Homestead to McKeesport Corridor Plan

NEXTRANSIT CORRIDOR R

December 2023

Pittsburgh Regional Transit

CONNECT WITH US!

We're here to help make your trip easier. PRT customer service representatives are available from 6 a.m. to 7 p.m. on weekdays and from 8 a.m. to 4.30 p.m. on weekends and holidays.

ridePRT.org

412.422.2000 or 412.231.7007 (TTY)

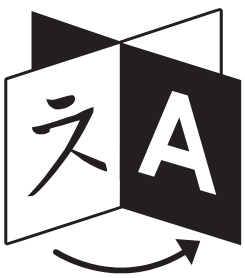
@pghtransit @pghtransitcare @pghtransitalert

@pghtransit

Text PRT (space) and your stop number to 41411 for real-time bus information.

ACCESS Paratransit: 412.562.5353 or 711 (TTY)

DISCRIMINATION POLICY: Section 601of Title VI of the Civil Rights Act of 1964 states the following: No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation under any program or activity receiving Federal financial assistance.



Translation?

¿Traducción? 需要翻譯？

ترجمة Traduzione? अनुवाद

Customer Service: 412.442.2000

CONTENTS

ACKNOWLEDGMENTS

About Pittsburgh Regional Transit

Pittsburgh Regional Transit (PRT) provides public transportation throughout Pittsburgh and Allegheny County in Western Pennsylvania.

PRT's 2,600 employees operate, maintain, and support bus, light rail, incline, and paratransit services for approximately 115,000 daily riders.

Governed by an 11-member board appointed by the Allegheny County executive, leaders from both parties in the Pennsylvania House of Representatives and Senate, and the governor of Pennsylvania, the board and its committees hold regularly scheduled public meetings.

PRT's budget is funded by fare and advertising revenue, along with money from county, state, and federal sources. PRT's finances and operations are audited on a regular basis, both internally and by external agencies.

PRT began serving the community as the Port Authority of Allegheny County in March 1964. In early 2015, PRT began investing in a transit-oriented development (TOD) program. This document is the result of investment to date, overseen by PRT's Corridor Planning staff and an interdisciplinary working group focused on TOD. The Port Authority of Allegheny County re-branded as Pittsburgh Regional Transit in 2021.

About the Homestead to McKeesport Corridor Planning Study

The Homestead to McKeesport (H2M) Corridor is a top priority corridor recommendation from PRT's long-range plan, NEXTransit, which was adopted in September 2021.

The H2M project was supported by a grant from the Transportation Alternatives Set-Aside (TASA) program, funded by the federal Bipartisan Infrastructure Law.

PRT was also awarded grants from the Southwestern Pennsylvania Commission (SPC) to focus on the southern end of the Homestead Grays Bridge and Eighth Avenue in Homestead and Munhall. Considerations will be made for bus queue jump lanes, bus stop improvements (shelters, curb extensions, and other rider amenities), pedestrian crossing improvements, and signal upgrades, including transit signal priority (TSP).

Participants

PRT would like to thank agency partners, including Allegheny County, SPC, and Pennsylvania Department of Transportation (PennDOT) for supporting the corridor planning project in Homestead, Munhall, Whitaker, and West Mifflin Boroughs, and the cities of Duquesne and McKeesport. PRT also thanks all those who participated by dedicating their time and expertise.

This document was stewarded internally by PRT's Planning Department. The development of corridor planning projects is managed by Seth Davis, PLA, LEED AP BD+C, PRT's Manager of Corridor Planning.

This study was developed by PRT in collaboration with Design Hub by Michael Baker International (MBI) and evolve environment:architecture. All maps and graphics were created by PRT and the MBI consultant team unless otherwise noted.

Published on December 8, 2023

BACKGROUND

PROJECT DESCRIPTION

In 2021, Pittsburgh Regional Transit (PRT) completed the 2045 NEXTransit Long-range Plan. Four of the top ten proposed projects were identified as top priority projects, including Homestead to McKeesport Upgraded Transit (also referred to as Corridor R in the plan).

The Homestead to McKeesport (also referred to as H2M) Corridor Plan is an initiative led by PRT and delivered in partnership with Allegheny County, PennDOT, and the six municipalities through which this project extends. The H2M study area extends from the southern end of the Homestead Grays Bridge to the McKeesport Transportation Center along Route 837 and Route 148 (Lysle Boulevard in McKeesport), a distance of 7.03 miles in the heart of the Mon Valley. H2M is a busy arterial corridor which follows the southern/western shore of the Monongahela (Mon) River from the City of Pittsburgh south through the Mon Valley.

Several major attractions, employers, and community anchors are found along the corridor and attract people from across the region. Kennywood is a large seasonal employer that employs thousands of workers each summer, many of whom are young adults who may not have access to a car and rely on transit to commute to and from work. Additionally, the Waterfront shopping center attracts shoppers from around the region and contributes to the traffic volumes and turning movements of vehicles in Homestead and Munhall.

PROJECT OBJECTIVES

Improve safety and accessibility for transit riders at and around bus stops.

- Improve crossing conditions and shorten crosswalk distances to increase safety for transit riders accessing bus stops across the street.
- Provide ADA-compliant amenities to ensure that riders of all abilities can easily access transit service.
- Ensure buses can serve riders using wheelchairs directly from the curb/boarding area.
- Make it easier and safer for people to access transit stops.
- Investigate locations that may warrant new stops or adjustments to existing stops.

Create a more comfortable experience for transit riders at and traveling to/from bus stops.

- Provide a high-quality experience at bus stops including amenities like seating, real-time travel information, and/or transit ticket vending.
- Ensure that PRT facilities are more comfortable and attractive.

Improve transit speed and reliability through the corridor.

- Improve flow of transit service in areas with low bus travel speeds or high congestion using signalization or street design tactics.
- Consolidate bus stops to meet PRT spacing guidelines.
- Reduce travel times from consolidation of bus stops and other transit improvements.
- Identify actions for transit to bypass congestion points which will facilitate improved bus operations, particularly in Homestead and Munhall Boroughs.

H2M BY THE NUMBERS

WITHIN .25 MILES OF BUS STOPS IN THE CORRIDOR:

7,777
POPULATION
(Census, 2020)

2,279
PEOPLE WORK FROM HOME

31%
ARE LIVING IN
POVERTY

4,312
PEOPLE COMMUTE TO WORK

59%
ARE NON-WHITE OR OF **HISPANIC/ LATINO ORIGIN**
(Census 2020)

17%
65+ YEARS OLD

35%
OF HOUSEHOLDS HAVE
NO CAR

15
SCHOOLS
(CHILDCARE & K-12)

19%
TAKE **PUBLIC TRANSIT** TO WORK

32
PUBLIC HOUSING
BUILDINGS

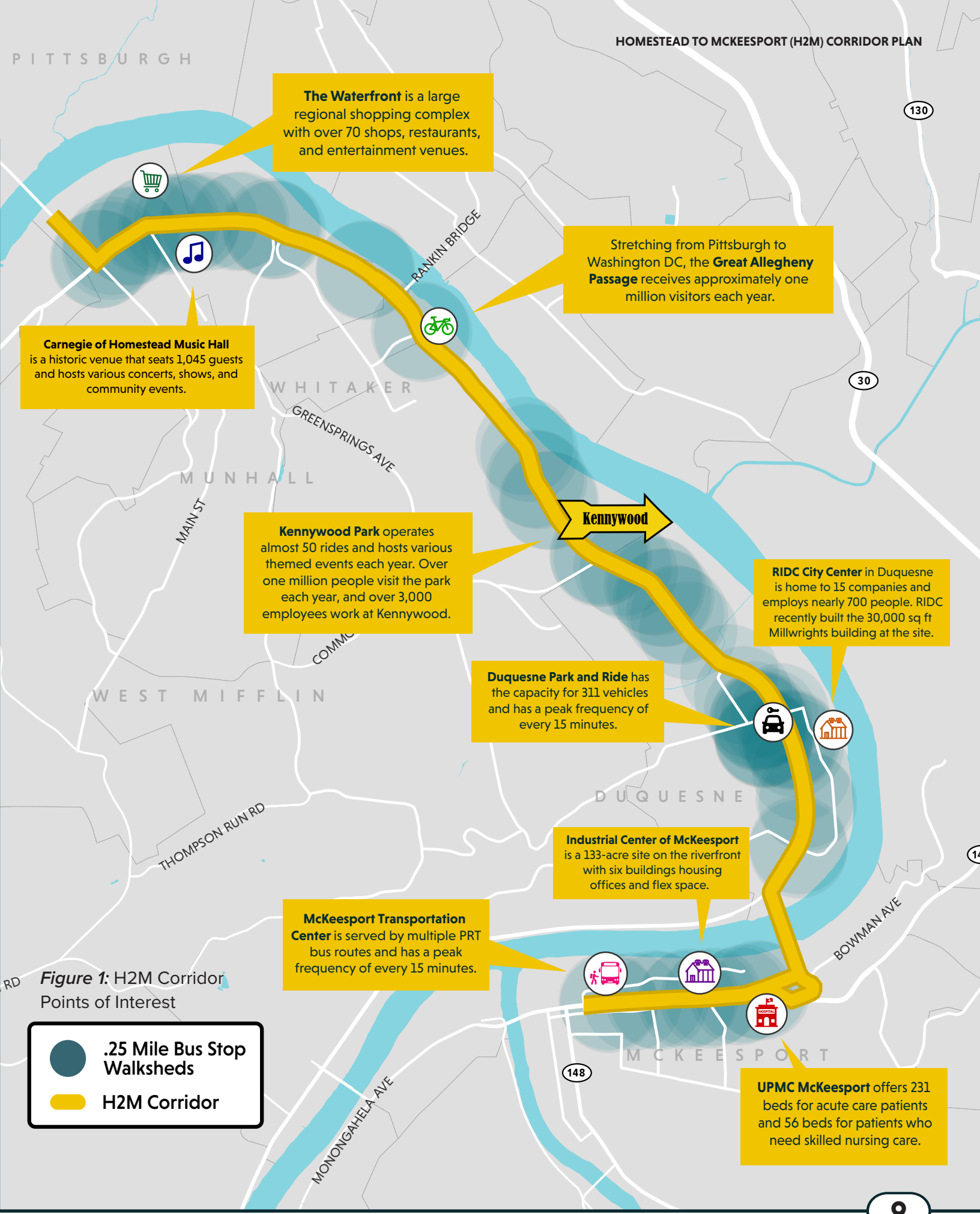


Figure 1: H2M Corridor Points of Interest

WHAT IS CORRIDOR PLANNING?

Transit corridor planning is a crucial part of urban and regional development that aims to create efficient, safe, and sustainable transportation systems. This process focuses on the design and management of routes that accommodate various modes of transportation, such as bus, bike, and walking/rolling. It strives to balance the need for smooth and **efficient** transit with pedestrian **safety** for all street users.

PEDESTRIAN SAFETY IN TRANSIT CORRIDOR PLANNING

Ensuring pedestrian safety is a paramount consideration in transit corridor planning. Some key strategies for achieving this include:

Safe Crosswalks: Place crosswalks strategically at transit stops and intersections, with adequate signaling, lighting, and signage to protect people walking/rolling.

Sidewalk Maintenance: Well-maintained and spacious sidewalks are essential to protect pedestrians. Regular upkeep, including snow removal and repairs, is crucial.

Traffic Calming Measures: Implementing traffic calming measures like lower speed limits, speed humps, narrower streets/lanes, sharper corner radii, and raised/level crossings can reduce the risk of crashes and improve safety for those on foot or using mobility devices.

Accessibility: Ensuring that transit stops and sidewalks are accessible to people with disabilities, such as those using wheelchairs or mobility devices, is essential for inclusive and safe transit corridors.

Community Involvement: Engaging with the public and stakeholders in the planning process can lead to safer and more inclusive corridors by incorporating the specific needs of people who use them.

EFFICIENCY IN TRANSIT CORRIDOR PLANNING

Efficiency in transit corridor planning is about optimizing the flow of people while minimizing congestion and delays. Several key principles contribute to achieving this goal:

Multimodal Integration: Efficient corridors are designed to seamlessly integrate multiple transportation modes. This means bus stops should be strategically located and spaced appropriately to allow for easy walking access while reducing travel time and the need for personal vehicles. Bicycle facilities should also be incorporated at transit stops and include connections to on-street bike paths and off-street trails, where possible.

Transit-Oriented Development (TOD): Corridor planning often includes the development of mixed-use zones around transit hubs, encouraging people to live, work, and shop near transit, thereby reducing car usage.

Signal Prioritization: Traffic signals along the corridor can be synchronized to prioritize transit, reducing dwell times at intersections, and improving overall transit efficiency.

Dedicated Lanes: Exclusive lanes for buses can significantly enhance efficiency by bypassing general traffic congestion. These lanes encourage the use of public transportation and keep it on schedule. They can be short (small sections near intersections, called queue jumps) or span the length of a whole corridor.

Real-Time Information: Providing passengers with real-time information on transit schedules and delays enables them to plan their journeys more effectively, reducing wait times and uncertainty.

INTEGRATION WITH EXISTING PRT PROGRAMS

BUS STOP AND STREET DESIGN GUIDELINES

In 2019, PRT developed guidelines for the design and placement of bus stops of various types throughout its system. The document is used both within the agency and by external partners as the bus network continues to evolve.

PRT recognizes that all locations are unique, especially with the topography and varied street systems of Allegheny county, so every bus stop placement must respond to local conditions.

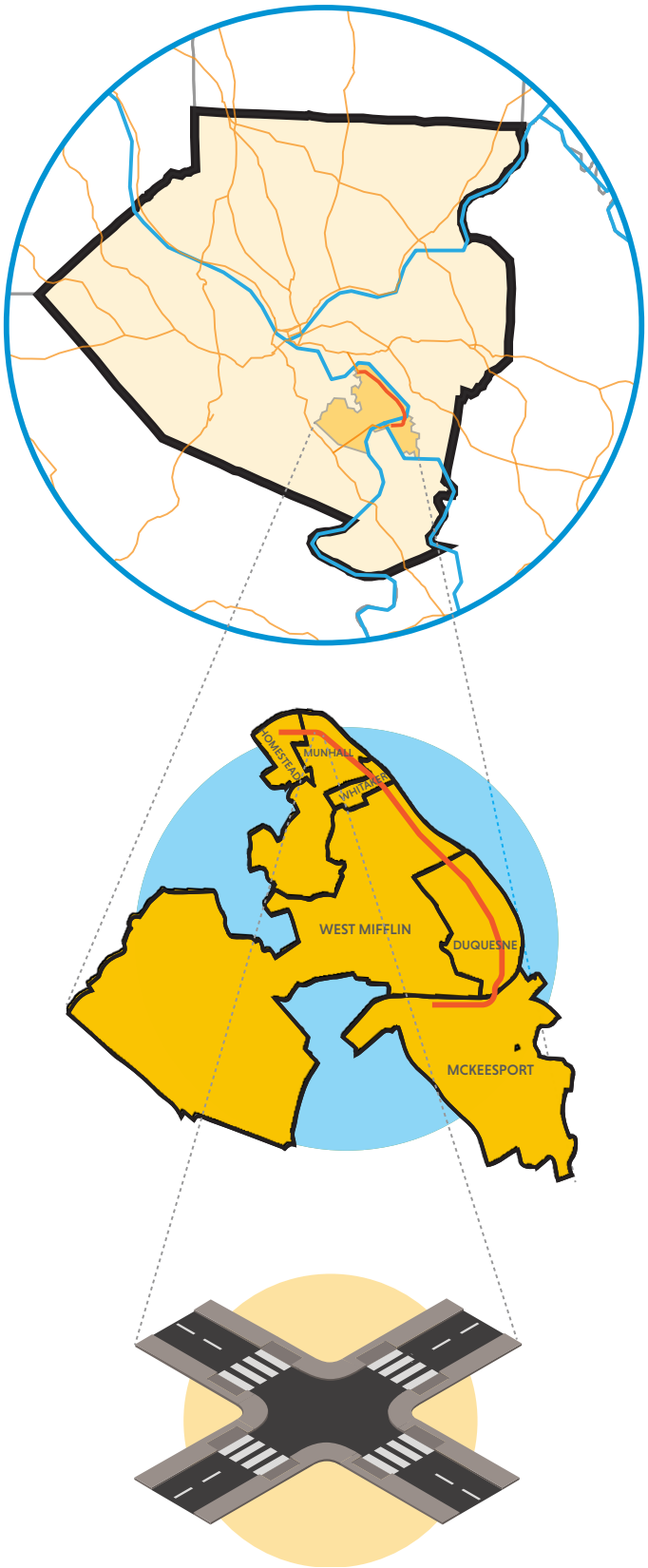
The H2M plan takes into account the spacing, siting, and operational standards set forth by PRT, and as design and construction follows, the layouts in the following sections should be refined to adhere to the standards as closely as possible.

TRANSIT-ORIENTED DEVELOPMENT GUIDELINES

The guidelines, developed in 2016, contain what PRT considers to be best practice standards for TOD, based on local and national research. PRT strives to achieve the outcomes described in the document to the best of its ability and expects development partners, private developers, and community developers to do the same. PRT works with local governments where possible to facilitate these best practices.

These guidelines are intended to facilitate the implementation of existing community supported planning and provide guidance where new planning occurs, and upgraded bus stops/ intersections in the H2M corridor can serve as key TOD focus areas moving forward.

CORRIDOR ANALYSIS AT THREE SCALES



In a transit corridor project, planners and engineers consider three distinct scales to effectively design, develop, and manage the transportation infrastructure. These three scales help address all aspects of the project and ensure that it functions efficiently and safely.

REGIONAL CONNECTIONS

Definition: The regional corridor scale encompasses the entire mobility route, whether it is for bus rapid transit (BRT), on-street service, or multi-use trails. It provides an extensive view of the transportation corridor from one end to the other and includes key connections to regional transportation facilities and major trip generators.

Considerations: At this scale, planners focus on high-level decisions, such as route type, alignment, and the corridor's role in the broader transportation network. They consider the corridor's length, connectivity to other modes of transportation, and its relationship to land use and urban development.

FOCUS AREAS

Definition: Focus areas are specific segments within the overall corridor that require more detailed attention and customization. These segments may be influenced by unique geographic, urban, or transportation-related factors.

Considerations: At the focus area scale, planners delve into the specific needs and characteristics of each segment. This includes factors like topography, existing land use, traffic conditions, environmental factors, community preferences, and municipal boundaries. The goal is to tailor the design and interventions to the unique challenges and opportunities present within each focus area.

INTERSECTIONS AND TRANSIT FACILITIES

Definition: The micro scale focuses on the most granular elements of the corridor, including intersections and bus stops. These are critical points where transit services connect to destinations and other modes of transportation, and passengers board and alight from vehicles.

Considerations: At the micro scale, planners and engineers consider design elements such as signal timing, pedestrian crossings, accessibility, sidewalk layout, shelter placement, and safety features. They aim to ensure seamless transitions between different modes and provide convenient and safe facilities for passengers.

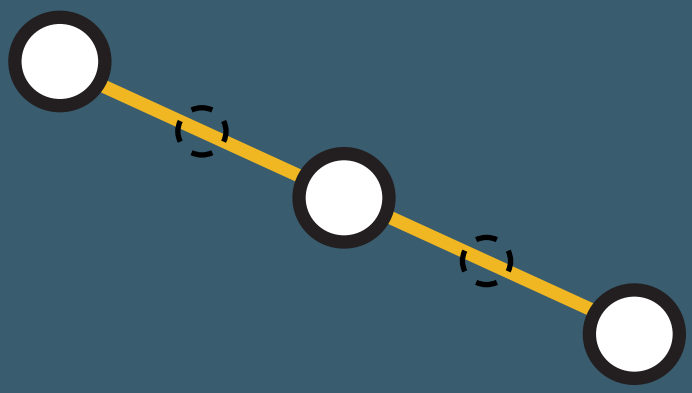
These three scales are interconnected and mutually influence one another. Decisions made at the macro-scale impact the design and operation of focus areas and micro-scale elements. Similarly, feedback from focus areas and micro-scale elements can inform adjustments to the overall corridor plan. Successful transit corridor projects require a comprehensive approach that considers all three scales to optimize transit operations, enhance safety, and provide a well-integrated transportation system that meets the needs of the community while minimizing environmental impacts.

BENEFITS OF BUS STOP CONSOLIDATION

Bus stop consolidation offers several significant benefits to both transit agencies and their passengers. By reducing the number of stops along a route, it can lead to quicker and more reliable service. Passengers spend less time waiting for buses to stop frequently, leading to faster journeys. Additionally, it can enhance pedestrian safety by reducing the need for mid-block crossing between closely spaced stops or at unsafe locations.

For transit agencies, consolidation can lead to cost savings as it reduces maintenance and operational expenses. Overall, bus stop consolidation streamlines public transit operations and improves the efficiency and convenience of bus services for riders.

The H2M corridor experiences inconsistent traffic flow, especially during PM peak periods, which causes delay for riders. The project team studied each stop and the overall traffic flow near them to understand where opportunities for streamlining stops exist.



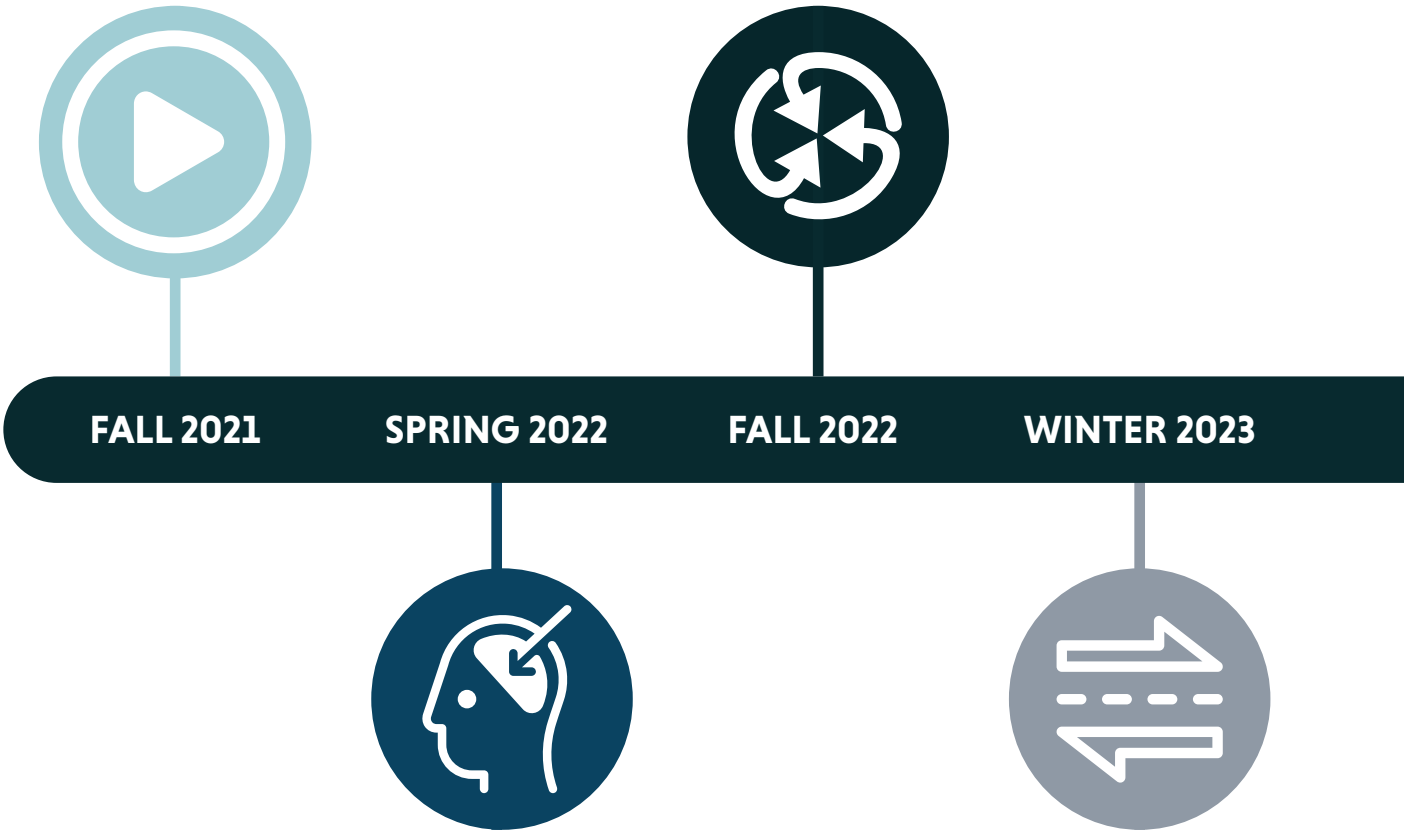
PROJECT TIMELINE

Getting Started

Gather existing conditions data and identify potential corridor interventions. Host two public workshops to get feedback on desired improvements.

