



# RTC

## REGIONAL TECHNICAL COMMITTEE

**COMMONWEALTH OF PENNSYLVANIA:**

BUCKS COUNTY | CHESTER COUNTY | DELAWARE COUNTY | MONTGOMERY COUNTY |  
CITY of PHILADELPHIA | CITY of CHESTER

**STATE OF NEW JERSEY:**

BURLINGTON COUNTY | CAMDEN COUNTY | GLOUCESTER COUNTY | MERCER COUNTY |  
CITY of CAMDEN | CITY of TRENTON

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# Agenda

**Tuesday, March 12, 2024 | 10am**

**Online Only meeting:**

[https://dvrpc.zoom.us/webinar/register/WN\\_1acjj69cQo-f\\_xIEq4xoEw](https://dvrpc.zoom.us/webinar/register/WN_1acjj69cQo-f_xIEq4xoEw)

**Call to Order – Chair’s Comments**

**Deputy Executive Director’s Report**

**Public Comments on Agenda and Non-Agenda Items**

**ACTION ITEMS**

1. **Highlights of the February 6, 2024 RTC Meeting**
2. **DVRPC Transportation Improvement Program (TIP) Actions**

Ethan Fogg, Capital Program Coordinator, will present. The dynamic nature of funding transportation improvements and the need to remain within financial constraint require amendments or modifications to the TIP on a regular basis. The following projects require formal TIP modifications or amendments this month for the FY2024 TIP for New Jersey and/or the FY2023 TIP for Pennsylvania.

- a. PA23-99: North Philadelphia School Zones (RAISE 2023) (MPMS #120993), City of Philadelphia – Add New Project to the TIP
- b. PA23-100: Reconnecting Our Chinatown (RCP 2022) (MPMS #119896), City of Philadelphia - Add New Project to the TIP
- c. PA23-101: US 1 BAT Lanes: Hellerman/Bustleton – Bucks (ARLE) (MPMS #118074), City of Philadelphia - Add New Project to the TIP
- d. PA23-102: Pleasant View Road Bridge (MPMS #92637), Montgomery County - Advance CON Phase
- e. PA23-103: Projects of Significance (MPMS #115472), SEPTA - Add New Federal Funds
- f. NJ24-018: Route 47, Grove St. to Route 130, Pavement (DB #12305), Gloucester County – Increase CON Phase

- g. NJ24-019: Route 295/42/I-76, Direct Connection, Contract 4 (DB #355E), Camden County – Delay and Increase CON Phase
- h. NJ24-020: Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout To Glen Echo Avenue (CR 538) (DB #D2406), Gloucester County – Add New Project to the TIP

**3. Adoption of the 2023 Congestion Management Process (CMP)**

Tom Edinger, Manager, Regional Congestion Management Program, will present. A Congestion Management Process (CMP) is a systematic process for managing congestion. It identifies specific multimodal strategies for all locations in the region to minimize congestion and enhance the ability of people and goods to reach their destinations. The CMP advances the goals of DVRPC's Long-Range Plan including reducing congestion and improving mobility, reliability, multimodal accessibility, safety, and economic vitality.

**4. Adoption of the Updated Comprehensive Economic Development Strategy (CEDS) Goals**

Karen Cilurso, Associate Director, Livable Communities, will present. Adopted in 2019, Growing Greater Philadelphia satisfies the U.S. Economic Development Administration (EDA) requirement for a regional Comprehensive Economic Development Strategy (CEDS). To remain eligible for EDA funding, the goals and objectives must be evaluated every five years. This presentation will highlight the update process, post COVID economic trends, and the updated goal statements.

**5. Memorandum of Understanding with Pottstown Area Rapid Transit**

Michael Boyer, Director of Regional Planning, will present. At the direction of the Federal Transit Administration, DVRPC and the Borough of Pottstown, which owns and administers Pottstown Area Rapid Transit, have developed a Memorandum of Understanding that outlines how the two entities will carry out transportation planning and programming activities.

**6. FY2024 Work Program Amendment: West Windsor Township Travel Model**

Matt Gates, Associate Director, Travel Trends and Forecasts, will present. West Windsor Township (Mercer County) NJ and their consultant (Arora Associates) requested DVRPC prepare a customized version of its regional travel demand model suitable for traffic impact analysis in the township. DVRPC will create this travel model by modifying its current regional travel demand model (TIM2.5.1) by creating a SubNetwork that includes only Mercer County, NJ and portions of Middlesex and Monmouth counties adjacent to West Windsor Township.

## **PRESENTATION ITEMS**

**7. Voices of Environmental Justice Communities**

Jaclyn Davis, Manager, Office of Long-Range Planning, will present. In preparation for an updated long-range plan and associated region-wide environmental justice (EJ) analysis, DVRPC staff sought to engage members of these communities to understand their needs and perceptions of various transportation projects. The process and findings from four focus group discussions with low-income and racial and ethnic minority populations held in July and August of 2023 will be presented. Findings are informing project-level analysis, region-wide system-level analysis, and project candidates for inclusion in the Plan. See <https://www.dvrpc.org/products/24128> for the full report.

## 8. Vision Zero: Hunting Park

Kelsey McElduff, Principal Transportation Engineer, DVRPC, and Lydia Kenselaar, Philadelphia Office of Transportation, Infrastructure and Sustainability (OTIS), will share how they engaged stakeholders and the community to identify safety concerns and develop recommendations to improve the Hunting Park Avenue corridor, an important arterial corridor serving numerous communities in North Philadelphia.

## DISCUSSION ITEMS

### 9. IIJA Update

An update on IIJA funding opportunities and coordination activities will be provided.

### 10. One Minute Reports

RTC Members and guests will be invited to provide updates on the activities of their agencies.

## Old Business and New Business

### 11. Meeting Adjournment

The next scheduled meeting of the RTC is Tuesday, April 9, 2024, planned for in person/hybrid.

*The Delaware Valley Regional Planning Commission (DVRPC) fully complies with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice, and related nondiscrimination statutes and regulations in all programs and activities. DVRPC's website, [www.dvrpc.org](http://www.dvrpc.org), may be translated into multiple languages. Publications and other public documents can be made available in alternative languages and formats, if requested. DVRPC public meetings are always held in ADA-accessible facilities and in transit-accessible locations when possible. Auxiliary services can be provided to individuals who submit a request at least seven days prior to a meeting. Requests made within seven days will be accommodated to the greatest extent possible. Any person who believes they have been aggrieved by an unlawful discriminatory practice by DVRPC under Title VI has a right to file a formal complaint. Any such complaint may be in writing and filed with DVRPC's Title VI Compliance Manager and/or the appropriate state or federal agency within 180 days of the alleged discriminatory occurrence. For more information on DVRPC's Title VI program, or to obtain a Title VI Complaint Form, please call (215) 592-1800 or email [public\\_affairs@dvrpc.org](mailto:public_affairs@dvrpc.org).*

**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**

**REGIONAL TECHNICAL COMMITTEE**

**February 6, 2024 Meeting Highlights**

**This Meeting was Hybrid**

**Public Comment on Any Agenda and Non-Agenda Items**

No public comments were stated.

**RTC AGENDA ITEMS**

**1. Highlights of the January 9, 2024 RTC Meeting**

The highlights from the January 9, 2024 meeting of the RTC were presented for adoption.

*Motion: by Matt Edmond seconded by Nick Cressman that the RTC adopt the highlights of the January 9, 2024 RTC meeting.*

Motion passed. All votes were cast in favor of the motion.

**2a. PA23-94: I-95 BS5: Delaware Avenue Extension (MPMS #103563), City of Philadelphia – Cashflow CON Phase**

The RTC recommends:

Board approval of TIP Action PA23-94, PennDOT's request that DVRPC amend the FY2023 TIP for Pennsylvania by cash flowing \$9,642,000 (\$7,714,000 NHPP/\$1,928,000 State 581) of the Construction (CON) Phase funding for the Delaware Avenue Extension (MPMS #103563) project from FY2024 to FY2027.

**2b. PA23-95: Roosevelt Boulevard over Wayne Junction (MPMS #83736), City of Philadelphia – Increase CON Phase**

The RTC recommends:

Board approval of TIP Action PA23-95, PennDOT's request that DVRPC amend the FY2023 TIP for Pennsylvania by increasing the Construction (CON) Phase of the

Roosevelt Boulevard over Wayne Junction (MPMS #83736) project by \$19,715,000 (FY24: \$12,714,000 (\$10,000,000 NHPP/\$2,714,000 State 581) and FY25: (\$7,001,000 (\$5,601,000 NHPP/\$1,400,000 State 581)).

Motion for 2a and 2b by *Jonathan Korus*, seconded by *Mason Austin* that the RTC recommend the Board approve the TIP actions.

Motion passed. All votes were cast in favor of the motion.

**2c. PA23-96: US 202 and PA 29 Sinkhole Remediation (MPMS #107175), Various Counties – Add New Project to the TIP**

The RTC recommends:

Board approval of of TIP Action PA23-96, PennDOT's request that DVRPC amend the FY2023 TIP for Pennsylvania adding a new project to the TIP, US 202 and PA 29 Sinkhole Remediation (MPMS #107175) in the amount of \$13,500,000 programmed as follows: \$1,500,000 State 581 funds for the Preliminary Engineering (PE) Phase in FY24 and \$12,000,000 STU for the Construction (CON) Phase in FY24.

**2d.PA23-97: Ridge Pike: School Lane to Belvoir Road/Interchange Area Bridges (MPMS #110444), Montgomery County – Cashflow CON Phase**

The RTC recommends:

Board approval of TIP Action PA23-97, PennDOT's request that DVRPC amend the FY2023 TIP for Pennsylvania by cash flowing \$19,259,000 (\$7,907,000 STP/\$7,500,000 STU/\$2,889,000 State 183/\$935,000 LOC) of the Construction (CON) Phase funding for the Ridge Pike: School Lane to Belvoir Road/Interchange Area Bridges (MPMS #110444) project from FY2024 to FY2025 through FY2031 programmed as follows:

- \$1,250,000 (\$1,000,000 STU/\$187,000 State 183/\$63,000 LOC) in FY25
- \$2,500,000 (\$2,000,000 STU/\$375,000 State 183/\$125,000 LOC) in FY26
- \$4,375,000 (\$2,000,000 STP/\$1,500,000 STU/\$656,000 State 183/\$219,000 LOC) in FY27
- \$2,500,000 (\$1,500,000 STP/\$500,000 STU/\$375,000 State 183/\$125,000 LOC) in FY28
- \$2,500,000 (\$2,000,000 STP/\$375,000 State 183/\$125,000 LOC) in FY29
- \$5,625,000 (\$2,000,000 STP/\$2,500,000 STU/\$844,000 State 183/\$281,000 LOC) in FY30
- \$509,000 (\$407,000 STP/\$77,000 State 183/\$25,000 LOC) in FY31.

Motion for 2c and 2d by *Jonathan Korus*, seconded by *Donna Rendeiro* that the RTC recommend the Board approve the TIP actions.

Motion passed. All votes were cast in favor of the motion.

### **3. Adoption of Regional Safety Targets Update to Satisfy MPO Requirements Under the Federal Transportation Performance Management (TPM) Process**

The RTC recommends:

Board adoption of the regional safety targets update and to agree to plan and program projects that contribute toward meeting or exceeding the targets.

Motion: by *Donna Rendeiro*, seconded by *Nick Baker* that the RTC recommend Board approval of the Regional Safety Targets.

Motion passed. All votes were cast in favor of the motion.

### **4. FY 2024 Work Program Amendments - CRRSAA Funding**

The RTC recommends:

That the Board amend the FY24 UPWP by adding two CRRSAA funded projects: Pproject 23-23-100: Support for Implementation of RAISE Award for Construction of Camden County LINK Trail for \$400,000, and Project 23-62-400: New Jersey Local Concept Development: Dinosaur Trail, Gloucester County for \$700,000.

Motion for both: by *Matt Lawson*, seconded by *Nick Cressman* that the RTC recommend Board approval of these work program amendments.

Motion passed. All votes were cast in favor of the motion.

### **5. Urban Land Institute Technical Assistance Panel Overview**

### **6. Pennsylvania \$5 Vehicle Registration Surcharge - Discussion on Uses of Collected Revenue for Local Transportation Projects**

### **7. IIJA Updates**

The next scheduled meeting of the RTC is **Tuesday, March 12, 2023, planned for all virtual.**

**ATTENDANCE**

**Voting Members**

NJ Department of Transportation  
NJ Department of Environmental Protection  
NJ Department of Community Affairs  
NJ Governor's Appointee  
NJ Office for Planning Advocacy  
PA Department of Community and Economic Development  
PA Department of Environmental Protection  
PA Department of Transportation  
PA Governor's Appointee  
PA Governor's Policy Office  
Bucks County  
Burlington County  
Camden County  
Chester County  
Delaware County  
Gloucester County  
Mercer County  
Montgomery County  
City of Philadelphia – City Planning Commission  
City of Philadelphia – Department of Streets  
City of Philadelphia – OTIS  
City of Camden  
City of Chester  
City of Trenton  
Delaware River Port Authority  
New Jersey Transit Corporation  
Port Authority Transit Corporation  
Southeastern PA Transportation Authority  
Public Participation Task Force  
Public Participation Task Force  
Public Participation Task Force

**Non-Voting Members**

Delaware River Joint Toll Bridge Commission  
Delaware Valley Goods Movement Task Force  
Federal Highway Administration - NJ Division  
Federal Highway Administration - PA Division  
Federal Transit Administration - Region III  
Greater Philadelphia Chamber of Commerce  
NJ Turnpike Authority  
New Jersey TMAs  
Pennsylvania TMAs  
Pennsylvania TMAs  
Pennsylvania Turnpike Commission

**Representative**

Andrew Clark  
(not represented)  
Keith Henderson  
(not represented)  
Donna Rendeiro  
(not represented)  
Sachin Shankar  
David Alas  
Jonathan Korus  
(not represented)  
Richard Brahler  
Tom Stanuikynas  
(not represented)  
Brian Styche  
Lou Hufnagle  
Nick Cressman  
Matthew Lawson  
Matt Edmond  
Mason Austin  
Nick Baker  
Kelley Yemen  
June Morton  
(not represented)  
Michael Kolber  
Jalila Parker  
Michael Swan  
(not represented)  
Kellie Bellina  
Lee Wolfe  
Bill Matulewicz  
Eva Hayes  
**Representative**  
(not represented)  
(not represented)  
Jason Simmons  
(not represented)  
(not represented)  
(not represented)  
(not represented)  
Rosemary Nivar  
Ronda Urkowitz  
Jacqui Baxter – Rollins  
Tracy Barusevicius  
(not represented)



Phila Port	(not represented)
Pottstown Urban Transit	(not represented)
Select Greater Philadelphia	(not represented)
South Jersey Port Corporation	(not represented)
South Jersey Transportation Authority	(not represented)
Transportation Operations Task Force	(not represented)
US EPA - Region II	(not represented)
US EPA - Region III	(not represented)
US Department of Housing and Urban Development	(not represented)

**Other Member Representatives and Guests**

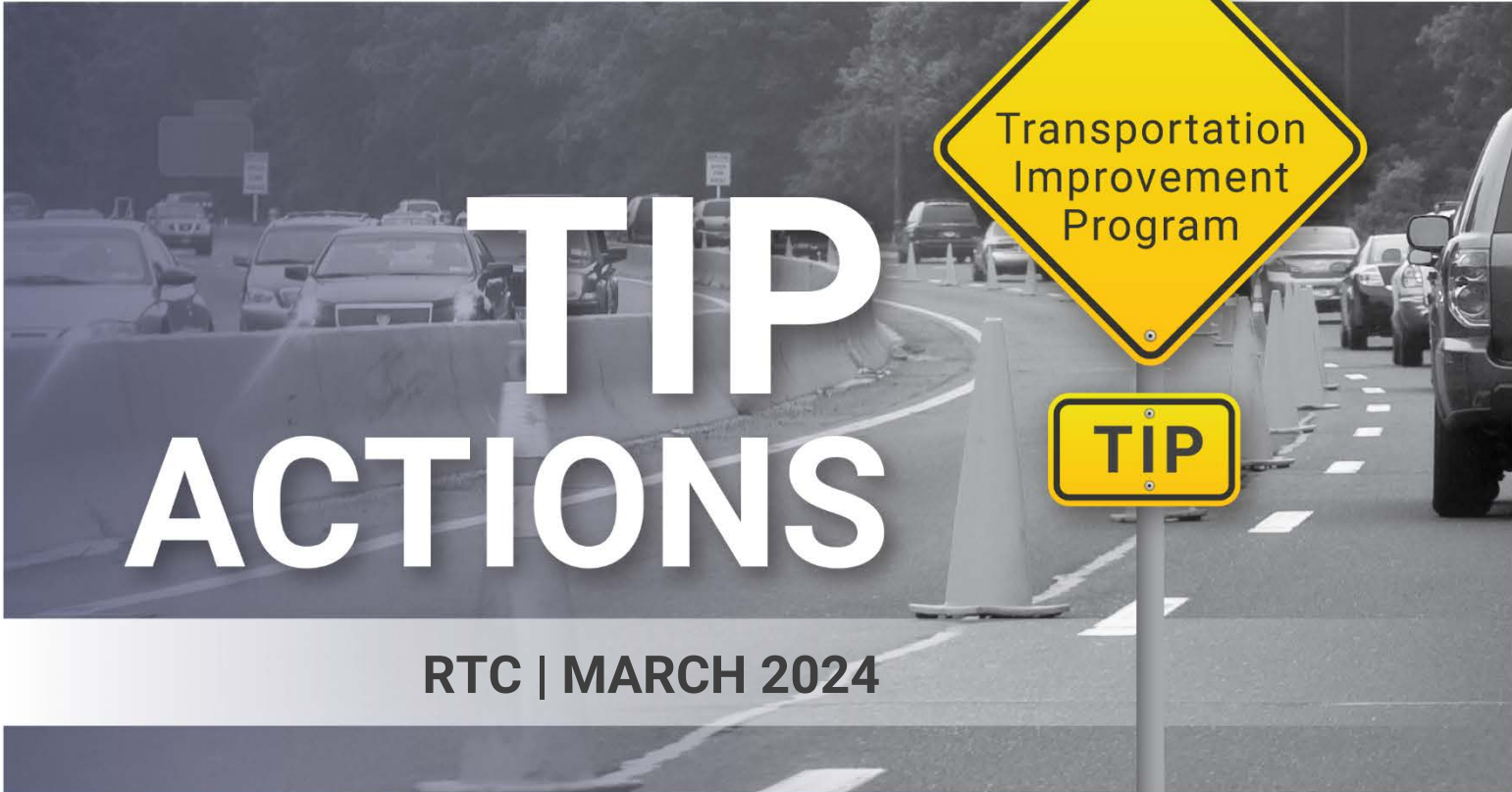
Chester County	Patty Quinn
City of Philadelphia Streets Department	David Kanthor
City of Philadelphia Streets Department	Meryl Klein
Burlington County	Carol Ann Thomas
Delaware County	Gina Burritt
Gloucester County	Bill Fleming
Gloucester County	Jackie Huston
Mercer County	Jason Mildenburg
Montgomery County	Matt Popek
Montgomery County	Bill Hartman
PennDOT	Nyomi Evans
PennLaw	Connor Henderson
ULI	Kevin Moran
ULI	Christina Chavez
DVRPC PPTF	Judith Fagan

**DVRPC Staff**

Patty Elkis  
Ariella Maron  
Alyssa Driscoll  
Elise Turner  
Renee Wise  
Wideline Desir  
Alison Hastings  
Shoshana Akins  
Najah Jackson  
Shawn Megil Legendre  
Ethan Fogg  
Alyson Dressman  
Amy Solano  
Matthew Galenas  
Jesse Buerk

Richard Murphy  
Karin Morris  
Derek Lomardi  
Gregory Diebold  
Betsy Mastaglio  
Greg Krykewycz  
Vanessa Doan  
Mike Boyer  
Rebecca Wetzler  
Meijun Liu  
Christopher Mulroy  
Russell Livolsi  
Tom Edinger  
Eva Pilchta  
Brad Lane  
Stacy Bartels  
Jason Crouch  
Glenn McNichol  
Brett Fusco

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# TIP ACTIONS

RTC | MARCH 2024

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**TIP Actions for March 2024**

The following projects require formal TIP modifications or amendments this month for the FY2023 TIP for Pennsylvania and/or FY2024 TIP for New Jersey. Attached is the Action statement (“Pink Sheet”) for the project followed by the TIP “Before/After” description page and supporting documentation, such as request letters, and maps, as needed. Towards the end of the package in a separate section are financial constraint charts and any other information that may be helpful to you as you review this package.

- a) **PA23-99: North Philadelphia School Zones (RAISE 2023) (MPMS #120993), City of Philadelphia – Add New Project to the TIP**
- b) **PA23-100: Reconnecting Our Chinatown (RCP 2022) (MPMS #119896), City of Philadelphia - Add New Project to the TIP**
- c) **PA23-101: US 1 BAT Lanes: Hellerman/Bustleton – Bucks (ARLE) (MPMS #118074), City of Philadelphia - Add New Project to the TIP**
- d) **PA23-102: Pleasant View Road Bridge (MPMS #92637), Montgomery County - Advance CON Phase**
- e) **PA23-103: Projects of Significance (MPMS #115472), SEPTA - Add New Federal Funds**
- f) **NJ24-018: Route 47, Grove St. to Route 130, Pavement (DB #12305), Gloucester County – Increase CON Phase**
- g) **NJ24-019: Route 295/42/I-76, Direct Connection, Contract 4 (DB #355E), Camden County – Delay and Increase CON Phase**
- h) **NJ24-020: Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout To Glen Echo Avenue (CR 538) (DB #D2406), Gloucester County – Add New Project to the TIP**

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PLEASE NOTE THAT THERE ARE ALSO NJDOT, PENNDOT, AND DVRPC LOCAL ADMINISTRATIVE AND/OR INFORMATIONAL ACTIONS INCLUDED FOR YOUR INFORMATION AT THE END OF THE PACKET IN THE “FISCAL CONSTRAINT CHARTS” SECTION.

**ACTION ITEM**

Date Prepared: March 1, 2024

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**

**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**

**REGIONAL TECHNICAL COMMITTEE MEETING**

**MARCH 12, 2024**

**Agenda Item:**

**2a. PA23-99: North Philadelphia School Zones (RAISE 2023) (MPMS #120993),  
City of Philadelphia – Add New Project to the TIP**

**Background/Analysis/Issues:**

PennDOT and the City of Philadelphia have requested that DVRPC amend the FY2023 TIP for Pennsylvania by adding a new project to the TIP, North Philadelphia School Zones (MPMS #120993) in the amount of \$29,000,000 programmed as follows: \$1,119,000 Local funds for the Preliminary Engineering (PE) Phase in FY24, \$1,119,000 Local funds for the Final Design (FD) Phase in FY25, and \$26,762,000 (\$25,000,000 RAISE/\$1,762,000 LOC) for the Construction (CON) Phase in FY26. \$10 of federal funds have also been added to allow PennDOT to process a 4232 and establish an end date for the project. This allows the City to start design and receive credit towards their local match. The RAISE and Local funds are additional to the region and are outside the Core Funding distributions.

This project was awarded a 2023 Rebuilding American Infrastructure with Sustainability and Equity (RAISE) federal discretionary grant in June of 2023. The project includes constructing multimodal safety, accessibility, and mobility improvements, or "Slow Zones," around six schools in the City of Philadelphia. The work includes improvements such as raised crosswalks at Neighborhood Slow Zone gateways, redesigned Slow Zone advisory signage for drivers entering Slow Zone limits, concrete curb extensions in place of painted corner clearances at key community locations and at hazardous crossings, installation of Continental crosswalks in place of several standard crosswalks, and new ADA ramps at multiple locations. The project will also implement state-of-good repair upgrades such as resurfacing streets, upgrading traffic signals and communications, and constructing ADA-compliant curb ramps.

Located in North Philadelphia, the proposed work seeks to address high crash rates within the project area by implementing Slow Zones. From 2017 – 2021, there were 418 crashes in the project area, resulting in 156 injuries and three fatalities. Furthermore, the selected schools scored among the top ten highest schools on the City's School Stress Index, which determines school stress based on the number, frequency, and severity of vehicular, pedestrian, and bike injuries; proximity to the City's High Injury Network; scoring high on the City's Litter Index; the number of households in poverty; number of narcotics-related crime incidents; and health indicators including high rates of asthma, diabetes, and obesity.

The proposed work is part of the City's Neighborhood Slow Zone Program, which brings posted speed limits down to 20 MPH and installs traffic calming throughout an entire zone of residential streets. Informed by FHWA's Proven Safety Countermeasures and a robust community engagement process, the improvements proposed for this project aim to improve health and safety in Philadelphia by increasing the number of students walking and bicycling to school, decreasing the likelihood of injuries and fatalities and, ultimately, improving equitable access to opportunity.

Financial Constraint:

Financial constraint will be maintained as these funds are additional to the region.

Conformity Finding:

The TIP's current conformity finding will not be impacted by this amendment as this project is exempt from air quality analysis.

Cost and Source of Funds:

\$29,000,000 (\$25,000,000 RAISE/\$4,000,000 LOC)

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make recommendations at the March 12, 2024 RTC Meeting.

Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee recommends Board approval of TIP Action PA23-99, PennDOT and the City of Philadelphia's request that DVRPC amend the FY2023 TIP for Pennsylvania by adding a new project to the TIP, North Philadelphia School Zones (MPMS #120993) in the amount of \$29,000,000 programmed as follows: \$1,119,000 Local funds for the Preliminary Engineering (PE) Phase in FY24, \$1,119,000 Local funds for the Final Design (FD) Phase in FY25, and \$26,762,000 (\$25,000,000 RAISE/\$1,762,000 LOC) for the Construction (CON) Phase in FY26.

Staff Contact:

Travis Spotts

Attachments:

1. PennDOT FCC #119
2. Project Location Map

# DVRPC FY2023-2026 TIP for PA Pennsylvania - Highway and Transit Program

Action: PA23-99

## Philadelphia

MPMS# 120993 *North Philadelphia School Zones*

AQ Code S6

LIMITS:

Latitude:

MUNICIPALITIES: Philadelphia City

Longitude:

Bicycle/Pedestrian Improvement

PROJ MANG: AECOM/P. Schultes

The project includes constructing multimodal safety, accessibility, and mobility improvements, or "Slow Zones," around six schools in the City of Philadelphia. The work includes improvements such as raised crosswalks at Neighborhood Slow Zone gateways, redesigned Slow Zone advisory signage for drivers entering Slow Zone limits, concrete curb extensions in place of painted corner clearances at key community locations and at hazardous crossings, installation of Continental crosswalks in place of several standard crosswalks, and new ADA ramps at multiple locations. The project will also implement state-of-good repair upgrades such as resurfacing streets, upgrading traffic signals and communications, and constructing ADA-compliant curb ramps.

### Summary of Action:

Action to amend the FY2023 TIP for Pennsylvania by adding a new project to the TIP, North Philadelphia School Zones (MPMS #120993) in the amount of \$29,000,000 programmed as follows: \$1,119,000 Local funds for the Preliminary Engineering (PE) Phase in FY24, \$1,119,000 Local funds for the Final Design (FD) Phase in FY25, and \$26,762,000 (\$25,000,000 RAISE/\$1,762,000 LOC) for the Construction (CON) Phase in FY26.

**The proposed action will add a new project to the TIP**

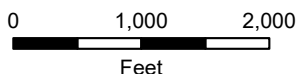
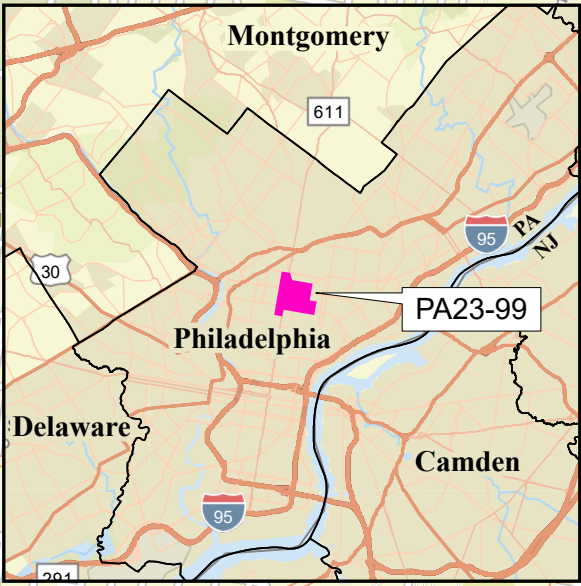
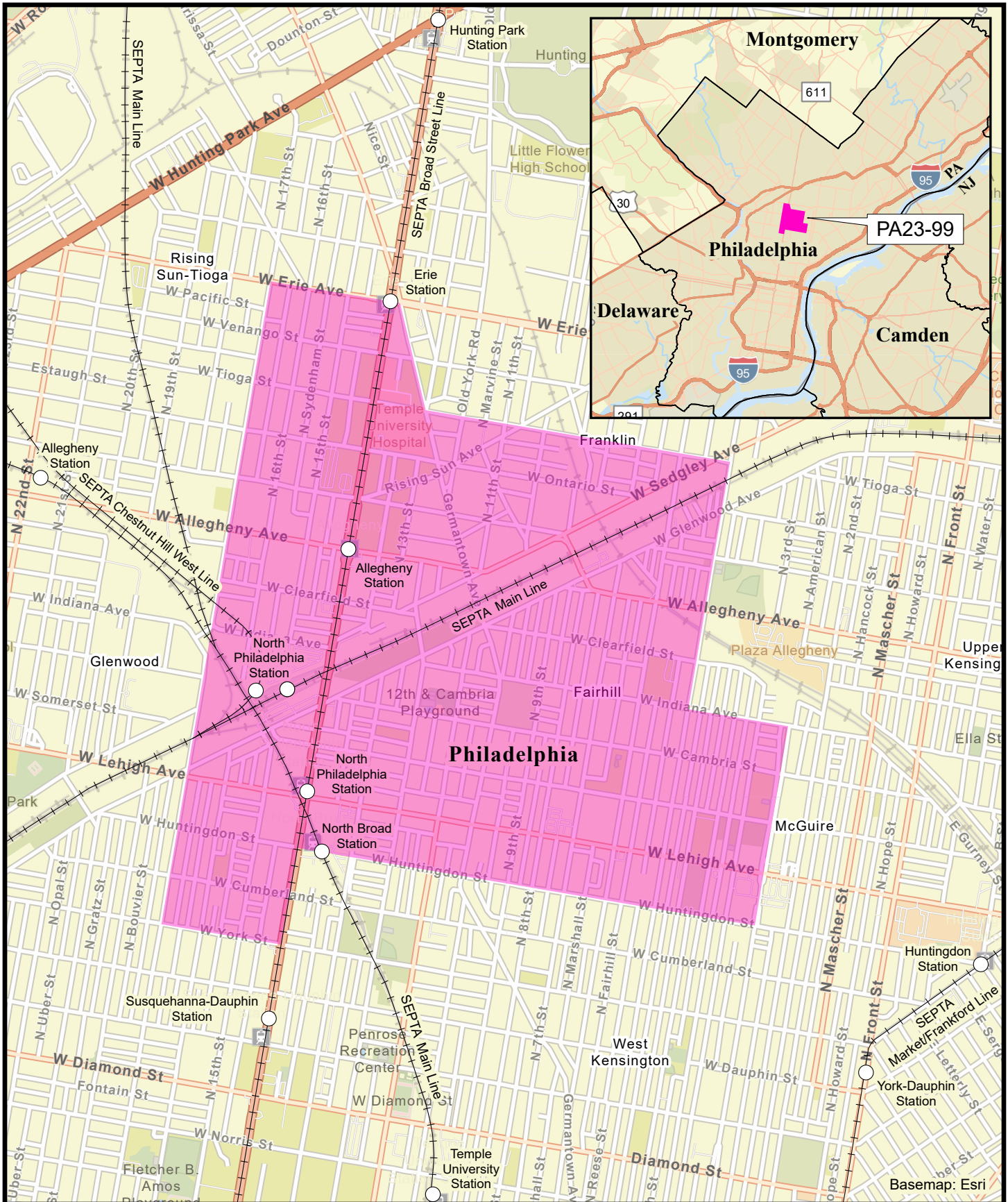
### After Proposed Action

#### TIP Program Years (\$ 000)

Phase	Fund	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	
PE	LOC		1,119											
FD	LOC			1,119										
CON	RAISE				25,000									
CON	LOC				1,762									
		0	1,119	1,119	26,762	0	0	0	0	0	0	0	0	
		Total FY2023-2026			29,000	Total FY2027-2030				0	Total FY2031-2034			0



# PA23-99: North Philadelphia School Zones (RAISE 2023)



Basemap: Esri

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**  
**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**  
**REGIONAL TECHNICAL COMMITTEE MEETING**  
**MARCH 12, 2024**

**Agenda Item:**

**2b. PA23-100: Reconnecting Our Chinatown (RCP 2022) (MPMS #119896), City of Philadelphia – Add New Project to the TIP**

**Background/Analysis/Issues:**

PennDOT and the City of Philadelphia have requested that DVRPC amend the FY2023 TIP for Pennsylvania by adding a new project to the TIP, Reconnecting Our Chinatown (RCP 2022) (MPMS #119896) in the amount of \$4,055,000 (\$1,805,000 RCP/\$600,000 State 581D/\$1,650,000 LOC) for the Study Phase in FY24. Please note that State matching funds are provided from the Statewide Reserve. RCP, State, and Local funds are additional to the region and are outside the Core Funding distributions.

This project was awarded a 2022 Reconnecting Communities and Neighborhoods (RCP) federal discretionary grant in February, 2023. Funds will be used to study how to reconnect Chinatown across the Vine Street Expressway (I-676) through community capacity building and engagement, planning and feasibility activities, preliminary engineering and design studies that support the environmental review, and the development of an Equitable Outcomes Action Plan. The City will explore the feasibility of constructing a cap to reconnect Chinatown and restore community connectivity, support sustainable transit options, and improve community quality of life.

Founded in 1871, Philadelphia's Chinatown grew steadily to consist of a vibrant, family-oriented community with churches, businesses, and a myriad of other social and cultural institutions. In the 1960's, construction of the Vine Street Expressway, a six-lane below-grade Interstate flanked by service roads, cut through central Chinatown. The Interstate's construction has led to persistent quality-of-life challenges for the neighborhood. For example, Chinatown's current poverty rate is 32%.

The City of Philadelphia recognizes the harm done by the creation of this facility and has developed a detailed plan for engaging with community members throughout the project, along with current partnerships with community groups, government bodies, and local businesses.

Financial Constraint:

Financial constraint will be maintained as these funds are additional to the region.

Conformity Finding:

The TIP's current conformity finding will not be impacted by this amendment as this project is exempt from air quality analysis.

Cost and Source of Funds:

\$4,055,000 (\$1,805,000 RCP/\$600,000 State 581D/\$1,650,000 LOC)

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make recommendations at the March 12, 2024 RTC Meeting.

Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee recommends Board approval of TIP Action PA23-100, PennDOT and the City of Philadelphia's request that DVRPC amend the FY2023 TIP for Pennsylvania by adding a new project to the TIP, Reconnecting Our Chinatown (RCP 20220) (MPMS #119896) in the amount of \$4,055,000 (\$1,805,000 RCP/\$600,000 State 581D/\$1,650,000 LOC) for the Study Phase in FY24.

Staff Contact:

Travis Spotts

Attachments:

1. PennDOT Statewide FCC

# DVRPC FY2023-2026 TIP for PA

## Pennsylvania - Highway and Transit Program

Action: PA23-100

### Philadelphia

MPMS# 119896 *Reconnecting Our Chinatown*

AQ Code X1

LIMITS:

Latitude:

MUNICIPALITIES: Philadelphia City

Longitude:

Other

PROJ MANG: EE/DVRPC/J. Banks

This project was awarded a 2022 Reconnecting Communities and Neighborhoods (RCP) federal discretionary grant in February, 2023. Funds will be used to study how to reconnect Chinatown across the Vine Street Expressway (I-676) through community capacity building and engagement, planning and feasibility activities, preliminary engineering and design studies that support the environmental review, and the development of an Equitable Outcomes Action Plan. The City will explore the feasibility of constructing a cap to reconnect Chinatown and restore community connectivity, support sustainable transit options, and improve community quality of life.

#### Summary of Action:

Action to amend the FY2023 TIP for Pennsylvania by adding a new project to the TIP, Reconnecting Our Chinatown (RCP 2022) (MPMS #119896) in the amount of \$4,055,000 (\$1,805,000 RCP/\$600,000 State 581D/\$1,650,000 LOC) for the Study Phase in FY24.

**The proposed action will add a new project to the TIP**

#### After Proposed Action

		TIP Program Years (\$ 000)												
Phase	Fund	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	
STUD	RCP		1,805											
STUD	581D		600											
STUD	LOC		1,650											
		0	4,055	0	0	0	0	0	0	0	0	0	0	
		Total FY2023-2026			4,055	Total FY2027-2030				0	Total FY2031-2034			0

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**  
**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**  
**REGIONAL TECHNICAL COMMITTEE MEETING**  
**MARCH 12, 2024**

**Agenda Item:**

**2c. PA23-101: US 1 BAT Lanes: Hellerman/Bustleton (ARLE) - Bucks (MPMS #118074), City of Philadelphia – Add New Project to the TIP**

**Background/Analysis/Issues:**

PennDOT has requested that DVRPC amend the FY2023 TIP for Pennsylvania by adding a new project to the TIP, US 1 BAT Lanes: Hellerman/Bustleton - Bucks (MPMS #118074) in the amount of \$3,100,000 programmed as follows: \$1,000,000 State 244 funds for the Preliminary Engineering (PE) Phase in FY24, \$300,000 State 244 funds for the Final Design (FD) Phase in FY24, and \$1,700,000 for the Construction (CON) Phase in FY25. These are additional funds to the region and are outside the Core Funding distributions.

The purpose of the project is to improve safety along US 1 (Roosevelt Boulevard) by converting an existing travel lane to a Business Access and Transit (BAT) lane. Traffic signal timing changes to improve traffic flow and turning movement restrictions will be implemented throughout the project area, as well as data collection and traffic modeling for future work. A new traffic signal will be installed at the intersection of US 1 and Woodhaven Road. No additional travel lanes or pavement will be added as part of this project. BAT lanes will be installed on US 1 Northbound from Bustleton Avenue to the Bucks County line and US 1 Southbound from the Bucks County line to Hellerman Street.

This project was identified in the Roosevelt Boulevard Route for Change study. It is being counted towards the City's required match for the MEGA grant funded projects of US 1: Broad Street - Adams Avenue (MPMS #119822) and US 1: Adams Avenue - Old Lincoln Highway (MPMS #119836.) This project is also a break out of the Roosevelt Boulevard Crossover Lanes project (MPMS #114173.) The crossover project was a precursor to the implementation of BAT lanes on the Boulevard.

Financial Constraint:

Financial constraint will be maintained as these funds are additional to the region.

Conformity Finding:

The TIP's current conformity finding will not be impacted by this amendment because this project will be included in subsequent regional emissions analysis as required by the current conformity rule.

Cost and Source of Funds:

\$3,100,000 State 244

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make recommendations at the March 12, 2024 RTC Meeting.

Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee recommends Board approval of TIP Action PA23-101, PennDOT's request that DVRPC amend the FY2023 TIP for Pennsylvania by adding a new project to the TIP, US 1 BAT Lanes: Hellerman/Bustleton - Bucks (MPMS #118074) in the amount of \$3,100,000 programmed as follows: \$1,000,000 State 244 funds for the Preliminary Engineering (PE) Phase in FY24, \$300,000 State 244 funds for the Final Design (FD) Phase in FY24, and \$1,700,000 for the Construction (CON) Phase in FY25.

Staff Contact:

Travis Spotts

Attachments:

1. PennDOT Statewide FCC
2. Project Location Map

# DVRPC FY2023-2026 TIP for PA

## Pennsylvania - Highway and Transit Program

Action: PA23-101

### Philadelphia

MPMS# 118074 **US 1 BAT Lanes: Hellerman/Bustleton - Bucks**

AQ Code S6

LIMITS:

Latitude:

MUNICIPALITIES: Philadelphia City

Longitude:

Streetscape

PROJ MANG: Gannett/A. Harper

Project will improve safety along US 1 (Roosevelt Boulevard) by converting an existing travel lane to a Business Access and Transit (BAT) lane. Traffic signal timing changes to improve traffic flow and turning movement restrictions will be implemented throughout the project area, as well as data collection and traffic modeling for future work. A new traffic signal will be installed at the intersection of US 1 and Woodhaven Road. No additional travel lanes or pavement will be added as part of this project. BAT lanes will be installed on US 1 Northbound from Bustleton Avenue to the Bucks County line and US 1 Southbound from the Bucks County line to Hellerman Street.

#### Summary of Action:

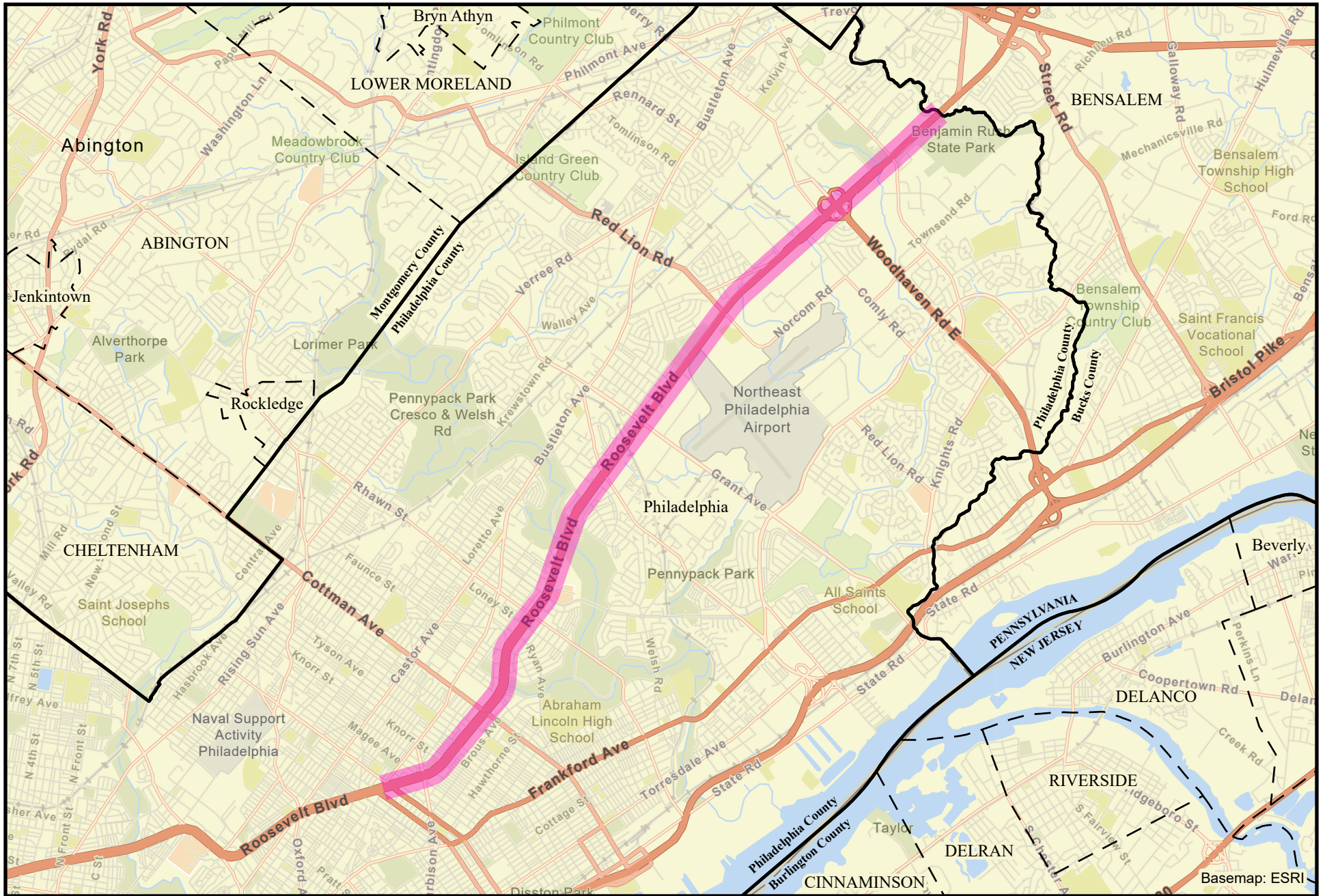
Action to amend the FY2023 TIP for Pennsylvania by adding a new project to the TIP, US 1 BAT Lanes: Hellerman/Bustleton - Bucks (MPMS #118074) in the amount of \$3,100,000 programmed as follows: \$1,000,000 State 244 funds for the Preliminary Engineering (PE) Phase in FY24, \$300,000 State 244 funds for the Final Design (FD) Phase in FY24, and \$1,700,000 for the Construction (CON) Phase in FY25.

**The proposed action will add a new project to the TIP**

#### After Proposed Action

		TIP Program Years (\$ 000)													
Phase	Fund	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034		
PE	244		1,100												
FD	244		300												
CON	244		1,700												
		0	3,100	0	0	0	0	0	0	0	0	0	0		
		Total FY2023-2026			3,100	Total FY2027-2030				0	Total FY2031-2034				0

# PA23-101: US 1 BAT Lanes: Hellerman/Bustleton – Bucks (ARLE)





**ACTION ITEM**

Date Prepared: March 1, 2024

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**

**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**

**REGIONAL TECHNICAL COMMITTEE MEETING**

**MARCH 12, 2024**

**Agenda Item:**

**2d. PA23-102: Pleasant View Road over Sanatoga Creek (MPMS #92637),  
Montgomery County – Advance Construction Phase**

**Background/Analysis/Issues:**

PennDOT has requested that DVRPC amend the FY2023 TIP for Pennsylvania by advancing the Construction (CON) Phase funding and federalizing the Pleasant View Road over Sanatoga Creek (MPMS #92637) project from outside the 4-year program into FY24, and increasing the funding by \$1,000,000 BOF to a total of \$3,250,000 BOF for CON in FY24.

This project is for the replacement of the State Route (SR) 4028 (Pleasant View Road) bridge over Sanatoga Creek in Lower Pottsgrove Township, Montgomery County. The Pleasant View Road over Sanatoga Creek bridge is in poor condition and has significant safety concerns as well as an inadequate turning radius for trucks.

Environmental, Right-of-Way, and Utility clearances have been obtained for the project and the bid package is in final preparation for advertisement. If this bridge replacement is not completed on a priority basis, the bridge may be downgraded in rating, resulting in posting of load limits. The majority of the cost increase is due to inflation in construction pricing since the previous cost estimate. In addition, several items were added to the scope related to dismantling and resetting of masonry walls. Partially grouted riprap was also added to the project. Finally, PECO gas installation is being incorporated into the project.

**Financial Constraint:**

Financial constraint will be maintained by adjusting other existing TIP projects whose schedules or costs have changed. The attached fiscal constraint charts provided by PennDOT show all of the adjustments

Conformity Finding:

The TIP's current conformity finding will not be impacted by this amendment as this project is exempt from air quality analysis.

Cost and Source of Funds:

\$3,325,000 BOF

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make recommendations at the March 12, 2024 RTC Meeting.

Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee recommends Board approval of TIP Action PA23-102, PennDOT's request that DVRPC amend the FY2023 TIP for Pennsylvania by advancing the Construction (CON) Phase funding and federalizing the Pleasant View Road over Sanatoga Creek (MPMS #92637) project from outside the 4-year program into FY24, and increasing the funding by \$1,000,000 BOF to a total of \$3,250,000 BOF for CON in FY24.

Staff Contact:

Travis Spotts

Attachments:

1. PennDOT FCC #122
2. Project Location Map

# DVRPC FY2023-2026 TIP for PA

## Pennsylvania - Highway and Transit Program

Action: PA23-102

### Montgomery

MPMS# 92637 *Pleasant View Rd/Sanatoga (Bridge)*

AQ Code S19 **LIMITS:** North of Linfield Rd and South of Sanatoga Station Rd over Sanatoga Crk on Pleasant View Rd

**Latitude:** **MUNICIPALITIES** Lower Pottsgrove Township

**Longitude:** Bridge Repair/Replacement **PROJ MANG:** HNTB/N. Velaga

This project involves rehabilitating or replacing the Bridge at Pleasant View Road over Sanatoga Creek. The improvement is a breakout of MPMS #88706 for Bridge Rehabilitation in order to process federal authorization.

A final alternative for bridge rehabilitation or replacement is determined upon federal National Environmental Policy Act (NEPA) or state Categorical Exclusion clearance.

#### Summary of Action:

Action to amend the FY2023 TIP for Pennsylvania by advancing the Construction (CON) Phase funding, and federalizing the Pleasant View Road over Sanatoga Creek (MPMS #92637) project from outside the 4-year program into FY24, and increasing the funding by \$1,000,000 BOF, to a total of \$3,250,000 BOF for CON in FY24.

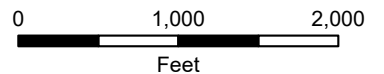
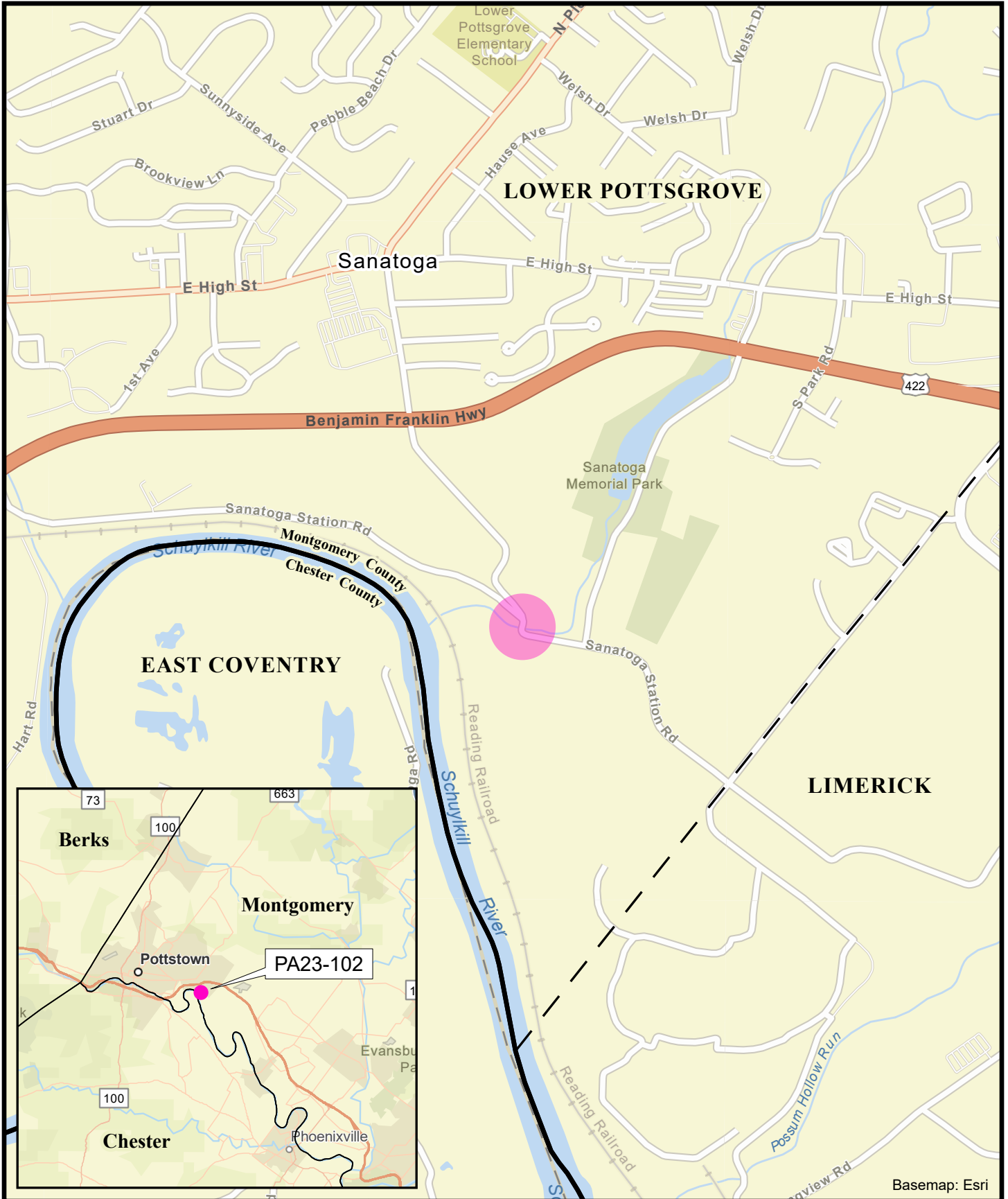
#### Before Proposed Action

		TIP Program Years (\$ 000)													
Phase	Fund	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034		
FD	185		225												
ROW	185		50												
UTL	185		225												
CON	BRIP							2,250							
		0	500	0	0	0	0	2,250	0	0	0	0	0		
		<b>Total FY2023-2026</b>			500	<b>Total FY2027-2030</b>				2,250	<b>Total FY2031-2034</b>				0

#### After Proposed Action

		TIP Program Years (\$ 000)													
Phase	Fund	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034		
FD	185		225												
ROW	185		50												
UTL	185		225												
CON	BOF		3,250												
		0	3,750	0	0	0	0	0	0	0	0	0	0		
		<b>Total FY2023-2026</b>			3,750	<b>Total FY2027-2030</b>				0	<b>Total FY2031-2034</b>				0

# PA23-102: Pleasant View Road Bridge



**ACTION ITEM**

Date Prepared: March 1, 2024

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**

**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**

**REGIONAL TECHNICAL COMMITTEE MEETING**

**MARCH 12, 2024**

**Agenda Item:**

**2e. PA23-103: Projects of Significance (MPMS #115472), SEPTA – Add New Federal Funds**

**Background/Analysis/Issues:**

SEPTA has requested that DVRPC amend the FY2023 TIP for Pennsylvania by adding new federal grant funds to the Projects of Significance Program (MPMS #115472) for the Market Frankford Vehicle Replacement Project, in the amount of \$317,160,000 for the Engineering/Right-of-Way/Construction (ERC) Phase, programmed as follows: \$48,453,000 Rail Vehicle Replacement (RVR) funds in FY24, \$134,757,000 RVR in FY25, and \$133,950,000 RVR in FY26.

This project will purchase modern trainsets to replace the aging Market-Frankford Line M-4 Railcars. The current fleet of M-4 cars, some showing the wear of 25 years on the tracks with structural cracks and increasing maintenance challenges, will make way for the efficient M-5 models. The project encompasses not only the acquisition of the M-5 cars but also the installation of a new signal system and track improvements. Included within the budget of this project is vehicle specification development, as well as signal system and other infrastructure improvements needed to enhance operational efficiency of the new railcars. These enhancements are crucial for reducing delays and ensuring a smoother, more dependable service for Philadelphia's busiest transit line.

On February 16, 2024, it was announced that SEPTA received a \$317,000,000 award from the FTA Rail Vehicle Replacement Grant Program funded via the Infrastructure Investment and Jobs Act. This represents the largest single grant award in SEPTA's history. With an estimated project cost between \$700-800 million, the federal grant covers a significant portion of the Market Frankford Vehicle Replacement Project.

Financial Constraint:

Financial constraint will be maintained as these are additional and external funds to DVRPC's Core funding.

Conformity Finding:

The TIP's current conformity finding will not be impacted by this amendment as this project is exempt from air quality analysis.

Cost and Source of Funds:

\$317,160,000 RVR

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make recommendations at the March 12, 2024 RTC Meeting.

Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee recommends Board approval of TIP Action PA23-103, SEPTA's request that DVRPC amend the FY2023 TIP for Pennsylvania by adding new federal grant funds to the Projects of Significance Program (MPMS #115472) for the Market Frankford Vehicle Replacement Project, in the amount of \$317,160,000 for the Engineering/Right-of-Way/Construction (ERC) Phase, programmed as follows: \$48,453,000 RVR in FY24, \$134,757,000 RVR in FY25, and \$133,950,000 RVR in FY26.

Staff Contact:

Travis Spotts

Attachments:

1. SEPTA FCC
2. SEPTA Request Letter

# DVRPC FY2023-2026 TIP for PA

## Pennsylvania - Highway and Transit Program

Action: PA23-103

### SEPTA

MPMS# 115472 *Projects of Significance*

AQ Code 2035M

LIMITS:

Latitude:

MUNICIPALITIES

Longitude:

Transit Improvements

PROJ MANG:

SEPTA and its regional partners continue to advance key Projects of Significance to build towards a shared lifestyle transit network vision for Southeastern Pennsylvania. These projects are instrumental to ensuring SEPTA is able to achieve the goals set forth in our strategic plan, SEPTA Forward. SEPTA's Bus Revolution, Trolley Modernization, King of Prussia Rail and railcar replacement projects are all critical links to ensuring SEPTA achieves its goal for a more resilient, prosperous and equitable region for everyone, with transit at the core.

Regional Rail Master Plan Implementation:

This process will progress concepts and alternatives evaluated through the Regional Rail Master Plan effort, including more detailed alternative analysis and concept design. Work may include progression of appropriate NEPA work with a focus on increasing grant-program readiness. Specific components for further study are currently being identified but will include continued coordination with external stakeholders.

Bus Revolution includes the following projects:

- Bus Network Enhancements Project - \$105M (FY 2022 – FY 2034 Property Acquisition, Design and Construction)
- South Philadelphia Transportation Center - \$12.25M (FY 2022 – FY 2026 Property Acquisition, Design and Construction)
- Wissahickon Transportation Center - \$37.64M (Prior Years – FY 2025 Construction)
- Micro Transit Service Implementation Project - \$6.11M (FY 2024 - FY 2025)

King of Prussia Rail- 30% Non-CIG Share Funding Commitment - \$390M (FY 2021 – FY 2029 Design and Construction).

SEPTA's King of Prussia Rail Project (KOP Rail) will extend the existing Norristown High Speed Line (NHSL) 4 miles into King of Prussia. The project includes five ADA accessible stations and will provide a "one-seat" ride from any station along the NHSL, including the 69th Street Transportation Center in Upper Darby and the Norristown Transportation Center in Norristown.

The KOP Rail Project is currently proceeding towards 30 percent design. In October 2021, the Federal Transit Administration (FTA) officially approved entry of the project into the Project Development stage of its Capital Investment Grant (CIG) program. Project Development activities will add more design and engineering detail to KOP Rail and the five stations and supporting documentation, including a draft financial plan and evaluation of project delivery methods. The total project is currently estimated at \$2.08 billion dollars.

The Market-Frankford Line Vehicle Replacement - \$720M (FY 2021 – FY 2022 MFL Vehicle Design) (FY 2023 – FY 2029 Rail Vehicle Replacement

This project will purchase modern trainsets to replace the aging Market-Frankford Line M-4 Railcars. Included within the budget of this project is vehicle specification development as well as signal system and other infrastructure improvements needed to enhance operational efficiency of the new railcars.

Regional Rail Cars Silverliner IV Replacement - \$250M (FY 2028 – FY 2034)

This project is for pursuing future procurement of regional rail cars to replace the Authority's aging Silverliner IV railcar fleet. The Silverliner IV railcar fleet was built between 1974 and 1976. This initial investment in the replacement of the aging fleet will ensure that service on Regional Rail continues to be safe and reliable.

Trolley Modernization \$1.15B (FY 2021 – FY 2025 Design and Initial Enhancements) (FY 2022 – FY 2032 Trolley Acquisition) (FY 2023 – FY 2029 Construction).

These capital funds allow SEPTA to advance early action trolley infrastructure design and construction for the Trolley Modernization program. The new ADA accessible vehicles will require a complex and closely interrelated series of infrastructure upgrades in areas such as communications, signals, power, ADA stations, bridge improvements and maintenance facilities.

The goals of the Trolley Modernization program are:

- Accessible Trolleys that are fast and easy to use
- A system in full compliance with the Americans with Disabilities Act including vehicles and stations
- Providing quick, reliable and higher capacity service
- A safe and improved customer experience
- This program advances equity by improving trolley access and service that disproportionately serves people of color, low-income populations, and individuals with disabilities.

Specific activities to be addressed include the following:

- Property acquisition for the new accessible vehicle Facility/Facilities
- ADA Accessibility and State of Good Repair Improvements to 19th and 37th Street Trolley Stations

2/29/2024

# DVRPC FY2023-2026 TIP for PA

## Pennsylvania - Highway and Transit Program

Action: PA23-103

### SEPTA

- Bridge enhancements to support the new vehicles
- Trolley Tunnel State of Good Repair Program, including the overhaul of the 40th Street Substation
- Develop modern station design standards and identify locations with public input and community engagement
- Study and advancement of end-of-line improvements
- Coordination with utilities and the City of Philadelphia
- Preliminary engineering and program management for overall project
- ADA Accessible vehicle acquisition.

69th Street Transportation Center Comprehensive Plan Implementation - \$4M (FY 2022 - FY 2024 Design and Early Actions)  
Development of a comprehensive master plan and undertake early actions to rehabilitate and improve service at the 69th Street Transportation Center. These infrastructure and intermodal connectivity improvements are critical to the success of Trolley Modernization, King of Prussia (KOP) Rail, and Bus Revolution.

Rebirth of Southwest Philadelphia Transportation Network - \$25M (FY 2024)  
The project will implement trolley modernization and complete streets improvements on approximately 3.85 miles of roadway along the Route 36 corridor from 49th Street and Grays Avenue to 56th Street and Island Avenue.

Regional Rail Master Plan Implementation Project - \$3M (FY 2024 - Ongoing)  
Provides funding for planning and design activities related to the Regional Rail Master Plan.

Microtransit Service Implementation project - \$6.11 M (FY 2024 - FY 2025)

#### Summary of Action:

Action to amend the FY2023 TIP for Pennsylvania by adding new federal grant funds to the Projects of Significance Program (MPMS #115472) for the Market Frankford Vehicle Replacement Project, in the amount of \$317,160,000 for the Engineering/Right-of-Way/Construction (ERC) Phase, programmed as follows: \$48,453,000 Rail Vehicle Replacement (RVR) funds in FY24, \$134,757,000 RVR in FY25, and \$133,950,000 RVR in FY26.

#### Before Proposed Action

#### TIP Program Years (\$ 000)

Phase	Fund	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034
ERC	5305	300											
ERC	5307	10,038											
ERC	5337	26,864											
ERC	ARPA	500											
ERC	1514	69,311											
ERC	LOC	2,308											
ERC	OTH	46,411											
ERC	5339c		9,800										
ERC	RAISE		40,000										
ERC	5337		45,699										
ERC	1514		96,335										
ERC	OTH		94,892										
ERC	LOC		3,211										
ERC	5307			69,517									
ERC	5339			6,891									
ERC	5337			66,718									
ERC	1514			68,280									
ERC	LOC			2,276									
ERC	OTH			58,330									
ERC	5307				8,001								
ERC	5337				23,998								
ERC	1514				127,143								
ERC	LOC				4,233								
ERC	OTH				120,607								









February 22, 2024

Mr. Jesse Buerk  
Manager, Office of Capital Programs  
Delaware Valley Regional Planning Commission  
190 North Independence Mall West, 8<sup>th</sup> Floor  
Philadelphia, PA 19106-1520

Dear Mr. Buerk:

The Southeastern Pennsylvania Transportation Authority (SEPTA) requests consideration by the Delaware Valley Regional Planning Commission (DVRPC) of an amendment to the FY2023-2026 Transportation Improvement Program (TIP) for Pennsylvania.

On February 21, 2024, the Federal Transit Administration announced a grant award for the SEPTA Market-Frankford Line Rail Vehicle Replacement Project. The project includes replacing the Market-Frankford Line M-4 Railcars. SEPTA will receive funding to buy up to 200 new rail cars to replace older rail cars that have been in service for nearly 25 years, operating along the Market-Frankford Line, SEPTA's most heavily used line. SEPTA is requesting an amendment to FY 2024 (\$48.453M), FY 2025 (\$134,757M), and FY 2026 (\$133,950M) to add a total of \$317,160,000 to the Projects of Significance Program (MPMS #115472) to add the Rail Vehicle Replacement (RVR) Program competitive funding.

The attached fiscal constraint chart provides a summary of changes by funding source and the detailed TIP programming adjustments. Please contact me if you have any questions regarding these changes to the TIP. We appreciate your consideration of this request.

Please contact me if you have any questions regarding these changes to the TIP.

We appreciate your consideration of this request.

Sincerely,

Brian McFadden  
Director, Capital Budgets & Grant Development

cc: T. Lidiak - FTA  
J. Korus - PennDOT  
D. Alas - PennDOT

**ACTION ITEM**

Date Prepared: February 29, 2024

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**  
**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**  
**REGIONAL TECHNICAL COMMITTEE MEETING**  
**MARCH 12, 2024**

**Agenda Item:**

**2f. NJ24-018: Route 47, Grove St. to Route 130, Pavement (DB #12305),  
Gloucester County – Increase CON Phase**

**Background/Analysis/Issues:**

NJDOT has requested that DVRPC amend the FY2024 TIP for New Jersey by increasing the FY24 Construction (CON) Phase of the Route 47, Grove St. to Route 130, Pavement project by \$18.2 M NHPP from \$66.5 M NHPP to \$84.7 M NHPP.

The increase in construction cost is due to the inflation of construction prices. This project was initiated from the NJDOT Pavement Management System, it will resurface, rehabilitate and reconstruct the roadway within the project limits. The project will update the ADA requirements, and correct a culvert which causes a flooding condition in the area.

**Financial Constraint:**

Financial constraint will be maintained by making adjustments to other existing TIP projects whose schedules or costs have changed. The attached fiscal constraint chart provided by NJDOT shows all of the adjustments taking place in accordance with the TIP Memorandum of Understanding. All projects listed contribute to fiscal constraint.

**Conformity Finding:**

The TIP's current conformity finding will not be impacted by this amendment as this project is exempt from air quality analysis

**Cost and Source of Funds:**

\$18.2 M NHPP

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make recommendations at the March 12, 2024 RTC Meeting

Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee (RTC) recommends Board approval of TIP Action NJ24-018, NJDOT's request that DVRPC amend the FY2024 TIP for New Jersey by increasing the FY24 Construction (CON) Phase of the Route 47, Grove St. to Route 130, Pavement project by \$18.2 M NHPP from \$66.5 M NHPP to \$84.7 M NHPP.

Staff Contact:

Ethan Fogg

Attachments:

1. Project Location Map
2. NJDOT FY24-33 FCC #1

# DVRPC FY2024 TIP for New Jersey

Action: NJ24-018

## Highway/Transit/Statewide Program

### Gloucester

DB# 12305      **Route 47, Grove St. to Route 130, Pavement**

A/Q Code S10

Initiated from the Pavement Management System, this project will resurface, rehabilitate and reconstruct within the project limits. The project will update the ADA requirements, and correct a culvert which causes a flooding condition.

Prog Mgr: Dave, Hardev

Glassboro Borough; Washington Township; Deptford Township; Westville Borough

**Summary of Action:**

Action to amend the TIP by increasing the FY24 Construction (CON) Phase of the Route 47, Grove St. to Route 130, Pavement project by \$18.2 M NHPP from \$66.5 M NHPP to \$84.7 M NHPP.

Mapped: Y

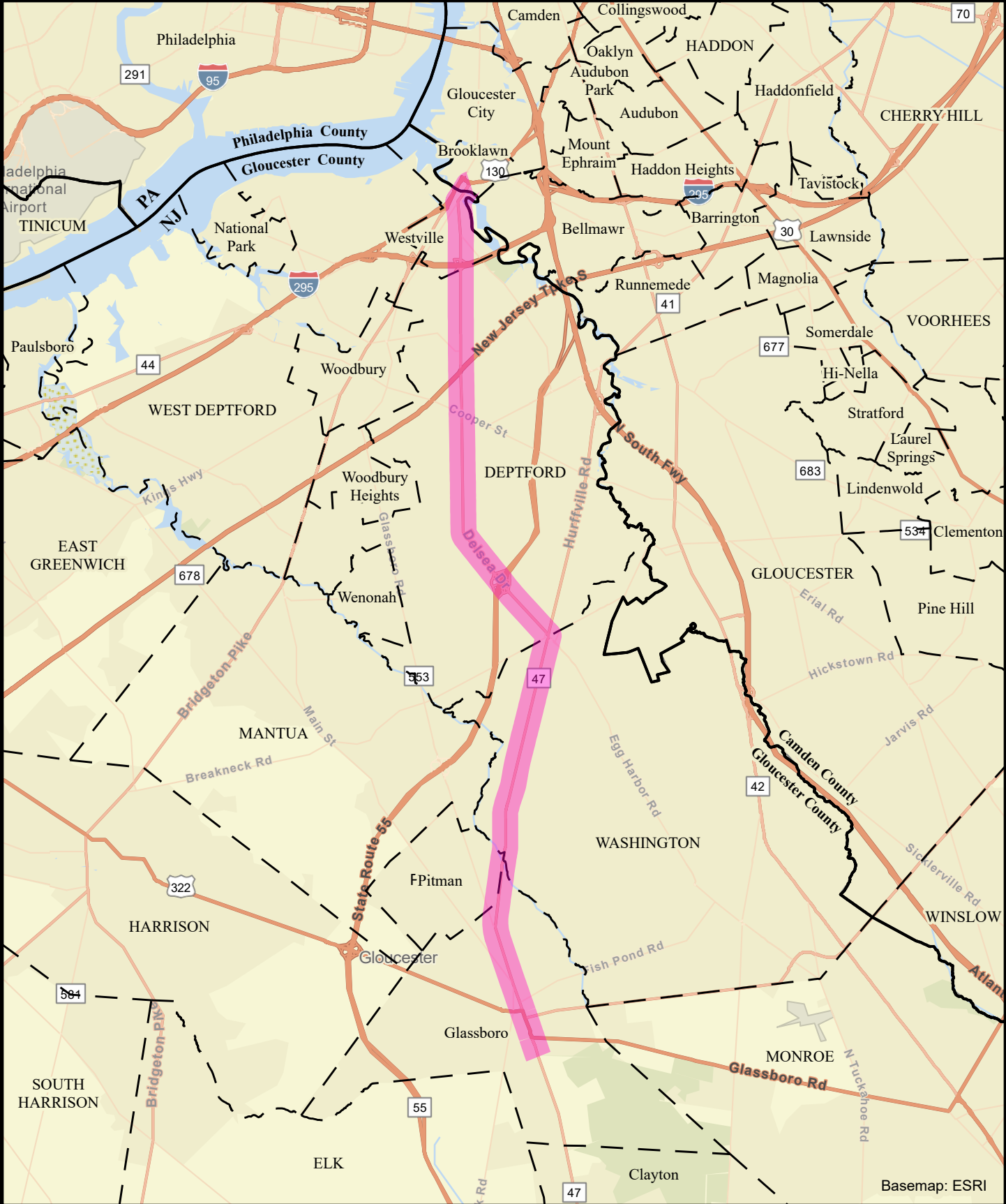
**Before Proposed Action**

		TIP Program Years (\$ millions)				Out-Years					
Phase	Fund	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
CON	NHPP	66.500									
	Fiscal Year Total	66.500									
		<b>Total FY2024-2027</b>				66.500	<b>Out-Year Cost</b>				

**After Proposed Action**

		TIP Program Years (\$ millions)									
Phase	Fund	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
CON	NHPP	84.700									
	Fiscal Year Total	84.700									
		<b>Total FY2022 - 2025</b>			84.700	<b>Total FY2026 - 2031</b>					

# NJ24-018: Route 47, Grove Street to Route 130, Pavement



**ACTION ITEM**

Date Prepared: February 29, 2024

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**

**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**

**REGIONAL TECHNICAL COMMITTEE MEETING**

**MARCH 12, 2024**

**Agenda Item:**

**2g. NJ24-019: Route 295/42/I-76, Direct Connection, Contract 4 (DB #355E),  
Camden County – Delay & Increase CON Phase**

**Background/Analysis/Issues:**

NJDOT has requested that DVRPC amend the FY2024 TIP for New Jersey by delaying the Construction (CON) phase of the Route 295/42/I-76, Direct Connection, Contract 4 (DB #355E) project from FY25 to FY28 and increasing the CON cost estimate by \$10.45 M. The multi-year NHFP-HWY funding and NHPP funding for the CON phase will be reprogrammed as follows:

- FY28: \$50 M NHPP
- FY29: \$80 M (\$20 M NHFP-HWY/\$60 M NHPP)
- FY30: \$80 M (\$20 M NHFP-HWY/\$60 M NHPP)
- FY31: \$80 M (\$20 M NHFP-HWY/\$70.45 M NHPP)
- FY32: \$58.5 M (\$6.243 M NHFP-HWY/\$52.257 M NHPP)

The CON Phase will have an overall increase of \$10.45 M, from \$348.5 M (66.243 M NHFP-HWY/\$282.257 M NHPP) to \$358.95 M (66.243 M NHFP-HWY/\$292.707 M NHPP).

CON programming has been updated to match the most recent Financial Management Plan (FMP) expenditures. The main reason for the delay is that Contract 4 cannot start until the completion of Contract 3, and Contract 3 has been delayed due to several issues. The cost increase can primarily be attributed to the more detailed cost estimates available for each contract with the advancement of the design that further refined the preliminary cost estimates used to generate the initial FMP estimates. Also, change orders during construction have been higher than originally anticipated.

The overall Route 295/42/I-76 Direct Connection project will relieve the existing bottleneck at the interchange by constructing a direct connection on I-295 and other highway improvements that will reduce congestion and enhance traffic operations and safety throughout the project area. The improvements include a six-lane mainline



through the interchange, elimination of dangerous merging and weaving movements, upgrades to ramp geometry, and the addition of shoulders throughout the interchange. Contract 4 includes the reconstruction of I-76 and Route 42 along the entire project limits, the completion of new Ramps C & F, and the completion of the new I-295 Northbound direct connection. Contract 4 is a breakout of "Route 295/42/I-76, Direct Connection, Camden County" project.

Financial Constraint:

Financial constraint will be maintained by making adjustments to other existing TIP projects whose schedules or costs have changed. The attached fiscal constraint chart provided by NJDOT shows all of the adjustments taking place in accordance with the TIP Memorandum of Understanding. All projects listed contribute to fiscal constraint.

Conformity Finding:

The TIP's current conformity finding will not be impacted by this amendment since this project was included in the regional air quality conformity analysis.

Cost and Source of Funds:

\$358.95 M (66.243 M NHFP-HWY/\$292.707 M NHPP)

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make recommendations at the March 12, 2024 RTC Meeting

Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee (RTC) recommends Board approval of TIP Action NJ24-019, NJDOT's request that DVRPC amend the FY2024 TIP for New Jersey by delaying the Construction (CON) phase of the Route 295/42/I-76, Direct Connection, Contract 4 (DB #355E) project from FY25 to FY28 and increasing the CON cost estimate by \$10.45 M. The multi-year NHFP-HWY funding and NHPP funding for the CON phase will be reprogrammed as follows:

- FY28: \$50 M NHPP
- FY29: \$80 M (\$20 M NHFP-HWY/\$60 M NHPP)
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- FY32: \$58.5 M (\$6.243 M NHFP-HWY/\$52.257 M NHPP)

The CON Phase will have an overall increase of \$10.45 M, from \$348.5 M (66.243 M NHFP-HWY/\$282.257 M NHPP) to \$358.95 M (66.243 M NHFP-HWY/\$292.707 M NHPP).

Staff Contact:

Ethan Fogg

Attachments:

1. Project Location Map
2. NJDOT FY24-33 FCC #2

# DVRPC FY2024 TIP for New Jersey

Action: NJ24-019

## Highway/Transit/Statewide Program

### Camden

DB# 355E      Route 295/42/I-76, Direct Connection, Contract 4

A/Q Code 2035M

This project relieves the existing bottleneck at the interchange by constructing; a direct connection on I-295 and other highway improvements, which will reduce congestion and enhance traffic operations and safety throughout the project area. The improvements include; a six lane mainline through the interchange, elimination of dangerous merging and weaving movements, upgrades to ramp geometry and the addition of shoulders throughout the interchange. Contract 4 includes the reconstruction of I-76 and Route 42 along the entire project limits; the completion of new Ramps C & F, and the completion the new I-295 Northbound direct connection. Contract 4 is a breakout of "Route 295/42/I-76, Direct Connection, Camden County".

Prog Mgr: Dave, Hardev      Bellmawr Borough; Mount Ephraim Borough

**Summary of Action:**

Formal action to amend the TIP by delaying the Construction (CON) phase of the Route 295/42/I-76, Direct Connection, Contract 4 (DB #355E) project from FY25 to FY28 and increasing the CON cost estimate by \$10.45 M. The multi-year NHFP-HWY funding and NHPP funding for the CON phase will be reprogrammed as follows: FY28: \$50 M NHPP; FY29: \$80 M (\$20 M NHFP-HWY/\$60 M NHPP); FY30: \$80 M (\$20 M NHFP-HWY/\$60 M NHPP); FY31: \$80 M (\$20 M NHFP-HWY/\$60 M NHPP); FY32: \$58.5 M (\$6.243 M NHFP-HWY/\$52.257 M NHPP).

Mapped: Y

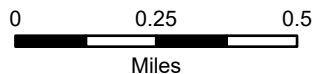
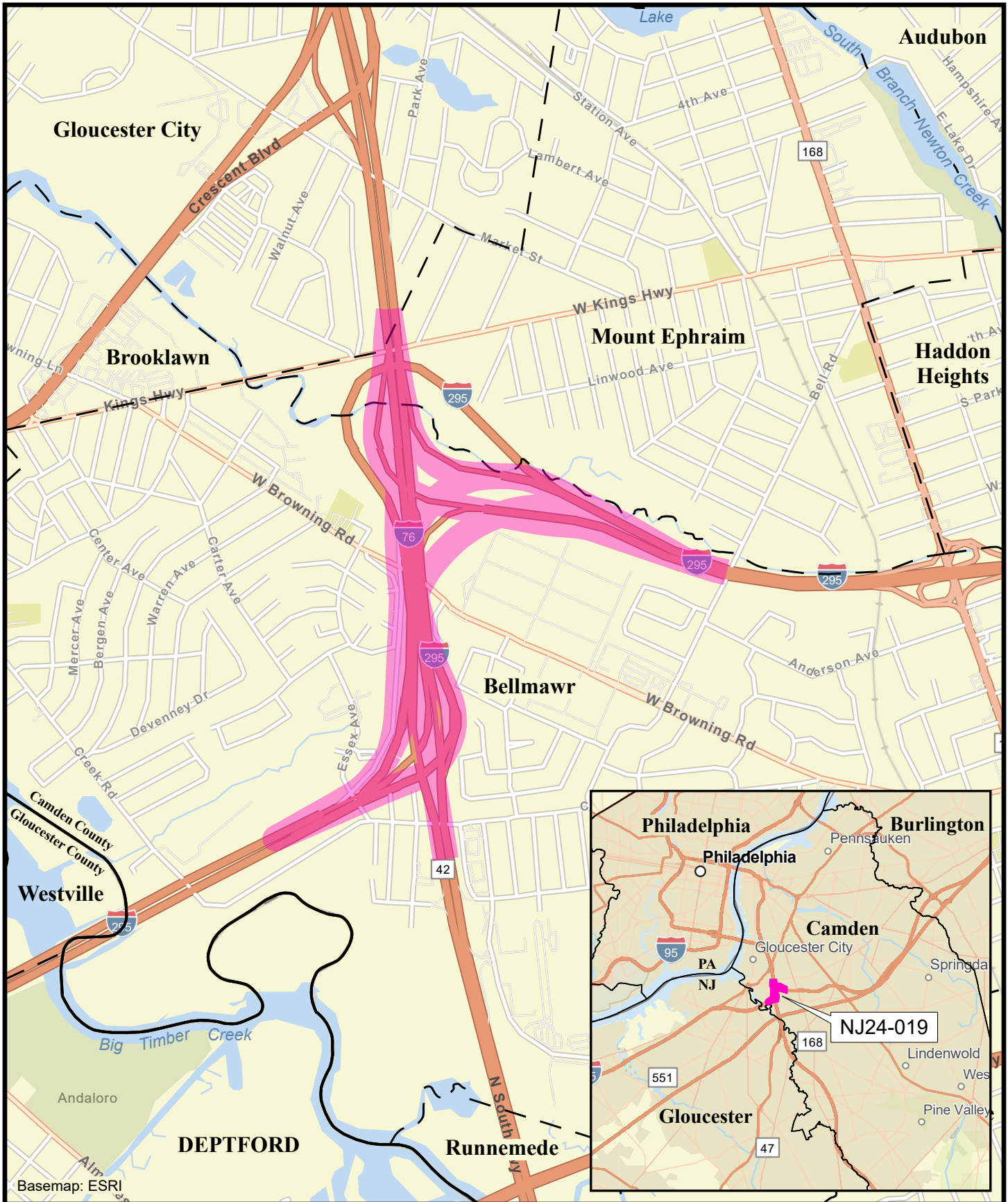
**Before Proposed Action**

		TIP Program Years (\$ millions)				Out-Years					
Phase	Fund	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
CON	NHFP-HWY		36.011	30.232							
CON	NHPP				166.858	115.399					
Fiscal Year Total			36.011	30.232	166.858	115.399					
<b>Total FY2024-2027</b>					233.101	<b>Out-Year Cost</b>		115.399			

**After Proposed Action**

		TIP Program Years (\$ millions)									
Phase	Fund	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
CON	NHFP-HWY						20.000	20.000	20.000	6.243	
CON	NHPP					50.000	60.000	60.000	70.450	52.257	
Fiscal Year Total						50.000	80.000	80.000	90.450	58.500	
<b>Total FY2022 - 2025</b>						<b>Total FY2026 - 2031</b>		358.950			

# NJ24-019: Route 295/42/I-76, Direct Connection, Contract 4



**ACTION ITEM**

Date Prepared: February 29, 2024

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**  
**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**  
**REGIONAL TECHNICAL COMMITTEE MEETING**  
**MARCH 12, 2024**

**Agenda Item:**

**2h. NJ24-020: Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout to Glen Echo Avenue (CR 538) (DB #D2406), Gloucester County – Add New Project to the TIP**

**Background/Analysis/Issues:**

Gloucester County has requested that DVRPC amend the FY2024 TIP for New Jersey by adding the Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout to Glen Echo Avenue (CR 538) (DB #D2406) project to the TIP for Construction in FY24 in the amount of \$1.339 M STBGP-PHILA.

This project will mill and overlay the roadway with a 1.5-inch depth of hot mix asphalt surface course. The current centerline grade will be generally held. The pavement cross slope will be developed at 2%, with exceptions to maintain curb or drainage patterns where necessary. Existing drainage patterns will be maintained. Driveway aprons shall be replaced and/or adjusted where necessary. Existing ADA Curb ramps will be upgraded as necessary to meet ADA requirements. Storm sewer inlets will also be updated to meet New Jersey Department of Environmental Protection (NJDEP) requirements. Curb and driveway aprons will only be replaced if conditions warrant their replacement. All roadway markings and signs shall be removed and replaced.

**Financial Constraint:**

Financial constraint will be maintained by making adjustments to other existing TIP projects whose schedules or costs have changed. The attached fiscal constraint chart provided by DVRPC shows all of the adjustments taking place in accordance with the TIP Memorandum of Understanding. All projects listed contribute to fiscal constraint.

**Conformity Finding:**

The TIP's current conformity finding will not be impacted by this amendment as this project is exempt from air quality analysis

Cost and Source of Funds:

\$1.339 M STBGP-PHILA

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make recommendations at the March 12, 2024 RTC Meeting

Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee (RTC) recommends Board approval of TIP Action NJ24-020, Gloucester County's request that DVRPC amend the FY2024 TIP for New Jersey by adding the Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout to Glen Echo Avenue (CR 538) (DB #D2406) project to the TIP for Construction in FY24 in the amount of \$1.339 M STBGP-PHILA.

Staff Contact:

Ethan Fogg

Attachments:

1. Project Location Map
2. DVRPC Local FCC #6

# DVRPC FY2024 TIP for New Jersey

Action: NJ24-020

## Highway/Transit/Statewide Program

### Gloucester

**DB# D2406 Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout to Glen Echo Avenue (CR 538)**

A/Q Code S10

This project will mill and overlay the roadway with a 1.5-inch depth of hot mix asphalt surface course. The current centerline grade will be generally held. The pavement cross slope will be developed at 2%, with exceptions to maintain curb or drainage patterns where necessary. Existing drainage patterns will be maintained. Driveway aprons shall be replaced and/or adjusted where necessary. Existing ADA Curb ramps will be upgraded as necessary to meet ADA requirements. Storm sewer inlets will also be updated to meet New Jersey Department of Environmental Protection (NJDEP) requirements. Curb and driveway aprons will only be replaced if conditions warrant their replacement. All roadway markings and signs shall be removed and replaced.

Prog Mgr: Buerk, Jesse Swedesboro Borough

**Summary of Action:**

Action to amend the TIP by adding the Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout to Glen Echo Avenue (CR 538) (DB #D2406) project to the TIP for Construction in FY24 in the amount of \$1.339 M STBGP-PHILA.

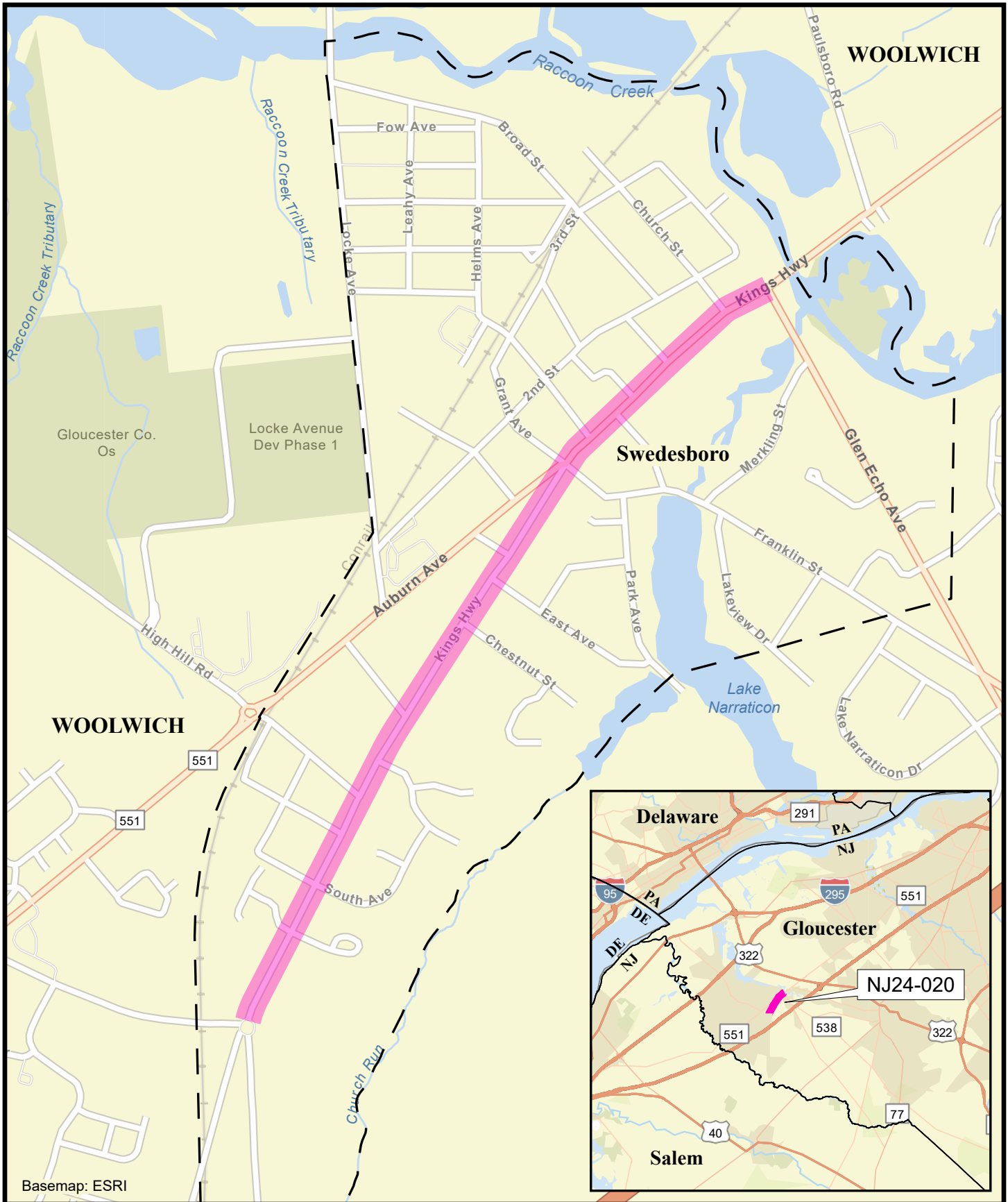
Mapped: Y

**The proposed action will add a new project to the TIP.**

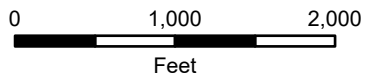
**After Proposed Action**

		TIP Program Years (\$ millions)									
Phase	Fund	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
CON	STBGP-PHILA	1.339									
	Fiscal Year Total	<b>1.339</b>									
		<b>Total FY2022 - 2025</b>			<b>1.339</b>	<b>Total FY2026 - 2031</b>					

# NJ24-020: Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout To Glen Echo Avenue (CR 538)



Basemap: ESRI





***PennDOT Fiscal Constraint Charts***  
***(March 2024)***

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DVRPC FFY 2023 - 2026 TIP for PENNSYLVANIA  
FISCAL CONSTRAINT CHART  
FEDERAL & STATE FUNDS (in \$1,000's)

MA IDs:

TIP MODIFICATIONS FOR FEBRUARY 2024  
Chart #115

Chart: 115

\* Positive number denotes a surplus/Negative denotes a deficit

Administrative Action				Fund Type			FFY 2023			FFY 2024			FFY 2025			FFY 2026			2ND 4 YRS FFY 2027			2ND 4 YRS FFY 2028			2ND 4 YRS FFY 2029			2ND 4 YRS FFY 2030			3RD 4 YRS FFY 2031			TOTAL	Remarks
Project Title	MPMS	Phs	Amts.	Fed.	Sta.	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	TOTAL	Remarks			
NHPP RESERVE LINE ITEM DISTRICT WIDE	82216	CON	Before	NHPP	581		0	0	0	3,092,750	1,190,000	0	14,600,516	1,651,129	0	18,491,000	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	0	39,026,395	LINE ITEM		
			Adjust	NHPP	581		0	0	0	5,796,000	0	0	(5,969,880)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		(173,880)	
			After	NHPP	581		0	0	0	8,888,750	1,190,000	0	8,630,636	1,651,129	0	18,491,000	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0		38,852,515	
I-95 BS5: DELAWARE AVE EXTENSION PHILADELPHIA	103563	UTL	Before	NHPP	TC		0	0	0	5,796,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,796,000	CASH FLOWING BASED ON WHEN FUNDS ARE NEEDED.		
			Adjust	NHPP	TC		0	0	0	(5,796,000)	0	0	5,969,880	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	173,880			
			After	NHPP	TC		0	0	0	0	0	0	5,969,880	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5,969,880	
NHPP RESERVE LINE ITEM DISTRICT WIDE	82216	CON	Before	NHPP	581		0	0	0	8,888,750	1,190,000	0	8,630,636	1,651,129	0	18,491,000	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	0	38,852,515	LINE ITEM		
			Adjust	NHPP	581		0	0	0	(4,000,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(4,000,000)			
			After	NHPP	581		0	0	0	4,888,750	1,190,000	0	8,630,636	1,651,129	0	18,491,000	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0		34,852,515	
I-95 CONCEPTUAL STUDY PHILADELPHIA	104243	STY	Before	NHPP	TC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	INCREASING FUNDS DUE TO A SUPPLEMENT FROM THE CONSULTANT.		
			Adjust	NHPP	TC		0	0	0	4,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,000,000			
			After	NHPP	TC		0	0	0	4,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,000,000			
<b>Before FFY Totals</b>							0	0	0	17,777,500	2,380,000	0	23,231,152	3,302,258	0	36,982,000	0	0	2,000	0	0	0	0	0	0	0	0	0	0	0	0	83,674,910			
<b>FFY Adjustment Totals</b>							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>After FFY Totals</b>							0	0	0	17,777,500	2,380,000	0	23,231,152	3,302,258	0	36,982,000	0	0	2,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83,674,910	

DVRPC FFY 2023 - 2026 TIP for PENNSYLVANIA  
FISCAL CONSTRAINT CHART  
FEDERAL & STATE FUNDS (in \$1,000's)

MA IDs:

TIP MODIFICATIONS FOR FEBRUARY 2024  
Chart #116

Chart: 116

\* Positive number denotes a surplus/Negative denotes a deficit

Administrative Action			Fund Type			FFY 2023			FFY 2024			FFY 2025			FFY 2026			2ND 4 YRS FFY 2027			2ND 4 YRS FFY 2028			2ND 4 YRS FFY 2029			2ND 4 YRS FFY 2030			3RD 4 YRS FFY 2031			TOTAL	Remarks
Project Title	MPMS	Phs	Amts.	Fed.	Sta.	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	TOTAL	Remarks			
NHPP RESERVE LINE ITEM DISTRICT WIDE	82216	CON	Before	NHPP	581	0	0	0	4,888,750	1,190,000	0	8,630,636	1,651,129	0	18,491,000	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	34,852,515	LINE ITEM	
			Adjust	NHPP	581	0	0	0	(4,616,000)	(1,154,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		(5,770,000)
			After	NHPP	581	0	0	0	272,750	36,000	0	8,630,636	1,651,129	0	18,491,000	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0		29,082,515
US422: SCHUYLKILL RIVER BRG - W OF KEIM ST.	14698	FD	Before	NHPP	581	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PREVIOUSLY OBLIGATED, INCREASING FUNDS TO MATCH CURRENT FINAL DESIGN ESTIMATE AND COVER REMAINING ADVACNE CONSTRUCT.	
Adjust			NHPP	581	0	0	0	4,616,000	1,154,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,770,000		
After			NHPP	581	0	0	0	4,616,000	1,154,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		5,770,000
<b>Before FFY Totals</b>						0	0	0	4,888,750	1,190,000	0	8,630,636	1,651,129	0	18,491,000	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	34,852,515		
<b>FFY Adjustment Totals</b>						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>After FFY Totals</b>						0	0	0	4,888,750	1,190,000	0	8,630,636	1,651,129	0	18,491,000	0	0	1,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34,852,515	

DVRPC FFY 2023 - 2026 TIP for PENNSYLVANIA  
FISCAL CONSTRAINT CHART  
FEDERAL & STATE FUNDS (in \$1,000's)

MA IDs:

TIP MODIFICATIONS FOR FEBRUARY 2024  
Chart #118

Chart: 118

\* Positive number denotes a surplus/Negative denotes a deficit

Administrative Action			Fund Type		FFY 2023			FFY 2024			FFY 2025			FFY 2026			2ND 4 YRS FFY 2027			2ND 4 YRS FFY 2028			2ND 4 YRS FFY 2029			2ND 4 YRS FFY 2030			3RD 4 YRS FFY 2031			TOTAL	Remarks						
Project Title	MPMS	Phs	Amts.	Fed.	Sta.	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	TOTAL	Remarks							
TAPHTS/SR2S LINE ITEM RESERVE DISTRICTWIDE	64984	CON	Before	TAU			0	0	0	5,259,190	0	0	8,266,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	33,754,000	0	0	89,469,190	LINE ITEM				
			Adjust	TAU			0	0	0	(1,173,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,173,000)					
			After	TAU			0	0	0	4,086,190	0	0	8,266,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	33,754,000		0	0	88,296,190	
FRANKLIN SQUARE PED ACCESS(C) PHILADELPHIA SR,3032,FSP	111496	CON	Before	TAP	TC		432,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	432,000	NO CHANGE, INCLUDED TO SHOW OVERALL PHASE COST.				
			Adjust	TAP	TC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0		
			After	TAP	TC		432,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	432,000	
FRANKLIN SQUARE PED ACCESS(C) PHILADELPHIA SR,3032,FSP	111496	CON	Before	TAU	TC		850,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	850,000	ADDING FUNDS FOR LOW BID COST INCREASE.				
			Adjust	TAU	TC		0	0	0	430,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	430,000		
			After	TAU	TC		850,000	0	0	430,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	1,280,000		
SOUTH BROAD ST SIDE PATH(C) PHILADELPHIA SR,0611,SBS	111508	CON	Before	TAP	TC		1,537,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,537,000	NO CHANGE, INCLUDED TO SHOW OVERALL PHASE COST.				
			Adjust	TAP	TC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	
			After	TAP	TC		1,537,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	1,537,000	
SOUTH BROAD ST SIDE PATH(C) PHILADELPHIA SR,0611,SBS	111508	CON	Before	TAU	TC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	ADDING FUNDS FOR LOW BID COST INCREASE.		
			Adjust	TAU	TC		0	0	0	323,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	323,000			
			After	TAU	TC		0	0	0	323,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		323,000	
CRAMP ELEMENTARY SAFETY(C) PHILADELPHIA SR,....,CES	111507	CON	Before	TAP	TC		1,297,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,297,000	NO CHANGE, INCLUDED TO SHOW OVERALL PHASE COST.				
			Adjust	TAP	TC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	
			After	TAP	TC		1,297,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	1,297,000	
CRAMP ELEMENTARY SAFETY(C) PHILADELPHIA SR,....,CES	111507	CON	Before	TAU	TC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	ADDING FUNDS FOR LOW BID COST INCREASE.			
			Adjust	TAU	TC		0	0	0	420,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		420,000		
			After	TAU	TC		0	0	0	420,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	420,000	
<b>Before FFY Totals</b>							4,116,000	0	0	5,259,190	0	0	8,266,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	33,754,000	0	0	93,585,190					
<b>FFY Adjustment Totals</b>							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
<b>After FFY Totals</b>							4,116,000	0	0	5,259,190	0	0	8,266,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	8,438,000	0	0	33,754,000	0	0	93,585,190		



DVRPC FFY 2023 - 2026 TIP for PENNSYLVANIA  
FISCAL CONSTRAINT CHART  
FEDERAL & STATE FUNDS (in \$1,000's)

MA IDs:

TIP MODIFICATIONS FOR MARCH 2024  
Chart #120

Chart: 120

\* Positive number denotes a surplus/Negative denotes a deficit

Administrative Action			Fund Type		FFY 2023			FFY 2024			FFY 2025			FFY 2026			2ND 4 YRS FFY 2027			2ND 4 YRS FFY 2028			2ND 4 YRS FFY 2029			2ND 4 YRS FFY 2030			3RD 4 YRS			TOTAL	Remarks				
Project Title	MPMS	Phs	Amts.	Fed.	Sta.	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	TOTAL	Remarks						
S T P LINE ITEM  BUCKS	79927	CON	Before	STP	581	0	0	327,000	876,657	0	0	910,131	0	0	305,000	0	0	1,600,000	0	900,000	511,000	176,000	807,000	1,600,000	194,000	896,000	1,816,000	194,000	807,000	303,890	334,000	318,970	12,876,648	LINE ITEM			
			Adjust	STP	581	0	0	0	(10)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		(10)		
			After	STP	581	0	0	327,000	876,647	0	0	910,131	0	0	305,000	0	0	1,600,000	0	900,000	511,000	176,000	807,000	1,600,000	194,000	896,000	1,816,000	194,000	807,000	303,890	334,000	318,970	12,876,638				
NORTH PHILA SCHOOL ZONES RAISE 23  PHILADELPHIA  SR,----,SZS	120993	CON	Before			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	ADDING SMALL AMOUNT OF FEDERAL FUNDS IN ORDER TO PROCESS A 4232. THIS WILL ALLOW US TO ESTABLISH AN END DATE FOR THE PROJECT SO THE CITY CAN START THEIR DESIGN AND RECEIVE CREDIT TOWARDS THEIR LOCAL MATCH.		
			Adjust	STP		0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		10	
			After	STP		0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		10	
<b>Before FFY Totals</b>						0	0	327,000	876,657	0	0	910,131	0	0	305,000	0	0	1,600,000	0	900,000	511,000	176,000	807,000	1,600,000	194,000	896,000	1,816,000	194,000	807,000	303,890	334,000	318,970	12,876,648				
<b>FFY Adjustment Totals</b>						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>After FFY Totals</b>						0	0	327,000	876,657	0	0	910,131	0	0	305,000	0	0	1,600,000	0	900,000	511,000	176,000	807,000	1,600,000	194,000	896,000	1,816,000	194,000	807,000	303,890	334,000	318,970	12,876,648				

DVRPC FFY 2023 - 2026 TIP for PENNSYLVANIA  
FISCAL CONSTRAINT CHART  
FEDERAL & STATE FUNDS (In \$1,000's)

MA IDs:

TIP MODIFICATIONS FOR MARCH 2024  
Chart #121

Chart: 121

\* Positive number denotes a surplus/Negative denotes a deficit

Administrative Action				Fund Type			FFY 2023			FFY 2024			FFY 2025			FFY 2026			2ND 4 YRS FFY 2027			2ND 4 YRS FFY 2028			2ND 4 YRS FFY 2029			2ND 4 YRS FFY 2030			3RD 4 YRS			TOTAL	Remarks					
Project Title	MPMS	Phs	Amts.	Fed.	Sta.	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)		State (\$)	LOC			
REGIONAL SAFETY INITI DISTRICT LINE ITEM	57927	CON	Before	HSIP			0	0	0	3,073,885	0	0	414,000	0	0	13,746,908	0	0	24,976,000	0	0	27,176,000	0	0	27,176,000	0	0	27,176,000	0	0	0	108,705,000	0	0	0	232,443,793	LINE ITEM			
			Adjust	HSIP			0	0	0	(2,000,000)	0	0	2,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	
			After	HSIP			0	0	0	1,073,885	0	0	2,414,000	0	0	13,746,908	0	0	24,976,000	0	0	27,176,000	0	0	27,176,000	0	0	27,176,000	0	0	0	108,705,000	0	0	0	232,443,793				
PA 896 SAFETY: ELBOW LN-SHEPHERD LN CHESTER SR,0896,SIP	85949	CON	Before	HSIP	TC		1,808,956	0	0	7,861,044	0	0	2,000,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,670,000	ADVANCING FUNDS BASED ON CURRENT LET DATE.			
			Adjust	HSIP	TC		0	0	0	2,000,000	0	0	(2,000,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	
			After	HSIP	TC		1,808,956	0	0	9,861,044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	11,670,000	
S T U LINE ITEM BUCKS	79980	CON	Before	STU	581		0	0	0	7,278,670	720,044	0	4,342,845	2,388,272	250,000	2,681,000	2,585,000	1,836,000	1,223,000	246,000	3,623,000	108,000	0	152,000	0	0	0	1,333,000	957,000	0	283,000	0	0	0	30,006,831	LINE ITEM				
			Adjust	STU	581		0	0	0	(3,100,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	(3,100,000)	
			After	STU	581		0	0	0	4,178,670	720,044	0	4,342,845	2,388,272	250,000	2,681,000	2,585,000	1,836,000	1,223,000	246,000	3,623,000	108,000	0	152,000	0	0	0	1,333,000	957,000	0	283,000	0	0	0	26,906,831					
PA 896 SAFETY: ELBOW LN-SHEPHERD LN CHESTER SR,0896,SIP	85949	CON	Before	HSIP	TC		1,808,956	0	0	9,861,044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,670,000	NO CHANGE, INCLUDED TO SHOW OVERALL PHASE COST.			
			Adjust	HSIP	TC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	
			After	HSIP	TC		1,808,956	0	0	9,861,044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	11,670,000	
PA 896 SAFETY: ELBOW LN-SHEPHERD LN CHESTER SR,0896,SIP	85949	CON	Before				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	ADDING FUNDS TO MATCH CURRENT PROJECT ESTIMATE FOR UPCOMING LETTING.	
			Adjust	STU	TC		0	0	0	3,100,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		3,100,000
			After	STU	TC		0	0	0	3,100,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,100,000		
Before FFY Totals							3,617,912	0	0	28,074,643	720,044	0	6,756,845	2,388,272	250,000	16,427,908	2,585,000	1,836,000	26,199,000	246,000	3,623,000	27,284,000	0	152,000	27,176,000	0	0	28,509,000	957,000	0	108,988,000	0	0	0	285,790,624					
FFY Adjustment Totals							0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
After FFY Totals							3,617,912	0	0	28,074,643	720,044	0	6,756,845	2,388,272	250,000	16,427,908	2,585,000	1,836,000	26,199,000	246,000	3,623,000	27,284,000	0	152,000	27,176,000	0	0	28,509,000	957,000	0	108,988,000	0	0	0	285,790,624					

DVRPC FFY 2023 - 2026 TIP for PENNSYLVANIA  
FISCAL CONSTRAINT CHART  
FEDERAL & STATE FUNDS (In \$1,000's)

MA IDs:

TIP MODIFICATIONS FOR MARCH 2024  
Chart #122

Chart: 122

\* Positive number denotes a surplus/Negative denotes a deficit

AMENDMENT			Fund Type			FFY 2023			FFY 2024			FFY 2025			FFY 2026			2ND 4 YRS FFY 2027			2ND 4 YRS FFY 2028			2ND 4 YRS FFY 2029			2ND 4 YRS FFY 2030			3RD 4 YRS			TOTAL	Remarks				
Project Title	MPMS	Phs	Amts.	Fed.	Sta.	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	Fed. (\$)	State (\$)	LOC	TOTAL	Remarks				
COUNTY/CITY BRDG RESERV	95447	CON	Before		183	0	0	0	0	792,800	197,700	0	1,104,000	245,042	0	795,502	166,125	0	934,000	233,000	0	8,158,000	2,039,000	0	6,318,000	1,579,000	0	14,766,000	3,621,000	0	0	0	0	40,949,169	LINE ITEM			
BUCKS			Adjust		183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(567,000)	(188,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	(755,000)			
SR,-----			After		183	0	0	0	0	0	792,800	197,700	0	1,104,000	245,042	0	795,502	166,125	0	367,000	45,000	0	8,158,000	2,039,000	0	6,318,000	1,579,000	0	14,766,000	3,621,000	0	0	0	0	0	40,194,169		
BRIDGE RESERVE LINE ITEM	79929	CON	Before	BOF	185	0	0	88,835	1,085,210	3,117,710	1,317,896	69,000	293,209	29,000	0	19,005	491,000	4,582,000	89,000	0	0	165,000	0	273,000	0	0	297,000	38,000	0	68,040,000	63,636,849	0	0	0	143,631,714	LINE ITEM		
BUCKS			Adjust	BOF	185	0	0	0	3,000,000	563,000	187,000	(69,000)	(13,000)	(4,000)	0	0	0	0	(3,022,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	642,000		
			After	BOF	185	0	0	88,835	4,085,210	3,680,710	1,504,896	0	280,209	25,000	0	19,005	491,000	1,560,000	89,000	0	0	165,000	0	273,000	0	0	297,000	38,000	0	68,040,000	63,636,849	0	0	0	0	144,273,714		
W BRIDGE ST O/ AMTRAK	14134	CON	Before	BOF	183	0	0	0	6,399,000	1,200,000	400,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,999,000	CASH FLOWING BASED ON CURRENT LET DATE.		
CHESTER			Adjust	BOF	183	0	0	0	(3,000,000)	(563,000)	(187,000)	69,000	13,000	4,000	0	0	0	0	3,022,000	567,000	188,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	113,000		
SR,7410,BRG			After	BOF	183	0	0	0	3,399,000	637,000	213,000	69,000	13,000	4,000	0	0	0	0	3,022,000	567,000	188,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,112,000	
BRIDGE RESERVE LINE ITEM	79929	CON	Before	BOF	185	0	0	88,835	4,085,210	3,680,710	1,504,896	0	280,209	25,000	0	19,005	491,000	1,560,000	89,000	0	0	165,000	0	273,000	0	0	297,000	38,000	0	68,040,000	63,636,849	0	0	0	0	144,273,714	LINE ITEM	
BUCKS			Adjust	BOF	185	0	0	0	(3,250,000)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(3,250,000)		
			After	BOF	185	0	0	88,835	835,210	3,680,710	1,504,896	0	280,209	25,000	0	19,005	491,000	1,560,000	89,000	0	0	165,000	0	273,000	0	0	297,000	38,000	0	68,040,000	63,636,849	0	0	0	0	141,023,714		
BRIDGE INVESTMENT PROGRAM(BRIP) LINE ITEM	117997	CON	Before	BRIP		0	0	0	90,000	0	0	0	0	0	5,255,000	0	0	0	0	0	0	100,000	0	0	0	0	0	0	0	0	0	0	0	0	5,445,000	LINE ITEM		
MONTGOMERY			Adjust	BRIP		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,250,000	0	0	0	0	0	0	0	0	0	2,250,000			
			After	BRIP		0	0	0	90,000	0	0	0	0	0	0	5,255,000	0	0	0	0	0	100,000	0	0	2,250,000	0	0	0	0	0	0	0	0	0	0	7,695,000		
PLEASANT VIEW RD O/ SANATOGA CR	92637	CON	Before	BRIP		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,250,000	0	0	0	0	0	0	0	0	0	0	2,250,000	ADVANCING FUNDS FOR MAY 2024 LETTING.		
MONTGOMERY			Adjust	BRIP		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,250,000)	0	0	0	0	0	0	0	0	0	0	(2,250,000)			
SR,4028,NR1			After			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PLEASANT VIEW RD O/ SANATOGA CR	92637	CON	Before			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MONTGOMERY			Adjust	BOF		0	0	0	3,250,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,250,000	ADDING FUNDS BASED ON CURRENT ESTIMATE.
SR,4028,NR1			After	BOF		0	0	0	3,250,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,250,000	
<b>Before FFY Totals</b>						0	0	177,670	11,659,420	8,791,220	3,420,492	69,000	1,677,418	299,042	5,255,000	833,512	1,148,125	6,142,000	1,112,000	233,000	100,000	8,488,000	2,039,000	2,796,000	6,318,000	1,579,000	594,000	14,842,000	3,621,000	136,080,000	127,273,698	0	0	344,548,597				
<b>FFY Adjustment Totals</b>						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>After FFY Totals</b>						0	0	177,670	11,659,420	8,791,220	3,420,492	69,000	1,677,418	299,042	5,255,000	833,512	1,148,125	6,142,000	1,112,000	233,000	100,000	8,488,000	2,039,000	2,796,000	6,318,000	1,579,000	594,000	14,842,000	3,621,000	136,080,000	127,273,698	0	0	344,548,597				



FISCAL CONSTRAINT CHART  
 FFY 2023-2026 TIP Highway/Bridge

<b>Administrative Action</b> (MA ID: 133448) <b>DVRPC TIP</b>					<b>Fund Type</b>		<b>FFY 2023</b>			<b>FFY 2024</b>			<b>FFY 2025</b>			<b>FFY 2026</b>			<b>Remarks</b>
<b>Project Title</b>	<b>MPMS</b>	<b>Phase</b>	<b>Amts</b>	<b>Fed</b>	<b>State</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>		
US 1 BAT Lanes: Hellerman/Busteton - Bucks 6001/BAT Philadelphia	118074	PE	Before															Adding PE phase. No source, these funds are additional to the TIP and STIP.	
			Adjust		244						1,100,000								
			After		244						1,100,000								
US 1 BAT Lanes: Hellerman/Busteton - Bucks 6001/BAT Philadelphia	118074	FD	Before															Adding FD phase. No source, these funds are additional to the TIP and STIP.	
			Adjust		244						300,000								
			After		244						300,000								
US 1 BAT Lanes: Hellerman/Busteton - Bucks 6001/BAT Philadelphia	118074	CON	Before															Adding CON phase. No source, these funds are additional to the TIP and STIP.	
			Adjust		244						1,700,000								
			After		244						1,700,000								
<b>Before Totals</b>						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Actions do not affect air quality conformity.	
<b>Adjustment Totals</b>						\$0	\$0	\$0	\$0	\$3,100,000	\$0	\$0	\$0	\$0	\$0	\$0			
<b>After Totals</b>						\$0	\$0	\$0	\$0	\$3,100,000	\$0	\$0	\$0	\$0	\$0	\$0			

NOTES

FISCAL CONSTRAINT CHART  
 FFY 2023-2026 TIP Highway/Bridge

Administrative Action (MA ID: 133675) District 6-0 Interstate TIP				Fund Type			FFY 2023			FFY 2024			FFY 2025			FFY 2026			Remarks	
Project Title	MPMS	Phase	Amts	Fed	State	Federal	State	Loc/Oth	Federal	State	Loc/Oth	Federal	State	Loc/Oth	Federal	State	Loc/Oth			
Interstate Contingency  /  Central Office	75891	CON	Before	BRIP	185					1,462,391									Interstate Contingency LI utilized as source of funds to maintain fiscal constraint.	
			Before	NHPP	581			62,423,269			801,251			43,647,107	1,500,000		33,865,504	5,043,151		
			Adjust	BRIP	185															
			Adjust	NHPP	581							(450,000)								
			After	BRIP	185							1,462,391								
			After	NHPP	581						62,423,269	351,251			43,647,107	1,500,000		33,865,504		5,043,151
Post IDA Study on D6 Transportation Infrastructure 676/IDA Philadelphia	117881	STUDY	Before		581		400,000												Increase for STUDY phase supplement.	
			Adjust		581						450,000									
			After		581		400,000				450,000									
<b>Before Totals</b>						\$0	\$400,000	\$0	\$62,423,269	\$2,263,642	\$0	\$43,647,107	\$1,500,000	\$0	\$33,865,504	\$5,043,151	\$0	Actions do not affect air quality conformity.		
<b>Adjustment Totals</b>						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
<b>After Totals</b>						\$0	\$400,000	\$0	\$62,423,269	\$2,263,642	\$0	\$43,647,107	\$1,500,000	\$0	\$33,865,504	\$5,043,151	\$0			

**NOTES**

FISCAL CONSTRAINT CHART  
 FFY 2023-2026 TIP Highway/Bridge

<b>Administrative Action</b> (MA ID: 133824) <b>District 6-0 Interstate TIP</b>				<b>Fund Type</b>			<b>FFY 2023</b>			<b>FFY 2024</b>			<b>FFY 2025</b>			<b>FFY 2026</b>			<b>Remarks</b>		
<b>Project Title</b>	<b>MPMS</b>	<b>Phase</b>	<b>Amts</b>	<b>Fed</b>	<b>State</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>				
Interstate Contingency  /  Central Office	75891	CON	Before	BRIP	185					1,462,391									Interstate Contingency LI utilized as source of funds to maintain fiscal constraint.		
			Before	NHPP	581					98,186,929	4,180,851			43,647,107	1,500,000		33,865,504	5,043,151			
			Adjust	BRIP	185																
			Adjust	NHPP	581						(950,000)										
			After	BRIP	185							1,462,391									
			After	NHPP	581						97,236,929	4,180,851			43,647,107	1,500,000		33,865,504		5,043,151	
District 6-0 Interstate Guiderail (C) 476/IGR Delaware	115868	CON	Before	NHPP														Increase to cover AUC.			
			Adjust	NHPP						950,000											
			After	NHPP						950,000											
<b>Before Totals</b>						\$0	\$0	\$0	\$98,186,929	\$5,643,242	\$0	\$43,647,107	\$1,500,000	\$0	\$33,865,504	\$5,043,151	\$0	Actions do not affect air quality conformity.			
<b>Adjustment Totals</b>						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0				
<b>After Totals</b>						\$0	\$0	\$0	\$98,186,929	\$5,643,242	\$0	\$43,647,107	\$1,500,000	\$0	\$33,865,504	\$5,043,151	\$0				

**NOTES**

FISCAL CONSTRAINT CHART  
 FFY 2023-2026 TIP Highway/Bridge

<b>Administrative Action</b> (MA ID: 133676) <b>DVRPC TIP</b>				<b>Fund Type</b>		<b>FFY 2023</b>			<b>FFY 2024</b>			<b>FFY 2025</b>			<b>FFY 2026</b>			<b>Remarks</b>
<b>Project Title</b>	<b>MPMS</b>	<b>Phase</b>	<b>Amts</b>	<b>Fed</b>	<b>State</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	
US 1: Broad St - Adams Ave 1/RB1 Philadelphia	119822	PE	Before	244														Add phase for Automated Speed Enforcement (ASE) project. These state funds are additional to the TIP and STIP.
			Adjust	244						4,800,000								
			After	244							4,800,000							
US 1: Adams Ave - Old Lincoln Hwy 1/RB2 Philadelphia	119836	PE	Before	244														Add phase for Automated Speed Enforcement (ASE) project. These state funds are additional to the TIP and STIP.
			Adjust	244						4,800,000								
			After	244							4,800,000							
<b>Before Totals</b>						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	Actions do not affect air quality conformity.
<b>Adjustment Totals</b>						\$0	\$0	\$0	\$0	\$9,600,000	\$0	\$0	\$0	\$0	\$0	\$0		
<b>After Totals</b>						\$0	\$0	\$0	\$0	\$9,600,000	\$0	\$0	\$0	\$0	\$0	\$0		

NOTES

FISCAL CONSTRAINT CHART  
 FFY 2023-2026 TIP Highway/Bridge

Administrative Action (MA ID: 133751) Statewide & DVRPC TIPs				Fund Type		FFY 2023			FFY 2024			FFY 2025			FFY 2026			Remarks	
Project Title	MPMS	Phase	Amts	Fed	State	Federal	State	Loc/Oth	Federal	State	Loc/Oth	Federal	State	Loc/Oth	Federal	State	Loc/Oth		
Highway Reserve / Central Office	77786	CON	Before	NHPP	581		4,902,028		3,500,000	1,753,215			18,399,853			19,207,435		Statewide Highway Reserve utilized as source of funds to maintain fiscal constraint.	
			Adjust	NHPP	581					(600,000)									
			After	NHPP	581		4,902,028		3,500,000	1,153,215				18,399,853			19,207,435		
Reconnecting Our Chinatown 676/RCP Philadelphia	119896	STUDY	Before		581													Add Reconnecting Communities Program (RCP) Pilot project. State A-581 provided from Statewide Reserve. RCP and LOC/OTH funds are additional to the TIP. LOC/OTH funds of \$1.65M provided from Councilmember Squilla's office (\$50k), William Penn (\$1.2M), Knight Foundation (\$200k) and Philadelphia City (\$200k).	
			Adjust	RCP	581				1,805,000	600,000	1,650,000								
			After	RCP	581				1,805,000	600,000	1,650,000								
<b>Before Totals</b>						\$0	\$4,902,028	\$0	\$3,500,000	\$1,753,215	\$0	\$0	\$18,399,853	\$0	\$0	\$19,207,435	\$0	Actions do not affect air quality conformity.	
<b>Adjustment Totals</b>						\$0	\$0	\$0	\$1,805,000	\$0	\$1,650,000	\$0	\$0	\$0	\$0	\$0	\$0		
<b>After Totals</b>						\$0	\$4,902,028	\$0	\$5,305,000	\$1,753,215	\$1,650,000	\$0	\$18,399,853	\$0	\$0	\$19,207,435	\$0		

NOTES

FISCAL CONSTRAINT CHART  
 FFY 2023-2026 TIP Highway/Bridge

<b>Administrative Action</b> (MA ID: 133755) DVRPC and STWD Items TIPs				<b>Fund Type</b>			<b>FFY 2023</b>			<b>FFY 2024</b>			<b>FFY 2025</b>			<b>FFY 2026</b>			<b>Remarks</b>
<b>Project Title</b>	<b>MPMS</b>	<b>Phase</b>	<b>Amts</b>	<b>Fed</b>	<b>State</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>		
New Falls Rd Ped SFTY Improvmts (C) 2006/SIP Bucks	104365	PE	Before															Deobligated sHSIP funds.	
			Deob							(100,391)									
			After							(100,391)									
New Falls Rd Ped SFTY Improvmts (C) 2006/SIP Bucks	104365	UTL	Before															Deobligated sHSIP funds.	
			Deob							(29,000)									
			After							(29,000)									
New Falls Rd Ped SFTY Improvmts (C) 2006/SIP Bucks	104365	ROW	Before															Deobligated sHSIP funds.	
			Deob							(25,858)									
			After							(25,858)									
HSIP Set Aside Reserve / Central Office	101969	CON	Before	sHSIP		99,566			4,088,850			10,672,807			30,904,396			Return funds to Statewide HSIP Set Aside Reserve line item.	
			Adjust	sHSIP					155,249										
			After	sHSIP		99,566			4,244,099			10,672,807			30,904,396				
<b>Before Totals</b>						\$99,566	\$0	\$0	\$4,088,850	\$0	\$0	\$10,672,807	\$0	\$0	\$30,904,396	\$0	\$0	Actions do not affect air quality conformity.	
<b>Adjustment Totals</b>						\$0	\$0	\$0	\$155,249	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
<b>After Totals</b>						\$99,566	\$0	\$0	\$4,088,850	\$0	\$0	\$10,672,807	\$0	\$0	\$30,904,396	\$0	\$0		

**NOTES**

FISCAL CONSTRAINT CHART  
 FFY 2023-2026 TIP Highway/Bridge

<b>Administrative Action</b> (MA ID: 133816) DVRPC and STWD Item TIPS				<b>Fund Type</b>		<b>FFY 2023</b>			<b>FFY 2024</b>			<b>FFY 2025</b>			<b>FFY 2026</b>			<b>Remarks</b>	
<b>Project Title</b>	<b>MPMS</b>	<b>Phase</b>	<b>Amts</b>	<b>Fed</b>	<b>State</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>		
Castor Ave. Roundabout 1005/SP3 Philadelphia	110958	ROW	Before															Add phase to approved project	
			Adjust	sHSIP					50,000										
			After	sHSIP						50,000									
HSIP Set Aside Reserve / Central Office	101969	CON	Before	sHSIP					4,189,679			10,672,807			30,904,396			HSIP Set Aside Reserve line item source of funds	
			Adjust	sHSIP					(50,000)										
			After	sHSIP					4,139,679			10,672,807			30,904,396				
<b>Before Totals</b>						\$0	\$0	\$0	\$4,189,679	\$0	\$0	\$10,672,807	\$0	\$0	\$30,904,396	\$0	\$0	Actions do not affect air quality conformity.	
<b>Adjustment Totals</b>						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
<b>After Totals</b>						\$0	\$0	\$0	\$4,189,679	\$0	\$0	\$10,672,807	\$0	\$0	\$30,904,396	\$0	\$0		

NOTES

FISCAL CONSTRAINT CHART  
 FFY 2023-2026 TIP Highway/Bridge

<b>Administrative Action</b> (MA ID: 133823) DVRPC and STWD Items TIPs				<b>Fund Type</b>			<b>FFY 2023</b>			<b>FFY 2024</b>			<b>FFY 2025</b>			<b>FFY 2026</b>			<b>Remarks</b>
<b>Project Title</b>	<b>MPMS</b>	<b>Phase</b>	<b>Amts</b>	<b>Fed</b>	<b>State</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>		
HSIP Set Aside Reserve / Central Office	101969	CON	Before	sHSIP					4,139,679			10,672,807			30,904,396			HSIP Set Aside Reserve line item source of funds.	
			Adjust	sHSIP					(875,000)										
			After	sHSIP						3,264,679			10,672,807			30,904,396			
Marshall Rd. Safety Improv (C) 2024/SIP Delaware	110965	CON	Before															Add phase to program to cover AUC.	
			Adjust	sHSIP					875,000										
			After	sHSIP						875,000									
<b>Before Totals</b>						\$0	\$0	\$0	\$4,139,679	\$0	\$0	\$10,672,807	\$0	\$0	\$30,904,396	\$0	\$0	Actions do not affect air quality conformity.	
<b>Adjustment Totals</b>						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0			
<b>After Totals</b>						\$0	\$0	\$0	\$4,139,679	\$0	\$0	\$10,672,807	\$0	\$0	\$30,904,396	\$0	\$0		

NOTES



FISCAL CONSTRAINT CHART  
 FFY 2023-2026 TIP Highway/Bridge

<b>Administrative Action</b> (MA ID: 133858) STWD - DVRPC				<b>Fund Type</b>			<b>FFY 2023</b>			<b>FFY 2024</b>			<b>FFY 2025</b>			<b>FFY 2026</b>			<b>Remarks</b>
<b>Project Title</b>	<b>MPMS</b>	<b>Phase</b>	<b>Amts</b>	<b>Fed</b>	<b>State</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>	<b>Federal</b>	<b>State</b>	<b>Loc/Oth</b>		
TAP Reserve	60560	CON	Before	TAP		347,224			620,920			6,714,238			28,604,000			Balancing source	
/			Adjust	TAP					(127,000)			127,000							
Central Office			After	TAP			347,224			493,920			6,841,238			28,604,000			
Chestnut St. Ped. Islands	118351	CON	Before	TAP					500,000			500,000						Cashflow to estimated let date	
3/CPI			Adjust	TAP					500,000			(500,000)							
Philadelphia			After	TAP						1,000,000									
Walkable Chadds Ford	111487	CON	Before	TAP		842,000			1,031,000			127,000						Cashflow to estimated let date	
1/WCF			Adjust	TAP					127,000			(127,000)							
Delaware			After	TAP			842,000			1,158,000									
Octoraro Trail Phase 1	111486	CON	Before	TAP					500,000			663,000						Cashflow to estimated let date	
/OTC			Adjust	TAP					(500,000)			500,000							
Delaware			After	TAP								1,163,000							
<b>Before Totals</b>						\$1,189,224	\$0	\$0	\$2,651,920	\$0	\$0	\$8,004,238	\$0	\$0	\$28,604,000	\$0	\$0	Actions do not affect air quality conformity.	
<b>Adjustment Totals</b>						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
<b>After Totals</b>						\$1,189,224	\$0	\$0	\$2,651,920	\$0	\$0	\$8,004,238	\$0	\$0	\$28,604,000	\$0	\$0		

NOTES

***NJDOT Fiscal Constraint Charts  
(March 2024)***

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FISCAL CONSTRAINT BANK BEFORE MODIFICATIONS									
FUNDING SOURCE	FUNDING CATEGORY			FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	
NET- FEDERAL				0.000	0.000	0.000	0.000	0.000	
PROJECT MODIFICATIONS									
PROJECT NAME	DB#	PHASE	FUND	COUNTY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
ADA South, Contract 4	15423	BEFORE		Camden	0.000	8.150	0.000	0.000	8.150
		CON	STBGP-FLEX		8.150	(8.150)	0.000	0.000	0.000
		AFTER			8.150	0.000	0.000	0.000	8.150
Route 130, CR 545 (Farnsworth Avenue)	12346A	BEFORE		Burlington	1.440	0.000	0.000	0.000	1.440
		ROW	NHPP		(1.440)	0.000	0.000	0.000	(1.440)
		AFTER			0.000	0.000	0.000	0.000	0.000
Route 168, Route 42 to CR 544 (Evesham Road)	15396	BEFORE		Camden	10.500	0.000	0.000	0.000	10.500
		CON	NHPP		(10.500)	10.500	0.000	0.000	0.000
		AFTER			0.000	10.500	0.000	0.000	10.500
Route 47, Grove St. to Route 130, Pavement	12305	BEFORE		Gloucester	66.500	0.000	0.000	0.000	66.500
		CON	NHPP		18.200	0.000	0.000	0.000	18.200
		AFTER			84.700	0.000	0.000	0.000	84.700
Route 168, Merchant Street to Ferry Avenue, Pavement	10341	BEFORE		Camden	23.300	0.000	0.000	0.000	23.300
		CON	NHPP		(9.916)	0.000	0.000	0.000	(9.916)
		AFTER			13.384	0.000	0.000	0.000	13.384
Route 168, Merchant Street to Ferry Avenue, Pavement	10341	BEFORE		Camden	0.000	0.000	0.000	0.000	0.000
		CON	INFRA		8.000	0.000	0.000	0.000	8.000
		AFTER			8.000	0.000	0.000	0.000	8.000
Route 168, Merchant Street to Ferry Avenue, Pavement	10341	BEFORE		Camden	0.000	0.000	0.000	0.000	0.000
		CON	STATE		2.267	0.000	0.000	0.000	2.267
		AFTER			2.267	0.000	0.000	0.000	2.267
Releases From Prior Year Unobligated Balances	N/A	BEFORE		Various	6.844	0.000	0.000	0.000	6.844
		ERC	VAR FEDERAL-F		(6.844)	0.000	0.000	0.000	(6.844)
		AFTER			0.000	0.000	0.000	0.000	0.000
Total					7.917	2.350	0.000	0.000	10.267
FISCAL CONSTRAINT BANK AFTER MODIFICATIONS									
FUNDING SOURCE	FUNDING CATEGORY			FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	
NET- FEDERAL				2.350	(2.350)	0.000	0.000	0.000	
<i>... the net result for the first fiscal year must be that the Fiscal Constraint Bank has a zero or positive balance and that the net result for the constrained TIP/STIP period must also be a zero or positive balance. This will allow for temporary imbalances in the second, third, and fourth years, but will still maintain the overall Fiscal Constraint of the TIP/STIP. (MOU - Section C, Subsection 2, Paragraph 2)</i>									

FISCAL CONSTRAINT BANK BEFORE MODIFICATIONS																
FUNDING SOURCE	FUNDING CATEGORY				FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	FFY 28	FFY 29	FFY 30	FFY 31	FFY 32	FFY 33	FFY 24-33
NET- FEDERAL					2.350	(2.350)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PROJECT MODIFICATIONS																
PROJECT NAME	DB#	PHASE	FUND	COUNTY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	FFY 28	FFY 29	FFY 30	FFY 31	FFY 32	FFY 33	FFY 24-33
Route 295/42/I-76, Direct Connection, Contract 4	355E	BEFORE		Camden	0.000	36.011	30.232	0.000	66.243	0.000	0.000	0.000	0.000	0.000	0.000	66.243
		CON	NHFP-HWY		0.000	(36.011)	(30.232)	0.000	(66.243)	0.000	20.000	20.000	20.000	6.243	0.000	0.000
		AFTER			0.000	0.000	0.000	0.000	0.000	0.000	0.000	20.000	20.000	20.000	6.243	0.000
Route 295/42/I-76, Direct Connection, Contract 4	355E	BEFORE		Camden	0.000	0.000	0.000	166.858	166.858	115.399	0.000	0.000	0.000	0.000	0.000	282.257
		CON	NHPP		0.000	0.000	0.000	(166.858)	(166.858)	(65.399)	60.000	60.000	70.450	52.257	0.000	10.450
		AFTER			0.000	0.000	0.000	0.000	0.000	50.000	60.000	60.000	70.450	52.257	0.000	292.707
Total					0.000	(36.011)	(30.232)	(166.858)	(233.101)	(65.399)	80.000	80.000	90.450	58.500	0.000	10.450
FISCAL CONSTRAINT BANK AFTER MODIFICATIONS																
FUNDING SOURCE	FUNDING CATEGORY				FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	FFY 28	FFY 29	FFY 30	FFY 31	FFY 32	FFY 33	FFY 24-33
NET- FEDERAL					2.350	33.661	30.232	166.858	233.101	65.399	(80.000)	(80.000)	(90.450)	(58.500)	0.000	(10.450)
<i>... the net result for the first fiscal year must be that the Fiscal Constraint Bank has a zero or positive balance and that the net result for the constrained TIP/STIP period must also be a zero or positive balance. This will allow for temporary imbalances in the second, third, and fourth years, but will still maintain the overall Fiscal Constraint of the TIP/STIP. (MOU - Section C, Subsection 2, Paragraph 2)</i>																



FISCAL CONSTRAINT BANK BEFORE MODIFICATIONS															
FUNDING SOURCE	FUNDING CATEGORY			FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	FFY 28	FFY 29	FFY 30	FFY 31	FFY 32	FFY 33	FFY 24-33
NET- FEDERAL				2.350	33.661	30.232	166.858	233.101	65.399	(80.000)	(80.000)	(90.450)	(58.500)	0.000	(10.450)

PROJECT MODIFICATIONS																	
PROJECT NAME	DB#	PHASE	FUND	COUNTY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	FFY 28	FFY 29	FFY 30	FFY 31	FFY 32	FFY 33	FFY 24-33	
Route 73, Granite Avenue to Route 41	18383	BEFORE		Burlington	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		CON	HSIP-VRUS		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.900	0.000	11.900
		AFTER			0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.900	0.000
Total					0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

FISCAL CONSTRAINT BANK AFTER MODIFICATIONS															
FUNDING SOURCE	FUNDING CATEGORY			FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	FFY 28	FFY 29	FFY 30	FFY 31	FFY 32	FFY 33	FFY 24-33
NET- FEDERAL				3.950	33.661	32.532	171.358	241.501	65.399	(80.000)	(80.000)	(90.450)	(46.600)	0.000	9.850

... the net result for the first fiscal year must be that the Fiscal Constraint Bank has a zero or positive balance and that the net result for the constrained TIP/STIP period must also be a zero or positive balance. This will allow for temporary imbalances in the second, third, and fourth years, but will still maintain the overall Fiscal Constraint of the TIP/STIP. (MOU - Section C, Subsection 2, Paragraph 2)

FISCAL CONSTRAINT BANK BEFORE MODIFICATIONS									
FUNDING SOURCE	FUNDING CATEGORY			FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	
NET- FEDERAL				0.000	0.000	0.000	0.000	0.000	
PROJECT MODIFICATIONS									
PROJECT NAME	DB#	PHASE	FUND	COUNTY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
Statewide Traffic Operations and Support Program	13308	BEFORE		Various	17.000	0.000	0.000	0.000	17.000
		EC	NHPP		2.000	0.000	0.000	0.000	2.000
		AFTER			19.000	0.000	0.000	0.000	19.000
Mobility and Systems Engineering Program	13306	BEFORE		Various	6.000	0.000	0.000	0.000	6.000
		EC	NHPP		5.700	0.000	0.000	0.000	5.700
		AFTER			11.700	0.000	0.000	0.000	11.700
Releases From Prior Year Unobligated Balances	N/A	BEFORE		Various	7.700	0.000	0.000	0.000	7.700
		ERC	VAR FEDERAL-F		(7.700)	0.000	0.000	0.000	(7.700)
		AFTER			0.000	0.000	0.000	0.000	0.000
Total					0.000	0.000	0.000	0.000	0.000
FISCAL CONSTRAINT BANK AFTER MODIFICATIONS									
FUNDING SOURCE	FUNDING CATEGORY			FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27	
NET- FEDERAL				0.000	0.000	0.000	0.000	0.000	
<i>... the net result for the first fiscal year must be that the Fiscal Constraint Bank has a zero or positive balance and that the net result for the constrained TIP/STIP period must also be a zero or positive balance. This will allow for temporary imbalances in the second, third, and fourth years, but will still maintain the overall Fiscal Constraint of the TIP/STIP. (MOU - Section C, Subsection 2, Paragraph 2)</i>									

**FISCAL CONSTRAINT BANK BEFORE MODIFICATIONS**

FUNDING SOURCE	FUNDING CATEGORY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
NET- FEDERAL		0.000	0.000	0.000	0.000	0.000

**PROJECT MODIFICATIONS**

PROJECT NAME	DB#	PHASE	FUND	COUNTY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
Sign Structure Replacement Contract 2021-2	22319	BEFORE		Various	4.600	0.000	0.000	0.000	4.600
		CON	NHPP		(4.600)	4.600	0.000	0.000	0.000
		AFTER			0.000	4.600	0.000	0.000	4.600
Total					(4.600)	4.600	0.000	0.000	0.000

**FISCAL CONSTRAINT BANK AFTER MODIFICATIONS**

FUNDING SOURCE	FUNDING CATEGORY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
NET- FEDERAL		4.600	(4.600)	0.000	0.000	0.000

... the net result for the first fiscal year must be that the Fiscal Constraint Bank has a zero or positive balance and that the net result for the constrained TIP/STIP period must also be a zero or positive balance. This will allow for temporary imbalances in the second, third, and fourth years, but will still maintain the overall Fiscal Constraint of the TIP/STIP. (MOU - Section C, Subsection 2, Paragraph 2)



**FISCAL CONSTRAINT BANK BEFORE MODIFICATIONS**

FUNDING SOURCE	FUNDING CATEGORY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
NET- FEDERAL		4.600	(4.600)	0.000	0.000	0.000

**PROJECT MODIFICATIONS**

PROJECT NAME	DB#	PHASE	FUND	COUNTY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
Drainage Rehabilitation & Improvements	X154D	BEFORE		Various	23.000	0.000	0.000	0.000	23.000
		EC	PPF		(22.703)	0.000	0.000	0.000	(22.703)
		AFTER			0.297	0.000	0.000	0.000	0.297
Drainage Rehabilitation & Improvements	X154D	BEFORE		Various	0.000	0.000	0.000	0.000	0.000
		EC	STBGP-FLEX		22.703	0.000	0.000	0.000	22.703
		AFTER			22.703	0.000	0.000	0.000	22.703
<b>Total</b>					<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>

**FISCAL CONSTRAINT BANK AFTER MODIFICATIONS**

FUNDING SOURCE	FUNDING CATEGORY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
NET- FEDERAL		4.600	(4.600)	0.000	0.000	0.000

... the net result for the first fiscal year must be that the Fiscal Constraint Bank has a zero or positive balance and that the net result for the constrained TIP/STIP period must also be a zero or positive balance. This will allow for temporary imbalances in the second, third, and fourth years, but will still maintain the overall Fiscal Constraint of the TIP/STIP. (MOU - Section C, Subsection 2, Paragraph 2)

**FISCAL CONSTRAINT BANK BEFORE MODIFICATIONS**

FUNDING SOURCE	FUNDING CATEGORY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
NET- FEDERAL		4.600	(4.600)	0.000	0.000	0.000

**PROJECT MODIFICATIONS**

PROJECT NAME	DB#	PHASE	FUND	COUNTY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
Delaware & Raritan Canal Bridges	15322	BEFORE		Mercer	0.000	0.000	0.000	0.000	0.000
		ERC	DEMO		0.019	0.000	0.000	0.000	0.019
		AFTER			0.019	0.000	0.000	0.000	0.019
Total					0.019	0.000	0.000	0.000	0.019

**FISCAL CONSTRAINT BANK AFTER MODIFICATIONS**

FUNDING SOURCE	FUNDING CATEGORY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
NET- FEDERAL		4.600	(4.600)	0.000	0.000	0.000

... the net result for the first fiscal year must be that the Fiscal Constraint Bank has a zero or positive balance and that the net result for the constrained TIP/STIP period must also be a zero or positive balance. This will allow for temporary imbalances in the second, third, and fourth years, but will still maintain the overall Fiscal Constraint of the TIP/STIP. (MOU - Section C, Subsection 2, Paragraph 2)

**FISCAL CONSTRAINT BANK BEFORE MODIFICATIONS**

FUNDING SOURCE	FUNDING CATEGORY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
NET- FEDERAL		4.600	(4.600)	0.000	0.000	0.000

**PROJECT MODIFICATIONS**

PROJECT NAME	DB#	PHASE	FUND	COUNTY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
Delaware & Raritan Canal Bridges	15322	BEFORE		Mercer	0.000	0.000	0.000	0.000	0.000
		ERC	NHPP		2.500	0.000	0.000	0.000	2.500
		AFTER			2.500	0.000	0.000	0.000	2.500
Releases From Prior Year Unobligated Balances	N/A	BEFORE		Various	2.500	0.000	0.000	0.000	2.500
		ERC	VAR FEDERAL-F		(2.500)	0.000	0.000	0.000	(2.500)
		AFTER			0.000	0.000	0.000	0.000	0.000
<b>Total</b>					0.000	0.000	0.000	0.000	0.000

**FISCAL CONSTRAINT BANK AFTER MODIFICATIONS**

FUNDING SOURCE	FUNDING CATEGORY	FFY 24	FFY 25	FFY 26	FFY 27	FFY 24-27
NET- FEDERAL		4.600	(4.600)	0.000	0.000	0.000

... the net result for the first fiscal year must be that the Fiscal Constraint Bank has a zero or positive balance and that the net result for the constrained TIP/STIP period must also be a zero or positive balance. This will allow for temporary imbalances in the second, third, and fourth years, but will still maintain the overall Fiscal Constraint of the TIP/STIP. (MOU - Section C, Subsection 2, Paragraph 2)

***SEPTA Fiscal Constraint Charts***  
***(March 2024)***

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DVRPC FFY 2023-2026 TIP for Pennsylvania  
 Fiscal Constraint Chart  
 SEPTA TIP Actions for March 2024  
 Federal and State Funds (in \$1,000s)

Project Title	MPMS	Phase	Fund Type			FFY 2024			FFY 2025			FFY 2026			Comments
			Amts	Fed	State	Fed	State	Local	Fed	State	Local	Fed	State	Local	
Projects of Significance	115472	ERC	Before	5307	1514	0	0	0	69,517	0	0	8,001	127,143	0	Amendment to add new competitive grant to the TIP
			Before	5305	1514	0	0	0	0	0	0	0	0	0	
			Before	5337	1514	45,699	4,492	150	66,718	0	0	23,998	0	0	
			Before	RAISE	1514	65,000	77,420	2,580							
			Before	5339B	1514	0	0	0	6,891	68,280	0	0	0	0	
			Before	5339C	1514	9,800	0	0	0	0	0	0	0	0	
			Before	ARPA	1514	0	0	0	0	0	0	0	0	0	
			Before	RVR											
			Before	OTH	1514	0	0	94,892	0	0	58,330	0	0	120,607	
			Before	n/a	1514	0	91,843	3,061	0	0	2,276	0	0	4,233	
			Adjust	5307	1514	0	0	0	0	0	0	0	0	0	
			Adjust	5305	1514	0	0	0	0	0	0	0	0	0	
			Adjust	5337	1514	0	0	0	0	0	0	0	0	0	
			Adjust	RAISE	1514	0	0	0							
			Adjust	5339B	1514	0	0	0	0	0	0	0	0	0	
			Adjust	5339C	1514	0	0	0	0	0	0	0	0	0	
			Adjust	ARPA	1514	0	0	0	0	0	0	0	0	0	
			Adjust	RVR	1514	48,453	0	0	134,757	0	0	133,950	0	0	
			Adjust	OTH	1514	0	0	0	0	0	0	0	0	0	
			Adjust	n/a	1514	0	0	0	0	0	0	0	0	0	
			Total Adjust			48,453	0	0	134,757	0	0	133,950	0	0	
			After	5307	1514	0	0	0	69,517	0	0	8,001	127,143	0	
			After	5305	1514	0	0	0	0	0	0	0	0	0	
			After	5337	1514	45,699	4,492	150	66,718	0	0	23,998	0	0	
			After	RAISE	1514	65,000	77,420	2,580							
			After	5339B	1514	0	0	0	6,891	68,280	0	0	0	0	
After	5339C	1514	9,800	0	0	0	0	0	0	0	0				
After	ARPA	1514	0	0	0	0	0	0	0	0	0				
After	RVR		48,453	0	0	134,757	0	0	133,950	0	0				
After	OTH	1514	0	0	94,892	0	0	58,330	0	0	120,607				
After	n/a	1514	0	91,843	3,061	0	0	2,276	0	0	4,233				
Summary of Changes			Before			936,376	446,970	244,106	367,900	356,665	210,939	370,800	353,351	220,731	
Summary of Changes			Adjust			48,453	0	0	134,757	0	0	133,950	0	0	
Summary of Changes			After			984,829	446,970	244,106	502,657	356,665	210,939	504,750	353,351	220,731	

***DVRPC Local Fiscal Constraint Chart  
(March 2024)***

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## DVRPC FY2024 TIP for New Jersey (FY24-FY27)

### Fiscal Constraint Chart #6

### DVRPC Local Highway Program (in Millions)

\* Positive number denotes a surplus/(Negative) denotes a deficit, decrease, or return to the appropriate line item.

Informational and Formal TIP Actions					First Four Years of the TIP (FY24-27)					Out Years (FY28-33)							10-Yr Total	Remarks
Project Title/Local/Sponsor	DB #	Phase	Action	Fund Type	2024	2025	2026	2027	4-Yr Total	2028	2029	2030	2031	2032	2033	Out Yrs Total		
DVRPC, Future Projects Local Various	D026	ERC	Before	STBGP-PHILA	0.777	0.305	0.000	0.000	1.082	0.000	1.815	4.988	9.416	11.006	12.174	39.399	40.481	Administrative action to add \$3.218 M STBGP-PHILA to the FY24 ERC Phase; remove \$0.305 M STBGP-PHILA from the FY25 ERC Phase; remove \$0.5 M STBGP-PHILA from the FY29 ERC Phase; remove \$3.5 M STBGP-PHILA from the FY30 ERC Phase; and remove \$1.554 M STBGP-PHILA from the FY31 ERC Phase. A total of \$1.782 M STBGP-PHILA will be removed, from \$40.481 M STBGP-PHILA to \$38.699 M STBGP-PHILA.
			Adjust	STBGP-PHILA	3.218	-0.305	0.000	0.000	2.913	0.000	(0.500)	(3.500)	(1.554)	0.000	0.000	(5.554)	(2.641)	
			After	STBGP-PHILA	3.995	0.000	0.000	0.000	3.995	0.000	1.315	1.488	7.862	11.006	12.174	33.845	37.840	
Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout To Glen Echo Avenue (CR 538) Local Gloucester	D2406	CON	Before	STBGP-PHILA		0.000	0.000	0.000	0.000							0.000	0.000	Formal action to add the Resurfacing & Safety Improvements to Kings Highway (CR 551) from the Roundabout To Glen Echo Avenue (CR 538) (DB #D2406) into the TIP for CON in FY24 in the amount of \$1.339 M STBGP-PHILA.
			Adjust	STBGP-PHILA	1.339	0.000		0.000	1.339	0.000	0.000	0.000				0.000	1.339	
			After	STBGP-PHILA	1.339	0.000	0.000	0.000	1.339	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.339	
New or Upgraded Traffic Signal Systems at Intersections, Phase 1 Local City of Camden	D2020	DES	Before	STBGP-PHILA		0.000	0.000	0.000	0.000							0.000	0.000	Administrative action to add \$0.15 M STBGP-PHILA funded DES Phase to FY24.
			Adjust	STBGP-PHILA	0.150	0.000	0.000	0.000	0.150	0.000	0.000	0.000				0.000	0.150	
			After	STBGP-PHILA	0.150	0.000	0.000	0.000	0.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.150	
Rancocas Creek Greenway, Laurel Run Park (Circuit) Local Burlington	D2207	CON	Before	STBGP-PHILA	4.707	0.000	0.000	0.000	4.707							0.000	4.707	Administrative action to delay the \$4.707 M STBGP-PHILA funded CON Phase from FY24 to FY25 with an overall increase of \$1.152 M. Funding will be broken down as follows: FY24: \$0.0 M; FY25: \$1.305 M; FY26: \$1.054 M; FY27: \$2 M; FY28: \$1.5 M.
			Adjust	STBGP-PHILA	-4.707	1.305	1.054	2.000	-0.348	1.500	0.000	0.000				1.500	1.152	
			After	STBGP-PHILA	0.000	1.305	1.054	2.000	4.359	1.500	0.000	0.000	0.000	0.000	0.000	1.500	5.859	
Kaighn Avenue (CR 607), Bridge over Cooper River (Roadway and Bridge Improvements) Local Camden	D1709	CON	Before	STBGP-PHILA		2.008	1.969	2.690	6.667		1.351	1.300				2.651	9.318	Administrative action to shift a total of \$4.054 M STBGP-PHILA to LFY. Funding will be shifted as follows: remove \$1 M from FY25; remove \$1.054 M from FY26; remove \$2 M from FY27; add \$1 M to FY28; add \$0.5 M to FY29; add \$1 M to FY30; and add \$1.554 M to FY31.
			Adjust	STBGP-PHILA	0.000	-1.000	-1.054	-2.000	-4.054	1.000	0.500	1.000	1.554			4.054	0.000	
			After	STBGP-PHILA	0.000	1.008	0.915	0.690	2.613	1.000	1.851	2.300	1.554	0.000	0.000	6.705	9.318	
CR 706 (Cooper Street) Bridge over Almonesson Creek (Bridge 3-K-3) Local Gloucester	D2017	CON	Before	STBGP-PHILA		0.000	0.000	1.690	1.690	5.053	2.183	0.000				7.236	8.926	Administrative action to shift \$2.5 M STBGP-PHILA from FY28 to FY30 in the CON Phase.
			Adjust	STBGP-PHILA	0.000	0.000	0.000	0.000	0.000	(2.500)	0.000	2.500			0.000	0.000		
			After	STBGP-PHILA	0.000	0.000	0.000	1.690	1.690	2.553	2.183	2.500	0.000	0.000	0.000	7.236	8.926	
<b>Total Before</b>					5.484	2.313	1.969	4.380	8.662	0.000	1.815	4.988	9.416	11.006	12.174	27.225	35.887	<b>Fiscal Constraint is maintained.</b>
<b>Total Adjust</b>					0.000	0.000	0.000	0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
<b>Total After</b>					5.484	2.313	1.969	4.380	14.146	0.000	1.315	4.988	7.862	11.006	12.174	25.171	39.317	

1. ... the net result for the first fiscal year must be that the Fiscal Constraint Bank has a zero or positive balance and that the net result for the constrained TIP/STIP period must also be a zero or positive balance. This will allow for temporary imbalances in the second, third, and fourth years, but will still maintain the overall Fiscal Constraint of the TIP/STIP. (MOU - Section C, Subsection 2, Paragraph 2)

2. Apportioned Program Funding Types that are Eligible for Transferability Under Section 126 of Title 23, United States Code are NHPP, STBGP (Formerly STP), HSIP, CMAQ, NHFP, and TAP. In other words, up to half of their programmed amounts in the TIP are transferable to another Federal funding type. STBGP suballocated funds distributed by population are not transferable to other apportioned programs. Source: [https://www.fhwa.dot.gov/cfo/transferability\\_qa.cfm](https://www.fhwa.dot.gov/cfo/transferability_qa.cfm)

# **Index of Frequently Used Transportation Acronyms, Codes, and Terminology in the TIP Actions Packet**

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Updated as of August 23, 2022



## Index of Transportation Acronyms, Codes, and Terminology

\*Acronym applies to the Pennsylvania (PA) TIP only.

