

February 11, 2020 RTC



# TIP ACTIONS

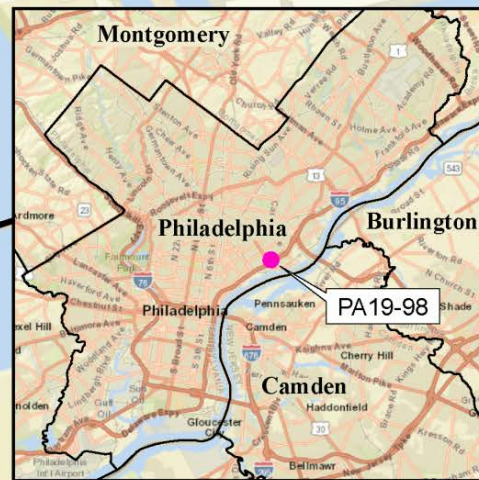
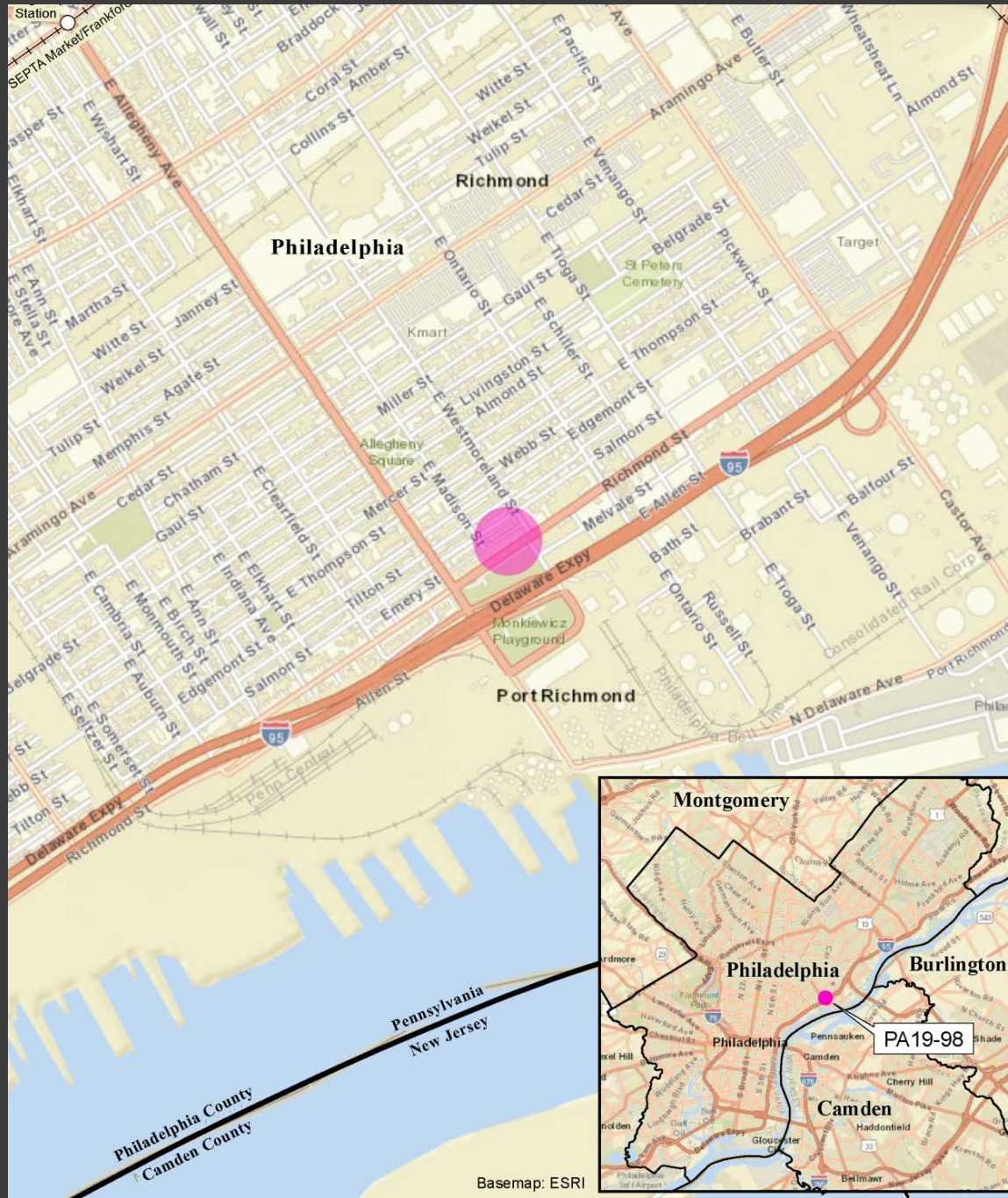
Transportation Improvement Program  
Pennsylvania TIP (FY2019-2022)  
New Jersey TIP (FY2020-2023)



# Track Improvement Program

## SEPTA | Add a New Project to Transit Program

- **TIP Amendment**
- **Action:** Add a new \$8,000,000 (\$6,400,000 Section 5307/\$1,548,000 State 1514/ \$52,000 Local) project to the TIP for FY20 ERC and rename “Westmoreland Loop” to “Westmoreland Loop/Richmond Street Track Reconstruction”.
- **Background:**
  - SEPTA Route 15 trolley track relocated and reconstructed on Richmond St. between Girard Ave. and Ann St.
  - SEPTA reimburse PennDOT 50% of cost to relocate Route 15 trolley infrastructure as part of cost-sharing agreement.





# TIP ACTION | Proposed – PA

*Agenda Item 5a*

## Recommend Board approval of SEPTA TIP Amendment request:

- **Track Improvement Program**

Add a new \$8,000,000 (\$6,400,000 Section 5307/\$1,548,000 State 1514/ \$52,000 Local) project to the TIP for FY20 ERC and rename “Westmoreland Loop” to “Westmoreland Loop/Richmond Street Track Reconstruction”.

# Transit and Regional Rail Station Program

SEPTA | Funding Increase, Add New Project, Scope Change

- **TIP Amendment - Action:**
- Increase Funding for:
  - **Conshohocken Parking Garage** - \$17,000,000 (\$15,000,000 Section 5307/\$2,000,000 FLEX/CMAQ)
- Add New Project:
  - **Direct Bus Phase B** - \$2,000,000 Section 5339B
- Shifting Funding:
  - **30<sup>th</sup> Street Station Project** - \$15M federal BUILD funding from FY19 to FY20.

# Transit and Regional Rail Station Program

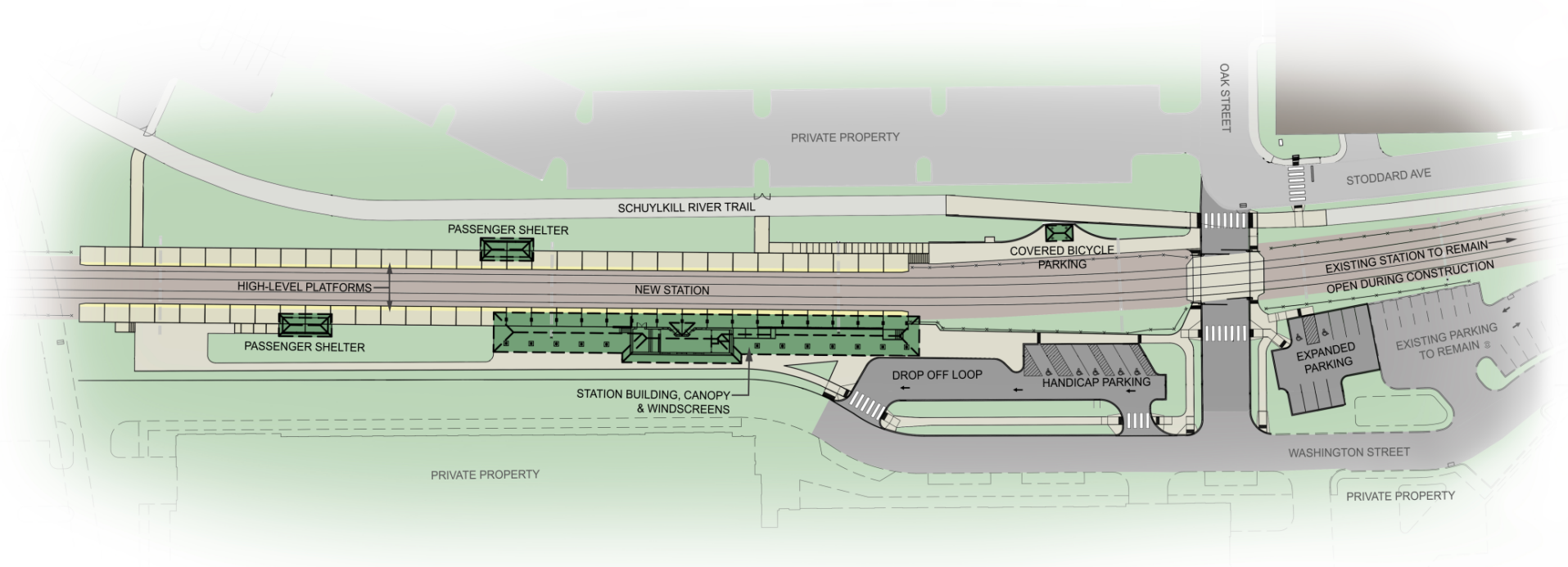
SEPTA | Funding Increase, Add New Project, Scope Change

- **Background:** PennDOT is supporting Conshohocken Parking Garage with \$15M Section 5307, which must be used on Keystone Corridor. Several administrative actions and this formal action must take place to utilize PennDOT funding.
- SEPTA also awarded \$2M for FTA competitive Bus and Bus Facilities Program for Direct Bus Phase B.
- \$15M federal BUILD funding being shifted from FY19 to FY20 in order for SEPTA to obligate and place funding in a grant for 30<sup>th</sup> Street Station Project.

**PROJECT SUMMARY:**

SEPTA is building a new accessible station at Conshohocken to include:

- High-level, accessible platforms with ramps, stairs, guard & hand rails
- New station building on inbound platform with heated waiting room & restroom facilities
- Inbound platform canopy & windscreen, two open air passenger shelters & covered bicycle parking
- Upgraded signage, lighting, plazas, sidewalks & landscaping
- Storm water management system
- New drop off loop, accessible parking stalls and expanded parking at existing parking lot
- Vehicular and pedestrian grade crossing at Oak Street
- Realignment of Schuylkill River trail
- SEPTA KEY fare and parking equipment



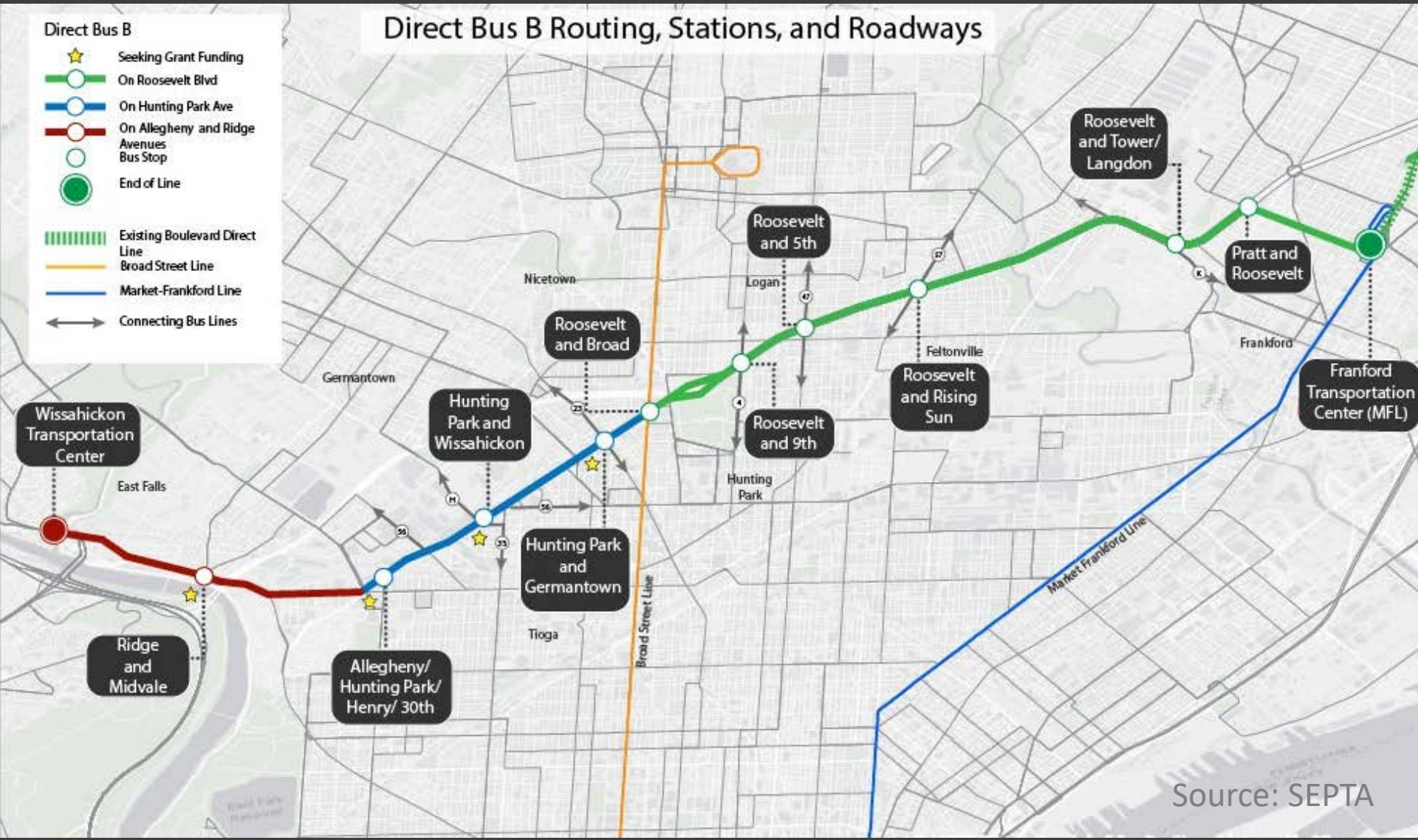
# CONSHOHOCKEN STATION - PROPOSED PLAN

SEPTA greatly appreciates your patience and cooperation while this work is completed. Please contact SEPTA Constituent Relations Coordinator Rochelle Culbreath at [rculbreath@septa.org](mailto:rculbreath@septa.org) if you have questions about this project. For current information about the SEPTA Rebuilding the System program please visit [www.septa.org/rebuilding](http://www.septa.org/rebuilding)



# Direct Bus B Routing, Stations, and Roadways

- Direct Bus B**
- ★ Seeking Grant Funding
  - On Roosevelt Blvd
  - On Hunting Park Ave
  - On Allegheny and Ridge Avenues
  - Bus Stop
  - End of Line
  - Existing Boulevard Direct Line
  - Broad Street Line
  - Market-Frankford Line
  - ↔ Connecting Bus Lines



Source: SEPTA





30TH STREET STATION – STREET LEVEL PERSPECTIVE

Source: SEPTA



30TH STREET STATION – STATION LEVEL PERSPECTIVE

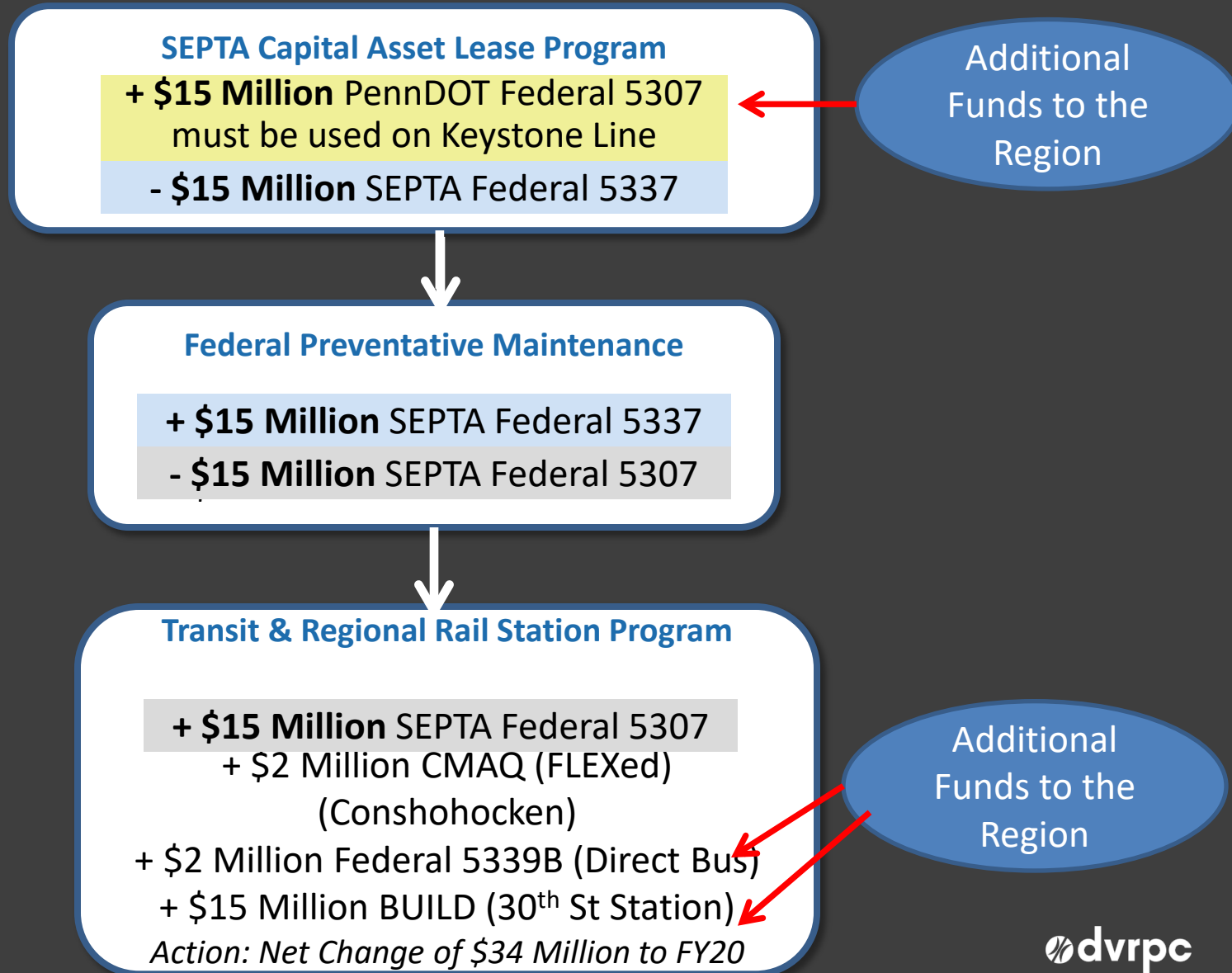
Source: SEPTA



30TH STREET STATION – MEZZANINE LEVEL FLOOR OPENING

Source: SEPTA

PennDOT has provided \$15 Million to support the Conshohocken Garage project. \$2 Million of CMAQ has been FLEXed to SEPTA. SEPTA has been awarded \$2 Million for Federal Bus and Bus Facilities Program. SEPTA is shifting \$15 Million BUILD from FY19 to FY20.