Agency Coordination

Present potential corridor interventions to PennDOT, Allegheny County, and municipalities.



Deeper Dive

Engage consultant team and conduct further data collection and surveys.

Traffic Feasibility

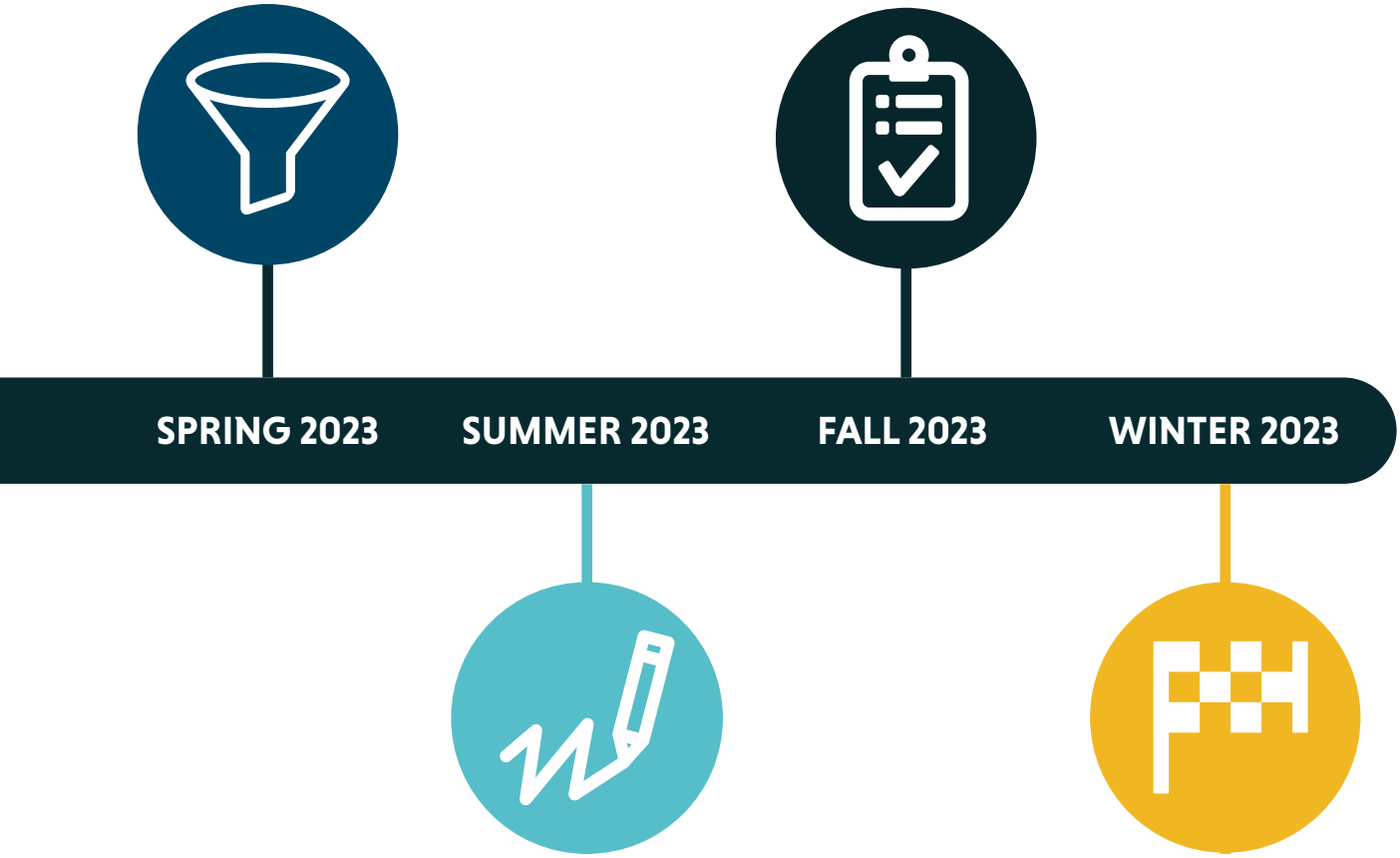
Detailed traffic analysis to confirm that proposed improvements will not negatively impact traffic.

Review and Refine

Host second round of public engagement to review draft concepts. Use input to develop final concept.

Getting the Details Right

Develop 10%-level engineering drawings for corridor concepts and attach high-level cost estimates.



Concept Development

Develop corridor concepts based on input from general public, stakeholders, and PRT departments.

Wrapping Up

Host final round of community engagement to present the final concept and implementation plan. PRT begins preparation for design and construction phases.

PLAN METHODOLOGY AND DELIVERABLES

Throughout the H2M corridor planning process, PRT relied on a public and stakeholder input and analysis feedback loop to develop and refine the recommended intersection improvement concepts and 10% conceptual design plans for the 11 chosen intersections located within the four segment areas.

During the development and adoption of the NEXTransit Plan in 2021, PRT conducted a variety of community engagement and outreach activities across Allegheny County and identified 17 high priority corridors to make transit investments in the short- and long-term. Origin/destination analysis from the NEXTransit project confirmed that Mon Valley riders have a high transit dependence.

Through this, H2M rose to the top five most essential transit investments and is also the first NEXTransit corridor project to be advanced to detailed planning and initial design. The corridor's role as a major transit trip generator in the system, connection to other proposed transit upgrades, safety, and operational challenges all contribute to SR 837 improvements being a top priority for PRT.

In addition to the NEXTransit plan acknowledging SR 837 as a high priority corridor, Southwestern Pennsylvania Commission's (SPC) SmartMoves for a Changing Region Report, SPC's 2014 Mon Valley Places Study and 2003/2006 Eastern Corridor Transit Studies, and Pittsburghers for Public Transit's (PPT) Expanding the East Busway Report all identify corridor operations as not being optimized for all vehicles, the lack of transit rider amenities at bus stops, and poor walking conditions that create significant safety concerns.

PROJECT DELIVERABLES:

DATA GATHERING AND FIELD VIEWS

The project team gathered a variety of public data sources, including from PRT, PASDA, and PennDOT. Field view pictures were captured along the corridor to reflect current conditions of bus stops, amenities, infrastructure, and equipment.

PUBLIC ENGAGEMENT

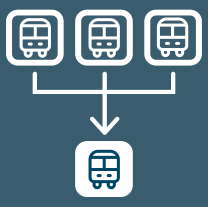
Public, stakeholder, and municipal engagement is essential to understanding the individual and collective community needs and opportunities. A Public Meeting Memo is included in **Appendix 1** which summarizes these efforts.

EXISTING CONDITIONS

Using field view photos and data sources gathered, a full existing conditions analysis was completed to better understand pedestrian, transit, and vehicular conditions. This resulted in an Existing Conditions memo which is included in **Appendix 3**.

TRAFFIC MODELING

Modeling is a useful way to validate public input and existing conditions analysis. For H2M, the project team used Synchro and SIM Traffic modeling to further analyze vehicular and roadway conditions, which was summarized in a memo.



BUS STOP CONSOLIDATION

Many transit agencies have bus stop consolidation programs. When considering consolidation opportunities, it is important for agencies to carefully consider and weigh the trade-offs of system frequency vs. coverage.

INTERSECTION PLANS

Investments in infrastructure and signal equipment at intersections is critical for achieving larger systemic changes. These investments may also encourage broader public realm improvements to create more people-oriented designs.

WHY THIS CORRIDOR?

THE CASE FOR TRANSIT IMPROVEMENTS IN THE H2M CORRIDOR

The Mon Valley communities have experienced continuous cycles of disinvestment since the beginning of the steel industry's decline in the 1970s, which has affected all aspects of life for their residents, including quality of housing and education, to access to basic essentials and key destinations across the region. With an acute awareness of the economic, quality of life, and historical challenges Mon Valley communities continue to experience and a significant percentage of residents not owning a personal vehicle, PRT recognizes it has a role to play in reinvesting in these communities. Through additional internal analysis conducted by PRT, including its 2019 Equity Index, the Mon Valley is one of the highest clusters of need in Allegheny County which further justifies the need for investing in critical transit, pedestrian, and vehicular infrastructure improvements.

With the continued support of revitalization and ongoing development opportunities in the Eighth Avenue Business District in Homestead Borough and expectation for this to reach other segments of the corridor, this is a unique opportunity for these municipalities since SR 837 experiences one of the highest service delays in the Mon Valley.

On an average weekday, over 7,500 transit riders travel through Eighth Avenue in Homestead, showing how the 61C and other routes have both high ridership and demand throughout the day.

In addition to the existing ten routes which operate in the corridor today, PRT is also preparing to implement the PRTX University Line service between Downtown Pittsburgh and Oakland. The 61C route will benefit from operating along the streamlined PRTX corridor, helping to connect residents of the Mon Valley to the region's largest employment centers.

At the opposite end of the study area, the McKeesport Transportation Center is also a major transfer hub for transit riders in the Mon Valley and serves as a hub for other transit providers in the ten county region.

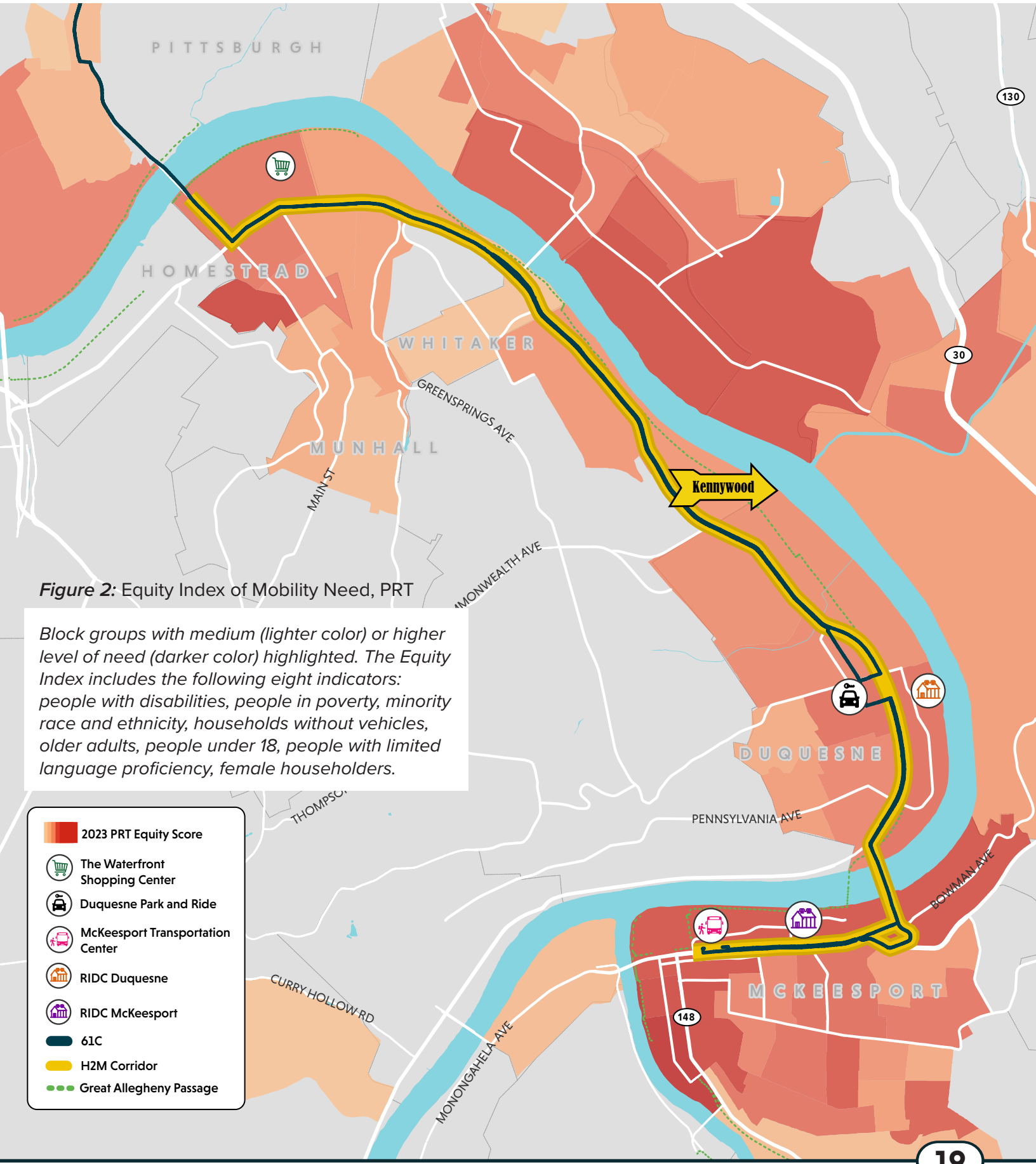


Figure 2: Equity Index of Mobility Need, PRT

Block groups with medium (lighter color) or higher level of need (darker color) highlighted. The Equity Index includes the following eight indicators: people with disabilities, people in poverty, minority race and ethnicity, households without vehicles, older adults, people under 18, people with limited language proficiency, female householders.

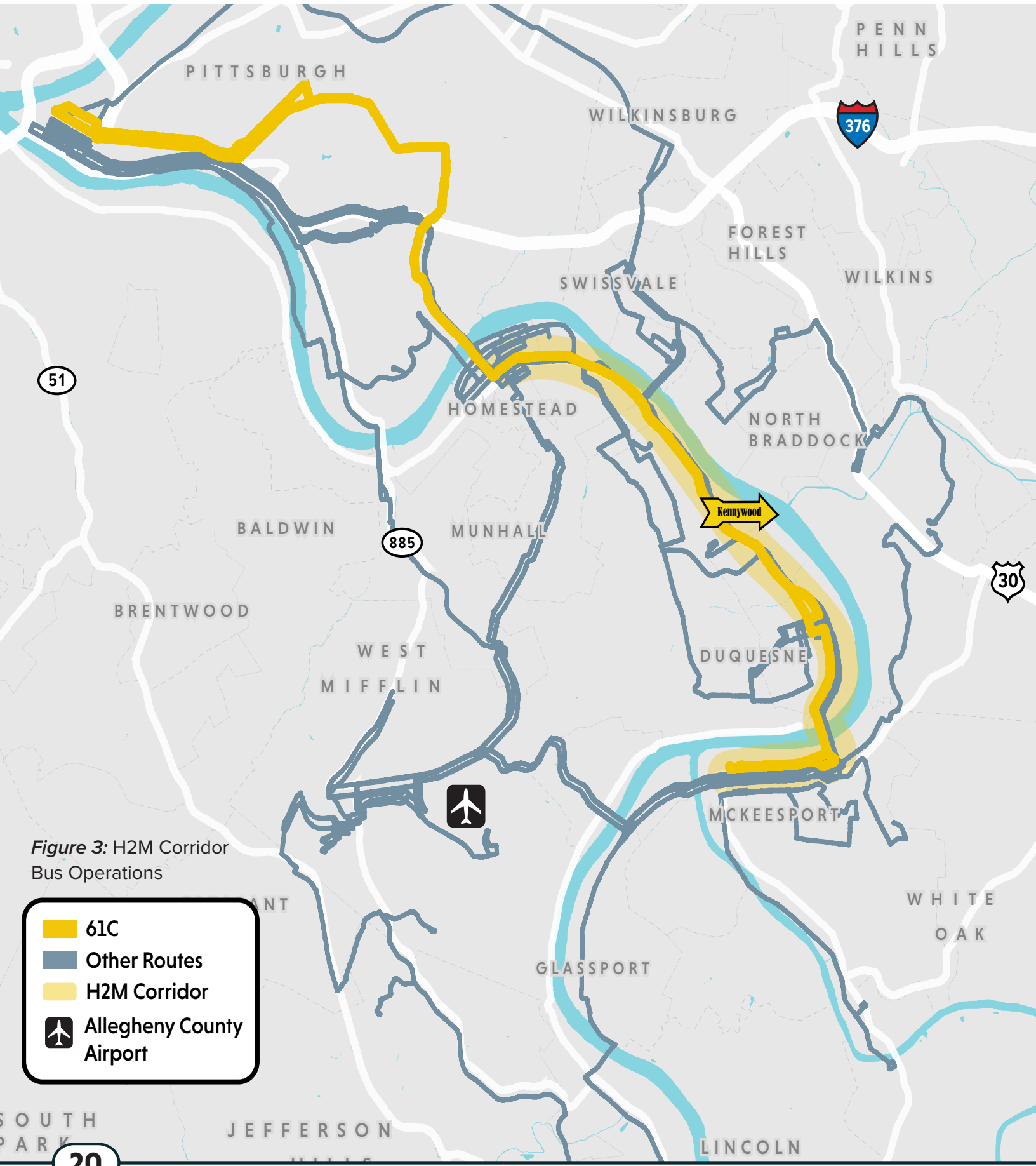


Figure 3: H2M Corridor Bus Operations

EXISTING BUS OPERATIONS AND AMENITIES

During the Existing Conditions phase, the project team created a StoryMap to convey all of the initial existing conditions findings, with details on existing bus operations, bus amenities, existing roadway conditions, travel speed, traffic volume, turning movements at intersections, sidewalk walksheds, sidewalk gaps, and curb cuts.

According to October 2023 data, the 61C has the third highest daily weekday ridership in PRT's system. The average weekday ridership on the routes serving the H2M corridor equates to 9.7% of the total ridership in PRT's bus network.

In addition to the PRT transit service, Heritage Community Initiatives (HCI) operates a weekday bus route that connects McKeesport residents to other portions of the Monongahela Valley. HCI's bus route overlaps with PRT service on Lysle Boulevard in McKeesport and serves as a potential transfer location for riders traveling through the Homestead to McKeesport corridor.

Currently, PRT serves 68 bus stops within the corridor study area and of these, only ten have covered bus shelters (eight are owned by PRT, two owned by Lamar Advertising).

In addition to the existing transit service that operates through the corridor today, PRT is also preparing to implement the University Line Bus Rapid Tranist project linking Downtown, Uptown, and Oakland and, in the future, other eastern communities. Although this project is a separate initiative from the Homestead to McKeesport Study and BRT service ends at Murray Avenue and Loretta Street in Greenfield, the 61C bus route is highly relevant to both projects and is a vital connection to Downtown Pittsburgh (#2 economic center in Pennsylvania) and Oakland (#3 economic centers in Pennsylvania) for residents in the Monongahela Valley.

Bus stop conditions, Eighth Ave at Amity St

Bus stop conditions, Kennywood Blvd at Hoffman Blvd

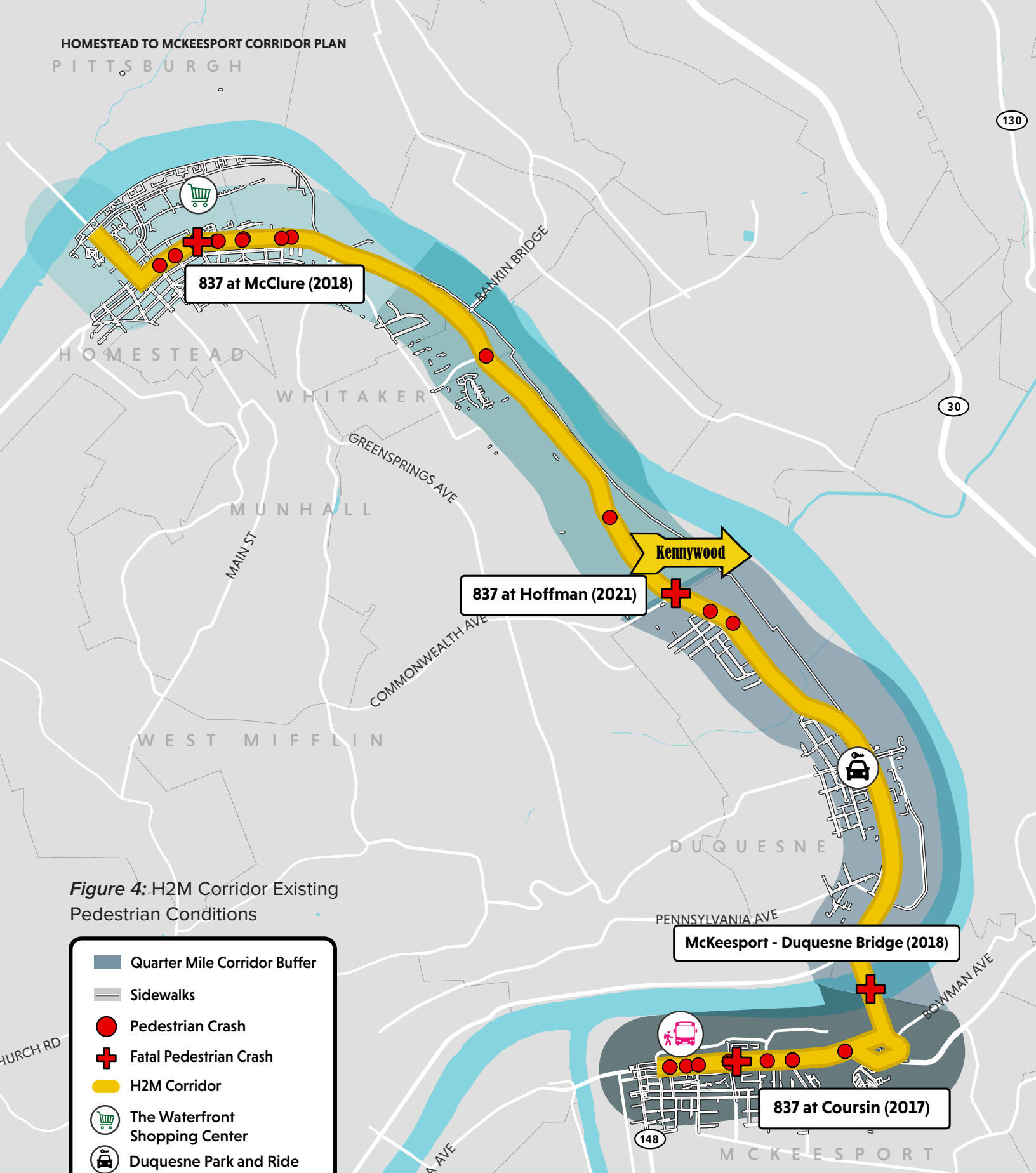


Figure 4: H2M Corridor Existing Pedestrian Conditions

While most pedestrian crashes occurred in Homestead and McKeesport, the four fatal pedestrian crashes in the corridor are dispersed.

EXISTING PEDESTRIAN CONDITIONS

While sidewalks provide access to many bus stops, others lack essential basic connections to enable people walking or rolling to get to and from their stops. Field views during the Existing Conditions phase confirmed that there are significant sidewalk gaps, particularly in the Munhall and Duquesne segments of the corridor.

In addition to field views, a sidewalk walkshed analysis was performed for each of the 68 stops in the study area to examine how accessible stops are for transit riders. The walksheds measure a five-minute walk/roll distance surrounding each stop with an estimated speed of 3.1 mph and were created using a comprehensive sidewalk dataset to offer the most realistic estimate of travel time in the corridor.

In addition to sidewalk walkshed analysis, curb cuts were assessed since they pose risks for people walking as vehicles can pull in and out of these areas at any time, with pedestrian visibility being an added challenge. In total, the study area has a total of 231 curb cuts (80 curbs cuts in the inbound direction and 151 curb cuts in the outbound direction) and on average, there are 10.9 curb cuts per mile in the inbound direction and 20.7 curb cuts per mile in the outbound direction.

There are also five blocks of curb cuts along the corridor where the entire roadway segment between streets lacks a curb or has many garages into which vehicles pull in and out.

Sidewalk existing conditions captured during field views completed in October 2022.

Significant volumes of people cross SR 837 at or near the Homestead Grays Bridge. When coupled with high numbers of vehicular turns, this introduces excessive conflict at this location. Currently, buses stop near this intersection, which adds complexity to the overall movements occurring here, as buses are not always able to fully access the curb in the outbound direction to serve passengers safely. **Table 1** shows the intersections with the highest number of pedestrian crossings.

Homestead and McKeesport are the most densely populated areas of the corridor with heavy pedestrian activity. In contrast, other segments of SR 837, such as the stretches by the Rankin Bridge and Kennywood, have high travel speeds and a wide roadway. Placing an emphasis on pedestrian infrastructure improvements at intersections with high turn movements and pedestrian crossings will create safer conditions which in turn will result in fewer injuries and deaths for people who are walking or rolling.

