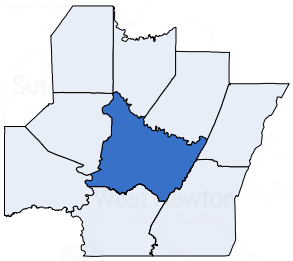


Westmoreland County
Transit Development Plan

Prepared for:

SOUTHWESTERN PENNSYLVANIA COMMISSION SPC

Prepared by:

Michael Baker INTERNATIONAL

In association with:

MOORE DESIGN associates

May 2018

Table of Contents

List of Appendices

This page left intentionally blank.

Executive Summary

The Westmoreland County Transit Development Plan (TDP) is a five-year blueprint to improve public transportation in Westmoreland County, Pennsylvania. It is part of a regional effort by the Southwestern Pennsylvania Commission (SPC) to improve public transportation throughout the Southwestern Pennsylvania region through good planning and by encouraging a broader regional discussion about public transportation.

In 2017, SPC partnered with Westmoreland County and the Westmoreland County Transit Authority (WCTA) to undertake an intense three-part planning process. This planning process engaged the community at all levels of the organization, including county officials, the Board of Directors, and WCTA management and staff. In addition, a robust public involvement process engaged more than 2,000 community members to hear their ideas for public transportation in Westmoreland County. These inputs were incorporated into this TDP and two companion documents:

- **WCTA Strategic Business Plan** – A governing board-driven document that identifies the major tasks to be accomplished by WCTA staff over the next three to five years.
- **Service Guidelines –** A robust set of parameters for current and future service in Westmoreland County, designed to ensure that service is continually improved and that there is a well-reasoned approach to adding or reallocating service.

Through a planning process that included qualitative and quantitative analysis, recommendations for short-, medium-, and long-term improvements have been identified. These improvement recommendations are made in line with three overarching service goals:

Mobility: WCTA takes me where I want to go, when I want to go. It makes good use of my time.

Usability: I understand how the WCTA system works and can use it when I wish.

Quality: WCTA is a worthwhile investment of my money and is a good steward of taxpayer funds. I trust WCTA to provide a good experience.

The opportunities for improvement detailed in the TDP include:

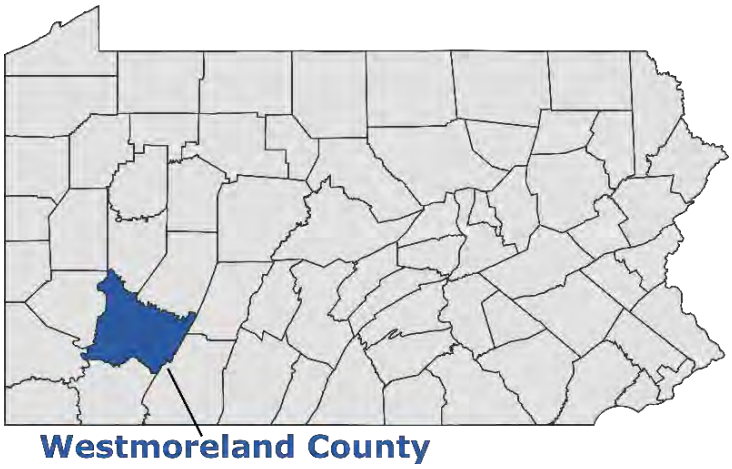
- **Implement 1-hour or better headways on local service**
- **Redefine and clarify service**
- **Improve Shared-ride services**
- **Add service to West Newton and Monessen**
- **Eliminate service to Johnstown**
- **Evaluate and reallocate utilization of rural transit funds**
- **Strengthen Intra-County connections through regional routes**
- **Explore the introduction of microtransit**
- **Implement customer experience enhancements**

This page left intentionally blank.

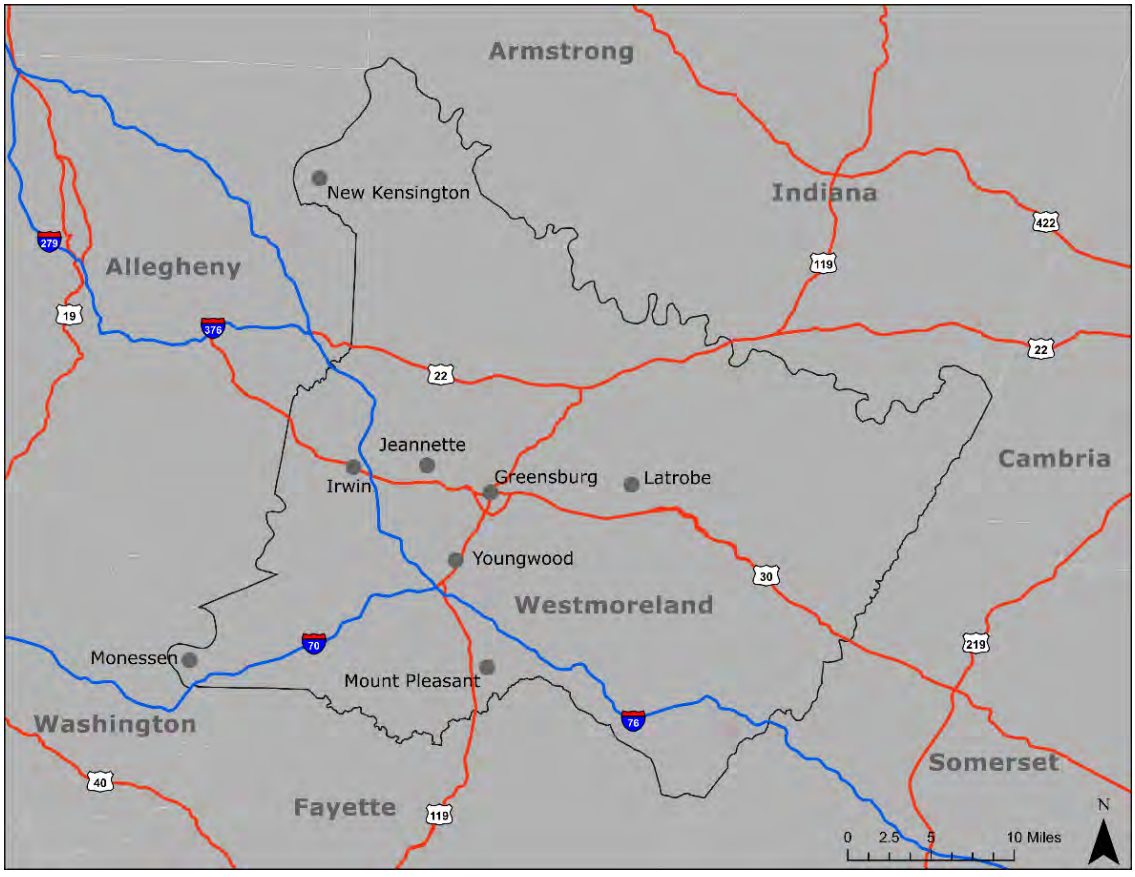
Westmoreland County Overview

Westmoreland County is a large and mostly rural county covering 1,036 square miles, making it the 9th largest county by land area in Pennsylvania and the largest in the SPC region. The county is made up of 65 municipalities, the largest of which is Hempfield Township, with a population of 41,917, according to the latest US Census estimate. Other significant municipalities include:

- Greensburg
- Irwin
- Jeannette
- Latrobe
- Monessen
- Mount Pleasant
- Murrysville
- New Kensington
- North Huntingdon
- Unity



Westmoreland County lies at the crossroads of several major transportation corridors. The county is served by two major Interstate Highways, I-70 and the Pennsylvania Turnpike (I-76). I-70 provides access to Wheeling, WV, and Columbus, OH, to the west, while I-76 provides access to Pittsburgh and Cleveland, OH to the west. The two interstates merge in New Stanton to provide access to Harrisburg, Philadelphia, Baltimore, and Washington to the East.



Three US highways cross the county: US-22, US-30, and US-119. Additionally, State Route 66 has been improved to a limited access freeway between New Stanton and Delmont and serves as a major regional thoroughfare. These major roadways, combined with a strong network of local and municipal roads, form a solid foundation of the transportation network.

The roadway network is complemented by several intercity transit operators, facilitating connections throughout the region and the Commonwealth. Intercity transportation service in Westmoreland County is provided by Greyhound Coach Lines, Fullington Trailways, and Amtrak.

- **Greyhound Lines** – Greyhound has stops in Greensburg (WCTA transit center) and Latrobe (Arnold Palmer Regional Airport), connecting riders to Pittsburgh and Harrisburg via Altoona and State College. WCTA provides transit service to both of these locations.
- **Fullington Trailways** – Fullington has one stop near Delmont, PA, on US-22, connecting riders to Pittsburgh and Harrisburg via State College, DuBois, Punxsutawney, and Indiana.
- **Amtrak –** Amtrak operates the *Pennsylvanian* service once daily between Pittsburgh and New York by way of Harrisburg and Philadelphia. There are two train stations in Westmoreland County; one in Greensburg and one in Latrobe.

There are currently four public transit agencies operating fixed route service in Westmoreland County: WCTA, Mid Mon Valley Transit Authority (MMVTA), Fayette Area Coordinated Transportation (FACT), and Port Authority of Allegheny County (PAAC). The largest provider is WCTA, operating countywide service. MMVTA is a multi-municipal authority operating portions of some routes in Monessen, North Belle Vernon and Rostraver Township in the far southwest area of Westmoreland County. PAAC's service area does not overlap Westmoreland County; however, there is one route which crosses into the county briefly in the City of New Kensington. FACT provides commuter express service between Uniontown and Pittsburgh making one stop in Westmoreland County at the Rostraver Airport in Belle Vernon.

Population and Demographics

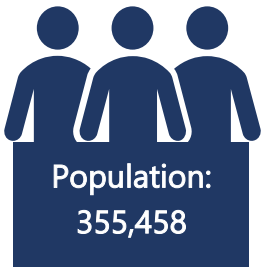
Analyzing and understanding population trends are important for understanding the broader context in which public transportation operates. These trends can help to explain transit performance and can provide a useful foundation to adjust service to reflect the changing nature of WCTA's customers. Where possible, data from the 2016 American Community Survey (ACS) is used as it is the most recently available data that provides a reasonable look at the current conditions of Westmoreland County. It is important to note that ACS data is based on a sample of residents and may be somewhat different from the population of Westmoreland County today. For this reason, the population trend analysis is but one piece of the total Transit Development Plan.

For the demographic analysis, several key pieces of information were analyzed:

- **Total population** – A measure of the total amount of potential riders.
- **Senior citizen population** – In Pennsylvania, residents over the age of 65 receive free or reduced-cost public transportation.
- **Population Dispersion** – Rural populations (lower density) are harder to serve by public transportation than those in urban areas (higher density).

- **Racial Diversity** – According to the 2017 American Public Transportation Association (APTA) *Who Rides Public Transit* report, a majority of public transportation riders (60%) in the United States belong to a racial minority. It is important to track changes in racial diversity, as this is sometimes an indicator of future population growth or decline and can also indicate possible changes in the public's opinions and expectations of public transportation.
- **Disability Status** – Pennsylvania offers the People with Disability (PwD) program that offers reduced-fare transportation for individuals with disabilities aged 18-64. There are also other programs, such as the federal Section 5310 Enhanced Mobility of Seniors & Individuals with Disabilities, which seek to serve this group with public transportation.
- **Veteran Status** – Military veterans are often identified as a target group for public transportation with elected officials and others seeking to give back to military service members. In addition, veterans using Veterans Administration (VA) medical facilities represent a large group of people making routine trips to major facilities (trip density).
- **Household Income** – Public transportation frequently serves as one of the only means of transportation to low-income individuals who do not own a car, do not have access to a reliable vehicle, or who may be a one-car household.
- **Car Ownership** – Individuals that don't own cars are likely to use public transit to meet the needs of their daily life.

Population



According to the 2016 ACS, the total population of Westmoreland County is approximately 355,000. Like most of its neighboring counties, Westmoreland County has experienced a slight but steady decline in population since 2000. Conversely, the total population in Pennsylvania has been on the rise during that period and grew around 4% between 2000 and 2015. Looking at historical demographic data, the bulk of the County's decline relates to residual urban flight from the cities and boroughs, which together lost 3.9% of their population between 1990 and 2000, while population in the townships actually increased 2.3%. Despite this trend, as of 2016 almost one fifth of the County's residents still live in one of its seven cities.

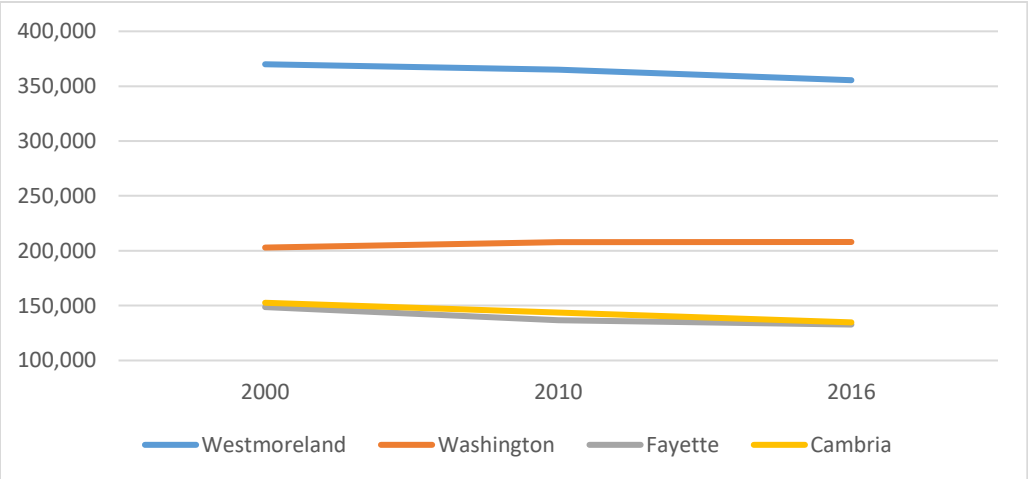


Figure 1: Total County Population Since 2000 (2000 Census, 2010 Census, & 2016 ACS 5-Year)

The population in Westmoreland County is also aging quickly, with 21.7% of the population estimated to be over the age of 65, up from 18.9% in 2010. Following this trend, roughly **a quarter of the population within the County will be 65 years or older by 2020**.

Racial Diversity

The racial makeup of the county is mostly homogenous, with 94.9% of the population identifying as white, 2.4% African American, and only 1.2% Hispanic of any race. Westmoreland County is much less diverse than the Commonwealth overall, where roughly one out of every four residents identifies as either non-white or white Hispanic. Similarly, less than 1.8% of the population of Westmoreland County were born abroad (both citizens and noncitizens), compared to 7% statewide. Race and ethnicity are important factors to consider when looking at population growth—as the overall ethnic makeup of the US and Pennsylvania is becoming more diverse, population growth is increasingly driven by minority populations and immigration. [1]

For Westmoreland County, this will likely lead to a stagnated, homogenous population where benefits from the growth of existing ethnic communities are few and further immigration to the area is less likely.

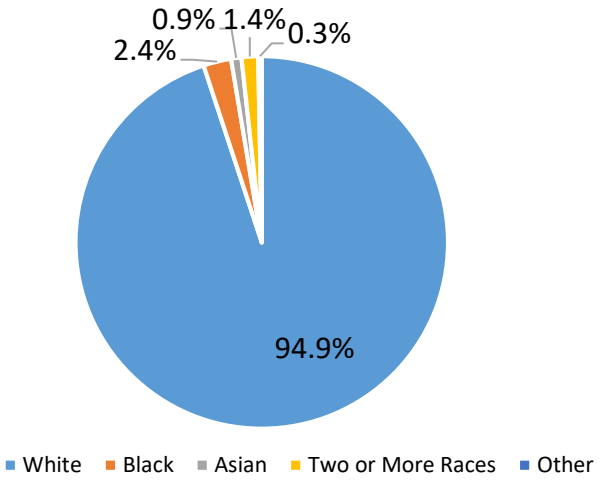
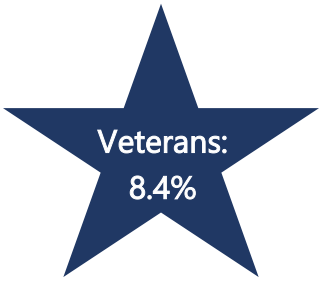


Figure 2: Racial Composition of Westmoreland County (2016 ACS 5-Year)

[1] Cohn, D'Vera, and Andrea Caumont. "10 Demographic Trends That Are Shaping the U.S. and the World." *Fact Tank*, Pew Research Center, 31 Mar. 2016.

Individuals with Disabilities

According to the 2016 5-year ACS, an estimated 14.8% of county residents (or one out of every six) currently live with a disability. While residents under 35 are much less likely to have a disability, around a third of adults living in the County who are over 65 have a disability. Similarly, while only around 7.8% of the total County population has an ambulatory difficulty, fully 20% of adults over 65 have serious difficulty walking or navigating stairs.



Veterans

A relatively high proportion of Westmoreland County are US military veterans—8.4%, representing more than 29,000 individuals, compared to a rate of 4.3% statewide. The County's veteran population is served by one Veterans Affairs (VA) Community-Based Outpatient Clinic in Greensburg, which is a satellite clinic of the VA Medical Center in Pittsburgh. Veterans who require transportation to the VA facilities in Pittsburgh but don't have a car rely on WCTA fixed route service to Pittsburgh, as well as weekday shuttles from Apollo, New Kensington, and Donegal provided by the Disabled American Veterans organization.

Household Income

In 2016, median household income was estimated to be $54,142, which is just under the statewide average of $54,895. Household income in Westmoreland County has been on the rise since 2010, closing the gap between countywide and statewide median income. Where the county's median household income was only 94.6% of the statewide median income at the beginning of the decade, by 2016 it was up to 98.6% of the statewide median income.

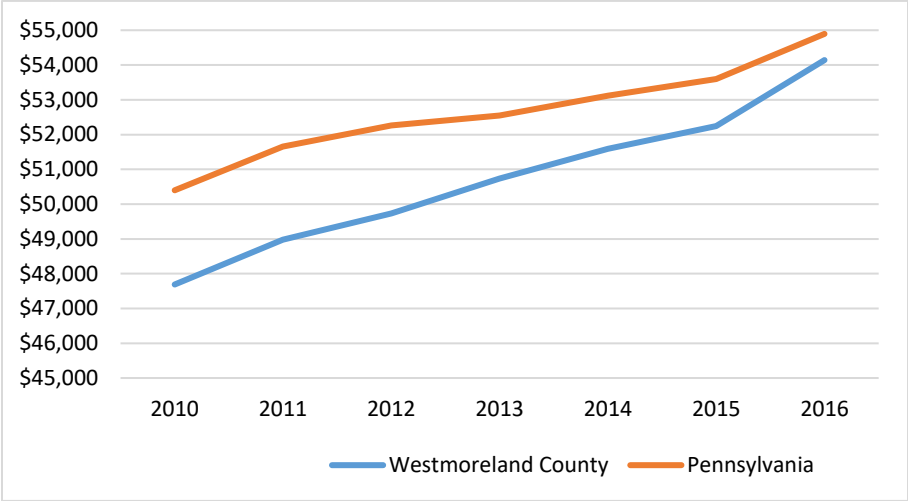
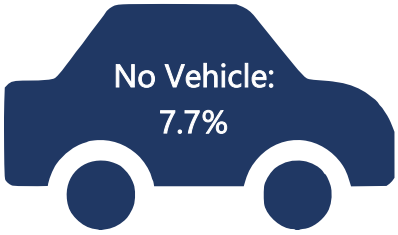


Figure 3: Median Household Income (2016 ACS 5-Year)

The percentage of families living below the poverty line has also decreased slightly, from 7.1% in 2010 to an estimated 6.9% in 2016. By comparison, the rate of poverty for families across the Commonwealth for 2016 was 9.1%.

Car Ownership

More than 7.7% of households do not have access to a personal vehicle, and 2.2% of workers do not have a vehicle available to drive to work. These rates have increased noticeably since 2010, when 7.3% of households and only 1.5% of workers lacked a vehicle for regular use. This means that now, in addition to a large aging population who may become less able to drive, another 7,800 county residents between the ages of 16 and 65 do not have reliable access to a personal vehicle.



Additional maps showing locations of demographically significant areas of Westmoreland County can be found in Appendix A: Supplemental Demographic Maps.

Economic and Commuter Profile

Employment is a major driver of public transportation trips across Pennsylvania. Jobs that have set schedules, generally between the hours of 6:00 am and 6:00 pm, can represent a substantial portion of an agency's ridership.

Westmoreland County has historically been a seat of industry and manufacturing. The county has experienced decline in these types of jobs since the 1980s, but there are still many large-scale industrial and manufacturing jobs in the County. According to the Pennsylvania Department of Labor & Industry, the top five industry sectors in Westmoreland County are:

Industry Sector	Percent of Total Employed (2016)
Health Care and Social Assistance	15.7%
Retail Trade	14.4%
Manufacturing	12.9%
Accommodation and Food Service	9.8%
Education Services	6.7%

A closer look at the employer makeup of these primary industries can be a useful tool for designing transit service that meets the needs of residents. As of the third quarter of 2017, the largest 15 employers in the county were:

1) **Wal-Mart Associates, Inc.**
2) **State Government**
3) **Westmoreland Regional Hospital**
4) **United Parcel Service, Inc.**
5) **Westmoreland County**
6) **Respironics, Inc.**
7) **Giant Eagle, Inc.**
8) **Elliott Turbomachinery Co., Inc.**
9) **Leedsworld, Inc.**
10) **Excela Health Physician Practices**
11) **Latrobe Area Hospital, Inc.**
12) **Westinghouse Electric Co., LLC**
13) **Federal Government**
14) **Hempfield Area School District**
15) **Latrobe Specialty Metals Company**

Of these industries and employers, retail trade and accommodation and food service positions are generally difficult to serve by transit due to inconsistent schedules and non-traditional work hours. On the other hand, these industries typically employ young, low-income workers that may not have access to a car and could rely on public transportation to get to work. By focused outreach, discussions, and partnerships with major employers, WCTA may be able to better serve these sectors to increase ridership and improve the regional economy.

Evaluating the current employment in Westmoreland County does not illustrate a full picture of the commuting needs of residents. In fact, most workers leave the county for work every day, as illustrated in the graphic below. According to the 2015 Longitudinal Employer-Household Dynamics (LEHD) data from the U.S. Census, approximately 77,000 residents live and work in the county, while 89,000 leave every day for their job. Conversely, 56,000 commuters travel from surrounding counties into Westmoreland County every day to work.

Figure 4: Westmoreland County Employee Commute Flow (LEHD 2015)

This page left intentionally blank.

WCTA System Overview

WCTA was formed in 1978 to oversee public transportation services in the City of Greensburg and the surrounding county. WCTA's charter specifically prohibits the Authority from directly operating transit services. As a result, WCTA contracts with private operators to physically operate the system, the current contract being with National Express. Through this contract, WCTA provides fixed route, commuter bus, and Shared-ride transportation services.

Fixed Route and Commuter Bus

Fixed route transit service is what most people think of when they speak of public transportation. Fixed route is service in which a vehicle is operated along a prescribed route according to a fixed schedule. Stops are clearly marked and they follow the same route, at the same times, every day.

Commuter service is a type of fixed route service, designed to meet the needs of workers in urban areas. WCTA's commuter service connects residents with Oakland and Pittsburgh in Allegheny County. This represents a sizable portion of WCTA's service and ridership. WCTA operates 25 fixed routes across Westmoreland County, consisting of a mix of local circulator routes, intercity service between cities and boroughs, and long-distance express commuter bus service.

WCTA routes are numbered between 1 and 20 with no specific association for numerical choice. Letters are added to route numbers as service indicators to distinguish between service types. Service indicators include:

- A – Alternate. This is a route extension that operates as a differentiator between local route service patterns.
- F – Flyer. This is express service which utilizes the busways of Allegheny County to access downtown Pittsburgh.
- J – Job Connection. This is a service type used only in New Kensington to designate a route which connects city residents to job centers in the Westmoreland Business and Research Park and Pittsburgh Mills Mall.
- S – Saturday. This is used to distinguish Saturday Service from weekday-only service.

A listing of WCTA routes is below:

- 1F Greensburg – Pittsburgh Flyer
- 2F Latrobe – Pittsburgh Flyer
- 3F Mt. Pleasant – Pittsburgh Flyer
- 4 Greensburg – Pittsburgh
- 4S Greensburg – Pittsburgh Saturday
- 5 Greensburg – Jeannette Shopper
- 5S Greensburg – Jeannette Shopper Saturday
- 6 Greensburg – Irwin
- 8 Greensburg – Youngwood – New Stanton – Countryside Plaza
- 9 Greensburg – Latrobe Shopper
- 9A Latrobe – Derry
- 9S Greensburg – Latrobe Shopper Saturday
- 9AS Latrobe – Derry Saturday

- 11 Johnstown – Latrobe
- 12 Greensburg – New Kensington
- 14 Local New Kensington
- 14F New Kensington – Pittsburgh Flyer
- 14J New Kensington – Penn State – Pittsburgh Mils
- 14S Local New Kensington Saturday
- 15 Avonmore – New Kensington
- 16 Greensburg – Mt. Pleasant
- 16S Scottdale – Greensburg Saturday
- 17 Local Scottdale
- 18 Irwin – Greensburg Flyer
- 20 East Flyer

A map of these routes is depicted below. The current WCTA route structure is focused on providing a broad level of coverage to wide swaths of the county, with limited frequency on many of the routes.

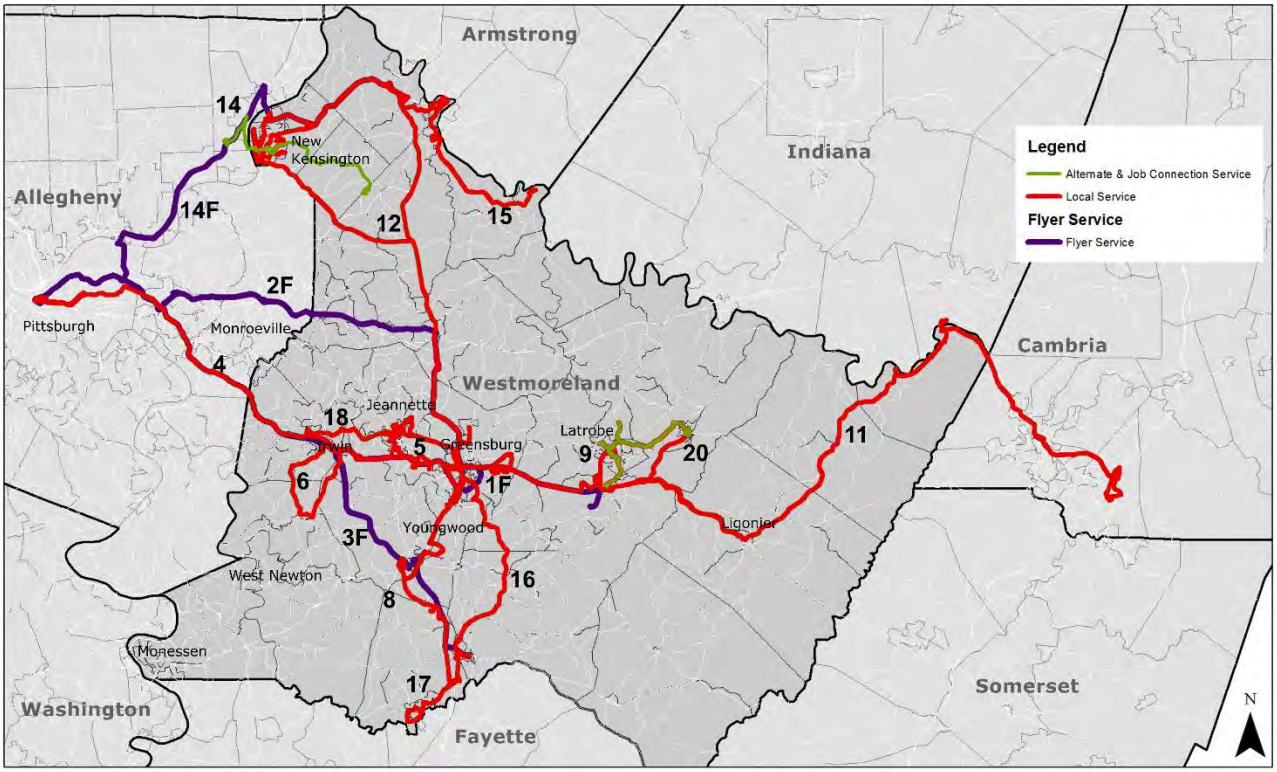


Figure 5: Westmoreland Transit Weekday Routes

Transfer Points

WCTA operates a service that is highly dependent on timed transfers to extend the range of routes to offer enhanced mobility for regional travelers. Transfers are provided at several major stops throughout the county, including:

- Greensburg Transit Center, 41 Bell Way, Greensburg, PA
- Latrobe 30 Plaza, 1008 Latrobe 30 Plaza, Latrobe, PA
- Central City Plaza New Kensington, 801 4th Ave, New Kensington, PA

The Greensburg Transit Center serves as the main hub of the system, and is also the location of WCTA administration. WCTA recently completed a major renovation of the Greensburg Transit Center that improved the operations and safety of the facility.

Park-and-Ride

Westmoreland County provides a considerable amount of express commuter bus service. This type of service relies heavily on the use of park-and-ride lots to facilitate high ridership with limited stops. Westmoreland County has 10 official park-and-ride lots. Seven offer fixed route transit connections while the remaining three lots are primarily used for carpooling. Locations of these park-and-ride lots are identified below.

The following Park & Rides are located on WCTA bus routes:

- Allegheny Township, SR-56 at Terrace Ave, Allegheny Township, PA (Route 14F)
- Arnold Palmer Airport, 148 Aviation Ln, Latrobe, PA (Route 2F)
- Carpenter Lane, 13700 US030, North Huntingdon Township, PA (Routes 1F, 3F, and 4)
- Five Star Trail, 430 E Pittsburgh St., Greensburg, PA (Routes 1F and 4)
- Living Waters Church, 8800 Pennsylvania Ave, North Huntingdon Twp, PA (Routes 1F, 4, and 6)
- Midtown Plaza, 450 S. Main St., Greensburg, PA (Routes 1F and 4)

The following Park & Ride is located on a FACT bus route:

- Rostraver Airport, 100 Jonathan Willey Road, Rostraver Twp, PA (FACT Pittsburgh Commuter)

The following Park & Rides are currently unserved by transit:

- Irwin Turnpike Exit, 125 Rocky Rd, Irwin, PA
- Salem Township (US-22 & SR-819), 898 Croft Rd, Greensburg, PA
- Route 201 Park & Ride, 101 Pricedale Rd, Rostraver Township, PA

Shared-ride Demand Response

Shared-ride demand response, or 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, Shared-ride service is provided through federally-required Americans with Disabilities Act (ADA)

Complementary Paratransit service within ¾ mile of any existing fixed route and through the Pennsylvania Shared-Ride Program.

GO Westmoreland is the primary Shared-ride provider in Westmoreland County. Overseen by WCTA and provided by the service contractor, the service is provided countywide. As of FY 2017-2018, GO Westmoreland offers service Monday through Friday, 7:00 am to 7:00 pm, and Saturday, 7:00 am to 4:00 pm, for trips within Westmoreland County and within a 5-mile "buffer zone". Travel to Pittsburgh is provided Monday through Friday, 9:00 am to 2:00 pm.

Several other regional providers offer Shared-ride service in Westmoreland County. These providers include:

- ACCESS by Port Authority operates primarily in Allegheny County but will serve locations 1.5 miles outside or beyond the Allegheny County line.
- TACT Shared-ride by Town and Country Transit operates primarily in Armstrong County but will also serve all areas in Westmoreland County from or to Armstrong County.
- Reserve-a-Ride by CamTran operates primarily in Cambria County but will also serve all areas in Westmoreland County from or to Cambria County.
- FACT Shared-ride by Fayette Area Coordinated Transportation operates primarily in Fayette County but will also serve all areas in Westmoreland County from or to Fayette County.
- Freedom Transit Shared Ride operates primarily in Washington County but will serve locations within 5 miles outside or beyond the Washington County line.

Review of Existing Plans

A key step in the transit development planning process is to identify existing plans within Westmoreland County and to determine what these plans discuss regarding public transportation. By reviewing existing plans, and incorporating relevant information, Westmoreland County is taking to heart the needs and wants of the communities that have expressed their desires through a variety of planning efforts, from project-specific to general municipal comprehensive planning efforts.

More than 20 public planning documents were reviewed for their incorporation of WCTA and other public transit services. Of the plans reviewed, the most relevant plans include:

- US Route 30 Master Plan (2007/2008)
- Westmoreland County Comprehensive Plan (2005)
- Greensburg Comprehensive Plan (2005)
- Westmoreland County Housing Policy and Plan (2014)
- Mapping the Future: The Southwestern PA Plan (2015)
- Southwestern PA Public Transit-Human Services Coordinated Transportation Plan (2016)
- Comprehensive Economic Development Strategy for Southwestern Pennsylvania (2016)

Taken together, these plans present a vision for transportation in Westmoreland County that includes increased public transit options through multiple modes that get people where they want to go. Several call for enhanced commuter service to Pittsburgh and other areas. Additionally, the City of Greensburg specifically identified in their comprehensive plan a desire to institute a circulator route that connects city residents with local high schools, colleges, and other points of interest.

Some of the plans identify capital improvements that should be made to the WCTA system. Specifically, an improved transit center, enhanced and additional park-and-ride lots, and new buses were identified.

US Route 30 Master Plan

The US Route 30 Master Plan, completed in several phases from 2006 to 2008 with documents published in 2007 and 2008, developed a land use and transportation plan for the 40-mile length of US Route 30 in Westmoreland County. This "strategic blueprint" identified cost-effective solutions for future community and economic development initiatives.

The master plan specifically highlighted several recommendations that relate to public transportation and WCTA:

- **Increase multimodal opportunities and connectivity along the Route 30 corridor –** through policy recommendations that include incorporating transit into developments and incorporate bicycle and pedestrian accommodations into transportation network projects.
- **Create a county-wide network of mixed-use, pedestrian-oriented destinations, walkable districts and streets** – through policy recommendations such as encouraging mixed-use development and prioritizing the implementation of complete streets.

These recommendations set the stage for successful public transit along US Route 30 encouraging density and a transportation network that supports public transportation. The recommendations should continue to be implemented by Westmoreland County and municipalities in this important corridor.

Mapping the Future: The Southwestern PA Plan

In 2015, the Southwestern Pennsylvania Commission (SPC) published its long-range regional plan. The plan, *Mapping the Future: The Southwestern PA Plan*, incorporated public feedback during multiple planning phases from 2013 to 2015. The SPC plan was focused on issues at the regional level, looking toward the year 2040. It highlighted several key facts about public transportation in the 10-county region:

- In FY 2012, transit providers in the SPC region provided over 67 million rides on fixed-route and rail, plus 4-6 million Shared-ride trips.
- The CommuteInfo Program operates the regional vanpool and carpool program for SPC and provides thousands of passengers commuting opportunities from multiple locations in Westmoreland County to Pittsburgh, Oakland, and Cranberry Township.
- A companion document to *Mapping the Future*, the Southwestern PA Public Transit-Human Services Coordinated Transportation Plan, reviewed the 12 fixed-route transit providers and 15 demand response service providers in the SPC region. Five transportation barriers identified through research and public outreach include:
    - Limitations in public funding
    - Availability and accessibility
    - Cost and affordability
    - Program policies and regulations
    - Education and information
- Another companion document, the Comprehensive Economic Development Strategy, or CEDS, included an analysis of the benefits of public transportation for the regional economy.

Westmoreland County Comprehensive Plan

The Westmoreland TDP was developed simultaneously with the Westmoreland County Comprehensive Plan: *Reimagining our Westmoreland.* Transportation was a recurring theme throughout the *Reimagining Our Westmoreland* planning process, in which more than 3,500 people participated in the planning phase. Public transportation, while not a focus point of the planning process, nevertheless was identified as a significant asset and issue in the county.

REIMAGINING OUR WESTMORELAND
a plan for a more livable & prosperous county

- More than 30% of participants identified a lack of public transportation as a significant disadvantage to living in the county.

- Nearly 20% of people surveyed for the comprehensive plan identified public transportation as one of the top three planning issues for them. Over 17% indicated that traffic congestion was a top issue.
- During more than 30 community workshops, public transportation was identified as an issue at nearly half of the meetings
- Through an online map activity, the following areas for improvement were noted:
    - Increase commuter service to Pittsburgh from all areas
    - Improve park-and-ride lots
    - More weekend transportation to Pittsburgh
    - Service to the "Mon Valley"

The final recommendations for the Westmoreland TDP will be incorporated into *Reimagining Our Westmoreland* to provide a comprehensive framework for improving the livability of Westmoreland County.

This page left intentionally blank.

Community Engagement

Community Input is a critical part of any planning process—it identifies the needs and wants of the people who use the transportation network daily to get to where they need to go. Throughout the development of the Westmoreland TDP, more than 2,000 county residents provided input through a variety of methods. These community input opportunities were designed to engage both riders and non-riders alike, with the overall goal of keeping current riders and tapping into new markets that are currently underserved. Four distinct public outreach activities were utilized during the planning process; they are:

- Westmoreland County Comprehensive Plan Meetings
- On-board Customer Satisfaction Surveys (on all WCTA routes)
- Public Input Sessions at the Westmoreland Transit Center
- Interactive Online Survey

Community input is the foundation by which the improvements outlined in the TDP were primarily identified. A summary of outreach activities and the themes that were heard throughout the process are identified on the next few pages.

On-Board Customer Satisfaction Surveys

Measuring the satisfaction of the customers you have today is a valuable tool in determining what improvements should be made to keep existing riders on public transportation. For this reason, SPC and WCTA partnered with the Pennsylvania Public Transportation Association (PPTA) to administer customer satisfaction surveys during the week of September 25th-30th, 2017. Survey responses were collected on all WCTA routes following a statistically valid sampling plan (Appendix B: WCTA Customer Satisfaction Survey). A total of 185 surveys were completed.

Survey participants were asked to rate WCTA in 19 categories on a scale of one to five, with five being the highest. The responses reflect the highest satisfaction with drivers, buses, and general customer service.

On the opposite end, lower satisfaction scores were noted in bus stop amenities and park-and-ride lots, a significant issue as these assets are the gateways to the WCTA system. In addition, riders expressed dissatisfaction with the frequency of weekend service, as shown in Figure 6 Figure 6 below.

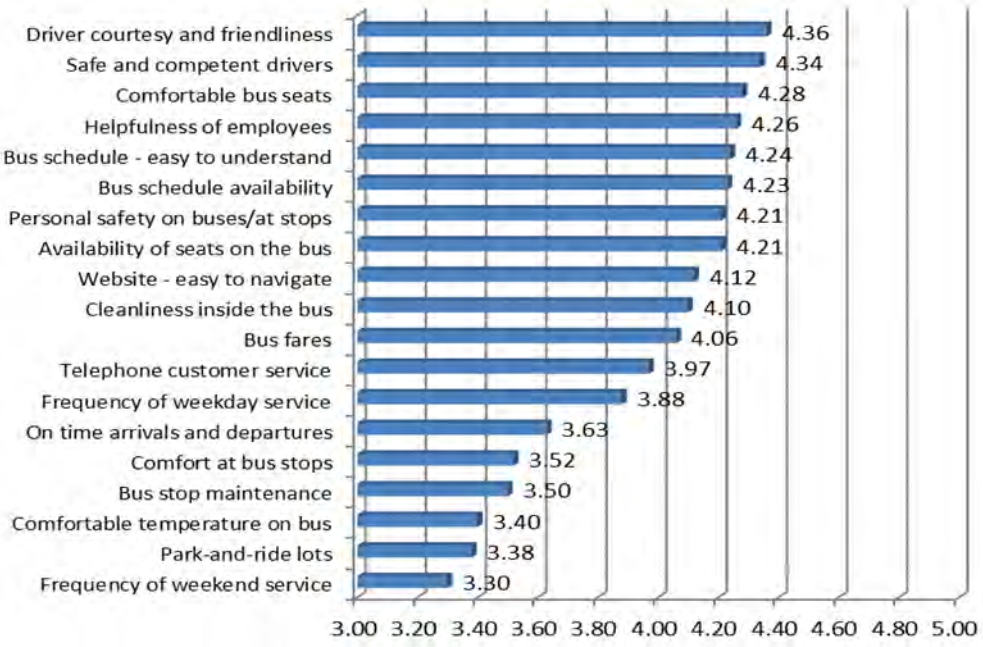


Figure 6: Satisfaction by Category (source: PPTA Customer Satisfaction Survey)

Interactive Online Survey

To engage a wide range of current and potential riders within Westmoreland County, an interactive online survey was developed. The survey focused on identifying the priorities for improved public transportation in Westmoreland County, as well as identifying locations where survey participants thought transit should take them.

It is important to note that online survey participants were self-selected and may not represent a statistically valid sample of the community. However, the individuals that chose to participate represent

the involved public in Westmoreland County, many of which are, or could be, public transportation riders.

The survey launched on October 10th, 2017, and ran for approximately 30 days. Over the survey period, more than 1,420 people completed the survey, the vast majority of whom completed the entire survey and provided valuable input for the planning process.

The survey was laid out into five "pages" of interactive questions designed to work on all forms of internet-enabled devices. The pages consisted of:

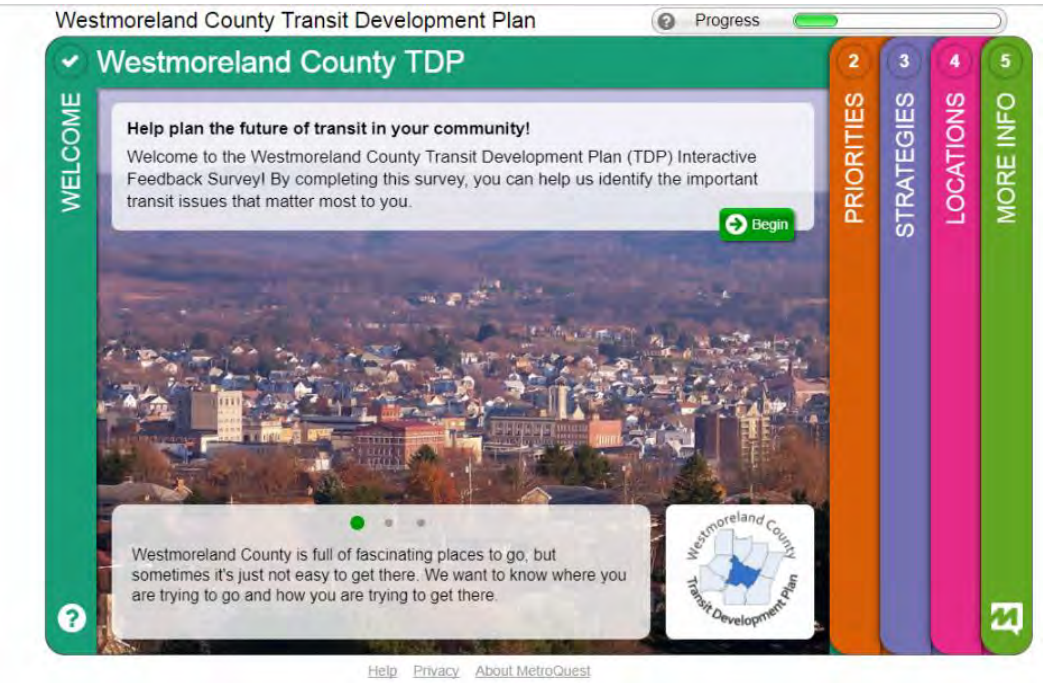
1. **Welcome** – Introduced the purpose of the survey with facts about Westmoreland County.

