

BELOMAR REGIONAL MULTIMODAL STUDY

Improving walking, biking, and public transportation
in Belmont, Ohio, and Marshall Counties



Prepared by the Belomar Regional Council

Foreword:

A statement from the Belomar Regional Council:

This study was built to solve real problems. Across our region, many residents, especially those in zero vehicle households, rely on public transit or walk to reach jobs, services, and basic needs—often without safe, connected, or reliable infrastructure. For these individuals, mobility is more than convenience; it’s a daily challenge that shapes opportunity.

The Belomar Regional Multimodal Study provides a clear framework for addressing these challenges. It focuses on transit and transit supportive infrastructure while identifying high-priority areas to focus resources where transportation barriers are greatest and demand is highest. These insights are practical and actionable.

The study draws on detailed local data, public input, and agency collaboration to recommend strategies that improve access, safety, and connectivity. It also fulfills the bicycle and pedestrian planning requirements of our long-range metropolitan transportation plan, while positioning the region to compete for discretionary grants and strategic funding opportunities.

What follows is not a shelf document. It’s a practical, usable plan designed to inform decisions and drive implementation. We thank the community members, local partners, and stakeholders who helped shape it—and we look forward to putting it to work.

Sam Richardson

Belomar Regional Council
Transportation Planning Director



Mural along the Wheeling Heritage Trail

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CHAPTER 1: STUDY OVERVIEW

The Belomar Multimodal Study was created through a comprehensive, cooperative, and continuing planning process alongside the Belomar 2050 Metropolitan Transportation Plan.

Read to learn more about the study's approach, goals, and recommendations.



Study Overview

This study builds on recent momentum to improve bicycle, pedestrian, and transit infrastructure across Belmont, Ohio, and Marshall counties. Local citizens and leaders drove this project through continuous feedback about their transportation experiences and were essential for guiding this study's analyses and recommendations. This collaborative process helped produce a study that can guide transportation planning for years to come.

Need for Multimodal Transportation

The Belomar Region consists of three counties (Belmont, Ohio, and Marshall County) across two states (Ohio and West Virginia). Characterized by the Appalachian Hills and Ohio River, the region's landscape is striking, but it also presents many challenges. Topography, rivers, and streams mean most communities are nestled in sparse flat areas with limited connectivity between them. This is exactly the challenge this study is taking on.

Many of the region's residents rely on walking, biking, and public transportation everyday to get to work, to run errands, or for recreation, and are met with many barriers and hazards they need to overcome. This study will focus on local improvements that could be made to improve the quality and safety of these transportation options, and better connect our people to their communities and to each other.

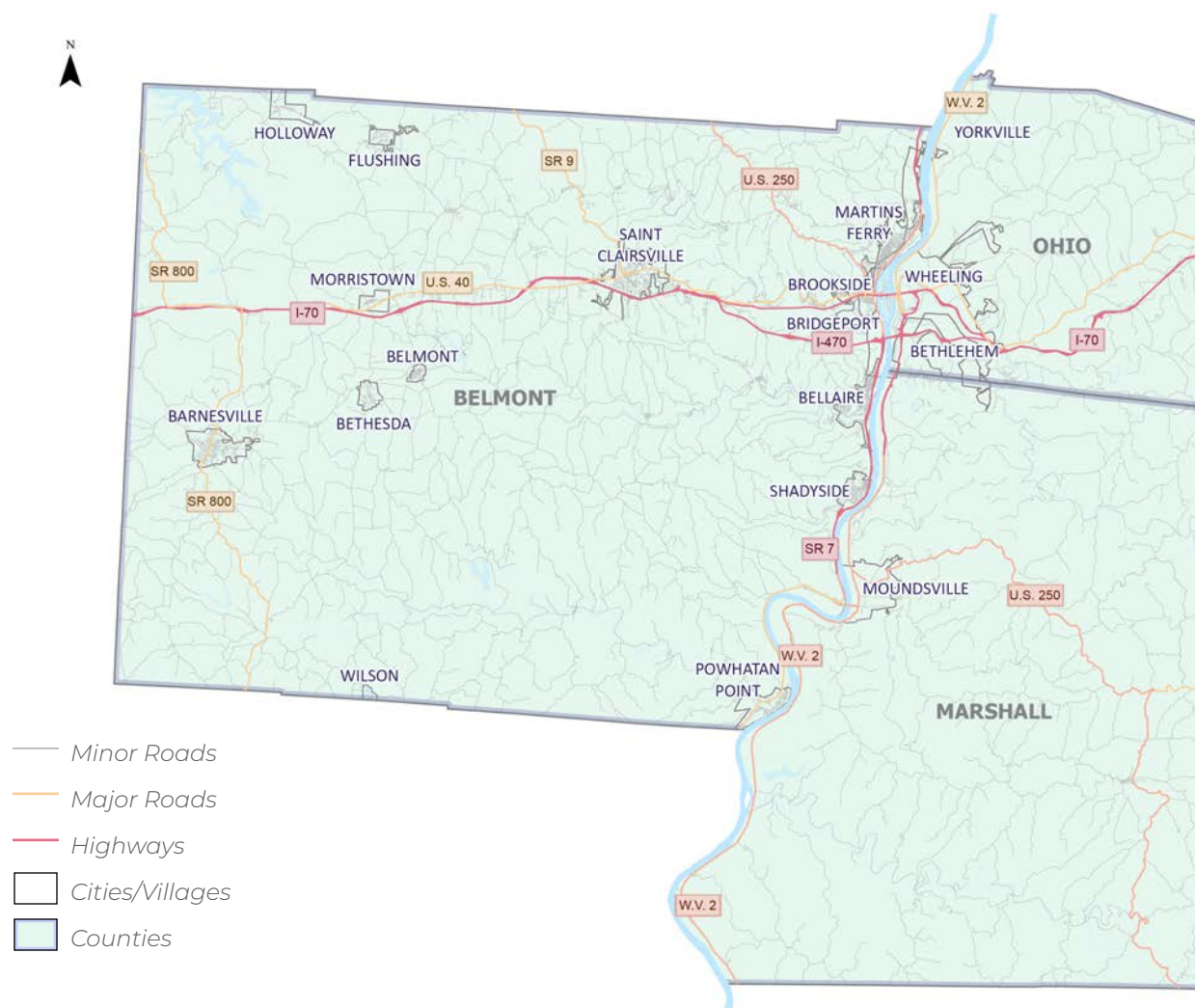


Figure 1. The Belomar Region's major roads, cities/villages, and counties

Regional Planning History

Local, regional, and statewide planning and service agencies focus their efforts on improving the communities they serve. In recent years, these agencies have prepared documents through extensive planning processes to identify needs and propose practical solutions. This work serves as a foundation of public engagement, planning analysis, and best practices for Belomar to follow and build on.

The following documents were collected and reviewed to understand the long history of planning work within the Belomar Region:

Local Plans

1. *Envision Wheeling Comprehensive Plan (2014)*

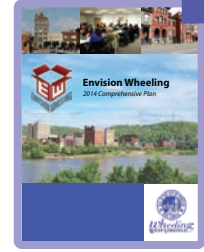
- Defines a vision for the city’s future and identifies steps, and strategies for progress.
- Identifies active transportation and public transit as key components to developing in a more sustainable and modern way.
- Calls for strong community and regional partnerships to make reaching these goals possible.
- Plan update coming in 2025.

2. *Wheeling Access Plan (2019)*

- Analyzes non-motorized trip patterns and identifies locations that are currently disconnected due to topography or lack of infrastructure.
- Lists common-sense improvements that could be made to make walking, biking, and using transit more safe, efficient, and enjoyable.

Local & Regional

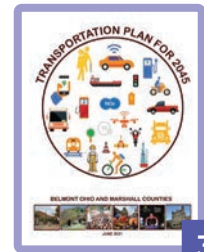
2014



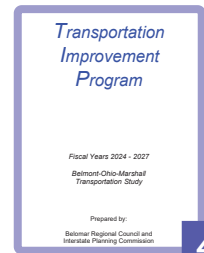
2019



2021



2022

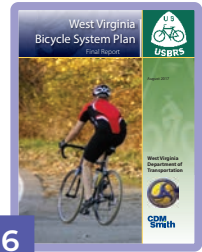


2023



Statewide

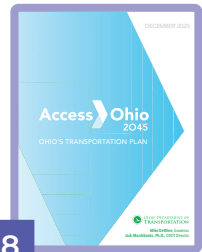
2017



2021



2021



2021

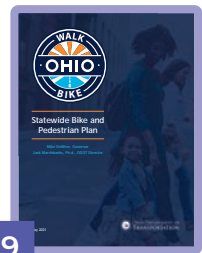


Figure 2. Local, Regional, and Statewide multimodal planning timeline

Regional Plans

3. Belmont-Ohio-Marshall Counties Transportation Plan for 2045 (2021)

- This long-range transportation plan for the Wheeling-Bridgeport Metropolitan Planning area promotes economic development through the safe and efficient movement of people and freight.
- Recommendations focus on creating livable communities through streetscaping, bike/ped facilities, and improved transit.

4. BOMTS Transportation Improvement Plan 2024-2027 (2022)

- This transportation improvement plan for the Belmont-Ohio-Marshall Transportation Study (BOMTS) identifies projects to maintain and improve infrastructure through 2027.
- Transit projects included through 2027 are primarily intended to maintain existing services.

5. WVDOT Coordinated Public Transit - Human Service Plan for Region X (2023)

- Region X (Marshall, Ohio, and Wetzel Counties) worked with the West Virginia Department of Transportation to focus on access to human services, jobs, and goods for transit dependent populations.
- Agency coordination and public information/education campaigns were among many strategies outlined.
- Public information strategies included real-time bus tracking through an application and online information about existing service and service changes.
- It was recommended that existing service levels should be maintained, but extending hours of operation is critical for transit dependent users.

Statewide Plans

6. West Virginia Bicycle System Plan (2017)

- This West Virginia Dept. of Transportation (WVDOT) planning study identifies regional connections for on-street signed bike routes utilizing the state highway system.
- This plan was an effort to expand bike connections in a state where bike transportation was exceedingly difficult.
- Identifies 12 WV Cross State Bicycle Routes.

7. 2050 West Virginia Statewide Long-Range Transportation Plan (2021)

- WVDOT emphasized the need to improve transit services across the state.
- Established a statewide focus on sidewalks, pedestrian connections, bike signage, and improved bus amenities.

8. Access Ohio (2021)

- The Ohio Dept. of Transportation (ODOT) statewide plan for all modes in Ohio, including transit and active transportation.
- This plan outlines strategies for local and regional agencies to improve mobility in their communities. These strategies include inter-regional coordination, public education, and last mile services.

9. Walk.Bike.Ohio (2021)

- The Ohio Dept. of Transportation's (ODOT) bike and pedestrian plan to improve safety and mobility across the state.
- Establishes an ODOT task force for developing complete streets guidance.
- Asks locals to identify needs, develop active transportation plans, and educate people to improve mobility in their communities.

Project Purpose

The Belomar Multimodal Study was developed in tandem with the 2050 Metropolitan Transportation Plan (see Figure 3) in an effort to identify actionable steps toward improving walking, biking, and transit transportation across the three county region. Extensive research, engagement, and analyses were all focused on making progress toward three main goals.

This plan does more than just fulfill the bicycle and pedestrian planning requirements of Belomar’s upcoming Metropolitan Transportation Plan. It documents a collaborative and comprehensive planning process and presents results and recommendations that empower our communities to start making progress. Recommendations are organized by community to encourage incremental implementation across the region. Counties, cities, and villages are encouraged to closely coordinate with Belomar Regional Council, the Ohio Valley Regional Transit Authority (OVRTA)/ Eastern Ohio Regional Transportation Authority (EORTA) to leverage this document in pursuit of state and federal grant funding.

Goal #1:

“ Pinpoint **quick-win infrastructure projects** at the community level that improve walkability and access to public transportation. ”

Goal #2:

“ Propose **transit service strategies** to improve transit experience, service, and connectivity to key points of interest within the transit service area. ”

Goal #3:

“ Identify **visionary active transportation opportunities**, and use study findings to empower communities to fund future projects and plans to implement them. ”

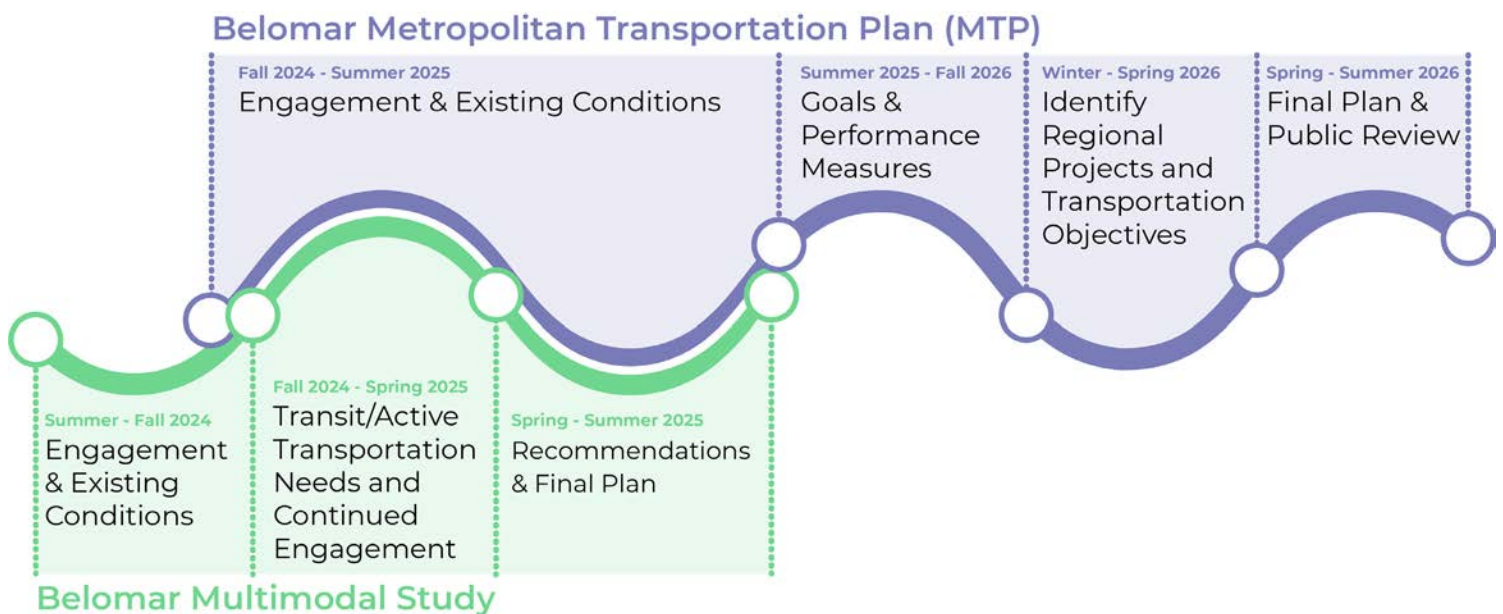


Figure 3. Belomar Multimodal Study and Metropolitan Transportation Plan Unified Project Schedule

Study Outcomes

The Belomar Multimodal Study lays a strong foundation for building a safer, more connected, and more accessible regional transportation network. This study reflects a collaborative and community-driven process that responds directly to local mobility needs. It draws from recent planning efforts, ongoing agency initiatives, and public feedback to chart a course toward more inclusive multimodal options in Belmont, Ohio, and Marshall counties.

As the study moves into specific findings and recommendations, communities are encouraged to use this document as a resource to coordinate across agencies, pursue funding, and take incremental steps toward a more multimodal future for the Belomar region.

Noteworthy elements of the Belomar region and the development of this study include:

- The region's geography presents real barriers to connectivity, particularly for people walking, biking, or using transit. Addressing these challenges will require targeted, community-scale investments.
- A strong foundation of prior planning work exists—from city plans to statewide strategies—which this study builds upon to create actionable, locally relevant recommendations.
- The study is designed for implementation, with goals focused on quick wins, improved transit connectivity, and long-range active transportation visioning.



Multimodal Infrastructure in Downtown Wheeling

CHAPTER 2: EXISTING CONDITIONS

A complete system makes room for all users. Analysis and public feedback were used together to create a more comprehensive understanding of our multimodal network.

This chapter identifies network gaps and needs, then outlines opportunities to address them.



Regional Context

The Belomar region faces unique challenges connecting people to the local economy and essential services. Understanding the population and regional planning history helps inform where and how expanding active transportation and transit can directly improve regional quality of life.

Study Area

At the heart of the Belomar Region is Wheeling, WV. Wheeling is home to many jobs, recreational attractions, and essential services that are needed by residents across Belmont, Ohio, and Marshall counties. But for those living in other cities or rural areas, accessing these services outside of their communities remains a challenge.

Today, getting around the region without a vehicle can be difficult or impossible, unless they have access to suitable transit, bicycle, and pedestrian facilities. This leaves many residents one flat tire away from significant hardships. Improving walking, biking, and transit can give residents options to navigate their communities, especially for older residents and those without a personal vehicle.

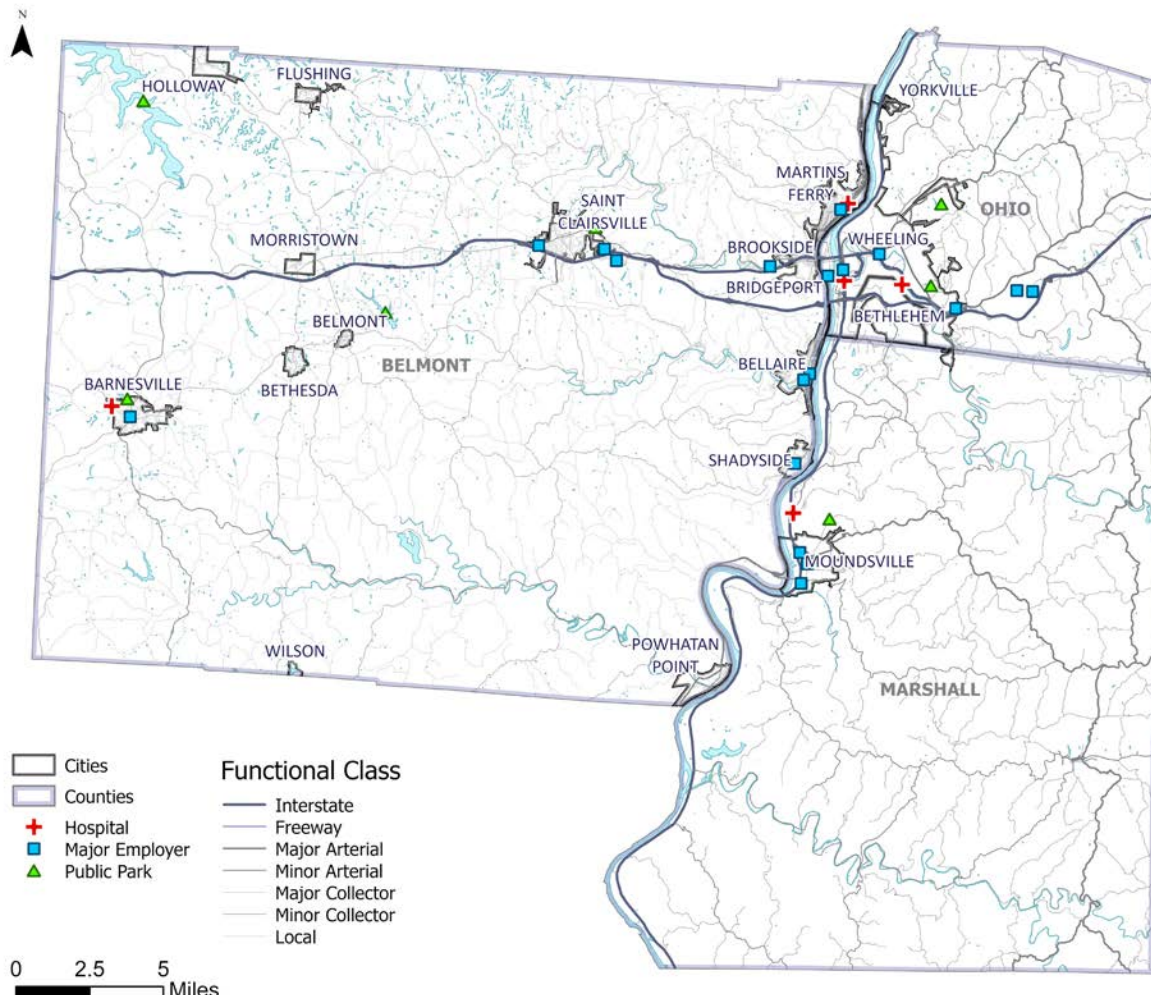


Figure 4. The Belomar Region and its cities/villages, major services, and recreational assets

Population

Belomar’s densest cities/villages fall along the Ohio River and Interstate 70, where existing transit services and bike/pedestrian facilities are most concentrated. Outside of these denser areas, large areas of Belmont County and eastern Marshall and Ohio County are low density rural foothills, with limited options for alternative transportation.

Additionally, the region is home to 137,000 residents where over 4,700 (8.5%) of households do not own a vehicle and are required to be reliant on alternate modes or carpooling to get around. For comparison, this is more than Ohio (7.4%) and near West Virginia’s (9%) statewide averages.

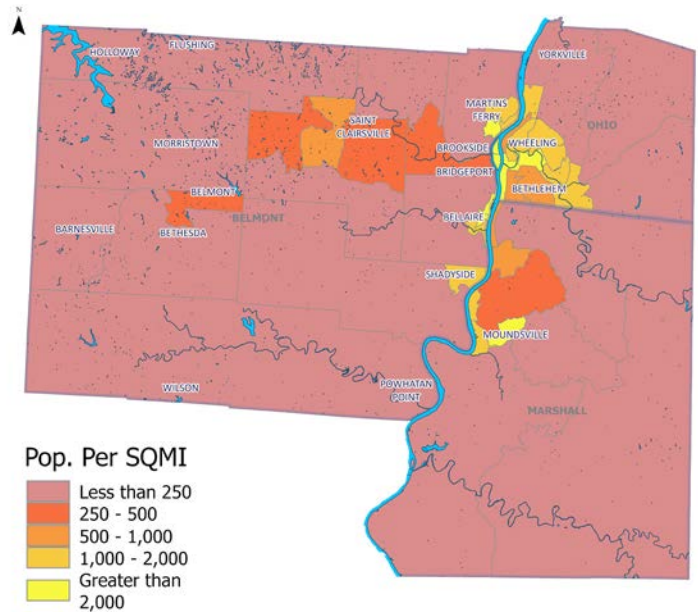


Figure 5. 2022 Population Density of Belomar Region (U.S. Census)

Commuting Patterns

Driving is the only feasible option most residents have due to the rural nature of the region and how limited transit services are outside of Wheeling. This shows when analyzing the population’s commuting patterns:

- Overall, 91.5% of workers drive alone or carpool to get to work. Driving alone is the most common choice by a wide margin.
- However, not everyone drives. Today, over 2,000 people walk, bike, or use transit to get to work each day.
- Today, nearly 5% of workers work from home, far less than the national average. The Bureau of Labor Statistics reported that 35% of employed people nationwide did some or all of their work at home.
- Nearly 30% of Belomar residents travel more than 30 minutes each day, likely to cities outside the region including Pittsburgh, Morgantown, Marietta, and Columbus.

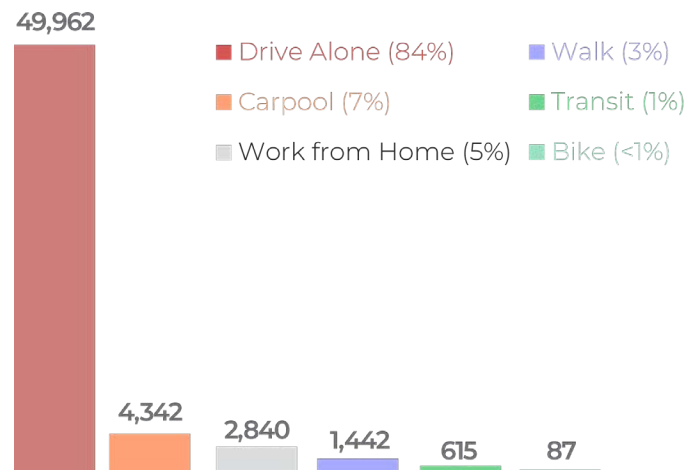


Figure 6. Mode choice of work commutes (U.S. Census)

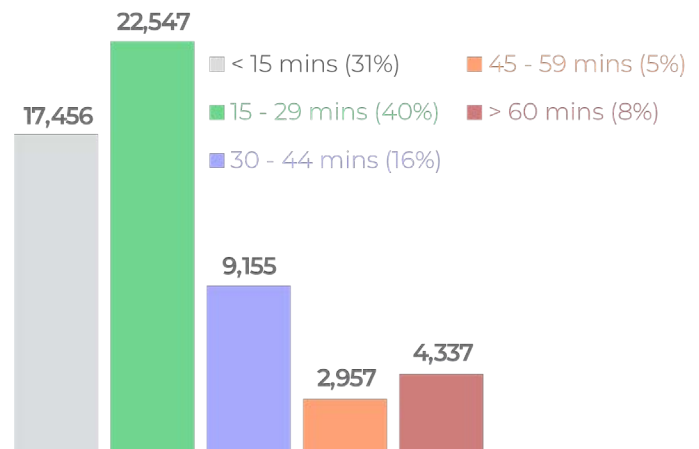


Figure 7. Travel time of work commutes (U.S. Census)

Longitudinal Employer-Household Dynamics (LEHD) data is a location-based commuter resource produced by the U.S. Census. This tool allows us to explore how interconnected Belomar's local economies are, and how many residents are commuting across county lines each day. **Figure 8** summarizes these results.

Overall, the majority of Belomar residents live and work within the region, but counties share a significant amount of each other's workforce. Over 13,600 workers, 36% of the population, commute outside of their county to work somewhere else within the Belomar region. Of that, over 9,000 workers commute into Ohio county from Belmont or Marshall County; presenting an opportunity for transit to be a successful commuting option.

Regional Commute Patterns

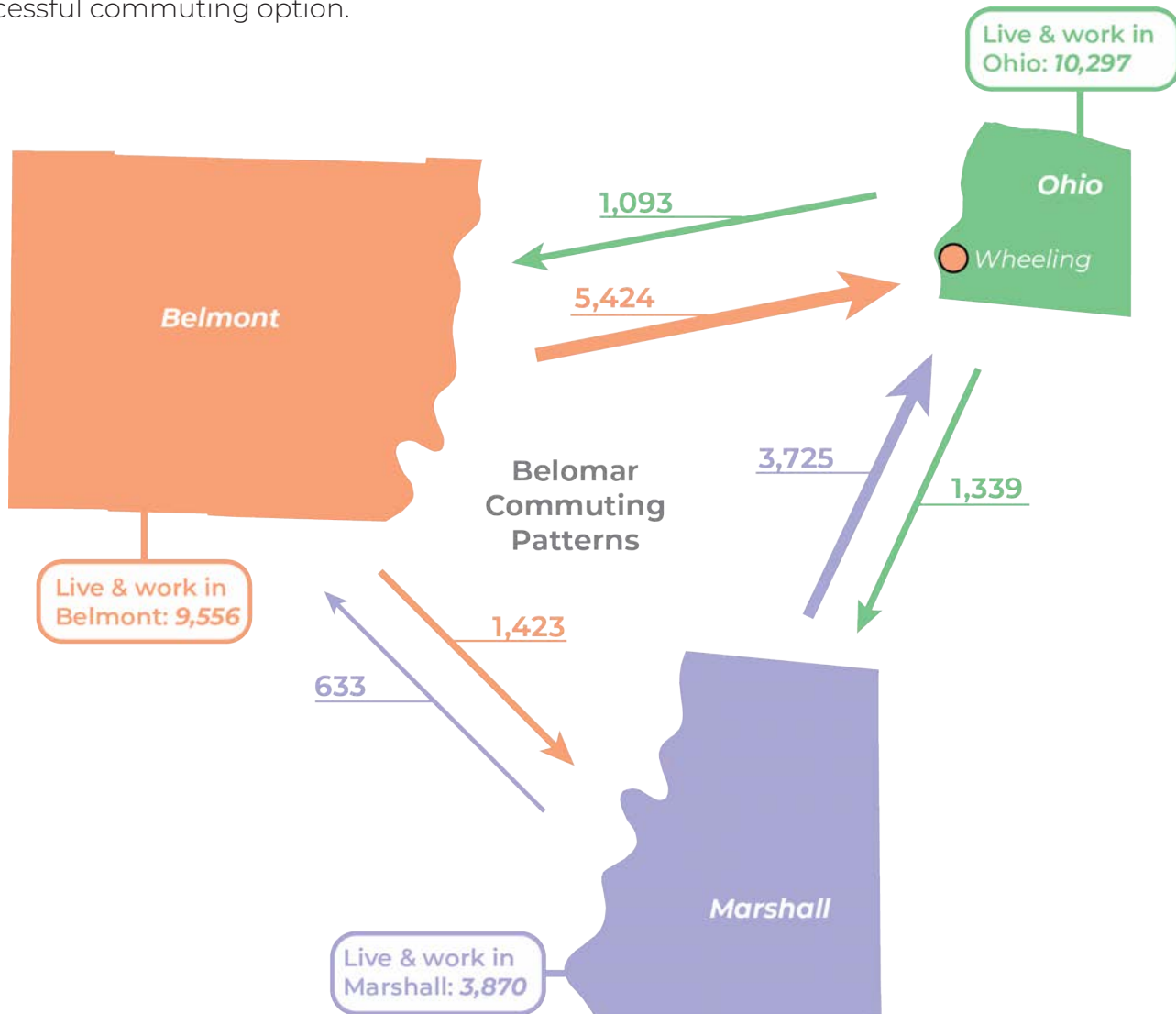
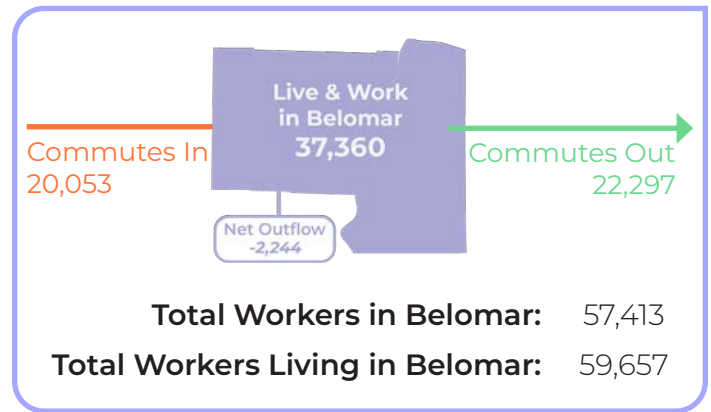


Figure 8. Travel time of work commutes (U.S. Census)

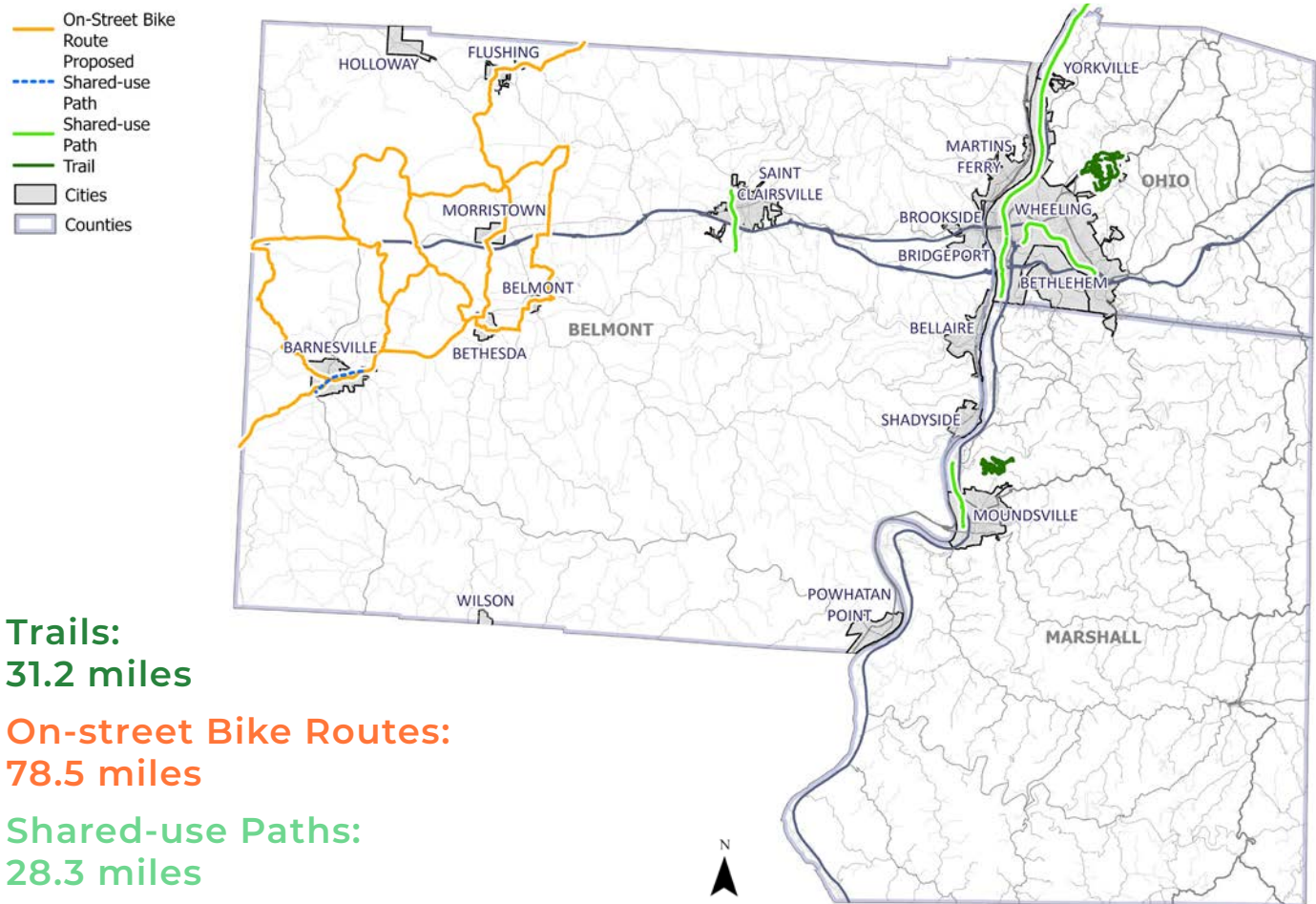
Multimodal System Summary

Walking and biking are more than recreational activities. Active streets are a sign of a vibrant local economy and connected communities. Trail connections between cities and villages can offer a new option for those who need to get to work or complete errands, but can't or choose not to drive. This section will look at the existing multimodal system of the Belomar Region.

Active Transportation

The region is home to trails and paths that are used by thousands of residents each year, despite topographic challenges. The Wheeling Heritage trail and St. Clairsville National Road Bikeway are fantastic examples of separated trails that cross and connect communities together. Despite these existing facilities, rural connections remain limited and difficult to navigate.

Bike Route 95 and the Eastern Ohio Backroad Biking loop in Belmont County are on-street regional connections in western Belmont County. These offer recreation and transportation between villages, but on-street facilities aren't for everyone, as less confident cyclists may not use them. Expanding low-stress connections between more rural areas and villages could greatly improve the region's multimodal network.