Ten fatal crashes were recorded in the study area between 2016-2021, and of those, four fatalities were pedestrians. Three of the four fatal crashes occurred at night, and weather was not a known factor in any of the incidents. However, human-scale lighting is also lacking throughout the corridor. As expected, intersections with a substantial number of vehicular turning movements present an increased risk of conflict. Most pedestrian crashes occurred in the most densely developed portions of the corridor with

The images on this page demonstrate examples of ADA curb ramps found in the corridor today.

INTERSECTION LOCATION	PEDESTRIAN CROSSINGS RECORDED	MUNICIPALITY
E Eighth Ave at Ann St	838 crossings/day	Homestead
E Eighth Ave at Amity St	549 crossings/day	Homestead
Lysle Blvd at Coursin St	440 crossings/day	McKeesport
E Eighth Ave at McClure St	433 crossings/day	Homestead

Table 1: Pedestrian Crossing Counts, 9/27/2022

the largest residential clusters found primarily on one side of the roadway and a variety of commercial destinations located along the other side.

In addition to transit stops, the local development patterns and nearby activity centers encourage and generate walking trips, increasing the amount of people crossing intersections in the corridor.

The project team applied a tool to estimate the inherent risk of crossing the street for pedestrians and bicyclists, called the Pedestrian Intersection Safety Index (PISI), developed by the Federal Highway Administration (FHWA). The index is determined by calculating separate values for the pedestrian crash potential on each crossing, or approach, of an intersection. The data required to calculate this index are typically readily available, making it an easy-to-use assessment tool. Each index is based on existing conditions and is a function of traffic speed, traffic volume, roadway width, traffic control, and other intersection conditions. The project team evaluated existing intersection characteristics to derive the PISI for each intersection in the corridor.

While the PISI values do not serve as warrants for making improvements, the index helps provide a relative assessment of safety and assists in prioritizing the need for improvements at intersections. A high PISI value does not necessarily indicate an intersection is hazardous, but generally the higher the PISI value the greater the safety concern.

PISI index values range between 1 (safest) and 6 (least safe). All the crossings that were analyzed have values less than 3. Generally, the side street crossings have values less than 2, and the crossings of the main street have values between 2 and 3. A full list of intersections and their PISI values by approach can be found in **Appendix 7**.

EXISTING VEHICULAR CONDITIONS

The project team analyzed several metrics related to overall traffic flow in the corridor, including travel speed of transit vehicles at AM- and PM-peak and mid-day, traffic volumes at AM- and PM-peak (includes all vehicles), turning movements of vehicles at intersections, and vehicle crashes. **Appendix 4** contains data about the signalized intersections and existing traffic operations throughout the H2M corridor, along with proposed signal timings to streamline traffic flow. Most signal re-timing efforts will be focused on the Homestead portion of the corridor.

According to PennDOT's Pennsylvania Crash Information Tool (PCIT), 768 crashes occurred on SR 837 between 2016 and 2021. Segmenting these crashes by crash type, the most common types of crashes were rear end (264 crashes or 34%), hit-fixed-object (181 crashes or 24%), and angle (153 crashes or 20%). More than half of all reported crashes resulted in injury (385 crashes) and a substantial portion were classified as property damage only (350 crashes).

Anecdotal field observations support the data which shows that travel speeds are slowest in the Homestead business district. Marginally slower traffic occurs west of the Rankin Bridge, just east of Kennywood, in the Duquesne business district, and in the McKeesport business district on Lysle Boulevard. Delays are not significant.

Bus riders suffer from lower overall travel speeds, largely because there is no dedicated transit infrastructure to prioritize transit vehicles. Although reducing travel times through the corridor is a goal of this corridor planning effort, slower traffic speeds are also beneficial for pedestrian safety.

The project team manually collected weekday and weekend traffic counts at all signalized intersections throughout the corridor.

Traffic volumes were highest at AM peak conditions (weekdays from 8:15-9:15 AM) heading northbound on the Homestead Grays Bridge (918 vehicles/hour) and on the section of SR 837 between East Mifflin Street and the Rankin Bridge (900 vehicles/hour). These increased traffic volumes can be attributed to commuters using the Rankin Bridge as well as people traveling to and from the Waterfront for work, shopping, entertainment, or dining. For PM peak conditions (weekdays from 4:30-5:30 PM), more vehicles travel in the southbound direction towards McKeesport. PM peak traffic volumes were highest on the southbound section of SR 837 (1,125 vehicles/hour) between the Rankin bridge and East Mifflin Street—this segment also carries high traffic volumes during both AM and PM peak periods. Even in the segments of the corridor with the highest traffic volumes, the maximum estimated lane capacity is still not reached, which indicates that vehicular capacity reduction in favor of multimodal improvements is feasible.

Manual turning movement counts (TMCs) were collected at the 28 signalized intersections on three different days in fall 2022, and revealed that turning volume is highest at the Rankin Bridge, which is a key connection to the regional highway network. The Homestead Grays Bridge has the second highest level of turning movements for the same reason.

Following the Existing Conditions analysis completed in fall 2022, traffic analyses were performed to determine the ideal operational improvements along the corridor. A Synchro analysis was completed in winter 2022, which measured the existing and proposed street geometry to determine the Level of Service (LOS) during the morning and evening peak periods.

LOS is a tool that allows roadway engineers to understand the overall delay drivers may experience in the street network as a result of signal timings and other factors.

The Synchro analysis findings show that most of the corridor operates at an acceptable LOS except for the Homestead area between the Homestead Grays Bridge and Amity Street. n the McKeesport portion of the corridor, the analysis shows that there is enough travel capacity to consider a future re-purposing of some travel lanes for multimodal uses. The Synchro analysis results are summarized in **Appendix 4**, which shows the approach delay along each direction of the corridor for both the existing and proposed conditions in both peak periods.

The project team performed an additional microsimulation in spring 2023 utilizing SimTraffic software to determine the travel times and average speeds through the corridor. **Appendix 4** contains a summary of the average approach speed between intersections by direction for the existing and proposed conditions during both peak periods, as well as the average travel time for vehicles between intersections by direction for the existing and proposed conditions during both peak periods. With a proposed signal re-timing, the SimTraffic results show a slight improvement in travel time through the Homestead area.

Note that Synchro and SimTraffic are not capable of analyzing transit queue jump lanes, though time savings for transit riders can occur because of the proposed queue jump lane at Eighth Ave at Amity St and the and though the bus stop consolidation efforts along the entire corridor.

INTERSECTION LOCATION	TOTAL VEHICLE TURN MOVEMENTS	MUNICIPALITY
SR 837 and Rankin Bridge	2,061 turns	Rankin Borough
SR 837 and Homestead Grays Bridge	1,166 turns	Homestead Borough
SR 837 and Waterfront Drive	918 turns	Homestead Borough
SR 837 and Hoffman Blvd	607 turns	West Mifflin

Table 2: *Vehicle Turning Movement Counts*

PUBLIC ENGAGEMENT

Pittsburgh Regional Transit (PRT) hosted two rounds of public engagement as part of the development of the Homestead to McKeesport Transit Access Improvements project. Activities within each series included meetings with different stakeholder groups including the Stakeholder Advisory Group (SAG), Allegheny County Transit Council (ACTC), Committee for Accessible Transportation (CAT), Elected Officials, Project Partners (Allegheny County, City of Pittsburgh, PennDOT, and SPC), as well as the public, through a series of in-person and online meetings, workshops, community pop-ups, and the project website.

In addition to the municipal and stakeholder engagement that occurred during the corridor planning process, PRT also conducted three rounds of public engagement (fall/winter 2021, summer 2023, and winter 2023).

ROUND ONE

The purpose of the first round of engagement was to educate stakeholders and the public on corridor planning, the Homestead to McKeesport project goals, objectives, and boundaries while asking for input from the public on the corridor experience and desired improvements.

Engagement efforts included:

- An online engagement platform via Social Pinpoint which is hosted on **PRT's Homestead to McKeesport Engage page** for the public to provide general comments and respond to a series of prompted visioning questions about SR 837 corridor.
- A virtual public meeting on December 7, 2021, to introduce and promote the project to the public, share initial strategies, present first approach on the intersection improvement concepts, and ask for feedback. A recorded link from one of the virtual public meetings is available here. During the virtual presentation PRT shared the corridor analysis and high-level treatments, introduced the Social Pinpoint page where the public could input their comments on the proposed upgrades, and took people through a detailed walk through of the corridor.

ROUND TWO

The second round, in the Summer of 2023, took place after the project was relaunched post the Covid-19 pandemic. The purpose of the second round of engagement was to educate residents and stakeholders about the H2M project goals, objectives, and timeline. It was also an opportunity for the project team to gather public input about the existing conditions analysis and share 5% design concepts. In the last public engagement phase, PRT returned to the public to gather more input on specific solutions and segments of the corridor and provide an opportunity for the public to ask questions.

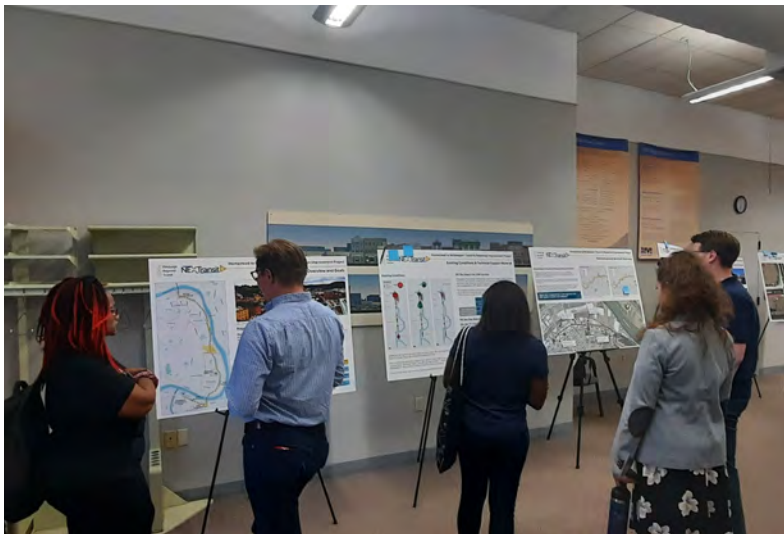
Engagement efforts included:

- An online public meeting on August 2, 2023, and an in-person open house meeting on August 3, 2023, at the Mon Valley Initiative space in Homestead.
- A PRT-hosted community pop-up table at the Duquesne Community Days event on August 4, 2023, during which we received more public comments.

During the online and in-person public meetings, the project team received approximately 50 questions and/or comments on the presented intersection concepts, with 24 people in attendance at this series of public meetings. Comments were received in the following categories:

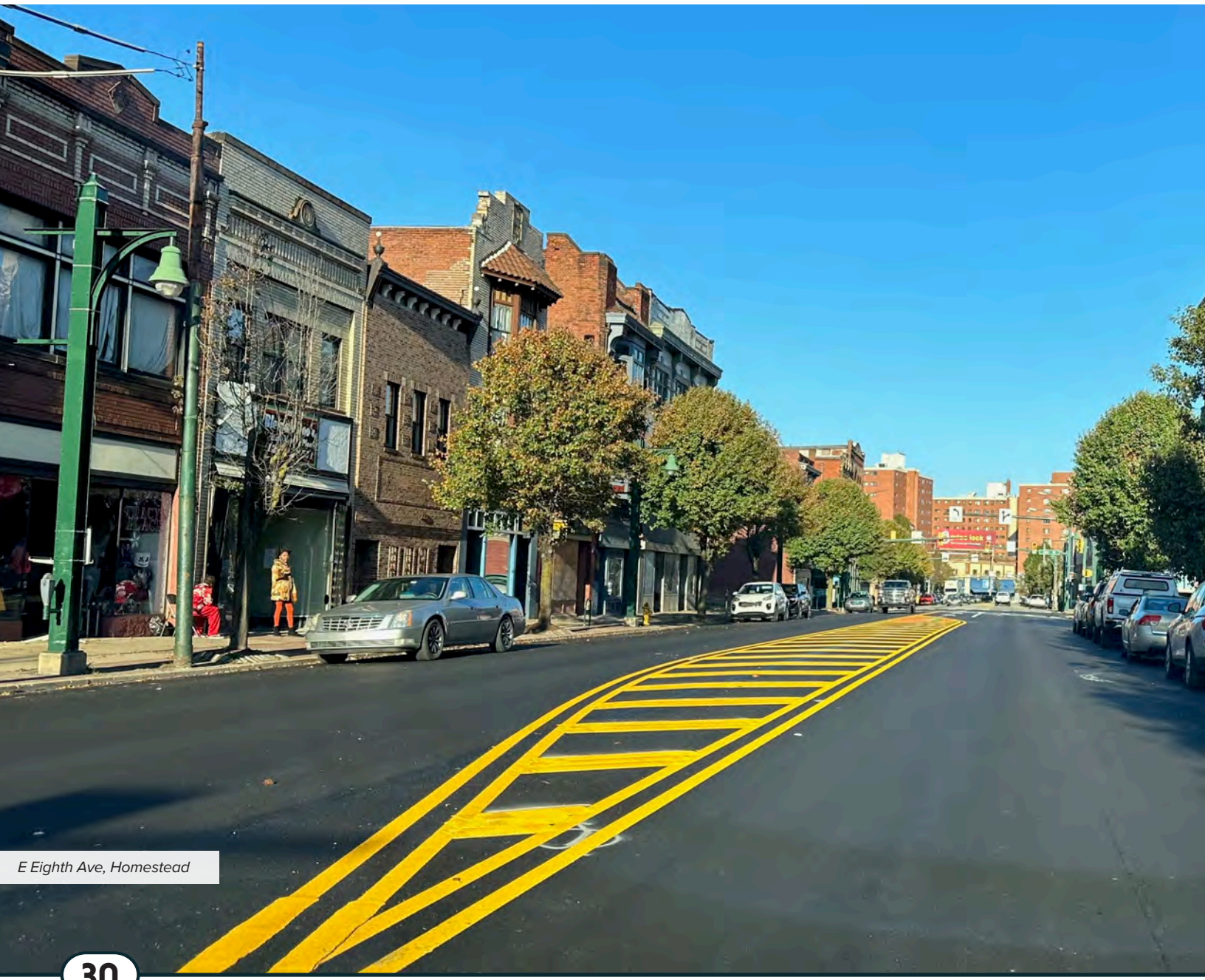
- **General:** Related to overall bus service in the area and a suggestion to present outreach materials during community meetings and events where there would be more foot traffic.
- **Amenities:** Several people mentioned the need for Connect Card machines along the corridor and real-time schedule updates.
- **Corridor Segments/Intersection Solutions:**
  - » **Homestead to Munhall:** People mentioned that the Ann St stop was more used that the McClure one, the need to improve crossing times and signals at the Grays Bridge and 8th Ave intersection, and commended the landscaping approach at the proposed Library Place intersection.
  - » **Kennywood and Duquesne:** Several comments focused on adding Connect Card machines at the bus stops in this area.
  - » **McKeesport:** People appreciated the changes proposed at the 5th Ave ramp, agreed that Lysle Boulevard could use traffic calming to make it a more pedestrian friendly corridor, and asked for improved amenities at the bus stops due to the high ridership in this area.

To view the Public Meeting Round Two Summary memo, see **Appendix 1.**



Public Meeting – Open House at Mon Valley Initiative in Homestead on August 3, 2023

RECOMMENDED IMPROVEMENTS



E Eighth Ave, Homestead

HOW TO USE THIS SECTION

The H2M Corridor Plan's Recommended Improvements section is set up to display proposed improvement designs in an easy-to-understand graphical format. The content is presented in three components:

Corridor Upgrades: A Kit of Parts

This component highlights a general collection of proven safety measure PRT and its partner agencies may utilize during corridor planning efforts, and the reasons each item is useful for promoting pedestrian/ rider safety.

Bus Stop Consolidation Recommendations

As a key part of efficiency improvements for any corridor plan, bus stop spacing should be implemented strategically. The rationale and outcome of the analysis is presented here.

Infrastructure Improvements

This component contains the recommended improvements, and are presented at the corridor, focus area, and intersection scales.

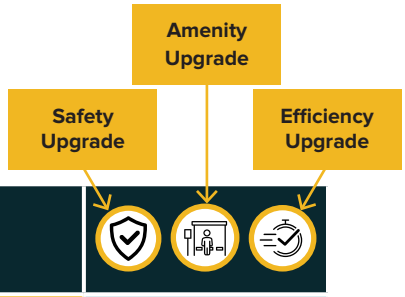
Focus areas are simply groups of neighborhoods/municipalities that have parts of the overall H2M corridor in common. Each focus area has an overview map highlighting that part of the corridor and identifies the specific intersection concepts located there.

Each intersection is accompanied by a brief overview of the context in which it operates, a description of the improvements, and a matrix summarizing key metrics. An example of the value ranges presented is shown in the sample table at right. Itemized cost estimates for each project are included in **Appendix 6**, along with potential funding sources.

Focus area pages show all numbered/ lettered project locations in more detail.

Intersection scale pages are numbered to correspond with the overview map.

Each improvement should, in some way, meet all three H2M objectives, but the key ones are identified here:



MAIN OBJECTIVES ADDRESSED	
SAFETY IMPACT	Low/Moderate/ High
OPERATIONAL IMPACT	Low/Moderate/ High
RIGHT-OF-WAY (ROW) IMPACT	Low/Moderate/ High
ENVIRONMENTAL IMPACT	Low/Moderate/ High

Safety, operations, ROW, and environmental impacts are rated as estimates of the general level of change the project will have on its surroundings or key category metrics compared to current conditions.

CORRIDOR UPGRADES: A KIT OF PARTS

The features shown on this page are broadly applicable in the H2M corridor (and most corridors where transit operates), and are proven safety measures that can also improve the quality of walkable places. The headings below are hyperlinked to the best practice resource for each safety measure.

PROHIBIT RIGHT TURNS ON RED

Vehicles turning right on red signals can encroach upon the crosswalk in front of them as people are crossing. The A-pillars of vehicles can block visibility of people crossing, and drivers tend to only look left for gaps in traffic, ignoring people who may be in front of or to the right of their vehicle. At intersections with higher levels of pedestrian activity, especially where bus stops are located, right turns on red should be prohibited.

PROGRAM FIXED-TIME SIGNALS FOR PEDESTRIAN RECALL

Pedestrian recall is a function of a traffic signal controller that automatically displays a walk signal at every cycle rather than requiring people to press a button to call for a walk signal. While introducing pedestrian recall can cause delay for vehicles in areas where pedestrian volumes are low or sporadic, pedestrians should be expected and designed for at all locations in dense areas.

IMPLEMENT LEADING PEDESTRIAN INTERVAL (LPI)

This type of signal programming displays a walk signal for people to begin crossing 3-7 seconds before vehicular traffic heading the same direction gets a green light. This allows people walking to get a head start and either clear the lane that cars may have been about to turn into, or at least be more visible to turning drivers. Where left turn signals are provided, the protected phase must be shifted to the end of the cycle, rather than the beginning, so that an LPI can be implemented.

UTILIZE 4-HEAD FLASHING YELLOW SIGNALS FOR PROTECTED/ PERMISSIVE LEFT TURN LANES

Recent studies have shown that the flashing yellow arrow increases driver yielding behavior as they plan to turn left when they do not have a green arrow. Additionally, signals with flashing yellow arrows can be programmed to display a green arrow at the end of the signal cycle to clear queues of vehicles waiting to turn. Doing this at the end of the cycle allows the LPI to be programmed at the beginning of the cycle.

UPGRADE ALL ADA ELEMENTS AND RIDER AMENITIES

All intersections within the project area should be upgraded with detectable warning surfaces, audible pushbuttons for crosswalk signals, and curb ramps, whether they are done through this project or another coordinated effort.

Transit amenities to be used include standard shelters with seating, pedestrian-scale lighting, waste bins, and real-time arrival screens.

NARROW THE STREETS

Wider lanes often lead to higher speeds due to the way drivers perceive distance as they move. This subconscious action by drivers can have dangerous consequences in a busy urban area. 11-foot lanes are best for busy streets that must accommodate bus and truck traffic. 10-foot (or narrower) lanes can be good for low-speed neighborhood streets, and 12-foot lanes are too wide for most urban contexts.

Another tool for narrowing streets is by installing curb extensions, also known as bumpouts. Extending the curb outward at intersections helps to slow traffic and makes crossing distances shorter for pedestrians.

INSTALL AND MAINTAIN CROSSWALKS

The continental style crosswalk is proven to be the most visible to approaching drivers viewing them in perpendicular and for turning vehicles viewing them in parallel. Typical PennDOT standards allow for up to a 5-foot gap between bars, which is too large for a dense, walkable area. The best practice ratio to ensure proper visual contrast is 1:1 (2-foot wide bars, 2-foot gap), but it is OK to *slightly* increase this to allow for vehicle tires to track through the gaps, if the visual contrast effect is not compromised.

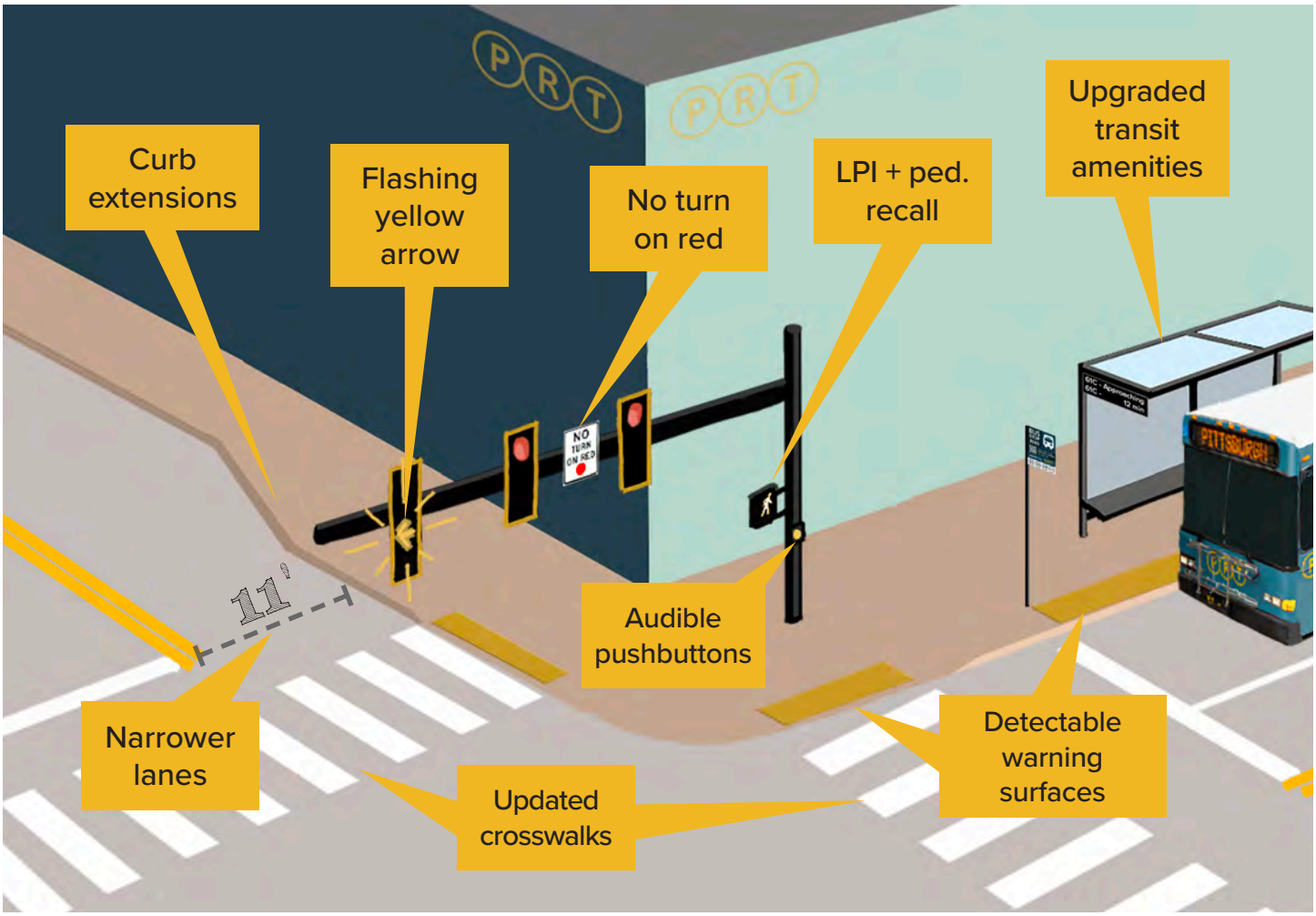


Figure 5: Proven Safety Measures for Transit Corridor Upgrades

BUS STOP CONSOLIDATION RECOMMENDATIONS

As outlined in PRT's Bus Stop and Station Design Guidelines, the overall goal of the stop consolidation process is to balance the number of bus stops to improve on-time performance, reliability, and PRT rider's overall experience. There are multiple factors taken into consideration during the bus stop balancing process including stop utilization (average daily boarding and alighting), stop spacing, slope and topographical conditions, and proximity to key community anchors.

