Transit Asset Management Performance Measure Targets (Form A-90)

Transit agencies must report the next fiscal year performance targets to the NTD for assets for which they have capital replacement responsibility. Agencies report on their progress towards achieving a state of good repair for capital assets by submitting condition assessment and performance data. To support TAM planning, the NTD presents this data side-by-side with targets set in the prior year.

The TAM Final Rule defines a performance target as a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by FTA (in this case, in the next fiscal year). Therefore, NTD reporters should contact appropriate personnel involved in TAM planning to make sure the targets they report are accurate.

An agency is required to report an asset to the NTD in the fiscal year that the agency begins using the asset for public transportation service. Agencies should not report assets that are being assembled, assets under construction, or assets that are in testing at the end of the fiscal year.

Transit agencies must report performance targets for the following categories:

Exhibit 44: Transit Asset Management Performance Targets

Category	What to Report
Rolling Stock	Percentage of revenue vehicles within a particular asset class that are expected to meet or exceed their Useful Life Benchmark (ULB)[6] Report one target for each vehicle type
Equipment	Percentage of service vehicles that are expected to meet or exceed their ULB Report one target for each vehicle type
Facilities	Percentage of facilities with a condition rating expected to rate below 3.0 on the FTA Transit Economic Requirements Model (TERM) scale *(1=Poor to 5=Excellent)*

[6] According to FTA's Performance Management web page, targets "connect a provider's strategic goals to the actions that the provider will take to reach those goals."

Category	What to Report
	Report one target for each facility type (Maintenance/Administration, Passenger/Parking)
Infrastructure	Percentage of guideway track miles expected to be operating under performance restrictions, by class Report one target for each rail mode

Capital Responsibility

An agency has direct capital responsibility for an asset if any of the following are true:

- The agency owns the asset,
- The agency jointly owns the asset with another entity, or
- The agency is responsible for replacing, overhauling, refurbishing, or conducting major repairs on an asset, or the cost of those activities is itemized as a capital line item in the agency's budget.

Performing minimal preventive maintenance work on an asset, like cleaning, does not in itself indicate direct capital responsibility for the asset. An agency must have direct capital responsibility or management or oversight responsibilities for the line-item project.

Performance Target Categories

Rolling Stock

Rolling Stock performance targets should be set based on the percent of revenue vehicles that are expected to meet or exceed their Useful Life Benchmark. For each vehicle type reported across all modes, transit agencies must set an individual target.

Equipment

Equipment performance targets should be set based on the percent of service vehicles that are expected to meet or exceed their Useful Life Benchmark. Transit agencies must set a target for each applicable vehicle type:

- Automobiles,
- Trucks and Other Rubber Tire Vehicles, and
- Steel Wheel Vehicles

Please note, the Equipment category for performance targets does not include equipment that agencies own or use outside of service vehicles.

Facility

Facility performance targets should be set based on the percent of facilities that are expected to rate below 3 on the condition scale as defined in Exhibit 53.

Infrastructure

Transit agencies that operate or manage rail modes will be required to report performance targets for the percent of track segments expected to be operating under performance restrictions. For each rail mode, an individual target is required.

Performance Measure Calculations

Progress towards these targets will be calculated based on the reporting of the asset categories outlined above. Each category is further defined in Exhibit 45 while Exhibit 46 outlines the calculation used to generate the actual performance of each asset type.

Exhibit 45: Transit Asset Management Performance Targets

Asset Category	Report Asset Inventory	Report Asset Condition Assessment and Performance Targets
Passenger Station Facility	All passenger stations and facilities including Stations on ROW, bus terminals, and transfer stations Bus stops should NOT be inventoried	All passenger stations/facilities for which the agency has capital responsibility (Condition on 1 to 5 scale)
Maintenance or Administrative Facility	Count of all maintenance facilities used to support revenue service Detailed inventory of all facilities for which the agency has capital responsibility	All maintenance facilities for which the agency has capital responsibility (Condition on 1 to 5 scale)

Asset Category	Report Asset Inventory	Report Asset Condition Assessment and Performance Targets
Revenue Vehicles	All vehicles used in revenue service	All revenue vehicles for which the agency has capital responsibility (ULB)
Service Vehicles	All service vehicles for which the agency has capital responsibility	All revenue vehicles for which the agency has capital responsibility (ULB)

Exhibit 46: Performance Measure Calculations

Performance Measure	Numerator	Denominator
Rolling Stock	Total dedicated, active revenue vehicles that have met or exceeded the reported ULB with capital responsibility	Total dedicated, active revenue vehicles with capital responsibility and ULB reported
Equipment	Total service vehicles that have met or exceeded the reported ULB with capital responsibility	Total service vehicles with capital responsibility and ULB reported
Facilities	Total facilities with a rating of a 1 or 2 on the TERM scale, with capital responsibility	Total facilities with a condition assessment reported and with capital responsibility. This does not include facilities with “N/A” reported for their condition assessment
Infrastructure	Total Track Miles under Performance Restriction (revenue service) with capital responsibility	Total Track Miles used in Revenue Service with capital responsibility. This is equal to total tangent and curve revenue track minus revenue track with no capital responsibility

Agency Tiers

Transit agencies are broken down into two tiers that determine the reporting of performance targets — Tier I and Tier II.

Tier I Agencies

Tier I agencies are transit agencies that:

- Own, operate, or manage 101 vehicles or more in maximum service across all non-rail, fixed route modes or in any one non-fixed route mode.
- Own, operate or manage rail modes.

Tier I agencies are required to develop their own TAM plan and report their own performance targets directly to the NTD.

Tier II Agencies

Tier II agencies are transit agencies that:

- Own, operate, or manage less than 101 vehicles in maximum service across all non-rail fixed route modes or in any one non-fixed route mode.
- Any subrecipients under the §5311 Formula Grants for Rural Areas, or any American Indian tribe.

Tier II agencies may participate in a group plan sponsor's TAM plan, in which the group plan sponsor will report the performance targets for all participants in the group. Tier II agencies may only participate in one group plan sponsor's TAM plan. Any Tier II agency that chooses to opt out of a group TAM plan, must develop its own TAM plan, or participate in another group TAM plan.

Narrative Report

Agencies are required to upload a narrative report to the NTD that outlines performance targets and their progress towards their targets. This narrative may include any changes in transit system conditions that may affect progress towards targets.

Group Plan Sponsors

Tier II agencies may participate in a group TAM plan that is coordinated by a group plan sponsor. In many cases, State DOTs will serve as group plan sponsors for their subrecipients. MPOs may also be considered group plan sponsors.

Tier II agencies must have a direct or indirect funding relationship with their chosen group plan sponsor. American Indian tribes have the option to select a sponsor that they do not receive funds from.

Existing NTD reporters must designate their group plan sponsor, if reporting as a Tier II agency. The agency will be prompted to declare and confirm their group plan sponsor every four years, following the TAM reporting cycle. Any new reporters that are required to report to the NTD per TAM legislation, must be added by their designated group plan sponsor.

Transit Agency Facilities

Station Criteria

Passenger stations are defined according to the mode(s) serving the station.

The following are passenger stations:

- All CR, HR, YR, MG, and AR rail passenger facilities
- All LR, CC, and SR passenger facilities that have platforms and/or serve track that is in a separate ROW (not in mixed-street traffic)
- All FB stops
- All transportation, transit or transfer centers, park-and-ride facilities, and transit malls if they have a structure for passengers for ticketing, information, restrooms, concessions, telephones, etc.
- All MB, RB, CB, and TB passenger facilities in a separate ROW that have a platform and/or structure
- All MB, RB, CB, and TB operated in mixed traffic that have a separate structure (simple shelters, lighting, signage, or ramps for accessibility alone are not enough to establish a passenger station)
- For any station that operates in mixed traffic, a significant structure must be present. This does not include bus shelters. Significant structures are structures that are enclosed, or, if partially enclosed, have a minimum roof square footage of 150ft. Examples may include larger canopies or coverings to serve passengers.

Stations and Maintenance Facilities (Form A-10)

Transit agencies report data on

- The number of passenger stations, both accessible and non-accessible, in accordance with the Americans with Disabilities Act (ADA)
- The number of elevators and escalators within passenger stations
- The number of maintenance facilities by size and ownership categories

Transit agencies reporting this information must separate data by mode and type of service (DO and PT). Transit agencies are not required to report this data for TN and TX types of service.

Passenger Stations

This section does not apply to Rural Reporters.

Transit agencies report passenger station information for fixed route, fixed schedule services (rail modes, bus modes, Trolleybus, Ferryboat, and Aerial Tramway). Each agency must report data for all passenger stations that the agency uses, even if the agency does not own the stations.

Exhibit 47: Reporting Passenger Stations

Example: Coaster Transit Agency (CTA) provides Bus (MB) service to a Ferryboat (FB) passenger station that Surf Transportation Authority owns. How should CTA report the passenger station?

Solution: CTA should report one passenger station while Surf Transportation Authority also reports one passenger station. Stations are reported by use, not ownership.

For rail modes, report the station in each rail mode and TOS that it is used. This may result in the "double counting" of some stations since they might be served by two rail modes (e.g., HR/DO and LR/DO) or two TOS (e.g., CR/DO and CR/PT). However, the "double-counting" rule does not apply when a station is served by rail modes and a non-rail mode, such as MB, CB, or RB. In these cases, report the station only under the rail modes.

For example, you should report a station that serves CR, LR, and MB on the A-10 forms for CR and LR, but not the MB A-10 form.

For non-rail modes, report the station in each mode and TOS that it is used. This may result in the "double counting" of some stations, because two types of MB service (e.g., MB/DO and MB/PT) serve them, or because a combination of MB, CB and RB services serve them.

Americans with Disabilities Act of 1990 Accessible Stations

Transit agencies must indicate if passenger stations meet ADA accessibility standards.

Accessible stations do not have physical barriers that prevent or restrict access by individuals with disabilities, including individuals who use wheelchairs. Transit agencies must identify accessible stations.