\*\*Acronym applies to the New Jersey (NJ) TIP only.

No asterisk means acronym applies to both PA and NJ TIPs.

<b>PROJECT PHASES OF WORK</b>		
<b>Acronym</b>	<b>Definition</b>	<b>Description</b>
**CAP	Capital Acquisition	Used to denote the acquisition of rolling stock by NJ TRANSIT.
*CAP	Capital Asset Construction	Involves construction of buildings, structures, equipment, or intellectual property.
**CD	Concept Development	Involves traffic studies, needs analyses, corridor studies, and other preparatory work for New Jersey project development.
CON	Construction	Involves the actual building of a project.
*DES	Final Design	Consists of taking a recommended solution and scope of work defined in the preliminary design phase and developing a final design, including right-of-way and construction plans.
DS	Debt Service	Involves scheduled payments due for principal and interest on bonds for transit operator.
EC	Engineering/Construction	Funding can be used for both design and/or construction costs.
ER	Engineering/Right-of-Way	Funding can be used for both design and/or right-of-way costs.
ERC	Engineering/Right-of-Way/Construction	Funding can be used for design, right-of-way, and/or construction costs.
FD	Final Design	The refinement of the Initial Preferred Alternative (IPA) based upon environmental studies, community input and the needs of the traveling public.
**LPD	Local Preliminary Design	Preliminary design done by a local entity (local government, municipality) for New Jersey transportation projects.
OP	Operations Phase	Funding can be used for any activity required for the operation of a transit system.
**PD	Preliminary Design	The process of advancing preliminary engineering and obtaining formal community and environmental approval of the Initially Preferred Alternative for New Jersey transportation projects.

**F** – Denotes Federal Funding

**S** – Denotes State Funding

**L** – Denotes Local Funding

No asterisk means acronym applies to both PA and NJ TIPs.

\*Acronym applies to the Pennsylvania (PA) TIP only.

\*\*Acronym applies to the New Jersey (NJ) TIP only.

<b>PROJECT PHASES OF WORK (Continued)</b>		
<b>Acronym</b>	<b>Definition</b>	<b>Description</b>
PE	Preliminary Engineering	The process of advancing preliminary engineering and obtaining formal community and environmental approval of the Initially Preferred Alternative for Pennsylvania transportation projects.
PLS	Planning Study	Involves traffic studies, needs analyses, corridor studies, and other work preparatory to project development.
*PRD	Project Development	Intended to develop feasible project proposals that produce the best balance among transportation needs, environmental values, public concerns, and costs.
**PR	Project Development	Intended to develop feasible project proposals that produce the best balance among transportation needs, environmental values, public concerns, and costs.
*PUR	Purchase of Equipment	Involves the purchasing of equipment for Pennsylvania transportation projects.
ROW	Right-of-Way Acquisition	Involves purchasing the land needed to build a project.
**SWI	Statewide Investment	Used to describe a series of coordinated smaller-scale projects in multiple locations, and in multiple phases work, that address a specific mobility issue
UTL	Utilities	Utility relocation work associated with a project.

**F** – Denotes Federal Funding  
**S** – Denotes State Funding  
**L** – Denotes Local Funding

No asterisk means acronym applies to both PA and NJ TIPs.  
 \*Acronym applies to the Pennsylvania (PA) TIP only.  
 \*\*Acronym applies to the New Jersey (NJ) TIP only.

## HIGHWAY PROJECT FUNDING SOURCES

	<i>Acronym</i>	<i>Definition</i>	<i>Description</i>
S	*A-073	Appropriation 073	State funding provided for Green Light-Go projects. Funds are appropriated out of the Motor License Fund and provided in a form of grants to municipalities for the operation and maintenance of traffic signals along critical and designated corridors on state highways and requires a municipal or private match of not less than 50% of the amount of funds to be provided. See Act 89 of 2013: Title 75, Section 9511(e.1).
S	*183/H-STATE	Appropriation 183	State funding which can be applied to local bridge projects.
S	*185/H-STATE	Appropriation 185	State funding which can be applied to state bridge projects.
S	*581/H-STATE	Appropriation 581	State funding which can be applied to highway projects on the state highway system.
S	*582/H-STATE	Appropriation 582	State funding which can be applied to the operations of various maintenance activities such as resurfacing projects maintenance personnel, and other maintenance operations
S	*916	Act 44	State funding to be used for the preservation and restoration of roadways and structurally deficient bridges as well as operations and maintenance of the system.
S	*ACT13	Act 13 of 2012	State funding from the Marcellus Shale Impact Fee to fund the cost of replacement or repair of locally owned (county or municipal) at-risk deteriorated bridges.
S	*BND	Bond Funds	State funding made available from the sale of state bonds and is applied to resurfacing projects, structurally deficient bridge projects, safety and capacity management projects.
F	**BFP-OS-BRDG	Bridge Formula Program Off System Bridge	This federal-aid funding category established under the Infrastructure Investment and Jobs Act (IIJA), provides funds to replace, rehabilitate, preserve, protect, and construct bridges on public roads. This funding is used for bridges that are off the federal-aid system.
F	BFP	Bridge Formula Program	This federal-aid funding category established under the Infrastructure Investment and Jobs Act (IIJA), provides funds to replace, rehabilitate, preserve, protect, and construct bridges on public roads.
F	BRIDGE	Federal Bridge Program	Provides funding for the rehabilitation or replacement of bridges defined as structurally deficient and/or functionally obsolete. This program is merged into NHPP in MAP-21.
F	**BRIDGE-OFF		Provides funding for the rehabilitation or replacement of bridges that are off the federal-aid system and are defined as structurally deficient and/or functionally obsolete. This program is merged into NHPP in MAP-21.

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## HIGHWAY PROJECT FUNDING SOURCES (Continued)

<i>Acronym</i>		<i>Definition</i>	<i>Description</i>
F	CR	Carbon Reduction Program	This federal-aid funding category established under the Infrastructure Investment and Jobs Act (IIJA), provides funds for projects to reduce transportation emissions or the development of carbon reduction strategies.
F	CRRSAA	Coronavirus Response and Recovery Supplemental Appropriations Act	This federal-aid funding category was established under the The Coronavirus Response and Relief Supplemental Appropriations Act, 2021 (CRRSAA) and appropriated funds by geographic regions.
F	DEMO	Demonstration Funds	Federal transportation acts sometimes target specific projects in various states in addition to general programs for federal support. This funding category includes “demonstration” funding provided under Transportation Equity Act for the 21 <sup>st</sup> Century (TEA-21) and Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Projects with “demonstration”, or “high priority project”, funding often have special rules of use.
F	EB	Equity Bonus Program	Provides federal funding to states based on equity considerations. This program is discontinued in MAP-21.
F	ER	Emergency Relief Program	Provides federal funding for emergency and permanent repairs on Federal-aid highways and roads on Federal lands that have suffered serious damage as a result of a natural or man-made disaster.
S	*ECON	Economic Development	Special bond funding from the State Department of Economic Development. This fund type is now known as Transportation Infrastructure Investment (TIFF).
F	*ECON-R	American Recovery and Reinvestment Act Funds	Provides American Recovery and Reinvestment Act funding to State projects for restoration, repair, construction and other activities under the Surface Transportation Program.
F	*eSTP	Economic Development Surface Transportation Program Funds	A portion of Pennsylvania’s funds are reserved each year for transportation improvements associated with economic development opportunities. Decisions on how to utilize this funding will be at the discretion of the Secretary of Transportation.
F	FERRY	Federal Ferry Funds	Provides funding for the rehabilitation and/or development of ferry facilities throughout the State. FERRY is replaced by FBP in MAP-21.

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<b>HIGHWAY PROJECT FUNDING SOURCES (Continued)</b>		
<i>Acronym</i>	<i>Definition</i>	<i>Description</i>
F	**NEVFP National Electric Vehicle Formula Program	This federal-aid funding category established under the Infrastructure Investment and Jobs Act (IIJA), provides funds for electric vehicle charging infrastructure and to establish an interconnected network to facilitate data collection, access, and reliability.
F	**PFP PROTECT Formula Program	Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) was established under the Infrastructure Investment and Jobs Act (IIJA), provides funds for planning, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure.
F	STBGPP (formerly STP) Surface Transportation Block Grant Program (formerly Surface Transportation Program)	Provides funding previously made available under various smaller federal-aid categories as well as broad, flexible components, such as safety and projects under the new Transportation Alternatives program (TAP). For the first time, truck parking and surface transportation infrastructure improvements at port terminals became eligible under MAP-21. STP remained the core federal highway program and with the broadest eligibility criteria in MAP-21. New eligible project categories added, while existing eligibilities are maintained under the FAST Act.
F	**STBGP-OS-BRDG Surface Transportation Block Grant Program Off System Bridges	This federal-aid funding category provides funds for the rehabilitation or replacement of bridges defined as structurally deficient and/or functionally obsolete according to federal definitions. This funding is used for bridges that are off the federal-aid system.
F	STP-STU Surface Transportation Program-Urban Allocation	Urban allocation of flexible federal funding that may be used by states and localities for projects on any Federal Aid highway, including the NHS and bridge projects on any road. Funds are typically used on highway projects, but can be used for transit capital projects and intracity and intercity bus terminals and facilities.
F	STP-TE Surface Transportation Program-Transportation Enhancement Program	Provides funding for pedestrian and bicycle infrastructure and safety programs, scenic and historic highway programs, landscaping and scenic beautification, historic preservation, environmental mitigation, rehabilitation of historic facilities related to transportation, renovated streetscapes, rail-trails and other transportation trails, transportation museums, and scenic and historic highway program visitor centers. STP-TE was incorporated into the Transportation Alternatives Program (TAP) in MAP-21.

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<b>HIGHWAY PROJECT FUNDING SOURCES (Continued)</b>			
<i>Acronym</i>	<i>Definition</i>	<i>Description</i>	
F	STP Set-Aside (formerly TAP)	Surface Transportation Program Set-Aside (formerly Transportation Alternatives Program)	Provides set-aside federal funding for programs combined from the previous authorization, SAFETEA-LU, which are: Transportation Enhancements, Recreational Trails, and the federal-aid Safe Routes to School (SRTS). TAP funds may be transferred to NHPP, STP, HSIP, CMAQ or PL, or to the Federal Transit Administration for TAP-eligible projects. Under FAST Act, program's core elements and existing eligibilities are maintained. However, funds will no longer be a takedown of core programs. MPOs with over 200,000 populations may flex (transfer) half of funds for any STP-eligible project, but MPOs must distribute funds "in consultation with the relevant state."
F	SXF	Special Federal Earmarks	Special federal funding from congressional earmarks provided under ISTEA, TEA-21, and SAFETEA-LU.
S	*TIFF	Transportation Infrastructure Investment Fund	Formerly Economic Development, \$25 million state funds are reserved each year for transportation improvements associated with economic development opportunities. Decisions on how to utilize this funding will be at the discretion of the Secretary of Transportation.
F	TIGER or CTDG	Competitive Transportation Investment Generating Economic Recovery Discretionary Grants	Special federal economic recovery funding used to spur a national competition for innovative, multi-modal and multi-jurisdictional transportation projects that promise significant economic and environmental benefits to an entire metropolitan area, a region, or the nation.
S	**TTF	Transportation Trust Fund	Provides funding from the New Jersey Transportation Trust Fund.
S	*411/MTF	State Appropriations 411/Multimodal Transportation Fund	Competitive statewide program established by Act 89 of 2013 to provide grants to ensure that a safe and reliable system of transportation is available for the residents of the Commonwealth of Pennsylvania.

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## TRANSIT PROJECT FUNDING SOURCES

<i>Acronym</i>		<i>Definition</i>	<i>Description</i>
S	**CASINO REVENUE	Casino Revenue	Provides state transit funding from the annual allocation of the 7.5 percent of the Casino Tax Fund appropriated for transportation services for senior and disabled persons.
S	*CB/ T-Bond	Capital Bonds	State funding used to match federal grants and support State funded initiatives.
F	**COPS	State Certificates of Participation	Federal funding freed up on existing COPS Notes substituting insurance policy for a cash reserve fund to guarantee payment to the note holders.
F	DRPA	Delaware River Port Authority	Delaware River Port Authority funds.
F	FTA FERRY	Federal Ferry Funds-FTA	Provides funding for the rehabilitation and/or development of ferry facilities throughout the state. It is discontinued in MAP-21.
F	HPP10	High Priority Projects	Special funding from congressional earmark provided under SAFETEA-LU.
F	HPP20	High Priority Projects	Special funding from congressional earmark provided under SAFETEA-LU.
F	JARC	Job Access and Reverse Commute Program	Provides funding for selected municipal plans that either increase job accessibility for the most disadvantaged members of the population, or facilitate reverse commute movements. MAP-21 has repealed this program, but transit agencies can choose to use their formula funds from Section 5307 (Urbanized Area Formula Grants) and Section 5311 (Non-urbanized Area Formula Program) to continue funding JARC projects.

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## TRANSIT PROJECT FUNDING SOURCES (Continued)

<i>Acronym</i>	<i>Definition</i>	<i>Description</i>
F	NEW FREEDOM FTA 5317 Formula Program	Provides funding for projects that improve public transportation services, and alternatives to public transportation, for people with disabilities beyond those required by the Americans with Disabilities Act of 1990. It has been merged with MAP-21’s Section 5310 FTA Enhanced Mobility of Seniors and Individuals with Disabilities Program.
S	*SEC 1514 Act 44 - Asset Improvement Program	State Act 44 funding that is distributed to transit agencies based on their demonstrated need. Funding can be used for debt service payments, asset improvement projects, and acquisition of new assets.
S	*SEC 1515 Act 44 - New Initiatives Program	State Act 44 funding that is used to provide the framework to advance new or expansion of existing fixed guideway projects.
S	*SEC 1516 Act 44 - Programs of Statewide Significance	State Act 44 funding that fund programs such as Persons With Disabilities, Welfare to Work, Job Access and Reverse Commute, intercity passenger rail and bus services, community transportation capital and service stabilization.
S	*SEC 1517 Act 44 - Capital Improvement Program	State Act 44 funding that is distributed on a formula based on the number of passengers carried so that transit agencies will have a steady reliable stream of capital funding.
F	SEC 5303, 5304, & 5305 FTA Metropolitan & Statewide and Nonmetropolitan Transportation Planning	Provides funding and procedural requirements for the state and MPOs to develop transportation plans and programs; plan, design and evaluate a public transportation project; and conduct technical studies related to public transportation.
F	SEC 5307 FTA Urbanized Area Formula Grants Program	Federal Transit Administration Urbanized Area Formula Program provides funding for capital, planning, and JARC-eligible activities as well as discretionary passenger ferry grants. Systems with 100 or fewer buses in urbanized areas over 200,000 became eligible to receive funding for operating expenses in MAP-21, but Section 5307 funds can no longer transfer to highway programs.
F	SEC 5309 FTA Capital Assistance Program/ FTA Fixed Guideway Capital Investments Grants/ “New Starts”	Federal Transit Administration Capital Investment Program funding that provides for transit capital projects that meet specific criteria either by earmarks (5309D - 5309 Discretionary/5309B – 5309 Bus) or by apportionment under a formula that only includes New Starts in MAP-21. Fixed Guideway Modernization and Bus and Bus Facilities programs, which were previously funded by SEC 5309, are now funded in MAP-21’s Sec. 5337 (State of Good Repair Program) and Sec. 5339 (Bus and Bus Facilities Program).



## TRANSIT PROJECT FUNDING SOURCES (Continued)

	<i>Acronym</i>	<i>Definition</i>	<i>Description</i>
F	SEC 5309D	FTA funds	Federal Congressional earmarks to projects.
F	SEC 5310	Elderly and Persons with Disabilities Program	Provides funding for the purchase of small buses or van-type vehicles with lifts for private or nonprofit agencies that serve the elderly and persons with disabilities.
		Enhanced Mobility of Seniors and Individuals with Disabilities Program	Provides funding for two programs merged from the previous authorization in MAP-21: NEW FREEDOM Sec. 5317 and previous authorization's Section 5310 Elderly and Persons with Disabilities Program.
F	SEC 5311	Non-urbanized (Rural) Area Formula Program	Provides funding for rural public transportation programs in areas with a population fewer than 50,000 according to the Census, including JARC-eligible activities from previous authorizations and in MAP-21.
F	SEC 5312	FTA Discretionary Public Transportation Innovation	Provides funding to develop innovative products and services assisting transit agencies in better meeting the needs of their customers. Under MAP-21 this fund source contain the Low or No Emission Vehicle Deployment program.
F	SEC 5318	FTA Bus Test Facility	Provides funding for a bus testing facility to ensure new models offered for purchase will meet performance standards.
F	SEC 5324	Public Transportation Emergency Relief Program	Provides funding for capital and operating expenses to protect, repair, replace, or reconstruct equipment and facilities in danger of failing or have suffered serious damage as a result of a natural or man-made disaster that are not reimbursed by the Federal Emergency Management Agency (FEMA).
F	SEC 5326	FTA Transit Asset Management	Provides transit asset management and reporting requirements across FTA's grant programs to promote accountability.

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## TRANSIT PROJECT FUNDING SOURCES

<i>Acronym</i>	<i>Definition</i>	<i>Description</i>
F	SEC 5337 State of Good Repair Program	Provides dedicated formula-based funding for the replacement and rehabilitation of fixed guideway system and high-intensity motor-bus systems that use high-occupancy vehicles (HOV) lanes, including bus rapid transit (BRT), rail, and passenger ferries in order to maintain public transportation systems in a state of good repair. Projects must be included in a transit asset management plan.
F	SEC 5339 Bus and Bus Facilities Program	Provides formula-based funding based on population, vehicle revenue miles, and passenger miles to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities with a 20 percent local match requirement. This replaces the previous authorization's Section 5309 Bus and Bus Facilities program.
F	SEC 5340 FTA 5340 Formula Program	Provides additional apportionment of funding to the Urbanized Area Formula and Rural Area Formula programs in MAP-21 (Sec 5307 and 5311) as in previous authorizations.
F	SEC 5340-G Growing States and High Density States Programs	Half of these funds are apportioned based on specific 15 year population forecasts and half are apportioned to urbanized areas within seven states identified in SAFETEA-LU, including New Jersey.
S	STATE State Transportation Funds	Provides funding from New Jersey Transportation Trust Fund or the Pennsylvania State Motor License Fund.

## OTHER TRANSPORTATION ACRONYMS, CODES, AND TERMINOLOGY

<i>Acronym</i>	<i>Definition</i>
Advance Construction	Allows a State to initiate a project using non-federal funds while preserving eligibility for future Federal-aid funds. After an advance construction project is authorized, the State may convert the project to regular Federal- aid funding provided Federal funds are made available for the project
Allocation	An administrative distribution of funds for programs that do not have statutory distribution formulas.
AQ Code	Air Quality Code
ARRA	American Recovery and Reinvestment Act of 2009
AUC	Accrued Unbilled Costs - Costs on a project that have been accrued, usually during construction, but have not yet been programmed nor paid
CMP	Congestion Management Process
Contract Authority	A form of budget authority that permits obligations to be made in advance of appropriations.
CR	County Road
DB# or DBNUM	NJDOT Database or Project Number
DOT	Department of Transportation
DRPA/PATCO	Delaware River Port Authority/ Port Authority Transit Corporation
FAST	Fixing America's Surface Transportation Act (signed into law by President Obama on Dec. 4, 2015)
FHWA	Federal Highway Administration
Fiscal Constraint	A demonstration of sufficient funds (Federal, State, local, and private) to implement proposed transportation system improvements, as well as to operate and maintain the entire system, through the comparison of revenues and costs.
FTA	Federal Transit Administration
FY	Fiscal Year
Illustrative Projects	Additional projects that would be included in the adopted transportation improvement program if reasonable additional resources beyond those identified in the financial plan were available.
ITS	Intelligent Transportation Systems
MAP-21	Moving Ahead for Progress in the 21st Century (P.L. 112-141)






## OTHER TRANSPORTATION ACRONYMS, CODES, AND TERMINOLOGY (Continued)

Acronym	Definition
IIJA/BIL	On November 15, 2021, President Biden signed the <a href="#">Infrastructure Investment and Jobs Act (IIJA) (Public Law 117-58, also known as the "Bipartisan Infrastructure Law" (BIL))</a> into law. It provides \$550 billion over fiscal years 2022 through 2026 in new Federal investment in infrastructure, including in roads, bridges, and mass transit, water infrastructure, resilience, and broadband.
MPMS	Multi-Modal Project Management System; Note that MPMS# is PennDOT Database or Project Number.
MPO	Metropolitan Planning Organization
NJDOT	New Jersey Department of Transportation
NJTPA	North Jersey Transportation Planning Authority
Non-attainment Area	Any geographic area that has not met the requirements for clean air as set out in the Clean Air Act of 1990.
NRS	Not Regionally Significant
Obligation	Binding agreement or commitment by the federal government to pay for the federal share of a project's eligible cost and thus result in immediate or future outlays to the State. Funds are considered used when they are "obligated" even though cash has not yet been transferred to the State.
Obligation Authority	The total amount of funds that may be obligated in a year as determined by the Federal Highway Administration (FHWA) and adjusted by the State Department of Transportation.
Obligation Limitation	An annual Congressional restriction or ceiling on the amount of Federal assistance that may be obligated during a specific period of time. Controls the rate at which funds may be used.
Over programmed	Associated with the TIP/STIP in which the cumulative total of the programmed projects/project phases, by year, exceed the estimated revenues that are "reasonably expected to be available" to implement the TIP and/or STIP
PCTI	Pennsylvania Community Transportation Initiative
PennDOT	Pennsylvania Department of Transportation
Regionally Significant Project	A transportation project (other than an exempt project) that is on a facility which serves regional transportation needs including, access to and from the area outside of the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves, and would normally be included in the travel demand modeling of a metropolitan area's transportation network.
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SEPTA	Southeastern Pennsylvania Transportation Authority

SJTPO	South Jersey Transportation Planning Organization
STIP	State Transportation Improvement Program
TSM	Transportation Systems Management



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**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**  
**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**  
**REGIONAL TECHNICAL COMMITTEE MEETING**  
**MARCH 12, 2024**

**Agenda Item:**

**3. Adoption of the 2023 DVRPC Congestion Management Process (CMP)**

Background/Analysis/Issues:

The Congestion Management Process (CMP) uses a variety of traffic data to identify the most congested roadways in the DVRPC region. It uses this information along with other analyses to recommend multimodal strategies that improve the flow of people and goods, enhance safety, and expand travel options on the region's transportation network. The multimodal strategies help minimize costs, advance Long Range Plan goals, and make regional transportation projects consistent with the CMP and Long-Range Plan. The CMP evaluates the effectiveness of implemented strategies to improve mobility and reliability, and enhance safety across the region; and uses the results to inform strategy recommendations. The CMP is also a requirement of the federal surface transportation legislation and needs to be updated on a continuing and systematic basis. Regulations require that alternatives to building new Single-Occupant Vehicle (SOV) road capacity be explored first, and where additional capacity is found to be necessary, multimodal supplemental strategies must be developed to obtain the most long-term value from the investment.

DVRPC held five meetings with the CMP Advisory Committee between September 2023 and January 2024 to get planning partner input as the 2023 CMP was developed. The previous 2019 CMP was adopted by the DVRPC Board in January 2020.

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make recommendations at the March 12th, 2024 RTC Meeting

Staff – Recommends approval.

Action Proposed:

That the RTC recommend that the Board adopt the Congestion Management Process (CMP).

Staff Contact:

Thomas K. Edinger, AICP, Manager, Congestion Management Programs

Attachment:

- 1) CMP Report



# 2023

## DRAFT: CONGESTION MANAGEMENT PROCESS





### The Delaware Valley Regional Planning Commission

is the federally designated Metropolitan Planning Organization for the Greater Philadelphia region, established by an Interstate Compact between the Commonwealth of Pennsylvania and the State of New Jersey. Members include Bucks, Chester, Delaware, Montgomery, and Philadelphia counties, plus the City of Chester, in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer counties, plus the cities of Camden and Trenton, in New Jersey.

DVRPC serves strictly as an advisory agency. Any planning or design concepts as prepared by DVRPC are conceptual and may require engineering design and feasibility analysis. Actual authority for carrying out any planning proposals rest solely with the governing bodies of the states, local governments or authorities that have the primary responsibility to own, manage or maintain any transportation facility.



**DVRPC's vision** for the Greater Philadelphia Region is a prosperous, innovative, equitable, resilient, and sustainable region that increases mobility choices by investing in a safe and modern transportation system; that protects and preserves our natural resources while creating healthy communities; and that fosters greater opportunities for all.

**DVRPC's mission** is to achieve this vision by convening the widest array of partners to inform and facilitate data-driven decision-making. We are engaged across the region, and strive to be leaders and innovators, exploring new ideas and creating best practices.

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# Executive Summary

The Congestion Management Process (CMP) uses a variety of traffic data to identify the most congested roadways in Greater Philadelphia. It uses this information along with other analyses to recommend multimodal strategies that improve the flow of people and goods, enhance safety, and expand travel options on the region's transportation network. The CMP evaluates the effectiveness of implemented strategies to improve mobility and reliability, and enhance safety across the region and uses the results to inform strategy recommendations. The multimodal strategies help minimize costs, advance Long Range Plan goals, and make regional transportation projects consistent with the CMP and Long-Range Plan.

The CMP is a requirement of the federal Surface Transportation Act legislation (23 CFR Parts 450.322 and 500.109) for urbanized areas (UZAs) with populations greater than 200,000, known as Transportation Management Areas (TMAs). These federal regulations specify that the CMP be implemented as a continuous part of the metropolitan planning process. Regulations require that alternatives to building new Single-Occupant Vehicle (SOV) road capacity be explored first, and where additional capacity is found to be necessary, multimodal supplemental strategies must be developed to obtain the most long-term value from the investment.

As part of the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation Act (FAST Act), and continuing with the new Infrastructure Investment and Jobs Act (IIJA), national performance management measures have been adopted by the Federal Highway Administration (FHWA) effective May 20, 2017. The intent is to have DOTs, MPO's and other planning partners better align proposed project improvements through performance-based planning and programming. The CMP integrates the national performance management reliability and traffic congestion measures, known as PM3 measures, to assist in identifying and prioritizing congested locations and for developing strategies to improve mobility and reliability.

The Coronavirus Disease 2019 (Covid-19) pandemic significantly altered traffic patterns in the DVRPC region as well as nationally, resulting in less traffic congestion on the roadways, and reduced passenger rail and bus transit ridership. The CMP helps to understand these and other traffic trends, and to prioritize roadways and other transportation facilities for improvements in managing congestion, despite the changing conditions. While transit ridership and traffic congestion are on the rise, in most cases many of the roadway and transit facilities are operating at below pre-Covid conditions.

A series of CMP objective measures are used to tie the CMP analysis to DVRPC Long-Range Plan goals and to where congestion is occurring in the region. The CMP objective measures include, increasing mobility and reliability, integrating modes and providing transit accessibility where it is most needed, modernizing and maintaining the transportation network, achieving Vision Zero, providing for goods movement, maintaining and enhancing the transportation security and emergency preparedness, and supporting Long-Range Plan goals, such as investing in centers first, prioritizing investments in less sensitive environmental areas, and investing in Environmental Justice communities.

The CMP analyzes 336 focus roadway corridor facilities, and contains a detailed analysis of 41 of the most congested focus roadway facilities. Of the 336 focus roadway corridor facilities, 236 are comparable between 2017 and 2022, and of those 85 percent experienced less congestion in 2022, but comparing the same ones between 2021 to 2022, 86 percent experienced more congestion. Location matters when analyzing congestion. For example, some areas in 2022 experienced more congestion than in 2017 such as I-76 from US 30 (Girard Ave) to US 1 (City Ave) in Philadelphia and NJ 42 from the Atlantic City Expressway to I-295 in Camden County at 35 percent and 55 percent, respectively. Some roadways experienced significantly less congestion in 2022 compared to 2017, such as US 422 from Trooper Road to US 202 in Montgomery County and NJ 73 from the NJ Turnpike to NJ 70 in Burlington County at 71 percent and with 70 percent, respectively.

In addition, the CMP analyzes most SEPTA and NJ Transit bus routes and 400 plus intersection and limited-access roadway bottlenecks. It uses the focus roadway corridor, bottleneck, and CMP objective measures to identify 37 broader CMP corridor areas that experience more congestion or unreliability.

The CMP identifies 125 strategies that can help to mitigate congestion—ranging from operational improvements, to travel demand management, policy approaches, transit improvements, goods movement, and road improvements and new roads. The CMP uses CMP objective measures, data, analysis, and DVRPC and planning partners' corridor planning study findings to help align the right strategy recommendations to each congested corridor. Some of the most congested facilities and bottlenecks are analyzed in more detail with specific recommended very appropriate strategies for managing congestion for the facility or bottleneck. The remainder of the focus roadway corridors and bottlenecks include strategies to manage congestion by CMP corridor and subcorridor area.

The CMP can be used in different ways. County and other agencies can use the CMP to help identify and prioritize congested locations for project planning to mitigate congestion, or to assist in developing project strategies for managing congestion that

minimize costs and be consistent with the DVRPC CMP and Long-Range Plan goals. The CMP supports the Long-Range Plan and Transportation Improvement Program (TIP) to inform the process of identifying the most congested locations, and advance the most appropriate strategies to mitigate congestion; it provides screening criteria for the *Long-Range Plan and TIP Project Evaluation Criteria* (DVRPC Publication #23128), and supports competitive grant programs, such as the Congestion Mitigation and Air Quality (CMAQ) Program. It can be used to identify candidate projects for performing more detailed corridor studies as part of the DVRPC work program.

See the CMP website at [www.dvrpc.org/webmaps/cmp](http://www.dvrpc.org/webmaps/cmp) for mapping of the CMP corridor and subcorridor areas and the associated multimodal strategies for managing congestion, CMP objective measures, focus roadway corridor facilities and bottlenecks, and other CMP analysis.



# 1. Introduction

Congestion can be an indicator of prosperity, but if left unmanaged, it can limit access to jobs, housing, educational opportunities, health services, and other amenities. The Congestion Management Process (CMP) uses a variety of traffic data to identify the most congested roadways in Greater Philadelphia. It uses this information along with other analyses to recommend multimodal strategies that improve the flow of people and goods, enhance safety, and expand travel options on the region's transportation network. The CMP uses performance measures to identify and prioritize congested locations, analyzes potential causes of congestion, establishes multimodal transportation strategies to mitigate congestion, and evaluates the effectiveness of implemented strategies. The CMP is also a requirement of the federal surface transportation legislation and needs to be regularly updated. The purpose of the CMP is to meet the federal requirements while advancing the goals in the DVRPC Long-Range Plan, including reducing congestion, and improving mobility, reliability, multimodal accessibility, safety, and economic vitality. The CMP provides valuable input into corridor planning, project development, project evaluation, and long-range plan policy by providing data, system-level analysis, and strategy recommendations. The CMP also supports competitive grant programs such as the Congestion Mitigation and Air Quality (CMAQ) program and the setting and achievement of federal Transportation Performance Management (TPM) targets. The federally mandated supplement strategy requirements are a key tool to help achieve DVRPC's Long-Range Plan goals to expand travel options by building out a multimodal transportation network. The CMP is developed with significant input and guidance from the CMP Advisory Committee to meet needs across the region.

The Coronavirus Disease 2019 (Covid-19) pandemic significantly altered traffic patterns in the DVRPC region as well as nationally as more workers shifted to working from home, resulting in less overall commuter traffic on the region's roadways and less passenger rail and bus ridership. In 2022, INRIX released its annual "INRIX Global Traffic Scorecard" using 2022 data to help understand how traffic patterns have changed across the nation.<sup>1</sup> INRIX ranked the Philadelphia area fourth nationally in hours lost for a typical driver in 2022 at 114 hours, a 27 percent increase in delay compared to 2021. To provide some perspective, Chicago, IL, Boston, MA and New York, NY ranked one, two, and three respectively, and Miami, FL, Los Angeles, CA, and San Francisco, CA ranked five, six, and seven, respectively. INRIX analyzed the change in downtown travel between 2021 and 2022 to help determine the impact from telecommuting and hybrid work. Out of the top 20 downtowns identified, Philadelphia ranked 18th with a one percent increase in trips downtown. Washington, DC had a 23 percent increase and both Charlotte, NC, and Chicago, IL had a 19 percent increase. Only Los Angeles, CA and Baltimore, MD, were lower than Philadelphia with a one percent and two percent decrease, respectively.

This chapter reviews what congestion is, federal CMP requirements, DVRPC's perspectives on the CMP, how the CMP is integrated into the transportation planning process, causes of congestion, identification of the portions of the transportation network included in the analysis, and current regional congestion trends. Chapter 2 establishes regional objectives for congestion management. Chapter 3 defines the CMP objective measure criteria, which measures the extent, variability, and duration of congestion on the region's roads and are drawn from the vision and goals of the region's Long-Range Plan. Chapter 4 analyzes congestion on the transportation network to identify and prioritize congested focus roadway corridor facilities, focus intersection and limited access roadway bottlenecks, bus transit routes, and

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<sup>1</sup> INRIX 2022 Global Traffic Scoreboard, [www.inrix.com/scorecard/](http://www.inrix.com/scorecard/). INRIX is an international big data firm that provides location-based data and analytics for real-time and historical analysis, and specializes in transportation needs.

determines congested corridor, subcorridor, and emerging growth corridor areas. Chapter 5 identifies congestion mitigation strategies, which have been applied to the corridor and subcorridor areas and the most congested focus roadway corridor facilities and intersection bottlenecks. Further strategy recommendations for each CMP subcorridor can be found at [www.dvrpc.org/webmaps/cmp](http://www.dvrpc.org/webmaps/cmp). Chapter 6 evaluates performance trends and the effectiveness of implemented strategies. Lastly, chapter 7 summarizes the conclusions and next steps for the 2023 update for the Greater Philadelphia CMP.

## 1.1 What is Congestion?

*Congestion* occurs when demand for road space exceeds supply. The U.S. Department of Transportation defines congestion as “the level at which the transportation system performance is no longer acceptable due to traffic interference.” The performance may vary by the type of transportation facility, location, or time of day.

The effect of traffic congestion includes lost time, extra fuel costs, and deterioration of air quality. Left unmanaged, congestion leads to a negative overall impact on the health, competitiveness, and sustainability of a region. However, it is unrealistic to conclude that all congestion can be completely eliminated; some degree of congestion may be acceptable, or even desirable, as a sign of a healthy and growing economy. The CMP helps to manage congestion in order to minimize and mitigate its negative impacts.

## 1.2 Federal CMP Requirements

Federal regulations provide guidance on how Metropolitan Planning Organizations (MPOs), like DVRPC, should address congestion management. The CMP original regulations date back to the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005, which built upon the previous federal Congestion Management Systems (CMS) requirements that were first implemented under the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. These CMP regulations were retained and largely unchanged by subsequent federal legislation, including Moving Ahead for Progress in the 21st Century (MAP-21), Fixing America’s Surface Transportation (FAST) Act and the current Infrastructure Investment and Jobs Act (IIJA) Pub. L. No. 117-58, which was signed into law in November 2021. The CMP is a requirement under the regulations (23 CFR Parts 450.322 and 500.109) for Urbanized Areas (UZAs) with populations greater than 200,000, known as TMAs. These regulations specify that the CMP program be implemented as a continuous part of the metropolitan planning process like the other core federal requirements: Long-Range Plan, TIP, and Unified Planning Work Program (UPWP). According to the regulations, MPOs that serve a TMA must maintain a CMP that provides for:

Safe and effective integrated management and operation of the multimodal transportation system, based on cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities...through the use of travel demand reduction and operational management strategies.

Congestion mitigation involves travel demand reduction, such as decreasing single-occupant vehicles (SOVs), increasing transit ridership, and improving system management and operation. Regulations require that alternatives to building new SOV road capacity should be explored first. Where additional

capacity is found to be necessary, multimodal supplemental strategies must be included to obtain the most long-term value from the investment.

Starting with MAP-21 and continuing with the IIJA, the legislation created a performance-based surface transportation program with specific requirements for state Departments of Transportation (DOTs), MPOs, and transit agencies. As part of the FAST Act, there were new federal requirements (23 CFR Part 490 National Performance Management Measures) regarding measuring system performance and setting targets to achieve quantifiable goals to improve mobility and reliability on the National Highway System (NHS), known as PM3 measures. These measures are established statewide and by UZA, and are integrated into the CMP as applicable. As part of the IIJA, federal legislation also requires state DOTs and MPOs to establish Safety (PM1) and Pavement and Bridge Condition (PM2) measures and set targets.

The statewide PM3 measures used in the CMP are recognized as “Reliability” measures and the metrics include Level of Travel Time Reliability (LOTTR) and Truck Travel Time Reliability (TTTR). LOTTR assesses the performance of the NHS, while TTTR addresses the freight movement on the interstate system, which is part of the NHS. The LOTTR and TTTR measures are established by the state DOTs in coordination with MPOs, such as DVRPC, and other planning partners.

The UZA PM3 measures are recognized as Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita and Percent Non-Single-Occupant Vehicle (non-SOV) travel, and each assesses traffic congestion as part of the CMAQ Program. Both PHED and percent non-SOV travel are required to be established in UZA populations over 200,000 starting in the second performance period (2022–2025) that are, in all or part, of a designated nonattainment or maintenance area for air quality conformity purposes under the Clean Air Act. DVRPC, as the largest MPO in the Philadelphia, PA-NJ-DE-MD UZA, is responsible for establishing baseline and two- and four-year targets for PHED and percent non-SOV travel measures in coordination with state DOT and MPO planning partners that share a portion of the UZA. The partners include: Pennsylvania Department of Transportation (PennDOT), New Jersey Department of Transportation (NJDOT), Delaware Department of Transportation (DelDOT), Maryland Department of Transportation (MDOT), North Jersey Transportation Planning Authority (NJTPA), South Jersey Transportation Planning Organization, and Wilmington Area Planning Council (WILMAPCO), and Lancaster MPO. The Trenton, NJ UZA in Mercer County, NJ, which is in the DVRPC region also meets the over 200,000 population criteria. DVRPC, as the largest MPO in the Trenton, NJ UZA, is responsible for establishing baseline and two- and four-year targets for PHED and percent non-SOV travel measures in coordination with state DOT and MPO planning partners that share a portion of the UZA. The partners include the New Jersey Department of Transportation (NJDOT).

The UZA boundaries have changed due to the new 2020 decennial Census and revisions to the methodology of how the UZAs are calculated. This impacts partnering agencies to coordinate target setting. DVRPC is still the largest MPO in the Philadelphia, PA-NJ-DE-MD UZA, and remains responsible for taking the lead in establishing baseline and two- and four-year targets for PHED and percent non-SOV travel measures. The partnering agencies in the Pennsylvania portion of the DVRPC region remain the same with two exceptions. The Pottstown UZA boundary is now part of the Philadelphia UZA which now extends into Berks County, so the Reading Area Transportation Study (RATS) will become a partner in establishing targets. The Lancaster MPO no longer contains a portion of the Philadelphia UZA, so they will not be required to partner with in establishing targets.

In the New Jersey portion of the DVRPC region, the Philadelphia UZA no longer extends into the NJTPA region, so NJTPA will not be required to partner with in establishing targets. DVRPC is still the largest

MPO in the Trenton, NJ UZA and remains responsible for taking the lead in establishing baseline and two- and four-year targets, and the UZA now extends into the NJTPA region, so they will be required to partner with in establishing targets.

Although a CMP is required to be established in TMAs and meet certain compliance requirements, federal regulations are not prescriptive on the methods and approaches to implement.

## 1.3 DVRPC's Perspective on the CMP

### DVRPCs Transportation Planning Philosophy

CMP analysis and strategy recommendations inform transportation investments that support the goals and policies of the Greater Philadelphia Long-Range Plan. The CMP is a critical part of a regional transportation planning process that:

- Follows the federally required “3C” process to be Comprehensive, Cooperative, and Continuing.
- Prioritizes transportation investments to: (1) maintain and modernize the existing transportation network, by bringing roads, bridges, and transit facilities up to current design standards; making substantive safety improvements; and improving convenience for transferring between modes; (2) optimize the operational efficiency of existing transportation facilities and manage transportation demand by fostering efficient land use patterns, encouraging non-SOV options, and pursuing strategies that reduce the need for and length of trips; and (3) add new road capacity at the highest priority locations, only as a last resort to mitigate congestion.
  - Where additional SOV road capacity is deemed necessary, the CMP includes supplemental strategies to reduce travel demand, improve operations, and get the most long-term value from the investment.
- Investment benefits and costs should be strategically distributed across the region, with careful consideration given to safety, land use, environmental, economic, and social impacts. Projects should be affordable, incorporate context-sensitive design and other smart transportation techniques, and align with Transportation Performance Management targets.
  - Environmental Justice analysis will evaluate distribution of benefits and burdens from transportation projects throughout the region, considering impacts across racial, ethnic, and socioeconomic groups to inform equitable investment, and identify and address potential disproportionate adverse impacts.
- Incorporates innovative policy approaches, ITS applications, and emerging technologies, and projects that continue to transform the region into a better place to live, visit, work, learn, and play.

### CMP Principles

The CMP is a medium-term planning effort that advances the goals of DVRPC's Long-Range Plan and strengthens the connection between the Long-Range Plan and the TIP. The CMP is a systematic process that analyzes the regional transportation network and provides information on the transportation network performance. This effort uses regional transportation system performance and other CMP objective measures, recommendations from corridor studies, and guidance from the CMP Advisory Committee. It is used to identify and prioritize congested corridor and subcorridor areas based on performance and other



CMP objective measures. The CMP recommends multimodal strategies to mitigate congestion and improve mobility and reliability for people and goods. The CMP is also used to identify emerging regionally significant growth areas that are not currently congested but may likely become so in the future. Proactive, low-cost region wide strategies are recommended for these areas to help prevent them from becoming congested.

The general strategies identified in the CMP include: (1) Operational Improvements; (2) Transportation Demand Management (TDM), including growth management and smart transportation policies that promote alternative modes of transportation besides the automobile, such as walking and bicycling; (3) transit improvements and new investments in transit; (4) goods movement improvements; and (5) road improvements and new roads. The CMP evaluates the effectiveness of implemented strategies in order to better inform strategy recommendations.

Federal regulations require projects that add SOV capacity to be consistent with the CMP in order to be eligible for federal funding. If they are not consistent, further analysis is required and will be reviewed by DRVPC staff for further eligibility. The CMP defines procedures to follow for federally funded major single-occupant vehicle (SOV) capacity-adding road projects if they are not in CMP congested corridor areas, or in subcorridors where major SOV capacity-adding is not listed as a CMP strategy, see the *CMP Procedures* (DVRPC Publication #21010). Such projects may be appropriate, but they must meet a higher burden of proof, given limited funding. The project must include analysis of multimodal strategies, including ones listed in the CMP. Capacity-adding projects outside CMP corridors must demonstrate consistency with the Long-Range Plan, follow CMP procedures, and compare well in terms of Long-Range Plan and TIP project evaluation criteria for projects in the region.

New major SOV capacity-adding projects may be appropriate where there is a need and no other strategies can reasonably reduce congestion. These projects must include multimodal supplemental strategy improvements to get the most long-term value from the investment. This begins with the strategies that are listed in the CMP subcorridor area for the project location, which are then refined through meetings with stakeholders ideally in the project's preliminary design stage. The supplemental strategy improvements should be funded at the same time as the main project and included in a CMP supplemental strategies document, TIP project description, and the implementation be monitored by DVRPC staff and reported to state and federal agencies. Final engineering for major SOV capacity-adding projects should not be funded in the TIP without a table of supplemental strategies that has been approved by the DVRPC Board. The DVRPC Long-Range Plan is used to help determine which congested facilities will receive major additional SOV capacity, and this must balance CMP findings with transportation priorities, land use and smart growth policies, and financial constraints.

Both statewide and UZA PM3 measures are used to help identify and prioritize congested locations, and to develop strategies to mitigate congestion. Specifically, this includes the LOTTR and TTTR roadway reliability measures, and the PHED traffic congestion measure. CMP congestion analysis will be used in future PM3 measure reporting periods to inform the process of setting two- and four-year targets for both PHED and percent non-SOV measures.

## 1.4 Integrating the CMP into the Transportation Planning Process

Figure 1 identifies CMP process flows (outlined in gray) and how the CMP is integrated into the transportation planning process, which was developed in part based on FHWA's *Congestion Management Process: A Guidebook*.

The first two process flows “Advance LRP Goals and Develop Regional CMP Objectives” and “Define CMP Network” are expanded on in Chapter 2 and lay the groundwork for what transportation networks will be analyzed in the CMP and what data and performance measures will be used based on the goals and objectives defined by the CMP Advisory Committee. While the CMP focuses on the roadway network, the transit, freight, bicycle, and pedestrian networks are included and used to develop strategies for managing congestion. The third process flow “Define Performance Measures, Criteria and Collect Data” is developed in Chapter 3 and provides detailed information on the performance measures used in the analysis. The fourth process flow “Analyze Congestion Using Data and Performance Measures” is expanded on in Chapter 4 to indicate how the focus roadway corridors, bottlenecks, transit facilities, and corridor and subcorridor areas are developed and analyzed to identify and prioritize congestion locations. Identifying and prioritizing these locations are part of the fifth and sixth two process flows, which are also elaborated on in Chapter 4. The seventh process flow “Identify Congestion Causes” is covered in Chapter 1 and describes the general causes of congestion (recurring and nonrecurring) and provides a further breakdown of the causes by state. The eighth process flow “Define and Evaluate CMP Strategies” is expanded on in Chapters 5 and 6, respectively. The ninth and tenth process flows “Identify Project Consistency” and “Maximize Project Benefits” are expanded on in Chapter 6. The remaining process flows indicate how the CMP integrates with the other transportation planning processes.

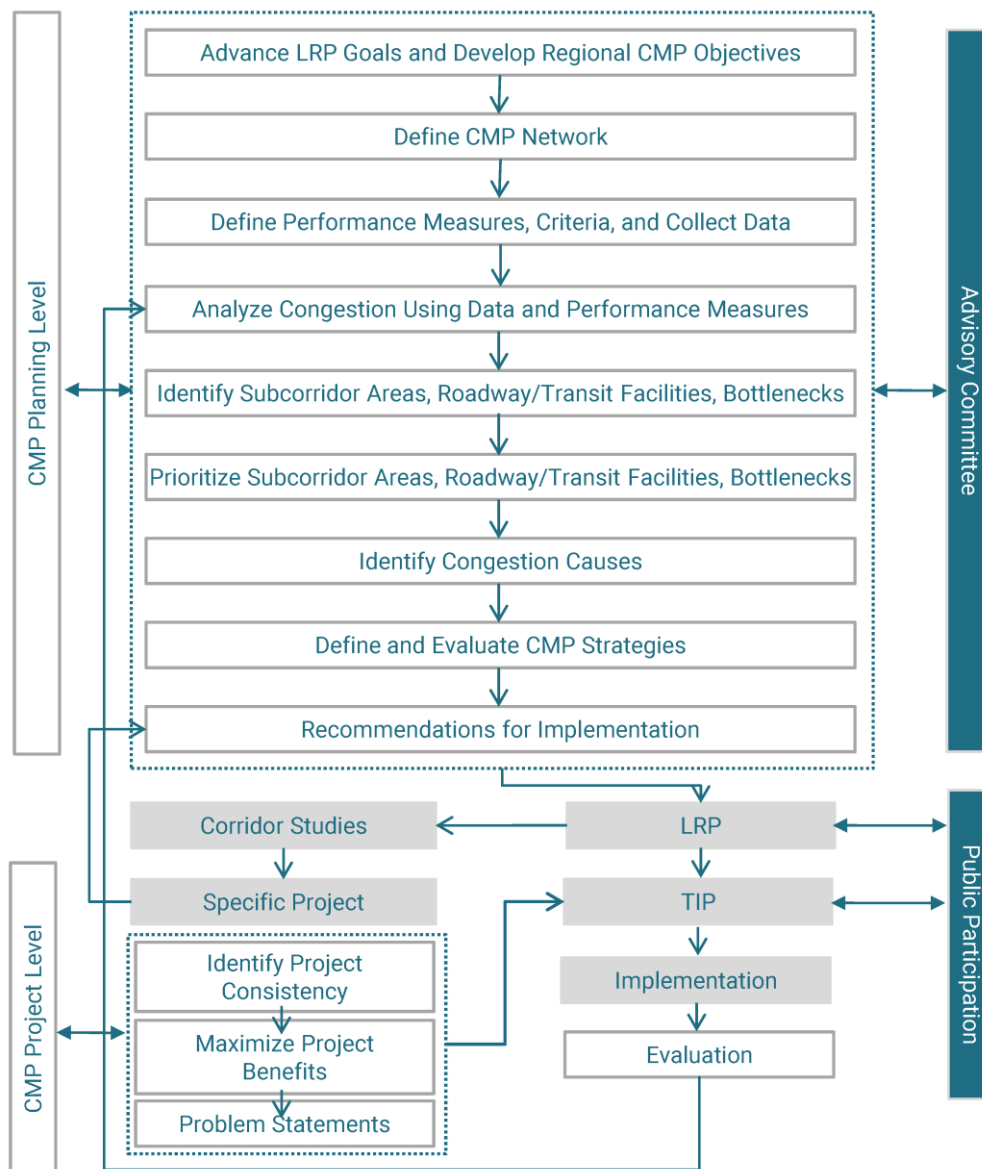
CMP objectives flow from the transportation goals of the Long-Range Plan, and congested locations that meet more CMP objective criteria will be given stronger support for recommended improvements. The Long-Range Plan principles and goals that serve as guidance for the CMP include:

- 1) Increase mobility and reliability, and reduce VMT and congestion;
- 2) Integrate existing and emerging transportation modes into an accessible, multimodal, mobility as a service network, which collects real-time data, and uses it to plan and pay for travel using the best options available. Transit, walking, and biking—including the Circuit Trail system—are integral components of this network;
- 3) Rebuild and modernize the region's transportation assets to achieve and maintain a state of good repair, including full ADA accessibility;
- 4) Achieve Vision Zero—no fatalities or serious injuries from traffic crashes by 2050;
- 5) Improve global connections—facilitate goods movement and aviation, support the Federal Railroad Administration's Northeast Corridor Future plan, and expand broadband, wi-fi, and 5G cellular infrastructure;
- 6) Strengthen transportation network security and cybersecurity; and
- 7) Support the Plan's equity, sustainability, and resiliency principles.

Congestion and other CMP objective measures are used to identify priority congested locations, and then a list of strategies are recommended to mitigate congestion based on identifying any known causes, and from guidance from the CMP Advisory Committee. These congested locations are mapped by focus roadway and transit facility, intersection and limited access roadway bottleneck, and congested corridor and subcorridor area. (See Chapter 4 for more information on the congested locations and the

performance measures used.) Projects that exist at these locations may be given higher-priority, but they need to be weighed against Long-Range Plan regional priorities. The CMP is also intended to be used at the project level to help get the most long-term value from an investment by providing travel options or ways to more efficiently use existing roadway space. The CMP analysis results are utilized by DVRPC staff and other stakeholders as part of the problem statement process and the *PennDOT Connects* development process with NJDOT and PennDOT, respectively. Planning partners can use the analysis in assisting them in project planning and developing local projects.

**Figure 1: Integrating the CMP into the Transportation Planning Process**



Source: DVRPC, 2023

The CMP furthers the growth management goals identified in the Long-Range Plan by recommending congestion management strategies at locations that align with current and future land uses in coordination with the CMP Advisory Committee. For example, where congested locations exist in moderate- to high-density mixed-use areas without space available for roadway widening, bus transit

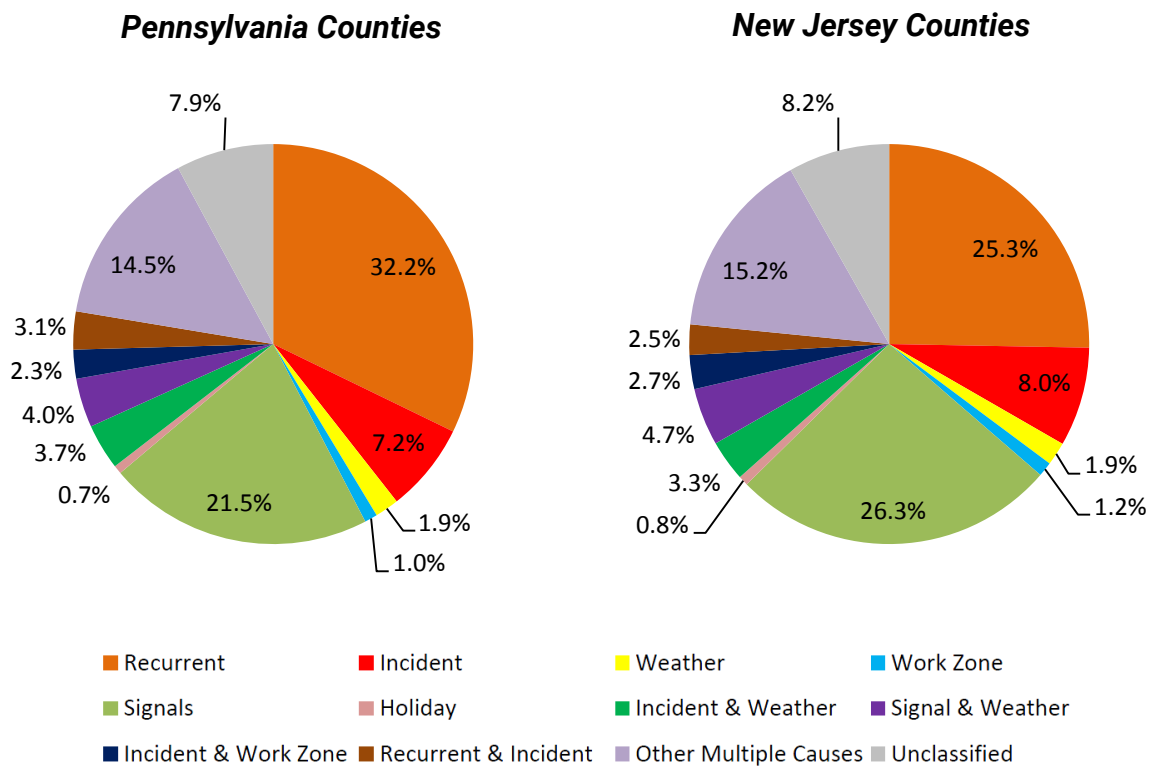
improvement studies may be recommended. In congested locations with many access points and smaller lots with mixed uses, access management strategies and increased bicycle and pedestrian infrastructure investments may be proposed as future transportation alternatives to supplement the existing roadway network.

## 1.5 What Causes Congestion?

There are two primary types of congestion: recurring and nonrecurring. Recurring congestion tends to be predictable and observed on a regular basis and is concentrated in shorter time periods, such as rush hour, and is typically associated with excessive traffic volumes resulting in reduced speed and flow rate on the roadway system. Nonrecurring congestion, on the other hand, is caused by irregularly occurring events that affect the travel time reliability. The CMP addresses both types of congestion. The causes of recurring congestion can include: daily peak period commuter traffic; insufficient capacity; excess volume; bottlenecks, such as roadway geometry deficiencies; traffic signal timing and coordination issues; heavy truck volumes; seasonal activities; and long-term construction. The causes of nonrecurring congestion can include crashes, disabled vehicles, special events, bad weather, and short-term emergency construction.

PennDOT and NJDOT capture traffic event information using highway cameras, Waze, and other traffic operational technologies to keep the roads clear for travel. These sources are combined with INRIX travel time data to estimate causes of congestion and provide a guide for emphasizing various congestion mitigation strategies (see Figure 2). Just over half of the congestion in 2019 in the DVRPC Pennsylvania and New Jersey counties (54.7 percent and 52.8 percent, respectively) is due to different types of recurring congestion, which includes traffic signals and work zones. Work zones are considered planned construction or maintenance activity and are generally classified as recurring congestion. Nonrecurring types of congestion are caused by weather and a range of traffic incidents such as: disabled vehicles, crashes, emergency roadwork, and road obstructions. These nonrecurring causes of congestion total 12.8 percent and 13.2 percent of congestion, respectively. The remaining causes of congestion are mainly due to a combination of different known types, such as “Signal and Weather.” The “Other Multiple Causes” type of congestion is due to more than one unknown factor, such as a traffic incident occurring on a holiday. The “Unclassified” congestion type is due to an interruption in traffic flow, but with an unknown cause.

**Figure 2: Causes of Congestion Summary in the DVRPC Region in 2019**



Sources: RITIS PDA Suite; Causes of Congestion Transportation Disruption and Disaster Statistics 2019

The causes of congestion will vary by urban and rural location, and by type of facility. For example, arterial roadways with traffic signals may have some congestion related to poor signal timing, but this would not apply on limited access freeways. Travel time reliability, or the variability of congestion, is an important measure to evaluate as a part of nonrecurring congestion. Traffic incidents, such as disabled vehicles or crashes, can unexpectedly make the typical 20-minute trip a 40-minute one. Also, the interaction between multiple types and sources of congestion may vary from day to day, causing frustration for commuters. Some events can cause others to occur. For example, high congestion levels can lead to increases in crashes due to closer vehicle spacing, or bad weather can lead to crashes. TSMO and ITS improvements for addressing reliability issues can typically be performed at lower costs with less impact on the environment, compared to capacity-adding improvements. DVRPC's *Connections 2040 Technical Analysis* (DVRPC Publication #13043) compared the cost of reducing an hour of delay using average costs for ITS projects from Texas Transportation Institute's *Urban Mobility Report* and roadway system expansion costs based on Travel Demand Model results, and determined that system expansion traffic delay reduction capital costs were 36 percent higher than for ITS improvements.

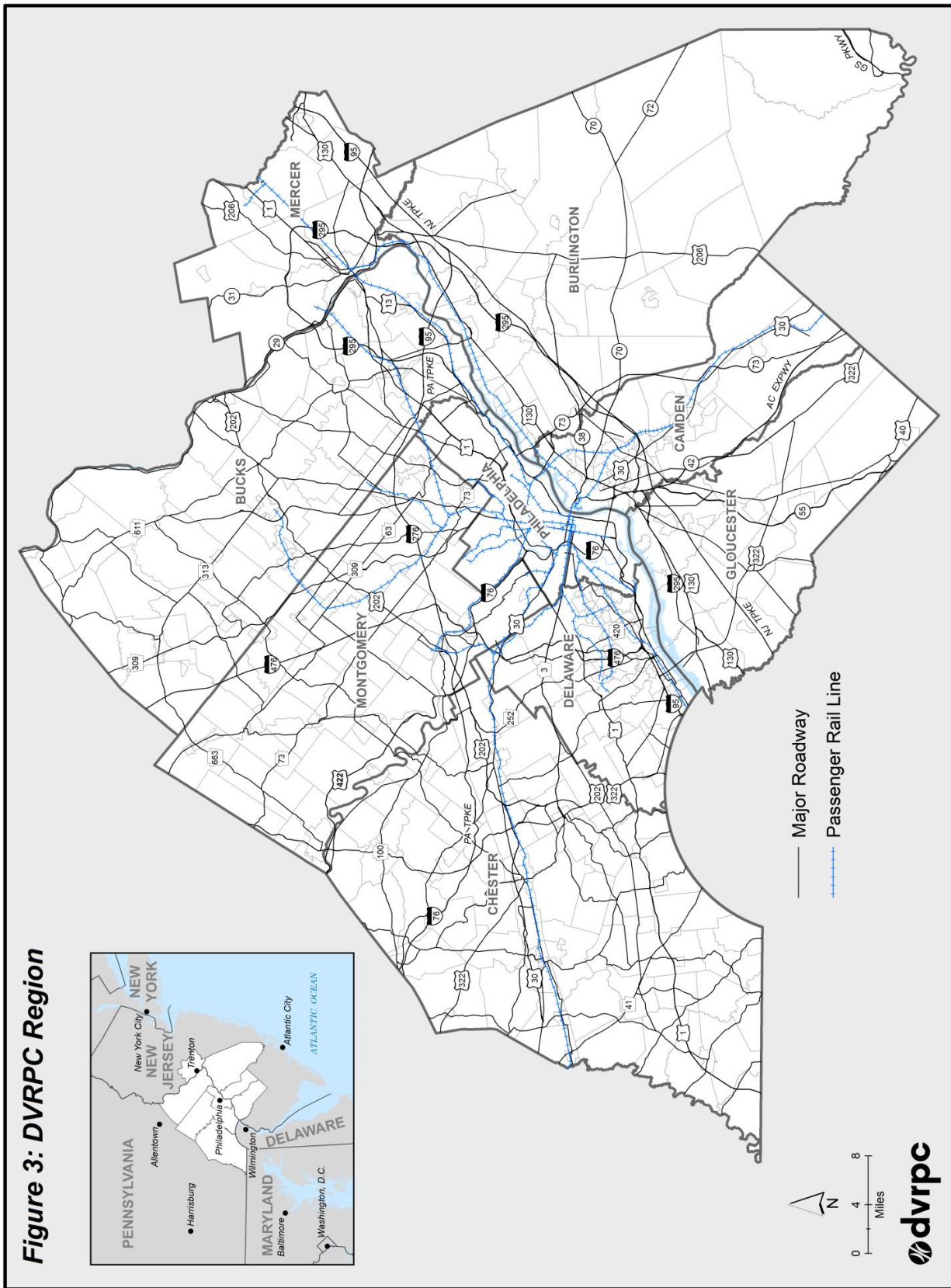
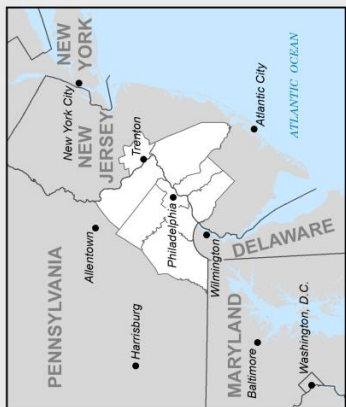
The CMP also analyzes the causes of congestion by focus roadway corridor facility with the help of TRANSCOM's Regional Integrated Multi-Modal Information Share (RIMIS) system, which is a software platform that provides for storage and retrieval of PennDOT and NJDOT traffic event data, including work zones, weather-related, and a range of traffic incidents. The analysis helps to determine the type, intensity, and duration of congestion by facility and provides a guide for emphasizing various congestion mitigation strategies. While the analysis is helpful, it over-represents traffic events that occur on facilities where traffic cameras exist, which are used in large part to collect the event data. As a result, the other

facilities do not get counted which needs to be considered when analyzing nonrecurring congestion and prioritizing congestion mitigation strategies by facility.

## 1.6 CMP Study Area and Transportation Networks

DVRPC is the federally designated MPO for 350 municipalities in the nine-county Greater Philadelphia region. DVRPC serves Bucks, Chester, Delaware, Montgomery, and Philadelphia counties in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. The area is home to 5.76 million people and employs approximately 3.06 million people (by place of residence) according to 2020 population and employment estimates, respectively, as identified in the Long-Range Plan (*Connections 2050*). The region has one of the most comprehensive transportation networks in the nation. Major roadways that pass through the area include interstates I-95, I-76, I-676, I-476, I-276, I-295, I-195, and the Pennsylvania and New Jersey Turnpikes. Major U.S. routes include US 1, US 13, US 30, US 130, US 202, US 206, US 322, and US 422 (see Figure 3). Extensive bus and fixed-rail transit networks exist in the region as well, including light, commuter, and heavy passenger rail. Light rail includes the River LINE in New Jersey and the SEPTA Route 10 Lancaster Avenue trolley line in Philadelphia. Commuter rail includes regional lines, such as Lansdale-Doylestown and Paoli-Thorndale in Pennsylvania, and the New Jersey Transit Northeast Corridor service in New Jersey. Heavy rail lines (or subways) in Philadelphia include the Broad Street and Market-Frankford lines. Intercity rail service includes the Amtrak Northeast Corridor serving Philadelphia's 30th Street Station and points south, such as Washington, DC, and points north to Boston; and the Keystone Corridor that serves 30th Street Station and points west to Harrisburg and beyond. Major freight lines that provide for goods movement in the region include CSX and Norfolk Southern. Some locations in the region are experiencing significant growth, while others remain unchanged. Some are high-density urban areas, while others are more rural. Given this variation, it is important that the CMP congestion mitigation strategies reflect the challenges and opportunities that are unique to each location.

**Figure 3: DVRPC Region**

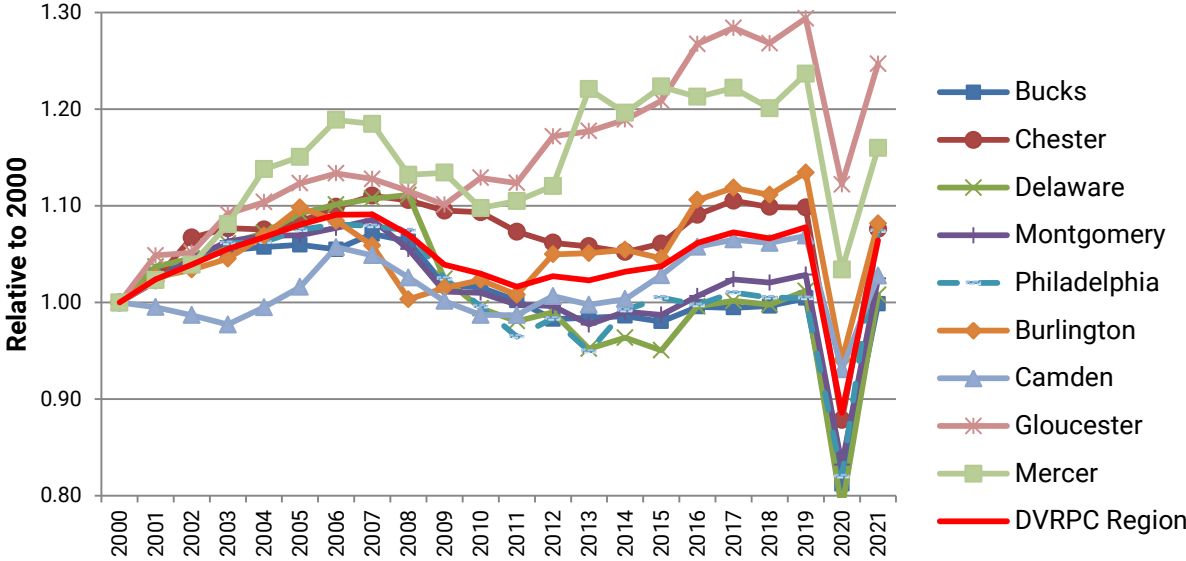


# 1.7 Regional Trends

Vehicle miles of travel (VMT) is the FHWA’s primary measure of travel activity on the nation’s roadways. More travel tends to increase the amount of congestion on the roadways, which makes this an important measure to track. It is measured as daily VMT for all vehicles. From 2000 to 2021, VMT increased by about 6.5 percent for the DVRPC region relative to a 2000 base (see Figure 4), but there were variations during this period. From 2000 to 2007, VMT increased by about 9 percent; then declined 7 percent from 2007 to 2011. This decrease coincided with rising gasoline prices and the Great Recession; and a similar trend occurred statewide and nationally. However, between 2011 and 2019, travel trends increased again by 6 percent. Gloucester County experienced greater gains during this time period than any other county in the region at 15 percent, while Bucks County experienced the least with an increase of just one-quarter of a percent. The Covid-19 pandemic resulted in dramatic decreases in VMT in 2020 and impacted travel trends substantially throughout the region as well as nationally. VMT declined by 18 percent from 2019 to 2020. Since 2020, VMT has rebounded and increased by 20 percent but it is still not quite at 2019 levels. From 2000 to 2021, the region’s population increased by about 9 percent, which is about 2.5 percent more than VMT. This indicates that other modes such as transit, walking and biking are increasingly being used to provide mobility.

Population and employment are projected to modestly increase according to DVRPC forecasts. Population is projected to increase by 500,437 (8.8 percent) from 2015 to 2050, and employment by 466,795 (15.4 percent) over the same time period.<sup>2</sup> Given these trends, increased levels of traffic congestion will likely occur, unless mitigation strategies, programs, and policies are developed.

**Figure 4: Regional VMT**



Sources: PennDOT, NJDOT

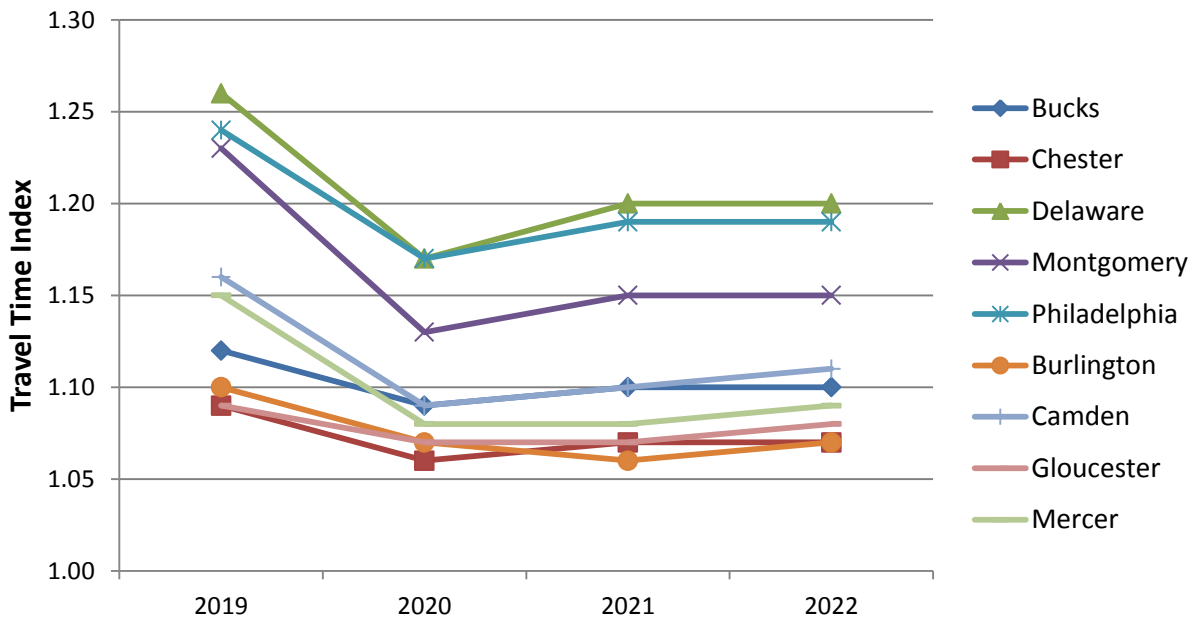
<sup>2</sup> About half of the Connections 2050 employment forecast accounts for a return of jobs lost during the Covid-19 pandemic.



The TTI congestion measure was used to trend traffic congestion and identify which DVRPC counties experienced higher congestion than others analyzed for weekdays during the highest peak hour: AM peak hours 7:00–8:00 and 8:00–9:00, and PM peak hours 4:00–5:00 and 5:00–6:00 (see Figure 5). Delaware and Philadelphia counties indicate the most congestion with Delaware County slightly higher for all time periods (except 2020). Burlington, Gloucester, and Chester counties indicate the least congestion. All counties experience a significant decline in congestion from 2019 to 2020 due to the pandemic as more workers shifted to working from home, resulting in less traffic congestion. All the counties experience the same or more congestion from 2021 to 2022, but have not reached pre-pandemic levels.

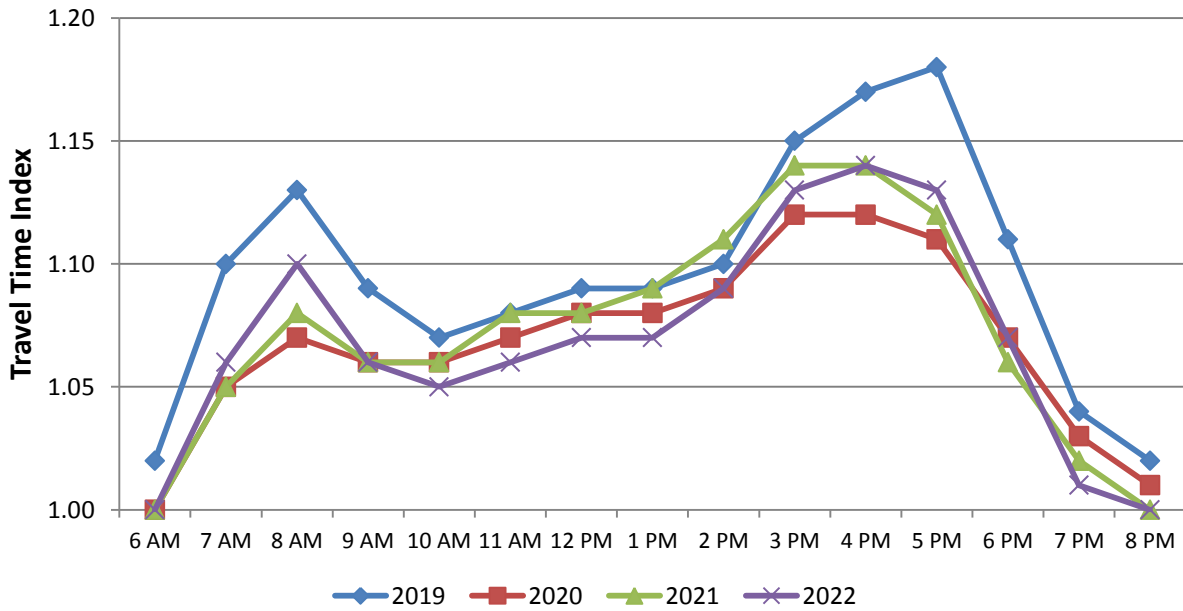
The TTI congestion measure was also used to analyze congestion by time of day on weekdays separately for the Pennsylvania and New Jersey DVRPC counties (see Figures 6 and 7). For the Pennsylvania Counties, the 2019 TTI AM peak hours 7:00–8:00 and 8:00–9:00 and PM peak hours 4:00–5:00 and 5:00–6:00 are clearly higher compared to the other time periods in 2019, but not as much for the same time periods in 2021 and 2022, where the peak periods seem to be more spread out, particularly during the PM peak. Some of the hourly 2021 TTI values during the non-peak period periods were the same or more than 2019 values, indicating more travel and congestion during the non-peak periods likely due to more people working from home, and more staggered work schedules. The New Jersey counties indicate the same traffic congestion patterns by time of day as the Pennsylvania counties, except the TTI values are lower across all time periods indicating less overall congestion.

**Figure 5: Travel Time Index by DVRPC Counties**



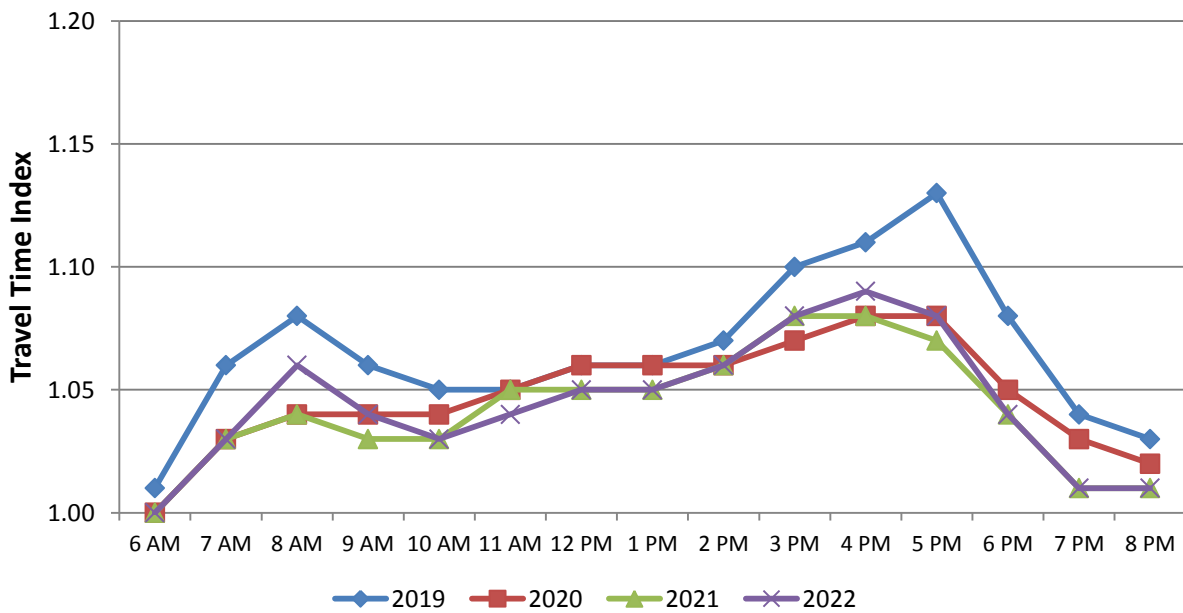
Data Source: RITIS PDA Suite; Note that 2020 values contained lower data coverage and increased reliance on historical data due to reductions in traffic due to Covid-19.

**Figure 6: Travel Time Index by Time of Day for DVRPC Pennsylvania Counties**



Data Source: RITIS PDA Suite; Note that 2020 values contained lower data coverage and increased reliance on historical data due to reductions in traffic due to Covid-19.

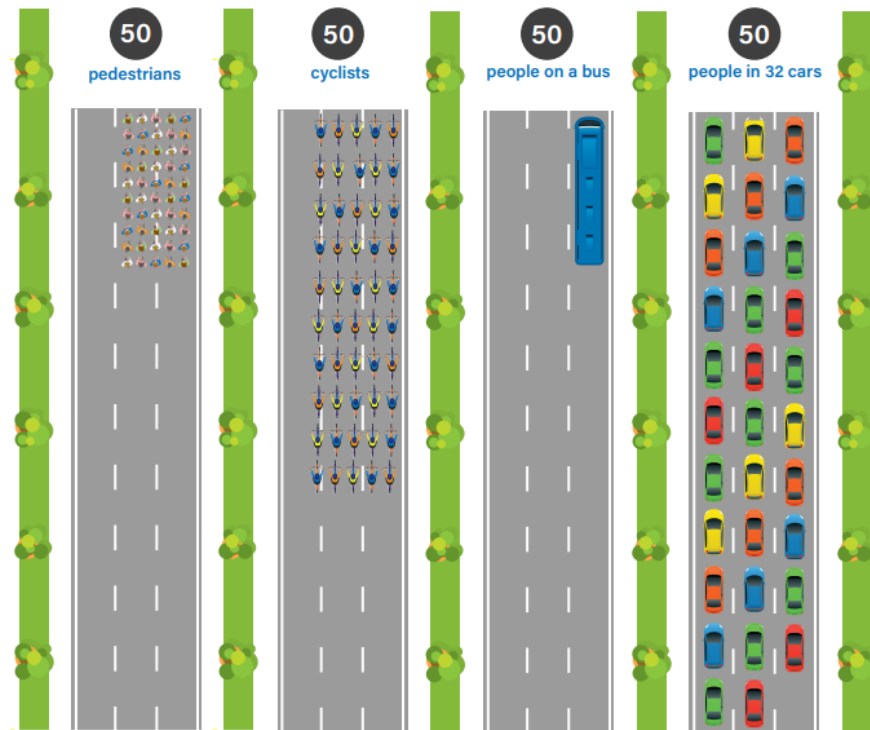
**Figure 7: Travel Time Index by Time of Day for DVRPC New Jersey Counties**



Data Source: RITIS PDA Suite; Note that 2020 values contained lower data coverage and increased reliance on historical data due to reductions in traffic due to Covid-19.

Transit ridership and other non-SOV modes are important to encourage in reducing traffic congestion. For example, you can significantly fit more people inside a bus, than in vehicles within the same space. Figure 8 illustrates this by showing how much space 50 people fill for different modes: pedestrians, cyclists, people on a bus, and in cars.<sup>3</sup> Car occupancy is based on DVRPC's 2012–13 Household Travel Survey for the Delaware Valley Region (Publication #14033), which indicates an average occupancy of 1.58 persons per vehicle.

**Figure 8: Mode Share Capacity**



Source: DVRPC



Southeastern Pennsylvania Transportation Authority (SEPTA) annual ridership increased for all mode types from FY 2022 to FY 2023. Regional rail experienced the highest percent increase from 13.70 million to 17.91 million, or 30.7 percent (see Figure 9). The Market-Frankford Line experienced the lowest increase from 23.98 million to 24.13 million (0.6 percent). However, ridership decreased for all modes comparing FY 2019 to FY 2023 due in large part to the pandemic and some workers shifting to working at home instead of commuting on transit. The Norristown High Speed Line experienced the highest percent decrease from 3.10 million in FY 2019 to 1.35 million in FY 2023 (56.5 percent). The City bus ridership experienced the lowest percent decrease from 126.96 million to 91.64 million (27.8 percent), and it is also by far the most used transit mode type at about 53 percent of all ridership trips in FY 2023, followed by the Market-Frankford Line and Regional Rail at 14 percent and 10 percent, respectively.

NJ Transit ridership increased for all modes from FY 2021 to FY 2022. The Northeast Corridor line, which is operated by NJ Transit along Amtrak's right-of-way from the Trenton Transit Center to New York Penn

<sup>3</sup> The bus ridership space in Figure 8 does not account for the headways between buses, which increases this mode's roadway space needs.

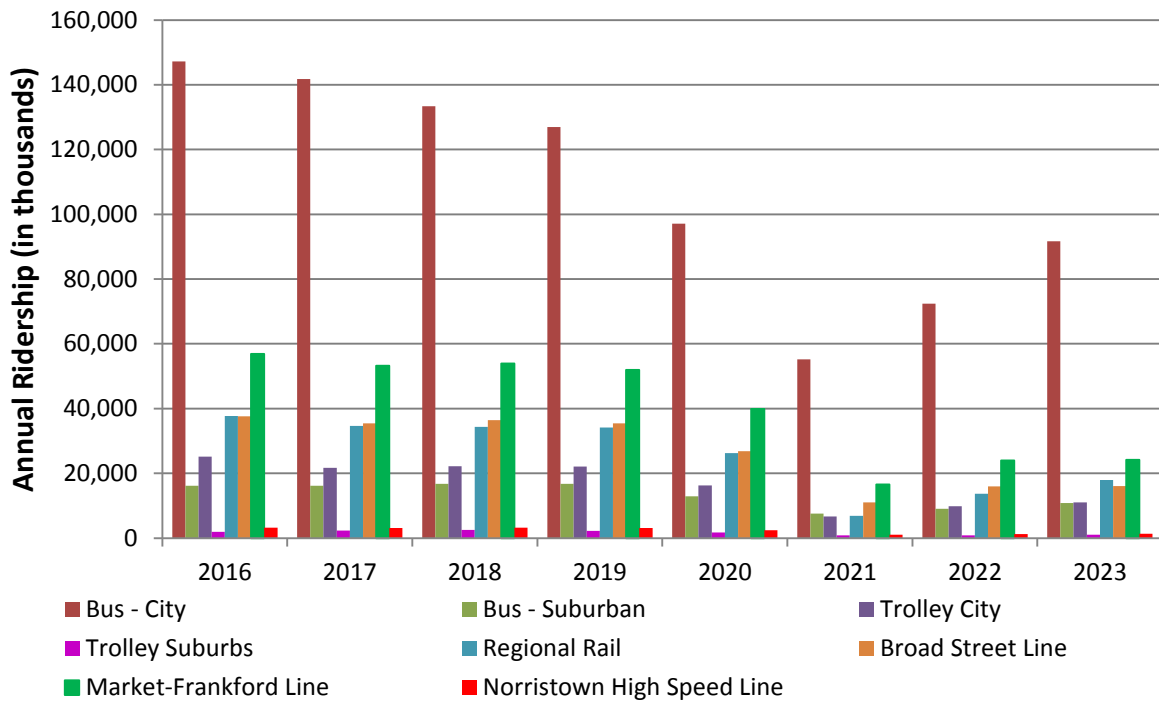
Station, experienced by far the highest percent increase from 8.43 million to 17.14 million, or 103.3 percent (see Figure 10). Philadelphia Interstate buses had a slight increase from 2.69 million to 2.72 million, or 1.1 percent. For similar reasons as SEPTA, NJ Transit ridership decreased for all modes comparing FY 2019 to FY 2022. The Northeast Corridor experienced the highest percent decrease from 35.49 million to 17.14 million (51.7 percent). The Atlantic City Line had the lowest percent decrease, due in part to a service suspension in FY 2019, which caused ridership to be less than normal. The next lowest percent decrease was the River LINE from 2.74 million to 1.71 (37.6 percent). The Northeast Corridor Line is by far the most used transit mode type at about 67 percent of all unlinked trips in FY 2022, followed by Philadelphia Interstate Bus and Mercer Bus at 11 percent and 8 percent, respectively.

The Port Authority Transit Corporation (PATCO) transit ridership increased from 3.68 million in 2021 to 4.87 million in 2022, or 32.3 percent (see Figure 11), but is still well below pre-Covid levels. Comparing 2019 to 2022, ridership sharply decreased from 11.1 million to 4.87 million (56.1 percent), which was mainly due to the pandemic and people working from home.

The Delaware River Port Authority (DRPA) bridge traffic is a key measure to track since the bridges provide key transportation links to the Pennsylvania and New Jersey portions of the DVRPC region. DRPA manages four bridges over the Delaware River, including the Betsy Ross Bridge, which carries Route 90; the Ben Franklin Bridge, which carries I-676; the Walt Whitman Bridge which carries I-76; and the Commodore Barry Bridge, which carries US 322. Comparing 2021 to 2022, combined traffic for all bridges increased from 46.64 million to 48.12 million (3.2 percent), which is approaching pre-Covid 2019 levels of 53.10 million (see Figure 12). Comparing 2019 to 2022 traffic decreased from 53.1 million to 48.12 million, or 9.4 percent, but it is not as significant a drop compared to transit.

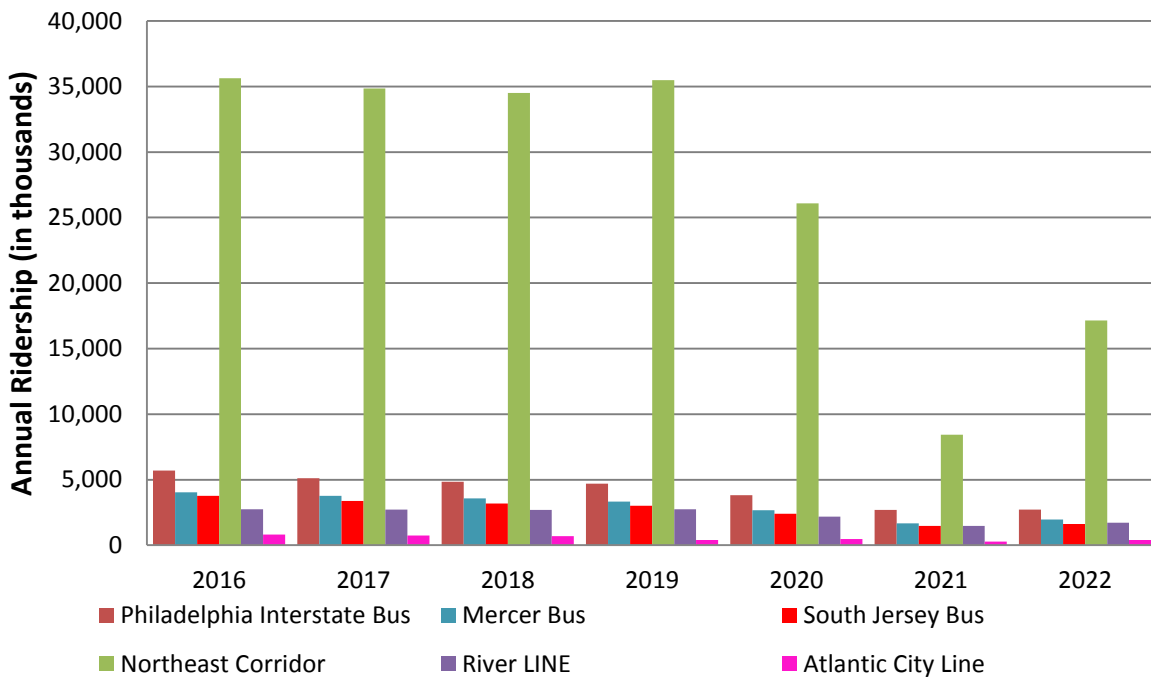
The overall decrease in rail, bus, and trolley ridership, and bridge traffic comparing 2019 to 2022 is largely due to the pandemic and more workers shifting to working from home starting in early 2020. However, decreases in transit ridership can also be attributed to other factors, including higher car ownership rates; introduction of shared-ride services, such as Uber and Lyft; and bus transit delays due to traffic congestion that may entice riders with the means to find other transportation options, including SOVs. As a result, traffic congestion may increase, and strategies will be needed to mitigate it.

**Figure 9: SEPTA Ridership by Mode Type FY 2016 – FY 2023**



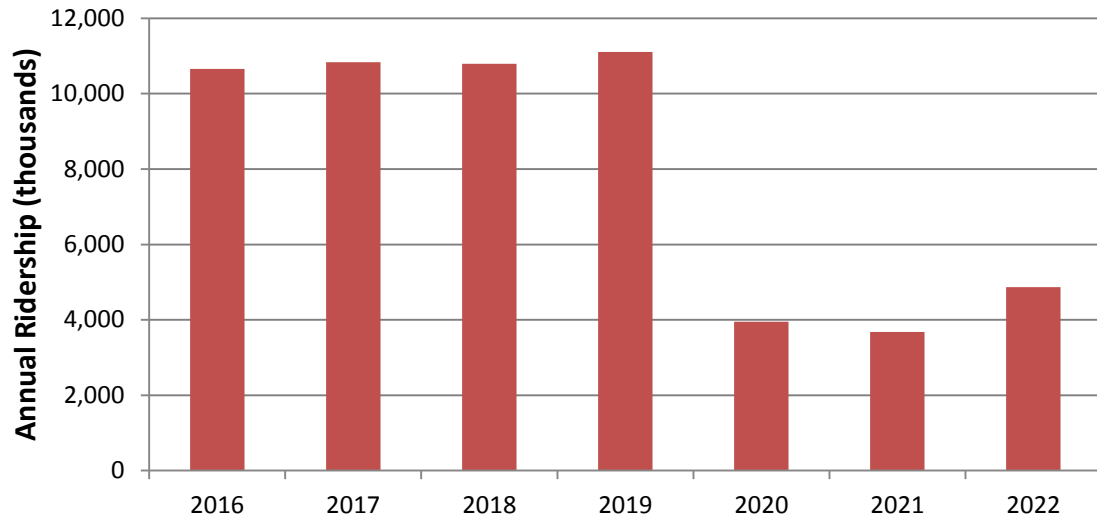
Data Source: Division & Mode Unlinked Ridership (FY 2016 – FY 2023)

**Figure 10: NJ Transit Ridership Mode FY 2016 – FY 2022**



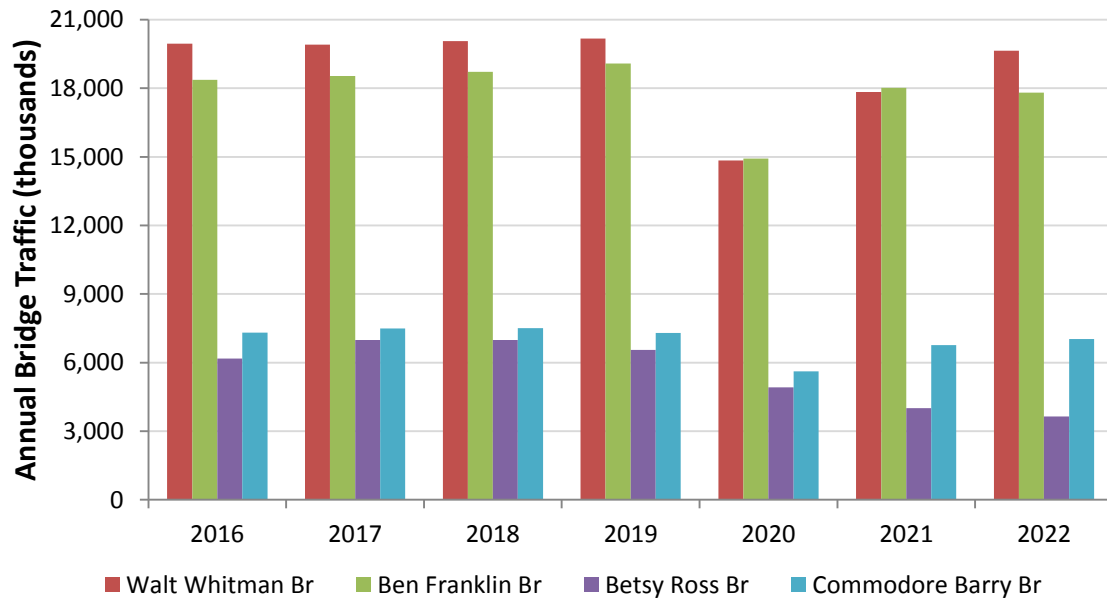
Data Source: NJ Transit Annual Unlinked Ridership Data; Northeast Corridor line includes ridership trips from Trenton Station to Penn Station

**Figure 11: PATCO Ridership 2016 – 2022**



Data Source: DRPA Comprehensive Annual Financial Reports; Unlinked Ridership

**Figure 12: DRPA Bridge Traffic 2016 – 2022**

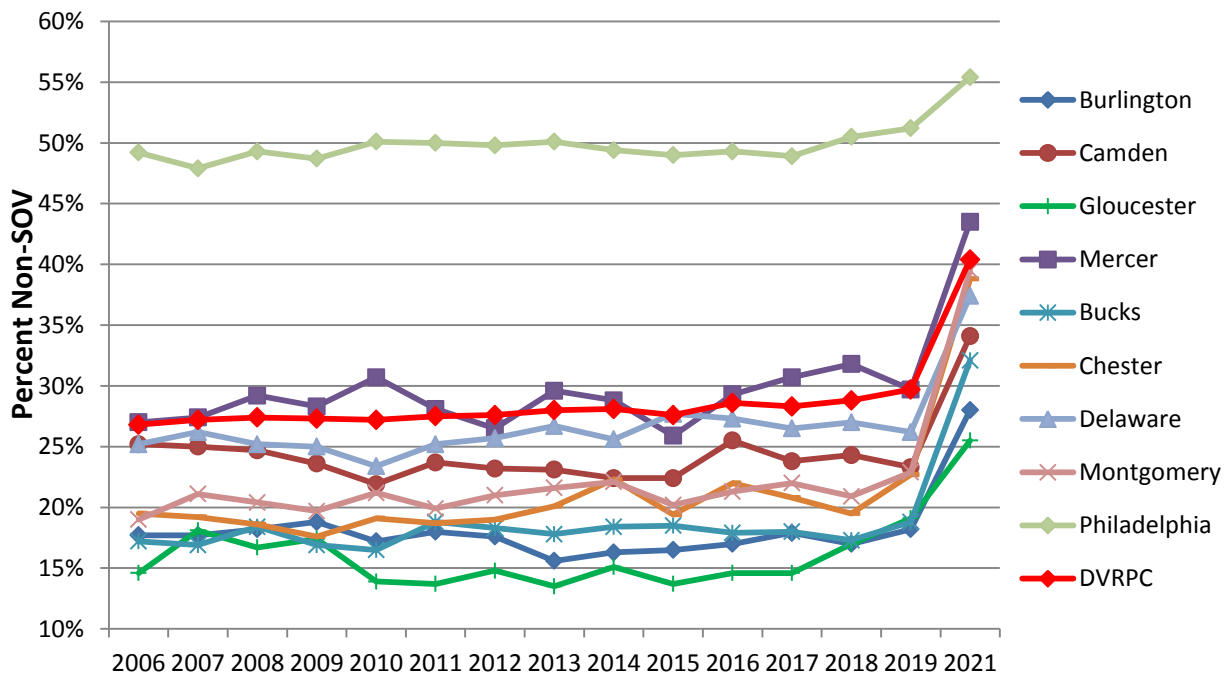


Data Source: DRPA Comprehensive Annual Financial Reports

Other modes of travel besides SOV (or driving alone) should be encouraged and expanded to improve mobility and reliability, and reduce congestion where appropriate. To help track progress toward achieving this, the U.S. Census American Community Survey (ACS) provides journey-to-work trip estimates for percent non-SOV travel. This measure includes carpool, train, bus, walk, bicycle, taxi, rideshare, working at home, etc.; anything other than driving alone. Although all trips (not just journey to work) would be optimal to track, this regularly updated and approved ACS dataset is recognized as one of the best available to measure mode share. Increases in transit ridership, ridesharing, transportation network companies, walking, biking, and working from home would contribute to increases in this measure.

Analyzing non-SOV travel prior to the pandemic (2006 to 2019), Philadelphia far exceeded other counties throughout the region, averaging about 50 percent (see Figure 13). Mercer County, New Jersey followed by Delaware County, Pennsylvania contains the second and third most non-SOV travel, averaging 29 percent, and 26 percent, respectively. Gloucester County, New Jersey experiences the least at 16 percent on average. The Covid-19 pandemic dramatically increased percent non-SOV travel in all the region's counties comparing 2019 to 2021 (2020 ACS one-year data not available due the pandemic). The suburban counties experienced the most percent increase with Montgomery County (16.6 percent), Chester County (16.1 percent), Mercer County (13.8 percent), and Bucks County (13.3 percent). There were significant declines in non-SOV transit trips starting in 2020 as a result of the pandemic, but these were more than offset by increases in people working from home.

**Figure 13: Percent Non-SOV Travel by County**



Data Source: U.S. Census ACS 1-year S0801, B08006: Percent Non-SOV Travel (No ACS 1-year 2020 Percent Non-SOV available)

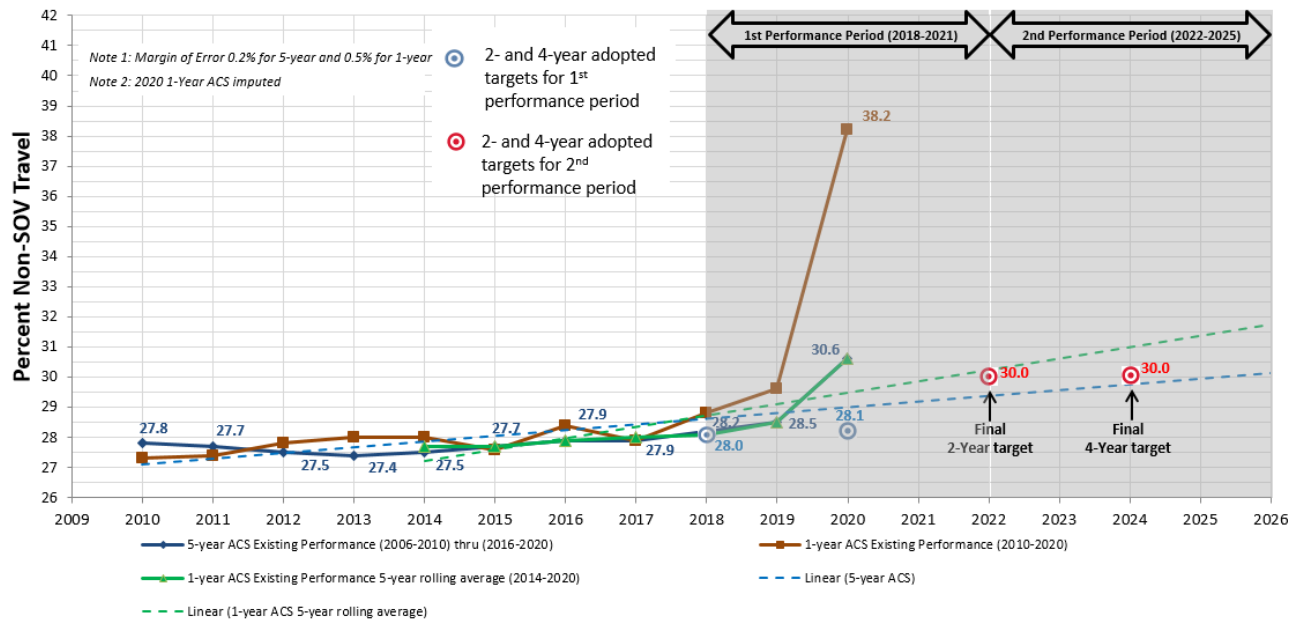
Percent non-SOV travel is also one of the required national Performance Management traffic congestion measures (PM3) to track as part of the IIJA for UZAs with populations greater than 200,000 (previously over 1,000,000 population in the 1st performance period). DVRPC, as the largest MPO in the Philadelphia PA-NJ-DE-MD and Trenton, NJ UZA's, established baseline, and two- and four-year targets for the 2nd performance period (2022–2025) for percent non-SOV based on required U.S. Census ACS five-year estimates in coordination with PM3 planning partners (see Figures 14 and 15). For the Philadelphia PA-NJ-DE-MD UZA, the 2020 baseline year value is 30.6 percent (based on the 2016–2020 ACS 5-year estimate) and the two- and four-year targets (2022 and 2024) are both 30.0 percent. For the Trenton, NJ UZA, the 2020 baseline is 26.4 percent and the two- and four-year targets (2022 and 2024) are 26.5 percent and 26.8 percent, respectively.

There are various considerations and uncertainties in establishing the targets. Trendlines based on past non-SOV five-year estimates (2006–2010 through 2016–2020) were used to help establish targets. There is a two-year time lag in reporting percent non-SOV, so any non-SOV completed project would not be reflected in the measure until two years later. Changes to the measure are incremental due to five-year averages. In addition, these targets were set with the uncertainties of the pandemic and its impact on more people working remotely, which contributes to increases in this measure. Inflation, fuel energy costs, and supply chain disruptions have further impacted travel.

Percent non-SOV travel five-year estimates (2006–2010 to 2017–2021) by commute mode were also analyzed to help establish the targets (see Figures 16 and 17). For the last two ACS five-year estimates (2016–2020 and 2017–2021) work from home significantly increased and public transit decreased, but transit was more than offset by increases in people working from home. For the Philadelphia, PA-NJ-DE-MD UZA, work from home increased from 8.1 percent (2016–2020) to 11.7 percent (2017–2021), which is the highest absolute percent change increase compared to any prior period. Public transit decreased by one percent from 9.5 percent to 8.5 percent. For the Trenton, NJ UZA work from home increased from 6.2 percent in 2016–2020 to 9.8 percent in 2017–2021. This is the highest absolute percent change increase compared to prior time periods, and public transit decreased a modest 0.3 percent, from 5.0 percent to 4.7 percent.

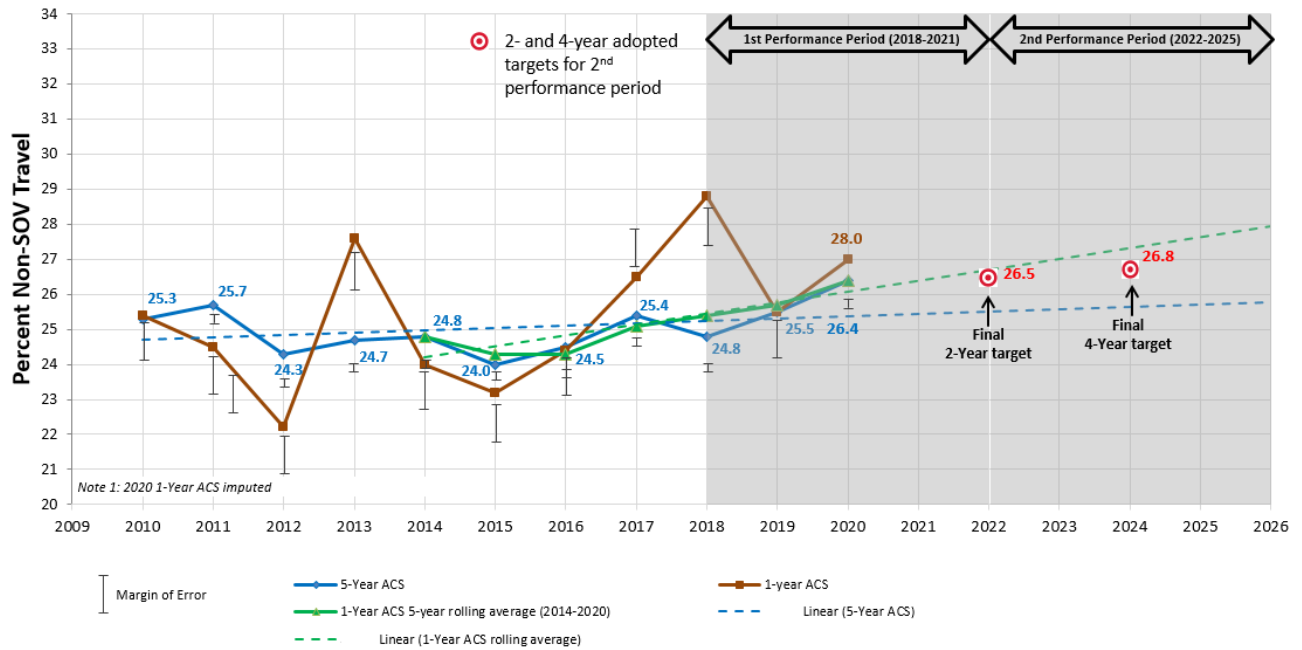


**Figure 14: Percent Non-SOV Targets, Philadelphia, PA-NJ-DE-MD UZA**



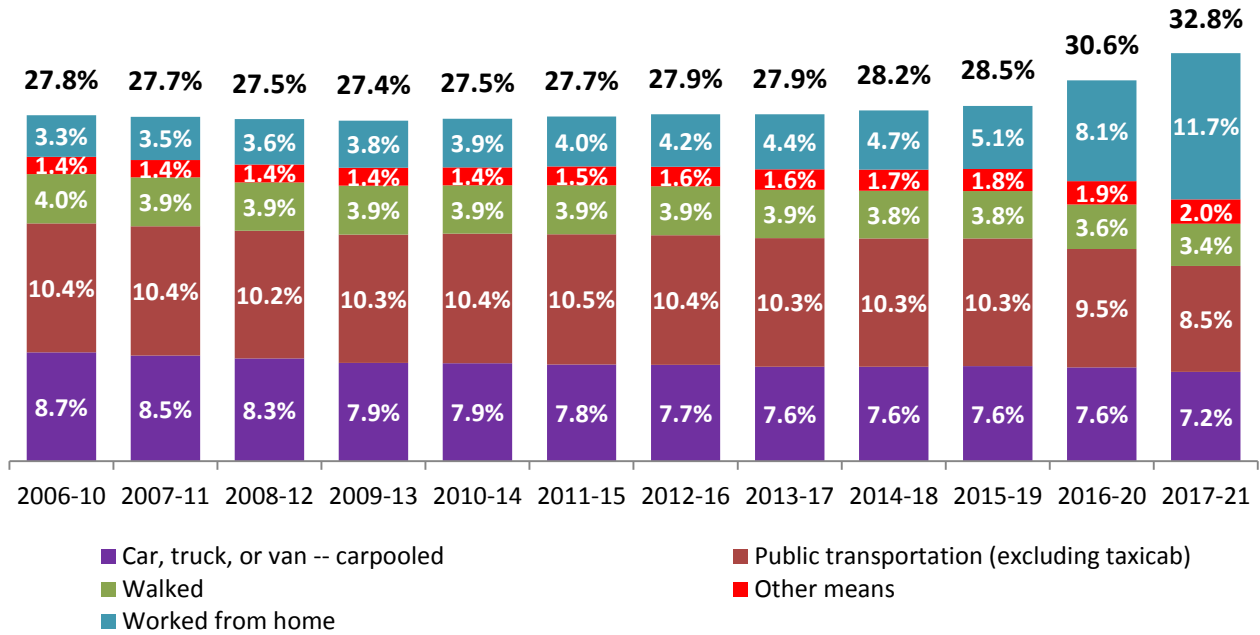
Data Sources: U.S. Census Bureau, DVRPC

**Figure 15: Percent Non-SOV Targets, Trenton, NJ UZA**



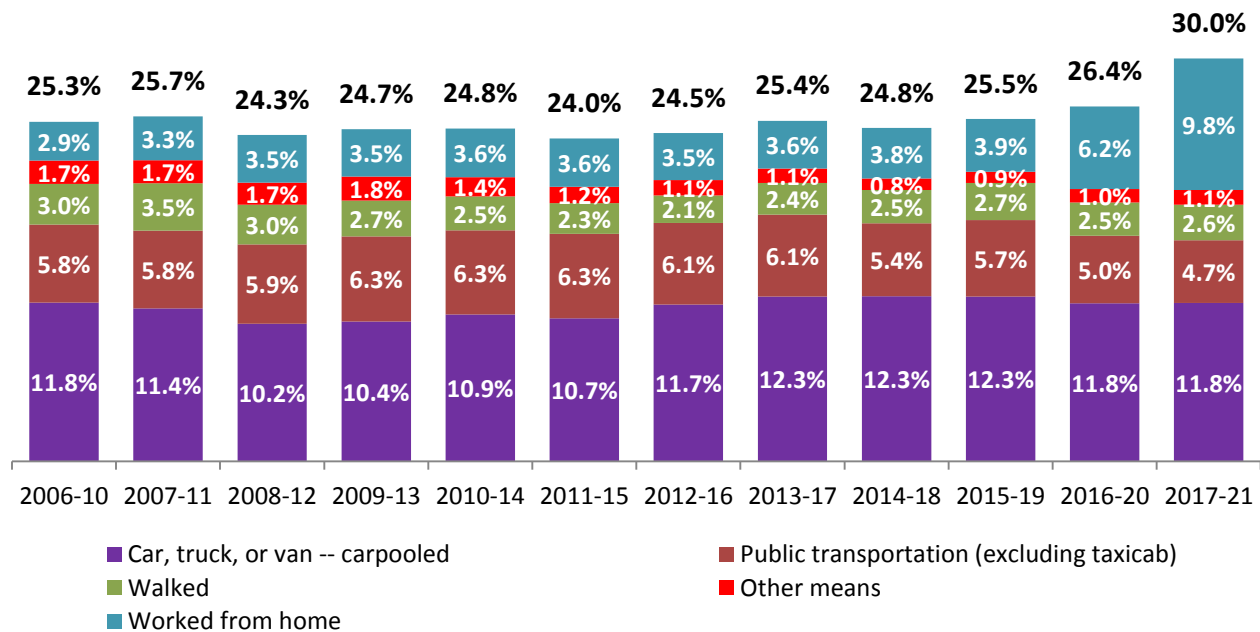
Data Sources: U.S. Census Bureau, DVRPC

**Figure 16: Percent Non-SOV Commute Mode Trends, Philadelphia, PA-NJ-DE-MD UZA**



Data Source: U.S. Census ACS 5-year DP03 Selected Economic Characteristic: Commuting to Work

**Figure 17: Percent Non-SOV Commute Mode Trends, Trenton, NJ UZA**



Data Source: U.S. Census ACS 5-year DP03 Selected Economic Characteristic: Commuting to Work

Analysis of PennDOT and NJDOT crash data for the DVRPC region indicates increased traffic fatalities since the pandemic despite lower VMT compared to pre-Covid conditions<sup>4</sup>. Similar trends are observed nationally. There are many contributing factors for rising fatalities, but studies show that reduced congestion owing to lower VMT, spurs drivers to travel at higher speeds, and increases severity when crashes occur. The INRIX data indicates higher speeds owing to decreased congestion overall comparing 2017 to 2021 and 2022 (see Chapter 6). Crash data also indicates that pedestrian and cyclist fatalities have increased since the pandemic. The scope of engineering strategies to make drivers, pedestrians and bicyclists safer and reduce fatalities depends in part on the roadway location, such as urban or rural, or limited and non-limited access. For example, on limited access highways, perhaps rumble strips represent an appropriate strategy to keep cars in their lane and not flying off the road at high speeds. In urban areas, installing protected sidewalks and bicycle lanes may be an appropriate strategy. Other safety strategies could include “speed management” to reduce speeds, such as more traffic signals, road diets, roundabouts, and traffic-calming. All these solutions tie to the CMP’s Vision Zero objective and the *Connection 2050* Plan’s Vision Zero goal by 2050. As strategies are put place to improve both mobility and reliability they simultaneously must attain Vision Zero goals.

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<sup>4</sup> The Transportation Safety indicator in the Tracking Progress dashboard ([www.dvrpc.org/trackingprogress](http://www.dvrpc.org/trackingprogress)) has up-to-date roadway annual kills and severe injuries data.



## 2. Regional Objectives for Congestion Management

Congestion management objectives define the region's goals for managing congestion in the context of livability, economic vitality, equity, safety, and multimodal access. The objectives support the Long-Range Plan's goals, including improving the performance and operation of the transportation system.

CMP objectives include: (1) increase mobility and reliability, including minimizing growth in recurring and non-recurring congestion, and meeting PM3 targets; (2) integrate modes, including providing transit, trails and sidewalks where they are most needed for an accessible and connected multimodal network; (3) modernize infrastructure, including improving existing core transportation network; (4) achieve Vision Zero, including improving vehicle, pedestrian and bicycle safety, and reducing nonrecurring congestion by reducing crashes; (5) make global connections, including maintaining movement of goods by truck and rail and improving connections to ports and airports; (6) maintain transportation security and cybersecurity, while increasing the transportation network's preparedness for major events; and 7) ensure that all transportation investments support DVRPC Long-Range Plan principles. These include prioritizing transportation investments in less sensitive environmental areas; investing to support land use centers first, then infill and redevelopment areas, and then emerging growth areas; sustaining the environment; developing livable communities; reducing poverty and increasing workforce skills by investing in EJ and Equity populations; and creating an integrated, multimodal transportation network. These objectives flow from the Long-Range Plan goals (see Table 1). The table includes LRP goals, associated CMP objectives, a description of the measure criteria for each CMP objective, and possible scores.

CMP objectives are translated into specific CMP measure criteria and then scored to analyze performance of the regional transportation system, and for developing strategies to mitigate congestion. For example, the CMP Objective of "Increasing mobility and reliability, including minimizing growth in recurring and non-recurring congestion, and meeting PM3 targets", includes six criteria as indicated in the first part of the "Sub Id" identifier. Some criteria have more than one threshold with the higher threshold scored more. For example, the TTI measure has two thresholds, which is indicated in the second part of the "Sub id" identifier. TTI greater than 1.50 would be the highest threshold and be weighted more with a score 1.0, and the TTI between 1.20 and 1.50 would be scored less at 0.5. The scores are capped for each CMP objective to a maximum score in order to weigh some measures more than others. For this measure, a maximum score of 4.0 can be attained even though the six criteria could sum to a total score of 6.0. The criteria analysis is multimodal and performed using Geographic Information Systems (GIS), where the results are represented on the roadway network. The measure criteria are further described in Chapter 3.

**Table 1: Long-Range Plan Goals, CMP Objectives, and Analysis Criteria**

ID	2050 LRP Goal	CMP Objective	SUB ID	CMP Measure Criteria	Score	Max Score
1	Increase mobility and reliability	Increase mobility and reliability, including minimizing growth in recurring and non-recurring congestion, and meeting PM3 targets	1.1	High TTI (> 1.50) weekday peak hour (7-8am, 8-9am, 4-5pm, or 5-6pm) <sup>1</sup>	1.0	4.0
			1.2	Medium TTI (1.20 to 1.50) weekday peak hour (7-8am, 8-9am, 4-5pm, or 5-6pm) <sup>1</sup>	0.5	
			2.0	PM3 Peak Hour Excessive Delay Per Road Segment Mile (1x the regional average) <sup>2</sup>	1.0	
			3.0	Anticipated moderate to high congestion (> .85) V/C LRP TDM 2050 - highest peak hour (7-8am, 8-9am, 4-5pm, 5-6pm)	1.0	
			4.0	Anticipated moderate to high congestion (> .85) V/C LRP TDM 2015 & increase in congestion (15%) LRP TDM (2015-50)	0.5	
			5.1	Very High PTI (> 3.50) weekday peak hour (7-8am, 8-9am, 4-5pm, or 5-6pm) <sup>1</sup>	1.5	
			5.2	High PTI (3.00 to 3.50) weekday peak hour (7-8am, 8-9am, 4-5pm, or 5-6pm) <sup>1</sup>	1.0	
			5.3	Medium PTI (2.00 to 3.00) weekday peak hour (7-8am, 8-9am, 4-5pm, or 5-6pm) <sup>1</sup>	0.5	
			6.1	PM3 LOTTR High (2.50 or more) <sup>2</sup>	1.0	
			6.2	PM3 LOTTR Medium (1.50 to 2.49) <sup>2</sup>	0.5	
2	Integrate modes and increase accessibility	Integrate modes and provide transit where it is most needed for accessibility	1.0	High Transit Score: high population and employment density, and zero-car households	1.0	2.0
			2.0	Near bus transit (1/4 mile) and passenger rail stations (1 mile)	1.0	
3	Modernize Infrastructure	Modernize and maintain the existing core transportation network	1.1	Substantial Transit bus and shuttle routes (>= 3 runs in urban areas and >=2 runs in suburban) during peak periods	1.0	1.5
			1.2	Any Transit bus and shuttle routes	0.5	
			2.0	Near Transit passenger rail, including Amtrak (1-mile buffer)	1.0	
			3.0	National Highway System, including freight connectors	0.5	
			4.0	Freight - centers, ports, and PHL airport; near rail lines (1-mile buffer)	1.0	
4	Achieve Vision Zero	Improve safety and reduce nonrecurring congestion due in part to crashes	1.0	High crash frequency (crashes per million vehicle miles traveled)	1.0	2.0
			2.0	High crash severity	1.0	
5	Make Global Connections	Maintain movement of goods by truck and meet PM3 targets	1.1	High TTTI (> 3.00) weekday peak hour (7-8am, 8-9am, 4-5pm, or 5-6pm) <sup>2</sup>	1.0	1.5
			1.2	Medium TTTI (2.00 to 3.00) weekday peak hour (7-8am, 8-9am, 4-5pm, or 5-6pm) <sup>2</sup>	0.5	
			2.1	High TPTI (> 6.50) weekday peak hour (7-8am, 8-9am, 4-5pm, or 5-6pm) <sup>2</sup>	1.0	
			2.2	Medium TPTI (5.50 to 6.50) weekday peak hour (7-8am, 8-9am, 4-5pm, or 5-6pm) <sup>2</sup>	0.5	
			3.0	PM3 TTTR High (>= 2.00) <sup>2</sup>	1.0	
6	Strengthen Security and Cybersecurity	Maintain and enhance the transportation security and prepare for major events, especially ones that call for inter-regional movements far beyond normal; this also serves routine needs	1.0	High population or employment density (>2x regional average) by Census Block Group	0.5	1.0
			2.0	Heavily used transit stations	0.5	
			3.0	Limerick nuclear power plant evacuation zone	0.5	
			4.0	Major roadway bridges (> 100,000 AADT)	0.5	
			5.0	Major passenger and freight rail bridges	0.5	
			6.0	Key military locations	0.5	
			7.0	Stadium and waterfront Locations	0.5	
7	Support 2050 Long-Range Plan Principles – Sustainability / Resiliency/ Equity	Invest to support centers first, then infill and redevelopment areas, and then emerging growth areas Prioritize transportation investments in less sensitive environmental areas Assess EJ indicators	1.0	Land use centers	0.5	3.0
			2.0	Infill and redevelopment areas, and emerging growth areas	0.5	
			3.0	Environmental Screening Tool	0.5	
			4.0	100- and 500-year floodplains	0.5	
			5.0	Assess IPD EJ indicators	1.0	
Total Maximum Score						15.0

TTI: Travel Time Index | PTI: Planning Time Index | TTTI: Truck Travel Time Index | TPTI: Truck Planning Time Index | LOTTR: Level of Travel Time Reliability

<sup>1</sup> Data Source: INRIX

<sup>2</sup> Data Source: National Performance Management Research Dataset (NPMRDS)

Source: DVRPC, 2023

## 3. CMP Objective Measure Criteria

Congestion is a broad and subjective topic that makes it challenging to measure. There are a number of approaches that attempt to quantify congestion using performance measures to systematically assess roadways and other facilities. DVRPC derives CMP objectives from its Long-Range Plan goals. Availability, ease of update, staff time, overall cost, and the ability to partner with others are some of the considerations used to determine performance measures. The measures can be categorized into congestion and reliability measures, and other CMP objective measure criteria.

### 3.1 Congestion and Reliability Measure Criteria

Congestion and reliability measures help to identify the extent, intensity, and variability of congestion on the transportation network. The main data source used for these measures was INRIX travel time data, which was made available through INRIX. The CMP collected and processed this data on most roads in the region for every minute of every day for all of 2021, and analyzed over weekdays and peak time periods. The data was chosen over other travel time datasets due to availability and advantages of extensive coverage and improved granularity. The measures used include TTI, PTI, and vehicle and volume travel time and planning time delays. PennDOT and other transportation agencies have partnered with INRIX to use the data for traffic analysis, which allows DVRPC to use. INRIX data is also made available through the Eastern Transportation Coalition's University of Maryland Center for Advanced Transportation Technology Laboratory (CATT Lab) Probe Data Analytics (PDA) Software Suite. The Coalition contracts with private companies to provide travel time data collected from connected vehicles and other location-based services, and develops tools to access and analyze various congestion and reliability measures. The CMP used the PDA software to analyze truck delays using the TTTI and TPTI measures, PM3 measures, and intersection bottleneck vehicle and volume delays. The DVRPC regional Travel Demand Model, which estimates trips based on population and employment forecasts and planned infrastructure investments, was used to identify base and future year volume-to-capacity (V/C) ratios. State DOT annualized traffic volume data was combined with the travel time data to understand which locations experience both high volumes and high travel time congestion and unreliability.

New national performance management reliability and congestion PM3 measures derived from the National Performance Management Research Dataset (NPMRDS), are used in the CMP congestion analysis. While the measures are reported at the statewide and UZA level for target setting, some of the data is available at the roadway segment level for a more granular analysis. This data contains speeds and travel times by road segment, like INRIX, but is limited to the NHS. The PM3 measures include: LOTTR, TTTR, and PHED.

A transit reliability measure, largely based on INRIX data, is utilized by the CMP to help measure bus transit service efficiency in the region. Congestion and transit agency route and ridership data are combined to develop composite reliability indicators.

More detailed descriptions of these measures are described below.

#### **Travel Time Index (TTI)**

This measure is derived from the INRIX travel time data, and is defined as the ratio of the peak period average travel time to the free-flow travel time (uncongested travel time) for a given roadway segment. Free-flow values were determined for this, and all other INRIX based measures, using reference speeds provided by INRIX for each road segment based on the 66th percentile observed speed for all time periods. The greater the TTI value, the more congestion it indicates. TTI is analyzed for AM peak hours

7:00–8:00 and 8:00–9:00, and the PM peak hours 4:00–5:00 and 5:00–6:00. A TTI of 1.00 indicates vehicles are traveling at free-flow speeds, while one at 1.50 indicates that a 20-minute free-flow trip takes 30 minutes. Roadways with a TTI between 1.20 and 1.50 are considered moderately congested, and ones greater than 1.50 are considered highly congested.

### **Planning Time Index (PTI)**

This measure is the ratio of the peak period 95th percent travel time, where 100 percent is the worst travel time, to the free-flow travel time for a given roadway segment. It is also derived from INRIX travel time data. This is equivalent to one work day a month (19 out of 20 days) a traveler should allow to ensure on-time arrival 95% of the time. The 95th percentile indicates that 95 percent of the travel times are less, and 5 percent more, and measures the variability, or reliability, of travel. A PTI of 1.00 means the trip time is consistently the same from day to day, while higher values mean more variation and unreliability. A PTI of 3.00 indicates a 20-minute free-flow trip will take 60 minutes in the peak period, where one might expect to plan to leave 40 minutes earlier to arrive on time. Roadways with a PTI between 2.00 and 3.00 are considered moderately unreliable and ones greater than 3.00 are considered highly unreliable. PTI measures are analyzed for weekdays during the AM peak hours 7:00–8:00 and 8:00–9:00, and the PM peak hours 4:00–5:00 and 5:00–6:00.

### **Peak Vehicle Delay**

This measure indicates the travel time and planning time delay by roadway segment, in seconds. Peak vehicle delay is the difference between the average peak period travel time and the free-flow time for peak travel time delay and the difference between the 95th percentile travel time and the free-flow time for peak planning time delay. The greater the difference, the greater the delay. This measure is derived from the INRIX data for weekdays during the AM peak hours 7:00–8:00 and 8:00–9:00, and the PM peak hours 4:00–5:00 and 5:00–6:00. It is used to analyze and rank delay by focus roadway facility, and intersection and limited access roadway bottleneck. For the focus roadway facilities, the vehicle delay is divided by the facility length, resulting in a peak vehicle delay per mile measure. Roads with high vehicle delay are identified in order to manage congestion for every driver on the road, not just locations with high traffic volumes.

### **Peak Volume Delay**

This measure indicates peak period vehicle delay, measured in hours, as a function of traffic volumes for the peak hour (which accounts for 7 percent of total daily traffic in the AM, and 9 percent in the PM). Roads with both high vehicle and volume travel time and planning time delay normally lead to congestion with a more regional impact, compared to ones with just high vehicle delay, due to the sheer number of vehicles involved. This measure is used to analyze and rank peak travel time and planning time volume delay by focus roadway facility, and just travel time volume delay by intersection and limited access roadway bottleneck. For focus roadway facilities, the volume delay is divided by the facility length, resulting in a peak volume delay per mile measure. The volume part of the delay measure is derived from traffic flow defined as Annual Average Daily Traffic (AADT), which is the average number of daily vehicles that traverse a roadway analyzed for all days in the week over a one-year period. AADT is determined through continual and seasonal traffic counts conducted by PennDOT, NJDOT, and DVRPC. For purposes of this CMP, AADT was conflated to INRIX roadway segments using GIS and other conflation tools to calculate peak hour volume delays. The conflation results in minor inaccuracies that can occur when transferring spatial data between two spatially inconsistent databases.

### **High Anticipated V/C and High Anticipated Growth in V/C**

This measure indicates where high traffic congestion might be in the future, and where it is likely to significantly increase in the future according to the time span of the DVRPC Long-Range Plan (currently 2022 to 2050). The V/C ratio is a traditional traffic engineering measure indicating road capacity



sufficiency, or whether the physical geometry provides sufficient capacity for travel movements. It is an important measure for comparing a roadway's performance over a future time period, as opposed to travel time data, which is a more effective measure for indicating existing quality of service, and a driver's frustration. DVRPC Travel Demand Model runs provide AM and PM peak period V/C by roadway link (or segment) for both the model's base year (2015) and the Long-Range Plan's horizon year (2050) in addition to other analysis years in between. It identifies potential future congested roadways in 2050 using the 2050 socioeconomic forecasts, programmed projects approved for funding, and a host of other inputs. Links with high anticipated V/C ( $\geq 0.85$ ) for either the AM or PM peak hour in the horizon year and links with high base year V/C ( $\geq 0.85$ ) and 15 percent or more change increase between the base and horizon year are used in this measure. Like AADT, Travel Demand Model V/C was conflated to the INRIX roadway network.

### **National Performance Management Measures (PM3)**

FHWA completed rulemaking for PM3 measures in May 2017, which were initially legislated by MAP-21, and continued in both the FAST Act and the IIJA. Transportation Performance aims to improve transportation project investments and decisions through performance-based planning and programming. Baseline and required two- and four-year targets are established at the statewide and UZA levels with the intention of programming projects to meet the regional targets (see Tables 2 through 5). Although the baseline and target values are established at the statewide and UZA geographic levels, they are calculated at the roadway segment level (except percent non-SOV travel which is calculated at the census block group level) from the NPMRDS data, which includes roadways on the NHS. While it would be helpful to have these measures calculated at lower level non-NHS road segments, this NPMRDS dataset is federally approved. The NPMRDS data was conflated to the INRIX roadway network and utilized in the CMP to identify and prioritize congested locations, and to develop strategies to mitigate congestion. The three PM3 measures used in the CMP are LOTTR, TTTR, and PHED, and they are described below.

#### **Reliability Measure and Level of Travel Time Reliability (LOTTR)**

This statewide PM3 reliability measure helps to assess the performance of the NHS and indicates the percentage of person miles traveled on the interstate and non-interstate system NHS that are reliable within a region (see 23 CFR 490.507(a)(1,2)). The measure is in part computed by calculating an LOTTR value for each road segment, which is the ratio of the 80th percentile travel time to a "normal" travel time (50th percentile). This measure is calculated for four peak time periods: weekdays 6:00–10:00 AM, 10:00 AM–4:00 PM, and 4:00–8:00 PM; and weekends 6:00 AM–8:00 PM. If all four periods are below a 1.50 threshold criteria, the reporting segment is designated reliable; if not then it is unreliable. This is the portion of the measure that is used in the CMP. Both VMT and average vehicle occupancy are factored into the reliability measure. The final reliability measure is calculated separately for interstate and non-interstate routes as the total person miles that are reliable divided by the total person miles.

Table 2 shows the applicable statewide baseline, and two- and four-year actual performance and targets for this PM3 measure for the 1st performance period (2017–2021). In New Jersey, the 2021 interstate and non-interstate established targets were set at 82.0 percent and 84.1 percent, respectively, aiming for actual performance to be above these figures. The actual performance was 94.0 percent and 92.2 percent, respectively; therefore the targets were achieved. In Pennsylvania, the 2021 interstate and non-interstate targets were set at 89.5 percent and 87.4 percent, respectively. The actual performance was 92.8 percent and 92.6 percent, respectively; therefore the 2021 four-year targets were achieved. The reliability targets were easily achieved in both states due largely to the impact of Covid-19 on travel patterns and more workers shifting to working at home thereby reducing congestion owing to reduced travel.

Figure 18 shows the interstate and non-interstate roadways in the region that are unreliable using the LOTTR part of the reliability measure. The time period with the highest LOTTR is mapped with brown segments the most unreliable. For purposes of the CMP, an LOTTR value between 1.50 and 2.49 is considered moderately unreliable, and 2.50 or more is considered most unreliable.

For the 2nd performance period (2022–2025), the baseline and two- and four-year targets for interstate and non-interstate reliability are established, but no two- or four-year performance to compare against is yet available (see Table 3). For New Jersey, the 2021 baseline for interstate reliability is 94.0 percent and the two- and four-year established targets are 82.0 percent and 83.0 percent, respectively. The 2021 baseline for non-interstate reliability is 92.2 percent and the two- and four-year targets are 85.0 and 86.0 percent, respectively. NJDOT set the targets for future years based more on pre-pandemic performance, while considering the possible effects of future changes in traffic trends due to the pandemic and working remotely, and more off-peak trips. For Pennsylvania, the 2021 baseline for interstate reliability is 92.8 percent and the two- and four-year targets are both 89.5 percent, and the baseline for the non-interstate reliability is 92.6 percent and the two- and four-year targets are both 88.0 percent. PennDOT set targets considering increased freight and more road construction impacting performance, as well as considering the effects of the pandemic.

#### **Truck Travel Time Reliability (TTTR) Index**

This statewide index measure helps to assess freight movements on the interstate system within the region, and is also referred to as the freight reliability measure (see 23 CFR 490.607). The TTTR indicates the reliability of the interstates for freight movement measured by the ratio of the 95th percentile travel time to a “normal” travel time (50th percentile). Unlike LOTTR, it does not include VMT and average vehicle occupancy in the calculations, and there is no threshold criteria established for unreliability, the higher the index, the more unreliable. Table 2 shows the applicable statewide baseline and two- and four-year actual performance and targets for the 1st performance period (2017–2021). In New Jersey, the 2021 freight reliability index four-year established target was set at 1.95, aiming for actual performance to be below this figure. The actual performance in 2021 was 1.56 compared, so the four-year target was achieved. In Pennsylvania, the 2021 freight reliability index target was set at 1.40. The actual performance in 2021 was 1.30, so the four-year target was achieved.

For the 2nd performance period (2022–2025), the baseline and two- and four-year targets are established, but no two- or four-year performance to compare against is yet available (see Table 3). For New Jersey, the 2021 baseline for the freight reliability index is 1.82 and the two- and four-year targets are 1.90 and 1.95, respectively. NJDOT set the two- and four-year targets higher in future years, considering the long-term growth in e-commerce as a contributor to traffic congestion and unreliability. For Pennsylvania, the 2021 baseline for the freight reliability index is 1.30 and the two- and four-year targets are both 1.40. PennDOT set targets considering increased freight and more road construction impacting performance, and anticipates performance will move closer to pre-pandemic levels.

Figure 19 shows mapping of the freight reliability index on interstate roadways in 2021 classified into four categories, with brown segments the most unreliable. This measure is calculated for five peak time periods: weekdays 6:00–10:00 AM, 10:00 AM–4:00 PM, and 4:00–8:00 PM; weekends 6:00 AM–8:00 PM, and every day 8:00 PM–6:00 AM. The time period with the highest TTTR is used as the criteria for determining reliability by road segment and mapped. For purposes of the CMP, a TTTR value of 2.00 or more was considered unreliable, and included in the CMP objective measure scoring.

**Table 2: Reliability and TTTR Baseline, Target and Performance for Reliability Measures 1st Performance Period (2017–2021)**

Measure	New Jersey					Pennsylvania				
	2017 Baseline	2019 Actual	2019 2-Year Target	2021 Actual	2021 4-Year Target	2017 Baseline	2019 Actual	2019 2-Year Target	2021 Actual	2021 4-Year Target
Interstate Reliability (Statewide)	82.0%	80.6%	82.0%	94.0%	82.0%	89.8%	89.9%	89.8%	92.8%	89.5%
Non-Interstate Reliability (Statewide)	84.1%	86.2%	Optional	92.2%	84.1%	87.4%	88.5%	Optional	92.6%	87.4%
Truck Reliability (Statewide)	1.82	1.89	1.90	1.56	1.95	1.35	1.36	1.34	1.30	1.40

Sources: DVRPC CATT Lab, PennDOT, NJDOT, U.S. Census Bureau  
 Gray text indicates target not achieved

**Table 3: Reliability and TTTR Baseline and Targets for Reliability Measures 2nd Performance Period (2022–2025)**

Measure	New Jersey			Pennsylvania		
	2021 Baseline	2023 2-Year Target	2025 4-Year Target	2021 Baseline	2023 2-Year Target	2025 4-Year Target
Interstate Reliability (Statewide)	94.0%	82.0%	83.0%	92.8%	89.5%	89.5%
Non-Interstate Reliability (Statewide)	92.2%	85.0%	86.0%	92.6%	88.0%	88.0%
Truck Reliability (Statewide)	1.82	1.90	1.95	1.30	1.40	1.40

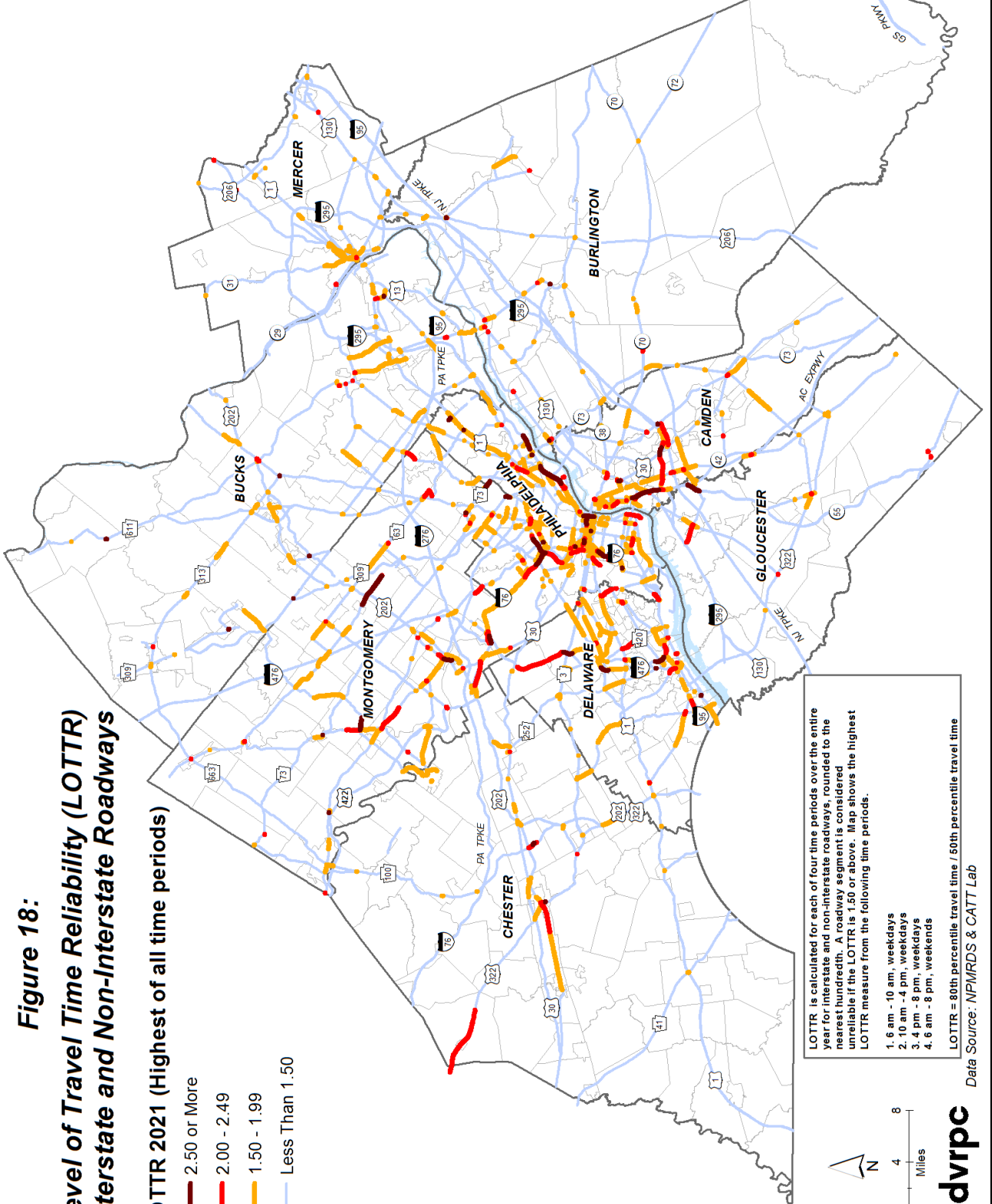
Sources: DVRPC, CATT Lab, PennDOT, NJDOT, U.S. Census Bureau

**Figure 18:**

**Level of Travel Time Reliability (LOTR) Interstate and Non-Interstate Roadways**

**LOTR 2021 (Highest of all time periods)**

- 2.50 or More
- 2.00 - 2.49
- 1.50 - 1.99
- Less Than 1.50



LOTR is calculated for each of four time periods over the entire year for interstate and non-interstate roadways, rounded to the nearest hundredth. A roadway segment is considered unreliable if the LOTR is 1.50 or above. Map shows the highest LOTR measure from the following time periods.

- 1. 6 am - 10 am, weekdays
- 2. 10 am - 4 pm, weekdays
- 3. 4 pm - 8 pm, weekdays
- 4. 6 am - 8 pm, weekends

LOTR = 80th percentile travel time / 50th percentile travel time

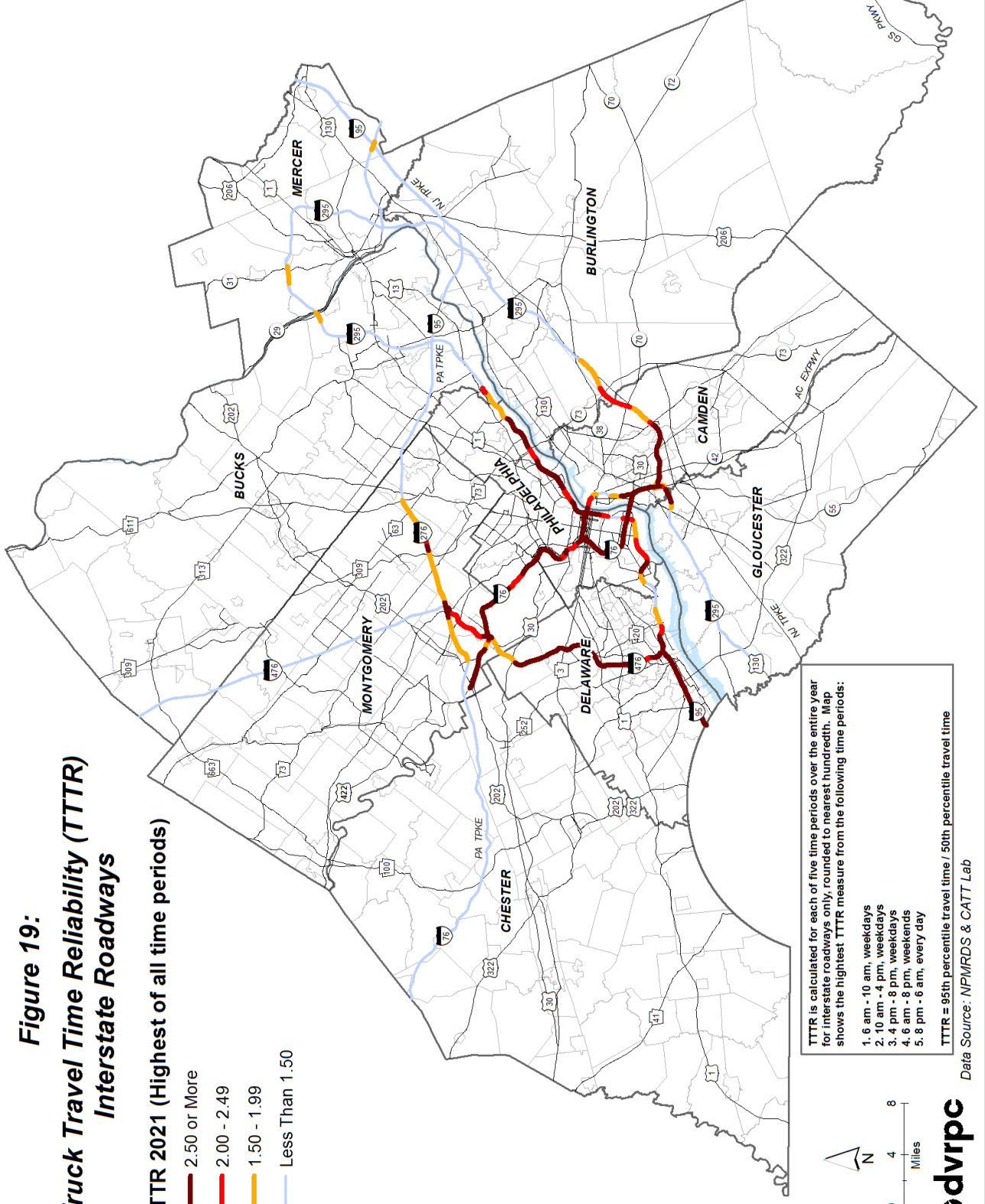
Data Source: NPIFRDS & CATT Lab



**Figure 19:**  
**Truck Travel Time Reliability (TTTR)**  
**Interstate Roadways**

**TTTR 2021 (Highest of all time periods)**

- 2.50 or More
- 2.00 - 2.49
- 1.50 - 1.99
- Less Than 1.50



TTTR is calculated for each of five time periods over the entire year for interstate roadways only, rounded to nearest hundredth. Map shows the highest TTTR measured from the following time periods:

1. 6 am - 10 am, weekdays
2. 10 am - 4 pm, weekdays
3. 4 pm - 8 pm, weekdays
4. 6 am - 8 pm, weekends
5. 8 pm - 6 am, every day

TTTR = 95th percentile travel time / 50th percentile travel time  
 Data Source: NPMRDS & CATT Lab

0 4 8  
 Miles

### **Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita**

This UZA measure helps to assess excessive traffic congestion and the role it plays in pollutant emissions as part of the CMAQ Program (see 23 CFR 490.707(a)). In the second performance period starting in 2021, this measure applies to UZA populations over 200,000 that are, in all or part, of a designated nonattainment or maintenance area for ozone, carbon monoxide, or particulate matter for air quality conformity purposes under the Clean Air Act. The first performance period, which started in 2017, applied only to UZAs with more than one million population. The Philadelphia, PA-NJ-DE-MD UZA was included in this measure for the 1st performance period and the Trenton, NJ UZA is included in this measure starting in the 2nd performance period. Travel times, hourly traffic volumes, posted speed limits, mode shares (passenger vehicles, transit, and trucks), and average vehicle occupancy factors are used in the excessive delay calculation at the roadway segment level for the full reporting calendar year for peak periods 6:00–10:00 AM and 3:00–7:00 PM, and then aggregated to the UZA. The “excessive” part of the PHED name is because some level of congestion is recognized as acceptable, and is thus not counted in the measure. This corresponds to the recognition that it is not possible, nor sometimes desirable, to eliminate all congestion delay; some congestion relates to economic activity and naturally occurs in thriving places. The “per capita” implies that the total delay is shared by all residents; and that everyone can benefit when some trips are avoided, shifted to walking or biking, or occur outside the peak time period. Annual hours of PHED per capita is indicated by the ratio of the total delay to the population of the UZA.

