

Exhibit 9

**IN THE UNITED STATES DISTRICT COURT FOR
THE WESTERN DISTRICT OF PENNSYLVANIA**

UNITED STATES OF AMERICA, and the)
ALLEGHENY COUNTY HEALTH)
DEPARTMENT,)

Plaintiffs,)

v.)

UNITED STATES STEEL CORPORATION,)

Defendant.)

Civil Action No. 2:22-cv-00729-CRE

**Declaration of Allason Holt from the Allegheny County Health Department in Support of
the United States' Motion to Enter Consent Decree**

I, Allason Holt, declare as follows:

1. I am the Air Quality Enforcement Program Manager for the Allegheny County Health Department ("ACHD") and have been so employed since August 29, 2022. The ACHD has been delegated authority pursuant to the federal Clean Air Act, 42 U.S.C. Sections 7401-7671q (hereinafter "CAA"), and the Pennsylvania Air Pollution Control Act, 35 P.S. Sections 4001-4014 (hereinafter "APCA"), and the ACHD is a local health agency organized under the Local Health Administration Law, 19 P.S. §§ 12001-12028, whose powers and duties include the enforcement of laws relating to public health within Allegheny County, Pennsylvania, including but not limited to, the ACHD's Rules and Regulations, Article XXI, Air Pollution Control (Allegheny County Code of Ordinances Chapters 505, 507 and 535) (hereinafter "Article XXI").

2. I have personal knowledge of the matters set forth herein, except for those items stated to be based on information and belief. For those items based upon information and belief, I have relied upon information typically used by professionals in my field to inform our professional judgement and opinion and, as to those matters, I am informed and believe them to be true as expressly stated herein. If called to testify on the matters herein, I could and would testify competently thereto.

3. I submit this Declaration in support of the United States' Motion to Enter Consent Decree.

4. As the Air Quality Enforcement Program Manager, my duties include assessing compliance of stationary sources with both ACHD and CAA requirements, determining appropriate penalties for sources found out of compliance, and making recommendations to ACHD leadership regarding whether to enter into settlement agreements.

5. I have reviewed the public comments submitted for the Consent Decree, which are appended to the United States' motion to enter the Consent Decree.

6. The Consent Decree requires U. S. Steel to pay a civil penalty of \$1,500,000, with \$750,000.00 of that amount paid to ACHD. Consent Decree, § IV. As reflected in Paragraph 12 of the Consent Decree, ACHD has agreed that its portion of the civil penalty will be used to help fund a project developed by the Allegheny County Department of Economic Development ("ACDED"). The project, referred to as the "ACHD-Only Supplemental Environmental Project," is further described in Appendix A of the Consent Decree, and will help support the construction of the Westmoreland Heritage Trail ("WHT") to Great Allegheny Passage ("GAP") Trail Connector Project (hereinafter referred to as the "Turtle Creek Trail Connector").

7. The Turtle Creek Trail Connector is a multimodal trail project that resulted from two years of work, including public engagement, as further described in the Turtle Creek Connector Feasibility Study published by Allegheny County in January 2022, a true and correct copy of which is attached as Exhibit A to this declaration. The Feasibility Study is also available online, and describes the tangible, significant public health and economic benefits expected to be achieved for the communities in and around the trail corridor, which include the areas directly affected by the Defendant's alleged actions.¹

8. Prior to agreeing to the terms of the proposed Consent Decree, ACHD assessed whether the civil penalty terms are consistent with ACHD policies for the collection and use of civil penalties. ACHD has published guidance setting forth those policies, referred to as the ACHD Civil Penalty Policy of January 10, 2018 ("CPP"), a true and correct copy of which is attached as

¹Allegheny County Public Works, Allegheny County Economic Development, Office of the Allegheny County Executive, and WSP, *Turtle Creek Connector Trail Feasibility Study: Westmoreland Heritage Trail (WHT) to the Great Allegheny Passage (GAP), Final Report*, p. I-1 – I-3, II-13 – II-15 (January 2022), <http://alleghenycounty.us/TurtleCreekTrailStudy>.

Exhibit B to this declaration. ACHD's CPP expressly allows for the offset of the amount of a civil penalty through a Supplemental Environmental Project ("SEP"), where certain criteria are met, as further discussed in this declaration.² After applying these criteria and considering the public health benefits discussed in the Turtle Creek Connector Feasibility Study, ACHD determined that the Turtle Creek Trail Connector Project meets the criteria for inclusion in the Consent Decree as a SEP for the ACHD portion of the civil penalty.

ACHD Response to Public Comments Received Concerning ACHD Policies

9. During the public notice and comment period for the Consent Decree, the Clean Air Council commented that the \$750,000.00 for the SEP must be paid into the Allegheny County Clean Air Fund ("Clean Air Fund") and not to the ACDED.

10. ACHD applied the CPP in determining the penalty and SEP provisions of the Consent Decree. If funds are being used for a SEP, the CPP does not require payment of those funds to pass through the Clean Air Fund.³ Rather, the CPP provides that an agreement to undertake a SEP "may result in the mitigation of all or part of the civil penalty" that would otherwise be due to be paid to the Clean Air Fund. ACHD CPP, p 5. Additionally, if USS does not use/pay the full \$750,000 toward the SEP, and the SEP is completed, USS must pay the remainder to ACHD, not the ACDED, as a stipulated penalty.⁴

11. GASP and individual commenters asserted that the proposed SEP does not meet several requirements set forth in Section IV(A) of ACHD's CPP which provides five general criteria for ACHD to consider when reviewing a SEP.⁵ These criteria are quoted below in full:

1. The SEP must improve, protect, or reduce the risk to public health or the environment. In keeping with the multi-media nature of pollution prevention, the SEP need not be air quality-related, as long as an environmental and/or public health benefit can be recognized. While the SEP may provide the violator with some benefits, the project must primarily benefit the public health and/or the environment.
2. The SEP cannot be a project that the violator is already legally required to perform by a federal, state, or Department law or regulation or a permit condition. A SEP does

² ACHD CPP, pp. 5 – 8.

³ *See id.* (describing the SEP process and containing no requirements that funds used as a SEP must pass through the Clean Air Fund).

⁴ *Proposed Consent Decree*, ¶ 77(b).

⁵ ACHD CPP, pp. 5 – 6.

not alter a violator's obligation to remedy a violation expeditiously and return to compliance.

3. The SEP should be performed in the same geographic area where the violation occurred unless the SEP is intended to benefit the entire County. The SEP can affect either the facility itself, the surrounding community, or both.

4. There must be a reasonable probability that the SEP will be successful. However, if the agreed-upon SEP is carried out faithfully, the facility will not be penalized if the expected environmental or public health benefits are not realized.

5. The SEP must be incorporated into the terms of a legally enforceable settlement document such as a consent decree or settlement agreement.⁶

12. Although the CPP does not state expressly that a SEP must meet all five criteria, nor that any criterion has more weight than another, ACHD has determined that the proposed SEP meets all five of the CPP's criteria.

13. Regarding Criterion 1, commenters assert that that ACHD SEP does not adequately establish that the SEP will provide environmental or public health benefits. GASP Comments, at 7-8. As quoted above, the CPP provides that the "SEP need not be air quality-related, as long as an environmental and/or public health benefit can be recognized." In evaluating this criteria, ACHD relied on the findings of the Turtle Creek Connector Feasibility Study, which identified several significant public health and environmental benefits expected from the project, including in the form of encouraging increased physical activity and outdoor recreation, both of which are linked to the prevention, reduction, and management of heart disease, type 2 diabetes, obesity and related health issues that disproportionately affect the surrounding communities.⁷ ACHD similarly relied on the Feasibility Study's conclusion that a multi-modal trail could provide environmental benefits by enhancing the quality of transit service and extending the range of cyclist-bus riders, among other benefits.⁸ Based on these findings, ACHD concluded that the first criteria is met.

14. Regarding Criterion 2, Paragraph 12 of the Consent Decree includes a certification that U. S. Steel is not otherwise required to perform the project by a federal, state, or local law.

⁶ *Id.*

⁷ *Turtle Creek Connector Trail Feasibility Study*, pp. II-13 to 15.

⁸ *Turtle Creek Connector Trail Feasibility Study*, pp. II-6, IV-3, IV-7.

15. Regarding Criterion 3, commenters question whether the ACHD SEP will be performed in the same geographic area as the violations. GASP Comments, at 8. However, as quoted above, this criterion provides that a SEP can benefit the impacted community(ies), Allegheny County at-large, or both, and there is no dispute that large portions of the project are located in Allegheny County. In any event, ACHD concluded that the SEP will be performed in the same geographic area as the violations. As described in the Turtle Creek Trail Connector Feasibility Study, the Turtle Creek Trail Connector corridor includes Rankin and Swissvale as well as the communities of Braddock, North Braddock, East Pittsburgh, Turtle Creek, Wilmerding, Monroeville, Pitcairn, and Trafford, and runs near the communities of North Versailles, East McKeesport, and Wall. The facility at issue in this case, the USS Edgar Thomson Plant, is in Braddock, PA, which is one of the impacted and benefited communities. Additionally, six of the other impacted and benefited communities are within approximately four miles of the Edgar Thomson Plant. Based on these findings, ACHD determined that Criterion 3 is met.

16. Regarding Criterion 4, commenters question whether the ACHD SEP will actually be successfully built, particularly because the total cost of the Turtle Creek connector trail will be much more than \$750,000. GASP Comments, at 7. However, the \$750,000.00 payment will be used for trail construction in the form of a match to future grant funding for one or more phases of trail construction. The Feasibility Study has already been completed and was funded by the Southwestern Pennsylvania Commission and Allegheny County. That Study was used to estimate costs for Connector Trail design and engineering. Additionally, existing development and trail projects in the area further demonstrate the likely implementation, completion, and success of the Turtle Creek Connector Trail. For example, community members are working on projects similar to the GAP Trail and WHT, such as a trail extension and pedestrian bridge in Trafford.⁹ Further, Redevelopment at the Carrie Furnace site—where the Hot Metal Bridge trail connection will be—is already underway, and “[t]he Redevelopment Authority of Allegheny County (RAAC) recently entered into an agreement with the Regional Industrial Development Corporation (RIDC) to develop the site for various commercial uses.”¹⁰ In addition, the Turtle Creek Connector Trail Feasibility Study contains two and a half pages of potential funding sources for the Connector

⁹ *Turtle Creek Connector Trail Feasibility Study*, p. II-9.

¹⁰ *Turtle Creek Connector Trail Feasibility Study*, p. II-9.

Trail.¹¹ Based on these findings and conclusions from the Turtle Creek Connector Trail Feasibility Study, ACHD determined that there is a reasonable possibility that the project will be completed for purposes of Criterion 4.

17. Regarding Criterion 5, there is no dispute that if the Court approves the Consent Decree with the SEP, then the SEP will be incorporated into the legally enforceable Consent Decree.

18. PennFuture and individual commenters commented that the ACHD SEP lacked public input, and asserted that the project does not sufficiently meet all factors in the CPP to warrant 100% mitigation of the Civil Penalty that would otherwise be paid to ACHD.

19. With respect to public input, the Consent Decree itself was the product of settlement negotiations between the parties. However, the Turtle Creek Connector Trail Feasibility Study recounts that the Connector Trail was the subject of an extensive public engagement process that included a website, press releases, a virtual public meeting, fliers, signs, public open houses, and direct engagement with municipal officials and stakeholders.¹²

20. With respect to whether it was appropriate for ACHD to mitigate 100% of its portion of the civil penalty, the CPP specifically contemplates that a defendant may propose to mitigate all or a portion of the civil penalty, and that ACHD has discretion to mitigate the entire penalty if it determines that the SEP is of outstanding quality.¹³ ACHD applied that discretion and determined that mitigation of the entire amount of ACHD's portion of the civil penalty was appropriate, based on the following criteria set forth in the CPP:

1. The SEP will provide significant, quantifiable benefits to public health or the environment;
2. The SEP will provide environmental or public health benefits to a community that may have been disproportionately exposed to pollution or is at environmental risk;
3. The SEP was developed with active solicitation and consideration of community input;

¹¹ *Turtle Creek Connector Trail Feasibility Study*, p. V-2 – V-4.

¹² *Turtle Creek Connector Trail Feasibility Study*, pp. IV-1 to IV-3.

¹³ ACHD CPP, pp. 6 – 7.

4. The SEP will further the development, implementation, or dissemination of innovative processes, technologies, and/or methods which will improve the public health or environment;

5. The SEP will reduce emissions to one or more mediums; and

6. The SEP will develop and implement pollution prevention techniques and practices that reduce the generation of a pollutant.¹⁴

7. In addition to the preceding six expressly enumerated factors, the CPP states that the ACHD will consider “factors specific to the violator and the enforcement action.”¹⁵

21. The CPP does not expressly say that a SEP must meet all factors in order to have the Civil Penalty mitigated by 100%. Instead, the ACHD “has the discretion to set the penalty mitigation amount as high as 100% of the estimated SEP cost.”¹⁶ In exercising its discretion, the ACHD will consider the quality of the SEP, including its benefit to public health and/or the environment.¹⁷

22. ACHD considered these factors and determined that the SEP is of “outstanding quality” and will deliver direct public health, environmental, and economic benefits to impacted communities:

a. Regarding Factor 1, as previously explained, the SEP “will provide significant, quantifiable benefits to public health,” as well as environmental benefits.

b. Regarding Factor 2, as previously explained, the SEP will directly benefit several communities that “may have been disproportionately exposed to pollution” by the alleged violations.

c. Regarding Factor 3, the Turtle Creek Connector Trail Feasibility Study “was completed over a two-year period beginning in January 2020.”¹⁸ Allegheny County’s design consultant, Allegheny County, and “project team members, including . . . Pennsylvania Department of Transportation (PennDOT), Southwestern Pennsylvania Commission (SPC), and Friends of the Riverfront, collaborated to gather input from the public and affected

¹⁴ ACHD *CPP*, pp. 6 – 7.

¹⁵ ACHD *CPP*, p. 6.

¹⁶ ACHD *CPP*, p. 7.

¹⁷ ACHD *CPP*, p. 7.

¹⁸ *Turtle Creek Connector Trail Feasibility Study*, p. I-3.

communities.”¹⁹ The project team used the following tools to gather public input for the Study: “website, press releases, a virtual public meeting, fliers and brochures, signs along trails, public open houses, and direct engagement with municipal officials and stakeholders.”²⁰ Additionally, the Allegheny county Department of Public Works held a public meeting from 6 p.m. to 7:30 p.m. on Wednesday, June 23, 2021, via the Microsoft Teams video conferencing app. Plus, Allegheny County and its design consultant, WSP, held two in-person open houses on the Turtle Creek Connector Trail Feasibility Study.²¹

d. Regarding Factor 4, as previously explained, the success of the GAP Trail and WHT have already encouraged additional trail development in places like Trafford.²² Therefore, it is reasonable to anticipate that the Connector Trail will encourage and result in additional trail development. Given the public health and environmental benefits of trail use, such continued trail development would be an increase in the dissemination of innovative methods to improve both public health and the environment.

e. Regarding Factors 5 and 6, the Connector Trail is anticipated to result in the increased use of public transit and bicycles for commuting. In turn, that would result in a decrease in emissions from personal, fossil-fuel-based motor vehicles.

f. Regarding Other Specific Circumstances:

i. First, USS has already implemented and agreed to implement additional pollution control measures at the Edgar Thompson Plant.²³

ii. Second, based on the conclusions of the Turtle Creek Connector Feasibility Study, the SEP would help to address the economic disparities faced by community residents, particularly residents who come from historically underserved and disenfranchised populations. More specifically, “[m]ulti-use trails have been documented to improve the local economy of the towns through which they pass, increasing property

¹⁹ Allegheny County, *County Publishes Turtle Creek Connector Trail Feasibility Study Report*, <https://alleghenycounty.us/News/2022/6442477471.aspx> (March 18, 2022).

²⁰ *Turtle Creek Connector Trail Feasibility Study*, p. IV-1.

²¹ Allegheny County, *REMINDER: Public Meeting to Discuss Trail Feasibility Study to Occur Tomorrow*, <https://alleghenycounty.us/News/2021/Public-Works-2021/6442474938.aspx> (June 22, 2021).

²² *Turtle Creek Connector Trail Feasibility Study*, p. II-9.

²³ *See Proposed Consent Decree*, ¶¶ 14 – 63.

values, attracting businesses and new residents while increasing civic pride.”²⁴ Among other things, “a 2021 study of GAP trail-related business in 2019 found that” the GAP Trail had a “total economic impact of” “\$121 million - \$800,000 per mile,” which included “support[ing] 1,393 jobs, generating \$52.6 million in employee wages.”²⁵ By building the Connector Trail, it is anticipated that the impacted communities will enjoy similar economic benefits.

iii. Third, the Proposed Consent Decree contains stipulated penalties if USS “fails to satisfactorily complete the” SEP.²⁶ Those penalties start at \$1,000 per day and go up to \$4,000 per day.²⁷ Furthermore, the Proposed Consent Decree states that if the SEP is satisfactorily completed, but USS does not pay the full \$750,000.00 toward the SEP, then USS must still pay the remainder of the \$750,000.00 as a stipulated penalty.²⁸

23. Several commenters raised the issue of public access to future consent decree documents. ACHD currently maintains a Compliance Status Report website²⁹ where it provides publicly available information related to its enforcement efforts. In order to facilitate public understanding of the Consent Decree for the Edgar Thomson Facility, ACHD intends to post the semi-annual reports to be submitted by U. S. Steel to EPA and ACHD under the consent decree.

I declare under penalty of perjury under the laws of the Commonwealth of Pennsylvania that the foregoing is true and accurate.



Executed this 12 day of October 2022, in Pittsburgh, Pennsylvania.

Dated: October 12, 2022

²⁴ Turtle Creek Connector Trail Feasibility Study, p. II-13 (citing New York Parks & Conservation Association and The Business Council of New York State, Inc., *Greenways & Trails Bringing Economic Benefits to New York* (2000)).

²⁵ Turtle Creek Connector Trail Feasibility Study, p. II-14 (citing Fourth Economy on behalf of the Great Allegheny Passage Conservancy, *Great Allegheny Passage Economic Impact Report* (November 2021)).

²⁶ Proposed Consent Decree, ¶ 77.

²⁷ Proposed Consent Decree, ¶ 77.

²⁸ Proposed Consent Decree, ¶ 77.

²⁹ The current web address is <https://www.alleghenycounty.us/Health-Department/Programs/Air-Quality/Compliance-Status-Report.aspx>, which could possibly change.

Exhibit A: Turtle Creek Connector Trail Feasibility Study
Declaration of Allason Holt from the Allegheny County
Health Department in Support of the United States'
Motion to Enter Consent Decree

Turtle Creek Connector Trail Feasibility Study

Westmoreland Heritage Trail (WHT)
to the
Great Allegheny Passage (GAP)

Final Report: January 2022



Allegheny County Public Works
Allegheny County Economic Development
Office of the Allegheny County Executive

Allegheny County, Pennsylvania



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I. INTRODUCTION**Acknowledgments**

This study was overseen by a project steering committee comprised of the following individuals:

- Meghan Sexton, P.E., Assistant Deputy Director, Allegheny County Department of Public Works
- Jason Molinero, P.E., Deputy Director, Allegheny County Department of Public Works
- Dave Wright, P.E., Civil Engineer, Allegheny County Department of Public Works
- Ann Ogoreuc, AICP, Assistant Director of Mobility and Transportation Initiatives, Allegheny County Economic Development
- Anthony Schneider, AICP, Planner II – Transportation, Allegheny County Economic Development
- Jessica Mooney, Manager of Special Projects, Allegheny County Executive’s Office
- Darla Cravotta, Director of Community Relations and Special Projects, Allegheny County Executive’s Office
- Mark Young, District Environmental Planning Manager, PennDOT Engineering District 11-0
- Todd Crouch, Environmental Supervisor – NEPA, PennDOT Engineering District 11-0
- Stephanie Spang, Design Planner – PennDOT Connects, PennDOT Engineering District 11-0
- Bill Lesterick, Pedestrian and Bicycle Coordinator, PennDOT Engineering District 11-0
- Ryan Gordon, Manager, Transportation Program Development, Southwestern Pennsylvania Commission
- Lillian Gabreski, Project Development Planner, Southwestern Pennsylvania Commission
- Courtney Mahronich Vita, Director of Trail Development, Friends of the Riverfront
- John Nicholson Jr., P.E., Consultant Project Manager, WSP USA Inc.
- Chad Smedley, EIT, Consultant Civil Engineer, WSP USA Inc.

The Steering Committee would like to acknowledge the guidance and assistance provided by the following individuals and organizations: Shane’ Lanham (Rankin Borough); Deborah Brown, Tina Doose, and Chardaé Jones (Braddock Borough); Douglas Marguriet, Vicki Vargo (North Braddock Borough); Seth Abrams (East Pittsburgh Borough); Julie Pantalone, Kelly Kelley (Turtle Creek Borough); Caroline Lang, Glen Gilliland (Wilmerding Borough); Patricia Logo (North Versailles Township); Annette Dietz, Mike Bolen (Pitcairn Borough); Tim Little, Paul Estok (Municipality of Monroeville); Ashley Stack (Trafford Borough); Brandon Simpson (Westmoreland County Parks & Recreation); Stan Rudge (Westmoreland Heritage Trail); Amanda Settellaier (Turtle Creek Valley COG); Erin Deasy (Redevelopment Authority of Allegheny County); Jason McCabe (Turtle Creek Watershed Association); Tim White (Regional Industrial Development Corporation), and Matt Kundrat.

This project was also greatly assisted by the many individuals that participated at the general public and stakeholder meetings.

Background

The Allegheny County Department of Public Works (ACDPW), Allegheny County Economic Development (ACED), and the Office of the Allegheny County Executive, in partnership with the Southwestern Pennsylvania Commission (SPC), the Pennsylvania Department of Transportation (PennDOT), the Federal Highway Administration (FHWA), and Friends of the Riverfront, conducted a study to assess the feasibility

of providing a multimodal, or active transportation, connection through the communities of the Turtle Creek Valley that will connect the Great Allegheny Passage (GAP) via a future rehabilitation of the Carrie Furnace Hot Metal Bridge in Rankin Borough to the Westmoreland Heritage Trail (WHT) in Trafford Borough.

The study was funded by a Livability through Smart Transportation grant from SPC. PennDOT provided oversight for the grant. Allegheny County provided local match funding.

The study area is shown in Figure 1.1. On the western end, the corridor begins on the Carrie Furnace Redevelopment site in Rankin and Swissvale. This is where a future connection to the GAP trail will be made via a future rehabilitation of the site's Hot Metal Bridge over the Monongahela River. To the east, the corridor includes Braddock, North Braddock, and East Pittsburgh. From East Pittsburgh, the corridor generally follows Turtle Creek through the communities of Turtle Creek, Wilmerding, Monroeville, Pitcairn and Trafford and passes closely to North Versailles, East McKeesport, and Wall. The connection to the existing WHT is in B-Y Park in Trafford.

Project Purpose and Need

To comply with the National Environmental Policy Act (NEPA), project partners defined the study's purpose and need. The Project Purpose and Need was prepared pursuant to PennDOT Publication 319 – Need Study Handbook (May 2020).

Purpose Statement

The purpose of the proposed project is to provide an accessible, convenient, and equitable system linkage between the GAP and the WHT, thereby improving the connectivity and utilization of these and other existing transportation assets while improving the well-being of the citizens in and around the corridor.

Needs Statement

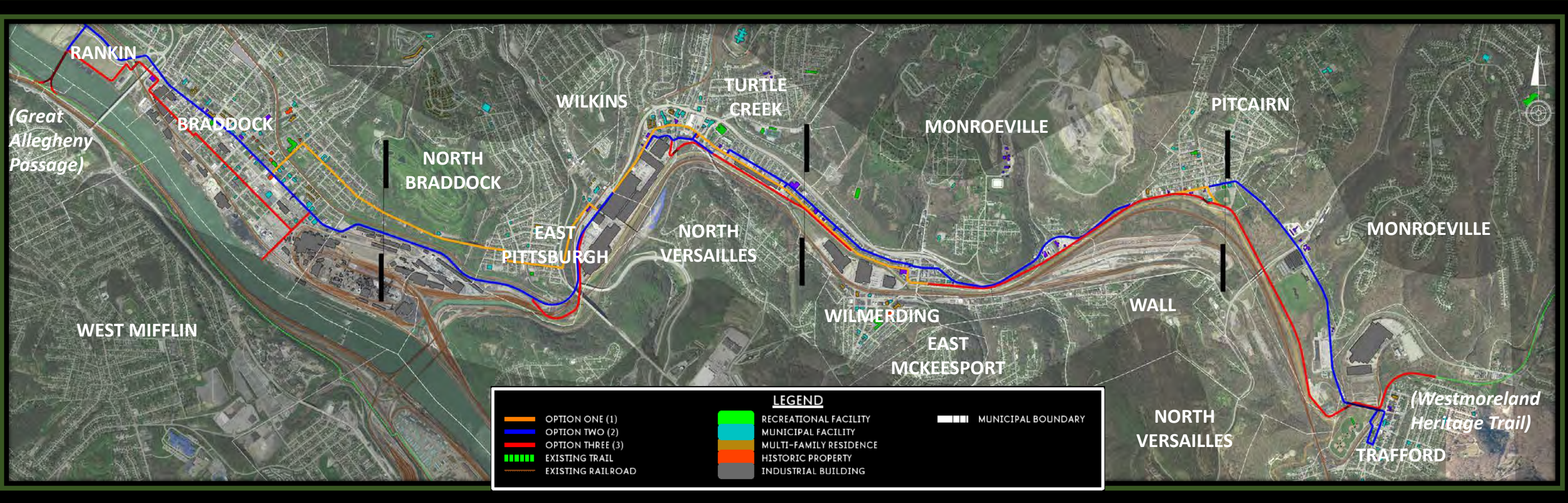
System Linkage

Currently there is no physical connection between the GAP and WHT trail systems. By establishing a system linkage between the WHT and the GAP, citizens in the region will be provided with a physical and thereby an economic connection between the economically disadvantaged communities of the Turtle Creek Valley and surrounding communities. The project will ultimately connect to a vast trail network with direct access to regional attractions and employment centers in Pittsburgh including Downtown, Oakland, the Southside and Homestead, as well as points east including Murrysville, Delmont, Saltsburg, PA, Washington, D.C. and beyond.

Multimodal Connectivity

The proposed corridor has deteriorated and fragmented pedestrian and bicycle facilities with minimal connectivity to transit and roadway facilities. The proposed connection would provide multimodal connectivity by linking several of the communities in the Turtle Creek Valley including Rankin, Braddock, North Braddock, East Pittsburgh, Turtle Creek, Wilmerding, Monroeville, Pitcairn and Trafford, PA and will pass closely to North Versailles, East McKeesport, and Wall. Decades ago, before widespread automobile travel, people in these communities relied mainly on trolley rail service or walking for transportation in and among the industry-centered company towns of the Monongahela River and Turtle Creek Valleys. Construction of the Tri-Boro expressway (carrying a portion of PA 130) in 1968 and other urban renewal projects allowed for reduced vehicle delays but fragmented the pedestrian facilities.

Figure 1.1: Study Area Map



Relationship to Existing Plans

During the planning process the project team took careful consideration and evaluation of existing plans that have been completed throughout the corridor. These plans served as the foundation for this effort. The connectivity of the GAP and WHT trails systems has been noted and discussed in many recent planning studies including the Five Boroughs Active Transportation Plan (2018); the BEN Comprehensive Plan (2021) for Braddock, East Pittsburgh, and North Braddock; and the Monroeville Active Transportation Plan (2019). In addition, the project team considered work developed by a local interested party. This study seeks to address some of the key goals and objectives of these existing studies by evaluating possible alternatives and feasibility within the respective municipalities.

Overview of the Study Process and Report Organization

The feasibility study was completed over a two-year period beginning in January 2020. The process began with the development of the study's purpose and needs. The existing conditions analysis (Chapter II) provided an overview of the study area's history and topography, traffic and transportation network characteristics, public transportation services, and demographics. Upon completing the existing conditions review and conducting field views in the corridor, the project team began developing alternatives for trail alignments and their associated costs, benefits, and constraints (Chapter III). Throughout the study, project team members utilized a wide variety of tools to obtain input from stakeholders such as outreach meetings with municipal officials, a project website, a virtual public meeting, and two in-person public open houses (Chapter IV). The study concluded in early 2022 with the release of this final report. An overview of next steps is described in Chapter V.

II. SUMMARY OF EXISTING CONDITIONS

Introduction

This chapter describes the existing attributes of the study corridor including its geographical features, historical development patterns, transportation networks, and demographic characteristics. A graphical depiction of the existing conditions of the infrastructure and land use may be found in the *Existing Conditions Figures* (Appendix A).

Study Area Context

The following sections provide context with details of the study corridor's geography; historical and projected population changes and related industrial history; traffic on the existing highways and local streets; existing multi-use trails including the Great Allegheny Passage and Westmoreland Heritage Trail, planned trail extensions and land development plans in and near the corridor.

Geography

The beautiful hills and valleys of the corridor are well described in the *Final Report- Ethnographic Survey- Turtle Creek Valley*- Bob Carlin and Steffi Domike- October 29, 1992:

The Turtle Creek Valley runs [11 miles] east of [Downtown] Pittsburgh, built along a tributary of the Monongahela River, which runs north/south. The Valley itself consists of a small, level area that runs along both sides of the Creek in Eastern Allegheny County, rapidly rising up to thickly forested hills. Because of the difficulty of building homes on these hillsides, combined with the location of workplaces and business districts close by the Creek, the hills have remained thinly populated. Although the industrial buildings still remain, the closing of riverfront commercial sites have cleared the air, making it more possible to appreciate the beauty of the area. In the early morning or at sunset, the view from the hilltops is quite spectacular, and remind one of what the Valley must have been like before the coming of industry.

Because the Turtle Creek separates municipalities from one another, bridges were built to connect towns to each other and to outside communities. These physical bridges help define relationships between communities. For example, it is relatively easy to get from Turtle Creek to Wilmerding because a bridge joins the two communities. However, there is no bridge between Pitcairn proper and the town of Wall. The Westinghouse Bridge, opened in 1932, helped join East Pittsburgh to a larger geographic area, but, also divided the community in two and routed traffic away from the Turtle Creek Valley. The Bridge also facilitated the out-migration of area residents to Westmoreland County. Towns are built along the level ground on both sides of the Creek. From west to east, they include East Pittsburgh, Turtle Creek (both on the north side), Wilmerding (both sides), Pitcairn (north side), Wall and Trafford (both on the south side).

Industrial History and Outmigration

The corridor has undergone several changes since modern settlement began around the 1850s with the establishment of accommodations for stagecoach passengers, followed by coal mines, railroad stations and heavy industry of national significance. Population peaks in these industrial communities varied mainly between the decades of 1920s to 1930s. Central Business Districts (CBDs) in the corridor served most of the day-to-day needs of their citizens including work, shopping, entertainment, schools, and other institutions. After WWII, outmigration grew with the preponderance of the personal automobile and

suburban sprawl: The Penn-Lincoln I-376 Parkway East (3 miles to the north) opened to regional traffic in 1956 to connect the eastern suburbs with Oakland and Downtown Pittsburgh. Within the corridor, the Tri-Boro Expressway opened in 1968 between East Pittsburgh and Wilmerding. Suburban shopping centers began supplanting the old town centers as early as the 1950s: Miracle Mile shopping center opened in Monroeville in 1954, followed by Eastland Shopping Mall in North Versailles in 1964 and Monroeville Shopping Mall in Monroeville in 1969. These projects highlight the Post-WWII suburbanization trend which in part reflects the population loss of many of the communities in the study. Ultimately, offshoring and automation of manufacturing jobs contributed to the industrial collapse and economic downturn of the 1980s which further devastated many of communities of the Monongahela and Turtle Creek Valleys, including many of the communities in the study area.

The rich history of heavy industry is still visible, including the steel-making along the Monongahela River and electrical and railroad equipment production in the Turtle Creek Valley. Beginning at the western edge of the corridor the Rivers of Steel: The Carrie Blast Furnaces National Historic Landmark stands in tribute to the former Homestead Steel Works Carrie Furnace near the site's Hot Metal Bridge in Swissvale and Rankin, PA. The Carrie Blast Furnaces stopped operations in 1982 but guided tours of the remnants are provided by the Rivers of Steel nonprofit. Moving east is the existing Mon Valley Works—Edgar Thomson Plant of the United States Steel Corporation in Braddock, active since 1872 and still in operation producing steel slabs. Then, moving east toward the center of the corridor, passing under the magnificent concrete arch George Westinghouse Bridge, into the Turtle Creek Valley, is the former Westinghouse Electric Plant in East Pittsburgh, Turtle Creek and North Versailles, PA. This plant closed in 1987 and is now operating as the RIDC Keystone Commons Industrial Park. Continuing east, in Wilmerding, the Westinghouse Airbrake Plant is still manufacturing railway air brakes under the name WABTEC as of 2020. Finally, the Pitcairn Rail Yard in the east of the corridor, which opened in 1882, is now an intermodal freight transport yard for Norfolk Southern. Several other supporting industries operated among these major players which together employed tens of thousands of workers during their peak years. While some of these industrial sites still employ workers, their influence on the towns has greatly diminished from the peak production years of and prior to WWII.

Overview of Existing Highways and Local Streets

Three highways play the most significant role in the transportation of people and goods within the corridor, each flowing into the next. From east to west in the corridor: Braddock Avenue, the Tri-Boro Expressway / PA-130, and Broadway Boulevard / PA-130. These form the main motor vehicle backbone of the area.

Beginning in the west of the corridor, near the Rankin Bridge, Braddock Avenue carries over 8,500 ADT (Average Daily Traffic) through the central business district of Braddock, PA. Transit service feeds into and along this artery and sidewalks accommodate pedestrians on both sides of the street of this recovering business district. Moving eastward out of Braddock and into North Braddock and East Pittsburgh, past the Mon Valley Works—Edgar Thomson Plant, Braddock Avenue carries about 6,700 ADT. Sidewalks are limited or do not exist and the road becomes unfriendly to cyclists and pedestrians. There is no transit service in this stretch of road.

Continuing east under the George Westinghouse Bridge (which carries US Route 30, over 200 feet overhead), Braddock Avenue widens to four lanes and divides and bifurcates into an upper and lower portion of expressway-like highway. Its lower portion carries eastbound traffic and its upper portion carries westbound traffic. Portions of this section are on structure and its width and geometry encourage higher speeds. Moving east into Turtle Creek Borough, the eastbound portion of Braddock Avenue diverts

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to the right on its pre-1968 alignment and towards the Turtle Creek central business district. The main highway changes its name to Tri-Boro Expressway at the intersection with Electric Avenue, one of several signalized intersections in this stretch. This 4-lane arterial section carries the highest traffic volumes of the corridor, over 15,600 ADT. While sidewalks exist here, they are often limited to only one side of the highway and the narrow width, geometry, and automobile speeds leave pedestrians with an uneasy feeling. Transit service runs across but not along this section of highway. PA-130 joins the Tri-Boro at the signalized intersection with Brown Avenue (which connects to Wilkins Township and Churchill and I-376 The Parkway East 3 miles to the north). Leaving Turtle Creek Borough and heading east towards neighboring Wilmerding, Tri-Boro Expressway has a near freeway-like geometry and no traffic signals and has no sidewalks nor transit service.

Tri-Boro Expressway / PA-130 continues east out of Wilmerding then skirts the southern edge of Monroeville, returns to a two-lane arterial carrying about 12,000 ADT where it changes its name to Broadway Boulevard. Transit Route P69 Trafford rejoins here and Broadway Boulevard continues into the central business district of Pitcairn through several traffic signals. Broadway Boulevard / PA-130 passes out of Pitcairn and again through Monroeville and the major signalized intersection with PA-48 / Mosside Boulevard. Continuing east, approaching Trafford, the route then passes through the Haymaker Road / Forbes Road signal and finally turns left into Trafford, PA becoming Fifth Street / PA-130 then through the heart of Trafford along Fifth Street, Forest Avenue and Seventh Street / PA-130 where the study corridor ends at the intersection with Forbes Road and the trail head at Parkside Creamery, a few hundred feet northeast of B-Y Park in Trafford Borough, Westmoreland County.

Additionally, two second-tier routes run roughly parallel this main backbone: the first, running to the north of Braddock Avenue and sitting at a higher elevation on the hill in North Braddock and East Pittsburgh, comprises Bell Avenue, Center Avenue and Center Street. They carry approximately 2,300, 2,100 and 2,800 ADT respectively, through North Braddock and East Pittsburgh boroughs and sit just north of and parallel to the Norfolk Southern rail lines. These minor arterials have sidewalks of varying quality as they run through residential neighborhoods. Route 61A North Braddock provides transit service along two blocks of Bell Avenue in the west and the P68 Braddock Hills Flyer provides service on the eastern side of this route, when it ends at a signalized T-intersection at US-30 / Lincoln Highway.

The second set of second-tier streets run through lower East Pittsburgh, Turtle Creek and into Wilmerding and includes the eastern-most portion of Braddock Avenue, Penn Avenue Extension and Airbrake Avenue. This route formed one of the corridor's main thoroughfares before the construction of the Tri-Boro Expressway in 1968. It begins at the former Westinghouse Electric in East Pittsburgh (now home to RIDC's Keystone Commons) passes through downtown Turtle Creek where it is called Penn Avenue then becomes Airbrake Avenue at the signalized intersection with Monroeville Avenue / Greensburg Pike. Finally, Airbrake Avenue leads to Wilmerding as it passes Wabtec Global Services (formerly Westinghouse Airbrake plant). It terminates at the signalized intersection with Patton Avenue which leads to Wall, PA south of the Turtle Creek. The ADT is about 2,400 and four transit routes provide service along these 2-lane minor arterials: 69 Trafford, P69 Trafford Flyer, 59 Mon Valley and P68 Braddock Hills Flyer. A circuitous route on Avenue U, Watkins Avenue and State Street connects with Broadway Boulevard / PA-130 (at the end of the Tri Boro Expressway).

Also noteworthy is SR 2183 in East Pittsburgh: this partially abandoned road carries 186 ADT and veers right off eastbound South Braddock Avenue on the eastern side of the Edgar Thomson Plant. It appears to have been the original alignment of South Braddock Avenue and bypass the bike-unfriendly Tri Boro Expressway portion of Braddock Ave. SR 2183 is blocked by a locked gate which is reportedly controlled by Keystone Commons.

Existing Street Design Deficiencies

The original streets of the corridor were built in the late 1800s to accommodate street cars, pedestrians and horse-drawn vehicles through central business districts—typically one in each town—and to and from the residences of varying size and quality built for factory workers and their families. As automobile ownership and use expanded post-1945, and as the interstate highway system was built with the Federal Aid Highway Act of 1956, motor vehicle traffic increased throughout the region. The Tri Boro Expressway, carrying a portion of PA 130 cut through the corridor and opened to traffic in 1968. This semi-limited access 4-lane divided urban renewal project was primarily designed to handle freight and other motor vehicle traffic passing through the corridor and outside of the CBDs. However, the expressway lacks connections with any regional highways of similar classification or capacity—aside from the similarly-constrained SR 2037 East Pittsburgh-McKeesport Blvd to the south. It is connected to the 2-lane Braddock Avenue in the west and the 2-lane Broadway Boulevard in the east. Its construction involved extensive right-of-way takes including razing 320 buildings. Furthermore, the expressway dead-ended several local streets, partially severing local connectivity. Although many of the local roads still have sidewalks and bus service, the street network and traffic signals are currently overall oriented more towards automobile users. Aside from the Tri-Boro Expressway, there is significant on-street parking throughout much of the corridor. Cyclists must operate in mixed traffic with cars, trucks, and buses.

Realizing the need to rethink how best to accommodate the needs of travelers using the region's streets, the Five Boroughs (Rankin, Braddock, North Braddock, East Pittsburgh, and Turtle Creek) and the Municipality of Monroeville have recently completed active transportation studies and reports. The guidance from these reports includes shifting local policy which views streets as primarily for automobiles to one which seeks balance among transit riders, pedestrians, bicyclists, and motor vehicle operators. Design criteria and policies resulting from the studies has been developed to support context sensitive and multi-modal priorities and to change the engineering standards that have prioritized automobile travel since at least 1945.

Refer to Table 2.1 for Average Daily Traffic (ADT) of primary corridor streets and other pertinent data from the PennDOT Traffic Information Repository (TIRe).

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Table 2.1: Highway Characteristics and ADT

| Street | ADT | Municipality | Functional Classification | Truck Percent | Number of Lanes | Traffic Growth Rate |
|---|--------|-------------------------------------|---------------------------|---------------|-----------------|---------------------|
| Rankin Bridge | 21,513 | Rankin, Whitaker | Principal Arterial | 5 | 4 | 1.53% |
| Braddock Avenue (Downtown Braddock) | 8,557 | Rankin, Braddock | Principal Arterial | 8 | 2 | 0.50% |
| Braddock Ave (between O'Connell and SR 2183) | 6,727 | East Pittsburgh | Principal Arterial | 6 | 2 | 0.50% |
| Braddock Ave SR 2083 (between SR 2183 and East Pittsburgh / McKeesport Blvd., SR 2037) | 6,728 | East Pittsburgh | Expressway (Divided) | 6 | 4 | 0.50% |
| Braddock Ave (between East Pittsburgh / McKeesport Blvd., SR 2037 and Electric Avenue, SR 2112) | 9,411 | Turtle Creek | Expressway (Bifurcated) | 7 | 4 | 0.50% |
| Bell Avenue | 2,327 | North Braddock | Minor Arterial | 5 | 2 | 0.50% |
| SR 2183 | 186 | East Pittsburgh | | 7 | 2 | 0.50% |
| Center Avenue | 2,115 | East Pittsburgh | Minor Arterial | 2 | 2 | 0.50% |
| Center Street | 2,816 | East Pittsburgh | Minor Arterial | 3 | 2 | 0.50% |
| Tri-Boro (between Electric Avenue SR 2112 and Brown Avenue, PA-130) | 13,287 | Turtle Creek | Expressway (Divided) | 7 | 4 | 0.50% |
| Tri-Boro (between Brown Avenue PA-130 and Larimer Avenue, SR 2065) | 15,699 | Turtle Creek | Expressway (Divided) | 5.5 | 4 | 0.50% |
| Tri-Boro PA-130 (between Larimer Avenue, SR 2065 and Spring Street and Broadway Blvd) | 12,364 | Turtle Creek Wilmerding Monroeville | Expressway (Divided) | 7.5 | 4 | 0.50% |
| Penn Ave./Airbrake Ave. | 2,451 | Turtle Creek Wilmerding | Collector | 10 | 2 | 0.50% |
| Broadway Boulevard 1, PA-130 | 12,364 | Monroeville Pitcairn | Principal Arterial | 7 | 2 | 0.50% |
| Broadway Boulevard 2, PA-130 | 11,841 | Monroeville | Principal Arterial | 7 | 2 | 0.50% |
| Fifth Street, PA-130 | 7,055 | Trafford | Minor Arterial | 3 | 2 | 0.50% |
| Forest Ave. / Seventh St / PA-130 | 2,361 | Trafford | Minor Arterial | 6 | 2 | 1.53% |
| Forbes Road, SR 2021 | 5,724 | Trafford | Major Collector | 5 | 2 | 1.53% |

Source: PennDOT Traffic Information Repository (TIR) <https://gis.penndot.gov/TIR/>

Overview of Existing and Proposed Transit Service

The Port Authority of Allegheny County operates regularly scheduled bus service in the study corridor on six routes of varying service areas, operating times, and headways. Refer to Table 2.2 for a detailed list of bus routes and attributes. All bus stops are presented in the Existing Conditions Figures in Appendix A.

Several of the routes, (P7, P68, and P69) use the Martin Luther King Jr. East Busway (a two-lane bus-only highway running between Swissvale and Downtown Pittsburgh) to shorten travel time between the east and Downtown. The busway terminates approximately a half mile from the eastern edge of the study corridor at Swissvale Station. While outside the limits of this project, future opportunities may arise for a trail connection with the busway, either at Swissvale Station or Hamnet Station (both in Swissvale about a half mile and 1 ½ miles to the northeast, respectively). As a result of its recently adopted NexTransit 25-year long-range plan, Port Authority may explore an extension of the East Busway into the study corridor. A busway extension is among the plan's short-term recommendations. An extension could potentially utilize the existing railroad corridor and/or on-street bus rapid transit with stops in Braddock and East Pittsburgh. Future planning efforts would determine the extension's terminus, possibly Monroeville or McKeesport.

A multi-use trail could enhance the quality of transit service in the corridor by providing last-mile connections from bus stops to destinations. Each of the Port Authority buses is equipped with a front-mounted bike rack that holds two bicycles, thereby extending the range of cyclist-bus riders.

Additionally, the Downtown-Uptown-Oakland-East End Bus Rapid Transit (BRT) project is currently in final design and scheduled to begin to operate in 2023. While the main physical infrastructure for the BRT will be outside of the multi-use trail study limits, two of the routes in the corridor, 61A North Braddock and 61B Braddock – Swissvale, will become BRT routes using exclusive bus lanes and thereby potentially enhancing service to trail users in the study corridor. Refer to Table 2.2 for existing transit service details including route names, communities served, service frequency, and average daily ridership.

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Table 2.2: Transit Service Overview

| Transit Route and Type of Service | Communities Served | Service Frequency Weekdays (Headway Time, Minutes) | | | Average Daily Ridership | | |
|--|--|---|----------|-------|-------------------------|-------|-----|
| | | AM | Off-Peak | PM | M-F | Sat | Sun |
| 59 Mon Valley <i>Local - no service to Downtown</i> | North Versailles • Turtle Creek • East Pittsburgh Forest Hills • Braddock Hills • North Braddock • Braddock • Swissvale • Rankin • Munhall The Waterfront • Homestead • Whitaker • Duquesne McKeesport • Dravosburg • West Mifflin | 30 | 60 | 60 | 1,462 | 1,254 | 814 |
| P7 McKeesport Flyer <i>Commuter</i> | Via East Busway Downtown • Edgewood • Swissvale • Rankin • West Mifflin • Duquesne • McKeesport | 30 | - | 30 | 174 | - | - |
| 61B Braddock - Swissvale <i>Local (Slated to become BRT Route outside of Study Corridor)</i> | Downtown • Uptown • Soho • Oakland • Squirrel Hill • Regent Square • Swissvale • Rankin • Braddock | 15 | 20 | 30 | 1,312 | 1,075 | 695 |
| 61A North Braddock <i>Local (Slated to become BRT Route outside of Study Corridor)</i> | Downtown • Uptown • Soho • Oakland Squirrel Hill • Wilkinsburg • Edgewood • Swissvale North Braddock • Braddock | 15-20 | 15-20 | 30 | 1,643 | 1,327 | 905 |
| P68 Braddock Hills Flyer <i>Local</i> | Via East Busway Downtown • Wilkinsburg Braddock Hills • North Braddock • East Pittsburgh Turtle Creek • Monroeville | 30 | 60 | 30-60 | 632 | 440 | 311 |
| 69 Trafford <i>Local</i> | Downtown • Oakland • Squirrel Hill • Point Breeze Wilkinsburg • Forest Hills • Chalfont • East Pittsburgh Turtle Creek • Wilmerding • Pitcairn • Trafford | 30 | 60 | 30 | 559 | 178 | 124 |
| P69 Trafford Flyer <i>Commuter</i> | Via East Busway Downtown • Wilkinsburg Forest Hills • Chalfont • East Pittsburgh • Turtle Creek Wilmerding • Pitcairn • Trafford | 30 | - | 30 | 94 | - | - |

Source: Port Authority of Allegheny County System Map and PDF Time Tables <https://www.portauthority.org/system-map/>, accessed November 15, 2021.

Existing Multipurpose Trails - GAP and WHT

Both the GAP¹ and the WHT² are well-used important regional assets, enjoyed by both recreational riders and commuters. Potential connections to the GAP and WHT are shown in Figure 1.1. The study corridor's relationship to the larger regional trail network, much of which is itself still in development or under construction, is shown in Figure 2.1.

On the GAP, there were 151,148 users³ counted in 2020 near milepost 138.3 near the Rankin Bridge in Whitaker, just east of the trail head at the Rivers of Steel Pump House & Water Tower at The Waterfront lifestyle center. This averages to about 414 users per day for the year with the busiest months being May, August, and September and very low activity in January and February. The daily average for May and August is about 767 users per day on this section of the GAP. Overall, this site is on the western side of the study corridor. Trail usage varies through the seasons as shown in Table 2.3.

Table 2.3: 2020 Monthly Usage (persons) on Great Allegheny Passage Trail at the Rankin Bridge

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|-----|-----|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|---------|
| 152 | 152 | 13,796 | 15,122 | 23,802 | 16,949 | 10,086 | 21,607 | 23,021 | 14,647 | 9,443 | 2,371 | 151,148 |

Source: Analysis of 2020 Trail Usage Patterns along the Great Allegheny Passage Final Report, February 8, 2021, by Dr. Andrew R. Herr, Associate Professor of Economics Saint Vincent College

The GAP runs 150 miles, continuously, from Point State Park in Pittsburgh to Cumberland, Maryland where it meets the 184.5-mile C & O Towpath trail, creating a complete 334.5-mile connection to Washington, D.C., free of automobile traffic. It is one segment of the Potomac Heritage National Scenic Trail and is described as follows:

*"The 150-mile Great Allegheny Passage soars over valleys, snakes around mountains, and skirts alongside three rivers (the Casselman, Youghiogheny, and Monongahela) on its nearly level path. Cyclists pass through the Cumberland Narrows, cross the Mason-Dixon Line, top the Eastern Continental Divide at 2,392', weave through the breathtaking Laurel Highlands, wind their way through 19,052-acre Ohiopyle State Park, journey through the region's coke, coal, mining, and steel-making corridor, and end at Pittsburgh's majestic Point State Park."*⁴

Less count information is available regarding usage for the WHT; however, a one-week count in July and August in 2020 indicated the daily average is about 730 users on the WHT near Duff Park in Murrysville (R. Cronauer, email communication, August 28, 2020).

The WHT currently comprises two completed sections, separated by a gap between northeastern edge of Delmont and Export. The trail is most popular on Sundays when a great number of recreational users of all ages enjoy biking and hiking on the trail (on Sunday August 16, 2020 there were 1,313 trail users counted in Murrysville). The WHT is described as follows, starting in the northeast at Saltsburg and running to the southwest at Trafford:

"... a scenic bicycle and walking trail covering 8.5 miles from Saltsburg to Delmont and 9.3 miles from Export to Trafford. Future expansion is in progress to connect the two sections [between

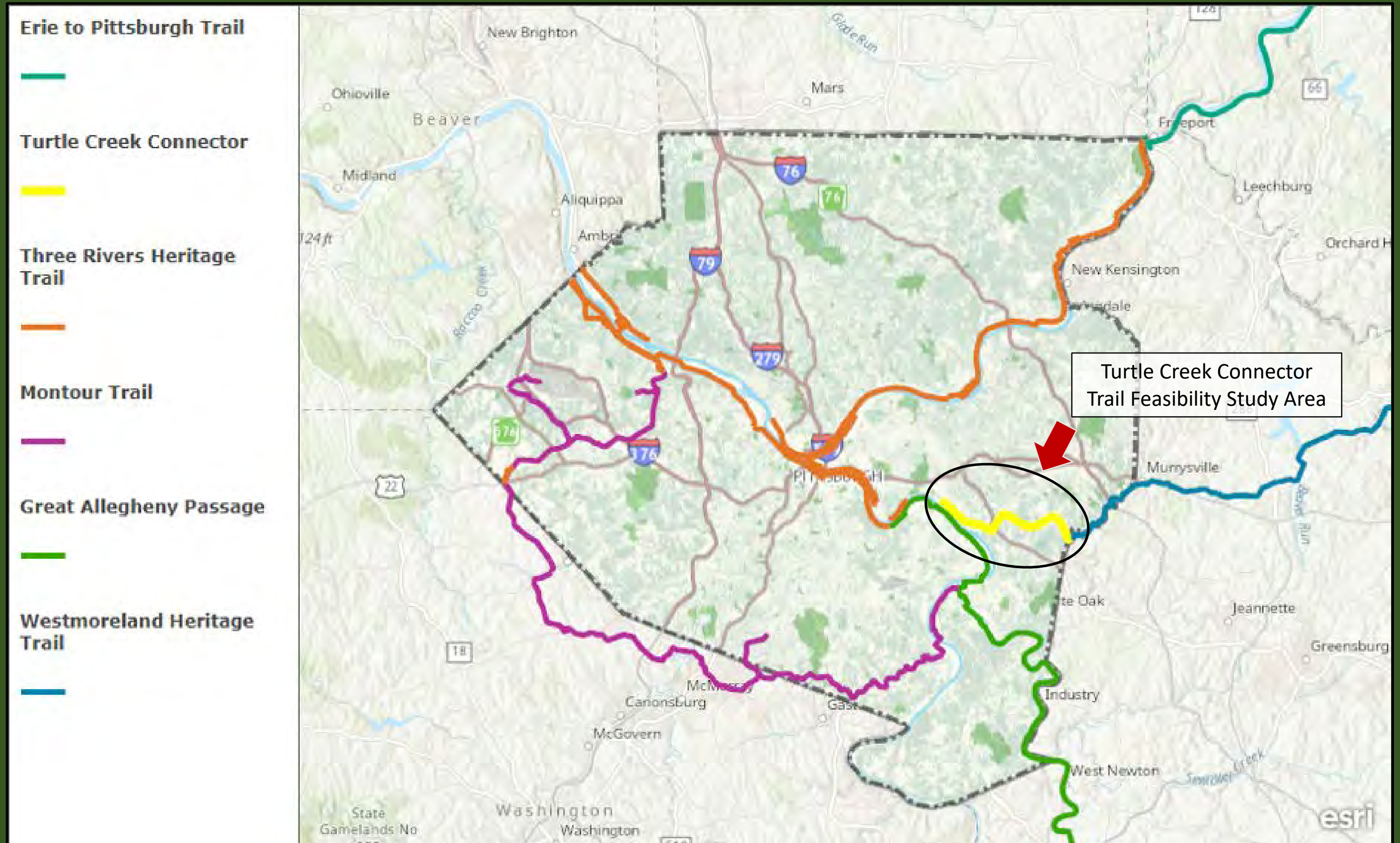
¹ GAP trail map can be found at www.gaptrail.org

² WHT trail map can be found at www.westmorelandheritagetrail.com

³ Analysis of 2020 Trail Usage Patterns along the Great Allegheny Passage, Final Report February 8, 2021 by Dr. Andrew R. Herr, Associate Professor of Economics, Saint Vincent College

⁴ <https://heritagepa.com/rivers-of-steel-national-heritage-area/> retrieved October 29, 2021

Figure 2.1 Trail System Network in Greater Allegheny County



Export and Delmont] to complete the goal of a 22-mile-long trail from Saltsburg to Trafford and extend four miles to connect to the Great Allegheny Passage [the subject of this study]. The trail is ideal for walking, jogging, bicycling, and cross-country skiing. It has a wide and flat handicapped accessible surface and will accommodate everyone regardless of age or physical ability. There are a few parks located just off the trail along the sections, including Duff Park behind the Robert's Parcel trailhead, B-Y Park near the Trafford trailhead, and Saltsburg Park near the Saltsburg trailhead. The Heritage corridor includes historic community centers in Saltsburg, Slickville, Export, South Murrysburg, and Trafford, which grew from local industries in salt mining, coal mining, natural gas extraction, and the manufacture of electrical generation equipment.”⁵

Planned Trails in the Corridor:

The popularity and success of multi-use trails like the GAP and WHT have mobilized citizens in the corridor to plan several new trails and or extensions, in various stages of planning:

- Future trail spur into Delmont, extension from the Trafford B-Y Park area into downtown, and
- Trafford pedestrian bridge connection and parking access at Valley Park on Abers Creek Road.

Land Development Plans

Several large-scale land development plans are under development at the time of this writing:

- An online retail distribution warehouse in Churchill Borough: Borough Council will decide in the fall of 2021 whether to move forward with the 133-acre parcel known as Churchill Crossing, formerly the George Westinghouse Research Park (A. Graziani, AICP, Churchill Borough Manager, personal communication, September 8, 2020).
- Churchill Valley Greenway: The Allegheny Land Trust is working with community members in Churchill and surrounding areas to create a greenspace on the abandoned site of the former Churchill Valley Country Club to enhance livability of the area and with the hope of attracting development nearby⁶.
- Carrie Furnace Redevelopment at the Hot Metal Bridge: This 168-acre site at the western limits of the project includes the Hot Metal Bridge. Ultimately, it is anticipated that the long-term trail connection will be provided through the Carrie Furnace site and across the repurposed rail bridge. The Redevelopment Authority of Allegheny County (RAAC) recently entered into an agreement with the Regional Industrial Development Corporation (RIDC) to develop the site for various commercial uses.

Mon-Fayette Expressway

The Mon-Fayette Expressway is a tolled, four-lane divided, limited access freeway connecting I-68 near Morgantown, West Virginia to PA-51 in Large, Pennsylvania. The Pennsylvania Turnpike Commission plans to extend the highway from its existing terminus in Large (15 miles to the south of the trail corridor) through the Monongahela River and Turtle Creek valleys to connect with I-376 in Monroeville (3 miles to the north). This extension is the last remaining unconstructed section of the project and is divided into two segments, south of and north of the Monongahela River. The future of the northern segment of the highway—the portion slated to run through the multi-use trail corridor—is uncertain because of revenue

⁵ <https://westmorelandheritagetrail.com/> retrieved August 17, 2020

⁶ <https://alleghenylandtrust.org/churchill-valley/> retrieved September 8, 2020

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shortfalls created by the COVID-19 pandemic.⁷ Currently, the northern segment plans included an interchange just southeast of the corridor, with East Pittsburgh-McKeesport Boulevard.

Demographics

The following sections detail population loss, poverty rate, employment rate and motor vehicle ownership in the corridor.

Population Trends

Over the past 70 years, population decline has presented challenges for the relatively small municipalities in the corridor. The area particularly reflects the fragmented nature of the larger Southwestern Pennsylvania region which has the country's most local governments per capita. Fortunately, the governments and citizens have worked together on cooperative initiatives in planning and resource sharing like this trail study. As shown in Table 2.4 below, based off census data obtained from 1930 to 2018, the collective population within the study area has steadily declined.

Population in almost every one of the individual study corridor municipalities peaked in the 1920s or 1930s. Monroeville and North Versailles being the exceptions, peaking in the 1980s and 1970s, respectively. Across all the corridor municipalities, population has steadily declined with each census decade since 1980. Refer to Table 2.4 for historical population in the corridor⁸.

Table 2.4 - Historical Population

| Location | Year | | | | | | | | | |
|------------------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|
| | 1930 | 1940 | 1950 | 1960 | 1970 | 1980 | 1990 | 2000 | 2010 | 2018 |
| Rankin | 7,956 | 7,470 | 6,941 | 5,164 | 3,817 | 2,892 | 2,503 | 2,315 | 2,122 | 2,100 |
| Braddock | 19,329 | 18,326 | 16,488 | 12,337 | 8,795 | 5,634 | 4,682 | 2,912 | 2,159 | 1,729 |
| North Braddock | 16,782 | 15,679 | 14,724 | 13,204 | 10,838 | 8,711 | 7,036 | 6,410 | 4,857 | 4,758 |
| East Pittsburgh | 6,214 | 6,079 | 5,259 | 4,122 | 3,006 | 2,493 | 2,160 | 2,017 | 1,822 | 1,755 |
| Turtle Creek | 10,690 | 9,805 | 12,363 | 10,607 | 8,308 | 6,959 | 6,556 | 6,076 | 5,349 | 5,244 |
| Monroeville | 4,687 | 4,689 | 7,841 | 22,446 | 29,011 | 30,977 | 29,169 | 29,349 | 28,386 | 27,893 |
| Wilmerding | 6,291 | 5,662 | 5,325 | 4,349 | 3,218 | 2,421 | 2,222 | 2,145 | 2,190 | 1,949 |
| Pitcairn | 6,317 | 6,310 | 5,857 | 5,383 | 4,741 | 4,175 | 4,087 | 3,689 | 3,294 | 3,230 |
| Trafford | 4,187 | 4,017 | 3,965 | 4,330 | 4,383 | 3,662 | 3,345 | 3,236 | 3,174 | 3,039 |
| Wall | 2,236 | 2,098 | 1,850 | 1,493 | 1,265 | 989 | 853 | 727 | 580 | 667 |
| North Versailles | 5,668 | 6,341 | 9,821 | 13,583 | 13,416 | 13,294 | 12,302 | 11,125 | 10,229 | 10,081 |
| East McKeesport | 6,214 | 6,079 | 5,259 | 4,122 | 3,006 | 2,493 | 2,160 | 2,017 | 1,822 | 2,106 |
| Total | 96,571 | 92,555 | 95,693 | 101,140 | 93,804 | 84,700 | 77,075 | 72,018 | 65,984 | 64,551 |

Source: Southwestern Pennsylvania Commission

⁷ Blazina, Ed (September 6, 2020). " Mon-Fayette Expressway include expensive utility relocations ". Pittsburgh Post-Gazette. Retrieved September 10, 2020.

⁸ SPC Southwestern Pennsylvania Commission and US Decadal Censuses

Poverty Rate, Employment Rate, and Motor Vehicle Ownership

Based on 2018 U.S. Census data⁹, the study area is home to 64,551 residents, 25,724 households (approximately 5 percent of the County's households). Minority populations comprise approximately 30 percent of the study area population, which is greater than the Allegheny county-wide composition (20 percent). Notably, the proportion of households below the poverty line is higher within the study area compared to county-wide demographics. The poverty rate comprises approximately 12 percent of the population Allegheny County-wide, but within the study area the poverty rate is at 16 percent. Zero-vehicle households make up approximately 13 percent of the total households within Allegheny County but approximately 22 percent of households within the study area (where data was available¹⁰) are zero-car households. Individual municipalities with rates of zero-car households higher than the Allegheny County overall rate are: Rankin, 49%; Braddock 35%; Wilmerding, 32%, East Pittsburgh, 31%; North Braddock 24%; Turtle Creek 19% and Pitcairn 16%.

Moreover, half of the municipalities in the study have poverty rates between two and three times higher than the overall Allegheny County rate; they are: Braddock, Wilmerding, North Braddock, Turtle Creek, Rankin, and East Pittsburgh. Three municipalities have poverty rates between one and two times the Allegheny County rate: Pitcairn, Wall, and Trafford. Only North Versailles and Monroeville have poverty rates lower than Allegheny County. Similarly, median household income in all but one of the corridor municipalities fall below the overall Allegheny County median. Braddock, East Pittsburgh, and Wilmerding have median household incomes less than half of the overall Allegheny County rate and Turtle Creek, North Braddock, Rankin, Pitcairn, Wall, North Versailles and Trafford each have median household incomes between one-half and one times the overall Allegheny County rate. Only Monroeville has a median household income greater than the overall Allegheny County rate.

Comparing employment rates of the study municipalities with Allegheny County overall, a majority have employment rates lower than Allegheny County: Braddock, Wilmerding, North Braddock, North Versailles, Pitcairn, Turtle Creek, East McKeesport, and Wall. Trafford and Monroeville have employment rates equal to Allegheny County's and Rankin and East Pittsburgh have employment rates slightly higher than Allegheny County's overall rate.

Comparing minority population percentages of the study municipalities with Allegheny County overall, a majority have minority populations higher than Allegheny County (20 percent) and four have majority minority population: Rankin, Braddock, East Pittsburgh, and North Braddock have greater than 50 percent minority populations. Wilmerding, Pitcairn, Turtle Creek, Monroeville, and North Versailles have a minority population proportion less than 50 percent but still greater than Allegheny County's overall proportion. Wall and Trafford have minority population proportions lower than Allegheny County's overall. Refer to Table 2.5 for more information.

⁹ 2018 American Community Survey

¹⁰ Rankin, Braddock, North Braddock, East Pittsburgh, Turtle Creek, Wilmerding, Pitcairn, Trafford, Wall and East McKeesport

II. Summary of Existing Conditions

Table 2.5: Poverty Rate, Employment Rate, Median Household Income and Minority Populations

| Location | 2018 Population | Poverty Rate % | Employment Rate % | Median Household Income | Median Household Income as a ratio of County Median | Minority Population | Minority Population as a ratio of County Minority Population |
|------------------|-----------------|----------------|-------------------|-------------------------|---|---------------------|--|
| Rankin | 2,100 | 28.5% | 63.8% | \$32,321.00 | 0.55 | 85% | 4.2 |
| Braddock | 1,729 | 35.7% | 34.8% | \$22,340.00 | 0.38 | 77% | 3.8 |
| North Braddock | 4,758 | 30.0% | 53.8% | \$31,406.00 | 0.54 | 53% | 2.6 |
| East Pittsburgh | 1,755 | 28.0% | 66.6% | \$25,848.00 | 0.44 | 74% | 3.7 |
| Turtle Creek | 5,244 | 28.8% | 56.8% | \$30,643.00 | 0.52 | 31% | 1.5 |
| Monroeville | 27,893 | 8.6% | 61.4% | \$61,834.00 | 1.06 | 24% | 1.2 |
| Wilmerding | 1,949 | 35.5% | 43.3% | \$27,564.00 | 0.47 | 39% | 2.0 |
| Pitcairn | 3,230 | 21.1% | 56.4% | \$33,769.00 | 0.58 | 32% | 1.6 |
| Trafford | 3,039 | 14.1% | 61.1% | \$49,028.00 | 0.83 | 3% | 0.2 |
| Wall | 667 | 14.4% | 58.7% | \$42,500.00 | 0.73 | 9% | 0.4 |
| North Versailles | 10,081 | 10.3% | 56.0% | \$43,750.00 | 0.75 | 20% | 1.0 |
| East McKeesport | 2,106 | 10.4% | 57.8% | \$45,292.00 | 0.78 | 13% | 0.7 |
| Allegheny CO. | 1,225,561 | 12.1% | 61.2% | \$58,383.00 | 1.00 | 20% | 1.0 |
| Westmoreland CO. | 354,751 | 10.0% | 58.2% | \$58,866.00 | 1.01 | 5% | 0.3 |

Source: Southwestern Pennsylvania Commission

Demographic Forecast

Per SPC data¹¹, the total population within the study is forecasted to increase by 9.0% between the years 2020 and 2045. The population is forecasted to increase from 65,650 people in year 2020 to 71,551 people in year 2045. This represents a 9.0% increase, compared to 14% for Allegheny County. Most notably, Trafford Borough is projected to have a 79.8% increase in population, going from 721 people to 1,296 people. Additionally, Rankin Borough is projected to increase its employment by 509 jobs resulting in an 88.2% increase. However, the East Pittsburgh Borough will see a decrease of 313 jobs resulting in a 21% decrease. Moreover, the population of nearly every corridor municipality is forecasted to increase, the one exception being North Braddock, which is forecasted to decline 6.3 percent.

Total employment within the study area is forecasted to slightly increase by 2.6% between year 2020 and 2045, while Allegheny County is forecasted to increase by 11.0%. The study area is forecasted to have a total of 52,195 jobs in year 2020 which will increase to a total of 53,552 jobs in 2045. Table 2.6 below shows a summary of the SPC projected population and employment data.

¹¹ SPC Southwestern Pennsylvania Commission, Cycle 11 Forecast of Population, Households, and Employment by Municipality, 2015-2045

II. Summary of Existing Conditions

Table 2.6: Employment and Population Projections

| Municipality | Projected Population | | | Projected Employment | | |
|------------------------------|----------------------|---------------|----------------|----------------------|---------------|----------------|
| | 2020 | 2045 | Percent Change | 2020 | 2045 | Percent Change |
| Braddock Borough | 1,852 | 1,877 | 1.3% | 2,261 | 2,213 | -2.1% |
| East Pittsburgh Borough | 1,752 | 1,805 | 3.0% | 1,494 | 1,181 | -21.0% |
| Monroeville, Municipality of | 28,175 | 30,793 | 9.3% | 35,268 | 36,048 | 2.2% |
| North Braddock Borough | 4,529 | 4,243 | -6.3% | 777 | 585 | -24.7% |
| Pitcairn Borough | 3,167 | 3,310 | 4.5% | 1,130 | 1,216 | 7.6% |
| Rankin Borough | 2,142 | 2,861 | 33.6% | 577 | 1,086 | 88.2% |
| Trafford Borough (part) | 721 | 1,296 | 79.8% | 239 | 294 | 23.0% |
| Turtle Creek Borough | 5,137 | 5,265 | 2.5% | 1,553 | 1,574 | 1.4% |
| Wall Borough | 765 | 809 | 5.8% | 153 | 171 | 11.8% |
| Wilmerding Borough | 1,675 | 1,698 | 1.4% | 2,061 | 2,098 | 1.8% |
| Trafford Borough (part) | 2,982 | 3,321 | 11.4% | 1,255 | 1,087 | -13.4% |
| North Versailles | 10,671 | 12,071 | 13.1% | 4,802 | 5,294 | 10.2% |
| East McKeesport | 2,082 | 2,202 | 5.8% | 625 | 705 | 12.8% |
| Total | 65,650 | 71,551 | 9.0% | 52,195 | 53,552 | 2.6% |
| Allegheny County | 1,229,020 | 1,400,888 | 14.0% | 934,510 | 1,037,234 | 11.0% |
| Westmoreland County | 355,285 | 394,643 | 11.0% | 188,855 | 196,830 | 4.2% |

Source: Southwestern Pennsylvania Commission

Benefits of Active Recreational Facilities

A multi-use trail has great potential to improve economic conditions and increase health and wellbeing by providing active recreation options.

Economic and Health Benefit from Trails

Multi-use trails have been documented to improve the local economy of the towns through which they pass, increasing property values, attracting businesses and new residents while increasing civic pride¹².

A 2012 economic impact study¹³ of business associated with and located near the GAP found that:

- on average, about 30 percent of businesses' gross revenues were attributed to the GAP trail.
- overall, about one-fourth of responding businesses reported gross revenue of more than \$250K.
- the GAP trail accounted for between \$650,000 and \$2.1 million in weighted average annual revenue, per establishment, at the county and firm type aggregation levels, respectively.

Businesses in the GAP study included lodging like hotel/motel/B&Bs, retail/gift/specialty stores and bike rental/sales/supplies businesses. Their peak months were summer (June, July, and August) followed by

¹² 2000 Greenways & Trails Bringing Economic Benefits to New York. New York Parks & Conservation Association and The Business Council of New York State, Inc.

¹³ 2012 Trail Town Business Survey Report for The Progress Fund May, 2012. Center for Regional Progress College of Business Frostburg State University Frostburg, Maryland 21532

Autumn (September, October, and November) then Spring (March, April, and May) and their off-peak was reported as the winter months (December, January, and February).

Likewise, a 2021 study¹⁴ of GAP trail-related businesses in 2019 found that:

- The total economic impact of the trail was \$121 million - \$800,000 per mile.
- The direct spending impact by GAP tourists at businesses in the Trail Impact Zone was \$74.7 million
- The average expenditure by trail users was \$90 for day users and \$496 for overnight users.
- The GAP supports 1,393 jobs, generating \$52.6 million in employee wages.

Over three-quarters of the overnight trail users reported using the trail for recreation. In contrast, using the trail for health and/or fitness was mentioned by more than half of the local and day trip trail users.

The Allegheny County Redevelopment Authority through the Qualified Opportunity Zone program has tax incentivized the purchase of vacant properties in Rankin Borough and Borough of Braddock. A multi-use trail would increase pedestrian and cycle traffic complementing the economic development goals for both the redevelopment of the Carrie Furnace Site and the Braddock Business Community Initiative.

Project will Help to Meet Community Health Initiatives

The corridor's two nearest hospitals have conducted Community Health Needs Assessments and have identified prevention of obesity and related chronic diseases as priorities for their populations. Many of the areas in the study corridor have been identified as Medically Underserved Areas and Medically Underserved Populations. Statistically, African American populations in Allegheny County are more likely to be affected by obesity, which is associated with the development of other chronic diseases including diabetes, heart disease, stroke and cancer¹⁵. Active outdoor recreation, like that which would be provided by an accessible multi-use trail, can help prevent or reduce obesity and related chronic diseases, including behavioral health issues. According to the Centers for Disease Control, "Active people generally live longer and are at less risk for serious health problems like heart disease, type 2 diabetes, obesity, and some cancers. For people with chronic diseases, physical activity can help manage these conditions and complications".¹⁶

As shown in Table 2.7, several of the corridor communities exceed the Allegheny County rates for prevalence of chronic health conditions. For hypertension (i.e., high blood pressure), the prevalence rates in six of the communities exceed the Allegheny County rate of 28 percent. For diabetes, only one community, East Pittsburgh, is below the county's rate of nine percent. The prevalence of the simultaneous presence, or comorbidity, of diabetes and hypertension is higher than the Allegheny County rate of 7 percent in all corridor communities. Finally, in the case of hyperlipidemia, or high cholesterol, 9 of the 12 corridor communities have lower rates than Allegheny County's 21 percent rate.

¹⁴ Great Allegheny Passage Economic Impact Report, Fourth Economy on behalf of the Great Allegheny Passage Conservancy, November 2021.

¹⁵ Community Health Needs Assessment Community Health Strategic Plan Allegheny County, June 30, 2019

¹⁶ Centers for Disease Control, *About Physical Activity*. Retrieved from <https://www.cdc.gov/physicalactivity/about-physical-activity/> on 2020, September 10

II. Summary of Existing Conditions

Table 2.7: Prevalence of Chronic Conditions in Priority Communities

| Location | Hypertension (2016) | Diabetes (2016) | Comorbidity of Diabetes and Hypertension (2016) | Hyperlipidemia (2016) |
|-------------------|---------------------|-----------------|---|-----------------------|
| Rankin | 21% | 9% | 10% | 12% |
| Braddock | 24% | 12% | 12% | 15% |
| North Braddock | 25% | 12% | 12% | 18% |
| East Pittsburgh | 19% | 8% | 8% | 12% |
| Turtle Creek | 27% | 11% | 11% | 22% |
| Monroeville | 28% | 10% | 9% | 27% |
| Wilmerding | 20% | 11% | 9% | 14% |
| Pitcairn | 22% | 9% | 8% | 17% |
| Trafford* | 30% | 12% | 11% | 19% |
| Wall* | | | | |
| North Versailles* | | | | |
| East McKeesport | 28% | 11% | 10% | 24% |
| Allegheny County | 25% | 9% | 7% | 21% |

*These communities are the same census tract and grouped together due to the small population. Data only includes the portion of the Trafford population within Allegheny County.

Source: WPRDC; claims data representing approximately 70% of Allegheny county

Existing Conditions Figures (Appendix A)

Refer to Appendix A for a detailed map of existing conditions with topography and environmental features, including existing trails, railroads, bus routes and stops, industrial buildings, commercial centers, recreational facilities, municipal facilities, multi-family residences, historic properties, managed waste facilities, and municipal boundaries. Also included are photographs depicting existing streets, sidewalks, other pedestrian facilities and aerial views of the corridor including SR 2183 in East Pittsburgh, the George Westinghouse Bridge, the Westinghouse flood gate in Turtle Creek, and the wooded area and remnants of the abandoned Turtle Creek Industrial Railroad tracks just west of B-Y Park in Trafford. Norfolk Southern now owns the abandoned tracks; there is interest in acquiring a portion of this track to extend the rail-trail to the Trafford business district. Per a news report, “Organizers want to extend [The WHT] down to the Veterans Memorial Bridge near the intersection of Fifth Street and Brinton Avenue. To do that, they would need cooperation from Norfolk Southern to use about 3,800 feet of its property for the trail”¹⁷.

¹⁷ McGee, Tom (April 27, 2016). *Westmoreland Heritage Trail supporters hope for cooperation from Norfolk Southern*. Pittsburgh Tribune-Review retrieved 10 September 2020.

III. OVERVIEW OF ALTERNATIVES

Introduction

Throughout the study corridor, the project team developed preliminary design proposals and trail alignments.¹ Due to the corridor's existing geography and land uses, these proposals include a mix of on-road and off-road connections. Some of these design proposals include facilities that are shared by multiple modes or dedicated just for bicycle and pedestrian use. This chapter provides an overview of the potential trail alignment alternatives within the study corridor municipalities using a variety of options such as shared use lanes, shared use paths, and cycle tracks. Each design option has its own advantages and disadvantages (e.g., cost, ease of implementation, etc.) and confers different levels of user comfort². The following is a brief description of each type of trail facility:

Shared Use Lanes: Shared use lanes accommodate bicyclists and motorists in the same travel lane within the existing road infrastructure. On-road pavement markings and share-the-road signage alert drivers to the presence of bicyclists. These improvements are generally only appropriate on roads with a low number of cars and slower traffic speeds.

Figure 3.1: Shared Use Lanes



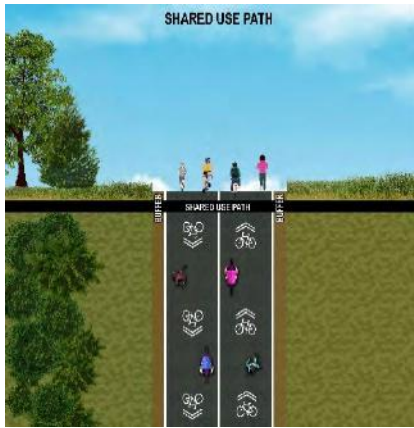
Figure 3.2: Shared Use Lanes on Grand Ave (Neville Township)



Shared Use Path: A shared use path is a facility that is physically separated from the roadway and typically accommodates bicycle and pedestrian travel in both directions. A preferred minimum width for this type of facility is 10 feet, though wider is better if a large number of users is expected. This type of facility is what is currently used on the Great Allegheny Passage and Westmoreland Heritage Trails today.

¹ At this stage of evaluation, the proposed alignments meet guidelines established by the Manual on Uniform Traffic Control Devices (MUTCD) and the American Association of State Highway Transportation Officials (AASHTO). Subsequent design phases will confirm the alignments' adherence to these national standards.