2. **Destination Priorities** – Each participant was asked to rank their top three destination priorities (where they would like to go) out of 8 possible categories.

3. **Service Strategies** – Each participant was asked to rank service strategies on a five-star scale to meet each of the top three destination priorities (how they would like to get there).

4. **Interactive Map –** Participants placed markers on a topographical map of the region to show locations of six categories of destinations: home, education, work, shopping, medical, and other.

5. **More Info** – A "thank you" for participating, with links to the public meeting schedules and a list of optional demographic questions, including home zip code, employment status, vehicle access, and age.



Participant Demographics

Of the interactive survey participants, the clear majority of participants had access to a car, with 81.2% of respondents having regular access and another 9.5% with at least occasional access. This indicates that the primary survey participants are what would be considered “choice riders”, those that have another means of transportation other than using WCTA.

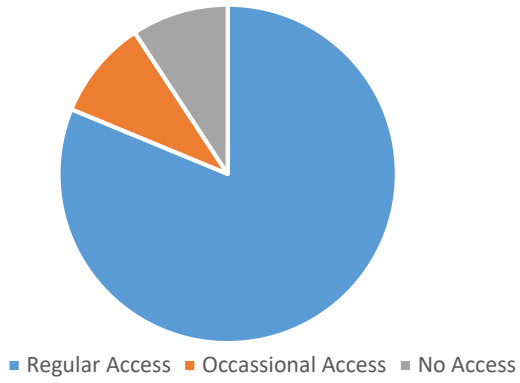


Figure 7: Proportion of Respondents with Access to a Car

Most survey participants were currently employed, with the second largest group being retired. This is consistent with the age breakdown of participants where the most common age range was 41-60 years, with the second most common being 61-80. Interestingly, despite younger generations’ preference for public transportation and the presence of several significant colleges in Westmoreland County, there was very little participation from students and people under the age of 25.

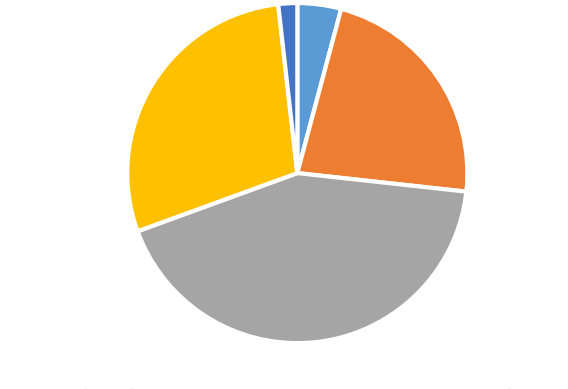


Figure 8: Age of Respondents

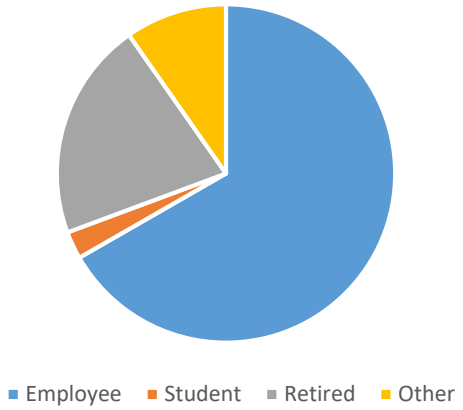


Figure 9: Employment Status of Respondents

It should also be noted that survey respondents were not completely representative of the county in geographic terms (see Figure 10). Because postcards and reminders about the survey were distributed mostly at WCTA facilities, representation in this survey was skewed towards areas where WCTA already has a presence. There is consequently comparatively less data available from this survey for some areas of the County, such as the Monessen area. SPC worked to mitigate this disparate data coverage by reaching out directly to officials and stakeholders in some of the areas beyond WCTA's immediate reach.

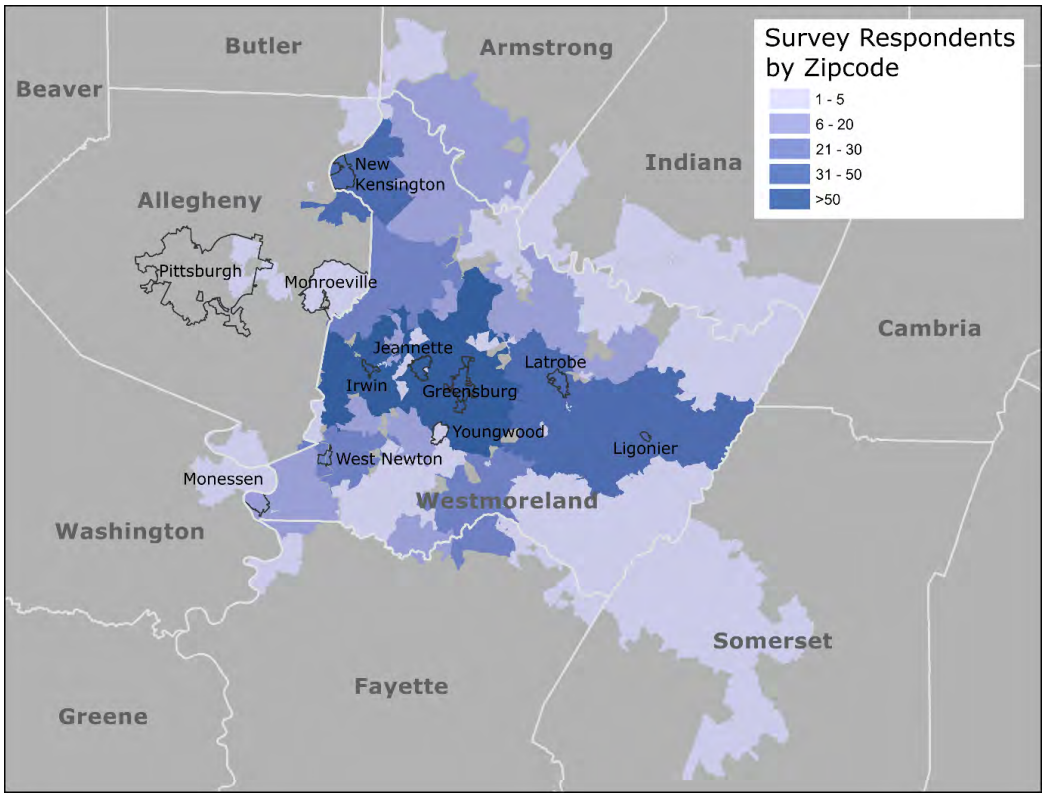


Figure 10: Representation of Metroquest Respondents by Zip code

Destination Priorities

In the first section, survey participants were asked to choose up to three of their top destination priorities out of the eight listed, and then rank those top priorities from 1 to 3 ("1" representing the issue of primary importance). These priorities indicate which types of places participants wanted most to be connected to. The tables below show both how often and how highly the eight priorities were ranked.

It is important to note that some priorities received high ratings among those who ranked them, despite being ranked as major priorities less frequently. To illustrate each priority's relative importance, Table 1 and Table 2 list the eight priorities first by average ranking, then by frequency of ranking.

	Destination Priority	Average Rank
1.	Pittsburgh	1.5
2.	Medical	1.9
3.	Rural Circulation	2.0
4.	Greensburg	2.1
5.	Urban Circulation	2.2
6.	Regional	2.2
7.	Shopping	2.2
8.	Education	2.2

Table 1: Destination Priorities by Average Ranking from 1 to 3

	Destination Priority	Number of Times Ranked
1.	Pittsburgh	767
2.	Shopping	483
3.	Medical	468
4.	Greensburg	412
5.	Regional	363
6.	Rural Circulation	294
7.	Education	291
8.	Urban Circulation	231

Table 2: Destination Priorities by Number of Times Included in Respondents' Top 3

Destination Services

For each of the three destination priorities that respondents selected, they were given the opportunity to specify which types of services they preferred to see pursued under each priority. Each service type was rated using a five-star system (with five being the best), the results of which are shown below. In total, respondents rated 35 different service options as shown in the following figures (with priorities shown in no particular order).

Pittsburgh

Express from Park & Rides: 4.3 Stars

- Express bus from Park & Rides in rural and suburban areas to Pittsburgh

Express from City Centers: 4.1 Stars

- Express bus from cities (Greensburg, New Nensington, etc.) to Pittsburgh

Weekend Bus Service: 3.8 Stars

- Express bus service to and from Pittsburgh on weekends

Late-Night Express: 3.6 Stars

- Bus service to and from Pittsburgh in the evening hours on weekdays

Medical Offices

Local Bus Service: 4.3 Stars

- Bus service to hospitals/doctors from nearby neighborhoods and boroughs

Ride Share Service: 3.9 Stars

- On-demand services (i.e., GO Westmoreland, Uber, Lyft, etc.)

Weekend Bus Service: 3.5 Stars

- Bus service to hospitals and doctors' offices on weekends

Evening Bus Service: 3.4 Stars

- Bus service to hospitals and doctors' offices on weekday evenings

Rural Circulation

Bus Network on Rural Highways: 4.1 Stars

- Bus services across county to connect smaller boroughs and townships

Regional Circulators: 3.8 Stars

- Divide the county into regions and provide circulators around each area

Countywide Ride Share: 3.8 Stars

- On-demand services (i.e. GO Westmoreland, Uber, Lyft, etc.)

Greensburg

Commuter Rail: 4.2 Stars

- Commuter rail service between Greensburg and Pittsburgh

Countywide Bus Service: 4.1 Stars

- Bus service from cities and boroughs across the county to Greensburg

Local Bus Service: 3.7 Stars

- Bus service in and around Greensburg connecting downtown to suburban areas

Intercounty Express: 3.6 Stars

- Express bus service between Greensburg and cities in surrounding counties

Shared-Ride Service: 3.6 Stars

- On-demand services (i.e., GO Westmoreland, Uber, Lyft, etc.)

Education

College Bus Service: 4.3 Stars
- Bus service to colleges and universities (WCCC, PennState New Ken, etc.)

Evening College Service: 4.1 Stars
- Bus service to colleges and universities on weekday evenings

Weekend College Service: 3.4
- Bus service to colleges and universities on weekends

Campus Circulators: 2.9
- Bus circulators between campuses and buildings at colleges and universities

Regional

Express Bus to PIT: 4.4 Stars
- Express bus service to Pittsburgh Int'l Airport from cities in Westmoreland County

Express Bus to Cranberry Township: 3.0 Stars
- Express bus service to Cranberry Township from cities in Westmoreland County

Express Bus to Washington County: 2.7 Stars
- Express bus service to Washington County, including Southpointe and Meadows

Express Bus to Johnstown: 2.5 Stars
- Express bus service to Johnstown from cities in Westmoreland County

Express Bus to Indiana: 2.5 Stars
- Express bus service to Indiana from cities in Westmoreland County

Urban Circulation

Greensburg Local Bus: 3.8 Stars
- Bus service in and around Greensburg connecting suburban areas

Latrobe Local Bus: 3.3 Stars
- Bus service in and around Latrobe connecting to suburban areas

Ligonier Local Bus: 3.0 Stars
- Bus service in and around Ligonier connecting to suburban areas

Jeannette Local Bus: 3.0 Stars
- Bus service in and around Jeannette connecting to suburban areas

New Kensington Local Bus: 2.9 Stars
- Bus service around New Kensington connecting to suburban areas

Shopping

Local Bus to Supermarket: 4.1 Stars
- Bus service to groceries/markets from nearby neighborhoods and boroughs

Local Bus to Malls/Plazas: 4.1 Stars
- Bus service to shopping centers from nearby neighborhoods and boroughs

Weekend Bus Service: 3.9 Stars
- Bus service to shopping centers and supermarkets on weekends

Evening Bus Service: 3.6 Stars
- Bus service to shopping centers and supermarkets on weekday evenings

Shopping Area Circulators: 3.6 Stars
- Small bus circulators to get between stores in shopping areas

Interactive Map

A third feature of the online survey provided respondents the opportunity to interact with an online map. The feature allowed users to identify specific destinations across the region. Survey respondents left a total of 3,311 markers on the interactive map, with corresponding comments.

The majority of markers of all types were placed in the Pittsburgh and Greensburg areas, as well as Monroeville, Irwin, Youngwood, and Latrobe. Education destinations were clustered around Greensburg, Youngwood, and Pittsburgh, consistent with important regional higher education facilities including Seton Hill, University of Pittsburgh branches, and Westmoreland County Community College. Work destinations were clustered in Greensburg and Pittsburgh, with many markers also placed in the Irwin and Latrobe areas. Similarly, shopping markers were focused on the Greensburg and Pittsburgh areas and to a lesser extent in other major municipalities, such as Monroeville, Irwin, Latrobe, and Ligonier.

Maps of the markers organized by each of the six destination categories can be found in Appendix C: Metroquest Map Markers by Type of Destination.

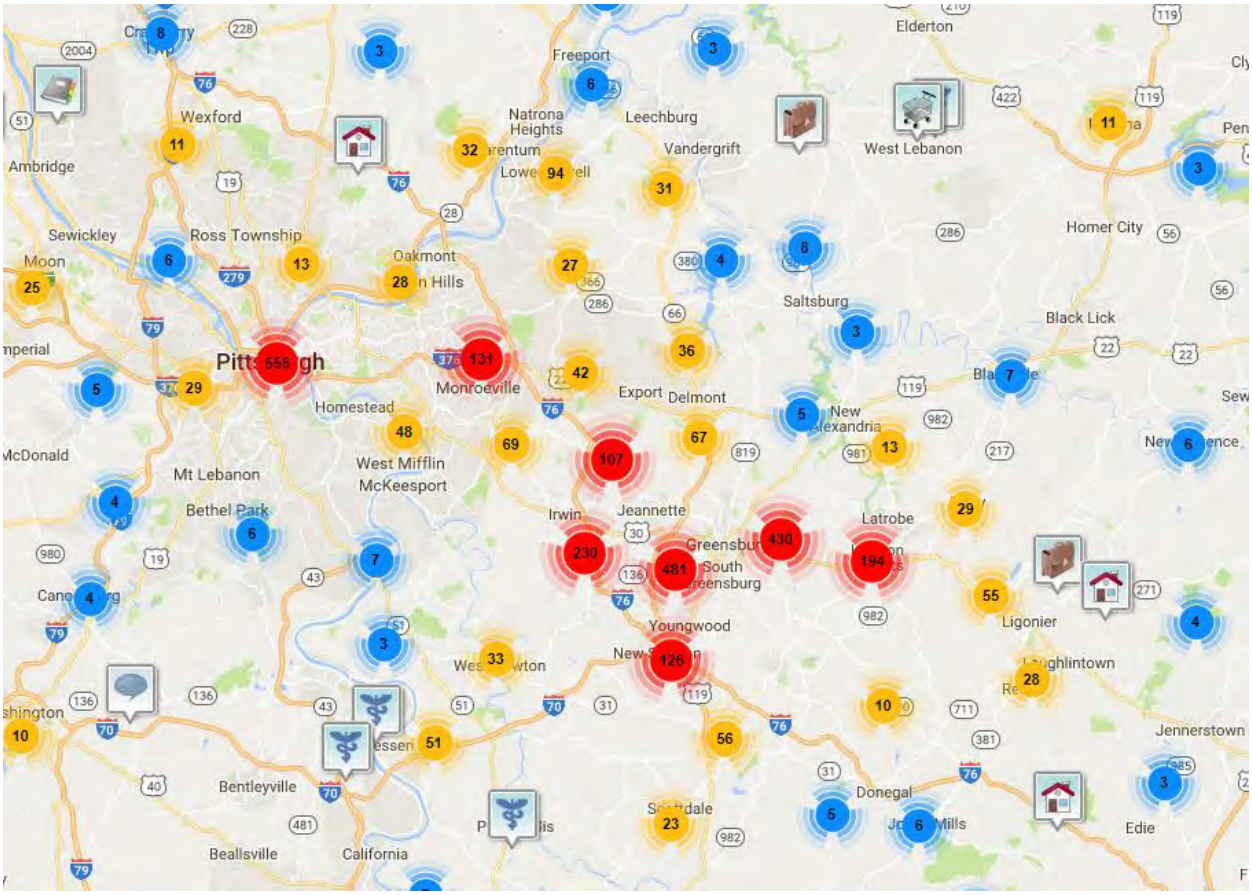


Figure 11: View of Interactive Metroquest Map Markers

Public Input Sessions

Public Input Sessions were held at the Westmoreland Transit Center in downtown Greensburg, on Thursday, October 18, 2017. The sessions provided opportunities for residents and riders transferring at the center to provide personal input and share their ideas with representatives from WCTA, SPC, and Westmoreland County. In additional, origin and destination data was collected and priorities and strategies were ranked by attendees.

General meeting responses reflected online survey data quite similarly. A word cloud of comments, shown in Figure 12, illustrates larger text for more common topics. The most common request was More Bus Service, but additional topics of interest include:

- More Saturday & Sunday Service
- Safety at Bus Stops
- Better Service to Jeannette
- Weekend & Late-Night service to Pittsburgh
- Better Service in Scottdale & Mount Pleasant
- Extended Hours on Weekdays
- Shorter Travel Times

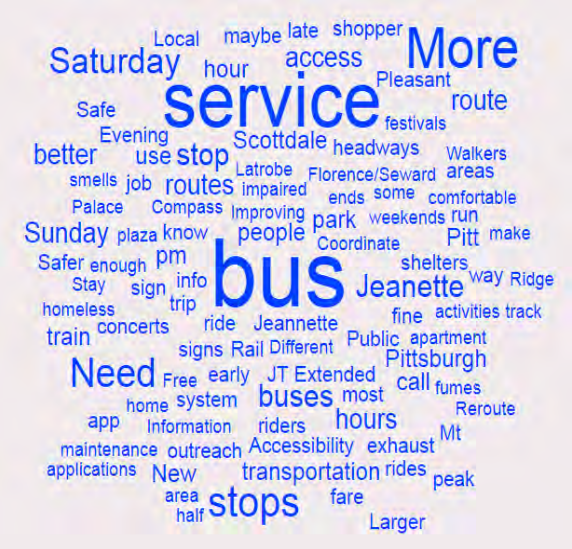


Figure 12: Word Cloud of Public Comments. Larger Text Reflects Usage Popularity.

Strategies and Priorities were also displayed at public meetings and reflected choices available in online surveys. Meeting attendees were given 10 play $1 bills and instructed to vote with their dollars on strategies. The exercise allowed participates to put themselves in the shoes of WCTA officials and provide the best service with limited funds. The display is shown in Figure 13.

By far, the most requested priority was “Access to Pittsburgh,” with almost twice the number of votes as other priorities. Second-tier priorities were “Access to Shopping” and “Access to Medical Facilities.” The lowest-ranked priorities were Circulator services and “Access to Education.”

Rank	Priority	Votes
1	Access to Pittsburgh	844
2	Access to Shopping	541
3	Access to Medical Facilities	536
4	Access to Greensburg	477
5	Access to Regional Destinations	395
6	Rural Circulation	337
7	Access to Education	310
8	Urban Circulation	274

Unlike the interactive online survey, the top-ranked strategies reflected a shift away from traditional fixed route services. There was a strong desire to shift resources away from local fixed route circulator services and into on-demand style transportation. This not only reflects an aging population and the need for door-to-door transportation, but also a national trend to replicate the services provided by Transportation Network Companies (TNC) such as Uber and Lyft.

Additionally, feedback suggests a desire to increase connections between regional places, shorten the time required to travel on buses, operate service more frequently, and add service later into the evenings. Late-night and weekend service requests were most common on Pittsburgh Express routes.

Highest-ranked strategies include:

- Increased Desire for On-demand Style Services
- Shorten Route Lengths
- Decrease Headways (more frequent service)
- Add Late-Night and Weekend Service on Express Routes to Pittsburgh
- Add Late-Night Service on Local and Regional Routes

Figure 13: Strategies and Priorities Exercise at a Public Input Session on October 18, 2017

Community Needs and Priorities

Through the community input process, a few recurring themes were identified. These themes represent the priorities for public transportation in Westmoreland County by people who currently are or could become riders. These themes represent the core of the transit planning process:

Improved Regional Connections – Better access to Pittsburgh and major areas within Westmoreland County (i.e., Greensburg from outlying areas).

More Frequent Service – Infrequent service and long headways (two hours or more) were consistently major issues for riders, and are likely discouraging new riders.

Enhancements to WCTA Gateways – In general, improvements to bus stops, park-and-ride lots, and the WCTA transfer center in Greensburg (project recently completed) were identified as primary areas of dissatisfaction and deterrents from using the system.

Ride Share Services – A shift away from local fixed routes to more on-demand style services was a common theme, reflecting a general movement within the industry to move towards personalized transportation.

Existing Service Analysis

Understanding the performance of existing transit services and comparing it to needs identified through demographic analysis and community input are critical to identifying where public transportation improvements could be made throughout Westmoreland County.

As a companion to the TDP, a set of WCTA Service Guidelines was developed. Service Guidelines are a set of basic requirements that should be met for an agency to offer a service based on measurable performance standards. These guidelines are an important and useful tool for a transit agency to help balance service requests with budgets and foster a culture of continuous improvement. The Service Guidelines are located in Appendix D: WCTA Service Guidelines. As part of the Service Guideline development process, an assessment of service between July 1, 2016, and June 30, 2017, was performed and compared to the established guidelines. The performance of existing services as compared to the service guidelines is summarized in each section below.

Fixed Route and Commuter Bus

Ridership data was collected from WCTA for the most recent fiscal year (FY 2016-17), verified by manual checks of ridership over a sample period, and analyzed by route. Total system ridership according to this data for FY 2016-17 was 411,824. Nearly 46% of that ridership is on Route 1F (Greensburg – Pittsburgh Flyer), as shown in Table 3. The route with the lowest ridership is Route 20F (East Flyer) offering one peak-only express trip between Ligonier, Derry, Latrobe, and Greensburg.

Route Name	Annual Riders
Route 1F (Greensburg - Pittsburgh Flyer)	187,539
Route 2F (Latrobe - Pittsburgh Flyer)	52,063
Route 9A (Latrobe - Derry)	37,267
Route 5 (Greensburg - Jeannette Shopper)	31,088
Route 8 (Greensburg to Youngwood, New Stanton, and South)	18,869
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	18,798
Route 6 (Greensburg - Irwin)	17,420
Route 4 (Greensburg - Pittsburgh)	14,108
Route 16 (Greensburg - Mt. Pleasant)	12,385
Route 14 (Local New Kensington)	9,343
Route 12 (Greensburg - New Kensington)	7,541
Route 9 (Greensburg - Latrobe Shopper)	6,953
Route 14F (New Kensington - Pittsburgh Fyler)	6,880
Route 17 (Local Scottdale)	5,004
Route 15 (Avonmore - New Kensington)	4,501
Route 18F (Irwin - Greensburg)	4,129
Route 11 (Johnstown - Latrobe)	2,911
Route 14J (New Kensington- Penn State- Pittsburgh Mills)	2,740
Route 20F (East Flyer)	2,285

Table 3: WCTA Ridership by Route

Total ridership is greatly affected by the number of trips offered each day. More meaningful measures of productivity are Passengers per Hour (measuring the ratio of riders to hours that the bus is in service) and Passengers per Trip (measuring the number of riders on each trip). The metric of Passengers per Hour helps to understand the fiscal impact of service and the metric of Passengers per Trip helps to understand the capacity requirements of the service.

Route 1F (Greensburg – Pittsburgh Flyer) is not only the route with the highest ridership, but it also has the highest productivity with 34.65 Passengers per Hour. Routes with fewer than five (5) Passengers per Hour are considered to have low productivity. Those include Route 12 (Greensburg – New Kensington), Route 14J (New Kensington – Penn State – Pittsburgh Mills), Route 20F (East Flyer), Route 15 (Avonmore – New Kensington), and Route 11 (Johnstown – Latrobe) as shown in Table 4.

The route with the lowest productivity and fewest passengers per trip is Route 11 (Johnstown – Latrobe) with only 1.41 Passengers per hour and 1.41 Passengers per Trip.

Route	Passengers/Hour	Passengers/Trip
Route 1F (Greensburg - Pittsburgh Flyer)	34.65	35.43
Route 2F (Latrobe - Pittsburgh Flyer)	20.14	28.42
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	13.85	21.61
Route 14F (New Kensington - Pittsburgh Fyler)	11.61	13.54
Route 9A (Latrobe - Derry)	10.01	18.35
Route 6 (Greensburg - Irwin)	9.29	5.96
Route 5 (Greensburg - Jeannette Shopper)	8.81	5.83
Route 8 (Greensburg to Youngwood, New Stanton, and South)	8.43	6.13
Route 18F (Irwin - Greensburg)	7.85	4.06
Route 9 (Greensburg - Latrobe Shopper)	6.15	5.41
Route 16 (Greensburg - Mt. Pleasant)	6.03	5.42
Route 4 (Greensburg - Pittsburgh)	5.50	9.26
Route 14 (Local New Kensington)	5.28	1.70
Route 17 (Local Scottdale)	5.15	3.25
Route 12 (Greensburg - New Kensington)	4.93	3.62
Route 14J (New Kensington- Penn State- Pittsburgh Mills)	3.24	1.55
Route 20F (East Flyer)	3.21	4.50
Route 15 (Avonmore - New Kensington)	2.92	3.13
Route 11 (Johnstown - Latrobe)	1.41	1.41

Table 4: WCTA Productivity by Route

When evaluating service, it is also important to look at segments individually in addition to evaluating the entire route. Some routes may have high productivity at certain times or locations while the average is lowered by underperformance of specific segments.

An example if this is Route 17 (Local Scottdale). The segment from Walmart to the Westmoreland County Community College Tech Campus in New Stanton had a significantly lower productivity than the rest of the route, as shown in Table 5. This portion of the route was discontinued in November 2017. Other notable findings from this analysis show that the Jeannette Loop segment on Route 5 has particularly low ridership, as does the Central City Plaza to Arnold trip on Route 14.

Segments with particularly poor performance should be evaluated for modification if the overall performance of the route is determined to be satisfactory as defined in the WCTA Service Guidelines.

Route Name	Segment Name	Passengers/HR	Passengers/Trip
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - Irwin	59.27	35.56
Route 1F (Greensburg - Pittsburgh Flyer)	Irwin - PGH	36.06	36.06
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	23.20	34.99
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	20.07	35.11
Route 2F (Latrobe - Pittsburgh Flyer)	Delmont - Pittsburgh	23.80	26.58
Route 2F (Latrobe - Pittsburgh Flyer)	Pittsburgh - Delmont	21.68	21.68
Route 2F (Latrobe - Pittsburgh Flyer)	Latrobe - Pittsburgh	20.17	39.32
Route 2F (Latrobe - Pittsburgh Flyer)	Pittsburgh - Latrobe	14.92	26.11
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	Mt. Pleasant - Pittsburgh	19.21	30.90
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	Pittsburgh - Mt. Pleasant	8.50	12.33
Route 4 (Greensburg - Pittsburgh)	GBG - PGH	5.50	9.26
Route 5 (Greensburg - Jeannette Shopper)	Greensburg - Jeannette	10.04	8.04
Route 5 (Greensburg - Jeannette Shopper)	Jeannette - Greensburg	9.42	6.67
Route 5 (Greensburg - Jeannette Shopper)	Jeannette - Jeannette	6.95	2.78
Route 6 (Greensburg - Irwin)	Greensburg - Irwin	12.04	5.22
Route 6 (Greensburg - Irwin)	Norwin Hills - Greensburg	9.10	5.61
Route 6 (Greensburg - Irwin)	Greensburg - Norwin Hills	6.73	7.06
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Greensburg - WCC Tech	12.46	5.96
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Mt. Pleasant - Greensburg	8.31	7.20
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Greensburg - Mt. Pleasant	6.56	6.56
Route 8 (Greensburg to Youngwood, New Stanton, and South)	WCC Tech - Greensburg	6.39	4.79
Route 9 (Greensburg - Latrobe Shopper)	Greensburg - Lat. 30	6.74	5.73
Route 9 (Greensburg - Latrobe Shopper)	Lat. 30 - Greensburg	5.55	5.09
Route 9A (Latrobe - Derry)	Greensburg - Derry	11.47	21.03
Route 9A (Latrobe - Derry)	Derry - Greensburg	8.55	15.68
Route 11 (Johnstown - Latrobe)	New Flo. - Johnstown	2.85	1.67
Route 11 (Johnstown - Latrobe)	Galleria - New Flo.	1.51	1.16
Route 11 (Johnstown - Latrobe)	Johnstown - Lat. 30	1.32	1.54
Route 11 (Johnstown - Latrobe)	Galleria - Lat. 30	1.19	1.79
Route 11 (Johnstown - Latrobe)	Lat. 30 - Galleria	1.17	1.85
Route 11 (Johnstown - Latrobe)	New Flo. - Galleria	0.44	0.45
Route 12 (Greensburg - New Kensington)	Westmd. Mall - Greensburg	10.57	5.28
Route 12 (Greensburg - New Kensington)	New Ken. - Greensburg	3.44	3.89
Route 12 (Greensburg - New Kensington)	Greensburg - New Ken.	3.37	3.73
Route 12 (Greensburg - New Kensington)	Greensburg - Westmd. Mall	2.34	1.56
Route 14 (Local New Kensington)	E. Ken Manor - Central City Plaza	7.44	1.24
Route 14 (Local New Kensington)	Lower Burrell - Central City Plaza	6.00	2.32
Route 14 (Local New Kensington)	Central City Plaza - Lower Burrell	5.92	2.62
Route 14 (Local New Kensington)	Central City Plaza - E. Ken Manor	4.19	1.47
Route 14 (Local New Kensington)	Central City Plaza - Arnold	2.87	0.84
Route 14F (New Kensington - Pittsburgh Fyler)	Allegheny Plaza - Pitt	13.37	15.60
Route 14F (New Kensington - Pittsburgh Fyler)	Pitt - Allegheny Plaza	9.84	11.48
Route 14J (New Kensington- Penn State- Pittsburgh Mills)	Center City - Pgh. Mills	4.03	1.46
Route 14J (New Kensington- Penn State- Pittsburgh Mills)	Center City - Penn State	2.45	1.65
Route 15 (Avonmore - New Kensington)	Avon - L.B.	3.78	3.91
Route 15 (Avonmore - New Kensington)	L.B. - Avon	3.44	3.44
Route 15 (Avonmore - New Kensington)	Avon - New Ken.	2.27	2.65
Route 15 (Avonmore - New Kensington)	New Ken. - Avon	2.19	2.54
Route 16 (Greensburg - Mt. Pleasant)	Greensburg - County Mkt.	6.10	5.39
Route 16 (Greensburg - Mt. Pleasant)	County Mkt. - Greensburg	5.95	5.46
Route 17 (Local Scottdale)	County Mkt. - Scottdale	11.15	4.27
Route 17 (Local Scottdale)	Scottdale - County Mkt.	4.91	2.87
Route 17 (Local Scottdale)	Scottdale Loop	4.51	4.14
Route 17 (Local Scottdale)	WCC Tech - Walmart	3.46	3.35
Route 17 (Local Scottdale)	Walmart - WCC Tech	1.70	1.65
Route 18F (Irwin - Greensburg)	Irwin - Greensburg	10.08	5.06
Route 18F (Irwin - Greensburg)	Greensburg - Irwin	5.63	3.06
Route 20F (East Flyer)	Ligonier - GBG	4.21	5.96
Route 20F (East Flyer)	GBG - Ligonier	2.22	3.04

Table 5: WCTA Productivity by Route Trip

Based on the trip-level ridership analysis, the WCTA system has a high of 59.27 passengers per revenue hour (PPH), and a low of 0.44 passengers per revenue hour (PPH). As explained through the Service Guidelines, these two values are to be used to calculate a range against which each individual route and trip is measured. Highly Productive service is service exceeding the 80th percentile (greater than 11.7 PPH), while Unproductive Service is that which falls below the 20th percentile (fewer than 2.9 PPH).

New Service or Demonstration Projects, as detailed in the Service Guidelines, should target achieving at least the 50th percentile by year 3 (greater than 6.1 PPH).

Maximum PPH	Minimum PPH	80th Percentile	50th Percentile	20th Percentile
59.27	0.44	11.70	6.10	2.87

Table 6: WCTA Service Evaluation Parameters

Highly Productive Service

Based on the service guidelines, Highly Productive service performs well above system averages and should receive continued support for service operations. Routes falling within this bracket should be assessed for opportunities to expand or receive additional hours of service reallocated from poorly performing routes. Any additional resources obtained by WCTA for service expansion should be evenly distributed among these routes. According to the 2017 data, the following services are Highly Productive:

- Routes 1F (Greensburg-Pittsburgh Flyer)
- Route 2F (Latrobe-Pittsburgh Flyer)
- Inbound to Pittsburgh of Routes 3F (Mt. Pleasant-Pittsburgh Flyer)
- Inbound to Pittsburgh of Route 14F (New Kensington-Pittsburgh Flyer)
- Route 8 (Greensburg to Westmoreland County Community College)
- Route 6 (Greensburg to Irwin)

It should be noted that the two flyer routes (3F and 14F) show average productivity on return trips from Pittsburgh to Westmoreland County, indicating that trip times should be evaluated for revision based on the significant difference between inbound and outbound performance.

Unproductive Service

Based on the service guidelines, Unproductive service performs well below system averages. These routes should undergo a Title VI Equity Analysis to determine if they should be classified as lifeline services. If they are classified as lifeline services, then minimal service should be continued to ensure access to disadvantaged populations. If these routes are not lifeline services, they should be eliminated and reallocated to more productive services or the start of new service. According to the 2017 data, the following routes are Unproductive:

- Route 11 (Johnstown-Latrobe)
- Route 15 (Avonmore-New Kensington) between Avonmore and New Kensington

- Route 20F (East Flyer)
- Route 14J (New Kensington – Penn State – Pittsburgh Mills) between downtown New Kensington and Penn State

Table 7 below lists all current WCTA routes, identifies the appropriate service type category (as identified in the Service Guidelines) and determines compliance with minimum service design standards. Currently, the only routes meeting minimum headway standards are the Flyer routes, which have no minimum standard. Minimum spans are met by eleven (11) of the nineteen (19) routes, and show compliance in all three fixed route service categories.

Route	Service Type	Minimum Spans	Minimum Headways
Route 1F (Greensburg - Pittsburgh Flyer)	Flyer	Yes	Yes
Route 2F (Latrobe - Pittsburgh Flyer)	Flyer	Yes	Yes
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	Flyer	Yes	Yes
Route 4 (Greensburg - Pittsburgh)	Regional	Yes	No
Route 5 (Greensburg - Jeannette Shopper)	Local	Yes	No
Route 6 (Greensburg - Irwin)	Regional	No	No
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Regional	Yes	No
Route 9 (Greensburg - Latrobe Shopper)	Regional	Yes	No
Route 9A (Latrobe - Derry)	Local	No	No
Route 11 (Johnstown - Latrobe)	Regional	No	No
Route 12 (Greensburg - New Kensington)	Regional	No	No
Route 14 (Local New Kensington)	Local	No	No
Route 14F (New Kensington - Pittsburgh Flyer)	Flyer	Yes	Yes
Route 14J (New Kensington - Penn State - Pittsburgh Mills)	Local	Yes	No
Route 15 (Avonmore - New Kensington)	Regional	No	No
Route 16 (Greensburg - Mt. Pleasant)	Regional	No	No
Route 17 (Local Scottdale)	Local	No	No
Route 18F (Irwin - Greensburg)	Flyer	Yes	Yes
Route 20F (East Flyer)	Flyer	Yes	Yes

Table 7: WCTA Route Compliance

As service changes progress through the implementation of the TDP, WCTA should work towards achieving the service design guidelines and ensure that all new service requests comply with all elements of the Service Guidelines.

Shared-ride Service Analysis

GO Westmoreland provided 186,868 Shared-ride and Americans with Disabilities Act (ADA) complementary paratransit trips during FY 2016-17 according to data exported from GO Westmoreland's paratransit software system, Ecolane. As shown in Table 8, most of these trips were funded by the Medical Assistance Transportation Program (MATP) and the PennDOT Shared-Ride Lottery Program.

Funding Source	# of Trips
Area Agency on Aging (AAA)	18
ADA	14,420
General Public	12
PennDOT Shared-Ride Program	77,981
Medical Assistance Transportation Program (MATP)	87,145
PennDOT Persons with Disabilities Program (PwD)	7,292
Total	**186,868**

Table 8: GO Westmoreland Trips by Funding Source

To understand details about these trips, how they impact the operations of WCTA, and to identify improvements that may be made, a Shared-ride analysis was completed to examine GO Westmoreland's service area, hours, and days to:

- Analyze the efficiency and effectiveness of GO Westmoreland's Shared-ride service
- Better understand existing travel patterns
- Identify trips that are costly for GO Westmoreland to provide
- Examine the potential for developing user service guidelines to group trips, increase efficiency, and reduce costs
- Examine the potential for coordinating trips with Shared-ride providers in surrounding counties
- Assess current service hours and days

Service Area Analysis

This analysis illustrates locations in GO Westmoreland's service area with the highest density of Shared-ride trips provided to, from, or through each location. It also compares areas of high density, or "hot spots," to WCTA's existing fixed route service.

Overall, GO Westmoreland's Shared-ride service is concentrated in Greensburg and its surrounding municipalities. The bulk of Shared-ride trips begin or end in Greensburg. As a destination alone, Greensburg accounts for almost one-fifth of Shared-ride drop-off points (see Table 9). Other popular areas include the municipalities east and west of Greensburg on US-30, such as Jeannette, Irwin, and Latrobe.

Municipality	Total Drop-Offs	Percent of Drop-Offs
Greensburg	33,199	17.8%
New Kensington	8,631	4.6%
Jeannette	7,532	4.0%
Monessen	6,569	3.5%
Latrobe	6,194	3.3%
Mount Pleasant	4,518	2.4%
Vandergrift	2,861	1.5%
Irwin	1,957	1.0%
Pittsburgh	1,835	1.0%
Youngwood	1,684	0.9%

Table 9: Top Shared-ride Destinations

As illustrated in Figure 14, outside of central Westmoreland County, the next highest concentration of Shared-ride travel is in eastern New Kensington. According to Table 9, New Kensington is the second most popular destination through GO Westmoreland's Shared-ride service, and the area connecting New Kensington to Vandergrift sees a significant amount of use from the service.

Another area of relatively high density is the southwest corner of Westmoreland County, towards Monessen from the east and the north.

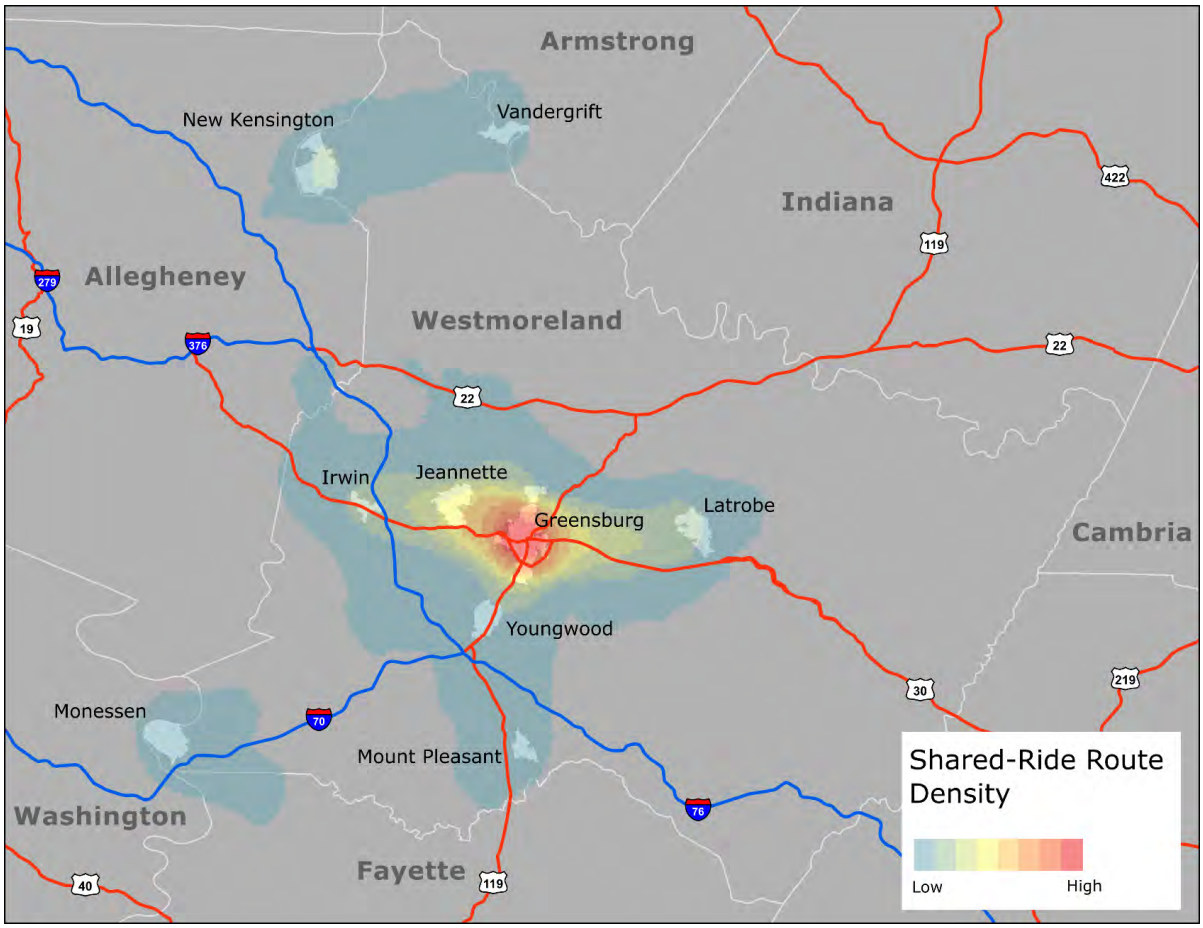


Figure 14: Shared-ride Route Density

Shared-ride Hot Spots and Fixed Route Service

As shown in Figure 15, WCTA's fixed route system overlaps high-demand areas of GO Westmoreland's Shared-ride service to a considerable extent. Fixed routes service all the major municipalities on east-west and north-south axes around Greensburg, from Irwin to Latrobe and from northern Greensburg to Mount Pleasant.