Table 4 shows the Philadelphia, PA-NJ-DE-NJ UZA baseline and two- and four-year actual performance and targets for the 1st performance period (2017–2021). The four-year target was set at 17.2 hours of PHED per capita, aiming for actual performance to be below this figure. The actual performance in 2021 was 13.1; therefore the four-year target was easily achieved. The impact of the Covid-19 pandemic and more people working from home, greatly contributed to the low 2021 PHED actual performance.

For the 2nd performance period (2022–2025), the baseline, and two- and four-year targets are established, but no two or four-year performance to compare against is yet available (see Table 5). The Philadelphia, PA-NJ-DE-MD UZA 2021 baseline was 13.1 annual hours of PHED per capita and the two- and four-year targets are 15.2 and 15.1, respectively. The Trenton, NJ UZA 2021 baseline was 3.4 and the two- and four-year targets are both 5.7. The targets support the DVRPC *Connections 2050* Long-Range Plan and the DOT’s transportation goals of increasing mobility and reliability while reducing congestion and vehicle miles traveled. The targets were established in part based on past PHED trends and on anticipating workers going back to the offices closer to 2019 traffic levels. Uncertainties still remain that may impact the targets, including how many workers will continue to work remotely, and how much inflation, energy costs, and supply chain disruptions will affect travel and congestion.

Figure 20 shows mapping of the annual hours of PHED in 2021 for both the Philadelphia, PA-NJ-DE-MD and Trenton, NJ UZAs. Roadways outside the UZAs are excluded from this measure, which includes some areas in each of the counties, with the exception of Philadelphia, which is totally inclusive. For purposes of the CMP, roadway segments with PHED greater than the regional average are considered high excessive delay, and included in the CMP objective measures scoring.

**Table 4: PHED and Non-SOV Baseline, Targets and Performance for Congestion Measures 1st Performance Period (2017–2021)**

Measure	Philadelphia, PA-NJ-DE-MD UZA				
	2017 Baseline	2019 Actual	2019 2-Year Target	2021 Actual	2021 4-Year Target
Annual Hours of PHED Per Capita	16.8	14.6	17.0 Optional	13.1	17.2
Percent Non-SOV Travel	27.9%	28.2%	28.0%	30.6%	28.1%

Sources: DVRPC CATT Lab, PennDOT, NJDOT, U.S. Census Bureau

**Table 5: PHED and Non-SOV Baseline and Targets for Congestion Measures 2nd Performance Period (2022–2025)**

Measure	Philadelphia, PA-NJ-DE-MD UZA			Trenton, NJ UZA		
	2021 Baseline	2023 2-Year Target	2025 4-Year Target	2021 Baseline	2023 2-Year Target	2025 4-Year Target
Annual Hours of PHED Per Capita	13.1	15.2	15.1	3.4	5.7	5.7
Percent Non-SOV Travel	30.6%	30.0%	30.0%	26.4%	26.5%	26.8%

Sources: DVRPC CATT Lab, PennDOT, NJDOT, U.S. Census Bureau

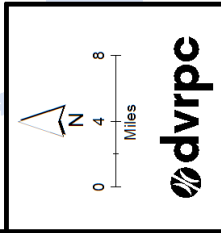
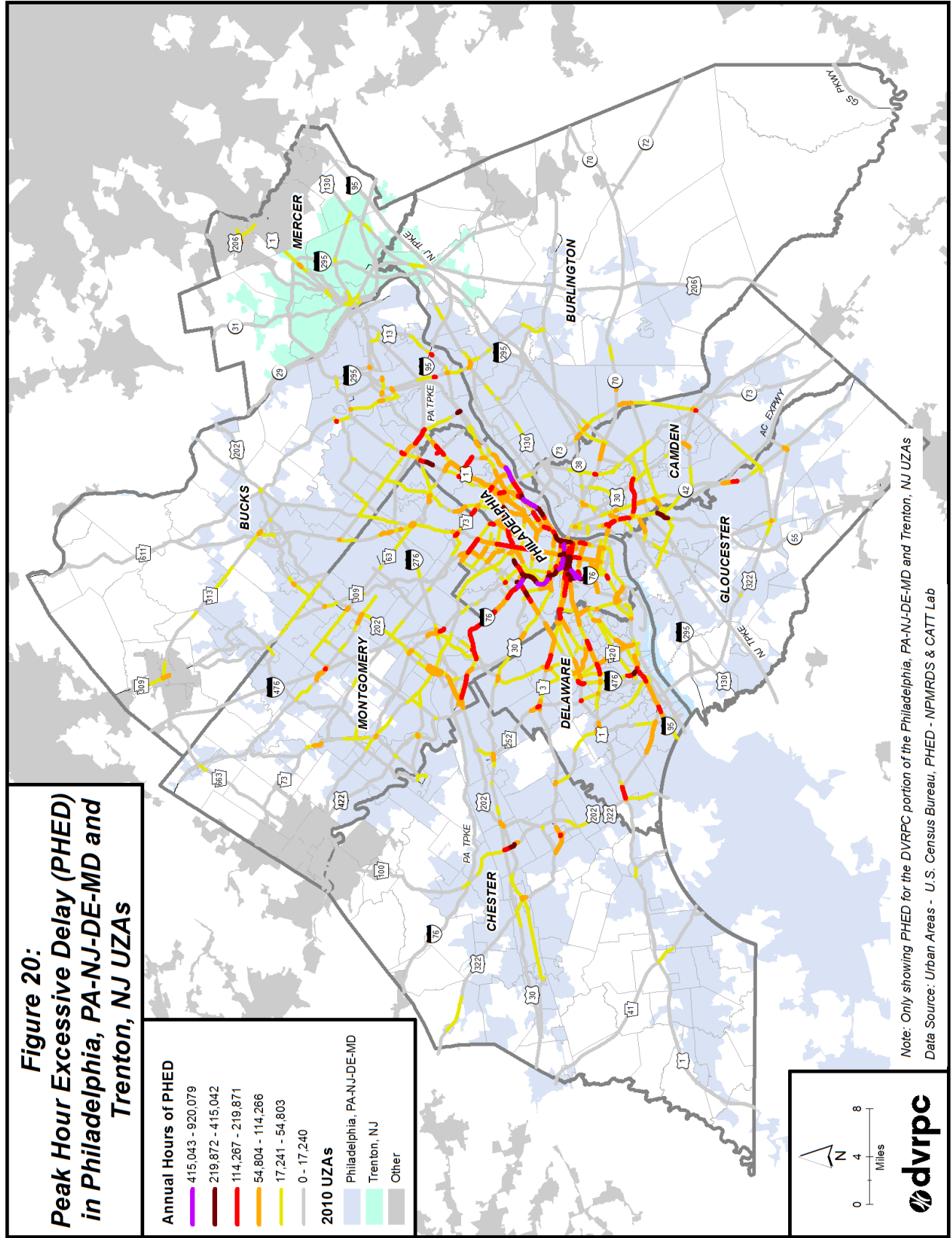
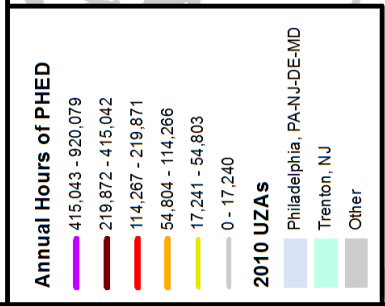
**Truck Travel Time Index (TTTI) and Truck Planning Time Index (TPTI)**

These measures use truck-only travel times on the NHS (interstate and non-interstate) from the NPMRDS database, separate from the PM3 measures, to identify congested and unreliable locations due to truck traffic. TTTI is defined as the ratio of the observed truck travel time to the free-flow truck travel time by roadway segment. Free-flow values are based on observed speeds for all time periods. Roadways with a TTTI between 2.00 and 3.00 are considered moderately congested and ones greater than 3.00 are considered highly congested. TTTI is analyzed for weekdays during the AM peak hours 7:00–8:00 and 8:00–9:00, and the PM peak hours 4:00–5:00 and 5:00–6:00. TPTI is defined as the ratio of the observed truck planning time (95th percentile) to the free-flow truck travel time by roadway segment. Free-flow values are based on observed speeds for all time periods. Roadways with a TPTI between 5.50 and 6.50 are considered moderately unreliable and ones greater than 6.50 are considered highly unreliable. The measure data was conflated to the INRIX road network.

**Bus Transit Reliability**

This composite bus transit reliability measure was derived from the INRIX 2021 travel time data and the latest bus route and ridership information available to identify routes where bus transit service is particularly slow or delayed, and where road or transit improvements could increase reliability. Bus transit reliability was calculated for most bus routes using planning time delay for each road segment along the route. Planning time delay was also weighted by riders to indicate road segments and routes that are most impacted by ridership. For purposes of the CMP, the reliability was calculated as vehicle and ridership delay by route and mapped to identify which routes performed more reliably than others according to the analysis. See Chapter 4, section 6 for more on the transit reliability analysis.

**Figure 20:  
Peak Hour Excessive Delay (PHED)  
in Philadelphia, PA-NJ-DE-MD and  
Trenton, NJ UZAs**



Note: Only showing PHED for the DVRPC portion of the Philadelphia, PA-NJ-DE-MD and Trenton, NJ UZAs  
Data Source: Urban Areas - U.S. Census Bureau, PHED - NPMRDS & CATT Lab



## 3.2 Other CMP Objective Measure Criteria

In addition to the congestion and reliability measures, other CMP objective measures are developed to support the goals of the Long-Range Plan (see Table 1). The measures are conflated to the INRIX roadway network and help to prioritize congested roadways for improvements and to develop strategies to mitigate congestion. The measures are classified by CMP objective and Long-Range Plan goals, and include integrate modes and provide transit where it is most needed for accessibility, modernize and maintain the existing transportation network, achieve Vision Zero, make global connections and improve goods movement, maintain and enhance the transportation network security and cybersecurity and prepare for major events, and supporting Long-Range Plan principles.

To support the goal to increase accessibility, the CMP gives more weight to congested roadway locations near rail transit passenger stations, along and near bus transit routes, in areas where there are high population and employment densities, and areas with high concentrations of zero-car households.

To support the goal to rebuild and maintain infrastructure, the CMP gives more weight to congested locations where they exist on the NHS, on the National Highway Freight Network and associated freight connectors, on transit bus and shuttle routes, near passenger and freight rail, near the Philadelphia International Airport, and within freight centers. This analysis aligns with the federal PM2 pavement and bridge condition measures where more emphasis is placed on managing congestion on NHS roadways—however, condition measure figures are not included in this CMP analysis.

To support the Vision Zero goal, the CMP gives more weight to congested roadways where they exist along high crash frequency and severity corridors. High crash frequency corridors are ones where actual crash rates are four or more times the average rate (three or more in the New Jersey portion of the DVRPC region) for a type of roadway. Roadway types include urban or rural, divided or undivided, limited access or no access control, and roadway width and AADT thresholds. Crash rates are calculated as crashes per one hundred million VMT, and average crash rates are assigned for each combination of roadway types. High crash severity corridors are ones with five or more kills or severe injuries (four or more for the New Jersey portion for the DVRPC region) per mile of roadway. Both crash frequency and severity are analyzed from PennDOT and NJDOT crash databases over a five-year time period from 2017 to 2021 for PennDOT and 2016 to 2020 for NJDOT. This analysis generally aligns with federal PM1 measures for assessing fatalities and serious injuries for both motorized and non-motorized roadway users.

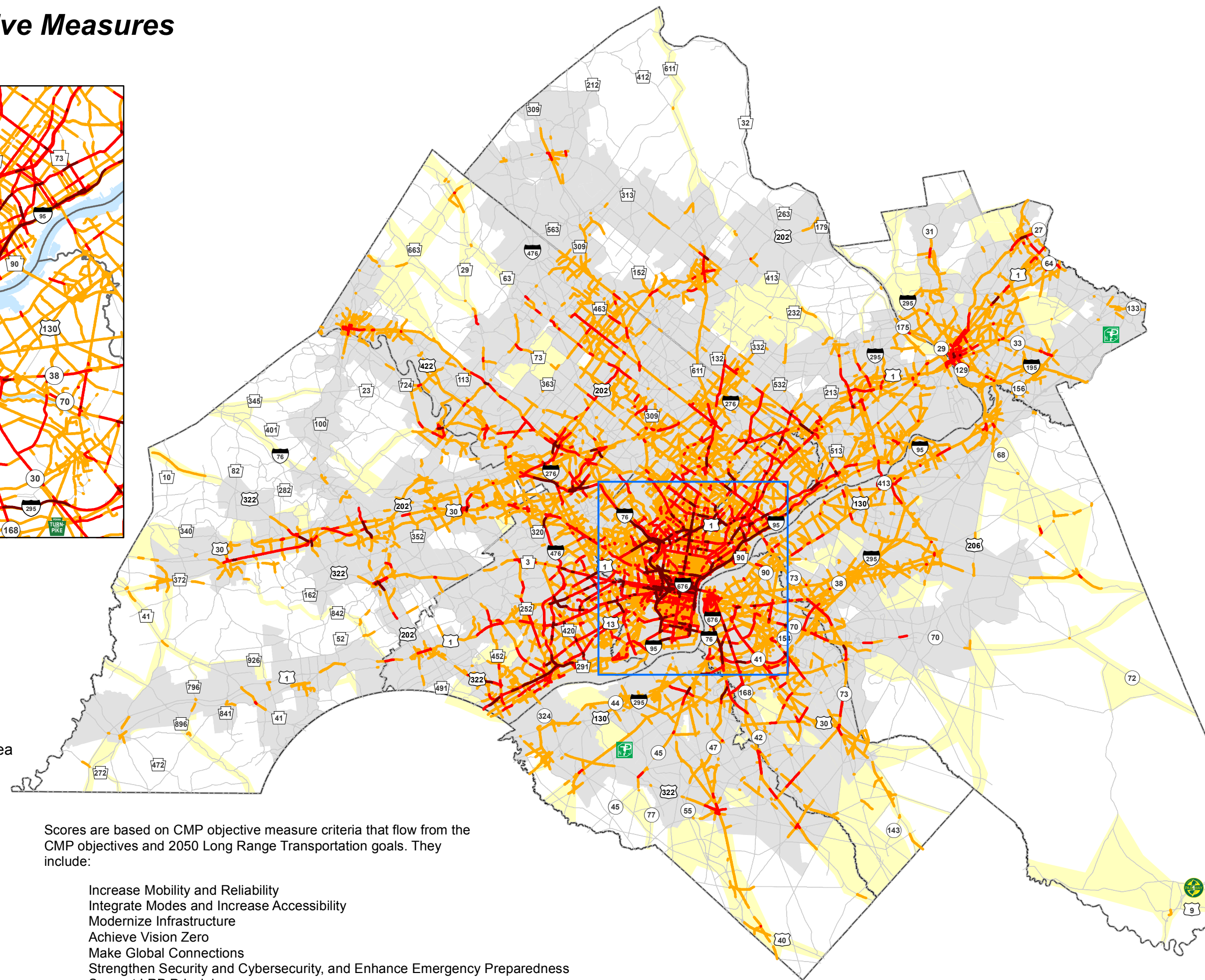
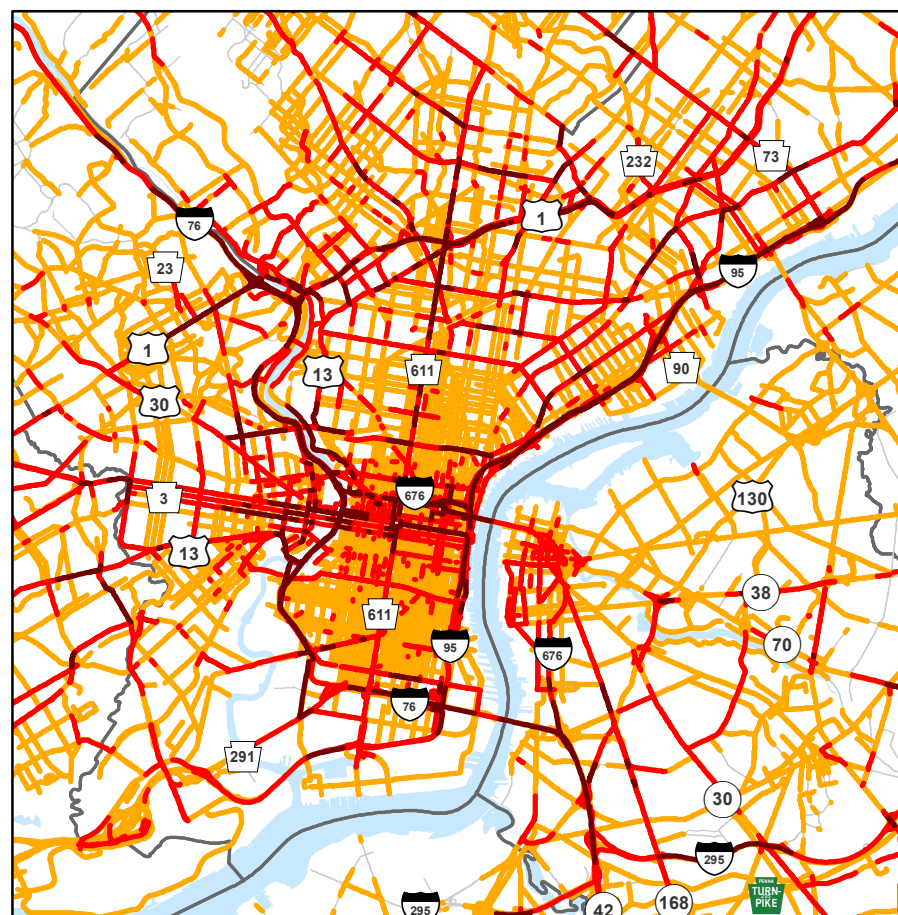
To support the making global connections goal, the CMP gives more weight to locations where trucks experience high congestion or unreliable travel times. Road segments that contain a high TTTI, TPTI, or PM3 TTTR are given more weight in this CMP analysis.

To support the enhancing security goal, the CMP gives more weight to congested roadways where they exist within high population and employment density areas; near heavily used transit stations; near major roadway, passenger, and freight rail bridges; near key military, stadium, and waterfront locations; and within the Limerick nuclear power plant evacuation zone.

To support the Long-Range Plan principles, the CMP gives more weight to congested roadways where they are within land use centers; within infill, redevelopment and emerging growth areas; within 100- and 500-year floodplains; at locations with fewer environmental impacts; and in areas with high EJ populations that are above and well above average based on DVRPC's Equity Analysis for the Greater Philadelphia Region (See website at [www.dvrpc.org/webmaps/ipd/](http://www.dvrpc.org/webmaps/ipd/)).

Figure 21 shows composite mapping of the CMP objective measures. Congested road segment locations that meet more CMP objective measure criteria than others contain higher score totals and are given stronger support for managing congestion. This analysis is used to help prioritize congested corridor and subcorridor areas, which is further described in Chapter 4, section 7, and is used to help prioritize focus roadway facilities, transit facilities, and intersection and limited access roadway bottlenecks, where each contain a CMP objective score. Also, see the CMP website at [www.dvrpc.org/webmaps/CMP2023/](http://www.dvrpc.org/webmaps/CMP2023/) for the CMP objective measure mapping.

**Figure 21: CMP Objective Measures**

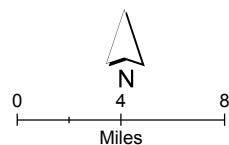


**Measure Score Totals**

- Greater Than 9.0
- 6.1 - 9.0
- 3.1 - 6.0
- 0.0 - 3.0
- Congested Corridor and Subcorridor Area
- Emerging Growth Corridor Area

Scores are based on CMP objective measure criteria that flow from the CMP objectives and 2050 Long Range Transportation goals. They include:

- Increase Mobility and Reliability
- Integrate Modes and Increase Accessibility
- Modernize Infrastructure
- Achieve Vision Zero
- Make Global Connections
- Strengthen Security and Cybersecurity, and Enhance Emergency Preparedness
- Support LRP Principles



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## 4. Network Analysis

The CMP transportation network is represented on the region's INRIX road network where travel time data is available to help identify congested locations. Although congestion is analyzed and mapped by roadway segment across the network using congestion and other CMP objective measures, further analysis is conducted by aggregating road segments by corridor facility, transit facility and intersection to analyze peak travel time and planning time vehicle and volume delays, and transit ridership delays.

### 4.1 Selecting Focus Roadway Corridor Facilities

Analyzing congestion at the roadway corridor facility level, rather than by roadway segment, can give a better understanding of why some roadway corridors are performing better than others, and enables congestion to be tracked over time. Focus roadway corridor facilities are identified based on locations with high congestion using TTI, PTI, and other congestion performance measures, and that are within the CMP congested corridor, subcorridor, and emerging growth corridor areas. There are 336 focus roadway corridor facilities in the DVRPC region – 205 in Pennsylvania and 131 in New Jersey (see Figure 22). These facilities are used to assist in prioritizing congested locations and developing a set of focused strategies to manage congestion (see Chapter 4, section 7). Facility limits are delineated based on where there are breaks between congested corridor and subcorridor areas, and between major interchanges, and major arterial roadways. Ramps are not included in facilities mainly due to lack of traffic volume data to analyze delays, but mainline merge roadways that typically contain volumes are included, such as ramps connecting I-476 to I-95 in Delaware County, or NJ 42 to I-295 in Camden County.

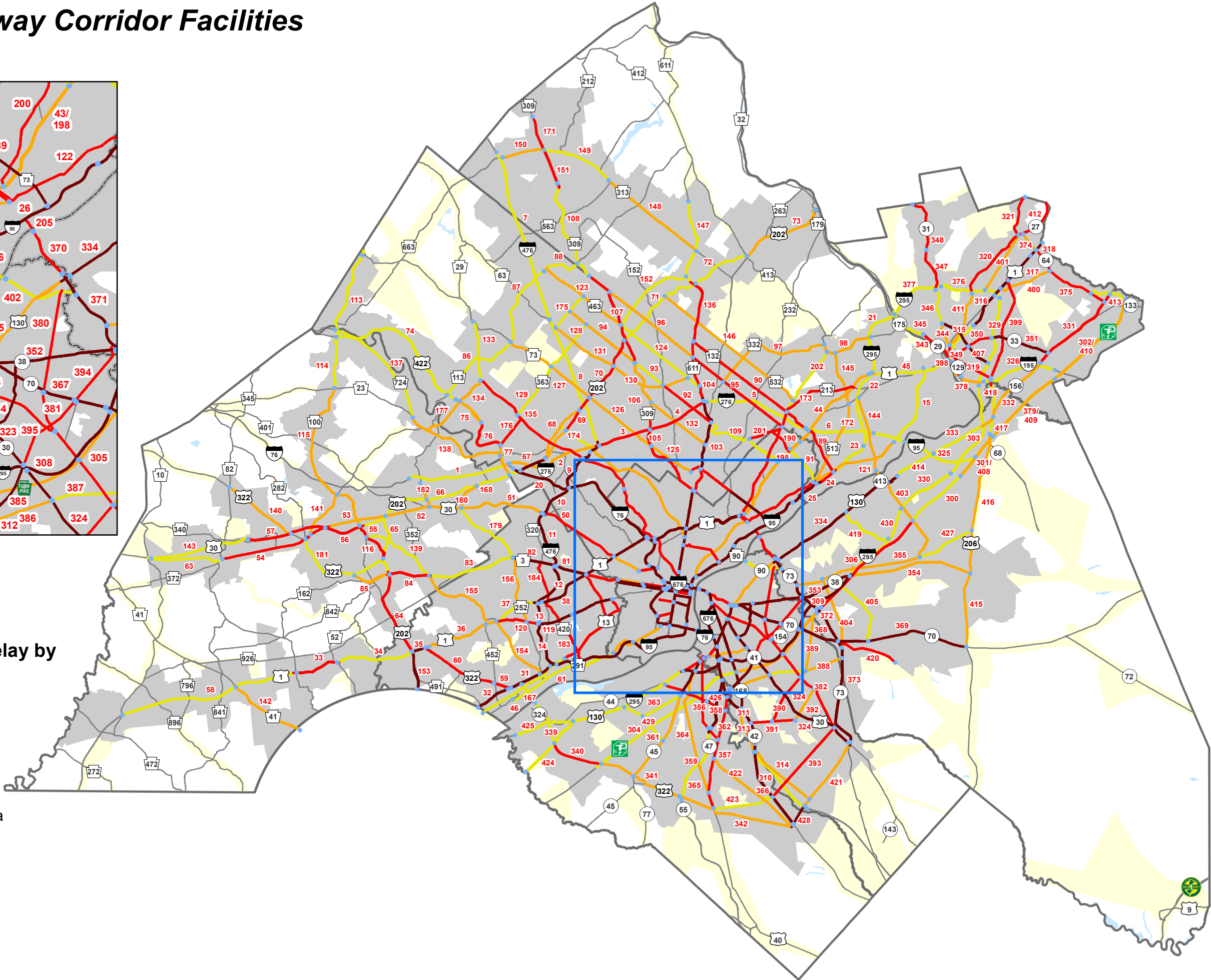
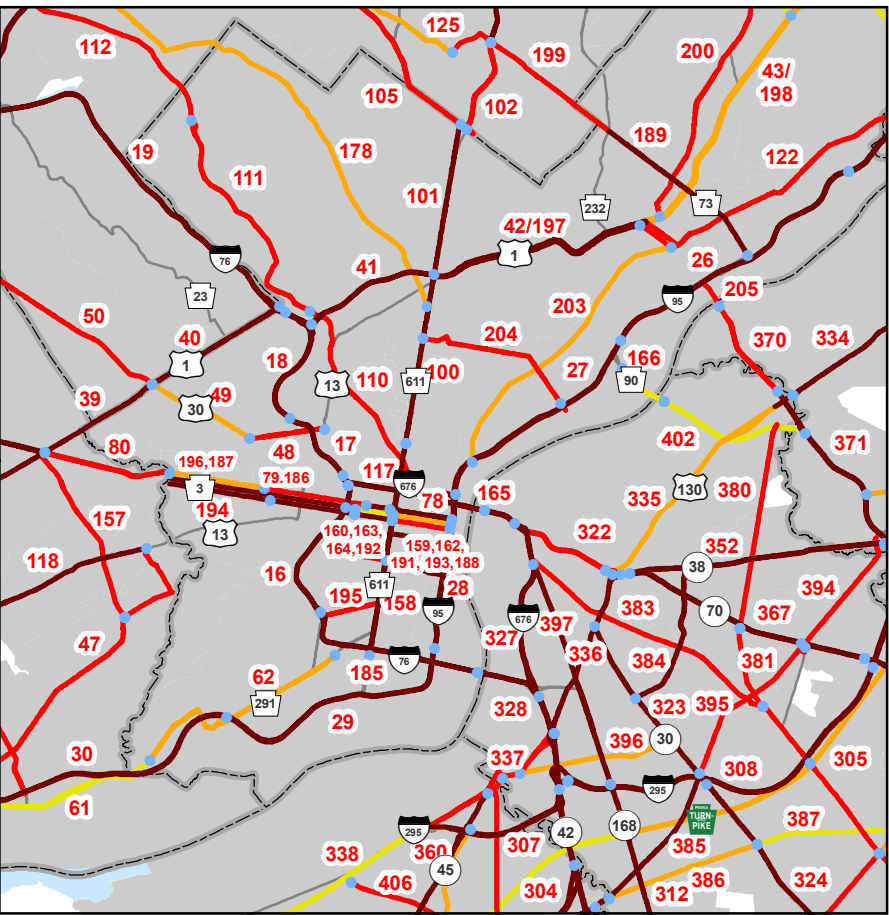
Peak vehicle and volume delay measures for both travel times and planning times are calculated from the INRIX travel time and DOT traffic volume data, then totaled by facility and divided by the facility length, and ranked separately for the Pennsylvania and New Jersey portions of the DVRPC region from most to least in delay, for both measures. The delay is divided, or normalized, by facility length to get a per mile measure, since longer facilities tend to over-represent delay. For example, Ridge Pike from I-476 to PA 29 (CMP facility 135) in Montgomery County is 20 miles, while US 1 (Roosevelt Boulevard) from PA 611 to US 13 (CMP facility 42) in Philadelphia is only 9.5 miles. Facility mileage is the total miles in each direction of vehicle travel, regardless of the number of through lanes. The focus roadway corridor facilities are symbolized by volume delay in quartiles separately for the Pennsylvania and New Jersey subregions, with brown locations being the most delayed and yellow the least.

Tables 6 and 7 contain a list of the focus roadway corridor facilities in the Pennsylvania and New Jersey portions of the DVRPC region, respectively, sorted in ascending order by county and roadway name, and ranked by both peak average travel time vehicle and volume delay with a rank of 1 being the most delayed. The delay rankings are color coded by quartiles from the most to least in delay, with brown being the most delayed and yellow the least. The facility mapping label identifier can be cross-referenced between Figure 22 and tables 6 and 7 to identify rankings and other facility information. Most of the facilities have more delay during the PM peak hour. There are a few with higher delay during the AM peak hour, which are noted in the "AM/PM Highest Delay" column. Vehicle delays are measured in seconds, while volume delays are measured in hours. Although congestion measures are of primary importance for the CMP, they are not the sole consideration in ranking facilities, nor the only factors used to influence investment decisions. Additional factors to consider are the other CMP objective measures drawn from the Long-Range Plan, and are used to help select priority congested corridor and subcorridor areas (see Chapter 4, section 8) and to identify strategies to mitigate congestion (see Chapter 4, section 9). Other considerations are the *Plan-TIP Project Evaluation Criteria* (DVRPC Publication #23128), and broader Plan

goals, such as Vision Zero and net zero greenhouse gases (GHG). The CMP objective measure score totals for all segments that are part of the facility are averaged to derive a CMP objective score by facility and it is ranked in comparison to the other facilities. Both the score and ranking are listed for each facility along with the other delay information for that facility.

The focus roadway corridor facilities delay measures and recommendations should be considered in DVRPC corridor and other planning studies, for evaluating before-and-after performance tracking, trending performance over time, and could be added to the *Plan-TIP Project Evaluation Criteria*. Improvement recommendations will need to be weighed against regional priorities and the region's extreme funding constraint.

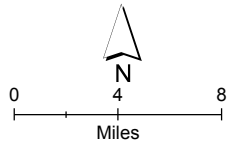
**Figure 22: Focus Roadway Corridor Facilities**



- 11 Focus Roadway ID
- Focus Roadway Start/End Point

**Focus Roadway Corridor Volume Delay by Quartile**

- Most Delayed
- Somewhat Delayed
- Somewhat Not Delayed
- Least Delayed
- Congested Corridor and Subcorridor Area
- Emerging Growth Corridor Area



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**Table 6:**  
**Focus Roadway Corridor Facilities in the Pennsylvania Portion of the DVRPC Region: Peak Travel Time Vehicle and Volume Delay (Sorted by County and Roadway Name)**

Map ID	Roadway	From Limit	To Limit	Miles	Limited Access	County	Peak Hour Travel Time Vehicle Delay (sec/mi)					Peak Hour Travel Time Volume Delay (hr/mi) (hh:mm:ss)					CMP Obj. Score	CMP Obj. Score Rank	
							AM Peak Delay	PM Peak Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	AADT	AM Peak Volume Delay	PM Peak Volume Delay	Highest Peak Volume Delay			AM/PM Highest Delay
146	Bristol Rd	PA 532	US 202 Pky	25.66	No	Bucks	10.7	17.2	17.2	PM	106	143	12,467	1:30:38	3:12:09	3:12:09	PM	1.92	203
6	I-276 PA Tpk	US 1	I-95	10.60	Yes	Bucks	0.0	0.0	0.0	AM	202	201	34,668	0:00:21	0:00:06	0:00:21	AM	2.98	172
21	I-295	PA 29 (Delaware River)	US 1	11.46	Yes	Bucks	0.9	0.1	0.9	AM	187	191	49,080	0:21:38	0:04:30	0:21:38	AM	2.14	200
22	I-295	US 1	I-95	12.45	Yes	Bucks	0.1	0.0	0.1	AM	200	199	60,807	0:02:44	0:01:44	0:02:44	AM	4.12	135
25	I-95	PA 63	Academy Rd	5.43	Yes	Bucks	0.9	8.0	8.0	PM	163	50	131,561	1:11:11	13:30:11	13:30:11	PM	6.10	72
24	I-95	PA 132 (Street Rd)	PA 63	3.22	Yes	Bucks	0.7	5.9	5.9	PM	174	87	97,780	0:40:14	7:12:08	7:12:08	PM	5.26	102
23	I-95	I-276 PA Tpk	PA 132 (Street Rd)	6.09	Yes	Bucks	0.0	1.2	1.2	PM	186	175	88,959	0:00:41	1:20:09	1:20:09	PM	4.37	128
169	I-95	I-276 PA Tpk	PA-NJ State Line	4.70	Yes	Bucks	0.1	0.1	0.1	PM	197	198	33,164	0:02:03	0:03:42	0:03:42	PM	3.44	157
89	PA 132 (Street Rd)	I-95	US 1	7.45	No	Bucks	8.4	29.2	29.2	PM	69	55	36,270	2:27:58	12:26:24	12:26:24	PM	5.62	88
90	PA 132 (Street Rd)	US 1	PA 611 (Easton Rd)	22.83	No	Bucks	11.1	23.3	23.3	PM	85	62	33,525	3:57:43	10:39:21	10:39:21	PM	5.33	101
151	PA 309	Bethlehem Pk	PA 663 (John Fries Hwy)/PA 113	6.29	No	Bucks	5.3	19.2	19.2	PM	102	69	41,227	2:03:18	9:38:43	9:38:43	PM	3.67	149
171	PA 309	PA 663/PA 313	Cherry Rd	5.46	No	Bucks	0.9	11.5	11.5	PM	144	100	39,523	0:19:55	5:40:12	5:40:12	PM	3.56	154
148	PA 313	PA 611	PA 563	16.78	No	Bucks	17.1	22.3	22.3	PM	90	117	17,104	2:46:58	4:35:47	4:35:47	PM	2.20	197
149	PA 313	PA 563	PA 309	12.03	No	Bucks	10.2	13.0	13.0	PM	131	164	12,752	1:10:22	1:55:28	1:55:28	PM	2.19	198
98	PA 332	PA 413 (Newtown Bypass)	I-295	8.86	No	Bucks	4.8	8.5	8.5	PM	159	138	32,460	1:26:33	3:23:54	3:23:54	PM	2.81	181
97	PA 332	County Line Rd	PA 413 (Newtown Bypass)	19.41	No	Bucks	6.9	14.2	14.2	PM	124	149	16,267	1:11:14	2:57:29	2:57:29	PM	3.10	167
145	PA 413	US 1 Bus (Lincoln Hwy)	PA 332	8.65	No	Bucks	12.2	25.9	25.9	PM	77	111	15,592	1:49:44	5:02:02	5:02:02	PM	6.49	62
144	PA 413	PA-NJ State Line	US 1 Bus (Lincoln Hwy)	12.58	No	Bucks	4.1	11.9	11.9	PM	137	148	19,856	0:56:52	2:58:50	2:58:50	PM	5.47	94
172	PA 513	US 13	US 1 (Lincoln Hwy)	12.88	No	Bucks	15.4	21.7	21.7	PM	91	137	11,250	1:49:21	3:25:19	3:25:19	PM	3.60	152
202	PA 532 (Buck Rd)	PA 213 (Bridgetown Pk)	PA 332 (Newtown Byp)	10.87	No	Bucks	9.7	12.6	12.6	PM	134	160	16,242	1:29:06	2:27:26	2:27:26	PM	2.73	188
173	PA 532/PA 213	PA 132 (Street Rd)	US 1	11.81	No	Bucks	15.5	27.3	27.3	PM	72	101	13,581	2:23:00	5:30:23	5:30:23	PM	3.63	151
136	PA 611	PA 132 (Street Rd)	US 202 Pkwy	9.57	No	Bucks	6.6	14.9	14.9	PM	120	88	37,280	2:21:05	6:52:03	6:52:03	PM	4.47	127
147	PA 611	US 202 Pkwy	Stump Rd	14.07	No	Bucks	4.7	7.0	7.0	PM	167	172	23,981	0:44:20	1:26:44	1:26:44	PM	2.74	187
150	PA 663 (John Fries Hwy)	PA 309	I-476 NE Ext	6.72	No	Bucks	7.9	15.4	15.4	PM	116	129	19,281	1:31:03	3:46:30	3:46:30	PM	2.92	174
44	US 1	Old Lincoln Hwy	I-295	15.40	No	Bucks	0.8	3.7	3.7	PM	177	150	57,696	0:39:39	2:56:09	2:56:09	PM	4.76	117
45	US 1	I-295	PA-NJ State Line	12.66	Yes	Bucks	0.2	0.8	0.8	PM	190	187	53,181	0:06:47	0:32:03	0:32:03	PM	3.43	158
121	US 13	I-95	PA 63	14.28	No	Bucks	9.6	14.3	14.3	PM	123	153	16,777	1:22:47	2:44:06	2:44:06	PM	5.61	89
15	US 13	US 1	I-95	12.97	No	Bucks	0.2	0.5	0.5	PM	192	195	20,603	0:02:14	0:07:13	0:07:13	PM	3.91	142
73	US 202	PA 413	PA 32	13.87	No	Bucks	9.9	12.8	12.8	PM	133	152	16,783	1:37:25	2:46:36	2:46:36	PM	2.29	195
72	US 202	PA 611	PA 413	9.45	No	Bucks	3.1	2.7	3.1	AM	180	186	17,389	0:31:04	0:35:39	0:35:39	PM	2.91	175
152	US 202 Business	PA 611	PA 309	13.83	No	Bucks	14.8	15.2	15.2	PM	118	159	12,408	1:49:26	2:29:32	2:29:32	PM	4.62	119
95	County Line Rd	PA 532	PA 611	17.44	No	Bucks, Montgomery	8.9	19.3	19.3	PM	101	92	24,217	2:11:29	6:20:37	6:20:37	PM	3.73	147
96	County Line Rd	PA 611	PA 309	16.37	No	Bucks, Montgomery	10.4	18.6	18.6	PM	103	136	15,456	1:29:35	3:29:49	3:29:49	PM	3.20	165
5	I-276 PA Tpk	PA 611 (Hatboro)	US 1	16.77	Yes	Bucks, Montgomery	0.2	1.6	1.6	PM	185	173	70,724	0:09:08	1:24:08	1:24:08	PM	4.01	137
108	PA 309	Bergey Rd	PA 663/PA 313	16.36	No	Bucks, Montgomery	0.9	0.8	0.9	AM	188	189	38,222	0:21:14	0:23:14	0:23:14	PM	2.06	202
71	US 202 Pkwy	PA 309	PA 611	15.05	No	Bucks, Montgomery	3.2	6.2	6.2	PM	171	170	20,964	0:37:00	1:35:50	1:35:50	PM	2.87	178
1	I-76 PA Tpk	PA 29	I-76 (Valley Forge)	15.44	Yes	Chester	0.0	0.0	0.0	PM	203	203	36,852	0:00:00	0:00:12	0:00:12	PM	2.45	192
116	PA 100	US 30 Bypass	US 202	6.33	Yes	Chester	5.8	17.2	17.2	PM	107	57	40,208	2:59:55	11:13:16	11:13:16	PM	4.49	124
115	PA 100	Ridge Rd	US 30 Bypass	26.44	No	Chester	7.5	11.6	11.6	PM	142	119	22,824	1:58:00	4:31:38	4:31:38	PM	2.78	183
114	PA 100	US 422	Ridge Rd	9.09	No	Chester	7.3	5.5	7.3	AM	166	179	18,483	1:16:01	1:14:28	1:16:01	AM	2.14	200
141	PA 113	PA 100	US 30 Business	7.89	No	Chester	16.1	15.0	16.1	AM	112	130	18,914	3:13:17	3:44:34	3:44:34	PM	2.64	190
180	PA 252	US 30	US 202	4.64	No	Chester	13.6	12.2	13.6	AM	126	141	21,104	2:49:21	3:16:15	3:16:15	PM	5.89	77
182	PA 29	US 30	I-76 PA Tpk	4.02	No	Chester	8.4	9.5	9.5	PM	155	139	29,440	2:22:27	3:22:32	3:22:32	PM	4.19	133
84	PA 3 (West Chester Pk)	PA 352	US 202	6.61	No	Chester	12.6	15.6	15.6	PM	114	84	35,942	4:31:32	7:15:03	7:15:03	PM	4.14	134
85	PA 3 (West Chester Pk)	US 202	US 322 Bus (High St)	6.03	No	Chester	6.9	15.0	15.0	PM	119	135	17,321	0:55:09	3:36:21	3:36:21	PM	5.41	98
139	PA 352/SR 2022 (Boot Rd)	Pottstown Pk	PA 3	12.21	No	Chester	10.9	10.9	10.9	AM	149	165	13,364	1:28:52	1:51:42	1:51:42	PM	2.44	193
142	PA 41	US 1	PA-DE State Line	12.29	No	Chester	14.5	20.8	20.8	PM	97	123	17,460	2:23:39	4:20:08	4:20:08	PM	2.96	173
137	PA 724	PA 100	PA 23	18.35	No	Chester	8.0	10.6	10.6	PM	152	167	12,494	0:58:14	1:41:00	1:41:00	PM	3.03	171
33	US 1	PA 82 (Unionville Rd)	PA 52 (Kennett Pk) South	6.94	No	Chester	2.6	11.5	11.5	PM	143	96	36,186	1:02:00	5:52:06	5:52:06	PM	3.22	164
58	US 1	PA 10	PA 82 (Unionville Rd)	28.04	Yes	Chester	0.0	0.0	0.0	AM	204	204	29,001	0:00:01	0:00:00	0:00:01	AM	2.15	199
66	US 202	US 30	PA 29	8.75	Yes	Chester	0.1	0.2	0.2	PM	193	192	91,493	0:05:45	0:14:05	0:14:05	PM	3.04	170
65	US 202	PA 3	US 30	9.69	Yes	Chester	0.0	0.1	0.1	PM	199	193	53,751	0:01:44	0:08:25	0:08:25	PM	3.25	163
52	US 30	PA 252 (Leopard Rd)	US 202	11.63	No	Chester	15.0	22.5	22.5	PM	89	104	18,499	2:48:18	5:15:08	5:15:08	PM	4.61	120

**Table 6  
Continued**

Map ID	Roadway	From Limit	To Limit	Miles	Limited Access	County	Peak Hour Travel Time Vehicle Delay (sec/mi)					Peak Hour Travel Time Volume Delay (hr/mi) (hh:mm:ss)					CMP Obj. Score	CMP Obj. Score Rank	
							AM Peak Delay	PM Peak Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	AADT	AM Peak Volume Delay	PM Peak Volume Delay	Highest Peak Volume Delay			AM/PM Highest Delay
54	US 30 Business	US 30 Bypass	PA 82 (Coatesville)	17.29	No	Chester	12.6	36.1	36.1	PM	47	91	14,118	1:45:57	6:30:00	6:30:00	PM	6.96	53
53	US 30 Business	US 202	US 30 Bypass	9.31	No	Chester	8.1	19.6	19.6	PM	100	124	16,073	1:18:06	4:17:23	4:17:23	PM	5.05	108
63	US 30 Business	PA 82 (Coatesville)	PA 10	11.82	No	Chester	1.1	8.0	8.0	PM	161	177	11,550	0:07:14	1:18:01	1:18:01	PM	3.17	166
56	US 30 Bypass	PA 100	US 30 Business	5.25	Yes	Chester	0.2	13.4	13.4	PM	127	80	45,400	0:04:42	7:33:00	7:33:00	PM	5.94	74
57	US 30 Bypass	US 30 Business	Reeceville Rd	12.62	Yes	Chester	11.3	5.8	11.3	AM	146	86	66,757	7:12:43	4:33:40	7:12:43	AM	3.96	139
55	US 30 Bypass	US 202	PA 100	4.13	Yes	Chester	2.0	2.0	2.0	PM	184	182	36,567	0:41:28	0:54:53	0:54:53	PM	4.95	111
143	US 30 Bypass	Reeceville Rd	PA 10	15.21	Yes	Chester	0.2	0.2	0.2	PM	194	196	37,115	0:04:42	0:06:38	0:06:38	PM	2.69	189
140	US 322	PA 82	US 30 Business	12.06	No	Chester	15.1	16.4	16.4	PM	111	140	15,686	2:30:05	3:17:43	3:17:43	PM	2.77	184
181	US 322	US 202	US 30 Business	16.64	No	Chester	5.4	9.4	9.4	PM	157	169	12,970	0:43:29	1:37:51	1:37:51	PM	2.36	194
179	PA 252	PA 3 (Newtown Rd)	US 30	11.66	No	Chester, Delaware	11.6	10.8	11.6	AM	141	156	22,369	1:57:33	2:35:16	2:35:16	PM	2.80	182
34	US 1	PA 52 (Kennett Pk) South	US 202	12.00	No	Chester, Delaware	3.5	6.2	6.2	PM	172	161	31,356	1:04:43	2:24:42	2:24:42	PM	3.26	162
51	US 30	I-476	PA 252 (Leopard Rd)	13.34	No	Chester, Delaware	13.7	20.1	20.1	PM	98	110	18,410	2:40:20	5:03:27	5:03:27	PM	5.52	91
64	US 322/US 202	US 1	PA 3	13.56	No	Chester, Delaware	7.3	14.1	14.1	PM	125	74	48,505	3:22:04	8:20:00	8:20:00	PM	3.07	168
138	PA 23	PA 724	PA 422	16.90	No	Chester, Montgomery	18.4	27.1	27.1	PM	74	106	13,087	2:37:41	5:10:23	5:10:23	PM	4.33	129
168	US 202	PA 29	I-76	14.10	Yes	Chester, Montgomery	0.1	0.2	0.2	PM	196	194	93,787	0:01:55	0:08:03	0:08:03	PM	3.73	147
118	Baltimore Ave	US 13	Bishop Ave	6.30	No	Delaware	22.2	74.8	74.8	PM	13	38	18,476	3:42:49	16:11:07	16:11:07	PM	8.32	24
119	Baltimore Pk	Bishop Ave	I-476	5.73	No	Delaware	24.6	64.6	64.6	PM	16	23	30,874	7:09:54	24:44:51	24:44:51	PM	7.91	31
120	Baltimore Pk	I-476	US 1	6.47	No	Delaware	24.7	32.4	32.4	PM	59	90	18,573	3:54:53	6:35:07	6:35:07	PM	5.94	74
11	I-476	US 30 (Villanova)	US 3 (Broomall)	9.14	Yes	Delaware	1.4	30.3	30.3	PM	63	16	98,431	1:18:26	35:27:38	35:27:38	PM	6.25	69
14	I-476	Baltimore Pk (Swarthmore)	I-95	7.36	Yes	Delaware	18.6	29.5	29.5	PM	65	17	83,463	15:18:24	30:09:52	30:09:52	PM	6.99	50
13	I-476	US 1	Baltimore Pk (Swarthmore)	3.40	Yes	Delaware	23.2	26.2	26.2	PM	75	20	83,725	18:40:19	27:12:07	27:12:07	PM	6.23	70
12	I-476	US 3 (Broomall)	US 1	7.32	Yes	Delaware	8.6	24.6	24.6	PM	82	24	78,823	6:24:35	23:23:22	23:23:22	PM	5.11	105
31	I-95	I-476	US 322	7.59	Yes	Delaware	7.1	21.5	21.5	PM	93	11	193,746	13:40:18	56:55:43	56:55:43	PM	8.42	21
32	I-95	US 322	PA-DE State Line	5.50	Yes	Delaware	10.5	23.5	23.5	PM	84	15	117,627	13:11:41	36:44:18	36:44:18	PM	7.55	39
157	Lansdowne Ave	US 13	PA 3	7.59	No	Delaware	33.2	56.8	56.8	PM	24	53	17,857	6:11:22	13:00:43	13:00:43	PM	5.85	78
156	PA 252	Baltimore Pk	PA 3	10.49	No	Delaware	16.2	24.6	24.6	PM	83	105	14,290	2:27:58	5:12:38	5:12:38	PM	5.83	80
61	PA 291	US 13	I-95	18.12	No	Delaware	2.8	2.5	2.8	AM	181	188	14,266	0:20:17	0:26:48	0:26:48	PM	5.11	105
80	PA 3	63rd St (Cobbs Creek Pkwy)	US 1	5.20	No	Delaware	22.7	33.3	33.3	PM	56	61	25,941	5:52:15	10:50:25	10:50:25	PM	7.66	35
81	PA 3 (West Chester Pk)	US 1	I-476	5.05	No	Delaware	21.7	42.8	42.8	PM	36	32	36,085	7:46:57	20:37:34	20:37:34	PM	7.33	47
82	PA 3 (West Chester Pk)	I-476	PA 252	6.54	No	Delaware	31.3	38.6	38.6	PM	42	45	29,028	9:02:56	14:18:05	14:18:05	PM	5.60	90
184	PA 320 (Sprowl Rd)	US 1	PA 3 (West Chester Pk)	6.49	No	Delaware	22.8	29.4	29.4	PM	67	67	29,578	5:47:33	9:51:57	9:51:57	PM	4.49	124
154	PA 352	I-95	US 1	11.05	No	Delaware	8.4	16.5	16.5	PM	110	121	22,771	1:54:25	4:22:16	4:22:16	PM	5.92	76
183	PA 420/PA 320 (Sprowl Rd)	I-95	US 1	11.31	No	Delaware	15.6	32.2	32.2	PM	61	83	19,851	2:33:56	7:20:42	7:20:42	PM	6.96	53
35	US 1	US 202	US 322	2.40	No	Delaware	17.2	36.6	36.6	PM	46	35	37,075	6:29:36	17:51:39	17:51:39	PM	6.48	63
38	US 1	I-476	PA 3	9.03	No	Delaware	18.5	37.5	37.5	PM	44	51	28,679	5:11:57	13:23:31	13:23:31	PM	6.94	55
36	US 1	US 322	PA 352	11.62	No	Delaware	3.8	9.8	9.8	PM	154	134	31,284	1:03:51	3:37:10	3:37:10	PM	5.07	107
37	US 1	PA 352	I-476	7.72	Yes	Delaware	1.9	3.7	3.7	PM	176	166	41,057	0:39:28	1:45:24	1:45:24	PM	4.28	131
47	US 13	I-95	Baltimore Ave	13.92	No	Delaware	15.8	32.2	32.2	PM	60	79	19,226	2:54:44	7:33:35	7:33:35	PM	7.36	45
46	US 13	PA-DE State Line	I-95	15.38	No	Delaware	7.0	16.7	16.7	PM	109	155	11,581	0:51:57	2:38:35	2:38:35	PM	5.78	83
153	US 202	US 1	State Line Rd	6.04	No	Delaware	9.8	25.0	25.0	PM	81	39	49,856	4:51:53	15:49:11	15:49:11	PM	3.05	169
60	US 322	PA 452	US 1	12.38	No	Delaware	20.6	32.7	32.7	PM	58	65	26,581	5:07:05	10:00:39	10:00:39	PM	5.22	103
59	US 322	I-95	PA 452	2.49	No	Delaware	10.1	12.3	12.3	PM	135	89	41,056	4:16:19	6:39:49	6:39:49	PM	3.88	144
167	US 322 (Commodore Barry Br)	I-95	PA-NJ State Line	3.30	Yes	Delaware	0.0	0.2	0.2	PM	195	197	37,000	0:00:00	0:05:39	0:05:39	PM	4.50	123
83	PA 3 (West Chester Pk)	PA 252	PA 352	13.31	No	Delaware, Chester	4.4	7.7	7.7	PM	164	154	29,560	1:09:38	2:43:15	2:43:15	PM	3.60	152
155	PA 352	US 1	PA 3	12.95	No	Delaware, Chester	10.3	20.9	20.9	PM	96	132	12,873	1:19:14	3:42:04	3:42:04	PM	3.32	161
30	I-95	PA 291 (Philadelphia Airport)	I-476	14.49	Yes	Delaware, Philadelphia	1.5	10.7	10.7	PM	151	47	123,673	1:37:49	14:07:44	14:07:44	PM	6.19	71
4	I-276 PA Tpk	PA 309 (Fort Washington)	PA 611 (Hatboro)	8.88	Yes	Montgomery	7.2	8.6	8.6	PM	158	72	79,260	5:35:44	8:36:17	8:36:17	PM	4.29	130
3	I-276 PA Tpk	I-476 PA Tpk NE Ext (Plymouth Meeting)	PA 309 (Fort Washington)	9.13	Yes	Montgomery	3.6	6.5	6.5	PM	170	81	90,465	3:09:49	7:24:41	7:24:41	PM	3.79	145
2	I-276 PA Tpk	I-76 (Valley Forge)	I-476 PA Tpk NE Ext (Plymouth Meeting)	15.02	Yes	Montgomery	0.1	6.2	6.2	PM	173	112	52,479	0:03:09	5:01:08	5:01:08	PM	4.49	124
9	I-476	I-276 PA Tpk (Plymouth Meeting)	I-76 (Conshohocken)	8.51	Yes	Montgomery	2.7	13.1	13.1	PM	130	28	136,636	3:53:25	22:11:48	22:11:48	PM	6.30	66
8	I-476 PA Tpk NE Ext	PA 63 (Sumneytown Pk)	I-276 PA Tpk (Plymouth Meeting)	21.21	Yes	Montgomery	0.7	0.1	0.7	AM	191	190	55,522	0:21:40	0:05:38	0:21:40	AM	2.77	184
19	I-76	US 1 (City Ave)	I-476	16.21	Yes	Montgomery	29.8	50.5	50.5	PM	28	7	135,304	40:17:20	88:16:42	88:16:42	PM	8.59	15
20	I-76	I-476	I-76 PA Tpk	8.99	Yes	Montgomery	21.9	41.2	41.2	PM	38	10	123,308	27:13:27	65:37:32	65:37:32	PM	8.51	17

**Table 6  
Continued**

Map ID	Roadway	From Limit	To Limit	Miles	Limited Access	County	Peak Hour Travel Time Vehicle Delay (sec/mi)					Peak Hour Travel Time Volume Delay (hr/mi) (hh:mm:ss)					CMP Obj. Score	CMP Obj. Score Rank	
							AM Peak Delay	PM Peak Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	AADT	AM Peak Volume Delay	PM Peak Volume Delay	Highest Peak Volume Delay			AM/PM Highest Delay
174	Johnson Hwy/Plymouth Rd	US 202 (Markely St)	Germantown Pk	6.06	No	Montgomery	5.3	6.7	6.7	PM	169	184	8,276	0:24:52	0:43:35	0:43:35	PM	3.37	160
130	Norristown Rd	PA 463	US 202	12.71	No	Montgomery	15.2	17.6	17.6	PM	105	142	14,752	2:14:23	3:12:26	3:12:26	PM	2.88	176
87	PA 113	PA 73 (Skipack Pk)	Allentown Rd	13.37	No	Montgomery	7.5	11.2	11.2	PM	147	162	14,570	1:12:22	2:17:52	2:17:52	PM	2.58	191
86	PA 113	US 422	PA 73 (Skipack Pk)	14.12	No	Montgomery	6.1	8.0	8.0	PM	162	181	10,398	0:36:31	1:02:42	1:02:42	PM	2.84	179
134	PA 29	Ridge Pk	US 422	4.90	No	Montgomery	5.2	14.4	14.4	PM	121	144	19,521	0:49:58	3:07:22	3:07:22	PM	4.04	136
133	PA 29	PA 73 (Skipack Pk)	Ridge Pk	9.43	No	Montgomery	13.0	10.0	13.0	AM	132	174	10,297	1:22:11	1:22:01	1:22:11	AM	2.75	186
105	PA 309	PA 611	I-276	13.44	Yes	Montgomery	1.8	15.2	15.2	PM	117	75	57,358	0:51:20	7:50:53	7:50:53	PM	4.81	115
106	PA 309	I-276	PA 63	11.00	Yes	Montgomery	1.0	3.7	3.7	PM	178	151	60,533	0:37:35	2:50:39	2:50:39	PM	2.83	180
129	PA 363 (S Valley Forge Rd)	PA 73 (Skipack Pk)	Ridge Pk	9.20	No	Montgomery	7.8	10.0	10.0	PM	153	168	13,746	1:01:19	1:40:37	1:40:37	PM	2.88	176
128	PA 363 (S Valley Forge Rd)	PA 63 (Welsh Rd)	PA 73 (Skipack Pk)	8.57	No	Montgomery	3.6	6.9	6.9	PM	168	180	13,451	0:27:32	1:08:14	1:08:14	PM	3.95	140
176	PA 363 (Trooper Rd)	Ridge Pk	US 422	5.15	No	Montgomery	13.9	28.6	28.6	PM	70	85	23,651	2:56:36	7:13:06	7:13:06	PM	5.19	104
123	PA 463	PA 113	PA 309	14.67	No	Montgomery	14.3	25.8	25.8	PM	79	118	12,069	1:39:18	4:34:49	4:34:49	PM	3.78	146
124	PA 463	PA 309	PA 611	15.24	No	Montgomery	6.7	10.8	10.8	PM	150	163	14,956	1:00:40	2:04:38	2:04:38	PM	1.88	204
103	PA 611	PA 73	I-276	11.43	No	Montgomery	19.9	44.4	44.4	PM	35	40	29,666	5:36:19	15:43:12	15:43:12	PM	7.34	46
102	PA 611	PA 309	PA 73	3.86	No	Montgomery	10.1	22.6	22.6	PM	88	82	25,630	2:33:35	7:22:58	7:22:58	PM	5.43	97
92	PA 63	PA 611 (Easton Rd)	PA 152 (Limekiln Pk)	9.43	No	Montgomery	12.2	22.9	22.9	PM	87	97	19,046	2:10:55	5:44:02	5:44:02	PM	5.68	87
94	PA 63	PA 309	PA 463 (Forty Foot Rd)	12.74	No	Montgomery	9.6	29.3	29.3	PM	68	103	15,454	1:18:10	5:19:25	5:19:25	PM	5.80	81
93	PA 63	PA 152 (Limekiln Pk)	PA 309	5.59	No	Montgomery	9.7	11.8	11.8	PM	138	176	9,915	0:51:10	1:19:59	1:19:59	PM	3.47	156
175	PA 63/PA 463 (Forty Food Rd)	Sumneytown Pk	PA 463 (Cowpath Rd)	6.46	No	Montgomery	13.4	12.9	13.4	AM	128	157	14,951	1:51:53	2:33:47	2:33:47	PM	3.92	141
126	PA 73	PA 309	US 202	12.18	No	Montgomery	18.2	21.5	21.5	PM	92	127	15,191	2:42:21	4:06:32	4:06:32	PM	3.90	143
125	PA 73	SR 2056 (Washington Lane)	PA 309	7.54	Yes	Montgomery	17.0	21.3	21.3	PM	94	131	12,808	2:14:26	3:44:06	3:44:06	PM	4.79	116
127	PA 73	US 202	PA 113	15.07	No	Montgomery	12.6	16.1	16.1	PM	113	146	15,131	1:53:35	3:03:27	3:03:27	PM	3.41	159
112	Ridge Ave	Northwestern Ave (County Line)	I-476	8.54	No	Montgomery	9.6	26.0	26.0	PM	76	73	25,815	2:31:07	8:25:28	8:25:28	PM	5.34	99
135	Ridge Pk	I-476	PA 29	20.47	No	Montgomery	12.8	25.1	25.1	PM	80	98	18,149	2:28:51	5:42:02	5:42:02	PM	5.78	83
132	SR 2017 (Susquehanna Rd)	PA 611	PA 309	10.73	No	Montgomery	17.4	17.9	17.9	PM	104	147	12,774	2:15:34	3:02:15	3:02:15	PM	3.64	150
131	Sumneytown Pk	US 202	PA 63 (Forty Foot Rd)	10.76	No	Montgomery	22.6	25.8	25.8	PM	78	107	15,869	3:29:15	5:10:14	5:10:14	PM	4.89	113
67	US 202	I-76	DeKalb St	4.60	No	Montgomery	13.0	40.9	40.9	PM	39	34	39,297	4:33:46	18:52:41	18:52:41	PM	7.06	49
69	US 202 (DeKalb Pk)	Johnson Hwy (202 split)	PA 73 (Skipack Pk)	6.34	No	Montgomery	17.9	27.2	27.2	PM	73	99	15,672	3:01:11	5:40:53	5:40:53	PM	5.45	95
70	US 202 (DeKalb Pk)	PA 73 (Skipack Pk)	PA 309	10.57	No	Montgomery	17.4	19.9	19.9	PM	99	102	21,926	3:34:43	5:19:48	5:19:48	PM	4.96	110
68	US 202 (Markley St)	US 202 (DeKalb Pk)	Swede Rd	9.45	No	Montgomery	12.0	15.6	15.6	PM	115	126	21,088	2:36:12	4:14:05	4:14:05	PM	5.85	78
170	US 202 Dekalb Pk	US 202 (Markley St)	Johnson Hwy Split	4.00	No	Montgomery	8.5	23.0	23.0	PM	86	133	12,422	1:09:18	3:37:16	3:37:16	PM	7.82	32
76	US 422	Egypt Rd	Trooper Rd	6.53	Yes	Montgomery	4.9	11.1	11.1	PM	148	56	77,469	3:37:56	11:46:18	11:46:18	PM	4.87	114
75	US 422	PA 29	Egypt Rd	5.65	Yes	Montgomery	2.4	4.2	4.2	PM	175	113	88,573	1:54:21	4:55:51	4:55:51	PM	5.04	109
77	US 422	Trooper Rd	US 202	4.65	Yes	Montgomery	3.2	1.0	3.2	AM	179	145	92,498	3:03:30	1:00:52	3:03:30	AM	3.97	138
74	US 422	PA 100	PA 29	25.06	Yes	Montgomery	0.9	0.2	0.9	AM	189	185	63,829	0:42:10	0:11:44	0:42:10	AM	3.48	155
7	I-476 PA Tpk NE Ext	PA 663 (John Fries Hwy)	PA 63 (Sumneytown Pk)	27.27	Yes	Montgomery, Bucks	0.0	0.0	0.0	AM	201	202	42,137	0:00:15	0:00:02	0:00:15	AM	1.69	205
88	PA 113	Allentown Rd	PA 309	6.33	No	Montgomery, Bucks	13.6	14.4	14.4	PM	122	171	9,257	1:09:30	1:33:19	1:33:19	PM	4.75	118
107	PA 309	PA 63	Bergey Rd	15.30	No	Montgomery, Bucks	10.5	20.9	20.9	PM	95	66	37,732	3:53:37	9:54:45	9:54:45	PM	4.90	112
104	PA 611	I-276	PA 132 (Street Rd)	9.29	No	Montgomery, Bucks	8.6	17.2	17.2	PM	108	77	34,517	2:56:36	7:43:18	7:43:18	PM	4.59	121
113	PA 100	PA 73	US 422	13.72	No	Montgomery, Chester	0.4	2.4	2.4	PM	182	183	25,412	0:06:15	0:46:59	0:46:59	PM	2.27	196
177	PA 29	PA 23	US 422	6.93	No	Montgomery, Chester	17.0	32.8	32.8	PM	57	120	11,848	1:57:17	4:27:53	4:27:53	PM	5.34	99
10	I-476	I-76 (Conshohocken)	US 30 (Villanova)	5.31	Yes	Montgomery, Delaware	1.2	8.4	8.4	PM	160	41	141,495	1:36:39	15:07:36	15:07:36	PM	5.44	96
50	US 30	US 1 (City Ave)	I-476	13.09	No	Montgomery, Delaware	23.0	36.0	36.0	PM	48	59	25,537	5:24:58	11:10:08	11:10:08	PM	6.38	65
39	US 1	PA 3	US 30 (Girard Ave)	5.11	No	Montgomery, Delaware	21.8	33.9	33.9	PM	54	43	35,854	7:51:26	14:59:52	14:59:52	PM	6.68	57
109	PA 63	US 1	PA 611 (Easton Rd)	14.67	No	Montgomery, Philadelphia	8.9	11.3	11.3	PM	145	158	16,077	1:16:46	2:30:55	2:30:55	PM	5.80	81
199	PA 73	PA 232 (Oxford Ave)	Church Rd	7.79	No	Montgomery, Philadelphia	17.5	33.8	33.8	PM	55	76	18,061	3:07:32	7:43:27	7:43:27	PM	6.51	61
201	Philmont Ave	PA 63 (Red Lion Rd)	Bustleton Ave	5.08	No	Montgomery, Philadelphia	24.7	32.1	32.1	PM	62	94	15,958	3:46:42	6:13:28	6:13:28	PM	6.53	60
40	US 1 (City Ave)	US 30 (Lancaster Ave)	I-76	5.89	No	Montgomery, Philadelphia	44.6	75.0	75.0	PM	12	13	43,195	19:17:39	40:34:17	40:34:17	PM	8.69	14
204	Allegheny Ave	I-95	PA 611 (Broad St)	7.03	No	Philadelphia	23.6	64.3	64.3	PM	17	70	11,648	2:49:50	9:34:34	9:34:34	PM	7.43	44
190	Byberry Rd	US 1 (Roosevelt Blvd)	Philmont Ave	4.26	No	Philadelphia	41.1	62.4	62.4	PM	19	52	16,357	6:51:06	13:10:23	13:10:23	PM	5.74	85
196	Chestnut St	63rd St	44th St	2.00	No	Philadelphia	41.5	38.7	41.5	AM	37	44	15,211	12:05:01	14:30:31	14:30:31	PM	7.26	48
203	Frankford Ave	I-95	US 13	12.24	No	Philadelphia	12.6	34.1	34.1	PM	52	128	8,824	1:11:27	4:04:26	4:04:26	PM	7.50	43
165	I-676 (Ben Franklin Br)	North 5th St	PA-NJ State Line	1.06	Yes	Philadelphia	28.0	14.4	28.0	AM	71	21	98,700	26:51:08	17:45:43	26:51:08	AM	8.02	29

Table 6  
Continued

Map ID	Roadway	From Limit	To Limit	Miles	Limited Access	County	Peak Hour Travel Time Vehicle Delay (sec/mi)					Peak Hour Travel Time Volume Delay (hr/mi) (hh:mm:ss)					CMP Obj. Score	CMP Obj. Rank	
							AM Peak Delay	PM Peak Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	AADT	AM Peak Volume Delay	PM Peak Volume Delay	Highest Peak Volume Delay			AM/PM Highest Delay
117	I-676 (Vine Street Expy)	I-76	I-95	4.06	Yes	Philadelphia	70.9	141.0	141.0	PM	1	1	141,231	87:25:36	252:53:51	252:53:51	PM	11.65	1
17	I-76	I-676 (Vine Street Expy)	US 30 (Girard Ave)	3.39	Yes	Philadelphia	30.0	103.0	103.0	PM	4	2	158,785	43:24:11	197:19:36	197:19:36	PM	10.02	3
18	I-76	US 30 (Girard Ave)	US 1 (City Ave)	5.82	Yes	Philadelphia	79.2	82.6	82.6	PM	8	3	187,396	130:51:58	188:03:20	188:03:20	PM	9.57	5
16	I-76	I-676 (Vine Street Expy)	Passyunk Ave	6.08	Yes	Philadelphia	35.5	61.4	61.4	PM	20	6	120,294	41:23:51	98:03:16	98:03:16	PM	10.41	2
185	I-76	Passyunk Ave	PA-NJ State Line	7.30	Yes	Philadelphia	8.6	11.6	11.6	PM	140	46	98,078	8:14:22	14:12:58	14:12:58	PM	7.52	42
27	I-95	PA 90 (Betsy Ross Bridge)	I-676 (Vine Street Expy)	9.30	Yes	Philadelphia	26.8	63.1	63.1	PM	18	4	208,318	46:39:42	155:46:09	155:46:09	PM	9.89	4
26	I-95	Academy Rd	PA 90 (Betsy Ross Bridge)	11.35	Yes	Philadelphia	47.1	45.2	47.1	AM	32	5	185,896	87:50:27	110:38:39	110:38:39	PM	7.95	30
28	I-95	I-676 (Vine Street Expy)	I-76 (Walt Whitman Bridge)	6.00	Yes	Philadelphia	2.0	29.5	29.5	PM	64	9	144,542	3:14:31	66:29:24	66:29:24	PM	8.34	22
29	I-95	I-76 (Walt Whitman Bridge)	PA 291 (Philadelphia Airport)	9.83	Yes	Philadelphia	2.9	12.0	12.0	PM	136	25	154,048	4:20:42	23:05:12	23:05:12	PM	6.77	56
79	Market St	PA 611 (Broad St)	21st Street	0.43	No	Philadelphia	51.7	93.1	93.1	PM	5	14	16,008	16:17:23	37:10:17	37:10:17	PM	8.21	27
78	Market St	I-95 (Penns Landing)	PA 611 (Broad St)	2.08	No	Philadelphia	82.0	122.5	122.5	PM	2	22	13,668	13:27:48	25:17:01	25:17:01	PM	9.21	8
186	Market St	21st St	44th St	3.89	No	Philadelphia	36.4	57.9	57.9	PM	22	58	14,850	5:33:47	11:11:33	11:11:33	PM	8.97	11
187	Market St	44th St	63rd St	4.01	No	Philadelphia	6.0	34.7	34.7	PM	50	114	10,999	0:33:59	4:55:38	4:55:38	PM	6.99	50
62	PA 291	I-95	I-76	8.75	No	Philadelphia	5.5	7.4	7.4	PM	165	115	50,121	2:57:23	4:47:33	4:47:33	PM	5.97	73
161	PA 3 (Chestnut St)	23rd St	44th St	1.69	No	Philadelphia	22.7	40.5	40.5	PM	40	33	19,141	8:25:45	19:52:56	19:52:56	PM	9.04	10
159	PA 3 (Chestnut St)	Front St	Broad St	1.15	No	Philadelphia	8.6	48.5	48.5	PM	29	116	3,866	0:42:27	4:46:58	4:46:58	PM	8.22	26
160	PA 3 (Chestnut St)	Broad St	23rd St	0.76	No	Philadelphia	0.0	0.0	0.0	PM	205	205	6,922	0:00:00	0:00:00	0:00:00	PM	8.57	16
164	PA 3 (Walnut St)	23rd St	44th St	1.69	No	Philadelphia	31.5	71.1	71.1	PM	14	18	16,524	9:57:19	29:20:56	29:20:56	PM	9.50	6
163	PA 3 (Walnut St)	Broad St	23rd St	0.76	No	Philadelphia	53.0	87.1	87.1	PM	7	31	9,925	9:47:21	20:47:42	20:47:42	PM	8.79	12
162	PA 3 (Walnut St)	Front St	Broad St	1.15	No	Philadelphia	38.7	54.0	54.0	PM	26	71	6,587	5:13:27	9:34:18	9:34:18	PM	8.18	28
100	PA 611 (Broad St)	Girard Ave	US 1	6.77	No	Philadelphia	44.1	92.4	92.4	PM	6	12	35,078	15:02:46	41:16:43	41:16:43	PM	9.28	7
101	PA 611 (Broad St)	US 1	PA 309	6.02	No	Philadelphia	39.7	54.7	54.7	PM	25	27	28,727	12:39:36	22:14:19	22:14:19	PM	7.54	40
188	PA 611 (Broad St)	Washington Ave	Market St	1.91	No	Philadelphia	32.2	65.9	65.9	PM	15	37	20,599	6:32:17	16:41:16	16:41:16	PM	8.27	25
99	PA 611 (Broad St)	Market St	Girard Ave	2.54	No	Philadelphia	38.6	47.6	47.6	PM	30	48	23,127	8:36:21	13:57:35	13:57:35	PM	8.78	13
158	PA 611 (Broad St)	I-76	Washington Ave	3.83	No	Philadelphia	45.4	56.8	56.8	PM	23	36	24,728	10:48:25	17:29:23	17:29:23	PM	7.67	34
189	PA 73 (Cottman Av)	I-95	PA 232 (Oxford Ave)	7.51	No	Philadelphia	27.2	53.7	53.7	PM	27	42	22,382	5:51:33	15:04:08	15:04:08	PM	7.69	33
195	Passyunk Ave	Broad St	I-76	2.26	No	Philadelphia	36.4	75.9	75.9	PM	10	54	12,639	4:51:21	12:53:04	12:53:04	PM	8.43	20
193	Pine St	Front St	Broad St	1.15	No	Philadelphia	39.4	116.2	116.2	PM	3	26	7,772	5:57:17	22:34:18	22:34:18	PM	6.61	58
111	Ridge Ave	US 1	Northwestern Ave (County Line)	10.27	No	Philadelphia	27.1	46.4	46.4	PM	33	78	13,019	3:29:00	7:34:50	7:34:50	PM	5.73	86
110	Ridge Ave	Callowhill St	US 1	8.21	No	Philadelphia	24.1	45.3	45.3	PM	34	95	11,049	2:38:15	6:09:24	6:09:24	PM	6.46	64
166	Route 90 (Betsy Ross Br)	Richmond St	PA-NJ State Line	1.78	Yes	Philadelphia	0.1	0.0	0.1	AM	198	200	22,000	0:01:17	0:00:00	0:01:17	AM	4.28	131
205	Tacony-Palmyra Br	I-95	PA-NJ State Line	1.02	Yes	Philadelphia	5.3	13.3	13.3	PM	129	93	36,772	2:15:12	6:18:20	6:18:20	PM	5.50	92
41	US 1	I-76	PA 611	6.08	Yes	Philadelphia	28.6	75.6	75.6	PM	11	8	84,056	17:38:54	84:09:07	84:09:07	PM	9.20	9
42	US 1 (Roosevelt Blvd)	PA 611	US 13	9.50	No	Philadelphia	27.4	34.2	34.2	PM	51	29	48,462	13:40:27	21:38:09	21:38:09	PM	8.46	18
43	US 1 (Roosevelt Blvd)	US 13	Old Lincoln Hwy	14.42	No	Philadelphia	3.3	9.5	9.5	PM	156	125	34,652	1:09:39	4:17:10	4:17:10	PM	5.50	92
197	US 1 (Roosevelt Blvd) Frontage Rd	PA 611	US 13	8.08	No	Philadelphia	19.7	40.1	40.1	PM	41	30	40,689	7:56:27	21:04:50	21:04:50	PM	8.34	22
198	US 1 (Roosevelt Blvd) Frontage Rd	US 13	I-276 PA Tpk	15.36	No	Philadelphia	5.9	11.6	11.6	PM	139	122	28,152	1:44:45	4:21:45	4:21:45	PM	6.30	66
48	US 30 (Girard Ave)	US 13 (N 33rd St)	Lancaster Ave	2.95	No	Philadelphia	16.8	34.0	34.0	PM	53	64	21,901	4:02:56	10:05:00	10:05:00	PM	8.46	18
49	US 30 (Lancaster Ave)	Girard Ave	US 1 (City Ave)	4.44	No	Philadelphia	22.7	37.2	37.2	PM	45	108	11,365	2:28:14	5:09:30	5:09:30	PM	7.54	40
194	Walnut St	44th St	63rd St	2.01	No	Philadelphia	18.9	79.0	79.0	PM	9	19	13,407	4:46:21	27:19:14	27:19:14	PM	7.65	36
191	Washington Ave	Front St	Broad St	2.32	No	Philadelphia	38.8	61.1	61.1	PM	21	49	17,922	6:45:43	13:41:13	13:41:13	PM	7.62	37
192	Washington Ave	Broad St	Grays Ferry Ave	2.22	No	Philadelphia	30.3	38.6	38.6	PM	43	68	20,104	5:54:46	9:41:25	9:41:25	PM	6.99	50
200	PA 532 (Bustleton Pk)	US 1 Roosevelt Blvd	PA 132 (Street Rd)	17.37	No	Philadelphia, Bucks	9.4	29.4	29.4	PM	66	60	28,366	2:51:16	10:54:00	10:54:00	PM	6.58	59
91	PA 63	I-95	US 1	6.40	Yes	Philadelphia, Bucks	0.2	2.3	2.3	PM	183	178	63,460	0:05:12	1:16:18	1:16:18	PM	4.52	122
122	US 13	PA 63	US 1 (Roosevelt Blvd)	13.70	No	Philadelphia, Bucks	21.5	47.4	47.4	PM	31	63	18,091	3:35:36	10:32:07	10:32:07	PM	7.57	38
178	Germantown Pk	Broad St	I-476 NE Ext	21.32	No	Philadelphia, Montgomery	18.4	35.9	35.9	PM	49	109	11,989	2:05:00	5:08:00	5:08:00	PM	6.29	68

- Most Delayed
- Somewhat Delayed
- Somewhat Not Delayed
- Least Delayed
- AM Delay

Source: DVRPC analysis of 2021 INRIX data

Table 7:

## Focus Roadway Corridor Facilities in the New Jersey Portion of the DVRPC Region: Peak Travel Time Vehicle and Volume Delay (Sorted by County and Roadway Name)

Map ID	Roadway	From Limit	To Limit	Miles	Limited Access	County	Peak Hour Travel Time Vehicle Delay (sec/mi)					Peak Hour Travel Time Volume Delay (hr/mi) (hh:mm:ss)					CMP Obj. Score	CMP Obj. Rank	
							AM Peak Delay	PM Peak Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	AADT	AM Peak Volume Delay	PM Peak Volume Delay	Highest Peak Volume Delay			AM/PM Highest Delay
427	CR 537	CR 541 (Mt. Holly Byp)	US 206	9.12	No	Burlington	2.9	5.7	5.7	PM	82	96	8,210	0:14:33	0:35:27	0:35:27	PM	1.90	121
355	CR 537 (Marne Hwy)	NJ 73	CR 541 (Mt. Holly Byp)	20.02	No	Burlington	9.7	14.2	14.2	PM	42	72	8,846	0:55:23	1:44:08	1:44:08	PM	3.66	82
403	CR 541 (Mt. Holly Rd)/CR 691	CR 537 (Washington St)	US 130	13.89	No	Burlington	0.8	6.3	6.3	PM	81	79	23,766	0:11:28	1:33:30	1:33:30	PM	4.62	47
405	CR 603/N Elmwood Rd	NJ 70	CR 537 (Marne Hwy)	12.79	No	Burlington	4.8	5.4	5.4	PM	88	104	7,201	0:19:51	0:28:28	0:28:28	PM	1.61	128
404	CR 607	NJ 70	CR 537 (Marne Hwy)	11.26	No	Burlington	3.9	11.0	11.0	PM	64	79	12,000	0:24:52	1:35:38	1:35:38	PM	2.97	100
420	CR 620	NJ 73	CR 623	9.06	No	Burlington	8.1	17.7	17.7	PM	36	58	11,252	0:53:00	2:26:56	2:26:56	PM	2.45	115
419	CR 626	I-295	US 130	8.47	No	Burlington	0.7	1.3	1.3	PM	109	114	15,428	0:06:25	0:15:29	0:15:29	PM	3.63	83
430	I-295	NJ 38 (Exit 40)	CR 541 (Exit 47)	13.67	Yes	Burlington	0.1	0.4	0.4	PM	116	109	81,776	0:04:06	0:22:23	0:22:23	PM	3.90	73
330	I-295	CR 541 (Mt. Holly Rd)	I-95	9.56	Yes	Burlington	0.0	0.0	0.0	AM	129	129	73,305	0:00:15	0:00:00	0:00:15	AM	2.96	101
325	I-95	PA-NJ State Line	NJ Tpk	13.71	Yes	Burlington	0.1	0.2	0.2	PM	122	126	40,937	0:01:51	0:02:51	0:02:51	PM	2.48	113
353	NJ 38	NJ 73	I-295	7.93	No	Burlington	5.4	17.9	17.9	PM	35	20	35,046	1:50:01	7:47:09	7:47:09	PM	4.90	40
354	NJ 38	I-295	US 206	19.21	No	Burlington	0.6	4.6	4.6	PM	92	76	29,656	0:11:32	1:40:09	1:40:09	PM	3.79	78
369	NJ 70	NJ 73	US 206	20.40	No	Burlington	11.5	21.0	21.0	PM	25	30	19,392	2:16:19	5:17:59	5:17:59	PM	2.67	106
372	NJ 73	NJ Tpk (Exit 4)	NJ 70	6.07	No	Burlington	5.1	19.4	19.4	PM	30	11	38,006	2:27:27	11:41:26	11:41:26	PM	5.16	31
306	NJ Tpk	Exit 4 (Camden - Philadelphia)	Exit 5 (Burlington - Mt. Holly)	18.99	Yes	Burlington	0.0	3.3	3.3	PM	95	57	58,832	0:00:00	2:27:14	2:27:14	PM	3.60	84
408	NJ Tpk	Exit 6 (I-95)	Exit 7 (Bordentown - Trenton) - Cars Only	8.61	Yes	Burlington	2.5	2.4	2.5	AM	100	87	39,678	0:59:19	1:13:48	1:13:48	PM	1.68	126
300	NJ Tpk	Exit 5 (Burlington - Mt. Holly)	Exit 6 (I-95)	10.60	Yes	Burlington	0.1	0.0	0.1	AM	124	121	64,524	0:04:45	0:00:14	0:04:45	AM	1.64	127
301	NJ Tpk	Exit 7 (I-95)	Exit 7 (Bordentown - Trenton)	8.62	Yes	Burlington	0.1	0.0	0.1	AM	127	127	46,272	0:01:53	0:00:00	0:01:53	AM	1.85	122
334	US 130	NJ 73	CR 543 (Columbus Rd)	23.15	No	Burlington	2.7	11.3	11.3	PM	60	26	20,111	1:04:23	5:44:01	5:44:01	PM	4.82	42
414	US 130	CR 543 (Columbus Rd)	I-95	6.48	No	Burlington	0.8	2.1	2.1	PM	105	100	23,022	0:10:51	0:35:57	0:35:57	PM	4.38	56
333	US 130	I-295	I-95	9.19	No	Burlington	0.7	1.9	1.9	PM	108	103	23,800	0:08:43	0:29:40	0:29:40	PM	4.54	51
415	US 206	NJ 70	NJ 38	11.56	No	Burlington	4.6	9.2	9.2	PM	73	80	13,730	0:36:52	1:35:09	1:35:09	PM	1.34	130
416	US 206	NJ 38	NJ Tpk	22.05	No	Burlington	2.2	5.2	5.2	PM	91	95	15,035	0:18:46	0:55:26	0:55:26	PM	1.79	123
417	US 206	NJ Tpk	US 130	2.42	No	Burlington	1.2	2.1	2.1	PM	106	102	19,952	0:13:56	0:31:16	0:31:16	PM	3.95	72
309	I-295	NJ 70 (Exit 34)	NJ 38 (Exit 40)	11.83	Yes	Burlington, Camden	0.6	8.8	8.8	PM	76	15	94,086	0:33:47	10:35:24	10:35:24	PM	4.37	57
371	NJ 73	US 130	NJ Tpk (Exit 4)	10.28	No	Burlington, Camden	2.3	14.6	14.6	PM	43	14	50,240	1:14:49	10:36:03	10:36:03	PM	4.61	49
303	I-295	CR 656 (Florence Columbus Rd)	I-95	15.51	Yes	Burlington, Mercer	0.1	0.1	0.1	AM	126	122	70,478	0:03:47	0:04:32	0:04:32	PM	3.90	73
409	NJ Tpk	Exit 7 (Bordentown - Trenton)	Exit 7A (Trenton - Hamilton Twp) - Cars Only	13.92	Yes	Burlington, Mercer	2.7	2.9	2.9	PM	97	74	47,384	1:13:23	1:44:36	1:44:36	PM	1.35	129
379	NJ Tpk	Exit 7 (Bordentown - Trenton)	Exit 7A (Trenton - Hamilton Twp)	13.96	Yes	Burlington, Mercer	0.3	0.2	0.3	AM	118	117	63,455	0:09:43	0:11:19	0:11:19	PM	1.33	131
332	US 130	I-195	I-295	13.22	No	Burlington, Mercer	0.7	3.0	3.0	PM	96	93	22,354	0:10:31	0:58:18	0:58:18	PM	3.54	87
418	US 206	US 130	I-195	4.65	No	Burlington, Mercer	0.8	2.1	2.1	PM	104	104	17,382	0:08:07	0:29:23	0:29:23	PM	4.09	66
391	CR 534 (Blackwood-Cementon Rd)	NJ 42	CR 686 (Gibbsboro Rd)	7.03	No	Camden	3.7	13.7	13.7	PM	47	46	20,713	0:43:01	3:30:42	3:30:42	PM	4.87	41
421	CR 536 Spur	NJ 42	US 30	11.90	No	Camden	4.9	5.6	5.6	PM	88	94	12,798	0:32:36	0:56:33	0:56:33	PM	2.55	111
386	CR 544	NJ 41	US 30	6.25	No	Camden	2.5	12.6	12.6	PM	52	71	11,416	0:16:29	1:48:07	1:48:07	PM	4.62	47
388	CR 544	CR 673	NJ 73	5.95	No	Camden	3.9	7.0	7.0	PM	82	85	16,863	0:38:49	1:27:23	1:27:23	PM	3.72	81
387	CR 544 (Evesham Rd)	US 30	CR 673	5.70	No	Camden	1.0	5.8	5.8	PM	86	97	12,879	0:06:39	0:49:50	0:49:50	PM	4.97	39
396	CR 551 (Kings Hwy)	US 30	US 130	6.16	No	Camden	5.9	9.1	9.1	PM	74	91	9,628	0:33:15	1:05:39	1:05:39	PM	4.07	69
383	CR 561	I-676	I-295	13.65	No	Camden	10.0	23.8	23.8	PM	19	41	11,113	1:23:32	3:58:17	3:58:17	PM	5.12	33
382	CR 561	I-295	CR 689 (Berlin - Cross Keys Rd)	14.15	No	Camden	6.6	12.9	12.9	PM	50	42	18,984	1:21:15	3:46:24	3:46:24	PM	4.16	64
384	CR 636	US 30	NJ 38	6.34	No	Camden	14.6	31.2	31.2	PM	8	23	17,744	2:23:38	6:39:37	6:39:37	PM	6.02	13
380	CR 644	Route 90	NJ 70	7.93	No	Camden	0.1	13.5	13.5	PM	48	35	21,927	0:01:13	4:49:29	4:49:29	PM	5.03	37
381	CR 644	NJ 70	CR 561	3.49	No	Camden	18.4	23.5	23.5	PM	20	39	13,977	2:22:06	4:17:36	4:17:36	PM	5.86	16
389	CR 673 (Springdale Rd)	CR 561 (Haddonfield-Berlin Rd)	CR 616 (Church Rd)	10.45	No	Camden	3.0	11.1	11.1	PM	63	69	15,221	0:23:10	2:01:32	2:01:32	PM	3.34	92
390	CR 673 (White Horse Rd)	CR 561 (Haddonfield-Berlin Rd)	CR 534 (Blackwood-Cementon Rd)	8.20	No	Camden	14.3	24.2	24.2	PM	18	34	16,685	2:11:31	4:52:19	4:52:19	PM	5.18	30
392	CR 686 (Gibbsboro Rd)	CR 534 (Blackwood-Cementon Rd)	CR 561 (Lakeview Dr)	5.78	No	Camden	1.8	8.6	8.6	PM	77	89	9,580	0:09:12	1:10:05	1:10:05	PM	3.98	71
308	I-295	NJ 42 (Exit 26)	NJ 70 (Exit 34)	16.38	Yes	Camden	7.8	31.5	31.5	PM	7	2	113,655	8:42:03	45:46:36	45:46:36	PM	6.08	11
327	I-676	NJ-PA State Line	I-76	9.88	Yes	Camden	2.7	17.4	17.4	PM	37	7	54,804	0:56:42	13:23:59	13:23:59	PM	6.67	4
328	I-76	NJ-PA State Line	I-295	6.87	Yes	Camden	3.5	40.0	40.0	PM	2	1	130,306	4:51:22	66:18:17	66:18:17	PM	8.46	1
312	NJ 168 (Black Horse Pk)	I-295	NJ 42	7.97	No	Camden	25.3	59.6	59.6	PM	1	13	14,589	3:39:37	11:27:02	11:27:02	PM	6.28	9
397	NJ 168/CR 605	I-295	CR 561 (Haddon Av)	9.57	No	Camden	7.0	30.7	30.7	PM	9	27	14,233	1:00:58	5:42:03	5:42:03	PM	7.26	2
395	NJ 41 (Kings Highway)/ CR 551	NJ 70	US 30	7.23	No	Camden	14.1	21.0	21.0	PM	24	51	10,491	1:26:53	2:48:28	2:48:28	PM	5.05	36
367	NJ 70	NJ 38	I-295	10.35	No	Camden	9.6	27.0	27.0	PM	11	5	44,232	4:23:13	15:41:10	15:41:10	PM	6.22	10

**Table 7  
Continued**

Map ID	Roadway	From Limit	To Limit	Miles	Limited Access	County	Peak Hour Travel Time Vehicle Delay (sec/mi)					Peak Hour Travel Time Volume Delay (hr/mi) (hh:mm:ss)					CMP Obj. Score	CMP Obj. Score Rank	
							AM Peak Delay	PM Peak Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	AADT	AM Peak Volume Delay	PM Peak Volume Delay	Highest Peak Volume Delay			AM/PM Highest Delay
305	NJ Tpk	Exit 3 (Woodbury - South Camden)	Exit 4 (Camden - Philadelphia)	17.10	Yes	Camden	1.0	2.5	2.5	PM	101	84	46,883	0:26:24	1:27:34	1:27:34	PM	3.75	80
314	Sicklerville Rd	AC Expressway	536 Spur	11.22	No	Camden	3.6	11.7	11.7	PM	55	67	14,505	0:31:09	2:08:27	2:08:27	PM	3.56	86
336	US 130	US 30	I-76	5.19	No	Camden	6.0	33.9	33.9	PM	5	3	49,245	2:46:54	17:42:35	17:42:35	PM	6.37	7
335	US 130	NJ 73	US 30	10.17	No	Camden	0.9	5.2	5.2	PM	90	65	33,872	0:18:38	2:12:29	2:12:29	PM	4.43	54
323	US 30	US 130	I-295	9.82	No	Camden	18.6	35.1	35.1	PM	3	12	26,443	3:58:02	11:31:56	11:31:56	PM	6.39	6
324	US 30	I-295	NJ 73	20.05	No	Camden	7.4	19.2	19.2	PM	31	21	25,534	1:58:42	6:47:53	6:47:53	PM	5.14	32
322	US 30	I-676	US 130	4.40	Yes	Camden	0.3	3.6	3.6	PM	94	60	50,673	0:09:23	2:25:23	2:25:23	PM	5.66	18
352	NJ 38	US 130	NJ 73	10.98	No	Camden, Burlington	3.6	22.2	22.2	PM	22	9	43,811	1:33:32	12:29:43	12:29:43	PM	5.89	15
394	NJ 41	NJ 70	NJ 38	5.08	No	Camden, Burlington	4.1	16.3	16.3	PM	39	37	21,078	0:50:58	4:24:32	4:24:32	PM	3.23	95
368	NJ 70	I-295	NJ 73	6.38	No	Camden, Burlington	14.4	26.1	26.1	PM	14	4	49,391	7:07:23	16:41:14	16:41:14	PM	5.93	14
373	NJ 73	NJ 70	US 30	17.08	No	Camden, Burlington	6.6	23.5	23.5	PM	21	17	33,043	2:19:52	10:11:11	10:11:11	PM	4.82	42
370	NJ 73	NJ-PA State Line	US 130	4.48	No	Camden, Burlington	2.0	10.0	10.0	PM	68	33	40,447	0:46:52	5:00:05	5:00:05	PM	5.22	27
402	NJ 90	NJ-PA State Line	NJ 73	6.64	Yes	Camden, Burlington	0.0	0.0	0.0	PM	130	130	29,110	0:00:00	0:00:00	0:00:00	PM	4.36	60
310	AC Expressway	Williamstown Rd (Exit 38)	Western Terminus (US 42)	12.60	Yes	Camden, Gloucester	0.2	1.0	1.0	PM	110	106	39,586	0:03:23	0:27:11	0:27:11	PM	2.85	103
393	CR 689 (Berlin - Cross Keys Rd)	NJ 42	AC Expressway	14.36	No	Camden, Gloucester	5.3	18.9	18.9	PM	32	36	19,260	0:50:33	4:38:13	4:38:13	PM	4.47	53
313	NJ 168	NJ 42	AC Expressway	6.48	No	Camden, Gloucester	7.0	14.0	14.0	PM	45	73	10,223	0:41:38	1:46:02	1:46:02	PM	4.37	57
385	NJ 41	NJ 42	US 30	7.42	No	Camden, Gloucester	8.9	24.6	24.6	PM	17	31	14,368	1:12:18	5:13:17	5:13:17	PM	5.22	27
311	NJ 42	AC Expressway	I-295	14.78	Yes	Camden, Gloucester	11.3	8.6	11.3	AM	59	6	111,499	12:24:37	14:00:09	14:00:09	PM	5.22	27
337	US 130	I-76	I-295	6.74	No	Camden, Gloucester	2.9	11.6	11.6	PM	56	52	17,980	0:32:05	2:47:18	2:47:18	PM	4.55	50
406	CR 534/CR 640	NJ 41	US 130	10.24	No	Gloucester	3.0	13.2	13.2	PM	49	53	14,004	0:26:35	2:46:26	2:46:26	PM	4.30	61
426	CR 544	NJ 41	CR 534	3.67	No	Gloucester	1.7	26.2	26.2	PM	12	25	15,327	0:22:55	5:46:33	5:46:33	PM	5.12	33
363	CR 551 (Kings Hwy)	CR 678 (Berkley Rd)	NJ 45	6.63	No	Gloucester	1.6	2.0	2.0	PM	107	115	4,402	0:08:03	0:13:23	0:13:23	PM	3.85	76
364	CR 553 (Kings Hwy)	I-295	NJ 55	15.07	No	Gloucester	5.6	11.7	11.7	PM	54	70	11,454	0:40:03	1:55:15	1:55:15	PM	3.42	91
365	CR 553 (Kings Hwy)	NJ 55	NJ 47	4.95	No	Gloucester	3.6	12.5	12.5	PM	53	72	11,394	0:24:10	1:47:18	1:47:18	PM	3.77	79
422	CR 654	US 322	NJ 47	16.08	No	Gloucester	4.7	9.4	9.4	PM	70	92	9,147	0:25:01	1:04:22	1:04:22	PM	2.80	104
429	CR 678	I-295	NJ 45	8.10	No	Gloucester	1.9	2.3	2.3	PM	102	116	7,004	0:07:59	0:12:34	0:12:34	PM	2.60	110
423	CR 689 (Berlin - Cross Keys Rd)	NJ 42	US 322	9.69	No	Gloucester	1.4	6.3	6.3	PM	83	98	9,280	0:07:21	0:49:31	0:49:31	PM	2.74	105
424	I-295	US 322	CR 602	6.08	Yes	Gloucester	0.0	0.0	0.0	AM	128	128	38,836	0:00:51	0:00:00	0:00:51	AM	3.19	96
362	NJ 41	NJ 42	NJ 47	7.09	no	Gloucester	8.4	19.7	19.7	PM	26	47	12,349	1:00:27	3:14:51	3:14:51	PM	2.15	117
366	NJ 42	AC Expressway	US 322	13.61	Yes	Gloucester	4.3	19.5	19.5	PM	29	16	38,393	1:47:08	10:13:23	10:13:23	PM	4.71	44
360	NJ 45	US 130	Kings Hwy	6.13	No	Gloucester	16.2	27.9	27.9	PM	10	32	10,669	2:16:20	5:03:54	5:03:54	PM	5.55	21
361	NJ 45	Kings Hwy	US 322	15.17	No	Gloucester	4.9	11.3	11.3	PM	58	66	14,351	0:41:09	2:09:09	2:09:09	PM	4.09	66
357	NJ 47	NJ 55	US 322	12.89	No	Gloucester	7.5	19.7	19.7	PM	27	43	12,928	0:58:22	3:33:58	3:33:58	PM	3.81	77
356	NJ 47	US 130	NJ 55	11.67	No	Gloucester	10.4	16.8	16.8	PM	38	49	13,473	1:22:46	2:54:15	2:54:15	PM	3.54	87
358	NJ 55	NJ 42	NJ 47	8.28	Yes	Gloucester	19.6	17.8	19.6	AM	28	8	58,164	10:46:57	12:35:23	12:35:23	PM	5.80	17
359	NJ 55	NJ 47	US 322	12.10	Yes	Gloucester	0.6	0.2	0.6	AM	112	111	51,508	0:19:14	0:08:35	0:19:14	AM	2.99	99
304	NJ Tpk	Exit 2 (Swedesboro-Glassboro)	Exit 3 (Woodbury - South Camden)	26.17	Yes	Gloucester	0.0	0.2	0.2	PM	119	118	39,880	0:00:00	0:06:37	0:06:37	PM	2.46	114
425	US 130	I-295	CR 620	9.69	No	Gloucester	0.1	0.2	0.2	PM	120	124	13,557	0:00:17	0:03:13	0:03:13	PM	3.29	93
338	US 130/I-295	I-295	US 322	23.85	Yes	Gloucester	0.2	0.1	0.2	AM	121	119	59,729	0:06:25	0:03:07	0:06:25	AM	2.65	108
340	US 322	I-295	NJ Tpk (Exit 2)	7.63	No	Gloucester	7.8	14.7	14.7	PM	42	50	16,634	1:03:50	2:53:05	2:53:05	PM	3.59	85
342	US 322	NJ 55	CR 536/CR 654 (Main St)	18.04	No	Gloucester	4.7	9.8	9.8	PM	69	78	10,517	0:33:09	1:35:57	1:35:57	PM	3.26	94
341	US 322	NJ Tpk (Exit 2)	NJ 55	14.43	No	Gloucester	4.3	7.2	7.2	PM	78	88	13,051	0:33:25	1:11:38	1:11:38	PM	2.09	118
339	US 322	NJ-PA State Line	I-295	7.33	Yes	Gloucester	0.0	0.0	0.0	PM	130	130	30,802	0:00:00	0:00:00	0:00:00	PM	2.61	109
307	I-295	US 130	NJ 42 (Exit 26)	5.79	Yes	Gloucester, Camden	10.2	9.6	10.2	AM	67	19	70,383	7:29:19	9:11:48	9:11:48	PM	5.52	22
428	US 322/CR 536	CR 536/CR 654 (Main St)	AC Expressway	3.75	No	Gloucester, Camden	7.8	32.4	32.4	PM	6	24	15,344	1:13:33	5:53:11	5:53:11	PM	5.36	24
399	CR 533	US 206	US 1	16.29	No	Mercer	4.5	11.3	11.3	PM	61	55	17,028	0:44:39	2:40:44	2:40:44	PM	3.51	89
375	CR 571	US 1	US 130	13.95	No	Mercer	6.4	10.6	10.6	PM	66	64	18,019	1:00:10	2:15:29	2:15:29	PM	3.02	98
374	CR 571 (Washington Rd)	NJ 27	US 1	3.28	No	Mercer	8.1	9.4	9.4	PM	71	83	12,658	0:59:54	1:29:09	1:29:09	PM	6.61	5
401	CR 583 (Princeton Pk)	I-295	NJ 27	10.23	No	Mercer	11.1	11.5	11.5	PM	57	68	14,801	1:35:20	2:06:02	2:06:02	PM	2.52	112
407	CR 622 (Olden Ave)	I-295	NJ 31	9.75	No	Mercer	13.5	34.2	34.2	PM	4	22	15,846	1:54:34	6:47:16	6:47:16	PM	4.37	57
400	CR 638	US 1	CR 571	8.43	No	Mercer	5.5	9.3	9.3	PM	72	86	11,613	0:35:37	1:18:54	1:18:54	PM	4.08	68
326	I-195	I-295	I-95 (NJ Tpk)	12.23	Yes	Mercer	0.1	0.5	0.5	PM	114	110	58,307	0:02:32	0:21:15	0:21:15	PM	4.15	65

Table 7  
Continued

Map ID	Roadway	From Limit	To Limit	Miles	Limited Access	County	Peak Hour Travel Time Vehicle Delay (sec/mi)					Peak Hour Travel Time Volume Delay (hr/mi) (hh:mm:ss)					CMP Obj. Score	CMP Obj. Rank	
							AM Peak Delay	PM Peak Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	AADT	AM Peak Volume Delay	PM Peak Volume Delay	Highest Peak Volume Delay			AM/PM Highest Delay
377	I-295	NJ 31	NJ 29	8.40	Yes	Mercer	0.0	0.6	0.6	PM	113	112	39,832	0:00:39	0:16:59	0:16:59	PM	3.07	97
376	I-295	US 1	NJ 31	9.43	Yes	Mercer	0.0	0.1	0.1	PM	125	120	53,759	0:01:29	0:05:03	0:05:03	PM	2.05	120
329	I-295	I-195	US 1	15.18	Yes	Mercer	0.1	0.1	0.1	AM	123	123	53,277	0:03:33	0:04:13	0:04:13	PM	2.95	102
398	NJ 129	NJ 29	US 1	3.96	No	Mercer	9.3	14.8	14.8	PM	41	38	24,109	2:06:46	4:19:14	4:19:14	PM	6.82	3
413	NJ 133	NJ Tpk	CR 571	8.37	No	Mercer	0.3	0.3	0.3	AM	117	125	19,969	0:02:38	0:03:00	0:03:00	PM	2.06	119
412	NJ 27	US 206	County Line	7.49	No	Mercer	17.9	24.9	24.9	PM	16	44	8,938	1:54:19	3:33:19	3:33:19	PM	4.68	46
343	NJ 29	Cass St	CR 579 (Sullivan Way)	6.85	No	Mercer	1.4	6.2	6.2	PM	85	48	35,813	0:28:10	3:00:57	3:00:57	PM	5.24	26
378	NJ 29	Cass St	I-295	5.57	Yes	Mercer	2.2	0.3	2.2	AM	103	90	62,313	1:08:08	0:11:12	1:08:08	AM	4.49	52
345	NJ 29	CR 579 (Sullivan Way)	I-295	6.22	Yes	Mercer	2.6	2.4	2.6	AM	99	108	12,469	0:21:54	0:24:12	0:24:12	PM	3.89	75
348	NJ 31	CR 623 (Pennington Titusville Rd)	CR 518 (Lambertville Hopewell Rd)	9.14	No	Mercer	10.5	11.2	11.2	PM	62	54	15,258	1:52:15	2:44:20	2:44:20	PM	2.67	106
347	NJ 31	I-295	CR 623 (Pennington Titusville Rd)	5.71	No	Mercer	8.5	10.7	10.7	PM	65	56	19,946	1:36:15	2:34:24	2:34:24	PM	4.06	70
344	NJ 31	US 206	CR 622 (Olden Ave)	3.67	No	Mercer	1.9	7.1	7.1	PM	80	96	10,771	0:10:48	0:52:37	0:52:37	PM	5.40	23
346	NJ 31	CR 622 (Olden Ave)	I-295	6.03	No	Mercer	0.8	4.5	4.5	PM	93	99	13,943	0:07:38	0:48:28	0:48:28	PM	3.50	90
351	NJ 33	I-295	US 130	9.24	No	Mercer	10.6	26.2	26.2	PM	13	29	16,940	1:43:48	5:33:06	5:33:06	PM	4.28	62
349	NJ 33	US 1	CR 622 (Olden Ave)	2.37	No	Mercer	5.8	25.5	25.5	PM	15	40	12,529	0:41:55	3:59:00	3:59:00	PM	6.33	8
350	NJ 33	CR 622 (Olden Ave)	I-295	4.04	No	Mercer	4.1	21.1	21.1	PM	23	45	13,929	0:35:09	3:31:27	3:31:27	PM	5.33	25
410	NJ Tpk	Exit 7A (Trenton - Hamilton Twp)	Exit 8 (Hightstown - Freehold) - Cars Only	15.59	Yes	Mercer	2.7	2.5	2.7	AM	98	77	51,343	1:19:40	1:37:17	1:37:17	PM	1.77	124
302	NJ Tpk	Exit 7A (Trenton - Hamilton Twp)	Exit 8 (Hightstown - Freehold)	15.47	Yes	Mercer	0.4	0.0	0.4	AM	115	113	68,821	0:16:25	0:00:00	0:16:25	AM	1.77	124
318	US 1	Alexander Rd	CR 629	2.16	No	Mercer	18.9	18.1	18.9	AM	33	10	50,898	9:40:20	11:45:32	11:45:32	PM	5.65	19
317	US 1	I-295	Alexander Rd	8.44	No	Mercer	2.2	7.1	7.1	PM	81	18	107,267	1:55:40	9:28:54	9:28:54	PM	4.69	45
316	US 1	CR 616 (Whitehead Rd)	I-295	5.78	Yes	Mercer	2.8	9.1	9.1	PM	75	28	36,786	1:22:04	5:39:02	5:39:02	PM	5.09	35
315	US 1	NJ-PA State Line	CR 616 (Whitehead Rd)	7.17	Yes	Mercer	0.4	0.7	0.7	PM	111	107	48,639	0:14:49	0:24:18	0:24:18	PM	5.00	38
331	US 130	NJ 133	I-195	15.29	No	Mercer	0.7	7.2	7.2	PM	79	62	26,174	0:10:52	2:22:09	2:22:09	PM	2.36	116
320	US 206	I-295	NJ 27	12.09	No	Mercer	18.1	13.6	18.1	AM	34	59	12,465	2:26:30	2:18:37	2:26:30	AM	4.39	55
321	US 206	NJ 27	Princeton Ave/County Line	6.55	No	Mercer	15.5	16.0	16.0	PM	40	61	11,910	1:47:28	2:22:57	2:22:57	PM	4.27	63
411	US 206	NJ 31	I-295	9.24	No	Mercer	12.8	11.9	12.8	AM	51	82	9,369	1:11:17	1:30:16	1:30:16	PM	5.58	20
319	US 206	I-195	NJ 31	8.77	No	Mercer, Burlington	2.5	13.9	13.9	PM	46	63	15,674	0:24:53	2:17:29	2:17:29	PM	6.06	12

Most Delayed  
 Somewhat Delayed  
 Somewhat Not Delayed  
 Least Delayed  
 AM Delay

Source: DVRPC analysis of 2021 INRIX data

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## 4.2 Most Congested Focus Roadway Corridor Facilities

The top two focus roadway corridor facilities with the highest peak vehicle delay and volume delay using both travel times and planning times were identified separately for each county in the region. Some county facilities were in the top two for both delay measures using both travel times and planning times, which reduced the total number of most congested facilities for a county. The final analysis identified 41 most congested facilities, with 23 in the Pennsylvania subregion and 18 in the New Jersey subregion (see Table 8). These facilities are listed in ascending order by county and roadway name, along with the map identifier, from and to limit, municipality (for Philadelphia the Planning Area), and the county in which they are located. The number of most congested facilities is limited due to the importance of targeting locations with the worst traffic congestion and due to funding availability. Some of these facilities are part of projects programmed on the Pennsylvania TIP (Fiscal Year [FY] 2023–2026) and New Jersey TIP (FY 2024–2027), and others are on the Long-Range Plan (*Connections 2050*). Facilities not ranked as the most congested should also be considered for improvements, but weighed against other regional priorities and the region’s extreme funding constraint.

### Focus Roadway Corridor Facility Summaries

The following pages include a map profile summary of each of the most congested focus roadway corridor facilities in the order they are listed in Table 8, along with a map title indicating the facility map identifier and name. Each map profile summary page provides the following information:

#### **Main Map**

Shows the location of the most congested facility, the annual average daily traffic for the facility (labeled in black), focus intersection and limited access roadway bottlenecks on or near the facility (see Sections 4.3 and 4.4, respectively, for more information on bottlenecks), nearby bus and passenger rail routes, and road segments that show high congestion indicated by the TTI measure (either a TTI between 1.50 and 1.99, or greater than 2.00).

#### **Summary of Conditions**

Provides delay measure rankings within each state out of the 205 Pennsylvania and 131 New Jersey focus roadway corridor facilities in the region. This section identifies roadway type (limited access or arterial) and potential or planned projects to mitigate congestion.

#### **Congestion Measures**

Lists the congestion performance measures for the most congested focus roadway corridor facility. The peak average travel time (TT) and planning time (PT) vehicle delay measures are derived from the INRIX travel time data, measured in seconds. Higher values indicate more vehicle delay. The peak hour volume delay measure is derived from the travel time and planning time delay and PennDOT, NJDOT, and DVRPC collected traffic volumes, with higher values indicating more volume delay. LOTTR, TTTR, and PHED are PM3 measures and indicate the miles of the measure that exist along the facility. The measures are only available on NHS roadways and the TTTR and PHED measures having further restrictions. TTTR is only available on interstate roadways and PHED only on NHS roadways within the Philadelphia, PA-NJ-DE-MD or Trenton, NJ UZAs. If these measures are not available to be computed “n/a” is indicated for the value. The TDM Forecasted Congestion measure represents the length of roadway miles where the regional travel demand model forecasts V/C greater than or equal to 0.85 in 2050.

#### **Planned Improvements on the Long-Range Plan and TIP**

Indicates projects on the roadway facility that are programmed on the Pennsylvania TIP (FY 2023–2026),

New Jersey TIP (FY 2024–2027), and the Long-Range Plan (*Connections 2050*). Long-Range Plan projects indicated with a letter designate transit projects and ones with a number road projects. Ones italicized indicate unfunded aspirational projects, and others are in the fiscally constrained funded plan.

### Very Appropriate Strategies

Indicates the most appropriate strategies to mitigate congestion for the roadway facility, which might be different from the strategies for the subcorridor area which many times contain multiple types of facilities. Recently implemented or partially implemented strategies are listed first and italicized.

### Additional Factors

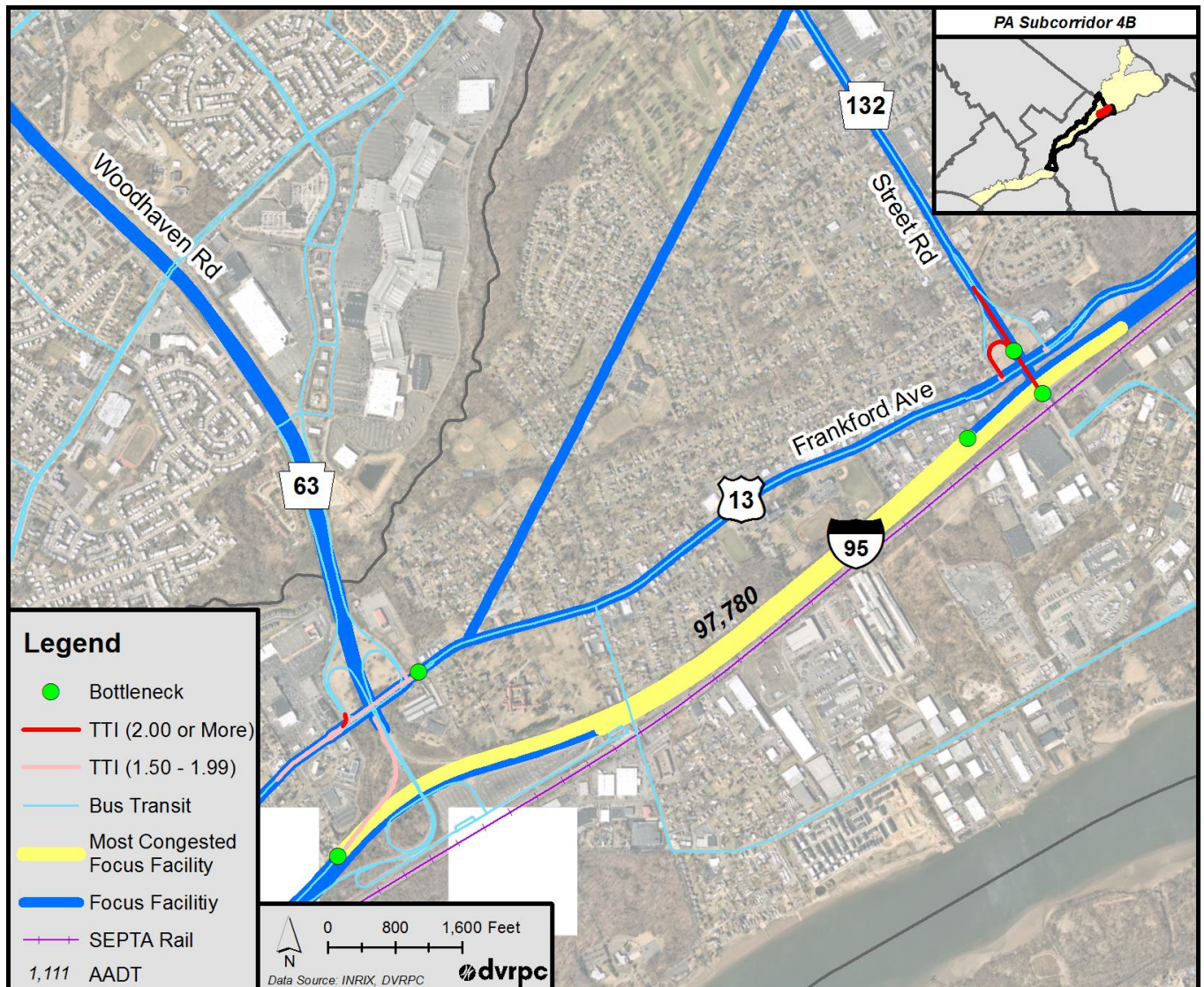
Provides additional information for the facility location that may affect mitigation strategies, and investment decisions. This includes the facility directional miles, whether it is on the NHS, along a bus transit route, along a park and ride lot, the count of focus roadway intersection or limited access bottlenecks, the number of miles of CMP high crash frequency and severity, the number of traffic signals (indicated as “n/a” for freeways since they are not applicable), and the annual average daily traffic. It also indicates the CMP objective scores, which are the same ones listed in Tables 6 and 7. Higher scores mean more CMP objectives are met for the facility.

**Table 8: Most Congested Focus Roadway Corridor Facilities**

Map ID	Roadway	From Limit	To Limit	Municipality	County
<b>Pennsylvania</b>					
24	I-95	PA 132 (Street Rd)	PA 63	Bensalem	Bucks
89	PA 132 (Street Rd)	I-95	US 1	Bensalem, Bristol	Bucks
145	PA 413	US 1 Bus (Lincoln Hwy)	PA 332	Langhore, Langhorne Manor, Middletown	Bucks
173	PA 532/PA 213	PA 132 (Street Rd)	US 1	L. Southampton, Langhorne, Middletown	Bucks
25	I-95	PA 63 (Woodhaven Rd)	Academy Rd	Bensalem, North Delaware	Bucks, Philadelphia
116	PA 100	US 30 Bypass	US 202	West Goshen, West Whiteland	Chester
138	PA 23	PA 724	US 422	East Pikeland, Phoenixville, Schuylkill	Chester, Montgomery
54	US 30 Business	US 30 Bypass	PA 82 (Coatesville)	Caln, Coatesville, Downingtown, East Caln	Chester
56	US 30 Bypass	PA 100	US 30 Business	East Caln, West White land	Chester
57	US 30 Bypass	US 30 Business	Reeceville Rd	Caln, East Caln	Chester
64	US 322/US 202	US 1	PA 3	various	Chester
118	Baltimore Ave	US 13	Bishop Ave	Clifton Heights, Lansdowne, Upper Darby	Delaware
119	Baltimore Pk	Bishop Ave	I-476	Nether Providence, Springfield	Delaware
31	I-95	I-476	US 322	Chester City, Chester, Ridley	Delaware
32	I-95	US 322	PA-DE State Line	Lower Chichester, Upper Chichester	Delaware
157	Lansdowne Ave	US 13	PA 3	Darby, Lansdowne, Upper Darby, Yeadon	Delaware
19	I-76	US 1 (City Ave)	I-476	Lower Merion, West Conshohocken	Montgomery
20	I-76	I-476	I-76 PA TPK	Upper Merion, West Conshohocken	Montgomery
40	US 1 (City Ave)	US 30 (Girard Ave)	I-76	Lower Merion, West Park	Montgomery, Philadelphia
117	I-676 (Vine Street Expy)	I-76	I-95	Central	Philadelphia
17	I-76	I-676 (Vine Street Expy)	US 30 (Girard Ave)	University - Southwest, West Park	Philadelphia
18	I-76	US 30 (Girard Ave)	US 1 (City Ave)	West Park	Philadelphia
78	Market St	I-95 (Penn's Landing)	PA 611 (Broad St)	Central	Philadelphia
<b>New Jersey</b>					
309	I-295	NJ 70 (Exit 34)	NJ 38 (Exit 40)	Cherry Hill, Mount Laurel	Burlington
369	NJ 70	NJ 73	US 206	Evesham, Medford, Southampton	Burlington
372	NJ 73	NJ TPK (Exit 4)	NJ 70	Evesham, Mount Laurel	Burlington
371	NJ 73	US 130	NJ TPK (Exit 4)	various	Burlington
308	I-295	NJ 42 (Exit 26)	NJ 70 (Exit 34)	various	Camden
328	I-76	NJ-PA State Line	I-295	Bellmawr, Gloucester, Mount Ephraim	Camden
312	NJ 168 (Black Horse Pk)	I-295	NJ 42	Bellmawr, Gloucester, Runnemede	Camden
426	CR 544	NJ 41	CR 534	Deptford	Gloucester
307	I-295	US 130	NJ 42 (Exit 26)	various	Gloucester
311	NJ 42	AC Expressway	I-295	various	Gloucester
360	NJ 45	US 130	Kings Hwy	various	Gloucester
358	NJ 55	NJ 42	NJ 47	Deptford	Gloucester
428	US 322/CR 536	CR 536/CR 654 (Main St)	AC Expressway	Winslow, Monroe	Gloucester
407	CR 622 (Olden Ave)	I-295	NJ 31	Trenton, Hamilton, Ewing	Mercer
351	NJ 33	I-295	US 130	Hamilton, Robbinsville	Mercer
349	NJ 33	US 1	CR 622 (Olden Ave)	Trenton	Mercer
318	US 1	Alexander Rd	CR 629	West Windsor	Mercer
317	US 1	I-295	Alexander Rd	Lawrence, West Windsor	Mercer

Source: DVRPC, 2023

**Figure 23: Facility 24**  
 I-95 from PA 132 (Street Rd) to PA 63, Bucks County, PA

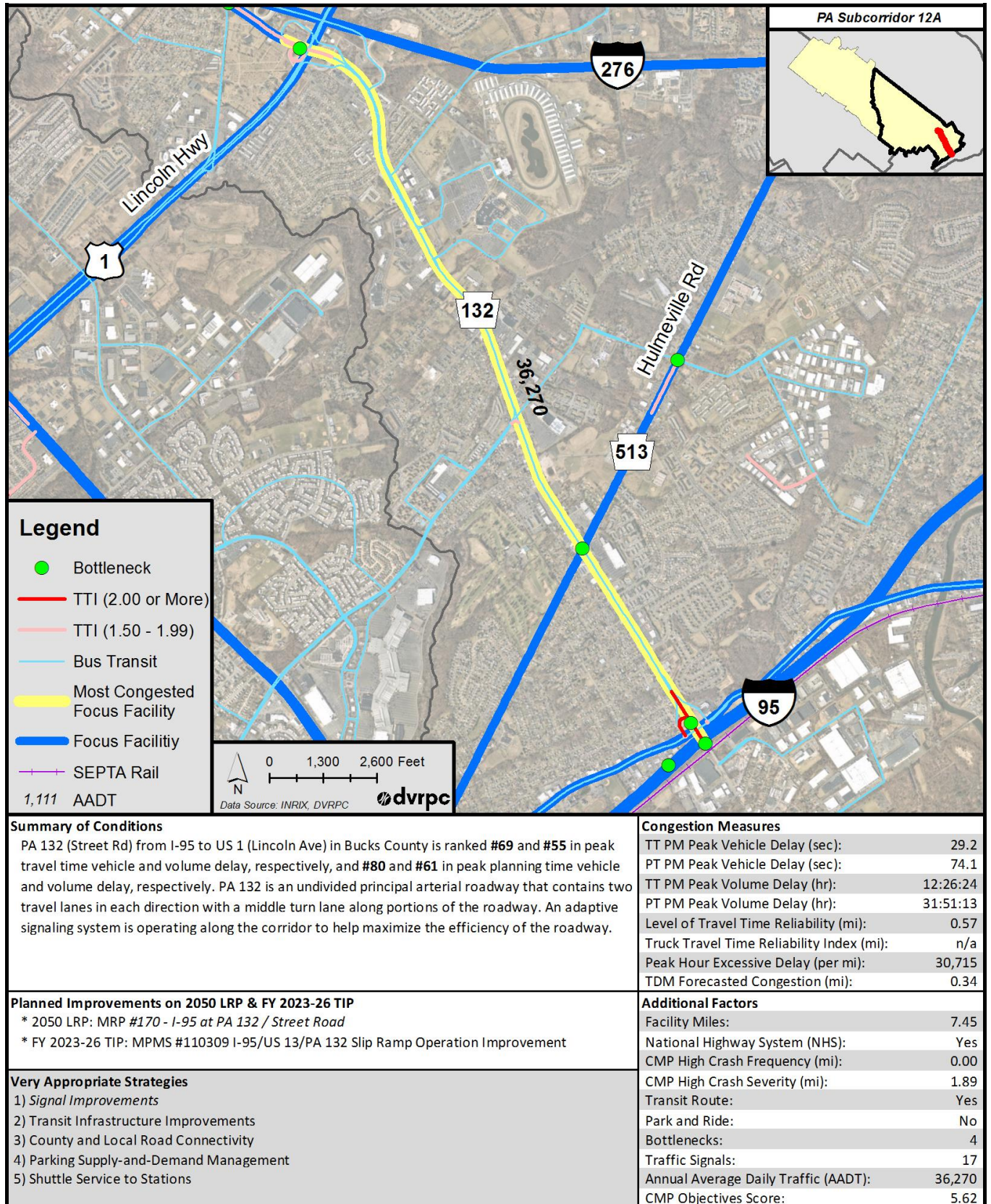


<p><b>Summary of Conditions</b></p> <p>I-95 from PA 132 (Street Rd) to PA 63 (Woodhaven Rd) in Bucks County is ranked <b>#174</b> and <b>#87</b> in peak travel time vehicle and volume delay, respectively, and <b>#170</b> and <b>#53</b> in peak planning time vehicle and volume delay, respectively. I-95 is an interstate limited access roadway that includes four travel lanes in each direction. A Park and Ride lot is located south of I-95 at PA 63 at Cornwells Heights (15 E 21st N, Bensalem, PA) that contains 1,600 spaces and includes shuttle service from the lot to SEPTA's Trenton Line station. In May 2023, the shuttle service averaged about 120 passengers per day.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>5.9</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>27.9</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>7:12:08</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>34:08:01</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.00</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>0.42</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>8,756</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.00</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	5.9	PT PM Peak Vehicle Delay (sec):	27.9	TT PM Peak Volume Delay (hr):	7:12:08	PT PM Peak Volume Delay (hr):	34:08:01	Level of Travel Time Reliability (mi):	0.00	Truck Travel Time Reliability Index (mi):	0.42	Peak Hour Excessive Delay (per mi):	8,756	TDM Forecasted Congestion (mi):	0.00				
TT PM Peak Vehicle Delay (sec):	5.9																				
PT PM Peak Vehicle Delay (sec):	27.9																				
TT PM Peak Volume Delay (hr):	7:12:08																				
PT PM Peak Volume Delay (hr):	34:08:01																				
Level of Travel Time Reliability (mi):	0.00																				
Truck Travel Time Reliability Index (mi):	0.42																				
Peak Hour Excessive Delay (per mi):	8,756																				
TDM Forecasted Congestion (mi):	0.00																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <p>* 2050 LRP: MRP #170 I-95 at PA 132 / Street Road; #CS CONNECT NEC 2035</p> <p>* FY 2023-26 TIP: MPMS #110309 I-95/US 13/PA 132 Slip Ramp Operation Improvement; #103556 I-95 ATMS (GR9); #98027 I-95 Congestion Management; #17918 I-95 Transit Improvements</p>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>3.22</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.00</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Park and Ride:</td><td>Yes</td></tr> <tr><td>Bottlenecks:</td><td>3</td></tr> <tr><td>Traffic Signals:</td><td>n/a</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>97,780</td></tr> <tr><td>CMP Objectives Score:</td><td>5.26</td></tr> </table>	Facility Miles:	3.22	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.00	Transit Route:	Yes	Park and Ride:	Yes	Bottlenecks:	3	Traffic Signals:	n/a	Annual Average Daily Traffic (AADT):	97,780	CMP Objectives Score:	5.26
Facility Miles:	3.22																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.00																				
Transit Route:	Yes																				
Park and Ride:	Yes																				
Bottlenecks:	3																				
Traffic Signals:	n/a																				
Annual Average Daily Traffic (AADT):	97,780																				
CMP Objectives Score:	5.26																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Incident Management</i></li> <li>2) <i>Intelligent Transportation Systems (ITS)</i></li> <li>3) Active Traffic Management (ATM) and Active Transportation and Demand Management (ATDM)</li> <li>4) Transit Infrastructure Improvements</li> <li>5) Expanded Parking for Existing Transit Stations (including remote, all modes)</li> <li>6) Modifications to Existing Transit Routes or Services</li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 24: Facility 89**

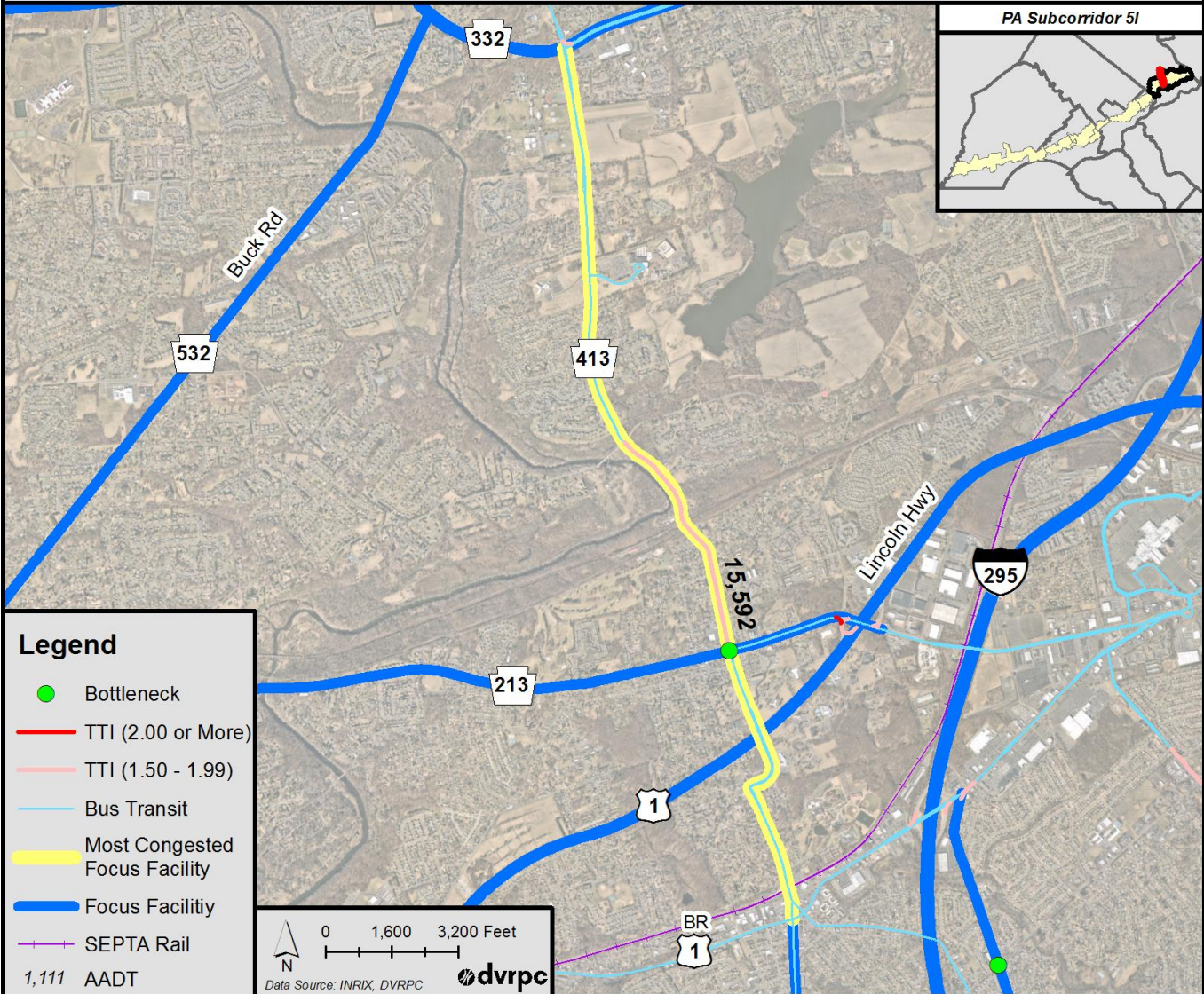
PA 132 (Street Rd) from I-95 to US 1, Bucks County, PA



Recently implemented or partially implemented strategies are listed first and italicized

**Figure 25: Facility 145**

PA 413 from US 1 Bus (Lincoln Hwy) to PA 332 (Newtown Bypass), Bucks County, PA



**Summary of Conditions**  
 PA 413 from US 1 Business to PA 332 (Newtown Bypass) in Bucks County is ranked #77 and #111 in peak travel time vehicle and volume delay, respectively, and #76 and #112 in peak planning time vehicle and volume delay, respectively. PA 413 is an undivided principal arterial roadway with primarily one lane in each direction with multiple signalized intersections that include separate turning lanes at the signalized approaches. A new partial cloverleaf interchange is proposed at PA 413 (Pine St) and US 1 with additional lanes along PA 413 at the interchange area, then funneling down to one lane at Flowers Ave to the north and Bellevue Ave to the South.

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	25.9
PT PM Peak Vehicle Delay (sec):	78.3
TT PM Peak Volume Delay (hr):	5:02:02
PT PM Peak Volume Delay (hr):	14:45:11
Level of Travel Time Reliability (mi):	5.68
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	46,555
TDM Forecasted Congestion (mi):	3.12

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: MRP #37 US 1 Reconstruction (RC3) including interchange improvements at PA 413  
 \* FY 2023-26 TIP: MPMS #93446 Route 1 Improvement Frontage Corridor (RC 3); #116082 Bellevue Ave Grade Crossing; #115420 Pennel Borough Intersection Improvements

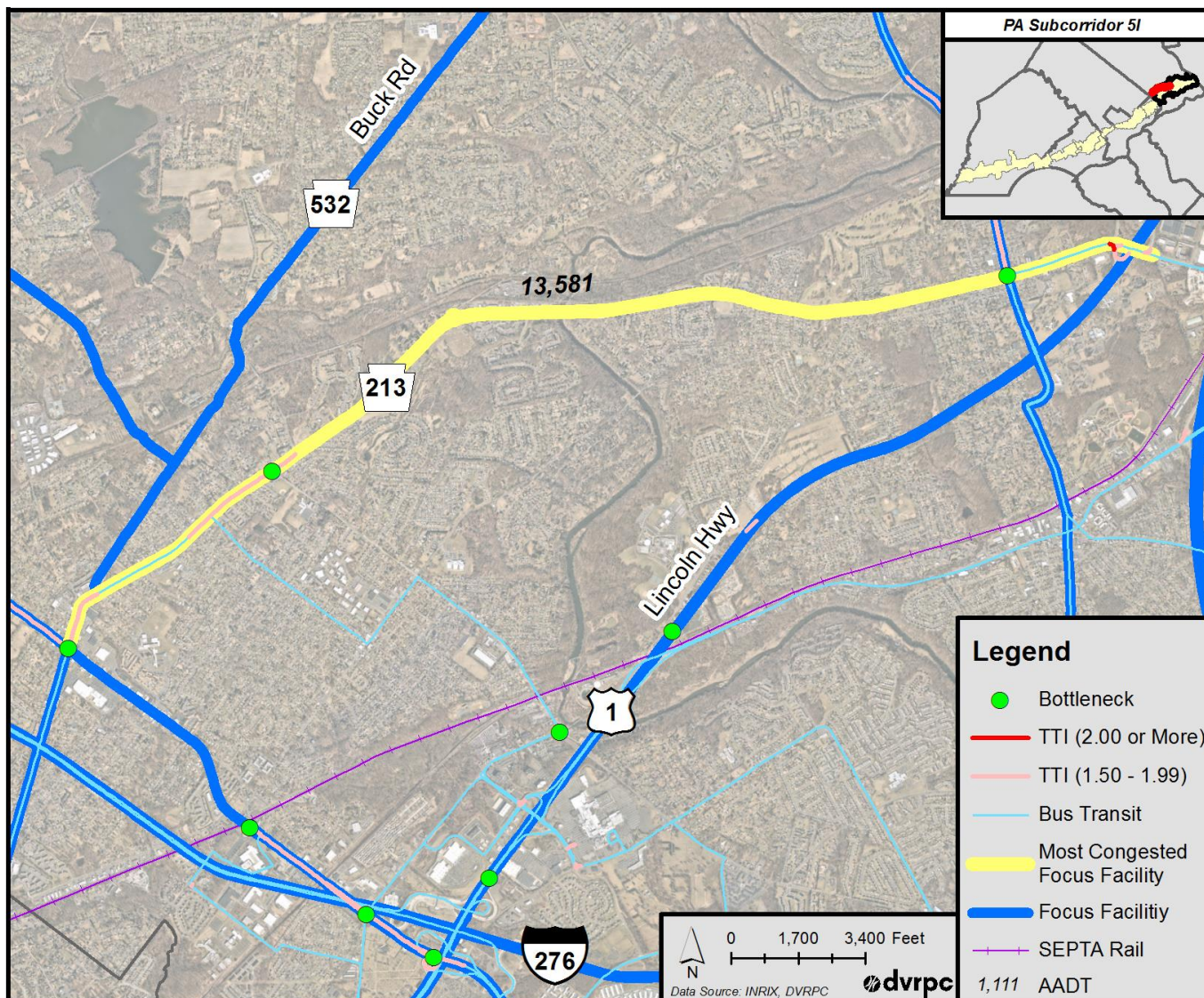
Additional Factors	
Facility Miles:	8.65
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.15
CMP High Crash Severity (mi):	0.03
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	1
Traffic Signals:	7
Annual Average Daily Traffic (AADT):	15,592
CMP Objectives Score:	6.61

**Very Appropriate Strategies**

- 1) Signal Improvements
- 2) Transit Infrastructure Improvements
- 3) Turning Movement Enhancements
- 4) Modifications to Existing Transit Routes or Services
- 5) Walking and Bicycling Improvements
- 6) Major Reconstruction with Minor Capacity Additions

**Figure 26: Facility 173**

PA 532/PA 213 from PA 132 (Street Rd) to US 1, Bucks County, PA



**Summary of Conditions**

PA 532 (Bustleton Pk)/PA 213 (Bridgetown Pk) from PA 132 (Street Rd) to US 1 in Bucks County is ranked #72 and #101 in peak travel time vehicle and volume delay, respectively, and #89 and #124 in peak planning time vehicle and volume delay, respectively. PA 532 comprises a small portion of the western portion of the corridor and then splits off northbound and PA 132 eastbound. PA 532 is a principal arterial roadway and PA 132 a minor arterial, and both are undivided with PA 532 containing two travel lanes in each direction and PA 132 one travel lane. CMP bottlenecks occur at the intersections of PA 532 and PA 132, PA 213 and East Bristol Rd, and PA 213 and PA 413.

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**

- \* 2050 LRP: No projects
- \* FY 2023-26 TIP: No projects

**Very Appropriate Strategies**

- 1) Signal Improvements
- 2) Transit Infrastructure Improvements
- 3) Turning Movement Enhancements
- 4) Modifications to Existing Transit Routes or Services
- 5) Express Transit Routes or Stop Consolidation

**Congestion Measures**

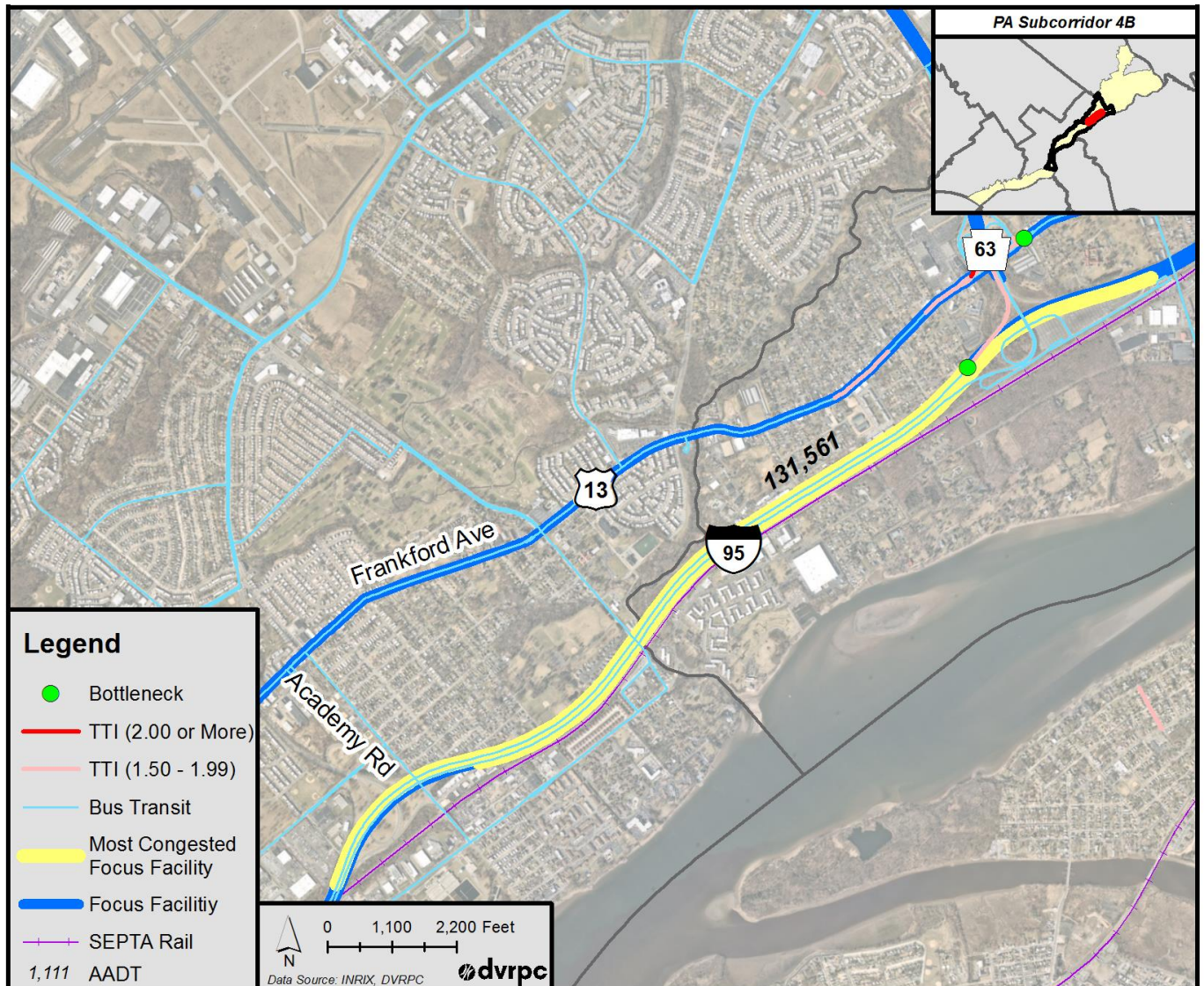
TT PM Peak Vehicle Delay (sec):	27.3
PT PM Peak Vehicle Delay (sec):	66.7
TT PM Peak Volume Delay (hr):	5:30:23
PT PM Peak Volume Delay (hr):	13:07:25
Level of Travel Time Reliability (mi):	0.10
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	1,937
TDM Forecasted Congestion (mi):	2.25

**Additional Factors**

Facility Miles:	11.81
National Highway System (NHS):	No
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	1.03
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	3
Traffic Signals:	12
Annual Average Daily Traffic (AADT):	13,581
CMP Objectives Score:	3.63

**Figure 27: Facility 25**

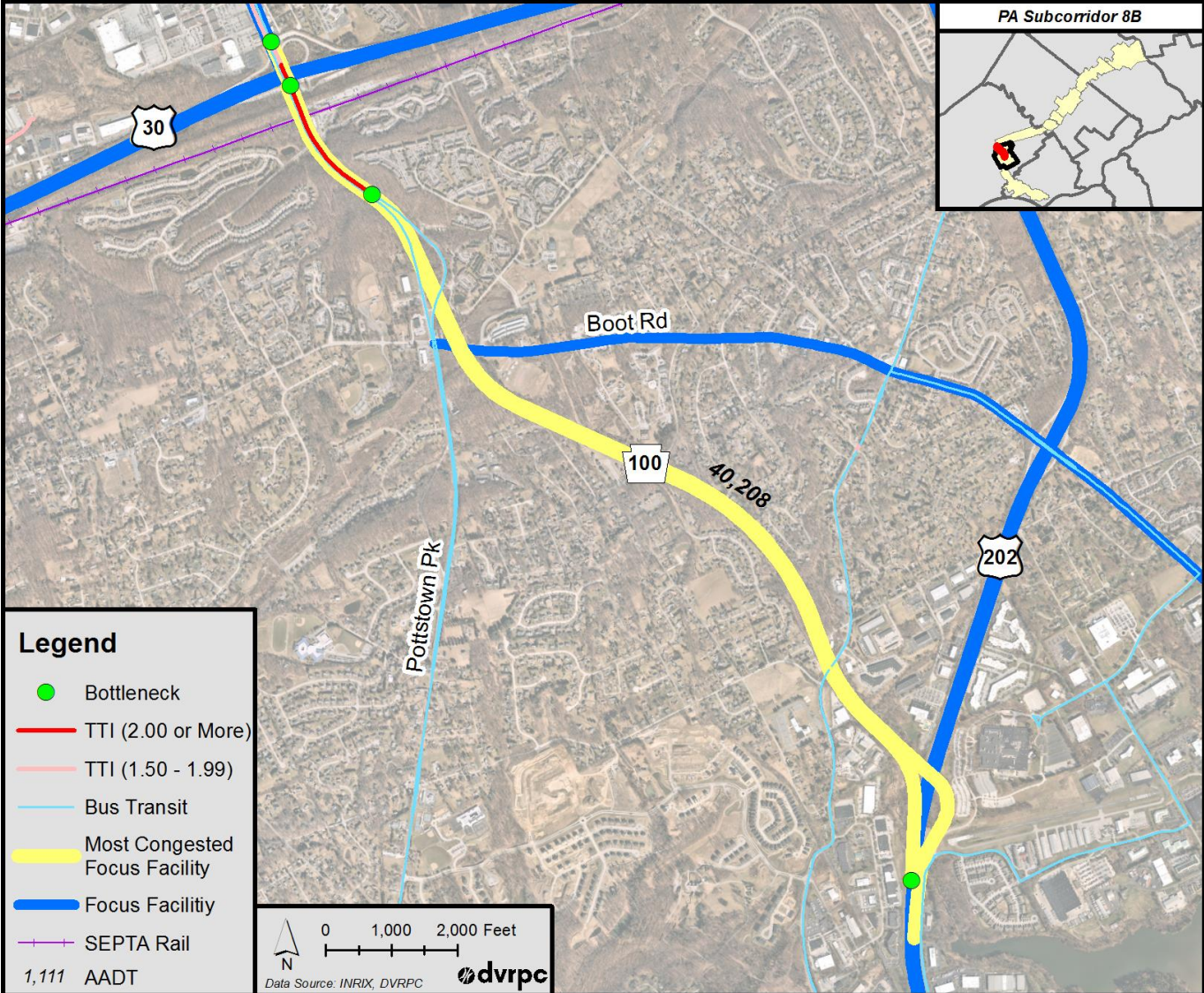
I-95 from PA 63 (Woodhaven Rd) to Academy Rd, Bucks and Philadelphia Counties, PA



<p><b>Summary of Conditions</b></p> <p>I-95 from PA 63 (Woodhaven Rd) to Academy Road in Bucks and Philadelphia Counties is ranked <b>#163</b> and <b>#50</b> in peak travel time vehicle and volume delay, respectively, and <b>#143</b> and <b>#24</b> in peak planning time vehicle and volume delay, respectively. I-95 is an interstate limited access roadway that includes four travel lanes in each direction. A Park and Ride lot is located south of I-95 at PA 63 at Cornwells Heights that contains 1,600 spaces and includes shuttle service from the lot to SEPTA's Trenton Line station. In May 2023, the shuttle service averaged about 120 passengers per day. A limited access roadway bottleneck occurs along I-95 southbound at the PA 63 on-ramp.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>8.0</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>41.7</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>13:30:11</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>71:05:48</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.00</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>0.00</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>0.00</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>2.71</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	8.0	PT PM Peak Vehicle Delay (sec):	41.7	TT PM Peak Volume Delay (hr):	13:30:11	PT PM Peak Volume Delay (hr):	71:05:48	Level of Travel Time Reliability (mi):	0.00	Truck Travel Time Reliability Index (mi):	0.00	Peak Hour Excessive Delay (per mi):	0.00	TDM Forecasted Congestion (mi):	2.71				
TT PM Peak Vehicle Delay (sec):	8.0																				
PT PM Peak Vehicle Delay (sec):	41.7																				
TT PM Peak Volume Delay (hr):	13:30:11																				
PT PM Peak Volume Delay (hr):	71:05:48																				
Level of Travel Time Reliability (mi):	0.00																				
Truck Travel Time Reliability Index (mi):	0.00																				
Peak Hour Excessive Delay (per mi):	0.00																				
TDM Forecasted Congestion (mi):	2.71																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <p>* 2050 LRP: MRP #131 I-95 Bucks/Philadelphia Active Traffic Management; #CS CONNECT NEC 2035</p> <p>* FY 2023-26 TIP: MPMS #91490 Expr Service Patrol; #103556 - I-95 ATM (GR9); #98027 I-95 Congestion Management; #17918 I-95 Transit Improvements/FLEX (Cornwells Heights)</p>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>5.43</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>1.54</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Park and Ride:</td><td>Yes</td></tr> <tr><td>Bottlenecks:</td><td>1</td></tr> <tr><td>Traffic Signals:</td><td>n/a</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>131,561</td></tr> <tr><td>CMP Objectives Score:</td><td>6.10</td></tr> </table>	Facility Miles:	5.43	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	1.54	Transit Route:	Yes	Park and Ride:	Yes	Bottlenecks:	1	Traffic Signals:	n/a	Annual Average Daily Traffic (AADT):	131,561	CMP Objectives Score:	6.10
Facility Miles:	5.43																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	1.54																				
Transit Route:	Yes																				
Park and Ride:	Yes																				
Bottlenecks:	1																				
Traffic Signals:	n/a																				
Annual Average Daily Traffic (AADT):	131,561																				
CMP Objectives Score:	6.10																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Incident Management</i></li> <li>2) <i>Intelligent Transportation Systems (ITS)</i></li> <li>3) <i>Expanded Parking for Existing Transit Stations (including remote, all modes)</i></li> <li>4) Active Traffic Management (ATM) and Active Transportation and Demand Management (ATDM)</li> <li>5) Express Transit Routes or Stop Consolidation</li> <li>6) Modifications to Existing Transit Routes or Services</li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 28: Facility 116**  
 PA 100 from US 30 Bypass to US 202, Chester County, PA



**Summary of Conditions**  
 PA 100 from US 202 to the US 30 Bypass in Chester County is ranked #107 and #57 in peak travel time vehicle and volume delay, respectively, and #145 and #81 in peak planning time vehicle and volume delay, respectively. PA 100 is a limited access divided expressway that includes two travel lanes in each direction with the northern portion ending at the US 30 Bypass and changing to an arterial roadway and the southern portion merging with US 202. PA 100 northbound experiences traffic congestion from Pottstown Pk to US 30, and a project is currently programmed on the TIP to mitigate. SEPTA's Exton station at PA 100 and US 30 is on the TIP for multimodal improvements.

