**Transit 101**

**Tips & pointers for understanding**

**ODOT PTD funding and requirements**

**Key Resources**

Below are some key resources for understanding some of the ODOT PTD Policies and Procedures

**ODOT PTD policies and procedures**

<http://www.oregon.gov/ODOT/RPTD/Pages/Transit-Rules.aspx>

**ODOT Guidance on the Statewide Transportation Improvement Fund (STIF)**

STIF webpage: <https://www.oregon.gov/ODOT/RPTD/Pages/STIF.aspx>

STIF-STF Consolidation information (will occur for next cycle in FY23-25): <https://www.oregon.gov/odot/RPTD/Pages/STF-STIF-RAC.aspx>

**ODOT PTD Funding Opportunities**

<https://www.oregon.gov/odot/RPTD/Pages/Funding-Opportunities.aspx>

**Federal Transit Administration**

Guidance for recipients of 5310, 5311, 5309, 5304 or other federal funds. These circulars provide with direction on program specific issues and statutory requirements. It is important to be familiar with the circulars relevant to the federal funds you receive.

<https://www.transit.dot.gov/regulations-and-guidance/fta-circulars/fta-circulars>

**Your Regional Transit Coordinators**

[About-RTCs.pdf (oregon.gov)](https://www.oregon.gov/ODOT/RPTD/RPTD%20Document%20Library/About-RTCs.pdf)

**Resources continued.**

A great webinar that talks about FTA and Transit – **FTA 101 An introduction to the Federal Transit Administration.** <http://web.transportation.org/fta_pres/fta_2018/presentation_html5.html>

**Transit** often refers to “mass transit” or “public transportation” and is generally thought to mean local transit such as buses, streetcars, subways, light rail, commuter trains etc. However, it can also mean dial-a-ride, demand response, fixed route, deviated fixed, or commuter.

**Public Transportation**

**Mode-** A form of public transportation

* **Fixed Route-** Bus, Rail and other
	+ Repetitive, fixed schedule.
	+ Specific route, stopping at specific locations.
	+ Trips use same origins and destinations.
	+ Published timetables and schedules.
	+ Specific boarding/deboarding areas
* Americans Disabilities Act-**ADA Complementary Paratransit**-ADA Act of 1990
	+ Operates in compliance with ADA requirements.
	+ Same level of service as fixed route systems.
	+ Same days of the week; hours as fixed route service.
* **Demand Response** (dial-a-ride, Senior Transit, Van Pool, Volunteer)
	+ Individual passenger requested service.
	+ Curb to curb or Door to Door service.
	+ Riders may have special needs.
	+ Lower demand service in rural areas.
* **Deviated Fixed Route**
	+ Hybrid of fixed-route and ADA Complementary Paratransit service
	+ Provides riders the reliability of fixed route service.
	+ Flexibility of demand response.
	+ Deviated Fixed routes do not have to provide.

**State Agency-** State entity responsible for administering federal transportation programs.

**Transit Agency-** Entity Responsible for managing and operating transit activities and services

**Multimodal Transit Agency-**An agency operating more than one mode of public transportation.

**Role of FTA**

Assistance to state, tribal and local systems. To develop new transportation systems, improve existing public transit systems, maintain existing public transit systems, and operate existing transit systems.

