Attachment 1:
Engagement Summary



Steering Committee Meetings

Steering Committee Contact List

	Contact name	Organization
1	Peter Rykard	Chester City
2	Dawn Jones	Eddystone Borough
3	Joseph Ryan	Ridley Township
4	David Schrieber	Tinicum
5	Tom Shaffer	Delaware County Planning
6	Cathy Spahr	Delaware County Planning
7	Gina Burritt	Delaware County Planning
8	Brittani Hales	Delaware County Planning
9	Julie DelMuto	Delaware County GIS
10	Elaine Schaefer	Delaware County Council
11	Christine Reuther	Delaware County
12	Laura Goodrich Cairns	Delaware County
13	Louis Belmonte	PennDOT
14	Ashwin Patel	PennDOT
15	Tim Stevenson	PennDOT
16	Lisa Gaffney	Riverfront Alliance
17	Shawn Megill Legendre	DVRPC
18	Daniel Paschall	East Coast Greenway
19	Emilia Crotty	Pennsylvania Environmental Council
20	Sarah Clark Stuart	Bicycle Coalition
21	Carol Kazeem	State Representative
22	Dave Demarco	State Representative
23	Chris Stanford	Michael Baker
24	Dave Debusschere	Union / Subaru Park
25	Brian Haggerty	Union / Subaru Park
26	Jamar Daniels	Omega Psi Phi fraternity
27	Mark Freeman	Laborers Local 413
28	Roland Taylor	Community
29	Ryan Judge	SEPTA
30	Rob Gusky	Kimberly-Clark / Commuter

KITTELSON & ASSOCIATES

Meeting Agenda

283680.000

Route 291 Study Steering Committee Meeting 1

February 2, 2023
Field Visit: 9:00 am to 10:30 am
Committee Meeting: 10:30 am to 12:00 pm
Chester City Hall

1.	Introductions	10 min
2.	Field Visit	90 min
3.	Break	10 min
4.	Steering Committee Meeting	
	• Study Overview	5 min
	• Steering Committee Role	5 min
	• Engagement Plan	15 min
	• Initial Corridor Understanding	10 min
	• Develop the Vision	15 min
	• Performance Metrics	15 min
5.	Next Steps	5 min

Field Visit Plan





Route 291 Study

Steering Committee Meeting

February 2, 2023

Delaware County
Pennsylvania

KITTELSON & ASSOCIATES

A.D. MARBLE
environmental·cultural·engineering
DBE/MBE/WBE CERTIFIED

Agenda

1. Introductions
2. Study Overview
3. Steering Committee Role
4. Engagement Plan
5. Initial Corridor Understanding
6. Develop the Vision
7. Performance Metrics
8. Next Steps



Introductions

Elaine Paul Schaefer (Vice Chair, Delaware County Council)

Gina Burritt (Director, Planning)

Tom Shaffer (Manager, Transportation Planning)

Cathy Spahr (Senior Planner)

Tara Hofferth

Will Weismantel

Alain Izabayo

KITTELSON & ASSOCIATES

Colleen Meiswich

A.D. MARBLE
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Introductions

- Chester City
- Eddystone Borough
- Ridley Township
- Tinicum Township
- Delaware County Planning
- Delaware County GIS
- Delaware County Council
- PennDOT District 6
- Riverfront Alliance
- Delaware Valley Regional Planning Commission
- East Coast Greenway Alliance
- PA Environmental Council
- Bicycle Coalition
- State Representation
- SEPTA

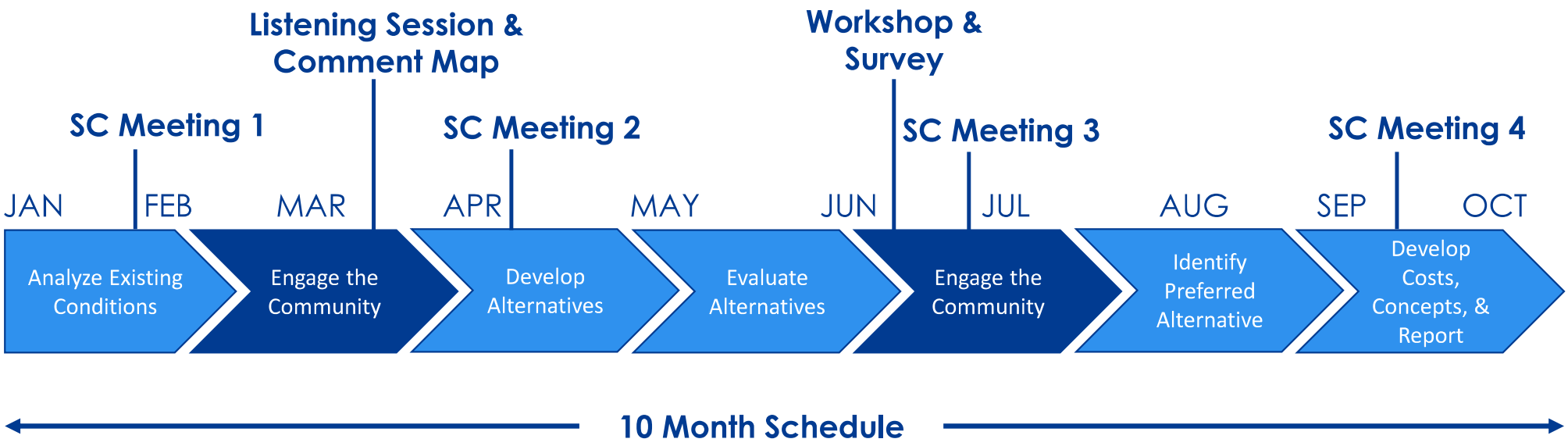
Study Extents + Purpose



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

It will also make recommendations for a dedicated East Coast Greenway facility through Chester City and Ridley Township.

Study Scope & Schedule



Steering Committee Role

- Craft the corridor vision
- Establish performance metrics
- Guide engagement
- Verify existing conditions
- Provide feedback on alternative development & selection
- Review results

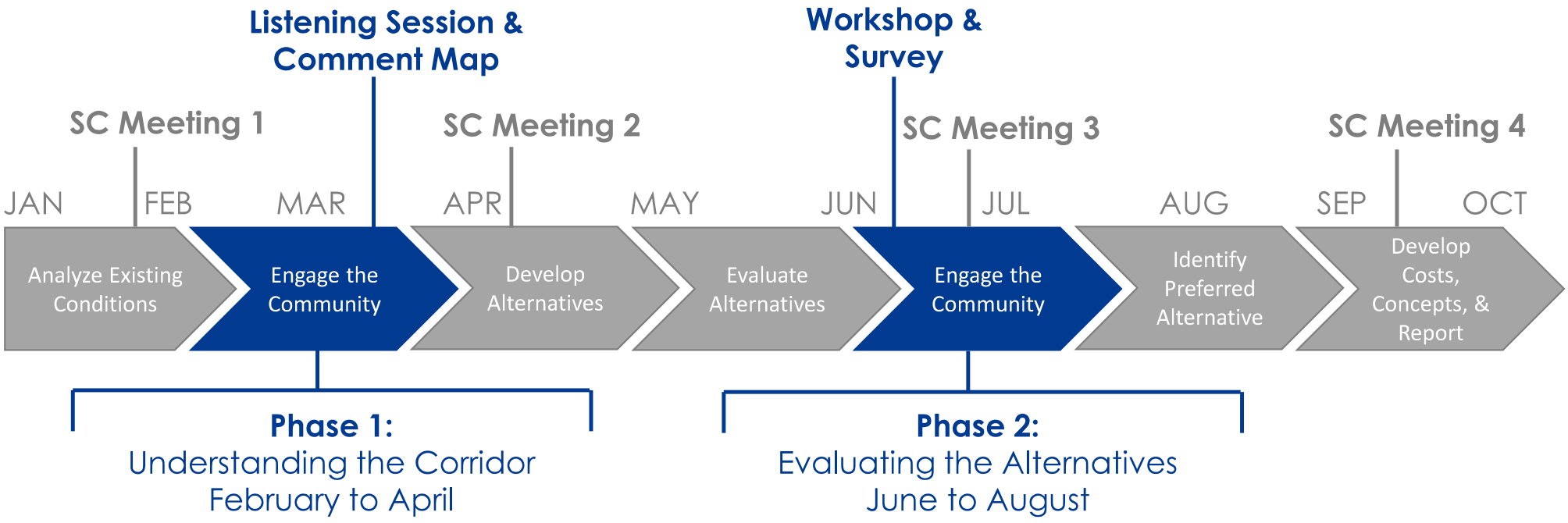
Engagement Plan

Two Phases of Community Engagement

Route 291 Study



Engagement Plan



Engagement Plan | Phase 1

Listening – **Facilitated Community Discussion**

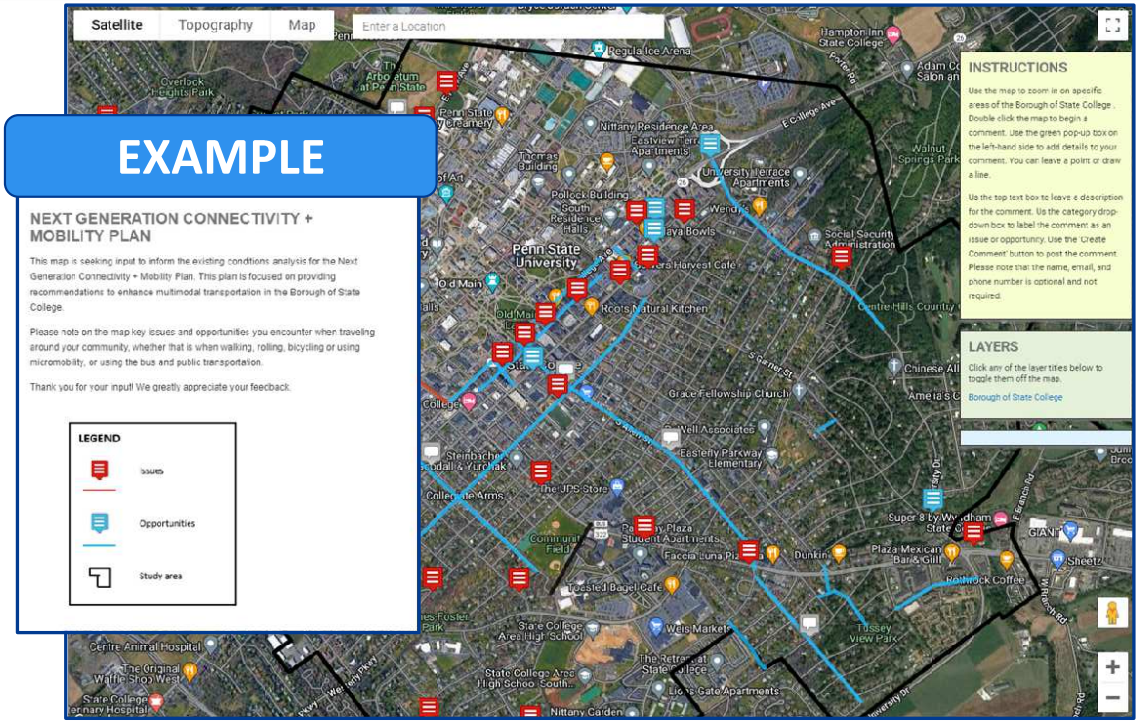
- In-person
- Community meeting space
- No presentation
- Discussion circles
- Introductions
- Asking questions



Engagement Plan | Phase 1

Listening – **Online Comment Map**

- Community can identify issues and opportunities
- Open from Mid-Feb. to Mid-March
- County website & distributed to Steering Committee



Engagement Plan | Phase 2

Workshopping Ideas – **Community Ideas Workshop**

- In-person
- Community meeting space
- Brief presentation of alternatives
- Rotating activities
- Opportunities to interact
- Seeking ideas & feedback on recommendations



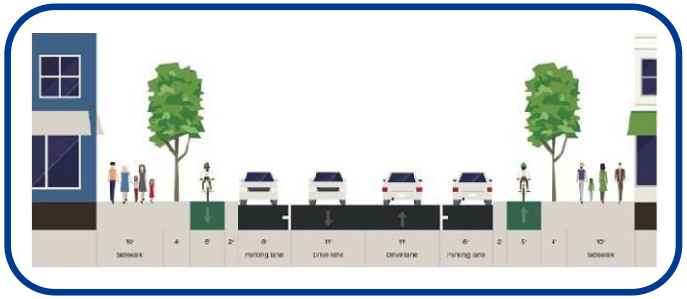
Engagement Plan | Phase 2

Workshopping Ideas – **Recommendations Survey**

- Graphic & straightforward
- Reacting to toolbox concepts
- Seeking preferences on alternatives & values
- Verifying alignment with vision
- Empowering decision making

Which cross section best matches your vision for the Route 291 Corridor?

A



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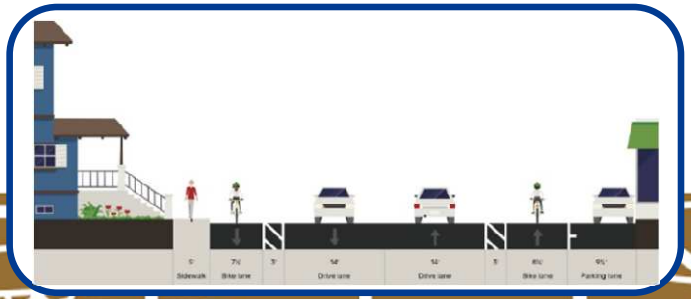
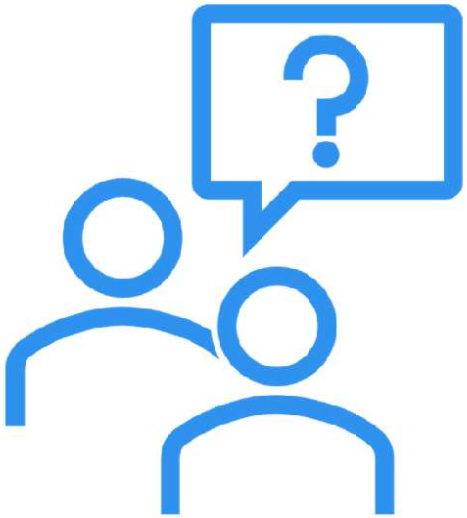


Engagement Plan

How else should we reach the community?



Initial Corridor Understanding

Data, previous studies, field visit, steering committee input, public feedback

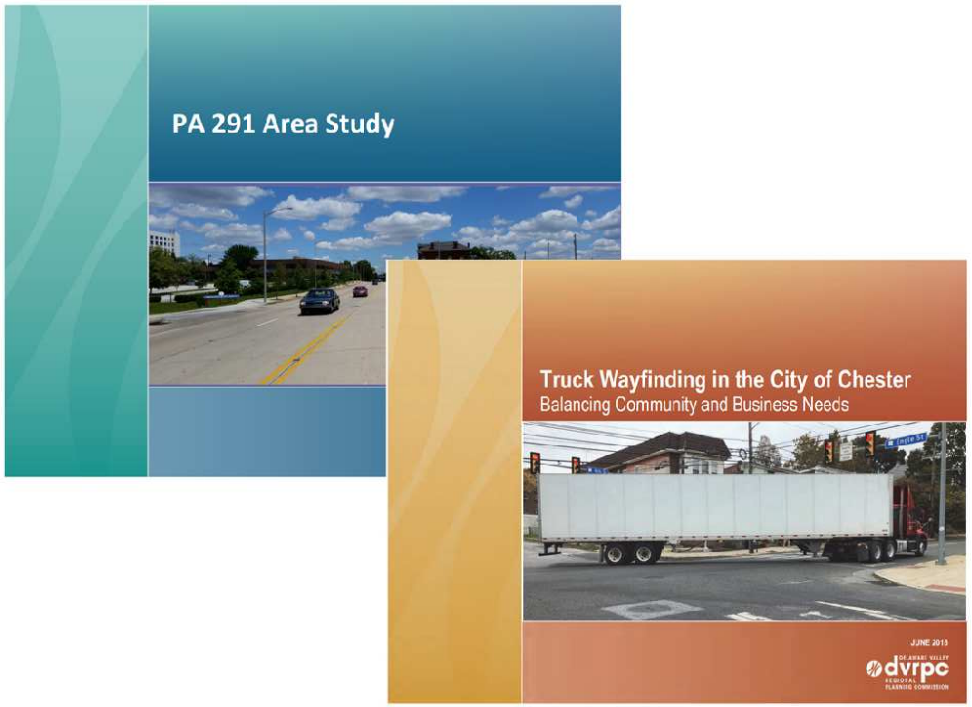


Route 291 Study

Data Analysis Plan

Resources:

- Previous Plan Review
- Land Use & Demographic Mapping
- Multimodal Infrastructure Inventory
- Traffic Data Collection & Analysis
- Safety Data Analysis
- Environmental Review
- Public and Stakeholder Engagement



Previous Plan Review

Plans Reviewed:

- Chester Waterfront Master Plan (2021)
- Resilience through Recreation (2018)
- Truck Wayfinding in the City of Chester (2018)
- City of Chester Green Stormwater Infrastructure Plan (2017)
- PA 291 Area Study (2015)
- Delaware County Open Space, Recreation, and Greenway Plan (2015)
- Chester Riverfront & Community Rail Access Study (2014)



Previous Plan Review

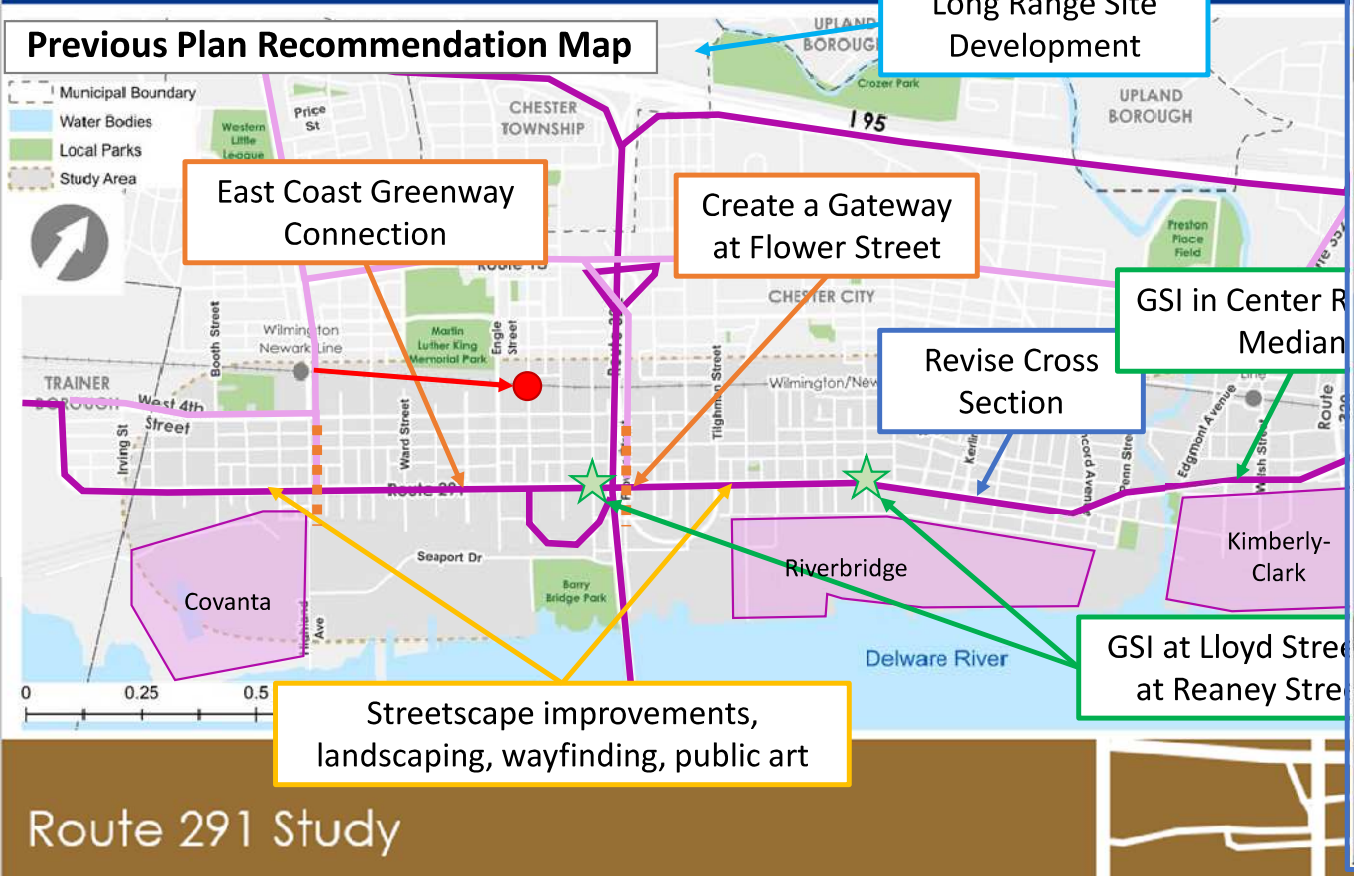
Themes that stand out:

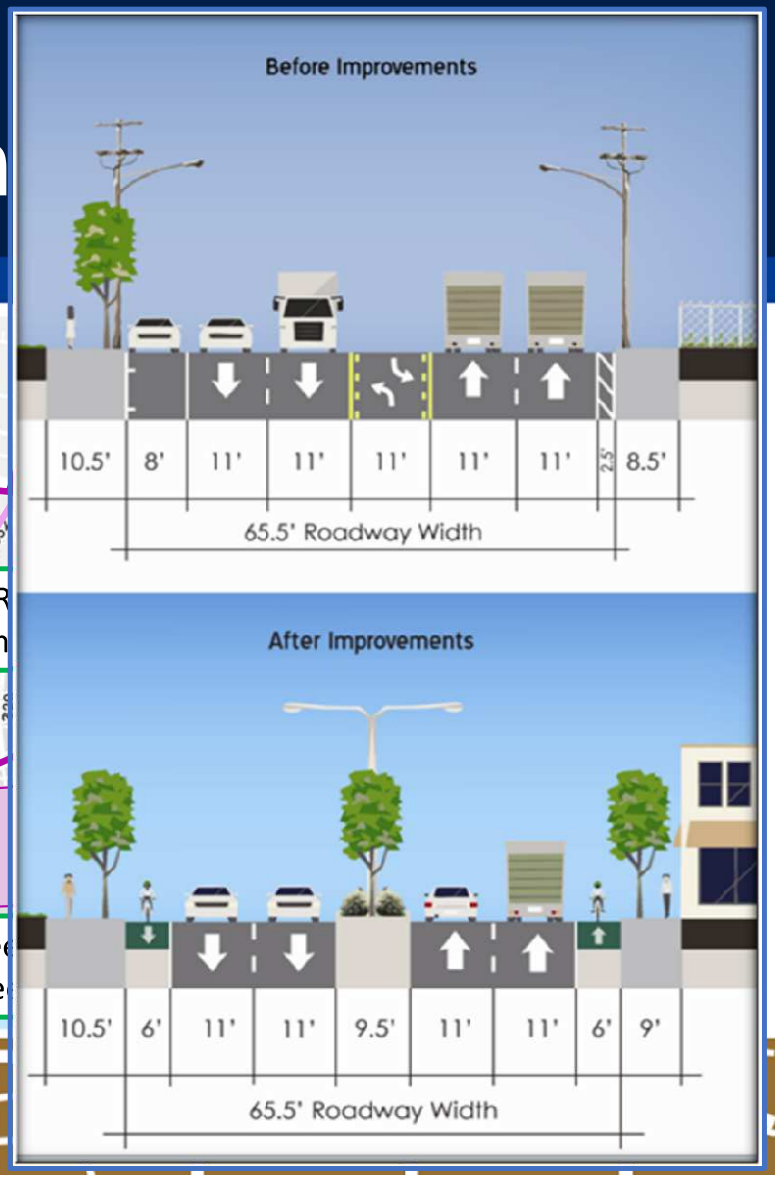
- Improve access to the waterfront
- Focus on safety and multimodal access
- Balance industrial and residential needs
- Seek out public / private partnerships
- Improve streetscape & wayfinding

Previous Outreach Methods:

- Advisory Committees
- Stakeholder interviews
- Community events
- Public meetings
- Survey
- Task forces
- Focus groups

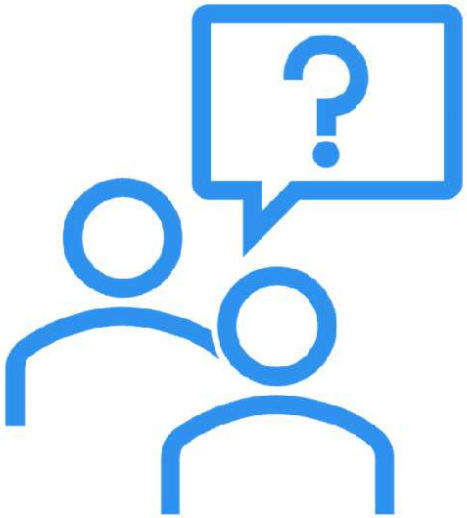
Previous Plan Recommen





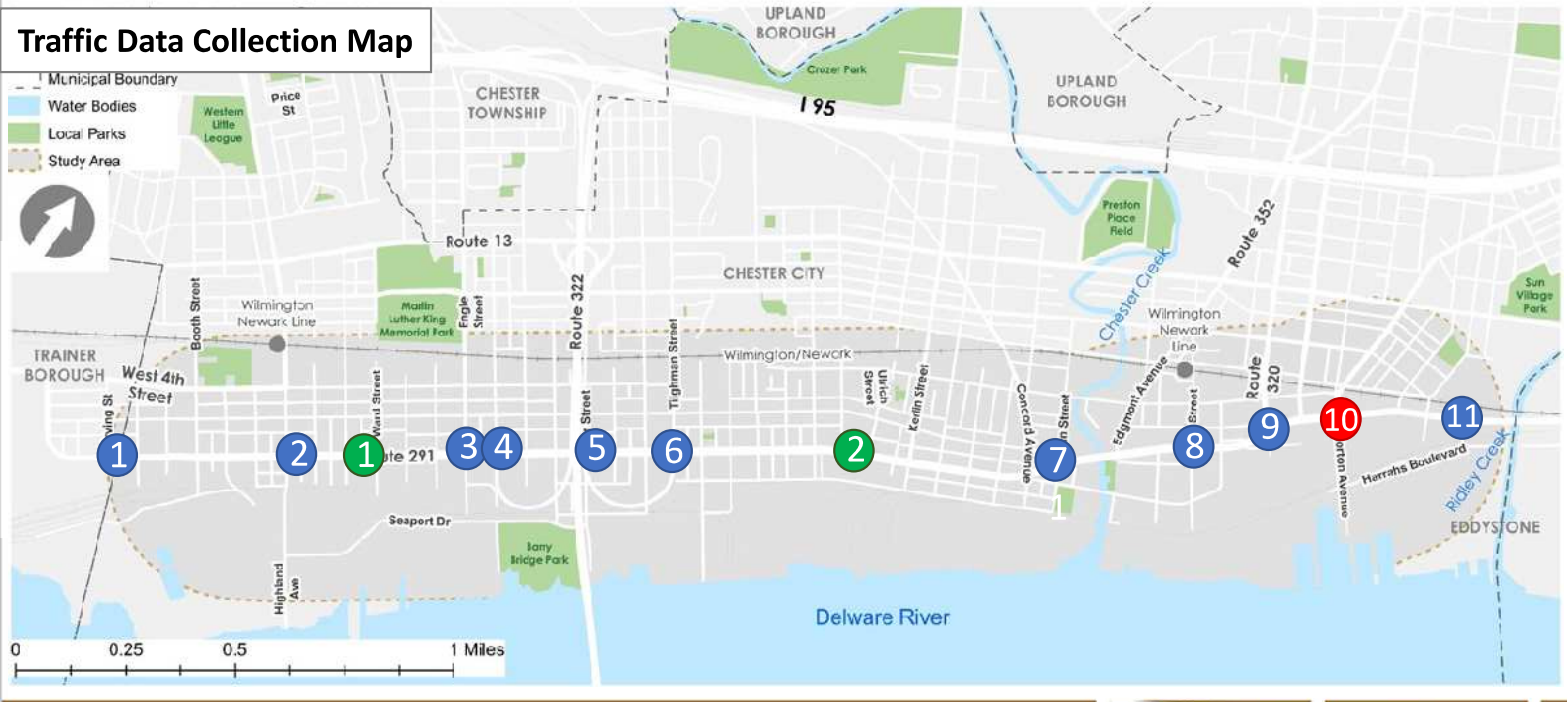
Previous Plan Review

What other key takeaways from previous efforts should we be building from?



Traffic Data Collection

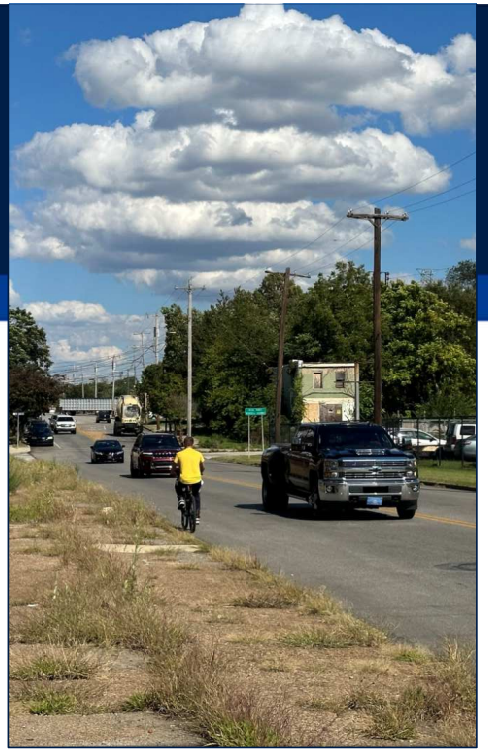
Traffic Data Collection Map



1. Irving Street & Route 291
2. Highland Ave & Route 291
3. Engle Street & Route 291
4. Jeffrey Street / US 322 Off Ramp & Route 291
5. Flower Street & Route 291
6. Tilghman Street / US 322 On Ramp & Route 291
7. Penn Street & Route 291
8. Welsh Street & Route 291
9. Madison Street & Route 291
10. Morton Ave & Route 291
11. Harrah's Blvd & Route 291
1. Route 291 West of Ward Street
2. Route 291 Between Ulrich Street and Pusey Street

Key Challenges

- Traffic volumes (north of the bridge)
- Traffic speeds & crashes
- Industrial land uses & heavy truck traffic
- I-95 traffic diversion route
- Disconnected waterfront & vacant parcels
- Limited controlled pedestrian crossings
- Narrow sidewalks
- No dedicated bike facilities
- Planning fatigue in the community



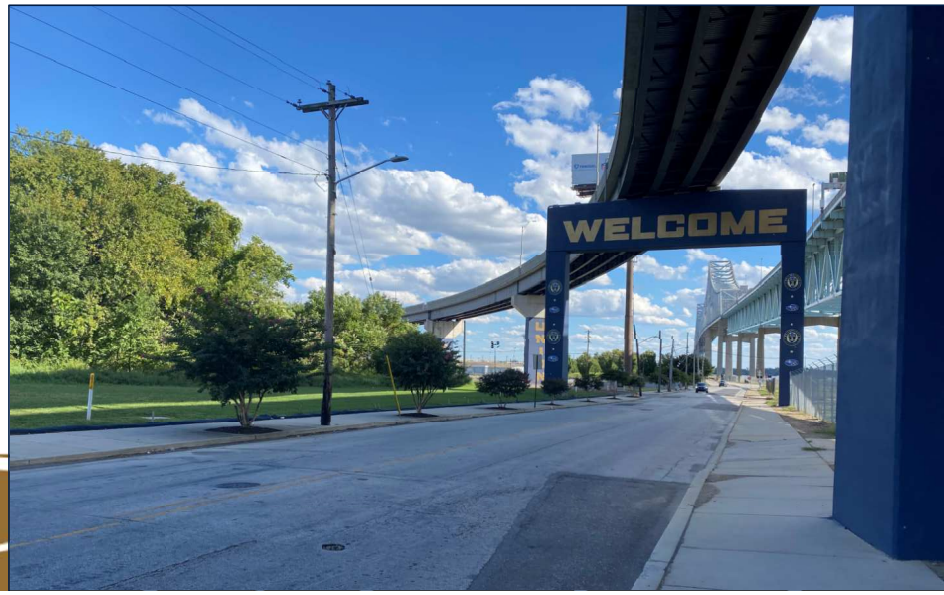




Key Opportunities

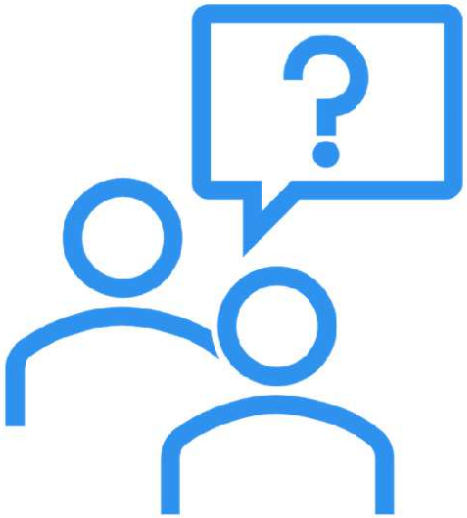
- Vision of revitalization in previous plans
- Wide right-of-way footprint to reimagine
- Redevelopment plans & opportunities
- Regional connectivity (transit and roads)
- Major job generators along the corridor
- Existing bike lanes on side streets
- Pedestrian demand





Key Challenges and Opportunities

What other key challenges and opportunities should be considered?



Develop the Vision

What is your vision for this study and for this corridor?



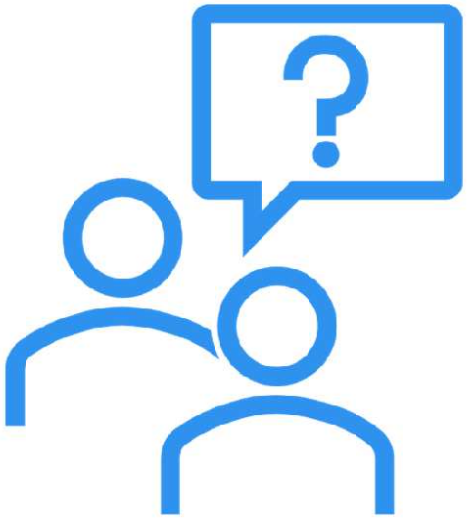
Develop the Vision

What should this study accomplish?



Develop the Vision

What is your vision for the corridor?



Using Poll Everywhere

How to join

Web



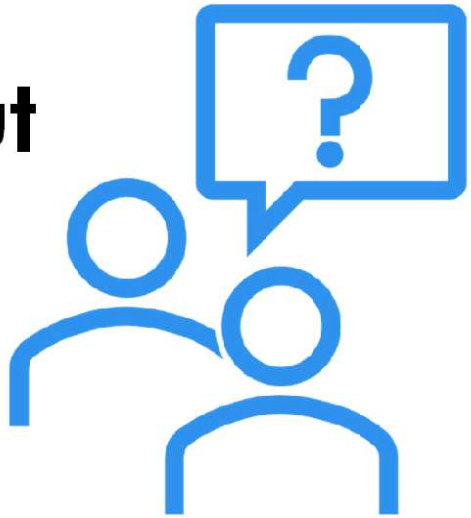
1. Go to **PollEv.com**
2. Enter **LAURAA161**

What words describe your desired future for the Route 291 corridor?

Start the presentation to see live content. For screen share software, share the entire screen. Get help at **pollev.com/app**

Develop the Vision

How should we be thinking about modal priority on the corridor?



How should we be ranking these competing priorities?

Safe pedestrian crossings

Dedicated bicycle facilities as part of the East Coast Greenway

Connectivity between the neighborhoods and the riverfront

Truck turning movements

Vehicular capacity during emergency events on I-95

Creating a sense of place that celebrates the existing community and spurs redevelopment

Start the presentation to see live content. For screen share software, share the entire screen. Get help at **pollev.com/app**

Performance Metrics

Metrics to guide toolbox development and alternative evaluation



Route 291 Study

Performance Metrics

Categories / Themes from Previous Plans:

Waterfront Master Plan

Connectivity

The Chester Image

Waterfront Activation

Successful Development

Environmental Sustainability

PA 291 Area Study

Improve access to the waterfront

Balance industry and its impact on residents

Create a safer environment for all

Open Space, Recreation, & Greenway Plan

Conserve natural and cultural resources

Increase the value of developed and undeveloped lands

Develop a greenway network that connects people



Performance Metrics

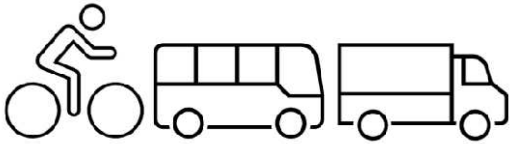
Potential Categories / Themes:

1



Safety

2



Multimodal Connectivity

3



Roadway Operations

4



Community Vibrancy

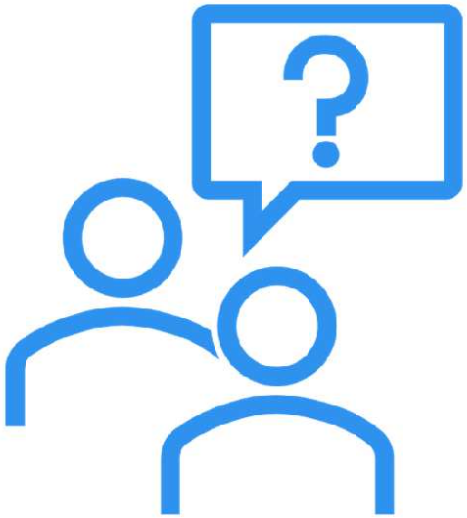
5



Implementation

Performance Metrics

What might be missing from these categories?



Safety

Roadway Operations

Implementation

Multimodal Connectivity

Community Vibrancy

Performance Metrics

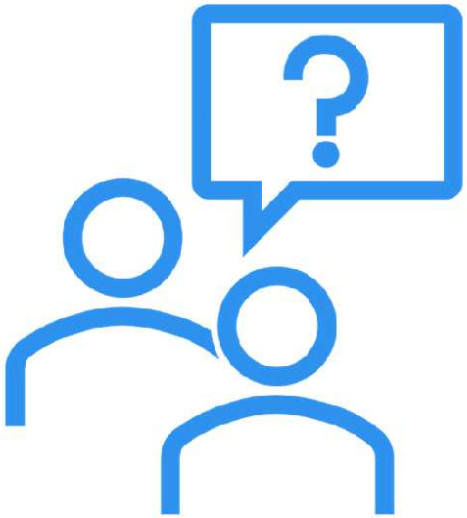
Potential Metrics:

- Bike/pedestrian connections to destinations
- Potential to reduce crashes
- Pedestrian level of comfort
- Environmental impacts
- Potential to reduce vehicle speeds
- Bicycle level of traffic stress
- Construction costs
- Emergency response times
- Truck turning movements
- Construction feasibility
- Frequency of controlled crossings
- Vehicle level of service
- Roadway capacity during I-95 closures



Performance Metrics

What might be missing from these metrics?



Next Steps

Where we go from here



Next Steps

1. Draft Vision / Performance Metrics – February
2. Draft Public Engagement Plan – February
3. Existing Conditions Analysis – February / March
4. Community Engagement – February / March
5. Second Steering Committee Meeting – April
6. Developing Toolbox – March / April

Questions?

Cathy Spahr
(SpahrC@co.delaware.pa.us)

Tara Hofferth
(thofferth@kittelson.com)

A.D. MARBLE
environmental·cultural·engineering

Route 291 Feasibility Study
Delaware County, PA
Steering Committee Meeting No. 1

MEETING DATE: February 2, 2023

TIME: 9:00AM – 12:00 PM

LOCATION: Chester City Hall and Field View

ATTENDEES: See attached sign-in sheet

ATTACHMENTS:
1) Agenda
2) Field Visit Plan
3) PowerPoint Presentation
4) Sign-in Sheet

Below is a summary of the meeting.

Introductions
Each meeting attendee introduced themselves.

Field Visit
The meeting attendees participated in a field view of the project corridor. The below provides the highlights of the field view and discussions held at the various stops along the corridor. A map of the field view and the various stops is included as an attachment to these minutes.

Stop 1: Start at Chester City Hall

Stop 2: Laborers' Local 413, Penn Street

- The home along Penn Street is hit frequently by trucks/cars going too fast.
- Vehicular/truck speed along Route 291 is a major concern.
- The logistics and trucking businesses are expanding and the trucks using Route 291 is going to continue to increase. Route 291 is called the "Industrial Highway". Identify options to accommodate trucks, manage the truck traffic.
- There are no traffic signals between Penn Street and Flower street, approximately 1 mile.
- The East Coast Greenway (ECG) has conducted studies and looked at alternatives for continuing the trail in this area. One option needed sliver acquisitions of between 60 to 70 properties. The attendees agreed that they would like to see Route 291 create a space for bicyclists.
- When there is traffic along I-95, vehicles use Route 291.
- Discussed other parallel routes to I-95: 9th Street is narrower, more residential and has traffic signals on every block; 7th Street is very residential and only those familiar with the travel patterns use 7th street as an alternate route to I-95.

- Discussed whether a center turn lane is needed the entire length of Route 291 and where are the truck turning movements most needed.
- Conrail alignment is along the river, and coordination with Conrail is challenging.
- Penn Street is the historical Penn's Landing. A Park is located to celebrate this, but access to this park is difficult.
- There is rich history in this area, and it would be ideal to have the historic sites accessible by bike. Fort Mifflin is the current terminus of the Schuylkill River Trail. Penn Street or Edgemont Street is the proposed location for the Chester Creek Trail.
- A consistent branding/signage plan is needed for the cultural aspects.

Stop 3: Ulrich Street

- Residents along Route 291 use the shoulder as a parking lane. Maintaining parking is important to the residents.
- The street and pedestrian lighting is poor along Route 291.
- Cars are speeding at night along Route 291, and the parked cars and/or their side view mirrors have been hit.
- Cars are queued to get to the Commodore Barry Bridge.
- There is no pedestrian crossing currently at Norris Street.
- A project is under design to have bikes connect to the waterfront at Norris Street and Highland Avenue. These would create a loop with Route 291 and the river trail.
- There were barbeque smokers set up in a green space near this stop. Residents gather in the green space for BBQ's.

Stop 4: Flower Street and Stop 5: Engle Street

- There is a grant to install a signal at Jeffrey Street, and a DCED multimodal grant which needs approval.
- Union Expansion: A large sports plex is planned to open June 2024. Expecting 500,000 more visitors annually to host youth soccer tournaments. Anticipating temporary surface parking lots along Route 291 on property where pipeline is located.
- Along Route 291 on the Union property, the frontage is PennDOT owned and there have been discussions about giving an easement to the ECG.
- A crosswalk is needed at Reaney Street.
- Signals are needed at the ramps.
- Improved public access is needed to the riverfront.
- On game day, there are a lot of left turns at Flower Street.
- Discussion about train station relocation to either Engle Street or Flower Street.
- Many Union fans cross at Flower Street. Fans are parking elsewhere and crossing mid-block.
- There is a lot of truck traffic on Flower Street.
- Flower Street connects to Waterfront Park where residents fish and there is an active boat launch.
- There is an interest in water taxies along the Delaware River; dredging money is needed for this.
- Engle Street is in the middle of the Union Campus. It connects to the Library in Chester. Consider a signal at Engle Street.

- The Calvary Baptist Church is an important community place. Could be a location for hosting community engagement. People walk to church. Funeral car processions park on Route 291.

Stop 6: Booth Street

- Booth Street is where the expansion of Route 291 stopped.
- Covanta and Delcora have multiple entrances to their properties and multiple driveways are onto a 2-lane section of roadway.
- A rail spur was discussed and not allowed at Covanta.
- Consider regional zoning standards and regional mitigation approaches.
- Suggestions of evaluating how the roadway serves local trucks vs. thru trucks

Stop 7: Stewart Avenue

- In Ridley Township, a PennDOT project is under design to handle roadway drainage issues. This project will shift the Route 291 alignment to accommodate the ECG trail on the south side of the roadway. It will be an 8-ft wide path.
- Boeing crossings are unsafe. Pedestrians wave flags to be seen. Pedestrians cross at all hours of the day. Be mindful of shift changes.
- Traffic increases while ships unload at the ports.
- Boeing has truck traffic that crosses Route 291.
- A larger planning study and a multi-municipal plan is needed for Route 291 from the airport to Delaware.
- This project does not involve Eddystone.

Steering Committee Meeting

Tara reviewed the PowerPoint presentation (attached to these minutes). A summary of the discussion generated by the presentation is included below.

Engagement Plan

- County has use of ZenCity survey tool.
- Riverfront Alliance can help with the outreach.
- Suggest to keep resident outreach and industrial outreach separate.
- Representative Kazeem's office conducts legislative walks along the corridor.
- The ECG has used Night Street Youth Center to help in outreach. Provided them with a stipend for the outreach efforts they conducted.
- There is a Hispanic population in the City. Translation may be needed.
- Host events at Taco's.
- Omega Si Phi conducts cleanups 4 times a year. Project team can help with these and interact with the local volunteers.
- Local 413 can host events.
- City's communications direction, Amanda Johnson, may have suggestions on outreach.
- The Executive Director of Delcora is the Chair of the Ridley Supervisors. Catania Engineers would have ideas on how to interact.
- Suggestion of carrying out the public engagement either during after-hours or during weekends to ensure views from all members of the community are gathered.

Previous Plan Review and Traffic Data

- Complete traffic modeling before public workshops.
- Consider median green stormwater infrastructure. The City's capacity to handle stormwater is limited.
- Norris Street will be the location for a new trail.
- Painted bike lanes are not helpful because of truck traffic. The goal is for a physical separation.
- Old Swedish Cemetery and ensuring the historic fabric is included in the plan
- Include a connection to Chester Creek Trail
- Through a DVRPC grant (McMahon), traffic counts were conducted between Highland and Ridley.
- Discussed traffic counts and when they were conducted- rush hour and mid-day. Traffic tubes were placed along Route 291 for a 48-hour time span. This was not done on a game day. The City has counts for game day traffic.
- Coordinate with the Commerce Center on traffic counts.
- Ashwin Patel asked about whether 9th Street counts were done. Team will look into this.
- DVRPC conducted a truck study of the main intersections.

Key Challenges and Opportunities

- Chester is financially challenged. Plan with a target of the funding sources in mind.
- Residents and industries may not be in favor of the project or have similar viewpoints.
- Use the project to get to their "interest" not their "position". How can the project improve their access to their properties?
- PennDOT may have origin and destination data.
- Opportunities for funding through Environmental Justice and equity-based programs.

PollEv.com results

- The results are attached to the minutes.

Performance Metrics

- Potential categories/themes are: Safety; multimodal connectivity; roadway operations; community vibrancy; and implementation. Discussion ensued on community vibrancy and changing it to balancing/co-existing/economic; need to define this theme better. Consider adding Uniformity and Improving Aesthetics.
- Ask community how it would define the metrics.
- Talking to school districts and other public transportation agencies to identify their stops and other areas of special consideration they may like to see in the planning process.
- There is an annual Delaware River Festival typically in September.
- Enforcement, compliance and maintenance needs to be part of the plan. Discussed the creation of a Business District that would be fee-based to support the maintenance needs.

Next Steps

- Draft Vision and Public Engagement Plan in February.
- Existing Conditions Analysis and Community Engagement in February/March.

- The next Steering Committee meeting will occur in April.
- A toolbox will be developed in March/April.

Tara thanked everyone for their attendance. The meeting ended at approximately 12:15 pm.

The preceding is a summary of the items discussed at the above-mentioned meeting. If you have any corrections to these meeting minutes, please provide them to Colleen Meiswich of A.D. Marble at cmeiswich@admarble.com by **Friday, February 17, 2023.**



Route 291 Study

Steering Committee Meeting #2

May 16, 2023

Delaware County
Pennsylvania

KITTELSON & ASSOCIATES

A.D. MARBLE
environmental·cultural·engineering
DBE/MBE/WBE CERTIFIED

Agenda

1. Study Overview
2. Stakeholder Committee Feedback
3. Vision & Performance Metrics
4. Community Feedback
5. Existing Conditions Overview
6. Synthesis of Issues & Opportunities
7. Project Toolkit
8. Developing & Evaluating Alternatives
9. Next Steps



Introductions

Elaine Paul Schaefer (Vice Chair, Delaware County Council)

Gina Burritt (Director, Planning)

Tom Shaffer (Manager, Transportation Planning)

Cathy Spahr (Senior Planner)

Tara Hofferth

Will Weismantel

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Colleen Meiswich

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DBE/MBE/WBE CERTIFIED

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- PennDOT District 6
- Riverfront Alliance
- Delaware Valley Regional Planning Commission
- East Coast Greenway Alliance
- PA Environmental Council
- Bicycle Coalition
- State Representation
- SEPTA

Study Overview



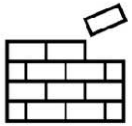
Study Extents + Purpose

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

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



Project Goals



Build upon previous planning, study, and community engagement efforts



Coordinate solutions with key stakeholders to move toward implementation

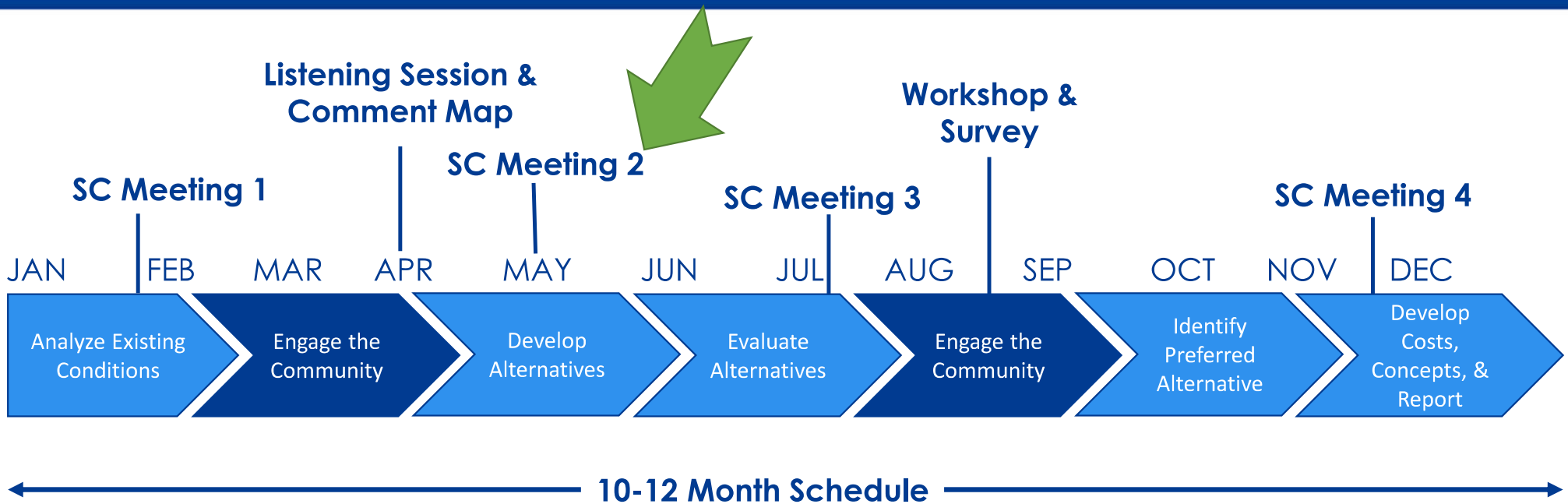


Engage the community in idea-generating and decision-making



Balance the many needs and uses of the corridor

Study Scope & Schedule



Steering Committee Feedback



Steering Committee Role

- Craft the corridor vision
- Establish performance metrics
- Guide engagement
- Verify existing conditions
- Provide feedback on alternative development & selection
- Review results

Steering Committee 1 Recap

Big Themes:

- Prioritize safety and slow traffic
- Coordinate with Industrial Leaders
- Take direction from residents
- Connect historic sites & key destinations
- Build upon the low stress bike network
- Consider traffic control at ramp intersections
- Expand traffic analysis

On February 2, 2023, we walked the corridor with stakeholders and met to discuss engagement and analysis plans.



Steering Committee Feedback

Traffic Analysis:

- Synchro Analysis
- SimTraffic Simulation
- Long-Range Travel Demand Modeling
- I-95 Diversion Analysis
- Predictive Safety Analysis
- ICE Analysis (Stage 1 Form)

Vision & Performance Metrics



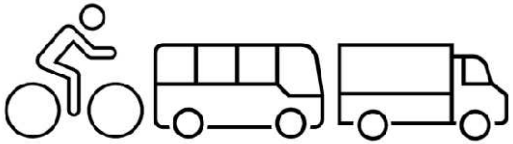
Performance Metrics

Steering Committee Vision:



Performance Metrics

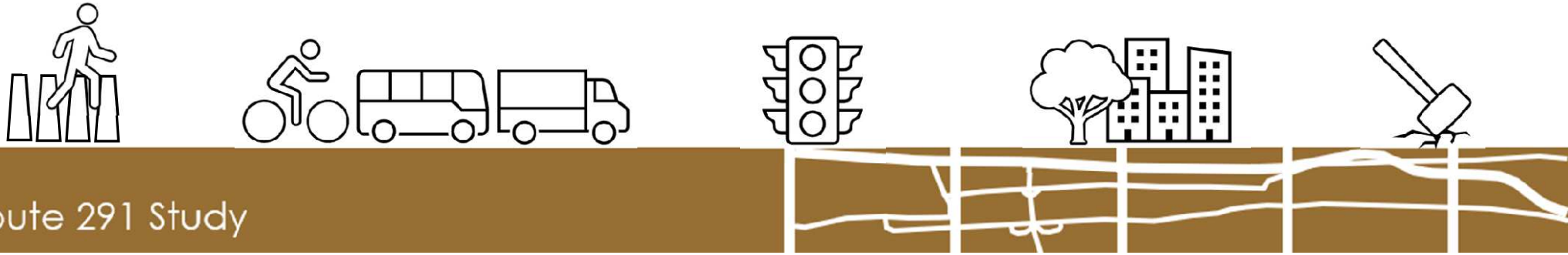
Metric Themes:

1. 
   Safety
2. 
   Multimodal Connectivity
3. 
   Roadway Operations
4. 
   Residential-Industrial Balance
5. 
   Implementation

Performance Metrics

High Level Metrics:

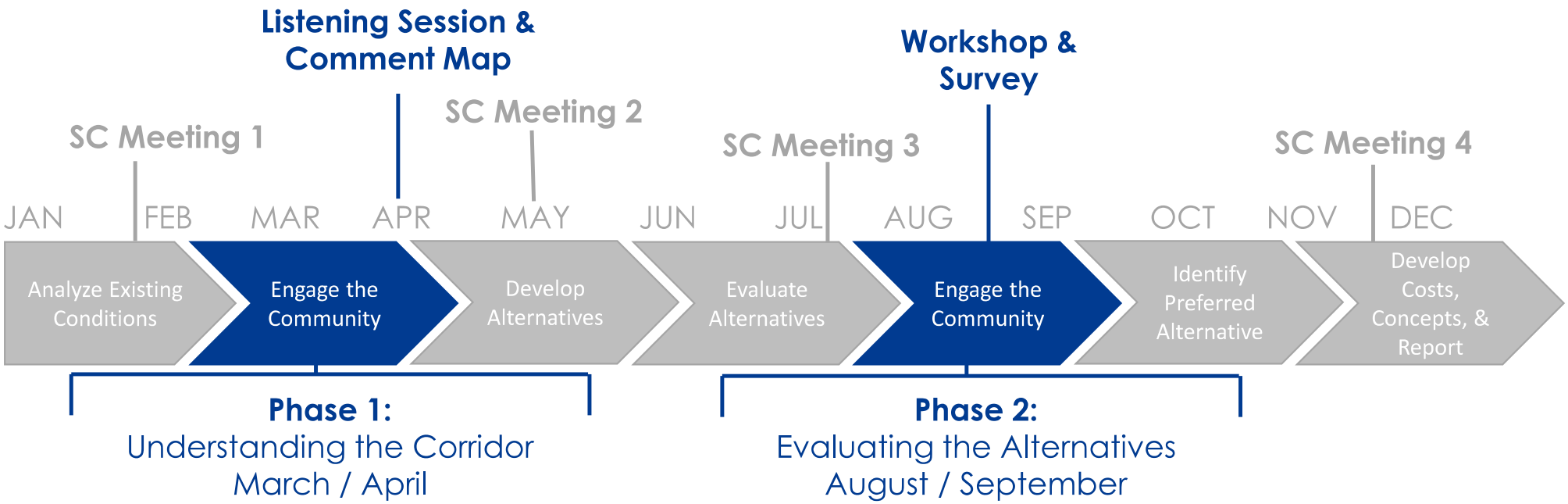
- Potential to reduce crashes
- Potential to reduce vehicle speeds
- Emergency response times
- Frequency of controlled crossings
- Bike / pedestrian connections
- Pedestrian comfort
- Bicycle level of traffic stress
- Truck turning movement availability
- Vehicle level of service
- Roadway capacity during I-95 closures
- Environmental impacts
- Construction & maintenance feasibility & costs
- Corridor Aesthetics



Community Feedback



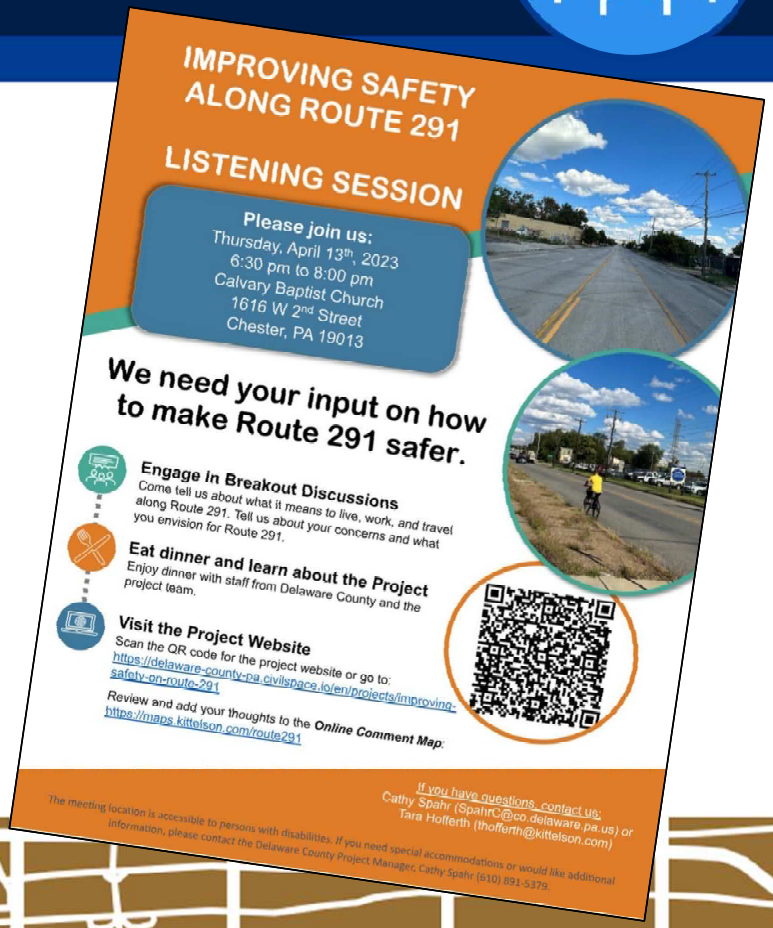
Community Engagement Schedule



Community Feedback – Phase 1

Listening – **Facilitated Community Discussion**

- Held at Calvary Baptist Church on Thursday, April 13, 2023, from 6:30 pm to 8:30 pm
- Ate hoagies and discussed safety on Route 291 in small circles
- About 40 people in attendance (residents, church members, landlords, business owners)



Community Feedback – Phase 1

Listening Session Big Themes:

- Prioritize residents
- Lack of equity with historic changes made to Route 291
- Route 291 feels like a highway through a community
- Desire to return to pre-widening conditions
- High speeds & lack of speed enforcement
- Making lefts onto Route 291 is challenging / unsafe
- US 322 is challenging to get on and off
- Maintenance & lighting are needed



Community Feedback – Phase 1

Listening Session Big Themes (Cont.):

- Support for more traffic signals
- Concerns about pollution and community health
- More crosswalks & wider sidewalks needed
- Chester representation and corridor beautification
- Celebrate and provide access to historic resources
- Desire for mixed use development
- A dedicated bike facility is needed
- Slow down trucks
- Connect people to the riverfront



Community Feedback – Phase 1



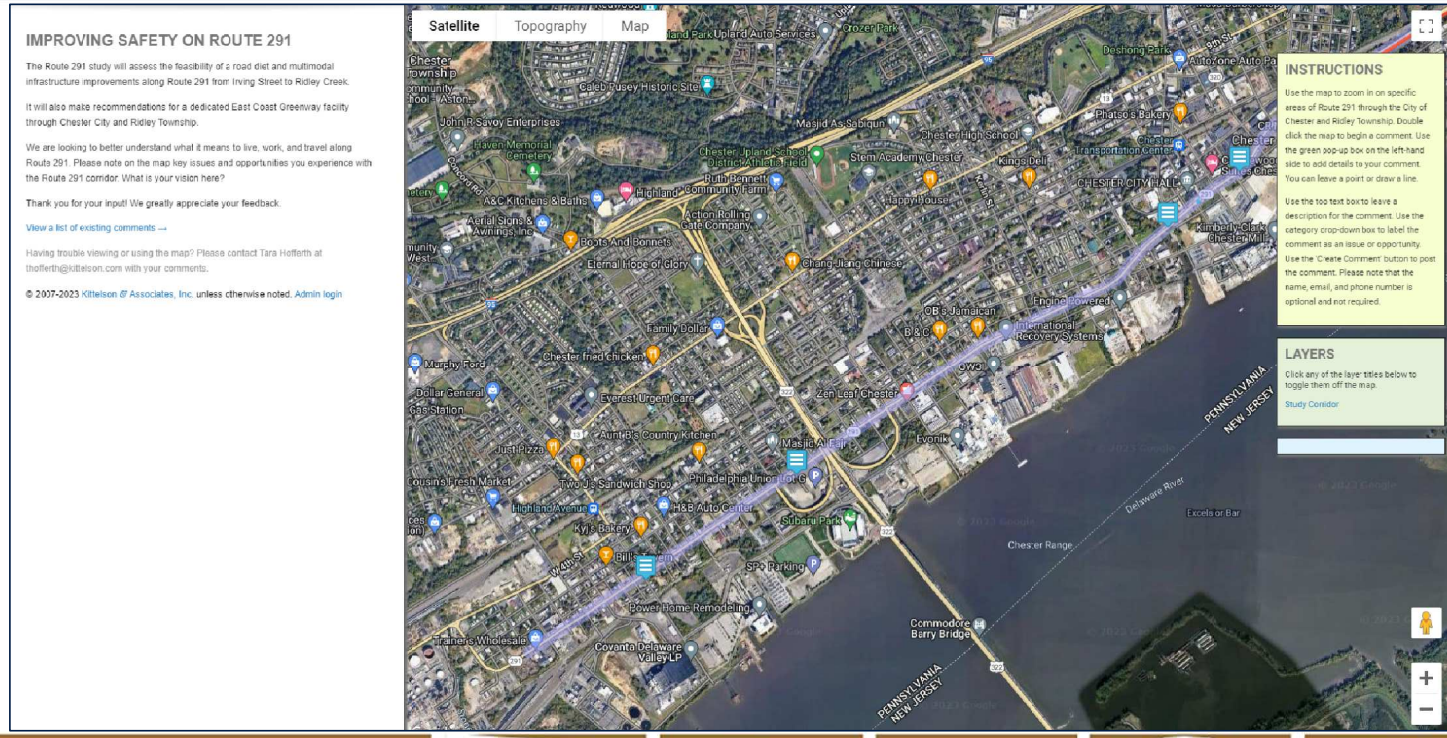
Several personal stories of crashes

"My name is Tykera Beauford. I am the daughter of the late Tyrine Beauford who passed away on his motorcycle May 19th, 2009. I have the unfortunate privilege of seeing his crash site imprint on the huge pole by Harrah's Casino. Please make 291 safe for all!"

Community Feedback – Phase 1

Online Comment Map

- Open throughout March & April
- County website & distributed to Steering Committee



Community Feedback – Phase 1

Comment Map Big Themes:

All through this proposed road diet area, there is an opportunity and a necessity to create real, clear, physically protected bike lanes (not merely plastic bollards). Because this is the East Coast Greenway, and the current truck and speed rates on 291 are so egregious, the only workable solution is a raised multidirecitonal biking lane or another biking solution that creates a clear physical barrier. Thank you.

Like Liked 3 times

Please reduce the width of Rt 291 and redesign it to accommodate safe, comfortable movement for all modes -- even people driving -- and to improve conditions for people living and working along the corridor. A separated trail along 291 and safe, signalized crossings with medians would provide residents with walking, running, and biking access to the waterfront, which really inhumane design has kept people away from for too long. This project is such a terrific opportunity to right the wrongs of planning past and improve the health and vitality of a neighborhood.

Like Liked 2 times

Would be great to have a safe bike lane on this stretch of 291.

Like Liked 1 time

Please implement a road diet with robust physical traffic calming interventions to reduce speeding and increase bike/pedestrian access for people of all ages and abilities. This should include new pedestrian crossings with median islands and traffic signals to stop traffic for pedestrians. Also, please replace the excess travel lane space from the road diet with a shared use path along the East Coast Greenway and create connections to green spaces like Ethel Waters Park and the future Greenway on Norris St down to the Riverfront Trail and destinations.

Like Liked 4 times

Existing Conditions Overview

Route 291 Study



Existing Conditions Analyses

Analyses performed:

- Previous Plan Review
- Land Use & Zoning
- Demographics
- Key Destinations
- Ongoing Development
- Traffic Counts
- Facility Ownership
- Truck Routes
- Pedestrian Infrastructure
- Bicycle Infrastructure
- Transit Infrastructure
- Crash Analysis
- Predictive Safety Analysis
- Speed Analysis
- Traffic Analysis
- Environmental Review

Existing Conditions Analyses

Analyses performed:

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- Bicycle Infrastructure
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- Crash Analysis
- Predictive Safety Analysis
- Speed Analysis
- Traffic Analysis
- Environmental Review

Development:

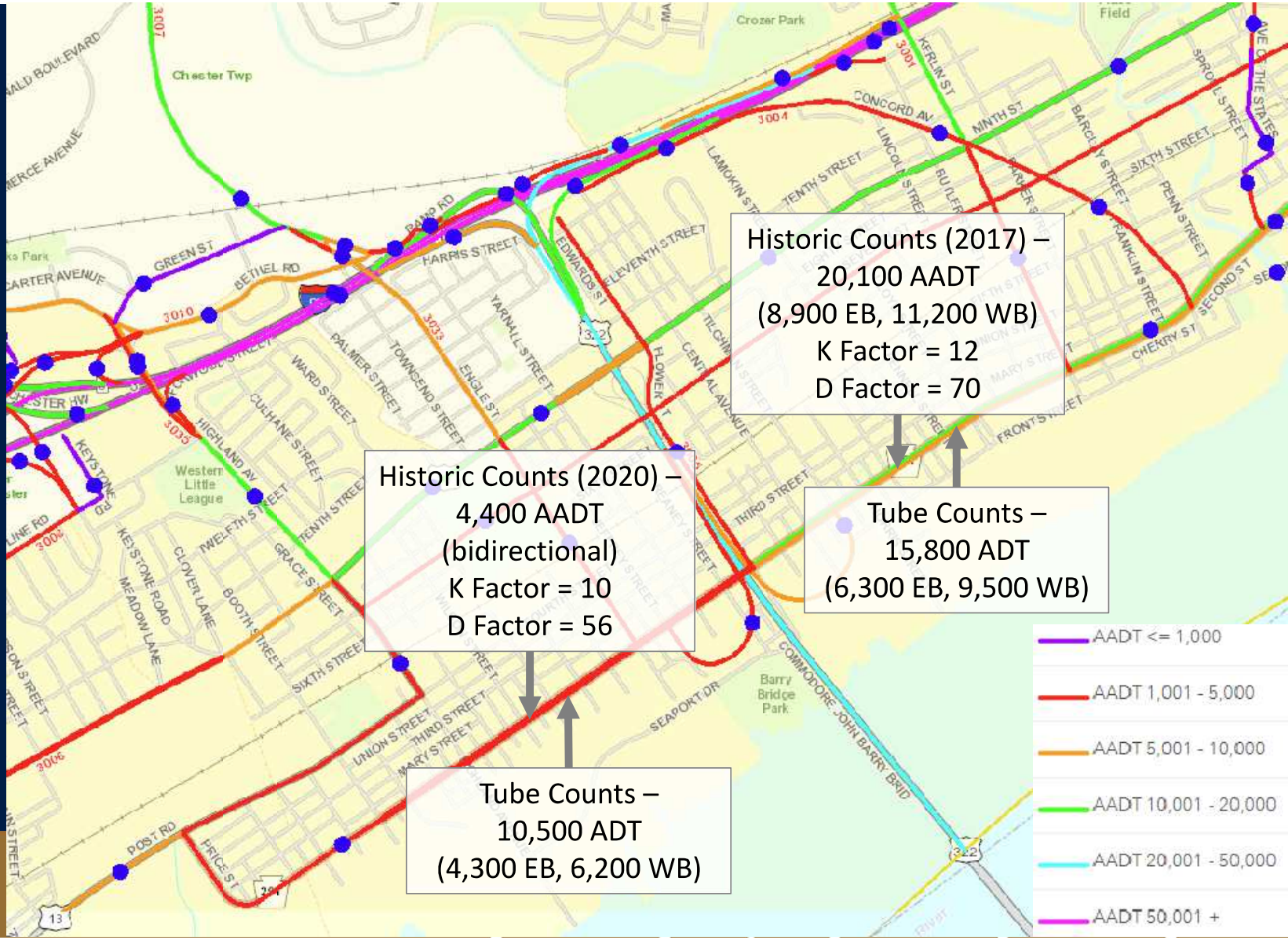
- Union Sportsplex
- 115,000 sqft Warehouse at 4th & Booth
- 375,000 sqft industrial building in Marcus Hook
- 81,000 sqft warehouse in Ridley Township
- 1.1 M sqft airport logistics center in Tinicum

Route 291 Study



Key Takeaways:

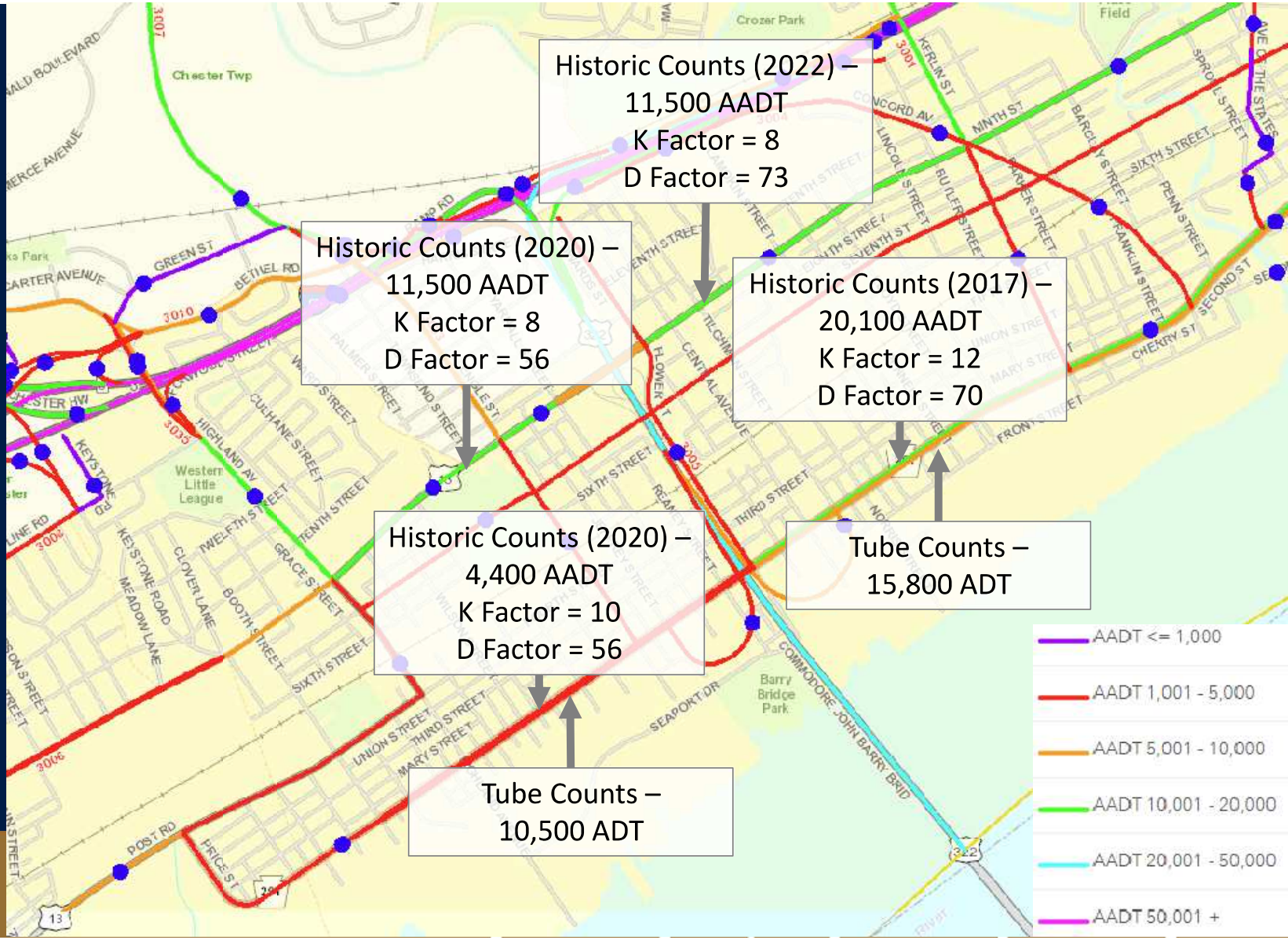
- Lower AADT west of Route 322 and higher AADT east of Route 322
- Higher volumes in westbound direction (high D factor)
- Tube counts were greater than historic counts west of bridge and less than historic counts east of bridge



Route 291 Study

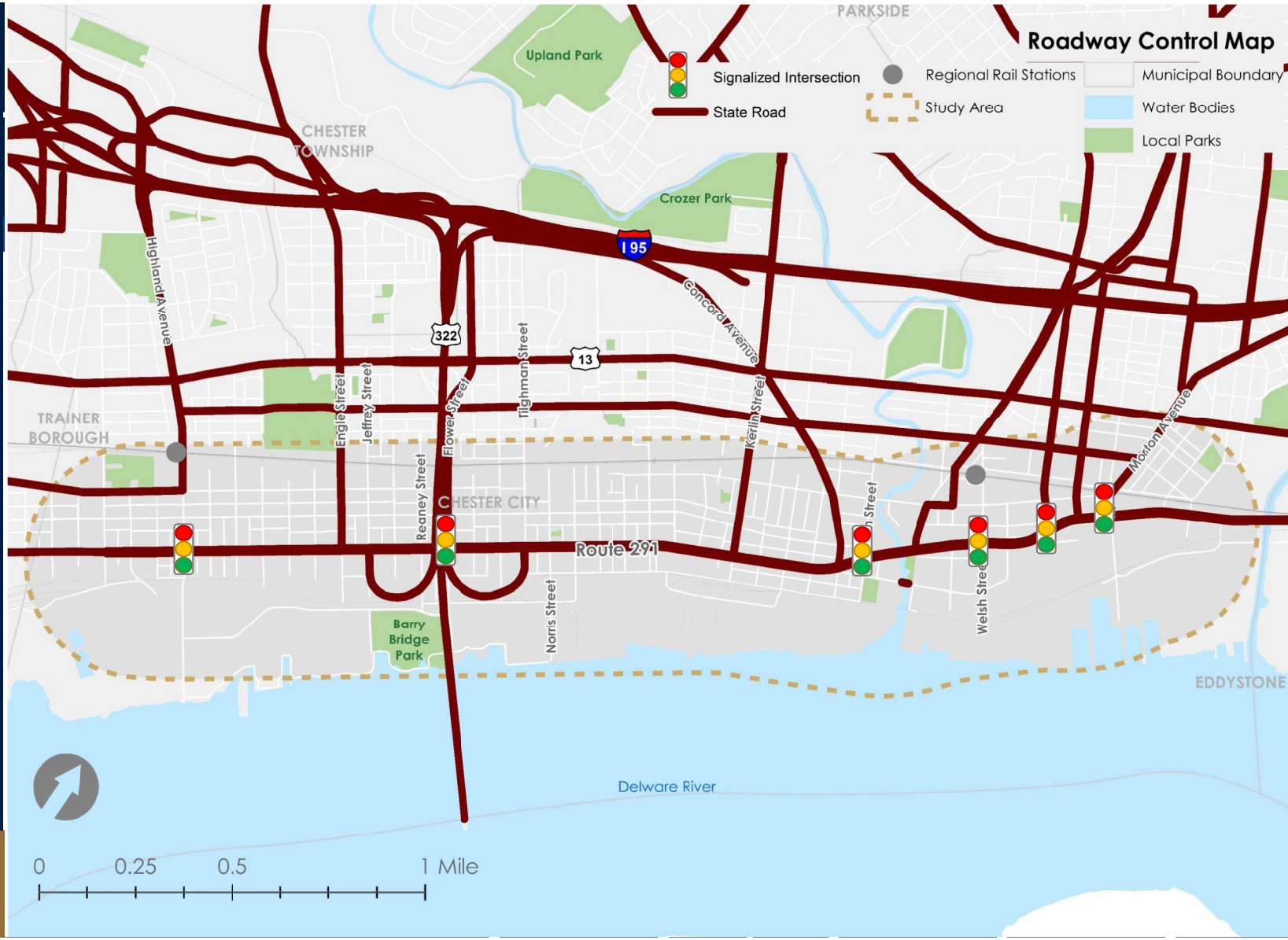
Key Takeaways:

- The AADT on Route 13 is similar to that on Route 291 (according to tube counts)
- Route 13 is also highly directional



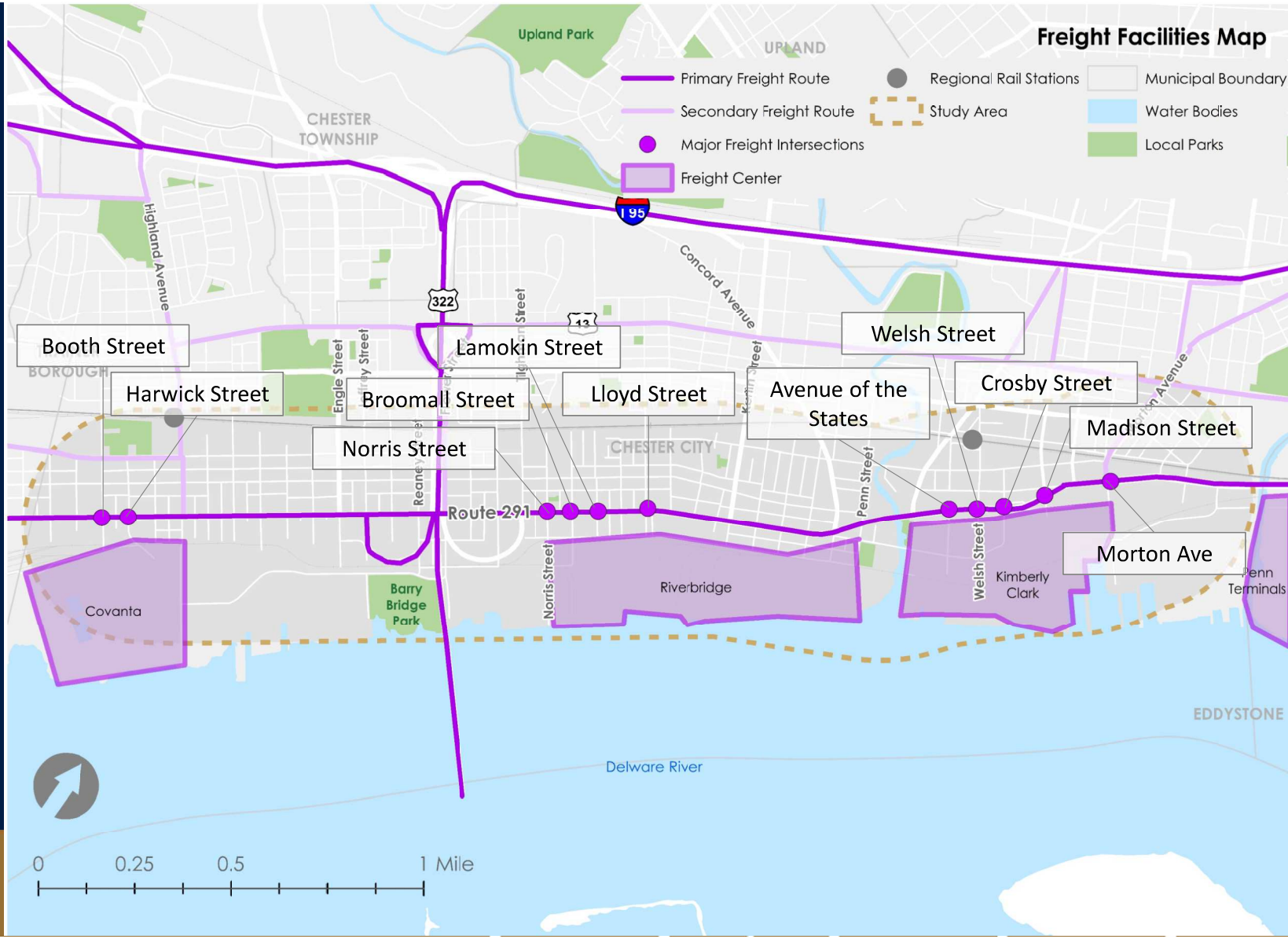
Key Takeaways:

- Major streets intersecting with Route 291 are State owned
- 6 signalized intersections within the study area
- Over a mile between Flower Street & Penn Street signals



Key Takeaways:

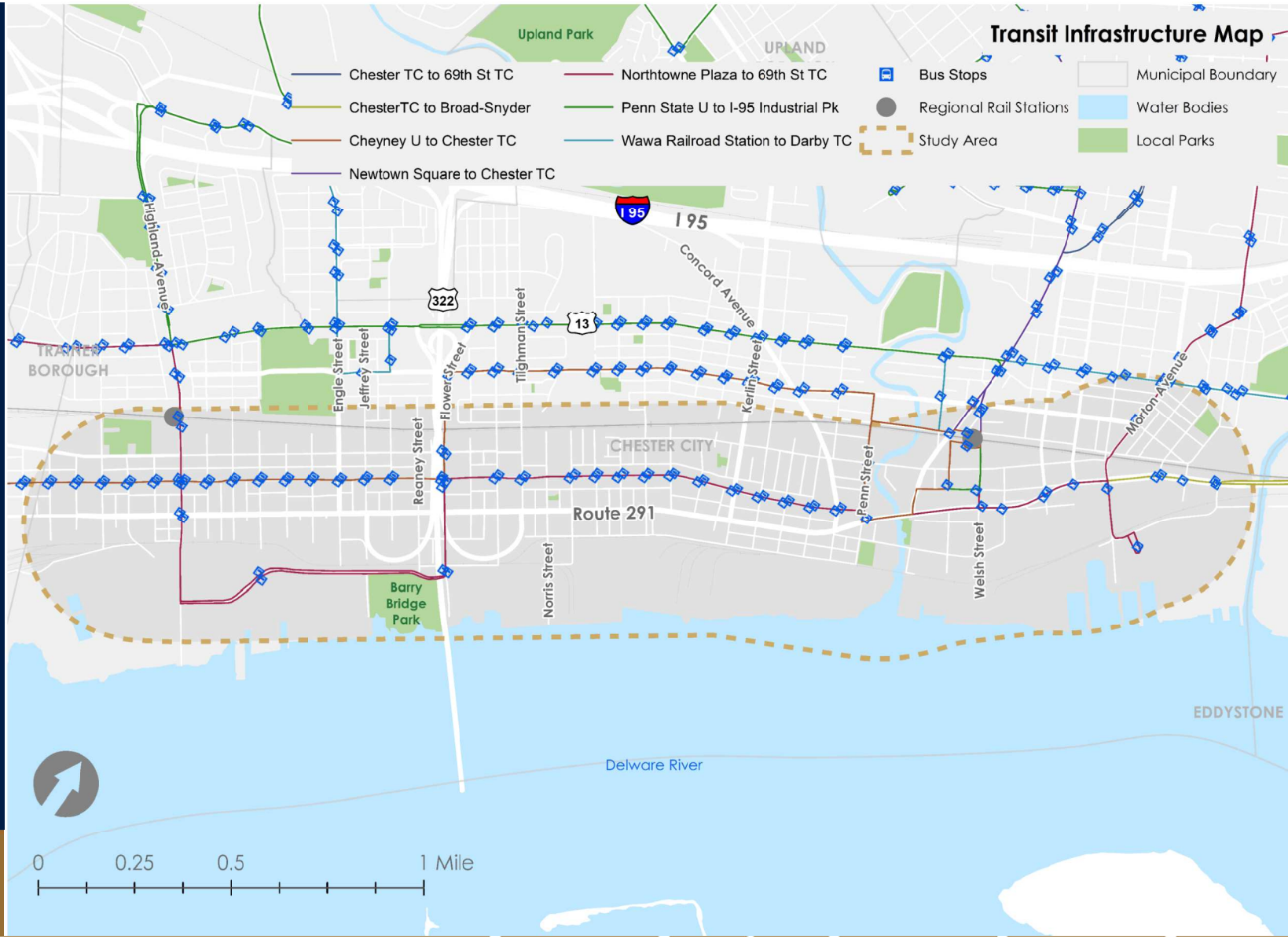
- Route 291, I-95, and Route 322 balance freight as primary routes
- Highland Avenue serves as secondary route
- Major freight centers along Route 291 include Covanta, Kimberly Clark, and Riverbridge



Route 291 Study

Key Takeaways:

- W 3rd Street is a priority corridor for bus service
- Buses make turns at Highland Avenue and Flower Street
- Bus stops on Route 291 northeast of Penn Street



Route 291 Study

Types of Safety Analysis

1. Existing Crash Analysis
2. Predictive Safety Analysis
3. Basic Level of Comfort Analysis



290

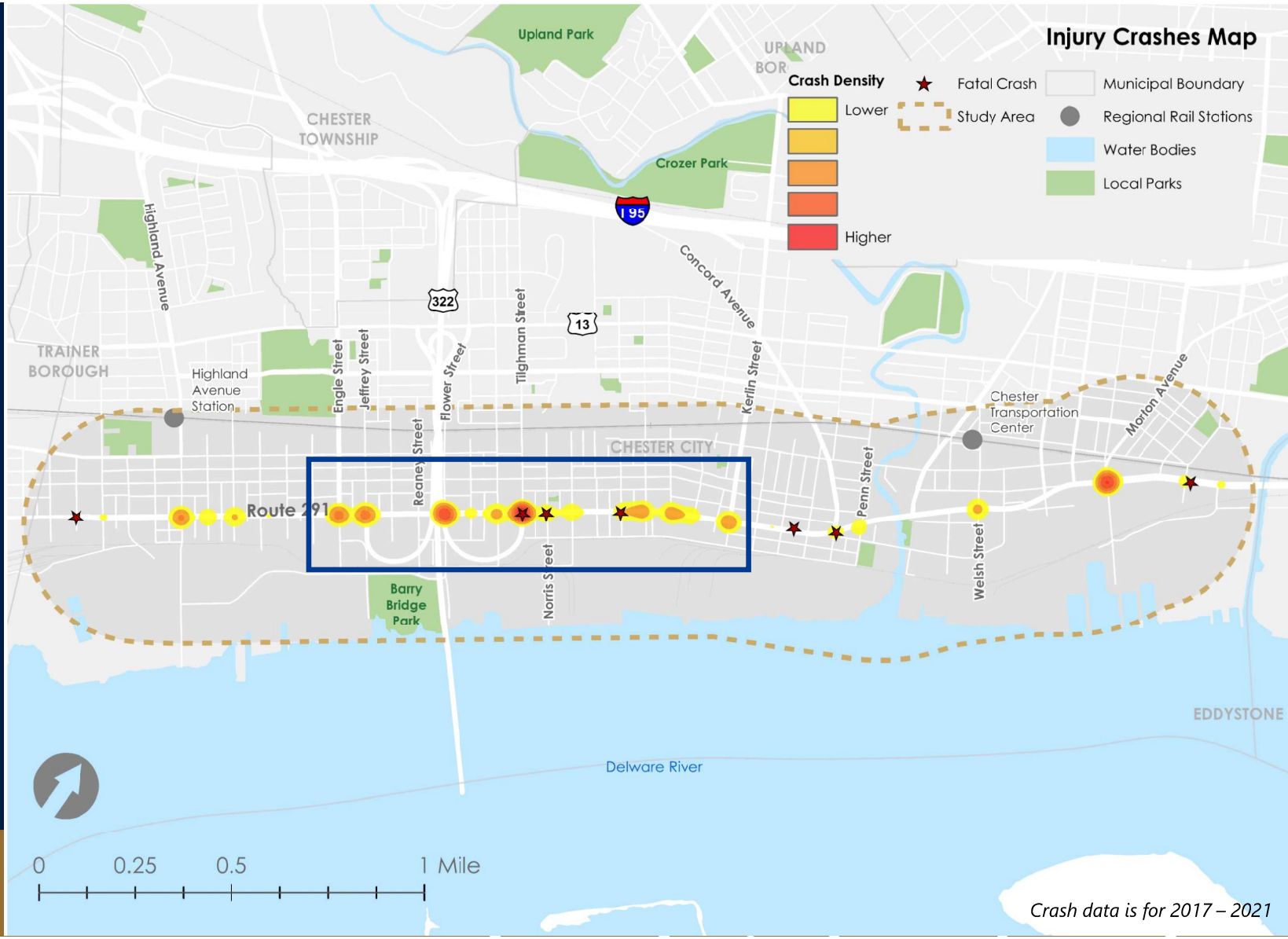
Total Crashes Along this Section of Route 291 From 2017 to 2021

Key Takeaways:

- High crash density between Engle Street and Kerlin Street
- Highest crash counts at Flower Street, Tilghman Street, and Morton Ave

Fatal Crashes at:

- Trainer Street
- Tilghman Street
- Norris Street
- Pennell Street
- Fulton Street
- Concord Avenue
- Hinkson Street



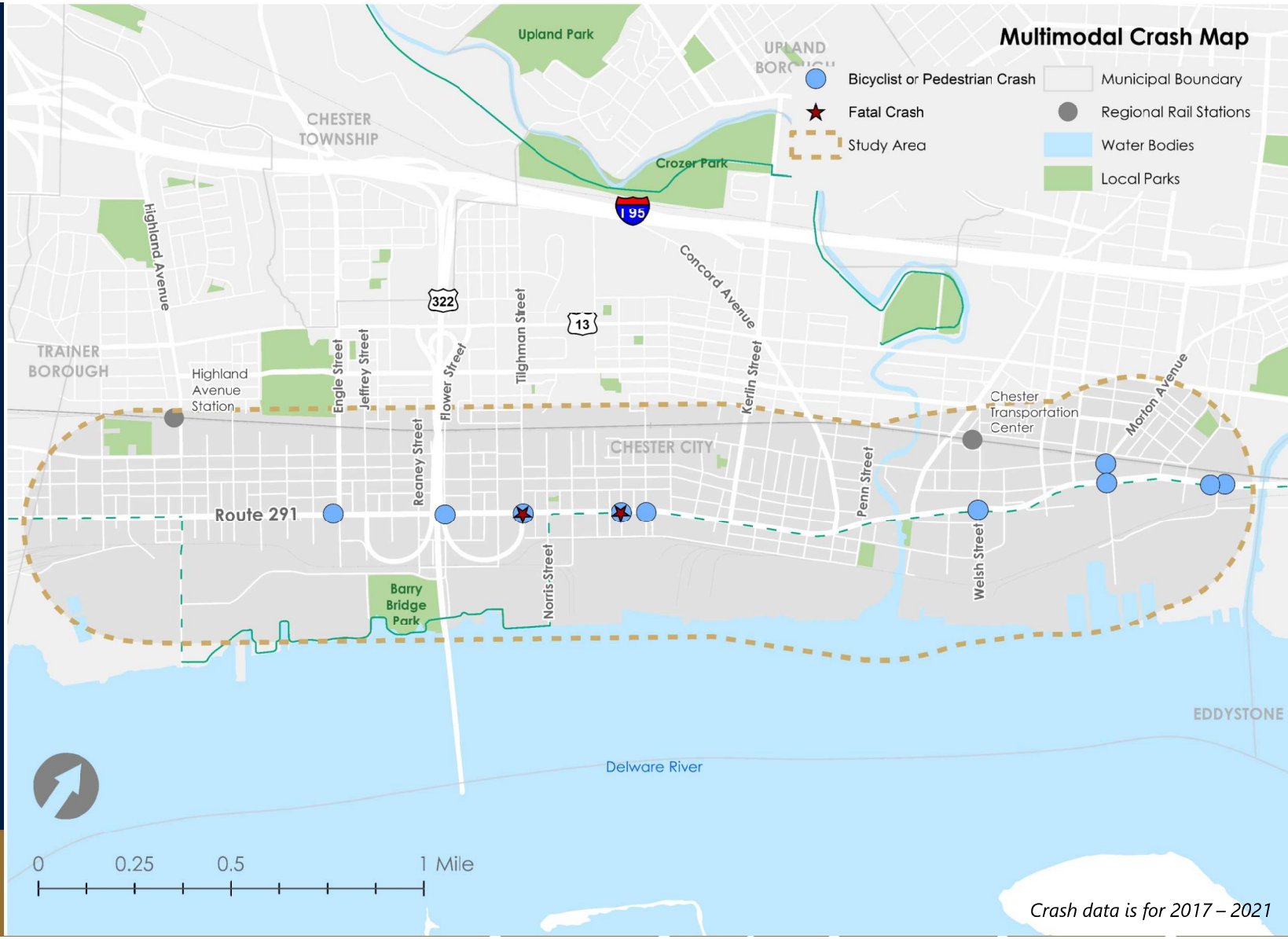
Route 291 Study

Key Takeaways:

- Crashes near intersections
- Fatal crashes in the middle portion of the corridor

Bike / Pedestrian Crashes at:

- Engle Street
- Flower Street
- Tilghman Street
- Pennell Street
- Lloyd Street
- Welsh Street
- Morton Avenue
- Harrah's Boulevard



Route 291 Study

Predictive Safety Analysis

Goals:

- Understand how expected crash data compares to predicted crash data
- Invest in safety improvements where there are measurably more expected crashes than predicted crashes

Methodology:

- Break the corridor down into segments and intersections
- Identify roadway characteristics that predict crash potential, such as classification, width, design speed
- Calculate predicted crashes using HSM Tools A and B
- Compare predicted crashes to actual crashes