Trails:
31.2 miles

On-street Bike Routes:
78.5 miles

Shared-use Paths:
28.3 miles

Figure 9. Belomar regional multimodal network

Bike Facility and Trail Accessibility

Figure 10 overlays regional population distribution with the existing bike and trail facilities. When we do this, the following patterns and gaps begin to emerge:

- Facilities are in the most populated cities: Wheeling, St. Clairsville, and Moundsville.
- Access to bike and trail facilities is still limited. Today, 70% of the region's population is more than a mile from the nearest trail/path.
- Connections to west Marshall County, east Ohio County, and between Morristown and Wheeling can greatly expand regional multimodal access. This is especially critical for areas with low vehicle ownership.

| | Facility Name | *Pop. within 1 mi | % Region Pop. |
|---|---------------------------------------|-------------------|---------------|
| ① | Wheeling Heritage Trail | 30,700 | 22.4% |
| ② | St. Clairsville National Road Bikeway | 2,800 | 2.0% |
| ③ | Glen Dale to Moundsville Rail Trail | 4,700 | 3.4% |
| ④ | Barnesville Trail | 1,100 | 0.8% |
| ⑤ | Bike Route 95 | 5,900 | 4.3% |
| ⑥ | Eastern Ohio Back Road Biking | 7,100 | 5.2% |
| ⑦ | Oglebay Resort Trails | 3,400 | 2.4% |
| ⑧ | Grand Vue Trails | 3,200 | 2.3% |
| | Total | 52,000 | 37.9% |

Table 1. Pop. with access to bike/ped facilities (U.S. Census)

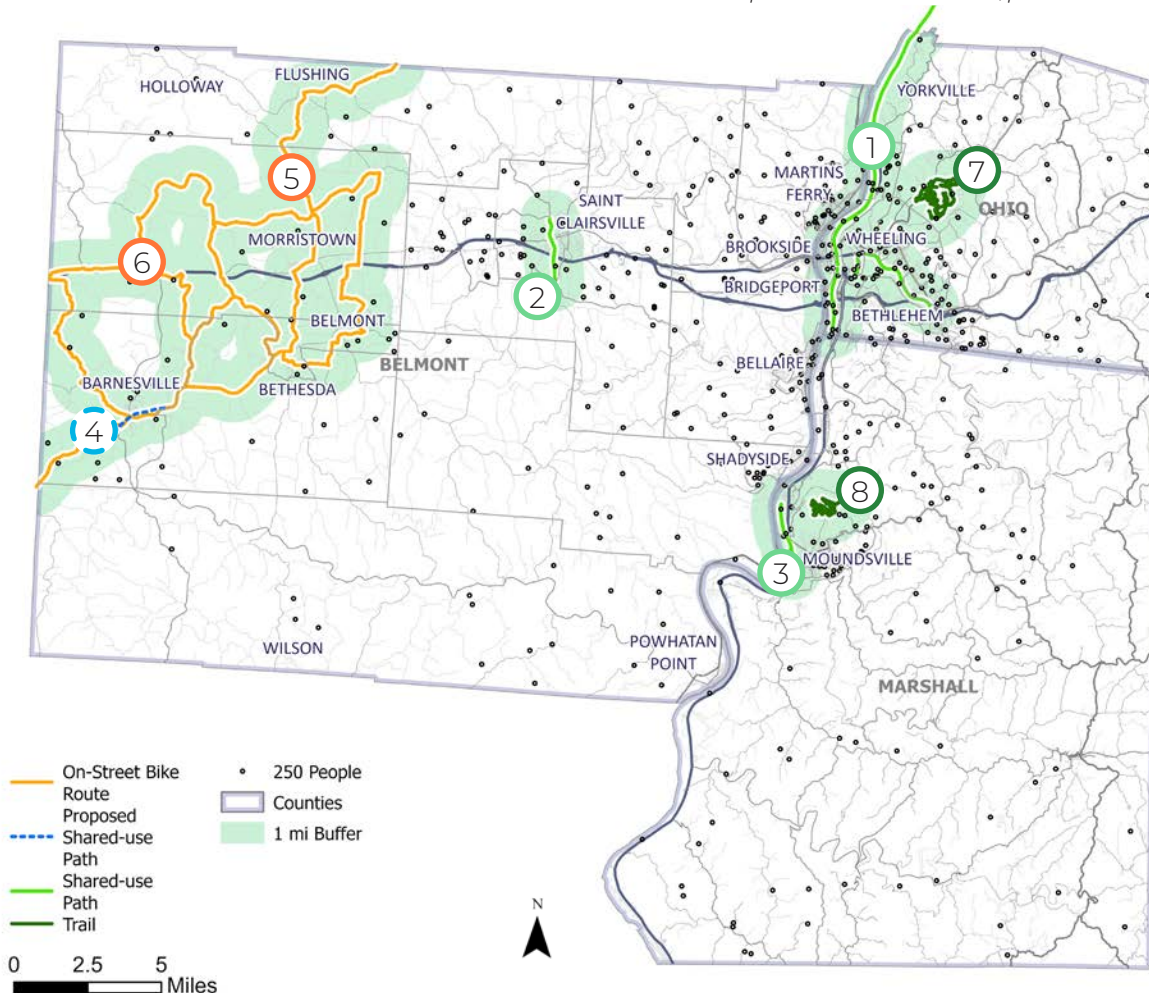


Figure 10. Population within one mile of multimodal facility (dots do not represent exact location)

Bike and Pedestrian Activity

Today, people are finding places to be active, even though walking and biking infrastructure is concentrated in a few locations. StreetLight origin-destination data was used to identify areas where bike and pedestrian activity is happening.

StreetLight is a transportation analysis tool that utilizes location based data sources (i.e. cellphones and GPS) to estimate travel patterns. This data gives us unique insights into where people are traveling, what routes are most commonly taken, and how many people are walking, biking, or driving. Below are takeaways from the StreetLight bike and pedestrian origin-destination analysis:

- There is high pedestrian activity in large commercial developments like the Ohio Valley Mall and the Highlands shopping center. This may be capturing trips of patrons, but stakeholder feedback has confirmed that residents commonly use these location for recreation and exercise.
- A vast majority of non-motorized trips are made by foot rather than bike. Overall, average daily bicycle trips are fairly low across the region. Trips are most concentrated along the Wheeling Heritage Trail. This data does rely on cellphone data, which can miss residents.
- Trips between origin-destination pairs are limited. Most trips are made within small districts. These trips should be supported with pedestrian facilities like sidewalks and crosswalks.

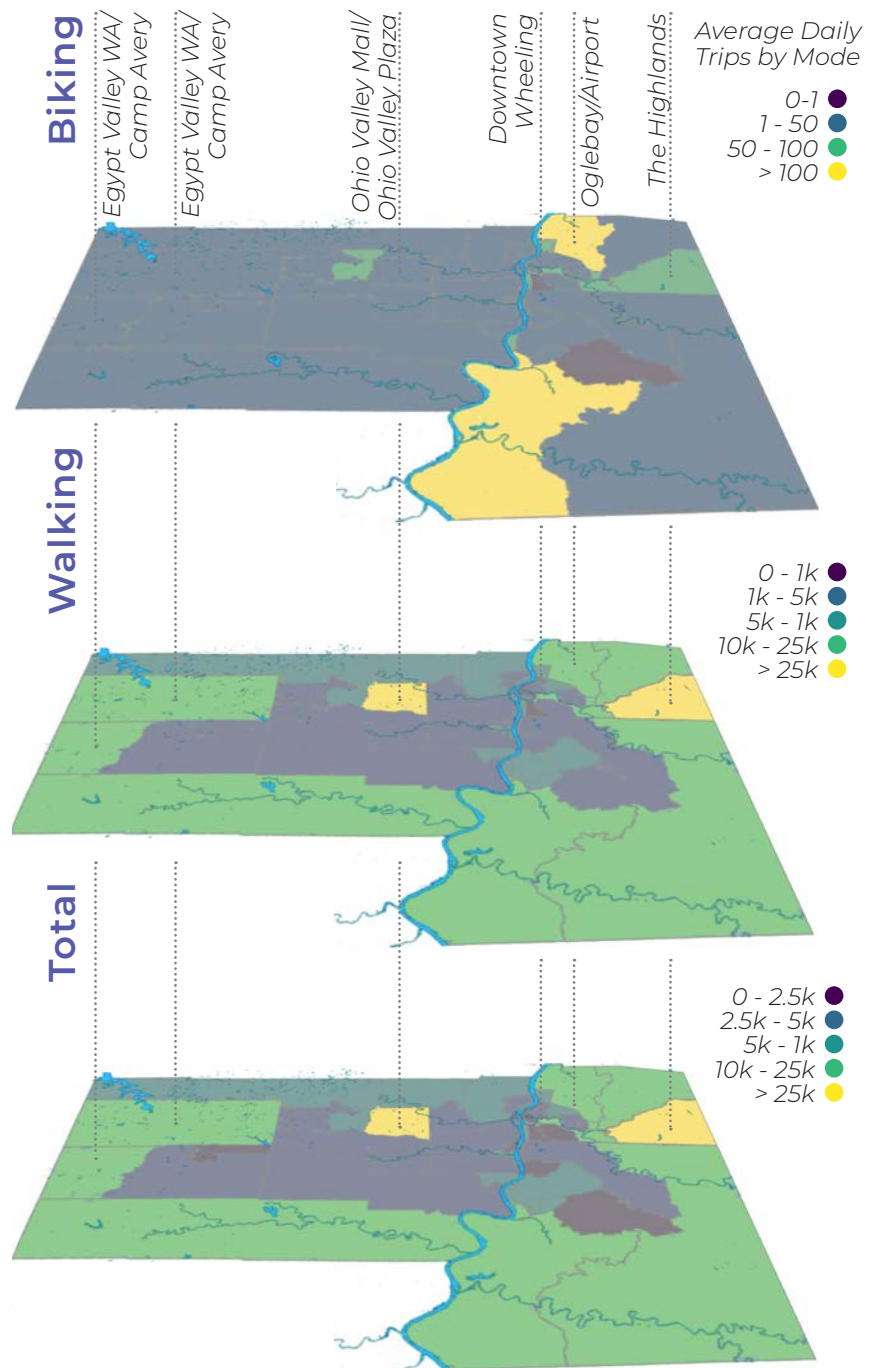


Figure 11. Number of trips made by pedestrians and cyclists on an average day (source: 2022 Streetlight bicycle and pedestrian estimates)

Public Transportation

Belomar has two major transit providers that offer fixed-route and paratransit services: Ohio-Valley Regional Transportation Authority (OVRTA) and the Eastern Ohio Regional Transit Authority (EORTA). Between both agencies, there are 12 active transit lines, one proposed route and 65 stops throughout the region; primarily in and around the Wheeling metro area.

Outside of Wheeling, several routes connect to the surrounding cities of Bellaire, Moundsville, and Saint Clairsville. Aside from these satellite cities/villages, rural areas of the county rely on paratransit services that are scheduled in advance and pick residents up at their location.

- * Moundsville Route is proposed and not currently in service
- ** Reynolds DMV Route only available on Tue and Thur

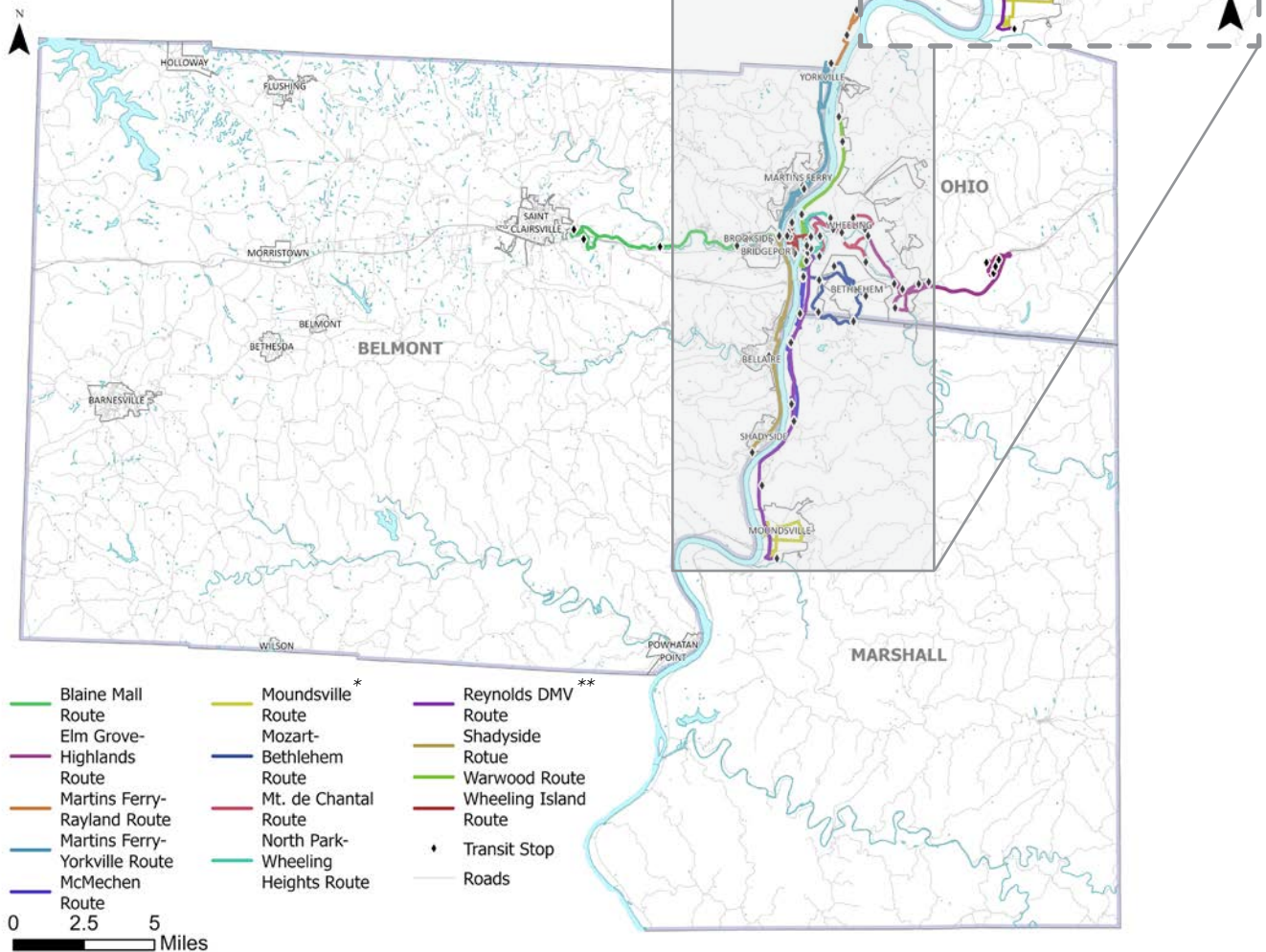


Figure 12. Belomar regional transit network. OVRTA & EORTA fixed routes shown

Transit Accessibility & Frequency

Transit accessibility starts with the location of transit stops and the frequency of service/hours of operation. Accessibility can be measured by the population living within a walkable distance of a transit stop. **Figure 13** shows all of the transit stops around the Wheeling metro area. Although the map may look clustered, looking closer reveals the following takeaways:

- Stop density is highest along the banks of the Ohio River near Wheeling and Wheeling Island. This area is the densest in the entire region in both population and development, making it the easiest part of the region to navigate by transit.
- Surrounding communities of Bellaire, Moundsville, and Saint Clairsville (see **Figure 12**), are connected to Wheeling by fixed-route transit, but have limited stops. In many instances, these cities/villages have one stop, leaving many of their residents far outside of a walking distance to the nearest stop.
- The two largest shopping areas along transit routes are The Highlands (near Tridelfphia) and the Ohio Valley Mall (near Saint Clairsville). Frequent connection to these locations is critical for both shoppers and shift workers that may work late or early hours. OVRTA services currently run from 6:00 AM - 6:00 PM, leaving late and early shift workers without a transit option for one end of their commute.
- Chapter 4 details a geospatial analysis that defines a 10-minute walkable distance from each transit stop. This analysis provides a more realistic estimate of the population that lives within a walkable distance of the transit network.

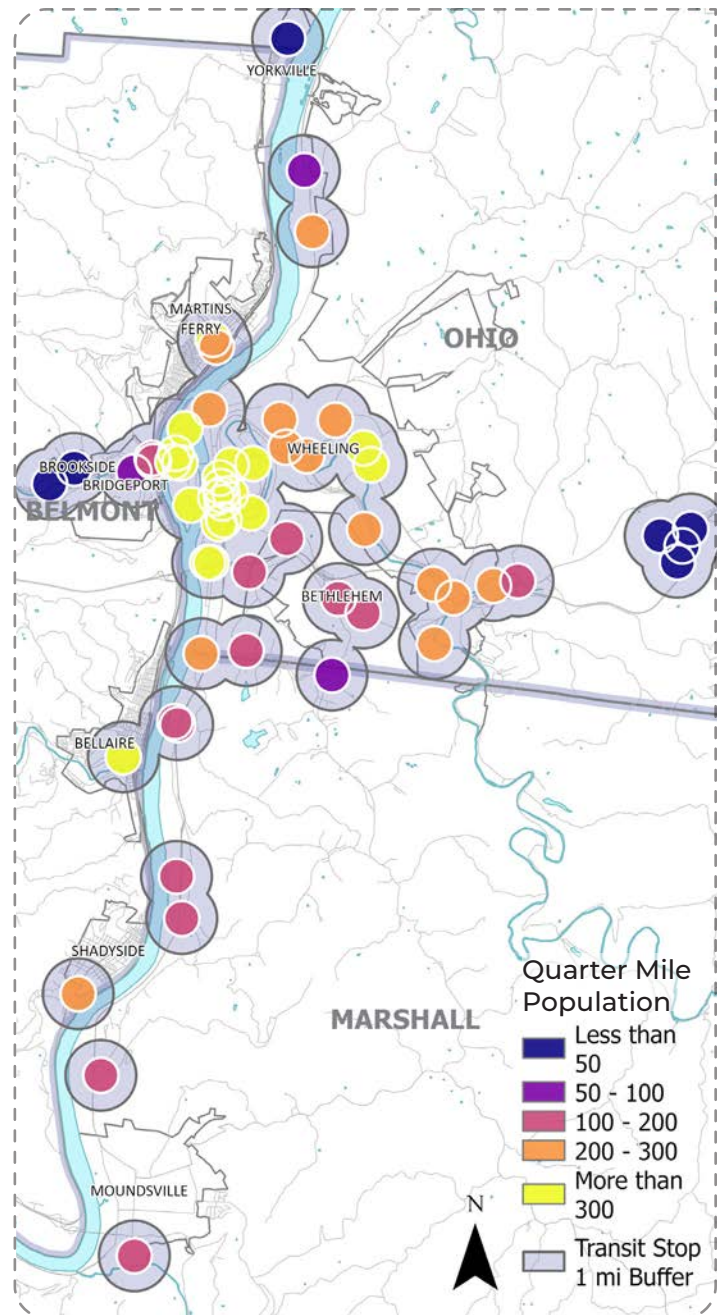


Figure 13. Transit Stop Accessibility within 1/4 and 1 mile

7% of population (~10.6k people) << live within 1/4 mi of a transit stop*

20% of population (~27k people) << live within 1/2 mi of a transit stop*

* Population estimated using U.S. Census block data

Transit Ridership

Transit agencies around America have dealt with changes to transit ridership, driver availability, and travel behavior in the wake of the COVID-19 pandemic. 2020-2024 Ridership reveals the following trends:

- EORTA and OVRTA had a combined service ridership of just over 327,000 in 2023, surpassing annual ridership in 2020-2022.
- Paratransit services serve a core function that many people rely on. In 2024, Nearly 7,000 trips were made using paratransit, 63% more than in 2020.
- In the COVID-19 recovery period 2021-present, OVRTA and EORTA data shows that ridership of both fixed route and paratransit service have increased.
- The data shows an increase in ridership by over 16% for fixed route and 63% for paratransit for OVRTA, and by 10% for fixed route, and by 72% for paratransit for EORTA.

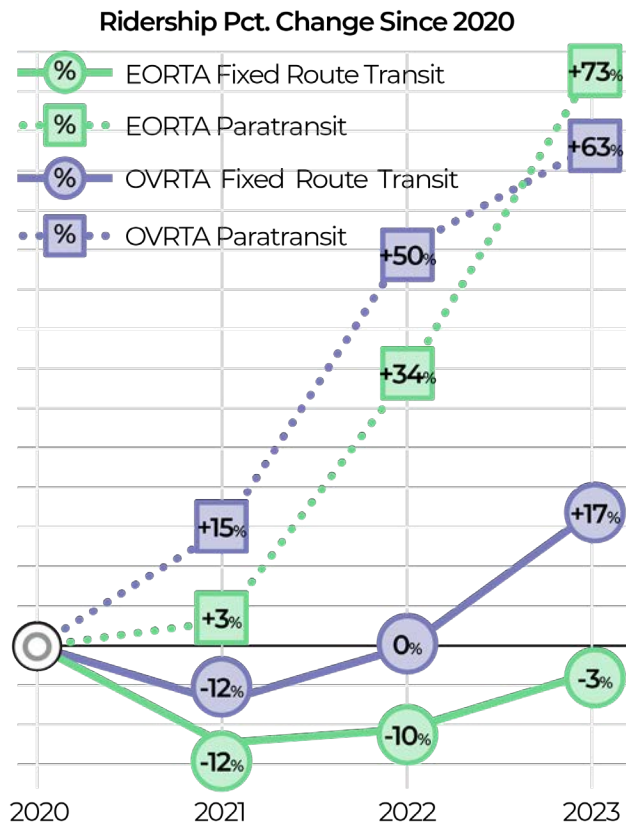


Figure 15. Annual ridership growth since 2020

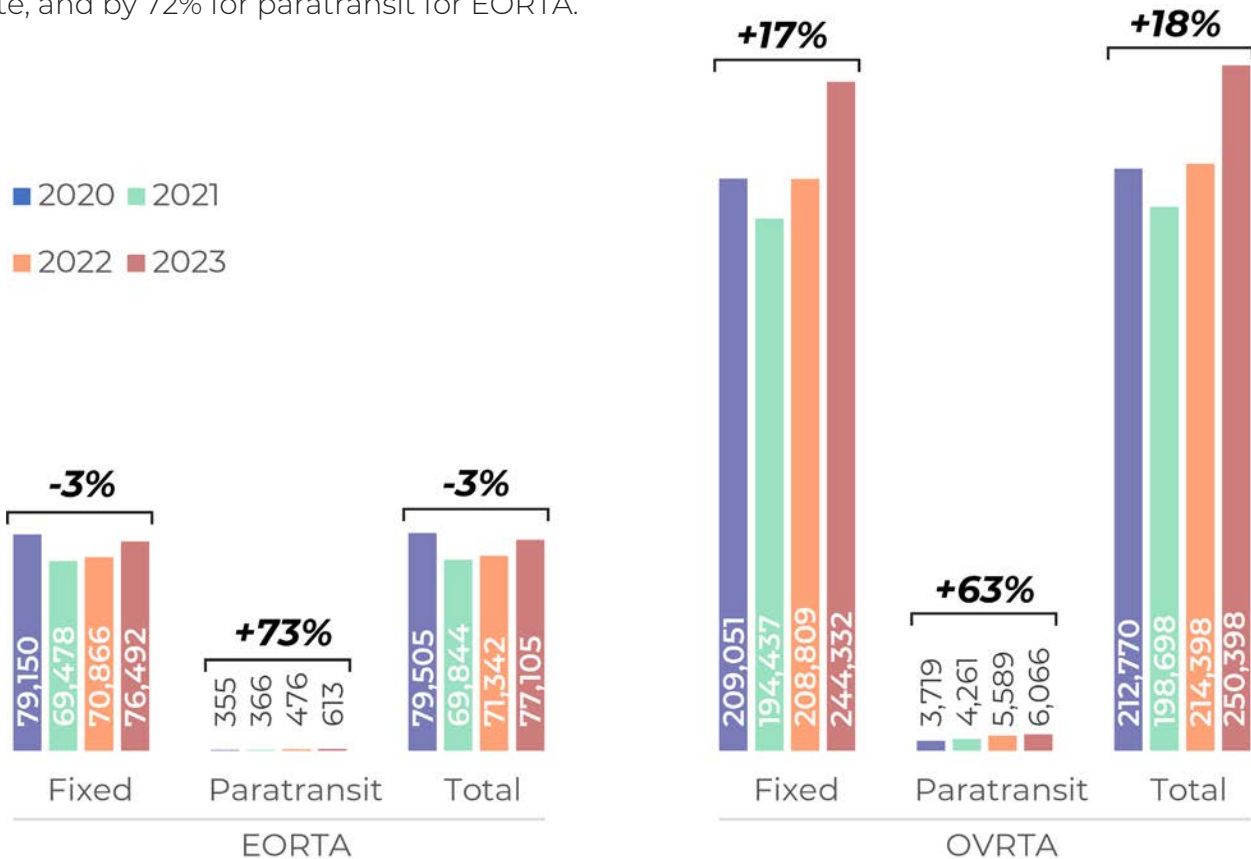


Figure 14. Annual ridership for EORTA and OVRTA transit services

Transit Fleet Inventory

OVRTA runs its 8 routes using 14 buses, and EORTA operates 4 routes using 6 buses. Between the two systems there are 3 contingency buses (2 for OVRTA and 1 for EORTA). Four paratransit vehicles are operating within 1.5 miles of the fixed routes - each agency has 2 paratransit vehicles at this time.

Additionally, supervisors use 3 vehicles, and each agency has one service vehicle. The type, quantity, and features of each revenue service vehicle inform the type of operating model used. Buses are typical of fixed route service, while vans and cutaway vehicles can be used for paratransit or on-demand services. Trucks and SUVs are indicative of supervisor vehicles and maintenance vehicles.

Below is the fleet information for EORTA and OVRTA. Vehicle mileage listed as of August 2024:

EORTA Fleet Inventory

Table 2. EORTA Fixed Route Transit Vehicles

| YEAR | MODEL | CAPACITY | MILEAGE* |
|------|-------------|----------|----------|
| 2017 | Champion** | 17 | 351,681 |
| 2018 | Low Floor** | 16 | 222,169 |
| 2023 | Defender** | 23 | 52,341 |
| 2023 | Defender** | 23 | 51,070 |
| 2023 | Defender** | 23 | 50,133 |
| 2023 | Gillig** | 32 | 45,606 |

Table 3. EORTA Paratransit Vehicles

| YEAR | MODEL | CAPACITY | MILEAGE* |
|------|------------|----------|----------|
| 2009 | Ford Van** | 9 | 208,707 |
| 2014 | MV-1 Van** | 5 | 114,720 |

* Mileage as of August 2024

** Leased from the eastern Ohio regional transit authority

*** Transferred from the state of West Virginia Public Transit Division - they retain the titles



Photo: Different OVRTA transit vehicles (OVRTA)

OVRTA Fleet Inventory

Table 4. OVRTA Fixed Route Transit Vehicles

| YEAR | MODEL | CAPACITY | MILEAGE* |
|------|-------------|----------|----------|
| 2018 | Champion | 22 | 244,578 |
| 2020 | Defender*** | 23 | 188,628 |
| 2020 | Defender*** | 23 | 185,323 |
| 2020 | Defender*** | 23 | 183,931 |
| 2020 | Defender*** | 23 | 180,540 |
| 2020 | Defender*** | 23 | 178,773 |
| 2020 | Defender*** | 23 | 178,377 |
| 2024 | Defender | 26 | 11,960 |
| 2024 | Defender | 26 | 11,402 |
| 2024 | Defender | 26 | 11,335 |
| 2024 | Defender | 26 | 10,808 |
| 2024 | Defender | 26 | 10,157 |
| 2024 | Defender | 26 | 8,137 |
| 2022 | Trolley | 22 | 2,572 |

Table 5. OVRTA Paratransit Vehicles

| YEAR | MODEL | CAPACITY | MILEAGE* |
|------|-------------|----------|----------|
| 2008 | Ford Van*** | 8 | 174,481 |
| 2018 | Ford Van*** | 6 | 137,826 |

Analysis Implications

Mobility options vary greatly depending on where you live within the Belomar Region. Access to quality transit, trails, bikeways, and goods and human services can be a (literal) mountain to climb. This report's analysis shows that Belomar residents are car dependent, and largely disconnected from their neighboring communities, especially in the region's most rural areas.

What does this mean for this study? How can Belomar and other agencies like OVRTA, EORTA, and Region X work together to expand mobility options and support those who can't navigate the region without a vehicle? This report will discuss ways to address the following challenges with practical solutions:

1. How can agencies coordinate to make the best use of local and regional resources, transit vehicles, and engagement/education opportunities?
2. Where would improved sidewalks, crosswalks, and bike signage/wayfinding be most valuable?
3. Can transit services be made more accessible for areas with low vehicle access by offering new stop locations, adjusting transit schedule/frequency, or expanding paratransit?
4. What are near, mid-, and long-term goals for transit services in the region?
5. What strategies, studies, and investments can Belomar lead to improve and expand multimodal options within the region?



Wayfinding on the Wheeling Heritage Trail.

CHAPTER 3: PROJECT ENGAGEMENT

Input from communities and stakeholders was paramount to identifying multimodal needs and preparing common sense multimodal recommendations.

Read to learn more about the study's public involvement process and what we learned.



Engagement Overview

No one knows a region better than those who live there, which is why this engagement process looked to connect directly with the public community leaders. This approach helped understand the experience of people who rely on alternative transportation every day and identify ways to best address their needs.

Approach

A multi-pronged approach was used to reach an audience actively using or working to improve multimodal transportation every day. The focus was to gather information about the experience of walking, biking, and using transit to make recommendations that directly improve people's lives. In total, the engagement process conducted six stakeholder interviews, two focus groups, a public open house, and an online public survey.

Advertisement for public engagement focused on reaching underserved populations including those living in poverty, senior citizens, the disabled, and zero-vehicle households. To do this, engagement events and the public survey were widely advertised using paper fliers, survey fliers, newspaper advertisements, social media, project website, and an online advertisement campaign. Fliers advertising the online public survey were displayed at public libraries, large retail stores, Oglebay Village and Wheeling Station, and places of worship around the region. The online video advertisement was posted on YouTube and Google platforms, resulting in 1,500 impressions, leading to 500 visits to the project website where people could learn more about this study and keep up to date with future Belomar engagement opportunities.

This chapter details the key takeaways from each phase of the engagement process, and how this input helped identify multimodal needs and ways to improve walking, biking, and transit across the Belomar Region.

Public Engagement

Public Open House

12/4/2024

- A public open house was held in downtown Wheeling
- Several interactive stations sparked discussion around areas of need, desired connections, and top priorities

Public Survey

2/2024 - 6/2025

- An online public survey was available through the project website from November 2024 - June 2025
- Belomar distributed paper fliers, utilized social media, posted newspaper advertisements, and appeared on local TV news to spread the word and increase participation

Local Leadership

Stakeholder Interviews

9/2024 - 12/2024

- Six one-on-one interviews with local leaders, public servants, and multimodal advocates

Focus Groups

3/2024

- Two focus groups with local multimodal advocates and human service organizations
- Discussion covered people's needs, multimodal infrastructure gaps, and desired connections to jobs, recreation, and essential services

Figure 16. Multimodal Study engagement timeline

Local Leadership

Public agency leaders, transportation advocates, and human service providers work everyday to improve the quality of life of the region's residents. These local leaders were heavily involved throughout the process to help identify multimodal transportation needs and discuss where new infrastructure and transit services would have the most impact. This section summarizes the key takeaways from our conversations with local leaders:

Stakeholders

Early engagement focused on connecting with local leaders. Six individual stakeholder interviews were held with local leaders who offered a unique perspective about the community and the region. Each interview discussed the needs of different communities, local planning history, new connections, and perceptions of the multimodal user's experience. The background and passion behind each stakeholder was made apparent through this process. These interviews helped us understand the strengths, weaknesses, and opportunities for walking, biking, and using transit in the Belomar Region.

Stakeholder Interviews

Lisa Weishar

OVRTA - Executive Director

Frank Shaffer

Belmont Co. Township Trustees Association - President

Susan Hagan

Region-X Coordinated Plan Group - Co-Chair

Melynda Sampson

United Way - Community Resource Specialist

Katie Hudak

NW Area Agency on Aging - Director

Doug Wayt

Ohio Valley Trail Partners - President

Key Takeaways - Stakeholder Interviews

Community and Regional Needs

- Participants discussed the need for better coordination among agencies and improved community engagement.
- Economic and infrastructure challenges were mentioned, particularly in rural areas and towns with limited resources.

Transportation Alternatives

- There was interest in exploring microtransit solutions and alternative transportation options such as biking and e-bikes.
- Concerns were expressed regarding the reliability and safety of private transportation solutions like Uber/Lyft and the adequacy of existing public and paratransit services.

Recommendations

- **Enhance Public Transit:** Improve service hours, frequency, and connectivity between key destinations and under served areas.
- **Increase Coordination:** Foster better communication and collaboration among agencies, local governments, and transit providers and/or update governance strategy.
- **Expand Transportation Options:** Explore microtransit and demand response and other innovative solutions to address gaps in service.
- **Transit Supportive Infrastructure:** Direct resources towards bike racks, pedestrian pathways, sidewalks, and improved transit stations to make accessing transit easier for all users.
- **Engage the Community:** Strengthen public outreach and engagement efforts to better understand and address local transportation needs. Emphasize engagement with those living and working in communities of persistent poverty.

Focus Groups

A series of focus group conversations brought local leaders together to continue building momentum toward addressing the region's multimodal needs. Two focus groups were held for this study and three additional groups were held for Belomar's upcoming Metropolitan Transportation Plan. Together, forty local leaders were invited to participate in these focus groups.

The first group included human service providers and advocates, and focused on the issues of the elderly, growing families, and those with limited income. The group reflected on how transportation services can be changed to be more inclusive of those with physical limitations, financial constraints, or limited time and complex work-life schedules. The second group consisted of transit and active transportation professionals and advocates. Conversations focused on transit service challenges, disconnected communities, and multimodal network gaps.

Human Services Group

Sara Wood-Shaw
City of Moundsville

Melynda Sampson
United Way

Paula Calvert
Family Service
Upper Ohio Valley

Claudia Raymer
United Way

Transit and Active Transportation Group

Doug Peterson
Ohio Valley Trail Partners

Susan Hagan
Region-X

Andrew Hollis
Ohio Valley Trail Partners

Doug Wayt
Ohio Valley Trail Partners

Mike Kinner
Ohio Valley Trail Partners

Zach Blazer
Belomar Regional Council

Key Takeaways - Human Services Focus Group

Housing Challenges

- **Housing Stock:** Many homes, particularly in Marshall County, are in disrepair or outdated, requiring renovation. There's a lack of accessible funding for home repairs or upgrades.
- **Safe, Affordable Housing Shortage:** Safe and affordable rentals are hard to find. Seniors are often stuck in homes that are too large or unsafe, lacking options for downsizing. These homes can often be difficult to manage for seniors, but may be ideal for new homeowners and growing families.
- **Funding Limitations:** Programs like the Community Housing Improvement Program (CHIP), American Rescue Plan Act (ARPA), and U.S. Department of Agriculture (USDA) loans help, but access and eligibility are inconsistent. Wheeling, for example, cannot use USDA loans.