Americans with Disabilities Act of 1990 Non-Accessible Stations

Non-accessible stations do not provide easy access (i.e., do not meet accessibility requirements for physical barriers, signage, and other aids) that enables individuals with disabilities, including individuals who use wheelchairs, to use public transit.

Escalators and Elevators

Transit agencies must report the number of escalators and elevators within the passenger stations. Passengers use these to transfer between levels in a station. Elevators and escalators exclude moving sidewalks.

Agencies should not report escalators and elevators that are used only for freight, transit staff, or as back-up if passenger escalators and elevators break down.

Maintenance Facilities

Transit agencies report maintenance facilities by

- Type — general purpose or heavy maintenance
- Ownership — owned or leased
- Size — the number of revenue vehicles that can be serviced

Agencies should not report maintenance facilities where third-party vendors perform services, such as a local gasoline service station or body shop.

On the A-10 form, a single facility consists of a property on which vehicle maintenance is performed. The facility may contain several structures. This is different from the A-15 form, which has its own rules about how to count facilities.

Type

A general-purpose maintenance facility is a garage or building where mechanics perform routine maintenance and repairs. General-purpose maintenance facilities typically serve as operating garages where agencies store and dispatch vehicles for revenue service.

Larger transit agencies may perform engine and other major unit rebuilds. FTA identifies facilities devoted exclusively to major rebuilds as heavy maintenance facilities.

Some transit agencies use the same facility for both general purpose and heavy maintenance. In these cases, agencies should report facilities they use for both purposes as general-purpose maintenance facilities.

Transit agencies must report general-purpose maintenance facilities by

- Ownership — owned or leased
- Size — the number of revenue vehicles that can be serviced

Transit agencies must report heavy maintenance facilities by ownership category. Agencies do not provide data on facility size for heavy maintenance facilities.

Ownership

Transit agencies must identify maintenance facility ownership based on the type of service (DO or PT).

For DO service, transit agencies must report if the facility is publicly owned or privately owned. Transit agencies identify if they own the facility, lease it from another public agency (such as a city highway department), or lease it from a private entity.

For PT service, agencies indicate if there is public or private involvement in the maintenance facility. Agencies must report data if the facility is owned by the service provider (PT contractor), owned by the public agency for the service provider, leased by the public agency for the service provider, or leased by the service provider.

Size

Agencies should report the size of the facility based on the maximum number of revenue vehicles that can be serviced and stored at one time. Size is a measure of the design capacity of the facility, not the number of revenue vehicles currently operated from the facility.

FTA divides size into three categories based on the number of revenue vehicles that can be serviced:

- Under 200 vehicles
- 200–300 vehicles
- More than 300 vehicles

Exhibit 48: Facility Size

Example: The Coaster Transit Agency (CTA operates 175 vehicles and owns a maintenance facility that can store 225 vehicles. What size of general-purpose maintenance facility should it report?

Solution: CTA should report a general-purpose maintenance facility that serves 200–300 vehicles.

Shared Facilities

Some transit agencies share facilities between multiple modes or types of service. The most common arrangement is the operation of Bus and Demand Response vehicles in a single facility. For reporting purposes, these shared facilities must be allocated among the various modes or types of service using the facility.

Exhibit 49: Shared General Purpose Maintenance Facilities

Example: CTA uses one of its general-purpose maintenance facilities for both Bus (MB) and Demand Response (DR) directly operated (DO) services and the DR purchased transportation (PT) service. How should the CTA report maintenance facilities?

Solution: *The CTA allocates the facility based on vehicles assigned.*

Mode	Vehicles Serviced	Percent of Total	Number of Facilities Reported:
MB/DO	240	82.8%	0.8
DR/DO	30	10.3%	0.1
DR/PT	20	6.9%	0.1
Total	290	100%	1.0

Transit Asset Management Facilities Inventory (Form A-15)

Transit agencies are required to report all passenger facilities used in revenue service, including passenger stations and parking facilities, regardless of capital responsibility.

Administrative and maintenance facilities are only reportable if the agency has capital responsibility for the facility and the transit use is greater than incidental. Use is incidental when 50 percent or less of the facility's physical space is dedicated to the provision of public transportation service. For maintenance facilities, agencies may use the number

of transit vehicles serviced in the facility compared to all vehicles serviced in the facility to estimate this percentage. Facilities must have a structure; empty lots used for storage are not reportable.

Agencies must provide condition assessments for passenger, administrative or maintenance facilities for which they have capital responsibility.

All reportable facilities must provide the following data points:

- Facility Type
- Year Built or Reconstructed as New
  - If a facility is constructed over the span of multiple years, this should reflect the end date of construction.
  - Reconstructed as New occurs when an old facility has been renovated to the degree that its expected useful life is equivalent to the condition and useful life of a new facility.
- Square Feet or Number of Parking Spaces
  - Agencies should report the best available measurement for the total number of square feet or parking spaces in a passenger or parking facility (or section of a facility).
  - Parking spaces are only reportable for facilities with a Facility Type of Parking Structure or Surface Parking Lot.
  - Agencies should use the following criteria to report square footage:
    - Underground Facilities: Report all areas under the roof, including mezzanines, platforms, and track.
    - Multilevel Facilities: Report all platforms and other floor areas under a roof.
    - Elevated Facilities: Report all platform and mezzanine space. Do not include track space.
    - At-Grade Facilities: Report building square footage (if applicable) and all platform area.
- Address
  - Agencies must report either Address, Latitude and Longitude coordinates, or both.

Shared Capital Responsibility

Transit agencies that share capital responsibility with another agency must report the amount of capital responsibility for each facility shared. Both agencies that share the capital responsibility will report the condition assessment for the asset. The agencies must determine their roles in conducting the assessment.

Primary, Secondary, and Private Mode

Transit agencies must report a primary mode for each facility. If a facility is utilized by more than one mode, agencies should report secondary modes for each mode that the facility is shared with. For example, if a shared facility hosts revenue vehicles for the operation of Bus (MB) and Demand Response (DR) vehicles but predominantly handles buses, then classify the facility as a Bus (MB) maintenance facility. If a facility is shared with a private mode or non-public transportation service, these should also be reported.

Private Modes

Transit agencies that serve multimodal passenger facilities with non-public transportation providers are required to report the non-public transportation modes with their facility asset information. Examples of these private modes include airports, Amtrak, and Intercity Bus.

A station is defined as multimodal if it serves more than one public transit mode operated by the reporting agency or another public transit agency, OR if it serves both a public transit and private mode, as defined in the table below.

Exhibit 50: Private Modes

Mode	Example
Private Water Transit	Passenger facility building is shared between a transit mode and a private ferry service. Shared space may include passenger waiting and ticket vending areas.

Mode	Example
Private Rail Transit	Passenger facility building is shared between a transit mode and intercity passenger rail service (typically Amtrak). Shared space may include platforms, passenger waiting areas, and ticket vending locations.
Airport/Private Bus Transit	Passenger facility building is shared between a transit mode and an airport, private bus provider, or the passenger facility provides connectivity to an airport. Connectivity may mean station and airport are connected directly via pedestrian overpasses, indirectly via airport shuttle buses, or directly with rail cars entering a station located in an airport building. Shared space for private bus providers may include passenger waiting areas, restrooms, and ticket vending locations.

Non-Agency Mode

The non-agency mode field is intended for use in cases when an agency has capital responsibility for a facility and continuing reporting requirements but does not operate public transit service using the facility. The agency will select the mode that the facility serves, which is operated by another entity.

Facility Types

Each facility must be defined as a specific type. Facility types can be grouped into three categories:

- Administrative
- Maintenance
- Passenger/Parking

Subsection of a Larger Facility

A subsection of a larger facility is a section of a facility that varies in age from the rest of the main facility due to significant rebuilding, addition, or retrofitting. Agencies are

encouraged to report sections of the facility in multiple entries to more accurately represent the age and function in the inventory. A facility may be reported as several subsections if the age varies throughout.

Different buildings on a single property should not be reported as subsections of a larger facility. Each building is one facility.

Facilities that are adjacent to one another must be reported separately.

Administrative and Maintenance Facility Type

Administrative buildings are the general administrative offices owned by a transit agency. Administrative buildings usually house executive management and support activities for overall transit operations, including accounting, finance, engineering, legal, safety, security, customer services, scheduling, and planning. Administrative buildings also include separate buildings for customer information or ticket sales that a transit agency owns and that are not part of passenger stations.

Maintenance facilities are those where routine maintenance and repairs, or heavy maintenance or unit rebuilds are conducted. Agencies must not report maintenance facilities where third-party vendors perform services, such as a local gasoline service or body shop.

Administrative and maintenance facilities are reportable if the agency has capital responsibility and the transit use is greater than incidental. For example, if the administrative office is in a building that has only incidental transit use (e.g., city hall), then it is not reportable.

Exhibit 51: Administrative and Maintenance Facility Types

Administrative or Maintenance Facility Type	Facility Type Description
Maintenance Facility (Service and Inspection)	Maintenance facility where mechanics, machinists and other maintenance personnel perform preventive maintenance, daily service and inspection, and/or corrective maintenance activities on revenue vehicles to keep them in-service. Facilities generally contain maintenance bays, built- in or portable lifts and/or inspection pits, fuel pump islands, fuel storage tanks, bus wash systems, and brake testing lanes. Personnel inspect, repair, or replace some, but not all, vehicle components during the following activities: • Clean interiors • Maintain cameras • Fill/replace fluids and lubricants • Replace filters • Replace/repair tires • Inspect suspensions and brakes • Inspect batteries, wheelchair lifts and ramps • Degrease engines • Perform minor body repairs and painting Revenue vehicles may be stored overnight or between being placed into revenue service.