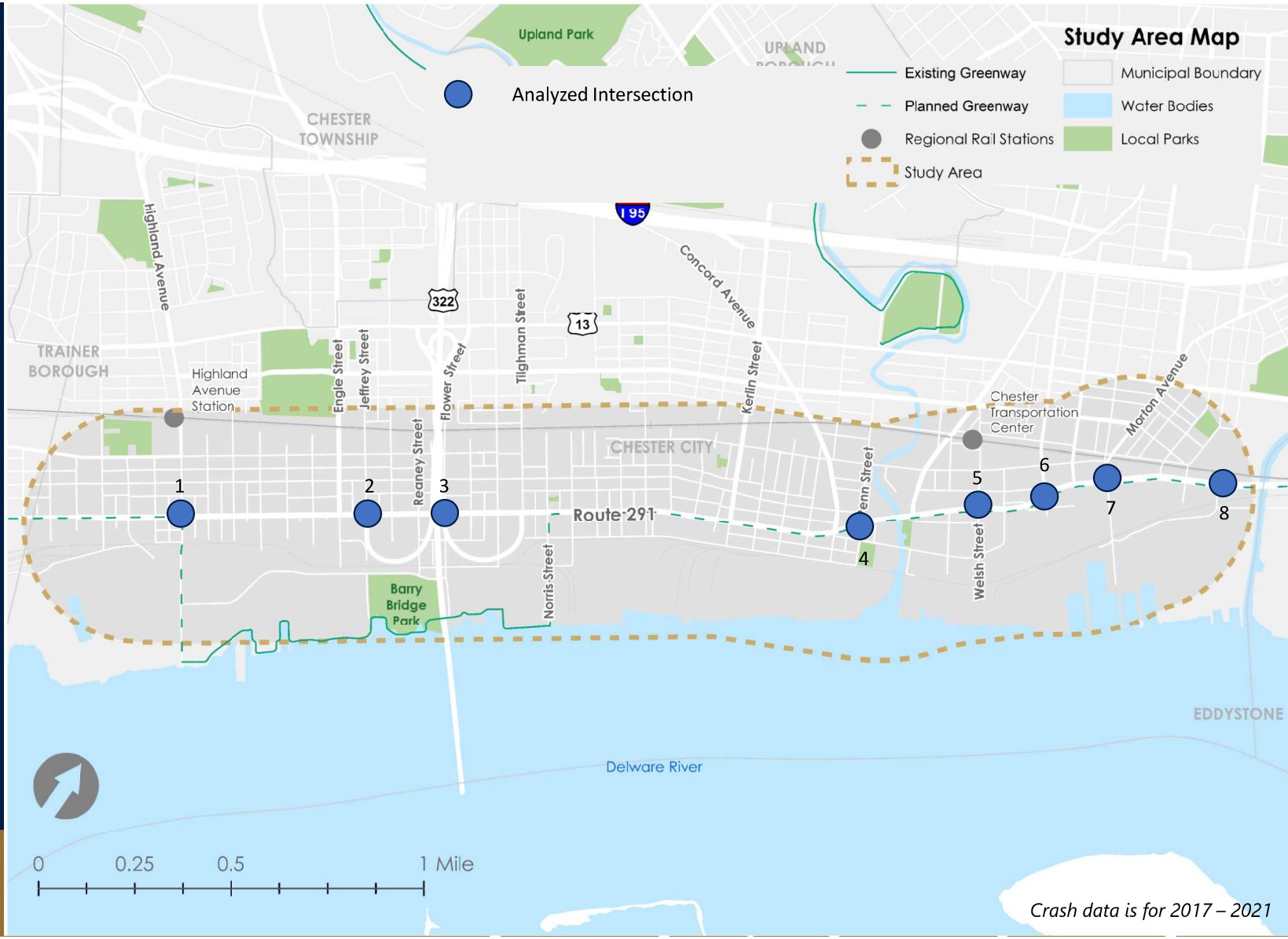
Predictive Safety Analysis

Results:

- Expected Crashes - Predicted Crashes = Potential for Safety Improvement (PSI)
- A negative PSI means that safety improvements may not be as effective in reducing observed crashes as compared to expected
- A positive PSI means that safety improvements may be especially effective in reducing observed crashes as compared to expected
- Thus, the HSM suggests making safety investments where PSI is positive

Intersections for Predictive Safety Analysis

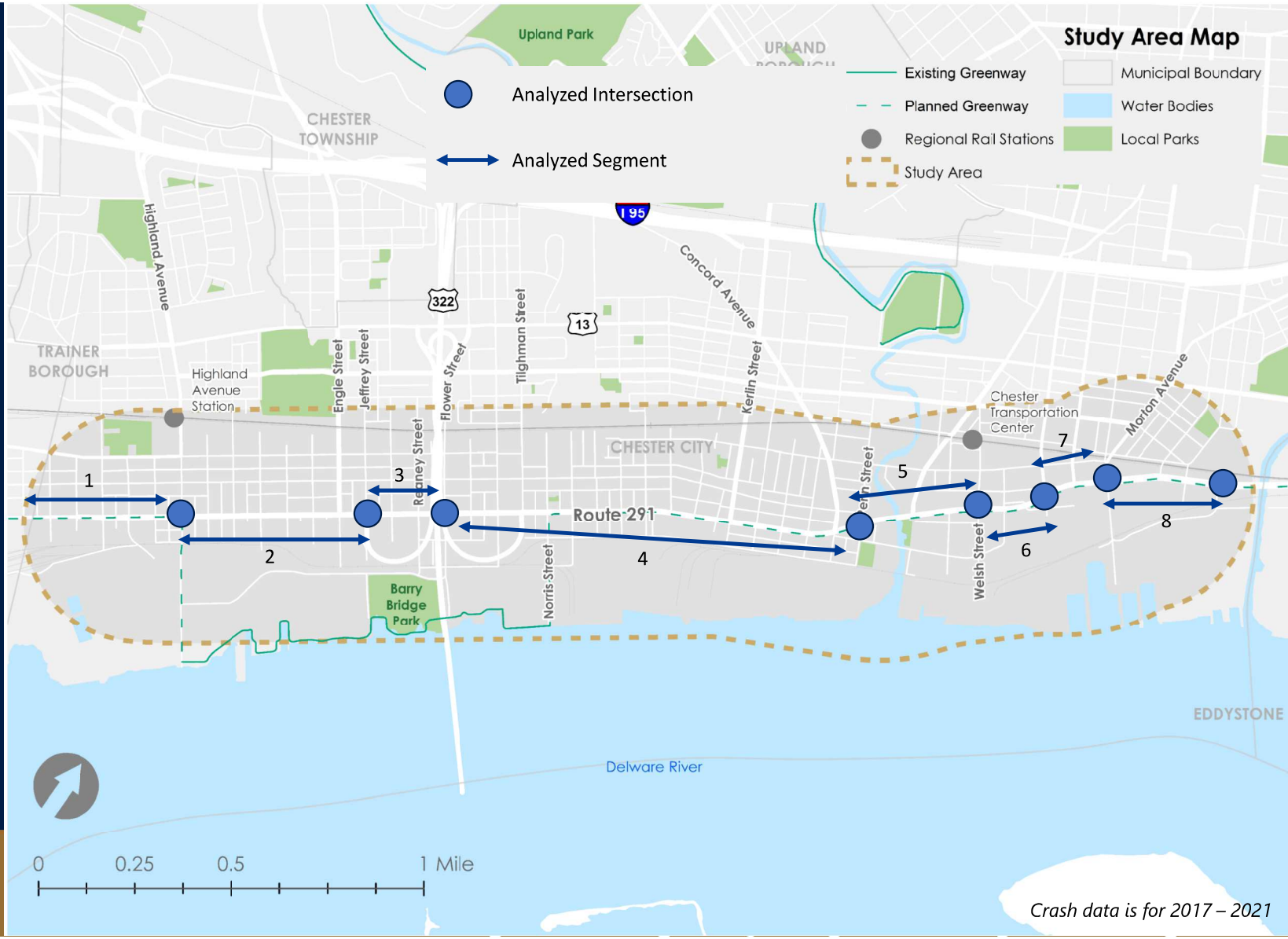
1. Highland Ave
2. Jeffrey Street
3. Flower Street
4. Penn Street
5. Welsh Street
6. Madison Street
7. Morton Ave
8. Harrah's Blvd



Route 291 Study

Segments for Predictive Safety Analysis

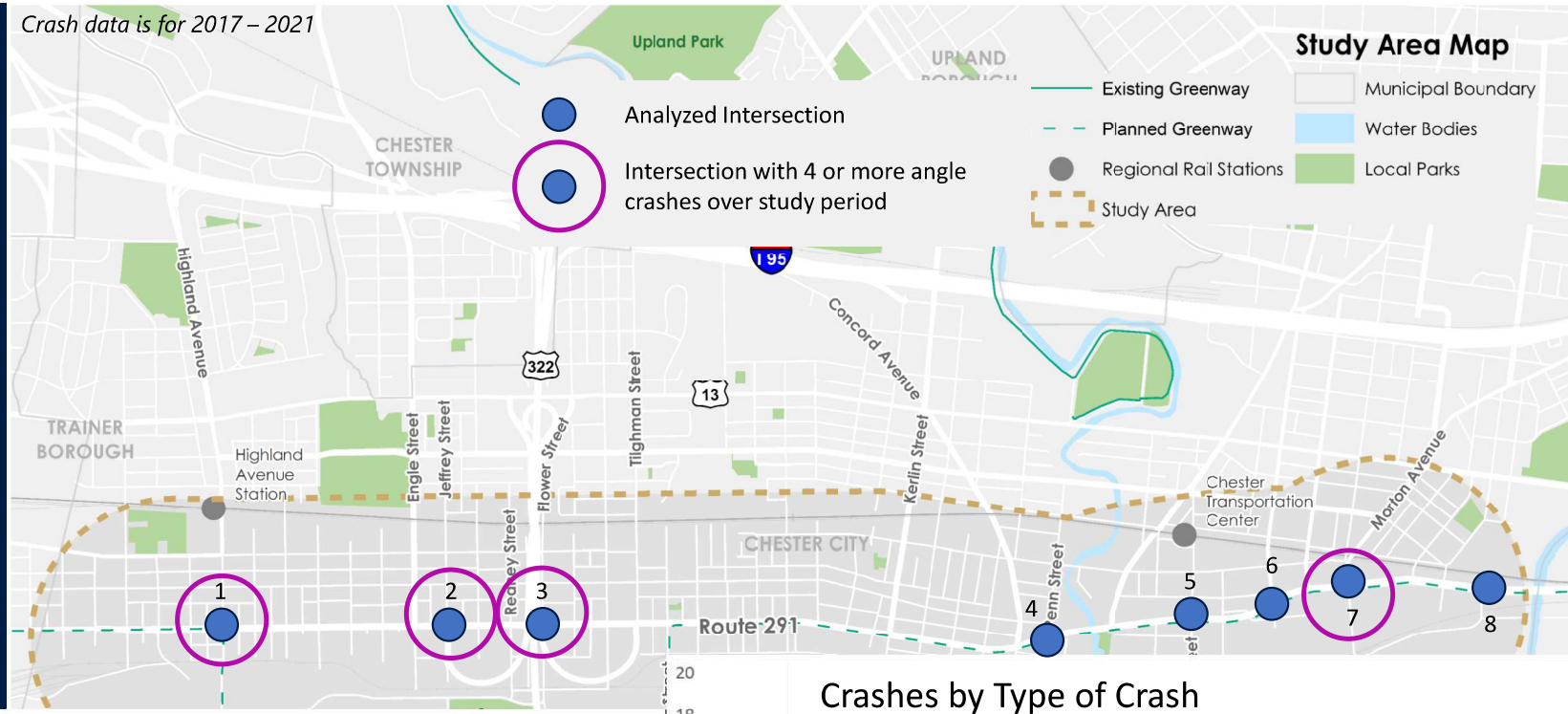
1. Irving Street to Highland Ave
2. Highland Ave to Jeffrey Street
3. Jeffrey Street to Flower Street
4. Flower Street to Penn Street
5. Penn Street to Welsh Street
6. Welsh Street to Madison Street
7. Madison Street to Morton Ave
8. Morton Ave to Harrah's Blvd

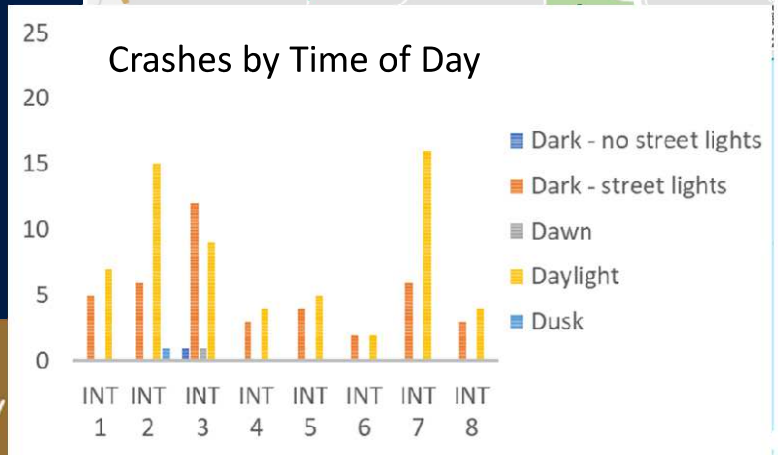


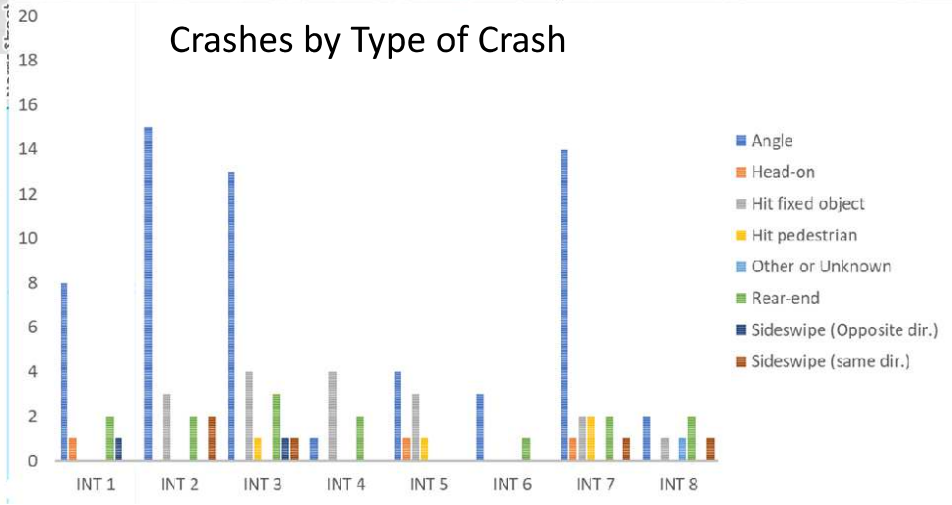
Route 291 Study

Key Takeaways:

- Crash hot spots at 1, 2, 3, & 7
- Angle, hit fixed objects, and rear-ends are the most frequent intersection crash types
- Typically, more daytime crashes
- Higher nighttime crashes at Flower Street

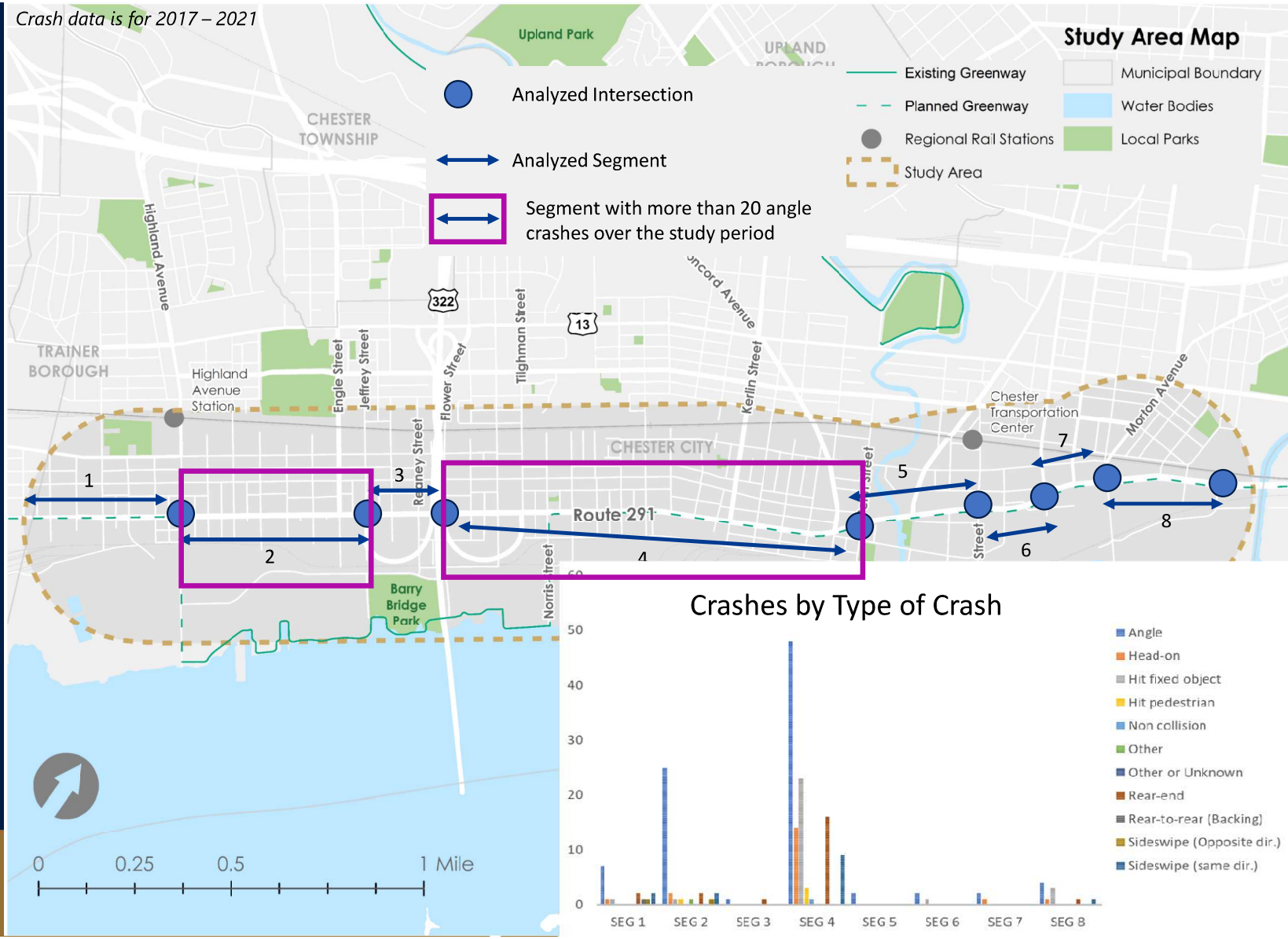






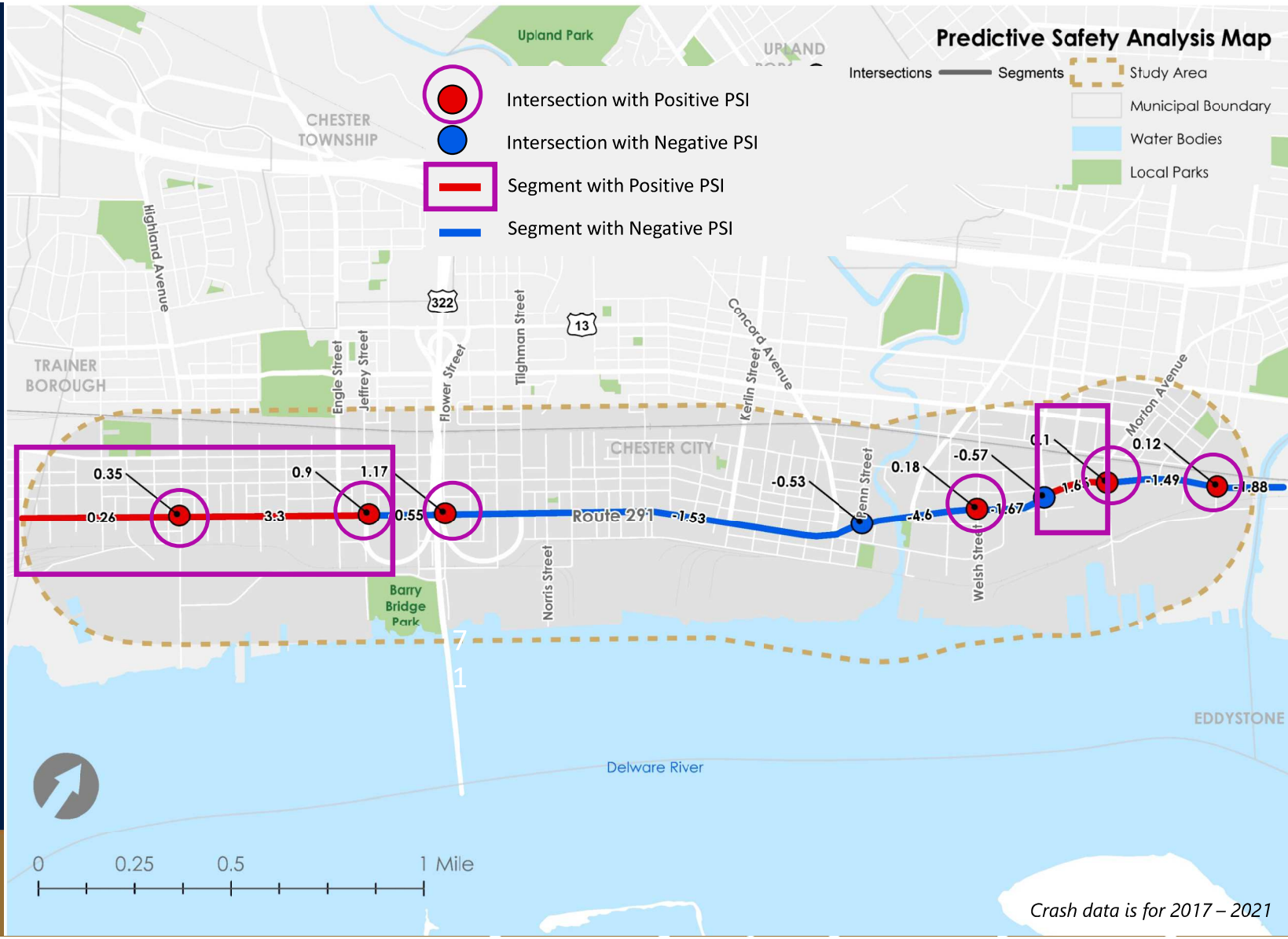
Key Takeaways:

- Segment 4 has the most fatal and serious injury crashes
- Angle, hit fixed objects, and rear-ends are the most frequent segment crash types
- Typically, more daytime crashes



Key Takeaways:

- Several intersections have positive PSI
- Segments west of Route 322 have positive PSI
- HSM suggests making safety investments where PSI is positive

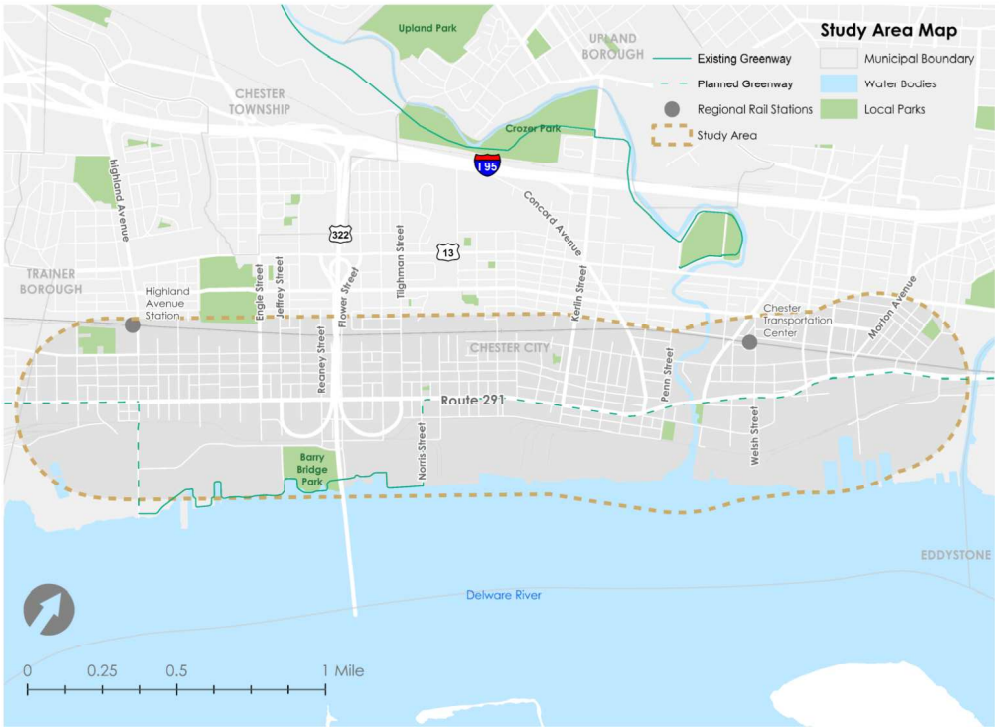


Route 291 Study

Basic Level of Comfort Analysis

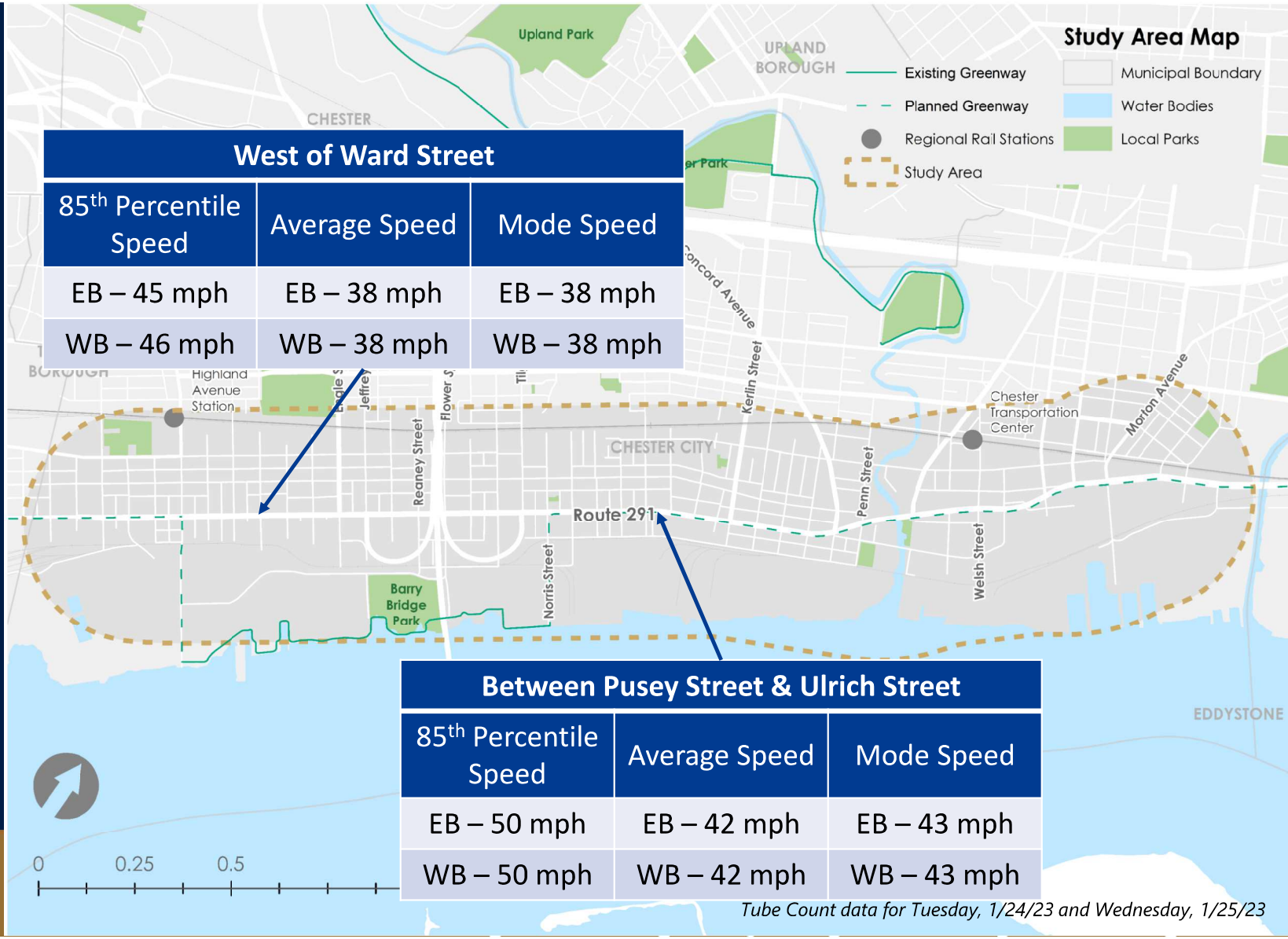
Category	Route 291	General PLOC
Street Functional Classification	Other Principal Arterial Highway	LOW
85th Percentile Speed	45-50 mph	LOW
Sidewalk / Planting Strip Width	7-feet (varies)	LOW
Marked Crosswalks	1 for entire corridor	LOW
Curb Ramps	Typical (but not all compliant)	MEDIUM

Pedestrian Level of Comfort (PLOC) methodology has modified one used in Montgomery County, MD



Key Takeaways:

- Speed limit is 35 mph
- Average, mode, and 85th percentile speeds exceed the limit
- Higher speeds east of the bridge

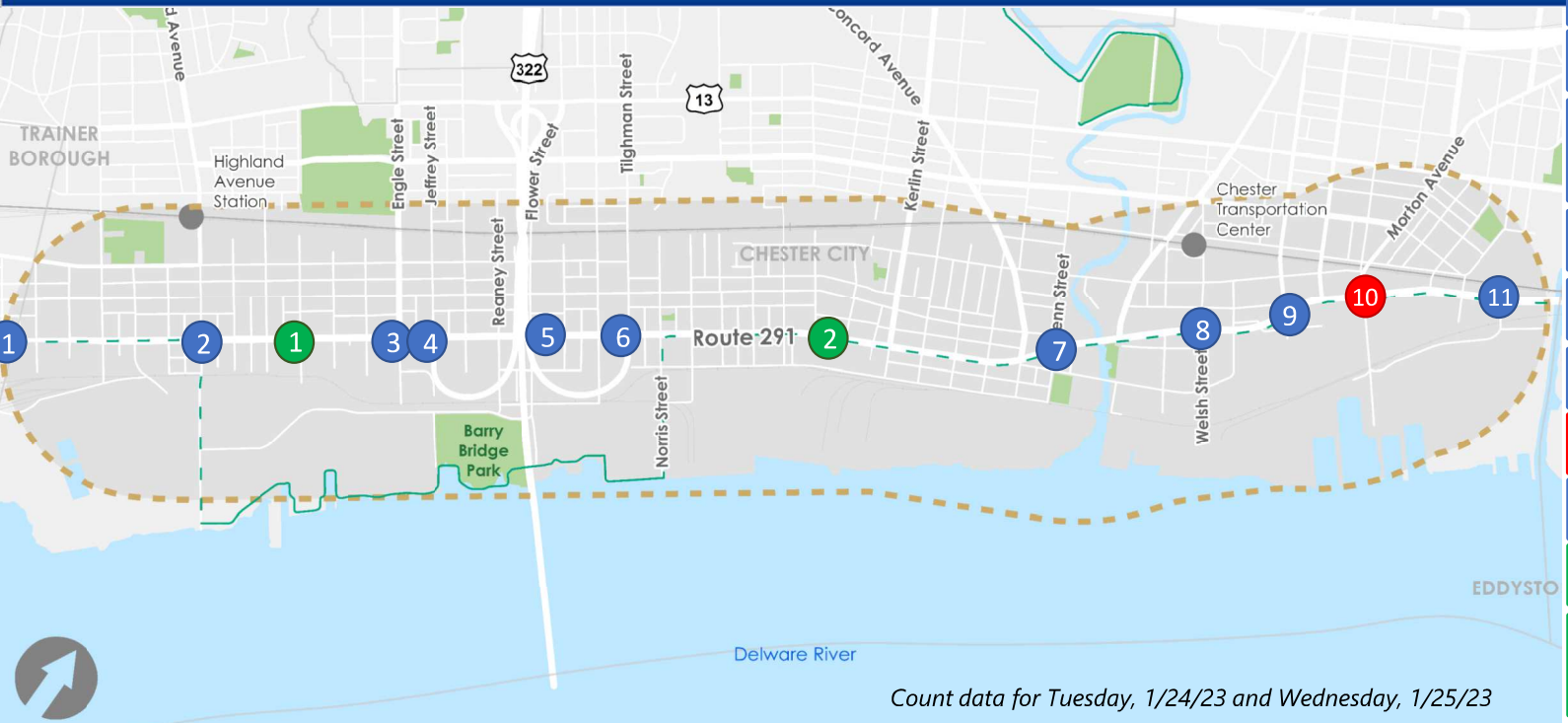


West of Ward Street		
85th Percentile Speed	Average Speed	Mode Speed
EB – 45 mph	EB – 38 mph	EB – 38 mph
WB – 46 mph	WB – 38 mph	WB – 38 mph

Between Pusey Street & Ulrich Street		
85th Percentile Speed	Average Speed	Mode Speed
EB – 50 mph	EB – 42 mph	EB – 43 mph
WB – 50 mph	WB – 42 mph	WB – 43 mph

Tube Count data for Tuesday, 1/24/23 and Wednesday, 1/25/23

Traffic Data Collection



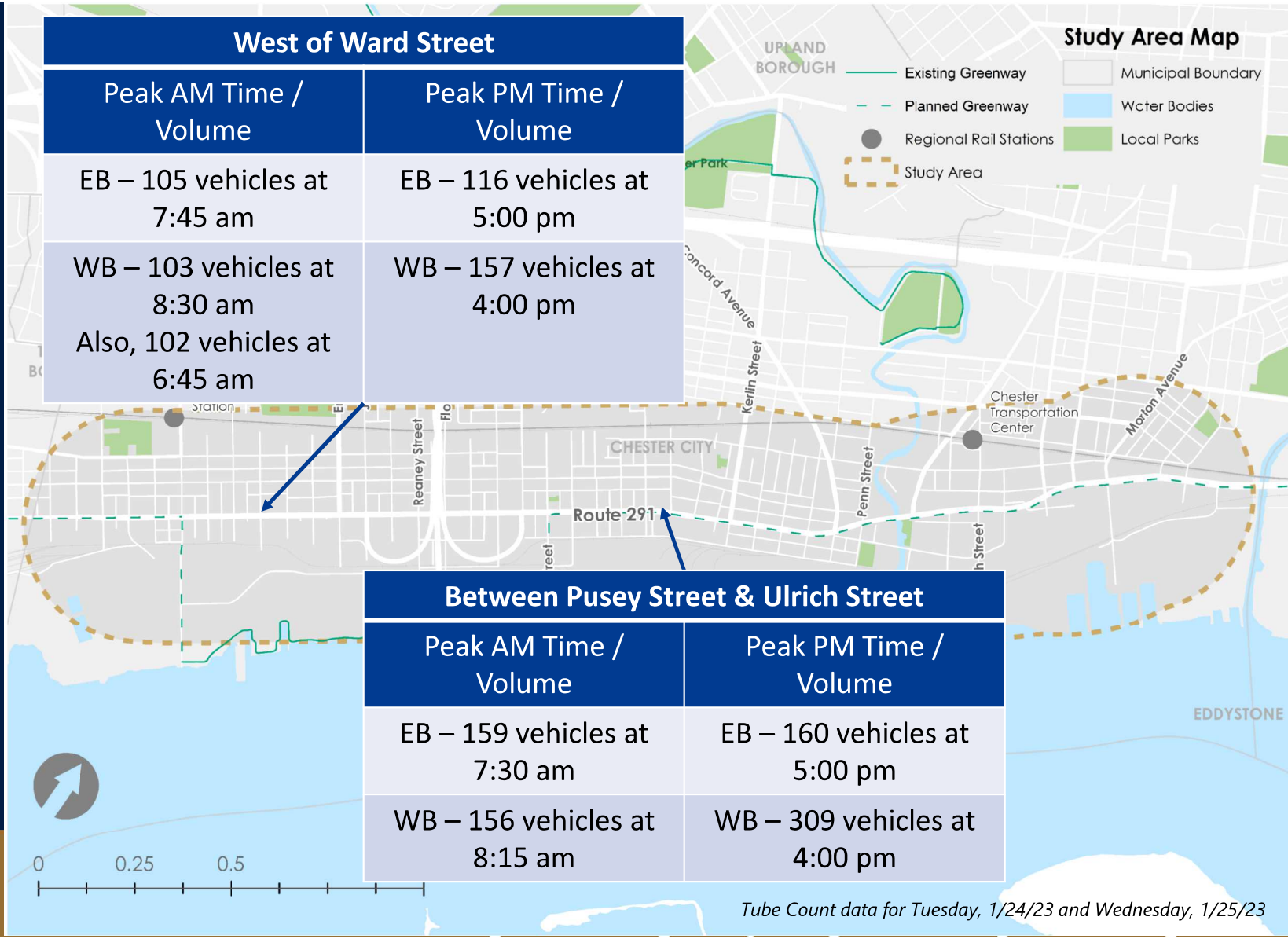
Count data for Tuesday, 1/24/23 and Wednesday, 1/25/23

1. Irving Street & Route 291
2. Highland Ave & Route 291
3. Engle Street & Route 291
4. Jeffrey Street / US 322 Off Ramp & Route 291
5. Flower Street & Route 291
6. Tilghman Street / US 322 On Ramp & Route 291
7. Penn Street & Route 291
8. Welsh Street & Route 291
9. Madison Street & Route 291
10. Morton Ave & Route 291
11. Harrah's Blvd & Route 291
1. Route 291 West of Ward Street
2. Route 291 Between Ulrich Street and Pusey Street

Key Takeaways:

- The westbound peak hour is earlier than eastbound
- Higher westbound volumes in the PM
- Higher volumes east of the bridge, especially westbound PM volumes

West of Ward Street	
Peak AM Time / Volume	Peak PM Time / Volume
EB – 105 vehicles at 7:45 am	EB – 116 vehicles at 5:00 pm
WB – 103 vehicles at 8:30 am Also, 102 vehicles at 6:45 am	WB – 157 vehicles at 4:00 pm



Between Pusey Street & Ulrich Street	
Peak AM Time / Volume	Peak PM Time / Volume
EB – 159 vehicles at 7:30 am	EB – 160 vehicles at 5:00 pm
WB – 156 vehicles at 8:15 am	WB – 309 vehicles at 4:00 pm

Tube Count data for Tuesday, 1/24/23 and Wednesday, 1/25/23

Key Takeaways:

- Heavier truck traffic west of the bridge
- Heavy 5-axle double truck traffic
- Tube count results different from historic counts

Historic Counts

2020 west of bridge - 248 trucks EB, 248 trucks WB

2017 east of bridge - 532 trucks EB, 787 trucks WB

West of Ward Street

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	60	5206	1330	232	462	276	116	118	654	22	2	3	28	178	8687
Percent	0.7%	59.9%	15.3%	2.7%	5.3%	3.2%	1.3%	1.4%	7.5%	0.3%	0%	0%	0.3%	2%	

EB ADT 4343



Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	53	7990	1895	177	568	367	62	86	699	24	1	0	17	376	12315
Percent	0.4%	64.9%	15.4%	1.4%	4.6%	3%	0.5%	0.7%	5.7%	0.2%	0%	0%	0.1%	3.1%	

WB ADT 6157



Between Pusey Street & Ulrich Street

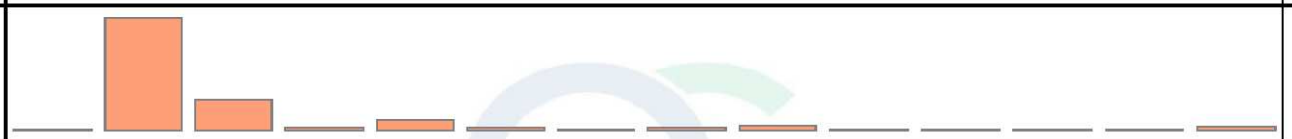
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	104	8799	1961	163	609	204	15	108	399	56	2	0	14	146	12580
Percent	0.8%	69.9%	15.6%	1.3%	4.8%	1.6%	0.1%	0.9%	3.2%	0.4%	0%	0%	0.1%	1.2%	

EB ADT 6290



Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	180	12276	3375	259	1195	265	50	322	564	111	9	14	31	376	19027
Percent	0.9%	64.5%	17.7%	1.4%	6.3%	1.4%	0.3%	1.7%	3%	0.6%	0%	0.1%	0.2%	2%	

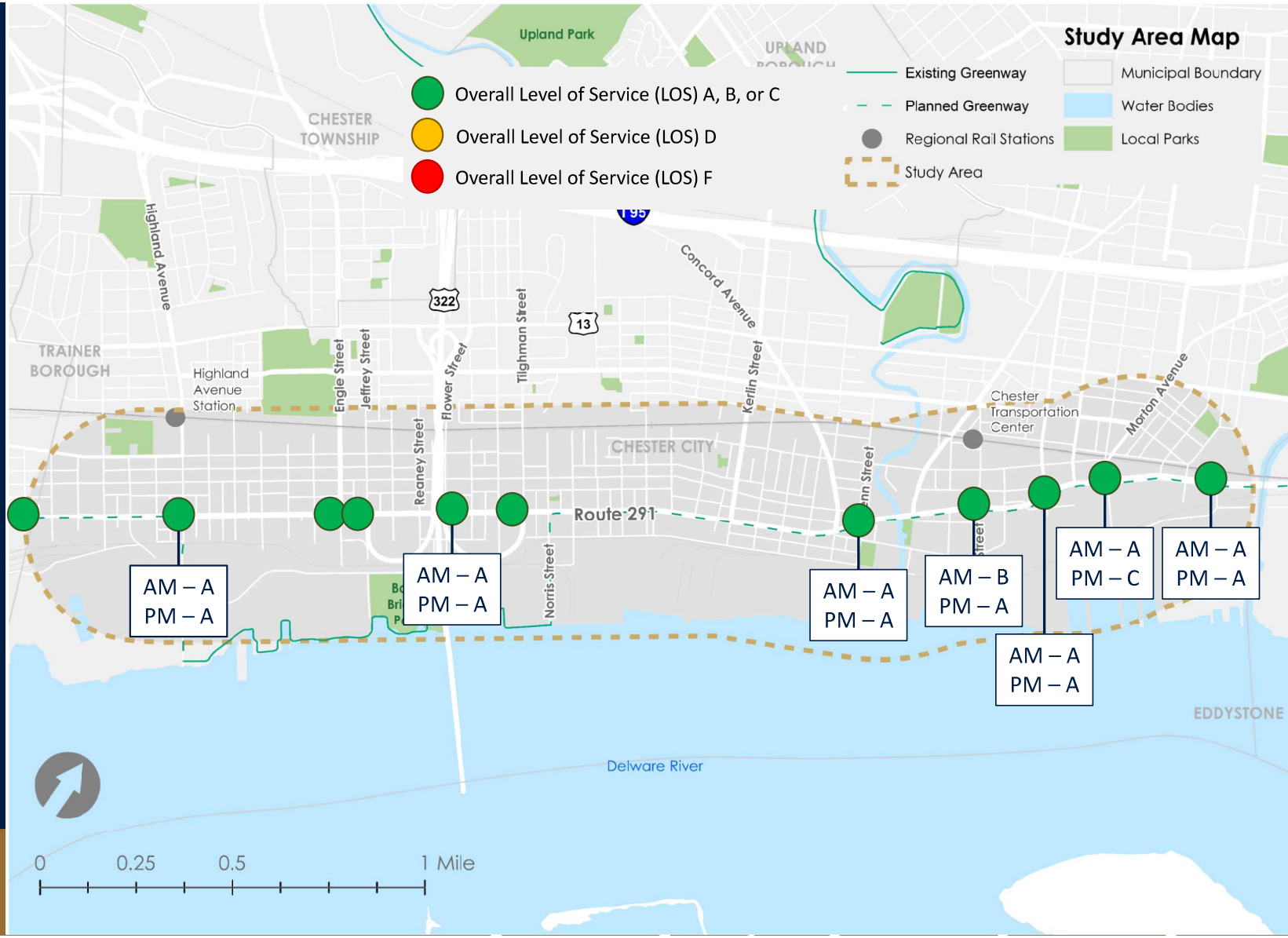
WB ADT 9513



Tube Count data for Tuesday, 1/24/23 and Wednesday, 1/25/23

Key Takeaways:

- Acceptable levels of service at all studied intersections (LOS D or better) overall and for all approaches

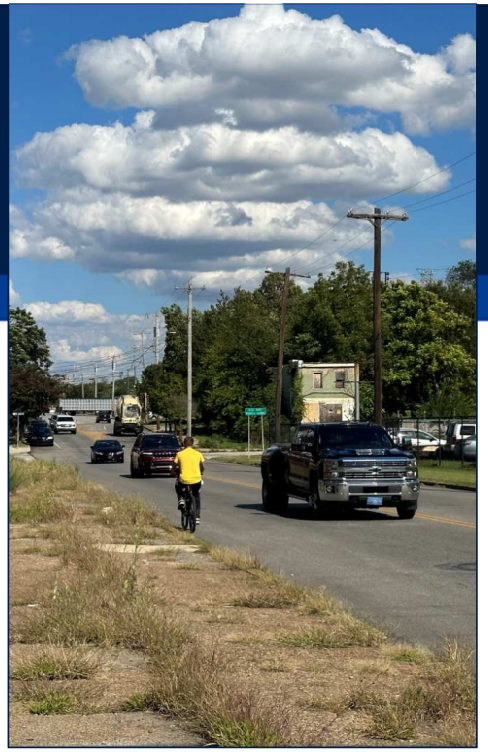


Synthesis of Issues & Opportunities



Key Challenges

- Traffic volumes north/east of the bridge
- Traffic speeds & crashes
- Industrial land uses & heavy truck traffic
- I-95 traffic diversion route
- Disconnected waterfront & vacant parcels
- Lack of pedestrian crossings
- Narrow sidewalks
- No dedicated bike facilities
- Planning fatigue in the community



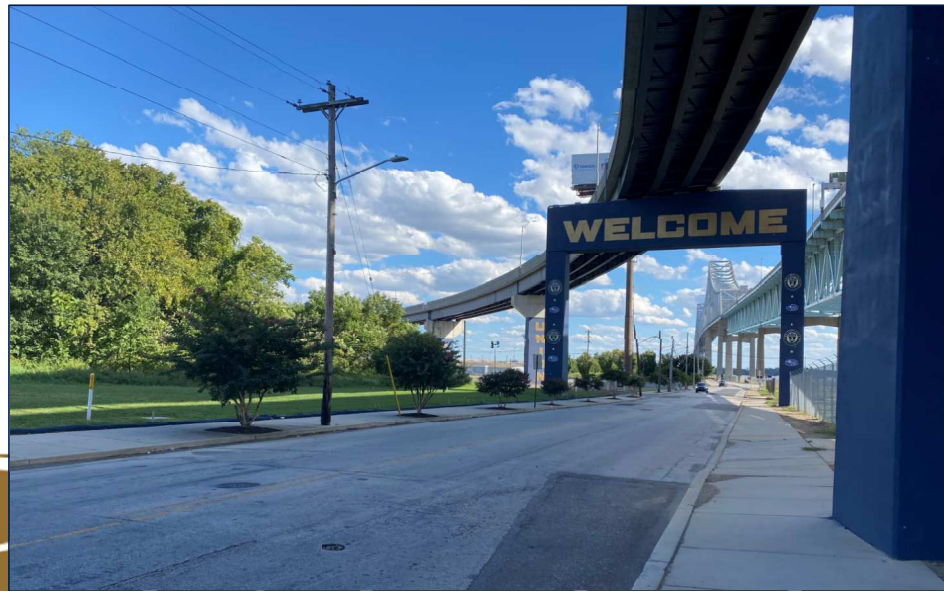




Key Opportunities

- Vision of revitalization in previous plans
- Wide right-of-way footprint to reimagine
- Redevelopment plans & opportunities
- Regional connectivity (transit and roads)
- Major job generators along the corridor
- Existing and planned bike lanes on side streets
- Pedestrian demand





Approach to Developing & Evaluating Alternatives

Route 291 Study

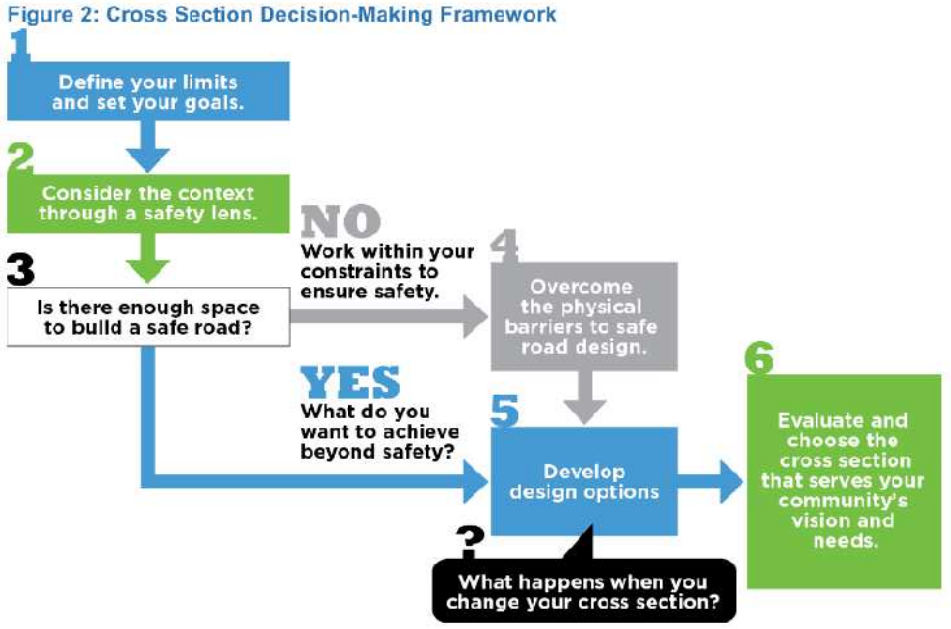


Developing Alternatives

Alternative Development Guided By –

- Project goals and vision
- Community and Stakeholder input
- National guidelines and best practices
- Technical feasibility and corridor context

NCHRP Report 1036: Roadway Cross-Section Reallocation: A Guide



Project Toolkit

Tools color coded by theme

Title, photo, and brief description provided for each tool

Toolkit Themes:

- Greenway Treatments
- Traffic Calming
- Multimodal Access
- Signals & Intersections
- Placemaking
- Truck Route Treatments



Greenway Treatments

SEPARATED BIKE LANE



A separated bike lane is within the street right-of-way and separated from motor vehicle traffic by a physical barrier, such as planters, flexible delineator posts, parked cars, landscape median, or a mountable curb.

SHARED USE PATH / TRAIL



This facility is shared between people biking and walking. A shared use path (SUP) or trail provides the highest level of separation and the lowest level of traffic stress for cyclists.

GREEN PAINT



Green and/or white pavement markings draw attention to cyclists moving through or past conflict areas, including intersections and driveways.

BICYCLE SIGNAL



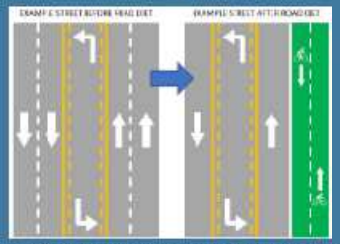
Bicycle signals indicate when bicyclists can cross. They also restrict conflicting vehicle movements. Bicycle-only signals can be used at intersections to provide a separate signal phase that is dedicated to bicyclists.

Which of these tools should be prioritized on Route 291 (in Chester and in Ridley Township)?

Are there other bicycle facilities or greenway treatments that should be considered?

Traffic Calming

ROAD DIET



5

A road diet involves reducing or repurposing lanes to change the purpose, width, directionality, or other characteristics of the roadway. This can slow vehicles and make room for a bicycle facility.

RAISED MEDIAN



6

A raised median provides horizontal deflection to slow vehicles along a roadway. Raised medians provide an opportunity to incorporate a pedestrian refuge or green stormwater infrastructure.

CURB EXTENSION



7

Curb or sidewalk extended into the street, either at an intersection or mid-block, narrows the street width, reduces pedestrian crossing distance, improves visibility of pedestrians, and reduces right-turning vehicle speeds.

INTERSECTION DAYLIGHTING



8

Daylighting uses pavement markings, flexible delineator posts, curb, or other visual or physical elements to delineate spaces where on-street parking is not allowed to maintain visibility at driveways and intersections.

AUTOMATED ENFORCEMENT



9

Automated speed enforcement with the use of cameras can reduce motorist speeds where physical infrastructure is less feasible or effective. Automated enforcement can also be used to reduce red-light running.

Which of these tools should be prioritized on Route 291 (in Chester and in Ridley Township)?

Are there other traffic calming treatments that should be considered?

Multimodal Access

TRANSIT AMENITIES



Transit amenities include shelters, benches, kiosks, and access to other services and amenities. There should be sidewalk access and safe roadway crossings near transit stops.

MARKED CROSSWALK



High visibility reflective crosswalk markings should be incorporated at controlled intersections and at priority midblock crossings. According to FHWA, "a high-visibility marked crosswalk can reduce pedestrian crashes up to 40%."

CROSSWALK VISIBILITY



Signage and warning beacons can be used in advance of marked pedestrian crossings to increase driver yielding.

FLASHING PEDESTRIAN SIGNAL



Rectangular Rapid Flash Beacons (RRFBs) include a flasher that lets motorists know pedestrians are crossing. These are especially applicable at uncontrolled, mid-block or trail crossings.

PROTECTED INTERSECTION



A protected intersection physically separates modes to reduce pedestrian and cyclist exposure. Separate signal phases eliminate conflict points.

SIDEWALK WIDENING



A complete and connected sidewalk network increases pedestrian access and safety. Along an urban corridor, the sidewalk clear width should be at least 6-ft wide, or ideally wider.

PEDESTRIAN REFUGE



A pedestrian median refuge island provides added protection for pedestrians and bicyclists crossing at an intersection or mid-block. The refuge improves pedestrian visibility, reduces conflict points, and reduces crossing distance.

COUNTDOWN SIGNAL



A pedestrian countdown signal includes an accessible push button, appropriate signage, and a pedestrian signal that indicates remaining walk time. Fixed, rather than actuated, signals are most preferred in urban areas.

LEADING PEDESTRIAN INTERVAL



A leading pedestrian interval (LPI) gives pedestrians advance signal time to begin crossing before conflicting vehicles start turning. LPIs are especially helpful at wide, busy intersections.

Signals & Intersections

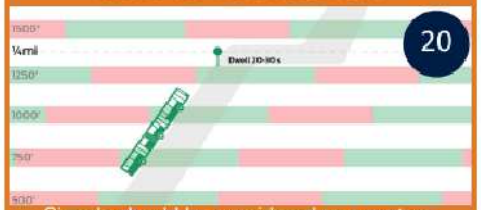
DIRECTIONAL SIGNAGE



Source: PennDOT

Providing clear signs and pavement markings along a corridor can reduce confusion and direct motorists to key destinations.

SIGNAL PROGRESSION



Signals should be considered as a system. Signal progression can provide priority to different modes, such as transit vehicles. It can also optimize performance and reduce queueing and congestion.

SIGNALIZE INTERSECTION



Source: NACTO

Full signalization of an intersection impacts traffic operations and controls the movements of all road users. This can slow traffic, improve mobility, and accommodate pedestrians and cyclists.

ROUNDABOUT



Source: Todd Boam

A roundabout is an intersection treatment with channelized approaches that reduce speeds. Roundabouts minimize conflict points and maintain a safe flow of traffic.

Which of these tools should be prioritized on Route 291 (in Chester and in Ridley Township)?

Are there other intersection operation treatments that should be considered?

Placemaking

Which of these tools should be prioritized on Route 291 (in Chester and in Ridley Township)?

Are there other placemaking treatments that should be considered?

WAYFINDING



Signs direct pedestrians and bicyclists toward destinations in the area, typically including distance and average walking or biking times. Bicycle wayfinidng can help people determine which streets have dedicated bicycle facilities.

CORRIDOR BRANDING



Trail and corridor branding provide a sense of place and direct users to destinations. This branding can connect various facilities within a greater region.

STREET LIGHTING



Pedestrian-scale lighting improves pedestrian security and comfort, especially at crossings, key destinations, and transit stops. Street lights improve visibility for drivers.

STREET TREES



Street trees provide shade and comfort to people on the sidewalk. They also contribute to a lively sense of place. Street trees must be placed and maintained to allow for motorist visibility.

GREEN STORMWATER INFRASTRUCTURE



Green Stormwater Infrastructure (GSI) in sidewalks, medians, and curb extensions collects stormwater runoff and filters it through special soil and plants before it soaks into the ground or is released slowly back into the sewer system.

Truck Route Treatments



What other treatments should we consider for better balancing and managing truck traffic?

Community Response







Route 291 Study

Evaluating Alternatives

Evaluate Alternatives –

- Synchro Analysis*
- SimTraffic Simulation*
- Long-Range Travel Demand Modeling*
- I-95 Diversion Analysis*
- Predictive Safety Analysis*
- ICE Analysis (Stage 1 Form)*
- Planning Evaluation

ALIGNMENT	NEED 1 BETTER ACCESS TO JOBS AND EDUCATION THROUGH IMPROVED EAST-WEST MOBILITY	NEED 2 ENCOURAGE DEVELOPMENT AND REDEVELOPMENT THAT SUPPORTS TRANSIT	NEED 3 INCREASE CORRIDOR TRANSIT RIDERSHIP	NEED 4 SUPPORT LYNX STRATEGIC PLAN AND REGIONAL TRANSIT NETWORK	NEED 5 INVEST IN TRANSIT IMPROVEMENTS THAT ARE FISCALLY RESPONSIBLE	PUBLIC INPUT	POTENTIAL TO MINIMIZE TRAVEL TIME	OVERALL RATING
Alignment A	Medium High	Medium	Medium	Low	Low	Low	Medium	Medium Low
Alignment B	Medium	Medium	Medium	Low	Low	Low	Medium	Medium Low
Alignment C	Medium Low	Medium	Medium	Low	Low	Low	Low	Medium Low
Alignment D	Medium	Medium High	Medium	Medium	Medium	Medium	High	Medium
Alignment E	Medium	High	Medium	Medium	Medium	Medium	Medium	Medium
Alignment F	Medium	High	Medium	Medium	Medium	Medium	High	Medium High
Alignment G	High	Medium Low	Medium High	High	Medium Low	Medium	High	Medium High
Alignment H	Medium	Medium	Medium	Medium High	Medium Low	Medium High	Low	Medium
Alignment I	Medium	Medium High	Medium High	Medium	Low	High	Low	Medium

*Activities required by PennDOT to evaluate road diet

Next Steps



Next Steps

1. Finalize Toolbox – May
2. Developing Alternatives – May / June
3. Evaluating Alternatives – June / July
4. 3rd Steering Committee Meeting – End of July / Early August
5. Next phase of engagement in August

Questions?

Cathy Spahr
(SpahrC@co.delaware.pa.us)

Tara Hofferth
(thofferth@kittelson.com)

A.D. MARBLE
environmental·cultural·engineering

Route 291 Study
Delaware County, PA
Steering Committee Meeting No. 2

MEETING DATE: May 16, 2023

TIME: 1:30PM- 3:00 PM

LOCATION: Virtual. MS Teams

ATTENDEES: Elaine Schaefer, Vice Chair Delaware County Council
Christine Reuther, Delaware County Council; DVRPC Board
Gina Burritt, Delaware County Planning Director
Tom Shaffer, Delaware County Planning Manager, Transportation Planning
Cathy Spahr, Delaware County Senior Planner
Brittani Hales, Delaware County Planning
Julie DelMuto, Delaware County Planning
Ashwin Patel, PennDOT District 6-0
Tim Stevenson, PennDOT District 6-0
Torsten Lienau, PennDOT District 6-0 Consultant- Jacobs
Shawn Megill Legendre, DVRPC
Peter Rykard, City of Chester, Director, City Planning
Lisa Gaffney, CEDA
Daniel Paschall, East Coast Greenway Alliance
Dave Debusschere, Philadelphia Union/Subaru Park
Tim Murphy, Philadelphia Union/Subaru Park
Tara Hofferth, Kittelson & Associates
Will Weismantel, Kittelson & Associates
Colleen Meiswich, A.D. Marble

ATTACHMENTS:
1) PowerPoint Presentation
2) Draft Toolkit

Tara Hofferth reviewed the PowerPoint presentation (attached to these minutes). Below is a summary of the meeting.

Agenda, Introductions, and Overview
Tara re-introduced the project team and reminded the attendees of the entities that comprise the Steering Committee.

Tara reviewed the project overview, project goals, study scope and schedule. Tara updated the Steering Committee on the extended schedule, which is now running approximately 10 to 12 months. Tara briefly reviewed the results of Steering Committee Meeting No. 1 and the role of the Steering Committee.

Since Steering Committee Meeting No. 1, the Project Team coordinated with PennDOT on what would be required to determine roadway reallocation feasibility. Daniel Paschall asked if additional funding is required to cover this study. Tara noted that a PennDOT Consultant (Jacobs) is covering some of the additional studies needed. Kittelson will also require additional funds for additional efforts. Gina Burritt noted that the County will be funding Kittelson for these additional funds.

Performance Measures and Community Feedback

Tara reviewed the performance measures and provided the Steering Committee an update on the Community Feedback to date. In April, a Listening Session was held and throughout March and April, the public provided comments on the comment map. There were common themes provided during this outreach, and they are summarized on the attached Slides 20 and 21.

Peter Rykard noted that during the outreach and in future discussions, emphasize that Route 291 is a State Road and not a City road.

Existing Conditions Analyses and Predictive Safety Analysis

Daniel asked if the team reviewed the Bus Revolution studies. Tara noted that the team has not but that will be an action item for Kittelson.

The existing projects occurring in the City of Chester were discussed. A traffic signal will be added at Route 291 and Jeffrey Street. A Rectangular Rapid Flashing Beacon (RRFB) will be added at Route 291 and Reaney Street. Coordination with these projects and their project teams is needed. McMahon is one of the firms involved for these other projects.

Daniel asked what the high frequency of angle crashes reveals. Tara and Will Weismantel stated that angle-type crashes typically relate to intersection-based crashes.

A discussion about the speeds on Route 291 occurred. There are existing speed limits of 35 mph. There was consensus that while the team could evaluate the speed on US-13 as a comparison to the speeds on Route 291 and lowering the speed limit could be part of the toolkit, lowering the speed limit is not a long-term solution. There was consensus that infrastructure tools are needed to slow vehicles down.

Approach to Developing & Evaluating Alternatives

Tara discussed the Project Toolkit and various themes identified. See attached for the revised toolkit, which reflects feedback received during the meeting. A discussion on the toolkit themes occurred:

Greenway Treatments

Shawn Megill Legendre indicated that the success of the greenway treatments depends on the space available. If the corridor allows it, can do a shared use path. The bike lane could also be used as a cycle path and have two way separated bike lanes; this would also need a separate sidewalk.

Ashwin Patel indicated that a separated shared use path/trail is desired by PennDOT. Separated Bike Lanes typically require a curb between the lane and sidewalk based on current vehicle code.

Elaine Schaefer strongly advocated for shared use path/trail. This invites beautification and traffic calming, and also invites people to want to invest in this area.

Daniel agrees with a shared use path/trail. The East Coast Greenway Alliance typically pushes for the most separation between vehicles and trail users. Separated Bike Lanes are great in constrained section but the East Coast Greenway Alliance prefers a trail. A trail helps to push a better pedestrian facility. A path helps walking to/from buses and for recreational purposes.

Lisa Gaffney and Cathy Spahr discussed Asphalt Art completed by Bloomburg Philanthropies where local artists complete the art. This was done recently in Media at Jackson Street. Gina Burritt provided the link in the chat- https://asphaltart.bloomberg.org/. Ashwin noted that PennDOT typically does not permit this in state right-of-way; however, PennDOT is currently working on updating policies for local aid highways.

Daniel shared in the chat: Please recommend inclusion of trail amenities overall as part of the Greenway (benches, bus shelters, trees, other ways to add art, wayfinding for the trail and nearby destinations) -- see recommendations related to infrastructure on page 2 of this summary (from Equity of Access to Trails Study): https://williampennfoundation.org/sites/default/files/reports/Equitable%20Trail%20Use%202-pager.pdf and https://williampennfoundation.org/what-we-are-learning/equity-access-trails.

Daniel also referenced Tinicum's shared use path / ECG on 291 has a bus shelter and trash can with access to the trail: https://goo.gl/maps/eHbReWAoXYYVTDYP9. After the meeting, Daniel sent along additional trail photos and resources.

Traffic Calming

Tim Stevenson asked about the type of automated enforcement the team was proposing and noted that automated speed control requires legislation. Ashwin stated that he could check if the City of Chester is able to do red light running. Peter noted that the City of Chester tried to institute red light cameras but the police department did not have accreditation to put this in place. Cathy stated that this may be an item the County can work through with the City of Chester, and this could be an action item that is worked towards.

Shawn preferred rumble strips and noted that speed bumps would likely be too jarring. Tara noted that raised treatments are not best option for this roadway.

Lisa asked if marking the speed limit on the road is permissible. PennDOT noted that yes, that is permitted.

Peter noted that adding more signs to show the posted speed limit would be helpful. Ashwin indicated that speed limit signs 35 mph and below is the responsibility of the municipality. The City of Chester is responsible for replacing missing signs.

Daniel asked if there would be pedestrian refuge areas in the raised median option. Tara indicated that there could be refuge areas.

Multimodal Access
Daniel asked that pedestrian scale lighting and intersection lighting be added.

Signals & Intersections
Lisa asked that the team look at the signal timing of Flower Street.

Placemaking Tools
No feedback was provided.

Truck Route Treatment
The team will add truck aprons to the toolbox.

Daniel noted that there is an NACTO (National Association of City Transportation Officials) guide that focuses on industrial streetscapes. (https://nacto.org/publication/urban-street-stormwater-guide/stormwater-streets/industrial-street/)

Next Steps
Tara noted that members of the team attended the 2023 Chester River Festival and received good feedback from the attendees.

Ashwin asked for existing condition analysis files. Tara will send pdf to Steering Committee. Ashwin also asked for the Syncro files and the safety analysis files. Tara will package traffic files and send to PennDOT and the Steering Committee, to be passed along to the City engineer by Lisa.

Daniel asked about the small gap in the proposed Ridley Township trail connection from Stewart Avenue to the Darby Creek Bridge. Daniel clarified that while PennDOT is building a portion of the trail in Ridley Township, a small gap will remain. Tara indicated that the team will look into this and will assess alternatives.

Tara asked for the contact for the firm that worked on the Eddystone project. Shawn will send along the final report for that.

Ashwin indicated PennDOT may be planning a traffic calming project in the southern section of the corridor. They will get Kittelson the plans and schedule.

Tara thanked everyone for their attendance. The meeting ended at approximately 3:00 pm.

The preceding is a summary of the items discussed at the above-mentioned meeting. If you have any corrections to these meeting minutes, please provide them to Colleen Meiswich of A.D. Marble at cmeiswich@admarble.com by **Friday, June 2, 2023.**

Improving Safety on Route 291



Steering Committee Meeting #3

September 20, 2023

9:30 am – 11:00 am

Delaware County
Pennsylvania

KITTELSON & ASSOCIATES

A.D. MARBLE
environmental·cultural·engineering
DBE/MBE/WBE CERTIFIED

Agenda

1. Study Recap
2. Other Study Area Projects
3. Alternatives Overview
4. Analysis Overview
5. Analysis Results
6. Ridley Township
7. Activities
8. Next Steps



Introductions

Elaine Paul Schaefer (Vice Chair, Delaware County Council)

Gina Burritt (Director, Planning)

Tom Shaffer (Manager, Transportation Planning)

Cathy Spahr (Senior Planner)

Tara Hofferth

Will Weismantel

Alain Izabayo

KITTELSON & ASSOCIATES

Colleen Meiswich

A.D. MARBLE
environmental·cultural·engineering
DBE/MBE/WBE CERTIFIED

Introductions

- Chester City
- Eddystone Borough
- Ridley Township
- Tinicum Township
- Delaware County Planning
- Delaware County GIS
- Delaware County Council
- PennDOT District 6
- Riverfront Alliance
- Delaware Valley Regional Planning Commission
- East Coast Greenway Alliance
- PA Environmental Council
- Bicycle Coalition
- State Representation
- SEPTA

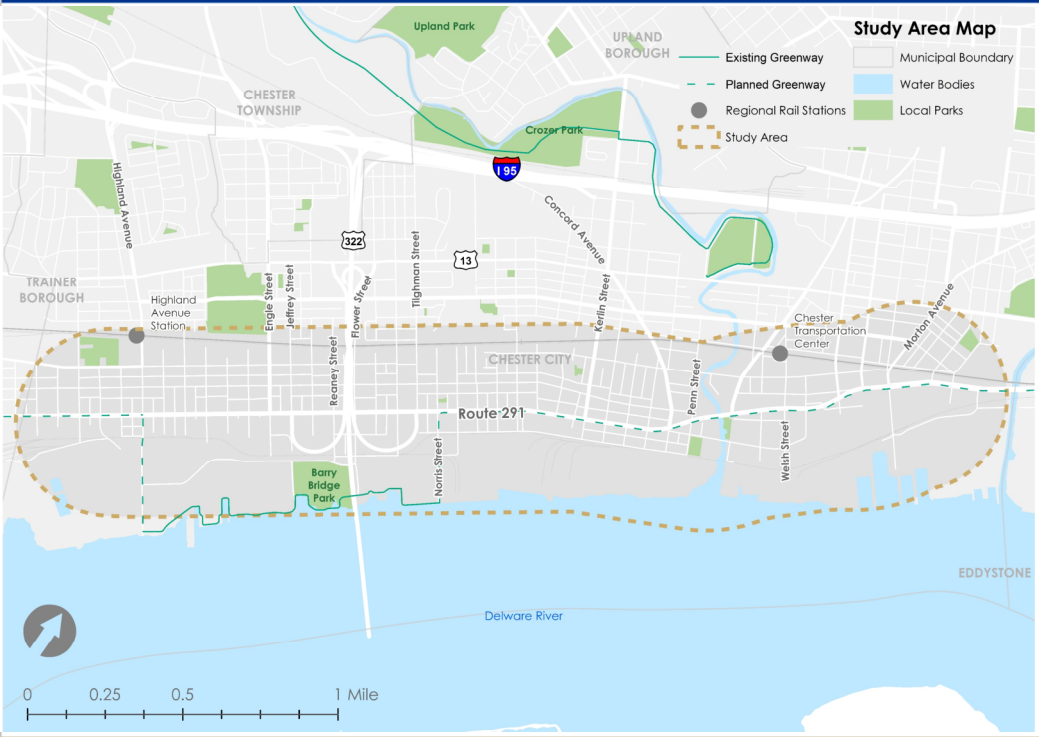
Study Recap



Goals

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

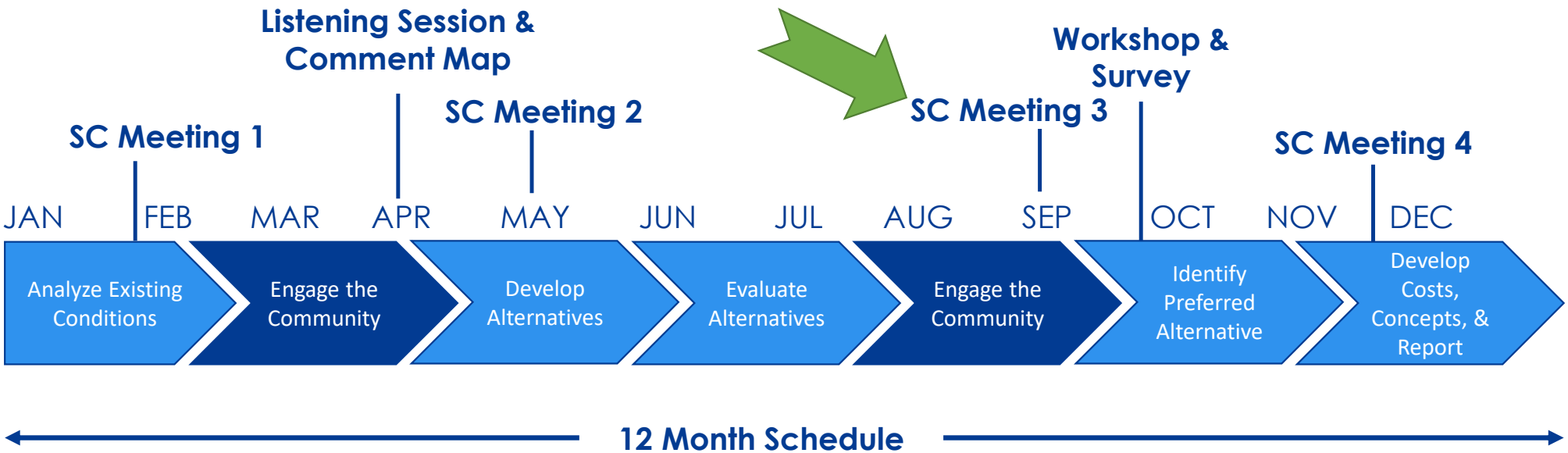
It will also make recommendations for the **dedicated East Coast Greenway facility** through Chester City and Ridley Township.



Study Objectives:

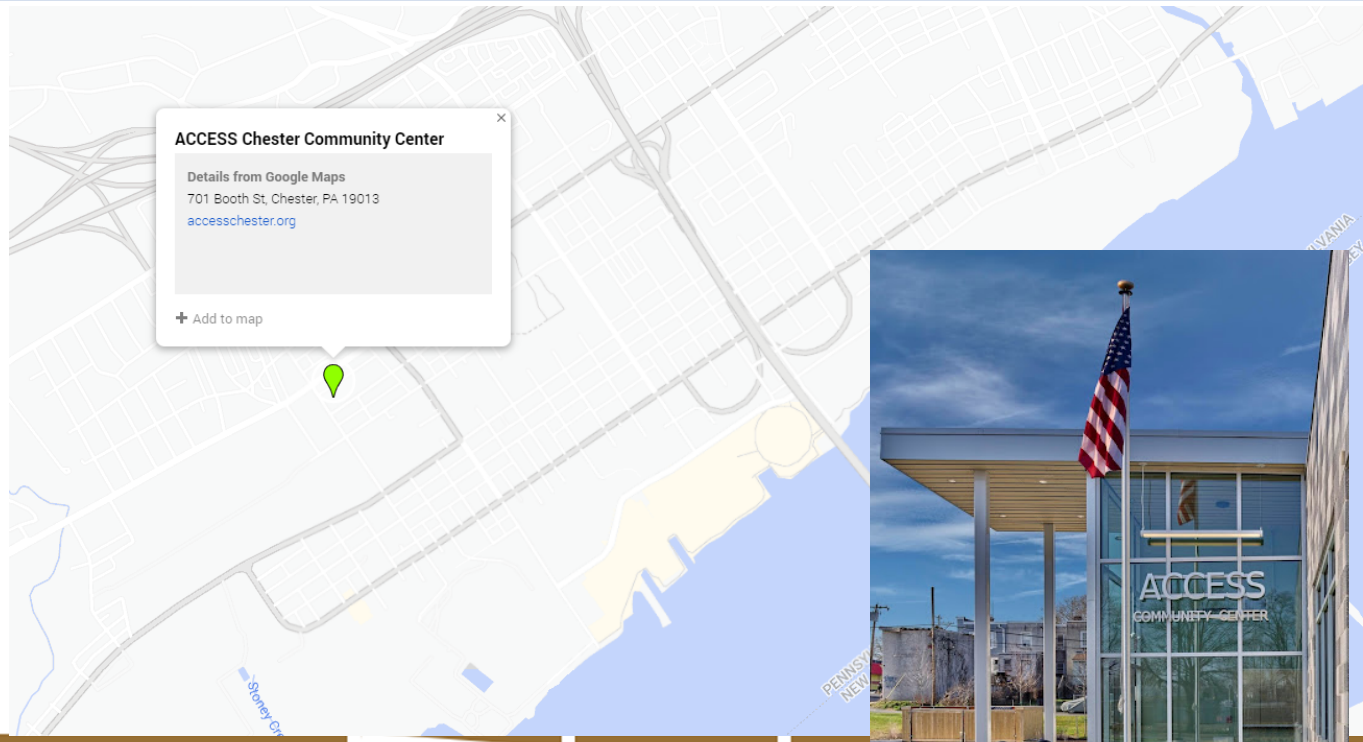
- Improve Safety For All
- Create Connections for Walking & Biking
- Optimize Roadway Operations
- Balance Residential and Industrial Needs
- Plan for Implementation

Timeline


Listening Session & Comment Map
SC Meeting 1
SC Meeting 2
SC Meeting 3
Workshop & Survey
SC Meeting 4
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Analyze Existing Conditions
Engage the Community
Develop Alternatives
Evaluate Alternatives
Engage the Community
Identify Preferred Alternative
Develop Costs, Concepts, & Report
12 Month Schedule

Upcoming Engagement

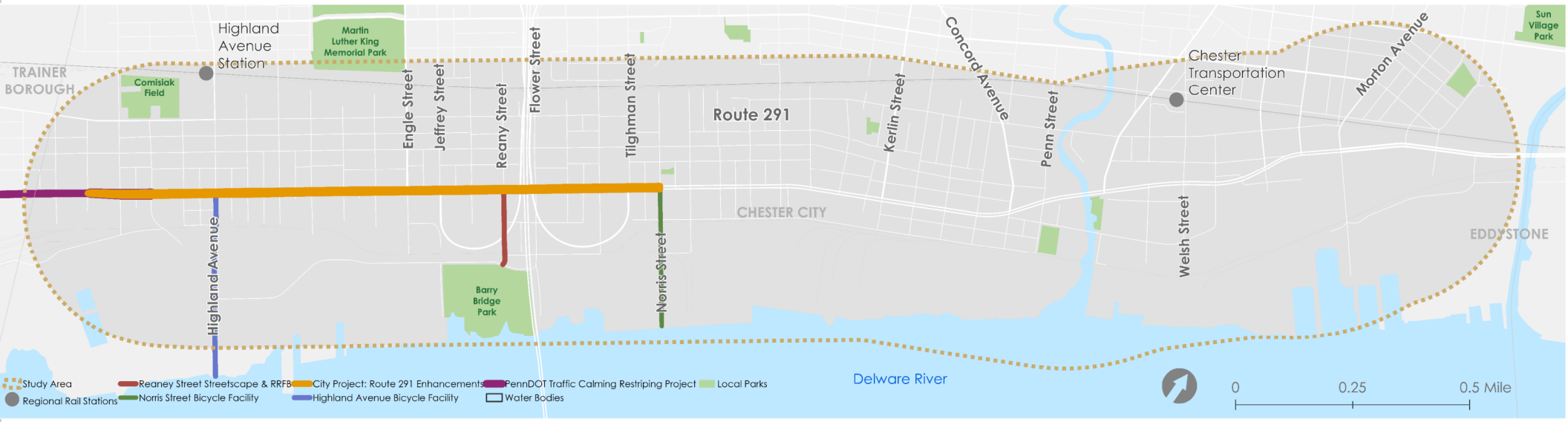
- Survey (Open through October 25th)
- Public Workshop October 11th at the ACCESS Center
- Distributing flyers at Food Truck Event & other community places



Other Study Area Projects



Other Projects in Study Area



Alternatives Overview

Route 291 Study



IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMAKING

SIGNALS & INTERSECTIONS

MULTIMODAL ACCESS

TRAFFIC CALMING

GREENWAY TREATMENTS

SEPARATED BIKE LANE



A separated bike lane is within the street right-of-way and separated from motor vehicle traffic by a physical barrier, such as planters, flexible delineator posts, parked cars, landscape median, or a mountable curb.

SHARED USE PATH / TRAIL



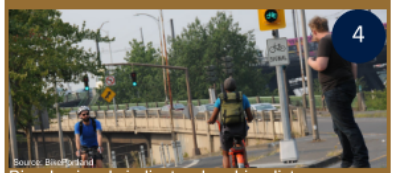
This facility is shared between people biking and walking. A shared use path (SUP) or trail provides the highest level of separation and the lowest level of traffic stress for cyclists.

GREEN PAINT



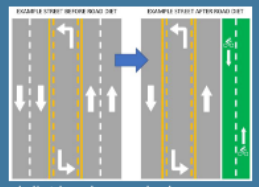
Green and/or white pavement markings draw attention to cyclists moving through or past conflict areas, including intersections and driveways.

BICYCLE SIGNAL



Bicycle signals indicate when bicyclists can cross. They also restrict conflicting vehicle movements. Bicycle-only signals can be used at intersections to provide a separate signal phase that is dedicated to bicyclists.

ROAD DIET



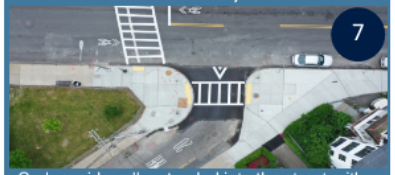
A road diet involves reducing or repurposing lanes to change the purpose, width, directionality, or other characteristics of the roadway. This can slow vehicles and make room for a bicycle facility.

RAISED MEDIAN



A raised median provides horizontal deflection to slow vehicles along a roadway. Raised medians provide an opportunity to incorporate a pedestrian refuge or green stormwater infrastructure.

CURB EXTENSION / BULBOUT



Curb or sidewalk extended into the street, either at an intersection or mid-block, narrows the street width, reduces pedestrian crossing distance, improves visibility of pedestrians, and reduces right-turning vehicle speeds.

INTERSECTION VISIBILITY



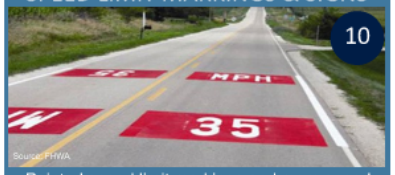
Marking off areas using pavement markings, flexible delineator posts, or other visual or physical elements delineates space where on-street parking is restricted. This maintain visibility at driveways and intersections.

SPEED / RED LIGHT CAMERAS



Speed or red light running cameras can reduce motorist speeds and impact driver behavior where physical infrastructure is less feasible or effective. Additional legislation and certification might be needed to implement.

SPEED LIMIT MARKINGS & SIGNS



Painted speed limit markings and more speed limit signs provide a visual reminder of the desired and allowable roadway speed. Speed limits can also be reduced where appropriate.

BUFFERS & RUMBLE STRIPS



Buffers and/or rumble strips can be used to separate different modes or traffic traveling in opposite directions. These treatments can enforce separation between fast moving traffic and a parking lane, bike lane, or turn lane.

SIDEWALK WIDENING



A complete and connected sidewalk network increases pedestrian access and safety. Along an urban corridor, the sidewalk clear width should be at least 6-ft wide, or ideally wider.

PEDESTRIAN REFUGE



A pedestrian median refuge island provides added protection for pedestrians and bicyclists crossing at an intersection or mid-block. The refuge improves pedestrian visibility, reduces conflict points, and reduces crossing distance.

MARKED CROSSWALK



High visibility reflective crosswalk markings should be incorporated at controlled intersections and at priority midblock crossings. According to FHWA, "a high-visibility marked crosswalk can reduce pedestrian crashes up to 40%."

CROSSWALK VISIBILITY



Signage and warning beacons can be used in advance of marked pedestrian crossings to increase driver yielding.

INTERSECTION MARKINGS



Pavement markings visually separate modes to reduce pedestrian and cyclist exposure. Separate signal phases for bicyclists and pedestrians eliminate conflict points.

IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMAKING

SIGNALS & INTERSECTIONS

MULTIMODAL ACCESS

TRAFFIC CALMING

GREENWAY TREATMENTS

FLASHING PEDESTRIAN SIGNAL



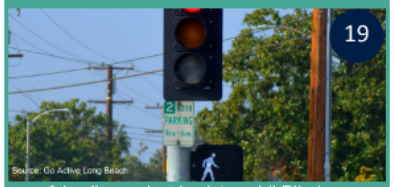
Rectangular Rapid Flash Beacons (RRFBs) include a flasher that lets motorists know pedestrians are crossing. These are especially applicable at uncontrolled, mid-block or trail crossings.

PEDESTRIAN COUNTDOWN SIGNAL



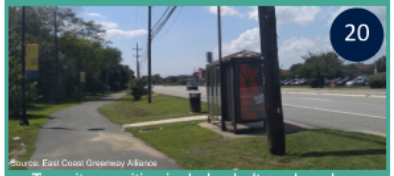
A pedestrian countdown signal includes an accessible push button, appropriate signage, and a pedestrian signal that indicates remaining walk time. Fixed, rather than actuated, signals are most preferred in urban areas.

EXTRA PEDESTRIAN CROSSING TIME



A leading pedestrian interval (LPI) gives pedestrians advance signal time to begin crossing before conflicting vehicles start turning. LPIs are especially helpful at wide, busy intersections.

TRANSIT AMENITIES



Transit amenities include shelters, benches, kiosks, and access to other services and amenities. There should be sidewalk access and safe roadway crossings near transit stops.

TRAFFIC SIGNALS AT INTERSECTIONS



Full signalization of an intersection impacts traffic operations and controls the movements of all road users. This can slow traffic, improve mobility, and accommodate pedestrians and cyclists.

ROUNDABOUT



A roundabout is an intersection treatment with channelized approaches that reduce speeds. Roundabouts minimize conflict points and maintain a safe flow of traffic.

DIRECTIONAL SIGNAGE



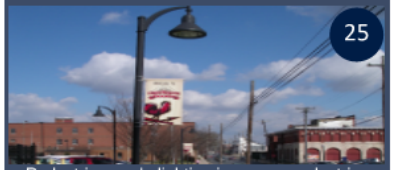
Providing clear signs and pavement markings along a corridor can reduce confusion and direct motorists to key destinations.

TRAFFIC SIGNAL TIMING



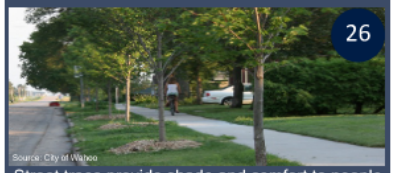
Traffic signal timing changes can optimize traffic operation and reduce queueing and congestion. Signal timing might also provide priority to different modes, such as transit vehicles.

STREET LIGHTING



Pedestrian-scale lighting improves pedestrian security and comfort, especially at crossings, key destinations, and transit stops. Street lights improve visibility for drivers.

STREET TREES



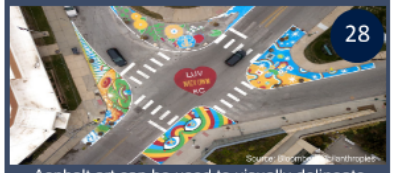
Street trees provide shade and comfort to people on the sidewalk. They also contribute to a lively sense of place. Street trees must be placed and maintained to allow for motorist visibility.

GREEN STORMWATER INFRASTRUCTURE



Green Stormwater Infrastructure (GSI) in sidewalks, medians, and curb extensions collects stormwater runoff and filters it through special soil and plants before it soaks into the ground or is released slowly back into the sewer system.

ASPHALT ART



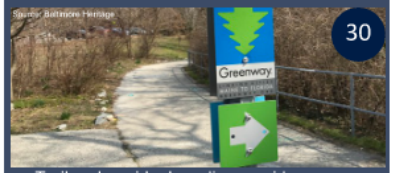
Asphalt art can be used to visually delineate space in the roadway to improve safety and revitalize public space.

TRAIL WAYFINDING & AMENITIES



Signs direct pedestrians and bicyclists toward destinations in the area, typically including distance and average walking or biking times. Other amenities might include benches, shelters, trees, and art.

CORRIDOR BRANDING



Trail and corridor branding provide a sense of place and direct users to destinations. This branding can connect various facilities within a greater region.

TRUCK SIGNAGE



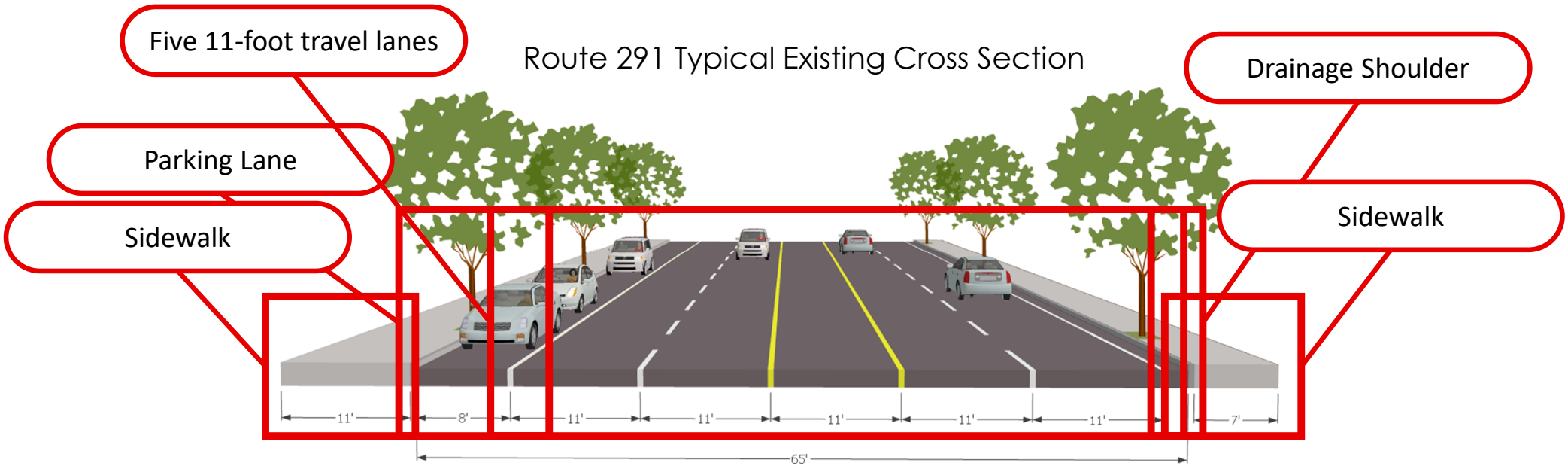
Signs and pavement markings can be used to direct and restrict truck traffic. Through-movement truck traffic can be discouraged while trucks accessing industry along the corridor can be directed to make safe, slow movements.

TRUCK APRON

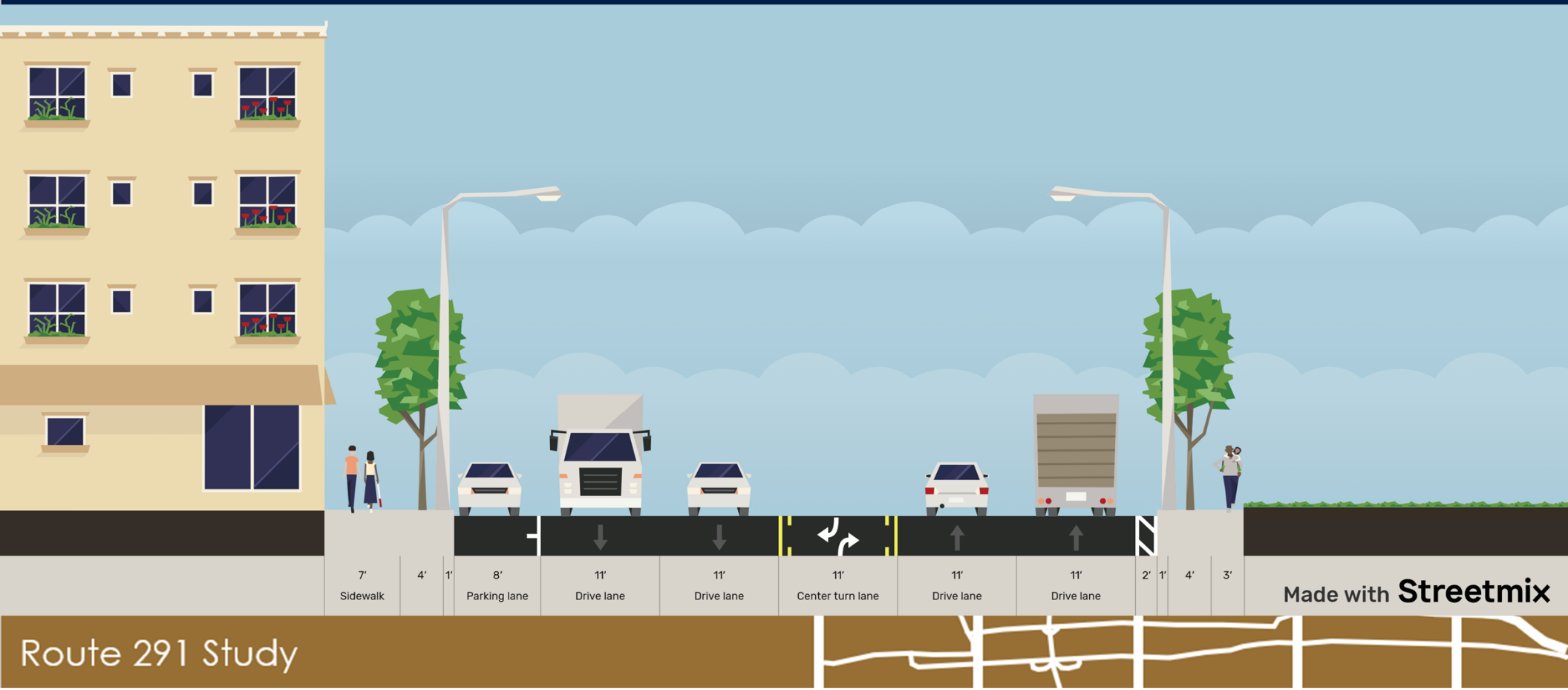


A truck apron is mountable by trucks or buses, but not by smaller vehicles. This means that the radius at intersections or driveways can be tightened to improve safety for pedestrians while still allowing wider truck turning movements.