² Bicyclist comfort is often evaluated according to a methodology that rates roadways according to a system known as Bicycle Level of Stress (BLOS). BLOS considerations include built environment factors such as grade change, traffic volume, traffic speed, and whether dedicated bicycle facilities are provided.

Figure 3.3: Shared Use Path*Figure 3.4: Westmoreland Heritage Trail*

Cycle Track: A cycle track is a two-way bicycle lane that is adjacent to the roadway but separated by a physical barrier such as delineator posts or curb. In this type of facility, you may also see single bicycle lanes moving in the direction of traffic or bicycle lanes on the opposite side of the roadway where the cyclist moves against the flow of traffic (also known as contraflow bike lanes).

Figure 3.5: Cycle Track*Figure 3.6: Cycle Track in downtown Pittsburgh*

Future phases of project development will also include a more in-depth evaluation of pedestrian improvements needed within these corridors. Pedestrian improvements that will be evaluated in the future include improved crosswalks, intersection upgrades, and enhancements around transit stops.

On the following pages, the proposed alignments are exhibited on roadway plan sheets, starting on the western end of the corridor in Rankin and proceeding eastward to Trafford. Throughout the corridor, the project team attempted to identify multiple opportunities for connections to evaluate. These will be identified on the roadway plan sheets as Option 1 – Yellow, Option 2 – Blue, and Option 3 – Red. For evaluation purposes, the colors are not associated with a particular type of improvement such as a shared use path or cycle track, but demonstrate a location for potential options. In some areas of the corridor, there is not enough space for three options. In these areas, some segments may have fewer than three

options to review. The final trail alignment within a municipality could be a mix of corridor options, e.g., a through route and a local circulator route. A summary of the alignment options within each municipality follows the roadways plans. Each municipal profile also includes a description of the opportunities, challenges, and preliminary cost³ of each proposed option.

Throughout the corridor there is a mix of County, State, local, private, and railroad property owners. The project team did their best to identify and label the ownership of affected roads and properties. There will be significant discussion and coordination with road and property owners as elements of this project advance to design and construction. Where alignments are proposed to be constructed in the existing right-of-way, further verification with the road owner will be required. In addition, the project partners will work with Port Authority of Allegheny County to coordinate the multimodal improvements with existing and planned transit routes and stops to ensure that transit service is not hampered. In fact, well-designed bicycle and pedestrian improvements should increase access to transit.

Additional visual depictions of the potential alignments and local context can be found in Appendix B.

³ The preliminary alignment cost estimates assume a 20-year design life and do not include expenses associated with maintenance, utility relocation, right-of-way acquisition, erosion and sedimentation control, traffic control, traffic signals, lighting, signage and pavement marking, and parking lots. The cost estimates include 35% for contingency funds, 6% for mobilization, and 20% for design and engineering.

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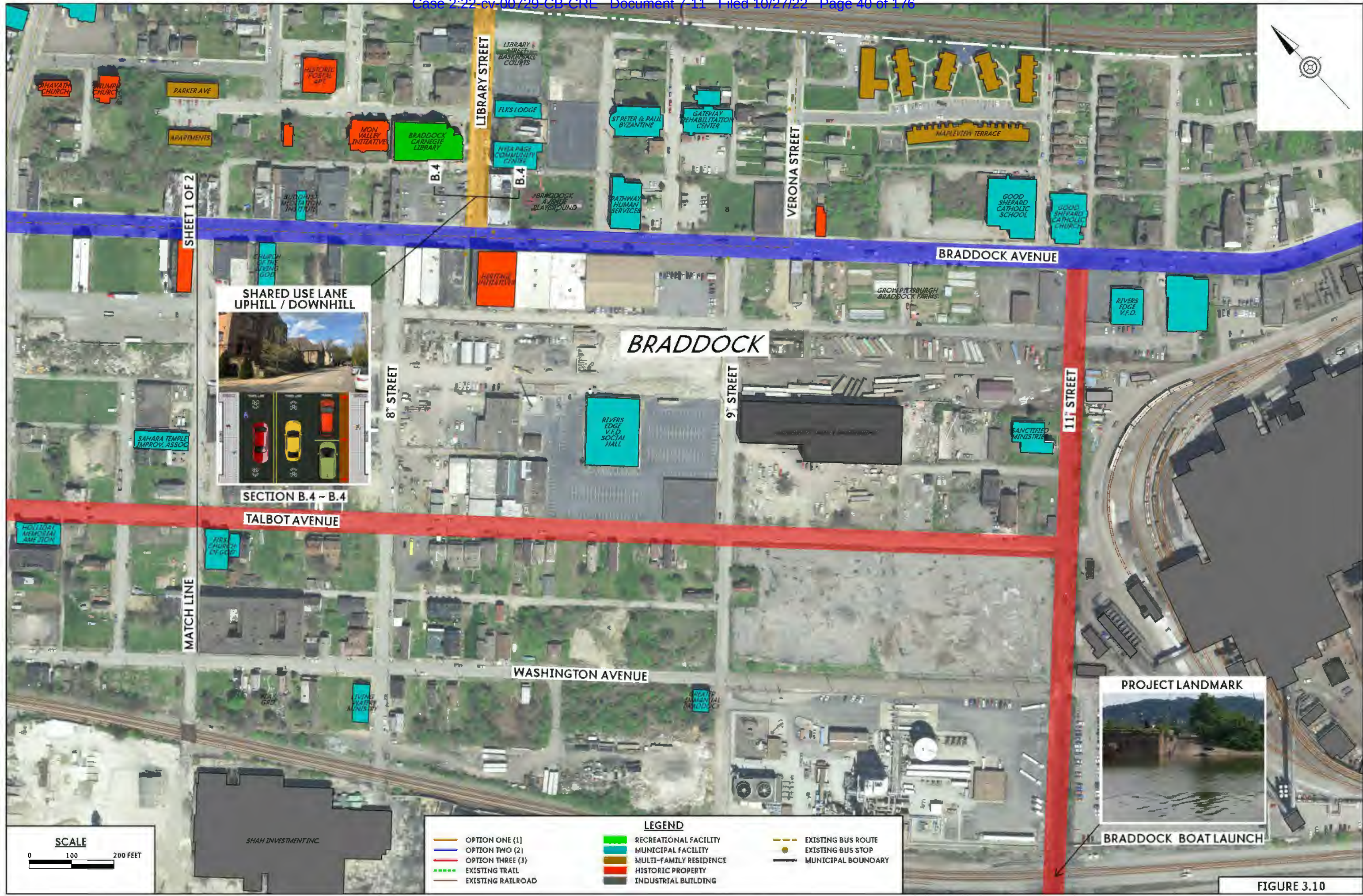


FIGURE 3.10

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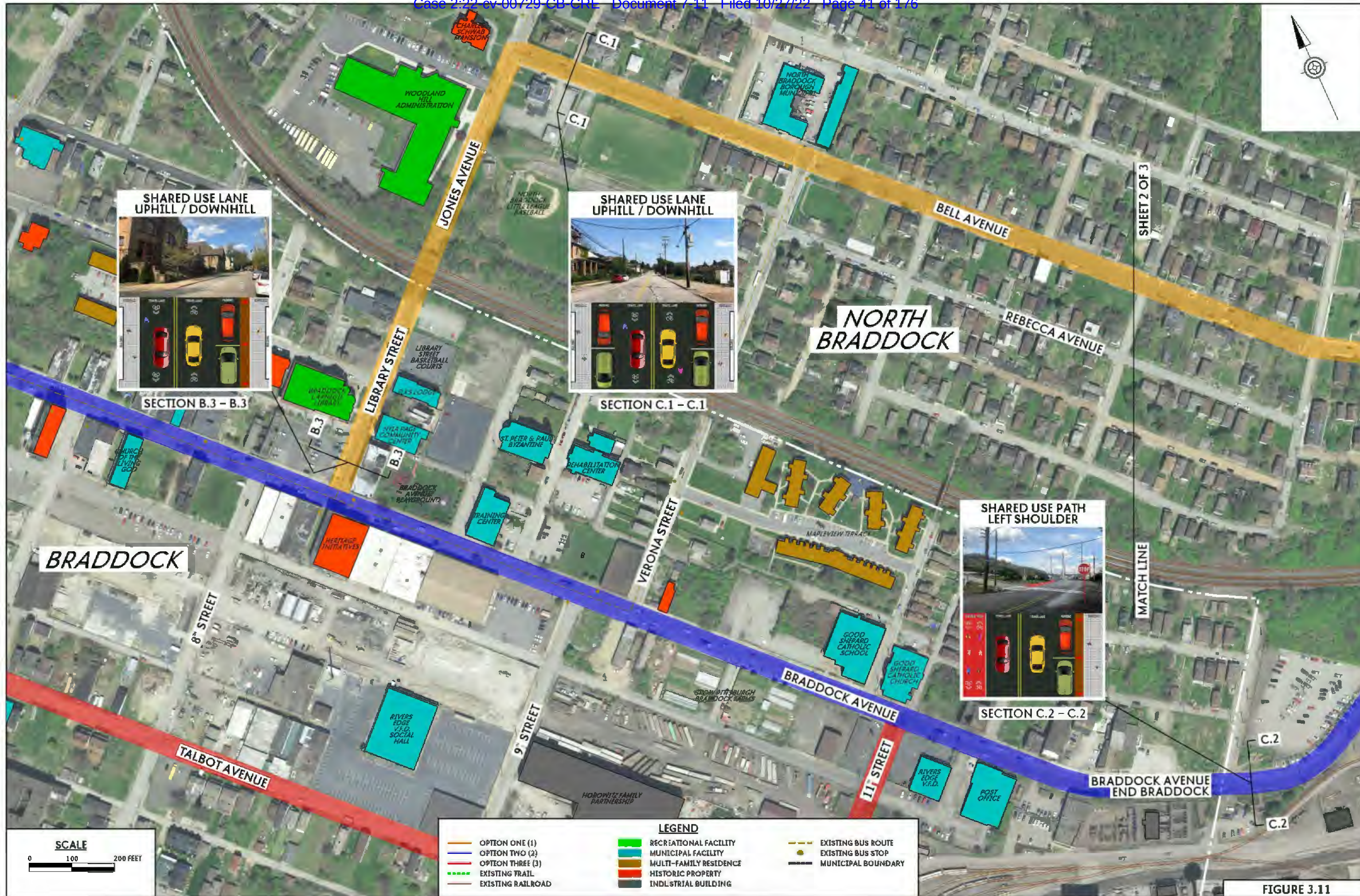
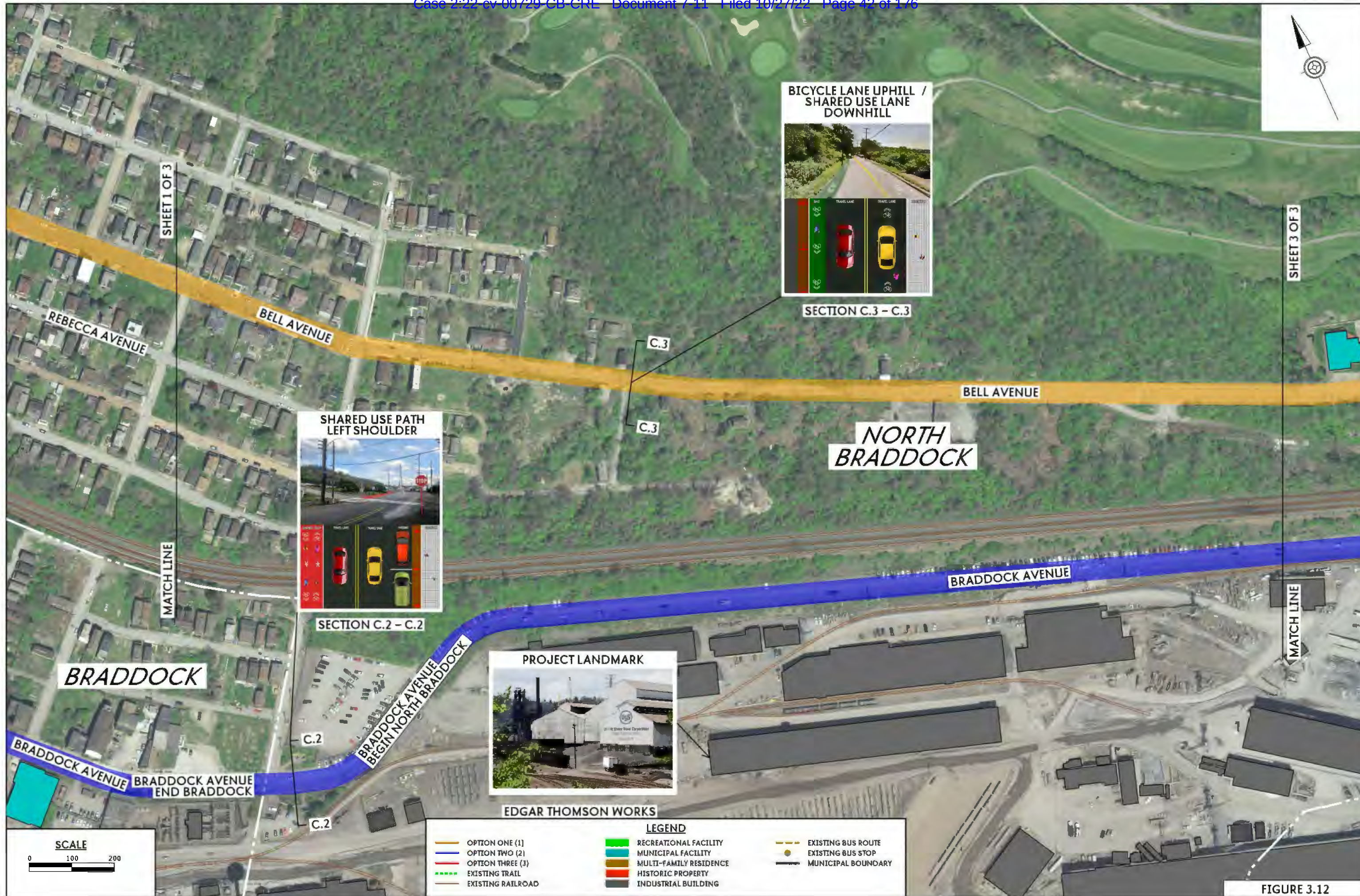


FIGURE 3.11

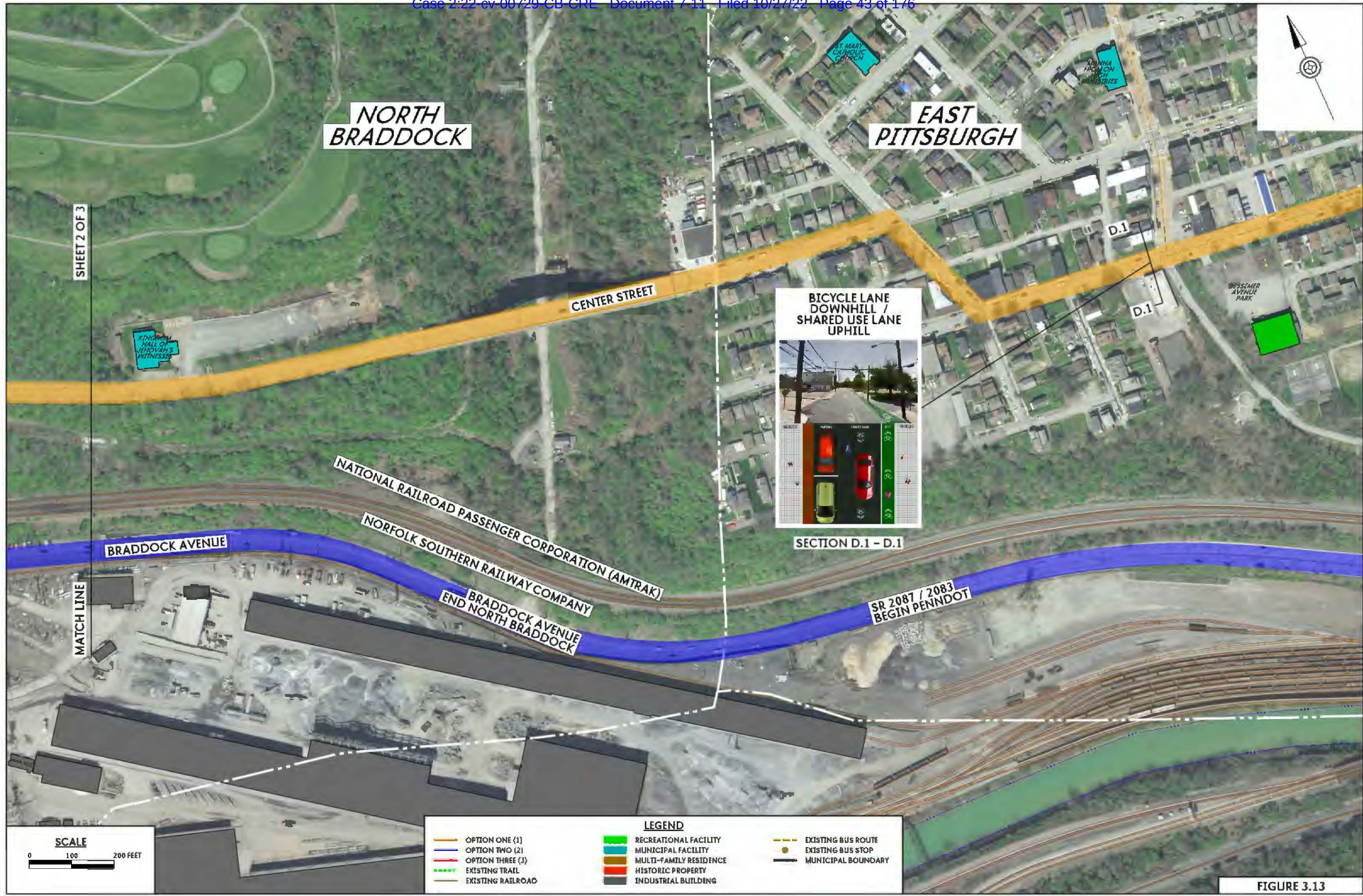
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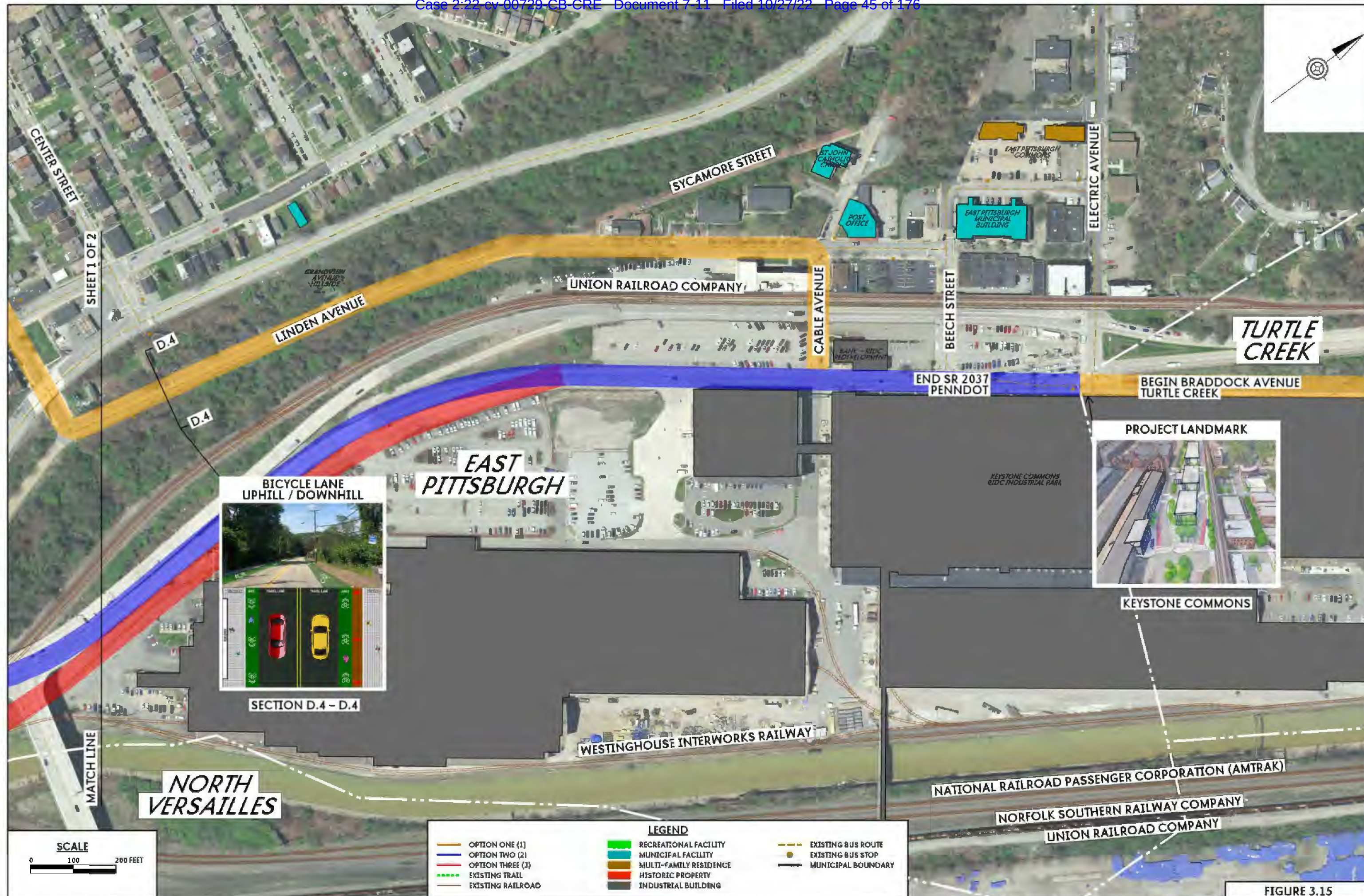
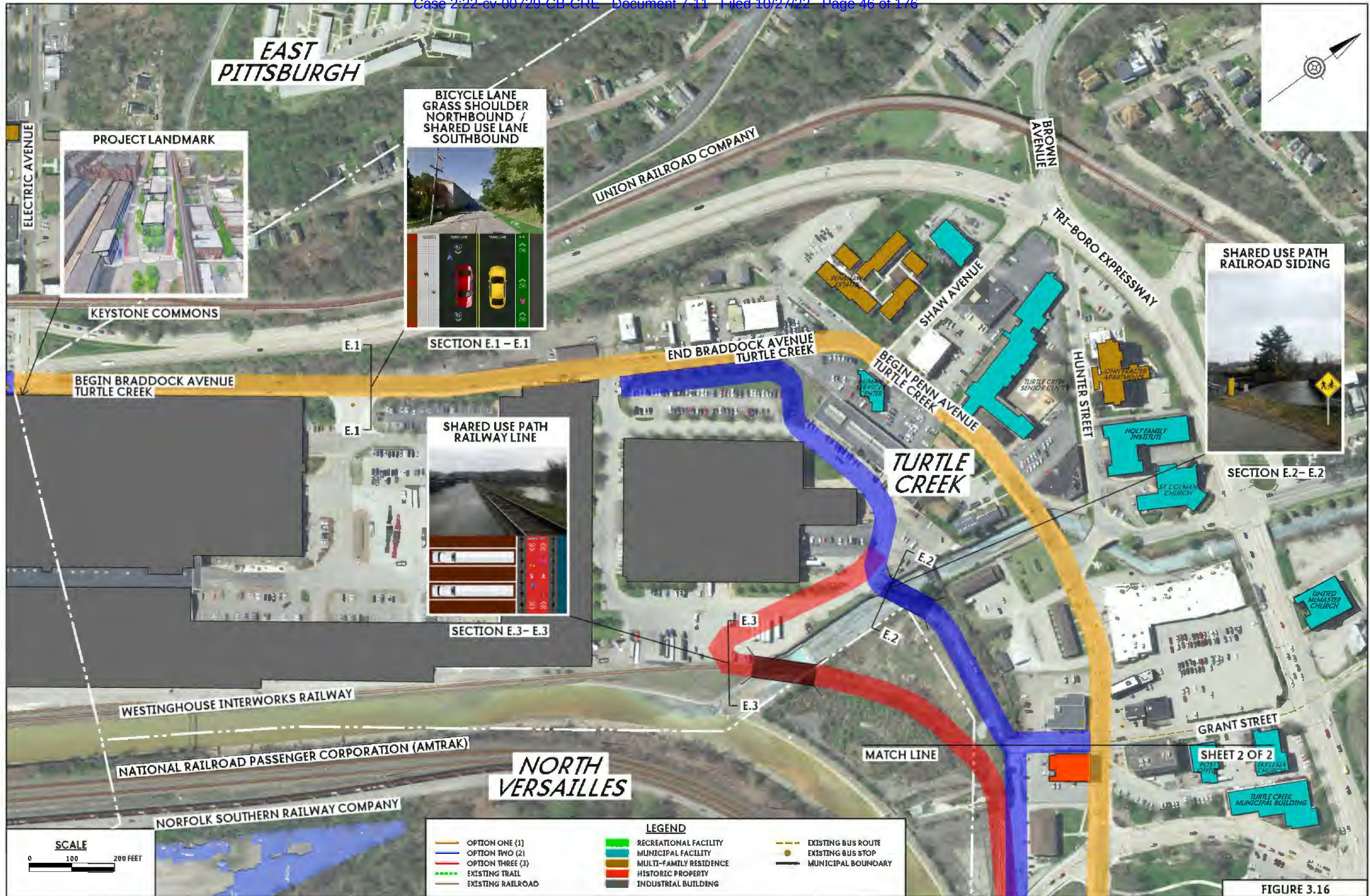


FIGURE 3.15

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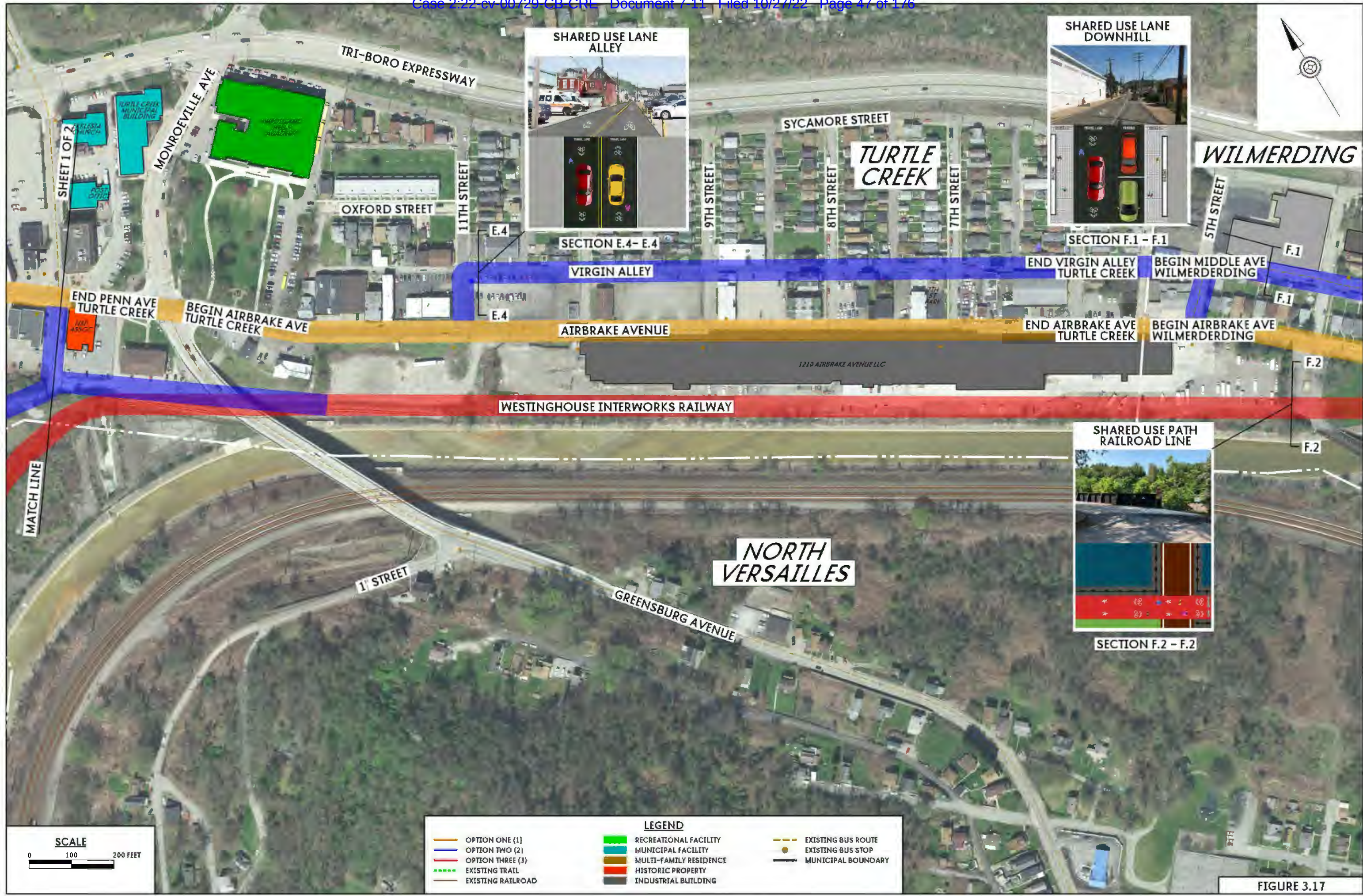
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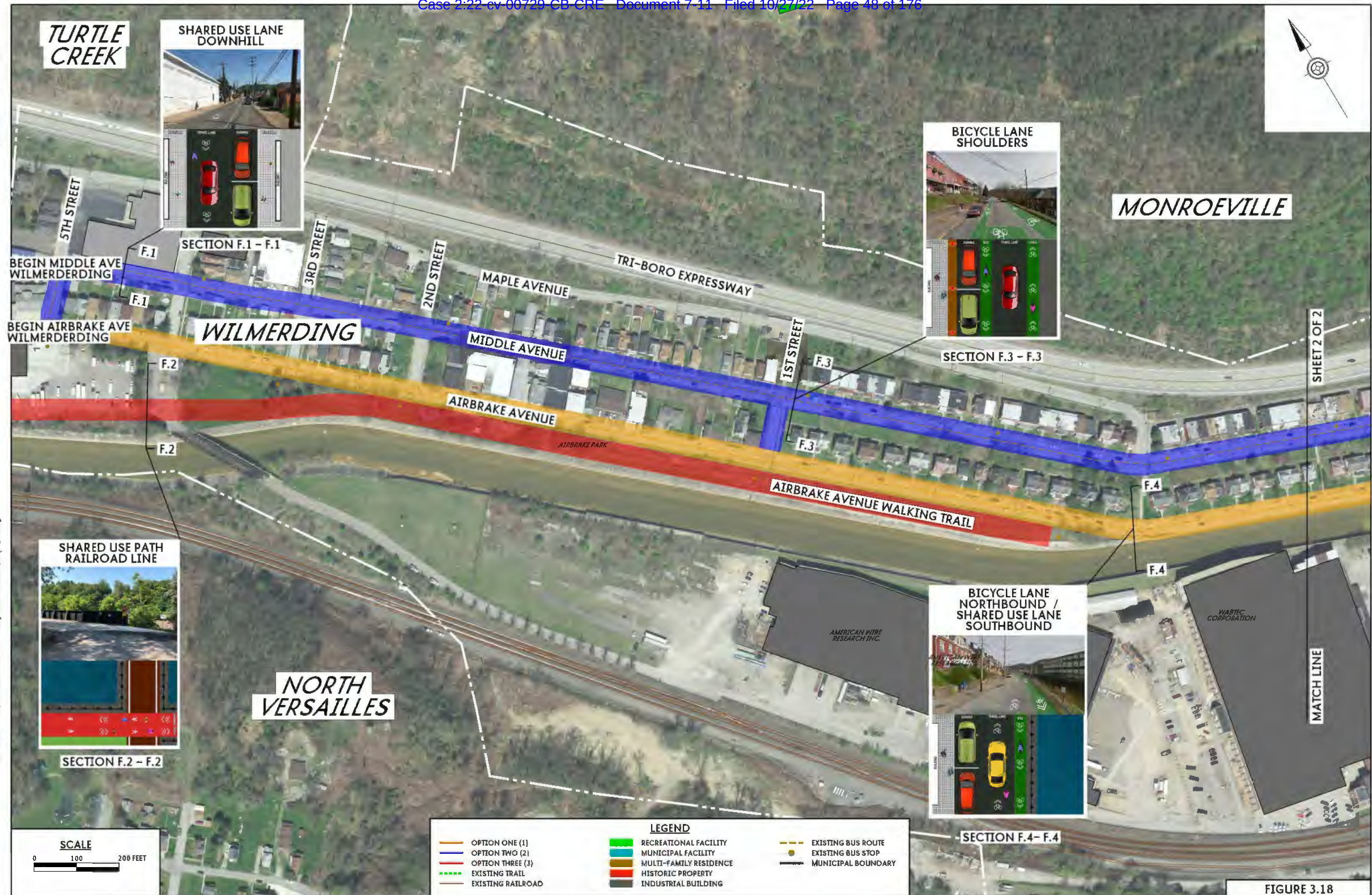
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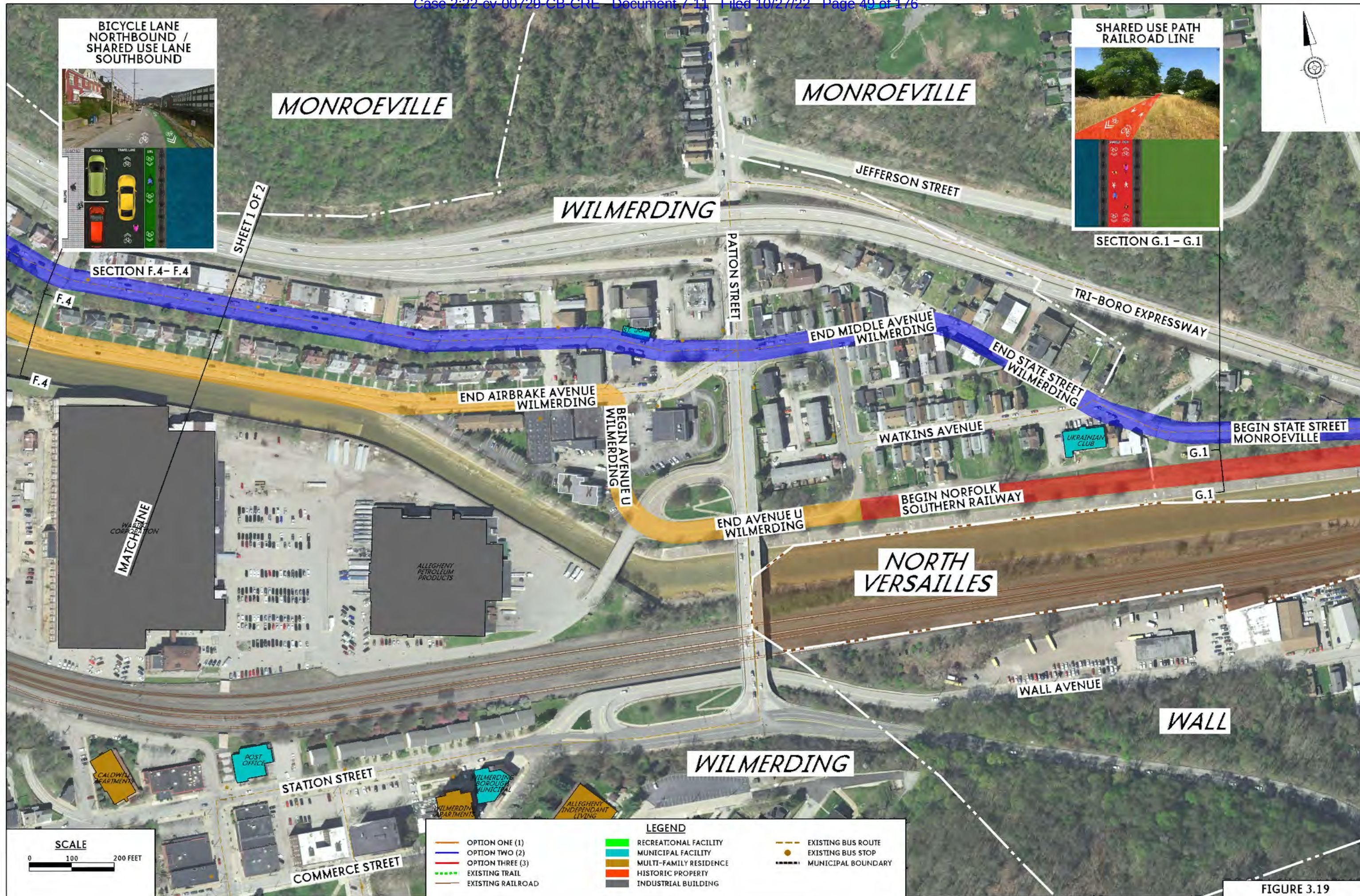
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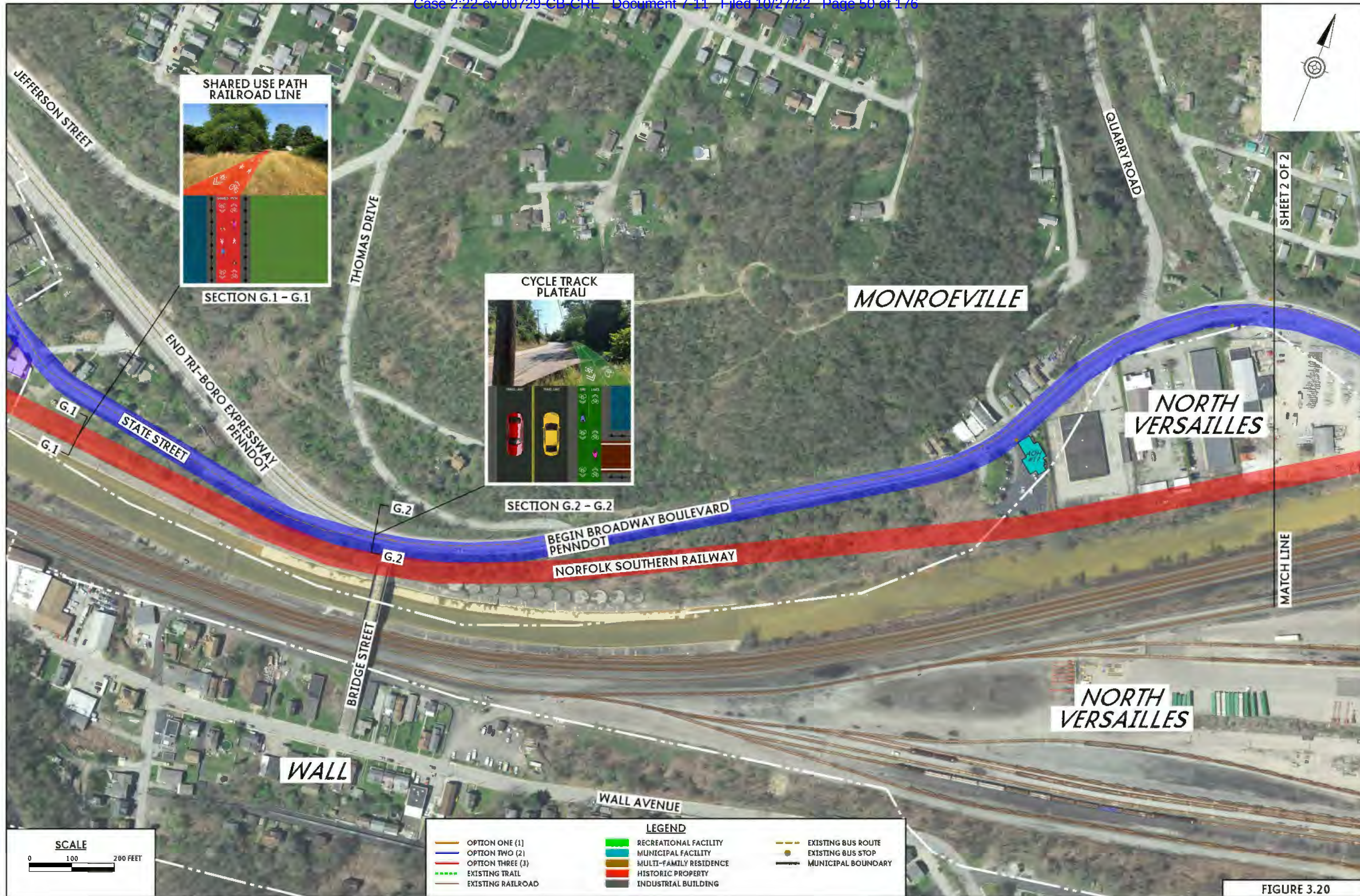
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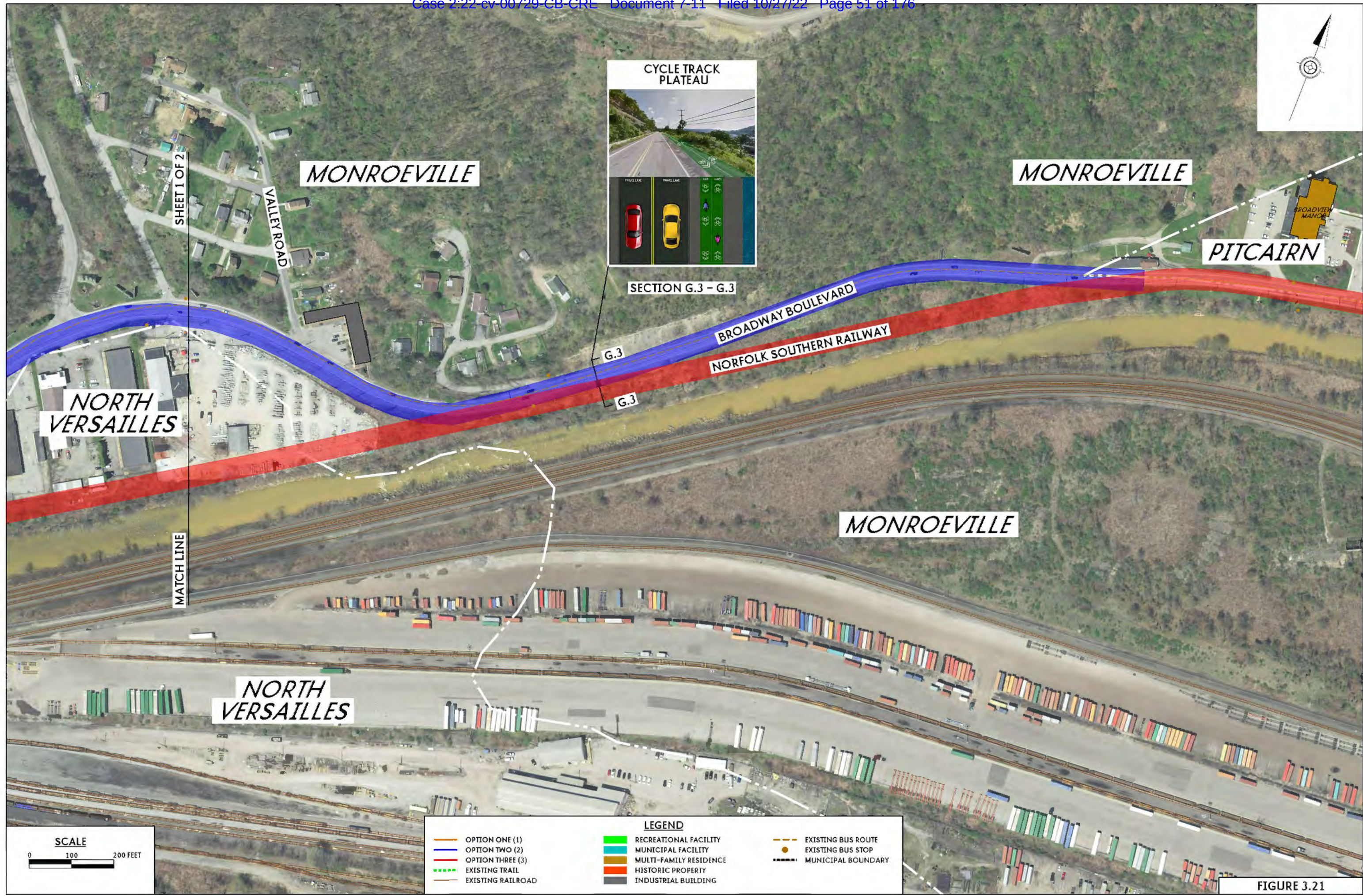


FIGURE 3.21

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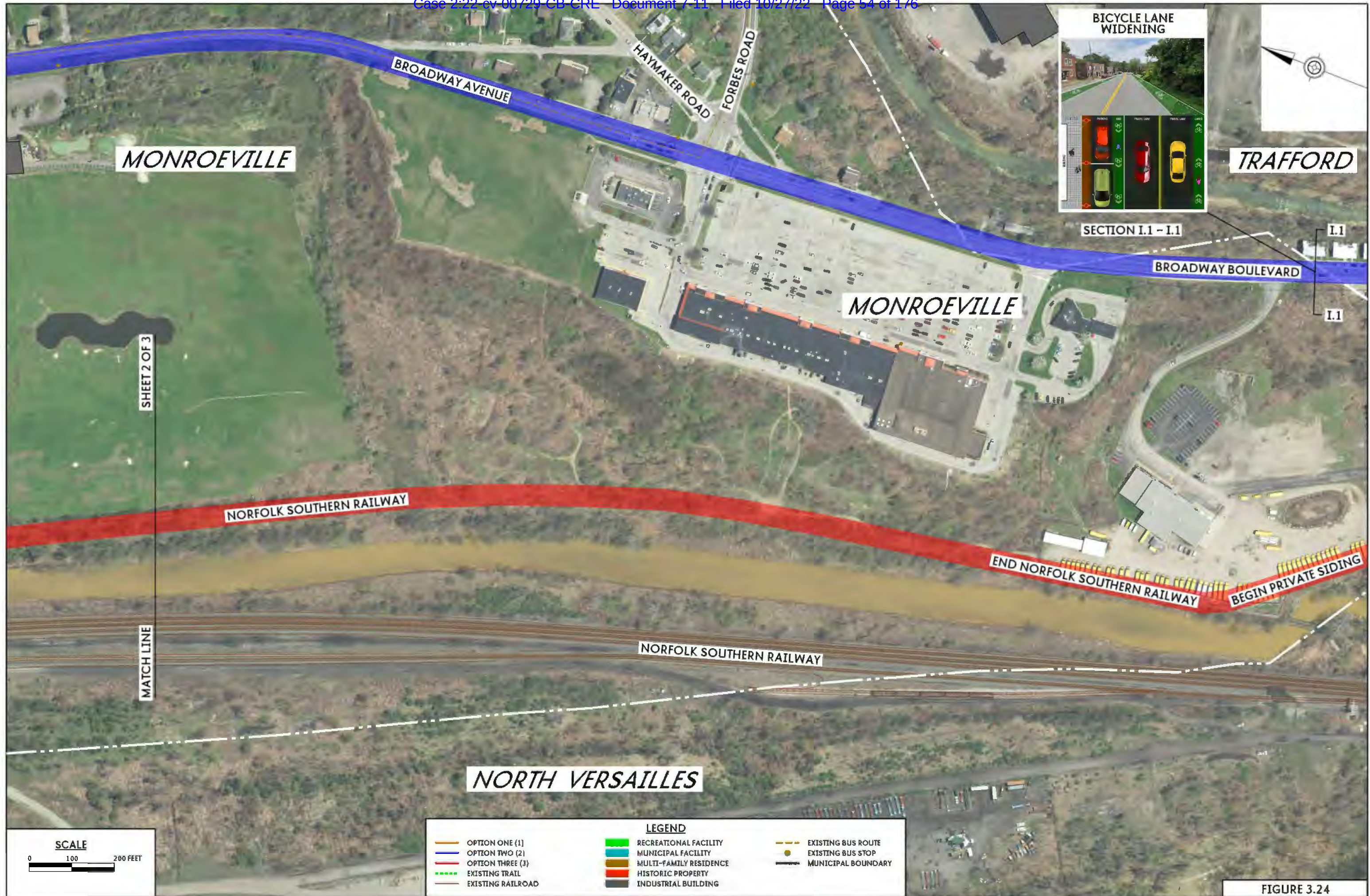


FIGURE 3.24

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FIGURE 3.25

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Description of Potential Alignments by Municipality**Rankin Borough (Refer to Figures 3.7 and 3.8)**

The western end of the study corridor begins in Rankin on the Carrie Furnace redevelopment site. West of the site, the multimodal corridor will connect to a future extension of the Duck Hollow Trail from Pittsburgh. The Carrie Furnace site offers two options for continuing east along the corridor. In addition, the Carrie Furnace site provides the connection to the Great Allegheny Passage via a planned rehabilitation of the site's Hot Metal Bridge. The exact alignment of a multimodal corridor through the Carrie Furnace site and access to the Hot Metal Bridge will be finalized in consultation with its developer.

Blue Alignment – .68 mile (3,585 feet)

The blue alignment is a curb-separated shared use path that is already constructed along Carrie Furnace Boulevard. The shared use path continues east on the flyover ramp to the intersection with Kenmawr Avenue. For a short distance the alignment uses shared travel lanes before entering the Braddock commercial district.

Opportunities:

- Utilizes existing infrastructure already constructed for multimodal use
- Attractive to a wide variety of users
- Points of Interest – Hot Metal Bridge, Carrie Blast Furnaces Historic National Landmark, future connection to Duck Hollow Trail
- Important feature of the Carrie Furnace site's redevelopment

| RANKIN | |
|-----------|-------------|
| Alignment | Total Cost |
| Yellow | - |
| Blue | \$1,323,000 |
| Red | \$2,186,000 |

Challenges:

- Steep grade (5%) along Carrie Furnace Boulevard Bridge and Kenmawr Avenue Ramp Bridge
- Increased bicyclist level of stress due to vehicle interactions at intersection with Kenmawr Avenue

Red Alignment – .73 mile (3,861 feet)

The red alignment through the Carrie Furnace site is a new shared use path that begins at the Hot Metal Bridge and continues east through the site along the river. The proposed shared use path requires crossing two rail lines at noted public crossings. After passing under the Rankin Bridge and Talbot Avenue Bridge, the alignment uses existing streets to access Braddock Borough. The relaxed nature of the trail promotes recreational use and emphasizes historical landmarks to regional audiences.

Opportunities:

- Attractive to a wide variety of users
- Points of Interest - Hot Metal Bridge, Carrie Blast Furnaces Historic National Landmark, riverfront access/views
- Important feature of the Carrie Furnace site's redevelopment

Challenges:

- Requires use of shared lanes on local streets to access Talbot Avenue in Braddock Borough

Braddock Borough (Refer to Figures 3.9 to 3.11)***Yellow Alignment – Library .1 mile (518 feet)***

The yellow alignment utilizes existing road infrastructure for a shared use lane along the transition from Library Street in Braddock to Jones Avenue in North Braddock before heading southeast on Bell Avenue. This section of the trail alignment is small and mostly uphill from Braddock into North Braddock (see North Braddock profile for a complete description of this portion of the alignment).

Blue Alignment – 1.07 miles (5,636 feet)

Utilizing a cycle track in an existing parking lane along Braddock Avenue, the proposed alignment supports local businesses and redevelopment efforts by providing direct access to the Braddock commercial district. The buffered and protected nature of cycle tracks reduces the bicycle level of stress and may be more attractive to a wider *range of users than shared use lanes*.

Opportunities:

- Utilizes existing infrastructure
- Potentially attractive to a wide range of users
- Points of Interest – Braddock Civic Plaza, AHN Urgent Care Center, the Ohringer Building, Heritage Community Initiatives, Grow Pittsburgh Braddock Farms
- Potential catalyst for redevelopment efforts (e.g., AlleghenyTogether)
- Provides access to transit stops

Challenges:

- Requires removal of one parking lane
- Existing high volumes of vehicular, bus, and truck traffic
- May require re-paving Braddock Avenue before installing the cycle track

| BRADDOCK | |
|-----------|-------------|
| Alignment | Total Cost |
| Yellow | \$186,000 |
| Blue | \$2,750,000 |
| Red | \$3,192,000 |

Red Alignment – 1.26 miles (6,661 feet)

After exiting the Carrie Furnace site, red alignment uses shared use lanes on West Braddock Avenue and Fleet Street and Talbot Avenue. Beginning at Talbot Avenue and Third Street, the red alignment is a shared use path utilizing existing right-of-way along the lower traffic volume, mixed residential and industrial corridor. The termination of the path at 11th Street provides a connection to the Braddock boat launch.

Opportunities:

- Low volume of existing traffic
- Attractive to a wide range of users
- Points of Interest – Monongahela River access, Edgar Thomson Works, Fifth Season vertical farm
- Potential for activation of vacant lots

Challenges:

- More remote from businesses along Braddock Avenue
- Used by heavy trucks serving local industries
- Requires potential coordination/relocation of utilities
- Requires use of shared lanes on local streets to access Talbot Avenue in Braddock Borough

North Braddock Borough (Refer to Figures 3.11 to 3.13)**Yellow Alignment – 1.19 miles (6,278 feet)**

The yellow alignment utilizes existing on-road infrastructure on a low volume, neighborhood street and supports residential connectivity between North Braddock and East Pittsburgh. The shared use lanes proceed north on Library Street in Braddock and continue Jones Avenue in North Braddock. It turns east on Bell Avenue. Preliminary assessment shows that there may be enough room for a bike lane in one direction on Bell Avenue east of 14th Street. The shared use lanes may be less attractive to a wide range of user types, but has the ability to enhance connectivity between boroughs and connect points of interest.

Opportunities:

- Utilizes existing on-road infrastructure
- Provides a navigable route for commuters
- Points of Interest – General Braddock’s Defeat, Carnegie Library of Braddock, the Schwab-Dixon Mansion, North Braddock Park
- Provides access to transit stops

Challenges:

- Steep grade (8%) along Jones Avenue connecting Braddock and North Braddock
- Shared use lanes might be less attractive to non-cyclists and inexperienced riders

| NORTH BRADDOCK | |
|----------------|-------------|
| Alignment | Total Cost |
| Yellow | \$1,136,000 |
| Blue | \$1,989,000 |
| Red | - |

Blue Alignment – .78 mile (4,098 feet)

Exiting Braddock, the blue alignment is a shared use path within the existing right-of-way along Braddock Avenue. The preliminary assessment shows that installation of a shared use path will require coordination with US Steel to reconfigure on-street parking in front of Edgar Thomson Works. The buffered and protected nature of this shared use path would improve user comfort and reduce the bicycle level of stress making this option more attractive to a wider range of users around the US Steel Edgar Thomson Works.

Opportunities:

- Utilizes existing right-of-way
- Potentially attractive to a wider range of users
- Points of Interest – US Steel Edgar Thomson Works, Steel Valley heritage tourism
- Enhanced connectivity between Braddock and East Pittsburgh

Challenges:

- Requires a reconfiguration of on-street parking in front of Edgar Thomson Works
- Requires potential coordination/relocation of utilities

East Pittsburgh Borough (Refer to Figures 3.13 to 3.15)***Yellow Alignment – .81 mile (4,273 feet)***

The yellow alignment utilizes existing right-of-way on low-volume streets to create a bicycle route connecting North Braddock to East Pittsburgh via Center Street, Bessemer Avenue, Linden Avenue, and Cable Avenue. Preliminary assessment indicates that bike lanes on one side of Bessemer Avenue and two sides of Linden may be feasible. Traveling this route requires significant grade change which increases bicycle level of stress. This alignment connects to the mixed-use district of East Pittsburgh and to the regional employment center at the Keystone Commons.

Opportunities:

- Utilizes existing infrastructure
- Low volume of traffic
- Points of Interest – Keystone Commons (former Westinghouse Electric & Manufacturing Co.)
- Potential catalyst for mixed-use development / Supports redevelopment of the Bank Building and vicinity

Challenges:

- Steep grade (7%) along Linden Avenue
- Shared use lanes might be less attractive to non-cyclists and inexperienced riders

Blue Alignment – 1.09 mile (5,760 feet)

Through East Pittsburgh the blue alignment is a curb-separated cycle track in an existing eastbound travel lane of SR 2087/SR 2083, requiring close coordination with PennDOT. The buffered and protected nature of the cycle track will improve user comfort in a high-volume traffic corridor while also reducing the bicycle level of stress, making this alternative attractive to a wider range of users.

Opportunities:

- Potentially attractive to a wider range of users
- Points of Interest – George Westinghouse Bridge, Keystone Commons (former Westinghouse Electric & Manufacturing Co.)
- Potential catalyst for mixed-use development / Supports redevelopment of the Bank Building and vicinity

Challenges:

- Roadway reconfiguration required - SR 2083 lane reduction.
- Requires potential coordination/relocation of utilities

| EAST PITTSBURGH | |
|-----------------|-------------|
| Alignment | Total Cost |
| Yellow | \$1,239,000 |
| Blue | \$3,818,000 |
| Red | \$1,709,000 |

Red Alignment – .67 mile (3,539 feet)

The red alignment is a shared use path that utilizes SR 2183 and historic Braddock Avenue that follows Turtle Creek (a combination of state and locally owned right-of-way). It is a visually attractive corridor due to the proximity to Turtle Creek, dominating views of the Westinghouse Bridge, and historical significance of the Turtle Creek flood gate. It will require coordination with RIDC's railroad to facilitate the rail-with-trail path.

Opportunities:

- Attractive to a wide range of users
- Separated from vehicular traffic
- Points of Interest – Turtle Creek Flood Gate, Westinghouse Bridge, Keystone Commons (former Westinghouse Electric & Manufacturing Co.)
- Potential catalyst for activation of undeveloped commercial parcels

Challenges:

- Heavy truck traffic in Keystone Commons would require a separated shared use path
- Requires access coordination with RIDC Railroad, PennDOT, and the Pennsylvania Turnpike Commission

Turtle Creek Borough (Refer to Figures 3.15 to 3.17)***Yellow Alignment – 1.08 miles (5,707 feet)***

In Turtle Creek, the yellow alignment re-starts at Electric Avenue and features a mix of shared use lanes and bike lanes within the existing right-of-way on Braddock Avenue and Penn Avenue. The yellow alignment continues along Airbrake Avenue to Wilmerding. The alignment along Braddock / Penn / Airbrake Avenues travels through mixed-use areas of with a high level of access to local destinations and residential areas.

Opportunities:

- Utilizes existing right-of-way and infrastructure
- Enhancement of community access to Turtle Creek destinations
- Points of Interest – Turtle Creek STEAM Academy, Turtle Creek Senior Center
- Potential catalyst for new development

Challenges:

- Numerous intersections (Fourteen (14) along Braddock / Penn / Airbrake Avenues) require additional consideration for safe accommodations
- Shared use lanes might be less attractive to non-cyclists and inexperienced riders

Blue Alignment – .43 mile (2,295 feet)

In Turtle Creek, the blue alignment picks up again at Keystone Commons North Yard Portal No. 9 entrance on Braddock Avenue. From there the alignment is a cycle track that travels through Keystone Commons and adjacent businesses. It crosses Thompson Run and ends after passing under Greensburg Avenue, connecting to the red alignment. The blue alignment re-starts on Virgin Alley where it utilizes shared use lanes to travel through Turtle Creek.

Opportunities:

- Cycle track sections of the alignment will be attractive to a wide range of users
- Portions of the alignment utilize existing infrastructure
- Points of Interest – Keystone Commons (former Westinghouse Electric & Manufacturing Co.), Turtle Creek tributaries

| TURTLE CREEK | |
|--------------|-------------|
| Alignment | Total Cost |
| Yellow | \$2,680,000 |
| Blue | \$1,807,000 |
| Red | \$3,023,000 |

Challenges:

- Existing parking restrictions and stop signs on Virgin Alley
- Potential access coordination with RIDC Railroad and the Pennsylvania Turnpike Commission
- Shared use lanes sections might not be attractive to a wide range of users

Red Alignment – .7 mile (3,670 feet)

The red alignment is a shared use path that begins in Keystone Commons and follows Turtle Creek along the former Westinghouse Interworks Railway line into Wilmerding Borough. The separated and at-grade nature of the path along Turtle Creek will be attractive to a wide range of users.

Opportunities:

- Attractive to a wide range of users

III. Overview of Alternatives

- Points of Interest – Keystone Commons (former Westinghouse Electric & Manufacturing Co.), Turtle Creek
- Potential catalyst for developing adjacent properties
- Provides access to transit stops

Challenges:

- Requires access coordination with RIDC Railroad, Pennsylvania Turnpike Commission, and ALCOSAN

Wilmerding Borough (Refer to Figures 3.17 to 3.19)***Yellow Alignment – .93 mile (4,928 feet)***

In Wilmerding, the yellow alignment continues along Airbrake Avenue as a mix of shared use lanes and bicycle lanes within the existing right-of-way in an established, mixed-residential corridor. This alignment includes a southbound shared use lane and a northbound, contraflow bike lane on Airbrake Avenue and Avenue U. It connects to the red alignment on its eastern end.

Opportunities:

- Utilizes existing infrastructure
- Provides a dedicated lane for northbound bicycle travel
- Provides access to transit stops
- Points of Interest – former Westinghouse Air Brake Factory, Airbrake Park Walking Trail, Turtle Creek

Challenges:

- Potential design complications regarding parked vehicles and guide rails
- Southbound shared use lane might be less attractive to non-cyclists and inexperienced riders

Blue Alignment – 1.05 miles (5,525 feet)

Heading into Wilmerding, the blue alignment continues along Middle Avenue. Between Fifth Street and First Street it features a single-direction, southbound shared use lane. The alignment provides dedicated bike lanes from First Street to State Street. This route utilizes the existing right-of-way as Middle Avenue is substantially wide due to its prior use as a trolley corridor.

Opportunities:

- Utilizes existing infrastructure
- Provides access to transit stops
- Points of Interest - Wilmerding Ukrainian Club

Challenges:

- One-way travel from Fifth Street to First Street
- Steep grade (5%) along Middle Avenue
- Shared use lanes might be less attractive to non-cyclists and inexperienced riders

| WILMERDING | |
|------------|-------------|
| Alignment | Total Cost |
| Yellow | \$1,414,000 |
| Blue | \$3,448,000 |
| Red | \$1,278,000 |

Red Alignment – .61 mile (3,206 feet)

In Wilmerding, the red alignment continues as a shared use path along Turtle Creek. It transitions from the former Westinghouse Interworks right-of-way to the Airbrake Park Walking Trail. The red alignment ends at the southeastern corner of Airbrake Park. It restarts near the intersection of Avenue U and Watkins Avenue where a shared use path begins on inactive Norfolk Southern right-of-way.

Opportunities:

- Attractive to a wide range of users
- Points of Interest – former Westinghouse Air Brake Factory, Turtle Creek

Challenges:

- Requires coordination with RIDC Railroad and Norfolk Southern

III. Overview of Alternatives

- Shared use path would need to transition to on-road facilities for part of Airbrake Avenue and U Avenue

Municipality of Monroeville (Refer to Figures 3.19 to 3.21)***Blue Alignment – 2.01 miles (10,610 feet)***

Heading into Monroeville, the blue alignment is a cycle track in the right-of-way adjacent to the eastbound travel lane along Broadway Boulevard between State Street and Second Street. The grade of the cycle track increases bicycle level of stress on the route, but the buffered and protected nature of the path allows for connectivity with minimal excavation and infrastructure reconfiguration.

Opportunities:

- Provides access to transit stops
- Creates regional connectivity between Wilmerding and Pitcairn

Challenges:

- Steep grade (5%) along State Street and Broadway Avenue
- Requires potential coordination/relocation of utilities
- Requires coordination/design consideration regarding adjacent property driveways
- Topography constraints may be less attractive to a wide variety of users

| MONROEVILLE | |
|-------------|--------------|
| Alignment | Total Cost |
| Yellow | \$1,914,000 |
| Blue | \$7,270,000 |
| Red | \$11,240,000 |

Red Alignment – 2.36 miles (12,436 feet)

The red alignment restarts right before entering Monroeville. At this location the alignment is a shared use path that utilizes inactive Norfolk Southern Railroad right-of-way. While the right-of-way lacks any remnants of track, its use would require significant improvements including structural modifications, land excavation, and installation of retaining walls. The buffered and protected nature of the shared use path and its location next to Turtle Creek will be attractive to a wide range of users.

Opportunities:

- Attractive to a wide variety of users
- Points of Interest – former Westinghouse Air Brake Factory, Turtle Creek

Challenges:

- Coordination with Norfolk Southern Railway
- Major structural modifications are necessary to convert the right-of-way to multimodal use

Note: The costs shown here for Monroeville are for the entire alignment within Monroeville, including the portion described below with the Pitcairn overview.

Pitcairn / Monroeville Overview (Refer to Figures 3.22 to 3.25)***Yellow Alignment – .23 mile (1,198 feet)***

In Pitcairn, the yellow alignment utilizes existing infrastructure to incorporate shared use lanes along Broadway Boulevard over Dirty Camp Run and into Pitcairn Park.

Opportunities:

- Potential economic impact for the Pitcairn Business District / Supports Allegheny Together business revitalization efforts
- Connectivity of the Pitcairn Business District to neighboring communities via non-vehicular modes

Challenges:

- Shared use lanes may be less attractive to non-cyclists and inexperienced riders
- High volume of existing heavy truck traffic
- Constrained right of way width limits dedicated facilities

Blue Alignment – .39 mile (2,042 feet)

The blue alignment is a dedicated cycle track that utilizes the shoulder and adjacent right-of-way along Broadway Boulevard when traveling out of Pitcairn into Monroeville. The grade change of the cycle track may limit access to certain users, but the dedicated cycle track allows for a direct connection with minimal excavation. Reconfiguration of the Mossie Boulevard (SR 48) Intersection will be required to facilitate non-vehicular movement through the intersection.

Opportunities:

- Provides access to transit stops
- Potential economic impact for the Pitcairn Business District / Supports the Allegheny Together business revitalization efforts

Challenges:

- Steep Grade (7%) along Broadway Boulevard
- Reconfiguration of Mossie Boulevard (SR 48) intersection to accommodate non-vehicular movement
- Less attractive to non-cyclists and inexperienced riders.
- Existing high volume of heavy truck traffic
- Requires coordination with PennDOT

| PITCAIRN | |
|-----------|------------|
| Alignment | Total Cost |
| Yellow | \$657,000 |
| Blue | \$934,000 |
| Red | \$771,000 |

Red Alignment – .16 mile (840 feet)

The red alignment is a shared use path that utilizes inactive Norfolk Southern Railroad right of way along Turtle Creek in Pitcairn and Monroeville. A portion of the railroad right-of-way near the Monroeville-Trafford border is privately owned. This alignment would require the construction of a new structure to cross Dirty Camp Run at the Pitcairn Hose Company No. 1 site. The buffered and protected nature of the shared use path and its location next to Turtle Creek will be attractive to a wide range of users.

Opportunities:

- Attractive to a wide variety of users
- Points of Interest – Norfolk Southern Pitcairn Intermodal Terminal and Pitcairn Borough Park

Challenges:

- Coordination with Norfolk Southern Railway
- Trail is disconnected from the Pitcairn Business District which may yield less economic impact

Note: The costs shown on the previous page are just for the portion of the alignment in Pitcairn. The total cost for the alignments within Monroeville is shown on page III – 13.

Trafford Borough (Refer to Figures 3.25 to 3.26)**Blue Alignment – .26 mile (1,366 feet)**

Moving from Monroeville into Trafford, the blue alignment utilizes the roadway shoulder of Fifth Street for the addition of on-street bike lanes. The addition of bike lanes within the existing right-of-way allows for connectivity into Trafford with minimal excavation. After crossing over the Fifth Street Bridge, the blue route uses Brinton Avenue, Third Street, and Adrian Avenue to access a future extension of the Westmoreland Heritage Trail from B-Y Park, shown as the red alignment.

Opportunities:

- Utilizes existing infrastructure
- Provides access to transit
- Dedicated connection between Trafford and Pitcairn

Challenges:

- May be less attractive to a wider variety of users
- Steep grade (7%) along Fifth Street (correct map)

| TRAFFORD | |
|-----------|-------------|
| Alignment | Total Cost |
| Yellow | - |
| Blue | \$4,425,000 |
| Red | \$2,116,000 |

Red Alignment – .6 mile (3,191 feet)

The red alignment is a shared use path connecting into Trafford that utilizes the existing crossing over Turtle Creek continuing under the Fifth Street / Veterans Bridge. Rehabilitation of the existing crossing over Turtle Creek will be required to support the shared use path at the Veterans Bridge undercrossing. The red alignment terminates at the existing WHT.

Opportunities:

- Attractive to a wide variety of users
- Reduces bicycle level of stress
- Seamless connection to the Westmoreland Heritage Trail

Challenges:

- Coordination with Norfolk Southern Railway and private landowners
- Rehabilitation of the Turtle Creek Crossing

Summary

The following tables summarize many of the key costs, benefits, and challenges associated with each of the trail alignments broken down by municipality. These tables consolidate the information provided throughout the document into a visual aid that provides useful metrics for future phases of the project development, fundraising, and implementation.

The Trail Alignment Option Summary (Table 3.1) provides a high-level summary of important factors that the study considered for evaluating the feasibility of each alignment. The table highlights the level of connectivity that each alignment provides to the municipalities where they are located. The yellow alignment provides a good amount of connectivity in the study communities, the blue alignment provides an excellent level of connectivity, and the red alignment has a fair amount of connectivity. The yellow and blue alignments mostly utilize existing road infrastructure or follow established corridors; however, the red alignment is more pastoral in nature and removed from, or adjacent to, the existing road network in most parts of the study corridor. Knowing this, the red alignment provides the lowest level of connectivity while providing the highest level of accessibility due to the nature of the shared use path design. This table also outlines cost estimates, trail length, and other constraints such as water crossings and railroad crossings.

The Trail Segment Cost Summary (Table 3.2) provides a detailed cost estimate for each of the municipalities and the respective alignment options – Option One, Option Two, and Option Three. The cost estimates assume a 20-year design life and do not include expenses associated with maintenance, utility relocation, right-of-way acquisition, erosion and sedimentation control, traffic control, traffic signals, lighting, signage and pavement marking, and parking lots. The cost estimates include 35% for contingency funds, 6% for mobilization, and 20% for design and engineering.

The Assessment of Complexity of Next Steps (Table 3.3) provides a high-level summary of potential complications and associated challenges that may arise or would need to be addressed prior to pursuing further work on each section. Some sections, such as Rankin, depict a low level of concern as many of the elements required to move forward have clear resolutions and lower concerns. However, sections such as Turtle Creek and Pitcairn have more tasks to navigate such as stream crossing and engineering studies for existing bridges and roadways.

Finally, Table 3.4 summarizes typical project implementation steps and the approximate length of time required to complete them. The actual amount of time required to complete any of the steps will depend on the complexity of the segment (e.g., requires determining property ownership, coordination with a railroad, and/or relocation of utilities, etc.), the availability of funding for design and construction, and project sponsor capacity to manage implementation among others.

Table 3.1: Trail Alignment Option Summary

| Factors | Option One (1) Yellow | Option Two (2) Blue | Option Three (3) Red |
|---|--|---|---|
| Accessibility to Varied Users | Poor (contains mostly shared-lane segments; cyclists of medium to high ability will be able to travel) | Good (contains mostly cycle track segments; cyclists of low to high ability will be able to travel) | Excellent (contains majority off-road segments) |
| Level of Connectivity to Residential, Commercial, and Recreational Areas | Good | Excellent | Fair |
| Water Crossings | 2 | 3 | 4 |
| Road Crossings | 37 | 59 | 24 |
| Railroad Crossings (At-Grade) | - | 1 | 4 |
| Level of PennDOT Coordination Required | Medium | High | Low |
| Number of Trailheads | 2 | 3 | 5 |
| Length of Option (mi) | 4.39 | 8.51 | 7.28 |
| On-Road Length (mi) | 4.39 | 7.68 | 4.63* |
| Off-Road Length (mi) | - | 0.83 | 2.65 |
| Engineer's Conceptual Cost Estimate | \$9,300,000 | \$27,800,000 | \$25,600,000 |

*This estimate includes road-adjacent segments (e.g., those within the right-of-way but not on the road).

Table 3.2: Trail Segment Cost Summary

| Segment Characteristics | Rankin | Braddock | North Braddock | East Pittsburgh | Turtle Creek | Wilmerding | Monroeville | Pitcairn | Trafford |
|------------------------------|-------------|-------------|----------------|-----------------|--------------|-------------|--------------|-----------|-------------|
| Option One (1) Cost | - | \$186,000 | \$1,136,000 | \$1,239,000 | \$2,680,000 | \$1,414,000 | \$1,914,000 | \$675,000 | - |
| Option Two (2) Cost | \$1,323,000 | \$2,750,000 | \$1,989,000 | \$3,818,000 | \$1,807,000 | \$3,448,000 | \$7,270,000 | \$934,000 | \$4,425,000 |
| Option Three (3) Cost | \$2,186,000 | \$3,192,000 | - | \$1,709,000 | \$3,023,000 | \$1,278,000 | \$11,240,000 | \$771,000 | \$2,116,000 |

Note: The preliminary alignment cost estimates assume a 20-year design life and do not include expenses associated with maintenance, utility relocation, right-of-way acquisition, erosion and sedimentation control, traffic control, traffic signals, lighting, signage and pavement marking, and parking lots. The cost estimates include 35% for contingency funds, 6% for mobilization, and 20% for design and engineering.

Table 3.3: Assessment of Complexity of Next Steps

| Segment Characteristics | Rankin | Braddock | North Braddock | East Pittsburgh | Turtle Creek | Wilmerding | Monroeville | Pitcairn | Trafford |
|---|------------------------------------|----------|-----------------------------------|---|---|------------|---|---|---|
| Property Ownership | 1 | 1 | 3 | 2 | 2 | 2 | 2 | 3 | 4 |
| Legal clearances and property maintenance | 1 | 1 | 2 | 3 | 3 | 1 | 2 | 2 | 2 |
| Safety | 1 | 2 | 2 | 3 | 2 | 1 | 2 | 3 | 4 |
| Traffic volumes & road speed | | | | | | | | | |
| Environmental clearance | 1 | 1 | 3 | 3 | 3 | 2 | 4 | 3 | 4 |
| Constructability | 1 | 2 | 3 | 5 | 2 | 2 | 4 | 4 | 3 |
| Bridges | Future Hot Metal Bridge connection | N/A | Dooker Hollow Bridge to open 2022 | Engineering Study for Flyover Bridge Lane Reduction & Railroad Tunnel | Engineering Study for RIDC Bridge over Thompson Run | N/A | Engineering Study for Railroad Bridge over Turtle Creek | Engineering Study for Proposed Bridge over Dirty Camp Run | Engineering Study for Rehabilitation of Existing Bridge |
| Stream Crossings | N/A | N/A | N/A | N/A | One | N/A | Six Unnamed Tributaries | One | One |

Key:

- 1 – Less of a concern, clear resolution anticipated
- 2 – Minor concerns and complications anticipated
- 3 – Moderate concern and moderate complications anticipated
- 4 – Unclear, more complicated
- 5 – Very unclear, very complicated, more known challenges, more effort anticipated

Table 3.4: Project Development Timeline

| Project Phase | Approximate Time to Complete |
|--------------------------------------|-------------------------------------|
| Project Initiation | 12 to 36 months |
| Title Search | 12 - 24 months |
| Fundraising/Grant application | 12 - 36 months |
| Preliminary Engineering | 12 to 24 months |
| Environmental clearance | 12 months |
| Right-of-way plan | 6 months |
| Utility plan | 6 to 9 months |
| Preliminary project design | 12 months |
| Final Design | 12 to 24 months |
| Right-of-way acquisition / approvals | 12 to 18 months |
| Utility clearance | 12 months |
| Permit approvals | 12 months |
| Final project design | 12 months |
| Construction | 12 to 24 months |

IV. SUMMARY OF PUBLIC ENGAGEMENT

Throughout the course of the feasibility study, the project team used a variety of tools to inform the public and stakeholders about the project and to obtain their input. The tools included a website, press releases, a virtual public meeting, fliers and brochures, signs along trails, public open houses, and direct engagement with municipal officials and stakeholders. The following is a summary of the public engagement process and feedback.

Project Website and Public Meetings

In March 2021, the project team published a webpage on the Allegheny County Department of Public Works website. This platform was used to begin getting the word out about the planning process to study the feasibility of a trail system in the Turtle Creek Valley. The purpose was to inform the community of the goal to study possible connections between the Westmoreland Heritage Trail in Trafford Borough and the Great Allegheny Passage trail system across the Monongahela River from Rankin Borough. The project's Purpose and Need report was published on the website for public review and provided a way for interested parties to stay informed about the project by providing basic contact information. Twenty individuals provided contact information to obtain project updates.

In June 2021, the County issued a press release to announce the date of a public meeting which was held virtually on June 23, 2021 at 6:00 p.m. The website became a way for participants to get more information and to register to attend the meeting. In addition to 20 information requests, the team received 112 requests to attend the public meeting for a total of 132 interested parties. After the public meeting, a recording of the meeting was published on the site for anyone to view, the project maps were posted in PDF format, and an online comment form was utilized to gather community feedback. As of July 30, 2021, the website had more than 1,600 clicks.

In June 2021, the project team determined that with the uncertainty of the COVID-19 pandemic, local regulations, and countywide mandates that the public meeting should be held virtually on the Microsoft TEAMS platform. The team also decided to hold two in-person, public open houses in the corridor, one in Braddock and the other in Pitcairn. The Pitcairn meeting was held on Tuesday, July 20th from 5:00 to 7:00 p.m. at the Pitcairn Park Building and the Braddock event was held on Saturday, July 24th from 11:00 a.m. to 1:00 p.m. at the Braddock Civic Plaza. The goal was to ensure that community members had as many opportunities as possible to participate in the process and voice their concerns.

The virtual public meeting held on the evening of June 23rd was very well attended with 67 members of the public in attendance (see Table 4.1). The attendees overwhelmingly supported the intent of the study and the alternatives that the project team presented. A number of questions submitted by the attendees focused on right-of-way capacity, safety, railroad right-of-way and ownership, economic development in the corridor, and environmental concerns.

