

# Washington County Transportation Authority Service Guidelines



June 2018

Prepared for:



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In association with:





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## Introduction

Every year, millions of Americans rely on mobility services provided by public transit agencies to fulfill basic life functions such as travelling to work, accessing medical care, and going shopping for food and other staples. Transit agencies provide these services even though they are unprofitable and, as such, rely on public investments to operate. Reconciling the needs and wants of the public with a limited budget can be challenging. Service guidelines, a set of basic requirements that should be met for an agency to offer a service based on measurable performance standards, are an important and useful tool for a transit agency to help balance service requests with budgets.

The guidelines outlined in this document are based on public feedback detailed in the companion Washington Transit Development Plan, as well as best practices from peer agencies in the public transportation industry. These guidelines will help Washington County Transportation Authority (WCTA) to make informed decisions on an ongoing basis to deliver the best possible transit services to the people of Washington County.

The guidelines outlined in this document are intended to assist WCTA in:

- Establishing measurable standards for service performance.
- Organizing and classifying service types.
- Setting service goals.
- Prioritizing future service changes.

## Service Definitions

This document uses transit-specific terminology. Definitions relevant to this document are:

- **Public Transportation** (also called **transit**, **public transit**, or **mass transit**) is transportation using a shared vehicle that provides regular and continuing transportation to the public.
- **Transit Agency** is an entity (public or private) responsible for administering and managing transit activities and services. Transit agencies can directly operate transit service or contract out for all or part of the transit service provided.
- **Fixed Route** is service on which a vehicle is operated along a prescribed route according to a fixed schedule. For example, a bus that makes the same stops every day at the same times.
- **Paratransit** service uses vans or small buses to provide curb-to-curb (origin-to-destination) service in response to reservations made from passengers or their representatives. The vehicles do not operate over a fixed route or on a fixed schedule. In Pennsylvania, paratransit service is provided through federally-required Americans with Disabilities Act (ADA) Complementary Paratransit service within  $\frac{3}{4}$  mile of any existing fixed route and through the PennDOT Shared-Ride Program.
- **Revenue Service** is the operation of a transit vehicle during the period which passengers can board and ride on the vehicle.
- **Trips** describe the one-way operation of a transit vehicle between two terminus points on a route. Each instance of a transit vehicle leaving the end of a route is considered one trip.

- **Headway** is the time interval between transit vehicles moving in the same direction on a particular route.
- **Branch** is used to describe a portion of a route with less frequent service than the main alignment. A route can have multiple branches.
- **Deviation** is used to describe a portion of a route operating off of the main street the route is service. Deviations most commonly occur to serve Park & Rides, shopping centers, housing complexes, and other destinations with poor pedestrian access to the street.
- **Span of Service** is the length of time a route operates each service day. Span is measured from the time the first vehicle of the day goes into revenue service along a route to the time the last vehicle on that route leaves revenue service.
- **Passenger Load** is the number of passengers aboard a transit vehicle at any one time.
- **Microtransit** is small-scale, on-demand public transit that features a low-fare for all riders. It is usually operated with dedicated vans or paratransit vehicles.

## Service Design Guidelines

These service design guidelines serve to implement the vision set out by the WCTA Board Mission Statement. The statement, as defined by the WCTA Board in 2018, is:

*“To be a preferred travel choice that connects the region by satisfying today’s needs and anticipating tomorrow’s demands.”*

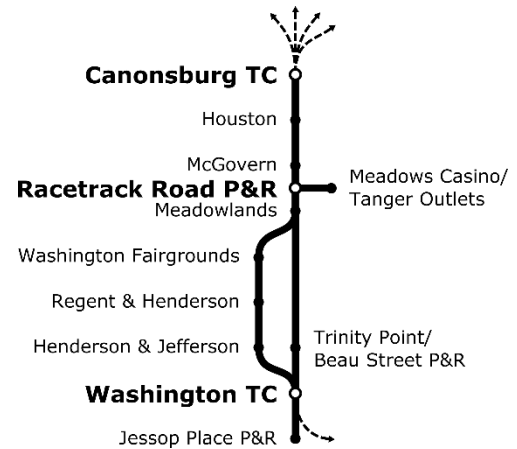
WCTA offers a diverse array of transit services in the form of long-distance commuter routes, intercity regional routes, local circulator routes, and curb-to-curb paratransit (called Shared-ride) services. WCTA’s services shall work together as one cohesive network, taking advantage of free transfers and other amenities.