**Recipient-** agency receiving aid directly from the administering agency. ODOT is recipient of funding from FTA.

**Sub-Recipient-**agency receiving funding from the recipient of the federal or state funding.

**Funding Sources**

|  |  |  |  |
| --- | --- | --- | --- |
| **Program** | **Purpose** | **Recipients** | **Eligible Uses & Match** (see later in document for more detailed definitions for each project type) |
| **Formula Funds***Typically awarded for odd-number biennia. Funds that rural counties typically receive are in* ***bold.*** |
| **5310** | Seniors andindividuals withdisabilities | STIF Agencies-Qualified Entities (State passes through FTA 5310 to eligible providers across the state by a formula based on total population and on the population of seniors and individuals with disabilities)  | * **Capital** (10.27% match) – vehicles, bus stop improvements, facilities (NEPA environmental documentation required)
* **Mobility Management** (10.27% match) – Travel training, outreach, coordination work, more than dispatch & admin
* **Purchased Service** (10.27%)– Contract for service.
* **Preventive Maintenance** (10.27%) – maintenance of vehicles & facilities
* **Operating (50-56%)** - Small urban areas can use for Operations (Driver salaries, fuel, staff & dispatch salaries, all other uses)
 |
| **STF-Merged with STIF** | Seniors andindividuals withdisabilities | STIF Agencies | * **Great source of match for FTA 5310 & 5311**
* All project types eligible. Very flexible, often used as match for FTA programs or to purchase non-ADA vehicles.
* ***No match.***
* Merged with STIF in FY23-25 but retain fund purpose
 |
| **STIF** | General public service with emphasis on low-income populations & student transportation | Qualified Entities (Same as STIF agencies) | * **Great source of match for FTA 5310 & 5311**
* **All project types eligible. Good source for capital projects because lower environmental documentation**
* ***No match***
* Merged with STF in FY23-25
* Submit ‘STIF Plan’ as the application
 |
| 5311 | General public rural transit | Cities, counties, districts, tribes, nonprofits that meet FTA requirements for D&A and other reporting (Oregon allocates its Section 5311 formula funds based upon ridership and revenue mileage to prequalified subrecipients using a formula approved by the Oregon Transportation Commission (OTC)) | * Operations (43.92% match)
* Capital (10.27%)
* Administration (10.27%)
* Preventive Maintenance (10.27%)
* Planning (10.27%)
* Mobility Management (10.27%)
 |
| **Discretionary Funds** *Sometimes awarded for even-number biennia. Funds that rural counties typically receive are in* ***bold.*** |
| **5310 Discretionary** | Seniors & individuals with disabilities |  | * Operations (50%)
* Mobility management
* Purchased service.
* Preventive maintenance (20% match)
 |
| STBG | ODOT provides flex funds for vehicle replacements | Urban, Small Urban, and Rural public transportation agencies | * Vehicle replacements (10.27% match)
 |
| 5339 | Capital projects | Small urban & rural service providers that meet FTA requirements for D&A and reporting | * Vehicles (15% match)
* Equipment & facilities (20% match)
 |
| 5307 | All public transportation projects  | Urbanized areas (larger cities with MPOs) populations greater than 50,001 are direct recipients and are part of a Metropolitan Planning Organization.  | * Vehicle replacement & right-sizing
* Operations
* Mobility management
* Purchased service.
* Preventive maintenance
 |
| **STIF Discretionary** | All public transportation projects except ongoing operations | Cities, counties, tribes, districts, governmental entities | * **Capital - Good source for capital projects because lower environmental documentation.**
* Mobility management
* Planning
* Pilot operations.
* ***Match rate varies between 10-20%***
 |
| 5311(f) | Longer-distance intercity services | Cities, counties, tribes, districts, governmental entities, private companies, and non-profits that meet FTA requirements for D&A and other reporting | * Capital
* Equipment
* Mobility management
* Planning
* Operations
 |
| STIF Intercommunity Discretionary | Longer-distance intercommunity services | Cities, counties, tribes, districts, governmental entities | * Capital
* Equipment
* Mobility management
* Planning
* Operations
 |
| **Rural Veterans Healthcare Transportation (RVHT)** | Healthcare related transportation for Veterans | Rural & Highly Rural STF Agencies | * Operations
* Contracted/Purchased services.
* Mobility management
* Planning
* ***(No match)***
 |
| 5304 | Transit planning | Cities, counties, tribes, districts, MPOs, ODOT, other governmental entities | * Planning
* (20% match)
 |

**Activity Types Description of Work**

|  |  |
| --- | --- |
| **Activity Type** | **Description of Work** |
| **Administration** | Office staff salaries, marketing, office supplies, website upkeep, taking & posting of minutes, meeting public meeting law requirements, equipment rental and overhead costs.This task is usually included in FTA 5311 grants where agencies want the better match rate (10.27%), or administration associated with an FTA vehicle/capital grant. |
| **Operations** | Ops covers everything, including all service operations, planning, PM, MM and Admin - usually at a 50% match rate though, so agencies try to fit work under other tasks with a better match rate. Direct service expenses including driver and dispatcher salaries; maintenance and repairs; fuel, bulk oil, supplies; purchased or contracted services. |
| **Purchased/Contracted Service** | Eligible task under FTA 5310 funds at a better match rate (10.27%) than operating (50%). Agencies must go through a formal procurement to contract with another agency or company for public transit service. |
| **Mobility Management** | Eligible task under FTA 5310 at a better match rate (10.27%) than regular Operating. MM work includes travel training, outreach, regional coordination, and work on the Coordinated Plan. Staffing a ‘one stop shop’ like many rural counties have can be eligible but on the fine line of eligibility because regular dispatch work is generally not defined as MM. |
| **Planning** | Technical studies, planning for capital improvements, coordinated plan, transit plan, business plan or other strategic visioning documents. Sometimes there is a better match rate depending on fund source. There can be overlap with MM, especially for coordinated plans. |
| **Preventive Maintenance** | Itemized regular vehicle maintenance and purchase of vehicle maintenance supplies reimbursed at a better match rate (10.27%) under FTA grants. With prior approval some larger engine/transmission repairs could be eligible. Does not include accident repair that should be covered by insurance. |
| **Vehicle Purchase** | Vehicle purchases can be ‘replacements,’ ‘right-sizing’ or ‘expansions’ and are typically at a 20% match rate. Vehicles purchased with FTA 5310 funds must be ADA. There is more flexibility with vehicles purchased with STF & STIF funds. |
| **Equipment Purchase** | Equipment is typically items over $5,000. This can include radios, communication equipment, computer systems, dispatch systems, service vehicles and other equipment. |
| **Facility Purchase or Construction** | Typically includes transit administration buildings, bus stops and bus barns. These projects are very rigorous, and agencies often hire a consultant project manager to do the heavy lifting.  |

**Core Requirements**

**Summary of Core Requirements for Transit Providers**

1. #1 is keeping people safe and vehicles operating - getting riders safely where they need to go.
2. Submit grant applications on time after consulting with transit advisory committee and getting County Court approval, if their approval is needed.
3. Submit grant signatures quickly because costs usually cannot be incurred until a grant is fully executed. Read the requirements in the grant agreement and ensure accuracy of the statement of work before sending in signature page.
4. Submit quarterly reports on time, each quarter.
5. Submit reimbursement requests in OPTIS at the same time as quarterly reports, with correct documentation.
6. Comply with ADA & Title VI
7. Complaint process
8. Ensure you have a preventive maintenance plan and follow it for on-time maintenance.
9. Work with ODOT / RTC on vehicle purchases and disposal
10. Have a transit advisory committee that meets twice a year and follows Oregon public meeting requirements.
11. Have a current Coordinated Plan that is at least reviewed every 3 years. A full update is not required every three years but be sure the priorities & project lists reflect current needs. Having a ‘current’ plan is required for grant applications.
12. Other required reporting

