Areas, within Metro Region 2040 centers, and within one-quarter mile of all primary and secondary schools** • Identification of the width, type, and condition of pedestrian facilities • Identification of crossing distances, type of crossing, closed crossings, curb ramps, and distance between crossings • Identification of the consistency of pedestrian facilities with applicable state, regional, and local design standards • Identification of crash risk factors of inventoried pedestrian facilities, including speed, volume, separation, and roadway width • **Location of all reported injuries and deaths of people walking or using a mobility device from the most recent 5 years of available data** • **Identification of key pedestrian destinations**	• Identification of the local, regional, and state standards for a complete pedestrian system[1] • **Evaluation of gaps and deficiencies in the pedestrian network relative to standards, including missing sidewalks**, narrow sidewalks, curb-tight sidewalks, poor sidewalk condition, poor street lighting, unmarked crossings, wide spacing between marked crossings, etc. • **Evaluation of gaps in pedestrian access to/from key destinations, including transit stops, schools, shopping areas, medical facilities, civic and recreational uses, and trails** • Pedestrian crash analysis and risk-based safety analysis • Analysis of pedestrian crash data and risk-based safety issues (see ODOT's Bicycle and Pedestrian Safety Implementation Plan for additional information) • **Evaluation of pedestrian fatality and serious-injury crash locations** • Evaluation of marked crossings, including location, spacing, treatments, etc.	• **Evaluation of gaps in pedestrian access to/from key destinations, including transit stops, schools, shopping areas, medical facilities, civic and recreational uses, and trails, based on future no-build condition and future land use conditions** • Analysis of pedestrian risk-based safety issues (see ODOT's Bicycle and Pedestrian Safety Implementation Plan for additional information), based on future no-build condition and future land use conditions • Evaluation of marked crossings, including location, spacing, treatments, etc., based on future no-build condition and future land use conditions	• **Completeness of the pedestrian network** • **Gaps and deficiencies in the pedestrian network along all arterials and collector** • **Gaps and deficiencies in the pedestrian network along all streets (including local streets) within climate-friendly areas, within Metro Region 2040 centers, and within one-quarter mile of all primary and secondary schools** • **Gaps in the pedestrian facilities that would link key community destinations (e.g., major employment centers, schools, parks, transit stops, intermodal facilities, and recreation areas)** • **Known safety issues in the pedestrian network (specifically, crash history, noting fatal and severe injury crashes**, or roadway characteristics such as number of lanes, speed, and volume of motor vehicles) • Enhanced facilities (above the minimum pedestrian system requirements) where necessary or desirable • Pedestrian facility design standards for arterials, collectors, and local streets • **Pedestrian projects identified in other relevant state, regional, and local plans** • Pedestrian facilities with: – Sidewalks – Landscape strips (protective buffers) – Pedestrian pathways/accessways – Pedestrian plazas – Shared-use paths and trails – Pedestrian scale lighting – Pedestrian amenities • Enhanced pedestrian crossings with: – High visibility pavement markings and signs – Raised median islands with pedestrian refuge – Flashing beacons (RRFBs, PHBs, etc.) – Curb extensions
Transit	• **Identification of local and intercity transit service providers** • **Identification of fixed-route and dial-a-ride service areas and the location of fixed routes, major stations, and transit stops** • **Identification of service characteristics, such as days and hours of operation and service frequency**	• Identification of the local, regional, and state standards for a complete public transportation system[6] • **Evaluation of gaps in the local transit network that serve key destinations, including schools, shopping areas, medical facilities, civic and recreational uses, and trails**	• **Evaluation of gaps in the local transit network that serve key destinations, including schools, shopping areas, medical facilities, civic and recreational uses, and trails, based on future no-build condition and future land use conditions** • The item to evaluate "transit corridors, including priority and other transit corridors in areas with greater than 10,000 in population,	The project team will coordinate with TriMet in preparation of transit solutions. • **Completeness of the public transportation network** • **Gaps and deficiencies in the public transportation network, including transit supportive facilities (e.g., stations, hubs, stops, shelters, signs, and ancillary features)** • **Gaps in the public transportation network that would link key community destinations (e.g., major**

[6] The transit analysis will follow the qualitative multimodal assessment (QMA) methodology outlined in the APM. Transit QMA provides a qualitative "good", "fair", "poor" rating for transit service based on hours of service, service frequency, and service coverage.