Existing Cross Section / No Build

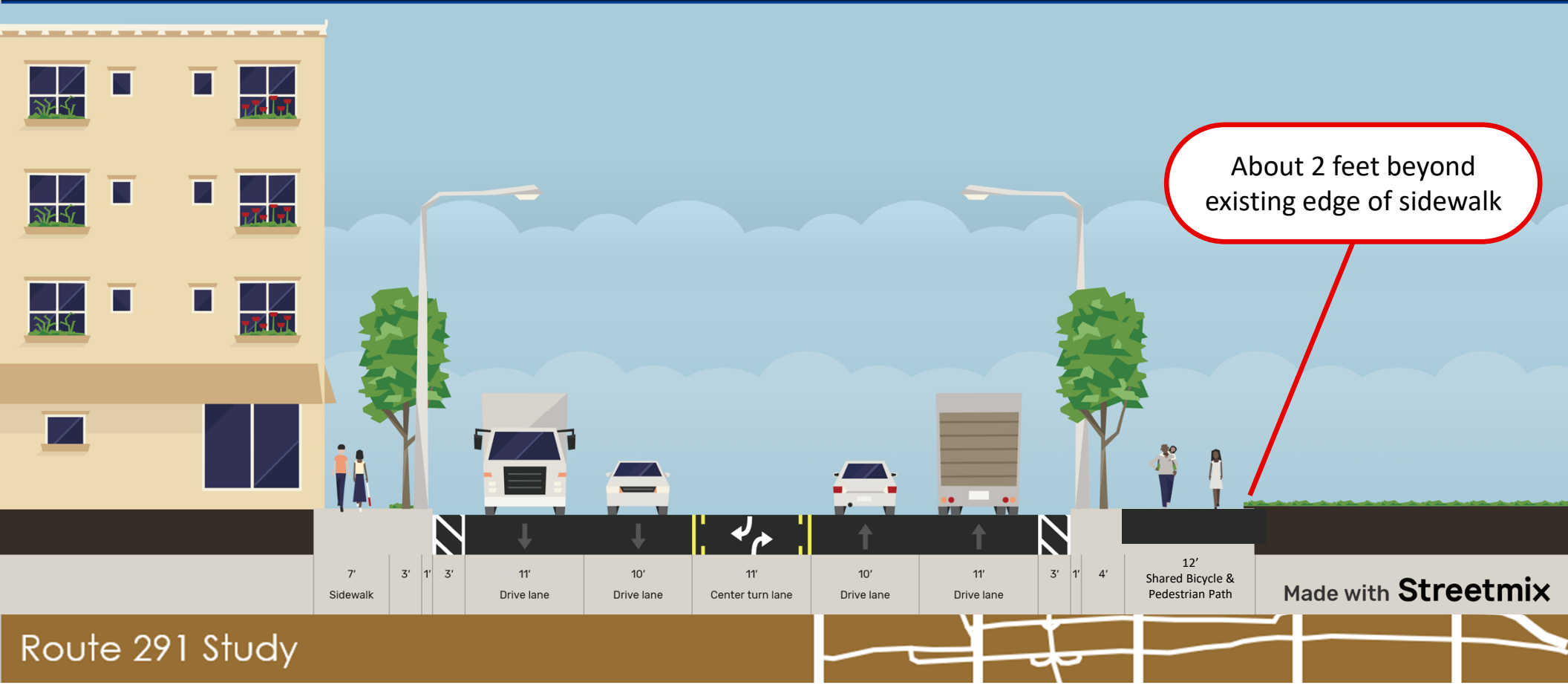


Existing Cross Section / No Build



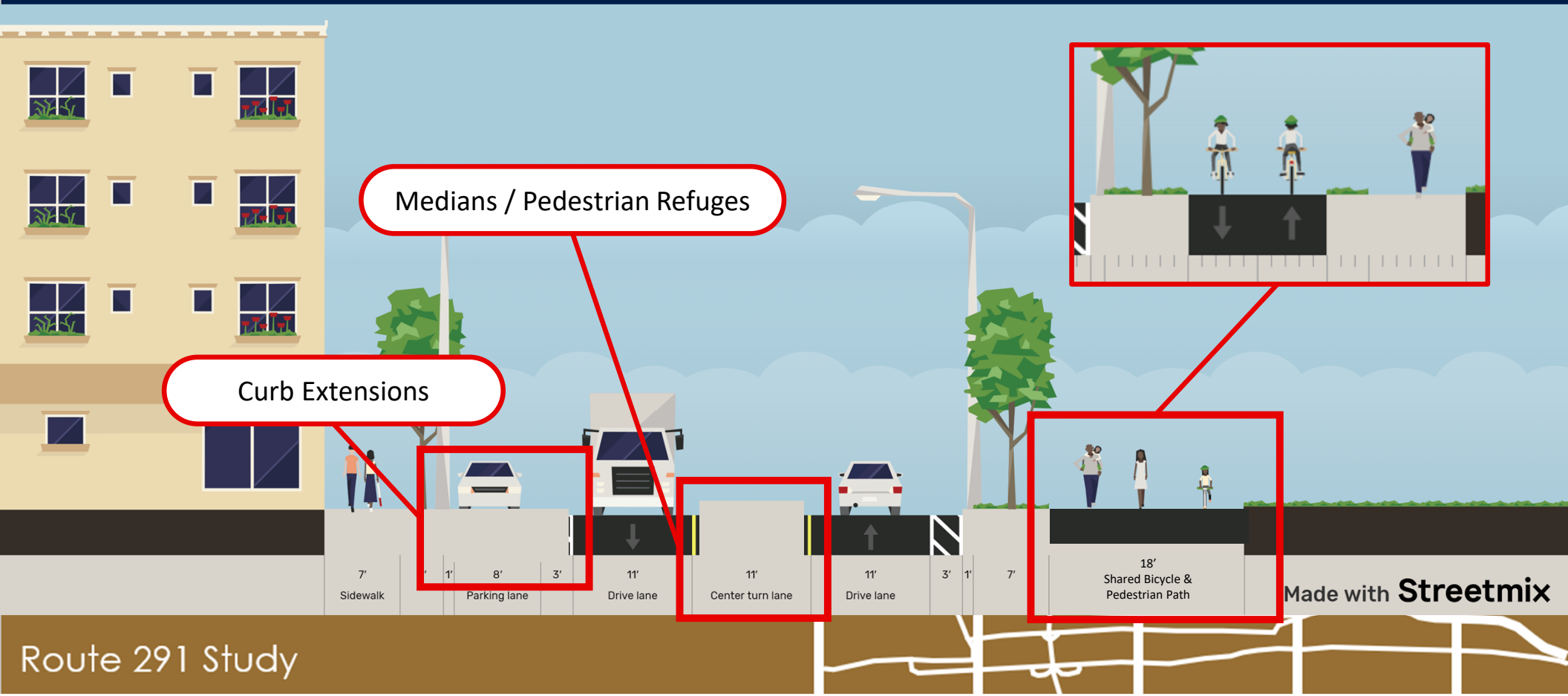
Route 291 Study

Alternative A –
5 Lanes with Safety Improvements



Route 291 Study

Alternative B –
3 Lanes with Safety Improvements



Route 291 Study

Analysis Overview



Performance Metrics



- Reduce crashes
- Reduce vehicle speeds
- Maintain Emergency response
- Provide more controlled crossings
- Improve pedestrian comfort
- Improve bicycle level of traffic stress
- Improve transit access
- Allow truck turning movements
- Provide acceptable vehicle level of service
- Maintain capacity during I-95 closures
- Maintain capacity on parallel streets
- Reduce environmental impacts
- Reduce construction & maintenance cost
- Beautify the corridor

Analyses Performed

- Crash Analysis
- Intersection Control Evaluation
- Traffic Analysis
- I-95 Diversion Analysis
- Other Planning Analyses

Crash Analysis

Route 291 Study



Crash Analysis

- HSM Predictive Safety Analysis
- Identify roadway characteristics that predict crash potential, such as classification, width, design speed



290

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

Crash Analysis – total crashes

5 Lanes, No Safety Improvements	58 Predicted Crashes
Reduce to 3 Lanes	44 Predicted Crashes
Alternative B – Keep 5 Lanes, Make Safety Improvements	32 Predicted Crashes
Alternative A – Reduce to 3 Lanes, Make Safety Improvements	21 Predicted Crashes



Predicted Crashes per Year

Crash Analysis – severe crashes

5 Lanes, No Safety Improvements	58 Predicted Crashes	41 F&I / 18 PDO
Reduce to 3 Lanes	44 Predicted Crashes	27 F&I / 17 PDO
Alternative B – Keep 5 Lanes, Make Safety Improvements	32 Predicted Crashes	22 F&I / 10 PDO
Alternative A – Reduce to 3 Lanes, Make Safety Improvements	21 Predicted Crashes	12 F&I / 9 PDO



F&I = Fatal and Injury Crashes
PDO = Property Damage Only Crashes
Predicted Crashes per Year

Basic Level of Comfort Analysis

Existing Condition

Category	Route 291	General PLOC
Street Functional Classification	Other Principal Arterial Highway	LOW
85th Percentile Speed	45-50 mph	LOW
Sidewalk / Planting Strip Width	7-feet (varies)	LOW
Marked Crosswalks	1 for entire corridor	LOW
Curb Ramps	Typical (but not all compliant)	MEDIUM

3 Lanes with Safety Improvements

Slow vehicle speeds to speed limit of 35 mph

Provide wide sidewalk / shared use path facilities

Provide several marked and controlled crossings

Replace all curb ramps to be ADA compliant

Pedestrian Level of Comfort (PLOC) methodology has modified one used in Montgomery County, MD



Intersection Control Evaluation

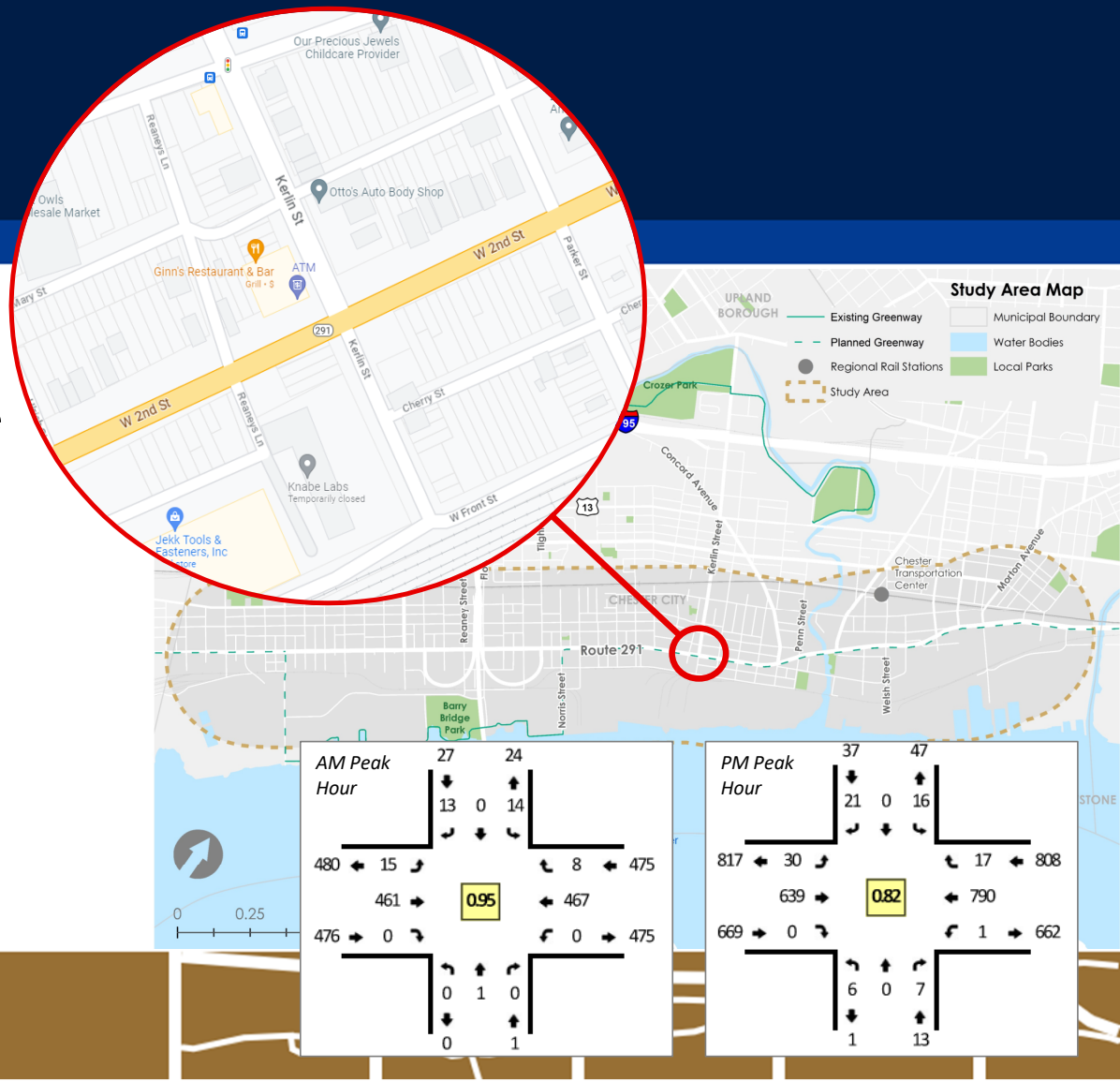
Route 291 Study



Kerlin Street

- Signalized control would reduce crashes and minimize traffic operation impacts during peak hours

- Other options:
  - All-Way Stop Control
  - Roundabout
  - Median U Turn
  - Restricted Crossing U Turn



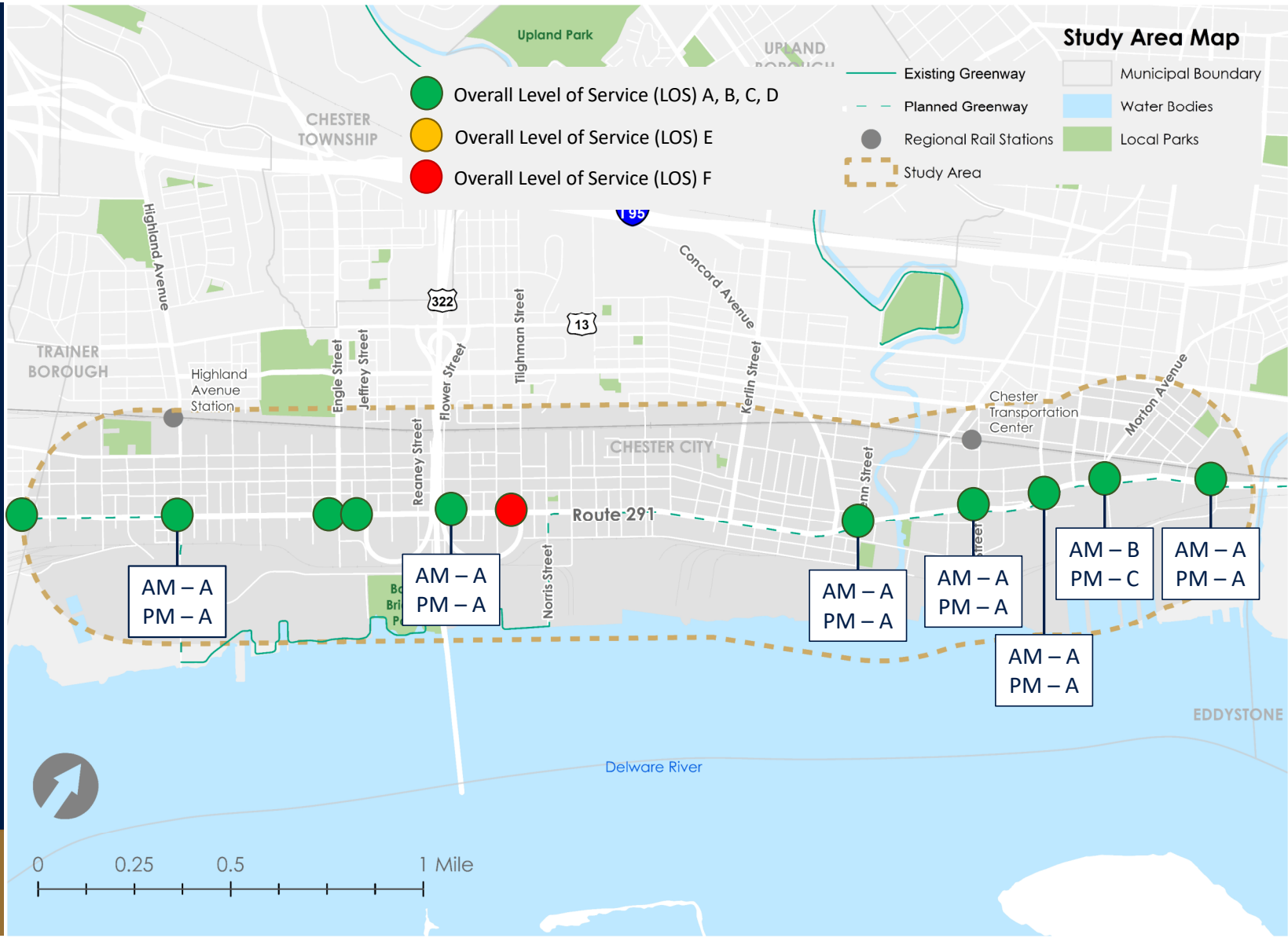
Traffic Analysis

Route 291 Study



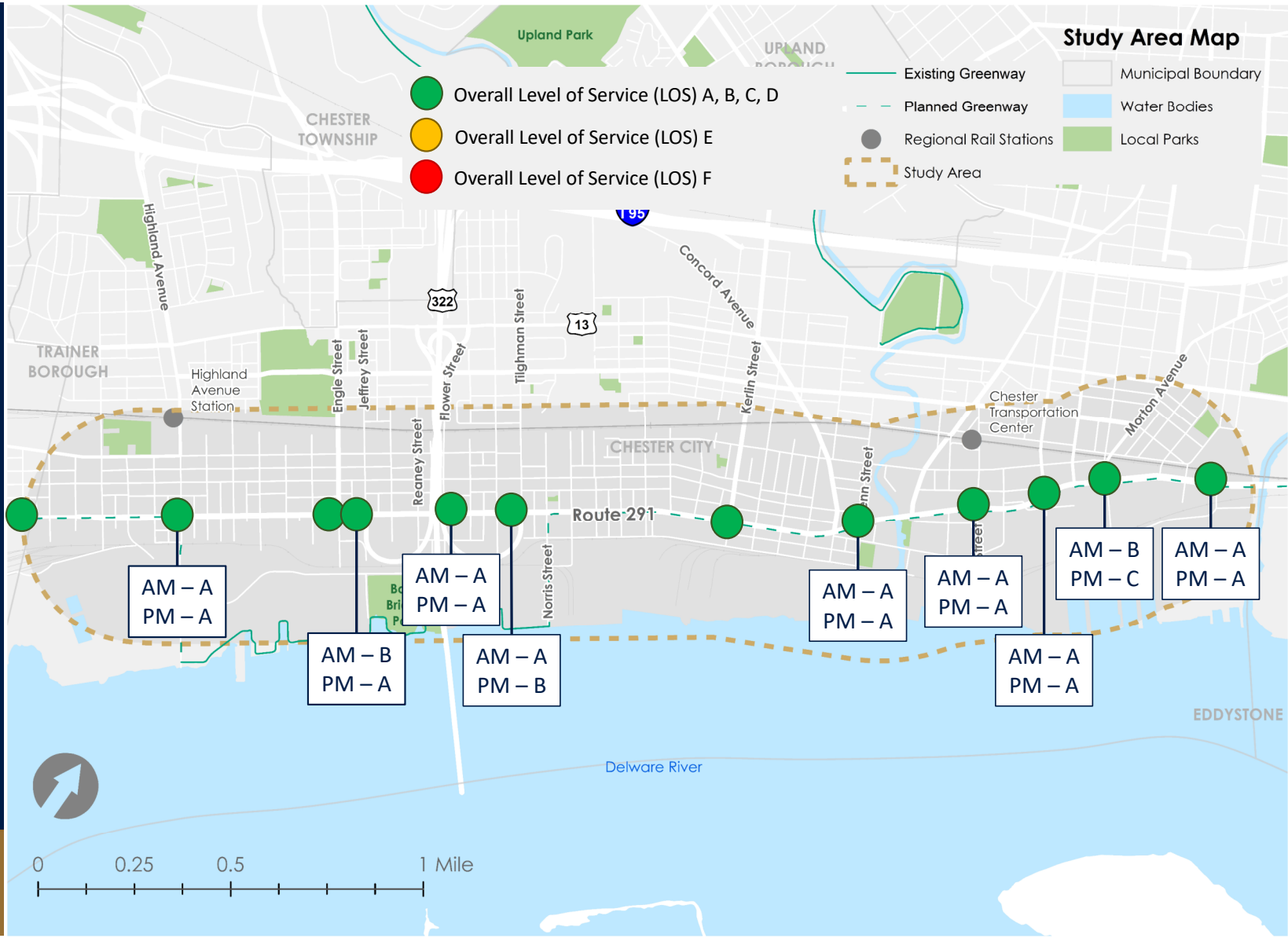
Existing Traffic Operations (2023):

- Acceptable levels of service at all studied intersections (LOS D or better) overall and for all approaches



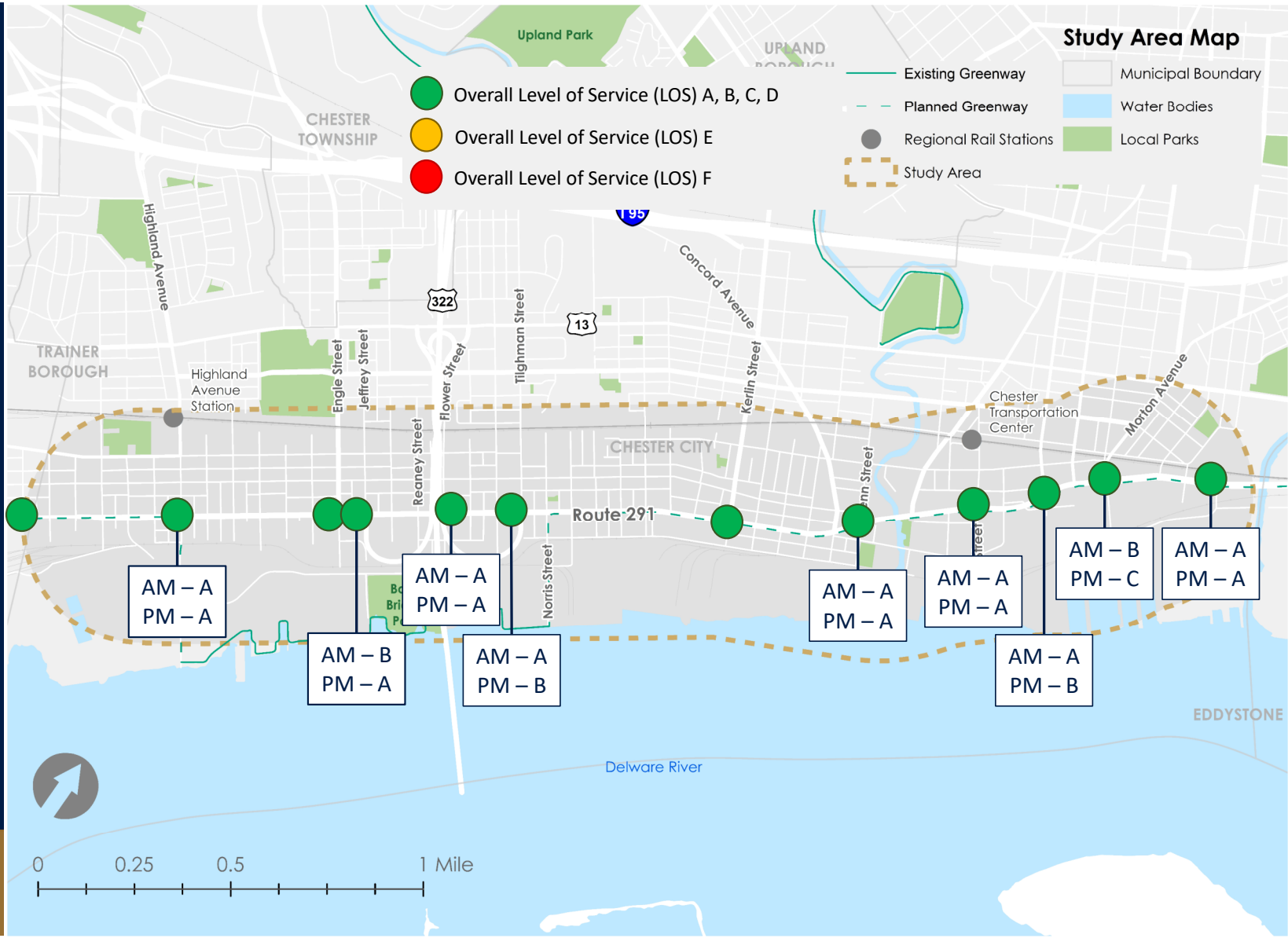
Alternative A - Future 5-Lane Condition (2050):

- Acceptable levels of service at all studied intersections (LOS D or better) overall and for all approaches



Alternative B - Future 3-Lane Condition (2050):

- Acceptable levels of service at all studied intersections (LOS D or better) overall and for all approaches



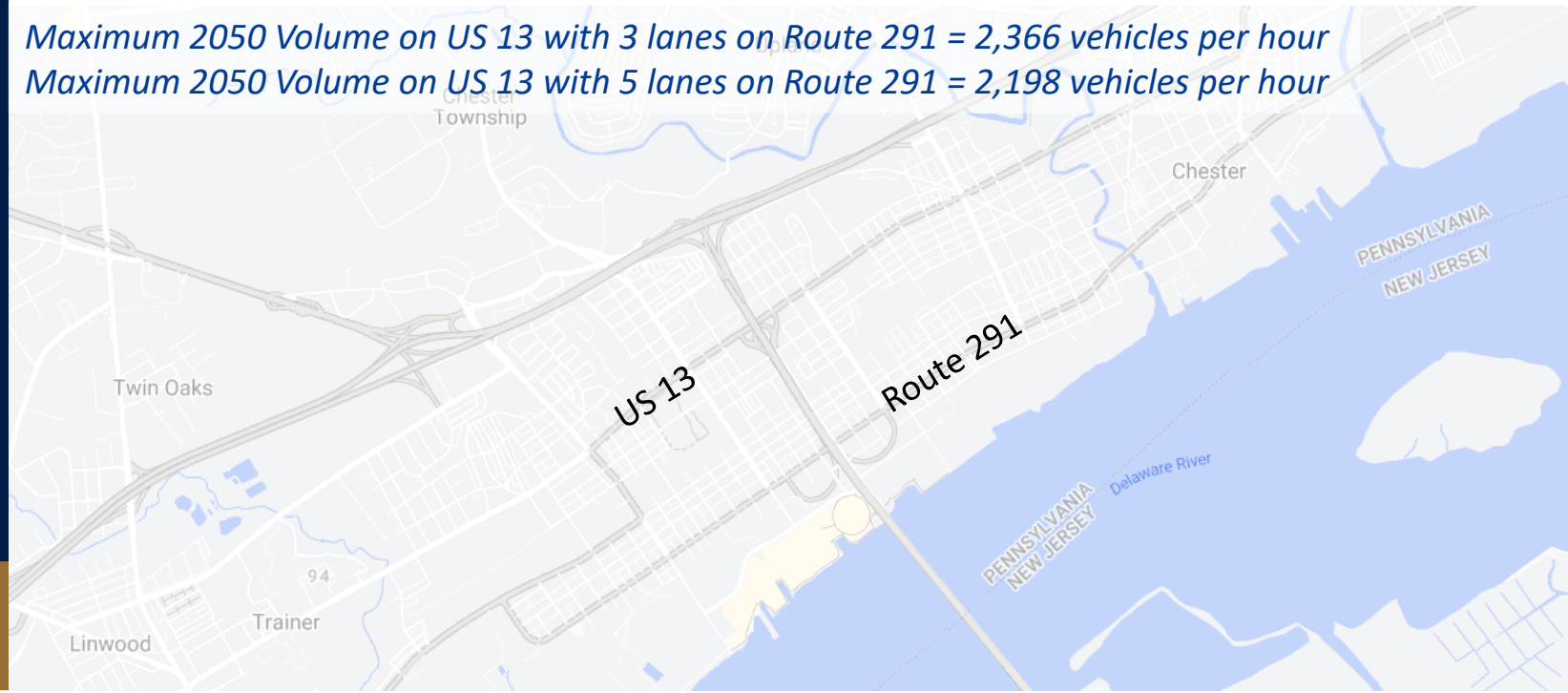
Volume impacts on US 13

- Reducing lanes on Route 291 might increase volumes on US 13 by about 300 vehicles during the peak hour (bi-directional)

Average Volumes on US 13

Alternative A 2050 – 5 Lanes on Route 291				Alternative B 2050 – 3 Lanes on Route 291				Change in Volumes			
EB		WB		EB		WB		EB		WB	
AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1552	1240	1024	1356	1738	1298	1153	1570	186	58	128	214

Maximum 2050 Volume on US 13 with 3 lanes on Route 291 = 2,366 vehicles per hour
Maximum 2050 Volume on US 13 with 5 lanes on Route 291 = 2,198 vehicles per hour



Morton Avenue Queue Lengths

- Max queue does not exceed storage for any alternative

Alternative	AM Peak Queue Length	PM Peak Queue Length
Existing (2023)	24 feet	54 feet
Future 5-Lanes (2050)	23 feet	100 feet
Future 3-Lanes (2050)	19 feet	85 feet



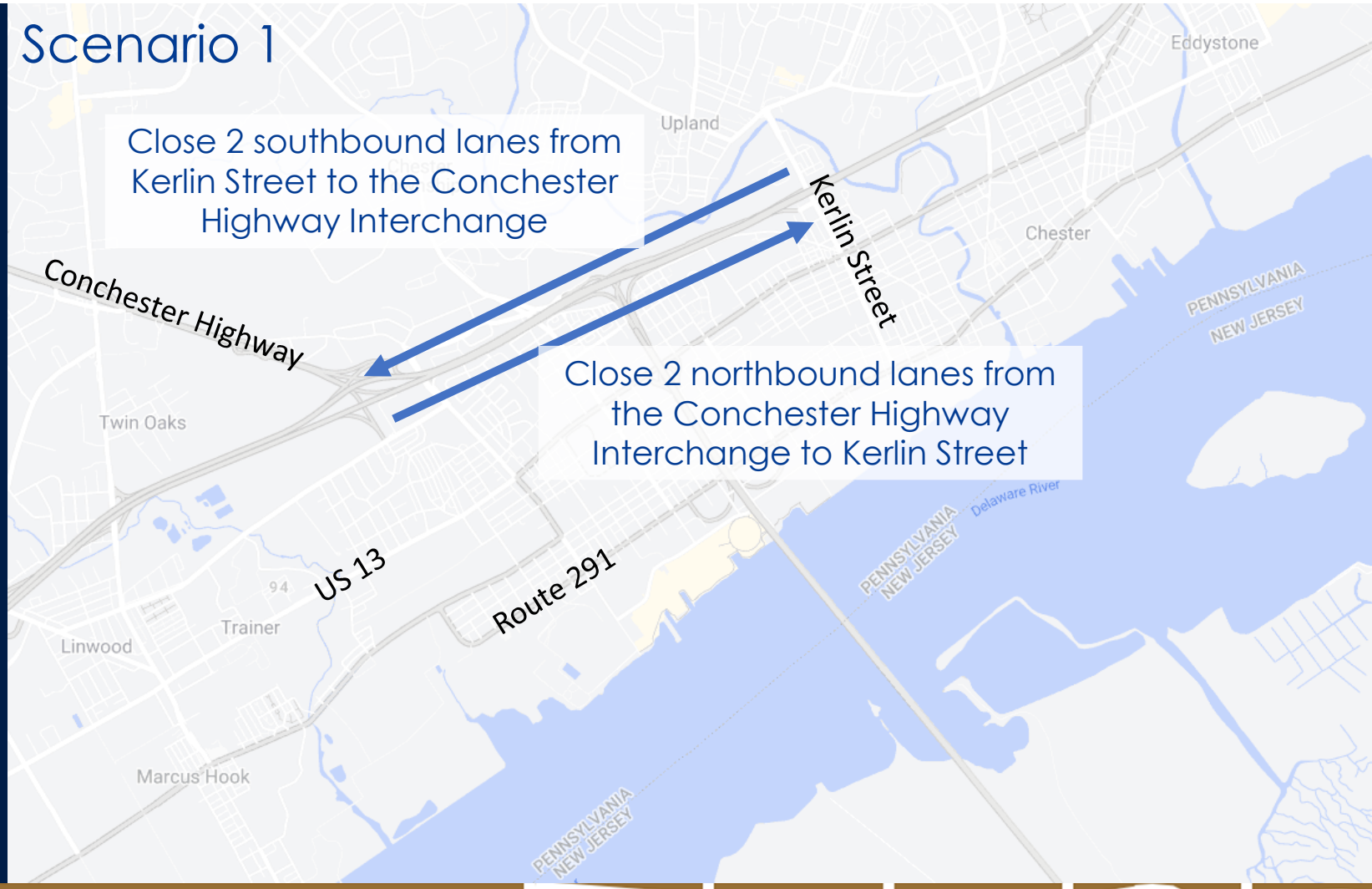
I-95 Diversion Analysis

Route 291 Study



I-95 Diversion Analysis

- **Scenario 1:** Close 2 lanes in each direction on I-95 from the Conchester Highway Interchange to Kerlin Street
- Scenario 2: Close all northbound lanes on I-95 from the Conchester Highway Interchange to Kerlin Street



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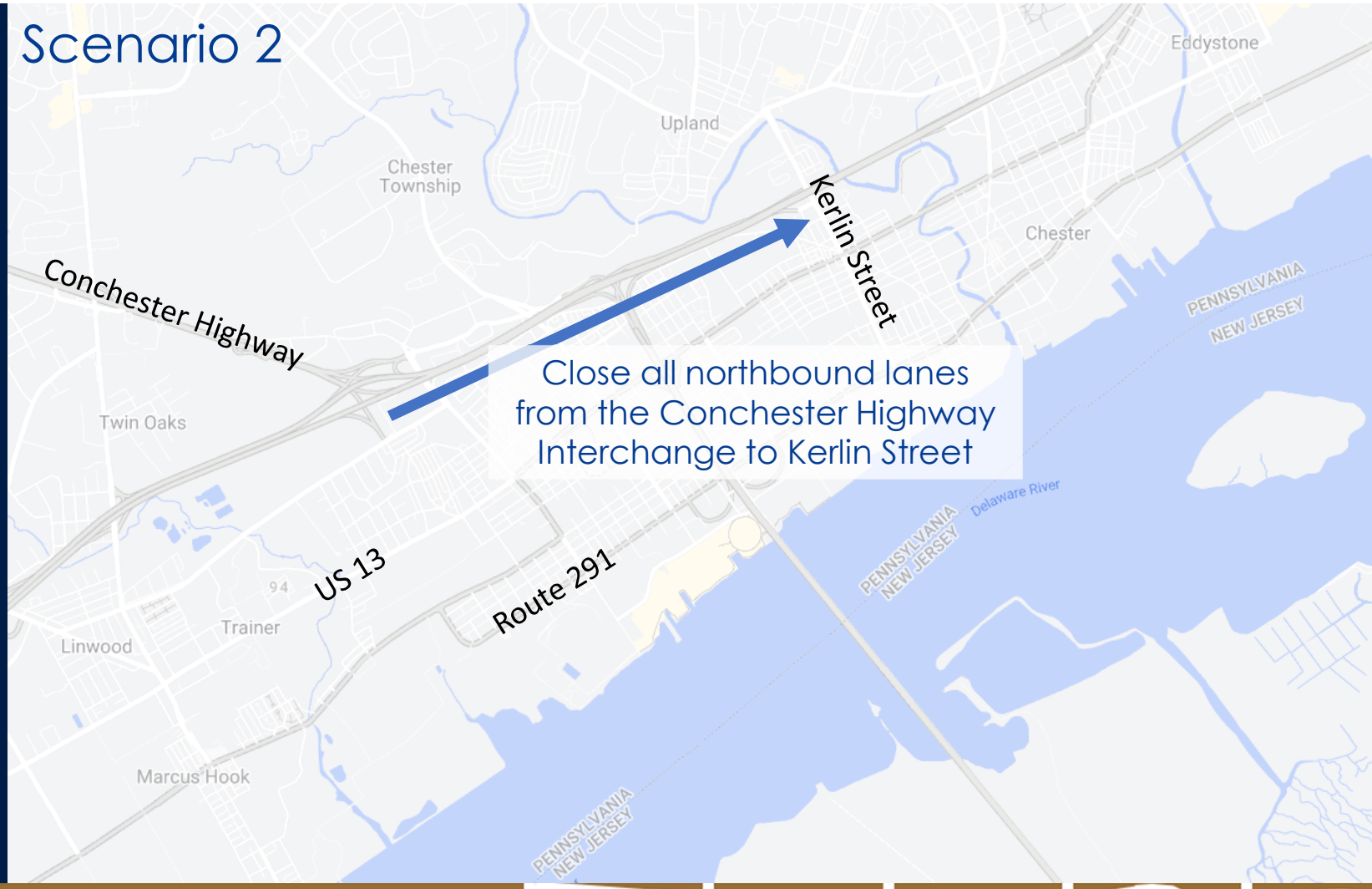

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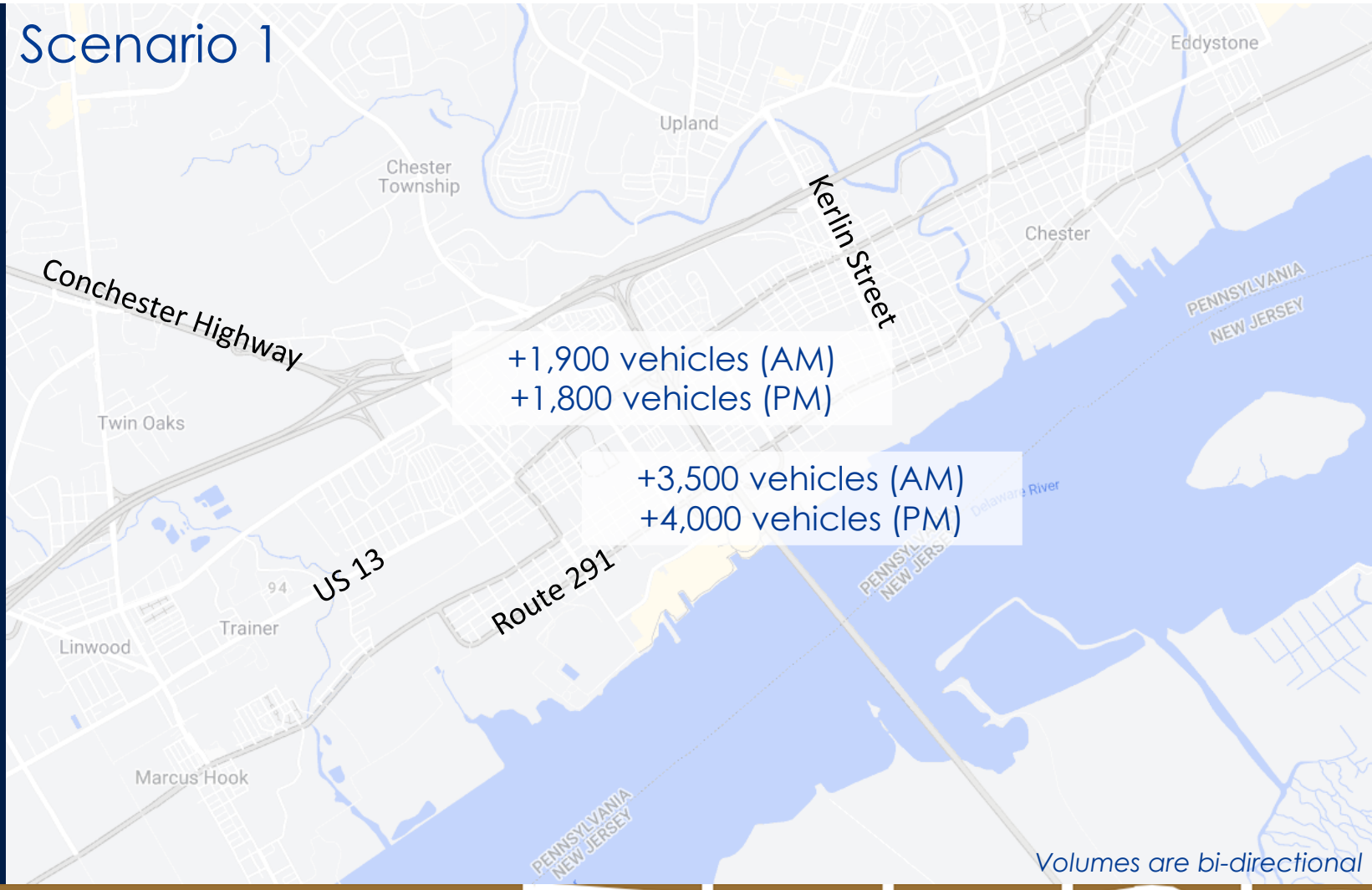

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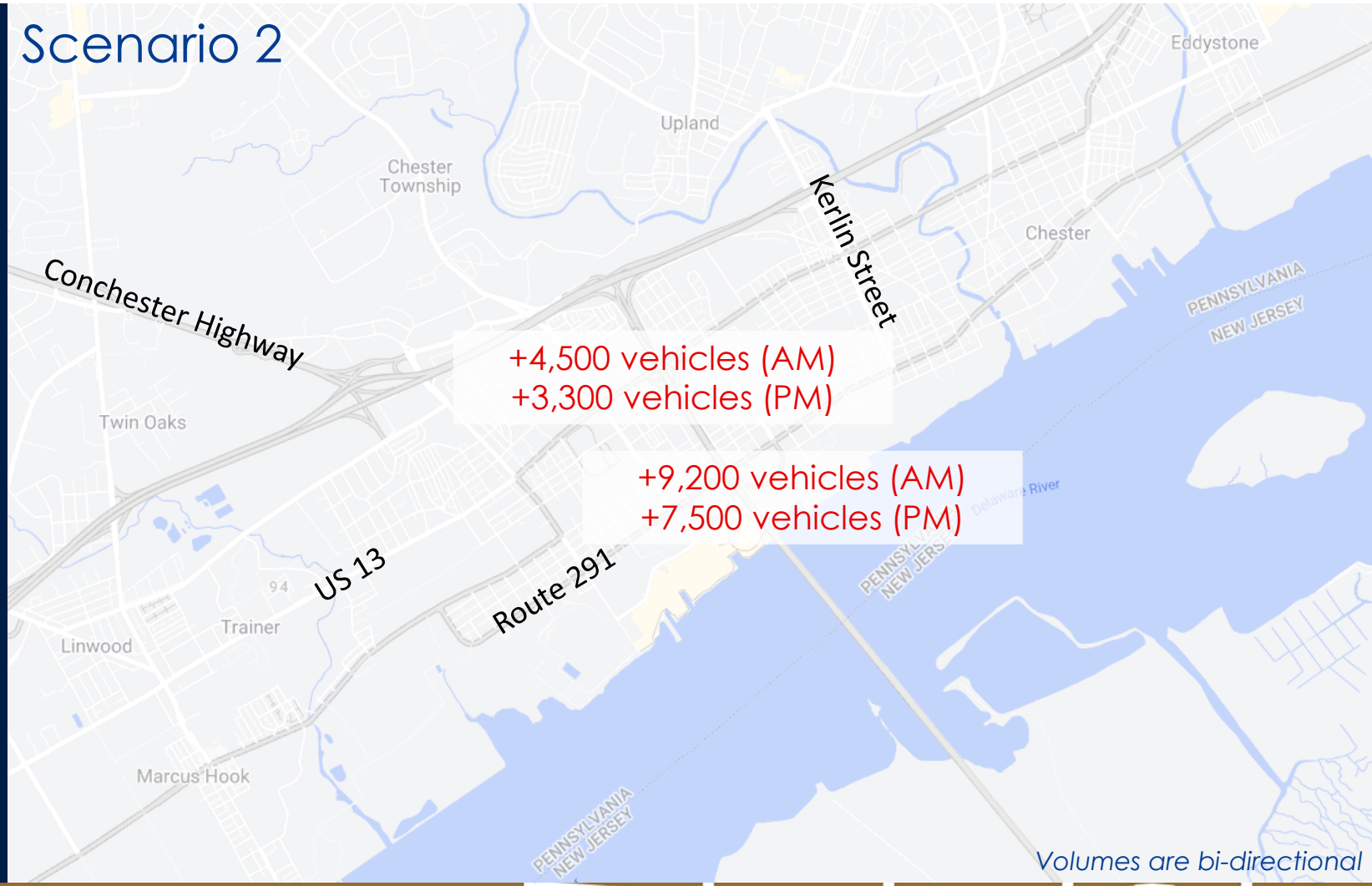
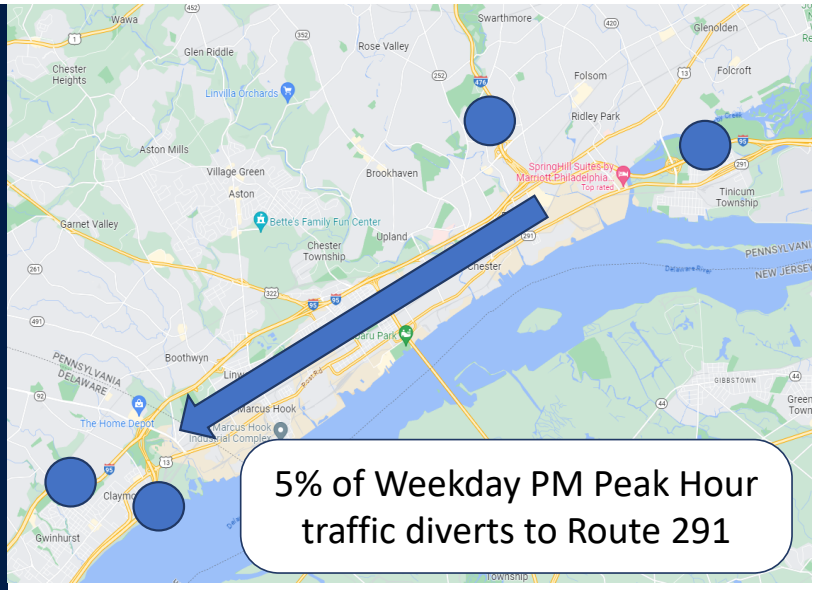
Scenario 2

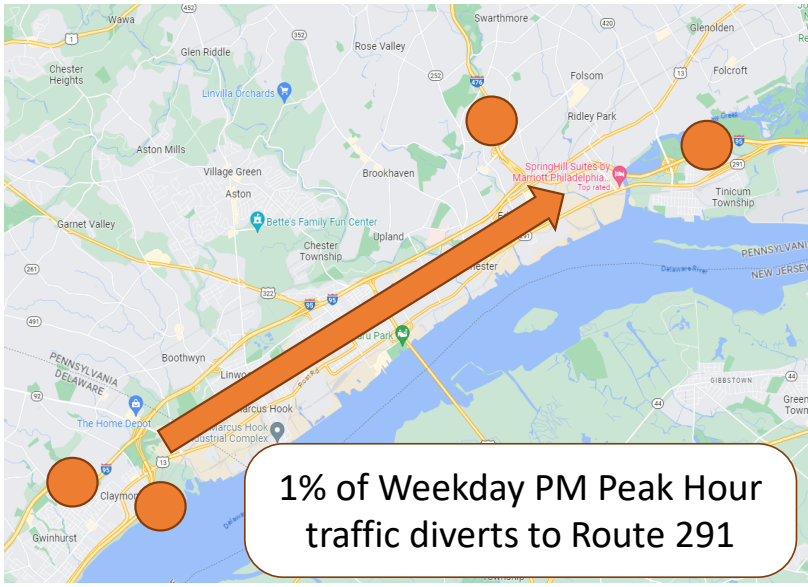


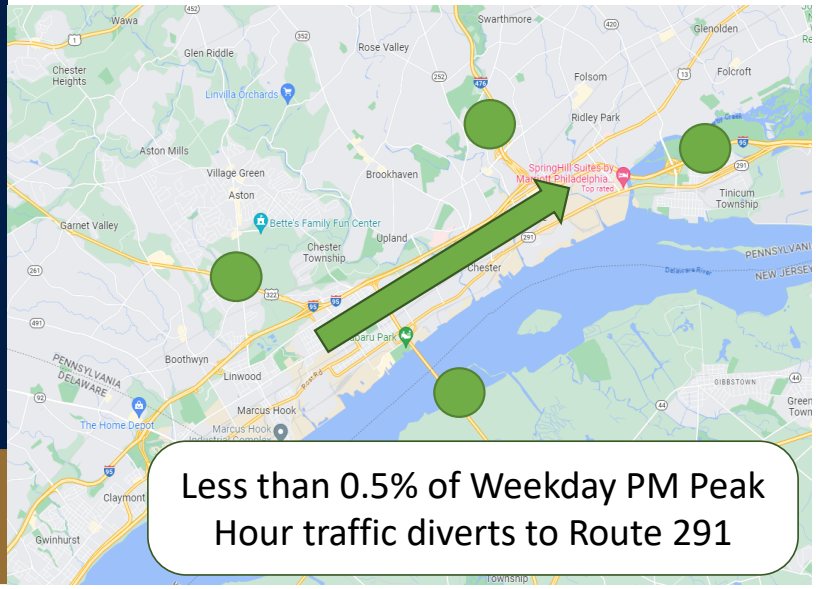
Volumes are bi-directional

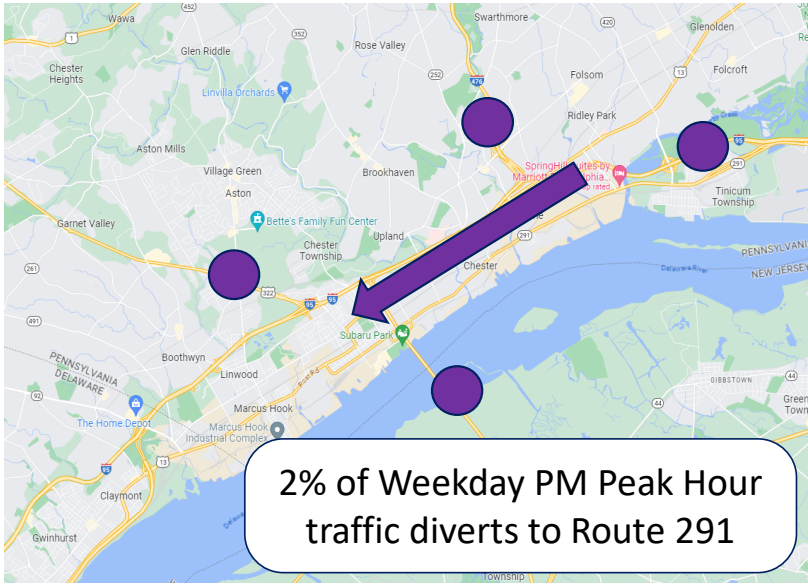
I-95 Diversion Analysis

- Overnight I-95 lane closures due to paving









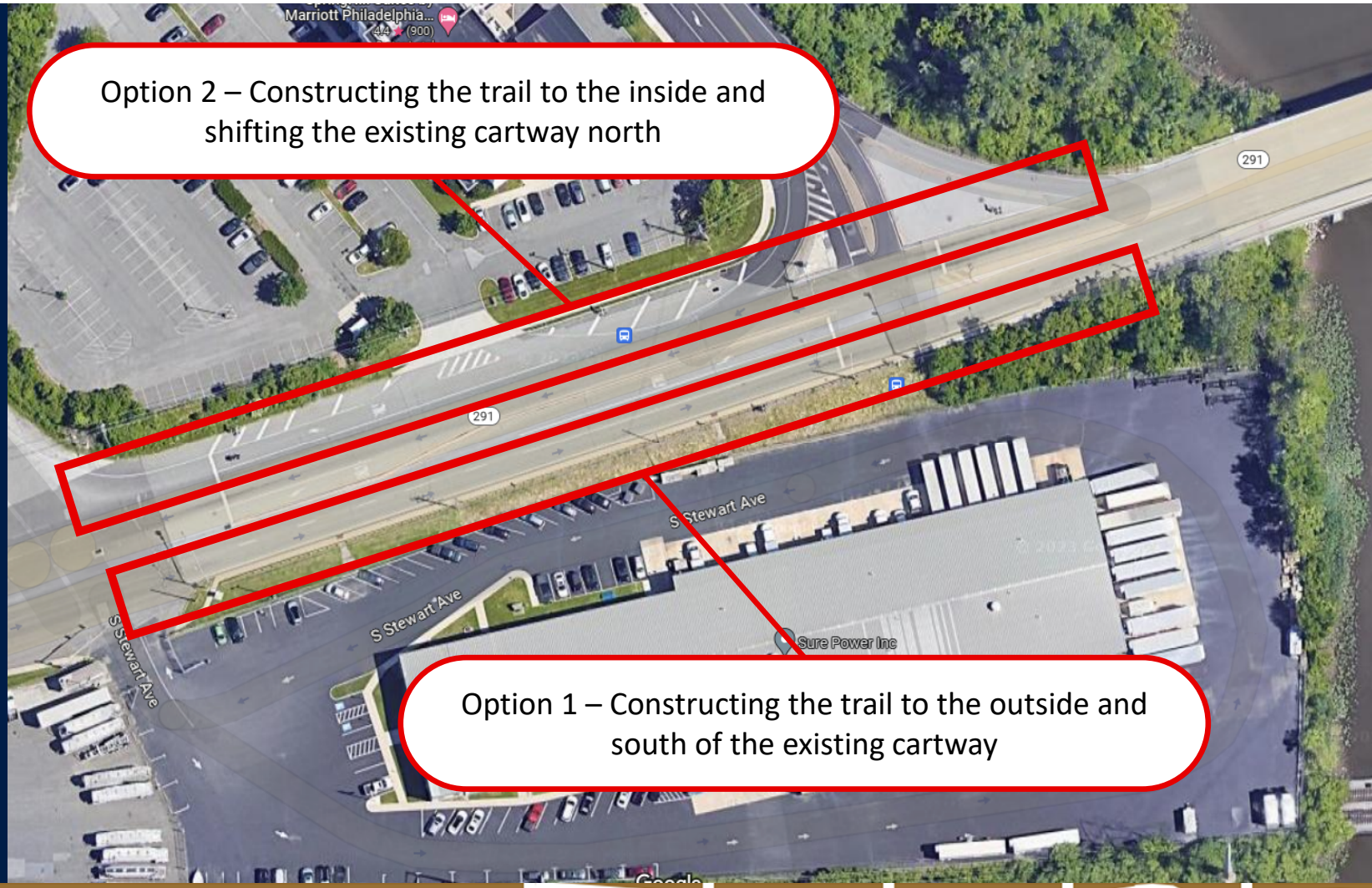
Ridley Township

Route 291 Study

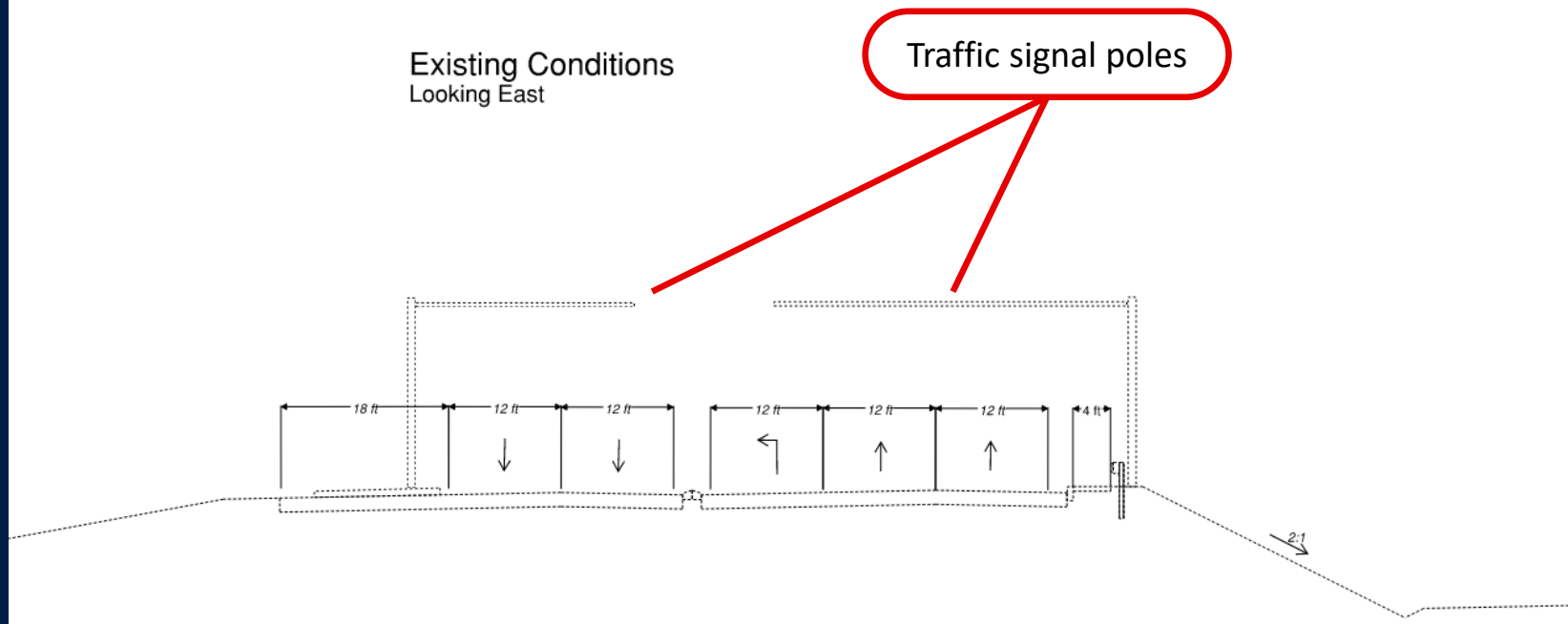


Filling the Trail Gap in Ridley Township

- Evaluated 2 options

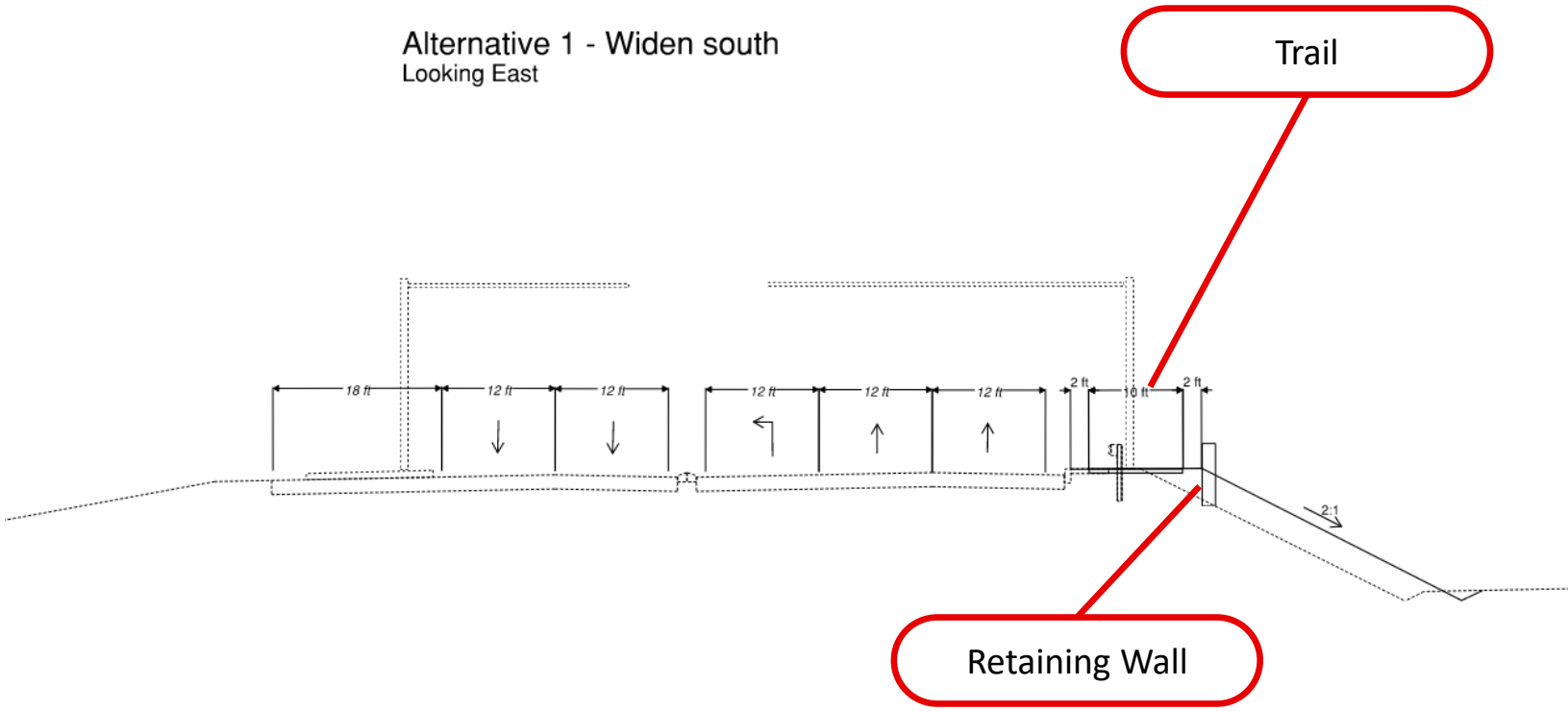


Filling the Trail Gap in Ridley Township



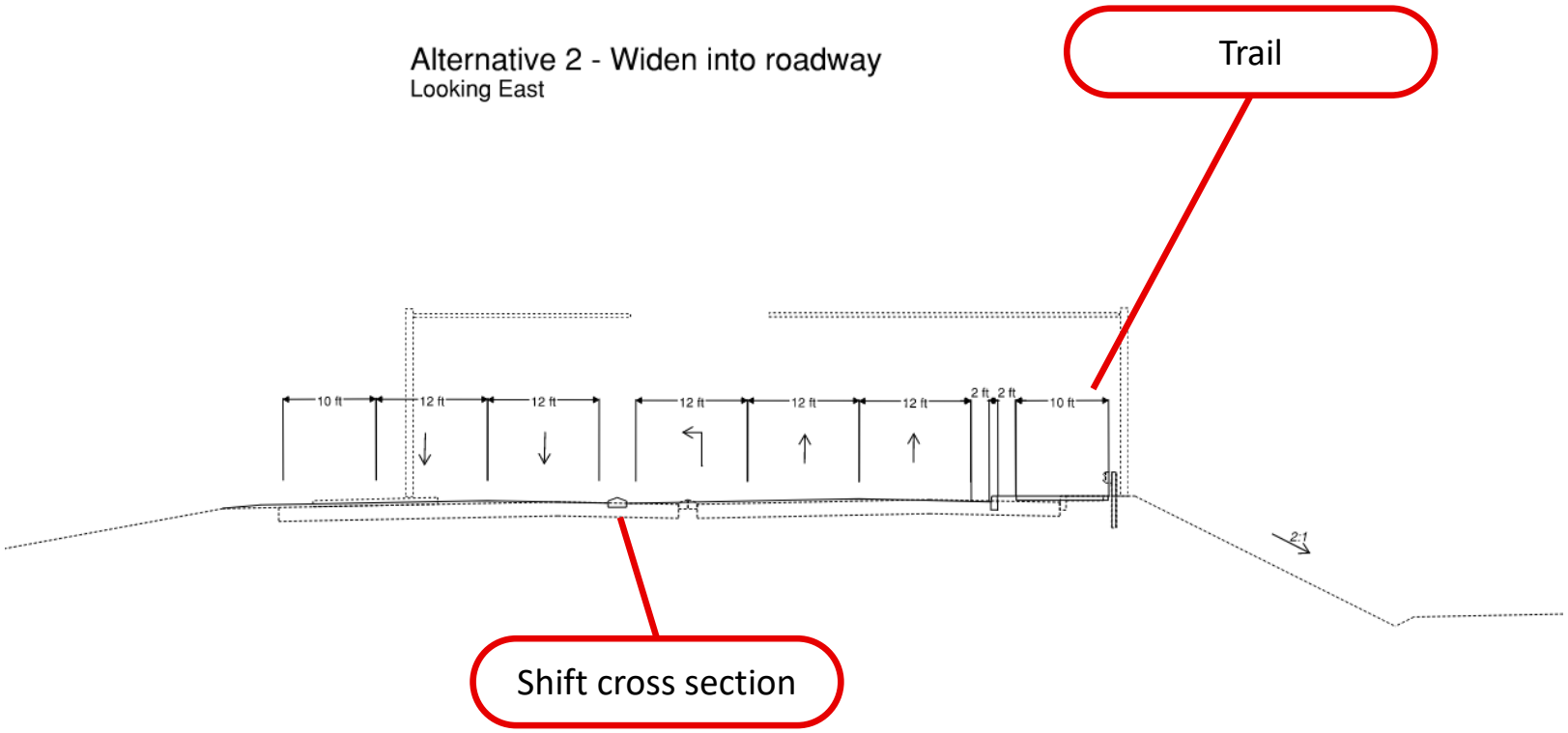
Filling the Trail Gap in Ridley Township

- Would require retaining wall and potential slope easement
- Maintains existing drainage & roadway section
- Relocate traffic signal pole



Filling the Trail Gap in Ridley Township

- No slope or right-of-way impacts
- Relocation of drainage
- Impacts to traffic signal poles and concrete medians
- Requires regrading



Activities



Activities

- Contemplate cross sections
- Discuss goals and tradeoffs
- Consider toolkit application

Next Steps

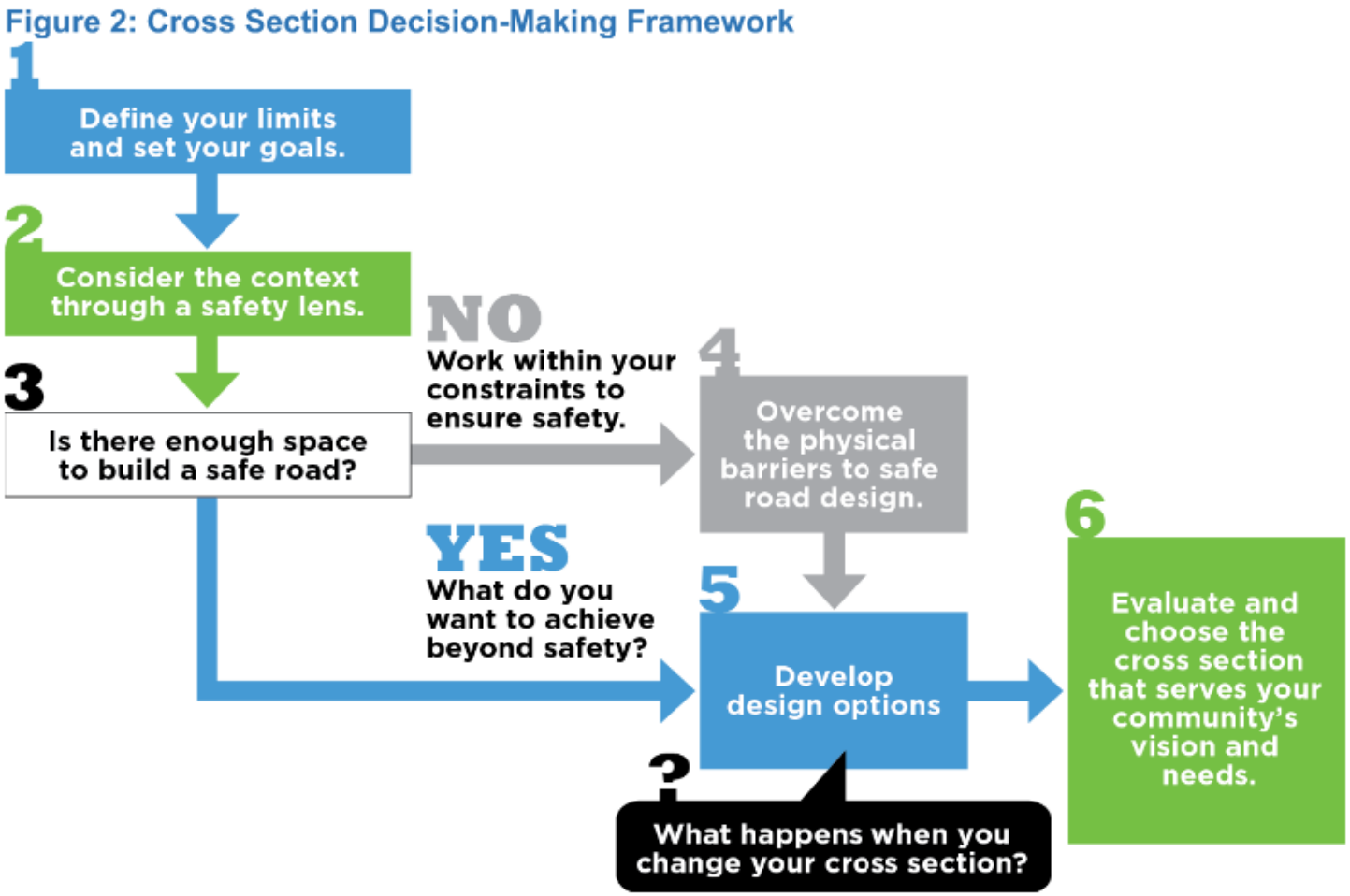


Next Steps

1. Community Engagement Event – 10/11/23 at the ACCESS Center
2. Online Survey
3. Selecting Preferred Alternative
4. Develop concepts, costs, and final report

Selecting a Preferred Alternative

NCHRP Report 1036: Roadway Cross-Section Reallocation: A Guide



Questions?

Cathy Spahr
(SpahrC@co.delaware.pa.us)

Tara Hofferth
(thofferth@kittelson.com)

A.D. MARBLE
environmental·cultural·engineering

Route 291 Study
Delaware County, PA
Steering Committee Meeting No. 3

MEETING DATE: September 20, 2023

TIME: 9:30AM- 11:00 AM

LOCATION: Laborers' Local 413, 222 Penn Street, Chester, PA 19103

ATTENDEES: Elaine Schaefer, Vice Chair Delaware County Council
Gina Burritt, Delaware County Planning Director
Tom Shaffer, Delaware County Planning Manager, Transportation Planning
Cathy Spahr, Delaware County Senior Planner
Brittani Hales, Delaware County Planning
Tim Murphy, Philadelphia Union/Subaru Park
Torsten Lienau, Jacobs, PennDOT District 6-0 Consultant
Barron Lacy, 9th Street Youth and Community Center
Peter Rykard, City of Chester, Director, City Planning
Lisa Gaffney, CEDA
Mark Freeman, Laborer's Union
Jonathan Morgan, Laborer's Union
Daniel Paschall, East Coast Greenway Alliance
Emilia Crotty, PEC
Roland Taylor, Duo Tacos and Bowls
Shawn Megill Legendre, DVRPC
Tara Hofferth, Kittleson & Associates
Will Weismantel, Kittleson & Associates
Alain Izabayo, Kittelson & Associates
Colleen Meiswich, A.D. Marble
Melanie Attieh, A.D. Marble

ATTACHMENTS:
1) PowerPoint Presentation
2) Draft Project Boards

Tara Hofferth reviewed the PowerPoint presentation (attached to these minutes). Below is a summary of the meeting.

Agenda, Introductions, and Overview

Tara re-introduced the project team and reminded the attendees of the entities that comprise the Steering Committee. The attendees introduced themselves.

Tara reviewed the project overview, project goals, study scope, schedule, and design alternatives. Tara notified the Steering Committee that this discussion of the Steering Committee's preferences will help the Project Team select a preferred alternative.

A public survey is open and available at this link: https://www.surveymonkey.com/r/ROUTE291. The survey is geared towards collecting information on a preferred alternative from local residents, businesses, and all users of Route 291. The attendees were encouraged to send the survey to their constituents and networks.

Tara informed the Steering Committee as about the upcoming Public Workshop. The Project Team will also be distributing flyers and information at the upcoming Food Truck event and the Bike Rodeo later in the month. A flyer advertising the Public Workshop will be distributed to local businesses and community places.

Other Projects within the Study Area

The following existing projects in the project study area were discussed:

1. **PennDOT's traffic calming project** is nearing constructing on restriping roadways, and installing new speed limit signage on and around Route 291. There are no curb reconstruction improvements associated with this project.

2. Tara reviewed the **Route 291 City of Chester project** which includes curb extensions and medians at select locations along Route 291 and on some side streets south of Norris Street. This project proposes signalization of the Jeffrey Street and Tilghman Street intersections. The project is currently in design and is under review by PennDOT.

   Question: A committee member asked if this project would include lane widening and a refuge island.
   Response: Tara noted there will be pedestrian refuge islands at some intersections, and offered to share the design plans after the meeting.

3. Tara briefly explained the **new bike facilities on Highland Avenue and Norris Street** which are currently in the design phase.

4. The **Reaney Street project** was also discussed. This project includes streetscape improvements along Reaney Street to the entrance to Subaru Park and implementing a Rectangular Rapid Flashing Beacon (RRFB) at the intersection of Route 291 and Reaney Street. The flashing beacon will be constructed for future adaptation into a full signal if applicable.

Alternatives Overview and Existing Cross Sections

Tara briefly reviewed the project toolkit and potential traffic control alternatives. The project toolkit is attached to these minutes.

Tara explained existing cross sections of the current roadway. Currently, on Route 291 there are five 11-foot travel lanes, an 8-foot parking lane, a drainage shoulder, and sidewalks. The sidewalks on the riverfront side are narrower due to trees along the sidewalk.

Tara reviewed the cross sections of the two main alternatives in question. Alternative A includes five travel lanes with safety improvements. The parking lane would be eliminated to improve bicycle and pedestrian facilities. The inner two driving lanes could be reduced to 10-feet, while the outer two lanes would remain at 11-feet wide. An 11-foot center turn lane and a 12-foot shared bicycle and pedestrian path are part of Alternative A. Drainage shoulders must be kept to comply with PennDOT design criteria. Right-of-way (ROW) impacts were not considered; however, ROW may be necessary for the shared used path.

Alternative B includes three travel lanes (each 11-feet wide) with safety improvements. The parking lane would be kept and a 3-foot buffer between the parking and travel lane could be implemented. The shared used path would be 18-feet wide to accommodate walking and biking along the riverfront. Alternative B also includes curb extensions, pedestrian refuges, and the ability to separate the shared use path into a bike lane and a pedestrian lane.

A discussion about both alternatives on Route 291 occurred.

Comment: A local business owner highlighted the potential pushback from residents with Alternative A if the parking lane was removed, and advised that a parking plan be devised.

Question: A committee member asked if there is a solution for the speed.
Response: Tara stated that keeping all 5 travel lanes could be challenging to enforce the speed limit, and that a 3-lane road has a greater potential to reduce speeds. With curb extensions and a center median, drivers will feel constrained and drive at slower speeds.

Question: A local resident added how speed traps may be a viable solution.
Response: Tara responded stating automated enforcement could be considered after physical infrastructure improvements are implemented. Automated enforcement is only allowable in PA currently on a pilot basis.

Comment: Shawn Megill Legendre affirmed that many of the tools discussed to reduce speed are "proven" methods; however, they do not force everyone to slow down. He advised to contact the local Pennsylvania state legislature regarding automated enforcement.

Comment: A committee member showed support for the curb extensions included in Alternative B since locals tend to park within crosswalks and drivers turning onto Route 291 from side streets have limited visibility. It was also noted that parking violations are not enforced on Route 291.

Comment: Another committee member agreed with Alternative B and added that drivers would probably go the speed limit if there were proper signs. He noted existing signs have either been

knocked over or covered by trees. He encouraged painting the speed limit on the roads or installing overhead signs.

Comment: For the workshop, Daniel Paschall suggested providing a ground-level before and after picture of the Route 291 roadway to show residents.

Question: A committee member asked if there is a business plan for trucking and industrial needs. With their main concern being truck traffic, and trucks performing turns with only 3 lanes (Alternative B), is this a viable alternative for the trucking industry?
Response: Tara added that truck traffic has been considered; however, this will be studied more during preliminary design. She mentioned that truck aprons could be a tool that allow truck turning movements will still restricting other vehicles.

Question: Another committee member added that Route 291 is currently used as an alternative route for I-95. Cutting two travel lanes (Alternative B) may not be viable if I-95 frequently overflows. They suggested adding more traffic signals.
Response: Tara mentioned that the Route 291 city project will add traffic signals to the Jeffrey and Tilghman Street intersections. As part of this study, a signal as the Kerlin Street intersection has been explored.

Question: Tim Murphy expressed concerns with how Alternative B would impact Subaru Park stadium traffic. With about 25 home games a year, 6,000 cars each game, and over 300,000 people frequenting Subaru Park a year, keeping all 5 travel lanes for gamedays may be pertinent. He wanted to know if these metrics were included in traffic studies and if Philadelphia Union games have been considered.
Response: Tara stated gameday traffic was not used in traffic modeling since it typically does not conflict with peak traffic hours. Tara mentioned that traffic signal modifications and event planning could alleviate concerns.

Comment: It was suggested that having police direct traffic at Flower Street and the US 322 Ramps can keep cars moving on the 25 game days. He added that the main priority of the project is roadway safety, and although there may be 25 days with increased congestion on Route 291, there are still 340 days where residents are at risk driving, walking, and biking along Route 291.

Comment: An attendee proposed looking at a 3-lane option for a one-way flow for the Philadelphia Union games.

Comment: Tim restated how impactful this project could be on Subaru Park.

Comment: Delaware County Planning representatives noted that traffic flow in/out of Subaru Park could be more organized with more formal travel patterns. The alternatives should provide a sense of predictability for drivers and Subaru Park visitors.
Comment: An attendee noted that consideration of turning the center turn lane into a travel lane on games days should be discussed.

Comment: Peter Rykard added that Route 291 is also US 13, and new signs for US 13 and US 13 Business are up.

Question: A committee member asked if the proposed designs take into consideration future businesses in Chester.
Response: Tara stated that traffic volume projections were developed using DVRPC's regional model for 2050, which includes some assumption for growth. Tara added that one warehouse development was included, however restaurants or a potentially new Wawa were not considered.

Performance Metrics & Analysis Results

Tara discussed and identified different performance metrics. A discussion on the analysis performed occurred:

a. Crash Analysis

A FHWA tool was used to analyze how many crashes are predicted to occur on a roadway based on the characteristics of the roadway. Tara explained that the reduction in lanes and the incorporation of other safety improvements result in fewer predicted annual fatal and serious injury crashes.

Question: A committee member asked if the reduction of fatal and injury crashes were related to speed.
Response: Tara said yes and explained that the FHWA tool has crash modification factors such as for curb extensions, medians, and crosswalks.

Question: Another committee member asked if the I-95 overflow was considered in the model.
Response: Tara explained that with congestion, drivers typically go slower, which can be safer, particularly for pedestrians. Crash severity is related to speed, and while congestion is not good for many reasons, it is good for speed control.

Question: Another committee member inquired about increasing a police presence.
Response: Tara mentioned that policing is expensive and that infrastructure improvements tend to be most effective at reducing speeds.

b. Intersection Control Evaluation - Kerlin Street

Kerlin Street was evaluated for improved intersection control because it is position about halfway through the 1 mile stretch of Route 291 where there is no signal. There is an opportunity to create another signalized pedestrian crossing at this intersection. Improvements on Kerlin Street would be part of the recommendation along with other improvements.

Comment: A committee member added that most crashes occur between Penn Street and Flowers Street.

c. Traffic Analysis

The DVRPC regional transportation model was used for the traffic analysis. Tara reviewed the existing traffic operations for existing conditions in 2023, Alternative A for the future year 2050,

and Alternative B for the future year 2050. Roadway improvements to I-95 and Route 322 were assumed and included in the model. Assumptions were verified with PennDOT. The analysis considered impacts to US 13 (business) / 9th Street. Tara restated that stadium traffic was not considered.

Overall, growth to 2050 does not degrade the level of service along the corridor. Traffic volume is expected to be less on the 3-lane alternative as compared to the 5-lane alternative. As a result, the level of service on Route 291 for the 3-lane alternative is also estimated to be operating acceptably. Regardless of the number of travel lanes, US 13 is projected to experience an increase in traffic and congestion in the future year 2050.

Queues on Morton Avenue would not backup to the railroad for either condition, considering signal timing modifications.

d. I-95 Diversion Analysis

An analysis of I-95 Diversions was completed. Scenario 1 included closing two lanes in each direction on I-95 from the Conchester Highway Interchange to Kerlin Street. Scenario 2 included closing all northbound lanes on I-95 from the Conchester Highway Interchange to Kerlin Street. Scenario 1 would include increased diversion to Route 291 as compared to US 13 and would put Route 291 at near capacity. Scenario 2 would exceed capacity on US 13 and Route 291 if I-95 northbound was totally closed.

Comment: A committee member asked how often has I-95 been shut down completed in the last 5 years.
Response: Torsten Lienau with Jacobs mentioned looking into this.

Comment: A committee member advised to be cautious on how to best communicate these results to the public since these scenarios are not likely to occur often. It was recommended to change the blue line to red "XXXX's" for the public workshop.

Comment: Shawn Megill Legendre stated that DVRPC can work with the community for side street traffic calming, and it can be incorporated into future stages of design.

Comment: Cathy Spahr commented that many streets in Chester would benefit from traffic calming and complete streets improvements.

Comment: Shawn Megill Legendre recommended to scope traffic calming measures early in future contracts.

Comment: Mark Freeman highlighted that flooding occurs in Chester at the wharf, with road closures at 2nd Street and Palmer Street. Flooding occurs at Kimberly Clarke as well.
Response: Cathy Spahr responded that stormwater design would be included in the next phase of design.

Comment: Shawn pointed out that the "Overnight Closure of I-95" slide was a bit vague. Tara agreed this slide needs more attention before the public workshop.

Ridley Township

Different options for filling the gap on the East Coast Greenway Trail were discussed. Option 1 is to widen the sidewalk and option 2 is to shift the roadway north. Option 1 includes a retaining wall and a slope easement may be needed. Option 2 requires regrading and updating the roadway drainage which would increase costs.

Comment: Councilwoman Schaefer asked who owns the land where the slope easement may be needed. The Councilwoman also suggested that a boardwalk type structure could be considered instead of the wall.
Response: Tara was unsure about property ownership but can look into this. She agreed that a boardwalk could be another option to explore.

Comment: Another committee member asked the price differences between a retaining wall and a bridge or boardwalk.
Response: Shawn Megill Legendre stated that it varies case by case, and both can be expensive with longer term maintenance. A boardwalk could be a great option.

Comment: A committee member asked what is the length on the missing piece.
Response: Tara answered approximately ¼ mile.

Activities

Tara asked for feedback on public meeting options.

Question: A committee member asked if there was consideration for a 4 lane alternative.
Answer: Tara responded that it was thought about, and it could be a solution near the stadium. Traffic operations work with 3-lanes.

Comment: Daniel Paschall of East Coast Greenway expressed his preference for 3 lanes. He also stated he would rather see 4 lanes than 5.

Next Steps

Tara stated that the study report will be completed by end of year. The public online survey will be released next week.

Tara thanked everyone for their attendance. The meeting ended at approximately 11:00 AM.

The preceding is a summary of the items discussed at the above-mentioned meeting. If you have any corrections to these meeting minutes, please provide them to Colleen Meiswich of A.D. Marble at cmeiswich@admarble.com by **Friday, October 6, 2023.**

Listening Session

IMPROVING SAFETY ALONG ROUTE 291

LISTENING SESSION



Please join us:
Thursday, April 13th, 2023
6:30 pm to 8:00 pm
Calvary Baptist Church
1616 W 2nd Street
Chester, PA 19013



We need your input on how to make Route 291 safer.

Engage in Breakout Discussions
Come tell us about what it means to live, work, and travel along Route 291. Tell us about your concerns and what you envision for Route 291.

Eat dinner and learn about the Project
Enjoy dinner with staff from Delaware County and the project team.

Visit the Project Website
Scan the QR code for the project website or go to:
https://delaware-county-pa.civilspace.io/en/projects/improving-safety-on-route-291

Review and add your thoughts to the ***Online Comment Map***:
https://maps.kittelson.com/route291

If you have questions, contact us:
Cathy Spahr (SpahrC@co.delaware.pa.us) or
Tara Hofferth (thofferth@kittelson.com)

The meeting location is accessible to persons with disabilities. If you need special accommodations or would like additional information, please contact the Delaware County Project Manager, Cathy Spahr (610) 891-5379.

Improving Safety on Route 291
Delaware County, PA

Delaware County Pennsylvania

Listening Session 1 Summary
Date: April 13, 2023
Time: 6:30 pm to 8:00 pm
Location: Calvary Baptist Church at 1616 W 2nd Street, Chester PA 19013

After a brief introduction and explanation of the purpose of the Listening Session, the attendees participated in small group discussions from 7:00 pm to 7:40 pm. The small group discussions focused on a series of questions as outlined below. This document provides an overview of the open discussion from the Listening Session and comments collected from the online comment map on the project's website.

1. **Please tell us more about safety along Route 291. Do you have any stories or experiences you want to share about what it feels like to travel along or across the corridor?**
    - Route 291's traffic and pedestrian safety has been overlooked, especially after expanding the roadway to four lanes.
    - Many people feel unsafe crossing the road due to car and bicycle crashes, lack of traffic signals, and vehicle speeding.
    - Although the speed limit is 35 mph, motorists do not seem to follow it, making the roadway feel like a highway through a community to local residents.
    - One mother shared a story of her son getting hit by a car at 2nd and Booth Street. She expressed the need for "Kids Play Here" signage along Route 291 as a reminder to drivers that they are driving through a partial residential area.

2. **What should our team be focusing on as we work to improve safety along Route 291? Are there specific intersections that need improvement? Where are safer crossings most needed? Where does it feel like people are driving the fastest? Where are you most concerned about crashes?**
    - Many areas along Route 291 were highlighted as intersections of concern including Tilghman Street, Pusey Street, Jeffrey Street, Flower Street, Hayes Street, and Penn Street.
    - Attendees indicated the need for safer turns at these intersections and suggested adding traffic signals at Tilghman Street and a full-time signal at Flower Streets. Residents indicated that the stretch from Penn Street to Flower Street is a high-speed area.
    - There were suggestions to focus on bicycle access and safety for people of all ages and abilities. People feel that a road diet is an opportunity to implement safe bike lanes with barriers along Route 291 as part of the East Coast Greenway
    - People want to connect greenspaces like Ethel Waters Park and the future bicycle facility on Norris Street down to the Riverfront Trail.
    - Attendees suggested developing a beautification plan with trees and greenery along Route 291.
    - People indicated the need for more overhead signs, especially for accessing the Route 322 on-ramp and having a turning lane onto Route 322 in both directions. Currently there is some confusion while merging.

- On-street parking may not be needed since there aren't many residential properties along the corridor anymore. On-street parking near intersections causes visibility issues when turning on to Route 291, especially at Engle Street.
- The need for additional pedestrian crossings and more traffic signals was raised several times, both at the Listening Session and in the online comment map.

3. **One challenge along this corridor is the push and pull of so many needs and uses. We have people walking, biking, parking, and living along the corridor and we also have truck traffic, people commuting, etc. What should be prioritized here? We have limited roadway space - what should it be used for? How might the industries and the residences be balanced?**
    - People felt that the safety of local residents should be the top priority.
    - Safety should be prioritized at the intersections of Route 291 and Highland Avenue, Engle Street (near the park and library), Flower Street, Welsh Street (City Hall), Kerlin Street, Norris Street (which offers access to the pier used for fishing). There should be improved safety connecting Route 291 to the rest of Chester's institutions, greenspace, and businesses.
    - The ramp at Tilghman Street needs improvement as it causes commuter confusion and crashes.
    - The retiming of traffic signals would make it easier to navigate around the city, specifically making the Flower Street signal shorter and the Welsh Street signal longer.
    - There was widespread support for incorporating a separated bicycle facility.

4. **What is your vision for Route 291 and the City of Chester? What types of activities, people, spaces, and jobs do you picture along the riverfront?**
    - The general response from attendees was the hope that Route 291 could be more user friendly. There is a need for more traffic signals with speed cameras, bike lanes, easily maintained trees, and crosswalks.
    - The corridor should represent the spirit of Chester and offer a safer environment for residents, workers, and visitors. Route 291 has great potential to be a lively connector between main attractions like Harrah's Casino and Subaru Park, the residential areas and the local businesses of Chester, to the greater region.

5. **Is there anything else you want to share with us? We will be back to brainstorm more ideas with you all, but you are welcome to get the ball rolling tonight – are there any solutions you have in mind for Route 291?**
    - Attendees of the Listening Session feel that adding more traffic signals with cameras is key to improving safety along Route 291.
    - Attendees expressed that the area needs more development in order to draw people to the City of Chester rather than just driving in for a Union soccer game and immediately leaving.
    - Attendees want to see visitors support local businesses and enjoy what Chester has to offer.

Overall Key Takeaways:

- Prioritize residents
- Residents currently avoid Route 291
- Route 291 feels like a highway through a community
- Desire to return to pre-widening conditions
- Speeds high above speed limit
- Lack of speed enforcement
- Several personal stories of crashes
- Making lefts onto Route 291 is challenging / unsafe
- Ramps are challenging to get on and off (lack of signage)
- Trees need to be maintained
- Street cleaning is needed
- Insufficient lighting throughout
- Residential parking is needed
- Additional traffic signals are needed
- Concerns about pollution and community health
- More crosswalks are needed (feels like Frogger)
- Fill sidewalk gaps and widen sidewalks
- Need for Chester representation and corridor beautification
- Celebrate and provide access to historic resources
- Desire for mixed use development
- Feels challenging to build houses now along Route 291
- A dedicated bike facility is needed
- Slow down trucks
- People feel cut off from the riverfront

Comment Map

Improving Safety on Route 291

1. 

David Rodbart Added April 01 2023

Would be great to have a safe bike lane on this stretch of 291.

Liked 1 time

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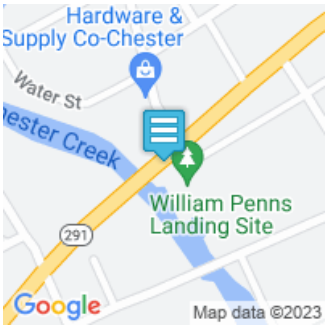
0 replies

2. 

Daniel Paschall Added April 10 2023

Please implement a road diet with robust physical traffic calming interventions to reduce speeding and increase bike/pedestrian access for people of all ages and abilities. This should include new pedestrian crossings with median islands and traffic signals to stop traffic for pedestrians. Also, please replace the excess travel lane space from the road diet with a shared use path along the East Coast Greenway and create connections to green spaces like Ethel Waters Park and the future Greenway on Norris St down to the Riverfront Trail and destinations.

Liked 5 times

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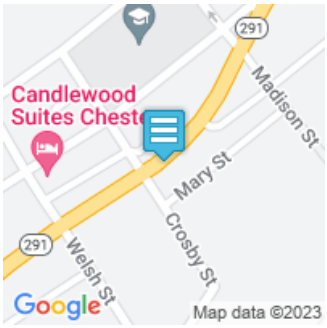
0 replies

3. 

Eric Hartman Added April 10 2023

All through this proposed road diet area, there is an opportunity and a necessity to create real, clear, physically protected bike lanes (not merely plastic bollards). Because this is the East Coast Greenway, and the current truck and speed rates on 291 are so egregious, the only workable solution is a raised multidirecitonal biking lane or another biking solution that creates a clear physical barrier. Thank you.

Liked 3 times

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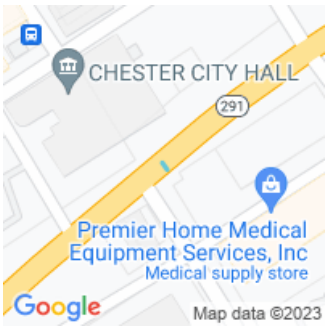
0 replies

4. 

Patrick Monahan Added April 11 2023

Thank you for providing us with the opportunity to comment on the Route 291 project. Please implement a road diet that provides significant traffic calming measures to reduce speeding and increase bicycle and pedestrian accessibility for all users. Please implement safe pedestrian crossings and a shared use path to carryout the need for active transportation via the Circuit Trails and the East Coast Greenway.

Liked 2 times

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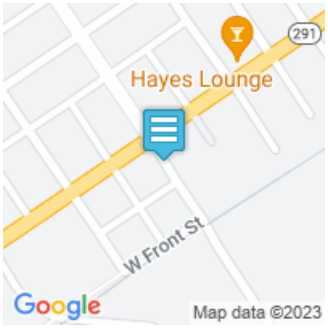
0 replies

5. 

Emilia Crotty Added April 11 2023

Please reduce the width of Rt 291 and redesign it to accommodate safe, comfortable movement for all modes -- even people driving -- and to improve conditions for people living and working along the corridor. A separated trail along 291 and safe, signalized crossings with medians would provide residents with walking, running, and biking access to the waterfront, which really inhumane design has kept people away from for too long. This project is such a terrific opportunity to right the wrongs of planning past and improve the health and vitality of a neighborhood.

Liked 3 times

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0 replies

6. 

Rob Gusky | Added April 15 2023

Lack of bike lane on EB Rt 291 from Harrah's Blvd to Darby Creek creates an unsafe condition where bicyclists must ride in the travel lane with high-speed vehicle traffic. I commuter this section of Rt. 291 daily from my home in Philadelphia to my work in Chester. Thank you for working to create safer biking conditions for all!

Liked 4 times

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0 replies

7. 

Rob Gusky | Added April 15 2023

John Heinz NWR provides a low-stress connection for bike commuters. However there is high speed vehicle traffic on the Wannamaker Ave access from Rt 291, making this section especially dangerous particularly due to the on-off traffic from I-95. A separate walking and biking trail with safer access would be a benefit for all.

Liked 2 times

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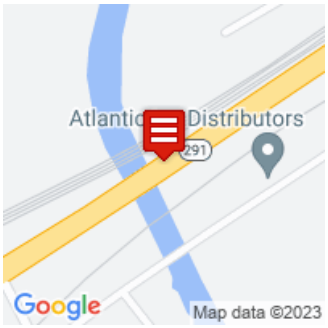
0 replies

8. 

Kevin Added September 05 2023

Major safety hazard where the bridge crossing Ridley Creek meets the road. In the Southbound left lane especially there is a huge gap and mismatch where the bridge starts. It sounds and feels like your car is exploding when you hit it at even a moderate, ~35mph, speed. I cannot imagine how many people have bent rims, broken suspension if not worse from the condition of this area. Please fix this area.

Liked 0 times

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0 replies

Public Workshop

IMPROVING SAFETY ALONG ROUTE 291 PUBLIC MEETING AND WORKSHOP



Please join us:

Wednesday, October 11, 2023
6:30 pm to 8:30 pm
ACCESS Chester Community Center
701 Booth Street
Chester, PA 19013



We need your input on how to make Route 291 safer.

Review Alternatives and Ask Questions

Tell us your opinion on the alternatives developed to make Route 291 safer. Formal presentation to start at 7pm. Workshop with interactive activities before and after the presentation.

Eat Dinner and Learn about the Project

Enjoy dinner with staff from Delaware County and the project team.

Take the Online Survey:

Scan the QR code for the project survey or go to: https://www.surveymonkey.com/r/ROUTE291

Visit the project website:
https://delcopa.gov/SafetyOnRt291/

Food sponsored by:

NAME A BETTER DUO TACOS AND BOWLS

JOURNEY TAX

If you have questions, contact us:
Cathy Spahr (SpahrC@co.delaware.pa.us) or
Tara Hofferth (thofferth@kittelson.com)

The meeting location is accessible to persons with disabilities.
If you need special accommodations or would like additional information, please contact the Delaware County Project Manager, Cathy Spahr (610) 891-5379.

