

# WSDOT Multimodal Level of Service Interim Guidance (Aug 2024)

## Contact

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## Background

In response to HB 1181 (2023)<sup>1</sup> and codified in RCW 36.70A.365<sup>2</sup> most jurisdiction must adopt multimodal level of service (MMLOS) standards. Specifically:

*“Multimodal level of service standards for all locally owned arterials, locally and regionally operated transit routes that serve urban growth areas, state-owned or operated transit routes that serve urban areas if the department of transportation has prepared such standards, and active transportation facilities to serve as a gauge to judge performance of the system and success in helping to achieve the goals of this chapter consistent with environmental justice.”*

For examples of multimodal level of service standards, please see:

- [City of Bellingham](#)
- [City of Bellevue](#)
- [City of Seattle](#)
- [CalTrans](#)
- [Ft. Collins, CO](#)
- [Hillsborough, FL](#)

WSDOT is considering how to adopt a MMLOS for state facilities. A discussion of efforts to date are available in Appendix D of the draft Highway System Plan.<sup>3</sup>

In general terms, the approach currently being developed and considered involves different levels of service by mode that incorporate the land use context of locations. Context sensitivity is already addressed at WSDOT in the Design Manual in Chapter 1102, Context Determination.<sup>4</sup> Figure 1 illustrates modal priority by land use context and facility type.

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<sup>1</sup> Washington State Legislature. (2023). Engrossed Second Substitute House Bill 1181. <https://lawfilesexternal.wa.gov/biennium/2023-24/Pdf/Bills/Session%20Laws/House/1181-S2.SL.pdf?q=20240813152546>

<sup>2</sup> Revised Code of Washington. (2024). RCW 36.70A.070 Comprehensive Plans—Mandatory elements (36.70A.365). <https://apps.leg.wa.gov/rcw/default.aspx?cite=36.70A.070>

<sup>3</sup> Washington State Department of Transportation. (2024). Highway System Plan. <https://wsdot.wa.gov/construction-planning/statewide-plans/highway-system-plan>

<sup>4</sup> Washington State Department of Transportation. (2024). Design Manual. <https://wsdot.wa.gov/engineering-standards/all-manuals-and-standards/manuals/design-manual>

		Land-Use Context			
		Rural	Suburban	Urban	Urban Core
Roadway Type	Freeways				
	Principal Arterial				
	Minor Arterial				
	Collector				
	Local				

  

<p><b>Motor Vehicles</b> <u>Incl. Freight</u></p> High Medium Low	<p><b>Bicycles</b></p> High Medium Low	<p><b>Pedestrians</b></p> High Medium Low	Transit compatibility not shown because it varies by route (compatibility can't be determined based on roadway type and land-use context)
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### DRAFT Place Type Mapping

Moving from context for a project location to all places requires developing definitions for each place type. In addition to the context definition in WSDOT's design manual, there are multiple approaches used in other states. For example, a National Cooperative Highway Research Program report shows the range of definitions from rural to urban as used by other states or in guidance documents.<sup>5</sup> There is also a previous WSDOT related effort in the Transportation Efficient Land Use Mapping Index (TELUMI),<sup>6</sup> and other efforts in Washington State—e.g., Regional Growth Centers at the Puget Sound Regional Council,<sup>7</sup> or King County transects.<sup>8</sup>

The Oregon Place Types Tool is used for the basis of most of WSDOT's effort in place type mapping.<sup>9</sup> Based on WSDOT expertise and the advice of the Technical Advisory Group, WSDOT's draft place type definitions are:

- **Rural:** 0-4 people and/or jobs per acre. No existing fixed-route transit service.
- **Suburban:** 4-8 people and/or jobs per acre, OR, 1-4 people and/or jobs per acre if there is any fixed-route transit service.

<sup>5</sup> Stamatiadis, N., Kirk, A., Wright, L., Steyn, H., Raulerson, M., and Musselman, J. (2022). Identification of AASHTO Context Classification. Retrieved from [https://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_1022Contractor.pdf](https://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_1022Contractor.pdf)

<sup>6</sup> Moudon, A., and Sohn, D. (2005). Transportation-Efficient Land Use Mapping Index (TELUMI). <https://www.wsdot.wa.gov/research/reports/fullreports/620.1.pdf>

<sup>7</sup> Puget Sound Regional Council. (2024). Centers. <https://www.psrc.org/our-work/centers>