# TIP ACTION | Proposed – PA

*Agenda Item 2b*

Recommend Board approval of SEPTA's TIP Amendment request:

## Transit and Regional Rail Station Program

- Increase Funding for:
  - **Conshohocken Parking Garage** - \$17,000,000 (\$15,000,000 Section 5307/\$2,000,000 FLEX/CMAQ)
- Add New Project:
  - **Direct Bus Phase B** - \$2,000,000 Section 5339B
- Shifting Funding:
  - **30<sup>th</sup> Street Station Project** - \$15,000,000 BUILD funding from FY19 to FY20.

# PA 796/Old Baltimore Pike Realignment

## Chester County | Add New Project to TIP

- **TIP Amendment**
- **Action:** Add new \$800,000 State 581 project for CON in FY20 for reimbursement to Penn Twp.
- **Background:**
  - Pilot project for pilot HOP Assist Program
  - HOP Assist Program - Facilitate economic development & partnering with private/municipal entities to “complete worthwhile transportation system improvements”.
  - MTF accomplishes same purpose; HOP Assist did not advance



# TIP ACTION | Proposed – PA

*Agenda Item 2m*

**Recommend Board approval of PennDOT's TIP Amendment request:**

- **PA796/Old Baltimore Pike Realignment**  
Add new \$800,000 State 581 project for CON in FY20 for reimbursement to Penn Twp.

These are additional funds to the region.



# Thank You

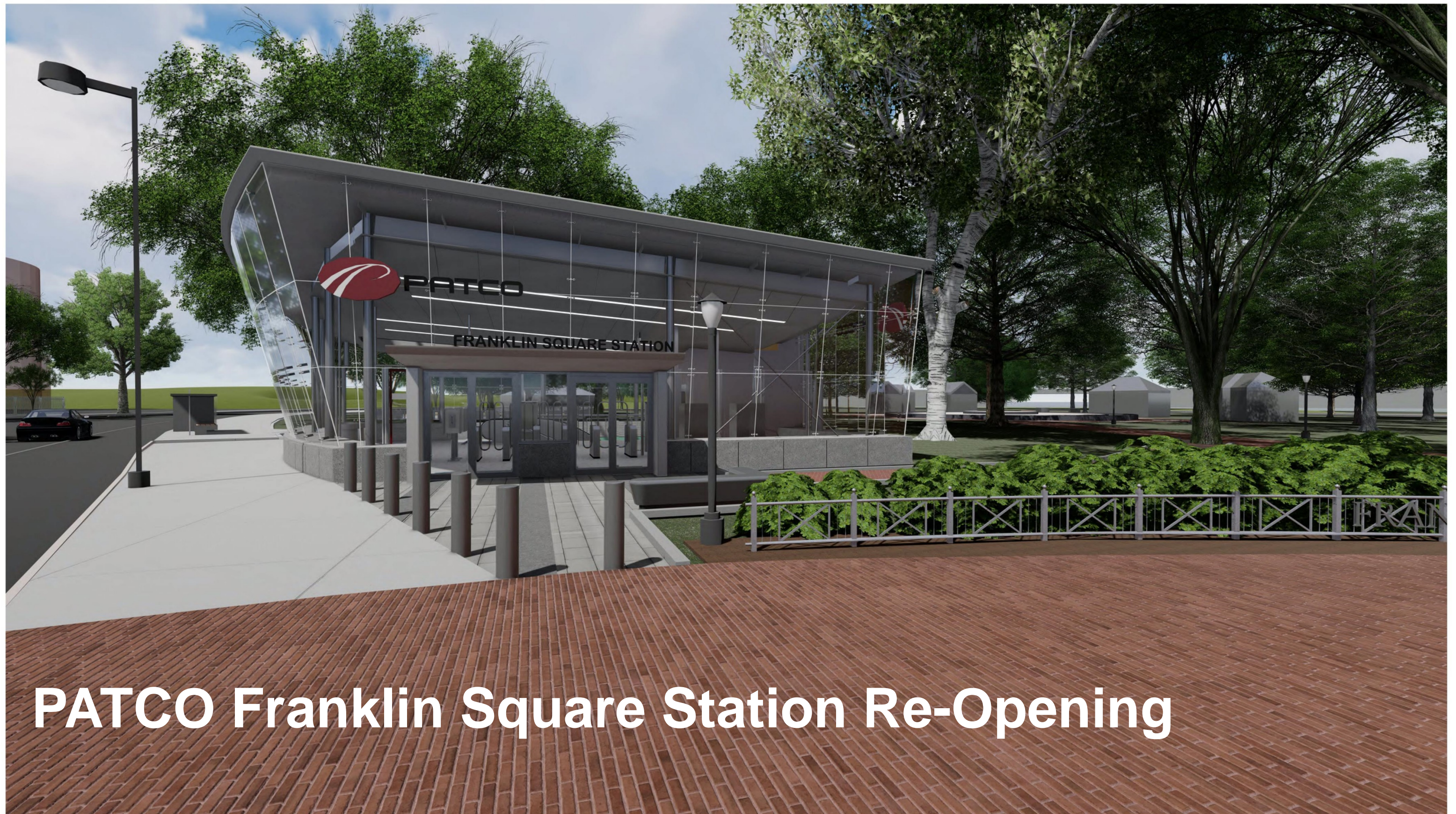
Connect With Us!



[www.dvrpc.org/TIP](http://www.dvrpc.org/TIP)







# PATCO Franklin Square Station Re-Opening

January 13, 2020



FRANKLIN SQUARE STATION RE-OPENING



# Franklin Square Station Re-Opening

## Project Purpose:

Reopen PATCO Franklin Square Station as a destination within the vibrant urban fabric that surrounds it.

## Meeting Purpose:

Present current project design to community and local businesses to develop open means of communication for partnership and collaboration.

# Franklin Square Station Re-Opening

The station renovation will:

- complement the surrounding park,
- provide a safe and secure environment,
- stimulate economic growth and employment opportunities,
- implement sustainable and energy efficient improvements,
- enhance the customer experience, and
- communicate the PATCO brand to travelers.

# Community Collaboration

- Callowhill Neighborhood Association (CNA)
- City of Philadelphia, Mayor's office
- City of Philadelphia, various departments
- Congressman Brendan Boyle, representing PA's 2nd district
- Congressman Dwight Evans, representing PA's 3rd district
- Congressman Donald Norcross, representing NJ's 1st district
- Councilman Mark Squilla, representing Philadelphia's 1st district
- Central Philadelphia Transportation Management Association (CPTMA)
- Delaware River Waterfront Corporation (DRWC)
- Delaware Valley Regional Planning Commission (DVRPC)

# Community Collaboration

- DRPA Citizen's Advisory Committee (CAC)
- Federal Transit Administration (FTA)
- Historic Philadelphia
- NJ Transit
- Old City Historic District
- Pennsylvania Horticultural Society)
- Philadelphia Chinatown Development Corporation (PCDC)
- Philadelphia Parking Authority
- Southeastern Pennsylvania Transportation Authority (SEPTA)
- US Department of Transportation (US DOT) / BUILD Grant



Description	Area
Headhouse ( <i>main</i> )	3,200 SF
Egress Headhouses ( <i>emergency only</i> )	250 SF each
Project Area /	16,250 SF
Limits of Disturbance	+ 6,250 SF
	22,500 SF
Franklin Square	356,214 SF

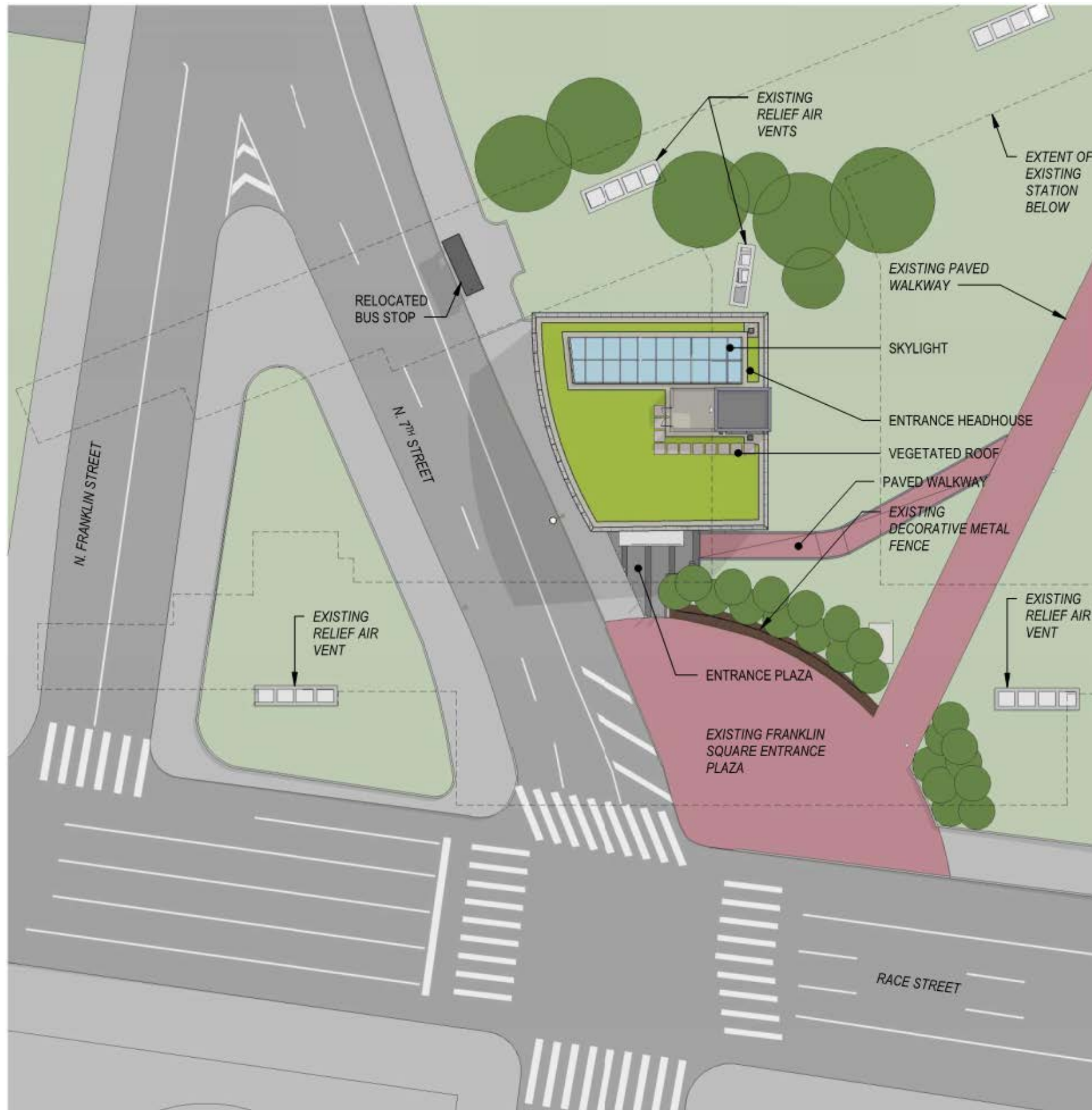


EXISTING SITE LOOKING NORTHEAST



EXISTING SITE LOOKING SOUTHWEST





EXISTING SITE LOOKING NORTHEAST

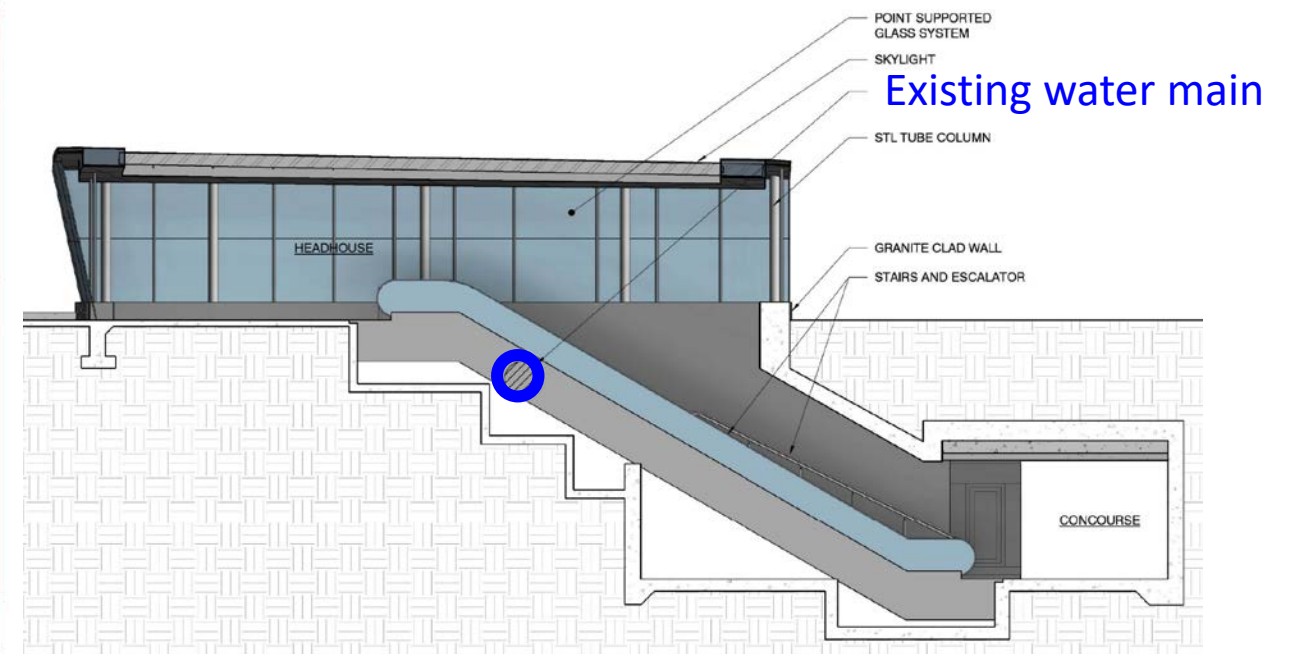


EXISTING SITE LOOKING SOUTHWEST

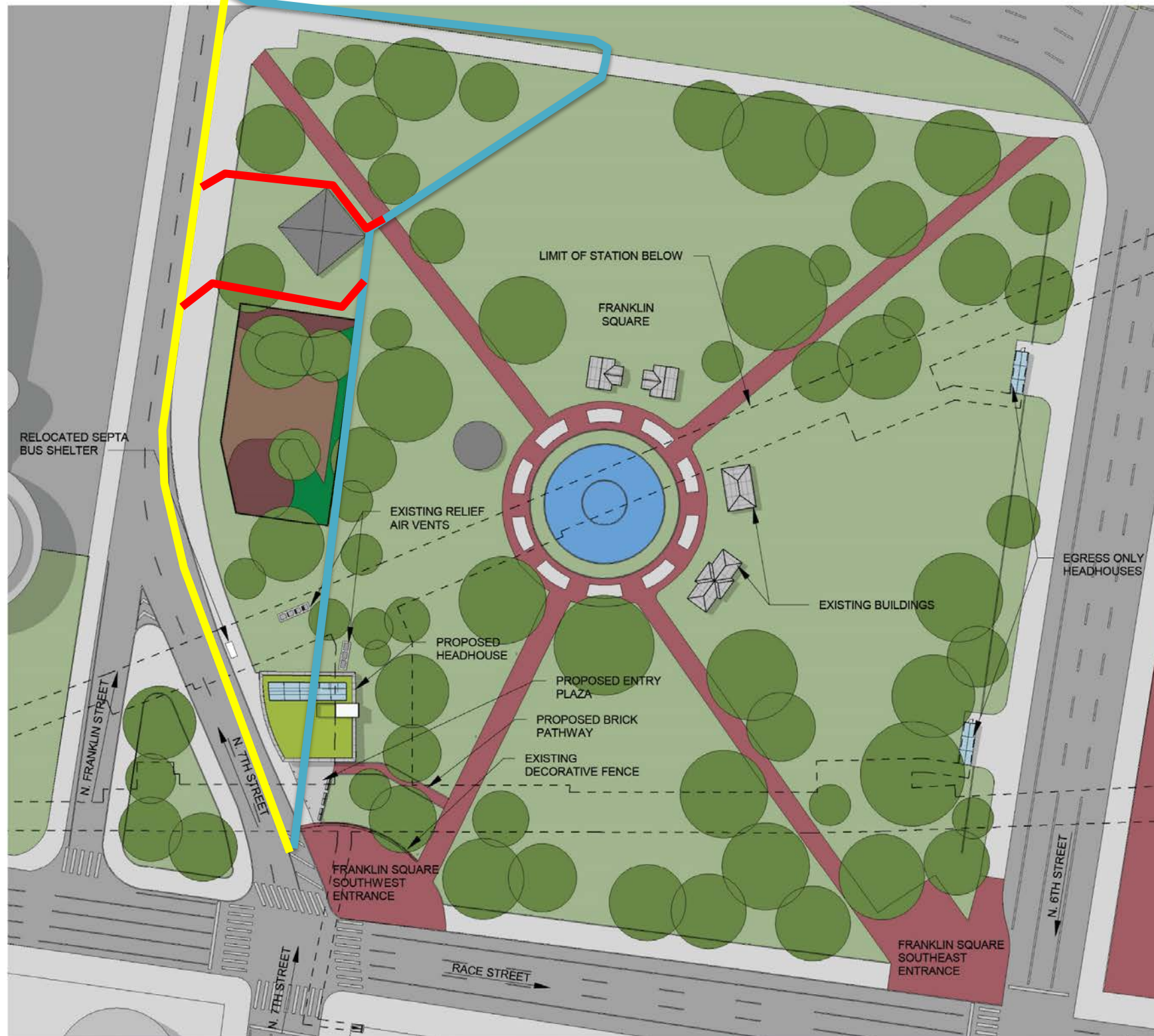




# Existing 36" Diameter Water Main



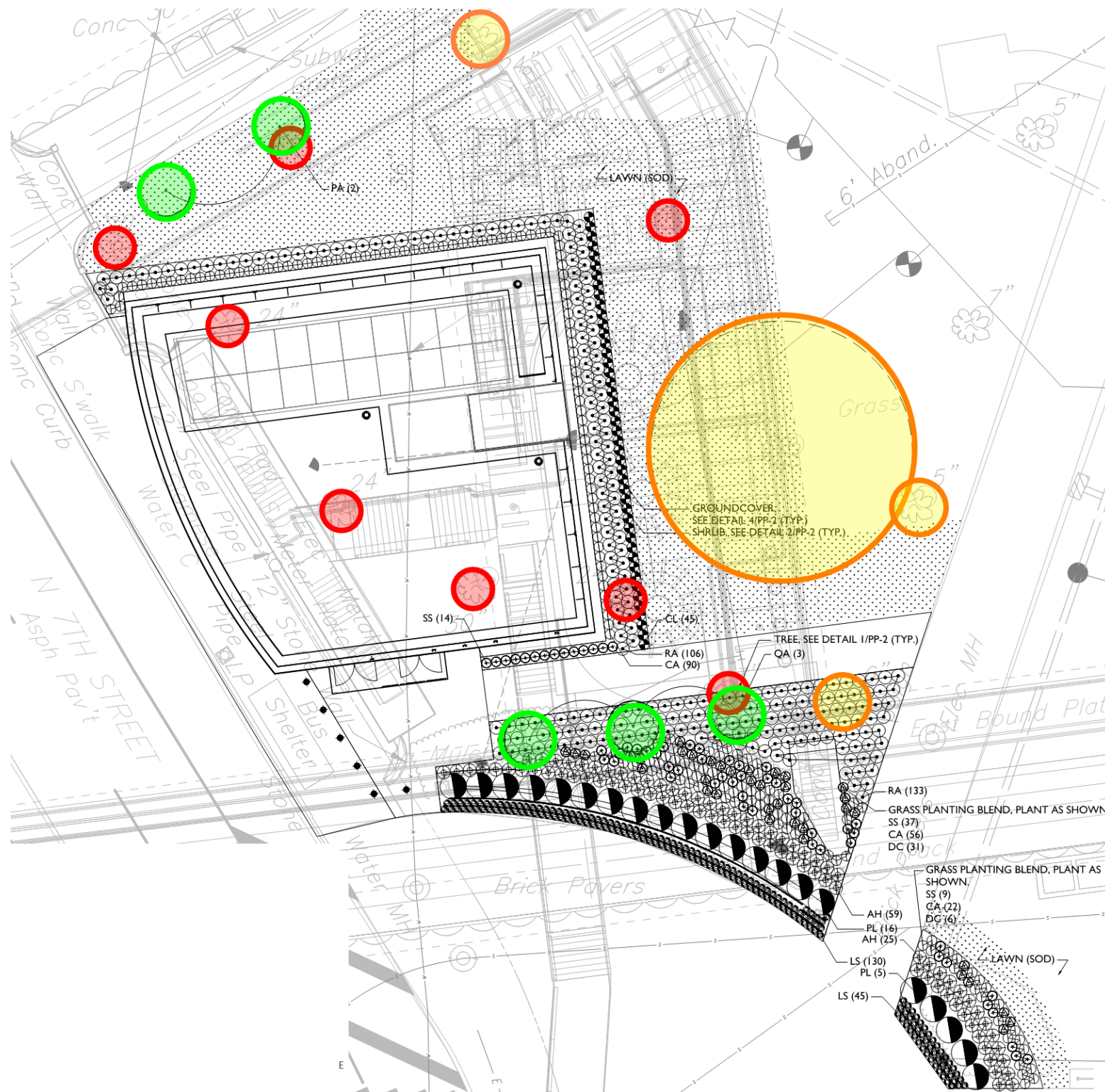
# Existing Water Main Re-Route



## Legend

- Existing routing (abandoned in-place)
- Proposed re-route
- Alternative routes (not selected)