Improving Safety on Route 291



Public Workshop

October 11, 2023

6:30 pm – 8:30 pm

Delaware County
Pennsylvania

KITTELSON & ASSOCIATES

A.D. MARBLE
environmental·cultural·engineering
DBE/MBE/WBE CERTIFIED

Agenda

1. Study Recap
2. Alternatives Overview
3. Analysis Overview & Results
4. Next Steps
5. Activities & Discussion



Introductions

Elaine Paul Schaefer (Vice Chair, Delaware County Council)

Gina Burritt (Director, Planning)

Tom Shaffer (Manager, Transportation Planning)

Cathy Spahr (Senior Planner)

Brittani Hales (Community Engagement Specialist)

Tara Hofferth

Laura Ahramjian

Jon Crisafi

Alain Izabayo

KITTELSON & ASSOCIATES

Colleen Meiswich

Melanie Attieh

A.D. MARBLE
environmental·cultural·engineering
DBE/MBE/WBE CERTIFIED

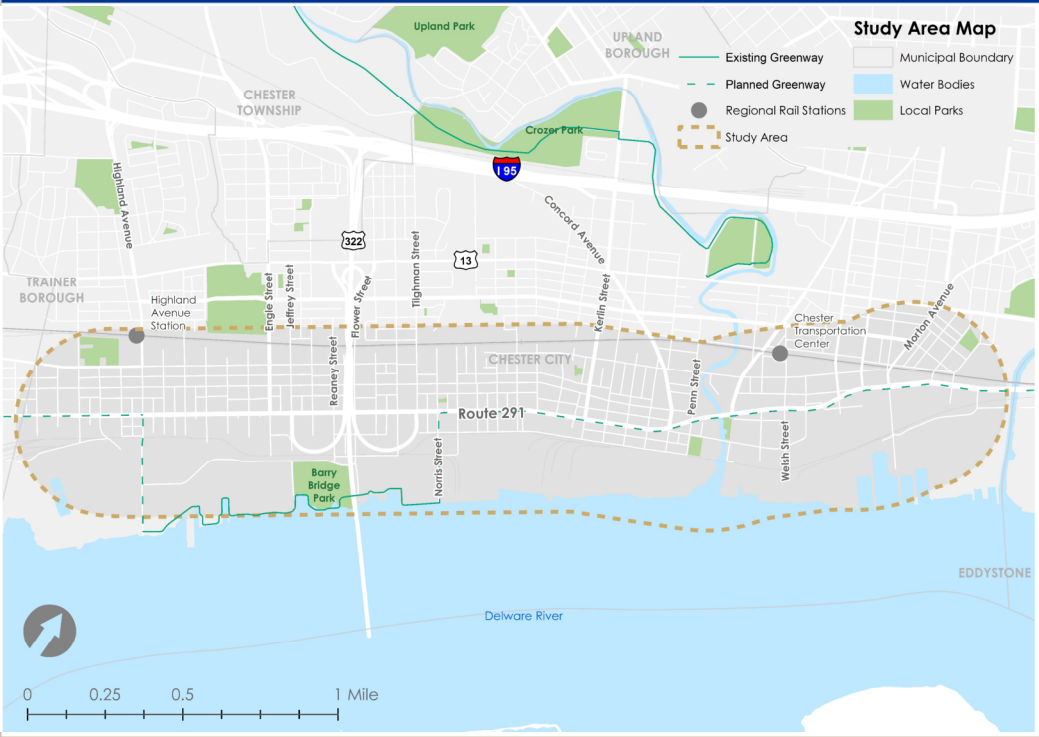
Study Recap



Goals

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

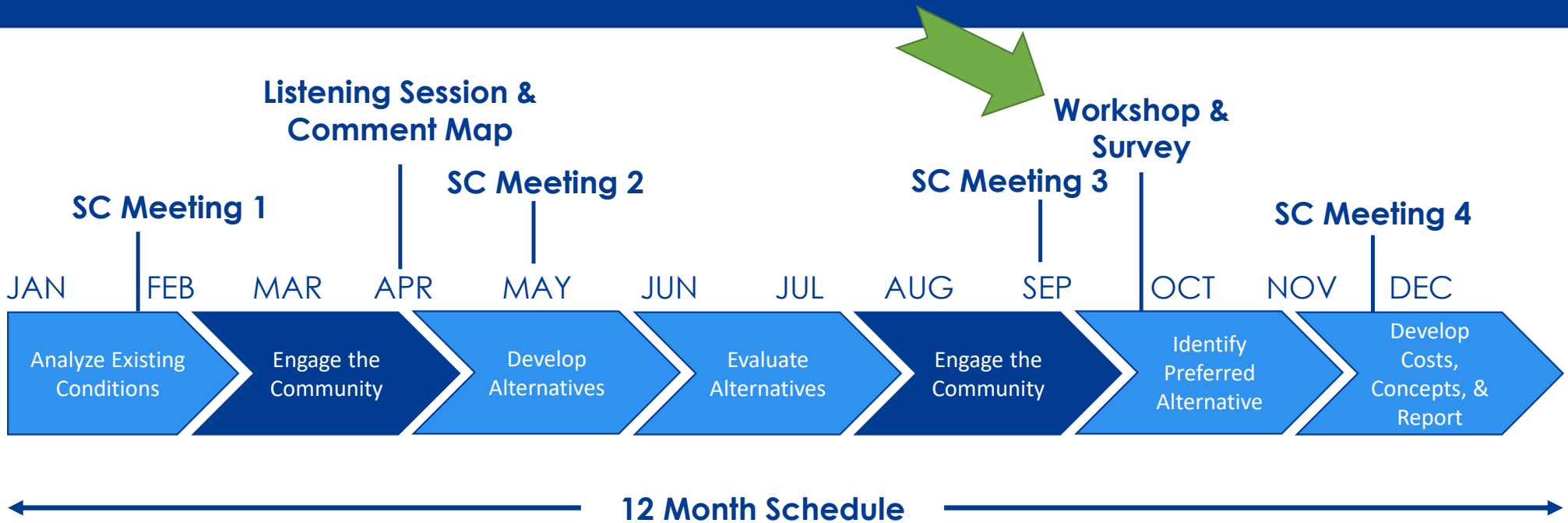
It will also make recommendations for the **dedicated East Coast Greenway facility** through Chester City and Ridley Township.



Study Objectives:

- Improve Safety For All
- Create Connections for Walking & Biking
- Optimize Roadway Operations
- Balance Residential and Industrial Needs
- Plan for Implementation

Timeline


Listening Session & Comment Map
Workshop & Survey
SC Meeting 1
SC Meeting 2
SC Meeting 3
SC Meeting 4
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Analyze Existing Conditions
Engage the Community
Develop Alternatives
Evaluate Alternatives
Engage the Community
Identify Preferred Alternative
Develop Costs, Concepts, & Report
12 Month Schedule

Previous Engagement

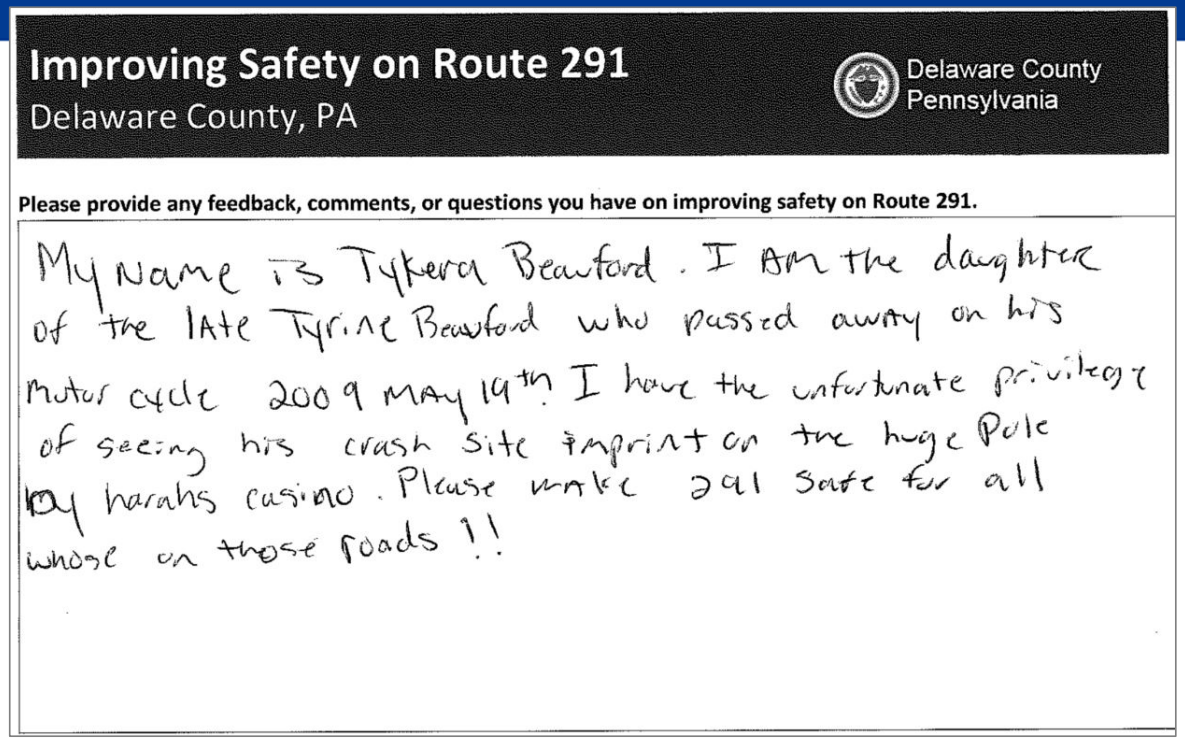
- Workshop 1
- Online comment map
- Door to door chats
- Riverfront Festival
- Food Truck / Music Event
- Steering Committee Meetings





What We've Heard:

- Feels like a highway through a community
- Many people in Chester know someone who has been in a crash on Route 291
- Speeding makes the street feel unsafe to drive along, walk or bike along, and walk across



Improving Safety on Route 291
Delaware County, PA

Delaware County Pennsylvania

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

My Name is Tykera Beauford. I AM the daughter of the late Tyrine Beauford who passed away on his motor cycle 2009 MAY 19th I have the unfortunate privilege of seeing his crash site imprint on the huge Pole by harahs casino. Please make 291 Safe for all whose on those roads !!

What We've Heard:



- Improve Safety For All
- Create Connections for Walking & Biking
- Optimize Roadway Operations
- Balance Residential and Industrial Needs
- Plan for Implementation

Alternatives Overview

Route 291 Study



IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMAKING

SIGNALS & INTERSECTIONS

MULTIMODAL ACCESS

TRAFFIC CALMING

GREENWAY TREATMENTS

SEPARATED BIKE LANE



A separated bike lane is within the street right-of-way and separated from motor vehicle traffic by a physical barrier, such as planters, flexible delineator posts, parked cars, landscape median, or a mountable curb.

SHARED USE PATH / TRAIL



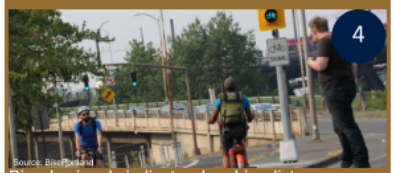
This facility is shared between people biking and walking. A shared use path (SUP) or trail provides the highest level of separation and the lowest level of traffic stress for cyclists.

GREEN PAINT



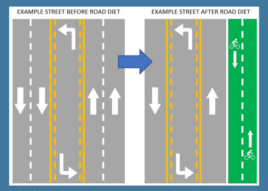
Green and/or white pavement markings draw attention to cyclists moving through or past conflict areas, including intersections and driveways.

BICYCLE SIGNAL



Bicycle signals indicate when bicyclists can cross. They also restrict conflicting vehicle movements. Bicycle-only signals can be used at intersections to provide a separate signal phase that is dedicated to bicyclists.

ROAD DIET



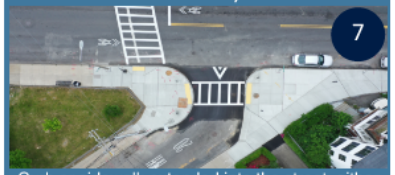
A road diet involves reducing or repurposing lanes to change the purpose, width, directionality, or other characteristics of the roadway. This can slow vehicles and make room for a bicycle facility.

RAISED MEDIAN



A raised median provides horizontal deflection to slow vehicles along a roadway. Raised medians provide an opportunity to incorporate a pedestrian refuge or green stormwater infrastructure.

CURB EXTENSION / BULBOUT



Curb or sidewalk extended into the street, either at an intersection or mid-block, narrows the street width, reduces pedestrian crossing distance, improves visibility of pedestrians, and reduces right-turning vehicle speeds.

INTERSECTION VISIBILITY



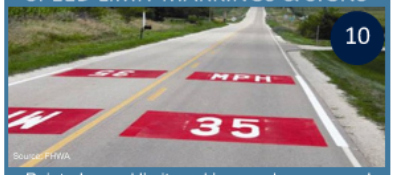
Marking off areas using pavement markings, flexible delineator posts, or other visual or physical elements delineates space where on-street parking is restricted. This maintain visibility at driveways and intersections.

SPEED / RED LIGHT CAMERAS



Speed or red light running cameras can reduce motorist speeds and impact driver behavior where physical infrastructure is less feasible or effective. Additional legislation and certification might be needed to implement.

SPEED LIMIT MARKINGS & SIGNS



Painted speed limit markings and more speed limit signs provide a visual reminder of the desired and allowable roadway speed. Speed limits can also be reduced where appropriate.

BUFFERS & RUMBLE STRIPS



Buffers and/or rumble strips can be used to separate different modes or traffic traveling in opposite directions. These treatments can enforce separation between fast moving traffic and a parking lane, bike lane, or turn lane.

SIDEWALK WIDENING



A complete and connected sidewalk network increases pedestrian access and safety. Along an urban corridor, the sidewalk clear width should be at least 6-ft wide, or ideally wider.

PEDESTRIAN REFUGE



A pedestrian median refuge island provides added protection for pedestrians and bicyclists crossing at an intersection or mid-block. The refuge improves pedestrian visibility, reduces conflict points, and reduces crossing distance.

MARKED CROSSWALK



High visibility reflective crosswalk markings should be incorporated at controlled intersections and at priority midblock crossings. According to FHWA, "a high-visibility marked crosswalk can reduce pedestrian crashes up to 40%."

CROSSWALK VISIBILITY



Signage and warning beacons can be used in advance of marked pedestrian crossings to increase driver yielding.

INTERSECTION MARKINGS



Pavement markings visually separate modes to reduce pedestrian and cyclist exposure. Separate signal phases for bicyclists and pedestrians eliminate conflict points.

IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMAKING

SIGNALS & INTERSECTIONS

MULTIMODAL ACCESS

TRAFFIC CALMING

GREENWAY TREATMENTS

SEPARATED BIKE LANE

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delineator p

SHARED USE PATH / TRAIL

2

GREEN PAINT

3

BICYCLE SIGNAL

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increase driver yielding.

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16

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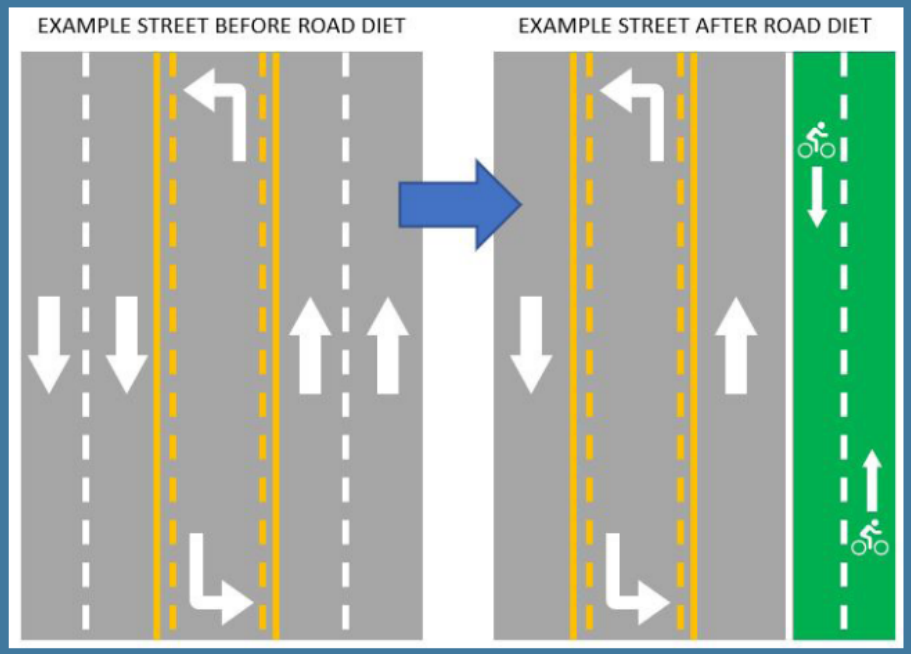
ROAD DIET



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IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMAKING

SIGNALS & INTERSECTIONS

MULTIMODAL ACCESS

TRAFFIC CALMING

GREENWAY TREATMENTS

SEPARATED BIKE LANE



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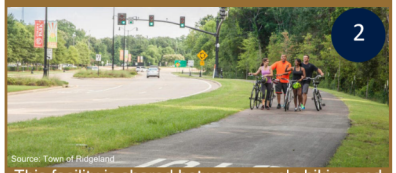
SHARED USE PATH / TRAIL



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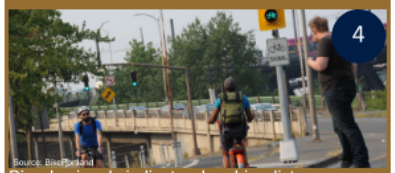

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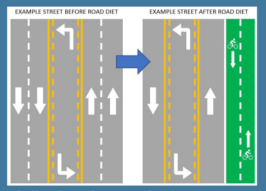

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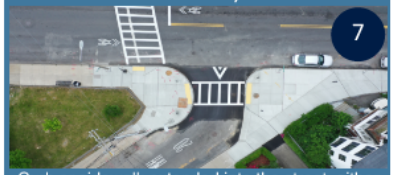

Curb or sidewalk extended into the street, either at an intersection or mid-block, narrows the street width, reduces pedestrian crossing distance, improves visibility of pedestrians, and reduces right-turning vehicle speeds.

INTERSECTION VISIBILITY



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SPEED / RED LIGHT CAMERAS



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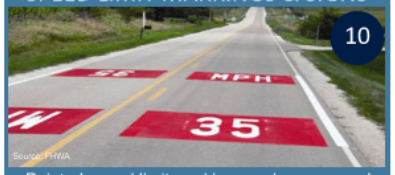

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91 TRUCK ROUTE TREATMENTS









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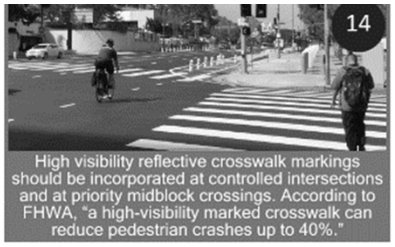

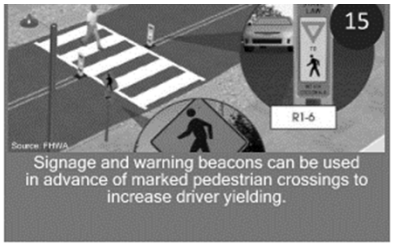

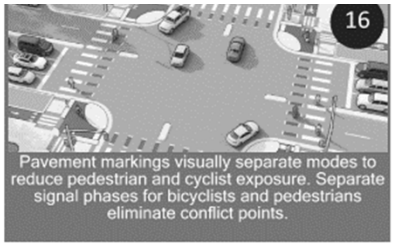

IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMAKING

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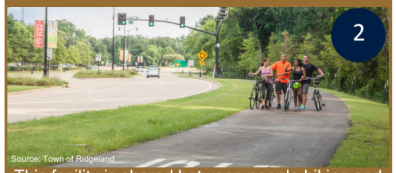

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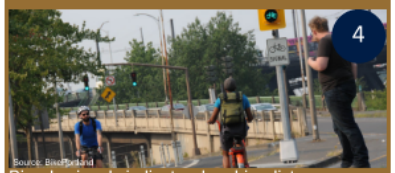

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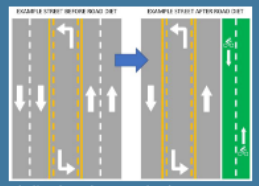

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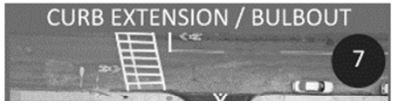

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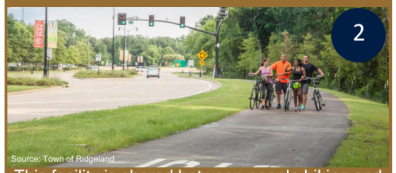

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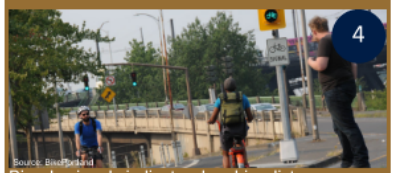

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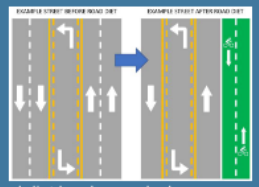

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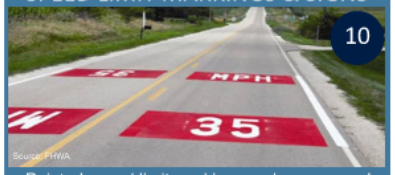

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ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMENT

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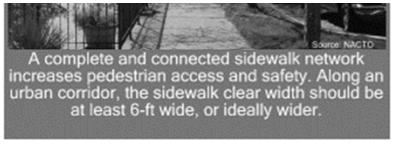

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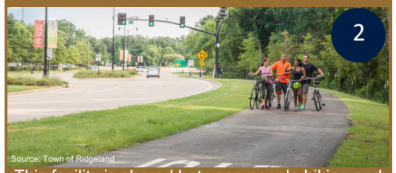

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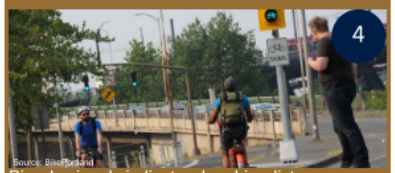

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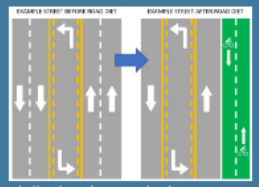

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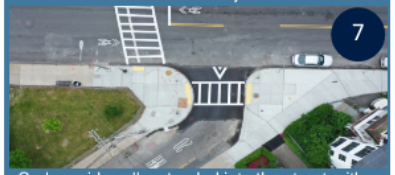

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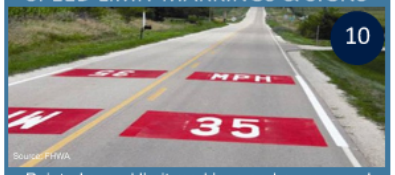

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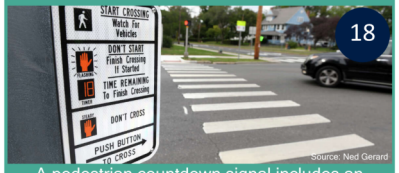
FLASHING PEDESTRIAN SIGNAL



Rectangular Rapid Flash Beacons (RRFBs) include a flasher that lets motorists know pedestrians are crossing. These are especially applicable at uncontrolled, mid-block or trail crossings.

PEDESTRIAN COUNTDOWN SIGNAL



A pedestrian countdown signal includes an accessible push button, appropriate signage, and a pedestrian signal that indicates remaining walk time. Fixed, rather than actuated, signals are most preferred in urban areas.

EXTRA PEDESTRIAN CROSSING TIME



A leading pedestrian interval (LPI) gives pedestrians advance signal time to begin crossing before conflicting vehicles start turning. LPIs are especially helpful at wide, busy intersections.

TRANSIT AMENITIES



Transit amenities include shelters, benches, kiosks, and access to other services and amenities. There should be sidewalk access and safe roadway crossings near transit stops.

TRAFFIC SIGNALS AT INTERSECTIONS



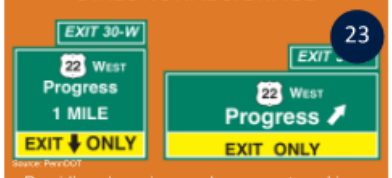
Full signalization of an intersection impacts traffic operations and controls the movements of all road users. This can slow traffic, improve mobility, and accommodate pedestrians and cyclists.

ROUNDABOUT



A roundabout is an intersection treatment with channelized approaches that reduce speeds. Roundabouts minimize conflict points and maintain a safe flow of traffic.

DIRECTIONAL SIGNAGE



Providing clear signs and pavement markings along a corridor can reduce confusion and direct motorists to key destinations.

TRAFFIC SIGNAL TIMING



Traffic signal timing changes can optimize traffic operation and reduce queueing and congestion. Signal timing might also provide priority to different modes, such as transit vehicles.

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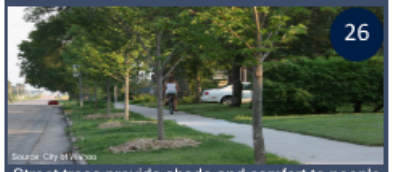

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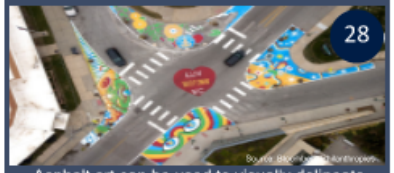

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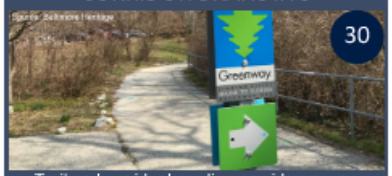

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FLASHING PEDESTRIAN SIGNAL

PEDESTRIAN COUNTDOWN SIGNAL

EXTRA PEDESTRIAN CROSSING TIME

TRANSIT AMENITIES

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IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

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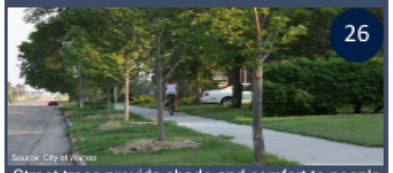

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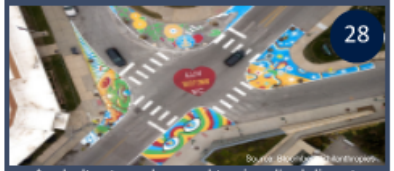

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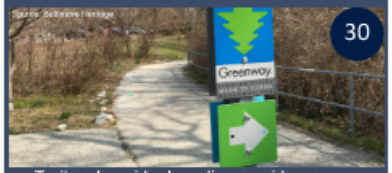

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Route 291 / Jeffrey Street

Route 291 / Tilghman Street

Route 291 / Kerlin Street



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IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMAKING

SIGNALS & INTERSECTIONS

MULTIMODAL ACCESS

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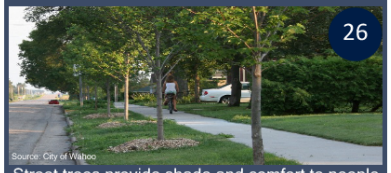

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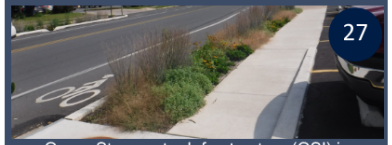

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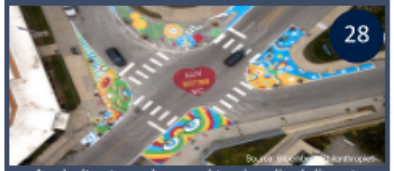

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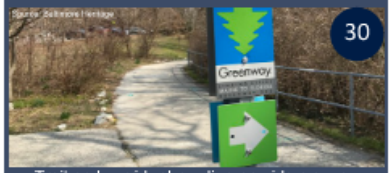

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UTE 291

TRUCK ROUTE TREATMENTS

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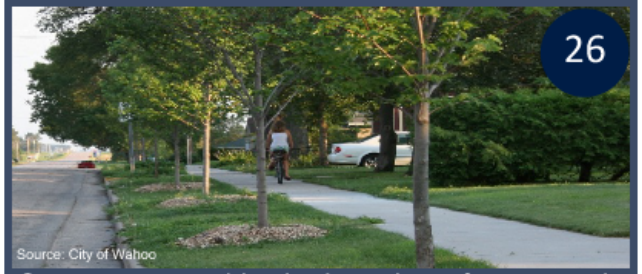

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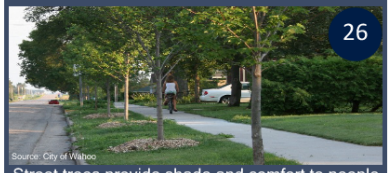

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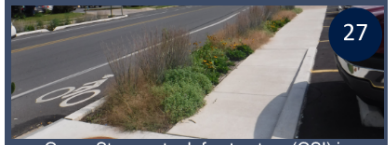

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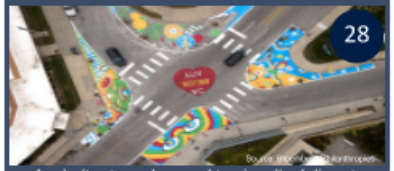

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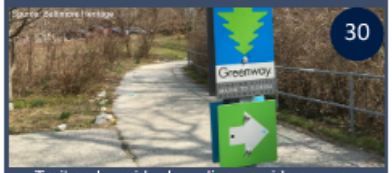

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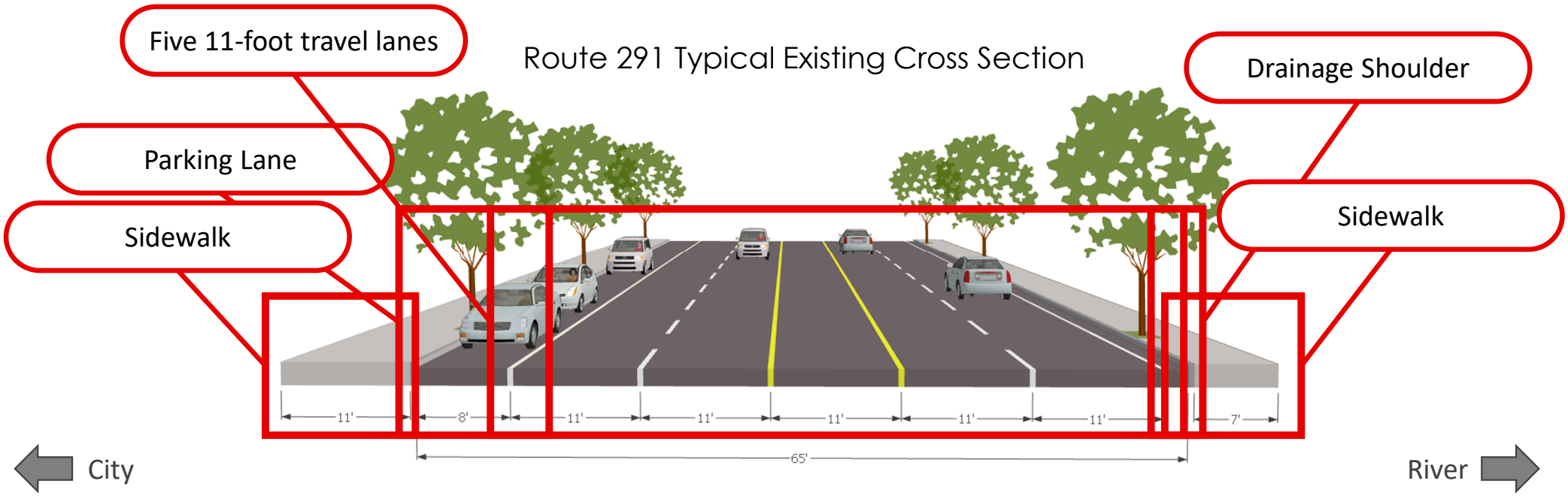

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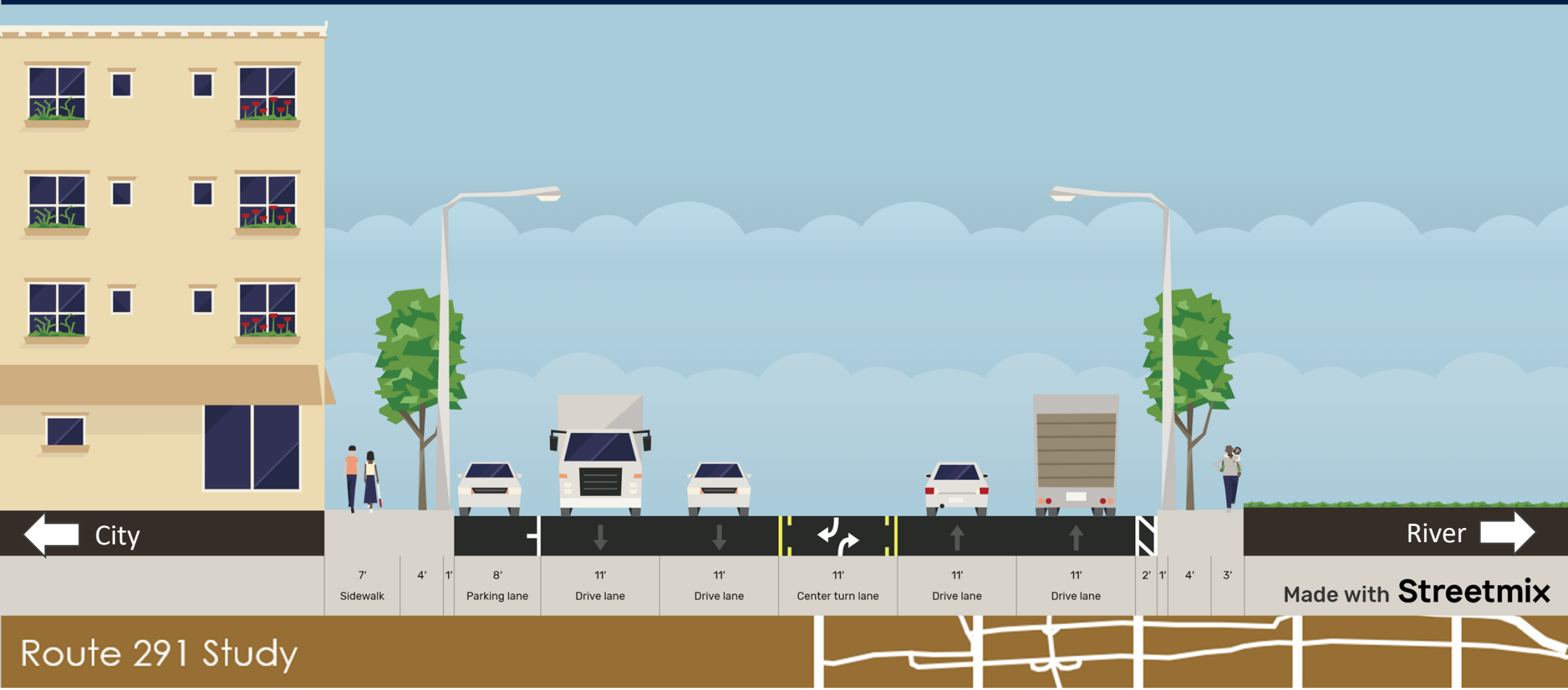
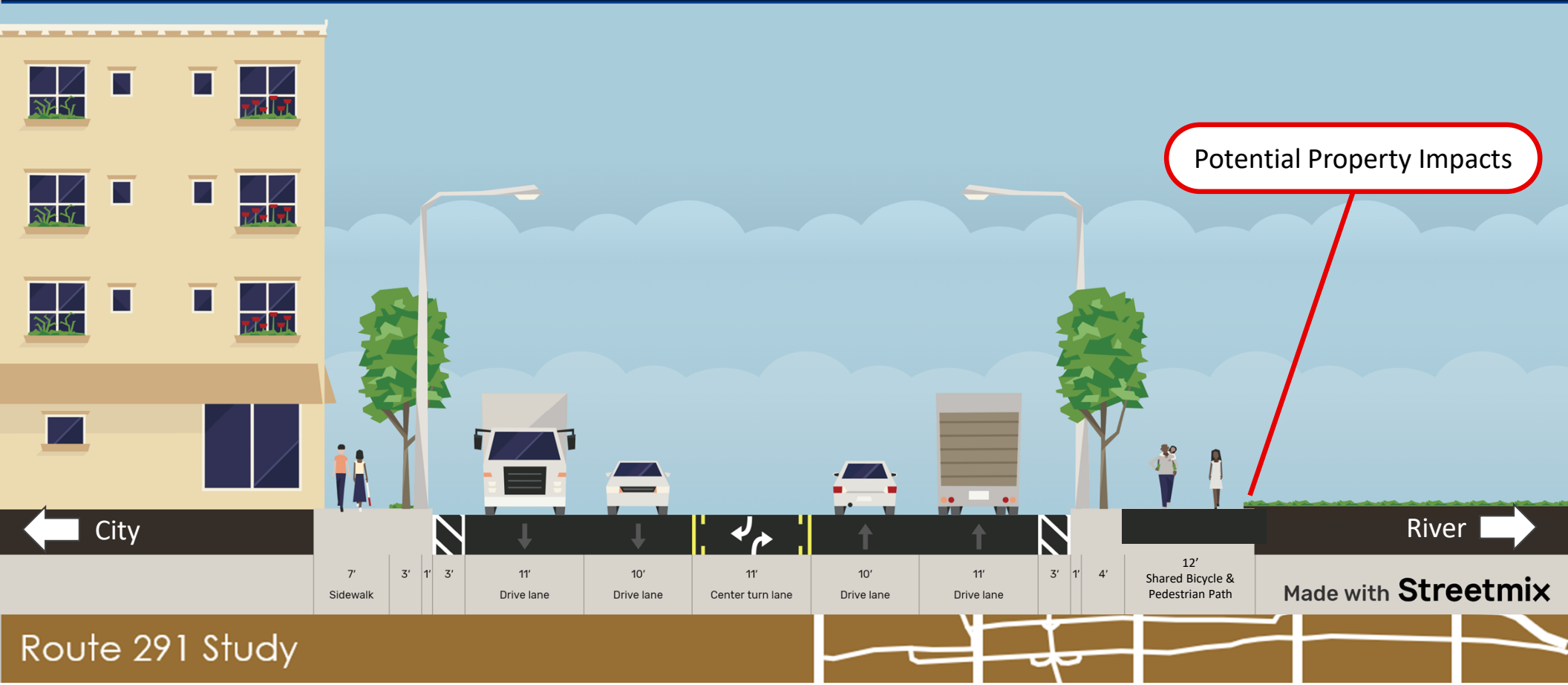


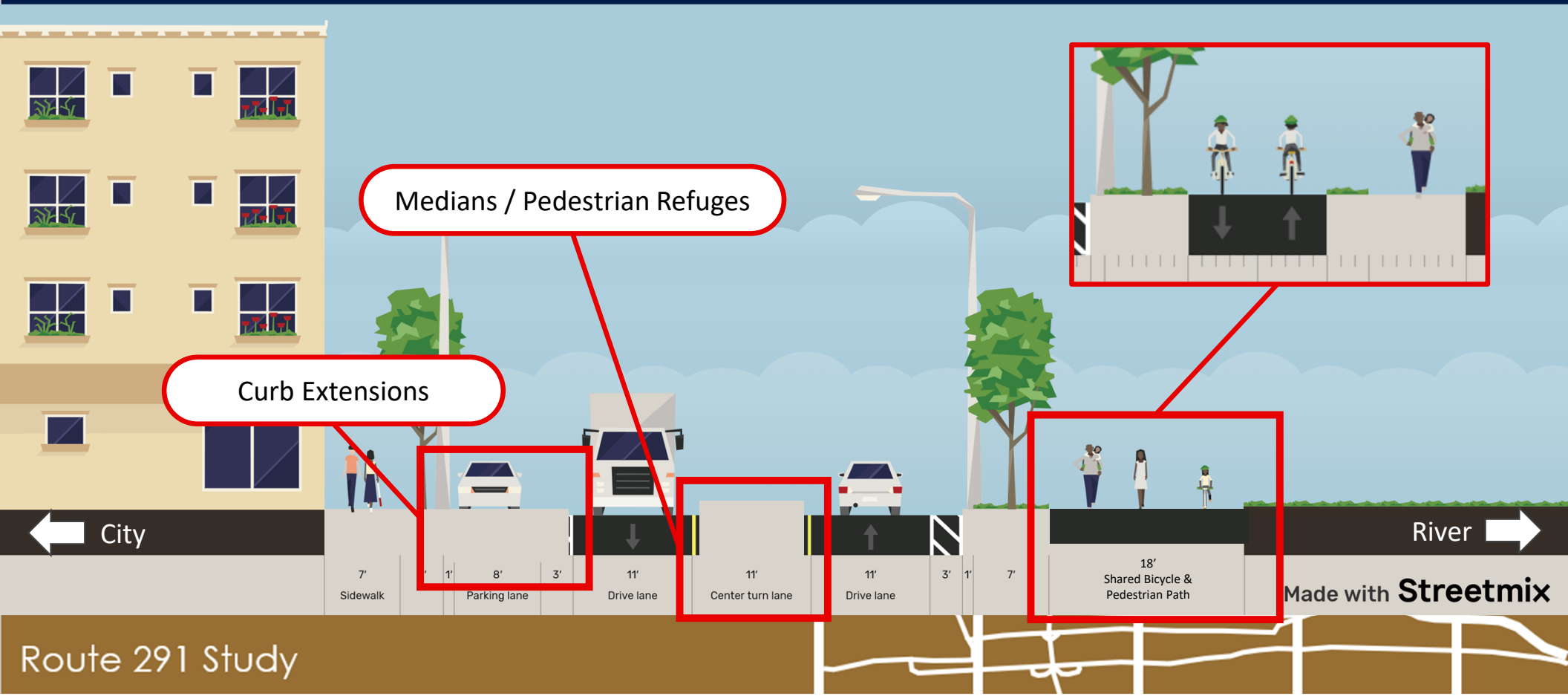
Route 291 Study

Alternative A –
5 Lanes with Safety Improvements



Route 291 Study

Alternative B –
3 Lanes with Safety Improvements



Analysis Overview & Results



Crash Analysis



Crash data is for 2017 – 2021



290

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



Crash Analysis

5 Lanes, No Safety Improvements	58 Predicted Crashes	40 Severe Crashes / 18 PDO
Reduce to 3 Lanes	44 Predicted Crashes	27 Severe Crashes / 17 PDO
Alternative A – Keep 5 Lanes, Make Safety Improvements	32 Predicted Crashes	22 Severe Crashes / 10 PDO
Alternative B – Reduce to 3 Lanes, Make Safety Improvements	21 Predicted Crashes	12 Severe / 9 PDO

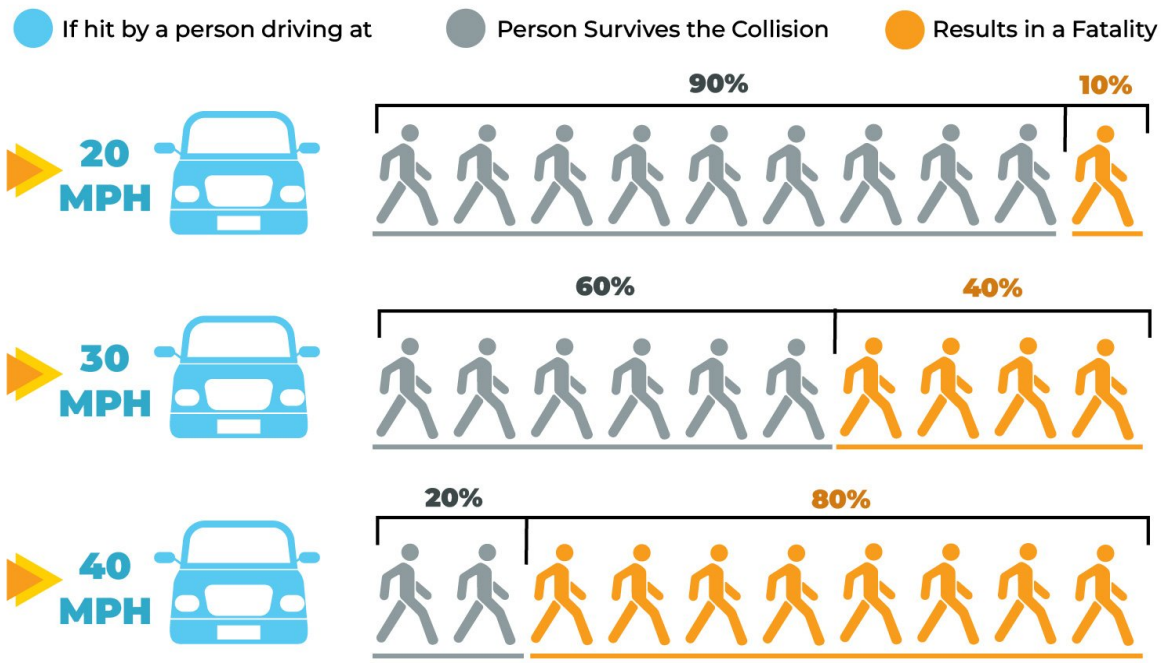
Reduces potential severe crashes by 1/2

Reduces potential severe crashes by 3/4



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

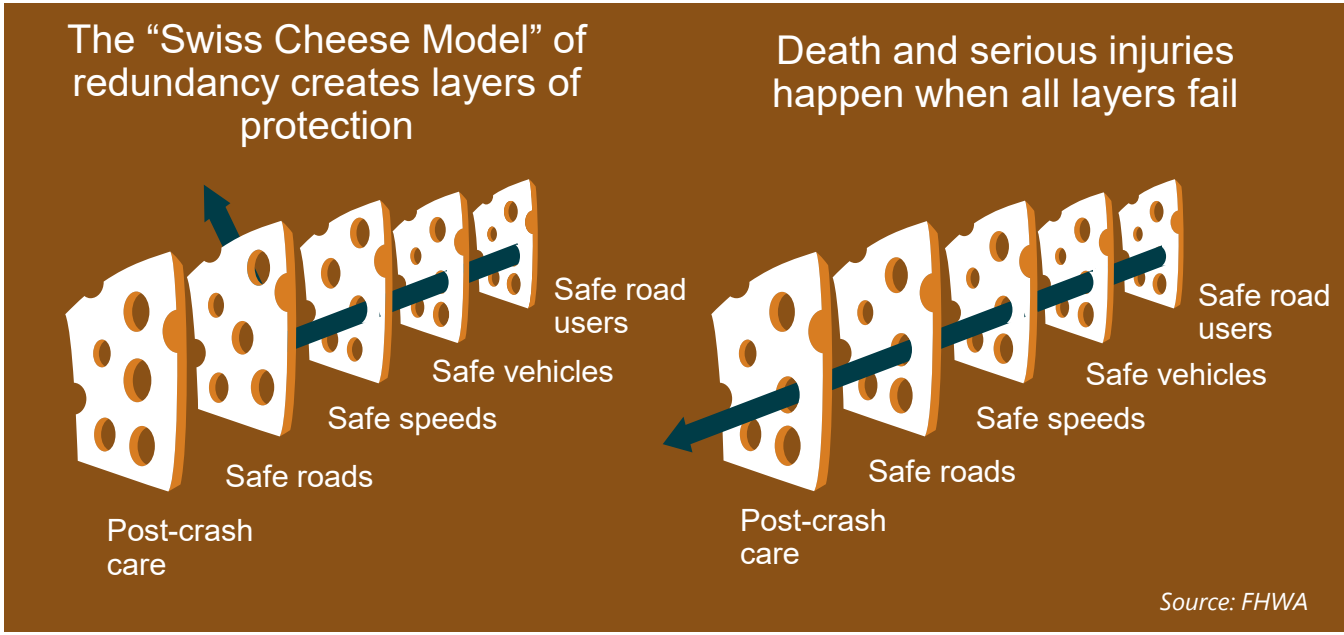
Fatal & Serious Injury Crashes



Source: Streets are for Everyone

Fatal & Serious Injury Crashes





Traffic Analysis

What we have heard / seen:



Residents experience congestion



Analysis shows minimal existing delays



Drivers are sometimes confused

Traffic Analysis

What we have heard / seen:



Stadium traffic is challenging



I-95 traffic uses Route 291



Traffic spills onto neighborhood streets

Traffic Analysis

Alternative analysis results:

- Analysis shows minimal delays for both the future 5-lane and the future 3-lane alternatives
- People are not anticipated to experience a change in congestion with either alternative

Traffic Analysis

Alternative analysis results:

- New signals at Jeffrey Street & Tilghman Street (via another project) are expected to improve operations and reduce confusion
- New signal at Kerlin Street is expected to improve safety without increasing congestion / delays

TRAFFIC SIGNALS AT INTERSECTIONS



Full signalization of an intersection impacts traffic operations and controls the movements of all road users. This can slow traffic, improve mobility, and accommodate pedestrians and cyclists.

Traffic Analysis

Alternative analysis results:

- Ongoing coordination regarding Stadium traffic
- During I-95 closures, traffic will divert to US 13, Route 291, and other streets in the network
- Some local traffic is anticipated to use parallel streets with 3-lanes on Route 291

Activities & Next Steps



Activities

- Fill out the survey and comment cards
- Discuss goals and tradeoffs
- Consider toolkit application
- Arrange the cross sections

Thank you!!

Next Steps

1. Take the Online Survey!
2. Selecting Preferred Alternative
3. Develop concepts, costs, and final report

Questions?

Cathy Spahr
(SpahrC@co.delaware.pa.us)

Tara Hofferth
(thofferth@kittelson.com)

Route 291 Road Diet Study Delaware County, PA

October 11, 2023 Public Workshop Comments/Questions and Answers

Below is a summary of the Comments provided/Questions asked during the October 11, 2023 Public Workshop and the Answers provided by the Project Team.

Question/Comment #1: What traffic studies were done? Does the community have access to them? Is truck traffic included in the traffic study? How long was the study taken, since there are peak traffic hours? There should be more police presence or rumble strips. Traffic lights have been taken down.

Delaware County/ Kittleson Response #1: A traffic study was conducted for 48-hour intervals in different areas. The highest volume of truck traffic was captured in the morning. The traffic study results will be posted to the project website. Increasing police enforcement is one option; however, it has been proven to be more efficient to create an environment where it does not feel safe for the motorist to speed. The current environment of the road allows motorists to feel safe going 80 mph in a 35mph zone.

Question/Comment #2: There was another industrial sites/ truck traffic study conducted for an alternative on 4th Street, were the results of this study considered? Was future development and growth of Chester included in the traffic study?

Delaware County/ Kittleson Response #2: The Kittleson team will look into the 4th Street study. Slowing down trucks is the top priority. The traffic models used in the traffic study anticipate how the region may grow, and how that may impact traffic operations to 2050.

Question/Comment #3: Are speed bumps or speed cameras an option?

Delaware County/ Kittleson Response #3: Speed bumps are not designed to be installed in an area with the speed limit above 25 mph. Rumble strips would be more practical on Route 291 rather than speed bumps; rumble strips are part of the project's toolkit. PennDOT has required the County to conduct a traffic study and collect public opinions on the roadway before making any improvements. Pennsylvania has a red-light program; however, there are no red-light cameras in Delaware County. Representative Carol Kazeem has been working with the state police.

Question/Comment #4: Unmaintained trees are a visual impairment to drivers.

Question/Comment #5: Was the addition of warehouses, distribution centers, and school buses routes taken into consideration? There are specific intersections that need lights.
Delaware County/ Kittleson Response #5: Yes. Tara Hofferth indicated that she would connect with the individual to record which streets need traffic lights in their opinion.

Question/Comment #6: Guiderails are needed at curves to prevent property damage since a car crashed into my house. When I called PennDOT to request guiderails, they said they don't put up guiderails to protect personal property. I didn't want them to put up guiderails for my personal benefit, rather it is about saving lives.

Question/Comment #7: Wherever there is a traffic light on 9th Street, there should be one on Route 291. Has the idea of pedestrian bridges connecting the riverfront to the community been considered?
Delaware County/ Kittleson Response #7: Even if pedestrian bridges are installed, people may choose to still use the dangerous roadway.

The following comments were captured via hard copy comment cards distributed at the public workshop on October 11, 2023.

Question/Comment #8: If you're going to talk with the Union Team about managing traffic, are you also going to discuss a partnership or solutions with SEPTA? The PennDOT process should formally be a part of the presentation, maybe a flow chart that explains how and why things have to be done a certain way.
Delaware County/ Kittleson Response #8:

Question/Comment #9: I think traffic signals should be installed every few blocks in Chester, PA. I have witnessed a dead person laying on the street from getting hit on his motorcycle, a birthday present his grandma gave him a few days prior, in my arms. I saw my family almost die

in front of me in 2007 when I was just 13 years old when a driver jumped the curb. What saved it was my cousin taking 2 seconds to hug my grandmother before the rest of my family left during a visit for Christmas. I realize this is a predominately Black community, and not much care is taken in consideration, but this is a community where my mom grew up! Care for the people.

Delaware County/ Kittleson Response #9:

Question/Comment #10: Is it possible to get low interest loan for the existing homes on the city side of 291? The loan could be used to improve the condition of the homes particularly the exterior. Contractors can hire city residents.

Delaware County/ Kittleson Response #10:

Question/Comment #11: There should be stoplights along every cross street that has one on 9th Street. We would like to see pedestrian bridges that incorporate the greenway.

Delaware County/ Kittleson Response #11:

Question/Comment #12: The traffic light at 2nd Street and Flower Street needs to be adjusted. The traffic on Flower Street (trucks) get backed up to 3rd Street and Flower Street blocking the intersection with 18-wheel trucks, horse trailers pulled by 6 wheels, cars (work, school, residents). The trucks turn onto 3rd Street south to come out Reaney Street and Edward Street. They then turn at the stop sign onto 291 to continue southbound. Put a traffic light at 2nd Street and Jeffery Street. Change flashing light to traffic light, there have been 2 deaths at the intersection since May 2022.

Delaware County/ Kittleson Response #12:

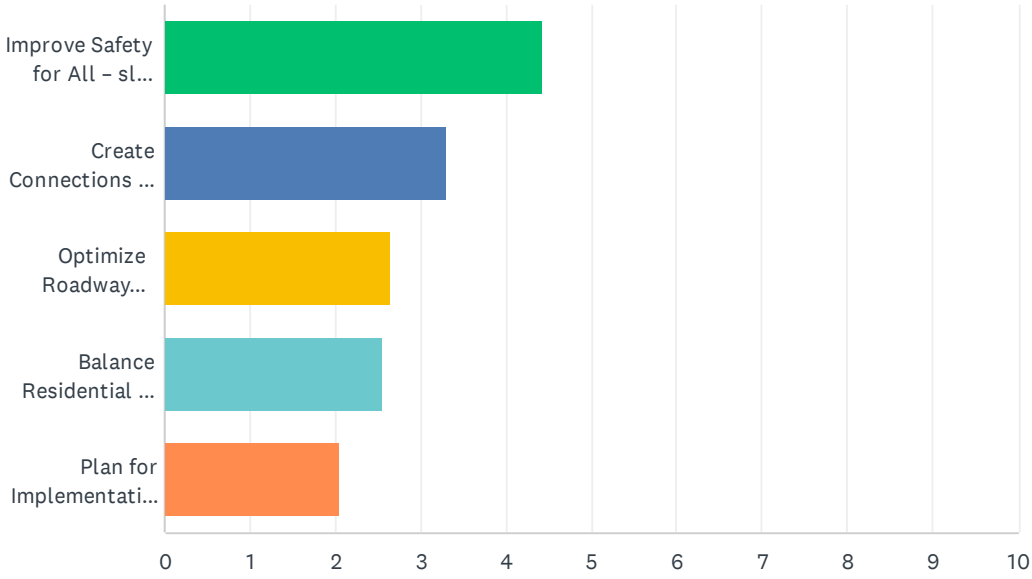
Question/Comment #13: Make 291 safe, green, and community/ business oriented.

Delaware County/ Kittleson Response #13:

Survey Results

Q1 How do you prioritize these project goals? Use the arrows on the left to rank your priorities. The item at the top of the list is your top priority and the item at the bottom of the list is your lowest priority.

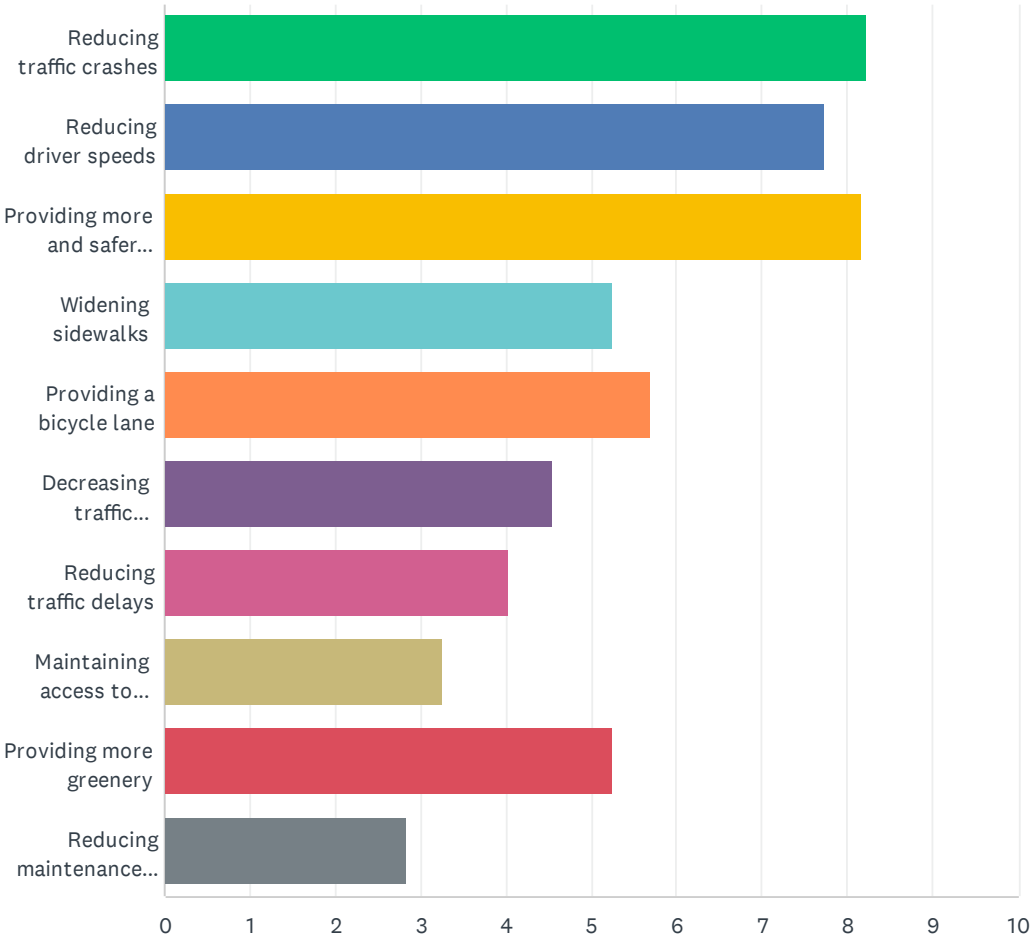
Answered: 39 Skipped: 4



	1	2	3	4	5	TOTAL	SCORE
Improve Safety for All – slow traffic speeds, shorten crossings, and make the road more predictable to reduce all types of crashes.	64.10% 25	23.08% 9	5.13% 2	7.69% 3	0.00% 0	39	4.44
Create Connections for Walking and Biking – dedicate space for pedestrians and bicyclists. Make it more comfortable to walk and bike along and across Route 291.	17.95% 7	38.46% 15	17.95% 7	7.69% 3	17.95% 7	39	3.31
Optimize Roadway Operations – move traffic efficiently and reduce delays for emergency vehicles, commuters, and trucks.	5.13% 2	17.95% 7	33.33% 13	23.08% 9	20.51% 8	39	2.64
Balance Residential and Industrial Uses – balance the need for truck access with improvements that enhance the road as a place, like greenery and bus shelters.	5.13% 2	17.95% 7	25.64% 10	30.77% 12	20.51% 8	39	2.56
Plan for Implementation – develop solutions that are implemented and can easily be maintained.	7.69% 3	2.56% 1	17.95% 7	30.77% 12	41.03% 16	39	2.05

Q2 Please rank the importance of the following goals along Route 291. Use the arrows on the left to rank the importance of the element. The item at the top of the list is your top priority and the item at the bottom of the list is your lowest priority.

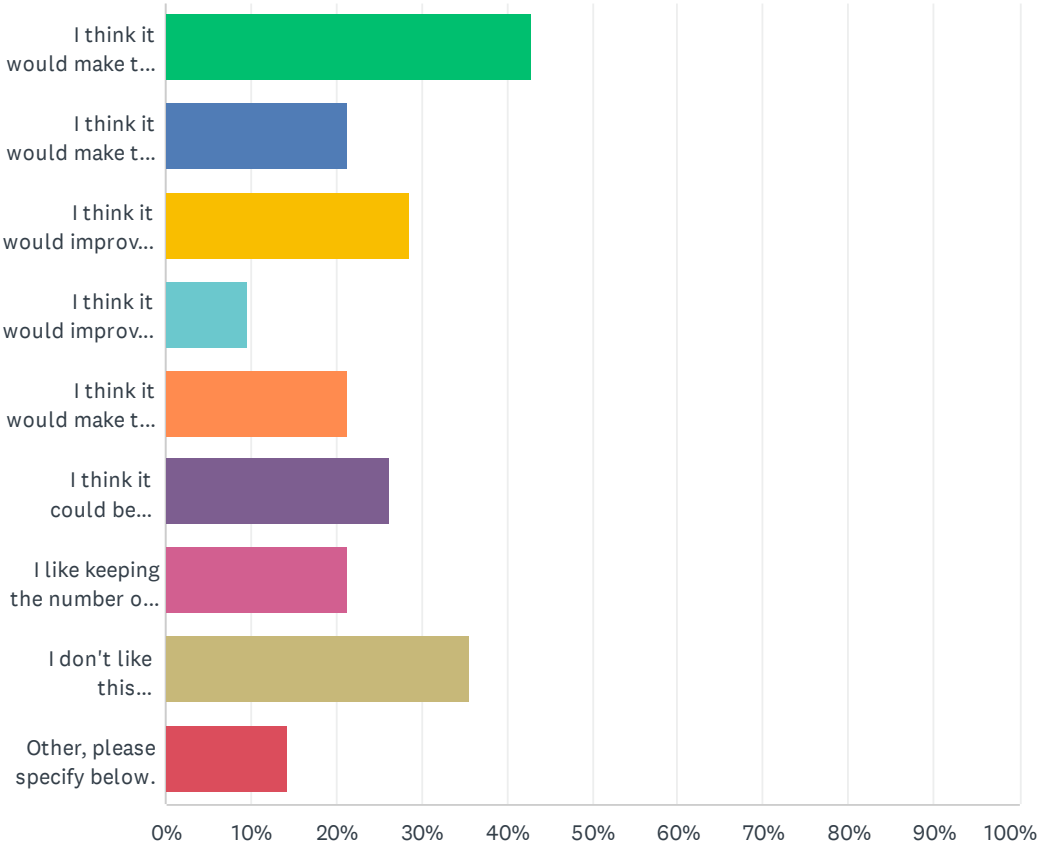
Answered: 37 Skipped: 6



	1	2	3	4	5	6	7	8	9	10	TOTAL
Reducing traffic crashes	32.43% 12	24.32% 9	13.51% 5	8.11% 3	10.81% 4	8.11% 3	2.70% 1	0.00% 0	0.00% 0	0.00% 0	37
Reducing driver speeds	16.22% 6	27.03% 10	18.92% 7	10.81% 4	13.51% 5	8.11% 3	2.70% 1	2.70% 1	0.00% 0	0.00% 0	37
Providing more and safer pedestrian crossings	21.62% 8	24.32% 9	29.73% 11	10.81% 4	5.41% 2	5.41% 2	0.00% 0	2.70% 1	0.00% 0	0.00% 0	37
Widening sidewalks	0.00% 0	2.70% 1	5.41% 2	29.73% 11	18.92% 7	10.81% 4	8.11% 3	8.11% 3	8.11% 3	8.11% 3	37
Providing a bicycle lane	16.22% 6	10.81% 4	5.41% 2	8.11% 3	16.22% 6	10.81% 4	2.70% 1	5.41% 2	8.11% 3	16.22% 6	37
Decreasing traffic diversion onto nearby streets	0.00% 0	2.70% 1	5.41% 2	2.70% 1	13.51% 5	21.62% 8	29.73% 11	13.51% 5	8.11% 3	2.70% 1	37
Reducing traffic delays	8.11% 3	0.00% 0	0.00% 0	2.70% 1	5.41% 2	21.62% 8	16.22% 6	18.92% 7	13.51% 5	13.51% 5	37
Maintaining access to industrial sites	0.00% 0	5.41% 2	2.70% 1	8.11% 3	2.70% 1	0.00% 0	8.11% 3	29.73% 11	18.92% 7	24.32% 9	37
Providing more greenery	2.70% 1	2.70% 1	18.92% 7	16.22% 6	5.41% 2	10.81% 4	16.22% 6	8.11% 3	13.51% 5	5.41% 2	37
Reducing maintenance costs and property impacts	2.70% 1	0.00% 0	0.00% 0	2.70% 1	8.11% 3	2.70% 1	13.51% 5	10.81% 4	29.73% 11	29.73% 11	37

Q3 Alternative A (see image below) keeps 5 lanes of traffic, including 2 lanes in each direction plus the center turn lane. It eliminates the parking lane to make more room for people walking and biking. It shortens crossings with medians and pedestrian refuges, signalizes the Kerlin Street intersection, and adds crosswalks to improve safety. What do you like about Alternative A? Select all that apply.

Answered: 42 Skipped: 1

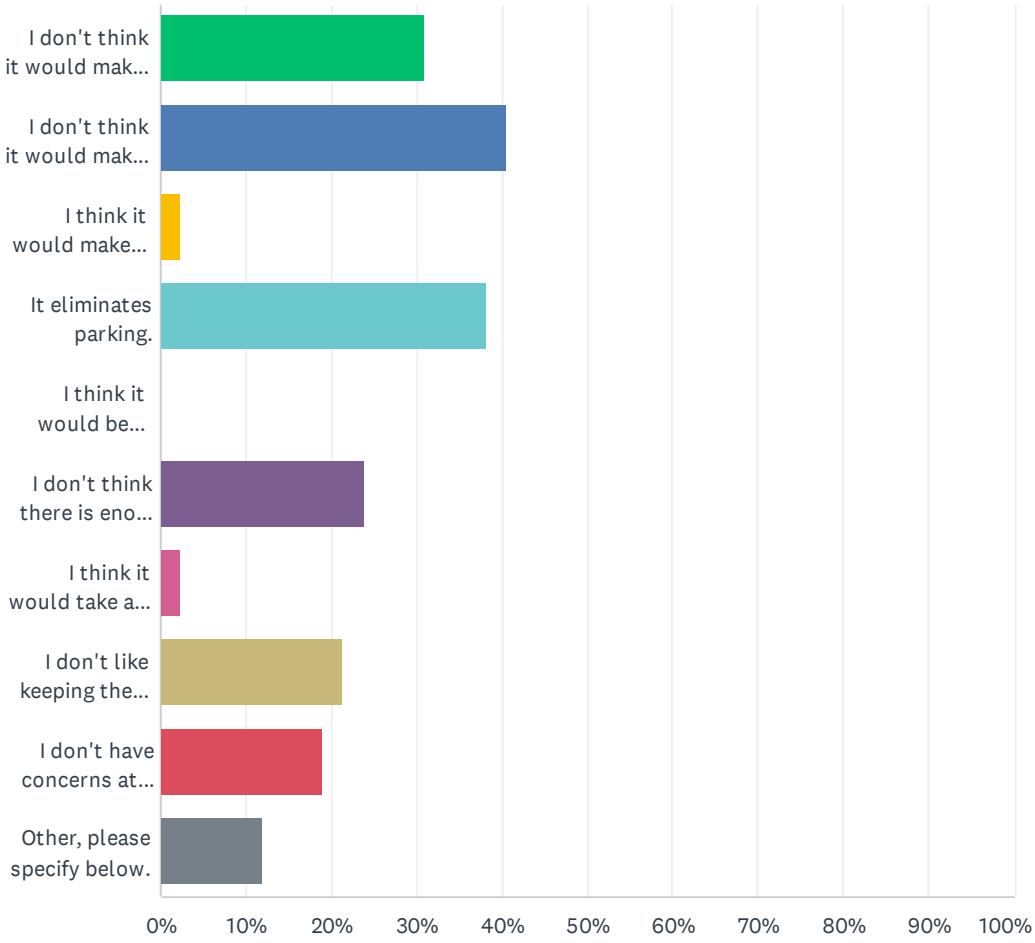


ANSWER CHOICES	RESPONSES	
I think it would make the road safer for people walking and biking.	42.86%	18
I think it would make the road safer for people driving.	21.43%	9
I think it would improve vehicle travel time.	28.57%	12
I think it would improve access to industrial sites.	9.52%	4
I think it would make the road feel more like a place in the community.	21.43%	9
I think it could be quickly implemented and easily maintained.	26.19%	11
I like keeping the number of travel lanes the same	21.43%	9
I don't like this alternative at this time.	35.71%	15
Other, please specify below.	14.29%	6
Total Respondents: 42		

#	IF YOU ANSWERED OTHER ABOVE, PLEASE INDICATE THE OTHER REASON(S) YOU LIKE ALTERNATIVE A IN THIS SPACE.	DATE
1	Parking on 291 needs to stay for the people who live there.	10/30/2023 3:44 PM
2	What is the parking alternative for the residence living on that street? Where do the residents park and how do they enter and exit their vehicles?	10/23/2023 7:15 PM
3	Where to people who live on that street park.	10/20/2023 8:19 AM
4	There is little about this alternative that helps the community or makes the road safer. I think the shared path would be better than what there is, right now, but if we want it to be a major connector, there should be more room. Additionally, the road is still extremely wide, which will make it difficult to cross and easy to speed.	10/10/2023 10:50 AM
5	doesn't seem like it would reduce driver speed possibly making it even more dangerous for pedestrians crossing the road	10/9/2023 11:13 AM
6	It won't change anything other than taking parking away from those that live there.	10/9/2023 6:38 AM
7	Very hard to see from side streets to pull onto road due to parked cars along 291 and can cause accidents during rush hours. I think in certain areas there should be no parking.	10/7/2023 4:32 AM
8	In general this alternative would create a safer corridor for biking and walking with an off-road path; however, that safety might still be threatened by speeding vehicles, especially given that parking would be taken away, since that acts as a slight buffer for pedestrians on the sidewalk closest to the housing.	10/6/2023 2:38 PM
9	My biggest concern is safety for pedestrians and biking	10/2/2023 5:06 PM

Q4 What concerns do you have about Alternative A (see image below)? Select all that apply.

Answered: 42 Skipped: 1

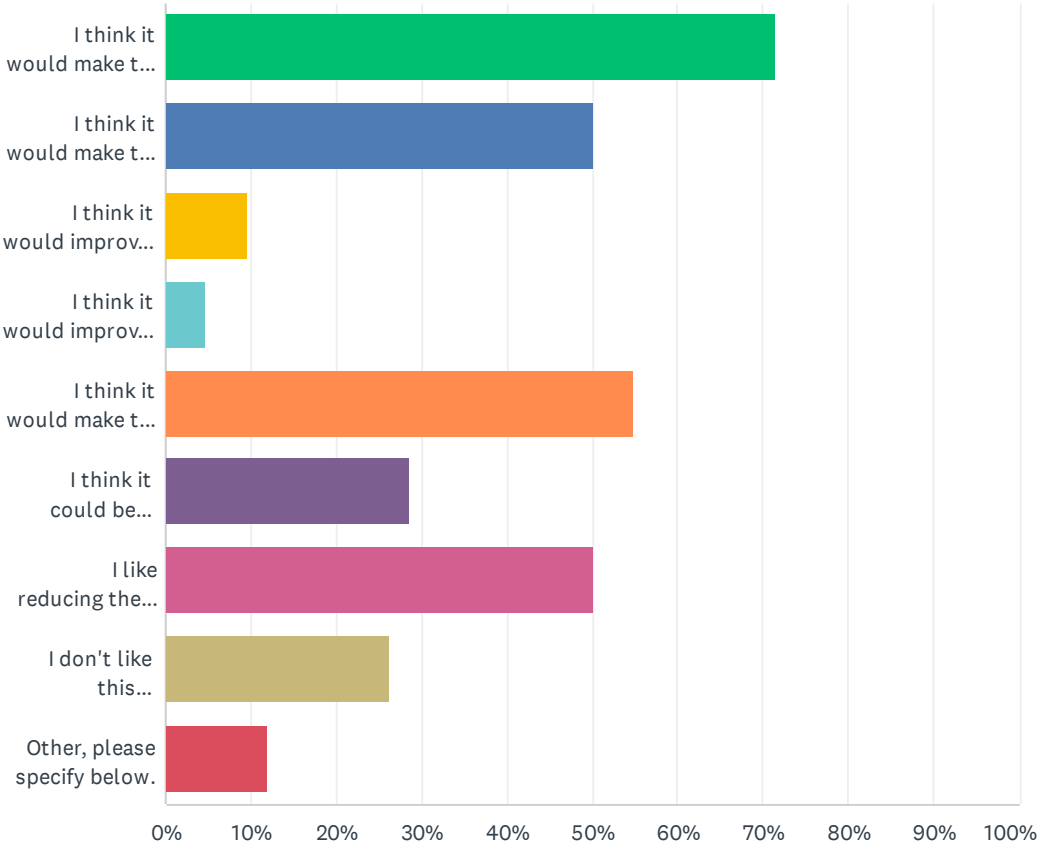


ANSWER CHOICES	RESPONSES	
I don't think it would make the road safer for people walking and biking.	30.95%	13
I don't think it would make the road safer for people driving.	40.48%	17
I think it would make vehicle travel time worse.	2.38%	1
It eliminates parking.	38.10%	16
I think it would be difficult to access industrial sites.	0.00%	0
I don't think there is enough space for community improvements.	23.81%	10
I think it would take a long time to implement and will be difficult to maintain.	2.38%	1
I don't like keeping the number of travel lanes the same.	21.43%	9
I don't have concerns at this time.	19.05%	8
Other, please specify below.	11.90%	5
Total Respondents: 42		

#	IF YOU ANSWERED OTHER ABOVE, PLEASE INDICATE THE OTHER CONCERN(S) YOU HAVE ABOUT ALTERNATIVE A IN THIS SPACE.	DATE
1	This will work for the volume but you need lights to slow people down. Green space in the turn lane could improve the look of the area.	10/30/2023 3:44 PM
2	There are no traffic calming measures	10/23/2023 9:37 PM
3	What is the parking alternative for the residence living on that street? Where do the residents park and how do they enter and exit their vehicles? Parking on this street blocks the view of cross traffic when turning from side streets.	10/23/2023 7:15 PM
4	Although it's better than nothing, it still prioritizes drivers over the community. There's walking and biking space along the road, but who will want to use it while next to four lanes of high-speed traffic?	10/10/2023 10:50 AM
5	It would make it safer and less unpleasant for those moving along the highway, but not safe for those crossing	10/9/2023 11:13 AM
6	It keeps the current unsafe, expansive road width, which forces pedestrians and cyclists to be exposed to traffic for a longer period of time when crossing the road.	10/6/2023 2:38 PM
7	i fear residents will still park on side of road creating dangerous traffic conditions. and in some ways its not fair that home owners no longer can park in front of their homes, but chester needs progress to bring in revenue to help the overall community.	10/2/2023 5:33 PM
8	I don't think it would reduce speeding	10/2/2023 3:39 PM

Q5 Alternative B (see image below) eliminates 2 traffic lanes so that there is 1 lane in each direction and a center turn lane. It keeps the parking lane. It includes a wide, separate space for people walking and biking. It shortens crossings with curb bump outs, medians, and pedestrian refuges, signalizes the Kerlin Street intersection, and adds crosswalks to improve safety. What do you like about Alternative B? Select all that apply.

Answered: 42 Skipped: 1

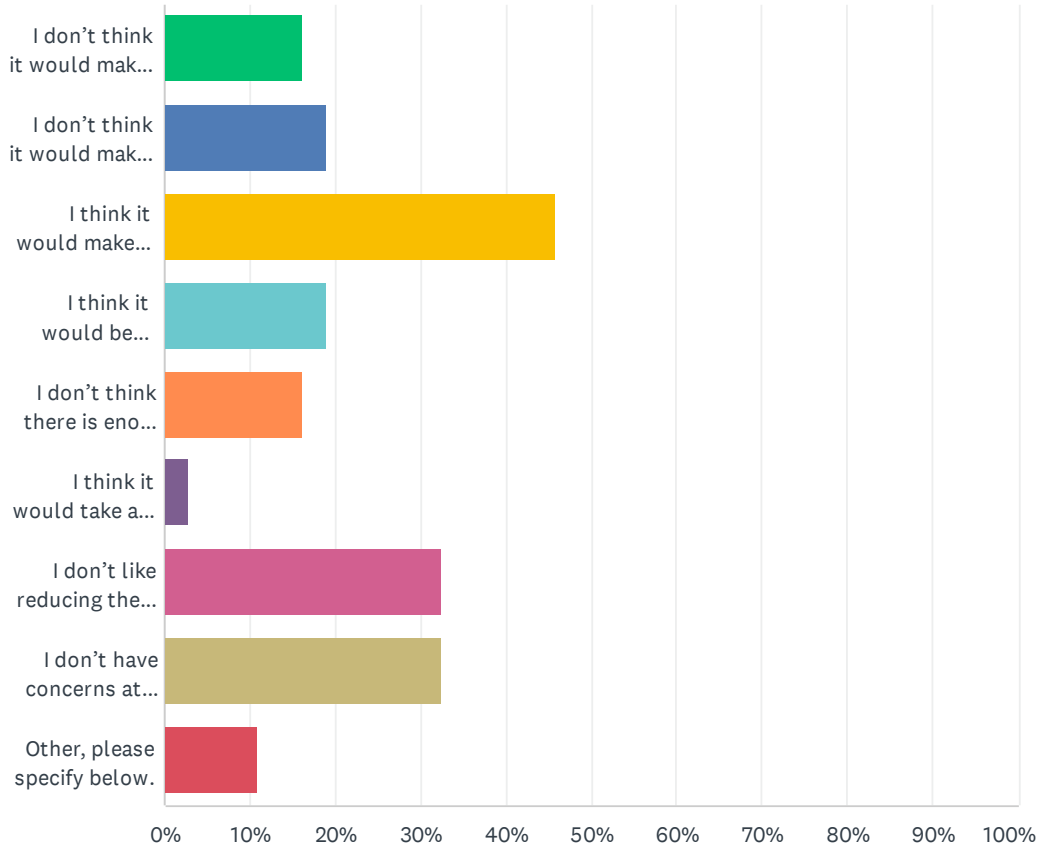


ANSWER CHOICES	RESPONSES	
I think it would make the road safer for people walking and biking.	71.43%	30
I think it would make the road safer for people driving.	50.00%	21
I think it would improve vehicle travel time.	9.52%	4
I think it would improve access to industrial sites.	4.76%	2
I think it would make the road feel more like a place in the community.	54.76%	23
I think it could be quickly implemented and easily maintained.	28.57%	12
I like reducing the number of travel lanes.	50.00%	21
I don't like this alternative at this time.	26.19%	11
Other, please specify below.	11.90%	5
Total Respondents: 42		

#	IF YOU ANSWERED OTHER ABOVE, PLEASE INDICATE THE OTHER REASON(S) YOU LIKE ALTERNATIVE B IN THIS SPACE.	DATE
1	Two lanes will work for the volume on the road to slow down the traffic but will cause a problem for the trucks. Volume pilling at lights.	10/30/2023 3:44 PM
2	Nothing	10/23/2023 9:37 PM
3	Adding in greenery beside the lanes will give shade, helping the environment long-term and helping our community short-term with shade and more tranquil space.	10/12/2023 10:50 AM
4	Love this alternative. Because there won't be a lot of lane-changing, traffic might improve, and there's loads of space for walking and biking. This will also improve access to industrial sites for those who cannot or choose not to drive.	10/10/2023 10:50 AM
5	People will pass using the turning lane causing more accidents. I don't feel it will make pedestrians and bikers more safe. Enforce the traffic laws and maybe the road will be safer.	10/9/2023 6:38 AM
6	Traffic would be mess especially when there is accident on 95 all alternative roads become nightmare to get anywhere.	10/7/2023 4:32 AM
7	Traffic flows would be come more predictable as there would be less space for reckless driving that cause greater risk of crashes and start-and-stop driving, both of which create traffic delays, vs the slower and steadier approach of this design.	10/6/2023 2:38 PM

Q6 What concerns do you have about Alternative B (see image below)? Select all that apply.

Answered: 37 Skipped: 6



ANSWER CHOICES	RESPONSES	
I don't think it would make the road safer for people walking and biking	16.22%	6
I don't think it would make the road safer for people driving	18.92%	7
I think it would make vehicle travel time worse	45.95%	17
I think it would be difficult to access industrial sites	18.92%	7
I don't think there is enough space for community improvements	16.22%	6
I think it would take a long time to implement and will be difficult to maintain	2.70%	1
I don't like reducing the number of travel lanes	32.43%	12
I don't have concerns at this time	32.43%	12
Other, please specify below.	10.81%	4
Total Respondents: 37		

#	IF YOU ANSWERED OTHER ABOVE, PLEASE INDICATE THE OTHER CONCERN(S) YOU	DATE

	HAVE ABOUT ALTERNATIVE B IN THIS SPACE.	
1	Two lanes will more than likely create traffic congestion.	10/23/2023 9:37 PM
2	Room to enter and exit vehichles.	10/23/2023 7:15 PM
3	I question if parking is necessary and would be better used as more green space.	10/11/2023 10:12 AM
4	I'd still like to see what the plans are for crossing the street. More lights and walk signals? Pedestrian and bike bridges?	10/10/2023 10:50 AM
5	Both alternatives don't mention speed limits. Will they be changed?	10/9/2023 11:13 AM

Q7 If you have concerns that are not addressed by any of the alternatives, what do you think can be improved? What would you like to see on Route 291 that you think is missing?

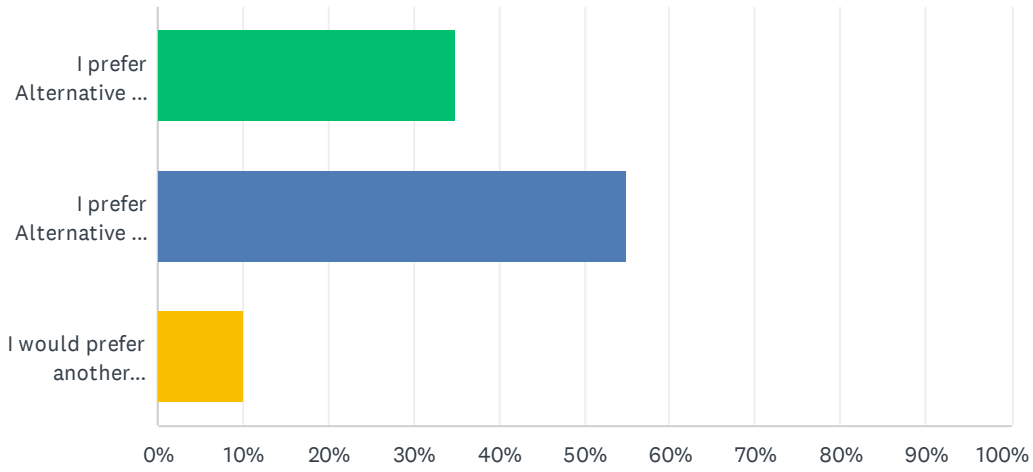
Answered: 31 Skipped: 12

#	RESPONSES	DATE
1	Bin blocks or guide rails should run along the length of the 291 where crashes are prevalent.	10/30/2023 3:38 PM
2	Bin blocks or guide rails should run along the length of the 291 where crashes are prevalent.	10/30/2023 3:36 PM
3	Bin blocks on guide rails should run along the length of r91 where crashes are prevalent.	10/30/2023 3:34 PM
4	Wide bike lanes	10/30/2023 3:21 PM
5	1 lane in each direction and a center turn lane. Parking is designed to allow visiblity for traffic entering onto 291 from side street.	10/23/2023 7:15 PM
6	Nothing	10/23/2023 2:16 PM
7	Bike lanes and improved sidewalks	10/23/2023 12:45 PM
8	all concerns addressed	10/20/2023 8:19 AM
9	N/A	10/16/2023 2:57 PM
10	Better line marking, overhead signs, more traffic lights that are synced, eliminating access to 291 from smaller streets and alleys	10/12/2023 5:38 PM
11	I think it is important to say that this survey provided no education about the "radical" change to 3 lanes. Assuming it was discussed at the meeting last night, the voices of those who heard concrete data about travel times and other impacts should be amplified. I can see many individuals answering this survey a specific way while thinking catastrophically and naively about the impacts of a lane reduction.	10/12/2023 10:50 AM
12	Access to the Waterfront, more greenspace	10/11/2023 6:43 PM
13	Access to the water front and greenery	10/11/2023 6:43 PM
14	None	10/11/2023 10:24 AM
15	How are residents going to be better connected to the waterfront, besides the shared path? How will these alternatives fit in with the east coast greenway?	10/11/2023 10:12 AM
16	Remove the lane of parked cars and give bikes their own lane rather than making a big multi modal sidewalk	10/10/2023 8:58 PM
17	Green buffers!	10/10/2023 1:21 PM
18	As I mentioned above, lighting and crossing need to be addressed to ensure people can actually access these amenities from the city side.	10/10/2023 10:50 AM
19	Possibly lower speed limits	10/9/2023 11:13 AM
20	Enforce traffic laws, try that first. Then if it doesn't work, change the road using one of your alternatives.	10/9/2023 6:38 AM
21	People coming out of Boeing are a huge problem They fly out of Boeing parking lots. When they come off of I-95 on stewart and turn right on #291 it is a racetrack. Many of them go through the light at Royal Farms every day. Need more police here to ticket these people. Travel this road every day to work and it is a major part of the problem.	10/7/2023 5:13 AM
22	Better and bigger signs for turning onto bridge for 95, confusion in that area with the turn. Need overhead turn sign.	10/7/2023 4:32 AM

23	I would simply like a safer, bike and walker friendlier, 291.	10/6/2023 7:10 PM
24	Alternative A that keeps 5 lanes would continue to make it unpleasant to travel and explore the 291 corridor, which hurts opportunities for people to experience Chester's history, culture, and heritage, let alone be physically active, healthy, and happy.	10/6/2023 2:38 PM
25	Better signage to I95 would definitely be a benefit for drivers. It needs to be more visible. Bus Lanes should be considered to reduce congestion. I would like to suggest specific lanes for buses, lanes for bikes, and improving pedestrian access and safety.	10/6/2023 12:15 PM
26	Side street exits are getting dangerous when trying to access 291. People speed excessively every single day	10/4/2023 2:43 PM
27	Truck noise is bad. waste management trucks smell aweful, trucks braking and down throttling is noisy (need signs and fines). Speeding is not enforced. 322 access to 291 needs a sensor light and silver traffic light box is blocking views for drivers. businesses need to clean up their properties, ie. weeds, vines, fenses. homes under repair need to be repaired more timely.	10/2/2023 5:33 PM
28	I feel as though there should be less travel lanes for safety of the road	10/2/2023 5:06 PM
29	Devise a plan to increase walking areas without limiting number of travel lanes for residential and industrial traffic - overpasses, property donations, etc.	10/2/2023 4:59 PM
30	none	10/2/2023 3:39 PM
31	better crossing walk-ways and more foliage and painted areas...less grafitti and run down buildings	10/2/2023 3:13 PM

Q8 Which alternative do you prefer?

Answered: 40 Skipped: 3



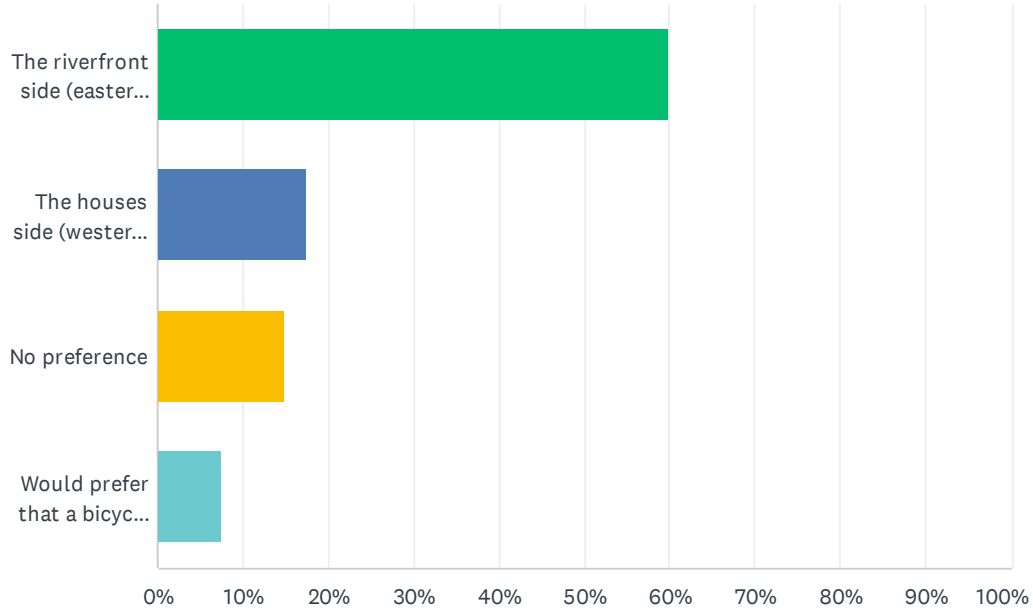
ANSWER CHOICES	RESPONSES	
I prefer Alternative A, which keeps 5 vehicle lanes	35.00%	14
I prefer Alternative B, which reduces the road to 3 vehicle lanes	55.00%	22
I would prefer another alternative. Please explain below.	10.00%	4
TOTAL		40

#	IF YOU SELECTED THAT YOU WOULD PREFER ANOTHER ALTERNATIVE. PLEASE EXPLAIN BELOW.	DATE
1	Better signs on 291, streets and ramp signs. Police on the road. Lights to slow traffic.	10/30/2023 3:44 PM
2	Dont think i like trees planted where houses are. Concerned about pipes cracking due to old pipes.	10/20/2023 8:19 AM
3	I would do B but without parking or the turning lane and give cars their own protected lane (if eliminating the turning lane it would be parking protected)	10/10/2023 8:58 PM
4	Definitely Alternative B. Alternative A is barely a road diet. Alternative B would even be better for cars, because it will reduce the number of crashes and allow people to take other forms of transportation, thereby decreasing the number of cars on the road.	10/10/2023 10:50 AM
5	Traffic laws need to be enforced. No one gets stopped, therefore it is a free-for-all.	10/9/2023 6:38 AM
6	Road diets have been proven many times over, including on PennDOT roads, to reduce traffic crashes and the resulting injuries and fatalities. They also have been shown to smooth traffic flows, making it more predictable. Traffic volume is not static; to avoid added congestion, drivers find other routes elsewhere on the road network, change modes to transit/biking/walking, change the timing of the trip, or decide not to take the trip. Additionally, by having slower, safer speed traffic, the corridor will improve the quality of life for residents and feel more like a more welcoming place for people on foot and bike, families, and visitors alike, thereby making the area a more viable area for new businesses and economic opportunities. This is all supported by resident input in dozens of plans dating back decades for Chester, and the time is now to transform 291 back into a more walkable bikeable 2nd Street for the City and its future!	10/6/2023 2:38 PM
7	5 lanes would be good except the people who live along 291. There is really no parking	10/4/2023 2:43 PM

	available for them. Alternative B is horrible idea.	

Q9 Which side of the street would be better for the dedicated bicycle lane?

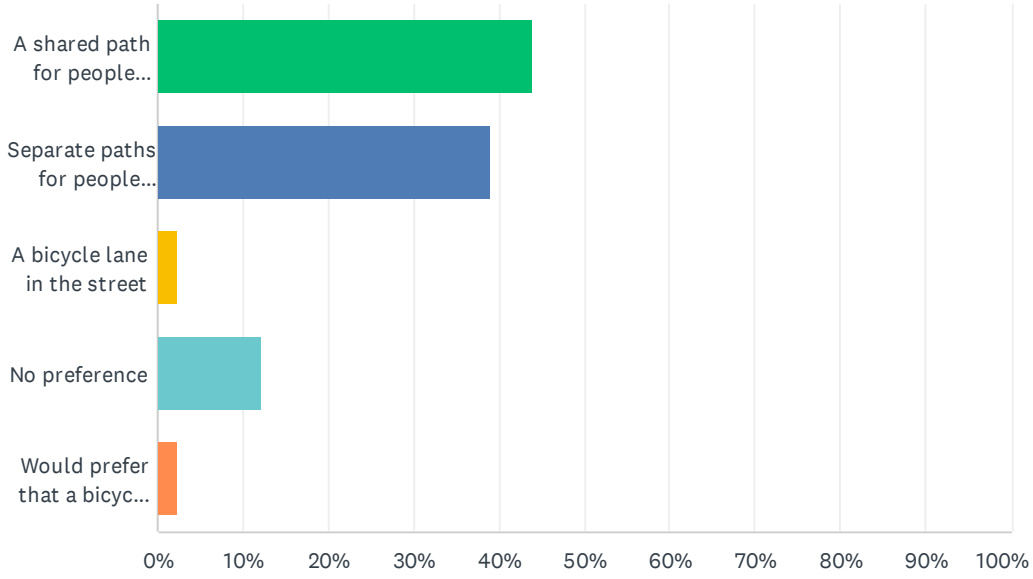
Answered: 40 Skipped: 3



ANSWER CHOICES	RESPONSES	
The riverfront side (eastern side)	60.00%	24
The houses side (western side)	17.50%	7
No preference	15.00%	6
Would prefer that a bicycle lane not be included	7.50%	3
TOTAL		40

Q10 Which type of bicycle lane would you prefer?

Answered: 41 Skipped: 2



ANSWER CHOICES	RESPONSES	
A shared path for people biking and walking	43.90%	18
Separate paths for people biking and walking	39.02%	16
A bicycle lane in the street	2.44%	1
No preference	12.20%	5
Would prefer that a bicycle lane not be included	2.44%	1
TOTAL		41

Q11 What is your zip code?

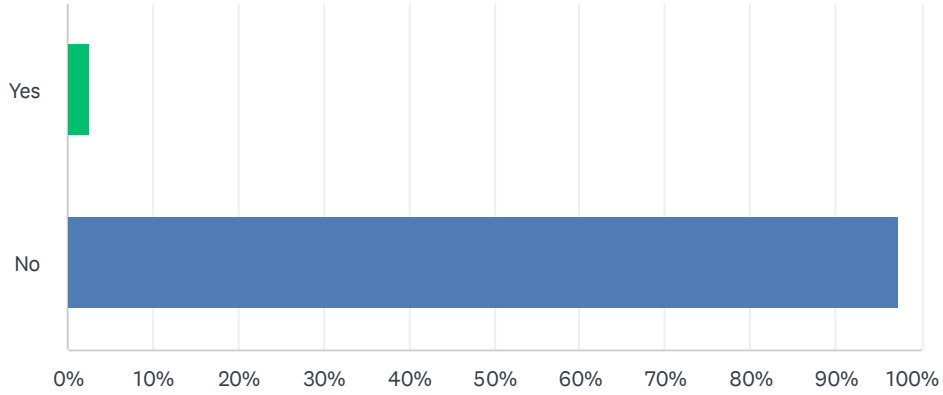
Answered: 39 Skipped: 4

#	RESPONSES	DATE
1	19104	10/30/2023 5:16 PM
2	19103	10/30/2023 3:47 PM
3	19103	10/30/2023 3:44 PM
4	19103	10/30/2023 3:39 PM
5	19103	10/30/2023 3:38 PM
6	19103	10/30/2023 3:36 PM
7	19103	10/30/2023 3:34 PM
8	19023	10/30/2023 3:30 PM
9	19103	10/30/2023 3:28 PM
10	19103	10/30/2023 3:21 PM
11	19013	10/24/2023 10:46 AM
12	19013	10/23/2023 9:37 PM
13	19013	10/23/2023 7:15 PM
14	19013	10/23/2023 2:28 PM
15	19013	10/23/2023 2:16 PM
16	19013	10/23/2023 12:45 PM
17	19311	10/23/2023 12:40 PM
18	19013	10/20/2023 8:19 AM
19	19103	10/16/2023 2:57 PM
20	19013	10/12/2023 5:38 PM
21	19013	10/12/2023 10:50 AM
22	19013	10/11/2023 6:43 PM
23	19103	10/11/2023 6:43 PM
24	19063	10/11/2023 10:24 AM
25	19147	10/10/2023 8:58 PM
26	19064	10/10/2023 10:50 AM
27	19063	10/9/2023 11:13 AM
28	19078	10/9/2023 6:38 AM
29	19087	10/7/2023 5:13 AM
30	19015	10/7/2023 4:32 AM
31	19041	10/6/2023 7:10 PM
32	19121	10/6/2023 2:38 PM
33	19013-1926	10/6/2023 12:15 PM

34	19013	10/4/2023 2:43 PM
35	19013	10/2/2023 5:33 PM
36	19013	10/2/2023 5:06 PM
37	19380	10/2/2023 4:59 PM
38	19060	10/2/2023 3:39 PM
39	19013	10/2/2023 3:13 PM

Q12 Are you Hispanic or Latino?