Mode	Facility Inventory	Needs Determination	Deficiencies Determination	Developing Solutions
	• **Identification of intercity bus and passenger rail terminals and park-and-ride stations** • **Identification of the location of transportation-disadvantaged and disabled populations, including areas with disproportionate concentrations of these populations** • Identification of special service characteristics, such as bus rapid transit • Identification of transitways, transit lanes, transit priority signals, queue jumps, on-route charging, and other transit supportive facilities not otherwise inventoried • Identification of existing and planned transit trunk routes, exclusive transit ways, terminals and major transfer stations, major transit stops, and park-and-ride stations • The item to evaluate "the feasibility of developing a public transit system for areas within an urban area containing a population greater than 25,000 persons not currently served by transit" is not appliable[5] • Identification of ADA accessibility to individual transit stops and services • **Identification of key public transportation destinations**	• The item to evaluate "transit corridors, including priority and other transit corridors in areas with greater than 10,000 in population " is not applicable[7]. • Evaluation of transit supportive facilities on priority and other transit corridors, including stations, hubs, stops, shelters, signs, and ancillary features • **Qualitative multimodal assessment of the public transit system (see ODOT's Analysis and Procedures Manual for technical guidance)** • Assessment of transit stops for accessibility by disabled and safety for all riders, including the accessibility of amenities such as bus shelters	based on future no-build condition and future land use conditions" is not appliable[8]. • Evaluation of transit supportive facilities on priority and other transit corridors, including stations, hubs, stops, shelters, signs, and ancillary features, based on future no-build condition and future land use conditions • **Qualitative multimodal assessment of the public transit system (see ODOT's Analysis and Procedures Manual for technical guidance), based on future no-build condition and future land use conditions**	**employment centers, schools, parks, transit stops, intermodal facilities, and recreation areas)** • **Gaps in the pedestrian and/or bicycle networks that limit access to/from existing or planned transit stops** • **Public transportation projects identified in other relevant transit agency plans**
Roadway	• **Document characteristics within the project limits of known roadway projects that will be moved into the updated TSP and that will be subject to an enhanced review process based on OAR 660-012-0830 (see Enhanced Review of Select Roadway Projects for more information)** • **Location of all publicly owned, operated, or supported streets** • **Identification of roadway ownership by jurisdiction** • **Identification of roadway classifications by jurisdiction, including federal, state, regional, and local classifications, as applicable** • Identification of primary uses, and whether they serve local, regional, pass-through, or freight traffic • Identification of primary users of a facility, including whether users are primarily on	• Identification of the local, regional, and state standards for a complete street and highway system • **Review state, regional, and local transportation/land use plans to identify roadway projects that will be moved into the updated TSP and that will be subject to an enhanced review process based on OAR 660-012-0830 (see Enhanced Review of Select Roadway Projects for more information)** • **Evaluation of local street design standards according to applicable state and regional standards and guidelines** • Comparison of roadway characteristics (travel lane widths, shoulder/bike lane widths, etc.) to applicable state, regional, and local standards • **Evaluation of the local street network and the identification of areas where new local streets will be needed. Cities and counties**	• **Evaluation of the local street network and the identification of areas where new local streets will be needed, based on future no-build condition and future land use conditions. Cities and counties must plan local streets in climate-friendly areas and Metro Region 2040 centers to prioritize pedestrian and bicycle systems and be limited to local access for motor vehicles.** • Evaluation of the collector street network and the identification of new collector streets connected with local streets and arterials, based on future no-build condition and future land use conditions. Cities and counties must plan collectors in climate-friendly areas and Metro Region 2040 centers to prioritize pedestrian, bicycle, and public transportation systems. • Evaluation of the arterial street network, identification of new arterial streets connected with local streets and arterials,	• **Completeness of the roadway network and local street connectivity relative to local performance measures, standards, and targets** • Gaps and deficiencies in the roadway network along arterials, collectors, and local streets • Address gaps and deficiencies in the roadway network that would link key community destinations (e.g., major employment centers, schools, parks, transit stops, intermodal facilities, and recreation areas) • **Roadway design standards for** arterials, collectors, and **local streets that reflect the minimum size necessary for the identified function, planned land use context, and expected users of the facility (roadway design standards may be included as a reference if located in a separate manual)** • **Roadway projects identified in other relevant state, regional, and local plans (projects identified in other plans are also subject to the requirements of OAR 660-012-0830)**