# Landscaping



## PLAZA PLANT SCHEDULE

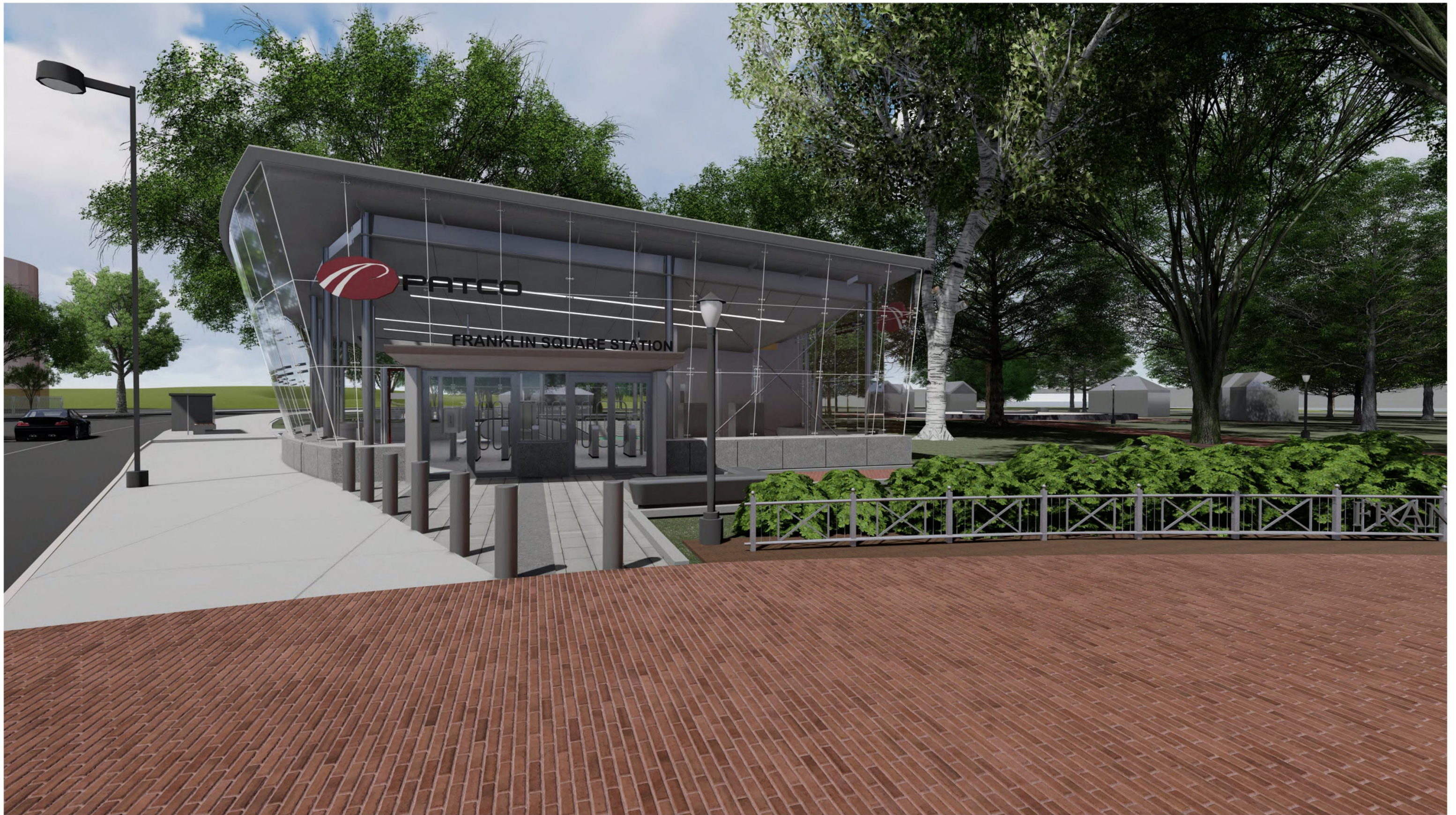
Quantity	Symbol	Scientific Name	Common Name	Size
<b>TREES</b>				
2	PA	PLATANUS X ACERIFOLIA	LONDON PLANE TREE	4-5" CAL., B&B
3	QA	QUERCUS ALBA	WHITE OAK	3.5-4" CAL., B&B
<b>SHRUBS</b>				
21	PL	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	'OTTO LUYKEN' CHERRY LAUREL	30-36" HT., 60" O.C. SPACING
239	RA	RHUS AROMATICA 'GRO-LOW'	'GRO-LOW' FRAGRANT SUMAC	18" HT., 24-30" O.C. SPACING
<b>GROUNDCOVERS, GRASSES, PERENNIALS</b>				
168	CA	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	'KARL FOERSTER' REED GRASS	1 GAL. CONTAINER, 18" O.C.
37	DC	DESCHAMPSIA CESPITOSA	TUFTED HAIR GRASS	1 GAL. CONTAINER, 18" O.C.
60	SS	SCHIZACHYRIUM SCOPARIUM 'STANDING OVATION'	'STANDING OVATION' LITTLE BLUESTEM GRASS	1 GAL. CONTAINER, 18" O.C.
84	AH	AMSONIA HUBRICHTII	BLUE STAR	1 GAL. CONTAINER, 24" O.C.
45	CL	CAREX LAXICULMUS 'BLUE BUNNY HOBBS'	'BLUE BUNNY' SEDGE	1 GAL. CONTAINER, 18" O.C.
175	LS	LIRIOPE SPICATA	LIRIOPE SP.	1 GAL. CONTAINER, 12" O.C.

## Legend

- (8) Trees Removed
- (4) Trees Protected
- (12) Proposed New Trees Planted  
Five (5) shown in graphic

# Station Re-Opening Design Scope

- Architecture
- Code and ADA compliance
- Utility coordination
- Site development
- Landscaping
- Structural
- Mechanical
- Plumbing
- Fire Protection
- Electrical: power and lighting
- Fire Alarm
- Communications
- Special Systems
- NEPA / permitting