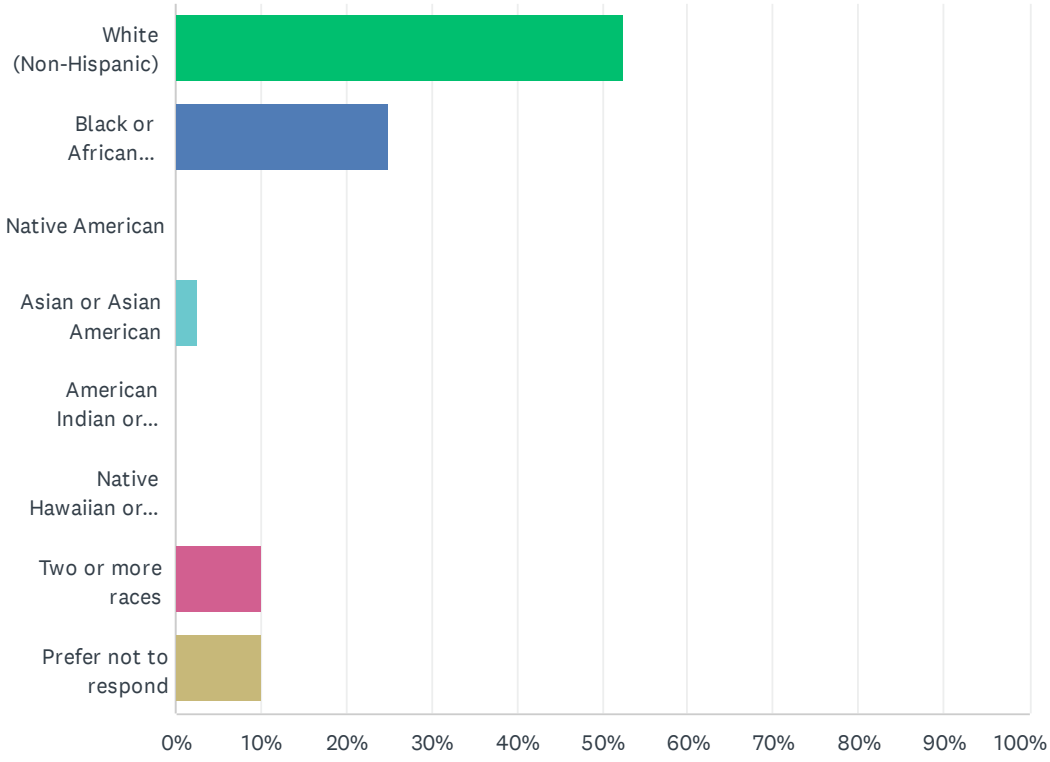
Answered: 40 Skipped: 3



ANSWER CHOICES	RESPONSES	
Yes	2.50%	1
No	97.50%	39
TOTAL		40

Q13 What is your race?

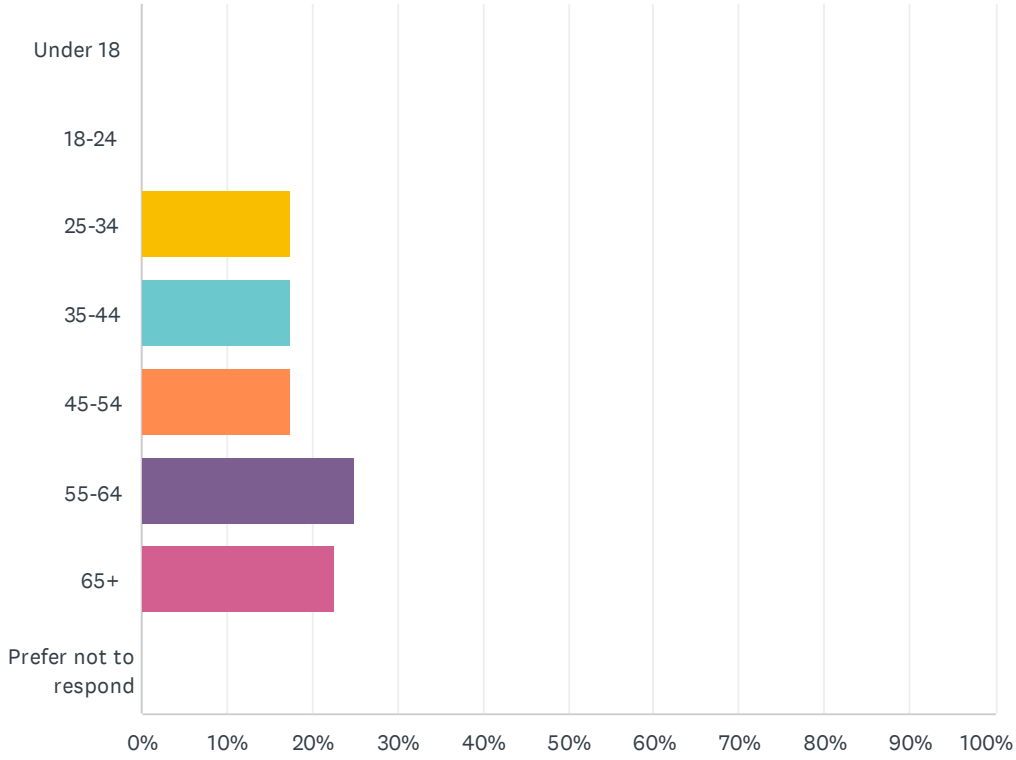
Answered: 40 Skipped: 3



ANSWER CHOICES	RESPONSES	
White (Non-Hispanic)	52.50%	21
Black or African American	25.00%	10
Native American	0.00%	0
Asian or Asian American	2.50%	1
American Indian or Alaska Native	0.00%	0
Native Hawaiian or other Pacific Islander	0.00%	0
Two or more races	10.00%	4
Prefer not to respond	10.00%	4
TOTAL		40

Q14 What is your age?

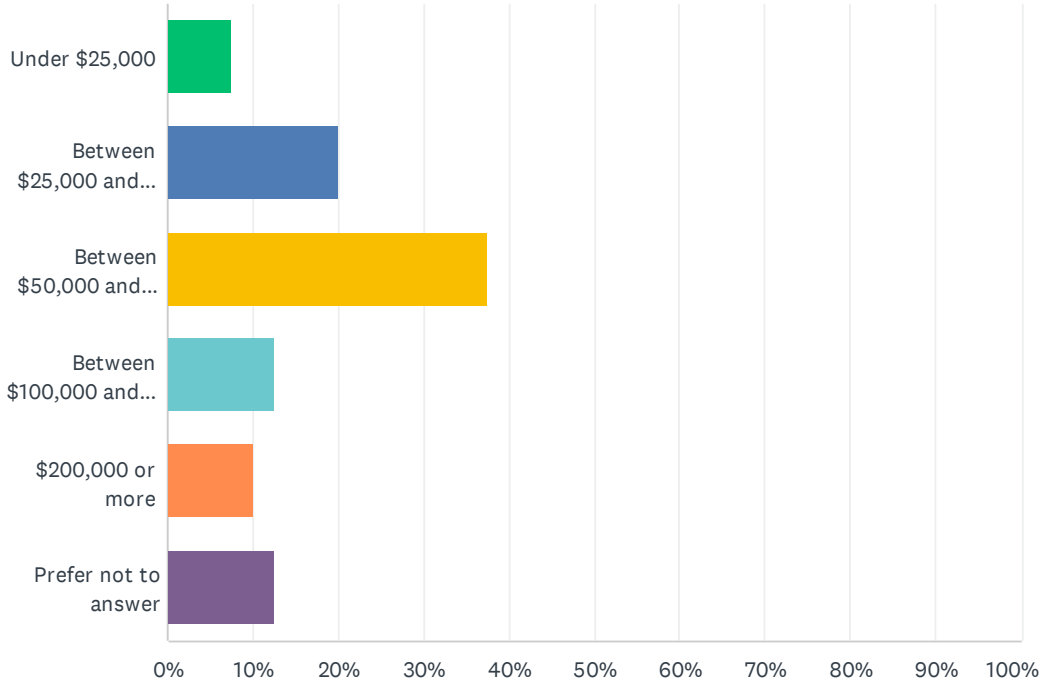
Answered: 40 Skipped: 3



ANSWER CHOICES	RESPONSES	
Under 18	0.00%	0
18-24	0.00%	0
25-34	17.50%	7
35-44	17.50%	7
45-54	17.50%	7
55-64	25.00%	10
65+	22.50%	9
Prefer not to respond	0.00%	0
TOTAL		40

Q15 What is your household income (before taxes)?

Answered: 40 Skipped: 3



ANSWER CHOICES	RESPONSES	
Under $25,000	7.50%	3
Between $25,000 and $49,999	20.00%	8
Between $50,000 and $99,999	37.50%	15
Between $100,000 and $199,999	12.50%	5
$200,000 or more	10.00%	4
Prefer not to answer	12.50%	5
TOTAL		40

Other Comments

Improving Safety on Route 291
Delaware County, PA

Delaware County Pennsylvania

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

My Name is Tykera Beauford. I AM the daughter of the late Tyrine Beauford who passed away on his motor cycle 2009 MAY 19th I have the unfortunate privilege of seeing his crash site imprint on the huge Pole by harahs casino. Please make 291 Safe for all whose on these roads !!

Improving Safety on Route 291
Delaware County, PA

Delaware County Pennsylvania

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

I am from Chester and original 2nd Street.
I am concerned about safety for Kids
etc Crossing the street.
Maybe build a drive in movie near
Soccer stadium or Discounted fun center
for kids/family low - Mid
income.

Attachment 2:
Existing Conditions





Route 291 Study

Existing Conditions

Delaware County
Pennsylvania

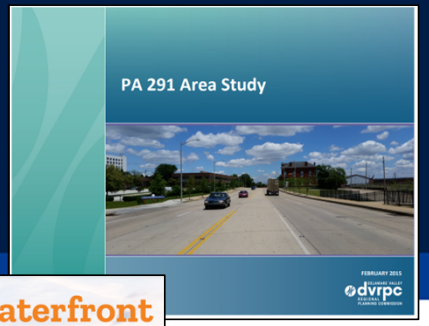
KITTELSON & ASSOCIATES

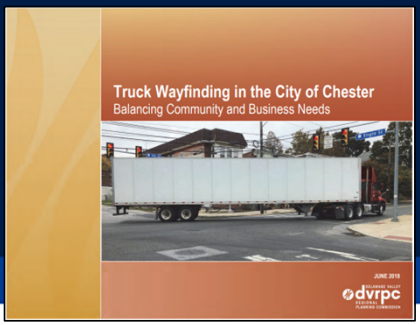
A.D. MARBLE
environmental·cultural·engineering
DBE/MBE/WBE CERTIFIED

Previous Plan Review

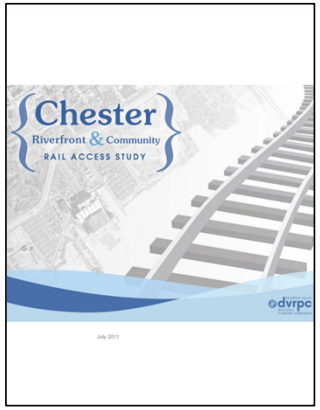


Previous Plan Review











Plans Reviewed:

- Chester Waterfront Master Plan (2021)
- Resilience through Recreation (2018)
- Truck Wayfinding in the City of Chester (2018)
- City of Chester Green Stormwater Infrastructure Plan (2017)
- PA 291 Area Study (2015)
- Delaware County Open Space, Recreation, and Greenway Plan (2015)
- Chester Riverfront & Community Rail Access Study (2014)

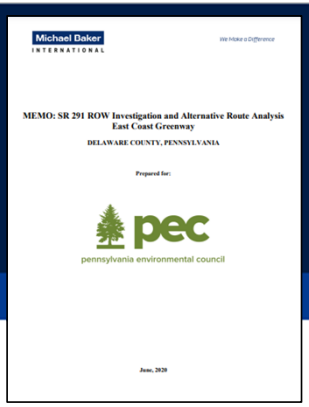


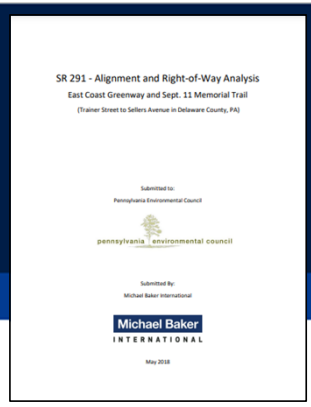


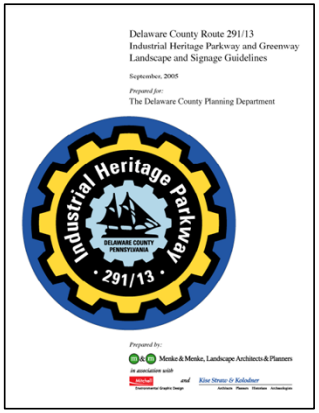
Previous Plan Review

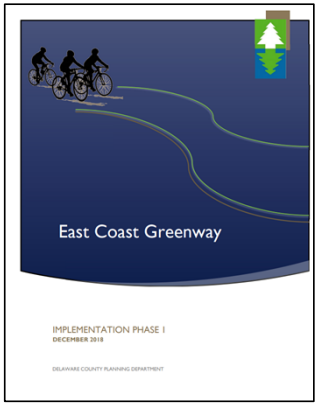
Plans Reviewed:

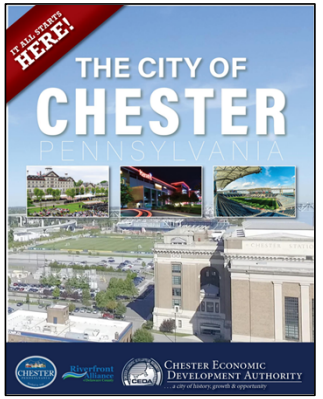
- Landscape & Signage Guidelines (2005)
- A River Reconnected (2021)
- ECG Alignment and ROW Analysis (2018)
- ECG Alignment and ROW Analysis (2020)
- The City of Chester (2019)
- ECG Implementation Plan (2018)
- PA Active Transportation Plan (2019)

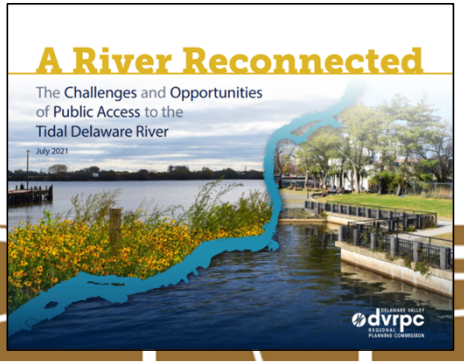














Previous Plan Review

Themes that stand out:

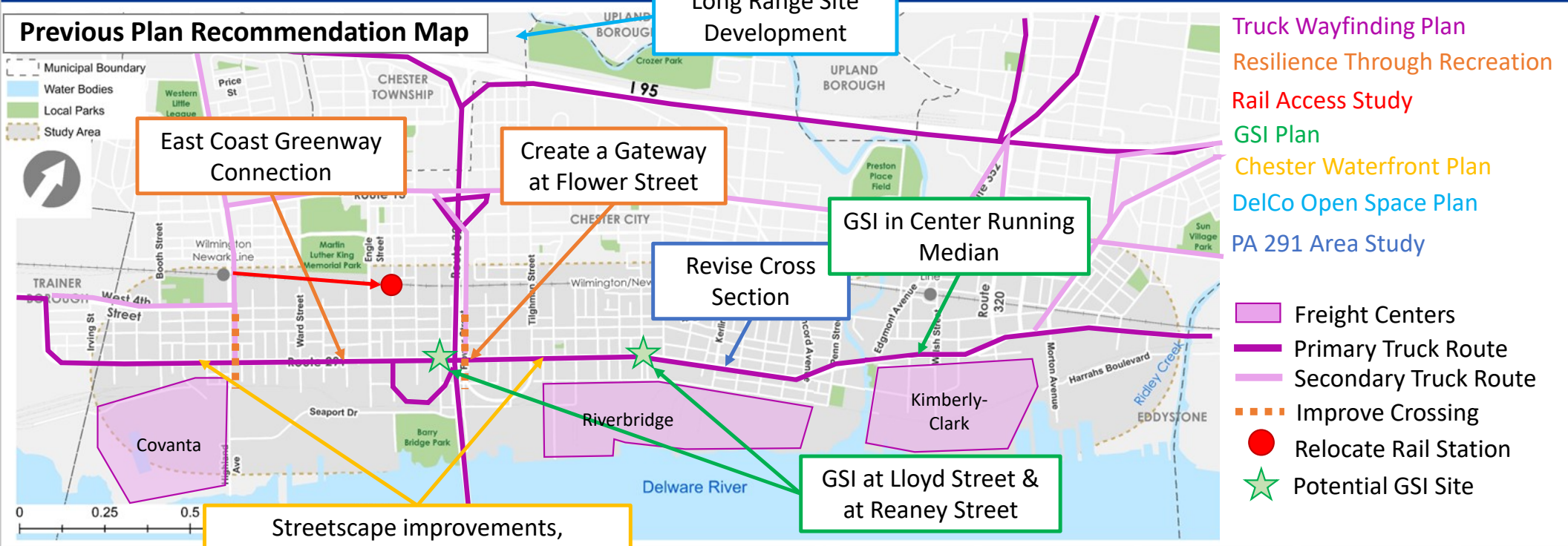
- Improve access to the waterfront
- Focus on safety and multimodal access
- Balance industrial and residential needs
- Seek out public / private partnerships
- Improve streetscape & wayfinding
- Build out a separated bike facility

Previous Outreach Methods:

- Advisory Committees
- Stakeholder interviews
- Community events
- Public meetings
- Survey
- Task forces
- Focus groups



Previous Plan Recommendations

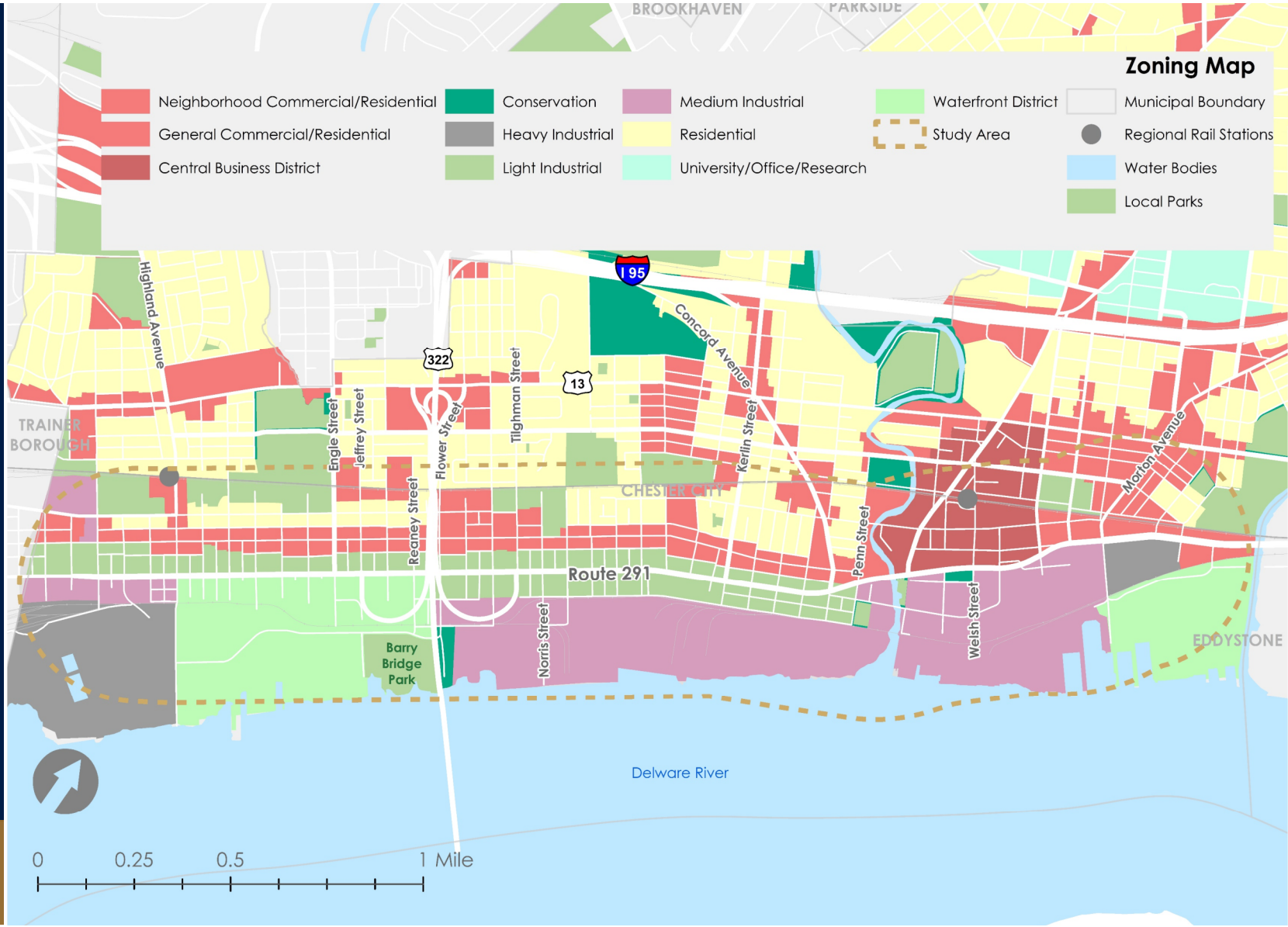


Land Use & Demographics



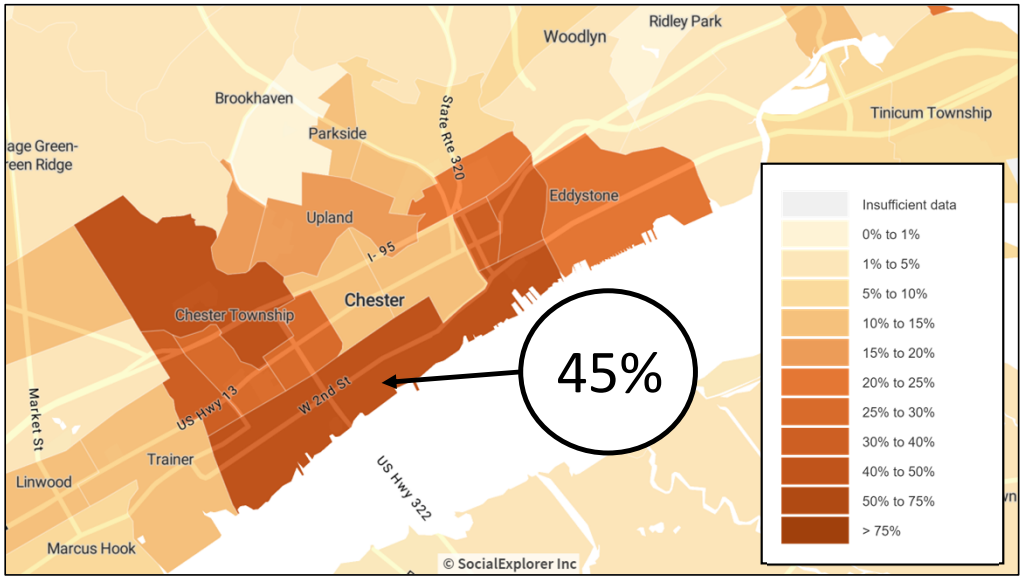
Key Takeaways:

- Light industrial zoning surrounding Route 291
- Medium & heavy industrial zoning along the riverfront
- Waterfront District

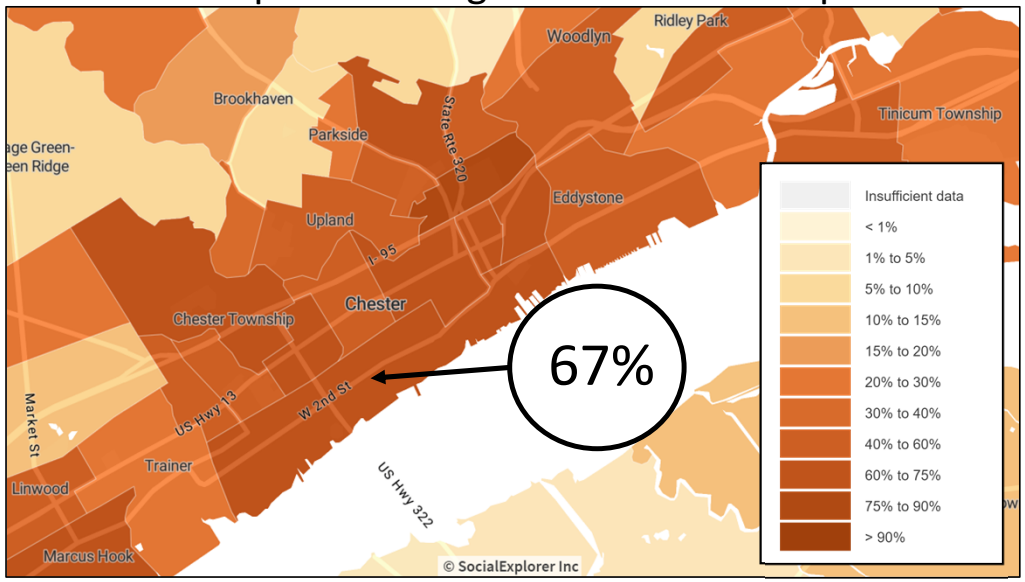


Demographics

Percent Families with Income Below Poverty Level

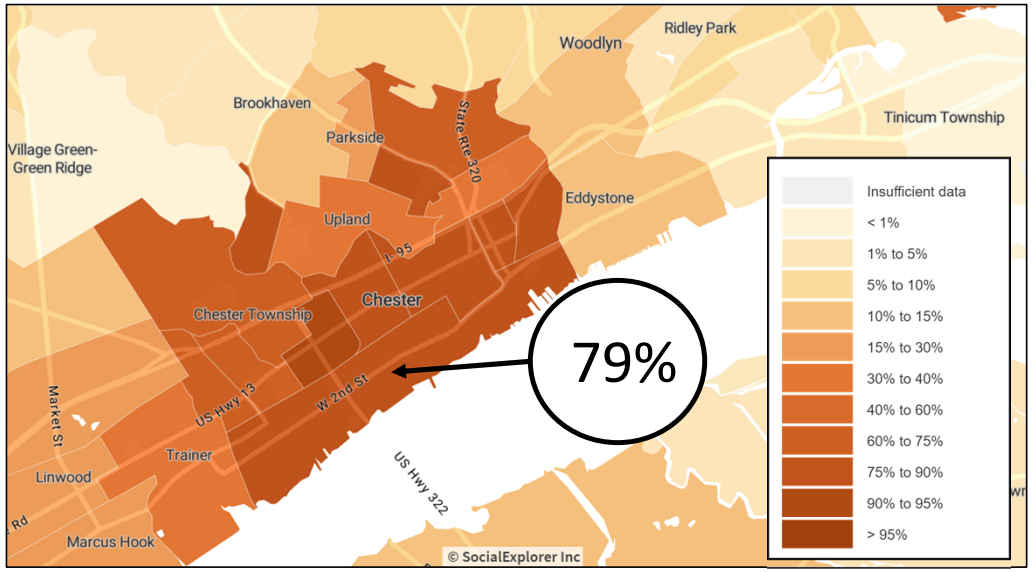


Percent Occupied Housing Units Renter Occupied

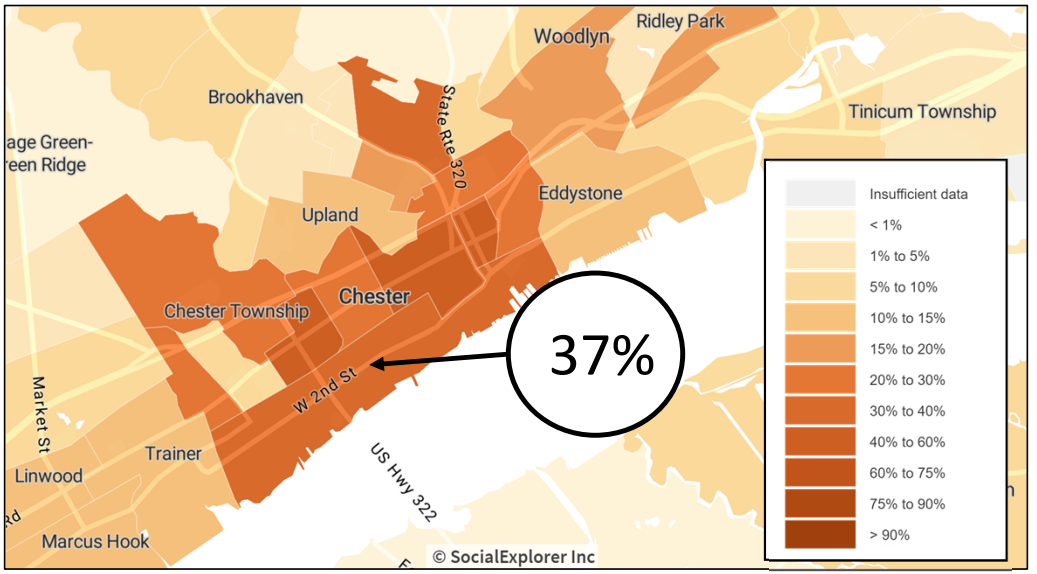


Demographics

Percent Black or African American Alone



Percent Occupied Housing Units with No Vehicle

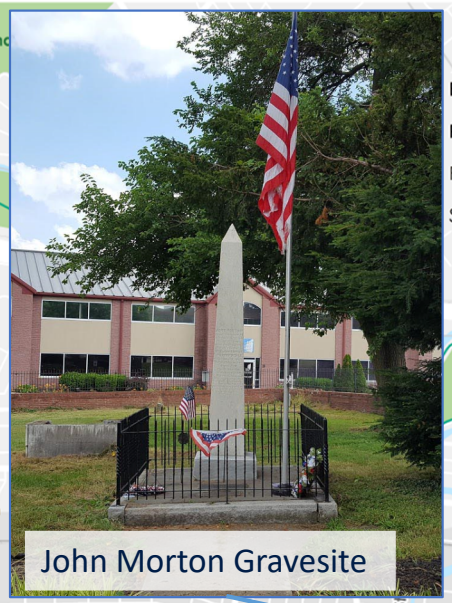


Key Destinations:

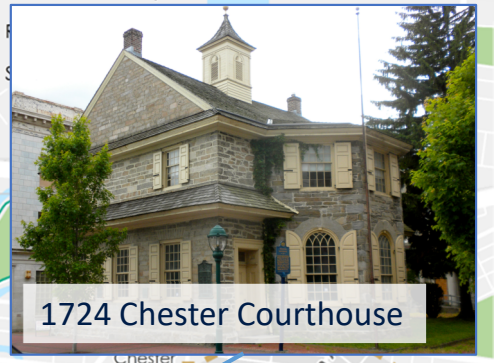
- Significant historic landmarks
- Regional attractions
- Key community places, including churches and small businesses



Calvary Baptist Church



John Morton Gravesite



1724 Chester Courthouse

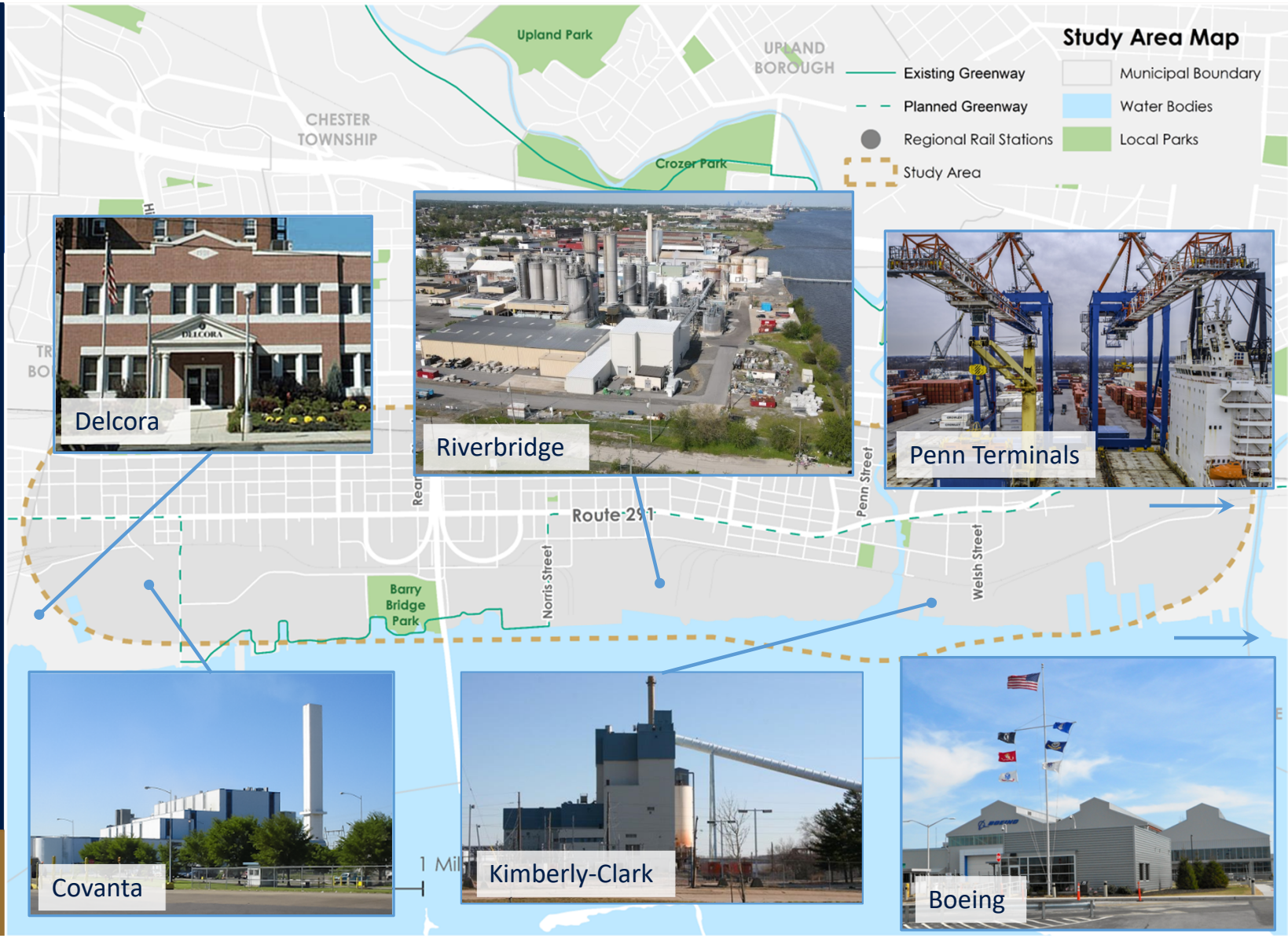
Subaru Park

Penn's Landing Spot

Harrah's Casino & Racetrack

Key Destinations:

- Significant industrial land use along the riverfront



Development:

- Union Sportsplex
- 115,000 sqft Warehouse at 4th & Booth
- 375,000 sqft industrial building in Marcus Hook
- 81,000 sqft warehouse in Ridley Township
- 1.1 M sqft airport logistics center in Tinicum

Route 291 Study

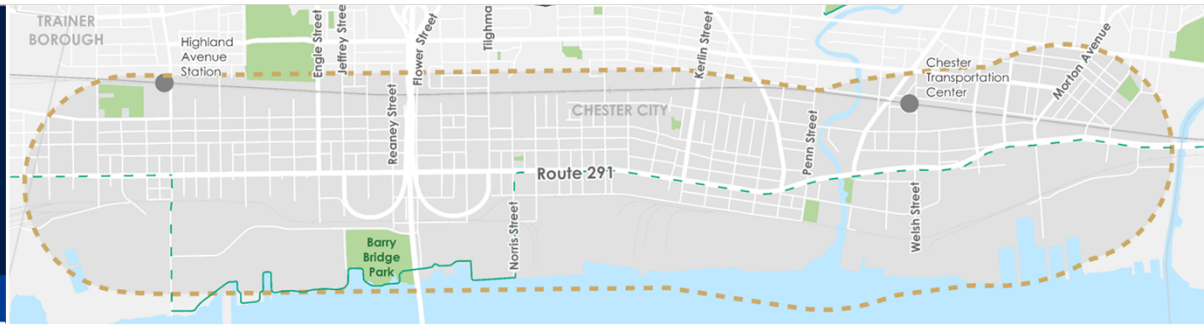


Infrastructure Inventory

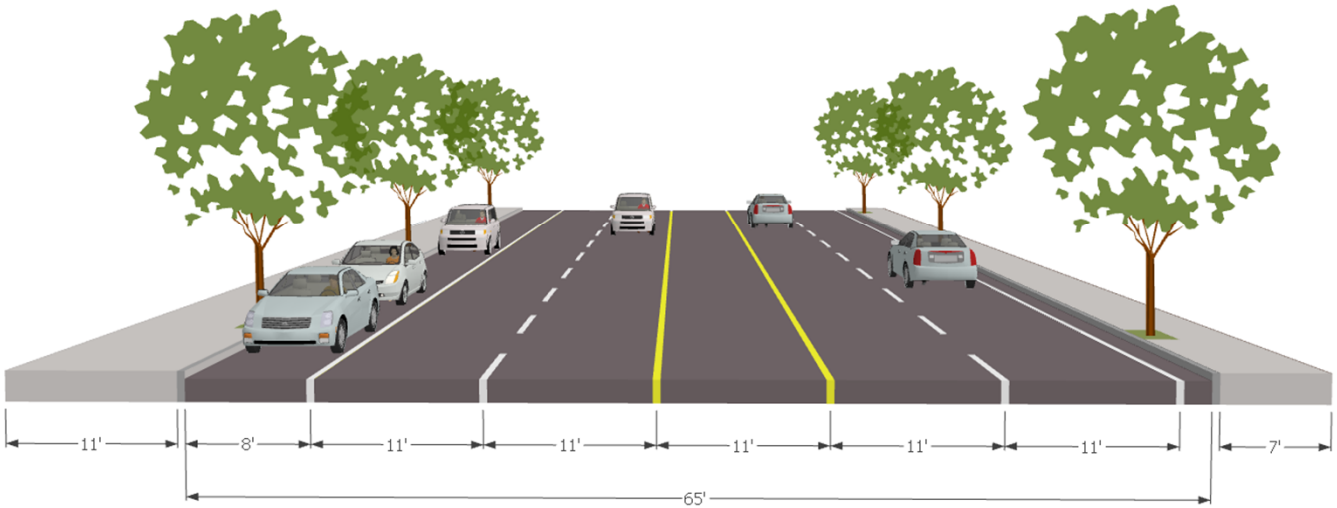
Route 291 Study



Cross Section

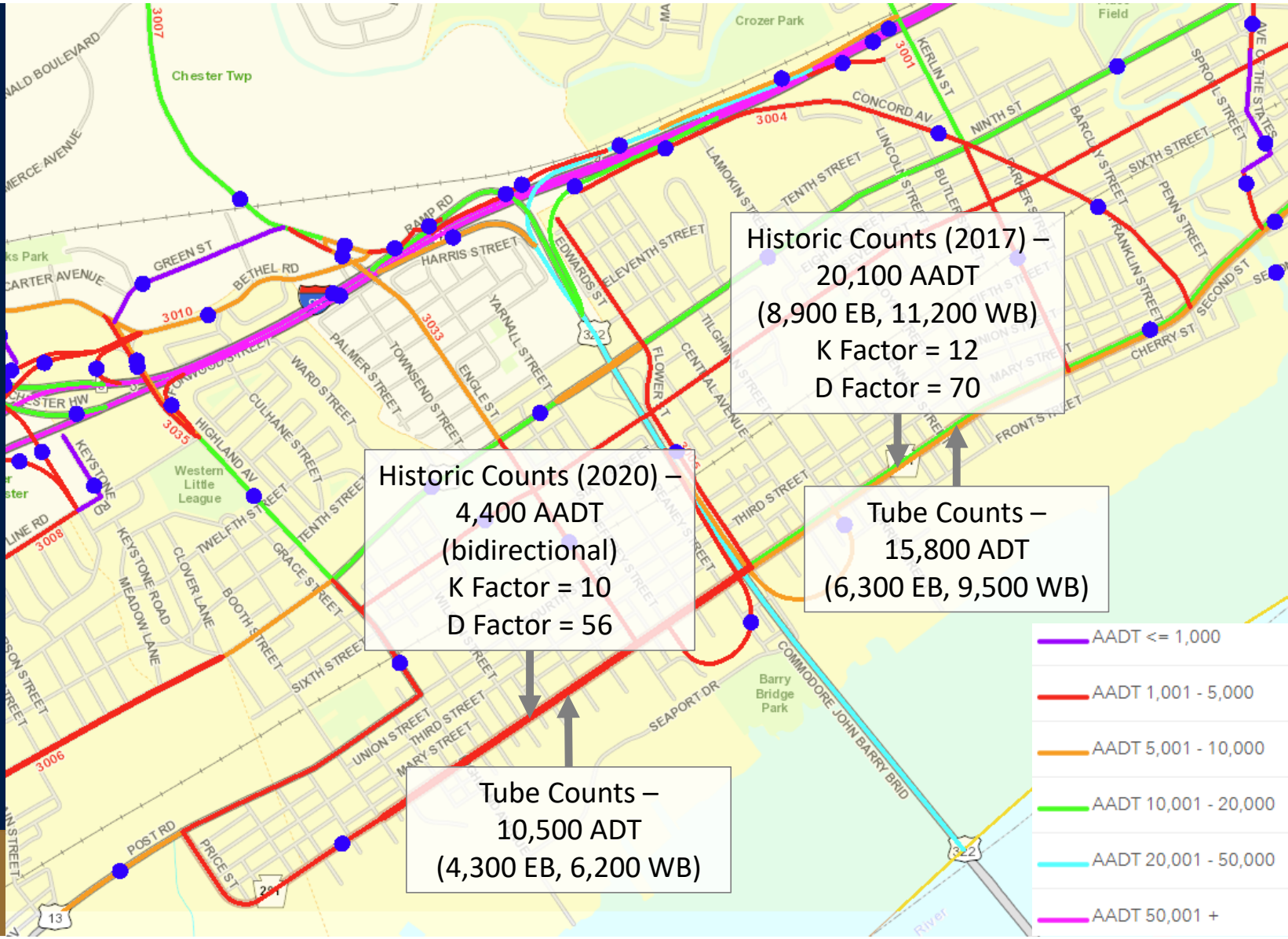


Route 291 Typical Existing Cross Section



Key Takeaways:

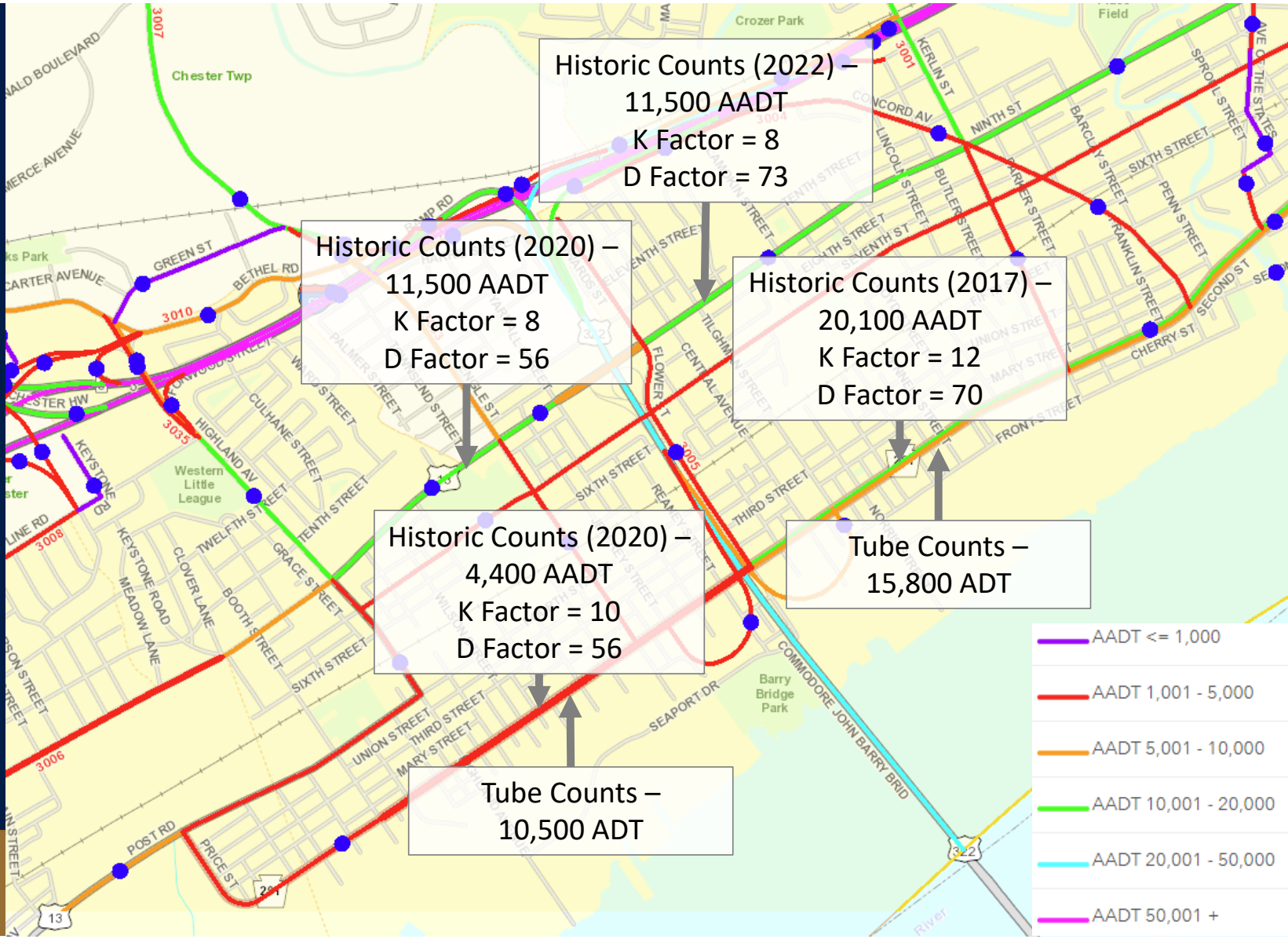
- Lower AADT west of Route 322 and higher AADT east of Route 322
- Higher volumes in westbound direction (high D factor)
- Tube counts were greater than historic counts west of bridge and less than historic counts east of bridge



Route 291 Study

Key Takeaways:

- The AADT on Route 13 is similar to that on Route 291 (according to tube counts)
- Route 13 is also highly directional



Key Takeaways:

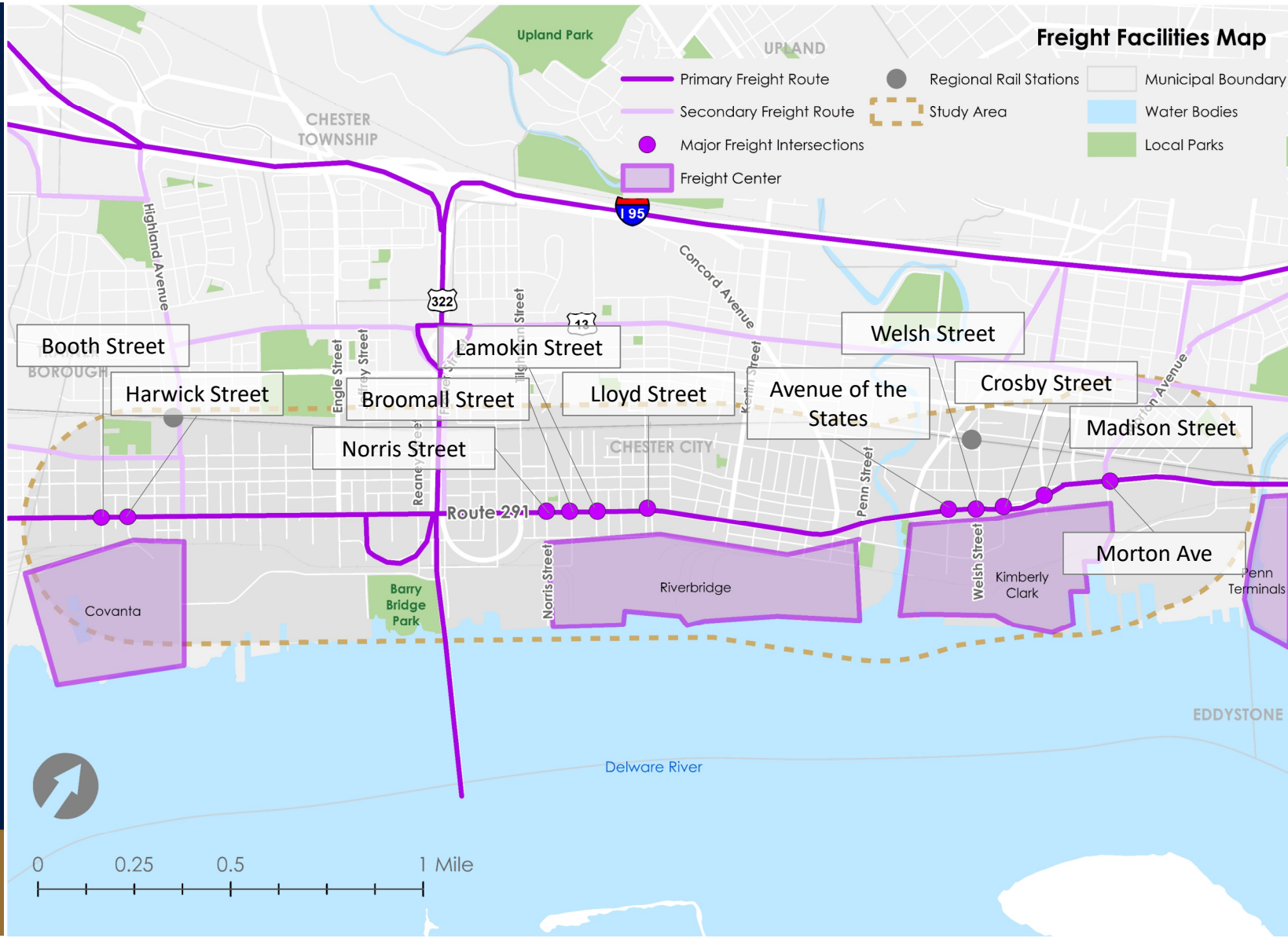
- Major streets intersecting with Route 291 are State owned
- 6 signalized intersections within the study area
- Over a mile between Flower Street & Penn Street signals



Route 291 Study

Key Takeaways:

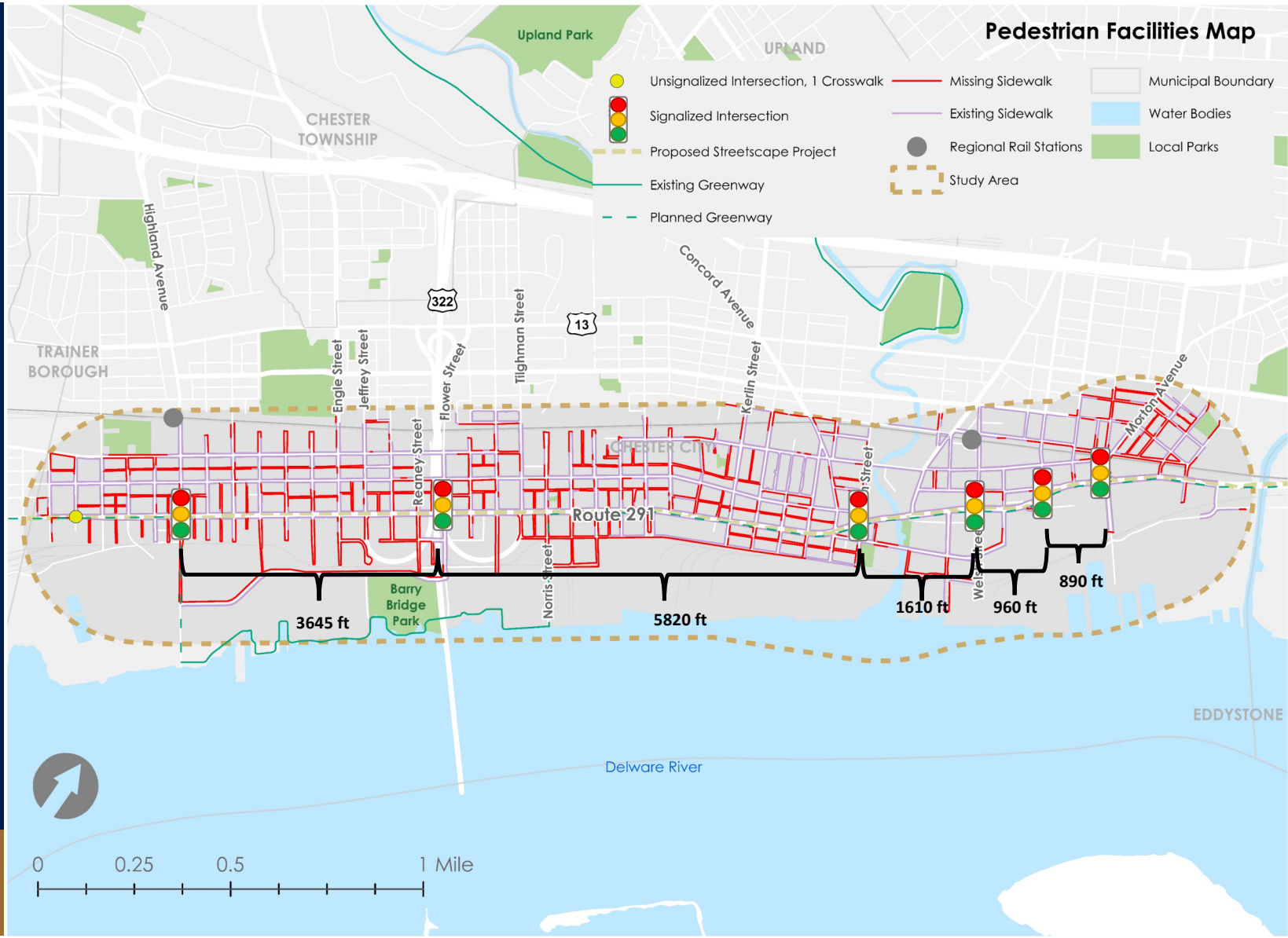
- Route 291, I-95, and Route 322 balance freight as primary routes
- Highland Avenue serves as secondary route
- Major freight centers along Route 291 include Covanta, Kimberly Clark, and Riverbridge



Route 291 Study

Key Takeaways:

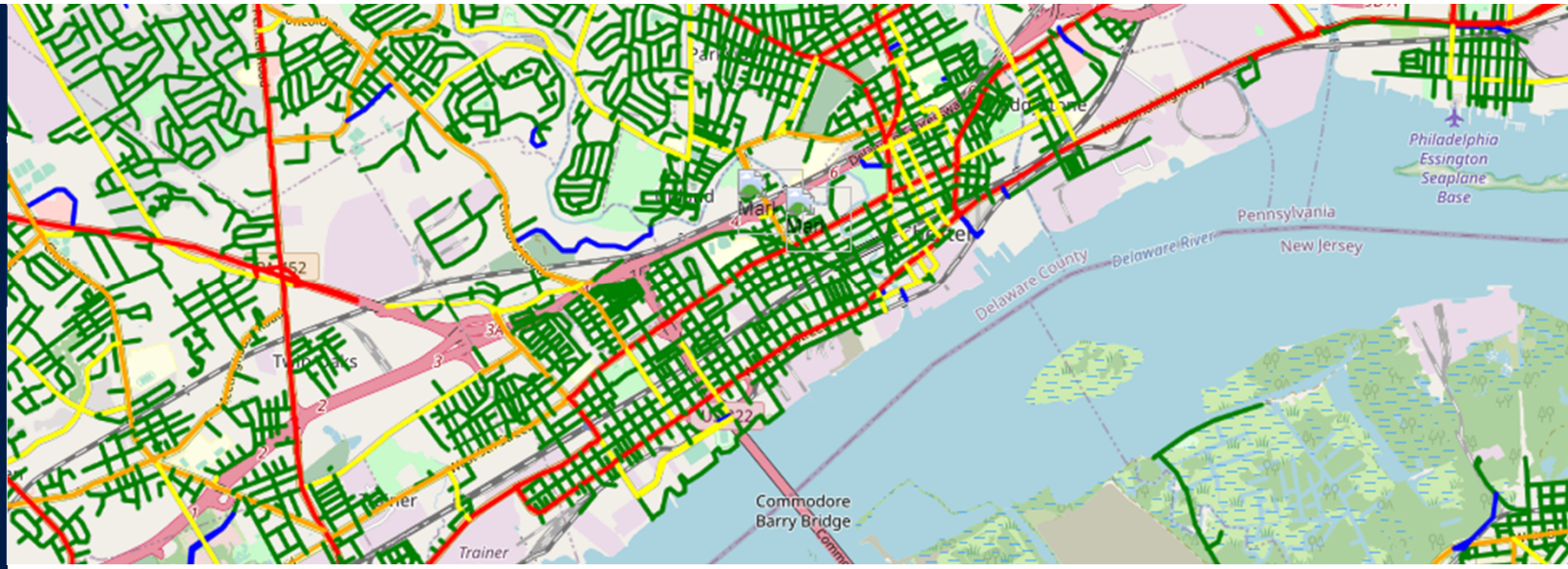
- Signalized intersections do not have marked crosswalks
- Long distances between signalized intersections
- Sidewalks exist along much of the corridor
- Connecting and parallel streets lack sidewalks



Route 291 Study

Key Takeaways:

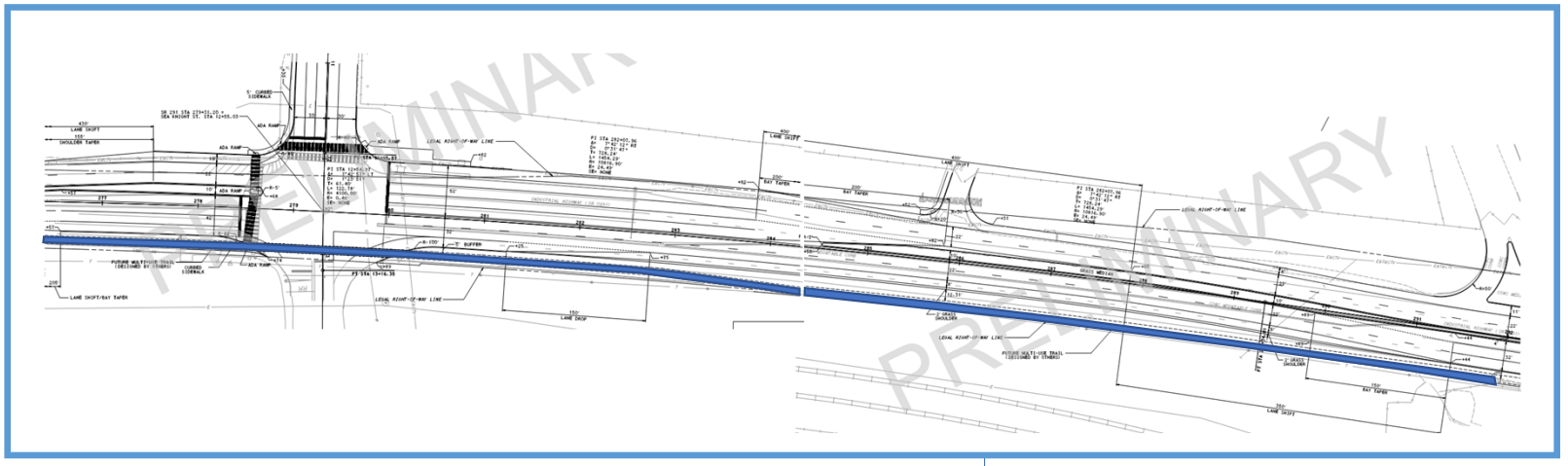
- Highest Level of Bicycle Traffic Stress (BLTS 4) along Route 291





Key Takeaways:

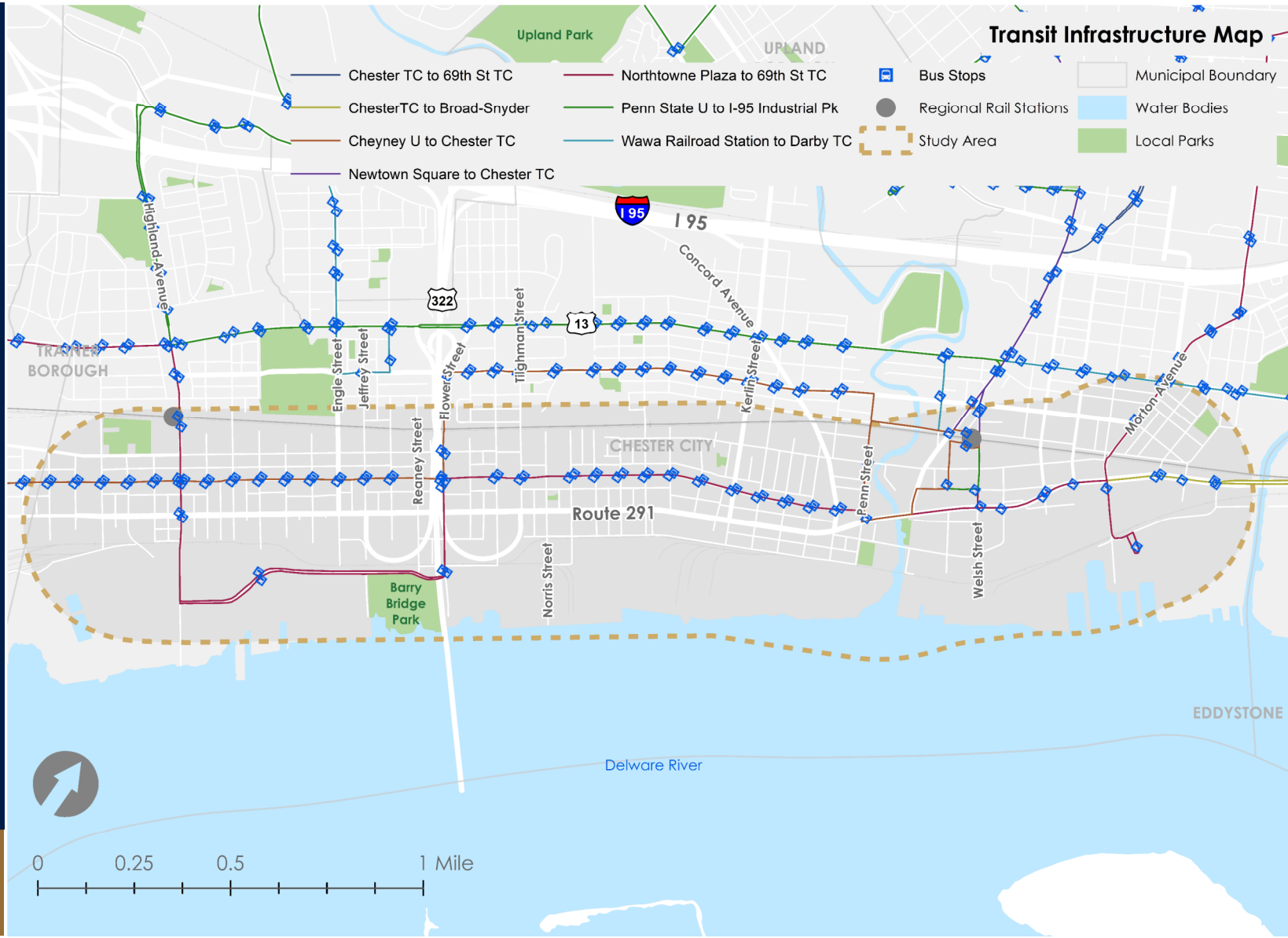
- Parts of the East Coast Greenway Trail are being built out in Eddystone & Ridley Township





Key Takeaways:

- W 3rd Street is a priority corridor for bus service
- Buses make turns at Highland Avenue and Flower Street
- Bus stops on Route 291 northeast of Penn Street



Route 291 Study

Safety Analysis



Types of Safety Analysis

1. Existing Crash Analysis
2. Predictive Safety Analysis
3. Basic Level of Comfort Analysis



290

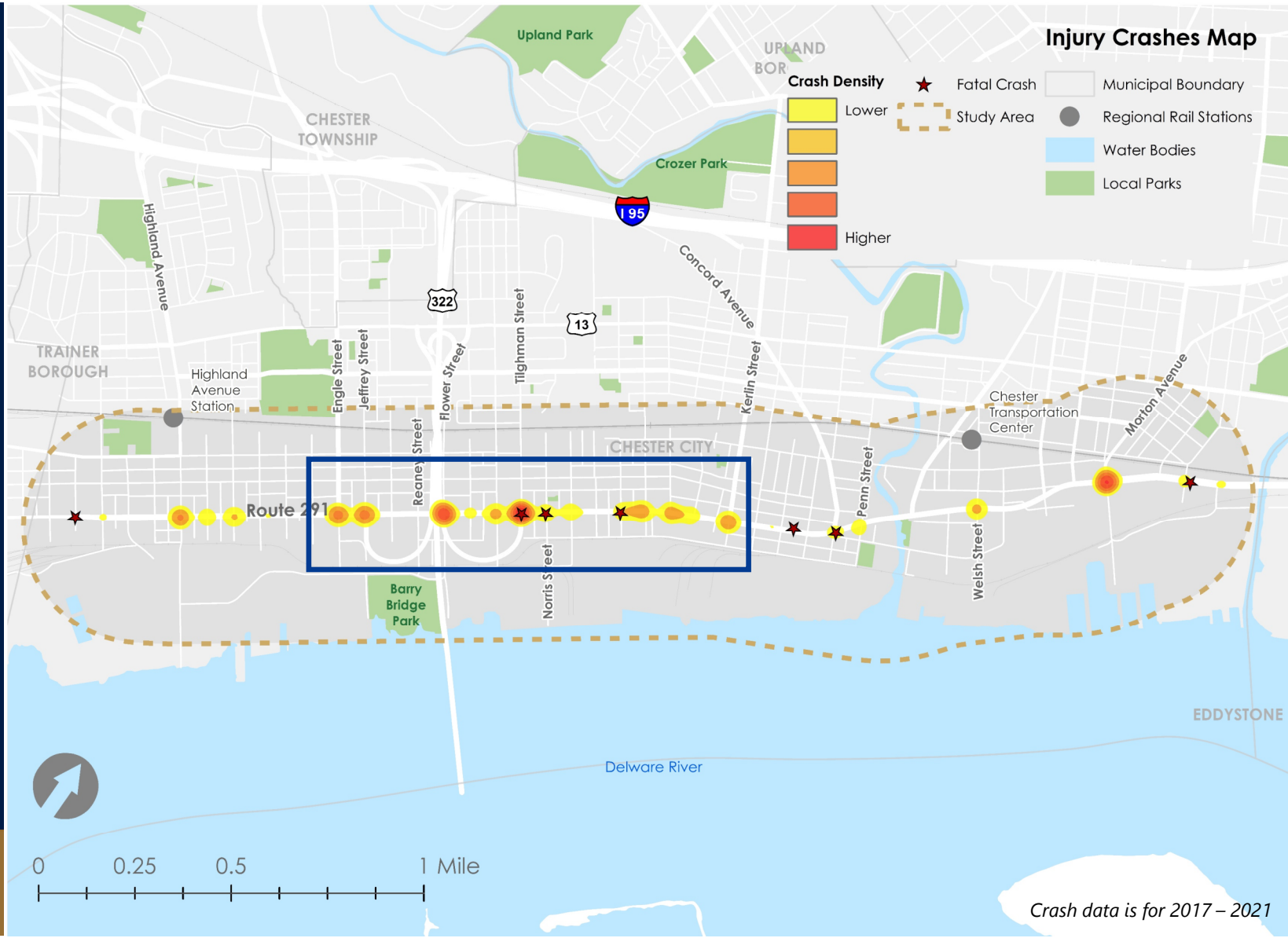
Total Crashes Along this Section of Route 291 From 2017 to 2021

Key Takeaways:

- High crash density between Engle Street and Kerlin Street
- Highest crash counts at Flower Street, Tilghman Street, and Morton Ave

Fatal Crashes at:

- Trainer Street
- Tilghman Street
- Norris Street
- Pennell Street
- Fulton Street
- Concord Avenue
- Hinkson Street



Route 291 Study

Key Takeaways:

- Crashes near intersections
- Fatal crashes in the middle portion of the corridor

Bike / Pedestrian Crashes at:

- Engle Street
- Flower Street
- Tilghman Street
- Pennell Street
- Lloyd Street
- Welsh Street
- Morton Avenue
- Harrah's Boulevard



Route 291 Study

Predictive Safety Analysis

Goals:

- Understand how expected crash data compares to predicted crash data
- Invest in safety improvements where there are measurably more expected crashes than predicted crashes

Methodology:

- Break the corridor down into segments and intersections
- Identify roadway characteristics that predict crash potential, such as classification, width, design speed
- Calculate predicted crashes using Tools HSM Tools A and B
- Compare predicted crashes to actual crashes



Predictive Safety Analysis

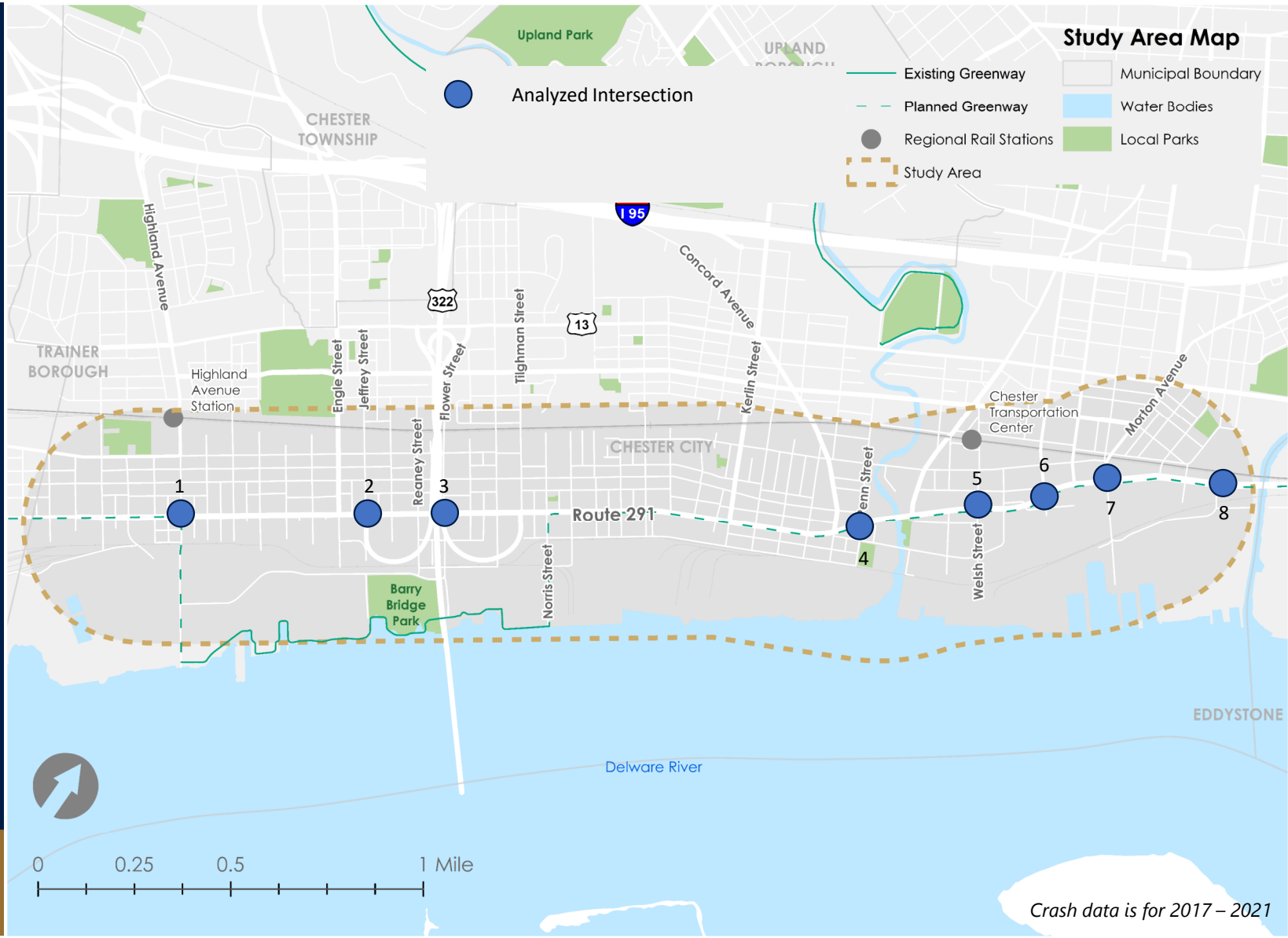
Results:

- Expected Crashes - Predicted Crashes = Potential for Safety Improvement (PSI)
- A negative PSI means that safety improvements may not be as effective in reducing observed crashes as compared to expected
- A positive PSI means that safety improvements may be especially effective in reducing observed crashes as compared to expected
- Thus, the HSM suggests making safety investments where PSI is positive



Intersections for Predictive Safety Analysis

1. Highland Ave
2. Jeffrey Street
3. Flower Street
4. Penn Street
5. Welsh Street
6. Madison Street
7. Morton Ave
8. Harrah's Blvd



Route 291 Study

Segments for Predictive Safety Analysis

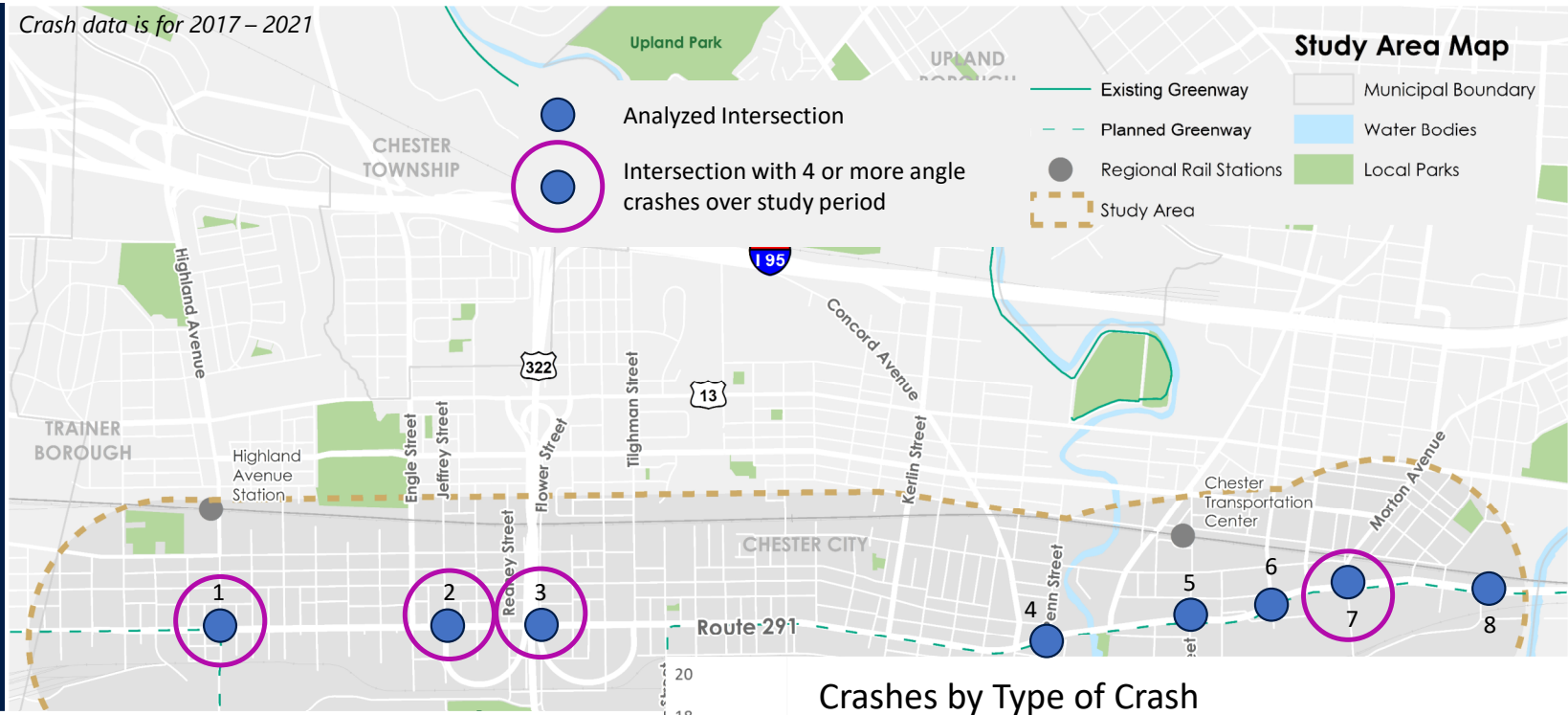
1. Irving Street to Highland Ave
2. Highland Ave to Jeffrey Street
3. Jeffrey Street to Flower Street
4. Flower Street to Penn Street
5. Penn Street to Welsh Street
6. Welsh Street to Madison Street
7. Madison Street to Morton Ave
8. Morton Ave to Harrah's Blvd

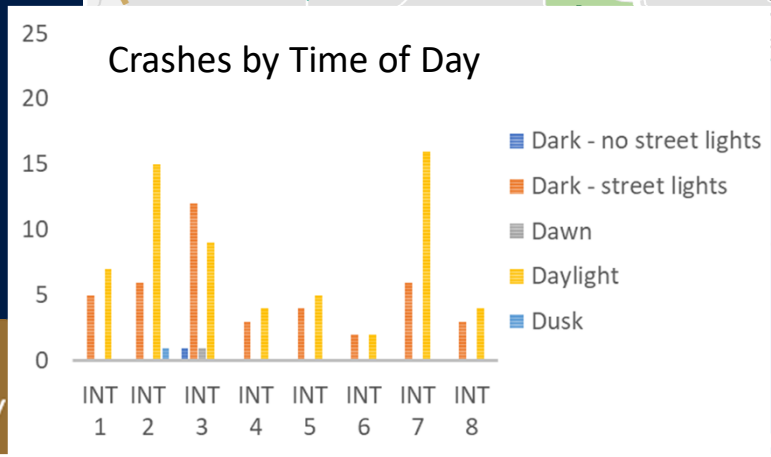


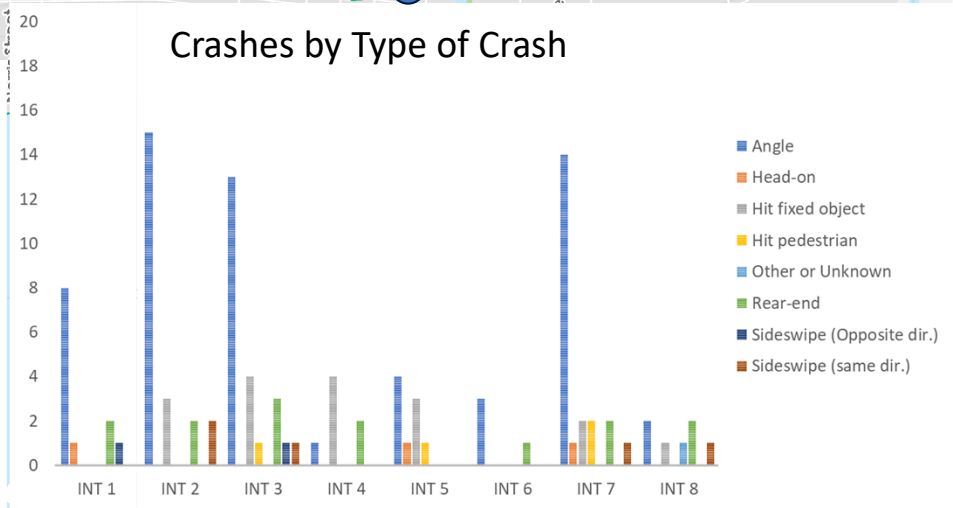
Route 291 Study

Key Takeaways:

- Crash hot spots at 1, 2, 3, & 7
- Angle, hit fixed objects, and rear-ends are the most frequent intersection crash types
- Typically, more daytime crashes
- Higher nighttime crashes at Flower Street

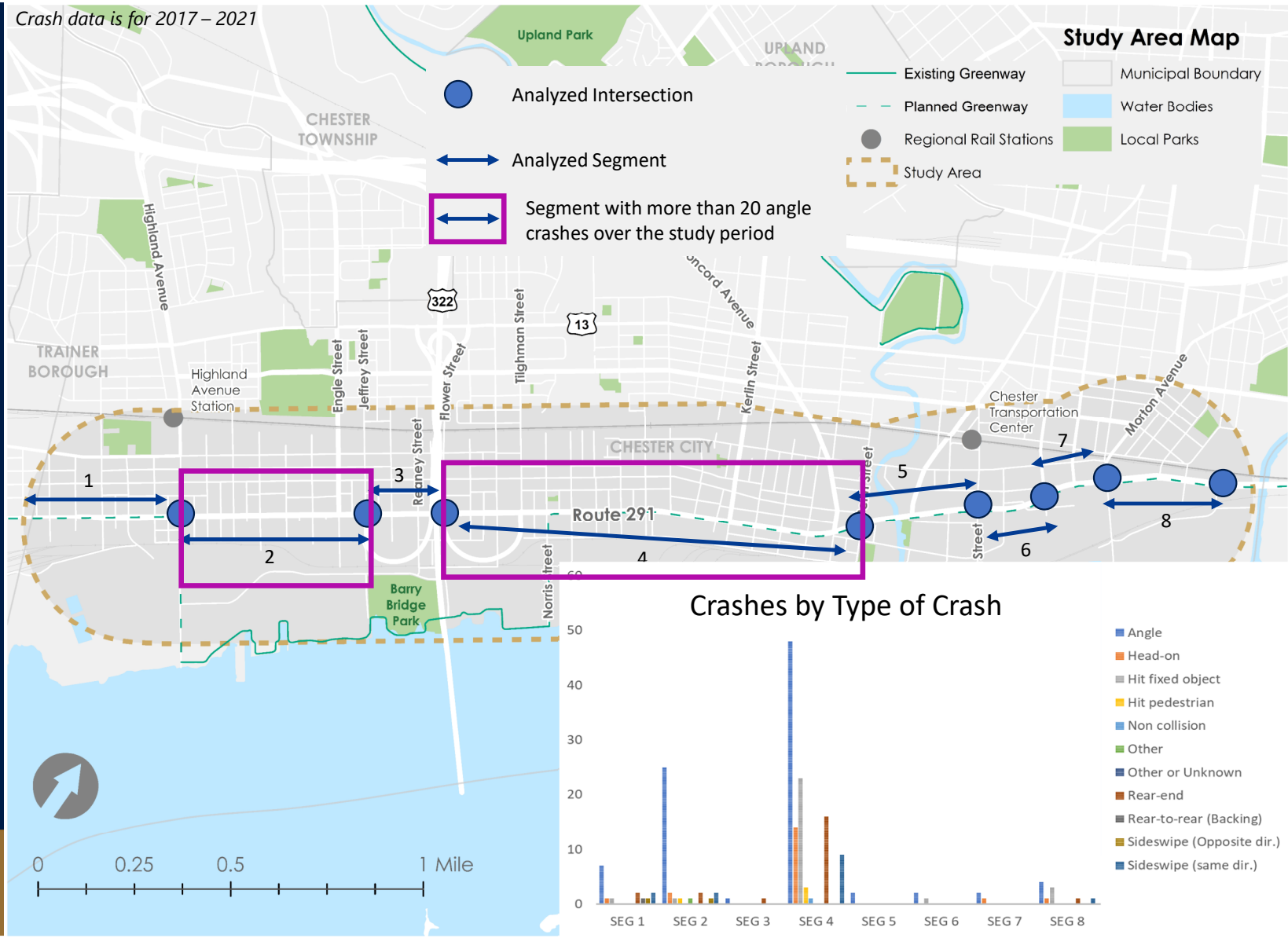






Key Takeaways:

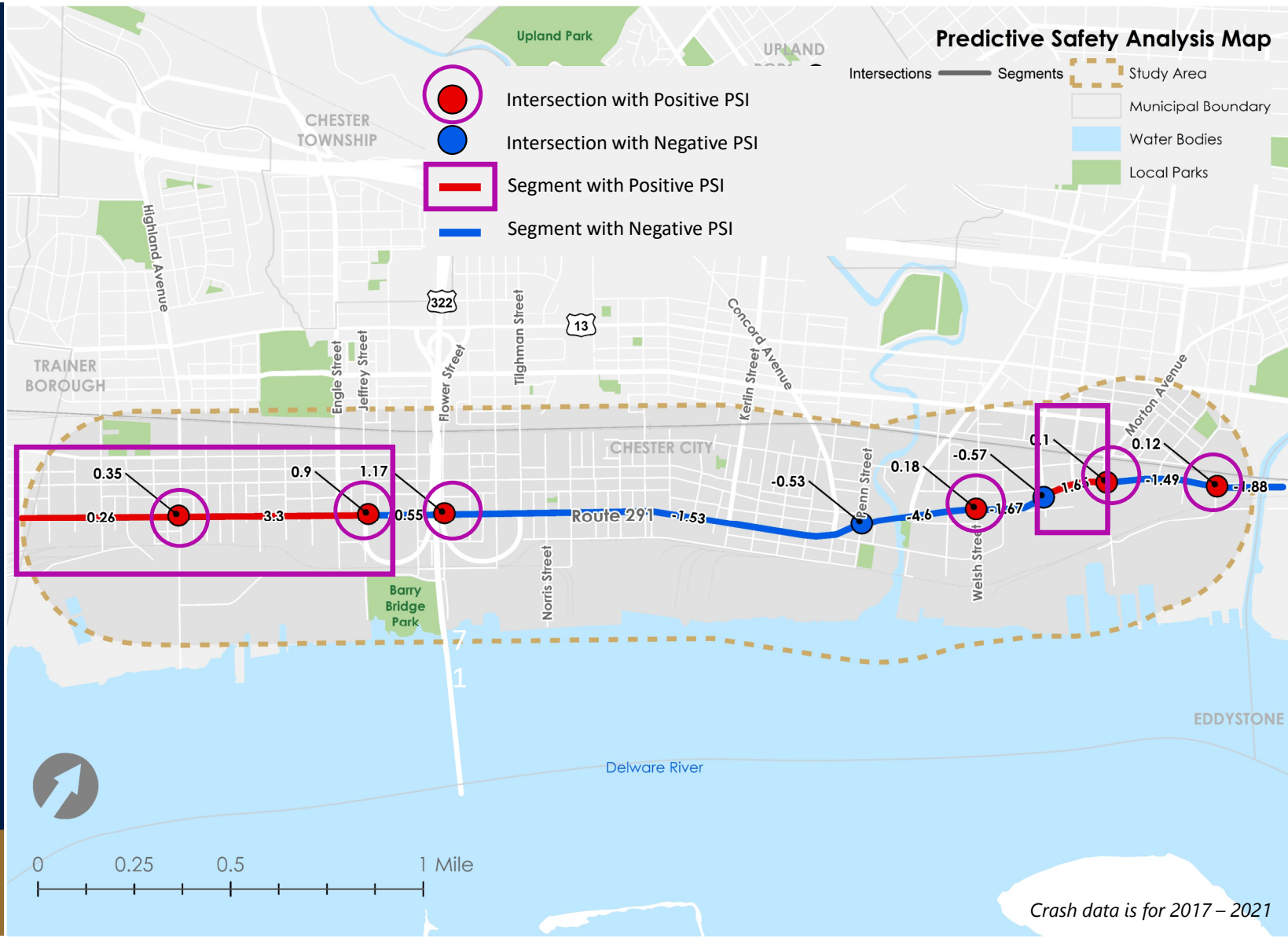
- Segment 4 has the most fatal and serious injury crashes
- Angle, hit fixed objects, and rear-ends are the most frequent segment crash types
- Typically, more daytime crashes



Route 291 Study

Key Takeaways:

- Several intersections have positive PSI
- Segments west of Route 322 have positive PSI
- HSM suggests making safety investments where PSI is positive

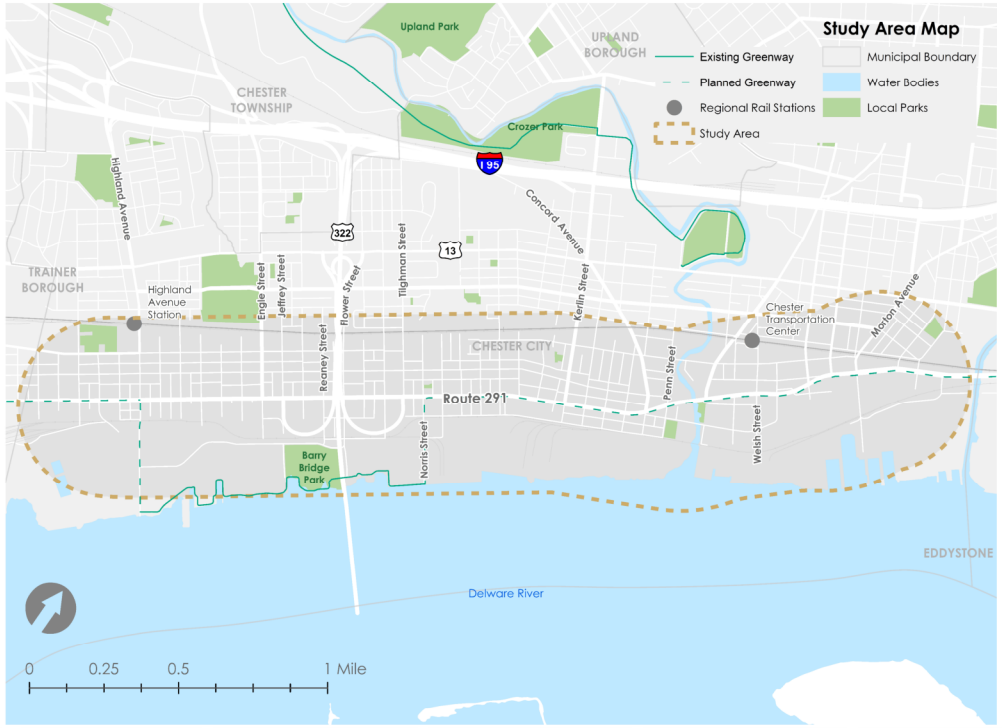


Route 291 Study

Basic Level of Comfort Analysis

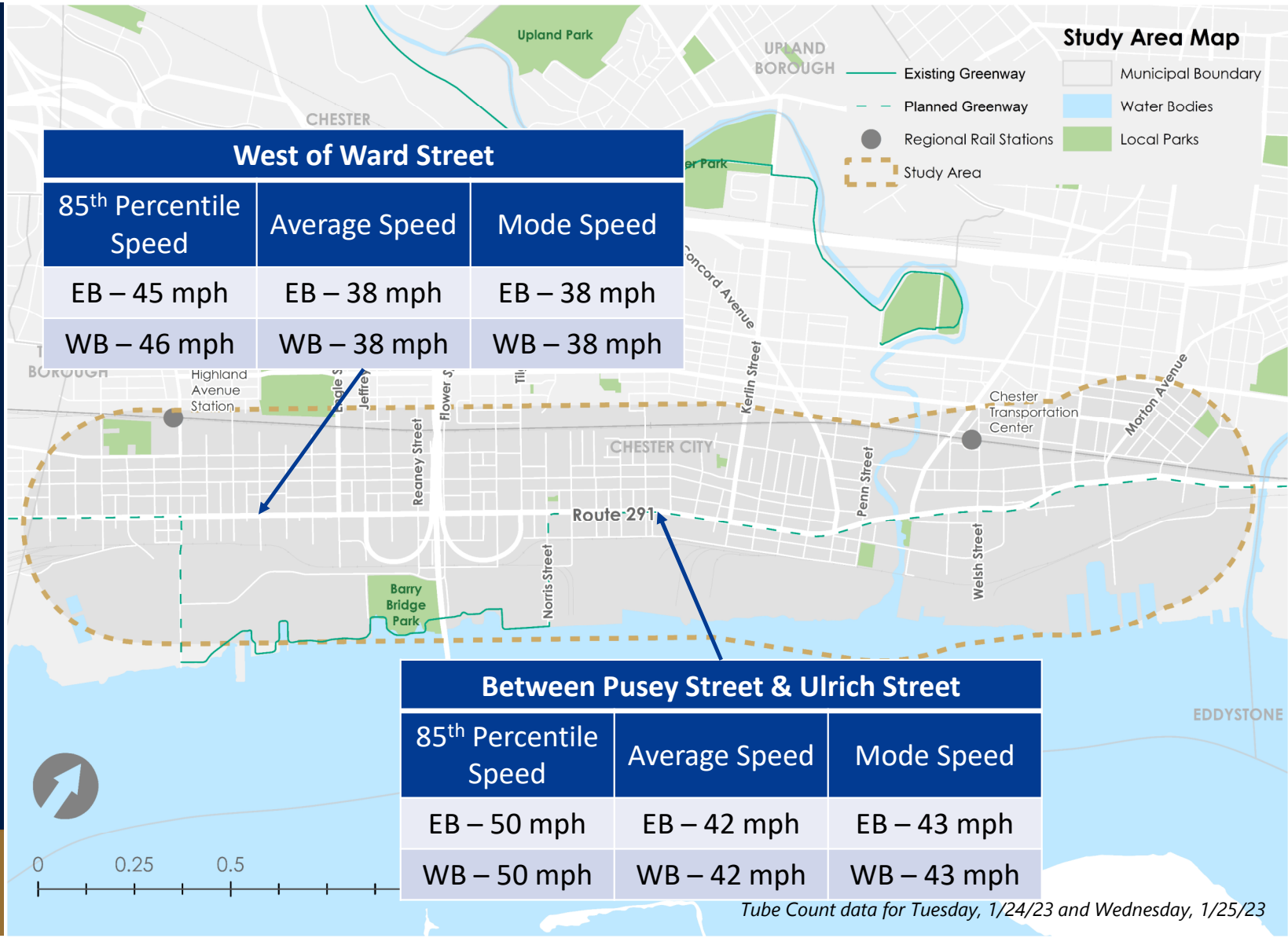
Category	Route 291	General PLOC
Street Functional Classification	Other Principal Arterial Highway	LOW
85th Percentile Speed	45-50 mph	LOW
Sidewalk / Planting Strip Width	7-feet (varies)	LOW
Marked Crosswalks	1 for entire corridor	LOW
Curb Ramps	Typical (but not all compliant)	MEDIUM