Administrative or Maintenance Facility Type	Facility Type Description
Heavy Maintenance and Overhaul (Backshop)	Maintenance facility where mechanics, machinists and other maintenance personnel perform heavy overhaul and other related rebuilding activities to help revenue vehicles reach their targeted service life. Activities usually occur at mid-life (i.e., mid-point of useful life) to refurbish, overhaul or replace major vehicle components. These components include, but are not limited to, the following: • Engines, transmissions, or axles • Fareboxes, radios, and other electronics • Starters, alternators, and brake system components • Chassis parts and seats • Bearings
General Purpose Maintenance Facility/Depot	Maintenance facility where mechanics and other maintenance department personnel, provide basic service readiness inspection (e.g., tire pressure, oil/fluid levels) and light repair (e.g., mirror replacement) or service (e.g., sweeping) on revenue. Revenue vehicles may be stored here overnight or between being placed into revenue service.
Vehicle Washing Facility	Stand-alone building or structure containing vehicle washer equipment.
Vehicle Blow-Down Facility	Stand-alone building or structure containing equipment for cleaning under-floor equipment of rail rolling stock.
Vehicle Fueling Facility	Stand-alone building or structure containing vehicle fuel dispensing equipment.

Administrative or Maintenance Facility Type	Facility Type Description
Vehicle Testing Facility	Maintenance facility used for vehicle acceptance testing (after being received from manufacturer or overhauls or other maintenance activity).
Administrative Office / Sales Office	Facilities and offices which house the executive management and supporting activities for transit operations, with the exception of vehicle maintenance, that could include accounting, finance, engineering, legal, safety, security, customer services, scheduling and planning. These buildings may include customer information or ticket sale offices, which are owned by the transit agency but not part of passenger stations.
Revenue Collection Facility	Facility where revenue collection personnel process electronic and/or cash fare payments. May include revenue counting equipment such as bill counters, coin scanners, and coin sorters. May also include or store the following revenue collection and monitoring equipment: • Cameras and Closed-Circuit Television (CCTV) • Cash box repair areas • Alarm systems • Computerized probe for downloading e-transactions on a GFI farebox • Vault compartment
Combined Administrative and Maintenance Facility	Any facility with combined functions of at least one of the administrative facilities listed above and one of the maintenance facilities listed above. If selected, describe specific facility in “Notes” field.

Administrative or Maintenance Facility Type	Facility Type Description
Other	Any administrative or maintenance facility that does not fit into one of the ten categories described above. If selected, describe specific facility.

Passenger and Parking Facility Types

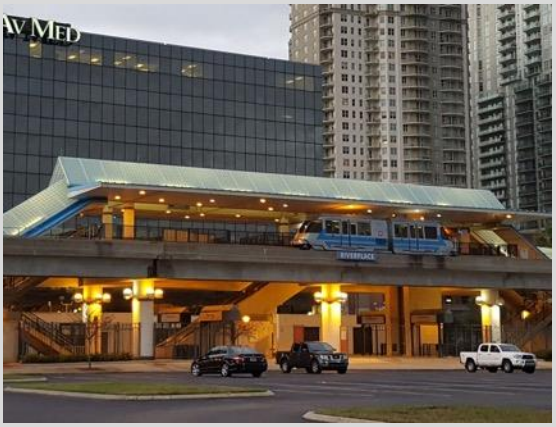
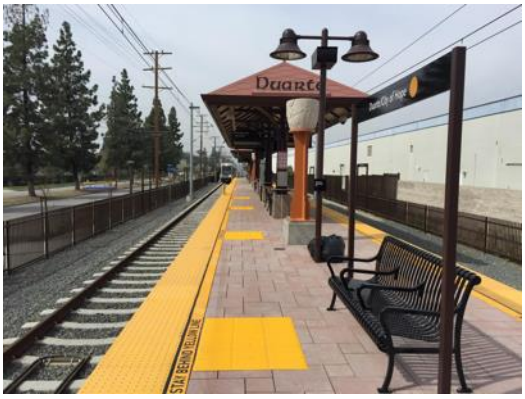
Agencies must report all passenger stations and parking facilities that passengers use in revenue service. Parking facilities include park & ride lots as well as parking garages. Note that passenger and parking facilities are often collectively referenced as "passenger facilities." Parking facilities used solely by employees are not reportable.

Parking facilities are those immediately adjacent to passenger facilities. Agencies must inventory parking facilities separately.

With the exception of Parking Structure or Surface Parking Lot, all other passenger facilities must meet the station criteria outlined in this manual. Please refer to the "Station Criteria" section of this chapter for further detail on criteria for specific modes.

Exhibit 52: Passenger and Parking Facility Types

Passenger or Parking Facility Type	Facility Type Description
Bus Transfer Center 	Terminal station for several routes or a large mid-route transfer facility where passengers may connect between two or more fixed-route bus services. The station may or may not have off-street area for buses to pull in or turn around. Terminal may have a single rubber-tire mode, usually MB, but may be connection hub for bus, CB, and/or Intercity Bus services. Transfer centers are structures that have a passenger waiting area. Some transfer centers have ticket vending machines or staffed ticketing booths. Simple shelters should not be reported.

Passenger or Parking Facility Type	Facility Type Description
Elevated Fixed Guideway Station 	Station located above grade built on a viaduct, a steel or concrete structure, or on retained fill. Steel and reinforced concrete components in elevated structure can include: • Foundation • Piers • Retaining Walls • Beams • Stringers • Bearing pads • Expansion joints Passenger stations include stairs, elevators, and escalators to reach ticket mezzanines and/or train platforms. Elevated stations may have pedestrian overpasses to allow passengers to cross over the tracks before or after entering the station. Stations may include canopies or shelters, lighting, and signage.
At-Grade Fixed Guideway Station 	Station located at street grade along a transit exclusive right-of-way. May include pedestrian overpasses to allow passengers to reach station.

Passenger or Parking Facility Type	Facility Type Description
Underground Fixed Guideway Station 	A passenger station typically consisting of a concrete structure built below grade, constructed by cut and cover, drill-and-blast, excavated, bored tunnel, or sunken underwater tube. Stations typically include sump pumps, ventilation systems, and lighting systems.
Simple At-Grade Platform Station 	Stops on-street or in street or highway medians. May be low-level platforms (serving low-floor vehicles) or raised platforms (serving high-floor vehicles). Typically includes shelters, canopies, lighting, signage, and/or ticket vending machines. Right-of-way leading up to the platform station is in mixed traffic. This station type is often served by LR and SR transit. For MB, CB, RB, and TB modes, a significant structure must be present. Does not include simple bus shelters.
Exclusive Platform Station 	Stops along the street or in street or highway medians that are separated from mixed traffic. May be low-level platforms (serving low-floor vehicles) or raised platforms (serving high-floor vehicles). Typically include shelters, canopies, lighting, signage, and/or ticket vending machines. Right-of-way leading up to the platform station is separated from automobile traffic. This station type is often served by LR and SR transit. For MB, CB, RB, and TB modes, a significant structure must be present. Does not include simple bus shelters.

Passenger or Parking Facility Type	Facility Type Description
Ferryboat Terminal 	Terminal station where passengers may board or alight from the ferryboat. Terminals may include canopies or shelters, lighting, and signage.
Surface Parking Lot 	A lot paved with asphalt, concrete, or permeable materials with parking spaces outlined by paint and other materials for demarcation. Typically includes lanes for vehicle circulation and is usually uncovered.
Parking Structure 	Single or multi-level parking structure built either underground (typically underneath a building or station), above grade, or both. Characterized by a street-level entrance with ramps to access parking spaces below the surface.
Other	Any passenger or parking facility that does not fit into one of the nine categories described above. If you select “Other,” describe specific facility and its functions in the “Notes” field.

Condition Assessment

Transit agencies are required to report a condition assessment for all facilities for which they have capital replacement responsibility. The condition assessment is based on FTA's TERM scale. The scale is based on five values for assets:

Exhibit 53: TERM Scale

Rating	Condition	Description
5	Excellent	No visible defects, new or new near condition, may still be under warranty if applicable
4	Good	Good condition, but no longer new, may have some slightly defective or deteriorated component(s), but is overall functional
3	Adequate	Moderately deteriorated or defective components; but has not exceeded its useful life
2	Marginal	Defective or deteriorated component(s) in need of replacement, exceeded useful life
1	Poor	Critically damaged component(s) or in need of immediate repair; well past useful life

Assets are considered in good repair with a score of three or higher. With a score of two or lower, assets are not considered to be in the state of good repair backlog.

Agencies are not required to report condition assessments on facilities or stations that are under construction. Agencies must inventory existing facilities that are under construction if they are still using them in revenue service. A condition assessment is not required until construction is complete. Agencies may only report condition assessments that occurred during the fiscal year being reported on.

Primary and Secondary Rating Levels

In the *TAM Facility Performance Measure Reporting Guidebook: Condition Assessment Calculation*, FTA outlines primary and secondary rating levels to assist in assessing facilities conditions. Primary levels describe large components of a facility, while secondary levels will detail the smaller components that make up the larger component. Secondary rating levels may assist in determine overall conditions for facilities that have varied conditions for the outlined features.

Examples of primary level features would include:

- Substructure
- Interiors
- Conveyance
- Plumbing

For the primary level, Substructure, secondary levels included may be elements such as:

- Foundations: walls, columns, pilings, etc.
- Basement: materials, insulations, slab, floor underpinnings

For a complete list of primary and secondary levels, please refer to the FTA guidebook.

Equipment in Facilities

Agencies may choose to include equipment in facility condition assessments. If the equipment is integral to the building and is not typically moved from one facility to another, it should be inventoried and assessed as part of the facility. Equipment that is inventoried separately, should not be assessed as part of an agency's facilities. Please note, the Equipment target set for each agency refers to service vehicles only.

TERM Scale Reporting

The TERM scale condition assessments must be reported as integers. The overall ratings must be rounded to the nearest whole value following standard rounding guidelines—if the value is less than .5, the value would be rounded down, and if the value is .5 or greater, it would be rounded up.