The major gap in service is to the city of Monessen. Many Shared-ride trips cross from the Greensburg area to Monessen and back again, and there is also a significant amount of movement between Monessen and the Scottdale area. Given that about 3.5% of Shared-ride trips are destined for Monessen (more than the city of Pittsburgh and borough of Mount Pleasant combined), connecting Monessen to fixed routes in Mount Pleasant or Greensburg may be beneficial to local residents.

While Pittsburgh is a reasonably popular destination for Shared-ride users across the county, the fixed route service to the Johnstown area in Cambria County sees negligible travel from patrons of GO Westmoreland's shared-ride service. In fact, only 12 Shared-ride trips had pick-up or drop-off locations in Cambria County in FY 2016-17, which suggests that overall demand for service there is already being adequately met by CamTran's Shared-ride service. When combined with the poor performance of the WCTA fixed route service to Johnstown, eliminating service is recommended.

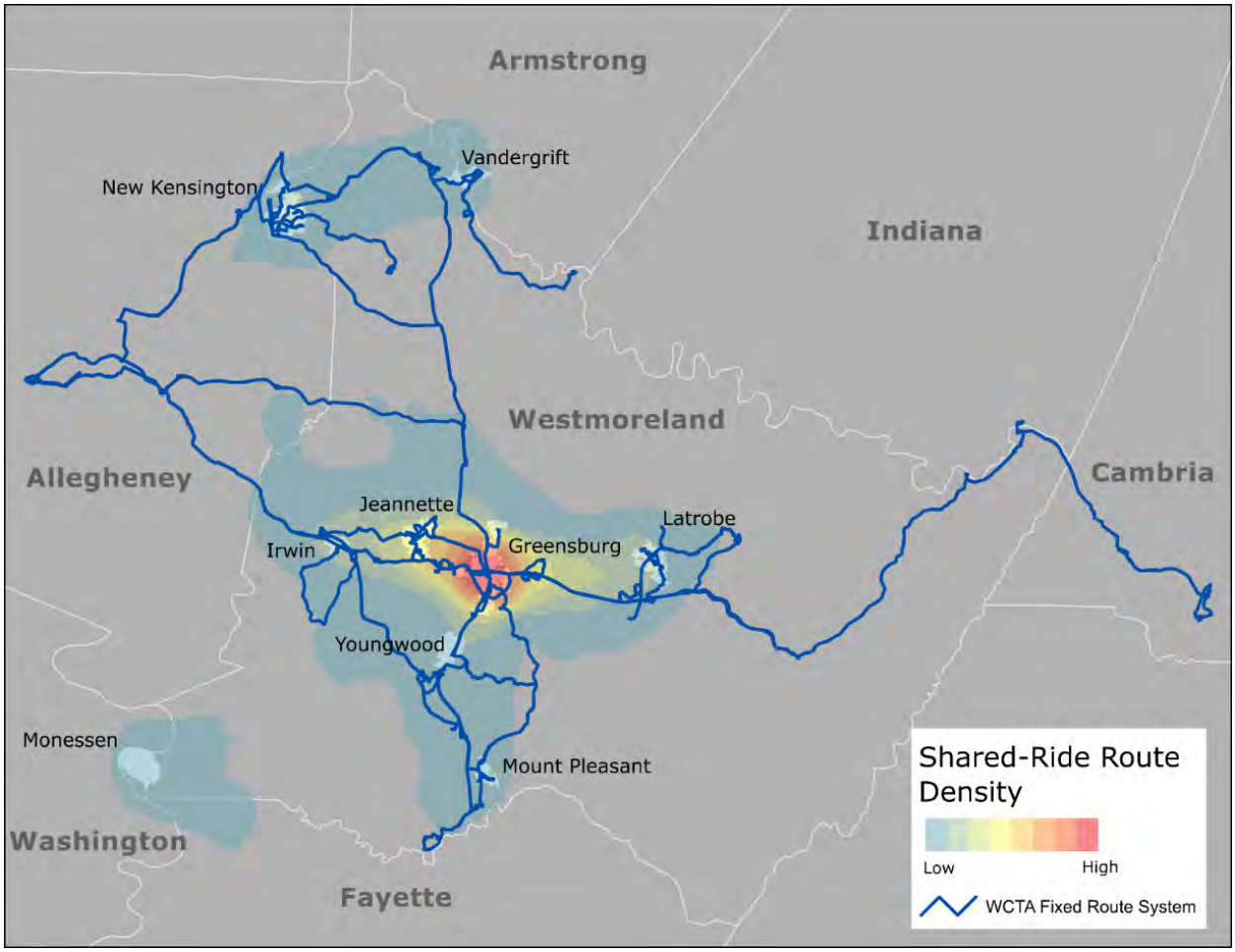


Figure 15:Shared-Ride Trip Hot Spots with Westmoreland Transit Fixed Routes

Service Hours Analysis

GO Westmoreland's service hours are defined as Monday through Friday, 7:00 am to 7:00 pm, and Saturday, 7:00 am until 4:00 pm. Based on the trip data summarized in Table 10, Shared-ride trips with pick-ups between 5:00 am and 7:00 am accounted for approximately 10% of all weekday trips, while trips with pick-ups after 5:00 pm accounted for only 2.4% of all weekday trips. Furthermore, less than 1% of all weekday pick-ups occur after 6:00 pm. **For this reason, GO Westmoreland should consider revising their weekday service hours to 5:00 am to 5:00 pm.**

GO Westmoreland should also consider expanding their morning service hours on Saturday to 5:00 am. Early-morning Saturday trip pick-up times between 5:00 am and 7:00 am accounted for 17.6% of all Saturday trips, while trips after 4:00 pm on weekends account for less than 2.5 percent of all Saturday trips. Currently these trips are being provided for specific customers (such as MATP) but the general public is not permitted to travel during this time. As the vehicles are already being utilized, there may be additional ridership to be gained if the same service is opened to the public.

Pick-Up Hour	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Total	
	Trips	%	Trips	%	Trips	%	Trips	%	Trips	%	Trips	%	Trips	%
4 am - 5 am	108	0.4%	100	0.3%	122	0.3%	101	0.3%	118	0.3%	145	1.3%	694	0.4%
5 am - 6 am	1,439	4.9%	1,020	2.8%	1,506	4.0%	1,119	3.1%	1,467	4.1%	669	6.0%	7,220	3.9%
6 am - 7 am	2,136	7.3%	2,509	6.9%	2,461	6.5%	2,342	6.4%	2,451	6.8%	1,297	11.6%	13,196	7.1%
7 am - 8 am	3,727	12.8%	4,031	11.0%	4,057	10.7%	3,968	10.9%	4,169	11.6%	1,770	15.9%	21,722	11.6 %
8 am - 9 am	2,117	7.3%	2,713	7.4%	2,981	7.9%	3,044	8.4%	2,899	8.1%	556	5.0%	14,310	7.7%
9 am - 10 am	2,468	8.5%	3,439	9.4%	3,351	8.9%	3,091	8.5%	3,333	9.3%	1,213	10.9%	16,895	9.0%
10 am - 11 am	2,811	9.6%	3,744	10.3%	3,993	10.5%	3,973	10.9%	4,229	11.8%	1,442	12.9%	20,192	10.8 %
11 am - 12 pm	2,365	8.1%	2,898	7.9%	3,156	8.3%	2,978	8.2%	3,074	8.6%	915	8.2%	15,386	8.2%
12 pm - 1 pm	2,632	9.0%	3,427	9.4%	3,434	9.1%	3,503	9.6%	3,571	9.9%	783	7.0%	17,350	9.3%
1 pm - 2 pm	2,161	7.4%	3,027	8.3%	3,384	8.9%	3,112	8.6%	2,788	7.8%	609	5.5%	15,081	8.1%
2 pm - 3 pm	2,386	8.2%	3,367	9.2%	3,169	8.4%	3,085	8.5%	2,767	7.7%	541	4.9%	15,315	8.2%
3 pm - 4 pm	2,868	9.8%	3,545	9.7%	3,515	9.3%	3,472	9.6%	2,962	8.2%	935	8.4%	17,297	9.3%
4 pm - 5 pm	1,142	3.9%	1,677	4.6%	1,705	4.5%	1,580	4.4%	1,294	3.6%	263	2.4%	7,661	4.1%
5 pm - 6 pm	465	1.6%	657	1.8%	632	1.7%	638	1.8%	467	1.3%	1	0.0%	2,860	1.5%
6 pm – 7 pm	232	0.8%	178	0.5%	281	0.7%	197	0.5%	301	0.8%	0	0.0%	1,189	0.6%
7 pm - 8 pm	76	0.3%	154	0.4%	109	0.3%	108	0.3%	53	0.1%	0	0.0%	500	0.3%
Total	**29,133**		**36,486**		**37,856**		**36,311**		**35,943**		**11,139**		**186,868**	

Table 10: Trips by Time of Day and Day of Week

This page left intentionally blank.

Transit Propensity Analysis

After considering the performance of the existing service, understanding the markets within Westmoreland County and how they may or may not be served by transit is a last critical component of the TDP process. One way in which to measure the potential for transit use and to determine if the current service is meeting those needs is through a transit propensity analysis.

The transit propensity analysis is based on *Transit Cooperative Research Program (TCRP) Report 28: Transit Markets of the Future,* which identifies fourteen groups of users as being "more likely than average to use transit as their principal mode for commuting to work, relatively independent of their income or the size or density of the metropolitan areas in which they live" (TCRP Report 28, page 8). Table 11 summarizes the most relevant of these characteristics that impact transit propensity.

Transit Determinant	Measure
Population	➢ Population Density
Age	➢ Seniors as % of Total Population ➢ Young Workers as % of Total Population
Race & Ethnicity	➢ Black ➢ Hispanic
Vehicle Ownership	➢ No Car
Education	➢ High School or Less
Immigrant Status	➢ Immigrant
Disability Status	➢ Has disability
Income	➢ Percent below poverty line

Table 11: Socio-Economic Transit Determinants

To better understand the overall likelihood of transit use, a "Transit Propensity Index" was created using the characteristics defined in Table 11. For all variables, higher values are indicative of greater need and likelihood of transit use. For example, a census block group with a higher number of zero-car households exhibits a greater mobility need and has a higher propensity for transit use.

It's important to understand propensity as a measure of need and not necessarily efficiency. A block group with the highest propensity means that the residents of that census block are most likely to ride transit service, but it does not mean that transit service would be most productive there. Population density and job density are the biggest factors in determining transit productivity. When overlaying current service on top of propensity, WCTA can begin to see new markets that are unserved by transit today. Comparing the propensity to Unproductive service also may show why certain routes perform more poorly than others.

Based on the Transit Propensity Analysis, the block groups with the highest transit propensity in Westmoreland County are:

1) St. Vincent College (Served by Routes 9 & 20F)

2) New Kensington (Served by Routes 12, 14, 14J, & 15)

3) Northern Derry Township (Unserved by current service)

4) City of Greensburg (Served by Routes 2F, 4, 5, 6, 8, 9, 12, 16, 18F, & 20F)

5) Salem Township (Unserved by current service)

6) Scottdale (Served by Route 17)

7) Youngwood (Served by Routes 3F & 8)

8) Monessen (Unserved by current service)

9) Bell Township (Served by Route 15)

10) Loyalhanna Township (Unserved by current service)

WCTA currently serves six of the ten blocks with the highest transit propensity (unserved blocks are identified in **bold** text). Consistent with other recommendations throughout the TDP, the propensity analysis indicates that service to Monessen and the Mon Valley should be considered. Service extensions should also be considered to North Derry Township, Salem Township, and Loyalhanna Township.

As can be seen on Figure 16, the Transit Propensity Analysis is generally consistent with, and helps to explain, the results of the service assessment completed previously. Specifically:

- **Unproductive Route 11 (Johnstown – Latrobe)** travels through blocks that show very little transit propensity, therefore increasing ridership on this route is unlikely, regardless of frequency or design.
- **Unproductive Route 14J (New Kensington – Penn State – Pittsburgh Mills)** does not connect jobs in Pittsburgh Mills with any blocks showing a propensity for transit. This route should be redesigned to focus more on gathering people in areas of relative high transit propensity that need to travel to Penn State or Pittsburgh Mills.

Conversely, **Unproductive Route 15 (Avonmore - New Kensington)** travels through blocks of average transit propensity, which is inconsistent with the poor performance of the route. It is important to note that the propensity analysis does not consider destinations that one can access with transit. High propensity will not lead to good ridership if transit doesn't connect people with where they need to go. For Route 15, WCTA should evaluate the destinations on the route, and look carefully at trip times and stop locations. If no meaningful improvements can be made to increase ridership, the route should be considered for elimination.

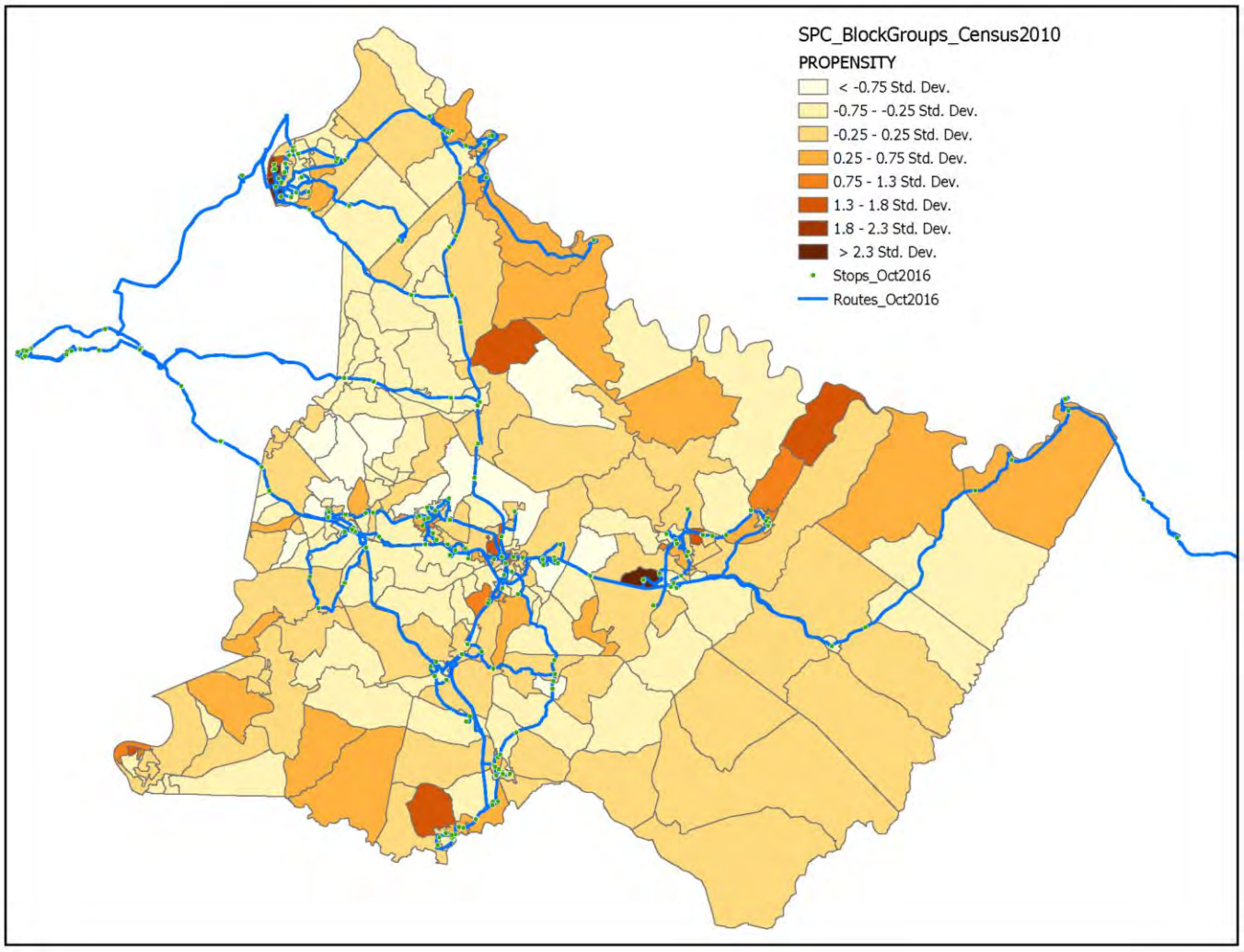


Figure 16: Transit Propensity by Census Block Group with WCTA Fixed Routes

This page left intentionally blank

Origin and Destination Analysis

In addition to the propensity for transit use of Westmoreland County residents, understanding where people travel to and from (origin and destination) every day can help plan for improvements to the transit service. Throughout the TDP process, all participants in all events and through the interactive online survey were asked to contribute origin and destination information. Responses from online surveys, on-street surveys, and public input sessions were compiled and mapped by trip type. Appendix E: Top Origins and Destinations Identified Through Public Feedback shows the clusters of origins and destinations based on those responses. A composite density heat map outlining general areas of transit need is shown below in Figure 17.

The results of the origin and destination analysis generally match the current fixed route bus network in Westmoreland County and show a general east-to-west travel pattern between central Westmoreland County and Pittsburgh.

There are two notable exceptions that indicate a need for service changes. A connection between Monessen, West Newton, and Greensburg would be in line with current travel patterns and is consistent with findings throughout the rest of the TDP. In addition, there appears to be no concentrated need for service east of Ligonier in Westmoreland County, which is consistent with the lack of ridership and propensity for service between Latrobe and Johnstown.

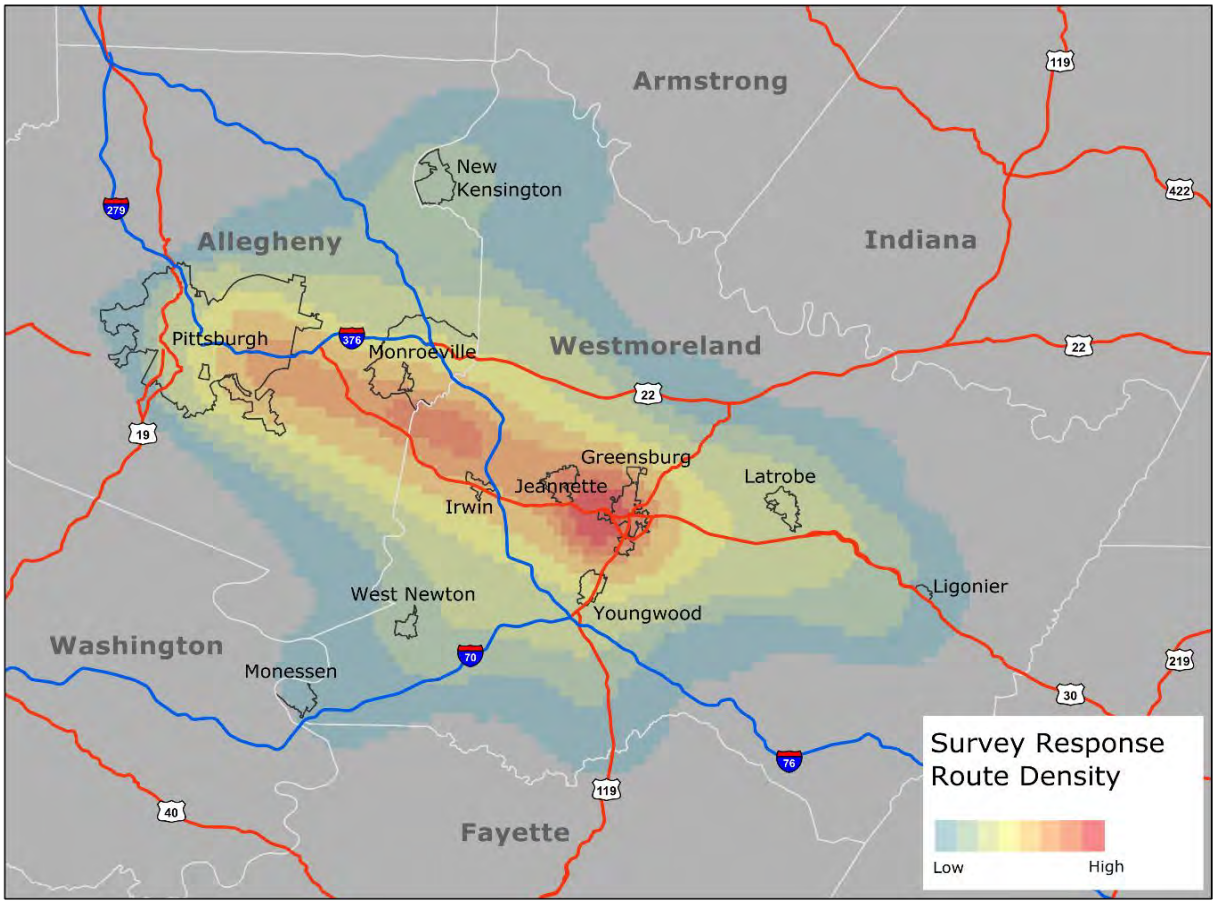


Figure 17: Density of Travel for Survey Respondents with Major Roadways

Commuter Travel

The majority of Westmoreland County workers leave the county for work every day. This commuter market represents a large part of WCTA's current ridership as well as a sizeable portion of the county's population. Understanding where the commuters are coming from and where they are going to is important to understand when planning for transit.

The Longitudinal Employer-Household Dynamics (LEHD) provides Home-to-Work Destination pairings by municipality based on survey responses collected during each census data collection cycle. The information is useful in determining shares and volumes of commuters between places.

A summary of the current commuter destinations for Westmoreland County residents is shown in Table 12. While it is generally understood that the City of Pittsburgh is the top work destination for commuters, Monroeville, O'Hara Township, Plum, and West Mifflin are also reasonably large destinations. Monroeville is the destination for 3.11% of Westmoreland County commuters, compared to Pittsburgh's 10.52%.

Work Destination	# of Daily Workers	Percentage of Total Workers
Pittsburgh city (Allegheny, PA)	17,670	10.52%
Monroeville city (Allegheny, PA)	5,219	3.11%
O'Hara township (Allegheny, PA)	2,097	1.25%
Plum borough (Allegheny, PA)	1,866	1.11%
West Mifflin borough (Allegheny, PA)	1,832	1.09%
Penn Hills township (Allegheny, PA)	1,437	0.86%
Cranberry township (Butler, PA)	1,330	0.79%
McKeesport city (Allegheny, PA)	1,078	0.64%
Robinson township (Allegheny, PA)	1,035	0.62%
North Versailles township (Allegheny, PA)	1,022	0.61%

Table 12: Work Destinations in Surrounding Counties for Residents of Westmoreland County.

An analysis of Monroeville workers, shown in Table 13, shows a large concentration of these workers in North Huntingdon, Penn Township, and Murrysville. Monroeville does not currently have one specific destination where the largest cluster of jobs would be located, and residential land use of the three municipalities of Westmoreland County is not conducive to transit use. Further study of these two areas would be necessary to determine if fixed route service is warranted.

Resident Municipalities	# of Daily Workers
North Huntingdon township (Westmoreland, PA)	721
Penn township (Westmoreland, PA)	679
Murrysville municipality (Westmoreland, PA)	659
Hempfield township (Westmoreland, PA)	478
Washington township (Westmoreland, PA)	176
Trafford borough (Westmoreland, PA)	167
New Kensington city (Westmoreland, PA)	164
Lower Burrell city (Westmoreland, PA)	163
Jeannette city (Westmoreland, PA)	148
Greensburg city (Westmoreland, PA)	142

Table 13: Residential Locations in Westmoreland County for Daily Workers in Monroeville

Public Transportation Needs and Opportunities

Throughout the TDP, a number of opportunities have been identified to enhance service to improve efficiency, increase ridership, and better serve Westmoreland County residents. These opportunities contain a range of improvements including simple policy-level changes, larger route design modifications, and new services that focus on areas that are currently underserved and show potential for transit use coupled with demonstrated need.

These opportunities have been separated into two distinct sets of recommendations. The first set is short-term scenarios that entail minimum investment of time or resources and have the potential to show immediate results for Westmoreland County. The second set of recommendations focuses on medium- and long-term opportunities that require a concerted effort from WCTA staff, Board of Directors, and local leaders to implement. These opportunities require a shift in operational organization and small-scale capital investment.

Service Goals

Based on community input, the Westmoreland County TDP establishes three primary service goals for future transit growth in Westmoreland County. These goals help steer decisions more broadly, maintaining a forward movement toward a robust and productive 21st century public transit system.

Mobility

WCTA takes me where I want to go, when I want to go. It makes good use of my time.

Usability

I understand how the WCTA system works and can use it when I wish.

Quality

WCTA is a worthwhile investment of my money and is a good steward of taxpayer funds. I trust WCTA to provide a good experience.

Each of the opportunities identified on the following pages strive to meet at least one of these three service goals. All future efforts should be aligned with advancing the system goals in a fiscally responsible way.

Short-Term Scenarios

Short-Term Scenarios are service improvements that can be accomplished within one year with little to no capital expenditures and/or operating cost increases.

Eliminate Johnstown Service

Service to Johnstown (route 11) is routinely the lowest performing service in the WCTA system, carrying only 1.2 riders/hour in 2017. Through outreach efforts and surveys, along with data analysis (demographic, origin and destination, and commuter), there is a lack of justifiable rationale to continue to service Johnstown. Additionally, the Shared-ride analysis shows minimal utilization of WCTA services to cross into Cambria County.

For this reason, it is recommended that service to Johnstown (Route 11) be eliminated or significantly reduced and the service reallocated to more productive existing services or focused on connecting new areas.

According to the Remix planning and scheduling software used by WCTA, operating Route 11 costs $253,000 per year, as shown in Figure 18. Two buses, 2,500 hours and 69,000 miles could be reallocated to other services in the county without increasing the total costs of operation at WCTA.

Some potential examples of service reallocation (with cost estimates provided by Remix) include:

- Monessen Service (regional service): Operating one bus on 3-hour headways 8 am-5 pm weekdays. (~$288,000; 2,800 hours; 66,000 miles). The WCTA Service Guidelines specify 1-hour or better headways for regional service, but exceptions can be made on a case-by-case basis as dictated by demand or budget.

- 1-hour weekday headways on Route 5 (local service). (~202,000; 2,030 hours; 32,000 miles)

- 1-hour weekday headways on Route 8 (local service). ($276,000; 2,800 hours; 64,000 miles)

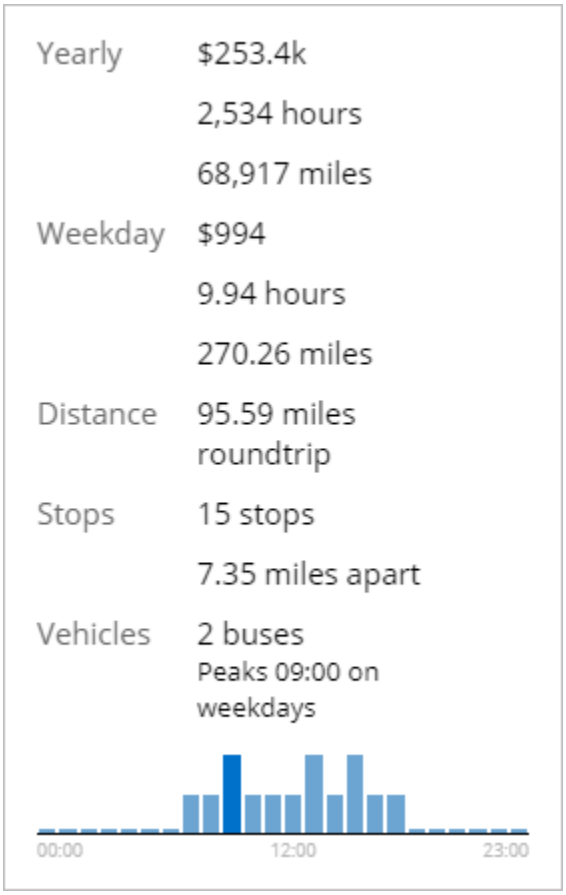


Figure 18: Route 11 Estimated Service Figures

Evaluate and Reallocate Utilization of Rural Transit Funds

WCTA is a unique organization in that it utilizes both urban formula funds through the Federal Transit Administration (FTA) Section 5307 as well as rural funds through the FTA Section 5311 administered by PennDOT. This mix of funding is appropriate given the widely rural nature of Westmoreland County. In Fiscal Year 2015-16, WCTA fixed route funding consisted of approximately 60% urban and 30% rural.

Historically, this rural funding has been used to subsidize Route 11 to Johnstown among other things. Considering the recommendation to reallocate the Johnstown service, it is appropriate for WCTA to develop a service allocation formula for application of rural funds.

Rural funds can be expended on any service outside of the census-designated urbanized area illustrated below in Figure 19. WCTA should determine all hours and miles completed outside of the urbanized area and apply Federal Rural funds to these areas to free up state and federal funding allocation for service in urban areas.

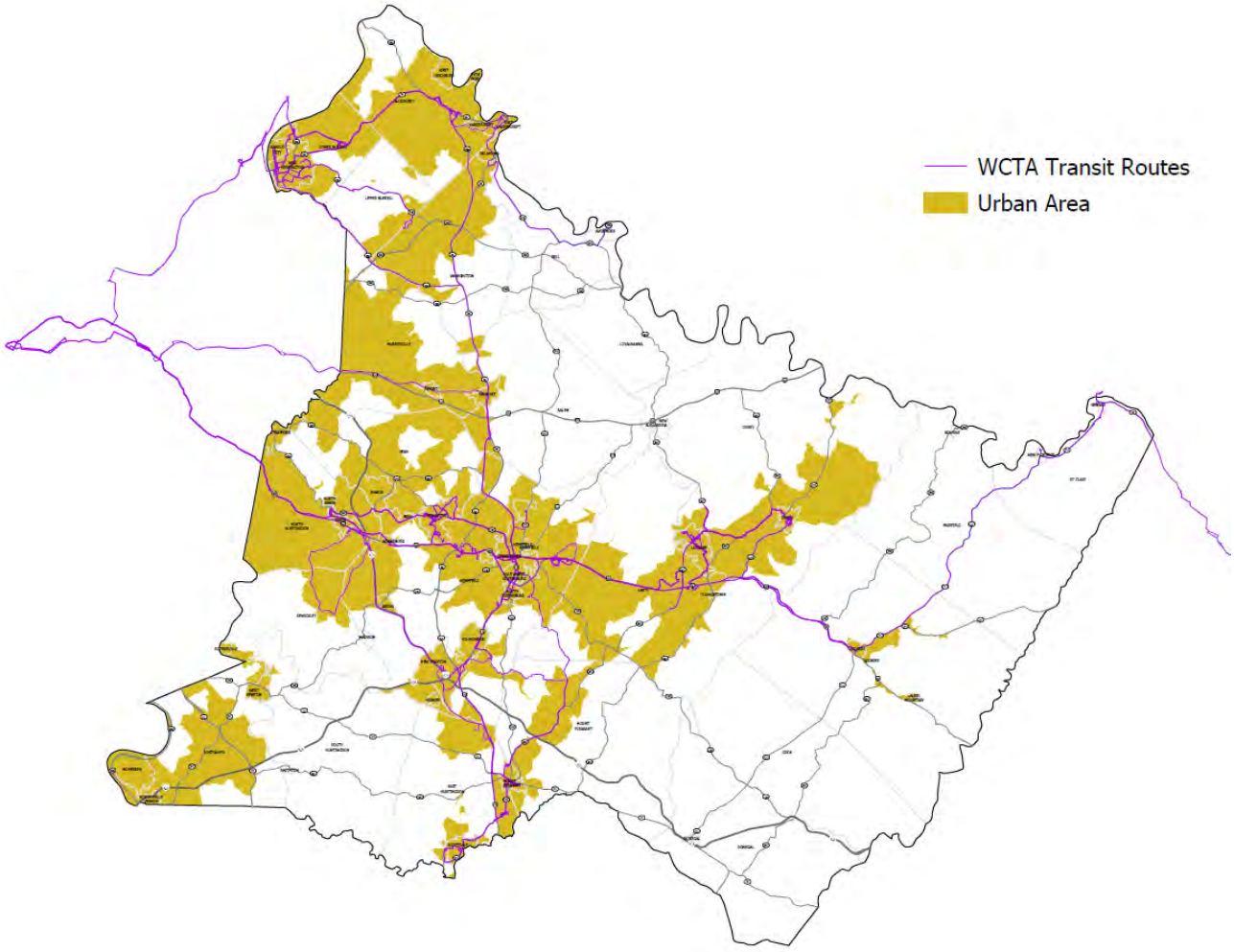
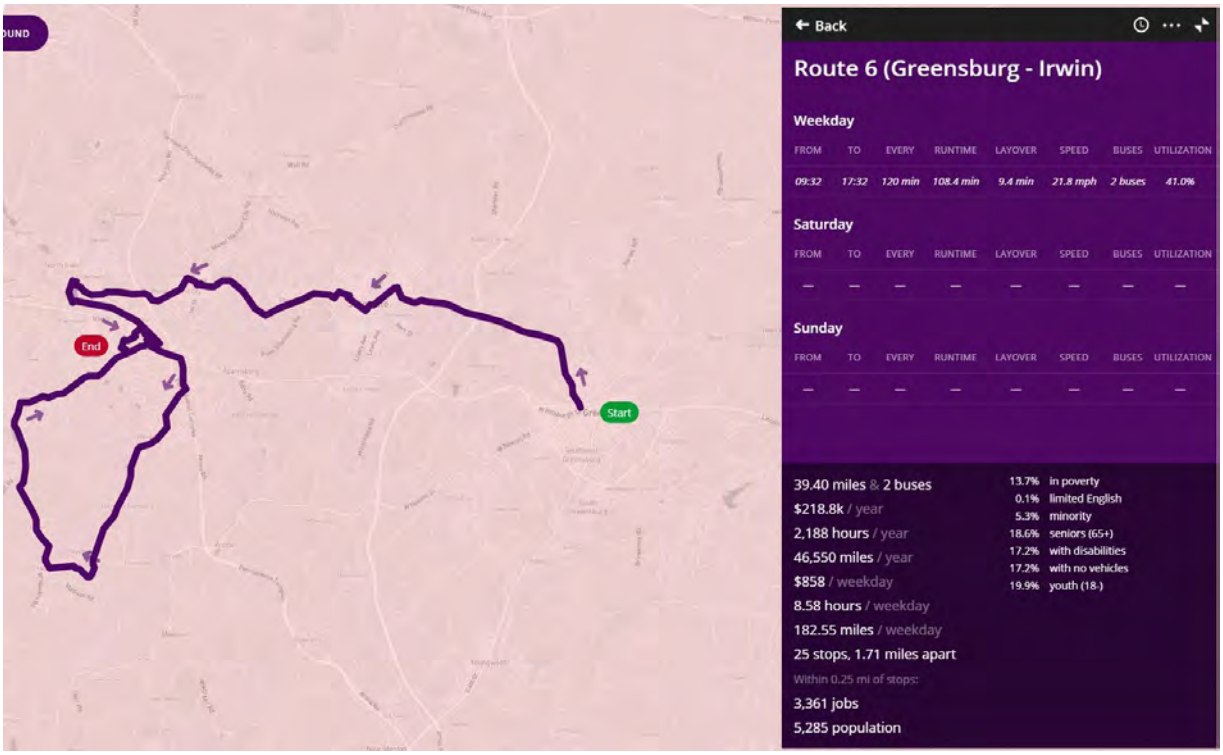


Figure 19: Westmoreland Urbanized Area

Redefining and Clarifying Service

WCTA provides several different service types that serve a variety of transit users and markets and have specific service characteristics. Through the line-by-line analysis, public involvement, and a review of current public information, it is evident that many services are attempting to serve too many markets, resulting in long and circuitous routes and general confusion for passengers. Accompanying this is a confusing route naming convention that riders have reported as being confusing or difficult to understand. These facts may lead to lower ridership potential. For example:

Service Design: Route 6 (Greensburg to Irwin) completes a circuitous path to serve as both a local service in Irwin and a regional connecting service between Greensburg and Irwin.

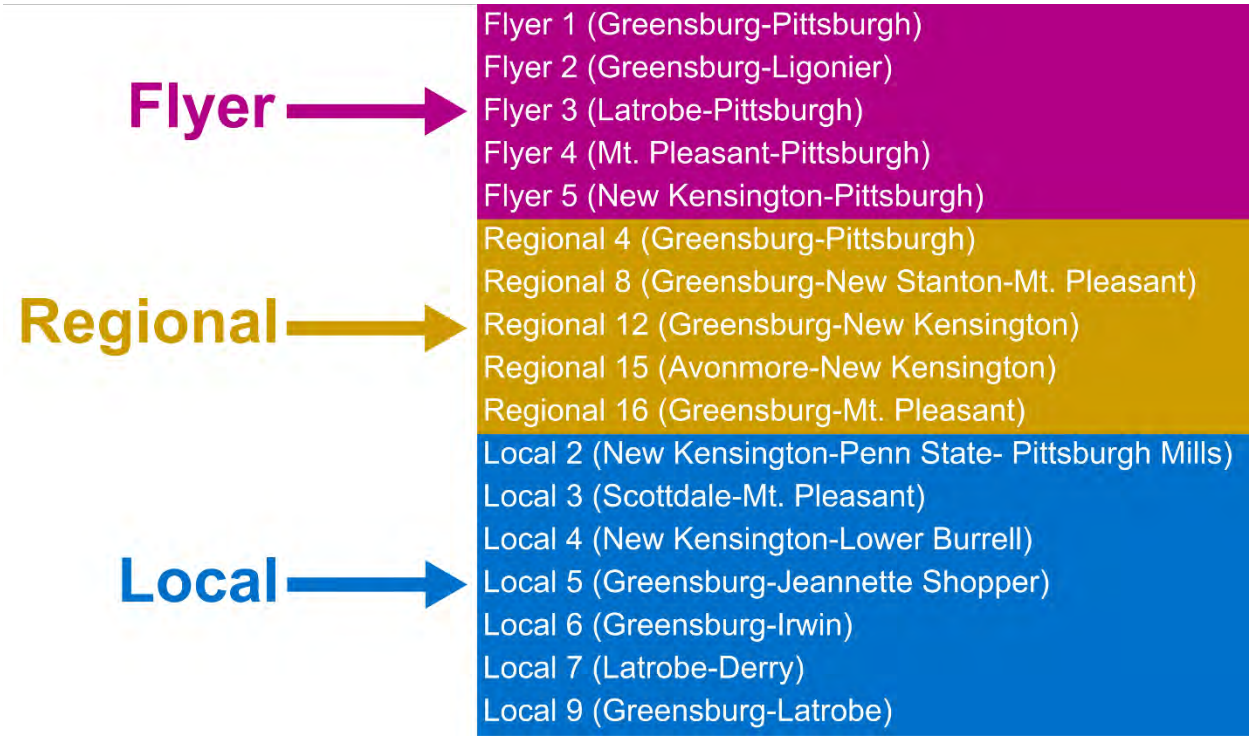


Naming Convention: Many riders expressed confusion over the naming of routes. For example, Routes 14, 14J, 14S, and 14F, which all have different routing, operate at different days and times, and have different total travel times.

Clearly delineating service types and having individual standards for each type of service will improve operations and make the system easier to use for customers. To properly monitor and gauge success, service categories should be defined by service model. All routes offering commuter service at peak hours should be one type ("flyer" routes), and service operating throughout the day between local cities and boroughs should be another type ("local" routes). Potential exists for another type of service category within the county by connecting non-contiguous urbanized areas ("regional" routes), such as a connection between New Kensington and Greensburg or Monessen and Greensburg. As outlined in the service guidelines, these new service type definitions include:

- **Flyer** – Fixed routes operating as local service in Westmoreland County and utilizing limited access freeways or busways to connect with regional destinations, most commonly Oakland and Downtown Pittsburgh. This service primarily serves the office commuter market, but can be expanded to include service outside of the typical office work day.
- **Regional** – Fixed routes connecting cities and boroughs primarily within Westmoreland 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.
- **Local** – Fixed routes operating within cities, boroughs, and their surrounding neighborhoods. These routes operate on more frequent headways and may provide access to destinations off of primary roadways.
- **GO Westmoreland** – Shared-ride services operating curb-to-curb service within Westmoreland County. Service does not operate on a fixed schedule and requires a reservation.

The route maps in Figure 20 on the following page illustrate the current WCTA system if the service types above were adopted and applied.



