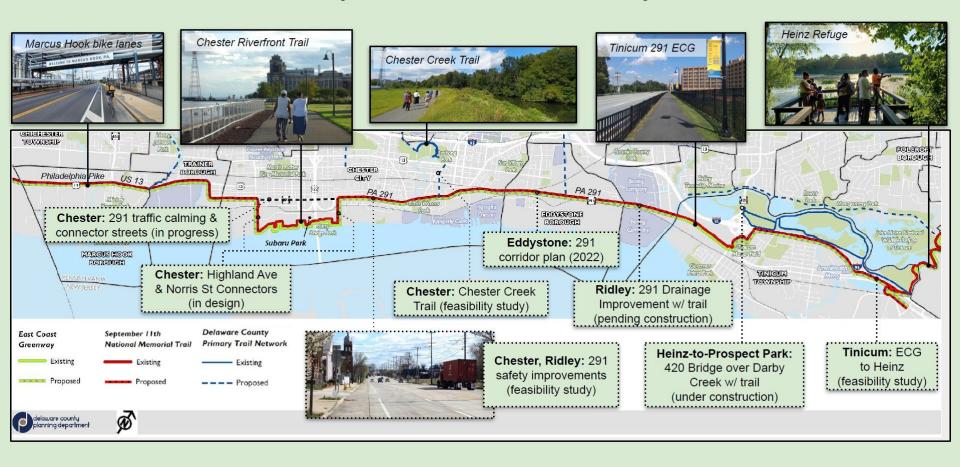
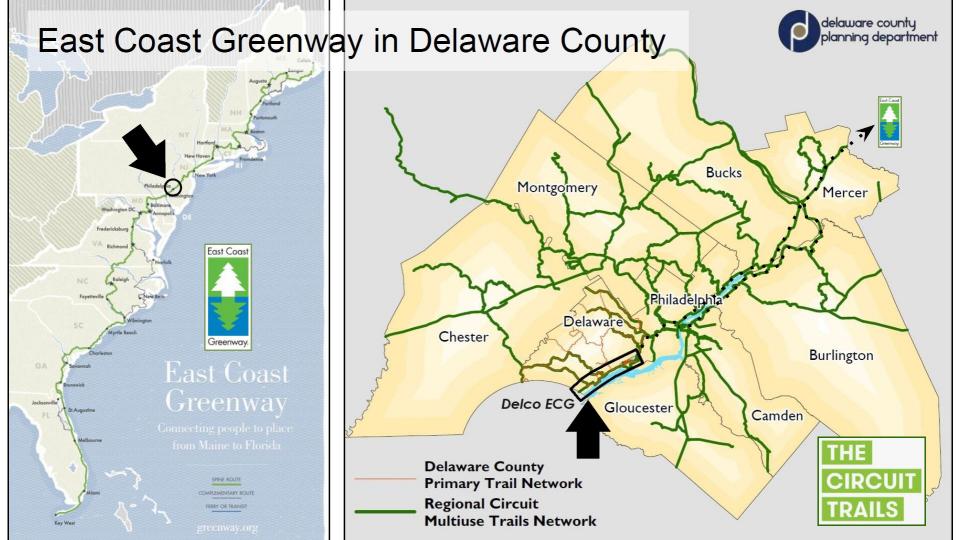




East Coast Greenway in Delaware County





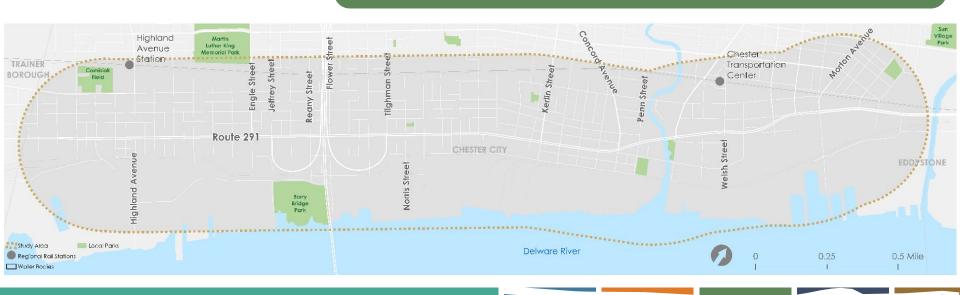


Study Overview

This study will assess the **feasibility of a road diet** and **multimodal safety improvements** along Route 291 from Irving Street to Ridley Creek.