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: MRP #217 PA 100 Northbound at Exton Station; #172 US 202 (Section 200)  
 \* FY 2023-26 TIP: MPMS #118025 PA 100 Northbound at Exton Station; #93588 Exton Station

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Intelligent Transportation Systems (ITS)
  - 3) Incident Management
  - 4) Turning Movement Enhancements
  - 5) Transit Infrastructure Improvements
  - 6) Bottleneck Removal of a Limited Scale for Cars and Trucks

**Congestion Measures**

TT PM Peak Vehicle Delay (sec):	17.2
PT PM Peak Vehicle Delay (sec):	38.6
TT PM Peak Volume Delay (hr):	11:13:16
PT PM Peak Volume Delay (hr):	23:38:35
Level of Travel Time Reliability (mi):	n/a
Truck Travel Time Reliability Index (mi):	0.87
Peak Hour Excessive Delay (per mi):	76,503
TDM Forecasted Congestion (mi):	0.00

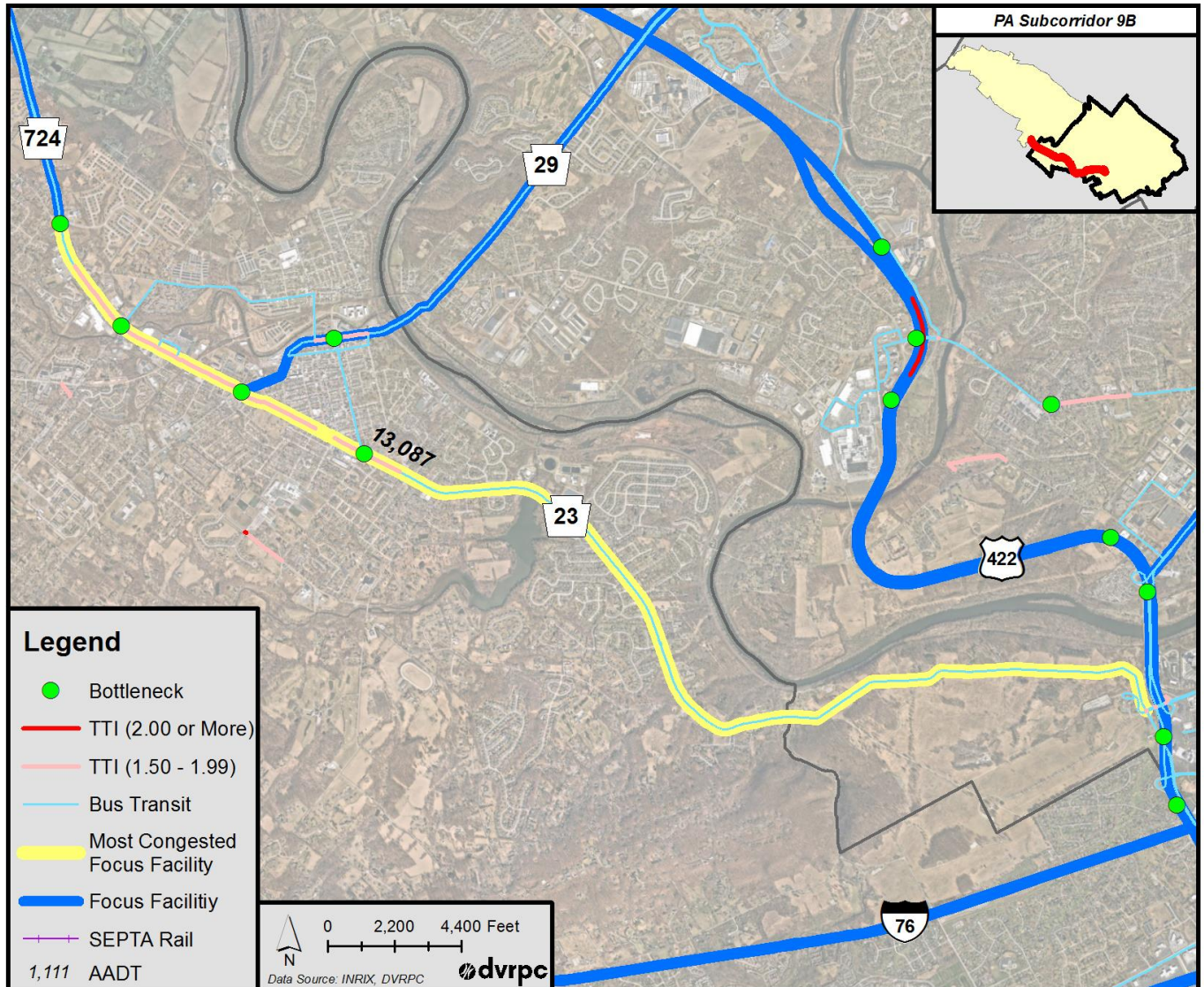
**Additional Factors**

Facility Miles:	6.33
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.00
Transit Route:	Yes
Park and Ride:	Yes
Bottlenecks:	4
Traffic Signals:	2
Annual Average Daily Traffic (AADT):	40,208
CMP Objectives Score:	4.76



**Figure 29: Facility 138**

PA 23 from PA 724 to US 422, Chester and Montgomery Counties, PA



**Legend**

- Bottleneck
- TTI (2.00 or More)
- TTI (1.50 - 1.99)
- Bus Transit
- Most Congested Focus Facility
- Focus Facility
- SEPTA Rail

1,111 AADT

0 2,200 4,400 Feet

North arrow pointing up.

Data Source: INRIX, DVRPC

**dvrpc**

**Summary of Conditions**

PA 23 from PA 724 to US 422 in Chester and Montgomery Counties is ranked #74 and #106 in peak travel time vehicle and volume delay, respectively, and #96 and #133 in peak planning time vehicle and volume delay, respectively. PA 23 is a minor arterial roadway that includes one travel lane in each direction with portions including a middle turn lane. PA 23 passes through Phoenixville Borough which contains various mixed land uses and through the Valley Forge National Historic Park which contains more rural uses. CMP bottlenecks occur along the western portion of the PA 23 corridor, including Main St, PA 113 (Bridge St), Township Line Rd, and PA 724 (Schuylkill Rd).

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**

- \* 2050 LRP: No projects
- \* FY 2023-26 TIP: MPMS #66952 PA 23/Valley Forge Road and North Gulph Relocation; #115423 Route 23 Corridor Safety Improvements

**Very Appropriate Strategies**

- 1) Signal Improvements
- 2) Turning Movement Enhancements
- 3) Modifications to Existing Transit Routes or Services
- 4) Complete Streets
- 5) Intelligent Transportation Systems (ITS)

**Congestion Measures**

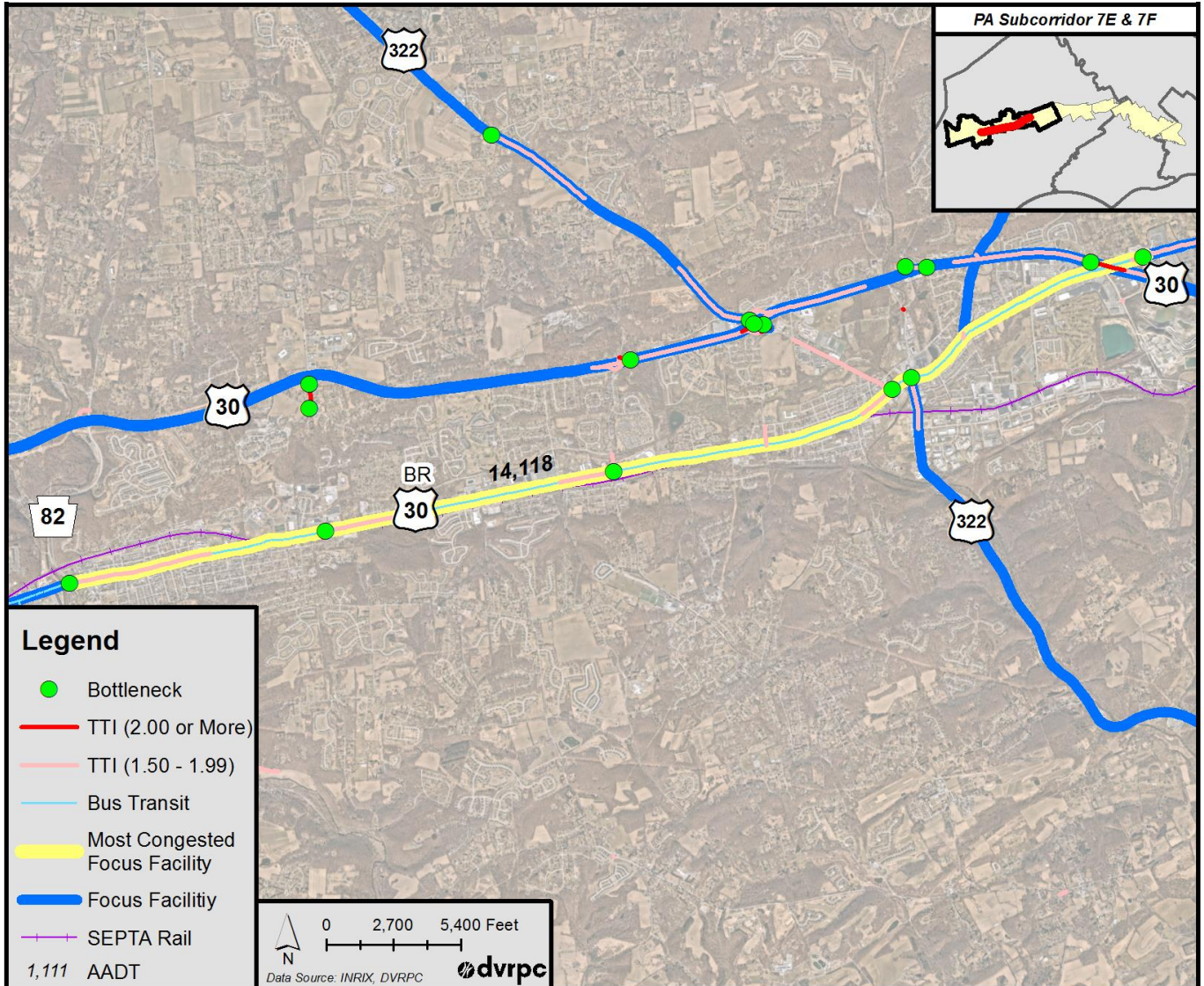
TT PM Peak Vehicle Delay (sec):	27.1
PT PM Peak Vehicle Delay (sec):	60.5
TT PM Peak Volume Delay (hr):	5:10:23
PT PM Peak Volume Delay (hr):	11:49:36
Level of Travel Time Reliability (mi):	n/a
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	n/a
TDM Forecasted Congestion (mi):	3.31

**Additional Factors**

Facility Miles:	16.90
National Highway System (NHS):	No
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.00
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	4
Traffic Signals:	15
Annual Average Daily Traffic (AADT):	13,087
CMP Objectives Score:	4.41

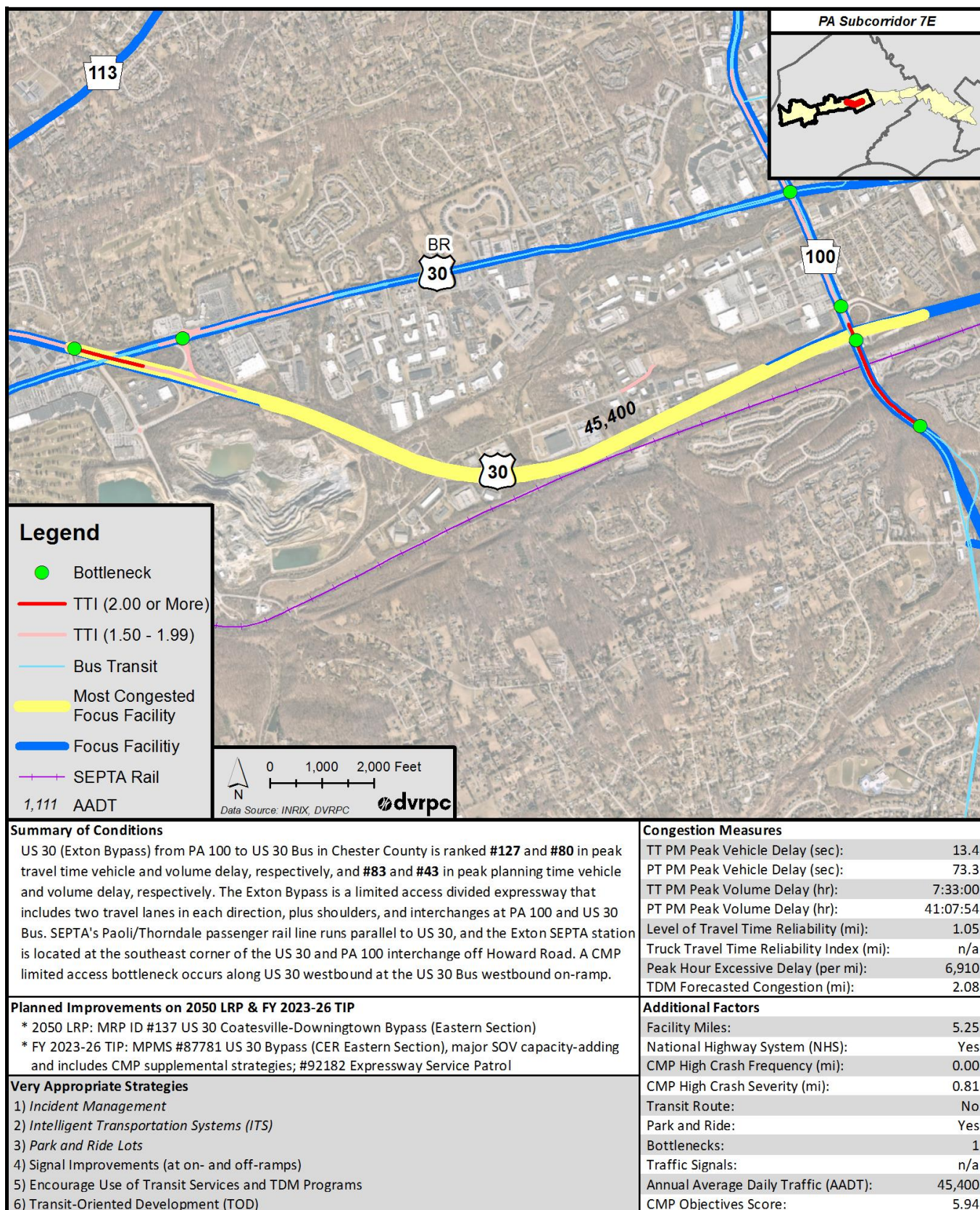
**Figure 30: Facility 54**

US 30 Business from US 30 Bypass to PA 82 (Coatesville), Chester County, PA



<p><b>Summary of Conditions</b></p> <p>US 30 Business from PA 82 (Manor Rd) to the US 30 Bypass in Chester County is ranked <b>#47</b> and <b>#91</b> in peak travel time vehicle and volume delay, respectively, and <b>#70</b> and <b>#111</b> in peak planning time vehicle and volume delay, respectively. US 30 Business is an undivided principal arterial roadway that includes one travel lane in each direction and passes through both the City of Coatesville and Downingtown Borough. US 30 Business contains many signalized intersections with additional left-turn lanes at major intersection approaches, and contains bicycle lanes in both directions on portions of the corridor in Coatesville.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>36.1</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>82.7</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>6:30:00</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>14:54:16</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>7.61</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>n/a</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>84,304</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>1.69</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	36.1	PT PM Peak Vehicle Delay (sec):	82.7	TT PM Peak Volume Delay (hr):	6:30:00	PT PM Peak Volume Delay (hr):	14:54:16	Level of Travel Time Reliability (mi):	7.61	Truck Travel Time Reliability Index (mi):	n/a	Peak Hour Excessive Delay (per mi):	84,304	TDM Forecasted Congestion (mi):	1.69				
TT PM Peak Vehicle Delay (sec):	36.1																				
PT PM Peak Vehicle Delay (sec):	82.7																				
TT PM Peak Volume Delay (hr):	6:30:00																				
PT PM Peak Volume Delay (hr):	14:54:16																				
Level of Travel Time Reliability (mi):	7.61																				
Truck Travel Time Reliability Index (mi):	n/a																				
Peak Hour Excessive Delay (per mi):	84,304																				
TDM Forecasted Congestion (mi):	1.69																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <p>* 2050 LRP: MRP #AF Amtrak Keystone Corridor-Coatesville Station; #W Atglen Regional Rail Ext</p> <p>* FY 2023-26 TIP: MPMS #87534 Coatesville Train Station; #107553 &amp; 87781 US 30 Bypass Eastern and Western sections, including CMP supplemental strategies for portions of US 30 Bus</p>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>17.29</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.00</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Park and Ride:</td><td>Yes</td></tr> <tr><td>Bottlenecks:</td><td>7</td></tr> <tr><td>Traffic Signals:</td><td>30</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>14,118</td></tr> <tr><td>CMP Objectives Score:</td><td>6.96</td></tr> </table>	Facility Miles:	17.29	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.00	Transit Route:	Yes	Park and Ride:	Yes	Bottlenecks:	7	Traffic Signals:	30	Annual Average Daily Traffic (AADT):	14,118	CMP Objectives Score:	6.96
Facility Miles:	17.29																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.00																				
Transit Route:	Yes																				
Park and Ride:	Yes																				
Bottlenecks:	7																				
Traffic Signals:	30																				
Annual Average Daily Traffic (AADT):	14,118																				
CMP Objectives Score:	6.96																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) Signal Improvements</li> <li>2) Improve Circulation</li> <li>3) Intelligent Transportation Systems (ITS)</li> <li>4) Transit Infrastructure Improvements</li> <li>5) Expanded Parking for Existing Transit Stations (all modes)</li> <li>6) Transit-Oriented Development (TOD)</li> </ol>																					

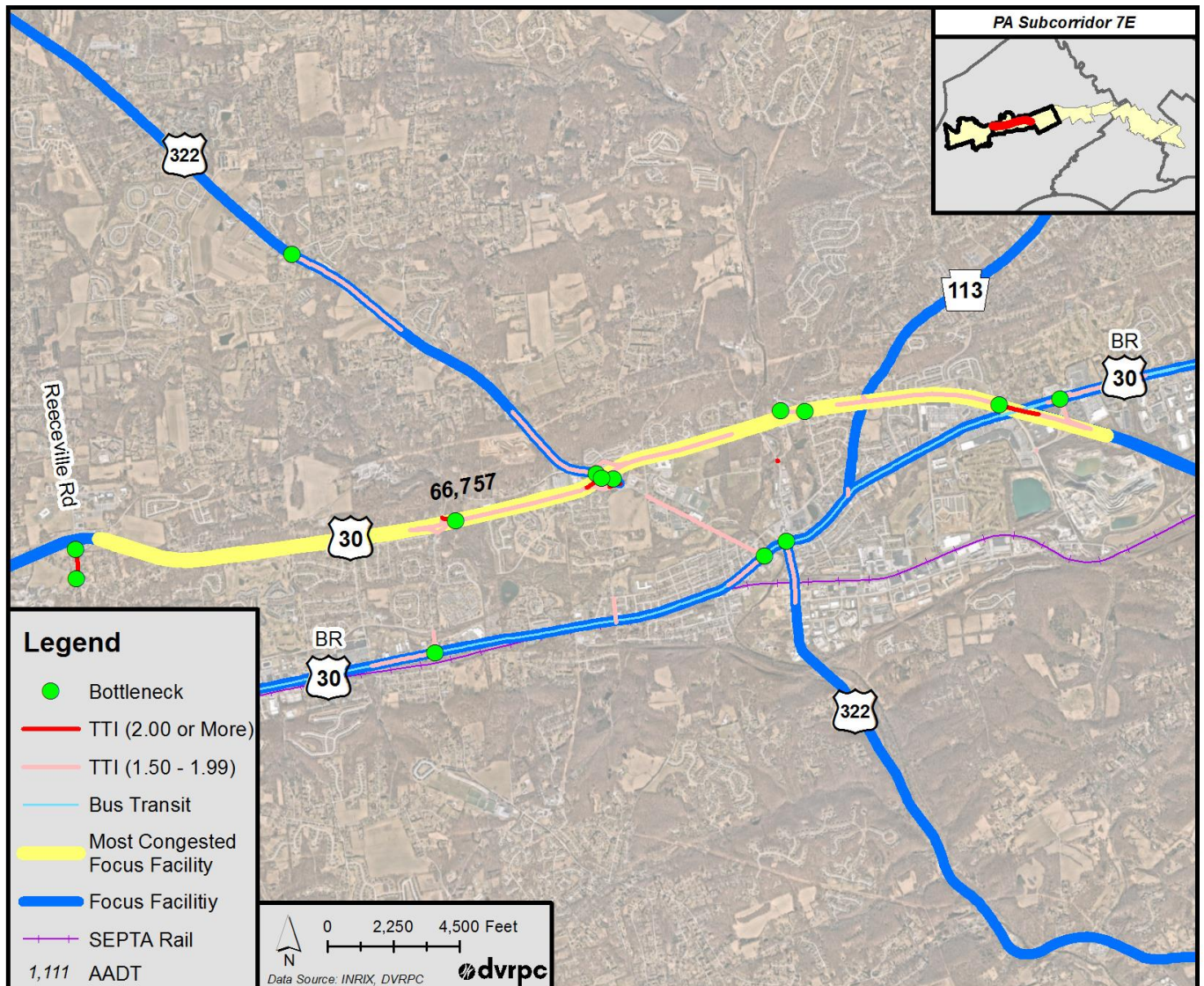
**Figure 31: Facility 56**  
 US 30 Bypass from PA 100 to US Business, Chester County, PA



Recently implemented or partially implemented strategies are listed first and italicized

**Figure 32: Facility 57**

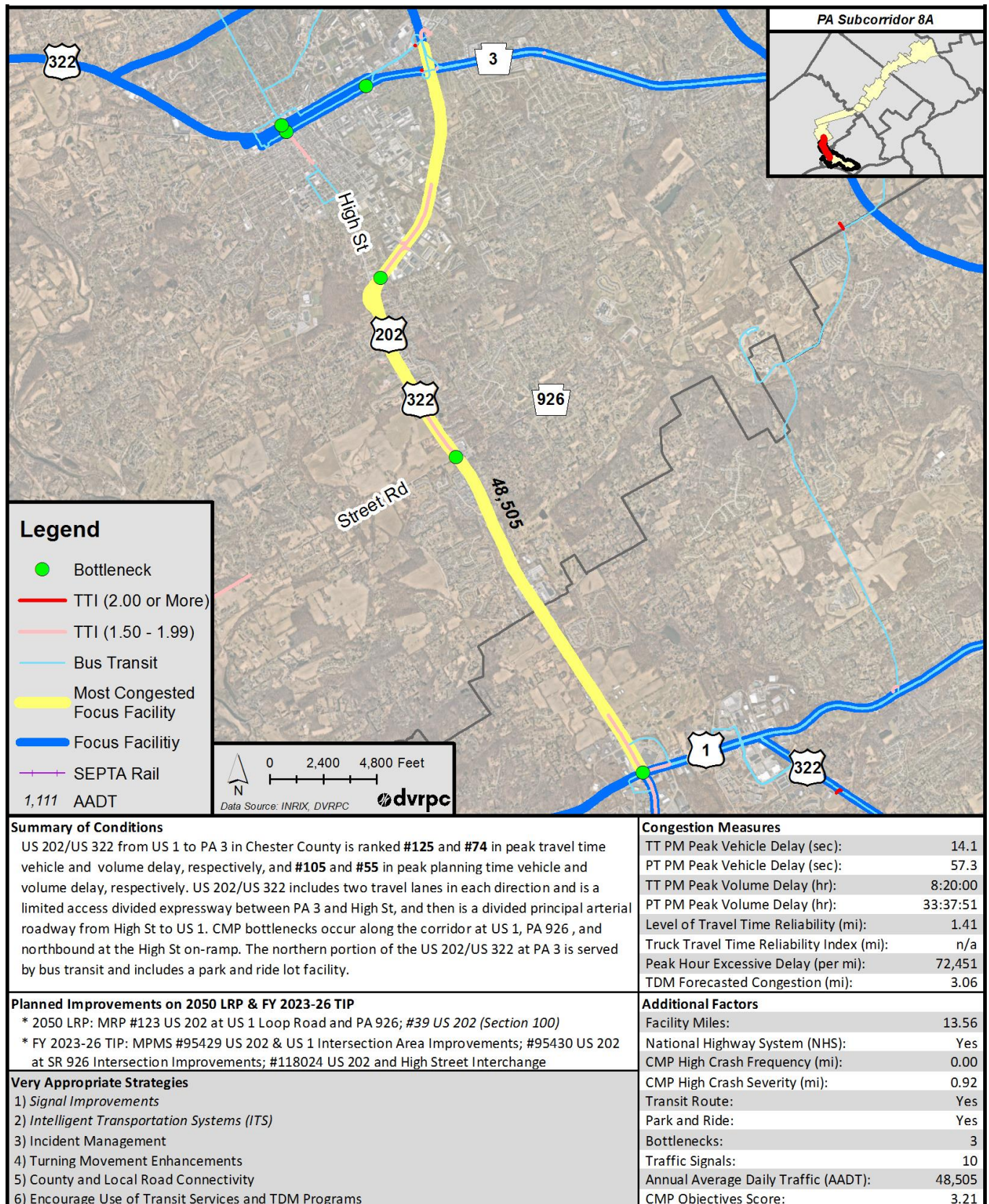
US 30 Bypass from US 30 Business to Reeceville Rd, Chester County, PA



<p><b>Summary of Conditions</b></p> <p>US 30 Bypass from US 30 Bus to Reeceville Rd in Chester County is ranked #146 and #86 in peak travel time vehicle and volume delay, respectively, and #109 and #54 in peak planning time vehicle and volume delay, respectively. US 30 Bypass is a limited access divided expressway that includes two travel lanes in each direction, plus shoulders, and varying median widths. Interchanges are at Reeceville Road, PA 340, US 322, PA 113, and US 30 Bus, and some include limited access and intersection bottlenecks. A Park and Ride lot is located at the southwest corner of US 30 Bypass and US 322. This corridor is on the TIP (MPMS #87781) for proposed major SOV capacity-adding.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>11.3</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>55.4</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>7:12:43</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>33:43:07</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>1.04</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>n/a</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>8,002</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.06</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	11.3	PT PM Peak Vehicle Delay (sec):	55.4	TT PM Peak Volume Delay (hr):	7:12:43	PT PM Peak Volume Delay (hr):	33:43:07	Level of Travel Time Reliability (mi):	1.04	Truck Travel Time Reliability Index (mi):	n/a	Peak Hour Excessive Delay (per mi):	8,002	TDM Forecasted Congestion (mi):	0.06				
TT PM Peak Vehicle Delay (sec):	11.3																				
PT PM Peak Vehicle Delay (sec):	55.4																				
TT PM Peak Volume Delay (hr):	7:12:43																				
PT PM Peak Volume Delay (hr):	33:43:07																				
Level of Travel Time Reliability (mi):	1.04																				
Truck Travel Time Reliability Index (mi):	n/a																				
Peak Hour Excessive Delay (per mi):	8,002																				
TDM Forecasted Congestion (mi):	0.06																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: MRP ID #137 US 30 Coatesville-Downingtown Bypass (Eastern Section)</li> <li>* FY 2023-26 TIP: MPMS #87781 US 30 Bypass (CER Eastern Section), major SOV capacity-adding and includes CMP supplemental strategies; #92182 Expressway Service Patrol</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>12.62</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.11</td></tr> <tr><td>Transit Route:</td><td>No</td></tr> <tr><td>Park and Ride:</td><td>Yes</td></tr> <tr><td>Bottlenecks:</td><td>7</td></tr> <tr><td>Traffic Signals:</td><td>n/a</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>66,757</td></tr> <tr><td>CMP Objectives Score:</td><td>3.98</td></tr> </table>	Facility Miles:	12.62	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.11	Transit Route:	No	Park and Ride:	Yes	Bottlenecks:	7	Traffic Signals:	n/a	Annual Average Daily Traffic (AADT):	66,757	CMP Objectives Score:	3.98
Facility Miles:	12.62																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.11																				
Transit Route:	No																				
Park and Ride:	Yes																				
Bottlenecks:	7																				
Traffic Signals:	n/a																				
Annual Average Daily Traffic (AADT):	66,757																				
CMP Objectives Score:	3.98																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Incident Management</i></li> <li>2) <i>Intelligent Transportation Systems (ITS)</i></li> <li>3) <i>Park and Ride Lots</i></li> <li>4) Signal Improvements (at on- and off-ramps)</li> <li>5) Encourage Use of Transit Services and TDM Programs</li> <li>6) Bottleneck Removal of a Limited Scale for Cars and Trucks</li> </ol>																					

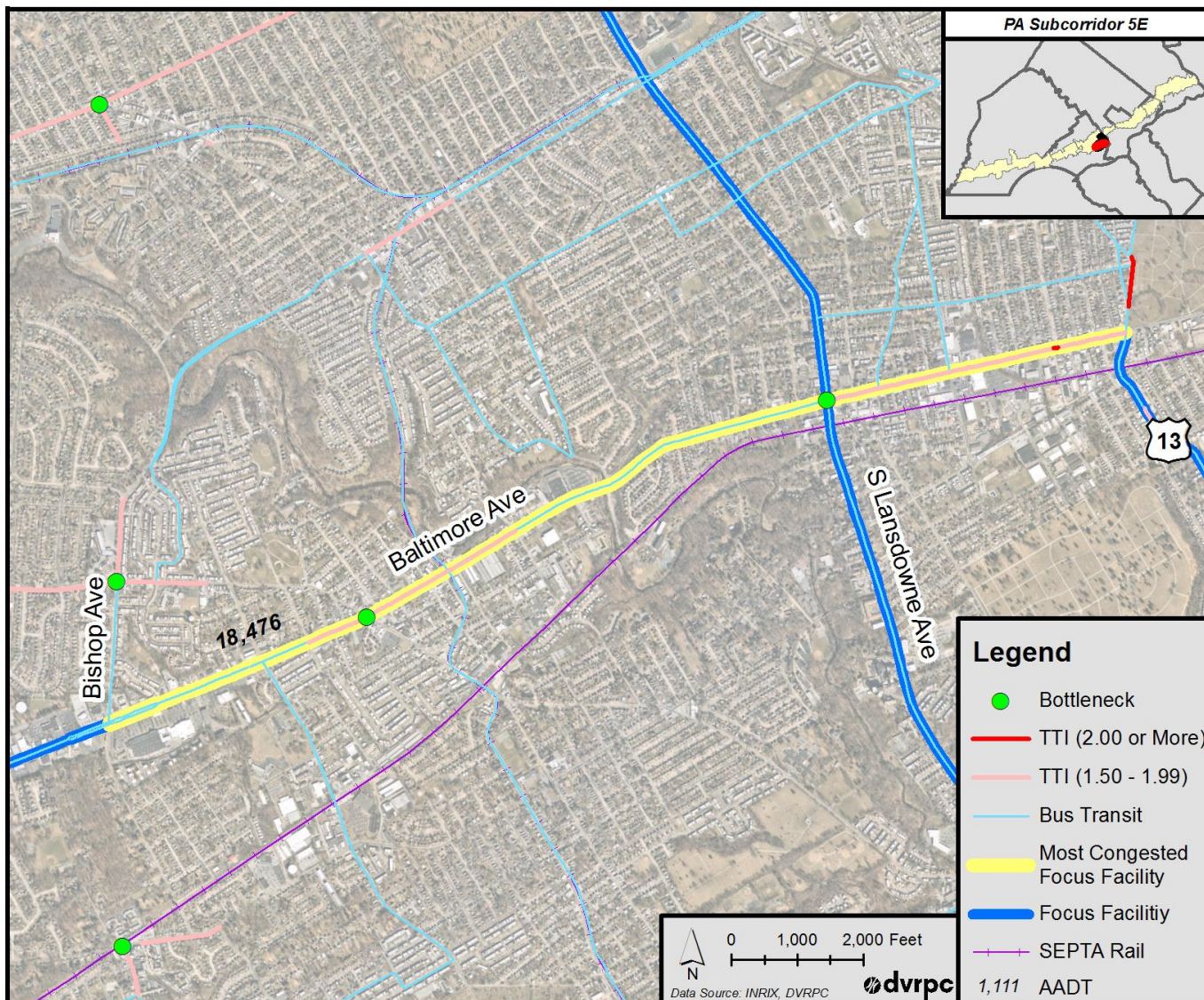
Recently implemented or partially implemented strategies are listed first and italicized

**Figure 33: Facility 64**  
 US 322/US 202 from US 1 to PA 3, Chester County, PA



Recently implemented or partially implemented strategies are listed first and italicized

**Figure 34: Facility 118**  
 Baltimore Ave from US 13 to Bishop Ave, Delaware County, PA



**Summary of Conditions**  
 Baltimore Ave from US 13 to Bishop Ave in Delaware County is ranked #13 and #38 in peak travel time vehicle and volume delay, respectively, and #16 and #52 in peak planning time vehicle and volume delay, respectively. Baltimore Ave is an undivided principal arterial roadway that includes one travel lane in each direction, and contains many signalized intersections with additional left-turn lanes at major intersection approaches. CMP bottlenecks occur along the corridor at the intersections of Springfield Rd and Lansdowne Ave. Past improvements along the corridor indicate new and upgraded sidewalks and crosswalks, and signal re-timing improvements (MPMS #84457).

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	74.8
PT PM Peak Vehicle Delay (sec):	155.2
TT PM Peak Volume Delay (hr):	16:11:07
PT PM Peak Volume Delay (hr):	34:23:21
Level of Travel Time Reliability (mi):	2.35
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	65,776
TDM Forecasted Congestion (mi):	1.44

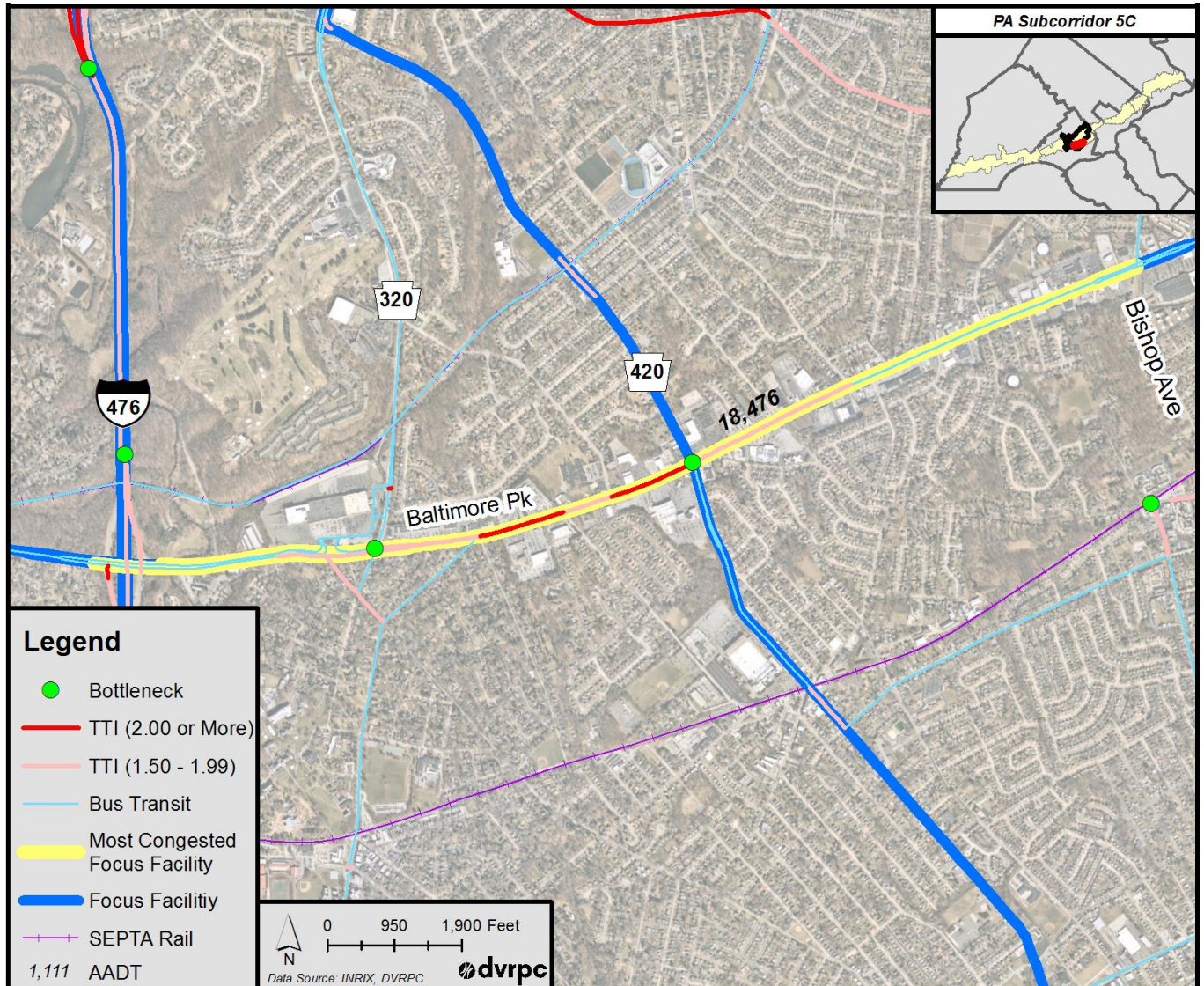
**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2023-26 TIP: No projects

Additional Factors	
Facility Miles:	6.30
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	1.03
CMP High Crash Severity (mi):	1.03
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	2
Traffic Signals:	17
Annual Average Daily Traffic (AADT):	18,476
CMP Objectives Score:	8.32

- Very Appropriate Strategies**
- 1) *Walking and Bicycling Improvements*
  - 2) *Signal Improvements*
  - 3) Transit Infrastructure Improvements
  - 4) Improve Circulation
  - 5) Transit-Oriented Development (TOD)
  - 6) Modifications to Existing Transit Routes or Services

Recently implemented or partially implemented strategies are listed first and italicized

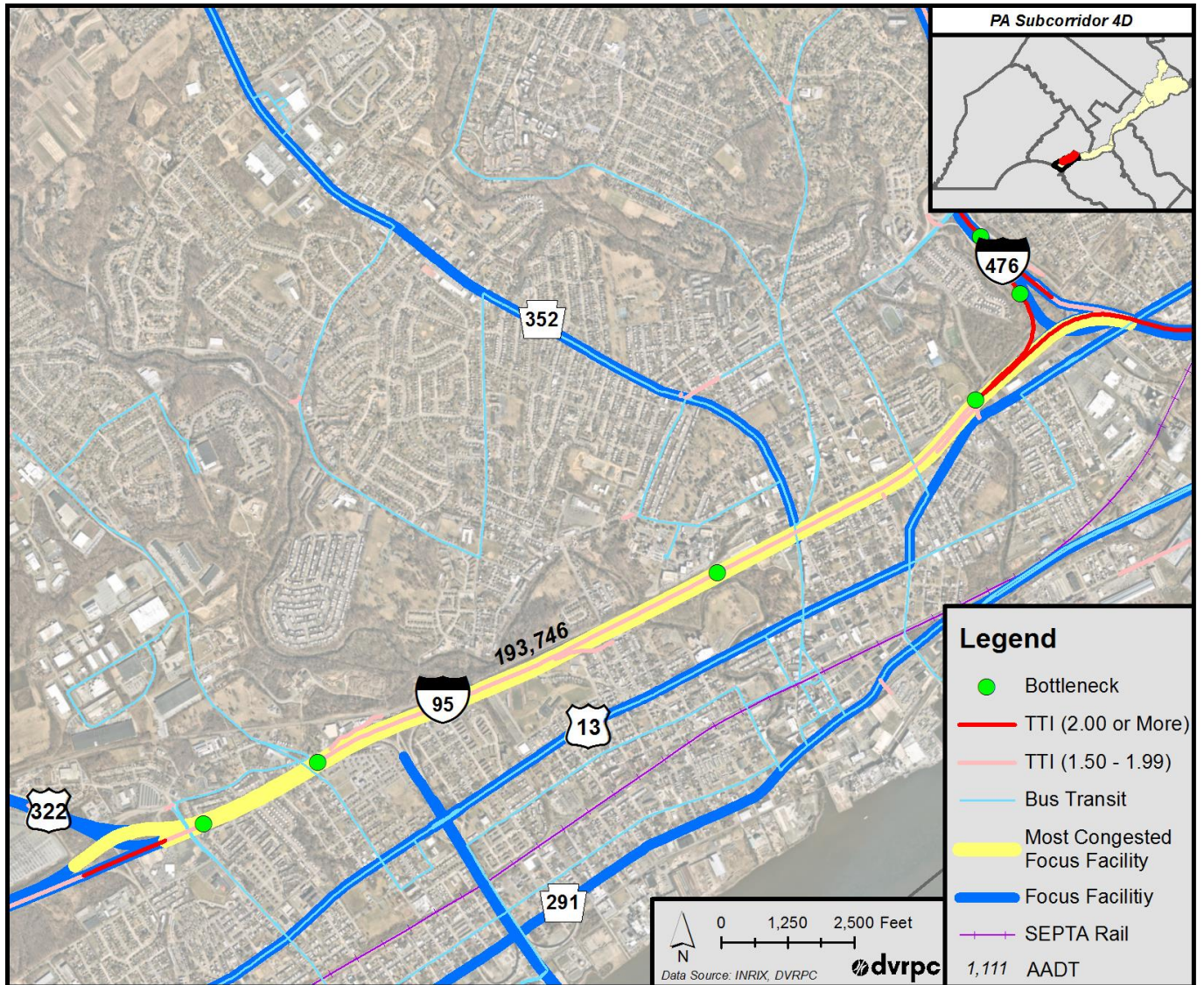
**Figure 35: Facility 119**  
 Baltimore Pk from Bishop Ave to I-476, Delaware County, PA



<p><b>Summary of Conditions</b></p> <p>Baltimore Pk from Bishop Ave to I-476 in Delaware County is ranked <b>#16</b> and <b>#23</b> in peak travel time vehicle and volume delay, respectively, and <b>#29</b> and <b>#37</b> in peak planning time vehicle and volume delay, respectively. Baltimore Pk is an undivided principal arterial roadway that includes one travel lane in each direction, and contains many signalized intersections with additional left-turn lanes at major intersection approaches. CMP bottlenecks occur along the corridor at PA 420 (Woodland Ave) and PA 320 (Sproul Rd). Past improvements along the corridor indicate signal re-timing improvements (MPMS #84457).</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>20.9</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>60.5</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>9:54:45</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>28:25:04</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.17</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>n/a</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>78,732</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.00</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	20.9	PT PM Peak Vehicle Delay (sec):	60.5	TT PM Peak Volume Delay (hr):	9:54:45	PT PM Peak Volume Delay (hr):	28:25:04	Level of Travel Time Reliability (mi):	0.17	Truck Travel Time Reliability Index (mi):	n/a	Peak Hour Excessive Delay (per mi):	78,732	TDM Forecasted Congestion (mi):	0.00				
TT PM Peak Vehicle Delay (sec):	20.9																				
PT PM Peak Vehicle Delay (sec):	60.5																				
TT PM Peak Volume Delay (hr):	9:54:45																				
PT PM Peak Volume Delay (hr):	28:25:04																				
Level of Travel Time Reliability (mi):	0.17																				
Truck Travel Time Reliability Index (mi):	n/a																				
Peak Hour Excessive Delay (per mi):	78,732																				
TDM Forecasted Congestion (mi):	0.00																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: MRP #130 I-476 Active Traffic Management</li> <li>* FY 2023-26 TIP: MPMS #104821 I-476 Travel Management</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>5.73</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.00</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Park and Ride:</td><td>No</td></tr> <tr><td>Bottlenecks:</td><td>2</td></tr> <tr><td>Traffic Signals:</td><td>16</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>30,874</td></tr> <tr><td>CMP Objectives Score:</td><td>7.91</td></tr> </table>	Facility Miles:	5.73	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.00	Transit Route:	Yes	Park and Ride:	No	Bottlenecks:	2	Traffic Signals:	16	Annual Average Daily Traffic (AADT):	30,874	CMP Objectives Score:	7.91
Facility Miles:	5.73																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.00																				
Transit Route:	Yes																				
Park and Ride:	No																				
Bottlenecks:	2																				
Traffic Signals:	16																				
Annual Average Daily Traffic (AADT):	30,874																				
CMP Objectives Score:	7.91																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Signal Improvements</i></li> <li>2) Placemaking for Non-motorized Transportation</li> <li>3) Expanded Parking for Existing Transit Stations (including remote, all modes)</li> <li>4) Park and Ride Lots</li> <li>5) Transit-Oriented Development (TOD)</li> <li>6) Walking and Bicycling Improvements</li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 36: Facility 31**  
I-95 from I-476 to US 322, Delaware County, PA



**Summary of Conditions**  
I-95 from I-476 to US 322 in Delaware County is ranked #93 and #11 in peak travel time vehicle and volume delay, respectively, and #69 and #9 in peak planning time vehicle and volume delay, respectively. I-95 is an interstate limited access roadway that includes three travel lanes in each direction. I-95 passes through the City of Chester and includes on- and off-ramps at various locations, including US 322, Kerlin St, PA 352 (Edgmont Ave), Chestnut St, and I-476. Limited access bottlenecks occur along I-95 southbound at the US 322 westbound on-ramp, the PA 352 on-ramp, and the I-476 on-ramp, and I-95 northbound at the US 322 eastbound on-ramp.

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	21.5
PT PM Peak Vehicle Delay (sec):	83.1
TT PM Peak Volume Delay (hr):	56:55:43
PT PM Peak Volume Delay (hr):	218:20:49
Level of Travel Time Reliability (mi):	2.18
Truck Travel Time Reliability Index (mi):	4.79
Peak Hour Excessive Delay (per mi):	24,781
TDM Forecasted Congestion (mi):	5.68

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: MRP #130 I-476 Active Traffic Management  
 \* FY 2023-26 TIP: MPMS #104821 I-476 Travel Management; #98207 I-95 Congestion Management; #103556 I-95 ATMS (GR9); #108910 I-95 Noise Abatement; #92182 Expressway Service Patrol

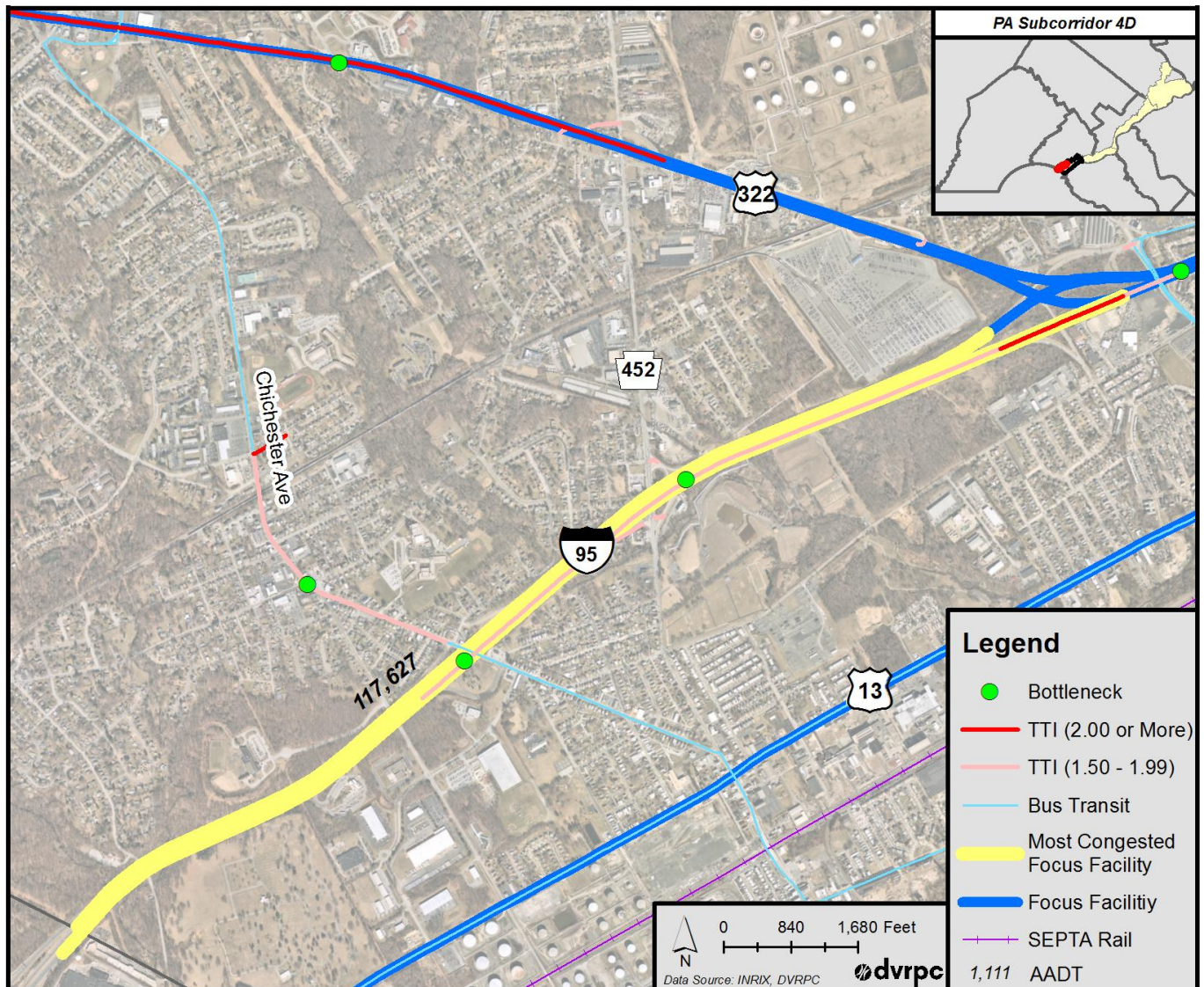
Additional Factors	
Facility Miles:	7.59
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	3.70
Transit Route:	No
Park and Ride:	No
Bottlenecks:	4
Traffic Signals:	n/a
Annual Average Daily Traffic (AADT):	193,746
CMP Objectives Score:	8.42

- Very Appropriate Strategies**
- 1) *Incident Management*
  - 2) *Intelligent Transportation Systems (ITS)*
  - 3) *Integrated Corridor Management (ICM)*
  - 4) Transit Infrastructure Improvements
  - 5) Park and Ride Lots
  - 6) Major Reconstruction with Minor Capacity Additions

*Recently implemented or partially implemented strategies are listed first and italicized*



**Figure 37: Facility 32**  
 I-95 from US 322 to PA-DE State Line, Delaware County, PA



**Summary of Conditions**  
 I-95 from US 322 to the PA-DE State Line is ranked #84 and #15 in peak travel time vehicle and volume delay, respectively, and #41 and #12 in peak planning time vehicle and volume delay, respectively. I-95 is an interstate limited access roadway that includes three travel lanes in each direction. I-95 includes on- and off-ramps at various locations, including US 322, PA 452 (Market St), and Chichester Ave. CMP limited access roadway bottlenecks occur on I-95 northbound at the Chichester Ave and PA 452 on-ramps.

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	23.5
PT PM Peak Vehicle Delay (sec):	112.6
TT PM Peak Volume Delay (hr):	36:44:18
PT PM Peak Volume Delay (hr):	170:11:18
Level of Travel Time Reliability (mi):	1.43
Truck Travel Time Reliability Index (mi):	2.98
Peak Hour Excessive Delay (per mi):	23,986
TDM Forecasted Congestion (mi):	2.51

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: MRP #115 I-95/US 322/Highland Ave Interchange  
 \* FY 2023-26 TIP: MPMS #103556 I-95 ATMS; #98207 I-95 Congestion Management; #15477 I-95/US 322/Conchester Hwy Improv.; #111022 Chichester Ave Corridor Safety Improv.

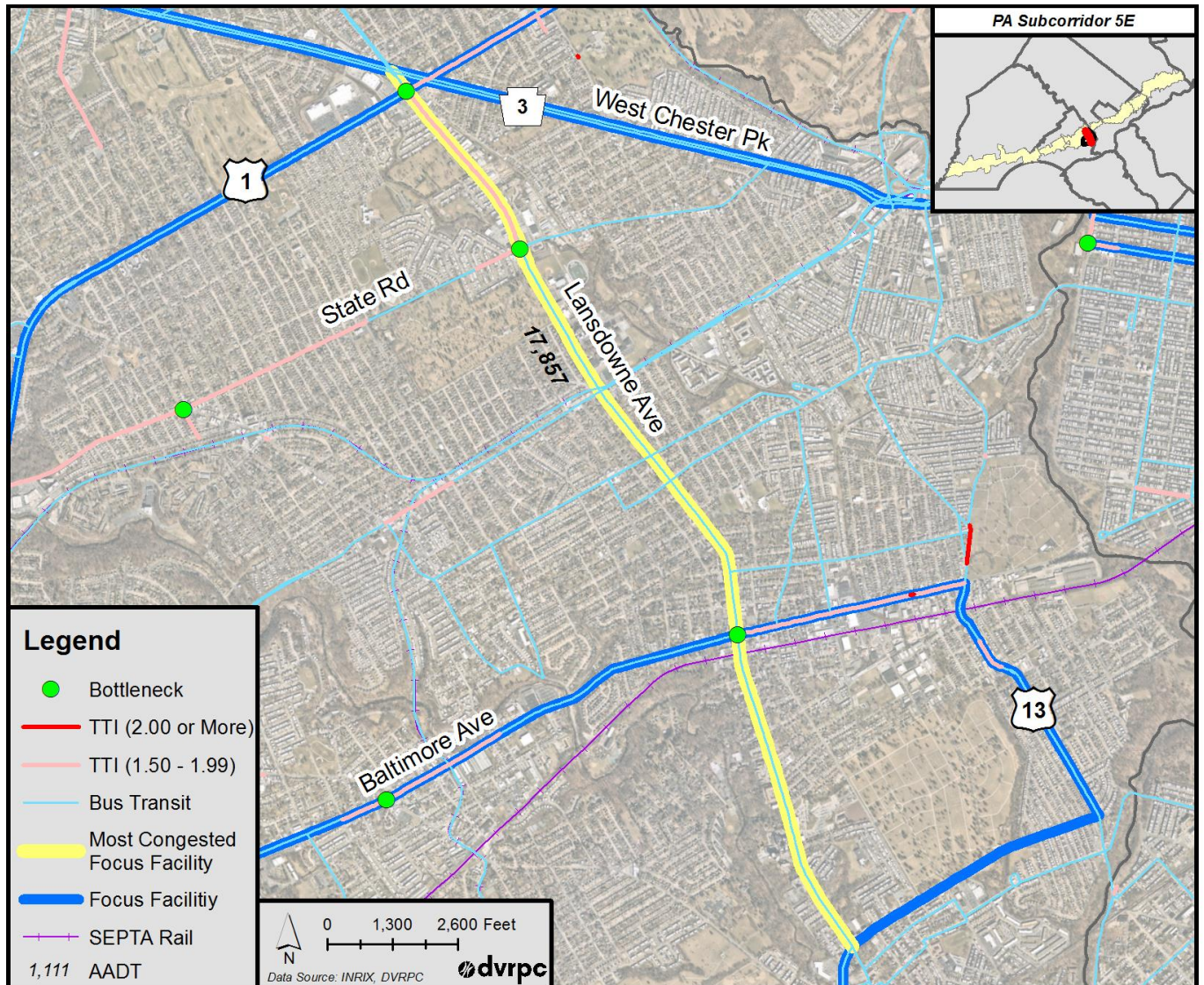
Additional Factors	
Facility Miles:	5.50
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	2.00
Transit Route:	No
Park and Ride:	No
Bottlenecks:	2
Traffic Signals:	n/a
Annual Average Daily Traffic (AADT):	117,627
CMP Objectives Score:	7.55

- Very Appropriate Strategies**
- 1) *Incident Management*
  - 2) *Intelligent Transportation Systems (ITS)*
  - 3) *Integrated Corridor Management (ICM)*
  - 4) Transit Infrastructure Improvements
  - 5) Park and Ride Lots
  - 6) Major Reconstruction with Minor Capacity Additions

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 38: Facility 157**

Lansdowne Ave from US 13 to PA 3, Delaware County, PA



**Summary of Conditions**  
 Lansdowne Ave from US 13 to PA 3 (West Chester Pk) is ranked #24 and #53 in peak travel time vehicle and volume delay, respectively, and #25 and #62 in peak planning time vehicle and volume delay, respectively. Lansdowne Ave is an undivided principal arterial roadway that includes one travel lane in each direction, and contains many signalized intersections with additional left-turn lanes at major intersection approaches. CMP bottlenecks occur along the corridor at the intersections of Baltimore Ave, State Rd and US 1.

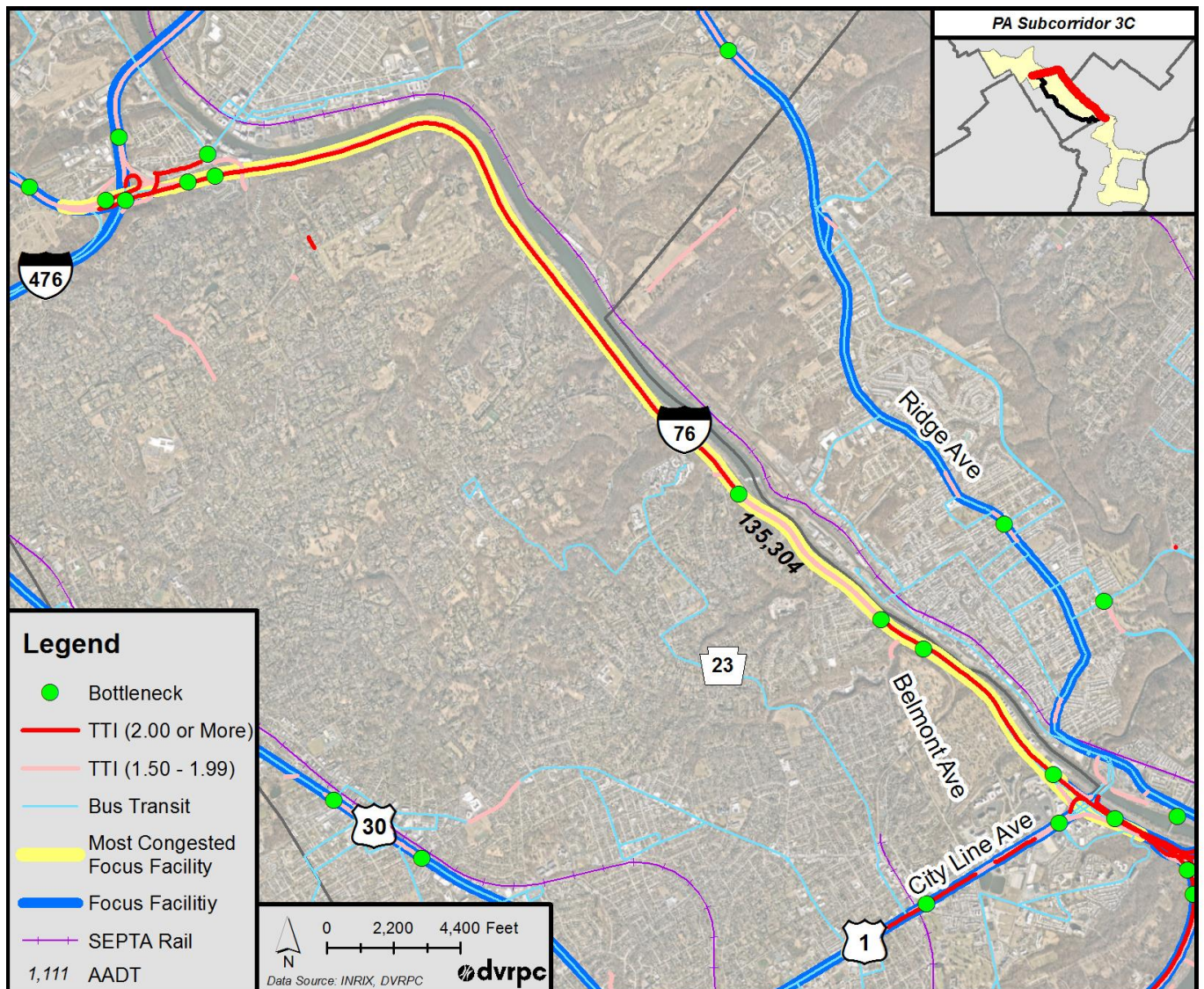
Congestion Measures	
TT PM Peak Vehicle Delay (sec):	56.8
PT PM Peak Vehicle Delay (sec):	73.5
TT PM Peak Volume Delay (hr):	13:00:43
PT PM Peak Volume Delay (hr):	15:42:12
Level of Travel Time Reliability (mi):	n/a
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	n/a
TDM Forecasted Congestion (mi):	2.81

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2023-26 TIP: MPMS #115427 Lansdowne Ave Corridor Safety Improvements

Additional Factors	
Facility Miles:	7.59
National Highway System (NHS):	No
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	1.22
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	3
Traffic Signals:	18
Annual Average Daily Traffic (AADT):	17,857
CMP Objectives Score:	5.85

**Very Appropriate Strategies**  
 1) Signal Improvements  
 2) Transit Infrastructure Improvements  
 3) Improve Circulation  
 4) Transit-Oriented Development (TOD)  
 5) Modifications to Existing Transit Routes or Services  
 6) Walking and Bicycling Improvements

**Figure 39: Facility 19**  
 I-76 from US 1 (City Ave) to I-476, Montgomery County, PA



**Summary of Conditions**  
 I-76 from US 1 (City Ave) to I-476 in Montgomery County is ranked **#28** and **#7** in peak travel time vehicle and volume delay, respectively, and **#26** and **#8** in peak planning time vehicle and volume delay, respectively. I-76 is an interstate limited access roadway with two lanes in each direction, and includes on- and off-ramps at various locations including US 1 (City Ave), Belmont Ave, Hollow Rd, Matsonford Rd and I-476. Variable Speed Limit devices are operating along the corridor to help improve the flow of traffic and mitigate congestion. The speed limits change based on traffic and safety conditions.

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	50.5
PT PM Peak Vehicle Delay (sec):	133.4
TT PM Peak Volume Delay (hr):	88:16:42
PT PM Peak Volume Delay (hr):	229:58:37
Level of Travel Time Reliability (mi):	8.58
Truck Travel Time Reliability Index (mi):	8.73
Peak Hour Excessive Delay (per mi):	180,293
TDM Forecasted Congestion (mi):	17.02

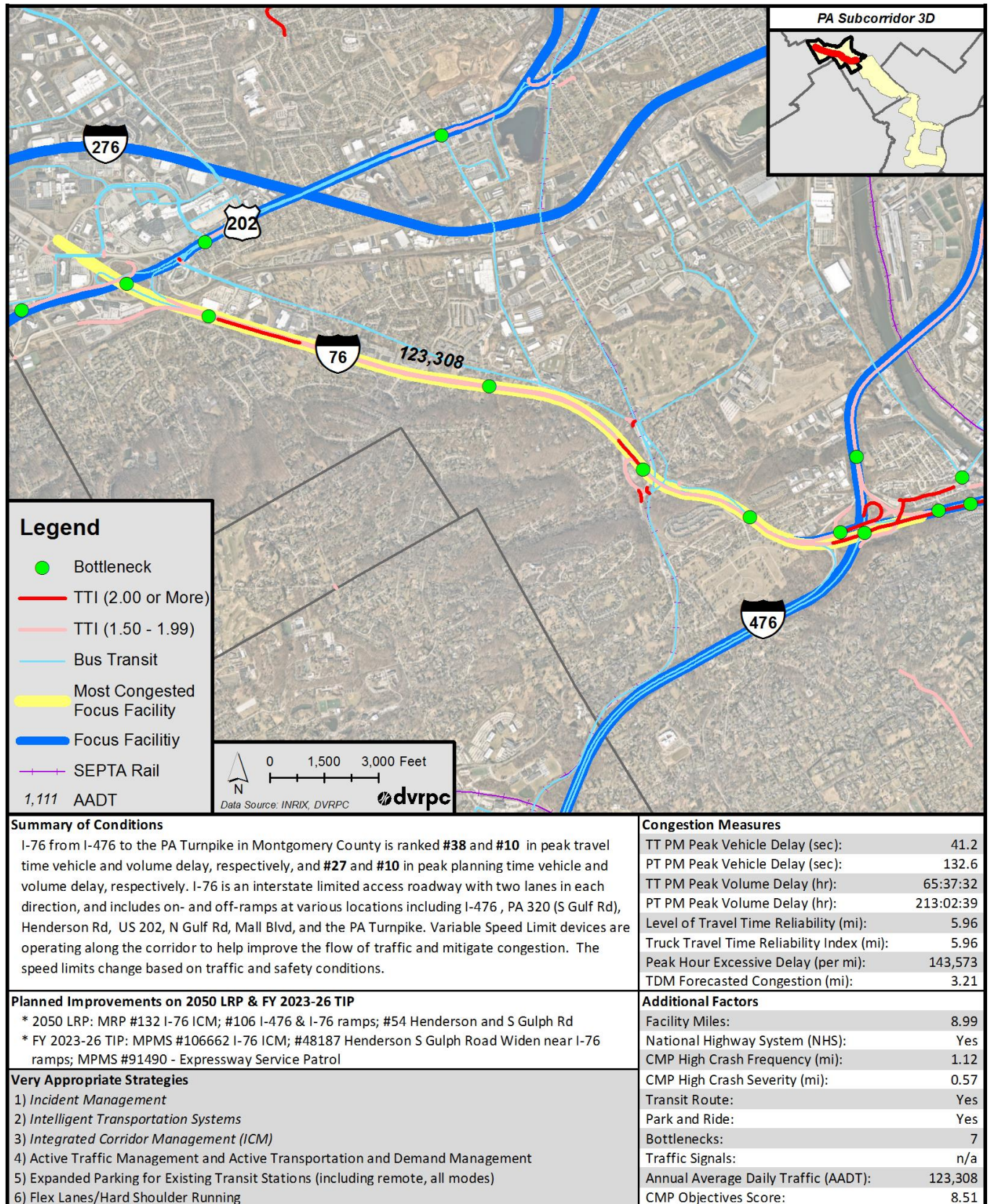
**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: MRP #132 I-76 ICM; #120 Belmont Ave; #107 PA 23  
 \* FY 2023-26 TIP: MPMS #106662 I-76 ICM; #64795 Belmont Rd/Rock Hill Rd Widening; #111005 Conshohocken Garage; MPMS #91490 - Expressway Service Patrol

Additional Factors	
Facility Miles:	16.21
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.27
CMP High Crash Severity (mi):	1.24
Transit Route:	Yes
Park and Ride:	Yes
Bottlenecks:	9
Traffic Signals:	n/a
Annual Average Daily Traffic (AADT):	135,304
CMP Objectives Score:	8.59

- Very Appropriate Strategies**
- 1) *Incident Management*
  - 2) *Intelligent Transportation Systems*
  - 3) *Integrated Corridor Management (ICM)*
  - 4) *Expanded Parking for Existing Transit Stations (including remote, all modes)*
  - 5) Active Traffic Management and Active Transportation and Demand Management
  - 6) Flex Lanes/Hard Shoulder Running

Recently implemented or partially implemented strategies are listed first and italicized

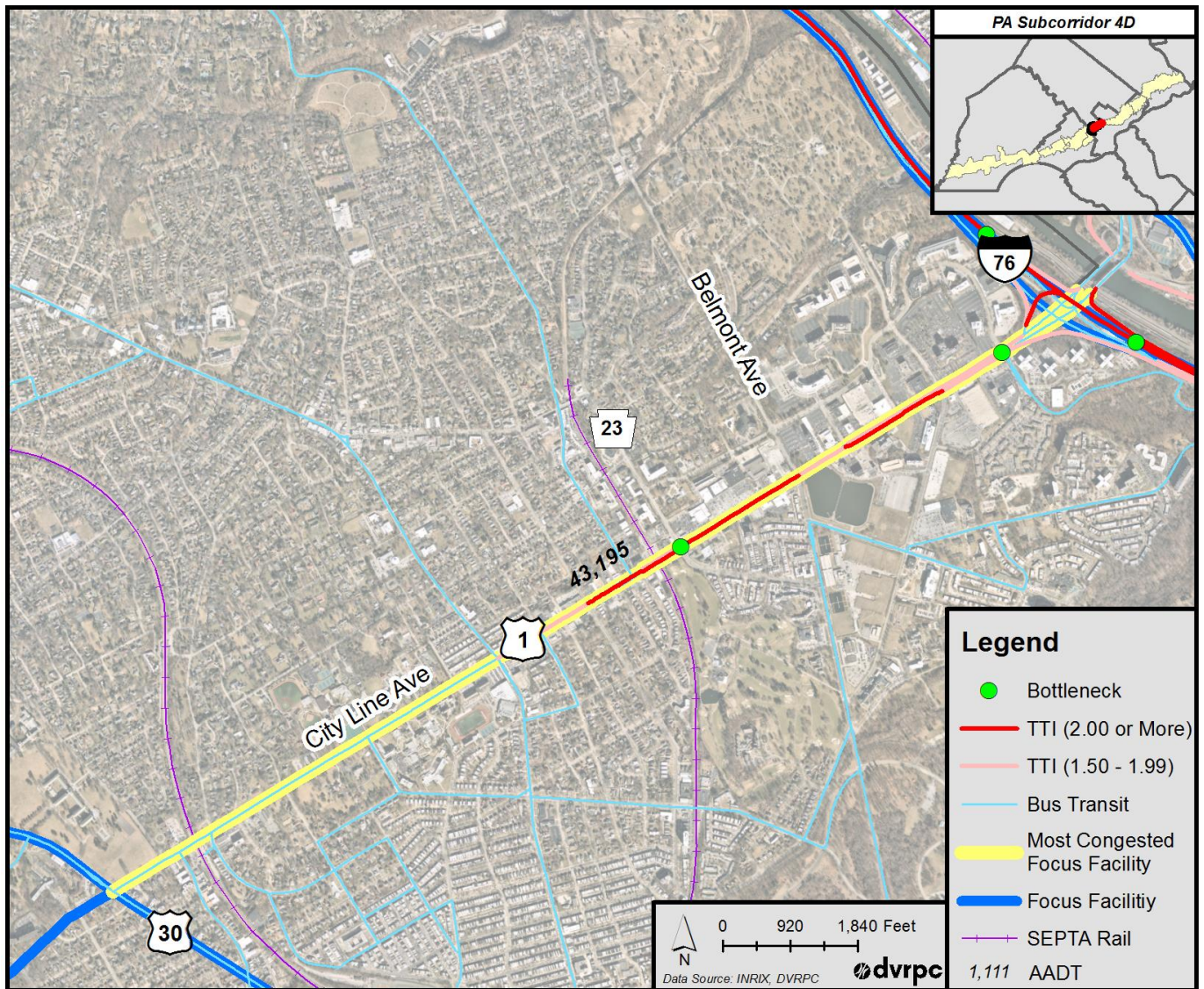
**Figure 40: Facility 20**  
 I-76 from I-476 to I-76 PA Turnpike, Montgomery County, PA



Recently implemented or partially implemented strategies are listed first and italicized

**Figure 41: Facility 40**

US 1 (City Ave) from I-76 to US 30 (Lancaster Ave), Montgomery and Philadelphia Counties, PA



**Summary of Conditions**  
 US 1 (City Ave) from I-76 to US 30 (Lancaster Ave) shares a boundary with both the City of Philadelphia and Montgomery County and is ranked #12 and #13 in peak travel time vehicle and volume delay, respectively, and #13 and #21 in peak planning time vehicle and volume delay, respectively. US 1 is an undivided principal arterial roadway, with largely two travel lanes in each direction with additional left-turn lanes at major intersection approaches. An adaptive signaling system is operating along the corridor to help maximize the efficiency of the roadway. CMP bottlenecks occur at the intersections of PA 23 (Conshohocken State Rd) and Presidential Blvd.

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	75.0
PT PM Peak Vehicle Delay (sec):	165.1
TT PM Peak Volume Delay (hr):	40:34:17
PT PM Peak Volume Delay (hr):	89:44:24
Level of Travel Time Reliability (mi):	0.71
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	66,257
TDM Forecasted Congestion (mi):	1.50

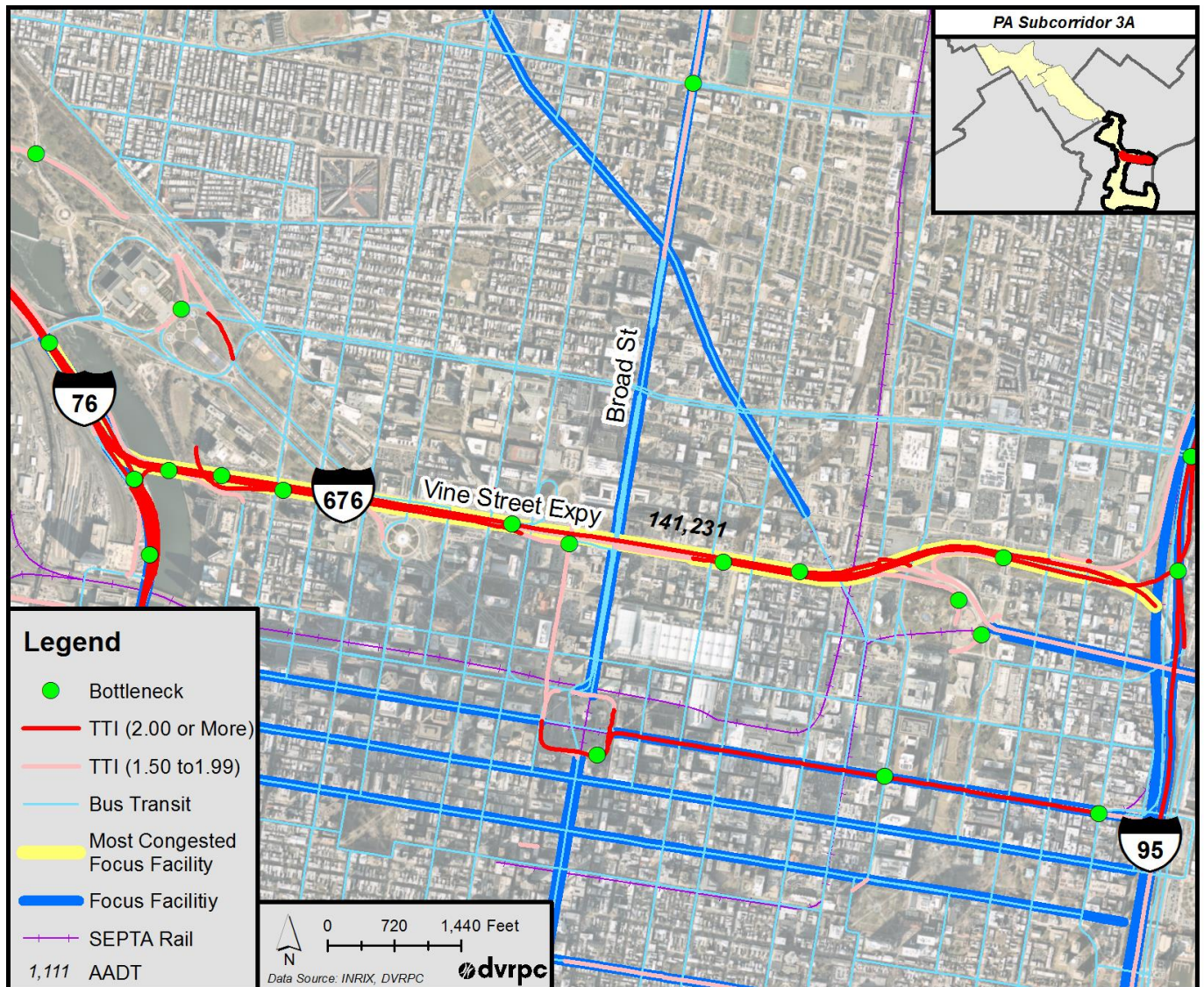
**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2023-26 TIP: No projects

Additional Factors	
Facility Miles:	5.89
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	1.53
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	2
Traffic Signals:	17
Annual Average Daily Traffic (AADT):	43,195
CMP Objectives Score:	8.69

- Very Appropriate Strategies**
- 1) *Signal Improvements*
  - 2) Enhanced Transit Amenities and Safety
  - 3) Turning Movement Enhancements
  - 4) Improvements to Pedestrian and Bicycle Access to Transit Stations and Bus Stops
  - 5) More Frequent Transit or More Hours of Service
  - 6) Walking and Bicycling Improvements

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 42: Facility 117**  
 I-676 (Vine Street Expy) from I-76 to I-95, Philadelphia County, PA

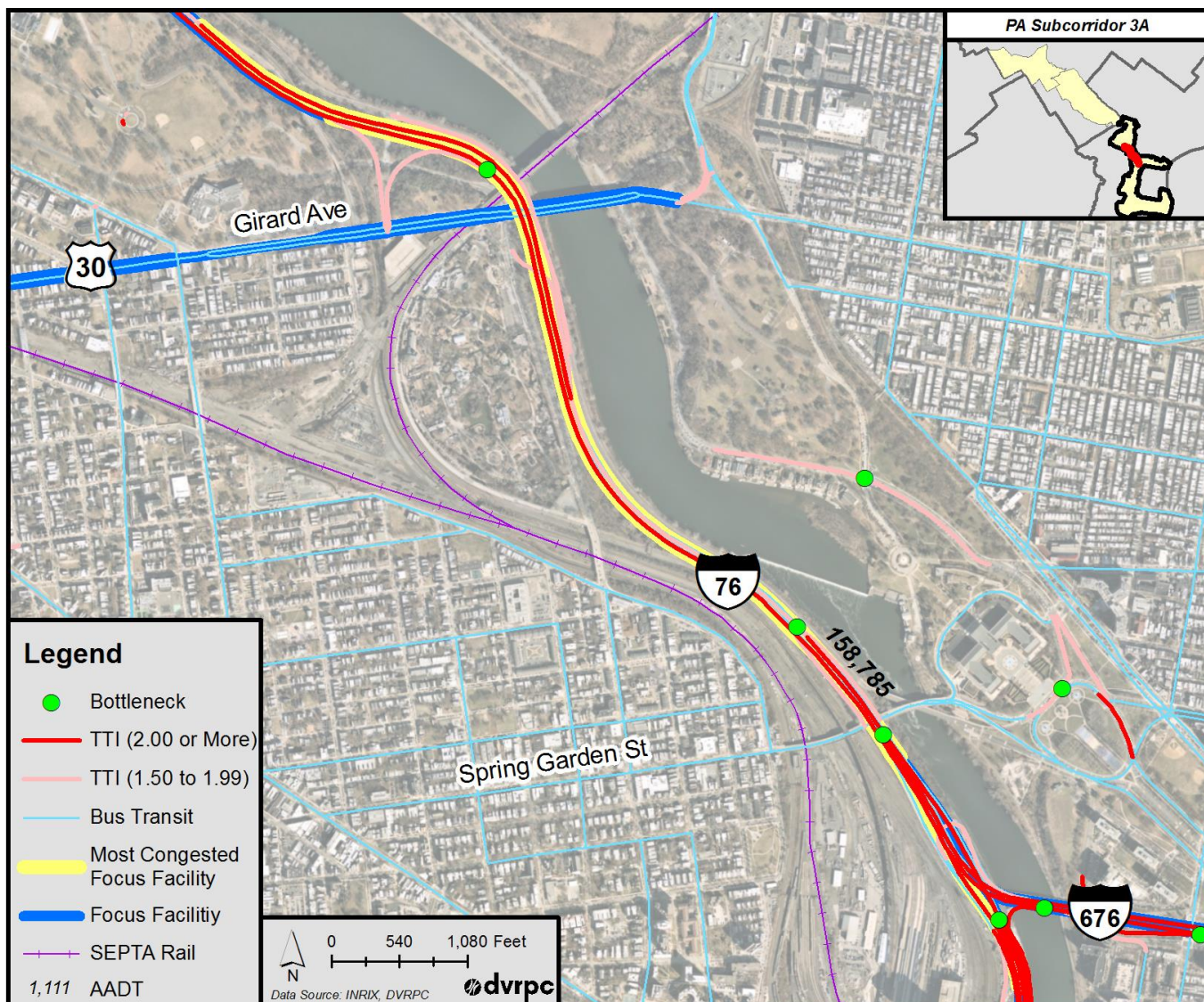


<p><b>Summary of Conditions</b></p> <p>I-676 (Vine Street Expy) from I-76 to I-95 in the City of Philadelphia is ranked #1 in both peak travel time vehicle and volume delay, and #1 in both peak planning time vehicle and volume delay. I-676 is an interstate limited access roadway that contains three travel lanes in each direction, and on-and off-ramps at I-95, I-76, Ben Franklin Pkwy, Broad St, 8th St and 6th St/ (Ben Franklin Bridge). Various limited access roadway bottlenecks occur along I-676 at on-ramp merge locations, and along with high traffic volumes, contribute to high traffic congestion in the corridor.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>141.0</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>332.0</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>252:53:51</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>593:37:17</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>3.10</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>3.81</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>100,685</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>1.38</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	141.0	PT PM Peak Vehicle Delay (sec):	332.0	TT PM Peak Volume Delay (hr):	252:53:51	PT PM Peak Volume Delay (hr):	593:37:17	Level of Travel Time Reliability (mi):	3.10	Truck Travel Time Reliability Index (mi):	3.81	Peak Hour Excessive Delay (per mi):	100,685	TDM Forecasted Congestion (mi):	1.38				
TT PM Peak Vehicle Delay (sec):	141.0																				
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Truck Travel Time Reliability Index (mi):	3.81																				
Peak Hour Excessive Delay (per mi):	100,685																				
TDM Forecasted Congestion (mi):	1.38																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: MRP #193 30th St Station; #X South Jersey BRT; #192 Vine St Expy Cap</li> <li>* FY 2023-26 TIP: MPMS #91490 - Expressway Service Patrol</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>4.06</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>2.03</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.95</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Park and Ride:</td><td>No</td></tr> <tr><td>Bottlenecks:</td><td>8</td></tr> <tr><td>Traffic Signals:</td><td>n/a</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>141,231</td></tr> <tr><td>CMP Objectives Score:</td><td>11.65</td></tr> </table>	Facility Miles:	4.06	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	2.03	CMP High Crash Severity (mi):	0.95	Transit Route:	Yes	Park and Ride:	No	Bottlenecks:	8	Traffic Signals:	n/a	Annual Average Daily Traffic (AADT):	141,231	CMP Objectives Score:	11.65
Facility Miles:	4.06																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	2.03																				
CMP High Crash Severity (mi):	0.95																				
Transit Route:	Yes																				
Park and Ride:	No																				
Bottlenecks:	8																				
Traffic Signals:	n/a																				
Annual Average Daily Traffic (AADT):	141,231																				
CMP Objectives Score:	11.65																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Incident Management</i></li> <li>2) <i>Travel Information Services</i></li> <li>3) <i>Integrated Corridor Management (ICM)</i></li> <li>4) <i>Expanded Parking for Existing Transit Stations (including remote, all modes)</i></li> <li>5) <i>Transit Infrastructure Improvements</i></li> <li>6) <i>Active Traffic Management and Active Transportation and Demand Management</i></li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 43: Facility 17**

I-76 (Schuylkill Expy) from I-676 (Vine Street Expy) to US 30 (Girard Ave), Philadelphia County, PA

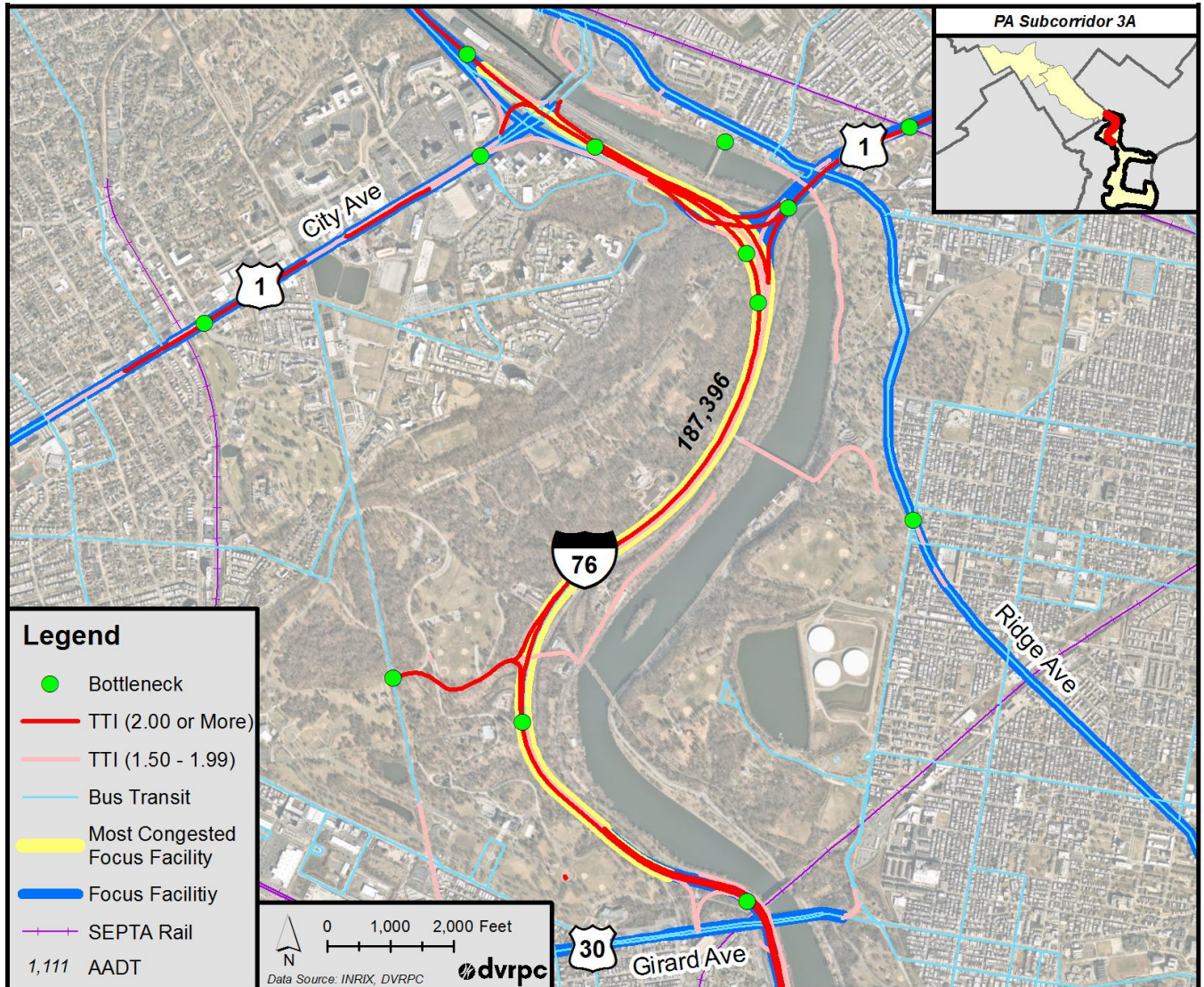


<p><b>Summary of Conditions</b></p> <p>I-76 (Schuylkill Expy) from I-676 (Vine Street Expy) to US 30 (Girard Ave) in the City of Philadelphia is ranked #4 and #2 in peak travel time vehicle and volume delay, respectively, and #3 in both peak planning time vehicle and volume delay. I-76 is an interstate limited access roadway that contains three travel lanes in each direction and on- and off-ramps at various locations, including I-676, Spring Garden Street, and Girard Avenue. Limited access roadway bottlenecks occur along I-76 westbound at on-ramp locations at I-676, Spring Garden St, and Schuylkill Ave, and occur along I-76 eastbound at the on-ramp location at Girard Ave.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>103.0</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>332.0</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>197:19:36</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>486:36:40</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>2.87</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>3.39</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>109,569</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>2.77</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	103.0	PT PM Peak Vehicle Delay (sec):	332.0	TT PM Peak Volume Delay (hr):	197:19:36	PT PM Peak Volume Delay (hr):	486:36:40	Level of Travel Time Reliability (mi):	2.87	Truck Travel Time Reliability Index (mi):	3.39	Peak Hour Excessive Delay (per mi):	109,569	TDM Forecasted Congestion (mi):	2.77				
TT PM Peak Vehicle Delay (sec):	103.0																				
PT PM Peak Vehicle Delay (sec):	332.0																				
TT PM Peak Volume Delay (hr):	197:19:36																				
PT PM Peak Volume Delay (hr):	486:36:40																				
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Truck Travel Time Reliability Index (mi):	3.39																				
Peak Hour Excessive Delay (per mi):	109,569																				
TDM Forecasted Congestion (mi):	2.77																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: MRP #BO 30th St Station; #204 I-76 Philadelphia Active Traffic Management</li> <li>* FY 2023-26 TIP: MPMS #91490 - Expressway Service Patrol</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>3.39</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.23</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Park and Ride:</td><td>No</td></tr> <tr><td>Bottlenecks:</td><td>4</td></tr> <tr><td>Traffic Signals:</td><td>n/a</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>158,785</td></tr> <tr><td>CMP Objectives Score:</td><td>10.05</td></tr> </table>	Facility Miles:	3.39	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.23	Transit Route:	Yes	Park and Ride:	No	Bottlenecks:	4	Traffic Signals:	n/a	Annual Average Daily Traffic (AADT):	158,785	CMP Objectives Score:	10.05
Facility Miles:	3.39																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.23																				
Transit Route:	Yes																				
Park and Ride:	No																				
Bottlenecks:	4																				
Traffic Signals:	n/a																				
Annual Average Daily Traffic (AADT):	158,785																				
CMP Objectives Score:	10.05																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Incident Management</i></li> <li>2) <i>Travel Information Services</i></li> <li>3) <i>Integrated Corridor Management (ICM)</i></li> <li>4) <i>Expanded Parking for Existing Transit Stations (including remote, all modes)</i></li> <li>5) <i>Transit Infrastructure Improvements</i></li> <li>6) <i>Active Traffic Management and Active Transportation and Demand Management</i></li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 44: Facility 18**

I-76 from US 30 (Girard Ave) to US 1 (City Ave), Philadelphia County, PA



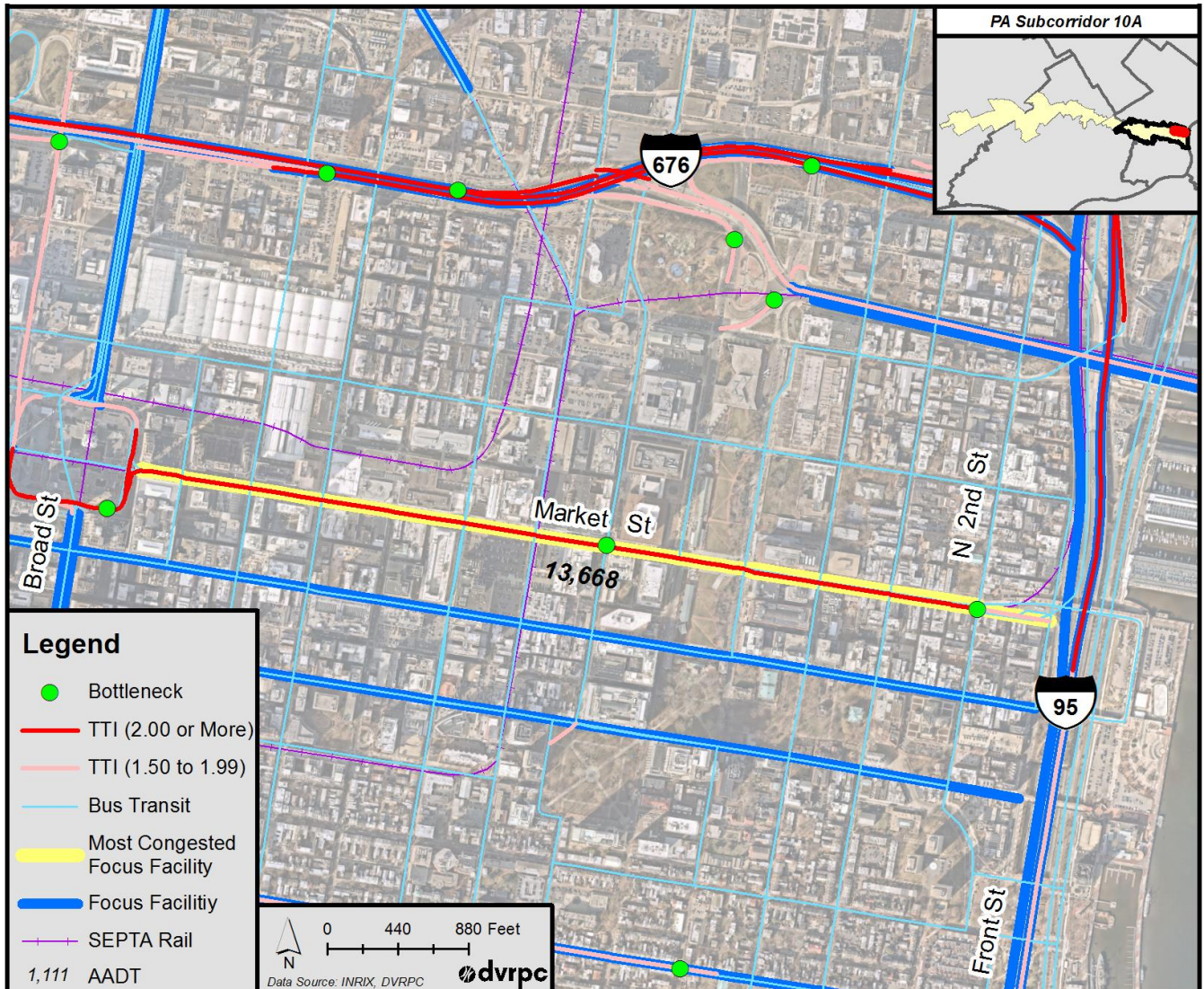
<p><b>Summary of Conditions</b>                  I-76 (Schuylkill Expy) from US 30 (Girard Ave) to US 1 (City Ave) in the City of Philadelphia is ranked <b>#8</b> and <b>#3</b> in peak travel time vehicle and volume delay, respectively, and <b>#2</b> in both peak planning time vehicle and volume delay. I-76 is an interstate limited access roadway that varies between three to four travel lanes in each direction, and major interchanges are located at US 1 (City Ave), US 1 (Roosevelt Blvd), and US 30 (Girard Ave).</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>82.6</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>261.5</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>188:03:20</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>587:51:39</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>3.93</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>4.94</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>195,571</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>5.82</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	82.6	PT PM Peak Vehicle Delay (sec):	261.5	TT PM Peak Volume Delay (hr):	188:03:20	PT PM Peak Volume Delay (hr):	587:51:39	Level of Travel Time Reliability (mi):	3.93	Truck Travel Time Reliability Index (mi):	4.94	Peak Hour Excessive Delay (per mi):	195,571	TDM Forecasted Congestion (mi):	5.82				
TT PM Peak Vehicle Delay (sec):	82.6																				
PT PM Peak Vehicle Delay (sec):	261.5																				
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Peak Hour Excessive Delay (per mi):	195,571																				
TDM Forecasted Congestion (mi):	5.82																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b>                  * 2050 LRP: MRP #204 - I-76 Philadelphia Active Traffic Management                  * FY 2023-26 TIP: MPMS #91490 - Expressway Service Patrol</p>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>5.82</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>2.18</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Park and Ride:</td><td>No</td></tr> <tr><td>Bottlenecks:</td><td>4</td></tr> <tr><td>Traffic Signals:</td><td>n/a</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>187,396</td></tr> <tr><td>CMP Objectives Score:</td><td>9.57</td></tr> </table>	Facility Miles:	5.82	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	2.18	Transit Route:	Yes	Park and Ride:	No	Bottlenecks:	4	Traffic Signals:	n/a	Annual Average Daily Traffic (AADT):	187,396	CMP Objectives Score:	9.57
Facility Miles:	5.82																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	2.18																				
Transit Route:	Yes																				
Park and Ride:	No																				
Bottlenecks:	4																				
Traffic Signals:	n/a																				
Annual Average Daily Traffic (AADT):	187,396																				
CMP Objectives Score:	9.57																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Incident Management</i></li> <li>2) <i>Integrated Corridor Management (ICM)</i></li> <li>3) <i>Transit Infrastructure Improvements</i></li> <li>4) <i>Expanded Parking for Existing Transit Stations (including remote, all modes)</i></li> <li>5) <i>Active Traffic Management and Active Transportation and Demand Management</i></li> <li>6) <i>Signal Improvements (at on- and off-ramps)</i></li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized



**Figure 45: Facility 78**

Market St from I-95 (Penn's Landing) to PA 611 (Broad St), Philadelphia County, PA



**Summary of Conditions**  
 Market St from I-95 (Penn's Landing) to Broad St in the City of Philadelphia is ranked #2 and #22 in peak travel time vehicle and volume delay, respectively, and #6 and #45 in peak planning time vehicle and volume delay, respectively. Market St is an undivided principal arterial roadway that generally contains two travel lanes in each direction from 2nd St to Broad St, but separates into one-way, one-lane travel eastbound from 2nd Street to Front Street, and westbound from Penn's Landing Road to 2nd Street. Curb-side parking is available at certain locations along travel lanes. CMP intersection bottlenecks occur at the intersections of 2nd St and 7th St.

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: MRP #164 CAP/Waterfront Access; #BO, #BR Concourse Upgrades; #V Delaware Ave Transit  
 \* FY 2023-26 TIP: MPMS #106264 - CAP/Waterfront Access

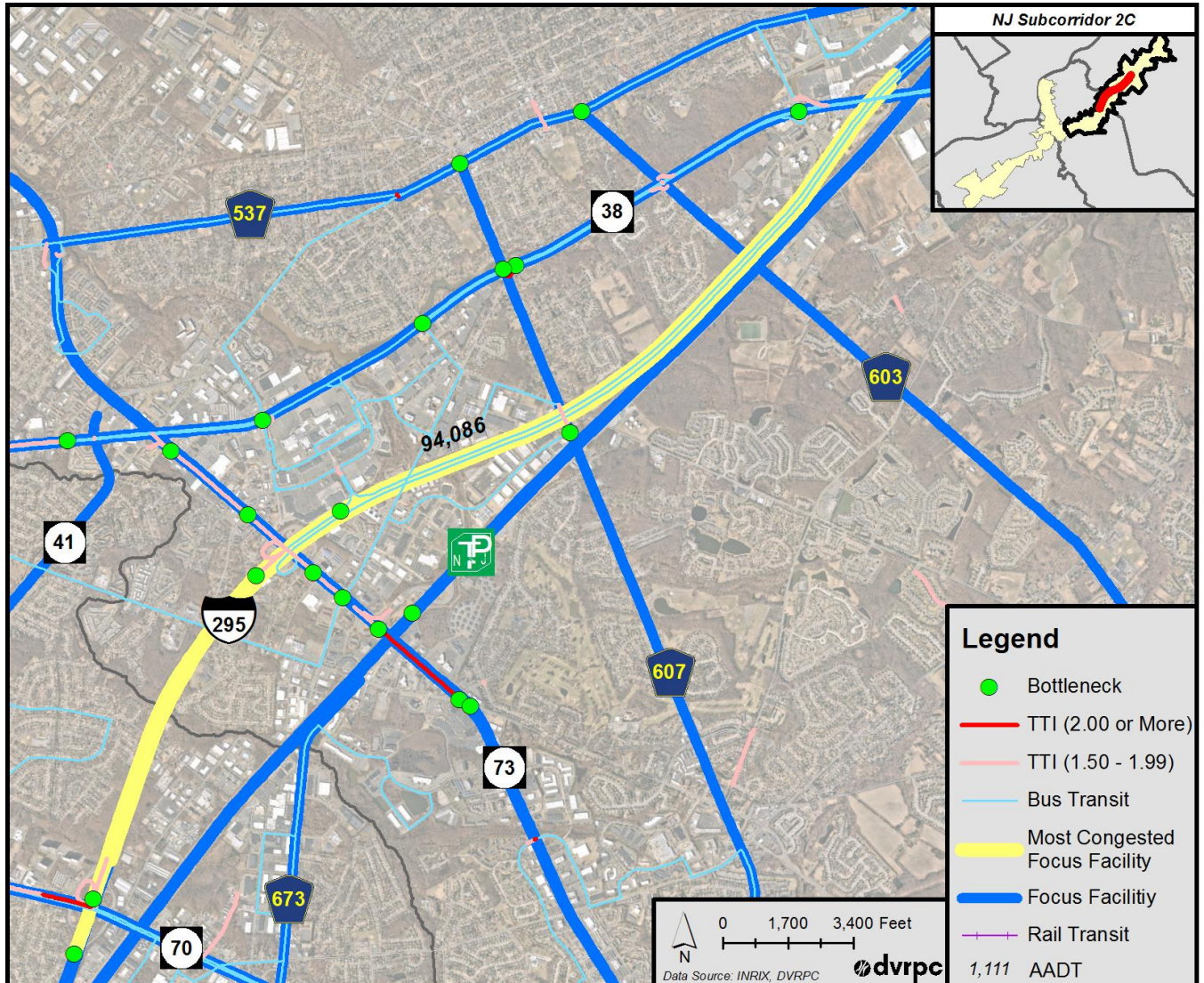
- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Transit Infrastructure Improvements
  - 3) Loading and Deliveries
  - 4) Transit-First Policy
  - 5) More Frequent Transit or More Hours of Service
  - 6) Transportation Services for Specific Populations

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	122.5
PT PM Peak Vehicle Delay (sec):	210.6
TT PM Peak Volume Delay (hr):	25:17:01
PT PM Peak Volume Delay (hr):	40:07:54
Level of Travel Time Reliability (mi):	1.44
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	34,979
TDM Forecasted Congestion (mi):	0.00

Additional Factors	
Facility Miles:	2.08
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.25
CMP High Crash Severity (mi):	0.56
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	2
Traffic Signals:	14
Annual Average Daily Traffic (AADT):	13,668
CMP Objectives Score:	9.21

**Figure 46: Facility 309**

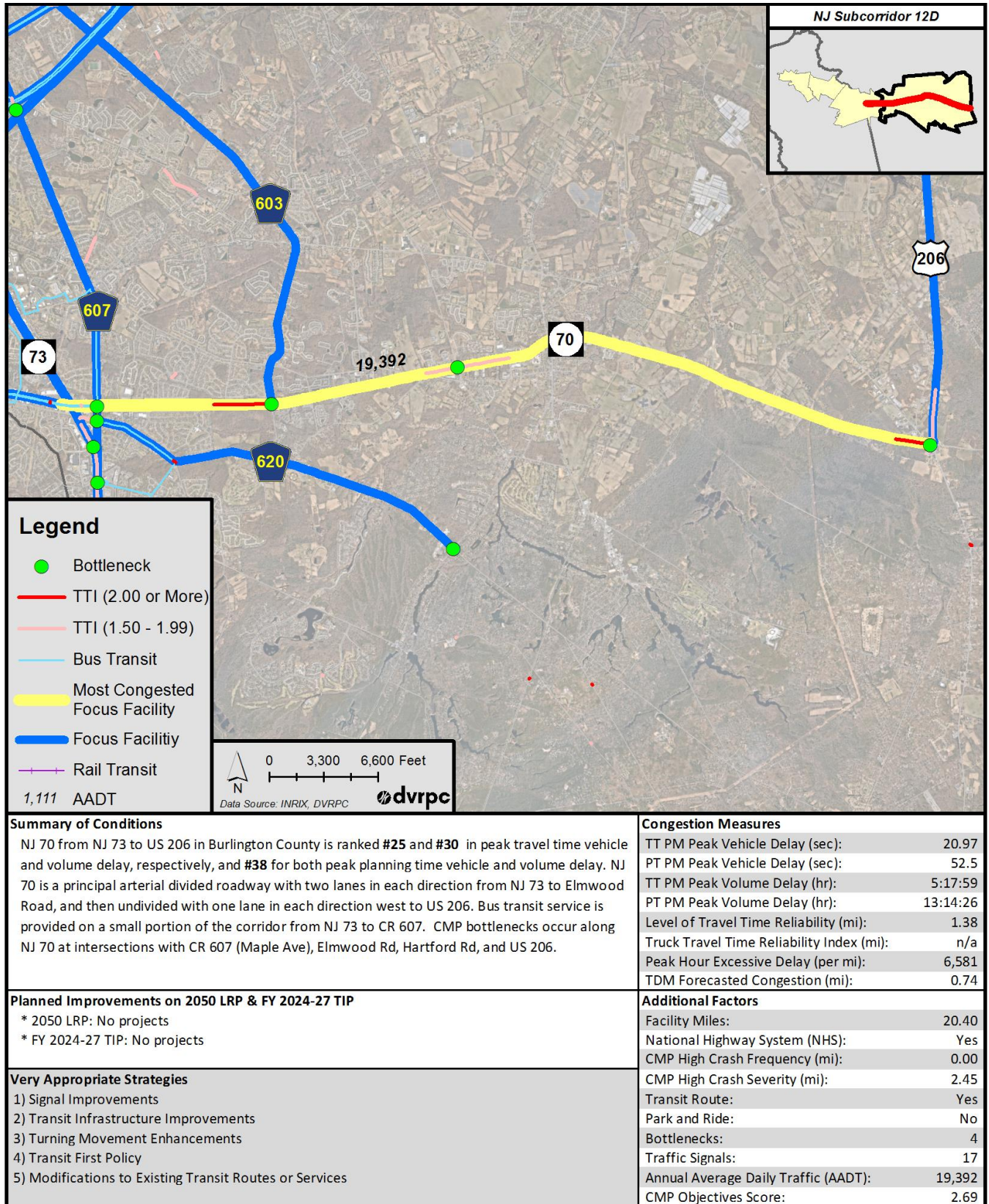
I-295 from NJ 70 (Exit 34) to NJ 38 (Exit 40), Burlington County, NJ



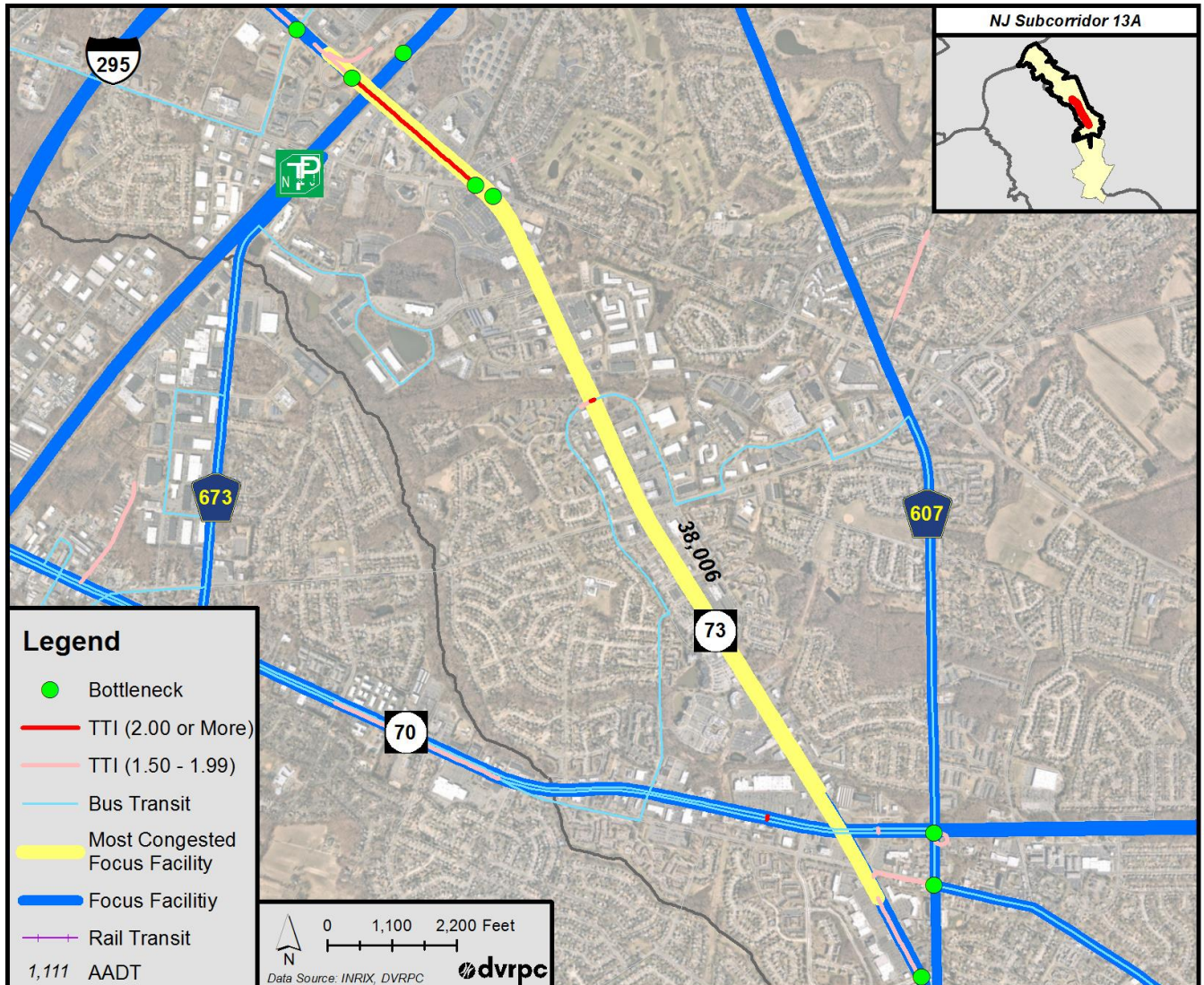
<p><b>Summary of Conditions</b></p> <p>I-295 from NJ 70 to NJ 38 in Burlington County is ranked <b>#76</b> and <b>#15</b> in peak travel time vehicle and volume delay, respectively, and <b>#45</b> and <b>#5</b> for peak planning time vehicle and volume delay, respectively. I-295 is an interstate limited access roadway that contains three travel lanes in each direction, plus shoulders in each direction on the left and right sides of the roadway, and includes interchanges at NJ 38, NJ 73, and NJ 70. Various CMP limited access bottlenecks occur along I-295 southbound at the NJ 70 eastbound and westbound on-ramps, NJ 73 southbound on-ramp, and the Nixon Dr on-ramp.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>8.8</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>48.8</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>10:35:24</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>58:25:32</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.00</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>2.81</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>15,910</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.00</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	8.8	PT PM Peak Vehicle Delay (sec):	48.8	TT PM Peak Volume Delay (hr):	10:35:24	PT PM Peak Volume Delay (hr):	58:25:32	Level of Travel Time Reliability (mi):	0.00	Truck Travel Time Reliability Index (mi):	2.81	Peak Hour Excessive Delay (per mi):	15,910	TDM Forecasted Congestion (mi):	0.00				
TT PM Peak Vehicle Delay (sec):	8.8																				
PT PM Peak Vehicle Delay (sec):	48.8																				
TT PM Peak Volume Delay (hr):	10:35:24																				
PT PM Peak Volume Delay (hr):	58:25:32																				
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Truck Travel Time Reliability Index (mi):	2.81																				
Peak Hour Excessive Delay (per mi):	15,910																				
TDM Forecasted Congestion (mi):	0.00																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2024-27 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: No projects</li> <li>* FY 2024-27 TIP: No projects</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>11.83</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.00</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Park and Ride:</td><td>No</td></tr> <tr><td>Bottlenecks:</td><td>4</td></tr> <tr><td>Traffic Signals:</td><td>n/a</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>94,086</td></tr> <tr><td>CMP Objectives Score:</td><td>4.54</td></tr> </table>	Facility Miles:	11.83	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.00	Transit Route:	Yes	Park and Ride:	No	Bottlenecks:	4	Traffic Signals:	n/a	Annual Average Daily Traffic (AADT):	94,086	CMP Objectives Score:	4.54
Facility Miles:	11.83																				
National Highway System (NHS):	Yes																				
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Transit Route:	Yes																				
Park and Ride:	No																				
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Traffic Signals:	n/a																				
Annual Average Daily Traffic (AADT):	94,086																				
CMP Objectives Score:	4.54																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Incident Management</i></li> <li>2) <i>Intelligent Transportation Systems (ITS)</i></li> <li>3) Park and Ride Lots</li> <li>4) Major Reconstruction with Minor Capacity Additions</li> <li>5) Modifications to Existing Transit Routes or Services</li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 47: Facility 369**  
 NJ 70 from NJ 73 to US 206, Burlington County, NJ



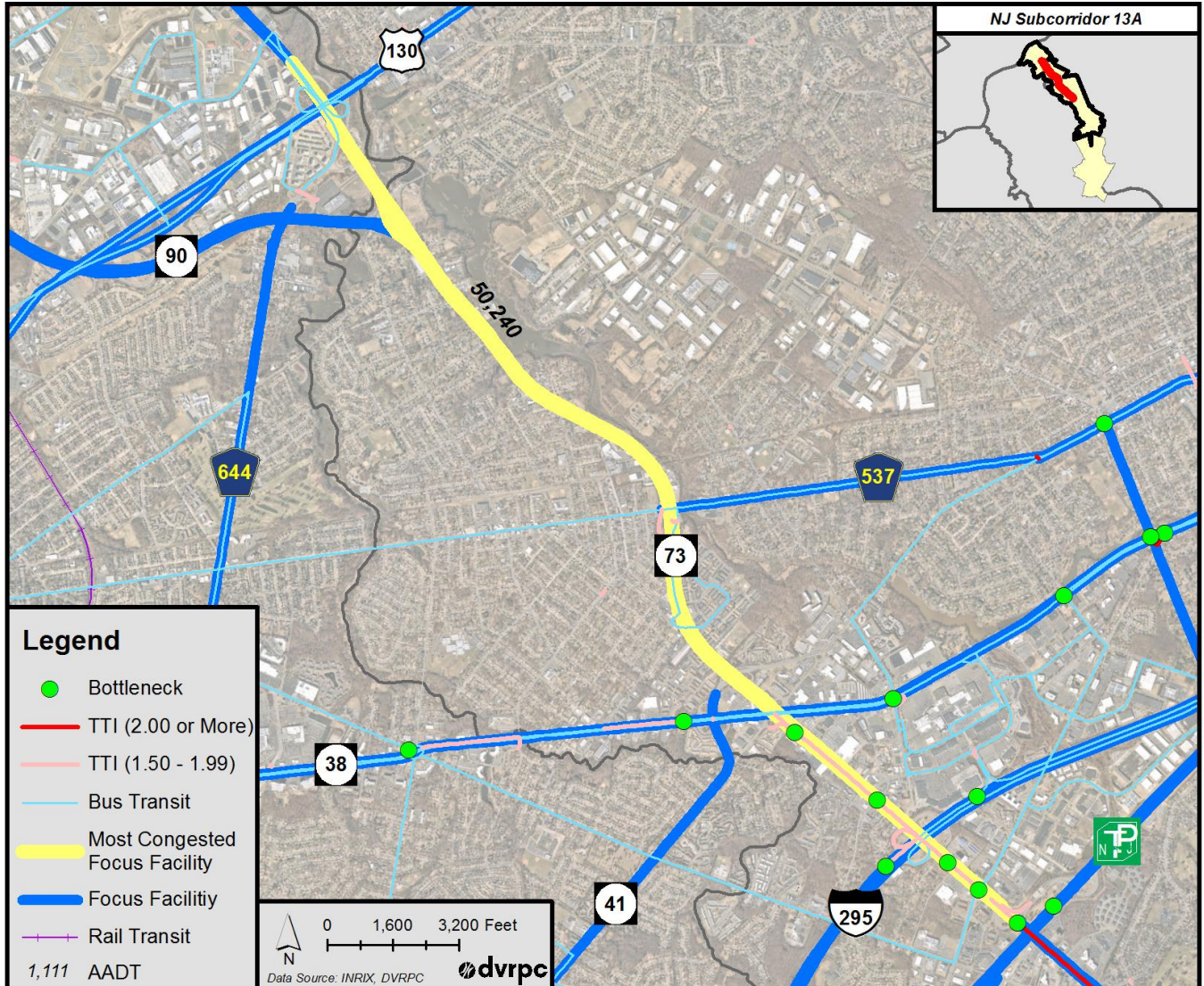
**Figure 48: Facility 372**  
 NJ 73 from NJ Turnpike (Exit 4) to NJ 70, Burlington County, NJ



<p><b>Summary of Conditions</b></p> <p>NJ 73 from the NJ Turnpike (Exit 4) to NJ 70 in Burlington County is ranked <b>#30</b> and <b>#11</b> in peak travel time vehicle and volume delay, respectively, and <b>#26</b> and <b>#15</b> for peak planning time vehicle and volume delay, respectively. NJ 73 is a divided principal arterial roadway with two lanes in each direction, including wide shoulders. CMP intersection bottlenecks occur along NJ 73 at Church Rd eastbound at Ramblewood Pkwy and Church Rd westbound, and a limited access bottleneck occurs at the New Jersey Turnpike southbound exit to NJ 73 southbound. There is currently no bus transit service on this portion of NJ 73.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>19.36</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>61.6</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>11:41:26</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>34:40:53</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.00</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>n/a</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>25,302</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>1.90</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	19.36	PT PM Peak Vehicle Delay (sec):	61.6	TT PM Peak Volume Delay (hr):	11:41:26	PT PM Peak Volume Delay (hr):	34:40:53	Level of Travel Time Reliability (mi):	0.00	Truck Travel Time Reliability Index (mi):	n/a	Peak Hour Excessive Delay (per mi):	25,302	TDM Forecasted Congestion (mi):	1.90				
TT PM Peak Vehicle Delay (sec):	19.36																				
PT PM Peak Vehicle Delay (sec):	61.6																				
TT PM Peak Volume Delay (hr):	11:41:26																				
PT PM Peak Volume Delay (hr):	34:40:53																				
Level of Travel Time Reliability (mi):	0.00																				
Truck Travel Time Reliability Index (mi):	n/a																				
Peak Hour Excessive Delay (per mi):	25,302																				
TDM Forecasted Congestion (mi):	1.90																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2024-27 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: MRP #210 Grade separated interchanges along NJ 73 at Church Rd &amp; Fellowship Rd</li> <li>* FY 2024-27 TIP: DB #12380 - Route 73, Church Road and Fellowship Road (new capacity)</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>6.07</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.48</td></tr> <tr><td>Transit Route:</td><td>No</td></tr> <tr><td>Park and Ride:</td><td>No</td></tr> <tr><td>Bottlenecks:</td><td>3</td></tr> <tr><td>Traffic Signals:</td><td>7</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>38,006</td></tr> <tr><td>CMP Objectives Score:</td><td>5.16</td></tr> </table>	Facility Miles:	6.07	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.48	Transit Route:	No	Park and Ride:	No	Bottlenecks:	3	Traffic Signals:	7	Annual Average Daily Traffic (AADT):	38,006	CMP Objectives Score:	5.16
Facility Miles:	6.07																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.48																				
Transit Route:	No																				
Park and Ride:	No																				
Bottlenecks:	3																				
Traffic Signals:	7																				
Annual Average Daily Traffic (AADT):	38,006																				
CMP Objectives Score:	5.16																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) Signal Improvements</li> <li>2) Modifications to Existing Transit Routes or Services</li> <li>3) Outreach and Marketing</li> <li>4) Parking Supply-and-Demand Management</li> <li>5) Comprehensive Policy Approaches</li> <li>6) Improve Circulation</li> </ol>																					

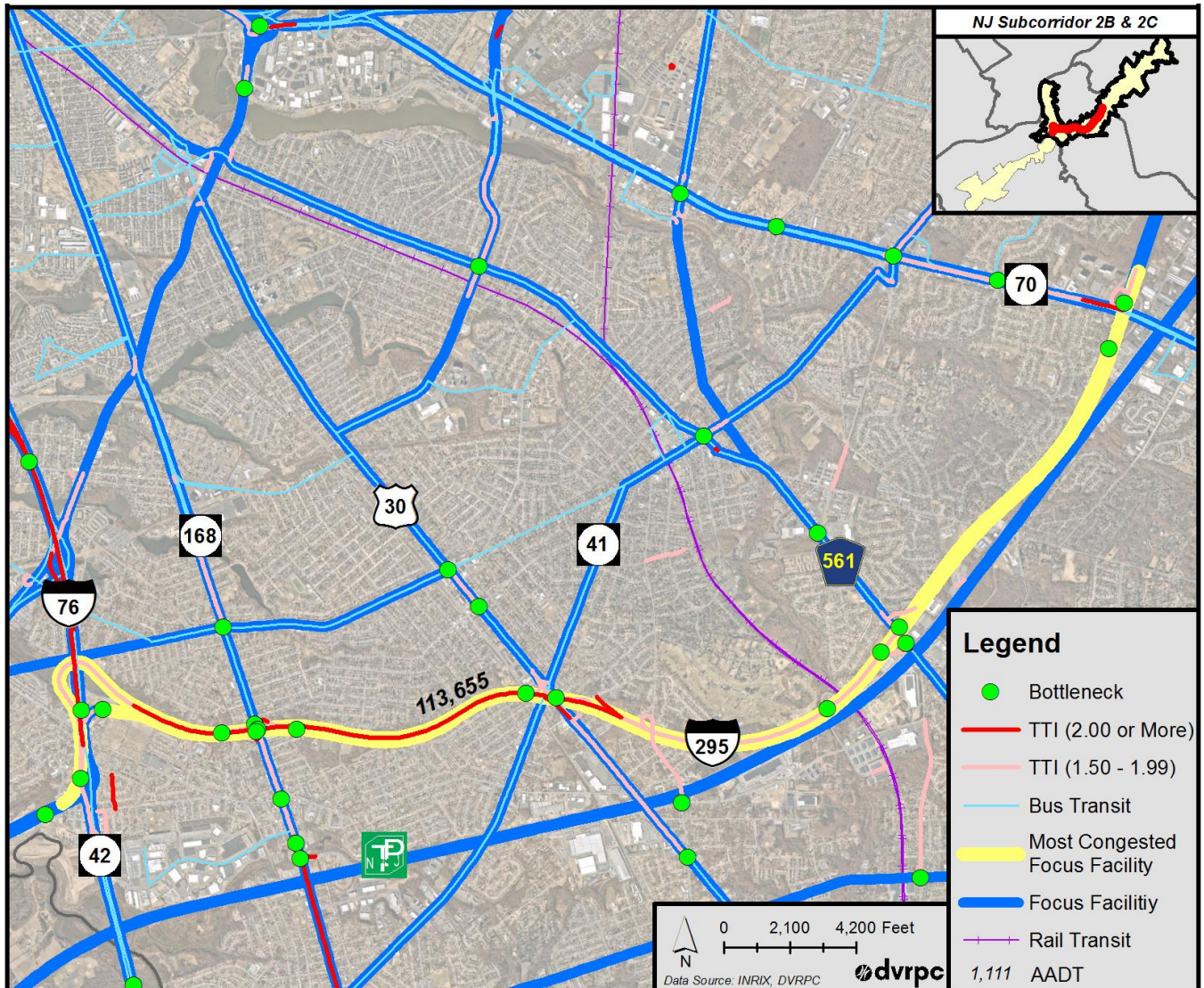
**Figure 49: Facility 371**

NJ 73 from US 130 to NJ Turnpike (Exit 4), Burlington County, NJ



<p><b>Summary of Conditions</b></p> <p>NJ 73 from the NJ Turnpike (Exit 4) to US 130 in Burlington County is ranked <b>#43</b> and <b>#14</b> in peak travel time vehicle and volume delay, respectively, and <b>#30</b> and <b>#10</b> for peak planning time vehicle and volume delay, respectively. NJ 73 is a divided principal arterial roadway with generally three lanes of travel in each direction, including wide shoulders at various locations. CMP bottlenecks occur along NJ 73 at the intersections of Collins Rd/Nixon Dr and Fellowship Rd, and limited access bottlenecks occur on NJ 73 southbound at the NJ Turnpike southbound exit, I-295 northbound exit, and NJ 38 eastbound exit. Walking and bicycling improvements are planned as part of DB#18383.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>14.6</td></tr> <tr><td>PT PM Peak Vehicle Delay (sec):</td><td>60.4</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>10:36:03</td></tr> <tr><td>PT PM Peak Volume Delay (hr):</td><td>42:56:00</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.60</td></tr> <tr><td>Truck Travel Time Reliability Index (mi):</td><td>n/a</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>5,030</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>2.31</td></tr> </table>	TT PM Peak Vehicle Delay (sec):	14.6	PT PM Peak Vehicle Delay (sec):	60.4	TT PM Peak Volume Delay (hr):	10:36:03	PT PM Peak Volume Delay (hr):	42:56:00	Level of Travel Time Reliability (mi):	0.60	Truck Travel Time Reliability Index (mi):	n/a	Peak Hour Excessive Delay (per mi):	5,030	TDM Forecasted Congestion (mi):	2.31				
TT PM Peak Vehicle Delay (sec):	14.6																				
PT PM Peak Vehicle Delay (sec):	60.4																				
TT PM Peak Volume Delay (hr):	10:36:03																				
PT PM Peak Volume Delay (hr):	42:56:00																				
Level of Travel Time Reliability (mi):	0.60																				
Truck Travel Time Reliability Index (mi):	n/a																				
Peak Hour Excessive Delay (per mi):	5,030																				
TDM Forecasted Congestion (mi):	2.31																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2024-27 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: MRP #210 Grade separated interchanges along NJ 73 at Church Rd &amp; Fellowship Rd</li> <li>* FY 2024-27 TIP: DB #12380 Route 73, Church Road and Fellowship Road (new capacity); #18383 Route 73, Granite Ave to Route 41</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Facility Miles:</td><td>10.28</td></tr> <tr><td>National Highway System (NHS):</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>2.53</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Park and Ride:</td><td>No</td></tr> <tr><td>Bottlenecks:</td><td>5</td></tr> <tr><td>Traffic Signals:</td><td>6</td></tr> <tr><td>Annual Average Daily Traffic (AADT):</td><td>50,240</td></tr> <tr><td>CMP Objectives Score:</td><td>4.62</td></tr> </table>	Facility Miles:	10.28	National Highway System (NHS):	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	2.53	Transit Route:	Yes	Park and Ride:	No	Bottlenecks:	5	Traffic Signals:	6	Annual Average Daily Traffic (AADT):	50,240	CMP Objectives Score:	4.62
Facility Miles:	10.28																				
National Highway System (NHS):	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	2.53																				
Transit Route:	Yes																				
Park and Ride:	No																				
Bottlenecks:	5																				
Traffic Signals:	6																				
Annual Average Daily Traffic (AADT):	50,240																				
CMP Objectives Score:	4.62																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) Signal Improvements</li> <li>2) Walking and Bicycling Improvements</li> <li>3) Modifications to Existing Transit Routes or Services</li> <li>4) Outreach and Marketing</li> <li>5) Comprehensive Policy Approaches</li> <li>6) Improve Circulation</li> </ol>																					

**Figure 50: Facility 308**  
 I-295 from NJ 42 to NJ 70, Camden County, NJ



**Summary of Conditions**  
 I-295 from NJ 42 (Exit 26) to NJ 70 (Exit 34) in Camden County is ranked #7 and #2 in peak travel time vehicle and volume delay, respectively, and #6 and #2 in peak planning time vehicle and volume delay, respectively. I-295 is an interstate limited access roadway that contains three travel lanes in each direction with major interchanges at NJ 42, NJ 168, US 30, CR 561 (Haddonfield-Berlin Rd), and NJ 70. Limited access roadway bottlenecks occur at various merge locations onto I-295 and result in traffic congestion.

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	31.6
PT PM Peak Vehicle Delay (sec):	93.2
TT PM Peak Volume Delay (hr):	45:46:36
PT PM Peak Volume Delay (hr):	45:46:36
Level of Travel Time Reliability (mi):	4.50
Truck Travel Time Reliability Index (mi):	5.95
Peak Hour Excessive Delay (per mi):	34,520
TDM Forecasted Congestion (mi):	1.35

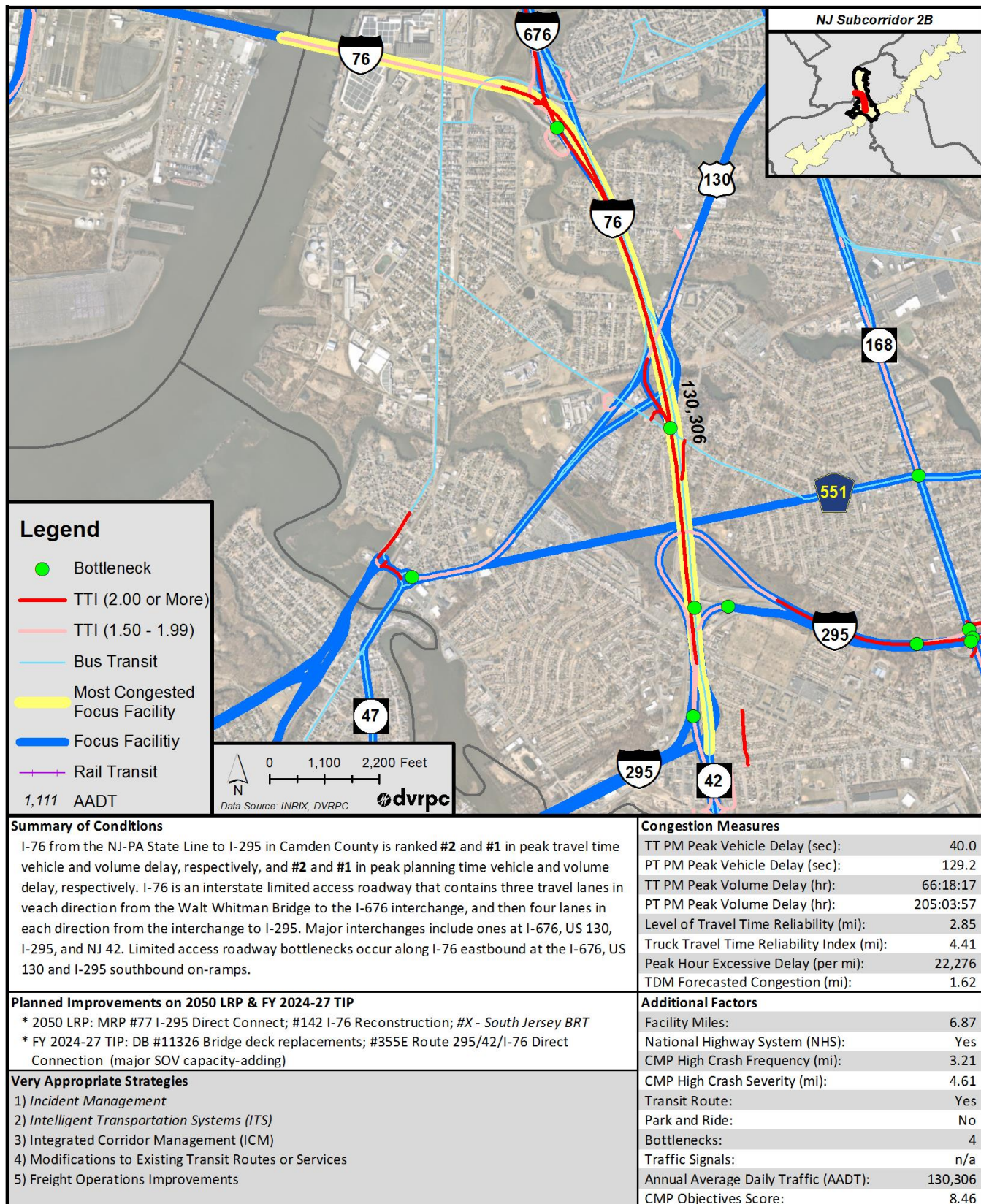
**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #77 - I-295 Direct Connect; #318 I-295 and NJ 168 interchange  
 \* FY 2024-27 TIP: DB #355E Route 295/42/I-76 Direct Connect; #X227A2 - Route 168 I-295 Interchange Improvements

Additional Factors	
Facility Miles:	16.38
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	4.55
Transit Route:	No
Park and Ride:	No
Bottlenecks:	12
Traffic Signals:	n/a
Annual Average Daily Traffic (AADT):	113,655
CMP Objectives Score:	6.08

**Very Appropriate Strategies**  
 1) *Incident Management*  
 2) *Intelligent Transportation Systems (ITS)*  
 3) *Integrated Corridor Management (ICM)*  
 4) *Park and Ride Lots*  
 5) *Modifications to Existing Transit Routes or Services*  
 6) *Major Reconstruction with Minor Capacity Additions*

*Recently implemented or partially implemented strategies are listed first and italicized*

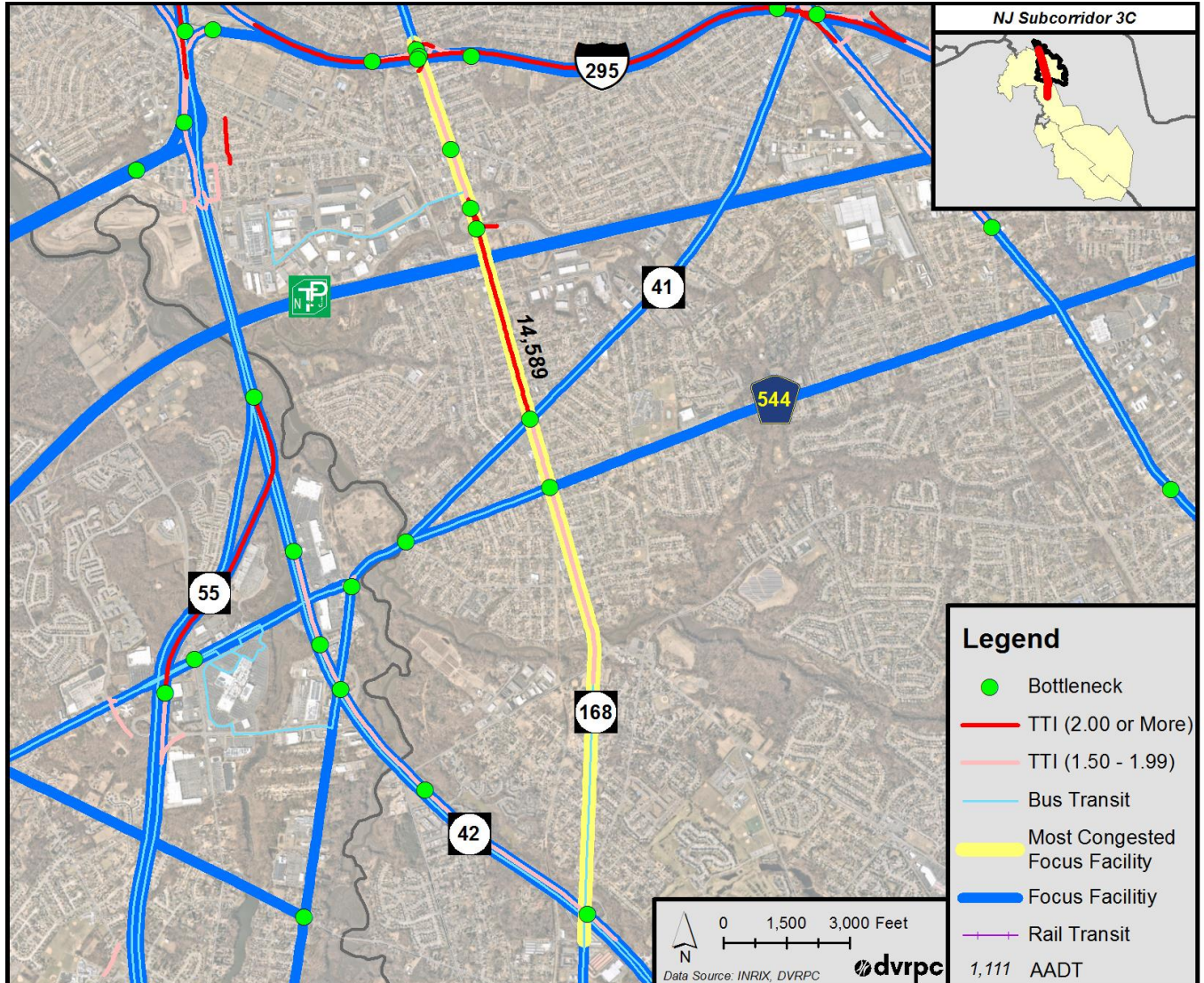
**Figure 51: Facility 328**  
 I-76 from NJ-PA State Line to I-295, Camden County, NJ



Recently implemented or partially implemented strategies are listed first and italicized

**Figure 52: Facility 312**

NJ 168 (Black Horse Pk) from I-295 to NJ 42, Camden County, NJ



**Summary of Conditions**  
 NJ 168 (Black Horse Pk) from I-295 to NJ 42 in Camden County is ranked #1 and #13 in peak travel time vehicle and volume delay, respectively, and #1 and #17 in peak planning time vehicle and volume delay, respectively. NJ 168 is an undivided principal arterial road wat that contains mostly one travel lane in each direction with a middle turn lane, and dedicated left-turn lanes on major approaches to signalized intersections. The NJ 168 and I-295 junction is being studied to be reconstructed as a Diverging Diamond Interchange to reduce congestion and improve safety (DB #X227A2). Also, an added lane to NJ 168 NB is proposed from the NJ Turnpike to Browning Rd.

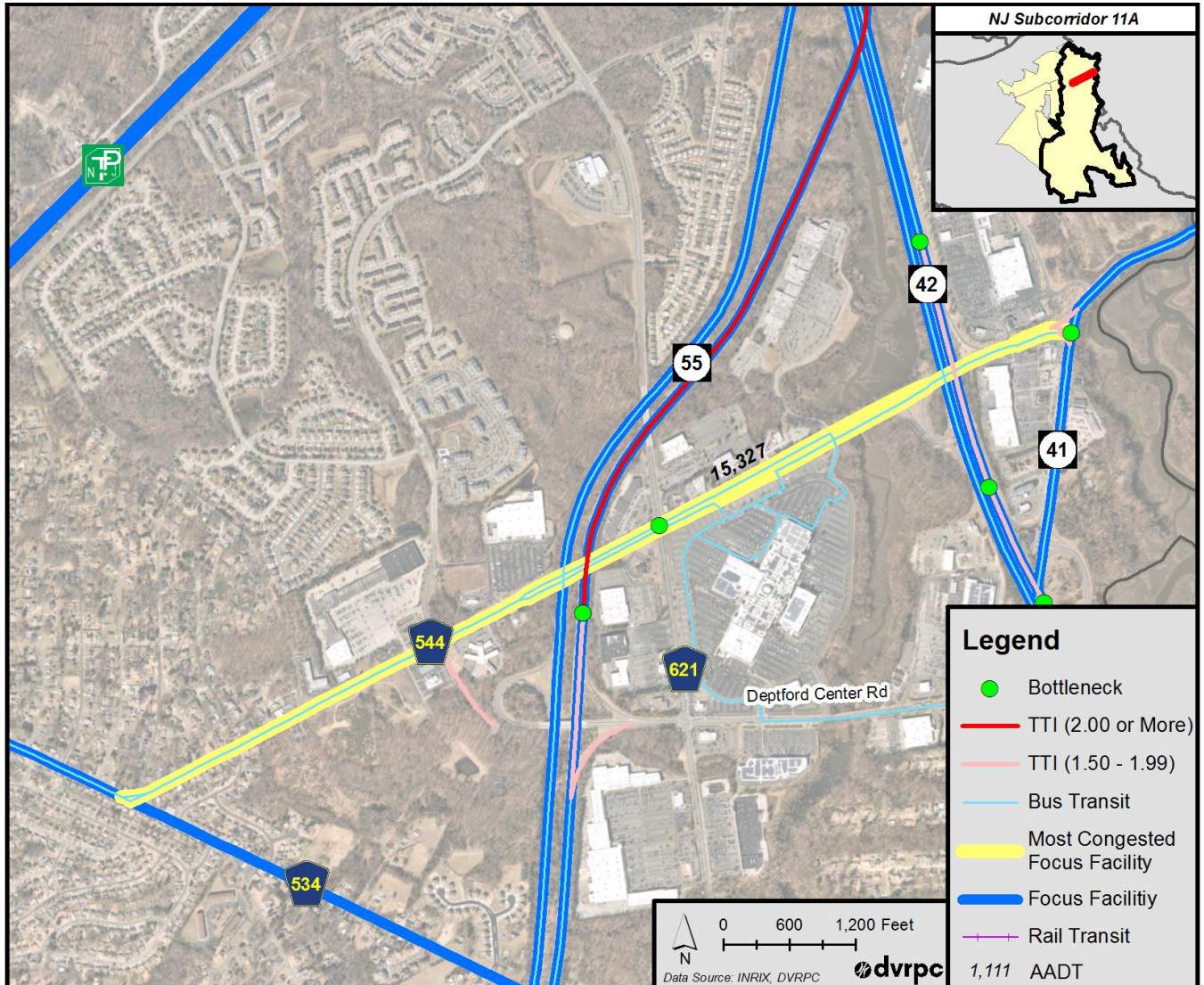
**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #318 I-295 and Route 168 Interchange  
 \* FY 2024-27 TIP: DB #X227A2 Route 168, I-295 Interchange Improvements

**Very Appropriate Strategies**  
 1) Signal Improvements  
 2) Turning Movement Enhancements  
 3) Context-Sensitive Design  
 4) Transit Infrastructure Improvements  
 5) Transit-First Policy  
 6) Modifications to Existing Transit Routes or Services

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	59.6
PT PM Peak Vehicle Delay (sec):	138.7
TT PM Peak Volume Delay (hr):	11:27:02
PT PM Peak Volume Delay (hr):	27:37:55
Level of Travel Time Reliability (mi):	2.52
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	20,167
TDM Forecasted Congestion (mi):	2.06
Additional Factors	
Facility Miles:	7.97
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.87
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	9
Traffic Signals:	10
Annual Average Daily Traffic (AADT):	14,589
CMP Objectives Score:	6.12



**Figure 53: Facility 426**  
 CR 544 from NJ 41 to CR 534, Gloucester County, NJ



**Summary of Conditions**  
 CR 544 (Clements Bridge Rd) from CR 534 (Cooper St) to NJ 41 in Gloucester County is ranked **#12** and **#25** in peak travel time vehicle and volume delay, respectively, and **#10** and **#29** in peak planning time vehicle and volume delay, respectively. CR 534 is a principal arterial roadway that is undivided with one travel lane in each direction and a center turn lane west of NJ 55, and divided with two travel lanes in each direction and dedicated left-turns on major approaches to signalized intersections east of NJ 55 to NJ 41. CMP intersection bottlenecks occur along CR 544 at CR 621 (Almonesson Rd) and NJ 41 (Hurffville Rd).

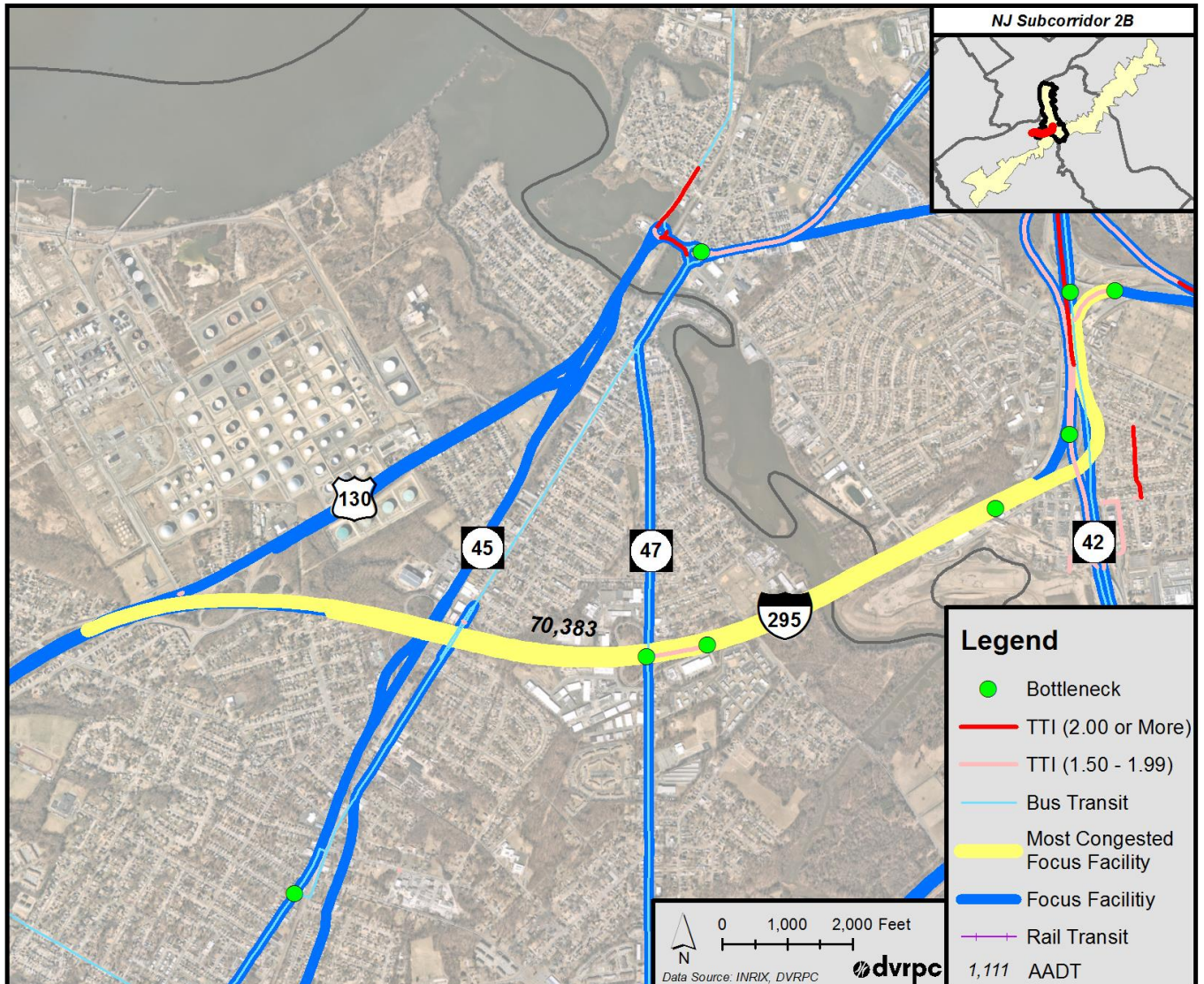
Congestion Measures	
TT PM Peak Vehicle Delay (sec):	26.3
PT PM Peak Vehicle Delay (sec):	78.0
TT PM Peak Volume Delay (hr):	5:46:33
PT PM Peak Volume Delay (hr):	16:40:51
Level of Travel Time Reliability (mi):	0.26
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	21,336
TDM Forecasted Congestion (mi):	0.56

**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2024-27 TIP: No projects

Additional Factors	
Facility Miles:	3.67
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	2.18
CMP High Crash Severity (mi):	0.47
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	2
Traffic Signals:	8
Annual Average Daily Traffic (AADT):	15,327
CMP Objectives Score:	5.02

- Very Appropriate Strategies**
- 1) Turning Movement Enhancements
  - 2) Signal Improvements
  - 3) Encourage use of Transit Services and TDM Programs
  - 4) Modifications to Existing Transit Routes or Services
  - 5) Transit Infrastructure Improvements

**Figure 54: Facility 307**  
 I-295 from US 130 to NJ 42, Gloucester County, NJ



**Summary of Conditions**  
 I-295 from US 130 to NJ 42 (Exit 26) in Gloucester County is ranked #67 and #19 in peak travel time vehicle and volume delay, respectively, and #18 and #3 in peak planning time vehicle and volume delay, respectively. I-295 is an interstate limited access roadway that contains three travel lanes in each direction with major interchanges at NJ 42, NJ 47, NJ 45, and US 130. I-295 is being reconstructed as part of the Direct Connect TIP FY 2024-27 project (DB#355E) and the "Missing Moves" TIP FY 2022-2025 project (DB#355A), which provides a new connection from I-295 EB to NJ 42 SB, and the NJ 55 NB ramp to NJ 42 WB will be widened to two lanes.