[5] This will not be evaluated in the TSP Update because it is not applicable based on the population size of Milwaukie.

[7] This will not be evaluated in the TSP Update because it is not applicable based on the population density along transit corridors in Milwaukie.

[8] This will not be evaluated in the TSP Update because it is not applicable based on the population density along transit corridors in Milwaukie.

Mode	Facility Inventory	Needs Determination	Deficiencies Determination	Developing Solutions
	foot, bicycle, transit, freight, or personal vehicle • Identification of land use context for each segment of a facility, including types of planned land uses surrounding the facility • Identification of the location of key destinations • Identification of roadway characteristics: – For local streets include location – For collector streets include location, condition, and number of general-purpose travel lanes and turn lanes – For arterial streets include location, condition, and number of general-purpose travel lanes, turn lanes, and lane width – For expressways and other limited-access highways include location, condition, and number of general-purpose travel lanes, turn lanes, and lane width, as well as the locations and types of interchanges • An overview of pricing strategies in use, including specific facility pricing, area or cordon pricing, and parking pricing • Identification of pavement type and conditions through a windshield survey • **Location of all reported serious injuries and deaths of people related to vehicular crashes from the most recent 5 years of available data**	**must plan local streets in climate-friendly areas and Metro Region 2040 centers to prioritize pedestrian and bicycle systems and be limited to local access for motor vehicles.** • Evaluation of the collector street network and the identification of new collector streets connected with local streets and arterials. Cities and counties must plan collectors in climate-friendly areas and Metro Region 2040 centers to prioritize pedestrian, bicycle, and public transportation systems. • Evaluation of the arterial street network, identification of new arterial streets connected with local streets and arterials, and designation of arterial streets as local access priority, through movement priority, or arterial segments in a climate-friendly area.	and designation of arterial streets as local access priority, through movement priority, or arterial segments in a climate-friendly area, based on future no-build condition and future land use conditions.	
Freight	• **Identification of Oregon Highway Plan Freight Routes and Reduction Review Routes** • **Identification of National Highway System (NHS) freight intermodal connectors and facilities** (e.g., truck-rail intermodal yards, truck-rail reload facilities, marine terminals, pipeline terminals, air-cargo facilities, park-and-ride lots, highway-to-rail transfer facilities), including service levels and other characteristics • **Identification of the National Highway Freight Network Critical Urban and/or Rural Freight Corridors** • **Identification of local and regional truck freight routes**	• No freight needs identified as shall statements	• No freight deficiencies as shall statements	• Known multi-modal safety issues along designated freight routes • Existing or projected future operational issues and geometric bottlenecks that impact the movement of truck freight along designated freight routes • **Truck freight projects identified in other relevant state, regional, and local plans**

Crash Analysis

The five most recent years of complete crash data available will be obtained from ODOT's crash database. Currently, complete crash data is available for the period from January 1, 2017 through December 31, 2021. The crash data will be analyzed according to the shall statements of OAR 660-020-0150, as documented in Table 6.

Potential countermeasures (and resulting crash percentage reductions) will be taken from the All Roads Transportation Safety (ARTS) Crash Reduction Factors (CRF) listing, the CRF Appendix, or the Crash Modification Factor (CMF) Clearinghouse; CMFs from the Clearinghouse will be three stars or better.