Access to Healthcare

- **Limited Medical Facilities:** Closure of East Ohio Regional Hospital and reduced local services push patients to Morgantown. This has contributed to an over reliance on emergency rooms and ambulances for basic medical access.
- **Transportation to Medical Care:** Scheduling and distance barriers result in long travel times for what should be short trips. Medical appointments are often missed due to scheduling limitations in transit.

Access to Childcare & Family Services

- **Childcare and Services:** Transit-dependent families face logistical conflicts between work, childcare, and transportation options. Parents' schedules rarely align with transit.
- **School Transportation:** School buses serve most districts, including after-school activity shuttles, with few exceptions. Wheeling Island's school bus is for mobility impaired students.
- **Family Services:** Communities need better access to parenting support services (some court-ordered), crisis units, and addiction treatment.

Key Takeaways - Transit & Active Transportation Focus Group

Transit Service Limitation

- **Limited Transit Service Area:** Many residential areas, especially senior and low-income housing, are outside public transit service zones. Seniors and low-income populations struggle most with access to services due to location and mobility barriers.
- **Paratransit Services:** On-demand services are constrained due to high demand and limited vehicles. OVRTA and other public service providers need to work together to maximize local resources. The group specifically mentioned utilizing several vans funded by the Federal Transit Administration's 5310 program that are currently out of use.
- **Service Frequency:** OVRTA buses are timely but infrequent. Services often end by 2 PM due to funding caps and staffing constraints. Park-and-ride options and microtransit/shuttles are desired but limited.

Public Transit Challenges

- **Bike and Bus Integration:** Limited options exist to combine bike and transit travel, and policies are not well understood.
- **Access to Employment and Services:** Areas like The Highlands lack adequate transit service, sidewalks, and connectivity affecting job access.
- **Microtransit and Shuttle Ideas:** Proposals for shuttles to under served areas (e.g., up Two-Mile Hill or to Oglebay) received community support.

Education and Public Perception

- **Confusing Transit System:** Community members don't understand how to use the system. Inconsistent bus stop signage and route information makes using transit a chore. Schedules and maps are difficult to interpret, especially for new users.
- **Transit Education:** There are many barriers for new riders. Understanding stops and complex transfers, fear of making mistakes (e.g., boarding the wrong bus), and stigmas about using transit can stop people from trying. There is a need for more accessible and user-friendly transit education resources, not just online.
- **Perception of Safety:** Misinformation and poor marketing have undermined trial routes and public perception. Trails like Heritage Trail and those in Wheeling are heavily used, but are perceived as unsafe due to poor lighting and perception of crime.

Pedestrian Access

- **Sidewalk Gaps:** Several critical areas are missing or have poor sidewalks. This creates unsafe conditions for students and pedestrians. Sidewalk connection and condition is most critical around transit stops, schools, major employers, medical facilities, and commercial districts. Three locations emphasized were along Route 2 and near both Jefferson Avenue and Triadelphia Elementary Schools.
- **Crossings and Connections:** Physical barriers like highways (i.e. Route 2), topography, and the Ohio River are cited as major obstacles for pedestrians. Crossing the Ohio River is essential for resources and economic activity to be shared across communities and counties.

Bicycle Infrastructure

- **Bike Parking:** There was significant emphasis on the need for more bike racks near schools, grocery stores, and transit hubs. Some areas, like Wheeling, were reported to have adequate bike rack availability. Some suggested it could be beneficial to improve bike parking in Martins Ferry and other parts of Ohio County.
- **Integrating Bike with Transit:** Buses lack adequate space or equipment for bicycles, creating barriers for multimodal trips. OVRTA is concerned about legal liability of bus bike racks.
- **Safety & Security:** Dangerous conditions for cyclists were reported on Route 88, National Road, and near Sheetz. National Road is widely used and has potential for bike lanes. Vandalism and perception of crime along the Heritage Trail discourage use. Suggestions include increased patrols and emergency call stations.

Desired Connections

- **Cross River Connections:** There is a strong interest in bike/pedestrian bridge(s) across the Ohio River from Wheeling to Martins Ferry and Benwood to Bellaire. Locations discussed included rehabilitating the Aetnaville Bridge and a new bridge south of Wheeling.
- **Visionary Regional Connections:** Participants advocated for a connection to The Great Allegheny Passage, connecting the Mondsville-Glen Dale trail to the Wheeling Heritage trail, and a new Ohio River crossing.
- **Agency Collaboration:** Participants noted frustration due to past projects stalling or failing due to local support and cross-jurisdictional coordination.

Local Leadership Summary

Stakeholder interviews and focus groups highlighted the interconnected challenges of housing, healthcare, transit access, childcare, and regional connectivity. Areas consistently emphasized include: gaps in service, infrastructure limitations, and opportunities for multimodal transportation like biking, walking, and needs for microtransit. Below are four key takeaways from local leadership engagement:

1. Expand Service to Residents in Need

- Limited service hours, infrequent routes, and inadequate paratransit restrict accessibility.
- The need for microtransit options to connect to low income housing and human services.
- Transportation planning must prioritize individuals in persistent poverty, seniors, families, and those with physical limitations.

2. Better Coordination

- Agencies and local governments often operate in silos.
- Stronger interagency collaboration and consistent use of established communication channels could benefit the implementation of identified goals.

3. Quality of Bike/Ped Infrastructure

- Unsafe or missing sidewalks, particularly around schools and transit stops.
- Need for bike facilities within cities and villages. Preference for protected bike facilities where possible.
- Limited bike parking and inadequate bike-transit integration are major concerns.

4. Desire for Visionary Bike/Ped Projects

- Strong interest in restoring or creating pedestrian/bike bridges across the Ohio River (e.g., Aetnaville Bridge).
- Advocates want connections to larger trail networks like the Great Allegheny Passage for recreation and tourism.



St. Clairsville Public Library

Public Engagement

Why do people walk, bike, or use transit? People's transportation choices are personal and complex. Understanding people's experience and perception of multimodal transportation helps identify where improvements will make the biggest difference. Read on to learn more about the public engagement opportunities and what we learned:

Multimodal Open House

Twenty participants attended a public open house hosted on December 4th 2024 at West Virginia Northern Community College (WVNCC) in Wheeling. This format encouraged one-on-one conversations with the project team about how we can make it easier and safer to bike, walk, and use transit. Several stations were situated around the room with each focused on a different topic:

1. Project Overview and Background
2. Ranking Project Priorities
3. Identifying Active Transportation Needs
4. Identifying Public Transportation Needs
5. Connecting to Points of Interest

Public Priorities

This station focused on gauging public support for improvements across different multimodal options. Participants placed stickers to indicate how high they would prioritize each mode and discussed improvement options for each. Here's what we learned:

Walking

- Pedestrian improvements; including more sidewalks, sidewalk maintenance, ADA compliance, and high visibility and protected street crossings were universally supported.

Biking

- In most cases, people were more likely to bike for recreation than transportation.
- Participants strongly supported expanding shared-use paths, rural bike lines and trails, and increased bike parking in urban areas.

Public Transit

- Transit users felt these services could be improved with new stops and expanded hours.
- There was a general belief that transit improvements were the most difficult to implement.



Multimodal Open House Meeting - 12/4/2024

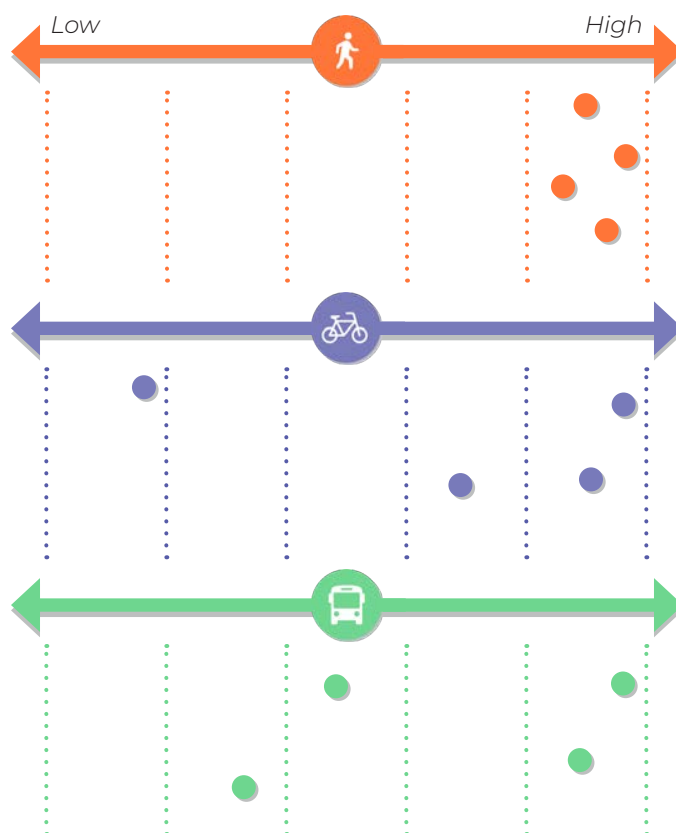


Figure 17. "What would you prioritize" activity results

What We Learned

The remaining stations were designed to identify locations across the region where different types of projects were most needed. Below is a summary of the conversations:

New Bike/Ped Connections

- People enjoy the Wheeling Heritage Trail and see potential to connect more communities by closing the 6.4 mile gap between the trail's south terminus in South Wheeling and the Glen Dale to Moundsville Rail Trail.
- Connections across the Ohio River are limited. Residents feel the Wheeling Suspension is an improvement, but need additional connections to Martins Ferry, Bridgeport, and Bellaire.

Improving Public Transit

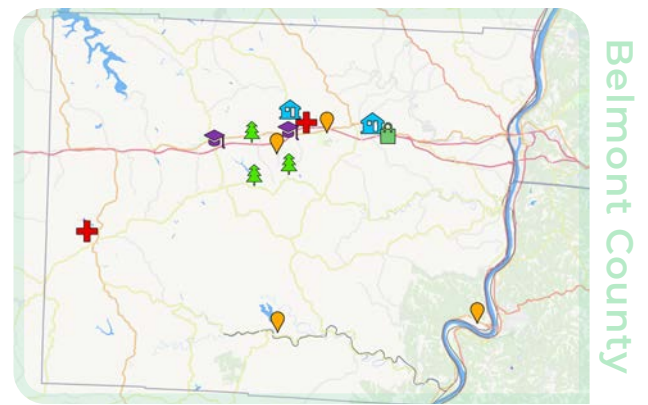
- Transit service schedules are limited. Participants stated that services either started too late or ended too early for trips they hoped to make.
- Service headways are large, causing excessive wait times and making bus service less dependable to use for appointments and commuting.
- Desire for higher frequency routes to job and commercial centers like The Highlands.

Connecting to Points of Interest

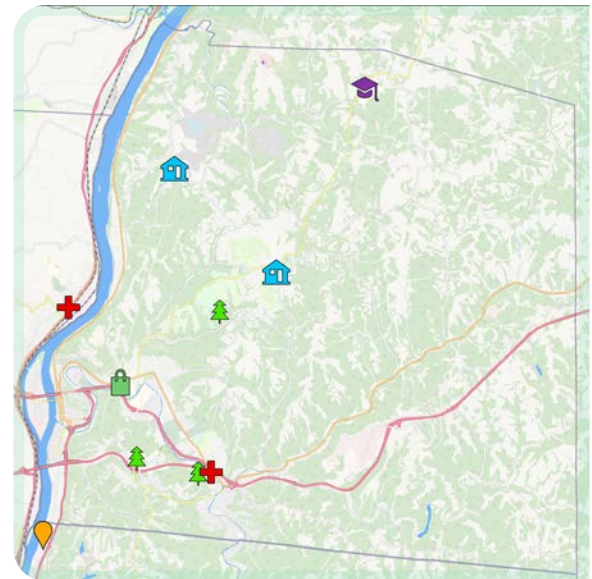
- Several multifamily housing developments are well outside the existing transit service area. Transit service is especially critical for these residents who are often older or lack reliable access to a personal car.
- A desire was expressed for new stops outside of Wheeling; including near medical centers, higher education, and government services.

Safety, Maintenance, and Accessibility

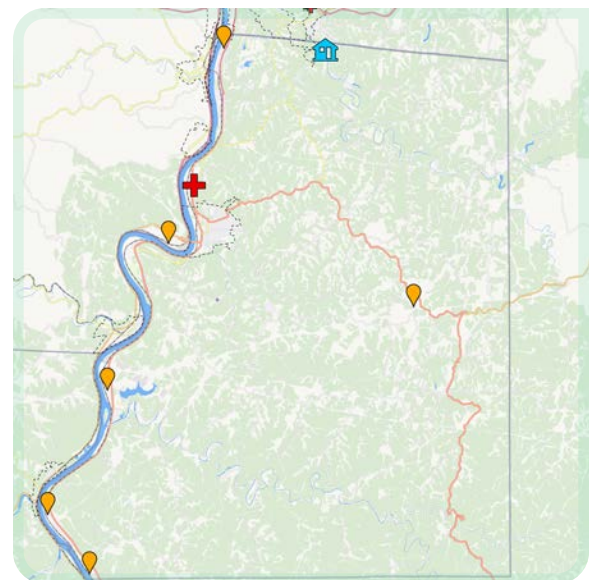
- Sidewalks, especially in rural areas and along major roads, can be poorly maintained with cracks and overgrowth.
- Roadway crosswalks are sometimes unmarked or lack ADA curb ramps. Clear markings with ADA compliant curb ramps are especially critical near transit stops, health care centers, and commercial districts.



Belmont County



Ohio County



Marshall County



Figure 18. "Connecting to Points of Interest" activity results

Public Survey

As part of our public engagement strategy, we wanted to capture a wide audience's thoughts and concerns about transportation within the Belomar region. To do this, a single online public survey was created for both this Multimodal Study and the Belomar 2050 Metropolitan Transportation Plan.

Survey questions focused on user experience, travel behavior, transportation mode preference, and desired infrastructure improvements. We asked respondents to detail why they do/don't walk, bike, or use transit on a frequent basis, and what improvements they feel could be made to make it safer and more efficient to navigate the region without a car.

Survey responses provide insight into public opinion, but are not always representative of the greater population. It's noteworthy that this survey's 74 respondents were on average older than the overall population and with a larger portion earning between \$25k - \$100k. Read more on the following pages about respondents' transportation experience and what changes they would like to see:



Figure 19. Survey Responses by County

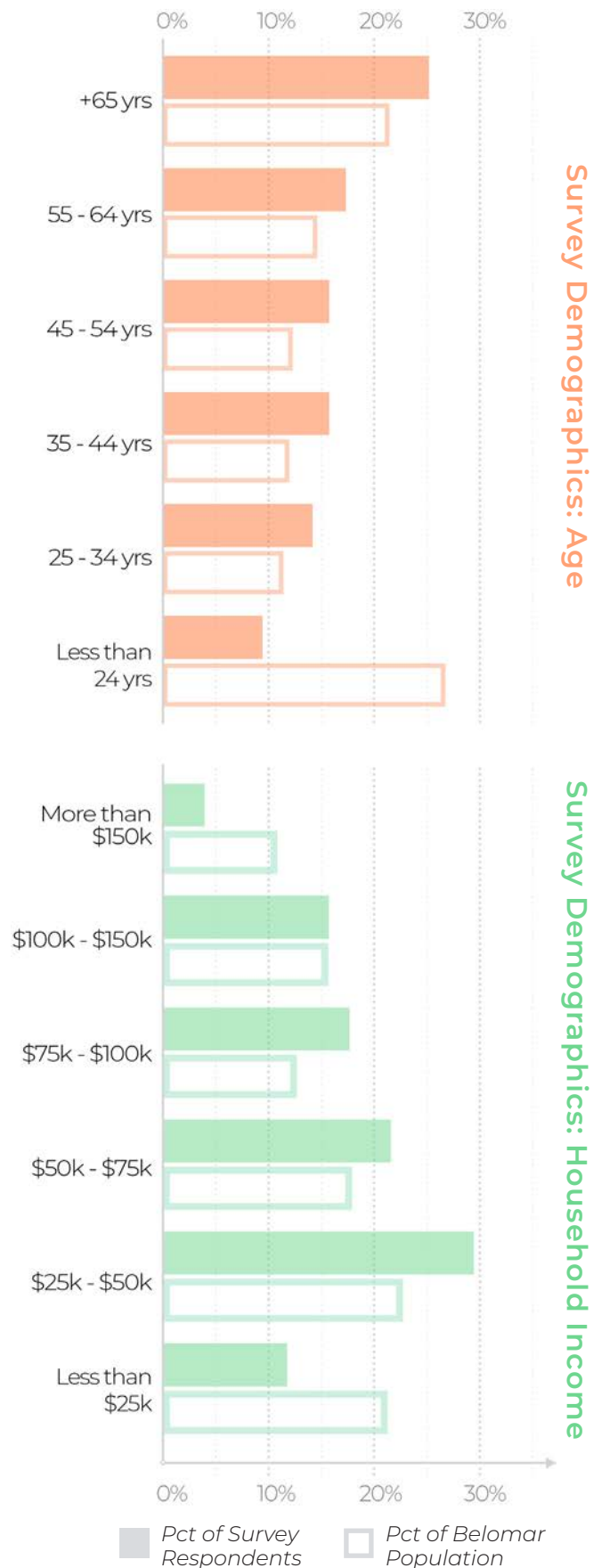
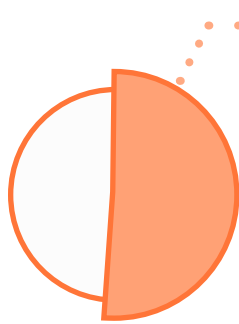


Figure 20. Survey Respondent's age and income compared to Belomar Region



User Experience: Walking

When and where do you walk today?



••• **53%** of respondents walk to complete trips at least once per month

41% never walk for transportation

Common Trip Purposes:

1. Recreation
2. Social/Leisure
3. Shopping

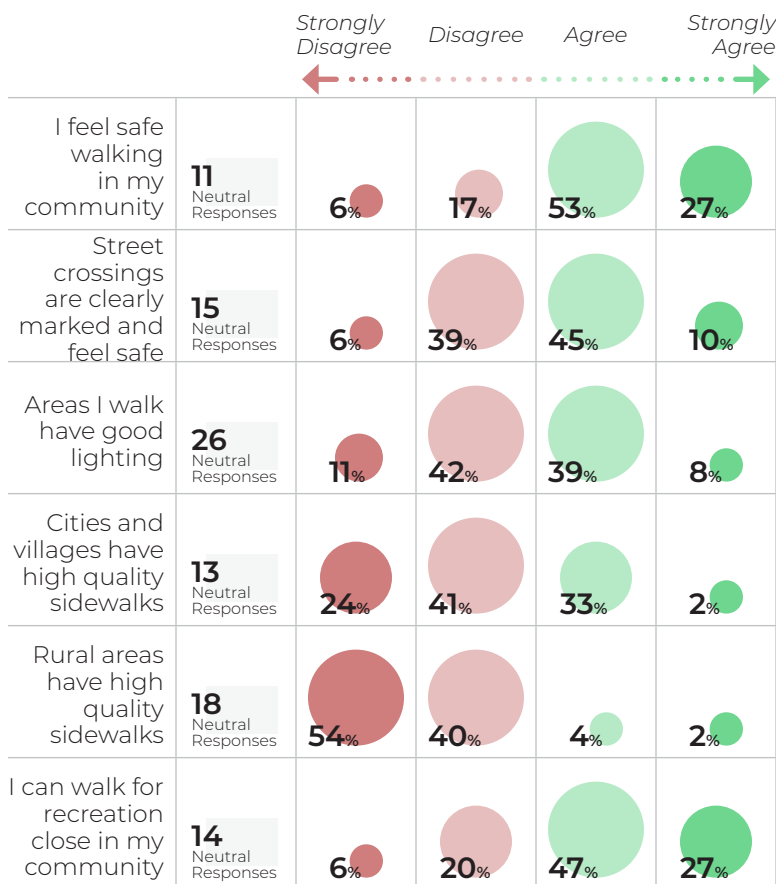
•• What are places you wish you could go, but can't?

Common Responses:

- Village/City downtowns
- Healthcare
- Parks and recreation

What is your experience like?

Percentages represent non-neutral responses



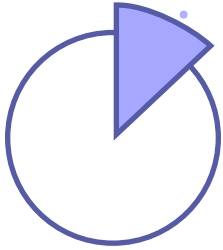
•• How can walking be improved?

- #1 Repair existing sidewalks and/or recreational trails
- #2 Build new sidewalks and/or recreational trails
- #3 Add more street lighting
- #4 Improve roadway crossings
- #5 Slow vehicle speeds on streets



User Experience: Biking

When and where do you bike today?



••• **13%** of respondents bike to complete trips at least once per month
61% never bike for transportation
Common Trip Purposes:

1. Recreation
2. Social/Leisure
3. Commuting

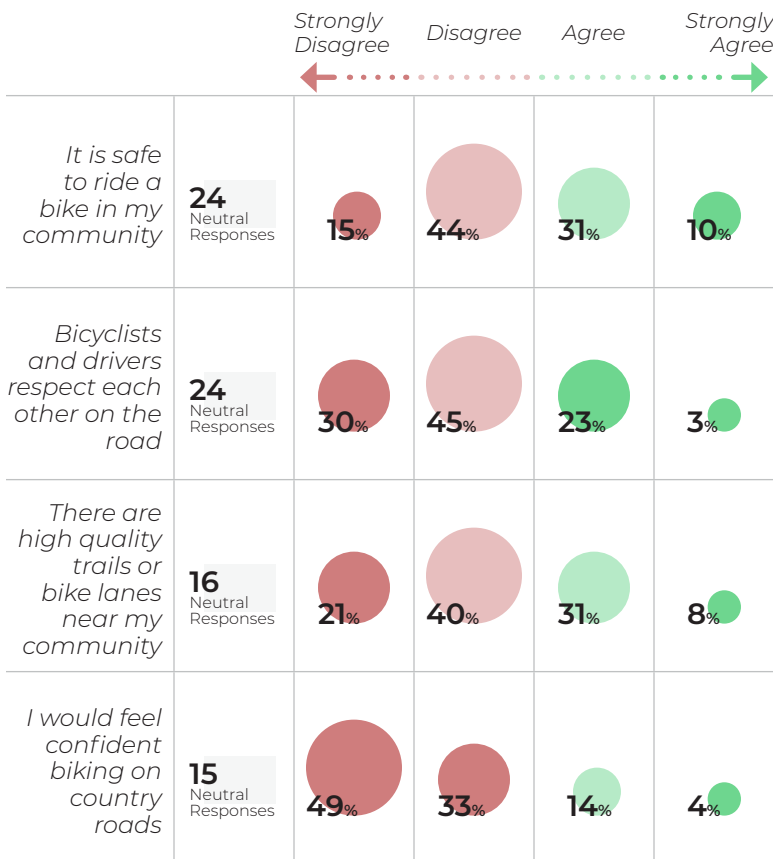
•• What are places you wish you could go, but can't?

Common Responses:

- Healthcare
- Parks and recreation
- Schools
- Grocery Stores

What is your experience like?

Percentages represent non-neutral responses



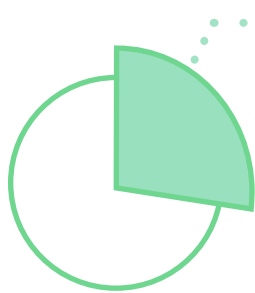
•• How can biking be improved?

- #1 More on-street bike lanes
- #2 More off-street bike paths and trails
- #3 Clearer signage for bike routes and shared streets
- #4 Integration with transit (bus bike racks)
- #5 More bike parking



User Experience: Transit

When and where do you use transit today?



• 27% of respondents use transit to complete trips *at least once per month*

• 58% never use transit

Common Trip Purposes:

1. Medical Appointments
2. Shopping
3. Commuting

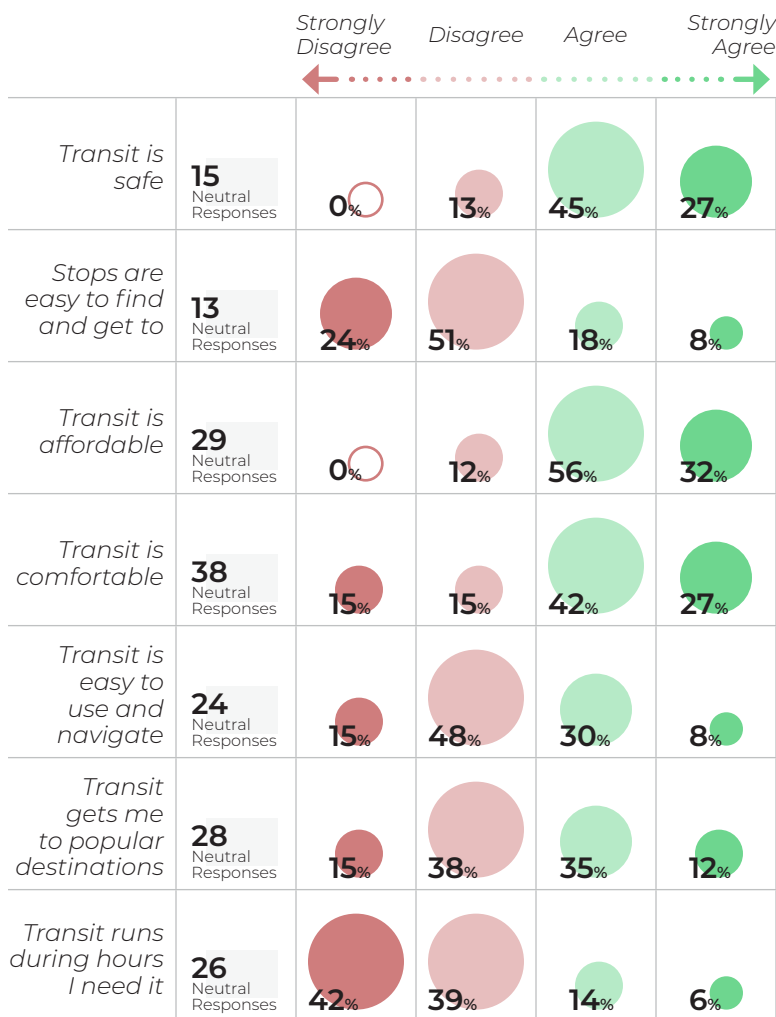
What are places you wish you could go, but can't?

Common Responses:

- Senior Housing
- Community Centers/ Libraries`
- The Highlands
- Place of work
- Ohio Valley Mall

What is your experience like?

Percentages represent non-neutral responses






How can transit be improved?

- #1 Larger service area
- #2 More frequent service
- #3 Longer service hours
- #4 Transit stops closer to important destinations
- #5 Improved safety and security

Open Responses

Open-response questions allow respondents to offer context and suggest projects. Below is a summary of the open-response questions relating to user safety, desired destinations, and impactful improvements:

| |  Walking |  Biking |  Transit |
|--|--|---|--|
| Are there factors that make you feel unsafe? | <ul style="list-style-type: none"> • Sidewalk gaps and Inadequate pedestrian crossings • Dangerous drivers • Lack of roadway lighting • Personal safety & crime | <ul style="list-style-type: none"> • Lack of dedicated space for bikers (i.e. bike lanes & shared-use paths) • Rural roadway conditions (i.e. narrow shoulders & high speeds) • Level of traffic stress | <ul style="list-style-type: none"> • Getting to transit stops can be dangerous due lack of transit supportive infrastructure (limited sidewalk coverage/ maintenance & transit stop amenities) |
| What places would you like to go to that you can't or are difficult to get to? | <ul style="list-style-type: none"> • Errands, essential services, & entertainment (i.e. grocery stores, medical offices, & retail) • Local parks and trails (i.e. Oglebay Park, Heritage Trail, St. Clairsville Trail) • School or place of work | <ul style="list-style-type: none"> • Neighborhood connectors to nearby downtowns • Local parks and trails (i.e. Oglebay Park, Heritage Trail, St. Clairsville Trail) • School or place of work | <ul style="list-style-type: none"> • Medical and social service appointments • Expanded stops in under served areas and neighborhoods • Regional connections (i.e. Pittsburgh, Steubenville, and Morgantown) |
| What improvement would most improve your experience? | <ul style="list-style-type: none"> • Improved sidewalks and street crossings (i.e. more coverage, maintenance, & ADA compliance) • Separation from traffic (i.e. wider sidewalks, shared-use paths, and pedestrian bridges) • Traffic calming and pedestrian visibility (i.e. street lighting, traffic signage, street design, and speed enforcement) | <ul style="list-style-type: none"> • Dedicated bike lanes protected with a buffer, physical barrier, or grade separated from traffic • Bike lanes connecting neighborhoods and downtowns where traffic speeds are low • Connections between neighborhoods and existing trails (i.e. St. Clairsville Trail & Wheeling Heritage Trail) | <ul style="list-style-type: none"> • Greater bus frequency and expanded service hours for commuting • Improved stops (i.e. signs, benches, shelters, schedules, & wayfinding) • Make it easier to buy a ticket (i.e. online ticket purchases, employer sponsored passes, and fixing token expiration) • Education to promote bus service |

Key Takeaways: Public Survey

Survey responses largely aligned with input from local leaders. Below are the major themes from the survey for walking, biking, and transit:

Walking

- Overall, sidewalk coverage and quality is the largest issue. Respondents felt sidewalk gaps and maintenance made walking unsafe near busy roads and in rural areas.
- Implement traffic calming to slow drivers' speeds and make pedestrians more visible. This included signage, traffic enforcement, and street lighting.
- Connect to the region's great recreational opportunities, and expand on existing shared-use paths and trail networks.

Biking

- There was an emphasis on low-stress bike facilities with physical separation from traffic.
- New neighborhood connections to recreation and downtowns on low speed/traffic roadways.

Transit

- Shorter waits and morning and evening hours would make transit a reliable commute option.
- Fixed-route service can be difficult and cumbersome. People wish buying tickets, reading the schedule, and finding stops was easier.
- Bus shelters, sidewalks, and wayfinding would make transit easier and more comfortable to use.

Engagement Summary

The public engagement process for the Belomar Multimodal Study included a mix of outreach strategies designed to gather input from a broad cross-section of the community. These efforts revealed strong community support for expanded pedestrian and bike infrastructure, improved transit service hours and coverage, and safer, more accessible connections to key destinations. Below are takeaways for transit and active transportation:

Transit

- **Improved ease of use** through education and wayfinding. People feel transit is hard to navigate and stigmatized; outreach and education can boost understanding and ridership. Clearer signage, better shelters, online ticketing, and more accessible route information were identified as needs by participants.
- **Transit Service limitations** makes using transit impractical for most. Respondents noted that buses often don't run early or late enough, have long wait times; and have limited coverage. Many key destinations like medical centers, higher education, and multifamily housing are outside service zones.

Active Transportation

- **Sidewalk Gaps and Pedestrian Safety** are top concerns as many sidewalks are missing, poorly maintained, or non-compliant with ADA standards, especially in rural areas. Safer crossings and better lighting are needed to make walking a reliable transportation option.
- **Low-Stress Biking Infrastructure** is needed. Participants want safer, physically separated bike lanes and better connections between neighborhoods, trails, and downtowns.
- **Improving River Connectivity** is necessary. Residents want new or improved connections across the Ohio River. Gaps between existing trail systems, like the Wheeling Heritage Trail and the Glen Dale–Moundsville Rail Trail, limit multimodal use.



Shelter and seating at the St. Clairsville Trail

CHAPTER 4: MULTIMODAL GAPS & NEEDS

A complete system makes room for all users. Analysis and public feedback were used together to create a more comprehensive understanding of our multimodal network.

This chapter identifies network gaps and needs, then outlines opportunities to address them.



Active Transportation Gaps & Needs

Public feedback was clear: people wish it was easier to walk and bike in their community. This section identifies opportunities for 'quick-wins' and regional active transportation projects that can address the needs identified by our existing conditions analysis and public feedback.

Approach

Walking and biking are essential to the success of a transit system. Many transit users utilize active transportation to reach their bus stop and again to reach their destination. This is often referred to as the first mile/last mile problem because it can be the most difficult part of a journey. A safe and connected network of active transportation facilities is therefore needed to improve transit service in the region.

Belomar stakeholders, focus groups, and public feedback emphasized the need for improved bike and pedestrian infrastructure throughout the region (**Figure 21**). Stakeholders and focus groups discussed the need to address sidewalk gaps and sidewalks in poor maintenance, a need for safe and protected bike facilities, and a need for more connections across physical barriers such as the Ohio River.

This section identifies opportunities for improvement across the region that directly address these concerns and close network gaps. These opportunities vary in scale, with larger projects requiring additional study to determine alignments and complete engineering design. Additionally, active transportation barriers like highways, steep topography, active rail lines, and waterways helped identify opportunities with clearer paths for implementation.



What you told us...

Public Feedback

93% said rural areas do not have high-quality sidewalks

59% feel it is not safe to ride a bike in their community

75% think that drivers and cyclists don't respect each other on the road

Local Leadership Feedback

Address sidewalk gaps and maintenance across the region, especially in rural communities.

Implement safe, protected bike facilities inside cities and villages.

Identify bike/ped opportunities including: rails-to-trails, bike routes between communities, and new Ohio River crossings.

Figure 21. Summary of Active Transportation Feedback

Active Transportation Barriers

The region’s terrain has always been a challenge for development. The first cities and villages were built in flat areas near the Ohio River and its tributaries. Over time, road connections, highways, and railroads were built between (and sometimes through) the hills to connect these towns to each other and the national highway network.

Today, developable land is scarce, leaving few opportunities for commercial and residential development outside of the existing cities. These barriers divide our communities today and present challenges to closing active transportation gaps. For example, due to steep terrain, many roads in rural areas were built without active transportation facilities such as sidewalks or shoulders.

These same barriers impact how easy it is to walk and bike. Slopes greater than 10% are extremely challenging to climb, even for someone who walks or bikes frequently, not to mention someone new to biking or using a wheelchair.

Constructing new roads and trails in these areas is generally more difficult and costly. Most ‘quick-win’ active transportation projects will be inside cities and villages because of these challenges. But, along the Ohio River, some visionary projects are worth exploring despite the implementation challenges that may come.

Figures 22 and 23 show existing barriers to walking and biking connections.