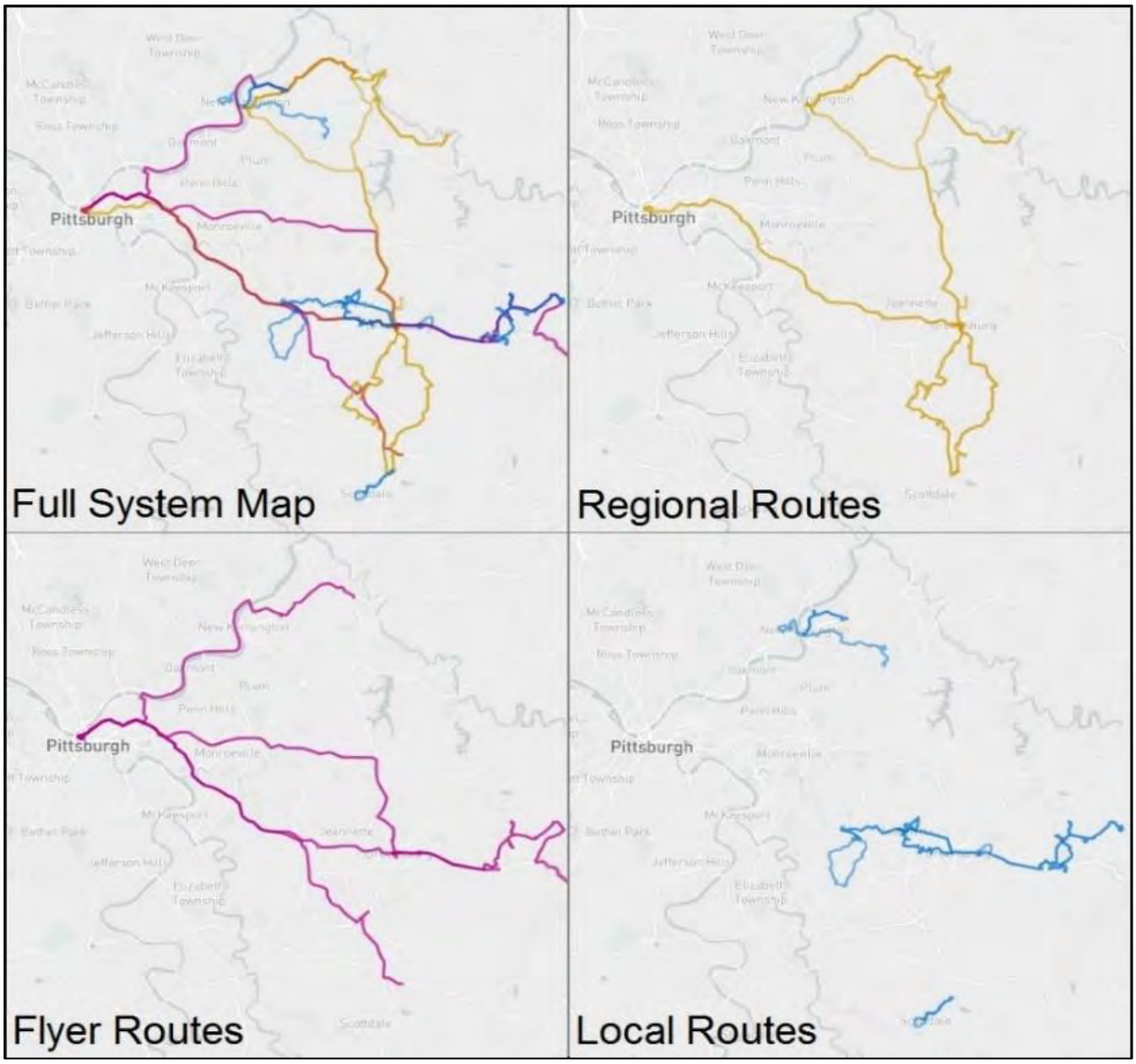


Figure 20: WCTA Service Types

In addition to defining service types, clearly indicating and deploying service standards to each individual service type will also help clarify the service for riders and allow them to gain a better understanding of how best to plan their travel. As defined in the service guidelines, two specific types of service standards should be used:

- **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.
- **Headway** is the time interval between transit vehicles moving in the same direction on a particular route.

For WCTA, Table 14 documents recommended service spans and headways for each of the individual service types.

Service Type	Minimum Service Spans	Minimum Service Headways
Flyer	No Minimum Span	No Minimum Headway
Regional	8:00 am – 5:00 pm	One Hour or Better
Local	8:00 am – 5:00 pm	Thirty (30) Minutes or Better
GO Westmoreland	5:00 am – 5:00 pm	Not Applicable

Table 14: Service Guidelines by Service Type

Finally, WCTA should rename all existing routes using common, easily understandable nomenclature to make the system easier to use.

If WCTA prefers to use the existing numbering system, numbers should be used only once without multiple variations (i.e., 14, 14J, 14S, 14F.) Creating number ranges, or varying the number of digits used and assigning to specific service types, may be an easy way to revise the naming convention. For example, single-digit routes could be local service, two-digit routes could be regional, and three-digit routes could be flyer service. Another alternative could be to change the naming convention based on service type.

Potential route naming examples:

- Flyers – Green, Gold, Red, Blue, Purple
- Local Routes – A, B, C, D, E, F, G
- Regional Routes – 1, 2, 3, 4, 5, 6, 7

Improvements to Shared-Ride Services

The WCTA Shared-ride service has experienced significant change over the past five years by bringing it under the WCTA organization and reducing the total number of contractors. Community input indicated that Shared-ride is the primary mode of travel for many people, and there remains work to be done to improve the system to meet the needs of riders.

Through input received and the completed Shared-ride analysis, the following improvements are recommended to enhance the system:

- Consider eliminating Shared-ride service to Johnstown in Cambria County.
- Continue monitoring demand for service to Pittsburgh during FY 2017-18. If the trends shown during the first quarter of the fiscal year do not continue, consider grouping trips to Pittsburgh on Tuesdays, Wednesday, Thursdays, and Fridays for cost savings benefits.
- Consider eliminating Saturday service to Armstrong and Indiana Counties and issue service guidelines to group these trips during weekdays.
- Examine the potential to group trips to Perryopolis in Fayette County.
- Issue service guidelines to group trips to the City of Indiana on specific days of the week, such as Wednesdays and Fridays, when there is higher demand for service to Indiana County.
- Expand weekday morning service hours to 5:00 am.
- Expand weekend morning service hours to 5:00 am.
- Eliminate weekday evening service hours after 5:00 pm.
- Explore opportunities to meet with Freedom Transit, FACT, CamTran, Mid-County Transit Authority, and IndiGO to discuss the potential for coordinating service into more distant areas of Washington, Fayette, Cambria, Armstrong, and Indiana Counties.

Medium- and Long-Term Scenarios

Medium- and Long-Term Scenarios are service improvements that require additional time (1 to 5 years) and may require capital investment and/or a shift in service delivery and operational organization that results in increased operating costs.

Add Service to West Newton and Monessen

Origin & Destination data, propensity analysis, and Shared-ride data show a strong connection between Monessen and Greensburg, stronger than other area connections such as New Kensington-Greensburg and Ligonier-Greensburg. Additionally, West Newton service was a frequent request in surveys and community meetings. Routing service from Monessen to Greensburg through West Newton would solve this issue.

A possible alignment is outlined in Figure 21 and mapped in Figure 22 on the following page. This route travels through the major roads of the corridor and provides access to major centers of population and employment, including:

- Greensburg Transit Center
- Downtown Monessen
- Allens Crossroads Shopping District
- Downtown West Newton
- New Stanton/Youngwood
- Timed connections to Route 3F in Youngwood
- Timed connections to all routes in Greensburg
- Timed connections to MMVTA Commuter service in Monessen

Figure 21: Monessen Route Estimated Service Figures

For a one-way trip, the travel time would be approximately 60 minutes. Furthermore, potential exists to interline service between Youngwood and Greensburg with current Route 8 service, offering higher frequency in that segment of the corridor.

To meet the service standards set for this type of service (regional), three buses would be required for a total of approximately $720,000 in additional cost.

If WCTA operated one block of service on this corridor with three-hour headways between 8:00 am and 5:00 pm, the additional service would cost an estimated $288,000 per year. This is in line with the eliminated Johnstown service and could be implemented without increasing the overall operating cost of the WCTA system.

This proposed route has the potential to capture travelers from Monessen to Greensburg, Greensburg to Monessen, West Newton to either Monessen or Greensburg to connect with Pittsburgh commuter routes, and access to the Allens Crossroads shopping district from West Newton and other rural areas between Greensburg and Monessen.

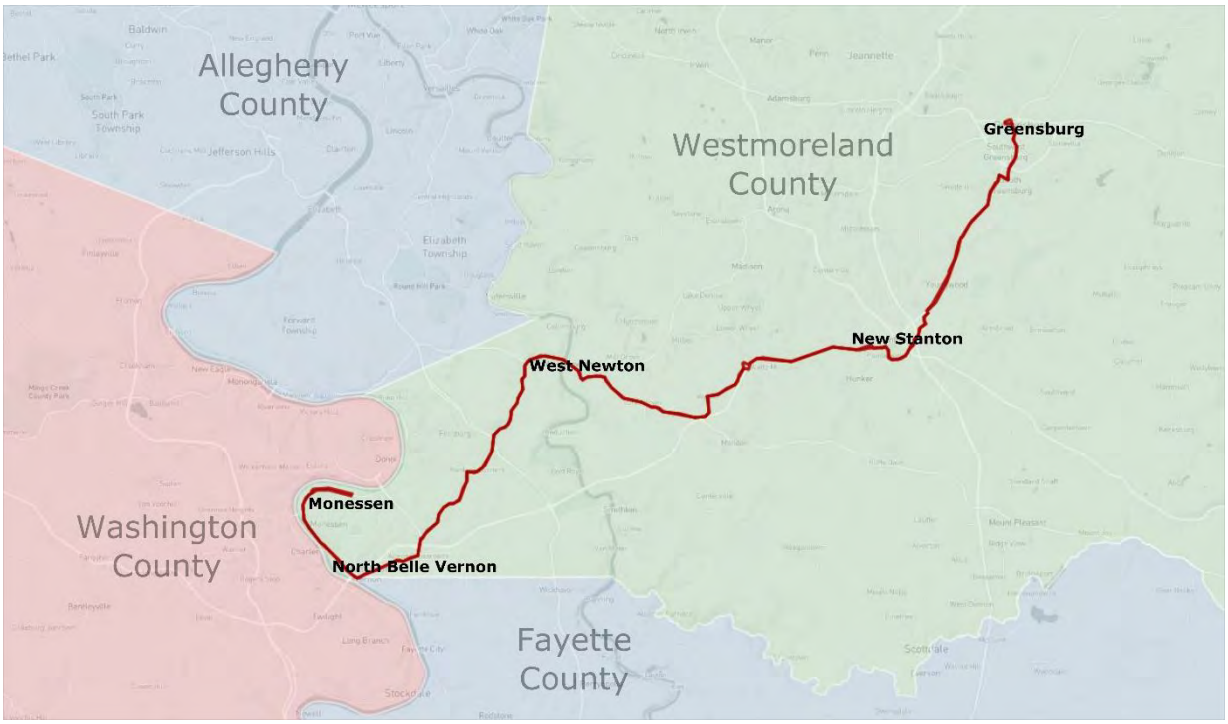


Figure 22: Potential fixed route alignment connecting Monessen and West Newton with Greensburg.

1-Hour or Better Headways on Local Service

Complaints regarding 2-hour headways were the most common received throughout the community input process. Many riders expressed that they must dedicate an entire day to accomplish simple tasks like trips to the doctor or grocery store. Improving the frequency of service, especially on local routes that focuses on meeting the daily needs of riders, will have an immediate and notable impact to riders.

According to the WCTA Service Guidelines, local service should be designed to have 30-minute or better headways. Given the current state of the WCTA system and budget constraints, WCTA should focus first on changing service design to maintain 1-hour or better headways. This interim step is critical to the success of WCTA. The ultimate goal should be to create routes with the shortest headways possible, with one hour between trips being the maximum time span. In future planning and development of the system, routes should not be added unless operational budgets allow for a frequency that meets the WCTA Service Guidelines.

1-hour headways are important on local routes, but may not be necessary on all routes. In order to more clearly define where this standard should be applied, a reclassification of service categories should be completed as outlined in the previous section.

One way in which 1-hour headways could be implemented in the medium-term is to practice what has been called “Pattern Balancing”. Pattern Balancing provides a balance between the needs of mobility-challenged riders and able-bodied riders. The largest share of riders prefers frequent trips to get from “Point A” to “Point B” as quickly and efficiently as possible. Walking a short distance to more frequent and faster service is an acceptable compromise for most riders. Excluding the needs of the elderly and disabled who may be unable to walk a short distance and require more direct access to destinations, however, creates an inequitable system. Unfortunately, providing direct access to destinations necessitates more circuitous and lengthy routes that increase travel time and therefore increase the headway time. Maintaining local service, providing more direct access to residential communities and storefronts, is possible by operating those alignments slightly less frequently and filling in the schedule gaps with shorter and more frequent direct patterns.

For example, Route 5 (Greensburg – Jeannette) currently operates every two hours on the 5-mile corridor between Jeannette and Greensburg. The route takes a long and circuitous route to reach every destination between the two ends of the line. The potential exists to make modifications to the existing service to remove excess time and have enough time left over in the schedule to operate direct trips between the cities in the space between. This concept is illustrated through potential schedules shown in Figure 23.

Both schedules operate using only one bus, making costs comparable, but by using the Pattern Balancing concept WCTA could achieve 1-hour headways on Route 5. This schedule design allows for more frequent bus arrival times for those who are able bodied and willing to walk to the main roadways, while maintaining direct door-to-door service for those who are mobility-challenged, albeit slightly less frequently than the previous, 2-hour headway schedule.

The concept of Pattern Balancing can be applied to most local routes in the WCTA system and makes the achievement of 1-hour or better headways more cost effective than simply increasing the amount of service provided.

Figure 23: Current and Potential WCTA Route 5 Schedules

Current Route 5 Schedule:

Route-5 / 5S (Greensburg - Jeannette Shopper) — **Weekday**

Greensburg Transit Center · Greengate Centre · Hempfield Square · Lincoln Heights · Jeannette Hospital (Broad… · Jeannette (7th / Clay) · Jeannette (3rd / Altman) · Jeannette (Harris… Sellers) · Jeannette (7th / Clay)

08:15 – 20:15 · Every 120 min · 14 trips

	0	+9.0	+5.0	+10.0	+3.0	+5.0	+6.0	+9.0	+6.0
A	08:15	08:24	08:29	08:39	08:42	08:47	08:53	09:02	09:08
A	10:15	10:24	10:29	10:39	10:42	10:47	10:53	11:02	11:08
A	12:15	12:24	12:29	12:39	12:42	12:47	12:53	13:02	13:08
A	14:15	14:24	14:29	14:39	14:42	14:47	14:53	15:02	15:08
A	16:15	16:24	16:29	16:39	16:42	16:47	16:53	17:02	17:08
A	18:15	18:24	18:29	18:39	18:42	18:47	18:53	19:02	19:08
A	20:15	20:24	20:29	20:39	20:42	20:47	20:53	21:02	21:08

Jeannette (7th / Clay) · Jeannette (3rd / Altman) · Jeannette (Harris… Sellers) · Jeannette (7th / Clay) · Jeannette Hospital (Broad… · Lincoln Heights (… Lowry Ave.) · Hempfield Square · Greengate Centre · Greensburg Transit Center

	0	+6.0	+9.0	+6.0	+4.0	+3.0	+9.0	+7.0	+10.0
A	09:14	09:20	09:29	09:35	09:39	09:42	09:51	09:58	10:08
A	11:14	11:20	11:29	11:35	11:39	11:42	11:51	11:58	12:08
A	13:14	13:20	13:29	13:35	13:39	13:42	13:51	13:58	14:08
A	15:14	15:20	15:29	15:35	15:39	15:42	15:51	15:58	16:08
A	17:14	17:20	17:29	17:35	17:39	17:42	17:51	17:58	18:08
A	19:14	19:20	19:29	19:35	19:39	19:42	19:51	19:58	20:08
A	21:14	21:20	21:29	21:35	21:39	21:42	21:51	21:58	22:08

Potential Route 5 Schedule:

Route 5 / 5S (Greensburg - Jeannette Shopper) — **Weekday**

Greensburg Transit Center · Greengate Centre · Hempfield Square · Lincoln Heights · Jeannette Hospital (Broad… · Downtown Jeanette (WB) · Jeannette (3rd / Altman) · Jeannette (Harris… Sellers) · Downtown Jeanette (EB)

08:00 – 20:40 · Every 50 min · 31 trips

	0	+6.0	+4.0	+6.0	+3.0	+3.0	+5.0	+6.0	+5.0
B	08:00	08:06	08:10	08:16	08:19	08:22	08:27	08:33	08:38
A	09:00	—	—	09:11	—	09:15	—	—	—
A	09:40	—	—	09:51	—	09:55	—	—	—
A	10:40	—	—	10:51	—	10:55	—	—	—
B	11:20	11:26	11:30	11:36	11:39	11:42	11:47	11:53	11:58
A	12:20	—	—	12:31	—	12:35	—	—	—
A	13:00	—	—	13:11	—	13:15	—	—	—
A	14:00	—	—	14:11	—	14:15	—	—	—
B	14:40	14:46	14:50	14:56	14:59	15:02	15:07	15:13	15:18
A	15:40	—	—	15:51	—	15:55	—	—	—
A	16:20	—	—	16:31	—	16:35	—	—	—
A	17:20	—	—	17:31	—	17:35	—	—	—
B	18:00	18:06	18:10	18:16	18:19	18:22	18:27	18:33	18:38
A	19:00	—	—	19:11	—	19:15	—	—	—
A	19:40	—	—	19:51	—	19:55	—	—	—

Downtown Jeanette (WB) · Jeannette (3rd / Altman) · Jeannette (Harris… Sellers) · Downtown Jeanette (EB) · Jeannette Hospital (Broad… · Lincoln Heights · Hempfield Square · Greengate Centre · Greensburg Transit Center

	0	+5.0	+7.0	+5.0	+3.3	—	—	+5.0	+5.0
A	—	—	—	08:40	—	08:44	—	—	08:56
A	—	—	—	09:20	—	09:24	—	—	09:36
B	10:00	10:05	10:12	10:17	10:21	—	10:29	10:34	10:39
A	—	—	—	11:00	—	11:04	—	—	11:16
A	—	—	—	12:00	—	12:04	—	—	12:16
A	—	—	—	12:40	—	12:44	—	—	12:56
B	13:30	13:35	13:42	13:47	13:50	—	13:59	14:04	14:09
A	—	—	—	14:20	—	14:24	—	—	14:36
A	—	—	—	15:20	—	15:24	—	—	15:36
A	—	—	—	16:00	—	16:04	—	—	16:16
B	16:40	16:45	16:52	16:57	17:00	—	17:09	17:14	17:19
A	—	—	—	17:40	—	17:44	—	—	17:56
A	—	—	—	18:40	—	18:44	—	—	18:56
A	—	—	—	19:20	—	19:24	—	—	19:36
B	20:00	20:05	20:12	20:17	20:20	—	20:29	20:34	20:39

Strengthen Intra-County Connections through Regional Routes

Community input showed a strong interest in improving regional (intra-county) connectivity. Requests for more frequent and quicker service between Westmoreland County cities and boroughs were common. People generally expressed interest in getting between places like New Kensington-Vandergrift, Jeannette-Greensburg, Mt. Pleasant-Greensburg, Trafford-Irwin, etc. more easily by shortening the running times and increasing the frequency, making the entire county more connected.

Both LEHD data analysis and public input feedback recommend longer service spans, faster and more direct alignments, and headways as frequent as possible. The most frequent LEHD pairings in order are:

1. Jeannette – Greensburg (406 daily commuters, 6.04% of total share)
2. Latrobe – Greensburg (349 daily commuters, 5.19% of total share)
3. New Stanton – Greensburg (179 daily commuters, 2.66% of total share)
4. New Stanton – Jeannette (133 daily commuters, 1.98% of total share)
5. Mount Pleasant – Greensburg (131 daily commuters, 1.95% of total share)
6. Scottdale - Mount Pleasant (99 daily commuters, 1.47% of total share)
7. Latrobe – Jeannette (93 daily commuters, 1.38% of total share)
8. Scottdale – Greensburg (90 daily commuters, 1.34% of total share)
9. New Stanton – Scottdale (84 daily commuters, 1.25% of total share)
10. Mount Pleasant - New Stanton (79 daily commuters, 1.18% of total share)

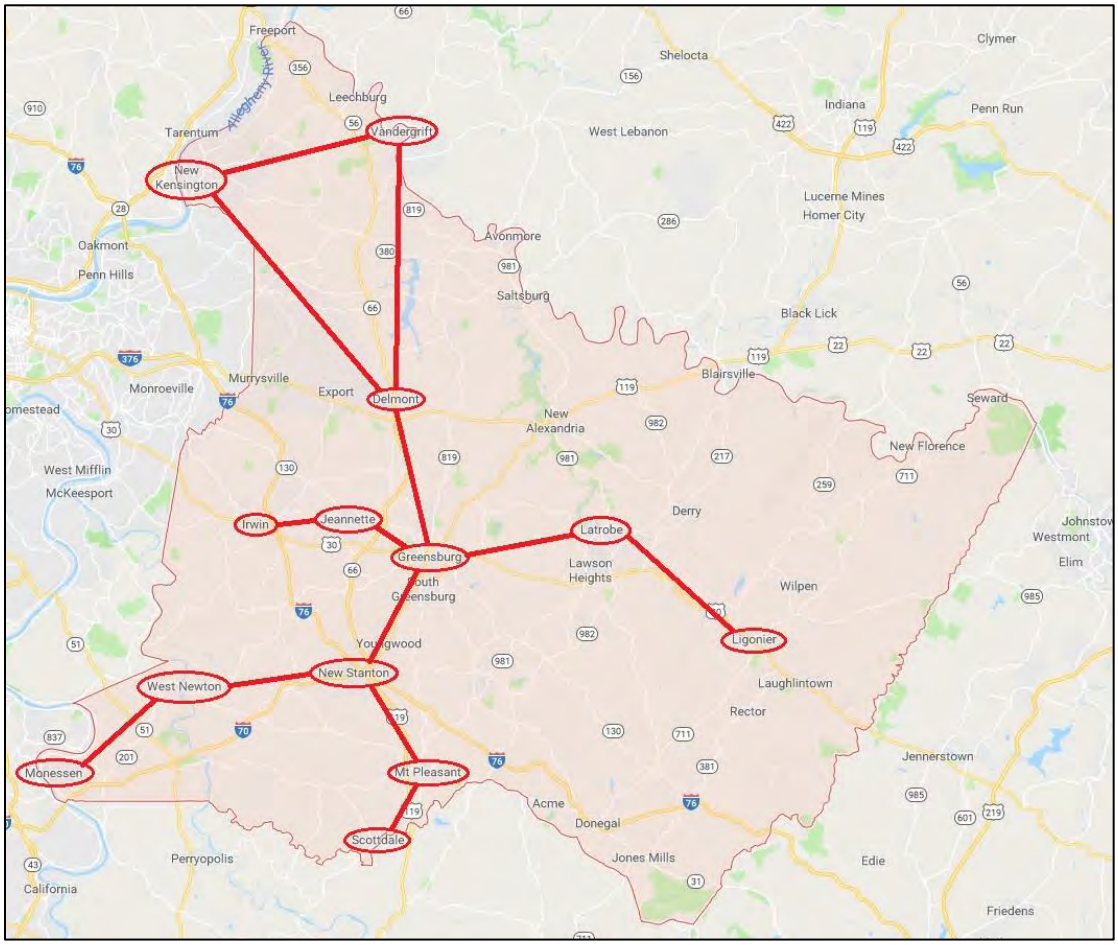


Figure 24: Westmoreland County Regional Connections

Explore the Introduction of Microtransit

Improvements to Shared-ride service and adding "Uber-like" services to the county was the number one request through community input. Passengers don't generally understand the difference between Shared-ride and other transit services, and integrating them through innovative design is critical to the long-term success of WCTA.

Microtransit is on-demand service that serves a small, pre-defined service area with small vehicles and personalized service. There are multiple examples of agencies successfully implementing this service throughout the country. It can be used to serve many markets simultaneously, including historical Shared-ride customers, first mile/last mile connection for express services, and to support rural areas that do not have the density to support fixed route transit.

Many transit agencies are starting to tap into that demand by offering on-demand service as last mile connectivity. Hillsborough Area Regional Transit (HART) in the Tampa, Florida, region is using a Transdev, Inc. app called Transdev Link to provide on-demand Shared-ride service within three-mile radii of its suburban transit centers. Within those zones, Shared-ride vehicles can be taken to designated stops to make fixed route connections for only $1, or $3 to any other destination within the zone. A map of two HART Hyperlink zones is shown in Figure 25.

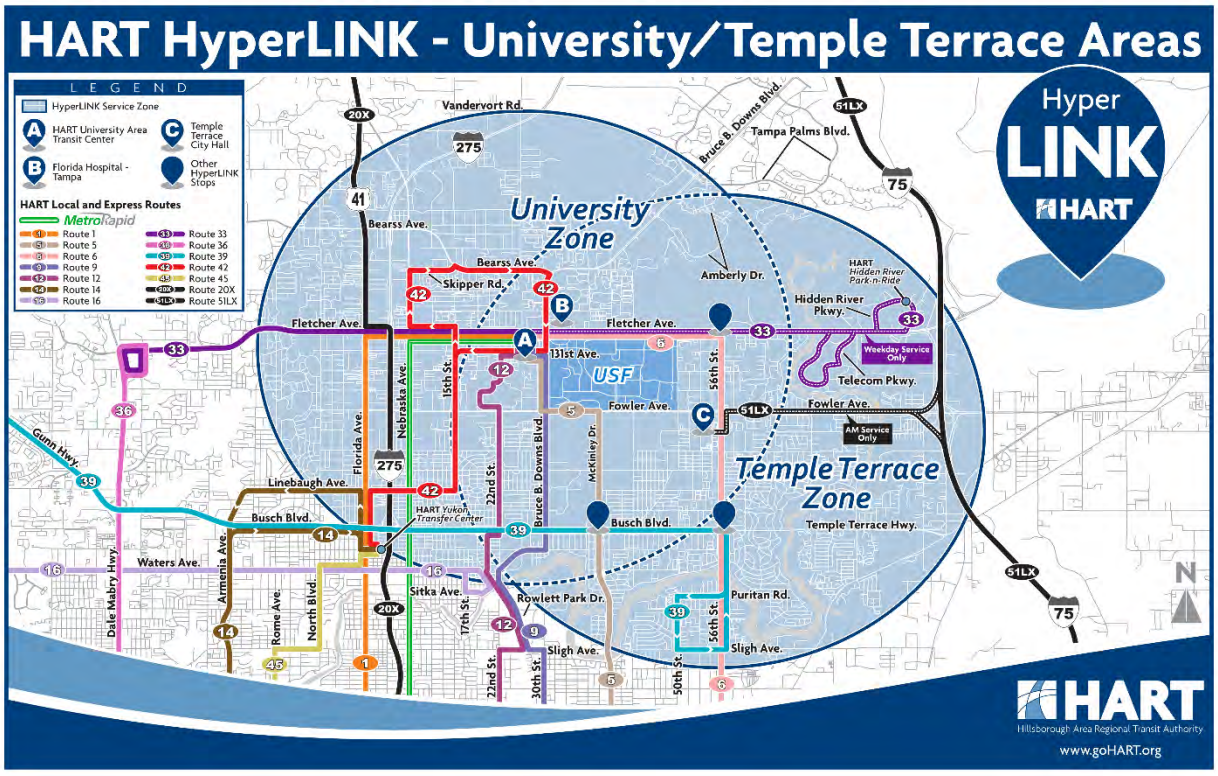


Figure 25: HART Hyperlink Service Area Map. An example of Microtransit operated by a public transit agency.

WCTA could benefit from implementing similar service in some less walkable, but transit-dependent areas such as Jeannette-Greensburg, Scottdale-Mount Pleasant, and Derry-Latrobe. Implementation of these services would remove the need for circuitous local fixed routes, and improve the overall quality

of fixed route service. A model route restructuring utilizing Microtransit in the Jeannette-Irwin area is shown in Figure 26.

This system design would create multiple options for riders. Fixed route service would no longer deviate to provide direct access to shopping centers along US-30. Instead, it would be designed to be a fast, frequent connection between the cities with comparable travel time to driving. Microtransit would operate in 3-mile radius zones around the central business districts of each place. Riders would have the choice of walking to fixed route service, only using Microtransit, or using a combination of the two services.

Fare structure is important in creating an equitable and fair mode choice. Both fixed route and Microtransit should have similar fares to current local service. Transfers between Microtransit and fixed route would require a small transfer fee. Transfers between Microtransit vehicles would cost a second full fare. This makes walking to fixed route or remaining in the Microtransit service area the cheapest option, using Microtransit to access fixed route service the second cheapest option, and transferring between Microtransit vehicles the most expensive option.

In this example, a resident of Jeannette could walk to downtown and catch a reasonably frequent local bus for the lowest price fare, take a Shared-ride vehicle from their house to downtown Jeannette and connect to the local bus for a slightly higher fare, or ride directly from their house to shopping areas nearby for a higher fare. The fare structure would be set to reflect fixed route fare pricing and not be based on distance. Typical Shared-ride fare structures would apply when traveling outside the three-mile service area radii.

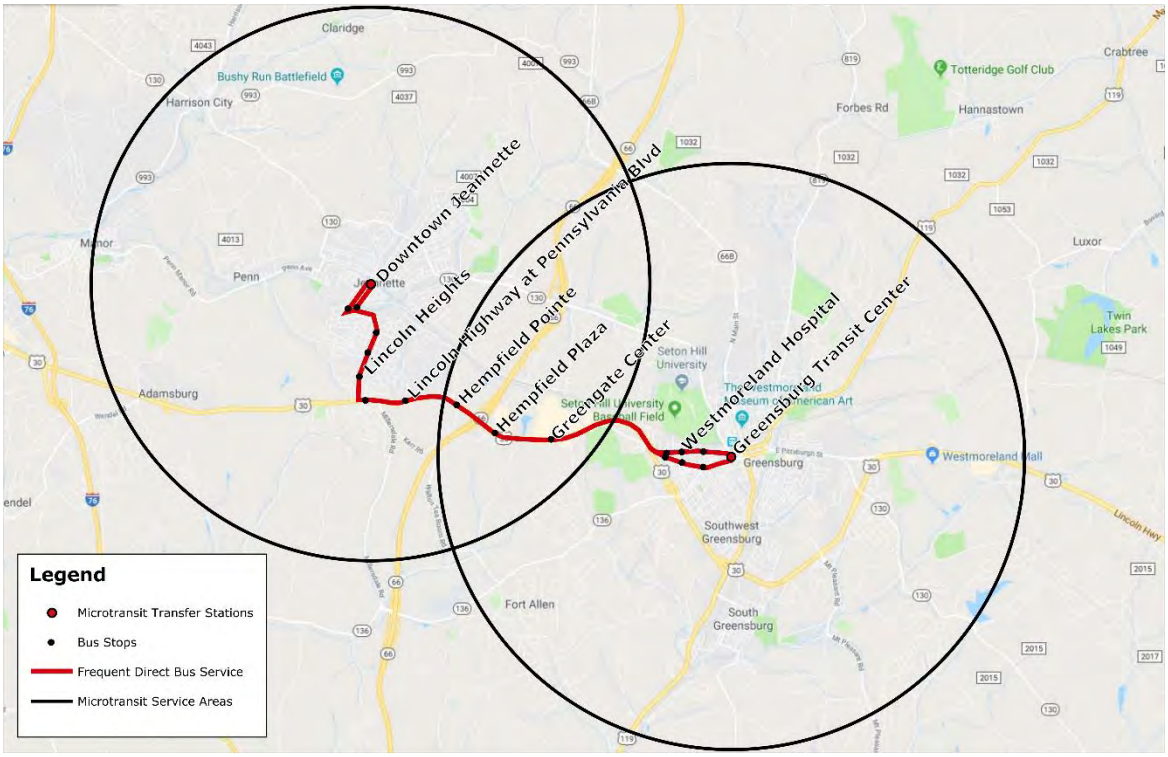


Figure 26: Greensburg-Jeannette Microtransit Example

Implementing Microtransit would require an upgrade to GO Westmoreland Shared-ride scheduling software. Restructuring administrative, staffing, scheduling, and public outreach to implement a Microtransit program in Westmoreland County would require at least a one-to-two-year lead time for implementation. Agreements with PennDOT would need to be secured to allow for on-demand scheduling and use of paratransit vehicles for the service.

Customer Experience Enhancements

Throughout the public involvement process, there were a number of issues raised related to the overall customer experience. These issues relate to how a person feels riding the system and whether they would actively choose to ride if given the opportunity. Customer service and the customer experience is critical to the success of the organization.

Two areas have been identified for customer experience enhancements. These improvements should be made as funding becomes available and as an incremental program that is budgeted for and implemented over several years.

The Pennsylvania Department of Transportation (PennDOT) has recently announced the selection of Avail Technologies of State College, PA for a Fixed Route Intelligent Transportation System (FRITS) program. It is anticipated that the FRITS program will be available to all transit agencies in the Commonwealth at some point and will greatly enhance customer-focused technology while providing a common technology platform amongst neighboring transit agencies. Prior to implementing any technology-related enhancements, WCTA and local leads should coordinate with PennDOT to determine WCTA's status related to the FRITS program.

Customer Information

A lack of information and understanding of the WCTA system and individual routes and services was routinely identified as an issue by the public. The disconnect between transit agency and rider is commonplace across the country and a number of best practices exist that should be considered by WCTA. These best practices include:

- **System-wide map that focuses on frequency and highlights transfer opportunities –** WCTA does not currently have a system map readily available to riders. Without a system map, riders may be unaware of the full breadth of services offered by WCTA and where they may be able to travel outside of their current route by transferring. System maps that focus on frequency (either through coloration or line weights) provide additional information to riders and give them a level of confidence about where they may travel in a given time frame. A sample of a frequency map (Figure 27) is shown on the following page from the Transit Authority of River City (TARC) in Louisville, KY.

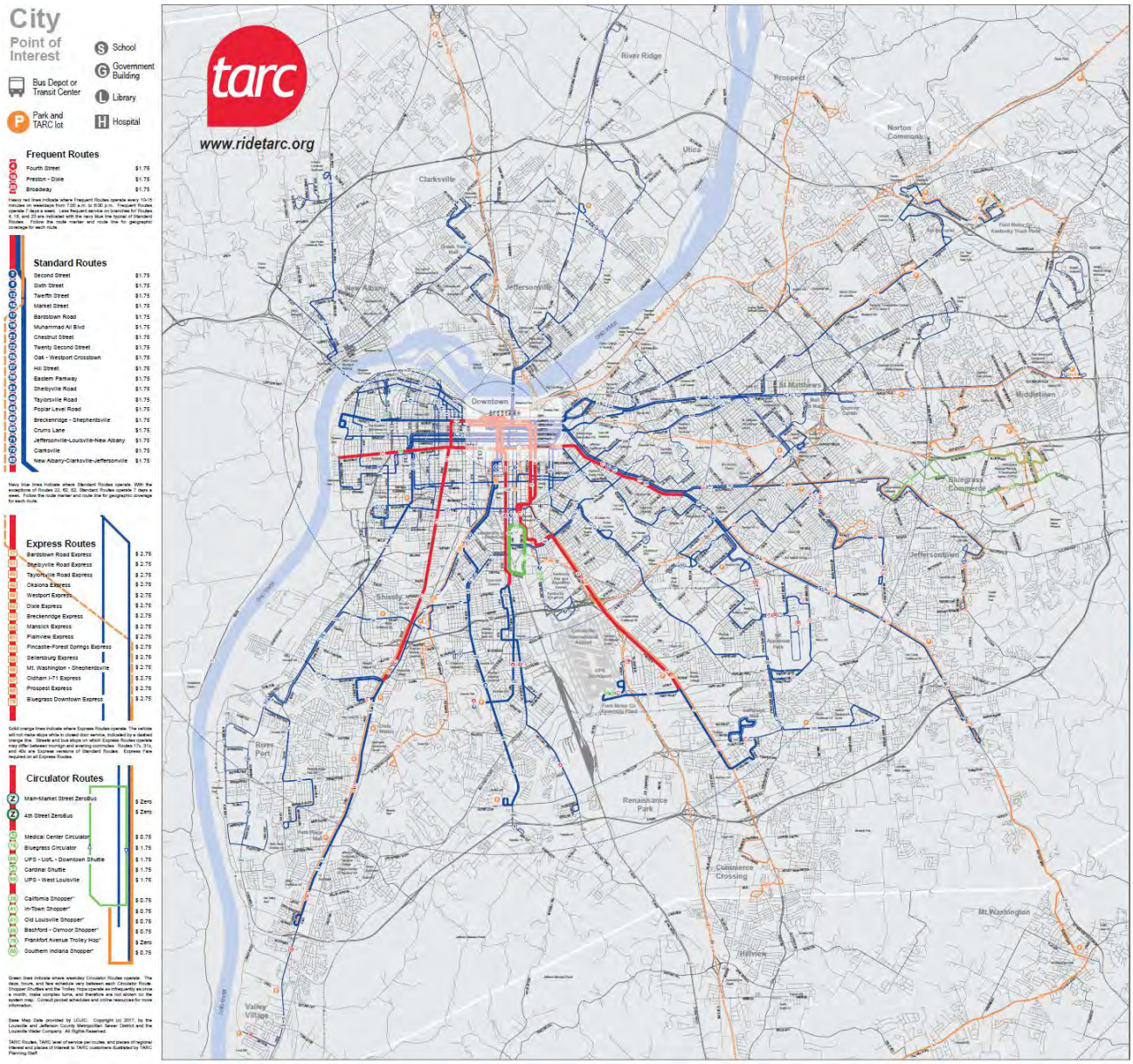


Figure 27: TARC (Louisville, KY) Frequency Map

- **On-line mapping and trip planning (such as Google Transit) –** Customers have come to expect that information is available at their fingertips to quickly determine the best way to travel to their destination. Over the last decade, this has moved beyond driving directions to include other modes such as walking, public transportation, and bicycling. These trip planners rely on data supplied by transit providers through General Transit Feed Specification (GTFS). SPC has been working with WCTA to create GTFS feeds for the entire WCTA system. This work should continue and WCTA should coordinate with trip planning systems (such as Google Maps) to incorporate WCTA routes. Figure 28 illustrates an example of the power of GTFS trip planning.

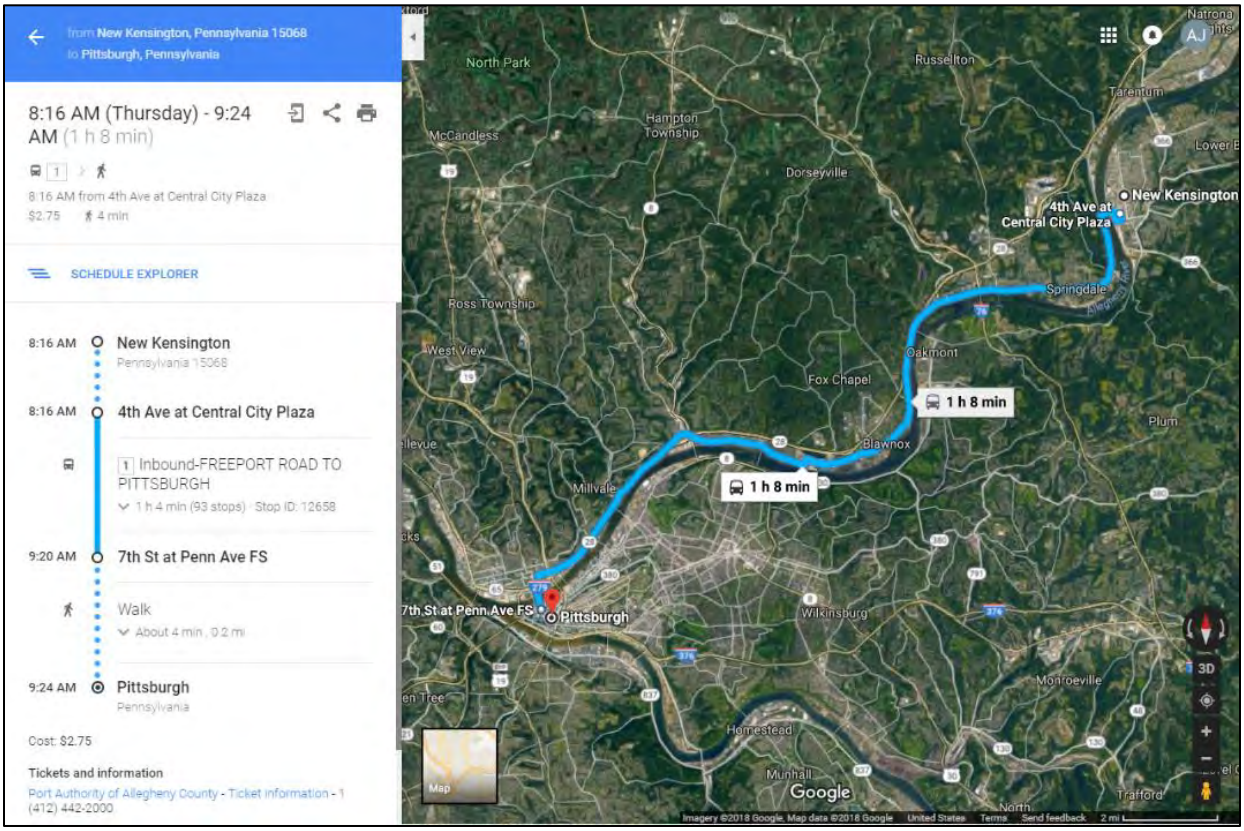


Figure 28: Example of Google Transit Directions using Port Authority GTFS Data

- **Real-time bus tracking and next bus information –** Another innovation in the transit industry over the last 10 years is the introduction of real-time bus tracking. This technology allows for riders to instantly view the location of their bus relative to their location, and provides a level of confidence that they have not missed their pick-up. This is especially critical on routes with infrequent service. Additional services exist that allow riders to text a phone number, enter a STOP ID, and immediately learn the status of their bus and an estimated time of arrival. Introducing this technology, given WCTA's long headways, would greatly improve customer confidence. A sample of current bus-tracking technology is shown in Figure 29 from Beaver County Transit Authority (BCTA) in Beaver County, PA.