Planning Level Cost Estimates

Planning level cost estimates will be developed for proposed solutions to inform the identification of a fiscally constrained project list.

According to the Financial Forecast Memo, the City is projected to have approximately $22 million available for capital projects over the next 20 years (excluding potential bonds). This amount of funding will be used to identify the fiscally constrained project list.

APPENDIX B: OREGON ADMINISTRATIVE RULES

This appendix includes the Oregon Administrative Rules (OARs) reviewed to develop the analysis methodology and performance measures. They were copied from the OAR database in February 2022.

OAR 660-012-0155

Prioritization Framework

(1) Cities, counties, Metro, and state agencies shall use the framework in this rule for decision making regarding prioritization of transportation facilities and services. Cities, counties, Metro, and state agencies shall consider the following:

(a) Prioritization factors as provided in section (3);

(b) Classification of facilities or segments as provided in section (4);

(c) The planned land use context as provided in section (5); and

(d) Expected primary users as provided in section (6).

(2) Cities, counties, Metro, and state agencies may use local values determined through engagement as provided in OAR 660-012-0120 to weight various prioritized factors when making prioritization decisions as provided in this division.

(3) Cities, counties, Metro, and state agencies shall prioritize transportation facilities and services based on the following factors:

(a) Meeting greenhouse gas reduction targets, including:

(A) Reducing per-capita vehicle miles traveled to meet greenhouse gas reduction targets provided in OAR 660-044-0020 or OAR 660-044-0025;

(B) Supporting compact, pedestrian-friendly patterns of development in urban areas, particularly in climate-friendly areas;

(C) Reducing single-occupant vehicle travel as a share of overall travel; and

(D) Meeting performance targets set as provided in OAR 660-012-0910.

(b) Improving equitable outcomes for underserved populations identified in OAR 660-012-0125;

(c) Improving safety, particularly reducing or eliminating fatalities and serious injuries;

(d) Improving access for people with disabilities;

(e) Improving access to destinations, particularly key destinations identified as provided in OAR 660-012-0360;

(f) Completing the multimodal transportation network, including filling gaps and making connections;

(g) Supporting the economies of the community, region, and state; and

(h) Other factors determined in the community.

(4) Cities, counties, Metro, and state agencies shall consider the functional classification of planned or existing transportation facilities or segments when making decisions about appropriate transportation facilities and services. Cities, counties, Metro, and state agencies may establish mode-specific functional classifications for each mode on any facility or segment that they own and operate.

(5) Cities, counties, Metro, and state agencies shall consider the planned land use context around an existing or planned transportation facility or segment when making decisions about appropriate transportation facilities and services.

(a) Within climate-friendly areas, cities, counties, Metro, and state agencies shall prioritize pedestrian, bicycle, and public transportation facilities and services. Cities, counties, Metro, and state agencies shall ensure facilities are planned for these modes to experience safe, low stress, and comfortable travel for people of all ages and abilities within climate-friendly areas with minimal interference from motor vehicle traffic.

(b) In areas with concentrations of underserved populations, cities, counties, Metro, and state agencies shall prioritize transportation projects addressing historic and current marginalization. Proposed transportation projects in these areas must work to rectify previous harms and prevent future harms from occurring. These areas may have suffered from disinvestment or harmful investments, including transportation system investments. Such harms include but are not limited to displacement, increased exposure to pollutants, destruction and division of neighborhoods, heat islands, and unsafe conditions for pedestrians, cyclists, transit users, and others.

(6) Cities, counties, Metro, and state agencies shall consider the expected primary users of an existing or planned transportation facility or segment when making decisions about appropriate transportation facilities and services. In particular:

(a) In areas near schools or other locations with expected concentrations of children, or areas with expected concentrations of older people or people with disabilities, cities, counties, Metro, and state agencies must prioritize safe, protected, and continuous pedestrian and bicycle networks connecting to key destinations, including transit stops.