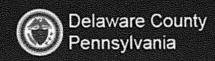
It will also make recommendations for the **dedicated East**Coast Greenway facility through Chester City and Ridley

Township.



Improving Safety on Route 291

Delaware County, PA



Please provide any feedback, comments, or questions you have on improving safety on Route 291.

My Name is Tykera Beautord. I Am the daughter of the late Tyrine Beautord who passed away on his motor cycle 2009 may 19th I have the infortunate privilegy of seeing his crash site imprint on the hoge Pole by harahs cusino. Please make 291 sate for all whose on those roads!

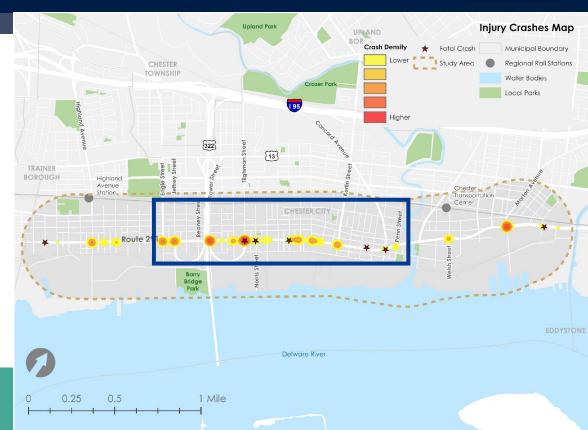


Reduce All Crashes





Total Crashes Along this Section of Route 291 From 2017 to 2021



Objectives



Improve Safety For All



Create Connections for Walking & Biking



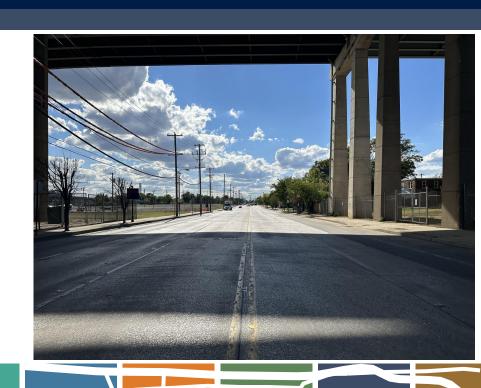
Optimize Roadway Operations



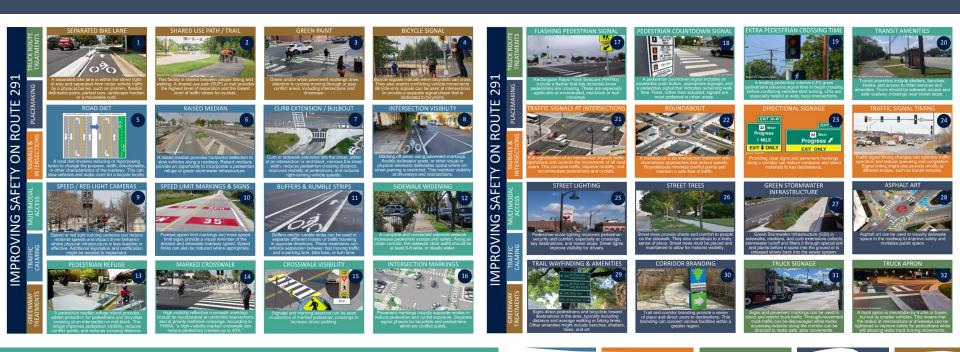
Balance Residential and Industrial Needs