​

**Reporting Schedule**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Report** | **Frequency** | **Reporter** | **Purpose** |  |
| **Reports that a provider initiates** |
| Agency Periodic Report (APR) | Quarterly, 45 days after the end of each quarter | Subrecipient | Track progress on grants, finances, accidents, civil rights, DBE, asset condition, etc. |
| STIF Plan Report (SPR) | Quarterly, 45 days after the end of each quarter | Qualified Entity & PTSP |   |
| STIF Annual QE Budget | Annually | Qualified Entity | QE’s adopted annual budget for the upcoming fiscal year must be submitted to ODOT. The deadline for ODOT receipt of each QEs’ budgets is no later than 30 days after adoption. |
| STIF Audit Report | Annually with 4th Quarter APR | Qualified Entity & PTSP | QE or any PTSP located within the QE’s area of responsibility must submit the results of any relevant financial audit, as required by a local, state, or federal oversight agency for the purposes of statewide reporting. |
| STIF Low-Income Tax Mitigation  | Annually with 4th Quarter APR | Qualified Entity & PTSP | Report actions taken by to mitigate the impact of the STIF tax on passengers who reside in low-income communities. |
| **Reports that ODOT will email you to complete** |
| National Transit Database (NTD) | Annually in December – ODOT enters info on behalf of rural and nonprofit providers that do not receive 5311 | Federal 5311 & 5339 fund recipients. Some 5310, 5307, & tribal recipients. | This report is the nation’s primary source of statistics about the U.S transit system. The data influences federal funding allocations. For rural agencies that only receive 5310 federal funds, reporting is minimal and ODOT enters it.Agencies with a population over 50,001 in population are considered a direct recipient and report directly to FTA for NTD and not through ODOT.  |
| Charter | Quarterly – ODOT will email you the form | Federal 5310, 5311, 5311(f) & 5339 fund recipients. | Report 'for hire' services that are not part of regular public transit operations |
| Disadvantaged Business Enterprise (DBE) | Quarterly with APR – ODOT will email you the form | Subrecipients that receive FTA funds from ODOT and do not report DBE information directly to FTA  | Track contracting opportunities awarded to DBE businesses certified by the Certification Office for Business Inclusion and Diversity (COBID). |
| TAM Equip. and Facilities | Annually | TAM Reporters |   |
| **Other reports that apply to agencies receiving 5311, 5339 or 5307** |
| Drug and Alcohol Management Information System (DAMIS) report | Annually in February | Federal 5311 & 5339 fund recipients. Some 5307 fund recipients. | FTA requires employers to have a drug & alcohol testing program and to report the results of that program annually. Applies to recipients of 5311, 5307, 5309 FTA funds and 5310 recipients with vehicles carrying more than fifteen people |

**Finance**

**Budget**

Agencies must have a budget approved by the governing body which shows anticipated farebox revenue, contributions, grants, contracts, and other program income. Agencies must maintain a comparison of revenue and expense budgets conducted at least monthly and must have procedures for changing the approved budget.

Agencies must have accounting procedures that identify appropriate sources of match to state and federal grants and procedures to prevent “double dipping.”

**Match Funds**

Most often, STIF funds are used for match on FTA 5310, 5311 or 5339 grants.

In-kind or contributed services (donations, volunteered services, or in‐kind contributions) are eligible to be counted toward the local match only if the value of each is formally documented and supported. Any in-kind match contributions must cover an expense that would be part of the project.

Mating funds for Federal grant cannot match Federal Grants.

**Financial Management**

Agencies should use technology for fiscal management and recordkeeping systems and policies. They should have both a permanent file system and an offsite or ‘cloud’ back up. Agencies should maintain an accounting manual with chart of accounts and the basic books of accounting: General Ledger, Accounts receivable/Cash Receipts Journal, and Accounts Payable/Cash disbursement Journal.

Additional expectations include:

* Records Retention: Record retention program in compliance with state and federal grants. Copies of originals of all grants and contracts on should be on file.
* Audit: Annual audit by independent auditor (if annual budget includes $500,000 or more of any source of federal grant funds
* Segregation of Duties: Adequate segregation of duties among personnel in the accounting functions, including policies regarding cash handling by drivers
* Insurance: Risk Insurance, Liability Insurance, Workman’s Compensation, other necessary insurance, or self-insurance reserve accounts

**Title VI & ADA**

Agencies must adopt a series of policies & processes to comply with federal requirements. This includes:

* Title VI Plan: PTD subrecipients must submit a Title VI plan and the plan must be updated and re-submitted every three years.
* Limited English Proficient (LEP): Agencies should outline LEP policies in the Title VI Plan. The LEP policies can outline things like when individuals may be entitled to language assistance with respect to a particular type of service, benefit, or encounter.
* Equal Employment Opportunity Policy: PTD subrecipients must ensure that they do not discriminate in their hiring practices based on race, color, sex (including pregnancy), national origin, creed, or religion. EEO plan required only for agencies with 50+ transit employees or a budget of $1 million or more.
* Disadvantaged Business Enterprises (DBE): Recipients of planning, capital and/or operating assistance who will award prime contracts (excluding transit vehicle purchases) exceeding $250,000 in FTA funds in a Federal fiscal year must submit a DBE program. If no program is required, but an agency receives federal funds, semi-annual reporting on external purchases is required.
* ADA: Ensure that hiring, public meetings and informational materials, facilities and vehicles, and service delivery complies with ADA policies and procedures.
* Compliant Process: Establish and make publicly available a complaint process and procedures. Processes should be established for general complaints, EEO complaints, and for Title VI complaints.
* Reasonable Modifications: ADA regulations require agencies to designate a responsible employee and establish a process where the public may request reasonable modifications when necessary to avoid discrimination based on disability, unless making such modifications would fundamentally alter the nature of the service or create a direct threat to the health or safety of others.

**Transit Advisory Committee**

Recipients of 5310, STIF funds are required to have a committee to advise on use of the funds and implementation of the related public transportation programs. With the consolidation of these two fund programs into one, agencies will be asked to merge their committees as well.

**Key Requirements**

* Members typically appointed by the governing body / County Court
* Meetings must comply public meeting law – notify the public and allow comment period.
* Maintain a committee with five members (3 for tribes)
* Hold Committee meetings at least twice a year.
* Establish bylaws to guide the structure and work of the Committee.

**Responsibilities of the Committee:**

* **Represent the people who are served by the transit program**. Members must live in the district or county and be knowledgeable about the transportation needs of the riders. They should be geographically representative. Member should represent low-income residents, seniors or people with disabilities, and transit providers. Committee membership must include diverse interests, perspectives, geography and reflect the population demographics of the area.
* **Consider how transit funds should be spent** and provide the governing body with information about their community’s special transportation needs. This may include evaluating proposals for service.
* **Be involved in developing the Coordinated Plan**. The Coordinated Plan should establish transit funding priorities and regional coordination opportunities. The committee must advise the County before the plan is adopted.
* **Advise the governing body** on funding priorities for transit grant applications to ODOT.

**GLOSSARY OF TERMS-**

**A**

**Accessibility**

The ability and level of ease with which all riders — including those with disabilities, special requirements, or other needs — can access transportation.

**ADA paratransit**

The Americans with Disabilities Act (ADA) mandates that comparable transportation service be offered to individuals with disabilities who are unable to use fixed-route transportation systems. Paratransit service must be available to individuals who start and end their transportation within three-quarters of a mile of a normal fixed route.

**agency**

An agency is an operator of a transit system, including both university and municipal public transportation agencies. See also: transit agency.

**agency-owned on-demand microtransit**

On-demand microtransit services that are either completely delivered by or through the local transit agency on behalf of their city. The agency has unfettered access to all transit service data and where the agency and the city are prescriptive on where and how services are delivered.

**American Public Transportation Association (APTA)**

APTA is a nonprofit international association of more than 1,500 public and private sector member organizations. Programs include advocacy for federal funding and policies, research, technical expertise and consulting services, workforce development programs, educational conferences, and seminars, and 135 subject-matter working committees.

**Americans with Disabilities Act (ADA)**

Federal legislation passed in 1990 that defines the responsibilities of and requirements for transportation providers to make transportation accessible to individuals with disabilities. This means that public transportation providers cannot refuse to provide transportation because of a person’s disability. This also requires that a public transit agency’s fixed-route service include a complementary paratransit service for those who may be unable to access fixed-route bus or rail.

**automatic fare collection (AFC)**

A system of devices and technology that automates ticketing and fare collection for a public transit system.

**automatic passenger counting (APC)**

Method of using electronic devices, typically situated near the doors of a bus or vehicle, which count the number of passengers that enter and exit at every stop. APC systems can synchronize with other operations hubs to provide real-time monitoring and inform route optimizations based on passenger information.

**automatic vehicle location (AVL)**

The use of computers and Global Positioning Systems (GPS) to dispatch and track transit vehicles in real-time.

**automatic voice annunciation (AVA)**

Equipment installed on a public transit vehicle to play audible information about upcoming stops. Used by agencies to comply with ADA requirements and provide an enhanced experience to their riders.

**autonomous vehicle (AV)**

A self-driving vehicle that does not require manual assistance to operate.

auto-restricted zone

Areas in which certain types of vehicles are regulated, sometimes by time of day or day of week. Public transit vehicles are usually permitted unrestricted access.

**B**

**base fare**

The minimum cost paid for transit service during base periods, excluding express service charges, transfer charges, or reduced fares.

**base period**

When transit services are scheduled at a normal, constant level. Also known as “off-peak periods,” when base fares are charged.

**busway**

Roads, or sections of roads, which are dedicated to public buses. Busways may contain tracks or grooves for guiding buses and restricting other traffic.

**C**

**carpool**

An arrangement among commuters or travelers to make a regular trip in a single, shared vehicle. Some high-population areas may offer reserved carpool traffic lanes for vehicles carrying a driver and one or more passengers.

**car sharing**

A model of car rental where people rent cars for short periods of time, often by the hour. Attractive to people who make only occasional use of a vehicle, as well as those who would like occasional access to a vehicle of a different type than the one, they use day-to-day.

**central business district (CBD)**

The commercial and business centers in cities. CBDs often contain the highest density of commercial space and offices, and service as common destination points for public transit.