ORIGINAL HEADHOUSE



EXISTING CONDITIONS

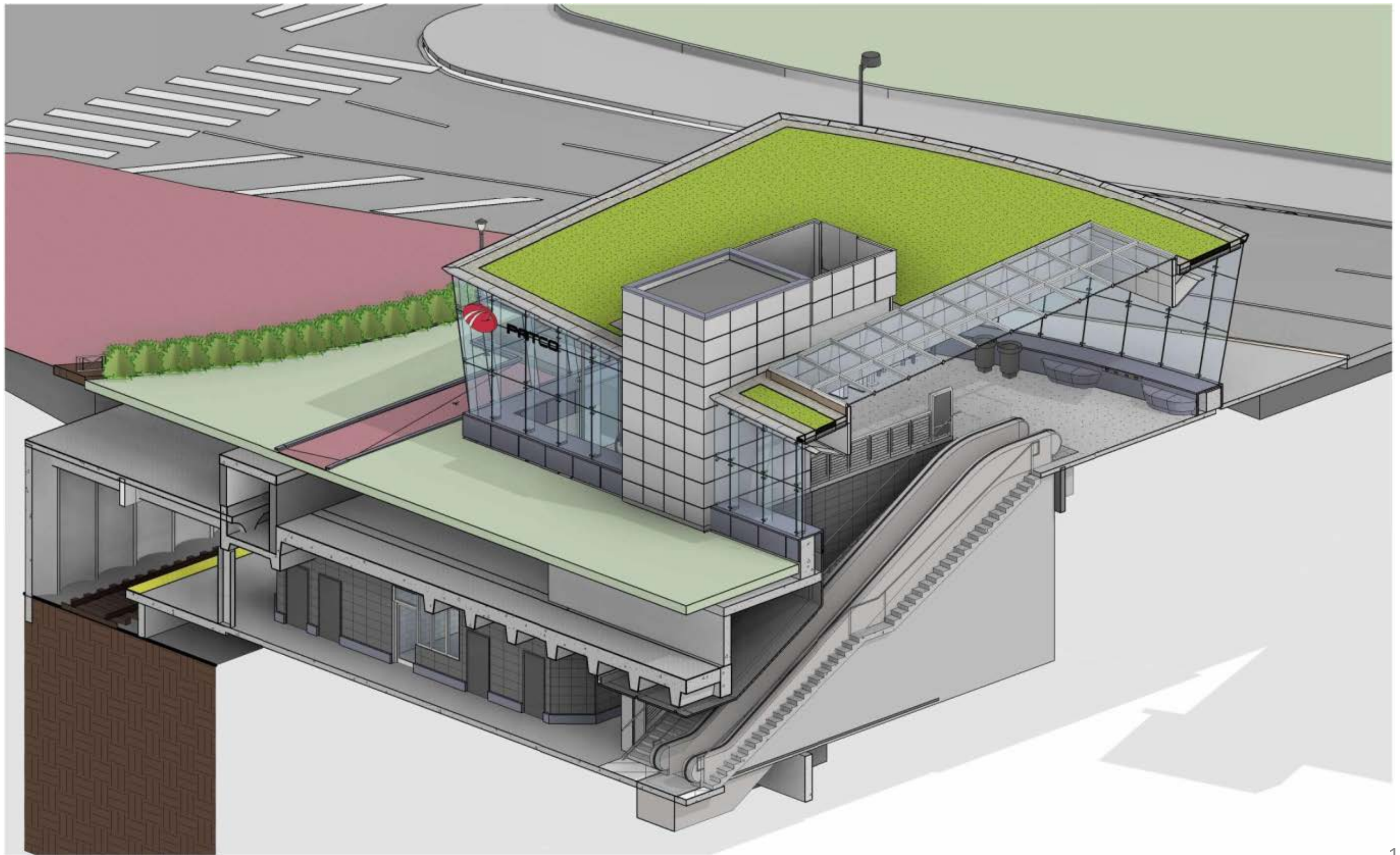


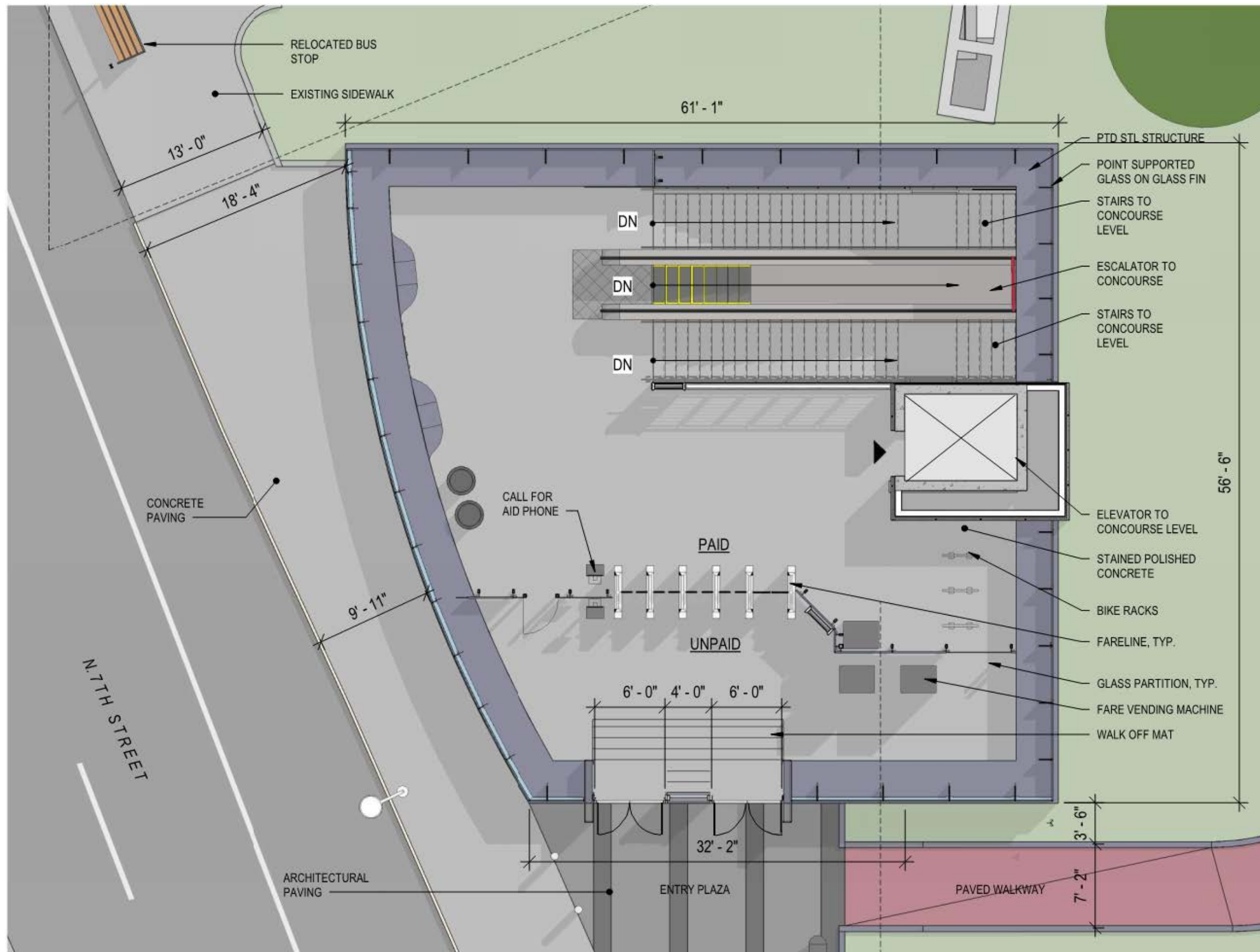
PROPOSED HEADHOUSE

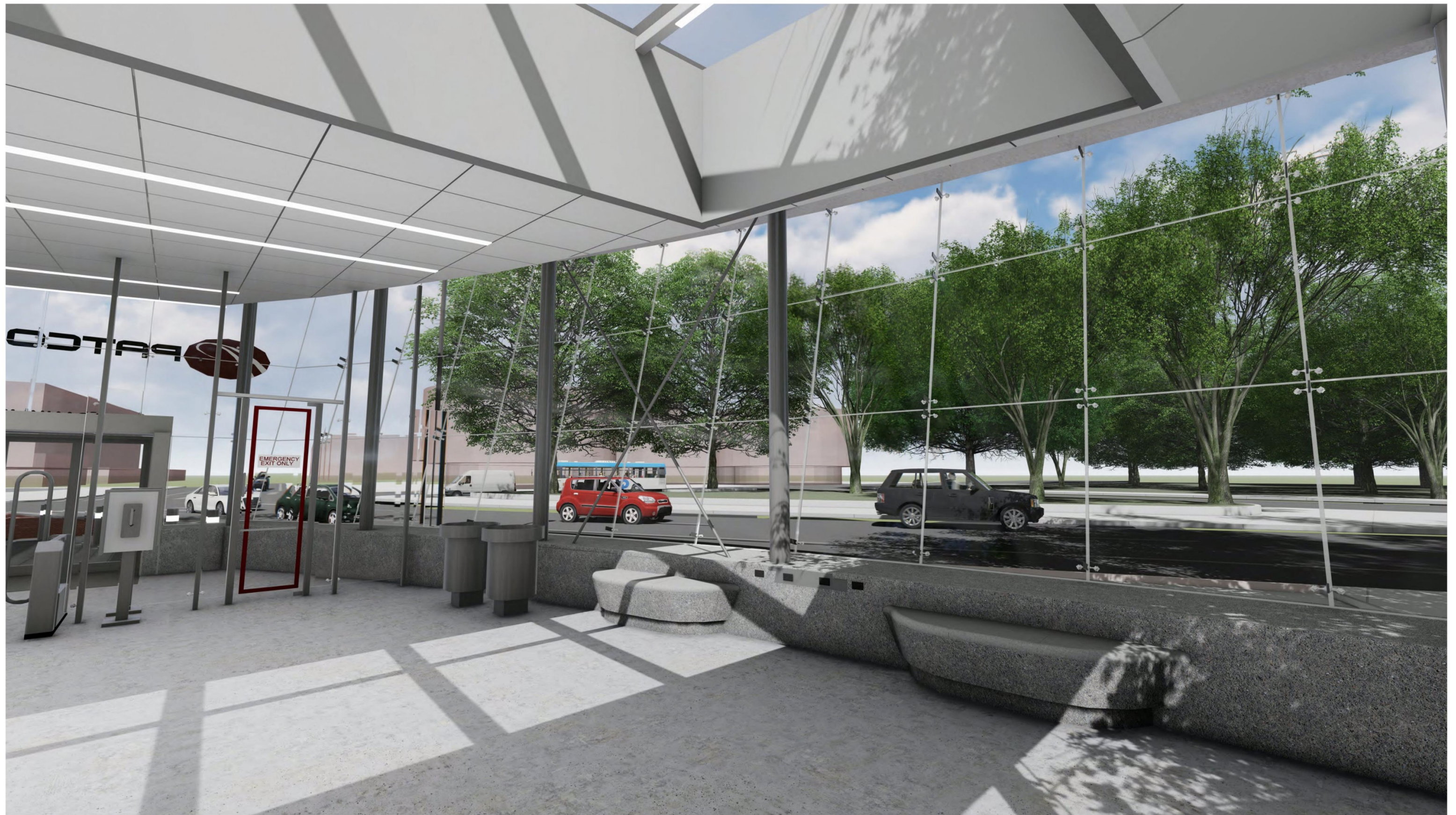
















EXISTING CONCOURSE LOOKING SOUTH

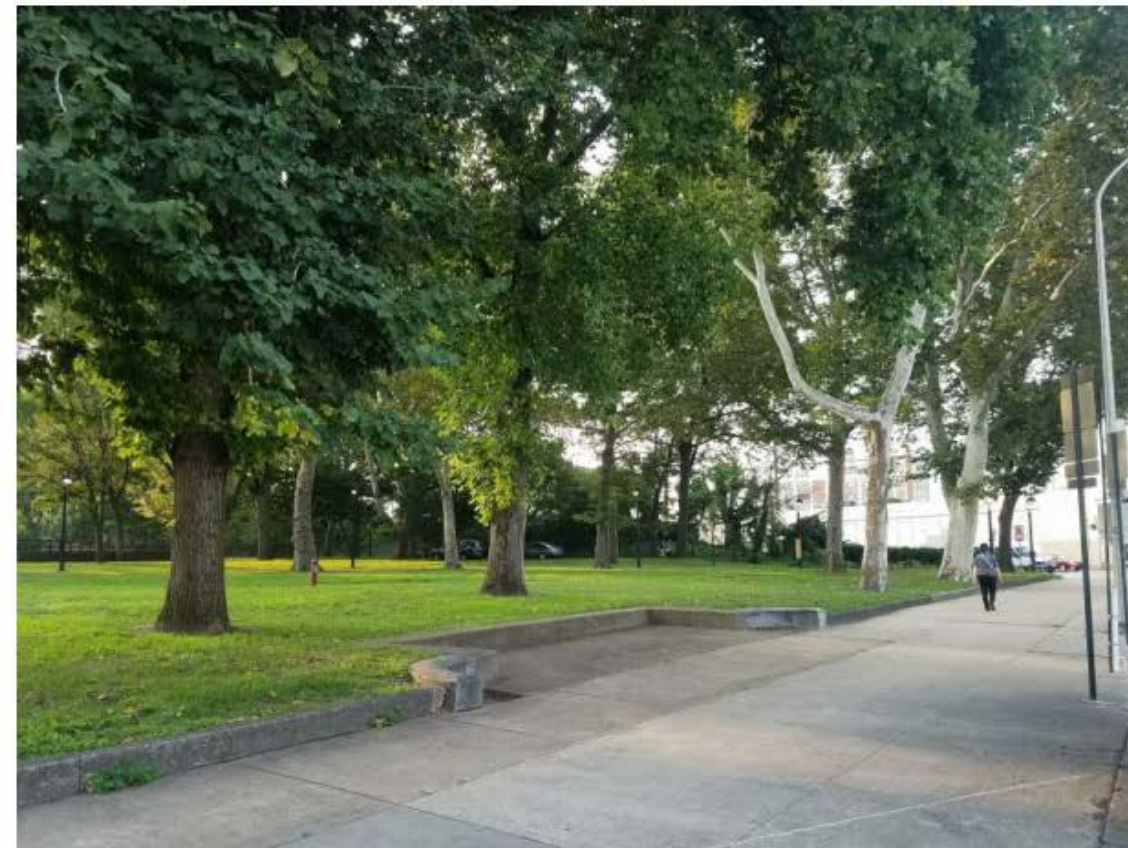
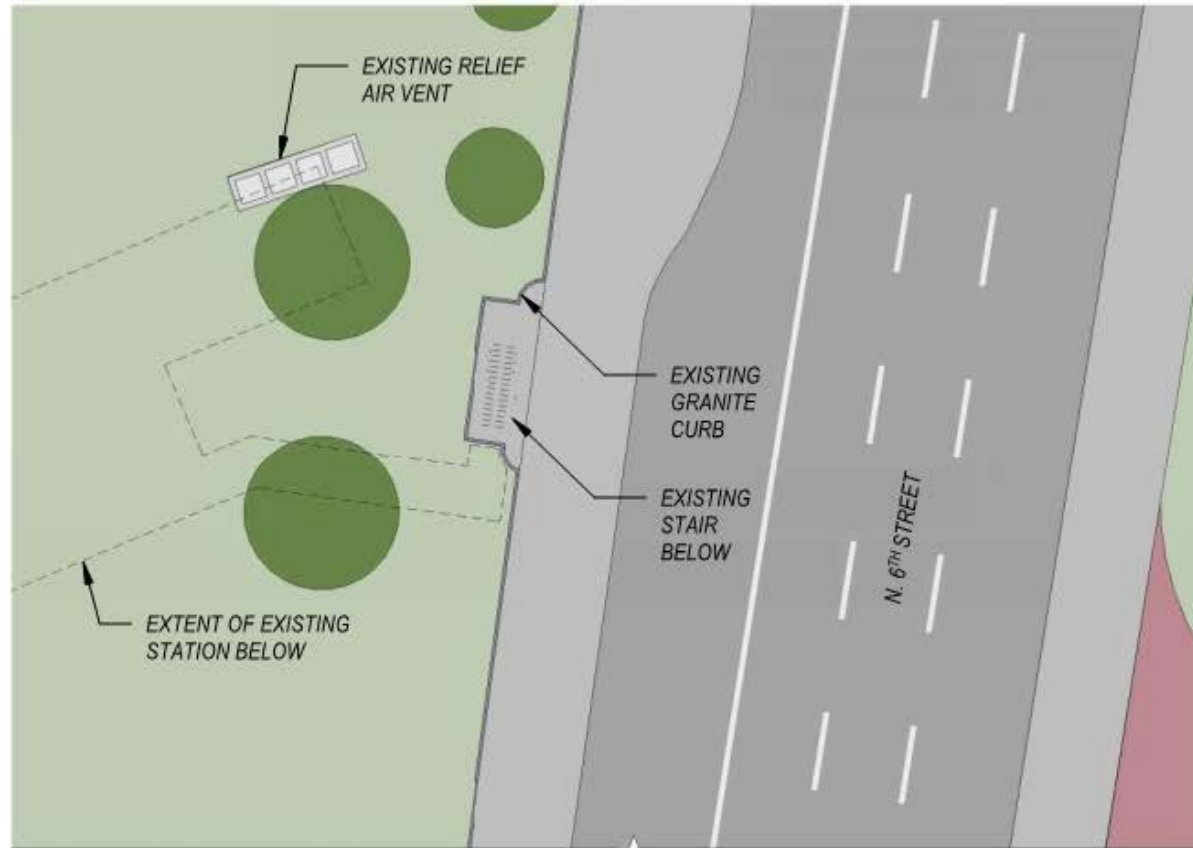


EXISTING CONCOURSE TILING

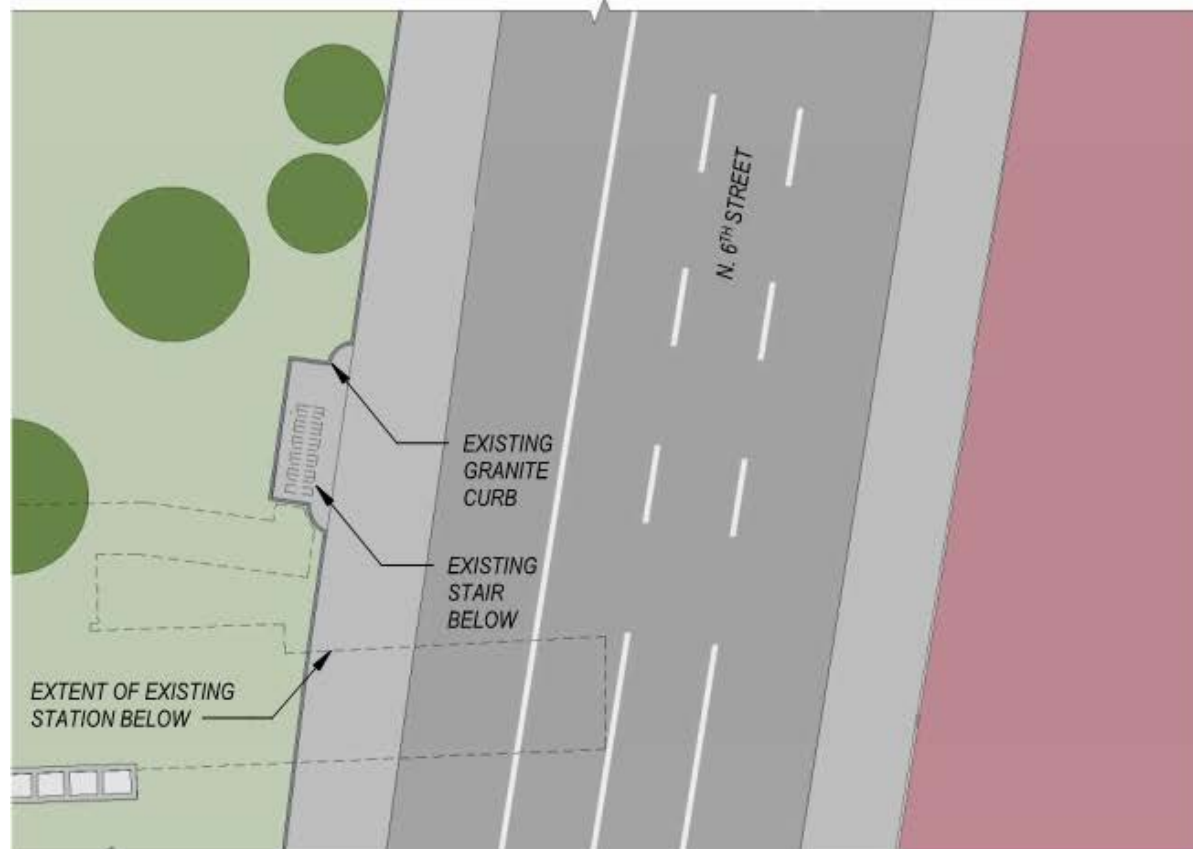


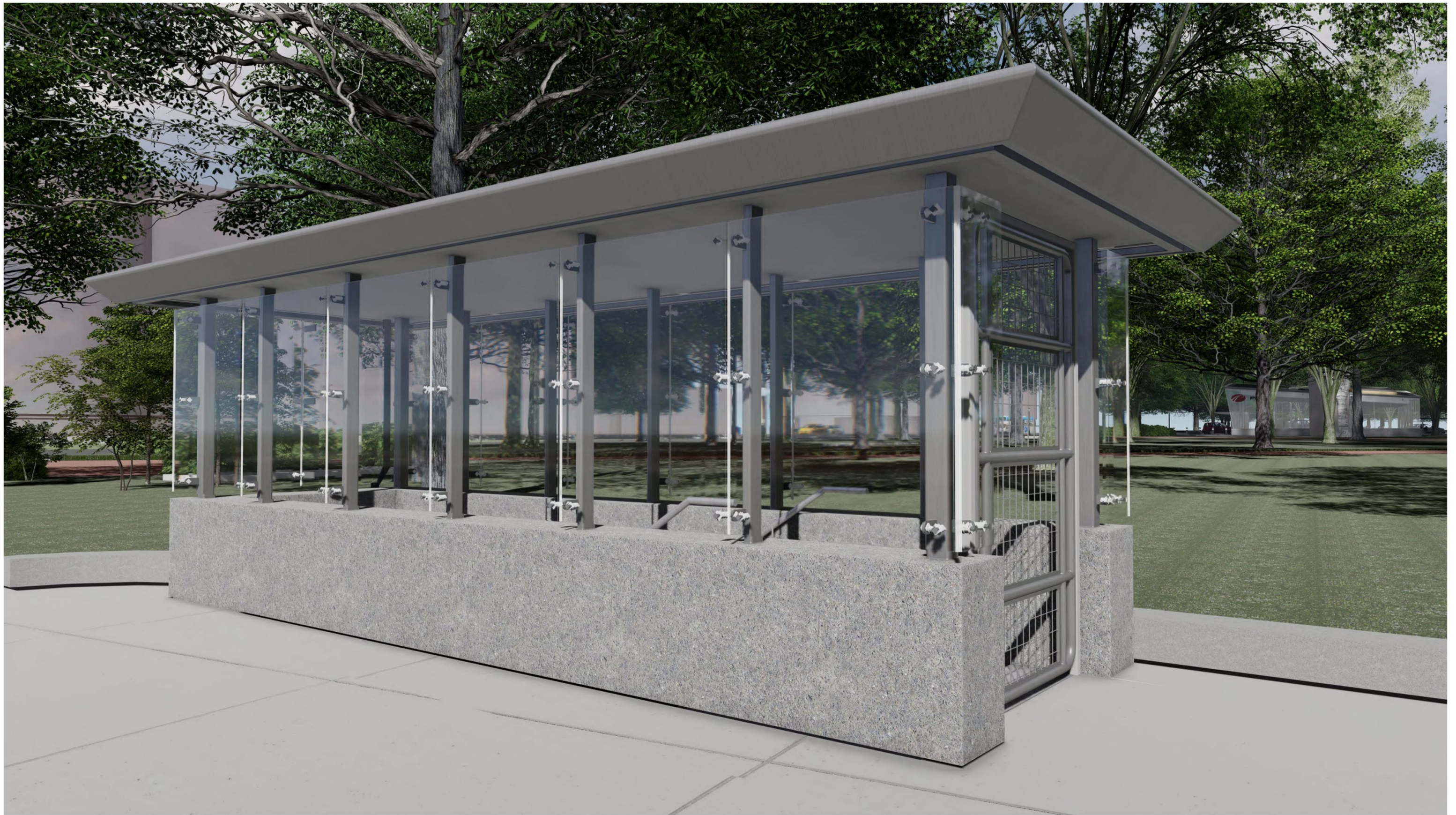
INTERIOR PERSPECTIVE OF CONCOURSE LEVEL





EXISTING SITE LOOKING NORTHEAST







# Project Enhancements

- Accessibility to Franklin Square and adjacent neighborhoods, businesses, and attractions
- Availability of multi-modal public-transit alternatives: subway, bus, bike, pedestrian
- Refresh of landscaping at 'Franklin Square' fence signage (7<sup>th</sup> & Race) and new tree plantings (1.5 x existing trees removed)
- Replacement of original cast-iron water transmission line
- Construction of architectural headhouse
  - Green roof to help condition space and manage stormwater
  - Skylight over stairs and transparent walls for daylighting and to emphasize viewshed of park
- Installation of ADA compliant elevator, escalator, and ramps
- Restoration of station architecture (green-white tiled walls)
- Update of station to a state-of-good-repair
- Upgrade/replacement of station utilities and systems
- Installation of energy-efficient LED light fixtures
- Implementation of wi-fi and security upgrades

# Proposed Construction Phasing

## Phase 1

Water main relocation

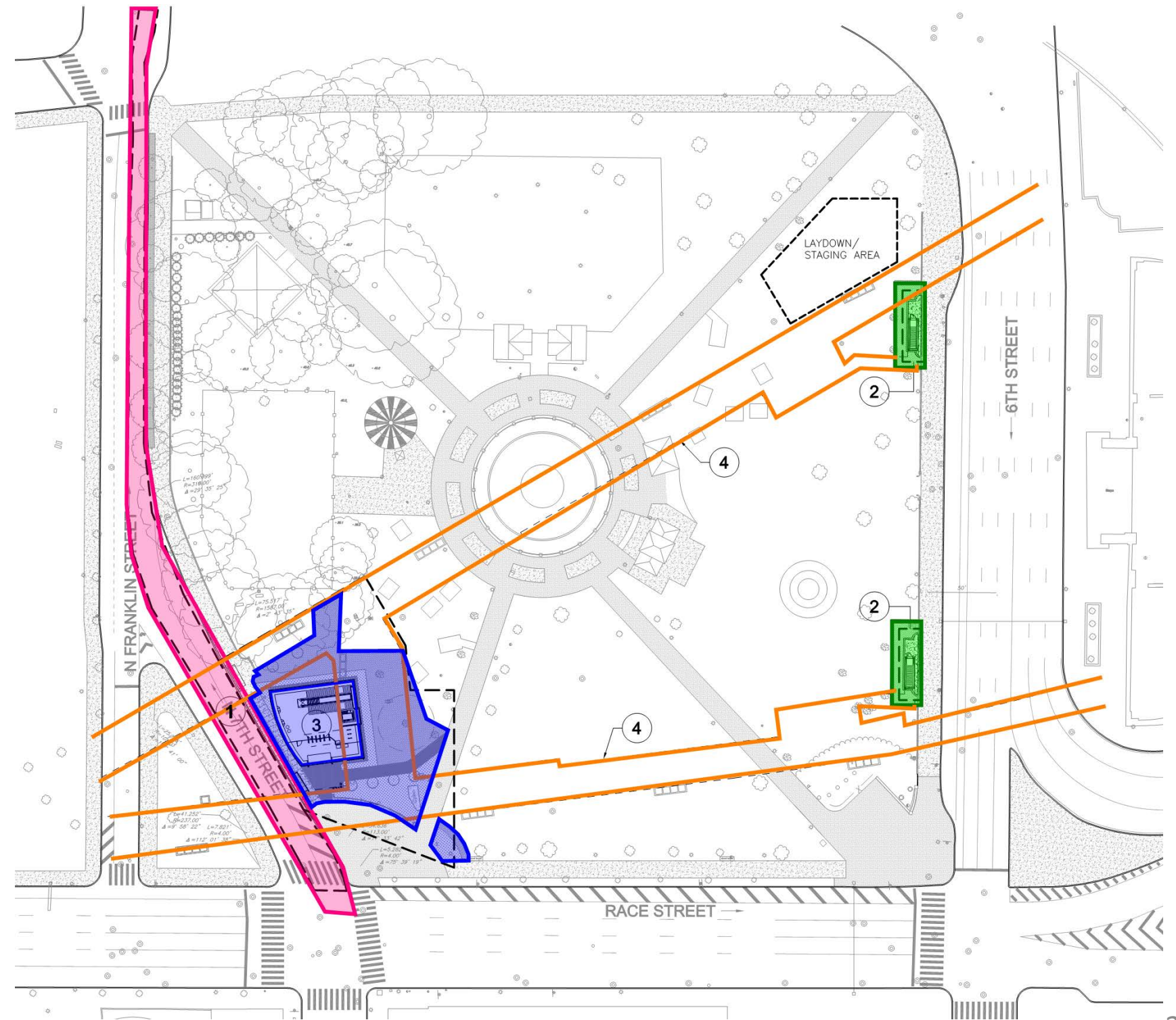
## Phase 2

Emergency egress headhouses and station updates

## Phase 3 / 4

Main headhouse and station updates

\*Not shown: Contractor's staging and laydown area(s)



# NEPA Documentation

National Environmental Policy Act (NEPA)  
in compliance with Federal Transit Administration (FTA)  
regulations:

- State Historic Preservation Office (SHPO)
- Pennsylvania Historical and Museum Commission (PHMC),  
National Historic Preservation Act (NHPA) - Section 106
- Section 4(f) of the Department of Transportation Act
- Categorical Exclusion (Cat-Ex / CE)

# Project Schedule

<b>Milestone</b>	<b>Date</b>
<b>Preliminary - 30% Submission</b>	October 15, 2018
<b>Progress - 60% Submission</b>	March 15, 2019
<b>Final - 90% Submission</b>	July 31, 2019
<b>PS&amp;E - 100% Submission</b>	March 2020
<b>Bid Set (signed and sealed)</b>	June 2020
<b>Bid Phase</b>	October 2020
<b>Construction NTP</b>	December 2020
<b>Construction Completion</b>	July 1, 2023

# Questions?



Description	Area
Headhouse ( <i>main</i> )	3,200 SF
Egress Headhouses ( <i>emergency only</i> )	250 SF each
Project Area / Limits of Disturbance	16,250 SF + 6,250 SF 22,500 SF
Franklin Square	356,214 SF