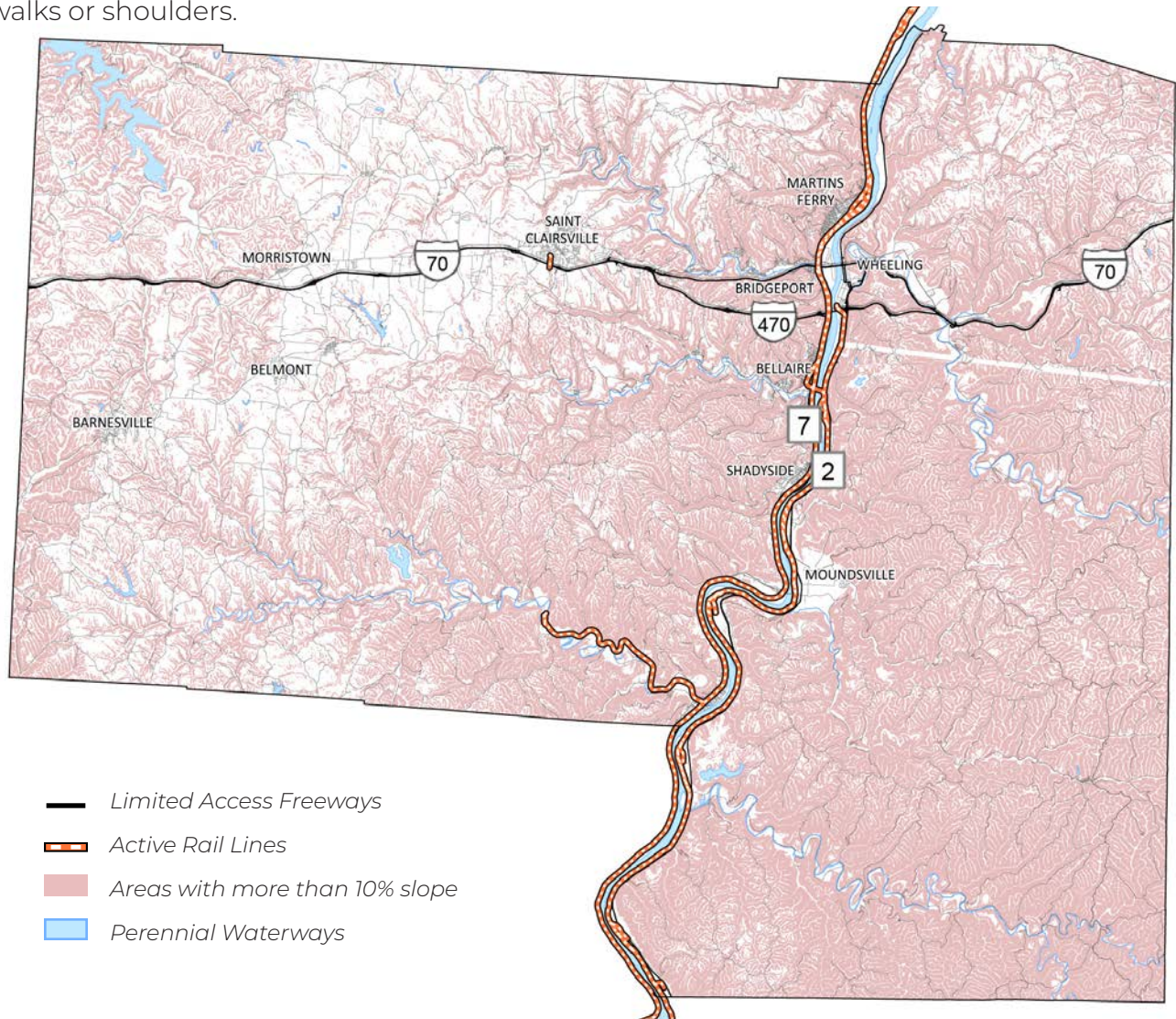


Figure 22. Physical barriers that present challenges for multimodal transportation and project implementation

Along the Ohio River and I-70 Corridor, dense communities are bisected by highways. These barriers block bike and pedestrian access, which creates challenges even where terrain is flat. Navigating around the existing infrastructure can increase the total length of trips and put people in unsafe positions.

There are several major barriers to safe access in communities near the Ohio River. Below are some examples of where these barriers are especially challenging.

1. Active Railroads along the Ohio River

Most of the region is cut off from the riverfront by active rail lines. Historically, these rail lines connected to ports along the Ohio River and helped the region thrive as an exporter of natural resources. Today, they are used less frequently, but still divide cities and restrict riverfront development. Other cities like Pittsburgh, PA have worked to reclaim their riverfront for decades, which has been a massive success.

2. Limited Access Highways

I-70 and I-470 also divide the communities that they travel through. For example, Wheeling Hospital is separated from its neighboring communities, forcing some to navigate dangerous interchanges by foot. However this can be addressed. In St. Clairsville, the National Road Bikeway connects the north and south side of town via an I-70 underpass.

3. Crossing the Ohio River

The Ohio River is a significant barrier to connectivity for all modes, but especially for active transportation. Currently, pedestrians can only cross the river at two locations: the Wheeling Suspension Bridge and the Main Street/Zane Street Bridge. The Moundsville Bridge also crosses the river but is only open to vehicular traffic. A new pedestrian crossing could have a massive impact on the shared economy of the region, like Purple People's Bridge which connects Cincinnati, OH to Covington, KY.

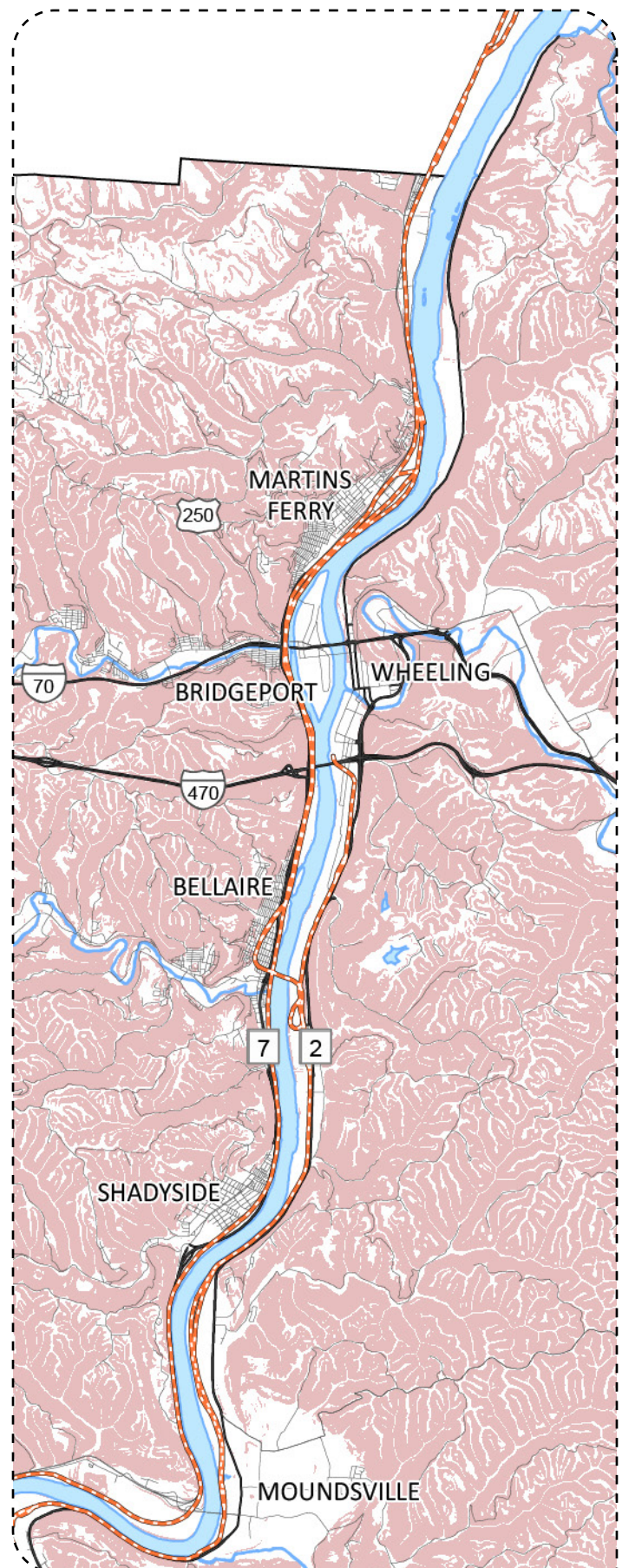


Figure 23. Multimodal barriers along the Ohio River

Active Transportation Opportunities

Despite the challenges, the Belomar region has several promising opportunities to improve and expand active transportation options. **Figure 24** shows three opportunities to close active transportation gaps by implementing visionary regional connections.

1. Widen road shoulders and wayfinding on county roads

Improving safety on low-volume roads like those along the Back Road Biking in Belmont County on-street route can be a 'quick-win' to connect rural communities.

2. Connect to Larger National Bike Routes

Work with Brooke and Hancock counties to explore potential connections to the Great Allegheny Passage.

3. Rails-to-trails Conversions

One of the most significant opportunities is the potential for more rails-to-trails conversions. Several former rail lines run through the Ohio River Valley and surrounding areas, offering relatively flat, direct alignments that are ideal for shared-use paths. This work should start by extending the National Road Bike Trail and the Wheeling Heritage Trail. Rails-to-trails conversions require long-term land acquisition negotiations, but local examples like The Glen Dale Moundsville Rail-Trail show how much benefit they provide to quality of life and the local economy.

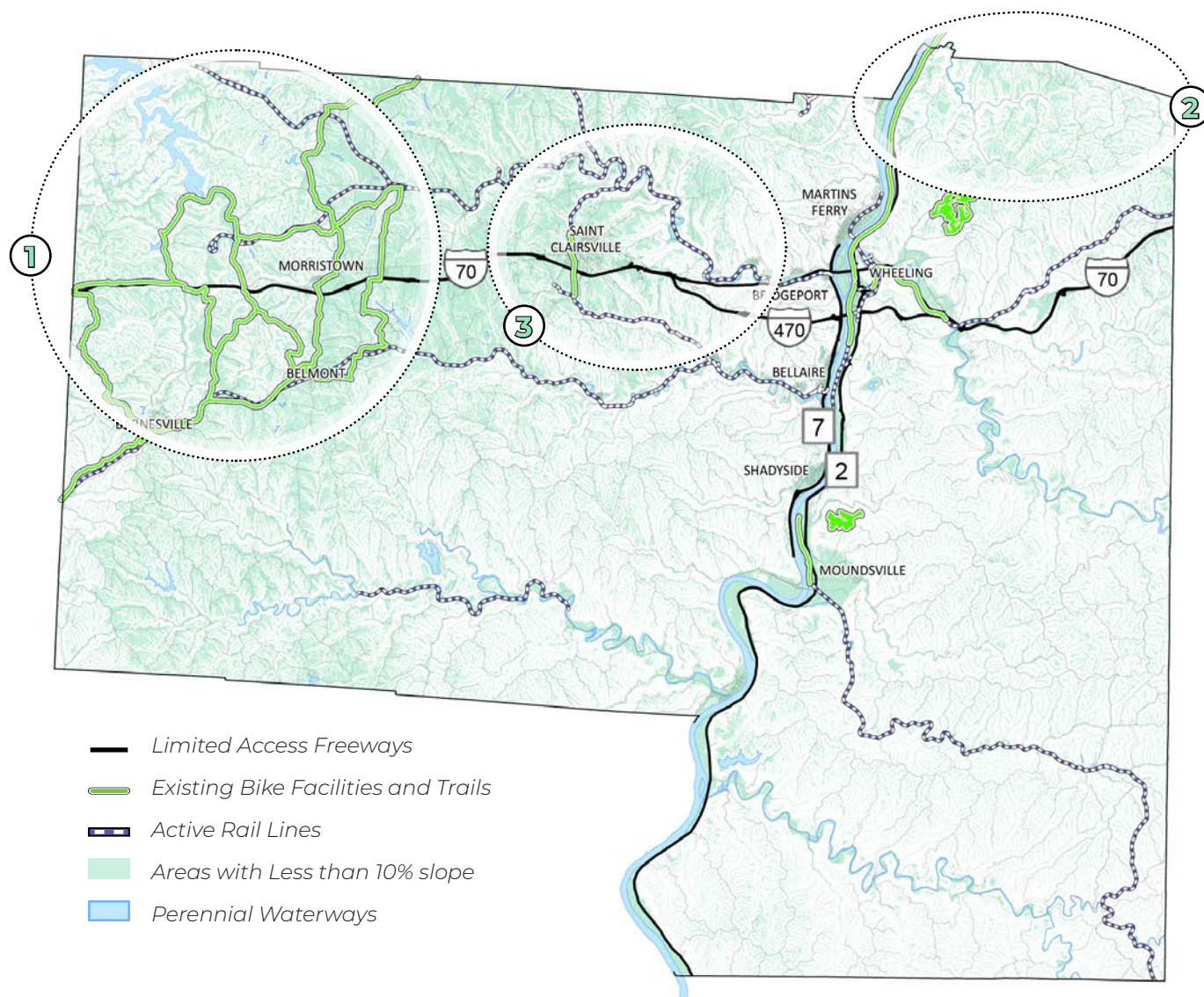


Figure 24. Multimodal opportunities for regional connections

Along the Ohio River, the terrain is flatter and the communities are denser. This makes the Ohio River corridor the ideal location for bike lanes and shared use paths that offer recreation and transportation utility. Existing trails such as the Wheeling Heritage Trail provide a successful model, attracting recreational users and connecting directly to downtown Wheeling.

Figure 25 shows three active transportation opportunities along and across the Ohio River.

1. Bike & Pedestrian River Crossings

Pedestrian and bicycle connections across the Ohio River would significantly improve connectivity. These connections could be new construction or utilize abandoned bridges such as the Bellaire Bridge or Aetnaville Bridge depending on structural soundness. In the short term, other bridges like the Moundsville Bridge or Zane Street Bridge could be improved by widened sidewalks or physical separation from traffic.

2. A Complete Regional Riverfront Trail

The Wheeling Heritage trail could be extended south to Moundsville by utilizing abandoned or underutilized rail lines. This connection would create safer, more comfortable routes for walking and biking while connecting key destinations such as downtowns, parks, and transit stops.

3. Connecting Parks and City Centers*

In cities and villages, first and last mile connections to transit should be improved by widening sidewalks, adding bike racks at bus stops and on buses, and filling in remaining gaps in the sidewalk network. In many places, waterways have adjacent green space or underused rights-of-way that could be transformed into shared-use paths. These corridors could provide scenic, low-stress connections that can serve both transportation and recreation purposes.

**Closing small gaps should be led by local cities and villages, prioritizing last-mile connections.*

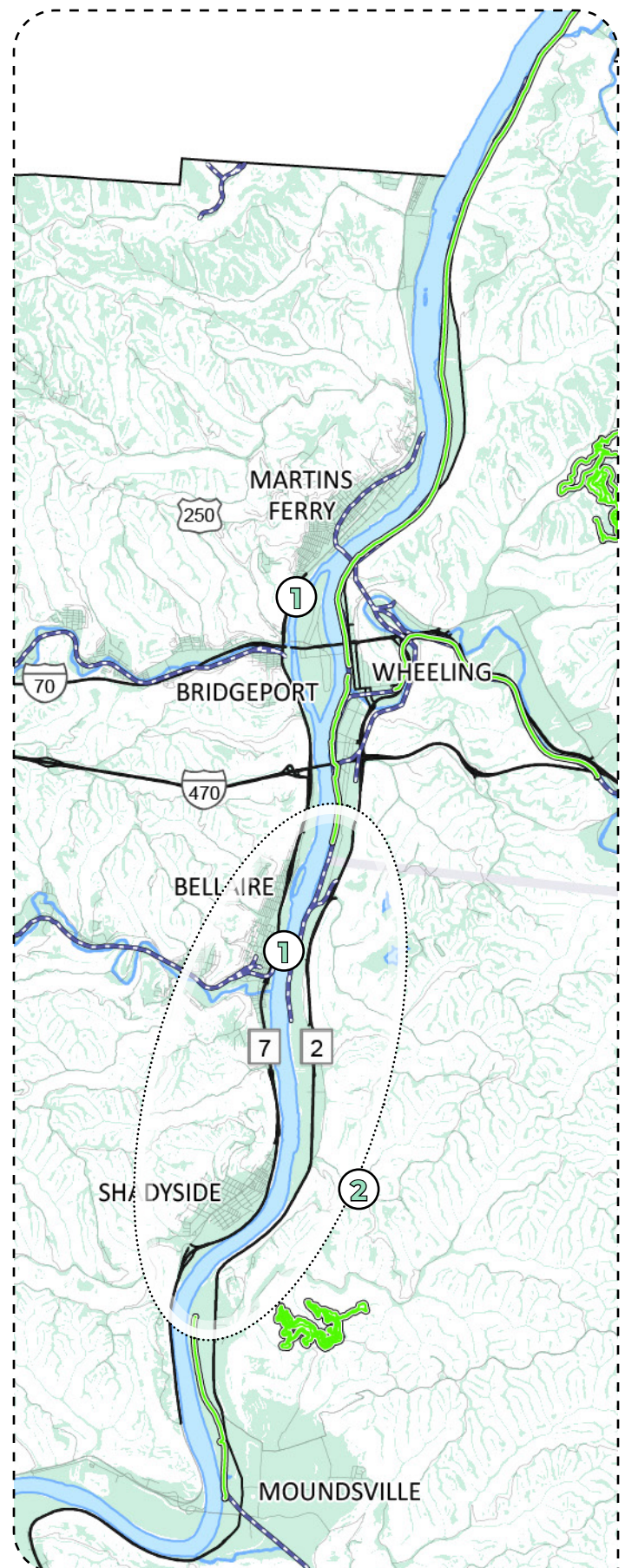


Figure 25. Multimodal opportunities on the Ohio River

Conclusion

Despite many barriers, the Belomar region has the opportunity to be a leader in active transportation for Appalachia. There is momentum from local leaders and the public to build out sidewalks and bike facilities inside cities and villages in the near future. Regional connections face implementation challenges, but can be transformative for the region's economy and transportation system.

Enhancing Local Connectivity

- **Start with sidewalks.** Recently, the City of Wheeling set an excellent example for the region with the Wheeling Streetscape Project. Other communities and counties should start basic sidewalk maintenance, and are encouraged to do their own complete streets studies to identify and close sidewalk gaps.
- **Identify local roads that can add bike lanes.** Many streets may have more lanes than they need for their current traffic. An active transportation study can review traffic data and identify roads in cities/villages that are good candidates for adding a new bike lane.
- **We're better when we work together.** Local, county, and regional agencies can team to help plan, fund, and build these projects. Communication makes big things possible.

Visionary Projects & Regional Connections

- **Identify river crossing locations.** A new pedestrian crossing is clearly needed to connect Ohio River communities. Choosing a location is a complex decision that impacts funding, constructibility, and local access. A study to evaluate potential crossing locations with an open engagement process is needed.
- **Complete the riverfront trail.** Many barriers are in the way of a continuous connection between Moundsville and Wheeling. Abandoned railroads, on-street connections, and river crossings are long-term options for closing this gap, but they need closer study.
- **Widen rural road shoulders.** Roadways are very narrow, impacting vehicular, pedestrian, and bicycle safety. Shoulders can be widened to 8 feet where feasible along major roads.



Bike racks add function and character in downtown Wheeling

Public Transportation Gaps & Needs

At first glance, transit routes may appear to cover every corner of the transit service area, but transit system gaps can be difficult to see. This section covers how transit gaps were identified and presents opportunities for addressing barriers to transit accessibility across the region.

Approach

Access is not strictly about connecting every community, it's about connecting people to the goods and services they need in an efficient, safe, and accessible way. Simple things like stop location, sidewalk connections, and transfer locations greatly impact how connected a transit service is to the community.

This section is a deep dive into the existing fixed-routes to identify service strengths and opportunities to address transit gaps and needs. To do this, two analyses were completed: a transit supportive infrastructure inventory (TSI) and an activity and demand assessment.

TSI Inventory

Transit supportive infrastructure (TSI) refers to built environment features that make public transportation more accessible, safe, and appealing. Each transit stop was reviewed for the presence of seven TSI elements (**Fig. 26**), to understand how transit access quality varies across the region. These TSI elements are cost effective and pragmatic ways of improving transit access in each community.

Walking is a part of almost every transit trip. To understand this, we performed a geospatial walkshed analysis for each transit stop in the region to identify areas that were within a comfortable 10-minute walk to transit. This approach utilized ESRI's Walk Time tool to map pedestrian-accessible areas based on actual walking paths, accounting for barriers like highways, rivers, or disconnected streets. The analysis assumes that every person is traveling at 3.1 mph, and does not account for slower walking speeds when walking up steep slopes.

Stop Signage



Transit Seating



Transit Shelter



Marked Crossings



Unmarked Crossings



Sidewalks



Bike Facilities



Figure 26. Elements of Transit Supportive Infrastructure (TSI)

Activity and Demand Assessment

The location of residential and commercial development impacts how our transportation system must function in order to efficiently connect people to the goods and services they need. An activity and demand analysis evaluates how each route in the existing transit network satisfies these connections.

First, a list of key points of interest was developed using input from local leaders and the public (**Table 6**). These points mark goods and services that should be within transit walksheds for easy access. Many communities do not have a wide range of services, so many residents rely on direct transit connections between communities for things like health care, groceries, and recreation.

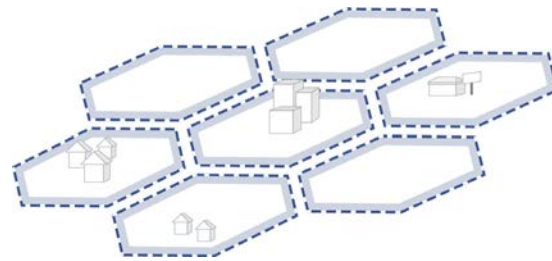
Because route specific ridership data was unavailable, we used Origin-Destination Analysis to tell us where people are traveling to and from by utilizing auto trip data. This analysis utilized the following three step process to estimate how popular certain stops, lines, and districts are:

1. 'Traffic Analysis Zones' define the boundary of where trips start or end. For this analysis, we used a hexagonal grid comprised of 0.28 square miles shapes. The grid's smaller scale improves the accuracy of the analysis.
2. Origin-Destination (OD) data for vehicles was collected using StreetLight, a service that estimates trips using data from connected vehicles and GPS devices. This OD analysis provides the number of vehicle trips that start or end in each hexagon on an average day. This provides a proxy for which areas are popular destinations.
3. OD data was overlaid with the 10-minute walksheds for each transit stop. This final step estimates the number of trips starting or ending within each walkshed. Walksheds with a high number of daily trips are expected to be the most popular today.

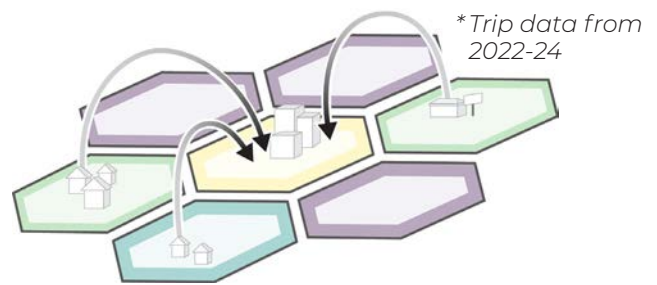
| Point of Interest | Description |
|--|---|
|  Medical Center | Health Services including: urgent care, hospitals, and rehabilitation centers |
|  Multi-family Housing | Housing Complexes including: apartments, townhomes, and senior housing |
|  Shopping Centers | Commercial Districts and Goods including: grocery stores, markets, and shopping centers |
|  Education/ Training | Education and training including: schools, universities, and community colleges |
|  Park/ Recreation | Recreation opportunities including: parks, greenspace, sports fields, and fairgrounds |

Table 6. Description of collected Points of Interest

1 Define Traffic Analysis Zones



2 Origin-Destination Analysis



3 Estimate Walkshed Demand

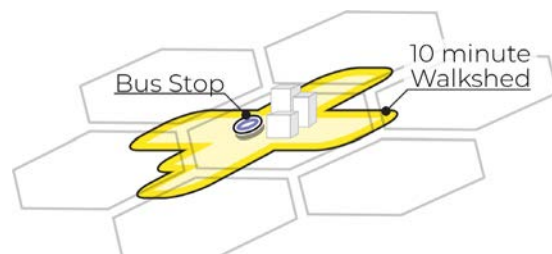


Figure 27. Estimating transit stop trip demand

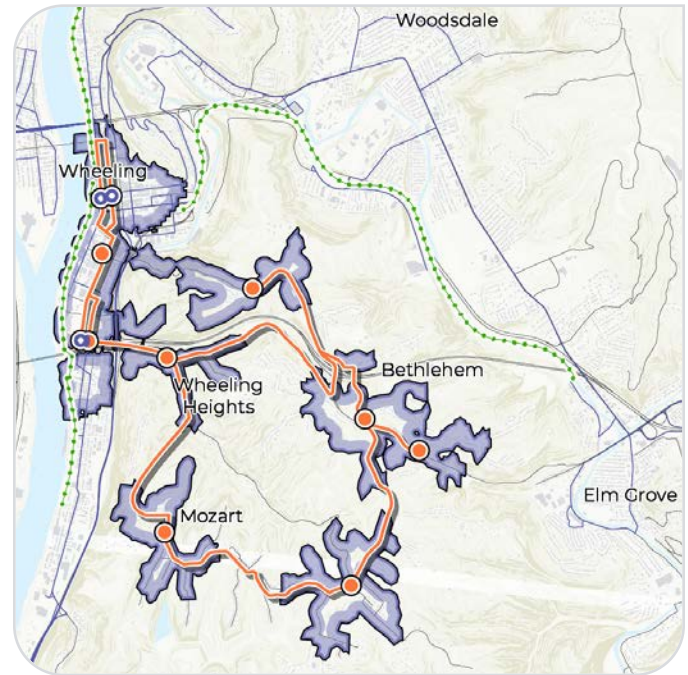
Route-by-Route Transit Gaps & Needs Evaluation

The following pages detail the results of the TSI inventory and activity and demand assessment. These two analyses were essential for identifying the strengths of each route and opportunities for TSI improvements and service changes that address the transit needs and gaps we see today. Below are examples of the maps resulting from these analyses, which include map legends that are helpful for understanding the pages that follow:

Route-by-Route TSI Inventory

We analyzed each transit route to evaluate the quality and coverage of transit supportive infrastructure at the stop location. This inventory reveals interesting, location specific, takeaways about the presence of TSI elements throughout OVRTA’s fixed-route transit network, which became the basis for recommending improved connections to the fixed-route public transportation system. Each ‘TSI Inventory’ map uses the symbology in the legend below:

- | | |
|---------------------------|----------------------------|
| Points of Interest | Trip Demand |
| Bus Stop (Transfer) | Bike/Ped Routes |
| Bus Stop (No Transfer) | 10 Minute Walkshed |
| Fixed Route Call-out | TSI Inventory Table |
| All OVRTA Fixed Routes | TSI Present |
| | TSI Not Present |

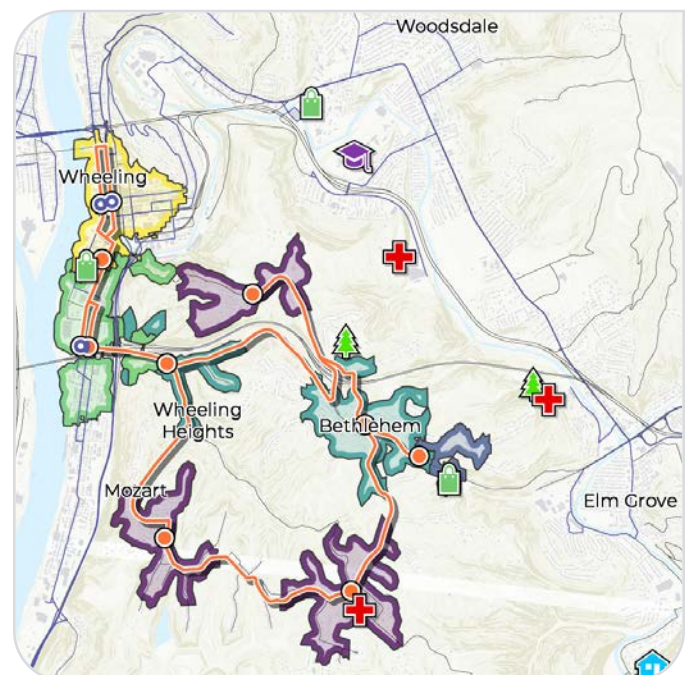


Ex: TSI Inventory Example (Mozart-Bethlehem Route)

Route-by-Route Service & Demand Assessment

Local trip demand and walkshed analysis help estimate the total number of trips made to each transit stop’s walkshed. This analysis gives us a strong proxy for transit trip demand across every stop in the fixed-route system. For each route, local demand and key destinations were analyzed to identify ways to better connect our transit system to desired locations across the Belomar region. Each ‘Activity and Demand Assessment’ map uses the symbology in the legend below:

- | | |
|---------------------------|-------------------------|
| Points of Interest | Trip Demand |
| Medical Center | Over 5,000 Trips/day |
| Multi-family Housing | 2,500 - 5,000 Trips/day |
| Shopping/Entertainment | 1,000 - 2,500 Trips/day |
| Education/Training | 500 - 1,000 Trips/day |
| Park/Recreation | Under 500 Trips/day |



Ex: Service & Demand (Mozart-Bethlehem Route)

North Park - Wheeling Heights: TSI Inventory

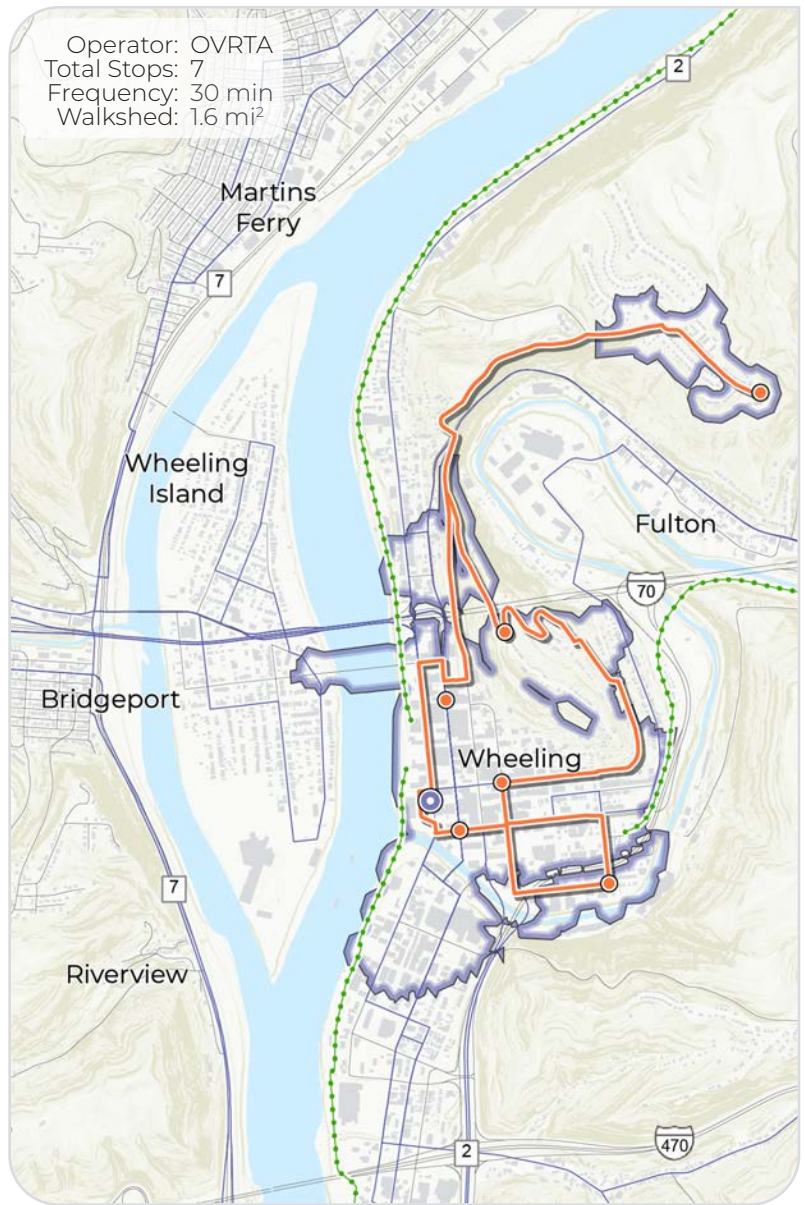
This 5.2 mile transit loop is a primary circulator in central Wheeling and also connects to the North Park apartments. This loop features seven stops including one transfer stop.

Strengths

- All stops have sidewalk access and multiple stops are accessible from the Wheeling Heritage Trail on the Ohio River's east bank.
- This route provides transit access to North Park Apartments, an income-based affordable housing apartment complex.
- Five of seven stops on this line have a marked or unmarked crossing. The presence of crossings is encouraging, although high visibility crossings are recommended at all locations.

Opportunities

- Most of the area north of 7th Street and south of 23rd Street is outside of the 10 minute walkshed.
- This loop features one transfer location (Intermodal Center). Other routes could be better connected to this central loop with small changes to existing alignments.
- Currently, the Intermodal Center is the transfer stop and only stop with a shelter. Other stops in downtown Wheeling can include seating or shelters due to higher trip demand.



| | Bus Stops | Community/ Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|-----------------------|-----------------------|---------------------|-------------|-----------------|-----------------|--------------------|------------------|----------|---------------|
| Direction of Travel ↓ | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| | 16th & Market St | Wheeling | ○ | ○ | ○ | ○ | ● | ● | ● |
| | 19th & Wood St | Wheeling | ● | ○ | ○ | ○ | ○ | ● | ● |
| | 14th & Eoff St | Wheeling | ○ | ○ | ○ | ○ | ● | ● | ● |
| | Top of Wheeling Hts | Wheeling | ● | ● | ○ | ● | ○ | ● | ○ |
| | North Park Apartments | Wheeling | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| | 11th & Market St | Wheeling | ● | ○ | ○ | ● | ○ | ● | ○ |

North Park - Wheeling Heights: Service & Demand Assessment

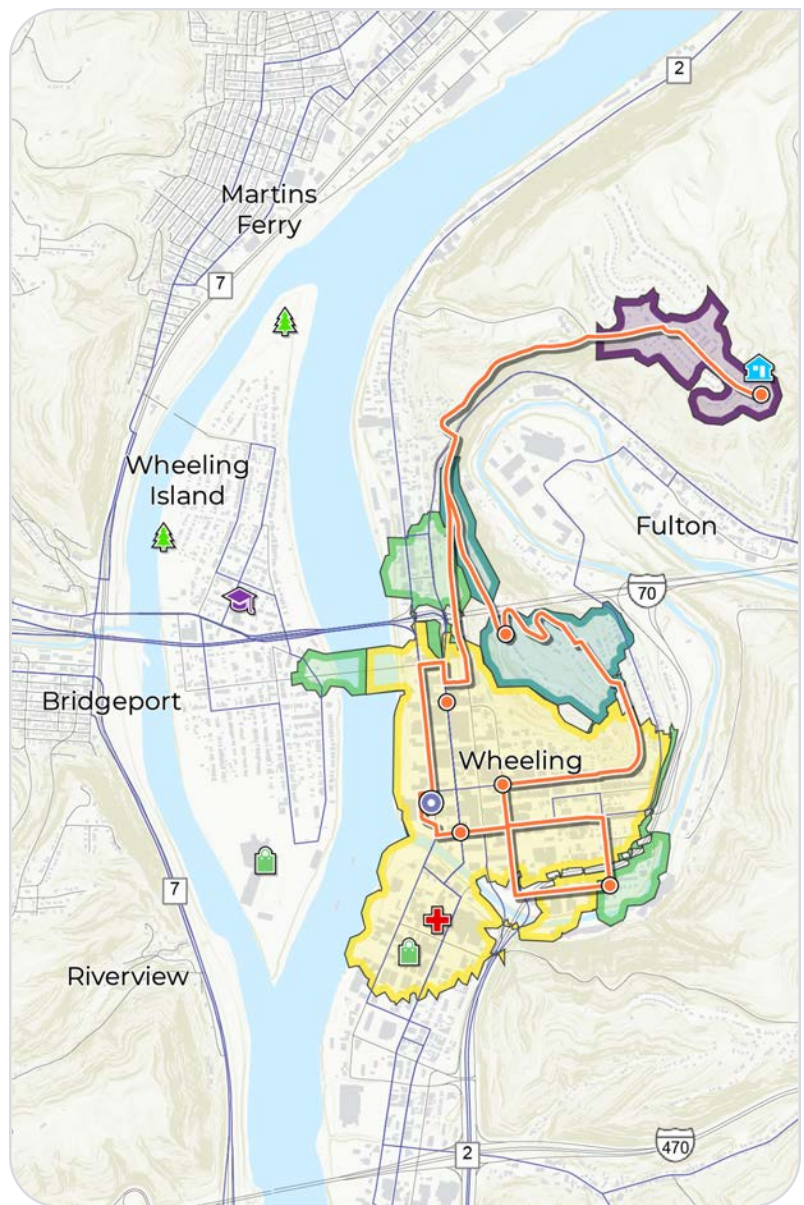
Within the 0.8 mile² walkshed, there are 3,600 residents and 11,750 trips per day. This is the closest any route comes to being a primary downtown circulator that services short trips between North, Central, and South Wheeling.