**choice riders**

Riders who have a transportation choice, such as commuters who could use their private vehicle but choose to take public transportation.

**circulator**

A fixed-route transportation option that typically operates within a closed loop, usually three miles or shorter in length. Effective in high-density areas with common shared travel patterns such as city centers or college campuses.

**City Solutions**

Ford’s City Solutions is a team that works with mayors, government, and business leaders who are interested in exploring how new mobility solutions could help residents get around by addressing urban environment issues.

**complete streets**

An approach to transportation design that requires streets to be planned, designed, and maintained to enable safe and comfortable access for users of all ages and abilities regardless of their mode of transportation. Complete streets allow for safe travel by those walking, cycling, driving automobiles, and riding public transportation.

**computer-aided dispatch (CAD)**

Software helping agencies deploy their drivers and vehicles according to the complex agency rules and plans. Typical CAD systems include services for dispatching, customer support, and administration. Also referred to as a joint system in conjunction with automatic vehicle location (AVL) as CAD/AVL.

**congestion mitigation and air quality (CMAQ)**

A federal program that provides funding for transportation projects that reduce emissions and contributes to the reduction of pollutants. Examples of eligible projects include vehicle replacement, facility development, non-recreational trails, and bike-share programs.

**contraflow lane**

Reserved traffic lanes for buses where the direction of bus traffic is opposite to the flow of traffic on other lanes on the same street.

**corridor**

A broad area of land that follows a general directional flow, containing a number of streets, highways, and transit routes, and that connects major sources of trips.

**crosstown**

A unique bus or rail service which does not enter the central business district (CBD).

CTAA- Community Transportation Association of America, offers membership to individuals and organizations to share innovation, receive training and certification specific to the needs of the members. They advance policy and legislative priorities and improve mobility options in their communities.

**curb management**

Also referred to as curbside management, curb management is the collection of operations, guidelines, and practices that enable the effective management of curbs and other high-demand areas for applications such as accessibility, transportation, and safety.

**curb-to-curb**

Curb-to-curb service is a type of transit service where, at both the beginning and end of the trip, the driver will assist the rider between the vehicle and a sidewalk or other location no more than fifteen feet from the vehicle.

**D**

**deadhead**

When a transit vehicle is operating without passengers on board, often to and from a garage or from one route to another.

**demand response**

Demand response, or demand-response transit, is a broad category of public transit in which shuttles or other shared vehicles will alter their routes during each journey based on rider locations and drop offs. Rides can be summoned through an app or phone call.

**demand-response transit**

Demand-response transit may include shuttle services to connect riders to employment and transit centers, paratransit, and private sector transit solutions such as Uber and Lyft. Benefits of demand-responsive transit services include greater flexibility in routing and scheduling compared to traditional fixed-route services.

**dependent rider**

Someone who must use public transportation to meet their mobility needs.

**deviated fixed route**

Service routes that are characterized by deviated times, rather than deviated routes. Service routes allow riders to hail a vehicle and request a drop-off anywhere along the route.

**dial-a-ride**

Dial-a-ride is an origin-to-destination advanced reservation transportation service provided by public transit for seniors and persons with disabilities. Passengers must call one to three days ahead of time to request a reservation.

**DIKW triangle**

The hierarchy of value that data goes through while it is being transformed into wisdom. Data > Information > Knowledge > Wisdom.

**Data**

Data is just numbers and labels. Giving those numbers and labels context makes it Information. Applying academic or professional experience to better understand the available information transforms Information into Knowledge. Knowing what to do with the knowledge to lead to actionable steps is Wisdom.

**downtime**

A period when a bus or vehicle is not being operated due to repairs or general maintenance.

**driver**

Operator of a vehicle.

**E**

**electronic fare payment (EFP)**

The automated calculation, validation, collection, recording, and reporting of passenger fare payments using some form of electronic media for rides on a mass transit system. Such acceptance is generally referred to as open payments within the mass transit industry.

**exception date**

Within GTFS, specific dates that are included or excluded from a particular trip.

**F**

**fare elasticity**

Fare elasticity measures how sensitive passengers are to fare price and can be used to predict changes in service demand as price of fare increases or decreases.

**farebox recovery ratio**

The fraction of operating expenses which are met by the fares paid by passengers. It is computed by dividing the system’s total fare revenue by its total operating expenses. Across the U.S. public transit system, the average farebox recovery ratio is approximately 20%.

**farebox revenue**

The value of cash, pass receipts, and tokens given by passengers as payment for transit service.

**Federal Highway Administration (FHWA)**

The U.S. Department of Transportation agency responsible for administering the federal highway aid program to individual states, and helping to plan, develop, and coordinate construction of federally funded highway projects.

**Federal Transit Administration (FTA)**

Government agency providing financial and technical assistance to local public transit systems while also overseeing safety measures and helping develop next-generation technology research.

**feed**

A GTFS “feed” is composed of a group of text files collected within a .zip file. Each file contains a particular set of transit information, such as stops, trips, routes, and other data.

**first mile/last mile (FM/LM)**

The beginning or end of an individual trip made primarily by public transportation. In many cases, people will walk to transit if it is close enough. However, on either end of a public transit trip, the origin or destination may be difficult or impossible to access by a short walk. This gap from public transit to destination is termed a last-mile connection.