Table 4.1 Virtual Meeting Attendance

| Metric | Totals |
|-------------------------------------|--------|
| Meeting Registrations | 132 |
| Persons that attended online | 58 |
| Persons that attended via telephone | 9 |
| Total Meeting Attendees | 67 |

The public open houses held in Braddock and Pitcairn were also well attended. The events had a total of 68 attendees between the two open houses with 49 people attending in Pitcairn and 19 people attending the Braddock event (see Table 4.2). At each open house, the project team displayed full-length prints of the project maps organized by borough(s) and provided comment sheets, post-it notes, and a brochure to ensure everyone who participated was able to voice concerns and support or ask questions.

Table 4.2: Open House Meeting Attendance

| Metric | Totals |
|----------------------|--------|
| Open House Attendees | 68 |
| Pitcairn | 49 |
| Braddock | 19 |

Throughout the public engagement process, the project received overwhelming support for the trail connection from both members of the public and public officials. From the public engagement participants, there were common themes among the comments they shared. Many participants indicated a preference to the trail being completely separated from vehicular traffic where possible and ideally running along the creek and rail corridors. Additionally, the safety of trail users was of high concern, especially regarding on-road trail facilities where there might be minimal separation of trail users from vehicular traffic—in these instances, most people were opposed to the “sharrow” and preferred at a minimum a buffered or protected cycle lane. A summary of the comments received during the public engagement process is provided in Table 4.3.

Public Officials Meetings

Following the initial study kick off of the project, members of the project team met with elected officials and administrative staff at each of the municipalities in the study area. The initial connection with the officials was with a meeting at the Turtle Creek Valley Council of Governments (TCVCOG). This meeting set the expectations for the project and timeline. Following the meeting with the TCVCOG, project team members met with the municipal officials individually for each community to gather local knowledge about the corridor through their communities. Some of these meetings were held at the municipal building prior to the pandemic and some were held virtually to adhere to pandemic mitigations. Throughout the study the project team remained in contact with the municipal officials through emails, phone, and virtual meetings. The project team continued to review and gather feedback on the alignments from municipal officials prior to being presented to the public.

Coordination with Allegheny Together

Allegheny Together is a program that provides strategic planning and technical support for traditional business districts throughout Allegheny County. The program is supported by Allegheny County Executive Rich Fitzgerald and the Allegheny County Economic Development. The process stresses community organization and data-driven planning as a way to direct public investment, spur private investment, and revitalize our communities.

In the program, communities (Braddock, North Braddock, East Pittsburgh, and Pitcairn) are led through a facilitated strategic planning process, utilizing data analysis, community engagement, and an urban design review. Through this process, priorities are established, which are then addressed through technical assistance. A principal objective of Allegheny Together is to help existing businesses thrive in the county’s downtown shopping districts. By helping existing enterprises succeed, Allegheny Together hopes to attract new entrepreneurs to the market, thus increasing district vibrancy.

County staff attended Allegheny Together Build Sessions in Pitcairn Borough on August 12, 2021 and in Braddock Borough on August 23, 2021. The sessions were presented in partnership with Allegheny Together consultant EvolveEA. As part of the meetings, County staff had the opportunity to further discuss how the Turtle Creek Connector study might impact the communities and how it could be coordinated with other work being done through Allegheny Together. In Pitcairn, staff received comments from citizens and business owners supporting and preferring at least a partial connection of the trail along Broadway Boulevard to help stimulate economic development in their business district. In Braddock, participants shared a preference for the trail connection to go through the business district, noting that Talbot Avenue seems a little more remote from activity in the community. Project planners noted that there may be an opportunity for both a through route and a local route in the community.

Key Themes and Future Considerations Based on Public Comments

The public comments that the project team received through the public engagement effort was largely supportive of the project as a whole with an eagerness for implementation to begin soon. Community input was rooted in a few major themes including: a preferred trail route that is completely separated from the roadway, concerns for the safety of trail users when the trail must be on road, and a concern for issues of right-of-way constraints that would constrict the flow of traffic or remove parking. Taking into account the general theme of the comments received throughout the public engagement process, there are a few design considerations the project team should assess in subsequent phases of preliminary engineering and final design.

- Considerations of where to place trail heads and what amenities will be necessary.
 - Locations
 - Parking—Vacant Lot Activation, etc.
 - Bathrooms
 - Bicycle Repair Stations
- Transit coordination with any on-road facilities.
- Consideration of pavement materials for off-road sections of the trail to ensure accessibility to a larger number of users including people with mobility challenges and those who choose other recreation modes such as roller skates and skateboards.
- Safety accommodations at rail crossings to ensure safe access for all trail users, not just cyclists.
- Connections to the Carrie Furnace Hot Metal Bridge.
- Trail segments near protected watersheds will need to be coordinated accordingly and have the potential to enhance water quality.
- Vehicular speed and traffic studies performed along to the corridor to ensure the safety of trail users for on-road or road-adjacent trail sections on the following roadways:
 - Lane taking on Tri-Boro Expressway
 - Braddock Avenue with trucks
 - Trafford- 5th Street truck issues
 - Broadway Boulevard in Pitcairn
- How to ensure safe crossing at all on-road intersections.
- Narrow right-of-way issues on Broadway Boulevard as the sections approach Pitcairn.
- Study potential safety issues regarding the various routes as proposed. Is one on-road section safer than another, etc.

In addition, the team received a few comments that do not have an ideal home among the selected metrics, including the following:

- The trail in Pitcairn could go around the ball fields in Pitcairn Park as an alternative to the Norfolk Southern right-of-way or the on-road option on Broadway Boulevard in the heavy traffic area of downtown Pitcairn. This option could re-connect with the on-road alignment on Broadway Boulevard east of downtown Pitcairn.
- Issues concerning the behaviors of some cyclists regarding safety when using vehicular travel lanes.
- Concerns about the compensation of landowners should they dedicate the land for the trail.

Table 4.3: Summary of Public Engagement Comments by Corridor Segment

| Rankin/Braddock | North Braddock | East Pittsburgh/Turtle Creek | Wilmerding/Monroeville/North Versailles | Pitcairn | Monroeville | Trafford |
|---|--|--|---|---|--|---|
| Residents use a path to walk from Harriet Street in Rankin Borough to Fleet Street & Talbot in Braddock | Sending the Yellow Line Alternative into North Braddock adds an element of inclusivity | Section in front of RIDC by Electric Avenue will be difficult. How ill bikes cross the traffic by the bank? | Consider taking a lane on the Tri-Boro Expressway for the trail | PA Rt. 130 (Broadway Blvd) is too narrow and dangerous for a trail. A number of cars have slid off the curve near the Monroeville-Pitcairn Border making the route dangerous without a safety barrier. | The Blue Line Alternative is less appealing than the Red Alignment | 5th Street (PennDOT Section) traffic & truck traffic create a narrow path--adding a bike lane could be a danger to cyclists and trail users |
| Connect Rankin residential area near St. Mary's to Braddock Avenue from Kenmawr Avenue | Bike/Ped Improvements on Rt. 30 are needed | Red Line Alternative is ideal for recreational riders. Commuters may end up using the Tri-Boro Expressway | Two-Way traffic on the Turtle Creek side of at Airbrake & 5th Street | Red Line Alternative is the safest choice as the other options could cause pedestrian and cycle accidents with vehicular traffic. | Preference for the Red Line Alternative or even if shifted slightly north & parallel with the Red Line Alternative | Recent landslides on the Norfolk Southern Bend |
| Could we look at utilizing vacant lots on Braddock Avenue to add parking in the event a parking lane is eliminated on Braddock Avenue. (Could also serve as Trail Head Parking) | | Consider using the creek crossing near RIDC & Westinghouse Bridge to run parallel to the Norfolk-Southern tracks. | Red Line Alternative is the preferred route | I like the Red Route the best: hugging the water gives the straightest, flattest most scenic path. It will have the fewest hill climbs and fewest stop signs. More separation from traffic makes for a safer, better ride and walk. | The Norfolk Southern right of way is clearly the best choice were available. Great opportunity for post-industrial restoration of the banks of Turtle Creek. | Are there any plans for trailheads between Trafford and the other end in Braddock? |
| Coordinate with Allegheny Together on Braddock Avenue improvements | | Please consider using trail surfaces that support other recreational modes such as roller skates, skate boarding, etc. | Transition from the Yellow Line Alternative at Avenue U and go up Miller Street to Middle Avenue for a route towards Turtle Creek with traffic. Trail should go toward Pitcairn on Yellow Airbrake Avenue | | | Possible Alternate route connecting the Stewart Station Drive (Private) to the current end of the WHT |
| Concerns regarding the safety of trail goes on Braddock Avenue in conjunction with heavy truck traffic in the corridor | | Look to York County as an example of a Rails to Trails Strategy. | | | | Truck traffic is supposed to go down Forbes Road, however GPS sends them down 5th & Brinton |

Table 4.3: Summary of Public Engagement Comments by Corridor Segment (cont.)

| Rankin/Braddock | North Braddock | East Pittsburgh/Turtle Creek | Wilmerding/Monroeville | Pitcairn | Monroeville | Trafford |
|---|----------------|---|------------------------|----------|-------------|---|
| Complete the Hot Metal Bridge Restoration | | Speed of vehicles along Braddock Avenue is greater than the speed of the freight rail trails on the Norfolk Southern lines. | | | | At the end of the present trail headed toward Trafford you come to a set of older RR Tracks. To the right it could be possible to perform some excavation work and then it would run into Steward Station Road and once there you can go to Forbes Road or toward Trafford Bridge |
| Put trail alignment on Braddock Avenue as a means of stimulating economic development | | Only 15' of clearance behind RIDC along the creek between the Rail Lines | | | | Trafford would like the trail to continue all the way to 4th Street or beyond as to use for business parking. |
| Talbot Avenue is a safer option because of traffic | | Has the trail analysis and alternatives taken into account the future Mon Fayette Expressway alternatives through the same general area? Doesn't the alignment of the Mon Fayette EXPW roughly follow Thompson Run? | | | | The Turtle Creek Watershed Association (TCWA) has found the Westmoreland Heritage Trail to be an excellent partner in raising awareness and interest in water quality and outdoor activities. If they haven't already, can the team for the Turtle Creek Trail project reach out and work with the watershed association on partnering efforts and ways to work together? |

Table 4.3: Summary of Public Engagement Comments by Corridor Segment (cont.)

| Rankin/Braddock | North Braddock | East Pittsburgh/Turtle Creek | Wilmerding/Monroeville | Pitcairn | Monroeville | Trafford |
|--|----------------|--|------------------------|----------|-------------|--|
| Red Line Alternative seems inherently safer than the Blue and Yellow Line Alternatives | | Does the Norfolk Southern Right of way and the Westinghouse Interworks Railway have sufficient width to be of interest to PAT as an extension of the east Busway from the current Swissvale/Rankin terminus to Monroeville/Trafford/Murrysville? | | | | This project has tremendous potential to improve the land/water quality of the Turtle Creek Watershed. |
| 500 Block (between 5th & 6th Streets) on Talbot could pose a safety concern--crime. | | Do we have usage statistics on the live or potentially live tracks? A train an hour is one thing, a train a week is a lot easier to deal with. Also, the speed of those trains. 45 mph? or 5 mph? | | | | |
| Please clean and maintain the Rankin Bridge Bike lanes--excessive glass and sharp objects cause cycle damages | | Has the group considered potentially using part of the unused US Steel land east of the ET works to connect to the road through the Westinghouse floodgate without going up onto the Triboro Expressway approach? | | | | |
| Would bike to work daily if the route was on Talbot Avenue--concerned about safety with traffic on Braddock Avenue | | | | | | |

V. CONCLUSION

This final report will serve as a guide for project partners to begin advancing segments of the project into design and construction. As a federally funded feasibility study, the process did not include the selection of a preferred alignment(s). All alternatives will be carried forward into preliminary engineering for further evaluation. Similar to other multi-municipal trail planning efforts in the county, it is expected that the corridor will be advanced in phases or in segments due to the complexity, cost, and road and property ownership characteristics along the corridor.

The project partners will work closely with the public, municipal officials, the Turtle Creek Council of Governments, stakeholders, and property owners as elements of the plan move forward. Support from the study municipalities is critical because it is the local communities that will likely be responsible for maintenance and upkeep once construction is complete. While that is an important consideration, the communities stand to benefit greatly from economic development and revenue derived from heritage and recreational tourism and non-motorized commuter spending.

Certainly, the implementation process may be lengthy, difficult, and expensive. Some segments will be especially complicated, but it was important to show them as a possibility and long-term goal. These segments will require coordination with private and railroad property owners. Working with these types of property owners and stakeholders can be a long and time-consuming task that may not be completed in the short term. These processes require coordination across multiple government agencies, work within the judicial system's processes, and several other factors—many of which are described in this report. In those specific segments where significant coordination is required, their completion is an ultimate aspiration for this trail network and their completion will likely take many years to come to fruition.

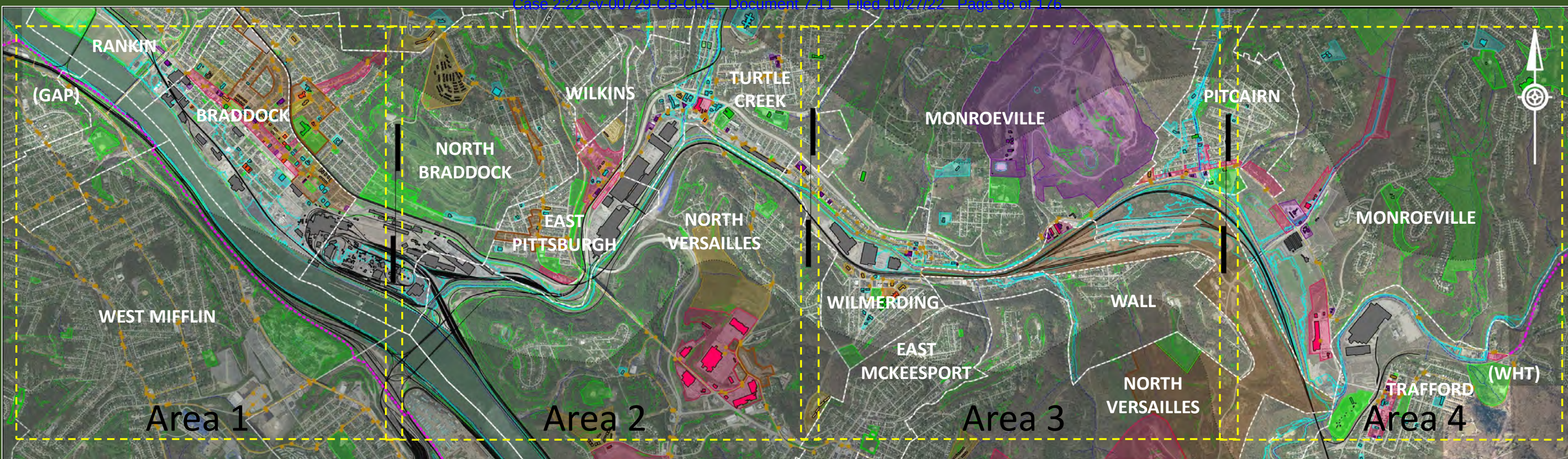
The completion of this study is the critical first step in establishing the importance of this corridor as a multimodal connection. It demonstrates the communities' long interest and support of enhanced active transportation opportunities and connections to local and regional destinations and amenities. In the short term, the report will serve as the foundation for grant funding requests to begin the selection of preferred alternatives and engineering and design activities. Table 5.1 provides a summary of several grant programs that should be considered to support the advancement of trail elements to implementation.

Table 5.1: Summary of Multimodal Grant Funding Programs

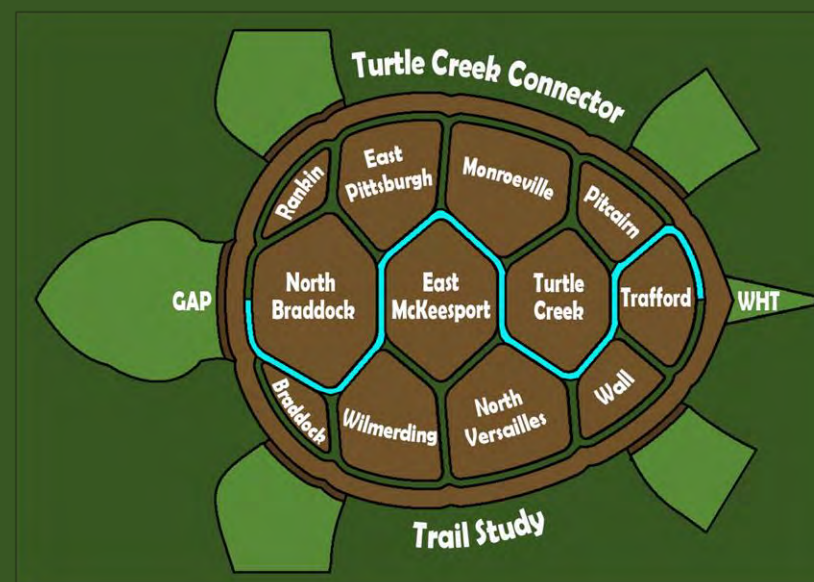
| Program Name | Eligible Activities | Match | Request Limit | Application Cycle |
|--|---|---|---|---|
| PennDOT Multimodal Transportation Fund (State funds) www.penndot.gov | Full-range of multimodal improvements. Acquisition of easements & ROW, construction. Engineering, design, and construction inspection limited to 10 percent of request. Administrative fee of 2 percent is allowed. | 30 percent from local cash contribution; no in-kind. Pre-construction activities can count towards match (if follow Pub 93 or qualifications-based consultant selection) | Minimum request is \$100,000. Maximum request is \$3 million. Can request more than \$3 million if project significantly leverages private investment and creates jobs. All funding must be secured by application deadline. | Applications typically due each November. |
| PA DCED Multimodal Transportation Fund (State Funds) www.dced.pa.gov | Full-range of multimodal improvements. Acquisition of easements & ROW, construction. Engineering, design, and construction inspection limited to 10 percent of request. Administrative fee of 2 percent is allowed. | 30 percent from local cash contribution; no in-kind. Local match contributions from municipalities waived through December 31, 2022. | Minimum request is \$100,000. Maximum request is \$3 million. All funding must be secured by application deadline. | Applications typically due each July. |

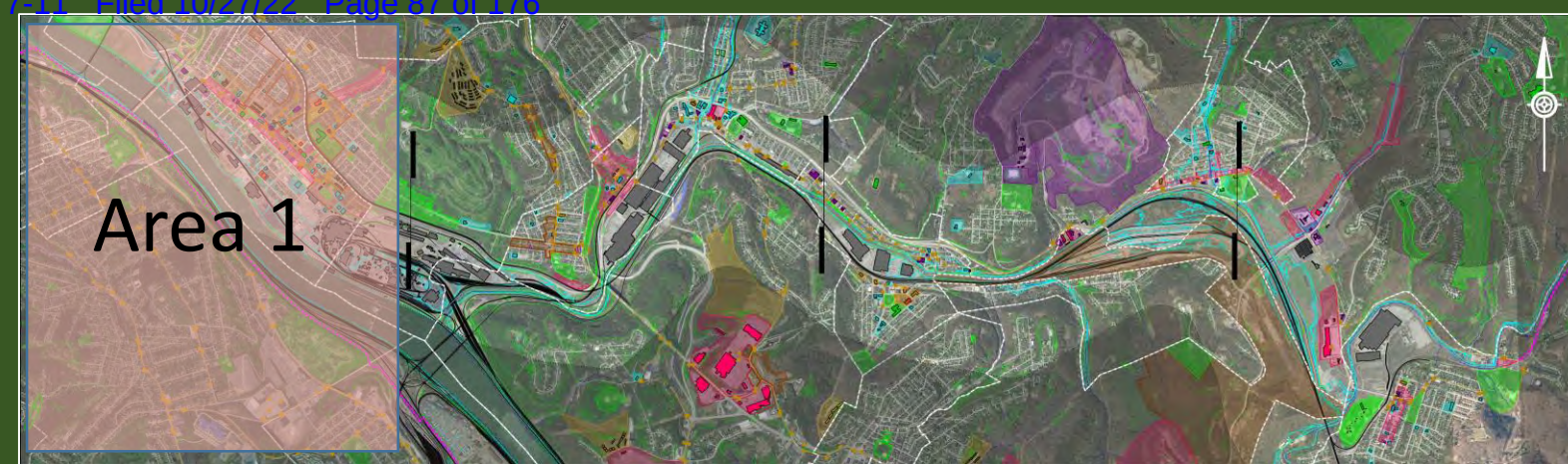
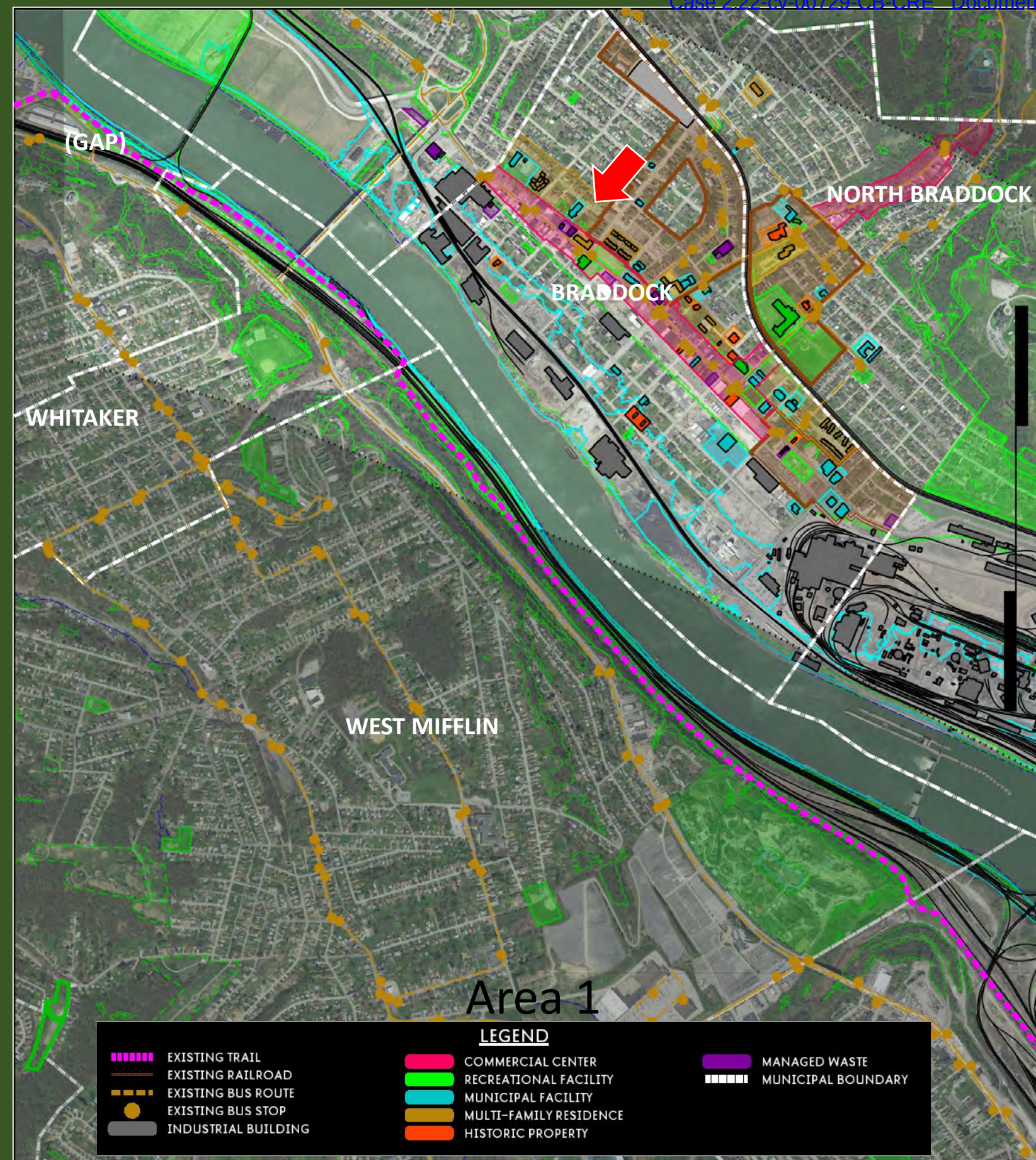
| Program Name | Eligible Activities | Match | Request Limit | Application Cycle |
|---|---|---|---|--|
| PennDOT Transportation Alternatives Program – SPC Region Allocation (Federal funds administered by PennDOT) www.spcregion.org | Construction of bicycle and pedestrian facilities, rails to trails conversion, safe routes to school programs, historic preservation of transportation facilities among others. | \$0 match if sponsor has paid for all pre-construction activities including utilities and right-of-way. Construction includes inspection. | Minimum request for infrastructure projects is \$50,000. Maximum request is \$1 million. Approximately \$1.8 million is available per year. | Applications typically accepted biannually in the late summer. |
| PA DCED: Greenways, Trails, and Recreation Program (GTRP)- (State Funds) www.dced.pa.gov | Planning, acquisition, development, rehabilitation, and repair of greenways, recreation trails, open space, parks, and beautification projects. | 15 percent from local cash contribution; no in-kind. | Maximum request is \$250,000. Match commitment documentation is required to be provided along with the application. | Applications are typically due by the end of May. |
| PA DCNR: Community Conservation Partnerships Program: (State Funds) www.dcnr.pa.gov | Planning, acquisition, and development of public parks; recreation areas; motorized and non-motorized trails; river conservation and access; and the conservation of open space. Grant funds can also be used to support regional and statewide partnerships that build capacity to better develop and manage resources. | Most require a cash or noncash match from the applicant of 50 percent of the project cost. Match requirements vary based on the grant program and funding source that is being utilized. | Request limits, minimums, and maximums vary based on the grant program and funding source is being utilized. See state website for further details. | Applications are typically due by the end of April. |

| Program Name | Eligible Activities | Match | Request Limit | Application Cycle |
|--|---|-----------------------|---|---|
| Community Infrastructure and Tourism Fund (State funds administered by Allegheny County) www.alleghenycounty.us/econdev | Planning, design, and construction of infrastructure improvements and facilities. | No match is required. | Projects must have a minimum budget of \$100,000. Maximum grant award is \$250,000. | Applications typically accepted annually. |
| Gaming Economic Development Tourism Fund (State funds administered by Allegheny County) www.alleghenycounty.us/econdev | Planning, design, and construction of infrastructure improvements and facilities. | No match is required. | Projects must have a minimum budget of \$150,000. Maximum grant award is \$500,000. | Applications typically accepted annually. |

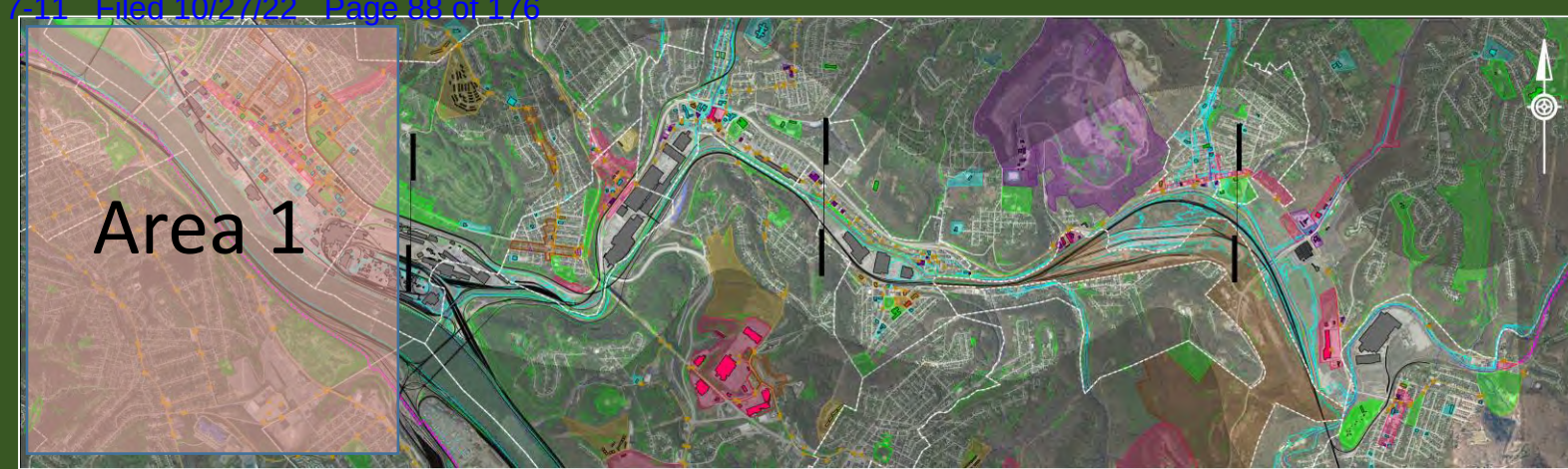
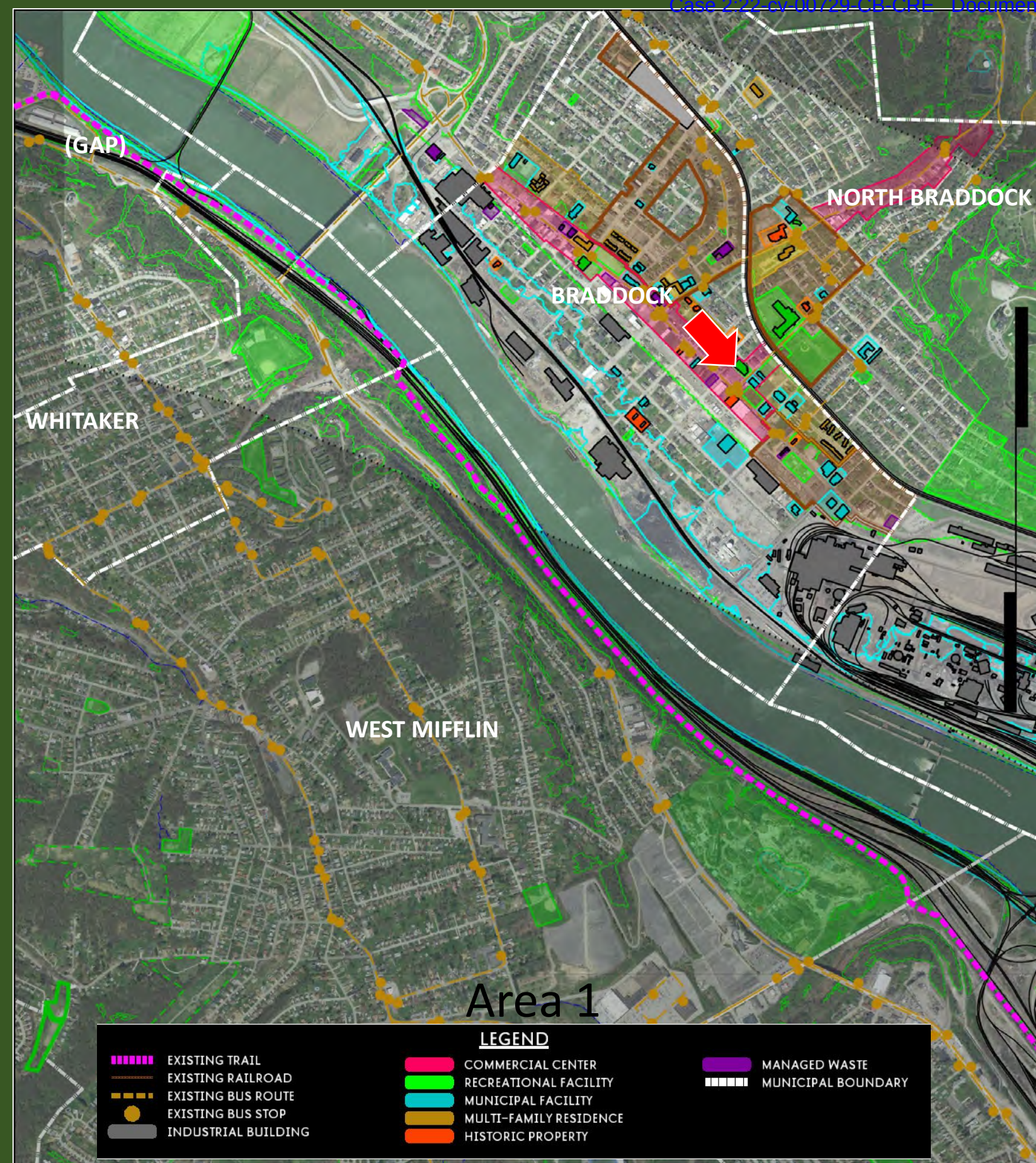


Appendix A: Existing Conditions Figures

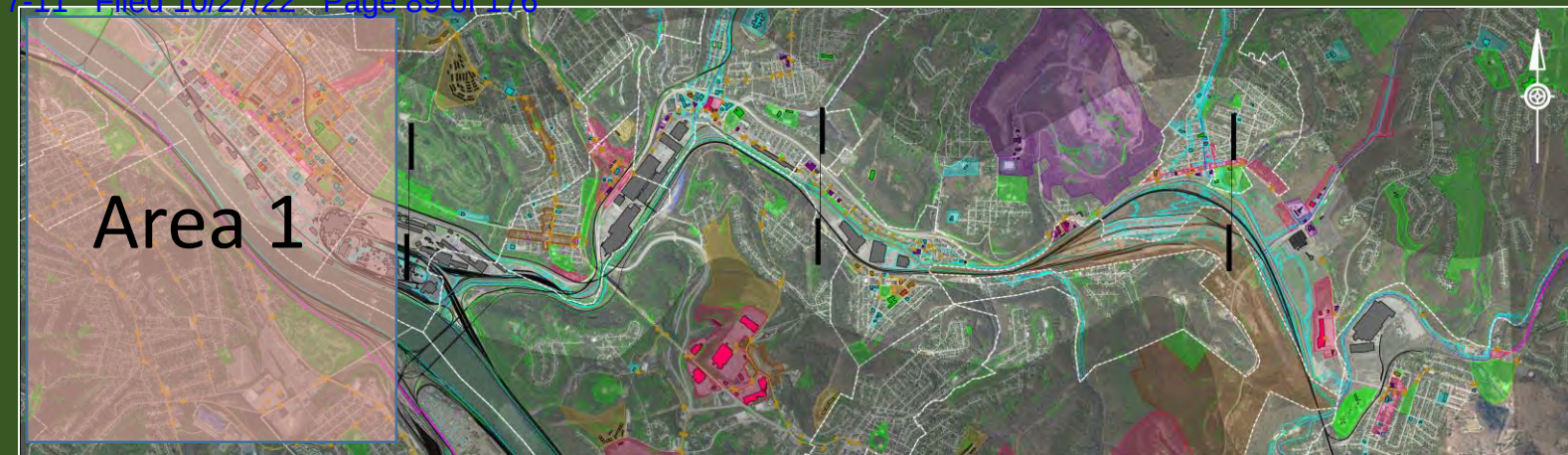
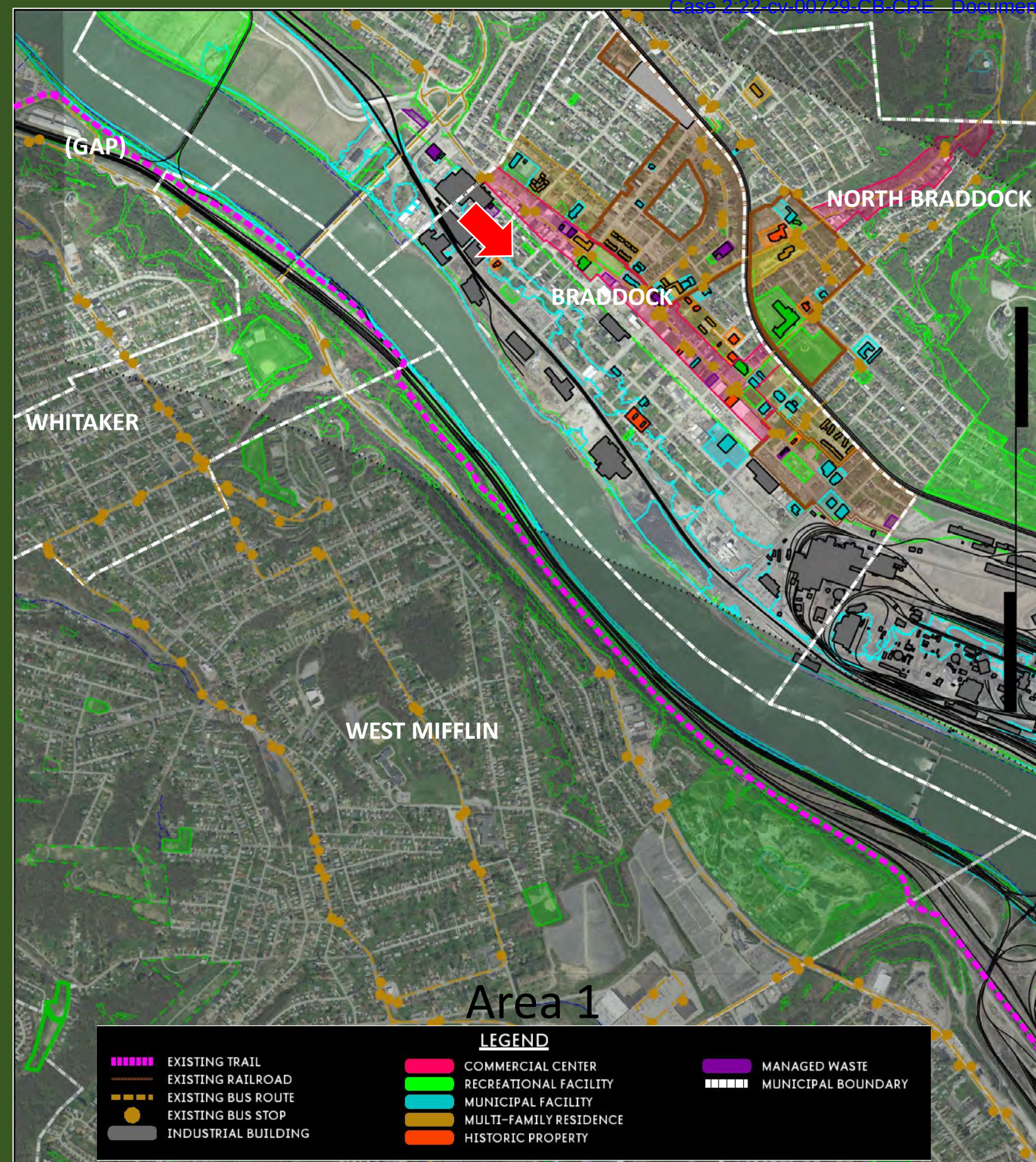




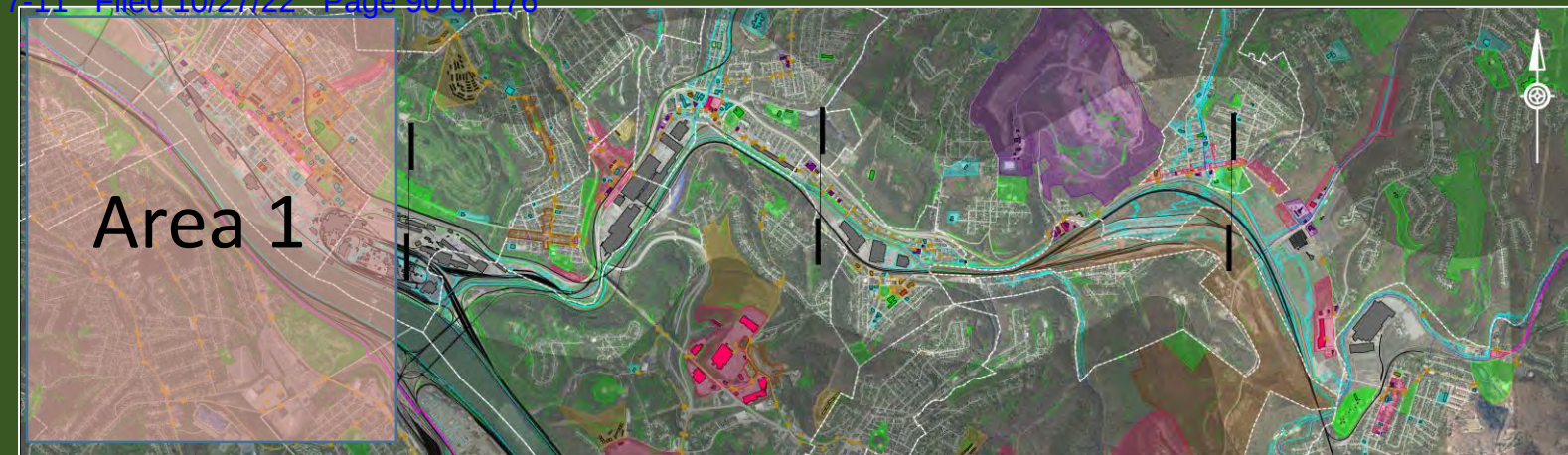
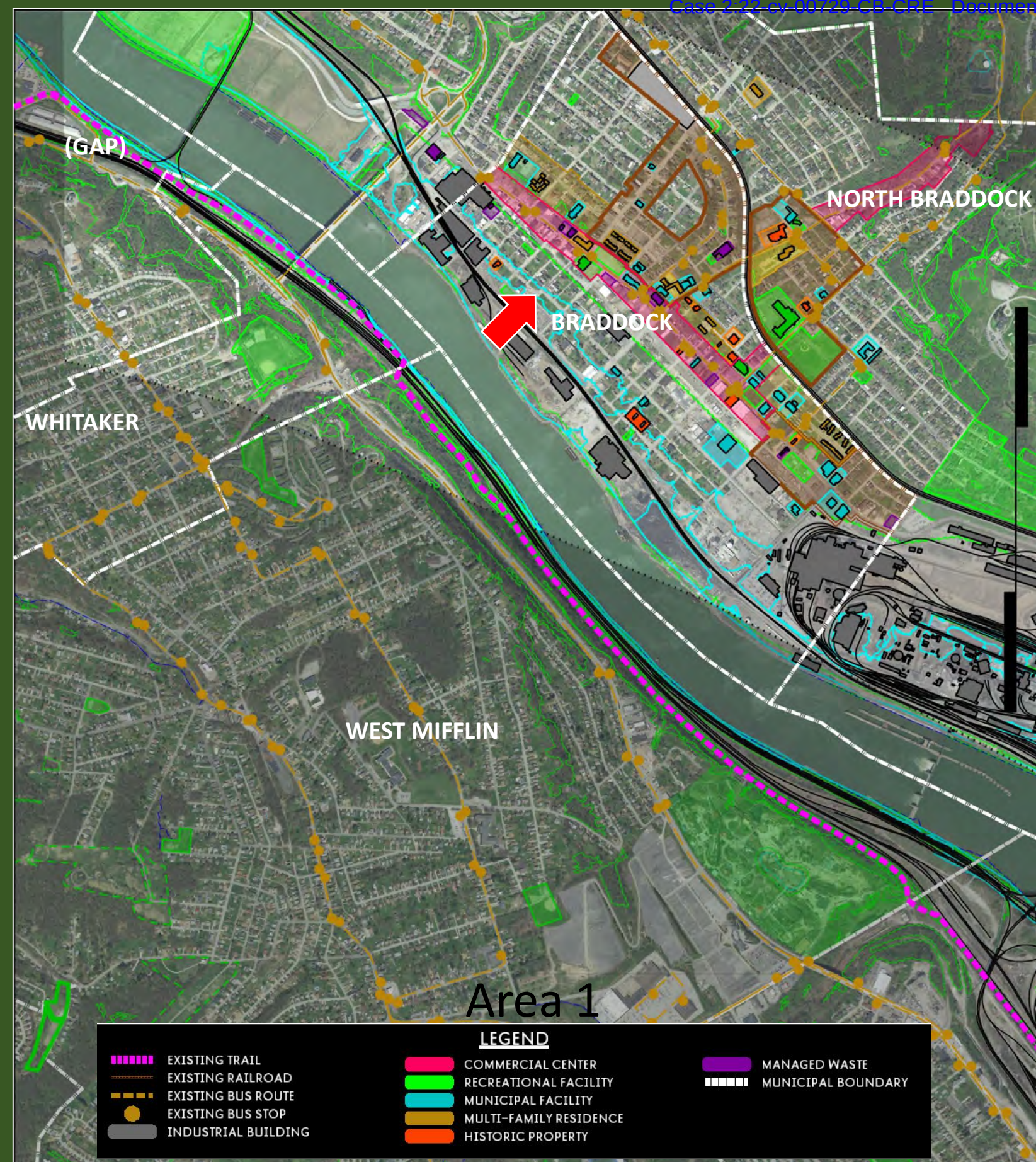
Braddock Ave. & 4th St. – Braddock
Braddock Civic Plaza with Utility & Pedestrian
Infrastructure



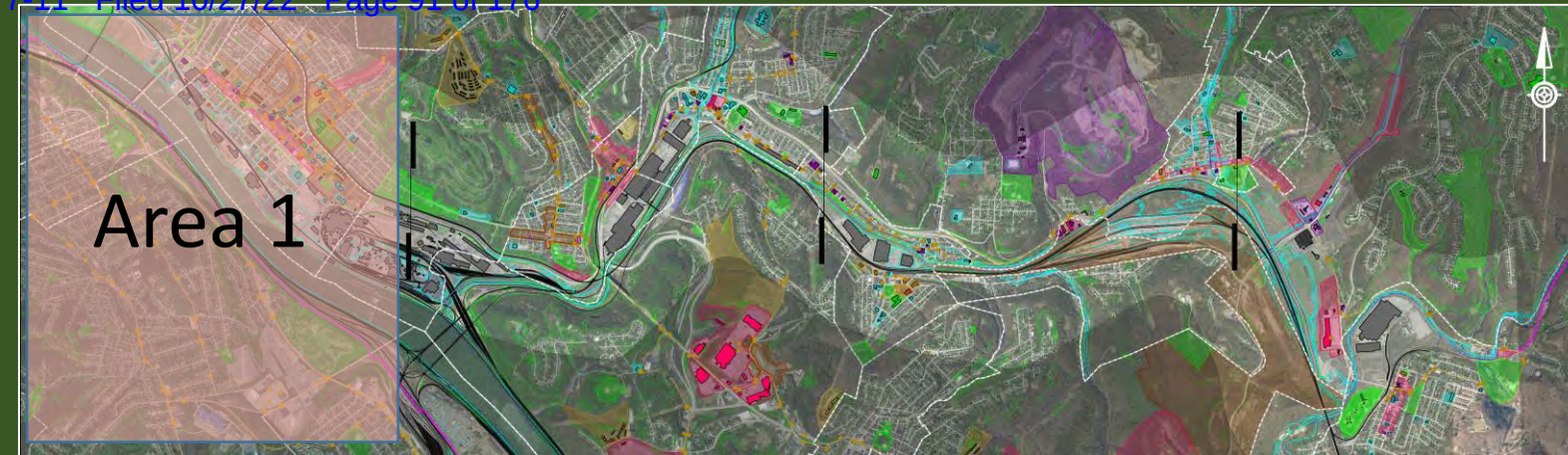
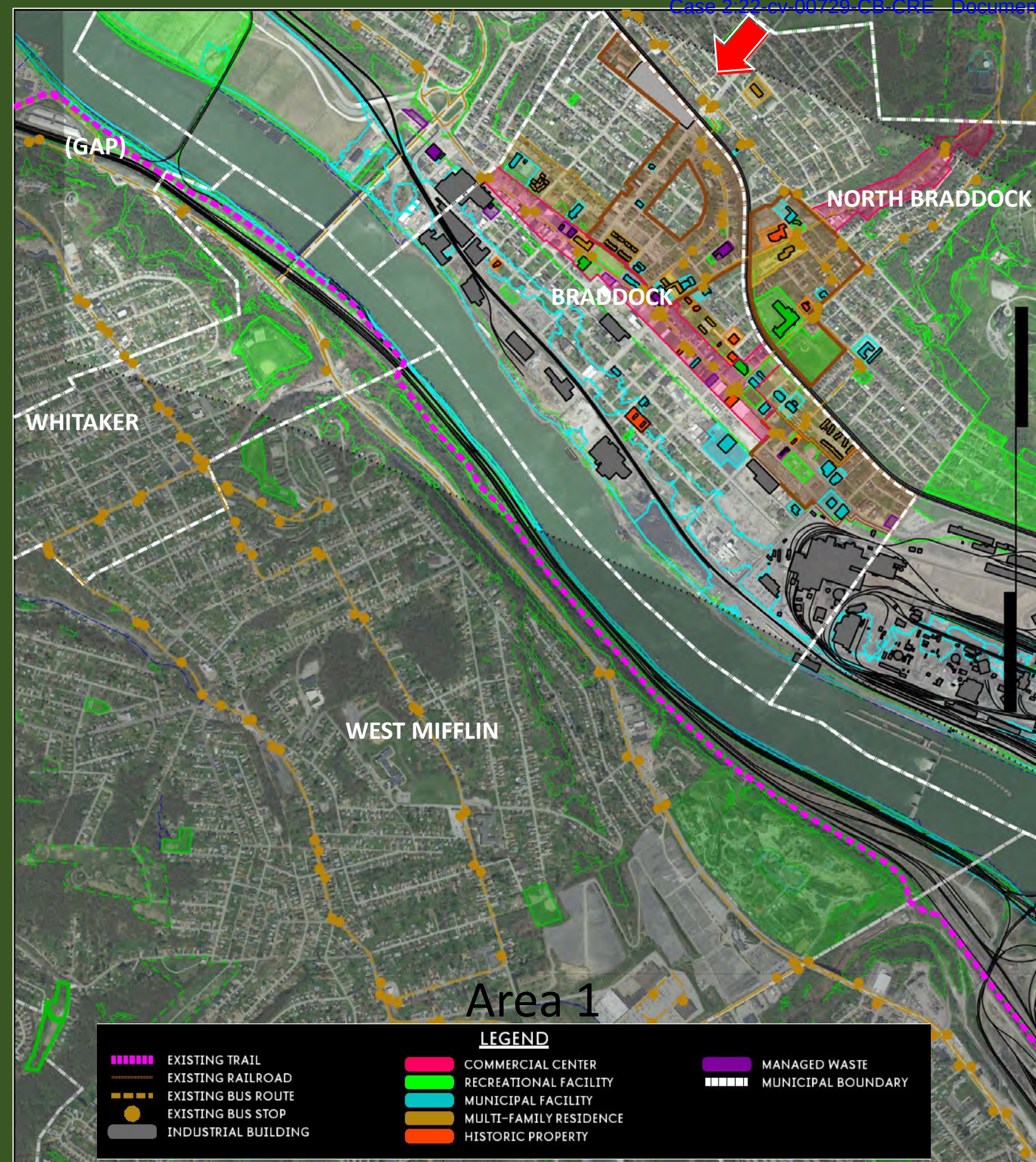
Braddock Ave. & Library St. - Braddock
View of Braddock Ave. with Parking on
Both Sides of the Street



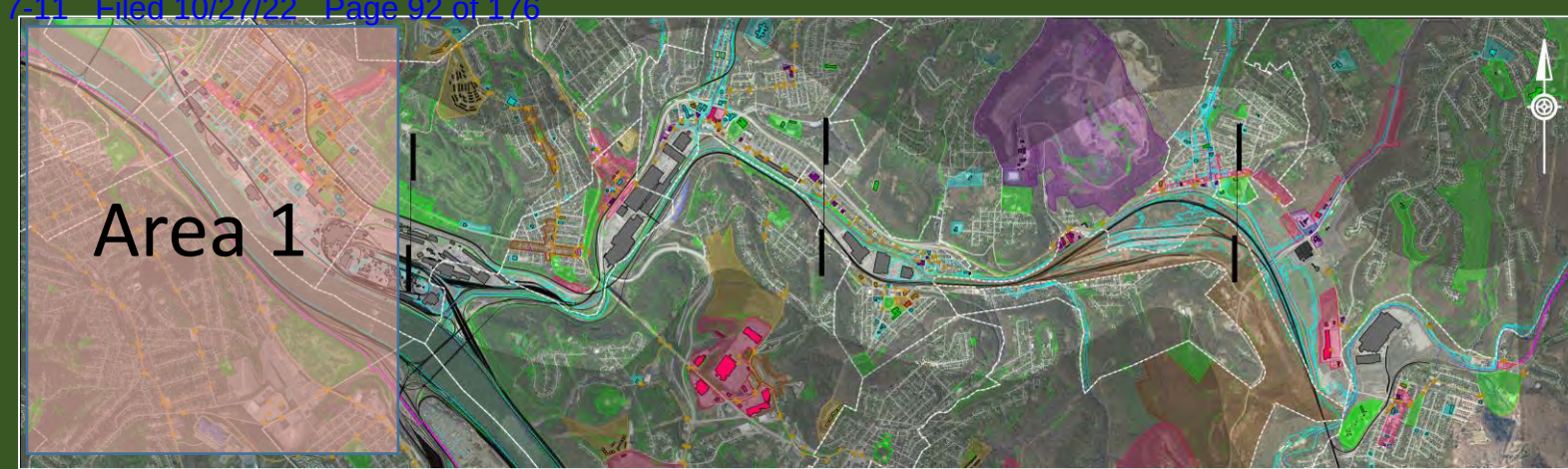
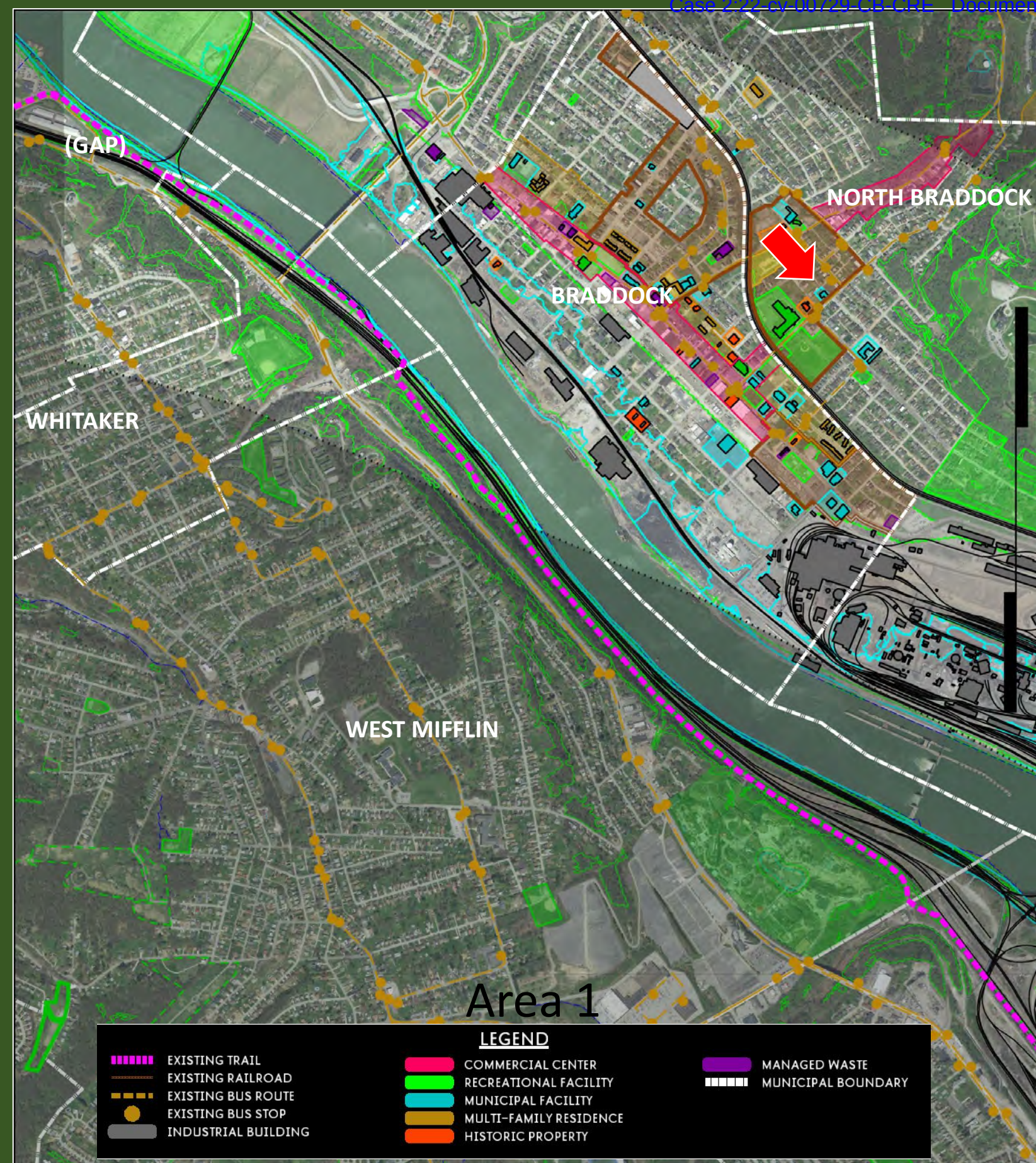
Talbot Ave. & 4th St. — Braddock
View of Talbot Ave. with Parking on Both Sides of the Street and Aging Pedestrian Infrastructure



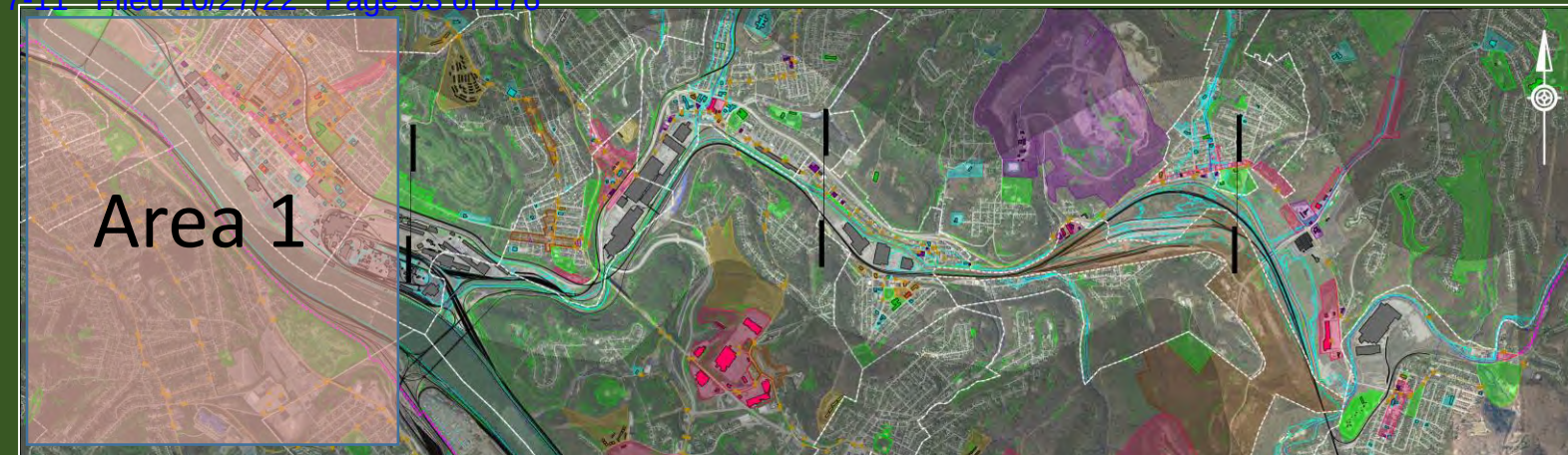
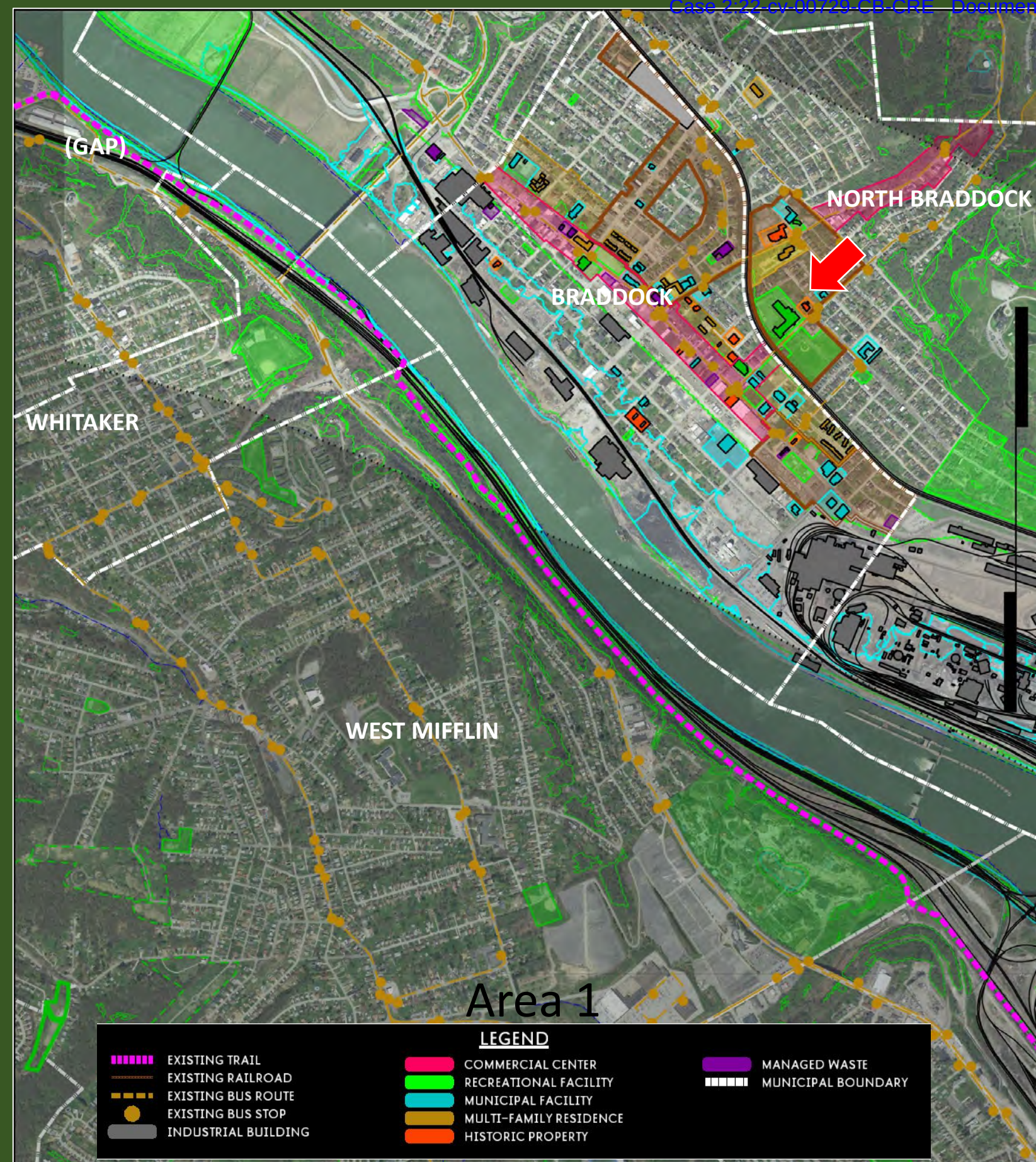
Talbot Ave. & 4th St. – Braddock
Parking on Both Sides of 4th St. with
Existing Pedestrian Infrastructure



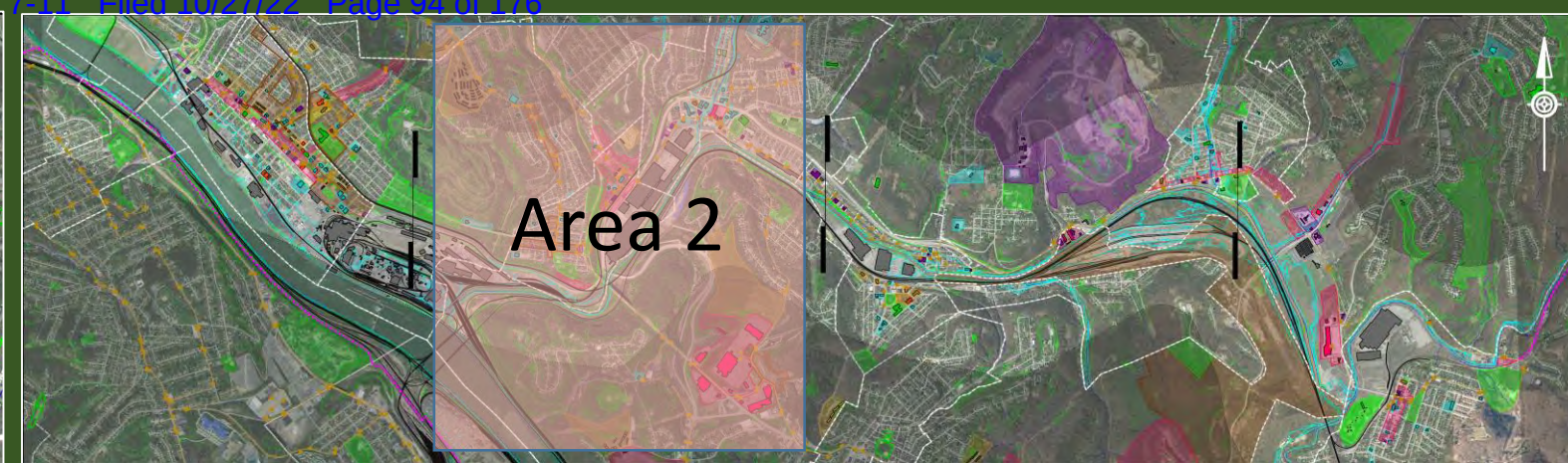
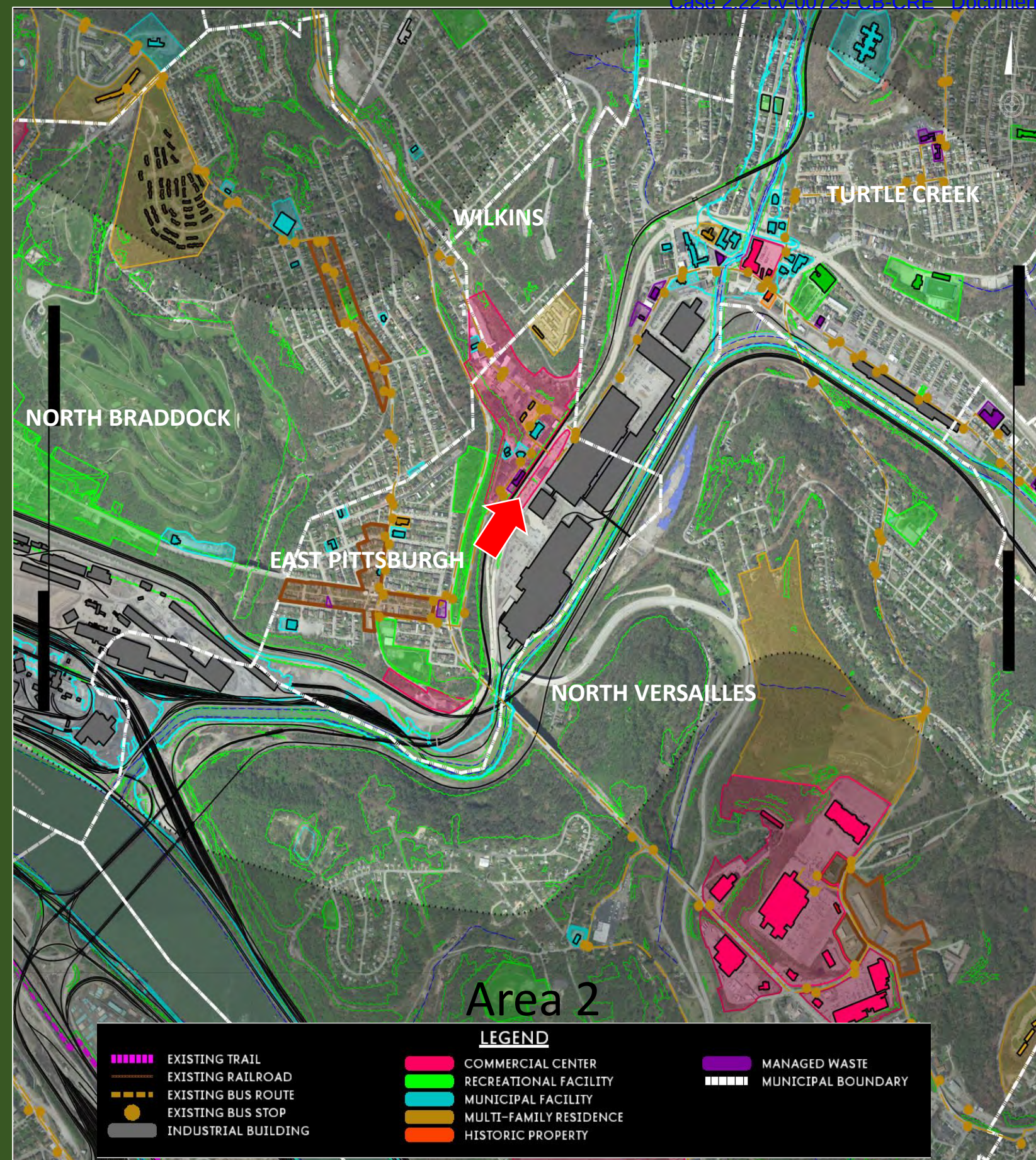
Hawkins Ave. & 4th St. – North Braddock
Existing Crosswalks and Pedestrian
Infrastructure with Utilities Installed on
the Sidewalks



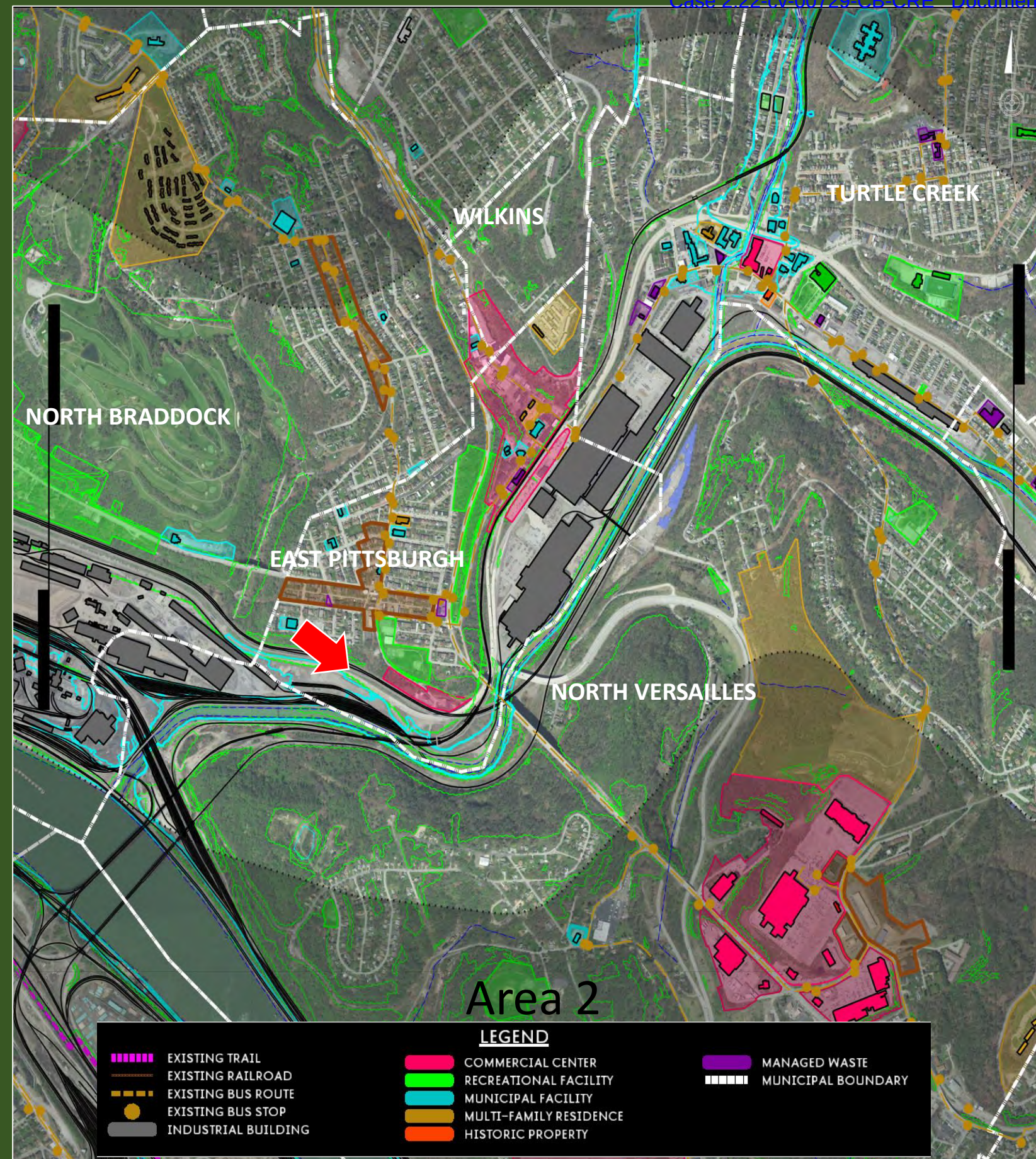
Bell Ave. & Jones Ave. – North Braddock
View of Bell Ave. with Crosswalk and Existing
Pedestrian and Utility Infrastructure



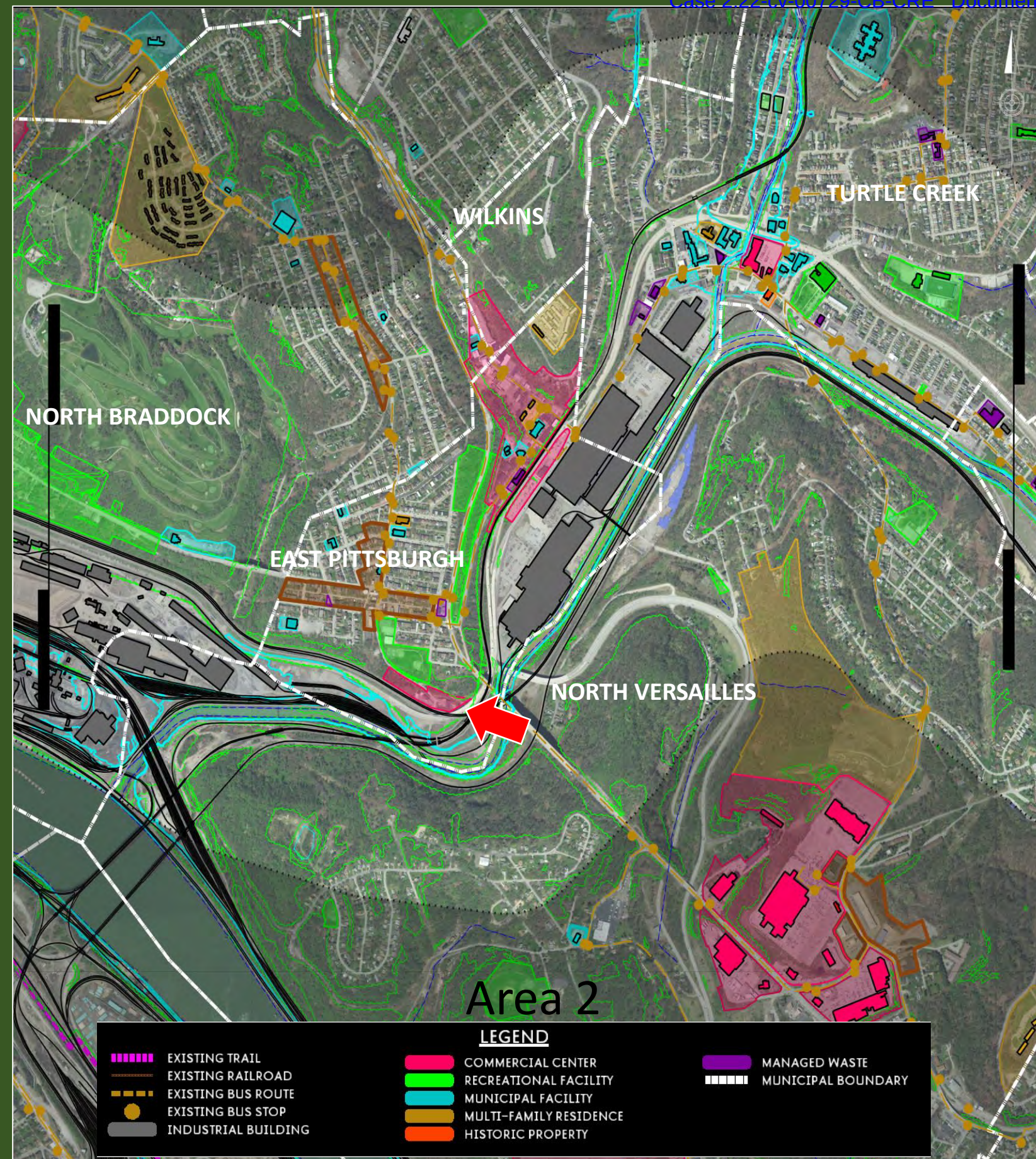
Bell Ave. & Jones Ave. – North Braddock
View of Jones Ave. Looking Toward the
Railroad Underpass with a Steep Grade



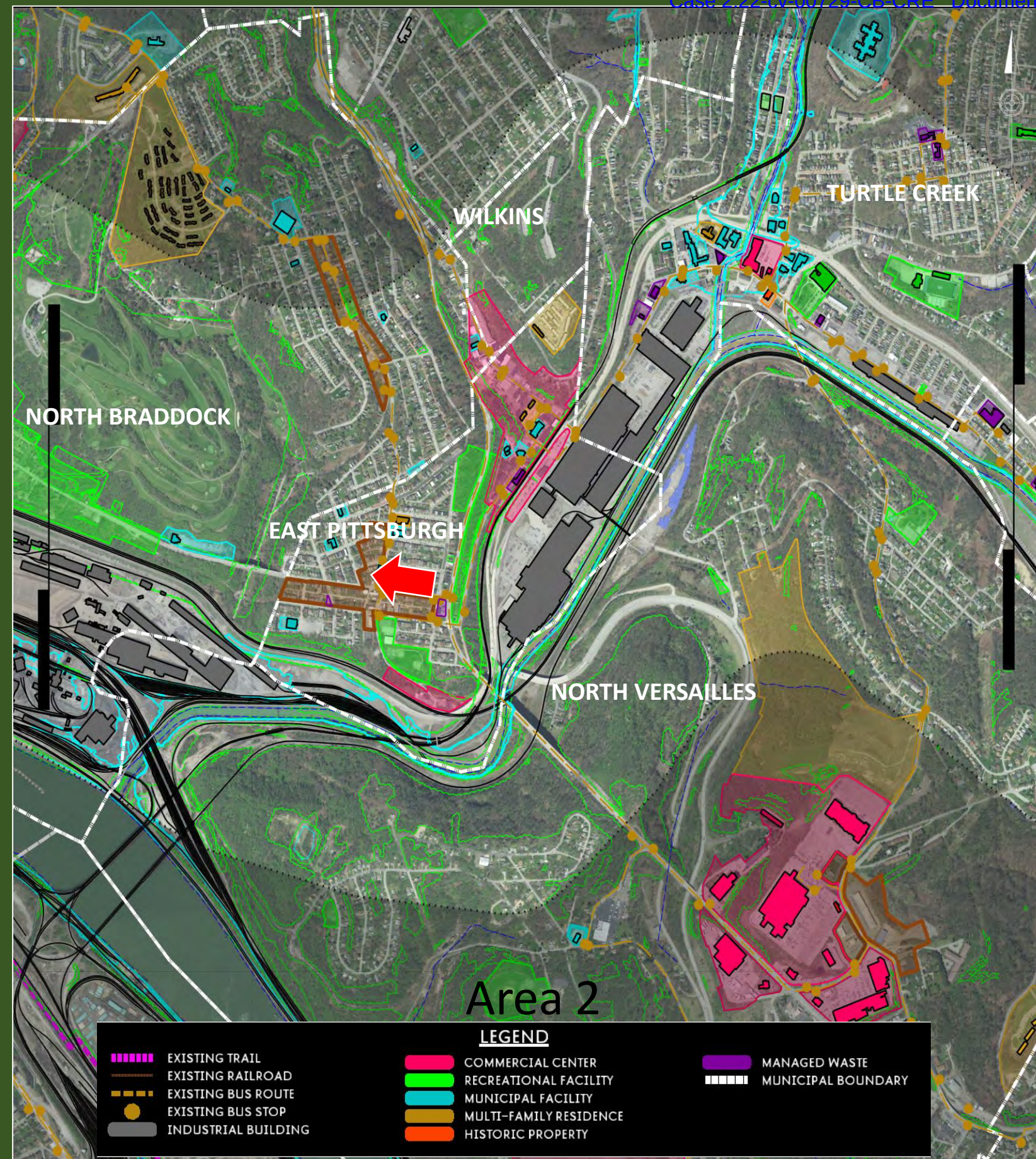
Braddock Ave. & Keystone Commons - East Pittsburgh
View from Inside RIDC/Keystone Commons
looking onto Braddock Ave.