Within the corridor, existing average stop spacing is around 500 feet. However, as per PRT's guidelines, the minimum spacing standard for key corridor and local routes is 650 feet, and the ideal spacing for high-density areas is 950 feet. In the Whitaker and West Mifflin portions of the corridor, the low-density area stop spacing recommendation of 1,300 feet applies.

Stops proposed to be consolidated meet the following three criteria: any stop categorized as deficient, those that have fewer than ten total daily boardings and alightings, and another those that have a stop nearby that could better or more safely serve riders. For consolidated and new stops, bus shelters with seating, additional transit amenities, and pedestrian improvements will be incorporated at 11 intersections in the H2M corridor.

DIRECTION	EXISTING STOPS		PROPOSED STOPS	
	# STOPS	# RATED DEFICIENT	# STOPS	# NEW SHELTERS
Inbound (North)	32	25	24	8
Outbound (South)	34	16	23	8

Table 3: Bus Stop Consolidation Totals

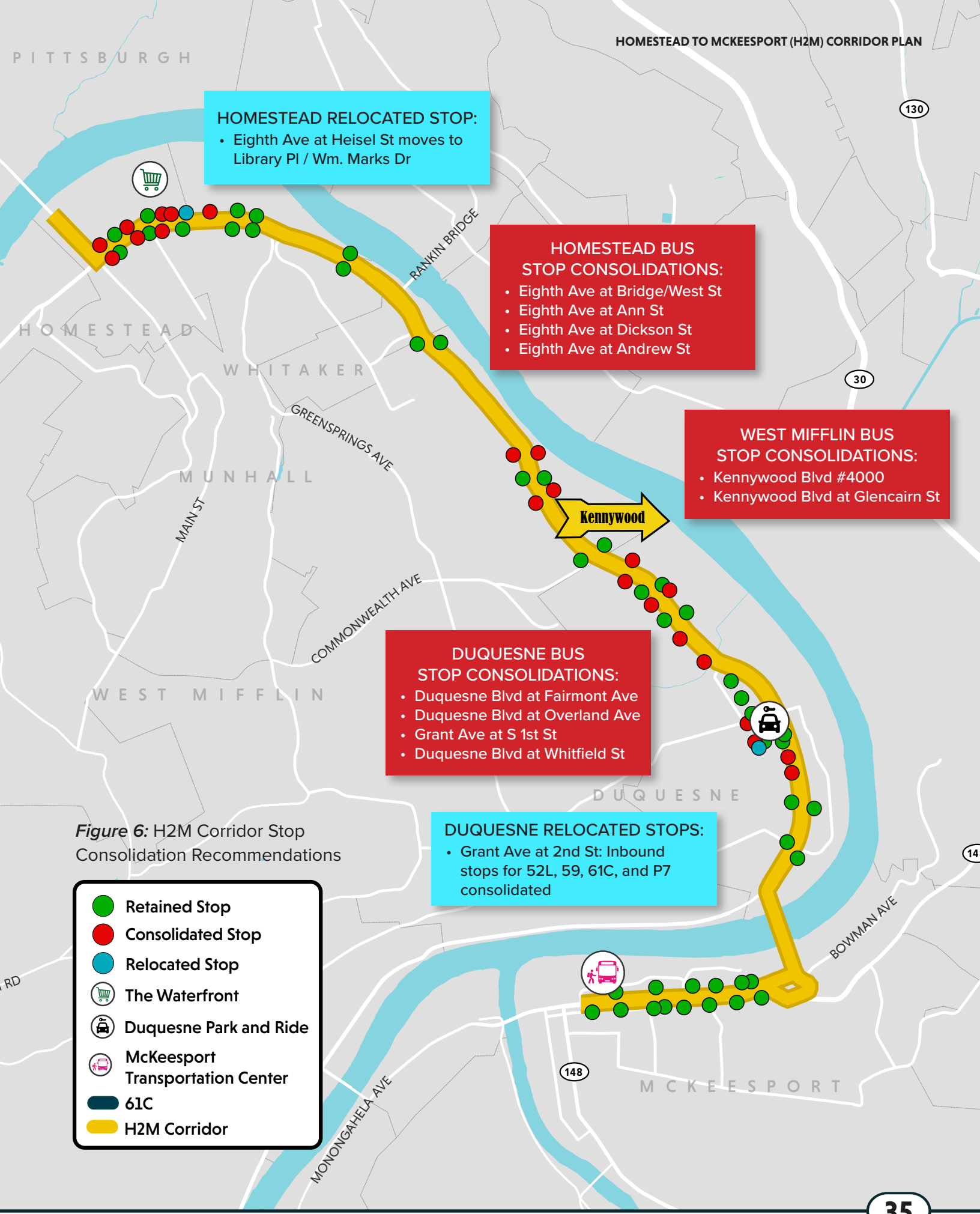


Figure 6: H2M Corridor Stop Consolidation Recommendations

INFRASTRUCTURE IMPROVEMENTS

Three types of improvements are proposed for the H2M corridor. **Intersection redesigns** (numbered 1 through 11) are the most capital intensive, and will require a subsequent engineering process to complete. **Minor improvements** are actions PRT can likely do internally to improve rider experience at relatively low cost. **Collaboration opportunities** are linked with upcoming projects led by partner agencies where PRT should prioritize rider-focused improvements. Minor improvements and collaboration opportunities are lettered A through H.

Each of the 19 improvements proposed in this plan has distinct elements that respond to the unique challenges posed by each location, but many are linked by common traffic/passenger flows and do depend on one another. For instance, the intersections of Eighth Ave that span Homestead and Munhall Boroughs are linked by a common signaling system.

The implementation of the improvements described in this section are flexible, depending on the specific elements for which funding becomes available. Each focus area page shows potential order of magnitude costs for each intersection redesign, and detailed project component costs are shown and the end of this section.

Each intersection redesign proposal is presented with an overview of the context in which it works today, a description of the improvements proposed, and an opinion of probable construction costs—as this is a concept plan completed to a 10% level of design, the figures presented here are for budgeting and identification of funding sources.

The map at right shows each of the four **improvement focus areas** and the location of proposed capital projects by type. Proposed bus stop consolidations are shown at each focus area level on their respective pages.

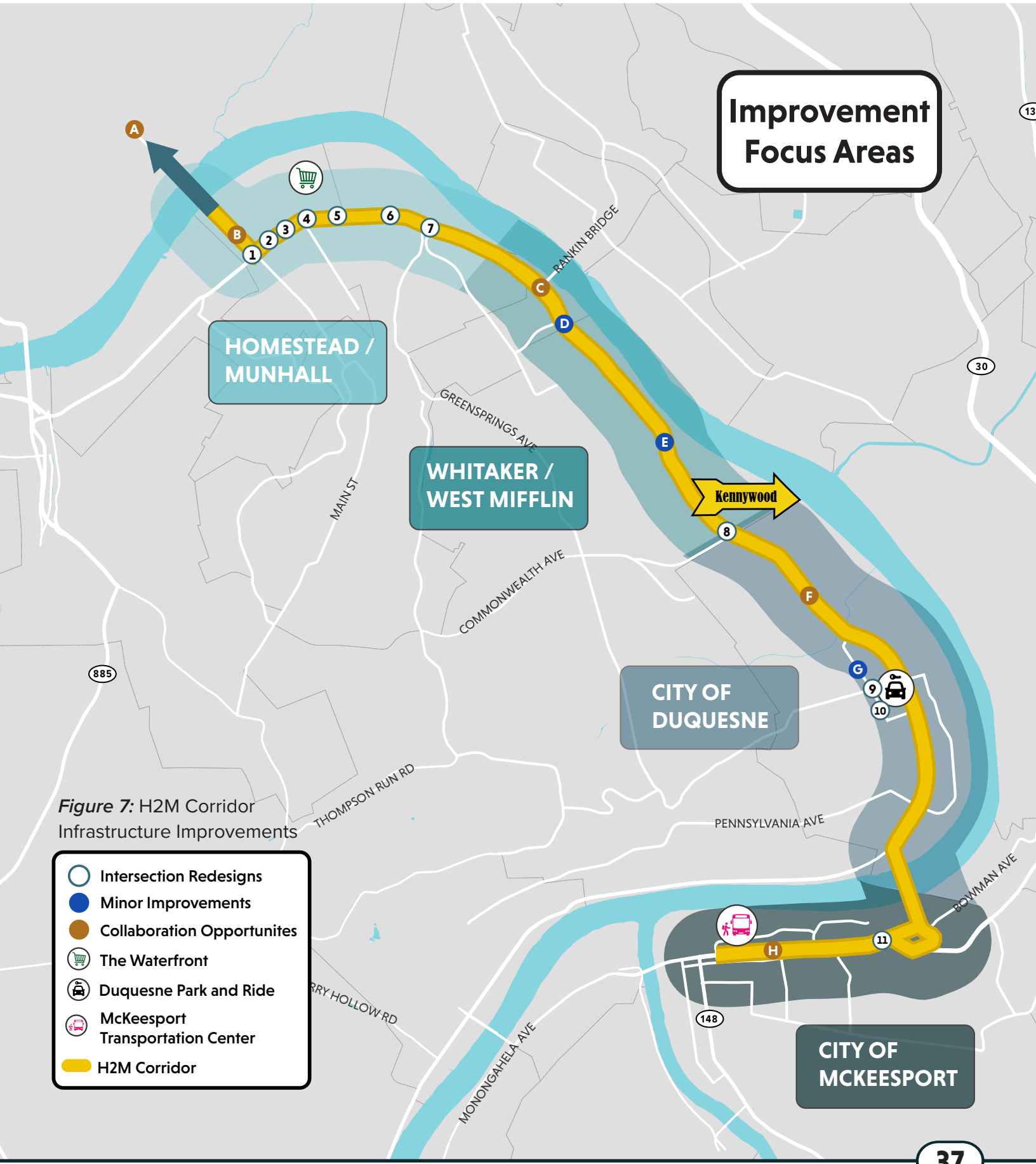


Figure 7: H2M Corridor Infrastructure Improvements

HOMESTEAD / MUNHALL AREA

Within the Homestead and Munhall segment, eight signalized intersections have been identified for a mix of infrastructure and traffic signal improvements which will directly benefit pedestrians, transit riders, and drivers.

The intersections that span Homestead and Munhall Boroughs are linked by a common signaling system. The implementation order of the improvements described in this section are flexible, depending on the specific elements for which funding becomes available.

Browns Hill Rd and PRTX Squirrel Hill branch future connection – City of Pittsburgh

A A future study should be completed to determine the most efficient way to use transit signal priority (TSP) to bypass bottlenecks north of H2M, especially at the Browns Hill Rd / Hazelwood Ave / Beechwood Blvd intersection.

Homestead Grays Bridge – Fifth Ave intersection and ramps – Allegheny County

B Allegheny County is planning a rehabilitation of this bridge, and PRT should partner with them to study upgrades to the Fifth Ave ramps to allow for two-way operation and/or signaling that could route traffic based on congestion and/or train blockages.

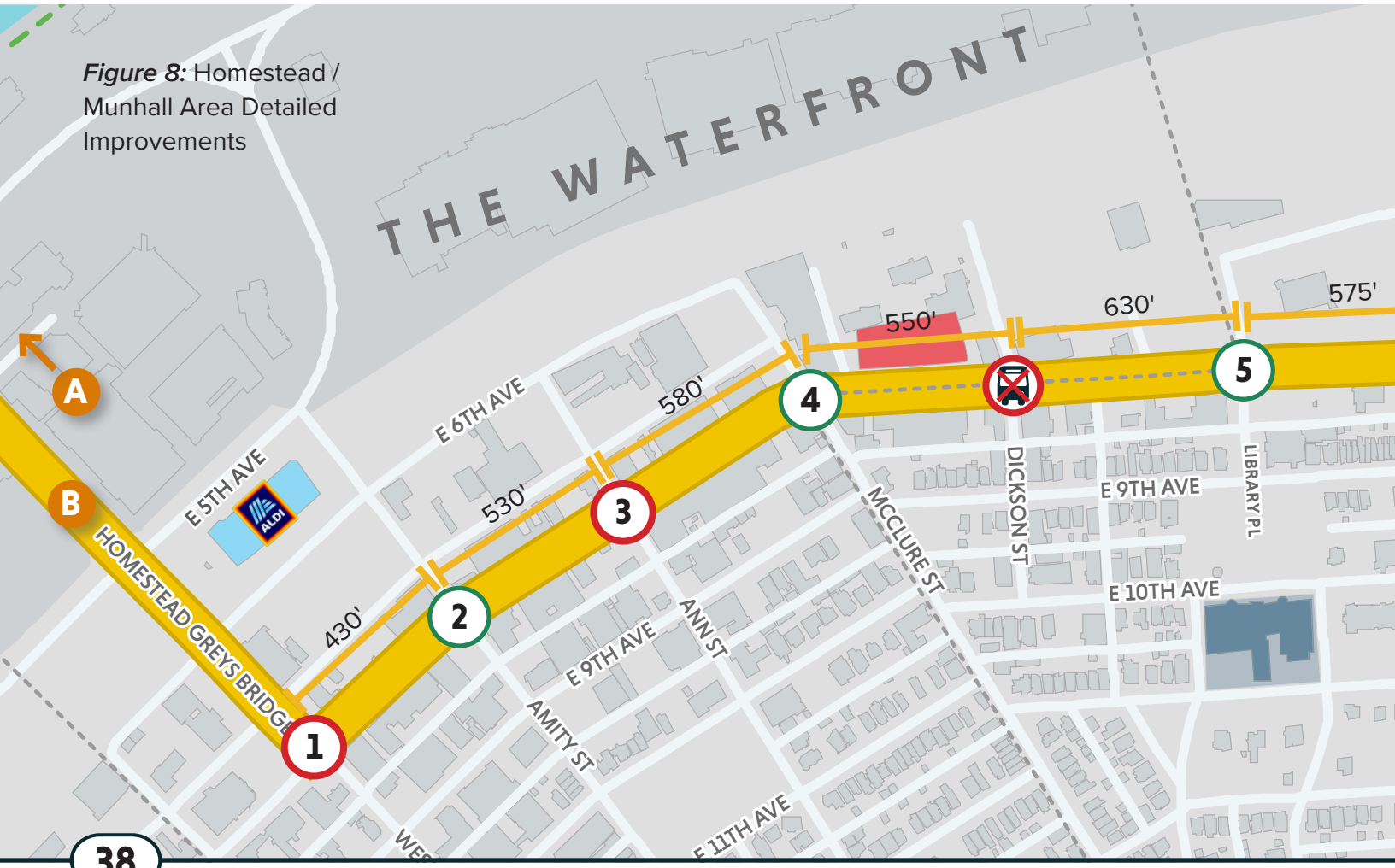


Figure 8: Homestead / Munhall Area Detailed Improvements

8

BUS ROUTES SERVING THIS PART OF THE CORRIDOR

3,000+

DAILY BOARDINGS AND ALIGHTINGS IN THIS SEGMENT

(THE BUSIEST SECTION OF THE H2M CORRIDOR)

KEY DESTINATIONS:

- ALDI
- SENIOR HOUSING COMPLEX
- CARNEGIE LIBRARY AND MUSIC HALL
- WATERFRONT SHOPPING CENTER
- ALLEGHENY COUNTY HOUSING AUTHORITY
- EIGHTH AVENUE BUSINESS DISTRICT

1 HOMESTEAD GRAYS BRIDGE / WEST STREET AT EIGHTH AVENUE

What's Happening at this Location Today?

Overall conditions at this intersection are unwelcoming for all street users, especially as this is a major gateway to not only Homestead, but the greater Mon Valley. The signal timing at this intersection is extraordinarily long (4–5-minute cycles), and while it tries to maximize flow between the bridge and Eighth Ave, it ends up creating long wait times for pedestrians, transit riders, and drivers approaching from all directions. Queues of vehicles can extend more than a half-mile across the bridge at peak times. The 2-minute green time for traffic turning left from the bridge to Eighth Ave during PM peak hours only operates efficiently for the first 45 seconds of the phase, as gaps between vehicles gradually increases.

Frustrated motorists who fear a long wait often run yellow and red lights at high speeds, which further endangers pedestrians, especially those on the sidewalk waiting to cross. Truck volumes are high, and turning speeds are high due to the width of the approach at the bridge. Due to excessive turning speeds, some truck drivers cause their trailers to track their rear wheels over the curb or sidewalk, as observed by the project team during field views.

Buses that stop on Eighth Ave after immediately exiting the bridge must often stop in the travel lane due to curbside access being restricted by parked vehicles. Inability to properly align the bus with the curb creates access issues for disabled riders and can also create added congestion for all street users.

What Improvements Are Proposed?

This intersection is proposed to be reconstructed for pedestrian safety and better overall traffic flow – shorter crossing distances and shorter signal cycle allow for more consistent flow. Small slivers of land currently owned by Allegheny County may be needed to construct the proposed turn lanes to/from the bridge. These turn lanes are not designed as free-flow slip lanes, as their appearance may suggest. Their layout is simply to create a narrower, more defined path to slow turning speeds and to provide pedestrian refuge islands.

Trucks and buses needing wider turns can use the tinted/textured concrete aprons. As with all signalized intersections in the project area, "No Turn on Red" signs should be posted at all approaches to protect pedestrians, including at the turn lanes to/from the bridge.

The signal timing should be adjusted to provide shorter cycles to minimize overall delay. While there may be minor delay introduced due to additional red overlap time, the overall delay can be reduced because the green time given to shorter cycles will be more efficiently used.

Bus stops will be moved to Amity St to reduce congestion directly at the intersection. As a result, five parking spots can be restored on Eighth Ave nearest to the West St intersection. Space taken from the roadway can be re-purposed for public amenities, gateway treatments, or public art. Landscaping or art could be placed in traffic islands or on bumpouts.

MAIN OBJECTIVES ADDRESSED	
SAFETY IMPACT	High
OPERATIONAL IMPACT	High
ROW IMPACT	Moderate
ENVIRONMENTAL IMPACT	Moderate

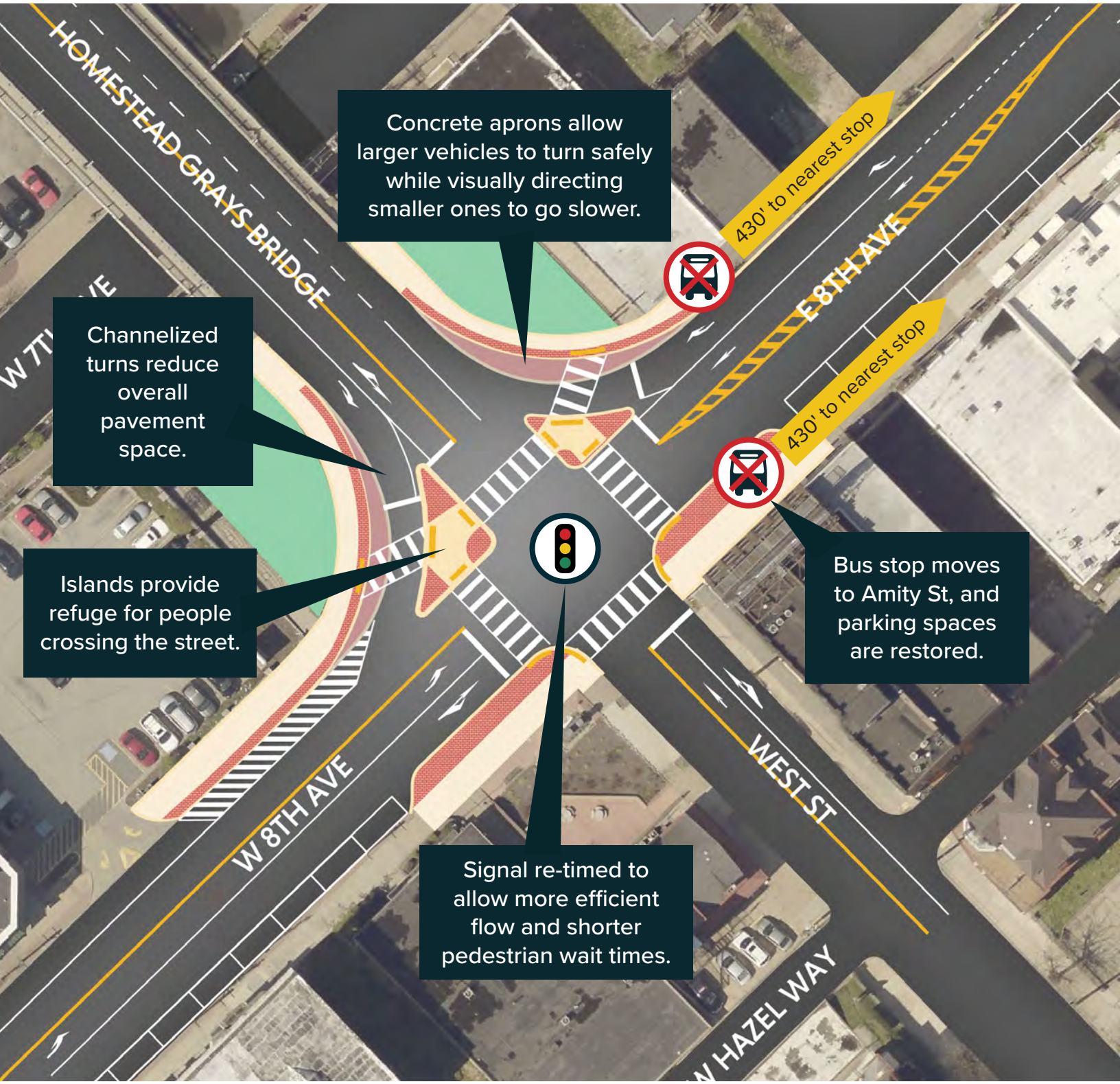


Figure 9: Homestead Grays Bridge / West Street at Eighth Avenue Proposed Transit and Intersection Improvements

Consolidated Stop Signal Changes

2 EIGHTH AVENUE AT AMITY STREET

What's Happening at this Location Today?

This intersection is linked to Eighth Ave at Homestead Grays Bridge/West St, not only through its traffic signal system, but its overall traffic flow and role within the core of Homestead. People accessing the Waterfront can walk, bike, take transit, and drive there using Amity Street, though railroad traffic often blocks the crossing—on average, 42 times per day on separate Norfolk Southern and CSX railroad lines through the area.

The combination of typical congestion and periodic train-related blockages can lead to safety issues for people walking and accessing transit. The blocks on either side of Amity St make up the core of the Homestead business district, and pedestrian activity here is at its highest level in the entire corridor. Buses experience their most significant delay within the corridor here as well, often due to queues related to signal delay, train blockages, or peak hour traffic—often all three at once.

On-street parking spaces are in high demand, and spaces designated only for loading and bus boarding/alighting are few. While pedestrian crossing distances are not as significant in this location as at the bridge, turning traffic creates conflict that can be mitigated through better signaling techniques.

What Improvements Are Proposed?

The signal timing improvements (shorter cycles) that are proposed for the Homestead Grays/West St intersection are connected to this intersection, as the main flow of traffic to/from the bridge continues past Amity St. While the current layout of the Homestead Grays bridge limits the possibility of dedicated bus lanes, the intersection at Amity St does have space for transit priority amenities.

The near side curb lanes of Eighth Ave approaching Amity can be re-purposed to queue jump lanes, which are spaces that allow buses to stop, board and unload passengers, and get a head start to jump ahead of general traffic. The current outbound stop is proposed to be moved to the near (west) side of the intersection to match the alignment of the inbound stop. Right turns for passenger vehicles are also accommodated from this lane.

Traffic signals must be upgraded to implement the queue jump feature. While the signal phasing plan may be more complex here than other locations, pedestrian-focused features that are recommended for all signalized intersections such as a leading pedestrian interval (LPI) should still be incorporated. For the protected/permissive left turns from Eighth Ave, a flashing yellow arrow signal head should be used to both implement the LPI and to allow for turns to occur throughout the signal phase.