**fixed route**

Transit services that are provided on a repetitive, fixed schedule along a specified route. Unlike demand responsive transit, fixed-route vehicles only stop to pick up and drop off passengers at specific locations or stops. In order to maximize efficiency, each route in a fixed-route service is usually designed to provide coverage in areas of high ridership.

**fixed route services**

Services provided on a repetitive, fixed schedule along a specific route with vehicles stopping to pick up and deliver passengers to specific locations. Each fixed-route trip serves the same origins and destinations, such as rail and bus, unlike demand responsive and vanpool services.

**Ford Telematics**

Uptime and productivity tools from Ford that create operational efficiencies from new fleet insights.

**frequency**

Headway, or the time between trips, for a given route.

**fringe parking**

Parking areas, usually located outside of the central business district (CBD), and most often used by residents of suburban areas who commute downtown.

**G**

**General Transit Feed Specification (GTFS)**

Common format for public transportation schedules and geographic information. GTFS feeds allow public transit agencies to publish their transit data and developers to write applications that consume that data in an interoperable way. A GTFS feed is a collection of at least six, and up to 13 CSV files (with extension .txt) contained within a .zip file.

**General Transit Feed Specification Realtime, GTFS-RT (GTFS Realtime)**

A format for expressing the real-time information about a fixed-route transit system. Similar to GTFS, GTFS-RT adds a layer of dynamic information about vehicle positions and arrival times.

**GTFS Validator**

Provided by Google, the GTFS Validator allows you to validate a GTFS feed upon submitting it to Google.

**H**

**headway**

The time interval between vehicles moving in the same direction or along a particular fixed route.

**headway signage**

sign located in the front or rear of a bus indicating the route the bus is on.

**I**

**instant replay viewer (IRV)**

A feature within many transit operations software products allowing dispatchers, administrators, and other agency personnel to view historical system operations as an “instant replay.” This feature gives agencies the opportunity to diagnose prior issues, improve driver training, and audit service performance after-the-fact.

**intelligent transport systems (ITS)**

An advanced application which aims to provide innovative services relating to different modes of transport and traffic management, enabling users to be better informed and make safer and smarter use of transport networks. ITS is made up of sixteen types of technology-based systems, divided into intelligent infrastructure systems and intelligent vehicle systems.

**intermodal**

Intermodal, or multimodal, services include more than one mode of transportation and often require connections, choices, and coordination between various modes.

**intermodal passenger transport**

See multimodal transportation.

**internal destination signage**

Displays and plays stop arrivals and departures. Also known as interior signage.

**International Parking & Mobility Institute (IPMI)**

IPMI is the world’s largest association of professionals in parking, transportation, and mobility. Members include everyone from garage owners and operators to architects to city managers to government agencies, health care centers, universities, airports, and convention centers.

**J**

**jitney**

A small bus or other vehicle that carries passengers for a low fare. In the early 1900s, jitney was slang for nickel due to the popularity of services that charged five-cent fares.

**K**

**kiosk signage**

Any sign at a terminal or stop that has human interaction.

**L**

**layover time**

Time that is built into a transit schedule between the end of a route and departure for the return trip. Layover time is typically used to recover any delays accumulated during the initial trip and to prepare for the return trip.

**load factor**

A ratio calculated by the number of passengers carried divided by the total passenger capacity of a transit vehicle.

**lobby signage**

Digital display sign located at an internal stop or lobby.

**M**

**mean distance between failures (MDBF)**

A measurement of the average distance in miles that a transit vehicle travels before a breakdown or other failure causes the vehicle to be removed from service.

**micromobility**

The use of small, lightweight personal vehicles (e.g., electric scooters, e-bikes, bicycles, etc.) to travel short distances, typically within an urban environment or college campus.

**microtransit**

A flexible, demand-driven mode of service that helps agencies optimize vehicles and improve the rider experience while reducing cost. See also: on-demand microtransit.

**mixed-mode commuting**

See multimodal transportation.

**mobile ticketing**

Providing fares for riders through mobile devices. Companies such as Masabi and Token Transit.

**Mobility-as-a-Service (MaaS)**

A shift away from personally owned modes of transportation and towards mobility solutions that are consumed as a service. This is enabled by combining transportation services from public and private transportation providers through a unified gateway that creates and manages the trip, which users can pay for with a single account. Users can pay per trip or a monthly fee for a limited distance. The key concept behind MaaS is to offer travelers mobility solutions based on their travel needs.

**mobility integrator (MI)**

What transit agencies are aiming to become by integrating not only different modes of transportation, but also regional, city, and county partners to provide real-time solutions for riders.

**mobility management**

The application of strategies and policies to reduce travel demand, or to redistribute this demand. Managing demand can be a cost-effective alternative to increasing capacity.

**mobility on demand (MOD)**

An innovative, user-focused approach which leverages emerging mobility services, integrated transit networks and operations, real-time data, connected travelers, and cooperative ITS to allow for a more traveler-centric approach, providing improved mobility options to all travelers and users of the system in an efficient and safe manner.

**mobility service provider (MSP)**

An organization that pairs passengers via websites and mobile apps with drivers who provide transportation services. Transportation network companies are examples of the sharing economy and shared mobility. See also: transportation network companies (TNCs)

**modal split**

The number of people who use alternative forms of transportation in lieu of public transit. It is typically used to determine the percentage of people in an area who use private vehicles as an alternative to public transit.