<sup>8</sup> King County. (2010). Framework: The Transect. [https://kingcounty.gov/~media/depts/permitting-environmental-review/dper/documents/growth-management/comprehensive-plan-2010/d\\_frameworktransect.ashx?la=en](https://kingcounty.gov/~media/depts/permitting-environmental-review/dper/documents/growth-management/comprehensive-plan-2010/d_frameworktransect.ashx?la=en)

<sup>9</sup> Oregon Department of Land Conservation and Development. (2024). Place Type Tool. <https://www.oregon.gov/lcd/cl/pages/place-types.aspx>

- **Urban:** 8-30 people and/or jobs per acre, OR, 4-8 people and jobs per acre IF the regional share of employment is in the top 5% of block groups for employment.
- **Urban Core:** More than 30 people and/or jobs per acre, OR, 8-30 people and jobs per acre IF there are more than 30 pedestrian links per square mile.
- **Freight dependent land use:** More than 2,000 freight dependent jobs in the block group. Freight dependent jobs include NAICS sectors 11 (Agriculture, Forestry, Fishing and Hunting), 21 (Mining, Quarrying, and Oil and Gas Extraction), 22 (Utilities), 23 (Construction), 31-33 (Manufacturing), 42 (Wholesale Trade), and 48-49 (Transportation and Warehousing).

The draft place types maps are available at: [https://bassoka.shinyapps.io/DRAFT\\_place\\_types/](https://bassoka.shinyapps.io/DRAFT_place_types/)

The code and data for generating the maps is available at: <https://github.com/abassok/mmls>

### Multimodal Level of Service

WSDOT's future work will focus on moving from this decision-aiding tool to updating level of service standards to multimodal level of service. The intention is to have a different standard for each mode and place type as follows:

- **Cars:** Modified level of service based on the current level of service as detailed in the Draft Highway System Plan.<sup>10</sup>
- **Active modes:** Level of Traffic Stress two or better across all place types. A discussion of Level of Traffic Stress is available at: <https://wsdot.wa.gov/sites/default/files/2023-06/PlanningStudyGuidance-AT-PlanForLevelOfTrafficStress.pdf>
- **Transit:** See Appendix A: draft transit LOS statements. Across place types there is a range of fixed-route and demand response services. Regardless of transit-supportive land uses, there are always people in all place types who cannot drive and a demand for transit services.
- **Freight:** There is demand for freight across all place types, whether for agricultural use in rural area or deliveries in the most urban areas. Special consideration should be given to freight dependent land uses, regardless of passenger vehicle level of service—e.g., truck parking, truck only lanes, dedicated loading zones, etc.

Work on this topic will continue in Fall 2024. Comments on the draft place types mapping, definitions, or anything else is most welcome. Local agencies are welcome to use the place type maps and MMLOS concepts for their own purposes.

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<sup>10</sup> Washington State Department of Transportation. (2024). Highway System Plan. <https://wsdot.wa.gov/construction-planning/statewide-plans/highway-system-plan>

# Appendix A: draft transit LOS statements

## Contact

For more information about Transit Level of Service, please contact:

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## Purpose statement

This transit level of service was prepared by WSDOT Public Transportation Division to support the agency's work to define multimodal level of service for state highways. It was designed to align broadly with previous WSDOT reports and plans including the [Human Services Transportation Plan](#) (2022), [Frequent Transit Service Study](#) (2023), [Highway System Plan](#) (2024), [Active Transportation Plan](#) (2020), and [Public Transportation Plan](#) (2016).

Two qualitative levels were designed per place type. "Minimum level of service" is generally met and achievable and "Equitable level of service" describes characteristics which would provide a transit level of services which meets community needs.

This framework may be modified to include local planning goals and community feedback.

The following characteristics are identified for each level of service described below.

- Relative access
- Fixed-route transit frequency and span/days
- Fixed-route transit mode
- Paratransit wait time
- Public micromobility and rideshare
- Active transportation access to transit
- Stop amenities
- Inducements to mobility
- Trip booking, technology access
- Safety infrastructure

## How to use this document

This document is intended to guide WSDOT staff, consultants, and jurisdiction staff on understanding (measuring) a public transportation users experience in terms of trip comfort, reliability, and access when using state highways. It will help officials understand how the highway is meeting the travel needs of those using transit.

Like traffic level of service, the highest level, is intended to be aspirational and reflects what an ideal travel time and trip could look like for public transportation users.

This document is not intended to guide transit route planning or local public transportation planning. There are a myriad of issues which influence public transportation access. The levels in this document allow us to achieve parity with traffic level of service.