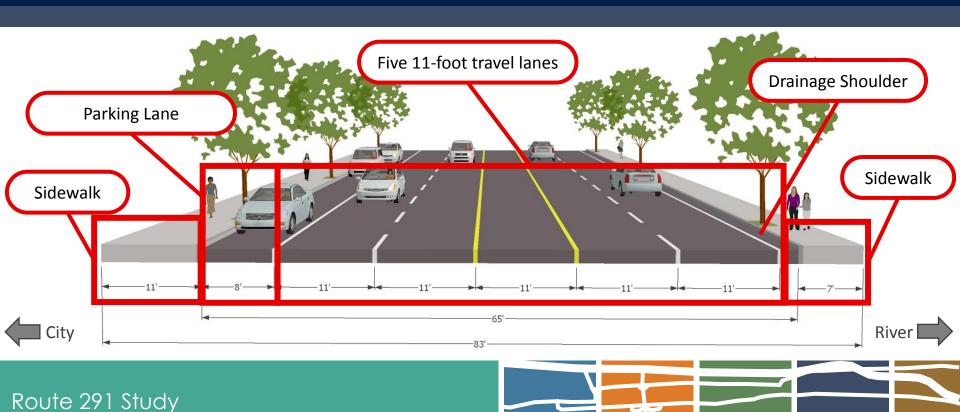
Plan for Implementation



Toolkit

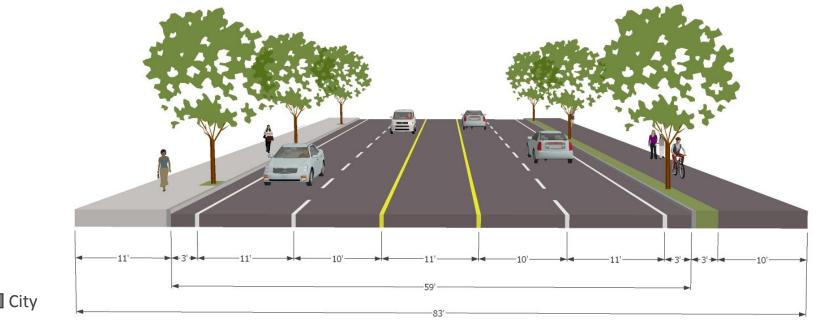


Typical Existing Section



Alternative A

- Maintains 5 lanes of traffic
- Includes safety improvements
- Shared use path
- Eliminate the on-street parking lane
- Reduce the curb-to-curb width

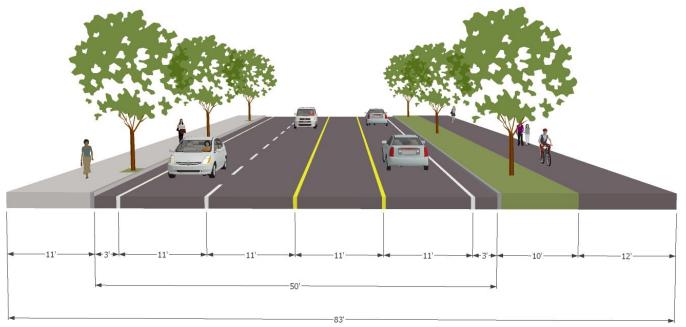






Alternative B2

- Hybrid 5-lanes, 3-lanes, 4-lanes
- Includes safety improvements
- Shared use path (or separate bike path)
- Maintain some on-street parking
- Reduce the curb-to-curb width