**multimodal transportation**

Involves using two or more modes of transportation in a journey. Mixed-mode commuting is often used to combine the strengths and offset the weaknesses of various transportation options. A major goal of modern intermodal passenger transport is to reduce dependence on the automobile as the major mode of ground transportation and increase use of public transport.

**N**

**National Transportation Database (NTD)**

The NTD was established by Congress to be the nation’s primary source for information and statistics on the transit systems of the United States. Recipients or beneficiaries of grants from the FTA are required by statute to submit data to the NTD.

**non-emergency medical transport/transportation (NEMT)**

A transportation service provided to individuals who are not in an emergency situation but need more assistance than a taxi service is able to provide. Oftentimes, these services are specially equipped to transport riders in wheelchairs, stretchers, or with other ability needs.

**O**

**on-board communication (OBC)**

On-board communication systems can consist of audio and/or visual communication devices such as loudspeakers, LED signs, and video monitors that allow for messages to be relayed to passengers in order to communicate route and stop information or other pertinent messages while onboard a bus or vehicle.

**on-board survey**

Surveys conducted by transit agencies every three to ten years. On-board surveys generally involve hiring an outside company to create a survey and collect responses from passengers on agency vehicles. Surveys try to assess passenger satisfaction and gather information for planning purposes as well as to satisfy funding sources such as state or federal grants.

**on-demand transit**

A method of passenger transportation that allows for vehicles to alter their routes during each journey based on particular transport demand without using a fixed route or timetable. Vehicles typically pick-up and drop-off passengers in locations according to passengers’ needs and can include taxis, buses, or other vehicles. See also: demand response.

**operating budget**

Detailed projection of all estimated income and expenses based on forecasted sales revenue during a given period. A majority of municipal transit agencies operate on a fiscal year operating budget that runs from July 1st to June 30th.

**OTA- Oregon Transit Association-** The purpose of the Association is to assist members in the development and improvement of efficient, safe and convenient transportation services, techniques and methods, facilities and equipment.

**P**

**paddle**

The schedule of work for each driver showing all routes they will operate in a day, including arrival and departure times and specific directions.

**paratransit**

Paratransit is recognized in North America as special transportation services for people with disabilities, often provided as a supplement to fixed-route bus and rail systems by public transit agencies.

**passenger**

An individual on board, boarding, or alighting from a revenue transit vehicle. Excludes operators, transit employees, and contractors.

**passenger fares**

Revenue earned from carrying passengers in regularly scheduled services.

**passenger information system (PIS)**

An automated information system providing real-time passenger information. It may include predictions about arrival and departure times, as well as information about the nature and causes of disruptions. It may be used both physically within a transportation hub and remotely using a web browser or mobile device.

**passenger miles**

The total number of miles traveled by passengers on transit vehicles. Passenger miles are determined by multiplying the number of unlinked passenger trips times the average length of their trips.

**peak/base ratio**

Calculated by taking the number of vehicles operated in passenger service during the peak period divided by the number of vehicles operated during the base period.

**peak period**

Time periods when transit riding is busiest. Typically, peak periods are in the morning and afternoon, coinciding with business commutes and standard highway rush hour.

**pepwave**

A router that brings in a cell network data plan and creates WIFI and GPS from the device.

**privately-owned**

Ridesharing, shuttle, or other transportation services that are owned and operated by private companies, not affiliated with local or regional governments. Privately-owned transportation services are often reliant on smaller, private vehicles and are typically predominant in high-traffic areas only, with no obligation to serve under-represented populations.

**Q**

**R**

**rapid transit**

A rail or bus transit service that operates completely separate from all other modes of transportation on an exclusive right-of-way route.

**real-time tracking**

The ability to track an agency’s current vehicle location as it navigates a fixed or ad hoc route.

**recovery time**

A planned time allowance between the arrival time of a just completed trip and the departure time of the next trip in order to allow the route to return to schedule if traffic, loading, or other conditions have made the trip arrive late. Recovery time is considered as reserve running time. Typically, the operator will remain on duty during the recovery period.

**refresh rate**

The update rate of a GPS module is how often it calculates and reports its position. The standard for most devices is 1hz (once per second).

**revenue service**

The time when a vehicle is available to the general public and there is an expectation of carrying passengers. These passengers either directly pay fares, are subsidized by public programs, or provide payment through some contractual arrangement. Vehicles operated in fare free service are considered in revenue service. Revenue service includes layover and recovery time. Revenue service excludes deadhead, vehicle maintenance testing, school bus service, and charter service.

**reverse commuting**

Travel that occurs opposite from the main flow of traffic during the morning peak period. Reverse commuting typically occurs from a CBD to a suburb or non-central location.

**ride-hailing service**

Booking rides and paying for a car service with a transportation network company (TNC) through an app. Ridesharing is also used, but this term has been considered inaccurate, so ride-hailing has been considered a more accurate descriptor.

**rider**

A transit user. See also: passenger.

**ridership**

The total number of passenger trips taken on a particular service or system during a given time period.

**ridesharing**

A form of transportation, other than public transit, in which more than one person shares in the use of the vehicle, such as a van or car, to make a trip. Uber, Lyft, Via, and others are examples of ridesharing services.

**rolling stock**

The vehicles used in a transit system, including buses, rail cars, vans, and shuttles.

**route**

The literal transit route, often referred to as a public transit “line.” Within GTFS, a route is made up of one or more “trips,” which occur at a specific time, making a route time independent.