Facilities condition assessments must be updated every four years at minimum. In Report Year 2021, agencies must have reported all facility condition assessments. For group TAM plans, the 25 percent annual minimum applies to the group as a whole and not to individual participants.

Please refer to the FTA guidebook for more information on determining TERM scale ratings for facilities.

Transit Way Mileage (Form A-20)

Transit agencies that are Full Reporters must report data for the HIB or FG segments on which they operate. Transit agencies must collect data for rail modes and non-rail modes (listed below) that operate on HIB or FG:

- Bus (MB)
- Trolleybus (TB)
- Commuter Bus (CB)
- Bus rapid transit (RB)

Transit agencies provide information on the segment track and its construction for rail modes and lane mileage information for applicable non-rail modes.

Right-of-Way Classes

Transit way mileage reporting requirements vary by mode. FTA recognizes that Commuter Bus (CB) and Bus (MB) modes may operate in the following types of ROW:

- **Fixed Guideway (FG).** Roadways that agencies reserve at all times (24 hours / 7 days per week) for public transportation vehicles. This type of ROW must meet safe operations and have strict enforcement.
- **High Intensity Busway (HIB).** Roadways that are either reserved at some times for transit use but open to mixed traffic at other times OR are reserved at some or all times for HOV operations (single-occupancy vehicles are prohibited).
- **Mixed-Traffic ROW (Non-Fixed Guideway).** Mixed-traffic ROW are normal streets and roads where transit vehicles operate. Public transportation shares these roadways with personal cars and trucks. Mixed-traffic ROW is the most common ROW public transportation uses.

Due to Federal statute, Aerial Tramway (TR) and Ferryboat service (FB) DRM are reportable as fixed guideway; FTA considers all Trolleybus (TB) and Bus Rapid Transit (RB) DRM as FG for funding eligibility.

Rail

FTA defines fixed guideway as a separate ROW for the exclusive use of public transportation vehicles. By this definition, all transit way mileage for rail modes is on FG.

Transit agencies must report miles of track for all rail modes. If the track is at grade with cross traffic or at grade with mixed and cross traffic, agencies must report the number of crossings.

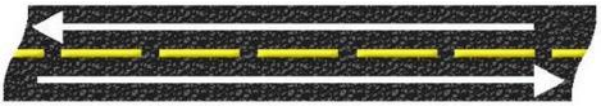
- **Track Miles** is the length of track to the nearest tenth of a mile for each segment. Agencies must measure miles of track without regard to traffic flow. Agencies must count all track, including yard track and sidings.
- **Number of Crossings** (for rail modes operating at grade) is the number of locations at which other traffic may cross the ROW. Grade crossings are any place where people or vehicles are intended to cross the tracks. This includes roads, bicycle crossings, and pedestrian crossings. For street-running track, count each cross street or crosswalk as a grade crossing (excludes driveways and parking lot entrances). For multiple crossings on one contiguous paved section of road, report one crossing.

Non-Rail Modes

The fixed route modes listed above may operate on their own FG, HIB, or with personal and commercial vehicles (mixed traffic ROW). For non-rail modes, transit agencies must report lane miles for three types of ROW:

- **Exclusive Fixed Guideway** — these segments are exclusive at all times, 24 hours per day, seven days per week;
- **Exclusive High Intensity Busway** — these segments are HOV lanes at all times, 24 hours per day, seven days per week or alternatively may be HOV lanes for a portion of the week and exclusive to transit for the remainder of the week; and
- **Controlled Access High Intensity Busway** — these segments may be exclusive to transit or function as HOV for a certain number of hours but are open to general traffic for some part of the week.

Example: This example depicts a two-lane road that is ten miles long with service in two directions. How should the agency report this segment?



Solution: The agency reports 20 lane miles.

Exhibit 54: Calculating Lane Miles

Lane miles are the length of a roadway (in miles) multiplied by the number of traffic lanes. The following exhibit gives examples for calculating lane miles for non-rail ROWs.

Exhibit 55: Calculating Lane Miles and Guideway Classifications

Examples	Solutions
Example 1: There is a HOV facility ten miles long with one traffic lane running northbound and one traffic lane running southbound. It operates under HOV restrictions all times.	10 miles for the northbound lane + 10 miles for the southbound lane = 20 lane miles, Exclusive HIB.
Example 2: There is reversible facility ten miles long with one traffic lane (operated north bound in the morning and south bound in the evening). During off-peak hours, it is open to all traffic.	There is only one lane, so the agency would report 10 lane miles, Controlled Access HIB.
Example 3: A busway (exclusive to transit vehicles at all times) is 3 miles long.	An agency using this busway would report 3 lane miles, Exclusive FG.

Guideway, Power and Signal Equipment, and Track (Rail Modes)

Transit agencies providing rail service are required to report on the specific types of guideway assets and power and signal equipment and on the specific types of track fixation assets in addition to the guideway class, miles of track, and crossings that has been historically required for all rail modes. Agencies must report on all track, including yard and sidetrack.

FTA collects data on the following three sections for all rail modes:

- Guideway elements
- Power and signal elements
- Track elements (special work assets)

For each guideway and power and signal elements reported, agencies must report either the percentage or quantity in an age group by decade of construction, ranging from pre-1940 to the present Report Year. For each section below, agencies will be required to report the following:

- Expected service years when new
    - This should represent the average number of service years for each element. Agencies may report their own expected service years specific to their agency's conditions and current environment.
- Transit agency capital responsibility

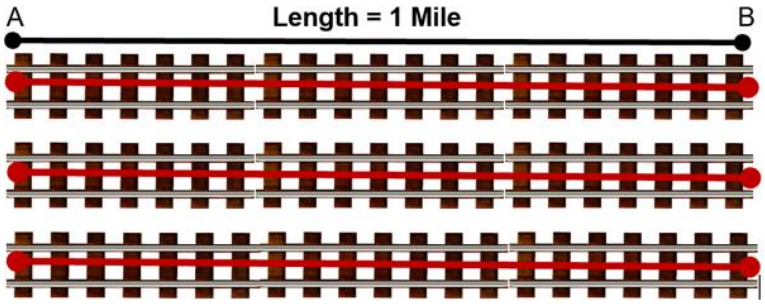
- Agencies will report the percentage for capital responsibility for each element reported.

- Agency with shared responsibility (if applicable)
  - Agencies with shared responsibility must report the other agency that shares capital responsibility for each element.

Guideway Elements

For each guideway element, agencies must report the amount of track miles.

Exhibit 56: Reporting Track Miles



Example: An agency has capital responsibility to maintain a corridor of guideway that is one mile from point A to point B. Three track railways operate over guideway. How would the agency report track miles for this section?

Solution: The agency would report three track miles. Track miles are the combined length of all track railways, even if they are parallel.

Guideway elements are reported according to the method of construction, as follows:

- At-Grade
  - Ballast (including expressway)
  - In-Street/embedded
- Elevated
  - Retained fill
  - Concrete
  - Steel viaduct or bridge
- Below-Grade
  - Retained cut

- Cut-and-cover tunnel
- Bored or blasted tunnel
- Submerged tube

See Exhibit 57 *(Track and Guideway Elements)* for more detail.

Agencies must report the age group of each guideway element. This can be reported as a percentage of the total for each element, or agencies may report age based on track miles for each age group.

The age of each element should reflect the age of the foundation of the guideway such as the roadway or ballast. If the period of construction of an element spanned two age groups, agencies should determine a reasonable and consistent split between the two age groups and report accordingly. If there is no reasonable basis for a split, the age group should reflect the end date of construction.

Splitting Guideway

To mark the division between guideway categories, agencies divide at-grade guideway into “sections” with an endpoint wherever there is a station or a change in construction type.

Power and Signal Elements

As part of the transit guideway asset inventory, agencies are required to report power and signal elements used for their rail modes. Power signals and elements are listed below:

- Substation building
- Substation equipment
- Third rail/power distribution
- Overhead contact system/power distribution
- Train control and signaling

Agencies must report the quantity of substation buildings. Agencies must report substations that comprise multiple buildings as one single substation if the individual buildings or shells are working elements of the same substation. If the buildings serve different purposes and are not sub-components of one operation, then the agency must count each individually. For other categories of power and signal elements, FTA does not require agencies to report the quantity, but agencies must indicate whether or not they have these assets.

Agencies that report Inclined Plane (IP) or Cable Car (CC) modes should report the associated motors and cables under Substation Equipment under the Power and Signal section.

Similar to guideway elements, agencies must report the age group for each power and signal element. This can be reported by quantity for each element or by percentage for each applicable age group.

Track Elements

Agencies must provide data on their track inventory. Linear assets are reported in three categories: Tangent, Curve, and Special Work Assets. Tangent and curve track are reported in track miles, in the following categories:

- Tangent — Revenue Service
- Curve — Revenue Service
- Non-Revenue Service
- Revenue Track — No Capital Replacement Responsibility

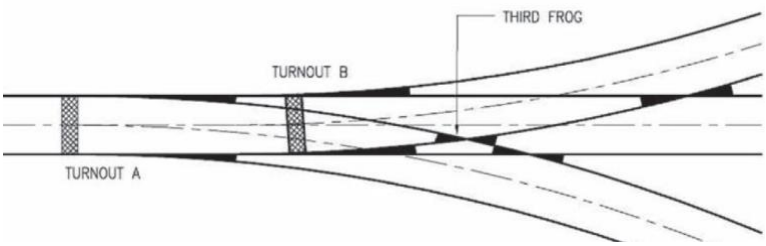
Special Work Assets are reported as the quantity of each category listed:

- Single turnout
- Lapped turnout
- Single crossover
- Double crossover
- Grade crossing
- Rail crossing
- Slip switch

Single Turnout

An assembly of track components that collectively permit two tracks to merge with each other. The primary components of a turnout are the frog and the switch.