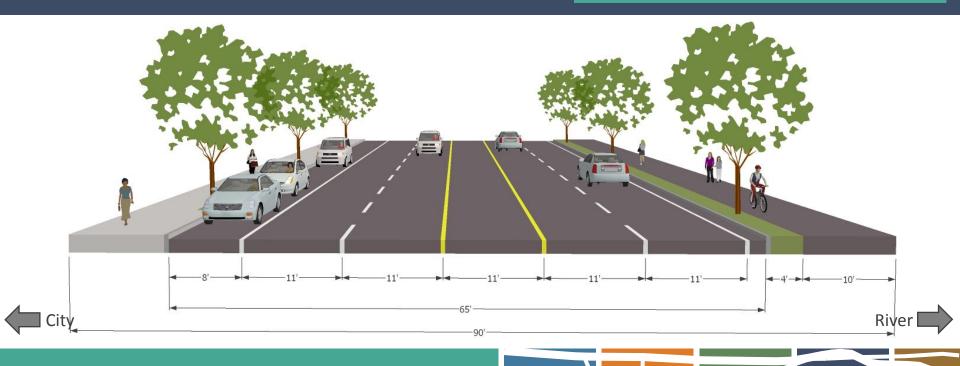






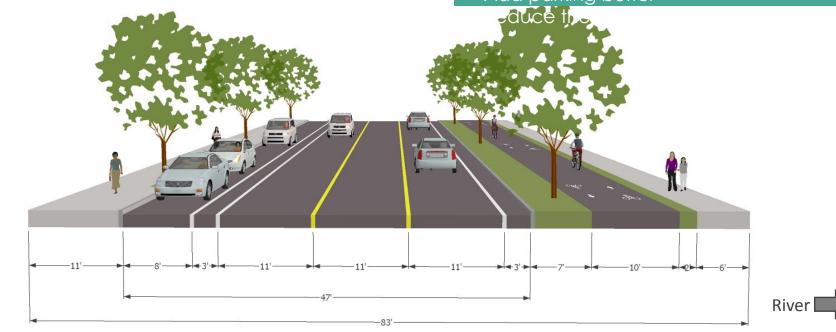
Alternative A2

- Maintains 5 lanes of traffic
- Includes safety improvements
- Shared use path
- Maintain the on-street parking lane
- Maintain the curb-to-curb width



Alternative B

- Reduces to 3 lanes of traffic
- Includes safety improvements
- Shared use path (or separate bike path)
- Maintain the on-street parking lane
- Add parking buffer



City

Alternative B2



Reduce Fatal & Serious Injury Crashes

5 Lanes, No Safety Improvements

58 Predicted Crashes

40 Severe Crashes

18 PDO

Reduce to 3 Lanes

44 Predicted Crashes

27 Severe Crashes

17 PDO



Keep 5 Lanes, Make Safety Improvements

Alternative B – 24 Predicted Cras

Reduce to 3 Lanes, Make Safety Improvements

34 Predicted Crashes

24 Severe Crashes 10 PDO

24 Predicted Crashes

15 9 PDO

Reduces potential severe crashes by 40%

Reduces potential severe crashes by

63%

PDO = 1

Reduce Fatal & Serious Injury Crashes

Reduce All Crashes



Severe Crash = Fatal & Serious Injury
PDO = Property Damage Only Crashes
Predicted Crashes per

Predicted Crashes per

Route 291 Study

Reduce Fatal & Serious Injury Crashes

By 2050, that's...

5 Lanes, No Safety **Improvements**

1,566 Predicted Crashes

1,080 Severe Crashes

486 PDO

Reduce to 3 Lanes

1,188 Predicted Crashes

729 Severe Crashes

459 PDO

Alternative A -

Keep 5 Lanes, Make Safety Improvements 918 Predicted Crashes

648 Severe Crashes

270 PDO

Alternative B -

Reduce to 3 Lanes, Make **Safety Improvements**

648 Predicted Crashes

405 Severe 243 PDO

Severe Crash = Fatal & Serious Injury PDO = Property Damage Only Crashes Predicted Crashes by 2050



Putting Together the Pieces

Chester Segment of the East Coast Greenway

- Highland Avenue
- Norris Street
- W. 2nd Street (Highland Norris)
- Chester Creek Connector Trail









September 11th
National Memorial Trail

Existing

Proposed



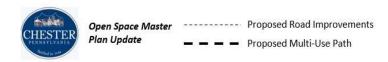
Delaware County Primary Trail Network

Existing

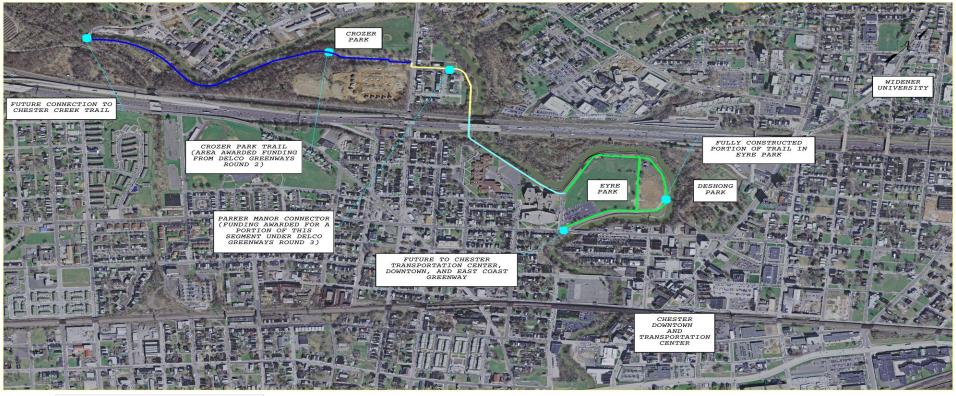
---- Proposed



Chester Creek Trail East Coast Greenway Garnet Valley Greenway



Map created by Delaware County Planning and adapted by East Coast Greenway Alliance