Strengths

- North Park and Wheeling Heights are located along the Wheeling hillside, with limited walkability and alternative connections to the city. For residents in this area without a vehicle, transit can be their transportation lifeline.

Opportunities

- This route has service overlaps with many of the other routes in the system. Additional stops at other transfer locations in central Wheeling or adjusting transit services to allow transfers at 14th & Eoff would better integrate this loop into the greater network.
- Frequency is greatly affected by buses traveling to the North Park stop. There are opportunities to incorporate these stops into the Warwood and Mount DeChantal Routes respectively. This small change would reduce the total length of this route, allowing it to function more effectively as a downtown circulator.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | | | | | |
|-----------------------|---------------------|--------------------------|---------------------------|--|--|--|--|--|
| Intermodal Center | Wheeling | 1,100 | 5,700 | | | | | |
| 16th & Market St | Wheeling | 1,300 | 6,500 | | | | | |
| 19th & Wood St | Wheeling | 550 | 3,000 | | | | | |
| 14th & Eoff St | Wheeling | 1,200 | 6,500 | | | | | |
| Top of Wheeling Hts | Wheeling | 300 | 1,100 | | | | | |
| North Park Apartments | Wheeling | 150 | 450 | | | | | |
| 11th & Market St | Wheeling | 1,200 | 4,000 | | | | | |

Wheeling Island:

TSI Inventory

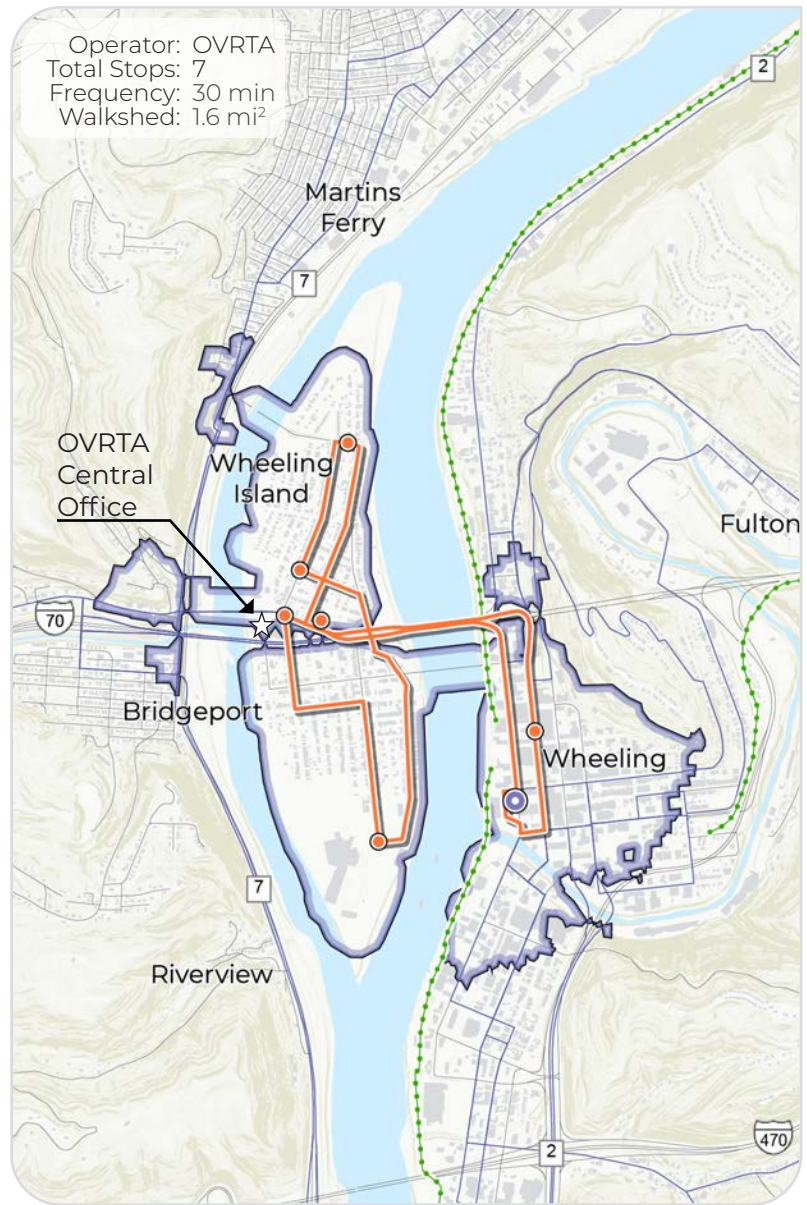
This 5.1 mile transit loop is the shortest in the region. It circulates between downtown Wheeling and Wheeling Island, with five different stops across the island.

Strengths

- Wheeling Island is one of the most walkable communities in the region. Dense development and seven stops make all the island’s residential area transit accessible.

Opportunities

- Limited transfer stations mean transit users need to travel to the Intermodal Center before using other transit routes, complicating trips to key destinations.
- There is significant overlap of transit stop walksheds due to tight stop spacing. There is potential to better space stops or even remove one stop to improve transit efficiency with little impact on accessibility.
- Currently, the island has two bridges that are accessible by pedestrians. An additional pedestrian connection between Wheeling Island and Belmont County would foster a shared economy between the Island and Bridgeport, Aetnaville, and Martins Ferry.



| | Bus Stops | Community/ Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|-----------------------|-------------------|---------------------|-------------|-----------------|-----------------|--------------------|------------------|----------|---------------|
| Direction of Travel ↓ | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| | 12th & Market St | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| | Madison School | Wheeling Island | ○ | ○ | ○ | ○ | ● | ● | ○ |
| | North Island | Wheeling Island | ● | ○ | ○ | ○ | ○ | ● | ○ |
| | Indiana St | Wheeling Island | ● | ○ | ● | ○ | ○ | ● | ○ |
| | South Island | Wheeling Island | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| | S Huron & Zane St | Wheeling Island | ○ | ○ | ○ | ○ | ● | ● | ○ |

Wheeling Island:

Service & Demand Assessment

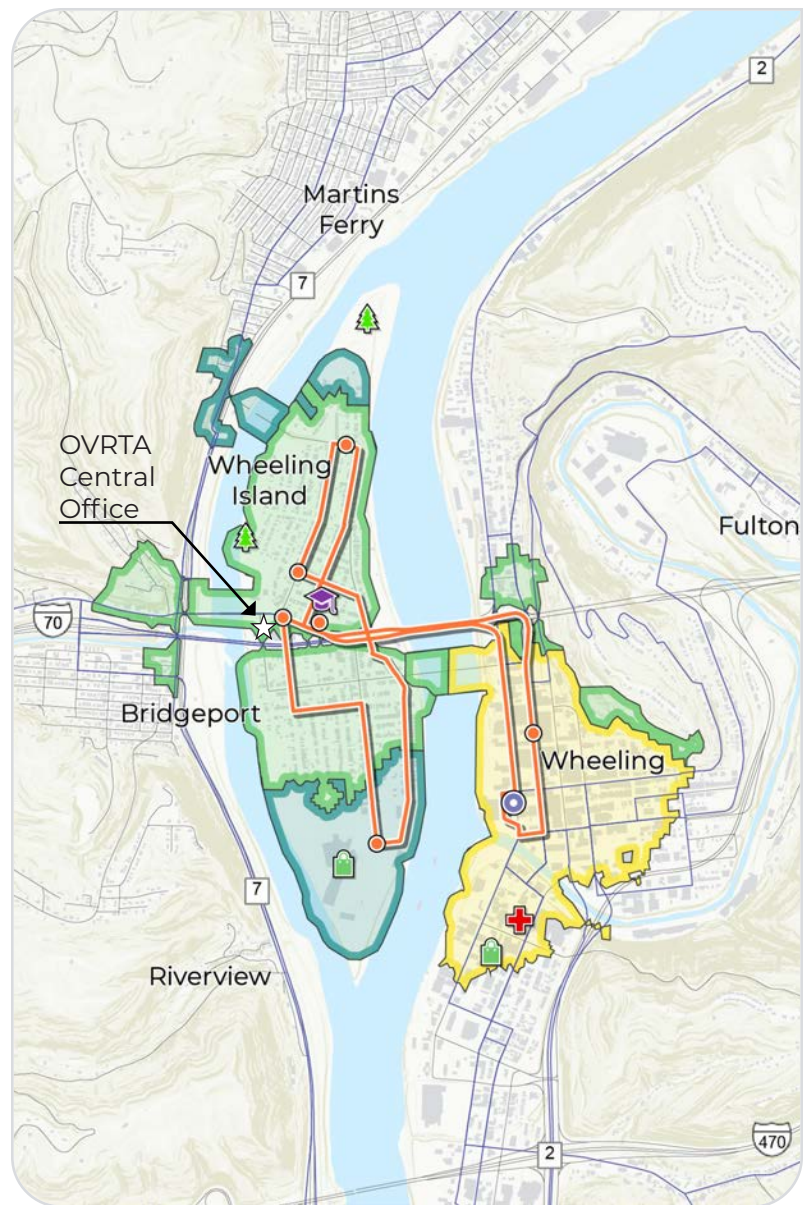
Within the 1.1 mile² walkshed, there are 2,300 residents and 10,000 trips per day. This route provides transit access to the entirety of Wheeling Island, including Madison Elementary, and the Wheeling Island Hotel and Casino.

Strengths

- Every home, business, and service on the island are accessible by transit. This makes Wheeling Island an excellent location for someone living without a vehicle or with limited mobility.

Opportunities

- Existing transit stops are clustered near the central island. Adding or moving stops closer to the Main Street Bridge and Wheeling Suspension bridge can vastly increase the walkable area and make it easier to get on and off the island.
- The island has no transfer locations, making it difficult to access the goods and services available outside of Wheeling and Wheeling Island.
- The OVRTA Central office is right in the heart of Wheeling Island. Because every OVRTA bus needs to return to this location, it is a prime spot for a new major transfer center that services all OVRTA's fixed routes, like the Intermodal Center in downtown Wheeling.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | + | 🏠 | 🎓 | 🏪 | 🌲 |
|---------------------|---------------------|--------------------------|---------------------------|---|---|---|---|---|
| 🎯 Intermodal Center | Wheeling | 1,100 | 5,700 | ● | ○ | ○ | ● | ○ |
| 🟠 12th & Market St | Wheeling | 1,150 | 4,900 | ○ | ○ | ○ | ○ | ○ |
| 🟠 Madison School | Wheeling Island | 1,700 | 3,000 | ○ | ○ | ● | ○ | ○ |
| 🟠 North Island | Wheeling Island | 1,250 | 1,900 | ○ | ○ | ● | ○ | ○ |
| 🟠 Indiana St | Wheeling Island | 1,700 | 2,650 | ○ | ○ | ● | ○ | ○ |
| 🟠 South Island | Wheeling Island | 750 | 2,300 | ○ | ○ | ● | ○ | ○ |
| 🟠 S Huron & Zane St | Wheeling Island | 1,750 | 2,900 | ○ | ○ | ○ | ● | ○ |

Elm Grove: TSI Inventory

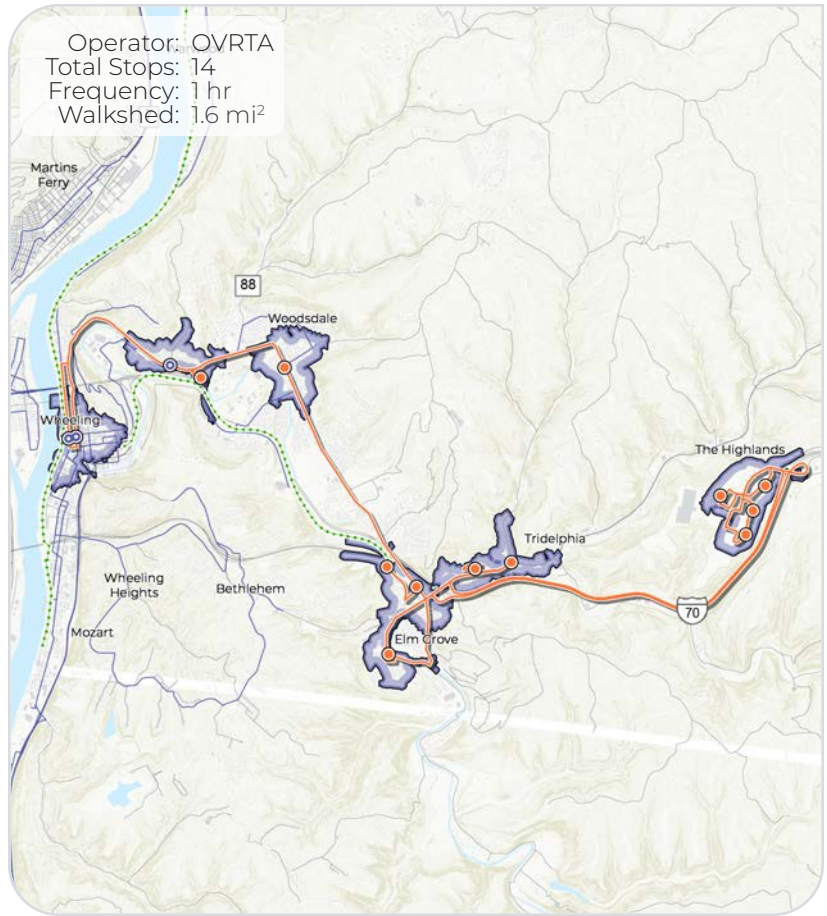
This 23.6 mile transit line is the longest route in the region, connecting downtown Wheeling and The Highlands, connecting the communities of Wheeling, Fulton, Woodsdale, and Elm Grove along the way.

Strengths

- This route is an additional option for shoppers or workers commuting into Central Wheeling or the Highlands.
- The Wheeling Heritage Trail offers a low-stress connection to transit for bicyclists and pedestrians

Opportunities

- The stops at commercial centers like Kroger, Reisbeck's, and The Highlands are not well connected to the storefronts. These stops could be better integrated into these locations with sidewalks, transit shelters, and signage.
- Park-and-ride or shuttle services between Elm Grove and the Highlands can increase bus frequency, making it more viable for commute trips



| | Bus Stops | Community/ Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|-----------------------|-------------------------|---------------------|-------------|-----------------|-----------------|--------------------|------------------|----------|---------------|
| Direction of Travel ↓ | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| | 14th & Market St | Wheeling | ● | ○ | ○ | ○ | ● | ● | ● |
| | Glenwood & National Rd | Fulton | ○ | ○ | ○ | ● | ○ | ● | ● |
| | Kroger (Wheeling) | Wheeling | ○ | ○ | ○ | ○ | ● | ● | ● |
| | Edgington Ln | Woodsdale | ● | ○ | ○ | ○ | ● | ● | ○ |
| | Elm Grove | Elm Grove | ● | ● | ○ | ○ | ● | ● | ● |
| | Mason Rehab | Elm Grove | ○ | ○ | ○ | ○ | ● | ○ | ○ |
| | Elm Terrace | Elm Grove | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | Riesbeck's (Eastside) | Elm Grove | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | S-Bridge | Elm Grove | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | The Highlands (4 stops) | The Highlands | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Elm Grove:

Service & Demand Assessment

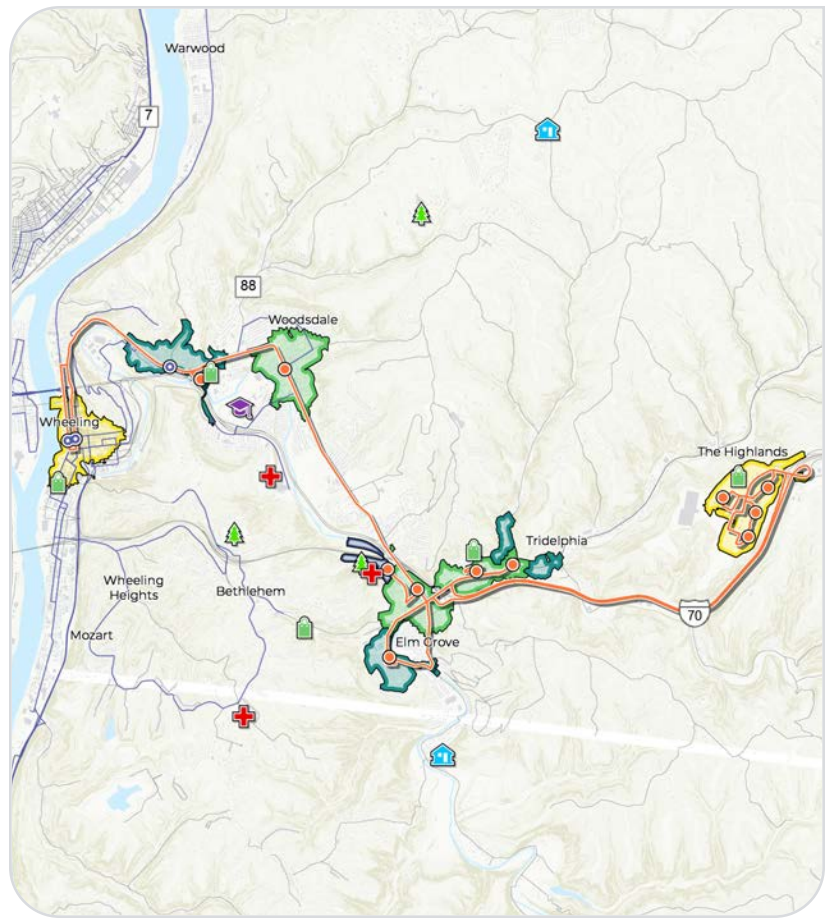
Within the 2.4 mile² walkshed, there are 5,800 residents and 31,250 trips per day. By local trip demand, this is the most active route in the network, connecting the commercial centers of downtown Wheeling and The Highlands.

Strengths

- The Elm Grove route covers a massive distance, connecting many points of interest along its way. This includes multiple grocery stores, medical centers, and Wheeling University.

Opportunities

- Limited service hours make it incompatible for early and late shift workers and long bus frequencies make transit less reliable for commuting.
- Creating a park and ride or shuttle service between Elm Grove and The Highlands can improve the practicality of using transit for commute and shopping trips by increasing frequency west of Elm Grove.
- This route should be integrated with the Mt. Dechantal route to increase frequency and service coverage. This can seamlessly be done by replacing the Edgington Lane stop with a Washington & National Road transfer stop.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | + | 🏠 | 🎓 | 🛒 | 🌲 |
|---------------------------|---------------------|--------------------------|---------------------------|---|---|---|---|---|
| 🎯 Intermodal Center | Wheeling | 1,100 | 5,700 | ● | ○ | ○ | ● | ○ |
| 🎯 14th & Market St | Wheeling | 1,200 | 6,100 | ● | ○ | ○ | ● | ○ |
| 🎯 Glenwood & National Rd | Fulton | 500 | 1,900 | ○ | ○ | ○ | ○ | ○ |
| 🎯 Kroger | Wheeling | 100 | 1,150 | ○ | ○ | ○ | ● | ○ |
| 🎯 Edgington Ln | Woodsdale | 1,950 | 4,600 | ○ | ○ | ● | ○ | ○ |
| 🎯 Elm Grove | Elm Grove | 850 | 3,750 | ○ | ○ | ○ | ○ | ○ |
| 🎯 Mason Rehab | Elm Grove | 200 | 900 | ● | ○ | ○ | ○ | ● |
| 🎯 Elm Terrace | Elm Grove | 450 | 1,700 | ○ | ○ | ○ | ○ | ○ |
| 🎯 Riesbeck's (Eastside) | Elm Grove | 750 | 2,500 | ○ | ○ | ○ | ● | ○ |
| 🎯 S-Bridge | Elm Grove | 650 | 1,900 | ○ | ○ | ○ | ● | ○ |
| 🎯 The Highlands (4 stops) | The Highlands | Less than 50 | 7,600 | ○ | ○ | ○ | ● | ○ |

Mount DeChantal: TSI Inventory

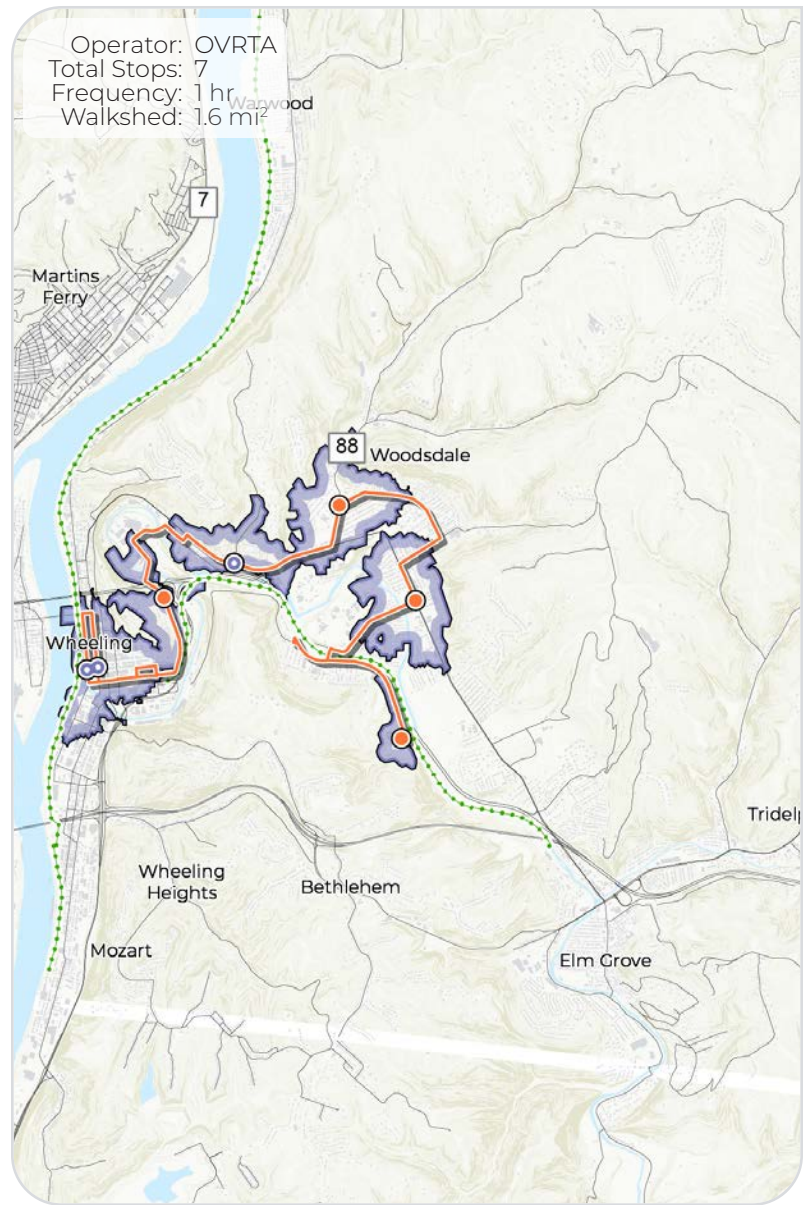
This 8.1 mile transit line connects WVU Medical Center, Wheeling University, and Woodsdale Neighborhood to Wheeling. This is the only route with a stop at WVU Medical Center.

Strengths

- This route connects the communities on the northeast side to downtown Wheeling and the WVU Hospital which is essential for commuting trips and university students.
- Several stops are located near the Wheeling Heritage Trail, offering a low-stress bike/ped connection to transit.

Opportunities

- Currently, only two of the seven transit stops are near a marked crossing. Unmarked crossings can be upgraded with high visibility striping.
- Each stop should be easy to find. Currently, three out of seven stops are not clearly marked.
- This route's three transfer stations, especially the two in Wheeling, should include seating and shelters for those waiting to transfer.
- WVU Hospital only has one access point. An additional access point on the southeast side that crosses I-70 would be a challenge to design, but it would be highly impactful for cars, bike, and pedestrians.



| | Bus Stops | Community/ Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|-----------------------|------------------------------|------------------------|----------------|--------------------|--------------------|-----------------------|---------------------|----------|------------------|
| Direction of Travel ↓ | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| | 10th & McColloch St | Wheeling | ● | ○ | ○ | ○ | ○ | ● | ● |
| | Glenwood & National Rd | Fulton | ○ | ○ | ○ | ● | ○ | ● | ○ |
| | Edgewood & Bethany Pike | Woodsdale | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| | National Rd & Washington Ave | Woodsdale | ● | ● | ○ | ○ | ● | ● | ○ |
| | Medical Park | WVU Hospital | ○ | ○ | ○ | ○ | ○ | ○ | ● |
| | 14th & Market St | Wheeling | ● | ○ | ○ | ○ | ● | ● | ● |

Mount DeChantal:

Service & Demand Assessment

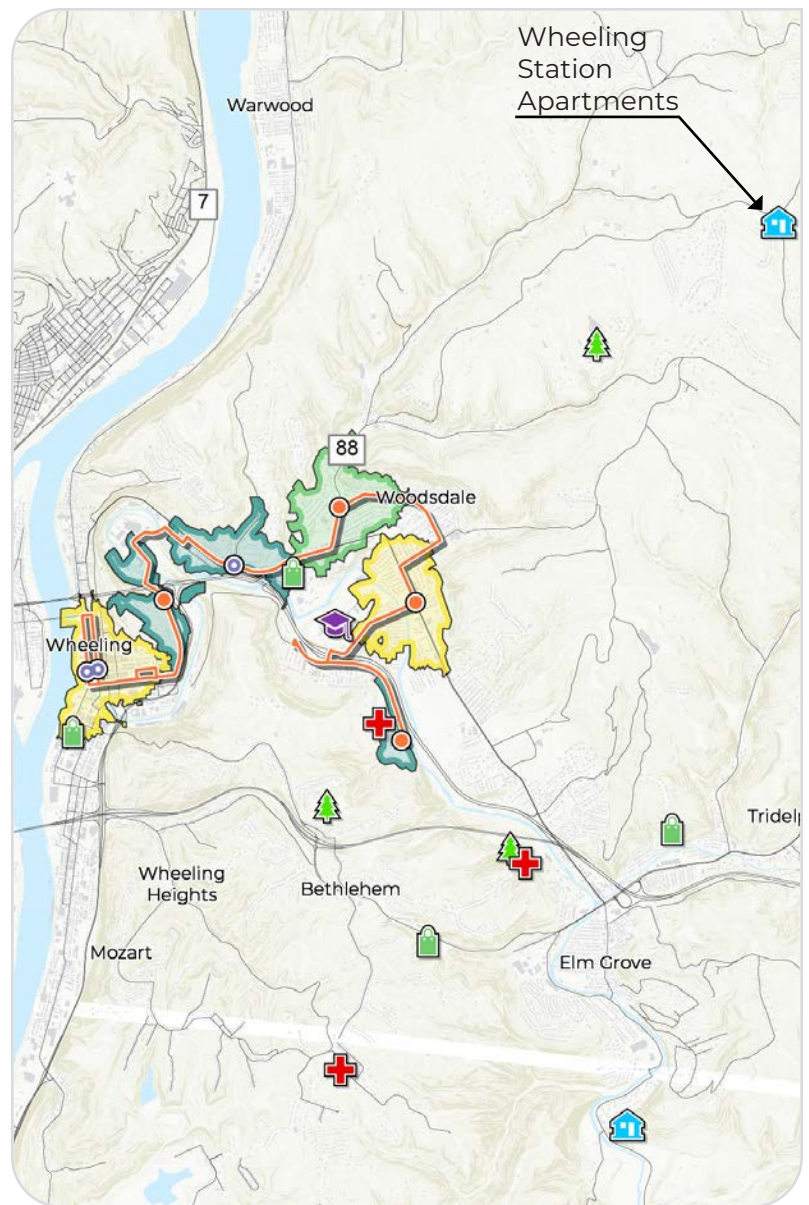
Within the 1.8 mile² walkshed, there are 6,050 residents and 20,300 trips per day. Mount DeChantal is one of the most essential transit routes in the entire system, because it is the only route that gets people directly to the WVU Medical Center.

Strengths

- Key goods and services along this route include: a grocery store (Kroger), hospital, and university. Mt. DeChantal is a critical connection with an efficient route to stop at every major destination in the area.

Opportunities

- Riders can only transfer at the intermodal center or Glenwood & National Road. Adding a transfer at the National Road & Washington Avenue stop puts riders closer to WVU Medical Center and Wheeling University.
- Adding an additional stop after the Medical Park at the corner of Mt. DeChantal and National Road would drop riders off on the nearside of National Road, removing the need to cross the busy, five lane, U.S. Route.
- This route is a potential candidate to become a deviated fixed route to connect to Wheeling Station, a multi-family housing unit near Oglebay Park.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | Hospital | Multi-Family Housing | University | Grocery Store | Park |
|------------------------------|---------------------|--------------------------|---------------------------|----------|----------------------|------------|---------------|------|
| Intermodal Center | Wheeling | 1,100 | 5,700 | ● | ○ | ○ | ● | ○ |
| 10th & McColloch St | Wheeling | 500 | 1,850 | ○ | ○ | ○ | ○ | ○ |
| Glenwood & National Rd | Fulton | 500 | 1,900 | ○ | ○ | ○ | ● | ○ |
| Edgewood & Bethany Pike | Woodsdale | 1,300 | 3,850 | ○ | ○ | ● | ○ | ○ |
| National Rd & Washington Ave | Woodsdale | 2,600 | 5,550 | ○ | ○ | ● | ○ | ○ |
| Medical Park | WVU Hospital | Less than 50 | 1,000 | ● | ○ | ○ | ○ | ○ |
| 14th & Market St | Wheeling | 1,200 | 6,100 | ● | ○ | ○ | ● | ○ |

Mozart-Bethlehem:

TSI Inventory

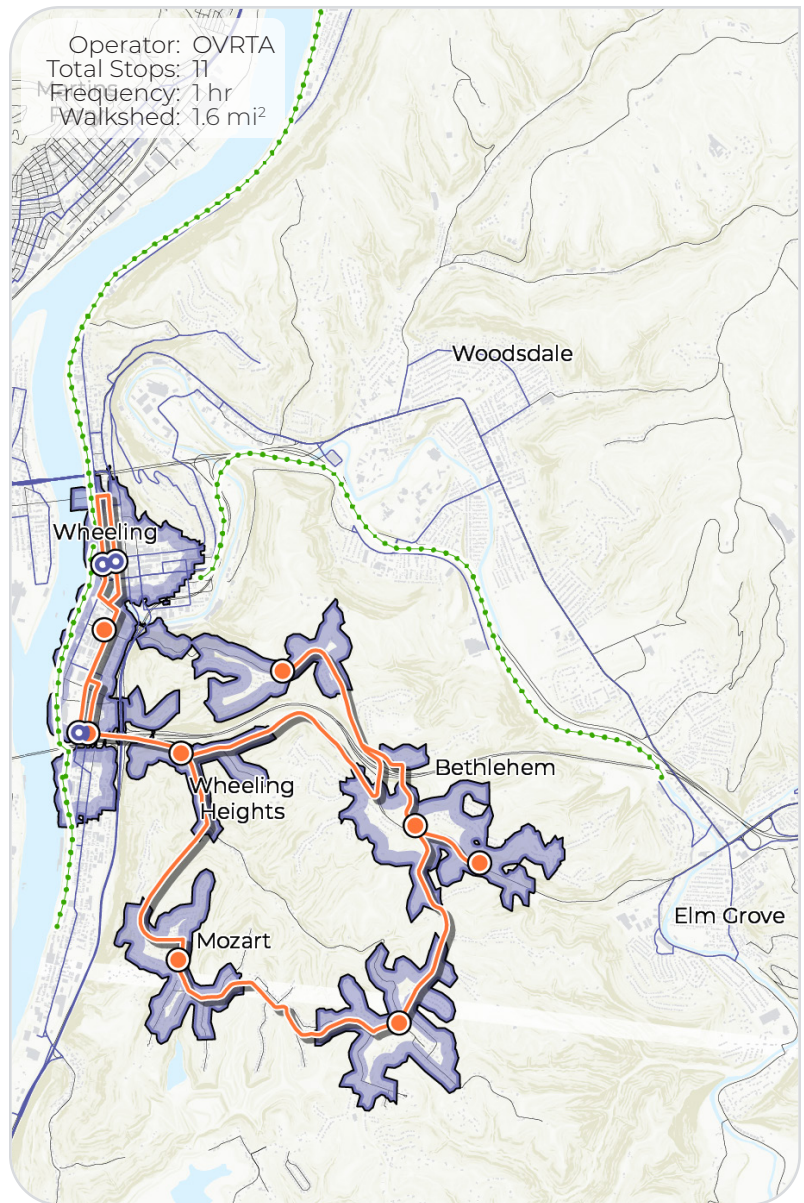
This 10.8 mile transit line is a residential connection between Wheeling and the neighborhoods nestled in the hills southeast of the city. Along its route there are stops in Wheeling, Wheeling Heights, Mozart, Mt. Olivet, Bethlehem, and Rio Vista.

Strengths

- This route is the only transit connection for many communities in the hills southeast of Wheeling. This includes: Wheeling Heights, Mozart, Bethlehem, Mount Olivet, and Rio Vista.
- The Wheeling Heritage Trail offers low-stress bike/ped access to each stop in downtown Wheeling.
- Pedestrian access in downtown Wheeling is high quality. All stops have a sidewalk and nearby crossing.