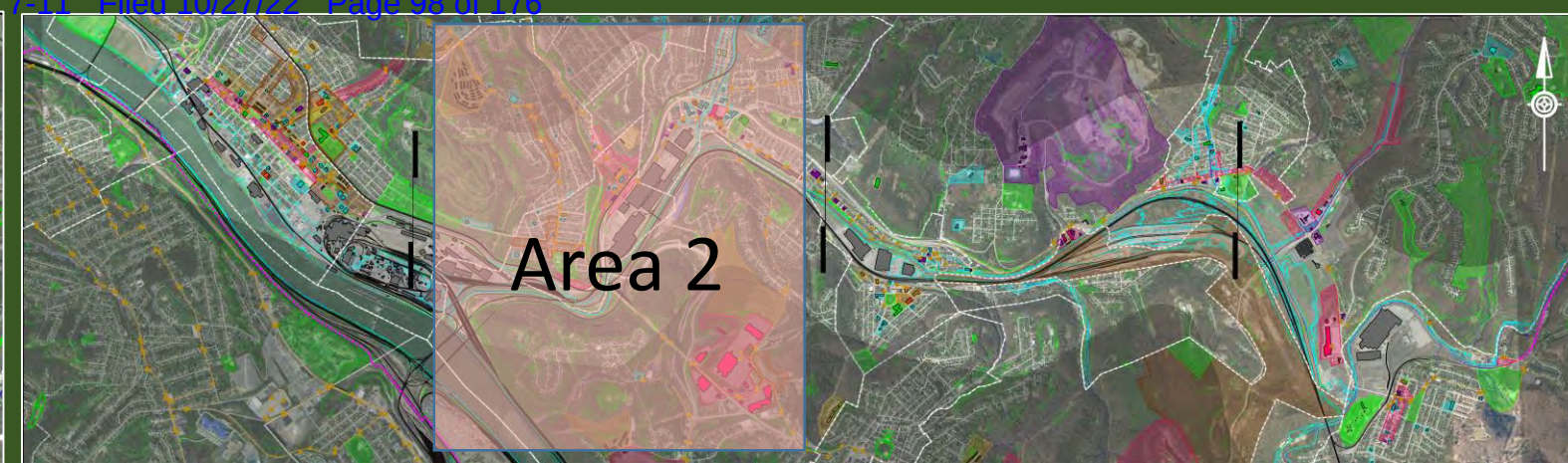
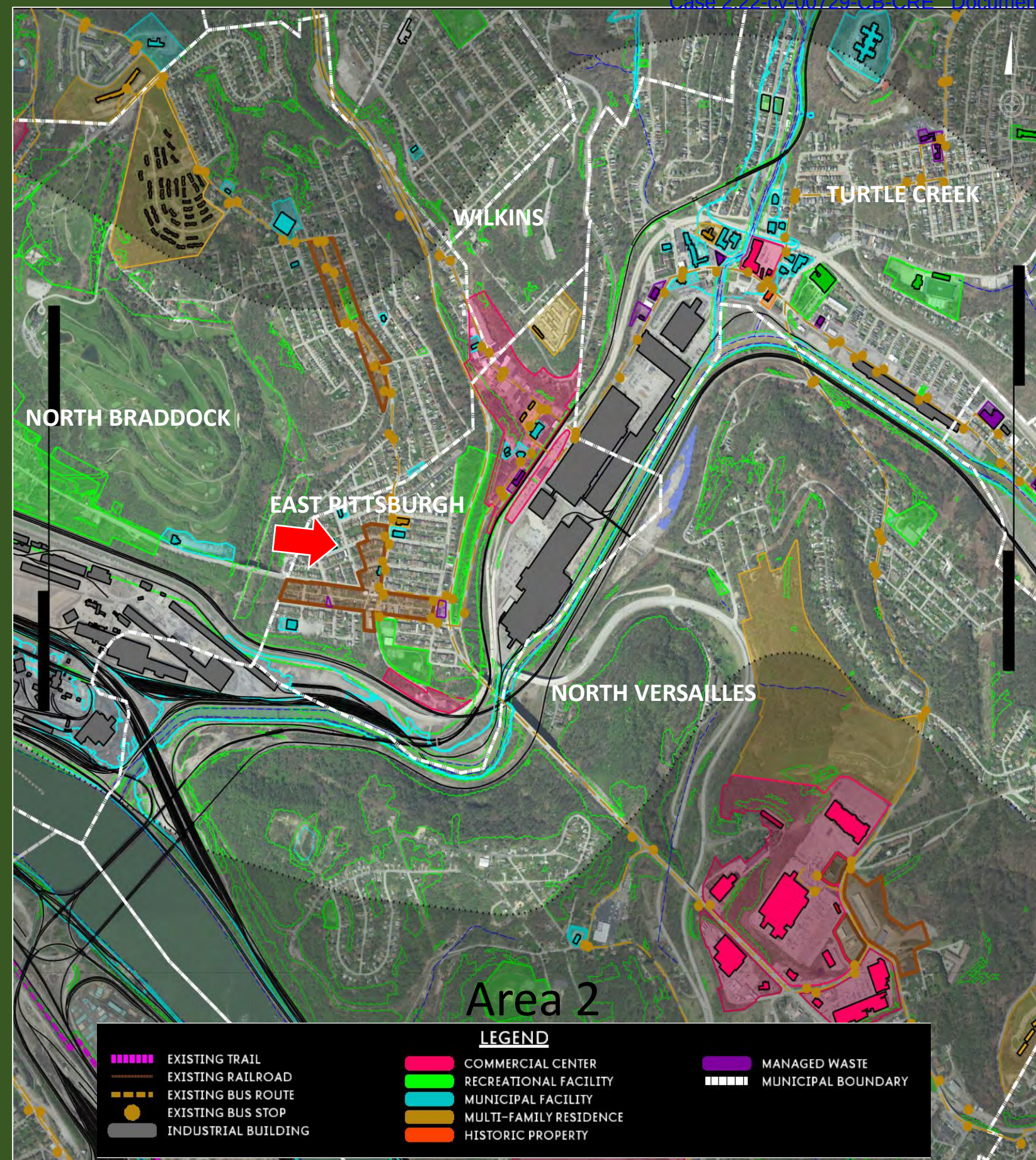
SR2183 & Braddock Ave. – East Pittsburgh
View Looking East Toward Braddock Ave.



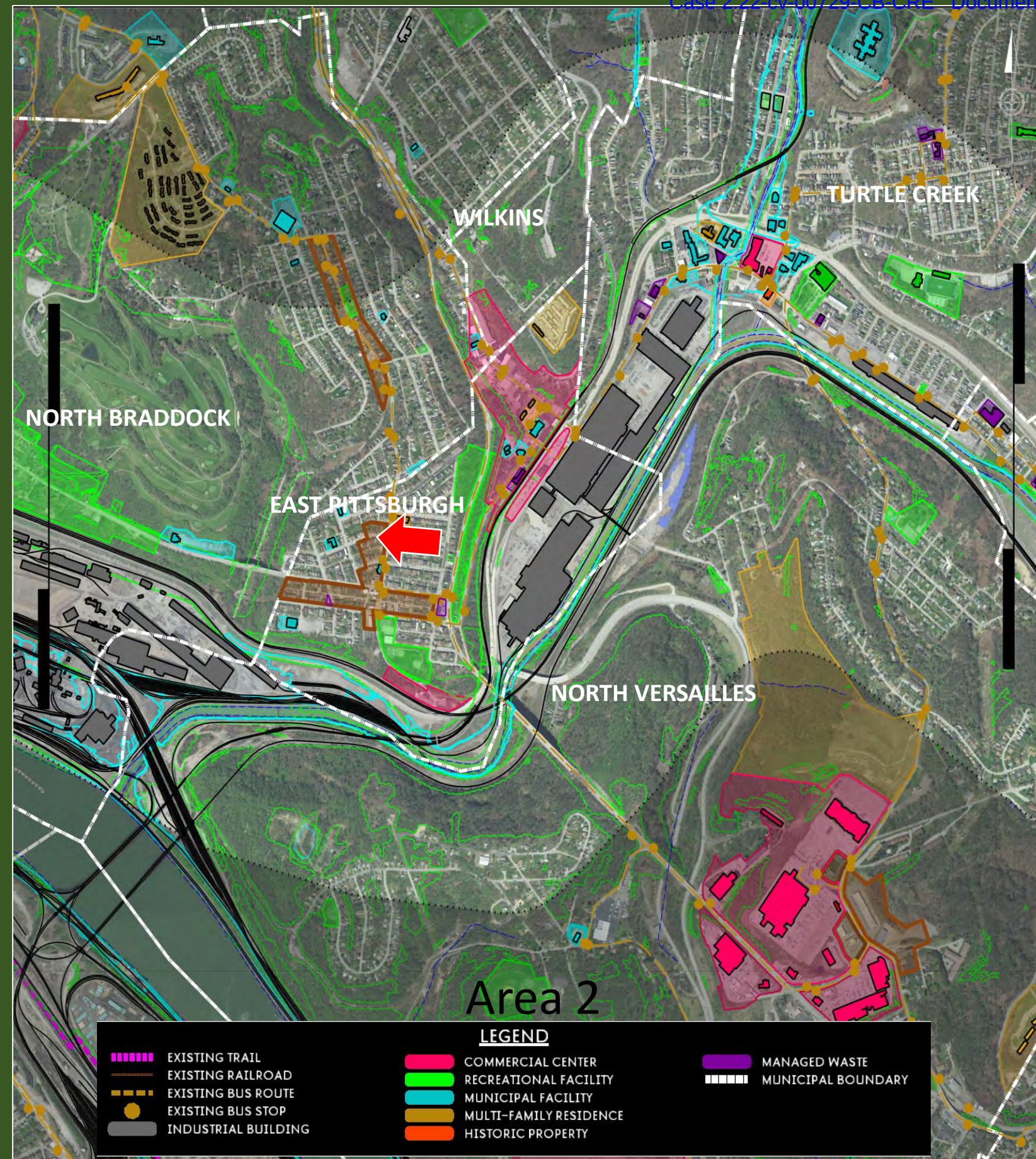
SR2183 & Braddock Ave. – East Pittsburgh
View Looking West at US Steel Property



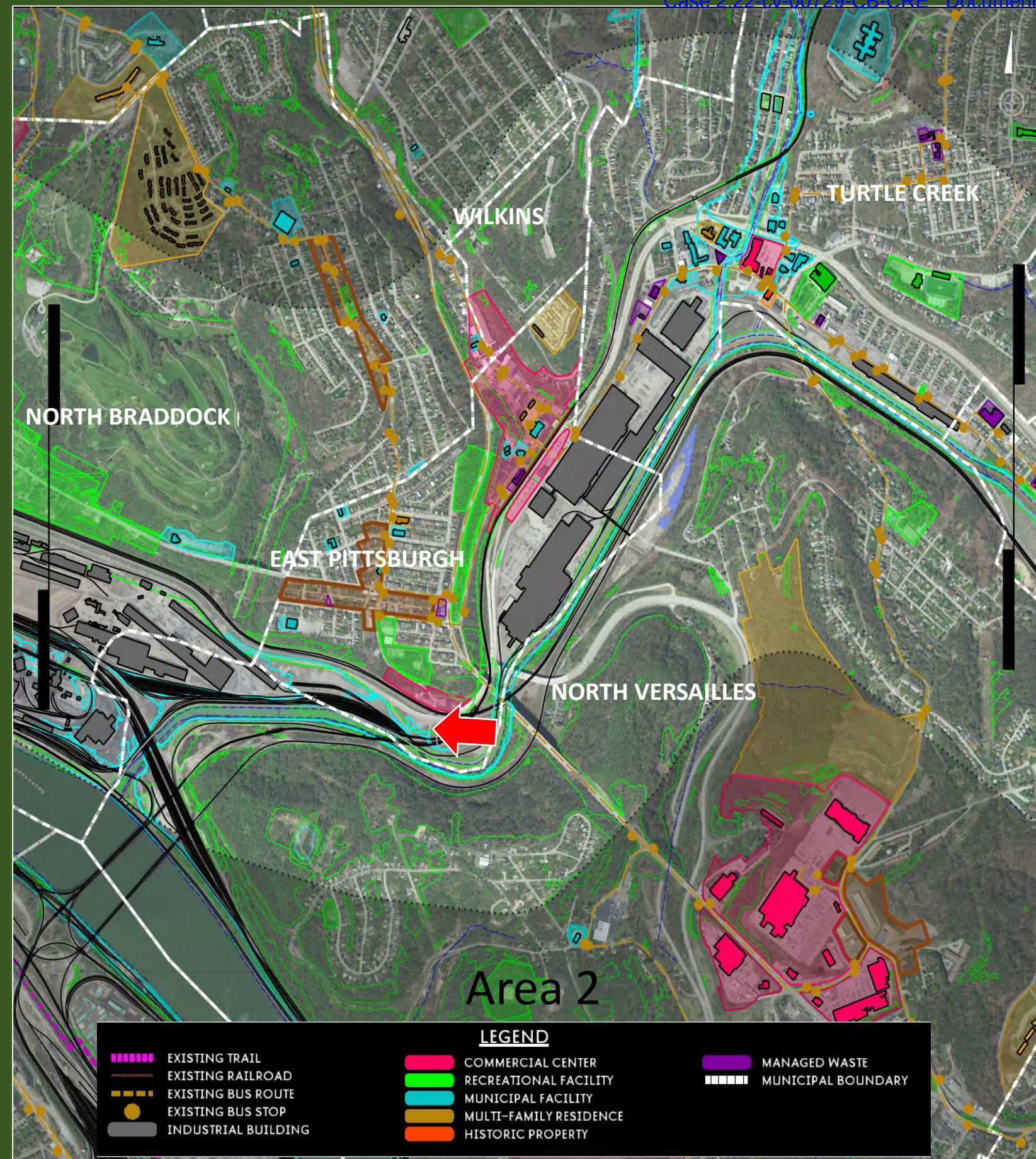
Bessemer Ave. & Main St. – East Pittsburgh
View of Bessemer Ave. Looking East with
Pedestrian and Utility Infrastructure



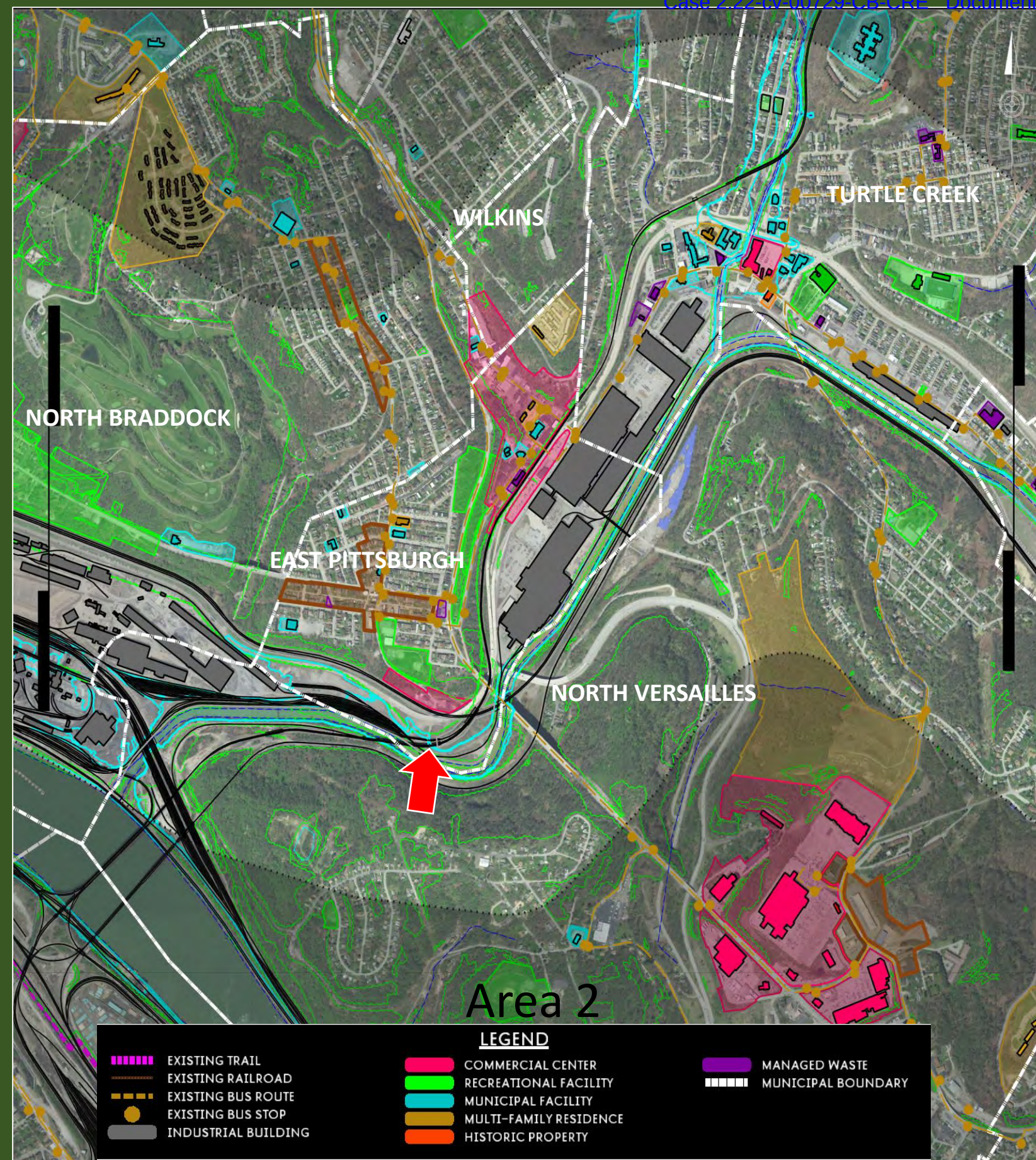
Bessemer Ave. & Main St. – East Pittsburgh
View of Bessemer Ave. with Existing
Pedestrian Crossings and Infrastructure



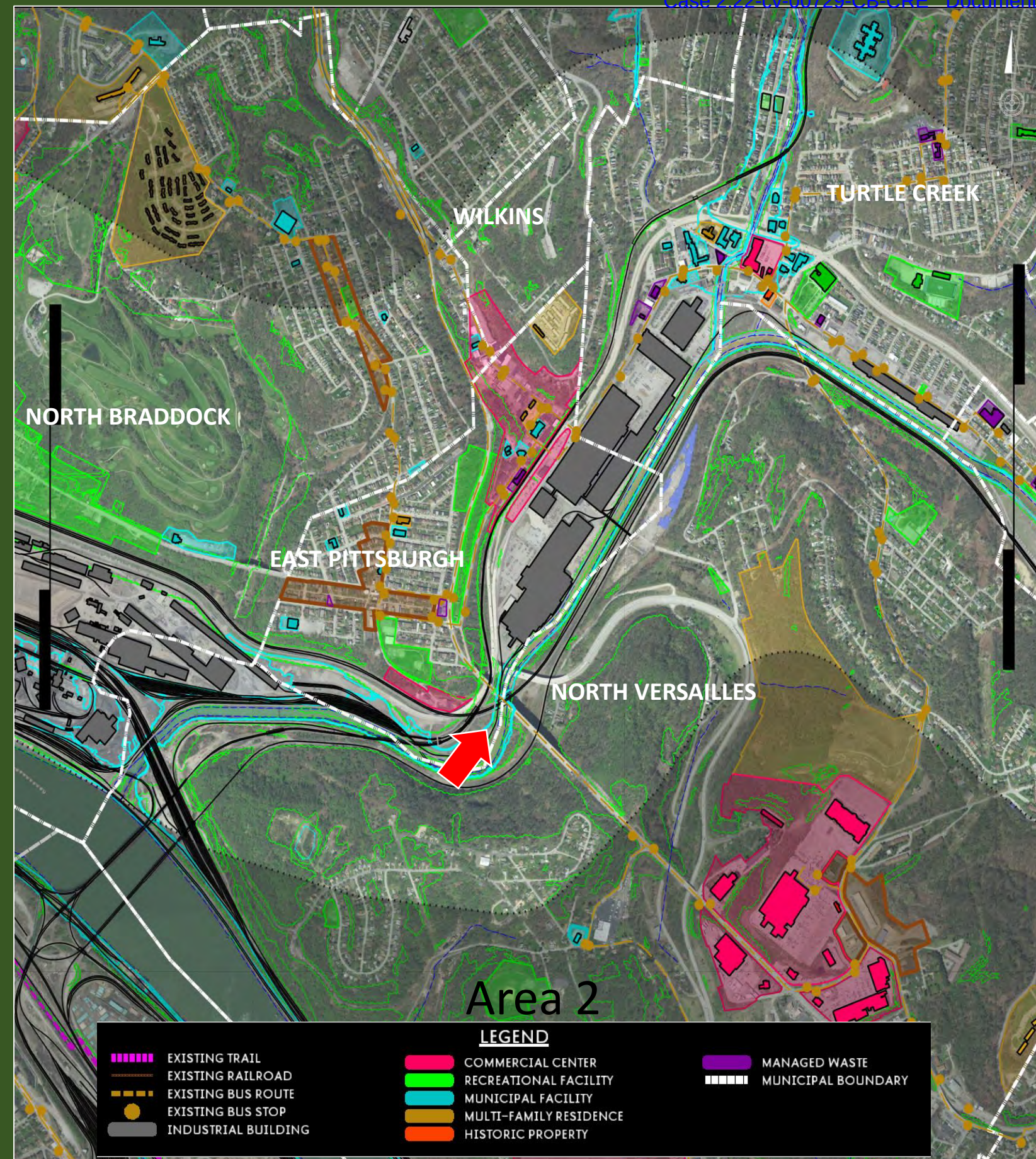
Center St. & Main St. – East Pittsburgh View
Looking West Down a One-Way Street



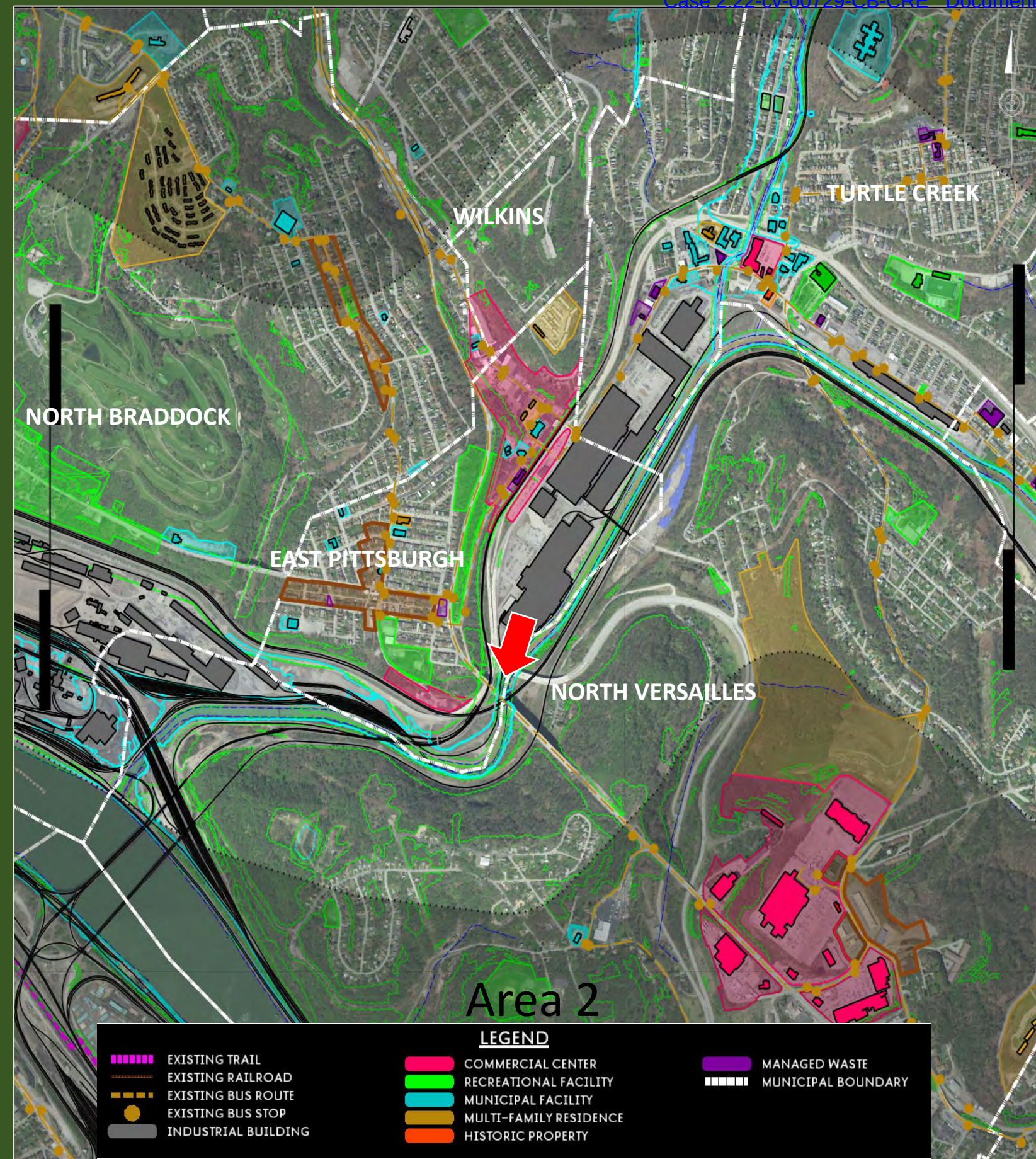
State Route 2183 & Braddock Ave. – East Pittsburgh
Looking West onto US Steel Rail yard



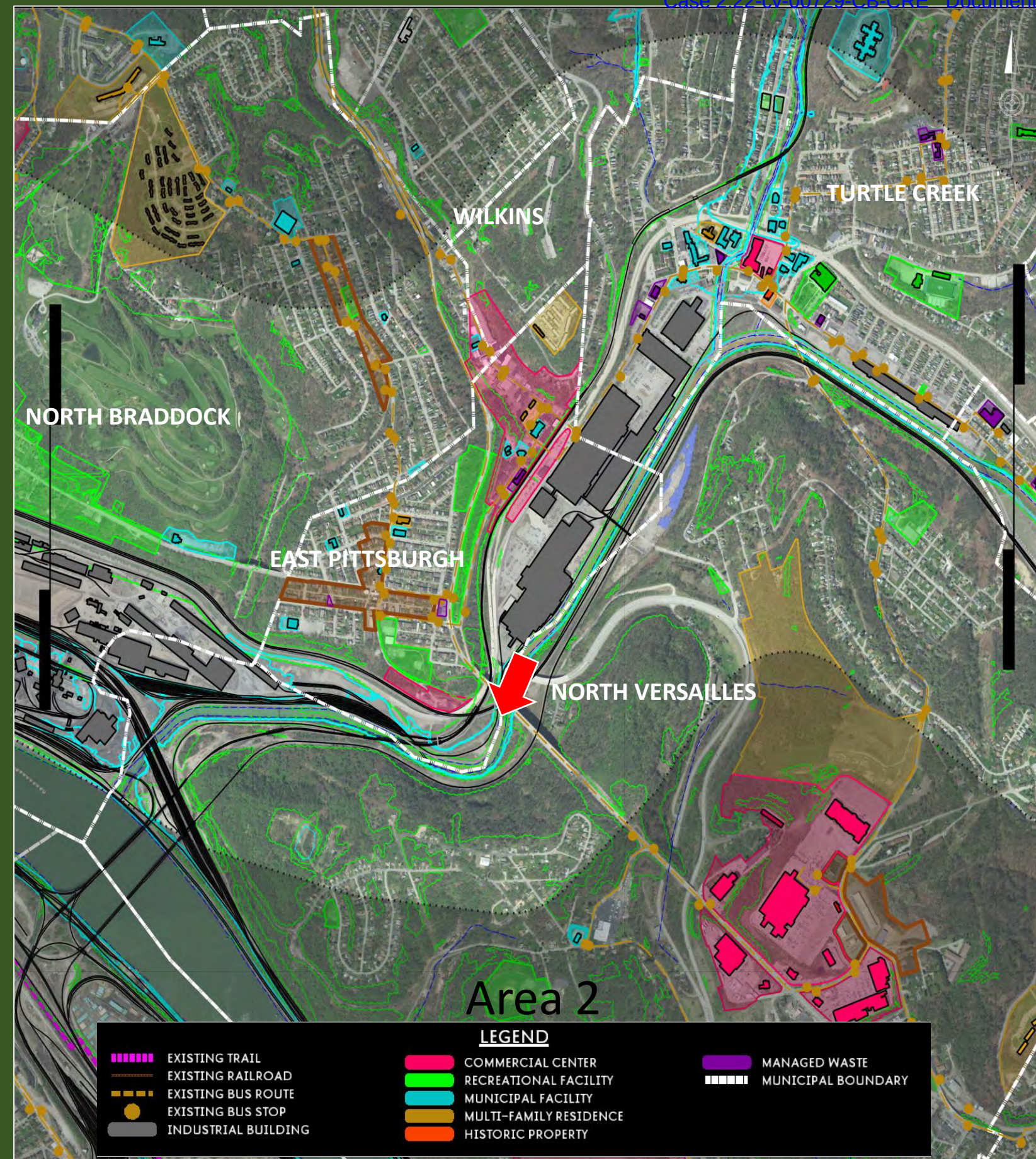
State Route 2183 & Main St. – East Pittsburgh
View Looking North on Main St.



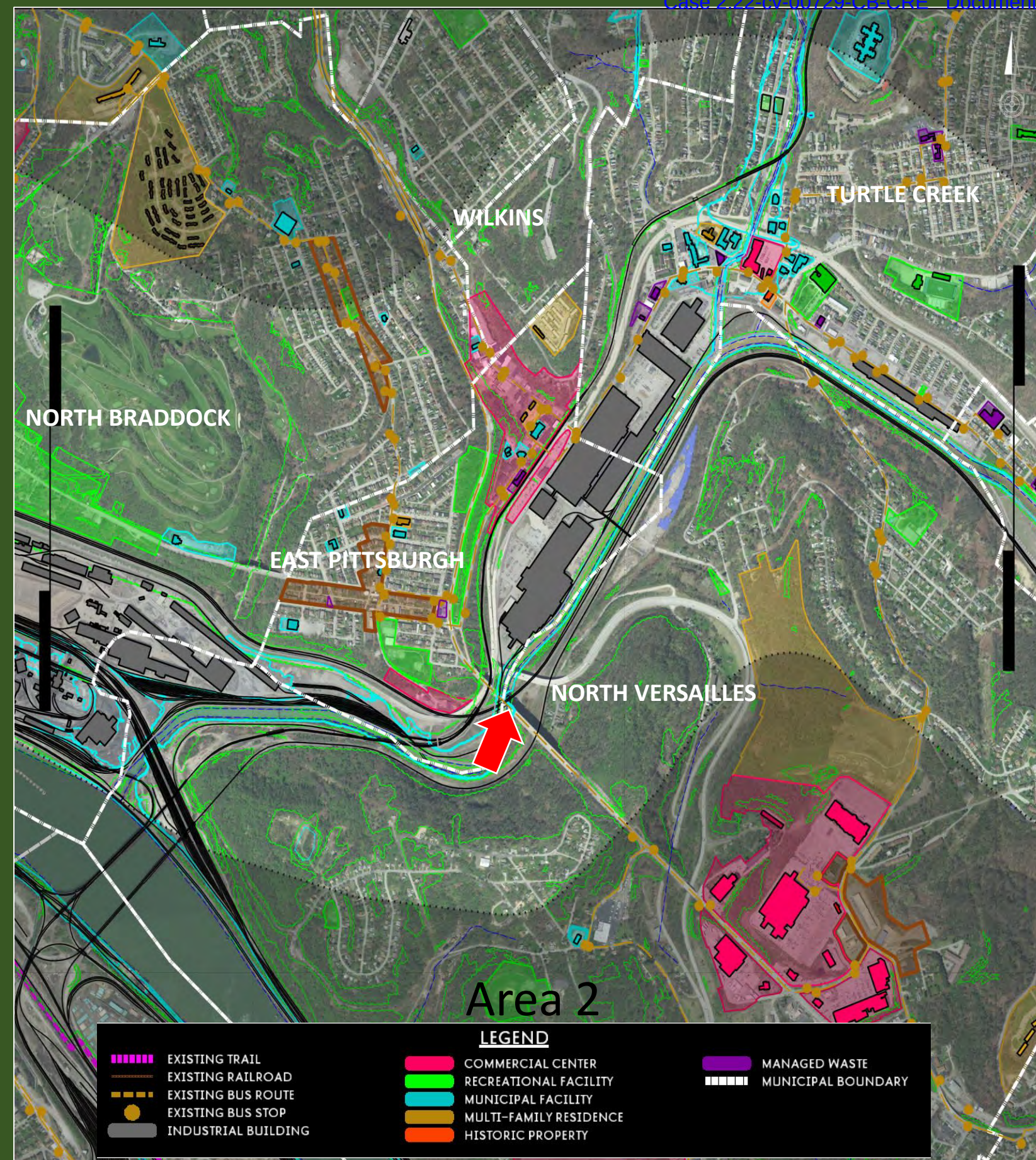
State Route 2183 & Braddock Ave. – East Pittsburgh
View Looking East at George Westinghouse Bridge



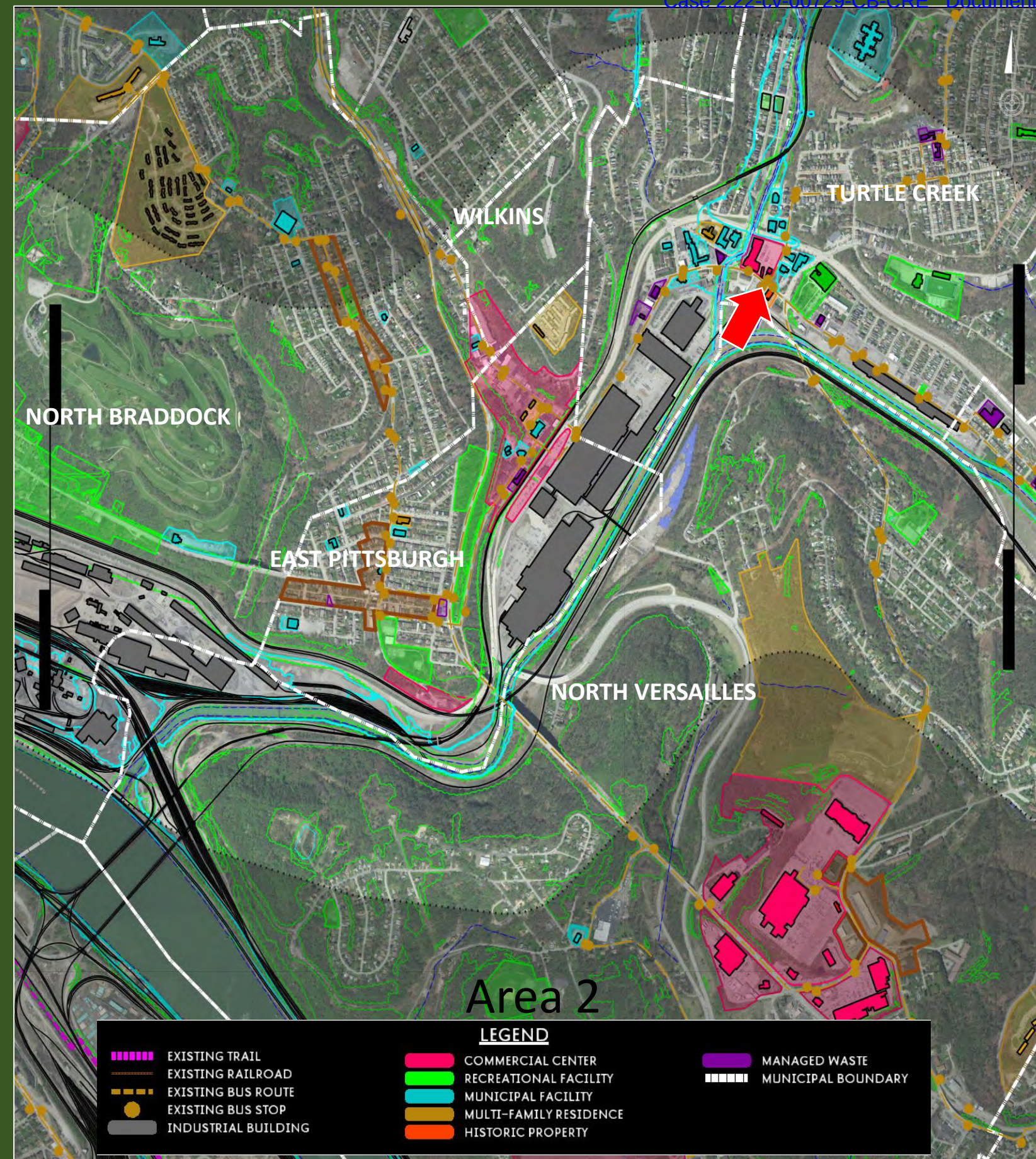
State Route 2183 – East Pittsburgh
View Looking South Under
George Westinghouse Bridge toward
Railroad Tunnel



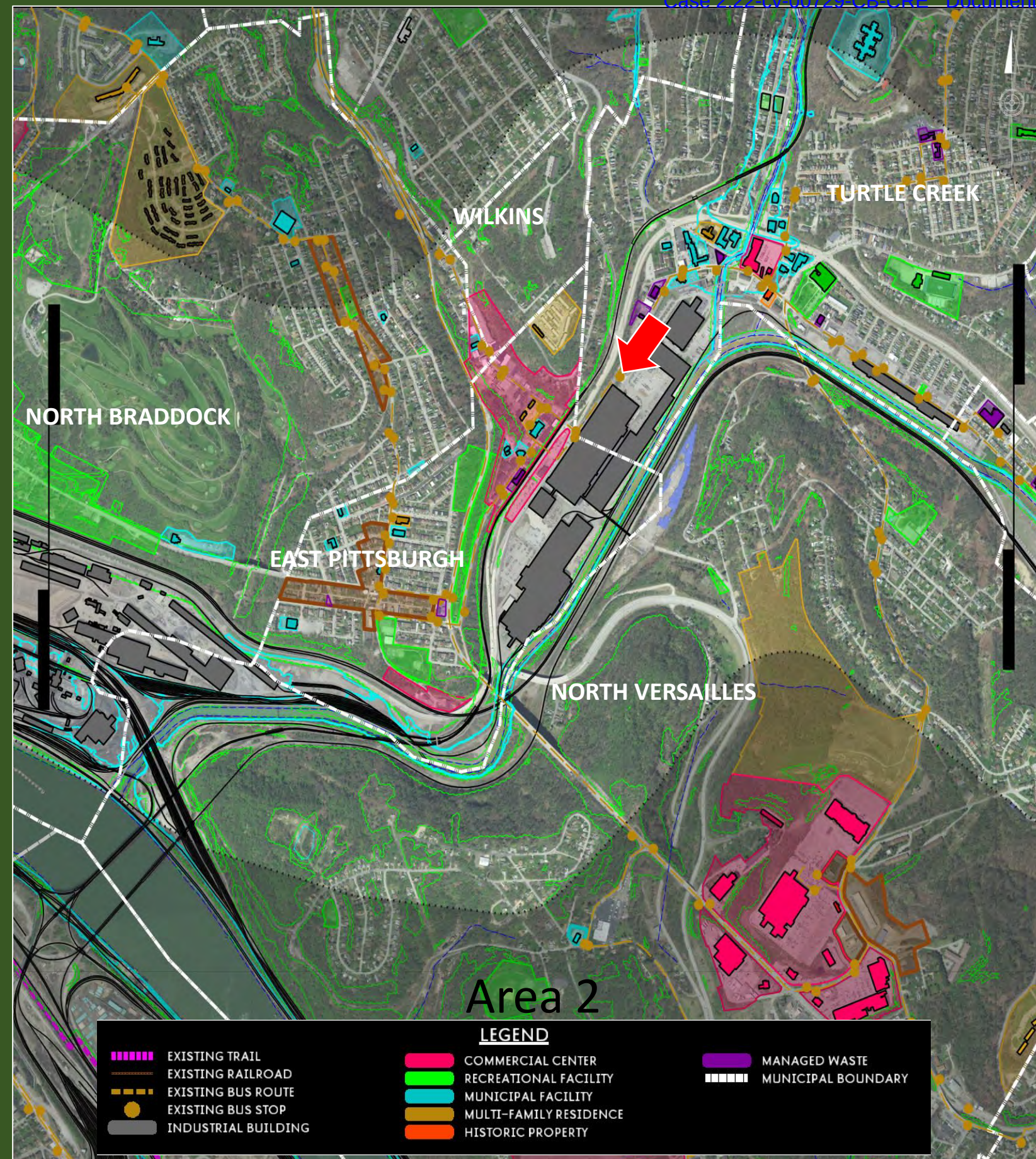
State Route 2183 – East Pittsburgh
View Looking South at Westinghouse Flood Gate



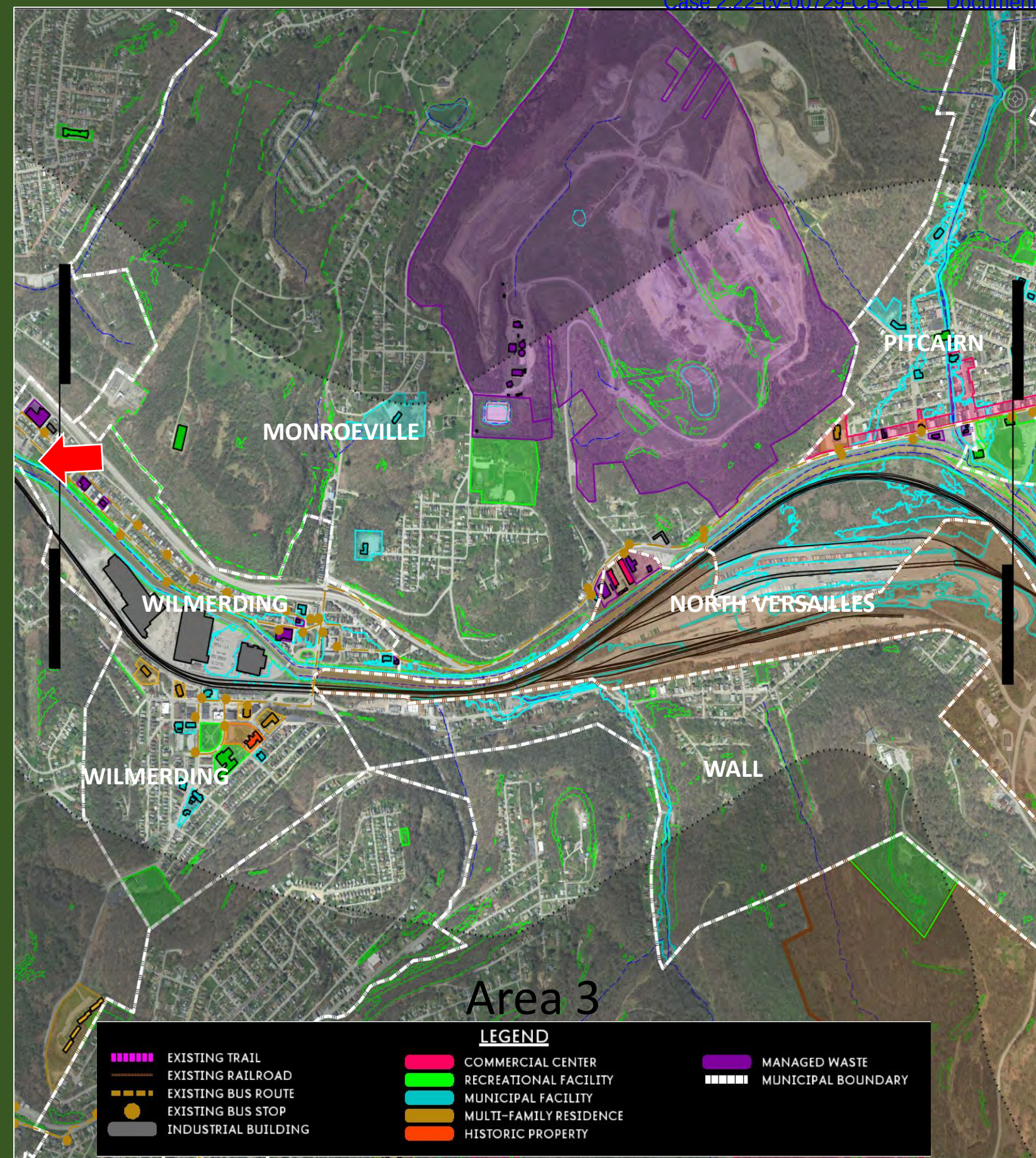
State Route 2183 – East Pittsburgh
View Looking North at Railroad Bridge



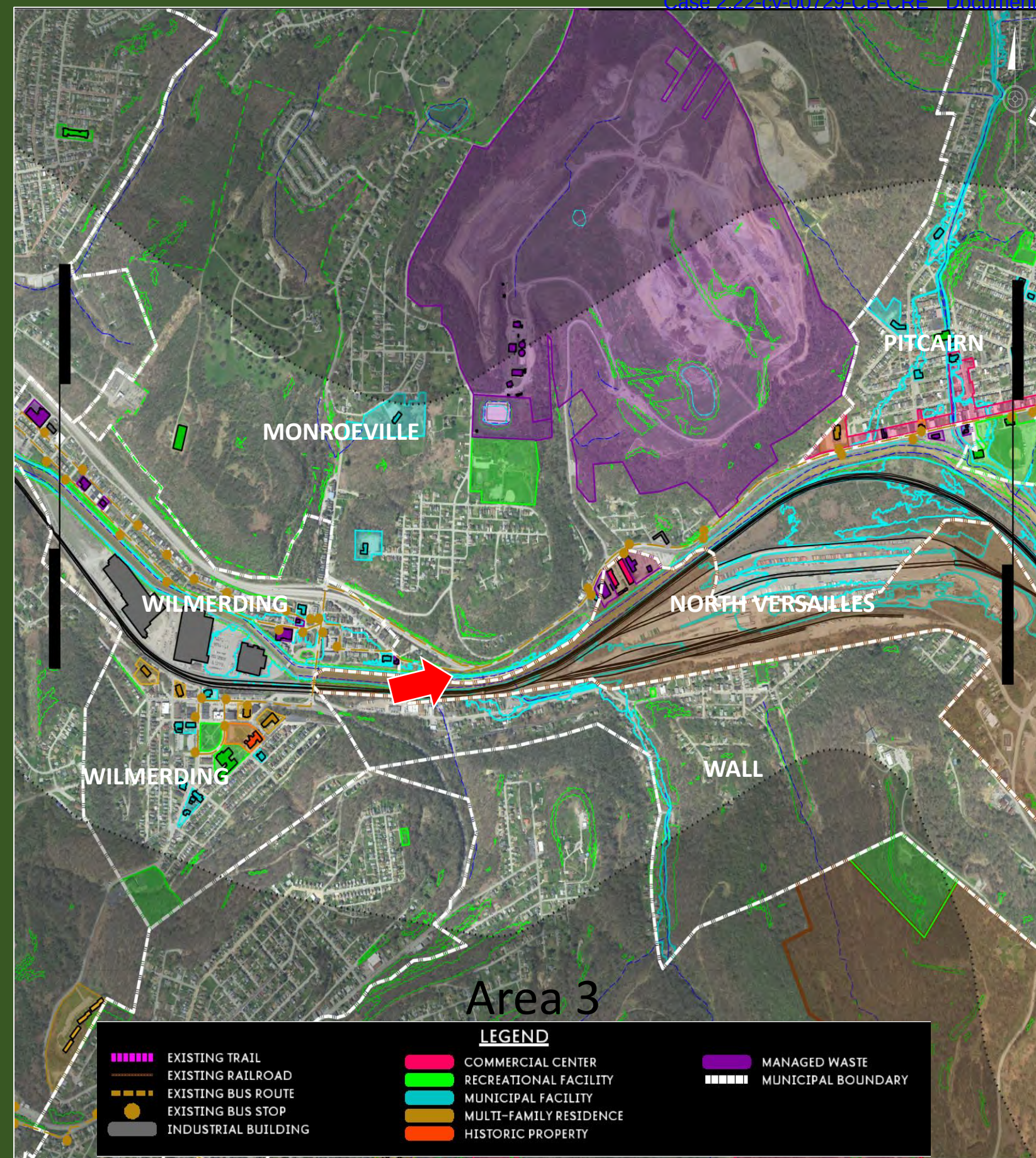
Airbrake Ave. & Grant St. – Turtle Creek
View Looking North on Grant St. with Existing
Pedestrian Infrastructure and Street Parking



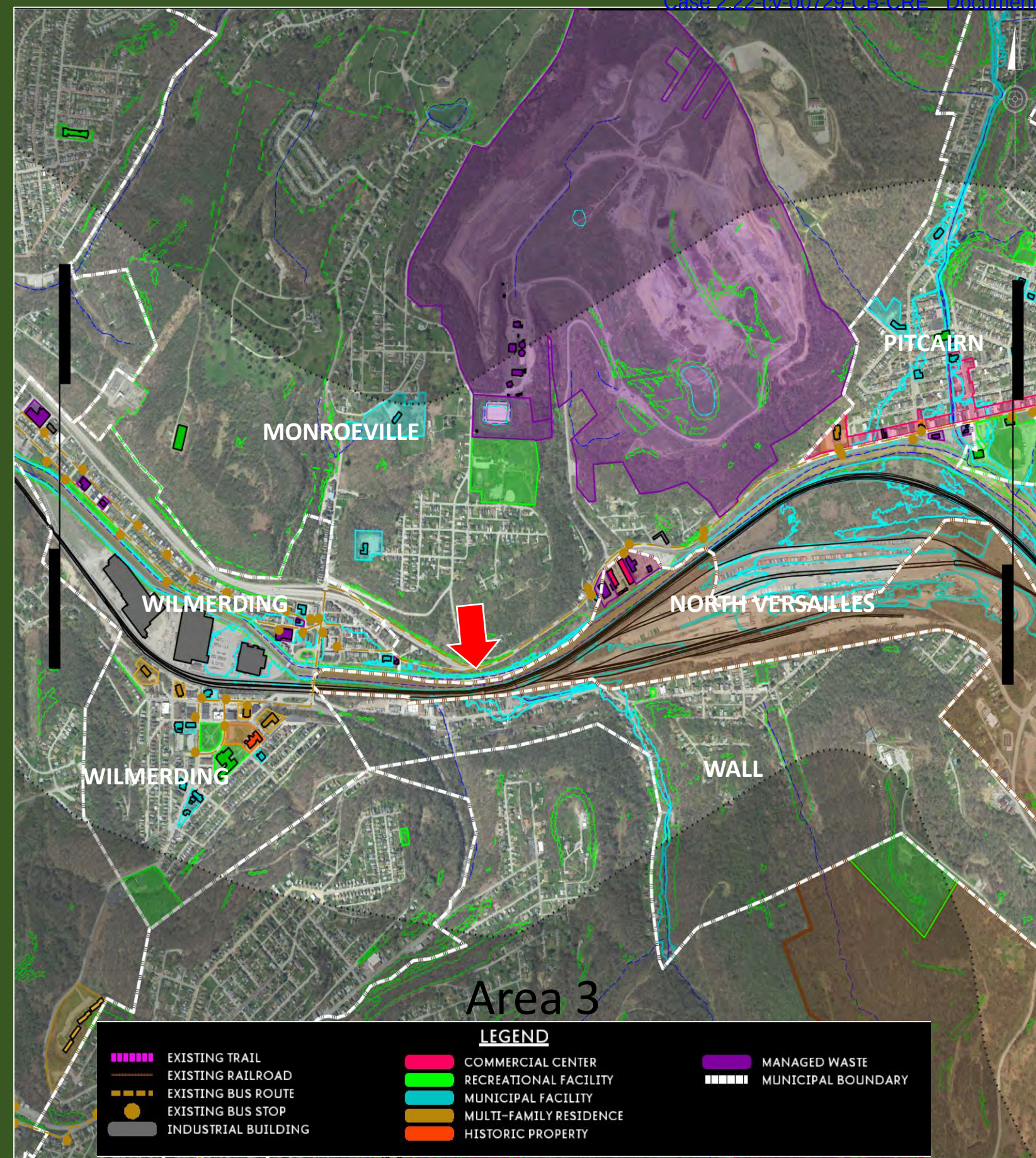
Braddock Ave. & RIDC Entrance– Turtle Creek
View of RIDC West Entrance Looking West



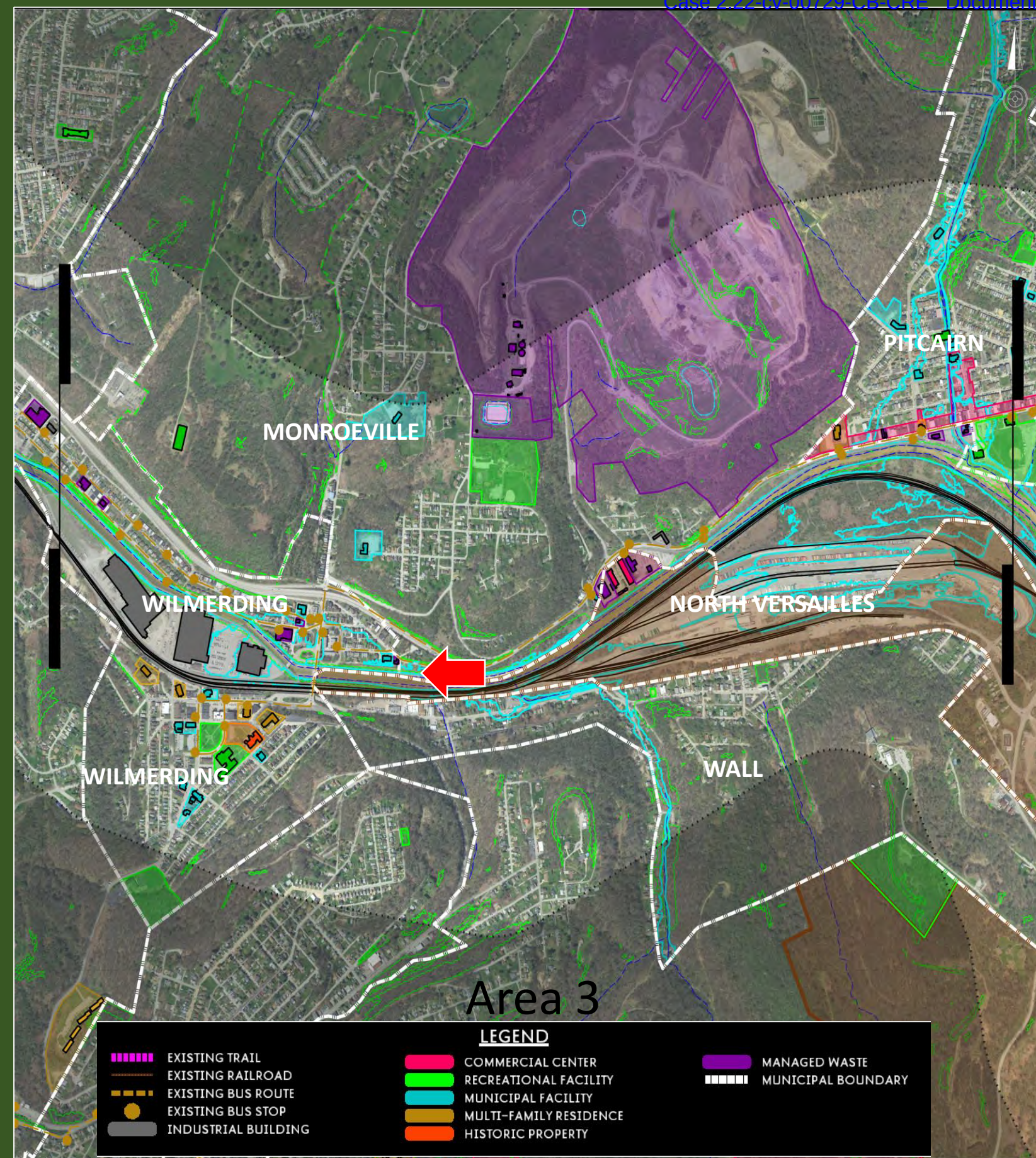
Airbrake Ave. & 4th St. – Wilmerding
View of Private Crossing over Turtle Creek
Looking South



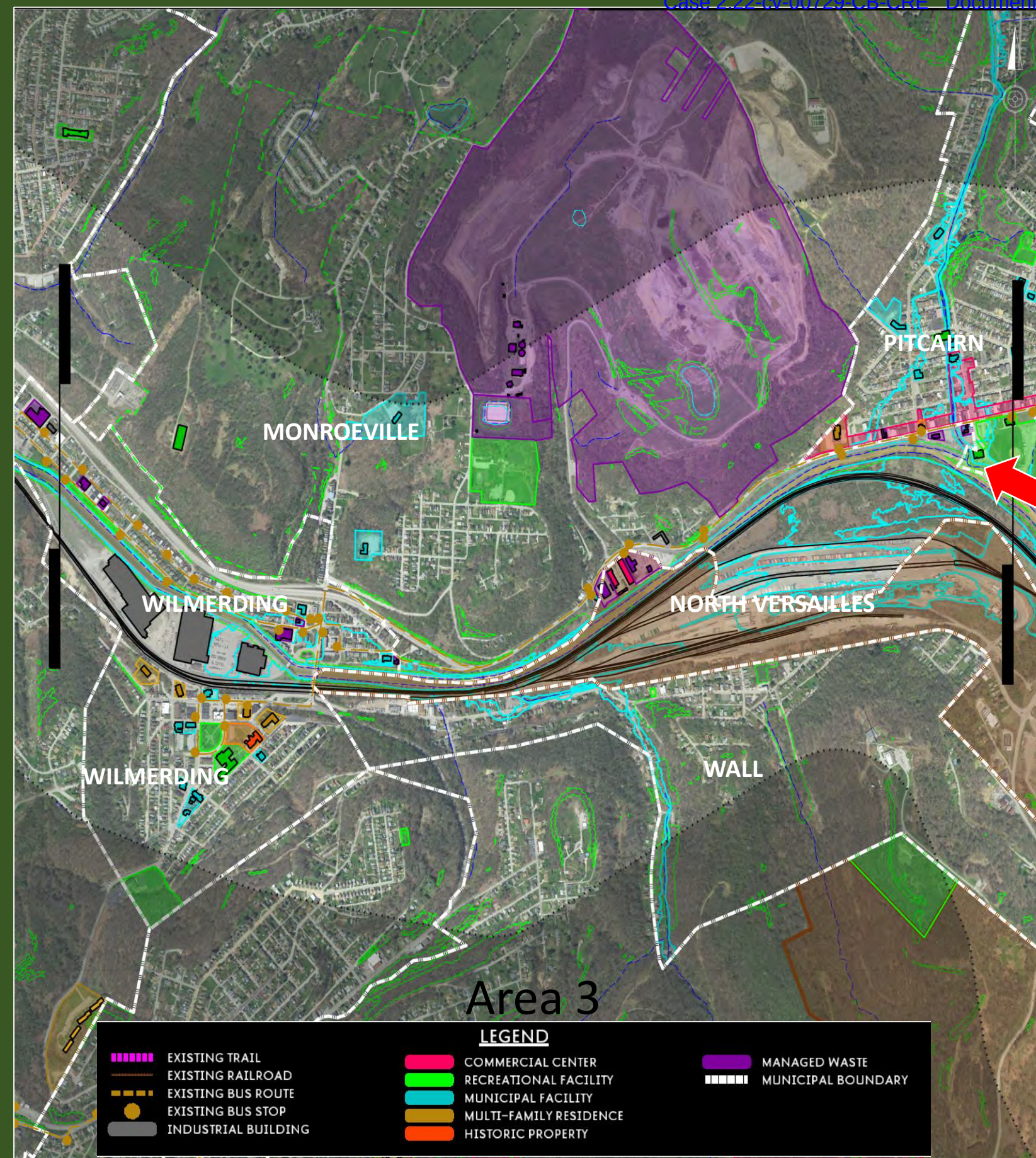
Tri-Boro Expy & Bridge St. - Wilmerding
View of Existing ROW and Shoulder Area



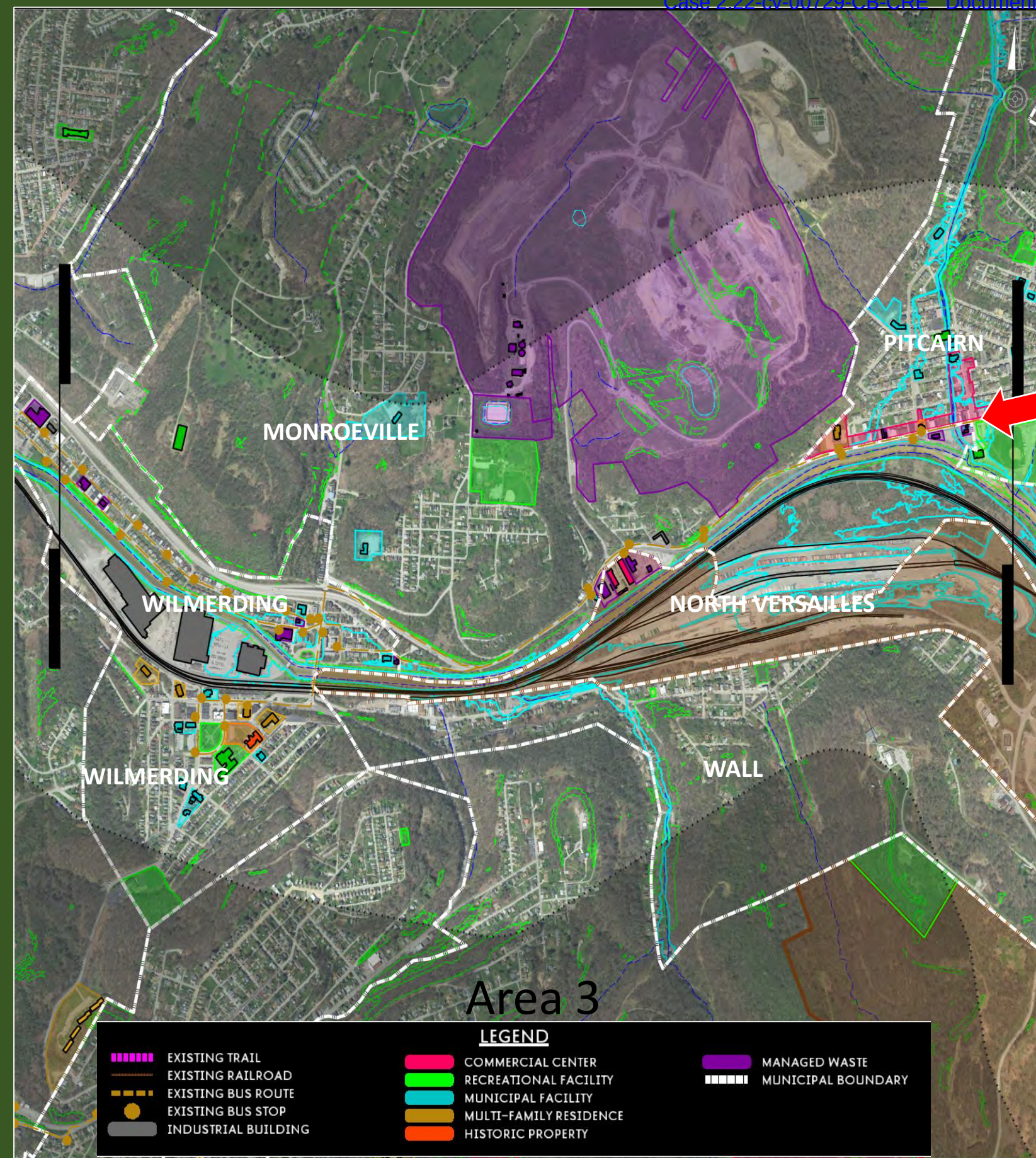
Tri-Boro Expy & Bridge St. - Wilmerding
Abandoned Bridge over Turtle Creek with Sidewalk



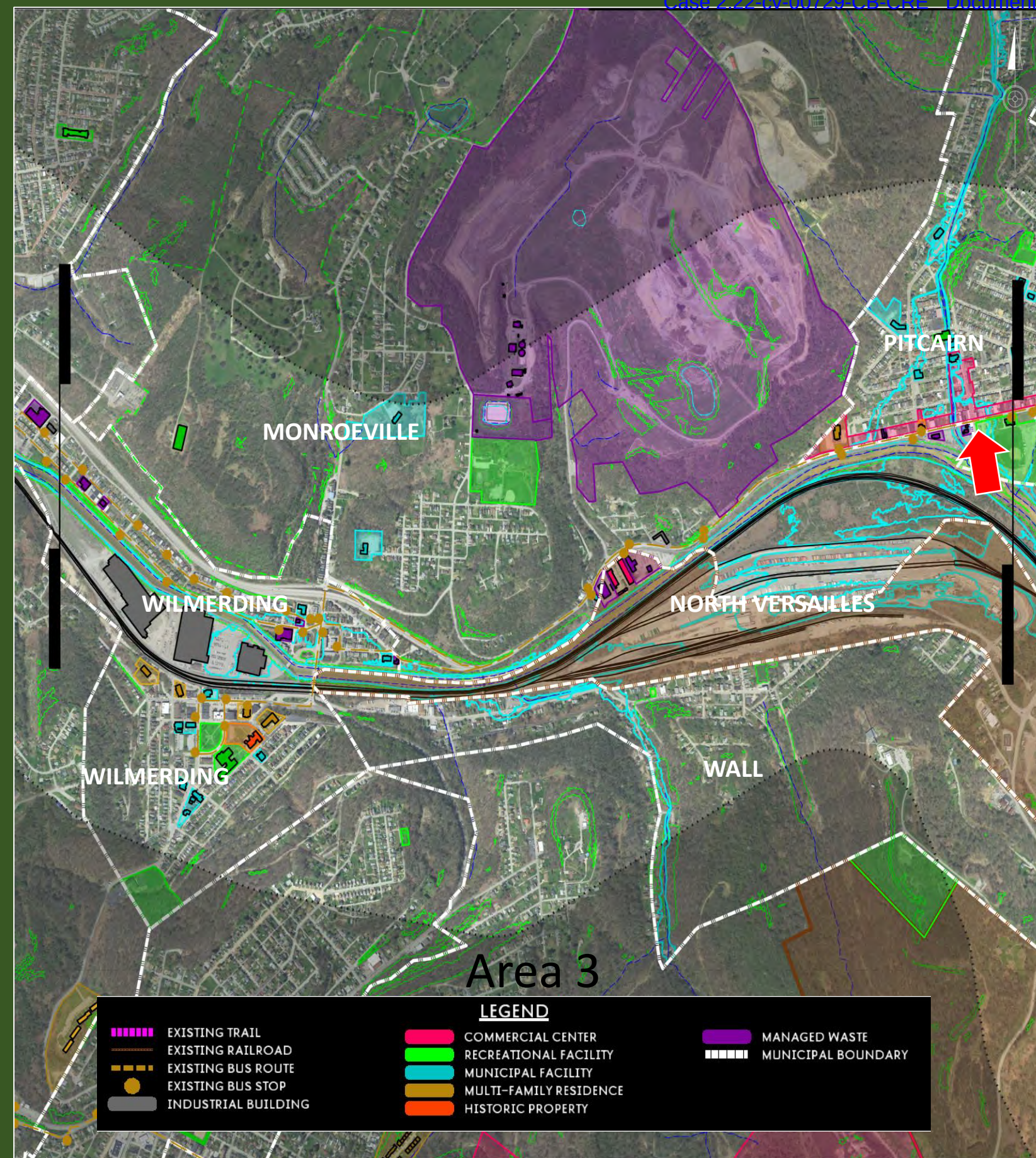
Avenue U & Watkins Ave. – Wilmerding
View Looking West Along Turtle Creek for
Potential Improvements



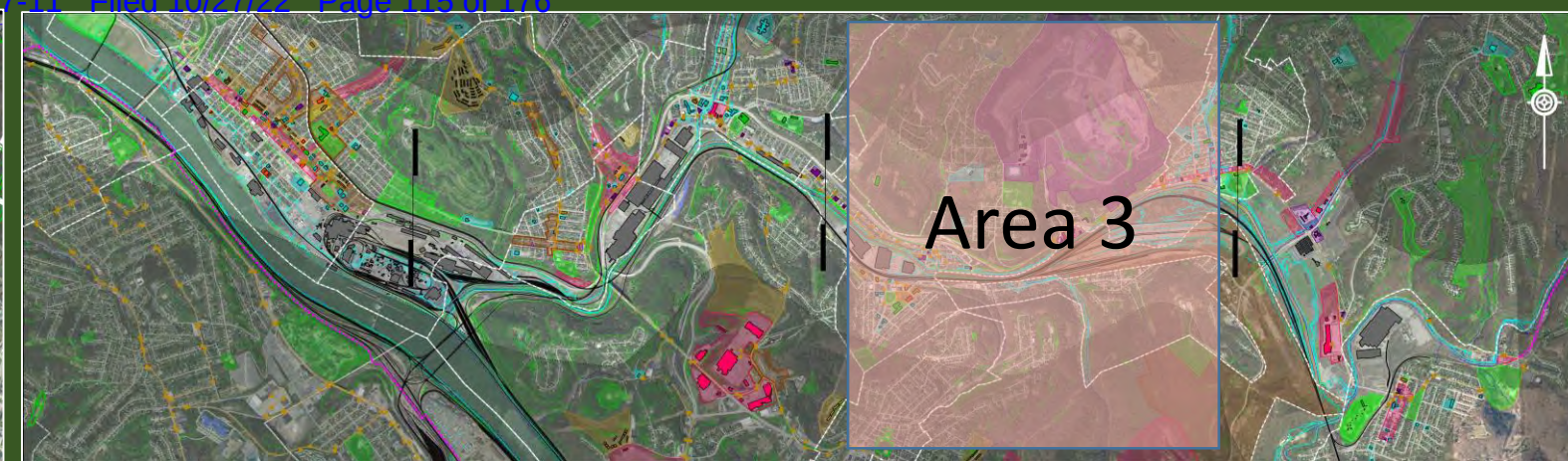
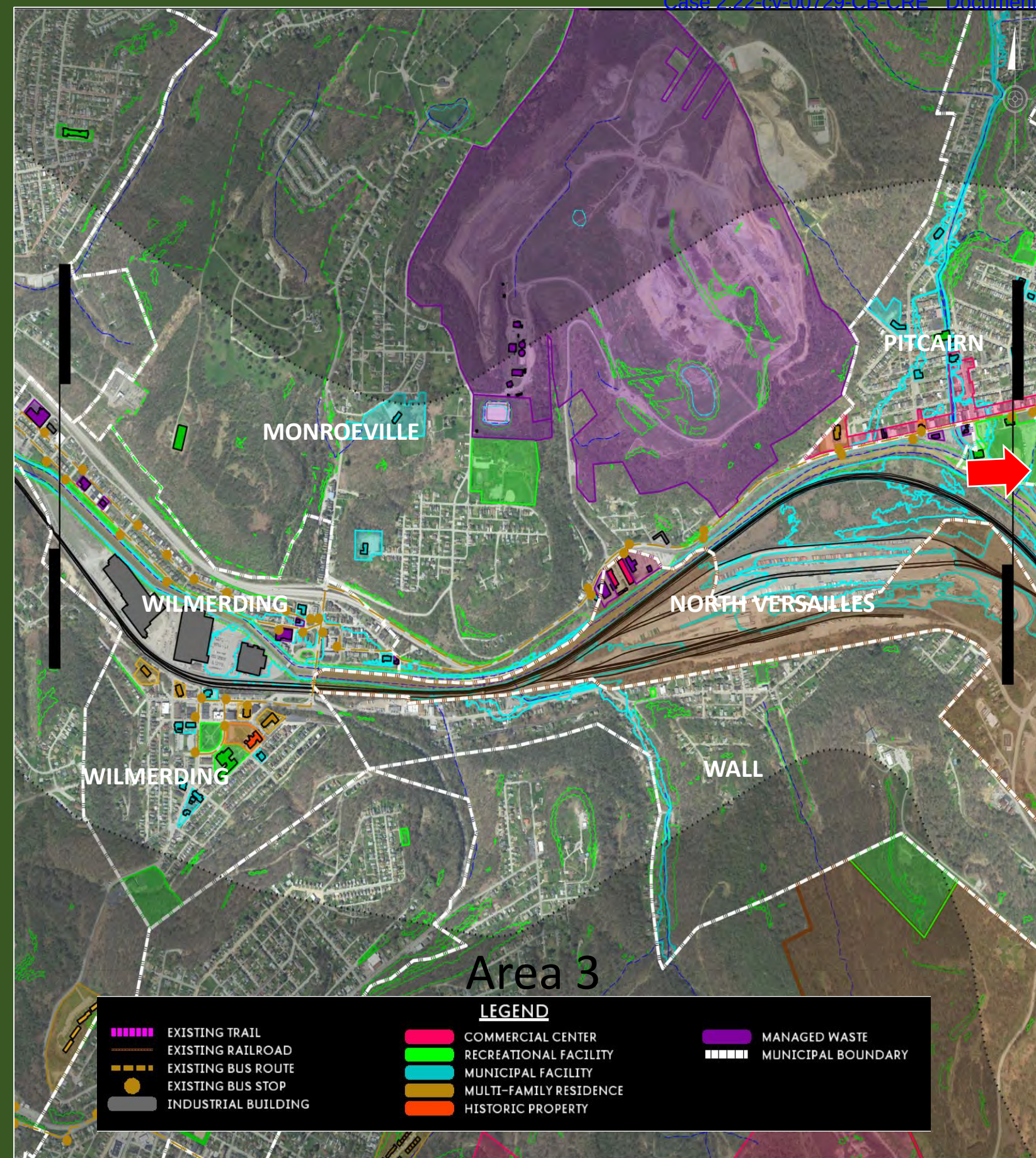
Pitcairn Park – Pitcairn
View Looking Northwest Toward
Pitcairn Park & Broadway Blvd.