## Transit Service Types

A key priority of the WCTA Strategic Business Plan and Transit Development Plan (TDP) is the focus on offering four brands of transit service. These brands are reflected in current service, but by defining each as a service type, WCTA will be able to add new routes to the service network without additional learning curve for current riders. Each service will be evaluated for effectiveness according to the goals they are designed to advance:

- **Metro** – Fixed routes in the City of Washington and Canonsburg and utilizing limited access freeways or busways to connect with regional destinations outside the county, including South Hills Village and Downtown Pittsburgh. This service primarily serves the commuter market, but can be expanded to include service outside of the typical office work day.

- County Line** – Fixed routes connecting cities and boroughs primarily within Washington County. These routes often travel on rural highways between destinations but may make stops along the way to service smaller, less frequently accessed stops. This service is designed to provide reasonable, all-day access for residents countywide.
- Service Spine** – A conceptual corridor between the City of Washington and Canonsburg in which service standards and amenities are targeted for higher standards. Three destinations along the act as transfer nodes: the Washington Transit Center on East Chestnut Street, a Racetrack Road Park & Ride (currently unbuilt) near the intersection of Racetrack Rod and I-79, and a Canonsburg Transit Center (currently unbuilt) near the intersection of Pike Street and Central Avenue.
- Local** – Fixed routes and/or microtransit operating within Washington County’s cities and boroughs, and their surrounding neighborhoods. These routes operate on more frequent headways or may be on-demand and may provide access to destinations off of primary roadways.
- Shared-ride** – Demand response services operating curb-to-curb service within Washington County. Service does not operate on a fixed schedule and requires a reservation.



### Density and Service Coverage

Residential and commercial/employment centers are primary generators of transit demand. Density, the number of residents in a given geographical area, drives transit efficiency. The denser a place is, the more potential transit riders there are. Service coverage guidelines outlined here reflect industry standards for minimum density required for productive transit service.

Washington County is largely rural and as a result, different service types need to target different service areas. Priority should always be given to areas with the highest employment and residential densities. For **Local** service minimum densities should cover the majority of the service area. For **County Line** service, minimum densities are necessary at the end-of-line destinations. The minimum densities required before consideration of service to an area are:

- Eight (8) Employees per Acre, or
- Four (4) People per Acre

Currently, the Employees per Acre metric is met in Census Tracts covering the City of Washington, South Strabane Township, North Strabane Township, Southpointe, Peters Township, Bentleyville, California, Charleroi, and Monongahela. Currently the People per Acre metric is met in Census Tracts covering most of the City of Washington, East Washington, Canonsburg, Houston, Monongahela, Donora, Charleroi, California, McDonald, Burgettstown, and Claysville.

Transit service may be established in less dense areas if the service connects to higher density destinations at both ends of a corridor. County Line routes may place boarding locations in rural areas to



increase access to the system for rural commuters. Service should not, however, be deviated from these corridors to serve areas less dense than the above criteria.

**Metro** service is more oriented toward commuters, with destinations and service time set to meet commuter needs. These routes may be deviated to meet park-and-ride facilities in less dense areas, and can operate as express service between service areas without regard for intermediate densities.

**Shared-ride** service operates across the entire county, regardless of density.

## Minimum Service Levels

The following section outlines the minimum levels of service recommended for transit in Washington County. These figures should be used to determine how and if transit service should be implemented. These minimum service levels are the lowest levels of service that should be provided; routes should provide higher levels of service wherever possible.