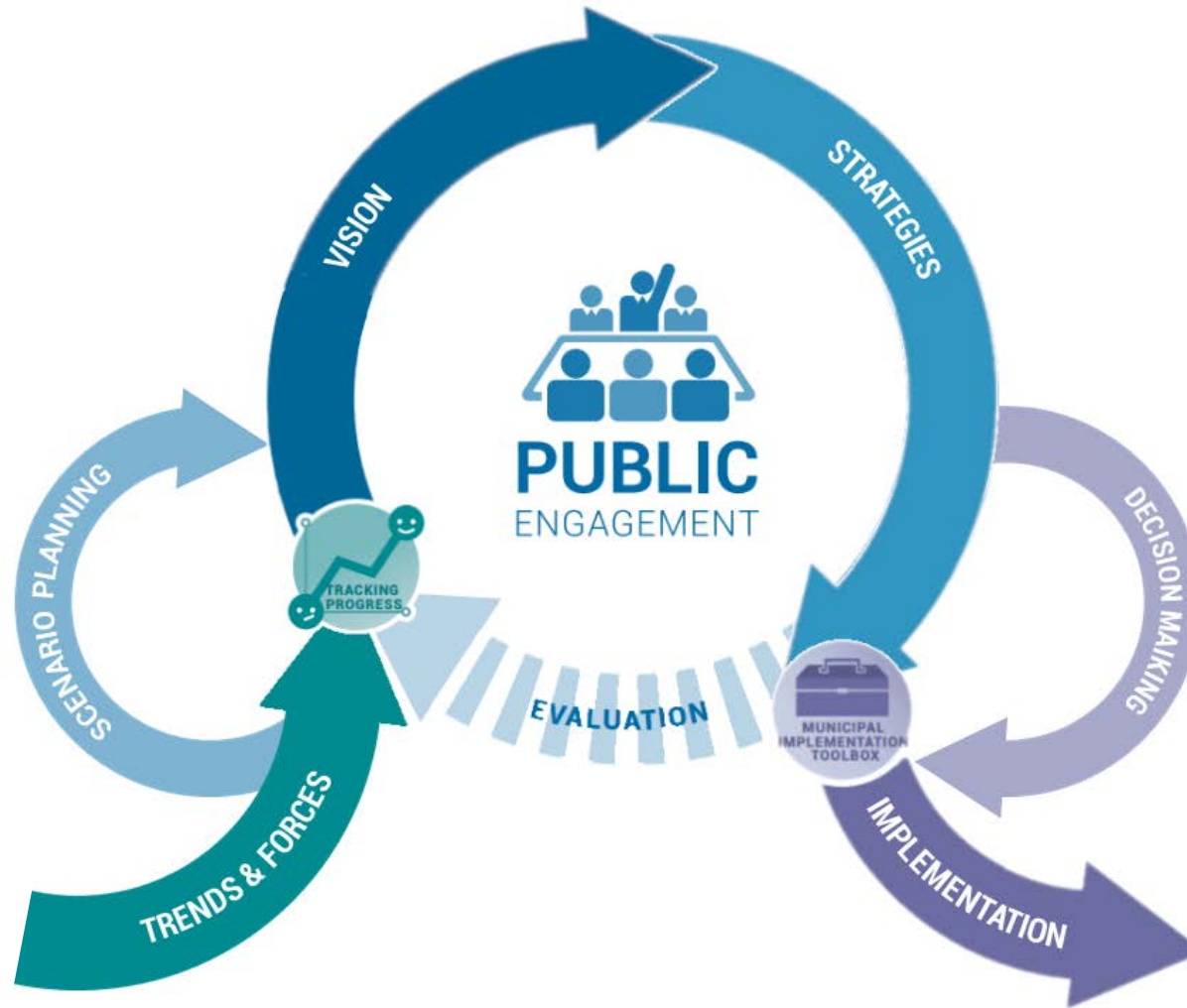
# TRACKING PROGRESS

A teal-colored line graph with four data points. The first point is a sad face, the second is a neutral face, the third is a neutral face, and the fourth is a happy face. The line starts at the sad face, goes up to the neutral face, down to the neutral face, and then up to the happy face.

## Regional Indicators Dashboard

RTC Meeting | February 11, 2020

# Long-Range Planning Process



[draft 2/7/20]



# Purpose of *Tracking Progress*

- For the LRP Process
  - understand where the region is at a given time period
  - identify successful programs
  - align DVRPC's planning & implementation activities
  - inform regional strategies
- A lot of valuable data for non-LRP use

# Tracking Progress - Currently

### Regional Indicators for the Core Planning Principles of the Connections 2040 Plan

- Transportation**  
Establishing a Modern Multimodal Transportation System
- Economic**  
Building the Economy
- Community**  
Creating Livable Communities
- Environmental**  
Managing Growth and Protecting the Environment

- Question
  - Source
  - Summary
- Question
  - Source
  - Summary
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- Question
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  - Summary

### ARE PEOPLE DRIVING LESS?

The number of vehicle miles traveled (VMT) increased regionally by 3.2 percent from 2009 to 2013. There has been a corresponding 3.3 percentage increase in total population growth. While drivers per household have decreased by 0.7 percent, and VMT per capita has decreased by 2.5 percent in the same period, 2009 and 2013.

In 2014, annual VMT per capita was 36.4 percent lower in the Philadelphia subregion than in New Jersey. However, the regional average is 1.3 percent higher in their cities. Reasons for these differences may reflect a larger population in other areas and more transit opportunities in the Philadelphia city of the area.

Regional VMT reached a peak in 2007 at 4.4 billion miles traveled. From 2007 to 2014, the region decreased by 1.4 percent but is beginning to rise again. This decline initially coincided with higher gas prices, but was accelerated during the economic recession that began in 2007. The recession may have reduced the ability to purchase new vehicles as expected with the economic recovery. The continuing decline in regional VMT may reflect mobility preferences among younger drivers. The regional average became more sustainable in the future by providing more transportation alternatives, increasing the fuel efficiency of vehicles, and further reducing the rate at which VMT grows.

INDICATOR: Vehicle Miles Traveled

dvrpc  
October 1, 2014

### TOTAL AND PER CAPITA VMT AND AUTOMOBILES, 1990-2013

	1990	2000	2002	2007	2010	2013	PERCENTAGE CHANGE 1990 TO 2013
<b>NEW JERSEY SUBREGION</b>							
Annual VMT (million)	18,241	18,776	18,838	18,838	18,435	18,879	3.4%
Automobiles (million)	8.46	9.64	9.84	9.84	9.84	9.84	16.6%
Annual VMT / Automobile	1,477	1,440	1,440	1,440	1,440	1,440	-1.0%
Automobiles / 1,000 Capita	944	1,012	1,012	1,012	1,012	1,012	6.4%
Annual VMT / Capita	8,743	8,743	8,743	8,743	8,743	8,743	0.7%
<b>PHILADELPHIA SUBREGION</b>							
Annual VMT (million)	21,040	24,771	25,040	24,000	24,000	24,000	13.8%
Automobiles (million)	1.1	1.8	1.8	1.8	1.8	1.8	63.6%
Annual VMT / Automobile	11,071	11,220	11,220	11,220	11,220	11,220	0.5%
Automobiles / 1,000 Capita	812	812	812	812	812	812	0.0%
Annual VMT / Capita	8,753	8,753	8,753	8,753	8,753	8,753	0.0%
<b>2009-2013 STATE TOTALS</b>							
Annual VMT (million)	34,143	37,845	40,845	40,300	40,300	39,150	13.7%
Automobiles (million)	3.7	5.0	5.0	5.0	5.0	5.0	34.6%
Annual VMT / Automobile	12,279	12,279	12,279	12,279	12,279	12,279	0.7%
Automobiles / 1,000 Capita	332	332	332	332	332	332	0.0%
Annual VMT / Capita	8,891	7,945	7,945	7,945	7,945	7,945	-6.2%
<b>REGIONAL TOTALS</b>							
Annual VMT (million)	5,147,000	5,744,000	5,994,000	5,939,000	5,949,000	5,939,000	15.1%
Automobiles (million)	124	179	187	187	187	187	51.6%
Annual VMT / Automobile	13,946	14,400	14,000	14,000	14,000	14,000	0.7%
Automobiles / 1,000 Capita	411	434	434	434	434	434	8.0%
Annual VMT / Capita	8,445	8,214	8,214	8,214	8,214	8,214	-2.4%

Source: New Jersey Department of Transportation, New Jersey Department of Transportation, U.S. Census Bureau

The number of vehicle miles traveled is beginning to increase in recent years, in the New Jersey subregion, after declining regionally from its peak in 2007.

- Feedback
  - DVRPC staff focus group
  - Stakeholder workshops
    - Public Participation Task Force (PPTF)
    - Regional Technical Committee (RTC)



- Research data
  - Availability
  - How far back?
  - Update frequency
- Data collection
- Text writing & revision
- Web design experimentation throughout