Opportunities

- Wheeling transfer stations should include shelters and transit seating to comfortably accommodate waiting riders.
- Stops in Wheeling Heights, Mozart, Mount Olivet, Bethlehem, and Rio Vista are in need of transit signage, sidewalks, and marked crossings.
- The hilly landscape and highways (I-470 and I-70) greatly limit the walkable area of each transit stop. Connecting communities requires a comprehensive and collaborative effort between each community and local agencies like OVRTA and Belomar.



| | Bus Stops | Community/ Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|---|-----------------------------|------------------------|----------------|--------------------|--------------------|-----------------------|---------------------|----------|------------------|
| ↻ | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| ↻ | 22nd & Chapline St | Wheeling | ● | ● | ○ | ● | ○ | ● | ● |
| ↻ | 29th & Chapline St | Wheeling | ○ | ○ | ○ | ● | ○ | ● | ● |
| ↻ | Fairmont Pike | Wheeling Hts | ○ | ○ | ○ | ○ | ○ | ● | ● |
| ↻ | Mozart Firehouse | Mozart | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| ↻ | Mt. Olivet & W.V. 88 | Mt. Olivet | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| ↻ | Old Bethlehem City Building | Bethlehem | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| ↻ | Village Plaza | Bethlehem | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| ↻ | Rio Vista | Rio Vista | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| ↻ | 29th & Eoff St | Wheeling | ● | ○ | ○ | ● | ○ | ● | ○ |
| ↻ | 14th & Market St | Wheeling | ● | ○ | ○ | ○ | ● | ● | ● |

Direction of Travel

Mozart-Bethlehem:

Service & Demand Assessment

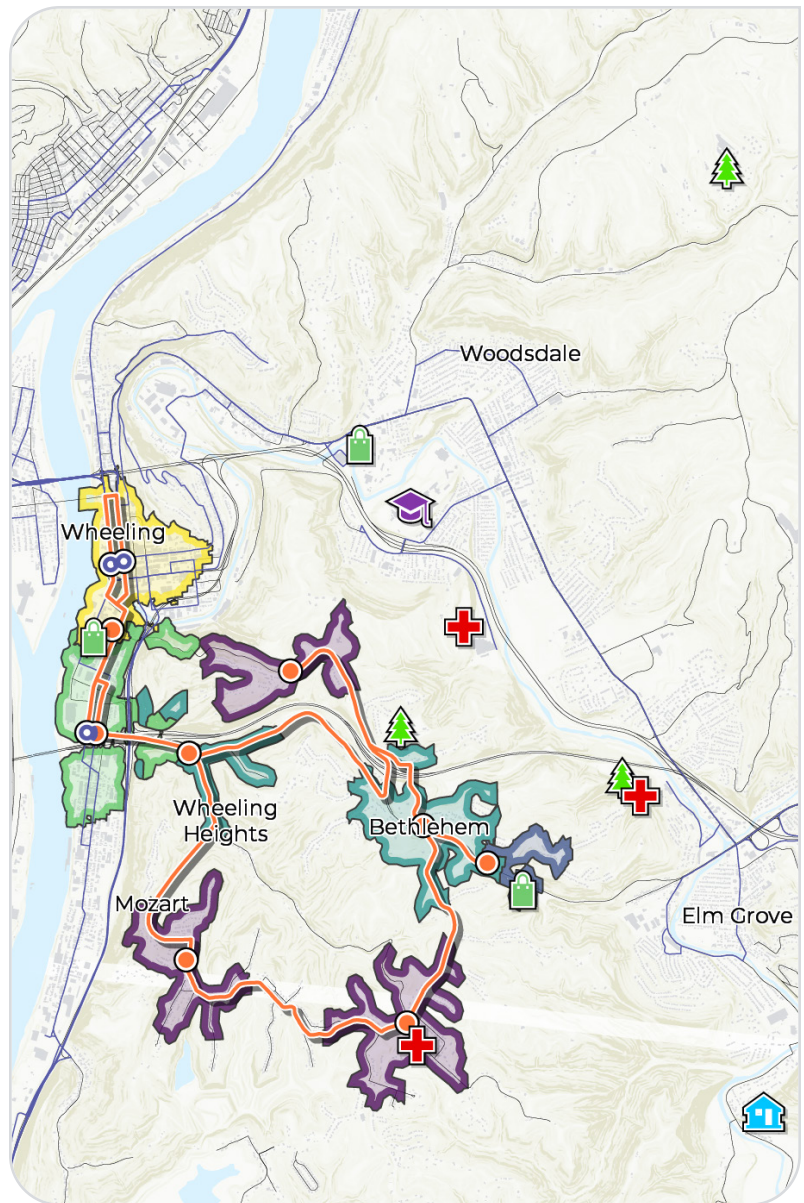
Within the 2.4 mile² walkshed, there are 4,100 residents and 13,100 trips per day. This route primarily connects residential areas in southeast Wheeling to downtown.

Strengths

- This loop primarily serves as a connection between Wheeling and the more isolated communities in southeast hillside. Without this route, the communities of Mozart, Bethlehem, Mount Olivet, and Rio Vista would have no alternative transportation option.

Opportunities

- Transfer stations are only in Central and South Wheeling. This makes trips to Elm Grove or The Highlands much longer and more complex. Adding an additional stop to transfer at Elm Grove would give this route more utility for riders.
- There are fewer connections to south Wheeling when compared to central Wheeling. It's important to increase transit access to south Wheeling in preparation for the new WVU Cancer Center currently under construction.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | + | 🏠 | 🎓 | 🔒 | 🌲 |
|-------------------------------|---------------------|--------------------------|---------------------------|---|---|---|---|---|
| 🕒 Intermodal Center | Wheeling | 1,100 | 5,688.6 | ● | ○ | ○ | ● | ○ |
| 🕒 22nd & Chapline St | Wheeling | 1,100 | 2,750 | ● | ○ | ○ | ● | ○ |
| 🕒 29th & Chapline St | Wheeling | 850 | 4,750 | ● | ○ | ○ | ● | ○ |
| 🕒 Fairmont Pike | Wheeling Hts | 200 | 1,050 | ○ | ○ | ○ | ○ | ○ |
| 🕒 Mozart Firehouse | Mozart | 550 | 450 | ○ | ○ | ○ | ○ | ○ |
| 🕒 Mt. Olivet & W.V. 88 | Mt. Olivet | 350 | 500 | ● | ○ | ○ | ○ | ○ |
| 🕒 Old Bethlehem City Building | Bethlehem | 350 | 1,200 | ○ | ○ | ○ | ○ | ● |
| 🕒 Village Plaza | Bethlehem | 250 | 700 | ○ | ○ | ○ | ● | ○ |
| 🕒 Rio Vista | Rio Vista | 200 | 450 | ○ | ○ | ○ | ○ | ○ |
| 🕒 29th & Eoff St | Wheeling | 1,100 | 2,900 | ● | ○ | ○ | ● | ○ |
| 🕒 14th & Market St | Wheeling | 1,200 | 6,100 | ● | ○ | ○ | ● | ○ |

Blaine Mall:

TSI Inventory

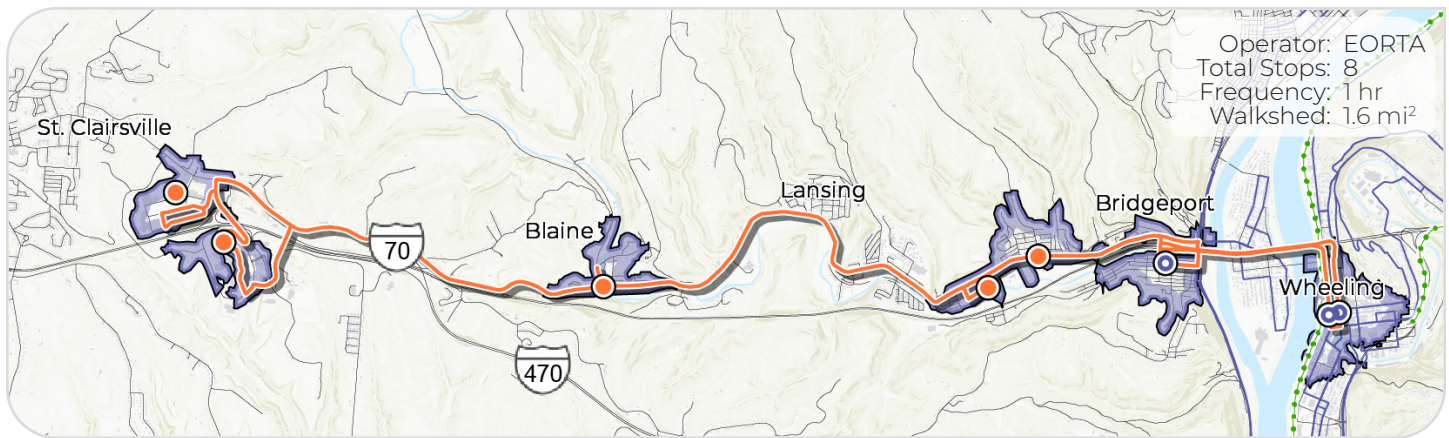
This 15.3 mile transit line connects the major business centers of downtown Wheeling and the Ohio Valley Mall near St. Clairsville. Along the way, there are stops in Wheeling, Bridgeport, Brookside, and Blaine.

Strengths

- Blaine Mall is the only western route in the region, connecting St. Clairsville, Blaine, Brookside, and Bridgeport to downtown Wheeling.
- Sidewalk coverage is excellent on the western side of this route. Every stop in Wheeling, Bridgeport, and Brookside are accessible by a sidewalk.
- Two of the three transfer stations have a transit shelter. Although all three transfer stations currently lack transit seating.

Opportunities

- Lansing and most of St. Clairsville do not currently have transit access. These communities can be connected with additional stops or supplemental transit services.
- Transfer stations in Wheeling and Bridgeport should include shelters and transit seating to comfortably accommodate waiting riders.
- There are no bike connections east of the Ohio River. On-street bike facilities in town centers and/or along U.S. 40 would expand transit accessibility west of the Ohio River.
- Commercial stops at Resibeck's, Barton, Walmart and Marshall's lack sidewalks and street crossings.



| | Bus Stops | Community/Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|-----------------------|-------------------------|--------------------|-------------|-----------------|-----------------|--------------------|------------------|----------|---------------|
| Direction of Travel ↓ | ⊙ Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| | ⊙ 14th & Market St | Wheeling | ● | ○ | ○ | ○ | ● | ● | ● |
| | ⊙ Howard & Marion St | Bridgeport | ● | ○ | ● | ○ | ○ | ● | ○ |
| | ● Dairy Queen | Brookside | ○ | ● | ○ | ○ | ○ | ● | ○ |
| | ● Riesbeck's (Westside) | Brookside | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| | ● Barton | Blaine | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | ● Walmart (Westside) | St. Clairsville | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| | ● Marshalls | Ohio Valley Mall | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Blaine Mall:

Service & Demand Assessment

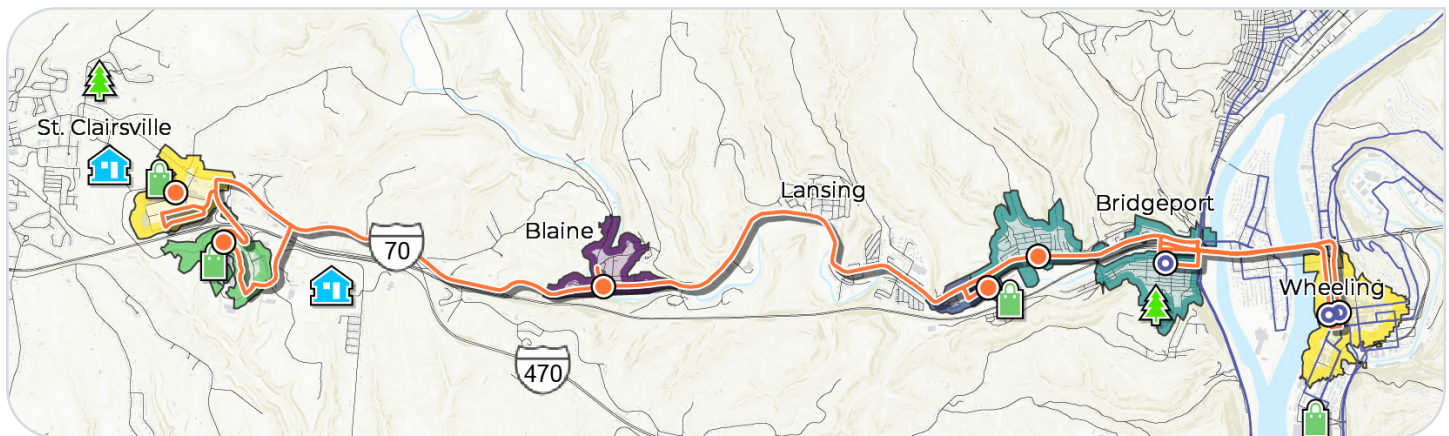
Within the 1.8 mile² walkshed, there are 3,100 residents and 23,500 trips per day. This line connects the major commercial centers of the Ohio Valley Mall/Plaza near St. Clairsville with downtown Wheeling.

Strengths

- This route connects shoppers and workers from St. Clairsville, Blaine, Lansing, Bridgeport, and Wheeling to the jobs and services along the I-70 corridor.
- Direct alignment along National Road (US 40) reduces the distance the route needs to deviate for an additional stop, increasing frequency.

Opportunities

- St. Clairsville has a wealth of jobs, services, and recreation that could benefit from transit access. This includes senior housing, St. Clairsville High School, and the National Road Bikeway.
- Deviated fixed-route services, park and rides, shuttle services, and public-private transportation services are all potential ways to extend transit services past this line's eastern terminus.
- Extending transit service can connect to a node of development near the U.S. 40/ I-70 interchange. This includes Belmont College, Belmont Career Center, Ohio University Eastern, and the Belmont County Department of Jobs & Services .



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | + | 🏠 | 🎓 | 👜 | 🌲 |
|-------------------------|---------------------|--------------------------|---------------------------|---|---|---|---|---|
| 🎯 Intermodal Center | Wheeling | 1,100 | 5,700 | ● | ○ | ○ | ● | ○ |
| 🎯 14th & Market St | Wheeling | 1,200 | 6,100 | ● | ○ | ○ | ● | ○ |
| 🎯 Howard & Marion | Bridgeport | 750 | 1,850 | ○ | ○ | ○ | ○ | ● |
| 🎯 Dairy Queen | Brookside | 700 | 1,350 | ○ | ○ | ○ | ● | ○ |
| 🎯 Riesbeck's (Westside) | Brookside | 150 | 650 | ○ | ○ | ○ | ● | ○ |
| 🎯 Barton | Blaine | 250 | 150 | ○ | ○ | ○ | ○ | ○ |
| 🎯 Walmart (Westside) | St. Clairsville | Less than 50 | 9,050 | ○ | ○ | ○ | ● | ○ |
| 🎯 Marshalls | Ohio Valley Mall | Less than 50 | 4,400 | ○ | ○ | ○ | ● | ○ |

Martins Ferry-Rayland:

TSI Inventory

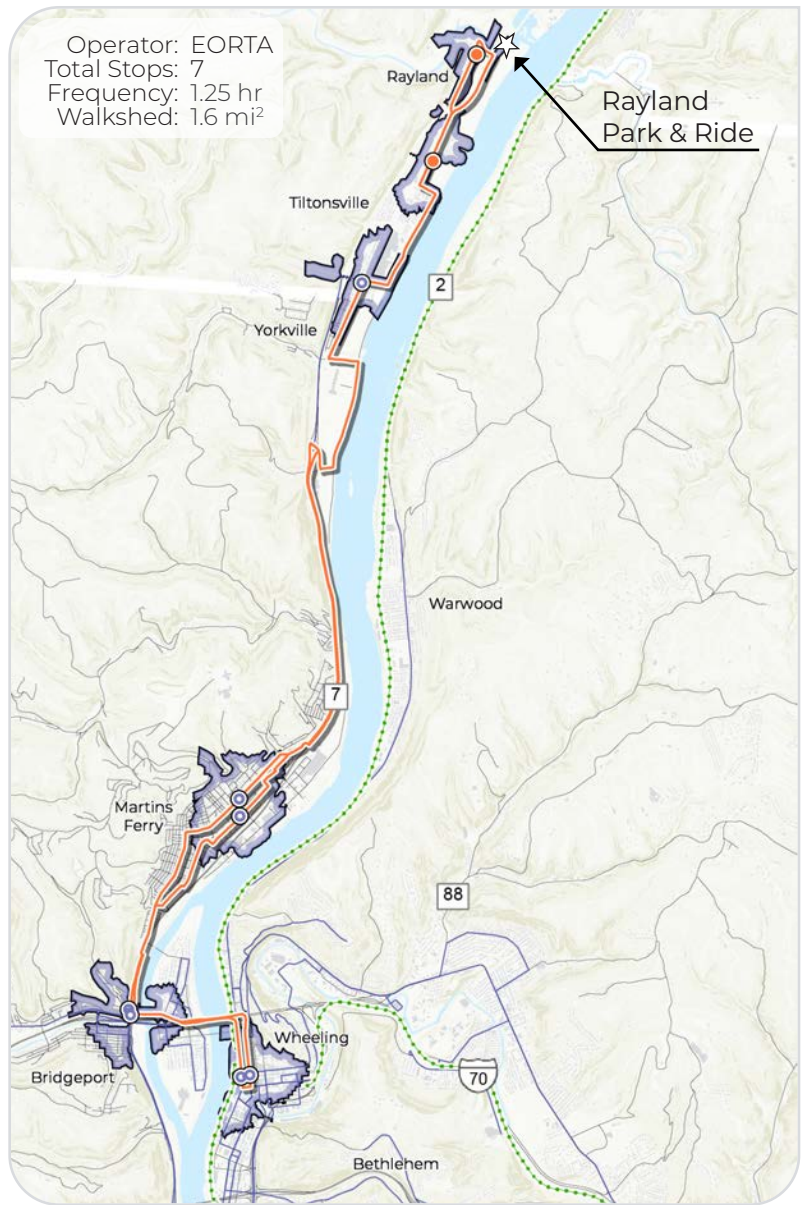
This 18.3 mile transit line is the second longest transit route on the west side of the Ohio River, connecting the communities of Wheeling, Bridgeport, Aetnaville, Martins Ferry, Yorkville, Tiltonsville, and Rayland.

Strengths

- The walkshed covers Tiltonsville and Rayland, two communities outside of the Belomar region.
- This route and the Martins Ferry-Yorkville route share alignments and stops. Both routes have excellent sidewalk coverage and pedestrian crossings near transit stops.

Opportunities

- Much of the southwest of Martins Ferry and an entire neighborhood east of Yorkville is outside of the walkshed. Adding an additional stop on the city's south end would provide greater coverage and connect to the local Kroger grocery store.
- This route transfers at every location with the Martins Ferry-Yorkville line. Adding transit shelters and/or seating for Wheeling-bound stops would improve rider comfort.
- A connection between Wheeling Island and Martins Ferry would have massive benefits. Currently Wheeling Island transit users need to travel through Wheeling before transferring to Northbound routes.



| | Bus Stops | Community/Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|---|--------------------|--------------------|-------------|-----------------|-----------------|--------------------|------------------|----------|---------------|
| ⬇ | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| ⬇ | 14th & Market St | Wheeling | ● | ○ | ○ | ○ | ● | ● | ● |
| ⬇ | Wilson's Furniture | Bridgeport | ○ | ○ | ○ | ○ | ● | ● | ○ |
| ⬇ | Hanover & Zane Hwy | Martins Ferry | ● | ○ | ○ | ○ | ● | ● | ○ |
| ⬇ | Public Rd | Yorkville | ● | ● | ● | ○ | ● | ● | ○ |
| ⬇ | Union & Walden Ave | Tiltonsville | ○ | ○ | ○ | ○ | ● | ● | ○ |
| ⬇ | Municipal Building | Rayland | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| ⬇ | Hanover & 4th St | Martins Ferry | ● | ● | ○ | ○ | ● | ● | ○ |
| ⬇ | National Rd | Bridgeport | ○ | ○ | ○ | ○ | ● | ● | ○ |

Martins Ferry-Rayland:

Service & Demand Assessment

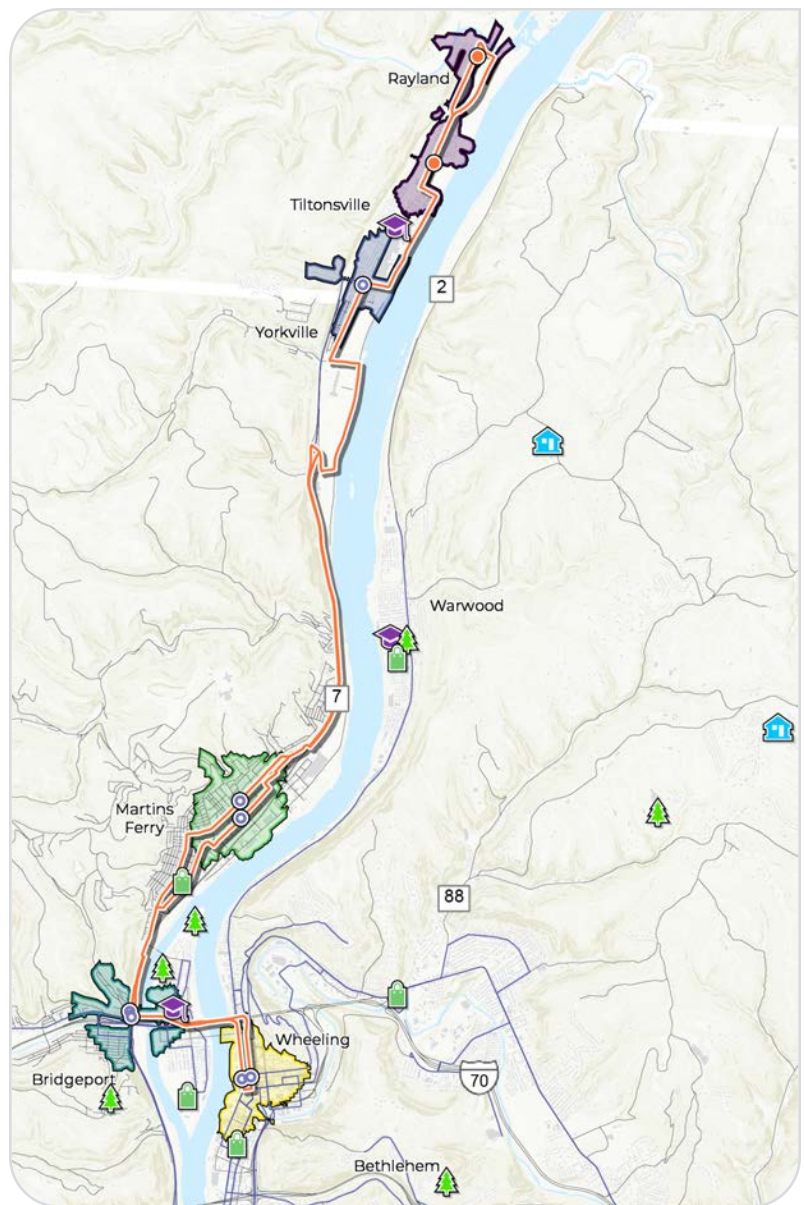
Within the 2.1 mile² walkshed, there are 6,650 residents and 13,550 trips per day. The Martins Ferry-Rayland is the only route with stops outside of the Belomar region.

Strengths

- Redundancy between the two Martins Ferry routes increases frequency. The added frequency makes these two routes more reliable for commute trips into Wheeling.

Opportunities

- The redundancy between the two Martins Ferry routes has pros and cons. Increased frequency is a benefit, but the additional mileage needed to connect to the northern villages is a strain on transit resources.
- Any changes must focus on reducing the total mileage between both routes without restricting service to Yorkville, Tiltonsville, or Rayland. Deviated fixed routes, shuttle services, peak hour route changes, or transfers in Martins Ferry are all viable options.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | + | 🏠 | 🎓 | 👜 | 🌲 |
|----------------------|---------------------|--------------------------|---------------------------|---|---|---|---|---|
| 🎯 Intermodal Center | Wheeling | 1,100 | 5,700 | ● | ○ | ○ | ● | ○ |
| 🎯 14th & Market St | Wheeling | 1,200 | 6,100 | ● | ○ | ○ | ● | ○ |
| 🎯 Wilson's Furniture | Bridgeport | 950 | 2,000 | ○ | ○ | ● | ○ | ○ |
| 🎯 Hanover & Zane Hwy | Martins Ferry | 2,150 | 3,550 | ○ | ○ | ○ | ○ | ○ |
| 🎯 Public Rd | Yorkville | 850 | Outside of Belomar | ○ | ○ | ○ | ○ | ○ |
| 🎯 Union & Walden Ave | Tiltonsville | 800 | Outside of Belomar | ○ | ○ | ● | ○ | ○ |
| 🎯 Municipal Building | Rayland | 250 | Outside of Belomar | ○ | ○ | ○ | ○ | ○ |
| 🎯 Hanover & 4th St | Martins Ferry | 2,050 | 3,700 | ○ | ○ | ○ | ○ | ○ |
| 🎯 National Rd | Bridgeport | 1,100 | 2,250 | ○ | ○ | ● | ○ | ● |

Martins Ferry-Yorkville:

TSI Inventory

This 16.5 mile transit line works together with the Martins Ferry-Rayland route to offer transit service to Wheeling, Bridgeport, Martins Ferry, and Yorkville.

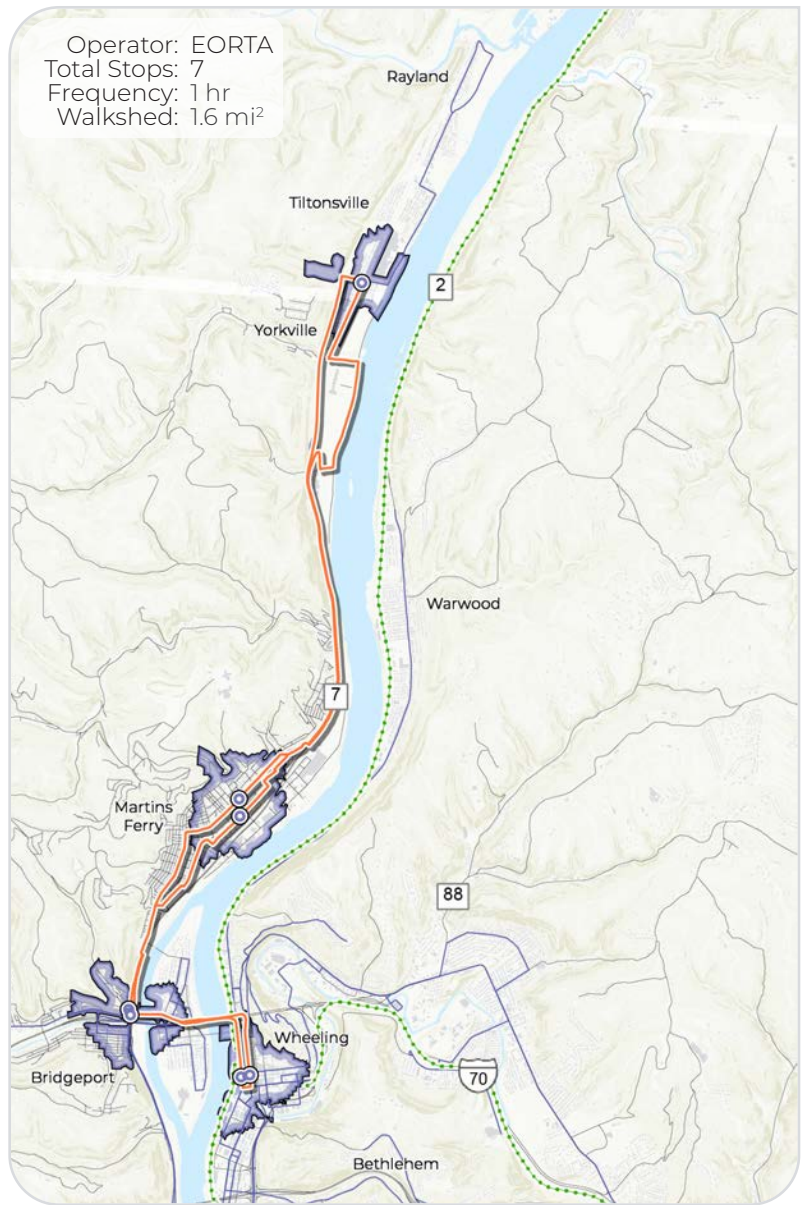
Strengths

- This route and Martins Ferry-Rayland have excellent sidewalk coverage and street crossings.
- Five of the seven stops are signed, making them easy to find for potential riders.

Opportunities

This route has the same opportunities as the Martins Ferry-Rayland route due to their shared alignment. They are listed again below:

- Much of the southwest of Martins Ferry and an entire neighborhood east of Yorkville is outside of the walkshed. Adding additional stop on the city's south end would provide greater coverage and connect to the local Kroger grocery store.
- This route transfers at every location with the Martins Ferry-Yorkville line. Adding transit shelters and/or seating for Wheeling-bound stops would improve rider comfort.
- A connection between Wheeling Island and Martins Ferry would have massive benefits. Currently Wheeling Island transit users need to travel through Wheeling before transferring to Northbound routes.



| | Bus Stops | Community/ Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|-----------------------|--------------------|---------------------|-------------|-----------------|-----------------|--------------------|------------------|----------|---------------|
| Direction of Travel ↓ | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| | 14th & Market St | Wheeling | ● | ○ | ○ | ○ | ● | ● | ● |
| | Wilson's Furniture | Bridgeport | ○ | ○ | ○ | ○ | ● | ● | ○ |
| | Hanover & Zane Hwy | Martins Ferry | ● | ○ | ○ | ○ | ● | ● | ○ |
| | Public Rd | Yorkville | ● | ● | ● | ○ | ● | ● | ○ |
| | Hanover & 4th St | Martins Ferry | ● | ● | ○ | ○ | ● | ● | ○ |
| | National Rd | Bridgeport | ○ | ○ | ○ | ○ | ● | ● | ○ |

Martins Ferry-Yorkville:

Service & Demand Assessment

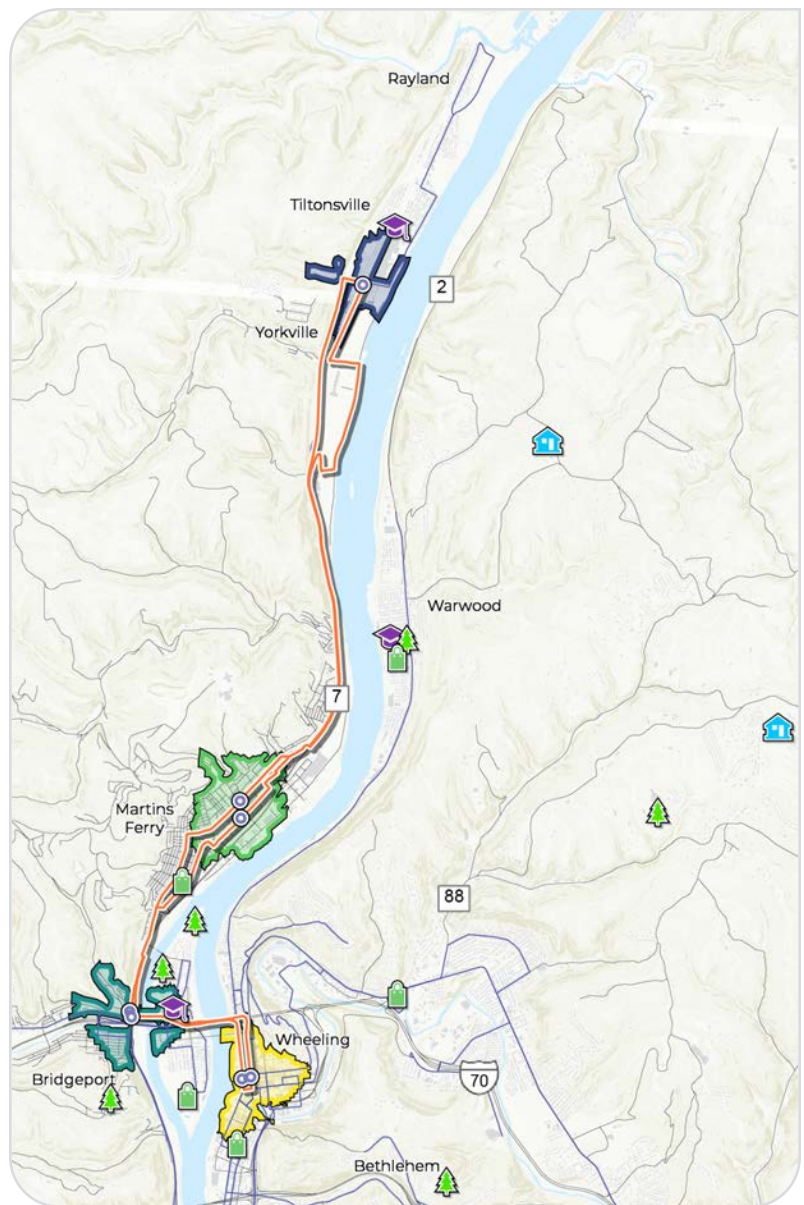
Within the 1.6 mile² walkshed, there are 5,600 residents and 13,550 trips per day. The Martins Ferry-Yorkville connects the region's two most populated cities; Wheeling and Martins Ferry.

Strengths

- Transit stops in Bridgeport, Martins Ferry, and Tiltonsville are centrally located. This maximizes walkshed coverage, connecting riders to nearby goods and services.

Opportunities

- Martins Ferry walkshed does not cover the city's south side. Adding an additional stop on Broadway Street would connect people to Kroger, the city's major grocery store.
- Overlap with the Martins Ferry-Rayland route needs deeper analysis to determine if the routes could be combined to use vehicle and driver resources more efficiently. Further analysis of ridership demand across both routes can determine if these routes can be combined.
- Stakeholders advocated for repurposing the Aetnaville Bridge, which has been closed to traffic for many years. Reopening this connection would directly connect Wheeling Island to Martins Ferry.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | | | | | |
|--------------------|---------------------|--------------------------|---------------------------|--|--|--|--|--|
| Intermodal Center | Wheeling | 1,100 | 5,700 | | | | | |
| 14th & Market St | Wheeling | 1,200 | 6,100 | | | | | |
| Wilson's Furniture | Bridgeport | 950 | 2,000 | | | | | |
| Hanover & Zane Hwy | Martins Ferry | 2,150 | 3,550 | | | | | |
| Public Rd | Yorkville | 850 | Outside of Belomar | | | | | |
| Hanover & 4th St | Martins Ferry | 2,050 | 3,650 | | | | | |
| National Rd | Bridgeport | 1,100 | 2,250 | | | | | |

Warwood:

TSI Inventory

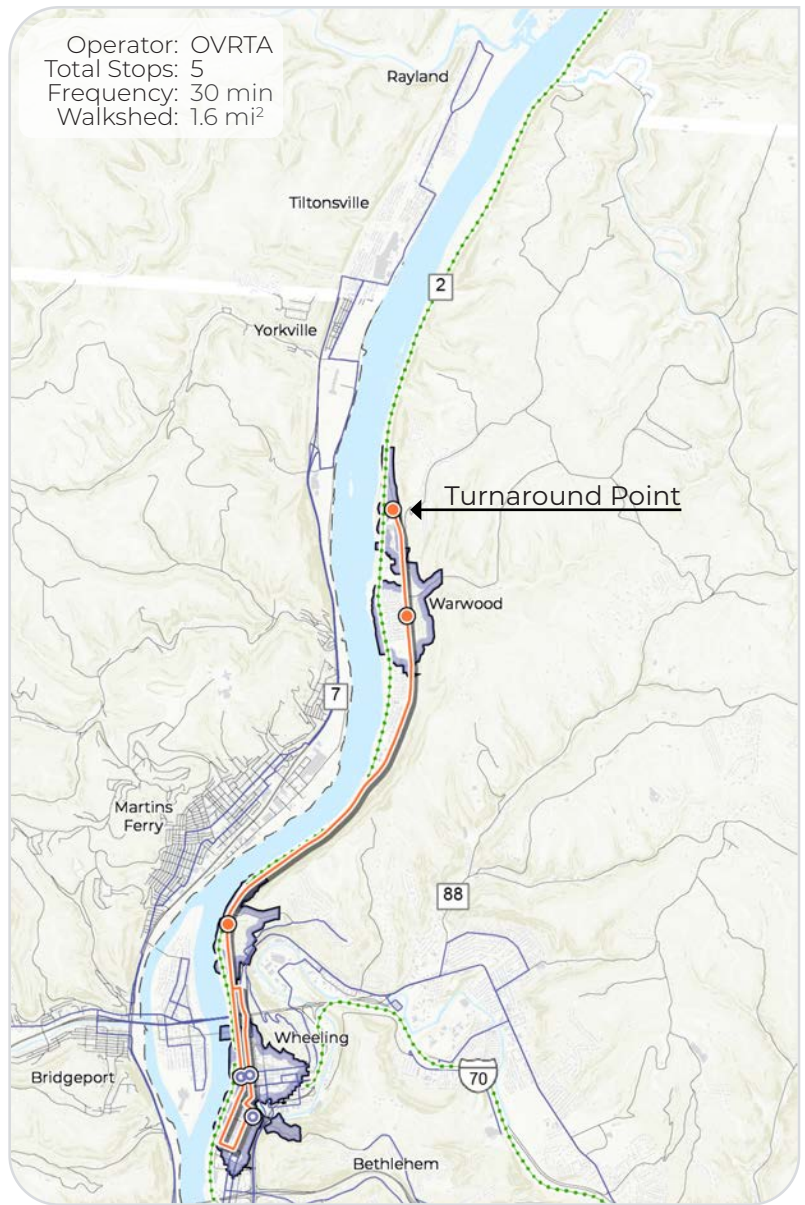
This 7.5 mile transit is the only route on the east side of the Ohio River north of Wheeling. It connects the village of Warwood and North Wheeling to downtown.