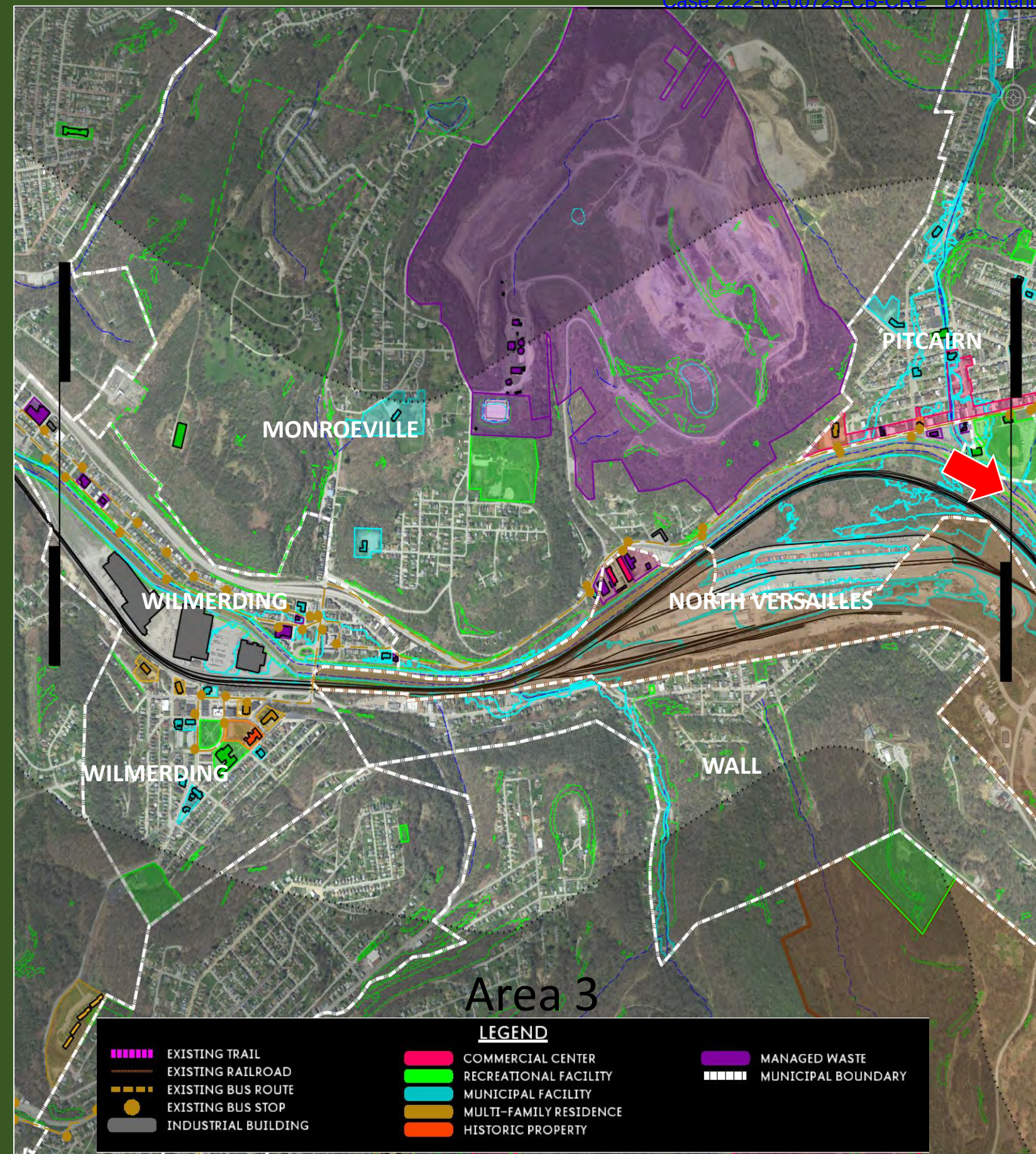
Pitcairn Park – Pitcairn
View from Pitcairn park near Borough Building
Looking West to Broadway Blvd



Broadway Blvd. & Center Ave. – Pitcairn
View Looking North on Center Ave. from Pitcairn
Park Parking Lot & Pitcairn Hose Co.



Pitcairn Park – Pitcairn
View Looking East on Gravel Access Road to
Pitcairn Park Baseball Fields



Pitcairn Park – Pitcairn
View from the Park Looking South

Area 4

PITCAIRN

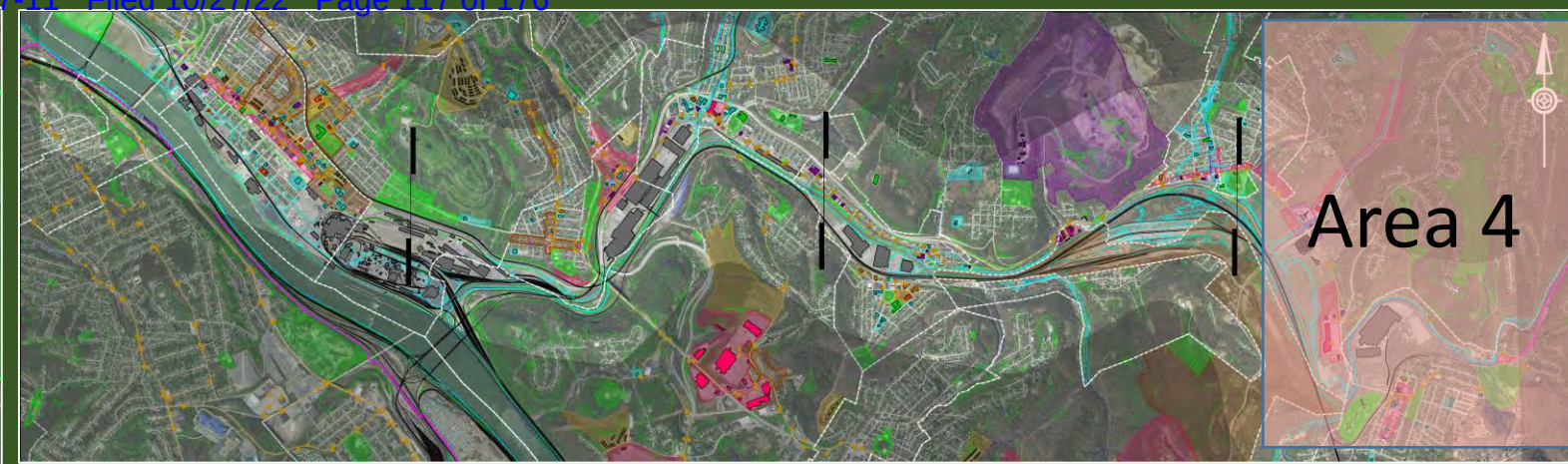
MONROEVILLE

TRAFFORD

(WHT)

WALL

NORTH VERSAILLES



Area 4



Rt. 130 Looking at Turtle Creek – Trafford View Looking South at All American Park

Area 4

PITCAIRN

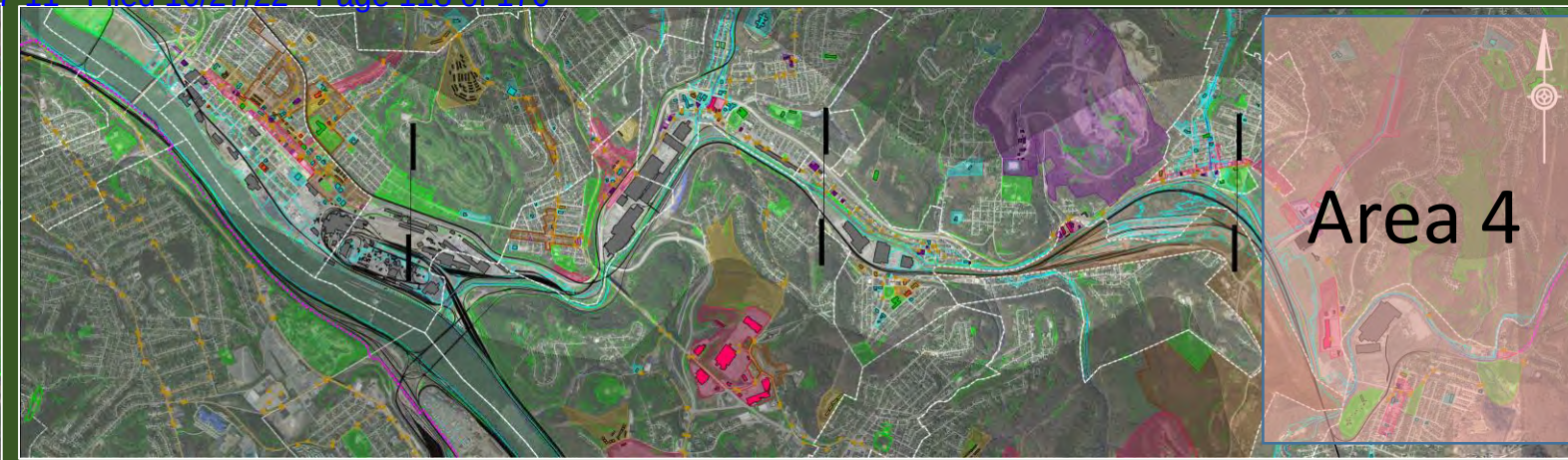
MONROEVILLE

WALL

NORTH VERSAILLES

TRAFFORD

(WHT)



Area 4



Stewart Station Drive – Trafford
View Looking East at 5th St. Ext.
Flyover Structure

Area 4

</

PITCAIRN

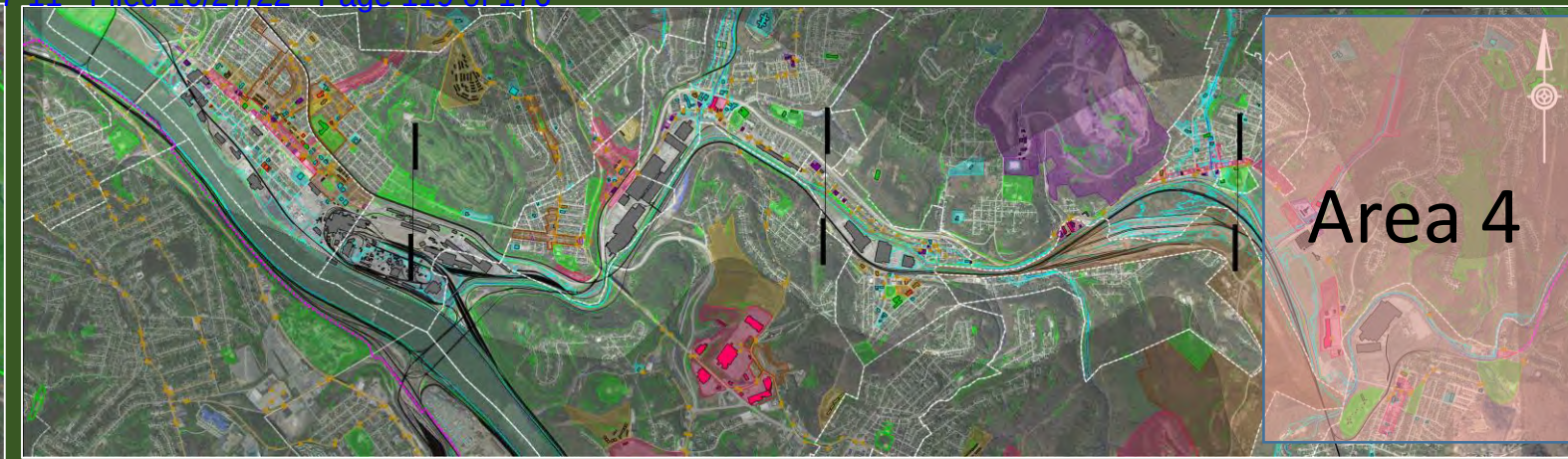
MONROEVILLE

WALL

NORTH VERSAILLES

TRAFFORD

(WHT)



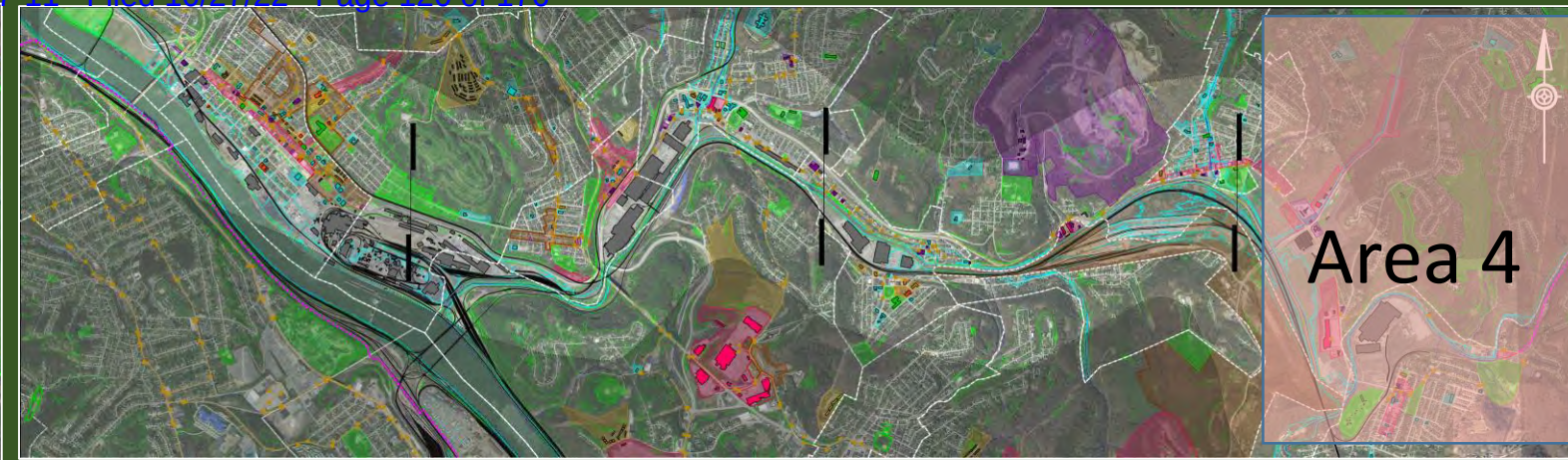
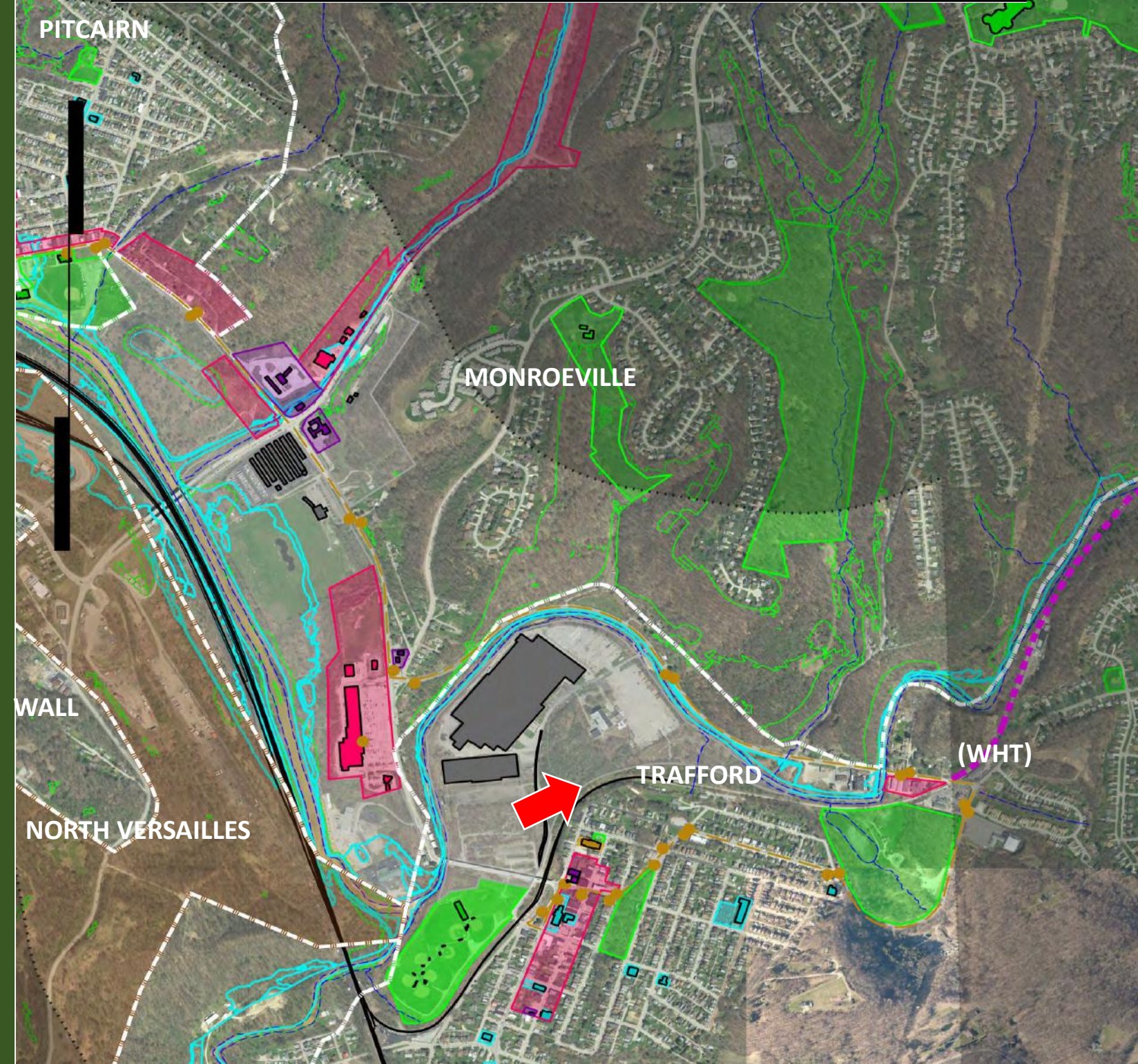
Area 4



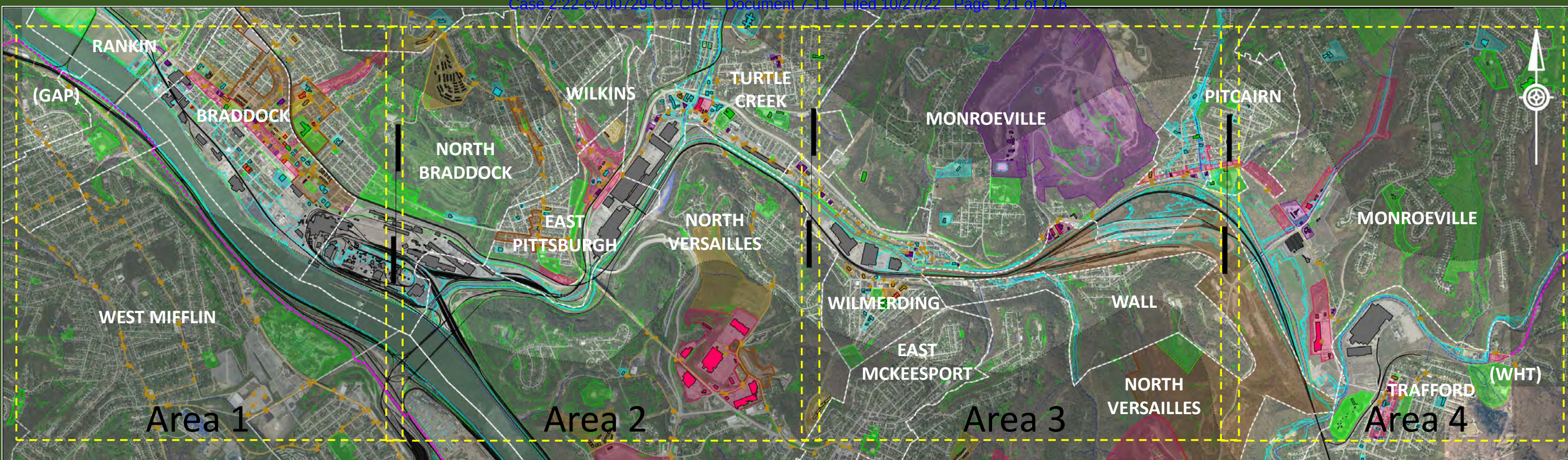
Stewart Station Drive – Trafford
View Looking South Toward Brinton Ave.

Area 4

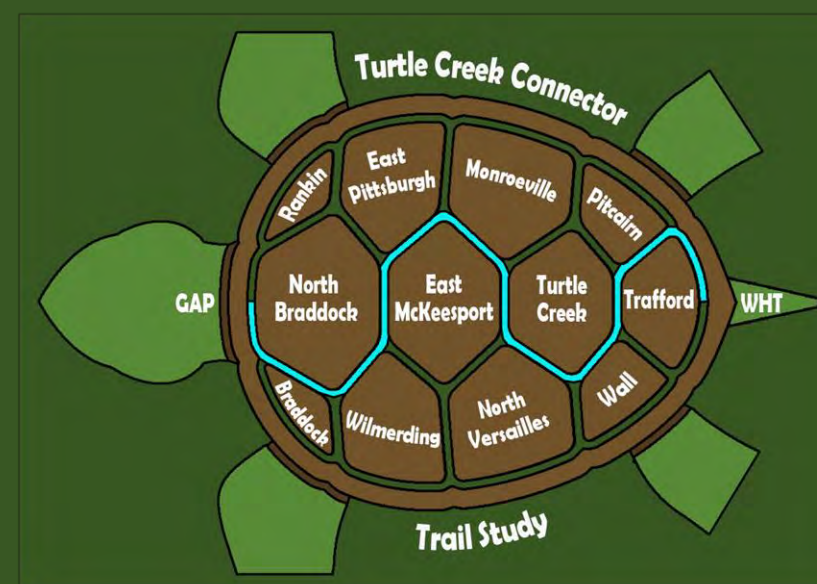
| LEGEND | | |
|---------------------|------------------------|--------------------|
| EXISTING TRAIL | COMMERCIAL CENTER | MANAGED WASTE |
| EXISTING RAILROAD | RECREATIONAL FACILITY | MUNICIPAL BOUNDARY |
| EXISTING BUS ROUTE | MUNICIPAL FACILITY | |
| EXISTING BUS STOP | MULTI-FAMILY RESIDENCE | |
| INDUSTRIAL BUILDING | HISTORIC PROPERTY | |

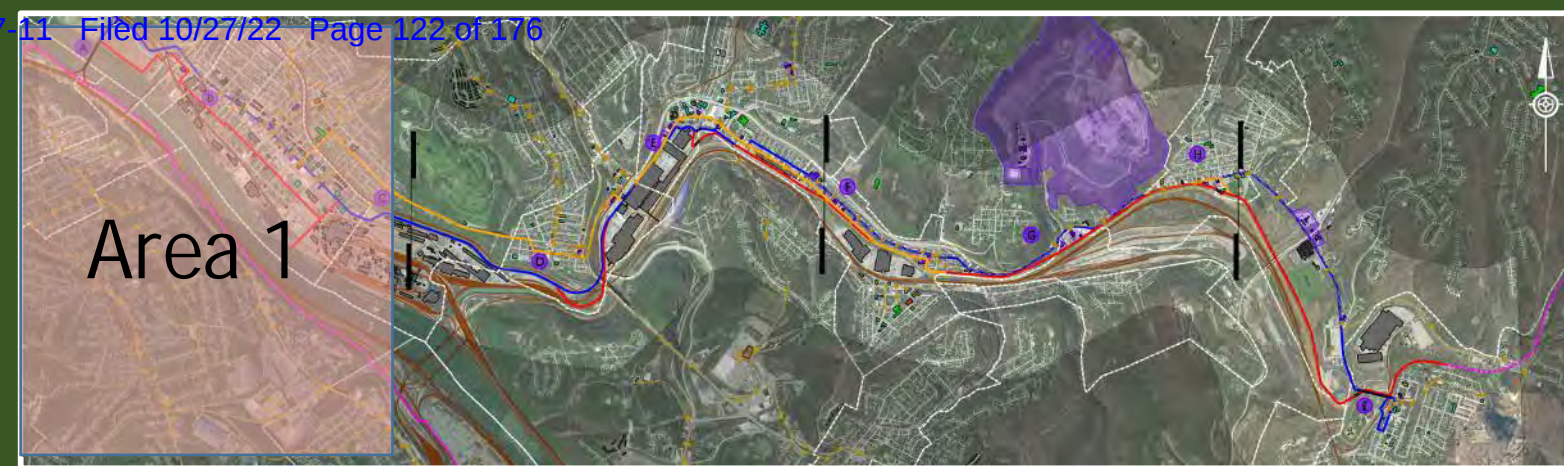
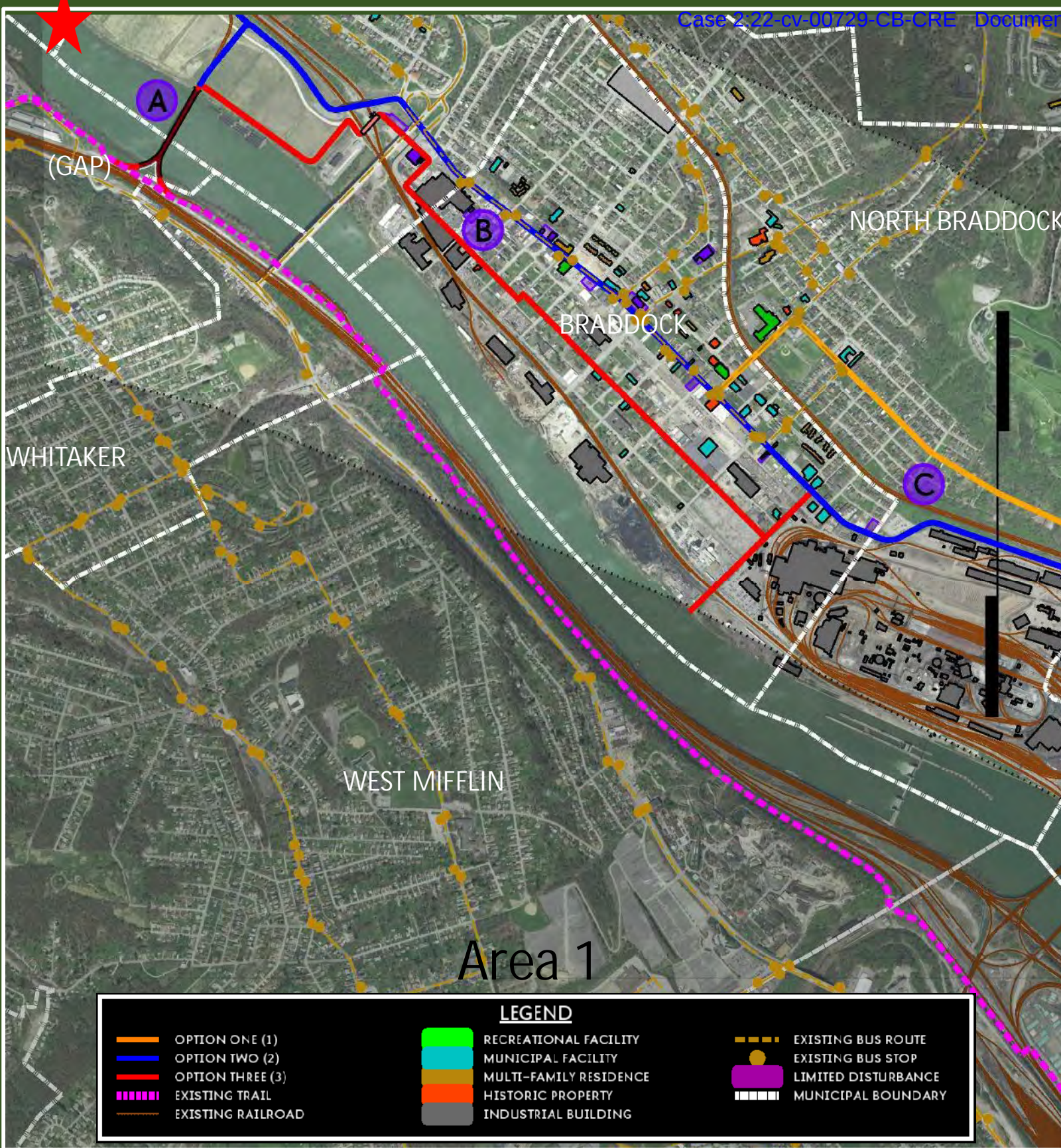


Stewart Station Drive – Trafford
View Looking North at Path Parallel to
Existing Railroad

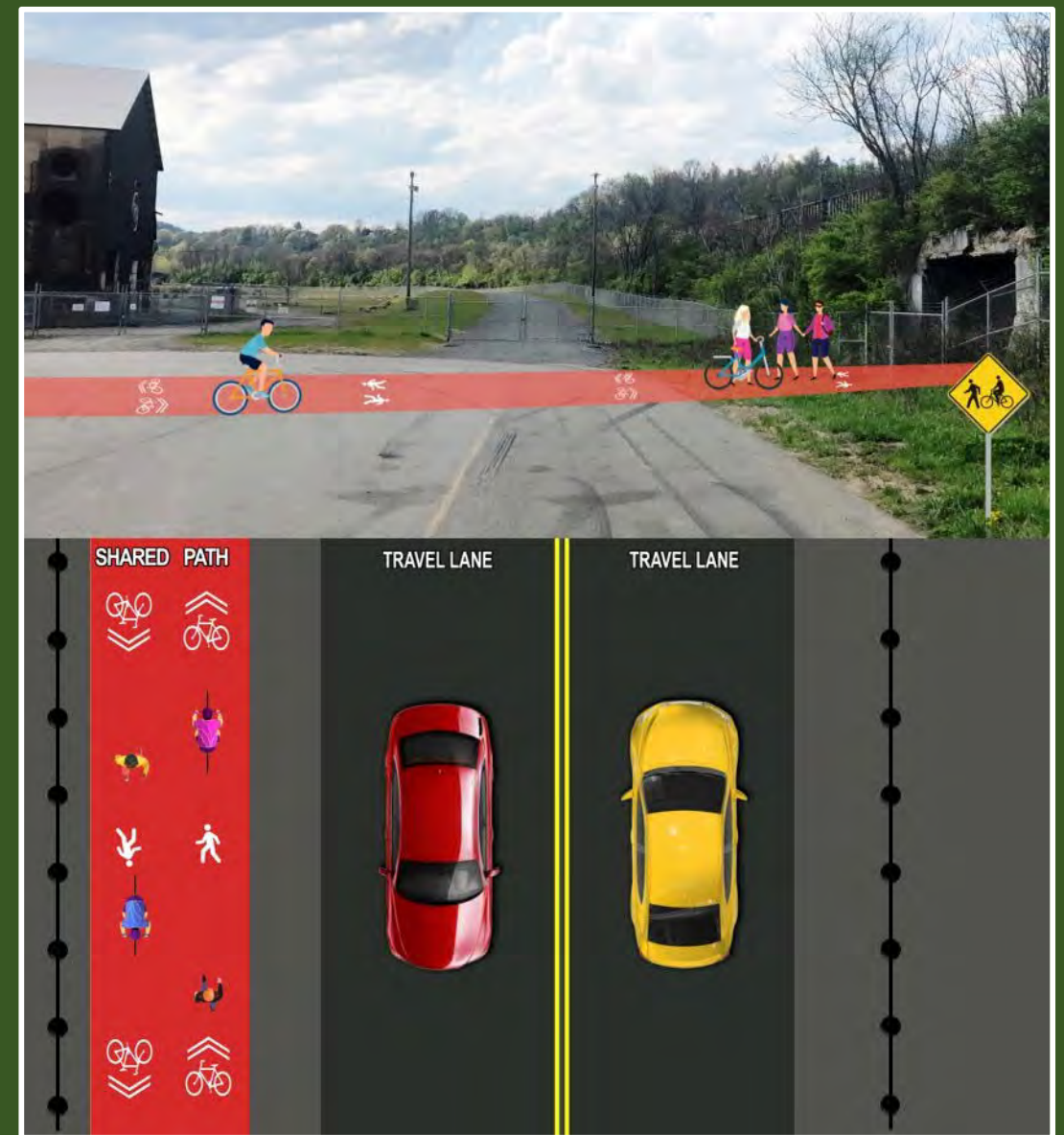
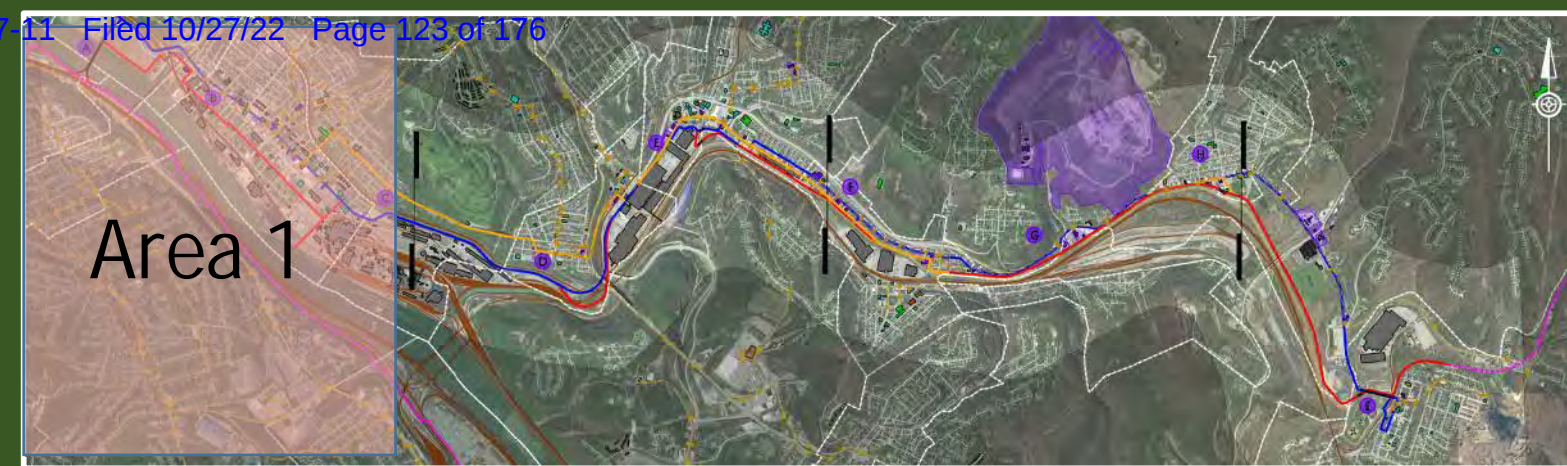
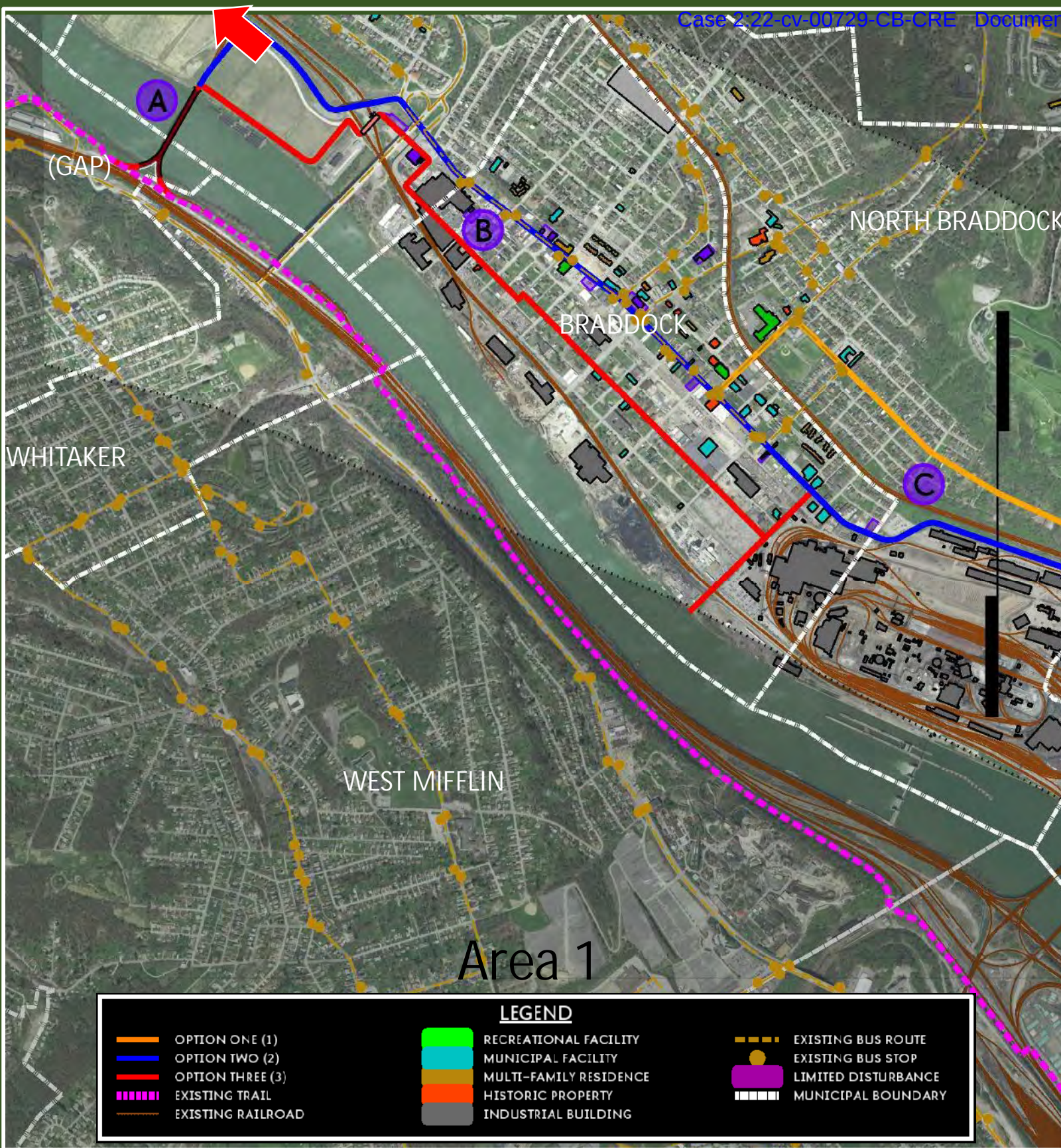


Appendix B: Alignment Visualizations

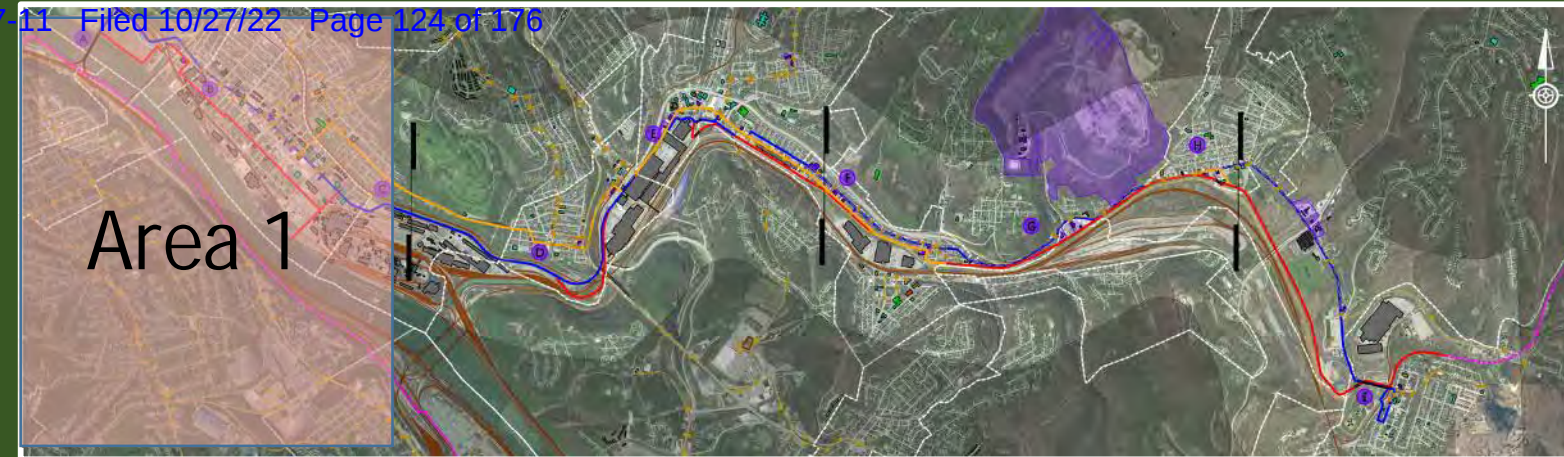
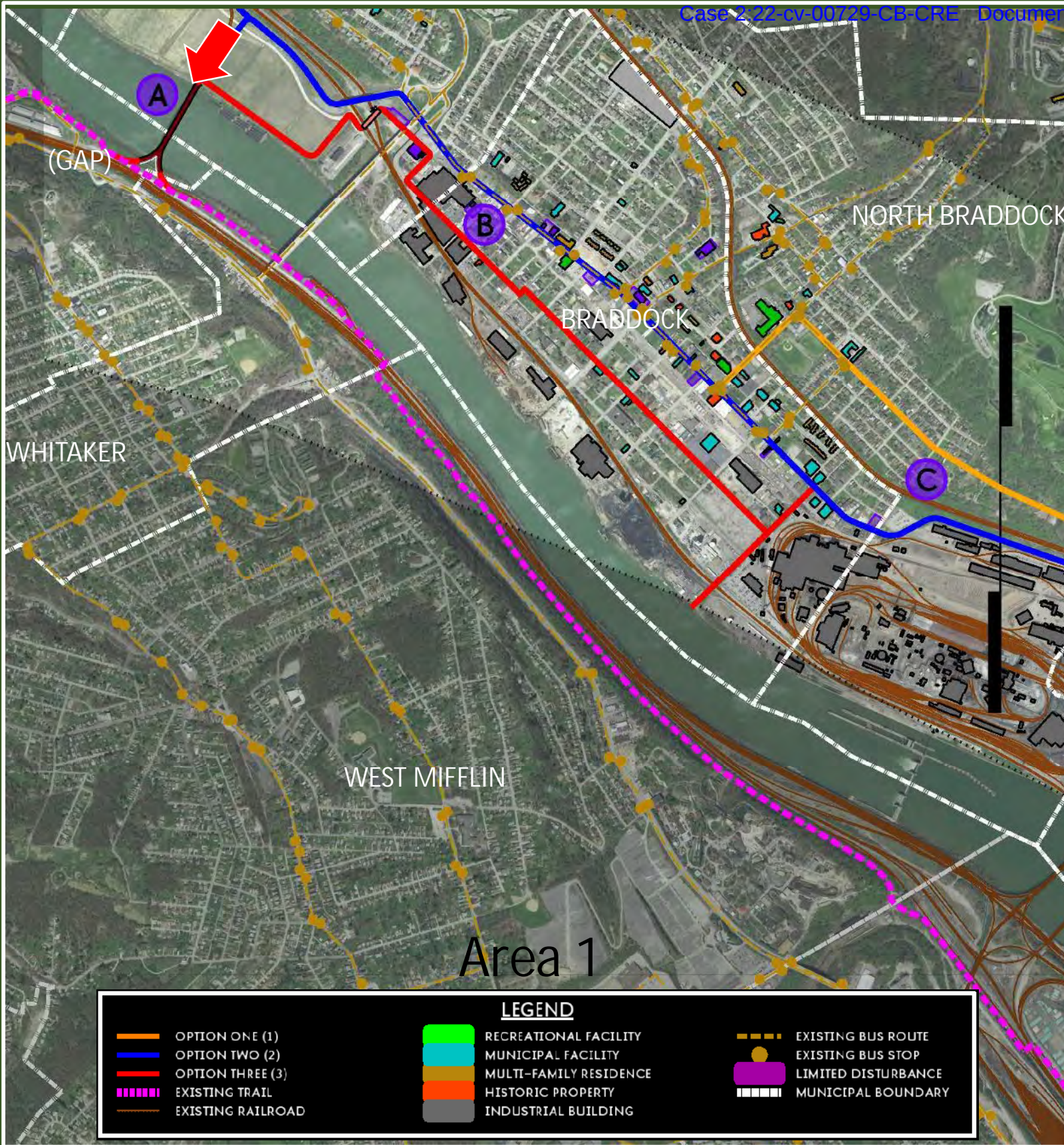




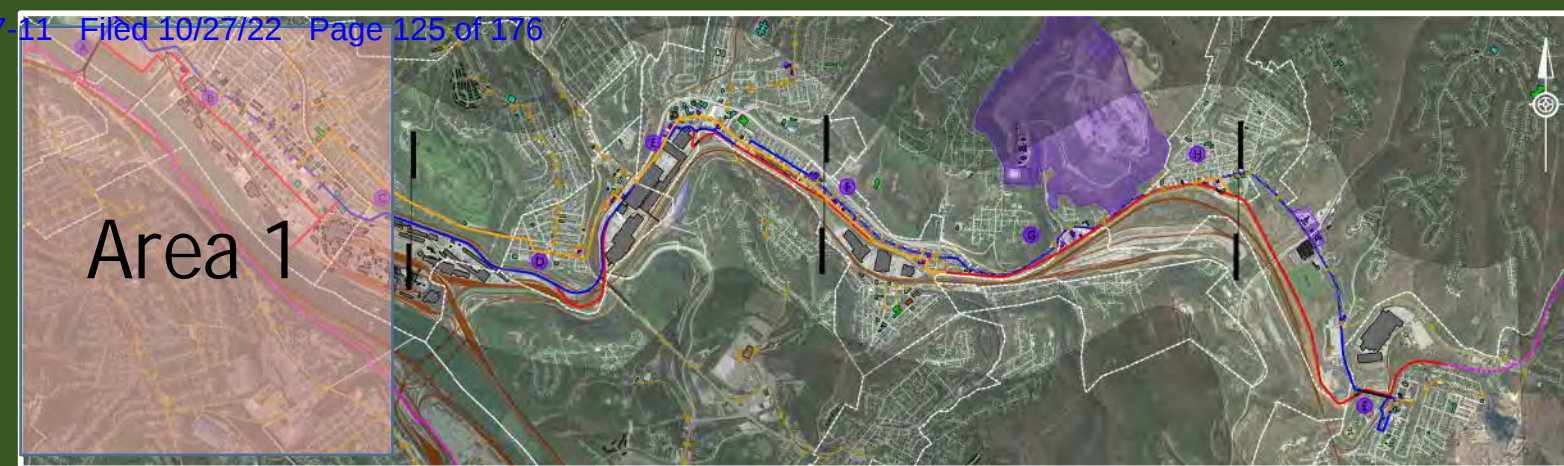
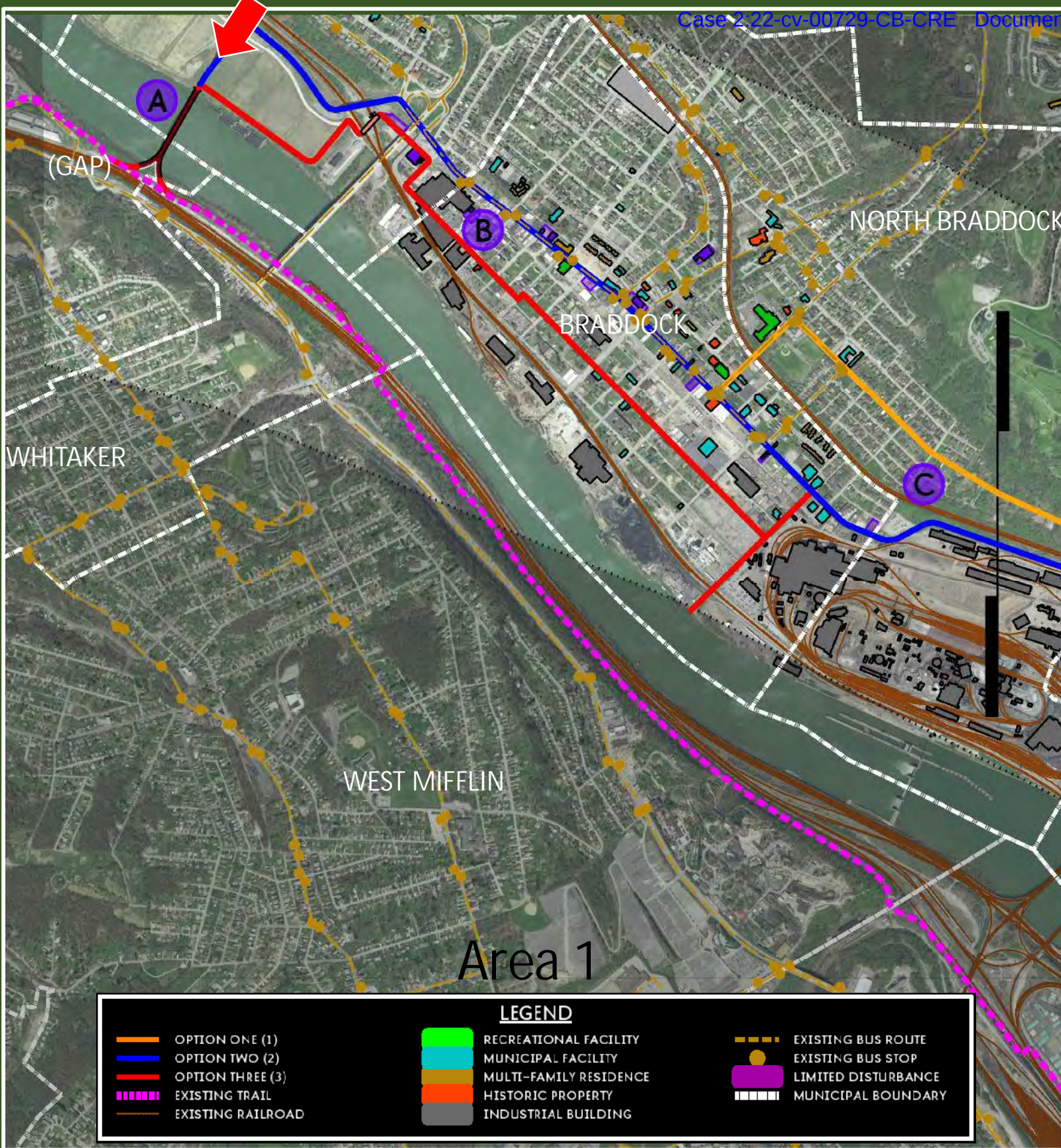
Carrie Blast Furnace
Swissvale



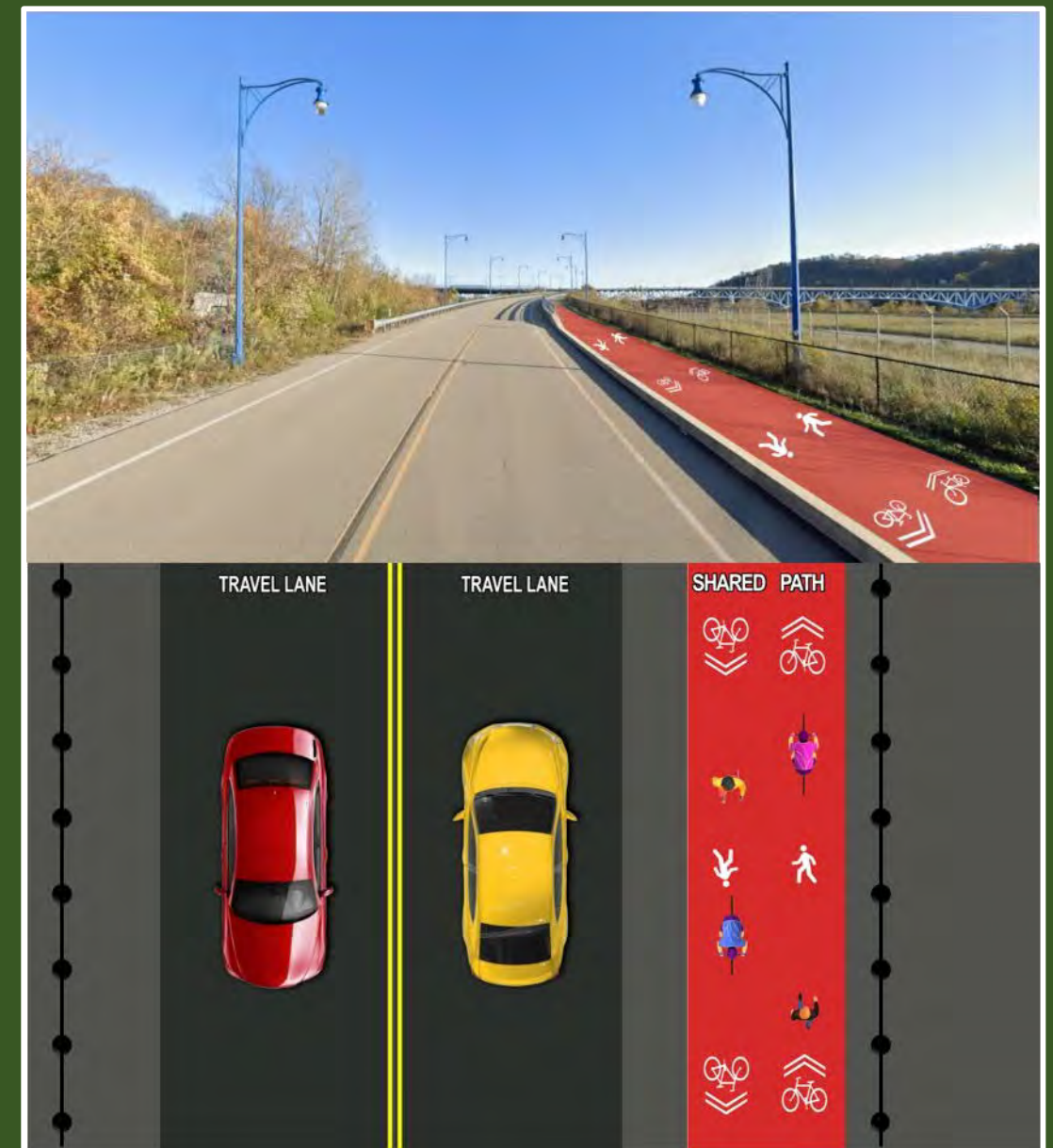
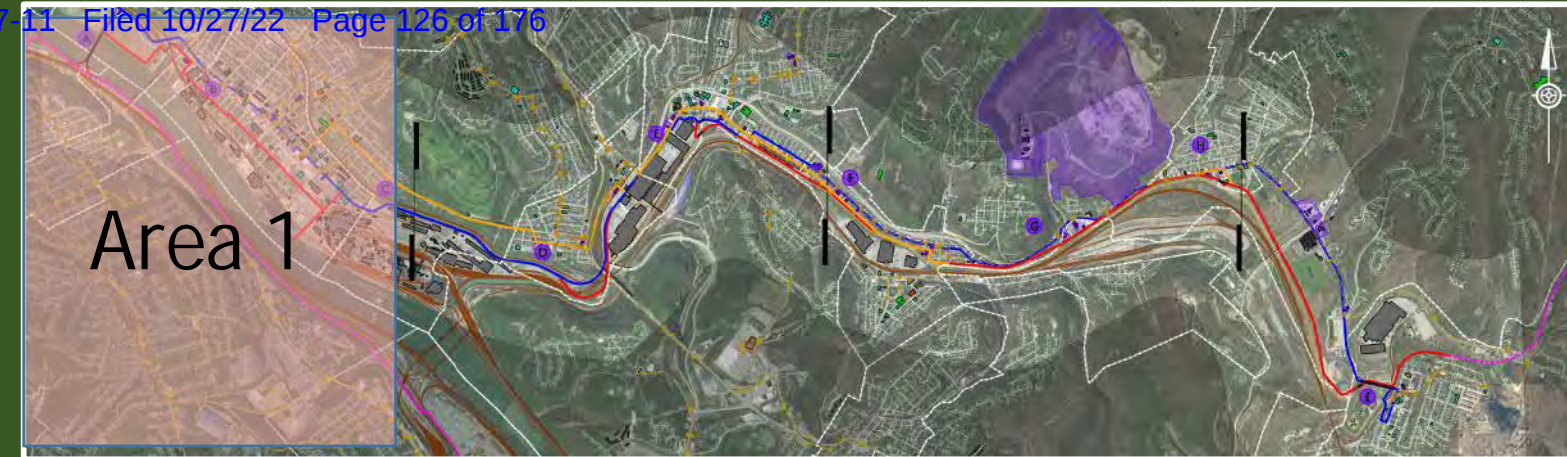
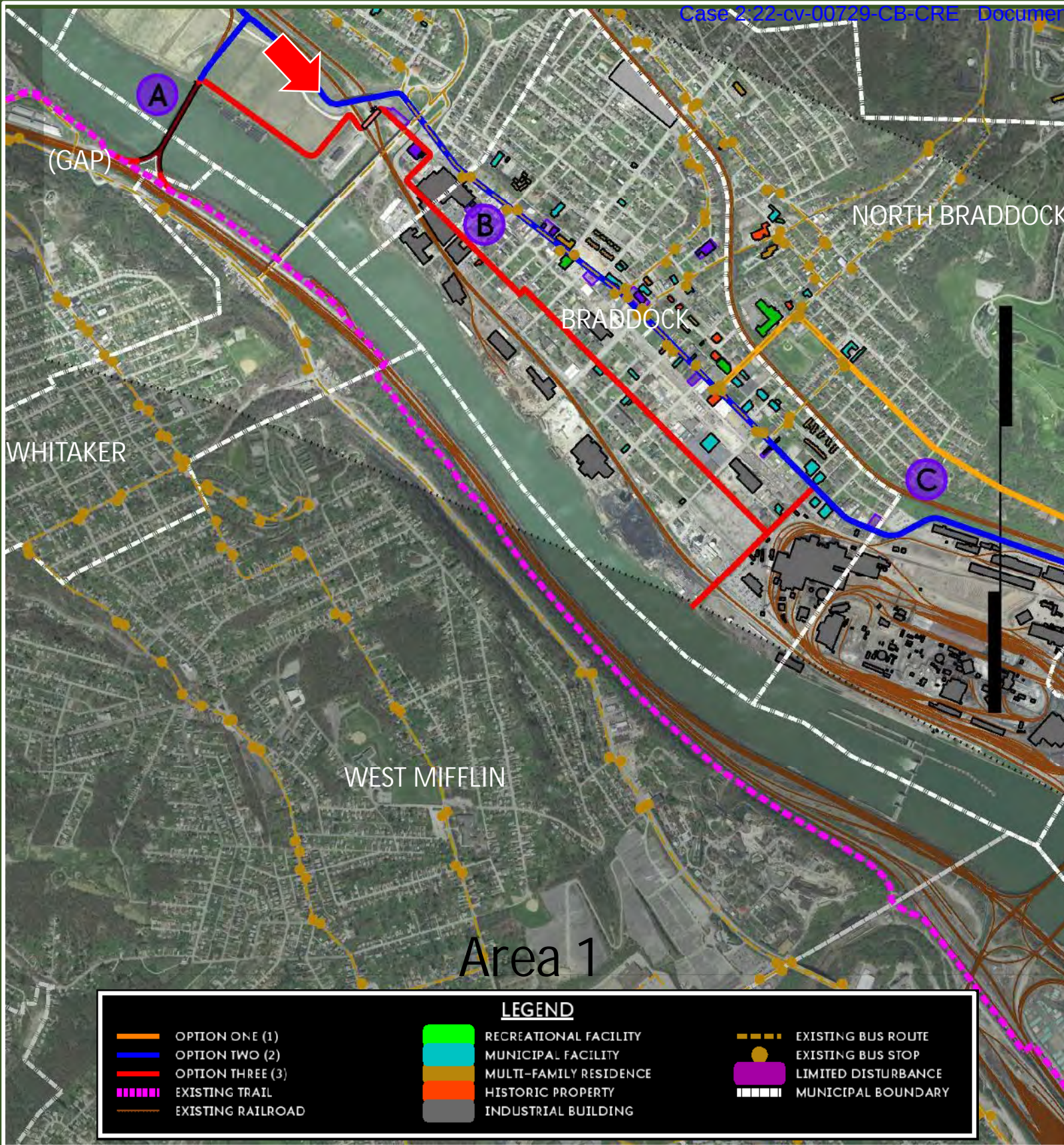
Carrie Furnace Site: Potential Connection via Swissvale Tunnel



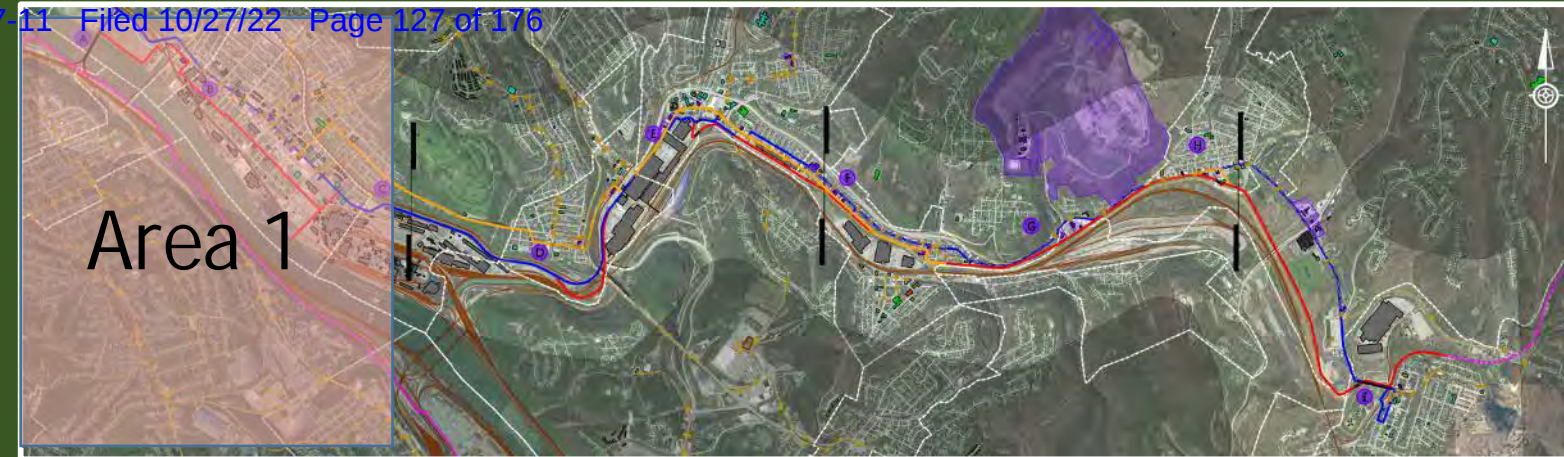
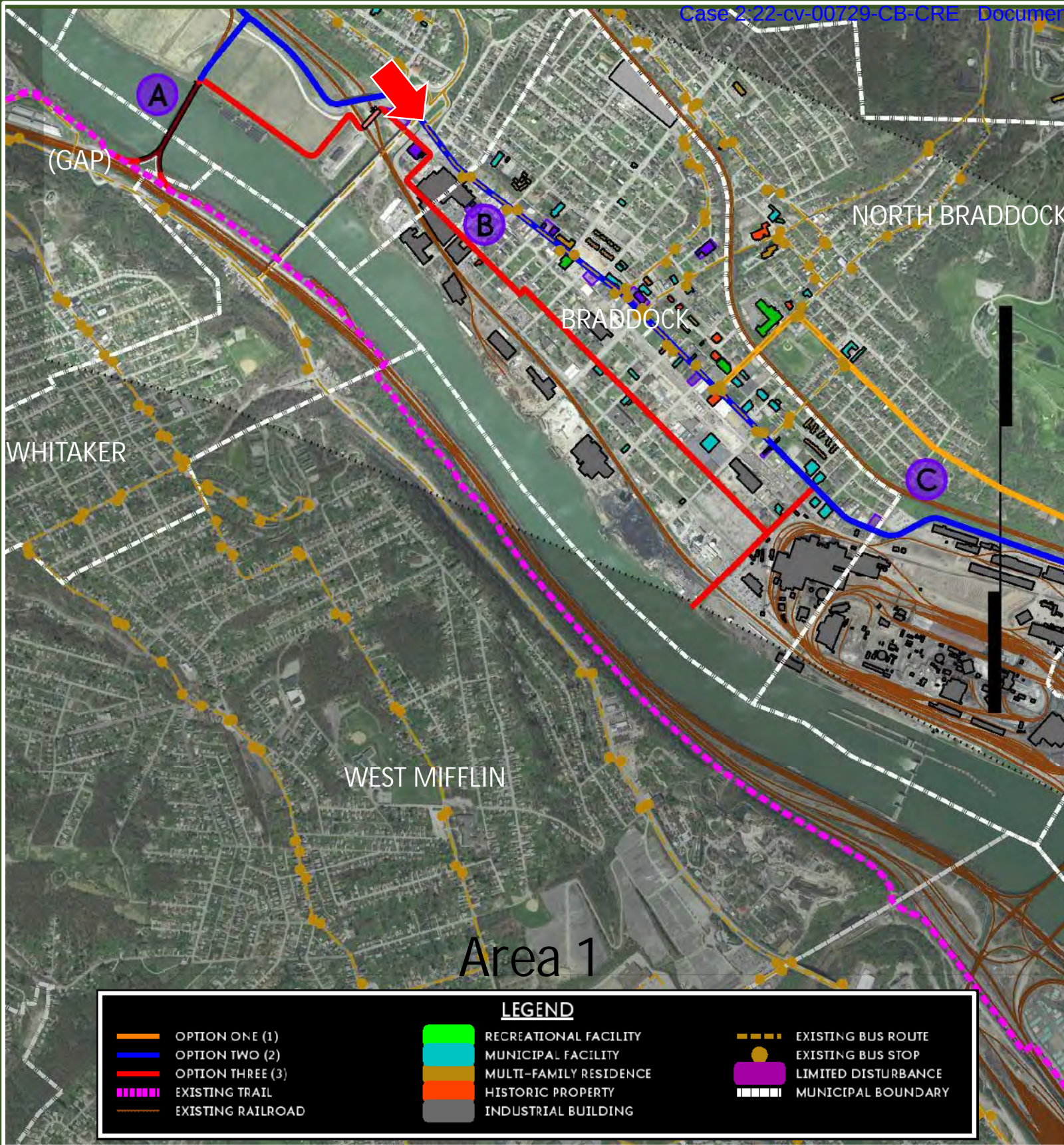
Hot Metal Bridge
Rankin



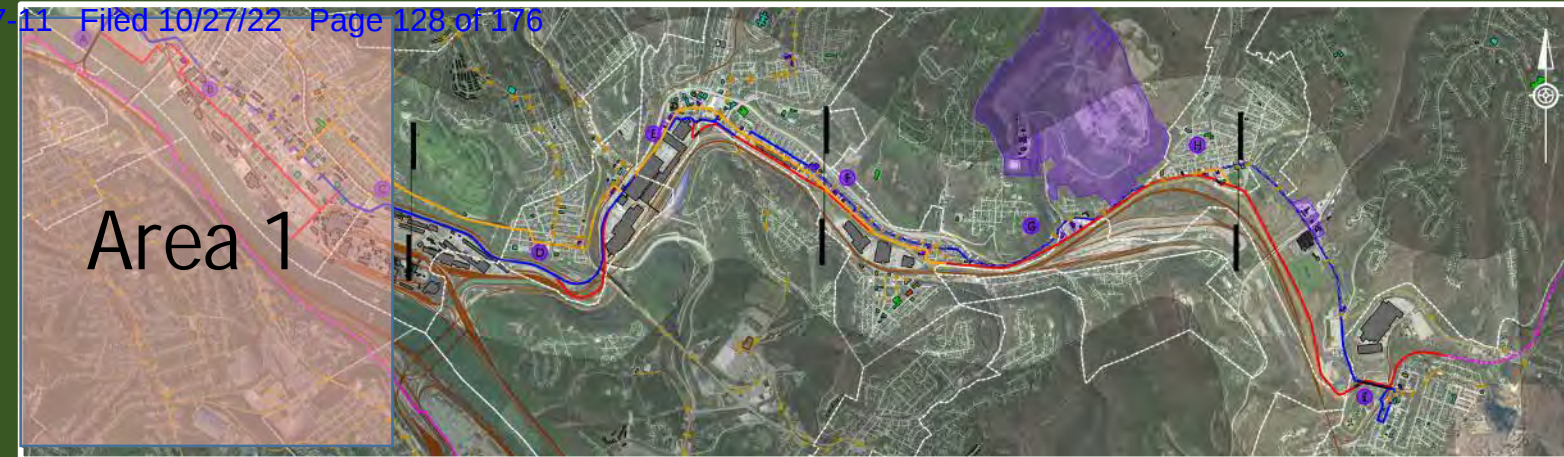
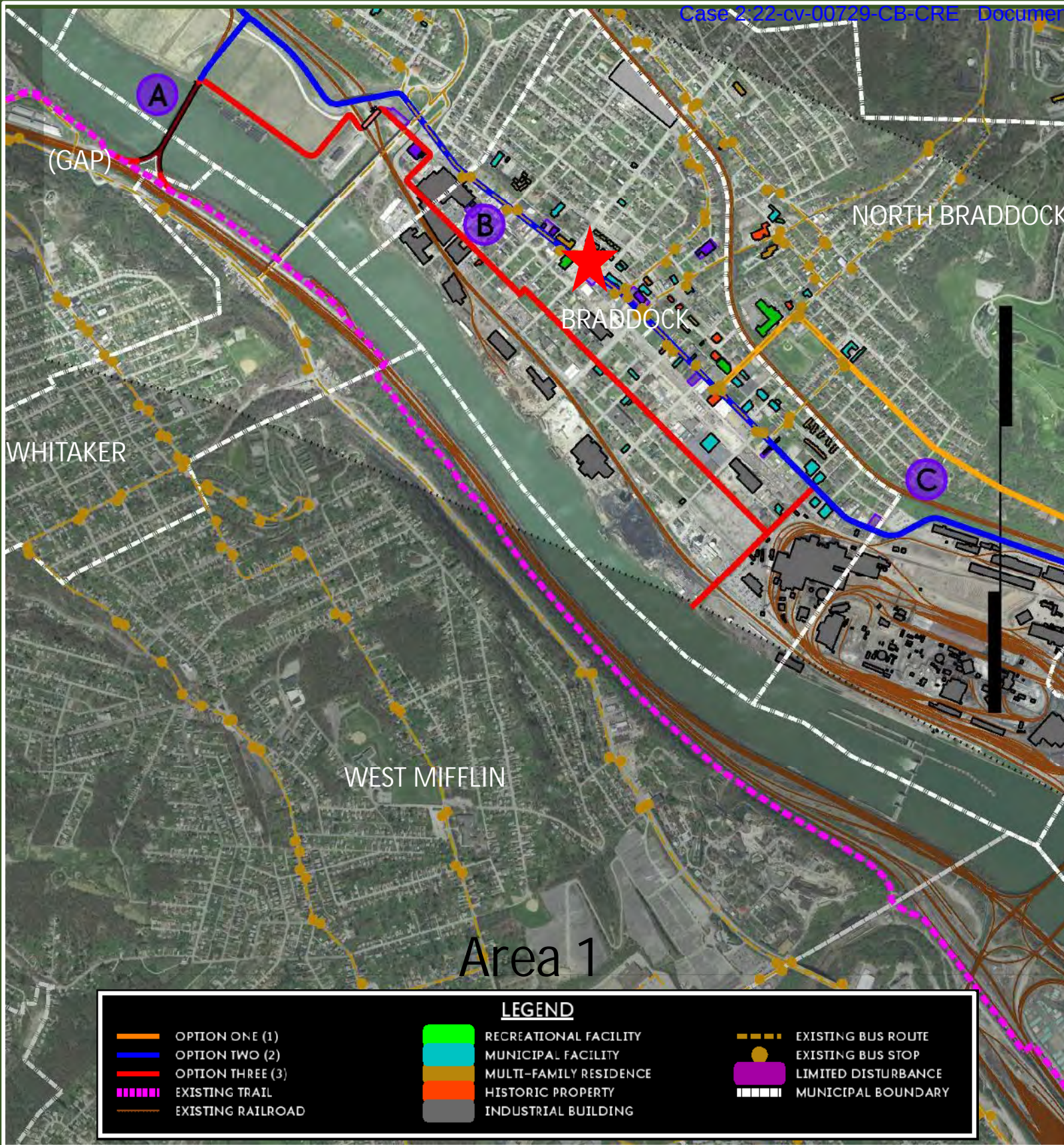
Carrie Furnace Site
Rankin



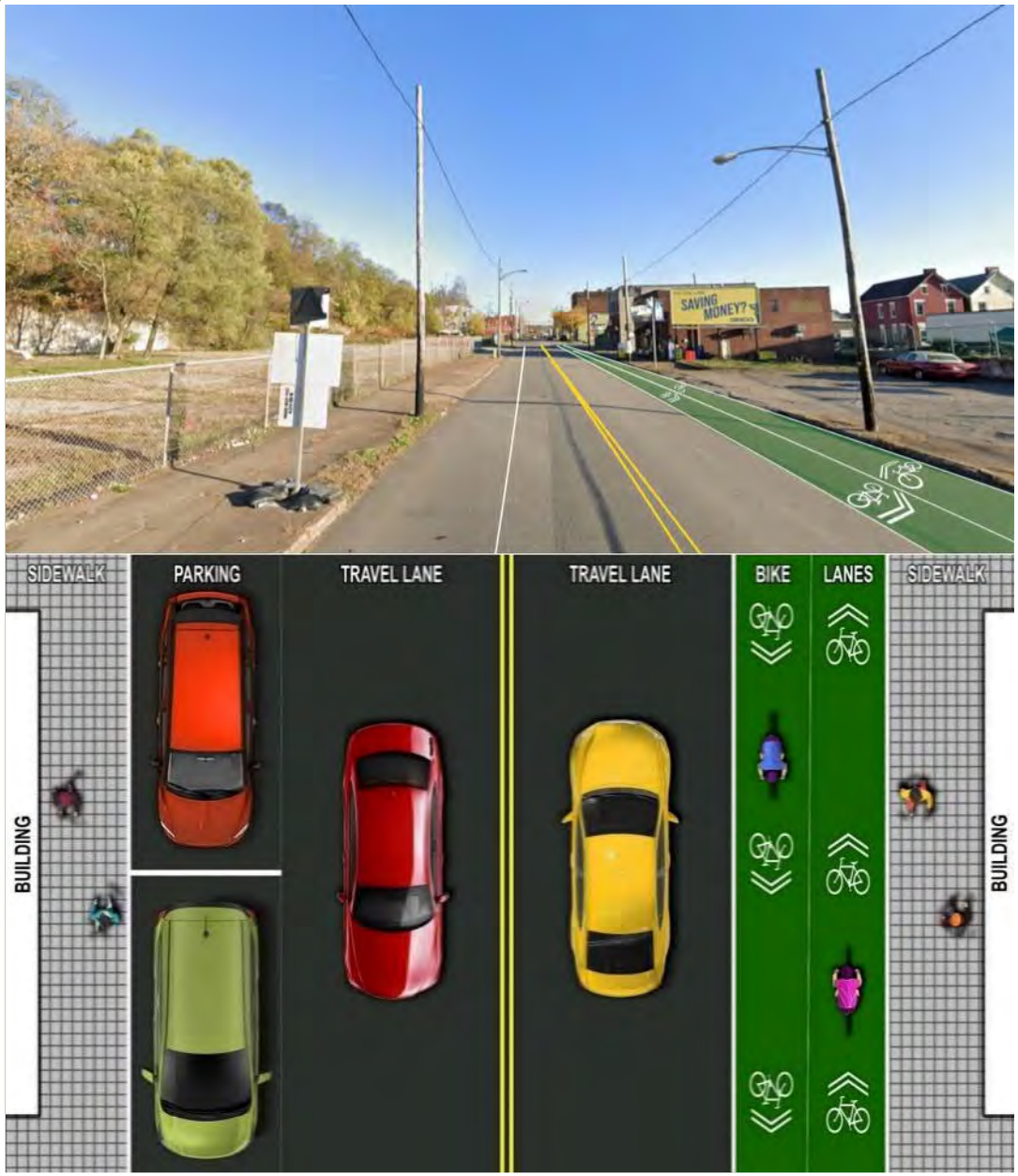
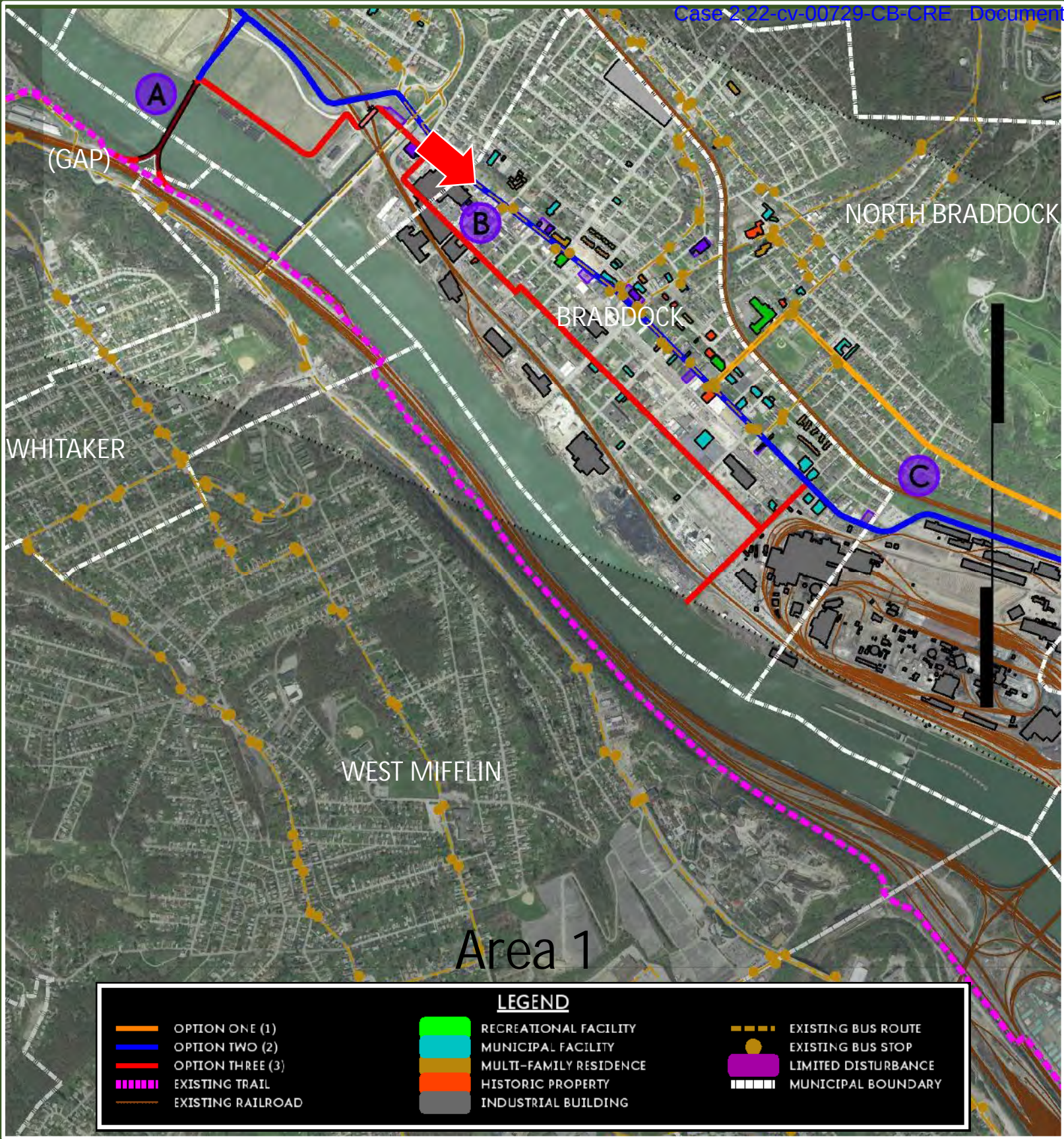
Carrie Furnace Boulevard Rankin