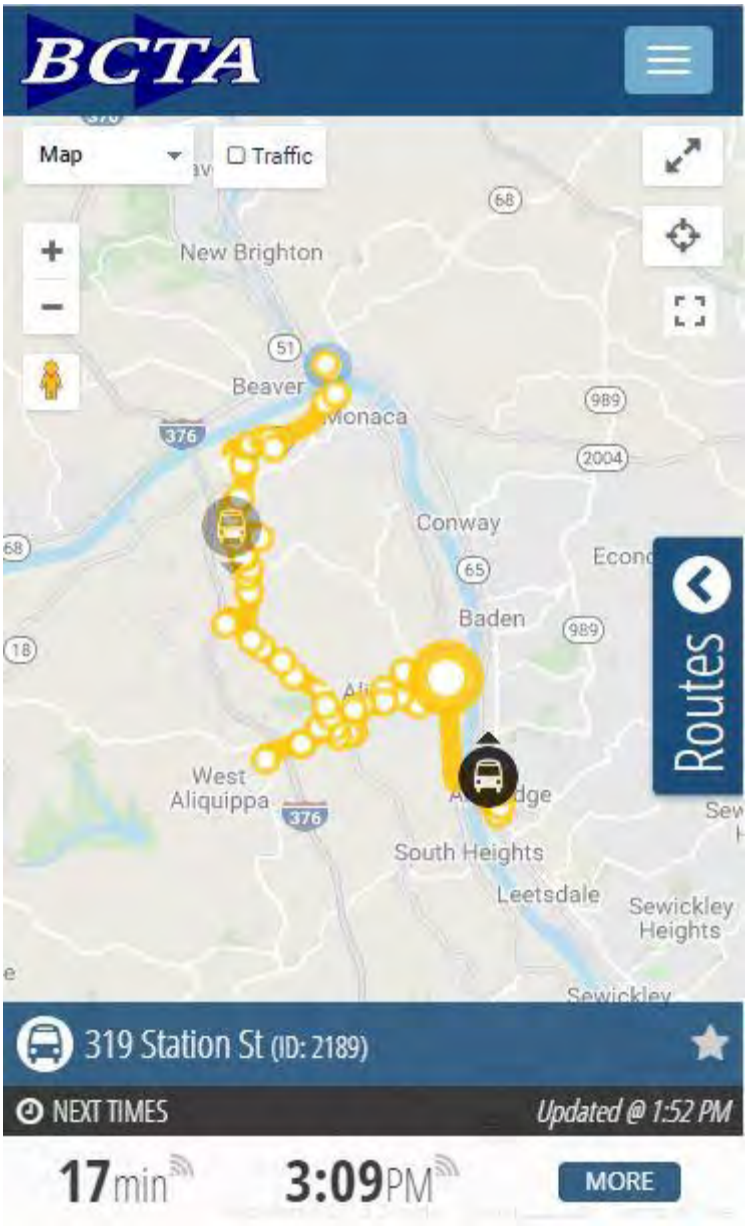


Figure 29: BCTA (Beaver, PA) Bus-Tracking

Passenger Amenities

In addition to customer information, there was periodic input received from the public related to passenger amenities which improve the comfort and convenience of using WCTA. The most frequently requested passenger amenity enhancements include:

- **Wi-fi on flyer buses** – WCTA focuses a considerable level of service on commuters who travel daily into Oakland and Pittsburgh. Adding wi-fi to these vehicles may help increase ridership if marketed in a way that entices office workers to leave their cars in favor of productive time spent on a bus.
- **Improvements to park-and-ride lots –** WCTA utilizes a variety of park-and-ride lots throughout the service area to feed into flyer services that shuttle commuters to Oakland and Pittsburgh. These lots serve as "gateways" to the WCTA system and are a reflection of the system itself. WCTA should make a concerted effort to maintain lots owned by the agency in a state of good repair and work closely with owners of lots that are leased to properly maintain these lots to a standard that encourages people to feel comfortable leaving their vehicles for the day.
- **More bus shelters –** WCTA has limited bus shelters scattered throughout the system but does not have a standard related to the construction of bus shelters at key locations. A focused effort of standard, branded bus shelters at high ridership stops would bring more visibility to the system while making waiting for the bus a more comfortable experience for riders.

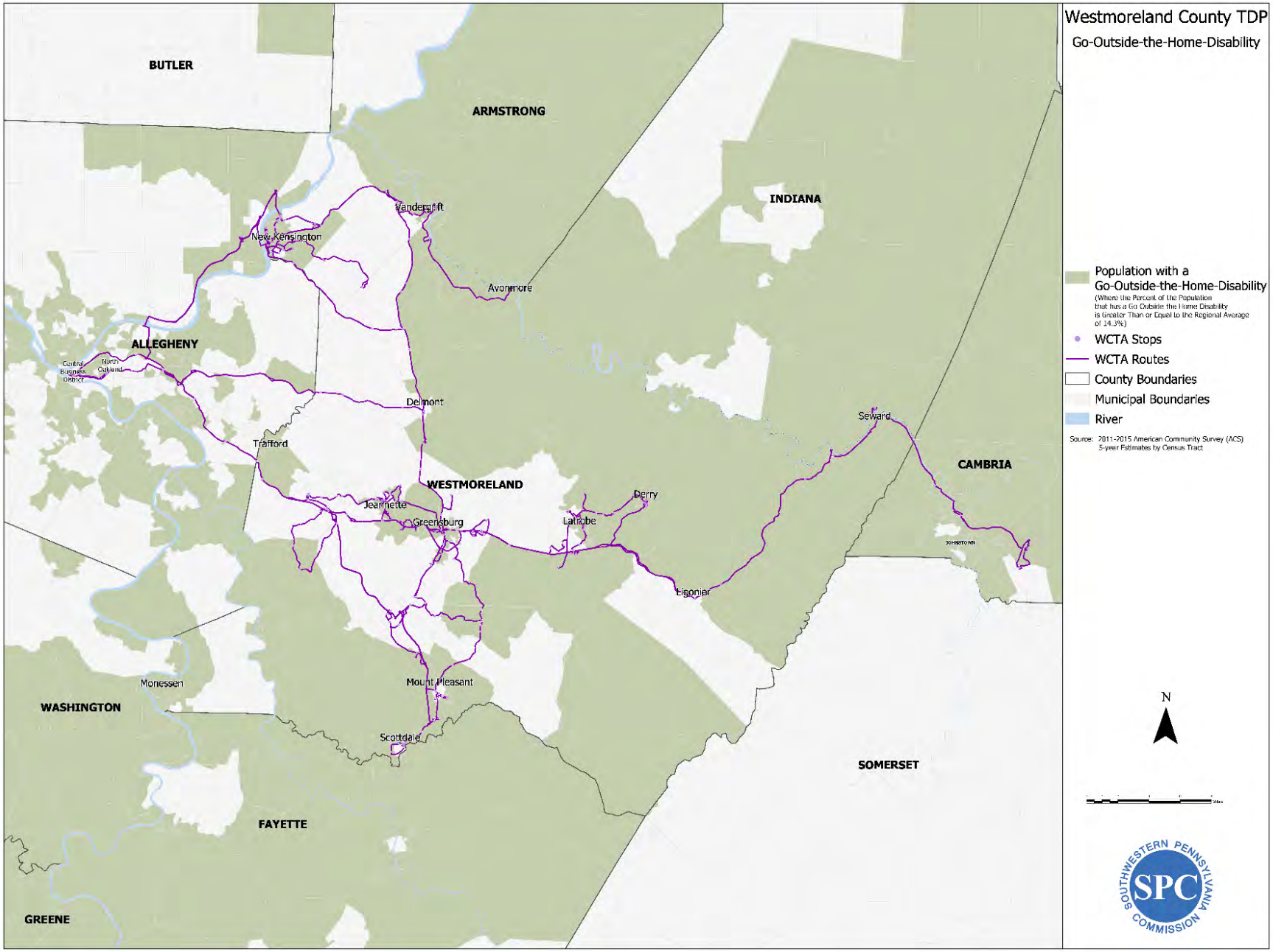
Implementation and Next Steps

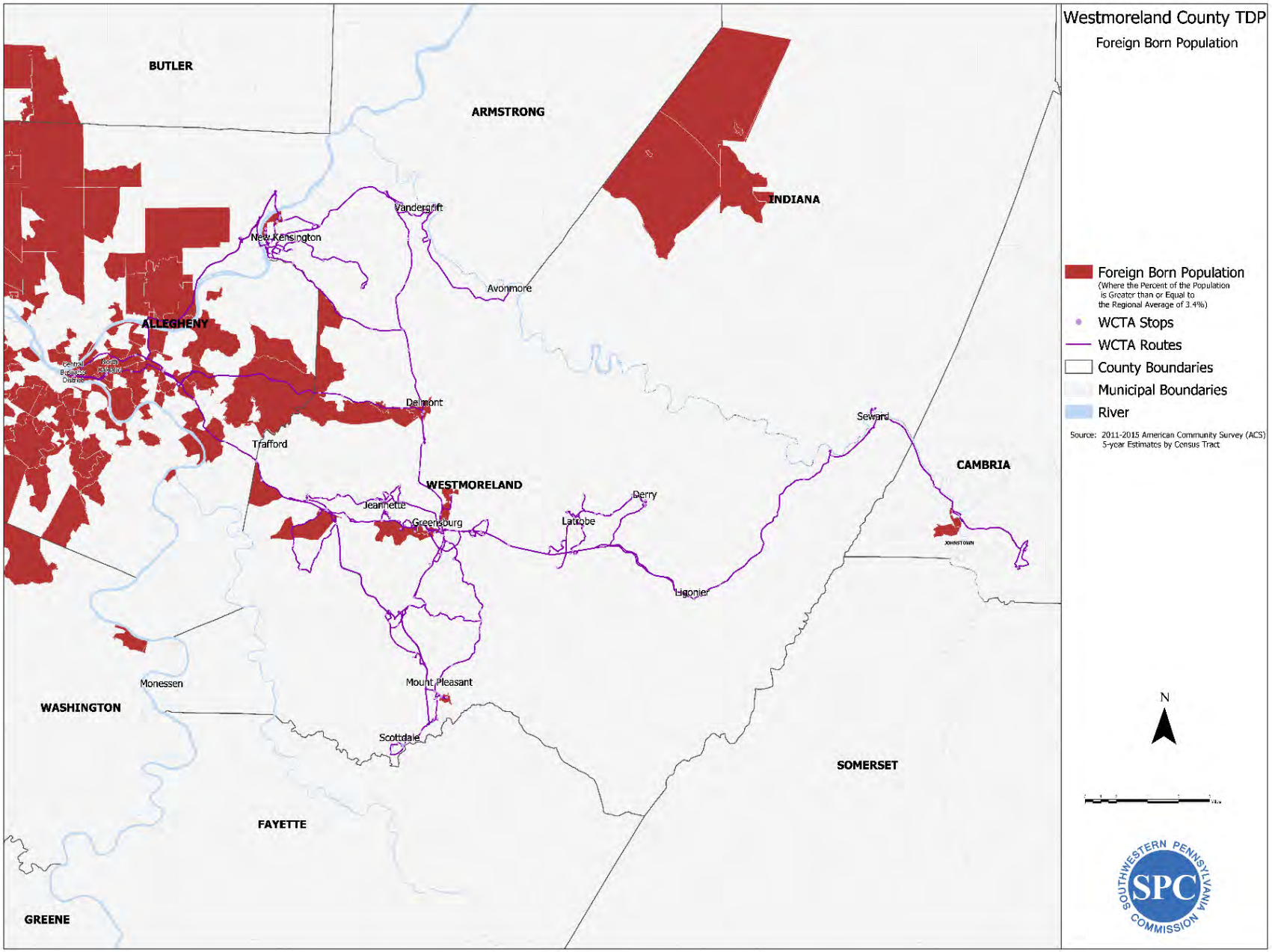
The Westmoreland County Transit Development Plan (TDP) outlines a blueprint for improving public transportation service in Westmoreland County over the next five years. It is a living document that evolves over time as demographics change and shift in Westmoreland County and as funding evolves at the local, state, and federal levels. The TDP should be revisited annually by SPC staff and WCTA management to adjust as needed and establish a plan for implementing recommendations over the coming year.

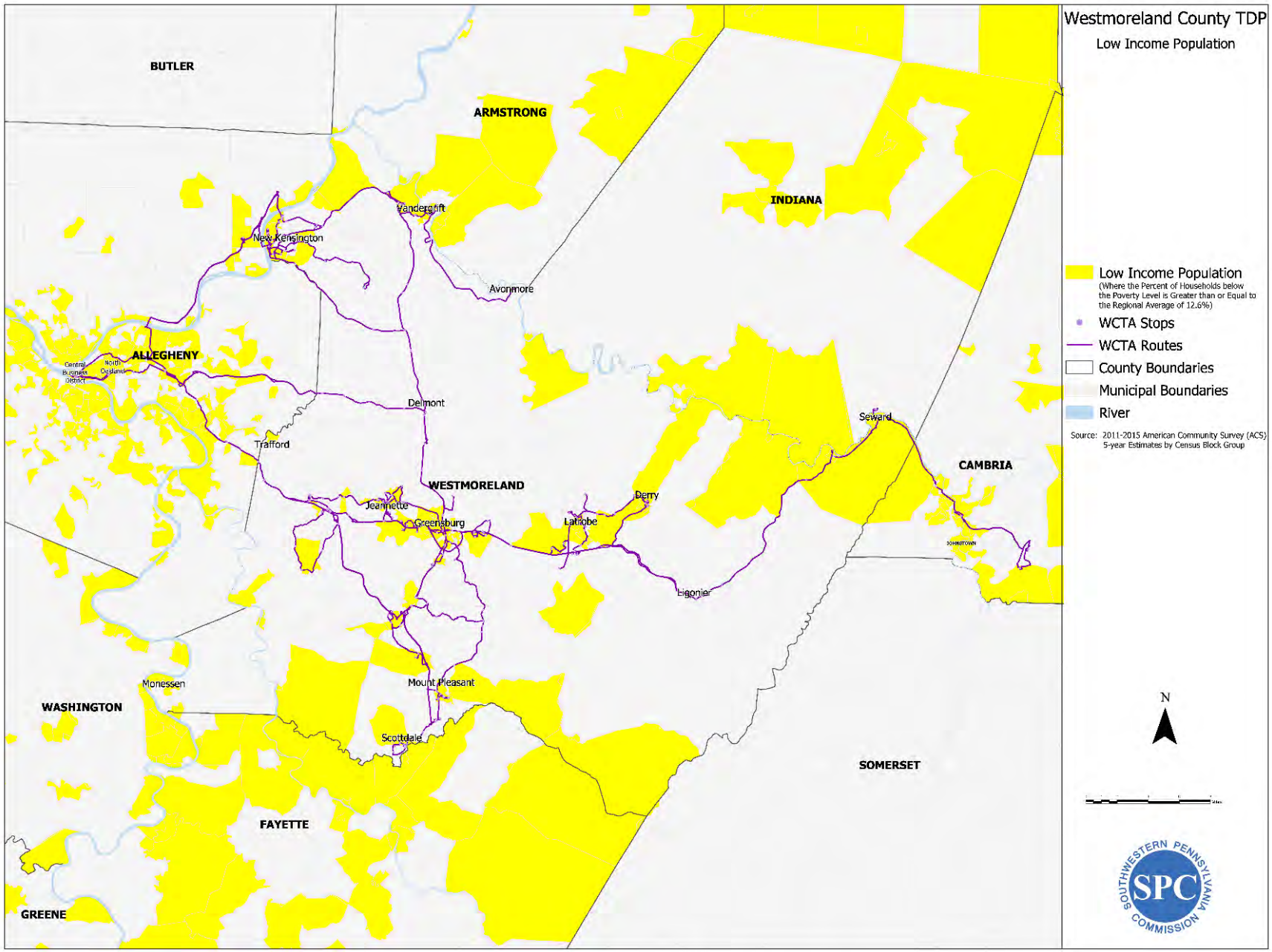
During the development of the TDP, WCTA staff and the Board of Directors developed a Strategic Business Plan that identifies the key management priorities for the next three to five years. WCTA management should use the Strategic Business Plan as a guide for implementation, making changes to the service as it aligns with the goals and actions in the Strategic Business Plans. In addition, the Service Guidelines (Appendix D: WCTA Service Guidelines) should be used to guide all service change decisions, and an Annual Performance Report as outlined in the guidelines should be completed and presented to the Board to install a culture of continuous improvement.

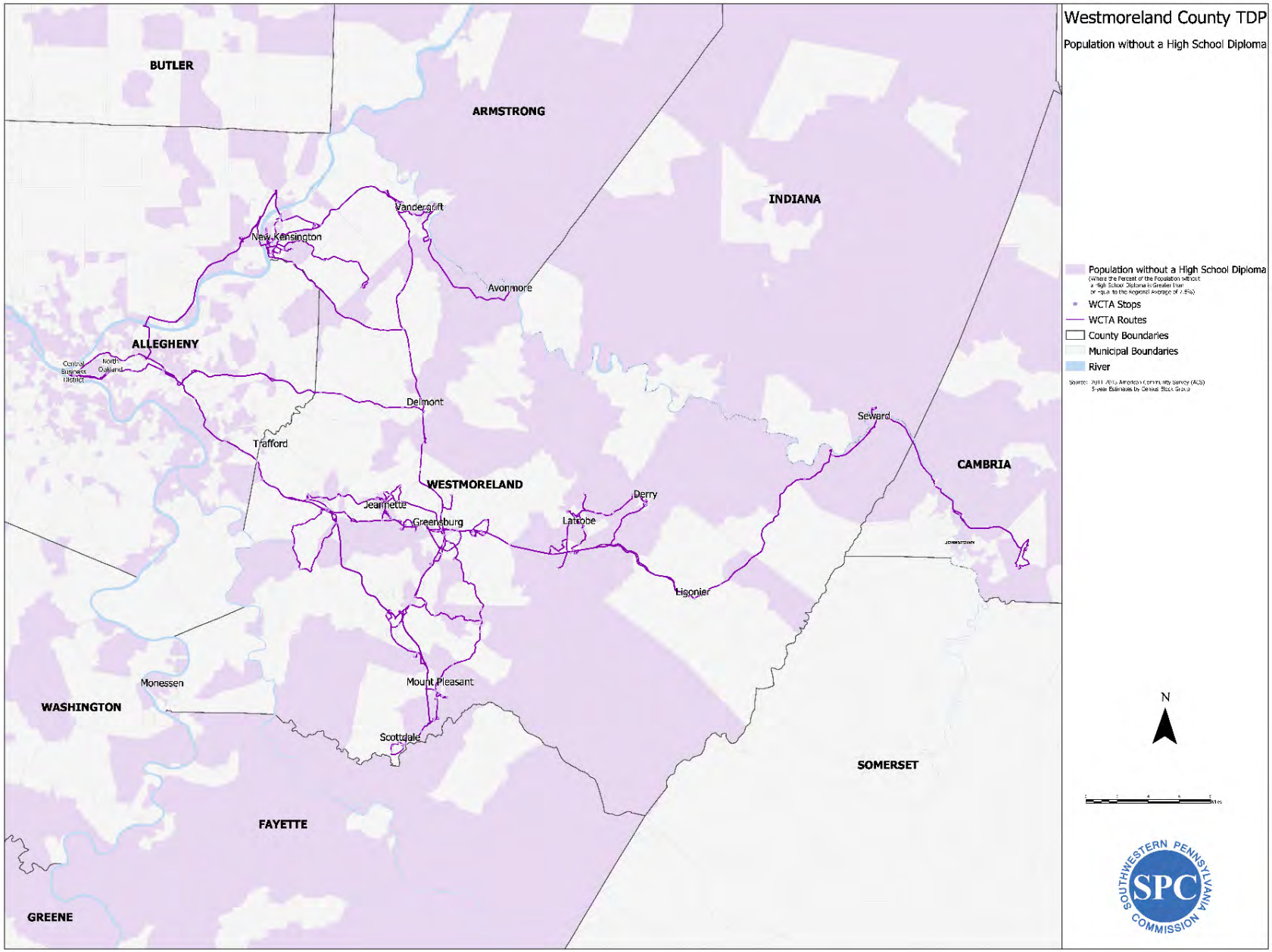
Appendix A: Supplemental Demographic Maps

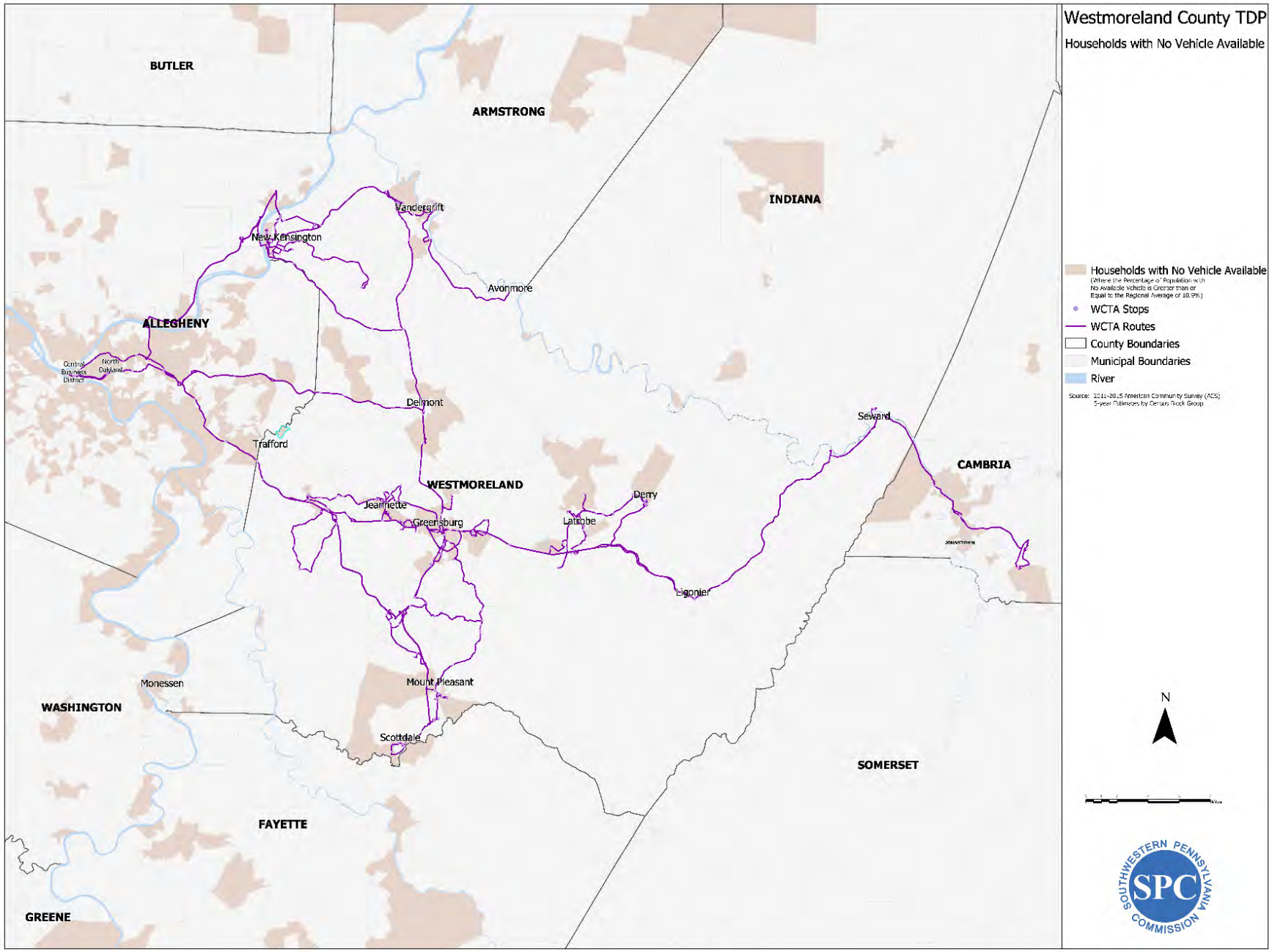
This page left intentionally blank.


Westmoreland County TDP
Go-Outside-the-Home-Disability
BUTLER
ARMSTRONG
INDIANA
ALLEGHENY
WESTMORELAND
CAMBRIA
WASHINGTON
FAYETTE
SOMERSET
GREENE
Vandergrift
New Kensington
Avonmore
Delmont
Trafford
Jeannette
Greensburg
Latrobe
Derry
Seward
Ligonier
Monessen
Mount Pleasant
Scottdale
Population with a Go-Outside-the-Home-Disability
(Where the Percent of the Population that has a Go Outside the Home Disability is Greater Than or Equal to the Regional Average of 14.3%)
WCTA Stops
WCTA Routes
County Boundaries
Municipal Boundaries
River
Source: 2011-2015 American Community Survey (ACS) 5-year Estimates by Census Tract
N
SOUTHWESTERN PENNSYLVANIA COMMISSION
SPC


Westmoreland County TDP
Foreign Born Population
BUTLER
ARMSTRONG
INDIANA
ALLEGHENY
WESTMORELAND
CAMBRIA
WASHINGTON
FAYETTE
SOMERSET
GREENE
Vandergrift
New Kensington
Avonmore
Delmont
Trafford
Jeannette
Greensburg
Latrobe
Derry
Seward
Ligonier
Monessen
Mount Pleasant
Scottdale
Foreign Born Population
(Where the Percent of the Population is Greater than or Equal to the Regional Average of 3.4%)
WCTA Stops
WCTA Routes
County Boundaries
Municipal Boundaries
River
Source: 2011-2015 American Community Survey (ACS) 5-year Estimates by Census Tract
N
SOUTHWESTERN PENNSYLVANIA COMMISSION
SPC


Westmoreland County TDP
Low Income Population
BUTLER
ARMSTRONG
INDIANA
ALLEGHENY
WESTMORELAND
CAMBRIA
WASHINGTON
FAYETTE
SOMERSET
GREENE
Vandergrift
New Kensington
Avonmore
Central Business District
North Oakland
Delmont
Trafford
Jeannette
Greensburg
Latrobe
Derry
Seward
Johnstown
Ligonier
Monessen
Mount Pleasant
Scottdale
Low Income Population
(Where the Percent of Households below the Poverty Level is Greater than or Equal to the Regional Average of 12.6%)
WCTA Stops
WCTA Routes
County Boundaries
Municipal Boundaries
River
Source: 2011-2015 American Community Survey (ACS) 5-year Estimates by Census Block Group
N
SOUTHWESTERN PENNSYLVANIA COMMISSION
SPC


Westmoreland County TDP
Population without a High School Diploma
BUTLER
ARMSTRONG
INDIANA
ALLEGHENY
WESTMORELAND
CAMBRIA
WASHINGTON
FAYETTE
SOMERSET
GREENE
Vandergrift
New Kensington
Avonmore
Central Business District
North Oakland
Delmont
Trafford
Jeannette
Greensburg
Latrobe
Derry
Seward
Ligonier
Monessen
Mount Pleasant
Scottdale
Population without a High School Diploma
(Where the Percent of the Population without a High School Diploma is Greater than or equal to the Regional Average of 7.8%)
WCTA Stops
WCTA Routes
County Boundaries
Municipal Boundaries
River
Source: 2011-2015 American Community Survey (ACS) 5-year Estimates by Census Block Group
N
SOUTHWESTERN PENNSYLVANIA COMMISSION
SPC


Westmoreland County TDP
Households with No Vehicle Available
BUTLER
ARMSTRONG
INDIANA
ALLEGHENY
WESTMORELAND
CAMBRIA
WASHINGTON
FAYETTE
SOMERSET
GREENE
Vandergrift
New Kensington
Avonmore
Central Business District
North Oakland
Delmont
Trafford
Jeannette
Greensburg
Latrobe
Derry
Seward
Ligonier
Monessen
Mount Pleasant
Scottdale
Households with No Vehicle Available
(Where the Percentage of Population with No Available Vehicle is Greater than or Equal to the Regional Average of 10.9%)
WCTA Stops
WCTA Routes
County Boundaries
Municipal Boundaries
River
Source: 2011-2015 American Community Survey (ACS) 5-year Estimates by Census Block Group
N
SOUTHWESTERN PENNSYLVANIA COMMISSION
SPC


Westmoreland County TDP
Population 65 Years and Older
BUTLER
ARMSTRONG
INDIANA
ALLEGHENY
WESTMORELAND
CAMBRIA
WASHINGTON
FAYETTE
SOMERSET
GREENE
Vandergrift
New Kensington
Avonmore
Central Business District
North Oakland
Delmont
Trafford
Jeannette
Greensburg
Derry
Latrobe
Seward
Johnstown
Ligonier
Monessen
Mount Pleasant
Scottdale
Population Age 65 and Older
(Where the Population Age 65 and Older is Greater than or Equal to the Regional Average of 17.9%)
WCTA Stops
WCTA Routes
County Boundaries
Municipal Boundaries
River
Source: 2011-2015 American Community Survey (ACS) 5-year Estimates by Census Block Group
N
SOUTHWESTERN PENNSYLVANIA COMMISSION
SPC

Appendix B: WCTA Customer Satisfaction Survey

This page left intentionally blank.

Customer Satisfaction Survey

Westmoreland County Transit Authority

1) Overall, how satisfied are you with our bus service?

- ☐ Very Satisfied
- ☐ Satisfied
- ☐ Neither Satisfied nor Dissatisfied
- ☐ Dissatisfied
- ☐ Very Dissatisfied

2) What is the primary reason you use the bus?

- ☐ Work
- ☐ Shopping
- ☐ Medical/Dental Appointment
- ☐ School K-12
- ☐ Technical/College/University
- ☐ Visiting friends or relatives / recreational
- ☐ Other

If "Other", please specify:

3) How do you generally get to the bus stop?

- ☐ Walk
- ☐ Drive and park
- ☐ Dropped off by someone
- ☐ Ride a bicycle
- ☐ Ride with someone who parked
- ☐ Other

If "Other", please specify:

4) How will you generally get to your final destination once you get off the bus?

- ☐ Walk
- ☐ Drive in a vehicle I parked
- ☐ Picked up by someone
- ☐ Ride a bicycle
- ☐ Ride with someone who parked
- ☐ Other

If "Other", please specify:

5) How often do you ride the bus?

- ☐ 6 - 7 days a week
- ☐ 5 days a week
- ☐ 2 - 4 days a week
- ☐ Once a week
- ☐ 1 - 3 times a month
- ☐ Less than once a month
- ☐ First time riding

6) How long have you been using this transit service?

- ☐ More than 3 years
- ☐ 1 - 3 years
- ☐ 1 month to 1 year
- ☐ Less than one month

7a) Please rate us in the following areas, over the last 30 days:

	Very Satisifed	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied
On-time arrivals and departures:	☐	☐	☐	☐	☐
Frequency of weekday services	☐	☐	☐	☐	☐
Frequency of weekend service	☐	☐	☐	☐	☐
Availability of seats on the bus	☐	☐	☐	☐	☐
Comfort of the seats	☐	☐	☐	☐	☐
Comfortable temperatures on the bus	☐	☐	☐	☐	☐
Comfort at bus stops	☐	☐	☐	☐	☐
Cleanliness inside the bus	☐	☐	☐	☐	☐
Bus fares are reasonable	☐	☐	☐	☐	☐
Driver courtesy and friendliness	☐	☐	☐	☐	☐
Safe and competent drivers	☐	☐	☐	☐	☐
Stops are properly maintained	☐	☐	☐	☐	☐
Personal safety on buses and at stops	☐	☐	☐	☐	☐
Helpfulness and responsiveness of employees	☐	☐	☐	☐	☐
Availability/accessibility of park-and -ride lots	☐	☐	☐	☐	☐

7b) Please rate the following services you use:

	Very Satisfied	Satisfied	Neither Satisfied Nor Dissatisfied	Dissatisfied	Very Dissatisfied
Telephone customer service	☐	☐	☐	☐	☐
Bus schedule availability	☐	☐	☐	☐	☐
Bus schedule - easy to understand	☐	☐	☐	☐	☐
Website - easy to navigate	☐	☐	☐	☐	☐

8) How likely are you to continue using this bus service?

- ☐ Definitely will continue using service
- ☐ Will likely continue to use service
- ☐ May or may not continue using service
- ☐ Will likely NOT continue to use service
- ☐ Definitely will NOT continue to use service

9) How likely are you to recommend this bus service to others?

- ☐ Definitely would recommend
- ☐ Would likely recommend
- ☐ May or may not recommend
- ☐ Would likely NOT recommend
- ☐ Definitely would NOT recommend

10) What is your current employment status?

- ☐ Employed full time
- ☐ Employed part time
- ☐ Unemployed and seeking employment
- ☐ Unemployed and NOT seeking employment
- ☐ Retired
- ☐ Student
- ☐ Other

If other, please specify:

11) Do you have a valid driver's license?

- ☐ Yes
- ☐ No

12) What is your gender?

- ☐ Male
- ☐ Female

13) What is your local zip code?

- ☐ 15068
- ☐ 15601
- ☐ 15626
- ☐ 15627
- ☐ 15632
- ☐ 15642
- ☐ 15644
- ☐ 15650
- ☐ 15666
- ☐ 15668
- ☐ 15672
- ☐ 15683
- ☐ 15697
- ☐ Other

If Other, please specify

14) What is your age group?

- ☐ 15 and under
- ☐ 16 to 24
- ☐ 25 to 40
- ☐ 41 to 60
- ☐ 61 to 64
- ☐ 65 and older

15) What is your race? (optional)

- ☐ African American / Black
- ☐ Asian
- ☐ Asian Indian
- ☐ Hispanic
- ☐ Pacific Islander
- ☐ White / Caucasian
- ☐ American Indian
- ☐ Other

If other, please specify:

16) Including yourself, how many people live in your home?

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6 or more

17) How many working motor vehicles (registered cars, trucks, SUVs, vans or motorcycles) are at your house?

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3 or more

18) What was your total household's gross income last year before taxes? (optional)

- ☐ $0 - $5,000
- ☐ $5,001 - $11,000
- ☐ $11,001 - $23,000
- ☐ $23,001 - $50,000
- ☐ $50,001 - $75,000
- ☐ More than $75,000

19) Where can you access the internet? (Check all that apply.)

- ☐ Home
- ☐ Work
- ☐ School
- ☐ Mobile Device (Phone, tablet, laptop)
- ☐ No Internet access

20) Which of the following technologies would/do you use? (Select all that apply.)

- ☐ Wi-Fi on Buses
- ☐ Bus / transit tracker application for smart phone
- ☐ Route planner on website
- ☐ Electronic signs at major stops identifying when the next bus is coming
- ☐ Rider alerts (emails / text messages about delays)
- ☐ Other

If Other, please specify:

21) Which fare did you pay for this trip?

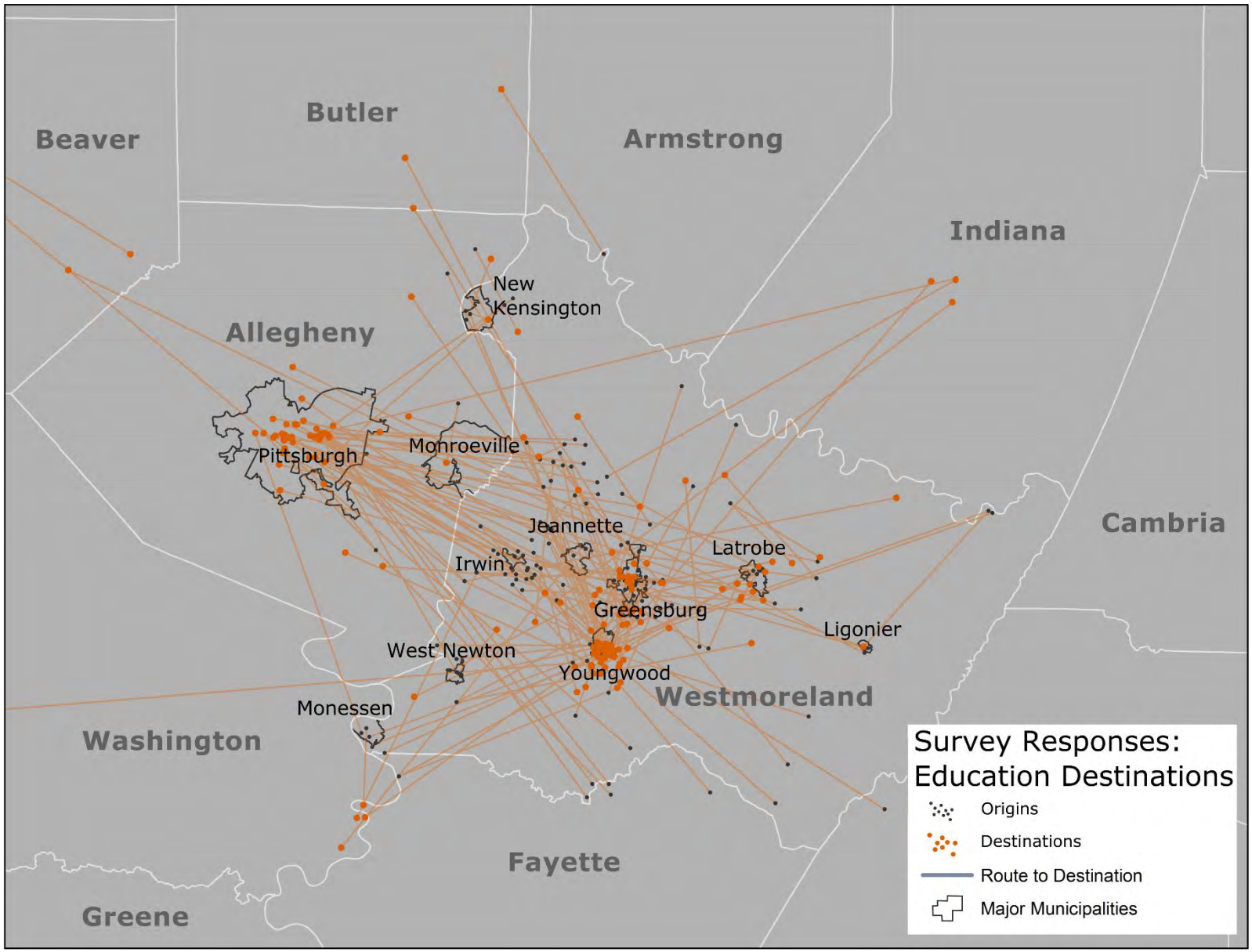
- ☐ Cash Full Fare
- ☐ Cash Half Fare
- ☐ 10-Trip Ticket Full Fare
- ☐ 10-Trip Ticket Half Fare
- ☐ Monthly Pass Full Fare
- ☐ Monthly Pass Half Fare
- ☐ Senior
- ☐ Free (Complimentary Pass, Voucher)
- ☐ Not Sure

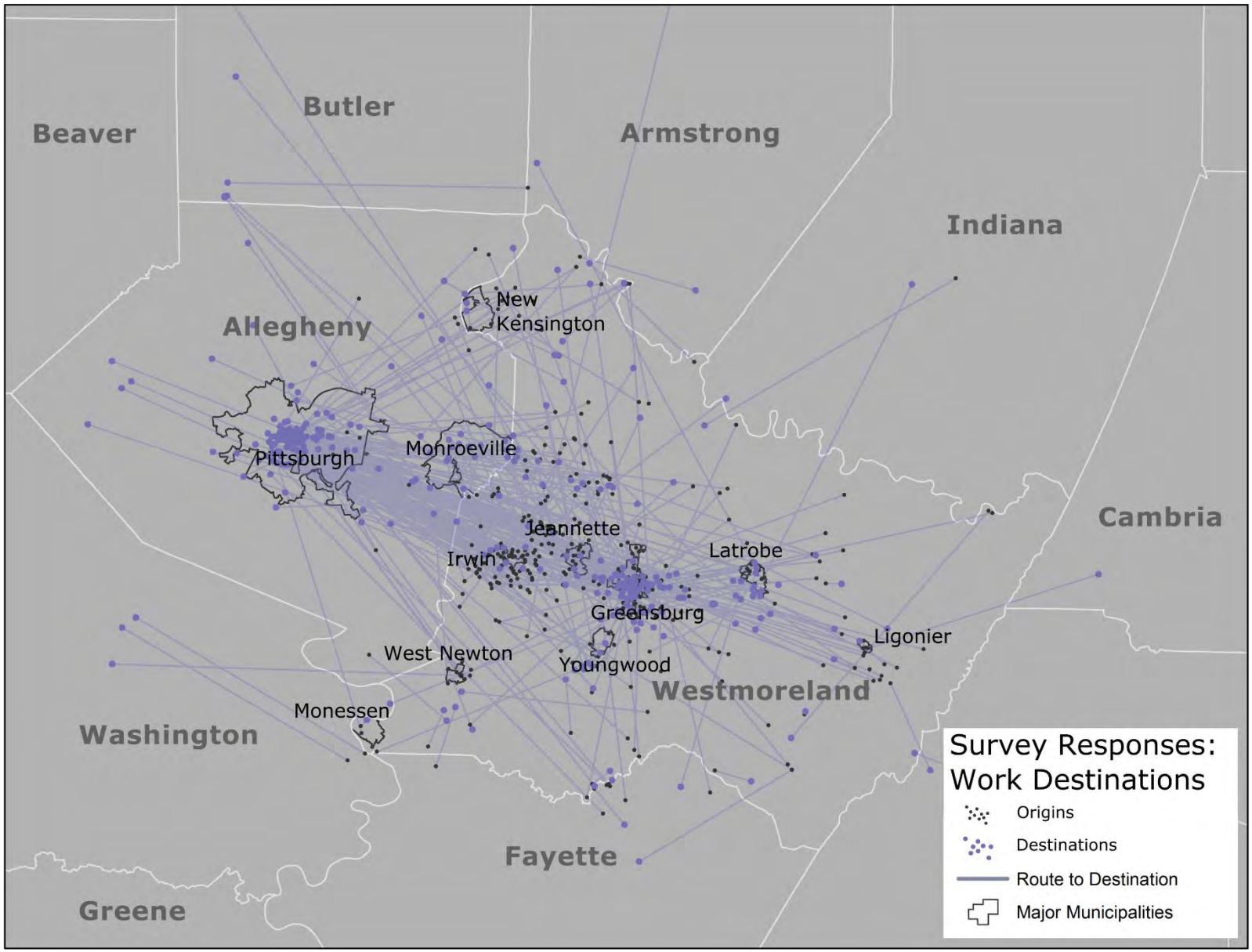
Are there any other comments you would like to make pertaining to the *Westmoreland County Transit Authority*?