This guide refers to levels of frequency discussed in the [Frequent Transit Service Study](#) on page 3:

Transit frequency	Description	Estimated population living within half a mile	Percentage of Washington residents
Level 1	12 min headway days; 15 nights and weekends	530,000	7%
Level 2	15 min headway days; 30 nights and weekends	1,520,000	20%
Level 3	30 min headway days; 60 nights and weekends	3,040,000	40%
Level 4	60 min headway minimum 5 days a week	4,390,000	58%
Level 5	6 trips per day on weekdays	4,610,000	61%
Level 6	2 trips per day on weekdays	4,720,000	63%
24-hour	1 trip every 2 hours overnight	690,000	9%

## Urban Core

### Equitable level of service

- Access for transit riders is nearly equivalent to access for drivers.
- Transit of level 2 frequency or better runs on most streets that aren't pedestrian/bike-only streets; very high frequency (6 minute or better frequency during peak, 12 minutes or better 5am to 2am) in a high-capacity mode (e.g. rail or BRT) is available within a half-mile walk from any origin.
- On-demand paratransit service is available with a 10 minute or less wait time
- Public bikeshare or other micromobility services support highly local trips; public rideshare may be available to provide service where fixed-route transit and micromobility are not sufficient.
- All streets have wide sidewalks and active transportation lanes or other multimodal facilities are present near all transit stops
- All transit stops have shelters, benches, lighting, trash cans, real-time signage, and restrooms available (though restroom access for minor transit stops may be nearby public restrooms); customer service staff members are available at all stations serving high-capacity modes and found onboard many vehicles or at many transit stops throughout the system.

- Public-sponsored programs are available and well-budgeted to induce use of non-drive alone modes through Transportation Demand Management
- High-quality information about all public transportation modes are accessible to all users through mobile devices and printed products, and services requiring booking can be reserved easily without downloading a special-purpose app.

### Minimum level of service

- Access for transit riders with no disabilities is roughly one tenth the access for drivers, access for riders with disabilities may be even lower due to limitations in sidewalk infrastructure and other factors.
- Transit of level 3 frequency or better is available within a half-mile walk from any origin. Transit of level 2 frequency and sometimes level 1 frequency is available at key destinations or along certain corridors. High-capacity transit may or may not be available.
- Paratransit service is available but may require reservation the day before the trip.
- Public bikeshare or other micromobility services may or may not be available.
- Nearly all streets have sidewalks but some may have been built pre-ADA and are not compliant, and active transportation lanes and other facilities are only present on a certain streets.
- Major transit stops have shelters, benches, and trash cans, but generally there is no real-time signage, customer service staff, or restrooms available except at high capacity transit stations.
- Public-sponsored programs may be available and induce use of non-drive alone modes through Transportation Demand Management
- Information about all public transportation modes are accessible to all users through mobile devices and printed products, but most available apps may not be fully real-time enabled and online booking may not be available for trips requiring reservations.

## Urban

### Equitable level of service

- Access for transit riders is roughly half the access for drivers.
- Transit of level 2 frequency or better runs is available within a half mile-walk from any origin; level 1 frequency or better transit in a high-capacity mode (e.g. rail or BRT) is available on certain corridors.
- On-demand paratransit service is available with a 15 minute or less wait time
- Public bikeshare or other micromobility services support highly local trips; public rideshare may be available to provide service where fixed-route transit and micromobility are not sufficient.
- All streets have wide sidewalks and active transportation lanes or other multimodal facilities are present near all transit stops
- All transit stops have shelters, benches, lighting, trash cans, real-time signage, and restrooms available (though restroom access for minor transit stops may be nearby public restrooms); customer service staff members are available at all stations serving high-capacity modes and found onboard some vehicles or at some transit stops throughout the system.

- Public-sponsored programs are available and well-budgeted to induce use of non-drive alone modes through Transportation Demand Management
- High-quality information about all public transportation modes are accessible to all users through mobile devices and printed products, and services requiring booking can be reserved easily without downloading a special-purpose app.