Full-size curb extensions are not feasible due to the curve of Eighth Avenue. Also, the queue jump lane requires some space on the far side of the intersection so buses can safely proceed into their lane. All available space remaining has been set aside for wider sidewalks. Mid-block, there are three curb extensions proposed that help to separate parking lanes from the queue jump lanes and the right turn lane to the bridge.

MAIN OBJECTIVES ADDRESSED	
SAFETY IMPACT	Moderate
OPERATIONAL IMPACT	High
ROW IMPACT	Low
ENVIRONMENTAL IMPACT	Low

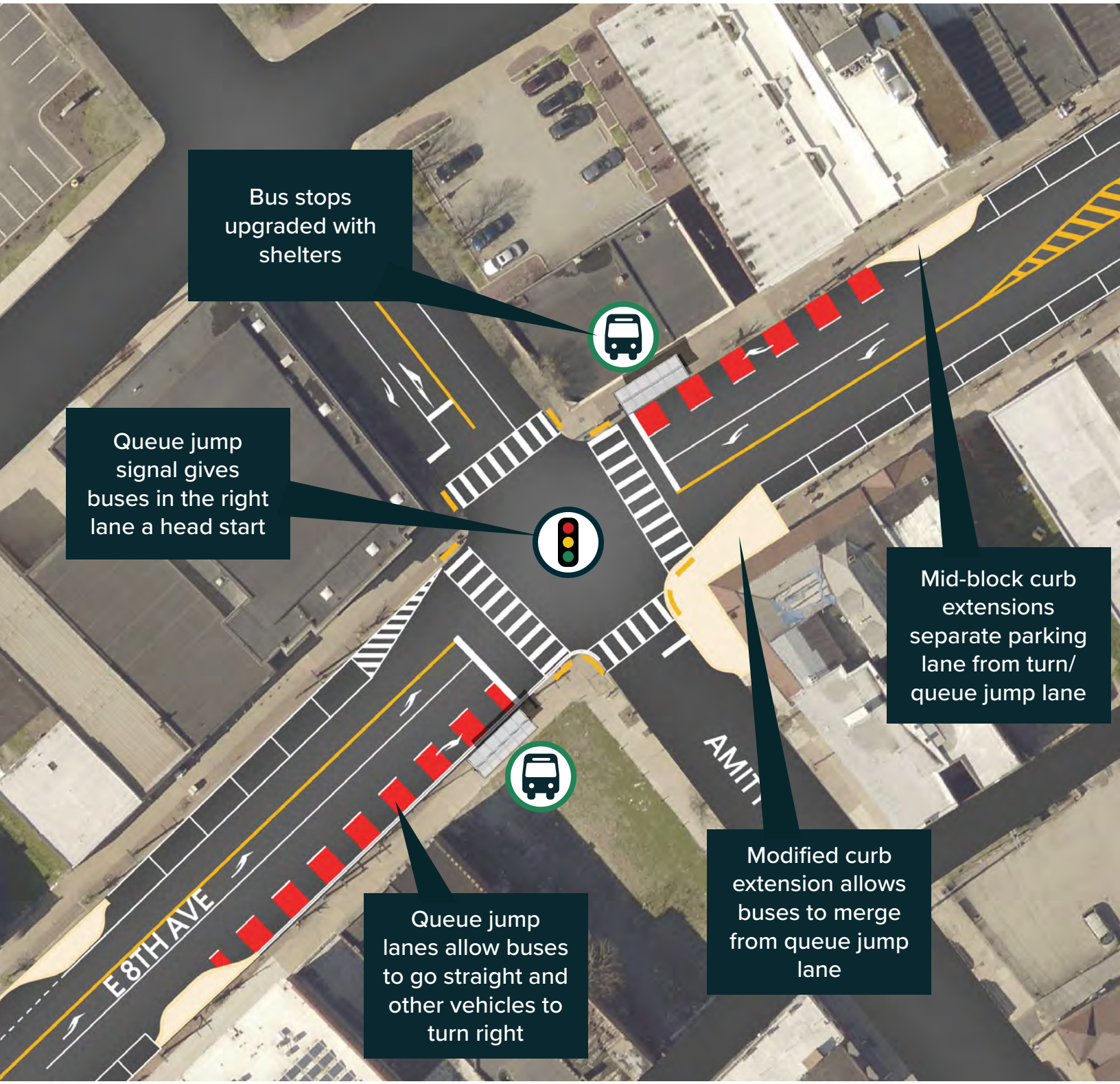


Figure 10: Eighth Avenue at Amity Street Proposed Transit and Intersection Improvements

Retained Stop Signal Changes

3 EIGHTH AVENUE AT ANN STREET

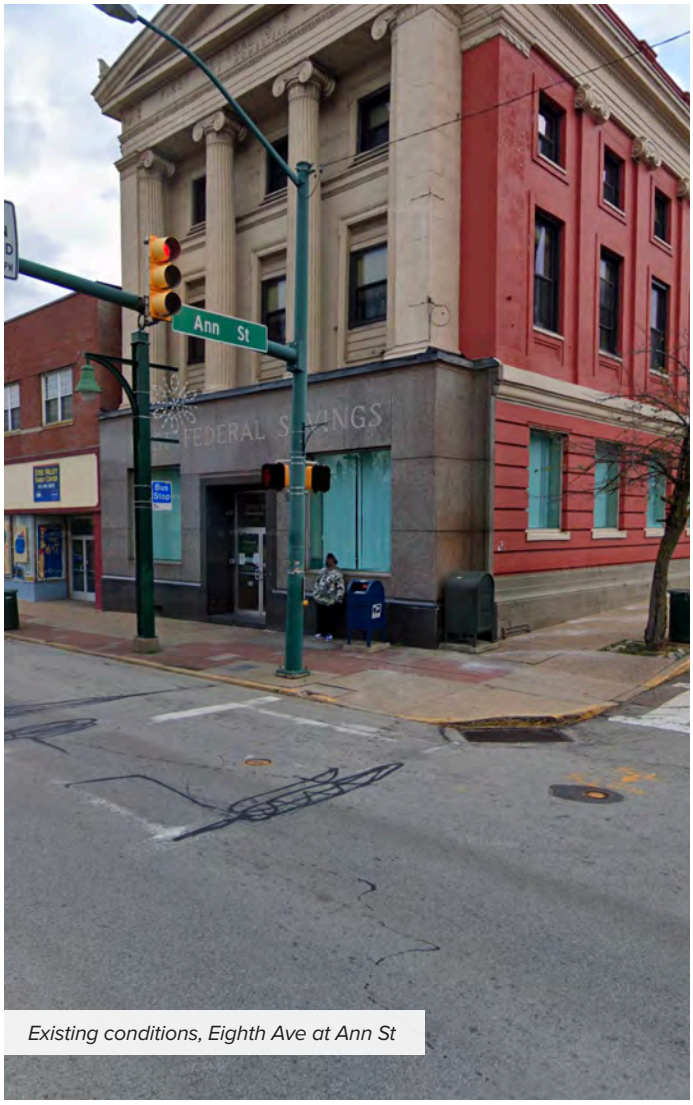
What's Happening at this Location Today?

Ann St is a standard 4-way signalized intersection that approaches the eastern end of the densest part of Homestead's business district. Fewer people cross here than at Homestead Grays Bridge and Amity St but demand still exists at most hours of the day. The current bus stop is situated approximately 500 feet from both Amity St and McClure St, which is closer than PRT's guidelines recommend.

What Improvements Are Proposed?

Curb extensions are proposed here to both shorten pedestrian crossing distances and to slow vehicular turns. Upgraded traffic signals may include a 4-head flashing yellow signal that makes permissive turns more clearly understood by drivers. This is optional at this location, as turn volumes are not significant, and a protected phase is not necessary.

The bus stop at this location is proposed to be consolidated due to its close spacing to neighboring stops that will be upgraded. Pedestrian wayfinding should be considered to direct people to the nearest inbound and outbound stop.



Existing conditions, Eighth Ave at Ann St

MAIN OBJECTIVES ADDRESSED	
SAFETY IMPACT	High
OPERATIONAL IMPACT	Moderate
ROW IMPACT	Low
ENVIRONMENTAL IMPACT	Low

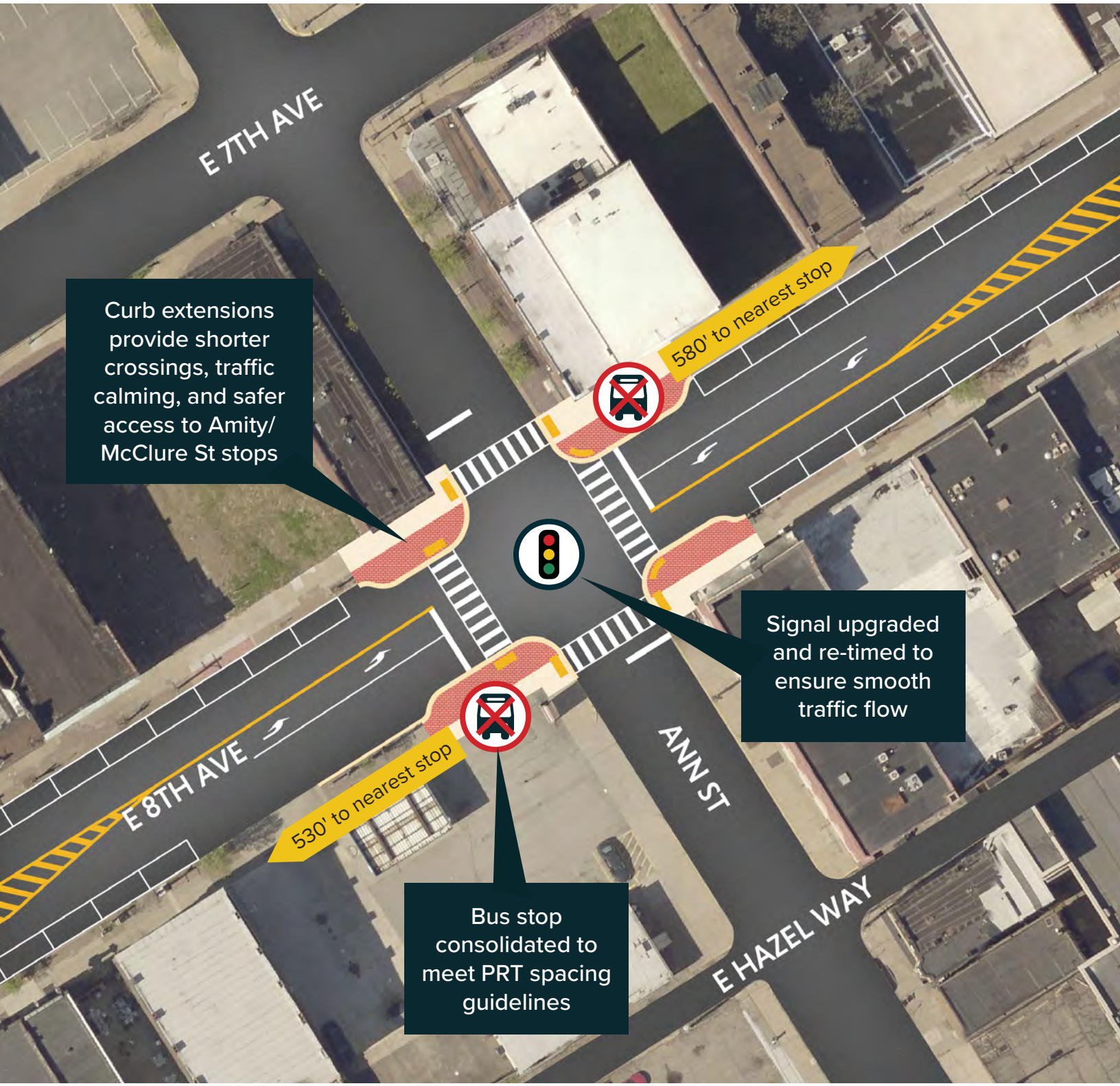


Figure 11: Eighth Avenue at Ann Street Proposed Transit and Intersection Improvements

Consolidated Stop Signal Changes

4 EIGHTH AVENUE AT MCCLURE STREET

What's Happening at this Location Today?

This intersection is like other Eighth Ave intersections to the west by way of the signaling system and built environment. The business district continues east of this intersection for another two blocks, where it crosses the borough boundary along McClure Street into Munhall.

Pedestrian activity is lighter at this location than at points west but is bolstered by nearby Allegheny County Housing Authority (ACHA) apartments, social services (Community LIFE), light industry, and small businesses. Buses experience minor delays here during peak traffic.

On-street parking spaces are less utilized here than in the core of the district, as many businesses have off-street parking, and the intensity of activity is lower. As with the intersection at Amity St, there is a slight bend in Eighth Ave, which can cause sight line issues and pose risk of head-on crashes.

What Improvements Are Proposed?

Signal timing improvements proposed for the rest of Eighth Ave are also linked to this intersection, as the main flow of traffic to/from the bridge continues past Amity St through here. Upgraded traffic signals may include a 4-head flashing yellow signal that makes permissive turns more clearly understood by drivers.

Stone Way - Proposed location of continuous sidewalk

This is optional at this location, as turn volumes are not significant, and a protected phase is not necessary.

Due to the curve in Eighth Ave here, the proposed curb extensions are customized to the unique layout in a way that maximizes pedestrian space and delineates the safe path for vehicles. Crossing lengths are shortened, especially for the eastern leg (McClure St crossing Eighth Ave to the inbound bus stop). Upgraded bus stops are proposed at near side locations, which is the same arrangement as the existing stops. Far side stops were evaluated but rejected due to sight line issues.

A notable feature that is part of the overall concept for this location is the crossing of Stone Way, which provides access to the Community LIFE center and the ACHA buildings. Given the number of people who have direct walk/roll access to the McClure St stop, this crossing is proposed to be a continuous sidewalk. This type of treatment retains the same material and elevation of the surrounding sidewalks, with vehicles ramping up to cross it. This provides greater visibility of pedestrians and slows turning vehicles—this makes it clear that vehicles are crossing a space prioritized for pedestrians.

MAIN OBJECTIVES ADDRESSED	
SAFETY IMPACT	High
OPERATIONAL IMPACT	Moderate
ROW IMPACT	Moderate
ENVIRONMENTAL IMPACT	Low

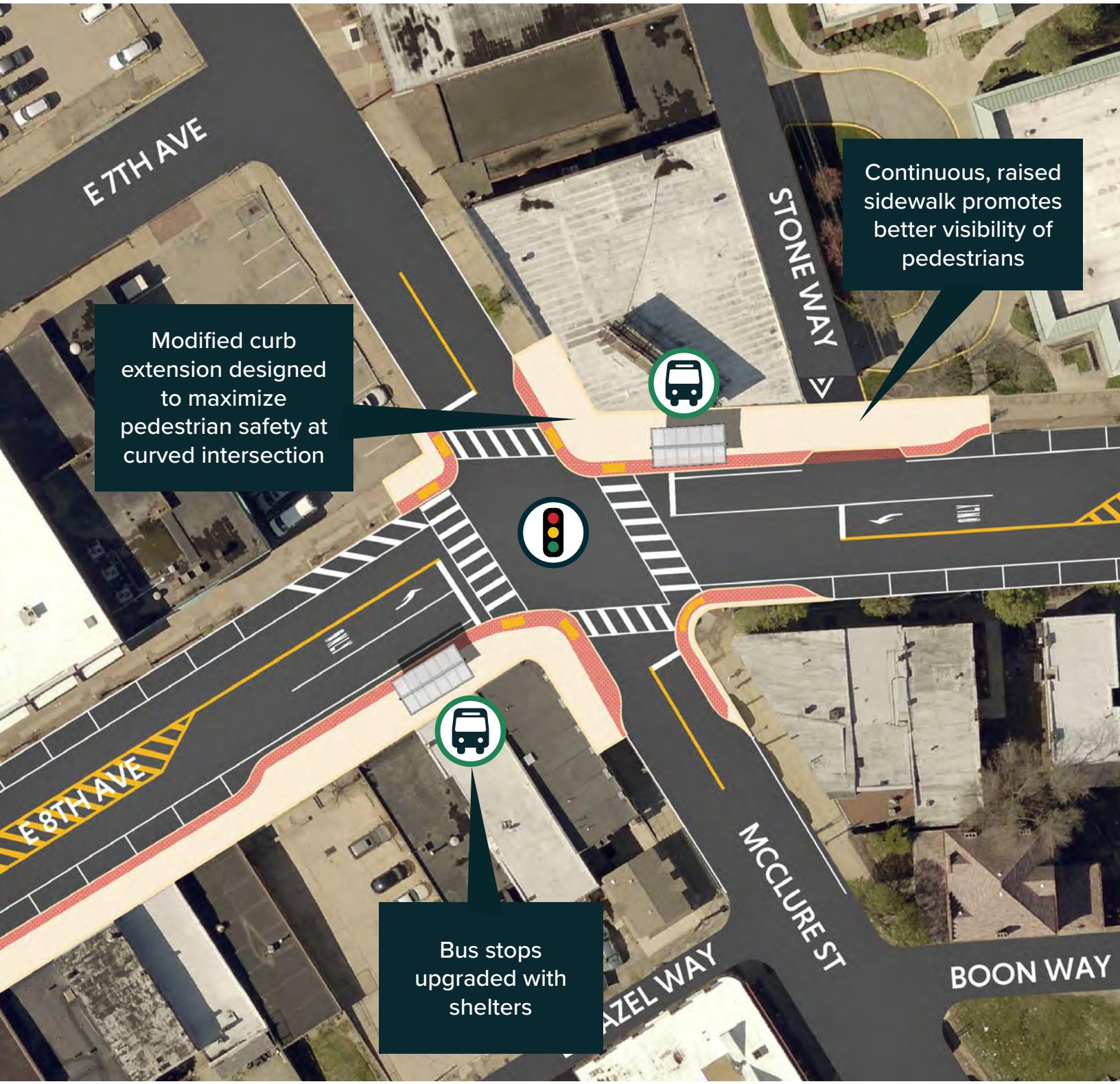


Figure 12: Eighth Avenue at McClure Street Proposed Transit and Intersection Improvements

Retained Stop Signal Changes

5 EIGHTH AVENUE AT LIBRARY PLACE

What's Happening at this Location Today?

This intersection is an important crossroads for Munhall, as it provides access to the business/retail complex to the north and to the Carnegie Library and Music Hall to the south. The layout of the intersection, however, is not in keeping with the character of its surroundings, especially the northern leg that accesses William Marks Dr.

The intersection design prioritizes higher speed turning movements to/from Eighth Ave using slip lanes with large corner radii, to accommodate an anticipated large volume of trucks. As a result of this design, an inbound bus stop cannot be accommodated close to the intersection, which increases walking distances and creates potential conflicts with people crossing mid-block. Given the potential to grow transit ridership to the Carnegie Library and Music Hall, a regional draw, it is important to consider the walking distance, safety, and visibility of the nearby transit stop.

What Improvements Are Proposed?

Pedestrian safety at this location can be drastically improved by right sizing the intersection to include the smallest amount of street surface that still enables traffic to get where it needs to go. The overbuilt nature of the existing design should be eliminated in favor of a simpler 4-way layout. This will involve removing the slip lanes and moving sidewalks to be tighter to the street, albeit with a 3-foot-wide planted strip.

The crosswalks will be significantly shorter due to both the simplification of the northern approach and the curb extensions on the southern side. Patrons heading to or from the Library/Music Hall can access the facility by using a single crossing. This is done by situating the inbound bus stop on the far side of the intersection and placing the outbound stop on the near side. This pair of shelters will be visually linked due to their proximity across the street from one another; alongside the incorporation of wayfinding, this ensures that new or occasional riders to the Library/Music Hall can easily understand where they need to go for their return journey.

As this intersection is situated at the foot of a steep hill (Library Pl heading south), treatments to capture stormwater runoff should be incorporated into future design. Space can be available for this within both the curb extensions on the southern side as well as the larger open spaces created by vacating the slip ramps to William Marks Dr. Stormwater can be conveyed across the intersection by trench drains, which is a recent practice used by the City of Pittsburgh, as shown in the image below.

Solway St at S Negley Ave, Squirrel Hill

MAIN OBJECTIVES ADDRESSED	
SAFETY IMPACT	High
OPERATIONAL IMPACT	High
ROW IMPACT	High
ENVIRONMENTAL IMPACT	Moderate

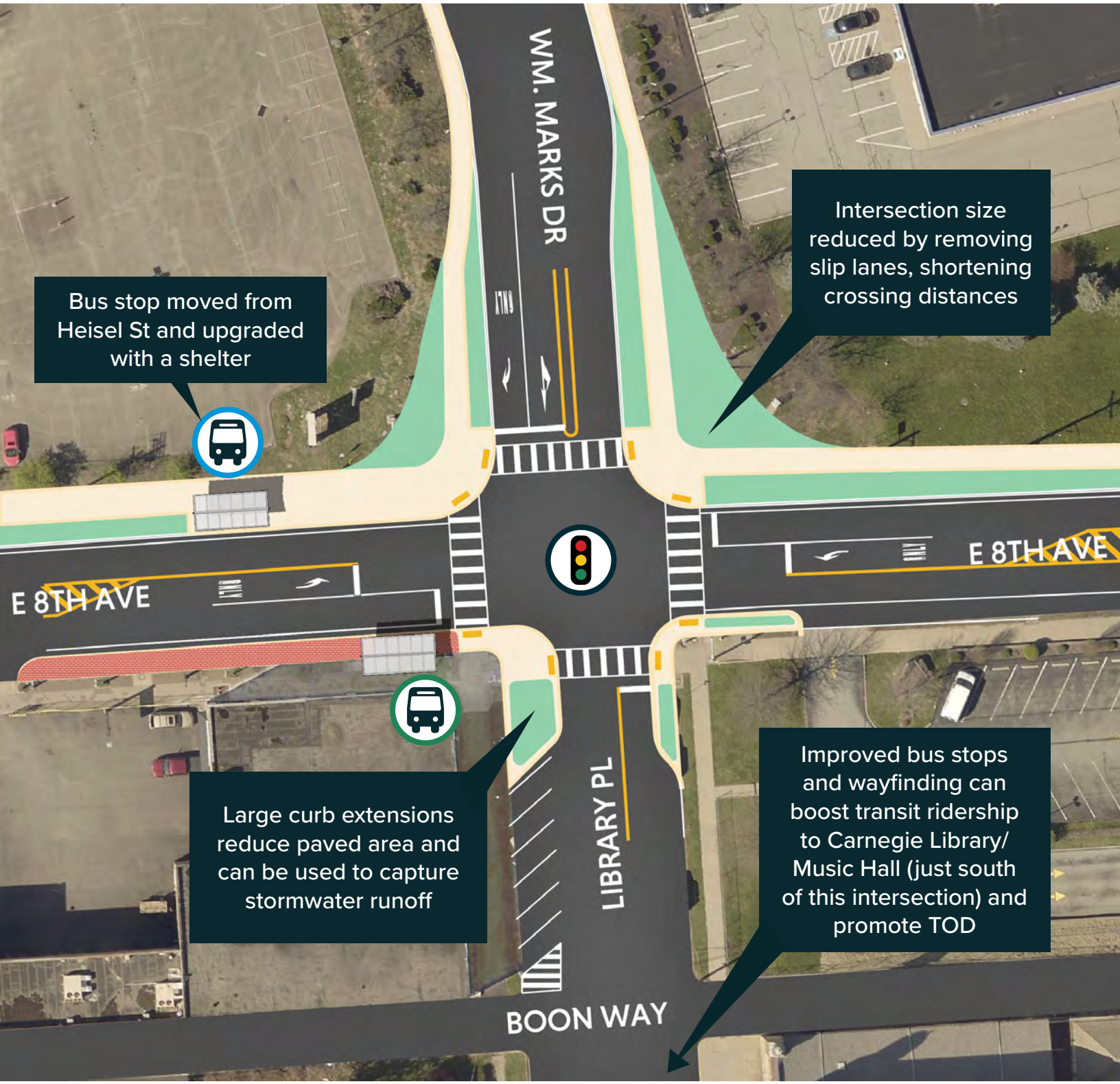


Figure 13: Eighth Avenue at Library Place Proposed Transit and Intersection Improvements

Relocated Stop Retained Stop Signal Changes

6 EIGHTH AVENUE AT GRANT STREET

What's Happening at this Location Today?

At the eastern edge of the Homestead/Munhall street grid is the last typical intersection in this group. Grant St and the eastern end of William Marks Dr form a standard (yet slightly offset) 4-way signalized intersection. Compared to other intersections in this part of the project area, cross traffic and pedestrian volumes are low, as are bus stop boardings and alightings.