Lapped Turnout



A lapped turnout is a special type of turnout in which the switch rails for a second turnout will be placed between the switch and the frog of the initial turnout. Lapped turnouts are used to achieve a more compact track layout in constrained locations, typically in a configuration that allows rail traffic to veer right or left in addition to proceeding straight ahead.[7]

Single Crossover

A single crossover consists of two turnouts positioned in two tracks that allow the vehicle to go from one track to the other. The two tracks are usually, but not always, parallel, and the turnouts are usually identical.

Double Crossover

A double crossover—sometimes called a *scissors crossover*—consists of two crossovers of opposite hand orientation superimposed upon each other. In addition to the four turnouts involved, a track crossing diamond is needed between the two main tracks.

Grade Crossing

A grade crossing is an intersection of a roadway and a rail right-of-way that cross each other at the same level (at grade). For street-running operations, each street intersection is considered a grade crossing (excludes driveways and parking lot entrances).

[7] Engineering images from TCRP Report 155, *Track Design Handbook for Light Rail Transit* (2016).

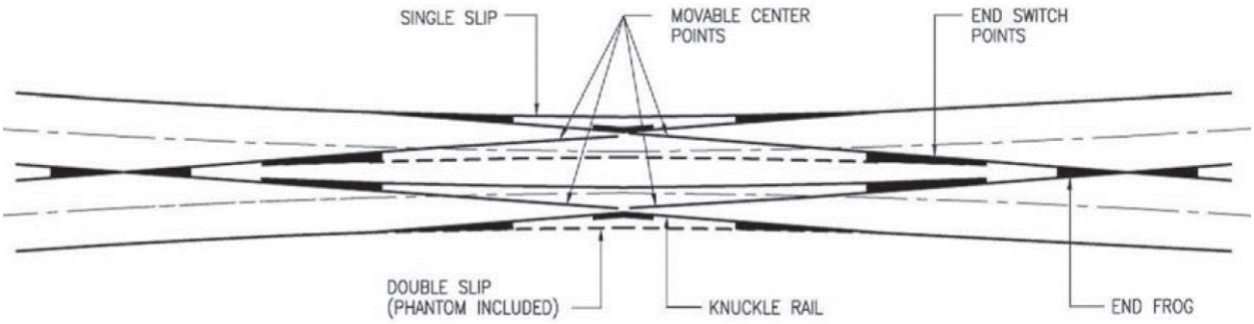
Rail Crossing

Track crossings permit two tracks to cross each other. Track crossings are commonly called either *crossing diamonds* or simply *diamonds* due to shape. The intersecting angle between the two tracks can be 90 degrees or less, but rigid crossings under approximately 10 degrees are rare.

If a track crosses two parallel tracks, as shown in the picture to the right, the agency should report two crossings. If there are two pairs of tracks that cross each other, the agency should report four crossings.

Slip Switch

A slip switch superimposes two switches and curved closure rails on top of an elongated track crossing. A slip switch may be installed to switch a train from one track to another at a flat angle crossing when space constraints make it impossible to provide separate



turnouts outside of the limits of the diamond. Both single and double slip switches are used in most transit operations. Agencies should not report switches if they are included as part of a single turnout or lapped turnout. Agencies should count each slip switch once, regardless of whether it is a single or a double slip switch.

In cases where agencies use freight assets to provide public transportation, they still are required to report these assets to the NTD. Agencies that share capital responsibility for track with a freight provider or other private entity are also required to provide data on the amount of track under performance restrictions.

In cases where agencies use freight assets to provide public transportation, they still are required to report these assets to the NTD. Agencies that share capital responsibility for

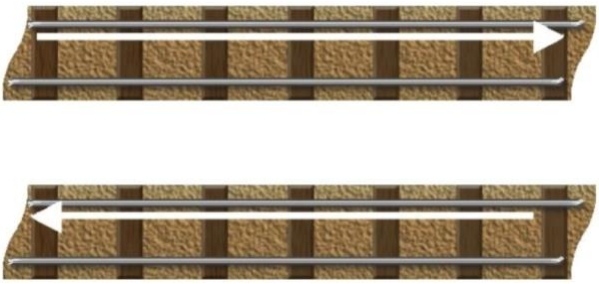
track with a freight provider or other private entity are also required to provide data on the amount of track under performance restrictions.

Exhibit 57: Calculating Track Miles

Example 1: This example shows one segment of track that is one mile long with service in two directions. How many miles of track can an agency report?

Solution: Track is measured without regard to routes or direction of travel. Agencies report this as one mile of track.

Example 2: This example shows a one-mile segment with inbound and outbound parallel tracks. How many miles of track should an agency report?



Solution: Track is measured without regard to routes or direction of travel. Agencies report this as two miles of track.

Performance Restriction

Agencies are required to report total track miles under performance restriction for which they have capital responsibility. A performance restriction is defined to exist on a segment of rail fixed guideway when the maximum permissible speed of transit vehicles is set to a value that is below the guideway's full-service speed. The performance restriction can be communicated through operating instructions, route signage, flaggers, or an agency's dispatch system. Performance restrictions may result from a variety of causes, including defects, signaling issues, construction zones, maintenance work, or other causes.

Performance restrictions must be recorded as of 9 AM on the first Wednesday of each month. If an agency does not operate at 9 AM, they must record during the AM peak on the first Wednesday of each month. An annual average is reported to the NTD each year. Performance restrictions must be reported by mode and type of service.

While FTA does not collect the causes or circumstances behind each performance restriction in the annual report forms, agencies may include these in their narrative report.

Performance restrictions serve as the condition assessment for the infrastructure category that is calculated in annual targets.

For more information on calculating performance restrictions, please reference the *TAM Infrastructure Performance Measure Reporting Guidebook: Performance Restriction (Slow Zone) Calculation*.

Exhibit 58: Reporting Performance Restrictions

A transit agency is experiencing high temperatures during the summer months. The agency issues an advisory warning for all Heavy Rail (HR) operators to reduce speed during the daylight hours. How should an agency report this?

The transit agency would not report a performance restriction in this case. A performance restriction must be specific to a section of track. If the agency cannot pinpoint the sections of track that need to be under a performance restriction during extreme weather conditions, it would not be considered a true performance restriction.

A transit agency has identified defects in several segments of their Commuter Rail (CR) track. The agency is conducting maintenance on these segments but has lowered the permissible speed from 40mph to 25mph. How would an agency report this?

The transit agency would include these segments of track in their total for track under performance restrictions since the defects in the track have caused the service to operate at a lower speed than the full-service speed.

Vehicles, Maintenance, and Fuel

All transit agencies reporting service data must provide information on revenue vehicles by mode and type of service. Rural reporters provide less detailed data.

Transit agencies must inventory all vehicles they use to provide public transportation that have not been sold or disposed of by the end of the fiscal year. Vehicles must be reported on the first fiscal year in which they are used in revenue service. This inventory identifies the vehicles in the total fleet and includes all revenue and service vehicles in the following situations.

- Vehicles in operation (i.e., providing revenue service)
- Vehicles awaiting sale or disposal
- Vehicles out for long-term repair
- Vehicles in storage
- Vehicles retained as part of an FTA-approved emergency contingency plan

For Commuter Rail service (CR), transit agencies must report data for both passenger cars and locomotives used to pull or push.

Transit agencies report revenue vehicle inventory data by groups or fleets. Agencies should group vehicles into fleets if they are identical in all aspects, including vehicle type, manufacture year, model, and funding source, etc.

Revenue Vehicle Inventory Data (Form A-30)

FTA collects the following data from transit agencies that report revenue vehicle inventory information:

- Agency Fleet Identification
- Vehicle type
- Number of vehicles in total fleet
- Number of active vehicles in fleet
- Dedicated fleet
- Vehicle length
- Seating capacity
- Year of manufacture
- Ownership
- Funding source
- Number of emergency contingency vehicles
- ADA-accessible vehicles
- Useful Life Benchmark

Agency Fleet Identification

Transit agencies may report unique identifiers for each fleet in their inventory. This may be any characteristic or group identifier the agency uses to distinguish between vehicle fleets.

Vehicle Type

Transit agencies must report the vehicle type for each fleet of vehicles. Please see the list of vehicle types below:

Articulated Buses (AB) are extra-long (54 ft. to 60 ft.) buses with two connected passenger compartments. The rear body section is connected to the main body by a joint mechanism that allows the vehicles to bend when in operation for sharp turns and curves and yet have a continuous interior.

Automated Guideway Vehicle (AG) is a vehicle used for Monorail/Automated Guideway mode (MG).

Automobile (AO) is a passenger car up to and including station wagons in size. Excludes minivans and anything larger.

Over-the-Road Bus (BR) is a bus characterized by an elevated passenger deck located over a baggage compartment.

Bus (BU) is a rubber-tired passenger vehicle powered by diesel, gasoline, battery, or alternative fuel engines contained within the vehicle. Vehicles in this category do not include school buses or cutaways.

Cable Car (CC) is a streetcar type of passenger vehicles operating by means of an attachment to a moving cable located below the street surface and powered by engines or motors at a central location not onboard the vehicles.

Cutaway (CU) is a transit vehicle is built on a van or truck chassis by a second stage manufacturer. The chassis is purchased by the body builder, a framework is built for the body, and then the body is finished for a complete vehicle. For example, a truck chassis may be used as the base for a small transit bus. Cutaways typically seat 15 or more passengers, and typically may accommodate some standing passengers.

Double Decker Bus (DB) is a high-capacity bus having two levels of seating, one over the other, connected by one or more stairways. Total bus height is usually 13 to 14.5 feet, and typical passenger seating capacity ranges from 40 to 80 people.

Ferryboat (FB) is a vessel for carrying passengers or vehicles over a body of water. The vessels are generally steam or diesel-powered conventional ferry vessels. They may also be hovercraft, hydrofoil, and other high-speed vessels.