# Dashboard Organization

## Plan Principles Environment



## Emojis



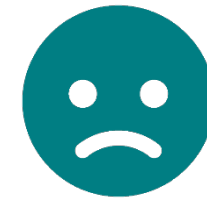
Very Good



Good



Neutral



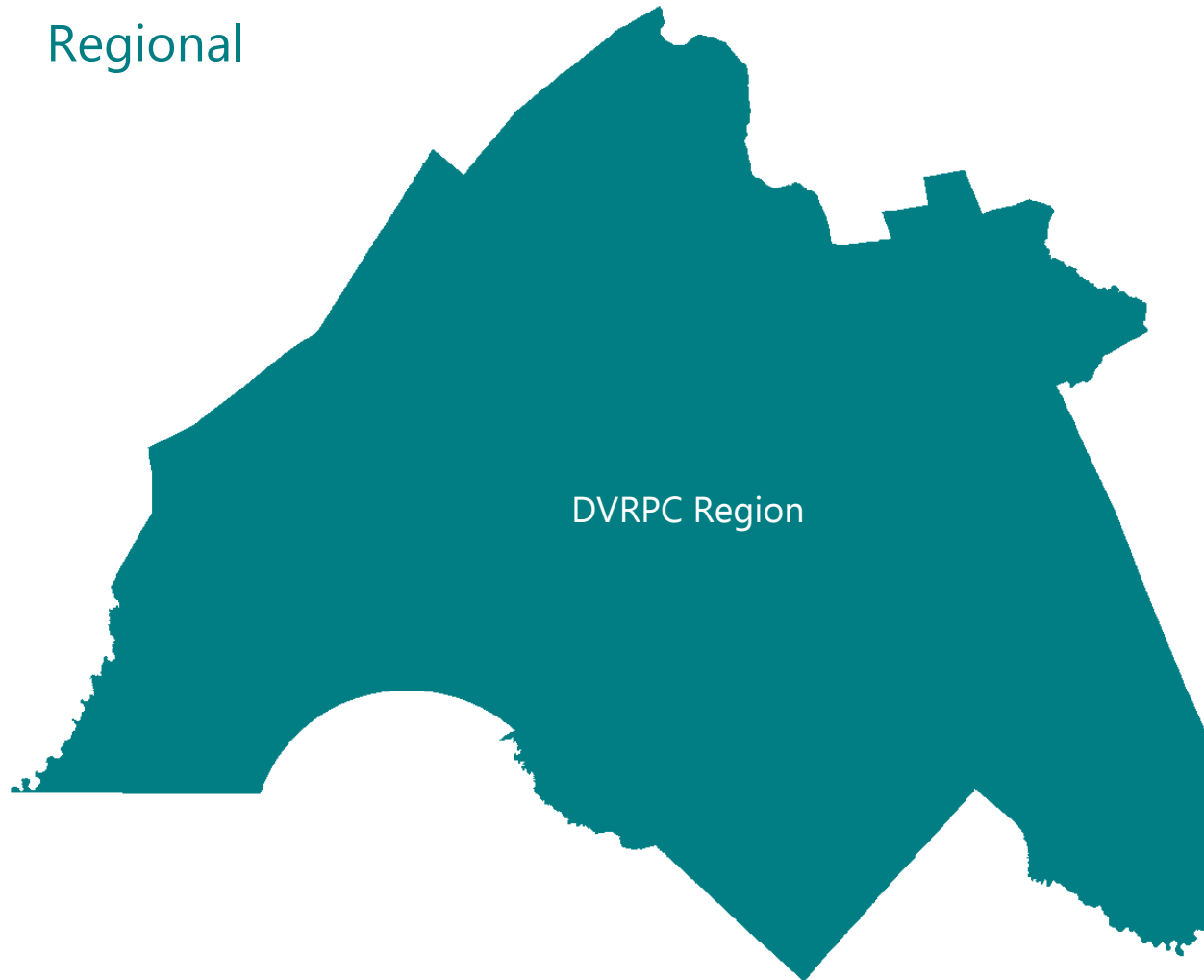
Bad



Very Bad

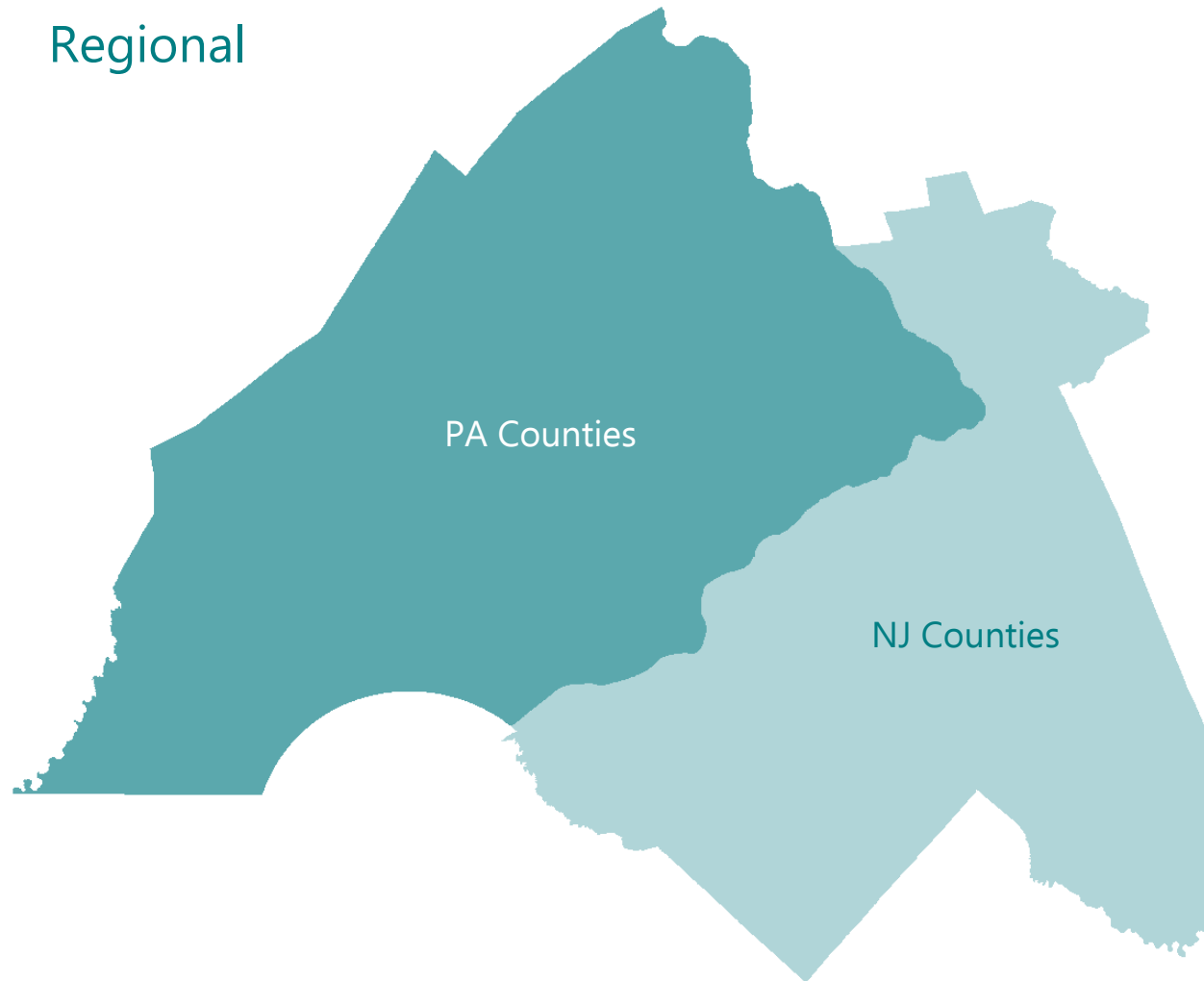
# Geographies Used

Regional



# Geographies Used

Regional



# Geographies Used

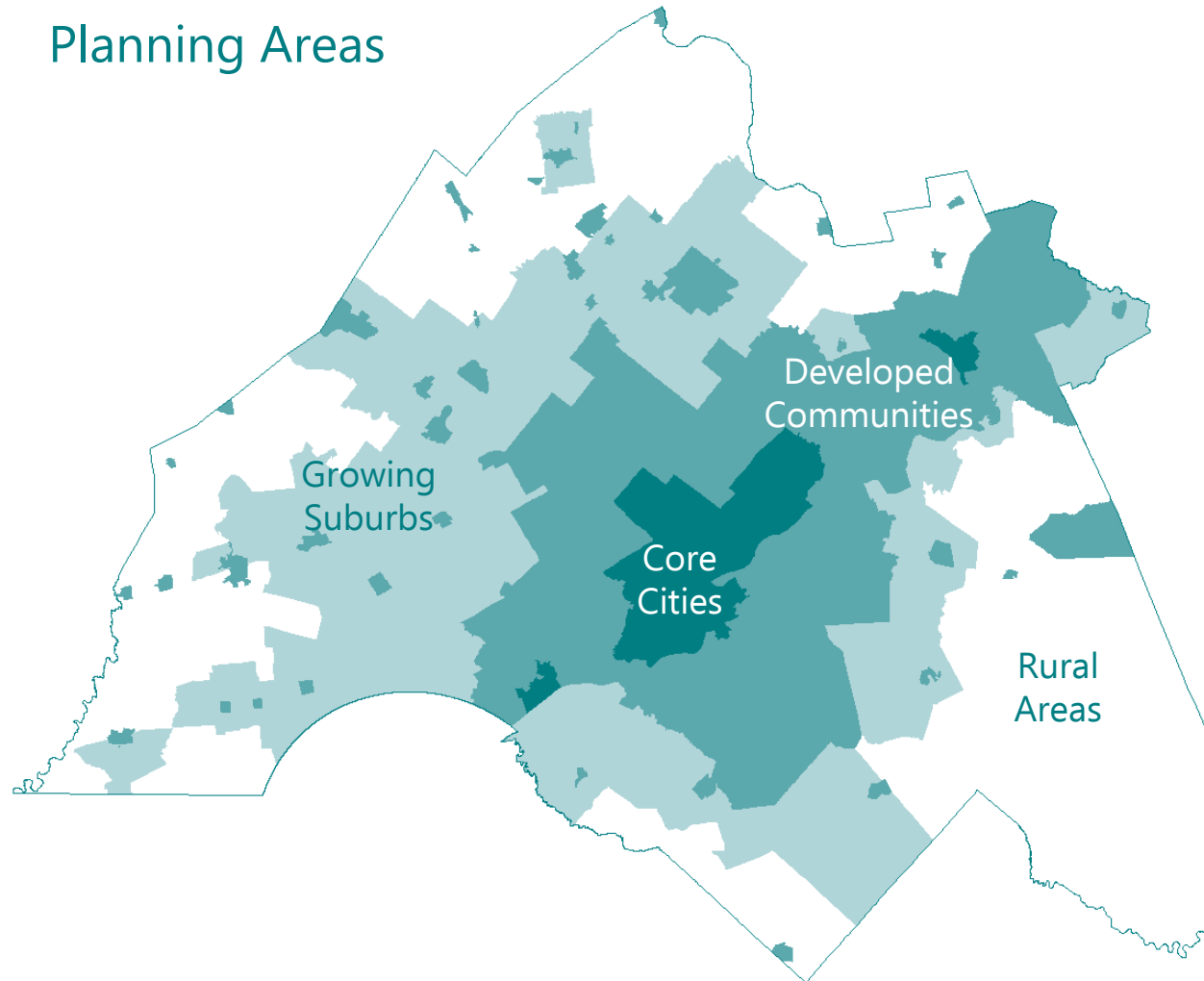
Regional





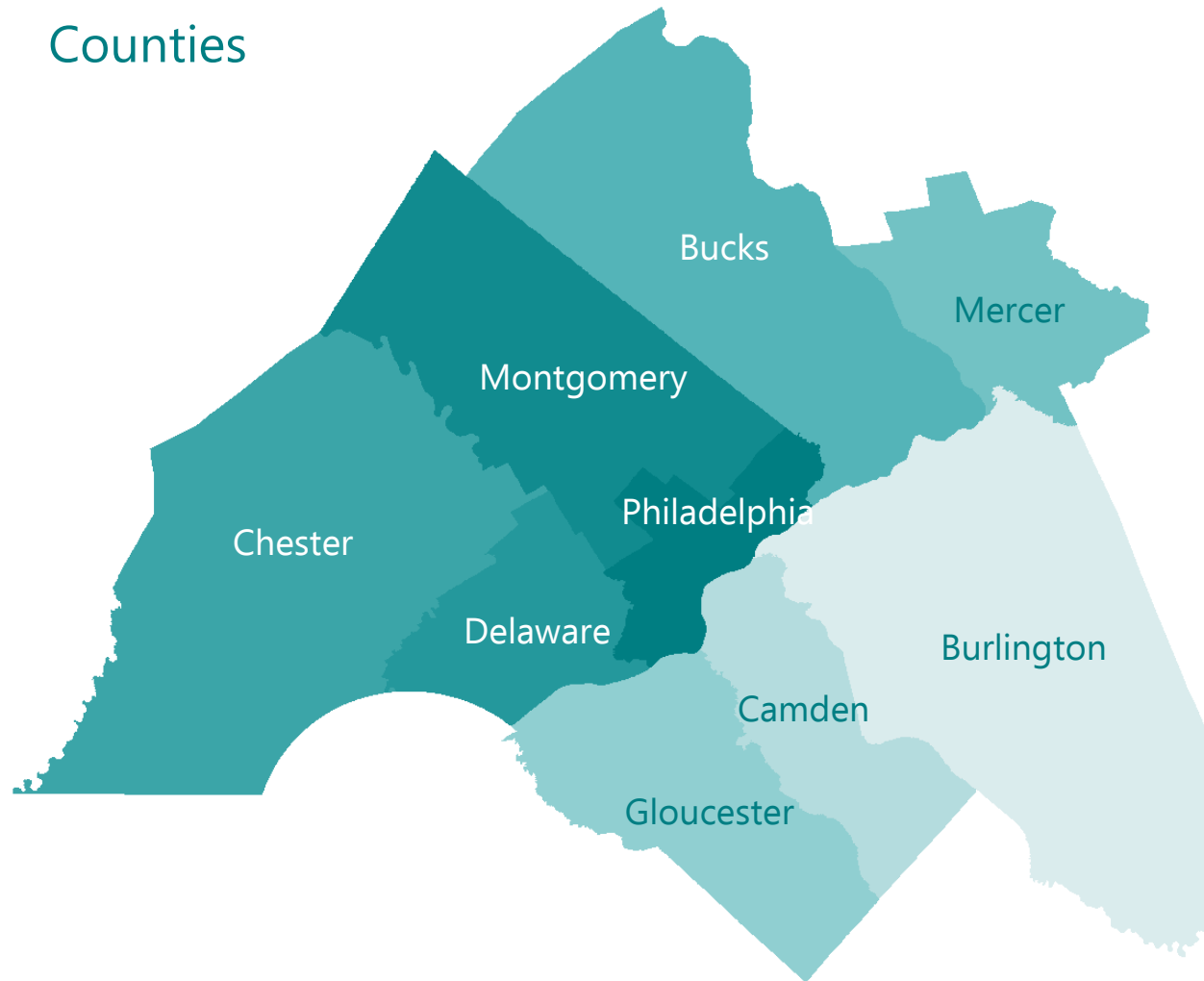
# Geographies Used

## Planning Areas



# Geographies Used

## Counties



- Interactive dashboard & charts
- Fun to explore
- Mobile friendly

## On the web

- 23 indicators
- 64 charts
- 43 drop-down menus

## Behind the scenes

- 86 tables
- 897 columns
- 1,090 rows
- 44,543 values

# Communicating the Indicators

- 4 tabs set up each indicator page
  - Why is it important?
  - What is it?
  - How are we doing?
  - Resources

Why is it important?

What is it?

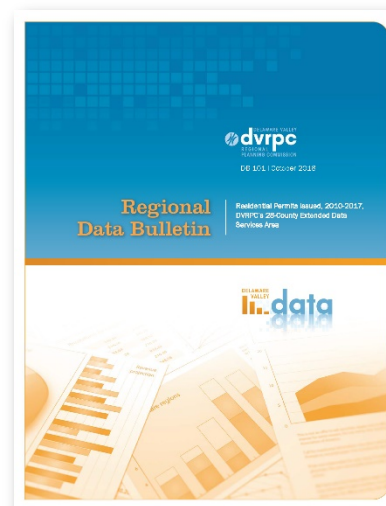
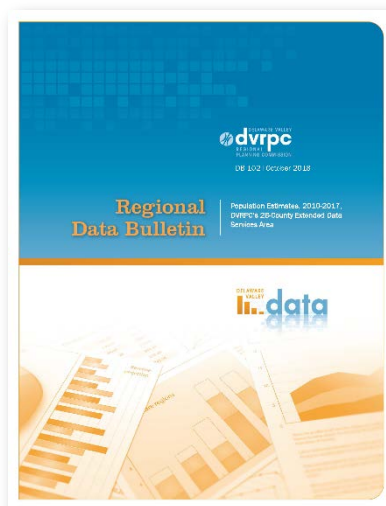
How are we doing?

Resources

DVRPC's *Municipal Implementation Toolbox* suggests the following tools for improving educational outcomes, attainment, and investing in our local workforce.

# New Home for Data Analysis

- Putting 2 Data Bulletins to rest
- Census Bureau's annual
  - Population Estimates
  - Residential Building Permits
- Municipal-level appendix data downloadable in "Resources" tab



# Plans for the Site

- Launch & promote this month
- Update 1 or 2 indicators per month, year-round
- Promote new data updates via DVRPC Newsroom & social media
- Opportunities for incremental improvements

# Tracking Progress Demo





# Questions?

## **Ben Gruswitz, AICP**

Manager, Socioeconomic & Land Use Analytics

[bgruswitz@dvrpc.org](mailto:bgruswitz@dvrpc.org)



RSTF 2020

FOCUS ON

# TRAFFIC SAFETY CULTURE



CONNECT WITH US! @DVRPC #RSTF #VISIONZERO

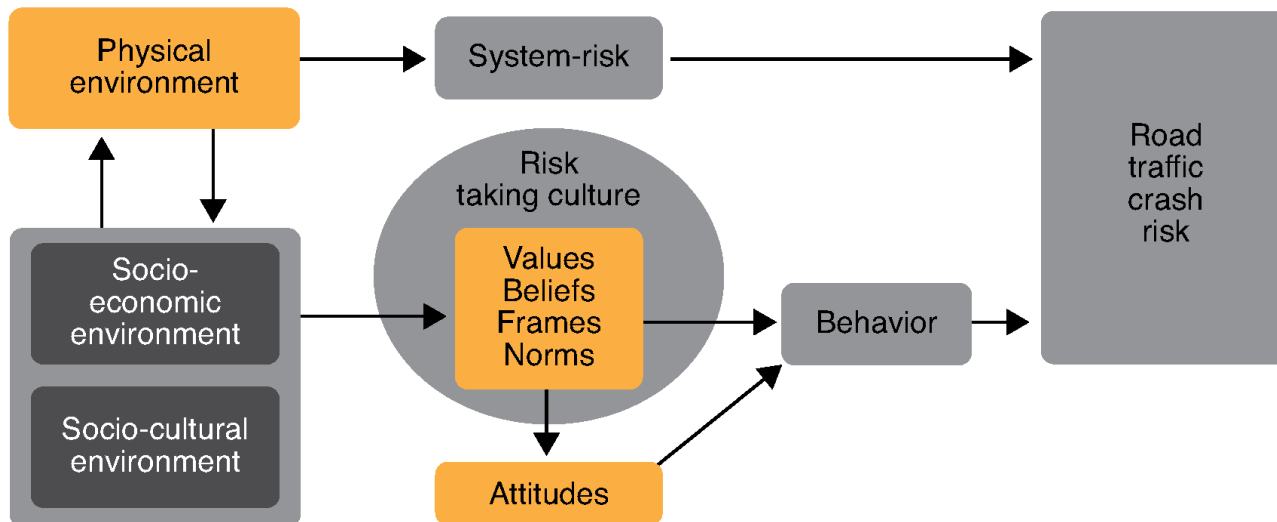


**Words matter in saving lives.**

<https://visionzeronetwork.org/crashnotaccident-words-matter-in-saving-lives/>

# What is Traffic Safety Culture?

- How **organizations** and **society** view crash risk and prioritize safety in decision-making
- Decisions are dictated by societal **values, beliefs, and norms**



*TowardsZeroDeaths.org*

# RSTF 2020: Year of Safety Culture - Goals:

- Build a better understanding of the traffic safety culture framework
- Identify how it impacts our own work as RSTF members
- Identify where it impacts other, non-transportation sectors
- Strategize how to shift traffic safety culture in the region

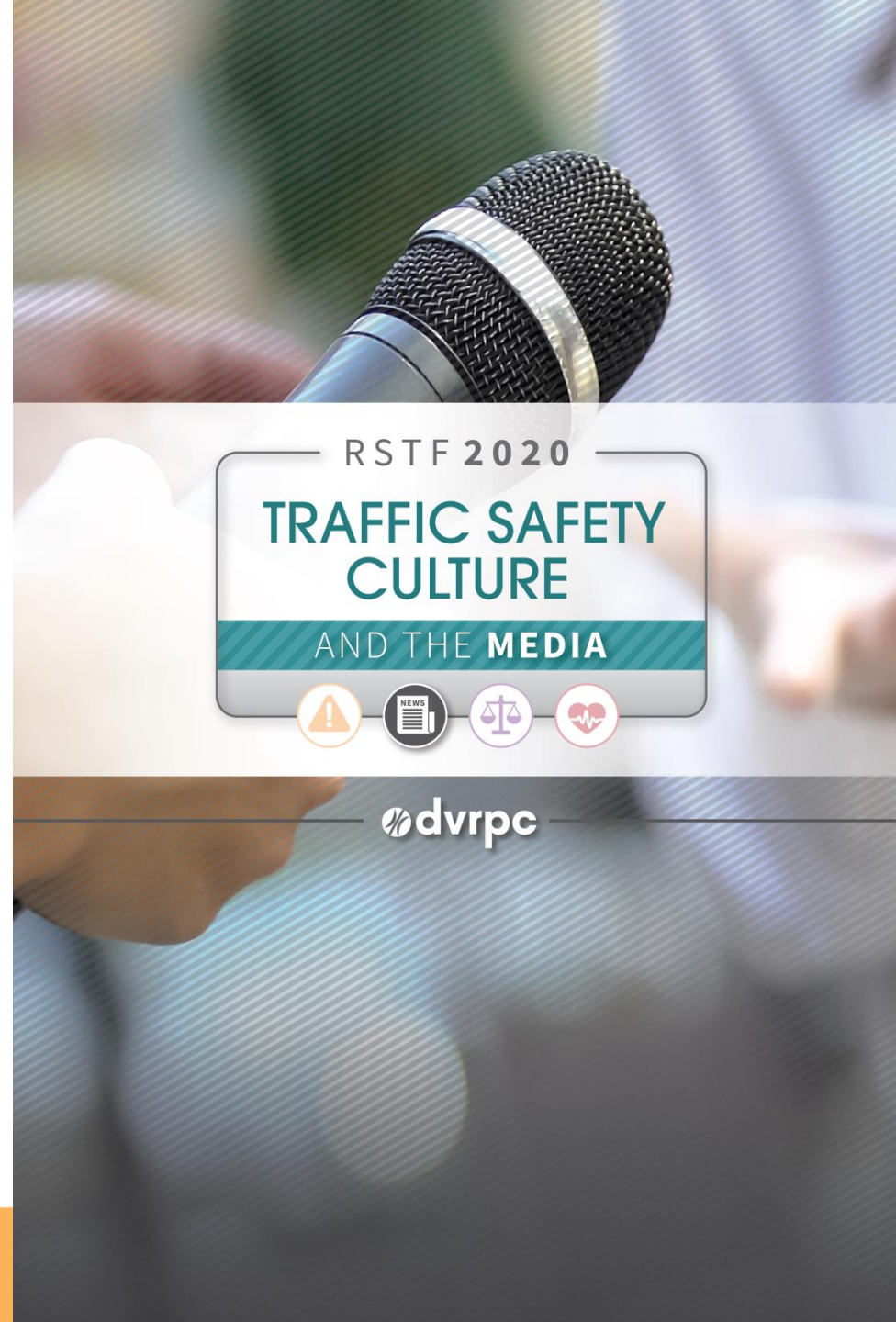
# March 2020

- What is *Traffic Safety Culture*?
- How can transportation safety professionals improve the traffic safety culture in the region?



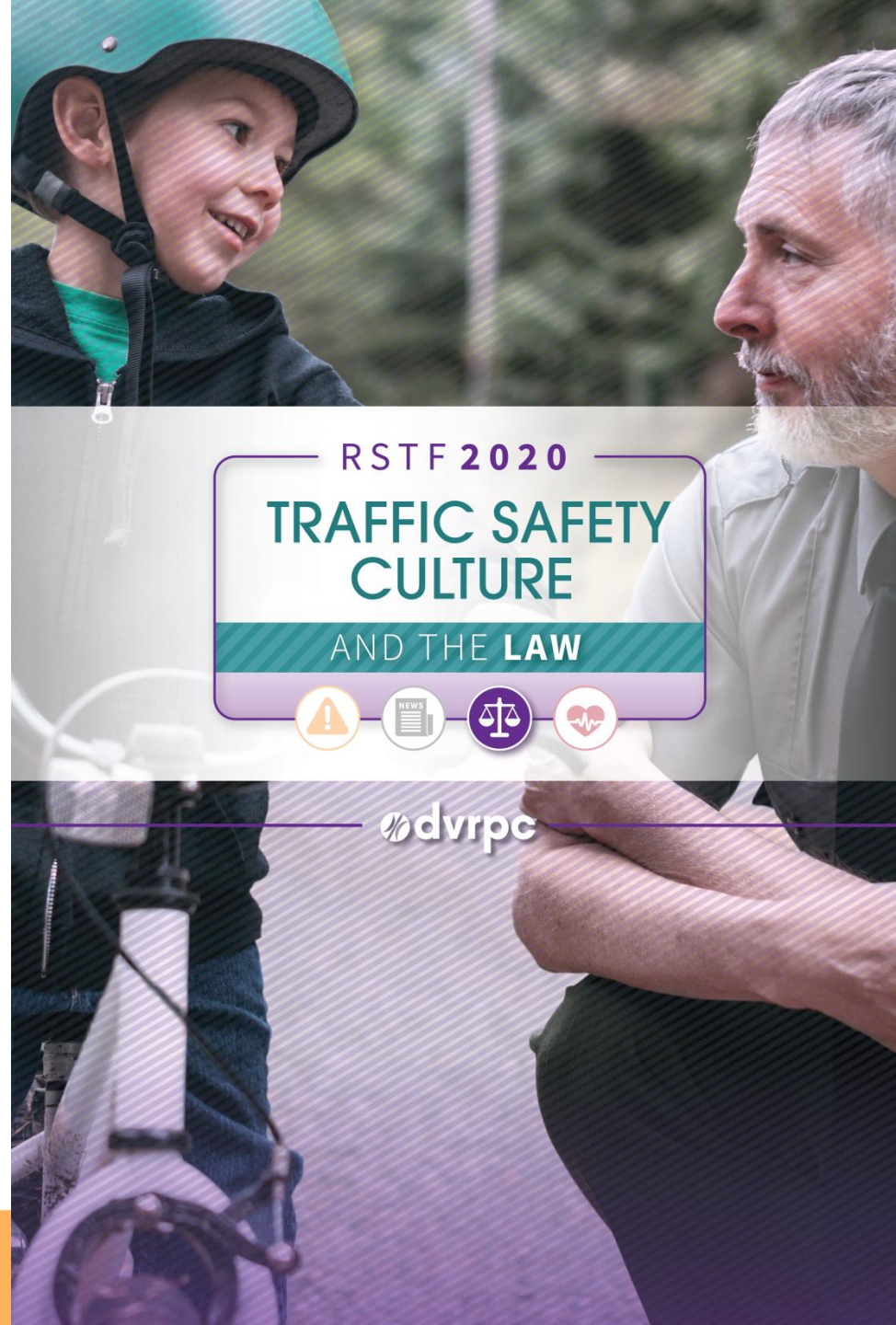
## June 2020

- How does the way the media reports crashes influence societal attitudes toward traffic safety?
- What role can the media play in shifting the narrative around crashes and traffic safety?



# September 2020

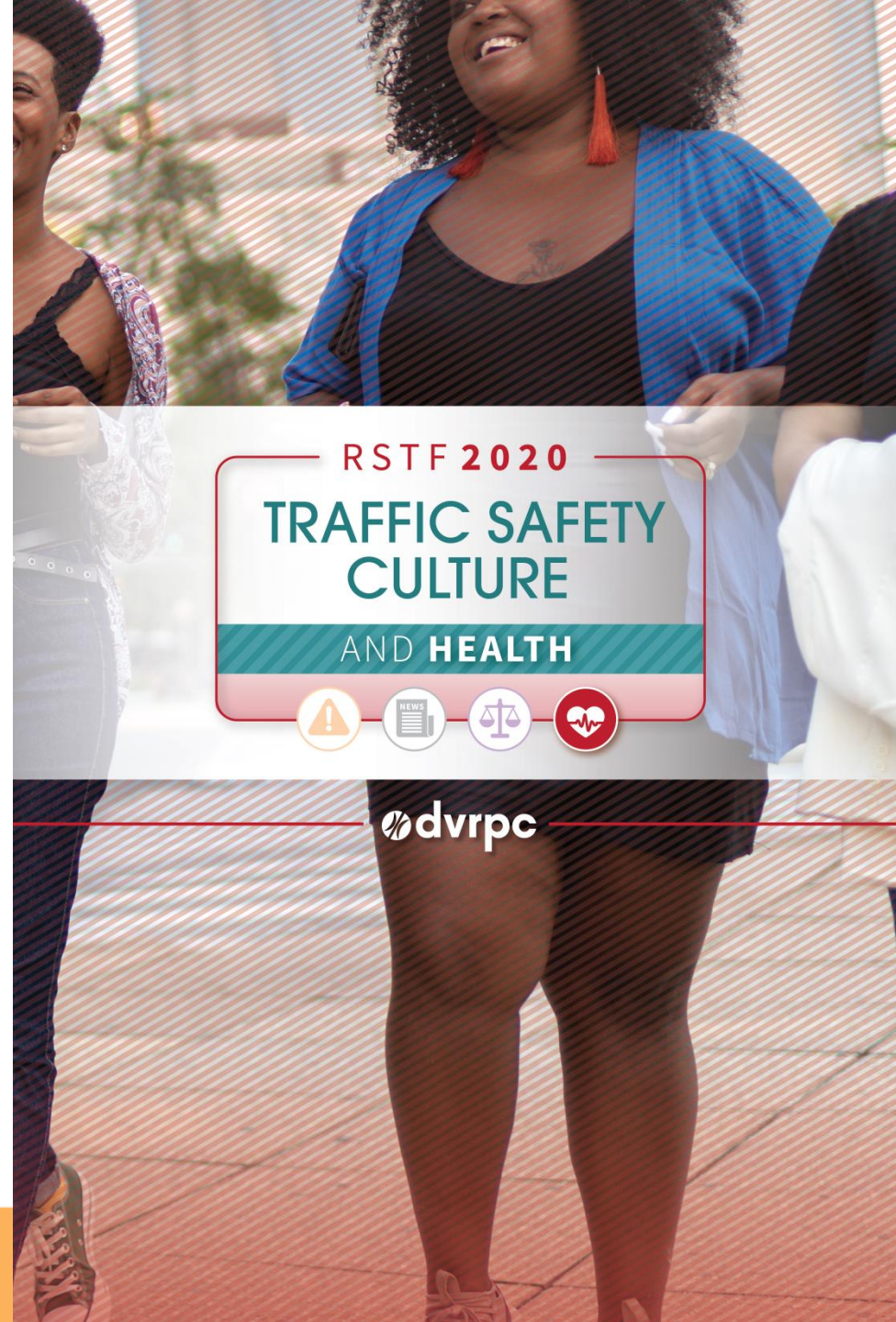
- How do laws and our justice system treat traffic safety?
- How can the justice system better promote safety culture?