### Span of Service

The length of time each day that a bus is available for use is a key factor for the mobility of transit users. If a rider cannot complete their trip within the span offered on a route, they will be forced to use another mode of travel. For this reason, minimum span of service guidelines ensures that a consistent level of transit service is offered across the WCTA system and riders can complete their trips without needing to use another mode. These are minimum standards; actual service delivery may improve on these service spans.

- **Metro** – Minimum six-hour span between first and last trip on each branch. Times of trips may vary based on each destination’s needs.
- **County Line** – Minimum six-hour span between first and last trip on each branch. Times of trips may vary based on each destination’s needs.
- **Service Spine** – 5:00am – 9:00pm weekdays, 9:00am – 7:00pm Saturdays. Alignments within the Service Spine (Metro, County Line, or other) may be determined based on demand, but all trips should access all three transfer nodes.
- **Local** – 8:00 am – 5:00 pm weekdays. Local service may be productive later in the evening for shopping destinations such as current Local B service.
- **Shared-ride** – 5:00 am-8:00 pm weekdays and Saturdays. Share-ride service should match the span of all County Line branches to allow it to be used for last mile trips.

### Service Headways

Frequency of service is commonly identified as one of the most important factors for transit ridership. Utilizing standard headways on similar service types provides riders with an understanding of how frequently they can expect service and allows them to adjust their travel plans accordingly.

- **Metro** – Service on branches have no headway standard. Service should meet demand based on branch destination.
- **County Line** – Service on branches have no headway standard. Service should meet demand based on branch destination.



- **Service Spine** – One-hour or better headways between the City of Washington and Canonsburg.
- **Local** – 30-minute or better headways. Local service should provide frequent, all-day connectivity within a service area.
- **Shared-ride** – Not Applicable. Service is reservation-based and is not headway-based.

Service Type	Minimum Service Spans	Minimum Service Headways
<b>Metro</b>	Minimum Six Hour Span	Based on Demand
<b>County Line</b>	Minimum Six Hour Span	Based on Demand
<b>Service Spine</b>	5:00 am – 9:00 pm	One Hour or Better
<b>Local</b>	8:00 am – 5:00 pm	Thirty (30) Minutes or Better
<b>Freedom Countywide</b>	5:00 am – 8:00 pm	Not Applicable

### Route Directness

Bus routes should be designed to operate as directly as possible to and from major destinations to minimize passenger travel time. Ideally, routes should operate on major arterial streets as much as possible. When a deviation from major streets exists or is being considered, the gain in convenience to those passengers who are boarding or alighting at the stop must be balanced against the additional travel time for the passengers traveling through. Factors for consideration include:

- Bi-directional service should be provided on the same street.
- Express service should be routed in the most direct manner possible.
- Deviations from the basic route alignment to serve activity centers will be made only when they have the potential to attract new riders equal to or exceeding the route performance evaluation standards for the corresponding route category (discussed later in the guidelines).
- Deviations should avoid operating on private property.
- Additional time to operate route deviations should not exceed five (5) minutes (one-way) or 10 percent (10%) of the one-way running time, whichever is less.
- Single-directional loops should not be operated in the middle of a route. A single-directional loop gives a passenger access to only one direction of travel. This practice limits the usability of the route and lengthens travel times for riders that board during the single-directional loop.
- Single-directional loops may be placed at one end of the route, but should not exceed 25 percent (25%) of a route’s total length for routes that exceed 30 minutes in one-way travel time. Trips should never terminate midway through a one-directional loop.
- Access to both directions of travel should be maintained from all locations along the route. Companion bus stops for opposite directions of travel should be located across from each other when possible and should never be out of line-of-site from each other, and not be more than a two-minute walk excluding crossing signal wait time.