**route miles**

The total number of miles along a fixed-route transit system.

**routing waypoint**

Within the pattern editor for Architect, a routing waypoint allows you to draw a shape that is automatically routed along roads on the map.

**S**

**seamless mobility**

Providing riders a way to complete their journeys across all mobility modes easily while giving agencies the ability to offer demand-driven modes to increase access to public transportation and make transit the first choice for all.

**service alert**

An announcement by a transit agency to a rider regarding an unexpected service interruption (e.g., delays, cancellations). A service alert can be sent to a rider’s mobile device, shared on a transit agency’s website, and/or announced over a vehicle intercom system.

**simulation**

Virtual simulations are commonly used by transit providers to predict the performance and viability of a particular transit service given a set of circumstances. Simulations are commonly used when implementing demand responsive or microtransit services alongside fixed route or other service models in order to create optimal coverage within multimodal service areas.

**single-occupancy vehicle (SOV)**

A single-occupancy, privately-operated vehicle with the driver as the only occupant. The drivers of SOVs use their vehicles primarily for personal travel, daily commuting, and for running errands.

**smart city**

A smart city is an urban area that uses diverse types of electronic data collection sensors to supply information which is used to manage assets and resources efficiently.

**sprawl**

The expansion of human populations away from central urban areas into low-density, monofunctional, and car-dependent communities.

**stop**

A location where a vehicle allows passengers to board or alight.

**stop time**

Times that a vehicle arrives and departs from an individual stop for a given trip.

**T**

**third-party operator**

Contract organizations that operate part or all of a university or municipal transit system on behalf of the university or municipality. Companies like FirstTransit can deploy an entire transit operation for their customers including vehicles, drivers, administrators, planners, etc.

**Title VI**

Refers to Title VI of the Federal Civil Rights Act of 1964 and requires that transportation planning and programming be nondiscriminatory based on race, color, and national origin.

**transit agency/provider**

An organization that has specific authority to operate public transit within a specified geographic area.

**transit authority/transit district**

A transit authority or transit district has the power of the government for solving problems related to transit issues. This includes eminent domain, the ability to impose taxes, and the ability to operate independently of the cities and counties that the transit district operates within.

**transit desert**

Areas containing transit-dependent populations who lack access to adequate public transit service.

**transit-oriented development (TOD)**

A type of development that links land use and transit facilities to support the transit system and help reduce sprawl, traffic congestion, and air pollution. It includes housing and complementary public uses (e.g., jobs, retail, and services) located at a strategic point along a regional transit system, such as a rail hub or major transit stop.

**transportation management area (TMA)**

Designated by the United States Secretary of Transportation as urbanized areas with a population of at least 200,000 people. These designations require additional oversight and gain access to planning benefits in an effort to continually improve planning processes in areas with large populations.

**transportation network company (TNC)**

An organization that pairs passengers with drivers who provide transportation services. Transportation network companies are examples of the sharing economy and shared mobility. Uber and Lyft are TNCs.

**travel demand model**

Used by transportation planners for simulating current travel conditions and for forecasting future travel patterns and conditions. Travel demand models help planners and policymakers analyze the effectiveness and efficiency of alternative transportation investments in terms of mobility, accessibility, and environmental and equity impacts.

**travel time**

The movement of people between relatively distant geographical locations and can involve travel by foot, bicycle, automobile, train, bus, or other means. It can be one way or round trip.

**trip**

A time-specific journey taken by a vehicle through a series of stops as expressed within a GTFS feed.

**U**

**United States Department of Transportation (USDOT)**

The federal cabinet-level agency with responsibility for highways, mass transit, aviation, and ports. It is headed by the Secretary of Transportation. The USDOT includes the Federal Highway Administration and the Federal Transit Administration, among others.

**unlinked passenger trips**

The frequency in which passengers board a public transportation vehicle.

**urbanized area**

The fully developed area of a central city and its suburbs. A rather complicated, but consistent formula measures for contiguous urban development. According to the 2010 census, urban areas — classified as either larger urbanized areas or smaller urban clusters — must encompass at least 2,500 people with 1,500 residing outside institutional group quarters.

**users**

Agency personnel that use our software, not passengers that use the app.

**V**

**vehicle miles traveled (VMT)**

One vehicle traveling one mile constitutes a vehicle mile. VMT is one measure of the use of state highways and roads and is aggregated by calculating the total annual miles of vehicle travel divided by a geographical location’s total population.

**vehicle operators**

Bus drivers, shuttle drivers, train conductors or any operator of a vehicle in a transportation system.

**voice announcements**

The Americans with Disabilities Act (ADA) requires transit agencies to announce stops at transfer points, major intersections, destination points, requested stops, and at intervals along a route sufficient to permit individuals who are blind or have vision impairments to be oriented to their location.

W

**wait time**

Wait time refers to the time spent by passengers while waiting for a transit vehicle.

**wayside signage**

Also called outdoor displays. Signage located at a stop or terminal for riders to know how much longer until the bus arrives.

**Web Content Accessibility Guidelines (WCAG)**

A range of recommendations to make Web content accessible to people with cognitive disabilities, visual, auditory, and speech impairments, or limited mobility. WCAG 2.0, published on December 11, 2008, consists of twelve guidelines categorized by four principles.

**X**

**Y**

**Z**

**zone fares**

A system of fares where a transit system’s service area is divided into zones with different specified rates or fares.