Heavy Rail Passenger Car (HR) is a rail car:

- With motive capability
- Driven by electric power taken from overhead lines or third rails
- Configured for passenger traffic
- Usually operated on exclusive right-of-way (ROW)

Light Rail Vehicle (LR) is a rail car:

- With motive capability
- Usually driven by electric power taken from overhead lines
- Configured for passenger traffic
- Operated on exclusive ROW or on mixed traffic streets

Inclined Plan Vehicle (IP) is a special type of passenger vehicle operating up and down slopes on rails via a cable mechanism.

Minivan (MV) is a light duty vehicle having a typical seating capacity of up to seven passengers plus a driver. A minivan is smaller, lower, and more streamlined than a full-sized van, but it is typically taller and has a higher floor than a passenger car. Minivans normally cannot accommodate standing passengers.

Commuter Rail Locomotive (RL) is a Commuter Rail (CR) vehicle used to pull or push CR passenger coaches. Locomotives do not carry passengers themselves.

Commuter Rail Passenger Coach (RP) is a Commuter Rail (CR) passenger vehicle not independently propelled and requiring one or more locomotives for propulsion.

Commuter Rail Self-Propelled Passenger Car (RS) is a Commuter Rail (CR) passenger vehicle not requiring a separate locomotive for propulsion.

School Bus (SB) is a passenger vehicle, which is designed to carry more than ten passengers in addition to the driver. School buses are used primarily for transporting pre-primary, primary or secondary school students either to such schools from home or from such schools to home.

Sports Utility Vehicle (SV) is a high-performance four-wheel drive car built on a truck chassis. It is a passenger vehicle, which combines the towing capacity of a pickup truck with the passenger-carrying space of a minivan or station wagon. Most SUVs are designed with a roughly square cross-section, an engine compartment, a combined passenger and cargo compartment, and no dedicated trunk. Most mid-size and full-size SUVs have three rows of seats with a cargo area directly behind the last row of seats. Compact SUVs and mini SUVs may have five or fewer seats.

Trolleybus (TB) is a rubber-tired, electrically powered passenger vehicle operated on city streets drawing power from overhead lines with trolleys.

Aerial Tramway Vehicle (TR) is an unpowered passenger vehicle suspended from a system of aerial cables and propelled by separate cables attached to the vehicle suspension system. Engines or motors at a central location, not onboard the vehicle, power the cable system.

Van (VN) is an enclosed vehicle having a typical seating capacity of 8 to 18 passengers and a driver. A van is typically taller and with a higher floor than a passenger car, such as a hatchback or station wagon. Vans normally cannot accommodate standing passengers.

Vintage Trolley/Streetcar (VT) is a vintage or antique rail car originally manufactured before 1975, or a replica of this type of rail car that has been built more recently. The vehicles are typically operated in mixed traffic ROW but may also operate on exclusive ROW.

Appendix B: Asset Codes provides a quick reference for abbreviations the NTD uses on the Annual Report for vehicle type.

Some transit agencies operate motor buses that look like trolleybuses. However, these replica trolleys do not share the same characteristics as true trolleybuses, such as drawing electrical power from overhead lines. If an agency operates replica trolleys, it must report the replicas as buses under the Bus (MB) mode.

Number of Vehicles in Total Fleet

Transit agencies must report the number of revenue vehicles in the total fleet at the end of the fiscal year. This total does not include supervisor or support vehicles. Total vehicles include both active and inactive vehicles held at the end of the fiscal year. Agencies report vehicles they sell or dispose of during their fiscal year and should indicate they have retired these vehicles.

Inactive vehicles are not readily available for revenue service. They include vehicles that are

- In storage
- Retained for emergency contingency purposes
- Out of service for an extended period of time for major repairs
- Awaiting sale or disposal

Transit agencies add vehicles to the inventory of Total Vehicles the first year they are used in transit service. Active Vehicles should include only the vehicles available to operate in revenue service. Active vehicles include spare vehicles and vehicles temporarily out of service for routine maintenance and minor repairs. Because the number of active vehicles includes spares, the number of active vehicles is typically greater than the number of VAMS.

Exhibit 59: Active and Inactive Vehicles

Vehicle Status	Total Vehicles	Active Vehicles	Contingency
Vehicles in Service	X	X	-
Spare Vehicles	X	X	-
Vehicles in Routine Maintenance/Minor Repairs	X	X	-
Vehicles in Rehabilitation/Major Repairs	X	-	-
Vehicles Awaiting Sale	X	-	-
Vehicles in Storage	X	-	-
FTA-Approved Contingency Vehicles	X	-	X
Vehicles Being Cannibalized for Parts	-	-	-
Vehicles Sold During Fiscal Year	-	-	-
Support Vehicles and Supervisor Vehicles	-	-	-
New Vehicles not yet in Service	-	-	-

Number of Active Vehicles in Fleet

Transit agencies must report the number of active vehicles in the fleet at year-end. Active vehicles do not include emergency contingency vehicles.

If an agency were holding an entire fleet of vehicles until disposal, the agency would report the number of active vehicles for that fleet as zero.

Dedicated Fleet

FTA defines dedicated vehicles as vehicles used exclusively for public transit service. Transit agencies that report directly operated service must report all vehicles under dedicated fleets.

In some cases, purchased transportation contractors do not use a dedicated fleet for public transit services. Transit agencies reporting this service must report such vehicles as non-dedicated. Transit agencies report limited data for non-dedicated fleets. Non-Dedicated fleets should encompass a representative sample of the vehicles used to provide the service. For TN and TX types of service, spares should not be included in this sample.

Vehicle Length

Transit agencies must report the vehicle length for each fleet of vehicles in feet.

Seating Capacity

The NTD captures seating capacity for each vehicle fleet. This is the actual number of seats onboard the vehicle and does not include the driver's seat except for Vanpool (VP) where the driver is typically a passenger. Manufacturers generally cite this information in the specification of the vehicle.

Year of Manufacture

Transit agencies must report the year of manufacture for the vehicles. The year of manufacturer is the year that the vehicles were built, not the model year.

Exhibit 60: Year of Manufacture vs. Model Year

Example: A fleet of 20 buses is manufactured in 2020. The model year of the 20 buses is 2021. What is the year of manufacture for purposes of NTD reporting?

Solution: Report the year of manufacture as 2020, as this is the year in which the vehicles were built.

Ownership

Transit agencies must indicate what type of entity owns the revenue vehicles and the ownership type. Ownership types include

- Owned outright by a public agency
- Owned outright by a private entity
- True lease by a public agency
- True lease by a private entity
- Lease under a lease purchase agreement by a public agency
- Lease under a lease purchase agreement by a private entity
- Leased or borrowed from related parties by a public agency
- Leased or borrowed from related parties by a private entity

Owned Outright

Owned outright indicates that a public agency or private entity owns the vehicles. Owned outright also includes safe harbor leasing agreements where only the tax title is sold.

True Lease

Under a **true lease** the public agency or private entity does not own the vehicle. Typically, at the end of the lease, the entity leasing the vehicle returns it to the leasing company. When the public agency or private entity returns the leased vehicle, it often enters into a new lease agreement, usually for a new vehicle.

In some cases, true leases include the option to purchase the vehicle at the end of the lease. When the agency buys the vehicle, vehicle ownership becomes **owned outright**.

Public transit agencies generally do not enter into true leases for revenue vehicles. However, should a transit agency enter into a true lease with a private entity for a Vanpool program, it should report the arrangement as a true lease. If the agency does not have a true lease, it should report the vehicles as owned outright by a private entity.

Lease Purchase Agreement

Under a **lease purchase agreement,** the public agency or private entity acquires the vehicle by making all lease payments. The public agency or private entity owns the vehicle when it makes all payments, at which the ownership type changes to **owned outright**.

Leased or Borrowed from Related Parties

Leased or borrowed from related parties usually involves two government entities. Sometimes, another public agency (e.g., a State) owns the vehicles and either leases them or provides them at no cost to the transit agency (e.g., local grantee).

Please see Appendix B, "Asset Codes," for the acronyms the NTD uses on the Annual Report for ownership type.

Funding Source

Agencies must indicate the funding source used to purchase or lease vehicles using the following options:

- Urbanized Area Formula Program (§5307)
- Formula Grants for Rural Areas (§5311)
- Enhanced Mobility of Seniors & Individuals with Disabilities (§5310)
- Other Federal funds
- Non-Federal public funds
- Non-Federal private funds.

Please see Appendix B, "Asset Codes," for the abbreviations the NTD uses on the Annual Report for funding sources.

Number of Emergency Contingency Vehicles

FTA normally requires that agencies dispose of vehicles when they replace them with FTA-funded vehicles. However, FTA may permit a transit agency to keep the vehicles in an inactive fleet to be used in the event of natural disasters. Agencies must request FTA approval of an Emergency Contingency Plan for keeping replaced vehicles.

Agencies must report the number of vehicles in an approved FTA Emergency Contingency Plan. They must report the emergency contingency vehicles as an inactive fleet.

ADA-Accessible Vehicles

Agencies must identify active vehicles that meet ADA requirements for accessibility.

Useful Life Benchmark

ULB is the expected life cycle of a capital asset for a particular transit agency's operating environment, or the acceptable period of use in that environment. Agencies must report a ULB for all fleets for which they have capital replacement responsibility.

FTA has outlined default ULB for each vehicle type. If a transit agency selects ULBs that differ from FTA's default values, the NTD analyst may request supporting documentation.

Please see the table below for default ULB's for common vehicle types.