## Bus Stops

Bus stops are the primary access points to the WCTA network. Stop spacing, placement, and amenities are decision factors for riders when choosing to ride a bus. Priorities that will be considered in determining bus stop locations and spacing include:

- Major transit generators (For example: employment centers, residential areas with 500+ units, retail centers, public education centers, major medical facilities)
- Transfer nodes (Washington TC, Racetrack Rd P&R, Canonsburg TC)
- Signalized intersections where there are designated crossings
- Intermediate stops along corridors with few cross streets at an interval of at least 2,500 feet

The greatest delay factor experienced by transit services is from leaving primary road networks to access bus stops. Whenever possible, bus stops should be placed along the main corridor roadways. If conditions require stops to be placed off the main roadways, these should be minimized in length to lessen the impact to schedule.

### Bus Stop Accessibility

The Americans with Disabilities Act (ADA) requires all new bus stops to have a set of standard features to provide accessibility to individuals with disabilities. These features include:

- 5' by 8' waiting area made of a hard, compacted, non-slip surface (such as concrete)
- The waiting area must be connected to the nearest public right-of-way with accessible pathways a minimum of 4' in width with less than a 2 percent (2%) cross-slope
- Absence of obstructions including poles, signs, or other obstacles which may impede access to the waiting area.

Through years of incremental development, many stops in the WCTA system are not ADA-compliant. WCTA will prioritize capital improvements for stops along major corridors to improve accessibility.

### Bus Stop Amenities

Investments in stop amenities, such as bus shelters, will be made based on ridership. Generally, stops with average daily boarding greater than 25 people should have some form of bench or shelter. Given the limited funds for such improvements, stops with the highest levels of ridership and along statistically dangerous corridors should be prioritized.

Stop safety is always the top priority.

Additionally, WCTA will work with local municipalities and developers to incorporate bus pads and transit-friendly sidewalk designs into roadway improvement projects and new developments. WCTA will also coordinate with PennDOT through "PennDOT Connects" and other future initiatives to integrate transit into traditional roadway design and construction.

Other factors that should be considered in determining the priority for amenities at stops are:

- Length of wait times between buses,
- Percentage (high) of transfer passengers, and
- Percentage (high) of seniors or disabled persons using the stop.

## Annual Performance Report

Following each fiscal year, WCTA staff will present an Annual Performance Report to the WCTA board to evaluate the productivity of every route segment and type. This evaluation will formalize a route optimization process in pursuit of long-term growth, a primary purpose of WCTA's Strategic Business Plan. To maintain transparency, this report will be available to the public. This will afford riders, Washington County residents, and other stakeholders the opportunity to understand any potential future service changes.

Routes will be assessed by the following metrics:

- Total Passengers
- Passengers per Revenue Vehicle Mile
- Passengers per Revenue Vehicle Hour
- Passengers per Actual Vehicle Mile
- Passengers per Actual Vehicle Hour

Revenue Vehicle statistics refer to times during which buses are operating in-service (on a schedule and collecting passengers.) Actual Vehicle statistics refer to the entire time a vehicle is out of the garage, both in-service and out-of-service (on breaks, traveling to the garage, etc.) Revenue Vehicle statistics are helpful in determining how effectively WCTA service is meeting the customers' needs. Actual Vehicle statistics are helpful in determining the overall operational efficiency of the service.

The purpose of the Annual Performance Report is to act as a guide for decision-making. WCTA currently maintains a detailed monthly spreadsheet including the above metrics as well as many other helpful data points; however, they are currently totaled only by service type: **Metro, County Line, Local, and Total.**

The Annual Performance Report should deliver the above metrics for each service segment (including branches, service spine, and shared-ride) and type as they are added to the system, for example:

- Metro Express Pittsburgh
- Metro Canonsburg-South Hills Village
- Metro Washington-Canonsburg (Service Spine)
- Metro Network Total
- County Line McDonald-Canonsburg
- County Line Charleroi-Washington
- County Line Monongahela-Canonsburg
- County Line Washington-Canonsburg (Service Spine)
- County Line Network Total
- Local A
- Local B
- Local C (Canonsburg)
- Local Total
- Service Spine Total
- Shared Ride

When possible, each metric should be compared to previous years for reference.