Pedestrian Level of Comfort (PLOC) methodology has modified one used in Montgomery County, MD



Key Takeaways:

- Speed limit is 35 mph
- Average, mode, and 85th percentile speeds exceed the limit
- Higher speeds east of the bridge



West of Ward Street		
85th Percentile Speed	Average Speed	Mode Speed
EB – 45 mph	EB – 38 mph	EB – 38 mph
WB – 46 mph	WB – 38 mph	WB – 38 mph

Between Pusey Street & Ulrich Street		
85th Percentile Speed	Average Speed	Mode Speed
EB – 50 mph	EB – 42 mph	EB – 43 mph
WB – 50 mph	WB – 42 mph	WB – 43 mph

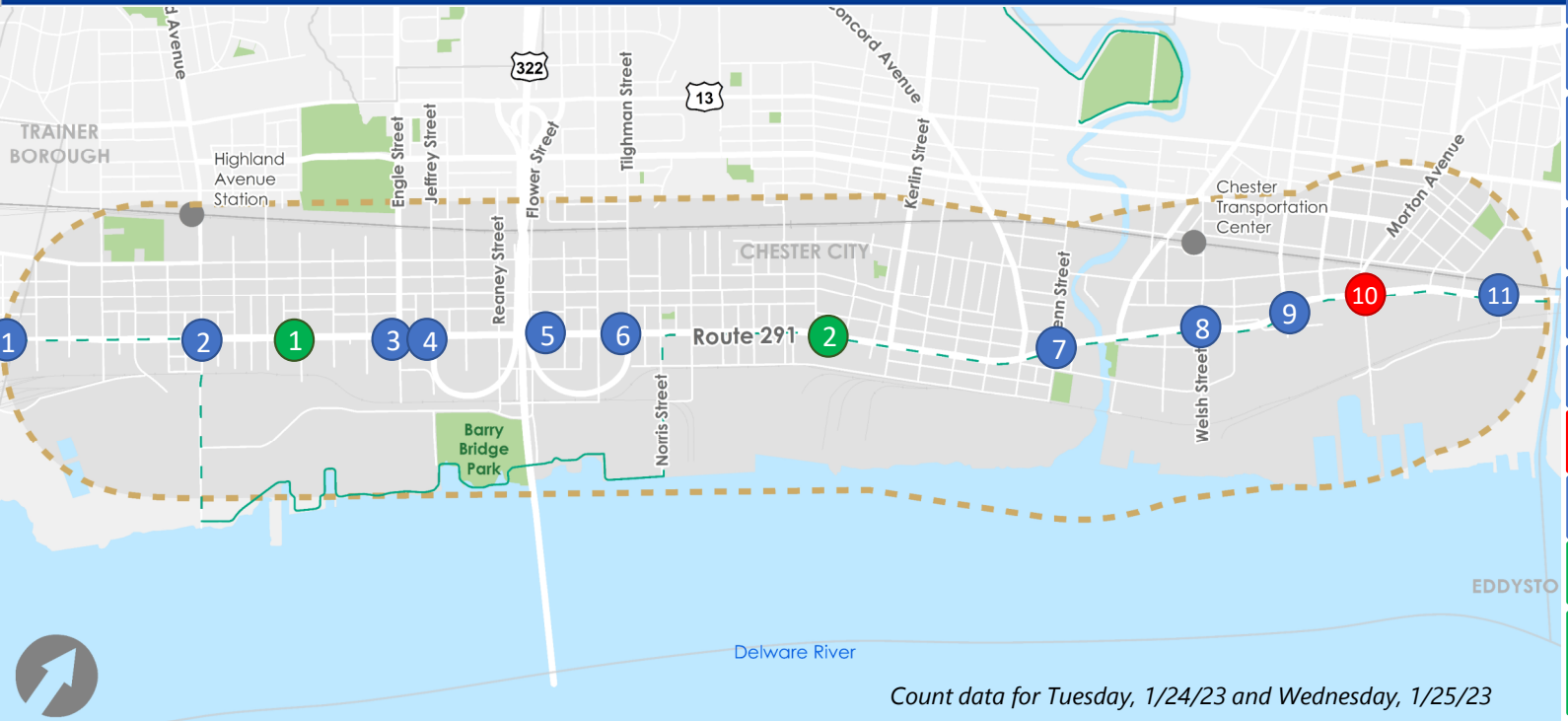
Tube Count data for Tuesday, 1/24/23 and Wednesday, 1/25/23

Traffic Analysis

Route 291 Study



Traffic Data Collection



Count data for Tuesday, 1/24/23 and Wednesday, 1/25/23

1. Irving Street & Route 291
2. Highland Ave & Route 291
3. Engle Street & Route 291
4. Jeffrey Street / US 322 Off Ramp & Route 291
5. Flower Street & Route 291
6. Tilghman Street / US 322 On Ramp & Route 291
7. Penn Street & Route 291
8. Welsh Street & Route 291
9. Madison Street & Route 291
10. Morton Ave & Route 291
11. Harrah's Blvd & Route 291

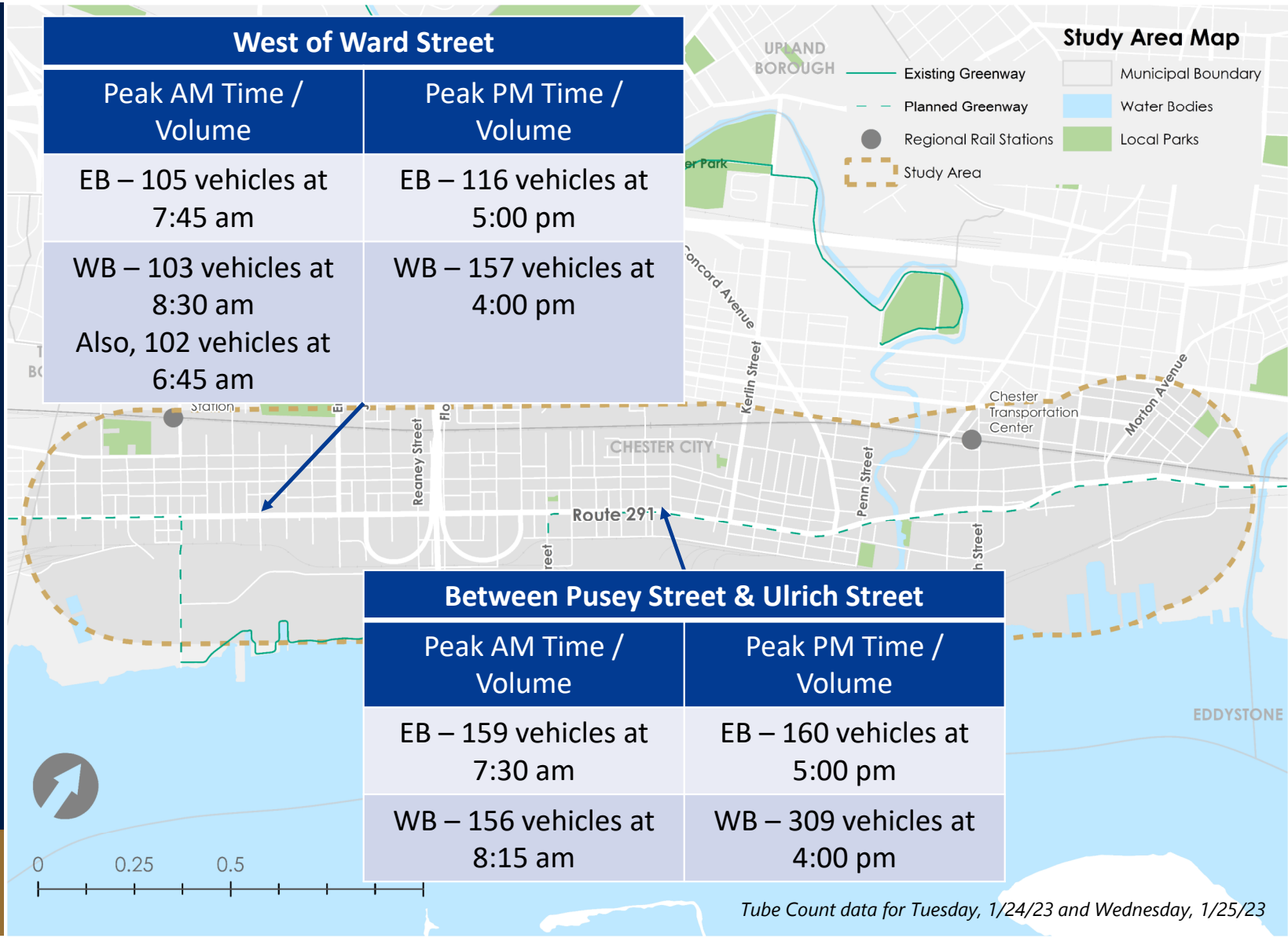
1. Route 291 West of Ward Street
2. Route 291 Between Ulrich Street and Pusey Street

Key Takeaways:

- The westbound peak hour is earlier than eastbound
- Higher westbound volumes in the PM
- Higher volumes east of the bridge, especially westbound PM volumes

West of Ward Street	
Peak AM Time / Volume	Peak PM Time / Volume
EB – 105 vehicles at 7:45 am	EB – 116 vehicles at 5:00 pm
WB – 103 vehicles at 8:30 am Also, 102 vehicles at 6:45 am	WB – 157 vehicles at 4:00 pm

Between Pusey Street & Ulrich Street	
Peak AM Time / Volume	Peak PM Time / Volume
EB – 159 vehicles at 7:30 am	EB – 160 vehicles at 5:00 pm
WB – 156 vehicles at 8:15 am	WB – 309 vehicles at 4:00 pm



Tube Count data for Tuesday, 1/24/23 and Wednesday, 1/25/23

Key Takeaways:

- Heavier truck traffic west of the bridge
- Heavy 5-axle double truck traffic
- Tube count results different from historic counts

Historic Counts

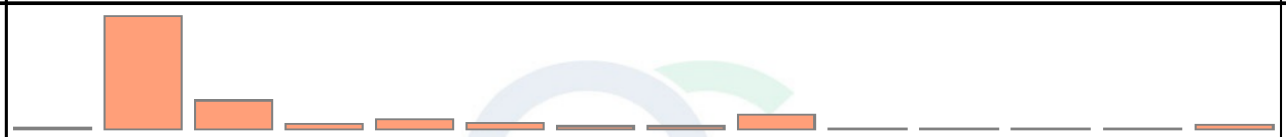
2020 west of bridge - 248 trucks EB, 248 trucks WB

2017 east of bridge - 532 trucks EB, 787 trucks WB

West of Ward Street

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	60	5206	1330	232	462	276	116	118	654	22	2	3	28	178	8687
Percent	0.7%	59.9%	15.3%	2.7%	5.3%	3.2%	1.3%	1.4%	7.5%	0.3%	0%	0%	0.3%	2%	

EB ADT 4343



Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	53	7990	1895	177	568	367	62	86	699	24	1	0	17	376	12315
Percent	0.4%	64.9%	15.4%	1.4%	4.6%	3%	0.5%	0.7%	5.7%	0.2%	0%	0%	0.1%	3.1%	

WB ADT 6157



Between Pusey Street & Ulrich Street

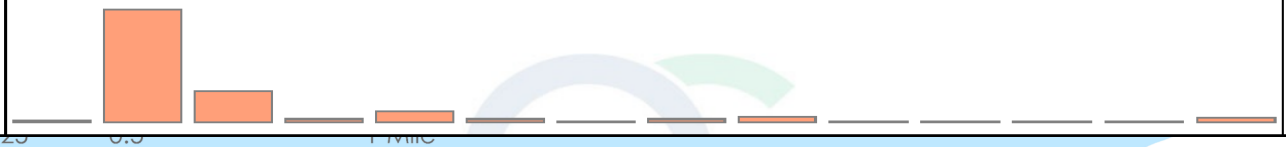
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	104	8799	1961	163	609	204	15	108	399	56	2	0	14	146	12580
Percent	0.8%	69.9%	15.6%	1.3%	4.8%	1.6%	0.1%	0.9%	3.2%	0.4%	0%	0%	0.1%	1.2%	

EB ADT 6290



Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	180	12276	3375	259	1195	265	50	322	564	111	9	14	31	376	19027
Percent	0.9%	64.5%	17.7%	1.4%	6.3%	1.4%	0.3%	1.7%	3%	0.6%	0%	0.1%	0.2%	2%	

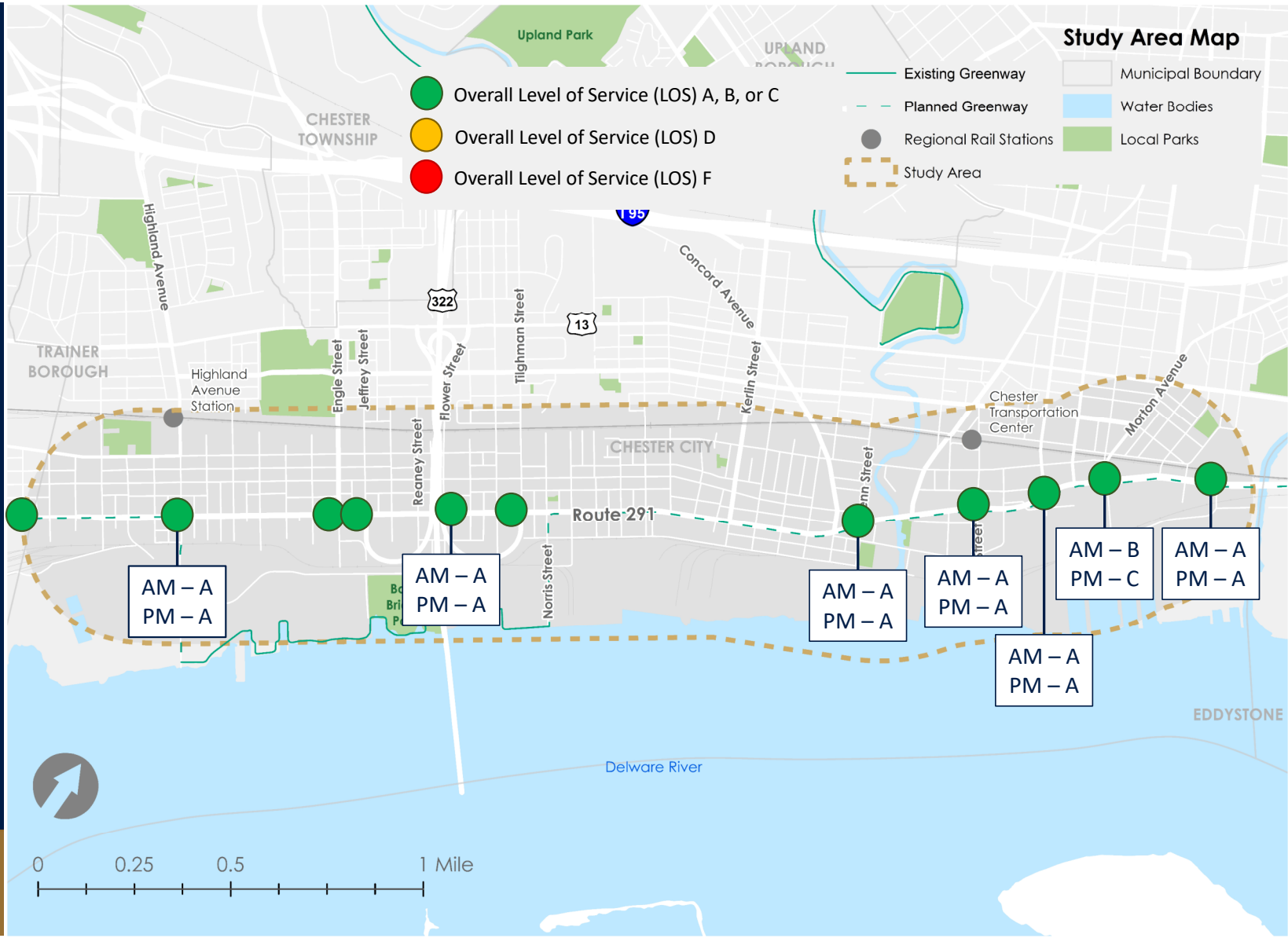
WB ADT 9513



Tube Count data for Tuesday, 1/24/23 and Wednesday, 1/25/23

Key Takeaways:

- Acceptable levels of service at all studied intersections (LOS D or better) overall and for all approaches



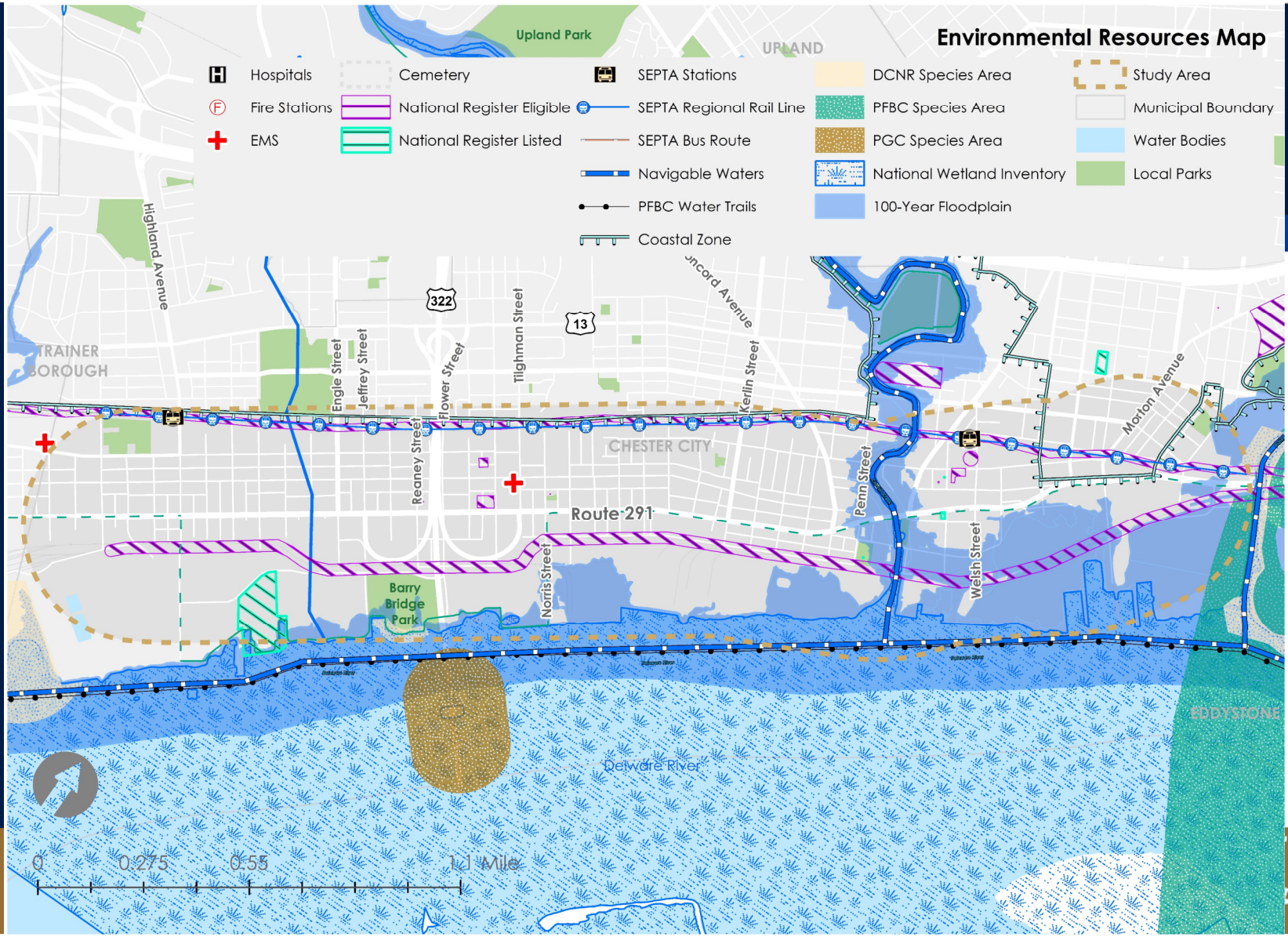
Environmental Review

Route 291 Study



Key Takeaways:

- Threatened and Endangered (T&E) Species throughout
- Historic properties throughout
- Community & recreational facilities throughout
- PADEP Coastal Zone and partially withing FEMA 100-year floodplain



Synthesis of Issues & Opportunities



Key Challenges

- Traffic volumes north/east of the bridge
- Traffic speeds & crashes
- Industrial land uses & heavy truck traffic
- I-95 traffic diversion route
- Disconnected waterfront & vacant parcels
- Lack of pedestrian crossings
- Narrow sidewalks
- No dedicated bike facilities
- Planning fatigue in the community







Key Opportunities

- Vision of revitalization in previous plans
- Wide right-of-way footprint to reimagine
- Redevelopment plans & opportunities
- Regional connectivity (transit and roads)
- Major job generators along the corridor
- Existing and planned bike lanes on side streets
- Pedestrian demand





Questions?

Cathy Spahr
(SpahrC@co.delaware.pa.us)

Tara Hofferth
(thofferth@kittelson.com)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	2	2	1	2	2	1	0	0	0	0	0	10	26-35	4
12:15 AM	0	0	0	0	3	3	1	0	0	0	0	0	0	0	7	31-40	6
12:30 AM	0	0	0	0	1	2	0	0	2	0	0	0	0	0	5	31-40	3
12:45 AM	0	0	0	0	1	1	2	2	0	0	0	0	0	0	6	41-50	4
01:00 AM	0	0	0	0	1	3	0	2	1	0	0	0	0	0	7	31-40	4
01:15 AM	0	0	0	1	1	0	0	2	0	0	0	0	0	0	4	41-50	2
01:30 AM	0	0	0	0	2	1	3	0	0	0	0	0	0	0	6	36-45	4
01:45 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2	41-50	2
02:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	16-25	1
02:15 AM	0	0	1	1	1	0	0	0	0	0	0	0	0	0	3	21-30	2
02:30 AM	0	0	0	0	2	0	0	1	0	0	1	0	0	0	4	26-35	2
02:45 AM	0	0	0	0	3	2	1	1	0	1	0	0	0	0	8	31-40	5
03:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	36-45	1
03:15 AM	0	0	0	0	0	0	2	1	3	0	0	0	0	0	6	46-55	4
03:30 AM	1	0	0	1	0	1	1	1	1	0	0	0	0	0	6	36-45	2
03:45 AM	0	0	0	1	2	2	1	2	0	0	0	0	0	0	8	31-40	4
04:00 AM	0	0	0	0	2	1	1	4	1	0	1	0	0	0	10	45-54	5
04:15 AM	1	0	0	0	3	6	6	0	0	0	0	0	0	0	16	36-45	12
04:30 AM	0	0	0	0	0	5	3	3	1	3	0	0	0	0	15	36-45	8
04:45 AM	0	0	0	0	1	5	6	5	3	3	0	0	0	**1**	24	37-46	11
05:00 AM	0	0	0	0	4	5	8	8	0	0	0	0	0	0	25	41-50	16
05:15 AM	0	0	0	1	6	8	24	7	7	0	0	0	0	1	54	36-45	32
05:30 AM	0	0	0	4	11	12	14	10	4	1	1	0	0	0	57	36-45	26
05:45 AM	0	0	0	2	12	4	13	5	6	0	1	0	0	0	43	41-50	18
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

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Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	0	0	1	0	4	11	14	7	1	0	0	0	0	0	38	36-45	25
06:15 AM	2	0	0	0	5	15	13	4	1	0	0	0	0	0	40	36-45	28
06:30 AM	3	0	0	4	3	22	17	23	3	1	0	0	0	0	76	41-50	40
06:45 AM	1	0	0	**12**	12	9	25	9	5	1	0	0	0	0	74	36-45	34
07:00 AM	0	0	1	6	8	9	16	11	9	1	1	**1**	0	0	63	41-50	27
07:15 AM	4	0	2	7	23	30	31	16	0	1	1	0	0	0	**115**	36-45	61
07:30 AM	4	1	1	12	16	13	28	**29**	4	0	0	0	0	0	108	41-50	57
07:45 AM	1	0	1	6	**26**	22	29	11	**12**	1	**2**	0	0	0	111	36-45	51
08:00 AM	1	0	3	0	15	26	**36**	7	4	2	1	0	0	0	95	36-45	62
08:15 AM	0	0	0	2	16	23	14	12	4	1	0	0	0	0	72	31-40	39
08:30 AM	2	0	0	6	18	15	13	15	7	2	1	0	0	0	79	31-40	33
08:45 AM	1	1	1	5	12	10	32	7	3	0	0	0	0	0	72	36-45	42
09:00 AM	1	**3**	0	5	17	22	13	7	3	1	0	0	0	0	72	31-40	39
09:15 AM	0	0	2	5	14	16	15	6	5	0	0	0	0	0	63	36-45	31
09:30 AM	1	0	0	2	7	11	9	8	5	0	0	0	0	0	43	36-45	20
09:45 AM	3	0	0	6	11	20	21	6	0	2	0	0	0	0	69	36-45	41
10:00 AM	2	0	2	5	7	16	20	9	3	0	0	0	0	0	64	36-45	36
10:15 AM	0	0	0	2	16	13	9	14	3	**4**	0	0	0	0	61	31-40	29
10:30 AM	4	0	1	3	11	20	19	9	1	0	0	0	0	0	68	36-45	39
10:45 AM	**6**	0	**4**	8	10	19	9	7	2	1	0	0	0	0	66	31-40	29
11:00 AM	0	0	1	5	18	16	22	8	2	0	0	0	0	0	72	36-45	38
11:15 AM	2	1	0	4	9	**41**	17	6	0	1	0	0	0	0	81	36-45	58
11:30 AM	1	0	0	1	9	24	20	10	2	0	0	0	0	0	67	36-45	44
11:45 AM	0	0	0	2	15	21	23	6	1	2	0	0	0	0	70	36-45	44
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

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Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	6	0	1	7	8	27	15	12	1	0	0	0	0	0	77	36-45	42
12:15 PM	2	0	0	3	15	16	13	12	3	**3**	**2**	0	0	0	69	31-40	31
12:30 PM	0	0	1	6	10	23	14	15	8	0	0	0	0	0	77	36-45	37
12:45 PM	0	1	2	4	6	18	19	10	2	0	0	0	0	0	62	36-45	37
01:00 PM	2	0	0	6	7	11	19	9	7	2	1	0	0	0	64	36-45	30
01:15 PM	0	1	1	6	8	15	20	10	1	2	0	0	0	0	64	36-45	35
01:30 PM	1	0	2	3	7	19	22	**19**	**9**	1	0	**1**	0	0	84	36-45	41
01:45 PM	2	1	1	6	8	**40**	19	11	5	1	0	0	0	0	94	36-45	59
02:00 PM	0	0	0	1	9	26	**29**	15	8	0	0	0	0	0	88	36-45	55
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
04:45 PM	**7**	**4**	**7**	**13**	26	23	12	0	2	0	0	0	0	0	94	31-40	49
05:00 PM	3	0	3	11	**56**	39	3	5	0	1	0	0	0	0	**121**	31-40	95
05:15 PM	2	1	1	8	29	39	16	3	0	0	0	0	0	0	99	31-40	68
05:30 PM	3	1	1	11	22	39	10	2	1	0	0	0	0	0	90	31-40	61
05:45 PM	2	0	0	7	27	29	17	3	1	0	0	0	0	0	86	31-40	56
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
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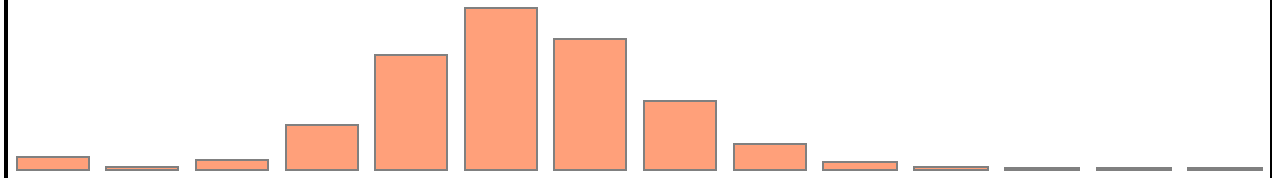
06:00 PM	0	0	1	11	20	35	9	3	2	0	0	0	0	0	81	31-40	55
06:15 PM	2	1	2	8	20	17	10	2	1	0	0	0	0	0	63	31-40	37
06:30 PM	1	0	3	7	20	15	7	2	0	0	0	0	0	0	55	31-40	35
06:45 PM	0	0	0	7	9	14	7	1	0	0	0	0	0	0	38	31-40	23
07:00 PM	0	0	0	7	16	12	4	1	0	0	0	0	0	0	40	31-40	28
07:15 PM	0	0	0	3	6	10	7	0	1	0	0	0	0	0	27	36-45	17
07:30 PM	0	0	3	4	8	12	9	1	0	1	0	0	0	0	38	36-45	21
07:45 PM	0	0	2	2	8	10	5	1	1	0	0	0	0	0	29	31-40	18
08:00 PM	1	0	1	3	5	8	6	2	0	0	0	0	0	0	26	36-45	14
08:15 PM	0	0	1	1	3	7	3	3	2	1	0	0	0	0	21	31-40	10
08:30 PM	1	0	1	3	7	6	9	0	0	0	0	0	0	0	27	36-45	15
08:45 PM	1	0	2	3	6	10	5	0	0	0	0	0	0	0	27	31-40	16
09:00 PM	0	0	1	5	3	11	3	1	0	0	0	0	0	0	24	31-40	14
09:15 PM	0	0	0	2	9	7	2	4	0	0	0	0	0	0	24	31-40	16
09:30 PM	0	0	0	6	6	5	3	1	1	0	0	0	0	0	22	26-35	12
09:45 PM	0	1	0	0	4	6	2	1	0	0	0	0	0	0	14	31-40	10
10:00 PM	0	0	0	2	8	11	6	3	2	2	0	0	0	0	34	31-40	19
10:15 PM	0	0	0	4	3	13	3	3	2	1	0	0	0	0	29	31-40	16
10:30 PM	0	0	1	2	4	5	2	1	0	1	0	0	0	0	16	31-40	9
10:45 PM	0	0	0	1	5	2	2	2	0	0	0	0	0	0	12	31-40	7
11:00 PM	1	0	1	4	4	3	1	2	0	0	0	0	0	0	16	26-35	8
11:15 PM	0	0	0	0	3	2	3	1	1	0	0	0	0	0	10	31-40	5
11:30 PM	0	0	0	1	3	3	2	0	1	0	0	0	0	0	10	31-40	6
11:45 PM	0	0	1	2	2	2	0	1	0	0	0	0	0	0	8	26-35	4
Day Total	78	17	62	301	780	1096	893	466	172	45	13	2	0	2	3927	36-45	1989
Percent	2%	0.4%	1.6%	7.7%	19.9%	27.9%	22.7%	11.9%	4.4%	1.1%	0.3%	0.1%	0%	0.1%			



AM Peak	10:45 AM	9:00 AM	10:45 AM	6:45 AM	7:45 AM	11:15 AM	8:00 AM	7:30 AM	7:45 AM	10:15 AM	7:45 AM	7:00 AM	12:00 AM	4:45 AM	7:15 AM		
15-min Vol	6	3	4	12	26	41	36	29	12	4	2	1	0	1	115		
PM Peak	4:45 PM	4:45 PM	4:45 PM	4:45 PM	5:00 PM	1:45 PM	2:00 PM	1:30 PM	1:30 PM	12:15 PM	12:15 PM	1:30 PM	12:00 PM	12:00 PM	5:00 PM		
15-min Vol	7	4	7	13	56	40	29	19	9	3	2	1	0	0	121		

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	1	1	2	0	0	1	2	0	0	0	0	7	31-40	3
12:15 AM	0	0	0	0	1	2	3	1	2	0	0	1	0	0	10	36-45	5
12:30 AM	0	0	0	3	2	1	2	1	2	0	0	0	0	0	11	26-35	5
12:45 AM	1	0	0	1	3	1	0	0	2	1	0	0	0	0	9	28-37	4
01:00 AM	1	1	0	0	1	4	0	0	0	0	0	0	0	0	7	31-40	5
01:15 AM	0	0	1	1	3	1	1	0	0	0	0	0	0	0	7	28-37	4
01:30 AM	0	0	0	1	2	2	0	3	1	0	0	0	0	0	9	46-55	4
01:45 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	26-35	1
02:00 AM	0	0	0	0	2	1	0	1	0	0	0	0	0	0	4	31-40	3
02:15 AM	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	16-25	1
02:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	31-40	2
02:45 AM	0	0	1	0	1	2	2	0	0	0	0	0	0	0	6	36-45	4
03:00 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	31-40	1
03:15 AM	0	0	0	0	1	1	2	1	0	0	0	0	0	0	5	41-50	3
03:30 AM	0	0	0	0	4	3	2	0	0	0	0	0	0	0	9	31-40	7
03:45 AM	0	0	0	0	0	0	4	2	0	0	0	0	0	0	6	41-50	6
04:00 AM	0	0	0	1	1	2	3	0	0	1	0	0	0	0	8	36-45	5
04:15 AM	1	1	0	2	6	2	4	2	0	0	0	0	0	0	18	28-37	8
04:30 AM	1	0	0	1	0	4	6	4	1	1	0	0	0	0	18	38-47	10
04:45 AM	0	0	0	0	5	6	4	2	2	0	0	0	0	0	19	31-40	11
05:00 AM	1	0	0	2	7	6	5	4	0	0	0	0	0	0	25	31-40	13
05:15 AM	2	0	2	2	4	24	14	9	1	2	0	0	0	0	60	36-45	38
05:30 AM	0	0	2	1	9	12	12	12	7	0	1	0	0	0	56	36-45	24
05:45 AM	0	0	3	3	8	11	14	4	2	1	0	0	0	0	46	36-45	25
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	0	0	0	1	7	8	14	9	0	0	0	0	0	0	39	41-50	23
06:15 AM	0	0	0	5	6	19	7	7	1	0	0	0	0	0	45	36-45	26
06:30 AM	3	0	0	0	12	20	22	13	4	1	0	0	0	0	75	36-45	42
06:45 AM	0	0	1	2	11	15	**24**	5	4	0	0	0	0	0	62	36-45	39
07:00 AM	4	0	1	5	13	**32**	17	7	4	1	0	0	0	0	84	36-45	49
07:15 AM	3	1	0	5	8	27	18	18	5	2	0	0	0	0	87	36-45	45
07:30 AM	2	0	3	4	8	20	22	**27**	6	**3**	0	0	0	0	95	41-50	49
07:45 AM	**7**	0	0	3	13	30	21	15	**8**	2	0	0	0	0	**99**	36-45	51
08:00 AM	2	0	0	1	8	23	22	14	1	3	1	1	0	0	76	36-45	45
08:15 AM	0	0	1	5	19	17	21	11	4	2	**2**	0	0	0	82	36-45	38
08:30 AM	3	0	2	**10**	11	21	20	9	0	0	1	0	**1**	0	78	36-45	41
08:45 AM	5	0	0	4	13	19	17	9	4	1	0	0	0	**1**	73	36-45	36
09:00 AM	2	0	3	6	9	12	15	16	4	0	0	0	0	0	67	41-50	31
09:15 AM	1	0	**4**	10	15	32	5	8	3	0	0	0	0	0	78	31-40	47
09:30 AM	1	1	2	7	16	19	7	7	1	1	0	0	0	0	62	31-40	35
09:45 AM	0	**2**	3	7	10	14	9	4	3	1	0	0	0	0	53	31-40	24
10:00 AM	0	0	2	6	**24**	15	10	7	1	0	0	0	0	0	65	31-40	39
10:15 AM	3	0	1	3	12	17	17	6	0	0	1	0	0	0	60	36-45	34
10:30 AM	0	0	2	9	17	17	7	10	3	2	0	0	0	0	67	31-40	34
10:45 AM	4	0	4	2	21	19	18	6	0	0	0	0	0	0	74	31-40	40
11:00 AM	1	0	0	5	10	17	17	7	0	3	0	0	0	0	60	36-45	34
11:15 AM	3	1	0	5	13	27	10	8	2	0	0	0	0	0	69	31-40	40
11:30 AM	2	0	0	4	15	24	19	8	0	1	0	0	0	0	73	36-45	43
11:45 AM	3	0	1	5	3	24	8	8	1	0	0	0	0	0	53	36-45	32
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Chester, PA | **DATE:** Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	0	0	1	4	24	28	15	3	1	0	0	0	0	0	76	31-40	52
12:15 PM	0	0	2	6	16	31	8	2	1	0	0	0	0	0	66	31-40	47
12:30 PM	3	0	1	6	10	24	14	4	1	0	0	0	0	0	63	36-45	38
12:45 PM	1	0	2	6	11	16	15	12	2	0	0	0	0	0	65	36-45	31
01:00 PM	4	2	0	6	10	17	22	10	2	1	0	0	0	0	74	36-45	39
01:15 PM	0	1	1	6	13	25	19	4	2	0	0	0	0	0	71	36-45	44
01:30 PM	1	0	0	2	15	22	10	7	1	0	1	0	0	0	59	31-40	37
01:45 PM	4	0	**6**	5	15	6	11	7	3	0	0	0	0	0	57	31-40	21
02:00 PM	1	0	1	5	18	15	18	9	3	0	0	0	0	0	70	35-44	33
02:15 PM	3	0	3	7	21	32	33	8	2	1	1	0	0	0	111	36-45	65
02:30 PM	2	3	0	6	23	28	21	15	2	1	0	0	0	0	101	31-40	51
02:45 PM	4	1	2	3	12	23	24	8	1	2	0	**1**	0	0	81	36-45	47
03:00 PM	5	2	5	**16**	8	18	24	8	2	**3**	0	0	0	0	91	36-45	42
03:15 PM	2	1	1	4	16	29	22	9	1	0	0	0	0	0	85	36-45	51
03:30 PM	**6**	0	0	8	21	**72**	**51**	12	1	0	0	0	0	0	**171**	36-45	123
03:45 PM	4	0	0	8	11	25	15	9	**4**	0	0	0	0	0	76	36-45	40
04:00 PM	4	0	1	8	10	27	21	11	3	0	1	0	0	0	86	36-45	48
04:15 PM	2	2	1	9	10	28	27	**23**	4	2	0	0	0	0	108	36-45	55
04:30 PM	3	1	1	5	17	41	23	12	1	1	0	0	0	0	105	36-45	64
04:45 PM	1	0	1	5	15	28	31	6	3	0	0	0	0	0	90	36-45	59
05:00 PM	1	0	0	3	**32**	45	24	6	0	0	0	0	0	0	111	31-40	77
05:15 PM	6	**4**	0	3	23	31	35	10	1	1	0	0	0	0	114	36-45	66
05:30 PM	0	0	0	3	18	29	30	10	1	0	0	1	0	0	92	36-45	59
05:45 PM	0	0	0	6	25	28	19	5	1	0	0	0	0	0	84	31-40	53
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

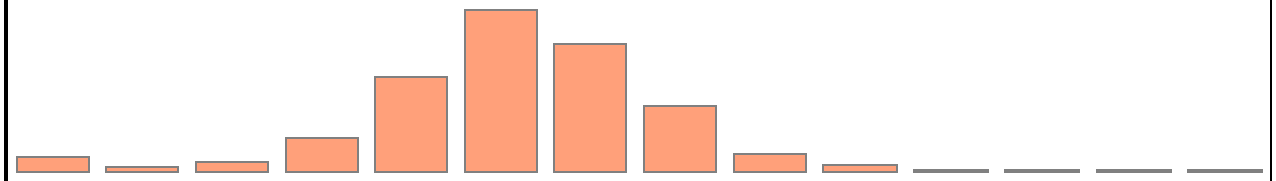
Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Chester, PA | **DATE:** Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	3	0	0	3	10	31	17	2	1	1	0	0	0	0	68	36-45	48
06:15 PM	1	0	1	4	5	19	15	8	0	0	0	0	0	0	53	36-45	34
06:30 PM	1	0	0	1	4	21	15	4	3	0	0	0	0	0	49	36-45	36
06:45 PM	2	4	0	3	6	14	8	6	2	0	1	0	0	0	46	36-45	22
07:00 PM	1	0	0	2	7	13	8	9	1	0	0	0	0	0	41	36-45	21
07:15 PM	0	0	0	3	8	10	2	2	0	0	0	0	0	0	25	31-40	18
07:30 PM	0	0	0	3	3	3	6	5	0	2	0	0	0	0	22	41-50	11
07:45 PM	0	0	0	0	4	9	6	5	0	0	2	0	0	0	26	36-45	15
08:00 PM	0	0	1	0	9	5	9	4	0	0	0	0	0	0	28	33-42	14
08:15 PM	0	0	0	4	1	5	8	2	0	1	0	0	0	0	21	36-45	13
08:30 PM	0	0	2	1	4	4	3	3	1	0	0	0	0	0	18	31-40	8
08:45 PM	0	0	0	0	2	8	4	3	1	0	0	0	0	0	18	36-45	12
09:00 PM	2	0	0	0	0	6	3	3	0	0	0	0	0	0	14	36-45	9
09:15 PM	1	2	0	0	3	6	8	8	2	0	0	0	0	0	30	41-50	16
09:30 PM	0	0	0	0	1	9	9	4	0	1	0	0	0	0	24	36-45	18
09:45 PM	2	0	0	0	4	5	17	0	4	1	1	0	0	0	34	36-45	22
10:00 PM	0	0	0	0	2	6	3	5	2	2	0	1	0	0	21	36-45	9
10:15 PM	0	0	0	1	1	5	7	1	1	0	0	0	0	0	16	36-45	12
10:30 PM	0	0	1	0	2	3	3	3	2	0	0	0	0	0	14	36-45	6
10:45 PM	0	0	0	0	4	5	5	2	1	0	0	0	0	0	17	36-45	10
11:00 PM	0	0	0	0	3	4	6	3	0	1	1	0	0	0	18	36-45	10
11:15 PM	0	0	0	1	0	0	0	3	0	0	0	0	0	0	4	41-50	3
11:30 PM	1	0	2	3	1	2	1	2	0	0	0	0	0	0	12	21-30	5
11:45 PM	1	0	1	0	2	2	2	1	1	0	0	0	0	0	10	31-40	4
Day Total	128	30	77	302	837	1441	1142	585	145	52	14	5	1	1	4760	36-45	2583
Percent	2.7%	0.6%	1.6%	6.3%	17.6%	30.3%	24%	12.3%	3%	1.1%	0.3%	0.1%	0%	0%			
AM Peak	7:45 AM	9:45 AM	9:15 AM	8:30 AM	10:00 AM	7:00 AM	6:45 AM	7:30 AM	7:45 AM	7:30 AM	8:15 AM	12:15 AM	8:30 AM	8:45 AM	7:45 AM		
15-min Vol	7	2	4	10	24	32	24	27	8	3	2	1	1	1	99		
PM Peak	3:30 PM	5:15 PM	1:45 PM	3:00 PM	5:00 PM	3:30 PM	3:30 PM	4:15 PM	3:45 PM	3:00 PM	7:45 PM	2:45 PM	12:00 PM	12:00 PM	3:30 PM		
15-min Vol	6	4	6	16	32	72	51	23	4	3	2	1	0	0	171		



Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

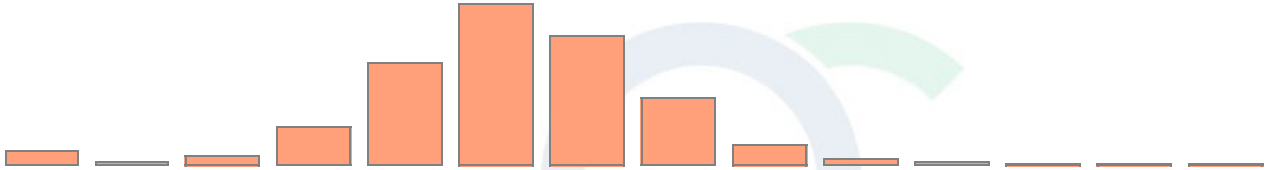
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	206	47	139	603	1617	2537	2035	1051	317	97	27	7	1	3	8687	36-45	4572
Percent	2.4%	0.5%	1.6%	6.9%	18.6%	29.2%	23.4%	12.1%	3.6%	1.1%	0.3%	0.1%	0%	0%			
Cumulative Percent	2.4%	2.9%	4.5%	11.5%	30.1%	59.3%	82.7%	94.8%	98.4%	99.6%	99.9%	100%	100%	100%			

ADT
4343



85th Percentile: 45 MPH
Mean Speed(Average): 38 MPH
Median: 38 MPH
Mode: 38 MPH

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	7	3	0	0	0	0	0	0	0	0	0	0	0	10
12:15 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7
12:30 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
12:45 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
01:00 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7
01:15 AM	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
01:30 AM	0	5	0	0	0	0	0	0	1	0	0	0	0	0	6
01:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
02:15 AM	0	1	0	0	0	0	0	0	2	0	0	0	0	0	3
02:30 AM	0	1	1	0	0	0	0	0	2	0	0	0	0	0	4
02:45 AM	0	3	3	0	0	1	0	0	1	0	0	0	0	0	8
03:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:15 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
03:30 AM	0	3	1	1	0	0	0	0	0	0	0	0	0	1	6
03:45 AM	0	6	0	0	0	0	0	0	2	0	0	0	0	0	8
04:00 AM	0	5	4	0	0	0	0	0	1	0	0	0	0	0	10
04:15 AM	0	2	1	1	1	1	0	0	8	**1**	0	0	0	1	16
04:30 AM	0	8	3	0	0	0	0	0	4	0	0	0	0	0	15
04:45 AM	0	12	4	0	3	2	0	0	3	0	0	0	0	0	24
05:00 AM	0	14	5	1	1	0	0	1	3	0	0	0	0	0	25
05:15 AM	0	23	12	3	3	1	3	0	9	0	0	0	0	0	54
05:30 AM	0	26	11	2	2	2	3	1	10	0	0	0	0	0	57
05:45 AM	0	16	6	1	5	1	**4**	0	10	0	0	0	0	0	43
Day Total															
Percent															
ADT 3927															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	12	5	2	4	0	3	0	10	1	0	**1**	0	0	38
06:15 AM	0	14	7	1	2	1	1	0	10	0	0	0	**2**	2	40
06:30 AM	0	42	16	3	2	4	4	0	3	0	0	0	0	2	76
06:45 AM	0	38	9	3	6	2	3	2	10	0	0	0	0	1	74
07:00 AM	0	40	11	0	6	1	1	1	2	0	0	0	1	0	63
07:15 AM	**2**	59	16	**8**	6	6	3	1	10	0	0	0	1	3	**115**
07:30 AM	0	**67**	11	1	9	3	2	3	8	0	0	0	1	3	108
07:45 AM	1	58	**24**	3	4	5	4	**4**	7	0	0	0	0	1	111
08:00 AM	1	58	16	5	4	3	0	1	7	0	0	0	0	0	95
08:15 AM	0	46	16	0	4	3	0	0	3	0	0	0	0	0	72
08:30 AM	1	45	8	1	4	3	1	1	11	1	0	0	1	2	79
08:45 AM	0	46	11	4	2	1	0	2	5	0	0	0	0	1	72
09:00 AM	1	29	18	7	1	2	3	1	10	0	0	0	0	0	72
09:15 AM	1	29	9	3	6	4	1	2	6	0	0	0	2	0	63
09:30 AM	0	22	3	3	3	2	0	2	7	0	0	0	0	1	43
09:45 AM	1	31	13	2	3	2	1	1	**13**	0	0	0	0	2	69
10:00 AM	0	23	9	5	9	4	0	4	8	0	0	0	0	2	64
10:15 AM	1	30	9	3	4	2	0	0	11	1	0	0	0	0	61
10:30 AM	1	27	9	6	3	**7**	2	1	9	0	0	0	1	2	68
10:45 AM	0	37	9	3	6	0	2	0	3	1	0	0	0	**5**	66
11:00 AM	1	30	15	1	7	4	0	2	12	0	0	0	0	0	72
11:15 AM	0	33	9	4	**14**	3	3	2	10	0	0	0	1	2	81
11:30 AM	0	38	9	2	5	4	0	2	7	0	0	0	0	0	67
11:45 AM	1	30	10	4	4	4	2	1	13	0	0	0	1	0	70
Day Total															
Percent															
ADT 3927															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	1	28	14	7	8	2	3	3	6	0	0	0	0	5	77
12:15 PM	0	30	11	3	5	6	0	1	11	0	0	0	0	2	69
12:30 PM	0	44	7	2	3	3	4	2	12	0	0	0	0	0	77
12:45 PM	0	27	8	2	4	5	4	1	9	1	0	0	0	1	62
01:00 PM	0	31	11	4	4	3	2	0	8	0	0	0	0	1	64
01:15 PM	0	29	11	1	7	2	2	1	11	0	0	0	0	0	64
01:30 PM	0	52	6	3	9	3	2	1	6	1	0	0	0	1	84
01:45 PM	0	42	17	3	9	8	1	1	9	0	0	0	2	2	94
02:00 PM	0	46	18	2	8	5	0	2	7	0	0	0	0	0	88
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	79	4	0	0	1	0	0	3	0	0	0	1	6	94
05:00 PM	1	91	19	0	1	1	0	0	4	0	0	0	1	3	121
05:15 PM	1	77	14	0	1	2	0	1	0	1	0	0	0	2	99
05:30 PM	0	76	8	0	1	0	0	1	1	0	0	0	0	3	90
05:45 PM	1	67	10	1	0	1	0	0	4	0	0	0	0	2	86
Day Total															
Percent															
ADT 3927															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

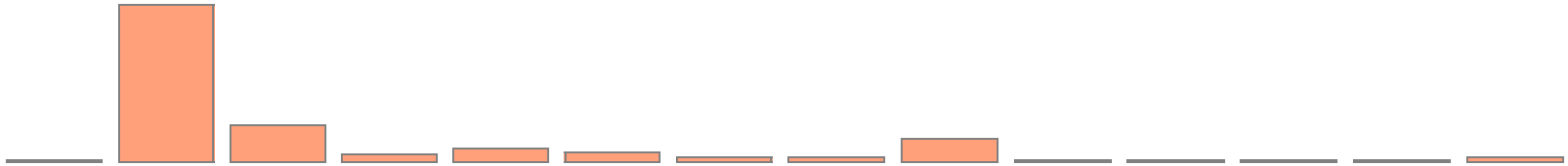
Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	1	60	12	1	2	3	1	0	1	0	0	0	0	0	81
06:15 PM	0	53	5	0	0	1	0	0	2	0	0	0	0	2	63
06:30 PM	0	49	4	0	0	0	0	0	1	0	0	0	0	1	55
06:45 PM	0	37	0	0	1	0	0	0	0	0	0	0	0	0	38
07:00 PM	0	30	8	0	0	0	0	0	2	0	0	0	0	0	40
07:15 PM	0	26	1	0	0	0	0	0	0	0	0	0	0	0	27
07:30 PM	0	33	4	1	0	0	0	0	0	0	0	0	0	0	38
07:45 PM	0	24	4	0	0	0	0	0	1	0	0	0	0	0	29
08:00 PM	0	22	2	0	1	0	0	0	0	0	0	0	0	1	26
08:15 PM	0	18	1	0	2	0	0	0	0	0	0	0	0	0	21
08:30 PM	0	23	4	0	0	0	0	0	0	0	0	0	0	0	27
08:45 PM	0	26	0	0	0	0	0	0	0	0	0	0	0	1	27
09:00 PM	0	22	1	0	0	0	0	0	1	0	0	0	0	0	24
09:15 PM	0	21	3	0	0	0	0	0	0	0	0	0	0	0	24
09:30 PM	0	20	2	0	0	0	0	0	0	0	0	0	0	0	22
09:45 PM	0	13	1	0	0	0	0	0	0	0	0	0	0	0	14
10:00 PM	0	33	1	0	0	0	0	0	0	0	0	0	0	0	34
10:15 PM	1	25	3	0	0	0	0	0	0	0	0	0	0	0	29
10:30 PM	0	16	0	0	0	0	0	0	0	0	0	0	0	0	16
10:45 PM	0	12	0	0	0	0	0	0	0	0	0	0	0	0	12
11:00 PM	0	13	2	0	0	0	0	0	0	0	0	0	0	1	16
11:15 PM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
11:30 PM	0	8	0	1	0	0	1	0	0	0	0	0	0	0	10
11:45 PM	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
Day Total	18	2367	551	114	199	124	65	50	350	8	0	1	15	65	3927
Percent	0.5%	60.3%	14%	2.9%	5.1%	3.2%	1.7%	1.3%	8.9%	0.2%	0%	0%	0.4%	1.7%	
ADT 3927															
AM Peak	7:15 AM	7:30 AM	7:45 AM	7:15 AM	11:15 AM	10:30 AM	5:45 AM	7:45 AM	9:45 AM	4:15 AM	12:00 AM	6:00 AM	6:15 AM	10:45 AM	7:15 AM
15-min Vol	2	67	24	8	14	7	4	4	13	1	0	1	2	5	115
PM Peak	12:00 PM	5:00 PM	5:00 PM	12:00 PM	1:30 PM	1:45 PM	12:30 PM	12:00 PM	12:30 PM	12:45 PM	12:00 PM	12:00 PM	1:45 PM	4:45 PM	5:00 PM
15-min Vol	1	91	19	7	9	8	4	3	12	1	0	0	2	6	121

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
12:15 AM	0	9	0	0	0	0	0	1	0	0	0	0	0	0	10
12:30 AM	0	11	0	0	0	0	0	0	0	0	0	0	0	0	11
12:45 AM	0	6	1	0	0	1	0	0	0	0	0	0	0	1	9
01:00 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	1	7
01:15 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
01:30 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
01:45 AM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
02:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
02:15 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
02:45 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
03:00 AM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
03:15 AM	0	4	0	0	0	0	0	1	0	0	0	0	0	0	5
03:30 AM	0	4	4	0	1	0	0	0	0	0	0	0	0	0	9
03:45 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
04:00 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
04:15 AM	0	6	2	0	0	2	0	0	7	0	0	0	0	1	18
04:30 AM	0	9	3	1	1	1	0	0	2	0	0	0	0	1	18
04:45 AM	0	4	3	1	1	2	0	0	8	0	0	0	0	0	19
05:00 AM	0	7	5	0	3	1	2	0	6	0	0	0	0	1	25
05:15 AM	0	26	9	2	2	3	3	2	**11**	0	0	0	0	2	60
05:30 AM	0	30	8	1	1	3	3	1	9	0	0	0	0	0	56
05:45 AM	0	21	8	1	1	7	3	0	5	0	0	0	0	0	46
Day Total															
Percent															
ADT 4760															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	1	17	7	1	2	1	1	0	9	0	0	0	0	0	39
06:15 AM	0	22	9	0	1	4	2	0	7	0	0	0	0	0	45
06:30 AM	2	38	16	3	5	2	3	0	4	0	0	0	0	2	75
06:45 AM	1	32	11	2	4	3	1	0	6	**2**	0	0	0	0	62
07:00 AM	1	51	14	0	3	6	4	0	1	0	0	0	**1**	3	84
07:15 AM	**3**	43	19	4	3	3	0	2	7	0	0	0	1	2	87
07:30 AM	1	**56**	17	3	3	3	0	2	9	0	0	0	0	1	95
07:45 AM	0	49	17	**7**	6	2	1	**3**	6	1	0	0	0	**7**	**99**
08:00 AM	0	42	12	3	6	3	1	2	5	0	0	0	0	2	76
08:15 AM	0	50	13	4	2	2	1	1	8	1	0	0	0	0	82
08:30 AM	1	42	15	2	5	0	**6**	2	3	0	0	**1**	0	1	78
08:45 AM	2	38	9	2	6	3	0	3	4	1	0	0	0	5	73
09:00 AM	0	34	13	3	3	5	1	0	4	2	0	0	0	2	67
09:15 AM	0	34	**21**	2	5	4	0	1	9	0	0	0	1	1	78
09:30 AM	0	25	10	2	5	6	3	1	9	0	0	0	0	1	62
09:45 AM	0	26	8	2	6	4	0	1	5	1	0	0	0	0	53
10:00 AM	1	26	13	0	**11**	3	4	0	7	0	0	0	0	0	65
10:15 AM	1	20	7	7	8	3	2	3	6	0	0	0	0	3	60
10:30 AM	0	34	11	3	4	2	0	3	10	0	0	0	0	0	67
10:45 AM	0	34	11	2	11	0	0	2	9	0	0	0	1	4	74
11:00 AM	0	26	12	2	3	**8**	1	2	4	0	0	0	1	1	60
11:15 AM	0	33	10	2	8	7	1	0	3	0	0	0	1	4	69
11:30 AM	0	31	11	6	6	4	2	2	9	1	0	0	0	1	73
11:45 AM	0	22	7	5	4	4	1	1	6	0	0	0	0	3	53
Day Total															
Percent															
ADT 4760															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	0	41	9	**6**	5	**5**	**1**	2	7	0	0	0	0	0	76
12:15 PM	0	39	12	1	4	4	0	0	6	0	0	0	0	0	66
12:30 PM	0	28	10	2	5	1	1	3	**9**	0	0	0	**1**	3	63
12:45 PM	0	35	12	1	4	2	0	2	6	**1**	0	**1**	0	1	65
01:00 PM	1	36	20	1	1	1	0	2	7	1	0	0	1	3	74
01:15 PM	1	39	10	3	5	4	0	1	8	0	0	0	0	0	71
01:30 PM	1	30	12	1	3	5	0	2	4	0	0	0	0	1	59
01:45 PM	1	19	12	4	10	3	0	1	3	0	0	0	1	3	57
02:00 PM	0	34	19	4	6	1	0	1	4	0	0	0	0	1	70
02:15 PM	0	54	23	2	**12**	5	1	3	8	0	0	0	0	3	111
02:30 PM	2	59	19	2	2	4	0	2	7	1	0	0	1	2	101
02:45 PM	1	47	16	2	8	2	0	0	2	0	0	0	1	2	81
03:00 PM	**5**	50	11	4	6	4	0	0	4	0	0	0	1	**6**	91
03:15 PM	0	55	20	2	4	0	0	0	2	0	0	0	0	2	85
03:30 PM	3	**103**	**39**	1	7	3	1	**4**	3	1	0	0	0	6	**171**
03:45 PM	0	53	15	0	2	0	0	0	2	0	0	0	0	4	76
04:00 PM	2	58	13	2	4	2	0	2	1	0	0	0	0	2	86
04:15 PM	2	76	18	0	5	2	0	0	3	0	0	0	0	2	108
04:30 PM	1	83	13	0	2	0	0	1	1	0	**1**	0	0	3	105
04:45 PM	0	73	9	0	3	0	0	0	4	0	0	0	0	1	90
05:00 PM	1	78	20	0	5	0	0	3	1	1	0	0	0	2	111
05:15 PM	3	79	20	1	5	0	0	1	1	0	1	0	0	3	114
05:30 PM	0	74	12	2	2	0	0	0	2	0	0	0	0	0	92
05:45 PM	0	68	10	0	1	1	0	0	4	0	0	0	0	0	84
Day Total															
Percent															
ADT 4760															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

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Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
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DIRECTION: EB
CITY/STATE: Chester, PA
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Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	0	52	7	2	3	0	0	0	0	0	0	0	1	3	68
06:15 PM	0	48	2	0	2	0	0	0	0	0	0	0	0	1	53
06:30 PM	0	42	3	0	3	0	0	0	0	0	0	0	0	1	49
06:45 PM	1	36	6	0	0	0	0	1	0	0	0	0	0	2	46
07:00 PM	0	34	4	0	1	0	0	0	1	0	0	0	0	1	41
07:15 PM	0	24	0	1	0	0	0	0	0	0	0	0	0	0	25
07:30 PM	0	16	4	0	2	0	0	0	0	0	0	0	0	0	22
07:45 PM	0	25	0	0	1	0	0	0	0	0	0	0	0	0	26
08:00 PM	0	25	2	0	0	0	0	0	1	0	0	0	0	0	28
08:15 PM	0	16	5	0	0	0	0	0	0	0	0	0	0	0	21
08:30 PM	0	15	1	0	1	0	0	0	1	0	0	0	0	0	18
08:45 PM	0	15	3	0	0	0	0	0	0	0	0	0	0	0	18
09:00 PM	1	10	3	0	0	0	0	0	0	0	0	0	0	0	14
09:15 PM	2	20	6	0	1	0	0	0	0	0	0	0	0	1	30
09:30 PM	0	21	3	0	0	0	0	0	0	0	0	0	0	0	24
09:45 PM	0	25	4	0	2	0	0	0	1	0	0	0	0	2	34
10:00 PM	0	16	2	0	3	0	0	0	0	0	0	0	0	0	21
10:15 PM	0	14	1	0	0	0	0	0	1	0	0	0	0	0	16
10:30 PM	0	11	1	0	1	0	1	0	0	0	0	0	0	0	14
10:45 PM	0	13	2	0	1	1	0	0	0	0	0	0	0	0	17
11:00 PM	0	16	1	0	1	0	0	0	0	0	0	0	0	0	18
11:15 PM	0	3	0	0	0	0	0	1	0	0	0	0	0	0	4
11:30 PM	0	8	2	1	0	0	0	0	0	0	0	0	0	1	12
11:45 PM	0	9	0	0	0	0	0	0	0	0	0	0	0	1	10
Day Total	42	2839	779	118	263	152	51	68	304	14	2	2	13	113	4760
Percent	0.9%	59.6%	16.4%	2.5%	5.5%	3.2%	1.1%	1.4%	6.4%	0.3%	0%	0%	0.3%	2.4%	
ADT 4760															
AM Peak	7:15 AM	7:30 AM	9:15 AM	7:45 AM	10:00 AM	11:00 AM	8:30 AM	7:45 AM	5:15 AM	6:45 AM	12:00 AM	8:30 AM	7:00 AM	7:45 AM	7:45 AM
15-min Vol	3	56	21	7	11	8	6	3	11	2	0	1	1	7	99
PM Peak	3:00 PM	3:30 PM	3:30 PM	12:00 PM	2:15 PM	12:00 PM	12:00 PM	3:30 PM	12:30 PM	12:45 PM	4:30 PM	12:45 PM	12:30 PM	3:00 PM	3:30 PM
15-min Vol	5	103	39	6	12	5	1	4	9	1	1	1	1	6	171

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	60	5206	1330	232	462	276	116	118	654	22	2	3	28	178	8687
Percent	0.7%	59.9%	15.3%	2.7%	5.3%	3.2%	1.3%	1.4%	7.5%	0.3%	0%	0%	0.3%	2%	

ADT
4343



Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		10	7			9			9	
12:15 AM		7	10			9			9	
12:30 AM		5	11			8			8	
12:45 AM		6	9			8			8	
01:00 AM		7	7			7			7	
01:15 AM		4	7			6			6	
01:30 AM		6	9			8			8	
01:45 AM		2	2			2			2	
02:00 AM		1	4			3			3	
02:15 AM		3	2			3			3	
02:30 AM		4	2			3			3	
02:45 AM		8	6			7			7	
03:00 AM		1	2			2			2	
03:15 AM		6	5			6			6	
03:30 AM		6	9			8			8	
03:45 AM		8	6			7			7	
04:00 AM		10	8			9			9	
04:15 AM		16	18			17			17	
04:30 AM		15	18			17			17	
04:45 AM		24	19			22			22	
05:00 AM		25	25			25			25	
05:15 AM		54	60			57			57	
05:30 AM		57	56			57			57	
05:45 AM		43	46			45			45	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		38	39			39			39	
06:15 AM		40	45			43			43	
06:30 AM		76	75			76			76	
06:45 AM		74	62			68			68	
07:00 AM		63	84			74			74	
07:15 AM		**115**	87			101			101	
07:30 AM		108	95			102			102	
07:45 AM		111	**99**			**105**			**105**	
08:00 AM		95	76			86			86	
08:15 AM		72	82			77			77	
08:30 AM		79	78			79			79	
08:45 AM		72	73			73			73	
09:00 AM		72	67			70			70	
09:15 AM		63	78			71			71	
09:30 AM		43	62			53			53	
09:45 AM		69	53			61			61	
10:00 AM		64	65			65			65	
10:15 AM		61	60			61			61	
10:30 AM		68	67			68			68	
10:45 AM		66	74			70			70	
11:00 AM		72	60			66			66	
11:15 AM		81	69			75			75	
11:30 AM		67	73			70			70	
11:45 AM		70	53			62			62	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		77	76			77			77	
12:15 PM		69	66			68			68	
12:30 PM		77	63			70			70	
12:45 PM		62	65			64			64	
01:00 PM		64	74			69			69	
01:15 PM		64	71			68			68	
01:30 PM		84	59			72			72	
01:45 PM		94	57			76			76	
02:00 PM		88	70			79			79	
02:15 PM		0	111			56			56	
02:30 PM		0	101			51			51	
02:45 PM		0	81			41			41	
03:00 PM		0	91			46			46	
03:15 PM		0	85			43			43	
03:30 PM		0	**171**			86			86	
03:45 PM		0	76			38			38	
04:00 PM		0	86			43			43	
04:15 PM		0	108			54			54	
04:30 PM		0	105			53			53	
04:45 PM		94	90			92			92	
05:00 PM		**121**	111			**116**			**116**	
05:15 PM		99	114			107			107	
05:30 PM		90	92			91			91	
05:45 PM		86	84			85			85	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		81	68			75			75	
06:15 PM		63	53			58			58	
06:30 PM		55	49			52			52	
06:45 PM		38	46			42			42	
07:00 PM		40	41			41			41	
07:15 PM		27	25			26			26	
07:30 PM		38	22			30			30	
07:45 PM		29	26			28			28	
08:00 PM		26	28			27			27	
08:15 PM		21	21			21			21	
08:30 PM		27	18			23			23	
08:45 PM		27	18			23			23	
09:00 PM		24	14			19			19	
09:15 PM		24	30			27			27	
09:30 PM		22	24			23			23	
09:45 PM		14	34			24			24	
10:00 PM		34	21			28			28	
10:15 PM		29	16			23			23	
10:30 PM		16	14			15			15	
10:45 PM		12	17			15			15	
11:00 PM		16	18			17			17	
11:15 PM		10	4			7			7	
11:30 PM		10	12			11			11	
11:45 PM		8	10			9			9	
Day Total		3927	4760			4369			4369	
% Weekday Average		89.9%	108.9%							
% Week Average		89.9%	108.9%			100%				
AM Peak 15-min Vol		7:15 AM 115	7:45 AM 99			7:45 AM 105			7:45 AM 105	
PM Peak 15-min Vol		5:00 PM 121	3:30 PM 171			5:00 PM 116			5:00 PM 116	

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	2	4	2	3	5	2	1	0	0	0	0	19	41-50	8
12:15 AM	0	0	2	2	6	6	2	3	0	0	0	0	0	0	21	31-40	12
12:30 AM	0	0	0	0	1	6	4	1	3	0	0	0	0	1	16	36-45	10
12:45 AM	0	0	0	1	3	2	5	2	0	0	0	0	0	0	13	40-49	7
01:00 AM	0	0	0	0	3	6	1	4	1	0	0	0	0	0	15	31-40	9
01:15 AM	0	0	0	2	1	2	1	3	0	0	0	0	0	0	9	41-50	4
01:30 AM	0	1	1	0	2	1	5	0	1	0	0	0	0	0	11	36-45	6
01:45 AM	0	0	1	1	2	2	3	3	1	0	0	0	0	0	13	41-50	6
02:00 AM	0	0	1	1	3	2	1	1	0	0	0	0	0	0	9	31-40	5
02:15 AM	0	0	1	1	1	3	3	0	1	0	0	0	0	0	10	36-45	6
02:30 AM	0	0	0	0	2	4	0	2	0	0	1	0	0	0	9	31-40	6
02:45 AM	0	0	0	0	5	3	2	1	1	1	0	0	0	0	13	31-40	8
03:00 AM	0	0	0	2	0	1	2	4	1	0	0	0	0	0	10	41-50	6
03:15 AM	0	0	0	1	4	3	6	2	3	0	0	0	0	0	19	36-45	9
03:30 AM	1	0	1	1	2	7	5	3	2	0	0	0	0	0	22	36-45	12
03:45 AM	0	0	0	1	6	3	2	5	4	0	0	0	0	0	21	46-55	9
04:00 AM	0	0	0	1	5	8	5	4	1	0	1	0	0	0	25	34-43	13
04:15 AM	1	0	0	0	9	12	13	3	1	0	0	0	0	0	39	36-45	25
04:30 AM	0	0	1	1	6	9	6	6	4	3	0	0	0	0	36	31-40	15
04:45 AM	0	0	0	5	5	19	14	6	3	3	0	0	0	1	56	36-45	33
05:00 AM	0	0	1	1	7	15	15	12	0	1	0	0	0	0	52	36-45	30
05:15 AM	0	0	3	6	13	27	30	10	9	2	0	0	0	1	101	36-45	57
05:30 AM	0	0	0	6	20	36	28	17	9	3	1	0	0	0	120	36-45	64
05:45 AM	0	0	0	3	27	18	29	20	14	3	2	0	0	0	116	41-50	49
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	0	0	1	4	13	40	31	16	9	0	1	0	0	0	115	36-45	71
06:15 AM	3	0	1	3	18	46	39	23	2	2	1	1	0	0	139	36-45	85
06:30 AM	**7**	0	2	6	18	38	40	**46**	6	2	0	0	0	0	165	41-50	86
06:45 AM	2	0	0	18	32	27	**56**	22	15	2	1	0	0	0	175	36-45	83
07:00 AM	1	0	1	9	19	28	28	18	10	2	1	1	0	0	118	36-45	56
07:15 AM	4	1	5	9	**40**	54	54	19	2	2	1	0	0	0	191	36-45	108
07:30 AM	4	1	2	14	25	38	46	38	8	3	1	0	0	0	180	36-45	84
07:45 AM	1	0	1	7	39	45	56	20	**19**	**7**	2	0	0	0	**197**	36-45	101
08:00 AM	3	0	4	1	34	52	55	23	13	3	**3**	0	0	0	191	36-45	107
08:15 AM	1	1	2	7	32	53	34	22	8	2	0	0	0	0	162	36-45	87
08:30 AM	4	0	0	**20**	28	49	34	25	11	6	1	0	0	0	178	36-45	83
08:45 AM	2	1	2	15	32	31	53	20	6	2	0	0	0	0	164	36-45	84
09:00 AM	5	**4**	2	9	27	46	28	14	7	3	0	0	0	0	145	36-45	74
09:15 AM	2	0	2	8	21	33	27	13	10	0	0	1	0	0	117	36-45	60
09:30 AM	2	0	2	8	17	28	24	16	7	2	0	0	0	0	106	36-45	52
09:45 AM	4	0	4	15	29	38	37	13	4	3	0	0	0	0	147	36-45	75
10:00 AM	4	0	3	9	19	44	42	20	6	1	0	**2**	0	0	150	36-45	86
10:15 AM	6	2	0	4	30	43	37	26	7	5	1	0	0	0	161	36-45	80
10:30 AM	7	0	2	10	20	42	47	24	5	1	1	0	0	0	159	36-45	89
10:45 AM	6	1	**6**	11	30	56	31	14	7	2	0	0	0	0	164	36-45	87
11:00 AM	6	1	2	8	32	36	38	16	5	2	0	0	0	0	146	36-45	74
11:15 AM	5	1	1	5	24	**68**	35	15	5	2	0	0	0	0	161	36-45	103
11:30 AM	1	0	0	3	24	48	34	23	7	0	3	0	0	1	144	36-45	82
11:45 AM	3	1	0	6	33	55	46	16	5	3	0	0	0	0	168	36-45	101
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	9	0	3	15	27	67	53	23	7	0	0	0	0	0	204	36-45	120
12:15 PM	3	1	0	3	28	53	45	25	6	4	**2**	0	0	0	170	36-45	98
12:30 PM	0	0	1	10	23	54	33	23	13	1	0	**2**	0	0	160	36-45	87
12:45 PM	2	1	5	9	19	42	45	29	11	1	0	0	0	0	164	36-45	87
01:00 PM	4	1	2	11	20	40	35	28	9	6	2	0	0	0	158	36-45	75
01:15 PM	1	1	2	6	20	37	45	33	9	3	1	0	0	0	158	36-45	82
01:30 PM	4	0	4	8	20	52	58	35	14	4	0	1	0	0	200	36-45	110
01:45 PM	2	1	1	9	16	76	56	30	15	**8**	0	0	0	0	214	36-45	132
02:00 PM	4	0	0	5	24	53	**65**	**37**	16	2	1	0	0	0	207	36-45	118
02:15 PM	7	1	0	4	13	22	32	20	9	5	0	0	0	0	113	36-45	54
02:30 PM	0	0	0	2	15	28	37	27	14	4	2	0	0	0	129	36-45	65
02:45 PM	2	0	2	5	18	38	38	27	6	2	0	0	**1**	0	139	36-45	76
03:00 PM	5	0	0	8	10	36	35	35	6	7	0	0	1	0	143	36-45	71
03:15 PM	4	0	2	4	9	37	34	26	10	1	1	0	0	0	128	36-45	71
03:30 PM	5	1	0	4	12	44	60	37	11	3	0	1	0	0	178	36-45	104
03:45 PM	0	0	0	3	7	44	49	25	13	4	1	1	0	0	147	36-45	93
04:00 PM	4	0	2	5	15	33	52	30	**26**	4	0	1	0	0	172	36-45	85
04:15 PM	3	2	0	2	16	46	50	32	10	1	0	0	0	0	162	36-45	96
04:30 PM	2	0	7	7	28	41	34	14	2	1	1	0	0	0	137	36-45	75
04:45 PM	**10**	**4**	**8**	**20**	41	73	52	16	7	4	1	0	0	0	236	36-45	125
05:00 PM	4	0	4	16	**75**	**97**	53	20	5	4	0	0	0	0	**278**	31-40	172
05:15 PM	3	1	2	10	39	66	48	29	10	4	0	1	1	0	214	36-45	114
05:30 PM	3	2	2	14	47	84	53	30	6	4	2	0	0	0	247	36-45	137
05:45 PM	3	0	0	11	46	67	44	20	8	2	0	0	0	0	201	31-40	113
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

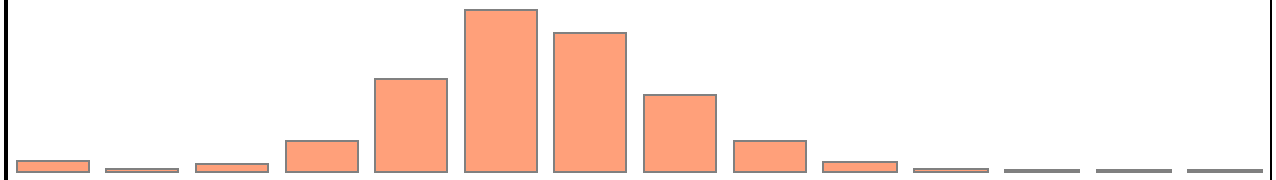
Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	4	0	3	16	41	72	33	19	6	1	1	1	0	0	197	31-40	113
06:15 PM	2	1	2	11	36	41	32	9	3	2	1	0	0	0	140	31-40	77
06:30 PM	1	0	3	11	30	30	24	9	3	1	0	0	0	0	112	31-40	60
06:45 PM	1	0	0	9	14	26	26	5	1	0	2	1	0	0	85	36-45	52
07:00 PM	0	0	0	9	24	31	15	3	3	0	0	0	0	0	85	31-40	55
07:15 PM	0	0	1	5	16	21	20	6	1	0	0	0	0	0	70	36-45	41
07:30 PM	0	0	3	4	26	26	17	4	3	3	0	1	0	0	87	31-40	52
07:45 PM	0	0	3	2	12	30	18	5	1	1	0	0	0	0	72	36-45	48
08:00 PM	2	0	2	5	13	21	12	8	5	0	0	0	0	0	68	31-40	34
08:15 PM	0	0	3	3	11	14	13	8	3	4	1	0	0	0	60	36-45	27
08:30 PM	1	0	1	3	13	20	14	9	1	1	1	0	0	1	65	36-45	34
08:45 PM	1	0	2	4	13	22	13	9	2	0	1	0	0	0	67	34-43	35
09:00 PM	0	0	2	7	6	24	6	5	1	3	2	0	0	0	56	31-40	30
09:15 PM	2	0	0	2	15	14	11	4	4	0	1	0	0	0	53	31-40	29
09:30 PM	1	0	1	9	12	11	11	3	1	2	2	0	0	0	53	31-40	23
09:45 PM	0	1	0	1	11	15	12	5	1	0	0	0	0	0	46	36-45	27
10:00 PM	1	0	0	2	13	24	12	8	3	2	0	1	0	0	66	31-40	37
10:15 PM	1	1	0	6	7	22	11	7	3	1	0	0	0	0	59	36-45	33
10:30 PM	3	1	1	2	8	9	12	4	0	2	0	0	0	1	43	36-45	21
10:45 PM	1	1	0	1	9	8	7	4	0	1	0	0	0	0	32	31-40	17
11:00 PM	1	0	1	6	6	11	7	7	0	0	0	0	0	0	39	36-45	18
11:15 PM	1	1	1	2	4	11	8	2	2	1	1	0	0	0	34	36-45	19
11:30 PM	0	0	0	2	8	10	8	2	2	0	0	1	0	0	33	33-42	18
11:45 PM	0	0	1	3	3	6	2	1	1	0	0	0	0	0	17	31-40	9
Day Total	192	37	134	563	1712	2984	2587	1416	538	178	49	17	3	6	10416	36-45	5571
Percent	1.8%	0.4%	1.3%	5.4%	16.4%	28.6%	24.8%	13.6%	5.2%	1.7%	0.5%	0.2%	0%	0.1%			
AM Peak	6:30 AM	9:00 AM	10:45 AM	8:30 AM	7:15 AM	11:15 AM	6:45 AM	6:30 AM	7:45 AM	7:45 AM	8:00 AM	10:00 AM	12:00 AM	12:30 AM	7:45 AM		
15-min Vol	7	4	6	20	40	68	56	46	19	7	3	2	0	1	197		
PM Peak	4:45 PM	4:45 PM	4:45 PM	4:45 PM	5:00 PM	5:00 PM	2:00 PM	2:00 PM	4:00 PM	1:45 PM	12:15 PM	12:30 PM	2:45 PM	8:30 PM	5:00 PM		
15-min Vol	10	4	8	20	75	97	65	37	26	8	2	2	1	1	278		



Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	4	2	6	2	1	1	2	0	0	0	0	18	33-42	8
12:15 AM	0	0	1	1	1	3	5	5	2	1	0	**1**	0	0	20	41-50	10
12:30 AM	0	0	0	3	6	1	5	2	3	0	0	0	0	0	20	26-35	9
12:45 AM	1	0	0	2	4	4	3	1	2	1	0	0	0	0	18	31-40	8
01:00 AM	1	1	0	0	2	5	3	1	0	0	0	0	0	0	13	36-45	8
01:15 AM	0	0	1	1	3	2	5	3	1	0	0	0	0	0	16	41-50	8
01:30 AM	0	0	0	1	5	5	1	3	1	0	0	0	0	0	16	31-40	10
01:45 AM	0	0	0	0	1	4	0	1	1	0	0	0	0	0	7	31-40	5
02:00 AM	0	0	0	0	4	1	0	2	2	0	0	0	0	0	9	31-40	5
02:15 AM	0	1	1	2	0	5	2	0	1	0	0	0	0	0	12	36-45	7
02:30 AM	0	0	0	2	2	2	1	1	0	0	0	0	0	0	8	26-35	4
02:45 AM	0	1	1	1	2	3	3	1	0	0	0	0	0	0	12	36-45	6
03:00 AM	0	0	1	0	1	2	2	1	1	0	0	0	0	0	8	36-45	4
03:15 AM	0	0	0	2	1	3	9	2	1	0	0	0	0	0	18	36-45	12
03:30 AM	0	0	0	0	5	10	6	0	1	0	0	0	0	0	22	36-45	16
03:45 AM	0	0	1	1	2	1	6	3	5	0	0	0	0	0	19	41-50	9
04:00 AM	0	0	0	1	4	2	6	1	2	1	0	0	0	0	17	36-45	8
04:15 AM	1	1	1	2	10	6	7	3	0	1	0	0	0	0	32	31-40	16
04:30 AM	1	0	1	3	6	13	12	7	3	2	1	0	0	0	49	36-45	25
04:45 AM	0	0	0	5	9	12	5	4	2	0	0	0	0	0	37	31-40	21
05:00 AM	2	0	0	6	16	14	12	7	2	1	0	0	0	0	60	31-40	30
05:15 AM	4	0	2	5	12	34	23	16	2	3	1	0	**1**	**1**	104	36-45	57
05:30 AM	0	0	2	5	11	28	31	26	11	0	1	0	0	0	115	36-45	59
05:45 AM	0	0	3	4	18	32	32	17	11	2	**3**	0	0	0	122	36-45	64
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	1	0	0	3	16	21	43	23	3	2	1	0	0	0	113	41-50	66
06:15 AM	1	0	0	6	19	46	31	22	11	1	1	0	0	0	138	36-45	77
06:30 AM	4	0	1	3	23	43	53	31	10	2	1	0	0	0	171	36-45	96
06:45 AM	1	0	2	8	22	42	**56**	18	**13**	3	0	0	0	0	165	36-45	98
07:00 AM	4	0	1	8	19	48	33	19	5	3	0	0	1	0	141	36-45	81
07:15 AM	3	1	1	8	27	47	36	32	8	3	0	0	1	0	167	36-45	83
07:30 AM	3	0	3	9	21	39	44	**38**	13	5	1	0	0	0	176	36-45	83
07:45 AM	**10**	0	3	4	34	48	40	27	13	4	0	0	0	0	183	36-45	88
08:00 AM	4	0	0	6	19	44	38	22	6	**9**	1	1	1	0	151	36-45	82
08:15 AM	0	0	2	8	32	45	43	23	10	6	2	0	0	0	171	36-45	88
08:30 AM	4	0	6	**17**	23	**56**	43	26	1	4	2	0	1	1	**184**	36-45	99
08:45 AM	7	1	0	5	34	45	45	24	7	1	0	0	0	1	170	36-45	90
09:00 AM	8	2	6	13	28	32	34	24	9	0	0	0	0	0	156	36-45	66
09:15 AM	2	0	6	11	23	53	16	18	7	2	0	0	0	0	138	31-40	76
09:30 AM	2	1	3	14	25	41	19	14	6	1	0	0	0	0	126	31-40	66
09:45 AM	0	**3**	5	13	22	35	27	11	5	1	0	0	0	0	122	36-45	62
10:00 AM	0	0	5	10	**41**	37	26	18	4	3	1	0	0	0	145	31-40	78
10:15 AM	4	0	1	7	25	40	27	14	2	0	1	0	0	0	121	36-45	67
10:30 AM	0	0	4	15	34	34	17	14	6	2	0	0	0	0	126	31-40	68
10:45 AM	9	1	**8**	12	39	43	25	12	3	0	0	0	0	0	152	31-40	82
11:00 AM	1	0	2	13	26	42	33	11	0	5	0	0	0	0	133	36-45	75
11:15 AM	5	1	3	9	34	46	20	14	7	2	0	0	0	0	141	31-40	80
11:30 AM	3	1	2	6	20	39	31	9	2	3	0	0	0	0	116	36-45	70
11:45 AM	5	1	4	10	16	40	16	11	3	2	1	0	0	0	109	35-44	56
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	43	0	1	9	28	44	24	8	2	0	0	0	0	0	159	31-40	72
12:15 PM	72	0	2	6	16	31	8	2	1	0	0	0	0	0	138	1-10	48
12:30 PM	**79**	0	1	6	10	24	14	4	1	0	0	0	0	0	139	1-10	53
12:45 PM	8	0	3	12	34	37	19	22	3	0	0	0	0	0	138	31-40	71
01:00 PM	8	3	0	10	27	46	37	22	6	2	0	0	0	0	161	36-45	83
01:15 PM	0	1	3	13	30	47	32	12	7	1	**2**	0	0	0	148	36-45	79
01:30 PM	6	0	0	11	39	49	22	15	3	0	1	0	0	0	146	31-40	88
01:45 PM	6	0	7	12	35	26	33	11	6	0	0	0	0	0	136	31-40	61
02:00 PM	2	0	1	9	44	31	40	18	**8**	0	0	0	0	0	153	31-40	75
02:15 PM	5	1	4	15	40	61	53	15	3	1	1	0	0	0	199	36-45	114
02:30 PM	4	3	0	17	47	55	39	30	8	**3**	0	0	0	0	206	31-40	102
02:45 PM	6	3	7	13	44	71	41	17	1	2	0	**1**	0	0	206	31-40	115
03:00 PM	6	2	**13**	**23**	27	59	54	15	5	3	0	0	0	0	207	36-45	113
03:15 PM	3	1	3	17	41	73	40	23	1	1	0	0	0	0	203	31-40	114
03:30 PM	12	3	5	18	47	**114**	**71**	19	2	2	0	0	0	0	**293**	36-45	185
03:45 PM	4	0	1	17	54	56	49	23	6	0	0	0	0	0	210	31-40	110
04:00 PM	6	1	3	15	41	75	57	21	8	0	1	0	0	0	228	36-45	132
04:15 PM	3	3	2	20	35	80	57	**32**	4	2	0	0	0	0	238	36-45	137
04:30 PM	8	2	2	17	54	89	53	25	4	2	0	0	0	0	256	31-40	143
04:45 PM	1	1	1	12	44	78	59	14	6	1	0	0	0	0	217	36-45	137
05:00 PM	5	0	7	12	**65**	80	42	16	3	0	0	0	0	0	230	31-40	145
05:15 PM	8	**4**	6	16	60	76	54	13	1	2	0	0	0	0	240	31-40	136
05:30 PM	1	0	1	9	46	69	55	19	1	2	0	1	0	0	204	36-45	124
05:45 PM	2	0	1	10	46	66	34	11	3	0	0	0	0	0	173	31-40	112
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

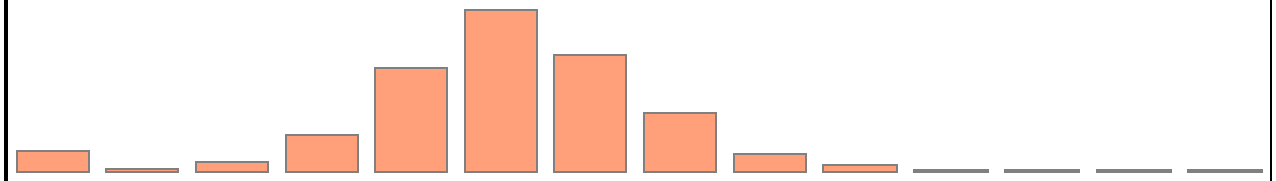
Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	4	2	3	15	38	62	32	7	2	1	0	0	0	0	166	31-40	100
06:15 PM	1	0	1	7	13	38	24	11	0	0	0	0	0	0	95	36-45	62
06:30 PM	1	0	1	13	24	46	28	7	3	1	0	0	0	0	124	36-45	74
06:45 PM	2	4	0	12	20	30	12	8	2	0	1	0	0	0	91	31-40	50
07:00 PM	1	1	0	8	16	31	21	12	1	1	0	0	0	0	92	36-45	52
07:15 PM	1	0	1	7	27	28	9	11	2	0	0	0	0	0	86	31-40	55
07:30 PM	0	0	0	6	17	20	15	9	2	2	0	0	0	0	71	31-40	37
07:45 PM	0	0	1	3	20	16	12	10	1	0	2	0	0	0	65	31-40	36
08:00 PM	0	1	2	5	35	11	13	7	0	0	0	0	0	0	74	31-40	46
08:15 PM	1	1	1	8	7	17	12	4	0	1	0	0	0	0	52	36-45	29
08:30 PM	0	0	2	5	12	21	8	5	3	0	0	0	0	0	56	31-40	33
08:45 PM	1	0	1	7	8	16	7	4	2	0	0	0	0	0	46	31-40	24
09:00 PM	2	0	0	2	2	23	9	6	1	1	0	0	0	0	46	36-45	32
09:15 PM	1	2	0	2	10	13	16	11	2	0	0	0	0	0	57	36-45	29
09:30 PM	0	0	1	2	8	23	14	7	2	2	0	0	0	0	59	36-45	37
09:45 PM	3	1	2	3	17	18	28	4	4	1	1	0	0	0	82	36-45	46
10:00 PM	2	1	0	5	23	30	16	14	2	2	0	1	0	0	96	31-40	53
10:15 PM	0	0	2	2	9	41	33	7	1	0	0	0	0	0	95	36-45	74
10:30 PM	0	0	1	3	8	14	10	6	3	0	0	0	0	0	45	36-45	24
10:45 PM	0	0	3	0	12	8	7	8	2	0	0	0	0	0	40	31-40	20
11:00 PM	0	0	0	3	10	11	12	4	1	2	1	0	0	0	44	36-45	23
11:15 PM	0	0	0	1	6	12	3	4	0	0	0	0	0	0	26	31-40	18
11:30 PM	1	0	3	6	3	9	3	3	2	0	0	0	0	0	30	31-40	12
11:45 PM	1	0	3	2	7	7	7	5	1	0	0	0	0	0	33	31-40	14
Day Total	411	57	185	715	2055	3186	2315	1164	341	116	28	5	5	3	10586	36-45	5501
Percent	3.9%	0.5%	1.7%	6.8%	19.4%	30.1%	21.9%	11%	3.2%	1.1%	0.3%	0%	0%	0%			
AM Peak	7:45 AM	9:45 AM	10:45 AM	8:30 AM	10:00 AM	8:30 AM	6:45 AM	7:30 AM	6:45 AM	8:00 AM	5:45 AM	12:15 AM	5:15 AM	5:15 AM	8:30 AM		
15-min Vol	10	3	8	17	41	56	56	38	13	9	3	1	1	1	184		
PM Peak	12:30 PM	5:15 PM	3:00 PM	3:00 PM	5:00 PM	3:30 PM	3:30 PM	4:15 PM	2:00 PM	2:30 PM	1:15 PM	2:45 PM	12:00 PM	12:00 PM	3:30 PM		
15-min Vol	79	4	13	23	65	114	71	32	8	3	2	1	0	0	293		



Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

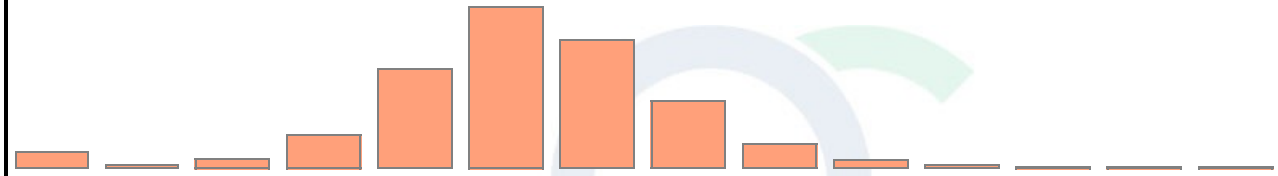
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	603	94	319	1278	3767	6170	4902	2580	879	294	77	22	8	9	21002	36-45	11072
Percent	2.9%	0.4%	1.5%	6.1%	17.9%	29.4%	23.3%	12.3%	4.2%	1.4%	0.4%	0.1%	0%	0%			
Cumulative Percent	2.9%	3.3%	4.8%	10.9%	28.9%	58.2%	81.6%	93.9%	98%	99.4%	99.8%	99.9%	100%	100%			

