

Transit Service Planning Glossary



Headway: The amount of time between consecutive trips in the same direction of travel. Headway is usually expressed in minutes. On routes with uneven headways (i.e. variation in times between buses), this measure is expressed as an “average headway.”

Frequency: The number of bus trips in the same direction of travel within a specified time period. Frequency is usually expressed as the number of trips per hour. Frequency is also sometimes expressed in minutes, when referring to a single trip within a specified time period.

Example of Headway and Frequency:

Route A departs at: 5:00, 5:30, 6:00, 6:15, 6:30, 6:40, 6:50 and 7:00

- Between 5:00 and 6:00, the headway of route A is 30 minutes and the frequency of route A is 2 buses/hour or 1 bus every 30 minutes.
- Between 6:00 and 7:00, the average headway of route A is 12 minutes and the frequency of route A is 5 buses/ hour. Between 6:00 and 6:30, the frequency of route A could also be expressed as a bus every 15 minutes. Between 6:30 and 7:00 the frequency of route A could also be expressed as a bus every 10 minutes.

Span of Service: The amount of time each day in which the route is operating. Span of Service can be expressed generally in terms of hours per day or more specifically by stating the time of the first and last trips of the day. For example, route A has a span of service of 18 hours between the first trip at 5:00 AM and the last trip at 11:00 PM.

Layover/Recovery Time: The scheduled time spent at a route’s terminal between consecutive trips by a single bus. Example: A bus is scheduled to arrive at its terminal at 2:00 PM and is scheduled to leave its terminal at 2:30 PM. The “layover” or “recovery” time for this bus would be 30 minutes. “Layover” or “recovery” time is necessary to allow bus drivers a break and provide a time cushion in event the preceding trip is delayed.

Deadhead Time: The scheduled time spent driving to and from the base or between trips on different routes. Passengers may be conveyed on deadheading trips.

Revenue Hours: The number of hours buses are operating scheduled trips for a given route. This time does not include layover or deadhead time.

Platform (Vehicle) Hours: The number of hours buses are on the road for a given route. This includes revenue time, layover time and deadhead time.

Transit Service Planning Glossary



Annual Platform (Vehicle) Hours: The number of platform hours operated during a calendar year for a given route. For example, if a route operates 10 platform hours of service each day of the year, there are 3,650 ($= 10 * 365$) annual platform hours on the route.

Passenger Load: The number of passengers divided by the number of seats on the bus. Passenger load is expressed a ratio and is measured at points along the route. Planning staff is interested in the maximum passenger load and where along the route it occurs. A maximum passenger load above 1.0 indicates that sometime in the bus trip at least one passenger is standing.

Fixed-Route Service: Scheduled transit routes in which trips are required to follow a fixed routing from the beginning of the trip to the end.

DART Service: Scheduled transit routes in which individual trips may deviate from the fixed route to pick up or drop off a passenger closer to their origin or destination. DART routes may only deviate into pre-specified "DART areas." Many DART routes include a fixed route portion in which passengers can access service from regular bus stops.

Paratransit (ACCESS) Service: Van operated service which has no fixed route or schedule and which provides trips to customers who have difficulty using Metro's fixed-route or DART service. Passengers must apply to use Access service in advance of making a trip.

Transit operation terms and concepts

Transit Center: A facility where numerous bus routes converge to provide a convenient and safe location for transferring. Bus schedules are often coordinated at transit centers to minimize transfer times between certain routes.

Park and Ride: A facility where transit passengers may park their automobile and catch a bus, vanpool or carpool to reach their final destination. Sometimes co-located with transit centers to provide many route options; such as the Redmond Transit Center and park-and-ride lot.

Transit Service Planning Glossary



Transit vehicle terms and concepts

Articulated bus: A 60-foot long bus, which consists of a front and rear section, connected by an accordion-like fabric. Metro articulated buses have seats for 54 to 64 passengers.

Standard bus: A 35 to 40-foot long single body bus. Metro standard buses have seats for 34 to 44 passengers.

Small bus: A 30-foot long single body bus. The small buses are slightly narrower than typical buses and have significantly better maneuverability than standard or articulated buses. Metro small buses have seats for 30 passengers.

Trolley bus: An electrically powered bus. Power is transmitted through the system using wires suspended above the roadway. The bus collects power using trolley poles.

Diesel bus: A diesel powered bus. Power is generated by the diesel engine carried on board the vehicle.

Hybrid bus: A diesel-electric powered bus. A diesel-electric engine carried on board the vehicle generates power. This bus has higher fuel economy than a standard diesel bus.

DART vehicle: A vehicle similar to a large passenger van. These vehicles are used exclusively on DART routes, and have seats for about 20 passengers.

Low-floor bus: A vehicle that has no stairs at the doorways. This provides much easier access to customers with mobility difficulties and can help to reduce the time for customers to get on and off the bus, thereby reducing the time at stops. The tradeoff is that due to the low floor, the wheel wells take up space within the passenger compartment reducing the number of seats.

Transit Service Planning Glossary



The anatomy of a transit trip

Origin: The location where a passenger begins a trip.

Destination: The location where a passenger ends their trip.

Boarding: A single passenger getting on a transit vehicle. Also referred to as an "on."

Alighting: A single passenger getting off a transit vehicle. Also referred to as an "off."

Ride: A single passenger using a single transit vehicle for a segment of their trip.

Trip: A single passenger movement from their origin to their destination. A trip may include several rides.

Transfer: Occurs when a passenger must change buses in order to complete their trip.

Example of a Transit Trip

A transit customer boards a bus at Bellevue Community College and rides to Overlake where they alight and transfer to another bus destined for downtown Redmond (their final destination).

- "Origin" at Bellevue Community College and "destination" at Redmond.
- One "Trip" (Bellevue Community College to Redmond)
- Two "boardings" (Bellevue Community College and Overlake)
- Two "alightings" (Overlake and Redmond)
- Two "rides" (Between Bellevue Community College and Overlake and between Overlake and Redmond)
- One "transfer" (in Overlake)

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