### Minimum level of service

- Access for transit riders with no disabilities is roughly one twentieth the access for drivers, access for riders with disabilities may be even lower due to limitations in sidewalk infrastructure and other factors.
- Transit of level 3 frequency or better is available within a half-mile walk from any origin. Transit of level 2 frequency and rarely level 1 frequency is available at key destinations or along certain corridors. High-capacity transit may or may not be available.
- Paratransit service is available but may require reservation the day before the trip.
- Public bikeshare or other micromobility services may or may not be available.
- There is mostly a complete accessible sidewalk network, although individual blocks or small areas may be missing sidewalks or curb cuts, and active transportation lanes and other facilities are only present on a certain streets.
- Many bus stops have a shelter and bench, but lack other amenities, but generally there is no real-time signage, customer service staff, or restrooms available except at major transit stations.
- Public-sponsored programs may be available and induce use of non-drive alone modes through Transportation Demand Management
- Information about all public transportation modes are accessible to all users through mobile devices and printed products, but most available apps may not be fully real-time enabled and online booking may not be available for trips requiring reservations.

### Suburban / Low-density or small-town area

#### Equitable level of service

- Access for transit riders with no disabilities is likely to vary widely in comparison to cars depending on the distance from job centers.
- Transit of level 5 frequency or better is available within a two-mile walk from any origin. Transit of level 3 frequency or better is available on certain higher density corridors and in small town areas. Transit of level 2 frequency or better may appear along commercial corridors. High-capacity transit may or may not be available. Intercity service of level 4 frequency is available to nearby urban areas within a 10-mile walk from any origin.
- On-demand paratransit service is available with a 15 minute or less wait time.
- Public bikeshare or other micromobility services support highly local trips; public rideshare may be available to provide service where fixed-route transit and micromobility are not sufficient.
- All streets have sidewalks and active transportation lanes or other multimodal facilities are present near all transit stops
- All transit stops have shelters, benches, lighting, trash cans, real-time signage, and restrooms available (though restroom access for minor transit stops may be nearby public restrooms); customer service staff members are available at all stations serving

high-capacity and intercity modes and found onboard some vehicles or at some transit stops throughout the system.

- Public-sponsored programs are available and well-budgeted to induce use of non-drive alone modes through Transportation Demand Management
- High-quality information about all public transportation modes are accessible to all users through mobile devices and printed products, and services requiring booking can be reserved easily without downloading a special-purpose app.

### Minimum required level of service

- Access for transit riders with no disabilities is likely to vary widely in comparison to cars depending on the distance from job centers.
- Transit of level 6 frequency or better is available within a two-mile walk from any origin. Transit of level 4 frequency or better is available on certain higher density corridors and in small town areas. Transit of level 2 frequency may appear along commercial corridors. High-capacity transit may or may not be available.
- Paratransit service is available in areas served by fixed route transit but may require reservation the day before the trip. Additional non-profit or public services provide mobility options to residents outside of areas served by fixed route transit.
- Public bikeshare or other micromobility services may or may not be available.
- There is mostly a complete accessible sidewalk network, although individual blocks or small areas may be missing sidewalks or curb cuts, and active transportation lanes and other facilities are only present on a certain streets.
- Many bus stops have a shelter and bench, but lack other amenities, but generally there is no real-time signage, customer service staff, or restrooms available except at major transit stations.
- Public-sponsored programs may be available and induce use of non-drive alone modes through Transportation Demand Management
- Information about all public transportation modes are accessible to all users through mobile devices and printed products, but most available apps may not be fully real-time enabled and online booking may not be available for trips requiring reservations.

## Rural

### Equitable level of service

- Access for transit riders is one-quarter or more the access for drivers, and access for transit riders with disabilities is only marginally less than access for transit riders without disabilities.
- Transit of level 3 frequency or better is available along the most populated corridors and within small urban centers. Intercity service of level 5 frequency is present within 10 miles of all population centers, and many towns along key intercity routes have level 4 frequency intercity serviced.
- Paratransit service is available in areas served by fixed-route transit, but may need to be scheduled up to 1 hour before the trip. In areas not served by fixed-route transit, general public demand-response service is available to be scheduled up to 1 day before the trip.
- Public bikeshare or other micromobility services are available in certain small town centers.



- There is generally a complete accessible sidewalk network in population centers, although individual blocks may be missing sidewalks or curb cuts. In between population centers, active transportation is available through multi-use paths or similar facilities.
- All bus stops have a shelter and bench, but may lack other amenities. Major and intercity transit stations have real-time signage, customer service staff, or restrooms available
- Public-sponsored programs may be available and induce use of non-drive alone modes through Transportation Demand Management
- Information about all public transportation modes are accessible to all users through mobile devices and printed products, and services requiring booking can be reserved easily without downloading a special-purpose app.

#### Minimum required level of service

- There is no fixed-route transit present except for intercity service for which level 6 frequency is present within 25 miles of all population centers.
- Non-profit or public services provide options to residents with identified mobility needs.
- Sidewalks are present only in certain population centers.