**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #77 I-295 Direct Connect; #75 I-295 at NJ 42 Missing Moves  
 \* FY 2024-27 TIP: DB #355E Route 295/42/I-76 Direct Connect, #18313 Route 42 SB, Leaf Avenue Extension to Creek Rd (CR 753)

- Very Appropriate Strategies**
- 1) *Incident Management*
  - 2) *Intelligent Transportation Systems (ITS)*
  - 3) *Integrated Corridor Management (ICM)*
  - 4) Park and Ride Lots
  - 5) Modifications to Existing Transit Routes or Services
  - 6) Major Reconstruction with Minor Capacity Additions

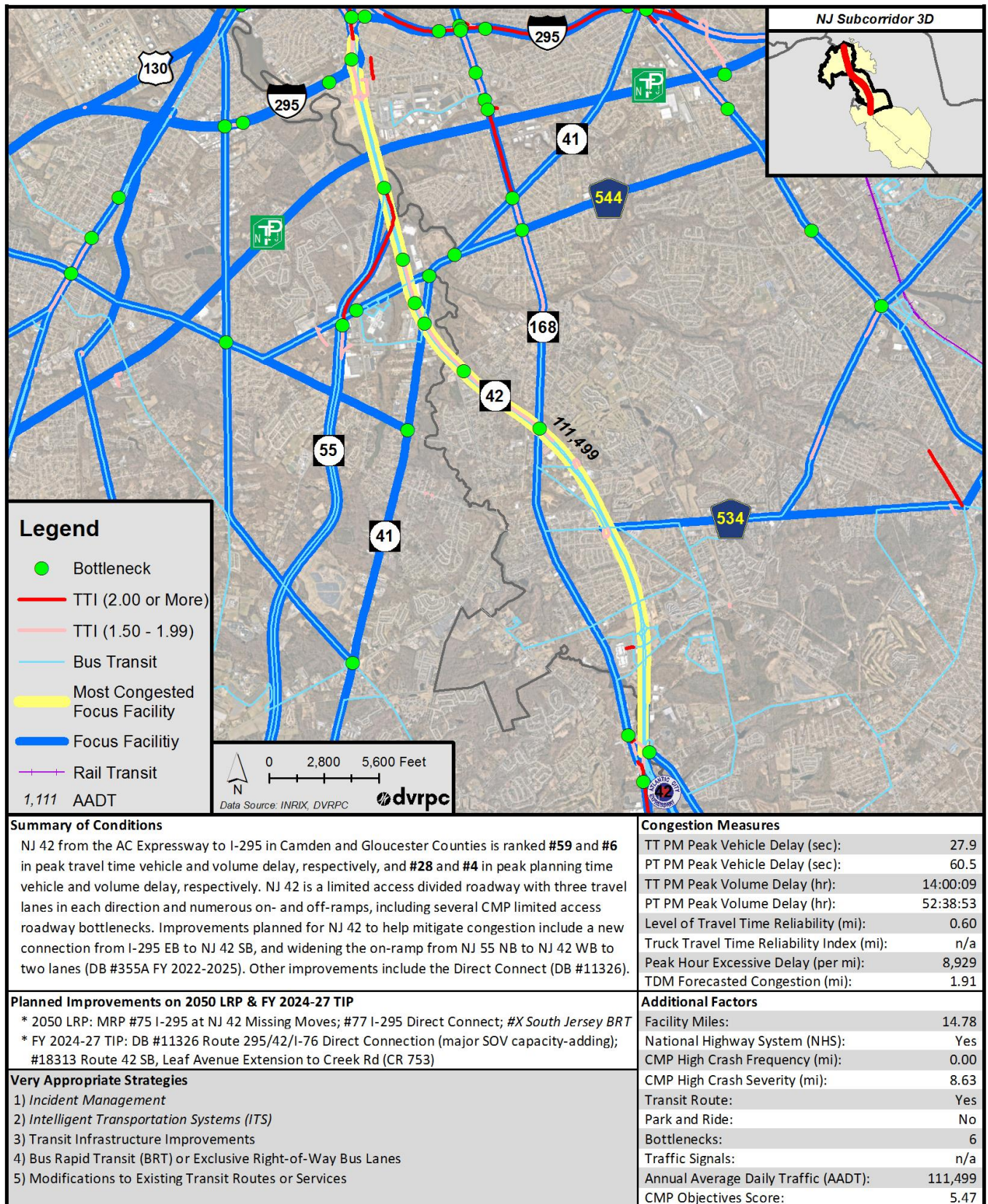
Congestion Measures	
TT PM Peak Vehicle Delay (sec):	10.2
PT PM Peak Vehicle Delay (sec):	68.4
TT PM Peak Volume Delay (hr):	9:11:48
PT PM Peak Volume Delay (hr):	65:51:51
Level of Travel Time Reliability (mi):	0.00
Truck Travel Time Reliability Index (mi):	1.56
Peak Hour Excessive Delay (per mi):	13,236
TDM Forecasted Congestion (mi):	0.58

Additional Factors	
Facility Miles:	5.79
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.88
CMP High Crash Severity (mi):	0.79
Transit Route:	No
Park and Ride:	No
Bottlenecks:	4
Traffic Signals:	n/a
Annual Average Daily Traffic (AADT):	70,383
CMP Objectives Score:	5.52

*Recently implemented or partially implemented strategies are listed first and italicized*

**Figure 55: Facility 311**

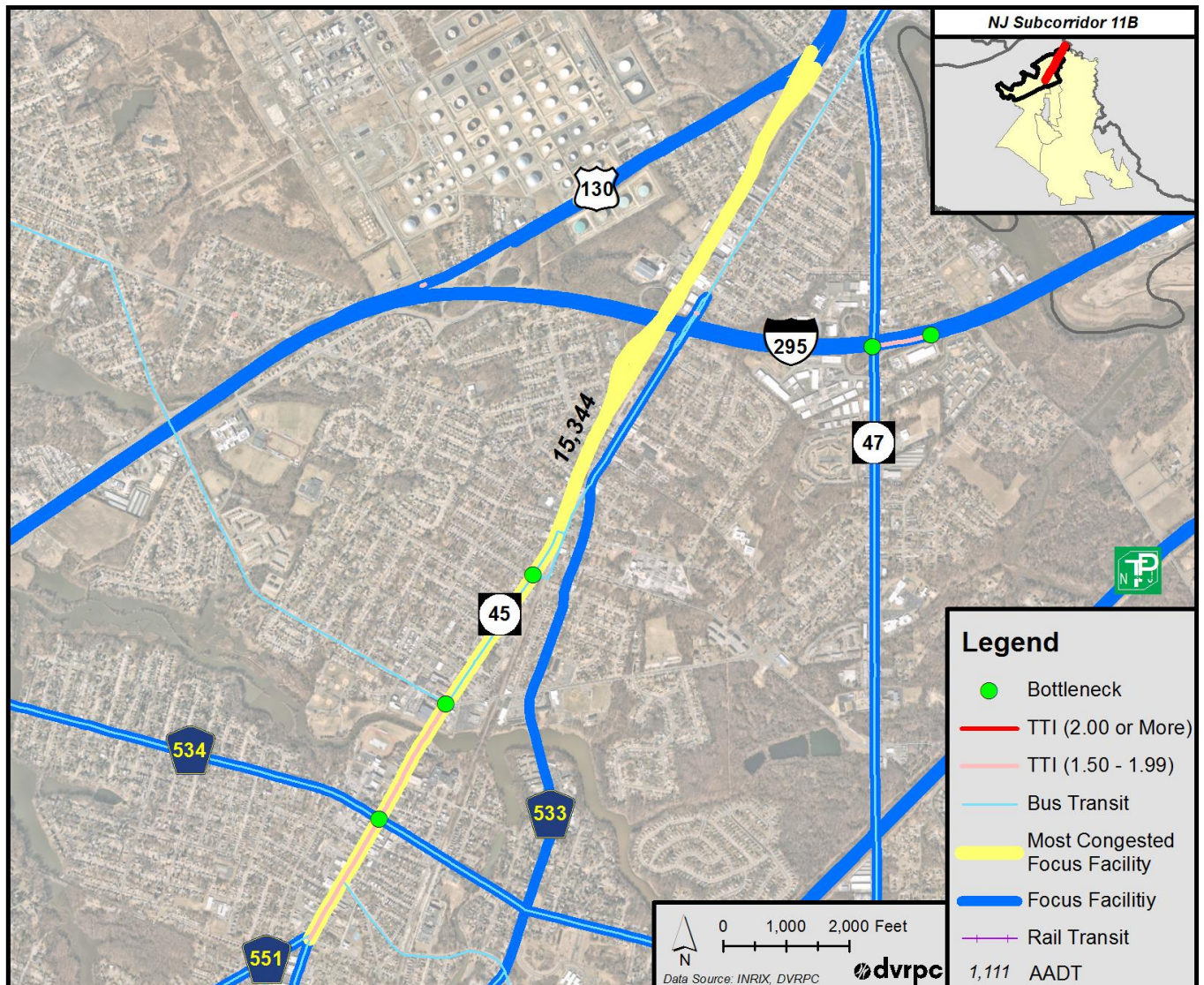
NJ 42 from AC Expressway to I-295, Camden and Gloucester Counties, NJ



Recently implemented or partially implemented strategies are listed first and italicized

**Figure 56: Facility 360**

NJ 45 from US 130 to CR 551 (Kings Hwy), Gloucester County, NJ



**Summary of Conditions**  
 NJ 45 from US 130 to CR 551 (Kings Hwy) in Gloucester County is ranked #10 and #32 in peak travel time vehicle and volume delay, respectively, and #15 and #42 in peak planning time vehicle and volume delay, respectively. NJ 45 is an undivided principal arterial roadway that contains one travel lane in each direction through Woodbury City, including bike lanes in each lane direction. North of I-295, NJ 45 changes to two lanes in each direction where it then connects to US 130. CMP intersection bottlenecks occur along NJ 45 at CR 534 (Cooper St), CR 644 (Red Bank Ave), and CR 551 (Edith Ave).

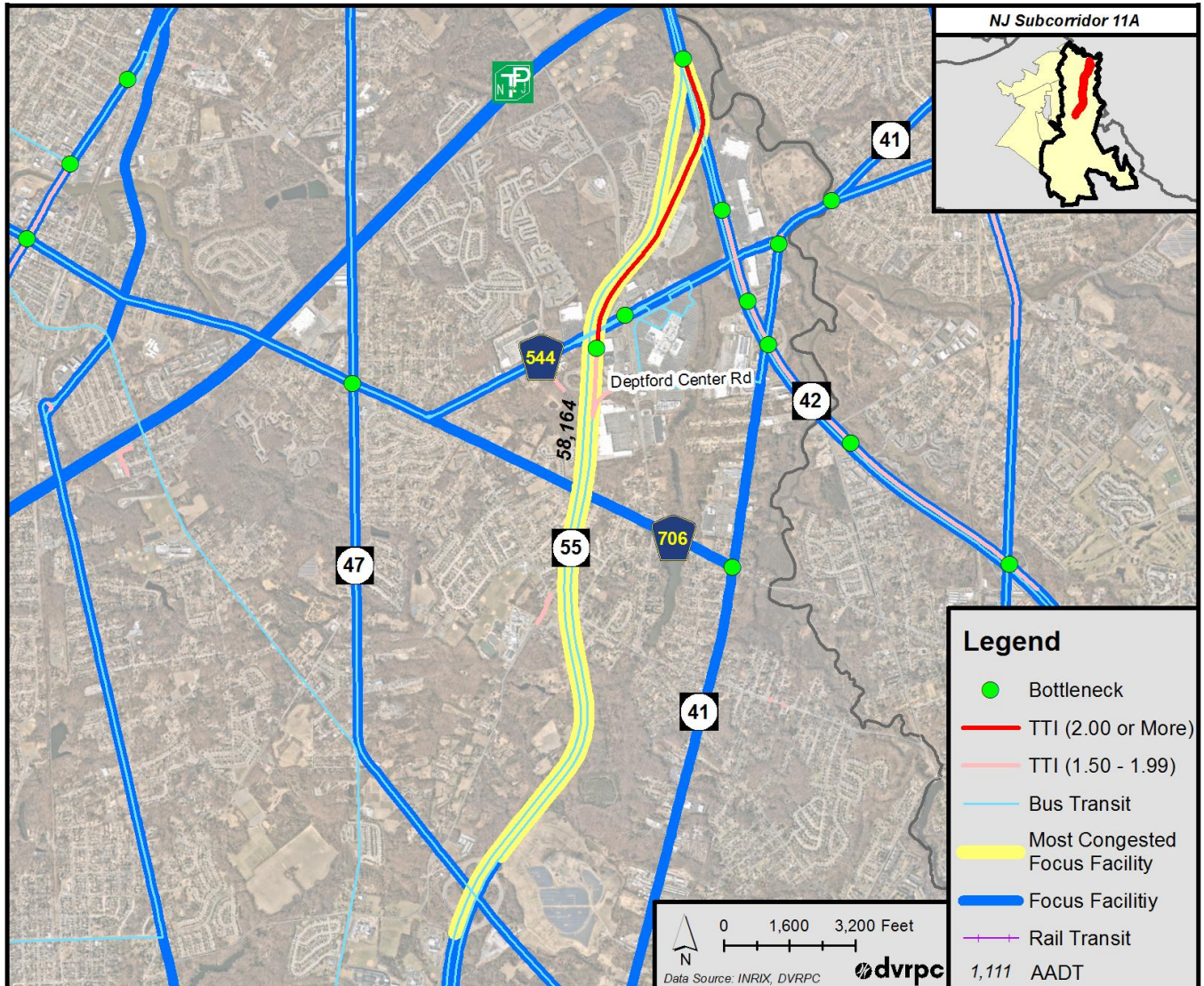
Congestion Measures	
TT PM Peak Vehicle Delay (sec):	27.9
PT PM Peak Vehicle Delay (sec):	71.1
TT PM Peak Volume Delay (hr):	5:03:54
PT PM Peak Volume Delay (hr):	12:35:30
Level of Travel Time Reliability (mi):	0.52
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	9,033
TDM Forecasted Congestion (mi):	1.53

**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #T Glassboro-Camden Line  
 \* FY 2024-27 TIP: No projects

Additional Factors	
Facility Miles:	6.13
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	1.64
CMP High Crash Severity (mi):	1.64
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	3
Traffic Signals:	10
Annual Average Daily Traffic (AADT):	15,344
CMP Objectives Score:	5.55

**Very Appropriate Strategies**  
 1) Signal Improvements  
 2) Improve Circulation  
 3) Economic Redevelopment-Oriented Transportation Policies  
 4) Transit-Oriented Development (TOD)  
 5) Modifications to Existing Transit Routes or Services

**Figure 57: Facility 358**  
 NJ 55 from NJ 42 to NJ 47, Gloucester County, NJ



**Summary of Conditions**  
 NJ 55 from NJ 47 to NJ 42 in Gloucester County is ranked #28 and #8 in peak travel time vehicle and volume delay, respectively, and #24 and #12 in peak planning time vehicle and volume delay, respectively. NJ 55 is a divided limited access freeway with two travel lanes in each direction and on- and off-ramps at NJ 47, Deptford Center Rd, and NJ 47. The NJ 55 NB ramp to NJ 42 WB will be widened to two lanes as part of the "Missing Moves" FY 2022-25 TIP project (DB# 355A), which also provides a new connection from I-295 EB to NJ 42 SB. CMP limited access roadway bottlenecks occur along NJ 55 NB at the Deptford Center Rd on-ramp and the NJ 42 NB merge.

**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #77 I-295 Direct Connect; #X South Jersey BRT  
 \* FY 2024-27 TIP: DB #11326 Route 295/42/I-76 Direct Connection (major SOV capacity-adding)

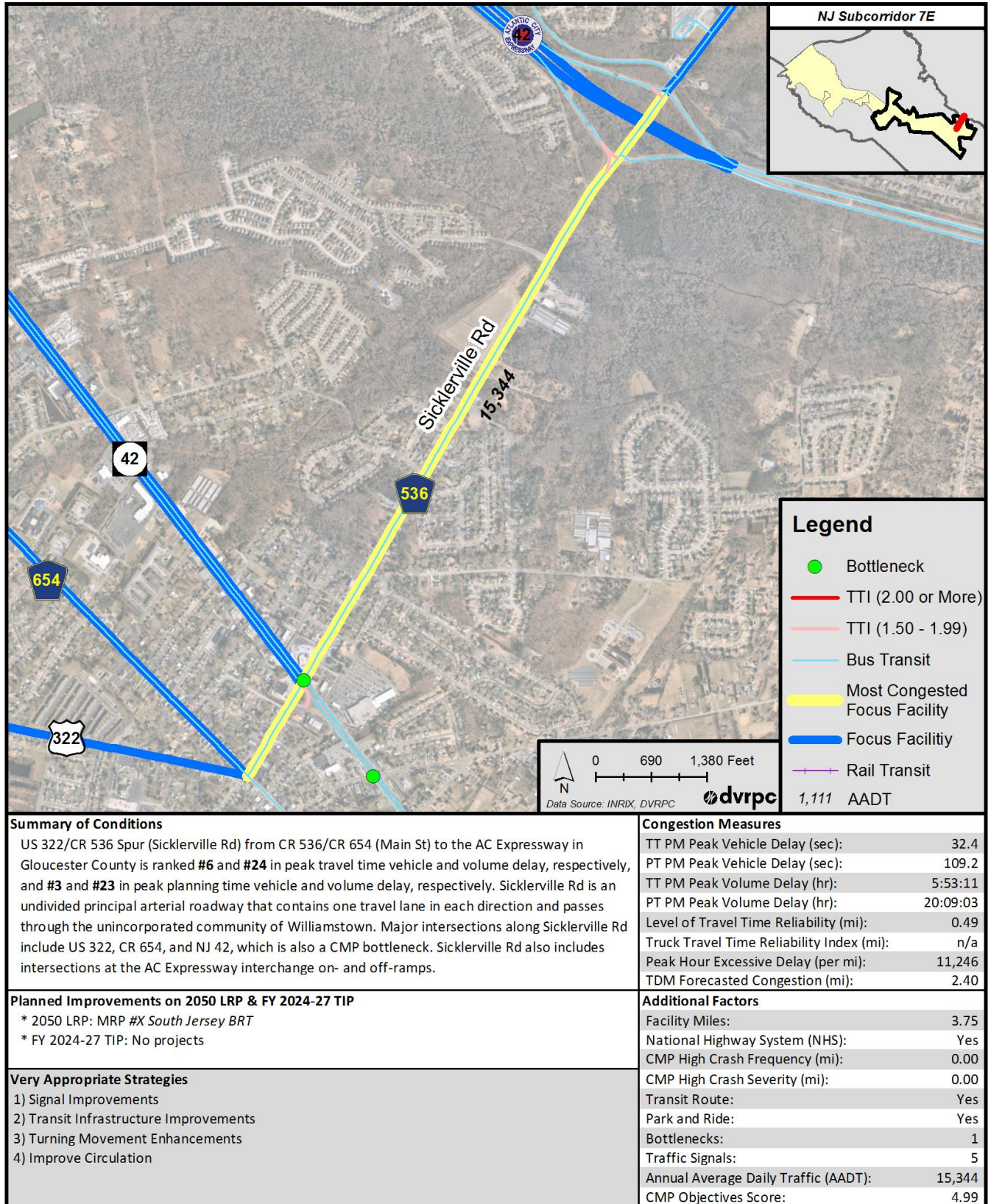
- Very Appropriate Strategies**
- 1) *Incident Management*
  - 2) *Intelligent Transportation Systems (ITS)*
  - 3) Transit Infrastructure Improvements
  - 4) Bus Rapid Transit (BRT) or Exclusive Right-of-Way Bus Lanes
  - 5) Modifications to Existing Transit Routes or Services

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	19.7
PT PM Peak Vehicle Delay (sec):	65.4
TT PM Peak Volume Delay (hr):	12:35:23
PT PM Peak Volume Delay (hr):	39:31:11
Level of Travel Time Reliability (mi):	1.00
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	36,780
TDM Forecasted Congestion (mi):	3.69
Additional Factors	
Facility Miles:	19.65
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	7.25
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	2
Traffic Signals:	n/a
Annual Average Daily Traffic (AADT):	58,164
CMP Objectives Score:	6.18

Recently implemented or partially implemented strategies are listed first and italicized

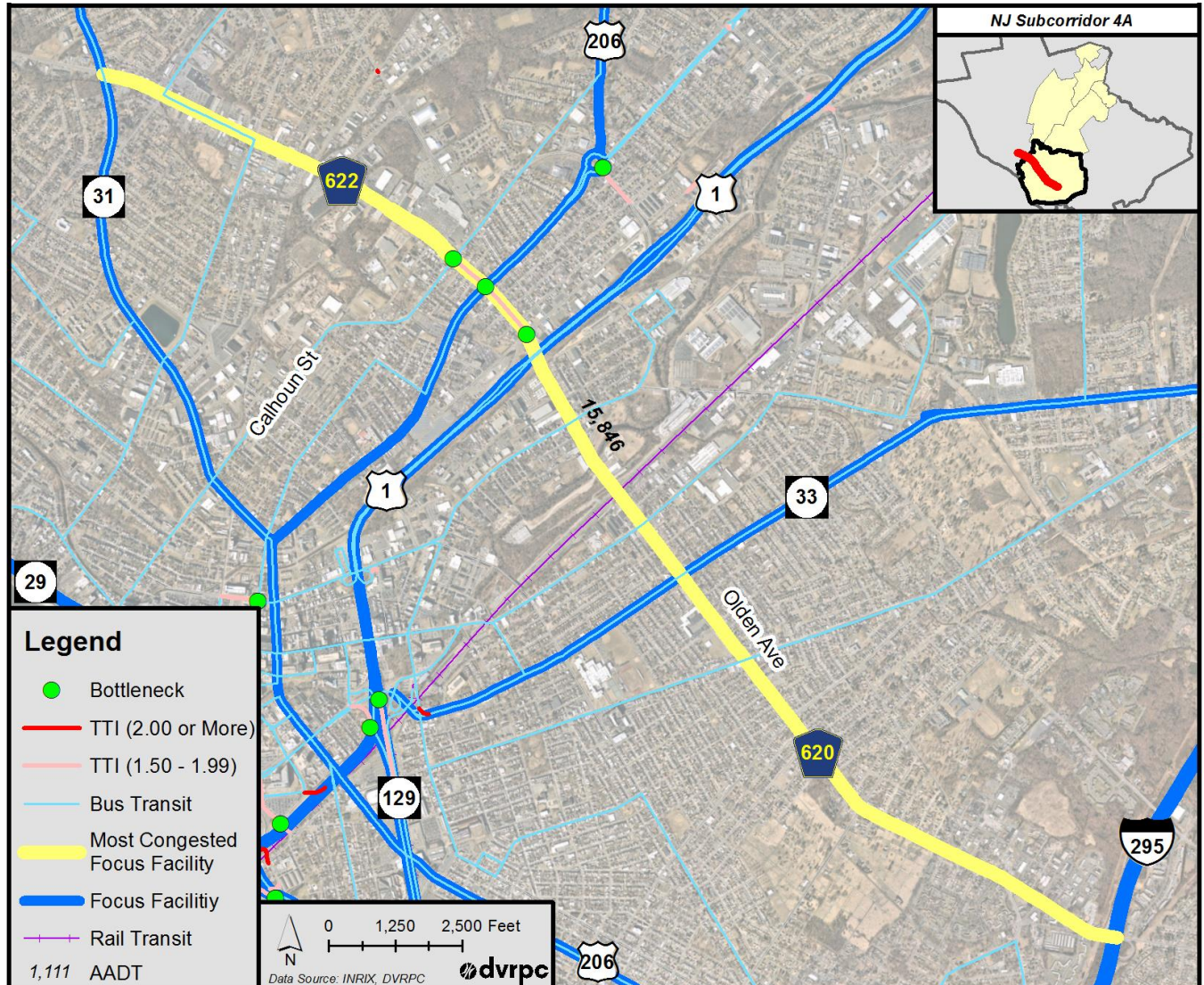
**Figure 58: Facility 428**

US 322/CR 536 from CR 536/CR 654 (Main St) to AC Expressway, Gloucester County, NJ



**Figure 59: Facility 407**

CR 622/CR 620 (Olden Ave) from I-295 to NJ 31, Mercer County, NJ



**Summary of Conditions**  
 CR 622/CR 620 (Olden Ave) from I-295 to NJ 31 in Mercer County is ranked #4 and #22 in peak travel time vehicle and volume delay, respectively, and #8 and #27 in peak planning time vehicle and volume delay, respectively. Olden Ave is an undivided minor arterial roadway containing one travel lane in each direction from I-295 to US 206/US 1 Bus, and then two travel lanes in each direction and a center turn lane to NJ 31. CMP intersection bottlenecks occur along Olden Ave at US 1 (Princeton Ave), Brunswick Ave, and New York Ave. Bus service is provided between Parkside Ave and Prospect St, less than one-half mile.

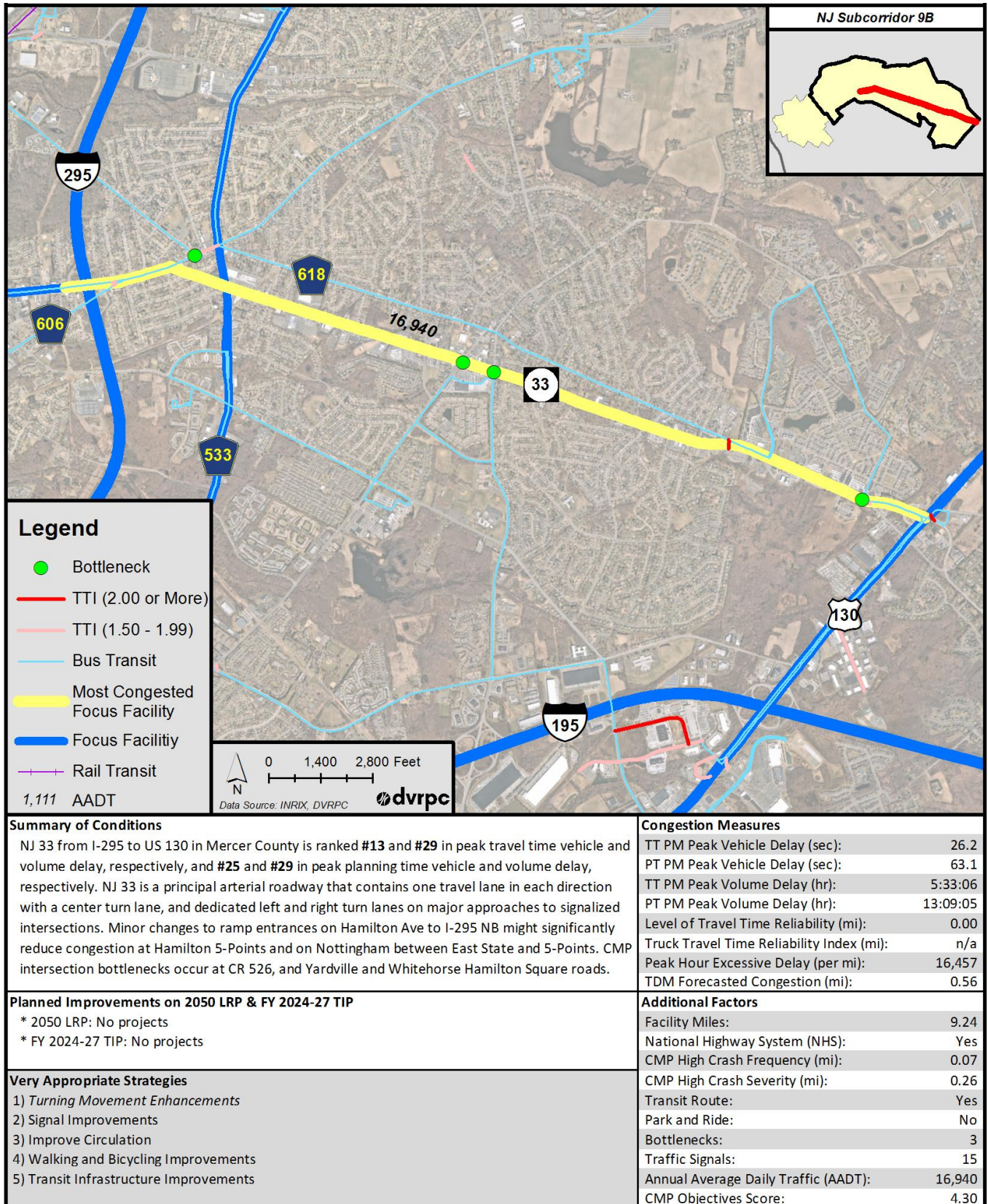
**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2024-27 TIP: DB #17412 N Olden Ave (CR 622), Bridge over Amtrak; #D2014 CR 622 (N Olden Ave) from NJ 31 to New York Ave, safety, traffic operations, and mobility improvements

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Transit Infrastructure Improvements
  - 3) Improve Circulation
  - 4) Economic Redevelopment-Oriented Transportation Policies
  - 5) Modifications to Existing Transit Routes or Services
  - 6) Bicycle and Pedestrian Improvements

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	34.2
PT PM Peak Vehicle Delay (sec):	87.4
TT PM Peak Volume Delay (hr):	6:47:16
PT PM Peak Volume Delay (hr):	17:10:34
Level of Travel Time Reliability (mi):	n/a
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	n/a
TDM Forecasted Congestion (mi):	1.75

Additional Factors	
Facility Miles:	9.75
National Highway System (NHS):	No
CMP High Crash Frequency (mi):	1.03
CMP High Crash Severity (mi):	0.75
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	3
Traffic Signals:	15
Annual Average Daily Traffic (AADT):	15,846
CMP Objectives Score:	4.37

**Figure 60: Facility 351**  
 NJ 33 from I-295 to US 130, Mercer County, NJ

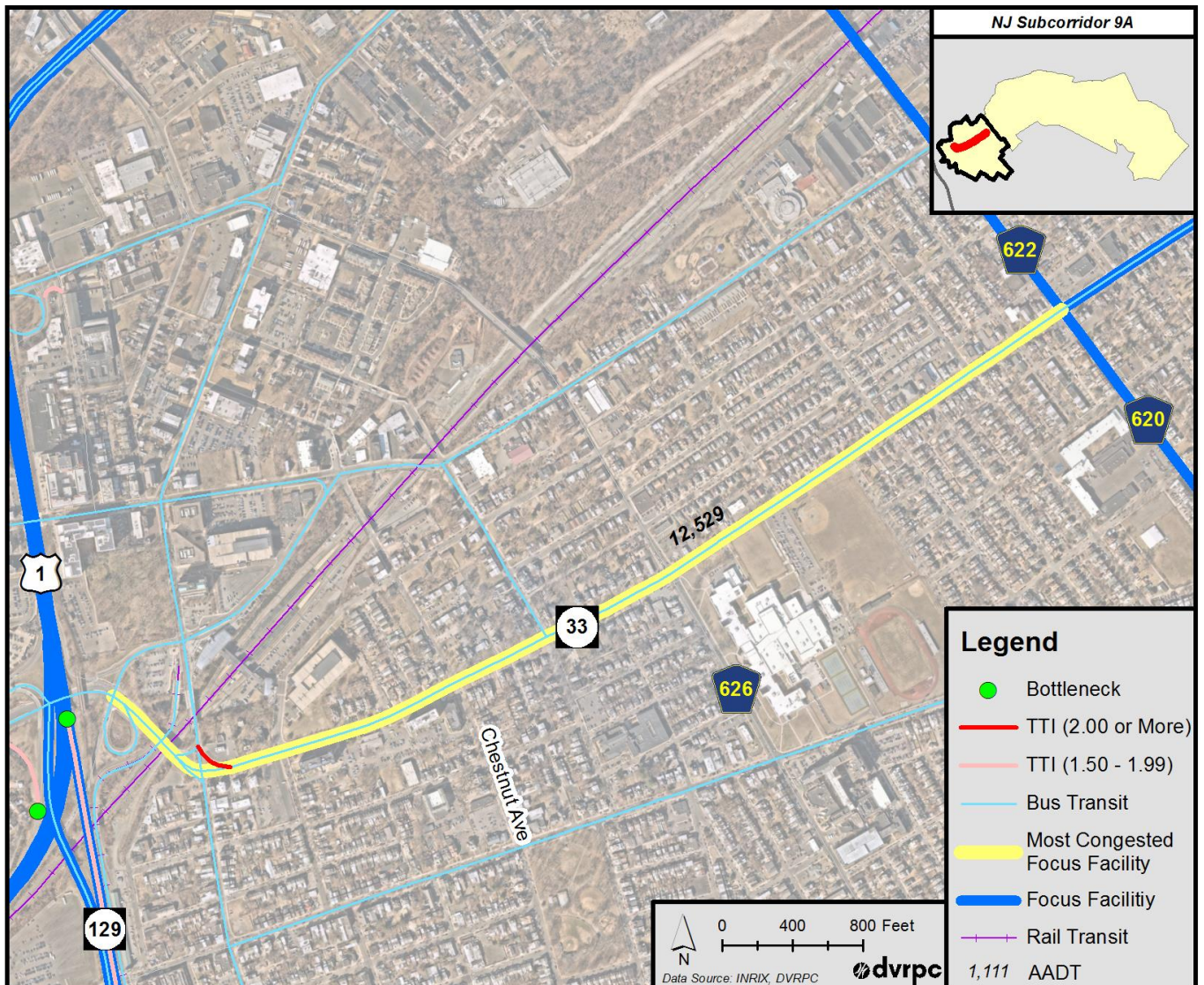


Recently implemented or partially implemented strategies are listed first and italicized



**Figure 61: Facility 349**

NJ 33 (Greenwood Ave) from US 1 to CR 622 (Olden Ave), Mercer County, NJ



**Summary of Conditions**  
 NJ 33 (Greenwood Ave) from US 1 to CR 622 (Olden Ave) in Mercer County is ranked **#15** and **#40** in peak travel time vehicle and volume delay, respectively, and **#12** and **#45** in peak planning time vehicle and volume delay, respectively. NJ 33 is an undivided principal arterial roadway that contains two travel lanes in each direction for a short distance from US 1 to Chestnut Ave and then one lane in each direction to CR 622. Major signalized intersections occur along NJ 33 at Barlow St, CR 626 (Chambers St), and CR 622 (Olden Ave).

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	25.5
PT PM Peak Vehicle Delay (sec):	76.9
TT PM Peak Volume Delay (hr):	3:59:00
PT PM Peak Volume Delay (hr):	12:00:19
Level of Travel Time Reliability (mi):	0.00
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	8,463
TDM Forecasted Congestion (mi):	0.21

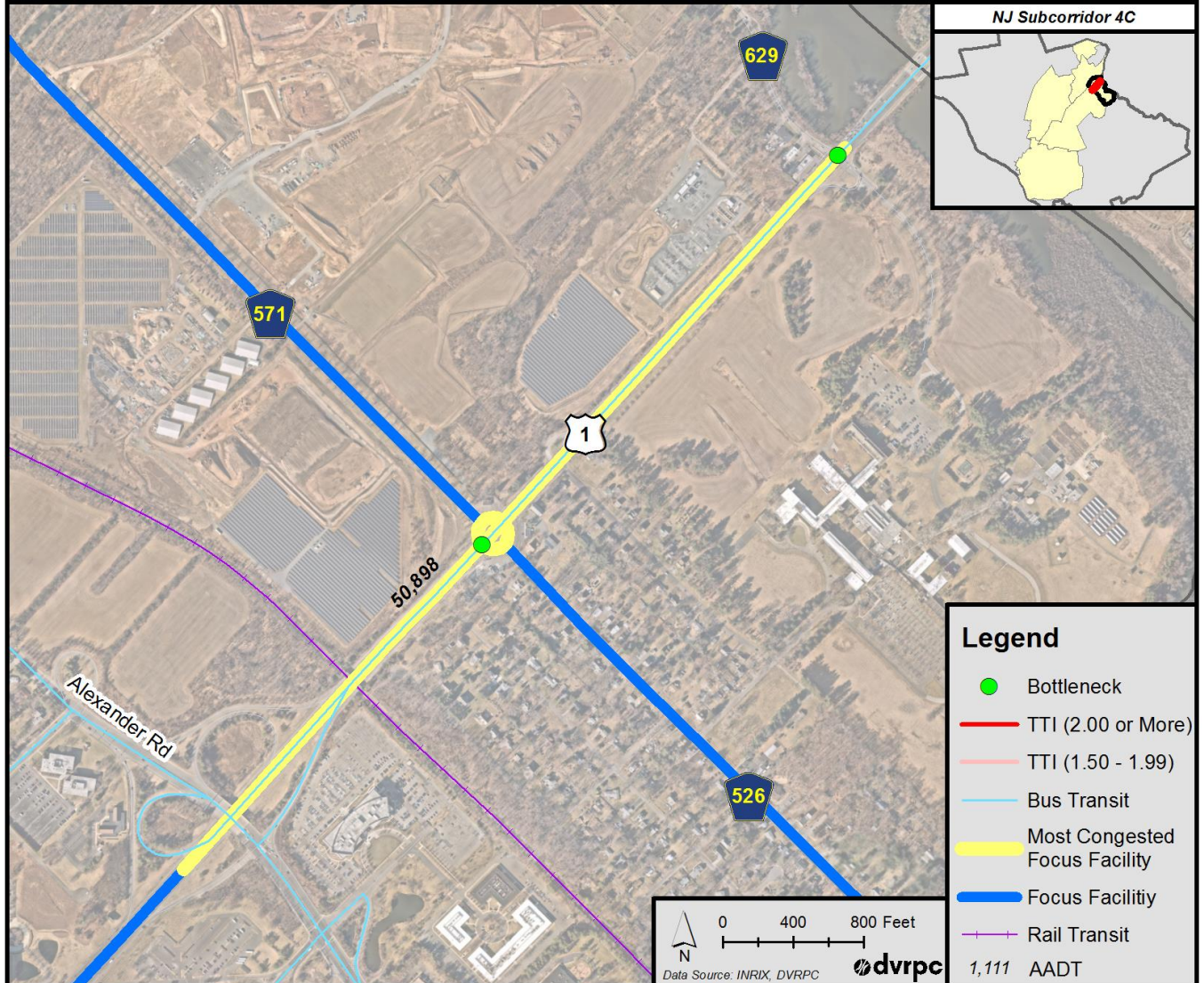
**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #308 Trenton Station Area Access; #5 US 1 Bus Rapid Transit  
 \* FY 2024-27 TIP: DB #D2023 Circulation Improvements around Trenton transit center

Additional Factors	
Facility Miles:	2.37
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.18
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	0
Traffic Signals:	8
Annual Average Daily Traffic (AADT):	12,529
CMP Objectives Score:	6.33

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Circulation Improvements
  - 3) Transit Infrastructure Improvements
  - 4) Transit-Oriented Development (TOD)
  - 5) Walking and Bicycling Improvements
  - 6) Bus Rapid Transit (BRT) or Exclusive Right-of-Way Bus Lanes

**Figure 62: Facility 318**

US 1 from Alexander Rd to CR 629 (Harrison St), Mercer County, NJ



**Summary of Conditions**  
 US 1 from Alexander Rd to CR 629 (Harrison St) in Mercer County is ranked #33 and #10 in peak travel time vehicle and volume delay, respectively, and #13 in both peak planning time vehicle and volume delay. Vehicle delays are higher in the AM peak than the PM peak indicating that strategies to mitigate mobility and reliability should include morning commute traffic patterns. US 1 is a divided principal arterial roadway that contains three travel lanes in each direction, and CMP intersection bottlenecks occur at CR 571 (Washington Rd) and CR 629.

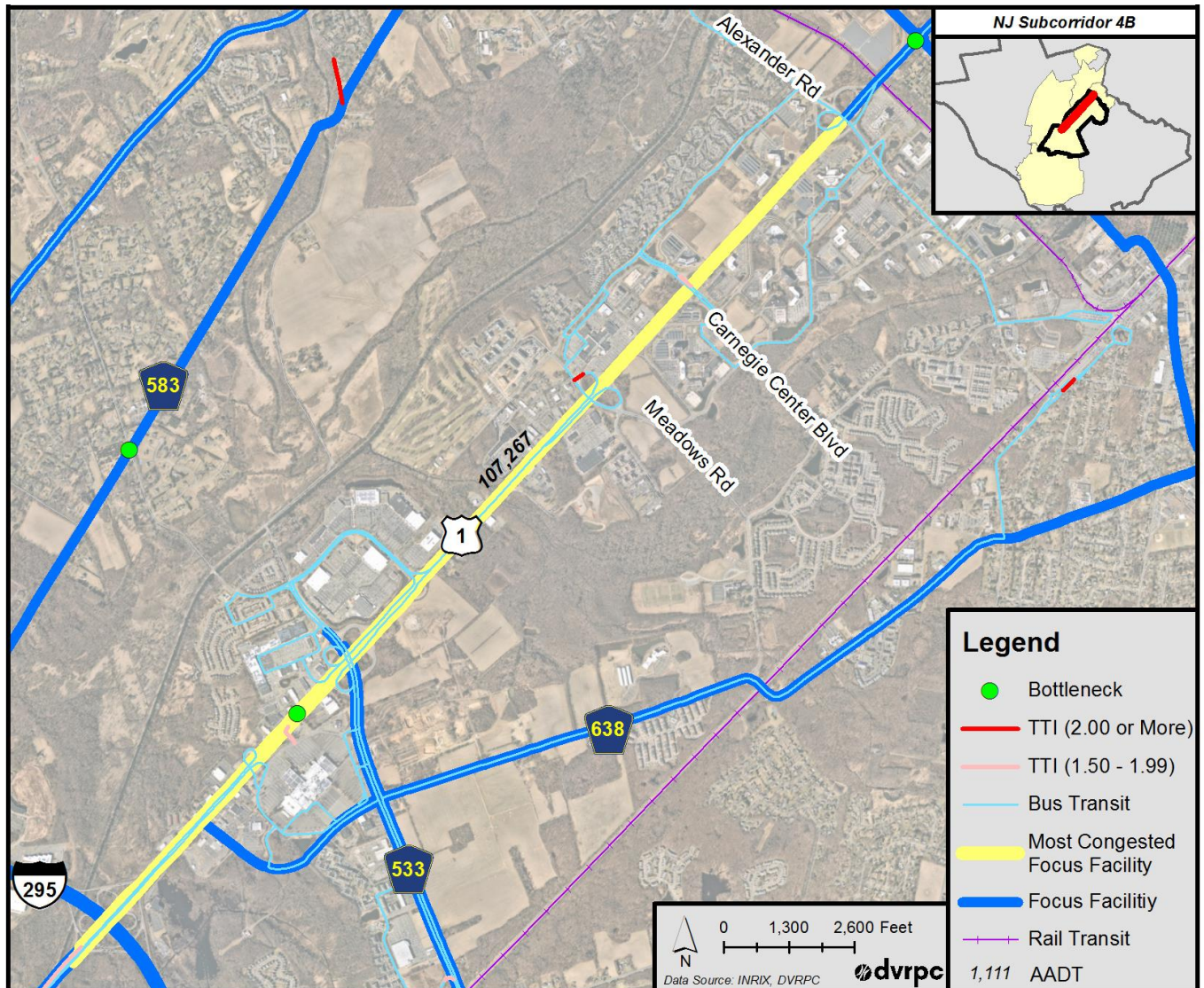
**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #5 US 1 Bus Rapid Transit  
 \* FY 2024-27 TIP: DB #17419 Route 1, Alexander Road to Mapleton Rd, increase travel lanes from 3 to 4 lanes per direction

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Transit Infrastructure Improvements
  - 3) Encourage Use of Fewer Cars
  - 4) Comprehensive Policy Approaches
  - 5) Walking and Bicycling Improvements
  - 6) Major Reconstruction with Minor Capacity Additions

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	18.9
PT PM Peak Vehicle Delay (sec):	76.4
TT PM Peak Volume Delay (hr):	11:45:32
PT PM Peak Volume Delay (hr):	38:21:17
Level of Travel Time Reliability (mi):	0.10
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	0
TDM Forecasted Congestion (mi):	0.65

Additional Factors	
Facility Miles:	2.16
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.05
CMP High Crash Severity (mi):	1.73
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	2
Traffic Signals:	3
Annual Average Daily Traffic (AADT):	50,898
CMP Objectives Score:	5.65

**Figure 63: Facility 317**  
 US 1 from I-295 to Alexander Rd, Mercer County, NJ



**Summary of Conditions**  
 US 1 from the I-295 interchange to Alexander Rd in Mercer County is ranked **#81** and **#18** in peak travel time vehicle and volume delay, respectively, and **#75** and **#8** in peak planning time vehicle and volume delay, respectively. US 1 is a divided principal arterial roadway that contains mostly three travel lanes in each direction with one signalized intersection at Carnegie Center Blvd, and on- and off-ramps at I-295, CR 533 (Quakerbridge Rd), Meadow Rd, and Alexander Rd. A CMP limited access roadway bottleneck occurs on US 1 southbound at the CR 533 (Quakerbridge Rd) on-ramps.

Congestion Measures	
TT PM Peak Vehicle Delay (sec):	7.1
PT PM Peak Vehicle Delay (sec):	33.8
TT PM Peak Volume Delay (hr):	9:28:54
PT PM Peak Volume Delay (hr):	45:39:34
Level of Travel Time Reliability (mi):	0.00
Truck Travel Time Reliability Index (mi):	n/a
Peak Hour Excessive Delay (per mi):	2,949
TDM Forecasted Congestion (mi):	4.21

**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #5 US 1 Bus Rapid Transit  
 \* FY 2024-27 TIP: No projects

Additional Factors	
Facility Miles:	8.44
National Highway System (NHS):	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.81
Transit Route:	Yes
Park and Ride:	No
Bottlenecks:	1
Traffic Signals:	1
Annual Average Daily Traffic (AADT):	107,267
CMP Objectives Score:	4.51

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Transit Infrastructure Improvements
  - 3) Encourage Use of Fewer Cars
  - 4) Comprehensive Policy Approaches
  - 5) Walking and Bicycling Improvements
  - 6) Bus Rapid Transit (BRT) or Exclusive Right-of-Way Bus Lanes

## 4.3 Selecting Focus Intersection Bottlenecks

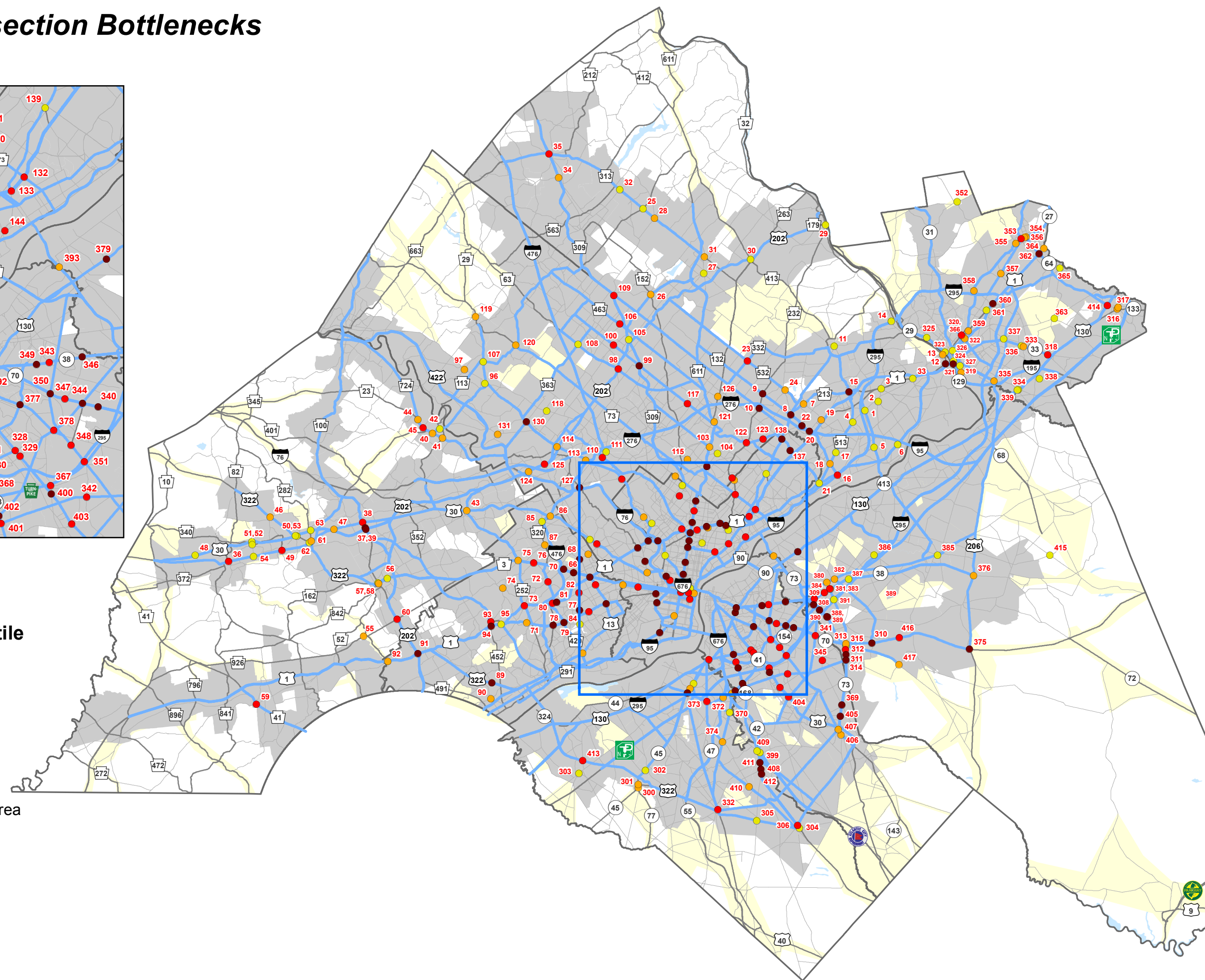
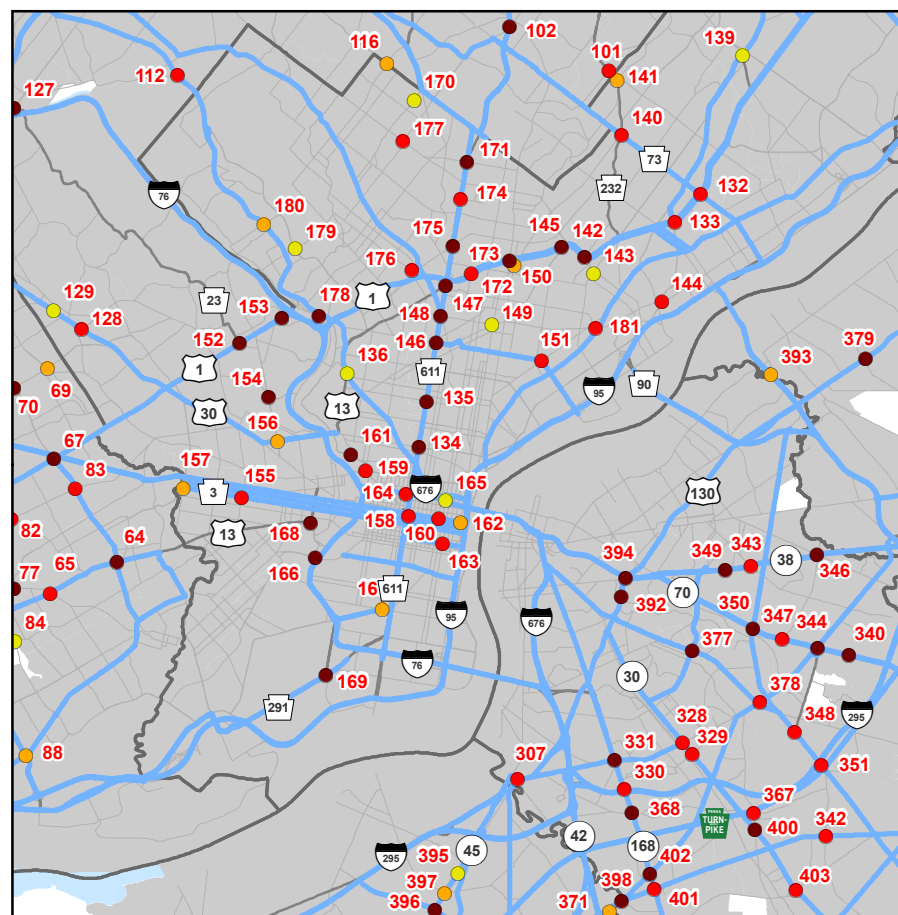
Some focus roadway corridor facilities may not indicate significant levels of congestion, but one or two intersections along the facility may experience reduced mobility and result in a bottleneck. The focus of the bottleneck analysis is along arterials and other non-controlled access roadway facilities, typically occurring at signalized intersections. Limited access roadway bottlenecks are reviewed as part of a separate analysis (see Chapter 4, section 5).

Focus intersection bottlenecks are identified in the region as ones that have at least one roadway segment approach to an intersection with a peak hour TTI greater than 1.50 or a PTI greater than 3.00 and high peak hour vehicle and volume delays. Intersections with more than one segment approach with high peak hour delays were given added weight to be included as a focus intersection bottleneck. The CATT Lab *PDA Bottleneck Ranking Tool* was used to help in these efforts, but a manual process of identifying segments with the highest delays was applied to derive the final list of bottlenecks analyzed separately for each county. For each bottleneck, peak travel time vehicle and volume delays are summarized for all approach segments that touch the intersection, and any other trailing adjacent segments with a TTI of 1.4 or more. A total of 299 focus intersection bottlenecks were identified: 181 in Pennsylvania and 118 in New Jersey. Figure 64 maps these bottlenecks, which are symbolized by volume delay in quartiles separately for the Pennsylvania and New Jersey subregions. Brown locations are the most delayed and yellow the least.

Tables 9 and 10 contain a list of bottlenecks in the Pennsylvania and New Jersey portions of the DVRPC region sorted by county and intersection name. They are ranked by both peak average travel time vehicle and volume delay with a rank of 1 being the most delayed. The bottleneck mapping label identifier can be cross-referenced between Figure 64 and tables 9 and 10 to identify more detailed delay and ranking information for each bottleneck. Most bottlenecks are more delayed during the PM peak hour, but there are a few that are more delayed during the AM peak hour, which are indicated in the “AM/PM Highest Delay” column and highlighted in gray. Vehicle and volume delays are measured in seconds and hours, respectively. The delay rankings are color coded by quartiles from the highest to lowest delay, with brown being the most delayed and yellow the least. The number of intersection legs included in the peak hour calculation is listed for each intersection, since some leg approaches are omitted from the analysis because they do not contain traffic volumes or travel time data, and as a result may significantly under-represent congestion. Also, the peak hour volume for all leg approaches is totaled and listed for each intersection. The CMP objective measure scores for all segments that are part of the bottleneck are averaged and ranked, and listed for each bottleneck.

The focus intersection bottlenecks should be considered in DVRPC corridor and other planning studies, PennDOT programs like Green Light-Go, before-and-after performance evaluations, and could be added to the *Plan-TIP Project Evaluation Criteria*. Bottleneck strategies will need to be weighed against regional priorities and the region’s extreme funding constraint.

**Figure 64: Focus Intersection Bottlenecks**



11 Bottleneck ID

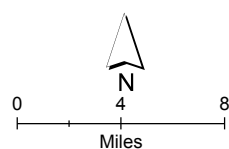
**Bottleneck Volume Delay By Quartile**

- Most Delayed
- Somewhat Delayed
- Somewhat Not Delayed
- Least Delayed

— Focus Roadway Corridor

■ Congested Corridor and Subcorridor Area

■ Emerging Growth Corridor Area



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**Table 9:  
Focus Intersection Bottlenecks in the Pennsylvania Portion of the DVRPC Region: Peak Travel Time Vehicle and Volume Delay (Sorted by County and Intersection Name)**

MAP ID	Intersection Name	Municipality*	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)							CMP Obj. Score	CMP Obj. Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	Intersection Legs Included in Delay	Peak Hour Volume	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay		
19	Bristol Rd @ Old Lincoln Hwy	Bensalem Township	Bucks	15.2	50.8	50.8	PM	137	128	4/4	3,171	2:35:37	11:17:58	11:17:58	PM	5.44	124
24	Bustleton Pk @ Bristol Rd	Northampton Township	Bucks	28.8	83.2	83.2	PM	81	101	4/4	1,660	3:46:18	15:27:40	15:27:40	PM	2.90	166
13	Calhoun St @ River Rd	Morrisville Borough	Bucks	9.5	45.4	45.4	PM	144	112	4/4	2,173	1:47:35	13:08:20	13:08:20	PM	6.46	97
14	I-295 On-/Off-Ramp @ Taylorsville Rd	Lower Makefield Township	Bucks	5.6	6.3	6.3	PM	180	179	3/3	1,232	0:26:03	0:42:44	0:42:44	PM	1.97	178
5	I-95 @ PA 413 (Veterans Hwy)	Bristol Township	Bucks	9.5	14.5	14.5	PM	176	169	3/3	4,039	2:43:24	5:19:16	5:19:16	PM	4.80	143
16	I-95 NB On-/Off-Ramp @ PA 132 (Street Rd)	Bensalem Township	Bucks	38.9	68.0	68.0	PM	108	84	3/3	2,562	8:13:57	18:44:44	18:44:44	PM	8.69	24
6	I-95 On-/Off-Ramp @ US 13 (Bristol Pk)	Bristol Township	Bucks	11.1	24.1	24.1	PM	170	166	3/3	3,148	2:09:31	6:00:16	6:00:16	PM	6.16	105
33	Lincoln Hwy @ New Tyburn Rd	Falls Township	Bucks	5.3	13.9	13.9	PM	177	175	4/4	2,985	0:46:00	2:41:29	2:41:29	PM	4.19	149
20	PA 132 (Street Rd) @ Old Lincoln Hwy	Bensalem Township	Bucks	42.4	99.9	99.9	PM	55	16	4/4	5,690	17:34:06	52:28:24	52:28:24	PM	8.01	45
9	PA 132 (Street Rd) @ PA 232	Upper Southampton Township	Bucks	56.6	125.5	125.5	PM	29	43	4/4	3,982	9:57:09	31:20:48	31:20:48	PM	6.33	101
8	PA 132 (Street Rd) @ PA 532 (Bustleton Pk)	Lower Southampton Township	Bucks	74.0	146.3	146.3	PM	17	19	4/4	5,714	19:20:59	51:23:44	51:23:44	PM	6.70	92
22	PA 132 (Street Rd) @ Trevoise Rd	Bensalem Township	Bucks	21.9	54.7	54.7	PM	128	35	4/4	5,814	11:49:55	34:21:50	34:21:50	PM	8.32	39
29	PA 179 (Bridge St) @ PA 32 (Main St)	New Hope Borough	Bucks	28.0	41.5	41.5	PM	149	174	3/4	761	1:49:51	2:59:49	2:59:49	PM	2.22	176
7	PA 213 (Bridgetown Pk) @ Bristol Rd	Lower Southampton Township	Bucks	45.5	91.5	91.5	PM	70	110	3/3	1,688	5:11:55	13:32:58	13:32:58	PM	4.52	146
10	PA 232 (Huntingdon Pk) @ County Line Rd	Upper Southampton Township	Bucks	67.7	170.7	170.7	PM	10	21	4/4	3,668	14:48:54	48:11:30	48:11:30	PM	5.77	117
34	PA 309 @ Tollgate Rd	Richland Township	Bucks	13.0	29.7	29.7	PM	165	116	4/4	4,256	2:34:50	12:48:50	12:48:50	PM	2.46	174
32	PA 313 (Dublin Pk) @ 5th St	East Rockhill Township	Bucks	25.4	27.0	27.0	PM	169	171	4/4	1,668	2:26:55	4:11:20	4:11:20	PM	0.91	181
25	PA 313 (Dublin Pk) @ PA 113 (Souderton Rd)	Bedminster Township	Bucks	33.5	36.3	36.3	PM	160	168	4/4	1,300	4:05:24	5:24:05	5:24:05	PM	1.33	180
28	PA 313 (Main St) @ Elephant Rd/Middle St	Dublin Borough	Bucks	44.8	66.5	66.5	PM	111	126	4/4	1,519	5:36:58	11:22:20	11:22:20	PM	2.60	171
31	PA 313 (Swamp Rd) @ N Easton Rd	Buckingham Township	Bucks	39.2	74.4	74.4	PM	98	118	4/4	2,458	5:25:05	12:45:44	12:45:44	PM	5.43	125
12	PA 32 (Bridge St) @ Pennsylvania Ave	Morrisville Borough	Bucks	34.0	123.2	123.2	PM	34	32	3/4	1,462	7:07:37	35:13:29	35:13:29	PM	6.74	91
23	PA 332 (Jacksonville Rd) @ Bristol Rd	Northampton Township	Bucks	51.5	104.3	104.3	PM	49	75	4/4	2,779	8:53:59	22:10:18	22:10:18	PM	4.14	151
15	PA 413 (Pine St) @ PA 213 (Maple Ave)	Langhorne Borough	Bucks	62.4	155.3	155.3	PM	15	42	4/4	2,200	9:44:34	32:19:35	32:19:35	PM	7.42	66
1	PA 413 @ Trenton Rd	Middletown Township	Bucks	13.7	49.3	49.3	PM	139	152	4/4	2,675	2:08:42	9:10:08	9:10:08	PM	5.37	129
18	PA 513 (Hulmesville Rd) @ PA 132 (Street Rd)	Bensalem Township	Bucks	26.7	42.9	42.9	PM	148	135	4/4	4,236	4:08:25	10:33:05	10:33:05	PM	3.81	157
4	PA 513 (Neshaminy St) @ Trenton Ave	Hulmeville Borough	Bucks	15.7	39.2	39.2	PM	156	165	3/4	1,753	2:07:39	6:15:18	6:15:18	PM	3.71	159
17	PA 513 @ Byberry Rd	Bensalem Township	Bucks	16.0	27.2	27.2	PM	167	170	4/4	2,057	2:07:51	4:31:52	4:31:52	PM	3.06	164
11	PA 532 (Sycamore St) @ Richboro Rd	Newtown Township	Bucks	11.7	18.4	18.4	PM	172	177	4/4	1,286	0:52:49	1:46:02	1:46:02	PM	3.18	163
35	PA 663 (Broad St) @ PA 309	Quakertown Borough	Bucks	20.9	61.6	61.6	PM	116	69	4/4	5,086	6:29:00	24:34:14	24:34:14	PM	6.21	104
3	US 1 (Lincoln Hwy) @ Oxford Valley Rd	Middletown Township	Bucks	3.2	35.6	35.6	PM	162	142	4/4	4,492	0:44:03	9:44:51	9:44:51	PM	5.16	136
21	US 13 (Bristol Pk) @ PA 63 (Woodhaven Rd)	Bensalem Township	Bucks	32.7	45.2	45.2	PM	145	146	3/3	1,906	5:15:54	9:25:59	9:25:59	PM	7.49	64
27	US 202 (State St) @ Main St	Doylestown Borough	Bucks	19.8	40.1	40.1	PM	153	148	3/3	1,251	2:14:44	5:49:46	9:18:20	PM	8.34	38
26	US 202 @ PA 152 (Main St)	Chalfont Borough	Bucks	36.6	62.7	62.7	PM	115	125	3/3	2,253	5:31:05	11:41:27	11:41:27	PM	7.14	74
30	US 202 @ PA 413 (Durham Rd)	Buckingham Township	Bucks	18.4	12.6	18.4	AM	173	176	4/4	1,493	1:53:12	1:30:11	1:53:12	AM	2.80	169
2	Woodbourne Rd @ Bristol Oxford Valley Rd	Middletown Township	Bucks	4.3	39.6	39.6	PM	155	153	4/4	2,636	0:31:30	8:59:51	8:59:51	PM	2.50	173
39	PA 100 @ Howard Rd	West Whiteland Township	Chester	31.4	90.7	90.7	PM	71	11	3/4	5,652	15:46:39	59:16:54	59:16:54	PM	8.18	40
38	PA 100 @ US 30 Bus (Lincoln Hwy)	West Whiteland Township	Chester	21.2	58.4	58.4	PM	120	62	4/4	5,616	9:04:44	25:59:29	25:59:29	PM	6.59	95
37	PA 100 @ US 30 Bypass WB Off-Ramp	West Whiteland Township	Chester	25.4	66.6	66.6	PM	110	27	3/3	5,095	12:12:24	39:21:37	39:21:37	PM	7.94	48
42	PA 113 (Bridge St) @ Main St	Phoenixville Borough	Chester	24.1	65.2	65.2	PM	113	160	3/4	1,256	2:19:16	7:50:45	7:50:45	PM	7.30	71
41	PA 23 (Nutt Rd) @ PA 29 (Manavon St)	Phoenixville Borough	Chester	82.3	83.5	83.5	PM	80	121	4/4	1,543	8:56:01	12:25:19	12:25:19	PM	5.20	134
40	PA 23 (Nutt Rd) @ PA 113 (Bridge St)	Phoenixville Borough	Chester	46.8	78.8	78.8	PM	85	103	4/5	2,578	7:17:01	15:02:52	15:02:52	PM	4.81	141
45	PA 23 (Nutt Rd) @ Township Line Rd	East Pikeland Township	Chester	56.2	95.8	95.8	PM	61	74	2/3	1,547	10:06:32	22:27:22	22:27:22	PM	5.86	115
56	PA 3 (Market St) @ Westtown Rd	West Goshen Township	Chester	0.0	2.4	2.4	PM	181	180	4/4	2,505	0:00:00	0:42:28	0:42:28	PM	3.20	162
52	PA 340 (Kings Hwy) @ Reeceville Rd	Caln Township	Chester	24.1	40.6	40.6	PM	151	167	4/4	1,334	2:51:38	6:00:09	6:00:09	PM	2.56	172
59	PA 41 @ Baltimore Pk	Avondale Borough	Chester	69.2	131.3	131.3	PM	23	64	3/3	1,736	10:56:37	25:45:18	25:45:18	PM	4.45	147
44	PA 724 (Schuylkill Rd) @ PA 23 (Ridge Rd)	East Pikeland Township	Chester	41.6	54.0	54.0	PM	131	133	3/4	1,698	6:10:12	10:45:40	10:45:40	PM	4.07	154
55	PA 926 (Street Rd) @ Pocopson Rd	Pocopson Township	Chester	29.3	78.0	78.0	PM	87	132	4/4	1,008	2:57:55	10:50:34	10:50:34	PM	2.73	170
60	US 202 (Wilmington Pk) @ PA 926 (Street Rd)	Thornbury Township	Chester	21.2	40.4	40.4	PM	152	79	4/4	4,811	7:19:08	20:50:43	20:50:43	PM	2.92	165
43	US 30 (Lancaster Ave) @ PA 252 (Leopard Rd)	Tredyffrin Township	Chester	49.1	51.7	51.7	PM	134	130	4/4	2,705	8:11:53	11:12:56	11:12:56	PM	6.27	102
54	US 30 Bus (Lincoln Hwy) @ Caln Rd	Caln Township	Chester	16.8	54.8	54.8	PM	127	139	4/4	1,932	2:25:23	10:09:50	10:09:50	PM	6.75	90
49	US 30 Bus (Lincoln Hwy) @ PA 340 (Bondsville Rd)	Caln Township	Chester	23.4	104.0	104.0	PM	51	81	4/4	2,323	3:43:23	19:44:20	19:44:20	PM	5.82	116
36	US 30 Bus (Lincoln Hwy) @ PA 82 (1st Ave)	Coatesville City	Chester	35.6	180.7	180.7	PM	9	47	4/4	2,355	4:41:16	30:02:15	30:02:15	PM	7.75	52

**Table 9  
Continued**

MAP ID	Intersection Name	Municipality*	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)							CMP Obj. Score	CMP Obj. Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	Intersection Legs Included in Delay	Peak Hour Volume	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay		
51	US 30 Bypass On-Ramp @ Reeceville Rd	Caln Township	Chester	16.9	23.1	23.1	PM	171	172	3/3	1,490	1:59:41	3:46:20	3:46:20	PM	4.07	154
53	US 30 Bypass On-/Off-Ramp @ US 322	Caln Township	Chester	57.9	13.8	57.9	AM	123	159	3/3	1,230	8:14:20	1:45:29	8:14:20	AM	6.01	108
50	US 30 Bypass On-/Off-Ramp @ US 322	Caln Township	Chester	76.4	18.9	76.4	AM	91	156	3/3	1,274	8:33:04	2:22:57	8:33:04	AM	6.91	85
48	US 30 Bypass WB Off-Ramp @ Airport Rd	Valley Township	Chester	7.6	9.2	9.2	PM	179	178	3/3	1,104	0:37:52	1:05:22	1:05:22	PM	2.37	175
47	US 30 Bypass WB Off-Ramp @ Lancaster Ave	East Caln Township	Chester	20.3	58.2	58.2	PM	122	109	3/4	2,458	3:38:36	13:43:30	13:43:30	PM	5.99	109
63	US 30 Bypass WB Off-Ramp @ Norwood Rd	Downingtown Borough	Chester	9.3	8.8	9.3	AM	178	181	3/3	438	0:20:15	0:33:05	0:33:05	PM	2.07	177
58	US 322 (High St) @ Gay St	West Chester Borough	Chester	8.6	15.8	15.8	PM	175	173	3/3	2,840	1:13:51	3:33:19	3:33:19	PM	9.10	15
57	US 322 (High St) @ PA 3 (Market St)	West Chester Borough	Chester	33.8	68.4	68.4	PM	107	122	3/4	2,064	4:28:18	12:10:38	12:10:38	PM	9.71	6
46	US 322 @ Hopewell Rd/Bondsville Rd	East Brandywine Township	Chester	43.1	76.5	76.5	PM	90	106	4/4	1,684	6:12:15	14:21:16	14:21:16	PM	2.87	167
62	US 322 @ US 30 Bus (Lancaster Ave)	Downingtown Borough	Chester	36.9	36.3	36.9	AM	159	164	3/3	1,558	4:42:33	6:36:16	6:36:16	PM	8.07	44
61	US 322 @ US 30 Business	Downingtown Borough	Chester	27.7	63.2	63.2	PM	114	127	3/3	2,041	4:06:47	11:21:21	11:21:21	PM	8.86	22
64	Baltimore Ave @ Lansdowne Ave	Lansdowne Borough	Delaware	66.2	190.1	190.1	PM	7	30	4/4	2,982	10:09:47	37:38:39	37:38:39	PM	7.74	53
71	Baltimore Ave @ Monroe St	Media Borough	Delaware	71.2	90.4	90.4	PM	73	91	4/4	1,470	10:48:51	17:31:44	17:31:44	PM	7.20	73
65	Baltimore Ave @ Springfield Rd	Clifton Heights Borough	Delaware	39.8	93.8	93.8	PM	65	88	4/4	2,708	5:52:56	18:00:52	18:00:52	PM	7.54	60
74	Bishop Hollow Rd @ Providence Rd	Upper Providence Township	Delaware	45.9	91.7	91.7	PM	69	123	4/4	1,481	4:17:36	12:04:31	12:04:31	PM	1.70	179
85	Conestoga Rd @ Radnor Chester Rd	Radnor Township	Delaware	59.5	72.8	72.8	PM	101	157	4/4	1,514	5:27:10	8:30:56	8:30:56	PM	5.20	134
68	Darby Rd @ Eagle Rd	Haverford Township	Delaware	141.2	183.7	183.7	PM	8	34	4/4	2,736	22:05:51	34:28:23	34:28:23	PM	5.94	112
69	Haverford Rd @ Wynnewood Rd	Haverford Township	Delaware	114.7	82.5	114.7	AM	40	100	4/4	2,269	15:38:14	15:04:56	15:38:14	AM	5.35	130
86	I-476 NB On-Ramp @ US 30 (Lancaster Ave)	Radnor Township	Delaware	22.4	39.0	39.0	PM	157	120	2/3	2,263	5:31:45	12:25:21	12:25:21	PM	7.29	72
83	Lansdowne Ave @ State Rd	Upper Darby Township	Delaware	62.5	104.5	104.5	PM	47	60	4/4	3,446	12:03:02	26:21:22	26:21:22	PM	6.86	88
90	Meeting House Rd @ Chichester Ave	Upper Chichester Township	Delaware	45.9	89.7	89.7	PM	75	98	4/4	2,229	6:09:33	16:08:57	16:08:57	PM	5.03	139
66	PA 3 (West Chester Pk) @ Eagle Rd	Haverford Township	Delaware	96.8	121.2	121.2	PM	35	20	4/4	3,722	20:35:07	49:36:47	49:36:47	PM	7.03	77
70	PA 3 (West Chester Pk) @ Lawrence Rd	Haverford Township	Delaware	37.9	74.7	74.7	PM	97	45	3/3	5,043	10:11:44	31:04:22	31:04:22	PM	6.96	81
76	PA 3 (West Chester Pk) @ Media Line Rd	Newtown Township	Delaware	84.7	103.3	103.3	PM	53	55	4/4	2,573	13:56:50	27:55:40	27:55:40	PM	6.36	100
75	PA 3 (West Chester Pk) @ PA 252 (Newtown Rd)	Newtown Township	Delaware	32.3	37.9	37.9	PM	158	108	4/4	4,931	8:55:27	14:11:11	14:11:11	PM	6.08	107
72	PA 320 (Sproul Rd) @ Lawrence Rd	Marple Township	Delaware	56.4	60.8	60.8	PM	118	83	3/3	3,838	13:44:55	18:48:56	18:48:56	PM	4.14	151
78	PA 320 (Sproul Rd)/Cedar Ln @ Baltimore Pk	Springfield Township	Delaware	55.5	107.3	107.3	PM	44	38	4/4	3,084	14:11:41	33:32:33	33:32:33	PM	8.64	27
93	PA 352 (Middletown Rd) @ PA 452 (Pennell Rd)	Middletown Township	Delaware	37.1	131.2	131.2	PM	24	61	4/4	2,423	5:43:58	26:20:18	26:20:18	PM	6.23	103
79	PA 420 (Woodlawn Ave) @ Baltimore Pk	Springfield Township	Delaware	75.4	167.4	167.4	PM	12	12	4/4	4,299	17:39:08	58:17:42	58:17:42	PM	7.03	77
84	Providence Rd @ South Ave	Upper Darby Township	Delaware	18.4	45.4	45.4	PM	143	158	4/4	2,031	2:47:40	8:27:31	8:27:31	PM	5.54	123
77	Springfield Rd @ Bishop Ave	Springfield Township	Delaware	129.7	273.9	273.9	PM	3	9	4/4	3,449	23:22:58	65:23:17	65:23:17	PM	8.66	26
87	Sprowl Rd @ S Bryn Mawr Ave	Radnor Township	Delaware	69.6	94.3	94.3	PM	64	114	4/4	2,046	7:44:48	13:01:11	13:01:11	PM	2.86	168
82	State Rd @ Burmont Rd	Upper Darby Township	Delaware	80.9	133.7	133.7	PM	22	67	3/3	2,042	11:44:02	25:16:13	25:16:13	PM	7.01	79
92	US 1 (Baltimore Pk) @ Creek Rd	Chadds Ford Township	Delaware	23.2	47.6	47.6	PM	142	95	3/3	2,949	6:17:09	16:33:16	16:33:16	PM	4.77	144
95	US 1 (Baltimore Pk) @ PA 352 (New Middletown Rd)	Middletown Township	Delaware	33.0	43.4	43.4	PM	146	145	2/2	1,499	5:04:23	9:38:41	9:38:41	PM	6.46	97
94	US 1 (Baltimore Pk) @ PA 452 (Pennell Rd)	Middletown Township	Delaware	57.7	116.1	116.1	PM	38	37	4/4	3,847	11:13:10	33:33:01	33:33:01	PM	6.94	82
81	US 1 (Media Bypass) NB On-/Off-Ramp @ Sprowl Rd	Springfield Township	Delaware	34.9	93.7	93.7	PM	66	57	4/4	3,766	7:49:34	27:46:22	27:46:22	PM	7.63	59
80	US 1 (State Rd) @ Springfield Rd	Springfield Township	Delaware	206.7	341.4	341.4	PM	2	2	4/4	3,825	42:33:24	94:18:44	94:18:44	PM	9.43	10
67	US 1 (Township Line Rd) @ Landowne Ave/Darby Rd	Haverford Township	Delaware	92.6	145.6	145.6	PM	19	18	4/4	4,505	22:50:55	51:47:11	51:47:11	PM	8.44	33
73	US 1 Media Bypass @ PA 252 (Providence Rd)	Upper Providence Township	Delaware	35.8	79.8	79.8	PM	84	71	3/3	2,231	7:00:39	22:50:00	22:50:00	PM	7.12	75
88	US 13 (Chester Pk) @ PA 420 (Lincoln Ave)	Prospect Park Borough	Delaware	16.3	32.2	32.2	PM	163	119	4/4	4,655	3:30:12	12:29:32	12:29:32	PM	7.99	46
91	US 202 (Wilmington Pk) @ US 1 (Baltimore Pk)	Chadds Ford Township	Delaware	63.1	108.7	108.7	PM	43	13	4/4	7,216	24:59:07	55:57:54	55:57:54	PM	5.71	119
89	US 322 @ Bethel Ave/Cherry Tree Rd	Upper Chichester Township	Delaware	254.8	401.1	401.1	PM	1	1	4/4	2,859	66:56:44	128:09:36	128:09:36	PM	7.94	48
111	Butler Pk @ Flourtown Rd/Plymouth Rd	Whitemarsh Township	Montgomery	34.2	55.5	55.5	PM	126	163	4/4	1,866	3:02:05	6:41:31	6:41:31	PM	3.77	158
116	Cheltenham Ave @ Wadsworth Ave	Cheltenham Township	Montgomery	26.1	68.7	68.7	PM	106	134	4/4	2,391	3:23:22	10:40:50	10:40:50	PM	5.65	121
115	Easton Rd @ Glenside Ave	Cheltenham Township	Montgomery	59.3	115.2	115.2	PM	39	93	4/4	1,686	6:49:53	16:57:30	16:57:30	PM	5.34	131
131	Egypt Rd & Pawlings Rd	Lower Providence Township	Montgomery	36.2	70.2	70.2	PM	105	113	4/4	2,554	5:29:14	13:07:38	13:07:38	PM	4.84	140
118	Germantown Pk @ Burnside Ave	East Norriton Township	Montgomery	34.9	51.1	51.1	PM	135	147	3/3	1,785	4:29:29	9:23:34	9:23:34	PM	3.57	160
110	Germantown Pk @ Butler Pk	Whitemarsh Township	Montgomery	42.3	109.6	109.6	PM	42	51	3/3	2,021	8:46:26	29:20:02	29:20:02	PM	5.59	122
127	PA 23 (Front St) @ Matsonford Rd/Fayette St	West Conshohocken Borough	Montgomery	100.9	126.5	126.5	PM	27	33	4/4	3,790	23:40:23	35:13:03	35:13:03	PM	8.92	20
101	PA 232 (Huntingdon Pk) @ Church Rd	Rockledge Borough	Montgomery	21.4	103.8	103.8	PM	52	50	3/3	2,524	4:27:16	29:29:50	29:29:50	PM	8.63	28
122	PA 232 (Huntingdon Pk) @ PA 63 (Welsh Rd)/Philmont Ave	Lower Moreland Township	Montgomery	77.0	100.6	100.6	PM	54	65	4/4	4,469	14:04:28	25:36:15	25:36:15	PM	7.38	68



**Table 9**  
**Continued**

MAP ID	Intersection Name	Municipality*	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)							CMP Obj. Score	CMP Obj. Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	Intersection Legs Included in Delay	Peak Hour Volume	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay		
126	PA 263 (S York Rd) @ Horsham Rd	Hatboro Borough	Montgomery	27.1	61.3	61.3	PM	117	111	3/3	2,078	4:21:38	13:08:26	13:08:26	PM	5.96	111
96	PA 29 (2nd Ave) @ E Main St	Collegetown Borough	Montgomery	25.5	51.0	51.0	PM	136	143	4/4	2,903	3:55:28	9:42:26	9:42:26	PM	5.27	133
107	PA 29 (Gravel Pk) @ PA 113 (Bridge Rd)	Perkiomen Township	Montgomery	80.4	73.1	80.4	AM	83	140	4/4	1,939	8:38:01	10:00:17	10:00:17	PM	5.29	132
109	PA 309 @ Line Lexington Rd	Hatfield Township	Montgomery	26.4	76.3	76.3	PM	92	78	4/4	4,276	6:07:00	21:40:05	21:40:05	PM	4.44	148
99	PA 309 @ PA 63 (Welsh Rd)	Lower Gwynedd Township	Montgomery	19.2	52.0	52.0	PM	133	40	4/4	5,983	7:59:14	32:57:31	32:57:31	PM	6.59	95
130	PA 363 (Trooper Rd) @ Ridge Pk	Lower Providence Township	Montgomery	85.8	191.6	191.6	PM	6	28	4/4	2,768	11:48:34	38:07:30	38:07:30	PM	6.15	106
108	PA 363 (Valley Forge Rd) @ Sumneytown Pk	Towamencin Township	Montgomery	40.5	40.8	40.8	PM	150	161	4/4	2,614	5:50:46	7:48:55	7:48:55	PM	5.04	138
106	PA 463 (Cowpath Rd) @ Broad St	Montgomery Township	Montgomery	38.0	84.1	84.1	PM	79	90	3/3	1,769	6:13:34	17:44:01	17:44:01	PM	5.90	113
121	PA 611 (Old York Rd) @ Davisville Rd	Upper Moreland Township	Montgomery	33.5	43.4	43.4	PM	147	92	4/4	3,793	10:26:45	16:58:10	16:58:10	PM	6.39	99
103	PA 611 (Old York Rd) @ Susquehanna Rd	Abington Township	Montgomery	29.0	57.1	57.1	PM	125	94	4/4	3,773	5:42:12	16:44:28	16:44:28	PM	5.98	110
102	PA 611 (Old York Rd) @ Washington Ln	Abington Township	Montgomery	51.5	163.4	163.4	PM	13	23	4/4	2,864	10:49:58	46:33:37	46:33:37	PM	8.43	34
100	PA 63 (Welsh Rd) @ E Main St/N Wales Rd	Lansdale Borough	Montgomery	34.7	104.4	104.4	PM	48	82	4/4	2,532	4:43:19	18:59:04	18:59:04	PM	5.43	125
117	PA 63 (Welsh Rd) @ Village Rd	Upper Dublin Township	Montgomery	61.3	85.4	85.4	PM	77	80	4/4	1,345	9:13:47	20:19:36	20:19:36	PM	5.39	128
119	PA 73 (Main St) @ Park Ave	Schwenksville Borough	Montgomery	40.5	78.8	78.8	PM	86	124	4/4	1,546	4:40:28	11:49:24	11:49:24	PM	3.51	161
120	PA 73 (Skippack Pk) @ PA 113 (Bridge Rd)	Skippack Township	Montgomery	36.0	90.5	90.5	PM	72	99	4/4	2,127	4:36:36	15:44:29	15:44:29	PM	4.10	153
123	Philmont Ave @ Pine Rd	Lower Moreland Township	Montgomery	52.1	146.0	146.0	PM	18	66	6/6	2,530	7:18:52	25:35:51	25:35:51	PM	5.76	118
113	Ridge Pk @ Alan Wood Rd	Plymouth Township	Montgomery	34.6	39.9	39.9	PM	154	136	4/4	3,878	6:31:33	10:22:12	10:22:12	PM	5.71	119
112	Ridge Pk @ Barren Hill Rd	Whitemarsh Township	Montgomery	19.4	75.4	75.4	PM	94	86	3/3	2,563	3:51:41	18:22:27	18:22:27	PM	4.81	141
97	Ridge Pk/W Main St @ W 7th Ave	Trappe Borough	Montgomery	31.1	72.5	72.5	PM	103	115	3/3	1,669	4:30:49	12:56:04	12:56:04	PM	4.74	145
104	Susquehanna Rd @ Washington Ln	Abington Township	Montgomery	44.9	84.1	84.1	PM	78	137	3/3	1,077	3:56:31	10:20:11	10:20:11	PM	5.05	137
114	Swede St @ Main St	Norristown Borough	Montgomery	32.2	59.2	59.2	PM	119	131	3/3	1,883	4:36:52	11:00:12	11:00:12	PM	9.06	17
125	US 202 (Dekalb Pk) @ Henderson Rd	Upper Merion Township	Montgomery	23.0	54.7	54.7	PM	129	76	4/4	4,920	7:00:27	22:10:07	22:10:07	PM	8.18	40
105	US 202 (Dekalb Pk) @ PA 309	Montgomery Township	Montgomery	4.7	27.0	27.0	PM	168	144	4/4	3,963	1:29:53	9:40:21	9:40:21	PM	3.93	156
124	US 202 (W Dekalb Pk) @ Mall Blvd	Upper Merion Township	Montgomery	7.2	29.4	29.4	PM	166	105	3/4	3,821	3:07:02	14:21:21	14:21:21	PM	6.86	88
98	US 202 @ Sumneytown Pk	Lower Gwynedd Township	Montgomery	71.6	116.5	116.5	PM	37	58	4/4	3,282	12:50:30	27:40:22	27:40:22	PM	7.53	61
128	US 30 (Lancaster Ave) @ Church Rd	Lower Merion Township	Montgomery	38.3	75.9	75.9	PM	93	73	4/4	2,782	8:45:24	22:32:42	22:32:42	PM	6.87	87
129	US 30 (Lancaster Ave) @ Woodside Rd	Lower Merion Township	Montgomery	26.8	35.8	35.8	PM	161	149	3/3	1,937	5:32:51	9:16:56	9:16:56	PM	7.09	76
151	Allegheny Ave @ Kensington Ave	North	Philadelphia	45.0	207.6	207.6	PM	5	49	4/4	2,307	5:40:47	29:43:07	29:43:07	PM	7.97	47
154	Belmont Ave @ Montgomery Dr	West Park	Philadelphia	105.6	102.5	105.6	AM	46	29	4/4	2,950	30:06:09	38:04:02	38:04:02	PM	6.92	84
137	Byberry Rd @ Evans Rd	Upper Far Northeast	Philadelphia	48.5	123.6	123.6	PM	32	39	3/3	2,420	9:08:57	33:24:10	33:24:10	PM	5.87	114
143	Castor Ave @ Adams Ave	Lower Northeast	Philadelphia	15.3	54.4	54.4	PM	130	138	2/2	1,365	2:14:04	10:19:10	10:19:10	PM	6.99	80
157	Cobbs Creek Pkwy @ PA 3 (Walnut St)	West	Philadelphia	27.4	52.3	52.3	PM	132	104	3/3	2,853	6:27:16	14:58:26	14:58:26	PM	7.74	53
150	Front St @ Rising Sun Ave	North	Philadelphia	22.8	89.9	89.9	PM	74	107	4/4	1,872	2:43:00	14:18:14	14:18:14	PM	8.18	40
156	Girard Ave and Belmont Ave	West	Philadelphia	35.0	72.8	72.8	PM	102	117	4/4	2,273	5:06:37	12:48:38	12:48:38	PM	9.43	10
166	Grays Ferry Ave @ 34th St	South	Philadelphia	83.9	123.8	123.8	PM	31	14	4/4	3,799	22:21:40	54:40:40	54:40:40	PM	9.57	8
144	Harbison/Aramingo Ave @ Torresdale Ave	Lower Northeast	Philadelphia	42.9	94.5	94.5	PM	63	56	4/4	3,462	11:40:03	27:49:26	27:49:26	PM	7.69	57
179	Henry Ave @ Walnut Ln	Lower Northwest	Philadelphia	19.5	31.1	31.1	PM	164	151	4/4	3,935	4:38:38	9:13:25	9:13:25	PM	7.53	61
165	I-676 (Vine St Expr) EB Off-Ramp @ 8th St	Central	Philadelphia	6.3	18.3	18.3	PM	174	154	2/2	2,876	2:13:01	8:47:19	8:47:19	PM	9.16	14
164	I-676 (Vine St Expr) EB Off-Ramp @ S 15th St	Central	Philadelphia	30.3	73.2	73.2	PM	99	89	2/2	2,778	5:56:32	17:48:12	17:48:12	PM	10.68	1
159	Kelly Dr @ Ben Franklin Pkwy	Central	Philadelphia	50.1	104.1	104.1	PM	50	48	2/2	1,929	15:09:22	29:44:10	29:44:10	PM	8.67	25
178	Kelly Dr @ Falls Bridge	Lower Northwest	Philadelphia	30.1	99.3	99.3	PM	56	24	4/4	5,232	10:53:18	42:40:06	42:40:06	PM	10.30	2
161	Kelly Dr @ Sedgely Dr	Central	Philadelphia	85.9	88.4	88.4	PM	76	41	4/4	3,007	24:45:29	32:48:02	32:48:02	PM	8.17	43
170	Limekiln Pk @ E Upsal St	Upper North	Philadelphia	14.9	57.2	57.2	PM	124	162	4/4	1,799	1:26:40	7:07:00	7:07:00	PM	4.17	150
162	Market St @ 2nd St	Central	Philadelphia	55.7	76.9	76.9	PM	89	102	2/2	1,063	8:31:33	15:14:06	15:14:06	PM	9.48	9
160	Market St @ 7th St	Central	Philadelphia	86.6	125.7	125.7	PM	28	53	3/3	1,113	15:38:23	28:10:09	28:10:09	PM	9.77	4
141	PA 232 (Oxford Ave) @ Pine Rd	Central Northeast	Philadelphia	20.9	48.4	48.4	PM	140	129	4/4	2,529	2:57:44	11:13:10	11:13:10	PM	8.35	36
169	PA 291 @ Penrose Ave	Lower South	Philadelphia	27.7	58.2	58.2	PM	121	31	4/4	7,027	14:53:07	36:38:38	36:38:38	PM	8.52	29
138	PA 532 (Bustleton Ave) @ Byberry Rd	Upper Far Northeast	Philadelphia	100.6	242.0	242.0	PM	4	5	4/4	4,657	20:56:17	77:45:59	77:45:59	PM	7.68	58
139	PA 532 (Welsh Rd) @ Bustleton Ave	Upper Far Northeast	Philadelphia	24.2	50.0	50.0	PM	138	155	4/4	3,033	3:38:38	8:36:42	8:36:42	PM	7.36	69
171	PA 611 (Broad St) @ 66th Ave	Upper North	Philadelphia	56.7	82.3	82.3	PM	82	44	4/4	3,474	17:01:35	31:05:37	31:05:37	PM	6.93	83
146	PA 611 (Broad St) @ Allegheny Ave	North	Philadelphia	68.4	155.5	155.5	PM	14	6	4/4	4,787	23:35:49	70:55:49	70:55:49	PM	9.00	18
135	PA 611 (Broad St) @ Diamond St	Lower North	Philadelphia	56.9	129.0	129.0	PM	25	8	4/4	3,055	21:57:27	66:15:25	66:15:25	PM	8.45	32

**Table 9  
Continued**

MAP ID	Intersection Name	Municipality*	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)								CMP Obj. Score	CMP Obj. Score Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	Intersection Legs Included in Delay	Peak Hour Volume	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay			
148	PA 611 (Broad St) @ Erie Ave	North	Philadelphia	71.9	120.8	120.8	PM	36	22	4/4	3,779	23:33:41	47:28:59	47:28:59	PM	9.76	5	
134	PA 611 (Broad St) @ Girard Ave	Lower North	Philadelphia	33.4	106.1	106.1	PM	45	25	4/4	3,962	8:59:48	40:55:26	40:55:26	PM	8.35	36	
174	PA 611 (Broad St) @ Old York Rd	Upper North	Philadelphia	75.2	72.3	75.2	AM	95	54	3/3	5,594	22:48:49	28:02:51	28:02:51	PM	8.82	23	
158	PA 611 (Broad St) @ S Juniper St/Penn Sq	Central	Philadelphia	68.4	71.7	71.7	PM	104	52	2/2	2,024	22:18:07	28:27:16	28:27:16	PM	9.42	12	
147	PA 611 (Broad St) @ US 13 (Hunting Park Ave)	North	Philadelphia	61.8	127.7	127.7	PM	26	15	4/4	6,257	22:31:19	53:09:18	53:09:18	PM	8.88	21	
175	PA 611 (Broad St) @ Windrim Ave	Upper North	Philadelphia	55.7	95.0	95.0	PM	62	26	4/4	3,278	18:44:28	39:47:03	39:47:03	PM	7.72	55	
140	PA 73 (Cottman Ave) @ PA 232 (Oxford Ave)	Central Northeast	Philadelphia	34.4	112.7	112.7	PM	41	59	4/4	2,837	6:32:43	27:18:46	27:18:46	PM	8.52	29	
132	PA 73 (Cottman Ave) @ US 1 (E Roosevelt Blvd)	North Delaware	Philadelphia	27.1	73.2	73.2	PM	100	70	3/3	4,192	6:52:59	23:54:38	23:54:38	PM	7.83	50	
167	Passyunk Ave @ Snyder Ave	South	Philadelphia	59.2	97.9	97.9	PM	59	96	3/3	1,220	7:40:24	16:26:01	16:26:01	PM	8.42	35	
163	Pine St @ S 5th St	Central	Philadelphia	32.6	96.2	96.2	PM	60	85	2/2	1,109	4:52:39	18:27:02	18:27:02	PM	6.90	86	
180	Ridge Ave @ Leverington Ave	Lower Northwest	Philadelphia	58.4	98.9	98.9	PM	57	97	4/4	1,231	7:43:10	16:24:37	16:24:37	PM	5.43	125	
136	Ridge Ave @ US 13 (33rd St)	Lower North	Philadelphia	38.4	75.2	75.2	PM	96	150	4/4	3,369	4:06:46	9:16:24	9:16:24	PM	6.67	93	
176	Roberts Ave @ Wayne Ave	Upper Northwest	Philadelphia	47.8	141.5	141.5	PM	20	63	4/4	2,399	7:01:20	25:45:19	25:45:19	PM	7.39	67	
142	Roosevelt Blvd Frontage N @ Adams Ave	Lower Northeast	Philadelphia	21.6	123.3	123.3	PM	33	7	3/3	3,844	7:35:52	67:48:11	67:48:11	PM	9.39	13	
149	Sedgley Ave @ Erie Ave	North	Philadelphia	24.9	67.8	67.8	PM	109	141	3/3	2,363	3:58:27	9:50:39	9:50:39	PM	7.33	70	
177	Stenton Ave @ Washington Ln	Upper Northwest	Philadelphia	63.0	124.3	124.3	PM	30	72	4/4	2,467	8:59:20	22:43:53	22:43:53	PM	7.72	55	
181	Torresdale Ave @ E Hunting Park Ave	River Wards	Philadelphia	60.8	139.9	139.9	PM	21	68	4/4	1,739	8:29:01	24:59:25	24:59:25	PM	6.64	94	
168	University Ave @ US 13 (Baltimore Ave)	University - Southwest	Philadelphia	92.6	59.4	92.6	AM	68	36	3/3	2,458	33:55:09	30:30:33	33:55:09	AM	9.97	3	
152	US 1 (City Ave) @ PA 23 (Conshohocken State Rd)	West Park	Philadelphia	85.6	169.1	169.1	PM	11	3	4/4	5,040	35:41:46	87:56:33	87:56:33	PM	8.49	31	
153	US 1 (City Ave) @ Presidential Blvd	West Park	Philadelphia	81.8	146.5	146.5	PM	16	4	4/4	7,216	39:54:05	86:52:35	86:52:35	PM	8.93	19	
133	US 1 (E Roosevelt Blvd) @ Harbison Ave	North Delaware	Philadelphia	19.4	47.7	47.7	PM	141	87	3/3	3,370	6:32:25	18:14:11	18:14:11	PM	7.44	65	
173	US 1 (E Roosevelt Blvd) @ Mascher St	Upper North	Philadelphia	24.8	98.2	98.2	PM	58	10	3/3	5,558	12:11:35	63:49:09	63:49:09	PM	9.10	15	
145	US 1 (E Roosevelt Blvd) @ Whitaker Ave	Lower Northeast	Philadelphia	8.1	77.9	77.9	PM	88	17	2/2	2,691	3:51:04	52:24:22	52:24:22	PM	9.59	7	
172	US 1 (W Roosevelt Blvd) @ 9th St	Upper North	Philadelphia	65.2	41.8	65.2	AM	112	46	4/4	4,211	30:12:58	23:30:07	30:12:58	AM	7.51	63	
155	Walnut St @ 52nd St	West	Philadelphia	17.5	93.1	93.1	PM	67	77	4/4	3,630	3:29:51	21:54:53	21:54:53	PM	7.80	51	

Most Delayed  
 Somewhat Delayed  
 Somewhat Not Delayed  
 Least Delayed

AM Delay  
 \* Municipality in Philadelphia County represents the Philadelphia City Planning Commission Planning District

Source: DVRPC analysis of 2021 INRIX data

**Table 10:  
Focus Intersection Bottlenecks in the New Jersey Portion of the DVRPC Region: Peak Travel Time Vehicle and Volume Delay (Sorted by County and Intersection Name)**

MAP ID	Intersection Name	Municipality	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)							CMP Obj. Score	CMP Obj. Score Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	Intersection Legs Included in Delay	Peak Hour Volume	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay		
382	CR 537 (Main St) @ Mt Laurel Rd	Moorestown Township	Burlington	49.8	59.3	59.3	PM	34	68	3/3	1,259	5:09:31	7:52:45	7:52:45	PM	3.69	96
385	CR 537 (Washington St) @ High St	Mount Holly Township	Burlington	5.4	11.6	11.6	PM	115	112	3/4	1,177	0:29:09	1:18:48	1:18:48	PM	5.08	66
380	CR 607 (Church St) @ CR 537 (Main St)	Moorestown Township	Burlington	47.8	58.0	58.0	PM	37	74	4/4	1,707	4:40:18	7:23:38	7:23:38	PM	4.93	71
391	CR 607 (Church St) @ Gaither Dr	Mount Laurel Township	Burlington	8.1	13.9	13.9	PM	112	106	3/3	1,519	0:52:11	2:16:15	2:16:15	PM	3.12	106
315	CR 607 (Maple Ave) @ Main St	Evesham Township	Burlington	7.4	28.1	28.1	PM	96	100	4/4	1,821	0:42:12	3:31:49	3:31:49	PM	4.11	84
417	CR 620 (Tuckerton Rd) @ CR 623 (Taunton Rd)	Medford Township	Burlington	31.6	56.2	56.2	PM	41	87	4/4	1,492	2:14:28	5:28:01	5:28:01	PM	2.22	115
415	CR 630 (Pointville Rd) @ CR 699 (Juliustown Rd)	Wrightstown Borough	Burlington	69.7	63.4	69.7	AM	27	105	4/4	628	2:09:40	2:23:02	2:23:02	PM	3.34	101
386	CR 636 (Creek Rd) @ Centerton Rd	Mount Laurel Township	Burlington	10.6	9.3	10.6	AM	116	115	4/4	1,083	0:48:23	0:57:33	0:57:33	PM	3.52	100
383	NJ 38 @ CR 607 (Church St)	Moorestown Township	Burlington	16.8	37.2	37.2	PM	73	60	4/4	3,807	3:20:43	9:27:29	9:27:29	PM	4.80	75
309	NJ 38 @ CR 608 (Lenola Rd)	Maple Shade Township	Burlington	3.1	22.6	22.6	PM	104	55	4/4	4,059	1:03:59	10:13:37	10:13:37	PM	4.19	81
387	NJ 38 @ CR 615 (Marter Ave)	Mount Laurel Township	Burlington	4.9	13.4	13.4	PM	113	92	4/4	3,564	1:23:22	4:56:16	4:56:16	PM	4.86	74
381	NJ 38 @ Fellowship Rd	Moorestown Township	Burlington	4.3	15.4	15.4	PM	111	88	2/3	3,099	0:57:34	5:25:09	5:25:09	PM	5.36	58
384	NJ 38 @ Pleasant Valley Ave	Moorestown Township	Burlington	9.9	28.3	28.3	PM	95	43	4/4	3,372	3:06:15	11:39:40	11:39:40	PM	5.33	59
313	NJ 70 @ CR 607 (Maple Ave)	Evesham Township	Burlington	10.0	27.8	27.8	PM	97	75	4/4	3,476	2:17:46	7:14:47	7:14:47	PM	3.27	103
310	NJ 70 @ Elmwood Rd	Evesham Township	Burlington	44.6	109.1	109.1	PM	9	10	4/4	2,544	9:22:34	31:00:17	31:00:17	PM	3.24	104
416	NJ 70 @ Hartford Rd	Medford Township	Burlington	32.9	55.1	55.1	PM	43	39	4/4	2,228	5:44:41	11:58:16	11:58:16	PM	3.82	91
311	NJ 73 @ Brick Rd	Evesham Township	Burlington	19.0	59.9	59.9	PM	33	12	4/4	4,536	6:33:28	28:57:32	28:57:32	PM	5.91	45
312	NJ 73 @ Centre Blvd/Marlton Center Blvd	Evesham Township	Burlington	5.2	31.2	31.2	PM	87	35	4/4	3,586	1:54:28	13:24:06	13:24:06	PM	6.55	27
389	NJ 73 @ Church Rd	Mount Laurel Township	Burlington	9.7	37.0	37.0	PM	74	34	3/3	3,536	2:05:36	13:33:13	13:33:13	PM	5.48	54
314	NJ 73 @ CR 544 (Evesham Rd)	Evesham Township	Burlington	19.7	56.3	56.3	PM	39	14	4/4	4,749	7:00:14	27:17:14	27:17:14	PM	6.24	36
388	NJ 73 @ CR 616 (Church Rd)/Ramblewood Pkwy	Mount Laurel Township	Burlington	21.7	80.5	80.5	PM	17	2	4/4	4,809	10:52:38	54:47:50	54:47:50	PM	6.57	26
390	NJ 73 @ Fellowship Rd	Mount Laurel Township	Burlington	9.3	43.4	43.4	PM	59	11	4/4	6,625	5:28:59	30:53:37	30:53:37	PM	6.02	43
308	NJ 73 @ Waverly Ave/Willow Rd	Maple Shade Township	Burlington	3.0	53.9	53.9	PM	46	6	4/4	5,479	1:43:07	40:26:09	40:26:09	PM	6.63	23
379	US 130 @ CR 603 (Riverton Rd)	Cinnaminson Township	Burlington	23.2	45.9	45.9	PM	54	23	3/3	3,885	5:25:02	19:55:40	19:55:40	PM	5.32	61
376	US 206 @ NJ 38	Southampton Township	Burlington	13.6	41.6	41.6	PM	66	73	4/4	2,867	1:49:27	7:25:11	7:25:11	PM	3.30	102
375	US 206 @ NJ 70	Southampton Township	Burlington	34.7	114.2	114.2	PM	6	21	4/4	2,573	4:43:32	21:28:19	21:28:19	PM	3.21	105
399	AC Expressway @ CR 705 (Sicklerville Rd)	Gloucester Township	Camden	7.0	25.6	25.6	PM	99	109	3/3	1,409	0:39:27	1:59:19	1:59:19	PM	6.39	28
342	CR 544 (Evesham Rd) @ CR 670 (Burnt Mill Rd)	Cherry Hill Township	Camden	25.4	75.9	75.9	PM	21	36	4/4	2,143	3:13:22	13:15:33	13:15:33	PM	5.51	52
377	CR 561 (Haddon Ave) @ CR 636 (Cuthbert Blvd)	Collingswood Borough	Camden	34.6	118.7	118.7	PM	4	17	4/4	2,297	5:54:25	24:39:12	24:39:12	PM	6.24	36
378	CR 561 (Haddon Ave) @ Kings Hwy	Haddonfield Borough	Camden	38.3	84.1	84.1	PM	15	48	4/4	1,881	3:51:30	10:55:55	10:55:55	PM	6.33	31
367	CR 639 (Warwick Rd) @ CR 667 (Oak Ave)	Lawnside Borough	Camden	12.9	79.9	79.9	PM	18	50	3/3	1,495	1:38:56	10:50:01	10:50:01	PM	6.64	21
345	CR 671 (Kresson Rd) @ CR 675 (Cropwell Rd)	Cherry Hill Township	Camden	23.4	65.9	65.9	PM	30	61	4/4	1,553	1:57:13	9:09:24	9:09:24	PM	2.86	110
351	I-295 EB @ CR 561 (Haddonfield-Berlin Rd)	Cherry Hill Township	Camden	21.5	33.9	33.9	PM	84	37	3/3	3,793	6:05:44	13:08:23	13:08:23	PM	7.78	6
330	I-295 WB On-/Off-Ramp @ NJ 168 (Black Horse Pk)	Haddon Heights Borough	Camden	45.1	73.8	73.8	PM	22	32	3/3	2,191	7:15:10	14:41:48	14:41:48	PM	7.04	13
348	NJ 154 (Brace Rd) @ CR 561 (Haddonfield-Berlin Rd)	Cherry Hill Township	Camden	14.7	67.5	67.5	PM	29	49	3/3	2,385	1:59:55	10:52:57	10:52:57	PM	5.33	59
401	NJ 168 (Black Horse Pk) @ CR 544 (Evesham Rd)	Runnemede Borough	Camden	34.5	78.4	78.4	PM	20	42	4/4	2,107	4:01:36	11:40:46	11:40:46	PM	5.81	48
331	NJ 168 (Black Horse Pk) @ CR 551 (W Kings Hwy)	Mount Ephraim Borough	Camden	28.9	96.5	96.5	PM	10	24	4/4	2,331	4:04:27	19:20:24	19:20:24	PM	6.59	25
368	NJ 168 (Black Horse Pk) @ CR 659 (Browning Rd)	Bellmawr Borough	Camden	34.3	86.0	86.0	PM	14	26	4/4	2,372	5:35:40	18:55:22	18:55:22	PM	5.43	57
402	NJ 168 (Black Horse Pk) @ NJ 41 (Clements Bridge Rd)	Runnemede Borough	Camden	56.2	223.6	223.6	PM	1	4	4/4	2,612	8:28:26	44:34:58	44:34:58	PM	7.03	15
349	NJ 38 (Kaighns Ave) @ Longwood Ave	Cherry Hill Township	Camden	8.9	48.5	48.5	PM	49	15	4/4	4,042	1:50:40	26:20:08	26:20:08	PM	6.71	20
346	NJ 38 @ CR 616 (Church Rd)	Cherry Hill Township	Camden	27.4	73.1	73.1	PM	24	25	5/5	4,645	4:12:39	19:15:42	19:15:42	PM	3.84	90
343	NJ 38 @ CR 626 (Chapel Ave)	Cherry Hill Township	Camden	4.1	26.8	26.8	PM	98	40	4/4	4,394	1:46:08	11:50:23	11:50:23	PM	6.20	38
398	NJ 41 (Clements Bridge Rd) @ CR 544 (Evesham Rd)	Gloucester Township	Camden	12.4	71.2	71.2	PM	26	28	4/4	2,676	2:39:54	16:53:59	16:53:59	PM	6.32	32
340	NJ 70 @ Chelton Pkwy/West Gate Dr	Cherry Hill Township	Camden	45.0	118.6	118.6	PM	5	1	4/4	4,775	23:35:41	78:10:15	78:10:15	PM	8.42	4
347	NJ 70 @ CR 627 (Cooper Landing Rd)	Cherry Hill Township	Camden	5.3	23.6	23.6	PM	102	46	3/3	4,704	1:33:19	11:17:40	11:17:40	PM	3.65	97
350	NJ 70 @ CR 644 (Haddonfield Rd)	Cherry Hill Township	Camden	13.3	43.0	43.0	PM	63	22	4/4	6,935	5:18:05	20:55:57	20:55:57	PM	6.20	38
341	NJ 70 @ CR 673 (Springdale Rd)	Cherry Hill Township	Camden	13.5	23.3	23.3	PM	103	45	4/4	6,305	5:34:22	11:32:37	11:32:37	PM	5.48	54
344	NJ 70 @ NJ 41 (Kings Hwy)	Cherry Hill Township	Camden	22.4	54.3	54.3	PM	45	16	4/4	6,348	8:36:57	26:06:43	26:06:43	PM	6.64	21
369	NJ 73 @ CR 675 (Cooper Rd)	Voorhees Township	Camden	26.8	119.1	119.1	PM	3	8	4/4	3,278	6:36:34	37:04:56	37:04:56	PM	3.89	88
405	NJ 73 @ Franklin Ave	Berlin Township	Camden	4.3	43.4	43.4	PM	60	29	3/3	2,672	1:12:14	15:29:16	15:29:16	PM	4.91	72
393	NJ 73 @ Hylton Rd	Pennsauken Township	Camden	7.2	18.5	18.5	PM	109	72	4/4	4,080	0:47:39	7:32:13	7:32:13	PM	5.06	67
394	US 130 (Crescent Blvd) @ NJ 38 (Kaighns Ave)	Pennsauken Township	Camden	6.1	34.3	34.3	PM	83	20	3/3	5,389	2:41:04	22:06:00	22:06:00	PM	8.57	3

**Table 10  
Continued**

MAP ID	Intersection Name	Municipality	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)								CMP Obj. Score	CMP Obj. Score Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	Intersection Legs Included in Delay	Peak Hour Volume	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay			
307	US 130 (Crescent Blvd) @ NJ 47 (Broadway)	Brooklawn Borough	Camden	16.3	55.7	55.7	PM	42	38	4/4	2,555	2:23:51	12:46:18	12:46:18	PM	6.01	44	
392	US 130 @ CR 628 (Park Dr)	Pennsauken Township	Camden	17.8	73.5	73.5	PM	23	9	4/4	5,749	9:45:50	36:51:54	36:51:54	PM	6.89	18	
329	US 30 (White Horse Pk) @ CR 656 (Station Ave)	Haddon Heights Borough	Camden	40.3	57.1	57.1	PM	38	41	4/4	1,977	6:10:53	11:42:22	11:42:22	PM	5.87	46	
403	US 30 (White Horse Pk) @ Carlton Ave	Somerdale Borough	Camden	16.3	58.9	58.9	PM	35	52	4/4	3,308	2:17:50	10:48:25	10:48:25	PM	6.29	33	
406	US 30 (White Horse Pk) @ CR 534 (Jackson Rd)	Berlin Borough	Camden	16.3	37.3	37.3	PM	72	67	3/3	1,613	2:30:16	7:54:28	7:54:28	PM	6.39	28	
328	US 30 (White Horse Pk) @ CR 653 (Kings Hwy)	Audubon Borough	Camden	34.3	56.3	56.3	PM	40	58	4/4	2,294	4:41:44	9:57:45	9:57:45	PM	5.67	51	
400	US 30 (White Horse Pk) @ CR 669 (Warwick Rd)	Magnolia Borough	Camden	42.0	94.2	94.2	PM	11	7	4/4	4,108	12:25:21	38:10:04	38:10:04	PM	7.59	8	
404	US 30 (White Horse Pk) @ CR 673 (Laurel Rd)	Stratford Borough	Camden	55.6	58.9	58.9	PM	36	33	4/4	4,118	9:09:05	14:24:19	14:24:19	PM	6.27	34	
407	US 30 (White Horse Pk) @ CR 689 (Cross Keys Rd)	Berlin Borough	Camden	18.0	35.5	35.5	PM	77	66	4/4	3,327	3:10:04	7:56:05	7:56:05	PM	5.44	56	
372	CR 544 (Clements Bridge Rd) @ CR 621 (Almonesson Rd)	Deptford Township	Gloucester	0.0	34.8	34.8	PM	79	84	4/4	1,828	0:00:00	5:34:58	5:34:58	PM	4.31	80	
303	CR 551 (Kings Hwy) @ CR 666 (Franklin St)	Swedesboro Borough	Gloucester	25.8	43.1	43.1	PM	62	95	4/4	1,157	1:50:12	4:29:40	4:29:40	PM	3.71	94	
410	CR 630 (Egg Harbor Rd) @ CR 654 (Hurffville-Crosskeys Rd)	Washington Township	Gloucester	26.1	47.2	47.2	PM	50	89	3/3	1,810	2:03:45	5:09:00	5:09:00	PM	4.64	76	
409	NJ 168 (Black Horse Pk) @ CR 705 (Sicklerville Rd)	Washington Township	Gloucester	14.1	44.6	44.6	PM	58	101	4/4	1,127	0:50:48	3:11:16	3:11:16	PM	5.74	50	
373	NJ 27 (Delsea Dr) @ CR 534 (Cooper St)	Deptford Township	Gloucester	13.9	44.7	44.7	PM	56	56	4/4	3,437	2:18:23	10:13:01	10:13:01	PM	4.34	79	
374	NJ 27 (Delsea Dr) @ CR 603 (Blackwood Barnsboro Rd)	Deptford Township	Gloucester	13.6	46.3	46.3	PM	52	69	4/4	2,321	1:39:15	7:50:20	7:50:20	PM	3.65	97	
370	NJ 41 (Hurffville Rd) @ Cooper St	Deptford Township	Gloucester	13.4	30.0	30.0	PM	92	94	4/4	1,887	1:29:56	4:30:24	4:30:24	PM	1.78	117	
371	NJ 41 (Hurffville Rd) @ CR 544 (Clements Bridge Rd)	Deptford Township	Gloucester	3.0	29.7	29.7	PM	93	62	3/3	3,260	0:44:49	9:02:06	9:02:06	PM	5.76	49	
408	NJ 42 (Black Horse Pk) @ CR 639 (Ganttown Rd)	Washington Township	Gloucester	18.4	87.5	87.5	PM	13	5	3/4	4,443	7:23:19	41:23:46	41:23:46	PM	5.21	62	
411	NJ 42 (Black Horse Pk) @ CR 651 (Greentree Rd)	Washington Township	Gloucester	35.2	112.8	112.8	PM	8	3	4/4	4,776	11:21:10	50:51:26	50:51:26	PM	6.26	35	
412	NJ 42 (Black Horse Pk) @ CR 655 (Fries Mill Rd)	Washington Township	Gloucester	6.6	44.7	44.7	PM	57	18	3/3	4,242	2:48:39	23:37:22	23:37:22	PM	4.07	85	
301	NJ 45 (Bridgeton Pk) @ CR 322 (Mullica Rd)	Harrison Township	Gloucester	17.3	34.6	34.6	PM	82	77	3/3	2,137	2:35:21	6:45:45	6:45:45	PM	3.10	107	
396	NJ 45 (Broad St) @ CR 534 (Cooper St)	Woodbury City	Gloucester	48.0	112.8	112.8	PM	7	19	4/4	2,923	7:32:33	22:51:24	22:51:24	PM	8.62	2	
395	NJ 45 (Broad St) @ CR 551 (Edith Ave)	Woodbury City	Gloucester	18.5	28.6	28.6	PM	94	98	3/3	1,532	2:02:55	4:03:52	4:03:52	PM	5.09	65	
397	NJ 45 (Broad St) @ CR 644 (Red Bank Ave)	Woodbury City	Gloucester	30.3	47.0	47.0	PM	51	64	4/4	2,110	4:12:30	8:20:42	8:20:42	PM	6.61	24	
302	NJ 45 (Main St) @ CR 603 (Breakneck Rd)	Harrison Township	Gloucester	19.5	30.5	30.5	PM	91	99	3/4	1,491	1:59:10	3:56:25	3:56:25	PM	4.14	82	
300	NJ 45 (Woodstown Rd) @ NJ 27 (Bridgeton Pk)	Harrison Township	Gloucester	19.6	40.1	40.1	PM	68	82	3/3	1,251	2:11:46	5:58:39	5:58:39	PM	2.56	112	
306	US 322 (Sicklerville Rd) @ NJ 42 (Black Horse Pk)	Monroe Township	Gloucester	18.6	49.5	49.5	PM	48	54	4/4	3,099	3:12:44	10:34:34	10:34:34	PM	4.96	69	
304	US 322 @ CR 536 (New Brooklyn Rd)	Monroe Township	Gloucester	3.7	8.8	8.8	PM	118	108	4/4	2,478	0:35:28	2:02:58	2:02:58	PM	4.02	86	
413	US 322 @ CR 653 (Paulsboro Rd)	Woolwich Township	Gloucester	22.6	45.6	45.6	PM	55	59	4/4	1,577	3:03:34	9:36:57	9:36:57	PM	3.98	87	
305	US 322 @ CR 655 (Fries Mill Rd)	Monroe Township	Gloucester	12.8	38.7	38.7	PM	69	111	4/4	829	0:36:55	1:53:00	1:53:00	PM	2.19	116	
332	US 322 @ NJ 47 (Delsea Dr)	Glassboro Borough	Gloucester	31.0	79.7	79.7	PM	19	31	3/3	1,645	3:42:26	14:43:54	14:43:54	PM	8.13	5	
326	Bank St @ N Warren St	Trenton City	Mercer	6.0	17.8	17.8	PM	110	116	3/4	1,114	0:13:12	0:28:57	0:28:57	PM	7.04	13	
324	Bridge St @ N Warren St	Trenton City	Mercer	5.8	31.3	31.3	PM	86	104	3/3	955	0:24:26	2:23:02	2:23:02	PM	6.34	30	
359	Brunswick Circle @ Strawberry St	Lawrence Township	Mercer	25.0	43.4	43.4	PM	61	76	5/5	2,571	2:59:22	6:52:25	6:52:25	PM	5.50	53	
323	Calhoun St @ Calhoun St Bridge	Trenton City	Mercer	18.5	82.4	82.4	PM	16	51	3/3	1,557	3:17:37	10:48:48	10:48:48	PM	7.06	12	
352	CR 518 (Broad St) @ Princeton Ave	Hopewell Borough	Mercer	19.1	17.8	19.1	AM	108	110	3/3	1,110	1:36:32	1:58:27	1:58:27	PM	2.26	114	
363	CR 535 (Old Trenton Rd) @ CR 641 (Windsor Rd)	West Windsor Township	Mercer	16.3	38.7	38.7	PM	70	93	4/4	1,341	1:41:44	4:53:37	4:53:37	PM	1.34	118	
337	CR 535 (State St Ext) @ CR 652 (Nottingham Way)	Hamilton Township	Mercer	14.3	23.7	23.7	PM	101	102	3/3	1,367	1:26:17	3:02:29	3:02:29	PM	5.02	68	
365	CR 615 (Cranbury Rd) @ CR 638 (Clarksville Rd)	West Windsor Township	Mercer	22.3	12.0	22.3	AM	105	107	3/3	1,096	2:06:52	1:17:22	2:06:52	AM	5.13	63	
320	CR 622 (Olden Ave) @ Brunswick Ave	Trenton City	Mercer	14.5	36.5	36.5	PM	75	80	4/4	1,825	1:54:42	6:22:32	6:22:32	PM	7.60	7	
322	CR 622 (Olden Ave) @ New York Ave	Trenton City	Mercer	27.3	46.0	46.0	PM	53	65	4/4	2,221	3:34:15	8:05:05	8:05:05	PM	6.91	17	
338	Edgebrook Rd @ Uncle Petes Rd	Hamilton Township	Mercer	128.1	3.9	128.1	AM	2	114	3/3	148	0:58:03	0:03:04	0:58:03	AM	2.86	110	
319	NJ 129 @ CR 650 (Lalor St)	Trenton City	Mercer	10.5	34.7	34.7	PM	81	63	4/4	3,399	2:24:06	8:51:13	8:51:13	PM	6.81	19	
334	NJ 156 @ CR 524 (Yardville Allentown Rd)	Hamilton Township	Mercer	10.4	6.4	10.4	AM	117	117	4/4	917	0:25:58	0:28:32	0:28:32	PM	4.51	77	
339	NJ 156 @ CR 672 (S Broad St)	Hamilton Township	Mercer	13.1	4.3	13.1	AM	114	118	4/4	800	0:24:36	0:16:33	0:24:36	AM	4.88	73	
354	NJ 27 (Nassau St) @ CR 526 (Washington Rd)	Princeton	Mercer	37.5	61.3	61.3	PM	32	70	4/4	1,671	3:46:26	7:38:10	7:38:10	PM	7.23	10	
356	NJ 27 (Nassau St) @ Witherspoon St	Princeton	Mercer	21.5	34.7	34.7	PM	80	78	2/3	1,399	3:14:52	6:44:12	6:44:12	PM	10.18	1	
327	NJ 29 @ Cass St	Trenton City	Mercer	11.2	20.6	20.6	PM	107	96	4/4	2,614	2:13:17	4:19:56	4:19:56	PM	7.13	11	
325	NJ 29 @ CR 579 (Sullivan Way)	Trenton City	Mercer	30.8	22.2	30.8	AM	89	103	3/3	1,233	2:17:22	2:43:10	2:43:10	PM	3.77	92	
321	NJ 29 @ S Warren St	Trenton City	Mercer	31.3	42.4	42.4	PM	64	30	3/4	4,353	7:10:14	15:05:00	15:05:00	PM	7.54	9	
318	NJ 33 @ CR 526 (Robbinsville Edinburg Rd)	Robbinsville Township	Mercer	21.9	71.8	71.8	PM	25	53	3/3	1,714	3:01:34	10:38:52	10:38:52	PM	4.95	70	
316	NJ 33 @ CR 539 (Main St)	Hightstown Borough	Mercer	15.4	35.7	35.7	PM	76	79	3/3	2,020	2:13:59	6:41:04	6:41:04	PM	4.13	83	

**Table 10  
Continued**

MAP ID	Intersection Name	Municipality	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)							CMP Obj. Score	CMP Obj. Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	Intersection Legs Included in Delay	Peak Hour Volume	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay		
317	NJ 33 @ CR 539 (Main St)	Hightstown Borough	Mercer	16.8	41.4	41.4	PM	67	83	3/3	1,593	1:58:28	5:58:16	5:58:16	PM	3.75	93
336	NJ 33 @ Whitehorse Hamilton Square Rd	Hamilton Township	Mercer	13.2	30.9	30.9	PM	88	97	4/4	1,851	1:23:52	4:04:14	4:04:14	PM	3.70	95
333	NJ 33 @ Yardville Hamilton Square Rd	Hamilton Township	Mercer	16.2	32.6	32.6	PM	85	81	4/4	2,404	1:59:34	6:07:39	6:07:39	PM	2.96	108
357	Princeton Pk @ Province Line Rd	Lawrence Township	Mercer	22.5	30.6	30.6	PM	90	91	4/4	2,225	3:07:15	4:58:09	4:58:09	PM	2.33	113
360	US 1 (Brunswick Pk) @ CR 546 (Franklins Corner Rd)	Lawrence Township	Mercer	18.5	55.0	55.0	PM	44	13	4/4	5,208	4:29:24	27:22:05	27:22:05	PM	6.18	40
364	US 1 (Brunswick Pk) @ CR 571 (Washington Rd)	West Windsor Township	Mercer	37.7	42.3	42.3	PM	65	27	4/4	5,882	14:26:09	18:43:41	18:43:41	PM	6.14	41
362	US 1 (Brunswick Pk) @ Lower Harrison St	West Windsor Township	Mercer	20.9	17.3	20.9	AM	106	71	3/4	2,756	7:26:51	7:34:09	7:34:09	PM	5.13	63
366	US 1 (Princeton Ave) @ CR 622 (Olden Ave)	Ewing Township	Mercer	19.8	50.5	50.5	PM	47	57	4/4	2,649	2:21:31	10:06:48	10:06:48	PM	5.82	47
361	US 1 Bus (Brunswick Pk) @ Allen Ln	Lawrence Township	Mercer	93.8	11.4	93.8	AM	12	113	2/2	835	0:59:17	0:27:34	0:59:17	AM	3.56	99
414	US 130 @ CR 571 (Princeton Hightstown Rd)	East Windsor Township	Mercer	7.1	37.5	37.5	PM	71	47	4/4	3,255	1:14:03	11:10:13	11:10:13	PM	2.95	109
335	US 206 (Broad St) @ CR 533 (White Horse Ave)	Hamilton Township	Mercer	11.0	24.4	24.4	PM	100	90	4/4	3,295	1:50:50	5:01:46	5:01:46	PM	4.48	78
353	US 206 (Stockton St) @ Bayard Ln	Princeton	Mercer	61.3	64.7	64.7	PM	31	44	3/3	1,917	8:33:48	11:37:47	11:37:47	PM	6.97	16
355	US 206 (Stockton St) @ CR 604 (Elm Rd)	Princeton	Mercer	68.1	54.1	68.1	AM	28	85	2/3	1,023	4:55:14	5:34:44	5:34:44	PM	6.09	42
358	US 206 @ CR 546 (Franklin Corner Rd)	Lawrence Township	Mercer	29.4	34.9	34.9	PM	78	86	4/4	2,012	3:33:40	5:31:23	5:31:23	PM	3.88	89

Most Delayed  
 Somewhat Delayed  
 Somewhat Not Delayed  
 Least Delayed  
 AM Delay

Source: DVRPC analysis of 2021 INRIX data

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## 4.4 Most Congested Focus Intersection Bottlenecks

The top two focus intersection bottlenecks with the highest peak hour vehicle and volume delays were identified separately for each county in the DVRPC region. Some bottlenecks were in the top two for both delay measures, which reduced the total number of most congested bottlenecks for a county. The final analysis identified 33 most congested intersection bottlenecks in the region, with 19 in the Pennsylvania subregion and 14 in the New Jersey subregion, respectively (see Table 11). These bottlenecks are listed in ascending order by county and intersection name with the associated map identifier, and the municipality and county in which they are located. Similar to the most congested focus roadway corridor facilities, the most congested bottlenecks are limited due to the importance of targeting locations with the most traffic congestion and due to funding availability. Some of these locations are programmed on the Pennsylvania TIP (FY 2023–2026) and New Jersey TIP (FY 2024–2027), and others are on the DVRPC’s *Connection 2050* Long-Range Plan programming list. Bottlenecks not identified as the most congested should still be considered for improvements, but weighed against other regional priorities and the region’s extreme funding constraint.

### Focus Intersection Bottleneck Summaries

The following pages include a map profile summary of each of the most congested bottlenecks in the order listed in Table 11, along with a map title indicating the bottleneck map identifier and name. Each map profile summary page provides the following information:

#### **Main Map**

Shows the location of the most congested focus intersection bottleneck, nearby bottlenecks and focus roadway corridor facilities, traffic volumes approaching the bottleneck (labeled in black), nearby traffic signals, nearby bus and passenger rail routes, and road segments that show high congestion indicated by the TTI measure (labeled in red).

#### **Summary of Conditions**

Provides information on delay measure rankings within each state with rankings for the most congested focus intersection bottlenecks out of the 181 bottlenecks (see section 4.3) in Pennsylvania and 118 in New Jersey. This section also identifies intersection characteristics such as FHWA functional classification and which approach experiences the most congestion.

#### **Congestion Measures**

Lists the congestion performance measures that exist for each congested focus intersection bottleneck. The average travel time (TT) vehicle delay is measured in seconds during the AM and PM peak periods using INRIX travel time data, with higher values indicating more vehicle delay. The peak hour volume delay measure is derived from the travel time delay and PennDOT, NJDOT, and DVRPC collected traffic volume counts, with higher values indicating more volume delay. LOTTR and PHED are PM3 measures that are only available on NHS roadways and represent the length of roadway miles that exists along the facility. The PHED measure only includes roadways within the Philadelphia, PA-NJ-DE-MD or Trenton, NJ UZAs. The TDM Forecasted Congestion measure represents the length of roadway miles the regional travel demand model forecasts V/C greater than or equal to 0.85 in 2050.

#### **Planned Improvements on the Long-Range Plan and TIP**

Indicates existing projects at the bottleneck that are programmed on the Pennsylvania TIP (FY 2023–2026), New Jersey TIP (FY 2024–2027), and the DVRPC Long-Range Plan (*Connections 2050*). Long-Range Plan projects indicated with a letter designate transit projects, and ones with a number road

projects. Ones italicized indicate unfunded aspirational projects, and others are in the fiscally constrained funded plan.

### **Very Appropriate Strategies**

Indicates the most appropriate strategies to mitigate congestion for the intersection bottleneck, which might be different than the strategies for the subcorridor area the intersection bottleneck is within. Recently implemented or partially implemented strategies are listed first and italicized.

### **Additional Factors**

Provides additional information at the bottleneck location that may affect mitigation strategies, and investment decisions. This includes AADT approach volumes to the intersection, number of intersection legs included in delay calculations, whether the bottleneck is on the NHS, along a bus or passenger rail route, part of a CMP congested corridor and subcorridor area, part of a focus roadway corridor facility, and the number of miles of CMP high crash frequency and severity. It also indicates the traffic signal type (coordinated, adaptive, isolated, or pre-timed). Coordinated involves a system of multiple traffic signals along a corridor or within a network that are synchronized with each other. Adaptive involves a special type of coordinated system, which continuously monitors traffic conditions using sensors and cameras and automatically adjusts signal timing in real-time to optimize traffic flow. An isolated traffic signal operates independently of other signals, responding to the traffic conditions at its specific intersection, and pre-timed signals follow a predetermined fix timing plan that is set in advance and does not change dynamically. Finally, the additional factors indicate the CMP objective measures score, which is the same value listed in Tables 9 and 10. The CMP score is the average score of all roadway segments that make up the delay calculation for the intersection bottleneck, and higher scores mean more CMP objectives are met.



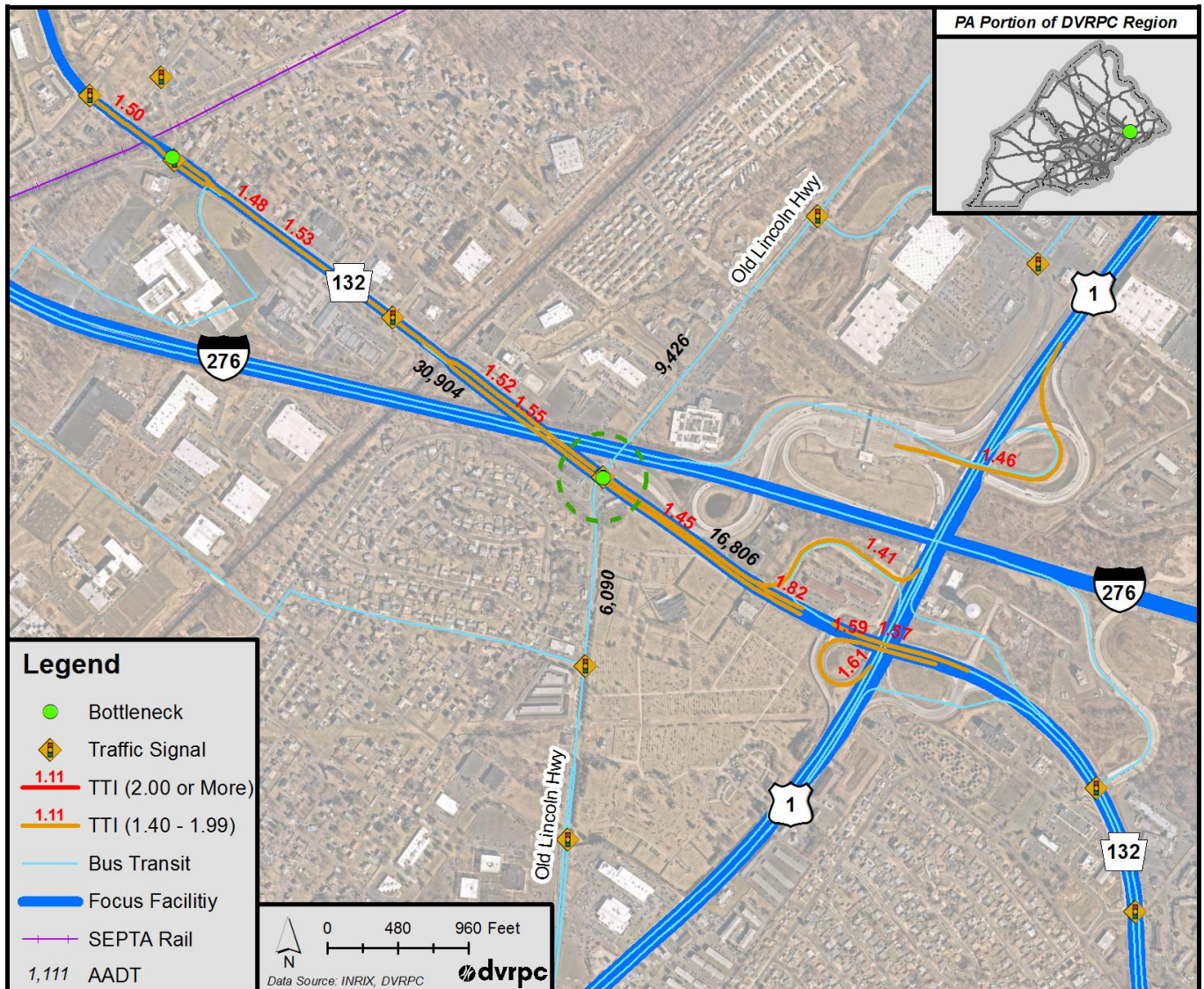
**Table 11: Most Congested Focus Intersection Bottlenecks**

Map ID	Intersection Name	Municipality	County
<b>Pennsylvania</b>			
20	PA 132 (Street Rd) @ Old Lincoln Hwy	Bensalem Township	Bucks
8	PA 132 (Street Rd) @ PA 532 (Bustleton Pk)	Lower Southampton Township	Bucks
10	PA 232 (Huntingdon Pk) @ County Line Rd	Upper Southampton Township	Bucks
15	PA 413 (Pine St) @ PA 213 (Maple Ave)	Langhorne Borough	Bucks
39	PA 100 @ Howard Rd	West Whiteland Township	Chester
37	PA 100 @ US 30 Bypass WB Off Ramp	West Whiteland Township	Chester
59	PA 41 @ Baltimore Pk	Avondale Borough	Chester
36	US 30 Bus (Lincoln Hwy) @ PA 82 (1st Ave)	Coatesville City	Chester
77	Springfield Rd @ Bishop Ave	Springfield Township	Delaware
80	US 1 (State Rd) @ Springfield Rd	Springfield Township	Delaware
89	US 322 (Conchester Hwy) @ Bethel Ave/Cherry Tree Rd	Upper Chichester Township	Delaware
127	PA 23 (Front St) @ Matsonford Rd/Fayette St	West Conshohocken Borough	Montgomery
130	PA 363 (Trooper Rd) @ Ridge Pk	Lower Providence Township	Montgomery
102	PA 611 (Old York Rd) @ Washington Ln	Abington Township	Montgomery
123	Philmont Ave @ Pine Rd	Lower Moreland Township	Montgomery
152	US 1 (City Ave) @ PA 23 (Conshohocken State Rd)	Lower Merion Township, West Park	Montgomery, Philadelphia
153	US 1 (City Ave) @ Presidential Blvd	Lower Merion Township, West Park	Montgomery, Philadelphia
151	Allegheny Ave @ Kensington Ave	North	Philadelphia
138	PA 532 (Bustleton Ave) @ Byberry Rd	Upper Far Northeast	Philadelphia
<b>New Jersey</b>			
375	US 206 @ NJ 70	Southampton Township	Burlington
310	NJ 70 @ Elmwood Rd	Evesham Township	Burlington
388	NJ 73 @ Church Rd/Ramblewood Pkwy	Mount Laurel Township	Burlington
308	NJ 73 @ Waverly Ave/Willow Rd	Maple Shade Township	Burlington
402	NJ 168 (Black Horse Pk) @ NJ 41 (Clements Bridge Rd)	Runnemede Borough	Camden
369	NJ 73 @ CR 675 (Cooper Rd)	Voorhees Township	Camden
340	NJ 70 @ Chelton Pkwy/West Gate Dr	Cherry Hill Township	Camden
396	NJ 45 (Broad St) @ CR 534 (Cooper St)	Woodbury City	Gloucester
411	NJ 42 (Black Horse Pk) @ CR 651 (Greentree Rd)	Washington Township	Gloucester
408	NJ 42 (Black Horse Pk) @ CR 639 (Ganttown Rd)	Washington Township	Gloucester
361	US 1 Bus (Brunswick Pk) @ Allen Ln	Lawrence Township	Mercer
318	NJ 33 @ CR 526 (Robbinsville Edinburg Rd)	Robbinsville Township	Mercer
360	US 1 (Brunswick Pk) @ CR 546 (Franklins Corner Rd)	Lawrence Township	Mercer
364	US 1 (Brunswick Pk) @ CR 571 (Washington Rd)	West Windsor Township	Mercer

Source: DVRPC, 2023

**Figure 65: Bottleneck 20**

PA 132 (Street Rd) @ Old Lincoln Hwy, Bensalem Twp, Bucks County, PA

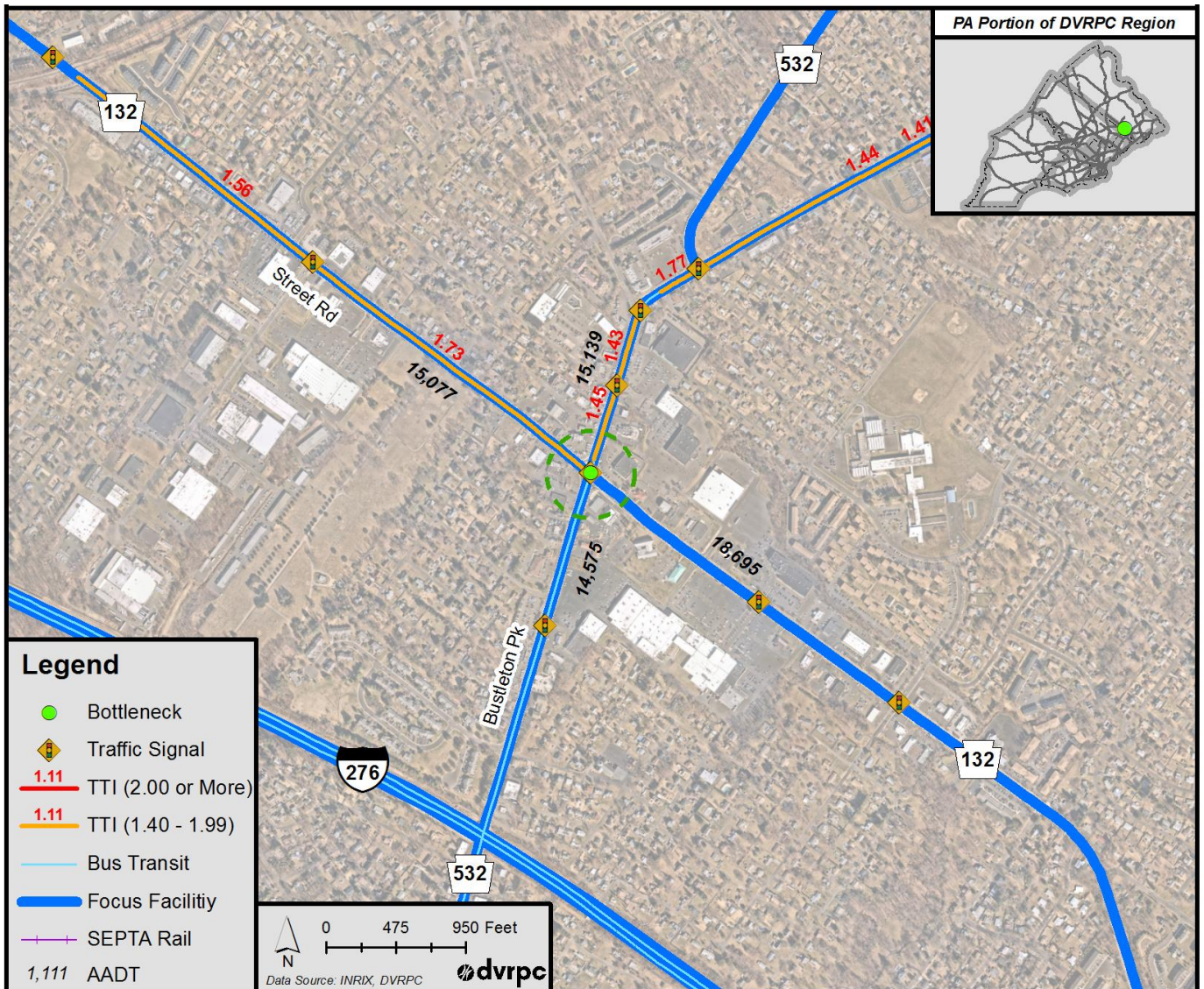


<p><b>Summary of Conditions</b></p> <p>The signalized intersection at PA 132 (Street Rd) and Old Lincoln Hwy in Bensalem Township, Bucks County includes four roadway approaches and is ranked #55 and #16 in peak travel time vehicle and volume delay, respectively. PA 132 is classified as a principal arterial roadway and Old Lincoln Highway as collector and the traffic signal is part of an adaptive system that runs along both PA 132 and Old Lincoln Hwy. The majority of the traffic congestion is on PA 132 in both the eastbound and westbound approaches to the intersection.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT AM Peak Vehicle Delay (sec):</td><td>42.4</td></tr> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>99.9</td></tr> <tr><td>TT AM Peak Volume Delay (hr):</td><td>17:34:06</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>52:28:24</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.00</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>91,838</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.69</td></tr> </table>	TT AM Peak Vehicle Delay (sec):	42.4	TT PM Peak Vehicle Delay (sec):	99.9	TT AM Peak Volume Delay (hr):	17:34:06	TT PM Peak Volume Delay (hr):	52:28:24	Level of Travel Time Reliability (mi):	0.00	Peak Hour Excessive Delay (per mi):	91,838	TDM Forecasted Congestion (mi):	0.69						
TT AM Peak Vehicle Delay (sec):	42.4																				
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TT AM Peak Volume Delay (hr):	17:34:06																				
TT PM Peak Volume Delay (hr):	52:28:24																				
Level of Travel Time Reliability (mi):	0.00																				
Peak Hour Excessive Delay (per mi):	91,838																				
TDM Forecasted Congestion (mi):	0.69																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: No projects</li> <li>* FY 2023-26 TIP: No projects</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Peak Hour Approach Volume:</td><td>5,690</td></tr> <tr><td>Intersection Legs Included in Delay:</td><td>4/4</td></tr> <tr><td>National Highway System:</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.00</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Traffic Signal Type:</td><td>Adaptive</td></tr> <tr><td>Focus Roadway Facility:</td><td>90</td></tr> <tr><td>Corridor and Subcorridor Area:</td><td>5I; 12A</td></tr> <tr><td>CMP Objectives Score:</td><td>8.01</td></tr> </table>	Peak Hour Approach Volume:	5,690	Intersection Legs Included in Delay:	4/4	National Highway System:	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.00	Transit Route:	Yes	Traffic Signal Type:	Adaptive	Focus Roadway Facility:	90	Corridor and Subcorridor Area:	5I; 12A	CMP Objectives Score:	8.01
Peak Hour Approach Volume:	5,690																				
Intersection Legs Included in Delay:	4/4																				
National Highway System:	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.00																				
Transit Route:	Yes																				
Traffic Signal Type:	Adaptive																				
Focus Roadway Facility:	90																				
Corridor and Subcorridor Area:	5I; 12A																				
CMP Objectives Score:	8.01																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Signal Improvements</i></li> <li>2) Turning Movement Enhancements</li> <li>3) Transit Infrastructure Improvements</li> <li>4) Modifications to Existing Transit Routes or Services</li> <li>5) Walking and Bicycling Improvements</li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 66: Bottleneck 8**

PA 132 (Street Rd) @ PA 532 (Bustleton Pk), Lower Southampton Twp, Bucks County, PA



**Summary of Conditions**  
 The signalized intersection at PA 132 (Street Rd) and PA 532 (Bustleton Pk) in Lower Southampton Township, Bucks County includes four roadway approaches and is ranked #16 and #19 in peak travel time vehicle and volume delay, respectively. Both PA 132 and PA 532 are classified as principal arterial roadways and each are part of an adaptive signaling system that extends along PA 132 south of the intersection and along PA 532 north of the intersection to PA 213 (Bridgetown Pk). PA 132 southbound and PA 532 southbound approaches to the intersection indicate the highest congestion.