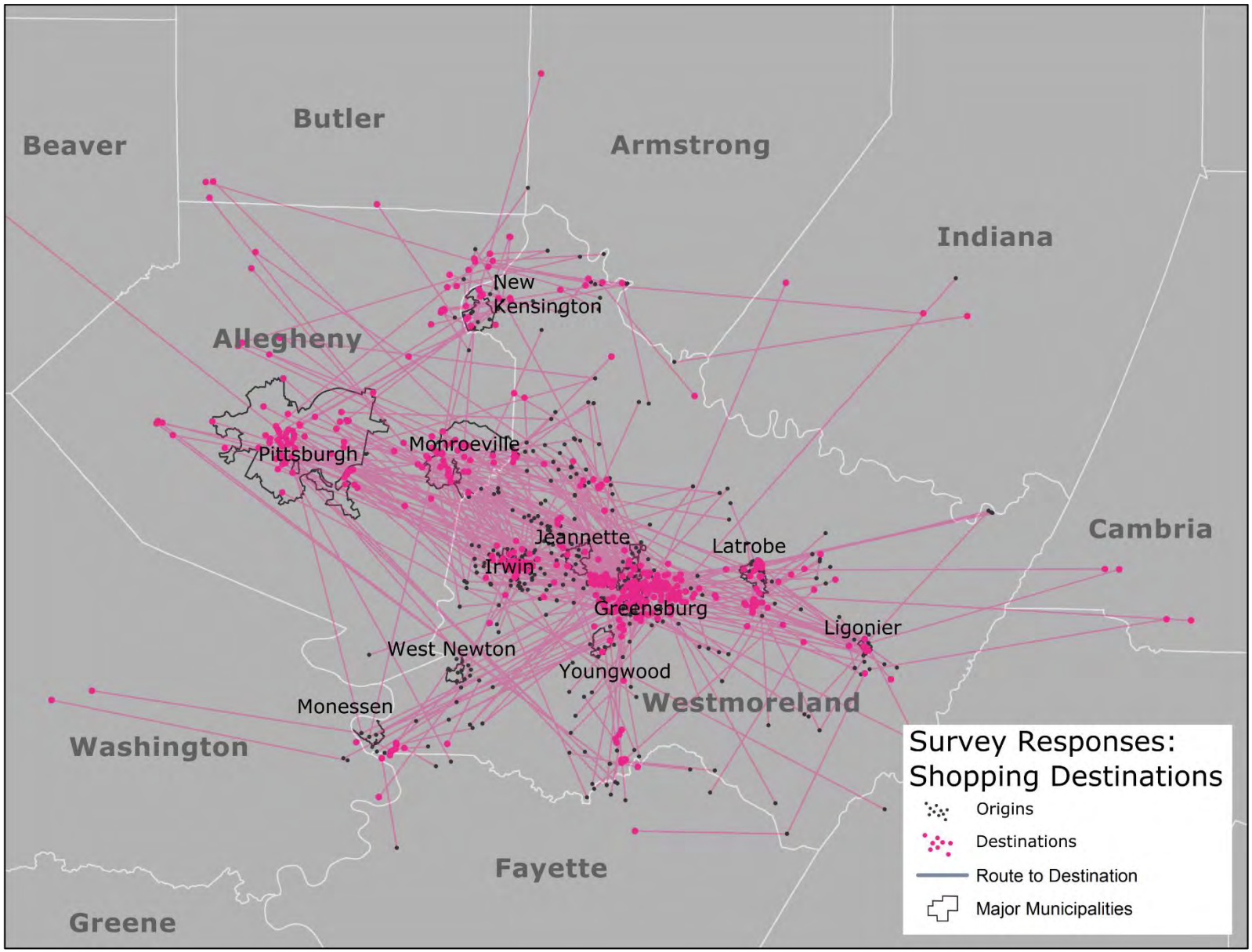
THANK YOU FOR HELPING
Westmoreland County Transit Authority
IMPROVE OUR SERVICE!

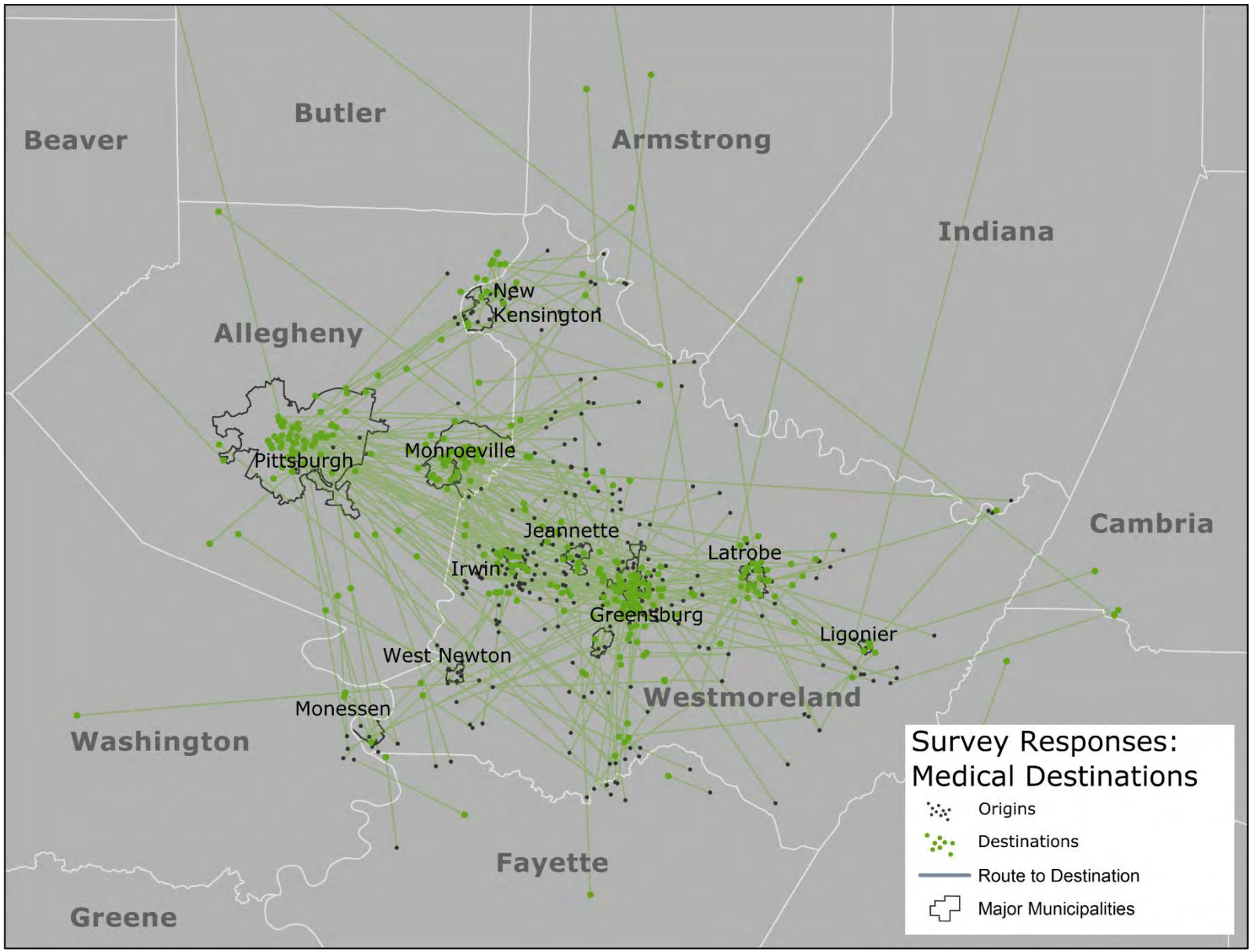
Appendix C: Metroquest Map Markers by Type of Destination

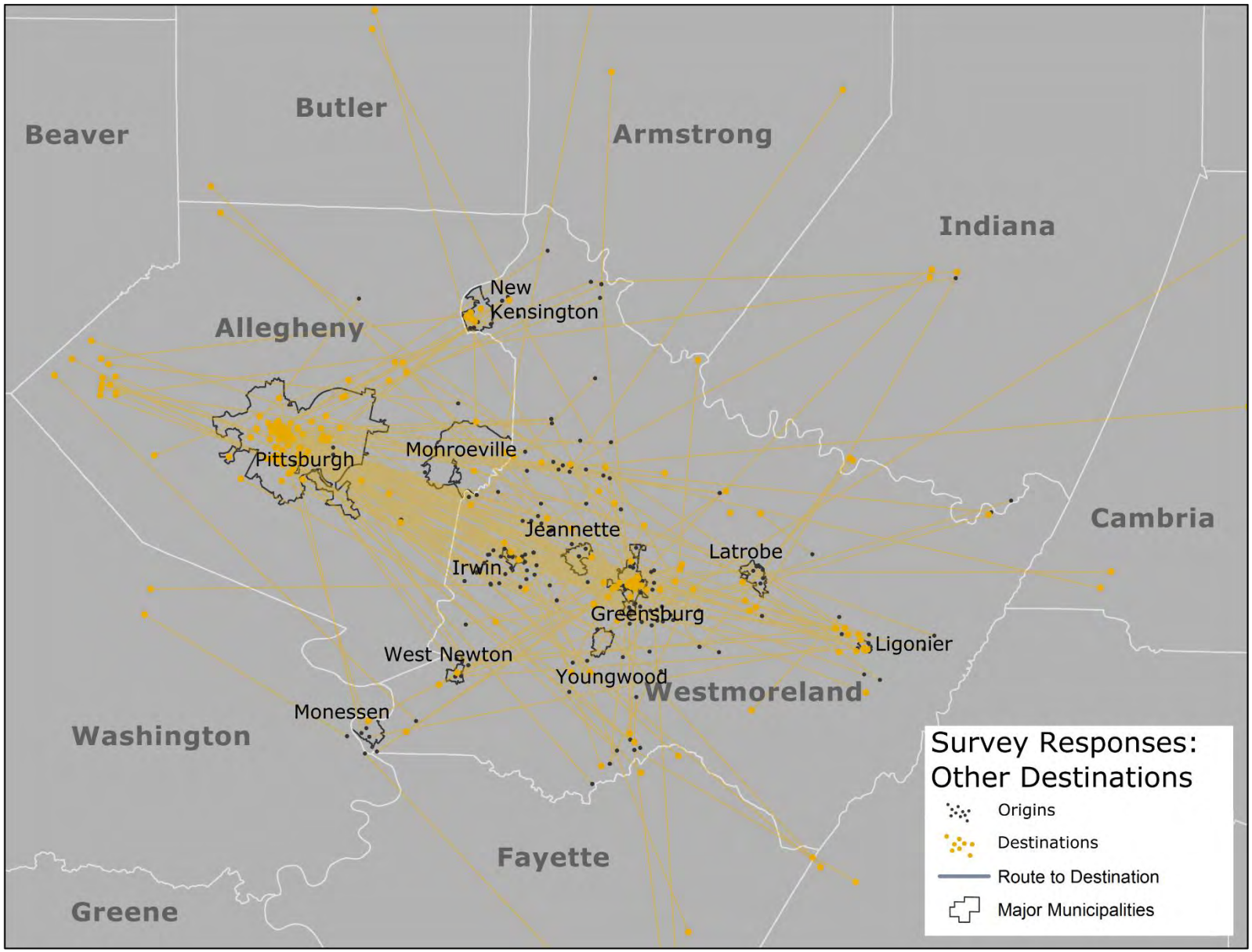
This page left intentionally blank.


Beaver
Butler
Armstrong
Indiana
Allegheny
New Kensington
Pittsburgh
Monroeville
Jeannette
Irwin
Latrobe
Greensburg
Ligonier
West Newton
Youngwood
Monessen
Westmoreland
Washington
Fayette
Greene
Cambria
Survey Responses: Education Destinations
Origins
Destinations
Route to Destination
Major Municipalities


Butler
Beaver
Armstrong
Indiana
Allegheny
New
Kensington
Pittsburgh
Monroeville
Jeannette
Irwin
Latrobe
Cambria
Greensburg
Ligonier
West Newton
Youngwood
Westmoreland
Monessen
Washington
Fayette
Greene
Survey Responses:
Work Destinations
Origins
Destinations
Route to Destination
Major Municipalities


Beaver
Butler
Armstrong
Indiana
Allegheny
New Kensington
Pittsburgh
Monroeville
Jeannette
Irwin
Latrobe
Greensburg
Ligonier
West Newton
Youngwood
Monessen
Westmoreland
Cambria
Washington
Fayette
Greene
Survey Responses: Shopping Destinations
Origins
Destinations
Route to Destination
Major Municipalities

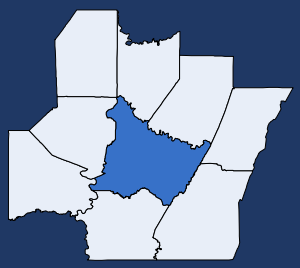

Beaver
Butler
Armstrong
Indiana
Allegheny
New Kensington
Pittsburgh
Monroeville
Jeannette
Irwin
Latrobe
Greensburg
Ligonier
West Newton
Monessen
Westmoreland
Washington
Cambria
Fayette
Greene
Survey Responses: Medical Destinations
Origins
Destinations
Route to Destination
Major Municipalities


Beaver
Butler
Armstrong
Indiana
Allegheny
New Kensington
Pittsburgh
Monroeville
Jeannette
Irwin
Latrobe
Greensburg
Ligonier
West Newton
Youngwood
Westmoreland
Monessen
Washington
Cambria
Fayette
Greene
Survey Responses: Other Destinations
Origins
Destinations
Route to Destination
Major Municipalities

This page left intentionally blank.

Appendix D: WCTA Service Guidelines

This page left intentionally blank.



Westmoreland County Transit Authority

Service Guidelines

Prepared for:

Prepared by:

February 2018

Table of Contents

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 Westmoreland Transit Development Plan, as well as best practices from peer agencies in the public transportation industry. These guidelines will help Westmoreland County Transit Authority (WCTA) to make informed decisions on an ongoing basis to deliver the best possible transit services to the people of Westmoreland 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 ¾ 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.
- **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.

Service Design Guidelines

WCTA offers a diverse array of transit services in the form of long-distance express routes, intercity regional routes, local circulator routes, and curb-to-curb paratransit (called Shared-ride) services. Many of WCTA's routes operate in long, circuitous alignments that meet disparate community needs while allowing WCTA to maintain fewer routes and avoid the introduction of new, stand-alone services. These routes have largely been designed to meet at timed transfer points that allow riders to transfer to another route and extend their travel range. Unfortunately, this approach also has several disadvantages, including longer-than-necessary travel times for some riders and sacrificing efficiency and ridership for the sake of coverage.

Transit Service Types

To address these issues and make using transit easier for the public—a key priority of the WCTA Strategic Business Plan and Transit Development Plan (TDP)—WCTA will focus on offering four distinct types of transit service. Each service will be evaluated for effectiveness according to the community goals they are designed to advance:

- **Flyer** – Fixed routes operating as local service in Westmoreland County and utilizing limited access freeways or busways to connect with regional destinations, most commonly Oakland and Downtown Pittsburgh. This service primarily serves the office commuter market, but can be expanded to include service outside of the typical office work day.
- **Regional** – Fixed routes connecting cities and boroughs primarily within Westmoreland 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.
- **Local** – Fixed routes operating within cities, boroughs, and their surrounding neighborhoods. These routes operate on more frequent headways and may provide access to destinations off of primary roadways.
- **GO Westmoreland** – Shared-ride services operating curb-to-curb service within Westmoreland 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 units 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.

Priority should always be given to areas with the highest employment and residential densities. The minimum densities required before consideration of service to an area are:

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

Transit service may be established in less dense areas if the service connects to higher density destinations at both ends of a corridor. Regional 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.

Minimum Service Levels

The following section outlines the minimum levels of service recommended for transit in Westmoreland County. These figures should be used for determining 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.

- **Flyer** – No minimum span. Flyer service should target commuters during typical peak office hours (6:00 am – 8:00 am and 4:00 pm – 6:00 pm weekdays) but can be operated outside these hours to meet demand. Flyer service operating to specific destinations or events should be timed accordingly.
- **Regional** – 8:00 am – 5:00 pm weekdays, 10:00 am – 5:00 pm Saturdays. Regional service should provide all-day connectivity for residents.
- **Local** – 8:00 am – 5:00 pm weekdays. Local service should act as feeder service to Regional services, matching the schedules of routes to which it connects. Local service may operate on Saturdays as necessary to meet demand.
- **GO Westmoreland** – 5:00 am – 5:00 pm weekdays and Saturdays. GO Westmoreland service should match the span of all Regional and Local fixed routes services to allow it to be used for ADA Complementary Paratransit Service. Flyer service does not require ADA Complementary Paratransit service.

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.

- **Flyer** – No minimum headway. Flyer service should operate at least one trip in each direction on weekdays.

- **Regional** – One-hour or better headways. Buses should arrive at minimum once per hour per direction of travel in normal service operations.
- **Local** – 30-minute or better headways. Local service should provide frequent, all-day connectivity within a service area.
- **GO Westmoreland** – Not Applicable. Service is reservation-based and is not headway-based.

Service Type	Minimum Service Spans	Minimum Service Headways
Flyer	No Minimum Span	No Minimum Headway
Regional	8:00 am – 5:00 pm	One Hour or Better
Local	8:00 am – 5:00 pm	Thirty (30) Minutes or Better
GO Westmoreland	5:00 am – 5:00 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 more than a five-minute walking distance from each other.

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 locations
- 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’ level boarding area made of a hard, compacted, non-slip surface (such as concrete)
- The boarding 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

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.

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 and weigh each route against the system-wide average. 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, Westmoreland County residents, and other stakeholders the opportunity to understand any potential future service changes.

Routes will be assessed by the following metrics:

- **Passengers per Revenue Vehicle Hour**
- **Peak Passenger Load**

After calculating passengers per revenue hour for all routes and trips, the trip with the highest value of Passengers per Revenue Vehicle Hour (PPH) will be defined as the Annual Highest Passengers per Revenue Vehicle Hour (High PPH). Conversely, the trip with the lowest value of PPH will be defined as the Annual Lowest Passengers per Revenue Vehicle Hour (Low PPH).

Peak Passenger Load (Load) is defined as a ratio between the maximum riders per trip and seats on a bus. For example, a bus with 40 seats and a trip averaging 50 riders would have a Load of 125 percent (125%).

Following the establishment of the annual High and Low of PPH and Load, a range should be calculated between the two points. Using the range of these evaluation measures, routes shall be classified as Highly Productive, Lifeline, Unproductive, or Demonstration.

Highly Productive Service

Routes operating with a PPH greater than the 80th percentile of the range between annual High PPH and Low PPH are Highly Productive. These routes are performing well above system averages and should receive continued support for service operations. Routes falling within this bracket should be assessed for opportunities to expand service. Any additional resources obtained by WCTA for service expansion should be evenly distributed among these routes.

Additionally, any Flyer trips with a Load greater than 100 percent (100%) and Regional or Local trips with a load greater than 120 percent (120%) should be prioritized for capacity expansion through either a larger vehicle or an additional trip within a 10-minute window.

Unproductive and Lifeline Service

Routes and trips operating with a PPH less than the 20th percentile of the range between High PPH and Low PPH are Unproductive. These routes should undergo a Title VI Equity Analysis to determine if they should be classified as lifeline service. A Title VI Equity Analysis, as defined by Federal Transit Administration Circular 4702.1B, requires agencies to "evaluate significant system-wide service changes and proposed improvements at the planning and programming stages to determine whether those changes have a discriminatory impact." Lifeline service is provided to pockets of low-income or otherwise disadvantaged populations with no alternative service options. If a route is determined to be lifeline service, it should be continued unless there is a strong, reasoned argument to be made that the disadvantaged populations served by the route can be reasonably served through another means.

Unproductive service that does not perform a vital Lifeline function should be evaluated for modification, reduction, or elimination.

Demonstration Service

New and innovative service concepts may be deployed by WCTA. These temporary demonstrations may be implemented with available funding or through other special sources, such as state or federal grants. Demonstration service may be initiated by WCTA staff or implemented in response to a new service proposal. Demonstration service shall be given the opportunity to succeed, with the goal of reaching the 50th percentile PPH within three years of operation.

New Service

New service proposals should be designed to meet the minimum service standards outlined above, but should also be assessed for potential to meet a minimum productivity greater than the 50th percentile PPH set by the previous year's Annual Performance Report. New service should be given the potential for three years of growth. Following three years of service, New service should exceed the 50th percentile target. New service falling below the 50th percentile target in year three should be removed from service before less productive legacy routes are removed or modified.

Potential ridership of new service is difficult to predict and cannot be simply calculated. New service will have to be assessed by WCTA staff and determined to be reasonably able to achieve the 50th percentile PPH goal by year three of service. Note that the 50th percentile goal will most likely shift with each new Annual Performance Report. New service should exceed the 50th percentile target set by the Annual Performance Report in year three regardless of how far it may have varied from the original target set in year one of New service.

2017 Annual Performance Report

In the absence of a current Annual Performance Report, an assessment of service between July 1, 2016 and June 30, 2017 has been performed.

Table 1 below lists all current WCTA routes, identifies the appropriate service type category, and determines compliance with minimum service design standards. Currently, the only routes meeting minimum headway standards are the Flyer routes, which have no minimum standard. Minimum spans are met by eleven (11) of the nineteen (19) routes, and show compliance in all three fixed route service categories.

Table 1: WCTA Route Compliance

Route	Service Type	Minimum Spans	Minimum Headways
Route 1F (Greensburg - Pittsburgh Flyer)	Flyer	Yes	Yes
Route 2F (Latrobe - Pittsburgh Flyer)	Flyer	Yes	Yes
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	Flyer	Yes	Yes
Route 4 (Greensburg - Pittsburgh)	Regional	Yes	No
Route 5 (Greensburg - Jeannette Shopper)	Local	Yes	No
Route 6 (Greensburg - Irwin)	Regional	No	No
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Regional	Yes	No
Route 9 (Greensburg - Latrobe Shopper)	Regional	Yes	No
Route 9A (Latrobe - Derry)	Local	No	No
Route 11 (Johnstown - Latrobe)	Regional	No	No
Route 12 (Greensburg - New Kensington)	Regional	No	No
Route 14 (Local New Kensington)	Local	No	No
Route 14F (New Kensington - Pittsburgh Flyer)	Flyer	Yes	Yes
Route 14J (New Kensington - Penn State - Pittsburgh Mills)	Local	Yes	No
Route 15 (Avonmore - New Kensington)	Regional	No	No
Route 16 (Greensburg - Mt. Pleasant)	Regional	No	No
Route 17 (Local Scottdale)	Local	No	No
Route 18F (Irwin - Greensburg)	Flyer	Yes	Yes
Route 20F (East Flyer)	Flyer	Yes	Yes

System-wide Performance Benchmarks

Annual Performance Report findings from 2017 show a high of 59.27 PPH, and a low of 0.44 PPH.

Highly Productive service is service with more than 11.7 PPH, and Unproductive service is that with fewer than 2.9 PPH.

New Service demonstration projects should target at least 6.1 PPH.

Maximum PPH	Minimum PPH	80th Percentile	50th Percentile	20th Percentile
59.27	0.44	11.70	6.10	2.87

Highly Productive Service

An assessment of productivity on all trips (shown in Appendix A and Appendix B) shows that all trips of Routes 1F (Greensburg-Pittsburgh Flyer) and 2F (Latrobe-Pittsburgh Flyer) are Highly Productive. These routes could benefit from additional investments.

The inbound to Pittsburgh trips of Routes 3F (Mt. Pleasant-Pittsburgh Flyer) and 14F (New Kensington-Pittsburgh Flyer) are Highly Productive, while the outbound trips simply reflect average productivity. This may suggest that return trips home in the evenings may not be aligning with the needs of riders.

Rounding out the bottom tier of Highly Productive service are Routes 8 and 6, operating service from Greensburg to Westmoreland County Community College and Greensburg to Irwin. These corridors should also be given additional resources.

Unproductive Service

An assessment of productivity on all routes (shown in Appendix A and Appendix B) shows that Route 11 (Johnstown-Latrobe) is Unproductive.

Route 15 (Avonmore-New Kensington) is showing service between Avonmore and New Kensington to be Unproductive while service between Avonmore and Lower Burrell on the same route is slightly more productive.

Route 20F (East Flyer) is listed as Unproductive and should be reviewed for service efficiencies.

Route 14J between downtown New Kensington and Penn State is also listed as Unproductive.

Peak Passenger Load

Currently the best data available, shown in Appendix C, delineates total riders per trip. On Flyer service, it's reasonable to assume that these totals reflect actual loads on buses as riders tend to ride through to the express destination. On Local and Regional service, however, actual load may be less than total riders as people may only be riding a portion of each trip. Improvements to Computer-aided Dispatch/Automated Vehicle Location software and inclusion of Automatic Passenger Counters on vehicles will improve the accuracy of these numbers. Until then, routes should be manually ride-checked to see if loads require capacity improvements.

Routes appearing regularly on the list of peak loads greater than 100 percent (100%) include Route 9A (Latrobe – Derry), Route 1F (Greensburg - Pittsburgh Flyer), and Route 5 (Greensburg – Jeanette). These routes should be manually ride-checked to assess for capacity expansion.

Appendix A – Passenger per Hour by Trip (Arranged by Productivity)

Route Name	Trip Name	Passengers / Hour
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - Irwin	59.27
Route 1F (Greensburg - Pittsburgh Flyer)	Irwin - PGH	36.06
Route 2F (Latrobe - Pittsburgh Flyer)	Delmont - Pittsburgh	23.80
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	23.20
Route 2F (Latrobe - Pittsburgh Flyer)	Pittsburgh - Delmont	21.68
Route 2F (Latrobe - Pittsburgh Flyer)	Latrobe - Pittsburgh	20.17
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	20.07
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	Mt. Pleasant - Pittsburgh	19.21
Route 2F (Latrobe - Pittsburgh Flyer)	Pittsburgh - Latrobe	14.92
Route 14F (New Kensington - Pittsburgh Flyer)	Allegheny Plaza - Pitt	13.37
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Greensburg - WCC Tech	12.46
Route 6 (Greensburg - Irwin)	Greensburg - Irwin	12.04
Route 9A (Latrobe - Derry)	Derry - Greensburg	11.47
Route 17 (Local Scottdale)	County Mkt. - Scottdale	11.15
Route 12 (Greensburg - New Kensington)	Westmd. Mall - Greensburg	10.57
Route 18F (Irwin - Greensburg)	Irwin - Greensburg	10.08
Route 5 (Greensburg - Jeannette Shopper)	Greensburg - Jeannette	10.04
Route 14F (New Kensington - Pittsburgh Flyer)	Pitt - Allegheny Plaza	9.84
Route 5 (Greensburg - Jeannette Shopper)	Jeannette - Greensburg	9.42
Route 6 (Greensburg - Irwin)	Norwin Hills - Greensburg	9.10
Route 9A (Latrobe - Derry)	Derry - Greensburg	8.55
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	Pittsburgh - Mt. Pleasant	8.50
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Mt. Pleasant - Greensburg	8.31
Route 14 (Local New Kensington)	E. Ken Manor - Central City Plaza	7.44
Route 5 (Greensburg - Jeannette Shopper)	Jeannette - Jeannette	6.95
Route 9 (Greensburg - Latrobe Shopper)	Greensburg - Lat. 30	6.74
Route 6 (Greensburg - Irwin)	Greensburg - Norwin Hills	6.73
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Greensburg - Mt. Pleasant	6.56
Route 8 (Greensburg to Youngwood, New Stanton, and South)	WCC Tech - Greensburg	6.39
Route 16 (Greensburg - Mt. Pleasant)	Greensburg - County Mkt.	6.10
Route 14 (Local New Kensington)	Lower Burrell - Central City Plaza	6.00
Route 16 (Greensburg - Mt. Pleasant)	County Mkt. - Greensburg	5.95
Route 14 (Local New Kensington)	Central City Plaza - Lower Burrell	5.92
Route 18F (Irwin - Greensburg)	Greensburg - Irwin	5.63
Route 9 (Greensburg - Latrobe Shopper)	Lat. 30 - Greensburg	5.55
Route 4 (Greensburg - Pittsburgh)	GBG - PGH	5.50
Route 17 (Local Scottdale)	Scottdale - County Mkt.	4.91
Route 17 (Local Scottdale)	Scottdale Loop	4.51
Route 20F (East Flyer)	Ligonier - GBG	4.21
Route 14 (Local New Kensington)	Central City Plaza - E. Ken Manor	4.19
Route 14J (New Kensington- Penn State- Pittsburgh Mills)	Center City - Pgh. Mills	4.03

Route Name	Trip Name	Passengers / Hour
Route 15 (Avonmore - New Kensington)	Avon - L.B.	3.78
Route 17 (Local Scottdale)	WCC Tech - Walmart	3.46
Route 12 (Greensburg - New Kensington)	New Ken. - Greensburg	3.44
Route 15 (Avonmore - New Kensington)	L.B. - Avon	3.44
Route 12 (Greensburg - New Kensington)	Greensburg - New Ken.	3.37
Route 14 (Local New Kensington)	Central City Plaza - Arnold	2.87
Route 11 (Johnstown - Latrobe)	New Flo. - Johnstown	2.85
Route 14J (New Kensington- Penn State- Pittsburgh Mills)	Center City - Penn State	2.45
Route 12 (Greensburg - New Kensington)	Greensburg - Westmd. Mall	2.34
Route 15 (Avonmore - New Kensington)	Avon - New Ken.	2.27
Route 20F (East Flyer)	GBG - Ligonier	2.22
Route 15 (Avonmore - New Kensington)	New Ken. - Avon	2.19
Route 17 (Local Scottdale)	Walmart - WCC Tech	1.70
Route 11 (Johnstown - Latrobe)	Galleria - New Flo.	1.51
Route 11 (Johnstown - Latrobe)	Johnstown - Lat. 30	1.32
Route 11 (Johnstown - Latrobe)	Galleria - Lat. 30	1.19
Route 11 (Johnstown - Latrobe)	Lat. 30 - Galleria	1.17
Route 11 (Johnstown - Latrobe)	New Flo. - Galleria	0.44

Appendix B – Passengers per Hour by Trip (Arranged by Route)

Route Name	Trip Name	Passengers / Hour
Route 11 (Johnstown - Latrobe)	New Flo. - Johnstown	2.85
Route 11 (Johnstown - Latrobe)	Galleria - New Flo.	1.51
Route 11 (Johnstown - Latrobe)	Johnstown - Lat. 30	1.32
Route 11 (Johnstown - Latrobe)	Galleria - Lat. 30	1.19
Route 11 (Johnstown - Latrobe)	Lat. 30 - Galleria	1.17
Route 11 (Johnstown - Latrobe)	New Flo. - Galleria	0.44
Route 12 (Greensburg - New Kensington)	Westmd. Mall - Greensburg	10.57
Route 12 (Greensburg - New Kensington)	New Ken. - Greensburg	3.44
Route 12 (Greensburg - New Kensington)	Greensburg - New Ken.	3.37
Route 12 (Greensburg - New Kensington)	Greensburg - Westmd. Mall	2.34
Route 14 (Local New Kensington)	E. Ken Manor - Central City Plaza	7.44
Route 14 (Local New Kensington)	Lower Burrell - Central City Plaza	6.00
Route 14 (Local New Kensington)	Central City Plaza - Lower Burrell	5.92
Route 14 (Local New Kensington)	Central City Plaza - E. Ken Manor	4.19
Route 14 (Local New Kensington)	Central City Plaza - Arnold	2.87
Route 14F (New Kensington - Pittsburgh Fyler)	Allegheny Plaza - Pitt	13.37
Route 14F (New Kensington - Pittsburgh Fyler)	Pitt - Allegheny Plaza	9.84
Route 14J (New Kensington- Penn State- Pittsburgh Mills)	Center City - Pgh. Mills	4.03
Route 14J (New Kensington- Penn State- Pittsburgh Mills)	Center City - Penn State	2.45
Route 15 (Avonmore - New Kensington)	Avon - L.B.	3.78
Route 15 (Avonmore - New Kensington)	L.B. - Avon	3.44
Route 15 (Avonmore - New Kensington)	Avon - New Ken.	2.27
Route 15 (Avonmore - New Kensington)	New Ken. - Avon	2.19
Route 16 (Greensburg - Mt. Pleasant)	Greensburg - County Mkt.	6.10
Route 16 (Greensburg - Mt. Pleasant)	County Mkt. - Greensburg	5.95
Route 17 (Local Scottdale)	County Mkt. - Scottdale	11.15
Route 17 (Local Scottdale)	Scottdale - County Mkt.	4.91
Route 17 (Local Scottdale)	Scottdale Loop	4.51
Route 17 (Local Scottdale)	WCC Tech - Walmart	3.46
Route 17 (Local Scottdale)	Walmart - WCC Tech	1.70
Route 18F (Irwin - Greensburg)	Irwin - Greensburg	10.08
Route 18F (Irwin - Greensburg)	Greensburg - Irwin	5.63
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - Irwin	59.27
Route 1F (Greensburg - Pittsburgh Flyer)	Irwin - PGH	36.06
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	23.20
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	20.07
Route 20F (East Flyer)	Ligonier - GBG	4.21
Route 20F (East Flyer)	GBG - Ligonier	2.22
Route 2F (Latrobe - Pittsburgh Flyer)	Delmont - Pittsburgh	23.80
Route 2F (Latrobe - Pittsburgh Flyer)	Pittsburgh - Delmont	21.68

Route Name	Trip Name	Passengers / Hour
Route 2F (Latrobe - Pittsburgh Flyer)	Latrobe - Pittsburgh	20.17
Route 2F (Latrobe - Pittsburgh Flyer)	Pittsburgh - Latrobe	14.92
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	Mt. Pleasant - Pittsburgh	19.21
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	Pittsburgh - Mt. Pleasant	8.50
Route 4 (Greensburg - Pittsburgh)	GBG - PGH	5.50
Route 5 (Greensburg - Jeannette Shopper)	Greensburg - Jeannette	10.04
Route 5 (Greensburg - Jeannette Shopper)	Jeannette - Greensburg	9.42
Route 5 (Greensburg - Jeannette Shopper)	Jeannette - Jeannette	6.95
Route 6 (Greensburg - Irwin)	Greensburg - Irwin	12.04
Route 6 (Greensburg - Irwin)	Norwin Hills - Greensburg	9.10
Route 6 (Greensburg - Irwin)	Greensburg - Norwin Hills	6.73
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Greensburg - WCC Tech	12.46
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Mt. Pleasant - Greensburg	8.31
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Greensburg - Mt. Pleasant	6.56
Route 8 (Greensburg to Youngwood, New Stanton, and South)	WCC Tech - Greensburg	6.39
Route 9 (Greensburg - Latrobe Shopper)	Greensburg - Lat. 30	6.74
Route 9 (Greensburg - Latrobe Shopper)	Lat. 30 - Greensburg	5.55
Route 9A (Latrobe - Derry)	Derry - Greensburg	11.47
Route 9A (Latrobe - Derry)	Derry - Greensburg	8.55

Appendix C – Passenger Loads by Trip

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 8 (Greensburg to Youngwood, New Stanton, and South)	Greensburg - WCC Tech	48	28	171%	03/07/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	48	28	171%	06/01/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	47	28	168%	07/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	45	28	161%	09/30/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	42	28	150%	12/30/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	42	28	150%	06/02/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	41	28	146%	07/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	40	28	143%	07/12/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	40	28	143%	09/02/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	40	28	143%	10/03/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	40	28	143%	10/10/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	40	28	143%	12/02/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	40	28	143%	02/03/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	40	28	143%	03/03/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	40	28	143%	05/08/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	39	28	139%	04/05/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	39	28	139%	10/03/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	39	28	139%	10/20/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	39	28	139%	12/29/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	39	28	139%	04/03/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	39	28	139%	05/01/2017

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 9A (Latrobe - Derry)	Greensburg - Derry	38	28	136%	08/15/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	38	28	136%	02/01/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	38	28	136%	06/12/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	38	28	136%	06/30/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	38	28	136%	10/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	37	28	132%	08/11/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	37	28	132%	12/05/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	37	28	132%	05/08/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	75	57	132%	05/23/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	36	28	129%	09/26/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	36	28	129%	03/07/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	36	28	129%	03/23/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	36	28	129%	04/13/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	36	28	129%	05/03/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	36	28	129%	06/01/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	36	28	129%	09/10/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	72	57	126%	05/18/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	35	28	125%	08/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	35	28	125%	08/05/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	35	28	125%	09/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	35	28	125%	11/02/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	35	28	125%	11/03/2016

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 9A (Latrobe - Derry)	Greensburg - Derry	35	28	125%	12/30/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	35	28	125%	02/14/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	35	28	125%	03/31/2017
Route 5 (Greensburg - Jeannette Shopper)	Greensburg - Jeannette	34	28	121%	10/06/2016
Route 9A (Latrobe - Derry)	Derry - Greensburg	34	28	121%	07/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	34	28	121%	08/08/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	34	28	121%	06/12/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	34	28	121%	06/30/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	68	57	119%	07/25/2016
Route 2F (Latrobe - Pittsburgh Flyer)	Pittsburgh - Latrobe	68	57	119%	04/06/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	33	28	118%	11/23/2016
Route 9A (Latrobe - Derry)	Derry - Greensburg	33	28	118%	05/10/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	08/11/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	08/19/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	09/08/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	10/04/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	10/06/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	10/11/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	12/22/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	02/17/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	04/10/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	04/12/2017

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	06/13/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	33	28	118%	09/17/2016
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	67	57	118%	06/19/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	67	57	118%	06/07/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	32	28	114%	07/20/2016
Route 9A (Latrobe - Derry)	Derry - Greensburg	32	28	114%	02/17/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	32	28	114%	06/12/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	07/22/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	09/13/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	09/16/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	11/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	11/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	11/18/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	12/13/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	03/27/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	04/05/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	05/01/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	05/09/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	05/15/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	32	28	114%	06/02/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	65	57	114%	08/25/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	64	57	112%	08/18/2016

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	64	57	112%	08/29/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	64	57	112%	09/01/2016
Route 9A (Latrobe - Derry)	Derry - Greensburg	31	28	111%	09/01/2016
Route 9A (Latrobe - Derry)	Derry - Greensburg	31	28	111%	05/18/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	08/03/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	08/09/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	09/12/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	10/07/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	11/29/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	12/05/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	02/10/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	03/01/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	05/05/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	08/06/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	31	28	111%	06/03/2017
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	63	57	111%	10/03/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	63	57	111%	07/22/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	63	57	111%	09/27/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	63	57	111%	01/06/2017
Route 2F (Latrobe - Pittsburgh Flyer)	Pittsburgh - Latrobe	63	57	111%	09/01/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	62	57	109%	08/10/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	62	57	109%	04/19/2017

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 5 (Greensburg - Jeannette Shopper)	Greensburg - Jeannette	30	28	107%	10/10/2016
Route 5 (Greensburg - Jeannette Shopper)	Greensburg - Jeannette	30	28	107%	06/01/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	30	28	107%	09/14/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	07/05/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	07/06/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	07/08/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	07/12/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	07/18/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	07/25/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	07/25/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	08/03/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	08/15/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	08/26/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	09/07/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	09/09/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	09/28/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	09/29/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	10/19/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	11/11/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	12/12/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	12/21/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	12/23/2016

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	12/30/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	01/18/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	01/25/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	02/27/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	03/29/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	04/03/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	04/19/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	04/27/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	05/24/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	06/05/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	06/06/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	30	28	107%	09/10/2016
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	61	57	107%	02/09/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	61	57	107%	07/01/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	61	57	107%	07/26/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	61	57	107%	08/31/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	61	57	107%	09/15/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	61	57	107%	02/08/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	61	57	107%	06/14/2017
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	60	57	105%	02/10/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	60	57	105%	08/30/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	60	57	105%	09/01/2016

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	60	57	105%	09/07/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	60	57	105%	09/07/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	60	57	105%	09/13/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	60	57	105%	09/20/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	60	57	105%	02/02/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	08/19/2016
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	09/02/2016
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	10/03/2016
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	01/19/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	03/13/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	04/10/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	05/04/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	05/10/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	06/01/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	07/07/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	07/11/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	08/02/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	08/12/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	08/18/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	08/19/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	08/24/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	09/01/2016

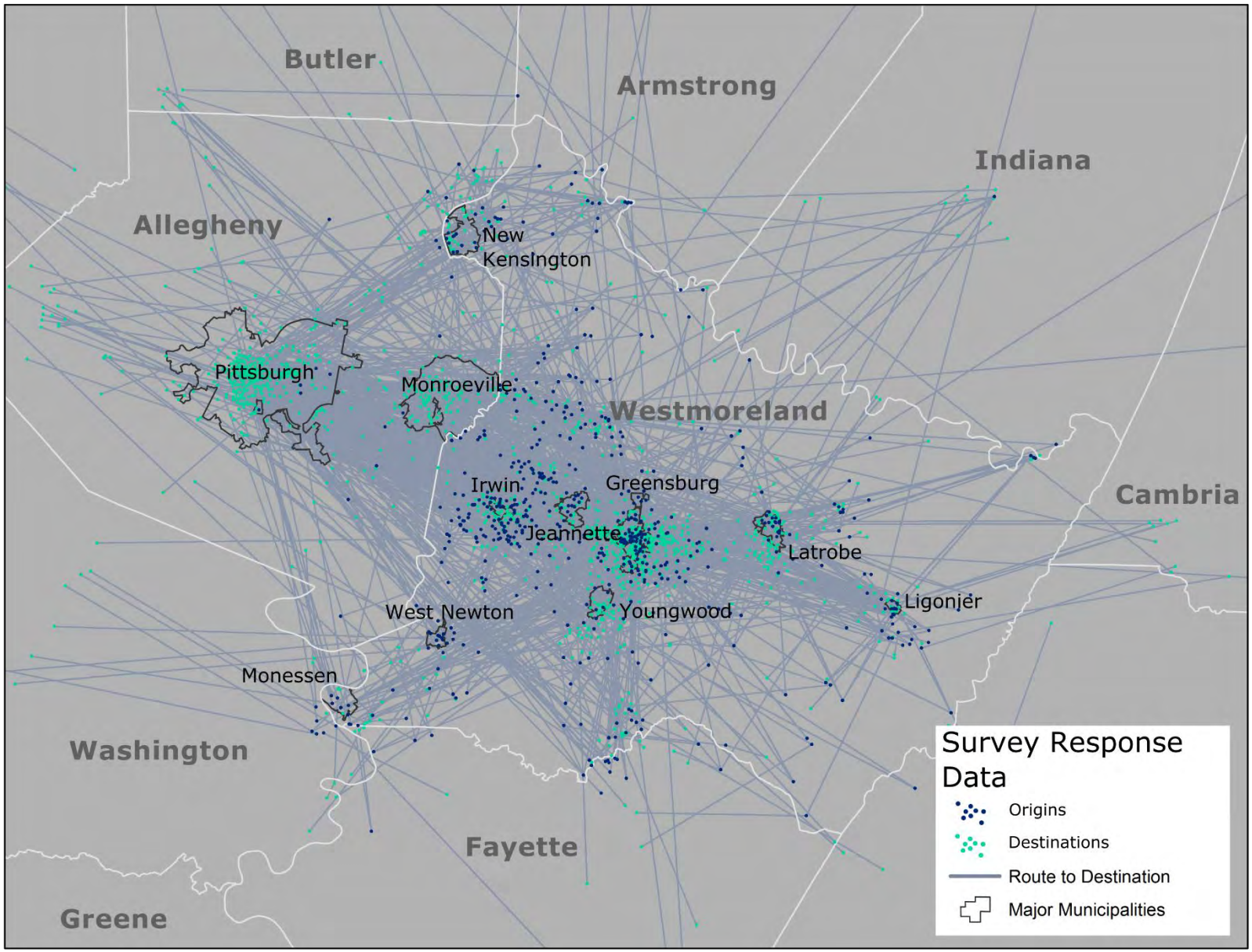
Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	09/02/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	11/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	11/08/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	11/16/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	12/01/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	12/02/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	12/29/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	01/11/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	02/06/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	03/27/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	03/31/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	04/03/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	04/10/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	04/17/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	04/26/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	05/04/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	05/09/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	06/26/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	06/28/2017
Route 9A (Latrobe - Derry)	Derry - Greensburg	29	28	104%	09/17/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	07/16/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	09/03/2016

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	10/22/2016
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	03/04/2017
Route 9A (Latrobe - Derry)	Greensburg - Derry	29	28	104%	05/13/2017
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	59	57	104%	01/12/2017
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	59	57	104%	06/14/2017
Route 1F (Greensburg - Pittsburgh Flyer)	Irwin - PGH	59	57	104%	03/09/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	59	57	104%	09/29/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	59	57	104%	10/18/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	59	57	104%	12/06/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	59	57	104%	01/25/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	59	57	104%	05/09/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	59	57	104%	06/13/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	59	57	104%	06/14/2017
Route 2F (Latrobe - Pittsburgh Flyer)	Pittsburgh - Latrobe	59	57	104%	04/27/2017
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	58	57	102%	01/17/2017
Route 1F (Greensburg - Pittsburgh Flyer)	GBG - PGH	58	57	102%	01/23/2017
Route 1F (Greensburg - Pittsburgh Flyer)	Irwin - PGH	58	57	102%	10/26/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	07/21/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	07/26/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	07/27/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	08/03/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	08/31/2016

Route Name	Trip Name	Total Riders	Bus Capacity	Passenger Load	Trip Date
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	10/18/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	10/31/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	11/03/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	11/15/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	11/17/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	11/29/2016
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	01/03/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	01/23/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	02/15/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	03/27/2017
Route 1F (Greensburg - Pittsburgh Flyer)	PGH - GBG	58	57	102%	05/11/2017
Route 3F (Mt. Pleasant - Pittsburgh Flyer)	Mt. Pleasant - Pittsburgh	58	57	102%	09/27/2016

Appendix E: Top Origins and Destinations Identified Through Public Feedback

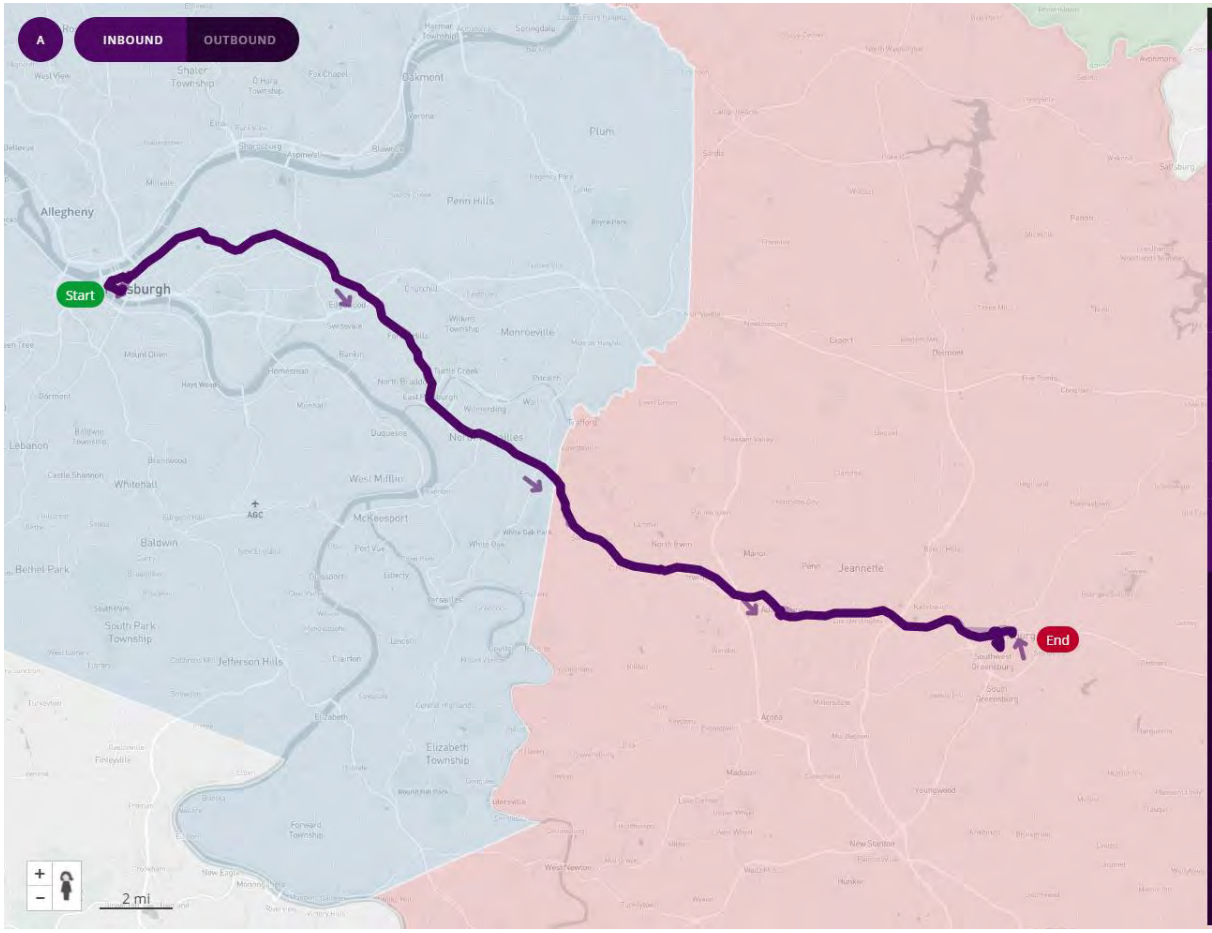
This page left intentionally blank.