Exhibit 61: Revenue Vehicle Default Useful Life Benchmarks

Vehicle Type	Default ULB (in years)
Articulated Bus (AB)	14
Automated Guideway Vehicle (AG)	31
Automobile (AO)	8
Over-the-road Bus (BR)	14
Bus (BU)	14
Cable Car (CC)	112
Cutaway Bus (CU)	10
Double Decked Bus (DB)	14
Ferryboat (FB)	42
Heavy Rail Passenger Car (HR)	31
Inclined Plane Vehicle (IP)	56
Light Rail Vehicle (LR)	31
Monorail Vehicle (MO)	31
Minivan (MV)	8
Commuter Rail Locomotive (RL)	39
Commuter Rail Passenger Coach (RP)	39

Vehicle Type	Default ULB (in years)
Commuter Rail Self-Propelled Passenger Car (RS)	39
School Bus (SB)	14
Streetcar (SR)	31
Sports Utility Vehicle (SV)	8
Trolleybus (TB)	13
Aerial Tramway (TR)	12
Van (VN)	8
Vintage Trolley (VT)	58

Capital Responsibility for Revenue Vehicles

Transit agencies indicate whether they have capital responsibility for each revenue vehicle fleet. If the transit agency leases the vehicles but must pay a certain percent annually to eventually own the assets, such as lease-to-own arrangements, the agency should report the status of capital responsibility as of the end of the fiscal year.

In the case of leased or borrowed from related party agreements, the lessee does not have to report ULB for these assets, as they do not have capital responsibility. It is typically the lessor that would report this condition assessment.

Agencies that have true leases are not required to report ULB for these revenue vehicles since the agency does not have capital responsibility.

Autonomous Vehicle Fleets

Transit agencies indicate whether fleet vehicles are autonomous. An autonomous vehicle is one “capable of performing all driving functions without human input under certain conditions.”

Revenue Vehicle Inventory — Additional Requirements for Urban Reporters

Full and Reduced Reporters operating in Urbanized Areas must also report the following, by fleet:

- Year of rebuild
- Manufacturer
- Model
- Standing capacity
- Total miles on active vehicles
- Average lifetime miles per active vehicle

Year and Type of Last Renewal

Transit agencies must report the year of renewal and type of renewal for the vehicles, if applicable. An agency must report the year of renewal if it performs work on a vehicle to extend its useful life or ensure the useful life is reached. The following renewal types must be reported:

- Mid-Life Vehicle Overhaul
- Life-Extending Rebuild

Mid-Life Vehicle Overhaul is the systematic replacement or upgrade of vehicle systems with a useful life less than the useful life of the entire vehicle in a programmed manner. Overhaul is performed as a planned or concentrated preventive maintenance activity and is intended to enable the vehicle to perform to the end of the original useful life.

Life-Extending Rebuild is a capital activity associated with rolling stock that occurs at or near the end of a unit of rolling stock's useful life. This results in an extended useful life for the unit consistent with the extent of the rebuild.

For example, an agency may rebuild a bus with a useful life of 12 years to extend its useful life to 17 years.

If an agency rebuilds a portion of a vehicle fleet that it reports to the NTD, it must divide the fleet and report the rebuilt vehicles separately. Agencies can only group vehicles into a fleet on the Annual Report if the vehicles are identical. Agencies should not update the original funding source in the event of a rebuild.

Manufacturer

Agencies should report the company that manufactured the vehicle. Some vehicles may have more than one manufacturer. For example, cutaway vehicles have two

manufacturers: the manufacturer of the chassis and the manufacturer of the body. Transit agencies must report the manufacturer of the body.

Please see Appendix B, "Asset Codes," for the acronyms the NTD uses on the Annual Report for manufacturer type.

Model

Transit agencies must report the model name for a vehicle as the model that the vehicle manufacturer provides. The Vehicle Identification Number (VIN) is not the model.

Exhibit 62: Manufacturer vs. Model

Example: Transit Agency A has a fleet of cutaway vehicles built on Ford F-350 chassis. The bodies were manufactured by El Dorado. El Dorado lists the vehicles as being Aerotech models. What does the agency report as the manufacturer and the model?

Solution: The agency must report the body manufacturer. Transit Agency A reports El Dorado (EDN) as the manufacturer and Aerotech as the model.

Standing Capacity

Transit agencies must report the standing capacity of the vehicle fleet. This is the maximum number of people that a transit agency allows (by policy) to stand on the vehicle at one time.

If local policy prohibits standing, the agency will report zero for standing capacity. In the unlikely event that there is no local policy on the maximum number of standees, the agency should report the rated standing capacity as provided by that vehicle's manufacturer.

Total Miles on Active Vehicles

Agencies must report the total miles each vehicle fleet was driven during the fiscal year. The total miles on active vehicles include

- Actual vehicle miles (including deadhead and revenue miles)
- The other miles incurred or driven during the reporting period such as mileage from
  - Operator training
  - Moving vehicles between and within maintenance facilities/garages

Average Lifetime Mileage per Active Vehicle

Transit agencies must report the average lifetime miles on its vehicles at the end of the fiscal year.

Average lifetime miles are the average mileage, since the date of manufacture, on active vehicles at fiscal yearend. Average lifetime miles always begin with the original date of manufacture, even if an agency has rebuilt a vehicle.

Exhibit 63: Total Miles and Average Lifetime Mileage per Active Vehicle

Example: A transit agency operates Bus (MB) service with a fleet of 8 vehicles. The odometer/hubometer readings for each vehicle and the vehicle status at fiscal year-end (FYE) 2021 are below. All buses have the same vehicle type, fuel type, ownership code, funding source, year of manufacture, manufacturer code, model number, and capacity (seating and standing). How does the agency report Total Miles During the Period and Average Lifetime Miles per Active Vehicle?

Vehicle Number	Odometer Reading at 2020 Fiscal Year-End	Odometer Reading at 2021 Fiscal Year-End	Mileage During 2021 Fiscal Year	Status at 2021 Fiscal Year-End
1	35,005	72,188	37,183	In revenue operation
2	47,410	98,442	51,032	In revenue operation
3	20,115	25,776	5,661	Out for six weeks for body work
4	140,020	190,290	50,270	In revenue operation
5	38,732	68,333	29,601	Out for six weeks for body work
6	150,043	155,747	5,704	Emergency contingency vehicle
7	40,555	79,676	39,121	In revenue operation
8	30,080	60,045	29,965	Spare used in operation

***Solution**: Determine active vehicles at 2021 FYE:*

Vehicles 1, 2, 4, 7, and 8 are active vehicles at FYE (includes vehicles currently in revenue operation and temporarily out of service for routine preventive maintenance). Vehicles 3, 5, and 6 are not part of the active fleet. Calculate and report average lifetime mileage per active vehicle and total mileage on active vehicles during the period:

Average lifetime mileage per active vehicle: ***(72,188 + 98,442 + 190,290 + 79,676 + 60,045) / 5 vehicles = 100,128 miles***

Total mileage on active vehicles during period: ***(37,183 + 51,032 + 50,270 + 39,121 + 29,965) = 207,571 miles***

Revenue Vehicle Inventory — Additional Requirements for Rail Mode Operators

Full Reporters operating rail modes must also report the following, by rail mode fleet (including passenger car fleets). Agencies do not report these data points for rail systems subject to Federal Railroad Administration (FRA) safety oversight, such as commuter rail systems.

Total Vehicles with Event Data Recorders

Report the total number of fleet vehicles equipped with event data recorders according to IEEE 1482.1 standard.

Total Vehicles with Emergency Lighting System Design

Report the total number of fleet vehicles with systems that meet the minimum performance criteria for emergency lighting specified by APTA RT-S-VIM-20-10 standard.

Total Vehicles with Emergency Signage

Report the total number of fleet vehicles with systems that meet the minimum performance criteria for the design of emergency signage specified by APTA RT-S-VIM-021-10 standard.

Total Vehicles with Low-Location Emergency Path Marking

Report the total number of fleet vehicles with systems that meet the minimum performance criteria for low-location exit path marking specified by APTA RT-S-VIM-022-10 standard.

Energy Consumption: Full Reporter Requirements

This section applies to Full Reporters only.

Full Reporters must provide data on the type and amount of fuel that they use to propel their revenue vehicles. Full Reporters must report this information for all modes and types of service except for the TX and TN Types of Service. The NTD reporting system provides energy choices for rail and non-rail modes.

If none of the energy choices fit, agencies must select other fuel (OR). If agencies select OR, FTA requires documentation of what type of energy the revenue vehicles use.

Agencies that use a fuel mixture must report the amount of fuel consumed in each category.

Rail Modes

FTA classifies rail propulsion methods by the following energy types:

- Kilowatt hours of propulsion power (EP)
- Gallons of diesel fuel (DF)
- Gallons of biodiesel (BD)
- Gallons of liquefied petroleum gas (LPG) (LP)
- Gallons of liquefied natural gas (LNG) (LN)
- Gallons of other fuel (OR)

Non-Rail Modes

Non-rail revenue vehicles may use the following energy types:

- Kilowatt hours of propulsion power (EP)
- Kilowatt hours to charge batteries (EB)
- Gallons of diesel fuel (DF)
- Gallons of biodiesel (BD)
- Gallons of gasoline (GA)
- Gallons of liquefied petroleum gas (LPG) (LP)
- Gallons of liquefied natural gas (LNG) (LN)
- Gallons of methanol (MT)
- Gallons of ethanol (ET)
- Gallons of compressed natural gas (CNG) (CN)
- Gallons of bunker fuel (low grade of diesel fuel often used in ferryboat operations) (BF)

- Gallons of kerosene (KE)
- Gallons of other fuel (OR)
- Gallons of hydrogen (HY)

Please see Appendix B, "Asset Codes," for the acronyms the NTD uses on the Annual Report for fuel types.

Hybrid Vehicles

Hybrid vehicles consume liquid fuel as their primary energy source and supplement the combustion engine with an electric motor charged by the motion of the vehicle. If agencies use hybrid vehicles, they must report the primary fuel source (typically gasoline or diesel).

Dual Fuel

A vehicle that uses more than one source of energy is called dual fuel. This includes plug-in hybrids that consume both liquid fuel and electricity from an external outlet. It does not include hybrids that charge their batteries using systems onboard the vehicle. For dual fuel vehicles, agencies should report both fueling types (e.g., gasoline and electric battery for a plug-in hybrid).