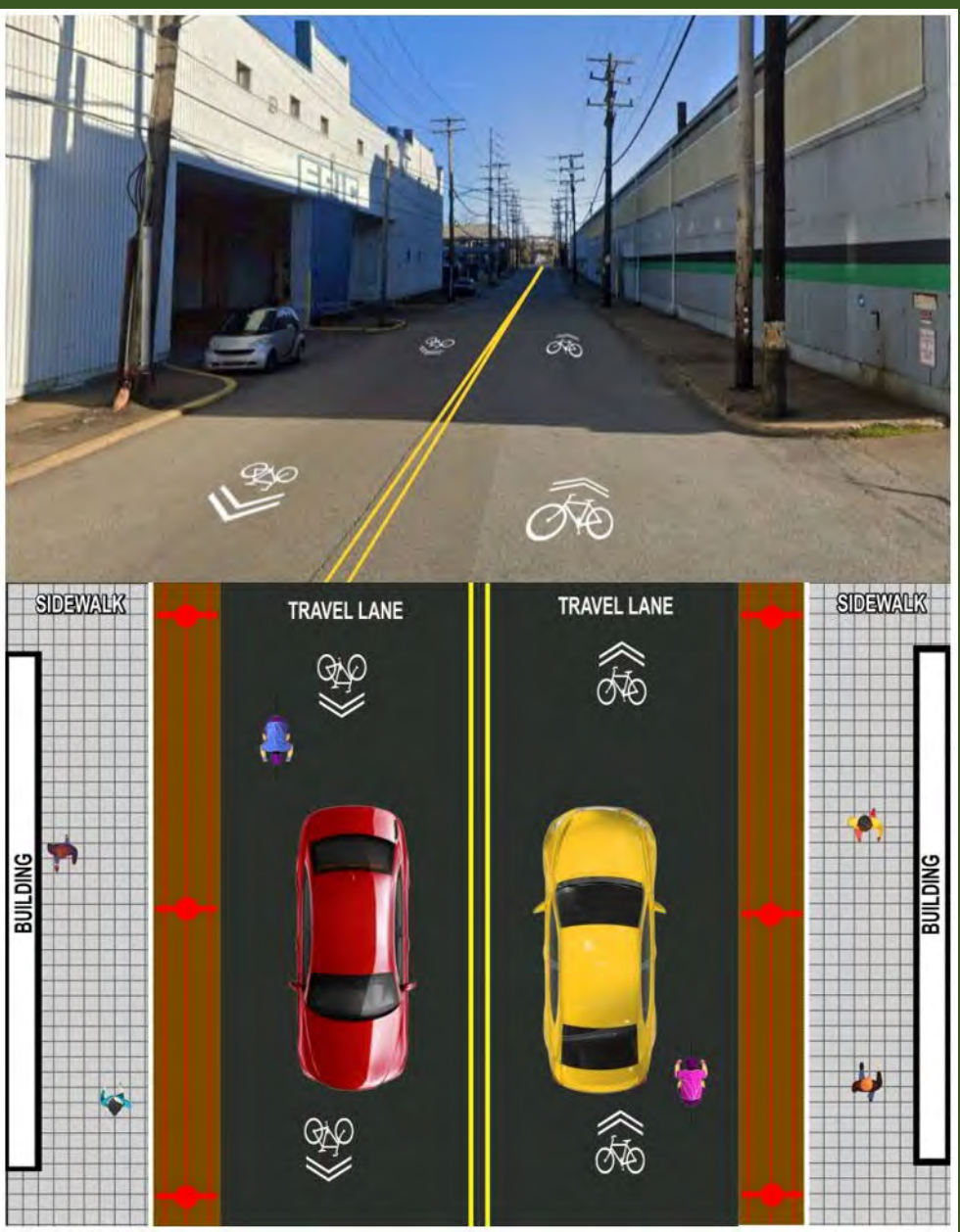
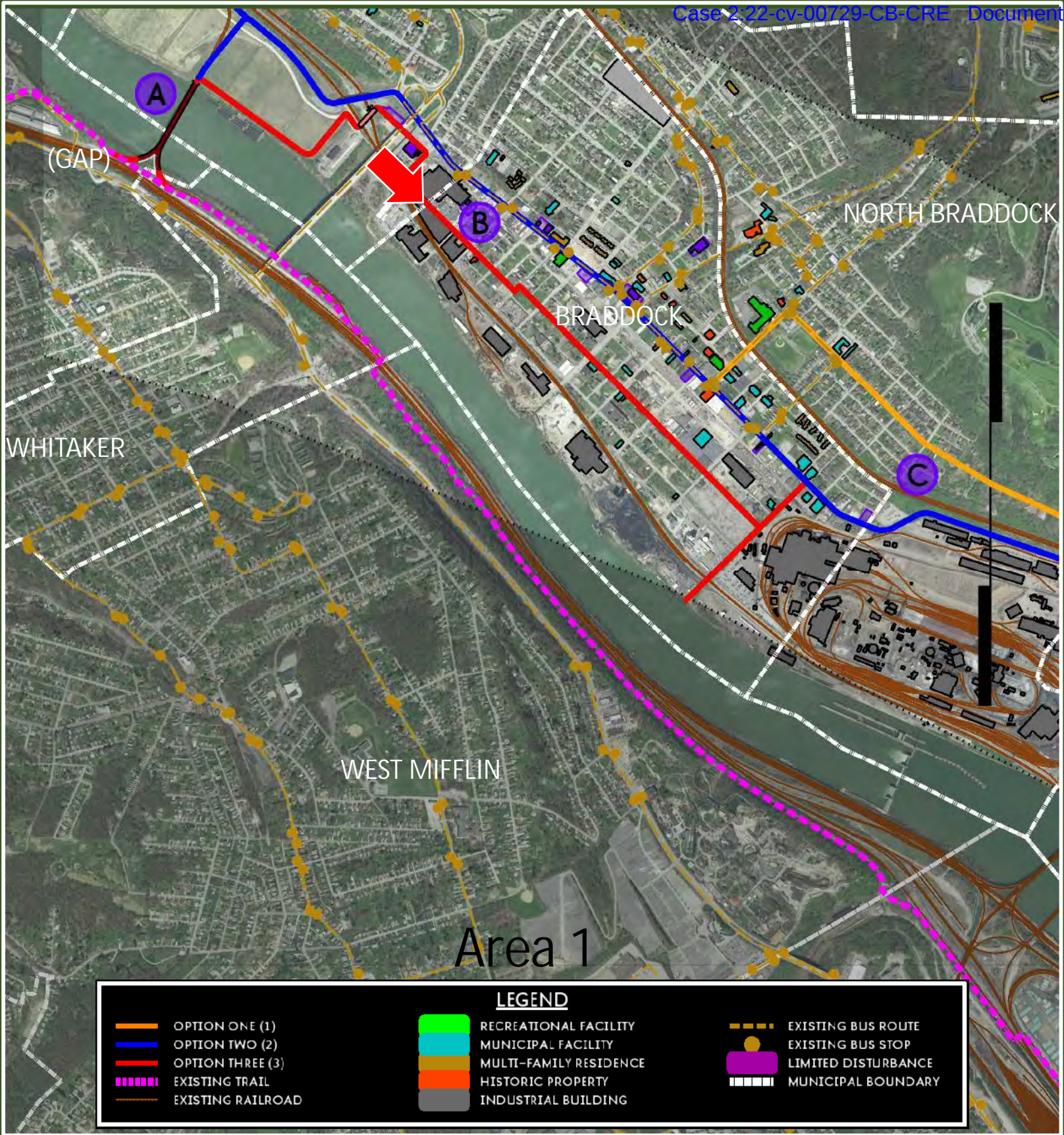
Kenmawr Avenue
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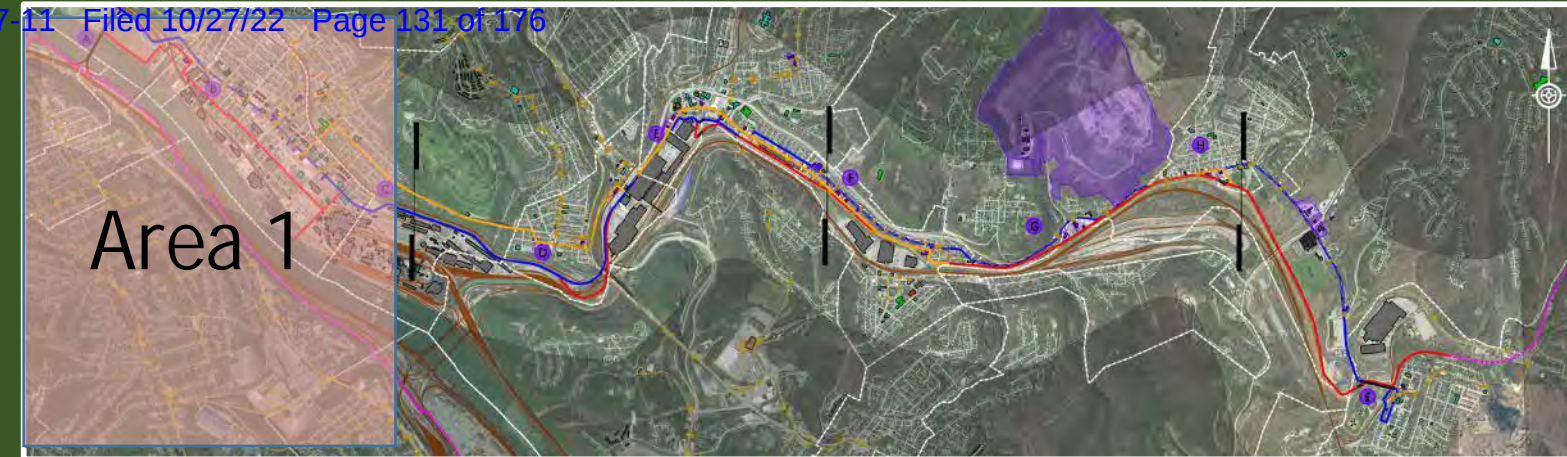
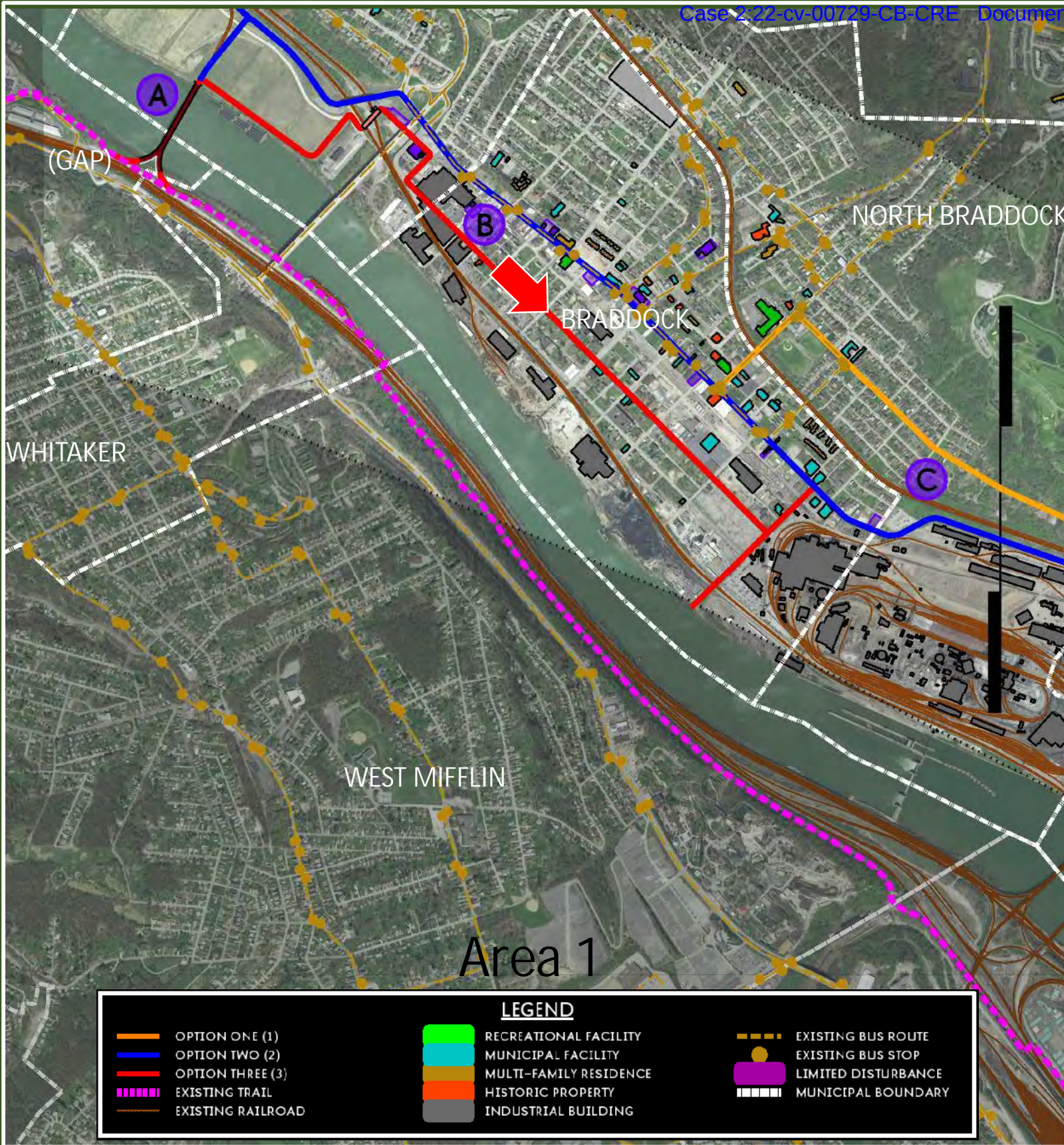
Braddock Civic Plaza
Braddock



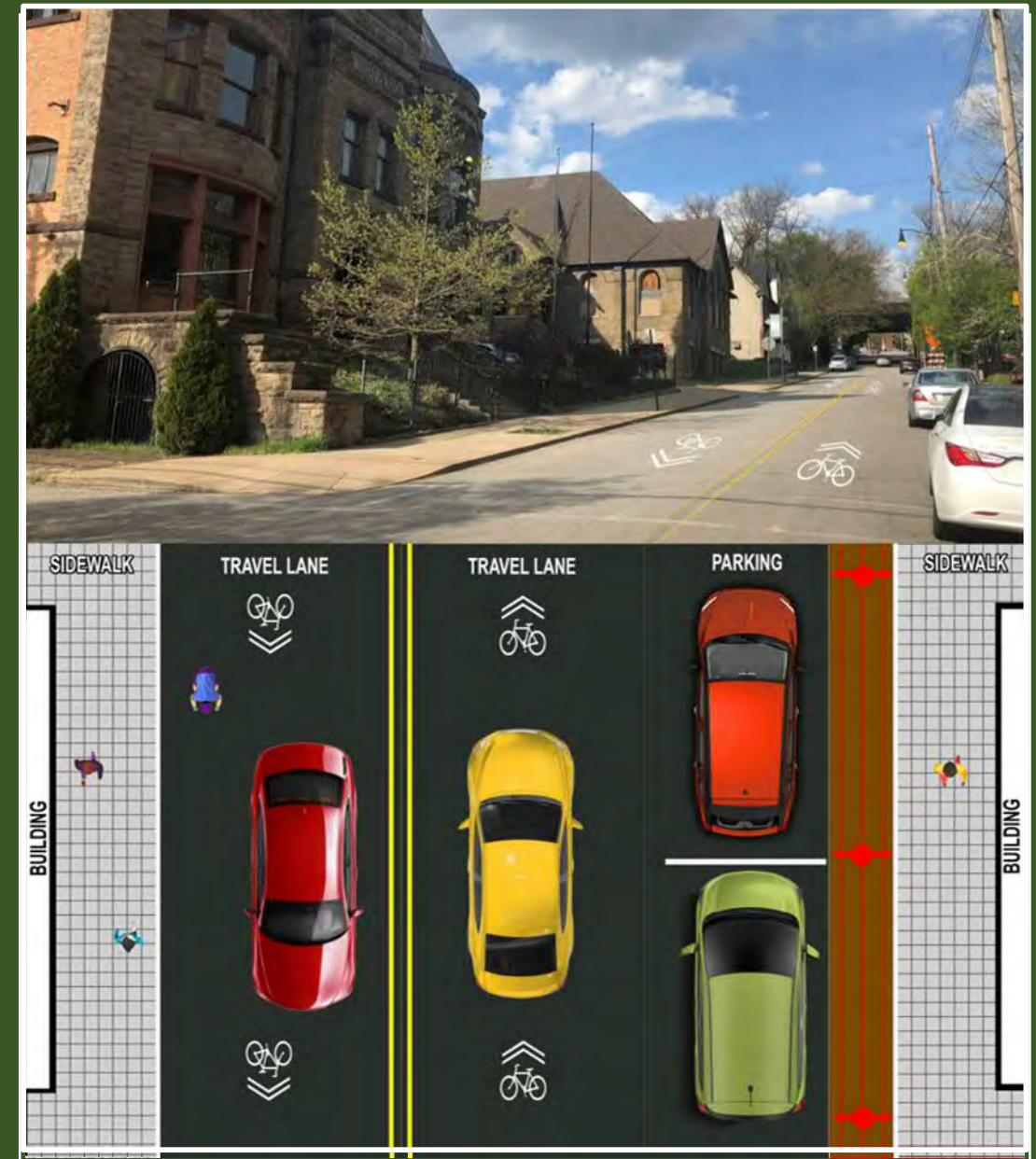
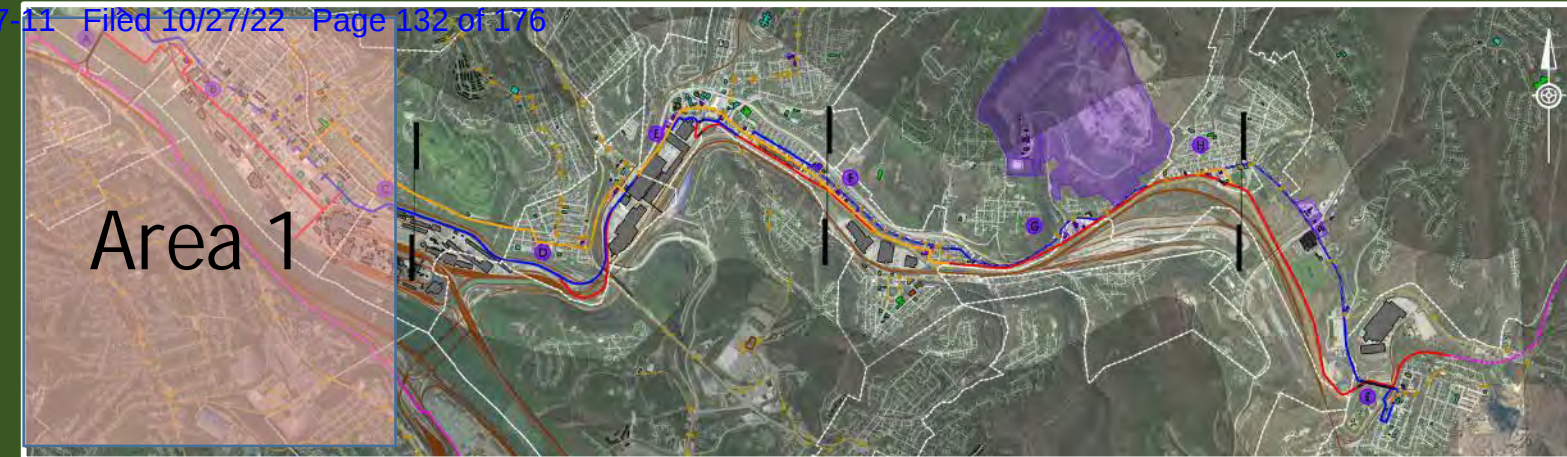
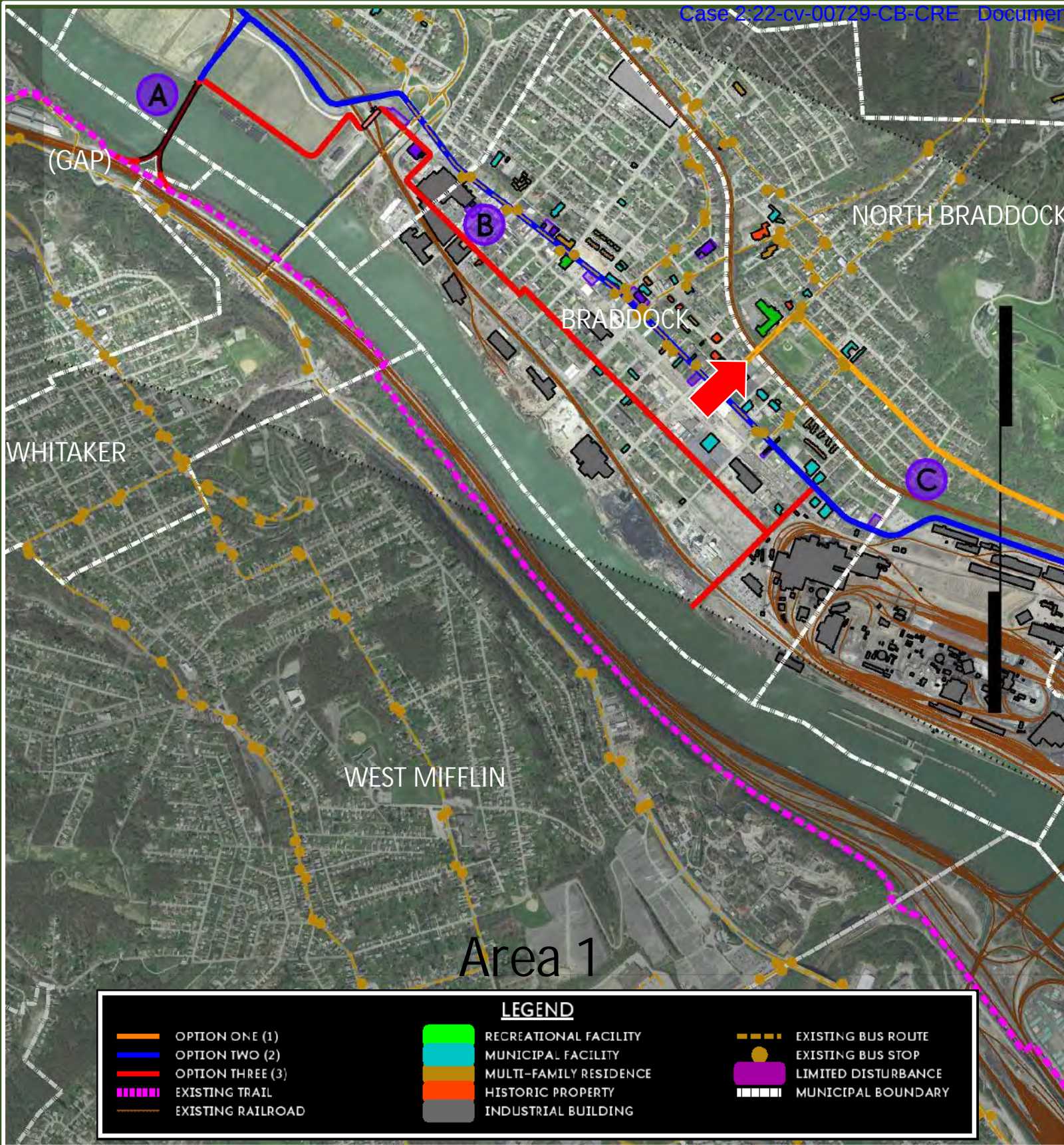
Braddock Avenue Braddock



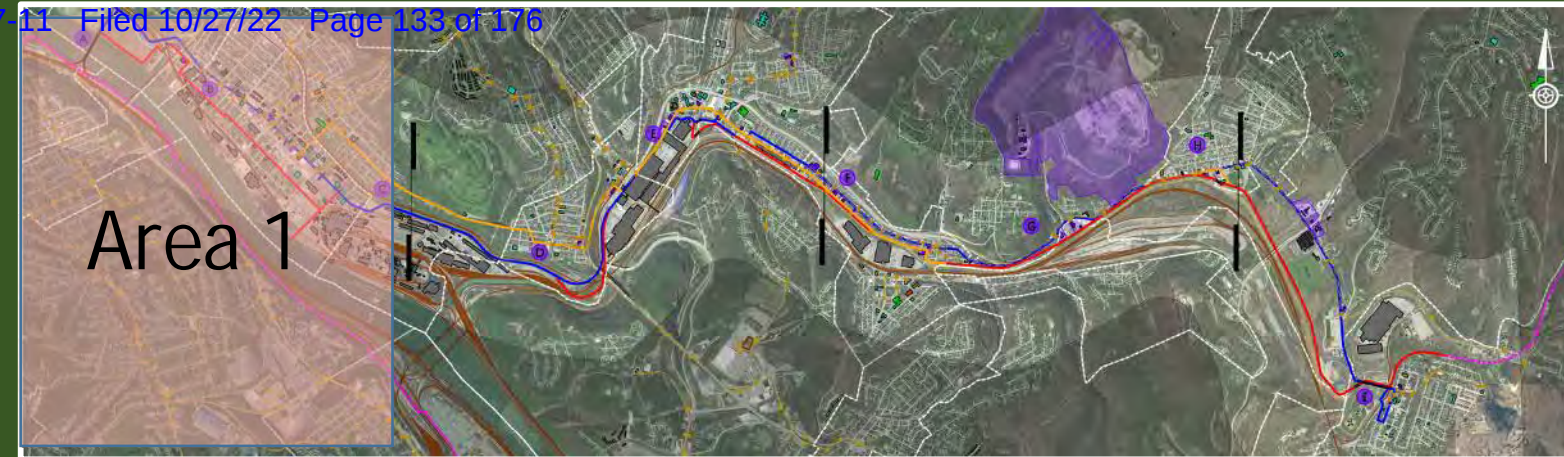
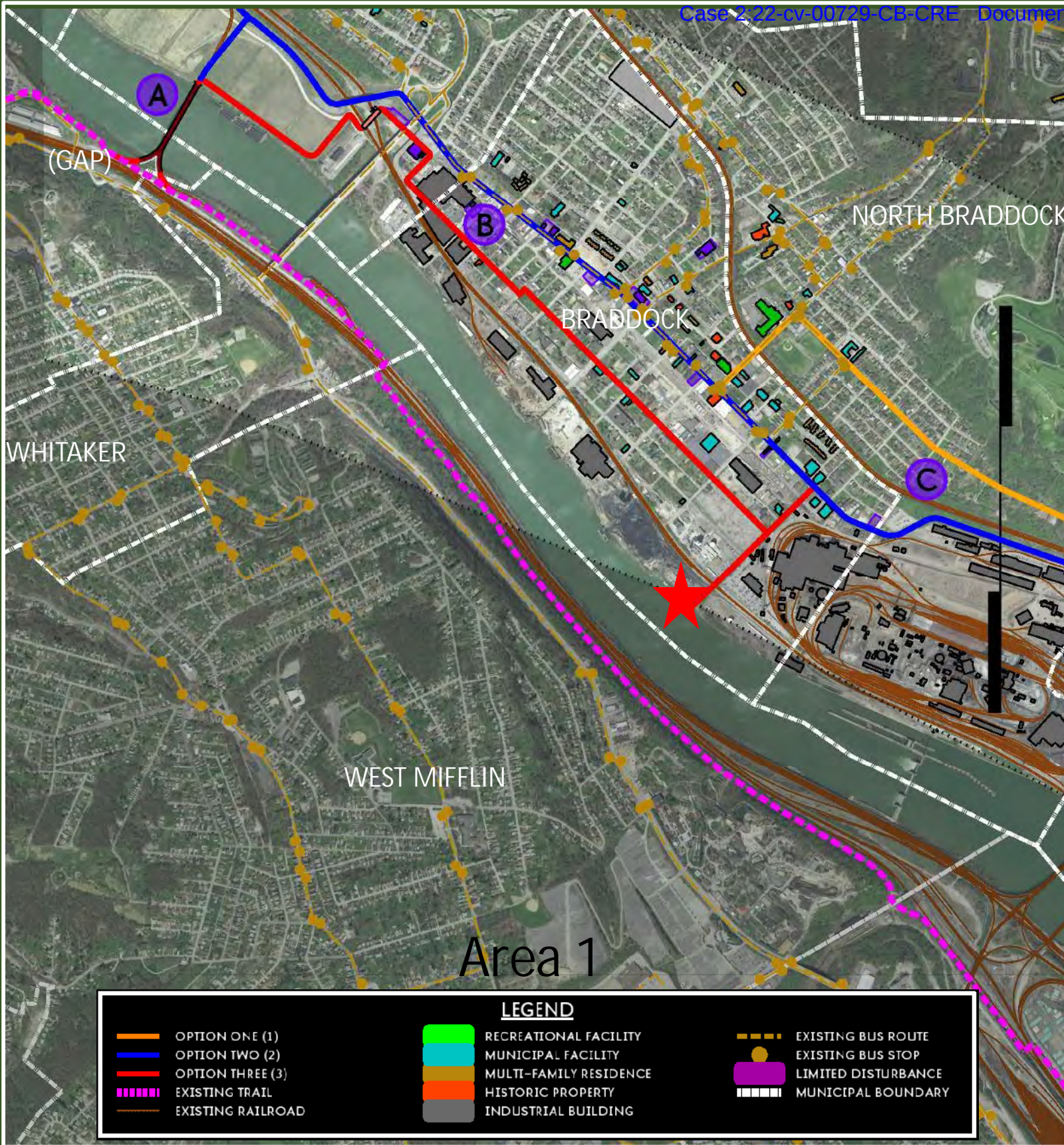
Talbot Avenue
Braddock



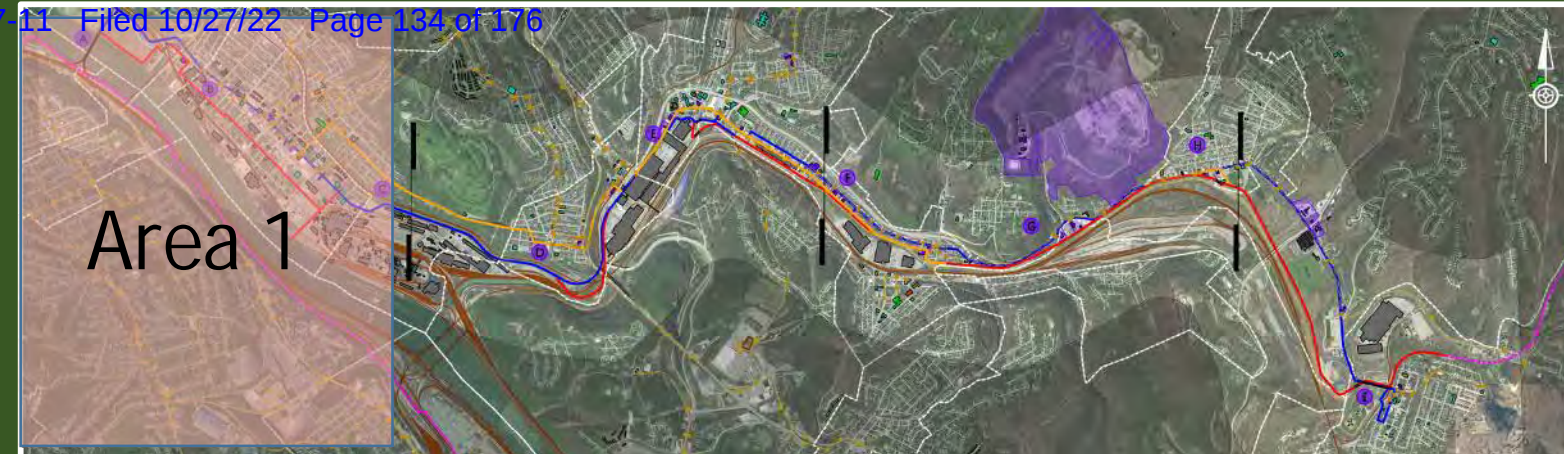
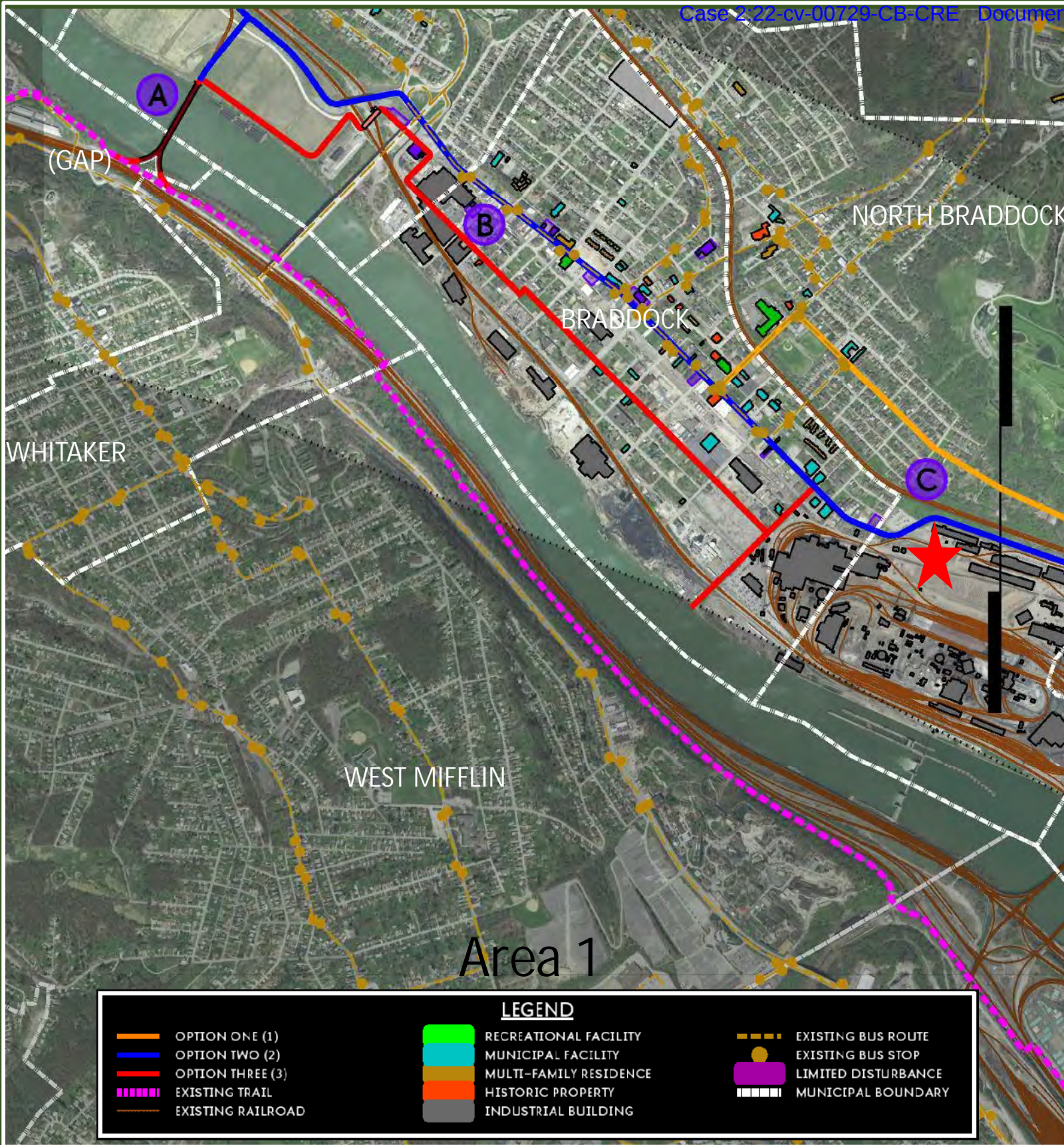
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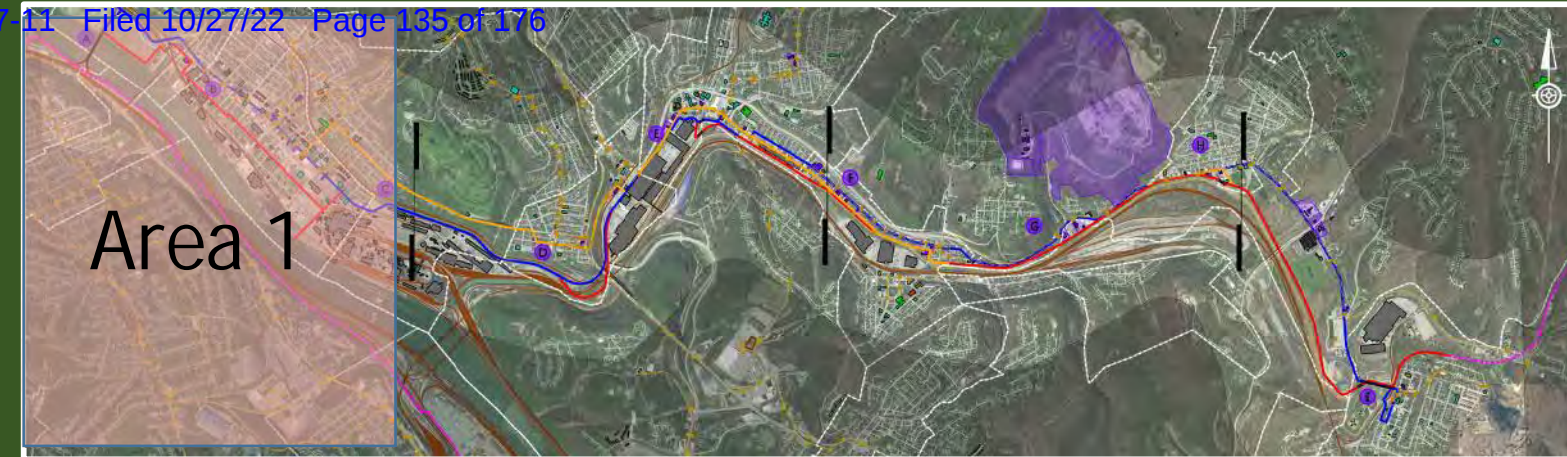
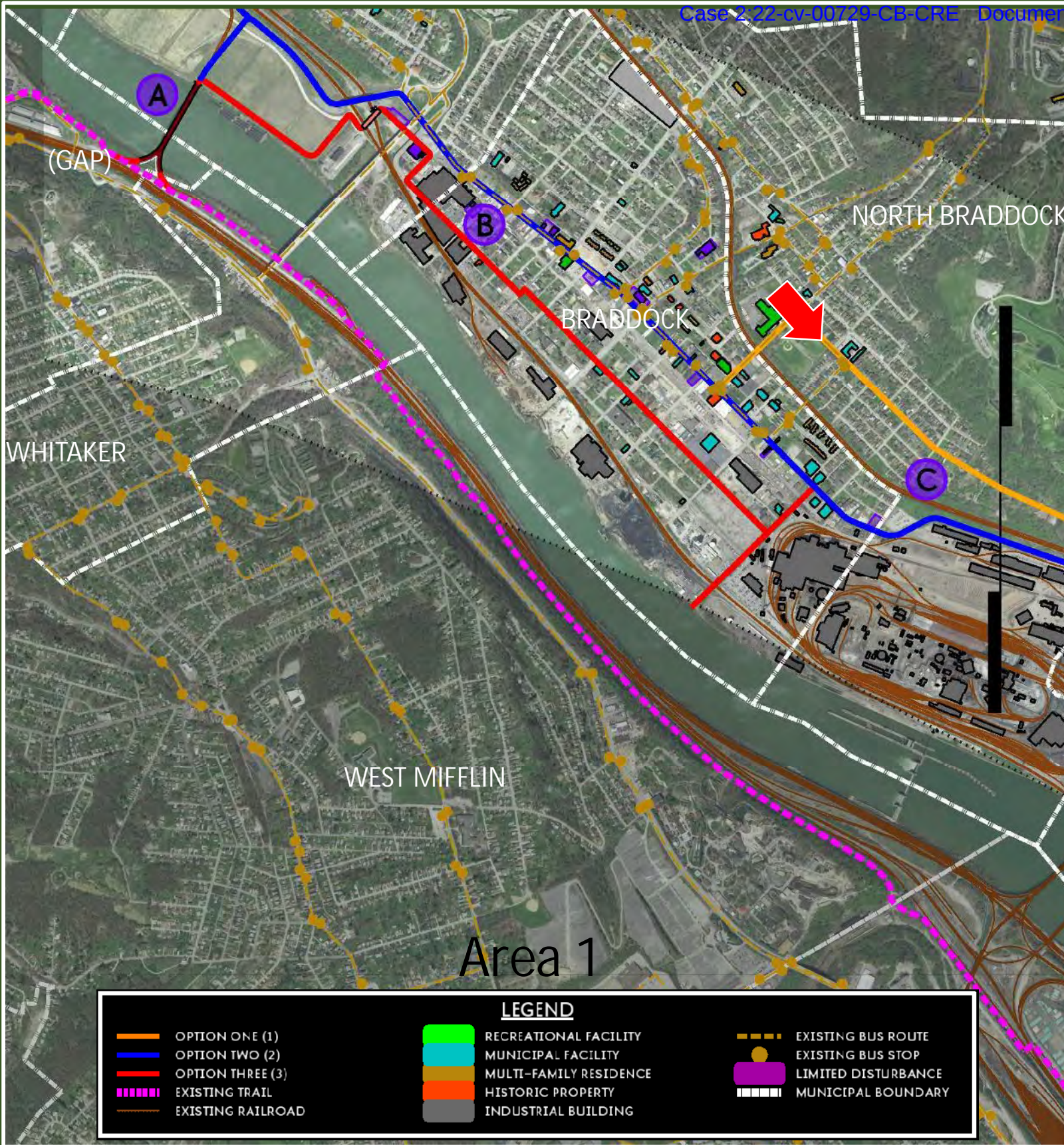
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Braddock



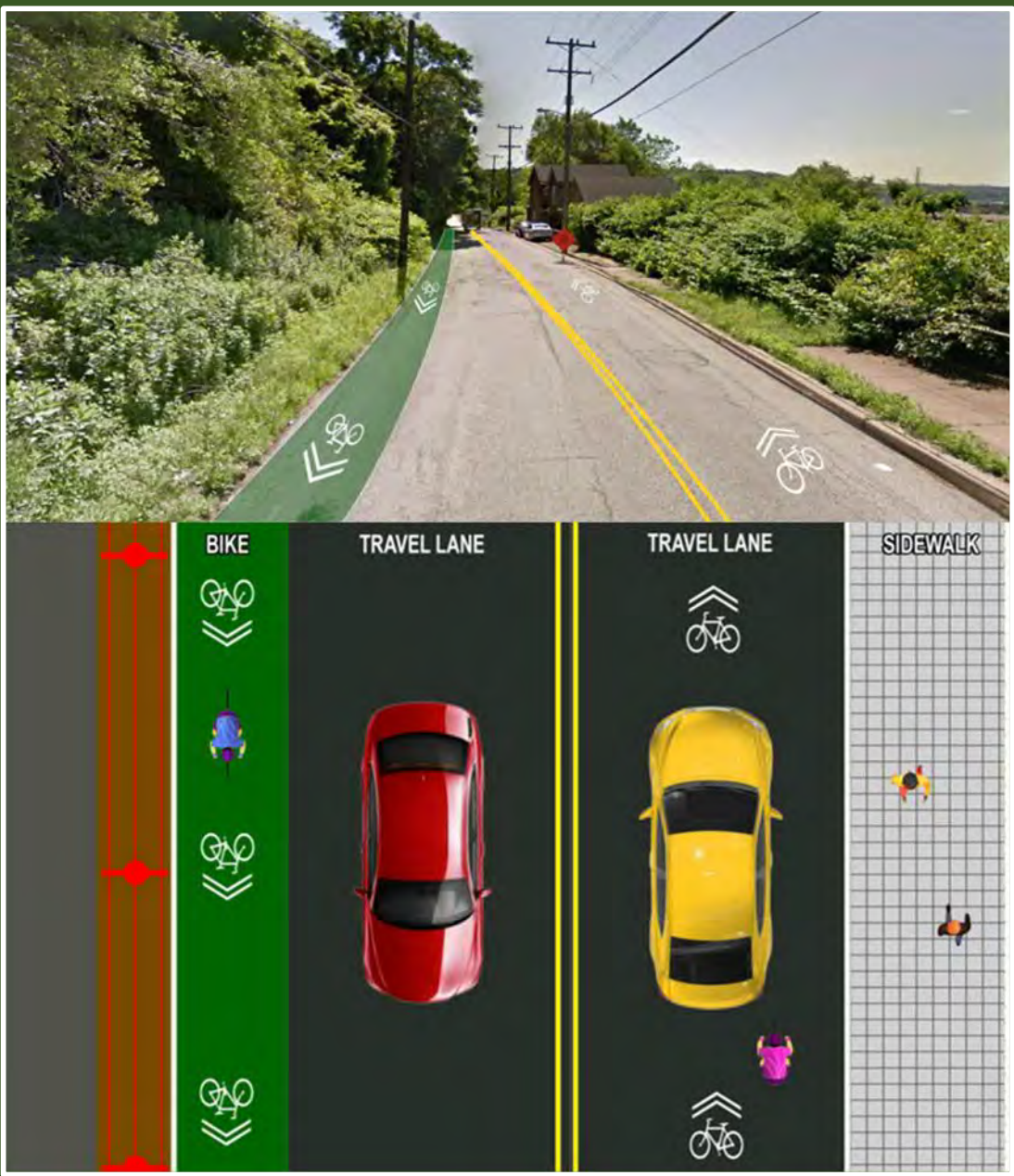
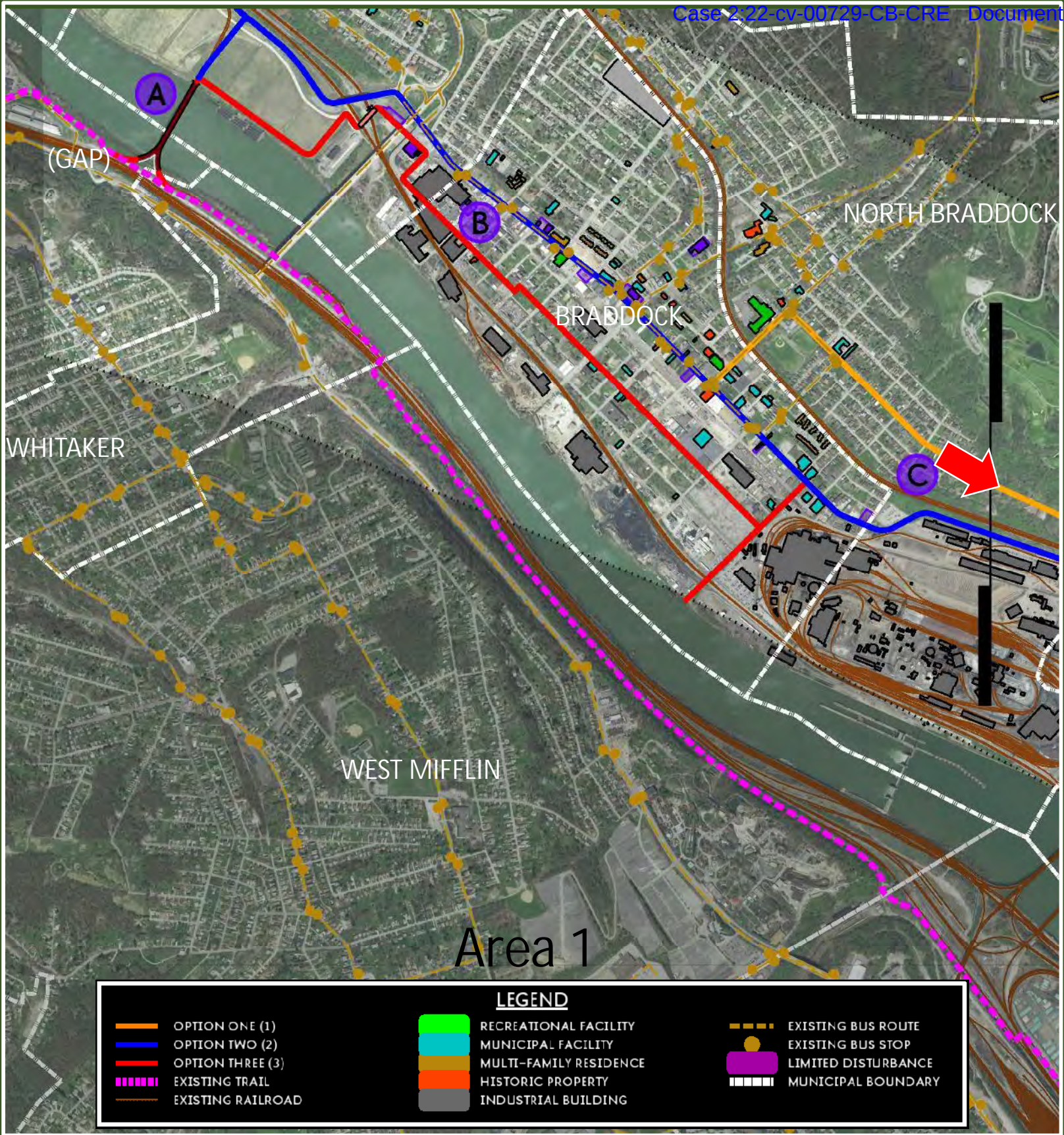
Eleventh (11th) Street Boat Launch
Braddock



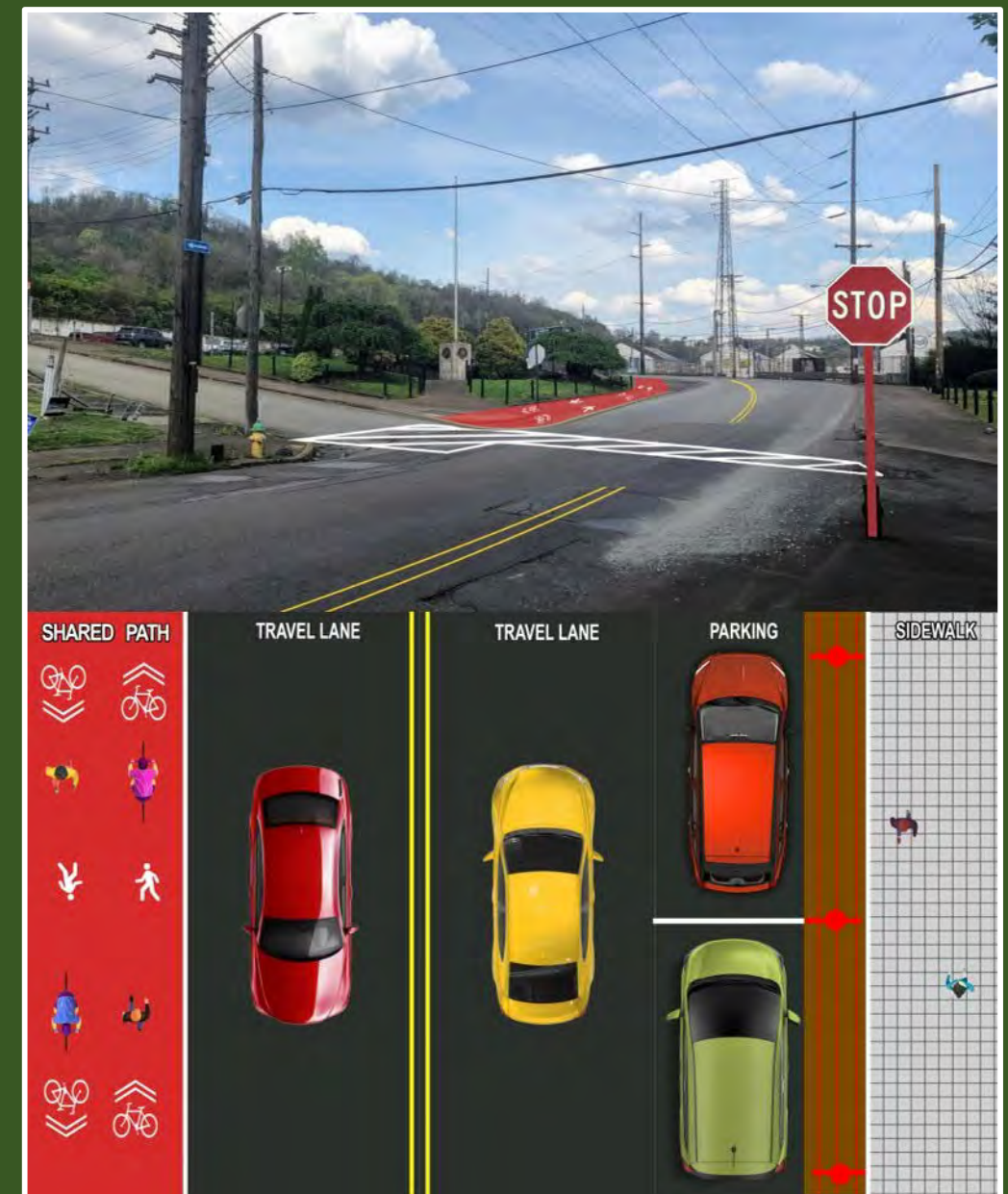
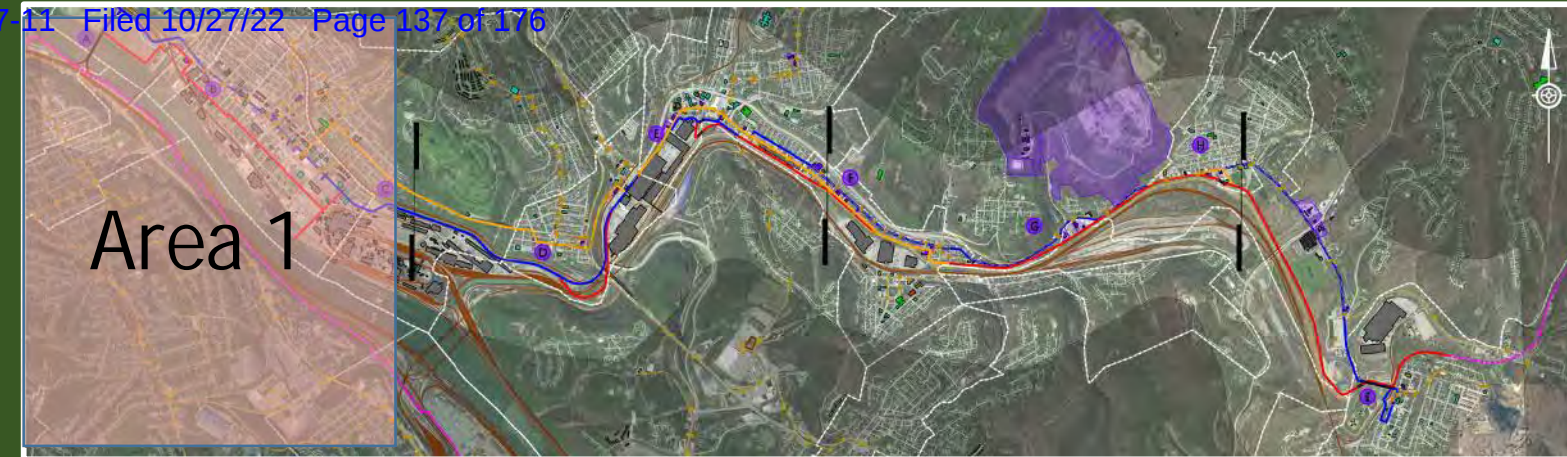
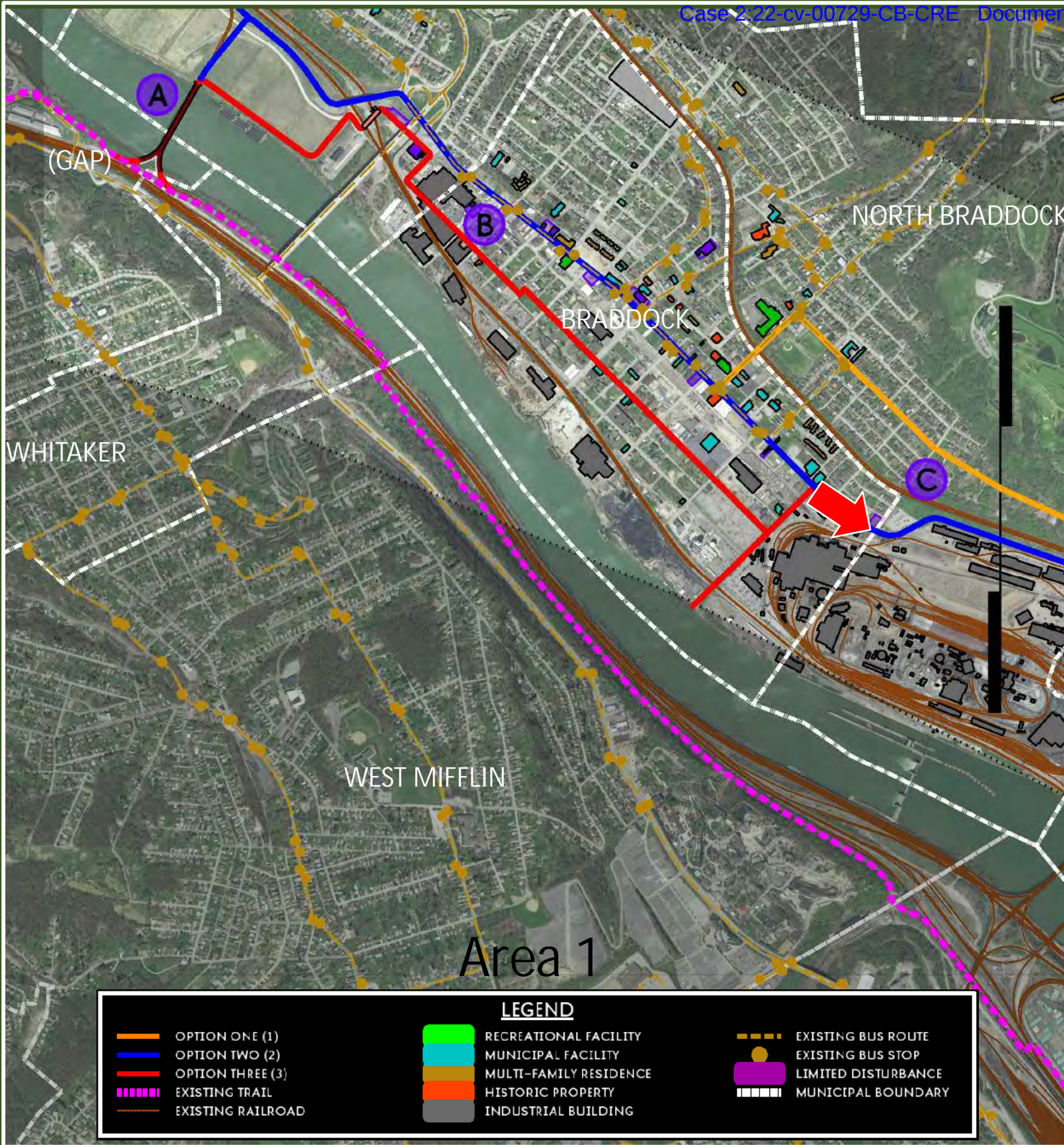
Edgar Thompson Works
North Braddock



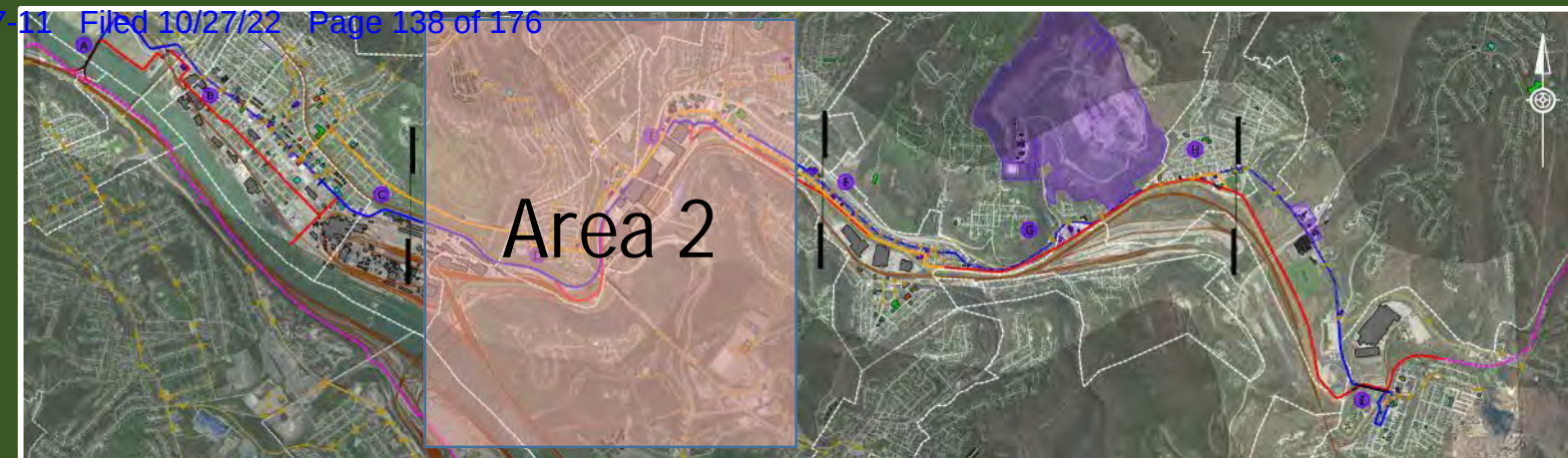
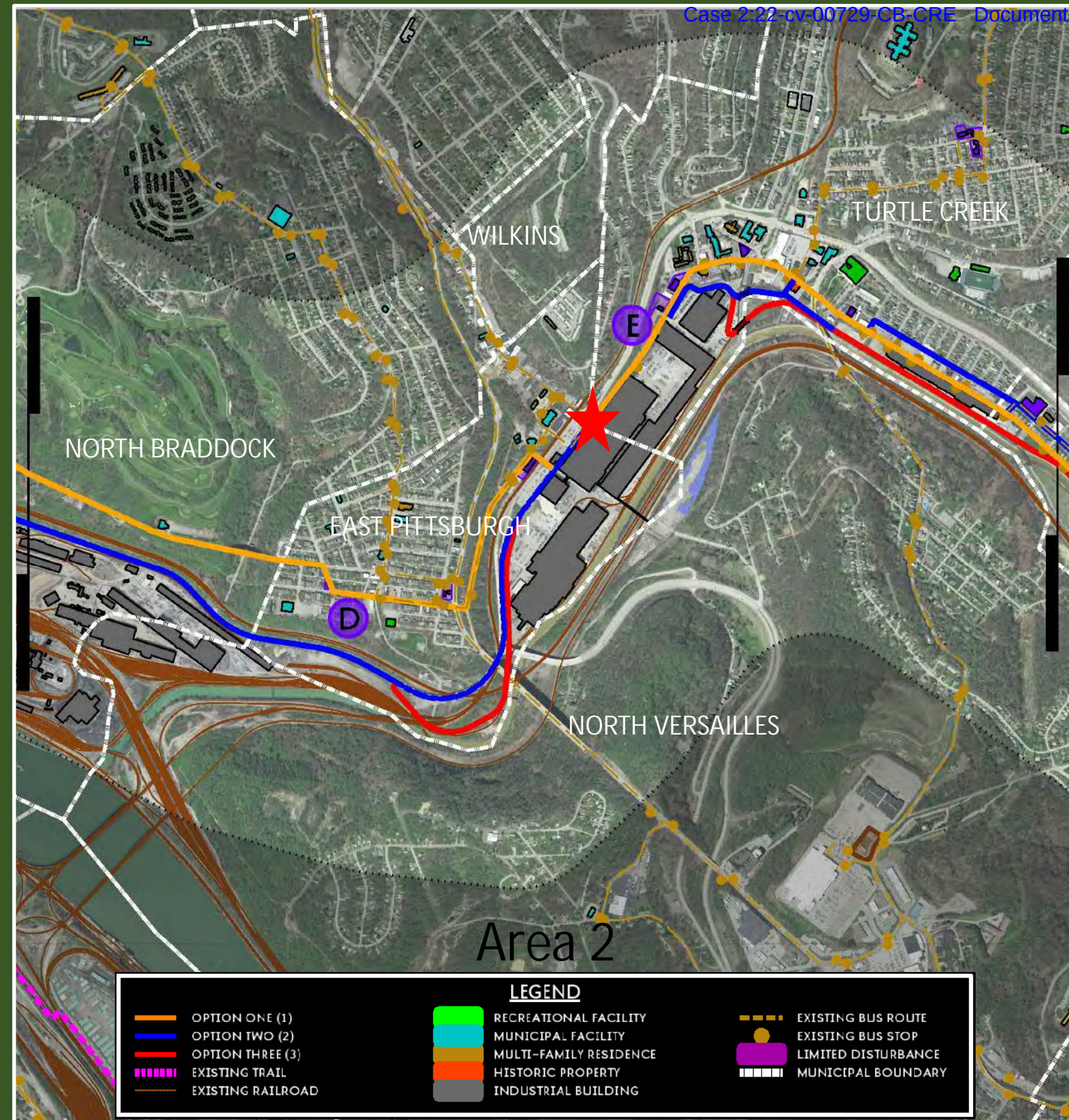
Bell Avenue
North Braddock



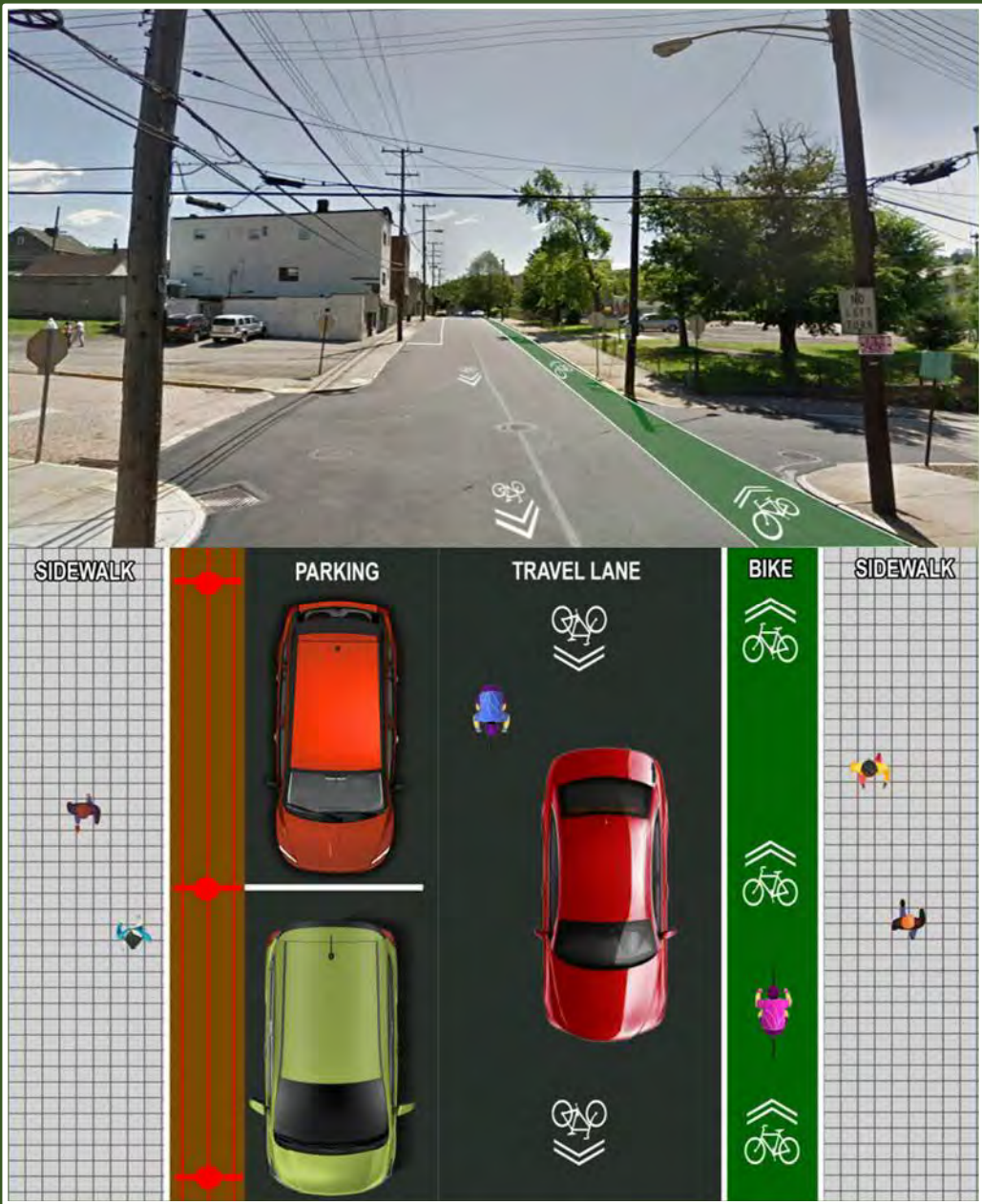
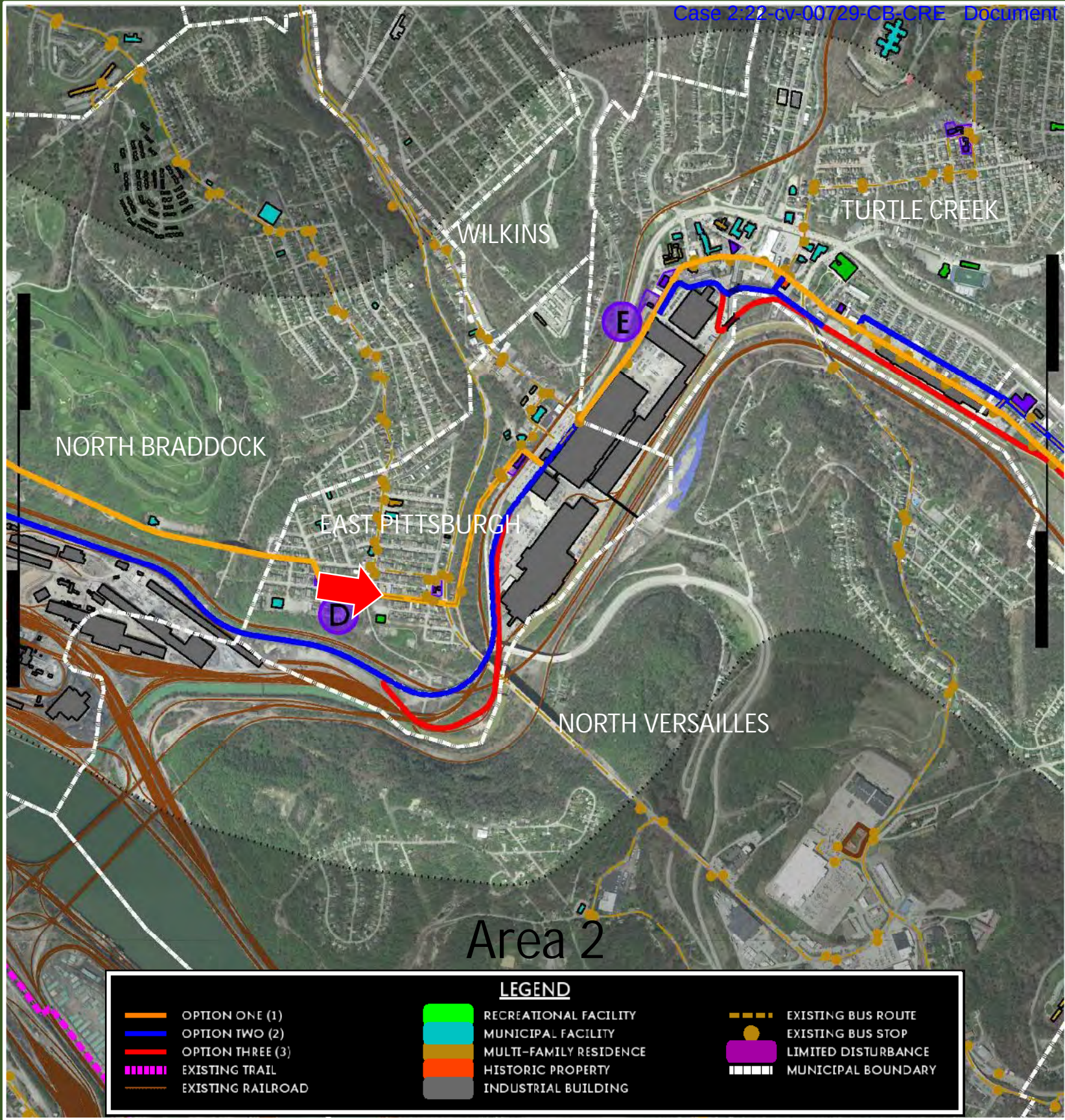
Jones Avenue
North Braddock



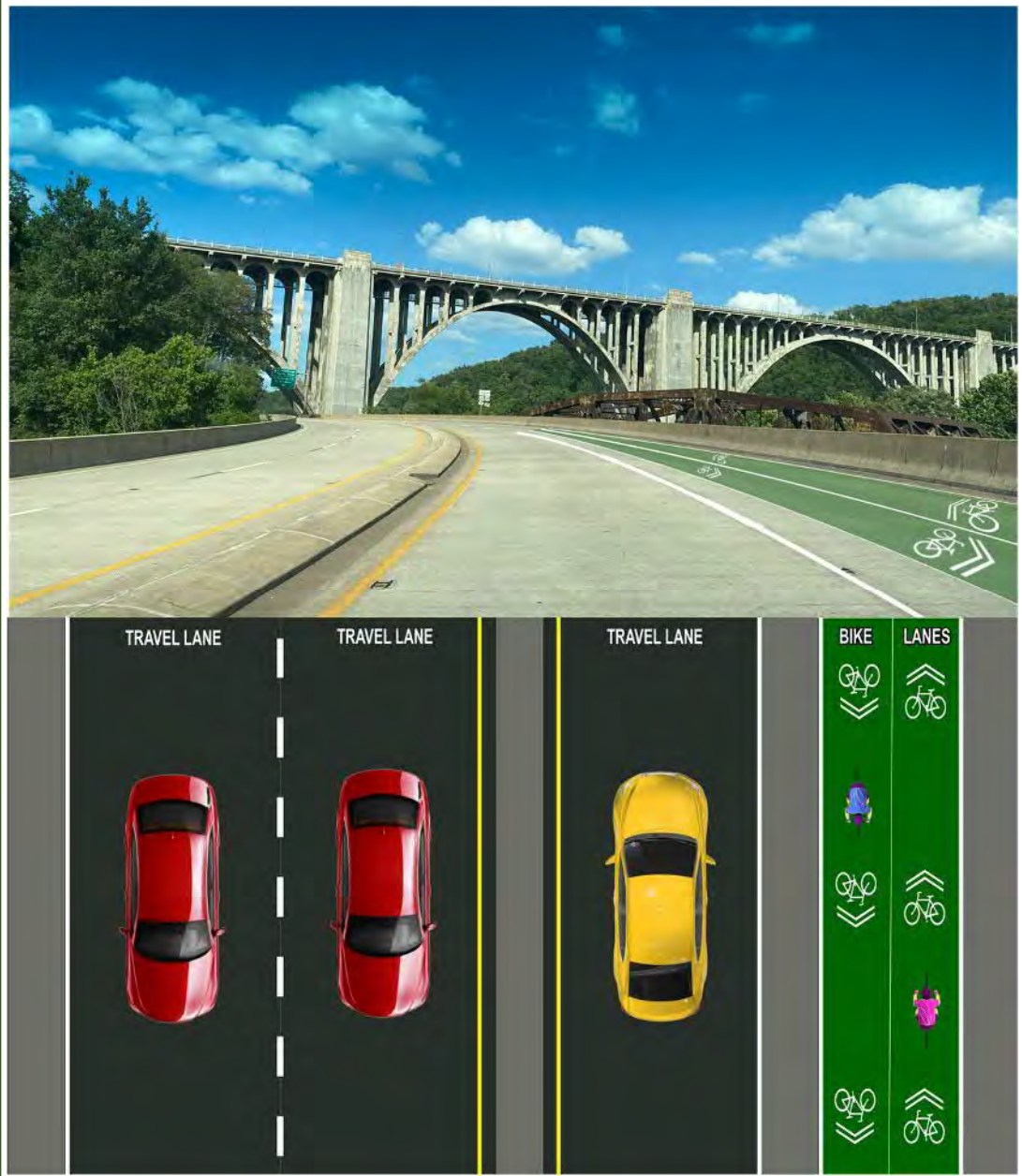
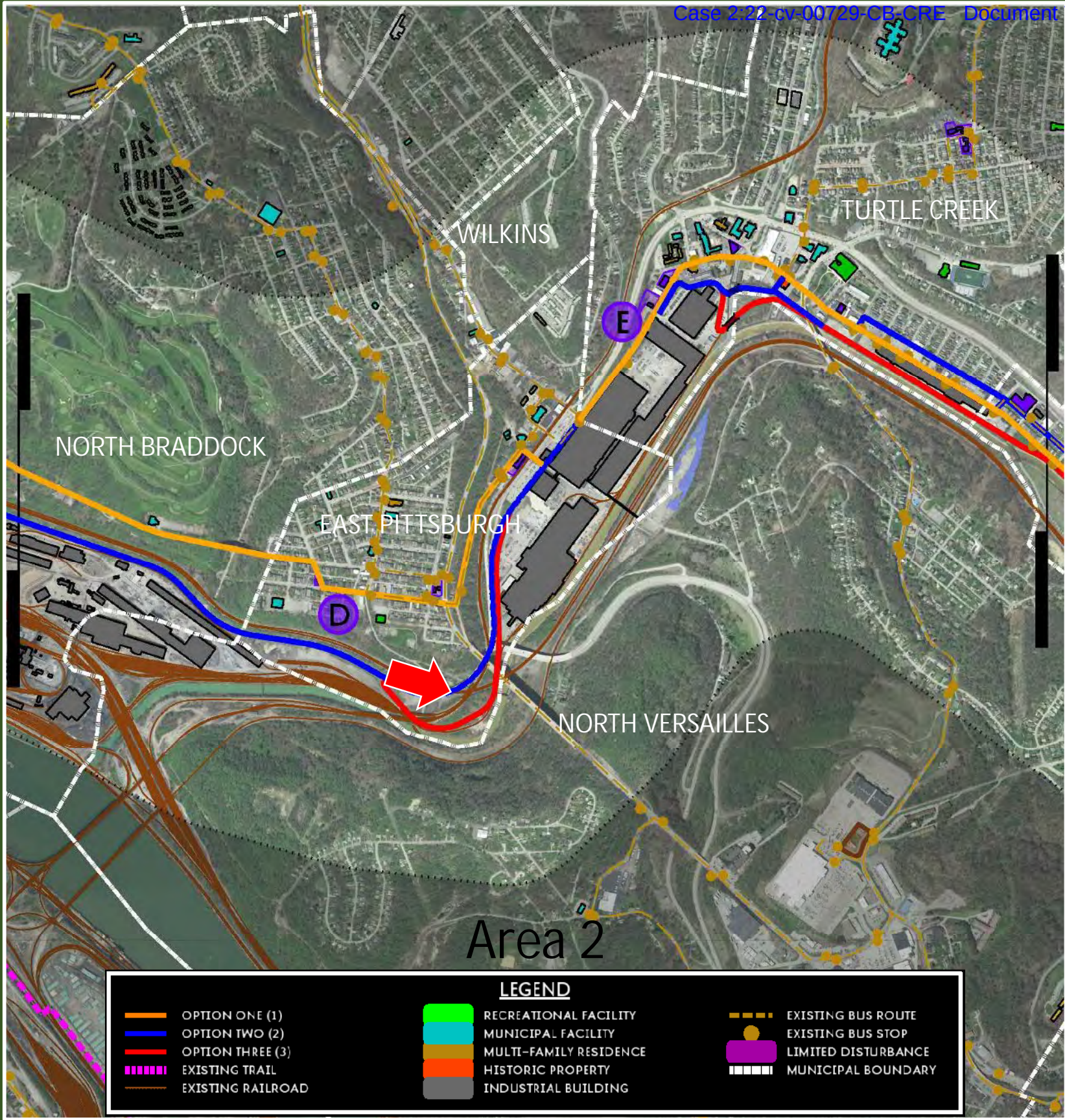
Braddock Avenue North Braddock