CONSTRUCTED SECTION OF TRAIL DESIGNED SECTION OF TRAIL FUNDING SECURED PORTION OF TRAIL PROPOSED FOR FUNDING

CHESTER CREEK TRAIL MAP

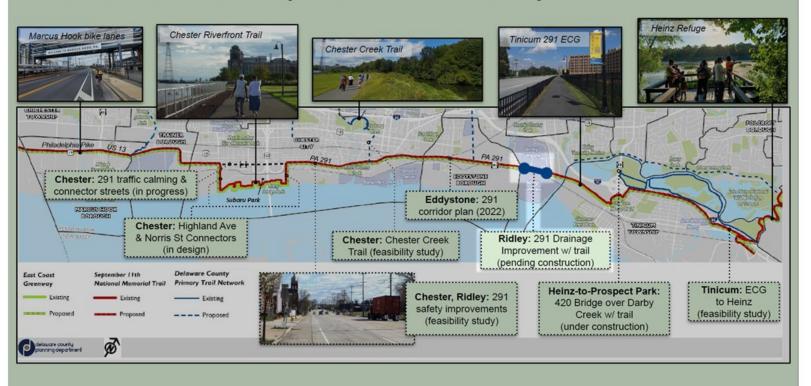
CITY OF CHESTER CHESTER, PA 19013 610.447.7700 DATED: OCTOBER 2022

SR 0291 INDUSTRIAL HWY. DRAINAGE IMPROVEMENT PROJECT INCORPORATING A SHARED USE PATH



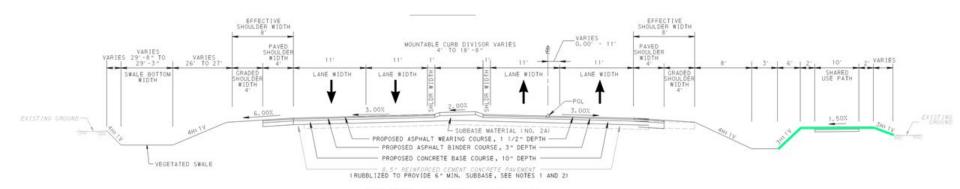
LOCATION

East Coast Greenway in Delaware County





ROAD CROSS SECTION







PROPOSED IMPROVEMENTS



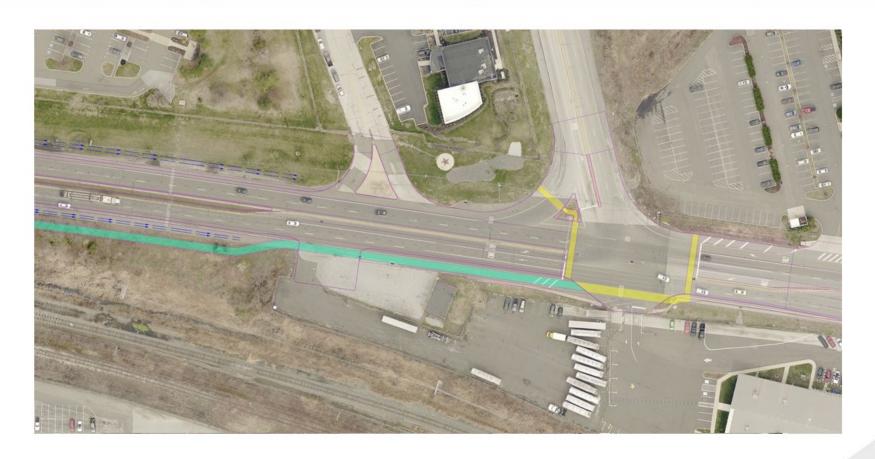


PROPOSED IMPROVEMENTS





PROPOSED IMPROVEMENTS





SCHEDULE

		2024			2025			2026			2027					
Task	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Design																
NEPA Studies																
Final Design																
Utility Conflict Resolution											9					
Section 404/105 Permitting																
ROW Acquisition																
Contracting																
Construction*																



^{*}During construction, the road will be reduced to a single lane in each direction.

^{*}Existing sidewalks will remain open to pedestrians during construction.