ADT
10501



85th Percentile: 46 MPH
Mean Speed(Average): 38 MPH
Median: 38 MPH
Mode: 38 MPH

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	14	4	0	0	0	0	0	1	0	0	0	0	0	19
12:15 AM	0	18	2	0	0	0	0	0	1	0	0	0	0	0	21
12:30 AM	0	13	2	0	1	0	0	0	0	0	0	0	0	0	16
12:45 AM	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13
01:00 AM	0	10	3	0	0	0	0	0	1	0	0	0	1	0	15
01:15 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
01:30 AM	0	9	0	0	0	1	0	0	1	0	0	0	0	0	11
01:45 AM	0	9	2	1	0	0	0	0	1	0	0	0	0	0	13
02:00 AM	0	6	1	1	0	0	0	0	1	0	0	0	0	0	9
02:15 AM	0	7	1	0	0	0	0	0	2	0	0	0	0	0	10
02:30 AM	0	4	1	0	1	0	0	0	3	0	0	0	0	0	9
02:45 AM	0	5	4	0	1	1	0	0	2	0	0	0	0	0	13
03:00 AM	0	6	1	0	1	2	0	0	0	0	0	0	0	0	10
03:15 AM	0	13	3	0	0	1	0	0	2	0	0	0	0	0	19
03:30 AM	0	10	3	1	0	2	0	0	5	0	0	0	0	1	22
03:45 AM	0	12	0	0	1	0	0	0	8	0	0	0	0	0	21
04:00 AM	0	11	5	0	0	2	1	0	6	0	0	0	0	0	25
04:15 AM	0	11	4	1	1	6	1	0	13	1	0	0	0	1	39
04:30 AM	0	16	8	2	0	2	0	0	8	0	0	0	0	0	36
04:45 AM	0	22	4	2	3	12	0	0	13	0	0	0	0	0	56
05:00 AM	0	23	8	1	6	1	0	1	12	0	0	0	0	0	52
05:15 AM	0	40	29	5	5	4	3	0	15	0	0	0	0	0	101
05:30 AM	0	49	29	3	9	4	3	1	22	0	0	0	0	0	120
05:45 AM	0	48	31	1	9	2	4	0	20	1	0	0	0	0	116
Day Total															
Percent															
ADT 10416															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	56	22	2	9	5	3	0	15	1	0	**1**	1	0	115
06:15 AM	0	64	31	2	9	5	3	0	16	**4**	0	0	**2**	3	139
06:30 AM	**2**	84	39	3	10	6	**5**	1	10	0	0	0	0	5	165
06:45 AM	1	95	26	4	18	3	3	2	20	0	0	0	1	2	175
07:00 AM	0	61	24	2	14	6	1	1	7	0	0	0	1	1	118
07:15 AM	2	98	28	**11**	11	13	3	1	18	2	0	0	1	3	191
07:30 AM	0	110	21	4	15	3	2	4	16	1	0	0	1	3	180
07:45 AM	1	**112**	**42**	7	10	5	4	**5**	10	0	0	0	0	1	**197**
08:00 AM	1	108	40	6	12	6	0	4	11	0	0	0	0	3	191
08:15 AM	1	95	35	1	12	5	1	1	10	0	0	0	0	1	162
08:30 AM	1	104	23	4	7	6	2	4	20	2	0	0	1	4	178
08:45 AM	1	96	22	10	4	8	2	3	14	1	0	0	0	3	164
09:00 AM	2	71	27	8	6	5	4	2	17	0	0	0	0	3	145
09:15 AM	1	50	25	4	11	5	1	3	14	0	0	0	2	1	117
09:30 AM	0	48	14	4	9	6	3	3	17	0	0	0	0	2	106
09:45 AM	1	69	21	7	8	5	3	2	**28**	0	0	0	0	3	147
10:00 AM	0	58	22	7	16	**16**	2	5	20	0	0	0	0	4	150
10:15 AM	2	82	26	6	12	8	1	0	18	1	0	0	0	5	161
10:30 AM	1	76	22	8	11	12	4	1	18	0	0	0	1	5	159
10:45 AM	1	78	27	4	16	11	3	1	15	1	0	0	1	**6**	164
11:00 AM	2	65	27	2	12	9	1	3	20	0	0	0	1	4	146
11:15 AM	0	69	23	6	**21**	6	3	3	23	0	0	0	2	5	161
11:30 AM	1	80	17	6	10	11	0	3	16	0	0	0	0	0	144
11:45 AM	1	80	32	8	9	10	4	2	18	0	0	0	1	3	168
Day Total															
Percent															
ADT 10416															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	1	98	34	**8**	**22**	10	3	**4**	15	1	0	0	0	8	204
12:15 PM	0	97	27	3	9	7	1	2	**21**	1	0	0	0	2	170
12:30 PM	**3**	86	22	4	7	9	**4**	4	20	1	0	0	0	0	160
12:45 PM	3	92	20	3	11	**12**	4	2	12	**3**	0	0	0	2	164
01:00 PM	1	82	27	7	9	10	3	1	14	0	0	0	0	4	158
01:15 PM	1	86	24	3	16	4	2	1	20	0	0	0	0	1	158
01:30 PM	0	122	24	5	12	6	4	4	18	1	0	0	0	4	200
01:45 PM	0	129	30	5	16	12	2	1	15	0	0	0	**2**	2	214
02:00 PM	2	116	37	3	14	10	0	4	17	0	0	0	0	4	207
02:15 PM	0	73	15	1	7	1	0	0	9	0	0	0	0	7	113
02:30 PM	0	81	27	4	7	1	1	4	4	0	0	0	0	0	129
02:45 PM	1	91	26	0	9	0	2	4	3	0	0	0	1	2	139
03:00 PM	1	95	29	1	6	2	0	2	4	0	0	0	0	3	143
03:15 PM	1	84	26	1	6	4	1	0	0	0	0	0	0	5	128
03:30 PM	2	125	34	1	3	2	2	1	3	0	0	0	0	5	178
03:45 PM	0	111	24	3	3	1	0	2	2	0	0	0	0	1	147
04:00 PM	0	125	27	3	11	1	0	0	1	0	0	0	0	4	172
04:15 PM	0	132	19	0	5	0	0	0	1	0	0	0	1	4	162
04:30 PM	0	98	28	1	2	0	0	0	6	0	0	0	0	2	137
04:45 PM	1	192	26	0	0	2	0	0	5	0	0	0	1	**9**	236
05:00 PM	3	**213**	**42**	1	5	3	0	0	5	0	**1**	0	1	4	**278**
05:15 PM	1	173	26	0	6	2	0	1	1	1	0	0	0	3	214
05:30 PM	1	205	27	1	5	0	0	2	2	0	0	0	0	4	247
05:45 PM	1	161	26	1	2	2	0	0	5	0	0	0	0	3	201
Day Total															
Percent															
ADT															
10416															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	3	155	25	2	4	3	1	0	2	0	0	0	0	2	197
06:15 PM	0	115	12	1	4	1	0	1	4	0	0	0	0	2	140
06:30 PM	0	99	10	0	0	0	0	1	1	0	0	0	0	1	112
06:45 PM	1	75	7	0	1	0	0	0	0	0	0	0	0	1	85
07:00 PM	0	69	13	0	1	0	0	0	2	0	0	0	0	0	85
07:15 PM	0	62	8	0	0	0	0	0	0	0	0	0	0	0	70
07:30 PM	0	72	11	1	1	0	0	1	1	0	0	0	0	0	87
07:45 PM	0	63	7	1	0	0	0	0	1	0	0	0	0	0	72
08:00 PM	0	56	6	1	2	0	0	0	1	0	0	0	0	2	68
08:15 PM	0	53	5	0	2	0	0	0	0	0	0	0	0	0	60
08:30 PM	0	56	9	0	0	0	0	0	0	0	0	0	0	0	65
08:45 PM	0	61	4	0	0	1	0	0	0	0	0	0	0	1	67
09:00 PM	0	51	3	0	0	0	0	0	2	0	0	0	0	0	56
09:15 PM	0	44	7	0	1	0	0	0	0	0	0	0	0	1	53
09:30 PM	0	48	5	0	0	0	0	0	0	0	0	0	0	0	53
09:45 PM	0	42	4	0	0	0	0	0	0	0	0	0	0	0	46
10:00 PM	2	59	3	0	0	0	0	1	0	0	0	0	0	1	66
10:15 PM	1	51	5	0	1	0	0	0	1	0	0	0	0	0	59
10:30 PM	0	39	2	0	0	0	0	0	0	0	0	0	0	2	43
10:45 PM	0	30	1	0	0	0	0	0	0	0	0	0	0	1	32
11:00 PM	0	32	5	0	1	0	0	0	0	0	0	0	0	1	39
11:15 PM	0	30	4	0	0	0	0	0	0	0	0	0	0	0	34
11:30 PM	0	27	3	1	1	0	0	1	0	0	0	0	0	0	33
11:45 PM	0	15	2	0	0	0	0	0	0	0	0	0	0	0	17
Day Total	52	6557	1590	210	522	321	100	100	746	23	1	1	23	170	10416
Percent	0.5%	63%	15.3%	2%	5%	3.1%	1%	1%	7.2%	0.2%	0%	0%	0.2%	1.6%	
ADT 10416															
AM Peak	6:30 AM	7:45 AM	7:45 AM	7:15 AM	11:15 AM	10:00 AM	6:30 AM	7:45 AM	9:45 AM	6:15 AM	12:00 AM	6:00 AM	6:15 AM	10:45 AM	7:45 AM
15-min Vol	2	112	42	11	21	16	5	5	28	4	0	1	2	6	197
PM Peak	12:30 PM	5:00 PM	5:00 PM	12:00 PM	12:00 PM	12:45 PM	12:30 PM	12:00 PM	12:15 PM	12:45 PM	5:00 PM	12:00 PM	1:45 PM	4:45 PM	5:00 PM
15-min Vol	3	213	42	8	22	12	4	4	21	3	1	0	2	9	278

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	15	2	0	1	0	0	0	0	0	0	0	0	0	18
12:15 AM	0	17	1	0	1	0	0	1	0	0	0	0	0	0	20
12:30 AM	0	18	1	0	0	0	0	0	1	0	0	0	0	0	20
12:45 AM	0	13	1	0	0	2	0	0	1	0	0	0	0	1	18
01:00 AM	0	9	2	0	0	0	0	0	1	0	0	0	0	1	13
01:15 AM	0	14	1	1	0	0	0	0	0	0	0	0	0	0	16
01:30 AM	0	12	3	0	0	0	0	0	1	0	0	0	0	0	16
01:45 AM	0	4	1	0	0	0	0	0	2	0	0	0	0	0	7
02:00 AM	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
02:15 AM	0	11	1	0	0	0	0	0	0	0	0	0	0	0	12
02:30 AM	0	7	0	0	0	0	0	0	1	0	0	0	0	0	8
02:45 AM	0	9	3	0	0	0	0	0	0	0	0	0	0	0	12
03:00 AM	0	6	0	0	0	1	0	0	1	0	0	0	0	0	8
03:15 AM	0	11	1	0	0	1	0	1	4	0	0	0	0	0	18
03:30 AM	1	7	6	1	1	3	0	0	3	0	0	0	0	0	22
03:45 AM	0	10	1	0	1	2	0	0	5	0	0	0	0	0	19
04:00 AM	0	9	5	0	0	1	0	0	2	0	0	0	0	0	17
04:15 AM	0	12	2	0	0	4	0	0	13	0	0	0	0	1	32
04:30 AM	0	16	9	5	3	3	0	0	12	0	0	0	0	1	49
04:45 AM	0	9	4	2	2	6	0	0	14	0	0	0	0	0	37
05:00 AM	0	19	6	0	6	9	2	0	16	0	0	0	0	2	60
05:15 AM	1	45	18	4	2	10	4	2	14	0	0	0	0	4	104
05:30 AM	0	54	28	3	6	4	3	1	16	0	0	0	0	0	115
05:45 AM	0	62	31	1	5	9	4	0	10	0	0	0	0	0	122
Day Total															
Percent															
ADT 10586															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	**3**	55	28	1	4	3	1	1	16	0	0	0	0	1	113
06:15 AM	0	74	32	1	11	5	3	0	11	0	0	0	0	1	138
06:30 AM	2	93	**39**	4	13	6	3	0	8	0	0	0	1	2	171
06:45 AM	1	87	32	4	12	9	2	0	13	**2**	0	0	0	3	165
07:00 AM	1	80	30	1	5	8	4	1	6	1	0	0	1	3	141
07:15 AM	3	88	30	8	6	8	1	2	**18**	0	0	0	1	2	167
07:30 AM	1	100	30	5	10	10	0	2	16	0	0	0	0	2	176
07:45 AM	2	91	35	**11**	8	8	1	**4**	12	1	0	0	0	**10**	183
08:00 AM	1	87	23	4	13	5	1	3	10	0	0	0	0	4	151
08:15 AM	0	**108**	28	5	9	7	1	1	11	1	0	0	0	0	171
08:30 AM	1	107	30	3	9	4	**7**	3	17	0	0	**1**	0	2	**184**
08:45 AM	2	88	19	10	17	7	1	4	13	1	0	0	0	8	170
09:00 AM	2	79	30	4	9	12	1	0	12	2	0	0	0	5	156
09:15 AM	0	69	32	4	8	5	1	2	14	0	0	0	1	2	138
09:30 AM	0	62	23	2	10	9	4	1	12	1	0	0	0	2	126
09:45 AM	0	56	19	5	12	7	2	4	15	2	0	0	0	0	122
10:00 AM	1	67	22	3	**22**	8	5	0	17	0	0	0	0	0	145
10:15 AM	1	47	20	10	11	6	2	4	15	1	0	0	0	4	121
10:30 AM	0	55	24	7	10	10	2	4	14	0	0	0	0	0	126
10:45 AM	1	68	28	4	16	9	0	2	16	0	0	0	1	7	152
11:00 AM	0	60	25	4	11	**15**	1	3	11	0	0	0	**2**	1	133
11:15 AM	0	71	23	5	12	10	1	1	11	0	0	0	2	5	141
11:30 AM	0	53	20	6	7	5	2	2	18	1	0	0	0	2	116
11:45 AM	1	53	15	6	8	5	3	2	11	0	0	0	0	5	109
Day Total															
Percent															
ADT															
10586															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	0	66	13	**6**	12	7	1	2	9	0	0	0	0	43	159
12:15 PM	0	39	12	1	4	4	0	0	6	0	0	0	0	72	138
12:30 PM	0	28	10	2	5	1	1	3	9	0	0	0	1	**79**	139
12:45 PM	0	75	23	1	6	6	1	4	12	1	0	**1**	1	7	138
01:00 PM	1	93	30	2	6	6	0	2	12	1	0	0	**2**	6	161
01:15 PM	1	92	21	6	7	7	1	1	12	0	0	0	0	0	148
01:30 PM	2	79	26	4	8	6	1	4	10	2	0	0	0	4	146
01:45 PM	1	61	27	6	16	6	0	3	9	0	0	0	2	5	136
02:00 PM	0	89	35	5	9	5	1	2	5	0	0	0	0	2	153
02:15 PM	0	110	34	2	**20**	**8**	1	**5**	**14**	0	0	0	0	5	199
02:30 PM	3	126	42	4	6	6	0	3	10	1	0	0	1	4	206
02:45 PM	1	131	38	5	15	4	0	2	5	0	0	0	1	4	206
03:00 PM	**5**	135	31	4	13	5	1	0	5	0	0	0	1	7	207
03:15 PM	1	140	39	3	12	0	1	0	3	1	0	0	0	3	203
03:30 PM	5	191	**59**	2	9	5	1	4	4	**3**	0	0	1	9	**293**
03:45 PM	0	159	35	0	6	0	0	1	5	0	0	0	0	4	210
04:00 PM	2	173	31	3	5	3	1	2	4	0	0	0	0	4	228
04:15 PM	2	182	33	0	10	3	0	0	5	0	0	0	0	3	238
04:30 PM	2	**202**	35	0	3	1	0	1	3	0	**1**	0	0	8	256
04:45 PM	1	181	23	0	5	0	0	0	6	0	0	0	0	1	217
05:00 PM	1	169	36	1	8	0	**2**	4	3	1	0	0	0	5	230
05:15 PM	3	186	31	2	7	0	0	2	1	0	1	0	1	6	240
05:30 PM	0	165	26	2	3	0	1	1	4	0	0	0	0	2	204
05:45 PM	0	141	23	0	1	1	1	0	4	0	0	0	1	1	173
Day Total															
Percent															
ADT															
10586															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	0	136	20	2	4	0	0	0	0	0	0	0	1	3	166
06:15 PM	0	85	6	0	2	0	0	0	1	0	0	0	0	1	95
06:30 PM	0	112	7	0	4	0	0	0	0	0	0	0	0	1	124
06:45 PM	1	72	14	0	0	0	0	2	0	0	0	0	0	2	91
07:00 PM	0	79	9	0	2	0	0	0	1	0	0	0	0	1	92
07:15 PM	0	77	5	1	1	0	0	1	0	0	0	0	0	1	86
07:30 PM	0	59	10	0	2	0	0	0	0	0	0	0	0	0	71
07:45 PM	0	58	3	0	2	0	0	1	1	0	0	0	0	0	65
08:00 PM	0	64	7	0	0	0	0	0	3	0	0	0	0	0	74
08:15 PM	0	42	9	0	0	0	0	0	0	0	0	0	0	1	52
08:30 PM	0	51	3	0	1	0	0	0	1	0	0	0	0	0	56
08:45 PM	0	38	5	0	1	0	0	0	1	0	0	0	0	1	46
09:00 PM	1	39	6	0	0	0	0	0	0	0	0	0	0	0	46
09:15 PM	2	43	8	0	2	0	0	0	1	0	0	0	0	1	57
09:30 PM	0	54	5	0	0	0	0	0	0	0	0	0	0	0	59
09:45 PM	0	66	8	0	3	0	0	0	2	0	0	0	0	3	82
10:00 PM	0	83	6	0	3	1	0	0	1	0	0	0	0	2	96
10:15 PM	1	84	7	0	0	0	0	2	1	0	0	0	0	0	95
10:30 PM	0	39	4	0	1	0	1	0	0	0	0	0	0	0	45
10:45 PM	0	35	3	0	1	1	0	0	0	0	0	0	0	0	40
11:00 PM	0	39	4	0	1	0	0	0	0	0	0	0	0	0	44
11:15 PM	0	23	2	0	0	0	0	1	0	0	0	0	0	0	26
11:30 PM	0	23	5	1	0	0	0	0	0	0	0	0	0	1	30
11:45 PM	0	30	1	0	1	0	0	0	0	0	0	0	0	1	33
Day Total	61	6639	1635	199	508	322	78	104	607	23	2	2	22	384	10586
Percent	0.6%	62.7%	15.4%	1.9%	4.8%	3%	0.7%	1%	5.7%	0.2%	0%	0%	0.2%	3.6%	
ADT 10586															
AM Peak	6:00 AM	8:15 AM	6:30 AM	7:45 AM	10:00 AM	11:00 AM	8:30 AM	7:45 AM	7:15 AM	6:45 AM	12:00 AM	8:30 AM	11:00 AM	7:45 AM	8:30 AM
15-min Vol	3	108	39	11	22	15	7	4	18	2	0	1	2	10	184
PM Peak	3:00 PM	4:30 PM	3:30 PM	12:00 PM	2:15 PM	2:15 PM	5:00 PM	2:15 PM	2:15 PM	3:30 PM	4:30 PM	12:45 PM	1:00 PM	12:30 PM	3:30 PM
15-min Vol	5	202	59	6	20	8	2	5	14	3	1	1	2	79	293

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
SPECIFIC LOCATION:
CITY/STATE: Chester, PA

QC JOB #: 15975346
DIRECTION: EB, WB
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	113	13196	3225	409	1030	643	178	204	1353	46	3	3	45	554	21002
Percent	0.5%	62.8%	15.4%	1.9%	4.9%	3.1%	0.8%	1%	6.4%	0.2%	0%	0%	0.2%	2.6%	
ADT 10501															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** EB, WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		19	18			19			19	
12:15 AM		21	20			21			21	
12:30 AM		16	20			18			18	
12:45 AM		13	18			16			16	
01:00 AM		15	13			14			14	
01:15 AM		9	16			13			13	
01:30 AM		11	16			14			14	
01:45 AM		13	7			10			10	
02:00 AM		9	9			9			9	
02:15 AM		10	12			11			11	
02:30 AM		9	8			9			9	
02:45 AM		13	12			13			13	
03:00 AM		10	8			9			9	
03:15 AM		19	18			19			19	
03:30 AM		22	22			22			22	
03:45 AM		21	19			20			20	
04:00 AM		25	17			21			21	
04:15 AM		39	32			36			36	
04:30 AM		36	49			43			43	
04:45 AM		56	37			47			47	
05:00 AM		52	60			56			56	
05:15 AM		101	104			103			103	
05:30 AM		120	115			118			118	
05:45 AM		116	122			119			119	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** EB, WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		115	113			114			114	
06:15 AM		139	138			139			139	
06:30 AM		165	171			168			168	
06:45 AM		175	165			170			170	
07:00 AM		118	141			130			130	
07:15 AM		191	167			179			179	
07:30 AM		180	176			178			178	
07:45 AM		**197**	183			**190**			**190**	
08:00 AM		191	151			171			171	
08:15 AM		162	171			167			167	
08:30 AM		178	**184**			181			181	
08:45 AM		164	170			167			167	
09:00 AM		145	156			151			151	
09:15 AM		117	138			128			128	
09:30 AM		106	126			116			116	
09:45 AM		147	122			135			135	
10:00 AM		150	145			148			148	
10:15 AM		161	121			141			141	
10:30 AM		159	126			143			143	
10:45 AM		164	152			158			158	
11:00 AM		146	133			140			140	
11:15 AM		161	141			151			151	
11:30 AM		144	116			130			130	
11:45 AM		168	109			139			139	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		204	159			182			182	
12:15 PM		170	138			154			154	
12:30 PM		160	139			150			150	
12:45 PM		164	138			151			151	
01:00 PM		158	161			160			160	
01:15 PM		158	148			153			153	
01:30 PM		200	146			173			173	
01:45 PM		214	136			175			175	
02:00 PM		207	153			180			180	
02:15 PM		113	199			156			156	
02:30 PM		129	206			168			168	
02:45 PM		139	206			173			173	
03:00 PM		143	207			175			175	
03:15 PM		128	203			166			166	
03:30 PM		178	**293**			236			236	
03:45 PM		147	210			179			179	
04:00 PM		172	228			200			200	
04:15 PM		162	238			200			200	
04:30 PM		137	256			197			197	
04:45 PM		236	217			227			227	
05:00 PM		**278**	230			**254**			**254**	
05:15 PM		214	240			227			227	
05:30 PM		247	204			226			226	
05:45 PM		201	173			187			187	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		197	166			182			182	
06:15 PM		140	95			118			118	
06:30 PM		112	124			118			118	
06:45 PM		85	91			88			88	
07:00 PM		85	92			89			89	
07:15 PM		70	86			78			78	
07:30 PM		87	71			79			79	
07:45 PM		72	65			69			69	
08:00 PM		68	74			71			71	
08:15 PM		60	52			56			56	
08:30 PM		65	56			61			61	
08:45 PM		67	46			57			57	
09:00 PM		56	46			51			51	
09:15 PM		53	57			55			55	
09:30 PM		53	59			56			56	
09:45 PM		46	82			64			64	
10:00 PM		66	96			81			81	
10:15 PM		59	95			77			77	
10:30 PM		43	45			44			44	
10:45 PM		32	40			36			36	
11:00 PM		39	44			42			42	
11:15 PM		34	26			30			30	
11:30 PM		33	30			32			32	
11:45 PM		17	33			25			25	
Day Total		10416	10586			10522			10522	
% Weekday Average		99%	100.6%							
% Week Average		99%	100.6%			100%				
AM Peak 15-min Vol		7:45 AM 197	8:30 AM 184			7:45 AM 190			7:45 AM 190	
PM Peak 15-min Vol		5:00 PM 278	3:30 PM 293			5:00 PM 254			5:00 PM 254	

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	2	1	1	3	1	1	0	0	0	0	9	43-52	4
12:15 AM	0	0	2	2	3	3	1	3	0	0	0	0	0	0	14	31-40	6
12:30 AM	0	0	0	0	0	4	4	1	1	0	0	0	0	**1**	11	36-45	8
12:45 AM	0	0	0	1	2	1	3	0	0	0	0	0	0	0	7	36-45	4
01:00 AM	0	0	0	0	2	3	1	2	0	0	0	0	0	0	8	31-40	5
01:15 AM	0	0	0	1	0	2	1	1	0	0	0	0	0	0	5	36-45	3
01:30 AM	0	1	1	0	0	0	2	0	1	0	0	0	0	0	5	36-45	2
01:45 AM	0	0	1	1	2	2	2	2	1	0	0	0	0	0	11	31-40	4
02:00 AM	0	0	0	1	3	2	1	1	0	0	0	0	0	0	8	31-40	5
02:15 AM	0	0	0	0	0	3	3	0	1	0	0	0	0	0	7	36-45	6
02:30 AM	0	0	0	0	0	4	0	1	0	0	0	0	0	0	5	31-40	4
02:45 AM	0	0	0	0	2	1	1	0	1	0	0	0	0	0	5	31-40	3
03:00 AM	0	0	0	2	0	1	1	4	1	0	0	0	0	0	9	45-54	5
03:15 AM	0	0	0	1	4	3	4	1	0	0	0	0	0	0	13	35-44	7
03:30 AM	0	0	1	0	2	6	4	2	1	0	0	0	0	0	16	36-45	10
03:45 AM	0	0	0	0	4	1	1	3	4	0	0	0	0	0	13	46-55	7
04:00 AM	0	0	0	1	3	7	4	0	0	0	0	0	0	0	15	36-45	11
04:15 AM	0	0	0	0	6	6	7	3	1	0	0	0	0	0	23	36-45	13
04:30 AM	0	0	1	1	6	4	3	3	3	0	0	0	0	0	21	31-40	10
04:45 AM	0	0	0	5	4	14	8	1	0	0	0	0	0	0	32	36-45	22
05:00 AM	0	0	1	1	3	10	7	4	0	1	0	0	0	0	27	36-45	17
05:15 AM	0	0	3	5	7	19	6	3	2	2	0	0	0	0	47	31-40	26
05:30 AM	0	0	0	2	9	24	14	7	5	2	0	0	0	0	63	36-45	38
05:45 AM	0	0	0	1	15	14	16	15	8	3	1	0	0	0	73	41-50	31
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	0	0	0	4	9	29	17	9	8	0	1	0	0	0	77	36-45	46
06:15 AM	1	0	1	3	13	31	26	19	1	2	1	1	0	0	99	36-45	57
06:30 AM	4	0	2	2	15	16	23	**23**	3	1	0	0	0	0	89	41-50	46
06:45 AM	1	0	0	6	**20**	18	**31**	13	**10**	1	1	0	0	0	**101**	36-45	49
07:00 AM	1	0	0	3	11	19	12	7	1	1	0	0	0	0	55	36-45	31
07:15 AM	0	1	3	2	17	24	23	3	2	1	0	0	0	0	76	36-45	47
07:30 AM	0	0	1	2	9	25	18	9	4	3	1	0	0	0	72	36-45	43
07:45 AM	0	0	0	1	13	23	27	9	7	**6**	0	0	0	0	86	36-45	50
08:00 AM	2	0	1	1	19	26	19	16	9	1	2	0	0	0	96	31-40	45
08:15 AM	1	1	2	5	16	30	20	10	4	1	0	0	0	0	90	36-45	50
08:30 AM	2	0	0	**14**	10	34	21	10	4	4	0	0	0	0	99	36-45	55
08:45 AM	1	0	1	10	20	21	21	13	3	2	0	0	0	0	92	36-45	42
09:00 AM	4	1	2	4	10	24	15	7	4	2	0	0	0	0	73	36-45	39
09:15 AM	2	0	0	3	7	17	12	7	5	0	0	1	0	0	54	36-45	29
09:30 AM	1	0	2	6	10	17	15	8	2	2	0	0	0	0	63	36-45	32
09:45 AM	1	0	**4**	9	18	18	16	7	4	1	0	0	0	0	78	31-40	36
10:00 AM	2	0	1	4	12	28	22	11	3	1	0	**2**	0	0	86	36-45	50
10:15 AM	**6**	**2**	0	2	14	30	28	12	4	1	1	0	0	0	100	36-45	58
10:30 AM	3	0	1	7	9	22	28	15	4	1	1	0	0	0	91	36-45	50
10:45 AM	0	1	2	3	20	**37**	22	7	5	1	0	0	0	0	98	36-45	59
11:00 AM	6	1	1	3	14	20	16	8	3	2	0	0	0	0	74	36-45	36
11:15 AM	3	0	1	1	15	27	18	9	5	1	0	0	0	0	80	36-45	45
11:30 AM	0	0	0	2	15	24	14	13	5	0	**3**	0	0	1	77	31-40	39
11:45 AM	3	1	0	4	18	34	23	10	4	1	0	0	0	0	98	36-45	57
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	3	0	2	**8**	19	40	38	11	6	0	0	0	0	0	127	36-45	78
12:15 PM	1	1	0	0	13	37	32	13	3	1	0	0	0	0	101	36-45	69
12:30 PM	0	0	0	4	13	31	19	8	5	1	0	**2**	0	0	83	36-45	50
12:45 PM	2	0	3	5	13	24	26	19	9	1	0	0	0	0	102	36-45	50
01:00 PM	2	1	2	5	13	29	16	19	2	4	1	0	0	0	94	36-45	45
01:15 PM	1	0	1	0	12	22	25	23	8	1	1	0	0	0	94	41-50	48
01:30 PM	3	0	2	5	13	33	36	16	5	3	0	0	0	0	116	36-45	69
01:45 PM	0	0	0	3	8	36	37	19	10	**7**	0	0	0	0	120	36-45	73
02:00 PM	4	0	0	4	15	27	36	22	8	2	1	0	0	0	119	36-45	63
02:15 PM	**7**	1	0	4	13	22	32	20	9	5	0	0	0	0	113	36-45	54
02:30 PM	0	0	0	2	15	28	37	27	14	4	**2**	0	0	0	129	36-45	65
02:45 PM	2	0	2	5	18	38	38	27	6	2	0	0	**1**	0	139	36-45	76
03:00 PM	5	0	0	8	10	36	35	35	6	7	0	0	1	0	143	36-45	71
03:15 PM	4	0	2	4	9	37	34	26	10	1	1	0	0	0	128	36-45	71
03:30 PM	5	1	0	4	12	44	**60**	**37**	11	3	0	1	0	0	**178**	36-45	104
03:45 PM	0	0	0	3	7	44	49	25	13	4	1	1	0	0	147	36-45	93
04:00 PM	4	0	2	5	15	33	52	30	**26**	4	0	1	0	0	172	36-45	85
04:15 PM	3	**2**	0	2	16	46	50	32	10	1	0	0	0	0	162	36-45	96
04:30 PM	2	0	**7**	7	**28**	41	34	14	2	1	1	0	0	0	137	36-45	75
04:45 PM	3	0	1	7	15	50	40	16	5	4	1	0	0	0	142	36-45	90
05:00 PM	1	0	1	5	19	**58**	50	15	5	3	0	0	0	0	157	36-45	108
05:15 PM	1	0	1	2	10	27	32	26	10	4	0	1	1	0	115	36-45	59
05:30 PM	0	1	1	3	25	45	43	28	5	4	2	0	0	0	157	36-45	88
05:45 PM	1	0	0	4	19	38	27	17	7	2	0	0	0	0	115	36-45	65
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

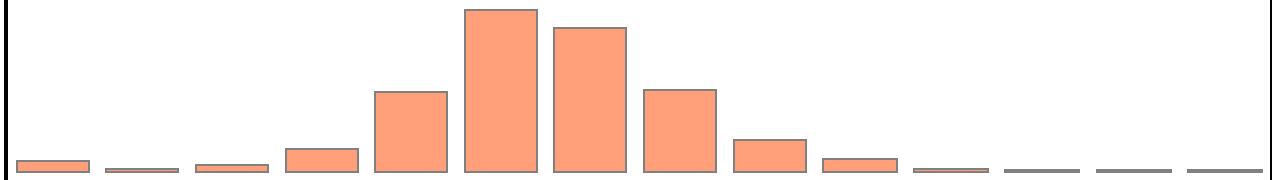
Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	4	0	2	5	21	37	24	16	4	1	1	1	0	0	116	36-45	61
06:15 PM	0	0	0	3	16	24	22	7	2	2	1	0	0	0	77	36-45	46
06:30 PM	0	0	0	4	10	15	17	7	3	1	0	0	0	0	57	36-45	32
06:45 PM	1	0	0	2	5	12	19	4	1	0	2	1	0	0	47	36-45	31
07:00 PM	0	0	0	2	8	19	11	2	3	0	0	0	0	0	45	36-45	30
07:15 PM	0	0	1	2	10	11	13	6	0	0	0	0	0	0	43	36-45	24
07:30 PM	0	0	0	0	18	14	8	3	3	2	0	1	0	0	49	31-40	32
07:45 PM	0	0	1	0	4	20	13	4	0	1	0	0	0	0	43	36-45	33
08:00 PM	1	0	1	2	8	13	6	6	5	0	0	0	0	0	42	31-40	21
08:15 PM	0	0	2	2	8	7	10	5	1	3	1	0	0	0	39	36-45	17
08:30 PM	0	0	0	0	6	14	5	9	1	1	1	0	0	1	38	31-40	20
08:45 PM	0	0	0	1	7	12	8	9	2	0	1	0	0	0	40	36-45	20
09:00 PM	0	0	1	2	3	13	3	4	1	3	2	0	0	0	32	31-40	16
09:15 PM	2	0	0	0	6	7	9	0	4	0	1	0	0	0	29	36-45	16
09:30 PM	1	0	1	3	6	6	8	2	0	2	2	0	0	0	31	36-45	14
09:45 PM	0	0	0	1	7	9	10	4	1	0	0	0	0	0	32	36-45	19
10:00 PM	1	0	0	0	5	13	6	5	1	0	0	1	0	0	32	36-45	19
10:15 PM	1	1	0	2	4	9	8	4	1	0	0	0	0	0	30	36-45	17
10:30 PM	3	1	0	0	4	4	10	3	0	1	0	0	0	1	27	36-45	14
10:45 PM	1	1	0	0	4	6	5	2	0	1	0	0	0	0	20	36-45	11
11:00 PM	0	0	0	2	2	8	6	5	0	0	0	0	0	0	23	36-45	14
11:15 PM	1	1	1	2	1	9	5	1	1	1	1	0	0	0	24	36-45	14
11:30 PM	0	0	0	1	5	7	6	2	1	0	0	1	0	0	23	36-45	13
11:45 PM	0	0	0	1	1	4	2	0	1	0	0	0	0	0	9	36-45	6
Day Total	114	20	72	262	932	1888	1694	950	366	133	36	15	3	4	6489	36-45	3582
Percent	1.8%	0.3%	1.1%	4%	14.4%	29.1%	26.1%	14.6%	5.6%	2%	0.6%	0.2%	0%	0.1%			
AM Peak	10:15 AM	10:15 AM	9:45 AM	8:30 AM	6:45 AM	10:45 AM	6:45 AM	6:30 AM	6:45 AM	7:45 AM	11:30 AM	10:00 AM	12:00 AM	12:30 AM	6:45 AM		
15-min Vol	6	2	4	14	20	37	31	23	10	6	3	2	0	1	101		
PM Peak	2:15 PM	4:15 PM	4:30 PM	12:00 PM	4:30 PM	5:00 PM	3:30 PM	3:30 PM	4:00 PM	1:45 PM	2:30 PM	12:30 PM	2:45 PM	8:30 PM	3:30 PM		
15-min Vol	7	2	7	8	28	58	60	37	26	7	2	2	1	1	178		



Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	3	1	4	2	1	0	0	0	0	0	0	11	36-45	6
12:15 AM	0	0	1	1	0	1	2	4	0	1	0	0	0	0	10	41-50	6
12:30 AM	0	0	0	0	4	0	3	1	1	0	0	0	0	0	9	41-50	4
12:45 AM	0	0	0	1	1	3	3	1	0	0	0	0	0	0	9	36-45	6
01:00 AM	0	0	0	0	1	1	3	1	0	0	0	0	0	0	6	38-47	4
01:15 AM	0	0	0	0	0	1	4	3	1	0	0	0	0	0	9	41-50	7
01:30 AM	0	0	0	0	3	3	1	0	0	0	0	0	0	0	7	31-40	6
01:45 AM	0	0	0	0	0	4	0	0	1	0	0	0	0	0	5	31-40	4
02:00 AM	0	0	0	0	2	0	0	1	2	0	0	0	0	0	5	46-55	3
02:15 AM	0	1	0	2	0	4	2	0	1	0	0	0	0	0	10	36-45	6
02:30 AM	0	0	0	2	1	1	1	1	0	0	0	0	0	0	6	26-35	3
02:45 AM	0	1	0	1	1	1	1	1	0	0	0	0	0	0	6	26-35	2
03:00 AM	0	0	1	0	1	1	2	0	1	0	0	0	0	0	6	36-45	3
03:15 AM	0	0	0	2	0	2	7	1	1	0	0	0	0	0	13	36-45	9
03:30 AM	0	0	0	0	1	7	4	0	1	0	0	0	0	0	13	36-45	11
03:45 AM	0	0	1	1	2	1	2	1	5	0	0	0	0	0	13	46-55	6
04:00 AM	0	0	0	0	3	0	3	1	2	0	0	0	0	0	9	41-50	4
04:15 AM	0	0	1	0	4	4	3	1	0	1	0	0	0	0	14	31-40	8
04:30 AM	0	0	1	2	6	9	6	3	2	1	1	0	0	0	31	31-40	15
04:45 AM	0	0	0	5	4	6	1	2	0	0	0	0	0	0	18	31-40	10
05:00 AM	1	0	0	4	9	8	7	3	2	1	0	0	0	0	35	31-40	17
05:15 AM	2	0	0	3	8	10	9	7	1	1	1	0	**1**	**1**	44	36-45	19
05:30 AM	0	0	0	4	2	16	19	14	4	0	0	0	0	0	59	36-45	35
05:45 AM	0	0	0	1	10	21	18	13	9	1	**3**	0	0	0	76	36-45	39
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	1	0	0	2	9	13	29	14	3	2	1	0	0	0	74	41-50	43
06:15 AM	1	0	0	1	13	27	24	15	**10**	1	1	0	0	0	93	36-45	51
06:30 AM	1	0	1	3	11	23	31	**18**	6	1	1	0	0	0	96	36-45	54
06:45 AM	1	0	1	6	11	27	**32**	13	9	3	0	0	0	0	103	36-45	59
07:00 AM	0	0	0	3	6	16	16	12	1	2	0	0	1	0	57	36-45	32
07:15 AM	0	0	1	3	19	20	18	14	3	1	0	0	1	0	80	31-40	39
07:30 AM	1	0	0	5	13	19	22	11	7	2	1	0	0	0	81	36-45	41
07:45 AM	3	0	3	1	**21**	18	19	12	5	2	0	0	0	0	84	31-40	39
08:00 AM	2	0	0	5	11	21	16	8	5	**6**	0	0	1	0	75	36-45	37
08:15 AM	0	0	1	3	13	28	22	12	6	4	0	0	0	0	89	36-45	50
08:30 AM	1	0	**4**	7	12	**35**	23	17	1	4	1	0	0	1	**106**	36-45	58
08:45 AM	2	1	0	1	21	26	28	15	3	0	0	0	0	0	97	36-45	54
09:00 AM	**6**	**2**	3	7	19	20	19	8	5	0	0	0	0	0	89	31-40	39
09:15 AM	1	0	2	1	8	21	11	10	4	2	0	0	0	0	60	36-45	32
09:30 AM	1	0	1	7	9	22	12	7	5	0	0	0	0	0	64	36-45	34
09:45 AM	0	1	2	6	12	21	18	7	2	0	0	0	0	0	69	36-45	39
10:00 AM	0	0	3	4	17	22	16	11	3	3	1	0	0	0	80	31-40	39
10:15 AM	1	0	0	4	13	23	10	8	2	0	0	0	0	0	61	31-40	36
10:30 AM	0	0	2	6	17	17	10	4	3	0	0	0	0	0	59	31-40	34
10:45 AM	5	1	4	**10**	18	24	7	6	3	0	0	0	0	0	78	31-40	42
11:00 AM	0	0	2	8	16	25	16	4	0	2	0	0	0	0	73	33-42	41
11:15 AM	2	0	3	4	21	19	10	6	5	2	0	0	0	0	72	31-40	40
11:30 AM	1	1	2	2	5	15	12	1	2	2	0	0	0	0	43	36-45	27
11:45 AM	2	1	3	5	13	16	8	3	2	2	1	0	0	0	56	31-40	29
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

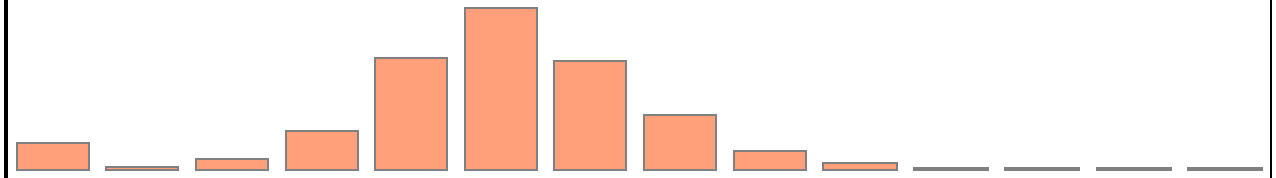
Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	43	0	0	5	4	16	9	5	1	0	0	0	0	0	83	1-10	29
12:15 PM	72	0	0	0	0	0	0	0	0	0	0	0	0	0	72	1-10	48
12:30 PM	**76**	0	0	0	0	0	0	0	0	0	0	0	0	0	76	1-10	51
12:45 PM	7	0	1	6	23	21	4	10	1	0	0	0	0	0	73	31-40	44
01:00 PM	4	1	0	4	17	29	15	12	4	1	0	0	0	0	87	31-40	46
01:15 PM	0	0	2	7	17	22	13	8	5	1	**2**	0	0	0	77	31-40	39
01:30 PM	5	0	0	9	24	27	12	8	2	0	0	0	0	0	87	31-40	51
01:45 PM	2	0	1	7	20	20	22	4	3	0	0	0	0	0	79	36-45	42
02:00 PM	1	0	0	4	26	16	22	9	5	0	0	0	0	0	83	31-40	42
02:15 PM	2	1	1	8	19	29	20	7	1	0	0	0	0	0	88	36-45	49
02:30 PM	2	0	0	11	24	27	18	**15**	**6**	**2**	0	0	0	0	105	31-40	51
02:45 PM	2	2	5	10	32	48	17	9	0	0	0	0	0	0	125	31-40	80
03:00 PM	1	0	**8**	7	19	41	30	7	3	0	0	0	0	0	116	36-45	71
03:15 PM	1	0	2	**13**	25	44	18	14	0	1	0	0	0	0	118	31-40	69
03:30 PM	6	**3**	5	10	26	42	20	7	1	2	0	0	0	0	122	31-40	68
03:45 PM	0	0	1	9	**43**	31	34	14	2	0	0	0	0	0	134	31-40	74
04:00 PM	2	1	2	7	31	48	**36**	10	5	0	0	0	0	0	142	36-45	84
04:15 PM	1	1	1	11	25	**52**	30	9	0	0	0	0	0	0	130	36-45	82
04:30 PM	5	1	1	12	37	48	30	13	3	1	0	0	0	0	**151**	31-40	85
04:45 PM	0	1	0	7	29	50	28	8	3	1	0	0	0	0	127	31-40	79
05:00 PM	4	0	7	9	33	35	18	10	3	0	0	0	0	0	119	31-40	68
05:15 PM	2	0	6	13	37	45	19	3	0	1	0	0	0	0	126	31-40	82
05:30 PM	1	0	1	6	28	40	25	9	0	2	0	0	0	0	112	31-40	68
05:45 PM	2	0	1	4	21	38	15	6	2	0	0	0	0	0	89	31-40	59
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	1	2	3	12	28	31	15	5	1	0	0	0	0	0	98	31-40	59
06:15 PM	0	0	0	3	8	19	9	3	0	0	0	0	0	0	42	36-45	28
06:30 PM	0	0	1	12	20	25	13	3	0	1	0	0	0	0	75	31-40	45
06:45 PM	0	0	0	9	14	16	4	2	0	0	0	0	0	0	45	31-40	30
07:00 PM	0	1	0	6	9	18	13	3	0	1	0	0	0	0	51	36-45	31
07:15 PM	1	0	1	4	19	18	7	9	2	0	0	0	0	0	61	31-40	37
07:30 PM	0	0	0	3	14	17	9	4	2	0	0	0	0	0	49	31-40	31
07:45 PM	0	0	1	3	16	7	6	5	1	0	0	0	0	0	39	31-40	23
08:00 PM	0	1	1	5	26	6	4	3	0	0	0	0	0	0	46	31-40	32
08:15 PM	1	1	1	4	6	12	4	2	0	0	0	0	0	0	31	31-40	18
08:30 PM	0	0	0	4	8	17	5	2	2	0	0	0	0	0	38	31-40	25
08:45 PM	1	0	1	7	6	8	3	1	1	0	0	0	0	0	28	31-40	14
09:00 PM	0	0	0	2	2	17	6	3	1	1	0	0	0	0	32	36-45	23
09:15 PM	0	0	0	2	7	7	8	3	0	0	0	0	0	0	27	36-45	15
09:30 PM	0	0	1	2	7	14	5	3	2	1	0	0	0	0	35	31-40	21
09:45 PM	1	1	2	3	13	13	11	4	0	0	0	0	0	0	48	31-40	26
10:00 PM	2	1	0	5	21	24	13	9	0	0	0	0	0	0	75	31-40	45
10:15 PM	0	0	2	1	8	36	26	6	0	0	0	0	0	0	79	36-45	62
10:30 PM	0	0	0	3	6	11	7	3	1	0	0	0	0	0	31	36-45	18
10:45 PM	0	0	3	0	8	3	2	6	1	0	0	0	0	0	23	31-40	11
11:00 PM	0	0	0	3	7	7	6	1	1	1	0	0	0	0	26	31-40	14
11:15 PM	0	0	0	0	6	12	3	1	0	0	0	0	0	0	22	31-40	18
11:30 PM	0	0	1	3	2	7	2	1	2	0	0	0	0	0	18	32-41	9
11:45 PM	0	0	2	2	5	5	5	4	0	0	0	0	0	0	23	31-40	10
Day Total	283	27	108	413	1218	1745	1173	579	196	64	14	0	4	2	5826	31-40	2963
Percent	4.9%	0.5%	1.9%	7.1%	20.9%	30%	20.1%	9.9%	3.4%	1.1%	0.2%	0%	0.1%	0%			
																	
AM Peak	9:00 AM	9:00 AM	8:30 AM	10:45 AM	7:45 AM	8:30 AM	6:45 AM	6:30 AM	6:15 AM	8:00 AM	5:45 AM	12:00 AM	5:15 AM	5:15 AM	8:30 AM		
15-min Vol	6	2	4	10	21	35	32	18	10	6	3	0	1	1	106		
PM Peak	12:30 PM	3:30 PM	3:00 PM	3:15 PM	3:45 PM	4:15 PM	4:00 PM	2:30 PM	2:30 PM	2:30 PM	1:15 PM	12:00 PM	12:00 PM	12:00 PM	4:30 PM		
15-min Vol	76	3	8	13	43	52	36	15	6	2	2	0	0	0	151		

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

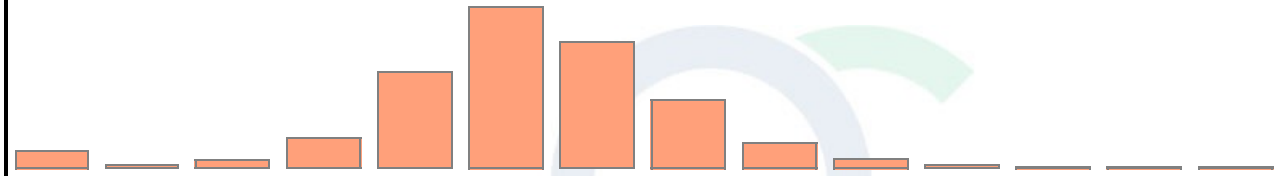
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	397	47	180	675	2150	3633	2867	1529	562	197	50	15	7	6	12315	36-45	6500
Percent	3.2%	0.4%	1.5%	5.5%	17.5%	29.5%	23.3%	12.4%	4.6%	1.6%	0.4%	0.1%	0.1%	0%			
Cumulative Percent	3.2%	3.6%	5.1%	10.5%	28%	57.5%	80.8%	93.2%	97.8%	99.4%	99.8%	99.9%	100%	100%			

ADT
6157



85th Percentile: 46 MPH
Mean Speed(Average): 38 MPH
Median: 38 MPH
Mode: 38 MPH

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	7	1	0	0	0	0	0	1	0	0	0	0	0	9
12:15 AM	0	13	0	0	0	0	0	0	1	0	0	0	0	0	14
12:30 AM	0	9	1	0	1	0	0	0	0	0	0	0	0	0	11
12:45 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	0	7
01:00 AM	0	5	1	0	0	0	0	0	1	0	0	0	1	0	8
01:15 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
01:30 AM	0	4	0	0	0	1	0	0	0	0	0	0	0	0	5
01:45 AM	0	7	2	1	0	0	0	0	1	0	0	0	0	0	11
02:00 AM	0	5	1	1	0	0	0	0	1	0	0	0	0	0	8
02:15 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
02:30 AM	0	3	0	0	1	0	0	0	1	0	0	0	0	0	5
02:45 AM	0	2	1	0	1	0	0	0	1	0	0	0	0	0	5
03:00 AM	0	5	1	0	1	2	0	0	0	0	0	0	0	0	9
03:15 AM	0	8	2	0	0	1	0	0	2	0	0	0	0	0	13
03:30 AM	0	7	2	0	0	2	0	0	5	0	0	0	0	0	16
03:45 AM	0	6	0	0	1	0	0	0	6	0	0	0	0	0	13
04:00 AM	0	6	1	0	0	2	1	0	5	0	0	0	0	0	15
04:15 AM	0	9	3	0	0	5	1	0	5	0	0	0	0	0	23
04:30 AM	0	8	5	2	0	2	0	0	4	0	0	0	0	0	21
04:45 AM	0	10	0	2	0	10	0	0	10	0	0	0	0	0	32
05:00 AM	0	9	3	0	5	1	0	0	9	0	0	0	0	0	27
05:15 AM	0	17	17	2	2	3	0	0	6	0	0	0	0	0	47
05:30 AM	0	23	18	1	7	2	0	0	12	0	0	0	0	0	63
05:45 AM	0	32	25	0	4	1	0	0	10	1	0	0	0	0	73
Day Total															
Percent															
ADT 6489															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	44	17	0	5	5	0	0	5	0	0	0	1	0	77
06:15 AM	0	50	24	1	7	4	2	0	6	**4**	0	0	0	1	99
06:30 AM	**2**	42	23	0	8	2	1	1	7	0	0	0	0	3	89
06:45 AM	1	57	17	1	**12**	1	0	0	10	0	0	0	1	1	**101**
07:00 AM	0	21	13	2	8	5	0	0	5	0	0	0	0	1	55
07:15 AM	0	39	12	3	5	7	0	0	8	2	0	0	0	0	76
07:30 AM	0	43	10	3	6	0	0	1	8	1	0	0	0	0	72
07:45 AM	0	54	18	4	6	0	0	1	3	0	0	0	0	0	86
08:00 AM	0	50	24	1	8	3	0	**3**	4	0	0	0	0	3	96
08:15 AM	1	49	19	1	8	2	1	1	7	0	0	0	0	1	90
08:30 AM	0	**59**	15	3	3	3	1	3	9	1	0	0	0	2	99
08:45 AM	1	50	11	**6**	2	7	2	1	9	1	0	0	0	2	92
09:00 AM	1	42	9	1	5	3	1	1	7	0	0	0	0	3	73
09:15 AM	0	21	16	1	5	1	0	1	8	0	0	0	0	1	54
09:30 AM	0	26	11	1	6	4	**3**	1	10	0	0	0	0	1	63
09:45 AM	0	38	8	5	5	3	2	1	**15**	0	0	0	0	1	78
10:00 AM	0	35	13	2	7	**12**	2	1	12	0	0	0	0	2	86
10:15 AM	1	52	17	3	8	6	1	0	7	0	0	0	0	**5**	100
10:30 AM	0	49	13	2	8	5	2	0	9	0	0	0	0	3	91
10:45 AM	1	41	18	1	10	11	1	1	12	0	0	0	1	1	98
11:00 AM	1	35	12	1	5	5	1	1	8	0	0	0	1	4	74
11:15 AM	0	36	14	2	7	3	0	1	13	0	0	0	1	3	80
11:30 AM	1	42	8	4	5	7	0	1	9	0	0	0	0	0	77
11:45 AM	0	50	22	4	5	6	2	1	5	0	0	0	0	3	98
Day Total															
Percent															
ADT 6489															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	0	70	20	1	**14**	**8**	0	1	9	1	0	0	0	3	127
12:15 PM	0	67	16	0	4	1	1	1	10	1	0	0	0	0	101
12:30 PM	**3**	42	15	2	4	6	0	2	8	1	0	0	0	0	83
12:45 PM	3	65	12	1	7	7	0	1	3	**2**	0	0	0	1	102
01:00 PM	1	51	16	3	5	7	1	1	6	0	0	0	0	3	94
01:15 PM	1	57	13	2	9	2	0	0	9	0	0	0	0	1	94
01:30 PM	0	70	18	2	3	3	**2**	3	**12**	0	0	0	0	3	116
01:45 PM	0	87	13	2	7	4	1	0	6	0	0	0	0	0	120
02:00 PM	2	70	19	1	6	5	0	2	10	0	0	0	0	4	119
02:15 PM	0	73	15	1	7	1	0	0	9	0	0	0	0	**7**	113
02:30 PM	0	81	27	**4**	7	1	1	**4**	4	0	0	0	0	0	129
02:45 PM	1	91	26	0	9	0	2	4	3	0	0	0	**1**	2	139
03:00 PM	1	95	29	1	6	2	0	2	4	0	0	0	0	3	143
03:15 PM	1	84	26	1	6	4	1	0	0	0	0	0	0	5	128
03:30 PM	2	125	**34**	1	3	2	2	1	3	0	0	0	0	5	**178**
03:45 PM	0	111	24	3	3	1	0	2	2	0	0	0	0	1	147
04:00 PM	0	125	27	3	11	1	0	0	1	0	0	0	0	4	172
04:15 PM	0	**132**	19	0	5	0	0	0	1	0	0	0	1	4	162
04:30 PM	0	98	28	1	2	0	0	0	6	0	0	0	0	2	137
04:45 PM	1	113	22	0	0	1	0	0	2	0	0	0	0	3	142
05:00 PM	2	122	23	1	4	2	0	0	1	0	**1**	0	0	1	157
05:15 PM	0	96	12	0	5	0	0	0	1	0	0	0	0	1	115
05:30 PM	1	129	19	1	4	0	0	1	1	0	0	0	0	1	157
05:45 PM	0	94	16	0	2	1	0	0	1	0	0	0	0	1	115
Day Total															
Percent															
ADT 6489															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	2	95	13	1	2	0	0	0	1	0	0	0	0	2	116
06:15 PM	0	62	7	1	4	0	0	1	2	0	0	0	0	0	77
06:30 PM	0	50	6	0	0	0	0	1	0	0	0	0	0	0	57
06:45 PM	1	38	7	0	0	0	0	0	0	0	0	0	0	1	47
07:00 PM	0	39	5	0	1	0	0	0	0	0	0	0	0	0	45
07:15 PM	0	36	7	0	0	0	0	0	0	0	0	0	0	0	43
07:30 PM	0	39	7	0	1	0	0	1	1	0	0	0	0	0	49
07:45 PM	0	39	3	1	0	0	0	0	0	0	0	0	0	0	43
08:00 PM	0	34	4	1	1	0	0	0	1	0	0	0	0	1	42
08:15 PM	0	35	4	0	0	0	0	0	0	0	0	0	0	0	39
08:30 PM	0	33	5	0	0	0	0	0	0	0	0	0	0	0	38
08:45 PM	0	35	4	0	0	1	0	0	0	0	0	0	0	0	40
09:00 PM	0	29	2	0	0	0	0	0	1	0	0	0	0	0	32
09:15 PM	0	23	4	0	1	0	0	0	0	0	0	0	0	1	29
09:30 PM	0	28	3	0	0	0	0	0	0	0	0	0	0	0	31
09:45 PM	0	29	3	0	0	0	0	0	0	0	0	0	0	0	32
10:00 PM	2	26	2	0	0	0	0	1	0	0	0	0	0	1	32
10:15 PM	0	26	2	0	1	0	0	0	1	0	0	0	0	0	30
10:30 PM	0	23	2	0	0	0	0	0	0	0	0	0	0	2	27
10:45 PM	0	18	1	0	0	0	0	0	0	0	0	0	0	1	20
11:00 PM	0	19	3	0	1	0	0	0	0	0	0	0	0	0	23
11:15 PM	0	21	3	0	0	0	0	0	0	0	0	0	0	0	24
11:30 PM	0	19	3	0	1	0	0	0	0	0	0	0	0	0	23
11:45 PM	0	8	1	0	0	0	0	0	0	0	0	0	0	0	9
Day Total	34	4190	1039	96	323	197	35	50	396	15	1	0	8	105	6489
Percent	0.5%	64.6%	16%	1.5%	5%	3%	0.5%	0.8%	6.1%	0.2%	0%	0%	0.1%	1.6%	
ADT 6489															
AM Peak	6:30 AM	8:30 AM	5:45 AM	8:45 AM	6:45 AM	10:00 AM	9:30 AM	8:00 AM	9:45 AM	6:15 AM	12:00 AM	12:00 AM	1:00 AM	10:15 AM	6:45 AM
15-min Vol	2	59	25	6	12	12	3	3	15	4	0	0	1	5	101
PM Peak	12:30 PM	4:15 PM	3:30 PM	2:30 PM	12:00 PM	12:00 PM	1:30 PM	2:30 PM	1:30 PM	12:45 PM	5:00 PM	12:00 PM	2:45 PM	2:15 PM	3:30 PM
15-min Vol	3	132	34	4	14	8	2	4	12	2	1	0	1	7	178

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	9	1	0	1	0	0	0	0	0	0	0	0	0	11
12:15 AM	0	8	1	0	1	0	0	0	0	0	0	0	0	0	10
12:30 AM	0	7	1	0	0	0	0	0	1	0	0	0	0	0	9
12:45 AM	0	7	0	0	0	1	0	0	1	0	0	0	0	0	9
01:00 AM	0	5	0	0	0	0	0	0	1	0	0	0	0	0	6
01:15 AM	0	8	0	1	0	0	0	0	0	0	0	0	0	0	9
01:30 AM	0	3	3	0	0	0	0	0	1	0	0	0	0	0	7
01:45 AM	0	3	1	0	0	0	0	0	1	0	0	0	0	0	5
02:00 AM	0	4	1	0	0	0	0	0	0	0	0	0	0	0	5
02:15 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
02:30 AM	0	5	0	0	0	0	0	0	1	0	0	0	0	0	6
02:45 AM	0	5	1	0	0	0	0	0	0	0	0	0	0	0	6
03:00 AM	0	5	0	0	0	1	0	0	0	0	0	0	0	0	6
03:15 AM	0	7	1	0	0	1	0	0	4	0	0	0	0	0	13
03:30 AM	1	3	2	1	0	3	0	0	3	0	0	0	0	0	13
03:45 AM	0	4	1	0	1	2	0	0	5	0	0	0	0	0	13
04:00 AM	0	2	4	0	0	1	0	0	2	0	0	0	0	0	9
04:15 AM	0	6	0	0	0	2	0	0	6	0	0	0	0	0	14
04:30 AM	0	7	6	4	2	2	0	0	10	0	0	0	0	0	31
04:45 AM	0	5	1	1	1	4	0	0	6	0	0	0	0	0	18
05:00 AM	0	12	1	0	3	8	0	0	10	0	0	0	0	1	35
05:15 AM	1	19	9	2	0	7	1	0	3	0	0	0	0	2	44
05:30 AM	0	24	20	2	5	1	0	0	7	0	0	0	0	0	59
05:45 AM	0	41	**23**	0	4	2	1	0	5	0	0	0	0	0	76
Day Total															
Percent															
ADT															
5826															
AM Peak															
15-min Vol															
PM Peak															
15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	2	38	21	0	2	2	0	1	7	0	0	0	0	1	74
06:15 AM	0	52	23	1	10	1	1	0	4	0	0	0	0	1	93
06:30 AM	0	55	23	1	8	4	0	0	4	0	0	0	1	0	96
06:45 AM	0	55	21	2	8	6	1	0	7	0	0	0	0	3	103
07:00 AM	0	29	16	1	2	2	0	1	5	1	0	0	0	0	57
07:15 AM	0	45	11	4	3	5	1	0	11	0	0	0	0	0	80
07:30 AM	0	44	13	2	7	7	0	0	7	0	0	0	0	1	81
07:45 AM	2	42	18	4	2	6	0	1	6	0	0	0	0	3	84
08:00 AM	1	45	11	1	7	2	0	1	5	0	0	0	0	2	75
08:15 AM	0	58	15	1	7	5	0	0	3	0	0	0	0	0	89
08:30 AM	0	65	15	1	4	4	1	1	14	0	0	0	0	1	106
08:45 AM	0	50	10	8	11	4	1	1	9	0	0	0	0	3	97
09:00 AM	2	45	17	1	6	7	0	0	8	0	0	0	0	3	89
09:15 AM	0	35	11	2	3	1	1	1	5	0	0	0	0	1	60
09:30 AM	0	37	13	0	5	3	1	0	3	1	0	0	0	1	64
09:45 AM	0	30	11	3	6	3	2	3	10	1	0	0	0	0	69
10:00 AM	0	41	9	3	11	5	1	0	10	0	0	0	0	0	80
10:15 AM	0	27	13	3	3	3	0	1	9	1	0	0	0	1	61
10:30 AM	0	21	13	4	6	8	2	1	4	0	0	0	0	0	59
10:45 AM	1	34	17	2	5	9	0	0	7	0	0	0	0	3	78
11:00 AM	0	34	13	2	8	7	0	1	7	0	0	0	1	0	73
11:15 AM	0	38	13	3	4	3	0	1	8	0	0	0	1	1	72
11:30 AM	0	22	9	0	1	1	0	0	9	0	0	0	0	1	43
11:45 AM	1	31	8	1	4	1	2	1	5	0	0	0	0	2	56
Day Total															
Percent															
ADT 5826															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	0	25	4	0	7	2	0	0	2	0	0	0	0	43	83
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	72	72
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**76**	76
12:45 PM	0	40	11	0	2	4	1	**2**	**6**	0	0	0	**1**	6	73
01:00 PM	0	57	10	1	5	**5**	0	0	5	0	0	0	1	3	87
01:15 PM	0	53	11	**3**	2	3	1	0	4	0	0	0	0	0	77
01:30 PM	1	49	14	3	5	1	1	2	6	**2**	0	0	0	3	87
01:45 PM	0	42	15	2	6	3	0	2	6	0	0	0	1	2	79
02:00 PM	0	55	16	1	3	4	1	1	1	0	0	0	0	1	83
02:15 PM	0	56	11	0	**8**	3	0	2	6	0	0	0	0	2	88
02:30 PM	1	67	**23**	2	4	2	0	1	3	0	0	0	0	2	105
02:45 PM	0	84	22	3	7	2	0	2	3	0	0	0	0	2	125
03:00 PM	0	85	20	0	7	1	1	0	1	0	0	0	0	1	116
03:15 PM	1	85	19	1	8	0	1	0	1	1	0	0	0	1	118
03:30 PM	**2**	88	20	1	2	2	0	0	1	2	0	0	1	3	122
03:45 PM	0	106	20	0	4	0	0	1	3	0	0	0	0	0	134
04:00 PM	0	115	18	1	1	1	1	0	3	0	0	0	0	2	142
04:15 PM	0	106	15	0	5	1	0	0	2	0	0	0	0	1	130
04:30 PM	1	**119**	22	0	1	1	0	0	2	0	0	0	0	5	**151**
04:45 PM	1	108	14	0	2	0	0	0	2	0	0	0	0	0	127
05:00 PM	0	91	16	1	3	0	**2**	1	2	0	0	0	0	3	119
05:15 PM	0	107	11	1	2	0	0	1	0	0	0	0	1	3	126
05:30 PM	0	91	14	0	1	0	1	1	2	0	0	0	0	2	112
05:45 PM	0	73	13	0	0	0	1	0	0	0	0	0	1	1	89
Day Total															
Percent															
ADT															
5826															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	0	84	13	0	1	0	0	0	0	0	0	0	0	0	98
06:15 PM	0	37	4	0	0	0	0	0	1	0	0	0	0	0	42
06:30 PM	0	70	4	0	1	0	0	0	0	0	0	0	0	0	75
06:45 PM	0	36	8	0	0	0	0	1	0	0	0	0	0	0	45
07:00 PM	0	45	5	0	1	0	0	0	0	0	0	0	0	0	51
07:15 PM	0	53	5	0	1	0	0	1	0	0	0	0	0	1	61
07:30 PM	0	43	6	0	0	0	0	0	0	0	0	0	0	0	49
07:45 PM	0	33	3	0	1	0	0	1	1	0	0	0	0	0	39
08:00 PM	0	39	5	0	0	0	0	0	2	0	0	0	0	0	46
08:15 PM	0	26	4	0	0	0	0	0	0	0	0	0	0	1	31
08:30 PM	0	36	2	0	0	0	0	0	0	0	0	0	0	0	38
08:45 PM	0	23	2	0	1	0	0	0	1	0	0	0	0	1	28
09:00 PM	0	29	3	0	0	0	0	0	0	0	0	0	0	0	32
09:15 PM	0	23	2	0	1	0	0	0	1	0	0	0	0	0	27
09:30 PM	0	33	2	0	0	0	0	0	0	0	0	0	0	0	35
09:45 PM	0	41	4	0	1	0	0	0	1	0	0	0	0	1	48
10:00 PM	0	67	4	0	0	1	0	0	1	0	0	0	0	2	75
10:15 PM	1	70	6	0	0	0	0	2	0	0	0	0	0	0	79
10:30 PM	0	28	3	0	0	0	0	0	0	0	0	0	0	0	31
10:45 PM	0	22	1	0	0	0	0	0	0	0	0	0	0	0	23
11:00 PM	0	23	3	0	0	0	0	0	0	0	0	0	0	0	26
11:15 PM	0	20	2	0	0	0	0	0	0	0	0	0	0	0	22
11:30 PM	0	15	3	0	0	0	0	0	0	0	0	0	0	0	18
11:45 PM	0	21	1	0	1	0	0	0	0	0	0	0	0	0	23
Day Total	19	3800	856	81	245	170	27	36	303	9	0	0	9	271	5826
Percent	0.3%	65.2%	14.7%	1.4%	4.2%	2.9%	0.5%	0.6%	5.2%	0.2%	0%	0%	0.2%	4.7%	
ADT 5826															
AM Peak	6:00 AM	8:30 AM	5:45 AM	8:45 AM	8:45 AM	10:45 AM	9:45 AM	9:45 AM	8:30 AM	7:00 AM	12:00 AM	12:00 AM	6:30 AM	6:45 AM	8:30 AM
15-min Vol	2	65	23	8	11	9	2	3	14	1	0	0	1	3	106
PM Peak	3:30 PM	4:30 PM	2:30 PM	1:15 PM	2:15 PM	1:00 PM	5:00 PM	12:45 PM	12:45 PM	1:30 PM	12:00 PM	12:00 PM	12:45 PM	12:30 PM	4:30 PM
15-min Vol	2	119	23	3	8	5	2	2	6	2	0	0	1	76	151

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	53	7990	1895	177	568	367	62	86	699	24	1	0	17	376	12315
Percent	0.4%	64.9%	15.4%	1.4%	4.6%	3%	0.5%	0.7%	5.7%	0.2%	0%	0%	0.1%	3.1%	
ADT 6157															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		9	11			10			10	
12:15 AM		14	10			12			12	
12:30 AM		11	9			10			10	
12:45 AM		7	9			8			8	
01:00 AM		8	6			7			7	
01:15 AM		5	9			7			7	
01:30 AM		5	7			6			6	
01:45 AM		11	5			8			8	
02:00 AM		8	5			7			7	
02:15 AM		7	10			9			9	
02:30 AM		5	6			6			6	
02:45 AM		5	6			6			6	
03:00 AM		9	6			8			8	
03:15 AM		13	13			13			13	
03:30 AM		16	13			15			15	
03:45 AM		13	13			13			13	
04:00 AM		15	9			12			12	
04:15 AM		23	14			19			19	
04:30 AM		21	31			26			26	
04:45 AM		32	18			25			25	
05:00 AM		27	35			31			31	
05:15 AM		47	44			46			46	
05:30 AM		63	59			61			61	
05:45 AM		73	76			75			75	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St
QC JOB #: 15975346
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		77	74			76			76	
06:15 AM		99	93			96			96	
06:30 AM		89	96			93			93	
06:45 AM		**101**	103			102			102	
07:00 AM		55	57			56			56	
07:15 AM		76	80			78			78	
07:30 AM		72	81			77			77	
07:45 AM		86	84			85			85	
08:00 AM		96	75			86			86	
08:15 AM		90	89			90			90	
08:30 AM		99	**106**			**103**			**103**	
08:45 AM		92	97			95			95	
09:00 AM		73	89			81			81	
09:15 AM		54	60			57			57	
09:30 AM		63	64			64			64	
09:45 AM		78	69			74			74	
10:00 AM		86	80			83			83	
10:15 AM		100	61			81			81	
10:30 AM		91	59			75			75	
10:45 AM		98	78			88			88	
11:00 AM		74	73			74			74	
11:15 AM		80	72			76			76	
11:30 AM		77	43			60			60	
11:45 AM		98	56			77			77	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		127	83			105			105	
12:15 PM		101	72			87			87	
12:30 PM		83	76			80			80	
12:45 PM		102	73			88			88	
01:00 PM		94	87			91			91	
01:15 PM		94	77			86			86	
01:30 PM		116	87			102			102	
01:45 PM		120	79			100			100	
02:00 PM		119	83			101			101	
02:15 PM		113	88			101			101	
02:30 PM		129	105			117			117	
02:45 PM		139	125			132			132	
03:00 PM		143	116			130			130	
03:15 PM		128	118			123			123	
03:30 PM		**178**	122			150			150	
03:45 PM		147	134			141			141	
04:00 PM		172	142			**157**			**157**	
04:15 PM		162	130			146			146	
04:30 PM		137	**151**			144			144	
04:45 PM		142	127			135			135	
05:00 PM		157	119			138			138	
05:15 PM		115	126			121			121	
05:30 PM		157	112			135			135	
05:45 PM		115	89			102			102	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Volume Data

LOCATION: SR 291 West of Ward St | **QC JOB #:** 15975346

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		116	98			107			107	
06:15 PM		77	42			60			60	
06:30 PM		57	75			66			66	
06:45 PM		47	45			46			46	
07:00 PM		45	51			48			48	
07:15 PM		43	61			52			52	
07:30 PM		49	49			49			49	
07:45 PM		43	39			41			41	
08:00 PM		42	46			44			44	
08:15 PM		39	31			35			35	
08:30 PM		38	38			38			38	
08:45 PM		40	28			34			34	
09:00 PM		32	32			32			32	
09:15 PM		29	27			28			28	
09:30 PM		31	35			33			33	
09:45 PM		32	48			40			40	
10:00 PM		32	75			54			54	
10:15 PM		30	79			55			55	
10:30 PM		27	31			29			29	
10:45 PM		20	23			22			22	
11:00 PM		23	26			25			25	
11:15 PM		24	22			23			23	
11:30 PM		23	18			21			21	
11:45 PM		9	23			16			16	
Day Total		6489	5826			6177			6177	
% Weekday Average		105.1%	94.3%							
% Week Average		105.1%	94.3%			100%				
AM Peak 15-min Vol		6:45 AM 101	8:30 AM 106			8:30 AM 103			8:30 AM 103	
PM Peak 15-min Vol		3:30 PM 178	4:30 PM 151			4:00 PM 157			4:00 PM 157	

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	2	1	3	5	2	3	0	0	0	0	0	16	36-45	8
12:15 AM	0	0	0	1	2	2	2	2	3	0	0	0	**1**	0	13	46-55	5
12:30 AM	0	0	1	0	1	1	0	4	0	0	0	0	0	0	7	41-50	4
12:45 AM	0	0	0	0	1	1	1	2	1	0	0	0	0	0	6	46-55	3
01:00 AM	0	0	0	0	3	2	3	3	2	1	0	0	0	0	14	41-50	6
01:15 AM	0	0	0	1	0	3	1	0	1	0	0	0	0	0	6	36-45	4
01:30 AM	0	0	0	0	1	2	5	2	0	0	0	0	0	0	10	40-49	7
01:45 AM	0	0	1	0	0	0	2	2	1	1	0	0	0	0	7	41-50	4
02:00 AM	0	0	1	1	2	1	1	1	0	0	0	0	0	0	7	31-40	3
02:15 AM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	36-45	3
02:30 AM	0	0	0	1	0	2	5	1	2	0	0	0	0	0	11	36-45	7
02:45 AM	0	0	0	0	2	1	2	4	1	0	0	0	0	0	10	41-50	6
03:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	36-45	1
03:15 AM	0	0	0	3	0	0	1	4	1	0	0	0	0	0	9	45-54	5
03:30 AM	0	0	**4**	1	1	2	3	3	0	0	0	0	0	0	14	41-50	6
03:45 AM	0	0	2	1	2	2	1	5	0	2	0	0	0	0	15	41-50	6
04:00 AM	0	0	0	0	2	3	2	6	2	1	0	0	0	0	16	43-52	8
04:15 AM	0	0	1	1	1	4	3	6	1	0	0	0	0	0	17	41-50	9
04:30 AM	0	0	0	1	2	10	9	8	5	0	1	0	0	**1**	37	36-45	19
04:45 AM	1	0	0	1	2	7	4	12	12	5	2	0	1	0	47	46-55	24
05:00 AM	0	1	0	0	2	6	14	13	10	6	2	0	0	0	54	41-50	27
05:15 AM	1	0	1	0	4	10	14	19	16	5	2	0	1	0	73	46-55	35
05:30 AM	0	0	0	1	3	12	24	30	20	10	**5**	1	0	0	106	41-50	54
05:45 AM	0	0	0	2	5	6	18	26	17	8	5	0	0	0	87	41-50	44
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	0	0	0	2	3	12	14	16	5	0	1	0	0	0	53	41-50	30
06:15 AM	0	0	1	0	3	14	24	17	10	1	0	0	0	0	70	41-50	41
06:30 AM	0	0	1	3	3	12	24	27	14	6	2	0	0	0	92	41-50	51
06:45 AM	1	0	1	2	4	9	17	39	20	8	2	0	0	0	103	46-55	59
07:00 AM	0	0	1	3	2	15	20	19	15	6	4	0	0	0	85	41-50	39
07:15 AM	0	0	0	1	7	**23**	27	21	21	5	5	0	0	0	110	36-45	50
07:30 AM	4	2	1	2	3	17	36	**63**	21	9	2	1	1	0	**162**	41-50	99
07:45 AM	1	0	2	4	9	13	35	41	19	**15**	5	**2**	0	0	146	41-50	76
08:00 AM	3	1	0	4	8	10	26	33	16	11	3	0	0	0	115	41-50	59
08:15 AM	2	0	2	**5**	5	13	31	30	13	6	4	0	0	0	111	41-50	61
08:30 AM	2	**3**	1	0	3	12	23	18	19	6	3	0	0	0	90	41-50	41
08:45 AM	1	1	1	0	8	17	**46**	13	13	7	3	0	0	0	110	36-45	63
09:00 AM	**7**	1	0	2	6	9	21	16	10	7	5	0	0	0	84	41-50	37
09:15 AM	1	0	2	3	3	10	35	20	7	4	2	1	0	0	88	41-50	55
09:30 AM	1	0	2	2	3	15	16	12	8	5	0	0	1	0	65	36-45	31
09:45 AM	1	0	1	2	**10**	16	36	19	11	2	0	0	0	0	98	41-50	55
10:00 AM	2	1	0	4	5	15	36	20	**22**	2	0	0	0	0	107	41-50	56
10:15 AM	3	0	0	1	1	12	21	22	11	3	3	0	0	0	77	41-50	43
10:30 AM	3	0	1	3	5	7	23	15	14	5	0	0	0	1	77	41-50	38
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1-10	0
12:30 PM	1	0	0	3	7	16	38	15	9	4	1	0	0	0	94	36-45	54
12:45 PM	0	0	2	1	10	15	21	20	9	5	0	0	0	0	83	41-50	41
01:00 PM	**5**	**2**	2	3	6	21	17	18	12	6	1	0	0	0	93	36-45	38
01:15 PM	2	0	1	2	6	11	20	19	10	5	1	0	0	0	77	41-50	39
01:30 PM	0	0	0	1	11	9	21	31	10	5	4	1	**1**	0	94	41-50	52
01:45 PM	1	0	1	2	4	14	27	31	18	2	2	1	0	0	103	41-50	58
02:00 PM	2	0	**5**	2	17	23	32	21	9	3	2	0	0	0	116	36-45	55
02:15 PM	1	0	0	2	3	14	27	39	13	8	3	**2**	0	0	112	41-50	66
02:30 PM	0	0	4	2	9	14	38	28	15	4	0	1	0	0	115	41-50	66
02:45 PM	0	0	0	2	4	22	32	28	11	7	1	0	0	0	107	41-50	60
03:00 PM	2	0	1	3	12	21	45	31	13	5	2	0	0	0	135	41-50	76
03:15 PM	1	0	0	0	6	9	34	30	11	6	2	2	0	0	101	41-50	64
03:30 PM	4	0	1	0	6	22	**58**	40	19	6	3	1	0	0	160	41-50	98
03:45 PM	2	0	0	0	8	17	24	32	**24**	**13**	2	0	0	0	122	41-50	56
04:00 PM	0	0	1	0	10	28	39	36	21	7	3	0	0	0	145	41-50	75
04:15 PM	0	0	0	2	7	19	43	30	9	6	2	1	0	0	119	41-50	73
04:30 PM	1	0	0	1	4	15	30	**41**	19	6	**5**	2	0	0	124	41-50	71
04:45 PM	0	0	0	3	6	23	40	23	17	3	1	1	0	0	117	39-48	63
05:00 PM	5	1	0	4	**20**	**37**	57	31	14	3	2	0	0	0	**174**	36-45	94
05:15 PM	0	0	0	**6**	10	19	37	32	15	2	0	0	0	0	121	41-50	69
05:30 PM	4	0	1	2	7	21	44	26	14	6	0	0	0	0	125	41-50	70
05:45 PM	0	1	0	1	7	18	31	27	15	7	0	0	0	0	107	41-50	58
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

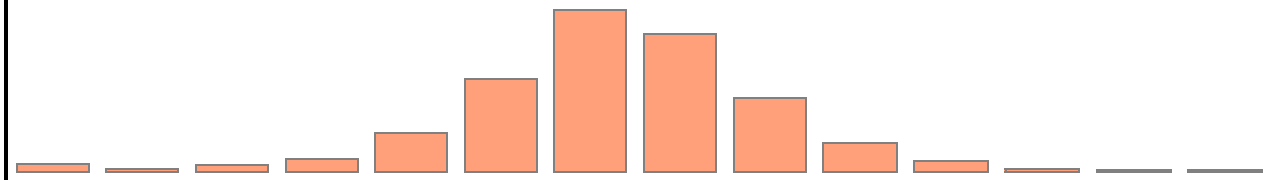
Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	1	0	0	1	10	22	31	28	9	1	0	0	0	0	103	41-50	59
06:15 PM	2	0	0	3	4	19	28	21	11	2	2	0	0	0	92	41-50	49
06:30 PM	0	0	0	0	10	16	27	11	6	0	0	0	0	0	70	36-45	43
06:45 PM	2	1	0	3	4	17	20	8	5	2	0	0	0	**1**	63	36-45	37
07:00 PM	0	0	1	1	11	16	17	12	5	0	0	0	0	0	63	36-45	33
07:15 PM	0	0	1	1	5	10	10	8	4	1	1	1	0	0	42	36-45	20
07:30 PM	1	0	0	2	1	11	12	12	4	2	2	0	0	0	47	41-50	24
07:45 PM	0	0	0	1	4	9	10	9	5	2	0	0	0	0	40	40-49	19
08:00 PM	0	0	0	1	3	5	12	11	5	2	1	1	0	0	41	41-50	23
08:15 PM	0	0	2	0	0	10	8	7	7	1	0	1	0	0	36	36-45	18
08:30 PM	1	0	0	2	1	5	16	6	4	1	0	0	0	0	36	41-50	22
08:45 PM	5	0	1	2	2	6	17	6	3	3	0	0	0	0	45	36-45	23
09:00 PM	0	0	0	2	2	6	15	8	3	0	1	0	0	0	37	41-50	23
09:15 PM	0	1	0	1	10	12	13	3	6	2	0	1	0	0	49	36-45	25
09:30 PM	0	0	1	1	5	7	6	15	4	1	2	1	0	0	43	41-50	21
09:45 PM	0	0	0	1	5	6	14	7	4	1	0	1	0	0	39	41-50	21
10:00 PM	0	0	3	1	4	9	11	8	2	1	0	0	1	0	40	36-45	20
10:15 PM	0	2	0	0	1	6	9	4	3	3	1	0	0	0	29	36-45	15
10:30 PM	0	0	1	3	2	12	8	5	3	1	0	0	0	0	35	36-45	20
10:45 PM	0	0	0	1	4	9	6	6	0	0	3	0	0	0	29	36-45	15
11:00 PM	1	1	1	2	2	3	9	8	3	1	0	1	0	0	32	41-50	17
11:15 PM	1	0	2	2	4	9	6	1	1	2	0	0	0	0	28	36-45	15
11:30 PM	0	0	1	2	2	4	3	3	0	2	0	0	0	0	17	36-45	7
11:45 PM	0	0	0	0	2	7	4	2	0	1	0	0	0	0	16	36-45	11
Day Total	79	19	61	135	406	975	1702	1454	772	298	111	24	7	3	6046	41-50	3156
Percent	1.3%	0.3%	1%	2.2%	6.7%	16.1%	28.2%	24%	12.8%	4.9%	1.8%	0.4%	0.1%	0%			
AM Peak	9:00 AM	8:30 AM	3:30 AM	8:15 AM	9:45 AM	7:15 AM	8:45 AM	7:30 AM	10:00 AM	7:45 AM	5:30 AM	7:45 AM	12:15 AM	4:30 AM	7:30 AM		
15-min Vol	7	3	4	5	10	23	46	63	22	15	5	2	1	1	162		
PM Peak	1:00 PM	1:00 PM	2:00 PM	5:15 PM	5:00 PM	5:00 PM	3:30 PM	4:30 PM	3:45 PM	3:45 PM	4:30 PM	2:15 PM	1:30 PM	6:45 PM	5:00 PM		
15-min Vol	5	2	5	6	20	37	58	41	24	13	5	2	1	1	174		



Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	1	3	4	3	1	0	2	0	0	0	0	14	31-40	7
12:15 AM	0	0	0	0	2	6	3	0	0	1	1	0	0	0	13	36-45	9
12:30 AM	0	0	0	1	1	3	5	1	2	0	1	0	0	0	14	36-45	8
12:45 AM	0	0	1	0	0	0	0	4	2	1	0	1	0	0	9	46-55	6
01:00 AM	0	0	0	0	1	2	3	0	3	1	1	0	0	0	11	36-45	5
01:15 AM	0	0	1	0	1	4	3	2	0	1	0	0	0	0	12	36-45	7
01:30 AM	0	0	0	0	1	1	1	5	1	0	0	0	0	0	9	44-53	6
01:45 AM	0	0	1	1	0	1	1	2	2	0	0	0	0	0	8	46-55	4
02:00 AM	0	0	0	0	1	4	1	1	2	0	0	0	0	0	9	35-44	5
02:15 AM	0	0	0	0	2	0	5	0	1	0	0	0	0	0	8	36-45	5
02:30 AM	0	0	1	0	0	1	1	4	0	0	0	0	0	0	7	41-50	5
02:45 AM	0	0	0	0	2	3	4	1	0	0	0	0	**1**	0	11	36-45	7
03:00 AM	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3	41-50	2
03:15 AM	0	0	0	0	0	4	2	3	0	0	0	0	0	0	9	36-45	6
03:30 AM	0	0	0	0	4	5	3	2	1	0	0	0	0	0	15	31-40	9
03:45 AM	2	0	0	1	2	2	2	0	0	1	1	0	0	0	11	31-40	4
04:00 AM	3	0	0	1	5	2	4	7	1	0	0	1	0	0	24	41-50	11
04:15 AM	0	0	0	0	4	3	4	5	0	2	0	0	0	0	18	41-50	9
04:30 AM	0	0	0	1	0	9	13	10	9	0	1	0	0	**1**	44	41-50	23
04:45 AM	0	0	0	2	1	2	11	12	6	4	1	3	0	0	42	41-50	23
05:00 AM	0	0	0	0	0	4	10	12	7	4	0	0	0	1	38	41-50	22
05:15 AM	0	0	0	1	4	11	19	29	15	4	3	1	0	0	87	41-50	48
05:30 AM	0	0	0	0	3	13	31	27	14	**9**	3	0	0	0	100	41-50	58
05:45 AM	0	0	0	0	0	6	19	35	11	7	**5**	1	0	0	84	41-50	54
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Chester, PA | **DATE:** Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	0	0	0	0	5	12	16	15	4	1	1	0	0	0	54	41-50	31
06:15 AM	0	0	2	0	3	7	16	23	10	5	0	0	0	0	66	41-50	39
06:30 AM	0	1	0	0	1	16	31	18	9	2	0	1	0	0	79	41-50	49
06:45 AM	1	0	1	1	5	26	33	19	13	7	0	0	0	0	106	36-45	59
07:00 AM	1	0	2	3	10	14	34	27	10	6	1	1	0	0	109	41-50	61
07:15 AM	0	0	0	3	6	22	34	30	**18**	1	2	0	0	0	116	41-50	64
07:30 AM	2	1	2	6	11	27	41	**42**	17	4	2	0	0	0	**155**	41-50	83
07:45 AM	2	0	1	3	7	19	**43**	33	12	5	2	0	0	0	127	41-50	76
08:00 AM	3	0	2	4	15	17	29	24	12	5	2	0	0	0	113	41-50	53
08:15 AM	2	1	2	1	14	15	33	33	17	4	3	1	0	0	126	41-50	66
08:30 AM	3	0	1	4	9	14	34	15	12	6	2	1	1	0	102	41-50	49
08:45 AM	1	2	2	2	9	18	21	31	10	1	3	**4**	0	0	104	41-50	52
09:00 AM	1	0	2	2	4	9	26	33	15	4	1	1	0	0	98	41-50	59
09:15 AM	2	0	1	4	4	21	19	22	4	6	1	0	1	0	85	41-50	41
09:30 AM	0	0	1	6	6	25	17	8	4	1	0	0	0	0	68	36-45	42
09:45 AM	0	0	0	2	11	20	21	16	6	4	0	0	0	0	80	36-45	41
10:00 AM	0	1	**4**	3	13	26	13	11	4	1	0	0	1	0	77	36-45	39
10:15 AM	**4**	0	1	4	10	29	27	13	3	2	1	1	0	0	95	36-45	56
10:30 AM	3	**4**	0	1	**17**	20	23	10	10	1	2	1	0	0	92	36-45	43
10:45 AM	2	0	2	6	14	27	28	9	7	1	0	0	0	0	96	36-45	55
11:00 AM	0	0	0	1	11	15	29	14	9	1	1	0	0	0	81	36-45	44
11:15 AM	1	0	2	**7**	9	16	26	16	7	2	0	0	0	0	86	37-46	42
11:30 AM	2	0	2	3	12	**30**	22	16	4	0	1	0	0	0	92	36-45	52
11:45 AM	0	0	0	4	6	19	29	12	6	1	1	0	0	0	78	36-45	48
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	0	0	0	2	9	24	26	20	4	3	1	**1**	0	0	90	36-45	50
12:15 PM	1	0	2	3	8	20	18	15	12	3	0	0	0	0	82	36-45	38
12:30 PM	1	0	**4**	6	12	21	24	14	5	3	0	0	0	0	90	36-45	45
12:45 PM	2	0	2	3	11	29	22	17	**14**	3	**3**	0	0	0	106	36-45	51
01:00 PM	2	0	1	5	11	18	21	23	11	3	1	0	0	0	96	41-50	44
01:15 PM	1	0	1	6	12	21	23	10	13	1	0	0	0	0	88	36-45	44
01:30 PM	1	1	4	4	11	21	27	17	2	0	1	0	0	0	89	36-45	48
01:45 PM	2	2	2	3	9	28	17	12	4	1	0	0	0	0	80	36-45	45
02:00 PM	0	0	2	**8**	18	27	28	10	2	2	0	0	0	0	97	36-45	55
02:15 PM	2	1	3	6	16	35	35	20	5	1	0	0	0	0	124	36-45	70
02:30 PM	0	0	4	6	12	42	33	10	6	0	0	0	0	0	113	36-45	75
02:45 PM	5	0	3	4	13	33	35	16	4	1	0	0	0	0	114	36-45	68
03:00 PM	**6**	**3**	2	7	16	43	18	11	3	1	0	0	0	0	110	36-45	61
03:15 PM	2	0	1	2	15	34	34	9	4	1	0	0	0	0	102	36-45	68
03:30 PM	6	0	4	6	18	41	34	20	5	1	0	0	0	0	135	36-45	75
03:45 PM	0	0	0	1	18	36	26	15	7	1	0	0	0	0	104	36-45	62
04:00 PM	2	3	3	2	13	30	45	17	5	1	1	0	0	0	122	36-45	75
04:15 PM	1	0	0	8	15	41	37	13	7	**4**	0	0	0	0	126	36-45	78
04:30 PM	0	0	2	2	10	51	53	23	6	1	0	0	0	0	148	36-45	104
04:45 PM	1	0	0	0	15	19	**56**	24	6	0	0	0	0	0	121	41-50	80
05:00 PM	2	0	1	2	**28**	41	45	18	8	0	0	0	0	0	145	36-45	86
05:15 PM	2	0	0	6	22	49	48	**32**	2	1	0	0	0	0	**162**	36-45	97
05:30 PM	2	0	1	3	9	36	39	19	3	0	0	0	0	0	112	36-45	75
05:45 PM	2	0	0	2	18	**54**	20	18	4	0	0	0	0	0	118	36-45	74
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

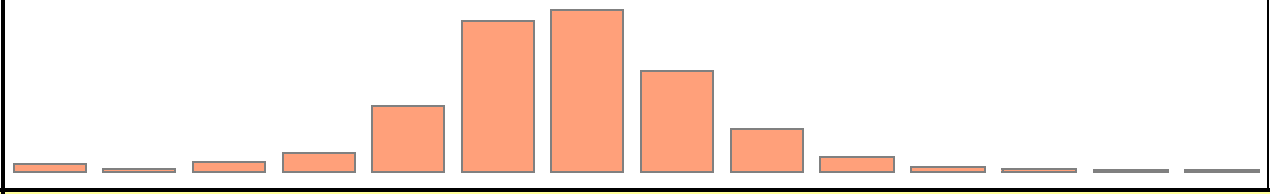
Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	0	0	1	2	11	28	22	8	2	0	0	0	0	0	74	36-45	50
06:15 PM	0	0	0	0	13	39	18	9	3	0	0	0	0	0	82	36-45	57
06:30 PM	2	1	1	5	8	20	16	9	1	1	0	0	0	0	64	36-45	36
06:45 PM	0	2	1	1	7	18	25	1	3	1	0	0	0	0	59	36-45	43
07:00 PM	0	0	0	2	6	16	21	11	2	0	0	0	0	0	58	36-45	37
07:15 PM	0	0	0	2	10	16	8	2	1	1	0	0	0	0	40	31-40	26
07:30 PM	0	0	0	4	8	12	13	1	5	1	0	0	0	0	44	36-45	25
07:45 PM	0	0	2	2	7	17	7	5	3	0	1	0	0	0	44	31-40	24
08:00 PM	0	2	1	3	6	17	14	0	0	0	0	0	0	0	43	36-45	31
08:15 PM	0	0	0	0	4	14	9	4	0	0	0	0	0	0	31	36-45	23
08:30 PM	0	0	0	2	9	11	7	0	1	1	0	0	0	0	31	31-40	20
08:45 PM	0	0	1	0	10	15	9	1	0	0	0	0	0	0	36	31-40	25
09:00 PM	0	0	0	1	2	11	5	1	2	0	0	0	0	0	22	36-45	16
09:15 PM	0	0	0	1	2	14	12	5	2	0	0	0	0	0	36	36-45	26
09:30 PM	1	0	1	2	9	15	12	3	1	0	0	0	0	0	44	36-45	27
09:45 PM	0	1	1	1	7	12	15	6	3	1	0	0	0	0	47	36-45	27
10:00 PM	0	0	1	3	6	11	6	1	1	0	0	0	0	0	29	31-40	17
10:15 PM	0	0	1	0	3	8	8	2	1	1	0	0	0	0	24	36-45	16
10:30 PM	0	0	1	2	2	11	8	7	1	0	0	0	0	0	32	36-45	19
10:45 PM	0	0	1	0	6	11	8	4	1	0	0	0	0	0	31	36-45	19
11:00 PM	0	0	2	2	4	13	4	7	2	0	0	0	0	0	34	36-45	17
11:15 PM	1	0	4	4	5	6	2	1	0	0	0	0	0	0	23	31-40	11
11:30 PM	0	0	0	1	1	13	6	0	2	0	0	0	0	0	23	36-45	19
11:45 PM	0	0	2	1	4	10	6	0	0	1	0	0	0	0	24	36-45	16
Day Total	82	26	97	217	738	1706	1819	1145	480	148	51	19	4	2	6534	36-45	3525
Percent	1.3%	0.4%	1.5%	3.3%	11.3%	26.1%	27.8%	17.5%	7.3%	2.3%	0.8%	0.3%	0.1%	0%			



AM Peak	10:15 AM	10:30 AM	10:00 AM	11:15 AM	10:30 AM	11:30 AM	7:45 AM	7:30 AM	7:15 AM	5:30 AM	5:45 AM	8:45 AM	2:45 AM	4:30 AM	7:30 AM		
15-min Vol	4	4	4	7	17	30	43	42	18	9	5	4	1	1	155		
PM Peak	3:00 PM	3:00 PM	12:30 PM	2:00 PM	5:00 PM	5:45 PM	4:45 PM	5:15 PM	12:45 PM	4:15 PM	12:45 PM	12:00 PM	12:00 PM	12:00 PM	5:15 PM		
15-min Vol	6	3	4	8	28	54	56	32	14	4	3	1	0	0	162		

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

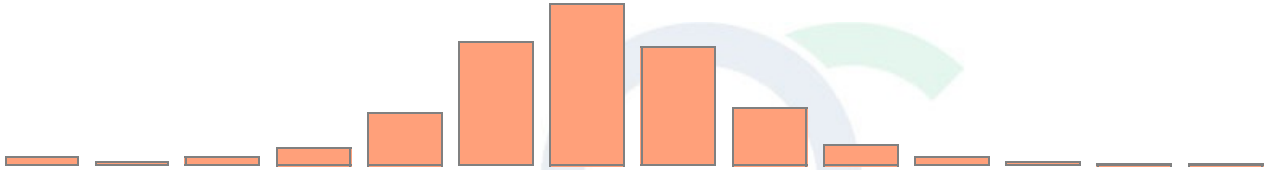
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	161	45	158	352	1144	2681	3521	2599	1252	446	162	43	11	5	12580	36-45	6202
Percent	1.3%	0.4%	1.3%	2.8%	9.1%	21.3%	28%	20.7%	10%	3.5%	1.3%	0.3%	0.1%	0%			
Cumulative Percent	1.3%	1.6%	2.9%	5.7%	14.8%	36.1%	64.1%	84.7%	94.7%	98.2%	99.5%	99.9%	100%	100%			