Compressed Natural Gas/Hydrogen Conversion

If an agency uses compressed natural gas (CNG), the agency must report the fuel in gallon equivalents of either gasoline or diesel fuel, as applicable, based on what type of fuel the revenue vehicle would use if it were not powered by CNG. Transit agencies should contact the supplier of the CNG for the correct conversion factors. If an agency cannot obtain the conversion factor from the supplier, it can use the exhibit below.

Biodiesel Fuel

If an agency has a vehicle fleet that uses biodiesel fuel, it should report the fuel type as diesel fuel.

Exhibit 64: Compressed Natural Gas Conversion Factors

1 Therm = 100,000 British Thermal Units (BTU)
Gallon equivalents of diesel (#2 grade) = Number of BTU / 138,000
Gallon equivalents of gasoline = Number of BTU / 114,000
Gallon equivalent of gasoline = 5.66 pounds
Gallon equivalent of diesel (#2 grade) = 5.42 pounds

Exhibit 65: Compressed Natural Gas Conversion

Examples	Solutions
Example 1: A transit agency has one small bus for Demand Response service that uses CNG fuel. It buys 5,000 therms of CNG. The transit agency decides that if the bus was not using CNG the most likely fuel used would be DF. The energy supplier reports that their conversion rate is 1.42 Therms to 1 diesel gallon equivalent.	5,000 therms ÷ 1.42= 3,521 equivalent gallons of diesel fuel (DF)
Example 2: A transit agency has one eight-passenger van for Demand Response (DR) service that uses CNG fuel. It buys 600 pounds of CNG. The transit agency decides that if the van was not using CNG, the most likely fuel used would be gasoline (GA). The energy supplier does not provide a conversion factor.	600 pounds × 5.66 gallons per pound = 3,396 equivalent gallons of gasoline (GA)

Vanpool: Estimating Fuel Usage and Cost

The best way to collect data on fuel usage and cost is to use a fuel card program that automatically sends these data to the agency. However, many Vanpool operators rely on drivers' reports for their data on fuel usage and cost. These reports can be unreliable and result in poor data quality. Thus, some Vanpool operators may wish to estimate these data instead. The following method for estimating these data would be acceptable for reporting to the NTD.

1. **Determine the fuel efficiency of each vehicle group in the Vanpool fleet.** Agencies should group together vehicles that are known to have the same fuel efficiency. Agencies must have a separate fuel efficiency calculation at least for each make/model of vehicle in their fleet. In some cases, vehicles of the same make/model, but different years may be grouped together. However, if the model changed significantly between model years (e.g., the 2012 model has a bigger engine than the 2011 model) agencies cannot group these years of vehicle together. Manufacturer's specifications of fuel efficiency tend to be overly optimistic. Instead, agencies must use their own data to determine fuel efficiency. The agency should use at least one month of reliable data on miles traveled and fuel used during regular Vanpool service to calculate fuel efficiency rates.
2. Track the miles traveled by each vehicle.
3. Divide miles traveled by fuel efficiency to estimate fuel used.
4. Use externally available data to estimate the cost of fuel per gallon. There are several websites such as gasbuddy.com and fuelgaugereport.aaa.com that publish reports on fuel prices by State and city. Agencies should use one of these sources to determine average fuel cost per gallon. Agencies must use data that are updated at least every month, and that break down prices geographically at least by State. Agencies may use a finer level of detail than this.
5. Separate out fuel taxes from fuel cost. Several online sources publish these data. Fuel taxes are usually applied on a per-gallon basis.
6. Multiply fuel used by cost per gallon to estimate fuel cost. Agencies should make sure to use both fuel used and cost per gallon data by month and region, or a finer level of detail.
7. Multiply fuel used by tax per gallon to estimate tax cost.

Exhibit 66: VP Estimating Fuel Usage and Cost

Example: A transit agency operates a 3-vehicle Vanpool for one month in February 2020, in Virginia. Two vehicles are the same make/model/year and the third vehicle is distinct. The agency divides these vehicles into vehicle group A and vehicle group B.

Solution:

1. *The agency collected the following information during the months when the transit agency received regular, reliable reports from the drivers:*

   Group A has traveled 2,000 miles and used 150 gallons of gasoline. Group B has traveled 1,200 miles and used 80 gallons of gasoline. Calculate the fuel efficiency for each group:

- **Group A:** 2000 miles / 150 gallons = 13.3 mpg
- **Group B:** 1200 miles / 80 gallons = 15 mpg

In February 2020 group A travels 1,600 vehicle miles, including 100 miles for personal use. Group B travels 900 vehicle miles, with no personal use. This means 1,500 and 900 miles are reported in the NTD.

The transit agency divides the miles travelled by the fuel efficiency to estimate the fuel used.

- **Group A:** 1,500 miles / 13.3 mpg = 112.78 gallons gasoline
- **Group B:** 900 miles / 15 mpg = 60 gallons gasoline
- **Total:** 112.78 gallons + 60 gallons = 172.78 gallons of gasoline

The transit agency determines that average fuel cost in Virginia for February 2020 is $2.284 per gallon of regular gasoline.

Federal tax is $0.184 per gallon of gasoline. According to dmv.virginia.gov, Virginia state tax is $0.162 per gallon of gasoline. Thus, the total tax per gallon is:

- **Total:** $0.184 + $0.162 = $0.346 tax per gallon
- **Fuel cost only:** $2.284 - $0.346 = $1.938 fuel cost per gallon

The transit agency uses the average fuel cost determined in step 5 to calculate the cost of fuel used by its vehicles.

- 172.78 gallons * $1.938 = $334.85 spent on fuel during February 2020.

The transit agency determines total tax on fuel as follows:

- 172.78 gallons * $0.346 = $59.78 spent on tax during February 2020.

The transit agency reports 172.78 gallons of gasoline used, $334.85 spent on fuel, and $59.78 spent on fuel taxes.

Service Vehicle Inventory (Form A-35)

Transit agencies must report the number of service vehicles in the total fleet at the end of the fiscal year. Agencies must only report service vehicles for which they have capital replacement responsibility. Transit agencies are required to report data on service vehicles, or vehicles which do not carry passengers. Agencies report service vehicle inventory data by groups or fleets. Agencies should group vehicles into fleets if they are identical in all aspects, including vehicle type, manufacture year, primary mode, etc. Service vehicles must not be used in revenue service to be reported on the A-35.

Service vehicles must be self-propelled and either road-worthy or major pieces of construction equipment to be reportable to the NTD. Examples of reportable service vehicles include automobiles used by supervisors or maintenance staff, wreckers, tow trucks, work trains, tampers, diggers, etc. Flatbed train cars, golf carts, and forklifts are not considered reportable service vehicles.

If an agency uses service vehicles that are pulled from a non-dedicated pool of agency owned vehicles that are not specific (or assigned) to transit, the agency should report a representative sample fleet of vehicles they typically use to support service.

Service Vehicle Inventory Data

The NTD collects the following data on service vehicles:

- Vehicle Type
- Primary Mode
- Secondary Mode(s)
- Total Vehicles
- Useful Life Benchmark
- Year of Manufacture
- Transit Agency Capital Responsibility
- Estimated Cost
- Year Dollars of Estimated Cost

Vehicle Type

Service Vehicles can be categorized into three vehicle types:

- Automobiles — Passenger cars, including station wagons. Excludes SUVs (crossovers and traditional SUVs), vans, minivans, and pickup trucks.
- Trucks and Other Rubber-Tired Vehicles — A self-propelled motor vehicle designed for the transportation of property or special purpose equipment or passengers., This vehicle category includes heavy-duty rubber-tired vehicles as well as pickup trucks, vans, SUVs (crossovers and traditional SUVs), and minivans.
- Steel Wheel Vehicles — In rail systems, these are vehicles with a specially designed cast or forged steel. This essentially cylindrical element rolls on the rail, carries the weight, and provides guidance for rail vehicles. Steel wheel vehicles exclude vehicles that are equipped for both road (rubber tires) and rail.

Modes

Agencies must report a primary mode for each fleet. If service vehicles are used across multiple modes, the agency must report one mode as the primary and then indicate the secondary modes for each fleet.

Total Vehicles

Transit agencies must report the number of service vehicles in the total fleet at the end of the fiscal year. Total vehicles include both active and inactive vehicles held at the end of the fiscal year.

Useful Life Benchmark

Useful Life Benchmark is the expected life cycle of a capital asset for a particular transit agency's operating environment, or the acceptable period of use in service that environment. FTA has outlined default ULBs for service vehicle types. If a transit agency selects ULBs that differ from FTA's default values, the agency must submit documentation supporting their agency specific ULBs for approval. Please see the table below for default ULB's for service vehicle types.

Exhibit 67: Service Vehicle Default Useful Life Benchmarks

Vehicle Type	Default ULB (in years)
Automobile (AO)	8
Trucks and Other Rubber Tire Vehicles	14
Steel Wheel Vehicles	25

Year of Manufacture

Transit agencies must report the year of manufacture for the vehicles. The year of manufacturer is the year that the vehicles were built, not the model year.

Capital Responsibility for Service Vehicles

Transit agencies report service vehicle fleets for which they own or have direct capital responsibility. Agencies report the degree of capital responsibility for each fleet as a percentage. If the transit agency leases the vehicles but must pay a certain percent

annually to eventually own the assets, such as lease-to-own arrangements, the agency should report the value for capital responsibility as of the end of the fiscal year.

Estimated Cost

For each service vehicle fleet, agencies must report the full cost to replace the fleet with a comparable set of vehicles. A reasonable estimate should reflect the current asset type, allowing for moderate increases in cost due to inflation or improvements in technology. The field should not reflect planning, but rather actual current estimated cost. The cost estimate should include “soft costs” such as unallocated contingencies or finance charges. The dollar figure should represent the agency’s most recent estimate of the full cost to replace these assets. If no recent cost estimate has been developed, then the agency may report the original cost of the asset.

Year Dollars of Estimated Cost

Agencies are required to report the year corresponding to dollar value reported for estimated cost for each fleet.