EAST COAST GREENWAY:TINICUM CONNECTION

FEASIBILITY STUDY



UPDATE

ADVANCING THE CREATION OF A NEW TRAIL

TINICUM EAST COAST GREENWAY TRAIL FEASIBILITY STUDY

WHY ARE WE HERE?

Tinicum Township hired TPD to identify and determine the feasibility of a new off-road alternative to the current East Coast Greenway segment that travels along Industrial Hwy (State Road PA 291).

PRIMARY GOAL & STUDY AREA INFORMATION

The study area is within Tinicum Township, Pennsylvania. The project is investigating a potential off-road alternative connection between the existing Industrial Heritage Parkway/ East Coast Greenway Trail along State Road PA 291, and the John Heinz National Wildlife Refuge (Heinz NWR).

The preferred alternative identified through this study would be an alternative to the current route that requires bicycle and pedestrian users to navigate challenging high speed and high-volume roadways with no separate facilities.

This current on-road route, shown on the adjacent map, follows the Industrial Heritage Parkway/ East Coast Greenway Trail along State Road PA 291 to access the existing trail network in the John Heinz National Wildlife Refuge (Heinz NWR).

WHAT IS A FEASIBILITY STUDY?

Before a planned connection can become a route, the partners and communities need to do some research to discover:

- What do we want to do?
- Can it be done? And how?
- What are the alternatives?
- · What impact might it have?
- What would it take to be successful?

- · How much would it cost?
- What would it take to get it designed and permitted?
- Are there funding opportunities to help implement the project?



ADDITIONAL PROJECT OBJECTIVES

In addition to the primary goal of closing a gap in the trail network with a high-quality greenway, the objectives of this feasibility study also include:

- 1 Connecting people with existing trails and cultural sites including the Heinz NWR; Fort Mifflin and the PA 291 Sidepath (existing East Coast Greenway
- Preserving and enhancing green space
- 3 Providing opportunities for better health and quality of life
- 4 Offering safe places to walk and bike for transportation and recreation

TINICUM EAST COAST GREENWAY TRAIL FEASIBILITY STUDY

WHY IS THIS CONNECTION SO IMPORTNAT?

This trail segment under study is included in the national (A) East Coast Greenway and (B) 9/11 National Memorial Trail networks. The trail segment is also included in (C) The Circuit Trails network covering the greater Philadelphia area.



WHAT WOULD THE TRAIL LOOK LIKE?

As a future dedicated segment of the East Coast Greenway, the trail would need to be designed to the standards set out by the East Coast Greenway Alliance. These design standards identify the width of the trail, the preferred surface and specify that the trail must be accessible to people of all abilities.

Specifically, the design standards detail:

· Asphalt surface

12' GREENWAY

28' EASEMENT

- · 10-12' wide (two-way bicycle traffic) or 14' wide for higher use segments
- · A running slope of 5% or less
- A cross slope of 2% 5%
- Bridges must be 16' wide to include 12' of usable trail and 4' of safety features such as walls and railings

ADVANCING THE CREATION OF A NEW TRAIL

TINICUM EAST COAST GREENWAY TRAIL FEASIBILITY STUDY

ALTERNATIVES DEVELOPMENT STEPS













Investigations

Committee Feedback

Mapped

Constructibility Review

Property Owner Meetings

PECO & PennDOT Meetings

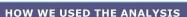
Seaments



4 CATEGORIES

- Under Consideration
- 2 Under Consideration: Must Meet PECO Design Criteria
- 3 Under Consideration: Requires Additional Stakeholder/ Property Owner Outreach
- A Removed from Consideration

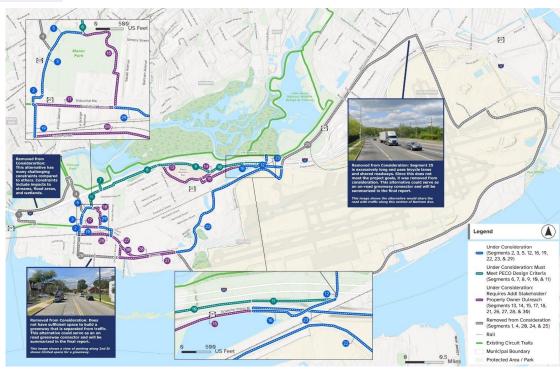




Based on the segment analysis, the team mapped

5 ALTERNATIVES





HOW WE WILL GET TO A PREFERRED ALTERNATIVE

TINICUM EAST COAST GREENWAY TRAIL FEASIBILITY STUDY

ALTERNATIVE EVALUATION WE WILL USE

WHY ARE WE USING AN ABBREVIATED LIST?