Strengths

- The Wheeling Heritage trail is near five stops making it a great example of how this shared-use path can maximize transit access on the east side of the Ohio River.
- Every stop has an existing sidewalk and a marked/unmarked crosswalk, making pedestrian access more comfortable and safer.
- Four out of five stops are signed, clearly marking where to access the bus.

Opportunities

- The Warwood stop location is central, covering most of the village. The stop could be closer to key points of interest on the village's south side.
- The 1st & Market Street stop in North Wheeling is on the far north side of town. This leaves a small gap in transit accessibility between this stop and I-70.
- The OVMC stop is near the future WVU cancer center. Due to its importance for medical trips, transit seating and shelter are strongly recommended.



| | Bus Stops | Community/ Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|---|---------------------------------|---------------------|-------------|-----------------|-----------------|--------------------|------------------|----------|---------------|
| ⬇ | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| ⬇ | OVMC (Future WVU Cancer Center) | Wheeling | ○ | ○ | ○ | ○ | ● | ● | ● |
| ⬇ | 14th & Market St | Wheeling | ● | ○ | ○ | ○ | ● | ● | ● |
| ⬇ | 1st & Main St | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| ⬇ | 19th St & Warwood Ave | Warwood | ● | ○ | ○ | ○ | ● | ● | ● |

Direction of Travel ↓

Warwood:

Service & Demand Assessment

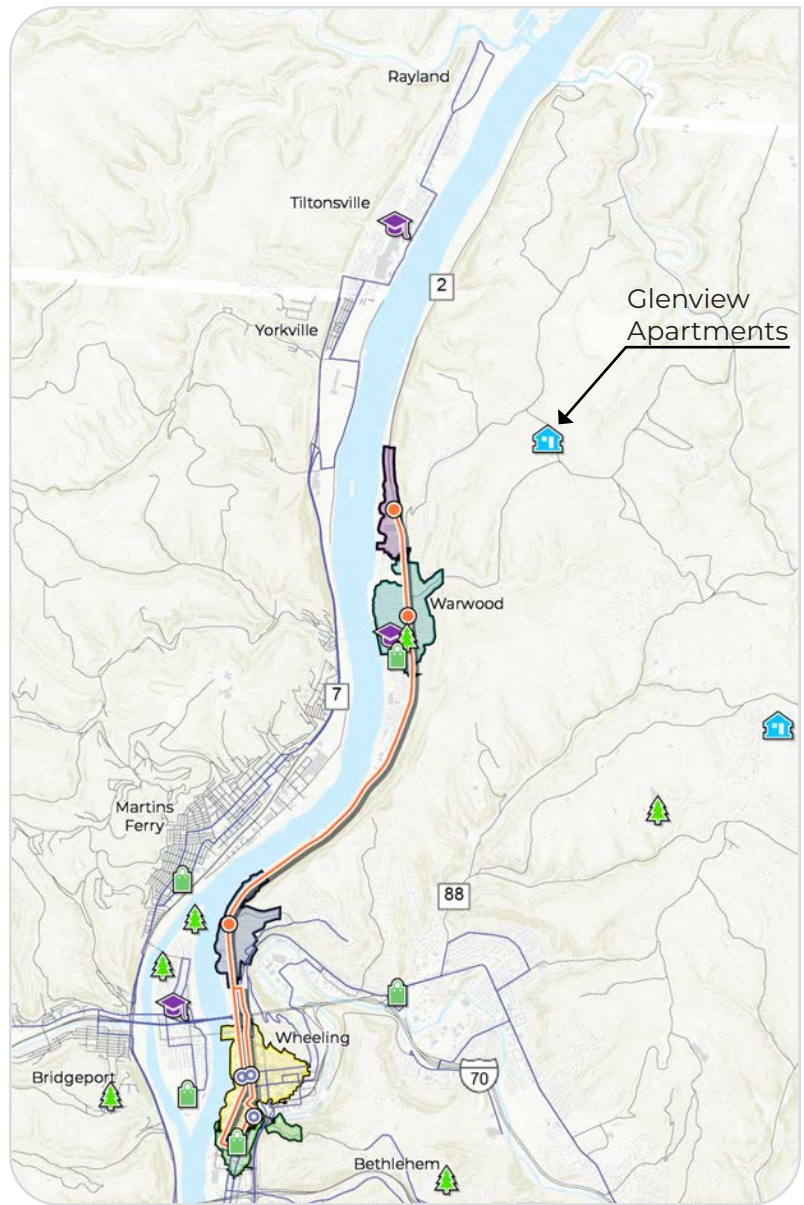
Within the 1.3 mile² walkshed, there are 4,250 residents and 10,550 trips per day. This line is the only North-South transit connection on the east bank of the Ohio River, connecting Warwood to Wheeling.

Strengths

- The Warwood stop's central location is within a walkable distance of N 24th Street Park, and most of the village's residential area.

Opportunities

- The 19th & Warwood Avenue stop is nearly 0.5 miles from Warwood Shopping Center, which is further than most people would be willing to walk.
- Adding a stop location at the intersection of Viking & Warwood Avenue would greatly expand the number of businesses and services accessible from this route, including: the Wheeling Heritage Trail, Warwood Schools, Kroger, Workforce West Virginia Office, the Social Security Administration, and Garden Park.
- This route is a potential candidate to become a deviated fixed route to connect to Glenview Apartments via Cherry Hill Road.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | | | | | |
|---------------------------------|---------------------|--------------------------|---------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| Intermodal Center | Wheeling | 1,100 | 5,700 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| OVMC (Future WVU Cancer Center) | Wheeling | 760 | 3,700 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 14th & Market St | Wheeling | 1,200 | 6,100 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 1st & Main St | Wheeling | 600 | 550 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19th St & Warwood Ave | Warwood | 1,650 | 2,000 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

Shadyside: TSI Inventory

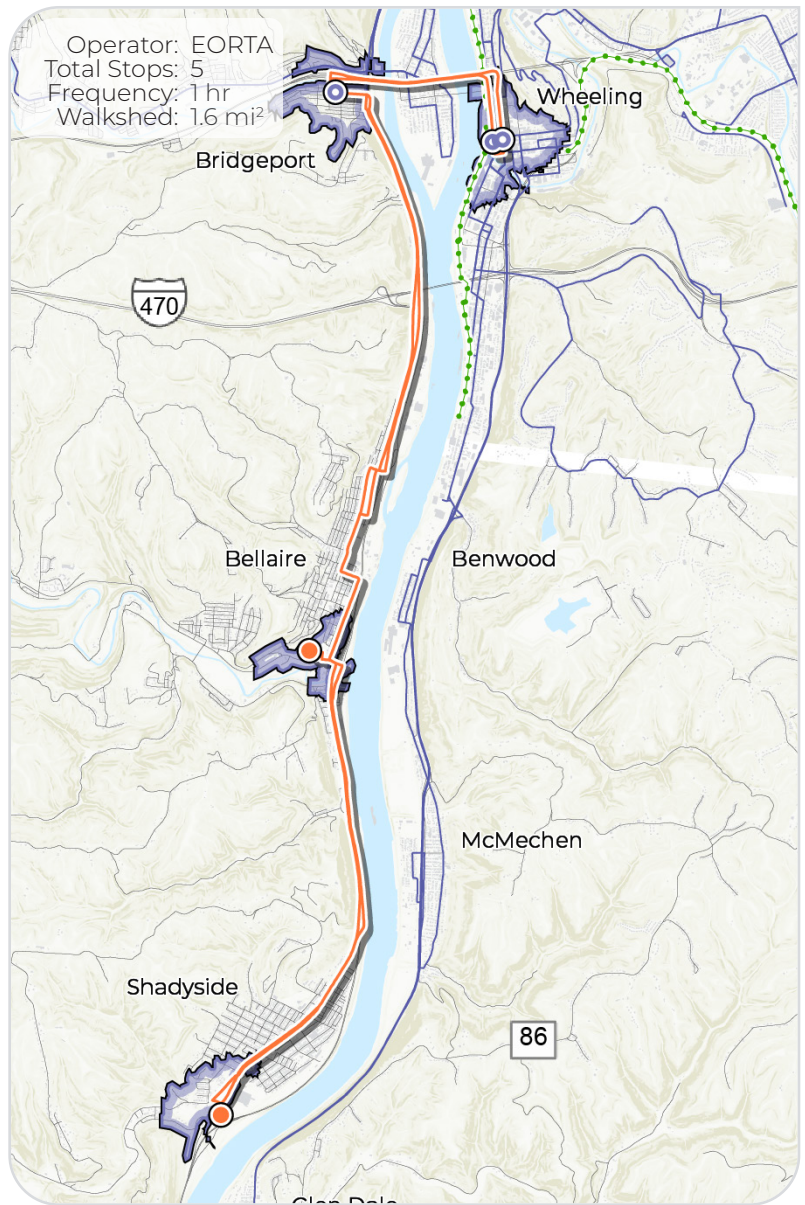
This 18.8 mile transit line is the longest route on the west side of the Ohio River. The route has one stop in the communities of Bridgeport, Bellaire, and Shadyside.

Strengths

- Two out of three transfer stops currently have a transit shelter. Shelters at transfer stations offer shade, information, and a place to rest while waiting between buses.
- Stops in Bridgeport and Wheeling are accessible by sidewalks and/or shared-use paths. Safe pedestrian access is especially important for these three transfer stops.

Opportunities

- Transit stops in Bridgeport, Bellaire, and Shadyside do not have crosswalks or sidewalks. High-visibility crossings and sidewalks are a low-cost way to improve safe access to transit.
- Existing transit stops in Bellaire and Shadyside are not centrally located. Currently most of these villages are outside of the 10 minute walkshed.
- Stops in Bellaire and Shadyside do not have transit stop signs, making them tougher to find. Marking the transit stops can make the service more visible and easier to use for new riders.



| | Bus Stops | Community/ Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|---|-------------------------|------------------------|----------------|--------------------|--------------------|-----------------------|---------------------|----------|------------------|
| ⬇ | ⊙ Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| ⬇ | ⊙ 14th & Market St | Wheeling | ● | ○ | ○ | ○ | ● | ● | ● |
| ⬇ | ⊙ Howard & Marion St | Bridgeport | ● | ○ | ● | ○ | ○ | ● | ○ |
| ⬇ | ● Kroger (Southside) | Bellaire | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| ⬇ | ● Shadyside Care Center | Shadyside | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Direction of Travel ↓

Shadyside:

Service & Demand Assessment

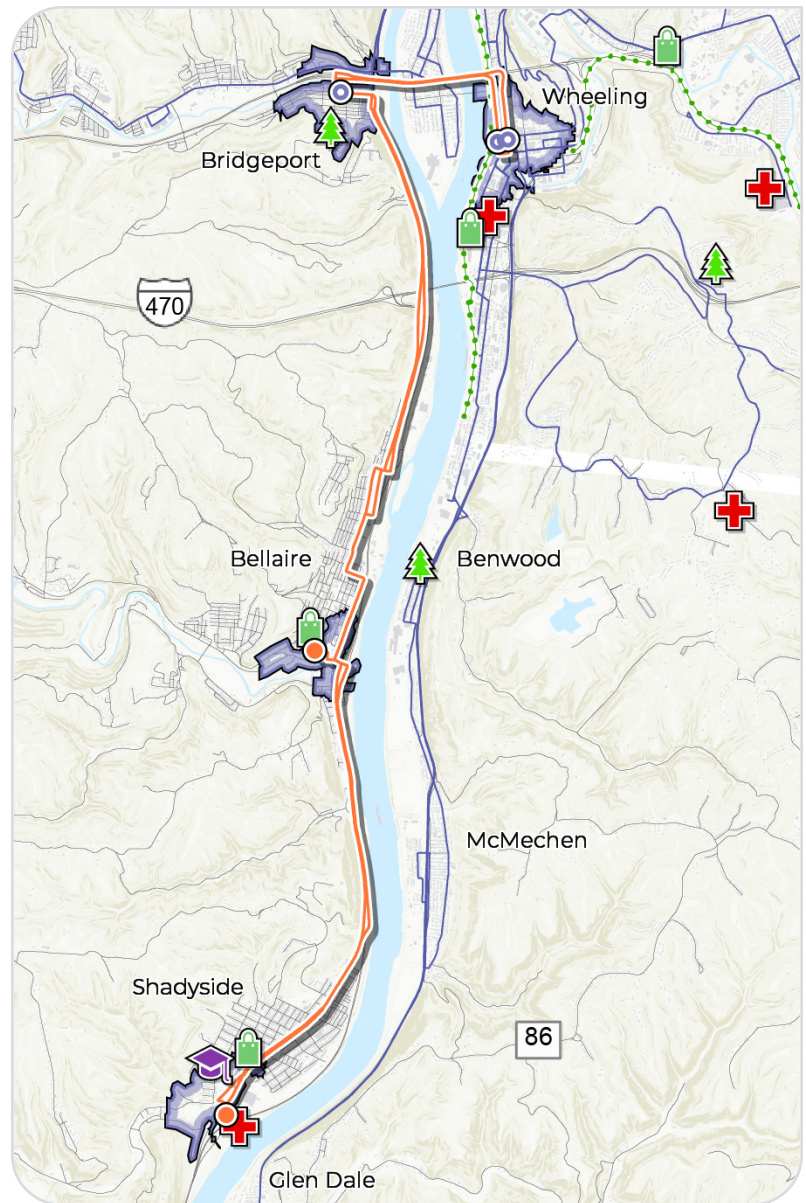
Within the 1.2 mile² walkshed, there are 2,700 residents and 10,600 trips per day. This connection provides transit access to Bellaire and Shadyside. Both villages are home to over 3,000 residents.

Strengths

- The Bridgeport transfer stop makes it much easier for riders living in Bellaire and Shadyside to get to Brookside, Blaine, or the Ohio Valley Mall via the Blaine Mall Route.

Opportunities

- In Bellaire, the transit stop is south of the B&O railroad viaduct, an elevated railing that divides the city between residential and industrial land uses. Adding one stop at Harrison & 41st would provide walkable transit access for residents living north of 34th Street.
- In Shadyside, the transit stop location is close to several key points of interest but is not walkable for most the village's population. Adding one stop at Central & 39th would provide walkable transit access for residents living north of 44th Street.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | Hospital | Home | School | Library | Park |
|-------------------------|---------------------|--------------------------|---------------------------|----------|------|--------|---------|------|
| ⊙ Intermodal Center | Wheeling | 1,100 | 5,700 | ● | ○ | ○ | ○ | ○ |
| ⊙ 14th & Market St | Wheeling | 1,200 | 6,100 | ● | ○ | ○ | ○ | ○ |
| ⊙ Howard & Marion St | Bridgeport | 750 | 1,850 | ○ | ○ | ○ | ○ | ● |
| ⊙ Kroger (Southside) | Bellaire | 250 | 1,800 | ○ | ○ | ○ | ● | ○ |
| ⊙ Shadyside Care Center | Shadyside | 500 | 650 | ● | ○ | ● | ● | ○ |

McMechen: TSI Inventory

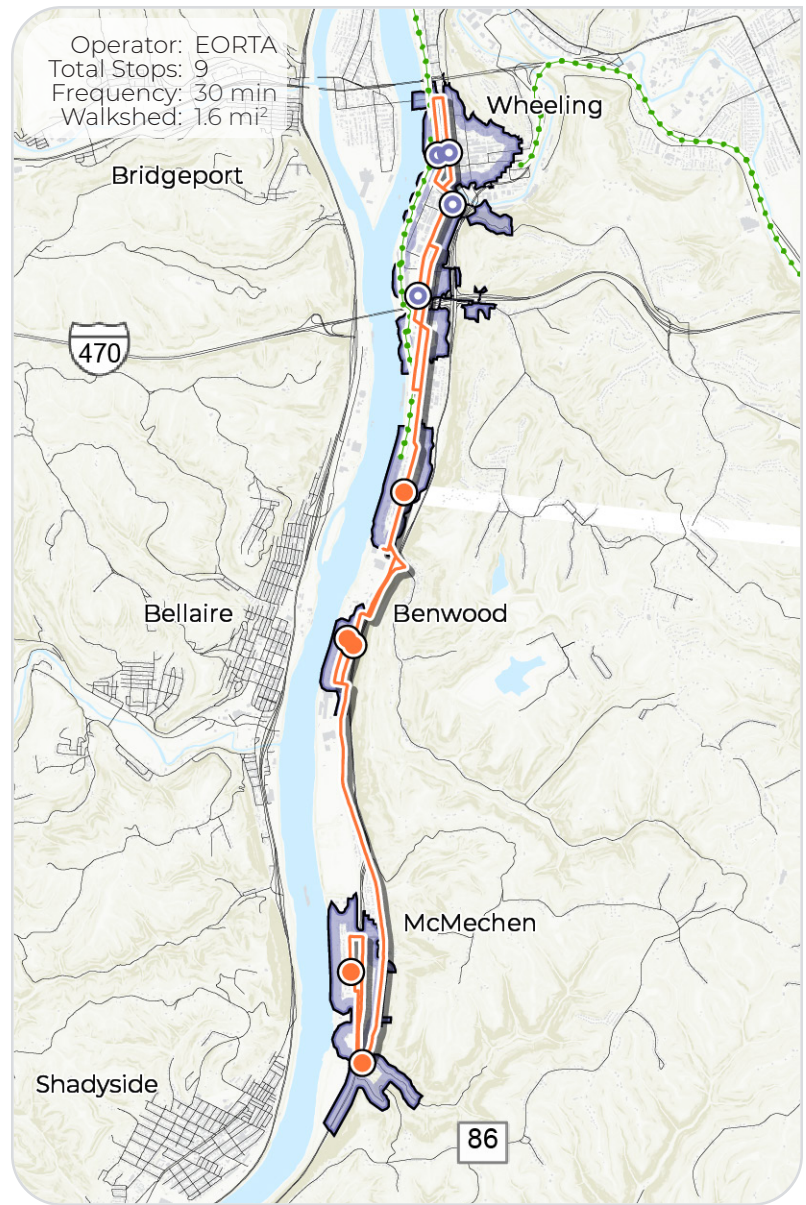
This 11.4 mile transit line connects the communities of Wheeling, South Wheeling, Benwood, and McMechen. This is the only route with stops in Benwood and McMechen.

Strengths

- In Benwood and McMechen, transit stops are centrally located to maximize walkshed coverage. Each community is fully within the 10 minute walkshed.
- Sidewalk coverage near transit stops is excellent. Eight of the nine stops have sidewalks nearby.
- The Wheeling Heritage Trail is accessible from all of the Wheeling stops making it a great example of the potential to better integrate bike facilities with transit.

Opportunities

- The Wheeling Heritage Trail stops in south Wheeling. There is potential to utilize an abandoned rail corridor for a rails-to-trails project between Wheeling and McMechen.
- Stops in Benwood and McMechen are currently not signed. Adding signage and schedule information will make transit more visible and usable in these communities.
- Stops in McMechen do not have a marked crossing. Adding high-visibility striping near transit stops indicates a place for riders to safely cross when boarding.



| | Bus Stops | Community/ Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|---|---------------------------------|------------------------|----------------|--------------------|--------------------|-----------------------|---------------------|----------|------------------|
| ↻ | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| ↻ | 29th & Chapline St | Wheeling | ○ | ○ | ○ | ● | ○ | ● | ● |
| ↻ | 48th & Jacob St | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| ↻ | Benwood City Building | Benwood | ○ | ○ | ○ | ● | ○ | ● | ○ |
| ↻ | 21st St & Marshall St | McMechen | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| ↻ | Dollar General | McMechen | ○ | ○ | ○ | ○ | ○ | ● | ○ |
| ↻ | McMechen & 5th St | Benwood | ○ | ○ | ○ | ○ | ● | ● | ○ |
| ↻ | OVMC (Future WVU Cancer Center) | Wheeling | ○ | ○ | ○ | ○ | ● | ● | ● |
| ↻ | 14th & Market St | Wheeling | ● | ○ | ○ | ○ | ● | ● | ● |

Direction of Travel ↓

McMechen:

Service & Demand Assessment

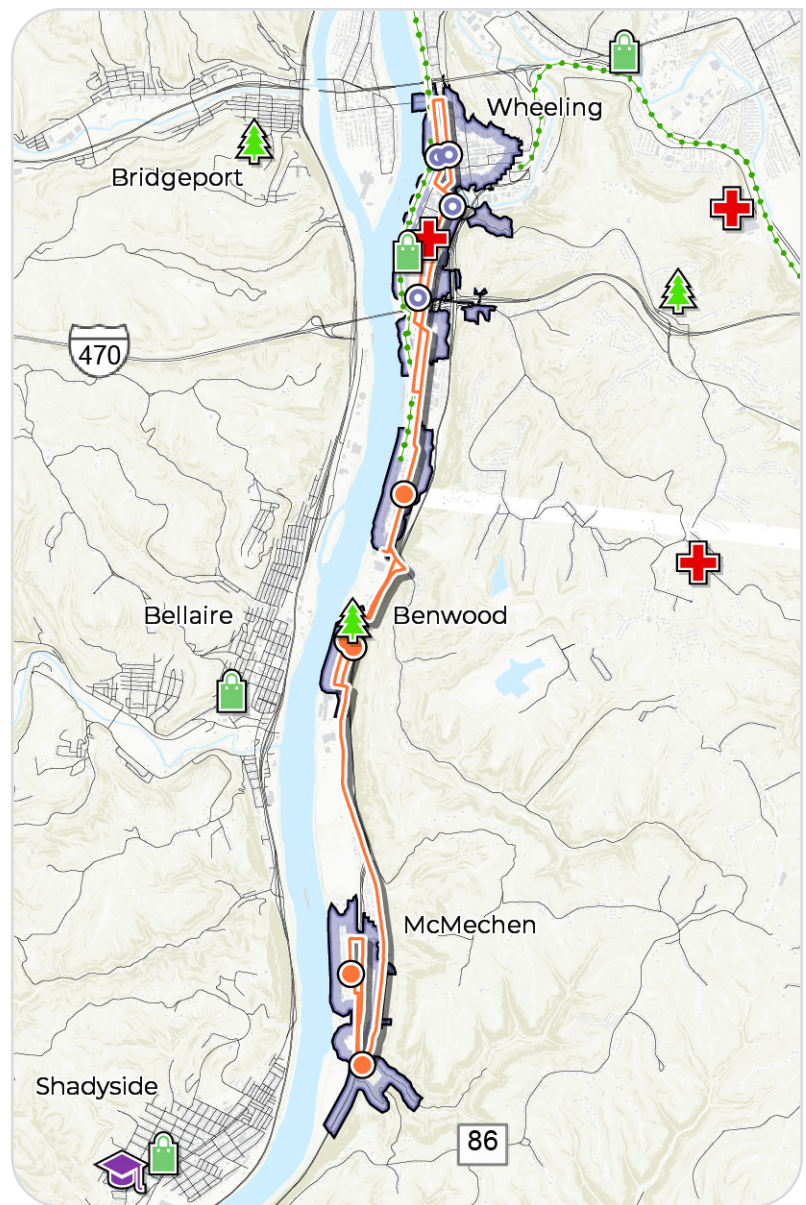
Within the 1.6 mile² walkshed, there are 4,600 residents and 11,750 trips per day. This route's centrally located stops provide complete transit coverage for the villages of Benwood and McMechen.

Strengths

- The McMechen line is an efficient, direct connection between Wheeling in the villages on the east bank of the Ohio River.
- This route includes several transfer stations, allowing riders to easily transfer to any route once in Wheeling.
- Both McMechen and Benwood have multiple transit stops in locations that are walkable from the entire village.

Opportunities

- 29th & Chapline Street is currently the most southern transfer stop, only transferring with the Mozart-Bethlehem Route. Adding an additional transfer in McMechen with the Reynolds DMV route would allow residents to travel to Moundsville more directly.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | + | 🏠 | 🎓 | 🛒 | 🌲 |
|-----------------------------------|---------------------|--------------------------|---------------------------|---|---|---|---|---|
| 🎯 Intermodal Center | Wheeling | 1,100 | 5,700 | ● | ○ | ○ | ● | ○ |
| 🎯 29th & Chapline St | Wheeling | 1,100 | 2,750 | ● | ○ | ○ | ● | ○ |
| 🎯 48th & Jacob St | Wheeling | 600 | 850 | ○ | ○ | ○ | ○ | ○ |
| 🎯 Benwood City Building | Benwood | 300 | 250 | ○ | ○ | ○ | ○ | ● |
| 🎯 21st St & Marshall St | McMechen | 400 | 350 | ○ | ○ | ○ | ○ | ○ |
| 🎯 Dollar General | McMechen | 1,150 | 1,000 | ○ | ○ | ○ | ○ | ○ |
| 🎯 McMechen & 5th St | Benwood | 300 | 250 | ○ | ○ | ○ | ○ | ○ |
| 🎯 OVMC (Future WVU Cancer Center) | Wheeling | 750 | 3,700 | ● | ○ | ○ | ● | ○ |
| 🎯 14th & Market St | Wheeling | 1,200 | 6,100 | ● | ○ | ○ | ● | ○ |

* Note: Based on the schedule on OVRTA website, this route may have recently changed.

Reynolds DMV: TSI Inventory

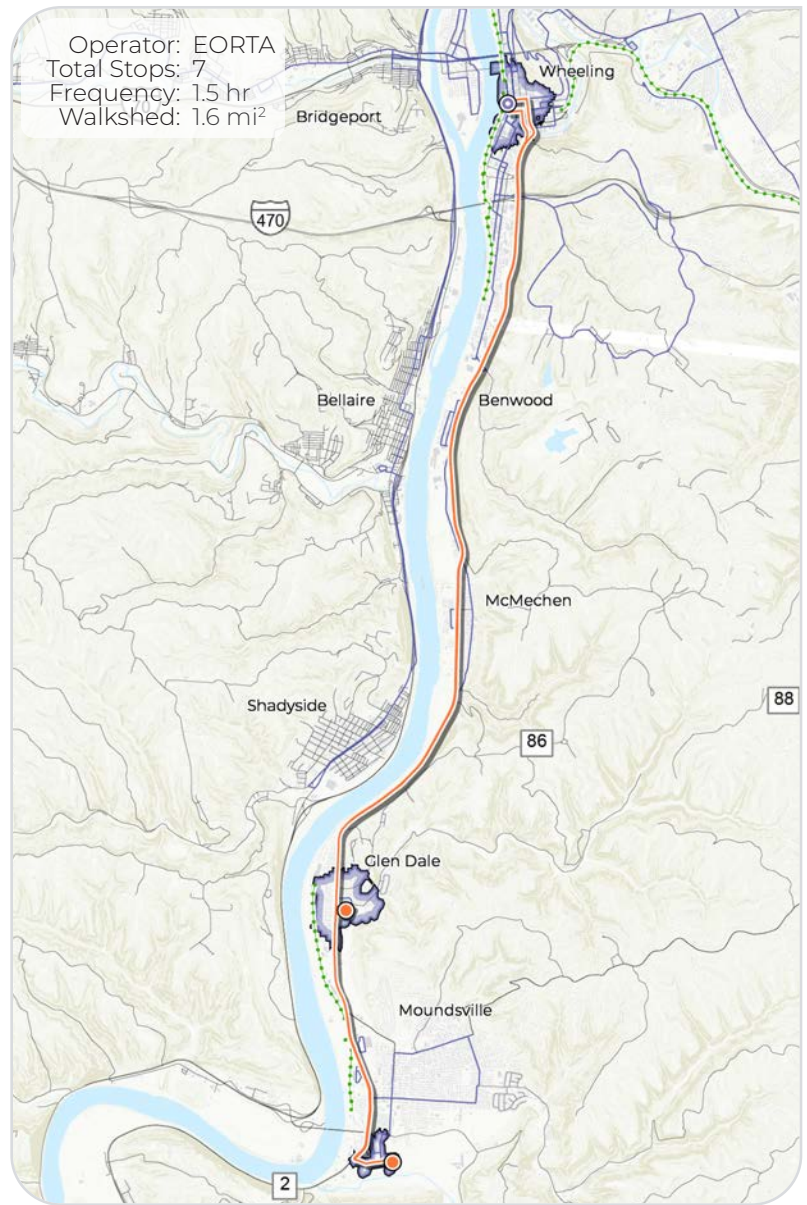
This 22.2 mile transit line is the second longest route on the east side of the Ohio River, stretching all the way between Wheeling and Moundsville. This route currently only runs on Tuesday and Thursday.

Strengths

- This route is currently the only transit service connecting Wheeling and Moundsville, two of the region's largest cities.
- The Wheeling Heritage Trail and the Glen Dale to Moundsville Rail-Trail are excellent low-stress bike/ped connections close to two transit stops.

Opportunities

- Transfer stations in downtown Wheeling should have a transit shelter and transit seating to accommodate waiting riders.
- Stops in Glen Dale and Moundsville are unsigned, making transit less visible and easy to find.
- The DMV stop is in a large office and commercial district on Moundsville's south side. This district currently lacks sidewalk coverage and marked crosswalks.



Direction of Travel

| | Bus Stops | Community/Location | Signed Stop | Transit Seating | Transit Shelter | Unmarked Crosswalk | Marked Crosswalk | Sidewalk | Bike Facility |
|---|----------------------------|--------------------|-------------|-----------------|-----------------|--------------------|------------------|----------|---------------|
| ● | Intermodal Center | Wheeling | ● | ○ | ○ | ● | ○ | ● | ● |
| ● | Reynolds Memorial Hospital | Glen Dale | ○ | ○ | ○ | ● | ○ | ● | ● |
| ● | DMV | Moundsville | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Reynolds DMV:

Service & Demand Assessment

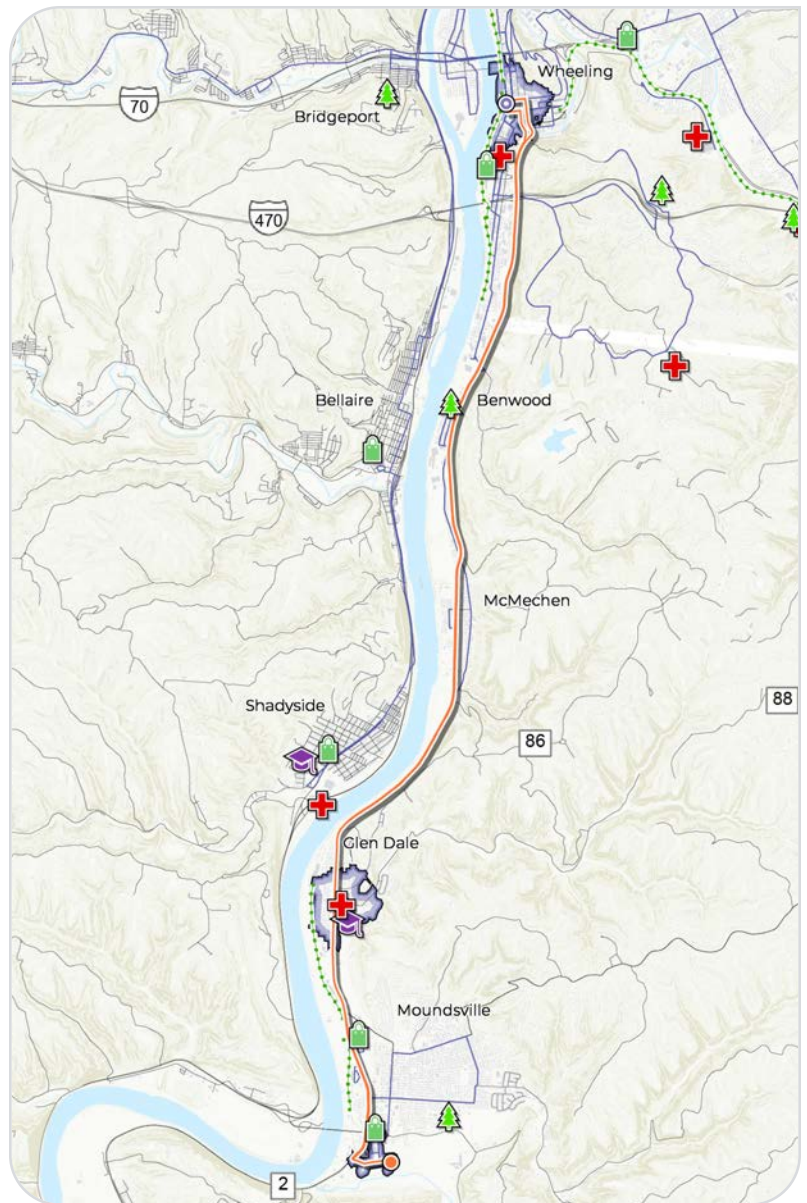
Within the 0.9 mile² watershed, there are 2,150 residents and 10,250 trips per day. This is a trial route designed to explore the demand and need for transit connectivity between Moundsville and Wheeling.

Strengths

- This trial route expanded transit services to two new communities, increasing the number of Belomar residents with transit access by over 1,000 people.
- The Glen Dale and Moundsville stops are strategically located near shopping and health/social services.

Opportunities

- Currently, the trial route only operates on Tuesdays and Thursdays with low frequency. For potential riders, this is not something you can rely on. Even though the connection has high potential, it is a major strain on agency resources as currently designed, without offering high usability.
- There are 9 miles between the Intermodal Center and the Reynolds Memorial Hospital. Reducing the size of the loop by having riders transfer in McMechen or Benwood could reduce the total travel time of the route and increase frequency.
- The city of Moundsville has extremely limited transit coverage. Additional stops in Moundsville could expand access to Walmart and nearby schools.



| Bus Stop | Community/ Location | Population within 10 min | Daily Trips within 10 min | | | | | |
|----------------------------|---------------------|--------------------------|---------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| Intermodal Center | Wheeling | 1,100 | 5,700 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Reynolds Memorial Hospital | Glen Dale | 1,050 | 2,850 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| DMV | Moundsville | Less than 50 | 1,750 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Community Summaries

Each individual route crosses multiple communities, connecting riders from all over the Belomar region. But each individual community needs to play a part to lift the quality of the overall system. When we isolate the transit supportive infrastructure and trip demand results by community and county, it shows a clearer picture of how each community can play a small role in improving transit access for everyone. **Table 7** summarizes the transit supportive infrastructure and trip demand analysis by community.