# December 2020

- How is traffic safety viewed in the health sector?
- How can the health and transportation sectors learn from one another and collaborate to better promote safety culture?



# RSTF 2020 Preview

RSTF 2020

## TRAFFIC SAFETY CULTURE

AND THE MEDIA





# Common language pitfalls

- Studies by CUTR and TRB found media reports often inadvertently seek to shift blame onto vulnerable users through tools like:
  - **Passive language**
  - **Counterfactuals**
  - **Narrow framing**

# Passive Language

“ Reid said the **cyclist** attempted to make a left turn north onto 65th Street and crossed into the path of **the Escape**.

- Boulder Times-Call

# Counterfactual

“ “ The truck, owned by Approved Oil, was making a left turn onto East 37th Street at the same time **Foster attempted to cross while wearing headphones and a hood**, according to police sources and witnesses.

- New York Post

RSTF 2020

INTRODUCTION TO  
TRAFFIC SAFETY  
CULTURE



 **dvrpc**

**March 31, 2020**

Contact: [mgorini@dvrpc.org](mailto:mgorini@dvrpc.org)

DELAWARE VALLEY  
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# SEPTA BUS STOP DESIGN GUIDELINES

DECEMBER 2019 | SECOND EDITION

## Purpose

- Provide municipalities in SEPTA's service area, local developers, and other local partners a consistent set of guidelines for designing surface transit stops.
- Update based on survey feedback
- Offers a template for desirable facilities and bus stop elements wherever it is possible to provide them

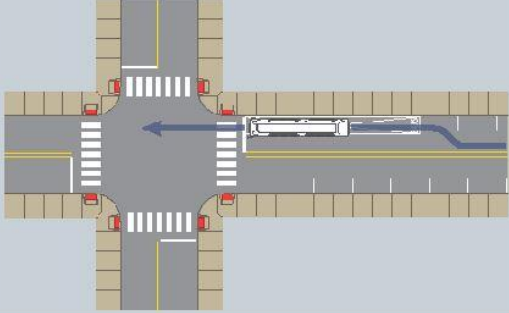
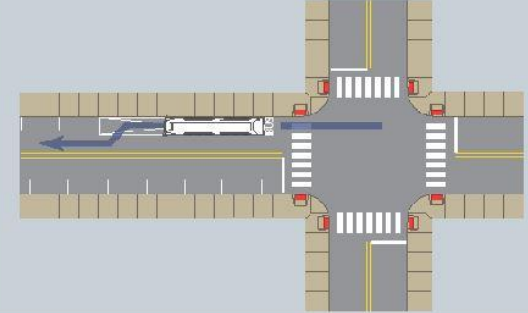


## Structure of Guide

1. Stop Placement
2. In-Street Design
3. Curbside Design
4. Stop Elements
5. Development Context and Case Studies

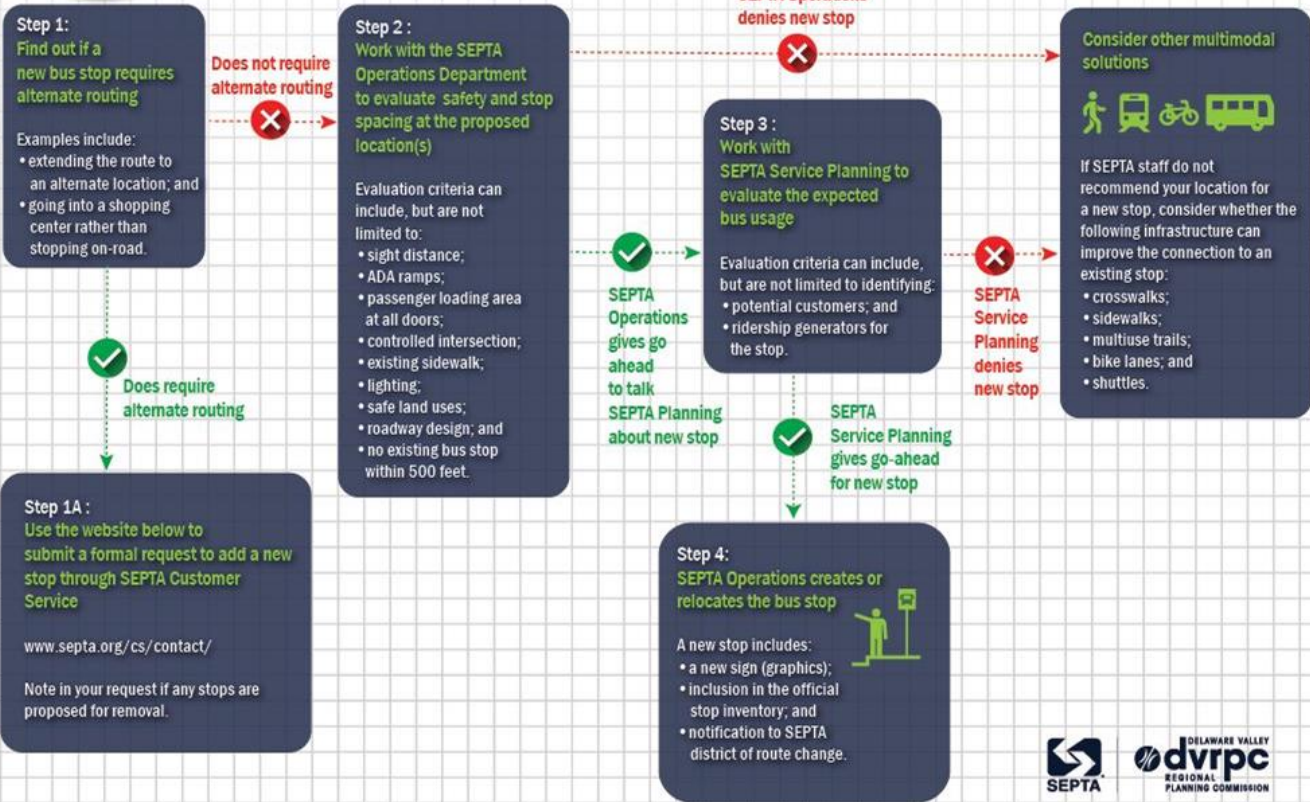


# Stop Placement

Near-Side Stop	Far-Side Stop
	
<p><b>Advantages</b></p> <ul style="list-style-type: none"><li>› Minimizes traffic interference during peak traffic flow hours, such as vehicles queuing into the intersection if a bus is at a far-side stop.</li><li>› Bus operator can use the intersection for acceleration space.</li><li>› Avoids double stopping for both signal and passenger movements.</li><li>› The bus operator has the advantage of full view of intersection activity.</li><li>› Can be coordinated with a far-side stop for a crossing route to allow passengers to transfer without crossing the street.</li><li>› Passengers are able to board the bus closer to the crosswalk.</li></ul>	<p><b>Advantages</b></p> <ul style="list-style-type: none"><li>› Minimizes conflicts with right-turning vehicles.</li><li>› Minimizes sight line conflicts for drivers and pedestrians.</li><li>› Encourages pedestrians to cross more safely behind the bus.</li><li>› Stopping at the far side of the intersection creates a shorter deceleration zone for the stop area because the intersection absorbs some of the space requirement.</li><li>› The gap in traffic flow created by the signal allows the driver room to pull back into the travel lane.</li><li>› Most effective stop location if combined with Transit Signal Priority (TSP): preferential treatment for transit vehicles at traffic signals (typically extended green phase).</li><li>› Passengers are able to alight the bus closer to the crosswalk.</li></ul>



# Steps to Create a New Bus Stop



## Stop Placement: Far-Side Open Bus Bay

### Advantages

Allows the bus to decelerate as it moves through the intersection

Allows general traffic to pass a loading bus and minimizes traffic delay

Interferes less with right-turning vehicles at the intersection

Provides protected area away from moving vehicles for both the stopped bus and bus passengers

### Disadvantages

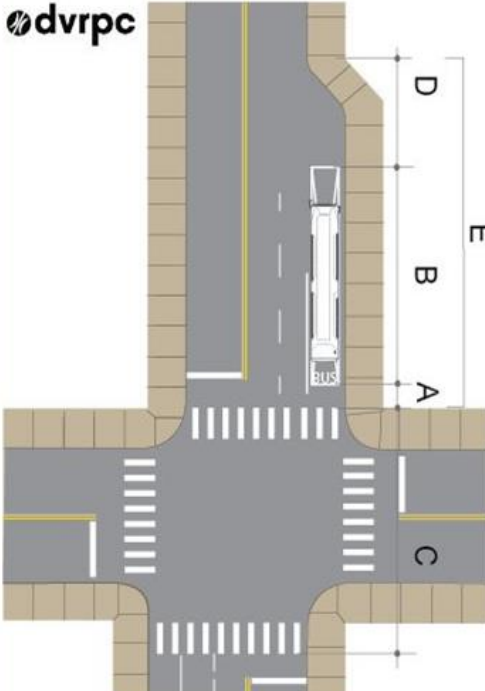
May present problems to bus drivers when attempting to re-enter traffic, especially during periods of high roadway volumes

Expensive to install compared with curbside stops

Difficult and expensive to relocate

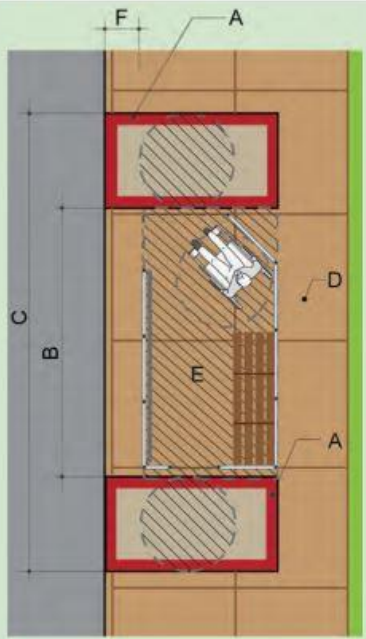


# In-street design: open bus bay stop

Stop Configuration	Roadway Characteristic	Minimum Safety buffer	Primary Bus Zone Length	Additional Deceleration Space	Additional Acceleration Space	Equivalent Parking Spaces
Open bus bay stop (far side)		A	B	C	D	E
 <p><b>dvrpc</b></p>	<p><u>Urban street with on-street parking:</u> typical posted speeds 25-30 mph; Bus enters stop area at 10 mph</p>	<p>10 ft. (3.0m) safety buffer beyond crosswalk</p>	<p>120 ft. (36.5 m) length x 11 ft. (3.4 m) width in bus bay; add 20 ft. (6.1m) for articulated bus</p>	<p>N/A: Uses intersection to decelerate</p>	<p>30 ft. (9.1 m) taper</p>	<p>Up to 8 spaces</p>
	<p><u>Minor road with no on-street parking:</u> typical posted speeds 25-35 mph; Bus enters stop area at 15 mph</p>		<p>120 ft. (36.5 m) length x 11 ft. (3.4 m) width in bus bay; add 20 ft. (6.1m) for articulated bus</p>		<p>40 ft. (12.2 m) transition plus 30 ft. (9.1 m) taper</p>	
	<p><u>Major road with no on-street parking:</u> typical posted speeds 35-45 mph; Bus enters stop area at 20 mph</p>		<p>120-ft. (36.5-m) length x 11-ft. (3.4-m) width in bus bay; add 20 ft. (6.1 m) for articulated bus</p>		<p>90 ft. (27.4 m) transition plus 33 ft. (10.1 m) taper</p>	<p>N/A</p>

# Curbside Design

## TYPE 6: Stop with standard shelter

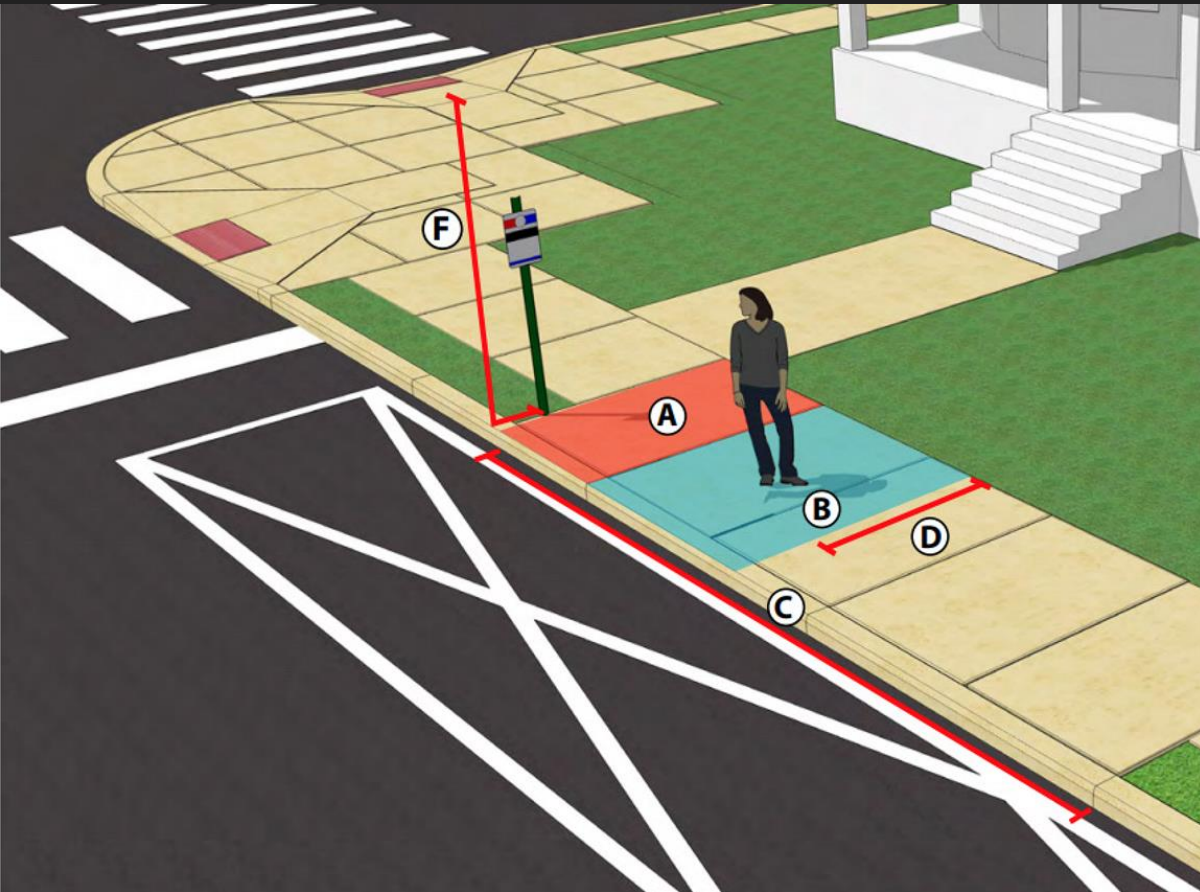


**NOTE:**  
This example assumes a 12 ft. (3.6m) sidewalk. A shelter with narrower width than 6 ft. (1.8m) may be appropriate where pedestrian volumes are high. In this case, consider excluding seating to maximize capacity and preserve space for comfortable wheelchair turning.

Source: DVRPC 2012

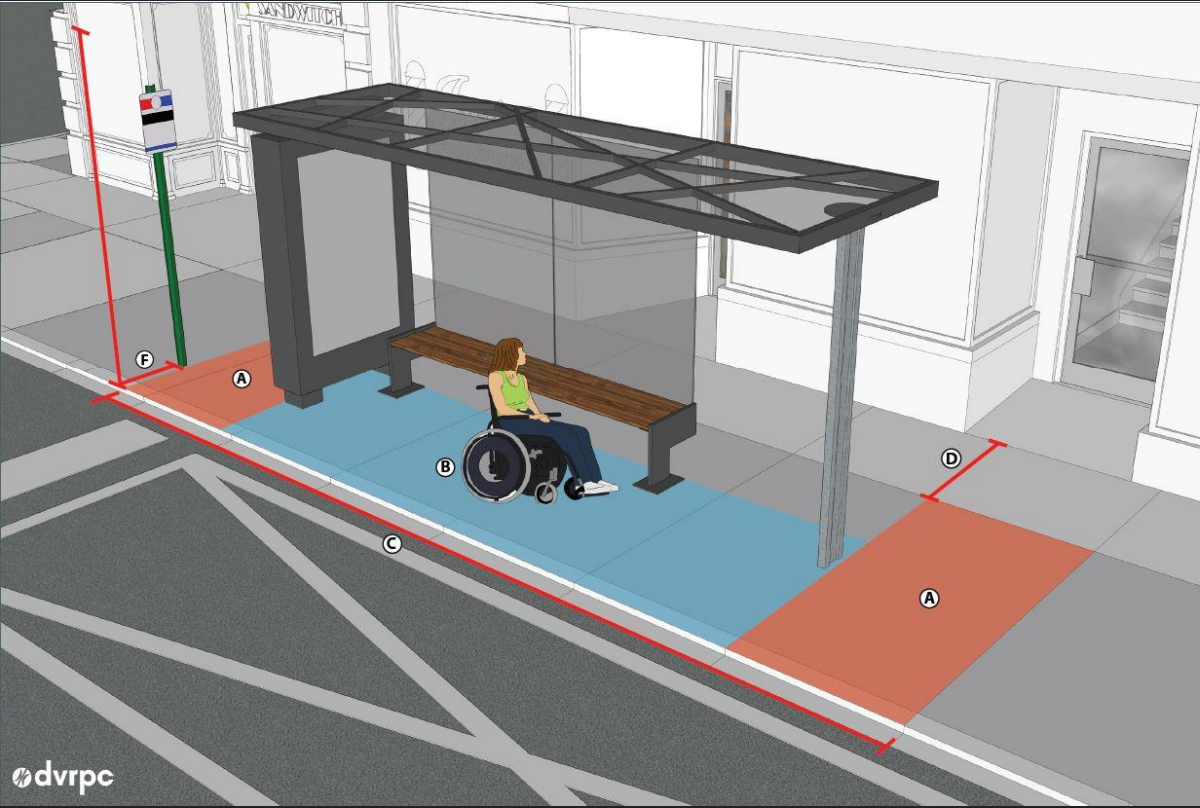
Element		Details
A	Loading pad	5 ft. (1.5m) long x 8 ft. (2.4m) deep; pad must be firm, stable, and slip resistant, and connected to the pedestrian path. Provides a 5 ft. (1.5m) diameter clear turning radius for wheelchair users. Where possible, loading pads should be provided for both front and rear doors (as pictured here).  Sign should be located adjacent to the loading pad to clearly indicate bus stop.
B	Waiting area	16 ft. (6.1m) long x 6 ft. (1.8m) deep between doors.  After subtracting bench dimension, provides enough net area for 12 standing passengers at 7 SF (0.65m <sup>2</sup> ) per person (86.3 SF total), plus seating space for 3. Shelter design and configuration may vary.
C	Stop area	26 ft. (7.9m) long area should be kept free from obstructions along the curb edge. The length should provide free access to vehicle's front and rear doors.
D	Pedestrian path	Minimum 4 ft. (1.2m) deep pedestrian path, or wider, as called for by local sidewalk standards, along a sidewalk or walkway. Should be a firm, stable, and slip resistant surface connected to the loading pad and separate from waiting area. Keep 3 ft. (0.9m) clear around all street furniture and building elements.
E	Furniture	15 ft. (4.6m) long x 6 ft. (1.8m) wide x 9 ft. (2.7m) high shelter with lean rail, 3-seat bench, information, & ad panel. Glass panels allow view of arriving bus and weather protection. 78 net interior SF (7.2 m <sup>2</sup> ) can accommodate 10-11 standing passengers plus seating for 3.
F	Clear area	2 ft. (0.6 m) from the curb edge, 9 ft. (2.7 m) minimum height.