(b) In industrial areas, along routes accessing key freight terminals, and other areas where accommodations for freight are needed, cities, counties, Metro, and state agencies must consider the needs of freight users. Pedestrian, bicycle, and public transportation system connections must be provided in industrial areas at a level that provides safe access for workers.

Statutory/Other Authority: ORS 197.040
Statutes/Other Implemented: ORS 197.012, ORS 197.180, ORS 197.712 & ORS 468A.205
History:
LCDD 9-2023, amend filed 11/07/2023, effective 11/07/2023
LCDD 3-2022, adopt filed 08/17/2022, effective 08/17/2022
LCDD 2-2022, temporary adopt filed 06/01/2022, effective 06/01/2022 through 11/27/2022

OAR 660-012-0160

Reducing Vehicle Miles Traveled

(1) The following jurisdictions are exempt from the requirements of this rule:

(a) Cities under 5,000 population;

(b) Counties under 5,000 population within urban growth boundaries but outside of incorporated cities; and

(c) Counties under 10,000 population within urban growth boundaries but outside of incorporated cities.

(2) When a city or county, makes a major update to a transportation system plan as provided in OAR 660-012-0105, or Metro makes an update to a regional transportation plan as provided in OAR 660-012-0140, they shall use the following requirements to project vehicle miles traveled per capita for the planning period.

(a) The city, county, or Metro must prepare a projection that estimates changes between vehicle miles traveled per capita from the base year and vehicle miles traveled per capita that would result from all projects on the financially-constrained project list prepared as provided in OAR 660-012-0180; and

(b) Projections of vehicle miles traveled per capita must incorporate the best available science on latent and induced travel of additional roadway capacity.

(3) The projections prepared as provided in section (2) must be based on:

(a) Land use and transportation policies in an acknowledged comprehensive plan and in the proposed transportation system plan;

(b) Local actions consistent with the adopted performance targets under OAR 660-012-0910, or OAR 660-044-0110; and

(c) Forecast land use patterns as provided in OAR 660-012-0340.

(4) Cities and counties may only adopt a transportation system plan if the projected vehicle miles traveled per capita at the horizon year using the financially-constrained project list is lower than estimated vehicle miles traveled per capita in the base year scenario.

(5) A city or county is not required to meet the requirements in sections (2) through (4) of this rule if the city or county has selected a financially-constrained project list that does not contain any project that would require review as provided in OAR 660-012-0830(1).

(6) Metro shall adopt a regional transportation plan in which the projected vehicle miles traveled per capita at the horizon year using the financially-constrained project list is lower than the estimated vehicle miles traveled per capita at the base year by an amount that is consistent with the metropolitan greenhouse gas reduction targets in OAR 660-044-0020. Metro may rely on assumptions on future state and federal actions, including the following state-led actions that affect auto operating costs:

(a) State-led pricing policies, and energy prices; and

(b) Vehicle and fuel technology, including vehicle mix, vehicle fuel efficiency, fuel mix, and fuel carbon intensity.

Statutory/Other Authority: ORS 197.040
Statutes/Other Implemented: ORS 184.899, ORS 197.012, ORS 197.712 & ORS 486A.205
History:
LCDD 3-2022, adopt filed 08/17/2022, effective 08/17/2022
LCDD 2-2022, temporary adopt filed 06/01/2022, effective 06/01/2022 through 11/27/2022

OAR-660-012-0215

Transportation Performance Standards

(1) This rule applies to transportation performance standards that cities and counties use to review comprehensive plan and land use regulation amendments as provided in OAR 660-012-0060. If a city or county requires applicants to analyze transportation impacts as part of development review in acknowledged local land use regulations, then that review must include evaluation of the performance standards established under this rule. This rule applies to transportation performance standards that Metro uses to review functional plan amendments as provided in OAR 660-012-0060.

(2) Cities and counties shall adopt transportation performance standards. The transportation performance standards must support meeting the targets for performance measures set as provided in OAR 660-012-0910. The transportation performance standards must include these elements:

(a) Characteristics of the transportation system that will be measured, estimated, or projected, and the methods to calculate their performance;

(b) Thresholds to determine whether the measured, estimated, or projected performance meets the performance standard. Thresholds may vary by facility type, location, or other factors. Thresholds shall be set at the end of the planning period, time of development, or another time; and

(c) Findings for how the performance standard supports meeting the targets for performance measures set as provided in OAR 660-012-0910.