Butler
Armstrong
Indiana
Allegheny
New Kensington
Pittsburgh
Monroeville
Westmoreland
Irwin
Greensburg
Cambria
Jeannette
Latrobe
Ligonier
West Newton
Youngwood
Monessen
Washington
Fayette
Greene
Survey Response Data
Origins
Destinations
Route to Destination
Major Municipalities

This page left intentionally blank.

Appendix F: WCTA Remix Route Maps

This page left intentionally blank.



← Back

Route 1F (Greensburg - Pittsburgh Fly

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
15:40	*17:40*	*12 min*	*178.3 min*	*18.3 min*	*22.3 mph*	*9 buses*	*26.1%*

Saturday

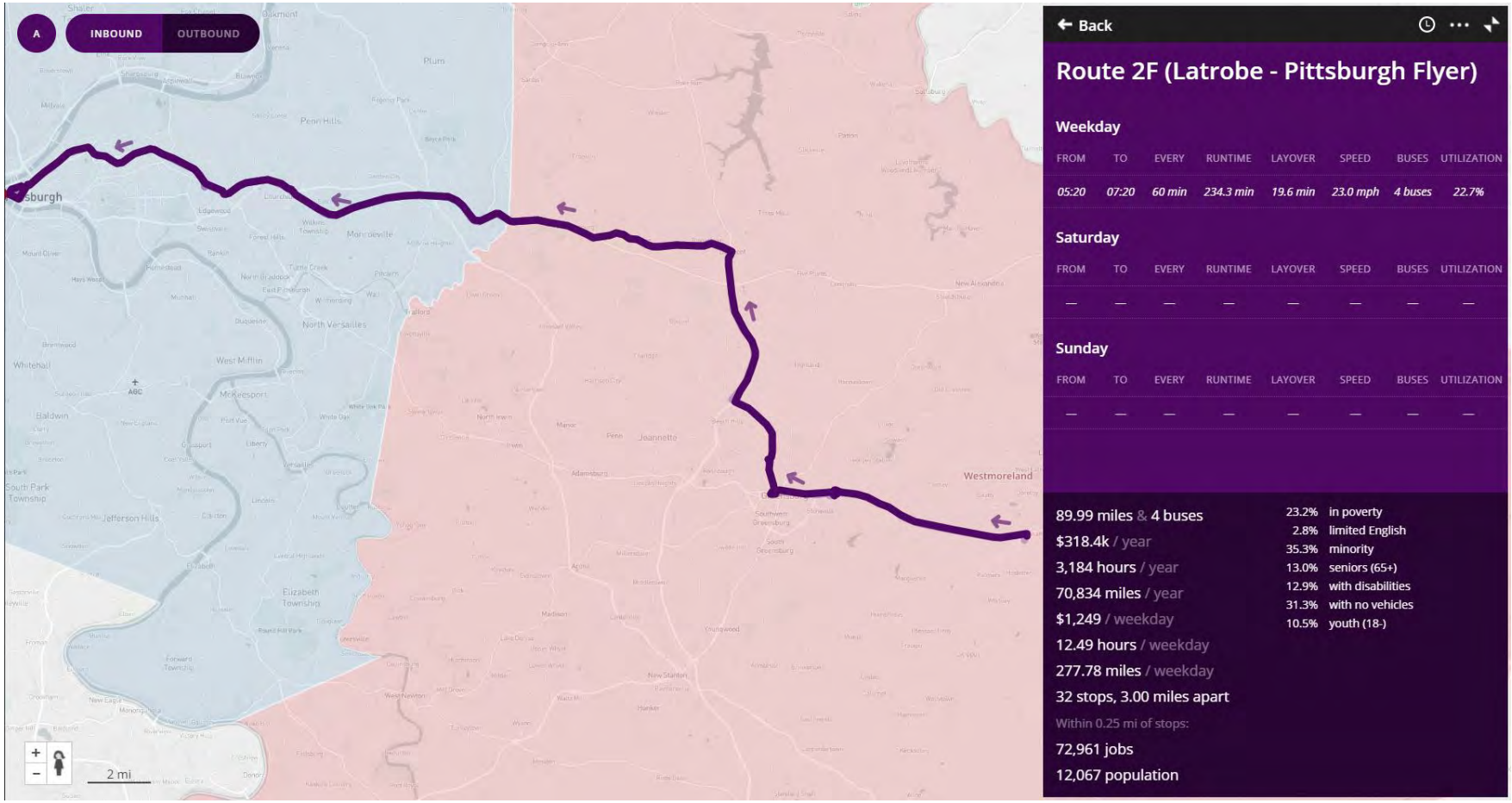
FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

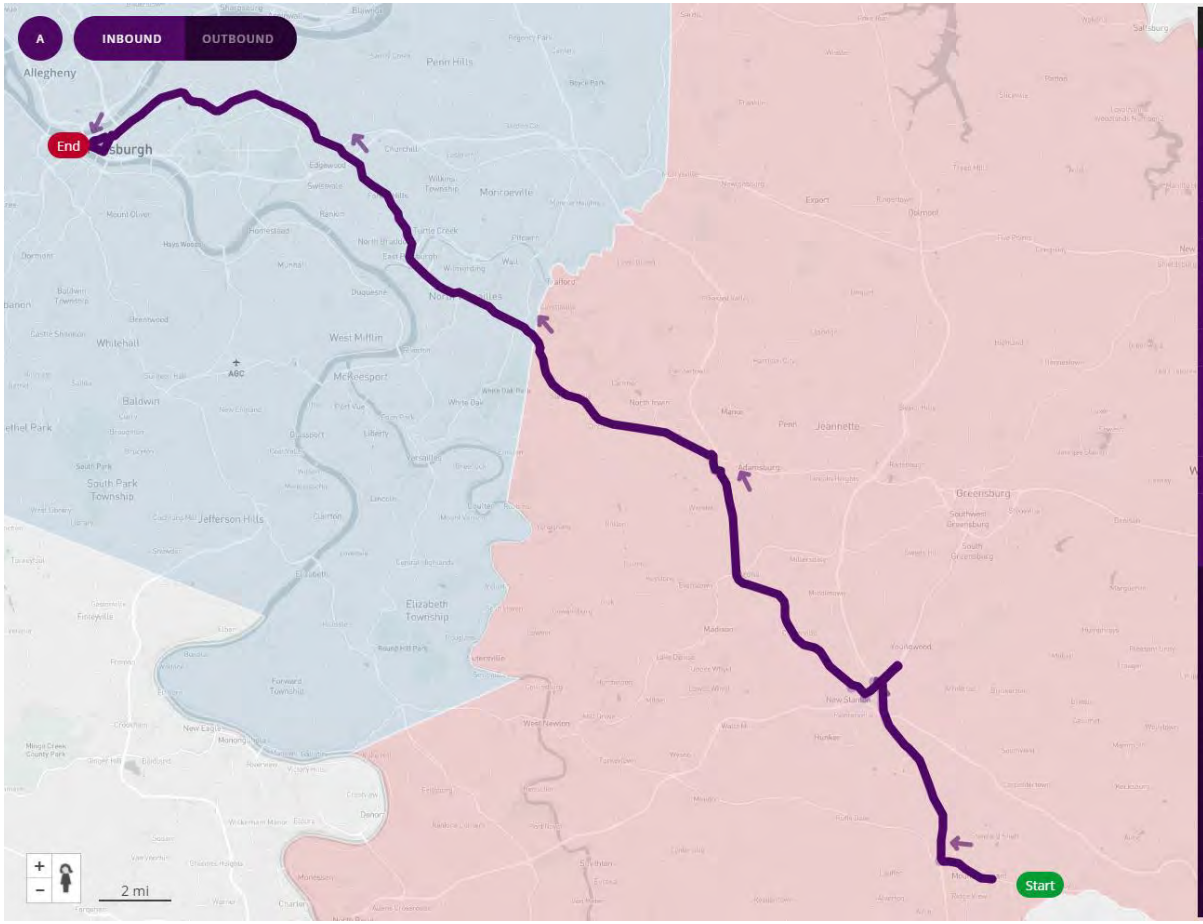
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

66.30 miles & 9 buses
$852.3k / year
8,523 hours / year
156,575 miles / year
$3,342 / weekday
33.42 hours / weekday
614.02 miles / weekday
36 stops, 1.95 miles apart
Within 0.25 mi of stops:
70,461 jobs
12,988 population

18.4% in poverty
0.8% limited English
25.6% minority
16.5% seniors (65+)
15.9% with disabilities
27.8% with no vehicles
14.2% youth (18-)


A
INBOUND
OUTBOUND
Plum
Penn Hills
Monroeville
North Versailles
West Mifflin
McKeesport
Baldwin
Whitehall
Jefferson Hills
South Park Township
Elizabeth Township
Jeannette
Westmoreland
2 mi
Back
Route 2F (Latrobe - Pittsburgh Flyer)
Weekday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
05:20 07:20 60 min 234.3 min 19.6 min 23.0 mph 4 buses 22.7%
Saturday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
— — — — — — — —
Sunday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
— — — — — — — —
89.99 miles & 4 buses
$318.4k / year
3,184 hours / year
70,834 miles / year
$1,249 / weekday
12.49 hours / weekday
277.78 miles / weekday
32 stops, 3.00 miles apart
Within 0.25 mi of stops:
72,961 jobs
12,067 population
23.2% in poverty
2.8% limited English
35.3% minority
13.0% seniors (65+)
12.9% with disabilities
31.3% with no vehicles
10.5% youth (18-)



← Back

Route 3F (Mt. Pleasant - Pittsburgh Fly

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
05:20	05:50	30 min	195.0 min	18.5 min	25.4 mph	2 buses	19.2%

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

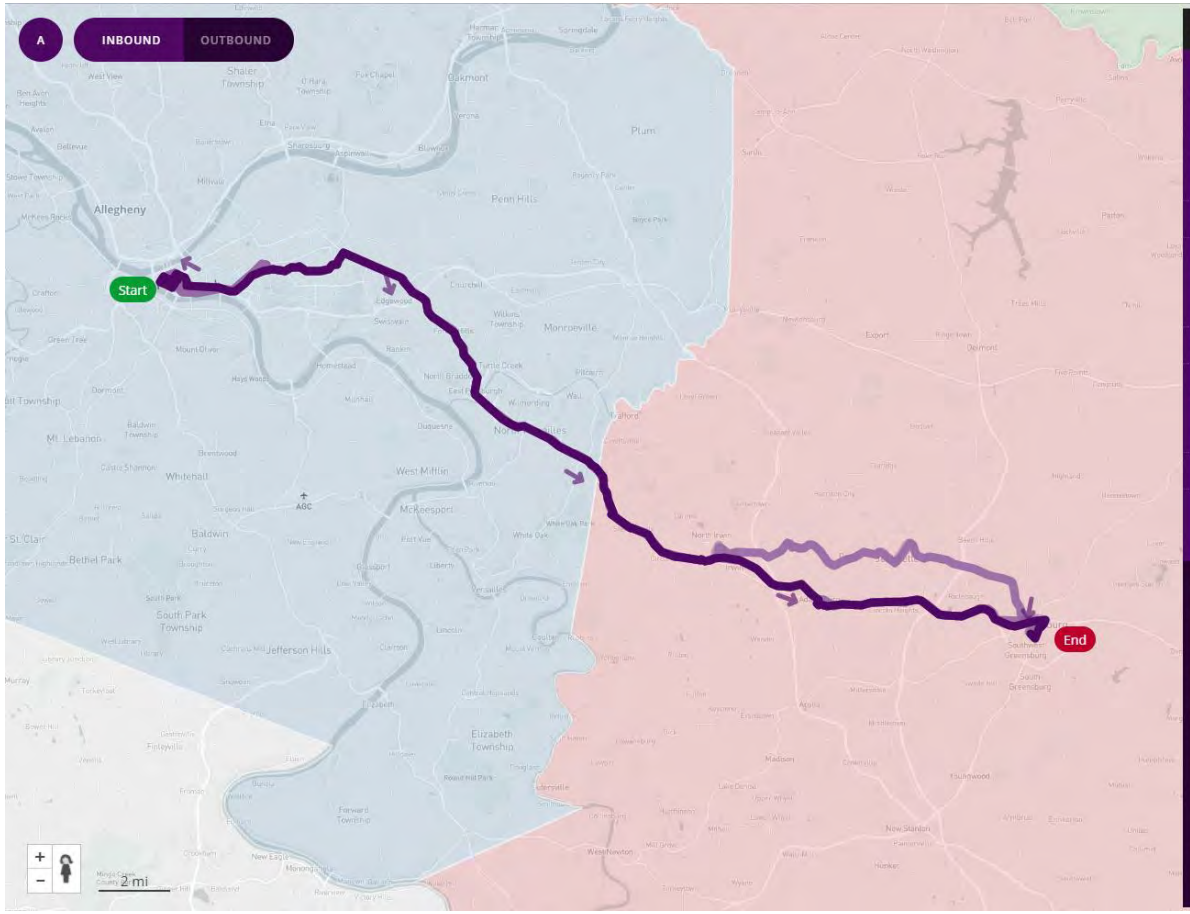
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

82.62 miles & 2 buses
$131.4k / year
1,314 hours / year
31,537 miles / year
$515 / weekday
5.15 hours / weekday
123.67 miles / weekday
29 stops, 3.06 miles apart

Within 0.25 mi of stops:
65,895 jobs
11,058 population

15.9% in poverty
1.1% limited English
24.1% minority
15.5% seniors (65+)
13.6% with disabilities
24.7% with no vehicles
14.5% youth (18-)



← Back

Route 4 (Greensburg - Pittsburgh)

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
08:30	*18:30*	*120 min*	*213.1 min*	*23.4 min*	*18.5 mph*	*3 buses*	*60.0%*

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
09:33	*16:30*	*208 min*	*185.2 min*	*17.8 min*	*21.3 mph*	*1 bus*	*90.6%*

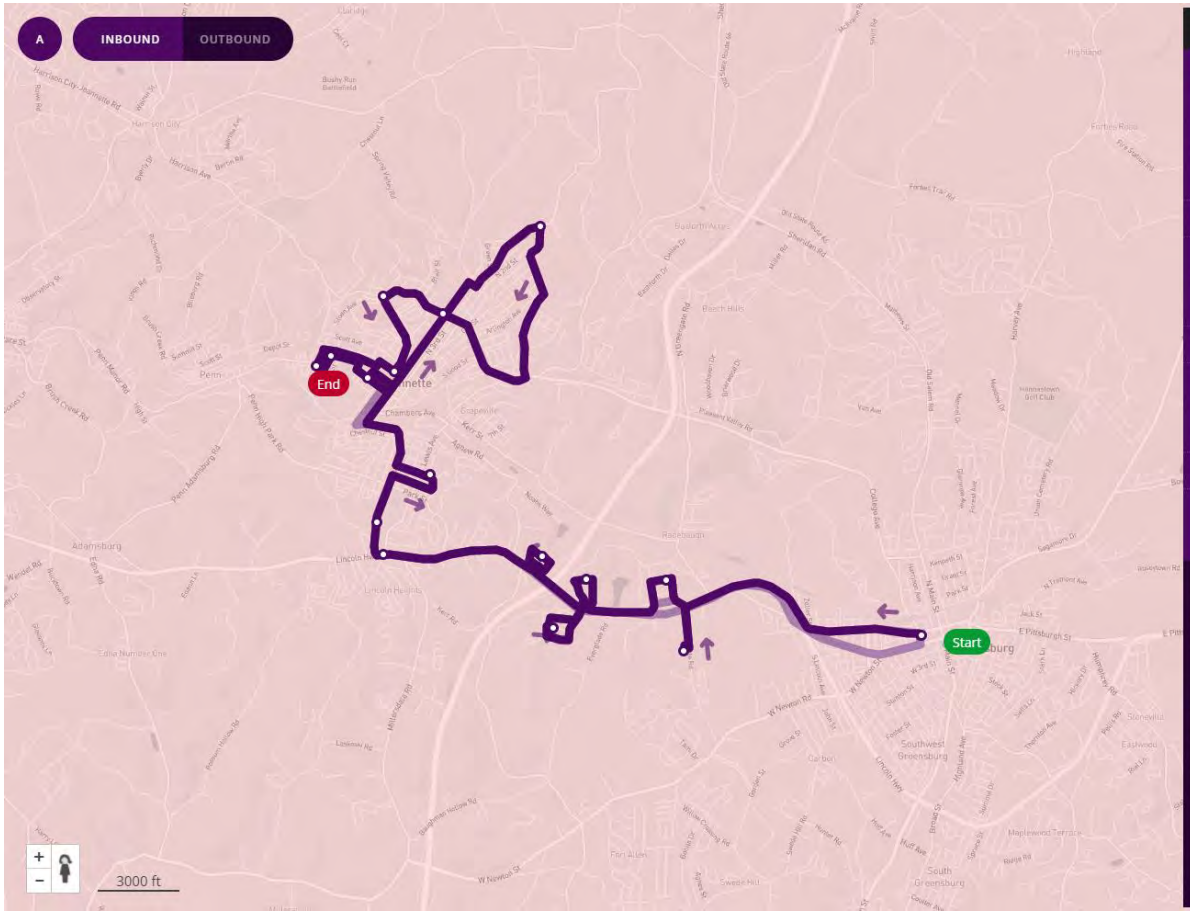
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

65.73 miles & 3 buses
$700.6k / year
7,006 hours / year
108,504 miles / year
$2,576 / weekday
25.76 hours / weekday
393.61 miles / weekday
40 stops, 1.73 miles apart

Within 0.25 mi of stops:
100,180 jobs
25,213 population

27.4%	in poverty
1.2%	limited English
24.9%	minority
11.6%	seniors (65+)
11.4%	with disabilities
26.1%	with no vehicles
10.5%	youth (18-)



← Back

Route 5 / 5S (Greensburg - Jeannette S

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
08:15	*20:15*	*120 min*	*148.8 min*	*13.7 min*	*12.7 mph*	*2 buses*	*63.1%*

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
10:15	*16:15*	*120 min*	*146.9 min*	*14.1 min*	*12.9 mph*	*2 buses*	*60.7%*

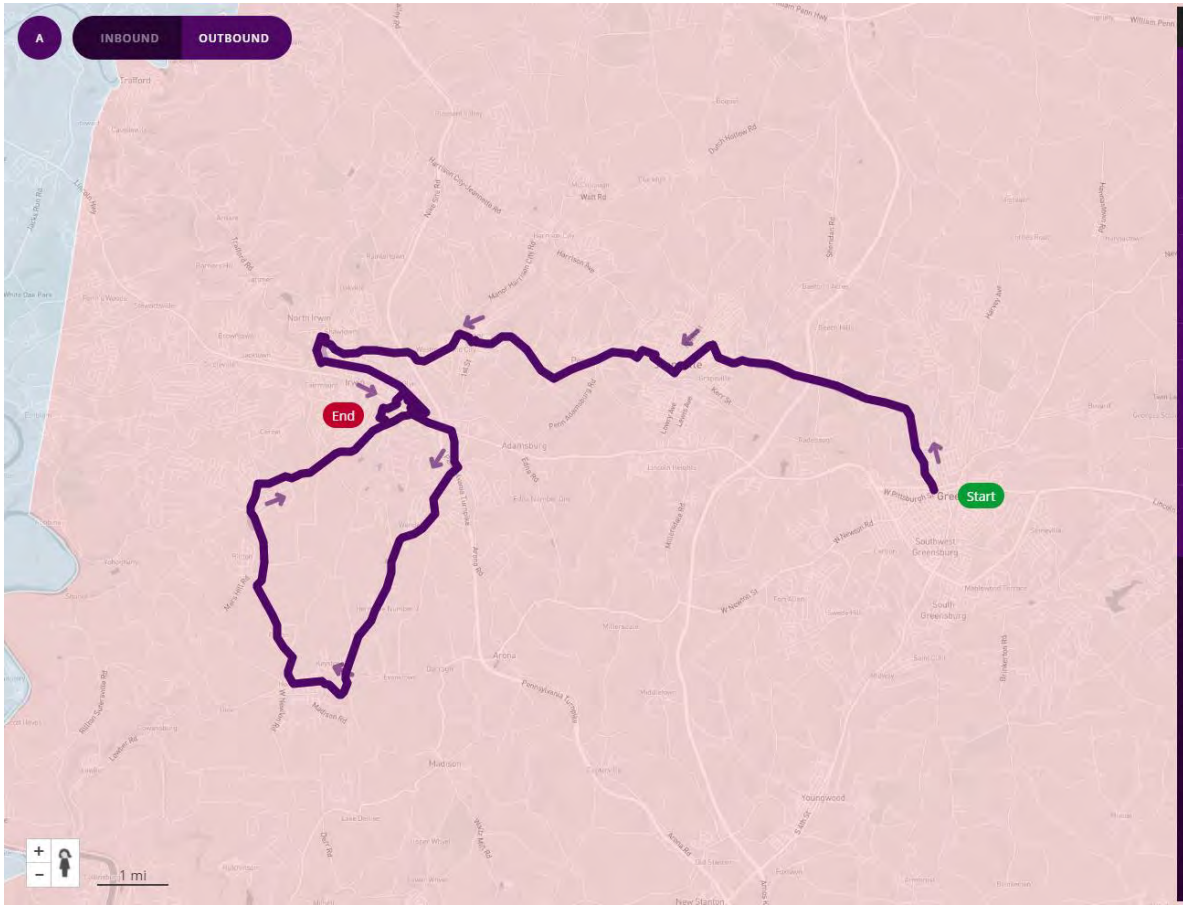
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

31.51 miles & 2 buses
$506.1k / year
5,061 hours / year
61,288 miles / year
$1,762 / weekday
17.62 hours / weekday
213.16 miles / weekday
37 stops, 4,752 ft apart

Within 0.25 mi of stops:
5,549 jobs
7,553 population

20.6%	in poverty
0.5%	limited English
11.7%	minority
18.8%	seniors (65+)
19.2%	with disabilities
17.8%	with no vehicles
19.1%	youth (18-)



← Back

Route 6 (Greensburg - Irwin)

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
09:32	*17:32*	*120 min*	*108.4 min*	*9.4 min*	*21.8 mph*	*2 buses*	*41.0%*

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

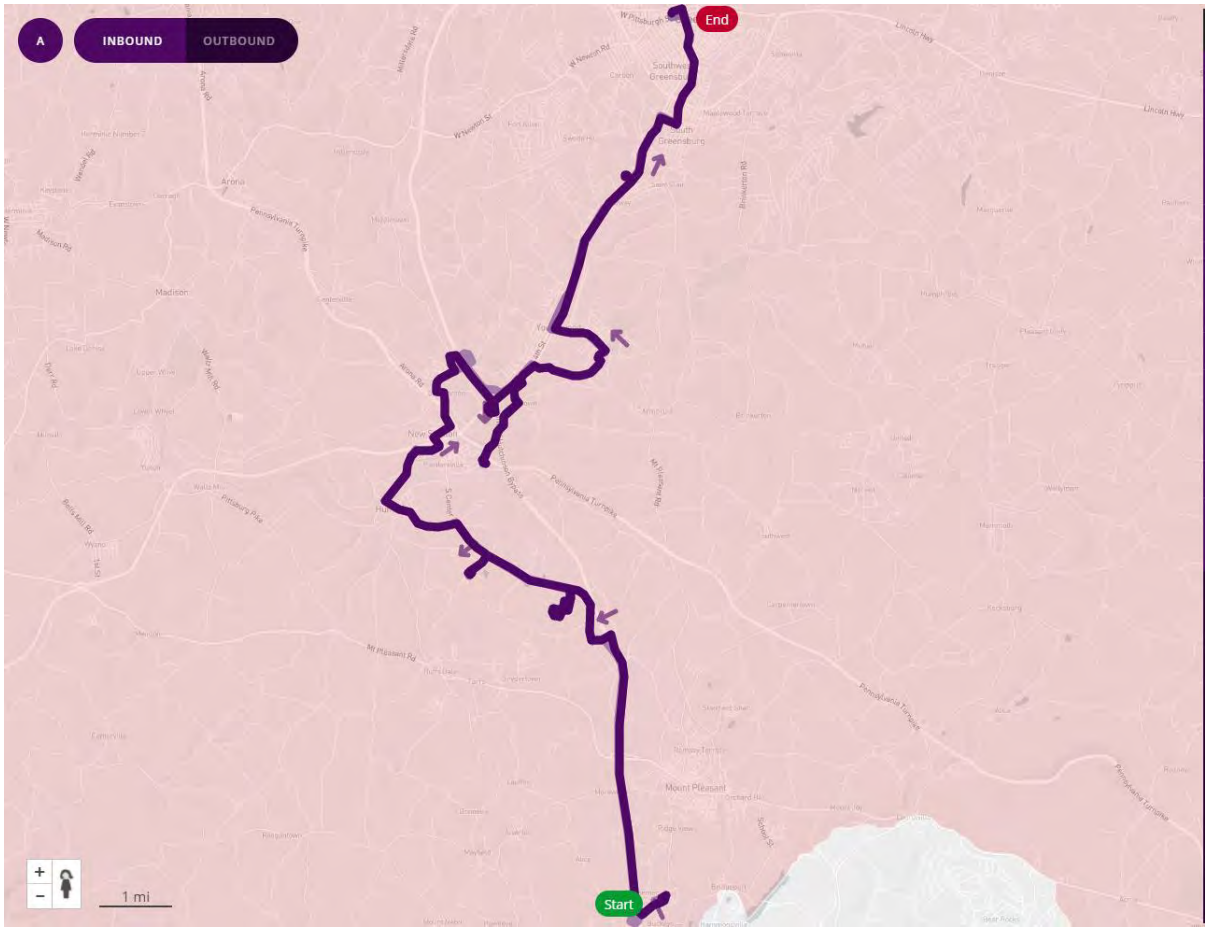
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

39.40 miles & 2 buses
$218.8k / year
2,188 hours / year
46,550 miles / year
$858 / weekday
8.58 hours / weekday
182.55 miles / weekday
25 stops, 1.71 miles apart

Within 0.25 mi of stops:
3,361 jobs
5,285 population

13.7% in poverty
0.1% limited English
5.3% minority
18.6% seniors (65+)
17.2% with disabilities
17.2% with no vehicles
19.9% youth (18-)



← Back

Route 8 (Greensburg to Youngwood, N

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
07:50	*17:15*	*113 min*	*119.4 min*	*10.2 min*	*26.4 mph*	*2 buses*	*51.9%*

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

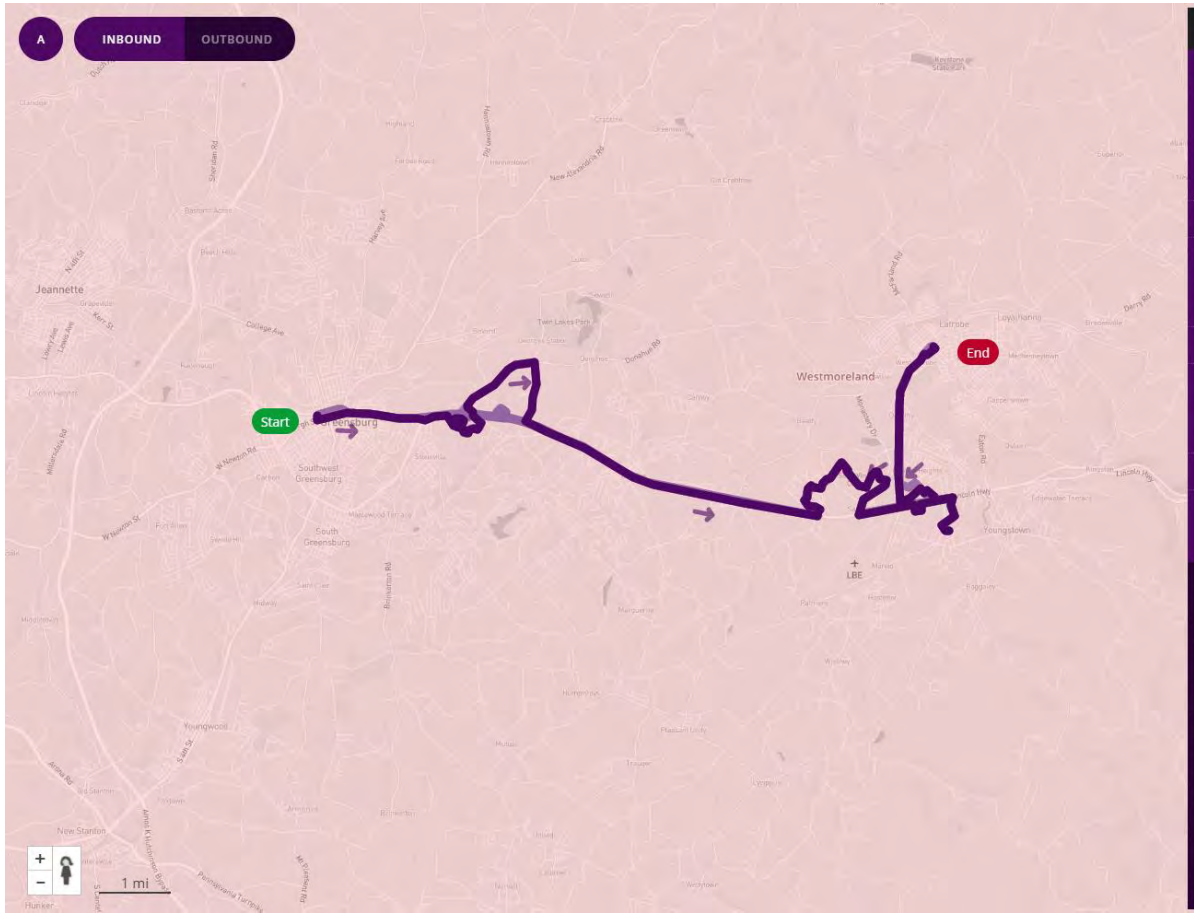
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

52.46 miles & 2 buses
$284.7k / year
2,847 hours / year
70,208 miles / year
$1,117 / weekday
11.17 hours / weekday
275.32 miles / weekday
25 stops, 2.28 miles apart

Within 0.25 mi of stops:
3,253 jobs
3,716 population

16.5%	in poverty
0.7%	limited English
8.6%	minority
19.3%	seniors (65+)
17.8%	with disabilities
15.5%	with no vehicles
18.1%	youth (18-)



← Back

Route 9

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
08:15	*20:15*	*120 min*	*136.7 min*	*12.7 min*	*16.4 mph*	*2 buses*	*59.2%*

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
10:15	*16:15*	*120 min*	*147.6 min*	*14.2 min*	*15.2 mph*	*2 buses*	*60.9%*

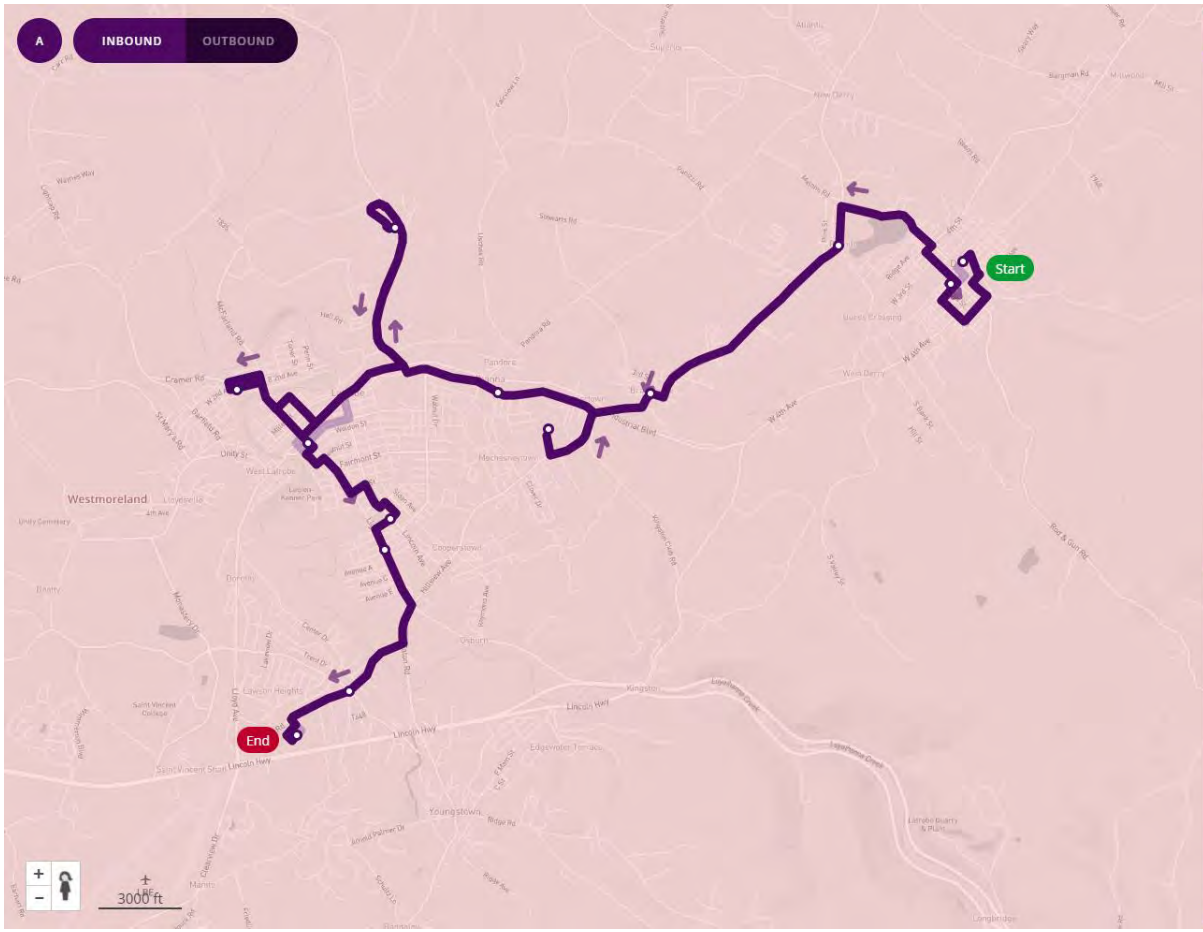
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

37.30 miles & 2 buses
$448.1k / year
4,481 hours / year
65,183 miles / year
$1,533 / weekday
15.33 hours / weekday
224.28 miles / weekday
21 stops, 1.96 miles apart

Within 0.25 mi of stops:
3,777 jobs
4,084 population

19.2%	in poverty
0.4%	limited English
8.1%	minority
20.9%	seniors (65+)
16.9%	with disabilities
17.8%	with no vehicles
16.1%	youth (18-)



← Back

Route 9A (Latrobe - Derry)

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
08:20	*14:20*	*120 min*	*108.4 min*	*10.4 min*	*18.0 mph*	*1 bus*	*96.5%*

Saturday

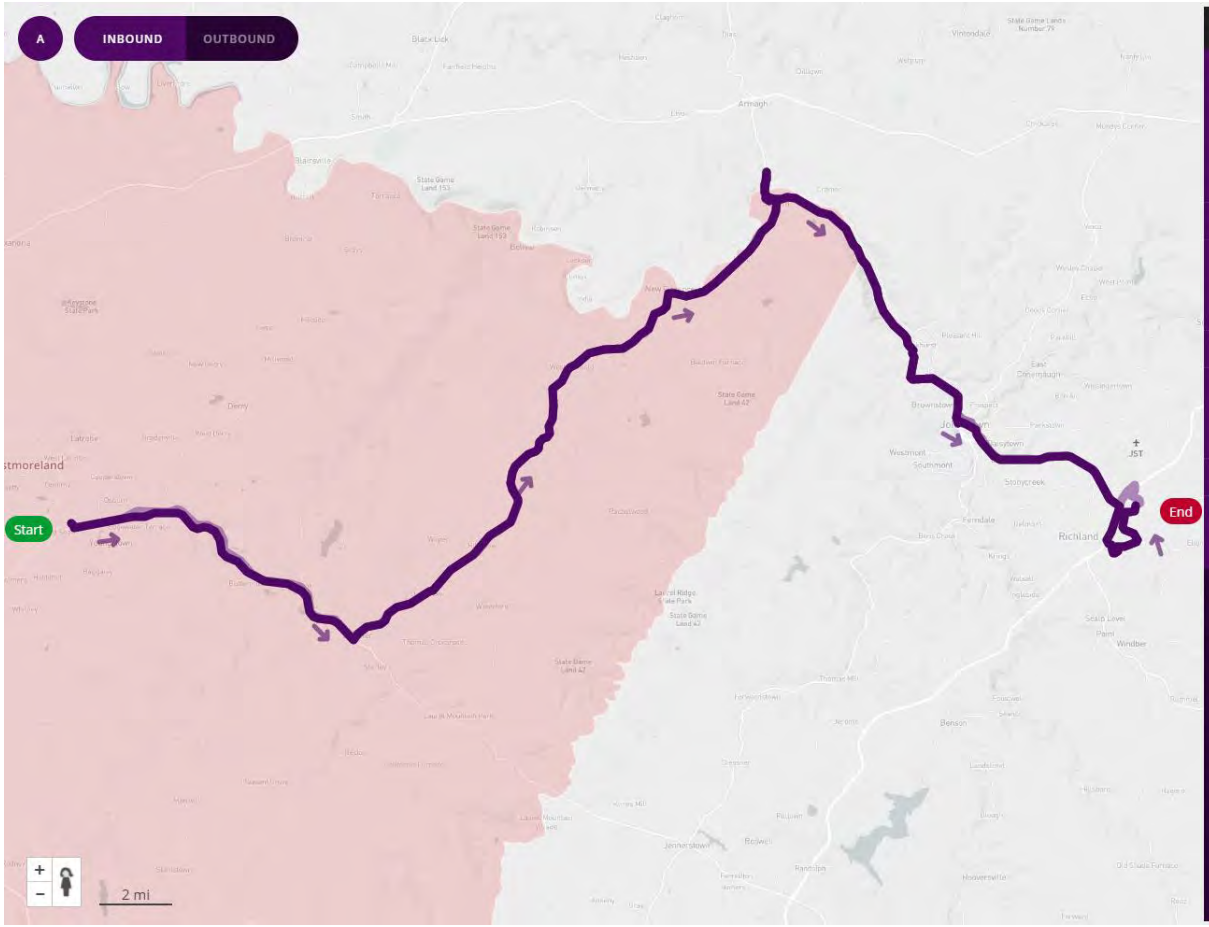
FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
08:20	*14:20*	*120 min*	*108.4 min*	*10.4 min*	*18.0 mph*	*2 buses*	*38.8%*

Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

32.52 miles & 2 buses
$236.4k / year
2,364 hours / year
40,330 miles / year
$763 / weekday
7.63 hours / weekday
130.10 miles / weekday
28 stops, 1.25 miles apart
Within 0.25 mi of stops:
2,728 jobs
4,487 population

11.2%	in poverty
0.5%	limited English
3.7%	minority
21.6%	seniors (65+)
15.0%	with disabilities
9.6%	with no vehicles
18.7%	youth (18-)



← Back

Route 11 (Johnstown - Latrobe)

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
07:30	*15:15*	*155 min*	*205.4 min*	*13.6 min*	*27.9 mph*	*2 buses*	*47.7%*

Saturday

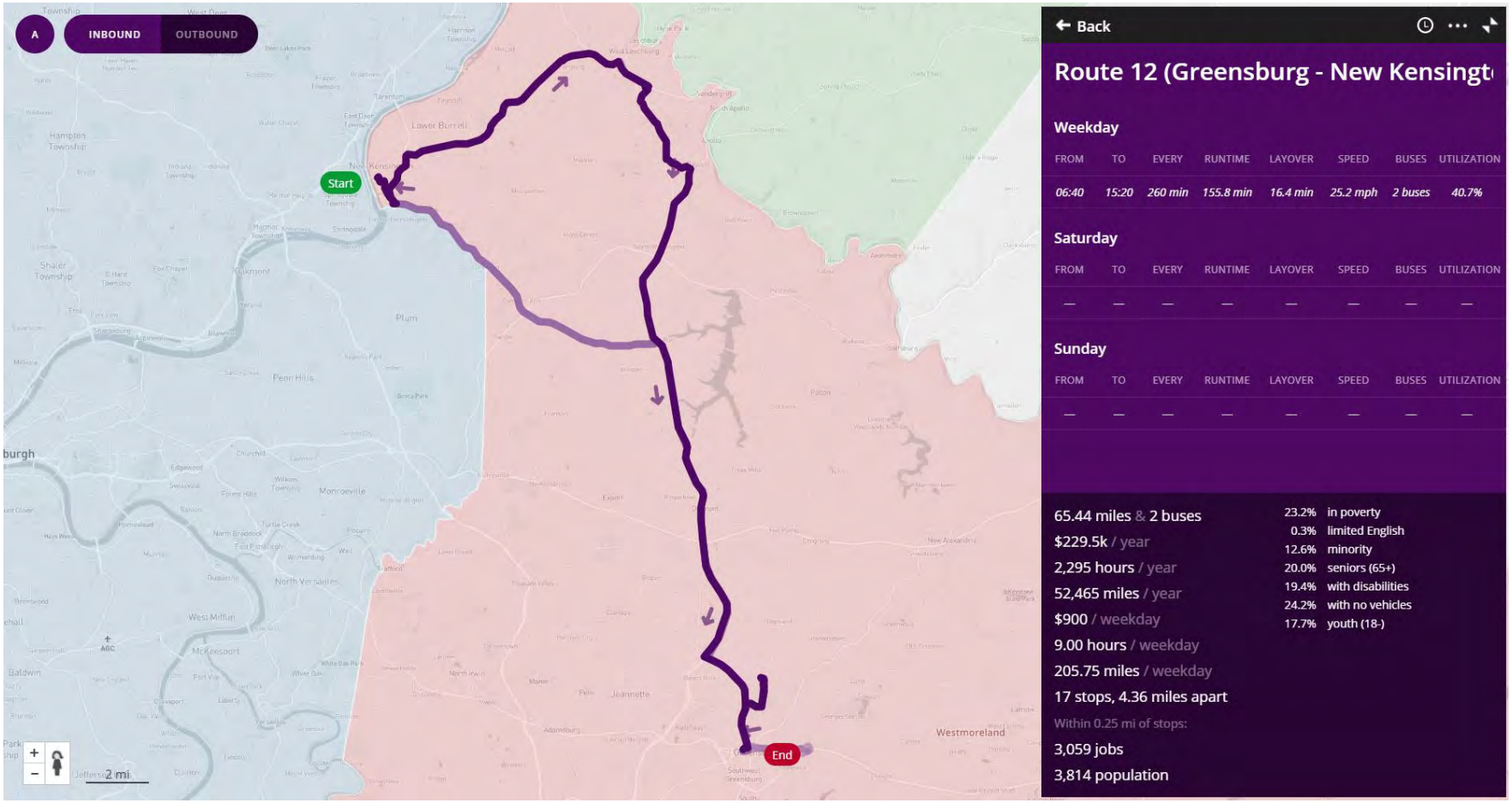
FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

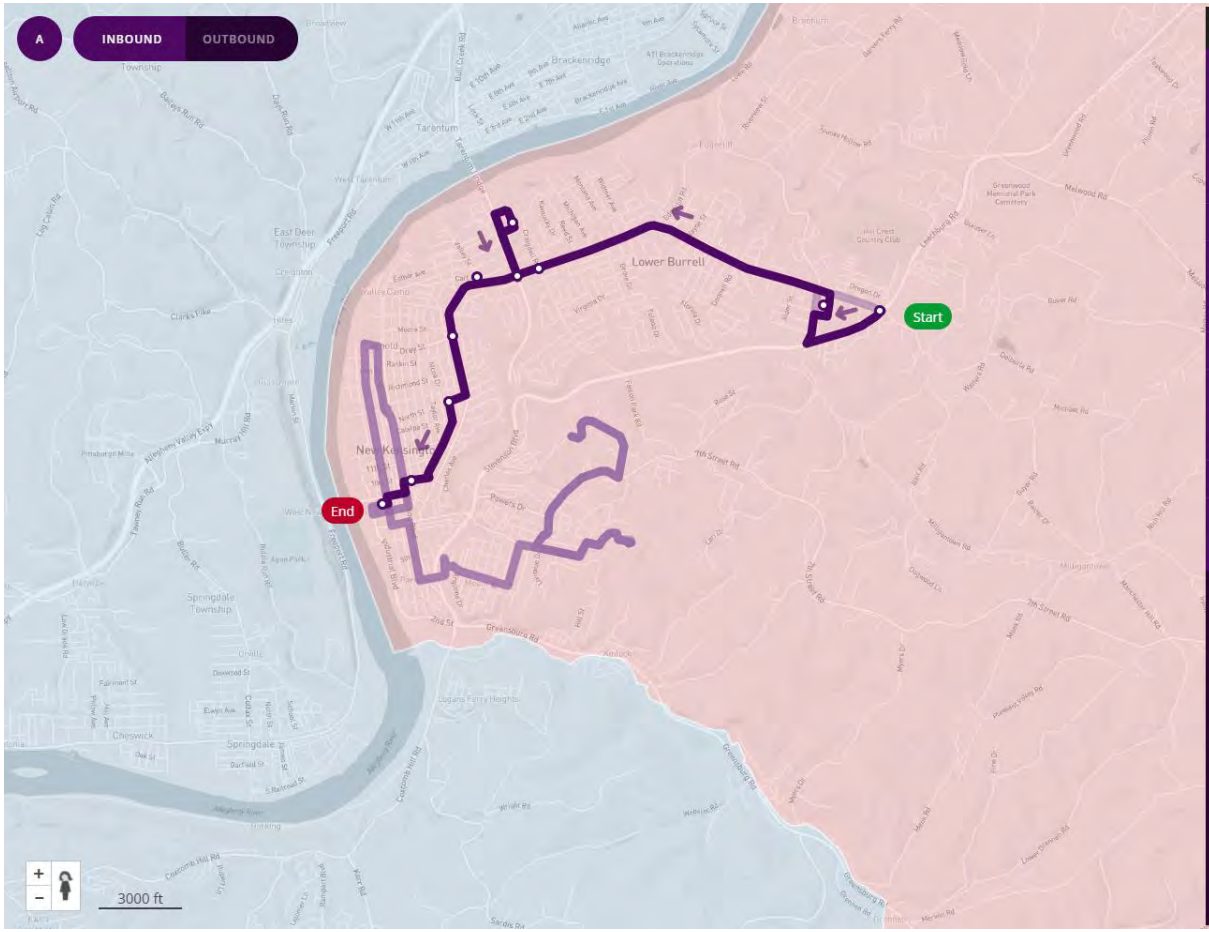
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

95.59 miles & 2 buses
$253.4k / year
2,534 hours / year
68,917 miles / year
$994 / weekday
9.94 hours / weekday
270.26 miles / weekday
15 stops, 7.35 miles apart
Within 0.25 mi of stops:
3,296 jobs
1,629 population

20.2% in poverty
0.8% limited English
9.3% minority
37.9% seniors (65+)
37.2% with disabilities
45.7% with no vehicles
7.4% youth (18-)


A
INBOUND
OUTBOUND
Start
End
2 mi
Back
Route 12 (Greensburg - New Kensingt
Weekday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
06:40 15:20 260 min 155.8 min 16.4 min 25.2 mph 2 buses 40.7%
Saturday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
— — — — — — — —
Sunday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
— — — — — — — —
65.44 miles & 2 buses
$229.5k / year
2,295 hours / year
52,465 miles / year
$900 / weekday
9.00 hours / weekday
205.75 miles / weekday
17 stops, 4.36 miles apart
Within 0.25 mi of stops:
3,059 jobs
3,814 population
23.2% in poverty
0.3% limited English
12.6% minority
20.0% seniors (65+)
19.4% with disabilities
24.2% with no vehicles
17.7% youth (18-)



← Back

Route 14 (Local New Kensington)

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
08:37	*17:36*	*49 min*	*52.4 min*	*4.3 min*	*14.9 mph*	*3 buses*	*33.7%*

Saturday

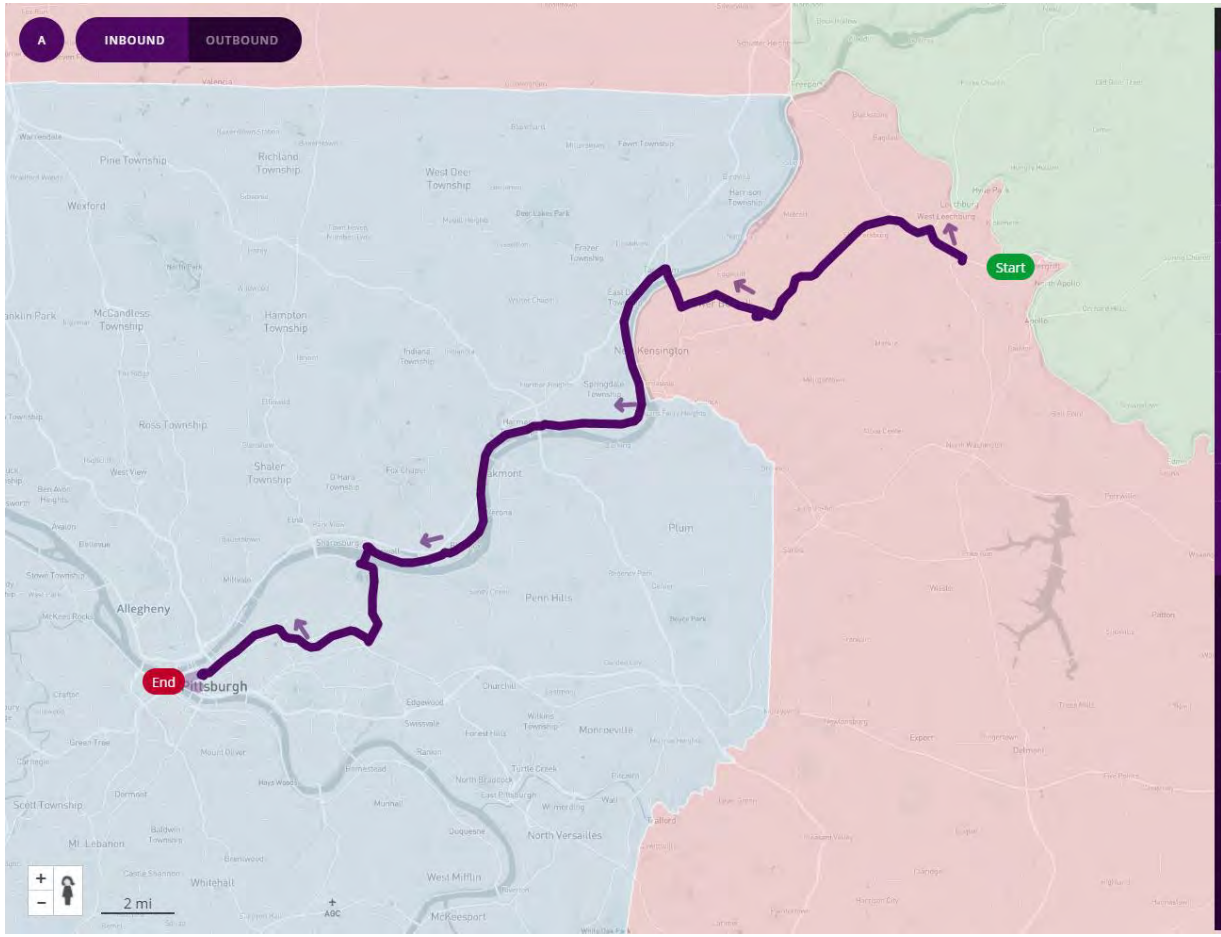
FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
08:37	17:20	140 min	127.4 min	12.7 min	6.1 mph	2 buses	53.1%

Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

13.00 miles & 3 buses
$290.1k / year
2,901 hours / year
34,258 miles / year
$937 / weekday
9.37 hours / weekday
123.13 miles / weekday
22 stops, 3,428 ft apart
Within 0.25 mi of stops:
2,784 jobs
10,583 population

26.2%	in poverty
1.0%	limited English
21.2%	minority
18.4%	seniors (65+)
21.3%	with disabilities
21.4%	with no vehicles
20.9%	youth (18-)



← Back

Route 14F (New Kensington - Pittsbur

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
06:15	*07:25*	*87 min*	*142.4 min*	*14.0 min*	*29.6 mph*	*1 bus*	*21.2%*

Saturday

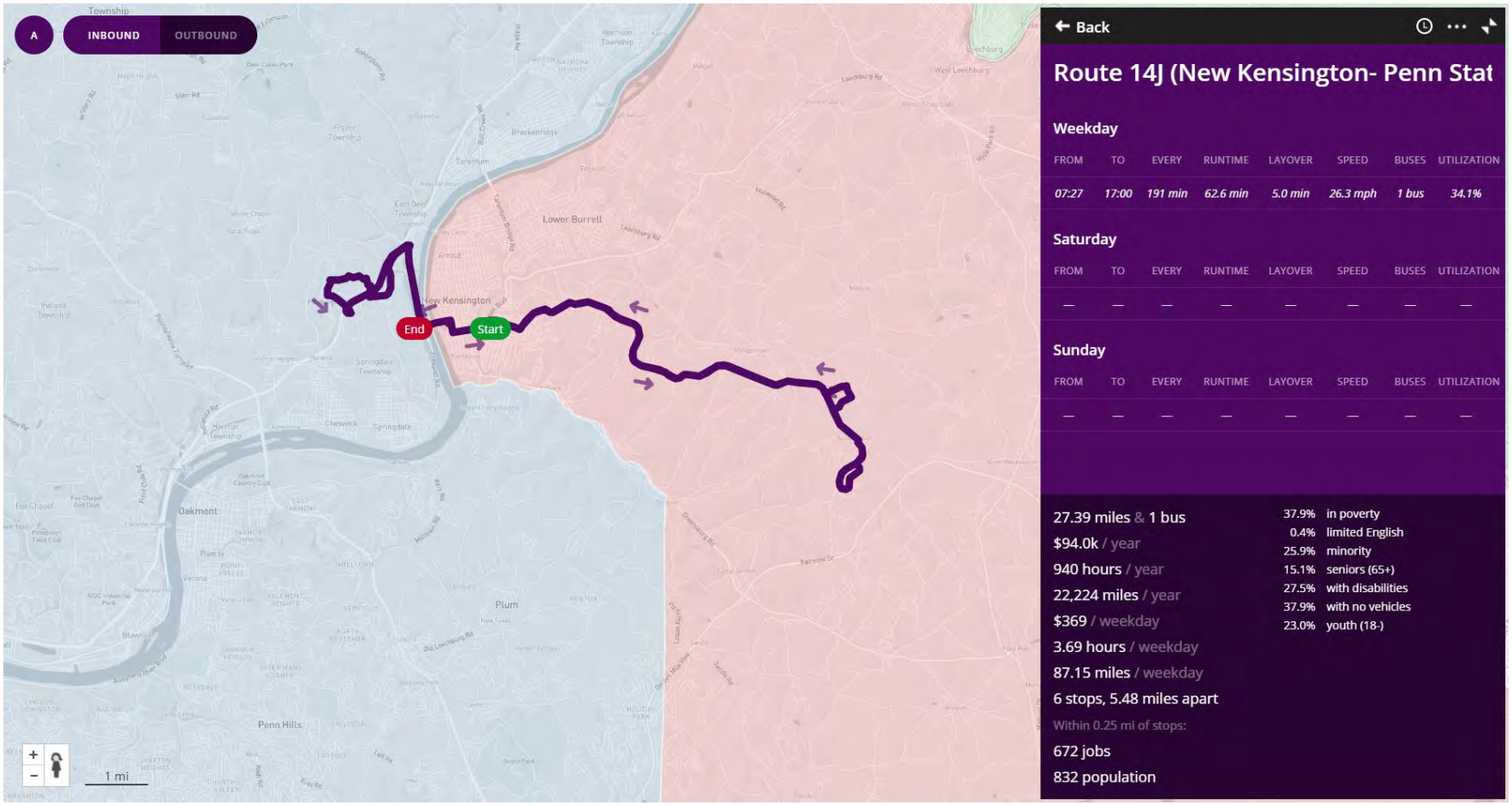
FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

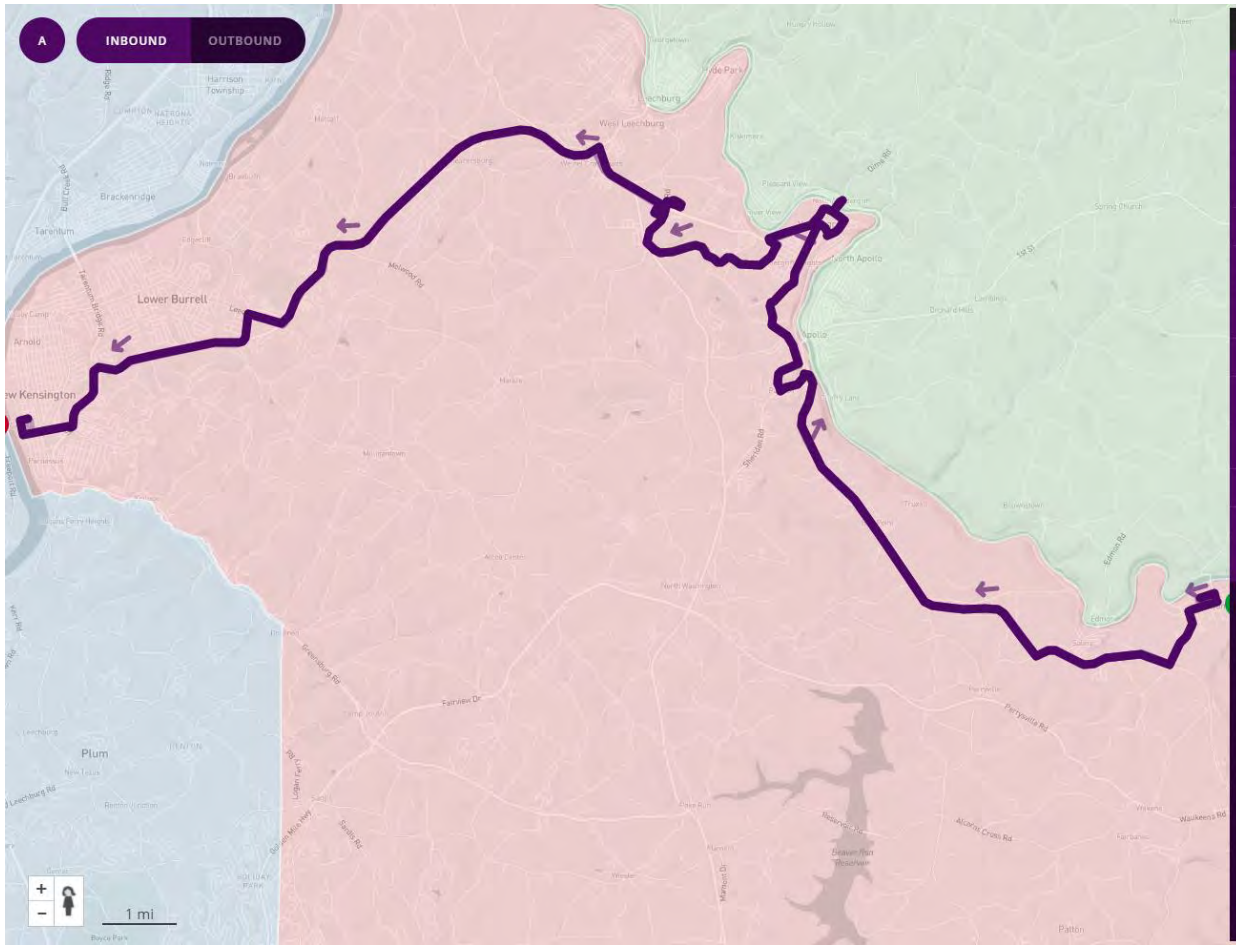
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

70.28 miles & 1 bus
$65.5k / year
655 hours / year
17,921 miles / year
$257 / weekday
2.57 hours / weekday
70.28 miles / weekday
109 stops, 3,466 ft apart
Within 0.25 mi of stops:
80,386 jobs
19,002 population

14.3% in poverty
2.6% limited English
15.0% minority
16.6% seniors (65+)
12.8% with disabilities
19.0% with no vehicles
13.5% youth (18-)


A
INBOUND
OUTBOUND
End
Start
Lower Burrell
New Kensington
Cheswick
Springdale
Oakmont
Plum
Penn Hills
1 mi
Back
Route 14J (New Kensington- Penn Stat
Weekday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
07:27 17:00 191 min 62.6 min 5.0 min 26.3 mph 1 bus 34.1%
Saturday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
— — — — — — — —
Sunday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
— — — — — — — —
27.39 miles & 1 bus
$94.0k / year
940 hours / year
22,224 miles / year
$369 / weekday
3.69 hours / weekday
87.15 miles / weekday
6 stops, 5.48 miles apart
Within 0.25 mi of stops:
672 jobs
832 population
37.9% in poverty
0.4% limited English
25.9% minority
15.1% seniors (65+)
27.5% with disabilities
37.9% with no vehicles
23.0% youth (18-)



← Back

Route 15 (Avonmore - New Kensingtor

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
08:05	*13:55*	*175 min*	*141.6 min*	*13.6 min*	*24.9 mph*	*1 bus*	*88.4%*

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

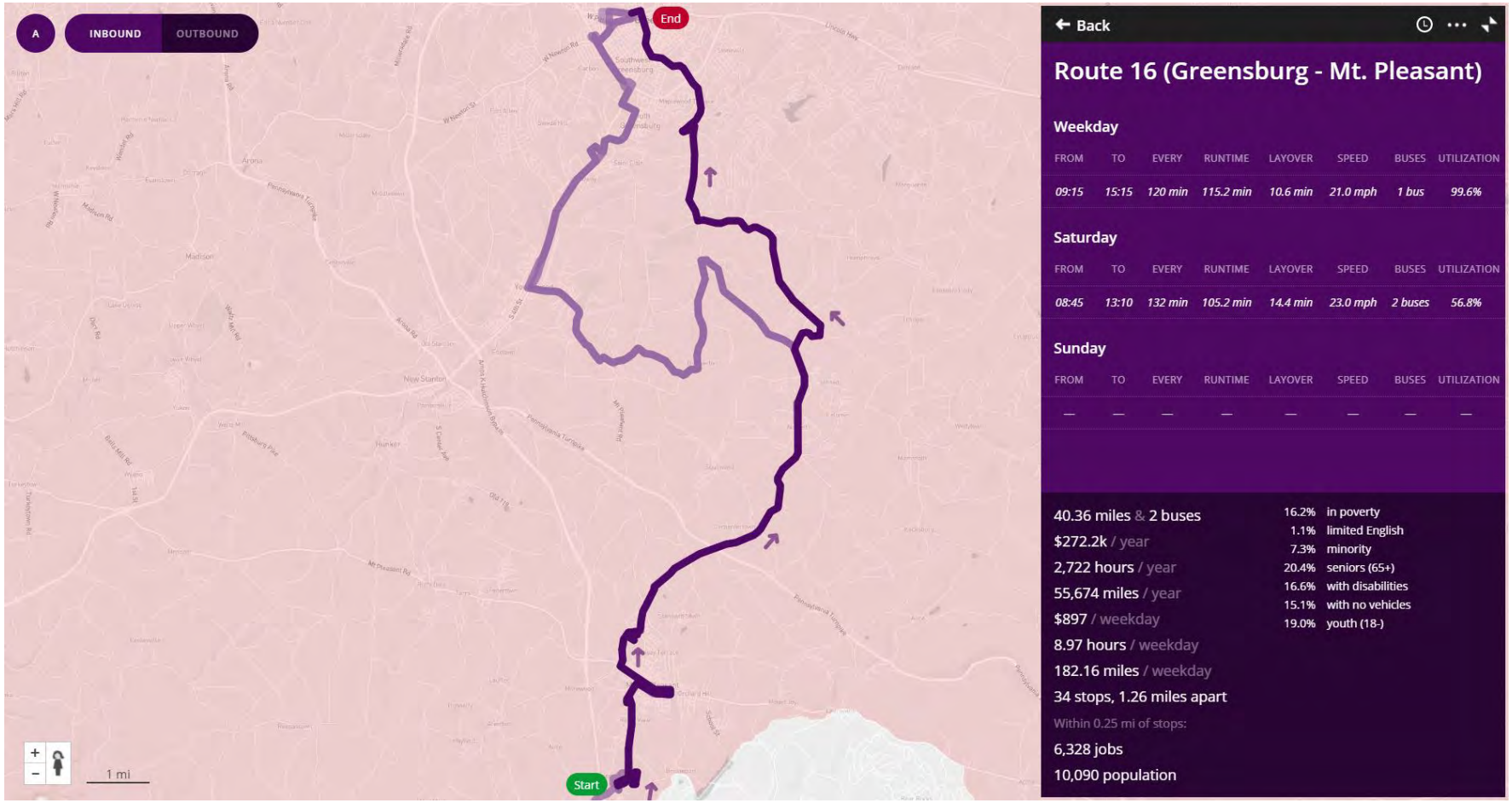
Sunday

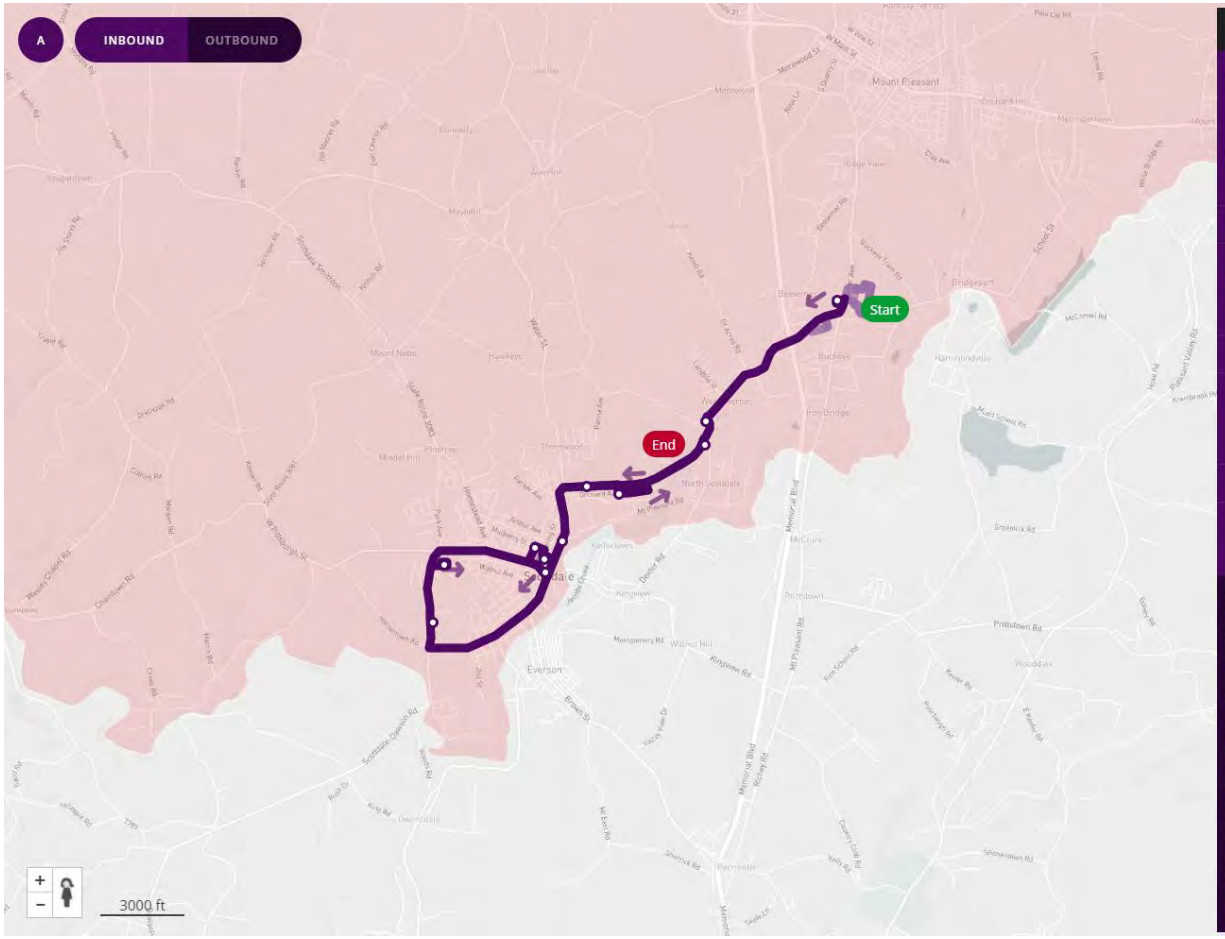
FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

58.87 miles & 1 bus
$190.3k / year
1,903 hours / year
42,965 miles / year
$746 / weekday
7.46 hours / weekday
168.49 miles / weekday
20 stops, 3.26 miles apart

Within 0.25 mi of stops:
1,280 jobs
4,449 population

23.7%	in poverty
0.3%	limited English
11.9%	minority
18.6%	seniors (65+)
18.8%	with disabilities
19.9%	with no vehicles
23.3%	youth (18-)


A
INBOUND
OUTBOUND
End
Start
1 mi
Back
Route 16 (Greensburg - Mt. Pleasant)
Weekday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
09:15 15:15 120 min 115.2 min 10.6 min 21.0 mph 1 bus 99.6%
Saturday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
08:45 13:10 132 min 105.2 min 14.4 min 23.0 mph 2 buses 56.8%
Sunday
FROM TO EVERY RUNTIME LAYOVER SPEED BUSES UTILIZATION
— — — — — — — —
40.36 miles & 2 buses
$272.2k / year
2,722 hours / year
55,674 miles / year
$897 / weekday
8.97 hours / weekday
182.16 miles / weekday
34 stops, 1.26 miles apart
Within 0.25 mi of stops:
6,328 jobs
10,090 population
16.2% in poverty
1.1% limited English
7.3% minority
20.4% seniors (65+)
16.6% with disabilities
15.1% with no vehicles
19.0% youth (18-)



← Back

Route 17 (Local Scottdale)

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
08:35	*15:20*	*101 min*	*36.9 min*	*3.8 min*	*24.5 mph*	*2 buses*	*28.7%*

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

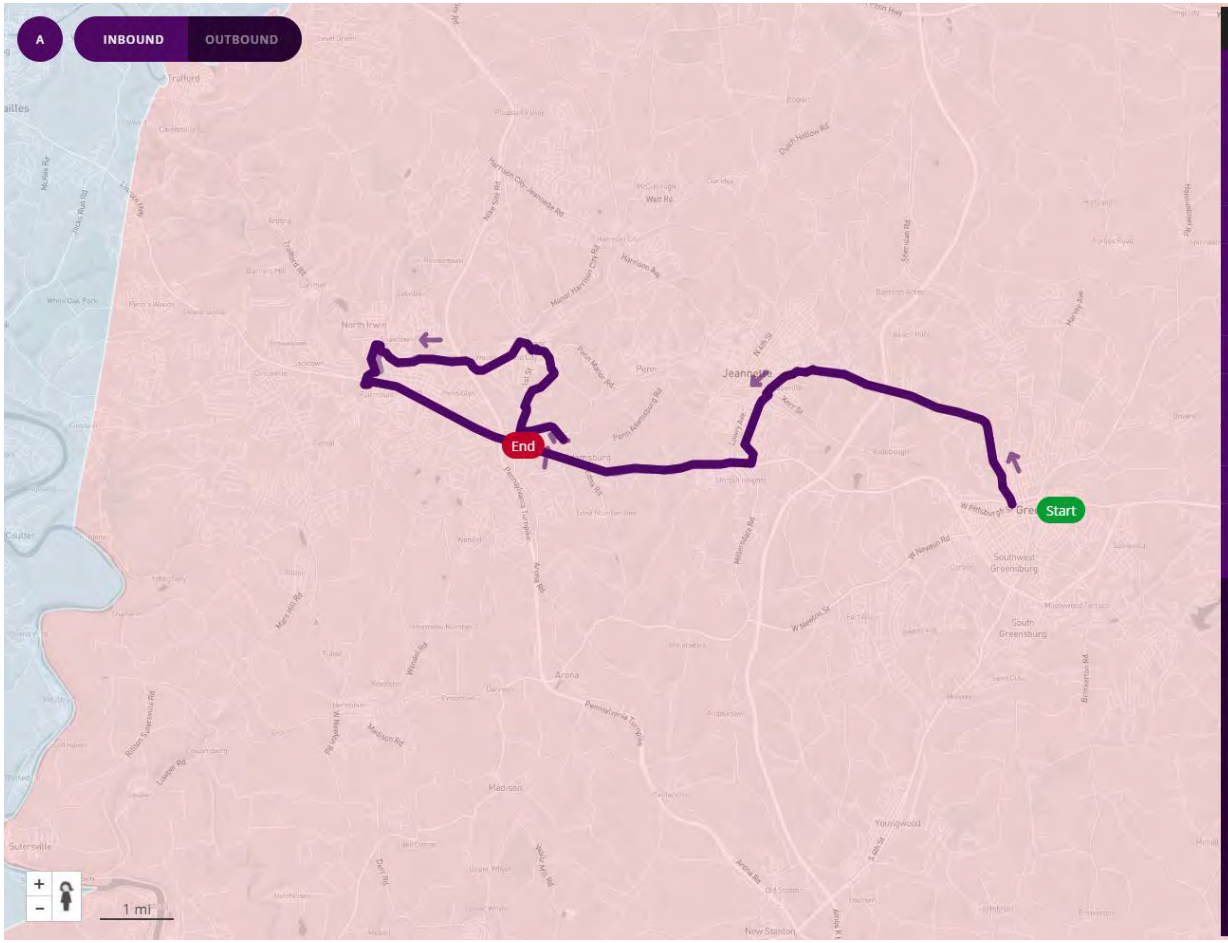
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

15.03 miles & 2 buses
$105.7k / year
1,057 hours / year
17,226 miles / year
$414 / weekday
4.14 hours / weekday
67.55 miles / weekday
20 stops, 4,384 ft apart

Within 0.25 mi of stops:
1,419 jobs
2,493 population

10.0%	in poverty
0.0%	limited English
4.2%	minority
20.4%	seniors (65+)
14.9%	with disabilities
9.3%	with no vehicles
20.2%	youth (18-)



← Back

Route 18F (Irwin - Greensburg)

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
06:05	08:15	130 min	71.2 min	6.4 min	28.8 mph	1 bus	82.5%

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

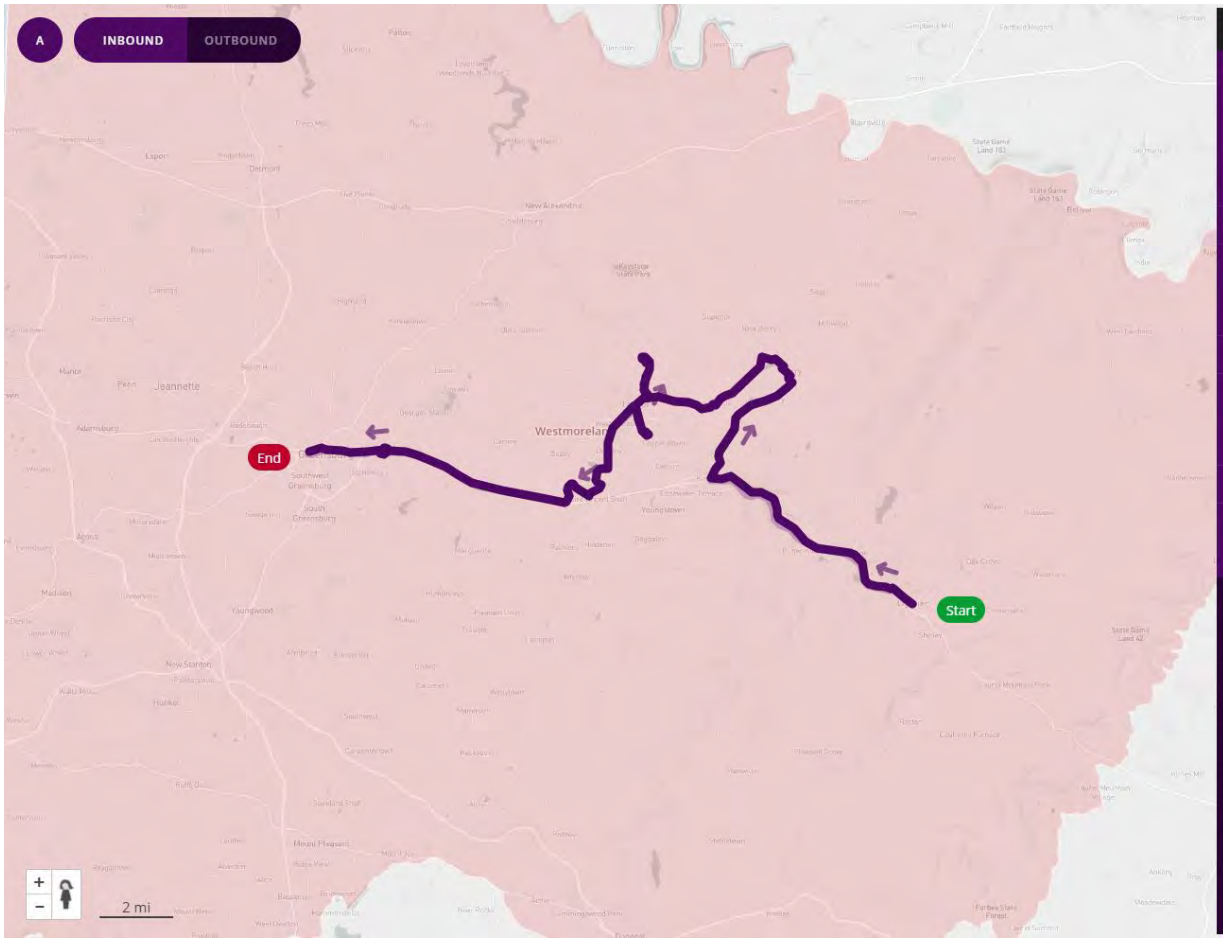
Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

34.19 miles & 1 bus
$59.8k / year
598 hours / year
15,482 miles / year
$235 / weekday
2.35 hours / weekday
60.71 miles / weekday
26 stops, 1.42 miles apart

Within 0.25 mi of stops:
3,067 jobs
4,689 population

12.9%	in poverty
0.2%	limited English
3.5%	minority
16.6%	seniors (65+)
17.3%	with disabilities
16.5%	with no vehicles
20.1%	youth (18-)



← Back

Route 20F (East Flyer)

Weekday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
06:40	*08:05*	*106 min*	*169.1 min*	*16.9 min*	*23.5 mph*	*1 bus*	*26.9%*

Saturday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

Sunday

FROM	TO	EVERY	RUNTIME	LAYOVER	SPEED	BUSES	UTILIZATION
—	—	—	—	—	—	—	—

66.32 miles & 1 bus
$79.0k / year
790 hours / year
16,913 miles / year
$310 / weekday
3.10 hours / weekday
66.32 miles / weekday
24 stops, 3.01 miles apart

Within 0.25 mi of stops:
4,236 jobs
5,620 population

17.8%	in poverty
0.4%	limited English
6.7%	minority
20.7%	seniors (65+)
16.1%	with disabilities
15.3%	with no vehicles
17.3%	youth (18-)