# Curbside Design: Minimum Stop with Recessed Pedestrian Path



Element		Details
A	Loading Pad	5 ft. (1.5 m) long x 8 ft. (2.4 m) deep; pad must be firm, stable, and slip resistant, and connected to the pedestrian path. Provides a 5-ft. (1.5-m) diameter clear turning radius for wheelchair users.  Sign should be located adjacent to the loading pad to clearly indicate bus stop.
B	Waiting Area	7 ft. (2.1 m) long x 4 ft. (1.2 m) deep (minimum); waiting area can be accommodated in the pedestrian path if pedestrian volumes are low. Provides enough area for 4 passengers at 7 sq. ft (0.65 m <sup>2</sup> ) per person, 28 sq. ft (2.6 m <sup>2</sup> ) total.
C	Stop Area	A 26-ft. (7.9-m) area along the curbline should be kept free from obstructions. The length should provide free access to the vehicle's front door.
D	Pedestrian Path	Minimum 4 ft. (1.2m) deep pedestrian path, or wider, as called for by local sidewalk standards, along a sidewalk or similar walkway. Should be a firm, stable, and slip-resistant surface connected to the loading pad. Wider path is desirable to provide space for passing.
E	Furniture	N/A
F	Clear Area	Clear space is required for the bus to pull over to allow passengers to board from the curb. The clear area should be 2 ft. (0.6 m) from the curb edge, 9 ft. (2.7 m) in minimum height.

# Curbside Design: Stop with Standard Bus Shelter



Element		Details
A	Loading Pad	5 ft. (1.5m) long x 8 ft. (2.4m) deep; pad must be firm, stable, and slip resistant, and connected to the pedestrian path. Provides a 5 ft. (1.5m) diameter clear turning radius for wheelchair users. Where possible, loading pads should be provided for both front and rear doors to accommodate more passengers boarding and alighting.  Sign should be located adjacent to the loading pad to clearly indicate bus stop.
B	Waiting Area	16 ft. (6.1m) long x 6 ft. (1.8m) deep between doors.  After subtracting bench dimension, provides enough net area for 12 standing passengers at 7 sq. ft. (0.65m <sup>2</sup> ) per person (86.3 sq. ft. or 8.01m <sup>2</sup> total), plus seating space for 3. Shelter design and configuration may vary.
C	Stop Area	26 ft. (7.9m) long area should be kept free from obstructions along the curb edge. The length should provide free access to vehicle's front and rear doors.
D	Pedestrian Path	Minimum 4 ft. (1.2m) deep pedestrian path, or wider, as called for by local sidewalk standards, along a sidewalk or walkway. Should be a firm, stable, and slip resistant surface connected to the loading pad and separate from waiting area. Keep 3 ft. (0.9m) clear around all street furniture and building elements.
E	Furniture	15 ft. (4.6m) long x 6 ft. (1.8m) wide x 9 ft. (2.7m) high shelter with lean rail, 3-seat bench, information, & ad panel. Glass panels allow view of arriving bus and weather protection. 78 net interior sq. ft. (7.2 m <sup>2</sup> ) can accommodate 10-11 standing passengers plus seating for 3. Existing shelters may vary in size based on their location.
F	Clear Area	2 ft. (0.6 m) from the curb edge, 9 ft. (2.7 m) minimum height.



# Curbside Design: Enhanced Bus Stop



Element		Details
A	Loading Pad	5 ft. (1.5m) long x 8 ft. (2.4m) deep; pad must be firm, stable, and slip resistant, and connected to the pedestrian path. Provides a 5 ft. (1.5m) diameter clear turning radius for wheelchair users. Where possible, loading pads should be provided for both front and rear doors to accommodate more passengers boarding and alighting.  Sign should be located adjacent to the loading pad to clearly indicate bus stop.
B	Waiting Area	38 ft. (4.6m) long x 4 ft. (1.2m) deep between doors; waiting area can be partially accommodated in the pedestrian path if pedestrian volumes are low.  Provides enough net area for 9 passengers, including 6 within the shelter at 7 SF (0.65m <sup>2</sup> ) per person, 64 SF (6.0 m <sup>2</sup> ) total. Shelter design and configuration may vary.
C	Stop Area	48 ft. (7.9m) long area should be kept free from obstructions along the curb edge. The length should provide free access to vehicle's front and rear doors.
D	Pedestrian Path	Minimum 4 ft. (1.2m) deep pedestrian path, or wider, as called for by local sidewalk standards, along a sidewalk or walkway. Should be a firm, stable, and slip resistant surface connected to the loading pad. Keep 3 ft. (.9m) clear around all street furniture and building elements.
E	Furniture	24 ft. (4.6m) long x 5 ft. (0.9m) wide x 9 ft. high shelter with stop information and advertising panel. Glass panels allow view of arriving bus and weather protection. 120 interior sq. ft. (11.1 m <sup>2</sup> ) can accommodate 16 passengers with seating for 4. Station area can also include 2 benches, a trash receptacle, and lighting.
F	Clear Area	2 ft. (0.6 m) from the curb edge, 9 ft. (2.7 m) minimum height.

# Stop Elements

Element	Pg.	
A	Public Art	49
B	Transit Shelter	50
C	Stop Area Seating	50
D	Trash Receptacle	50
E	Lighting	51
F	Signage	51
G	Real Time Info	51
H	Bicycle Parking	52
I	On Road Bicycle Facilities	52
J	Bike Share	53

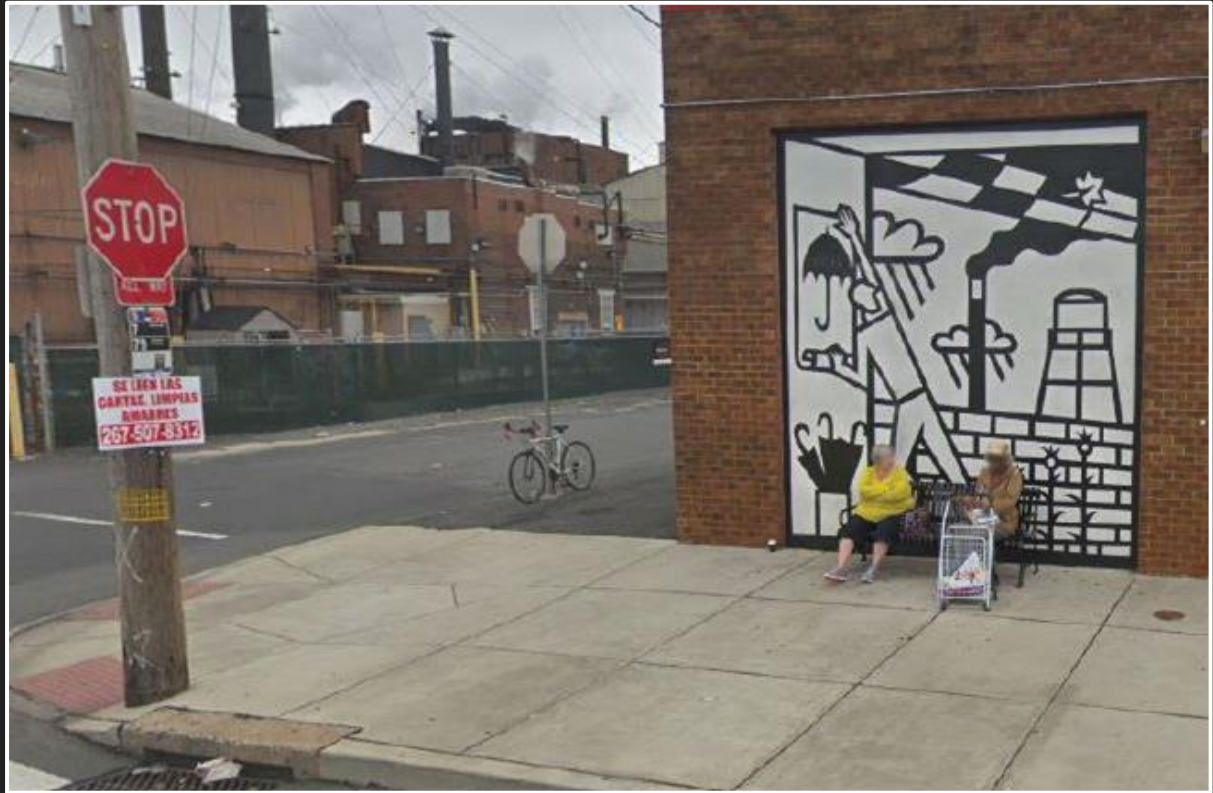




Floating island with bike lane, Seattle, Washington  
Source: NACTO Urban Street Design Guide (2018).



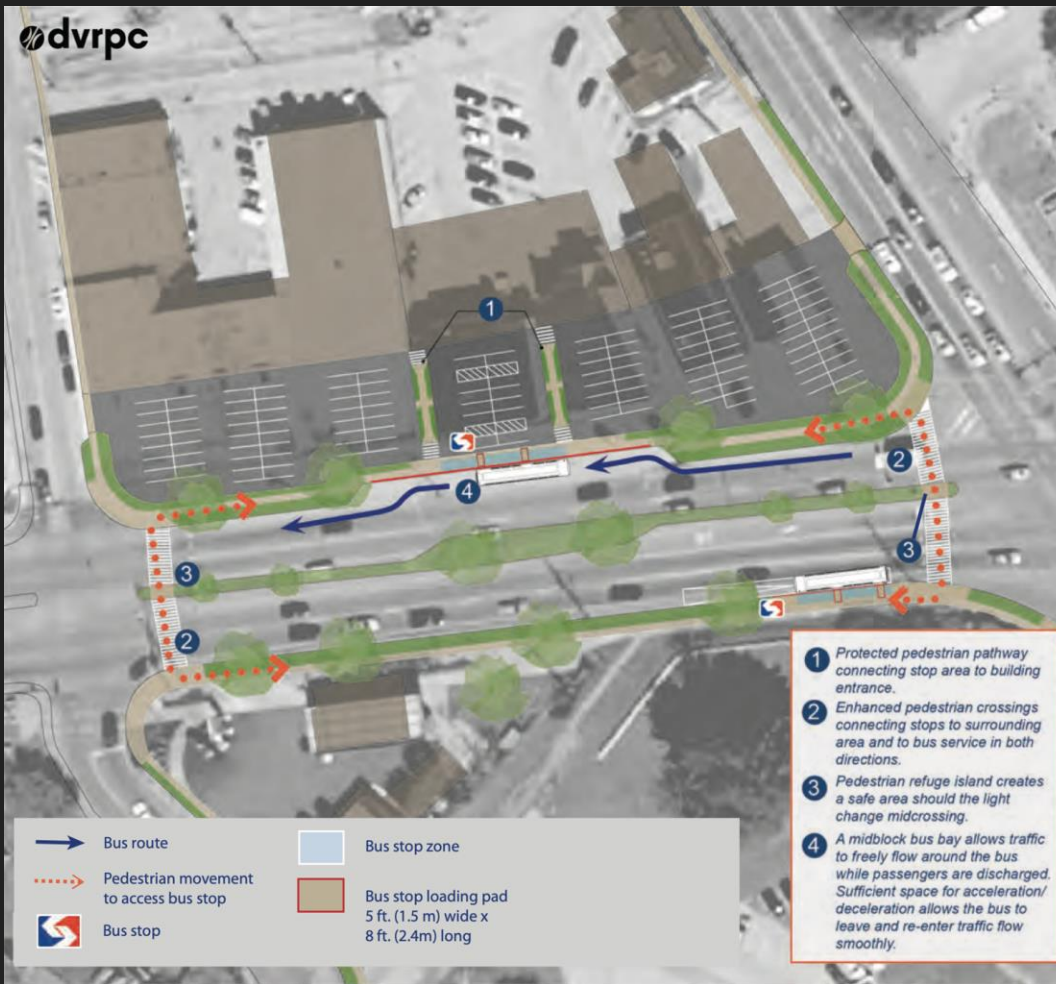
Indego Bike Share with SEPTA bus stop, Philadelphia, Pennsylvania  
Source: Google (2018).



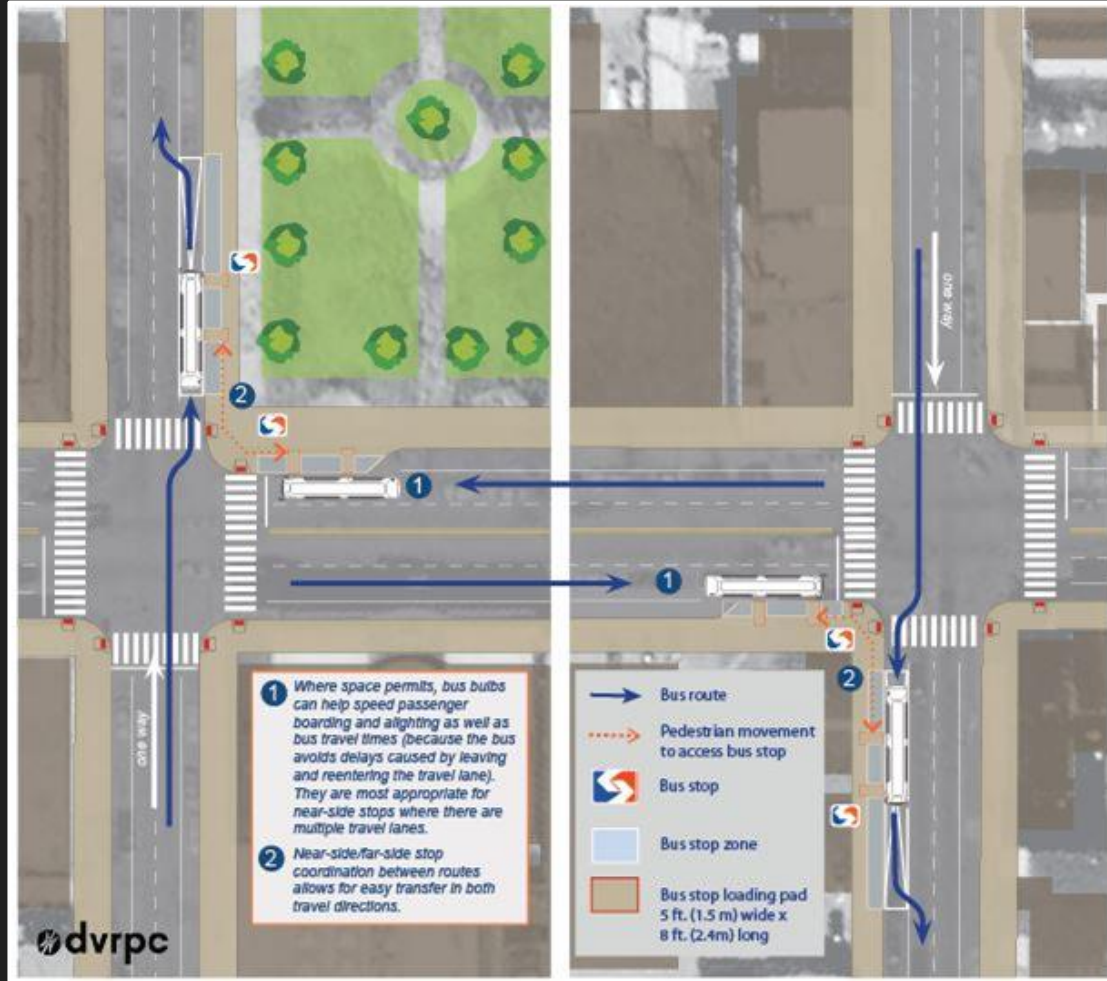
# Checklist for New or Relocated SEPTA Bus Stops

Stop Placement	
	Has SEPTA been contacted to verify that transit service currently exists adjacent to a proposed development, or may be feasible to provide in the future?
	Are large developments being designed to permit safe routing of buses throughout?
	Has SEPTA been contacted to explore whether new or relocated transit stops can be provided on or adjacent to the proposed development?
	If new or relocated transit stops are proposed, are they located in a reasonable proximity to major destinations, as well as in a pair of stops serving the opposite direction?
Transit Circulation	
	For all intersections and driveways that will accommodate buses, are corners designed for a 50-ft. (15.2-m)-outside and 30-ft. (9.1-m)-inside turning radius?
	For all roadways and driveways that will accommodate buses, are grades 6 percent or less?
	For all roadways and driveways that will accommodate buses, are lane widths 10–12 ft. (3.0–3.6 m)?
	For all roadways, driveways, and stop areas that will accommodate buses, have pavement cross-sections been designed to withstand the wear and tear that will be generated by heavier vehicles (ideally concrete pads at bus stop areas)?
	Will structures and landscaping outside the cartway permit sufficient vertical and horizontal clearance for buses, with all areas within 2 ft. (0.6m) of curbs kept clear of obstructions to a height of at least 9 ft. (2.7m)?
	Are proposed stops connected to primary destinations with an ADA-compliant pedestrian access path free of obstacles?
Stop Design Elements	
	If the developer is to provide stop improvements, have the proposed stop elements been designed to be consistent with the guidelines in this document and approved by SEPTA?
	If new or relocated transit stops are proposed, are they located in a safe, visible, and well-lit location?

# Case Study 1: Serving “Strip Commercial Development with a Curbside Stop



# Case Study 4: Coordinating Stop Design/Location to Enhance Customer Mobility





Download the report here:

<https://www.dvrpc.org/Reports/18029.pdf>

Amy Bernknopf

Assistant Manager, Office of Transit,  
Bicycle, and Pedestrian Planning  
[abernknopf@dvrpc.org](mailto:abernknopf@dvrpc.org)

Thom Stead

Senior Transportation Planner  
[tstead@dvrpc.org](mailto:tstead@dvrpc.org)