(3) Cities, counties, Metro, and state agencies shall adopt two or more transportation performance standards. Metro may adopt regional performance standards in a functional plan for use across regional and local plans. At least one of the transportation performance standards must support increasing transportation options and avoiding principal reliance on the automobile. The transportation system plan must clearly establish how to apply the multiple performance standards to a proposal that meets some, but not all, of the transportation performance standards. The transportation performance standards must evaluate at least two of the following objectives for the transportation system, for any or all modes of transportation:

(a) Reducing climate pollution;

(b) Equity;

(c) Safety;

(d) Network connectivity;

(e) Accessibility;

(f) Efficiency;

(g) Reliability; and

(h) Mobility.

Statutory/Other Authority: ORS 197.040
Statutes/Other Implemented: ORS 197.012, ORS 197.180 & ORS 197.712
History:
LCDD 9-2023, amend filed 11/07/2023, effective 11/07/2023
LCDD 3-2022, adopt filed 08/17/2022, effective 08/17/2022
LCDD 2-2022, temporary adopt filed 06/01/2022, effective 06/01/2022 through 11/27/2022

OAR 660-012-0905

Land Use and Transportation Performance Measures

(1) Cities, counties, and Metro that have a land use and transportation scenario approved by the commission as provided in OAR 660-044-0050 or OAR 660-044-0120 shall report on the performance measures from the approved regional scenario plan.

(2) Cities and counties that do not have a land use and transportation scenario approved by the commission as provided in OAR 660-044-0120 shall report on the specific actions, including capital improvements and the adoption of policies or programs that they have or will undertake to reduce pollution and increase equitable outcomes for underserved populations. At a minimum, this report must include the following performance measures:

(a) Compact Mixed-Use Development

(A) Number of publicly supported affordable housing units in climate-friendly areas.

(B) Number of existing and permitted dwelling units in climate-friendly areas and percentage of existing and permitted dwelling units in climate-friendly areas relative to total number of existing and permitted dwelling units in the jurisdiction.

(C) Share of retail and service jobs in climate-friendly areas relative to retail and service jobs in the jurisdiction.

(b) Active Transportation

(A) Percent of collector and arterial streets in climate-friendly areas and underserved population neighborhoods with bicycle and pedestrian facilities with Level of Traffic Stress 1 or 2.

(B) Percent of collector and arterial streets in climate-friendly areas and underserved population neighborhoods with safe and convenient marked pedestrian crossings.

(C) Percent of transit stops with safe pedestrian crossings within 100 feet.

(c) Transportation Options

(A) Number of employees covered by an Employee Commute Options Program.

(B) Number of households engaged with Transportation Options activities.

(C) Percent of all Transportation Options activities that were focused on underserved population communities.

(d) Transit

(A) Share of households within one-half mile of a priority transit corridor.

(B) Share of low-income households within one-half mile of a priority transit corridor.

(C) Share of key destinations within one-half mile of a priority transit corridor.

(e) Parking Costs and Management: Average daily public parking fees in climate-friendly areas.

(f) Transportation System

(A) Vehicle miles traveled per capita.

(B) Percent of jurisdiction transportation budget spent in climate-friendly areas and underserved population neighborhoods.

(C) Share of investments that support modes of transportation with low pollution.

Statutory/Other Authority: ORS 197.040
Statutes/Other Implemented: ORS 197.012, ORS 197.712 & ORS 468A.205
History:
LCDD 9-2023, amend filed 11/07/2023, effective 11/07/2023
LCDD 3-2022, adopt filed 08/17/2022, effective 08/17/2022
LCDD 2-2022, temporary adopt filed 06/01/2022, effective 06/01/2022 through 11/27/2022

Appendix C: Draft Performance Measure and Performance Standard Application Guidance