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	74.0
TT PM Peak Vehicle Delay (sec):	146.3
TT AM Peak Volume Delay (hr):	19:20:59
TT PM Peak Volume Delay (hr):	51:23:44
Level of Travel Time Reliability (mi):	0.05
Peak Hour Excessive Delay (per mi):	34,200
TDM Forecasted Congestion (mi):	0.00

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2023-26 TIP: No projects

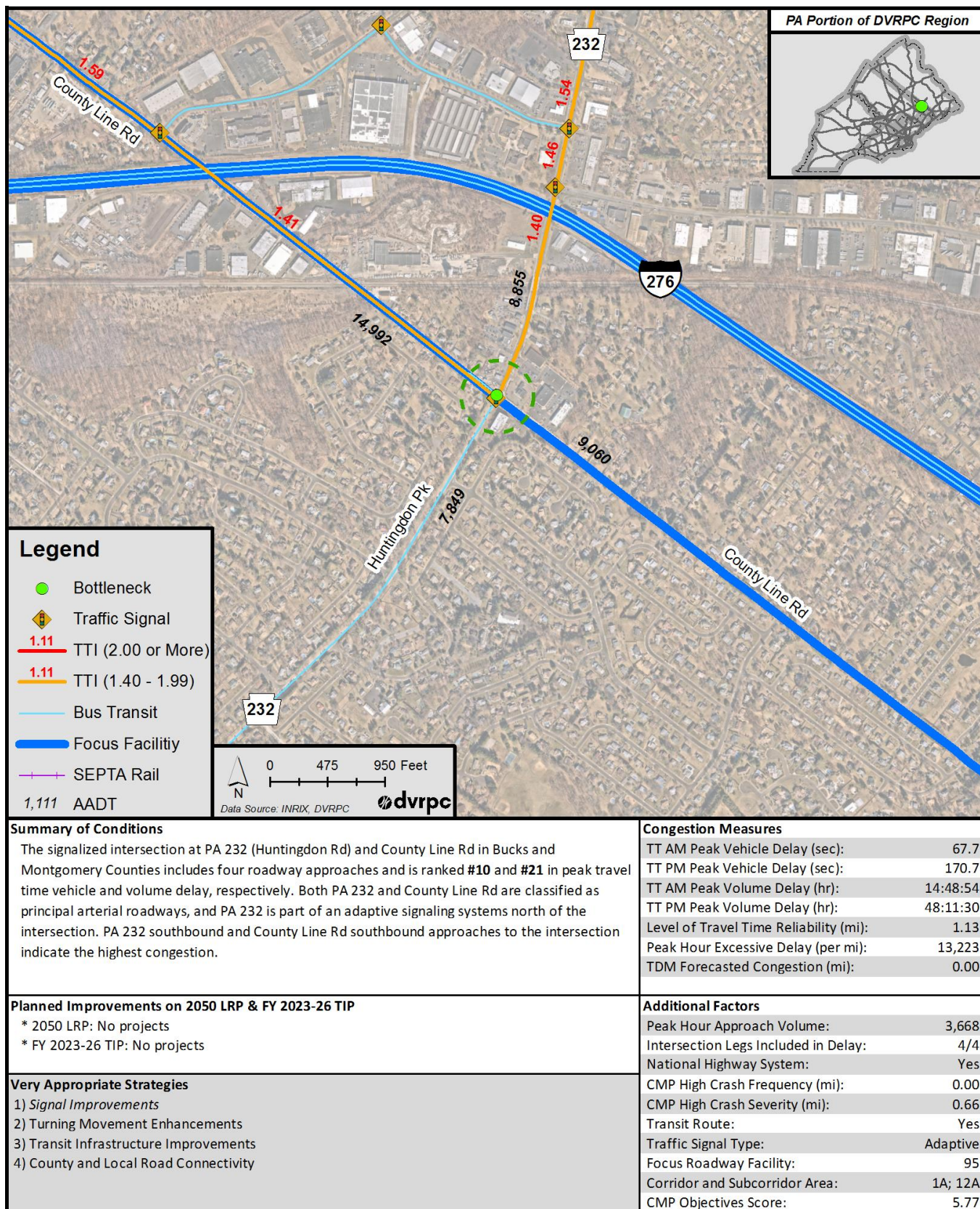
Additional Factors	
Peak Hour Approach Volume:	5,714
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.77
Transit Route:	Yes
Traffic Signal Type:	Adaptive
Focus Roadway Facility:	90; 173; 200
Corridor and Subcorridor Area:	12A
CMP Objectives Score:	6.70

- Very Appropriate Strategies**
- 1) *Signal Improvements*
  - 2) Transit Infrastructure Improvements
  - 3) Turning Movement Enhancements
  - 4) Modifications to Existing Transit Routes or Services
  - 5) Walking and Bicycling Improvements

Recently implemented or partially implemented strategies are listed first and italicized

### Figure 67: Bottleneck 10

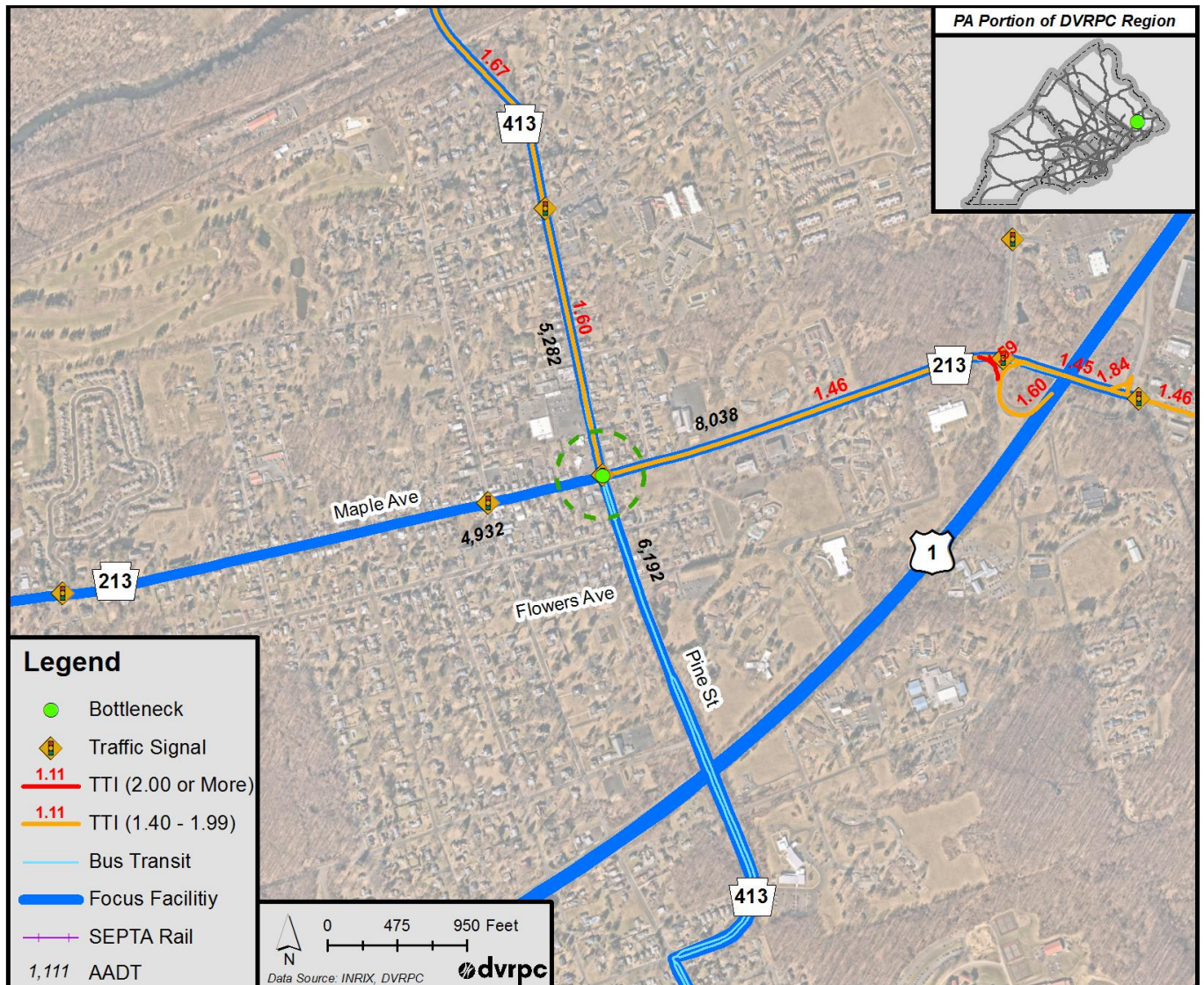
PA 232 (Huntingdon Pk) @ County Line Rd, Upper Southampton Twp, Bucks and Montgomery Counties, PA



Recently implemented or partially implemented strategies are listed first and italicized

**Figure 68: Bottleneck 15**

PA 413 (Pine St) @ PA 213 (Maple Ave), Langhorne Borough, Bucks County, PA



**Summary of Conditions**  
 The signalized intersection at PA 413 (Pine St) and PA 213 (Maple Ave) in Langhorne Borough, Bucks County includes four roadway approaches and is ranked #15 and #42 in peak travel time vehicle and volume delay, respectively. PA 413 is classified as a principal arterial and PA 213 as a minor arterial roadway. PA 413 is being reconstructed as part of MPMS #93446 Route 1 Improvement Frontage Corridor, including a new interchange at US 1 and a proposed additional lanes in each direction at US 1, including a northbound lane from US 1 to Flowers Avenue. PA 413 southbound and PA 213 westbound approaches to the intersection indicate the highest congestion.

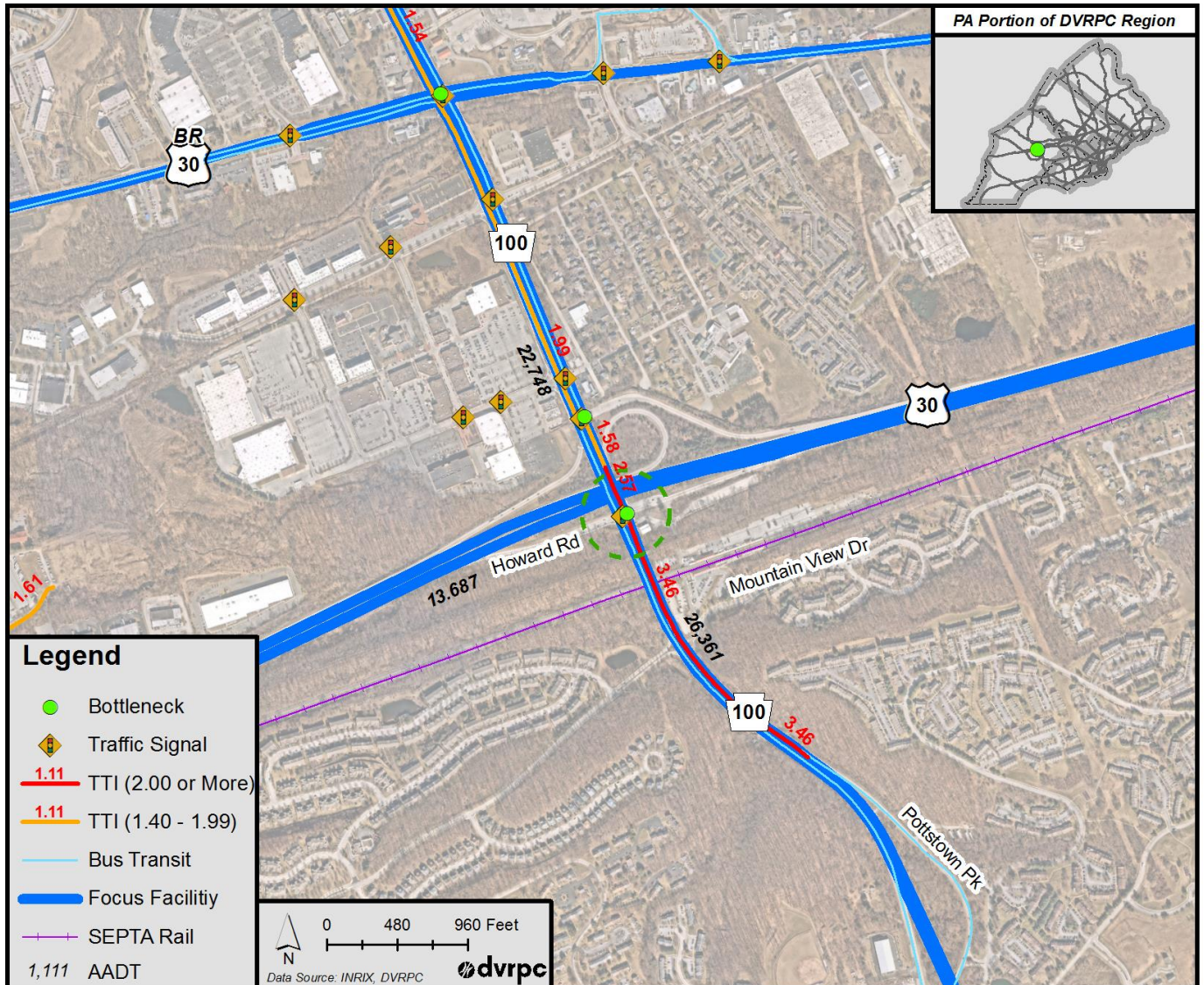
Congestion Measures	
TT AM Peak Vehicle Delay (sec):	62.4
TT PM Peak Vehicle Delay (sec):	155.3
TT AM Peak Volume Delay (hr):	9:44:34
TT PM Peak Volume Delay (hr):	32:19:35
Level of Travel Time Reliability (mi):	1.13
Peak Hour Excessive Delay (per mi):	37,215
TDM Forecasted Congestion (mi):	1.27

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2023-26 TIP: No projects

Additional Factors	
Peak Hour Approach Volume:	2,200
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.51
Transit Route:	Yes
Traffic Signal Type:	Coordinated
Focus Roadway Facility:	145; 173
Corridor and Subcorridor Area:	51
CMP Objectives Score:	7.42

**Very Appropriate Strategies**  
 1) Signal Improvements  
 2) Transit Infrastructure Improvements  
 3) Modifications to Existing Transit Routes or Services  
 4) Express Transit Routes or Stop Consolidation

**Figure 69: Bottleneck 39**  
 PA 100 @ Howard Rd, West Whiteland Twp, Chester County, PA



**Summary of Conditions**  
 The signalized intersection at PA 100 and Howard Rd in West Whiteland Township, Chester County includes four roadway approaches and is ranked #71 and #11 in peak travel time vehicle and volume delay, respectively. Both PA 100 and Howard Rd are classified as expressways, although Howard Rd functions as an on- and off-ramp for US 30 Bypass eastbound, and provides access to the Exton rail station and parking lot. TIP Project MPMS #118025 is proposed to mitigate this bottleneck with the addition of a northbound through-lane from Pottstown Pk to the on- and off-ramps at Howard Rd.

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: #217 PA 100 Northbound at Exton Station; #AG Exton Station, construct parking garage  
 \* FY 2023-26 TIP: MPMS #118025 PA 100 Northbound at Exton Station; #93588 Exton Station Transit Improvements

**Very Appropriate Strategies**  
 1) *Transit Infrastructure Improvements*  
 2) Signal Improvements  
 3) Bottleneck Removal of a Limited Scale for Cars and Trucks  
 4) Modifications to Existing Transit Routes or Services

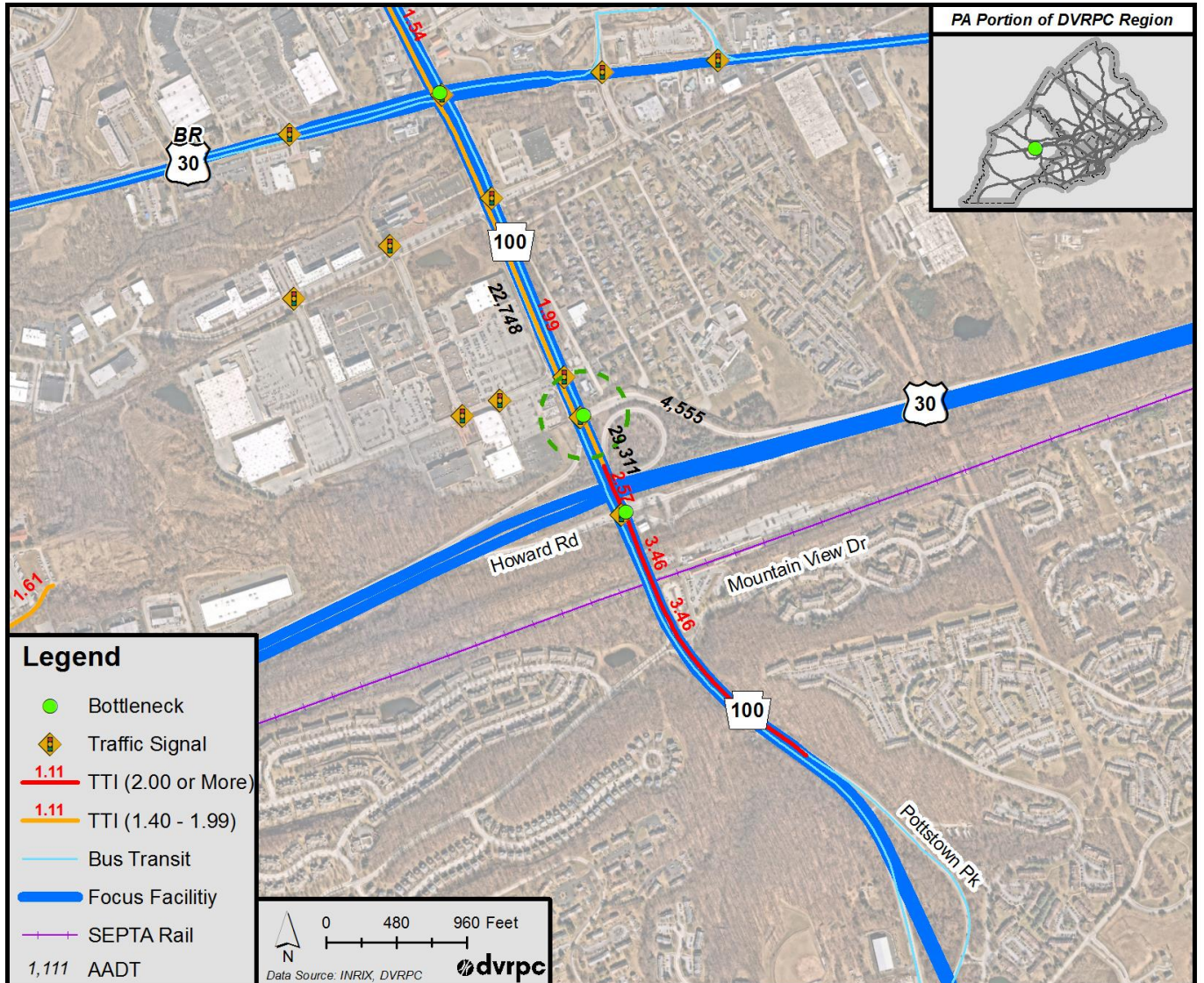
Congestion Measures	
TT AM Peak Vehicle Delay (sec):	31.4
TT PM Peak Vehicle Delay (sec):	90.7
TT AM Peak Volume Delay (hr):	15:46:39
TT PM Peak Volume Delay (hr):	59:16:54
Level of Travel Time Reliability (mi):	0.40
Peak Hour Excessive Delay (per mi):	70,554
TDM Forecasted Congestion (mi):	0.44

Additional Factors	
Peak Hour Approach Volume:	5,652
Intersection Legs Included in Delay:	3/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.00
Transit Route:	Yes
Traffic Signal Type:	Coordinated
Focus Roadway Facility:	55; 115
Corridor and Subcorridor Area:	7E; 8B; 8C
CMP Objectives Score:	8.18

*Recently implemented or partially implemented strategies are listed first and italicized*

**Figure 70: Bottleneck 37**

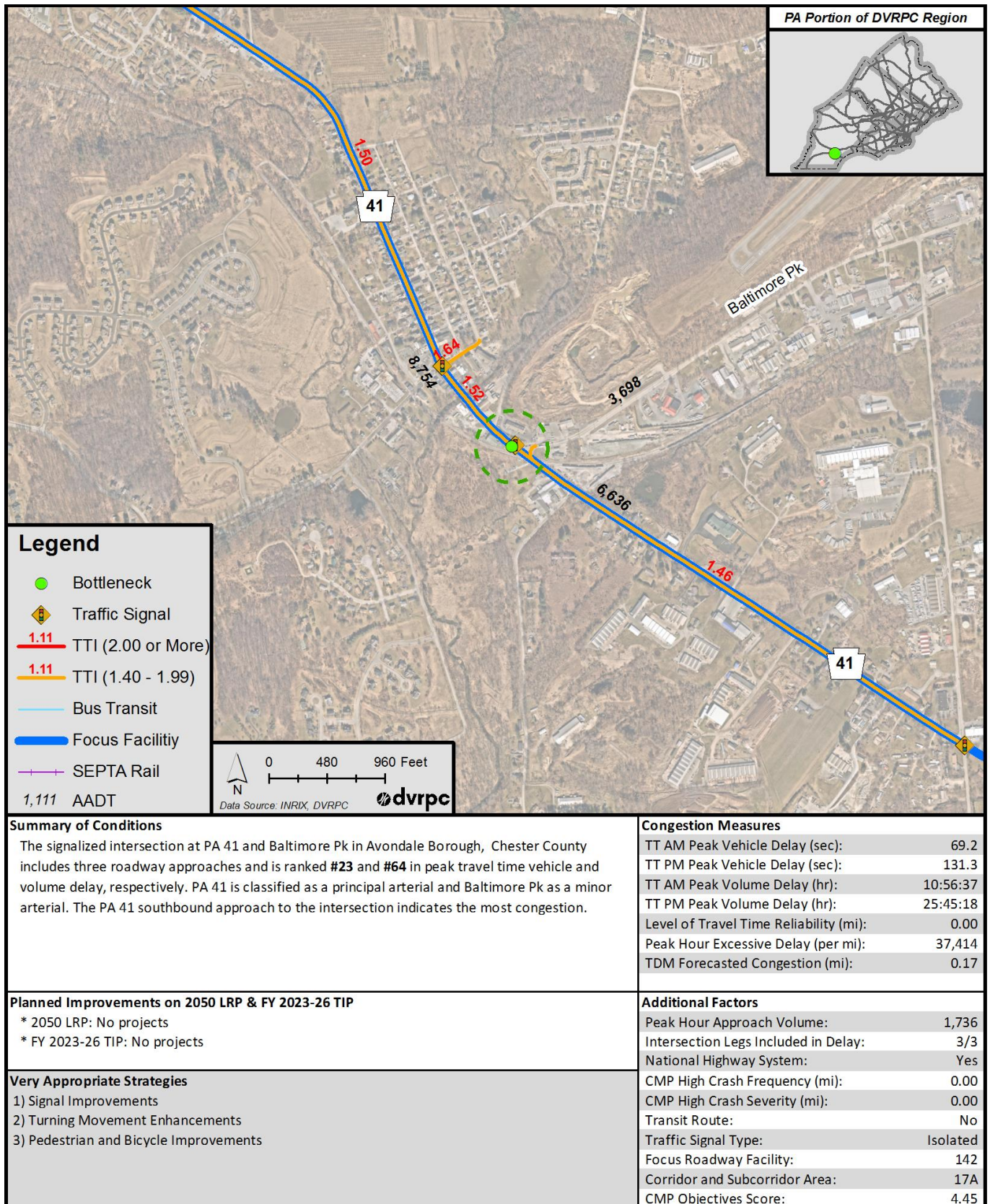
PA 100 @ US 30 Bypass WB Off-Ramp, West Whiteland Twp, Chester County, PA



<p><b>Summary of Conditions</b></p> <p>The signalized intersection at PA 100 and the US 30 Bypass westbound ramp in West Whiteland Township, Chester County includes three roadway approaches and is ranked <b>#110</b> and <b>#27</b> in peak travel time vehicle and volume delay, respectively. PA 100 is classified as a principal arterial north of the intersection and an expressway to the south, and the US 30 Bypass westbound ramp as an expressway. TIP project MPMS #118025 is proposed to mitigate this bottleneck by the addition of a northbound through-lane from Pottstown Pk to the US 30 Bypass westbound on- and off-ramps. The PA 100 northbound approach to the intersection indicates the highest congestion.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT AM Peak Vehicle Delay (sec):</td><td>25.4</td></tr> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>66.6</td></tr> <tr><td>TT AM Peak Volume Delay (hr):</td><td>12:12:24</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>39:21:37</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.00</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>33,765</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.46</td></tr> </table>	TT AM Peak Vehicle Delay (sec):	25.4	TT PM Peak Vehicle Delay (sec):	66.6	TT AM Peak Volume Delay (hr):	12:12:24	TT PM Peak Volume Delay (hr):	39:21:37	Level of Travel Time Reliability (mi):	0.00	Peak Hour Excessive Delay (per mi):	33,765	TDM Forecasted Congestion (mi):	0.46						
TT AM Peak Vehicle Delay (sec):	25.4																				
TT PM Peak Vehicle Delay (sec):	66.6																				
TT AM Peak Volume Delay (hr):	12:12:24																				
TT PM Peak Volume Delay (hr):	39:21:37																				
Level of Travel Time Reliability (mi):	0.00																				
Peak Hour Excessive Delay (per mi):	33,765																				
TDM Forecasted Congestion (mi):	0.46																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: #217 PA 100 Northbound at Exton Station</li> <li>* FY 2023-26 TIP: MPMS #118025 PA 100 Northbound at Exton Station</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Peak Hour Approach Volume:</td><td>5,095</td></tr> <tr><td>Intersection Legs Included in Delay:</td><td>3/3</td></tr> <tr><td>National Highway System:</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.00</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Traffic Signal Type:</td><td>Coordinated</td></tr> <tr><td>Focus Roadway Facility:</td><td>55; 115</td></tr> <tr><td>Corridor and Subcorridor Area:</td><td>7E; 8C</td></tr> <tr><td>CMP Objectives Score:</td><td>7.94</td></tr> </table>	Peak Hour Approach Volume:	5,095	Intersection Legs Included in Delay:	3/3	National Highway System:	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.00	Transit Route:	Yes	Traffic Signal Type:	Coordinated	Focus Roadway Facility:	55; 115	Corridor and Subcorridor Area:	7E; 8C	CMP Objectives Score:	7.94
Peak Hour Approach Volume:	5,095																				
Intersection Legs Included in Delay:	3/3																				
National Highway System:	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.00																				
Transit Route:	Yes																				
Traffic Signal Type:	Coordinated																				
Focus Roadway Facility:	55; 115																				
Corridor and Subcorridor Area:	7E; 8C																				
CMP Objectives Score:	7.94																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Transit Infrastructure Improvements</i></li> <li>2) Signal Improvements</li> <li>3) Bottleneck Removal of a Limited Scale for Cars and Trucks</li> <li>4) Modifications to Existing Transit Routes or Services</li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

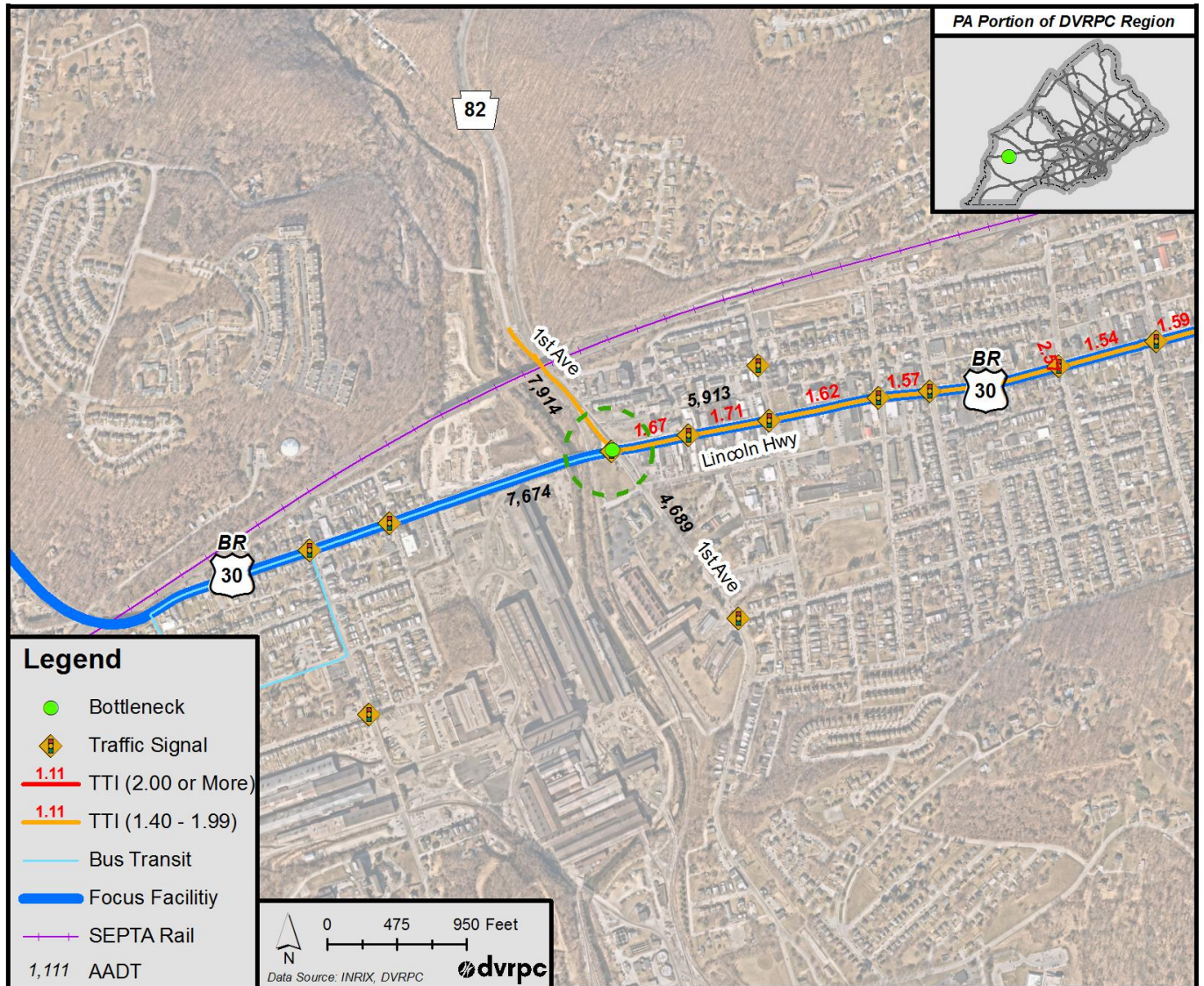
**Figure 71: Bottleneck 59**  
 PA 41 @ Baltimore Pk, Avondale Borough, Chester County, PA





**Figure 72: Bottleneck 36**

US 30 Bus (Lincoln Hwy) @ PA 82 (1st Ave), Coatesville City, Chester County, PA

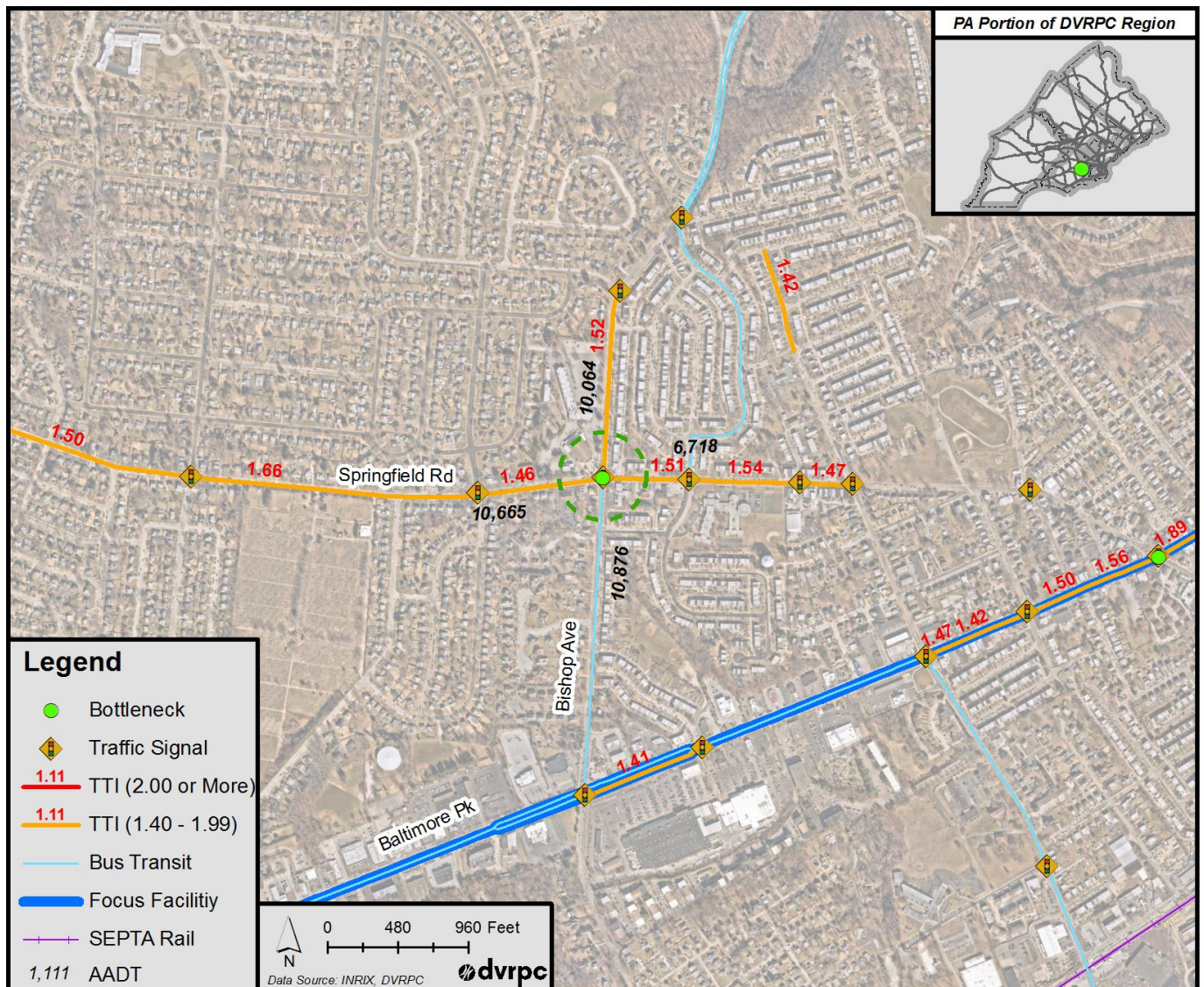


<p><b>Summary of Conditions</b></p> <p>The signalized intersection at US 30 Business (Lincoln Hwy) and PA 82 (1st Ave) in Coatesville City, Chester County includes four roadway approaches and is ranked #9 and #47 in peak travel time vehicle and volume delay, respectively. Both US 30 Business and PA 82 are classified as principal arterial roadways. The US 30 Business westbound approach to the intersection indicates the most congestion. Prior improvements included ITS treatments as part of MPMS #64479.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT AM Peak Vehicle Delay (sec):</td><td>35.6</td></tr> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>180.7</td></tr> <tr><td>TT AM Peak Volume Delay (hr):</td><td>4:41:16</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>30:02:15</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>1.99</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>143,288</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.30</td></tr> </table>	TT AM Peak Vehicle Delay (sec):	35.6	TT PM Peak Vehicle Delay (sec):	180.7	TT AM Peak Volume Delay (hr):	4:41:16	TT PM Peak Volume Delay (hr):	30:02:15	Level of Travel Time Reliability (mi):	1.99	Peak Hour Excessive Delay (per mi):	143,288	TDM Forecasted Congestion (mi):	0.30						
TT AM Peak Vehicle Delay (sec):	35.6																				
TT PM Peak Vehicle Delay (sec):	180.7																				
TT AM Peak Volume Delay (hr):	4:41:16																				
TT PM Peak Volume Delay (hr):	30:02:15																				
Level of Travel Time Reliability (mi):	1.99																				
Peak Hour Excessive Delay (per mi):	143,288																				
TDM Forecasted Congestion (mi):	0.30																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: #AG Atglen Regional Rail Line Extension</li> <li>* FY 2023-26 TIP: No projects</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Peak Hour Approach Volume:</td><td>2,355</td></tr> <tr><td>Intersection Legs Included in Delay:</td><td>4/4</td></tr> <tr><td>National Highway System:</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.00</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Traffic Signal Type:</td><td>Coordinated</td></tr> <tr><td>Focus Roadway Facility:</td><td>63</td></tr> <tr><td>Corridor and Subcorridor Area:</td><td>7F</td></tr> <tr><td>CMP Objectives Score:</td><td>7.75</td></tr> </table>	Peak Hour Approach Volume:	2,355	Intersection Legs Included in Delay:	4/4	National Highway System:	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.00	Transit Route:	Yes	Traffic Signal Type:	Coordinated	Focus Roadway Facility:	63	Corridor and Subcorridor Area:	7F	CMP Objectives Score:	7.75
Peak Hour Approach Volume:	2,355																				
Intersection Legs Included in Delay:	4/4																				
National Highway System:	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.00																				
Transit Route:	Yes																				
Traffic Signal Type:	Coordinated																				
Focus Roadway Facility:	63																				
Corridor and Subcorridor Area:	7F																				
CMP Objectives Score:	7.75																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Intelligent Transportation Systems (ITS)</i></li> <li>2) Signal Improvements</li> <li>3) Turning Movement Enhancements</li> <li>4) Modifications to Existing Transit Routes or Services</li> <li>5) Transit Infrastructure Improvements</li> <li>6) Pedestrian and Bicycle Improvements</li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 73: Bottleneck 77**

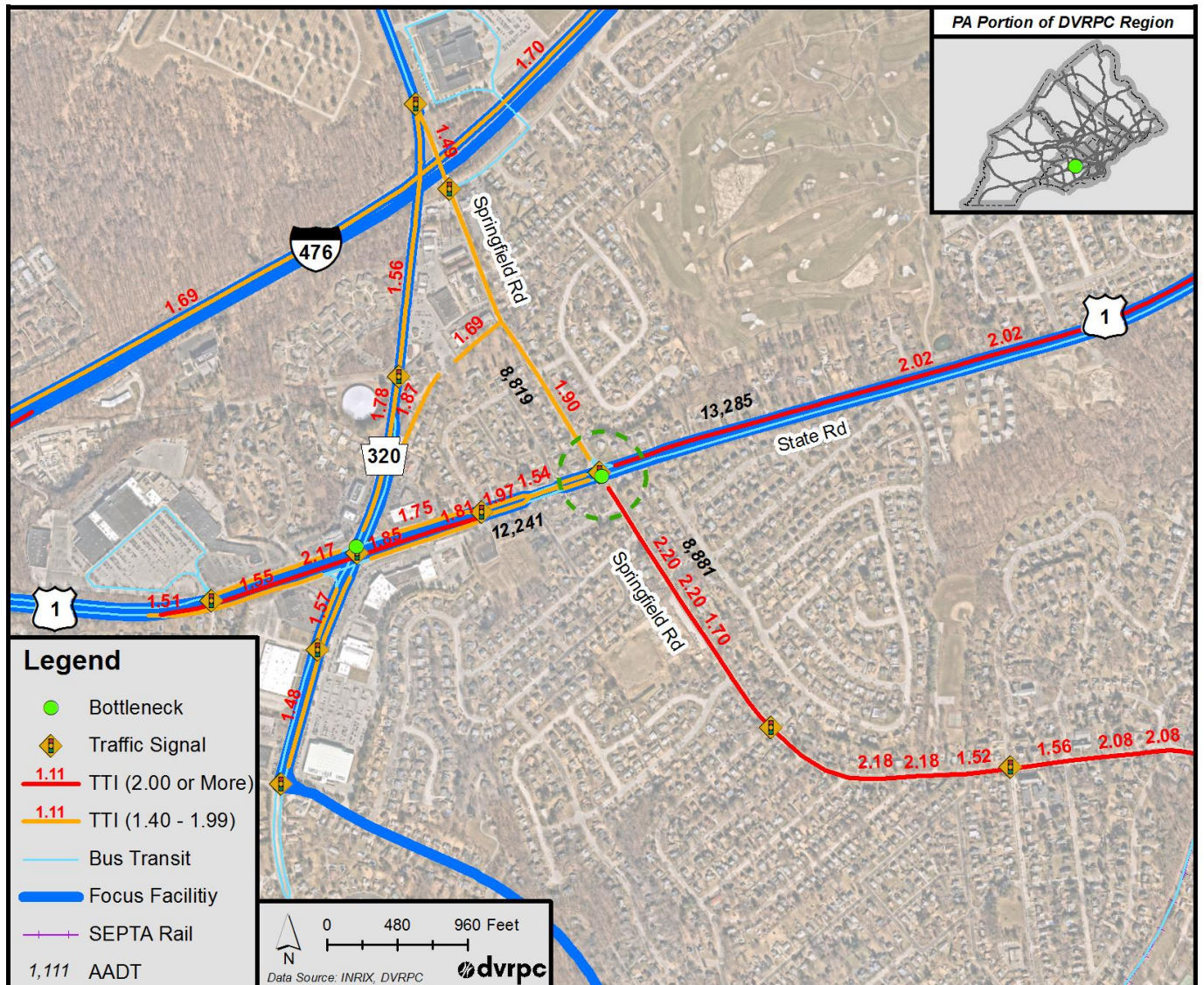
Springfield Rd @ Bishop Ave, Springfield Twp, Delaware County, PA



<p><b>Summary of Conditions</b></p> <p>The signalized intersection at Springfield Rd and Bishop Ave in Springfield Township, Delaware County includes four roadway approaches and is ranked #3 and #9 in peak travel time vehicle and volume delay, respectively. Springfield Rd and Bishop Ave are both classified as principal arterial roadways. The TIP project MPMS #84457 was recently completed, which included multiple traffic signal retiming's along Baltimore Pk just south of this intersection at Bishop Ave and Springfield Rd.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT AM Peak Vehicle Delay (sec):</td><td>129.7</td></tr> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>273.9</td></tr> <tr><td>TT AM Peak Volume Delay (hr):</td><td>23:22:58</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>65:23:17</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.66</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>81,058</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.93</td></tr> </table>	TT AM Peak Vehicle Delay (sec):	129.7	TT PM Peak Vehicle Delay (sec):	273.9	TT AM Peak Volume Delay (hr):	23:22:58	TT PM Peak Volume Delay (hr):	65:23:17	Level of Travel Time Reliability (mi):	0.66	Peak Hour Excessive Delay (per mi):	81,058	TDM Forecasted Congestion (mi):	0.93						
TT AM Peak Vehicle Delay (sec):	129.7																				
TT PM Peak Vehicle Delay (sec):	273.9																				
TT AM Peak Volume Delay (hr):	23:22:58																				
TT PM Peak Volume Delay (hr):	65:23:17																				
Level of Travel Time Reliability (mi):	0.66																				
Peak Hour Excessive Delay (per mi):	81,058																				
TDM Forecasted Congestion (mi):	0.93																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: No projects</li> <li>* FY 2023-26 TIP: No projects</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Peak Hour Approach Volume:</td><td>3,449</td></tr> <tr><td>Intersection Legs Included in Delay:</td><td>4/4</td></tr> <tr><td>National Highway System:</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.84</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Traffic Signal Type:</td><td>Coordinated</td></tr> <tr><td>Focus Roadway Facility:</td><td>38</td></tr> <tr><td>Corridor and Subcorridor Area:</td><td>5C; 5E</td></tr> <tr><td>CMP Objectives Score:</td><td>8.66</td></tr> </table>	Peak Hour Approach Volume:	3,449	Intersection Legs Included in Delay:	4/4	National Highway System:	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.84	Transit Route:	Yes	Traffic Signal Type:	Coordinated	Focus Roadway Facility:	38	Corridor and Subcorridor Area:	5C; 5E	CMP Objectives Score:	8.66
Peak Hour Approach Volume:	3,449																				
Intersection Legs Included in Delay:	4/4																				
National Highway System:	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.84																				
Transit Route:	Yes																				
Traffic Signal Type:	Coordinated																				
Focus Roadway Facility:	38																				
Corridor and Subcorridor Area:	5C; 5E																				
CMP Objectives Score:	8.66																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) Signal Improvements</li> <li>2) Turning Movement Enhancements</li> <li>3) Placemaking for Non-Motorized Transportation</li> <li>4) Modifications to Existing Transit Routes or Services</li> <li>5) Transit Infrastructure Improvements</li> <li>6) Pedestrian and Bicycle Improvements</li> </ol>																					

### Figure 74: Bottleneck 80

US 1 (State Rd) @ Springfield Rd, Springfield Twp, Delaware County, PA



**Summary of Conditions**  
 The signalized intersection at US 1 (State Rd) and Springfield Rd in Springfield Township, Delaware County includes four roadway approaches and is ranked #2 in both peak travel time vehicle and volume delay. US 1 and Springfield Rd are classified as principal arterial roadways. The TIP project MPMS #114112 Media Bypass ITS is programmed to help reduce congestion and improve traffic flow along the Route 1 corridor, including the intersection with Springfield Rd.

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	206.7
TT PM Peak Vehicle Delay (sec):	341.4
TT AM Peak Volume Delay (hr):	42:33:24
TT PM Peak Volume Delay (hr):	94:18:44
Level of Travel Time Reliability (mi):	3.47
Peak Hour Excessive Delay (per mi):	65,240
TDM Forecasted Congestion (mi):	1.30

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2023-26 TIP: MPMS #114112 Media Bypass ITS

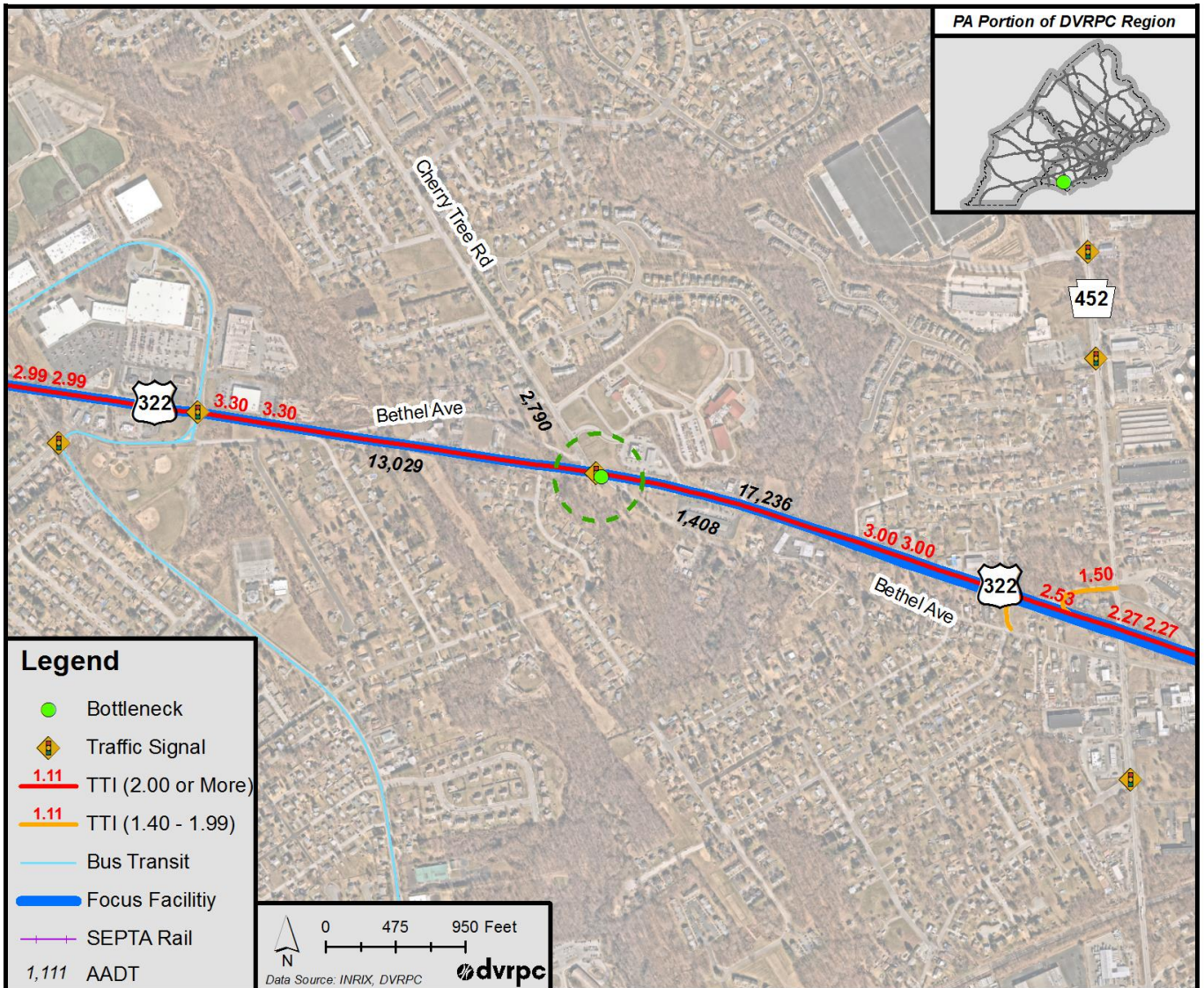
Additional Factors	
Peak Hour Approach Volume:	3,825
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.53
CMP High Crash Severity (mi):	0.59
Transit Route:	Yes
Traffic Signal Type:	Coordinated
Focus Roadway Facility:	38
Corridor and Subcorridor Area:	5C
CMP Objectives Score:	9.44

- Very Appropriate Strategies**
- 1) *Signal Improvements*
  - 2) Turning Movement Enhancements
  - 3) Intelligent Transportation Systems (ITS)
  - 4) Placemaking for Non-Motorized Transportation
  - 5) Park and Ride Lots
  - 6) Transit Infrastructure Improvements

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 75: Bottleneck 89**

US 322 (Conchester Hwy) @ Bethel Ave/Cherry Tree Rd, Upper Chichester Twp, Delaware County, PA



**Summary of Conditions**  
 The signalized intersection at US 322 (Conchester Hwy) and Bethel Ave/Cherry Tree Rd in Upper Chichester Township, Delaware County includes four roadway approaches and is ranked #1 in both peak travel time vehicle and volume delay. US 322 is classified as a principal arterial roadway and Bethel Ave/Cherry Tree Rd as a collector. The US 322 and eastbound and westbound approaches to the intersection experience the most delay. The TIP project MPMS #114034 is proposing to reconstruct the intersection, including realigning Bethel Ave and Cherry Tree Rd with US 322.

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	254.8
TT PM Peak Vehicle Delay (sec):	401.1
TT AM Peak Volume Delay (hr):	66:56:44
TT PM Peak Volume Delay (hr):	128:09:36
Level of Travel Time Reliability (mi):	2.57
Peak Hour Excessive Delay (per mi):	119,119
TDM Forecasted Congestion (mi):	0.52

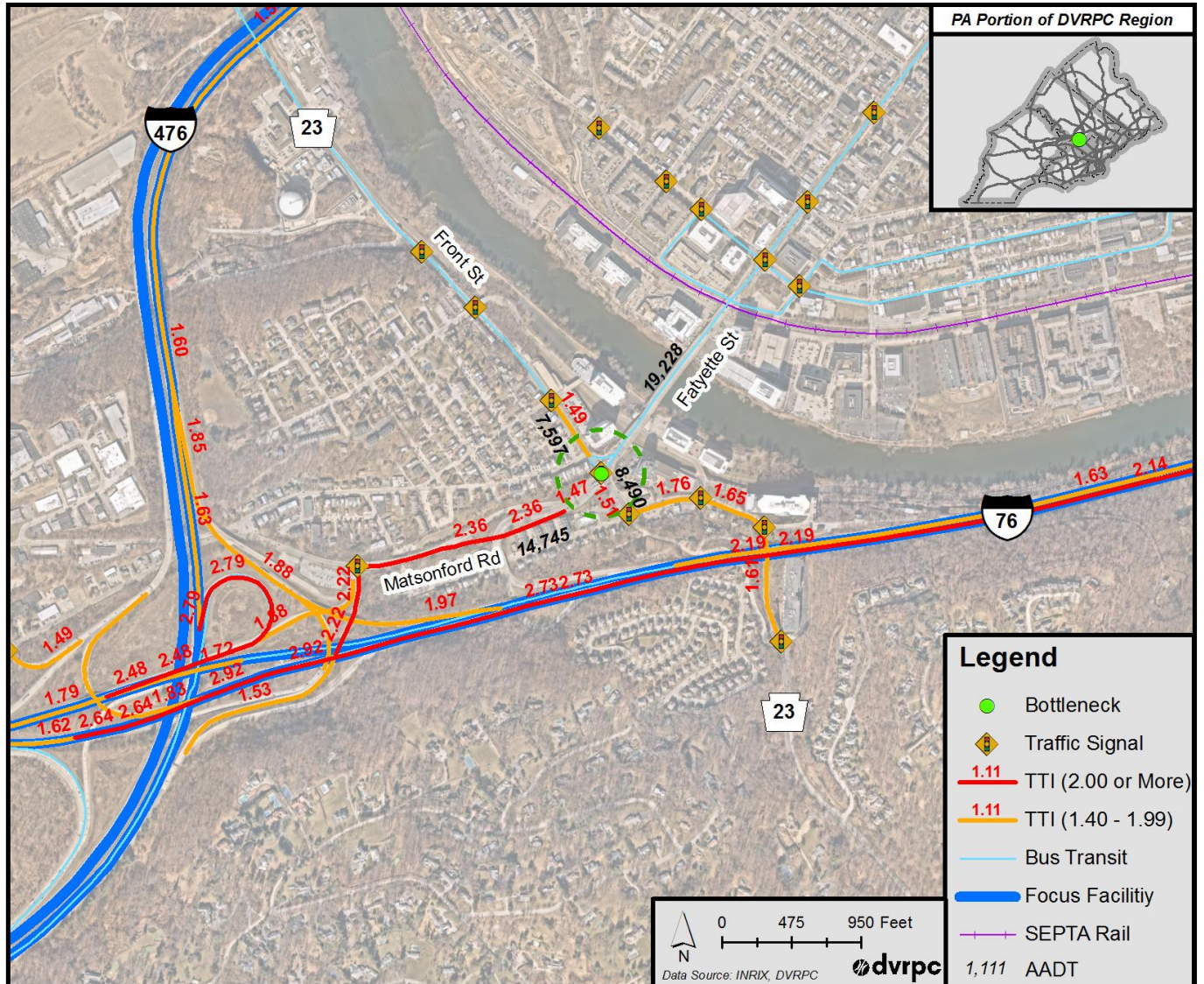
**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: #107 US 322 widening from Clayton Park Drive to I-95  
 \* FY 2023-26 TIP: MPMS #114034 US 322: Chelsea Parkway to Market St. Interchange (Section 103)

Additional Factors	
Peak Hour Approach Volume:	2,859
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	1.65
Transit Route:	No
Traffic Signal Type:	Isolated
Focus Roadway Facility:	60
Corridor and Subcorridor Area:	8A
CMP Objectives Score:	8.03

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Turning Movement Enhancements
  - 3) Intelligent Transportation Systems (ITS)
  - 4) Walking and Bicycling Improvements
  - 5) Encourage Use of Transit Services and TDM Programs

**Figure 76: Bottleneck 127**

PA 23 (Front St) @ Matsonford Rd/Fayette St, West Conshohocken Borough, Montgomery County, PA



**Summary of Conditions**

The signalized intersection at PA 23 (Front St) and Matsonford Rd/Fayette St in West Conshohocken Borough, Montgomery County includes four roadway approaches and is ranked #6 and #28 in peak travel time vehicle and volume delay, respectively. Matsonford Rd and Fayette Rd are classified as principal arterials and PA 23 (Front St) as a minor arterial. The Matsonford eastbound approach to the intersection experiences the most delay. Prior improvements included ITS treatments as part of MPMS #62616.

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**

- \* 2050 LRP: #107 I-76 at PA 23 Matsonford Rd, Roadway Operational Improvements
- \* FY 2023-26 TIP: No projects

**Very Appropriate Strategies**

- 1) *Intelligent Transportation Systems (ITS)*
- 2) Transit Infrastructure Improvements
- 3) Turning Movement Enhancements
- 4) Modifications to Existing Transit Routes or Services
- 5) Walking and Bicycling Improvements

**Congestion Measures**

TT AM Peak Vehicle Delay (sec):	100.9
TT PM Peak Vehicle Delay (sec):	126.5
TT AM Peak Volume Delay (hr):	23:40:23
TT PM Peak Volume Delay (hr):	35:13:03
Level of Travel Time Reliability (mi):	0.40
Peak Hour Excessive Delay (per mi):	12,504
TDM Forecasted Congestion (mi):	0.84

**Additional Factors**

Peak Hour Approach Volume:	3,790
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.24
CMP High Crash Severity (mi):	0.00
Transit Route:	Yes
Traffic Signal Type:	Adaptive
Focus Roadway Facility:	None
Corridor and Subcorridor Area:	2B; 3C
CMP Objectives Score:	8.92

Recently implemented or partially implemented strategies are listed first and italicized

### Figure 77: Bottleneck 130

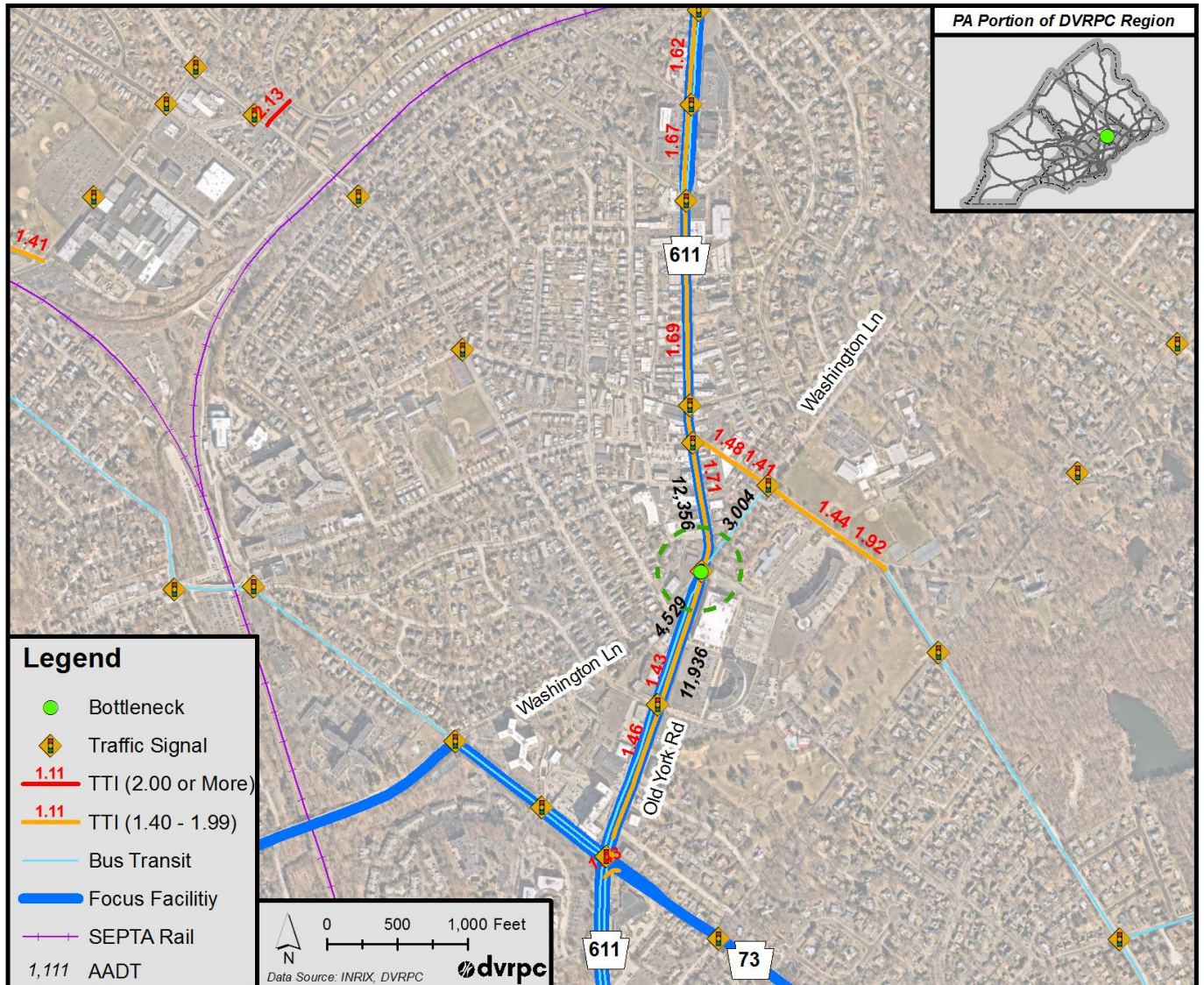
PA 363 (Trooper Rd) @ Ridge Pk, Lower Providence Twp, Montgomery County, PA



<p><b>Summary of Conditions</b></p> <p>The signalized intersection at PA 363 (Trooper Rd) and Ridge Pk in Lower Providence Township, Montgomery County includes four roadway approaches and is ranked #6 and #28 in peak travel time vehicle and volume delay, respectively. PA 363 south of Ridge Pk and all of Ridge Pk at the intersection are classified as principal arterials, and PA 363 North of Ridge Pk is classified as a minor arterial.</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT AM Peak Vehicle Delay (sec):</td><td>37.1</td></tr> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>131.2</td></tr> <tr><td>TT AM Peak Volume Delay (hr):</td><td>5:43:58</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>26:20:18</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>1.07</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>21,539</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.77</td></tr> </table>	TT AM Peak Vehicle Delay (sec):	37.1	TT PM Peak Vehicle Delay (sec):	131.2	TT AM Peak Volume Delay (hr):	5:43:58	TT PM Peak Volume Delay (hr):	26:20:18	Level of Travel Time Reliability (mi):	1.07	Peak Hour Excessive Delay (per mi):	21,539	TDM Forecasted Congestion (mi):	0.77						
TT AM Peak Vehicle Delay (sec):	37.1																				
TT PM Peak Vehicle Delay (sec):	131.2																				
TT AM Peak Volume Delay (hr):	5:43:58																				
TT PM Peak Volume Delay (hr):	26:20:18																				
Level of Travel Time Reliability (mi):	1.07																				
Peak Hour Excessive Delay (per mi):	21,539																				
TDM Forecasted Congestion (mi):	0.77																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: No projects</li> <li>* FY 2023-26 TIP: No projects</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Peak Hour Approach Volume:</td><td>2,768</td></tr> <tr><td>Intersection Legs Included in Delay:</td><td>4/4</td></tr> <tr><td>National Highway System:</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.00</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Traffic Signal Type:</td><td>Coordinated</td></tr> <tr><td>Focus Roadway Facility:</td><td>135; 176</td></tr> <tr><td>Corridor and Subcorridor Area:</td><td>98</td></tr> <tr><td>CMP Objectives Score:</td><td>5.84</td></tr> </table>	Peak Hour Approach Volume:	2,768	Intersection Legs Included in Delay:	4/4	National Highway System:	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.00	Transit Route:	Yes	Traffic Signal Type:	Coordinated	Focus Roadway Facility:	135; 176	Corridor and Subcorridor Area:	98	CMP Objectives Score:	5.84
Peak Hour Approach Volume:	2,768																				
Intersection Legs Included in Delay:	4/4																				
National Highway System:	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.00																				
Transit Route:	Yes																				
Traffic Signal Type:	Coordinated																				
Focus Roadway Facility:	135; 176																				
Corridor and Subcorridor Area:	98																				
CMP Objectives Score:	5.84																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) Signal Improvements</li> <li>2) Intelligent Transportation Systems (ITS)</li> <li>3) Transit Infrastructure Improvements</li> <li>4) Turning Movement Enhancements</li> <li>5) Modifications to Existing Transit Routes or Services</li> <li>6) Walking and Bicycling Improvements</li> </ol>																					

**Figure 78: Bottleneck 102**

PA 611 (Old York Rd) @ Washington Ln, Abington Twp, Montgomery County, PA



**Summary of Conditions**  
 The signalized intersection at PA 611 (Old York Rd) and Washington Ln in Abington Township, Montgomery County includes four roadway approaches and is ranked #13 and #23 in peak travel time vehicle and volume delay, respectively. PA 611 and Washington Ln are both classified as principal arterial roadways. The PA 611 southbound approach to the intersection experiences the most delay. The Long-Range Plan includes a PA 611 ITS improvements project, and the project scope is from 2041 to 2050.

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	51.5
TT PM Peak Vehicle Delay (sec):	163.4
TT AM Peak Volume Delay (hr):	10:49:58
TT PM Peak Volume Delay (hr):	46:33:37
Level of Travel Time Reliability (mi):	0.00
Peak Hour Excessive Delay (per mi):	36,034
TDM Forecasted Congestion (mi):	0.77

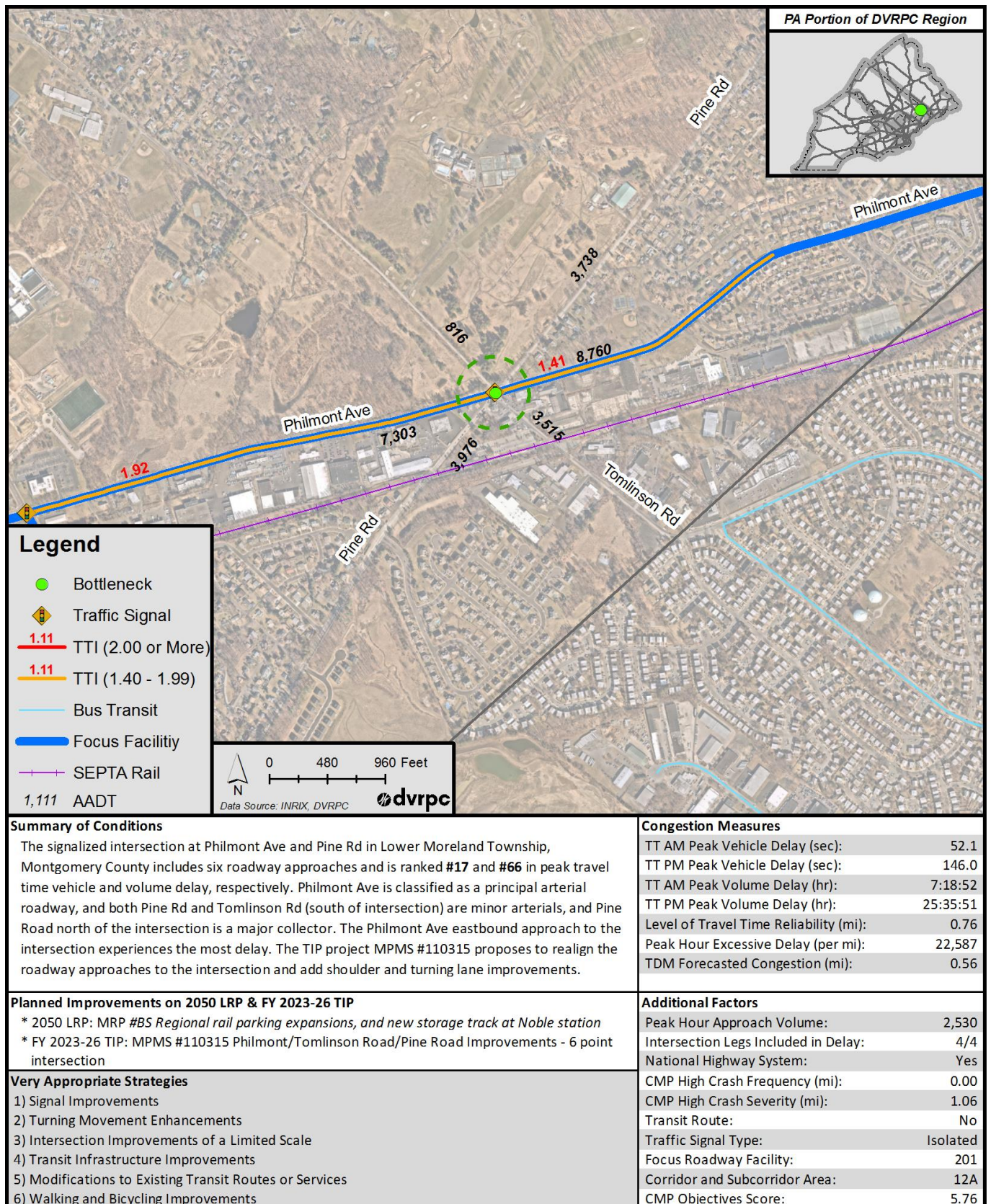
**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: #199 PA 611 ITS Improvements and Multimodal Upgrades  
 \* FY 2023-26 TIP: No projects

Additional Factors	
Peak Hour Approach Volume:	2,864
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.00
Transit Route:	Yes
Traffic Signal Type:	Coordinated
Focus Roadway Facility:	103
Corridor and Subcorridor Area:	14E
CMP Objectives Score:	8.77

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Intelligent Transportation Systems (ITS)
  - 3) Expanded Parking for Existing Transit Stations (including remote, all modes)
  - 4) Park and Ride Lots
  - 5) Transit-Oriented Development (TOD)
  - 6) Walking and Bicycling Improvements

**Figure 79: Bottleneck 123**

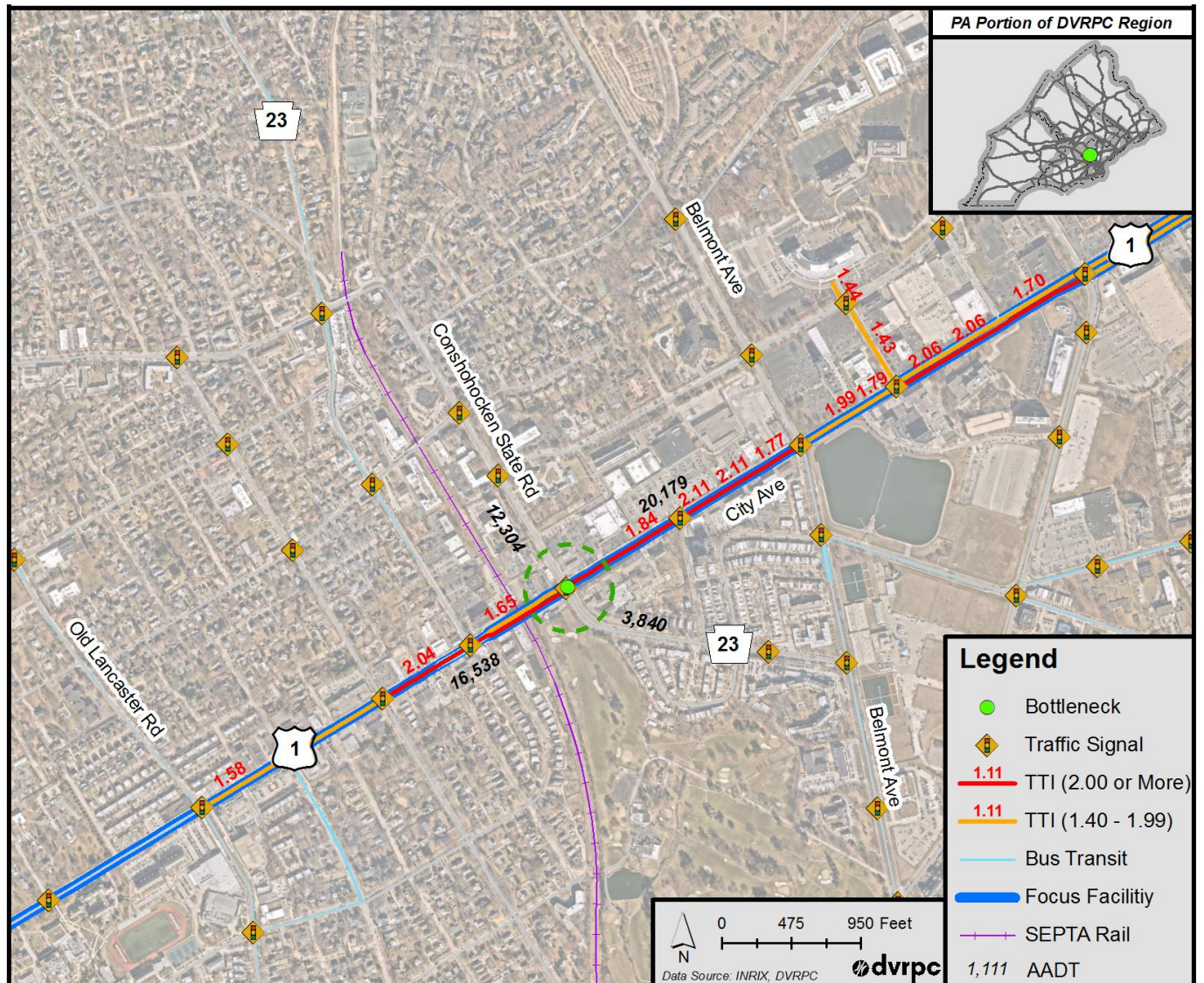
Philmont Ave @ Pine Rd, Lower Moreland Twp, Montgomery County, PA





**Figure 80: Bottleneck 152**

US 1 (City Ave) @ PA 23 (Conshohocken State Rd), Lower Merion Twp, Montgomery County and West Park Philadelphia County, PA

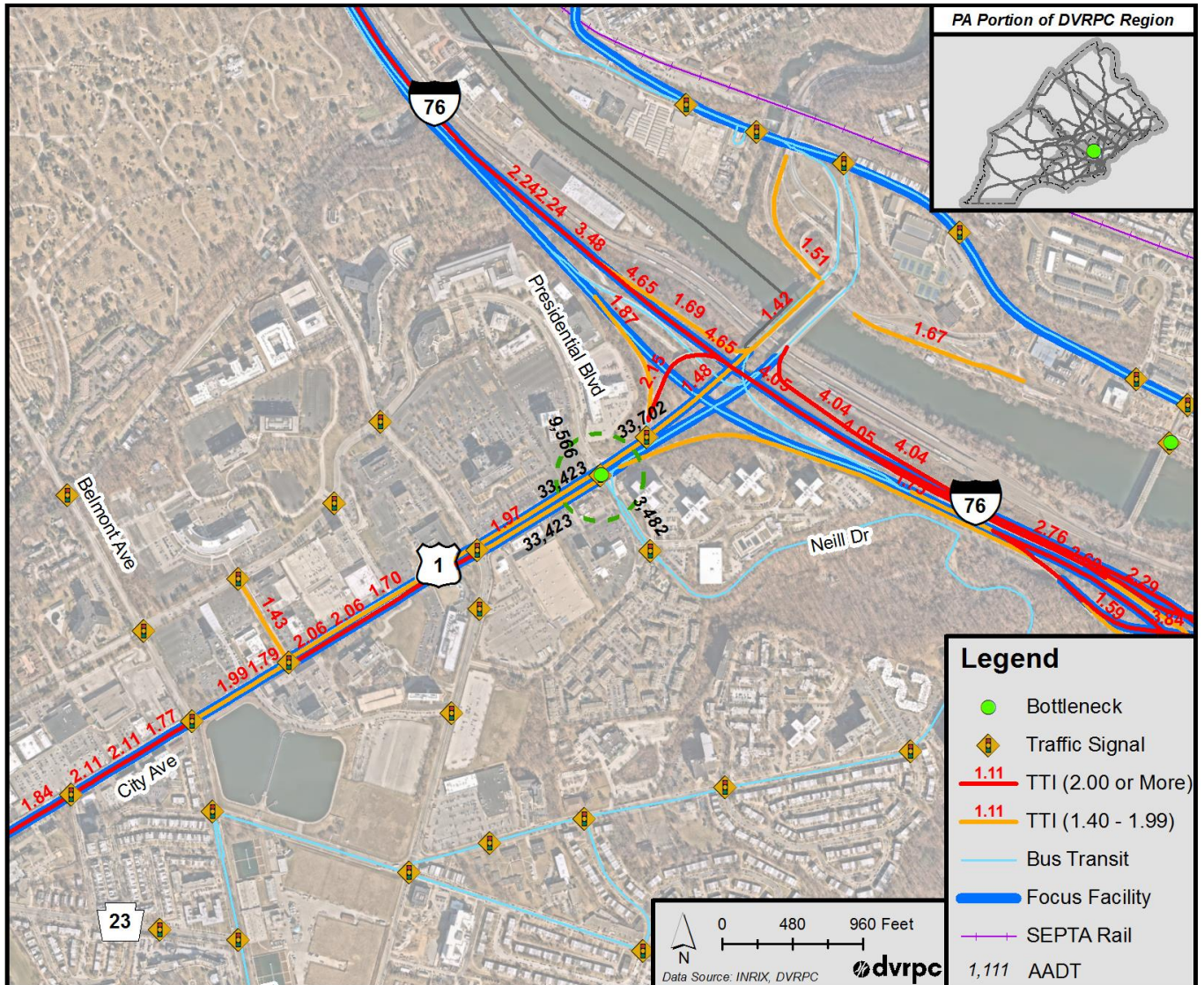


<p><b>Summary of Conditions</b></p> <p>The signalized intersection at US 1 (City Ave) and PA 23 (Conshohocken State Rd) occurs along a shared boundary between Lower Merion Township, Montgomery County and North East Planning District in Philadelphia County. It includes four roadway approaches and is ranked #11 and #3 in peak travel time vehicle and volume delay, respectively. US 1 is classified as a principal arterial roadway, and PA 23 as a principal arterial roadway north of the intersection and a minor arterial south of the intersection. The US 1 eastbound and westbound approaches to the intersection experience the highest congestion, and an adaptive signal system is operating along US 1 (City Ave).</p>	<p><b>Congestion Measures</b></p> <table border="1"> <tr><td>TT AM Peak Vehicle Delay (sec):</td><td>85.6</td></tr> <tr><td>TT PM Peak Vehicle Delay (sec):</td><td>169.1</td></tr> <tr><td>TT AM Peak Volume Delay (hr):</td><td>35:41:46</td></tr> <tr><td>TT PM Peak Volume Delay (hr):</td><td>87:56:33</td></tr> <tr><td>Level of Travel Time Reliability (mi):</td><td>0.35</td></tr> <tr><td>Peak Hour Excessive Delay (per mi):</td><td>53,537</td></tr> <tr><td>TDM Forecasted Congestion (mi):</td><td>0.47</td></tr> </table>	TT AM Peak Vehicle Delay (sec):	85.6	TT PM Peak Vehicle Delay (sec):	169.1	TT AM Peak Volume Delay (hr):	35:41:46	TT PM Peak Volume Delay (hr):	87:56:33	Level of Travel Time Reliability (mi):	0.35	Peak Hour Excessive Delay (per mi):	53,537	TDM Forecasted Congestion (mi):	0.47						
TT AM Peak Vehicle Delay (sec):	85.6																				
TT PM Peak Vehicle Delay (sec):	169.1																				
TT AM Peak Volume Delay (hr):	35:41:46																				
TT PM Peak Volume Delay (hr):	87:56:33																				
Level of Travel Time Reliability (mi):	0.35																				
Peak Hour Excessive Delay (per mi):	53,537																				
TDM Forecasted Congestion (mi):	0.47																				
<p><b>Planned Improvements on 2050 LRP &amp; FY 2023-26 TIP</b></p> <ul style="list-style-type: none"> <li>* 2050 LRP: No projects</li> <li>* FY 2023-26 TIP: No projects</li> </ul>	<p><b>Additional Factors</b></p> <table border="1"> <tr><td>Peak Hour Approach Volume:</td><td>5,040</td></tr> <tr><td>Intersection Legs Included in Delay:</td><td>4/4</td></tr> <tr><td>National Highway System:</td><td>Yes</td></tr> <tr><td>CMP High Crash Frequency (mi):</td><td>0.00</td></tr> <tr><td>CMP High Crash Severity (mi):</td><td>0.27</td></tr> <tr><td>Transit Route:</td><td>Yes</td></tr> <tr><td>Traffic Signal Type:</td><td>Adaptive</td></tr> <tr><td>Focus Roadway Facility:</td><td>40</td></tr> <tr><td>Corridor and Subcorridor Area:</td><td>5F; 7A; 7B</td></tr> <tr><td>CMP Objectives Score:</td><td>8.49</td></tr> </table>	Peak Hour Approach Volume:	5,040	Intersection Legs Included in Delay:	4/4	National Highway System:	Yes	CMP High Crash Frequency (mi):	0.00	CMP High Crash Severity (mi):	0.27	Transit Route:	Yes	Traffic Signal Type:	Adaptive	Focus Roadway Facility:	40	Corridor and Subcorridor Area:	5F; 7A; 7B	CMP Objectives Score:	8.49
Peak Hour Approach Volume:	5,040																				
Intersection Legs Included in Delay:	4/4																				
National Highway System:	Yes																				
CMP High Crash Frequency (mi):	0.00																				
CMP High Crash Severity (mi):	0.27																				
Transit Route:	Yes																				
Traffic Signal Type:	Adaptive																				
Focus Roadway Facility:	40																				
Corridor and Subcorridor Area:	5F; 7A; 7B																				
CMP Objectives Score:	8.49																				
<p><b>Very Appropriate Strategies</b></p> <ol style="list-style-type: none"> <li>1) <i>Signal Improvements</i></li> <li>2) <i>Integrated Corridor Management (ICM)</i></li> <li>3) Enhanced Transit Amenities and Safety</li> <li>4) Turning Movement Enhancements</li> <li>5) Improvements to Pedestrian and Bicycle Access to Transit Stations and Bus Stops</li> <li>6) More Frequent Transit or More Hours of Service</li> </ol>																					

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 81: Bottleneck 153**

US 1 (City Ave) @ Presidential Blvd, Lower Merion Twp, Montgomery County and West Park Philadelphia County, PA



**Summary of Conditions**  
 The signalized intersection at US 1 (City Ave) and Presidential Blvd occurs along a shared boundary between Lower Merion Township, Montgomery County and North East Planning District in Philadelphia County. It includes four roadway approaches and is ranked #19 and #4 in peak travel time vehicle and volume delay, respectively. US 1 is classified as a principal arterial roadway, and Presidential Blvd as a collector roadway. The US 1 eastbound and westbound approaches to the intersection experience the highest congestion, and an adaptive signal system is operating along US 1 (City Ave).

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	80.4
TT PM Peak Vehicle Delay (sec):	144.8
TT AM Peak Volume Delay (hr):	39:48:28
TT PM Peak Volume Delay (hr):	86:43:46
Level of Travel Time Reliability (mi):	0.35
Peak Hour Excessive Delay (per mi):	58,576
TDM Forecasted Congestion (mi):	0.55

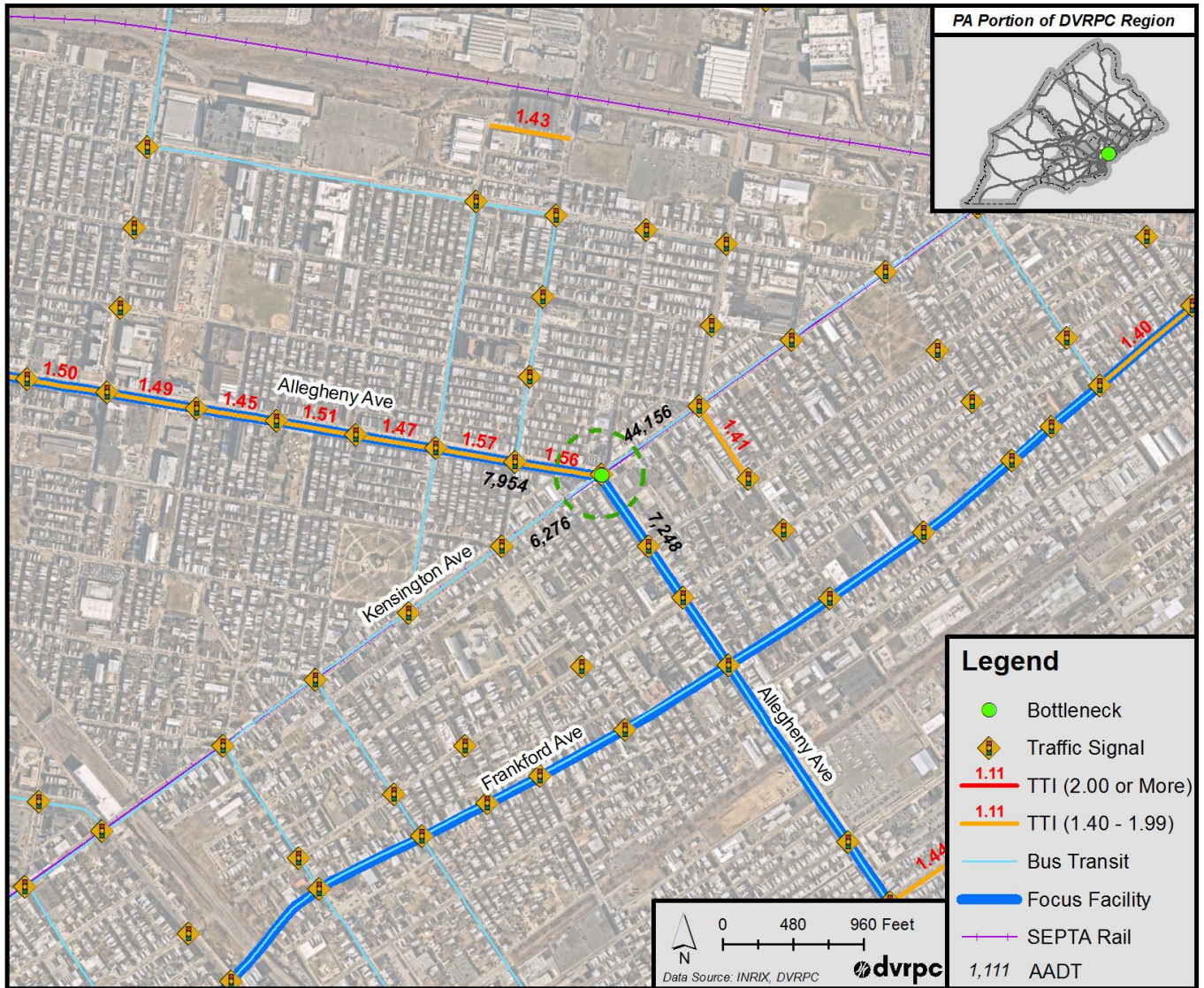
**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2023-26 TIP: No projects

Additional Factors	
Peak Hour Approach Volume:	7,216
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.62
Transit Route:	Yes
Traffic Signal Type:	Adaptive
Focus Roadway Facility:	40
Corridor and Subcorridor Area:	5F; 7A; 7B
CMP Objectives Score:	9.10

- Very Appropriate Strategies**
- 1) *Signal Improvements*
  - 2) *Integrated Corridor Management (ICM)*
  - 3) Enhanced Transit Amenities and Safety
  - 4) Turning Movement Enhancements
  - 5) Improvements to Pedestrian and Bicycle Access to Transit Stations and Bus Stops
  - 6) More Frequent Transit or More Hours of Service

Recently implemented or partially implemented strategies are listed first and italicized

**Figure 82: Bottleneck 151**  
 Allegheny Ave @ Kensington Ave, North Philadelphia County, PA



**Summary of Conditions**  
 The signalized intersection at Allegheny Ave and Kensington Ave in Philadelphia is ranked #5 and #49 in peak travel time vehicle and volume delay, respectively. Kensington Ave is classified as a principal arterial roadway and Allegheny Ave as a minor arterial. The Allegheny Ave eastbound approach to the intersection experiences the most delay. The Market Frankford Line Allegheny Station is located at the southwest corner of the intersection.

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	45.0
TT PM Peak Vehicle Delay (sec):	207.6
TT AM Peak Volume Delay (hr):	5:40:47
TT PM Peak Volume Delay (hr):	29:43:07
Level of Travel Time Reliability (mi):	0.00
Peak Hour Excessive Delay (per mi):	12,055
TDM Forecasted Congestion (mi):	0.44

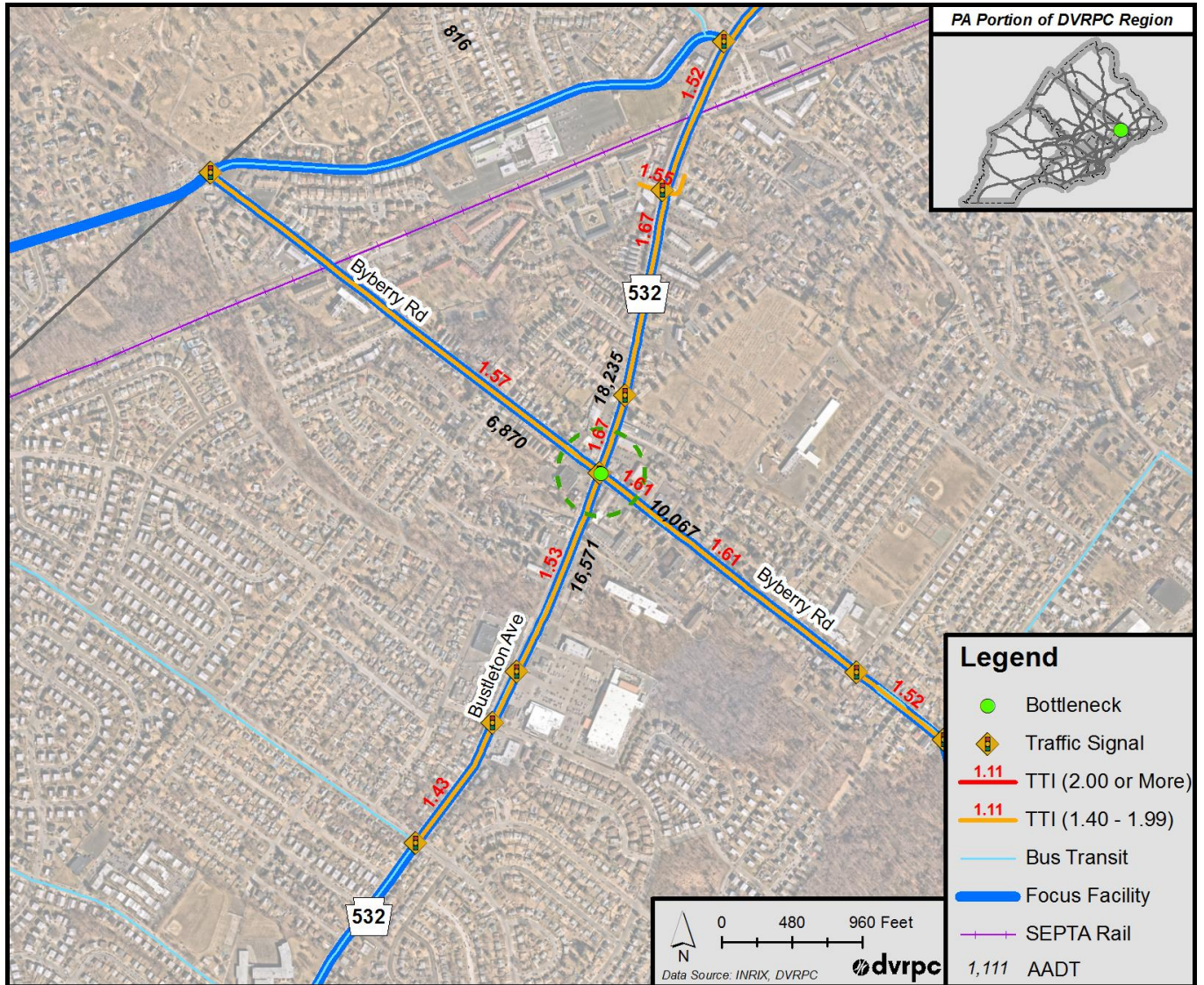
**Planned Improvements on 2050 LRP & FY 2023-26 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2023-26 TIP: No projects

Additional Factors	
Peak Hour Approach Volume:	2,307
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	1.18
CMP High Crash Severity (mi):	1.71
Transit Route:	Yes
Traffic Signal Type:	Pre-Timed
Focus Roadway Facility:	204
Corridor and Subcorridor Area:	4B; 14A
CMP Objectives Score:	7.97

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Turning Movement Enhancements
  - 3) Transit Infrastructure Improvements
  - 4) Modification to Existing Routes or Services
  - 5) Walking and Bicycling Improvements
  - 6) Placemaking for Non-Motorized Transportation

**Figure 83: Bottleneck 138**

PA 532 (Bustleton Ave) @ Byberry Rd, Upper Far Northeast Philadelphia County, PA



**Summary of Conditions**

The signalized intersection at PA 532 (Bustleton Ave) and Byberry Rd in Philadelphia is ranked #4 and #5 in peak travel time vehicle and volume delay, respectively. PA 532 is classified as a principal arterial roadway and Byberry Rd as a minor arterial. The West Trenton Line passenger rail Forest Hills and Somerton stations are about one-half mile west and north, respectively, of the intersection.

**Congestion Measures**

TT AM Peak Vehicle Delay (sec):	100.6
TT PM Peak Vehicle Delay (sec):	242.0
TT AM Peak Volume Delay (hr):	20:56:17
TT PM Peak Volume Delay (hr):	77:45:59
Level of Travel Time Reliability (mi):	1.36
Peak Hour Excessive Delay (per mi):	35,564
TDM Forecasted Congestion (mi):	1.23

**Planned Improvements on 2050 LRP & FY 2023-26 TIP**

- \* 2050 LRP: No projects
- \* FY 2023-26 TIP: No projects

**Additional Factors**

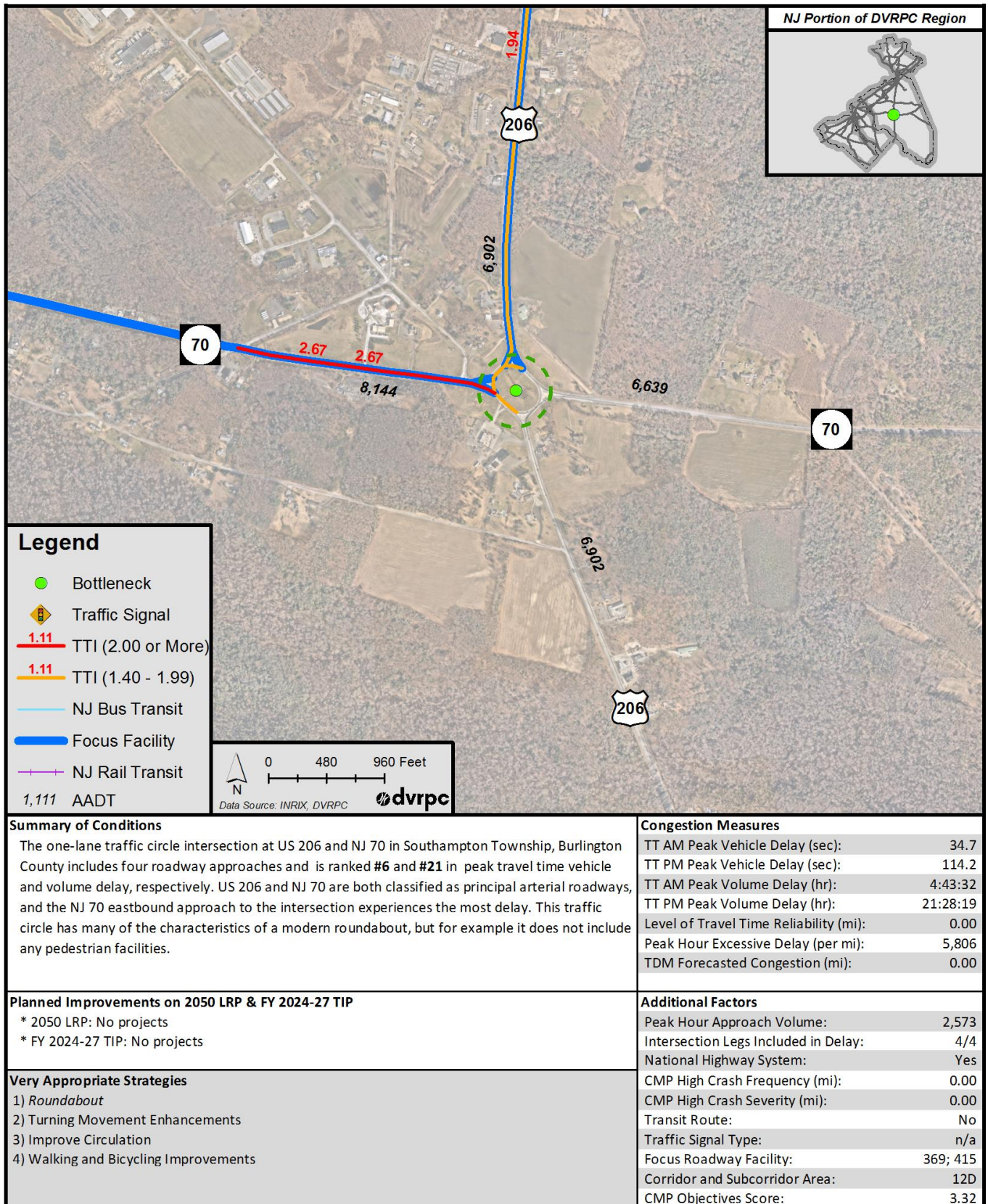
Peak Hour Approach Volume:	4,657
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.53
Transit Route:	Yes
Traffic Signal Type:	Coordinated
Focus Roadway Facility:	190; 200
Corridor and Subcorridor Area:	12A
CMP Objectives Score:	7.68

**Very Appropriate Strategies**

- 1) Signal Improvements
- 2) Transit Infrastructure Improvements
- 3) Walking and Bicycling Improvements
- 4) Parking Supply-and-Demand Management
- 5) Shuttle Service to Stations
- 6) Demand Response Transit Services (Microtransit)

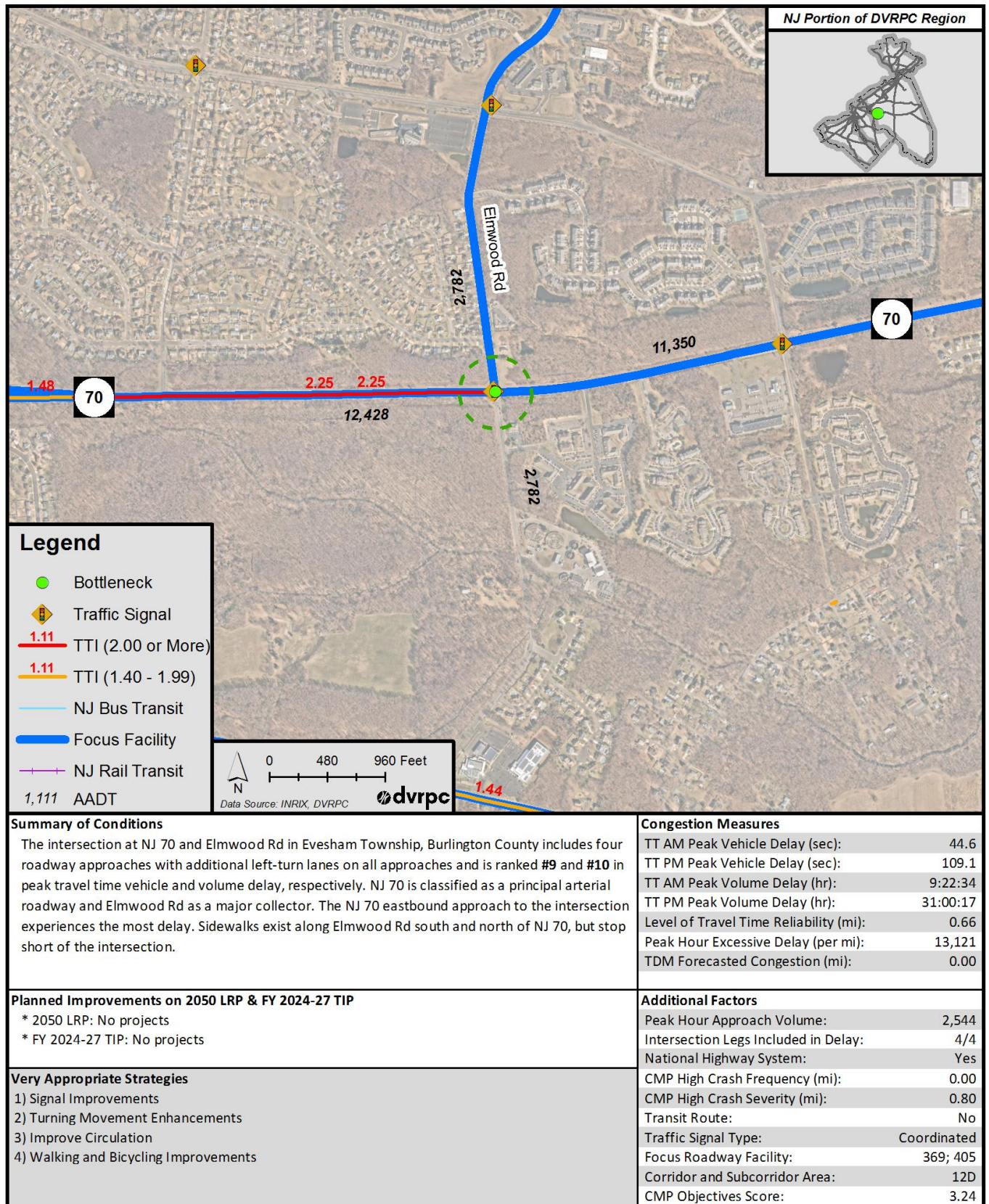
### Figure 84: Bottleneck 375

US 206 @ NJ 70, Southampton Twp, Burlington County, NJ



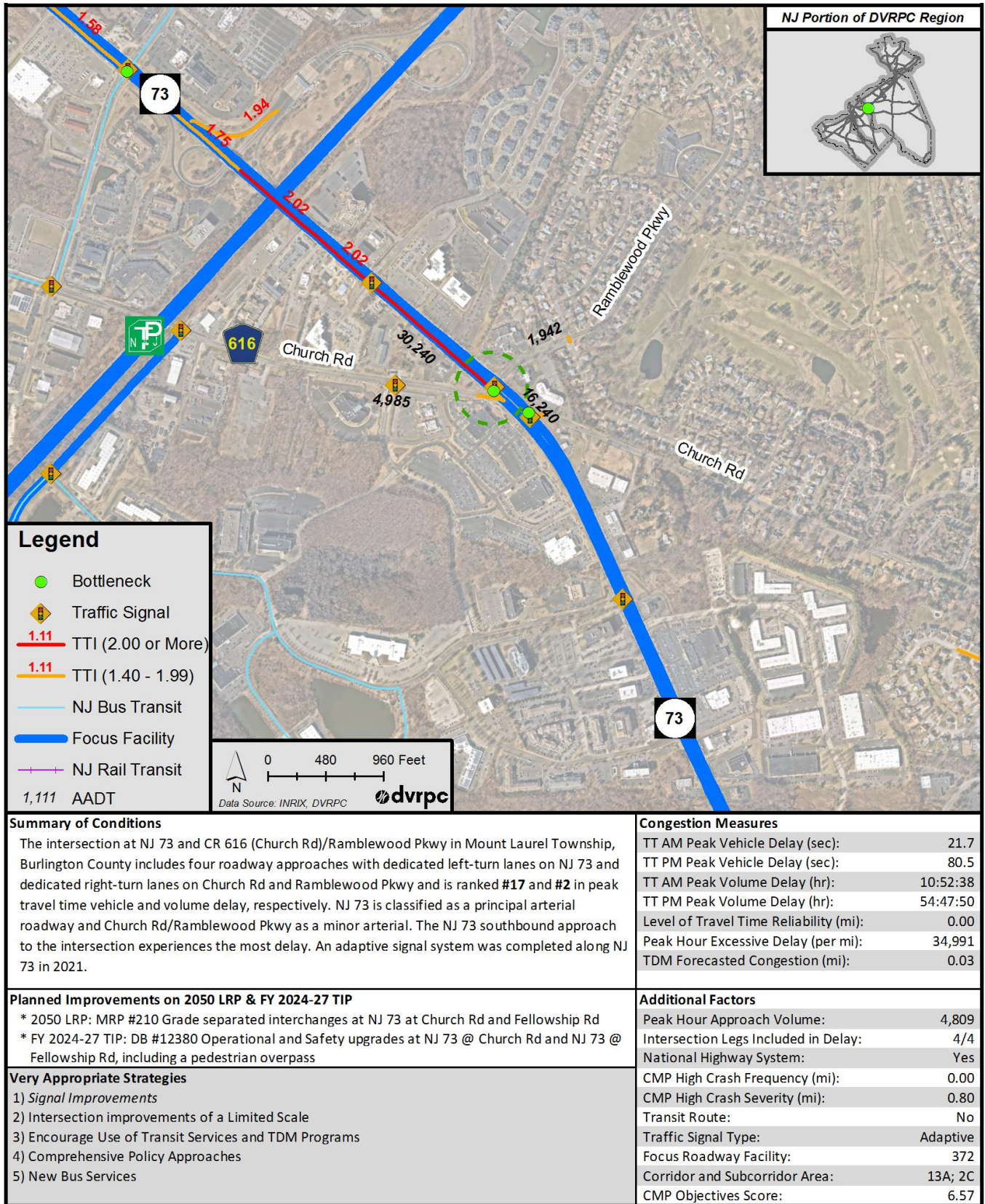
Recently implemented or partially implemented strategies are listed first and italicized

**Figure 85: Bottleneck 310**  
 NJ 70 @ Elmwood Rd, Evesham Twp, Burlington County, NJ



**Figure 86: Bottleneck 388**

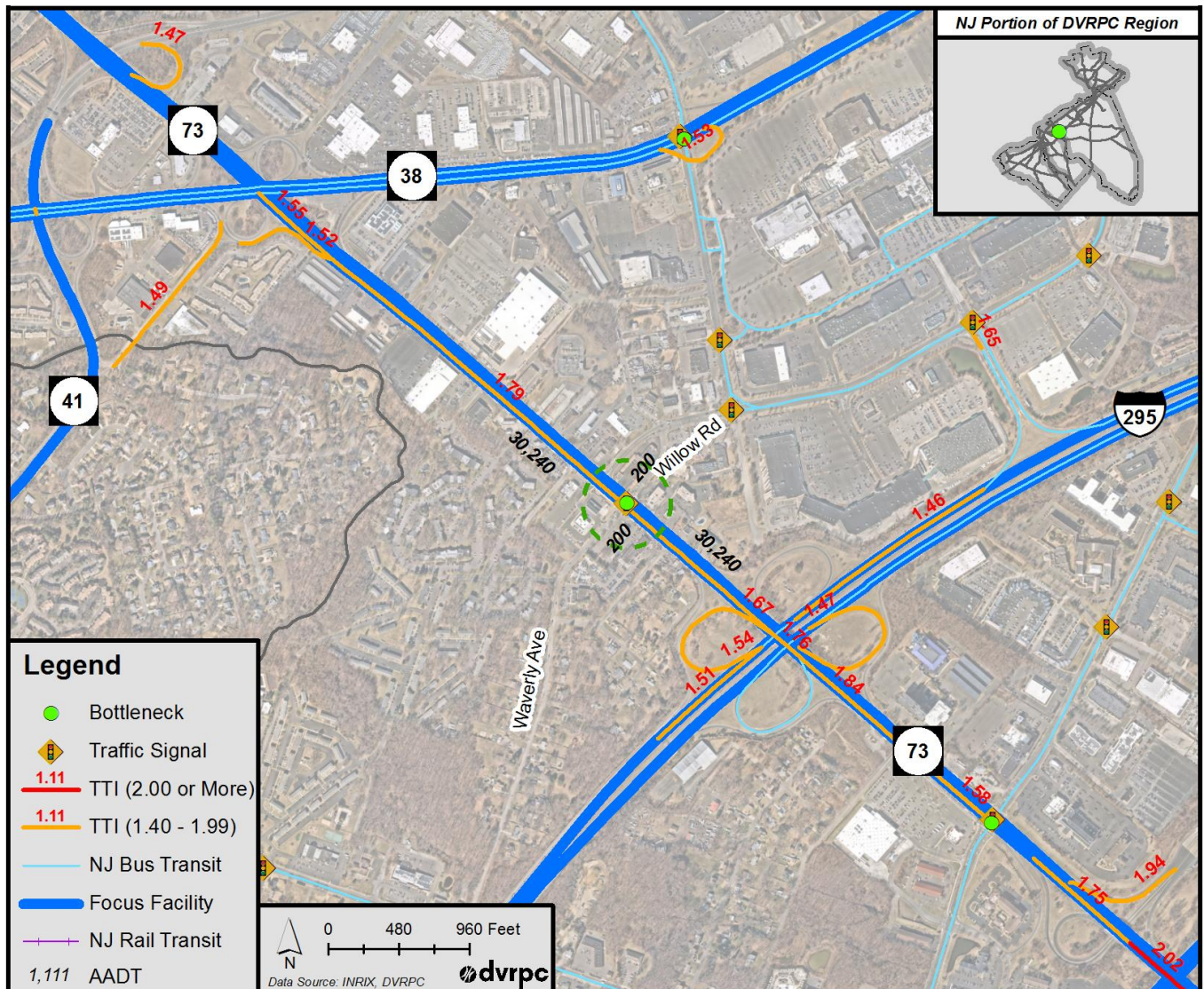
NJ 73 @ Church Rd/Ramblewood Pkwy, Mount Laurel Twp, Burlington County, NJ



Recently implemented or partially implemented strategies are listed first and italicized

**Figure 87: Bottleneck 308**

NJ 73 @ Waverly Ave/Willow Rd, Maple Shade Twp, Burlington County, NJ



**Summary of Conditions**  
 The intersection at NJ 73 and Waverly Ave/Willow Rd in Maple Shade Township, Burlington County includes four roadway approaches with dedicated left- and right-turn lanes on Waverly Ave and Willow Rd approaches and prohibited left- or right-turns on NJ 73 approaches, and is ranked #46 and #6 in peak travel time vehicle and volume delay, respectively. NJ 73 is classified as a principal arterial roadway and Waverly Ave and Willow Rd as local roads. The NJ 73 southbound approach to the intersection experiences the most delay, and an adaptive signal system was completed along NJ 73 including at this location in 2021.

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	3.0
TT PM Peak Vehicle Delay (sec):	53.9
TT AM Peak Volume Delay (hr):	1:43:07
TT PM Peak Volume Delay (hr):	40:26:09
Level of Travel Time Reliability (mi):	0.60
Peak Hour Excessive Delay (per mi):	20,655
TDM Forecasted Congestion (mi):	0.00

**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: No projects  
 \* FY 2024-27 TIP: DB #18383 Improvement of safety, security, mobility, accessibility, and reliability

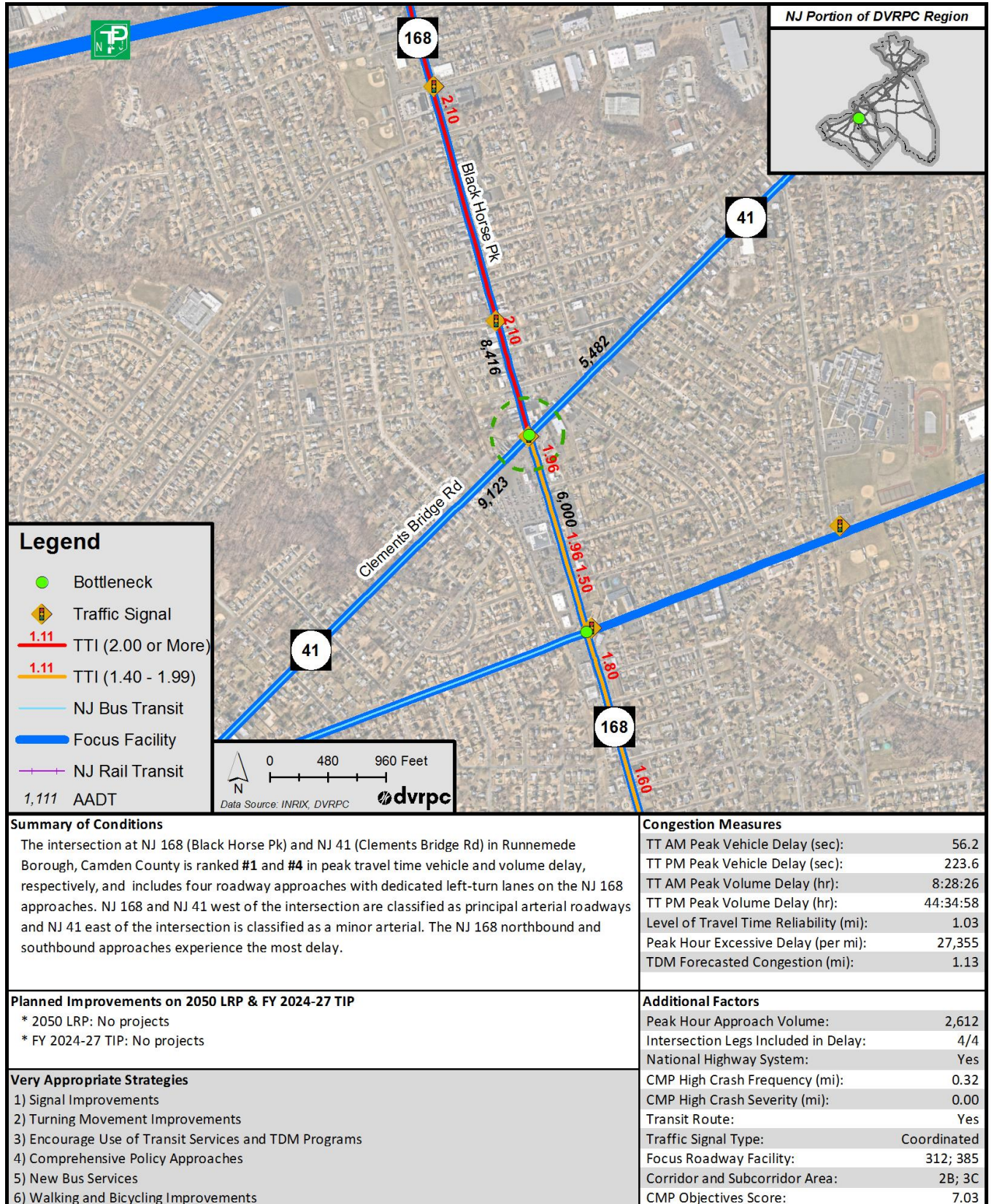
Additional Factors	
Peak Hour Approach Volume:	5,479
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.00
Transit Route:	No
Traffic Signal Type:	Adaptive
Focus Roadway Facility:	371
Corridor and Subcorridor Area:	13A
CMP Objectives Score:	6.63

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Modifications to Existing Transit Routes or Services
  - 3) Encourage Use of Transit Services and TDM Programs
  - 4) Comprehensive Policy Approaches
  - 5) New Bus Services
  - 6) Walking and Bicycling Improvements



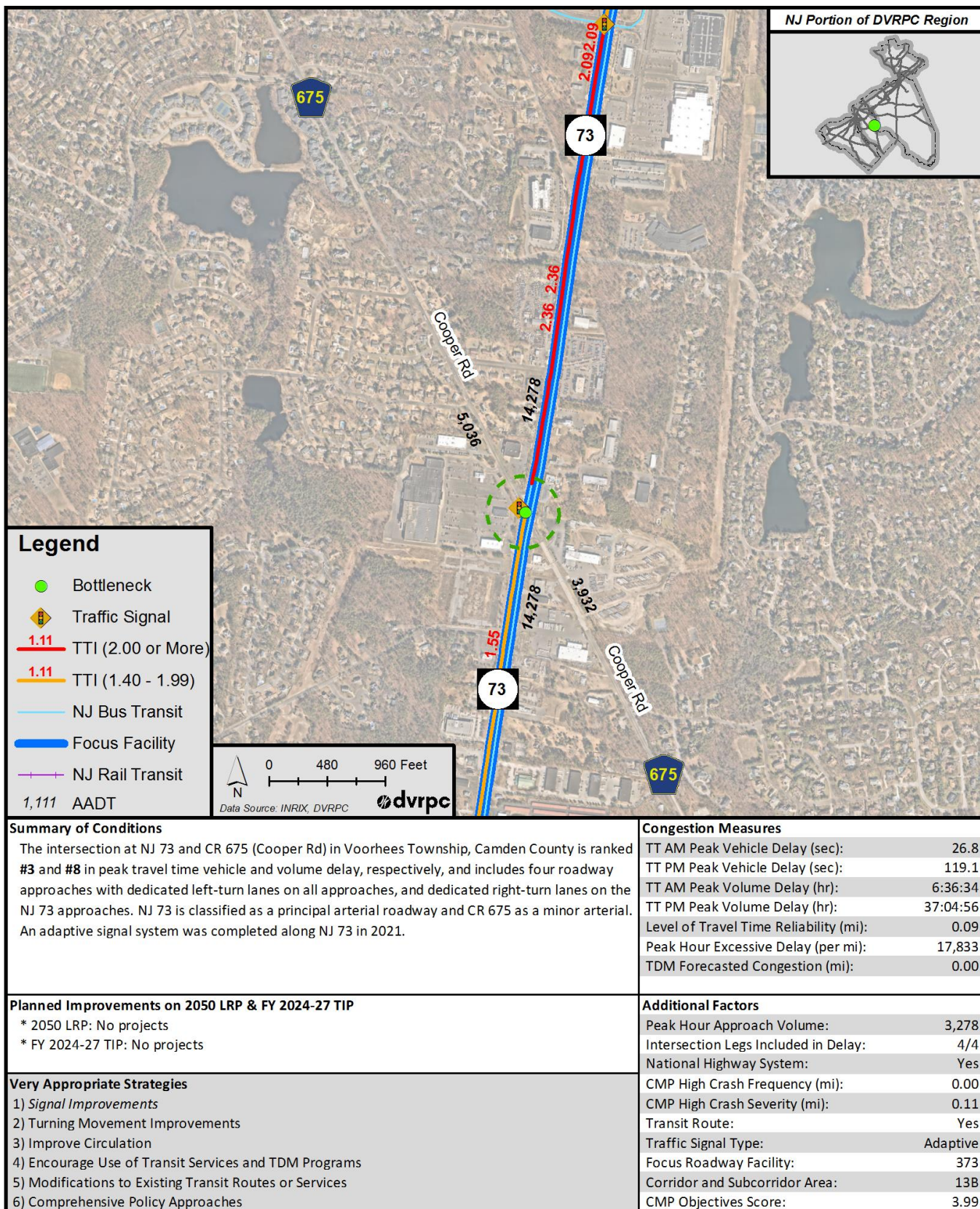
**Figure 88: Bottleneck 402**

NJ 168 (Black Horse Pk) @ NJ 41 (Clements Bridge Rd), Runnemede Borough, Camden County, NJ



**Figure 89: Bottleneck 369**

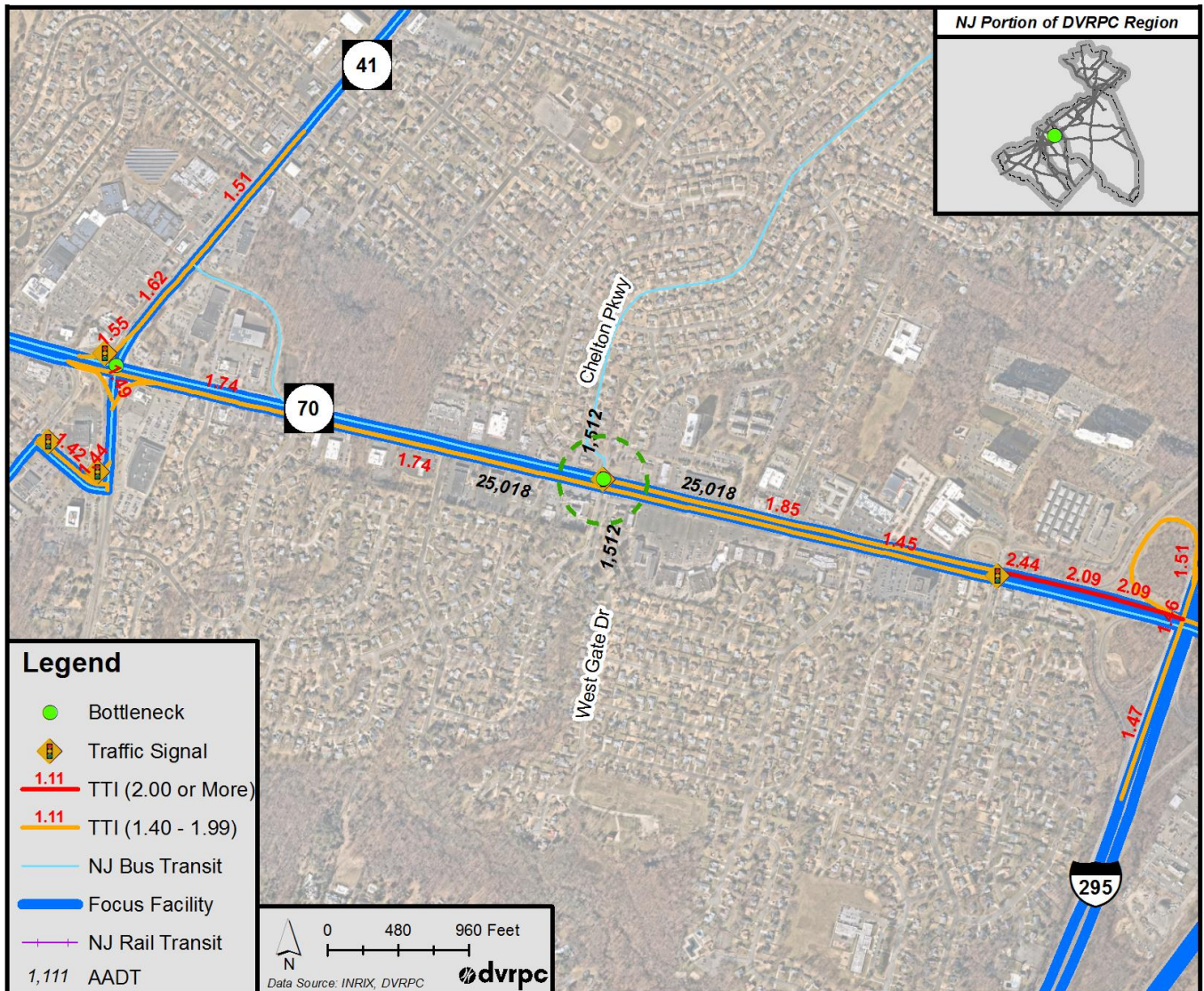
NJ 73 @ CR 675 (Cooper Rd), Voorhees Twp, Camden County, NJ



Recently implemented or partially implemented strategies are listed first and italicized

**Figure 90: Bottleneck 340**

NJ 70 @ Chelton Pkwy/West Gate Dr, Cherry Hill Twp, Camden County, NJ



**Summary of Conditions**  
 The intersection at NJ 70 and Chelton Pkwy/West Gate Dr in Cherry Hill Township, Camden County is ranked #5 and #1 in peak travel time vehicle and volume delay, respectively, and includes four roadway approaches with dedicated left-turn lanes on all approaches. NJ 73 is classified as a principal arterial roadway that is a divided roadway and includes two travel lanes in each direction. Chelton Pkwy is classified as a local roadway and Gates Dr as a major collector and both include one lane in each direction. The intersection is part of TIP project DB# 11338 (FY 2020-23), which consists of milling, resurfacing, and reconstructing NJ 70 from NJ 38 to Cooper Ave.

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	45.0
TT PM Peak Vehicle Delay (sec):	118.6
TT AM Peak Volume Delay (hr):	23:35:41
TT PM Peak Volume Delay (hr):	78:10:15
Level of Travel Time Reliability (mi):	1.16
Peak Hour Excessive Delay (per mi):	50,830
TDM Forecasted Congestion (mi):	0.59

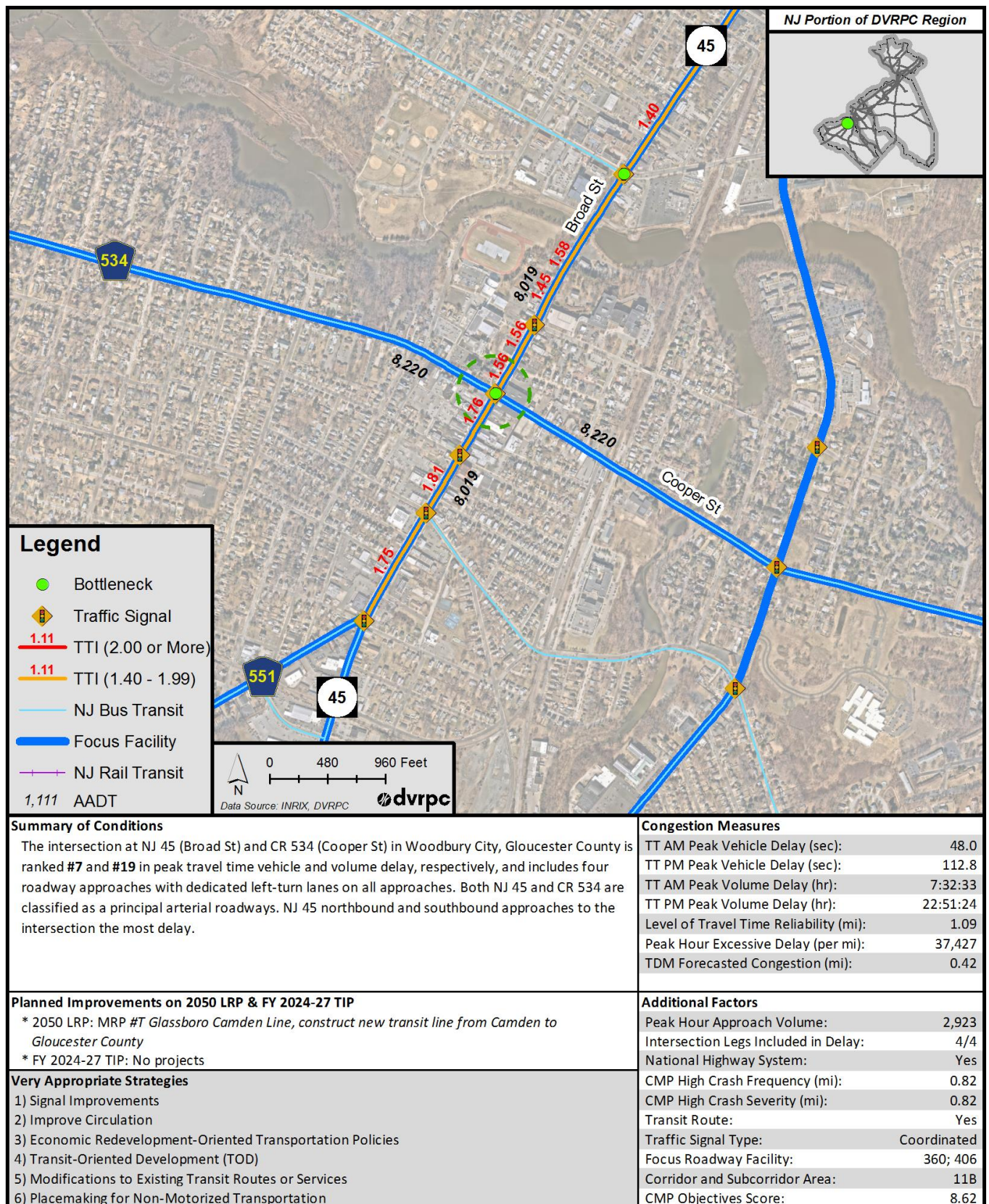
**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP # 93 NJ 70 Corridor and Intersection Improvements  
 \* FY 2024-27 TIP: No projects

Additional Factors	
Peak Hour Approach Volume:	4,775
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.00
Transit Route:	Yes
Traffic Signal Type:	Coordinated
Focus Roadway Facility:	367
Corridor and Subcorridor Area:	12B
CMP Objectives Score:	8.44

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Turning Movement Improvements
  - 3) Encourage Use of Transit Services and TDM Programs
  - 4) Modifications to Existing Transit Routes or Services
  - 5) Walking and Bicycling Improvements
  - 6) Comprehensive Policy Approaches

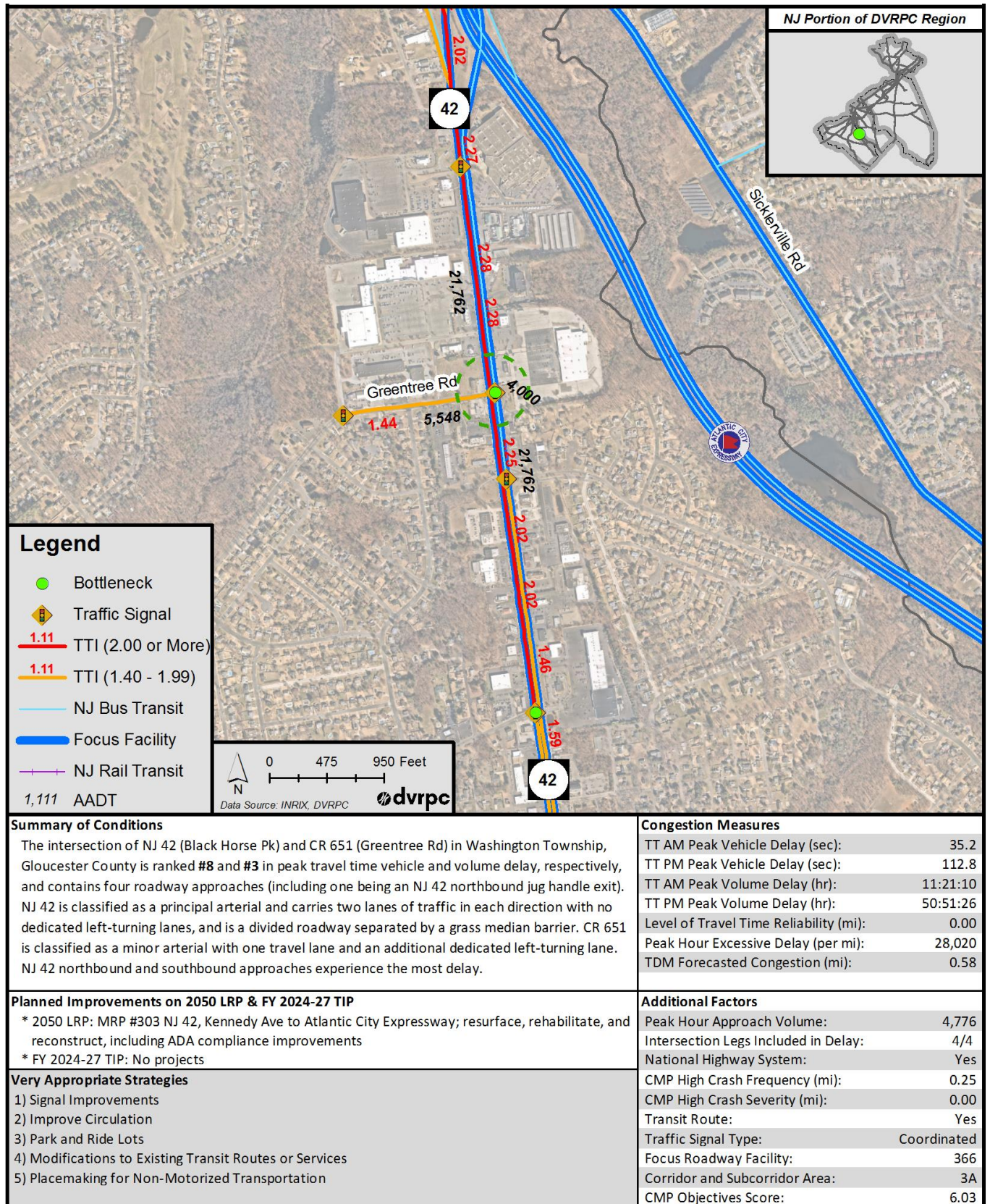
**Figure 91: Bottleneck 396**

NJ 45 (Broad St) @ CR 534 (Cooper St), Woodbury City, Gloucester County, NJ



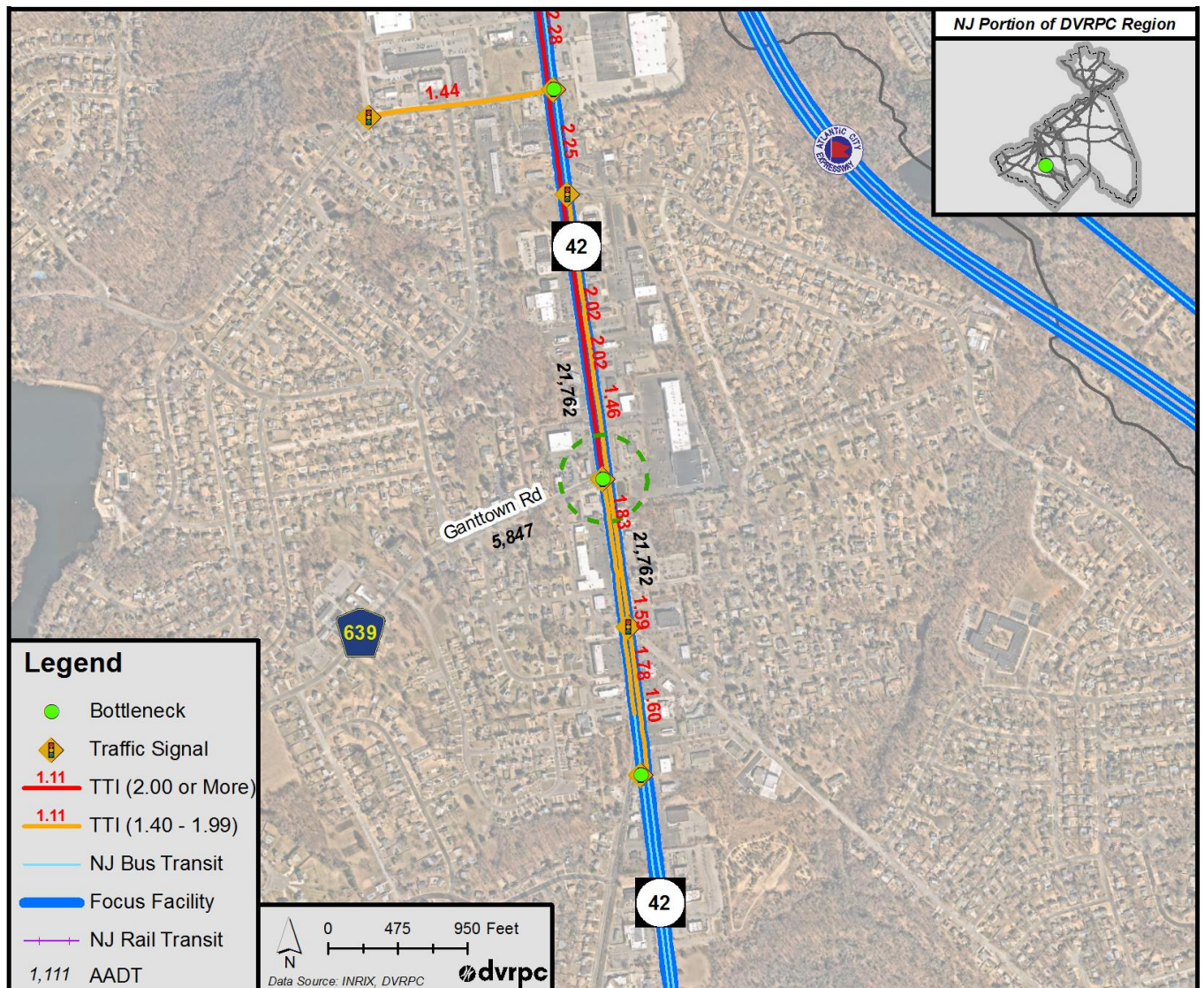
**Figure 92: Bottleneck 411**

NJ 42 (Black Horse Pk) @ CR 651 (Greentree Rd), Washington Twp, Gloucester County, NJ



**Figure 93: Bottleneck 408**

NJ 42 (Black Horse Pk) @ CR 639 (Ganttown Rd), Washington Twp, Gloucester County, NJ



**Summary of Conditions**  
 The intersection of NJ 42 (Black Horse Pk) and CR 639 (Ganttown Rd) in Washington Township, Gloucester County is ranked #13 and #5 in peak travel time vehicle and volume delay, respectively, and contains four roadway approaches with additional dedicated left- and right-turning lanes on all approaches (except the westbound approach which contains just a dedicated left-turning lane). NJ 42 is classified as a principal arterial and carries two traffic lanes in each direction, and CR 639 is a minor arterial with one lane of traffic in one direction and terminates at the intersection. The westbound approach to the intersection is driveway from the Ganttown Square Shopping Mall.

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	18.4
TT PM Peak Vehicle Delay (sec):	87.5
TT AM Peak Volume Delay (hr):	7:23:19
TT PM Peak Volume Delay (hr):	41:23:46
Level of Travel Time Reliability (mi):	0.00
Peak Hour Excessive Delay (per mi):	36,488
TDM Forecasted Congestion (mi):	0.14

**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #303 NJ 42, Kennedy Ave to Atlantic City Expressway; resurface, rehabilitate, and reconstruct, including ADA compliance improvements  
 \* FY 2024-27 TIP: No projects

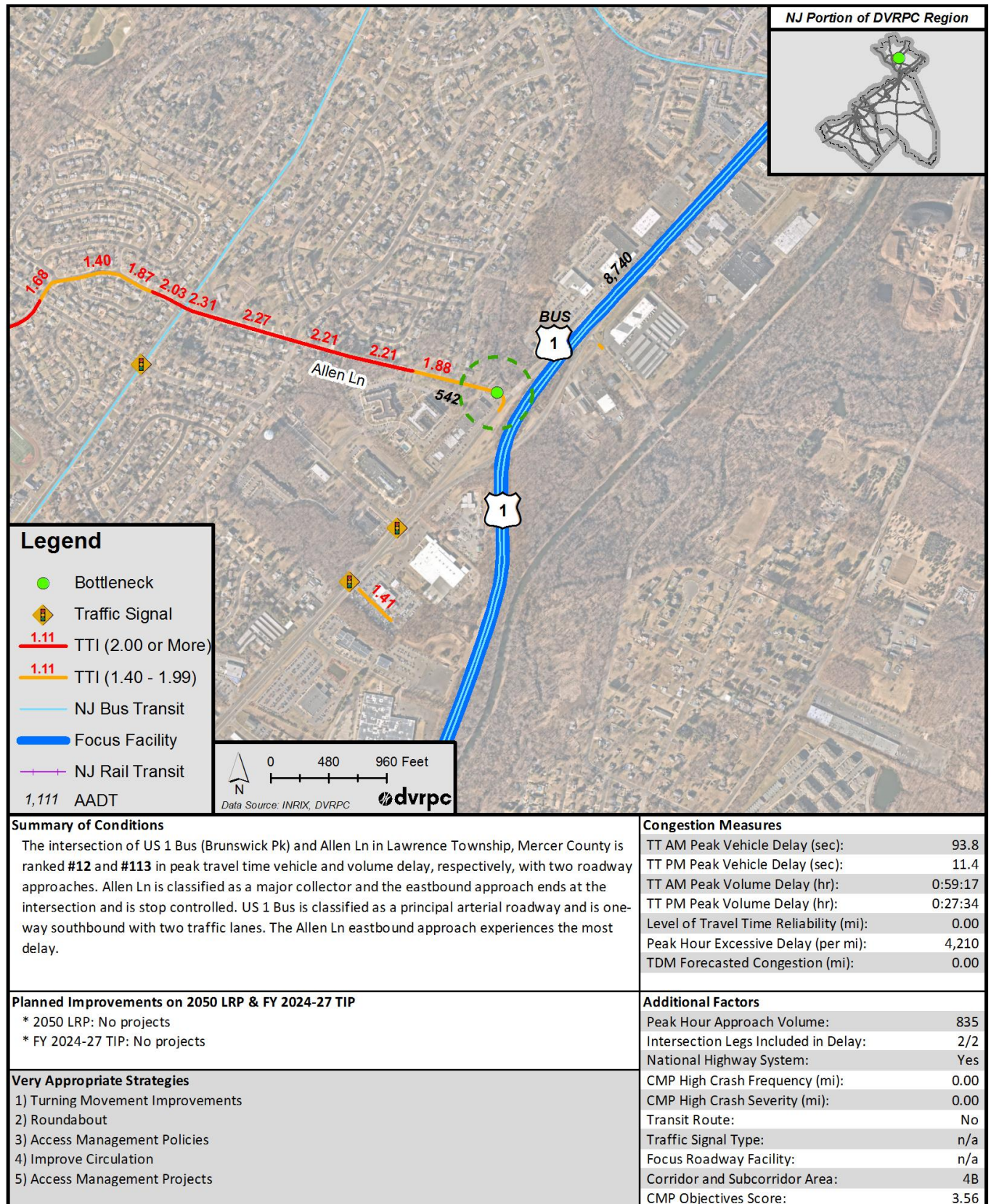
Additional Factors	
Peak Hour Approach Volume:	4,443
Intersection Legs Included in Delay:	3/4
National Highway System:	Yes

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Improve Circulation
  - 3) Park and Ride Lots
  - 4) Modifications to Existing Transit Routes or Services
  - 5) Placemaking for Non-Motorized Transportation

CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.00
Transit Route:	Yes
Traffic Signal Type:	Coordinated
Focus Roadway Facility:	366
Corridor and Subcorridor Area:	3A
CMP Objectives Score:	4.94

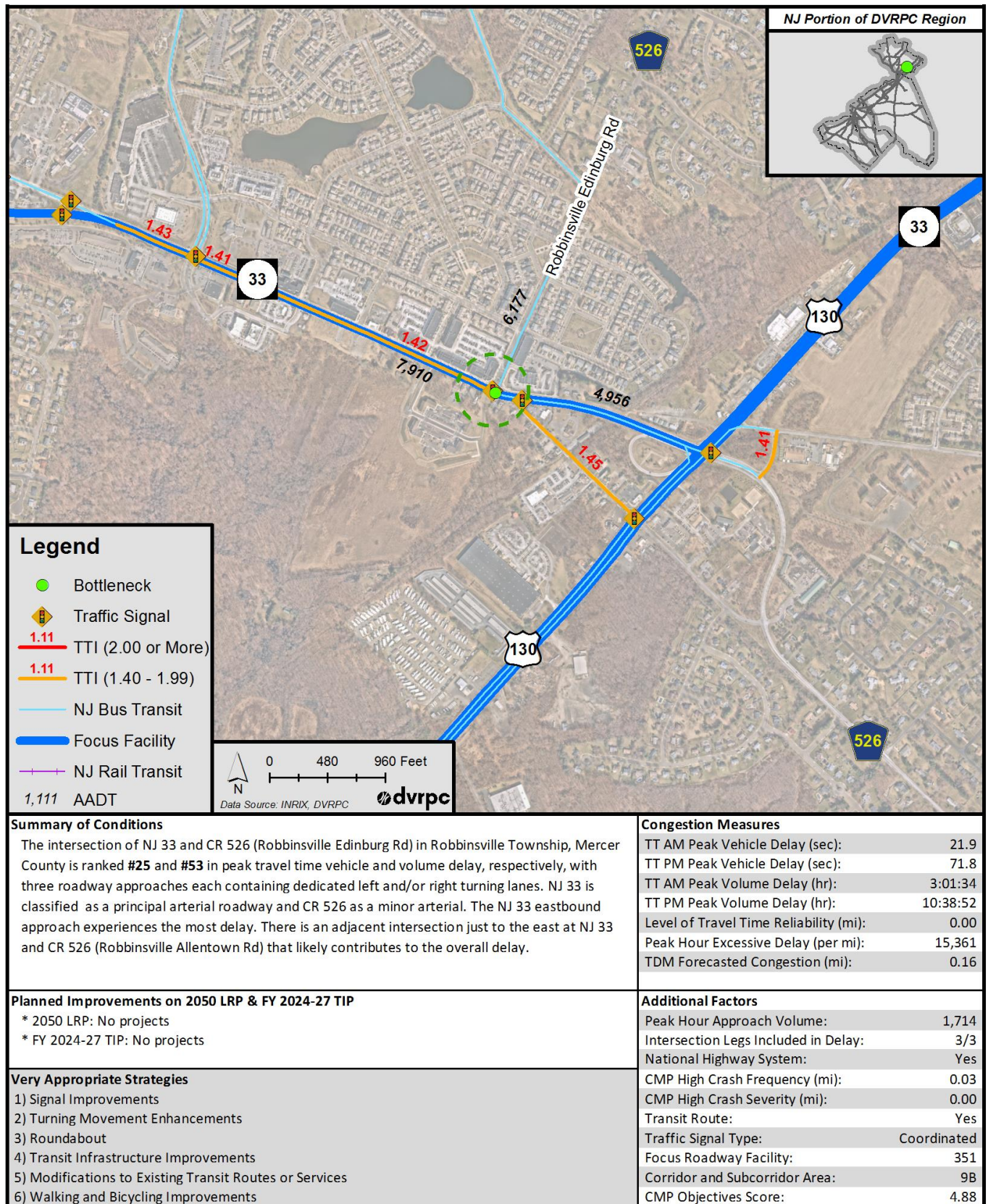
**Figure 94: Bottleneck 361**

US 1 Bus (Brunswick Pk) @ Allen Ln, Lawrence Twp, Mercer County, NJ



**Figure 95: Bottleneck 318**

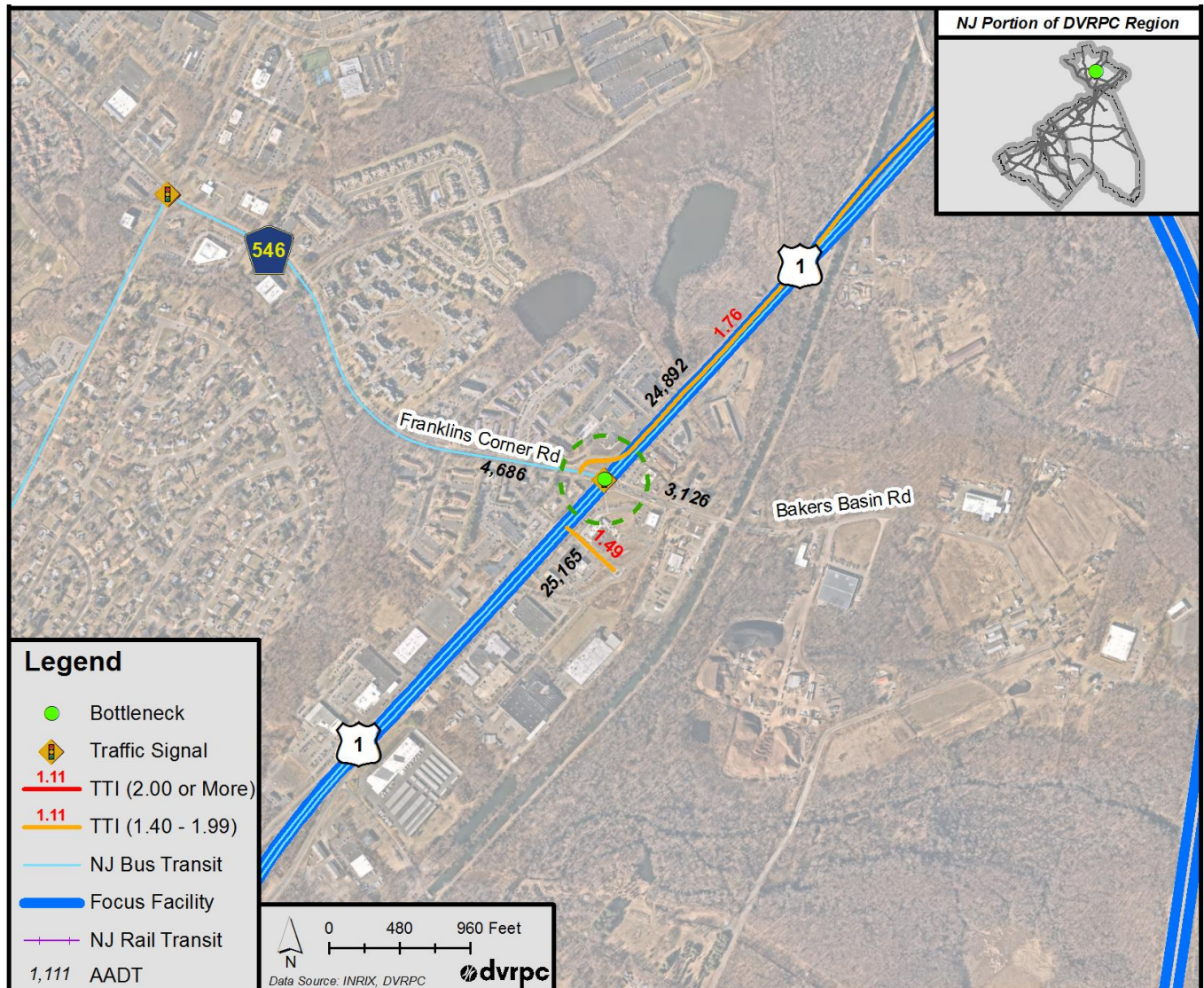
NJ 33 @ CR 526 (Robbinsville Edinburg Rd), Robbinsville Twp, Mercer County, NJ





### Figure 96: Bottleneck 360

US 1 (Brunswick Pk) @ CR 546 (Franklins Corner Rd), Lawrence Twp, Mercer County, NJ



**Summary of Conditions**  
 The intersection of US 1 (Brunswick Pk) and CR 546 (Franklins Corner Rd) in Lawrence Township, Mercer County is ranked #44 and #13 in peak travel time vehicle and volume delay, respectively, and contains four roadway approaches. The US 1 approaches include only through lanes and the CR 546 approaches include both through lane, and dedicated left and/or right turning lanes. US 1 is classified as a principal arterial roadway with jughandle ramp exits before the intersection to facilitate indirect left-turns and/or U-turns at the intersection, and CR 546 is classified as a minor arterial.