Presenting the results this way shows us a place to start. Every community has quick-win opportunities for multimodal transportation. Communities, counties, and regional agencies will need to work together to address these gaps in our existing multimodal network.

- **Ohio County** has over 66% of the total transit stops and 45% of the transfer stations. Rural communities should start by focusing on low-cost projects like sidewalks and high-visibility crosswalks near transit stops. Wheeling’s streetscape initiative has vastly improved TSI in the city, but transit shelters are still needed.
- **Belmont County** has over 23% of the total transit stops and 55% of the transfer stations. Communities on the north side have strategically placed their transit stations to maximize walkable area and accessibility. To the south and east, communities should consider moving stop locations and/or adding additional stops to expand transit coverage.
- **Marshall County** has the remaining 11% of existing transit stops and no transfer stations. Currently, crosswalks are sparse, making transit less safe to access. High-visibility crosswalks would be a major improvement, especially along SR 2 in McMechen, Glen Dale, and Moundsville.

| | City/Village | Total Stops | Transfer Stations | Signed Stops | Transfers with Shelter or Seating | Marked Crosswalk | Sidewalk | Bike Facility | Walkable Area (sq mi) | Pop in Walkshed* | Trips in Walkshed (Trips/day)* |
|--------------------------|----------------|-------------|-------------------|--------------|-----------------------------------|------------------|------------|---------------|-----------------------|------------------|--------------------------------|
| Belmont | Bellaire | 1 | 0 | 0% | N/A | 0% | 0% | 0% | 0.21 | 250 | 1,800 |
| | Blaine | 1 | 0 | 0% | N/A | 0% | 0% | 0% | 0.22 | 250 | 150 |
| | Bridgeport | 3 | 3 | 33% | 33% | 67% | 100% | 0% | 0.50 | 1,400 | 2,900 |
| | Brookside | 2 | 0 | 0% | N/A | 0% | 100% | 0% | 0.36 | 850 | 1,750 |
| | Martins Ferry | 2 | 2 | 100% | 50% | 100% | 100% | 0% | 0.55 | 2,450 | 4,100 |
| | Shadyside | 1 | 0 | 0% | N/A | 0% | 0% | 0% | 0.25 | 500 | 650 |
| | Unincorporated | 2 | 0 | 0% | N/A | 0% | 0% | 0% | 0.48 | < 50 | 13,450 |
| Marshall | Benwood | 2 | 0 | 0% | N/A | 0% | 100% | 50% | 0.10 | 300 | 250 |
| | Glen Dale | 1 | 0 | 0% | N/A | 0% | 100% | 100% | 0.38 | 1,050 | 2,850 |
| | McMechen | 2 | 0 | 0% | N/A | 0% | 50% | 0% | 0.47 | 1,350 | 1,150 |
| | Moundsville | 1 | 0 | 0% | N/A | 0% | 0% | 0% | 0.12 | < 50 | 1,750 |
| | Unincorporated | 1 | 0 | 0% | N/A | 0% | 0% | 0% | 0.40 | 350 | 500 |
| Ohio | Bethlehem | 3 | 0 | 0% | N/A | 0% | 0% | 0% | 0.76 | 700 | 1,900 |
| | Wheeling | 34 | 5 | 50% | 0% | 35% | 82% | 50% | 5.09 | 15,950 | 43,800 |
| | Unincorporated | 6 | 0 | 0% | N/A | 0% | 17% | 17% | 0.97 | 750 | 11,650 |
| Jefferson | Rayland | 1 | 0 | 0% | N/A | 0% | 100% | 0% | 0.19 | 300 | – |
| | Tiltonsville | 1 | 0 | 0% | N/A | 100% | 100% | 0% | 0.26 | 800 | – |
| | Yorkville | 1 | 1 | 100% | 100% | 100% | 100% | 0% | 0.30 | 850 | 900 |
| All Transit Stops | | 65 | 11 | 32% | 27% | 28% | 66% | 31% | 11.37 | 27,350 | 87,450 |

Table 7. Transit Activity and Demand Assessment Summary Population and trip estimates rounded to nearest 50*

Multimodal Priorities

In the Belomar Region, cities and villages can choose stop locations. These choices may seem small, but they have major trickle-down effects on the rest of the transit network. This chapter analyzed each route independently and highlighted the following opportunities where each community can work with OVRTA and EORTA to make small changes to improve the accessibility and function of transit.

TSI Priorities

- **Focus on ‘quick-wins’ first.** Prioritizing marked transit stops and high-visibility crosswalks for every transit stop in the Region.
- **New transit shelters and seating** for major existing transfer stations in Wheeling and Martins Ferry.
- **Expand and maintain sidewalks.** The hillside communities southeast of Wheeling are the most challenging to access in the region.
- **Integrate transit with bike/ped facilities.** New bike lanes, bike parking, and shared-use paths should be located with transit in mind.
- **Expand existing shared-use paths** along the east bank of the Ohio River, building toward the long-term goal of connecting the Wheeling Trail and Moundsville trails.

Transit Service Priorities

- **Move stops or add new stop locations** closer to critical points of interest like grocery stores, health care, and multifamily housing.
- **Create new transfer locations** between routes with similar paths to build in transit redundancy and increase bus frequency.
- **Make routes work together.** Currently, routes are designed to go through Wheeling and not connect to routes nearby. This leads to a complex transfer system where riders go well out of their way to get where they want to go.
- **Implement deviated-fixed route or shuttle services** between the existing routes and key locations well outside the transit service area, including The Highlands, Oglebay Park, Glenview Apartments, and the universities west of St. Clairsville.



Photo: Wheeling Suspension Bridge over the Wheeling Heritage Trail

CHAPTER 5: PROJECT RECOMMENDATIONS

Belomar has a clear path forward connecting communities and making the region more accessible

Read to learn more about the study's recommendations.



Summary of Recommendations

The research and engagement presented in this report identifies clear priorities for the region. Specifically, communities, transit agencies, and the Belomar Regional Council need to work together to improve transit supportive infrastructure and conduct future planning and engineering studies to move toward implementation of visionary projects.

Types of Recommendations

So far, this study has defined the 'what, where, and why' of Belomar's multimodal transportation. But how can we improve it? At first, addressing the existing multimodal needs can feel overwhelming, but communities can work together to incrementally make improvements starting right now. Recommendations cover the following core areas:

- *Transit Supportive Infrastructure projects* are quick-win opportunities for communities. These low-cost projects can be implemented incrementally as time and funding allow.
- *Bicycle and pedestrian connections* require additional planning to identify alignments, evaluate alternatives, and complete engineering design. Communities should focus multimodal planning efforts on several key areas identified as needs in this study.
- *Transit stops & service strategies* highlight ways transit service can be improved. New stop locations were identified through the multimodal gaps and needs analysis, and require minor changes to the existing network. Other transit strategies have a larger impact, and need further study and funding for implementation.
- *Coordination, engagement, & public communications* help transit providers connect with their riders. Several case studies on marketing and communication strategies are included as examples for how to build public understanding and trust.

Project Recommendations

Active Transportation & TSI

22 Sidewalk Gaps Near Public Transit

47 High-visibility Crosswalk Locations

4 Active Transportation Projects & Studies

Transit Stops & Service Strategies

29 Priority Bus Stop Locations

52 Bus Stop Amenities Projects

3 New Transfer Stops at Existing Locations





11 New Bus Stop & Transfer Locations

6 New Transit Service Strategies

Figure 28. Project Recommendations Summary

Transit Supportive Infrastructure

Each stop location has opportunities for small improvements that can make pedestrian access safer and more comfortable. Communities should begin work at priority stops. These priority stops were identified through this study's demand assessment, and are the busiest stop locations in each county. Several additional stops are included as priorities in response to input from local leaders and public engagement.

- Priority Stop ★
- Stop with Transfers 
- Stop without Transfers 
- Recommended Project 
- Not recommended or already present 

| | City/Village | Transit Stop Name | Priority Location | Stop Type | Stop Signage | High-vis Crosswalk | Shelter or Seating | Sidewalk | |
|----------|----------------|-----------------------------|--|---|---|---|---|---|---|
| Belmont | Bellaire | Kroger (Southside) | ★ |  |  |  |  |  | |
| | Blaine | Barton | - |  |  |  |  |  | |
| | Bridgeport | Howard & Marion St | | - |  |  |  |  |  |
| | | | Wilson's Furniture | - |  |  |  |  |  |
| | | | National Rd | ★ |  |  |  |  |  |
| | Brookside | Dairy Queen | - |  |  |  |  |  | |
| | | Riesbeck's (Westside) | - |  |  |  |  |  | |
| | Martins Ferry | Hanover & Zane Hwy | ★ |  |  |  |  |  | |
| | | Hanover & 4th St | ★ |  |  |  |  |  | |
| | Shadyside | Shadyside Care Center | ★ |  |  |  |  |  | |
| | Unincorporated | Walmart (Westside) | ★ |  |  |  |  |  | |
| | | Marshalls | ★ |  |  |  |  |  | |
| Marshall | Benwood | Benwood City Building | ★ |  |  |  |  |  | |
| | | McMechen & 5th St | - |  |  |  |  |  | |
| | Glen Dale | Reynolds Memorial Hospital | ★ |  |  |  |  |  | |
| | McMechen | Dollar General | - |  |  |  |  |  | |
| | | 21st St & Marshall St | ★ |  |  |  |  |  | |
| | Moundsville | DMV | ★ |  |  |  |  |  | |
| Ohio | Bethlehem | Mt. Olivet & W.V. 88 | - |  |  |  |  |  | |
| | | Old Bethlehem City Building | - |  |  |  |  |  | |
| | | Village Plaza | - |  |  |  |  |  | |
| | Unincorporated | Rio Vista | - |  |  |  |  |  | |
| | | Mozart Firehouse | - |  |  |  |  |  | |
| | | Walmart (The Highlands) | ★ |  |  |  |  |  | |
| | | Old Navy (The Highlands) | ★ |  |  |  |  |  | |
| | | Target (The Highlands) | ★ |  |  |  |  |  | |
| | | Cabela's (The Highlands) | ★ |  |  |  |  |  | |
| | Fairmont Pike | - |  |  |  |  |  | | |

Table 8. Regional Transit Supportive Infrastructure Priorities (continues on next page)

| City/Village | Transit Stop Name | Priority Location | Stop Type | Stop Signage | High-vis Crosswalk | Shelter or Seating | Sidewalk |
|-------------------|--------------------------------|--------------------|-----------|--------------|--------------------|--------------------|----------|
| Ohio | Wheeling | S-Bridge | - | ● | ● | ● | ● |
| | 48th & Jacob St | - | ● | ○ | ● | ○ | ○ |
| | Intermodal Center | ★ | ● | ○ | ● | ● | ○ |
| | 29th & Chapline St | - | ● | ● | ● | ● | ○ |
| | OVMC (Future WVU Cancer Cent.) | ★ | ● | ● | ○ | ● | ○ |
| | 14th & Market St | ★ | ● | ○ | ○ | ● | ○ |
| | 1st & Main St | - | ● | ○ | ● | ○ | ○ |
| | 29th & Eoff St | - | ● | ○ | ● | ○ | ○ |
| | 22nd & Chapline St | ★ | ● | ○ | ● | ○ | ○ |
| | 10th & McColloch St | - | ● | ○ | ● | ○ | ○ |
| | Edgewood & Bethany Pike | - | ● | ● | ● | ○ | ○ |
| | National Rd & Washington Ave | ★ | ● | ○ | ○ | ○ | ○ |
| | Medical Park | ★ | ● | ● | ● | ○ | ● |
| | Kroger (Wheeling) | ★ | ● | ● | ○ | ○ | ○ |
| | 12th & Market St | ★ | ● | ○ | ● | ○ | ○ |
| | 16th & Market St | ★ | ● | ● | ○ | ○ | ○ |
| | 19th & Wood St | - | ● | ○ | ● | ○ | ○ |
| | 14th & Eoff St | ★ | ● | ● | ○ | ○ | ○ |
| | North Park Apartments - Bldg 5 | - | ● | ● | ● | ○ | ○ |
| | 11th & Market St | - | ● | ○ | ● | ○ | ○ |
| | Elm Grove | ★ | ● | ○ | ○ | ○ | ○ |
| | Mason Rehab | - | ● | ● | ○ | ○ | ● |
| | Elm Terrace | - | ● | ● | ● | ○ | ● |
| | Riesbeck's (Eastside) | - | ● | ● | ● | ○ | ● |
| | Glenwood | ★ | ● | ● | ● | ● | ○ |
| | 19th St & Warwood Ave | - | ● | ○ | ○ | ○ | ○ |
| | Top of Wheeling Hts | - | ● | ○ | ● | ○ | ○ |
| | Madison School | ★ | ● | ● | ○ | ○ | ○ |
| | North Island | - | ● | ○ | ● | ○ | ○ |
| | Indiana St | - | ● | ○ | ● | ○ | ○ |
| South Island | - | ● | ● | ● | ○ | ○ | |
| S Huron & Zane St | - | ● | ● | ○ | ○ | ○ | |
| Edgington Ln | - | ● | ○ | ○ | ○ | ○ | |
| Jefferson* | Rayland | Municipal Building | - | ● | ● | ○ | ○ |
| | Tiltonsville | Union & Walden Ave | - | ● | ● | ○ | ○ |
| | Yorkville | Public Rd | - | ● | ○ | ○ | ○ |

* Jefferson County is outside of the Belomar Region

Bicycle and Pedestrian Connections

Active transportation infrastructure faces many barriers and challenges. Counties and communities can build off the insights of this study to complete tailored plans to develop active transportation connections in their communities. Below is a list of additional studies that are needed to explore local connections, identify facility alignments, evaluate alternative routes, and conduct preliminary engineering required to build out our bicycle and pedestrian infrastructure.

| Recommendation | Description | Project Leaders | Possible Connections |
|---|--|--|---|
| Complete Countywide Active Transportation Plans | Active Transportation Plans (ATP) establish a multimodal project through engagement, analysis, and preliminary engineering. Once completed, it empowers the communities to competitively pursue federal and state grant funding. | Belmont County | <ul style="list-style-type: none"> National Rd Sugar St Marietta St |
| | Projects identified by these plans can also be included in Belomar Transportation Improvement Plans (TIPs), which establish funding and implementation for the future of the region. | Ohio County | <ul style="list-style-type: none"> National Rd Market St Bethlehem Blvd |
| | | Marshall County | <ul style="list-style-type: none"> Jefferson Ave Third St Lafayette Ave |
| Develop Local Complete Streets Policies | <p>Local complete streets policies can better assess sidewalk conditions, ADA compliance, and street crossings to establish an implementable list of projects to make communities pedestrian friendly.</p> <p>This plan establishes emphasis areas for each community, and lays the groundwork for policies like these to build on for years to come</p> | Bellaire Bridgeport Martins Ferry McMechen Moundsville Shadyside St. Clairsville | N/A |
| Ohio River Corridor Study | <p>The Ohio River is the largest barrier to active transportation in the region, but also the biggest opportunity. The Wheeling Heritage trail is an excellent start, but many gaps remain.</p> <p>An Ohio River Corridor Study focused on active transportation and economic development could spark excitement and attention around the issues outlined in this plan. Namely, a River Corridor study should identify rails-to-trails opportunities, feasible and fundable river crossing locations, and explore potential connections to the Great Allegheny Passage (GAP) and counties north and south of the Belomar Region.</p> | Belomar together with Communities Along the Ohio River | <ul style="list-style-type: none"> Rail-to-Trails Wheeling Heritage Trail to Glen Dale Trail Wheeling Island River Crossing McMechen River Crossing |
| Widen Shoulders on Rural County Roads | Due to the region's natural resources industry, county roads are often used as the last mile connection for large trucks and equipment. These roads tend to be narrow with frequent curves, which can impact drivers ability to stay within their lane, especially for heavy vehicles. | Belmont County | <ul style="list-style-type: none"> National Rd County Rd 149 County Rd 9 |
| | Widening road shoulders and lanes would improve roadway safety for drivers' as well as cyclists and pedestrians. Wide shoulders create a space for cyclists and pedestrians to travel outside of vehicle travel lanes. These projects can also be implemented alongside routine road maintenance, making them easy projects to implement over time. | Ohio County | <ul style="list-style-type: none"> National Rd (U.S. 40) County Rd 88 Cherry Hill Rd |
| | | Marshall County | <ul style="list-style-type: none"> County Rd 86 County Rd 88 |

Table 9. Regional Active Transportation Priorities and Recommended Planning Initiatives

Innovations in Active Transportation Planning

These additional studies have the power to unite communities around the core mission of reinvigorating our region's streets. Working toward these visionary trail connections takes grassroots momentum, and that starts with a plan. We can look to other regions working to address similar needs as examples of what Belomar can achieve. Below are two successful planning efforts that laid the groundwork for the future success of their community:

Complete Streets: Joplin, Missouri

Joplin, Missouri has made major strides in promoting safer, more inclusive streets through its Complete Streets initiative. Adopted in 2022, the city's ordinance and Active Transportation Plan aim to improve access for all users, especially low-income residents, older adults, and people with disabilities. The policy, ranked fourth-best nationally by Smart Growth America in 2023, was developed with strong local input and advocacy support.

The city has paired policy with action. A downtown demonstration in 2023 showcased temporary bike lanes, crosswalk art, and pedestrian-friendly features, sparking community interest and feedback. Infrastructure upgrades have followed, including the widening of West 32nd Street with new sidewalks and a shared-use path. A similar project on 20th Street, with added roundabouts and a multi-use path, is planned for 2025–2026. Joplin's Complete Streets work reflects a growing commitment to safer, more connected travel options for everyone.



Pop-up event showcases ways to improve Joplin's streets (source: Missourians for Responsible Transportation)

Riverfront Planning: The Mahoning River



Mayor of Lowellville, a riverfront community, presents the plan's conclusions (source: In the Mahoning Valley)






The Mahoning River Corridor Study outlines a vision to reconnect and revitalize a historically industrialized region along the Mahoning River in northeast Ohio. The plan unites 13 municipalities around a shared framework of connecting communities, protecting wildlife and water, and promoting economic prosperity.

Key strategies include removing low-head dams, fostering aquatic habitats, and completing a continuous riverfront trail. Implementation toolkits were prepared for each community to offer concrete project recommendations, funding options, and branding efforts.

Overall, this corridor study provides a regional roadmap to transform the Mahoning River into a vibrant ecological, recreational, and economic asset, fostering shared growth in the Mahoning Valley.

Transit Stops and Services

Transit access is only as good as its stop location. Chapter 4 reviewed each fixed route to highlight areas currently outside of a 10-minute walk from a transit stop. New stop locations can close these gaps and connect to key points of interest. There are also opportunities improve transit service with new transfer stations between adjacent routes. These recommendations are summarized below:

- Existing Stop without Transfers 
- Existing Stop with Transfers 
- No Existing Stop 
- Recommended New Stop 
- Recommended New Transfer Stop 

Transit Stop Locations































| | City/Village | Transit Stop Name | Recommended Transit Stop Change | | Transit Routes Affected |
|----------|----------------|------------------------------|---|--|--|
| | | | Exst. | Rec. | |
| Belmont | Bellaire | Harrison & 41st |  |  | Shadyside |
| | Martins Ferry | Broadway & Breitenstein Ln |  |  | MF Rayland, MF Yorkville |
| | Shadyside | Central & 39th |  |  | Shadyside |
| | Unincorporated | Church St & National Road |  |  | Blaine Mall |
| Marshall | McMechen | Dollar General |  |  | McMechen, Reynolds/DMV |
| | Moundsville | Walmart (Southside) |  |  | Reynolds DMV |
| | | Jefferson & 7th |  |  | Reynolds DMV |
| Ohio | Wheeling | Elm Grove |  |  | Mozart-Bethlehem, Elm Grove |
| | | National Rd & Washington Ave |  |  | Mt. Dechantal, Elm Grove |
| | | Edgington Ln |  |  | Elm Grove |
| | | OVRTA Office |  |  | Wheeling Island, Blaine Mall, MF-Rayland, MF-Yorkville, Shadyside |
| | | Mt. Dechantal & National Rd |  |  | Mt Dechantal |
| | | Viking & Warwood Ave |  |  | Warwood |
| | | Glenview Apartments |  |  | Warwood |
| | | Unincorporated | Wheeling Station |  |  |

Table 10. Recommended transit stop changes, new stop locations, and affected transit services

Transit Service Strategies

| Recommendation | Description | Project Leaders | Opportunities |
|--|--|--|--|
| Create a Coordinated Regional Transit Plan | OVRTA and EORTA are recommended to develop their own coordinated regional transit plan to detail goals and projects for the future. This Multimodal study offers a strong base of public feedback, existing conditions analysis, and inventory of vehicle and infrastructure assets that should be built on further. | OVRTA EORTA | <ul style="list-style-type: none"> • The Highlands • Wheeling Station • Glenview Apartments • Universities west of St. Clairsville |
| Utilize Transit Shuttle Services and Deviated Fixed-routes | <p>Several key locations are far outside the core transit network, but we can connect them with limited impact on our existing service:</p> <p>Deviated fixed-routes are similar to standard fixed-routes, but travel off their path to pick up passengers at locations not directly on the route, typically within a specified area and time window. This can be effective for low volume, but crucial connections, to multifamily housing like Glenview and Wheeling Station.</p> <p>Shuttle services between high volume locations can increase trip frequency and reduce the total mileage of other fixed routes. This is ideal for locations like The Highlands and Belmont County's universities. Shuttle vehicles do not require a Commercial Drivers License (CDL) to operate, potentially making drivers easier to find.</p> | OVRTA EORTA | <ul style="list-style-type: none"> • The Highlands • Wheeling Station • Glenview Apartments • Universities west of St. Clairsville |
| Improve Transit Technologies | <p>There are many ways to implement new innovative transit technologies to improve the experience and convenience for transit users:</p> <p>Mobile applications like the 'Transit' app allow riders to plan and pay for their trip in one place. OVRTA and EORTA can partner with the transit app or provide an improved mobile option.</p> <p>In vehicle technologies like bus passenger counting and GPS tracking, collect data crucial for understanding how riders use your system. Improved understanding of transit demand helps transit agencies improve their system by better allocating resources where people need it most.</p> <p>Fare payment should be easy and seamless. Bus pass kiosks at transfer stops, smart phone fare payment, or an improved token system with a wider use window would be welcomed changes.</p> | OVRTA EORTA | <ul style="list-style-type: none"> • Integration with the smart phones • Virtual Ticketing • Real-time vehicle GPS tracking • Passenger count systems • Fare payment stations and ticket kiosks |
| Expand Transit Service Hours To Cover Late Shift Workers | Today, OVRTA's transit service runs from 6AM-6PM. Project feedback advocated to extend service times to offer transit to late shift workers and evening activities. Later hours do require longer bus shifts, so implementation is dependent on driver staff size and/or changes to transit services to accommodate these late trips. | OVRTA EORTA | <ul style="list-style-type: none"> • The Highlands • Downtown Wheeling • Ohio Valley Mall |
| Public-private partnerships for Transportation Services | OVRTA and EORTA should explore public-private partnership opportunities. These partnerships can take many shapes, including private shuttle services coordinated with the public transit system and private contributions to support deviated fixed routes to businesses and universities during select hours of the day. | OVRTA EORTA Local Universities Local Businesses | <ul style="list-style-type: none"> • The Highlands • Universities west of St. Clairsville • Ohio Valley Mall |

Table 11. Recommended Strategies for Improving Regional Transit Service

Innovations in Transit Service Design

Other transit agencies facing similar challenges have made huge strides to rightsize their transit systems and improve their amenities. Below are two examples of how similar sized transit agencies identified and addressed their needs with innovative planning and transit service design:

Alternative Service Trips: Marietta, OH

In response to ongoing transportation challenges and community feedback, the City of Marietta, Ohio, took strategic steps to improve local mobility by transitioning from fixed-route transit to an on-demand service model. The City leveraged American Rescue Plan Act (ARPA) funds to implement a supplemental transportation program in partnership with a third-party cab company. This flexible service addressed critical gaps in the existing system and successfully provided more than 8,000 trips during its operation. The program was well received by residents, many of whom expressed strong interest in seeing it continue. However, the limited availability of ARPA funds and the absence of a sustainable funding source led to its eventual discontinuation. Recognizing persistent issues such as high fixed-route trip denial rates and growing demand for more adaptable transit solutions, CABL, the local transit provider, responded by adopting a fully On-Demand service model. This transition marked a significant improvement in system efficiency and rider satisfaction, effectively aligning transit with community needs.

Bus Stop Typology Study: Nampa, Idaho

Valley Regional Transit (VRT) serves as the primary transit provider for the Greater Boise area. When the City of Nampa initiated the development of a Mobility Hub Playbook to expand local mobility options and better integrate with existing transit services, it turned to VRT's Bus Stop Typology Study for guidance.

This document, also referred to as a Kit of Parts design guide, offers standardized recommendations to enhance the safety, infrastructure, clarity, and accessibility of bus stops throughout the VRT service area. This creates a consistent experience for users throughout the region by unifying transit design in each community. By incorporating the principles outlined in this study, VRT is able to ensure that new mobility hubs are thoughtfully coordinated and seamlessly aligned with the region's established transit infrastructure, promoting a cohesive and user-friendly transportation network.

Transit Planning and Funding Opportunities

Rural Transit Agencies across the country are doing their best to provide ample transit services with the little resources they have. OVRTA and EORTA are no different. Securing state and federal transit funding is the biggest roadblock to implementing this plan's transit recommendations. Both agencies should begin working on their own transit plans to maximize their grant eligibility, like the federal 5310 program that specializes in funding to enhanced mobility of seniors & individuals with disabilities. Below are examples of some opportunities these agencies should explore:

Completing a Regional Transit Plan

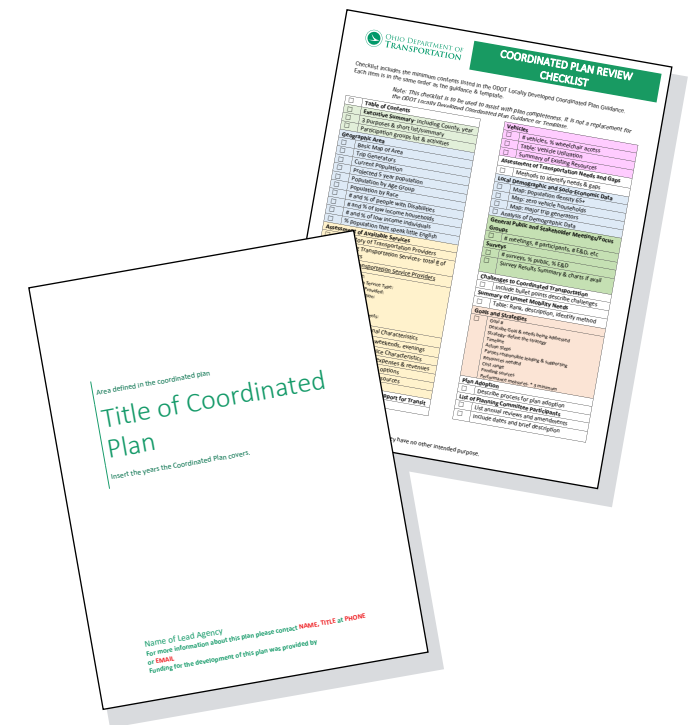
Routine updates to transit planning documents are essential for incrementally improving transit services and securing funding. The most recent transit plan in the region is the Region X Coordinated Public Transit-Human Services Transportation Plan 2019 Update. Below are two examples that should be updated every five to ten years.

- Transit Development Plans guide improvements to the region's transit system. They are an opportunity to engage the public and reassess the transit system, and are often required for state and federal transit funding.
- Coordinated Public Transit-Human Services Plans focus on the mobility needs of the elderly and disabled. A coordinated plan can be necessary for eligibility for certain 5310 funding.

There is plenty of guidance to help Rural Transit Agencies lead these plans. For example, The Ohio Department of Transportation offers resources for rural transit agencies to help them lead and develop their own plans to begin making steps toward improving their transit amenities and services.

Public-Private Partnerships: Nampa, Idaho

Public-private partnerships can play a critical role in sustaining and expanding transit services, particularly in areas where traditional fixed-route service falls short. In Nampa, Idaho, unmet transportation needs prompted the implementation of an On-Demand transit service designed to offer greater flexibility and coverage. This service is supported through a combination of federal and local funding, including interest earnings from American Rescue Plan Act (ARPA) allocations. In addition, the program is bolstered by a strategic partnership with local healthcare providers who



ODOT's Division of Transit offers easy to follow guidance to help rural transit agencies develop their own Coordinated Public Transit-Human Services Plan (Source: Ohio Department of Transportation)

contribute funding to ensure that patients have reliable transportation to and from medical appointments. These healthcare organizations recognize the value of transit access in improving health outcomes and reducing missed appointments, making their investment mutually beneficial.

The On-Demand service has been well utilized, providing approximately 30,000 rides annually, and serves as a successful example of how coordinated funding and partnerships can enhance mobility and community well-being.

Coordination, Engagement, & Public Communications

Public feedback indicated that many residents find the transit system confusing, and don't use it because it can be intimidating to navigate. Transit agencies have a responsibility to be advocates for their own services, and work to educate and engage with the community to make it easier to understand and use. This can be done through better public information materials, direct public outreach, and coordination with other agencies, cities, and villages. Below are examples of new strategies that can be implemented to strengthen public and leadership relations:

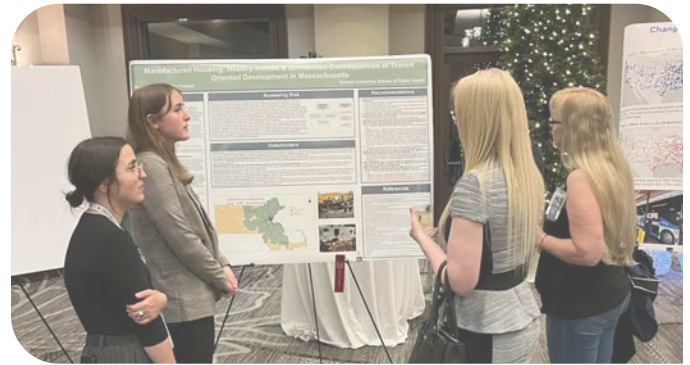
Engagement: Chicago RTA Outreach

The Regional Transportation Authority (RTA) in Chicago, Illinois maintains an extensive collection of education and outreach materials that are readily accessible through their website. These resources are designed to assist riders, advocates, and community partners in navigating the region's public transportation services. In addition to their digital materials, the RTA operates a dedicated Mobility Outreach Program, which provides valuable services such as travel training, accessibility information, safety tips, instructional videos, and more. This program is specifically geared toward helping individuals of all abilities feel more confident and secure when using public transit. What makes their approach particularly effective is the variety of access points they offer. Services and resources are available both online and in person at any of the 60 registration sites located throughout the region. This ensures that people with different needs, comfort levels, and technological skills can engage with the program in a way that works best for them. Altogether, these efforts reflect a thoughtful and consistent commitment to education, outreach, and accessibility, creating multiple avenues for the public to connect with information and support.



Direct engagement with riders (Source: Chicago RTA)

Coordination: National RTAP



Student lead presentations at the 5th Annual National RTAP Conference (Source: National RTAP)

The National Rural Transit Assistance Program (RTAP) offers a broad and thoughtfully curated collection of resources through their website, all aimed at supporting rural and tribal transit providers across the country. These materials range from marketing guides and best practice documents to webinars and in-depth topic guides that address the unique needs and challenges faced by transit agencies in less populated areas. What truly sets National RTAP apart, however, is their commitment to fostering ongoing, meaningful conversations within the transit community. In addition to their formal resources, they regularly host peer round-tables and informal chats, providing a space where practitioners, stakeholders, and community members can come together to exchange ideas and perspectives. These sessions serve as an important form of qualitative outreach, encouraging open and candid discussions about pressing issues, emerging concerns, and successful practices. By creating these opportunities for dialogue, National RTAP not only shares information, but also listens, allowing them to better understand what is working well, what might need improvement, and what new ideas could help shape the future of rural and tribal transit.

Communication: Cudahy, CA

The 2024 City of Cudahy Communications Plan presents a comprehensive strategy to enhance public awareness, engagement, and trust through clear, consistent, and proactive messaging. Its main goals are to inform residents, promote city services and programs, and position leadership as transparent and trusted communicators.

The plan emphasizes a blend of digital and traditional media, with a strong focus on expanding social media use, proactive media relations, and collaborative community partnerships. It also prioritizes issue management and crisis communication readiness by establishing clear protocols, training spokespersons, and using multiple channels for timely, accurate updates. Key strategies include maintaining an integrated content calendar, optimizing platforms like Facebook, Instagram, X, LinkedIn, and the city website, and launching targeted campaigns on topics such as mental health, summer safety, and back-to-school readiness. The plan encourages close coordination with local media, community groups, and government partners to amplify messaging. Success will be tracked through media coverage, digital engagement, website traffic, event participation, and community feedback. Altogether, these efforts aim to strengthen community connections, improve access to information, and foster civic pride across Cudahy.

Communication: Colonial Beach, VA

The Colonial Beach 2023–2024 Marketing and Communications Plan is a strategic roadmap to enhance community engagement, strengthen public perception, and support economic growth. Recognizing the challenges small towns face—such as limited budgets and resources—the plan outlines strategies to attract new residents, businesses, and visitors. Key focus areas include refining brand identity, developing engaging marketing tools, boosting tourism marketing, improving public relations, and establishing clear communication protocols for town events and emergencies. A major emphasis is placed on building strong partnerships with regional organizations, media, and stakeholders to increase the town's visibility and opportunities.

Specific goals include creating modern, cohesive brand guidelines; increasing digital and social media engagement; expanding assets like video, photography, and newsletters; and proactively pitching Colonial Beach to regional media. The plan also prioritizes a robust emergency communications system with operability, interoperability, and continuity at its core. Tactics such as media training, emergency communication handbooks, and clear decision-making protocols support this effort.

Overall, the plan provides a structured framework to improve day-to-day communication, enhance the town's reputation, and position Colonial Beach for sustainable growth in the year ahead.

Conclusion

The Belomar Multimodal Study's recommendations offer a roadmap to improve how people move throughout the region. Grounded in public input and regional data, the proposed projects and strategies address today's most pressing mobility challenges while preparing communities for future needs. Several key takeaways guide the way forward:

- Quick-win improvements like small-scale transit stop and infrastructure projects can deliver immediate benefits for pedestrian safety and transit accessibility.
- Visionary projects like river corridor enhancements will need deeper coordination, feasibility studies, and engineering design—but they have the potential to reshape regional mobility.
- Transit service strategies aim to close

existing gaps. New stop locations, adjusted service routes, expanded hours, and technology upgrades can make transit more convenient and easier for riders to navigate.

- Strong outreach, clear information, and coordination will build trust and can help grow ridership across all communities.
- Communities and transit agencies should pursue updated regional transit plans to position themselves for state and federal funding opportunities.

Belomar, local jurisdictions, and transit providers should work together to prioritize projects, pursue grant funding, and build momentum. These recommendations are the first steps in a regional commitment to a safer and more connected multimodal transportation system.



Residents enjoy an afternoon walk along the Wheeling Heritage Trail

Thank you for reading!

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