The surrounding area has significant levels of vacancy, and land uses are lower density with large surface parking areas. A new drive-through restaurant (Rally's) opened in June 2023 at the southeast corner of this intersection, which may increase traffic volumes in the area, and could potentially increase the risk of pedestrian conflicts. While this project caused the sidewalk on Grant St to be replaced, the sidewalk on E Eighth Ave was not addressed.

Sidewalks are technically present along the southern approaches to the intersection but are in poor condition and/or are constructed of uneven asphalt. There is minimal, if any, curb reveal on many sections, which provides neither protection for pedestrians nor channelization for stormwater flows. On the northern side of the street, a sidewalk only exists on the western side of William Marks Dr, and no sidewalk is present to access the inbound bus stop, which is situated in a gravel patch with various concrete obstacles in the path.

What Improvements Are Proposed?

Due to the limited right of way width and the lower volumes of pedestrian activity at this location, proposed improvements to the geometry of the intersection are minimal. What can be upgraded, however, is the overall experience of crossing the street and waiting for a bus here.

Despite current low transit ridership at this location, volumes may increase if walking conditions are improved, the stops are upgraded, and development activity continues This stop is adequately spaced from its nearest neighbors, so is proposed to be upgraded with a shelter and standard amenities.

Sidewalks should be replaced where they are deficient, especially along sections of Eighth Ave in either direction from the bus stop. Missing sidewalks within the stop's ¼ mile walkshed should be constructed, though one exception exists—the northern side of Eighth Ave east of the inbound bus stop. There are no walkable destinations east of this point until one reaches the next inbound stop at Ravine St.

MAIN OBJECTIVE ADDRESSED	
SAFETY IMPACT	Moderate
OPERATIONAL IMPACT	Low
ROW IMPACT	Low
ENVIRONMENTAL IMPACT	Low

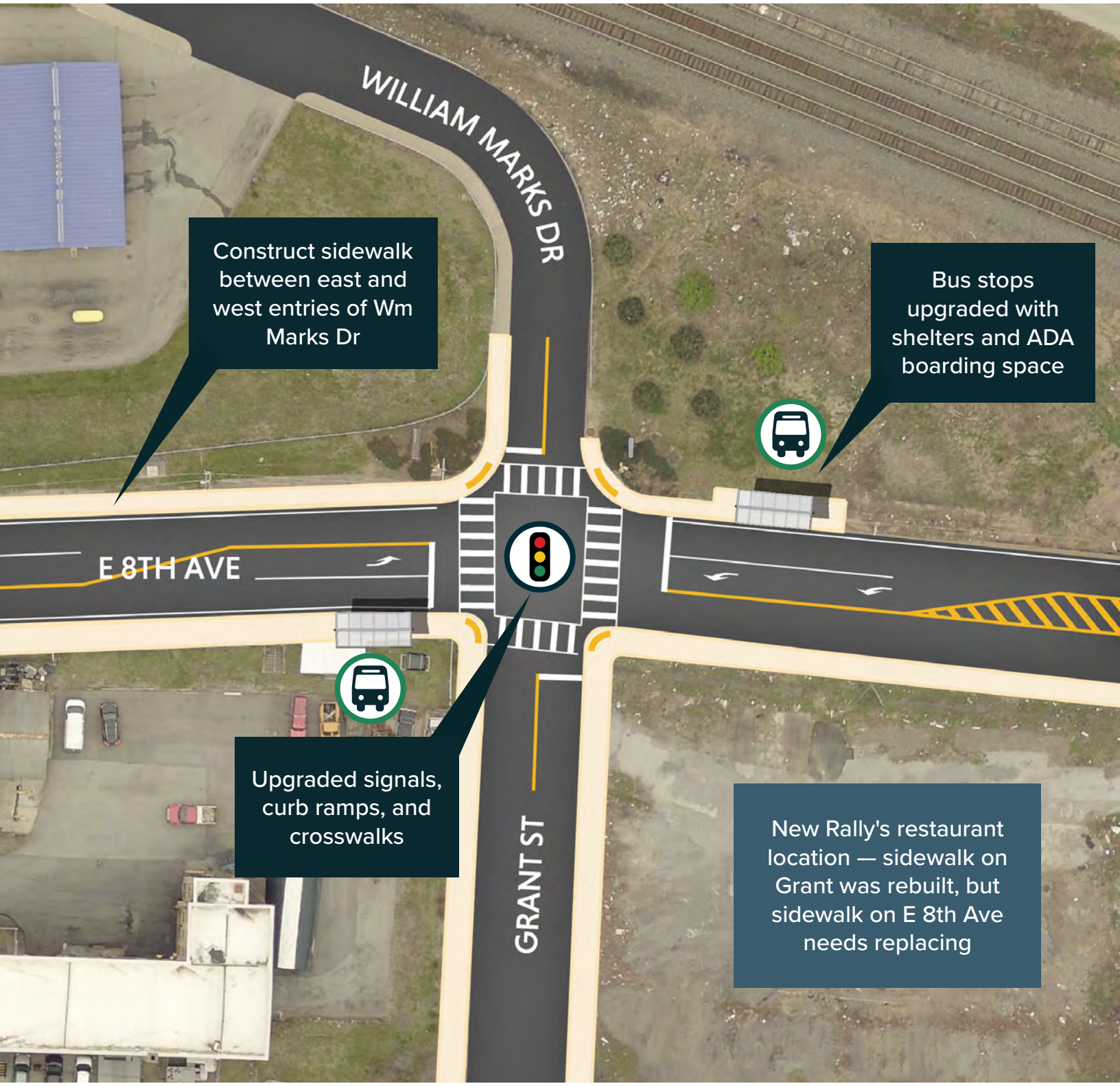


Figure 14: Eighth Avenue at Grant Street Proposed Transit and Intersection Improvements

Retained Stop Signal Changes

7 EIGHTH AVENUE AT RAVINE STREET

What's Happening at this Location Today?

The layout of the roadway is inconsistent in this area, as the southbound/eastbound curb line deviates from the travel lane by jogging slightly south toward Ravine St, and once again as it approaches Whitaker Way. This may be a legacy of the former streetcar layout – whatever purpose it previously served is no longer needed and may contribute to confusion for all street users. The northern edge of Eighth Ave lacks a curb, and the street edge is consumed by railroad ballast overflow, which can cause its own safety issues.

Today, this intersection's edge of pavement is not clearly defined and the travel lanes deviate several times since the center lane markings are present, but edge lines are missing.

Sidewalks are present but are in poor condition. As with the roadway layout, sidewalks on the southern side of Eighth Ave follow the jogging property line. No sidewalks are present on the northern side of Eighth Ave, but this is not an issue due to the railroad that immediately abuts the roadway. The inbound bus stop, though, should be served by a small section of sidewalk and an ADA-compliant landing pad. Instead it is only served by a small notch formed by a concrete retaining wall built into the railroad's ballast. The surface is gravel, no sidewalk is provided to access it, and the signalized crosswalk across Eighth Ave is not marked.

What Improvements Are Proposed?

Much of the proposed construction work at this location involves establishing a consistent full-height curb on both sides of Eighth Ave that frames consistent and straight travel/turn lanes. Only once this profile is established can proper sidewalks, crossings, and bus stops be installed.

Bus shelter areas should be clustered close to Ravine St, as this is the easternmost edge of the walkable area, and there is available space to create the necessary ADA-compliant boarding space. The outbound stop should be upgraded in its current location, and the inbound stop should move to the far side of Ravine St so that these stops function as a cross-street pair. Serving the inbound stop, which is outside the right-of-way of the railroad, should be a sidewalk/bus bulb bordering the railroad and separated by a fence. The crosswalk across Eighth Ave should be moved from the eastern leg to the western one to serve the upgraded stop – the current crosswalk should then be removed and the inbound stop consolidated.

Land that is currently used for the weaving sidewalks of the south side of Eighth Ave can be re-purposed as stormwater management features or returned to adjacent property owners – further study will be needed to assess the viability and layout of such features.

MAIN OBJECTIVES ADDRESSED	
SAFETY IMPACT	High
OPERATIONAL IMPACT	Moderate
ROW IMPACT	Moderate
ENVIRONMENTAL IMPACT	Low

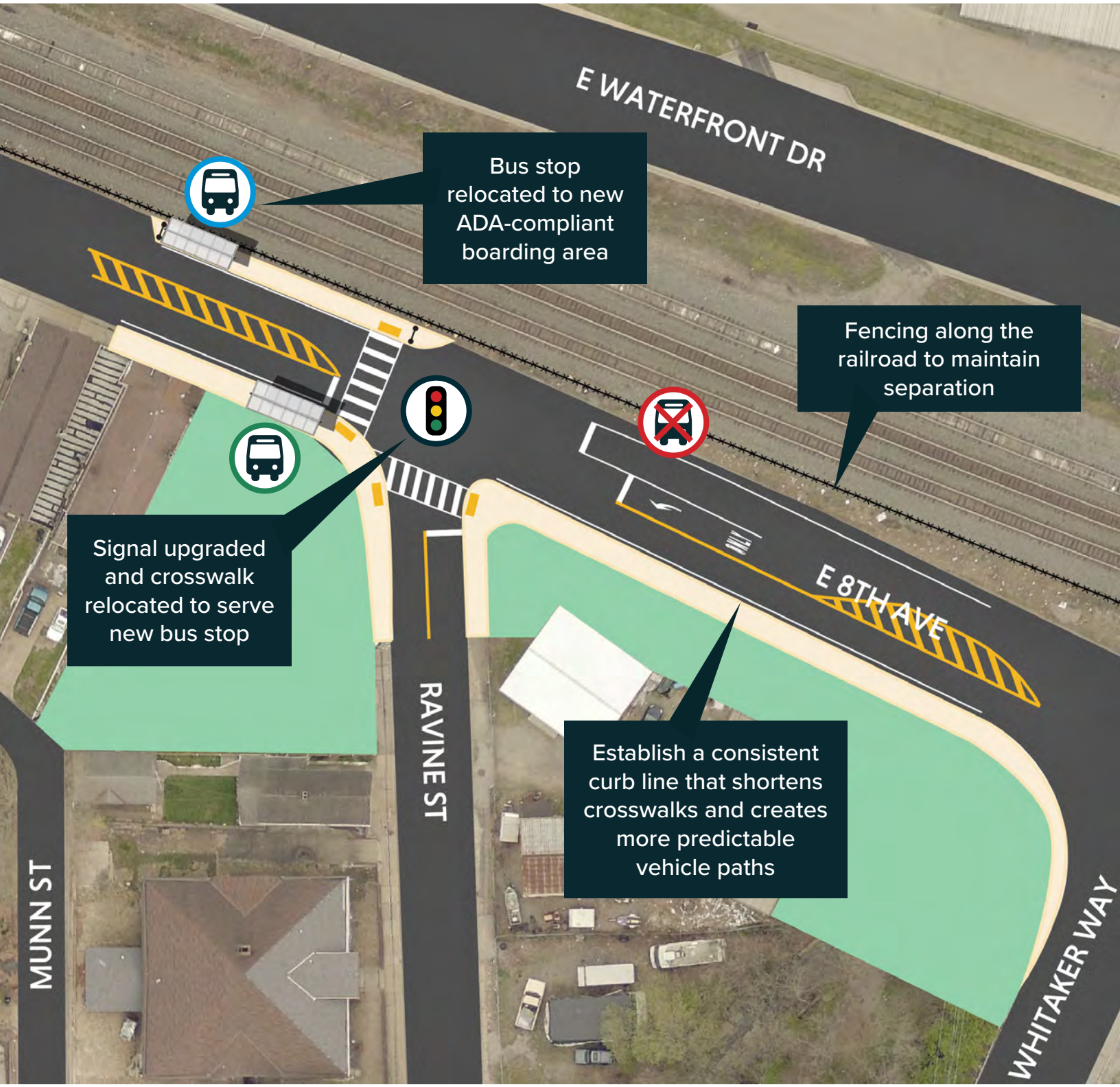


Figure 15: Eighth Avenue at Ravine Street Proposed Transit and Intersection Improvements

Relocated Stop | Retained Stop | Consolidated Stop | Signal Changes

WHITAKER / WEST MIFFLIN AREA

Most of this portion of the H2M corridor is low-density, four lanes wide, and designed for fast-moving vehicles. Few sidewalks and pedestrian crossings exist, but those that do are proposed to be upgraded where they meet with transit stops.

In West Mifflin Borough, one signalized intersection, at Kennywood Boulevard and Hoffman Boulevard, is proposed to receive improvements. As this intersection has high vehicle and pedestrian volumes, particularly during Kennywood's active season, safety improvements are essential.

River Rd at Rankin Bridge – Whitaker

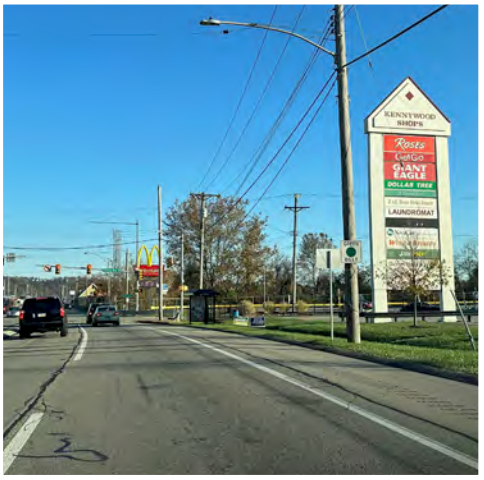
C A future construction project involving Allegheny County and PennDOT should include a PRT partnership that evaluates the possibility of a safe bus stop at the Whitaker end of Rankin Bridge. The existing stop on SR 837 will be retained with consideration for a new stop on River Road at Rankin Bridge.

River Rd/Kennywood Blvd at Mifflin St – Whitaker

D A sidewalk/curb and boarding pad should be constructed for the outbound bus stop. Work with Whitaker Borough and PennDOT to construct a sidewalk on the south side of Mifflin St from SR 837 uphill to connect to the existing segment that runs to Whitaker St.

Kennywood Blvd at Glenn St – West Mifflin

E Construct a full 8-by-5-foot, ADA-compliant boarding pad. Also, a sidewalk/curb should be constructed for the outbound bus stop to connect to the existing curb ramp. Coordination will be required between West Mifflin Borough and PennDOT to construct a sidewalk on the south/west side of SR 837 as well as on Glenn St to the residential area.



3
BUS ROUTES SERVING THIS PART OF THE CORRIDOR

2
STOPS PROPOSED TO BE CONSOLIDATED

KEY DESTINATIONS:

- KENNYWOOD PARK
- KENNYWOOD SHOPS (ON HOFFMAN BLVD)

Figure 16: Whitaker / West Mifflin Area Detailed Improvements

8 HOFFMAN BOULEVARD AT KENNYWOOD PARK

What's Happening at this Location Today?

Kennywood Park is served by transit, but in a way that is not always legible to riders. When the park is open, buses deviate from Kennywood Blvd (SR 837) and circulate through Kennywood's parking lot to serve an internal stop. When the park is closed, buses use on-street stops only.

The overall experience for people walking to/from bus stops in the area is poor, as almost no sidewalks are present. Near Kennywood, there are several restaurants in the area that could be better served by people who arrive by transit. The inbound bus stop serving Kennywood Blvd at Hoffman Blvd is currently at the western end of the Duquesne Blvd Bridge, which has a narrow sidewalk and no space for amenities.

Vehicular traffic is well-served, though sporadic congestion occurs during peak periods and during opening/closing hours at Kennywood Park in the summer. Crosswalks at Hoffman Blvd are of a standard layout, but there was a fatal crash involving a pedestrian here in 2021.

What Improvements Are Proposed?

Transit access is can be simplified by creating permanent, year-round stop locations for all routes serving this area. Routes stopping on Kennywood Blvd will use upgraded stops with dedicated, ADA-compliant bus boarding areas. The proposed shelters may be good candidates for a signature design treatment, as a PRT/Kennywood partnership could allow for design elements that reference Kennywood's classic amusement park look and its history as a trolley park. Other upgraded amenities such as real-time arrival signage, ticket vending machines, emergency call boxes, and enhanced wayfinding signage could help riders feel more comfortable and confident in using transit to visit (or work) at Kennywood Park.

Accessing the upgraded transit stops should be improved by installing sidewalks on both sides of Hoffman Blvd both to provide access to the buses serving that street as well as to allow people walking from Kennywood Blvd to safely walk to the other establishments nearby.

Access to Kennywood Park itself can be improved through an new pathway from the end of the Hoffman/Kennywood Blvd intersection and the eastern end of the new outbound platform, which would be accessible via a short bridge over the existing drainage trench. The new bus stop platforms should be situated across the street from one another, not just for legibility purposes, but because there is no available space to furnish a stop with proper amenities on the adjacent Duquesne Blvd Bridge. To discourage mid-block crossings between Kennywood Park and the inbound station, a barrier like those found at PRT's Busway stations is recommended. Finally, as buses would no longer circulate through Kennywood's parking lots, the driveway at the eastern end of the employee lot may be closed. A fence may be necessary to discourage mid-block pedestrian crossings here as well, and the concrete median on Kennywood Blvd may be restored to prevent U-turns.

Coordination with Pennsylvania State Historic Preservation Office will be required to ensure that all permitting and historical requirements have been met ahead of implementation of proposed improvements at this location.

MAIN OBJECTIVES ADDRESSED	
SAFETY IMPACT	High
OPERATIONAL IMPACT	High
ROW IMPACT	Moderate
ENVIRONMENTAL IMPACT	Moderate

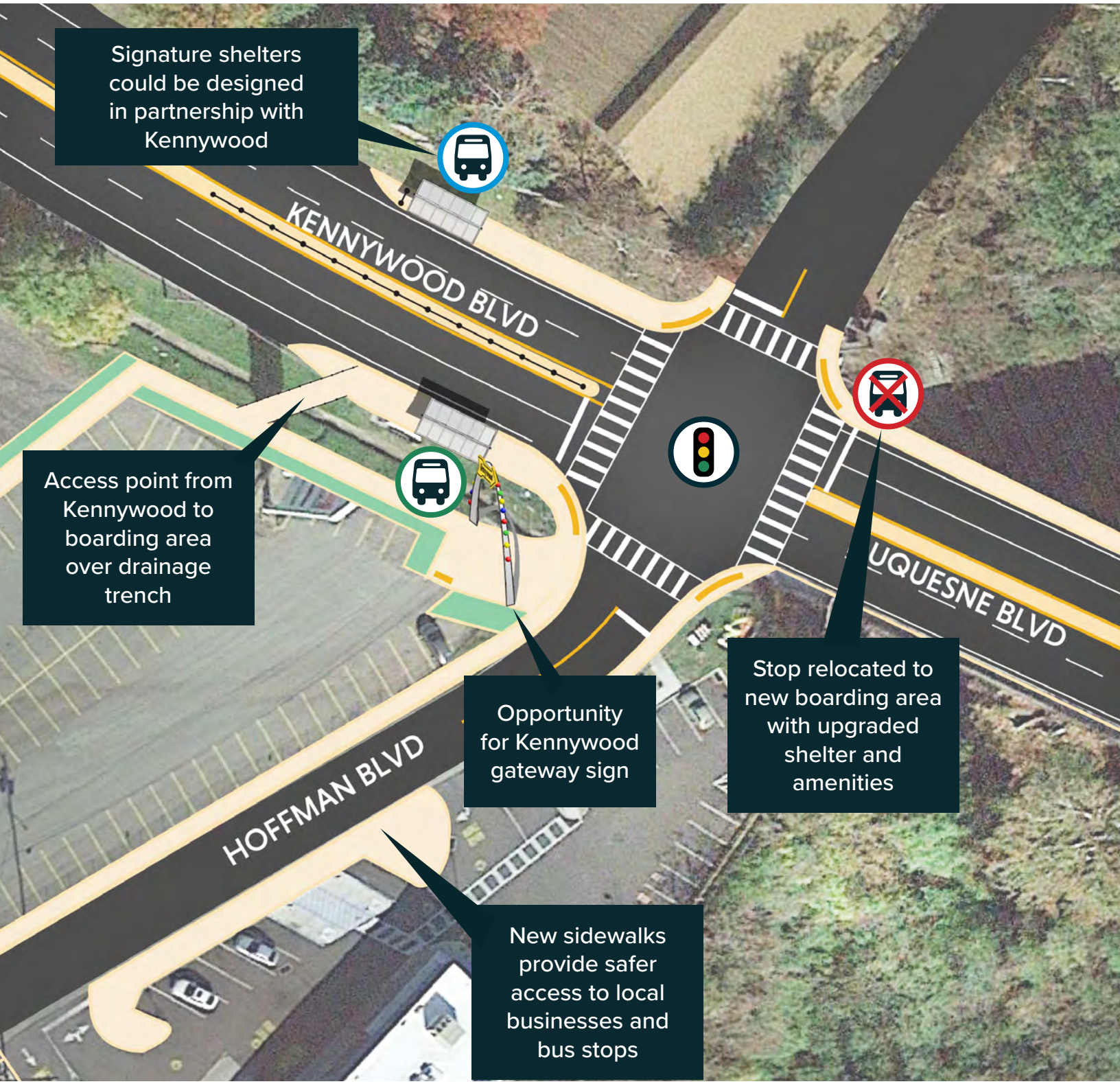


Figure 17: Hoffman Boulevard at Kennywood Park Proposed Transit and Intersection Improvements

Relocated Stop | Retained Stop | Consolidated Stop | Signal Changes

CITY OF DUQUESNE

In the City of Duquesne, two intersections are proposed to receive transit and pedestrian focused improvements, both of which are located on 2nd Street. At these locations, bus stops will be consolidated in an effort to improve transit operations, provide more substantial amenities, and simplify access for riders.

The map at right shows the paths of the 61C and P7 routes, which deviate from PA 837 slightly to serve the core of Duquesne via 2nd St, Grant Ave, and Library Pl.

Duquesne Blvd at Oakmont Ave – Duquesne

F While the inbound stop has a boarding pad, the outbound stop is set far back from the intersection due to a large curb cut for a used car dealer. As construction of the Mon-Fayette Expressway advances in the area and the potential for increased traffic is better understood, further investigation is needed of the installation of a far side stop and a traffic signal at this intersection to make crossings safer for people accessing the bus stops. This will require collaboration with the PA Turnpike Commission and PennDOT.

N 2nd St at Harry S Truman Tower – Duquesne

G The outbound stop at this location is proposed to remain to serve this apartment building for seniors. A 6-foot-wide by 10-foot-long bus bulb should be constructed at the stop to allow for bus ramp deployments to occur without being obstructed by parked vehicles.

4
BUS ROUTES SERVING THIS PART OF THE CORRIDOR

3
STOPS PROPOSED TO BE CONSOLIDATED

KEY DESTINATIONS:

- DUQUESNE PARK & RIDE
- GREATER PITTSBURGH COMMUNITY FOOD BANK
- HARRY S TRUMAN TOWER
- RIDC DUQUESNE

Figure 18: City of Duquesne Detailed Improvements

9 2ND STREET AT GRANT AVENUE

What's Happening at this Location Today?

Situated at the civic core of the City of Duquesne, this intersection has long been a crossroads for transit, commerce, and public life. The city commemorates this fact with special brick paving in the intersection and crosswalks, and a clock tower at the edge of the park that occupies the southwest corner. What this intersection no longer communicates to street users is a sense of place for people and not just cars passing through. The 4-way stop control adds a modicum of safety for pedestrians crossing here, but there are no other safety measures present.

There is an excess of pavement dedicated to vehicular traffic at this intersection—far more than is needed to accommodate their safe movement. The overly wide and severely angled northeast corner of the intersection in particular causes pedestrian crossing distances to be unnecessarily long, and sight distances for drivers is reduced with this layout.

The sidewalk along the northeast approach of N 2nd St is narrow and does not have the space for proper ADA-compliant wheelchair maneuvering at the bus stop. With bus stops at three of the four corners at this intersection, it is possible that infrequent or new bus riders may be confused about which stop serves which route/direction.

What Improvements Are Proposed?

To further define this intersection as a place for people rather than simply a place to pass through in a vehicle, the proposed design shrinks the center paved area to only the minimum space necessary to allow buses to complete their turning movements and serve their stops. The 4-way stop would remain, but the intersection itself is proposed to be raised to sidewalk level. This is an effective safety measure to protect pedestrians by making them more visible and slowing vehicles' approach to the intersection by way of a short ramp.