EVALUATION CRITERIA (COMPLETE)



DIRECTNESS OF CONNECTION

Compared to other alternatives, how direct is this route for users to get from stated the project's start and end points?



ABILITY TO ACQUIRE ENVIRONMENTAL PERMITS

Based on known natural and human environmental impacts, which include things such as flood zones, sensitive species and habitats, areas with hazardous waste, and historic and archaeological sites, how likely is it that this option can be permitted?



QUALITY OF USER EXPERIENCE

Compared to other alternatives, what level of user experience does this alternative provide? Considerations include visual surroundings, separation from hazards, feeling of personal safety, connection to nature, and topography (is the alternative flat or hilly).



AVAILABILITY OF RIGHT-OF-WAY

(Anticipated Property Owner Cooperation)
To what degree is right-of-way available or owned by property owners who would cooperate to build the alternative.



SECONDARY BENEFITS

Beyond the primary project goal, how well does this alternative provide opportunity for secondary benefits such as increased access for underserved populations (equity), economic development, connections to community resources, connections to places, etc.



SEPARATION FROM MOTORIZED VEHICLE CONFLICTS

Compared to other alternatives, how well does this alternative avoid motorized vehicle conflicts (such as busy intersections, high volume/high speed crossings and shared road conditions). Alternatives that have fewer traffic conflicts provide higher levels of safety for trail users. **EVALUATION CRITERIA - NEED MORE INFORMATION** (WILL BE PRESENTED AT THE NEXT COMMUNITY MEETING)



ABILITY TO CONSTRUCT

Based on an investigation of physical obstacles and constraints such as roads/railroads, utilities, topography, buildings, or waterways, how likely is it that this alternative can be built?



ALIGNMENT WITH COMMUNITY GOALS

Based on community leadership, public feedback, adopted plans or planning efforts, and stated local and organizational goals and objectives, what is anticipated level of community support for this alternative?



COST EFFECTIVENESS

Compared to other alternatives, how cost effective is this alternative?



POTENTIAL FOR FUNDING

Compared to other alternatives how likely is this route to qualify for known grant and funding opportunities?



POTENTIAL FOR TIMELY IMPLEMENTATION

Compared to other alternatives, how likely would this project be able to be designed, permitted and constructed?

Based on the project status, there are still some things we don't know such as:

- · Construction Costs
- Public Sentiment ← WE'RE GATHERING THIS
- Local Leadership Support Levels
- · Outcomes of Round 2 of Property Owner Engagement

EXAMPLE OF HOW ALTERNATIVES WILL BE SCORED

HOW DOES ALTERNATIVE A SCORE?

	ALTERNATIVE/SCORE						
CRITERIA	ALT A	ALT A-1					
Directness of Connection	4	4					
Ability to Acquire Environmental Permits	4	4					
Quality of User Experience	3	3					
Availability of Right-of-Way (Anticipated Property Owner Cooperation)	4	2					
Secondary Benefits	3	3					
Separation from Motorized Vehicle Conflicts	2	3					
TOTAL	20	19					

WHAT DO THESE SCORES MEAN?

Based on a comparison of all alternatives, this alternative has been scored on how it ranks with respect to meeting this project evaluation criteria:













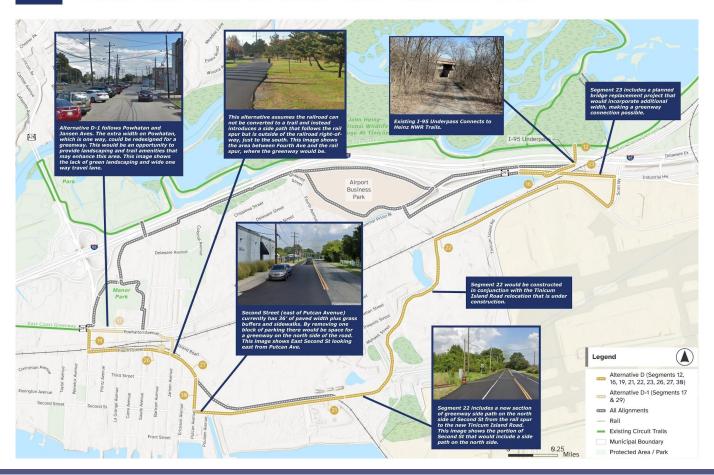
ALTERNATIVE B



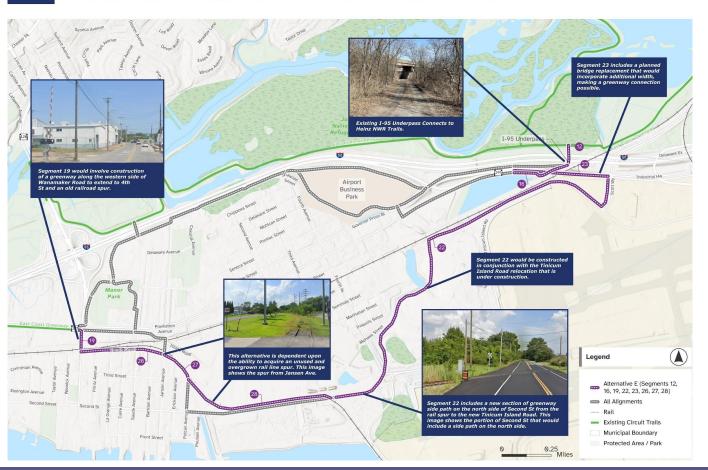
ALTERNATIVE C



ALTERNATIVE D







PRELIMINARY SCORES

(BASED ON LIMITED CRITERIA)

CRITERIA	ALTERNATIVE/SCORE													
	ALT A	ALT A-1	ALT B	ALT B-1		ALT C	ALT C-1			ALT D-1	ALT E			
Directness of Connection	4	4	4	4	4	3	3	3	3	3	3			
Ability to Acquire Environmental Permits	4	4	3	3	3	3	3	3	2	2	2			
Quality of User Experience	3	3	2	2	2	3	3	3	3	2	3			
Availability of Right-of-Way (Anticipated Property Owner Cooperation)	4	2	4	2	3	3	2	3	2	2	2			
Secondary Benefits	3	3	2	2	2	3	4	3	3	3	3			
Separation from Motorized Vehicle Conflicts	2	3	2	3	2	2	2	2	4	4	4			
TOTAL	20	19	17	16	16	17	17	17	17	16	17			

Evaluation Scoring

Based on a comparison of all alternatives, this alternative has been scored on how it ranks with respect to meeting this project evaluation criteria: 4 = Highest 3 = Above Average 2 = Average 1 = Below Average

ADDITIONAL ITEMS TO INVESTIGATE & CONSIDER

(REPORTED AT NEXT COMMUNITY MEETING)



ABILITY TO CONSTRUCT

Based on an investigation of physical obstacles and constraints such as roads/railroads, utilities, topography, buildings, or waterways, how likely is it that this alternative can be built?



ALIGNMENT WITH COMMUNITY GOALS

Based on community leadership, public feedback, adopted plans or planning efforts, and stated local and organizational goals and objectives, what is anticipated level of community support for this alternative?



COST EFFECTIVENESS

Compared to other alternatives, how cost effective is this alternative?



POTENTIAL FOR FUNDING

Compared to other alternatives how likely is this route to qualify for known grant and funding opportunities?



POTENTIAL FOR TIMELY IMPLEMENTATION

Compared to other alternatives, how likely would this project be able to be designed, permitted and constructed?

WHAT'S NEXT



Additional Property
Owner Outreach
(January & February 2024)

Finalize Alternative
Evaluations & Determine
Preferred Alternative
(March 2024)





This study will identify and determine the feasibility of a new off-road bicycle and pedestiran alternative to the current East Coast Greenway segment, which travels along Industrial Highway (State Road PA 291), and connect to the John Heinz National Wildlife Refuge (Heinz NWR). The preferred alignment identified through this study will be an alternative to the current route.

We have considered a number of route alternatives based on a range of criteria, settling on five possible route options. Take the online survey to help us rank them!

For more information, contact:
David Schreiber, Township Manager
(dschreiber@tinicumtownshipdelco.com)