Congestion Measures	
TT AM Peak Vehicle Delay (sec):	18.5
TT PM Peak Vehicle Delay (sec):	55.0
TT AM Peak Volume Delay (hr):	4:29:24
TT PM Peak Volume Delay (hr):	27:22:05
Level of Travel Time Reliability (mi):	0.64
Peak Hour Excessive Delay (per mi):	11,590
TDM Forecasted Congestion (mi):	0.73

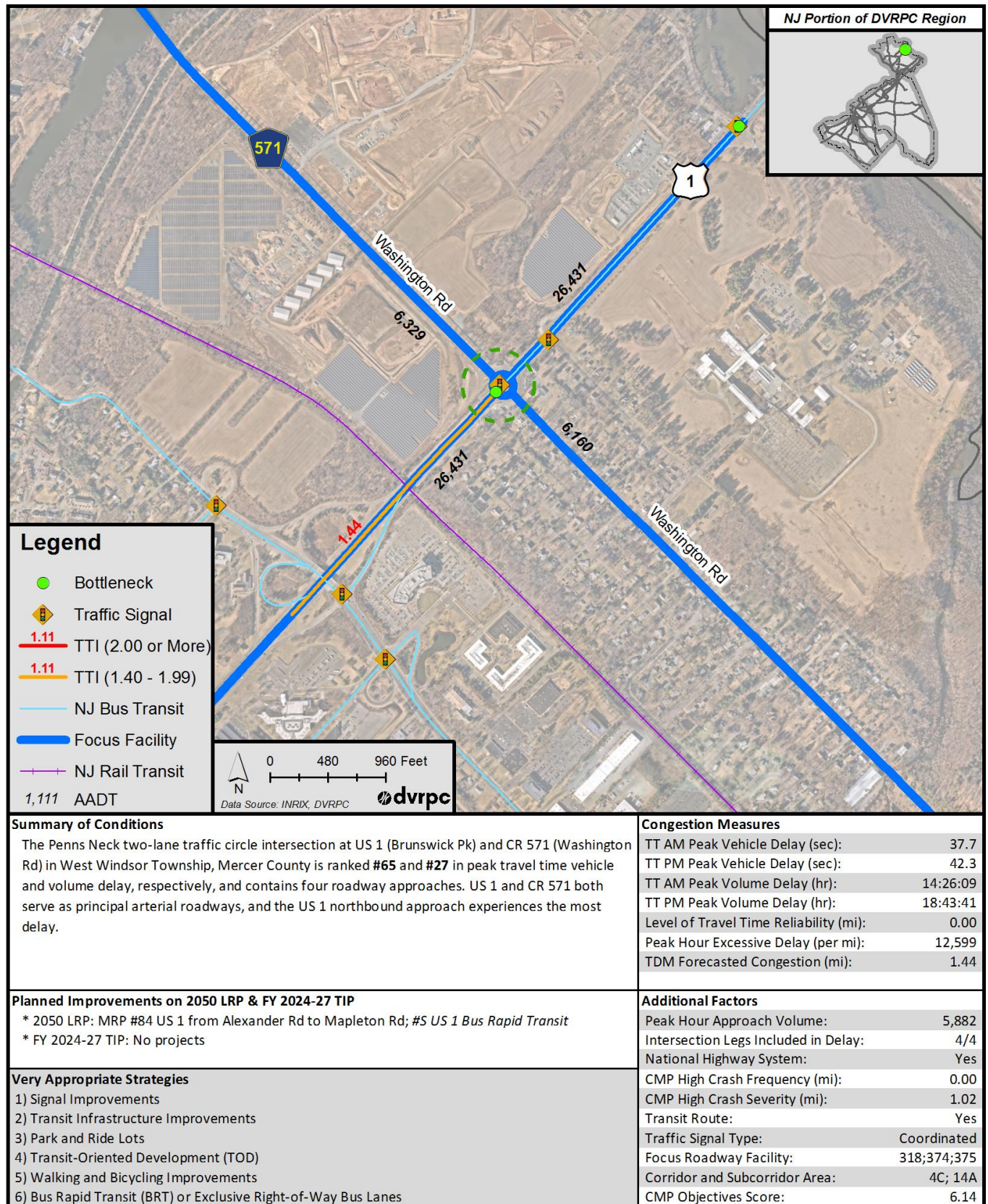
**Planned Improvements on 2050 LRP & FY 2024-27 TIP**  
 \* 2050 LRP: MRP #5 US 1 Bus Rapid Transit, Express bus service serving the US 1 corridor  
 \* FY 2024-27 TIP: No projects

Additional Factors	
Peak Hour Approach Volume:	5,208
Intersection Legs Included in Delay:	4/4
National Highway System:	Yes
CMP High Crash Frequency (mi):	0.00
CMP High Crash Severity (mi):	0.64
Transit Route:	Yes
Traffic Signal Type:	Coordinated
Focus Roadway Facility:	316
Corridor and Subcorridor Area:	4B
CMP Objectives Score:	5.72

- Very Appropriate Strategies**
- 1) Signal Improvements
  - 2) Transit Infrastructure Improvements
  - 3) Park and Ride Lots
  - 4) Transit-Oriented Development (TOD)
  - 5) Walking and Bicycling Improvements
  - 6) Bus Rapid Transit (BRT) or Exclusive Right-of-Way Bus Lanes

**Figure 97: Bottleneck 364**

US 1 (Brunswick Pk) @ CR 571 (Washington Rd), West Windsor Twp, Mercer County, NJ



## 4.5 Selecting Focus Limited Access Roadway Bottlenecks

Focus limited access roadway bottlenecks are identified in the region as ones that contain a road segment on a limited access roadway or approach to a limited access roadway with a high peak hour TTI or PTI segment greater than 1.50 or 3.00, respectively, and high peak hour vehicle and volume delays, analyzed separately for each county. Any trailing adjacent segment with a TTI of 1.40 or more is also included as part of the bottleneck. The CATT Lab PDA Bottleneck Ranking Tool was used to help in these efforts, but a manual process of identifying segments with the highest delays was applied to derive the final list of bottlenecks by county. For each bottleneck, peak travel time vehicle and volume delays are summarized for the immediate bottleneck segment and remaining upstream segments with a TTI of 1.40 or more, or until another bottleneck is encountered.

There are 145 limited access bottlenecks identified: 102 in the Pennsylvania subregion and 43 in the New Jersey subregion (see Figure 98). The bottlenecks are symbolized by volume delay in quartiles separately for the Pennsylvania and New Jersey portions of the region with brown locations being the most delayed and yellow the least. The bottleneck label identifier can be cross-referenced with Tables 12 and 13 to identify more detailed delay and ranking information. The top three limited access roadway bottlenecks in Pennsylvania include I-76 westbound at US 1 (Roosevelt Blvd) southbound on-ramp in Philadelphia, I-76 eastbound at Hollow Road on-ramp in Montgomery County, and I-95 southbound at State Road on-ramp in Philadelphia. The top three in New Jersey all occur in Camden County: NJ 42 southbound at I-295 southbound on-ramp; I-295 southbound at NJ 168 northbound on-ramp, and I-76 eastbound at US 130 (Crescent Boulevard)/Market Street on-ramp.

Tables 12 and 13 contain a list of limited access roadway bottlenecks in the Pennsylvania and New Jersey portions of the DVRPC region, respectively, sorted in ascending order by county and limited access roadway bottleneck name. They are ranked by both peak travel time vehicle and volume delay with a rank of 1 being the most delayed. Most bottlenecks are more delayed during the PM peak hour, but there are a few with more delay during the AM peak hour. These are indicated in the “AM/PM Highest Delay” column and highlighted in gray. Vehicle and volume delays are measured in seconds and hours, respectively. The delay rankings are color coded by quartiles from the most to least in delay, with brown being the most delayed and yellow the least. The CMP objective measure scores for all segments that are part of the bottleneck are averaged and ranked, and listed for each bottleneck.

Since delay is only accumulated to the next upstream bottleneck (as long as the road segments meet the selection criteria), limited access roadway bottlenecks that occur at closely spaced interchanges may not indicate as high of delay compared to those interchanges spaced farther apart. Bottlenecks that are clustered together should still be considered for improvements even if they show less delay. For example, the on-ramp at I-76 eastbound at Belmont Ave contains a peak hour volume delay ranking of 31, and the next upstream bottleneck at the on-ramp at I-76 eastbound at Hollow Road contains a delay ranking of 2. The difference in delay rankings is partially attributed to how the distance delay is calculated. The distance along I-76 from Belmont Avenue to the next upstream bottleneck at Hollow Road is about 1.6 miles, whereas the distance from Hollow Road to the next upstream bottleneck at Matsonford Road is about 4.4 miles.

Bottlenecks occur on limited access roadways along the mainline and at key on- and off-ramps. Bottlenecks along the mainline may occur due to lane drops, such as from three to two lanes. Bottlenecks at on-ramps may occur at merge locations where drivers along the mainline may need to slow down for merging drivers on the on-ramp that are trying to find a gap to enter the mainline. Bottlenecks near off-

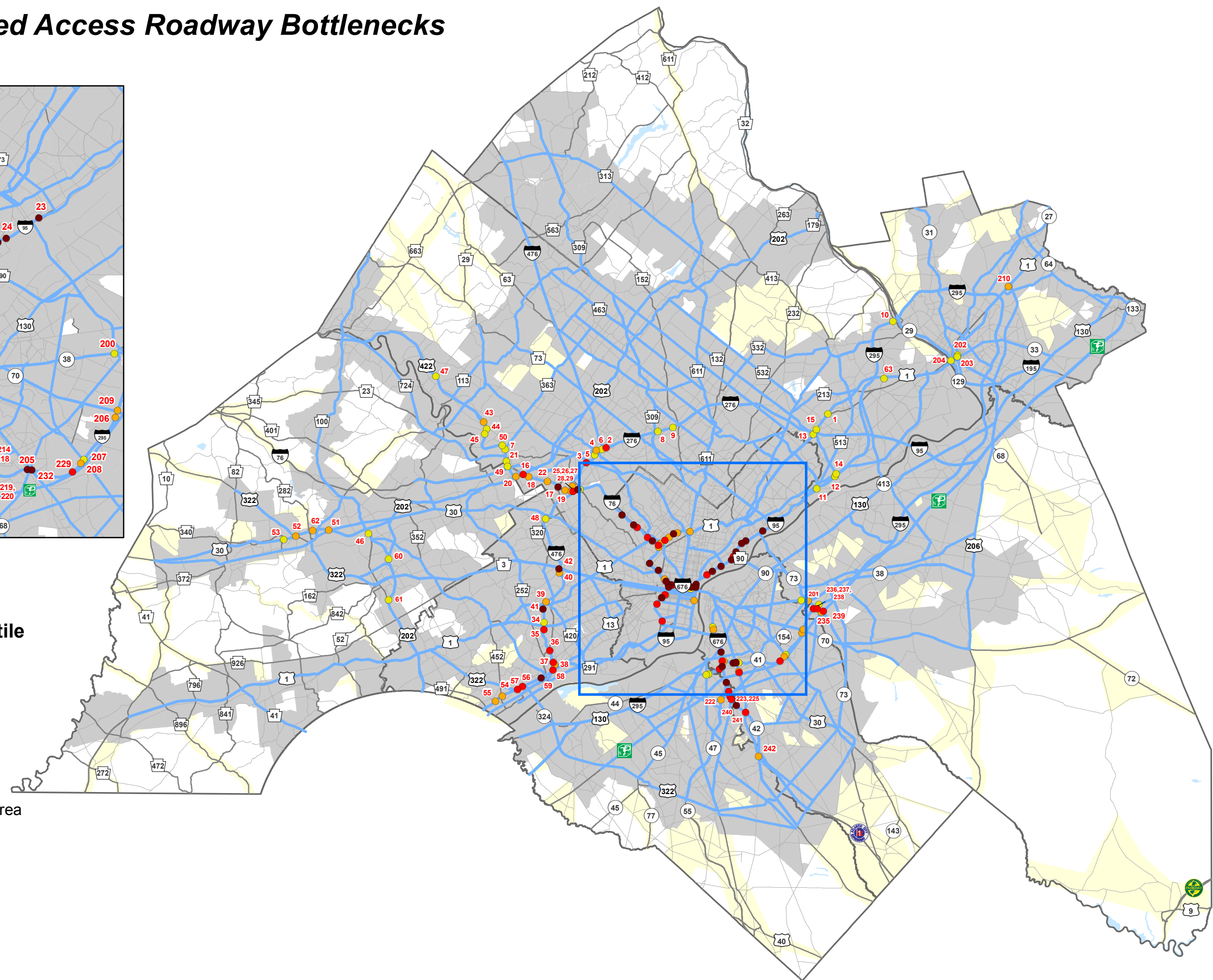
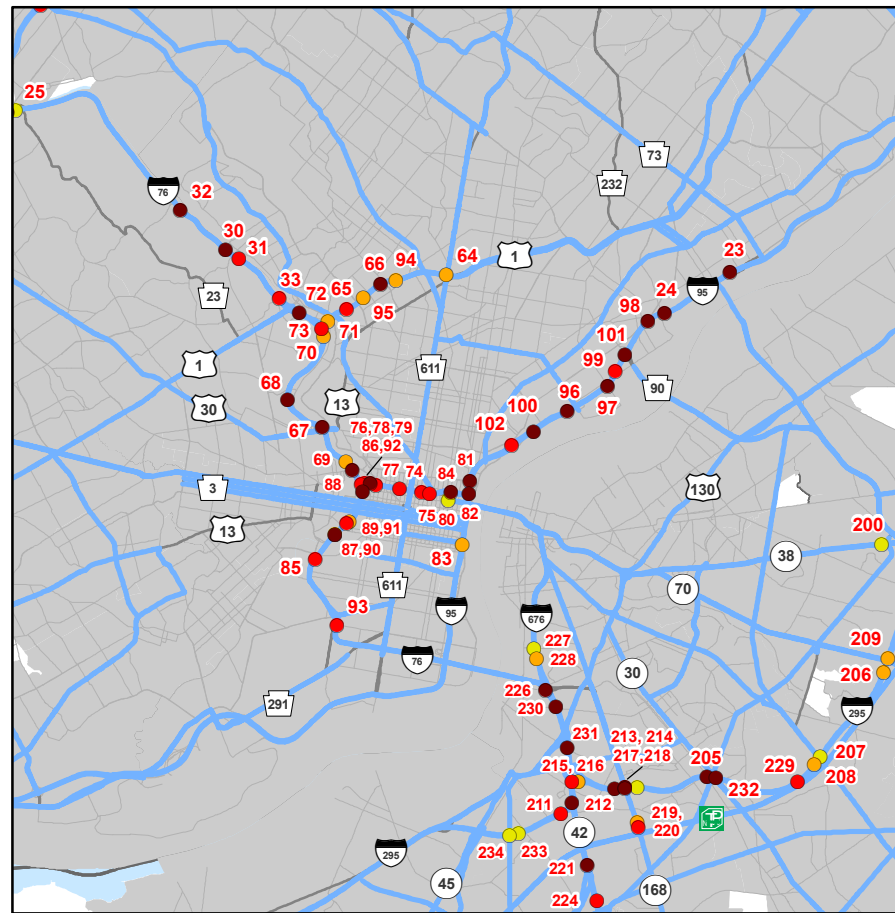
ramps may occur due to traffic queuing back to the mainline from a traffic signal at the end of an off-ramp with an extended red phase.

Bottlenecks on limited access roadways may be due to deficient roadway geometry such as short on- and off-ramps and not providing the driver adequate distance to merge onto the mainline, or adequate off-ramp length to safely exit the highway. For example, the US 30 Bypass from Reeceville Road to US 30 Business in Chester County includes interchanges with various short on- and off-ramps, such as at PA 340 (Bondsville Road). Additionally, bottlenecks may occur due to weaving conflicts between interchanges when they are spaced closely together, and drivers are jockeying for position to enter and exit the mainline. Again, the US 30 Bypass between the PA 113 and Norwood Road interchanges is a good example of this.

Limited access roadway bottlenecks can often have a greater impact on commuters than intersect bottlenecks due to the high volume of traffic on the roadways, and limited alternative routes to avoid the bottleneck. Traffic incidents such as crashes or disabled vehicles that occur along limited access roadways can compound these issues. Traffic incident management is a key strategy to mitigate congestion on these limited access roadways and clear crashes and disabled vehicles from the mainline as soon as possible. DVRPC transportation operations staff work closely with regional incident management task forces to better understand incident management issues and help to provide programs and funding to effectively manage roadways by reducing the time for incident detection, verification, response, and clearance.

The limited access roadway bottlenecks should be considered in DVRPC corridor and other planning studies, PennDOT and NJDOT programs, implementing before-and-after performance evaluations, and could be added to the *Plan-TIP Project Evaluation Criteria*. Limited access bottlenecks will need to be weighed against regional priorities and the region's extreme funding constraint.

**Figure 98: Focus Limited Access Roadway Bottlenecks**

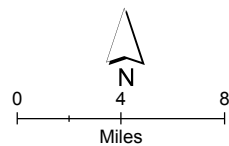


11 Bottleneck ID

**Bottleneck Volume Delay By Quartile**

- Most Delayed
- Somewhat Delayed
- Somewhat Not Delayed
- Least Delayed

- Focus Roadway Corridor
- Congested Corridor and Subcorridor Area
- Emerging Growth Corridor Area



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Table 12:

## Focus Limited Access Roadway Bottlenecks in the Pennsylvania Portion of the DVRPC Region: Peak Travel Time Vehicle and Volume Delay (Sorted by County and Name)

MAP ID	Name	Municipality	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)					CMP Obj. Score	CMP Obj. Score Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay		
10	I-295 NB On-Ramp @ Taylorsville Rd NB	Lower Makefield Township	Bucks	10.3	3.6	10.3	AM	92	96	2:30:39	0:31:36	2:30:39	AM	1.93	102
12	I-95 SB On-Ramp @ PA 132 (Street Rd)	Bensalem Township	Bucks	6.4	10.6	10.6	PM	91	86	1:14:37	4:48:34	4:48:34	PM	4.82	91
11	I-95 SB On-Ramp @ PA 63 (Woodhaven Rd)	Bensalem Township	Bucks	3.2	26.4	26.4	PM	82	77	1:25:47	20:00:32	20:00:32	PM	7.66	69
63	Oxford Valley Rd SB @ US 1 NB Off-Ramp	Falls Township	Bucks	1.3	10.9	10.9	PM	89	97	0:04:49	2:25:52	2:25:52	PM	5.21	88
13	PA 132 (Street Rd) EB @ US 1 SB Off-Ramp	Bensalem Township	Bucks	24.3	37.6	37.6	PM	70	81	5:04:44	11:21:40	11:21:40	PM	7.21	75
14	PA 132 (Street Rd) EB @ US 13 (Bristol Pk) SB Off-Ramp	Bensalem Township	Bucks	47.4	60.2	60.2	PM	57	80	6:29:02	11:50:10	11:50:10	PM	8.63	55
15	US 1 NB On-Ramp @ I-276 Exit	Bensalem Township	Bucks	2.9	6.4	6.4	PM	98	88	1:23:25	4:06:43	4:06:43	PM	5.24	87
1	US 1 SB On-Ramp @ Fairhill Ave/Highland Ave	Middletown Township	Bucks	5.3	10.8	10.8	PM	90	90	0:13:39	3:38:46	3:38:46	PM	4.71	94
46	PA 100 NB On-Ramp @ Pottstown Pk	West Whiteland Township	Chester	4.0	19.1	19.1	PM	84	87	0:28:42	4:35:03	4:35:03	PM	8.98	45
61	US 202 NB On-Ramp @ US 322 Business/High St	West Goshen Township	Chester	3.3	8.2	8.2	PM	94	92	1:00:40	3:23:23	3:23:23	PM	2.88	100
60	US 202 SB On-Ramp @ PA 100 SB	West Goshen Township	Chester	0.9	1.8	1.8	PM	102	102	0:21:30	0:55:06	0:55:06	PM	2.77	101
62	US 30 Bypass EB On-Ramp @ Norwood Rd	Downingtown Borough	Chester	44.5	1.0	44.5	AM	65	63	35:14:00	0:07:42	35:14:00	AM	4.46	95
51	US 30 WB On-Ramp @ US 30 Business (Lancaster Ave)	East Caln Township	Chester	1.8	68.2	68.2	PM	51	65	0:20:59	34:07:15	34:07:15	PM	7.86	66
49	US 422 EB On-Ramp @ 1st Ave	Tredyffrin Township	Chester	3.8	0.0	3.8	AM	101	99	2:15:44	0:00:00	2:15:44	AM	3.87	97
53	US-30 Bypass EB On-Ramp @ PA 340 (Bondsville Rd)	Caln Township	Chester	40.6	1.1	40.6	AM	68	78	18:25:59	0:12:43	18:25:59	AM	5.58	84
52	US-30 Bypass EB On-Ramp @ US-322	Caln Township	Chester	59.0	3.0	59.0	AM	58	72	28:18:30	0:52:35	28:18:30	AM	5.43	85
34	I-476 NB On-Ramp @ Baltimore Pk	Nether Providence Township	Delaware	41.7	29.1	41.7	AM	66	76	20:03:19	20:11:30	20:11:30	PM	8.17	62
37	I-476 NB On-Ramp @ I-95	Ridley Township	Delaware	28.0	134.9	134.9	PM	19	28	18:34:37	143:41:51	143:41:51	PM	9.38	36
36	I-476 NB On-Ramp @ MacDade Blvd	Ridley Township	Delaware	55.8	92.6	92.6	PM	36	48	35:25:20	78:27:32	78:27:32	PM	8.50	57
39	I-476 NB On-Ramp @ US 1 (Media Bypass)	Marple Township	Delaware	65.8	45.3	65.8	AM	54	71	28:29:53	25:18:39	28:29:53	AM	6.57	78
40	I-476 SB @ PA 3 (West Chester Pk) EB	Marple Township	Delaware	9.3	46.3	46.3	PM	63	59	5:29:28	42:21:23	42:21:23	PM	5.30	86
48	I-476 SB @ US 30	Radnor Township	Delaware	8.7	18.5	18.5	PM	85	82	1:00:11	11:15:51	11:15:51	PM	5.63	83
35	I-476 SB On-Ramp @ Baltimore Pk	Nether Providence Township	Delaware	40.8	79.1	79.1	PM	45	50	25:17:46	59:29:10	59:29:10	PM	7.27	74
38	I-476 SB On-Ramp @ MacDade Blvd	Ridley Township	Delaware	5.4	34.9	34.9	PM	71	66	3:30:12	33:49:41	33:49:41	PM	7.20	76
42	I-476 SB On-Ramp @ PA 3 (West Chester Pk) WB	Marple Township	Delaware	16.8	257.5	257.5	PM	4	12	7:26:11	279:20:29	279:20:29	PM	8.64	54
41	I-476 SB On-Ramp @ US-1 (Media Bypass)	Marple Township	Delaware	69.0	226.8	226.8	PM	10	23	41:50:25	185:49:32	185:49:32	PM	7.34	73
55	I-95 NB On-Ramp @ Chichester Ave	Upper Chichester Township	Delaware	6.3	26.8	26.8	PM	81	61	7:06:38	37:23:07	37:23:07	PM	8.13	63
54	I-95 NB On-Ramp @ PA 452 (Market St)	Upper Chichester Township	Delaware	14.5	28.3	28.3	PM	77	64	13:35:17	34:23:53	34:23:53	PM	8.79	51
57	I-95 NB On-Ramp @ US 322 EB	Chester City	Delaware	49.5	79.5	79.5	PM	44	32	63:26:07	132:32:52	132:32:52	PM	9.31	41
59	I-95 SB On-Ramp @ Edgmont Ave	Chester City	Delaware	11.4	65.8	65.8	PM	53	24	24:15:20	179:47:05	179:47:05	PM	10.61	13
58	I-95 SB On-Ramp @ I-476	Chester City	Delaware	21.2	93.5	93.5	PM	35	49	12:41:16	76:29:55	76:29:55	PM	9.78	26
56	I-95 SB On-Ramp @ US 322 WB/Commodore Barry Br	Chester Township	Delaware	5.6	64.7	64.7	PM	55	26	9:53:03	163:38:14	163:38:14	PM	9.70	28
4	I-276 EB On-Ramp @ Germantown Pk	Plymouth Township	Montgomery	1.6	52.1	52.1	PM	60	70	0:16:40	28:31:57	28:31:57	PM	6.02	80
2	I-276 EB On-Ramp @ I-476 NB	Plymouth Township	Montgomery	2.7	114.5	114.5	PM	26	46	1:14:56	83:10:03	83:10:03	PM	7.93	65
8	I-276 WB @ PA 309	Upper Dublin Township	Montgomery	22.7	18.9	22.7	AM	83	79	13:02:08	13:59:19	13:59:19	PM	8.00	64
9	I-276 WB On-Ramp @ Virginia Dr	Upper Dublin Township	Montgomery	11.1	10.2	11.1	AM	88	84	7:13:20	8:45:36	8:45:36	PM	5.75	82
26	I-476 NB On-Ramp @ I-76	West Conshohocken Borough	Montgomery	3.7	40.8	40.8	PM	67	62	1:31:35	36:28:47	36:28:47	PM	8.73	52
3	I-476 NB On-Ramp @ Ridge Pike	Plymouth Township	Montgomery	3.1	67.4	67.4	PM	52	35	0:14:40	124:21:23	124:21:23	PM	7.47	72
6	I-476 NE Ext SB On-Ramp @ I-276 WB	Plymouth Township	Montgomery	9.0	0.9	9.0	AM	93	89	4:02:34	0:29:28	4:02:34	AM	4.79	92
5	I-476 SB On-Ramp @ Germantown Pk	Plymouth Township	Montgomery	32.0	5.7	32.0	AM	73	85	7:38:29	2:02:18	7:38:29	AM	4.75	93
31	I-76 EB @ Belmont Ave	Lower Merion Township	Montgomery	50.8	80.1	80.1	PM	43	31	61:45:22	139:00:05	139:00:05	PM	7.67	68
32	I-76 EB On-Ramp @ Hollow Rd	Lower Merion Township	Montgomery	153.7	310.9	310.9	PM	2	2	238:11:23	617:21:55	617:21:55	PM	9.34	38
27	I-76 EB On-Ramp @ I-476 NB/Matsonford Rd	West Conshohocken Borough	Montgomery	48.8	94.3	94.3	PM	34	83	26:26:37	73:22:35	9:18:20	PM	9.65	30
28	I-76 EB On-Ramp @ I-476 SB	West Conshohocken Borough	Montgomery	48.3	74.1	74.1	PM	47	47	36:30:41	81:02:19	81:02:19	PM	8.83	49
17	I-76 EB On-Ramp @ PA 320 (Gulph Rd)	Upper Merion Township	Montgomery	102.3	156.7	156.7	PM	16	17	114:06:32	230:00:40	230:00:40	PM	9.34	38
18	I-76 EB On-Ramp @ US-202 EB	Upper Merion Township	Montgomery	34.4	25.8	34.4	AM	72	67	33:15:59	31:17:30	33:15:59	AM	8.41	59
22	I-76 WB @ Henderson Rd	Upper Merion Township	Montgomery	6.5	29.8	29.8	PM	75	54	5:43:59	47:42:56	47:42:56	PM	8.84	48
25	I-76 WB Off-Ramp @ I-476 NB	West Conshohocken Borough	Montgomery	136.4	250.3	250.3	PM	7	6	188:13:32	432:51:24	432:51:24	PM	8.21	61
30	I-76 WB On-Ramp @ Belmont Ave	Lower Merion Township	Montgomery	126.5	130.3	130.3	PM	22	25	131:33:20	178:10:39	178:10:39	PM	9.48	34
29	I-76 WB On-Ramp @ I-476 NB/Matsonford Rd	West Conshohocken Borough	Montgomery	33.1	77.7	77.7	PM	46	69	10:35:05	32:22:40	32:22:40	PM	8.47	58
19	I-76 WB On-Ramp @ I-476 SB	Upper Merion Township	Montgomery	13.2	28.0	28.0	PM	78	68	11:21:54	33:10:28	33:10:28	PM	7.54	71
33	I-76 WB On-Ramp @ US 1 (City Ave)	Lower Merion Township	Montgomery	92.1	110.3	110.3	PM	27	33	78:17:44	129:37:06	129:37:06	PM	9.51	33

**Table 12**  
**Continued**

MAP ID	Name	Municipality	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)					CMP Obj. Score	CMP Obj. Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay		
16	I-76 WB On-Ramp @ US-202 EB	Upper Merion Township	Montgomery	65.6	91.5	91.5	PM	37	27	90:37:42	161:02:10	161:02:10	PM	8.36	60
44	US 422 EB Off-Ramp @ Egypt Rd	Upper Providence Township	Montgomery	11.9	7.5	11.9	AM	87	100	1:34:36	1:38:54	1:38:54	PM	6.88	77
45	US 422 EB On-Ramp @ Egypt Rd	Upper Providence Township	Montgomery	6.4	0.2	6.4	AM	97	94	3:11:15	0:02:15	3:11:15	AM	5.98	81
21	US 422 EB On-Ramp @ PA 23 (Valley Forge Rd)	Upper Merion Township	Montgomery	5.2	1.4	5.2	AM	99	95	3:06:31	0:08:27	3:06:31	AM	4.00	96
7	US 422 EB On-Ramp @ PA 363 (Trooper Rd)	West Norriton Township	Montgomery	7.3	1.8	7.3	AM	96	91	3:35:37	0:13:37	3:35:37	AM	4.94	89
47	US 422 EB On-Ramp @ Township Line Rd	Limerick Township	Montgomery	7.6	2.6	7.6	AM	95	93	3:12:44	0:30:20	3:12:44	AM	3.48	98
50	US 422 WB @ PA 363 (Trooper Rd)	Lower Providence Township	Montgomery	1.7	5.2	5.2	PM	100	98	0:00:39	2:17:19	2:17:19	PM	3.31	99
43	US 422 WB On-Ramp @ Egypt Rd	Upper Providence Township	Montgomery	0.0	47.5	47.5	PM	62	53	0:00:00	52:49:13	52:49:13	PM	6.51	79
20	US 422 WB On-Ramp/Swedestford Rd @ I-76	Upper Merion Township	Montgomery	8.2	49.5	49.5	PM	61	74	3:02:12	23:51:19	23:51:19	PM	4.91	90
80	Benjamin Franklin Br EB @ 6th St	Central	Philadelphia	8.1	15.0	15.0	PM	86	101	0:55:23	1:07:03	1:07:03	PM	7.81	67
79	I-676 EB On-Ramp @ 24th St	Central	Philadelphia	31.6	95.8	95.8	PM	32	38	25:51:23	105:59:38	105:59:38	PM	10.22	15
74	I-676 EB On-Ramp @ Broad St	Central	Philadelphia	27.5	89.8	89.8	PM	39	29	34:57:05	140:42:43	140:42:43	PM	11.43	3
76	I-676 EB On-Ramp @ I-76 WB	Central	Philadelphia	40.9	94.6	94.6	PM	33	43	26:35:35	90:44:16	90:44:16	PM	10.71	9
77	I-676 WB On-Ramp @ 16th St	Central	Philadelphia	46.5	64.5	64.5	PM	56	40	56:03:51	100:02:27	100:02:27	PM	10.04	22
78	I-676 WB On-Ramp @ 22nd St	Central	Philadelphia	55.4	106.3	106.3	PM	29	21	81:26:56	200:01:41	200:01:41	PM	11.69	1
84	I-676 WB On-Ramp @ Ben Franklin Br	Central	Philadelphia	8.9	96.7	96.7	PM	31	22	11:33:36	196:52:28	196:52:28	PM	10.99	7
75	I-676 WB On-Ramp @ I-95	Central	Philadelphia	175.5	95.1	175.5	AM	12	36	123:48:31	84:13:08	123:48:31	AM	10.07	21
67	I-76 EB On-Ramp @ Girard Ave	West Park	Philadelphia	86.7	133.3	133.3	PM	21	11	154:03:23	307:17:00	307:17:00	PM	8.69	53
86	I-76 EB On-Ramp @ I-676 (Vine Street Expressway)	University - Southwest	Philadelphia	89.9	229.8	229.8	PM	9	7	107:14:07	389:17:46	389:17:46	PM	10.14	18
68	I-76 EB On-Ramp @ Montgomery Dr	West Park	Philadelphia	254.9	173.5	254.9	AM	6	8	386:17:28	360:41:08	386:17:28	AM	9.44	35
93	I-76 EB On-Ramp @ Passyunk Ave	Lower South	Philadelphia	12.7	72.2	72.2	PM	49	44	8:26:31	86:21:30	86:21:30	PM	9.03	43
90	I-76 EB On-Ramp @ South St	University - Southwest	Philadelphia	12.8	27.6	27.6	PM	79	73	8:17:49	25:24:02	25:24:02	PM	10.08	20
73	I-76 EB On-Ramp @ US 1 (City Ave) NB	West Park	Philadelphia	69.4	72.0	72.0	PM	50	45	79:32:43	83:57:56	83:57:56	PM	9.92	24
70	I-76 EB On-Ramp @ US 1 (Roosevelt Blvd) SB	West Park	Philadelphia	38.0	13.8	38.0	AM	69	58	42:31:00	19:34:49	42:31:00	AM	9.68	29
89	I-76 EB On-Ramp @ Walnut St	University - Southwest	Philadelphia	34.7	108.5	108.5	PM	28	30	38:04:17	139:42:20	139:42:20	PM	11.00	6
88	I-76 WB On-Ramp @ @ I-676 WB	University - Southwest	Philadelphia	61.5	135.6	135.6	PM	18	18	77:22:57	227:43:30	227:43:30	PM	11.59	2
85	I-76 WB On-Ramp @ 34th St	South	Philadelphia	106.1	38.1	106.1	AM	30	42	91:19:46	43:23:33	91:19:46	AM	10.71	9
92	I-76 WB On-Ramp @ Schuylkill Ave	University - Southwest	Philadelphia	22.5	81.6	81.6	PM	42	34	23:07:57	127:25:20	127:25:20	PM	10.74	8
91	I-76 WB On-Ramp @ South St	University - Southwest	Philadelphia	11.7	55.2	55.2	PM	59	51	8:01:01	57:37:24	57:37:24	PM	10.69	11
69	I-76 WB On-Ramp @ Spring Garden St	West Park	Philadelphia	7.2	30.0	30.0	PM	74	57	7:39:51	43:12:33	43:12:33	PM	8.81	50
87	I-76 WB On-Ramp @ University Ave	University - Southwest	Philadelphia	99.4	157.5	157.5	PM	15	20	108:15:41	212:29:08	212:29:08	PM	10.16	17
72	I-76 WB On-Ramp @ US 1 SB	West Park	Philadelphia	129.1	348.9	348.9	PM	1	1	133:35:06	633:02:39	633:02:39	PM	9.52	32
98	I-95 NB On-Ramp @ Betsy Ross Br	River Wards	Philadelphia	16.2	247.2	247.2	PM	8	4	26:07:10	531:33:48	531:33:48	PM	9.34	38
24	I-95 NB On-Ramp @ Bridge St	North Delaware	Philadelphia	19.0	90.7	90.7	PM	38	19	31:11:14	214:04:40	214:04:40	PM	9.00	44
97	I-95 NB On-Ramp @ Castor Ave	River Wards	Philadelphia	7.7	143.9	143.9	PM	17	10	10:54:10	314:09:00	314:09:00	PM	9.94	23
83	I-95 NB On-Ramp @ Christopher Columbus Blvd	Central	Philadelphia	6.6	28.8	28.8	PM	76	60	5:22:50	39:08:52	39:08:52	PM	8.97	46
81	I-95 NB On-Ramp @ I-676 EB	Central	Philadelphia	12.6	162.7	162.7	PM	14	15	13:59:47	246:48:15	246:48:15	PM	10.18	16
82	I-95 NB On-Ramp @ Race St	Central	Philadelphia	9.0	122.8	122.8	PM	25	16	11:38:01	235:20:19	235:20:19	PM	11.29	4
100	I-95 NB On-Ramp @ Richmond St	River Wards	Philadelphia	21.7	129.7	129.7	PM	23	9	34:10:43	330:17:58	330:17:58	PM	10.09	19
96	I-95 SB On-Ramp @ Allegheny Ave	River Wards	Philadelphia	188.2	104.9	188.2	AM	11	14	249:46:08	183:42:25	249:46:08	AM	10.35	14
101	I-95 SB On-Ramp @ Aramingo Ave	River Wards	Philadelphia	288.3	104.3	288.3	AM	3	5	521:13:44	256:54:32	521:13:44	AM	9.88	25
102	I-95 SB On-Ramp @ Aramingo Ave/Girard Ave	River Wards	Philadelphia	45.8	33.5	45.8	AM	64	41	95:47:07	92:56:10	95:47:07	AM	9.07	42
99	I-95 SB On-Ramp @ Betsy Ross Br/Aramingo Ave	River Wards	Philadelphia	134.0	49.5	134.0	AM	20	37	118:53:21	59:20:59	118:53:21	AM	8.55	56
23	I-95 SB On-Ramp @ State Rd	North Delaware	Philadelphia	199.2	256.3	256.3	PM	5	3	323:33:01	543:11:02	543:11:02	PM	9.72	27
66	US 1 NB (Roosevelt Blvd) On-Ramp @ Abbottsford Ave	North	Philadelphia	4.2	166.2	166.2	PM	13	13	3:49:32	257:23:50	257:23:50	PM	11.22	5
65	US 1 NB (Roosevelt Blvd) On-Ramp @ Ridge Ave	North	Philadelphia	4.5	73.9	73.9	PM	48	39	1:23:01	100:48:51	100:48:51	PM	10.68	12
71	US 1 NB On-Ramp @ I-76 WB	West Park	Philadelphia	4.4	89.6	89.6	PM	40	55	1:38:32	44:23:00	44:23:00	PM	8.91	47
95	US 1 SB (Roosevelt Blvd) On-Ramp @ Abbottsford Ave	Lower Northwest	Philadelphia	27.3	23.8	27.3	AM	80	75	21:13:29	23:23:59	23:23:59	PM	7.64	70
94	US 1 SB (Roosevelt Blvd) On-Ramp @ Berkley St	Upper Northwest	Philadelphia	86.0	54.2	86.0	AM	41	56	43:18:51	33:57:20	43:18:51	AM	9.36	37
64	US 1 SB On-Ramp @ Roosevelt Blvd	North	Philadelphia	128.0	23.9	128.0	AM	24	52	53:32:00	13:47:33	53:32:00	AM	9.64	31

Most Delayed  
 Somewhat Delayed  
 Somewhat Not Delayed  
 Least Delayed  
 AM Delay

Source: DVRPC analysis of 2021 INRIX data



Table 13:

Focus Limited Access Roadway Bottlenecks in the New Jersey Portion of the DVRPC Region: Peak Travel Time Vehicle and Volume Delay (Sorted by County and Name)

MAP ID	Name	Municipality	County	Peak Hour Vehicle Delay (sec)					Peak Hour Volume Delay (hh:mm:ss)					CMP Obj. Score	CMP Obj. Score Rank
				AM Peak Vehicle Delay	PM Peak Vehicle Delay	Highest Vehicle Delay	Time of Day with Highest Delay	Rank	Rank	AM Peak Volume Delay	PM Peak Volume Delay	Highest Volume Delay	Time of Day with Highest Delay		
237	I-295 SB On-Ramp @ Nixon Dr	Mount Laurel Township	Burlington	2.7	8.7	8.7	PM	38	39	0:24:10	4:23:47	4:23:47	PM	4.67	41
236	I-295 SB On-Ramp @ NJ 73 SB	Mount Laurel Township	Burlington	4.9	22.6	22.6	PM	23	18	1:44:07	19:05:43	19:05:43	PM	6.41	23
200	NJ 38 WB On-Ramp @ NJ 41 SB	Maple Shade Township	Burlington	2.3	8.0	8.0	PM	40	42	0:06:56	1:53:41	1:53:41	PM	3.87	43
238	NJ 73 SB On-Ramp @ I-295 NB	Mount Laurel Township	Burlington	6.6	32.6	32.6	PM	14	17	2:57:38	21:18:34	21:18:34	PM	6.38	24
201	NJ 73 SB On-Ramp @ NJ 38	Maple Shade Township	Burlington	1.4	12.8	12.8	PM	32	33	0:15:31	5:52:39	5:52:39	PM	5.72	31
239	NJ 73 SB On-Ramp @ NJ Turnpike	Mount Laurel Township	Burlington	7.2	17.9	17.9	PM	28	25	1:50:23	10:11:15	10:11:15	PM	5.46	34
235	NJ Turnpike On-Ramp @ NJ 73	Mount Laurel Township	Burlington	2.7	44.0	44.0	PM	10	12	0:23:37	30:12:16	30:12:16	PM	4.76	39
211	I-295 NB @ I-76 Off-Ramp	Bellmawr Borough	Camden	23.3	24.1	24.1	PM	20	15	17:50:57	23:42:31	23:42:31	PM	8.00	10
216	I-295 NB On-Ramp @ I-76 EB	Bellmawr Borough	Camden	4.4	9.8	9.8	PM	34	30	3:13:00	8:31:04	8:31:04	PM	6.06	27
218	I-295 NB On-Ramp @ NJ 168 (Black Horse Pk) NB	Bellmawr Borough	Camden	6.5	5.7	6.5	AM	43	35	3:35:54	4:59:06	4:59:06	PM	4.76	39
217	I-295 NB On-Ramp @ NJ 168 (Black Horse Pk) SB	Bellmawr Borough	Camden	17.9	27.7	27.7	PM	17	9	15:44:07	34:21:17	34:21:17	PM	7.28	14
215	I-295 NB On-Ramp @ NJ 42 NB	Bellmawr Borough	Camden	19.2	16.9	19.2	AM	25	20	15:11:00	10:54:30	15:11:00	AM	7.03	15
207	I-295 SB On-Ramp @ CR 561 (Haddonfield-Berlin Rd) NB	Cherry Hill Township	Camden	2.8	7.2	7.2	PM	42	34	0:47:50	5:17:29	5:17:29	PM	5.31	36
208	I-295 SB On-Ramp @ CR 561 (Haddonfield-Berlin Rd) SB	Cherry Hill Township	Camden	1.1	9.4	9.4	PM	35	29	1:22:24	8:59:26	8:59:26	PM	5.83	30
229	I-295 SB On-Ramp @ Melrose Ave	Haddonfield Borough	Camden	6.6	22.6	22.6	PM	22	13	4:31:48	28:13:34	28:13:34	PM	5.86	29
214	I-295 SB On-Ramp @ NJ 168 (Black Horse Pk) NB	Bellmawr Borough	Camden	25.5	186.1	186.1	PM	3	2	25:05:20	273:11:58	273:11:58	PM	9.57	2
213	I-295 SB On-Ramp @ NJ 168 (Black Horse Pk) SB	Bellmawr Borough	Camden	7.6	37.4	37.4	PM	11	8	3:50:08	37:52:07	37:52:07	PM	8.48	8
206	I-295 SB On-Ramp @ NJ 70 EB	Cherry Hill Township	Camden	4.0	13.4	13.4	PM	31	24	0:26:17	10:12:23	10:12:23	PM	5.22	37
209	I-295 SB On-Ramp @ NJ 70 WB	Cherry Hill Township	Camden	6.2	19.4	19.4	PM	24	28	0:47:17	9:08:49	9:08:49	PM	5.92	28
232	I-295 SB On-Ramp @ US 30 NB/Copley Rd	Barrington Borough	Camden	27.1	103.8	103.8	PM	6	5	28:14:51	149:14:32	149:14:32	PM	8.68	5
205	I-295 SB On-Ramp @ US 30 SB	Haddon Heights Borough	Camden	6.4	28.4	28.4	PM	16	11	4:43:51	31:00:43	31:00:43	PM	8.55	6
228	I-676 EB On-Ramp @ Morgan St EB	Camden City	Camden	0.9	17.1	17.1	PM	29	27	0:02:09	9:26:51	9:26:51	PM	7.42	13
227	I-676 EB On-Ramp @ Morgan St WB	Camden City	Camden	3.2	9.1	9.1	PM	37	36	0:11:24	4:55:22	4:55:22	PM	6.83	18
226	I-676 SB On-Ramp @ Collings Ave	Camden City	Camden	1.1	96.5	96.5	PM	7	7	0:04:23	67:40:04	67:40:04	PM	9.28	4
230	I-76 EB On-Ramp @ I-676 EB	Gloucester City	Camden	5.1	143.2	143.2	PM	5	4	5:33:44	170:37:58	170:37:58	PM	10.44	1
231	I-76 EB On-Ramp @ US 130 (Crescent Blvd)/Market St	Gloucester City	Camden	16.4	205.8	205.8	PM	2	3	3:22:04	194:04:33	194:04:33	PM	9.48	3
219	NJ 168 (Black Horse Pk) NB @ NJ Turnpike SB Off-Ramp	Bellmawr Borough	Camden	20.7	49.2	49.2	PM	9	32	2:22:10	6:17:24	6:17:24	PM	6.89	16
220	NJ 168 (Black Horse Pk) SB @ NJ Turnpike SB Off-Ramp	Bellmawr Borough	Camden	5.1	63.2	63.2	PM	8	21	0:38:47	11:45:33	11:45:33	PM	6.67	20
240	NJ 42 NB On-Ramp @ Lower Landing Rd	Gloucester Township	Camden	34.1	5.5	34.1	AM	13	10	32:26:28	5:01:59	32:26:28	AM	6.85	17
241	NJ 42 NB On-Ramp @ NJ 168 (Black Horse Pk)	Gloucester Township	Camden	26.3	6.0	26.3	AM	18	14	23:44:19	6:30:37	23:44:19	AM	5.42	35
212	NJ 42 SB On-Ramp @ I-295 SB	Bellmawr Borough	Camden	26.2	211.4	211.4	PM	1	1	22:03:42	323:18:47	323:18:47	PM	8.54	7
233	I 295 NB On-Ramp @ NJ 47 NB	Westville Borough	Gloucester	7.9	5.8	7.9	AM	41	37	4:47:37	4:55:19	4:55:19	PM	7.58	12
234	I 295 NB On-Ramp @ NJ 47 SB	Westville Borough	Gloucester	9.1	7.0	9.1	AM	36	38	4:53:40	4:35:25	4:53:40	AM	7.68	11
242	NJ 168 (Black Horse Pk) SB @ Atlantic City Expressway SB Off-Ramp	Washington Township	Gloucester	6.9	36.3	36.3	PM	12	26	0:22:59	9:38:23	9:38:23	PM	5.57	33
224	NJ 42 NB On-Ramp @ CR 544 (Clements Bridge Rd)	Deptford Township	Gloucester	25.3	4.9	25.3	AM	19	19	17:19:33	3:26:10	17:19:33	AM	5.59	32
225	NJ 42 NB On-Ramp @ NJ 41 (Hurffville Rd) NB	Deptford Township	Gloucester	32.4	6.0	32.4	AM	15	16	23:25:41	2:37:30	23:25:41	AM	6.17	25
223	NJ 42 NB On-Ramp @ NJ 41 (Hurffville Rd) SB	Deptford Township	Gloucester	13.7	4.2	13.7	AM	30	22	10:53:38	1:44:34	10:53:38	AM	5.03	38
221	NJ 42 NB On-Ramp @ NJ 55	Deptford Township	Gloucester	165.2	136.5	165.2	AM	4	6	109:07:26	102:06:24	109:07:26	AM	8.45	9
222	NJ 55 NB On-Ramp @ Deptford Center Rd	Deptford Township	Gloucester	18.2	11.8	18.2	AM	26	31	6:58:49	5:30:42	6:58:49	AM	6.07	26
203	Market St NB Ramp @ Stockton St Ramp	Trenton City	Mercer	3.1	8.6	8.6	PM	39	43	0:11:00	0:17:05	0:17:05	PM	6.60	21
202	US 1 NB On-Ramp @ NJ 129	Trenton City	Mercer	18.2	9.2	18.2	AM	27	40	4:18:01	2:41:07	4:18:01	AM	6.74	19
210	US 1 SB On-Ramp @ CR 533 (Quakerbridge Rd)	Lawrence Township	Mercer	0.0	11.1	11.1	PM	33	23	0:00:00	10:40:27	10:40:27	PM	4.23	42
204	US 1 SB On-Ramp @ Market St	Trenton City	Mercer	3.1	22.9	22.9	PM	21	41	0:17:13	3:28:09	3:28:09	PM	6.58	22

Most Delayed  
 Somewhat Delayed  
 Somewhat Not Delayed  
 Least Delayed  
 AM Delay

Source: DVRPC analysis of 2021 INRIX data

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## 4.6 SEPTA and NJ Transit Bus Reliability

Identifying congested bus routes for larger areas, like the DVRPC region, lends itself to first analyzing at the route facility level, rather than at the segment level. This improves understanding of how some bus routes are performing better than others, and enables bus route performance to be tracked over time.

Bus route planning time and ridership delay measures are used to analyze transit reliability. Planning time was chosen over travel time, since reliability is a key factor in attracting and retaining transit riders. Peak planning time vehicle delay is calculated from the INRIX travel time data and peak ridership delay is calculated from the planning time delay and the annual ridership based on published FY 2021 ridership data for NJ Transit and FY 2019 ridership for SEPTA. Ridership delay helps to understand the magnitude of delay since a crowded bus stuck in traffic is more impactful than a bus with just a few riders. Planning time delay measures the 95th percentile delay for one vehicle. High planning time delays may be due to unforeseen circumstances such as crashes, disabled vehicles, or parked cars in bus lanes. Delays were divided by the facility length, and ranked separately for SEPTA and NJ Transit from most to least in delay, for both measures. The delay is divided, or normalized, by facility length since longer routes would tend to over-represent delay.

Transit routes were updated on the INRIX road network from the latest published route information from SEPTA and NJ Transit. The main part of the route was chosen to be analyzed, and other parts that had less frequent service were dropped. A few route segments were removed from the analysis where INRIX data was not available. Figure 99 maps the 98 transit routes analyzed—65 SEPTA routes and 33 NJ Transit—and displays their planning time ridership delay by quartile with the most delayed routes shown in brown and the least delayed in yellow. All main bus transit routes for NJ transit were included in the analysis, except for those with less than ten riders per weekday on average or have less than 75 percent of their service area in the DVRPC region. Most SEPTA routes are included in the analysis except for those proposed to be dropped or significantly changed as part of SEPTA’s Bus Revolution plan.

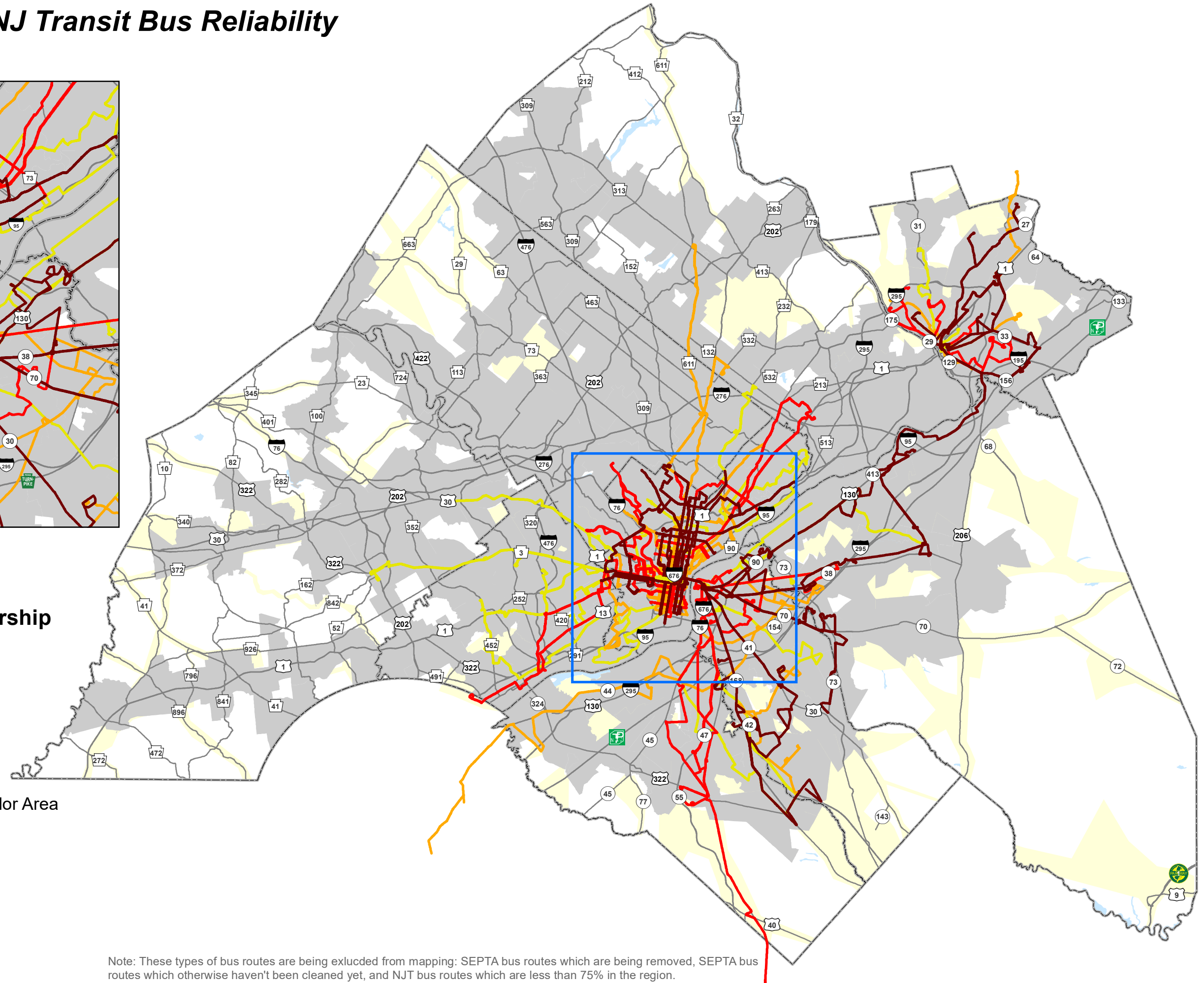
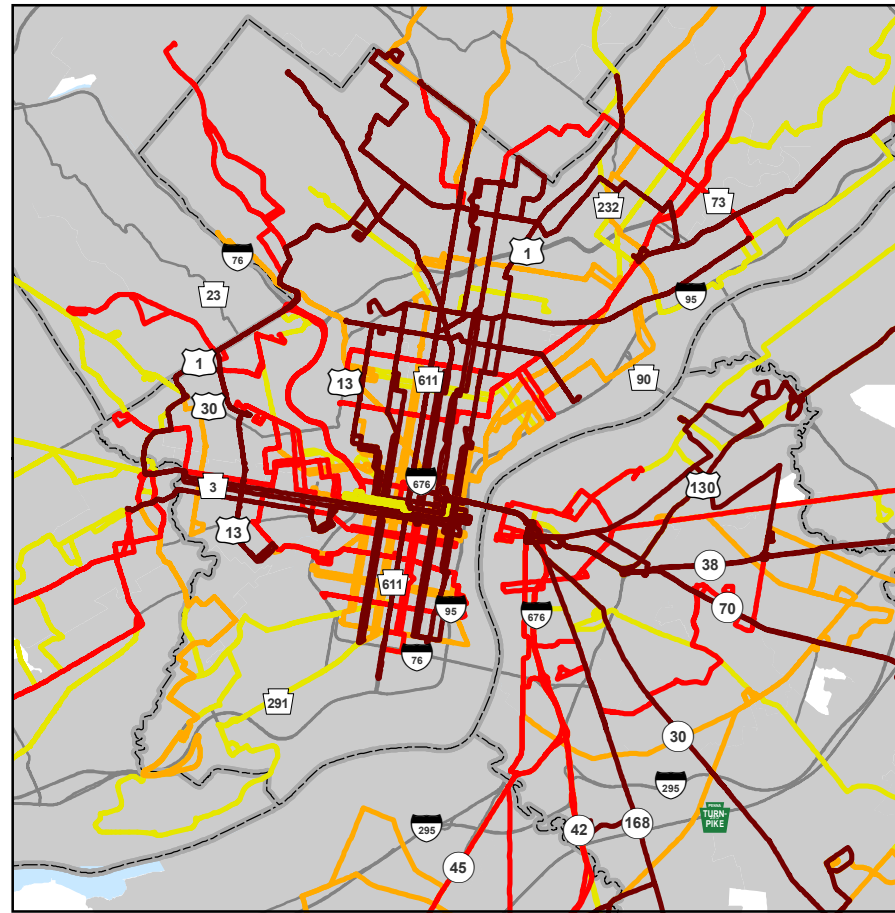
Tables 14 and 15 contain a list of SEPTA and NJ Transit routes, sorted by route name, and ranked by both peak planning time vehicle delay and ridership delay with a rank of 1 being the most delayed. The delay rankings are color coded by quartiles from the most to least in delay, with brown being the most delayed and yellow the least. Most of the transit routes are more delayed during the PM peak hour, but there are a few NJ Transit routes that are more delayed during the AM peak hour, which are noted in the “AM/PM Highest Delay” column. Vehicle and ridership delays are measured in seconds and hours, respectively. Although congestion and reliability measures are of primary importance for the CMP, they are not the sole factors to consider in ranking transit route facilities, and influencing investment decisions. Additional factors to consider are the other CMP objective measures as aligned with the Long-Range Plan, which are used to help select priority congested corridor and subcorridor areas (see Chapter 4, section 8) and to identify strategies to mitigate congestion (see Chapter 4, section 9). The CMP objective measure scores for all segments that are part of the transit route facility are averaged and ranked by route and listed along with the other delay measures for each bus route.

SEPTA routes with the highest ridership delay are all in the City of Philadelphia and include Route 47 (Whitman Plaza to 5th and Godfrey), Route 18 (Fox Chase to Cedarbrook Plaza), and Route 23 (11th and Market to Chestnut Hill). SEPTA routes with the highest vehicle delays, include Route 44 (5th and Market to Ardmore), Route 27 (Broad-Carpenter to Plymouth Meeting Mall), and Route 9 (4th and Walnut to Andorra). The majority of these routes are in the City and have significant ridership (greater than one million per year), but are not just the highest ridership routes.

NJ Transit routes with the highest ridership delay include Route 400 (Sicklerville – Philadelphia), Route 403 (Camden – Lindenwold PATCO – Turnersville), and Route 609 (Ewing – Quaker Bridge Mall). Both Routes 400 and 403 have the majority of coverage in Camden County, and Route 609 is in Mercer County. NJ Transit routes with the highest vehicle delay include Route 414 (Moorestown – 30<sup>th</sup> Street Philadelphia), Route 404 (Cherry Hill Mall – Pennsauken-Philadelphia) and Route 406 (Berlin – Marlton – Philadelphia). Route 414 has low ridership, so this route has less congestion impact compared to other routes with higher ridership.

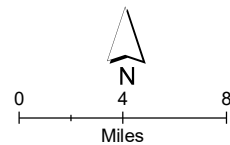
Unreliable transit routes that are within the CMP congested corridor, subcorridor, and emerging growth corridor areas are given more weight for managing reliability and congestion than routes not in these areas. The most delayed transit route facilities should be considered in DVRPC corridor and other planning studies, before-and-after performance evaluations, and could be added to the *Plan-TIP Project Evaluation Criteria*. They will need to be weighed against regional priorities and the region's extreme funding constraint.

**Figure 99: SEPTA and NJ Transit Bus Reliability**



**Bus Route Planning Time Ridership Delay by Quartile**

- Most Delayed
- Somewhat Delayed
- Somewhat Not Delayed
- Least Delayed
- Congested Corridor and Subcorridor Area
- Emerging Growth Corridor Area



Data Sources: DVRPC, NJ Transit, SEPTA, INRIX

Note: These types of bus routes are being excluded from mapping: SEPTA bus routes which are being removed, SEPTA bus routes which otherwise haven't been cleaned yet, and NJT bus routes which are less than 75% in the region.

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**Table 14:**  
**SEPTA Transit Route Facilities: Peak Planning Time Vehicle and Ridership Delay (Sorted by Route)**

Route	Name	Miles	Peak Hour Planning Delay (sec/mi)					Peak Hour Ridership Delay (hr/mi) (hh:mm:ss)							CMP Obj. Score	CMP Obj. Rank
			AM Delay	PM Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	Annual Ridership (000)	AM Delay	PM Delay	Highest Peak Delay	AM/PM Highest Delay			
2	20th-Johnston to Pulaski-Hunting Park	12.41	62.9	80.3	80.3	PM	49	38	1,464.3	97:15:07	124:14:56	124:14:56	PM	5.67	52	
3	33rd-Cecil B. Moore to Frankford TC	14.98	70.2	93.1	93.1	PM	38	21	2,372.7	175:58:39	233:12:21	233:12:21	PM	6.46	29	
4	Broad-Pattison to Fern Rock TC	19.83	92.3	129.7	129.7	PM	11	13	2,102.1	204:51:45	288:01:55	288:01:55	PM	7.40	9	
5	Front-Market to Frankford TC	13.44	74.3	105.6	105.6	PM	27	42	1,015.8	79:45:21	113:19:30	113:19:30	PM	7.02	14	
6	Olney TC to Cheltenham-Ogontz	4.81	73.4	122.7	122.7	PM	15	22	1,783.2	138:12:17	231:02:37	231:02:37	PM	5.37	59	
7	Pier 70 to 33rd-Dauphin	18.64	68.3	83.8	83.8	PM	45	35	1,468.5	105:57:00	129:57:56	129:57:56	PM	6.38	32	
9	4th and Walnut to Andorra	23.93	113.7	166.3	166.3	PM	3	20	1,362.0	163:37:02	239:16:51	239:16:51	PM	7.83	5	
12	Columbus-Dock to 50th-Woodland	9.15	90.8	129.1	129.1	PM	12	46	717.9	68:50:16	97:55:22	97:55:22	PM	6.47	28	
14	Neshaminy & Oxford Valley Malls to Frankford TC	21.42	43.0	60.2	60.2	PM	61	33	2,144.7	97:22:51	136:24:12	136:24:12	PM	6.06	40	
16	City Hall to Cheltenham-Ogontz	18.25	111.9	161.1	161.1	PM	5	14	1,688.7	199:37:01	287:25:12	287:25:12	PM	8.44	2	
17	Penn's Landing to 20th-Johnston & Broad-Pattison	9.17	112.2	132.5	132.5	PM	9	9	2,807.7	332:36:17	392:47:18	392:47:18	PM	6.70	24	
18	Fox Chase to Cedarbrook Plaza	16.84	84.6	114.0	114.0	PM	20	2	4,566.5	407:59:41	549:37:35	549:37:35	PM	7.18	12	
20	Philadelphia Mills to Frankford TC	14.32	43.1	50.6	50.6	PM	64	51	1,540.8	70:12:06	82:20:24	82:20:24	PM	5.46	56	
21	Penn's Landing to 69th Street TC	12.96	88.8	132.2	132.2	PM	10	7	2,983.1	279:42:38	416:40:06	416:40:06	PM	8.33	4	
22	Willow Grove & Warminster to Olney TC	30.96	57.9	83.2	83.2	PM	46	43	1,267.8	77:32:49	111:24:41	111:24:41	PM	6.09	39	
23	11th-Market to Chestnut Hill	20.33	78.7	117.8	117.8	PM	17	3	3,791.6	315:02:37	471:33:26	471:33:26	PM	6.67	26	
24	Southampton & Rockledge to Frankford TC	25.55	57.9	93.6	93.6	PM	37	56	650.1	39:46:54	64:15:46	64:15:46	PM	6.14	37	
25	Frankford TC to Columbus Commons	14.39	67.0	103.5	103.5	PM	29	34	1,209.0	85:31:53	132:13:16	132:13:16	PM	6.62	27	
26	Frankford TC to Cheltenham Ave Station	16.31	81.1	111.4	111.4	PM	22	10	2,900.4	248:32:46	341:22:57	341:22:57	PM	6.73	23	
27	Broad-Carpenter to Plymouth Meeting Mall	24.61	113.5	173.7	173.7	PM	2	24	1,185.9	142:12:56	217:34:10	217:34:10	PM	7.76	7	
29	Pier 70 to 33rd-Dickinson	3.86	62.4	66.7	66.7	PM	57	47	1,297.5	85:29:08	91:27:24	91:27:24	PM	5.37	60	
31	City Hall to 76th-City	8.10	76.6	105.3	105.3	PM	28	32	1,229.4	99:31:11	136:45:16	136:45:16	PM	6.77	22	
33	Penn's Landing to 23rd-Venango	11.09	93.0	119.7	119.7	PM	16	6	3,319.7	325:55:31	419:47:12	419:47:12	PM	6.40	31	
37	Chester TC to Broad-Snyder	18.84	46.5	58.0	58.0	PM	63	57	990.9	48:43:08	60:45:04	60:45:04	PM	5.90	44	
38	5th-Market to Wissahickon TC	18.66	68.2	90.9	90.9	PM	42	52	780.6	56:13:01	74:54:29	74:54:29	PM	6.69	25	
39	Richmond-Cumberland to 33rd-Dauphin	6.12	57.0	74.6	74.6	PM	52	59	663.0	39:52:57	52:14:10	52:14:10	PM	5.23	65	
40	2nd-Lombard to Conshohocken-Monument	17.27	73.9	96.8	96.8	PM	34	26	1,984.8	154:58:35	202:58:06	202:58:06	PM	5.87	45	
42	Penn's Landing to Wycombe or 61st-Pine	13.12	93.1	123.5	123.5	PM	14	12	2,213.7	217:33:46	288:51:46	288:51:46	PM	6.78	21	
43	Richmond-Cumberland to 50th-Parkside	13.89	76.8	101.7	101.7	PM	32	44	951.0	77:10:55	102:09:53	102:09:53	PM	7.35	10	
44	5th and Market to Ardmore	24.53	127.7	195.1	195.1	PM	1	25	1,024.2	138:06:47	211:04:09	211:04:09	PM	8.38	3	
45	Broad-Oregon to Nobel-12th	7.36	55.8	86.1	86.1	PM	44	31	1,514.4	89:18:30	137:41:13	137:41:13	PM	5.73	50	
46	58th-Baltimore to 63rd-Malvern	1.32	71.2	81.3	81.3	PM	47	36	1,496.1	112:35:19	128:26:05	128:26:05	PM	5.38	58	
47	Whitman Plaza to 5th and Godfrey	18.51	80.0	126.8	126.8	PM	13	1	4,771.1	403:14:08	638:48:11	638:48:11	PM	5.70	51	
48	Front-Market to 27th-Allegheny	10.39	91.1	116.5	116.5	PM	19	17	2,296.8	220:53:21	282:41:12	282:41:12	PM	6.92	16	
52	49th-Woodland to 54th-City or 50th-Parkside	10.70	64.3	109.7	109.7	PM	24	8	3,493.2	237:14:29	404:36:44	404:36:44	PM	5.78	47	
53	Wayne-Carpenter to Broad-Hunting Park or G-Hunting Park	11.95	66.7	79.7	79.7	PM	50	55	766.5	53:58:43	64:30:09	64:30:09	PM	5.41	57	
54	Richmond-Cambria to 33rd-Dauphin	8.28	65.1	108.7	108.7	PM	25	18	2,153.4	148:02:53	247:15:59	247:15:59	PM	7.20	11	
55	Willow Grove & Doylestown to Olney TC	43.12	48.0	73.0	73.0	PM	53	41	1,579.2	80:08:50	121:41:49	121:41:49	PM	5.73	49	
56	23rd-Venango & Bakers Centre to Torresdale-Cottman	15.70	84.2	132.7	132.7	PM	8	5	3,008.3	267:36:23	421:33:36	421:33:36	PM	7.03	13	

**Table 14  
(Continued)**

Route	Name	Miles	Peak Hour Planning Delay (sec/mi)					Peak Hour Ridership Delay (hr/mi) (hh:mm:ss)						CMP Obj. Score	CMP Obj. Rank
			AM Delay	PM Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	Annual Ridership (000)	AM Delay	PM Delay	Highest Peak Delay	AM/PM Highest Delay		
57	Whitman Plaza to Rising Sun-Olney & Fern Rock TC	21.80	64.2	98.3	98.3	PM	33	11	2,929.5	198:35:20	304:16:30	304:16:30	PM	6.11	38
58	Neshaminy Mall & Somerton to Frankford TC	25.69	48.0	94.5	94.5	PM	36	19	2,418.6	122:40:59	241:27:21	241:27:21	PM	6.29	34
59	Castor-Bustleton to Arrott TC	7.74	52.3	66.4	66.4	PM	58	50	1,182.0	65:14:41	82:51:40	82:51:40	PM	5.23	63
60	35th-Allegheny to Richmond-Westmoreland	10.65	88.7	137.0	137.0	PM	6	4	2,968.1	277:59:17	429:28:34	429:28:34	PM	6.91	17
61	9th-Market to Manayunk	15.25	87.3	110.6	110.6	PM	23	37	1,076.7	99:17:14	125:46:54	125:46:54	PM	6.91	18
64	50th-Parkside to Pier 70	16.00	71.2	95.7	95.7	PM	35	28	1,574.1	118:26:28	159:01:45	159:01:45	PM	6.43	30
65	Germantown-Chelten to 69th Street TC	16.96	92.8	116.9	116.9	PM	18	16	2,290.5	224:32:48	282:48:56	282:48:56	PM	6.97	15
66	Frankford TC to Frankford-Knights	11.94	81.0	102.7	102.7	PM	31	15	2,607.6	223:05:27	282:52:14	282:52:14	PM	7.64	8
67	Philadelphia Mills & Bustleton to Frankford TC	14.28	59.6	63.1	63.1	PM	60	48	1,366.8	86:03:49	91:09:29	91:09:29	PM	5.35	62
68	69th Street TC via UPS and PNC to Broad-Oregon	42.17	37.3	45.0	45.0	PM	65	65	562.5	22:09:46	26:45:11	26:45:11	PM	5.63	53
70	Torresdale-Cottman & Frankford-Gregg to Fern Rock TC	15.07	64.4	91.2	91.2	PM	40	23	2,259.9	153:45:58	217:38:20	217:38:20	PM	6.25	35
75	Wayne Junction to Arrott TC	7.16	84.6	112.6	112.6	PM	21	49	758.0	67:42:38	90:10:46	90:10:46	PM	5.36	61
79	Columbus Commons to 29th-Snyder	5.48	64.5	92.0	92.0	PM	39	30	1,519.8	103:32:12	147:37:52	147:37:52	PM	5.80	46
84	Philadelphia Mills & Bustleton-County Line to Frankford TC	22.60	57.6	58.2	58.2	PM	62	58	986.4	59:59:25	60:35:56	60:35:56	PM	5.47	55
104	West Chester University to 69th Street TC	40.99	54.0	68.4	68.4	PM	56	53	969.6	55:19:01	70:05:00	70:05:00	PM	5.23	64
105	Rosemont to 69th Street TC	13.03	68.2	89.1	89.1	PM	43	61	360.9	25:59:44	33:57:48	33:57:48	PM	6.37	33
106	Ardmore & Paoli to 69th Street TC	32.19	61.8	72.8	72.8	PM	54	63	373.6	24:22:33	28:43:40	28:43:40	PM	5.75	48
107	Lawrence Park to 69th Street TC	26.73	59.2	91.0	91.0	PM	41	62	311.3	19:28:12	29:56:20	29:56:20	PM	6.22	36
108	Airport & Airport Business Center to 69th Street TC	16.39	49.8	70.2	70.2	PM	55	40	1,656.0	87:08:21	122:44:31	122:44:31	PM	5.97	42
109	Chester TC to 69th Street TC	22.61	60.3	103.1	103.1	PM	30	29	1,404.8	89:25:36	152:58:29	152:58:29	PM	6.87	19
110	Springfield Mall & Penn State to 69th Street TC	26.08	69.0	106.8	106.8	PM	26	54	591.1	43:03:41	66:39:14	66:39:14	PM	6.82	20
112	Delaware County Community College to 69th Street TC	15.67	72.7	80.9	80.9	PM	48	64	319.5	24:32:17	27:18:58	27:18:58	PM	5.97	43
113	Northtowne Plaza to 69th Street TC	29.16	53.6	75.7	75.7	PM	51	27	2,131.1	120:34:31	170:21:31	170:21:31	PM	6.00	41
114	Penn State & I-95 Industrial Park to Darby TC	39.17	49.8	66.2	66.2	PM	59	60	596.7	31:23:46	41:44:09	41:44:09	PM	5.62	54
LUCYGO*	Gold Loop through University City	2.90	164.3	156.9	164.3	AM	4	39	709.8	123:10:59	117:35:38	123:10:59	AM	9.00	1
LUCYGR*	Green Loop through University City	3.85	131.0	134.8	134.8	PM	7	45	709.8	98:13:39	101:01:59	101:01:59	PM	7.82	6

	Most Delayed
	Somewhat Delayed
	Somewhat Not Delayed
	Least Delayed

Note: Ridership is based on the 2021 SEPTA Service Plan Update , which contains fiscal year 2019 data (July 1, 2018 - June 30, 2019).





\* Ridership is the same for both LUCY Gold and LUCY Green, since it was not provided separately.

Source: DVRPC analysis of 2021 INRIX data



**Table 15:**  
**DVRPC CMP NJ Transit Route Facilities: Peak Planning Time Vehicle and Ridership Delay (Sorted by Route)**

Route	Name	Miles	Peak Hour Planning Delay (sec/mi)					Peak Hour Ridership Delay (hr/mi) (hh:mm:ss)					CMP Obj. Score	CMP Obj. Rank	
			AM Delay	PM Delay	Highest Peak Delay	AM/PM Highest Delay	Rank	Rank	Annual Ridership (000)	AM Delay	PM Delay	Highest Peak Delay			AM/PM Highest Delay
400	Sicklerville - Philadelphia	47.63	45.6	58.1	58.1	PM	10	1	709.3	34:10:26	43:33:18	43:33:18	PM	5.13	8
402	Pennsville - Philadelphia	67.10	34.5	37.8	37.8	PM	32	22	104.4	3:48:22	4:10:19	4:10:19	PM	4.55	25
403	Camden - Lindenwold Patco - Turnersville	45.47	38.3	56.7	56.7	PM	11	2	344.7	13:56:57	20:38:02	20:38:02	PM	5.08	10
404	Cherry Hill Mall - Pennsauken- Philadelphia	19.18	64.9	71.6	71.6	PM	2	6	181.6	12:26:49	13:43:49	13:43:49	PM	5.80	3
405	Camden - Merchantville - Cherry Hill Mall	11.61	32.4	58.7	58.7	PM	9	20	88.6	3:01:43	5:29:29	5:29:29	PM	4.93	15
406	Berlin - Marlton - Philadelphia	34.97	49.6	66.6	66.6	PM	3	5	223.6	11:42:01	15:43:52	15:43:52	PM	5.80	2
407	Camden - Merchantville - Moorestown Mall	31.19	36.5	56.1	56.1	PM	12	13	134.2	5:10:30	7:56:48	7:56:48	PM	4.26	29
408	Millville -Philadelphia	71.30	31.4	41.5	41.5	PM	28	14	180.4	5:58:40	7:54:07	7:54:07	PM	4.46	27
409	Trenton - Willingboro - Philadelphia	92.53	34.4	41.0	41.0	PM	29	7	304.4	11:02:55	13:10:22	13:10:22	PM	4.94	13
412	Sewell - Glassboro - Philadelphia	63.04	37.9	50.4	50.4	PM	15	15	147.1	5:53:19	7:49:55	7:49:55	PM	4.90	16
413	Camden - Mt. Holly - Florence	63.57	28.1	43.0	43.0	PM	25	9	224.2	6:39:31	10:10:51	10:10:51	PM	4.57	24
414	Moorestown - 30th Street Philadelphia	35.11	59.8	72.0	72.0	PM	1	32	2.7	0:09:58	0:12:00	0:12:00	PM	5.47	6
417	Mt. Holly - Willingboro - 30th Street Philadelphia Express	61.41	38.7	47.7	47.7	PM	20	33	3.0	0:07:06	0:08:45	0:08:45	PM	5.06	12
419	Camden - Rt.73/Pennsauken Station - Riverside	23.65	36.8	37.4	37.4	PM	33	26	59.1	2:18:09	2:20:15	2:20:15	PM	5.12	9
450	Camden - Cherry Hill Mall	28.07	38.2	59.7	59.7	PM	7	10	142.5	5:45:31	8:58:59	8:58:59	PM	5.79	4
451	Camden - Voorhees Town Center	34.02	38.6	59.9	59.9	PM	6	28	21.0	0:51:26	1:19:49	1:19:49	PM	4.60	22
452	Camden - 36th Street Station	16.85	41.5	53.7	53.7	PM	13	12	140.6	6:09:59	7:58:54	7:58:54	PM	5.33	7
453	Ferry Avenue Patco - Camden	6.22	33.2	40.7	40.7	PM	31	29	27.8	0:58:40	1:11:56	1:11:56	PM	6.04	1
455	Cherry Hill Mall - Woodbury - Paulsboro	53.84	34.9	50.3	50.3	PM	16	18	106.2	3:55:16	5:38:49	5:38:49	PM	4.46	26
457	Camden - Moorestown Mall	31.97	41.1	51.3	51.3	PM	14	21	77.3	3:21:10	4:11:22	4:11:22	PM	4.32	28
459	Voorhees Town Center - Camden County College - Avandale P&R	28.34	32.5	43.4	43.4	PM	24	24	77.6	2:39:48	3:33:30	3:33:30	PM	4.03	31
463	Woodbury - Avandale Park/Ride	31.60	31.1	49.5	49.5	PM	17	30	18.2	0:35:47	0:56:59	0:56:59	PM	3.87	33
555	Avandale Park & Ride - 30th Street Philadelphia	48.06	43.4	60.0	60.0	PM	5	31	4.0	0:10:51	0:15:00	0:15:00	PM	5.71	5
601	College Of New Jersey - Trenton - Hamilton Marketplace	31.20	40.9	40.3	40.9	AM	30	16	171.3	7:24:10	7:17:27	7:24:10	AM	4.06	30
603	Mercer Mall - Hamilton Square - Yardville - Hamilton Marketplace	36.59	36.5	49.2	49.2	PM	18	17	137.1	5:17:03	7:07:16	7:07:16	PM	4.81	18
605	Montgomery Township - Princeton - Quaker Bridge Mall	21.90	35.7	42.0	42.0	PM	27	25	52.8	1:59:40	2:20:36	2:20:36	PM	3.95	32
606	Princeton - Mercerville - Hamilton Marketplace	55.55	45.8	49.0	49.0	PM	19	4	320.9	15:30:28	16:36:11	16:36:11	PM	4.64	21
607	Ewing - Trenton - Independence Plaza	16.28	38.0	44.8	44.8	PM	22	23	87.7	3:30:56	4:08:48	4:08:48	PM	5.07	11
608	Hamilton - Ewing	19.87	42.8	41.6	42.8	AM	26	11	194.2	8:45:58	8:31:51	8:45:58	AM	4.85	17
609	Ewing - Quaker Bridge Mall	21.36	39.9	58.8	58.8	PM	8	3	270.8	11:25:21	16:48:57	16:48:57	PM	4.58	23
613	Mercer Mall - Hamilton Square - Yardville - Hamilton Marketplace	36.38	37.5	46.3	46.3	PM	21	8	230.3	9:06:56	11:16:27	11:16:27	PM	4.94	14
619	Ewing - Mercer County College	16.30	51.1	65.6	65.6	PM	4	19	81.2	4:23:01	5:38:03	5:38:03	PM	4.70	19
624	Pennington - East Trenton	27.39	36.6	44.2	44.2	PM	23	27	39.6	1:32:08	1:51:15	1:51:15	PM	4.70	20

 Most Delayed  
 Somewhat Delayed  
 Somewhat Not Delayed  
 Least Delayed

Source: DVRPC analysis of 2021 INRIX data

Note 1: Length in miles indicates the portion of the route within the DVRPC region; Note 2: Annual ridership is based on NJ Transit Annual Ridership Data for fiscal year 2021 (July 1, 2020 - June 30, 2021).

## 4.7 Congested Corridor, Subcorridor, and Emerging Growth Corridor Areas

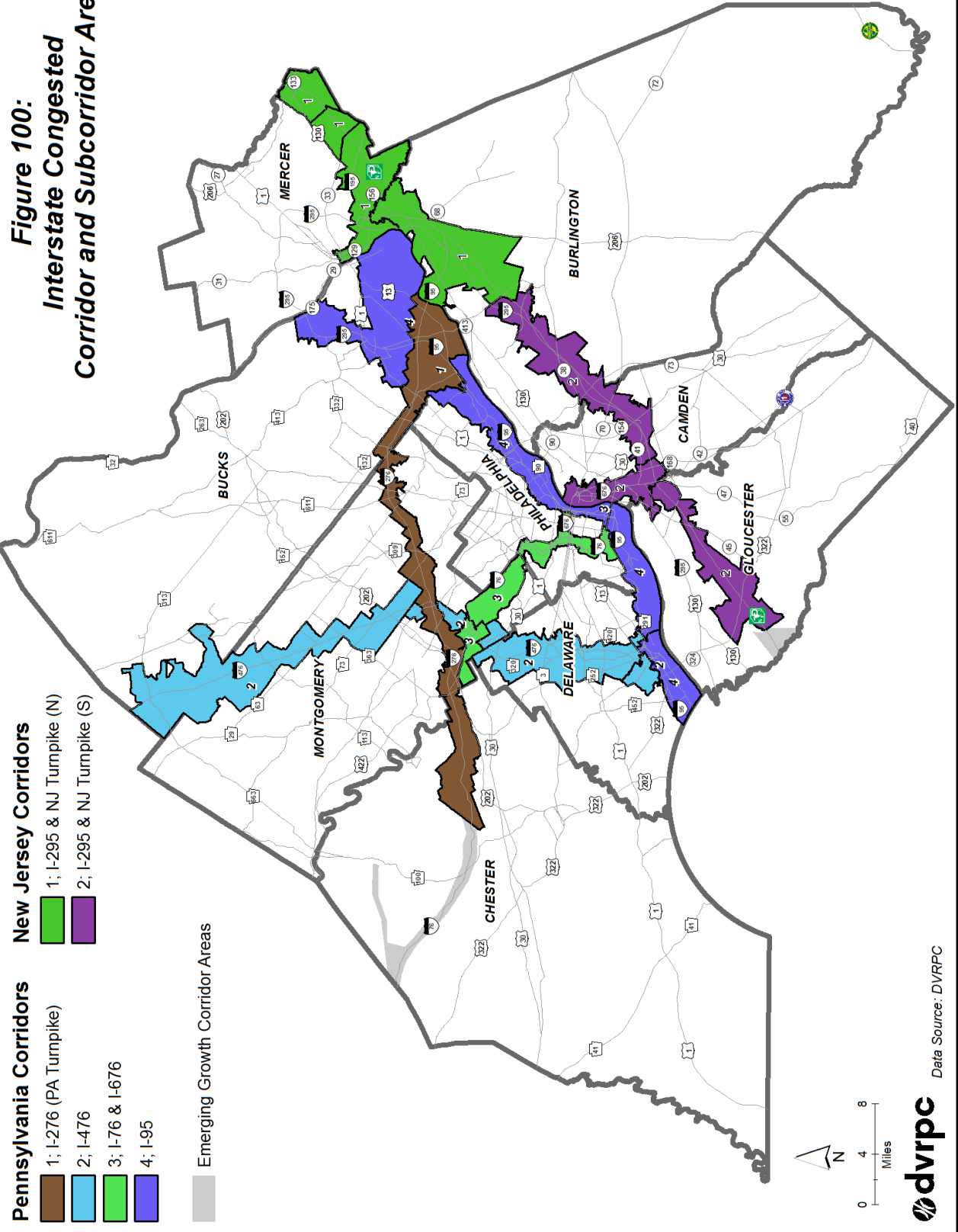
The DVRPC region is segmented into CMP congested corridor and subcorridor areas to help prioritize congested locations and to assist in developing focused strategies to mitigate congestion. The region is too large to prioritize congested locations and develop mitigation strategies for all roadways and intersections separately, so the subcorridor areas provide, at a regional planning level a framework for analysis. The CMP uses focus roadway corridors, bottlenecks, and CMP objective measures to identify 37 broader CMP corridor areas that experience more congestion and reliability. There are 20 corridor areas in the Pennsylvania subregion which are further divided into 68 subcorridors. There are 17 corridor areas in the New Jersey subregion, which are further divided into 63 subcorridors. For example, corridor area 5 (US 1) in Pennsylvania comprises nine subcorridor areas starting in western Chester County and ending at the Pennsylvania and New Jersey state boundaries. Corridor area 6 (US 130) in New Jersey includes 12 subcorridor areas starting in Gloucester County and ending at the Mercer County and Middlesex County boundary. Additionally, emerging regionally significant growth corridor areas are identified where traffic congestion is not a major concern yet, but may be in the future given existing land use and travel trends. Figures 100 and 101 show the congested corridor, subcorridor, and emerging growth corridor areas by interstate and non-interstate, respectively. The location and extent of the areas are based on various factors, such as land use, roadway functional classification, parallel roadways, transit facilities, and input from the CMP Advisory Committee. The corridor and subcorridor areas have been updated from the prior 2019 CMP to align with census block group boundaries, so census socioeconomic data can more accurately indicate the underlying makeup of the subcorridor areas and assist in identifying strategies for managing congestion.

## 4.8 Selecting Priority Congested Corridor and Subcorridor Areas

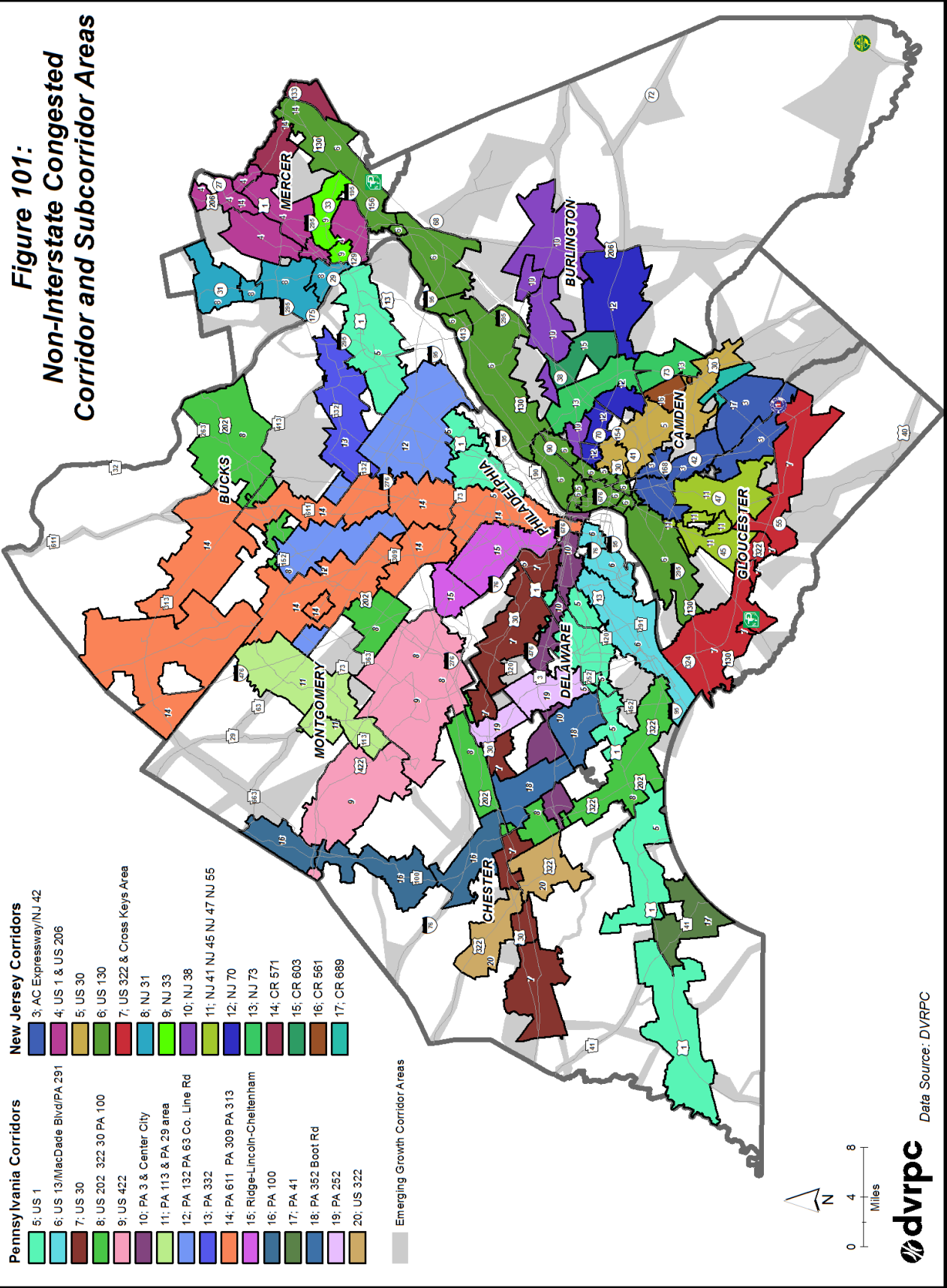
CMP objective measures are used to identify priority congested corridor and subcorridor areas for making investment decisions to manage traffic congestion (see Figure 102). Priority areas are used in the *Plan-TIP Project Evaluation Criteria*, which help to focus where investments need to be made to support the goals of the DVRPC Long-Range Plan, including increasing mobility and reliability, integrating modes and increasing accessibility, modernize infrastructure, achieve a Vision Zero goal of no fatalities or serious injuries on the region's transportation network by 2050, make global connections, strengthen cybersecurity, and ensure that transportation investments support other goals of the Long-Range Plan.

The measures are based on CMP objectives and criteria that are derived from goals of the Long-Range Plan (see Chapter 2). Scores are assigned to congested roadway segments that meet CMP objective criteria, and locations that meet more criteria receive higher scores and indicate a greater need for managing congestion, which are shown in brown and red on the mapping (see Figure 21). For example, congestion on a NHS roadway near passenger rail stations with high crash frequency, and within a Long-Range Plan land use center, will receive greater priority than congestion locations where these factors are not present. The locations that meet more CMP objective criteria are used to help select priority congested corridor and subcorridor areas along with input from the CMP Advisory Committee.

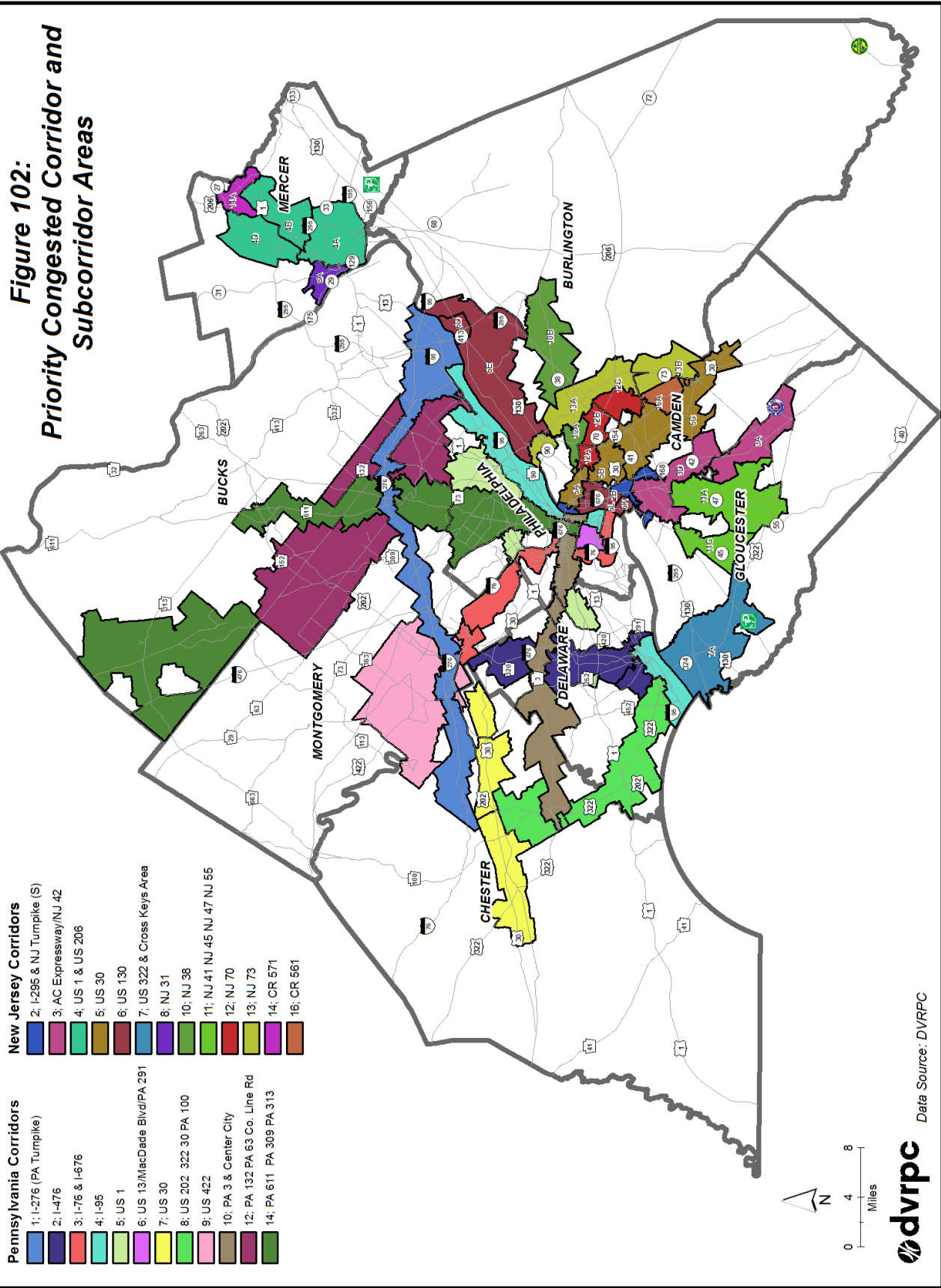
**Figure 100:**  
**Interstate Congested**  
**Corridor and Subcorridor Areas**



**Figure 101:  
Non-Interstate Congested  
Corridor and Subcorridor Areas**



**Figure 102:  
Priority Congested Corridor and  
Subcorridor Areas**



**dvrpc**  
Data Source: DVRPC

## 4.9 Advancing from CMP Objective Measures to Strategies

A main component of the CMP is to provide an appropriate mix of strategies to mitigate congestion by congested corridor and subcorridor area, and most congested focus roadway corridor facility and intersection bottleneck that will improve the mobility of people and goods traversing the regional transportation system, and at the same time address other CMP objectives as applicable, such as achieving Vision Zero, improving safety, accessibility, security, and supporting Long-Range Plan principles.

CMP objective measures help drive the process of identifying which strategies are more appropriate than others using Long-Range Plan goals and CMP objectives. Every subcorridor and facility in the region presents its own unique mobility challenges, so care should be taken to select the strategies that best fit the conditions, goals, and character of the area under consideration. For example, high congestion on a bus transit facility may warrant strategies such as Transit Signal Priority (TSP), ITS for transit, and modifications to existing transit routes and services. If the subcorridor area contains high Environmental Justice populations, then the area is higher priority than if those conditions were not present. High congestion on limited access roadways may warrant ITS and Incident Management, Active Traffic Management (ATM), and Active Transportation Demand Management (ATDM) strategies. High congestion with high crash frequency or severity may warrant safety improvement strategies. A guide to advancing from CMP objective measures to strategies is listed in Table 16. For the CMP objective of increasing mobility and reliability, strategies farther up the list should be considered first before new roadway capacity or passenger rail investments. Although each strategy for a particular measure may not necessarily be the most appropriate, the table provides a network screening of measures that starts the process of identifying appropriate strategies.

Chapter 5 details 125 strategies in the CMP that can be used to mitigate congestion.

**Table 16: Advancing from CMP Objective Measures to Strategies to Reduce Congestion**

LRP Goals	CMP Objectives	CMP Objective Measures	CMP Objective Measure Criteria	Guide to Advancing from Objectives and Criteria to Strategies
Increase Mobility and Reliability	Increase mobility and reliability, including minimizing growth in recurring and non-recurring congestion, and meeting PM3 targets	<ol style="list-style-type: none"> <li>Travel Time Index (TTI) to understand usual recurring congestion by road segment</li> <li>Planning Time Index (PTI) to understand non-recurring congestion by road segment</li> <li>Focus roadway corridor facility Vehicle Delay to understand how the corridor is performing for each vehicle</li> <li>Focus roadway corridor facility Volume Delay to understand how the corridor is performing for all vehicles</li> <li>High anticipated Volume To Capacity (V/C) and high anticipated growth in V/C in the peak hours using the travel demand model (2015 to 2050), reflecting board adopted population and employment forecasts</li> <li>Bottleneck delays to understand which intersections or limited access roadway locations are experiencing the most congestion or unreliability</li> <li>PM3 Level of Travel Time Reliability (LOTTR), and Peak Hour Excessive Delay (PHED) to understand reliability and congestion</li> </ol>	<ol style="list-style-type: none"> <li>INRIX roadway links with medium and high TTI (1.20 to 1.50) and (&gt;1.50) for peak hour periods 7-8am, 8-9am, 4-5pm and 5-6 pm, whichever is greater, all weekdays in 2021</li> <li>INRIX roadway links with medium and high PTI (2.00 to 3.00), (3.00 to 3.50) and (&gt; 3.50) for peak hour periods, 7-8am, 8-9am,4-5pm and 5-6 pm, whichever is greater, all weekdays in 2021</li> <li>Corridor Vehicle Travel Time and Planning Time Delay is the difference in actual travel time and the free-flow travel times and the planning time and the free-flow travel time, respectively, during peak hour periods, whichever is greater</li> <li>Corridor Travel Time and Planning Time Volume Delay is the difference in actual travel time and free-flow travel time and the planning time and free-flow travel time, respectively during peak hour periods, whichever is greater, multiplied by traffic volume in the peak period</li> <li>Model links with 2050 Volume To Capacity (V/C) (&gt;=0.85) for peak periods AM/PM, whichever is greater, and links with 15 percent increase in (V/C) between base year and future year, and base year V/C (&gt;=0.85) to focus on where congestion might become a problem in the future</li> <li>Identify bottlenecks using road links with TTI &gt; 1.50 or PTI &gt; 3.0 using INRIX travel time data. Then identify all approach segments, and trail trailing segments with TTI 1.40 or more to calculate vehicle and volume delays</li> <li>PM3 NPMRDS links with medium and high LOTTR (&gt;= 1.50 to 2.49) and (&gt;=2.50), and high PHED (&gt; 1x regional average). LOTTR is calculated by dividing 80<sup>th</sup> percentile by 50<sup>th</sup> percentile travel times</li> </ol>	<ul style="list-style-type: none"> <li><b>High TTI or High Vehicle Delay or High Volume Delay or High PHED</b> – Review strategies for TSMO/ITS (road &amp; transit) <ul style="list-style-type: none"> <li>Where transit exists: Transit Signal Priority (TSP), ITS Improvements for Transit, Modifications to Existing Transit Routes or Services, Transit Infrastructure Improvements</li> <li>On limited access highways: ITS Variable Speed Limits, Ramp Metering</li> </ul> </li> <li><b>High PTI or High LOTTR or High Bottleneck Delay</b> <ul style="list-style-type: none"> <li>Freeways: ITS family (esp. Traveler Information and Incident Management Services)</li> <li>Arterials, Signal Improvements family (esp. Coordinated Traffic Signals, Adaptive Signals)</li> </ul> </li> <li><b>High Growth in V/C</b> – Improve Circulation and Comprehensive Policy Approaches, such as Growth Management &amp; Smart Growth, Complete Streets, Revisions to Existing Land Use/Transportation Regulations, Access Management Policies and Projects</li> <li><b>High TTI and High Volume Delay and High PHED and High PTI</b> – Review all strategies above, plus Inter-regional Transportation Coordination if appropriate. Integrated Corridor Management (ICM), New Bus Services, Minor Road Expansions</li> <li><b>Highly Congested</b> – High TTI and High Vehicle Delay and High Volume Delay and High PHED and High PTI and High Growth in V/C – All strategies above plus Bus Rapid Transit or Exclusive Bus Lanes, New Passenger Rail Investments, Adding Capacity to Existing Roads (esp. Interchange with Related Road Segments), Flex Lanes, General Purpose Lanes</li> </ul>
Integrate Modes and increase Accessibility	Provide transit, trails and sidewalks where they are most needed for an accessible and connective multimodal network	<ol style="list-style-type: none"> <li>Assess Transit score, and population nearby rail stations and bus routes to understand where transit could reasonably help improve accessibility</li> </ol>	<ol style="list-style-type: none"> <li>Identify links with very high or high transit score by Census Block Group, within one-mile buffer of all rail stations, and within a quarter mile buffer of all bus routes</li> </ol>	<ul style="list-style-type: none"> <li><b>High Transit Score, Rail Station, or Bus Transit</b> – Walking and Bicycling Improvements, Modifications to Existing Transit Routes or Services, New Bus Services (esp. Shuttle Service to Stations, Transportation Services for Specific Populations). Consider Economic Development-Oriented Transportation Strategies where poverty is a major issue <ul style="list-style-type: none"> <li>Review with above average and well above average Indicators of Potential Disadvantage (IPD)</li> </ul> </li> </ul>
Modernize infrastructure	Modernize and maintain the existing core transportation network	<ol style="list-style-type: none"> <li>National Highway System (NHS), Primary Highway Freight System (PHFS) including Critical Urban and Rural Freight Corridors; rail lines (passenger and freight); major freight facilities and Philadelphia International Airport</li> <li>Roads with substantial bus or trolley service, which are essential infrastructure for transit riders</li> </ol>	<ol style="list-style-type: none"> <li>All NHS and PHFS (including principal arterials); existing passenger rail (including Amtrak); existing freight rail lines; major freight facilities—major rail yards, rail-truck intermodal yards, and ports (one-mile buffer); Philadelphia International Airport (one-mile buffer)</li> <li>Roads used by bus or trolley routes making three or more runs during the peak period in urban locations, or two or more runs in suburban locations</li> </ol>	<ul style="list-style-type: none"> <li><b>NHS, PHFS and Critical Urban and Rural Freight Corridors and Freight Facilities</b> – Goods Movement strategies</li> <li><b>Roads with substantial transit service or train stations with high boarding's</b> – Review Transit Infrastructure Improvements, TSP, ITS Improvements for Transit, Shuttle to Station, TOD, Modifications to Existing Transit Routes or Services</li> <li><b>Substantial transit and Highly Congested</b> – Review if appropriate: Passenger Intermodal Center or Garage for Transit Riders, Express Transit Routes, BRT</li> </ul>
Achieve Vision Zero	Improving vehicle, pedestrian, and bicyclist safety, and reducing nonrecurring congestion by reducing crashes	<ol style="list-style-type: none"> <li>Crash rate by comparing actual crash rate to average crash rate based on roadway characteristics, including AADT, access control, divisor, roadway width, and location (rural, not rural)</li> <li>Severity Index including kill and major injuries</li> </ol>	<ol style="list-style-type: none"> <li>Segments with crash rate four or more times the average rate (three or more in NJ) would be considered high crash rate corridors</li> <li>Segments with five or more kill or major injuries per segment mile (four or more in NJ) would be considered high severity corridors</li> </ol>	<ul style="list-style-type: none"> <li><b>High crash rates and High severity</b> – Emphasize Safety Improvements and Programs, and review FHWA proven safety countermeasures <ul style="list-style-type: none"> <li>On Interstates - Incident Management</li> </ul> </li> </ul>

**Table 16: Advancing from CMP Objective Measures to Strategies to Reduce Congestion**

LRP Goals	CMP Objectives	CMP Objective Measures	CMP Objective Measure Criteria	Guide to Advancing from Objectives and Criteria to Strategies
<p>Make Global Connections</p>	<p>Maintain movement of goods by truck and rail, and meeting PM3 targets</p>	<ol style="list-style-type: none"> <li>1. PM3 Truck Travel Time Reliability (TTTR) Index on Interstate System</li> <li>2. Corridor Truck Planning Time Volume Delay to understand how the corridor is performing due to truck volumes</li> <li>3. Truck Travel Planning Time Index (TPTI) on National Highway System</li> <li>4. Truck Travel Time Index (TTTI) on the National Highway System</li> </ol>	<ol style="list-style-type: none"> <li>1. NPMRDS interstate roadway links with high TTTR for the 5 time periods. TTTR is (95<sup>th</sup> percentile / 50<sup>th</sup> percentile) travel times. TTTR &gt;= 2.00 considered highly unreliable</li> <li>2. Truck Planning Time Delay is the difference in planning time from free-flow time during the peak hours, whichever is greater, multiplied by truck volume in peak period</li> <li>3. NPMRDS roadway links with high Truck Planning Time Index (TPTI) scores for peak hour periods 7-8am, 8-9am, 4-5pm and 5-6 pm, whichever is greater, all weekdays in 2021. PTI is (95<sup>th</sup> percentile / free-flow travel time)</li> <li>4. NPMRDS roadway links with high Truck Travel Time Index (TTTI) scores for peak hour periods 7-8am, 8-9am, 4-5pm and 5-6 pm, whichever is greater, all weekdays in 2021. PTI is (average travel time / free-flow travel time)</li> </ol>	<ul style="list-style-type: none"> <li>• <u>High TTTR and TPTI Score</u> – Provide for full-service overnight truck parking facilities, due in part to recent changes for driver hours-of-service regulations. Provide provisions for short-term parking for various types of deliveries in urban areas</li> <li>• <u>High Truck Volume Delay, and High TTTI Score</u> <ul style="list-style-type: none"> <li>○ Provide provisions for short-term parking for various types of deliveries in urban areas</li> <li>○ Provide for wider turn-radii for truck turn movements, where applicable</li> </ul> </li> </ul>
<p>Strengthen Security and Cybersecurity</p>	<p>Maintain and enhance transportation security and prepare for both routine and major events, especially ones that call for interregional movements far beyond normal</p>	<ol style="list-style-type: none"> <li>1. Areas where high population density makes evacuation a regional concern</li> <li>2. Most heavily used bridges and passenger transit stations</li> <li>3. Nuclear Power Plant evacuation zones</li> <li>4. General location of largest military bases in the region</li> </ol> <p>Note: Infrastructure measures are also considered in security planning.</p>	<ol style="list-style-type: none"> <li>1. Areas with high population or employment density (&gt;2x regional average). Also, stadium and waterfront attractions, such as the Stadium Complex and Penn’s Landing to name a few</li> <li>2. The most heavily used bridges in the region – bridges that carry over 100,000 trips per average day, and key passenger and rail bridges. Also, the most heavily used transit station in each county (except Philadelphia has three) – roads within a one-mile buffer</li> <li>3. Nuclear power plant Emergency Planning Zones (EMZ) – NHS roads in these 10-mile zones</li> <li>4. Military Facilities – General location of USCG-Sector Delaware Bay and Fort Dix/McGuire Air Force Base (one-mile buffer)</li> </ol>	<ul style="list-style-type: none"> <li>• <u>High densities</u> – Evacuation Planning</li> <li>• <u>Most heavily used transit stations</u> – Transit Station Security</li> <li>• <u>Nuclear power plant EMZ</u> – Coordinate with Nuclear Emergency Evacuation Zone (EMZ) Planning</li> <li>• <u>Most heavily used bridges</u> – Bridge Security</li> <li>• <u>Military facilities</u> – Coordinate with Military Bases</li> </ul>
<p>Ensure Transportation Investments Support Other Long-Range Plan Principles and Focus Areas:</p> <ol style="list-style-type: none"> <li>1. Principles <ul style="list-style-type: none"> <li>○ Sustainability</li> <li>○ Equity</li> <li>○ Resiliency</li> </ul> </li> <li>2. Focus Areas <ul style="list-style-type: none"> <li>○ Preserve and Restore the Natural Environment</li> <li>○ Grow and Innovative and Connected Economy with Broadly Shared Prosperity</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>1. Prioritize transportation investment in less-sensitive environmental areas</li> <li>2. Invest to support Community Centers first, then Infill and Redevelopment areas, then Emerging Growth areas</li> <li>3. Reduce poverty and increase work force skills by investing in EJ and Equity populations</li> </ol> <p>4 &amp; 5: All CMP objectives work toward expanding the economy and creating an integrated, multimodal transportation network</p>	<ol style="list-style-type: none"> <li>1. Environmental Screening Tool score (less harm to environment), and roads in 100- and 500-year floodplains</li> <li>2. Centers, Infill and Redevelopment areas, Emerging Growth areas</li> <li>3. Assess IPD indicators including zero-vehicle households</li> </ol>	<ol style="list-style-type: none"> <li>1. Road links within lowest impact range (0 to 2) of LRP Environmental Screen Tool scores. This further links planning and NEPA, and road links within 100- and 500-year floodplains</li> <li>2. LRP Land Use Centers; Infill and Redevelopment and Emerging Growth land use categories that intersect road links</li> <li>3. IPD indicators are above average and well above average, and zero-vehicle households that intersect road links</li> </ol>	<ul style="list-style-type: none"> <li>• <u>Environmental impact high</u> – Environmentally Friendly Transportation Strategies, Context Sensitive Design. Emphasize Growth Management and Smart Growth and if road capacity is being considered it should be done with careful evaluation of environmental factors and potential impacts. Further review of environmental issues is recommended early in the project development process. DVRPC can assist</li> <li>• LRP Centers – Review for strategies such as Walking and Bicycling Improvements, Improve Circulation, Planning and Design for Non-motorized Transportation, Context Sensitive Design, and Complete Streets <ul style="list-style-type: none"> <li>○ <u>LRP Center with transit</u> – Shuttle Service to Stations, TOD, TSP, Transit Infrastructure Improvements</li> <li>○ <u>Infill and Redevelopment/Emerging Growth areas and high PTI</u> – Improve Circulation (especially Access Management Projects &amp; County and Local Road Connectivity), Intersection Improvements of a Limited Scale, Transit-First Policy, Modifications to Existing Transit Routes or Services, New Bus Services, New Passenger Rail Investments, and Minor Road Expansions, in that order</li> <li>○ <u>Infill/Redevelopment with transit</u> – TSP, ITS Improvements for Transit, Modifications to Existing Transit Routes or Services, Transit Infrastructure Improvements</li> </ul> </li> <li>• <u>Environmental Justice</u> – Walking and Bicycling Improvements, Modifications to Existing Routes or Services, New Bus Services. Consider Economic Development-Oriented Transportation Strategies where poverty is a major issue</li> </ul>

Source: DVRPC, 2023



## 5. Traffic Congestion Mitigation Strategies

The CMP includes a list of 125 strategies to mitigate congestion (see Chapter 5, section 4). These strategies are applied at the congested corridor, subcorridor, and emerging growth corridor levels at a regional planning scale where a set of strategies is most appropriate. They are also applied at the facility level for the most congested corridor facilities and intersection bottlenecks. Corridor and subcorridor area strategies are subdivided into very appropriate and secondary strategies. Appropriate everywhere, or region wide strategies, should be considered for all congested corridor and subcorridor areas, and emerging growth corridor areas. A limited number of very appropriate strategies reflect the context of the corridor area. The secondary strategies should be considered after the very appropriate ones, and they cover a range of TSMO, TDM, transit, and roadway strategies based on the context of the area.

The very appropriate and secondary strategies by corridor and subcorridor area are listed in priority order from top to bottom and the top strategies should be considered first. For example, adding new capacity should be a last resort and only appears at the bottom of the strategy lists in a limited number of corridors where expansion has been deemed appropriate. The order for prioritizing strategies is: (1) maintain and modernize the existing transportation network, by bringing roads, bridges, and transit facilities up to current design standards; making substantive safety improvements; and improving convenience for transferring between modes; (2) optimize the operational efficiency of existing transportation facilities and manage transportation demand by fostering efficient land use patterns, encouraging non-SOV options, and pursuing strategies that reduce the need for and length of trips; and (3) add new road capacity at the highest priority locations, only as a last resort to mitigate congestion. These very appropriate and secondary strategies provide a starting point for planners and project managers to take a deeper dive into the appropriate mitigation measures for a particular location. New major SOV capacity-adding projects may be appropriate when other strategies do not reasonably reduce congestion further up the very appropriate and secondary strategy lists, but these projects must be developed in an appropriate way, and be incorporated with CMP supplemental strategies and commitments.

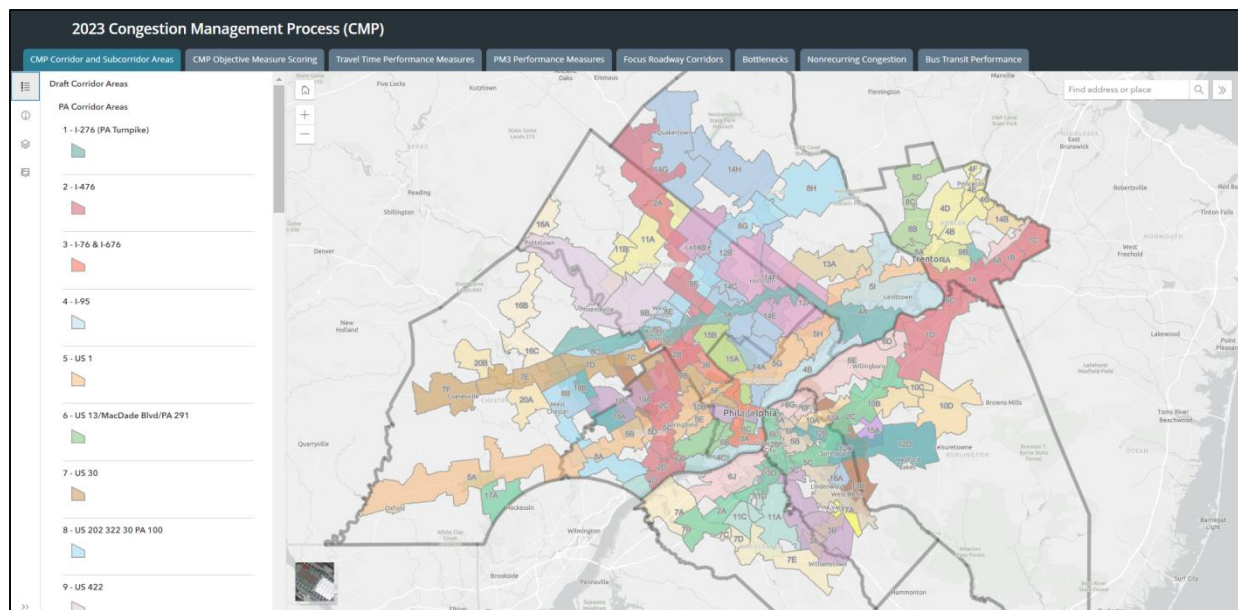
### 5.1 Strategies by Congested Corridor and Subcorridor Area

The specific strategies for a congested corridor and subcorridor area are identified by the CMP Advisory Committee and DVRPC staff using various sources, including adopted planning studies, and CMP objective measures (see Chapter 4, section 9). For example, the Pennsylvania subcorridor 7D (US 30 Paoli, Malvern) contains seven very appropriate strategies, including signal improvements, placemaking for non-motorized transportation, improve circulation, passenger Intermodal Center or Garage for Transit Riders, Transit-Oriented Development (TOD), Walking and Bicycling Improvements, and Demand Response Transit Services (Microtransit). The New Jersey subcorridor 4C (US 1/Penns Neck area) contains six very appropriate strategies, including signal improvements, transit infrastructure improvements, encourage use of fewer cars, comprehensive policy approaches, walking and bicycling improvements, and bus rapid transit (BRT) or Exclusive Right-of-Way Bus lanes.

A map of the congested corridor and subcorridor areas, along with the very appropriate and secondary strategies, is available on the CMP website at [www.dvrpc.org/webmaps/cmp](http://www.dvrpc.org/webmaps/cmp) (see Figure 103). Other information included by congested corridor and subcorridor area include, strategy notes, programmed major and minor SOV capacity-adding TIP projects, Long-Range Plan projects, and references to any

adopted corridor or other relevant planning studies. Strategy notes include specific strategies that may be recommended for a facility based on a corridor study, or more detail on a specific strategy.

**Figure 103: CMP Congested Corridor and Subcorridor Area Web Mapping**



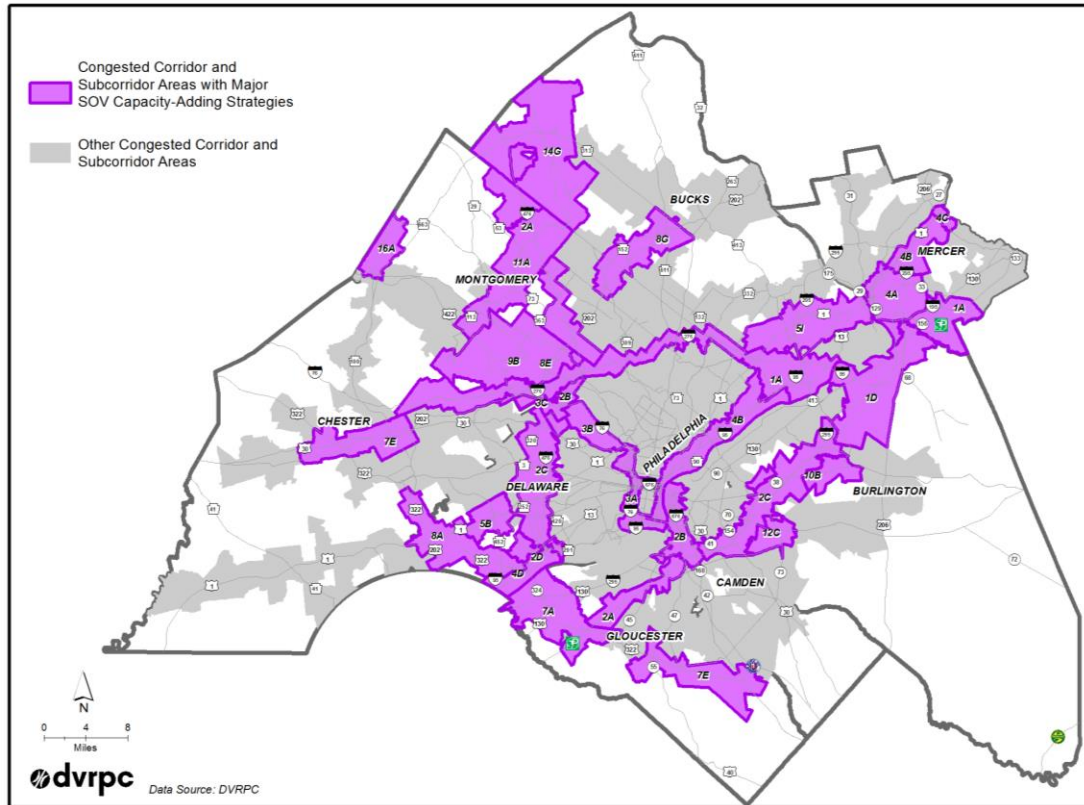
Source: DVRPC, [www.dvrpc.org/webmaps/cmp](http://www.dvrpc.org/webmaps/cmp)

## 5.2 Major SOV Capacity-Adding as a Strategy

The CMP helps decision makers assess where and how to make transportation investments by identifying very appropriate and secondary strategies to mitigate congestion by subcorridor. One of the ways this is accomplished is by considering certain subcorridor areas for limited additional road capacity, realizing that some areas have experienced or are forecasted to experience increased development, and some additional capacity may be necessary. The CMP does not encourage development in these areas, however, it may sometimes be appropriate. Just over one-third of the subcorridor areas in each of the Pennsylvania and New Jersey portions of the DVRPC region contain major capacity-adding strategies (see Figure 104). These projects result in increases in SOV capacity that will likely impact regional or corridor travel patterns. They take into consideration, although are not determined by, projects that are modeled for air quality conformity or studies considered likely to result in non-exempt air quality conformity projects. Minor SOV capacity-adding projects may slightly increase SOV road capacity, but are not new through lanes or new roads that are likely to result in capacity increases that would significantly affect corridor or regional travel patterns. Adding major SOV capacity may be appropriate when major congestion problems cannot be adequately addressed by a set of other strategies, and should be coordinated with multimodal supplemental strategies to get the most long-term value from the investment. Project screening criteria in the *Plan-TIP Project Evaluation Criteria* (DVRPC publication #23128) includes whether new roadway capacity-adding projects are located in CMP subcorridors designated for limited additional road capacity. If the project fails the screening process, it is not considered for inclusion in either the Aspirational Vision or Funded Plan. CMP strategies to add major capacity to existing roads include: general purpose lanes, flex lanes/hard shoulder running, adding movements at interchanges with related road segments, or large intersection projects with associated road segments. Strategies to add major capacity by building new roads include: arterial or collector roads,

bypass roads, or limited-access highways. Procedures for how additional major road capacity may be added as a strategy with additional supplemental strategies are described in the next section.

**Figure 104: Congested Corridor and Subcorridor Areas with Major Capacity-Adding as a Strategy**



## 5.3 Major SOV Capacity-Adding Projects and the CMP

Major SOV capacity-adding project strategies may be appropriate when other strategies do not reasonably reduce congestion, but these projects must be developed in an appropriate way to get the most long-term value from investments and meet federal requirements. Final engineering for major SOV capacity-adding projects should not be listed on the TIP without a table of multimodal supplemental strategies. DVRPC staff are available to provide technical and process support to project managers, including helping to set up stakeholder meetings or providing maps and analysis to advance the supplemental strategies. DVRPC has published CMP Supplemental Project Status Memorandum reports that list project commitments. See the biennial **Supplemental Projects Status Memorandum** reports on the DVRPC web site at [www.dvrpc.org/CongestionManagement/NewsAndTech](http://www.dvrpc.org/CongestionManagement/NewsAndTech) to track the progress of strategy implementation. In 2022/2023 DVRPC has developed additional CMP supplemental strategies for major SOV capacity-adding projects, including the US 30 Bypass in Chester County (MPMS #87781 & #107551), and US 1 section RC3 in Bucks County (MPMS #93446).

Table 17 provides a list of some of the multimodal supplemental strategy commitments to reduce congestion for the US 30 Bypass reconstruction and widening projects. The projects include two main parts: the Eastern Section from approximately Reeceville Road to US 30 Business, and Western Section from Reeceville Road to PA 10. Some project improvements have been completed, such as installation of ITS cameras, and others are in design and engineering. The proposed projects include interchange

improvements, roadway widening and other nearby street and signal improvements. These comprehensive, multimodal commitments will allow the US 30 Bypass projects to maximize the investment of over \$1 billion in federal and state transportation funds. Although this is one of the largest major capacity-adding projects in the region, it provides an example of how a coordinated set of supplemental commitments can be made to help reduce congestion and add value.

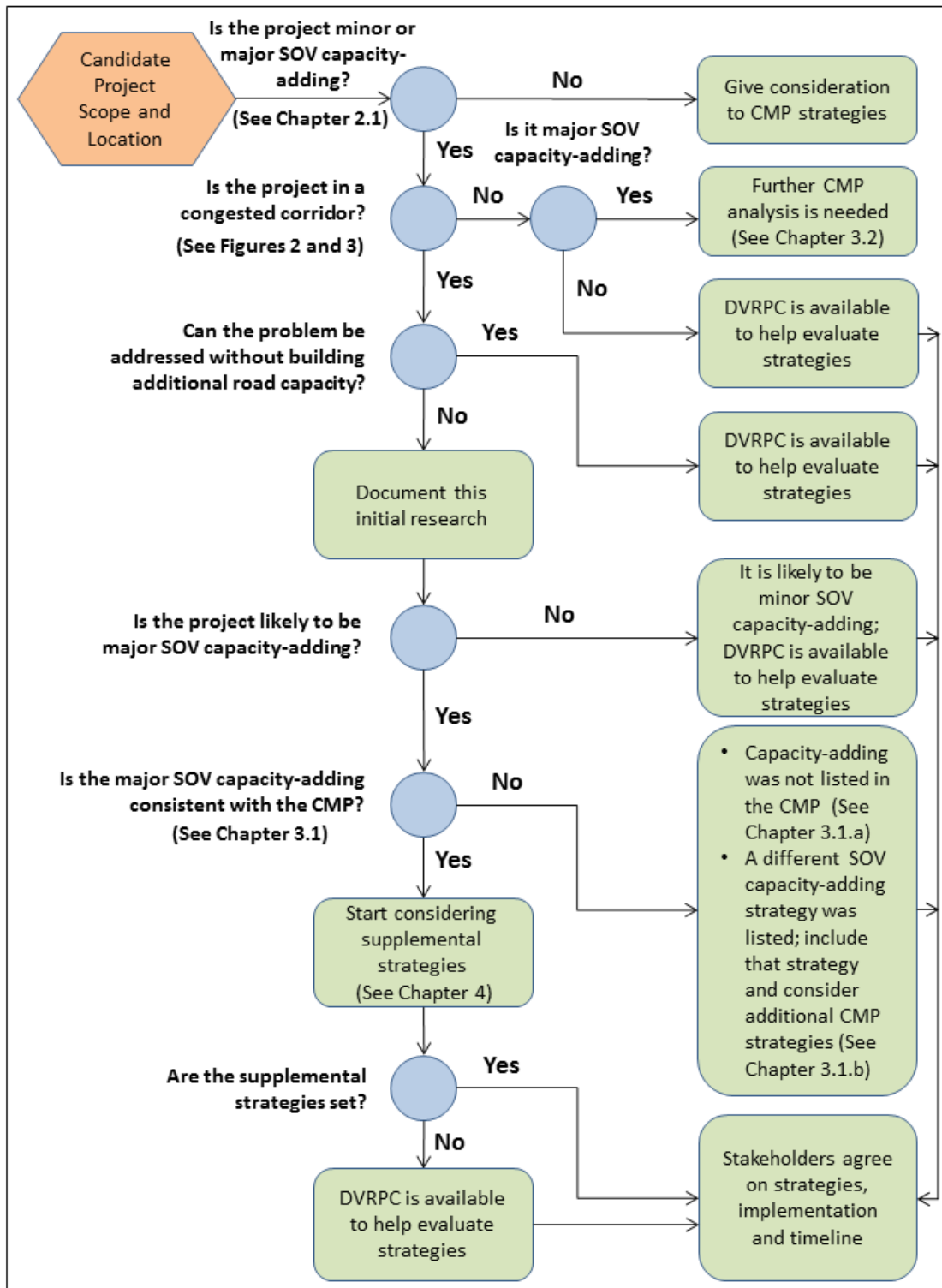
**Table 17: US 30 Bypass Supplemental Commitments**

Sample of Commitments	Lead Agency/Organization	Status
Corridor ITS Expansion (CCTV, DMS, TTS, Signal Upgrades)	PennDOT	Complete
US 30 Business traffic signal and other intersection improvements	PennDOT, Various Municipalities	Programmed/ In Design
Investigate retiming of key arterial signal systems (such as US 322, PA 113, PA 282, PA 340) and address signal retiming hardware and communication related issues identified during implementation of traffic signal retiming, as appropriate	PennDOT, Various Municipalities	Programmed/ In Design
Downingtown Train Station relocation and Improvements; the existing railroad bridge over Brandywine Avenue will be replaced as part of the project to provide more vertical clearance and to enable the addition of a turning lane for vehicular station-related improvements	PennDOT, Amtrak, SEPTA	Programmed/ Construction
Paoli-Thorndale line service enhancements	SEPTA, PennDOT	Being Planned
Improved pedestrian and bicycle access to transit (all modes)	DVRPC, SEPTA, Chester County Planning Commission (CCPC), Various Municipalities	Being Planned
US 30 Business sidewalks and bike lanes	PennDOT, CPCC, Various Municipalities	Being Planned
Conduct employer outreach to promote/ implement Transportation Demand Management (TDM) strategies	Transportation Management Agency of Chester County (TMACC)	Being Planned

Source: DVRPC, 2023

The process of identifying the most appropriate strategies for a transportation improvement project is necessary as part of the CMP. See Figure 105 for how a project moves through the CMP. For more information, see the *CMP Procedures* (DVRPC Publication #21010). It includes instructions for project sponsors on how to be consistent with the CMP, and clarification of which projects qualify as major SOV capacity-adding.

**Figure 105: How a Candidate Project Moves through the CMP**



Source: DVRPC, 2023

## 5.4 Range of Strategies to Reduce Congestion

Below is a list of strategies to address traffic congestion that can be used for specific focus roadway corridors and intersection bottlenecks, or CMP congested corridor and subcorridor areas. Since each area presents its own unique mobility challenges, different very appropriate and secondary strategies are recommended by subcorridor. Appropriate strategies to manage congestion depend on a host of factors, including limited and non-limited access roadways, availability of transit, urban versus rural, and the CMP objective measure scoring (See Chapter 4.9 Advancing from CMP Objective Measures to Strategies). The strategies also serve as a reference source for planners, engineers, and others thinking about ways to effectively address congestion problems across multiple modes of transportation while considering fiscal constraint.

The five categories below summarize the range of strategies. Some of them should be considered in virtually all situations, known as region wide strategies (**highlighted in green**) on the following pages and listed at the end of this section.

- A. **Operational Improvements**  
projects that maintain, optimize, and modernize the existing transportation system (roads, transit, other) by increasing throughput and efficiency on existing facilities, while maintaining and improving safety
- B. **Transportation Demand Management (TDM), Policy Approaches, and Smart Transportation**  
programs and projects that encourage the use of alternative modes of transportation, other than driving alone, and that otherwise focus on the demand side of trip making through physical or policy approaches, often also advancing other quality-of-life, environmental, and economic development goals
- C. **Public Transit Improvements and New Investments**  
programs and projects to increase the frequency, operating speed, and/or reliability of existing services and facilities first, adding new service when necessary and affordable within fiscal constraint
- D. **Goods Movement**  
policies, strategies, and projects to maintain and optimize the safe and efficient movement of freight
- E. **Road Improvements and New Roads**  
projects that increase the capacity of existing roads or build new capacity on new right-of-way, only as a last resort and when affordable within fiscal constraint

### A. Operational Improvements

Strategies in this category address traffic congestion problems through the improved management of existing roads and transportation facilities. Operational improvements may address such issues as better coordinating traffic signals or more safely managing combinations of through and local vehicles, primarily through engineering-based approaches. Transportation System Management and Operations (TSMO) applies multimodal, cross-jurisdictional services and projects to improve transportation network operations, security, safety, and reliability. It is an even broader range of ways to

maximize the use of the entire transportation system while minimizing the expense and impacts of building major new capacity. Intelligent Transportation Systems (ITS) focuses on integrating new technologies and coordinating data to improve roadway communications, reliability, and efficiency. Design requirements will ensure that all transportation projects and facilities are brought up to nominal safety standards. Where deficiencies exist, future investments will address them through improved shoulders, guide rails, lane dividers, signage, line-of-sight clearances, or lighting, and/or meet Americans with Disabilities Act (ADA) requirements.

1. **Signage** – Improvements to clearly communicate location and direction information, including adding or removing signs (to reduce clutter), redesigned signs, “trailblazing” to key locations, maintenance of signs and line-of-sight to them, and pavement markers to provide information.
2. **Safety System Approach** – SSA is an FHWA approach focused on reducing deaths and serious injuries through designs that accommodate human mistakes and injury tolerances. FHWA states that “Safety is an ethical imperative of the designers and owners of the transportation system. All transportation projects should apply these principles from the beginning and throughout project design and delivery: (1) deaths and injuries are unacceptable; (2) humans make mistakes; (3) humans are vulnerable; (4) responsibility is shared; (5) safety is proactive; and (6) redundancy is crucial. The elements of the SSA address every aspect of the risks associated with crashes, and when considered together create a holistic approach to safety across the entire transportation system: Safe Road Users, Safe Roads, Safe Speeds, Safe Vehicles, and Post-Crash Care.
3. **Substantive Safety** – Substantive safety uses data to characterize a road by its safety performance relative to an expected value for similar facilities. It may be quantified in terms of: crash frequency (number of crashes for a given road segment or intersection over a specified time period); crash rate (normalized to account for exposure); crash type; and/or crash severity (i.e., fatality, injury, or property damage only). If the roadway in question has a significantly higher incidence or severity of crashes than other roads of its kind, it may have a substantive safety problem. FHWA’s proven safety countermeasures represent a range of strategies that can help to deal with specific substantive safety issues. These strategies are highly appropriate in corridors with documented safety issues, and can also be more broadly applied as a measure to support the region’s Vision Zero by 2050 goal. Nominal safety projects, those that adhere to applicable design criteria and standards, typically fall into the category of system preservation (such as repaving, restriping, code compliance, etc.). However, adding value to maintenance-type projects is a way to re-frame such efforts within the SSA context, and promote safety everywhere systemically. For example, the DVRPC has been working with regional roadway owners to identify opportunities to add bicycle lanes and road diets on corridors scheduled for repaving. See also #75 road diets, #15 roundabouts, #11 access management projects, #78 improvements for bicycling, #76 traffic calming, and #6 left-turn lanes, and the FHWA Proven Safety Countermeasures.
4. **Work Zone Management** – Strategies to minimize congestion caused by maintenance and construction activities. ITS is often used to alert drivers, or to manage the work area. This is already part of the planning done by various implementing agencies for all federal-aid highway projects as part of their Traffic Management Plan.

**Turning Movement Enhancements** – Strategies to reduce congestion and crashes through safer turning movements.

5. **Channelization** – Strategy used in optimizing the flow of traffic for making right turns, usually using concrete islands or pavement markings.
6. **Left-Turn Lanes** – This strategy installs left-turn lanes to decrease left-turning traffic causing friction with through traffic. These are also a FHWA proven safety countermeasure.

7. **Center-Turn Lanes** – This strategy is used in conditions where there are many vehicles turning left midblock to reduce the impact on the movement of through traffic.
8. **Jughandles** – These are at-grade ramps provided at or between intersections to permit motorists to make indirect left turns and/or U-turns.

**Improve Circulation** – Strategies designed to move more vehicles through the existing road system, often using engineering approaches.

9. **Street Circulation Patterns** – Changing and/or restricting the direction of travel or separating two-way traffic on roadways. This can involve changing the designation of roadways from two-way travel to one-way, or vice versa.
10. **Vehicle Use Limitations and Restrictions** – The outright or time-of-day restrictions of vehicles to increase roadway capacity. This can include turn restrictions during peak hours to eliminate conflicting movements, limiting truck travel in the left-hand lane of limited access highways with three or more lanes, except to make a left turn, and prohibiting trucks on local roads using a “No Trucks,” or “No Thru Trucks” sign. Freight demand management strategies can be explored for corridors experiencing issues with freight loading and deliveries blocking travel lanes. See also Freight Operations Improvements.
11. **Access Management Projects** – This refers to the engineering side of controlling access primarily to and from arterial roadways. Access is controlled through the number and design of driveways, medians, and median lanes. This strategy is an FHWA proven safety countermeasure. See also #73 Access Management Policies.
12. **Parking Operations** – Changes to parking intended to improve the operation of roadways, such as relocating parking spaces nearest to dangerous intersections if line-of-sight is a problem; incentives to keep short-term parking used as such; and time-of-day limitations on parking.
13. **County and Local Road Connectivity** – This is a range of ways to encourage local traffic to use the local road network in order to maximize use of highways for through traffic. It can be encouraged through enhanced signage, additional connections within the local road network, and state policies.
14. **Bottleneck Removal of a Limited Scale for Cars and Trucks** – Removal or correction of short isolated and temporary lane reductions, substandard design elements, and other physical limitations that form a capacity constraint. See also #104 Bottleneck Removal for Passenger Rail, #108 Bottleneck Removal for Freight Rail, #88 Making Transfers Easier for Passengers, #77 Improvements for Walking, and #78 Improvements for Bicycling.
15. **Roundabouts** – These are circular intersections with specific design and traffic-control features. Key features include yield control of entering traffic, channelized approaches, and appropriate geometric curvature to slow speeds. Roundabouts provide substantially better operational and safety characteristics than older traffic circles and rotaries and are safer than comparable signalized intersections. This strategy is an FHWA proven safety countermeasure.

**Signal Improvements** – Strategies, ranging from basic to sophisticated, that improve the efficiency of signals individually and in systems. This includes specific applications, such as for pre-emption for emergency vehicles or buses.

16. **Basic Upgrading of Traffic Signals** – Adjustments and maintenance of signal timing and phasing, including installation of new signals as warranted, to improve flow and reduce congestion. This also includes equipment update, traffic signal removal, and pre-timed signal plans.
17. **Coordinated Traffic Signal Systems** – Includes linked traffic signals, closed-loop systems, and time-based systems. These systems generally interconnect intersections through a centralized



controller, which synchronizes signals based on predetermined timing patterns in order to efficiently move vehicles. Coordinated signal systems need to have their timing patterns reviewed and updated every 3-5 years. They can be timed to encourage travel at or just below the posted speed limit to enhance safety.

18. **Adaptive Signal Systems** – Responsive signal systems that change based on real-time traffic conditions. Using detectors, a centralized computer will periodically sample traffic flow and determine the most appropriate timing plan and signal phasing. This may be employed for corridors or interconnected areas.
19. **Signal Pre-emption for Emergency Vehicles** – Use of technology in vehicles and within signal infrastructure to preempt the signal timing to create green signals for ambulances and other high-priority response vehicles through the existing road system.
20. **Transit Signal Priority (TSP)** – Use of technology in vehicles and/or at signalized intersections to temporarily extend green time or otherwise expedite buses, light rail, or trolleys through the existing road system.

**Intelligent Transportation Systems (ITS)** – Strategies that encompass a broad range of technologies to relieve congestion, and improve communications and safety. Includes the dissemination of 511 real-time travel information to the public when integrated into the transportation system’s infrastructure.

21. **Traveler Information Services** – Provision of real-time pre-trip and en-route information to travelers on current traffic and other conditions. This includes advisory services to warn of traffic or transit delays, and dynamic message signs to inform motorists of traffic conditions. It is especially relevant to special-event generators and roadways with significant concentrations of travelers unfamiliar with the transportation system.
22. **Integrated Corridor Management (ICM)** – Building upon ITS technologies, ICM coordinates the individual network operations between parallel facilities to create an interconnected system. A corridor is defined as a combination of parallel surface transportation networks (e.g., freeway, arterial, transit networks) that link the same major origins and destinations. A coordinated effort between networks along a corridor can effectively manage the total capacity in a way that will result in reduced congestion. ICM uses many other strategies in this list, such as Coordinated Traffic Signal Systems #20, TSP, Incident Management #23, and Traveler Information Services #21. Often, these efforts are done from a Transportation Management Center.
23. **Incident Management** – These are programs to improve incident detection and verification; quickly and safely respond to and clear traffic incidents; and reduce the number of overall major, secondary, and work zone related traffic incidents. They usually include improved interagency communication and coordination.
24. **Automated Toll Collection** – This includes various existing and developing strategies that reduce congestion and delays at tollbooths, including by shifting to all-electronic tolls, such as E-ZPass. The Pennsylvania Turnpike converted to all cashless toll booths in late 2021.
25. **Commercial Vehicle Operations** – Utilization of ITS technologies to improve efficiency and effectiveness of commercial vehicles. This includes weigh station pre-clearance, automated safety inspections, and onboard safety monitoring.

**Active Traffic Management (ATM) and Active Transportation and Demand Management (ATDM)** – ATM is the ability to dynamically manage recurring and nonrecurring congestion on the mainline based on prevailing traffic conditions. Focusing on trip reliability, it maximizes the effectiveness and efficiency of the facility and increases throughput and safety through the use of integrated systems. ATM strategies include variable speed displays, dynamic lane assignment (DLA), hard shoulder/flex lanes, junction control, and queue warning. ATM can be combined with travel demand management and other

operational strategies to create ATDM, which refers to the collective approach for dynamically managing travel and traffic demand and available capacity of transportation facilities, based on prevailing traffic conditions, using one or a combination of operational strategies that are tailored to real time and predicted conditions in an integrated fashion. ATDM includes traditional traffic management and ITS technologies as well as new technologies and nontraditional traffic management technologies, such as ATM, managed lanes, ramp management, TDM, and ICM among others.

26. **Dynamic Lane Assignment (DLA)** – The use of lane control signals on gantries to provide advance notice that a lane is closed ahead, and to start the merge process into available other lanes well in advance of the actual closure. DLA is often installed in conjunction with #29 variable speed displays and also supports the ATM strategies of #121 Part-Time Shoulder Use/Flex Lanes, #28 queue warning, and #27 junction control.
27. **Junction Control** – A strategy that dynamically changes lane allocation at interchanges based on mainline, and entering or exiting ramp volumes. Junction control is useful for situations with a varying relationship between mainline demand and ramp demand. This strategy allows a ramp to have one or two lanes, depending on ramp and the mainline volumes. Through use of signs, and possibly lighted pavement markers, junction control can close a mainline lane and create a second lane on the ramp for entering or exiting traffic. When turned on, the right lane becomes a second entrance by closing it to mainline traffic upstream of the on-ramp, or an exit-only lane at an off-ramp. At other times of the day, when ramp demand is not as high or when mainline volumes are such that a mainline lane cannot be closed, the ramp operates as a single lane and the right mainline lane would operate as a through lane through the interchange.
28. **Queue Warning** – The use of technologies such as warning signs, flashing lights, or in-vehicle devices, to alert motorists of downstream queues. Goals include effectively utilizing available roadway capacity and reducing the likelihood of collisions related to queuing. In some applications, the cause of the queue (crash, maintenance activities, congestion) is also displayed on dynamic message signs.
29. **Variable Speed Displays** – These systems regulate speeds and advise motorists of downstream conditions, incidents, or congestion, providing advance warning to motorists and the need to slow down. They are often used in conjunction with DLA to merge vehicles out of lanes that are closed downstream in an orderly manner. Variable speed displays and lane control systems work to stabilize traffic speeds, reduce flow breakdown, and prevent the onset of stop-and-go driving behavior. This results in more uniform traffic flow, safer driving conditions, and reduces both primary and secondary incidents and their severity. Variable speed displays may be advisory or regulatory. If they are regulatory (e.g., variable speed limits), they are legal speed limits for which a motorist can receive a citation if they exceed the posted limit. If they are advisory, a motorist cannot be cited for a speed limit violation, unless in the officer’s judgment, they are driving too fast for the prevailing conditions. This is also called “Speed Harmonization.”
30. **Dynamic Rerouting** – The use of variable destination signing to make better use of available roadway capacity by directing motorists to less congested facilities. Dynamic rerouting signs are often intended for the nonlocal traveler wishing to travel through a metropolitan area. As a result, dynamic routing is often used to divert traffic around central business districts or other activity centers and is most effectively applied to interstate corridors.
31. **Ramp Metering** – Time-differentiated metering that acts as a traffic signal for vehicles entering freeways in order to control access to the highway and assist in maintaining vehicle flow.

**Transportation Security** – Improvements and programs designed to reduce negative transportation impacts of major events of all types. An all-hazards approach prepares the transportation system for events, including severe weather, major crashes, terrorist or criminal activities, or very large-scale events; any of which can create major congestion challenges.

32. **Coordinate with Military Bases** – Coordinate transportation planning in the vicinity of military bases with their security and access needs.
33. **Coordinate within the Nuclear Emergency Planning Zone (EPZ)** – Coordinate transportation planning in EPZs with nuclear plant and county/local evacuation plans.
34. **Freight Rail Bridge Security** – Enhance security on and around the limited number of key freight rail bridges, in particular the eight crossings of the Schuylkill and Delaware rivers.
35. **Passenger Rail Bridge Security** – Enhance security on and around the limited number of key bridges that carry passengers by rail. There are four major rail river crossings, two of which are part of the Northeast Corridor Amtrak Line.
36. **Road System Bridge Security** – Enhance security on and around road system bridges. This is especially important for the interstate system bridges in the region that carry over 100,000 vehicles on average per day.
37. **Transit Station Security** – Enhance security at and around transit stations, with particular attention to the most heavily used ones in each county that could become a focus in an evacuation situation.
38. **Evacuation Planning** – Coordinate with and enhance how transportation would serve dense and at-risk populations if they needed to leave the area, such as people without access to a private vehicle.
39. **Cybersecurity** – Enhance transportation systems so that they can be protected from outside interference. Cybersecurity techniques can include conducting risk assessments and vulnerability tests; inventorying all equipment with connectivity to other equipment and the internet; protecting the integrity of critical messages both in-network and external, including the use of authentication and encryption; controlled access to firmware; intrusion detection and prevention; hosting an immutable event log; regular software updates; and having plans in place to quickly recover from incidents when they do happen, and adopting lessons learned.

## B. Transportation Demand Management (TDM), Policy Approaches, and Smart Transportation

These are a wide range of policy and planning strategies that serve to get people and goods to their desired locations, while minimizing congestion and also advancing other quality-of-life, environmental, and economic development goals. They generally make the transportation system more efficient and sustainable, often at less cost than building new capacity, although often requiring education and outreach efforts. By improving the quality-of-life and sustainability of communities, they make it possible for more people to have a range of non-auto transportation options. By reducing the length and number of car trips, they reduce congestion. These approaches reflect the goals of the DVRPC Long-Range Plan, and of partner states, counties, and many municipalities. This category serves to “level the playing field” by creating conditions whereby alternative transportation can thrive.

40. **Park and Ride Lots** – These are facilities that serve as a transfer point between modes. They may be served by public transportation or can be used for transferring to carpools and vanpools. This strategy may cover agreements for use of existing spaces, adding additional spaces to existing facilities, or building new lots that do not primarily serve transit. See also #90 Expanded Parking for

Existing Transit Stations (including remote, all modes) and #92 Improvements to Pedestrian and Bicycle Access to Transit Stations and Bus Stops.

41. **Economic Redevelopment-Oriented Transportation Policies** – These are transportation strategies that serve the goals of redevelopment, revitalization, renewal, and recentralization of the region in keeping with adopted plans and programs. Such approaches are generally more efficient ways for a region to manage congestion while retaining or increasing employment, than developing in previously undeveloped areas. Examples may include actively redeveloping brownfields in CMP subcorridors as appropriate for investment of federal transportation funds. Brownfields are often sited near rail or other major transportation facilities and may be ideal for mixed-use, transit-oriented development (TOD) or freight intermodal centers.
42. **Environmentally Friendly Transportation Policies** – These are transportation strategies that seek to minimize the impacts of transportation on the natural environment in keeping with adopted plans and programs. They include approaches to minimize stormwater runoff; conserve fuel; improve air quality; and preserve farmland, natural features, and open spaces. They may include “Green Streets” programs or projects that help reduce flooding to prevent roads from closing or becoming unsafe during rain storms or other weather events.
43. **Inter-regional Transportation Coordination** – Although part of many other strategies, this is explicit recognition that people and goods travel across regional boundaries, and that congestion management is made more effective by coordinating and communicating beyond strict geographic lines. This includes coordination of MPOs, transit authorities, and departments of transportation, as well as outreach to key stakeholders, such as the freight community. The strategy includes continued strengthening of the transportation planning process.

**Encourage Use of Fewer Cars** – Strategies that encourage fewer cars on the road by reducing the number of SOVs, providing options for commuters, and promoting the use of transit and other modes rather than driving alone. Outreach and marketing are important to the success of these strategies and are included in the strategy by that name.

44. **Carpool/Vanpool Programs** – Carpooling is sharing a ride with one or more other people for at least most of a trip on a regular basis. Vanpooling is sharing a ride with a larger group of riders going to the same destination. These alternative forms of transportation save time and money, and are beneficial for the environment.
45. **Car Sharing** – This is an organized program that facilitates sharing vehicles among multiple users without each incurring the fixed cost and maintenance obligations of ownership. A charge is associated with each trip, or on a subscription basis. The Enterprise Car Share program is an example. Some communities are also experimenting with shared neighborhood electric vehicles.
46. **Emergency Ride Home** – Serves as a safety net for employees who car/vanpool or use transit service by providing a reliable backup ride to get them to their destination if an emergency arises or a car or vanpool participant has to work unusual hours.
47. **Ride Matching** – Any range of ways to help match people willing to coordinate their trip making. This is most often done with regard to work commutes. There are public services available, as well as services provided by specific employers. DVRPC has a program called Share-A-Ride. It is a free service that matches commuters with transit services, carpools, vanpools, and walking/bicycling opportunities in the five-county southeastern Pennsylvania region. The Share-A-Ride program also partners with local employers to provide these services for employees. Transportation Management Associations (TMAs) also provide related programs.
48. **Local Delivery Service** – Encouraging businesses to deliver their products to customers can reduce SOV trips and provide goods, especially in communities where car ownership is low.