The smaller intersection geometry allows for space to be returned to adjacent sidewalks. Curb extensions, in addition to shortening crossing distances, prevent parking near the intersection so that people crossing can see approaching vehicles, and drivers can see them. Combined with the raised intersection design that can incorporate special paving design (pavers or stamped/tinted concrete), Duquesne's center can keep its distinctive character.

Buses would now serve two stops instead of three. The outbound stop on N 2nd St would remain in place but would be upgraded with added amenities that fit within the expanded sidewalk space. The two current inbound stops would be combined to one location on Grant Ave, just to the east of the intersection. This stop would also be upgraded with new amenities and could serve as a placemaking and adjacent redevelopment opportunity for the city.

MAIN OBJECTIVES ADDRESSED	
SAFETY IMPACT	High
OPERATIONAL IMPACT	High
ROW IMPACT	Moderate
ENVIRONMENTAL IMPACT	Moderate

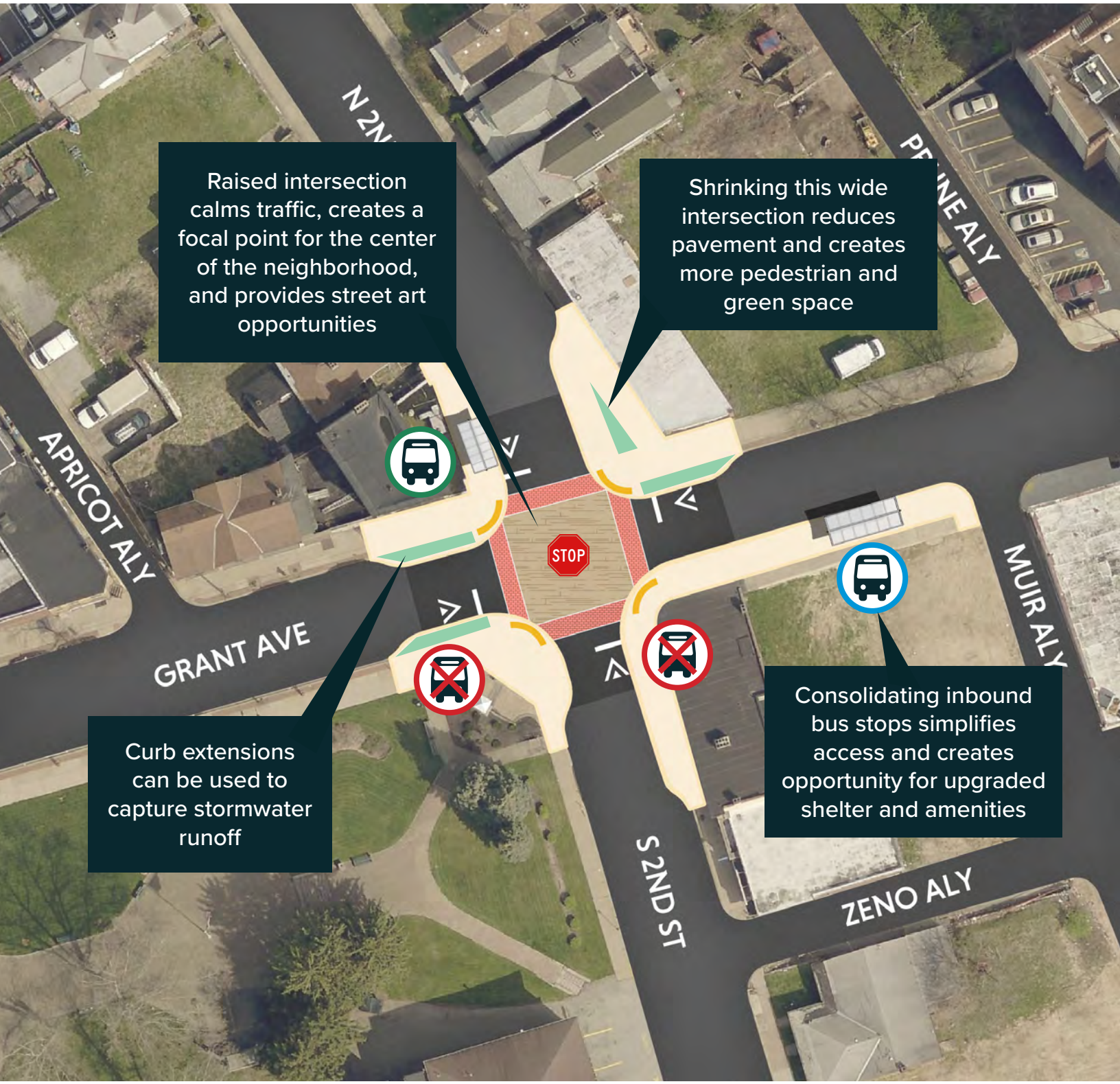


Figure 19: 2nd Street at Grant Avenue Proposed Transit and Intersection Improvements

Relocated Stop Retained Stop Consolidated Stop

10 S 2ND STREET AT KENNEDY AVENUE

What's Happening at this Location Today?

This intersection is one of two in Duquesne's part of the study area where multiple bus routes intersect. Buses divert from SR 837 (Duquesne Blvd) for several blocks to serve the core of the neighborhood—Duquesne Blvd has few walkable destinations, and there is a steep grade between it and 2nd St.

Kennedy Ave serves as a transfer point between local routes with transit coverage to the community and the Oakland/Downtown-bound service found on SR 837 outside of the core of Duquesne. As with the Grant Ave and 2nd St intersection, currently there are three separate bus stops at this location.

Sidewalks are present but vary in condition. Those next to the bus stops are narrow and do not have sufficient width to support transit amenities or ADA-compliant wheelchair maneuvering space.

S 2nd St at Kennedy Ave, Duquesne

What Improvements Are Proposed?

Consolidation of three bus stops into two is central to the design intent of the proposed improvements at this intersection. Two bus bulbs are situated directly across S 2nd St from one another, creating a cohesive pair of stops that can serve as a convenient transfer point from one route to another. This also has the effect of narrowing the street and calming traffic. Curb extensions to on the northern approach of the intersection are also proposed to prevent parking encroachment and to shorten the crossing distance.

Recent paving work has covered over the original yellow brick of Kennedy Ave, though it could be restored during construction of the proposed improvements of this plan. Further outreach and study will decide if this is workable and desirable. Another possibility would be to create a stamped concrete pattern in the center of the intersection to create aesthetic improvements and to call attention to the pedestrian crossing.

MAIN OBJECTIVE ADDRESSED	
SAFETY IMPACT	Moderate
OPERATIONAL IMPACT	Moderate
ROW IMPACT	Low
ENVIRONMENTAL IMPACT	Low

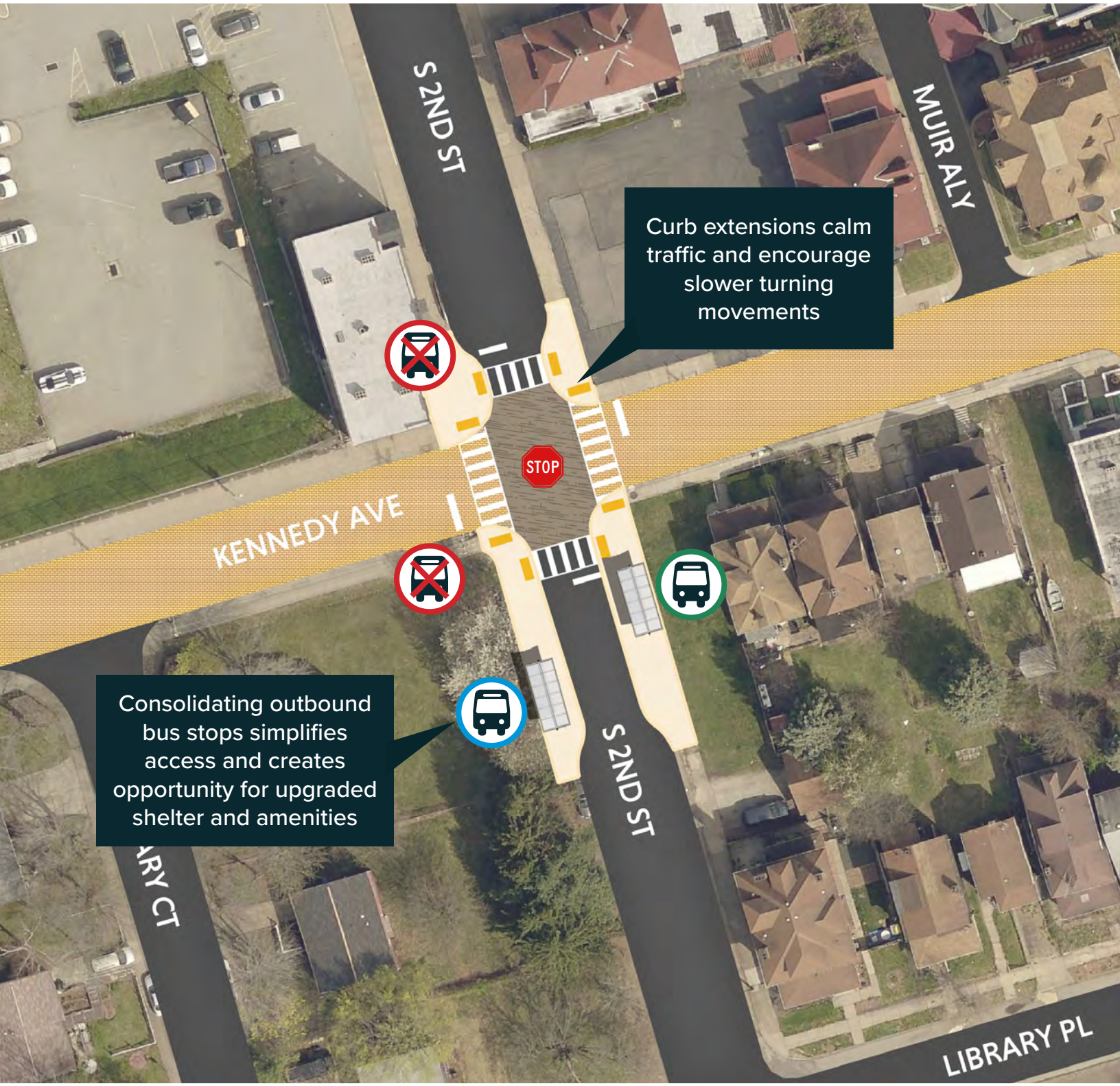


Figure 20: S 2nd Street at Kennedy Avenue Proposed Transit and Intersection Improvements

Relocated Stop Retained Stop Consolidated Stop

CITY OF MCKEESPORT

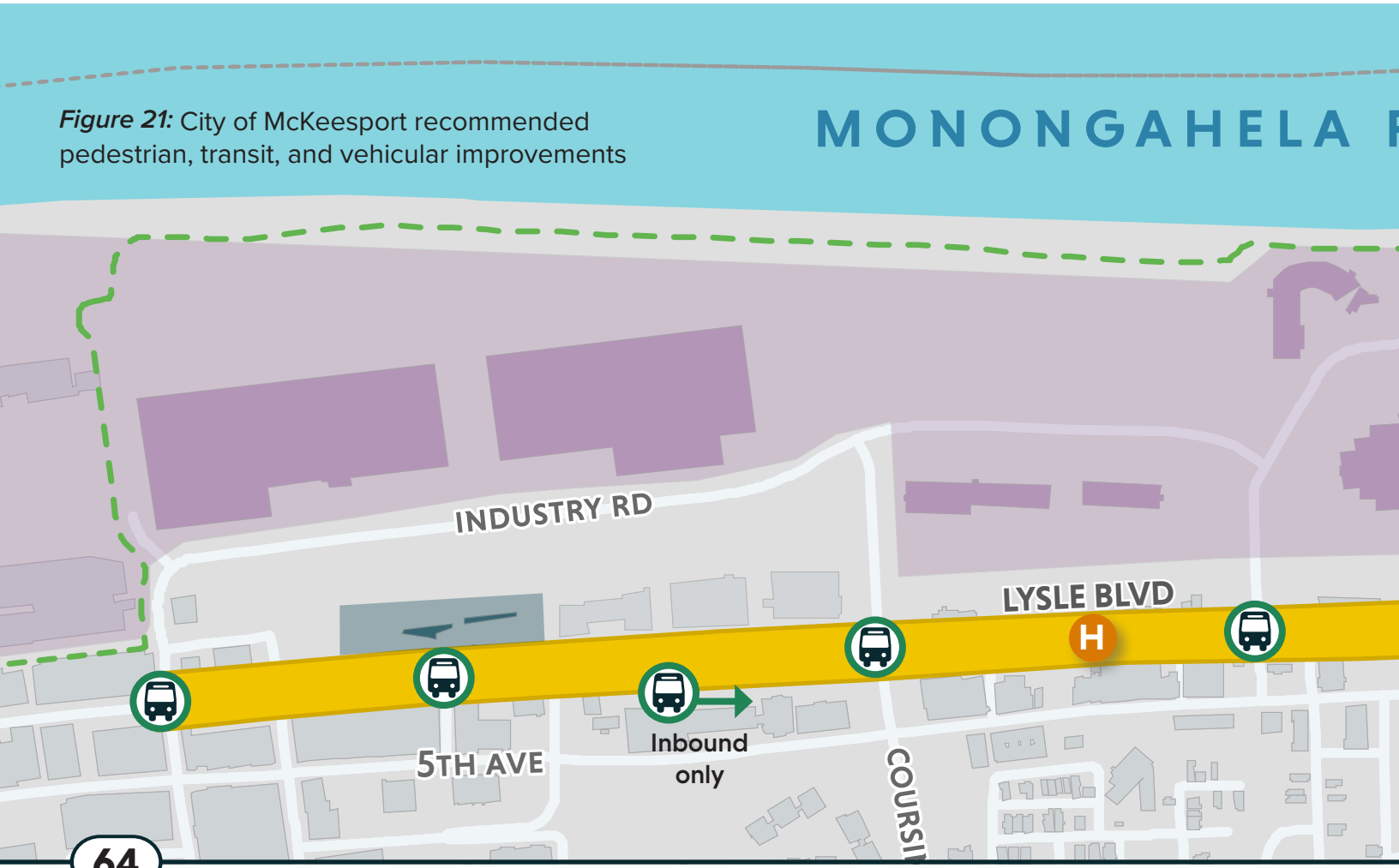
The City of McKeesport has one intersection that is recommended to receive a combination of significant pedestrian, transit, and vehicular improvements. A traffic signal is proposed at the area near the ramps to/from the McKeesport-Duquesne Bridge and Fifth Ave that can both protect pedestrian crossings and be forward compatible with other traffic calming efforts that may result from further studies.

Fifth Ave / Lysle Blvd / SR 148 – McKeesport

H As the infrastructure connecting Fifth Ave to the McKeesport-Duquesne Bridge continues to age and require long-term maintenance, PRT should partner with PennDOT, SPC, and the City of McKeesport to study this complex of ramps and propose alternatives for simplifying the traffic patterns in a way that increases safety for people walking and reduces overall vehicle miles traveled for all modes.

Lysle Blvd has significantly more vehicular capacity than current or projected volumes demand. To increase safety and accessibility for pedestrians, to create a more welcoming environment and sense of place, and to capitalize on the transit and bike trail resources McKeesport has, this street should be studied for a capacity reduction, also known as a road diet.

Figure 21: City of McKeesport recommended pedestrian, transit, and vehicular improvements



5

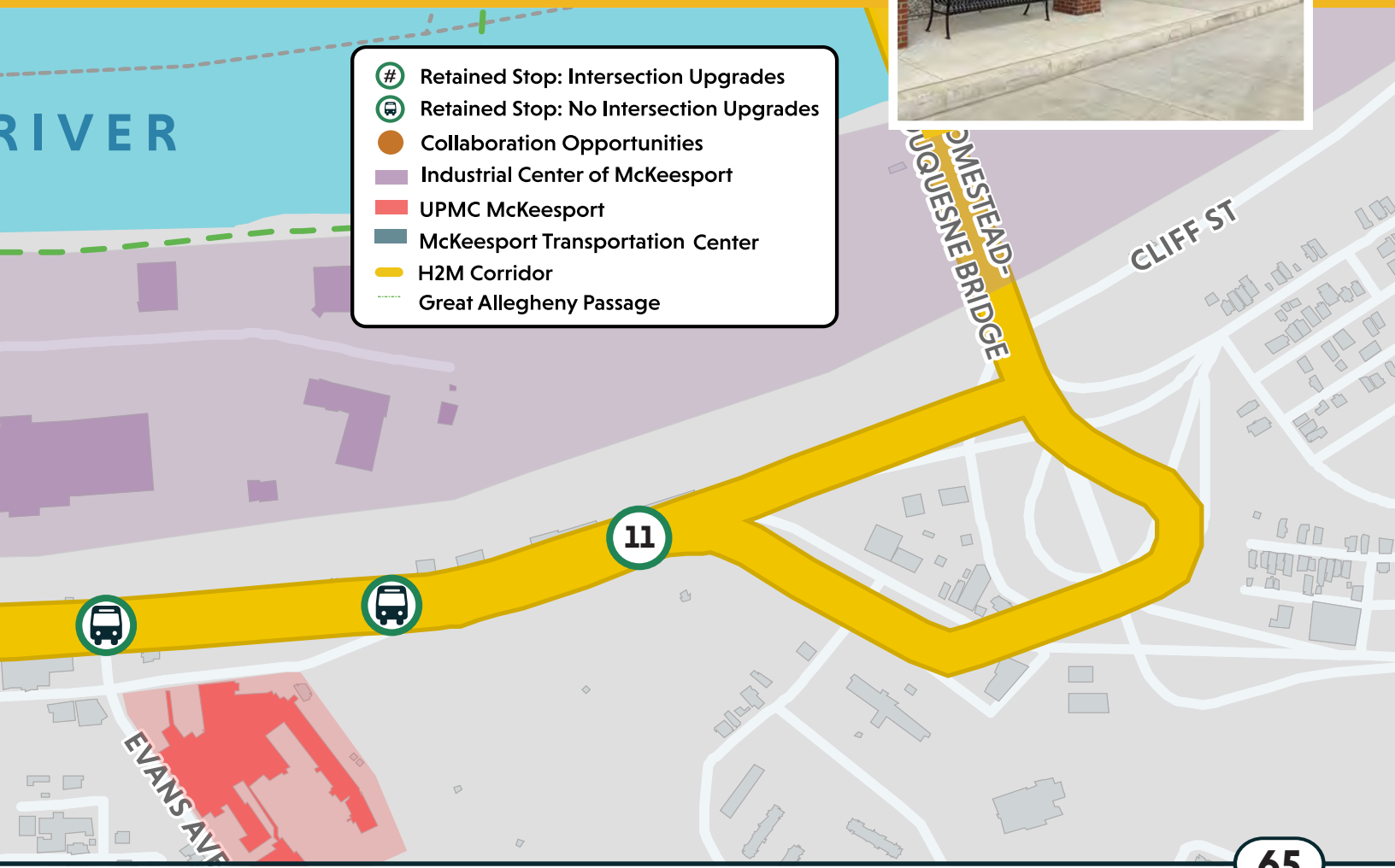
BUS ROUTES SERVING THIS SEGMENT OF THE CORRIDOR

0

STOPS PROPOSED TO BE CONSOLIDATED

KEY DESTINATIONS:

- MCKEESPORT TRANSPORTATION CENTER
- GREAT ALLEGHENY PASSAGE TRAIL
- RIDC MCKEESPORT
- UPMC MCKEESPORT



11 FIFTH AVENUE AT MCKEESPORT-DUQUESNE BRIDGE

What's Happening at this Location Today?

At the eastern gateway to McKeesport, Fifth Ave, Bowman Ave, and the McKeesport-Duquesne Bridge converge. This area has significantly more vehicular capacity than is needed, which contributes to high speeds, poor conditions for people walking, and an environment that is not conducive to development. Excess infrastructure is also costly and difficult to maintain—the complex ramp structures in this area are difficult to navigate as well.

While the bus stops that serve the 61C and other routes in this area are found on a part of Fifth Ave that is sparsely developed, they are the nearest stops to a large cluster of affordable housing buildings operated by the McKeesport Housing Authority. Residents headed to/from the 61C or other routes must access the stops via Pirl St, Fifth Ave, and an unmarked and uncontrolled crossing of the bridge's ramps. Access to the outbound stop also requires one to cross Fifth Ave at an unmarked location.

The area is poorly lit and the sidewalks are narrow. No amenities exist at the bus stops on Fifth Avenue, apart from a trash can at the outbound stop.

What Improvements Are Proposed?

Fifth Ave may be a strong candidate for a road diet—reducing the number of travel lanes to one in each direction with left turn lanes as needed. That determination is beyond the scope of this plan, but whether it is implemented or not, safety measures can be applied to this section of roadway in the near term that can be forward compatible with a right sized Fifth Ave.

McKeesport Housing Authority and other nearby residents can continue to access Fifth Ave via Pirl St but by using the excess PennDOT right of way next to the eastbound (bridge-bound) ramp, a more direct path can be provided via a proposed stairway. This will allow people headed to/from the inbound Fifth Ave stop to get there without having to cross a highway ramp. For onward access to/from the outbound stop, a proposed signal can stop Fifth Ave traffic to allow for a safe and controlled crossing. An alternate version of this idea shifts the signals further east toward the ramp approaches, which can provide better sight-lines and allow for controlled pedestrian crossings at the ramps themselves.