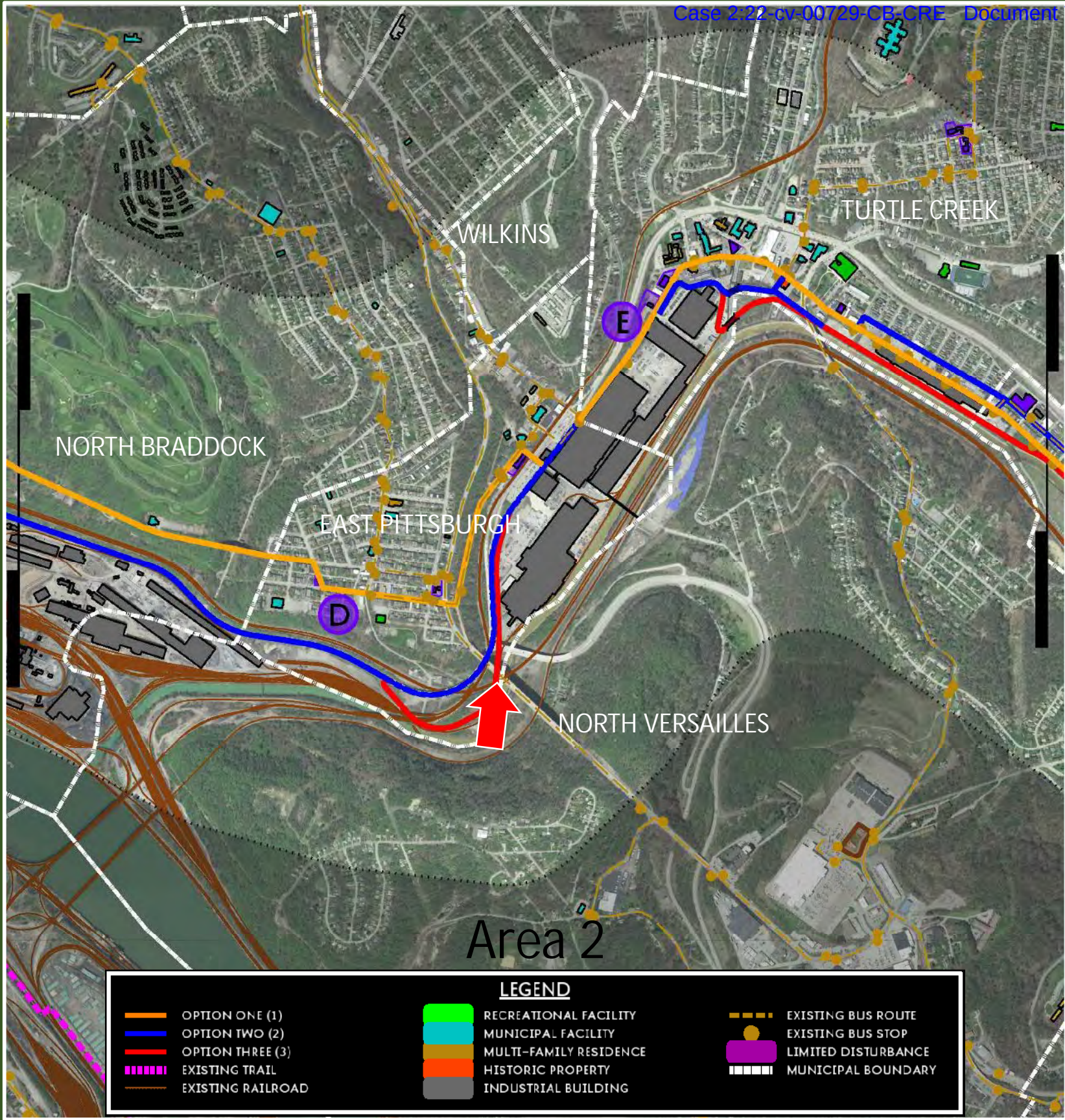
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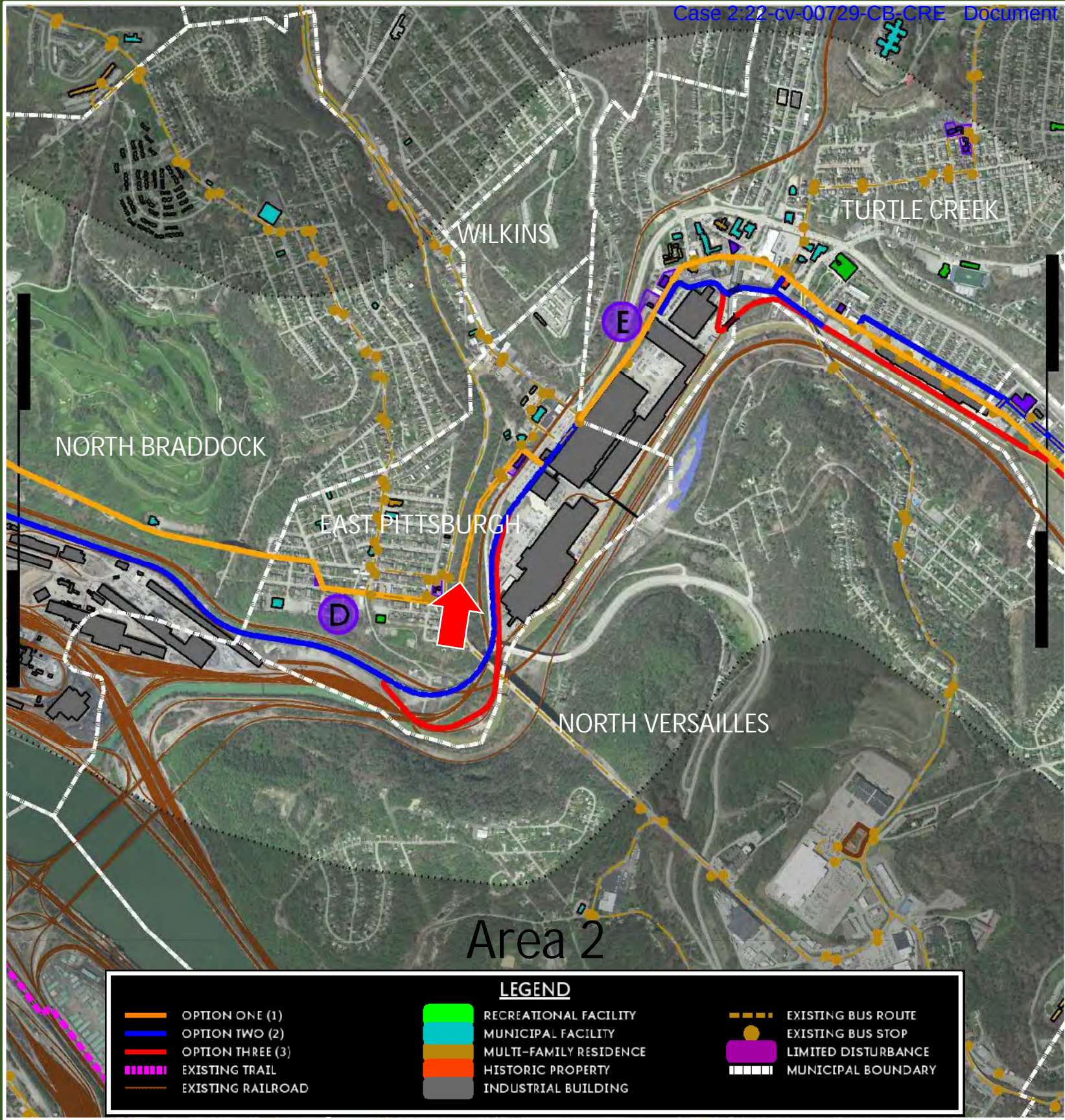
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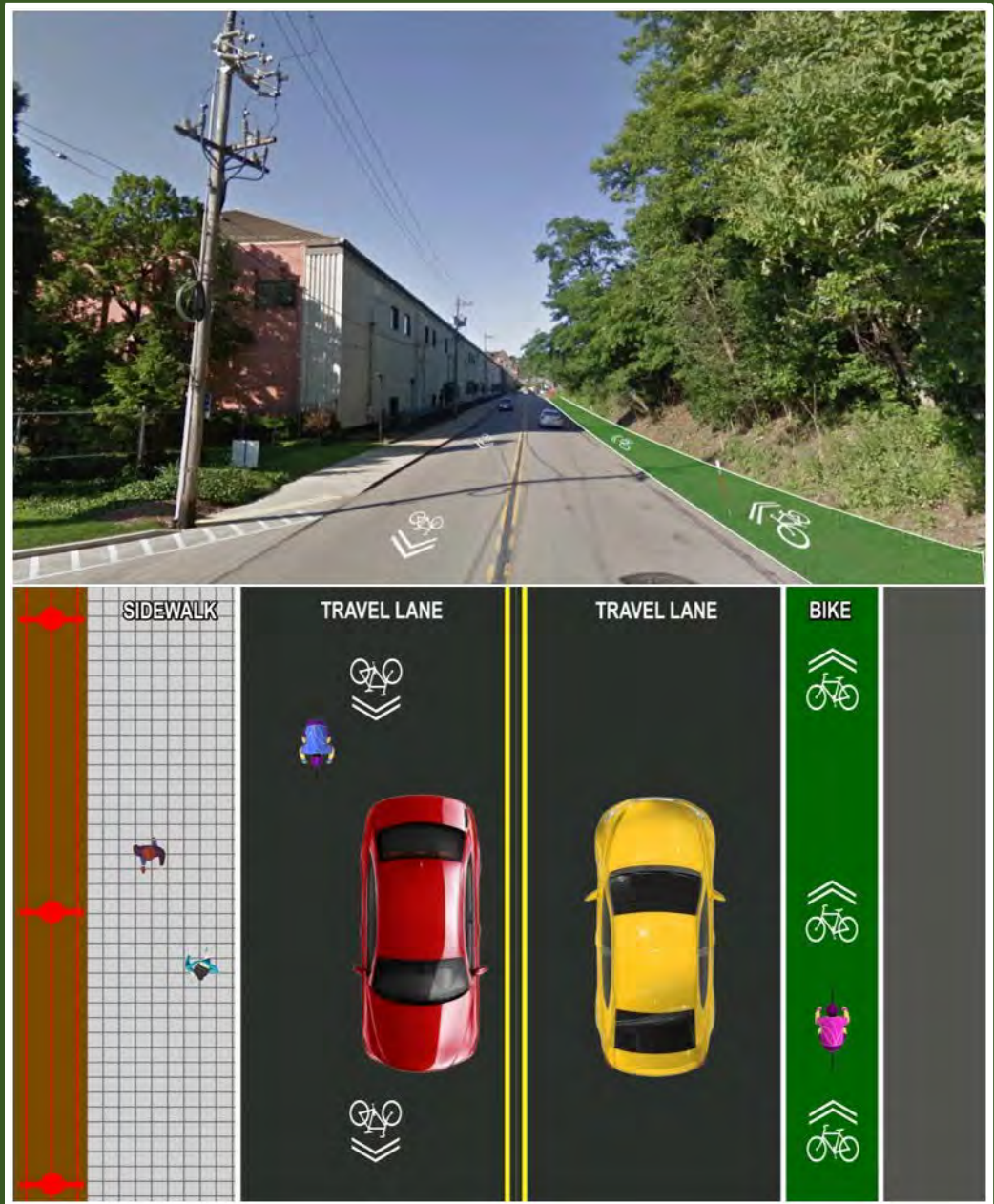
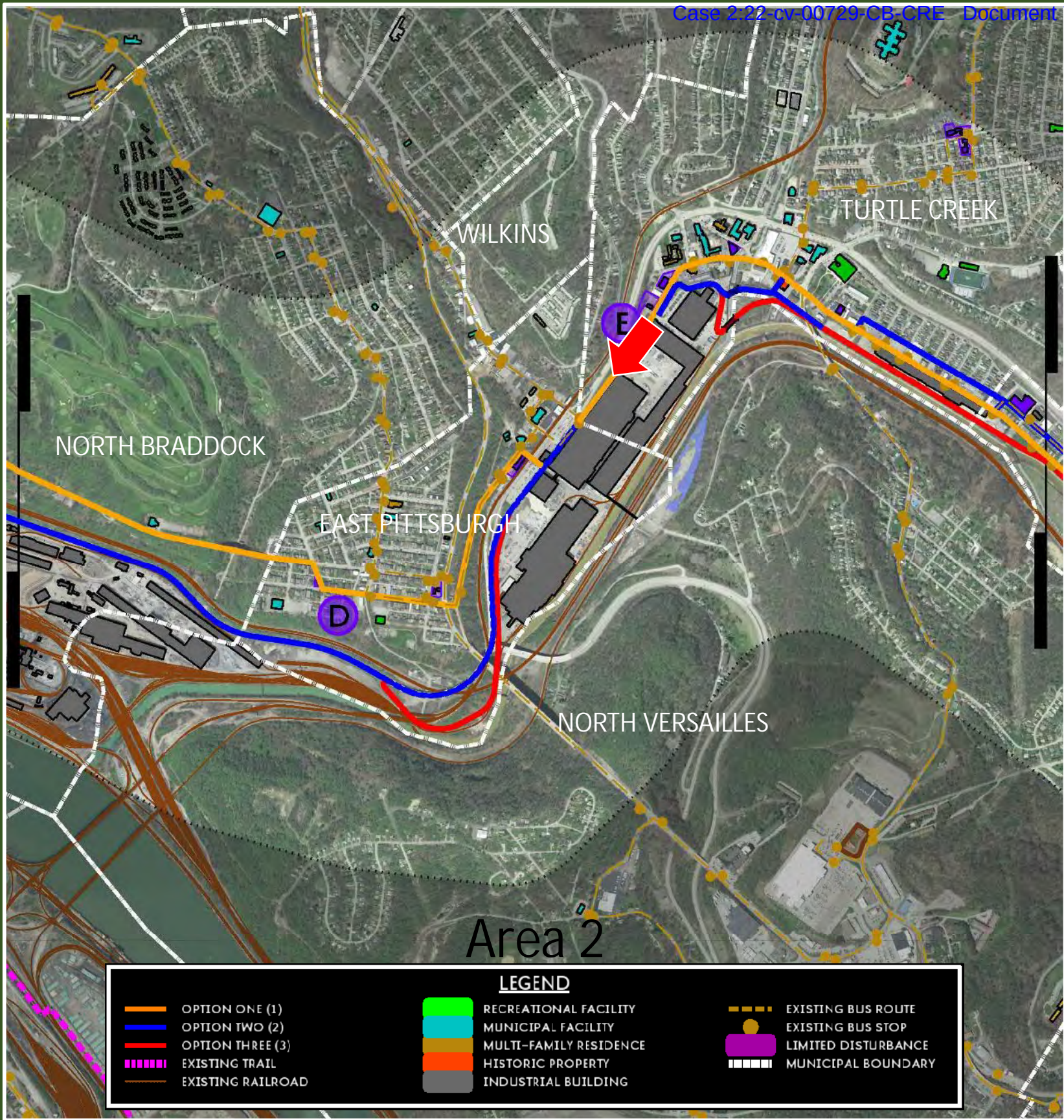
SR 2183 Flyover
East Pittsburgh



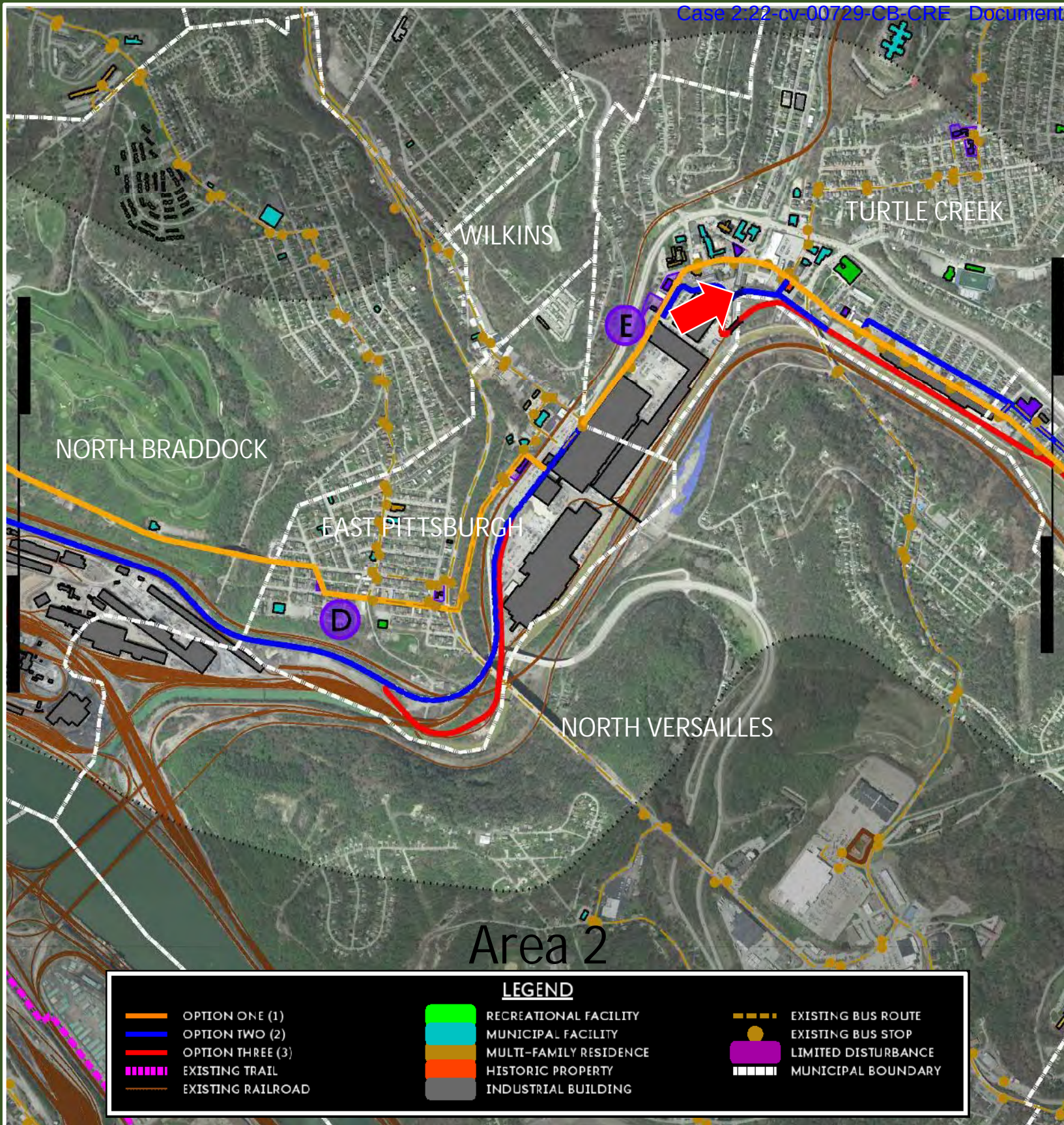
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East Pittsburgh



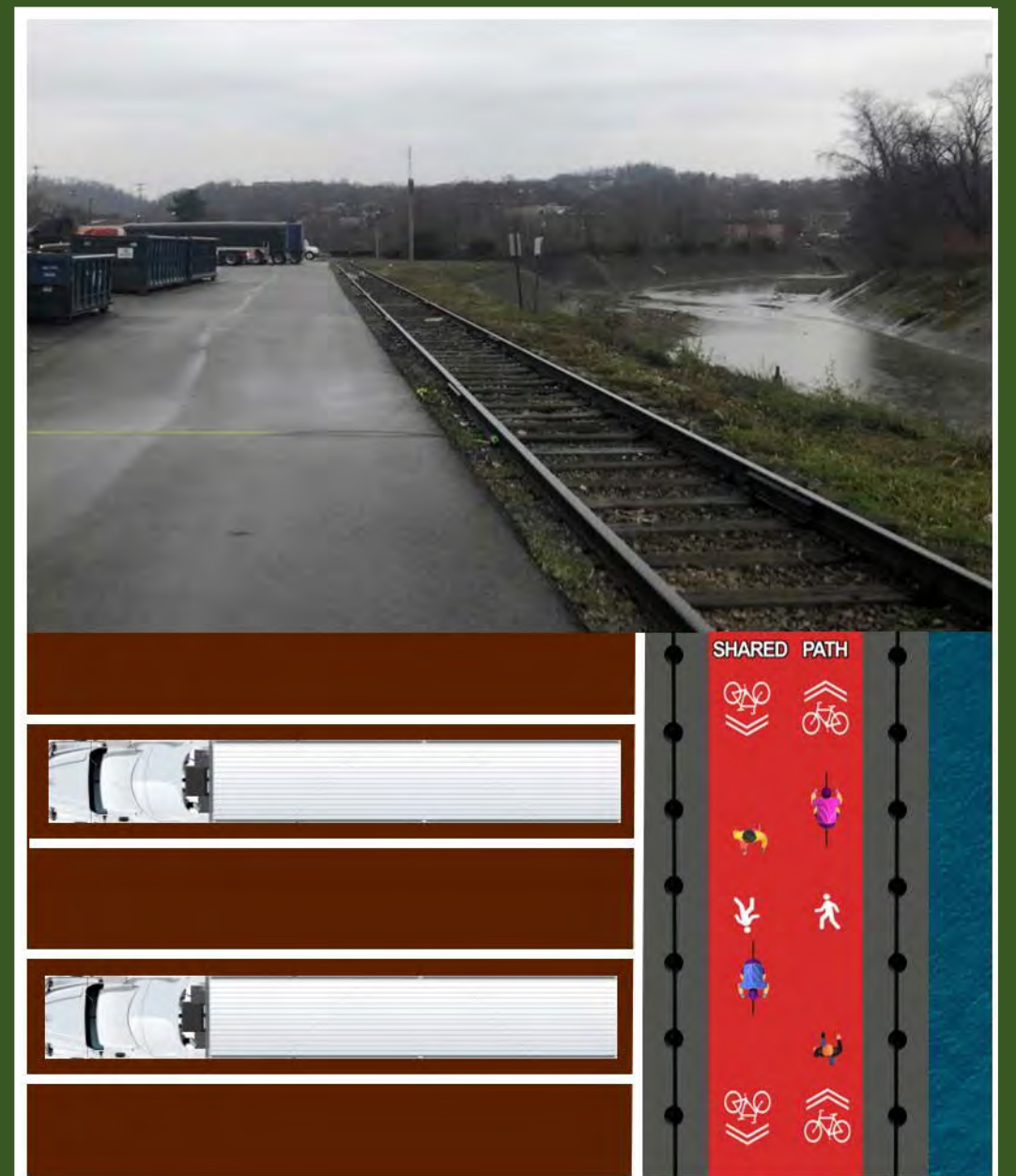
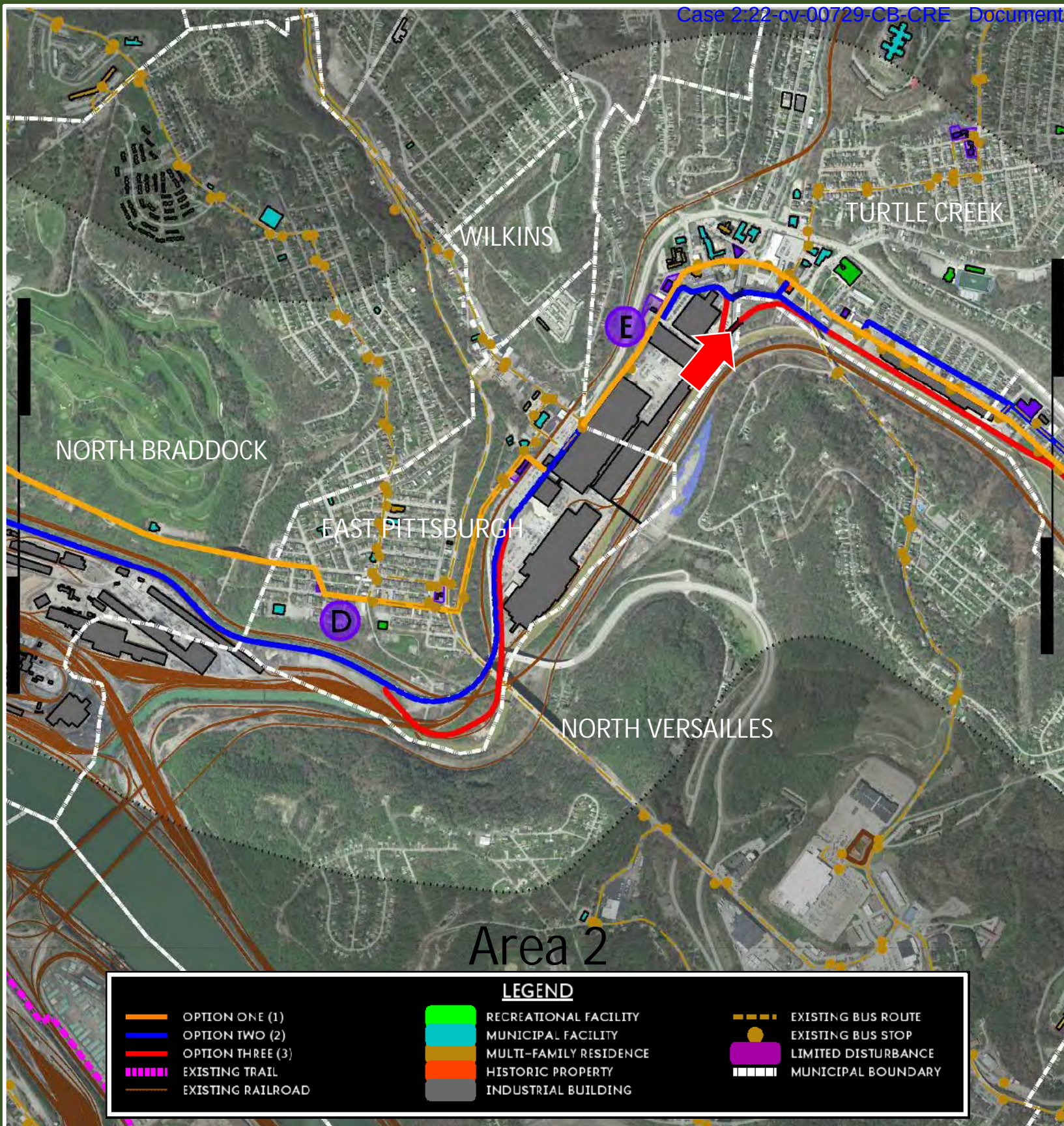
Linden Avenue
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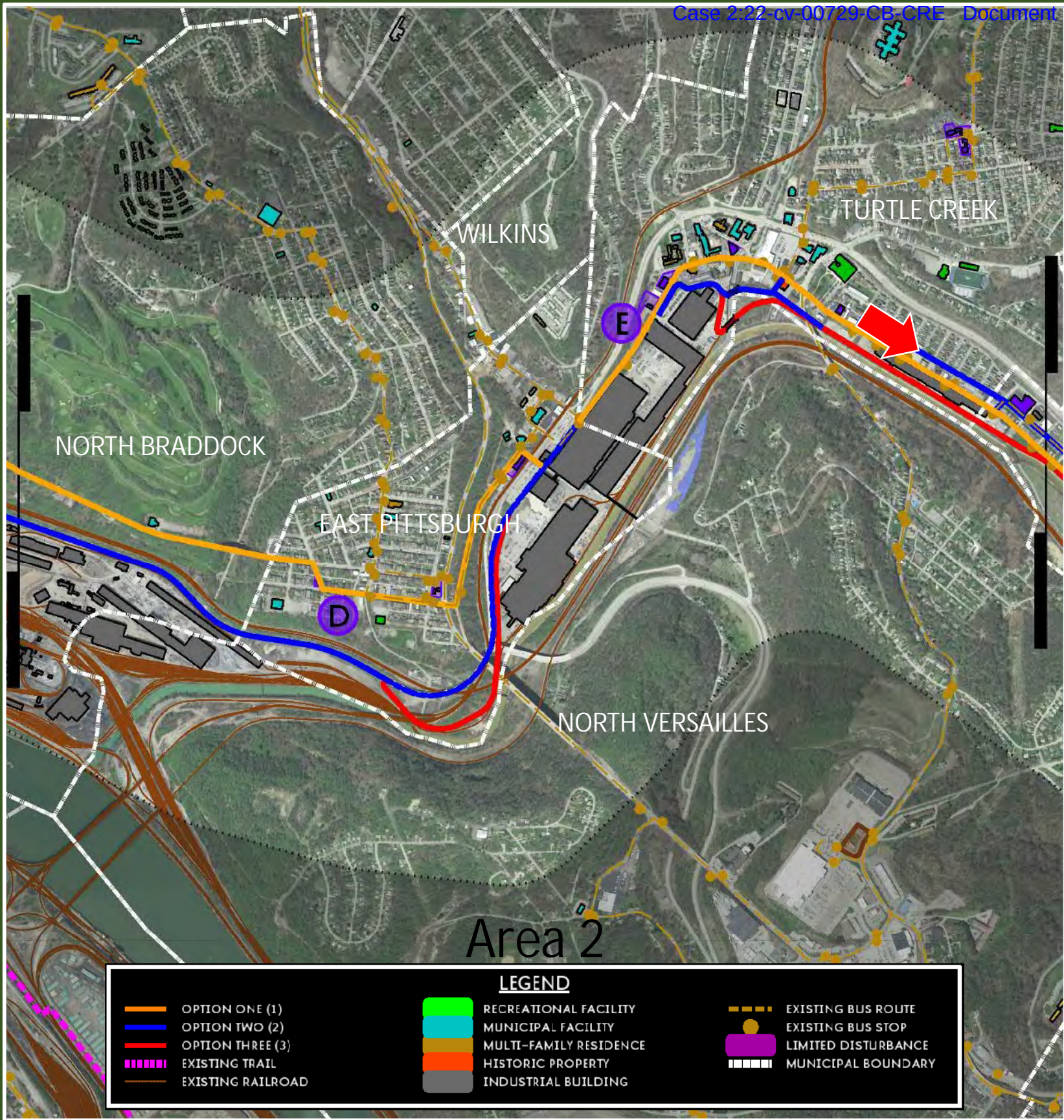
Braddock Avenue
Turtle Creek



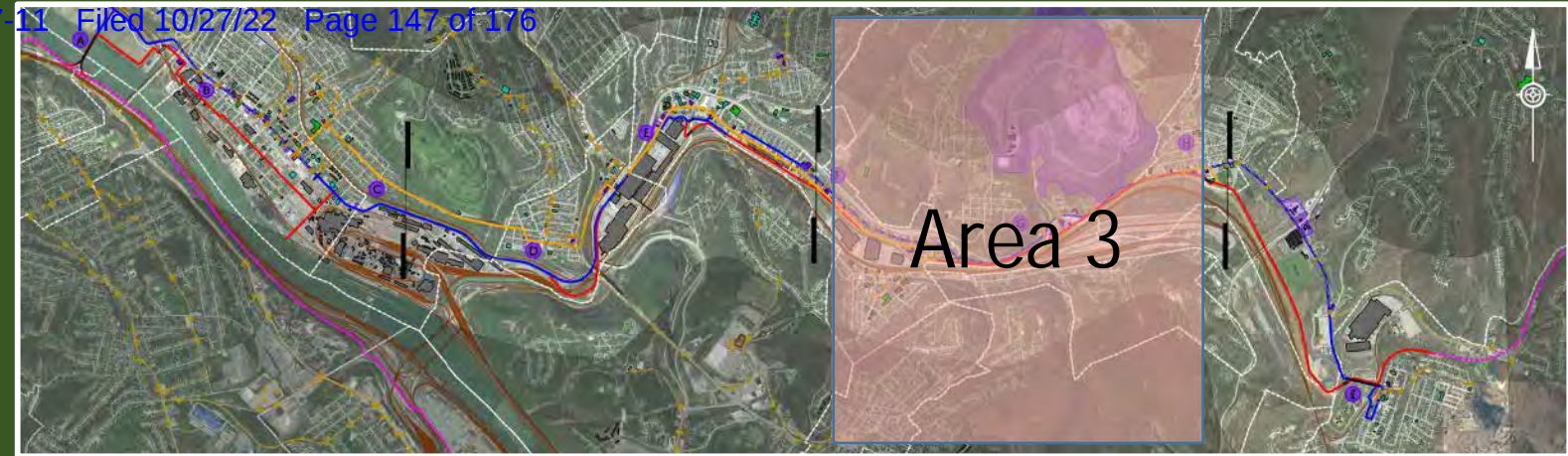
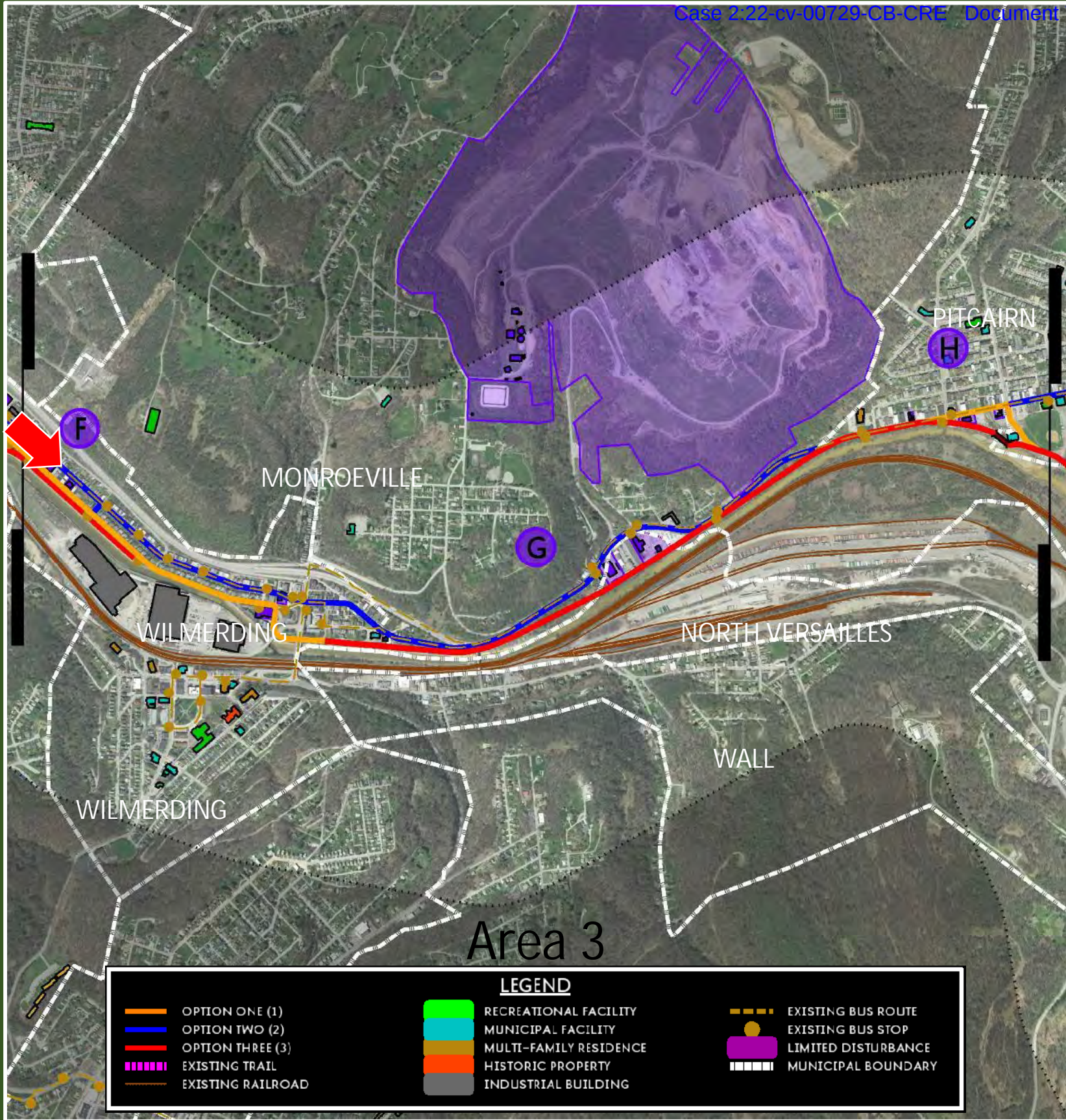
RIDC Railroad Siding
Turtle Creek



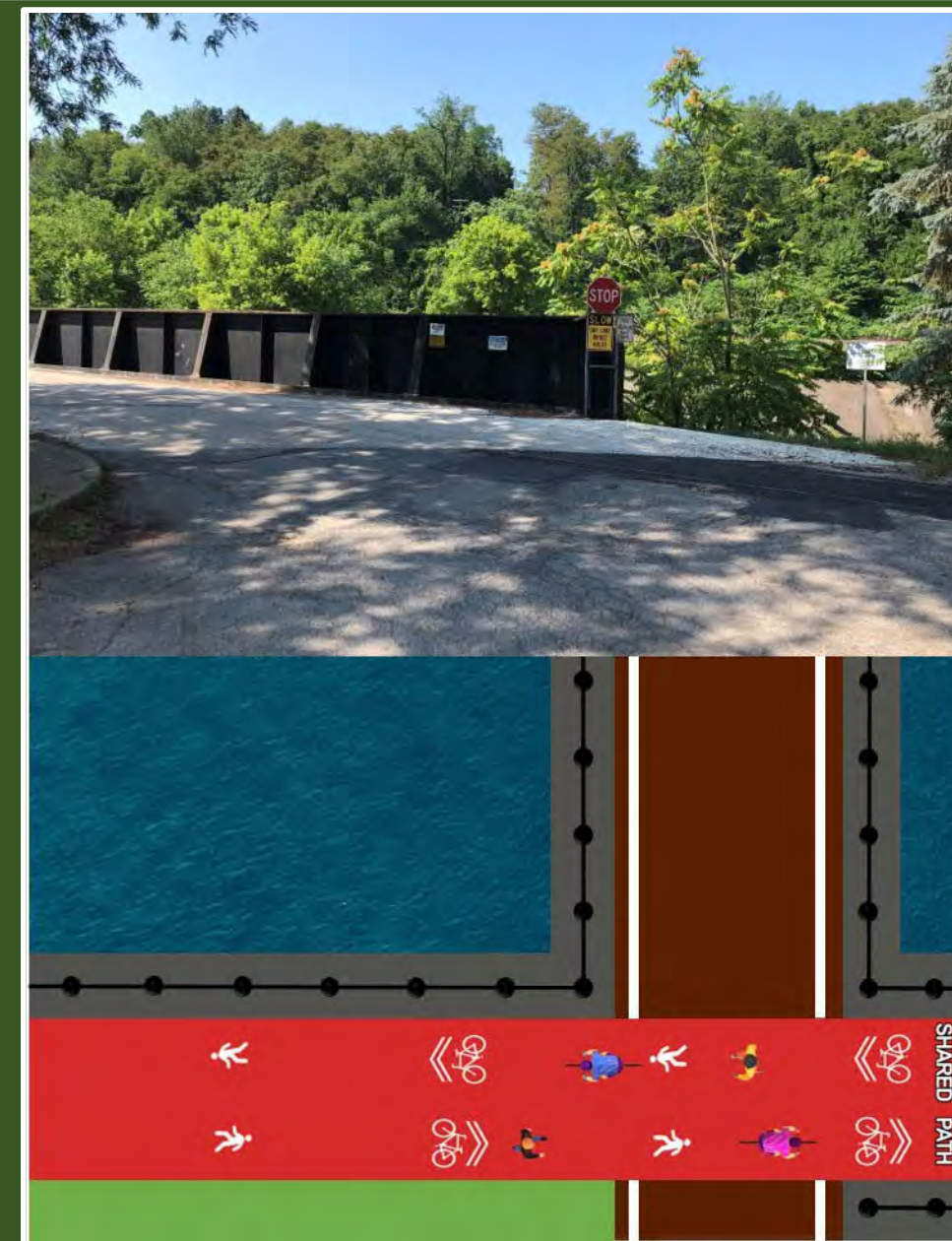
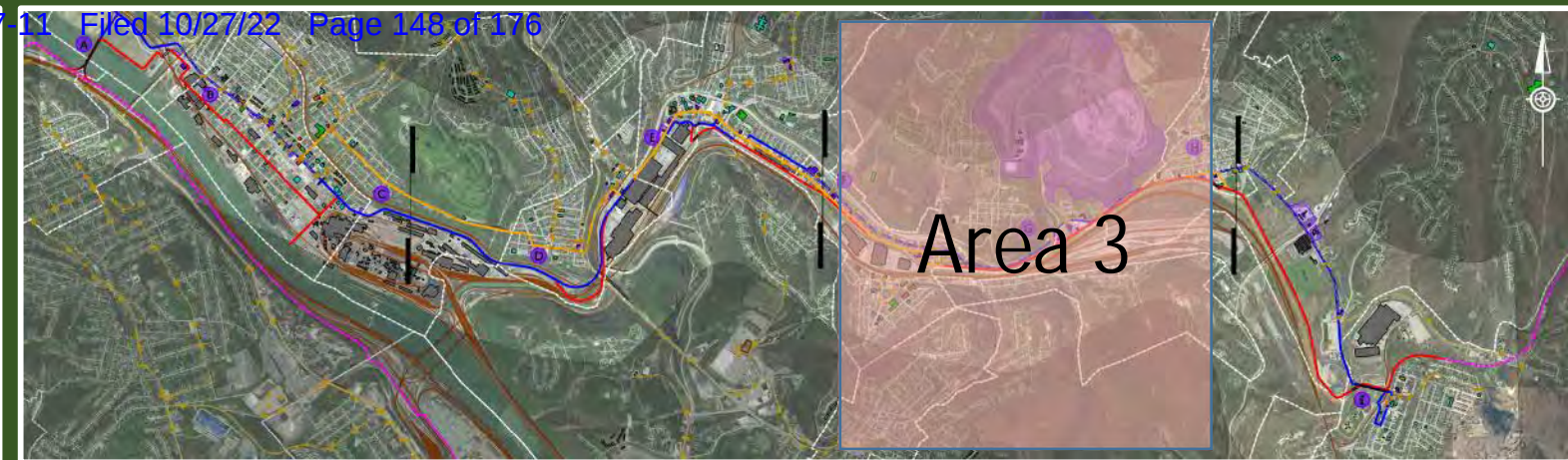
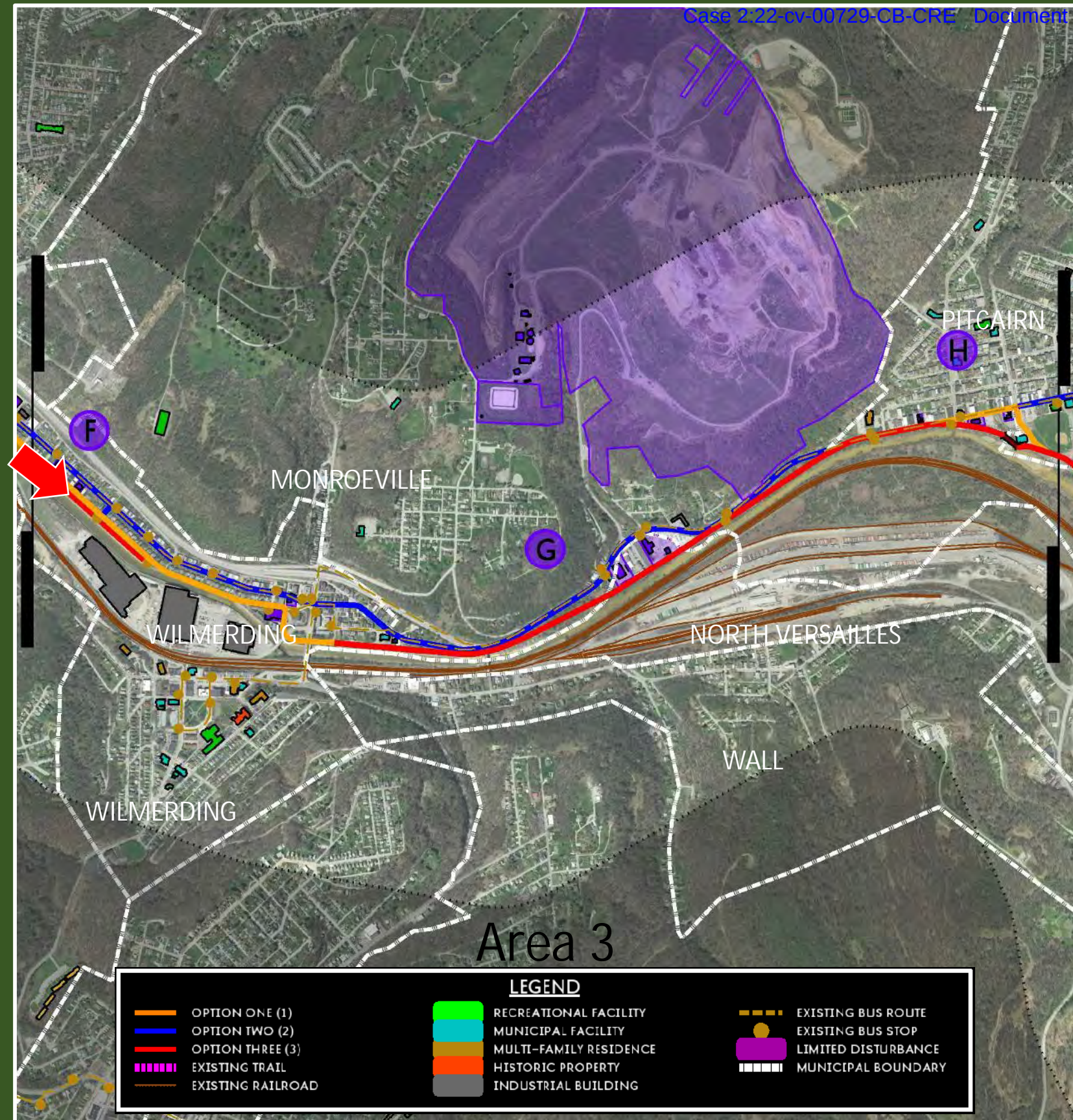
RIDC Railroad Track
Turtle Creek



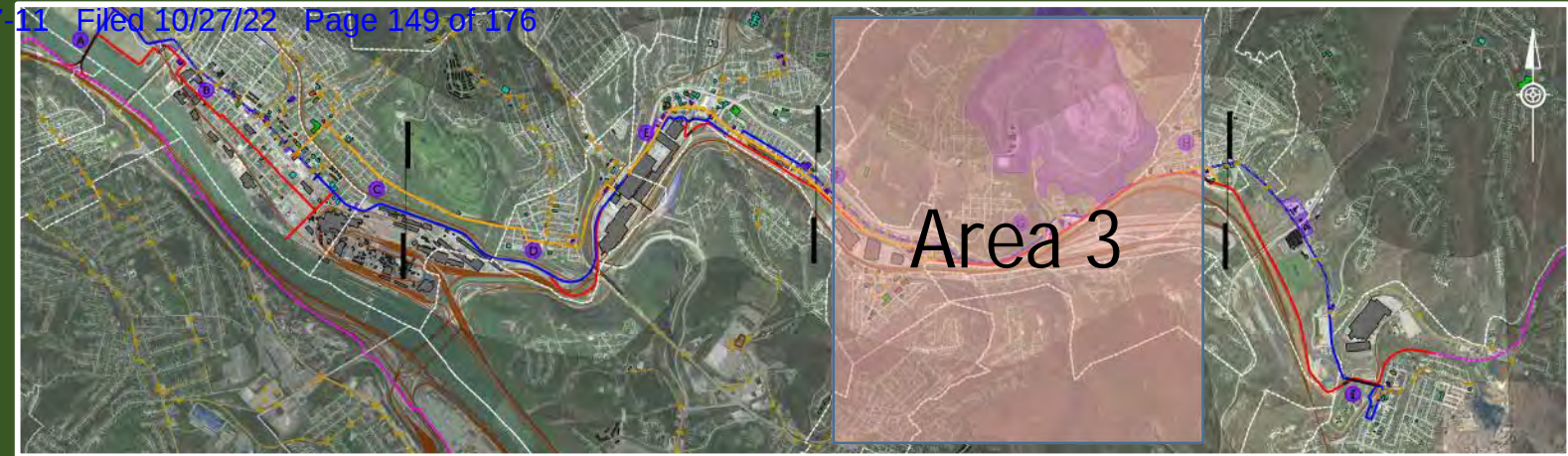
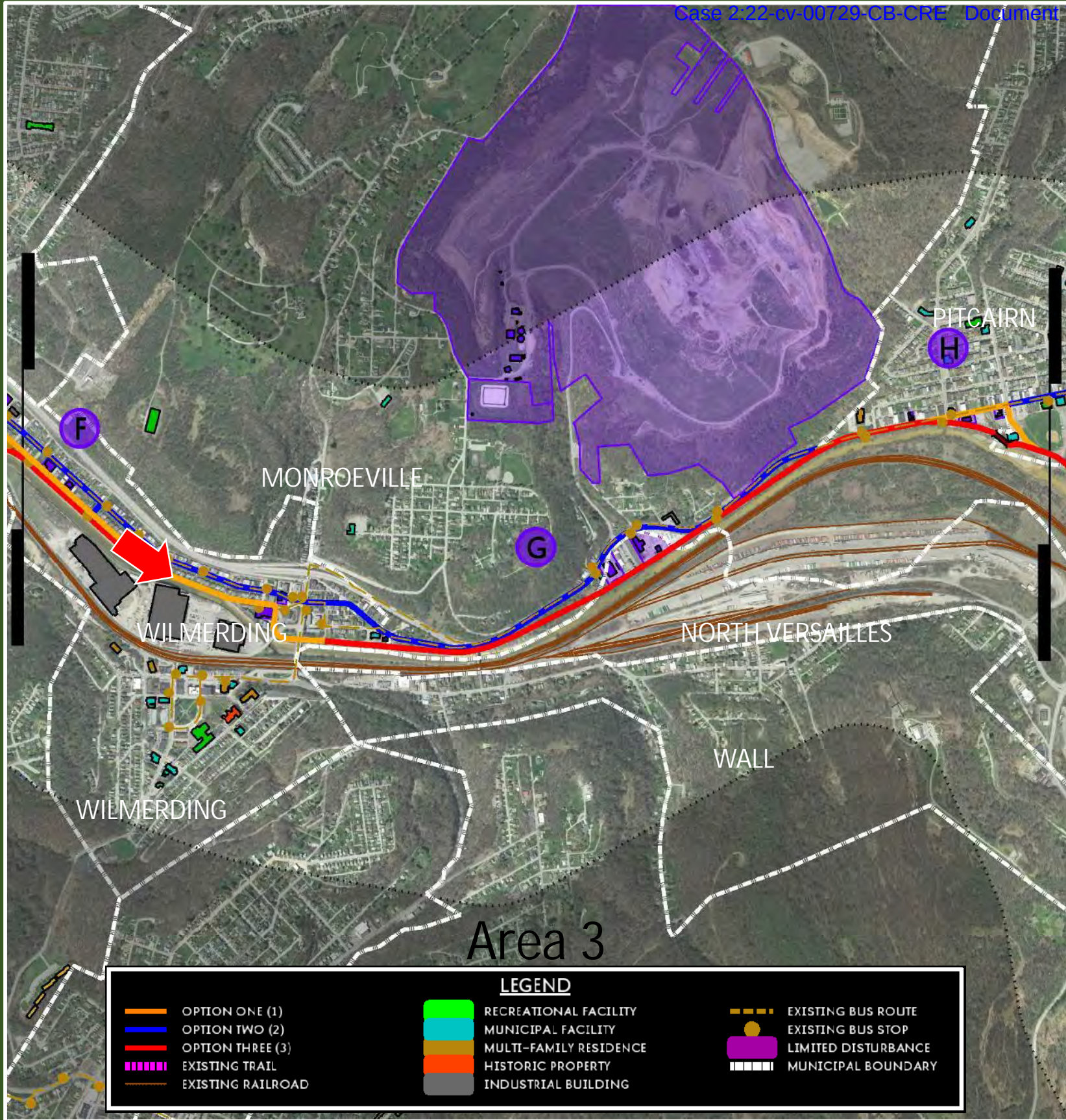
Virgin Alley
Turtle Creek



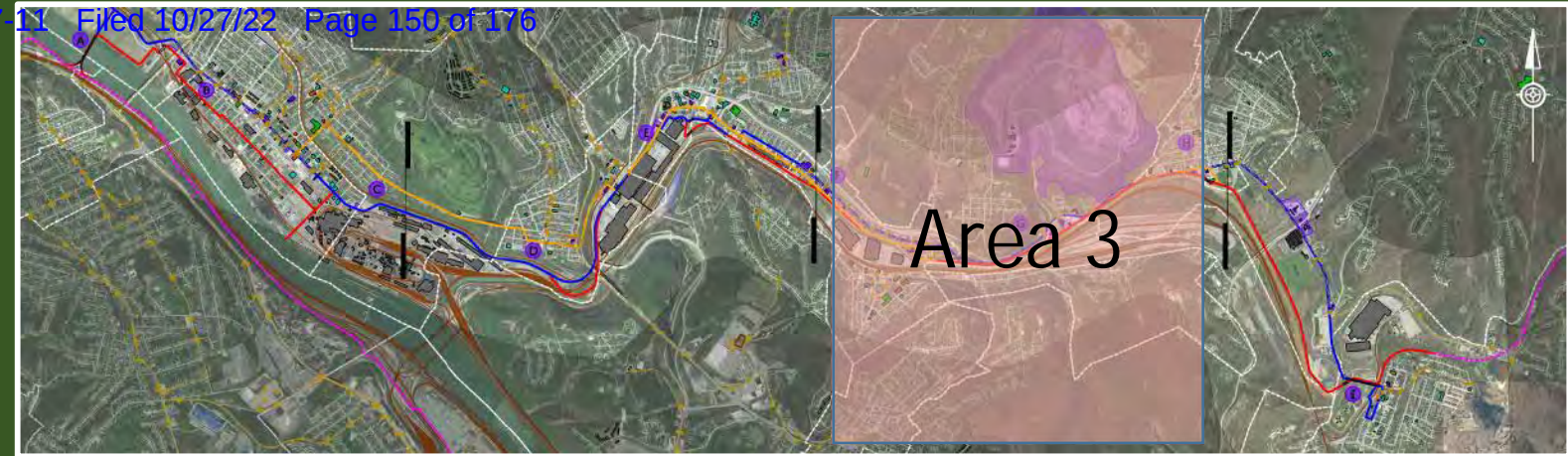
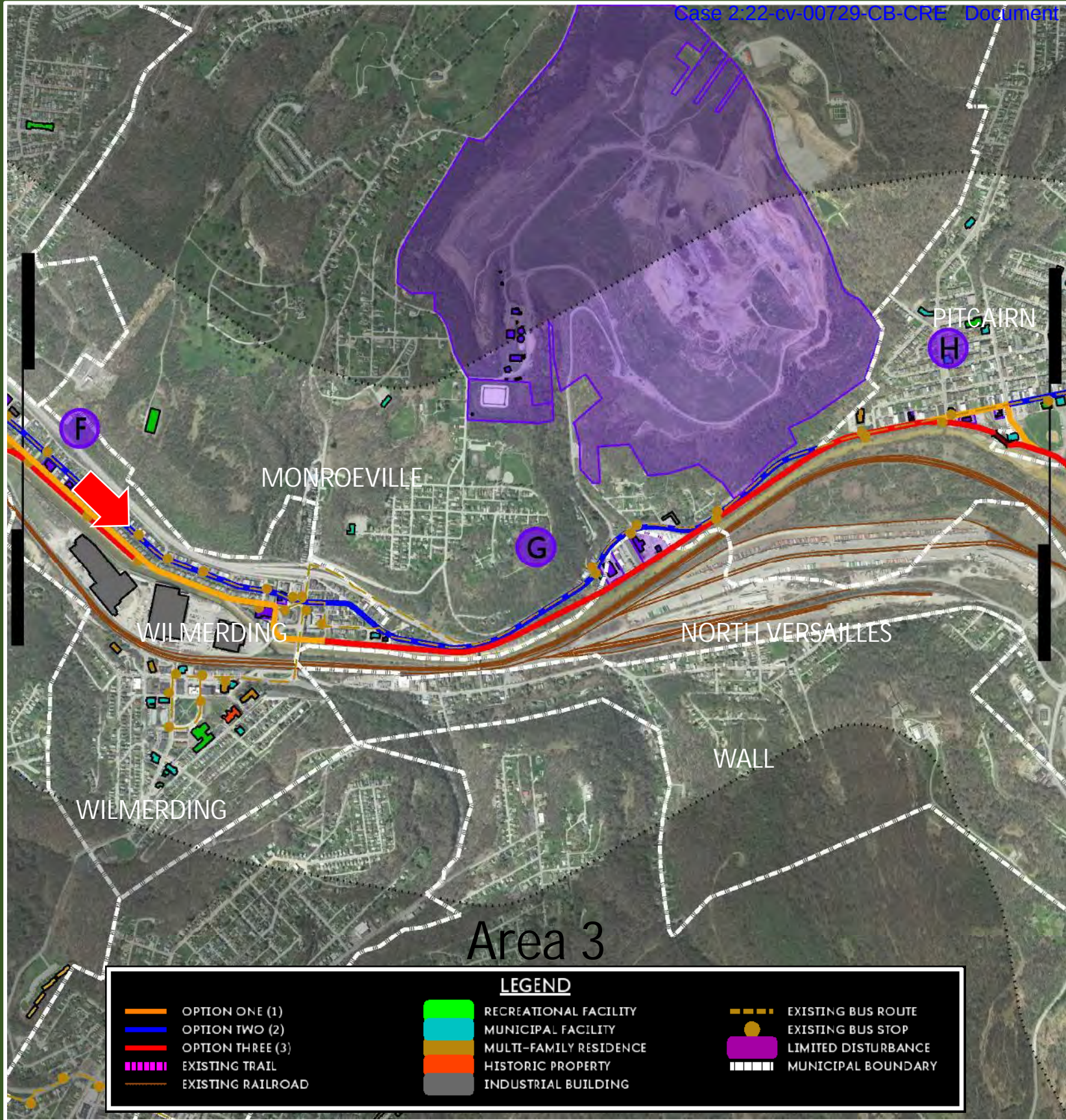
Middle Avenue Wilmerding



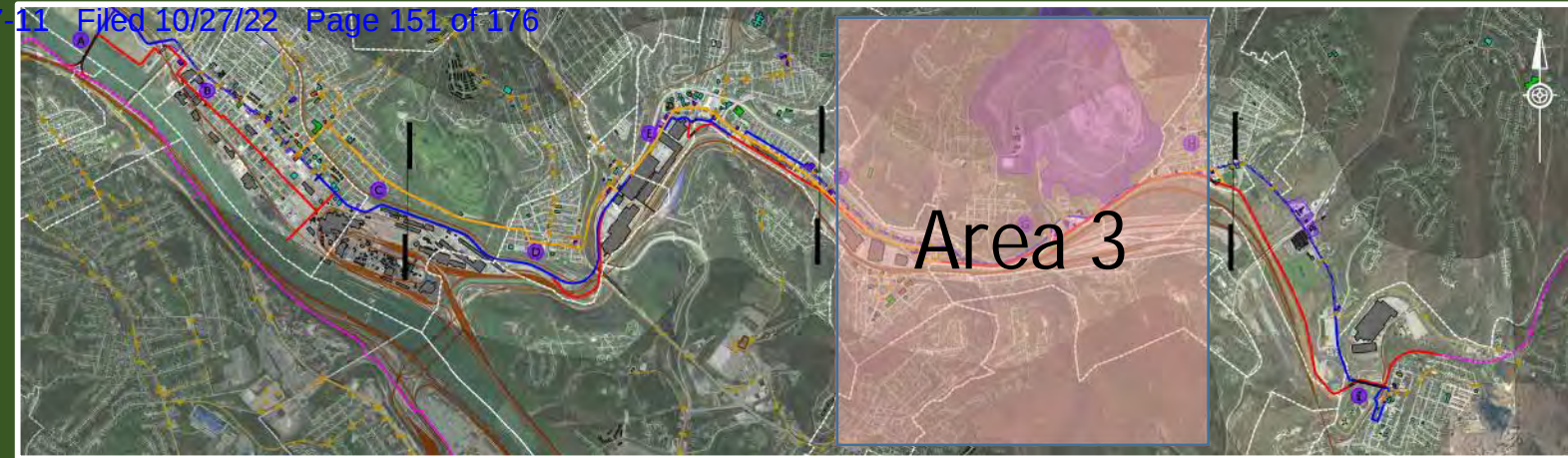
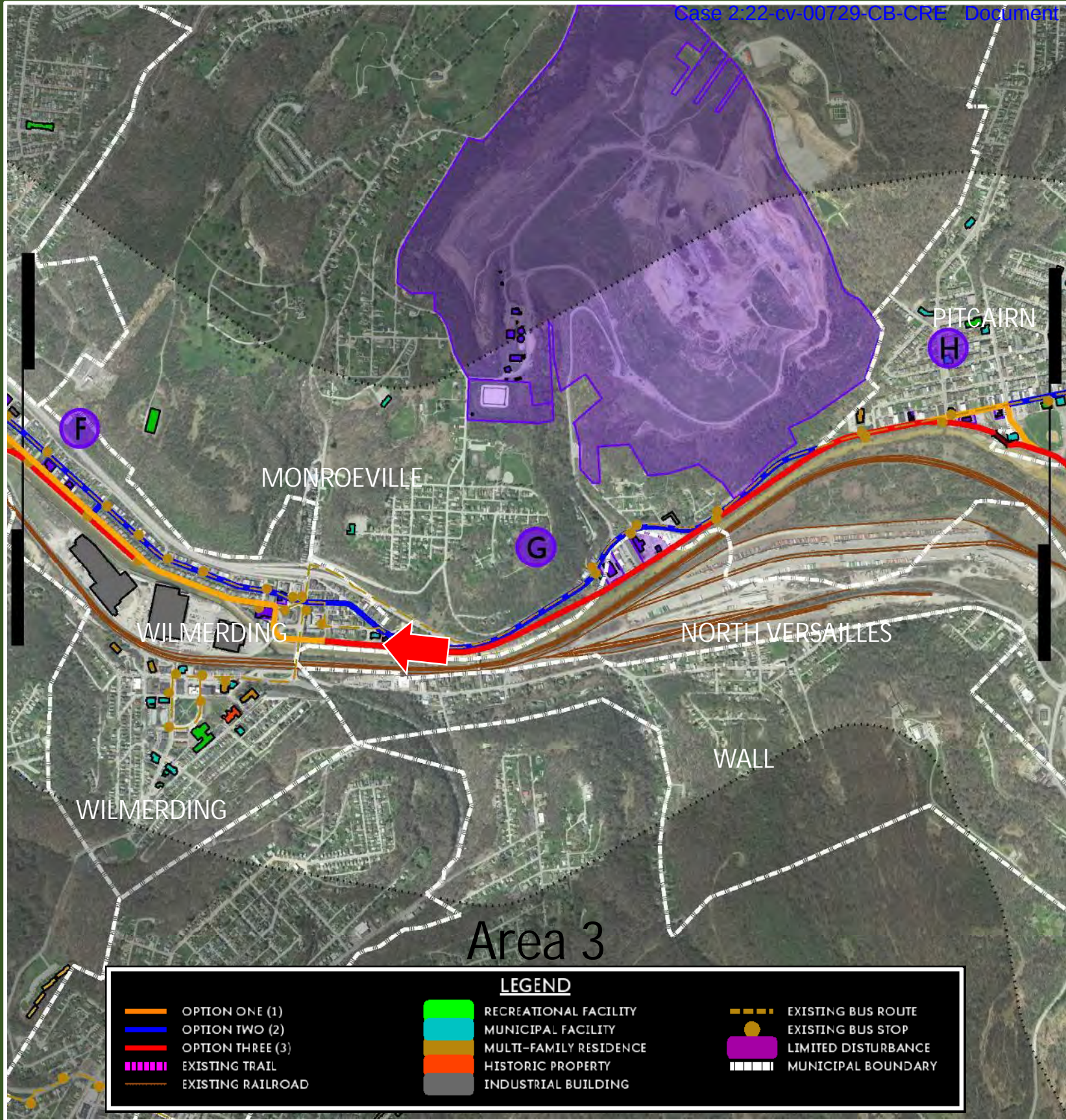
American Wire Bridge Wilmerding