49. **Bicycle to Work** – Programs to encourage employees to commute to work by bicycle. Supportive strategies may also include the provision of bicycle amenities by employers, such as bike racks (especially weather protected), bike maintenance stations (for example, air pumps), and shower access.
50. **Micromobility** – Includes a number of low-speed small wheeled vehicles such as bicycles, scooters, skateboards, roller skates, self-balancing vehicles, and other devices. These can be fully human powered or have some degree of electric motor assistance, such as e-bikes and e-scooters. Individuals may own or use their own vehicles, or rent them on a per use or subscription basis through a sharing program, such as bike sharing (like Indego in Philadelphia) or scooter sharing. E-scooters sharing services are currently not legal in Pennsylvania.
51. **Mobility-as-a-Service (MaaS)** – Integration of various shared mobility transportation modes into a single service, accessible on demand, via a seamless digital trip planning and payment application. Modes included in a MaaS network can range from traditional transit and taxis to newer options such as ride-hailing, bike and scooter sharing, and car sharing; and could eventually incorporate emerging technologies like automated taxis and shuttles.

**Shift Peak Travel** – Strategies that encourage employers to allow employees to work from home or shift their schedules to reduce the number of travelers during peak hours.

52. **Telecommute** – This involves the elimination of a commute, either partially or completely, to a conventional office through the use of computers and telecommunication technologies (phone, personal computer, email, etc.). It can involve either working at home, at a satellite work center, or a co-working space that is closer to an employee’s home than the conventional office.
53. **Alternate Work Hours** – These are strategies that reduce vehicle trip demand on highway facilities by shifting it to less congested time periods. This may include work schedules that spread the hours in which trips to and from the workplace occur or the complete elimination of trips to the workplace on some days, such as through compressed work weeks.

**Outreach and Marketing** – Strategies that promote and advertise existing services to encourage increased participation and/or general use of transit and TDM strategies, such as carpool, vanpool, and ridesharing programs, alternate work hours, telecommuting, emergency ride home, promotion of a regional commuter benefit, and car- and bike-sharing programs. Also included are strategies for effectively communicating with transportation-disadvantaged populations.

54. **Encourage Use of Transit Services and TDM Programs** – This covers outreach, education, planning, and other ways of encouraging use of transit services and TDM programs. This is applicable to employers, public entities, and the general public. It includes carpool, vanpool, and ridesharing programs; alternate work hours; emergency ride home; promotion of a regional commuter cost benefit; car sharing; bike sharing; and other TDM strategies.
55. **Environmental Justice and Equity Outreach for Decision-Making** – Although general outreach includes the range of groups that have a history and/or likelihood of being adversely affected or not adequately involved in decisions about transportation services, it has tended not to be effective in reaching these populations. Focused outreach may include meetings in different locations, times, or formats than are often used in the process of preparing recommendations or making decisions, and offering translated materials or translators as needed for people to participate.
56. **Multilingual Communication** – As part of the environmental justice and equity outreach, provide basic information in language-neutral signs where reasonable or in the languages used in communities with significant populations that speak English as a second language. This includes bus schedules and wayfinding signs. In addition to increasing access, this reduces the number of travelers confused for a range of reasons, including speed of reading and vision.

57. **Promotion of a Regional Commuter Cost Benefit** – A commuter benefit program allows employers to offer their employees a cost-saving way to help pay for commuting on transit or vanpools. It saves employers and commuters money because the program takes advantage of federal legislation that allows tax-free dollars to pay for transit fares.

**Comprehensive Policy Approaches** – Policy approaches that reduce congestion and help get people and goods where they need to go.

58. **Growth Management and Smart Growth** – Techniques that encourage the use of land in a manner that reduces overall congestion and transportation costs. These approaches recognize that transportation and land use decisions form a cycle, with many implications for communities. Dense, mixed-use development can reduce trip length by creating a better job/housing balance and by making it more feasible to get to places by means other than driving alone. This includes locating neighborhood schools and other public service facilities where students or service visitors can walk to them and/or access via transit to reduce the duplicative need for buses and congestion from drivers.
59. **Complete Streets** – Development and implementation of policies that require streets to be designed for all users. By design, complete streets serve bicyclists, pedestrians, disabled persons, transit users, trucks, and passenger vehicles. A municipality may be able to adopt such standards for future roads and roads under rehabilitation. Note that this is an adopted policy of the New Jersey Department of Transportation. See also #75 Road Diets.
60. **Transit-First Policy** – Implementation and enforcement of policies that give preferential treatment to transit to increase its attractiveness in comparison to SOV travel. Strategies include TSP, off-board fare payment, and dedicated bus lanes. See also #71 Transit-Oriented Development (TOD); and #20 TSP, and #96 Bus Rapid Transit (BRT) or Exclusive Right-of-Way Bus Lanes.
61. **Americans with Disabilities Act (ADA) Improvements** – ADA improvements, such as curb ramps, are built on public roadway facilities to provide access for all pedestrians, including those with physical and visual disabilities.
62. **Pavement Preservation** – Pavement preservation involves a proactive approach to maintain existing roadways in order to reduce future costly, time-consuming rehabilitation and reconstruction that leads to associated traffic disruptions. Lowest Life Cycle Cost (LLCC) is a process being implemented to maximize the life of the asset at lower cost by focusing on preservation, rather than just on poor condition. All applicable travel modes and multiple congestion management strategies should be considered as one single project.
63. **Bridge Preservation** – Bridge preservation, like pavement preservation, involves a LLCC proactive approach to slow or reverse deterioration, in order to keep the facility in good repair and extend the service life. Doing so can prevent later costly and time-consuming rehabilitation and reconstruction that leads to associated traffic disruptions.
64. **Railroad/Linear Right-of-Way Preservation** – Preservation of abandoned railroad rights-of-way for potential future transit or freight rail service or other transportation uses before other development occurs. In addition, other linear rights-of-way should be preserved, such as those for utilities.
65. **Curbside Management** – A growing number of users are seeking access to the curb, particularly in urban areas. These users include parking, freight loading and delivery, pick-up and drop-off for ride-hailing vehicles, EV charging stations, bike lanes, bike and scooter parking, green stormwater infrastructure, ADA accessibility improvements, and parklets. Managing the competing demands for curb space requires taking an inventory of available curb space, and allocating the space for optimal use. Successfully balancing these interests can improve mobility for residents, visitors, and business patrons. Management techniques can include regulations on use by time of day, operational strategies, technology, and pricing. See also #105 Loading and Deliveries.

**Financial Incentives** – Policy approaches that reduce congestion and help get people and goods where they need to go.

66. **Pricing Policies** – There are various policies that use pricing to shape transportation behavior or raise funds. They can include gas taxes, insurance structures, mileage-based user fees (MBUF), parking pricing, or other approaches. The funds may be used for general transportation improvements, or to pay for a specific project. See also specific applications, such as #67 Tolls/Congestion Pricing, and #68 Parking Supply-and-Demand Management.
67. **Tolls/Congestion Pricing** – This is a method of reducing congestion by charging for roadway use. Tolls are generally applied based on access or distance traveled, while congestion pricing considers time of day and/or real-time demand for the facility—with higher fees during the periods of greatest demand. Pricing structures could also be applied based on vehicle class and weight. Tolling strategies may encourage travelers to shift to alternative times, routes, or modes during peak traffic periods, or may help offset costs of maintaining the roadway. However, tolling can risk shifting travel off highways and onto local roads.
68. **Parking Supply-and-Demand Management** – These are actions taken to alter the supply and/or demand of a parking system to further the attainment of transportation objectives. They can include parking cash-out/transportation allowances, preferred parking areas for carpools or for people who only drive a few times a week, setting parking minimums or maximums to limit or expand parking supply through zoning, or changes in pricing.
69. **Expand Transit Pass Access to Vulnerable Communities** – Various policies to provide more affordable transit options, such as free full-week passes for public school students, discounted passes for low-income customers, and providing free or affordable transfers. Universal Basic Mobility programs provide stipends to low-income households or within historically underinvested communities to ensure basic levels of transportation access. The stipends can often be used on various modes, including transit, car sharing, bike sharing, ridehailing, and other shared mobility services. Programs can be paired with #51 mobility-as-a-service.

**Land Use/Transportation Policies** – Strategies that reduce congestion by changing land use and development patterns to encourage mobility options and limit new trip generation.

70. **Revisions to Existing Land Use/Transportation Regulations** – Revise and better coordinate existing regulations, such as zoning, to reduce future traffic congestion. Integrated land use and travel simulation modeling, or buildout analysis can help to understand the outcomes resulting from land use, zoning, and other regulatory changes. It is desirable that zoning ordinances, subdivision regulations, and other rules reflect master plans and other community goals, such as maintaining reasonable accessibility and quality-of-life. They can also incorporate access management. See also #11 Access Management Projects and #73 Access Management Policies.
71. **Transit-Oriented Development (TOD)** – This includes pedestrian-friendly, mixed-use development focused around transit stations. TOD encourages residents and workers to rely on modes other than the automobile. See also #60 Transit-First Policy.
72. **Trip Reduction Ordinances** – These are ordinances that use a municipality’s regulatory authority to limit trip generation from development sites. They usually cover an entire local political subdivision rather than just an individual project; they spread the burden more equitably between existing and future development; and they may be less vulnerable to legal challenges than conditions imposed on development approvals. Approaches may be voluntary or mandatory. Also known as Employee Trip Reduction.

**Engineering for Smart Growth** – Strategies to promote and enable smart growth using engineering solutions.

73. **Access Management Policies** – Adoption of the right to share access, provide cross access, regulate driveways, or other regulatory authority. This can also include the development of model ordinances and adoption of an access code by itself or as part of other regulations. Access management codes may cover corner lot requirements, continuity of sidewalk/bike networks and pedestrian/transit rider access, and land use (trip making) intensity controls in specific areas. See also #11 Access Management Projects.
74. **Context-Sensitive Design** – Engaging local stakeholders early in the process to ensure that projects reflect community goals, such as PennDOT Connects. Context-sensitive design also encourages designers to consider nontraditional approaches to designing projects for the community context while maintaining basic design standards. This is also known as context-sensitive solutions. It considers existing land use and the physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining mobility and safety.
75. **Road Diets** – Road diets involve a reduction in the number of through lanes, typically reducing a four-lane undivided road to three lanes, with two through lanes, a center turn lane, and two bike lanes. Road diets can encourage alternate modes of transportation, calm traffic, reduce crashes for all road users, and, in some cases, increase on-street parking. This strategy is an FHWA proven safety countermeasure. Studies indicate that in conditions where the average daily traffic is under 20,000 vehicles, there is minimal effect on road capacity or travel time.<sup>1</sup>
76. **Traffic Calming** – Specific actions intended to slow vehicular traffic to improve safety or meet other community goals. These goals can include improving pedestrian safety, making roads and streets more hospitable for bicycling and walking, and enhancing the livability of a neighborhood. In a commercial setting, traffic-calming can be part of a set of strategies to encourage a more walkable commercial district and to encourage investment. In a residential area, traffic-calming strategies, such as speed tables or speed humps, are sometimes used to reduce the speed and amount of through traffic cutting across local streets. Other traffic calming approaches include narrowed lane widths, chicanes, chokers, speed cushions, bulbouts, raised crosswalks, and median islands with pedestrian refuges. These techniques can be paired with improvements on larger roads to better manage the flow of traffic. Traffic calming is an FHWA proven safety countermeasure.

**Walking and Bicycling Improvements** – Strategies to reduce congestion and promote livability by making it safer and more convenient to travel by walking and bicycling.

77. **Improvements for Walking** – Improve safety and convenience for all pedestrians, but especially for ones who rely on walking for accessibility. These improvements should be selected to fit the level of development and population. Examples include sidewalk improvements, crosswalk improvements, signals, markings giving pedestrians the right-of-way, and pedestrian countdown signals.
78. **Improvements for Bicycling** – Improve safety and convenience for bicyclists, especially for people using bicycles for transportation. Examples include provision of sharrows, bike lanes, cycletracks, multiuse trails, and bicycle storage facilities to promote bicycles as an alternative to automobiles. Bicycle lanes are an FHWA proven safety countermeasure.
79. **Placemaking for Non-Motorized Transportation** – This covers the general work to make an area more conducive for modes other than driving alone, including landscaping, streetscaping, and development of regional bicycling and walking plans and maps.

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<sup>1</sup> *Corridor Planning Guide: Towards a More Meaningful Integration of Transportation and Land Use (Publication No. #07028). Philadelphia, PA: Delaware Valley Regional Planning Commission, 2007, p.29.*



80. **Create New Connections to Help Complete the Circuit and Other Regional Trail Networks** – The Circuit and other regional trail systems take advantage of opportunities to build and connect trails across the region. In addition to providing access to the region’s rivers, creeks, and streams, the Circuit and other trail systems will also serve as the backbone for a network of "bicycling highways" that will allow safe and efficient travel by bicycle between homes, businesses, parks, schools, and institutions, free from motorized traffic. This strategy includes identifying connections that will help complete the Circuit or improve access to existing or planned segments of the regional trail network.
81. **Shared Space** – A concept where typically narrow streets with low vehicle volumes are designed without a curb and with high-quality streetscape materials, enabling the street to function like a plaza or a paved yard. Through the use of design elements such as paving treatments and strategically placed vertical elements, shared space cues drivers to behave differently than on conventional streets so that all modes are integrated, and users have equal priority to use the space. By providing safe, comfortable, and aesthetically pleasing areas for pedestrians and bicyclists, shared space prioritizes these modes over motorized vehicles. Living streets expand the shared space concept by providing comfortable furniture to sit and rest, green infrastructure, and generous landscaping. Also known as curbsless streets, flex space, or woonerven (or the singular, woonerf). A shared space concept is being proposed in Old City, Philadelphia on Market Street between Front and 3rd streets.

## C. Public Transit Service Improvements and Expansion

This group of strategies deals with ways to make existing transit services more convenient. This may include bus, rail, or other conveyance—either publicly or privately owned—providing general or special service (but not including school buses, charter, or sightseeing services) on a regular and continuing basis.

**ITS Improvements for Transit** – Strategies to make existing transit services more convenient and reliable through ITS technologies.

82. **Electronic Fare Payment Improvements** – This involves automatic trip payment through the use of noncash media, such as magnetically encoded or radio frequency identification enabled fare cards, smartphones, and other digital devices. Increasingly, this method coordinates with other systems so that one medium works across various transit systems, or even for both transit and toll roads. An example of this is the "SEPTA Key" program. These programs can provide granular ridership data that can be used to improve service options.
83. **Advanced Transit System Management** – Use of Automatic Vehicle Locator systems on buses to communicate with people riding transit (such as information about transfers) or considering riding it (such as when the next vehicle is expected at a stop). Advanced Transit System Management may be coordinated through transit centers to be able to make real-time adjustments to schedules. Additionally, it may include the use of ITS technologies for bus, train, and coordinated transit management, including train signals and power grids. This is sometimes called Intelligent Transit Stops. See also #20 TSP.

**Modification to Existing Routes or Services** – Strategies to make existing transit services more convenient and reliable; includes the use of ITS technologies.

84. **Express Transit Routes or Stop Consolidation** – This involves having select or all service on a route stop only at major stops in order to transport people more rapidly. It can be done by dropping less heavily used stops from peak-hour scheduled runs or by adding additional express service.

85. **Extensions or Changes in Bus Routes** – This includes review of where bus service is provided, seeking ways to provide better or more efficient service using existing resources. For bus or other services, it may include minor extensions in existing routes to provide service to a broader area.
86. **More Frequent Transit or More Hours of Service (Span of Service)** – This involves providing additional service on an existing transit route. It can be done for increased peak service, increased service throughout the day, or to provide earlier or later service.
87. **Flexible Routing/Route Deviation Service** – This is an approach that increases passenger convenience for fixed-route bus riders by building in the ability for buses to deviate within a defined distance, such as a quarter-mile from a fixed route. This may require advance arrangement and is generally used more in rural areas.
88. **Making Transfers Easier for Passengers** – Focused improvements to make it more possible and convenient to fully use all available modes of transportation for their best purposes. Examples might include minor changes in schedules to better align bus and train schedules, improved information and amenities at intermodal centers, or through more convenient walking connections between different train lines. See also #91 Passenger Intermodal Center or Garage for Transit Riders.

**Transit Infrastructure Improvements** – Strategies that make it more convenient, safe, and desirable to use transit services.

89. **Enhanced Transit Amenities and Safety** – This is the broad range of ways to make transit use more comfortable, safe, and convenient. It includes, but is not limited to, onboard features and improvements at transit stops. Improvements at transit stops may include lighting, bus pull-off areas, shelters for passengers, real-time information, and making it safer for passengers walking to and from stops. Safety may be addressed for the people traveling, and also for the vehicles and bicycles left at stations. See also #83 Advanced Transit System Management and #92 Improvements to Pedestrian and Bicycle Access to Transit Stations and Bus Stops.
90. **Expanded Parking for Existing Transit Stations (including remote, all modes)** – Access to stations can be a limiting factor for use of the services that stop at them. Within the category of increasing parking capacity to existing facilities, this may be done through added surface lot capacity or shared use agreements with nearby sources of parking. An inexpensive example is assessing whether existing parking lots can be restriped in part or whole with smaller stalls to fit more vehicles in the same space. This could also be assessed in parking requirement regulations. There are a range of ways that access can be improved, see also #71 TOD, #98 Shuttle Service to Stations, #91 Passenger Intermodal Center or Garage for Transit Riders, and #92 Improvements to Pedestrian and Bicycle Access to Transit Stations and Bus Stops.
91. **Passenger Intermodal Center or Garage for Transit Riders** – This can range from extensive new facilities such as a landmark building with a range of services and structured parking, to parking decks for transit stations, to new surface lots. See also #40 Park and Ride Lots, and #90 Expanded Parking for Existing Transit Stations (including remote, all modes).
92. **Improvements to Pedestrian and Bicycle Access to Transit Stations and Bus Stops** – Biking, walking, and public transit work together to help residents and workers reduce SOV trips. Enabling safer bicycle and pedestrian connections between transit stations, neighborhoods, and employers, and improving bicycle accommodations at transit facilities can expand a rail station's catchment area at a lower cost than parking expansion. It can alternatively help ensure that station parking capacity is used by riders traveling from farther distances. DVRPC's *Level of Traffic Stress* maps ([www.dvrpc.org/webmaps/bikestress](http://www.dvrpc.org/webmaps/bikestress)) identify the level of stress comfort for cyclists along streets, and DVRPC's RideScore tool ([www.dvrpc.org/webmaps/ridescor](http://www.dvrpc.org/webmaps/ridescor)) can help prioritize rail stations for bike improvements. Additionally, *SEPTA Bus Stop Design Guidelines* (DVRPC Publication

#12025) illustrates how a bus stop can be effectively connected with the development it is intended to serve.

93. **Multimodal Transportation Hub** – Expand the number of alternative modes readily available at transit stations to improve first- and last-mile access to transit. Modes can include car sharing, bike sharing, scooter sharing, and others. Design should include Transportation Network Company (TNC) and taxi pick-up and drop-off areas, secure bike parking, and direct access to safe networks of sidewalks and bike lanes.
94. **At-Grade Rail Crossing Safety Improvements** – Improvements to the rail system at road or trail crossings, which can increase safety and reduce delays and other impacts. This may include improved coordination and warning systems. A related strategy is to equip a priority set of vehicles (such as school buses, hazardous material haulers, and emergency vehicles) with in-vehicle devices warning of approaching trains, with real-time information on train position.

**New Bus Services** – Strategies that provide new bus or shuttle routes or services.

95. **Bus Route** – New regular bus service in an area not served by existing routes.
96. **Bus Rapid Transit (BRT) or Exclusive Right-of-Way Bus Lanes** – A group of strategies aimed at speeding up bus service to make it more competitive with private automobiles. These approaches are often implemented together along with streamlined fare payments and boarding, enhanced use of ITS and traveler communication services, high-end vehicles, and distinctive marketing to allow buses to bypass road congestion. Both are generally applied to high-ridership routes. Exclusive bus lanes may be part of existing roads or on new rights-of-way. See also #20 TSP and #60 Transit-First Policies.
97. **Demand Response Transit Services (Microtransit)** – Transit set up by appointment, available to the general public using smaller vehicles, such as vans, 30-foot buses, transportation network companies (such as Uber or Lyft), or taxis. Services may use automated shuttles, though Pennsylvania does not currently allow for automated vehicle operations on public roadways, outside of testing. This may be most applicable in areas where transit demand is low or development is very dispersed. SEPTA has proposed these services at various locations as part of the *Bus Revolution* plan. Future services may use automated taxis or shuttles, as has been proposed in the Trenton MOVES project.
98. **Shuttle Service to Stations** – Shuttle services may be added to make existing services more accessible or to efficiently expand their reach in less dense areas. Smaller vehicles can provide loops or demand-responsive services to train stations, bus stops, or other multimodal transportation transfer centers (such as the Conshohocken Cab). This is sometimes referred to as shuttle bus to line-haul transit or last-mile service. Future services may use automated shuttles.
99. **Transportation Services for Special Events** – Shuttle services and other approaches can be provided to get people to and from sporting events, concerts, or other major gatherings. This can be an efficient way to reduce nonrecurring congestion and the need for expensive investments in infrastructure. These services usually serve outlying parking lots and/or transit stops.
100. **Transportation Services for Specific Populations** – This is the provision of services that addresses specific needs or populations, and includes employer-supported shuttles for employees. It also includes services oriented toward senior citizens and persons with disabilities.
101. **Intercity Bus** – These are longer-distance downtown-to-downtown routes (such as, Megabus) for distances around 125 to 350 miles, which are too short for airline trips, but uncomfortably long for driving. Curbside congestion for departures and arrivals are issues that need to be managed as part of this strategy.

**New Passenger Rail Investments** – Strategies that provide new passenger rail routes, stops, stations, or services.

102. **Intercity Rail Service** – This is longer-distance new rail service connecting to cities outside the region on new track or track previously not used for this specific service. Such service may be fueled and operated in a variety of ways, including electric or diesel power.
103. **Fixed-Rail Service (new, extensions, or added stations)** – This is generally, although not always, oriented to commuter rail movement within one region, often with linkages to intercity transportation. It can be provided in many ways, including trolley, subway, elevated rail, light-rail, or other approaches. This may include enhancements of existing services or new services.
104. **Bottleneck Removal for Passenger Rail** – Investing in new bridges, tunnels, double-decker cars, switches, or other communication systems significantly increases the capacity of the rail system with limited need for right-of-way. Specific projects can include double tracking, new passing sidings, and new interlockings. See also #88 Making Transfers Easier for Passengers and #108 Bottleneck Removal for Freight Rail.

## D. Goods Movement

Managing congestion on roads generally helps trucks move freight. Additional strategies can also be used to increase the efficient and safe movement of goods by various modes. See also A. Operational Improvements.

**Freight Operations Improvements** – Strategies to make truck, freight rail, and other means of moving goods function more efficiently by themselves or in combination with each other.

105. **Loading and Deliveries** – The provision of loading and delivery spaces on- and off-street is essential in central business districts and urban areas. Ensuring adequate capacity for truck loading and delivery reduces lane obstructions and other unsafe short-term parking behavior. These curbside management improvements coupled with freight demand management strategies, such as off-hours deliveries or consolidated delivery sites, can improve safety and traffic flow. See also #65 Curbside Management.
106. **Signage and Wayfinding** – Where appropriate wayfinding signage can be used to communicate preferred truck routes to drivers, including truck restriction signage. Clear directional signage may help to decrease miles traveled by reducing missed and incorrect turns at decision points.
107. **Truck Parking (staging and overnight)** – With trucking remaining the predominant mode of domestic freight transportation, and drivers required to meet stringent hours-of-service requirements, the supply of truck parking is critical for goods movement. However, parking is insufficient to meet current demand. Additional truck parking capacity can help to reduce vehicle miles traveled in search for parking and reduce truck parking on highway ramps and shoulders, which presents significant safety issues.
108. **Bottleneck Removal for Freight Rail** – Investing in needed upgrades to bridges, tunnels, switches, or other communication systems significantly increases the capacity of the rail system with limited need for new right-of-way. See also #97 Bottleneck Removal for Passenger Rail; and #106 Freight Centers and Intermodal Facilities.
109. **Making Intermodal Transfers Easier for Freight** – Improvements to make it more feasible and convenient to fully use all available modes of transportation for their best purposes. Examples might include “last-mile” minor improvements to roads needed for truck access to rail sidings or

improved communications/ITS approaches. See also #113 Freight Centers and Intermodal Facilities; and #88 Making Transfers Easier for Passengers.

110. **Freight Rail (rehabilitation or reconstruction)** – Existing rail infrastructure requires routine maintenance and periodic upgrades. Both Pennsylvania and New Jersey have statewide, competitive Rail Freight Assistance Programs that fund rail freight maintenance projects, with short-line railroads often being the beneficiaries.

**Freight Capacity Investments** – Strategies to expand the capacity of truck, freight rail, and other means of moving goods.

111. **Grade-Crossing Separations** – Roadway-railroad crossings that are at-grade create delay for both freight rail operations and the driving public. In instances of high usage, it may be desirable to grade separate the crossing to create free-flow conditions and improve safety for both the rail and vehicular traffic. The Federal Railroad Association has a Grade Crossing Elimination Grant Program that can be used to fund grade crossing improvement or elimination projects.
112. **Freight Rail (new or expanded)** – New rail lines or improvements of existing facilities built to industry standards will help meet the needs of moving freight efficiently by rail. This may promote a mode switch from truck to rail for certain commodities or ensure that current goods moved by rail do not switch to truck travel.
113. **Freight Centers and Intermodal Facilities** – Supports growth and efficiency at designated freight centers and major intermodal terminals. Freight centers are clusters of freight-related activities that are often served by common infrastructure across multiple modes. Intermodal activities can focus on transfer between modes, such as rail to truck. Investment in these centers provides benefits, such as improved management, lower transport costs, value-added activities, and increased reliability. Having appropriate truck parking areas for staging can be a critical component to freight center efficiency.
114. **Port Facility Expansion** – The expansion of existing marine terminals and the creation of new ones helps maximize the use of the region’s waterways for freight transportation purposes.

## E. Road Improvements and New Roads

These strategies address the area between minor operational improvements and building major new road facilities on new alignments.

**Minor Road Expansions** – Strategies that, although adding some capacity, intend to address a variety of goals; they should be carefully coordinated with other appropriate strategies and be reviewed for whether they change travel patterns in the corridor (such as intersection improvements at multiple, contiguous intersections).

115. **Frontage or Service Roads** – These are local roads that run parallel to higher-speed limited access roads that typically provide access to private driveways, shops, houses, and commercial uses. Road strategies include maintaining access to local land uses, while generally increasing the throughput of regional roads. These projects incorporate #11 Access Management Projects and #73 Access Management Policies.
116. **Intersection Improvements of a Limited Scale** – Minor isolated intersection widening and lane restriping to increase intersection capacity and safety. This may include auxiliary turn lanes (right or left) and widened shoulders. Intersection design should be context sensitive. Geometries should reflect the types and levels of expected truck activity, especially for designated truck routes.

117. **Major Reconstruction with Minor Capacity Additions** – Major reconstruction focuses on the basic use of a roadway, but may increase capacity, safety, and access for other modes. For example, reconstructing a facility so that it meets current design standards may include lengthening on- and off-ramps to provide driver’s adequate distance to merge onto the mainline, or adequate off-ramp length to safely exit the highway, which can result in higher actual safe operating speeds. Major new bridge or bridge replacement projects and interchange reconfigurations may fit into this category. These projects also offer the opportunity to add bicycle and pedestrian infrastructure to road facilities.
118. **High-Occupant Vehicle Treatments** – High-Occupant vehicles operate with two or more persons, and include carpools, vanpools, and buses. Treatments include giving priority to these vehicles, such as on High-Occupant Vehicle (HOV) lanes on freeways and at park and ride lots. These treatments help to reduce congestion by increasing the person throughput capacity of critically congested corridors. This also includes supporting policies and constructing facilities to encourage the use of high occupant vehicles. An assumption is that such a project will inherently include a range of TDM and safety improvements, and be coordinated with community needs.

**Adding Capacity to Existing Roads** – Strategies that extend or widen existing roads to add new through lanes in order to expand transportation network capacity. They should be carefully coordinated with appropriate supplemental strategies to get the most long-term value from the investment.

119. **General Purpose Lanes** – The addition of one or more through lanes to an existing road.
120. **Interchange with Related Road Segments** – These are projects at a scale that is expected to change regional transportation patterns (such as adding new movements at existing interchanges). They increase the capacity of the existing road network by increasing interconnection opportunities, and capacity. Large intersection projects with related roads that will add major capacity would be included in this strategy.
121. **Part-Time Shoulder Use/Flex Lanes** – These are similar concepts that are implemented in conjunction with complementary ITS and ATM strategies, and require sophisticated traffic management systems. Part-time shoulder use allows vehicles to travel the shoulder (or emergency lane) as an additional traffic lane on a freeway or expressway during peak and congested periods. Flex lanes is a broader concept where lanes on a roadway can be changed based on traffic demands, and can include lanes that are open during high traffic volumes (such as part-time shoulder use), reversible lanes, or lanes dedicated to certain types of vehicles (like buses or carpools) during specific times. A reversible lane may be in the middle of a roadway, where the direction of travel can be changed based on directional peak period demand. For example, higher traffic volumes heading to downtown in the morning peak and then higher volumes heading out of downtown in the afternoon peak.

**New Roads** – Strategies that build new roads in order to add capacity to make the existing transportation system function better, and/or to provide access to new development areas. They should be carefully coordinated with appropriate supplemental strategies to get the most long-term value from the investment.

122. **Gridded Streets** – Part of a traditional street network with intersection spacing every 1,200 feet or less. These streets were typically built before the automobile era, and facilitate easier bicycle, pedestrian, and transit improvements. Projects can expand existing gridded street networks or work to establish them within existing curvilinear road systems.
123. **Arterial or Collector Road** – New road or substantial extension of an existing road (usually over a mile in length), generally built with many access points and designed to fit local conditions.
124. **Bypass** – A bypass adds new capacity on a new alignment. Such roads may tend to be short to medium in length and address a variety of transportation and other issues.

125. **Limited-Access Highway** – The addition of a new facility or extension of existing facilities with accompanying ramps, tolls if included, signage, and other related improvements.

## Region Wide Strategies

Alternative Work Hours  
Americans with Disabilities Act (ADA) Improvements  
Bridge Preservation  
Car Sharing  
Carpool/Vanpool Programs  
Context-Sensitive Design  
Encourage Use of Transit Services and TDM Programs  
Emergency Ride Home  
Environmentally Friendly Transportation Policies  
Growth Management and Smart Growth  
Inter-Regional Transportation Coordination  
Pavement Preservation  
Promotion of a Regional Commuter Benefit  
Revisions to Existing Land Use/Transportation Regulations  
Ride Matching  
Safety System Approach  
Signage  
Telecommute  
Traveler Information Services  
Work Zone Management





## 6. Evaluating Performance Trends and the Effectiveness of Implemented Strategies

The CMP provides analysis on the performance of the transportation system for a particular time period, in part, to establish multimodal strategies that can mitigate congestion. However, additional types of analysis are important to evaluate the implementation of strategies. Before-and-after performance analysis of projects is important to help understand the effectiveness of implemented strategies to mitigate congestion in the region. Too often, improvements are made to reduce congestion but a follow-up evaluation is not completed to determine whether congestion has been reduced. Some of this has to do with the lack of staff time to perform a post-analysis of congestion and compare the before-and-after results, and some of it has to do with the inability to compare like data to make a sound planning and engineering judgment. There are many factors that affect the intensity and extent of traffic flows, which makes it sometimes difficult to assess how effective strategies are working to mitigate congestion. It is important to understand the anticipated effectiveness of proposed improvement strategies in order to develop transportation projects with maximum impact, see *CMP Strategy Evaluation: Testing Short-Listed Programs* (DVRPC Publication #12042).

The CMP trends congestion by focus roadway corridor facility using the INRIX network to evaluate performance and better understand the effectiveness of implemented strategies. The CMP compares yearly volume delay by focus roadway corridor facility during the PM peak from 5:00 – 6:00 PM for the years 2017, 2021, and 2022 (see Tables 18 and 19). 2017 is the analysis year of the prior 2019 CMP, 2021 is the analysis year for the current 2023 CMP, and 2022 is the most current year to compare against past performance. A volume delay congestion measure is used to measure performance which is vehicle delay as function of traffic volumes, where 2017 traffic volumes are used for year 2017, and 2021 traffic volumes are used for both 2021 and 2022. The changes in delay for 2022 are based on only travel time delays, since the 2022 traffic volumes are currently not available, and even if they were it takes additional time to conflate to the INRIX network. Both absolute and percent change in volume delay is used to evaluate corridor performance. Using just percent change over represents corridor volume delay impact, since the absolute change may be quite small, and vice versa evaluating using just absolute change underrepresents some corridors where the percent change is significant.

Congestion is analyzed comparing 2017 to 2022 to better understand if corridors are back to pre-pandemic conditions and to evaluate the performance of corridors for projects that started and ended between the time periods. Reduced performance may be due to high traffic volumes and limited capacity, long-term construction work zones, or to some type of non-recurring congestion (see Chapter 1, section 4). Improved performance may be due to completed congestion mitigation projects over the time period using TSMO, ITS, travel demand management, public transit, or other road improvements (see Chapter 5, section 4). Improved performance may also be attributed to reduced travel due to major shifts of people working from home as a result of the pandemic, which makes it difficult to understand the effectiveness of project strategies in reducing congestion. Performance is also analyzed comparing 2021 to 2022 to evaluate how congestion has changed most recently since the pandemic.

Corridors with significantly more delay comparing 2017 to 2022 for the Pennsylvania portion of the region include I-95 from PA 132 (Street Road) to PA 90 (CMP facilities 24, 25, and 26) in Bucks and Philadelphia Counties. These facilities experience both high delay and high percent change increases in delay over the time period. Much of this is likely due to the ongoing I-95 reconstruction, including roadway widening to, eliminate lane drops and add shoulders, interchange improvements, and upgrades to the surrounding street network. High increases in delay are also identified along I-76 from I-476 to the I-676 (CMP

facilities 17, 18, and 19) in Montgomery and Philadelphia counties. Despite variable speed limit devices installed in 2021 to help manage traffic flow, including the portion of I-76 from I-476 to US 1 (City Ave), the corridor indicates continued congestion. However, I-76 from I-476 to the PA Turnpike (CMP facility 20) in Montgomery County indicates modest reductions in delay which may indicate that variable speed limits are more effective.

For the New Jersey portion of the region, significant increases in delay comparing 2017 and 2022 include NJ 42 from the Atlantic Expressway to I-295 (CMP facility 311) and NJ 55 from NJ 47 to NJ 42 (CMP facility 358) in Gloucester County. Much of this delay is likely due to the ongoing I-295/NJ 42 Direct Connect reconstruction, including roadway widening and interchange improvements. The NJ 55 northbound on-ramp to NJ 42 northbound is planned to be widened to two lanes as part of the Direct Connect project, which should help reduce delay at this ramp location.

CMP focus roadway corridor facilities were identified where roadway performance improved comparing 2017 to 2022, but these improvements need to be considered along with the realization that more people are working from home since the pandemic, and contributing to the improved performance. In Pennsylvania, 83 percent of the CMP corridors experienced improved performance, or reductions in delay, when comparing 2017 to 2022. Some delay reductions were modest, but others were quite significant. For example, US 422 from Trooper Road to US 202 (CMP facility 77) in Montgomery County experienced major delay reductions, which may have been in part due to the roadway widening and intersection improvements as part of the US 422 Schuylkill River Crossing Complex. Chestnut Street from Broad Street to 23rd Street in Philadelphia (CMP facility 160) experienced significant delay reductions, which may be attributable to the City implementing various CMP strategies, including updating lane infrastructure with upgraded lane markings; SEPTA developing education materials to warn drivers not to park in the bus lanes, and enforcement partners working to regulate and ticket drivers parked in travel lanes. Other corridors with major delay reductions include I-476 in Plymouth Meeting, PA from I-276 (PA Turnpike) to I-76 in Conshohocken, PA (CMP facility 9) in Montgomery County, I-476 from I-76 to US 30 Villanova, PA (CMP facility 10) in Delaware and Montgomery counties, I-276 (PA Turnpike) from I-76 to I-476 (CMP facility 2) in Montgomery County, and I-95 from I-676 to I-76 (CMP facility 28) in Philadelphia.

In New Jersey, 89 percent of the corridors experienced reductions in delay comparing 2017 to 2022. Similar to the Pennsylvania region, some delay reductions were modest but others were significant. For example, I-295 from NJ 31 to NJ 29 (CMP facility 377) in Mercer County experienced major delay reductions, which may be attributable to the roadway widening, and interchange and toll gate improvements as part of the Scudder Fall Bridge replacement project. Also, NJ 73 from the NJ Turnpike to NJ 70 (CMP facility 372) in Burlington County experienced significant reductions in delay, and more modest reductions were on NJ 73 from NJ 70 to US 30 (CMP facility 373) in both Burlington and Camden Counties. This may in part be due to the adaptive signal system that was completed on NJ 73 in 2021. Other corridors with some major reductions in delay include I-676 from the NJ-PA State Line to I-76 (CMP facility 327) in Camden County, I-195 from the New Jersey Turnpike to I-295 (CMP facility 326) in Mercer County, NJ 38 from NJ 73 to I-295 (CMP facility 353) in Burlington County, and US 1 from Alexander Road to CR 629 (CMP facility 318) in Mercer County.

CMP focus roadway corridor facilities are evaluated comparing 2021 to 2022 to identify how performance has changed since the pandemic. Most of the facilities in DVRPC's Pennsylvania (87 percent) and New Jersey (88 percent) counties experienced increases in delay.

Facilities with some of the most increases in delay by absolute change in the Pennsylvania counties include:

- I-76 from Passyunk Ave to I-476 (CMP facilities 16, 17, 18, and 19) in Philadelphia and Montgomery counties,
- I-95 from US 322 to the PA-DE State Line (CMP facility 32) in Delaware County, and
- I-476 from US 30 to US 1 (CMP facilities 11 and 12) in Delaware County.

Additional top corridors with both high percent and absolute change increases in delay from 2021 to 2022 are:

- I-95 from PA 132 (Street Road) to Academy Road (CMP facilities 24 and 25) in Bucks County,
- US 422 from Egypt Road to US 202 (CMP facilities 76 and 77) in Montgomery County, and
- US 322/US 202 from US 1 to PA 3 (CMP facility 64) in Chester and Delaware counties.

These corridors are still below 2017 levels, excluding portions of I-76 and where comparison data is not available.

Some top corridors for the New Jersey counties with the most increase in delay by absolute change include:

- US 1 from I-295 to CR 629 (CMP facilities 317 and 318) in Mercer County,
- I-295 from NJ 70 to NJ 38 (CMP facility 309) in Burlington and Camden counties, and
- NJ 70 from NJ 73 to NJ 38 (CMP facilities 367 and 368) in Camden County.

Additional top corridors with both high percent and absolute change increases in delay between 2021 and 2022 are:

- NJ 73 from the NJ Turnpike to NJ 70 (CMP facility 372) in Burlington County,
- NJ 55 from NJ 47 to NJ 42 (CMP facility 358) in Gloucester County, and
- I-676 from the NJ-PA State Line to I-76 (CMP facility 327) in Camden County.

All these corridors are still below 2017 delay levels, excluding NJ 55 and portions of NJ 70, and where comparison data is not available.



Table 18:

## Focus Roadway Corridor Facilities Yearly Peak Hour Volume Delay Trends in the Pennsylvania Portion of the DVRPC Region (Sorted by County and Roadway)

Map ID	Roadway	From Limit	To Limit	2021/ 2022 Miles	Limited Access	County	Peak Hour Volume Delay (5-6pm)			Absolute Change			Percent Change		
							2017 hh:mm:ss	2021 hh:mm:ss	2022 hh:mm:ss	2017 to 2021	2017 to 2022	2021 to 2022	2017 to 2021	2017 to 2022	2021 to 2022
146	Bristol Rd	PA 532	US 202 Pky	25.66	No	Bucks	4:34:03	3:03:04	3:53:33	-1:30:58	-0:40:30	0:50:28	-33%	-15%	28%
6	I-276 PA Tpk	US 1	I-95	10.60	Yes	Bucks	-	0:00:06	0:02:46	-	-	0:02:40	-	-	2763%
21	I-295	PA 29 (Delaware River)	US 1	11.46	Yes	Bucks	2:53:55	0:04:30	0:01:22	-2:49:25	-2:52:33	-0:03:08	-97%	-99%	-70%
22	I-295	US 1	I-95	12.45	Yes	Bucks	-	0:01:44	0:27:09	-	-	0:25:26	-	-	1472%
23	I-95	I-276 PA Tpk	PA 132 (Street Rd)	6.09	Yes	Bucks	-	1:20:09	3:24:53	-	-	2:04:44	-	-	156%
24	I-95	PA 132 (Street Rd)	PA 63	3.22	Yes	Bucks	5:49:51	6:57:20	14:58:24	1:07:29	9:08:33	8:01:04	19%	157%	115%
25	I-95	PA 63	Academy Rd	5.43	Yes	Bucks	19:35:49	10:43:56	27:26:23	-8:51:53	7:50:34	16:42:27	-45%	40%	156%
169	I-95	I-276 PA Tpk	PA-NJ State Line	4.70	Yes	Bucks	-	0:03:42	0:09:32	-	-	0:05:50	-	-	157%
89	PA 132 (Street Rd)	I-95	US 1	7.45	No	Bucks	17:26:06	11:37:56	11:35:37	-5:48:11	-5:50:29	-0:02:18	-33%	-34%	0%
90	PA 132 (Street Rd)	US 1	PA 611 (Easton Rd)	22.83	No	Bucks	19:41:48	10:17:33	12:42:25	-9:24:15	-6:59:23	2:24:52	-48%	-35%	23%
151	PA 309	Bethlehem Pk	PA 663 (John Fries Hwy)/PA 113	6.29	No	Bucks	-	8:38:07	12:41:48	-	-	4:03:42	-	-	47%
171	PA 309	PA 663/PA 313	Cherry Rd	5.46	No	Bucks	-	5:22:43	11:19:12	-	-	5:56:29	-	-	110%
148	PA 313	PA 611	PA 563	16.78	No	Bucks	4:27:09	4:33:50	5:35:44	0:06:40	1:08:35	1:01:55	2%	26%	23%
149	PA 313	PA 563	PA 309	12.03	No	Bucks	1:44:58	1:35:07	2:16:16	-0:09:52	0:31:17	0:41:09	-9%	30%	43%
97	PA 332	County Line Rd	PA 413 (Newtown Bypass)	19.41	No	Bucks	5:02:39	2:36:16	3:32:16	-2:26:24	-1:30:23	0:56:01	-48%	-30%	36%
98	PA 332	PA 413 (Newtown Bypass)	I-295	8.86	No	Bucks	7:21:09	3:23:54	4:48:00	-3:57:16	-2:33:09	1:24:07	-54%	-35%	41%
144	PA 413	PA-NJ State Line	US 1 Bus (Lincoln Hwy)	12.58	No	Bucks	10:17:55	2:58:50	4:59:57	-7:19:05	-5:17:58	2:01:07	-71%	-51%	68%
145	PA 413	US 1 Bus (Lincoln Hwy)	PA 332	8.65	No	Bucks	-	4:23:38	6:16:53	-	-	1:53:15	-	-	43%
172	PA 513	US 13	US 1 (Lincoln Hwy)	12.88	No	Bucks	-	2:31:07	3:45:18	-	-	1:14:10	-	-	49%
202	PA 532 (Buck Rd)	PA 213 (Bridgetown Pk)	PA 332 (Newtown Byp)	10.87	No	Bucks	-	2:23:13	3:22:37	-	-	0:59:24	-	-	41%
173	PA 532/PA 213	PA 132 (Street Rd)	US 1	11.81	No	Bucks	-	5:17:14	7:06:37	-	-	1:49:23	-	-	34%
136	PA 611	PA 132 (Street Rd)	US 202 Pkwy	9.57	No	Bucks	12:52:05	6:27:16	10:56:49	-6:24:49	-1:55:16	4:29:33	-50%	-15%	70%
147	PA 611	US 202 Pkwy	Stump Rd	14.07	No	Bucks	3:26:39	1:05:20	1:58:24	-2:21:19	-1:28:15	0:53:04	-68%	-43%	81%
150	PA 663 (John Fries Hwy)	PA 309	I-476 NE Ext	6.72	No	Bucks	7:35:20	3:17:54	3:42:15	-4:17:26	-3:53:04	0:24:21	-57%	-51%	12%
44	US 1	Old Lincoln Hwy	I-295	15.40	No	Bucks	-	2:40:28	3:05:43	-	-	0:25:15	-	-	16%
45	US 1	I-295	PA-NJ State Line	12.66	Yes	Bucks	2:01:46	0:32:03	0:25:49	-1:29:44	-1:35:58	-0:06:14	-74%	-79%	-19%
15	US 13	US 1	I-95	12.97	No	Bucks	2:53:16	0:01:36	0:55:27	-2:51:40	-1:57:49	0:53:51	-99%	-68%	3350%
121	US 13	I-95	PA 63	14.28	No	Bucks	6:04:22	2:17:48	3:20:00	-3:46:34	-2:44:22	1:02:12	-62%	-45%	45%
72	US 202	PA 611	PA 413	9.45	No	Bucks	1:03:45	0:35:39	0:29:06	-0:28:07	-0:34:40	-0:06:33	-44%	-54%	-18%
73	US 202	PA 413	PA 32	13.87	No	Bucks	3:59:38	2:44:52	2:44:05	-1:14:46	-1:15:33	-0:00:47	-31%	-32%	0%
152	US 202 Business	PA 611	PA 309	13.83	No	Bucks	-	2:11:10	3:45:09	-	-	1:33:59	-	-	72%
95	County Line Rd	PA 532	PA 611	17.44	No	Bucks, Montgomery	9:31:06	6:17:28	8:24:47	-3:13:38	-1:06:19	2:07:19	-34%	-12%	34%
96	County Line Rd	PA 611	PA 309	16.37	No	Bucks, Montgomery	8:22:01	3:11:33	2:35:55	-5:10:29	-5:46:06	-0:35:37	-62%	-69%	-19%
5	I-276 PA Tpk	PA 611 (Hatboro)	US 1	16.77	Yes	Bucks, Montgomery	4:02:32	1:17:47	2:10:33	-2:44:45	-1:51:59	0:52:46	-68%	-46%	68%
108	PA 309	Bergey Rd	PA 663/PA 313	16.36	No	Bucks, Montgomery	0:25:28	0:07:01	0:45:38	-0:18:27	0:20:10	0:38:37	-72%	79%	551%
71	US 202 Pkwy	PA 309	PA 611	15.05	No	Bucks, Montgomery	5:43:35	1:35:50	3:17:42	-4:07:45	-2:25:53	1:41:52	-72%	-42%	106%
1	I-76 PA Tpk	PA 29	I-76 (Valley Forge)	15.44	Yes	Chester	0:23:42	0:00:00	0:13:51	-0:23:42	-0:09:51	0:13:51	-100%	-42%	0%
114	PA 100	US 422	Ridge Rd	9.09	No	Chester	-	1:05:25	2:21:48	-	-	1:16:23	-	-	117%
115	PA 100	Ridge Rd	US 30 Bypass	26.44	No	Chester	-	4:30:24	6:02:52	-	-	1:32:28	-	-	34%
116	PA 100	US 30 Bypass	US 202	6.33	Yes	Chester	26:43:06	10:07:54	13:16:03	-16:35:11	-13:27:03	3:08:09	-62%	-50%	31%
141	PA 113	PA 100	US 30 Business	7.89	No	Chester	6:22:17	3:28:06	5:42:46	-2:54:11	-0:39:31	2:14:40	-46%	-10%	65%
180	PA 252	US 30	US 202	4.64	No	Chester	-	3:07:59	7:27:52	-	-	4:19:52	-	-	138%
182	PA 29	US 30	I-76 PA Tpk	4.02	No	Chester	-	2:56:41	7:34:18	-	-	4:37:36	-	-	157%
84	PA 3 (West Chester Pk)	PA 352	US 202	6.61	No	Chester	20:01:45	6:33:44	8:30:29	-13:28:01	-11:31:16	1:56:45	-67%	-58%	30%
85	PA 3 (West Chester Pk)	US 202	US 322 Bus (High St)	6.03	No	Chester	-	3:04:29	8:14:58	-	-	5:10:29	-	-	168%
139	PA 352/SR 2022 (Boot Rd)	Pottstown Pk	PA 3	12.21	No	Chester	5:40:42	1:32:01	2:41:19	-4:08:41	-2:59:23	1:09:18	-73%	-53%	75%
142	PA 41	US 1	PA-DE State Line	12.29	No	Chester	6:22:11	3:41:35	4:22:49	-2:40:36	-1:59:23	0:41:13	-42%	-31%	19%
137	PA 724	PA 100	PA 23	18.35	No	Chester	1:50:36	1:34:14	1:47:16	-0:16:22	-0:03:20	0:13:03	-15%	-3%	14%
33	US 1	PA 82 (Unionville Rd)	PA 52 (Kennett Pk) South	6.94	No	Chester	10:06:55	4:51:40	6:59:26	-5:15:15	-3:07:29	2:07:46	-52%	-31%	44%
58	US 1	PA 10	PA 82 (Unionville Rd)	28.04	Yes	Chester	0:34:02	0:00:00	0:00:00	-0:34:02	-0:34:02	0:00:00	-100%	-100%	0%
65	US 202	PA 3	US 30	9.69	Yes	Chester	4:34:21	0:08:25	1:49:13	-4:25:56	-2:45:09	1:40:47	-97%	-60%	1197%
66	US 202	US 30	PA 29	8.75	Yes	Chester	13:15:49	0:14:05	1:36:33	-13:01:44	-11:39:16	1:22:29	-98%	-88%	586%
52	US 30	PA 252 (Leopard Rd)	US 202	11.63	No	Chester	13:26:49	4:40:31	6:53:34	-8:46:19	-6:33:15	2:13:03	-65%	-49%	47%
53	US 30 Business	US 202	US 30 Bypass	9.31	No	Chester	-	3:26:46	4:03:17	-	-	0:36:31	-	-	18%
54	US 30 Business	US 30 Bypass	PA 82 (Coatesville)	17.29	No	Chester	-	6:02:56	5:40:07	-	-	-0:22:49	-	-	-6%

**Table 18  
Continued**

Map ID	Roadway	From Limit	To Limit	2021/ 2022 Miles	Limited Access	County	Peak Hour Volume Delay (5-6pm)			Absolute Change			Percent Change		
							2017 hh:mm:ss	2021 hh:mm:ss	2022 hh:mm:ss	2017 to 2021	2017 to 2022	2021 to 2022	2017 to 2021	2017 to 2022	2021 to 2022
63	US 30 Business	PA 82 (Coatesville)	PA 10	11.82	No	Chester	0:59:17	0:39:38	1:05:24	-0:19:39	0:06:07	0:25:46	-33%	10%	65%
55	US 30 Bypass	US 202	PA 100	4.13	Yes	Chester	2:14:23	0:36:31	2:14:45	-1:37:51	0:00:22	1:38:14	-73%	0%	269%
56	US 30 Bypass	PA 100	US 30 Business	5.25	Yes	Chester	17:59:46	6:49:38	12:46:57	-11:10:08	-5:12:49	5:57:19	-62%	-29%	87%
57	US 30 Bypass	US 30 Business	Reeceville Rd	12.62	Yes	Chester	7:26:49	4:33:40	5:04:28	-2:53:09	-2:22:22	0:30:48	-39%	-32%	11%
143	US 30 Bypass	Reeceville Rd	PA 10	15.21	Yes	Chester	0:12:50	0:00:00	0:00:00	-0:12:50	-0:12:50	0:00:00	-100%	-100%	0%
140	US 322	PA 82	US 30 Business	12.06	No	Chester	-	2:38:42	3:07:32	-	-	0:28:50	-	-	18%
181	US 322	US 202	US 30 Business	16.64	No	Chester	-	1:32:09	2:38:13	-	-	1:06:03	-	-	72%
179	PA 252	PA 3 (Newtown Rd)	US 30	11.66	No	Chester, Delaware	-	1:53:56	5:12:36	-	-	3:18:40	-	-	174%
34	US 1	PA 52 (Kennett Pk) South	US 202	12.00	No	Chester, Delaware	5:27:25	1:50:29	1:30:45	-3:36:56	-3:56:40	-0:19:44	-66%	-72%	-18%
51	US 30	I-476	PA 252 (Leopard Rd)	13.34	No	Chester, Delaware	9:50:26	4:17:20	5:34:38	-5:33:07	-4:15:48	1:17:19	-56%	-43%	30%
64	US 322/US 202	US 1	PA 3	13.56	No	Chester, Delaware	24:45:58	6:52:02	13:58:07	-17:53:56	-10:47:51	7:06:05	-72%	-44%	103%
138	PA 23	PA 724	PA 422	16.90	No	Chester, Montgomery	6:26:54	4:55:44	5:26:00	-1:31:11	-1:00:54	0:30:17	-24%	-16%	10%
168	US 202	PA 29	I-76	14.10	Yes	Chester, Montgomery	3:56:56	0:06:53	0:33:26	-3:50:04	-3:23:30	0:26:34	-97%	-86%	386%
118	Baltimore Ave	US 13	Bishop Ave	6.30	No	Delaware	14:29:38	14:15:57	15:00:59	-0:13:41	0:31:20	0:45:02	-2%	4%	5%
119	Baltimore Pk	Bishop Ave	I-476	5.73	No	Delaware	24:02:28	22:37:45	20:36:43	-1:24:42	-3:25:45	-2:01:02	-6%	-14%	-9%
120	Baltimore Pk	I-476	US 1	6.47	No	Delaware	8:05:33	6:10:20	9:47:46	-1:55:12	1:42:13	3:37:26	-24%	21%	59%
11	I-476	US 30 (Villanova)	US 3 (Broomall)	9.14	Yes	Delaware	58:41:16	29:15:28	47:10:26	-29:25:48	-11:30:50	17:54:58	-50%	-20%	61%
12	I-476	US 3 (Broomall)	US 1	7.32	Yes	Delaware	29:48:02	23:18:29	40:47:02	-6:29:33	10:59:00	17:28:33	-22%	37%	75%
13	I-476	US 1	Baltimore Pk (Swarthmore)	3.40	Yes	Delaware	39:43:01	21:40:40	34:24:14	-18:02:20	-5:18:47	12:43:33	-45%	-13%	59%
14	I-476	Baltimore Pk (Swarthmore)	I-95	7.36	Yes	Delaware	40:33:06	23:30:57	35:03:42	-17:02:09	-5:29:23	11:32:46	-42%	-14%	49%
31	I-95	I-476	US 322	7.59	Yes	Delaware	58:13:42	56:09:17	63:28:18	-2:04:25	5:14:36	7:19:01	-4%	9%	13%
32	I-95	US 322	PA-DE State Line	5.50	Yes	Delaware	78:39:04	36:44:18	56:56:11	-41:54:46	-21:42:53	20:11:53	-53%	-28%	55%
157	Lansdowne Ave	US 13	PA 3	7.59	No	Delaware	14:47:35	10:58:36	12:32:33	-3:48:59	-2:15:02	1:33:57	-26%	-15%	14%
156	PA 252	Baltimore Pk	PA 3	10.49	No	Delaware	11:22:50	4:24:52	8:06:21	-6:57:57	-3:16:29	3:41:29	-61%	-29%	84%
61	PA 291	US 13	I-95	18.12	No	Delaware	1:04:39	0:21:26	0:37:14	-0:43:13	-0:27:26	0:15:47	-67%	-42%	74%
80	PA 3	63rd St (Cobbs Creek Pkwy)	US 1	5.20	No	Delaware	17:10:21	10:36:01	16:44:58	-6:34:20	-0:25:23	6:08:57	-38%	-2%	58%
81	PA 3 (West Chester Pk)	US 1	I-476	5.05	No	Delaware	36:06:59	17:09:53	27:11:43	-18:57:07	-8:55:16	10:01:50	-52%	-25%	58%
82	PA 3 (West Chester Pk)	I-476	PA 252	6.54	No	Delaware	24:23:07	10:41:06	13:41:33	-13:42:01	-10:41:34	3:00:27	-56%	-44%	28%
184	PA 320 (Sprowl Rd)	US 1	PA 3 (West Chester Pk)	6.49	No	Delaware	-	7:51:21	12:58:44	-	-	5:07:23	-	-	65%
154	PA 352	I-95	US 1	11.05	No	Delaware	5:13:24	3:30:44	5:17:59	-1:42:41	0:04:34	1:47:15	-33%	1%	51%
183	PA 420/PA 320 (Sprowl Rd)	I-95	US 1	11.31	No	Delaware	-	6:12:39	11:33:20	-	-	5:20:41	-	-	86%
35	US 1	US 202	US 322	2.40	No	Delaware	28:49:41	16:34:15	13:19:45	-12:15:26	-15:29:56	-3:14:30	-43%	-54%	-20%
36	US 1	US 322	PA 352	11.62	No	Delaware	14:19:58	3:09:22	6:59:11	-11:10:36	-7:20:47	3:49:50	-78%	-51%	121%
37	US 1	PA 352	I-476	7.72	Yes	Delaware	2:52:25	1:34:35	2:13:40	-1:17:50	-0:38:45	0:39:05	-45%	-22%	41%
38	US 1	I-476	PA 3	9.03	No	Delaware	24:00:56	11:54:40	14:53:57	-12:06:16	-9:06:58	2:59:18	-50%	-38%	25%
46	US 13	PA-DE State Line	I-95	15.38	No	Delaware	3:26:23	1:54:51	1:51:43	-1:31:32	-1:34:40	-0:03:08	-44%	-46%	-3%
47	US 13	I-95	Baltimore Ave	13.92	No	Delaware	10:35:24	6:22:33	7:36:14	-4:12:51	-2:59:10	1:13:41	-40%	-28%	19%
153	US 202	US 1	State Line Rd	6.04	No	Delaware	29:11:03	15:49:11	23:49:59	-13:21:53	-5:21:04	8:00:49	-46%	-18%	51%
59	US 322	I-95	PA 452	2.49	No	Delaware	3:59:35	5:20:28	2:27:49	1:20:53	-1:31:46	-2:52:39	34%	-38%	-54%
60	US 322	PA 452	US 1	12.38	No	Delaware	20:40:18	9:07:54	16:45:01	-11:32:24	-3:55:17	7:37:07	-56%	-19%	83%
167	US 322 (Commodore Barry Br)	I-95	PA-NJ State Line	3.30	Yes	Delaware	1:13:06	0:00:00	0:06:18	-1:13:06	-1:06:47	0:06:18	-100%	-91%	0%
83	PA 3 (West Chester Pk)	PA 252	PA 352	13.31	No	Delaware, Chester	5:41:55	2:15:37	3:40:15	-3:26:19	-2:01:40	1:24:38	-60%	-36%	62%
155	PA 352	US 1	PA 3	12.95	No	Delaware, Chester	-	2:29:49	4:05:40	-	-	1:35:52	-	-	64%
30	I-95	PA 291 (Philadelphia Airport)	I-476	14.49	Yes	Delaware, Philadelphia	32:26:43	12:44:33	24:46:33	-19:42:11	-7:40:11	12:02:00	-61%	-24%	94%
2	I-276 PA Tpk	I-76 (Valley Forge)	I-476 PA Tpk NE Ext (Plymouth Meeting)	15.02	Yes	Montgomery	36:28:53	5:00:36	11:09:53	-31:28:17	-25:19:00	6:09:17	-86%	-69%	123%
3	I-276 PA Tpk	I-476 PA Tpk NE Ext (Plymouth Meeting)	PA 309 (Fort Washington)	9.13	Yes	Montgomery	21:51:25	6:59:46	11:46:57	-14:51:39	-10:04:28	4:47:11	-68%	-46%	68%
4	I-276 PA Tpk	PA 309 (Fort Washington)	PA 611 (Hatboro)	8.88	Yes	Montgomery	13:35:29	6:55:44	9:13:00	-6:39:45	-4:22:30	2:17:16	-49%	-32%	33%
9	I-476	I-276 PA Tpk (Plymouth Meeting)	I-76 (Conshohocken)	8.51	Yes	Montgomery	48:24:14	15:37:09	20:00:56	-32:47:05	-28:23:19	4:23:46	-68%	-59%	28%
8	I-476 PA Tpk NE Ext	PA 63 (Sumneytown Pk)	I-276 PA Tpk (Plymouth Meeting)	21.21	Yes	Montgomery	5:43:45	0:04:29	0:04:05	-5:39:16	-5:39:39	-0:00:23	-99%	-99%	-9%
19	I-76	US 1 (City Ave)	I-476	16.21	Yes	Montgomery	97:28:26	83:51:37	121:57:00	-13:36:49	24:28:34	38:05:23	-14%	25%	45%
20	I-76	I-476	I-76 PA Tpk	8.99	Yes	Montgomery	76:26:35	62:07:18	60:12:39	-14:19:18	-16:13:56	-1:54:39	-19%	-21%	-3%
174	Johnson Hwy/Plymouth Rd	US 202 (Markely St)	Germantown Pk	6.06	No	Montgomery	-	0:16:59	1:03:41	-	-	0:46:41	-	-	275%
130	Norristown Rd	PA 463	US 202	12.71	No	Montgomery	8:33:40	3:12:26	4:35:55	-5:21:15	-3:57:45	1:23:30	-63%	-46%	43%
86	PA 113	US 422	PA 73 (Skipack Pk)	14.12	No	Montgomery	3:29:47	0:54:21	1:40:14	-2:35:25	-1:49:32	0:45:53	-74%	-52%	84%
87	PA 113	PA 73 (Skipack Pk)	Allentown Rd	13.37	No	Montgomery	2:01:18	1:46:46	2:41:00	-0:14:32	0:39:42	0:54:13	-12%	33%	51%

Table 18  
Continued

Map ID	Roadway	From Limit	To Limit	2021/ 2022 Miles	Limited Access	County	Peak Hour Volume Delay (5-6pm)			Absolute Change			Percent Change		
							2017 hh:mm:ss	2021 hh:mm:ss	2022 hh:mm:ss	2017 to 2021	2017 to 2022	2021 to 2022	2017 to 2021	2017 to 2022	2021 to 2022
133	PA 29	PA 73 (Skipack Pk)	Ridge Pk	9.43	No	Montgomery	2:59:04	1:12:23	2:26:44	-1:46:41	-0:32:20	1:14:20	-60%	-18%	103%
134	PA 29	Ridge Pk	US 422	4.90	No	Montgomery	7:07:24	3:06:08	5:16:11	-4:01:16	-1:51:13	2:10:03	-56%	-26%	70%
105	PA 309	PA 611	I-276	13.44	Yes	Montgomery	14:23:27	6:06:53	12:08:41	-8:16:34	-2:14:45	6:01:49	-58%	-16%	99%
106	PA 309	I-276	PA 63	11.00	Yes	Montgomery	5:28:57	2:39:03	3:55:01	-2:49:53	-1:33:56	1:15:57	-52%	-29%	48%
128	PA 363 (S Valley Forge Rd)	PA 63 (Welsh Rd)	PA 73 (Skipack Pk)	8.57	No	Montgomery	6:19:19	0:45:36	2:39:54	-5:33:43	-3:39:25	1:54:17	-88%	-58%	251%
129	PA 363 (S Valley Forge Rd)	PA 73 (Skipack Pk)	Ridge Pk	9.20	No	Montgomery	-	1:31:23	2:45:39	-	-	1:14:17	-	-	81%
176	PA 363 (Trooper Rd)	Ridge Pk	US 422	5.15	No	Montgomery	-	7:13:06	13:04:25	-	-	5:51:20	-	-	81%
123	PA 463	PA 113	PA 309	14.67	No	Montgomery	6:18:19	3:26:07	4:13:40	-2:52:12	-2:04:39	0:47:33	-46%	-33%	23%
124	PA 463	PA 309	PA 611	15.24	No	Montgomery	10:23:12	1:50:29	4:16:11	-8:32:42	-6:07:00	2:25:42	-82%	-59%	132%
102	PA 611	PA 309	PA 73	3.86	No	Montgomery	11:02:02	6:31:02	5:58:19	-4:31:00	-5:03:43	-0:32:43	-41%	-46%	-8%
103	PA 611	PA 73	I-276	11.43	No	Montgomery	21:55:39	13:50:27	16:19:20	-8:05:12	-5:36:19	2:28:53	-37%	-26%	18%
92	PA 63	PA 611 (Easton Rd)	PA 152 (Limekiln Pk)	9.43	No	Montgomery	12:23:06	5:36:46	7:45:37	-6:46:20	-4:37:29	2:08:51	-55%	-37%	38%
93	PA 63	PA 152 (Limekiln Pk)	PA 309	5.59	No	Montgomery	3:41:08	1:15:29	2:26:31	-2:25:38	-1:14:36	1:11:02	-66%	-34%	94%
94	PA 63	PA 309	PA 463 (Forty Foot Rd)	12.74	No	Montgomery	-	4:13:00	7:49:12	-	-	3:36:11	-	-	85%
175	PA 63/PA 463 (Forty Food Rd)	Sumneytown Pk	PA 463 (Cowpath Rd)	6.46	No	Montgomery	-	2:11:33	2:42:11	-	-	0:30:39	-	-	23%
125	PA 73	SR 2056 (Washington Lane)	PA 309	7.54	Yes	Montgomery	6:17:01	3:11:12	4:33:37	-3:05:49	-1:43:24	1:22:25	-49%	-27%	43%
126	PA 73	PA 309	US 202	12.18	No	Montgomery	11:19:01	4:01:02	6:58:58	-7:17:59	-4:20:04	2:57:55	-65%	-38%	74%
127	PA 73	US 202	PA 113	15.07	No	Montgomery	4:11:55	2:32:54	3:24:49	-1:39:02	-0:47:07	0:51:55	-39%	-19%	34%
112	Ridge Ave	Northwestern Ave (County Line)	I-476	8.54	No	Montgomery	14:13:29	7:51:56	12:13:39	-6:21:33	-1:59:50	4:21:43	-45%	-14%	55%
135	Ridge Pk	I-476	PA 29	20.47	No	Montgomery	8:50:46	4:45:35	5:44:18	-4:05:11	-3:06:29	0:58:43	-46%	-35%	21%
132	SR 2017 (Susquehanna Rd)	PA 611	PA 309	10.73	No	Montgomery	-	2:41:11	3:44:47	-	-	1:03:36	-	-	39%
131	Sumneytown Pk	US 202	PA 63 (Forty Foot Rd)	10.76	No	Montgomery	10:40:27	4:00:28	5:28:50	-6:39:59	-5:11:37	1:28:23	-62%	-49%	37%
67	US 202	I-76	DeKalb St	4.60	No	Montgomery	27:04:14	17:38:41	17:24:13	-9:25:32	-9:40:00	-0:14:28	-35%	-36%	-1%
69	US 202 (DeKalb Pk)	Johnson Hwy (202 split)	PA 73 (Skipack Pk)	6.34	No	Montgomery	10:24:20	5:10:22	7:10:03	-5:13:58	-3:14:17	1:59:41	-50%	-31%	39%
70	US 202 (DeKalb Pk)	PA 73 (Skipack Pk)	PA 309	10.57	No	Montgomery	9:53:17	5:11:14	6:19:28	-4:42:04	-3:33:49	1:08:14	-48%	-36%	22%
68	US 202 (Markley St)	US 202 (DeKalb Pk)	Swede Rd	9.45	No	Montgomery	-	3:35:30	4:13:50	-	-	0:38:21	-	-	18%
170	US 202 Dekalb Pk	US 202 (Markley St)	Johnson Hwy Split	4.00	No	Montgomery	-	3:03:15	8:45:23	-	-	5:42:08	-	-	187%
74	US 422	PA 100	PA 29	25.06	Yes	Montgomery	1:38:11	0:08:54	0:47:26	-1:29:17	-0:50:45	0:38:32	-91%	-52%	433%
75	US 422	PA 29	Egypt Rd	5.65	Yes	Montgomery	11:31:20	3:55:21	10:14:52	-7:35:59	-1:16:29	6:19:30	-66%	-11%	161%
76	US 422	Egypt Rd	Trooper Rd	6.53	Yes	Montgomery	31:08:56	9:56:51	21:18:20	-21:12:05	-9:50:37	11:21:28	-68%	-32%	114%
77	US 422	Trooper Rd	US 202	4.65	Yes	Montgomery	37:50:23	1:00:52	11:02:37	-36:49:31	-26:47:46	10:01:45	-97%	-71%	989%
7	I-476 PA Tpk NE Ext	PA 663 (John Fries Hwy)	PA 63 (Sumneytown Pk)	27.27	Yes	Montgomery, Bucks	0:33:40	0:00:02	0:52:02	-0:33:37	0:18:22	0:52:00	-100%	55%	151955%
88	PA 113	Allentown Rd	PA 309	6.33	No	Montgomery, Bucks	2:44:33	1:09:40	2:12:53	-1:34:53	-0:31:41	1:03:13	-58%	-19%	91%
107	PA 309	PA 63	Bergey Rd	15.30	No	Montgomery, Bucks	21:33:09	8:48:28	11:47:20	-12:44:41	-9:45:49	2:58:52	-59%	-45%	34%
104	PA 611	I-276	PA 132 (Street Rd)	9.29	No	Montgomery, Bucks	20:56:38	6:41:18	11:41:09	-14:15:20	-9:15:29	4:59:51	-68%	-44%	75%
113	PA 100	PA 73	US 422	13.72	No	Montgomery, Chester	-	0:39:52	1:53:07	-	-	1:13:15	-	-	184%
177	PA 29	PA 23	US 422	6.93	No	Montgomery, Chester	-	4:27:53	5:31:32	-	-	1:03:38	-	-	24%
10	I-476	I-76 (Conshohocken)	US 30 (Villanova)	5.31	Yes	Montgomery, Delaware	35:14:17	8:02:12	12:12:25	-27:12:05	-23:01:52	4:10:13	-77%	-65%	52%
39	US 1	PA 3	US 30 (Girard Ave)	5.11	No	Montgomery, Delaware	19:11:27	11:56:50	16:03:27	-7:14:37	-3:08:00	4:06:37	-38%	-16%	34%
50	US 30	US 1 (City Ave)	I-476	13.09	No	Montgomery, Delaware	12:53:53	9:17:44	12:38:42	-3:36:09	-0:15:10	3:20:58	-28%	-2%	36%
109	PA 63	US 1	PA 611 (Easton Rd)	14.67	No	Montgomery, Philadelphia	8:39:27	2:30:55	4:45:14	-6:08:32	-3:54:14	2:14:19	-71%	-45%	89%
199	PA 73	PA 232 (Oxford Ave)	Church Rd	7.79	No	Montgomery, Philadelphia	-	6:56:38	8:53:12	-	-	1:56:33	-	-	28%
201	Philmont Ave	PA 63 (Red Lion Rd)	Bustleton Ave	5.08	No	Montgomery, Philadelphia	-	6:13:28	10:08:49	-	-	3:55:20	-	-	63%
40	US 1 (City Ave)	US 30 (Lancaster Ave)	I-76	5.89	No	Montgomery, Philadelphia	56:33:10	37:22:15	37:40:30	-19:10:55	-18:52:40	0:18:15	-34%	-33%	1%
204	Allegheny Ave	I-95	PA 611 (Broad St)	7.03	No	Philadelphia	-	7:46:17	8:10:45	-	-	0:24:27	-	-	5%
190	Byberry Rd	US 1 (Roosevelt Blvd)	Philmont Ave	4.26	No	Philadelphia	-	13:10:23	17:12:54	-	-	4:02:31	-	-	31%
196	Chestnut St	63rd St	44th St	2.00	No	Philadelphia	-	13:04:56	12:36:25	-	-	-0:28:31	-	-	-4%
203	Frankford Ave	I-95	US 13	12.24	No	Philadelphia	-	3:19:01	4:38:03	-	-	1:19:01	-	-	40%
165	I-676 (Ben Franklin Br)	North 5th St	PA-NJ State Line	1.06	Yes	Philadelphia	-	17:45:43	24:08:27	-	-	6:22:44	-	-	36%
117	I-676 (Vine Street Expy)	I-76	I-95	4.06	Yes	Philadelphia	256:33:05	252:53:51	254:59:27	-3:39:14	-1:33:38	2:05:36	-1%	-1%	1%
16	I-76	I-676 (Vine Street Expy)	Passyunk Ave	6.08	Yes	Philadelphia	-	85:53:42	128:17:06	-	-	42:23:24	-	-	49%
17	I-76	I-676 (Vine Street Expy)	US 30 (Girard Ave)	3.39	Yes	Philadelphia	189:04:19	183:05:06	208:14:42	-5:59:12	19:10:23	25:09:36	-3%	10%	14%
18	I-76	US 30 (Girard Ave)	US 1 (City Ave)	5.82	Yes	Philadelphia	143:06:41	171:51:52	193:46:54	28:45:12	50:40:13	21:55:02	20%	35%	13%
185	I-76	Passyunk Ave	PA-NJ State Line	7.30	Yes	Philadelphia	-	10:56:47	15:02:41	-	-	4:05:54	-	-	37%
26	I-95	Academy Rd	PA 90 (Betsy Ross Bridge)	11.35	Yes	Philadelphia	34:09:23	102:04:51	113:20:16	67:55:27	79:10:53	11:15:25	199%	232%	11%

**Table 18  
Continued**

Map ID	Roadway	From Limit	To Limit	2021/ 2022 Miles	Limited Access	County	Peak Hour Volume Delay (5-6pm)			Absolute Change			Percent Change		
							2017 hh:mm:ss	2021 hh:mm:ss	2022 hh:mm:ss	2017 to 2021	2017 to 2022	2021 to 2022	2017 to 2021	2017 to 2022	2021 to 2022
27	I-95	PA 90 (Betsy Ross Bridge)	I-676 (Vine Street Expy)	9.30	Yes	Philadelphia	98:29:33	126:03:06	108:43:48	27:33:33	10:14:15	-17:19:18	28%	10%	-14%
28	I-95	I-676 (Vine Street Expy)	I-76 (Walt Whitman Bridge)	6.00	Yes	Philadelphia	116:30:14	50:18:08	43:26:37	-66:12:06	-73:03:37	-6:51:31	-57%	-63%	-14%
29	I-95	I-76 (Walt Whitman Bridge)	PA 291 (Philadelphia Airport)	9.83	Yes	Philadelphia	27:42:40	23:05:12	29:13:06	-4:37:28	1:30:25	6:07:54	-17%	5%	27%
78	Market St	I-95 (Penns Landing)	PA 611 (Broad St)	2.08	No	Philadelphia	27:43:21	23:37:29	24:19:11	-4:05:53	-3:24:10	0:41:42	-15%	-12%	3%
79	Market St	PA 611 (Broad St)	21st Street	0.43	No	Philadelphia	-	37:10:17	40:51:55	-	-	3:41:38	-	-	10%
186	Market St	21st St	44th St	3.89	No	Philadelphia	-	9:27:29	10:11:08	-	-	0:43:40	-	-	8%
187	Market St	44th St	63rd St	4.01	No	Philadelphia	-	4:14:55	5:58:41	-	-	1:43:45	-	-	41%
62	PA 291	I-95	I-76	8.75	No	Philadelphia	9:23:20	4:47:33	9:58:38	-4:35:48	0:35:18	5:11:06	-49%	6%	108%
159	PA 3 (Chestnut St)	Front St	Broad St	1.15	No	Philadelphia	15:07:27	4:26:26	6:29:24	-10:41:00	-8:38:03	2:02:57	-71%	-57%	46%
160	PA 3 (Chestnut St)	Broad St	23rd St	0.76	No	Philadelphia	40:15:53	0:00:00	8:20:37	-40:15:53	-31:55:15	8:20:37	-100%	-79%	0%
161	PA 3 (Chestnut St)	23rd St	44th St	1.69	No	Philadelphia	38:58:06	18:09:32	23:29:14	-20:48:34	-15:28:52	5:19:42	-53%	-40%	29%
162	PA 3 (Walnut St)	Front St	Broad St	1.15	No	Philadelphia	31:09:23	7:46:17	15:15:31	-23:23:06	-15:53:51	7:29:15	-75%	-51%	96%
163	PA 3 (Walnut St)	Broad St	23rd St	0.76	No	Philadelphia	41:27:03	20:47:42	32:22:56	-20:39:21	-9:04:07	11:35:15	-50%	-22%	56%
164	PA 3 (Walnut St)	23rd St	44th St	1.69	No	Philadelphia	29:03:43	29:20:56	30:31:02	0:17:12	1:27:19	1:10:07	1%	5%	4%
99	PA 611 (Broad St)	Market St	Girard Ave	2.54	No	Philadelphia	-	12:23:24	17:00:12	-	-	4:36:48	-	-	37%
100	PA 611 (Broad St)	Girard Ave	US 1	6.77	No	Philadelphia	32:44:54	34:51:50	35:02:33	2:06:56	2:17:39	0:10:43	6%	7%	1%
101	PA 611 (Broad St)	US 1	PA 309	6.02	No	Philadelphia	28:06:26	20:13:56	18:30:32	-7:52:30	-9:35:54	-1:43:24	-28%	-34%	-9%
158	PA 611 (Broad St)	I-76	Washington Ave	3.83	No	Philadelphia	-	15:33:19	21:54:44	-	-	6:21:25	-	-	41%
188	PA 611 (Broad St)	Washington Ave	Market St	1.91	No	Philadelphia	-	16:11:42	21:17:05	-	-	5:05:23	-	-	31%
189	PA 73 (Cottman Av)	I-95	PA 232 (Oxford Ave)	7.51	No	Philadelphia	-	14:54:07	13:08:20	-	-	-1:45:47	-	-	-12%
195	Passyunk Ave	Broad St	I-76	2.26	No	Philadelphia	-	11:19:19	13:43:36	-	-	2:24:17	-	-	21%
193	Pine St	Front St	Broad St	1.15	No	Philadelphia	-	22:24:45	27:54:31	-	-	5:29:47	-	-	25%
110	Ridge Ave	Callowhill St	US 1	8.21	No	Philadelphia	-	5:31:11	6:56:49	-	-	1:25:38	-	-	26%
111	Ridge Ave	US 1	Northwestern Ave (County Line)	10.27	No	Philadelphia	-	7:03:53	9:56:44	-	-	2:52:50	-	-	41%
166	Route 90 (Betsy Ross Br)	Richmond St	PA-NJ State Line	1.78	Yes	Philadelphia	0:11:21	0:00:00	0:09:36	-0:11:21	-0:01:44	0:09:36	-100%	-15%	0%
205	Tacony-Palmyra Br	I-95	PA-NJ State Line	1.02	Yes	Philadelphia	-	6:18:20	12:42:26	-	-	6:24:06	-	-	102%
41	US 1	I-76	PA 611	6.08	Yes	Philadelphia	69:47:14	62:02:55	60:18:09	-7:44:18	-9:29:05	-1:44:46	-11%	-14%	-3%
42	US 1 (Roosevelt Blvd)	PA 611	US 13	9.50	No	Philadelphia	-	21:04:50	18:29:38	-	-	-2:35:13	-	-	-12%
43	US 1 (Roosevelt Blvd)	US 13	Old Lincoln Hwy	14.42	No	Philadelphia	-	4:12:42	4:46:19	-	-	0:33:37	-	-	13%
197	US 1 (Roosevelt Blvd) Frontage Rd	PA 611	US 13	8.08	No	Philadelphia	-	20:53:21	19:13:30	-	-	-1:39:51	-	-	-8%
198	US 1 (Roosevelt Blvd) Frontage Rd	US 13	I-276 PA Tpk	15.36	No	Philadelphia	-	4:06:19	5:04:14	-	-	0:57:56	-	-	24%
48	US 30 (Girard Ave)	US 13 (N 33rd St)	Lancaster Ave	2.95	No	Philadelphia	38:58:00	8:41:59	11:33:50	-30:16:02	-27:24:10	2:51:52	-78%	-70%	33%
49	US 30 (Lancaster Ave)	Girard Ave	US 1 (City Ave)	4.44	No	Philadelphia	16:02:22	4:44:59	6:16:54	-11:17:23	-9:45:28	1:31:55	-70%	-61%	32%
194	Walnut St	44th St	63rd St	2.01	No	Philadelphia	-	26:51:12	23:16:50	-	-	-3:34:22	-	-	-13%
191	Washington Ave	Front St	Broad St	2.32	No	Philadelphia	-	12:17:57	14:32:09	-	-	2:14:12	-	-	18%
192	Washington Ave	Broad St	Grays Ferry Ave	2.22	No	Philadelphia	-	8:18:24	12:00:11	-	-	3:41:47	-	-	44%
200	PA 532 (Bustleton Pk)	US 1 Roosevelt Blvd	PA 132 (Street Rd)	17.37	No	Philadelphia, Bucks	-	10:54:00	13:40:58	-	-	2:46:57	-	-	26%
91	PA 63	I-95	US 1	6.40	Yes	Philadelphia, Bucks	6:38:52	1:16:18	1:58:20	-5:22:34	-4:40:31	0:42:03	-81%	-70%	55%
122	US 13	PA 63	US 1 (Roosevelt Blvd)	13.70	No	Philadelphia, Bucks	10:03:03	9:20:20	10:19:10	-0:42:43	0:16:06	0:58:50	-7%	3%	10%
178	Germantown Pk	Broad St	I-476 NE Ext	21.32	No	Philadelphia, Montgomery	-	4:30:07	6:26:07	-	-	1:56:00	-	-	43%

Decrease in Delay  
Increase in Delay

Note: Corridors with a dash in the 2017 peak hour volume delay or percent change columns cannot be compared to 2021 or 2022 due to either the corridor not existing in 2017, or the lengths being significantly modified since 2017, and not comparable to ones in 2021 or 2022

Source: DVRPC analysis of 2017, 2021, and 2022 INRIX data



Table 19:

## Focus Roadway Corridor Facilities Yearly Trends of Peak Hour Volume Delay in the New Jersey Portion of the DVRPC Region (Sorted by County and Roadway)

Map ID	Roadway	From Limit	To Limit	2021/ 2022 Miles	Limited Access	County	Peak Hour Volume Delay (5-6pm)			Absolute Change			Percent Change		
							2017 hh:mm:ss	2021 hh:mm:ss	2022 hh:mm:ss	2017 to 2021	2017 to 2022	2021 to 2022	2017 to 2021	2017 to 2022	2021 to 2022
427	CR 537	CR 541 (Mt. Holly Byp)	US 206	9.12	No	Burlington	-	0:31:26	1:14:33	-	-	0:43:08	-	-	137%
355	CR 537 (Marne Hwy)	NJ 73	CR 541 (Mt. Holly Byp)	20.02	No	Burlington	-	1:40:44	2:11:42	-	-	0:30:58	-	-	31%
403	CR 541 (Mt. Holly Rd)/CR 691	CR 537 (Washington St)	US 130	13.89	No	Burlington	-	1:33:30	2:39:51	-	-	1:06:21	-	-	71%
405	CR 603/N Elmwood Rd	NJ 70	CR 537 (Marne Hwy)	12.79	No	Burlington	2:20:19	0:27:48	0:57:19	-1:52:31	-1:23:00	0:29:31	-80%	-59%	106%
404	CR 607	NJ 70	CR 537 (Marne Hwy)	11.26	No	Burlington	5:54:15	1:35:38	3:36:40	-4:18:37	-2:17:35	2:01:02	-73%	-39%	127%
420	CR 620	NJ 73	CR 623	9.06	No	Burlington	-	2:26:56	3:01:55	-	-	0:34:59	-	-	24%
419	CR 626	I-295	US 130	8.47	No	Burlington	-	0:15:29	0:37:10	-	-	0:21:41	-	-	140%
330	I-295	CR 541 (Mt. Holly Rd)	I-95	9.56	Yes	Burlington	1:01:09	0:00:00	0:43:26	-1:01:09	-0:17:43	0:43:26	-100%	-29%	0%
430	I-295	NJ 38 (Exit 40)	CR 541 (Exit 47)	13.67	Yes	Burlington	-	0:08:51	0:50:06	-	-	0:41:15	-	-	466%
325	I-95	PA-NJ State Line	NJ Tpk	13.71	Yes	Burlington	0:24:42	0:02:51	0:02:06	-0:21:51	-0:22:36	-0:00:45	-88%	-92%	-27%
353	NJ 38	NJ 73	I-295	7.93	No	Burlington	30:39:10	7:39:18	12:04:00	-22:59:52	-18:35:10	4:24:42	-75%	-61%	58%
354	NJ 38	I-295	US 206	19.21	No	Burlington	5:33:51	1:19:47	2:39:34	-4:14:04	-2:54:17	1:19:47	-76%	-52%	100%
369	NJ 70	NJ 73	US 206	20.40	No	Burlington	-	4:44:12	5:19:19	-	-	0:35:07	-	-	12%
372	NJ 73	NJ Tpk (Exit 4)	NJ 70	6.07	No	Burlington	63:01:45	11:41:26	18:53:56	-51:20:19	-44:07:49	7:12:30	-81%	-70%	62%
300	NJ Tpk	Exit 5 (Burlington - Mt. Holly)	Exit 6 (I-95)	10.60	Yes	Burlington	-	0:00:00	0:03:53	-	-	0:03:53	-	-	0%
301	NJ Tpk	Exit 6 (I-95)	Exit 7 (Bordentown - Trenton)	8.62	Yes	Burlington	-	0:00:00	0:00:22	-	-	0:00:22	-	-	0%
306	NJ Tpk	Exit 4 (Camden - Philadelphia)	Exit 5 (Burlington - Mt. Holly)	18.99	Yes	Burlington	1:51:49	2:08:51	2:10:35	0:17:02	0:18:46	0:01:44	15%	17%	1%
408	NJ Tpk	Exit 6 (I-95)	Exit 7 (Bordentown - Trenton) - Cars Only	8.61	Yes	Burlington	-	1:13:48	1:18:09	-	-	0:04:22	-	-	6%
333	US 130	I-295	I-95	9.19	No	Burlington	5:32:17	0:19:12	0:28:14	-5:13:05	-5:04:04	0:09:01	-94%	-92%	47%
334	US 130	NJ 73	CR 543 (Columbus Rd)	23.15	No	Burlington	-	5:00:59	7:36:30	-	-	2:35:30	-	-	52%
414	US 130	CR 543 (Columbus Rd)	I-95	6.48	No	Burlington	-	0:13:04	1:05:35	-	-	0:52:31	-	-	402%
415	US 206	NJ 70	NJ 38	11.56	No	Burlington	-	1:05:31	1:34:23	-	-	0:28:51	-	-	44%
416	US 206	NJ 38	NJ Tpk	22.05	No	Burlington	-	0:35:35	0:56:43	-	-	0:21:07	-	-	59%
417	US 206	NJ Tpk	US 130	2.42	No	Burlington	-	0:31:00	1:00:53	-	-	0:29:53	-	-	96%
309	I-295	NJ 70 (Exit 34)	NJ 38 (Exit 40)	11.83	Yes	Burlington, Camden	-	9:49:58	20:22:06	-	-	10:32:08	-	-	107%
371	NJ 73	US 130	NJ Tpk (Exit 4)	10.28	No	Burlington, Camden	24:34:09	10:36:03	12:22:10	-13:58:05	-12:11:59	1:46:07	-57%	-50%	17%
303	I-295	CR 656 (Florence Columbus Rd)	I-95	15.51	Yes	Burlington, Mercer	3:08:27	0:04:32	0:18:26	-3:03:56	-2:50:01	0:13:54	-98%	-90%	307%
379	NJ Tpk	Exit 7 (Bordentown - Trenton)	Exit 7A (Trenton - Hamilton Twp)	13.96	Yes	Burlington, Mercer	-	0:06:41	0:01:19	-	-	-0:05:21	-	-	-80%
409	NJ Tpk	Exit 7 (Bordentown - Trenton)	Exit 7A (Trenton - Hamilton Twp) - Cars Only	13.92	Yes	Burlington, Mercer	-	1:44:36	1:26:55	-	-	-0:17:41	-	-	-17%
332	US 130	I-195	I-295	13.22	No	Burlington, Mercer	3:52:03	0:49:52	1:32:02	-3:02:10	-2:20:01	0:42:09	-79%	-60%	85%
418	US 206	US 130	I-195	4.65	No	Burlington, Mercer	-	0:22:54	0:18:48	-	-	-0:04:06	-	-	-18%
391	CR 534 (Blackwood-Cementon Rd)	NJ 42	CR 686 (Gibbsboro Rd)	7.03	No	Camden	6:10:10	3:30:42	4:26:31	-2:39:28	-1:43:39	0:55:49	-43%	-28%	26%
421	CR 536 Spur	NJ 42	US 30	11.90	No	Camden	-	0:53:00	1:04:08	-	-	0:11:08	-	-	21%
386	CR 544	NJ 41	US 30	6.25	No	Camden	4:38:51	1:48:07	3:37:09	-2:50:44	-1:01:42	1:49:02	-61%	-22%	101%
388	CR 544	CR 673	NJ 73	5.95	No	Camden	4:36:48	1:06:39	1:42:31	-3:30:09	-2:54:17	0:35:52	-76%	-63%	54%
387	CR 544 (Evesham Rd)	US 30	CR 673	5.70	No	Camden	9:45:34	0:48:54	2:00:49	-8:56:40	-7:44:45	1:11:55	-92%	-79%	147%
396	CR 551 (Kings Hwy)	US 30	US 130	6.16	No	Camden	3:51:44	1:01:12	2:03:13	-2:50:31	-1:48:30	1:02:01	-74%	-47%	101%
382	CR 561	I-295	CR 689 (Berlin - Cross Keys Rd)	14.15	No	Camden	9:40:59	3:46:24	7:18:06	-5:54:35	-2:22:54	3:31:41	-61%	-25%	93%
383	CR 561	I-676	I-295	13.65	No	Camden	-	3:58:17	5:26:22	-	-	1:28:05	-	-	37%
384	CR 636	US 30	NJ 38	6.34	No	Camden	10:39:03	6:39:37	7:48:11	-3:59:26	-2:50:52	1:08:34	-37%	-27%	17%
380	CR 644	Route 90	NJ 70	7.93	No	Camden	9:11:08	4:40:53	7:36:39	-4:30:15	-1:34:29	2:55:46	-49%	-17%	63%
381	CR 644	NJ 70	CR 561	3.49	No	Camden	8:10:14	4:17:36	7:30:40	-3:52:38	-0:39:34	3:13:04	-47%	-8%	75%
389	CR 673 (Springdale Rd)	CR 561 (Haddonfield-Berlin Rd)	CR 616 (Church Rd)	10.45	No	Camden	8:44:00	2:01:32	4:02:26	-6:42:28	-4:41:34	2:00:54	-77%	-54%	99%
390	CR 673 (White Horse Rd)	CR 561 (Haddonfield-Berlin Rd)	CR 534 (Blackwood-Cementon Rd)	8.20	No	Camden	10:17:39	4:44:20	8:28:46	-5:33:19	-1:48:53	3:44:26	-54%	-18%	79%
392	CR 686 (Gibbsboro Rd)	CR 534 (Blackwood-Cementon Rd)	CR 561 (Lakeview Dr)	5.78	No	Camden	9:26:45	1:10:05	3:00:31	-8:16:40	-6:26:14	1:50:26	-88%	-68%	158%
308	I-295	NJ 42 (Exit 26)	NJ 70 (Exit 34)	16.38	Yes	Camden	55:26:58	45:17:44	50:58:46	-10:09:14	-4:28:12	5:41:02	-18%	-8%	13%
327	I-676	NJ-PA State Line	I-76	9.88	Yes	Camden	51:04:52	11:52:24	17:38:35	-39:12:28	-33:26:16	5:46:12	-77%	-65%	49%
328	I-76	NJ-PA State Line	I-295	6.87	Yes	Camden	64:46:53	61:10:53	66:54:11	-3:36:00	2:07:18	5:43:18	-6%	3%	9%
312	NJ 168 (Black Horse Pk)	I-295	NJ 42	7.97	No	Camden	17:06:42	10:42:04	12:11:05	-6:24:38	-4:55:37	1:29:01	-37%	-29%	14%
397	NJ 168/CR 605	I-295	CR 561 (Haddon Ave)	9.57	No	Camden	10:40:48	5:02:00	5:06:32	-5:38:49	-5:34:16	0:04:32	-53%	-52%	2%
395	NJ 41 (Kings Highway)/ CR 551	NJ 70	US 30	7.23	No	Camden	-	2:37:27	5:02:34	-	-	2:25:06	-	-	92%
367	NJ 70	NJ 38	I-295	10.35	No	Camden	25:04:07	15:41:10	23:47:17	-9:22:57	-1:16:50	8:06:07	-37%	-5%	52%
305	NJ Tpk	Exit 3 (Woodbury - South Camden)	Exit 4 (Camden - Philadelphia)	17.10	Yes	Camden	1:32:00	1:22:25	1:17:36	-0:09:35	-0:14:23	-0:04:48	-10%	-16%	-6%
314	Sicklerville Rd	AC Expressway	536 Spur	11.22	No	Camden	2:35:11	2:05:21	2:29:52	-0:29:51	-0:05:19	0:24:31	-19%	-3%	20%

Table 19  
Continued

Map ID	Roadway	From Limit	To Limit	2021/2022 Miles	Limited Access	County	Peak Hour Volume Delay (5-6pm)			Absolute Change			Percent Change		
							2017 hh:mm:ss	2021 hh:mm:ss	2022 hh:mm:ss	2017 to 2021	2017 to 2022	2021 to 2022	2017 to 2021	2017 to 2022	2021 to 2022
335	US 130	NJ 73	US 30	10.17	No	Camden	14:24:07	1:45:24	4:23:15	-12:38:43	-10:00:52	2:37:51	-88%	-70%	150%
336	US 130	US 30	I-76	5.19	No	Camden	32:07:38	16:59:20	21:46:35	-15:08:19	-10:21:04	4:47:15	-47%	-32%	28%
322	US 30	I-676	US 130	4.40	Yes	Camden	7:30:23	2:25:23	4:56:30	-5:04:59	-2:33:53	2:31:06	-68%	-34%	104%
323	US 30	US 130	I-295	9.82	No	Camden	20:50:13	11:24:20	13:51:59	-9:25:53	-6:58:14	2:27:39	-45%	-33%	22%
324	US 30	I-295	NJ 73	20.05	No	Camden	8:45:36	6:44:10	7:56:38	-2:01:26	-0:48:58	1:12:28	-23%	-9%	18%
352	NJ 38	US 130	NJ 73	10.98	No	Camden, Burlington	23:49:39	12:29:43	15:56:43	-11:19:56	-7:52:56	3:27:00	-48%	-33%	28%
394	NJ 41	NJ 70	NJ 38	5.08	No	Camden, Burlington	16:43:25	4:24:32	6:29:20	-12:18:52	-10:14:05	2:04:48	-74%	-61%	47%
368	NJ 70	I-295	NJ 73	6.38	No	Camden, Burlington	24:16:40	16:41:14	24:48:41	-7:35:26	0:32:01	8:07:27	-31%	2%	49%
370	NJ 73	NJ-PA State Line	US 130	4.48	No	Camden, Burlington	6:57:16	5:00:05	8:36:33	-1:57:11	1:39:17	3:36:28	-28%	24%	72%
373	NJ 73	NJ 70	US 30	17.08	No	Camden, Burlington	15:38:29	8:32:57	10:25:09	-7:05:32	-5:13:20	1:52:12	-45%	-33%	22%
402	NJ 90	NJ-PA State Line	NJ 73	6.64	Yes	Camden, Burlington	0:29:47	0:00:00	0:00:00	-0:29:47	-0:29:47	0:00:00	-100%	-100%	0%
310	AC Expressway	Williamstown Rd (Exit 38)	Western Terminus (US 42)	12.60	Yes	Camden, Gloucester	0:52:26	0:18:46	0:10:27	-0:33:40	-0:41:59	-0:08:19	-64%	-80%	-44%
393	CR 689 (Berlin - Cross Keys Rd)	NJ 42	AC Expressway	14.36	No	Camden, Gloucester	8:02:06	4:38:13	5:15:19	-3:23:53	-2:46:47	0:37:07	-42%	-35%	13%
313	NJ 168	NJ 42	AC Expressway	6.48	No	Camden, Gloucester	4:55:24	1:38:21	1:47:46	-3:17:03	-3:07:38	0:09:25	-67%	-64%	10%
385	NJ 41	NJ 42	US 30	7.42	No	Camden, Gloucester	9:56:35	5:02:32	7:05:03	-4:54:03	-2:51:32	2:02:31	-49%	-29%	40%
311	NJ 42	AC Expressway	I-295	14.78	Yes	Camden, Gloucester	8:21:55	14:00:09	12:56:20	5:38:14	4:34:25	-1:03:49	67%	55%	-8%
337	US 130	I-76	I-295	6.74	No	Camden, Gloucester	8:55:29	2:47:18	3:18:53	-6:08:11	-5:36:37	0:31:34	-69%	-63%	19%
406	CR 534/CR 640	NJ 41	US 130	10.24	No	Gloucester	5:14:40	2:40:54	4:21:24	-2:33:46	-0:53:16	1:40:30	-49%	-17%	62%
426	CR 544	NJ 41	CR 534	3.67	No	Gloucester	-	5:07:56	7:09:28	-	-	2:01:33	-	-	39%
363	CR 551 (Kings Hwy)	CR 678 (Berkley Rd)	NJ 45	6.63	No	Gloucester	1:09:54	0:10:54	0:40:15	-0:59:00	-0:29:39	0:29:21	-84%	-42%	269%
364	CR 553 (Kings Hwy)	I-295	NJ 55	15.07	No	Gloucester	1:59:36	1:55:01	2:47:21	-0:04:35	0:47:45	0:52:20	-4%	40%	45%
365	CR 553 (Kings Hwy)	NJ 55	NJ 47	4.95	No	Gloucester	3:25:50	1:47:18	3:05:22	-1:38:32	-0:20:28	1:18:04	-48%	-10%	73%
422	CR 654	US 322	NJ 47	16.08	No	Gloucester	-	0:52:56	1:35:33	-	-	0:42:37	-	-	81%
429	CR 678	I-295	NJ 45	8.10	No	Gloucester	-	0:10:45	0:45:40	-	-	0:34:54	-	-	325%
423	CR 689 (Berlin - Cross Keys Rd)	NJ 42	US 322	9.69	No	Gloucester	-	0:40:35	1:21:01	-	-	0:40:26	-	-	100%
424	I-295	US 322	CR 602	6.08	Yes	Gloucester	-	0:00:00	0:00:00	-	-	0:00:00	-	-	0%
362	NJ 41	NJ 42	NJ 47	7.09	no	Gloucester	5:35:09	3:01:03	3:13:09	-2:34:06	-2:22:00	0:12:06	-46%	-42%	7%
366	NJ 42	AC Expressway	US 322	13.61	Yes	Gloucester	10:21:24	9:24:13	13:23:36	-0:57:11	3:02:12	3:59:23	-9%	29%	42%
360	NJ 45	US 130	Kings Hwy	6.13	No	Gloucester	9:30:58	4:33:25	6:58:17	-4:57:33	-2:32:41	2:24:53	-52%	-27%	53%
361	NJ 45	Kings Hwy	US 322	15.17	No	Gloucester	3:08:16	2:00:11	2:00:08	-1:08:05	-1:08:08	-0:00:03	-36%	-36%	0%
356	NJ 47	US 130	NJ 55	11.67	No	Gloucester	2:49:46	2:40:08	2:57:44	-0:09:38	0:07:58	0:17:36	-6%	5%	11%
357	NJ 47	NJ 55	US 322	12.89	No	Gloucester	6:30:19	3:33:58	4:06:29	-2:56:21	-2:23:50	0:32:31	-45%	-37%	15%
358	NJ 55	NJ 42	NJ 47	8.28	Yes	Gloucester	9:47:52	12:35:23	19:06:47	2:47:31	9:18:56	6:31:25	28%	95%	52%
359	NJ 55	NJ 47	US 322	12.10	Yes	Gloucester	0:36:08	0:08:17	0:12:36	-0:27:52	-0:23:33	0:04:19	-77%	-65%	52%
304	NJ Tpk	Exit 2 (Swedesboro-Glassboro)	Exit 3 (Woodbury - South Camden)	26.17	Yes	Gloucester	0:09:10	0:02:14	0:09:21	-0:06:57	0:00:10	0:07:07	-76%	2%	319%
425	US 130	I-295	CR 620	9.69	No	Gloucester	-	0:01:59	0:10:18	-	-	0:08:19	-	-	421%
338	US 130/I-295	I-295	US 322	23.85	Yes	Gloucester	0:38:38	0:03:07	0:04:12	-0:35:31	-0:34:26	0:01:05	-92%	-89%	35%
339	US 322	NJ-PA State Line	I-295	7.33	Yes	Gloucester	0:34:26	0:00:00	0:24:05	-0:34:26	-0:10:20	0:24:05	-100%	-30%	0%
340	US 322	I-295	NJ Tpk (Exit 2)	7.63	No	Gloucester	4:49:47	2:25:05	3:56:34	-2:24:43	-0:53:14	1:31:29	-50%	-18%	63%
341	US 322	NJ Tpk (Exit 2)	NJ 55	14.43	No	Gloucester	1:35:51	1:09:20	1:42:48	-0:26:32	0:06:57	0:33:29	-28%	7%	48%
342	US 322	NJ 55	CR 536/CR 654 (Main St)	18.04	No	Gloucester	3:24:40	1:29:29	2:38:25	-1:55:11	-0:46:14	1:08:56	-56%	-23%	77%
307	I-295	US 130	NJ 42 (Exit 26)	5.79	Yes	Gloucester, Camden	10:24:18	9:10:34	6:17:53	-1:13:44	-4:06:25	-2:52:41	-12%	-39%	-31%
428	US 322/CR 536	CR 536/CR 654 (Main St)	AC Expressway	3.75	No	Gloucester, Camden	-	5:27:38	8:18:02	-	-	2:50:24	-	-	52%
399	CR 533	US 206	US 1	16.29	No	Mercer	9:24:46	2:40:44	3:52:14	-6:44:02	-5:32:32	1:11:30	-72%	-59%	44%
375	CR 571	US 1	US 130	13.95	No	Mercer	3:53:18	2:15:29	2:29:40	-1:37:49	-1:23:39	0:14:10	-42%	-36%	10%
374	CR 571 (Washington Rd)	NJ 27	US 1	3.28	No	Mercer	7:15:51	1:25:07	3:44:41	-5:50:44	-3:31:09	2:19:34	-80%	-48%	164%
401	CR 583 (Princeton Pk)	I-295	NJ 27	10.23	No	Mercer	5:39:12	2:06:02	3:29:34	-3:33:11	-2:09:38	1:23:33	-63%	-38%	66%
407	CR 622 (Olden Ave)	I-295	NJ 31	9.75	No	Mercer	10:07:22	6:03:10	7:39:27	-4:04:12	-2:27:55	1:36:17	-40%	-24%	27%
400	CR 638	US 1	CR 571	8.43	No	Mercer	6:22:41	1:18:54	2:01:41	-5:03:47	-4:21:00	0:42:47	-79%	-68%	54%
326	I-195	I-295	I-95 (NJ Tpk)	12.23	Yes	Mercer	25:21:12	0:19:01	2:00:00	-25:02:10	-23:21:12	1:40:58	-99%	-92%	531%
329	I-295	I-195	US 1	15.18	Yes	Mercer	1:59:24	0:01:26	0:04:13	-1:57:58	-1:55:12	0:02:47	-99%	-96%	193%
376	I-295	US 1	NJ 31	9.43	Yes	Mercer	17:55:33	0:03:44	0:11:04	-17:51:50	-17:44:30	0:07:20	-100%	-99%	197%
377	I-295	NJ 31	NJ 29	8.40	Yes	Mercer	27:06:49	0:07:23	0:00:00	-26:59:26	-27:06:49	-0:07:23	-100%	-100%	-100%
398	NJ 129	NJ 29	US 1	3.96	No	Mercer	15:42:47	2:23:37	4:30:06	-13:19:11	-11:12:41	2:06:29	-85%	-71%	88%

**Table 19**  
**Continued**

Map ID	Roadway	From Limit	To Limit	2021/ 2022 Miles	Limited Access	County	Peak Hour Volume Delay (5-6pm)			Absolute Change			Percent Change		
							2017 hh:mm:ss	2021 hh:mm:ss	2022 hh:mm:ss	2017 to 2021	2017 to 2022	2021 to 2022	2017 to 2021	2017 to 2022	2021 to 2022
413	NJ 133	NJ Tpk	CR 571	8.37	No	Mercer	-	0:03:00	0:05:56	-	-	0:02:56	-	-	98%
412	NJ 27	US 206	County Line	7.49	No	Mercer	-	3:22:36	4:48:23	-	-	1:25:47	-	-	42%
343	NJ 29	Cass St	CR 579 (Sullivan Way)	6.85	No	Mercer	13:42:22	1:23:12	3:40:17	-12:19:10	-10:02:05	2:17:05	-90%	-73%	165%
345	NJ 29	CR 579 (Sullivan Way)	I-295	6.22	Yes	Mercer	1:33:22	0:14:20	0:08:59	-1:19:02	-1:24:23	-0:05:21	-85%	-90%	-37%
378	NJ 29	Cass St	I-295	5.57	Yes	Mercer	5:05:48	0:10:13	1:43:09	-4:55:35	-3:22:39	1:32:57	-97%	-66%	910%
344	NJ 31	US 206	CR 622 (Olden Ave)	3.67	No	Mercer	2:14:27	0:51:20	1:10:20	-1:23:06	-1:04:07	0:19:00	-62%	-48%	37%
346	NJ 31	CR 622 (Olden Ave)	I-295	6.03	No	Mercer	2:04:05	0:48:28	1:14:38	-1:15:37	-0:49:26	0:26:11	-61%	-40%	54%
347	NJ 31	I-295	CR 623 (Pennington Titusville Rd)	5.71	No	Mercer	5:47:40	2:34:24	3:45:15	-3:13:16	-2:02:25	1:10:51	-56%	-35%	46%
348	NJ 31	CR 623 (Pennington Titusville Rd)	CR 518 (Lambertville Hopewell Rd)	9.14	No	Mercer	3:24:31	2:34:30	3:09:41	-0:50:02	-0:14:50	0:35:12	-24%	-7%	23%
349	NJ 33	US 1	CR 622 (Olden Ave)	2.37	No	Mercer	5:29:44	3:27:26	3:23:29	-2:02:17	-2:06:15	-0:03:57	-37%	-38%	-2%
350	NJ 33	CR 622 (Olden Ave)	I-295	4.04	No	Mercer	3:32:12	3:00:06	2:29:19	-0:32:06	-1:02:53	-0:30:48	-15%	-30%	-17%
351	NJ 33	I-295	US 130	9.24	No	Mercer	7:10:56	5:31:59	5:11:47	-1:38:57	-1:59:10	-0:20:13	-23%	-28%	-6%
302	NJ Tpk	Exit 7A (Trenton - Hamilton Twp)	Exit 8 (Hightstown - Freehold)	15.47	Yes	Mercer	-	0:00:00	0:47:27	-	-	0:47:27	-	-	0%
410	NJ Tpk	Exit 7A (Trenton - Hamilton Twp)	Exit 8 (Hightstown - Freehold) - Cars Only	15.59	Yes	Mercer	-	1:37:17	2:00:08	-	-	0:22:51	-	-	23%
315	US 1	NJ-PA State Line	CR 616 (Whitehead Rd)	7.17	Yes	Mercer	10:17:28	0:19:11	0:33:48	-9:58:16	-9:43:39	0:14:37	-97%	-95%	76%
316	US 1	CR 616 (Whitehead Rd)	I-295	5.78	Yes	Mercer	12:51:15	4:08:12	6:19:45	-8:43:03	-6:31:29	2:11:33	-68%	-51%	53%
317	US 1	I-295	Alexander Rd	8.44	No	Mercer	37:58:40	9:28:54	22:09:36	-28:29:46	-15:49:04	12:40:42	-75%	-42%	134%
318	US 1	Alexander Rd	CR 629	2.16	No	Mercer	46:58:36	11:45:32	21:30:03	-35:13:04	-25:28:33	9:44:31	-75%	-54%	83%
331	US 130	NJ 133	I-195	15.29	No	Mercer	8:01:13	2:16:48	4:05:57	-5:44:25	-3:55:16	1:49:09	-72%	-49%	80%
320	US 206	I-295	NJ 27	12.09	No	Mercer	3:21:56	2:02:40	2:53:55	-1:19:16	-0:28:01	0:51:15	-39%	-14%	42%
321	US 206	NJ 27	Princeton Ave/County Line	6.55	No	Mercer	7:16:32	2:20:53	3:16:16	-4:55:39	-4:00:16	0:55:22	-68%	-55%	39%
411	US 206	NJ 31	I-295	9.24	No	Mercer	-	1:20:21	1:56:58	-	-	0:36:37	-	-	46%
319	US 206	I-195	NJ 31	8.77	No	Mercer, Burlington	-	1:54:33	2:56:38	-	-	1:02:05	-	-	54%

■ Decrease in Delay  
■ Increase in Delay

Note: Corridors with a dash in the 2017 peak hour volume delay or percent change columns cannot be compared to 2021 or 2022 due to either the corridor not existing in 2017, or the lengths being significantly modified since 2017, and not comparable to ones in 2021 or 2022

Source: DVRPC analysis of 2017, 2021, and 2022 INRIX data

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## 7. Conclusions

The CMP analysis combines a variety of traffic data sources to identify the most congested roadways in Greater Philadelphia. It uses this information along with other analyses to recommend multimodal strategies that improve the flow of people and goods, enhance safety, and expand travel options on the region's transportation network.

The CMPs objective measures tie to DVRPC Long-Range Plan goals and provide context to areas where congestion is occurring. The CMP objective measures include: increasing mobility and reliability, integrating modes and providing transit accessibility where it is most needed, modernizing and maintaining the transportation network, achieving Vision Zero, providing for goods movement, maintaining and enhancing the transportation security and emergency preparedness, and supporting Long-Range Plan goals, such as investing in centers first, prioritizing investments in less sensitive environmental areas, and investing in Environmental Justice communities.

The CMP analyzes 336 focus roadway corridor facilities, and contains a detailed analysis of 41 of the most congested focus roadway facilities. The CMP analysis for the DVRPC region indicates that peak period traffic congestion is not as bad as it was pre-Covid, but it is approaching pre-Covid conditions. Comparing 2017 to 2022, 85 percent of 236 CMP roadway corridor facilities experienced less congestion, but comparing the same ones from 2021 to 2022, 86 percent experienced more congestion. Location matters when analyzing congestion. For example, some areas in 2022 experienced more congestion and traffic delay than in 2017 such as I-76 from US 30 (Girard Ave) to US 1 (City Ave) in Philadelphia and NJ 42 from the Atlantic City Expressway to I-295 in Camden County at 35 percent and 55 percent, respectively. Some roadways experienced significantly less congestion in 2022 compared to 2017, such as US 422 from Trooper Road to US 202 in Montgomery County and NJ 73 from the NJ Turnpike to NJ 70 in Burlington County at 71 percent and with 70 percent, respectively.

The CMP analyzes most SEPTA and NJ Transit bus routes and 400 plus intersection and limited-access roadway bottlenecks. It uses the focus roadway corridor, bottleneck, and CMP objective measures to identify 37 broader CMP corridor areas that experience more congestion or unreliability.

The CMP identifies over 100 strategies that can help to mitigate congestion—ranging from Transportation System Management and Operations (TSMO), to travel demand management, policy approaches, transit improvements, goods movement, and road improvements and new roads. The CMP uses CMP objective measures, data, analysis, and DVRPC and planning partners' corridor planning study findings to help align the right strategy recommendations to the right location. Some of the most congested facilities and bottlenecks are analyzed in more detail with specific recommended very appropriate strategies for managing congestion for the facility or bottleneck. The remainder of the focus roadway corridors and bottlenecks include strategies to manage congestion by CMP corridor and subcorridor area. Some 20 regionwide strategies have been identified, which are appropriate to be applied to any facility, whether it is located within or outside of a congested corridor.

The DVRPC CMP serves as an essential component to the overall transportation planning and programming process. It is useful for transportation project managers, policy makers, municipal and county officials, businesses, and citizens concerned about transportation solutions. Decision-makers can use it to inform choices for transportation improvements with a better understanding of congestion issues in the region. County and other agencies can use the CMP to help identify and prioritize congested locations for project planning and development to mitigate congestion, or to assist in developing strategies for managing congestion that minimize costs and be consistent with the CMP and Long-Range Plan goals. The CMP supports the Long-Range Plan and TIP to inform the process of identifying the most

congested locations, and advancing the most appropriate strategies to mitigate congestion, it provides screening criteria for the *Plan and TIP Project Evaluation Criteria*, and competitive grant programs such as the Congestion Management Air Quality (CMAQ). Addressing congestion is an ongoing process and it is most effective with participation from everyone.

## 7.1 Next Steps

In order to ensure that the DVRPC CMP is flexible and evolving to meet current conditions, it is suggested that some next steps be implemented. They include:

1. Continue to hold meetings with stakeholders for major SOV capacity-adding projects to develop multimodal strategies – including transit, walking, and bicycling – to get the most long-term value from the investment. Develop Supplemental Project Status reports to identify supplemental strategy commitments, and improve sharing with stakeholders and the greater public, and track the progress of strategy implementation.
2. Build on the list of recently implemented roadway congestion mitigation projects, and use the archived travel time data to perform before-and-after performance evaluations using travel times and other congestion measures to determine the effectiveness of implemented improvements on mobility and reliability. Incorporate the RITIS PDA project assessment report templates as a starting point for the evaluations. Use recent or in development DVRPC tools (development intensity zones (DIZ), Plan and freight centers, regional high-injury network, truck route network, IPD analysis, DVRPC corridor studies, strategy effectiveness evaluation studies, roadway functional classification, and traffic volume data to better tie congestion mitigation with appropriate strategies at the facility and corridor area levels in a systematic manner.
3. Perform state-of-the-practice research to learn from peer MPO's on how the CMP is used for planning and programming projects, developing strategies for managing congestion, and for evaluating the effectiveness of improvements.
4. Undertake EJ analysis of subcorridor areas with SOV-capacity adding as a secondary appropriate strategy to ensure they don't represent a potentially disproportionate burden to low-income, and racial and ethnic populations.
5. Review the most congested focus roadway corridor facilities, intersection and limited access bottlenecks, and other facilities with planning partners to further prioritize and provide a more detailed assessment of congestion mitigation strategies. This could include making short- and long-term recommended improvements, and developing estimated costs as applicable.
6. Continue to collect subsequent yearly travel time data to provide complete year-to-year comparisons of congestion and reliability performance measures that enable the identification of trends. This should help to evaluate the effectiveness of implemented strategies targeted to improve congestion, influence future strategies and investment decisions, and inform PM3 target setting.
7. Better understand the causes of congestion by focus roadway corridor facility and intersection bottleneck to help evaluate performance and determine the effectiveness of strategies to

manage congestion. Incorporate INRIX Trips, StreetLight, or other similar data sources to determine trip origin and destination patterns, and where long and short trips are occurring. Utilize the CATT Lab PDA Suite and other systems to determine the location, type, and intensity of nonrecurring congestion, such as traffic incidents, work zones, weather-related, and special events, and their impacts on congestion in the region.

8. Build on the federal PM3 national performance management measures. For example, calculate the PHED measure for the entire DVRPC region, not just with the UZAs, which omits the non-urbanized portions of the counties—except the City of Philadelphia. The PHED measure identifies person hours of delay, rather than vehicle hours of delay, which is important to capture in this region due to the extensive use of public transit, and other mode share options. Also, calculate the PM3 truck reliability measure for non-interstate roadways, not just interstates, as the current PM3 measure requires. The reliable movement of goods is important to measure on all roadways, including the last-mile delivery ones. This will require capture of additional classification counts to obtain additional truck volumes, which this measure requires.
9. Develop improvements to the GIS web mapping to better visualize delays and rankings by focus roadway corridor, transit route facility, focus intersection bottleneck, and limited access roadway bottleneck, and other CMP objective measures. Also, develop a spatial tool to identify for a specific strategy the corridor and subcorridor areas it belongs to.
10. Integrate truck vehicle delay and volume delay into the focus roadway facility and bottleneck analysis. Limited truck volume counts on roadways, especially in the New Jersey portion of the DVRPC region, made this analysis more difficult. Work with NJDOT and the New Jersey counties within the DVRPC region to collect more classification counts to determine truck volumes.
11. Perform additional multimodal and transit data analysis. Most CMPs rely heavily on roadway data to measure congestion based on data availability, but it is important to know how other modes of transportation are performing. For example, SEPTA's real-time passenger information system can be used to better analyze peak congestion ridership delay at bus and rail stop locations.

## 7.2 Advisory Committee

The CMP Advisory Committee was critical in developing the CMP update. The committee met five times (one hybrid and four all remote meetings) and exchanged emails to reach consensus on the 2023 update. The CMP Advisory Committee will continue to meet to address ongoing matters, but more frequently during update periods. Participating organizations are listed below.

- DVRPC Member Governments;
- PennDOT and NJDOT;
- Transit Agencies;
- Federal Partners;
- Transportation Management Associations;
- Other DVRPC Committees, including the Transportation Operations Task Force and Goods Movement Task Force;
- Other MPOs; and
- Other participants as invited or who asked to join.



**Title: 2023 Congestion Management Process**

**Publication Number:** 24135

**Date Published:** March 2024

**Geographic Area Covered:**

The nine-county Philadelphia metropolitan area, which includes the counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester, and Mercer in New Jersey

**Key Words:**

Congestion Management Process (CMP), Traffic, Multimodal, Goods Movement, Transportation, Corridors, Strategies, Single-Occupant Vehicle (SOV), Capacity, Long-Range Plan, Transportation Improvement Program (TIP), Regional Transportation Planning, Criteria, Operations.

**Abstract:**


A Congestion Management Process (CMP) is a systematic process for managing congestion. It identifies specific multimodal strategies for all locations in the region to minimize congestion and enhance the ability of people and goods to reach their destinations. The CMP advances the goals of the Delaware Valley Regional Planning Commission Long-Range Plan and strengthens the connection between the Plan and the Transportation Improvement Program. The 2023 DVRPC CMP is an update of the 2019 CMP.

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**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**  
**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**  
**REGIONAL TECHNICAL COMMITTEE MEETING**

**March 12, 2024**

**Agenda Item:**

4. **Adoption of the Updated Comprehensive Economic Development Strategy (CEDS) Goals**

Background/Analysis/Issues:

Adopted in 2019, *Growing Greater Philadelphia* was developed to satisfy the U.S. Economic Development Administration's (EDA) requirement for a regional Comprehensive Economic Development Strategy (CEDS). The adopted regional CEDS covers the nine-county DVRPC region and includes background demographic, economic, and land use data; identifies regional strengths, weaknesses, opportunities, and threats; discusses economic resilience; identifies regional economic development goals, objectives, and strategies; and identifies potential performance measures that will be tracked in future years to measure progress made toward achieving the regional goals. To remain eligible for EDA funding, the goals and objectives must be evaluated every five years.

The goals update process included data gathering and input via online tools and workshops, following EDA guidelines. In October 2022, staff solicited comments and feedback on the regional Strengths, Weaknesses, Threats, and Opportunities (SWOT) analysis through *Bang the Table* (now part of EngagementHQ/Granicus). This was followed by six(6) workshops held in April 2023 to discuss background data findings and SWOT feedback. Draft goals and objectives were then developed and made available for public comment from July 17 to August 21, 2023. A meeting was held on August 22, 2023, to receive further comment from stakeholders. Outreach included direct emails to members of the CEDS Review Committee which includes representatives of the private sector; chambers of commerce; state, regional, county, and city agencies and organizations, and academic institutions as well as notices on DVRPC social media platforms and newsletters.

Date Action Required:

March 12, 2024

Recommendation:

Regional Technical Committee – Will make recommendations at the March 12th, 2024 RTC Meeting.

CEDS Committee Members - Recommends approval

Action Proposed:

The RTC recommends that the Board adopt the updated Comprehensive Economic Development Strategy (CEDS) Goals and Objectives.

Staff Contact:

Karen P.Cilurso, AICP/PP, Associate Director, Livable Communities, DVRPC

Attachment:

- 1) Adoption of the Updated Comprehensive Economic Development Strategy (CEDS) Goals Power Point Presentation



**GROWING**  
GREATER PHILADELPHIA  
comprehensive economic  
development strategy

**Chapter 2: Goals and Objectives**

Greater Philadelphia is a large and complex region, covering portions of two states, with hundreds of municipalities responsible for individual development decisions. The region's economy is similarly diverse and multifaceted, with dozens of public- and private-sector organizations seeking to promote or attract a wide variety of sectors or specific interests. Thus, there is no single process or simple strategy that will fully address the opportunities and challenges that the region faces.

Although each county and municipality approaches the economic development process differently, they are united in advancing common goals: investing in their people, creating attractive places, and supporting businesses. Continued coordination across state lines, municipal and county lines, employment sectors, and the public and private sectors is essential to maintain a broad regional perspective and to create a thriving region.

The regional Comprehensive and Economic Development Strategy (CEDS) Goals are broken into five focus areas: Prosperity, Livability, Vulnerability, Accessibility, and Capacity.





# Prosperity

# Προσπενή

## **Ensure all residents and businesses can prosper.**

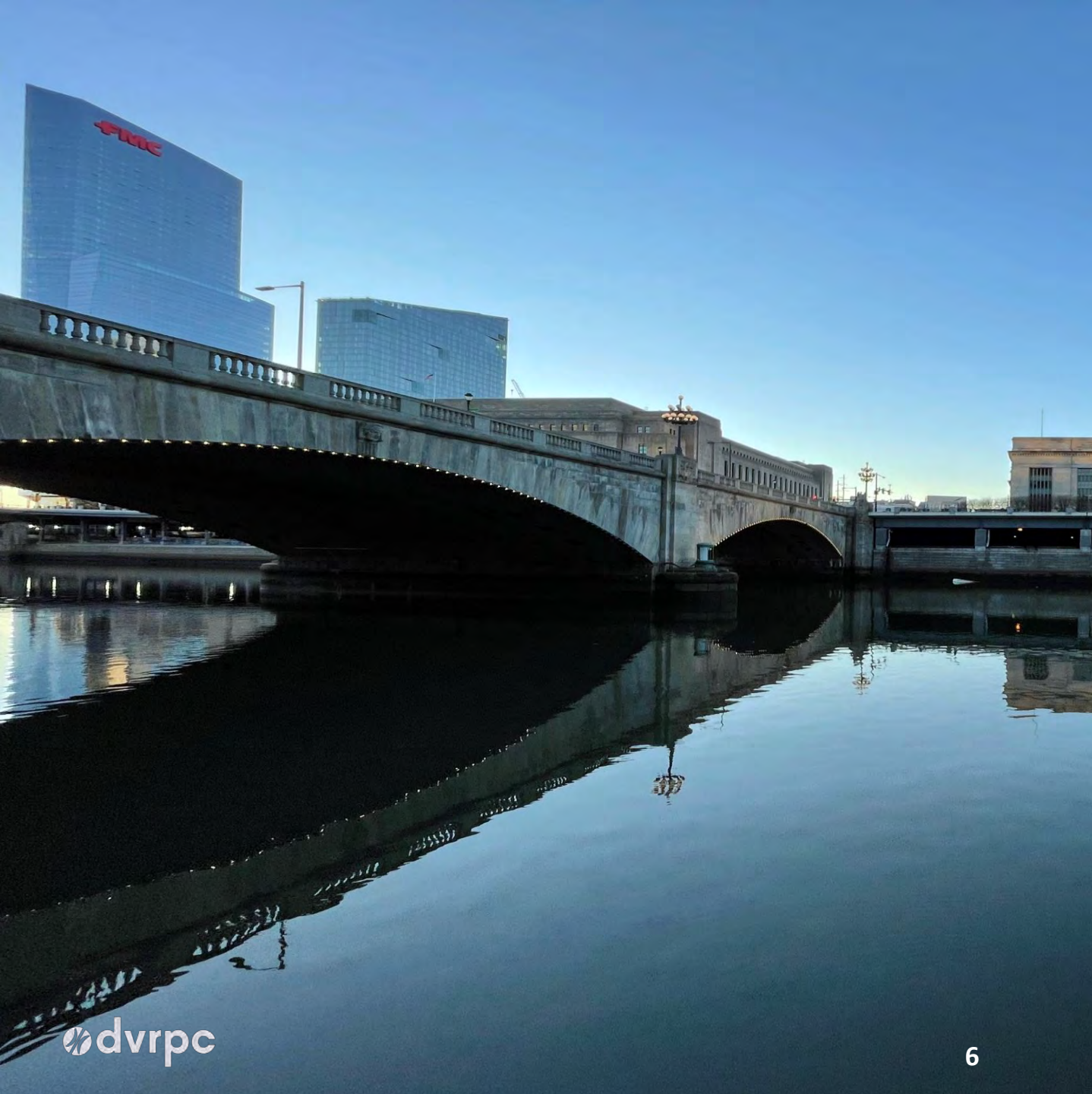
Equitable economic mobility requires intentionality about addressing disparities and objectives that promote inclusivity. Ensuring that all residents and businesses can prosper requires a multi-faceted approach involving collaboration and creating new opportunities.



## Support entrepreneurship for small business creation and expansion.

1. Increase support for individuals underrepresented in the entrepreneurial community to ensure equal representation and inclusion in startup creation.
2. Connect potential entrepreneurs with incubators, accelerators, and entrepreneurial fellowships for mentorship, training and resources.
3. Invest in education and training programs to help entrepreneurs acquire needed knowledge.
4. Fund programs that fill gaps in the startup ecosystem to ensure access to capital, talent, expertise, peer support, and other essential resources.





**Nurture an economic environment that helps the region's economy become more sustainable.**

1. Expand strategic utilization of the region's riverfronts, waterfronts, and ports for commercial and societal benefit.
2. Facilitate the integration of sustainable businesses, and business models, within existing economic clusters by strengthening relevant, and more specifically local, supply chain linkages.
3. Create an attractive investment climate by implementing policies that encourage both domestic and foreign investment.



## Invest in regional assets to propel technology-based inclusive economic development.

1. Broaden and disseminate new technologies to expand small scale firms and cohorts within the labor force.
2. Seek research and development (R&D) investments for technological innovations that support entrepreneurship within underserved cohorts.
3. Invest in existing and new concentrated innovation districts and technology hubs across the region.

# Livability

LIABILITY

## **Foster a regional economy that prioritizes local ownership, collaboration, and production.**

Overcoming social and economic disparities, such as access to employment, transportation, affordable housing, and healthy food, is paramount to ensuring a sustainable regional economy. Prioritizing local ownership, collaboration, and production can help create better health outcomes for all persons.

An aerial photograph of a suburban neighborhood. The scene is dominated by residential houses with various roof colors (grey, brown, white) and green lawns. A prominent feature is a tall, blue water tower with a white top, situated in a grassy area. A road with a crosswalk and a set of railroad tracks run through the neighborhood. The overall atmosphere is that of a well-maintained, established community.

## **Strengthen local economies by creating diverse commerce sectors and inclusive communities.**

1. Expand community-driven economic systems, such as community development financial institutions (CDFIs), for residents and business owners to access capital for local business development or homebuying.
2. Increase local supply chain connections through "local first" commerce policies.
3. Revitalize underutilized sites—brownfields, redevelopment areas, greyfields—into productive economic generators.
4. Foster viable growth through small-scale manufacturing policies to produce local inputs and outputs.



**Maintain access to natural and cultural resources that support recreation and tourism.**

1. Invest in regional arts, cultural, and historical institutions to enhance the region's desirability, and preserve its unique identity.
2. Advocate for special district designations and protect legacy businesses.
3. Further promote tourism to develop the region's meetings and attractions base.

A photograph of a farmers market stall. In the foreground, there are several wooden crates filled with fresh vegetables, including purple eggplants, white onions, and green zucchini. The background shows a blurred market scene with other stalls and people, suggesting an outdoor market setting.

## **Prioritize the creation of a healthy, productive workforce.**

1. Support local agriculture, as well as fresh food retailers and operators, to increase access to fresh, healthy foods in underserved areas across the region.
2. Provide social safety net programs—unemployment benefits and retraining programs— to safeguard vulnerable populations.
3. Advocate for work-life balance policies such as healthcare, flexible work arrangements, parental leave, access to healthy foods.





# Vulnerability

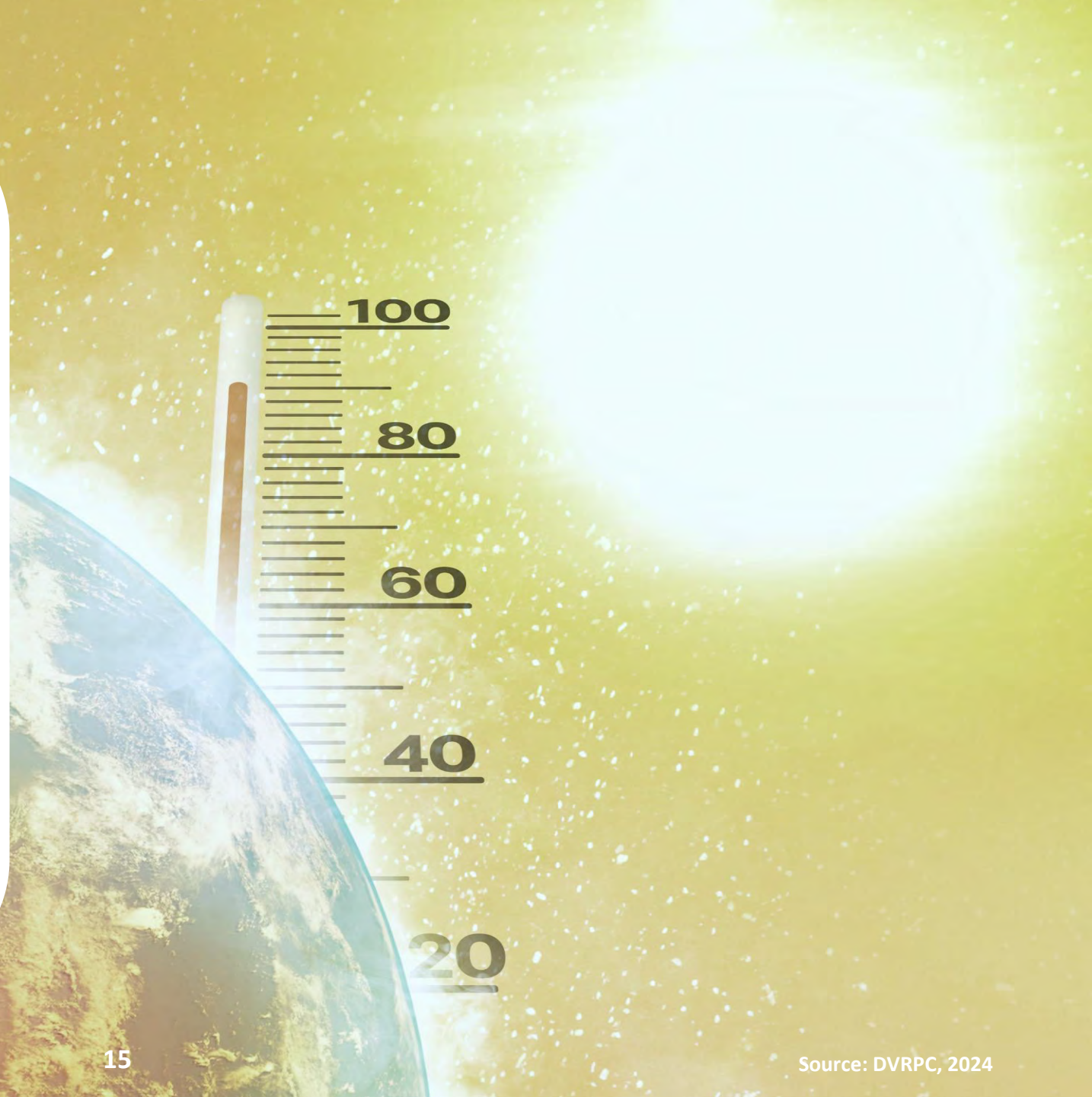
Vulnerability

# **Encourage growth in economic sectors and activities that reduce greenhouse gas pollution and minimize economic losses.**

Climate change causes economic losses through damage to infrastructure, reduced agricultural productivity, supply chain disruptions as well as negatively impacting human health through heat stress, the spread of infectious diseases, and increased air pollution. The cost of these losses can be reduced through collective efforts to reduce greenhouse gas emissions.

**Foster growth in environmentally cleaner sectors that produce more sustainable goods.**

1. Accelerate eco-industry clusters such as renewable energy systems (e.g., wind, solar, etc.), and other environmental protection-related industries.
2. Collaborate with academic institutions to prioritize sustainability-focused curricula to normalize sustainable practices across all sectors and growth of sustainable industries.
3. Invest in businesses and technologies that offer sustainable alternatives to traditional waste management practices.





## **Anticipate and reduce economic losses related to climate change Impacts.**

1. Relocate utility infrastructure such as treatment plants and pump stations, to higher elevations.
2. Identify and address climate impacts to air quality and associated health outcomes, specifically on vulnerable populations.
3. Provide economic assistance to local governments to protect residents and infrastructure from extreme heat and storm events.



**Adapt the regional economy to reduce waste and mitigate greenhouse gas pollution.**

1. Invest in sustainable technologies for goods movement and port facilities to fuel new job opportunities and efficiency.
2. Use locally-sourced materials and products to reduce environmental degradation associated with import shipping and transportation.
3. Reduce, reuse, and recycle waste materials and byproducts such as food and plastics to build a circular economy.



# Accessibility

Accessibility

## **Invest in multi-modal accessibility to support an evolving regional economy.**

Proper infrastructure is necessary to retain and attract businesses and ensure that the built environment can support the regional economy. In addition to access to energy-efficient systems and reliable transportation, the evolving and increasingly digitalized economy places greater importance on access to broadband telecommunications.

## **Secure telecommunications infrastructure.**

1. Ensure local, regional, and state plans are in place to meet access, speed needs, as well as goals.
2. Promote opportunities and events to identify key regional industry (information sharing, communications, and technology) partners.
3. Encourage a variety of telecommunications providers to address digital equity concerns.





**Prioritize transportation investments to ensure access to the region's economy.**

1. Connect households, both physically as well as digitally, to quality jobs, healthcare, and education.
2. Invest in multi-modal transportation options to existing and future employment opportunities.
3. Invest in the region's freight infrastructure to increase access to customers and suppliers.

## **Modernize infrastructure technologies and transition to green energy throughout the region.**

1. Support water, wastewater, and stormwater economic development projects that produce jobs in these sectors.
2. Install energy-efficient measures in new and existing buildings such as HVAC systems and lighting.
3. Support the development of alternative travel networks such as bike lanes, off road trails, micromobility, rideshare options, and electric vehicle charging stations.





Capacity  
εαβσϑιϕλ

## **Improve the durability and adaptability of our region's workforce to social, cultural, and technological changes.**

Cooperation among educational institutions, employers and workforce professionals is necessary to properly invest in human capital. Regional leaders need to monitor labor force characteristics and the evolving needs of employers to create incentives between the two elements.

A background image showing a stack of several books with various colored covers (blue, orange, green) and pages, creating a sense of depth and knowledge.


## **Address racial and economic inequities of the talent development system.**

1. Expand coordination of workforce development programming at the state, regional, and local levels to ensure targeted outreach to all populations.
2. Build diverse education and life sciences workforces that are representative of the region's residents.
3. Encourage collaboration between the region's employers and education and training systems to develop homegrown talent and reverse regional brain drain.



**Collaborate with employers to be able to respond quickly to economic shifts and disruptions.**

1. Continually evaluate workforce gaps within existing and emerging competitive economic sectors.
2. Work with employers on upskilling strategies to ensure retention and career growth in clean energy sectors.
3. Address barriers between job seekers and jobs, including degree inflation and experience inflation.



**Equip the workforce with the skills necessary to respond and adapt to technological advancements in production and distribution.**

1. Collaborate with employers and academic institutions to understand and anticipate the implications of digital technologies in terms of workforce automation.
2. Develop training programs aimed at reskilling workers displaced by digitally-enabled automation.
3. Work with employers to ensure employees displaced by automation can obtain wages equal or higher to previous earnings.

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**  
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**REGIONAL TECHNICAL COMMITTEE MEETING**

**March 12, 2024**

**Agenda Item:**

**5. Memorandum of Understanding with Pottstown Area Rapid Transit**

Background/Analysis/Issues:

US DOT regulations require an agreement between Metropolitan Planning Organizations and operators of publicly-owned transit services which specifies cooperative procedures for carrying out transportation planning (including corridor and subarea studies) and programming. Pottstown Area Rapid Transit (PART) is a local transportation agency owned and administered by the Borough of Pottstown that provides both fixed-route and complementary paratransit bus service in Pottstown and adjacent communities. During their latest federal certification review, the Federal Transit Administration (FTA) requested that PART submit a Memorandum of Understanding (MOU) with DVRPC. DVRPC worked with PART and the FTA to develop a MOU that outlines their mutual responsibilities for carrying out a cooperative, comprehensive, and continuing planning process.

Cost and Source of Funds:

Not Applicable

Date Action Required:

March 12, 2024

Recommendations:

RTC – Will make a recommendation at the March 12, 2024 RTC Meeting



Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee recommend Board approval of the Memorandum of Understanding with the Borough of Pottstown pertaining to Pottstown Area Rapid Transit.

Staff Contact:

Michael Boyer, Director of Regional Planning

Attachments:

- 1) Memorandum Of Understanding by and between the Delaware Valley Regional Planning Commission and the Borough Of Pottstown

**MEMORANDUM OF UNDERSTANDING**  
**BY AND BETWEEN**  
**DELAWARE VALLEY REGIONAL PLANNING**  
**COMMISSION**  
**AND**  
**BOROUGH OF POTTSTOWN**

This Memorandum of Understanding (“MOU”) is made and effective on this \_\_\_\_ day of \_\_\_\_\_ 2024, by and between the Delaware Valley Regional Planning Commission (hereinafter referenced as the “Metropolitan Planning Organization (MPO)” and Borough of Pottstown (dba Pottstown Area Rapid Transit (“PART”)).

**WITNESSETH**

Whereas, the Federal Highway Administration (hereinafter referenced as “FHWA”) and the Federal Transit Administration (hereinafter referenced as “FTA”), have promulgated regulation 23CFR.450.310(b) that states: “There shall be an agreement between the MPO and operators of publicly-owned transit services which specifies cooperative procedures for carrying out transportation planning (including corridor and subarea studies) and programming as required by this subpart.”

**WHEREAS**, joint responsibilities must be met for establishing and maintaining a cooperative, comprehensive, and continuing (3-C) metropolitan transportation planning and programming process as defined and required by the United State Department of Transportation (USDOT) in regulations at 23 CFR 450 Subpart A – Transportation Planning and Programming Definitions and 23 CFR 450 Subpart C – Metropolitan Transportation Planning and Programming, and

**WHEREAS**, the regulations at 23 CFR 450.314 Metropolitan Planning Agreements direct that the MPO, the States and public transportation operators shall cooperatively determine their mutual responsibilities for carrying out the 3-C process and clearly identify them in a written agreement.

**WHEREAS**, the regulations at 23 CFR 450.104 define public transportation operator to mean the public entity which participates in the continuing, cooperative, and comprehensive transportation planning process in accordance with 23 U.S.C. 134 and

135 and 49 U.S.C. 5303 and 5304, and is the designated recipient of Federal funds under title 49 U.S.C. Chapter 53 for transportation by a conveyance that provides regular and continuing general or special transportation to the public, but does not include school bus, charter, or intercity bus transportation or intercity passenger rail transportation provided by Amtrak.

**WHEREAS**, nothing in this MOU shall be construed as limiting or affecting the legal authorities of the parties, or as requiring the parties to perform beyond their respective authorities.

**WHEREAS**, PART is a local transportation agency providing both fixed-route and complementary paratransit bus service in Pottstown and adjacent communities and is a publicly-owned and privately-operated system. The Borough of Pottstown owns, funds, and administers the system. The day-to-day operations are the responsibility of Pottstown Area Rapid Transit Inc. (PART),

**WHEREAS**, the MPO and PART share an overlapping service jurisdiction,

**WHEREAS**, the MPO and PART recognize the need for integrated long-range planning for transit markets, services, and projects that span MPO boundaries,

**WHEREAS**, the MPO and PART seek to carry out public transportation planning in compliance with FTA and FHWA regulations and guidelines,

**WHEREAS**, FTA guidelines for transit planning encompass the following three stages: Systems Planning, Project Planning, and Environmental Planning and Review,

**WHEREAS**, the MPO and PART desire to adopt cooperative procedures that define specific roles and responsibilities for the MPO and PART,

**WHEREAS**, the MPO and PART recognize and agree that they will conduct a cooperative, comprehensive, and continuing transportation planning and programming process, and that their mutual roles and responsibilities for carrying out this process are described in the MOU,

**NOW, THEREFORE** the MPO and PART agree as follows:

**1. Recitals**

The above recitals are incorporated into this MOU by reference.

**2. Scope of the Metropolitan Transportation Planning Process**

The MPO and PART will conduct a metropolitan transportation planning process that is continuous, cooperative, and comprehensive and provide for the consideration of projects, strategies, and services that will address the ten planning factors as specified in 23 CFR 450.306 – Scope of the Metropolitan Transportation Planning Process. This metropolitan planning process will be carried out in coordination with the state transportation planning process that is required in regulations at 23 CFR 450 Subpart B – Statewide Transportation Planning and Programming.

**3. Cooperative Procedures and Responsibilities in Carrying Out the Metropolitan Transportation Planning Process**

The MPO and PART agree to carry out transportation planning (including corridor and subarea planning) in a cooperative manner that conforms to FTA guidelines for: transportation systems planning, project planning, and environmental planning and review. The planning activities undertaken by the MPO and PART are described in Articles 3-6 below. By participating as a non-voting member of the MPO's Regional Technical Committee, PART shall coordinate bus and other transit planning in the region and to incorporate their plans into the Long-Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP). PART provides funding inputs for the TIP based on their system's annual operating and capital improvement budgets. PART also provides projections of their system revenues, operating and maintenance costs, and major improvement costs for the update of the financially constrained plan based upon their system's operating and capital improvement plan.

**4. Development and Sharing of Information for Financial Plans**

Financial plans are required to be included with the LRTP and TIP that demonstrate the consistency between reasonable available and projected sources of Federal, state, local, and private revenues and the costs of implementing the proposed transportation system improvements. As the metropolitan transportation planning process is on-going, the MPO will solicit projects and programs to be included in the next update of the LRTP and TIP. When the Plan or TIP are amended or updated for PART projects or programs, the MPO and PART will cooperatively develop, share, review, and adopt estimates of revenues and costs required for the financial

plan that demonstrate fiscal constraint for the transportation plan as specified in 23 CFR 450.322(f)(10) and for the TIP specifically in 23 CFR 450.324(h) & (l).

**5. Development of the Annual Listing of Obligated Projects**

Each year within 90 days after the close of the Federal Fiscal Year (FFY), the MPO and PART will cooperatively develop a listing of projects from the TIP for which Federal transportation funds were obligated in the preceding FFY. This report will contain the projects and financial information as required in 23 CFR 450.332 Annual Listing of Obligated Projects. This report will be made available to the public on the MPO web page.

**6. Development and Sharing of Performance Information**

The MPO and PART agree to a performance-based planning approach to transportation decision-making that is integrated into the development of the LRTP, TIP, Congestion Management Process (CMP), and other appropriate regional planning documents through coordination with state and Federal partners to fulfill Transportation Performance Management requirements, including tracking performance measures, setting data-driven targets for each measure, selecting projects to help meet those targets, and describing the anticipated effect toward achieving the established performance targets. As a Tier II transit agency, PART participates in the statewide Group Plan developed with PennDOT.

**PARTIES EXECUTING THIS MEMORANDUM OF UNDERSTANDING**

**For Delaware Valley Regional Planning Commission:**

\_\_\_\_\_ **Date:** \_\_\_\_\_

**Ariella Maron, Executive Director**

**For Borough of Pottstown:**

\_\_\_\_\_ **Date:** \_\_\_\_\_

**Justin M. Keller, Borough Manager**

**ACTION ITEM**

Date Prepared: February 28, 2024

**REGIONAL TECHNICAL COMMITTEE SUMMARY SHEET**  
**DELAWARE VALLEY REGIONAL PLANNING COMMISSION**  
**REGIONAL TECHNICAL COMMITTEE MEETING**  
**MARCH 12, 2024**

**Agenda Item:**

**6. DVRPC FY 2024 Work Program Amendment: West Windsor Township  
Travel Model**

Background/Analysis/Issues:

West Windsor Township (Mercer County) NJ and their consultant (Arora Associates) requested DVRPC prepare a customized version of its regional travel demand model suitable for traffic impact analysis in the township. DVRPC will create this travel model by modifying its current regional travel demand model (TIM2.5.1) by creating a SubNetwork that includes only Mercer County, NJ and portions of Middlesex and Monmouth counties adjacent to West Windsor Township.

Cost and Source of Funds:

\$TBD from Arora Associates

Date Action Required:

March 12, 2024

Staff – Recommends approval.

Action Proposed:

That the Regional Technical Committee recommend Board approval to amend the FY2024 Work Program to include the West Windsor Township Travel Model

Staff Contact:

Matt Gates

Attachments

- 1) FY2024 Work Program Write Up

**Project 24.34.xxx: West Windsor Township Travel Model**

**Responsible Agency:** Delaware Valley Regional Planning Commission

**Project Manager:** Will Tsay

**Goal:**

Support the evaluation of development proposals in West Windsor Township, NJ by providing a custom travel model suitable for traffic impact analysis.

**Description:**

DVRPC will create a custom travel model for West Windsor Township, NJ by modifying its current regional travel demand model (TIM2.5.1) by creating a SubNetwork that includes only Mercer County, NJ and portions of Middlesex and Monmouth counties adjacent to West Windsor Township. The model will be suitable for traffic impact assessments and other evaluations of proposed developments within West Windsor Township. The regional model's procedure sequence will be modified to allow trip generation through traffic assignment steps to be run at the SubNetwork level. The model will be calibrated to 2019 Mercer County highway travel and transit ridership.

**DVRPC Tasks:**

1. Create Subnetworks of regional travel model focused on West Windsor Twp and surrounding municipalities for 2019, 2025, 2035, and 2045 analysis years.
2. Re-assign highway and transit trips for each analysis year and time period.
3. Capture external-external trips for each analysis year, time period, and vehicle class and export to \*.mtx files.
4. Create input \*.ver file for each analysis year; remove unused UDAs; K-factors, TMAs, and transit operators.
5. Modify VISUM Procedure Sequence, Trip Generation, Park and Ride and other Python scrips as needed.
6. Modify reporting tools for subnetwork
7. Execute full model run for 2019 analysis year.
8. Calibrate/validate 2019 subnetwork for Mercer County VMT, highway volumes, and transit ridership
9. Migrate calibration/validation edits to future analysis years.
10. Execute full model runs for future analysis years.

**DVRPC Products:**

1. Customized travel model and documentation.

**Beneficiaries:** West Windsor Township and Mercer County, New Jersey.



**Project Cost and Funding:**

<b>Fiscal Year</b>	<b>Total</b>	<b>Highway Program</b>	<b>Transit Program</b>	<b>Comprehensive Planning</b>	<b>Other*</b>
2023					
2024	TBD				TBD*
2025					

\*Contract with Arora and Associates.