Ramp to Fifth Ave, McKeesport

MAIN OBJECTIVE ADDRESSED	
SAFETY IMPACT	High
OPERATIONAL IMPACT	Moderate
ROW IMPACT	Moderate
ENVIRONMENTAL IMPACT	Low

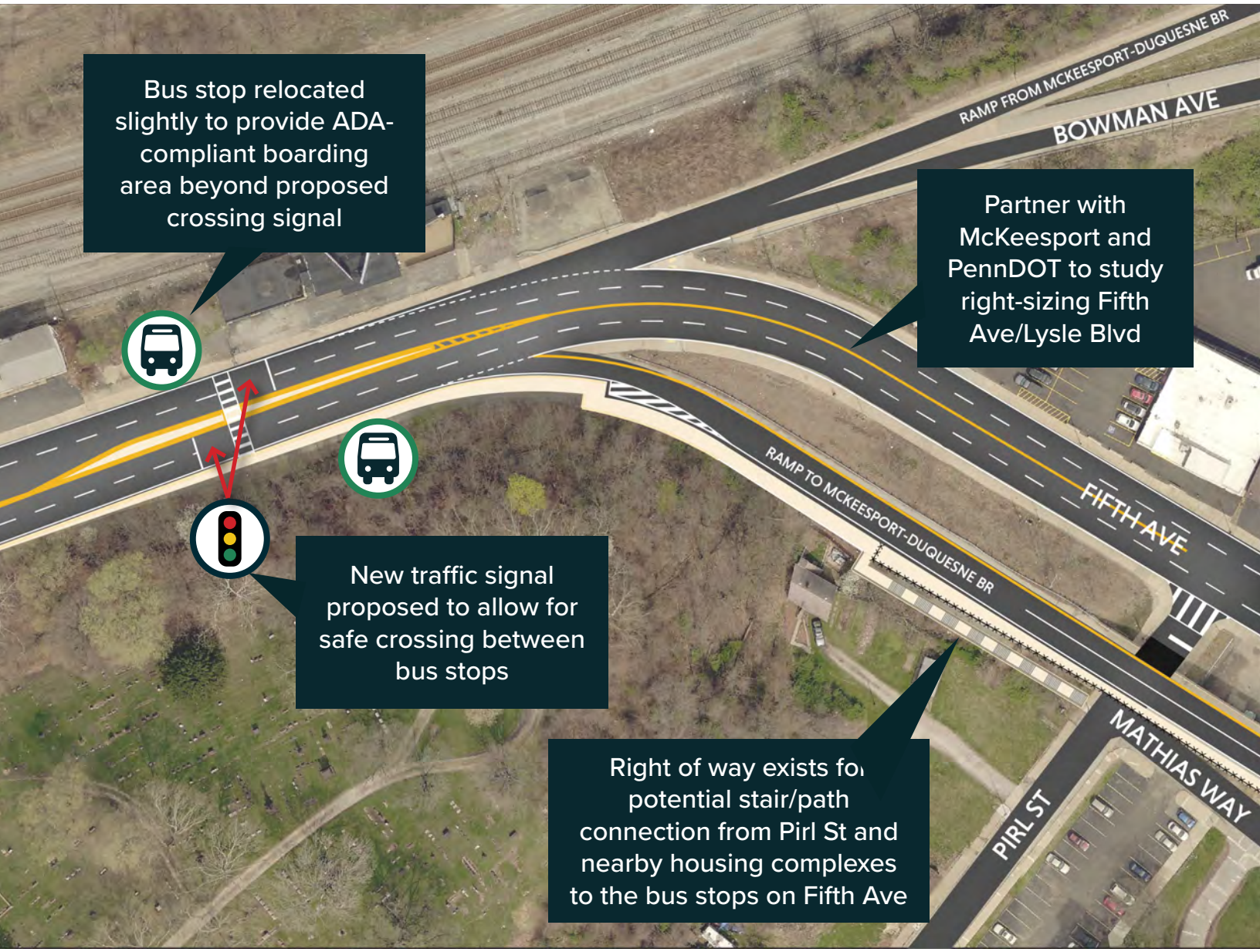
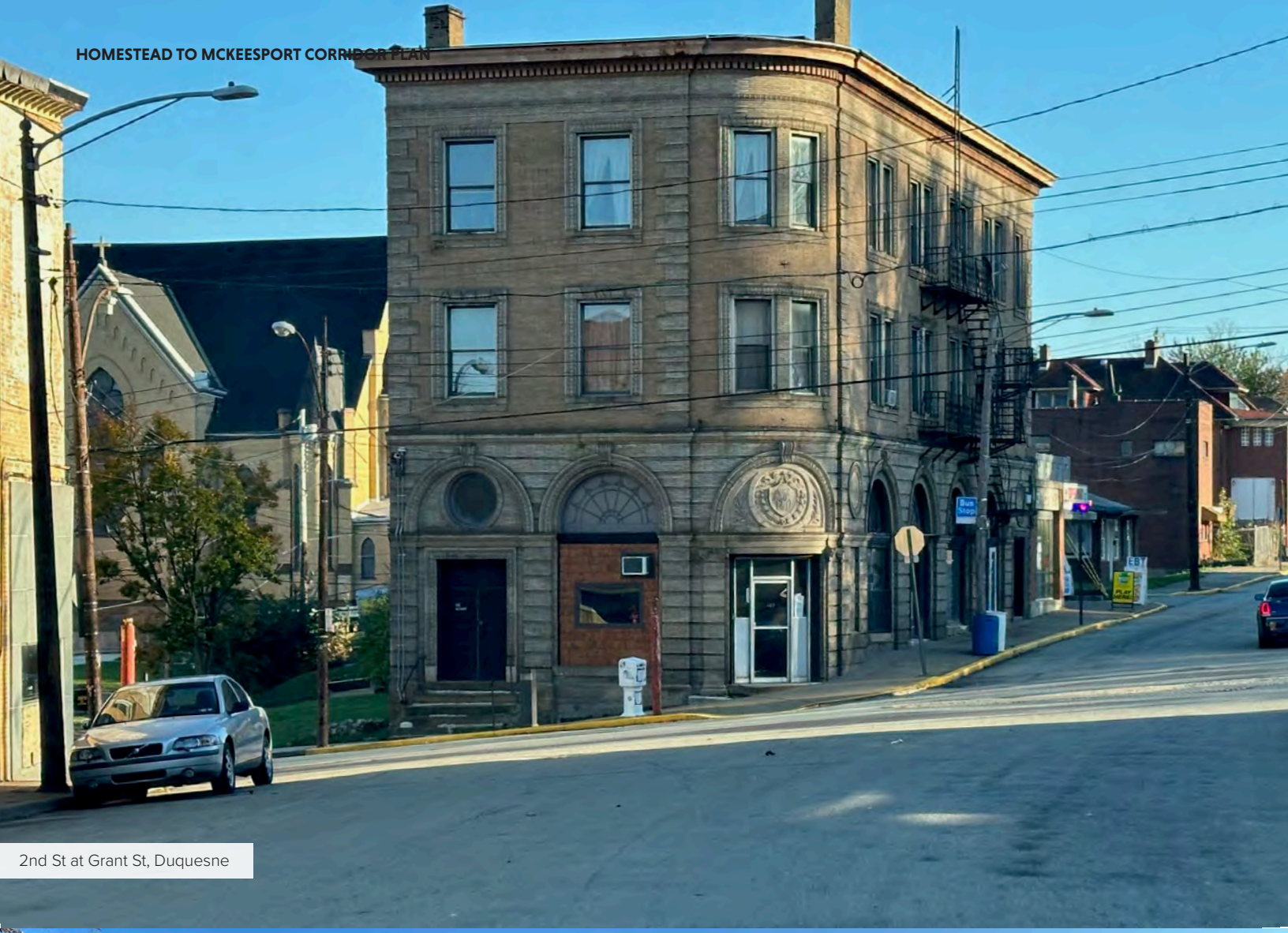


Figure 22: Fifth Avenue at McKeesport-Duquesne Bridge Proposed Transit and Intersection Improvements

Retained Stop Signal Changes



2nd St at Grant St, Duquesne

Eighth Ave at West St, Homestead

IMPLEMENTATION: ROLES, POLICY, AND FUNDING

MUNICIPAL LEADERSHIP AND COORDINATION

As SR 837 and SR 148 are owned and maintained by PennDOT, each of the proposed intersection and infrastructure upgrades described in the Key Intersection Improvement section above require staff involvement from PennDOT's District 11 office. During the Homestead to McKeesport project, PennDOT's District 11 staff were directly engaged during the Existing Conditions phase in fall 2022 and the second round of stakeholder and public engagement in summer 2023. At these stakeholder meetings, PRT provided general status updates on the project's progress and evaluated the intersection improvement concepts to ensure that all safety and operational concerns were considered. As PRT transitions to the implementation phase, PennDOT staff would benefit from reviewing the recommendations and findings from this final report to ensure that any future projects within or next to the SR 837 and SR 148 corridors take into consideration the needs of all modes, particularly transit riders, pedestrians, and cyclists.

PRT also conducted one-on-one discussions with each municipality (except for the City of Duquesne due to leadership changes at the municipal office) during the summer 2023 stakeholder and public engagement phase to set basic expectations about the project, share and evaluate proposed intersection improvement concepts, and discuss future opportunities to collaborate along the corridor. This project involves PRT working with municipalities to arrive at mutually beneficial proposals for improvements to SR 837 and SR 148 in partnership with PennDOT. PennDOT can utilize the recommendations of this plan when it undertakes improvement projects on the route, or PRT and the municipalities can partner with PennDOT to seek new funding sources to take action directly. The recommendations of this plan allow for a mixture of these two paths to implementation.

Allegheny County, the owner of the Homestead Grays and Rankin Bridges, is a public entity that should also be engaged as improvements move forward. The Eighth Avenue and Rankin Bridge intersection is not included as one of the key intersections since Rankin Bridge is included in SPC's Transportation Improvement Program (TIP) as a bridge preservation project. As a result, this is a future opportunity for Allegheny County, PennDOT, and Whitaker Borough to collaborate and incorporate an intentional, transit-supportive design which takes into consideration the needs of pedestrians and transit riders at this intersection and the bridge.

POLICY RECOMMENDATIONS

SUPPORT AND ENCOURAGE MULTIMODAL LIFESTYLES

Many historic neighborhoods of the Mon Valley were built before the advent of the automobile. As such, they have denser development patterns, interconnected street networks, and smaller blocks. These communities grew up around transit and walking. While more car-oriented development has occurred since the 1950s, the potential to capitalize on fundamental placemaking principles still exists. More recent improvements like the Great Allegheny Passage and other key trail assets are not only regional destinations, but they are also critical mobility corridors, and should be further integrated into all aspects of community development. People in the Mon Valley already live multimodal lifestyles, as they walk, bicycle, and use transit. Their infrastructure should reflect that.

COMPLETE THE SIDEWALK NETWORK

Currently, there are significant sidewalk gaps on one or both sides of the road throughout the plan corridor, particularly outside of Homestead's business district on Eighth Avenue, which creates accessibility challenges and unsafe conditions for pedestrians and transit riders. Three out of the four fatal pedestrian crashes that oc`curred between 2016 and 2021 also took place outside of Homestead. For commercial development to continue expanding throughout the corridor and because of the proximity to many affordable housing sites and nearby residential areas, then the sidewalk network should be completed to facilitate safer pedestrian conditions. In addition to adding new sidewalk, repairing the existing sidewalk is also a priority since a significant amount of the existing network is in poor condition.

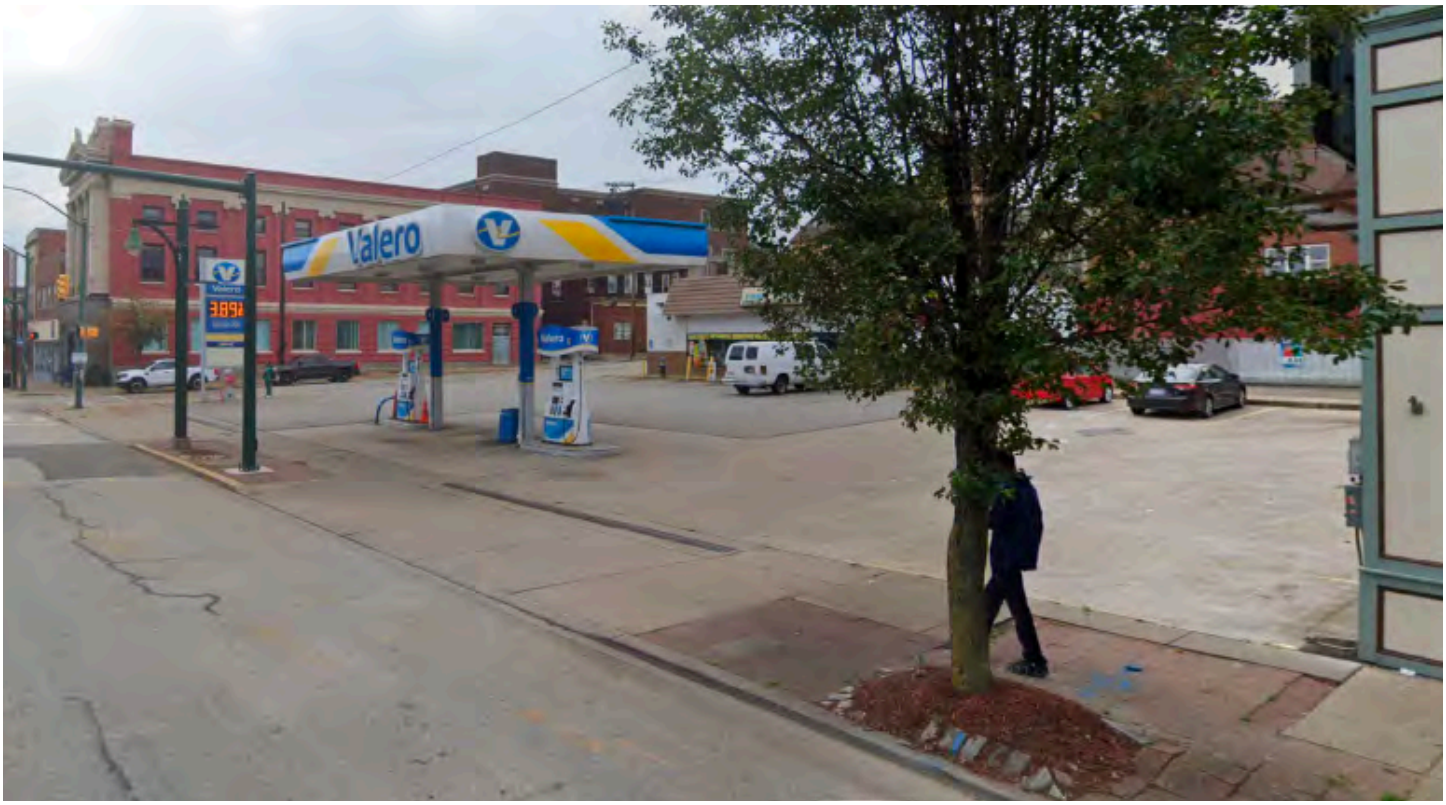
Municipalities in Pennsylvania typically require private property owners to manage the maintenance of existing sidewalks. For new developments, Zoning Ordinance regulations should require sidewalk and curb installation and provide guidance on materials.

UPDATE CURB CUT / DRIVEWAY POLICIES

Access to private property is critical to development and has historically been enabled by side or rear entry points through alleys or side streets. When curb cuts and driveways are placed on main thoroughfares, conflicts and inefficiencies are introduced that could and should be avoided. Each curb cut is a place where vehicles cross the sidewalk and create conflict with people walking. Multiple driveway access points on a main street can cause the street to lose capacity and cause delay for all street users, including bus riders, as vehicles entering and exiting interfere with through traffic.

Typical driveway construction has the sidewalk ramping down to street level, with cars leaving the roadway with no vertical change.

Situations such as this should be updated to a more pedestrian-friendly design as streetscape projects occur. The preferred design is for sidewalk level and materials/design to be continuous across the width of the driveway, with vehicles ramping up to cross it by way of a driveway apron. The three-foot decorative/planting strip that typical in many business district locations is well suited for this. This makes it clear that vehicles are entering a pedestrian space as guests and gives a tactile cue for drivers to slow down and observe their surroundings.



MODERNIZE LAND USE CODES AND PURSUE EQUITABLE TOD

In 2023, PRT completed the development of a TOD Action Plan. This plan is intended to be an internal roadmap both for PRT staff and public agency partners in an effort to improve coordination and communication about parcel ownership and future land use in Allegheny County. An output of the plan identifies opportunity areas where collective action is needed due to the near-term TOD potential both at and near to PRT's properties.

Additionally, PRT will undertake a systemwide Park and Ride study to establish a strategy to reinvest, redevelop, or sell park and ride properties located throughout Allegheny County. Within the H2M study area, PRT owns two park and rides: Duquesne Park and Ride and McKeesport Transportation Center Park and Ride. RIDC also owns two sites within this corridor and in proximity to PRT's two Park and Rides.

Equitable Transit-Oriented Development (ETOD) policy is an approach to urban planning that looks to create inclusive and sustainable communities by integrating transportation and land-use planning. At its core, ETOD aims to redress historical inequities and promote social and economic justice.

This policy framework prioritizes the development of public transportation infrastructure in tandem with affordable housing, amenities, and services, ensuring that all members of the community, regardless of income or background, have equal access to well-connected, transit-rich neighborhoods.

By focusing on equitable access and affordability, ETOD policies address issues of urban sprawl, traffic congestion, and environmental sustainability, fostering vibrant, walkable communities where residents can live, work, and play with ease. In doing so, ETOD not only enhances mobility but also contributes to the broader goal of fostering more inclusive and resilient communities.

Through PRT's TOD Action Plan, the following actions were identified for the agency to pursue:

- Complete the Homestead to McKeesport Corridor Plan. In addition to infrastructure and transit service considerations, the planning process should identify development opportuni-ties, interest among partners such as RIDC, and propose next steps.
- Partner with Allegheny County Economic Development, the Steel Valley Council of Govern-ments (Steel Valley COG), municipalities and RIDC on land use planning and development activities.
- If PRT park and rides are proposed for redevelopment, take TOD projects forward in part-nership with municipalities and RIDC to build capacity around TOD and ensure development projects are integrated as much as possible.
- Consider providing capacity support to municipalities to establish TOD supportive conditions in terms of zoning, community engagement, and funding.
- If the planning process identifies interest from RIDC in TOD, provide support in terms of site planning and design to understand the potential for TOD on their sites.


LEVINE BROS. HARDWARE
Citizens Bank


McKEESPORT
CONNECT

FUNDING STRATEGIES AND GRANT OPPORTUNITIES

With substantial improvements proposed at 11 intersections across the study area, PRT and the respective municipalities will need to be strategic about seeking out additional funding sources to deliver the full scope of this project. Leading up to the start of the Homestead to McKeesport project in 2022, PRT secured two state grants to apply towards the implementation of the proposed improvements. The table below provides high-level details about the grants and overall funds awarded to-date.

GRANT NAME	AWARD AMOUNT	DESCRIPTION
Transportation Alternatives Set-Aside Program	**$960,000**	Funds can be used throughout the full 7.3-mile study area and be applied towards construction and capital improvements, including bus stop upgrades, bus pads, transit amenities, signal upgrades, and improved pedestrian crossings and access.
SPC SMART Grant	**$420,000**	Funds should be focused on the southern end of Homestead Grays Bridge to Eighth Avenue in Homestead and Munhall. Eligible upgrades include queue jump lanes, bus stop improvements, pedestrian crossing improvements, and signal upgrades.
TOTAL GRANT FUNDS AWARDED:	**$1,380,000**	

To create some direction for stakeholders and municipal partners, the following tables estimate the cost of improvements and is summarized by municipality. Details about the lead agency and partners to coordinate with, potential funding sources, time-frame, priority level, and estimated cost are also included. Project time-frames, priorities, and funding decisions will depend on factors beyond this project's scope, including agency and partner priorities, funding availability and capacity to prepare competitive grant applications, local and regional developments and associated infrastructure needs, and future feasibility of conceptual design considerations.

In addition to the potential funding sources shown in the following tables, there are a wide range of local, state, and federal funding sources, many of which are organized below, that should be further explored to address funding gaps. Based on the 10% opinion of probable construction costs, which factors in roadway, traffic, and transit costs, mobilization factor, maintenance and protection of traffic (10%), erosion controls, (5%), engineering/ design (15%), construction inspection (10%), and contingency factor (25%), the approximate total cost of improvements at the 11 key intersections is projected to be $10,040,120.

Additional details about many of these programs is also outlined in Southwestern Pennsylvania Commission's (SPC) 2023 Funding Handout document to provide additional guidance on grant purpose, local match requirements, eligibility, deadlines, and website information.

FUNDING PROGRAM KEY:

SPC Transportation Improvement Program (TIP) Base Funds

- Strengthening Mobility and Revolutionizing Transportation (SMART) Program
- Regional Traffic Signal Program
- Congestion Mitigation and Air Quality (CMAQ)
- Federal Transportation Alternatives Set-Aside (TASA)
- Federal Highway Safety Improvement Program (HSIP)
- Infrastructure for Rebuilding America (INFRA) Grant Program
- Safe Streets and Roads for All Grant Program (SS4A)
- Railroad Crossing Elimination Grant Program
- Bridge Investment Program
- Reconnecting Communities Pilot Program
- Thriving Communities Program

Other Federal Funds

- USDOT Discretionary Programs
- Special Federal Earmark (SXF)

Other State Funds

- DCED Multimodal Transportation Fund (MTF)
- PennDOT Multimodal Transportation Fund (MTF)
- PennDOT Automated Right Light Enforcement Program (ARLE)
- PennDOT Green Light-Go
- Pennsylvania Infrastructure Bank (PIB)

Other Funds

- Allegheny County Act 13
- Municipal Liquid Fuels Program
- Local municipal funding
- Private financing / Public-private partnerships (P3)

WHAT'S NEXT?

Effective collaboration between PRT, PennDOT, SPC, Allegheny County, and local municipalities is vital for successful implementation, and securing grant funding is a key part of that effort. The next steps below in pursuing funding through strategic partnerships is a model for how PRT can approach this and future corridor planning efforts. The timeline begins upon PRT's adoption of this plan.

Define the Implementation Process (Month 1-2)

- Convene a multi-stakeholder meeting with representatives from the transit agency, PennDOT, and local municipalities, with the goal of forming a dedicated Corridor Improvement Grant Team (CIGT).
- Finalize prioritization of high priority transit projects and identify key project milestones and a timeline for grant application submissions.

Confirm Funding Priorities (Month 2-3)

- Collaborate on and communicate all “Notice of Funding Availability” (NOFA) dates for federal, state, and private sector grant programs identified in this plan.
- Prioritize grant pursuits based on NOFA info, project types/eligibility, and CIGT input.

Budget Development and Data Collection (Month 3-4)

- Work collectively with the CIGT to develop a comprehensive project budget that includes contributions from all partners.
- Calculate in-kind contributions and demonstrate local commitment to the project, which is a key criterion for grant funding.
- Assign responsibilities for drafting grant applications, gathering required information, and ensuring compliance with application deadlines.

Grant Application Preparation (Month 5-6)

- Utilize the corridor plan and its related materials as a source for grant narratives, graphics, and other information.
- Collaboratively draft applications, addressing each funder's specific requirements.
- Ensure that the applications emphasize the project's benefits, including regional and local economic impacts, sustainability, and community engagement.

Application Review and Submission (Month 6+)

- Conduct thorough reviews of all grant applications with CIGT members to ensure accuracy and completeness.
- Submit grant applications according to established deadlines, with one partner assigned as the primary applicant for each grant.

Follow-Up and Advocacy (Ongoing)

- Maintain open communication with grant agencies and provide requested updates and additional information promptly.
- Advocate for the project as a united CIGT group by engaging with local and state legislators as well as key stakeholder groups to secure political support and demonstrate the project's significance.

It is critical that CIGT partners strategically pursue grant funding opportunities together, demonstrating their commitment to enhancing transit corridors and improving infrastructure for the benefit of the entire region. Effective execution of this action plan will pave the way for successful corridor improvement projects and foster a sustainable, connected, and vibrant region.

Each of the 11 infrastructure improvement items has a detailed cost estimate by project component in **Appendix 6**. Funding source abbreviations are spelled out on the previous page.

ID	IMPROVEMENT CONCEPT	LEAD AGENCY/ COORDINATION REQUIRED	POTENTIAL GAP FUNDING SOURCES	TIME FRAME	PRIORITY LEVEL	ESTIMATED COST
HOMESTEAD BOROUGH						
1	**Eighth Ave / Homestead Grays Bridge**	PRT, Homestead Borough, Allegheny County, PennDOT District 11	GLG, RTSP, INFRA, ARLE, RCEGP, CMAQ	Mid-term	High	$1,069,260
2	**Eighth Ave / Amity St**	PRT, Homestead Borough, PennDOT District 11	GLG, ARLE, RTSP, DMTF, PMTF, CMAQ	Mid-term	High	$986,670
3	**Eighth Ave / Ann St**	PRT, Homestead Borough, PennDOT District 11	DMTF, SS4A	Short-term	Low	$637,790
4	**Eighth Ave / McClure St**	PRT, Homestead Borough, Munhall Borough, PennDOT District 11	DMTF, SS4A	Short-term	Medium	$1,075,290
MUNHALL BOROUGH						
5	**Eighth Ave / Library Pl**	PRT, Munhall Borough, PennDOT District 11	DMTF, PMTF, INFRA	Mid-term	High	$1,470,920
6	**Eighth Ave / Grant St**	PRT, Munhall Borough, PennDOT District 11	DMTF, PMTF, SS4A	Mid-term	Low	$741,370
7	**Eighth Ave / Ravine St**	PRT, Munhall Borough, PennDOT District 11	DMTF, PMTF, SS4A	Long-term	Medium	$820,900
WEST MIFFLIN BOROUGH						
8	**Hoffman Blvd at Kennywood Blvd**	PRT, West Mifflin Borough, Kennywood, PennDOT District 11	DMTF, PMTF, TASA, SS4A, RCPP	Long-term	High	$1,186,470
CITY OF DUQUESNE						
9	**2nd St / Grant Ave**	PRT, City of Duquesne	DMTF, PMTF, TASA, SS4A, TCP	Short-term	Medium	$686,690
10	**2nd St / Kennedy Ave**	PRT, City of Duquesne	DMTF, PMTF, TASA, SS4A, TCP	Mid-term	Low	$269,310
CITY OF MCKEESPORT						
11	**5th Ave at McKeesport-Duquesne Bridge**	PRT, City of McKeesport, PennDOT District 11	HSIP, RTSP, INFRA, ARLE, SMART	Long-term	Medium	$1,095,450

Short-term = less than 3 years; Mid-term = 3-7 years; Long-term = more than 7 years

FIGURES & TABLES

FIGURES

TABLES

APPENDICES

Supporting appendices for this documented are listed below and attached to this PDF. To access the attachments in the PDF, either:

- **On the top of the toolbar, go to View > Show/Hide > Navigation Panes > Attachments,**
- **Or click on the arrow on the left-hand side of the Adobe Window to open the Navigation Pane, then click on the Paperclip (Attachments) icon.**

Appendix 1: Public Meeting Round Two Summary Memo

Appendix 2: Review of Previous Plans

Appendix 3: Existing Conditions Analysis

Appendix 4: Synchro Traffic Memo

Appendix 5: Conceptual (10%) Design Drawings

Appendix 6: Detailed Cost Estimates by Project

Appendix 7: Pedestrian Intersection Safety Index (PISI) for Study Area Signalized Intersections

Appendix 8: Safe Streets and Roads for All (SS4A) Plan Eligiblity Checklist


PRT
Pittsburgh Regional Transit
SOUTH
837
NORTH
837