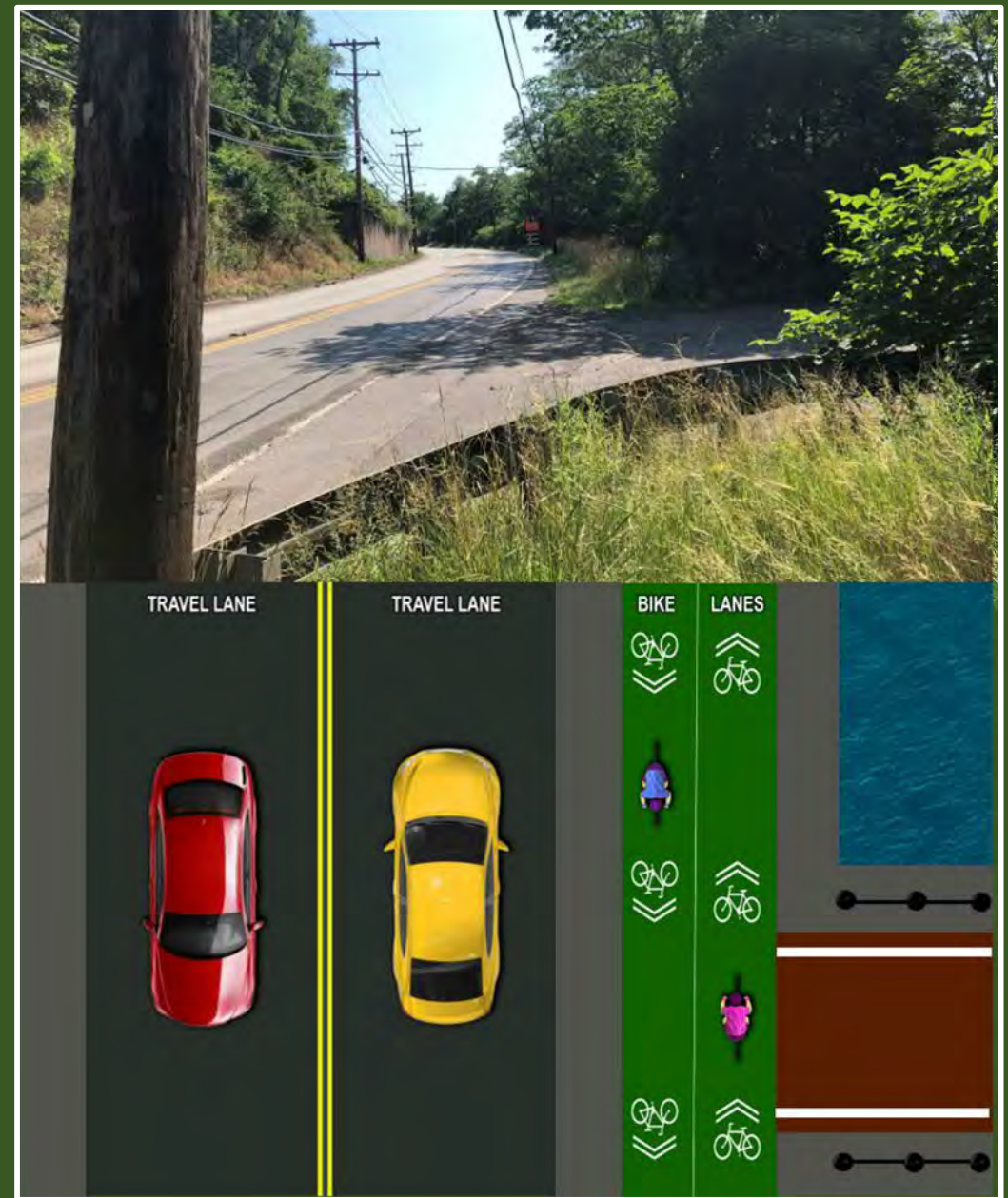
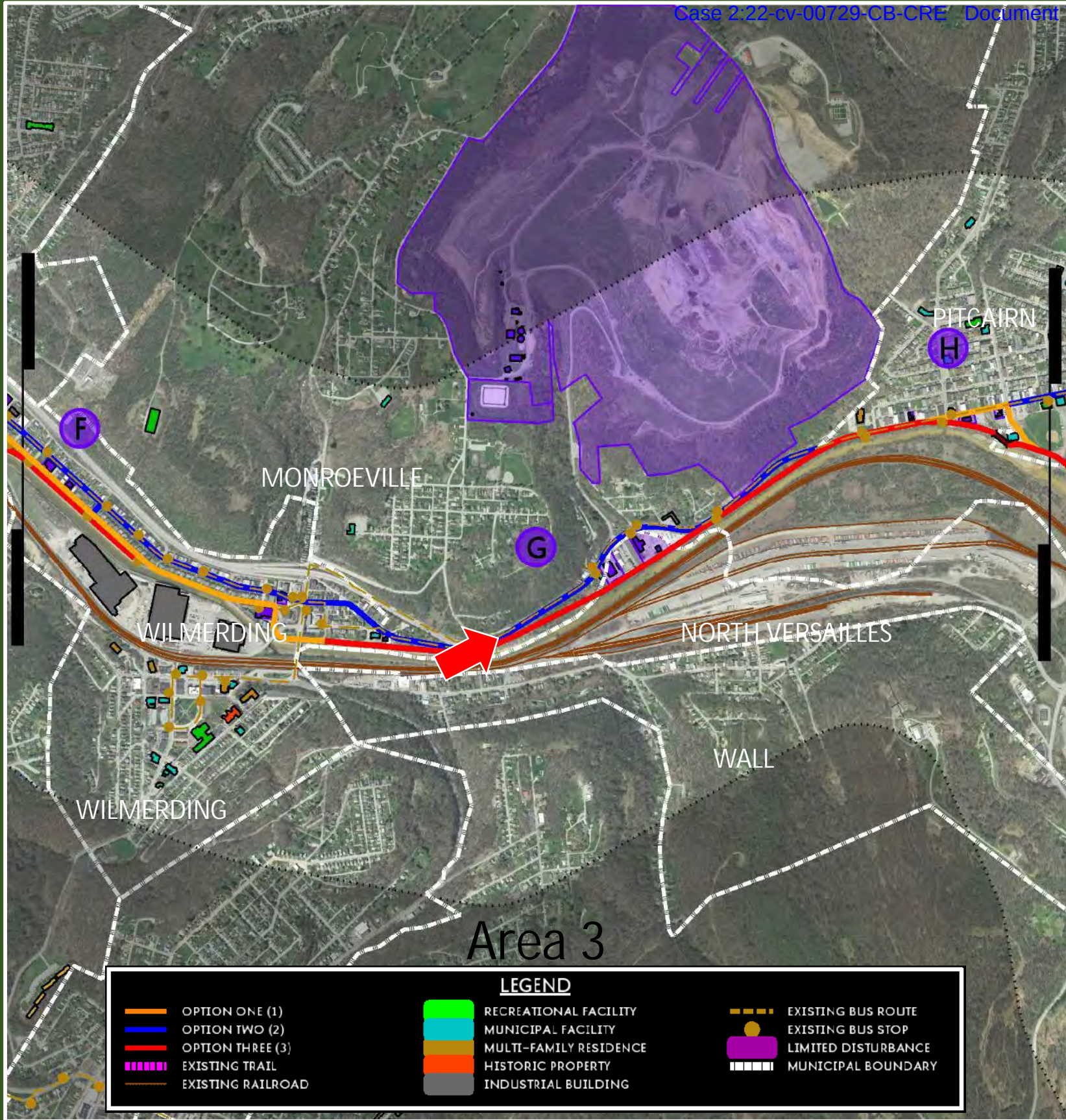
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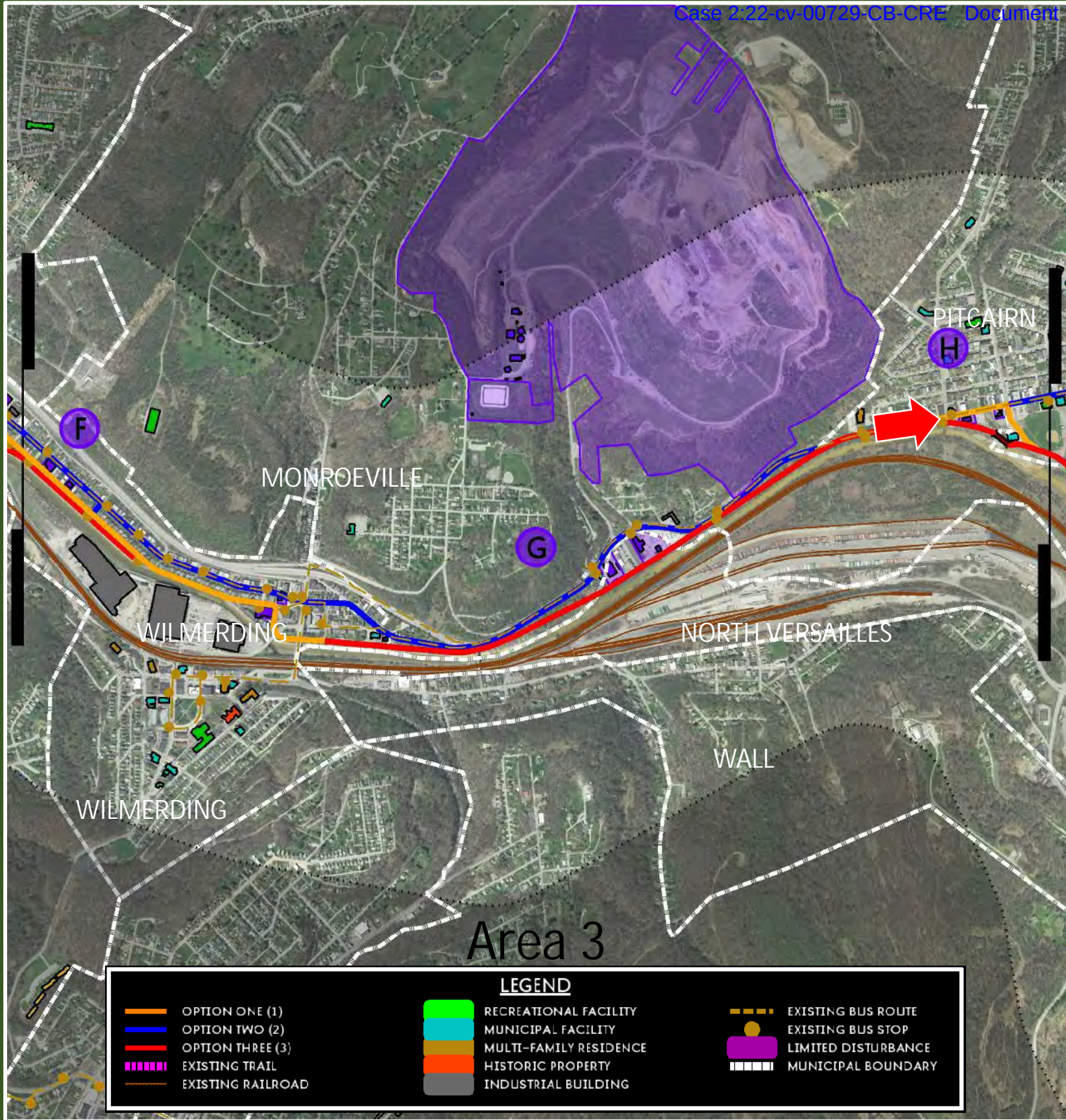
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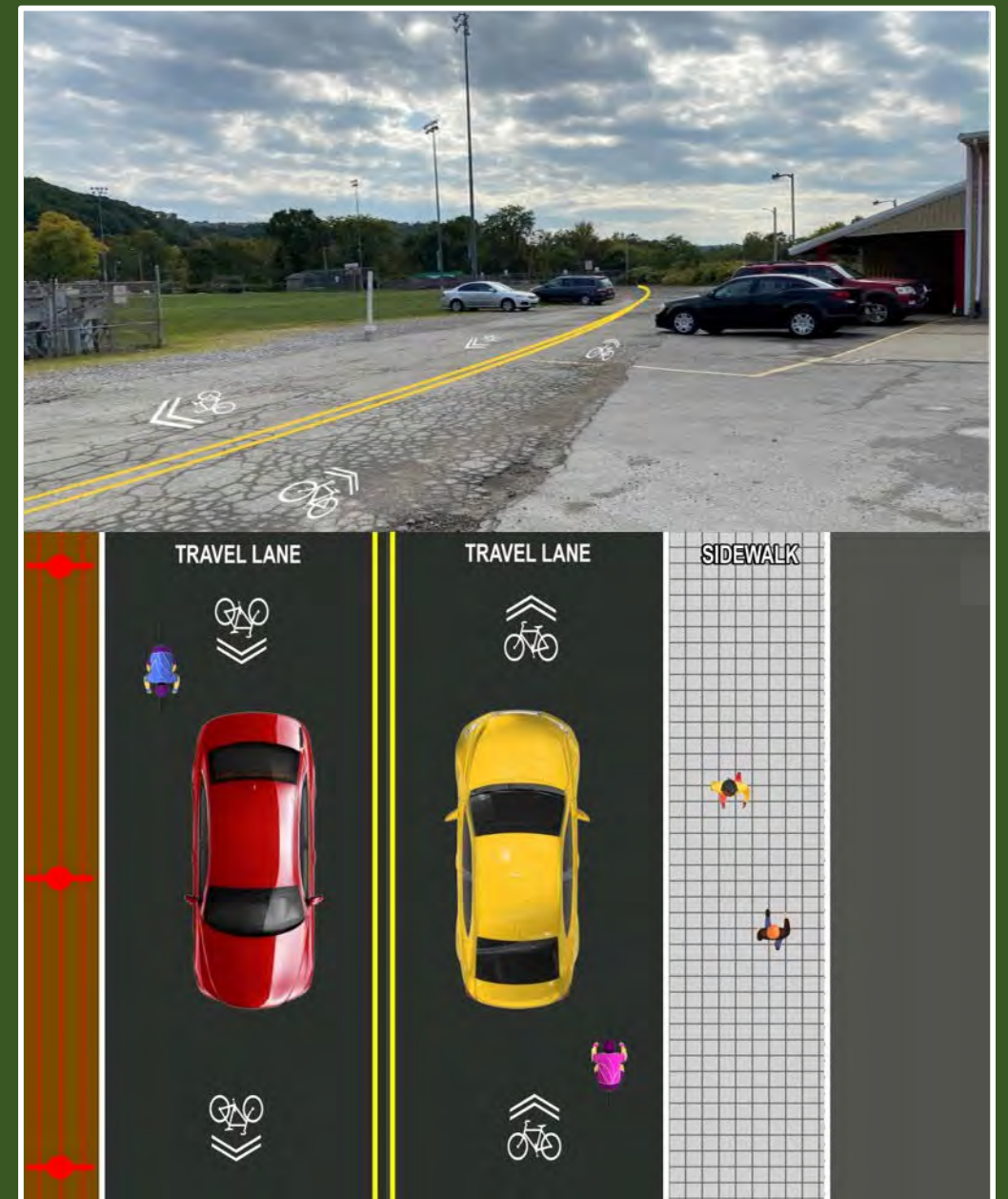
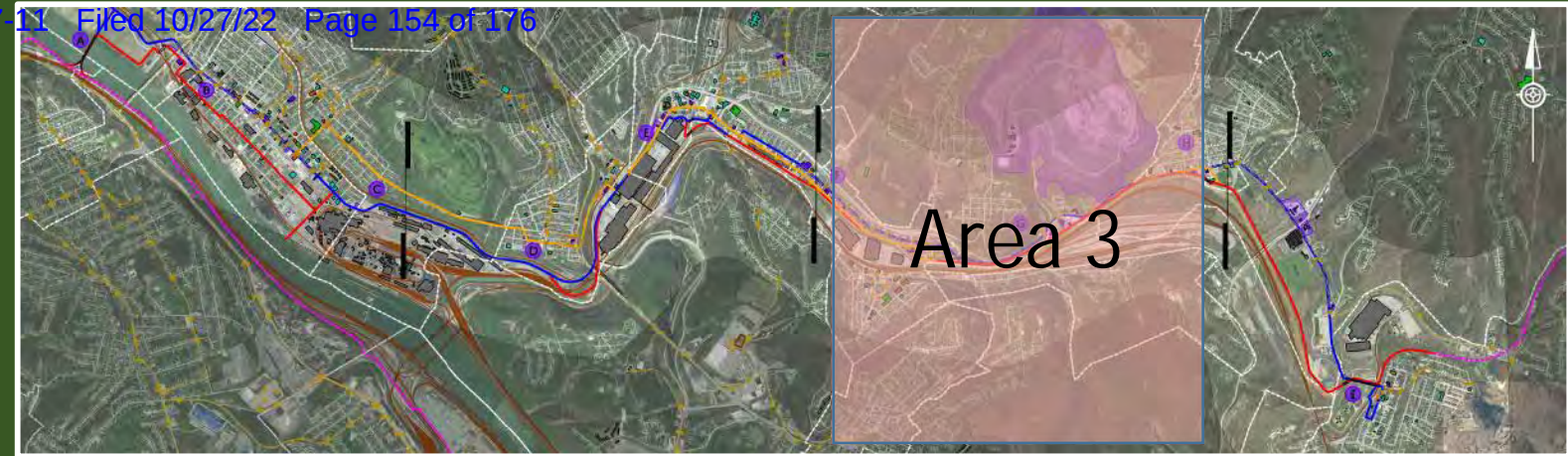
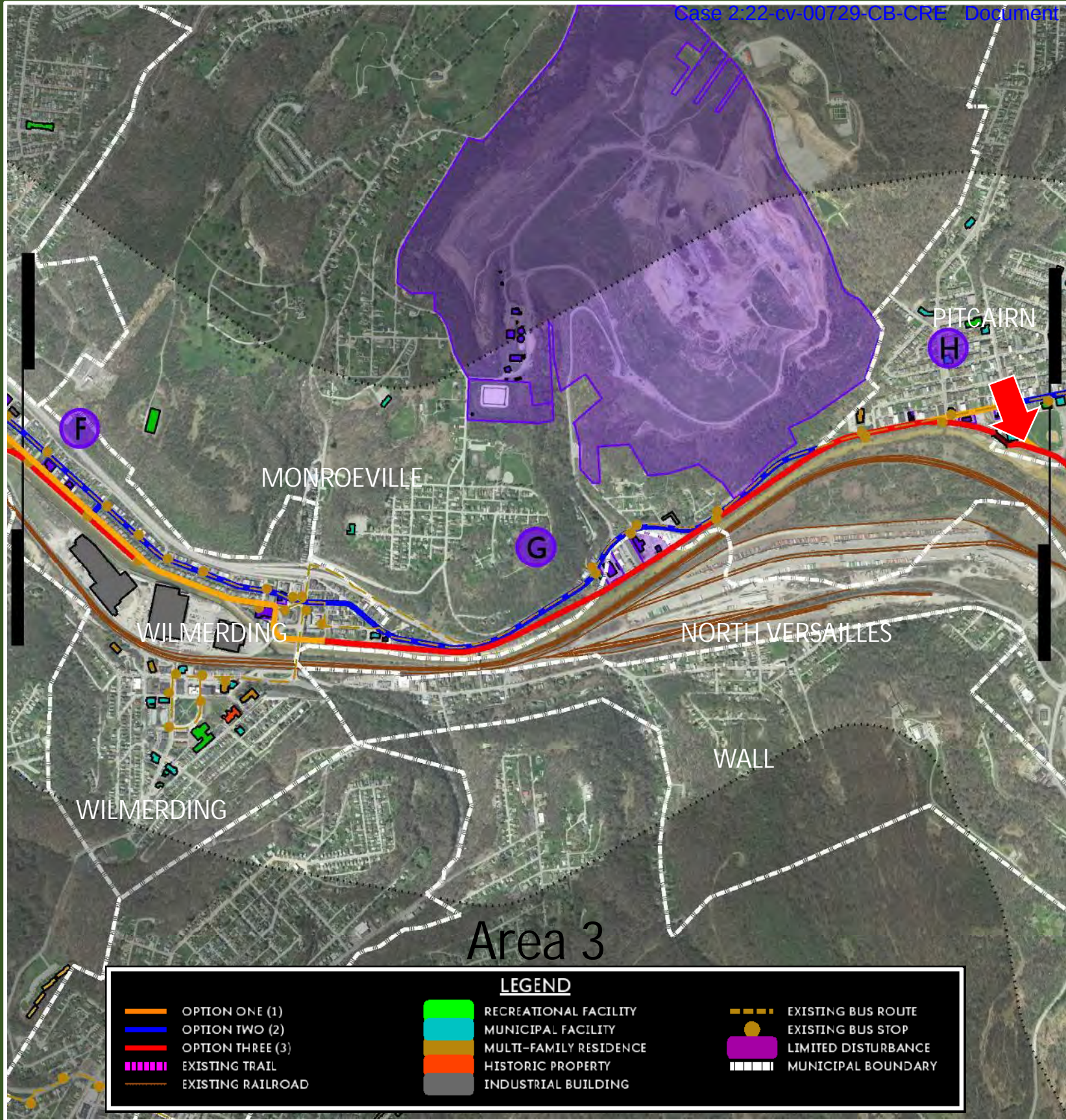
Norfolk Southern Railway Monroeville / North Versailles



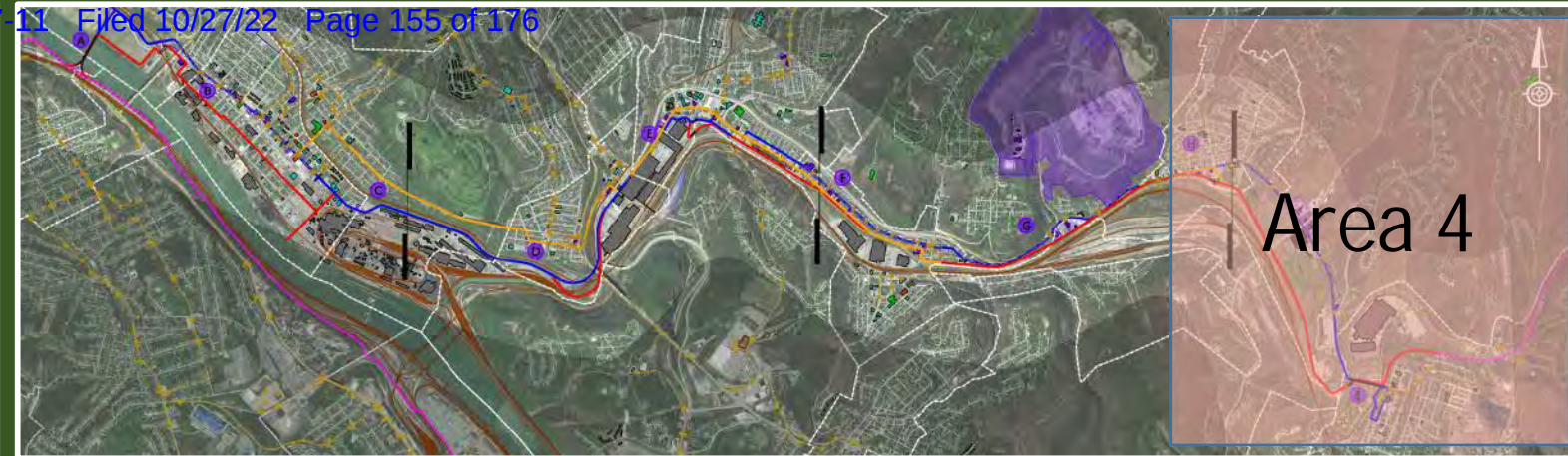
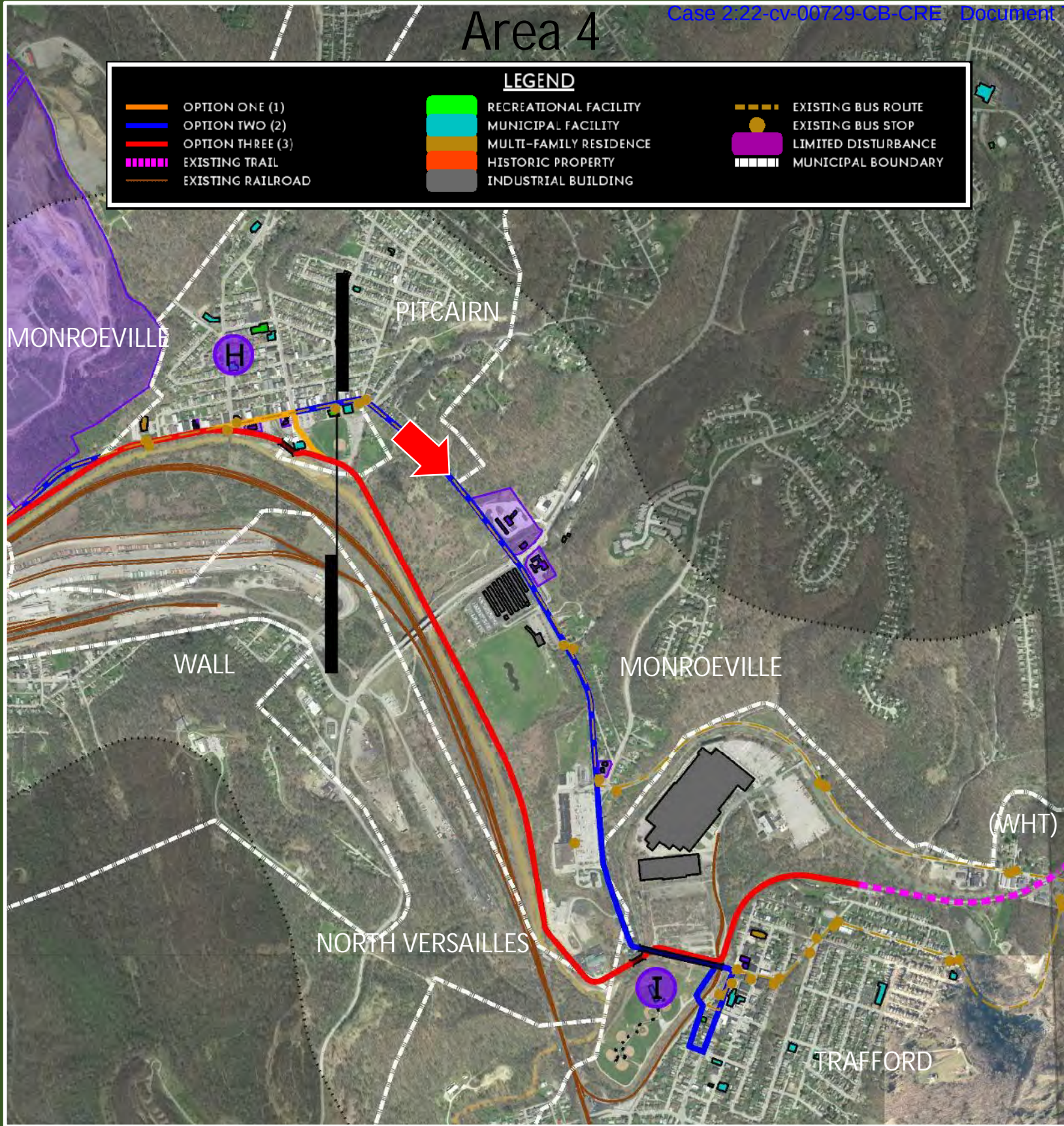
Broadway Boulevard Monroeville / North Versailles



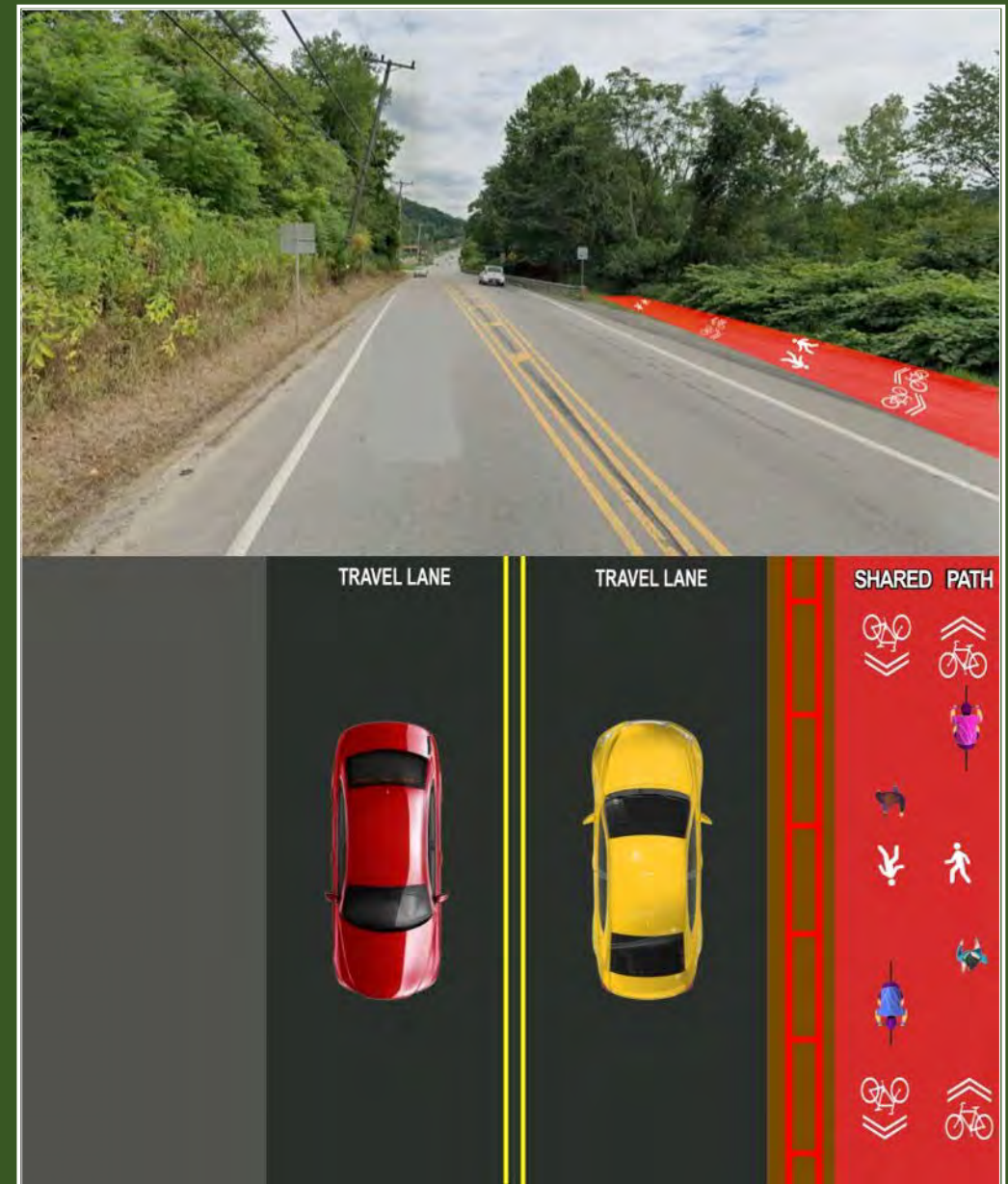
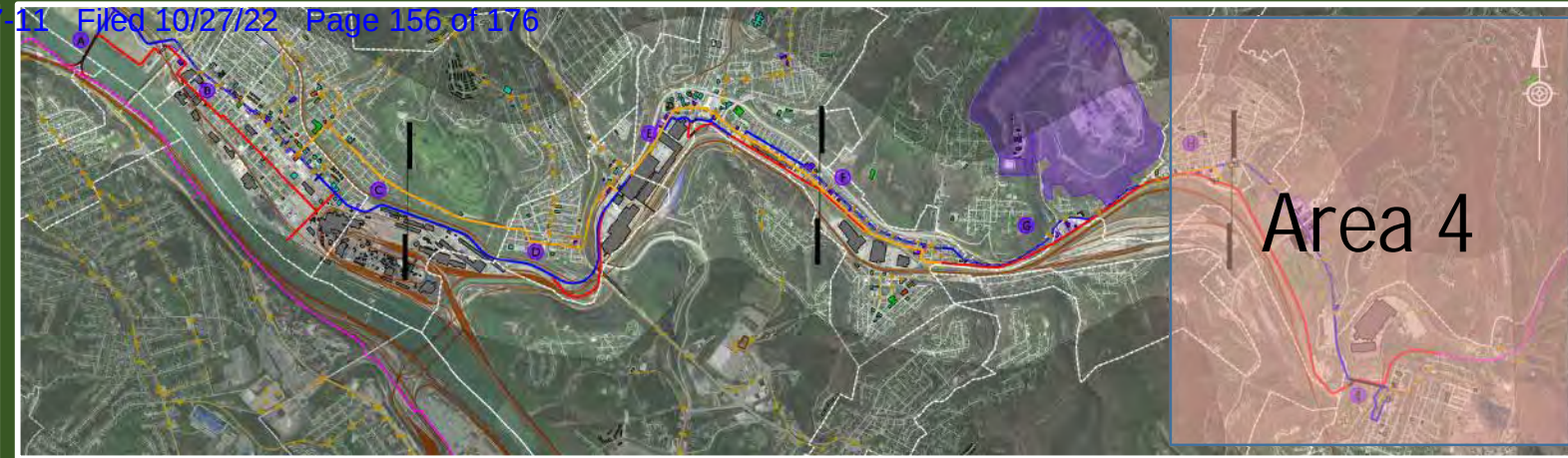
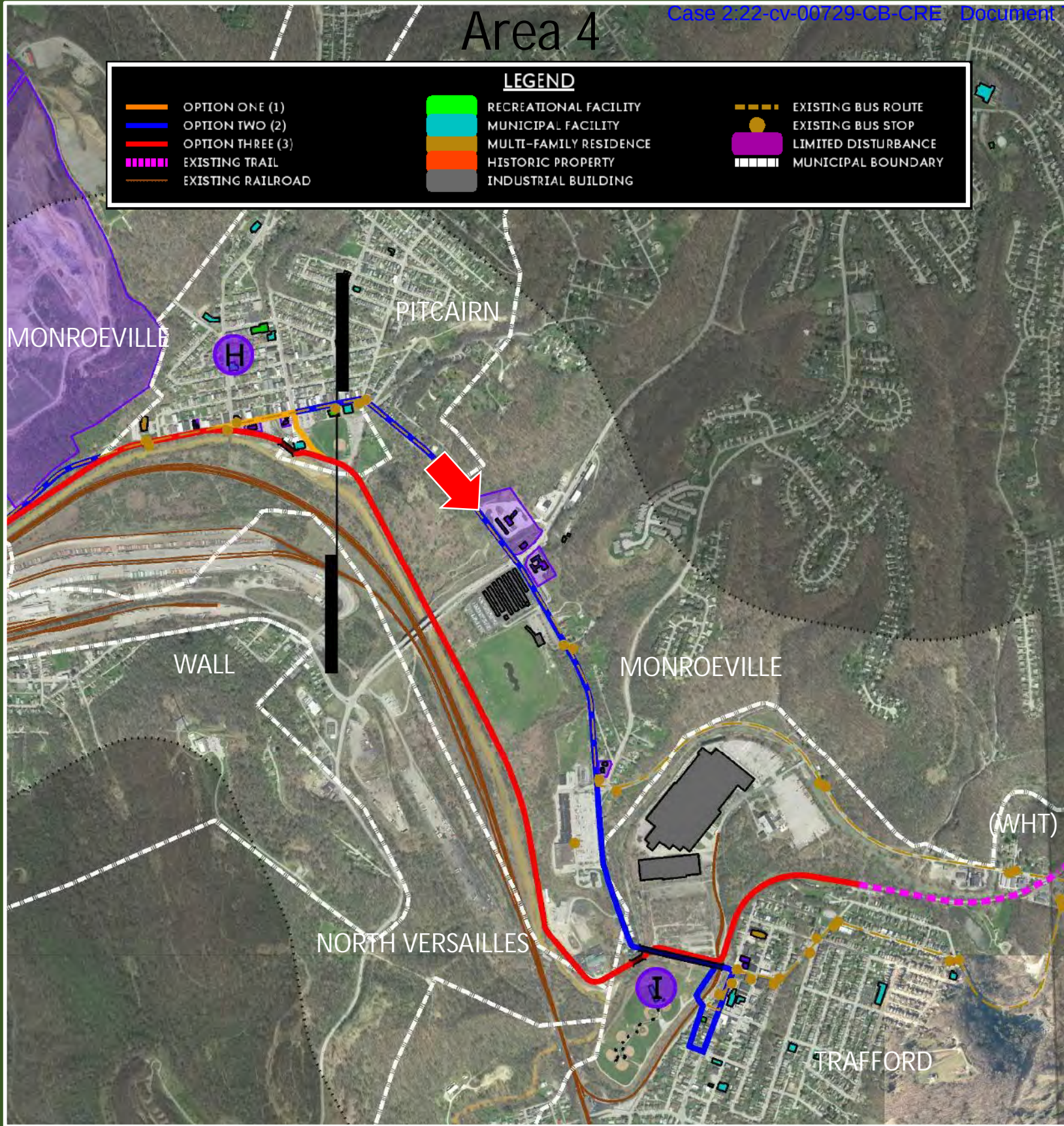
Broadway Boulevard Pitcairn / Monroeville



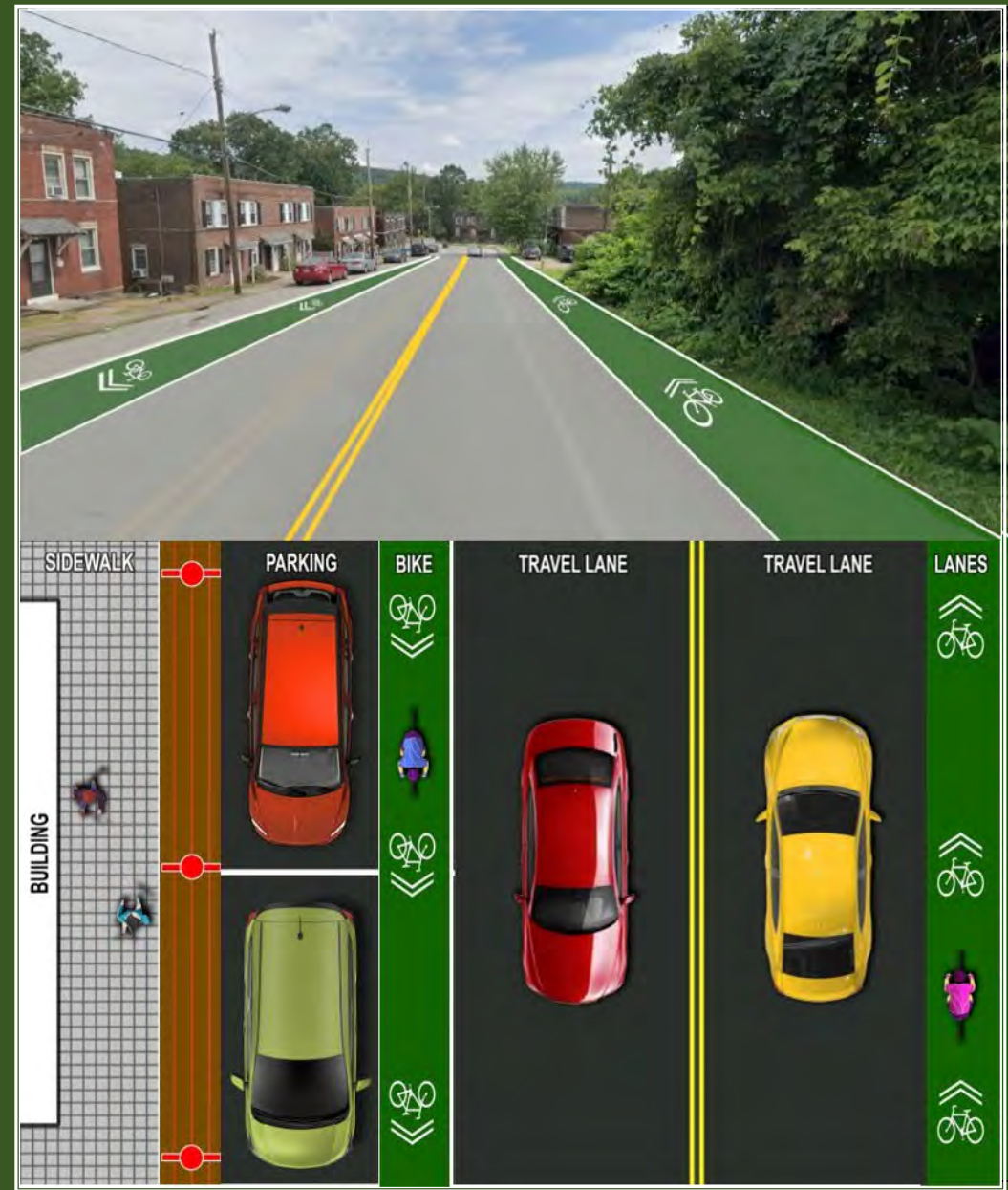
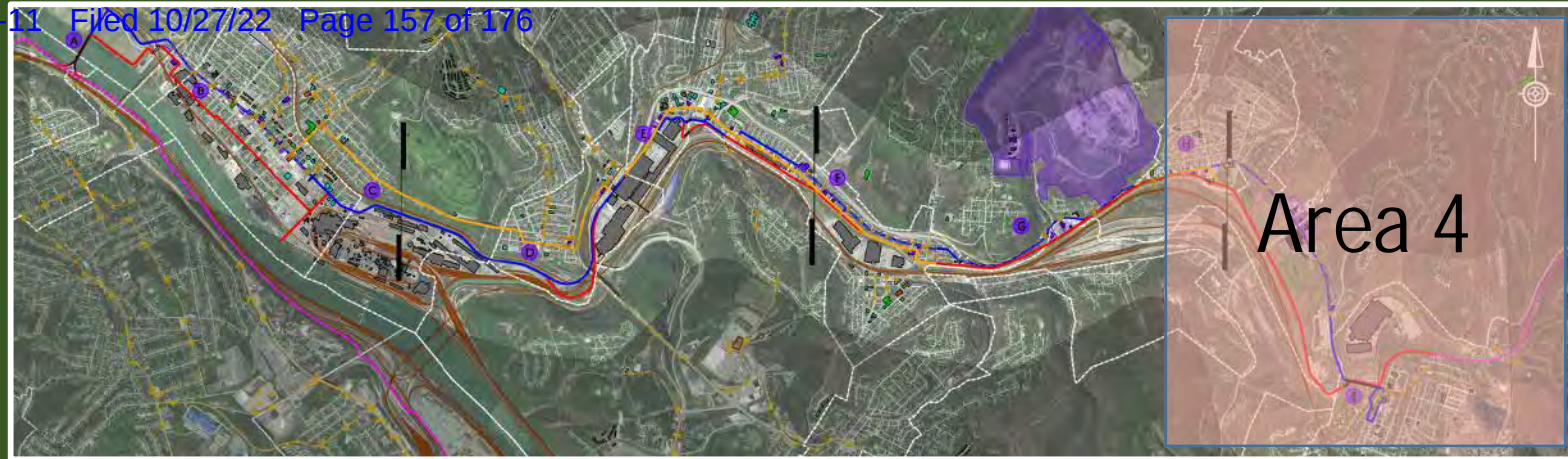
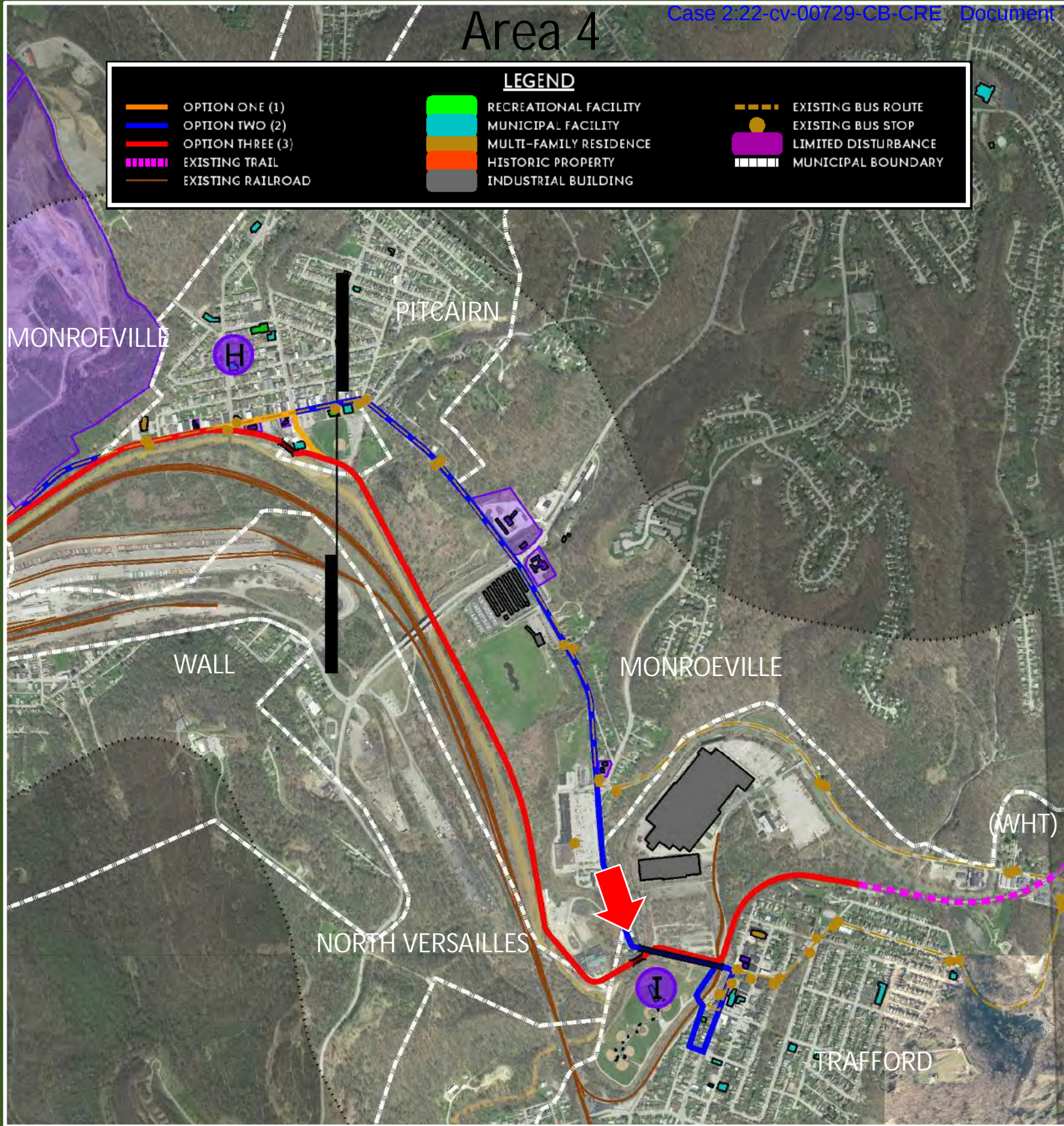
Center Avenue Pitcairn / Monroeville



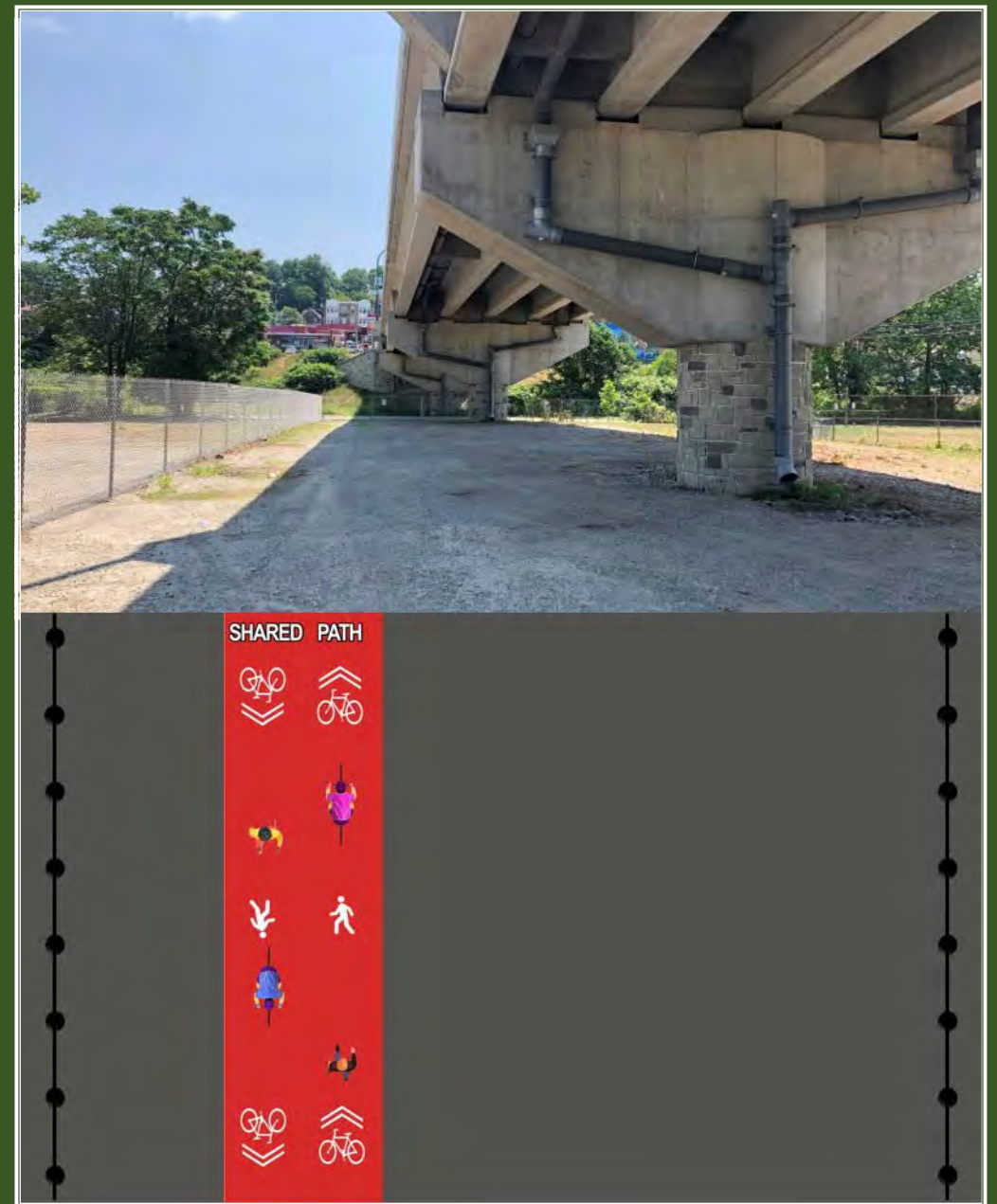
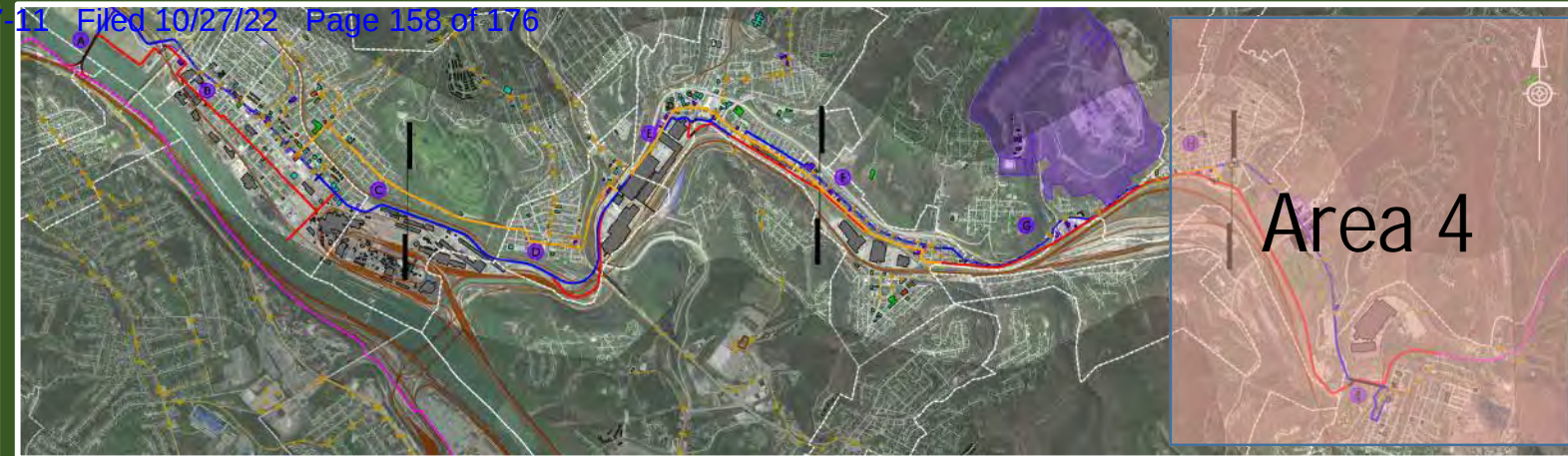
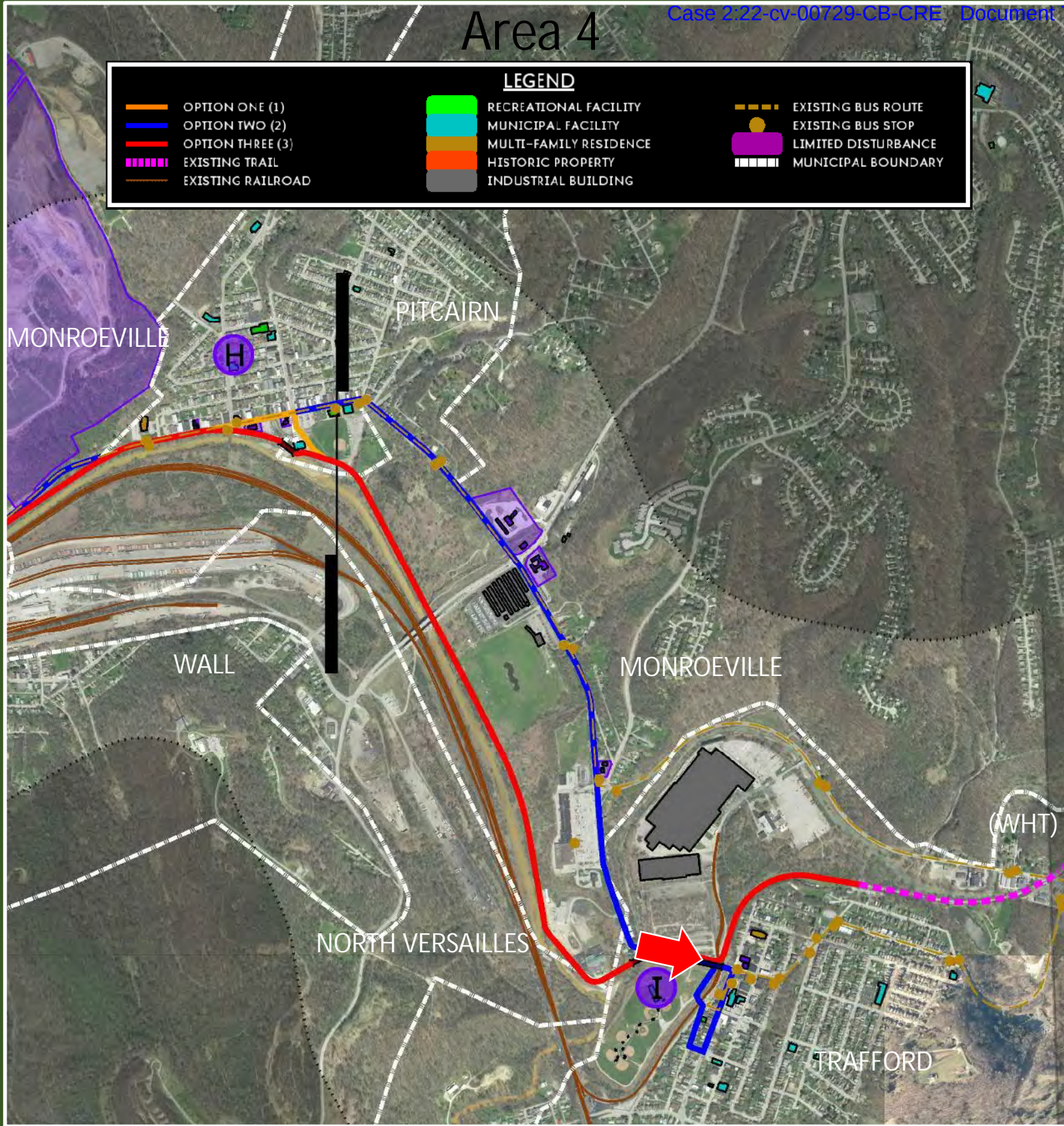
Broadway Boulevard
Pitcairn / Monroeville



Broadway Boulevard
Pitcairn / Monroeville



Fifth (5th) Street
Trafford / Monroeville



Veterans Bridge
Trafford / Monroeville

Exhibit B: Allegheny County Civil Penalty Policy
Declaration of Allason Holt from the Allegheny County
Health Department in Support of the United States'
Motion to Enter Consent Decree

ALLEGHENY COUNTY HEALTH DEPARTMENT

Air Quality Program

POLICY & PROCEDURE HPA #363

Effective: January 10, 2018

Reviewed: January 8, 2018

Revised: January 9, 2018

CIVIL PENALTY POLICY

Approved: 

**Page 1
of 17**

PURPOSE

The mission of the Allegheny County Health Department is to protect, promote, and preserve the health and well-being of all Allegheny County residents, particularly the most vulnerable. The purpose of this policy is to further this mission by establishing procedures to assure that civil penalties for violations of the Allegheny County Health Department's Article XXI, "Air Pollution Control" (hereinafter "Article XXI"), regulations are assessed in a uniform and fair manner and are sufficient to deter future violations, especially those violations that pose the greatest harm to the public.

POLICY

Outlines the procedures to be followed for assessing civil penalties for violations of the Article XXI regulations.

DISCLAIMER

The policies and procedures herein are not an adjudication or a regulation or intended to supplement any existing regulations. There is no intent on the part of the Allegheny County Health Department ("Department") to give the procedures in this policy that weight or deference. This document establishes the framework within which the Department will exercise its administrative discretion with respect to civil penalties. The Department reserves the discretion to deviate from this policy if circumstances warrant and may change this policy at any time in accordance with the procedures set forth in HPA #360.

PROCEDURE

I. INTRODUCTION

A. Assessment of Penalties under the Air Pollution Control Act and Article XXI

The primary purpose for assessing civil penalties is to deter future violations not only at the specific facilities that are involved in the enforcement actions taken by the Department, but also at all the facilities within Allegheny County that are subject to the Article XXI regulations. In order to achieve the goal of deterrence, a civil penalty should remove any significant economic benefit resulting from noncompliance and include an amount beyond recovery of the economic benefit to reflect the seriousness of the violation.

In order to ensure that civil penalties for air pollution violations are uniform throughout Pennsylvania, the Air Pollution Control Act (APCA) requires that the Department apply the penalty provisions under the APCA. 35 P.S. § 4012(g). Pursuant to the APCA, a

ALLEGHENY COUNTY HEALTH DEPARTMENT**Air Quality Program****POLICY & PROCEDURE HPA #363****Effective: January 10, 2018****CIVIL PENALTY POLICY****Page 2 of 17**

civil penalty may never exceed the statutory maximum of \$25,000 per day for each violation. 35 P.S. § 4009.1(a); Article XXI, § 2109.06.a.1.

Article XXI, § 2109.06.b.1., requires that the following factors be considered in assessing civil penalties. The “Civil Penalty Calculation Procedure” in Section V sets forth the specific procedures on how to apply the following factors when calculating a civil penalty:

1. the willfulness of the violation;
2. the actual and potential harm to the public health, safety, and welfare;
3. the damage to the air, soil, water, and other natural resources of the County and their uses;
4. the economic benefit gained by such person by failing to comply with this Article;
5. the deterrence of future violations;
6. the costs of the Department;
7. the size of the source or facility;
8. the compliance history of the source;
9. the nature, frequency, severity, and duration of the violation;
10. the degree of cooperation in resolving the violation;
11. the speed with which compliance is ultimately achieved;
12. whether or not the violation was voluntarily reported;
13. other factors unique to the owners, operators, or other responsible parties of the source or facility; and
14. other relevant factors.

B. Relationship with the EPA and PA DEP Civil Penalty Policy

This policy is based, in part, on the EPA’s “Clean Air Act Stationary Source Civil Penalty Policy,” issued October 25, 1991, and the PA DEP’s “Guidance for the Application of Regional Civil Assessment Procedures,” dated June 2, 2012. The Department’s Civil Penalty Policy should be used when calculating a civil penalty for a violation of Article XXI.

C. Approval of Penalty Assessment

This policy may be used by any Department staff to calculate a civil penalty amount. Before a penalty is issued, the penalty calculation must be reviewed by the Air Quality Program Enforcement Section Chief and the Legal Department and final approval must be obtained by either the Director, the Deputy Director of the Bureau of Environmental Health,

ALLEGHENY COUNTY HEALTH DEPARTMENT**Air Quality Program****POLICY & PROCEDURE HPA #363****Effective: January 10, 2018****CIVIL PENALTY POLICY****Page 3 of 17**

or the Manager of the Air Quality Program.

D. Relationship to Settlement Offers

This policy is used to calculate the civil penalty that is assessed by the Department. It may be appropriate to update a penalty calculation prior to final settlement to take into account additional and/or continuing violations or new information obtained during the investigation or from the violator that affects the appropriateness of the initial penalty calculation. All settlement amounts must be approved by either the Director, the Deputy Director of the Bureau of Environmental Health, or the Manager of the Air Quality Program.

E. Confidentiality

This policy is a public record available for public review under the Pennsylvania Right to Know Law. Any documents related to a penalty calculation or settlement negotiations are not public records and should not be produced under the Right to Know Law on the basis that the documents are considered confidential settlement negotiations, predecisional deliberations by the Department and/or relate to a noncriminal investigation conducted by the Department. A final settlement agreement would be a public record once it has been executed by all parties.

II. SUMMARY OF THE CIVIL PENALTY POLICY

A civil penalty is calculated by first determining the gravity based component which reflects the severity of the violation and the potential harm to the public or environment from the violation. The gravity based component is then adjusted for factors and circumstances unique to the violator. The economic benefit of noncompliance and any additional costs to the Department should be added to the penalty calculation. The specific procedures for calculating a civil penalty are set forth in Section V, below.

A. Determining the Number of Violations

A penalty should be calculated for every violation that constitutes an independent and substantially distinguishable violation. One activity or omission can result in more than one violation.

Successive or separate violations exist at the same facility when there is evidence of violations on separate days, but no evidence (or presumption) that the violations were continuing during the intervening days. For example, where there has been more than one inspection and no evidence of a continuing violation, violations uncovered at each inspection should be calculated as separate successive violations.

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If a violation continued for more than one day, the Department may apply a continuing violation penalty at an appropriate frequency, such as a per-day or per-month basis, as applicable to the duration or continuance of the violation under consideration. A violation should be assumed to be continuous from the first provable date of violation until the source demonstrates compliance. If the source has affirmative evidence to show that the violation was not continuous, appropriate adjustments should be made. When there is evidence of an ongoing violation and facts do not indicate when compliance was achieved, presume the longest period of noncompliance for which there is any credible evidence and calculate the duration of the violation based on that date. The Department retains full discretion to seek up to the maximum penalty of \$25,000 for each day a continued violation existed.

B. Compliance History

An adjustment factor used for the gravity based penalty component is the compliance history of the violator. For most sources,¹ a history of noncompliance means one or more prior violations within the last two years. A “prior violation” includes any act or omission resulting in an enforcement response (e.g., notice of violation, warning letter, administrative order, field citation, complaint, consent decree, consent agreement, or judicial order) under Article XXI enforced by the Department unless subsequently dismissed or withdrawn on the grounds that the party was not liable. It also includes any act or omission for which the violator has previously been given written notification, however informal, that the Department believes a violation exists. A violation of an administrative order will generally be considered an additional violation and should be assessed a separate penalty. Further, when determining compliance history, the Department has the discretion to consider violations that occurred at other facilities owned by the violator or violations that occurred by the violator’s parent corporation or subsidiary corporations.

III. ECONOMIC BENEFIT COMPONENT

This component is a measure of the economic benefit gained by the violator as a result of noncompliance with the regulatory, statutory, or permit requirements. Information on actual economic benefit should be used if available. Such savings or benefits would include the value of delaying or avoiding expenditures for: fuel, power, control equipment, process modification, testing, etc. When calculating the economic benefit from noncompliance, the EPA’s BEN economic model may be consulted. The BEN model calculates a violator’s economic benefit of noncompliance from delaying or avoiding pollution control expenditures. If appropriate, the Department may also consider economic benefits that results from the following illegal competitive advantages:

- Violator gains additional market share;

¹ For coke battery violations, compliance rate is based on the coke batteries’ total compliance rate for the quarter subject to the present enforcement action and prior quarter using the Department’s inspections, including those performed by its Method 303 contractors, and comparing the inspections to the Department’s standards. High opacity door inspections are not to be used in the compliance rate calculation.

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- Violator sells products or services prohibited by law;
- Violator initiates construction or operation prior to government approval; and
- Violator operated at higher capacity than it should have.

In the interest of simplifying and expediting an enforcement action, the Department may forego calculating economic benefit in cases where it appears that the total economic benefit for all alleged violations is likely to be less than \$5,000 or if the Department is unable to calculate a specific economic benefit amount.

For asbestos violations: In the absence of reliable information regarding a violator's actual expenses, the Department may assess an economic benefit of up to \$20.00 per linear or square foot of asbestos for the costs of stripping, removing, disposing of, and handling asbestos. The figures are based on rough cost estimates of asbestos removal nationwide. If any portion of the job is done in compliance, the economic benefit should be based only on the asbestos improperly handled. It should be assumed, unless there is convincing evidence to the contrary, that all stripping, removal, disposal and handling was done improperly if such improper practices are observed by the inspector.

IV. SUPPLEMENTAL ENVIRONMENTAL PROJECTS²

The Department encourages the inclusion of appropriate Supplemental Environmental Projects (SEP) in any consent decree or settlement agreement. A SEP is defined as a project or activity that improves, protects, or reduces the risk to public health or the environment, and that is not otherwise required by law. An agreement by the violator to undertake a SEP, in addition to all actions required for the facility to come into compliance, may result in the mitigation of all or part of the civil penalty. The Department will look favorably on any proposed SEP, but is not obligated to accept such a project. The Department can negotiate the terms of the project, or reject it outright.

A. Criteria for a SEP

The Department will consider the following criteria when determining whether to approve a proposed SEP:

1. The SEP must improve, protect, or reduce the risk to public health or the environment. In keeping with the multi-media nature of pollution prevention, the SEP need not be air quality-related, as long as an environmental and/or public health benefit can be recognized. While the SEP may provide the violator with some benefits, the project must primarily benefit the public health and/or the environment.
2. The SEP cannot be a project that the violator is legally required to perform by a federal, state, or Department law or regulation or a permit

² The Department's policy titled "Pollution Prevention in Enforcement & Compliance" (HPA #262) has been revised and incorporated into the Department's "Civil Penalty Policy".

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condition. A SEP does not alter a violator's obligation to remedy a violation expeditiously and return to compliance.

3. The SEP should be performed in the same geographic area where the violation occurred unless the SEP is intended to benefit the entire County. The SEP can affect either the facility itself, the surrounding community, or both.
4. There must be a reasonable probability that the SEP will be successful. However, if the agreed-upon SEP is carried out faithfully, the facility will not be penalized if the expected environmental or public health benefits are not realized.
5. The SEP must be incorporated into the terms of a legally enforceable settlement document such as a consent decree or settlement agreement.

B. Mitigation of the Penalty When SEPs are Included in Settlement

During the settlement of an enforcement action, the Department and the violator will agree upon an appropriate civil penalty amount. The violator may propose a SEP to mitigate all or a portion of the civil penalty. The amount of penalty mitigation allowed for a SEP should be equivalent to a percentage of the estimated cost to implement the SEP. The Department will determine the amount of penalty mitigation based on the following criteria, as well as factors specific to the violator and the enforcement action:

1. The SEP will provide significant, quantifiable benefits to public health or the environment;
2. The SEP will provide environmental or public health benefits to a community that may have been disproportionately exposed to pollution or is at environmental risk;
3. The SEP was developed with active solicitation and consideration of community input;
4. The SEP will further the development, implementation, or dissemination of innovative processes, technologies, and/or methods which will improve the public health or environment;
5. The SEP will reduce emissions to one or more mediums; and
6. The SEP will develop and implement pollution prevention techniques and practices that reduce the generation of a pollutant.

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If the violator can demonstrate that the SEP is of outstanding quality, the Department has the discretion to set the penalty mitigation amount as high as 100% of the estimated SEP cost.

Generally, for settlements that include a SEP, the Department will require the violator to pay a monetary penalty amount as part of the settlement. However, the Department has the discretion to allow a 100% mitigation of the penalty amount if the SEP will provide an exceptional public health or environmental benefit.

C. Procedure for Approval and Implementing a SEP

1. The Department calculates the civil penalty pursuant to this policy and initiates an enforcement action against the violator.
2. During the settlement of an enforcement action, the Department and the violator will agree on an appropriate settlement amount. The violator has the option to propose any SEP, although the Department may, upon request, suggest potential areas for SEPs.
3. The SEP proposal must be in writing and include the following information:
 - a. Project description;
 - b. Location of project;
 - c. Implementation and reporting schedule;
 - d. Costs of the project with supporting documentation³;
 - e. Expected benefits to the public health and/or environment;
 - f. The area that will benefit from the project;
 - g. Resources that will be necessary to ensure project completion; and
 - h. Identify any partners involved in the project.
4. If the SEP is approved, the Department will determine the amount of the civil penalty that will be mitigated by the SEP. All SEPs and settlement amounts must be approved by either the Director, the Deputy Director of the Bureau of Environmental Health, or the Manager of the Air Quality Program. The Director, or her designee, must approve any settlement that will result in a 100% mitigation of the penalty amount.

³ Documentation such as appraisals, bid proposals, invoices, contracts, and third-party cost estimates may be submitted to establish the estimated cost of the SEP.

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5. The details of any SEP, including schedules and interim reporting schedules, shall be agreed to by all parties and be made a part of the legally enforceable settlement document. The settlement document should include stipulated penalties and other provisions to ensure that the violator complies satisfactorily with the terms of the SEP. The settlement document should also include a provision stating that if the violator fails to expend the full amount of the proposed SEP, the violator may, at the Department's discretion, be liable for an amount that the civil penalty was reduced.
6. The Department will monitor progress in carrying out the SEP. The settlement document should require that the violator submit a report to the Department after the SEP has been completed. The report should include an itemized list of all eligible SEP costs and a certification from a corporate officer or responsible official of the violator stating that the SEP has been fully implemented pursuant to the settlement document.
7. The Department will notify the violator if the SEP has been completed satisfactorily and if stipulated penalties are required. If the Department is satisfied that the violator has carried out the SEP, as it was conceived and agreed to, then there will be no additional penalties if the anticipated environmental benefits are not fully realized.

V. CIVIL PENALTY CALCULATION PROCEDURE

The following calculation is used to assess the civil penalty:

$$\text{Civil Penalty} = (\text{Gravity Based Component} \times \text{Adjustment Factor}) + \text{Economic Benefit} + \text{Cost to the Department} + \text{Additional Deterrent Penalty}$$

NOTE: The maximum penalty that the Department may assess is \$25,000 per day for each violation. This civil penalty policy requires a determination of the Gravity Based Component ("Step 1") and the Adjustment Factor ("Step 2"). **After these two determinations have been made, the preliminary penalty amount for major violations may increase to \$33,000.** The Department may then add to the penalty amount any economic benefit from noncompliance ("Step 3") and any additional costs to the Department ("Step 4"). The Department also has the discretion to include an additional deterrence amount ("Step 5"), if appropriate. **If the calculated civil penalty amount exceeds the statutory maximum of \$25,000 per day for each violation, then the final civil penalty amount must be reduced to \$25,000.**

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Step 1 – Calculate the Gravity Based Component: The first step in assessing a civil penalty is to determine the gravity based component. A gravity based component reflects the potential harm that the violation may have on the public or environment and the severity of the violation. Table 1 should be used to determine the penalty range for the gravity based component for each violation. Table 1 requires a determination of whether the “Potential for Harm” and the “Severity of Violation” is “major,” “moderate,” or “low.” Table 2 in Section V.A and Table 3 in Section V.B provide guidance on this determination. **The gravity based component for each violation should be an amount within the penalty range that would be most effective in deterring future violations.**

Table 1: Gravity Based Component

| POTENTIAL FOR HARM | SEVERITY OF VIOLATION | | |
|---------------------------|------------------------------|-----------------|-----------------|
| | Major | Moderate | Low |
| Major | \$12,000-\$6,000 | \$6,000-\$3,500 | \$3,500-\$2,000 |
| Moderate | \$5,000-\$2,500 | \$2,500-\$1,300 | \$1,300-\$900 |
| Low | \$2,500-\$1,300 | \$1,300-\$900 | \$900-\$400 |

A. Potential for Harm

The following five factors are used to evaluate the potential harm to the public or environment that may result from the violation. For each factor, select a number based on the condition that most appropriately describes the violation. After calculating a total score from all five factors, use Table 2, below, to determine whether the “Potential for Harm” is “major,” “moderate,” or “low”:

Table 2: Potential for Harm

| POTENTIAL FOR HARM | TOTAL SCORE |
|---------------------------|--------------------|
| Major | 8-10 |
| Moderate | 4-7 |
| Low | 0-3 |

1. Toxicity of the Pollutants

| | |
|----------|--|
| 2 | The violations involved Hazardous Air Pollutants, an emission point subject to NESHAPs or MACT standards, or a toxic substance. All asbestos violations. |
| 1 | Opacity violations, criteria pollutants, and all other pollutants. |
| 0 | Procedural violation. |

ALLEGHENY COUNTY HEALTH DEPARTMENT**Air Quality Program****POLICY & PROCEDURE HPA #363****Effective: January 10, 2018****CIVIL PENALTY POLICY****Page 10 of 17****2. Amount of Pollutant**

| | |
|----------|--|
| 2 | The violations involved a significant amount of pollutant when compared to standard or permit limit. The total amount of asbestos involved in the violation is > 50 units*. For coke battery violations – emissions determined to be heavy. |
| 1 | The violations involved a moderate amount of pollutant when compared to standard or permit limit. The total amount of asbestos involved in the violation is > 10 units but ≤ 50 units*. For coke battery violations – emissions determined to be moderate. |
| 0 | Only a minimal amount of pollutant or no pollution was involved in the violation. The total amount of asbestos involved in the violation is ≤ 10 units*. Procedural. For coke battery violations – emissions determined to be light. |

[*Unit = 160 square feet]

3. Duration of Violation

| | |
|----------|---|
| 2 | The violator had the ability to correct the violation well before it was corrected. |
| 1 | The violator had the ability to correct the violation somewhat before it was corrected. |
| 0 | Violation was corrected promptly or lasted less than thirty minutes. |

4. Impact on Public

| | |
|----------|---|
| 2 | The violation may have exposed many members of the public to pollution. Any Department monitor exceeds a short-term ambient air quality standard for the emitted pollutant on the day of the violation. An asbestos violation that occurred in an area of a facility where individual(s) living, working, or visiting may have been exposed. Asbestos notification/survey violations. |
| 1 | A few nearby residents or members of the public may have been exposed to the pollution. Any Department monitor exceeds a short-term ambient air standard on the day of the violation. |
| 0 | Emissions in an isolated area with virtually no impact or exposure on the public. Procedural violation. |

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| | |
|----------|---|
| 2 | Violation includes emitting a pollutant in a location with more than 2 non-attainment areas. ⁴ |
| 1 | Violation includes emitting a pollutant in a location with 1 to 2 non-attainment areas. ⁴ |
| 0 | Violation includes emitting pollutants located in an attainment area. ⁴ Procedural violation. |

B. Severity of the Violation

Table 3, below, should be used to determine whether the “Severity of Violation” is “major,” “moderate,” or “low.” Violations not covered by this chart should be determined on a case-by-case basis.

Table 3: Severity of Violation

| MAJOR | MODERATE | LOW |
|---|--|--|
| > 50% over the first non-compliant value* | 20-50% over the first non-compliant value* | Less than 20% over the first non-compliant value* |
| > 60% opacity | 40%-60% opacity | < 40% opacity |
| Open burning in violation of material, size, and distance requirements. | Open burning in violation of 2 of: material, size, or distance requirements. | Open burning in violation of 1 of: material, size, or distance requirements. |
| Failure to conduct required stack testing, monitoring or recordkeeping. | > 3 months over the reporting deadline and/or not self-reported | < 3 months over the reporting deadline and/or self-reported |
| Strong or very strong odors as determined by Department source testing method. | Moderate odors as determined by Department source testing method. | Slight odors as determined by Department source testing method. |
| A Title V or Synthetic Minor source installing equipment without required permit. | A minor source installing equipment without required permit. | |
| Report which did not disclose emission non-compliant conditions. | Report which did not disclose procedural non-compliant conditions. | Reports with minor inaccuracies or incompleteness. |
| For asbestos violations only, use the table in Appendix “A.” | For asbestos violations only, use the table in Appendix “A.” | For asbestos violations only, use the table in Appendix “A.” |

[*Use this factor for determination of high-opacity door violations on coke batteries.]

⁴ Attainment areas are based on current EPA designations found at <https://www.epa.gov/green-book>.

ALLEGHENY COUNTY HEALTH DEPARTMENT**Air Quality Program****POLICY & PROCEDURE HPA #363****Effective: January 10, 2018****CIVIL PENALTY POLICY****Page 12 of 17****Step 2 – Calculate the Adjustment Factor:**

| |
|---|
| Adjustment Factor = 1.0 + (sum of (A) through (D)) |
|---|

(A) Degree of Cooperation:

| | |
|------|---|
| 0.25 | Belligerent; refused to cooperate. |
| 0.1 | Reluctantly cooperated, was slow to act, or took some corrective action, but not all. |
| 0 | Cooperative; took prompt corrective action. |
| -0.3 | Voluntarily self-reported violation and took prompt action or submitted adequate corrective plan. |

(B) Compliance History:

| | |
|------|--|
| 1.0 | Four or more prior violations within last 2 years. For coke battery violations - compliance rate of < 97.00%*. |
| 0.5 | Two or three prior violations within last 2 years. For coke battery violations - compliance rate of 97.00% – 97.99%*. |
| 0.25 | One prior violation within last 2 years. For coke battery violations - compliance rate of 98.00% – 99.00%*. |
| 0 | No prior violations within the last 2 years. For coke battery violations - compliance rate of > 99.00%*; high opacity door violations. |

***Note for coke battery violations:** Compliance rate is based on the coke batteries' total compliance rate for the quarter subject to the present enforcement action and prior quarter using the Department's inspections, including those performed by its Method 303 contractors, and comparing the inspections to the Department's standards. High opacity door inspections are not to be used in the compliance rate calculation.

(C) Degree of Willfulness:

| | |
|------|--|
| 0.3 | Intentional or Reckless: A violation that was intentional or that was done with knowledge that the relevant conduct or omission was unlawful or that resulted from a reckless disregard of applicable regulatory or legal requirement or good operating practices. |
| 0 | Negligent: A violation resulting from ignorance of legal or regulatory requirements or from the failure to exercise due care, caution or diligence. |
| -0.2 | Accidental: A violation resulting from factors beyond the control of the responsible person or entity; a violation which occurred despite the responsible person or entity's exercise of due care, caution or diligence. |

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| | |
|-------|---|
| 0 | >200 employees; Net worth or net current assets > \$5,000,000 |
| -0.1 | 51-200 employees; Net worth or net current assets between \$1,000,000-\$5,000,000 |
| -0.25 | 11-50 employees; Net worth or net current assets between \$500,000-\$999,999 |
| -0.45 | 1-10 employees; Net worth or net current assets < \$500,000 / Government Facility |

| | |
|-------|--|
| + 0.2 | Add 0.2 if source is a Title V source or a Synthetic Minor source. |
|-------|--|

Note: For non-government violators, if the size of the violator falls into more than one category, apply the highest factor. In the case of a company with more than one facility, the size of the violator is determined based on the company's entire operation, not just the violating facility. With regard to parent and subsidiary corporations, only the size of the entity subject to the enforcement action should be considered.

Step 3 – Determine the economic benefit from non-compliance: See Section III (“Economic Benefit Component”), above, for determining the economic benefit gained by such person, source, or facility by failing to comply with Article XXI.

Step 4 – Determine the cost to the Department: Extra monetary costs for the investigation and preparation of the case, such as source sampling costs and laboratory costs, may be identified and added to the adjusted civil penalty. All costs recovered by the Department shall be paid into the Department's Air Pollution Control Fund. Article XXI, § 2109.08.b.

Step 5 – Determine whether an additional deterrent penalty should be assessed: If additional deterrent effect is justified by the circumstances of the case, an appropriate deterrent penalty should also be added to the adjusted civil penalty.

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APPENDIX “A”
(Asbestos Violations)

| Article XXI Section | Violation Description | Severity of Violation |
|---|--|----------------------------------|
| 2101.11.a | Failure to comply with permit condition and/or causing potential danger to public health, safety or welfare. | Major |
| 2105.60 | The removal, encasing, or encapsulating of ACM without a valid Asbestos Abatement Contractor License issued by the Department. | Major |
| 2105.61.a | Failure to meet accreditation requirements under the federal Toxic Substances Control Act and the Pennsylvania Asbestos Occupations Accreditation and Certification Act. | Major |
| 2105.61.b | Failure to have photocard issued by DOLI or course certificate available for inspection. | Low |
| 2105.62.b; 40 C.F.R. § 61.145(a) | Failure to perform an asbestos survey prior to demolition or renovation. | Major |
| 2105.62.f-g; 40 C.F.R. § 61.145(b). | Failure to submit an Asbestos Notification Form prior to demolition or renovation work starting. | Major |
| 2105.62.f-g; 40 C.F.R. § 61.145(b). | Asbestos Notification Form submitted late, but prior to asbestos removal or demolition starting date. | Low |
| 2105.62.f.1 2105.62.g 2105.62.h.3.A | Asbestos Notification Form or Permit Application lacks required information or documentation. | Low |
| 2105.62.f.2 2105.62.h | The removal of asbestos without a permit or failure to comply with permit requirements. | Major |
| 2105.62.h.1.B.i | Failure to submit permit application prior to asbestos abatement. | Major |
| 2105.62.h.1.B.ii | Performing asbestos abatement prior to permit being issued. | Moderate |
| 2105.62.h.1.B.iii | Failure to perform abatement in compliance with permit requirements. | Major |
| 2105.62.h.2 | Failure to post abatement permit at the work area. | Low |
| 2105.62.h.3 | Submitting an application less than 10 days from proposed start of abatement and failure to submit a complete permit application and application fee. | Low |
| 2105.62.h.4 | Failure to submit application fee with the permit application. | Low |
| 2105.62.h.7 | Performing asbestos abatement after the expiration date on the permit. | Low |

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| | | |
|-----------------|--|----------|
| 2105.62.h.8.A | Failure to submit a permit amendment prior to the removal of ACM that differs from the ACM identified by type, amount, or specific location in the permit. | Moderate |
| 2105.62.h.8.D.i | Failure to timely submit permit amendment after amendment conditionally approved in the field or verbally of the phone. | Low |
| 2105.62.h.9 | Performing abatement after permit has been rejected, suspended, or revoked. | Major |
| 2105.62.h.10.A | Failure to follow permit conditions. Information provided as part of permit application constitutes permit condition and must be complied with during abatement. | Major |
| 2105.62.h.10.B | After permit issuance – removal of ACM that differs from the ACM identified by type, amount, or specific location in the permit. | Moderate |
| 2105.62.i.2 | Requesting a waiver of 10-day notification when no emergency exists. | Low |
| 2105.62.j.3 | Failure to submit a timely and complete written quarterly report following the approval of an Operating & Maintenance Plan. | Moderate |
| 2105.62.k | Failure to submit a notification to the Department of completion of the full set-up and preparation of work site prior to commencement of abatement. | Low |
| 2105.63.b.1 | Failure to post warning signs at all approaches to the work area as required. | Moderate |
| 2105.63.b.2 | Failure to maintain negative air pressure in the work area at all times. | Major |
| 2105.63.c.1 | Failure to “immediately” decontaminate any area outside work area which has become contaminated. | Major |
| 2105.63.c.2 | Failure to notify the Department within 60 minutes of the contamination of an area outside the work area as a result of asbestos abatement. Failure to provide written notice to the Department within 7 days. | Moderate |
| 2105.63.d | Failure to properly cover and enclose all fixed objects, openings, floor and wall surfaces with minimum six mil plastic sheeting sealed with tape. | Moderate |
| 2105.63.d.1 | Failure to shut down HVAC systems prior to abatement. | Major |
| 2105.63.d.2 | Failure to remove all moveable objects from work area prior to abatement. | Low |
| 2105.63.d.3 | Failure to cover and enclose a fixed object in work area with minimum six mil plastic sheeting sealed with tape. | Low |
| 2105.63.d.4 | Failure to cover all openings (e.g. windows doorway, ducts) with minimum six mil plastic sheeting sealed with tape. | Moderate |
| 2105.63.d.5 | Failure to properly cover all floors and wall surfaces with minimum six mil plastic sheeting sealed with tape. | Moderate |

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| | | |
|---------------|--|----------|
| 2105.63.e | Failure to provide, maintain and/or utilize a decontamination enclosure system at all exits and entrances to work area. | Major |
| 2105.63.f.1 | ACM not properly wetted or kept wet during removal. | Major |
| 2105.63.f.2 | Failure to properly remove ACM in a manner so as to prevent the release of any fibers during removal and/or disposal. | Major |
| 2105.63.f.3 | Failure to remove ACM in manageable sections capable of containerization in six mil poly bags or drums. | Moderate |
| 2105.63.f.4 | Failure to carefully lower to the floor ACM during removal. | Moderate |
| 2105.63.f.5 | Failure to properly bag, seal, place in drums, and label all removed ACM. | Major |
| 2105.63.f.6 | Failure to properly wrap and seal oversized components that do not fit into drums. | Major |
| 2105.63.f.7 | Failure to properly wet clean all surfaces from which ACM has been removed. | Moderate |
| 2105.63.g | Failure to properly encapsulate ACM. | Moderate |
| 2105.63.h.1 | Failure to properly remove and containerize all visible accumulations of ACM and asbestos containing debris. | Moderate |
| 2105.63.h.2 | Failure to properly wet clean, dry, and vacuum all objects and surfaces in the work area. | Moderate |
| 2105.63.h.2 | Failure to properly dispose of all rags, mops, and sponges used in clean-up. | Moderate |
| 2105.63.h.2 | Commencing clearance air sampling and/or contacting the Department to arrange for final clearance inspection prior to achieving no visible residue remaining on any surfaces or objects in the work area. | Moderate |
| 2105.63.i | Applying a non-clear encapsulant to any object or surface in a work area prior to final inspection. | Moderate |
| 2105.63.j | Failure to conduct final clearance air sampling, take proper number of samples, attain clearance standard, and/or conduct sampling and analysis as required under 2105.63.j.1–8. | Moderate |
| 2105.63.j.8 | Clearance air sampling laboratory results not on site for review. | Low |
| 2105.63.k.1 | The unauthorized removal of containment barriers or reopening of the work area to the public and/or failure to maintain negative air pressure until the final clearance inspection results were deemed acceptable. | Major |
| 2105.63.k.5-6 | Failure to pass a final clearance inspection or reinspection. | Low |
| 2105.63.l | Failure to properly dispose of ACM. | Major |
| 2105.63.l.1 | Failure to properly containerize and seal all ACM at least once per 8-hour work shift and prior to removal from work area. | Major |
| 2105.63.l.2 | Failure to properly label leak tight containers. | Major |

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| 2105.63.1.6 | Failure to properly wet, wrap, seal, and/or transport ACM which cannot be placed in leak-tight containers. | Major |
| 2105.63.1.8 | Failure to transport ACM directly to landfill or temporary storage of ACM outside the work area for more than 8 hrs. | Moderate |
| 2105.63.1.9 | Failure to maintain and/or produce all transportation and disposal documentation upon request by the Department. | Major |
| 2105.63.m.3 | Failure to obtain approval from the Department for an alternative procedure to be followed on an abatement project. | Major |
| 2105.63.m.5 | Improper use of heating equipment or high-pressure air, liquid, or solids for the removal, wetting, or clean-up. | Major |