ADT
6290



85th Percentile: 50 MPH
Mean Speed(Average): 42 MPH
Median: 42 MPH
Mode: 43 MPH

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	14	2	0	0	0	0	0	0	0	0	0	0	0	16
12:15 AM	0	9	2	0	0	1	0	0	1	0	0	0	0	0	13
12:30 AM	0	3	4	0	0	0	0	0	0	0	0	0	0	0	7
12:45 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
01:00 AM	0	12	2	0	0	0	0	0	0	0	0	0	0	0	14
01:15 AM	0	4	2	0	0	0	0	0	0	0	0	0	0	0	6
01:30 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
01:45 AM	0	6	1	0	0	0	0	0	0	0	0	0	0	0	7
02:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	0	7
02:15 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
02:30 AM	0	3	4	0	1	2	0	0	1	0	0	0	0	0	11
02:45 AM	0	7	0	1	1	1	0	0	0	0	0	0	0	0	10
03:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
03:15 AM	0	5	3	0	1	0	0	0	0	0	0	0	0	0	9
03:30 AM	0	11	1	1	0	1	0	0	0	0	0	0	0	0	14
03:45 AM	0	6	5	0	0	0	0	0	4	0	0	0	0	0	15
04:00 AM	0	11	4	0	0	0	0	0	0	**1**	0	0	0	0	16
04:15 AM	0	9	7	0	1	0	0	0	0	0	0	0	0	0	17
04:30 AM	0	20	10	2	4	0	0	1	0	0	0	0	0	0	37
04:45 AM	0	22	17	0	3	1	0	0	2	1	0	0	0	1	47
05:00 AM	0	25	23	2	1	2	**1**	0	0	0	0	0	0	0	54
05:15 AM	0	52	14	0	3	1	0	0	2	0	0	0	0	1	73
05:30 AM	1	64	23	2	9	1	0	**3**	2	0	0	0	0	1	106
05:45 AM	0	52	20	0	7	2	0	0	5	1	0	0	0	0	87
Day Total															
Percent															
ADT 6046															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	34	14	0	2	1	0	0	2	0	0	0	0	0	53
06:15 AM	0	45	12	1	9	0	1	0	2	0	0	0	0	0	70
06:30 AM	0	57	23	0	6	1	0	1	4	0	0	0	0	0	92
06:45 AM	0	66	**24**	0	7	0	1	0	3	1	0	0	0	1	103
07:00 AM	0	56	12	2	5	1	1	2	5	1	0	0	0	0	85
07:15 AM	0	74	17	**5**	3	1	0	0	8	0	0	0	**2**	0	110
07:30 AM	**3**	**113**	24	4	6	1	0	3	3	1	0	0	0	4	**162**
07:45 AM	2	97	20	4	**12**	**6**	0	0	4	0	0	0	0	1	146
08:00 AM	1	73	18	4	3	3	0	2	8	0	0	0	0	3	115
08:15 AM	0	76	15	0	6	3	0	1	5	1	0	0	1	3	111
08:30 AM	1	63	11	1	7	1	0	0	4	0	0	0	0	2	90
08:45 AM	1	79	14	5	4	1	0	1	3	1	0	0	0	1	110
09:00 AM	3	44	19	3	0	2	0	2	5	1	0	0	0	**5**	84
09:15 AM	0	60	12	0	5	3	0	1	6	0	0	0	0	1	88
09:30 AM	0	41	12	2	2	1	0	2	3	1	0	0	0	1	65
09:45 AM	0	54	24	3	4	3	0	0	**10**	0	0	0	0	0	98
10:00 AM	0	59	22	3	10	3	0	1	7	0	0	0	0	2	107
10:15 AM	0	51	8	0	5	3	0	0	6	1	0	0	0	3	77
10:30 AM	1	44	13	2	3	3	0	0	8	0	0	0	1	2	77
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Day Total															
Percent															
ADT 6046															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	2	67	13	1	3	2	**1**	1	3	0	0	0	0	1	94
12:45 PM	2	42	17	2	9	3	0	0	**7**	1	0	0	0	0	83
01:00 PM	2	63	10	2	5	3	1	1	3	1	0	0	0	2	93
01:15 PM	1	50	14	0	5	1	0	2	1	1	0	0	0	2	77
01:30 PM	1	65	13	0	7	3	0	2	2	1	0	0	0	0	94
01:45 PM	0	70	14	3	6	3	0	2	1	**2**	0	0	0	2	103
02:00 PM	2	67	20	1	9	**6**	0	2	7	0	0	0	0	2	116
02:15 PM	0	72	22	2	7	2	0	1	5	0	0	0	0	1	112
02:30 PM	**3**	81	14	2	7	2	0	0	4	2	0	0	0	0	115
02:45 PM	1	75	19	2	3	0	0	1	5	1	0	0	0	0	107
03:00 PM	1	85	21	4	9	5	1	**4**	2	0	0	0	0	3	135
03:15 PM	0	67	14	**8**	9	1	1	0	0	0	0	0	0	1	101
03:30 PM	2	104	28	3	**13**	1	0	1	3	0	0	0	0	**5**	160
03:45 PM	1	95	16	1	5	0	0	1	0	0	0	0	0	3	122
04:00 PM	0	107	**30**	1	6	0	0	0	1	0	0	0	0	0	145
04:15 PM	2	89	23	0	2	1	1	1	0	0	0	0	0	0	119
04:30 PM	1	99	16	0	2	2	0	2	1	0	0	0	0	1	124
04:45 PM	0	98	13	0	4	1	0	0	1	0	0	0	0	0	117
05:00 PM	1	**146**	11	0	7	1	0	3	0	0	0	0	0	5	**174**
05:15 PM	1	91	19	0	9	0	0	1	0	0	0	0	0	0	121
05:30 PM	0	95	16	0	8	0	0	0	2	0	0	0	0	4	125
05:45 PM	0	88	13	2	1	1	0	1	0	0	0	0	0	1	107
Day Total															
Percent															
ADT 6046															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	0	78	16	1	7	0	0	0	0	0	0	0	0	1	103
06:15 PM	0	72	9	0	6	0	0	3	0	0	0	0	0	2	92
06:30 PM	0	62	5	0	3	0	0	0	0	0	0	0	0	0	70
06:45 PM	2	54	4	1	0	0	0	0	1	0	0	0	0	1	63
07:00 PM	1	50	10	0	1	0	0	1	0	0	0	0	0	0	63
07:15 PM	0	33	7	0	1	1	0	0	0	0	0	0	0	0	42
07:30 PM	0	40	4	0	2	0	0	0	0	0	0	0	0	1	47
07:45 PM	1	32	4	0	1	1	0	0	1	0	0	0	0	0	40
08:00 PM	0	33	5	0	1	1	0	0	1	0	0	0	0	0	41
08:15 PM	1	29	2	1	2	1	0	0	0	0	0	0	0	0	36
08:30 PM	0	27	7	0	0	1	0	1	0	0	0	0	0	0	36
08:45 PM	2	37	3	0	0	0	0	1	1	0	0	0	0	1	45
09:00 PM	0	33	3	0	0	1	0	0	0	0	0	0	0	0	37
09:15 PM	0	44	5	0	0	0	0	0	0	0	0	0	0	0	49
09:30 PM	0	30	12	0	1	0	0	0	0	0	0	0	0	0	43
09:45 PM	0	36	1	0	2	0	0	0	0	0	0	0	0	0	39
10:00 PM	0	35	3	0	2	0	0	0	0	0	0	0	0	0	40
10:15 PM	1	24	2	0	0	1	0	0	1	0	0	0	0	0	29
10:30 PM	0	28	5	0	1	0	0	0	1	0	0	0	0	0	35
10:45 PM	0	22	2	1	1	1	0	0	2	0	0	0	0	0	29
11:00 PM	1	20	8	0	1	1	0	0	0	0	0	0	0	1	32
11:15 PM	0	23	4	0	0	0	0	0	0	0	0	0	0	1	28
11:30 PM	1	11	4	0	1	0	0	0	0	0	0	0	0	0	17
11:45 PM	0	13	2	0	0	0	0	1	0	0	0	0	0	0	16
Day Total	46	4227	964	85	299	97	9	53	169	20	0	0	4	73	6046
Percent	0.8%	69.9%	15.9%	1.4%	4.9%	1.6%	0.1%	0.9%	2.8%	0.3%	0%	0%	0.1%	1.2%	
ADT 6046															
AM Peak	7:30 AM	7:30 AM	6:45 AM	7:15 AM	7:45 AM	7:45 AM	5:00 AM	5:30 AM	9:45 AM	4:00 AM	12:00 AM	12:00 AM	7:15 AM	9:00 AM	7:30 AM
15-min Vol	3	113	24	5	12	6	1	3	10	1	0	0	2	5	162
PM Peak	2:30 PM	5:00 PM	4:00 PM	3:15 PM	3:30 PM	2:00 PM	12:30 PM	3:00 PM	12:45 PM	1:45 PM	12:00 PM	12:00 PM	12:00 PM	3:30 PM	5:00 PM
15-min Vol	3	146	30	8	13	6	1	4	7	2	0	0	0	5	174

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	11	2	0	0	0	0	0	1	0	0	0	0	0	14
12:15 AM	0	9	1	0	1	1	0	0	1	0	0	0	0	0	13
12:30 AM	0	13	1	0	0	0	0	0	0	0	0	0	0	0	14
12:45 AM	0	7	2	0	0	0	0	0	0	0	0	0	0	0	9
01:00 AM	0	7	4	0	0	0	0	0	0	0	0	0	0	0	11
01:15 AM	0	6	5	0	0	1	0	0	0	0	0	0	0	0	12
01:30 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
01:45 AM	0	7	1	0	0	0	0	0	0	0	0	0	0	0	8
02:00 AM	0	7	1	0	0	1	0	0	0	0	0	0	0	0	9
02:15 AM	1	4	1	0	0	1	0	0	1	0	0	0	0	0	8
02:30 AM	0	5	2	0	0	0	0	0	0	0	0	0	0	0	7
02:45 AM	0	4	5	0	0	1	0	0	1	0	0	0	0	0	11
03:00 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	3
03:15 AM	0	8	0	0	0	0	0	1	0	0	0	0	0	0	9
03:30 AM	0	6	5	1	2	0	0	0	1	0	0	0	0	0	15
03:45 AM	1	3	3	1	1	1	0	0	0	0	0	0	0	1	11
04:00 AM	2	13	3	0	0	1	0	0	1	2	0	0	0	2	24
04:15 AM	1	11	2	0	1	1	0	1	1	0	0	0	0	0	18
04:30 AM	0	16	18	0	5	0	0	0	5	0	0	0	0	0	44
04:45 AM	0	21	16	0	2	0	0	1	2	0	0	0	0	0	42
05:00 AM	0	20	15	0	1	1	0	0	1	0	0	0	0	0	38
05:15 AM	0	60	18	0	5	2	1	0	1	0	0	0	0	0	87
05:30 AM	1	64	24	1	5	2	0	0	2	1	0	0	0	0	100
05:45 AM	0	52	23	0	5	0	0	0	2	1	0	0	1	0	84
Day Total															
Percent															
ADT 6534															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	28	13	1	4	1	0	1	6	0	0	0	0	0	54
06:15 AM	0	42	16	1	4	0	0	0	3	0	0	0	0	0	66
06:30 AM	0	56	16	0	4	1	0	0	2	0	0	0	0	0	79
06:45 AM	0	64	**31**	1	6	1	0	0	2	0	0	0	0	1	106
07:00 AM	0	69	15	2	8	4	1	1	5	2	0	0	1	1	109
07:15 AM	2	69	21	1	8	3	0	1	8	2	**1**	0	0	0	116
07:30 AM	2	**107**	17	**6**	9	4	0	1	5	**3**	0	0	0	1	**155**
07:45 AM	0	87	19	5	9	1	0	2	2	0	0	0	0	2	127
08:00 AM	1	79	12	5	8	4	0	0	1	0	0	0	0	3	113
08:15 AM	**3**	91	14	4	5	3	0	0	4	0	0	0	0	2	126
08:30 AM	1	74	11	1	7	0	0	1	5	0	0	0	0	2	102
08:45 AM	1	63	23	1	5	4	0	1	5	1	0	0	0	0	104
09:00 AM	2	57	19	3	9	3	0	0	4	0	0	0	0	1	98
09:15 AM	1	52	11	2	3	2	1	1	7	3	0	0	0	2	85
09:30 AM	0	38	11	1	5	3	0	2	7	1	0	0	0	0	68
09:45 AM	1	54	8	0	4	4	0	1	7	1	0	0	0	0	80
10:00 AM	1	40	13	1	**11**	3	0	1	6	0	0	0	0	1	77
10:15 AM	1	52	16	1	6	3	0	**3**	5	2	0	0	**2**	**4**	95
10:30 AM	1	52	18	0	8	0	0	2	7	0	0	0	1	3	92
10:45 AM	1	52	15	1	7	0	0	1	**16**	1	0	0	0	2	96
11:00 AM	1	49	14	0	5	1	0	1	8	2	0	0	0	0	81
11:15 AM	3	48	20	0	3	**5**	0	0	5	0	0	0	1	1	86
11:30 AM	1	51	20	2	11	1	0	0	1	2	0	0	1	2	92
11:45 AM	0	51	12	0	4	0	0	2	7	2	0	0	0	0	78
Day Total															
Percent															
ADT 6534															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	0	65	8	1	7	2	0	0	5	2	0	0	0	0	90
12:15 PM	0	63	11	1	2	0	0	1	3	0	0	0	0	1	82
12:30 PM	2	51	19	1	6	2	0	1	6	0	0	0	1	1	90
12:45 PM	4	66	18	3	2	3	1	3	4	0	0	0	0	2	106
01:00 PM	1	65	13	1	6	4	0	0	4	1	0	0	0	1	96
01:15 PM	0	60	12	2	4	1	0	2	5	1	0	0	0	1	88
01:30 PM	1	59	17	0	2	1	0	1	6	1	0	0	0	1	89
01:45 PM	1	48	16	1	5	2	0	0	5	0	0	0	1	1	80
02:00 PM	1	65	17	3	2	3	0	0	5	1	0	0	0	0	97
02:15 PM	3	73	24	0	7	3	1	1	9	1	0	0	1	1	124
02:30 PM	0	81	18	3	3	2	0	1	2	3	0	0	0	0	113
02:45 PM	3	76	12	1	8	3	0	3	5	0	0	0	0	3	114
03:00 PM	0	74	13	4	5	0	0	2	6	0	0	0	0	6	110
03:15 PM	0	70	15	5	5	1	0	1	3	0	0	0	0	2	102
03:30 PM	0	98	17	2	8	0	0	2	1	0	1	0	0	6	135
03:45 PM	0	73	24	2	4	0	0	0	1	0	0	0	0	0	104
04:00 PM	0	94	18	2	2	1	0	1	1	0	0	0	0	3	122
04:15 PM	2	95	19	1	6	1	0	1	0	0	0	0	0	1	126
04:30 PM	0	128	15	0	4	0	0	0	1	0	0	0	0	0	148
04:45 PM	0	104	10	1	2	0	0	3	0	0	0	0	0	1	121
05:00 PM	1	121	12	0	6	2	0	1	0	0	0	0	0	2	145
05:15 PM	2	116	35	1	5	1	0	0	0	0	0	0	0	2	162
05:30 PM	3	87	12	0	6	2	0	1	0	0	0	0	0	1	112
05:45 PM	0	99	13	0	1	1	0	0	2	0	0	0	0	2	118
Day Total															
Percent															
ADT 6534															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	0	61	7	0	4	0	0	1	1	0	0	0	0	0	74
06:15 PM	0	75	1	0	6	0	0	0	0	0	0	0	0	0	82
06:30 PM	1	51	5	0	1	2	0	1	1	0	0	0	0	2	64
06:45 PM	1	52	5	0	0	1	0	0	0	0	0	0	0	0	59
07:00 PM	0	53	4	0	0	0	0	0	1	0	0	0	0	0	58
07:15 PM	0	36	1	1	0	0	1	1	0	0	0	0	0	0	40
07:30 PM	1	35	6	0	1	1	0	0	0	0	0	0	0	0	44
07:45 PM	0	40	3	0	1	0	0	0	0	0	0	0	0	0	44
08:00 PM	0	41	2	0	0	0	0	0	0	0	0	0	0	0	43
08:15 PM	0	26	4	0	1	0	0	0	0	0	0	0	0	0	31
08:30 PM	0	28	2	0	1	0	0	0	0	0	0	0	0	0	31
08:45 PM	0	32	2	0	0	0	0	1	1	0	0	0	0	0	36
09:00 PM	0	19	2	0	0	0	0	1	0	0	0	0	0	0	22
09:15 PM	0	30	5	0	0	0	0	0	1	0	0	0	0	0	36
09:30 PM	0	41	2	0	0	0	0	0	0	0	0	0	0	1	44
09:45 PM	0	41	3	0	3	0	0	0	0	0	0	0	0	0	47
10:00 PM	0	26	3	0	0	0	0	0	0	0	0	0	0	0	29
10:15 PM	0	22	0	0	1	0	0	0	1	0	0	0	0	0	24
10:30 PM	0	29	3	0	0	0	0	0	0	0	0	0	0	0	32
10:45 PM	0	25	4	0	1	1	0	0	0	0	0	0	0	0	31
11:00 PM	0	31	2	0	0	0	0	0	1	0	0	0	0	0	34
11:15 PM	2	16	0	0	1	2	0	0	1	0	0	0	0	1	23
11:30 PM	0	20	2	0	0	1	0	0	0	0	0	0	0	0	23
11:45 PM	0	22	2	0	0	0	0	0	0	0	0	0	0	0	24
Day Total	58	4572	997	78	310	107	6	55	230	36	2	0	10	73	6534
Percent	0.9%	70%	15.3%	1.2%	4.7%	1.6%	0.1%	0.8%	3.5%	0.6%	0%	0%	0.2%	1.1%	
ADT 6534															
AM Peak	8:15 AM	7:30 AM	6:45 AM	7:30 AM	10:00 AM	11:15 AM	5:15 AM	10:15 AM	10:45 AM	7:30 AM	7:15 AM	12:00 AM	10:15 AM	10:15 AM	7:30 AM
15-min Vol	3	107	31	6	11	5	1	3	16	3	1	0	2	4	155
PM Peak	12:45 PM	4:30 PM	5:15 PM	3:15 PM	2:45 PM	1:00 PM	12:45 PM	12:45 PM	2:15 PM	2:30 PM	3:30 PM	12:00 PM	12:30 PM	3:00 PM	5:15 PM
15-min Vol	4	128	35	5	8	4	1	3	9	3	1	0	1	6	162

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	104	8799	1961	163	609	204	15	108	399	56	2	0	14	146	12580
Percent	0.8%	69.9%	15.6%	1.3%	4.8%	1.6%	0.1%	0.9%	3.2%	0.4%	0%	0%	0.1%	1.2%	
ADT 6290															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		16	14			15			15	
12:15 AM		13	13			13			13	
12:30 AM		7	14			11			11	
12:45 AM		6	9			8			8	
01:00 AM		14	11			13			13	
01:15 AM		6	12			9			9	
01:30 AM		10	9			10			10	
01:45 AM		7	8			8			8	
02:00 AM		7	9			8			8	
02:15 AM		3	8			6			6	
02:30 AM		11	7			9			9	
02:45 AM		10	11			11			11	
03:00 AM		2	3			3			3	
03:15 AM		9	9			9			9	
03:30 AM		14	15			15			15	
03:45 AM		15	11			13			13	
04:00 AM		16	24			20			20	
04:15 AM		17	18			18			18	
04:30 AM		37	44			41			41	
04:45 AM		47	42			45			45	
05:00 AM		54	38			46			46	
05:15 AM		73	87			80			80	
05:30 AM		106	100			103			103	
05:45 AM		87	84			86			86	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		53	54			54			54	
06:15 AM		70	66			68			68	
06:30 AM		92	79			86			86	
06:45 AM		103	106			105			105	
07:00 AM		85	109			97			97	
07:15 AM		110	116			113			113	
07:30 AM		**162**	**155**			**159**			**159**	
07:45 AM		146	127			137			137	
08:00 AM		115	113			114			114	
08:15 AM		111	126			119			119	
08:30 AM		90	102			96			96	
08:45 AM		110	104			107			107	
09:00 AM		84	98			91			91	
09:15 AM		88	85			87			87	
09:30 AM		65	68			67			67	
09:45 AM		98	80			89			89	
10:00 AM		107	77			92			92	
10:15 AM		77	95			86			86	
10:30 AM		77	92			85			85	
10:45 AM		0	96			48			48	
11:00 AM		0	81			41			41	
11:15 AM		0	86			43			43	
11:30 AM		0	92			46			46	
11:45 AM		0	78			39			39	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St **QC JOB #:** 15975347

SPECIFIC LOCATION: **DIRECTION:** EB

CITY/STATE: Chester, PA **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		0	90			45			45	
12:15 PM		0	82			41			41	
12:30 PM		94	90			92			92	
12:45 PM		83	106			95			95	
01:00 PM		93	96			95			95	
01:15 PM		77	88			83			83	
01:30 PM		94	89			92			92	
01:45 PM		103	80			92			92	
02:00 PM		116	97			107			107	
02:15 PM		112	124			118			118	
02:30 PM		115	113			114			114	
02:45 PM		107	114			111			111	
03:00 PM		135	110			123			123	
03:15 PM		101	102			102			102	
03:30 PM		160	135			148			148	
03:45 PM		122	104			113			113	
04:00 PM		145	122			134			134	
04:15 PM		119	126			123			123	
04:30 PM		124	148			136			136	
04:45 PM		117	121			119			119	
05:00 PM		**174**	145			**160**			**160**	
05:15 PM		121	**162**			142			142	
05:30 PM		125	112			119			119	
05:45 PM		107	118			113			113	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		103	74			89			89	
06:15 PM		92	82			87			87	
06:30 PM		70	64			67			67	
06:45 PM		63	59			61			61	
07:00 PM		63	58			61			61	
07:15 PM		42	40			41			41	
07:30 PM		47	44			46			46	
07:45 PM		40	44			42			42	
08:00 PM		41	43			42			42	
08:15 PM		36	31			34			34	
08:30 PM		36	31			34			34	
08:45 PM		45	36			41			41	
09:00 PM		37	22			30			30	
09:15 PM		49	36			43			43	
09:30 PM		43	44			44			44	
09:45 PM		39	47			43			43	
10:00 PM		40	29			35			35	
10:15 PM		29	24			27			27	
10:30 PM		35	32			34			34	
10:45 PM		29	31			30			30	
11:00 PM		32	34			33			33	
11:15 PM		28	23			26			26	
11:30 PM		17	23			20			20	
11:45 PM		16	24			20			20	
Day Total		6046	6534			6316			6316	
% Weekday Average		95.7%	103.5%							
% Week Average		95.7%	103.5%			100%				
AM Peak 15-min Vol		7:30 AM 162	7:30 AM 155			7:30 AM 159			7:30 AM 159	
PM Peak 15-min Vol		5:00 PM 174	5:15 PM 162			5:00 PM 160			5:00 PM 160	

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	2	1	3	13	7	4	0	2	0	0	0	32	41-50	20
12:15 AM	0	0	0	1	5	5	5	8	4	1	1	0	1	0	31	41-50	13
12:30 AM	0	0	2	1	1	6	8	5	1	1	1	0	0	0	26	36-45	14
12:45 AM	0	0	0	0	4	5	2	4	3	1	0	0	0	0	19	31-40	9
01:00 AM	0	0	0	1	4	5	9	3	3	1	0	0	0	0	26	36-45	14
01:15 AM	0	0	0	1	0	6	5	4	4	0	0	0	0	0	20	36-45	11
01:30 AM	0	0	1	0	2	4	8	4	2	0	0	0	0	0	21	41-50	12
01:45 AM	0	0	1	0	2	3	5	2	3	2	0	0	0	0	18	36-45	8
02:00 AM	0	0	2	1	3	3	3	3	3	0	0	0	0	0	18	31-40	6
02:15 AM	0	0	0	0	1	2	5	2	1	0	1	0	0	0	12	40-49	7
02:30 AM	0	0	0	1	1	3	10	2	4	0	1	0	0	0	22	36-45	13
02:45 AM	0	0	0	0	3	3	4	7	3	0	0	0	1	0	21	41-50	11
03:00 AM	0	0	0	0	1	1	4	7	2	3	2	0	0	0	20	41-50	11
03:15 AM	0	0	0	4	0	2	2	7	1	0	0	0	0	0	16	41-50	9
03:30 AM	0	0	4	1	1	6	7	5	0	0	0	0	0	0	24	36-45	13
03:45 AM	0	0	2	1	2	4	6	9	2	3	1	0	0	0	30	41-50	15
04:00 AM	0	0	0	1	2	5	6	8	6	1	0	0	0	0	29	41-50	14
04:15 AM	0	0	1	1	2	10	4	11	3	0	0	0	0	0	32	41-50	15
04:30 AM	1	0	0	2	6	11	11	12	8	0	2	0	0	1	54	41-50	23
04:45 AM	1	0	0	1	2	11	10	15	12	6	2	0	1	0	61	46-55	27
05:00 AM	0	1	0	2	2	8	19	18	12	6	3	0	1	0	72	41-50	37
05:15 AM	2	1	1	1	9	13	19	24	19	8	4	0	1	0	102	41-50	43
05:30 AM	0	0	0	1	4	18	30	48	28	13	5	1	0	0	148	41-50	78
05:45 AM	0	0	0	2	5	13	34	40	23	11	7	0	0	0	135	41-50	74
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	1	1	0	2	4	20	35	31	22	10	4	1	0	0	131	41-50	66
06:15 AM	2	1	2	0	6	22	44	36	20	3	2	0	1	0	139	41-50	80
06:30 AM	1	0	2	6	5	20	37	52	26	12	3	0	0	0	164	41-50	89
06:45 AM	3	0	2	2	10	25	34	66	24	13	6	1	0	0	186	41-50	100
07:00 AM	1	0	1	4	7	27	33	35	19	7	5	1	0	0	140	41-50	68
07:15 AM	0	1	0	2	14	41	42	44	32	8	6	0	1	0	191	41-50	86
07:30 AM	4	2	1	6	8	32	67	**81**	37	21	3	1	1	0	264	41-50	148
07:45 AM	4	0	3	7	**31**	**45**	61	81	36	**28**	6	**3**	0	0	**305**	41-50	142
08:00 AM	4	3	0	**10**	15	27	47	74	**41**	27	7	1	0	1	257	41-50	121
08:15 AM	5	1	4	9	24	35	66	62	35	16	**9**	0	0	1	267	41-50	128
08:30 AM	4	3	1	2	10	36	49	61	39	17	6	3	0	0	231	41-50	110
08:45 AM	2	1	3	1	15	26	**84**	49	30	13	3	0	0	0	227	41-50	133
09:00 AM	11	2	1	2	14	19	40	38	19	12	8	1	0	0	167	41-50	78
09:15 AM	6	1	2	5	12	27	54	46	12	6	3	1	0	0	175	41-50	100
09:30 AM	4	0	4	4	12	31	35	38	18	9	1	1	1	0	158	41-50	73
09:45 AM	3	1	1	3	21	30	52	35	27	6	2	0	0	1	182	41-50	87
10:00 AM	6	1	0	8	12	39	74	49	31	7	1	0	0	**3**	231	41-50	123
10:15 AM	**12**	0	3	2	4	42	64	47	29	5	4	0	0	0	212	41-50	111
10:30 AM	4	0	1	4	17	32	58	47	26	9	1	1	0	1	201	41-50	105
10:45 AM	3	0	3	1	9	34	35	17	8	5	0	0	0	0	115	36-45	69
11:00 AM	5	0	2	3	7	18	24	28	18	3	1	1	1	0	111	41-50	52
11:15 AM	4	0	2	4	11	19	25	27	17	2	0	0	0	0	111	41-50	52
11:30 AM	3	0	1	4	14	37	29	27	9	6	2	0	0	0	132	36-45	66
11:45 AM	1	**4**	2	4	9	28	40	29	24	8	2	0	0	0	151	41-50	69
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	4	1	2	2	17	31	58	28	10	4	1	0	0	0	158	36-45	89
12:15 PM	0	2	1	7	21	43	40	20	16	2	1	0	0	0	153	36-45	83
12:30 PM	8	0	1	3	20	40	85	55	22	8	4	0	0	0	246	41-50	140
12:45 PM	3	0	3	4	19	52	77	50	23	19	3	0	0	0	253	36-45	129
01:00 PM	13	**4**	5	6	13	43	45	50	30	11	1	0	0	0	221	41-50	95
01:15 PM	9	0	5	3	14	38	70	56	32	13	2	1	0	0	243	41-50	126
01:30 PM	0	0	0	5	23	49	59	64	32	21	**10**	1	1	1	266	41-50	123
01:45 PM	4	1	1	3	12	41	80	88	36	18	6	1	0	0	291	41-50	168
02:00 PM	8	0	6	2	33	48	98	87	36	10	5	2	0	0	335	41-50	185
02:15 PM	1	0	0	3	8	48	83	91	44	21	8	**4**	0	0	311	41-50	174
02:30 PM	3	0	**8**	3	25	46	114	89	**63**	**29**	6	1	0	0	387	41-50	203
02:45 PM	7	0	0	5	24	76	115	94	36	17	8	1	**3**	0	386	41-50	209
03:00 PM	7	1	1	6	29	50	139	116	39	17	6	0	0	0	411	41-50	255
03:15 PM	1	0	0	2	18	36	90	**124**	51	15	3	2	1	0	343	41-50	214
03:30 PM	**14**	0	2	3	47	100	154	115	41	15	5	2	1	0	**499**	41-50	269
03:45 PM	7	1	3	6	25	75	148	89	49	22	2	1	1	0	429	41-50	237
04:00 PM	9	1	2	4	31	82	**160**	115	51	13	4	1	0	0	473	41-50	275
04:15 PM	8	1	2	6	21	66	149	111	44	20	4	3	1	0	436	41-50	260
04:30 PM	7	2	0	4	15	68	102	119	63	14	8	2	0	0	404	41-50	221
04:45 PM	7	0	1	6	22	63	130	70	53	6	3	1	0	0	362	41-50	200
05:00 PM	8	1	4	**24**	43	**103**	146	99	32	5	4	0	0	0	469	36-45	249
05:15 PM	7	1	6	21	**49**	94	88	74	21	10	3	0	0	0	374	36-45	182
05:30 PM	13	0	2	11	26	85	119	91	32	14	0	1	0	0	394	41-50	210
05:45 PM	3	1	1	5	21	67	84	77	37	12	0	1	0	0	309	41-50	161
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

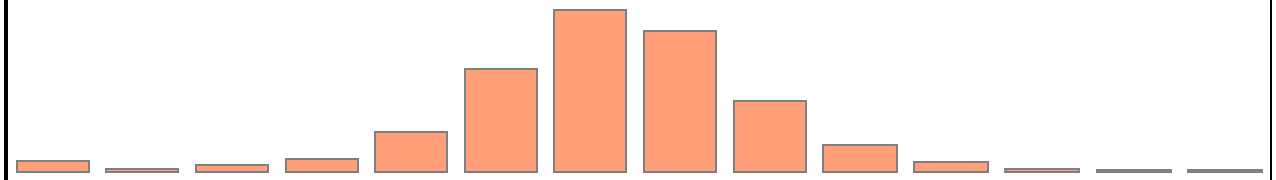
Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	9	0	3	10	22	55	89	80	39	12	0	2	0	0	321	41-50	169
06:15 PM	4	0	4	6	16	63	50	39	28	5	3	0	0	0	218	36-45	113
06:30 PM	0	0	2	2	14	39	48	37	30	4	2	0	0	0	178	36-45	87
06:45 PM	2	1	0	4	11	33	48	33	12	7	2	0	0	1	154	36-45	81
07:00 PM	0	1	1	4	15	25	41	22	17	4	0	0	0	0	130	36-45	66
07:15 PM	2	0	2	2	11	27	33	30	8	3	1	1	0	0	120	41-50	63
07:30 PM	2	0	1	3	1	23	35	18	8	6	4	1	0	0	102	36-45	58
07:45 PM	0	1	1	1	8	18	26	27	15	5	0	0	0	0	102	41-50	53
08:00 PM	3	0	1	1	9	14	29	22	16	5	2	1	0	0	103	41-50	51
08:15 PM	0	0	2	2	1	20	13	25	13	12	1	3	1	0	93	45-54	38
08:30 PM	1	0	0	4	4	14	31	21	12	2	1	0	0	**2**	92	41-50	52
08:45 PM	6	0	1	3	5	14	40	19	11	6	1	1	1	1	109	41-50	59
09:00 PM	0	0	0	2	2	12	26	31	8	2	1	2	0	0	86	41-50	57
09:15 PM	1	1	0	4	12	20	22	15	14	4	2	1	0	0	96	36-45	42
09:30 PM	1	0	1	7	8	22	18	25	11	4	3	1	0	0	101	41-50	43
09:45 PM	0	0	0	1	6	15	25	18	9	5	1	1	0	0	81	41-50	43
10:00 PM	0	0	5	3	6	22	30	23	9	4	0	0	1	0	103	41-50	53
10:15 PM	0	2	1	0	3	10	17	22	8	6	1	0	0	0	70	41-50	39
10:30 PM	3	0	1	4	6	22	16	19	16	4	0	0	0	1	92	36-45	38
10:45 PM	0	0	1	1	10	18	8	14	3	1	3	0	0	0	59	31-40	28
11:00 PM	1	1	3	4	8	6	18	23	12	3	0	1	0	0	80	41-50	41
11:15 PM	2	0	3	2	6	22	12	7	4	2	1	1	0	0	62	36-45	34
11:30 PM	0	0	1	2	6	6	14	7	4	3	0	0	0	0	43	41-50	21
11:45 PM	0	0	0	1	2	9	15	10	4	2	0	0	0	0	43	41-50	25
Day Total	285	48	145	337	1122	2835	4495	3914	1954	757	243	58	21	14	16228	41-50	8409
Percent	1.8%	0.3%	0.9%	2.1%	6.9%	17.5%	27.7%	24.1%	12%	4.7%	1.5%	0.4%	0.1%	0.1%			
AM Peak	10:15 AM	11:45 AM	3:30 AM	8:00 AM	7:45 AM	7:45 AM	8:45 AM	7:30 AM	8:00 AM	7:45 AM	8:15 AM	7:45 AM	12:15 AM	10:00 AM	7:45 AM		
15-min Vol	12	4	4	10	31	45	84	81	41	28	9	3	1	3	305		
PM Peak	3:30 PM	1:00 PM	2:30 PM	5:00 PM	5:15 PM	5:00 PM	4:00 PM	3:15 PM	2:30 PM	2:30 PM	1:30 PM	2:15 PM	2:45 PM	8:30 PM	3:30 PM		
15-min Vol	14	4	8	24	49	103	160	124	63	29	10	4	3	2	499		



Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	3	6	7	9	5	2	3	2	0	0	0	37	36-45	16
12:15 AM	0	0	0	0	2	10	6	3	3	1	2	0	0	0	27	36-45	16
12:30 AM	0	0	1	1	1	7	10	5	8	1	1	0	0	0	35	36-45	17
12:45 AM	0	0	1	0	1	4	4	6	6	3	0	1	0	0	26	46-55	12
01:00 AM	0	0	0	0	2	6	7	4	7	3	1	0	0	**2**	32	36-45	13
01:15 AM	0	0	1	0	1	4	4	5	1	2	2	0	0	0	20	41-50	9
01:30 AM	0	1	0	0	4	4	8	7	1	0	0	0	0	0	25	41-50	15
01:45 AM	0	0	1	1	0	6	2	4	5	2	0	0	0	0	21	46-55	9
02:00 AM	0	0	0	1	2	8	5	4	2	0	0	0	0	0	22	36-45	13
02:15 AM	1	0	0	0	3	3	13	4	3	0	0	0	0	0	27	41-50	17
02:30 AM	1	1	1	1	1	3	1	6	0	0	1	0	0	0	16	41-50	7
02:45 AM	0	0	0	0	3	4	7	4	1	0	1	0	1	0	21	39-48	11
03:00 AM	0	0	0	0	1	1	5	5	5	1	0	0	0	0	18	41-50	10
03:15 AM	0	0	0	0	0	5	6	11	1	2	1	0	0	0	26	41-50	17
03:30 AM	0	0	1	0	4	8	7	2	1	0	0	0	0	0	23	36-45	15
03:45 AM	2	0	0	1	3	5	3	4	0	2	1	0	0	0	21	31-40	8
04:00 AM	3	0	1	1	6	4	8	10	4	0	0	1	0	0	38	41-50	18
04:15 AM	0	0	1	2	5	6	9	7	0	5	0	0	0	0	35	41-50	16
04:30 AM	0	0	0	3	3	13	17	13	11	2	1	0	0	1	64	41-50	30
04:45 AM	0	0	0	3	2	4	15	15	7	7	1	3	0	0	57	41-50	30
05:00 AM	0	0	0	0	0	8	13	15	10	5	0	0	0	1	52	41-50	28
05:15 AM	0	0	0	1	6	13	26	31	16	7	4	1	1	2	108	41-50	57
05:30 AM	1	0	1	0	5	18	37	38	16	11	3	1	0	0	131	41-50	75
05:45 AM	2	0	1	0	1	8	33	43	18	10	5	1	0	0	122	41-50	76
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	0	0	1	0	8	14	23	43	22	9	2	0	0	0	122	41-50	66
06:15 AM	2	0	2	0	4	17	27	42	29	11	5	0	0	0	139	46-55	71
06:30 AM	1	1	2	1	5	28	53	36	17	8	2	2	0	0	156	41-50	89
06:45 AM	1	0	1	2	12	40	53	46	25	11	1	0	0	0	192	41-50	99
07:00 AM	1	1	3	5	16	22	44	42	17	8	3	**5**	0	0	167	41-50	86
07:15 AM	1	0	2	4	9	41	62	59	31	9	2	0	0	0	220	41-50	121
07:30 AM	4	1	2	9	16	35	68	68	26	15	4	0	1	0	249	41-50	136
07:45 AM	5	0	2	7	17	35	70	70	**41**	8	6	1	0	0	262	41-50	140
08:00 AM	5	0	5	12	27	47	58	55	27	11	3	0	0	2	252	41-50	113
08:15 AM	5	2	4	4	21	35	**73**	**73**	35	**18**	**9**	3	0	0	**282**	41-50	146
08:30 AM	9	0	4	10	18	41	63	43	33	15	5	3	1	0	245	41-50	106
08:45 AM	8	2	3	4	20	43	42	59	31	9	6	5	0	0	232	41-50	101
09:00 AM	1	0	2	5	9	27	53	66	31	8	5	2	0	0	209	41-50	119
09:15 AM	**10**	1	2	6	6	30	41	39	18	10	2	0	1	0	166	41-50	80
09:30 AM	4	1	6	11	22	40	41	25	8	7	2	0	0	0	167	36-45	81
09:45 AM	1	2	3	4	15	33	45	31	21	10	2	0	0	0	167	36-45	78
10:00 AM	0	3	4	6	26	45	35	28	8	6	3	0	**2**	0	166	36-45	80
10:15 AM	5	0	3	4	18	49	59	23	13	6	3	3	0	0	186	36-45	108
10:30 AM	4	**8**	**7**	4	**33**	41	61	25	22	1	2	2	0	0	210	36-45	102
10:45 AM	5	2	4	**13**	22	46	68	24	15	3	0	0	0	0	202	36-45	114
11:00 AM	2	0	3	4	19	34	49	37	16	6	3	0	0	0	173	41-50	86
11:15 AM	2	0	4	11	24	37	50	31	15	5	1	0	0	0	180	36-45	87
11:30 AM	3	1	2	5	24	**51**	63	22	13	3	1	0	0	0	188	36-45	114
11:45 AM	2	0	2	6	15	39	50	26	21	7	3	0	0	0	171	36-45	89
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	1	0	0	11	17	42	49	41	10	6	2	**1**	0	0	180	36-45	91
12:15 PM	4	0	3	8	19	43	53	28	21	12	1	0	0	0	192	36-45	96
12:30 PM	1	0	5	8	17	46	35	49	22	8	1	0	0	0	192	41-50	84
12:45 PM	4	1	4	8	30	44	47	35	28	6	**4**	1	0	0	212	36-45	91
01:00 PM	9	1	4	8	35	41	48	61	23	9	3	0	0	0	242	41-50	109
01:15 PM	4	2	2	9	26	37	66	39	23	6	2	0	0	**1**	217	41-50	105
01:30 PM	4	2	5	7	35	44	58	44	12	5	2	1	0	0	219	36-45	102
01:45 PM	7	2	7	10	25	48	44	43	14	4	1	0	0	1	206	36-45	92
02:00 PM	1	0	2	13	25	65	70	44	**30**	**14**	1	1	0	0	266	36-45	135
02:15 PM	6	1	6	10	35	67	76	59	16	3	2	0	0	0	281	36-45	143
02:30 PM	4	0	4	10	49	96	93	52	25	7	2	0	0	0	342	36-45	189
02:45 PM	7	0	8	**24**	35	98	99	41	12	3	2	1	0	0	330	36-45	197
03:00 PM	11	**5**	4	21	40	118	80	46	9	3	0	0	0	0	337	36-45	198
03:15 PM	7	1	5	10	43	100	103	43	11	1	0	0	0	0	324	36-45	203
03:30 PM	**12**	0	6	18	**71**	98	98	**69**	17	3	0	0	0	0	392	36-45	196
03:45 PM	4	0	0	1	51	109	90	60	21	3	0	0	0	0	339	36-45	199
04:00 PM	9	5	4	10	63	119	119	56	19	6	1	0	0	0	411	36-45	238
04:15 PM	8	2	5	14	31	120	115	46	17	6	0	0	0	0	364	36-45	235
04:30 PM	6	0	2	3	31	**179**	122	62	12	2	0	0	0	0	**419**	36-45	301
04:45 PM	3	0	1	3	37	103	113	62	15	0	0	0	0	0	337	36-45	216
05:00 PM	3	0	9	8	43	121	**137**	58	15	2	0	0	0	0	396	36-45	258
05:15 PM	6	0	1	9	45	122	114	69	9	5	0	0	0	0	380	36-45	236
05:30 PM	2	0	4	8	34	111	110	36	8	1	0	0	0	0	314	36-45	221
05:45 PM	3	0	0	4	33	109	68	41	10	1	0	0	0	0	269	36-45	177
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

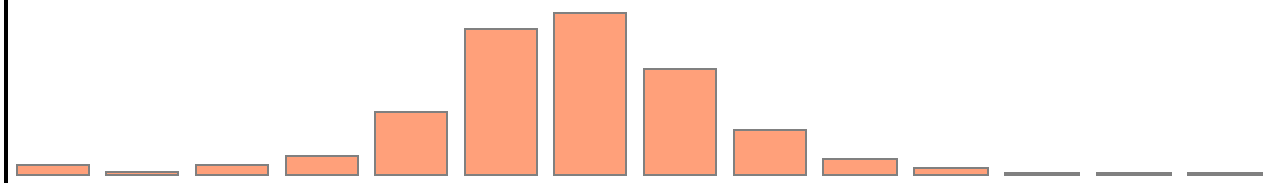
Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	6	1	10	5	32	62	84	37	15	1	0	0	0	0	253	36-45	146
06:15 PM	1	0	1	0	21	78	64	19	10	0	0	0	0	0	194	36-45	142
06:30 PM	3	1	1	10	23	51	46	33	2	1	0	0	0	0	171	36-45	97
06:45 PM	2	2	1	8	16	41	56	10	11	1	0	0	0	0	148	36-45	97
07:00 PM	0	0	0	3	14	35	43	26	8	3	0	0	0	0	132	36-45	78
07:15 PM	0	0	1	4	18	35	29	20	5	1	1	0	0	0	114	36-45	64
07:30 PM	2	2	0	5	11	25	35	12	15	4	1	0	0	0	112	36-45	60
07:45 PM	2	0	2	4	11	32	21	17	7	1	1	0	0	0	98	36-45	53
08:00 PM	1	2	1	3	12	43	29	9	1	2	0	0	0	0	103	36-45	72
08:15 PM	0	1	0	0	8	24	32	18	0	1	0	0	0	0	84	36-45	56
08:30 PM	0	0	0	3	14	25	21	10	3	1	0	0	0	0	77	36-45	46
08:45 PM	0	0	2	3	19	27	25	6	4	0	0	0	0	0	86	36-45	52
09:00 PM	2	0	1	1	4	18	25	14	5	0	0	0	0	0	70	36-45	43
09:15 PM	0	0	2	3	4	25	29	12	4	1	0	0	0	0	80	36-45	54
09:30 PM	2	0	1	4	13	25	32	11	1	0	0	0	0	0	89	36-45	57
09:45 PM	1	1	1	1	12	29	33	13	4	1	0	0	0	0	96	36-45	62
10:00 PM	0	0	1	4	11	25	29	16	5	0	0	0	0	0	91	36-45	54
10:15 PM	0	0	4	1	8	24	40	17	3	1	0	0	0	0	98	36-45	64
10:30 PM	3	0	1	5	6	23	19	22	8	0	1	0	0	0	88	36-45	42
10:45 PM	0	0	2	2	11	16	22	10	3	0	0	0	0	0	66	36-45	38
11:00 PM	1	0	2	3	12	24	15	18	7	0	1	0	0	0	83	36-45	39
11:15 PM	1	0	4	4	12	20	13	4	1	1	0	0	0	0	60	36-45	33
11:30 PM	1	0	0	2	6	21	11	3	2	0	1	0	0	0	47	36-45	32
11:45 PM	1	0	3	4	12	24	17	4	4	2	0	0	0	0	71	36-45	41
Day Total	246	59	215	472	1648	3861	4283	2809	1190	409	131	39	7	10	15379	36-45	8144
Percent	1.6%	0.4%	1.4%	3.1%	10.7%	25.1%	27.8%	18.3%	7.7%	2.7%	0.9%	0.3%	0%	0.1%			
AM Peak	9:15 AM	10:30 AM	10:30 AM	10:45 AM	10:30 AM	11:30 AM	8:15 AM	8:15 AM	7:45 AM	8:15 AM	8:15 AM	7:00 AM	10:00 AM	1:00 AM	8:15 AM		
15-min Vol	10	8	7	13	33	51	73	73	41	18	9	5	2	2	282		
PM Peak	3:30 PM	3:00 PM	6:00 PM	2:45 PM	3:30 PM	4:30 PM	5:00 PM	3:30 PM	2:00 PM	2:00 PM	12:45 PM	12:00 PM	12:00 PM	1:15 PM	4:30 PM		
15-min Vol	12	5	10	24	71	179	137	69	30	14	4	1	0	1	419		



Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

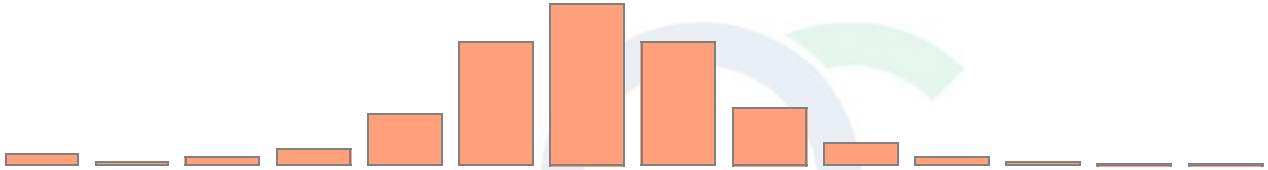
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	531	107	360	809	2770	6696	8778	6723	3144	1166	374	97	28	24	31607	41-50	15501
Percent	1.7%	0.3%	1.1%	2.6%	8.8%	21.2%	27.8%	21.3%	9.9%	3.7%	1.2%	0.3%	0.1%	0.1%			
Cumulative Percent	1.7%	2%	3.2%	5.7%	14.5%	35.7%	63.4%	84.7%	94.7%	98.3%	99.5%	99.8%	99.9%	100%			

ADT
15803



85th Percentile: 50 MPH
Mean Speed(Average): 42 MPH
Median: 42 MPH
Mode: 43 MPH

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	26	6	0	0	0	0	0	0	0	0	0	0	0	32
12:15 AM	0	26	2	0	1	1	0	0	1	0	0	0	0	0	31
12:30 AM	0	17	7	0	0	0	0	1	1	0	0	0	0	0	26
12:45 AM	0	17	1	0	1	0	0	0	0	0	0	0	0	0	19
01:00 AM	0	22	4	0	0	0	0	0	0	0	0	0	0	0	26
01:15 AM	0	17	2	0	1	0	0	0	0	0	0	0	0	0	20
01:30 AM	0	14	4	1	1	0	0	0	1	0	0	0	0	0	21
01:45 AM	0	14	4	0	0	0	0	0	0	0	0	0	0	0	18
02:00 AM	0	15	2	0	1	0	0	0	0	0	0	0	0	0	18
02:15 AM	0	11	1	0	0	0	0	0	0	0	0	0	0	0	12
02:30 AM	0	11	7	0	1	2	0	0	1	0	0	0	0	0	22
02:45 AM	0	15	2	1	1	2	0	0	0	0	0	0	0	0	21
03:00 AM	0	14	3	0	1	0	0	0	2	0	0	0	0	0	20
03:15 AM	0	11	3	0	2	0	0	0	0	0	0	0	0	0	16
03:30 AM	0	18	3	2	0	1	0	0	0	0	0	0	0	0	24
03:45 AM	0	20	6	0	0	0	0	0	4	0	0	0	0	0	30
04:00 AM	0	22	4	0	0	2	0	0	0	1	0	0	0	0	29
04:15 AM	0	15	10	0	3	3	0	0	1	0	0	0	0	0	32
04:30 AM	1	26	16	2	4	2	0	1	1	0	0	0	0	1	54
04:45 AM	0	33	18	0	4	1	0	0	3	1	0	0	0	1	61
05:00 AM	0	38	24	2	5	2	1	0	0	0	0	0	0	0	72
05:15 AM	0	68	21	2	5	2	0	0	2	0	0	0	0	2	102
05:30 AM	1	87	31	3	17	1	0	3	4	0	0	0	0	1	148
05:45 AM	0	82	32	0	12	2	0	0	5	1	0	0	0	1	135
Day Total															
Percent															
ADT 16228															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	84	32	0	8	1	0	0	5	0	0	0	0	1	131
06:15 AM	0	86	27	2	16	1	1	1	3	0	0	0	0	2	139
06:30 AM	0	102	39	0	13	1	1	1	5	1	0	0	0	1	164
06:45 AM	1	118	36	1	15	4	1	1	5	1	0	0	0	3	186
07:00 AM	0	86	23	6	11	2	1	2	7	1	0	0	0	1	140
07:15 AM	0	123	28	**14**	11	2	0	1	8	2	0	0	**2**	0	191
07:30 AM	3	177	41	5	14	1	0	5	12	1	0	0	1	4	264
07:45 AM	**5**	**195**	48	9	**23**	8	0	2	10	1	0	0	0	4	**305**
08:00 AM	1	168	41	7	13	5	0	**6**	12	0	0	0	0	4	257
08:15 AM	2	171	44	6	14	7	1	2	10	2	0	0	1	7	267
08:30 AM	1	172	24	2	12	4	0	2	8	1	**1**	0	0	4	231
08:45 AM	1	166	27	8	9	2	0	2	8	2	0	0	0	2	227
09:00 AM	3	103	26	4	5	3	0	4	8	1	0	0	0	10	167
09:15 AM	0	100	36	0	13	3	0	3	14	1	0	0	0	5	175
09:30 AM	1	90	26	4	13	5	0	3	11	2	0	0	0	3	158
09:45 AM	1	96	38	4	12	4	**2**	0	**20**	2	0	0	1	2	182
10:00 AM	1	117	**50**	9	18	8	0	6	17	0	0	0	0	5	231
10:15 AM	0	131	26	1	16	4	1	3	15	1	0	0	1	**13**	212
10:30 AM	1	114	35	6	14	**9**	1	1	11	**4**	0	0	2	3	201
10:45 AM	2	57	19	3	11	8	1	2	7	0	0	0	2	3	115
11:00 AM	0	54	29	4	3	2	1	1	9	1	0	0	0	7	111
11:15 AM	0	61	15	2	9	5	0	1	12	0	0	0	2	4	111
11:30 AM	0	72	24	4	15	4	1	0	7	2	0	0	0	3	132
11:45 AM	1	78	37	5	9	4	0	5	9	2	0	0	0	1	151
Day Total															
Percent															
ADT 16228															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	1	90	26	1	16	5	0	5	8	2	0	0	0	4	158
12:15 PM	2	100	22	3	12	3	2	3	6	0	0	0	0	0	153
12:30 PM	6	154	41	4	13	7	**3**	3	8	1	0	0	**1**	5	246
12:45 PM	2	141	42	6	22	7	2	3	**20**	4	0	0	1	3	253
01:00 PM	4	135	36	3	14	6	3	3	6	1	0	0	1	9	221
01:15 PM	1	146	40	5	20	5	1	5	10	1	0	0	0	9	243
01:30 PM	1	168	47	4	19	5	1	5	11	2	0	0	1	2	266
01:45 PM	0	184	41	7	28	4	0	5	10	5	1	0	1	5	291
02:00 PM	3	189	71	2	22	**14**	0	7	13	4	0	0	1	9	335
02:15 PM	2	195	64	5	24	6	1	2	10	1	0	0	0	1	311
02:30 PM	8	238	77	8	27	3	2	6	8	**7**	0	0	0	3	387
02:45 PM	8	248	71	5	19	3	2	11	10	1	0	1	0	7	386
03:00 PM	5	243	81	8	32	9	1	**14**	7	2	0	0	0	9	411
03:15 PM	0	228	57	**11**	30	4	1	4	5	1	0	1	0	1	343
03:30 PM	4	306	**98**	8	**34**	3	2	14	8	2	**3**	0	1	**16**	**499**
03:45 PM	4	288	79	7	22	4	1	3	7	5	0	0	1	8	429
04:00 PM	5	333	77	3	22	5	0	9	6	3	0	0	0	10	473
04:15 PM	**9**	292	83	3	19	6	1	9	4	2	0	0	0	8	436
04:30 PM	3	289	64	2	13	5	0	9	8	2	0	**2**	1	6	404
04:45 PM	5	265	51	0	21	3	0	3	4	1	1	0	0	8	362
05:00 PM	6	**354**	62	4	19	2	1	12	1	0	0	0	0	8	469
05:15 PM	4	270	50	1	26	2	3	7	1	1	1	0	0	8	374
05:30 PM	1	281	59	1	26	3	1	2	4	1	0	1	0	14	394
05:45 PM	3	234	43	4	10	1	0	6	1	1	0	1	0	5	309
Day Total															
Percent															
ADT															
16228															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	3	232	49	1	21	3	0	2	0	0	0	0	0	10	321
06:15 PM	0	166	26	2	10	1	0	6	2	0	0	0	0	5	218
06:30 PM	0	139	28	0	7	0	1	2	1	0	0	0	0	0	178
06:45 PM	2	124	13	4	4	0	0	2	4	0	0	0	0	1	154
07:00 PM	1	103	22	1	2	0	0	1	0	0	0	0	0	0	130
07:15 PM	0	90	18	0	9	1	0	0	0	0	0	0	0	2	120
07:30 PM	0	81	13	0	5	0	0	0	0	0	0	1	0	2	102
07:45 PM	1	83	10	0	3	1	0	1	3	0	0	0	0	0	102
08:00 PM	0	75	19	0	3	2	0	0	2	0	0	0	0	2	103
08:15 PM	2	70	16	1	2	1	0	1	0	0	0	0	0	0	93
08:30 PM	0	66	22	0	0	1	0	2	1	0	0	0	0	0	92
08:45 PM	2	84	15	0	3	1	0	1	1	0	0	0	0	2	109
09:00 PM	0	73	9	0	2	1	0	0	1	0	0	0	0	0	86
09:15 PM	0	76	17	0	2	0	0	0	0	0	0	0	0	1	96
09:30 PM	1	75	20	0	3	1	0	0	0	0	0	0	0	1	101
09:45 PM	0	69	7	0	4	0	0	0	1	0	0	0	0	0	81
10:00 PM	1	78	16	0	5	1	0	0	1	0	0	1	0	0	103
10:15 PM	1	53	9	0	4	1	0	0	2	0	0	0	0	0	70
10:30 PM	1	68	16	0	4	1	0	0	1	0	0	0	0	1	92
10:45 PM	0	49	3	1	2	1	0	0	3	0	0	0	0	0	59
11:00 PM	1	52	18	0	4	1	0	0	2	0	0	0	0	2	80
11:15 PM	0	49	11	0	0	0	0	0	0	0	0	0	0	2	62
11:30 PM	1	33	7	0	1	1	0	0	0	0	0	0	0	0	43
11:45 PM	0	35	4	0	2	1	0	1	0	0	0	0	0	0	43
Day Total	130	10754	2754	234	969	253	42	228	460	81	7	8	21	287	16228
Percent	0.8%	66.3%	17%	1.4%	6%	1.6%	0.3%	1.4%	2.8%	0.5%	0%	0%	0.1%	1.8%	
ADT 16228															
AM Peak	7:45 AM	7:45 AM	10:00 AM	7:15 AM	7:45 AM	10:30 AM	9:45 AM	8:00 AM	9:45 AM	10:30 AM	8:30 AM	12:00 AM	7:15 AM	10:15 AM	7:45 AM
15-min Vol	5	195	50	14	23	9	2	6	20	4	1	0	2	13	305
PM Peak	4:15 PM	5:00 PM	3:30 PM	3:15 PM	3:30 PM	2:00 PM	12:30 PM	3:00 PM	12:45 PM	2:30 PM	3:30 PM	4:30 PM	12:30 PM	3:30 PM	3:30 PM
15-min Vol	9	354	98	11	34	14	3	14	20	7	3	2	1	16	499

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	31	5	0	0	0	0	0	1	0	0	0	0	0	37
12:15 AM	0	19	4	0	2	1	0	0	1	0	0	0	0	0	27
12:30 AM	0	25	7	0	1	0	0	1	1	0	0	0	0	0	35
12:45 AM	0	18	6	0	0	0	0	1	1	0	0	0	0	0	26
01:00 AM	0	21	11	0	0	0	0	0	0	0	0	0	0	0	32
01:15 AM	0	12	7	0	0	1	0	0	0	0	0	0	0	0	20
01:30 AM	0	23	2	0	0	0	0	0	0	0	0	0	0	0	25
01:45 AM	0	19	2	0	0	0	0	0	0	0	0	0	0	0	21
02:00 AM	0	15	5	0	1	1	0	0	0	0	0	0	0	0	22
02:15 AM	1	17	5	0	0	2	0	0	1	0	0	0	0	1	27
02:30 AM	0	9	3	0	2	0	0	0	1	0	0	0	0	1	16
02:45 AM	0	13	6	0	0	1	0	0	1	0	0	0	0	0	21
03:00 AM	0	13	4	0	1	0	0	0	0	0	0	0	0	0	18
03:15 AM	0	22	3	0	0	0	0	1	0	0	0	0	0	0	26
03:30 AM	0	11	7	1	2	0	0	0	2	0	0	0	0	0	23
03:45 AM	1	11	5	1	1	1	0	0	0	0	0	0	0	1	21
04:00 AM	2	20	6	0	1	2	0	0	3	2	0	0	0	2	38
04:15 AM	1	21	6	0	3	1	0	1	2	0	0	0	0	0	35
04:30 AM	0	27	23	0	7	2	0	0	5	0	0	0	0	0	64
04:45 AM	0	29	21	0	4	0	0	1	2	0	0	0	0	0	57
05:00 AM	0	30	18	0	2	1	0	0	1	0	0	0	0	0	52
05:15 AM	0	73	22	0	5	1	1	1	1	0	0	0	0	0	108
05:30 AM	1	80	29	2	10	2	0	2	3	1	0	0	0	1	131
05:45 AM	0	80	29	0	7	0	0	0	2	1	0	0	1	2	122
Day Total															
Percent															
ADT 15379															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	65	30	1	14	3	0	2	7	0	0	0	0	0	122
06:15 AM	0	86	33	2	10	0	0	2	3	1	0	0	0	2	139
06:30 AM	1	103	32	1	10	1	1	0	5	1	0	0	0	1	156
06:45 AM	0	117	**50**	1	13	3	0	1	6	0	0	0	0	1	192
07:00 AM	0	107	28	3	11	5	1	1	7	2	0	0	1	1	167
07:15 AM	2	131	32	10	**22**	5	0	1	11	**4**	**1**	0	0	1	220
07:30 AM	3	157	35	9	16	4	0	4	13	4	0	0	0	4	249
07:45 AM	0	162	43	7	21	7	1	**7**	9	0	0	0	0	5	262
08:00 AM	2	166	34	**12**	16	4	0	3	8	1	0	0	0	6	252
08:15 AM	4	**201**	38	6	12	4	0	2	7	3	0	0	0	5	**282**
08:30 AM	**5**	156	32	4	20	1	0	3	15	1	0	0	0	**8**	245
08:45 AM	2	131	46	8	18	**8**	0	1	10	2	0	0	0	6	232
09:00 AM	3	121	44	4	17	4	0	2	12	1	0	0	0	1	209
09:15 AM	3	101	24	2	7	4	1	1	15	3	0	0	0	5	166
09:30 AM	0	86	35	4	10	8	0	3	15	1	0	0	1	4	167
09:45 AM	1	99	23	1	18	6	0	3	12	2	0	0	1	1	167
10:00 AM	1	88	31	4	22	4	0	2	11	2	0	0	0	1	166
10:15 AM	1	100	38	5	14	3	0	6	10	2	0	0	2	5	186
10:30 AM	2	116	42	4	17	3	0	3	17	0	0	0	1	5	210
10:45 AM	1	121	31	2	11	3	0	4	**21**	3	0	0	0	5	202
11:00 AM	3	90	36	1	15	4	0	3	15	4	0	0	0	2	173
11:15 AM	5	100	38	1	8	5	0	1	15	1	0	0	**3**	3	180
11:30 AM	2	98	44	2	16	3	1	0	15	2	0	0	1	4	188
11:45 AM	0	99	39	0	11	1	0	3	14	2	0	0	0	2	171
Day Total															
Percent															
ADT 15379															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	2	122	20	2	14	3	0	1	12	3	0	0	0	1	180
12:15 PM	1	122	37	5	10	2	0	3	8	2	0	0	0	2	192
12:30 PM	3	116	35	1	13	2	0	3	**16**	1	0	0	1	1	192
12:45 PM	4	123	33	**9**	8	7	1	7	12	2	0	0	1	5	212
01:00 PM	2	151	38	5	13	**8**	0	5	12	1	0	0	0	7	242
01:15 PM	1	133	46	3	14	4	0	2	8	2	0	0	0	4	217
01:30 PM	1	128	45	2	14	3	1	2	15	2	0	1	2	3	219
01:45 PM	2	122	36	3	17	4	0	0	14	0	0	0	2	6	206
02:00 PM	2	165	58	6	14	4	0	3	10	3	0	0	0	1	266
02:15 PM	5	158	56	6	21	6	**3**	2	15	1	0	0	**3**	5	281
02:30 PM	3	209	64	6	22	5	2	**13**	7	**7**	0	0	0	4	342
02:45 PM	8	224	45	2	23	6	1	8	6	2	0	0	0	5	330
03:00 PM	3	205	61	9	**25**	1	1	8	10	0	0	0	1	13	337
03:15 PM	3	215	58	8	14	2	0	6	6	5	0	0	0	7	324
03:30 PM	**9**	250	73	4	23	1	1	9	5	2	**1**	0	0	**14**	392
03:45 PM	4	219	**75**	2	19	3	1	6	5	1	0	0	1	3	339
04:00 PM	6	295	66	4	12	5	1	6	5	0	1	1	0	9	411
04:15 PM	8	244	70	1	22	5	1	4	0	1	0	0	0	8	364
04:30 PM	5	**324**	54	0	11	2	0	8	4	2	1	0	1	7	**419**
04:45 PM	2	267	39	1	10	5	0	8	1	0	0	0	0	4	337
05:00 PM	3	308	53	1	19	2	0	4	1	1	0	0	0	4	396
05:15 PM	6	278	66	3	15	2	0	3	1	0	0	0	0	6	380
05:30 PM	3	246	35	2	12	2	0	6	4	1	0	**2**	0	1	314
05:45 PM	1	220	32	0	5	1	2	2	2	0	0	0	1	3	269
Day Total															
Percent															
ADT 15379															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

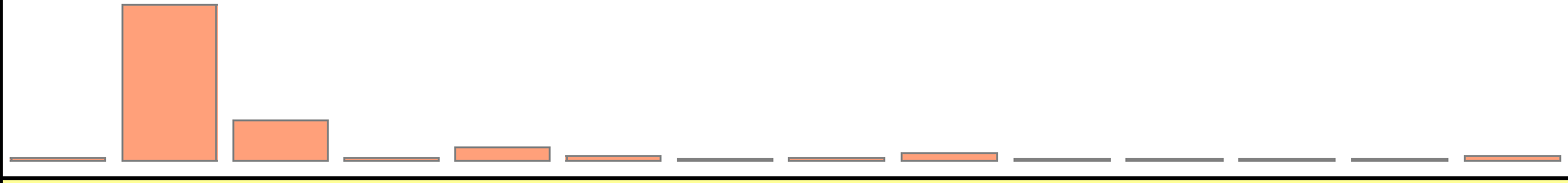
Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	1	201	32	0	7	1	0	2	2	0	0	1	0	6	253
06:15 PM	1	159	21	1	8	1	0	0	2	0	0	0	0	1	194
06:30 PM	3	139	15	0	3	2	0	3	2	1	0	0	0	3	171
06:45 PM	2	115	17	2	5	2	0	2	1	0	0	0	0	2	148
07:00 PM	0	112	17	0	1	0	0	0	1	0	0	1	0	0	132
07:15 PM	1	91	10	2	8	0	1	1	0	0	0	0	0	0	114
07:30 PM	2	87	16	0	2	2	0	0	1	0	0	0	0	2	112
07:45 PM	1	84	7	0	4	0	0	0	0	0	0	0	0	2	98
08:00 PM	1	88	11	0	0	1	0	1	1	0	0	0	0	0	103
08:15 PM	0	68	14	0	2	0	0	0	0	0	0	0	0	0	84
08:30 PM	0	71	5	0	1	0	0	0	0	0	0	0	0	0	77
08:45 PM	1	65	17	0	1	0	0	1	1	0	0	0	0	0	86
09:00 PM	0	56	6	0	2	2	0	2	0	0	0	0	0	2	70
09:15 PM	0	68	9	0	0	0	0	0	3	0	0	0	0	0	80
09:30 PM	1	77	7	0	1	0	0	0	1	0	0	0	0	2	89
09:45 PM	1	80	9	0	5	0	0	0	0	0	0	0	0	1	96
10:00 PM	0	68	19	0	2	0	0	0	2	0	0	0	0	0	91
10:15 PM	1	81	7	0	3	1	0	2	3	0	0	0	0	0	98
10:30 PM	1	69	13	0	3	0	0	1	0	0	0	0	0	1	88
10:45 PM	0	53	9	0	2	1	1	0	0	0	0	0	0	0	66
11:00 PM	0	68	8	0	4	0	0	1	1	0	0	0	0	1	83
11:15 PM	2	42	8	0	2	3	0	1	1	0	0	0	0	1	60
11:30 PM	0	39	6	0	0	1	0	0	0	0	0	0	0	1	47
11:45 PM	1	56	10	0	1	1	0	0	1	0	0	0	0	1	71
Day Total	154	10321	2582	188	835	216	23	202	503	86	4	6	24	235	15379
Percent	1%	67.1%	16.8%	1.2%	5.4%	1.4%	0.1%	1.3%	3.3%	0.6%	0%	0%	0.2%	1.5%	
ADT 15379															
AM Peak	8:30 AM	8:15 AM	6:45 AM	8:00 AM	7:15 AM	8:45 AM	5:15 AM	7:45 AM	10:45 AM	7:15 AM	7:15 AM	12:00 AM	11:15 AM	8:30 AM	8:15 AM
15-min Vol	5	201	50	12	22	8	1	7	21	4	1	0	3	8	282
PM Peak	3:30 PM	4:30 PM	3:45 PM	12:45 PM	3:00 PM	1:00 PM	2:15 PM	2:30 PM	12:30 PM	2:30 PM	3:30 PM	5:30 PM	2:15 PM	3:30 PM	4:30 PM
15-min Vol	9	324	75	9	25	8	3	13	16	7	1	2	3	14	419

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	284	21075	5336	422	1804	469	65	430	963	167	11	14	45	522	31607
Percent	0.9%	66.7%	16.9%	1.3%	5.7%	1.5%	0.2%	1.4%	3%	0.5%	0%	0%	0.1%	1.7%	
ADT 15803															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** EB, WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		32	37			35			35	
12:15 AM		31	27			29			29	
12:30 AM		26	35			31			31	
12:45 AM		19	26			23			23	
01:00 AM		26	32			29			29	
01:15 AM		20	20			20			20	
01:30 AM		21	25			23			23	
01:45 AM		18	21			20			20	
02:00 AM		18	22			20			20	
02:15 AM		12	27			20			20	
02:30 AM		22	16			19			19	
02:45 AM		21	21			21			21	
03:00 AM		20	18			19			19	
03:15 AM		16	26			21			21	
03:30 AM		24	23			24			24	
03:45 AM		30	21			26			26	
04:00 AM		29	38			34			34	
04:15 AM		32	35			34			34	
04:30 AM		54	64			59			59	
04:45 AM		61	57			59			59	
05:00 AM		72	52			62			62	
05:15 AM		102	108			105			105	
05:30 AM		148	131			140			140	
05:45 AM		135	122			129			129	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		131	122			127			127	
06:15 AM		139	139			139			139	
06:30 AM		164	156			160			160	
06:45 AM		186	192			189			189	
07:00 AM		140	167			154			154	
07:15 AM		191	220			206			206	
07:30 AM		264	249			257			257	
07:45 AM		**305**	262			**284**			**284**	
08:00 AM		257	252			255			255	
08:15 AM		267	**282**			275			275	
08:30 AM		231	245			238			238	
08:45 AM		227	232			230			230	
09:00 AM		167	209			188			188	
09:15 AM		175	166			171			171	
09:30 AM		158	167			163			163	
09:45 AM		182	167			175			175	
10:00 AM		231	166			199			199	
10:15 AM		212	186			199			199	
10:30 AM		201	210			206			206	
10:45 AM		115	202			159			159	
11:00 AM		111	173			142			142	
11:15 AM		111	180			146			146	
11:30 AM		132	188			160			160	
11:45 AM		151	171			161			161	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		158	180			169			169	
12:15 PM		153	192			173			173	
12:30 PM		246	192			219			219	
12:45 PM		253	212			233			233	
01:00 PM		221	242			232			232	
01:15 PM		243	217			230			230	
01:30 PM		266	219			243			243	
01:45 PM		291	206			249			249	
02:00 PM		335	266			301			301	
02:15 PM		311	281			296			296	
02:30 PM		387	342			365			365	
02:45 PM		386	330			358			358	
03:00 PM		411	337			374			374	
03:15 PM		343	324			334			334	
03:30 PM		**499**	392			**446**			**446**	
03:45 PM		429	339			384			384	
04:00 PM		473	411			442			442	
04:15 PM		436	364			400			400	
04:30 PM		404	**419**			412			412	
04:45 PM		362	337			350			350	
05:00 PM		469	396			433			433	
05:15 PM		374	380			377			377	
05:30 PM		394	314			354			354	
05:45 PM		309	269			289			289	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		321	253			287			287	
06:15 PM		218	194			206			206	
06:30 PM		178	171			175			175	
06:45 PM		154	148			151			151	
07:00 PM		130	132			131			131	
07:15 PM		120	114			117			117	
07:30 PM		102	112			107			107	
07:45 PM		102	98			100			100	
08:00 PM		103	103			103			103	
08:15 PM		93	84			89			89	
08:30 PM		92	77			85			85	
08:45 PM		109	86			98			98	
09:00 PM		86	70			78			78	
09:15 PM		96	80			88			88	
09:30 PM		101	89			95			95	
09:45 PM		81	96			89			89	
10:00 PM		103	91			97			97	
10:15 PM		70	98			84			84	
10:30 PM		92	88			90			90	
10:45 PM		59	66			63			63	
11:00 PM		80	83			82			82	
11:15 PM		62	60			61			61	
11:30 PM		43	47			45			45	
11:45 PM		43	71			57			57	
Day Total		16228	15379			15826			15826	
% Weekday Average		102.5%	97.2%							
% Week Average		102.5%	97.2%			100%				
AM Peak 15-min Vol		7:45 AM 305	8:15 AM 282			7:45 AM 284			7:45 AM 284	
PM Peak 15-min Vol		3:30 PM 499	4:30 PM 419			3:30 PM 446			3:30 PM 446	

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	0	0	0	8	5	1	0	2	0	0	0	16	41-50	13
12:15 AM	0	0	0	0	3	3	3	6	1	1	1	0	0	0	18	41-50	9
12:30 AM	0	0	1	1	0	5	8	1	1	1	1	0	0	0	19	36-45	13
12:45 AM	0	0	0	0	3	4	1	2	2	1	0	0	0	0	13	31-40	7
01:00 AM	0	0	0	1	1	3	6	0	1	0	0	0	0	0	12	36-45	9
01:15 AM	0	0	0	0	0	3	4	4	3	0	0	0	0	0	14	41-50	8
01:30 AM	0	0	1	0	1	2	3	2	2	0	0	0	0	0	11	38-47	5
01:45 AM	0	0	0	0	2	3	3	0	2	1	0	0	0	0	11	36-45	6
02:00 AM	0	0	1	0	1	2	2	2	3	0	0	0	0	0	11	46-55	5
02:15 AM	0	0	0	0	1	2	2	2	1	0	1	0	0	0	9	36-45	4
02:30 AM	0	0	0	0	1	1	5	1	2	0	1	0	0	0	11	39-48	6
02:45 AM	0	0	0	0	1	2	2	3	2	0	0	0	1	0	11	43-52	5
03:00 AM	0	0	0	0	1	1	3	7	1	3	2	0	0	0	18	41-50	10
03:15 AM	0	0	0	1	0	2	1	3	0	0	0	0	0	0	7	41-50	4
03:30 AM	0	0	0	0	0	4	4	2	0	0	0	0	0	0	10	36-45	8
03:45 AM	0	0	0	0	0	2	5	4	2	1	1	0	0	0	15	41-50	9
04:00 AM	0	0	0	1	0	2	4	2	4	0	0	0	0	0	13	41-50	6
04:15 AM	0	0	0	0	1	6	1	5	2	0	0	0	0	0	15	46-55	7
04:30 AM	1	0	0	1	4	1	2	4	3	0	1	0	0	0	17	46-55	7
04:45 AM	0	0	0	0	0	4	6	3	0	1	0	0	0	0	14	36-45	10
05:00 AM	0	0	0	2	0	2	5	5	2	0	1	0	1	0	18	41-50	10
05:15 AM	1	1	0	1	5	3	5	5	3	3	2	0	0	0	29	41-50	10
05:30 AM	0	0	0	0	1	6	6	18	8	3	0	0	0	0	42	46-55	26
05:45 AM	0	0	0	0	0	7	16	14	6	3	2	0	0	0	48	41-50	30
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	1	1	0	0	1	8	21	15	17	10	3	1	0	0	78	41-50	36
06:15 AM	2	1	1	0	3	8	20	19	10	2	2	0	1	0	69	41-50	39
06:30 AM	1	0	1	3	2	8	13	25	12	6	1	0	0	0	72	41-50	38
06:45 AM	2	0	1	0	6	16	17	27	4	5	4	1	0	0	83	41-50	44
07:00 AM	1	0	0	1	5	12	13	16	4	1	1	1	0	0	55	41-50	29
07:15 AM	0	1	0	1	7	18	15	23	11	3	1	0	1	0	81	41-50	38
07:30 AM	0	0	0	4	5	15	31	18	16	12	1	0	0	0	102	41-50	49
07:45 AM	3	0	1	3	**22**	32	26	40	17	13	1	1	0	0	**159**	41-50	66
08:00 AM	1	2	0	**6**	7	17	21	41	**25**	**16**	4	1	0	1	142	46-55	66
08:15 AM	3	1	2	4	19	22	35	32	22	10	**5**	0	0	1	156	41-50	67
08:30 AM	2	0	0	2	7	24	26	**43**	20	11	3	**3**	0	0	141	41-50	69
08:45 AM	1	0	2	1	7	9	38	36	17	6	0	0	0	0	117	41-50	74
09:00 AM	4	1	1	0	8	10	19	22	9	5	3	1	0	0	83	41-50	41
09:15 AM	5	1	0	2	9	17	19	26	5	2	1	0	0	0	87	41-50	45
09:30 AM	3	0	2	2	9	16	19	26	10	4	1	1	0	0	93	41-50	45
09:45 AM	2	1	0	1	11	14	16	16	16	4	2	0	0	1	84	41-50	32
10:00 AM	4	0	0	4	7	24	38	29	9	5	1	0	0	**3**	124	41-50	67
10:15 AM	**9**	0	**3**	1	3	30	**43**	25	18	2	1	0	0	0	135	36-45	73
10:30 AM	1	0	0	1	12	25	35	32	12	4	1	1	0	0	124	41-50	67
10:45 AM	3	0	3	1	9	34	35	17	8	5	0	0	0	0	115	36-45	69
11:00 AM	5	0	2	3	7	18	24	28	18	3	1	1	1	0	111	41-50	52
11:15 AM	4	0	2	4	11	19	25	27	17	2	0	0	0	0	111	41-50	52
11:30 AM	3	0	1	4	14	**37**	29	27	9	6	2	0	0	0	132	36-45	66
11:45 AM	1	**4**	2	4	9	28	40	29	24	8	2	0	0	0	151	41-50	69
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	4	1	2	2	17	31	58	28	10	4	1	0	0	0	158	36-45	89
12:15 PM	0	**2**	1	7	21	43	40	20	16	2	1	0	0	0	153	36-45	83
12:30 PM	7	0	1	0	13	24	47	40	13	4	3	0	0	0	152	41-50	87
12:45 PM	3	0	1	3	9	37	56	30	14	14	3	0	0	0	170	36-45	93
01:00 PM	8	2	3	3	7	22	28	32	18	5	0	0	0	0	128	41-50	60
01:15 PM	7	0	4	1	8	27	50	37	22	8	1	1	0	0	166	41-50	87
01:30 PM	0	0	0	4	12	40	38	33	22	16	6	0	0	1	172	36-45	78
01:45 PM	3	1	0	1	8	27	53	57	18	16	4	0	0	0	188	41-50	110
02:00 PM	6	0	1	0	16	25	66	66	27	7	3	**2**	0	0	219	41-50	132
02:15 PM	0	0	0	1	5	34	56	52	31	13	5	2	0	0	199	41-50	108
02:30 PM	3	0	4	1	16	32	76	61	**48**	**25**	6	0	0	0	272	41-50	137
02:45 PM	7	0	0	3	20	54	83	66	25	10	**7**	1	**3**	0	279	41-50	149
03:00 PM	5	1	0	3	17	29	94	85	26	12	4	0	0	0	276	41-50	179
03:15 PM	0	0	0	2	12	27	56	**94**	40	9	1	0	1	0	242	41-50	150
03:30 PM	**10**	0	1	3	**41**	**78**	96	75	22	9	2	1	1	0	**339**	36-45	174
03:45 PM	5	1	3	6	17	58	**124**	57	25	9	0	1	1	0	307	36-45	182
04:00 PM	9	1	1	4	21	54	121	79	30	6	1	1	0	0	328	41-50	200
04:15 PM	8	1	2	4	14	47	106	81	35	14	2	2	1	0	317	41-50	187
04:30 PM	6	2	0	3	11	53	72	78	44	8	3	0	0	0	280	41-50	150
04:45 PM	7	0	1	3	16	40	90	47	36	3	2	0	0	0	245	41-50	137
05:00 PM	3	0	4	**20**	23	66	89	68	18	2	2	0	0	0	295	41-50	157
05:15 PM	7	1	**6**	15	39	75	51	42	6	8	3	0	0	0	253	36-45	126
05:30 PM	9	0	1	9	19	64	75	65	18	8	0	1	0	0	269	41-50	140
05:45 PM	3	0	1	4	14	49	53	50	22	5	0	1	0	0	202	41-50	103
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

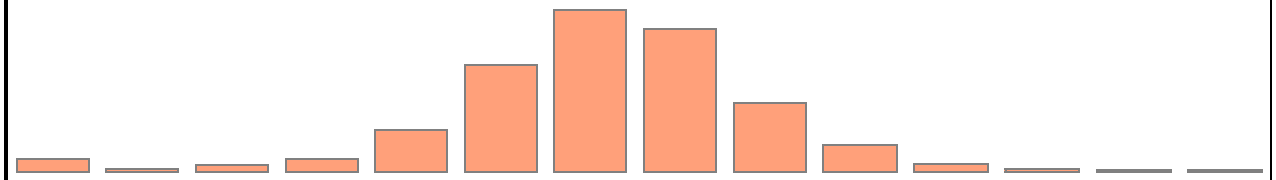
Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	8	0	3	9	12	33	58	52	30	11	0	2	0	0	218	41-50	110
06:15 PM	2	0	4	3	12	44	22	18	17	3	1	0	0	0	126	36-45	66
06:30 PM	0	0	2	2	4	23	21	26	24	4	2	0	0	0	108	46-55	50
06:45 PM	0	0	0	1	7	16	28	25	7	5	2	0	0	0	91	41-50	53
07:00 PM	0	1	0	3	4	9	24	10	12	4	0	0	0	0	67	41-50	34
07:15 PM	2	0	1	1	6	17	23	22	4	2	0	0	0	0	78	41-50	45
07:30 PM	1	0	1	1	0	12	23	6	4	4	2	1	0	0	55	36-45	35
07:45 PM	0	1	1	0	4	9	16	18	10	3	0	0	0	0	62	41-50	34
08:00 PM	3	0	1	0	6	9	17	11	11	3	1	0	0	0	62	41-50	28
08:15 PM	0	0	0	2	1	10	5	18	6	11	1	2	1	0	57	46-55	24
08:30 PM	0	0	0	2	3	9	15	15	8	1	1	0	0	**2**	56	41-50	30
08:45 PM	1	0	0	1	3	8	23	13	8	3	1	1	1	1	64	41-50	36
09:00 PM	0	0	0	0	0	6	11	23	5	2	0	2	0	0	49	41-50	34
09:15 PM	1	0	0	3	2	8	9	12	8	2	2	0	0	0	47	41-50	21
09:30 PM	1	0	0	6	3	15	12	10	7	3	1	0	0	0	58	36-45	27
09:45 PM	0	0	0	0	1	9	11	11	5	4	1	0	0	0	42	41-50	22
10:00 PM	0	0	2	2	2	13	19	15	7	3	0	0	0	0	63	41-50	34
10:15 PM	0	0	1	0	2	4	8	18	5	3	0	0	0	0	41	41-50	26
10:30 PM	3	0	0	1	4	10	8	14	13	3	0	0	0	1	57	46-55	27
10:45 PM	0	0	1	0	6	9	2	8	3	1	0	0	0	0	30	31-40	15
11:00 PM	0	0	2	2	6	3	9	15	9	2	0	0	0	0	48	44-53	24
11:15 PM	1	0	1	0	2	13	6	6	3	0	1	1	0	0	34	36-45	19
11:30 PM	0	0	0	0	4	2	11	4	4	1	0	0	0	0	26	41-50	15
11:45 PM	0	0	0	1	0	2	11	8	4	1	0	0	0	0	27	41-50	19
Day Total	206	29	84	202	716	1860	2793	2460	1182	459	132	34	14	11	10182	41-50	5253
Percent	2%	0.3%	0.8%	2%	7%	18.3%	27.4%	24.2%	11.6%	4.5%	1.3%	0.3%	0.1%	0.1%			



AM Peak	10:15 AM	11:45 AM	10:15 AM	8:00 AM	7:45 AM	11:30 AM	10:15 AM	8:30 AM	8:00 AM	8:00 AM	8:15 AM	8:30 AM	2:45 AM	10:00 AM	7:45 AM		
15-min Vol	9	4	3	6	22	37	43	43	25	16	5	3	1	3	159		
PM Peak	3:30 PM	12:15 PM	5:15 PM	5:00 PM	3:30 PM	3:30 PM	3:45 PM	3:15 PM	2:30 PM	2:30 PM	2:45 PM	2:00 PM	2:45 PM	8:30 PM	3:30 PM		
15-min Vol	10	2	6	20	41	78	124	94	48	25	7	2	3	2	339		

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 AM	0	0	0	2	3	3	6	4	2	1	2	0	0	0	23	41-50	10
12:15 AM	0	0	0	0	0	4	3	3	3	0	1	0	0	0	14	36-45	7
12:30 AM	0	0	1	0	0	4	5	4	6	1	0	0	0	0	21	46-55	10
12:45 AM	0	0	0	0	1	4	4	2	4	2	0	0	0	0	17	36-45	8
01:00 AM	0	0	0	0	1	4	4	4	4	2	0	0	0	**2**	21	36-45	8
01:15 AM	0	0	0	0	0	0	1	3	1	1	2	0	0	0	8	43-52	4
01:30 AM	0	1	0	0	3	3	7	2	0	0	0	0	0	0	16	36-45	10
01:45 AM	0	0	0	0	0	5	1	2	3	2	0	0	0	0	13	36-45	6
02:00 AM	0	0	0	1	1	4	4	3	0	0	0	0	0	0	13	36-45	8
02:15 AM	1	0	0	0	1	3	8	4	2	0	0	0	0	0	19	41-50	12
02:30 AM	1	1	0	1	1	2	0	2	0	0	1	0	0	0	9	31-40	3
02:45 AM	0	0	0	0	1	1	3	3	1	0	1	0	0	0	10	41-50	6
03:00 AM	0	0	0	0	1	1	4	4	4	1	0	0	0	0	15	41-50	8
03:15 AM	0	0	0	0	0	1	4	8	1	2	1	0	0	0	17	41-50	12
03:30 AM	0	0	1	0	0	3	4	0	0	0	0	0	0	0	8	36-45	7
03:45 AM	0	0	0	0	1	3	1	4	0	1	0	0	0	0	10	41-50	5
04:00 AM	0	0	1	0	1	2	4	3	3	0	0	0	0	0	14	41-50	7
04:15 AM	0	0	1	2	1	3	5	2	0	3	0	0	0	0	17	36-45	8
04:30 AM	0	0	0	2	3	4	4	3	2	2	0	0	0	0	20	36-45	8
04:45 AM	0	0	0	1	1	2	4	3	1	3	0	0	0	0	15	41-50	7
05:00 AM	0	0	0	0	0	4	3	3	3	1	0	0	0	0	14	36-45	7
05:15 AM	0	0	0	0	2	2	7	2	1	3	1	0	**1**	2	21	37-46	9
05:30 AM	1	0	1	0	2	5	6	11	2	2	0	1	0	0	31	41-50	17
05:45 AM	2	0	1	0	1	2	14	8	7	3	0	0	0	0	38	41-50	22
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 AM	0	0	1	0	3	2	7	28	18	8	1	0	0	0	68	46-55	46
06:15 AM	2	0	0	0	1	10	11	19	19	6	5	0	0	0	73	46-55	38
06:30 AM	1	0	2	1	4	12	22	18	8	6	2	1	0	0	77	41-50	40
06:45 AM	0	0	0	1	7	14	20	27	12	4	1	0	0	0	86	41-50	47
07:00 AM	0	1	1	2	6	8	10	15	7	2	2	**4**	0	0	58	41-50	25
07:15 AM	1	0	2	1	3	19	28	29	13	8	0	0	0	0	104	41-50	57
07:30 AM	2	0	0	3	5	8	27	26	9	11	2	0	1	0	94	41-50	53
07:45 AM	3	0	1	4	10	16	27	37	**29**	3	4	1	0	0	135	46-55	66
08:00 AM	2	0	3	**8**	12	**30**	29	31	15	6	1	0	0	2	139	41-50	60
08:15 AM	3	1	2	3	7	20	40	**40**	18	**14**	**6**	2	0	0	**156**	41-50	80
08:30 AM	6	0	3	6	9	27	29	28	21	9	3	2	0	0	143	41-50	57
08:45 AM	7	0	1	2	11	25	21	28	21	8	3	1	0	0	128	43-52	49
09:00 AM	0	0	0	3	5	18	27	33	16	4	4	1	0	0	111	41-50	60
09:15 AM	**8**	1	1	2	2	9	22	17	14	4	1	0	0	0	81	41-50	39
09:30 AM	4	1	5	5	**16**	15	24	17	4	6	2	0	0	0	99	41-50	41
09:45 AM	1	2	3	2	4	13	24	15	15	6	2	0	0	0	87	41-50	39
10:00 AM	0	2	0	3	13	19	22	17	4	5	3	0	1	0	89	36-45	41
10:15 AM	1	0	2	0	8	20	32	10	10	4	2	2	0	0	91	36-45	52
10:30 AM	1	**4**	**7**	3	16	21	38	15	12	0	0	1	0	0	118	36-45	59
10:45 AM	3	2	2	7	8	19	40	15	8	2	0	0	0	0	106	36-45	59
11:00 AM	2	0	3	3	8	19	20	23	7	5	2	0	0	0	92	41-50	43
11:15 AM	1	0	2	4	15	21	24	15	8	3	1	0	0	0	94	36-45	45
11:30 AM	1	1	0	2	12	21	**41**	6	9	3	0	0	0	0	96	36-45	62
11:45 AM	2	0	2	2	9	20	21	14	15	6	2	0	0	0	93	36-45	41
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
12:00 PM	1	0	0	9	8	18	23	21	6	3	1	0	0	0	90	41-50	44
12:15 PM	3	0	1	5	11	23	35	13	9	9	1	0	0	0	110	36-45	58
12:30 PM	0	0	1	2	5	25	11	35	17	5	1	0	0	0	102	46-55	52
12:45 PM	2	1	2	5	19	15	25	18	14	3	1	**1**	0	0	106	41-50	43
01:00 PM	**7**	1	3	3	24	23	27	38	12	6	**2**	0	0	0	146	41-50	65
01:15 PM	3	**2**	1	3	14	16	43	29	10	5	2	0	0	**1**	129	41-50	72
01:30 PM	3	1	1	3	24	23	31	27	10	5	1	1	0	0	130	41-50	58
01:45 PM	5	0	5	7	16	20	27	31	10	3	1	0	0	1	126	41-50	58
02:00 PM	1	0	0	5	7	38	42	34	**28**	**12**	1	1	0	0	169	36-45	80
02:15 PM	4	0	3	4	19	32	41	39	11	2	2	0	0	0	157	41-50	80
02:30 PM	4	0	0	4	37	54	60	42	19	7	2	0	0	0	229	36-45	114
02:45 PM	2	0	5	**20**	22	65	64	25	8	2	2	1	0	0	216	36-45	129
03:00 PM	5	2	2	14	24	75	62	35	6	2	0	0	0	0	227	36-45	137
03:15 PM	5	1	4	8	28	66	69	34	7	0	0	0	0	0	222	36-45	135
03:30 PM	6	0	2	12	**53**	57	64	**49**	12	2	0	0	0	0	257	36-45	121
03:45 PM	4	0	0	0	33	73	64	45	14	2	0	0	0	0	235	36-45	137
04:00 PM	7	2	1	8	50	89	74	39	14	5	0	0	0	0	**289**	36-45	163
04:15 PM	7	2	5	6	16	79	78	33	10	2	0	0	0	0	238	36-45	157
04:30 PM	6	0	0	1	21	**128**	69	39	6	1	0	0	0	0	271	36-45	197
04:45 PM	2	0	1	3	22	84	57	38	9	0	0	0	0	0	216	36-45	141
05:00 PM	1	0	8	6	15	80	**92**	40	7	2	0	0	0	0	251	36-45	172
05:15 PM	4	0	1	3	23	73	66	37	7	4	0	0	0	0	218	36-45	139
05:30 PM	0	0	3	5	25	75	71	17	5	1	0	0	0	0	202	36-45	146
05:45 PM	1	0	0	2	15	55	48	23	6	1	0	0	0	0	151	36-45	103
Day Total																	
Percent																	
AM Peak 15-min Vol																	
PM Peak 15-min Vol																	

Comments:

Report generated on 2/1/2023 6:00 AM

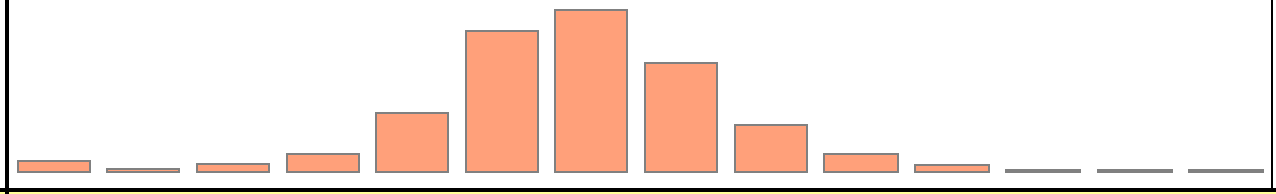
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
06:00 PM	6	1	9	3	21	34	62	29	13	1	0	0	0	0	179	36-45	96
06:15 PM	1	0	1	0	8	39	46	10	7	0	0	0	0	0	112	36-45	85
06:30 PM	1	0	0	5	15	31	30	24	1	0	0	0	0	0	107	36-45	61
06:45 PM	2	0	0	7	9	23	31	9	8	0	0	0	0	0	89	36-45	54
07:00 PM	0	0	0	1	8	19	22	15	6	3	0	0	0	0	74	36-45	41
07:15 PM	0	0	1	2	8	19	21	18	4	0	1	0	0	0	74	36-45	40
07:30 PM	2	2	0	1	3	13	22	11	10	3	1	0	0	0	68	36-45	35
07:45 PM	2	0	0	2	4	15	14	12	4	1	0	0	0	0	54	36-45	29
08:00 PM	1	0	0	0	6	26	15	9	1	2	0	0	0	0	60	36-45	41
08:15 PM	0	1	0	0	4	10	23	14	0	1	0	0	0	0	53	41-50	37
08:30 PM	0	0	0	1	5	14	14	10	2	0	0	0	0	0	46	36-45	28
08:45 PM	0	0	1	3	9	12	16	5	4	0	0	0	0	0	50	36-45	28
09:00 PM	2	0	1	0	2	7	20	13	3	0	0	0	0	0	48	41-50	33
09:15 PM	0	0	2	2	2	11	17	7	2	1	0	0	0	0	44	36-45	28
09:30 PM	1	0	0	2	4	10	20	8	0	0	0	0	0	0	45	36-45	30
09:45 PM	1	0	0	0	5	17	18	7	1	0	0	0	0	0	49	36-45	35
10:00 PM	0	0	0	1	5	14	23	15	4	0	0	0	0	0	62	41-50	38
10:15 PM	0	0	3	1	5	16	32	15	2	0	0	0	0	0	74	36-45	48
10:30 PM	3	0	0	3	4	12	11	15	7	0	1	0	0	0	56	41-50	26
10:45 PM	0	0	1	2	5	5	14	6	2	0	0	0	0	0	35	41-50	20
11:00 PM	1	0	0	1	8	11	11	11	5	0	1	0	0	0	49	36-45	22
11:15 PM	0	0	0	0	7	14	11	3	1	1	0	0	0	0	37	36-45	25
11:30 PM	1	0	0	1	5	8	5	3	0	0	1	0	0	0	24	34-43	13
11:45 PM	1	0	1	3	8	14	11	4	4	1	0	0	0	0	47	36-45	25
Day Total	164	33	118	255	910	2155	2464	1664	710	261	80	20	3	8	8845	36-45	4619
Percent	1.9%	0.4%	1.3%	2.9%	10.3%	24.4%	27.9%	18.8%	8%	3%	0.9%	0.2%	0%	0.1%			



AM Peak	9:15 AM	10:30 AM	10:30 AM	8:00 AM	9:30 AM	8:00 AM	11:30 AM	8:15 AM	7:45 AM	8:15 AM	8:15 AM	7:00 AM	5:15 AM	1:00 AM	8:15 AM		
15-min Vol	8	4	7	8	16	30	41	40	29	14	6	4	1	2	156		
PM Peak	1:00 PM	1:15 PM	6:00 PM	2:45 PM	3:30 PM	4:30 PM	5:00 PM	3:30 PM	2:00 PM	2:00 PM	1:00 PM	12:45 PM	12:00 PM	1:15 PM	4:00 PM		
15-min Vol	7	2	9	20	53	128	92	49	28	12	2	1	0	1	289		

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

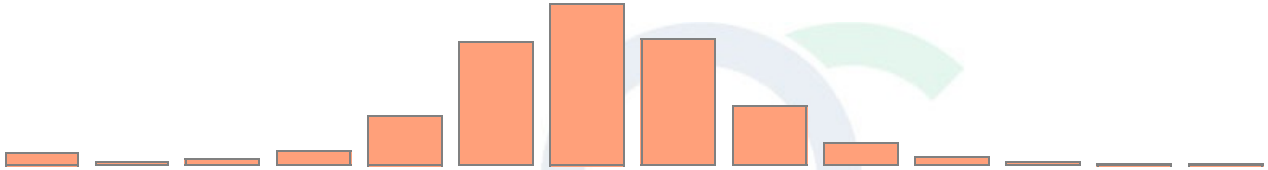
Type of report: Tube Count - Speed Data

SUMMARY - Tube Count - Speed Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Speed Range	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
Grand Total	370	62	202	457	1626	4015	5257	4124	1892	720	212	54	17	19	19027	41-50	9381
Percent	1.9%	0.3%	1.1%	2.4%	8.5%	21.1%	27.6%	21.7%	9.9%	3.8%	1.1%	0.3%	0.1%	0.1%			
Cumulative Percent	1.9%	2.3%	3.3%	5.7%	14.3%	35.4%	63%	84.7%	94.6%	98.4%	99.5%	99.8%	99.9%	100%			

ADT
9513



85th Percentile: 50 MPH
Mean Speed(Average): 42 MPH
Median: 42 MPH
Mode: 43 MPH

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	12	4	0	0	0	0	0	0	0	0	0	0	0	16
12:15 AM	0	17	0	0	1	0	0	0	0	0	0	0	0	0	18
12:30 AM	0	14	3	0	0	0	0	1	1	0	0	0	0	0	19
12:45 AM	0	11	1	0	1	0	0	0	0	0	0	0	0	0	13
01:00 AM	0	10	2	0	0	0	0	0	0	0	0	0	0	0	12
01:15 AM	0	13	0	0	1	0	0	0	0	0	0	0	0	0	14
01:30 AM	0	5	3	1	1	0	0	0	1	0	0	0	0	0	11
01:45 AM	0	8	3	0	0	0	0	0	0	0	0	0	0	0	11
02:00 AM	0	10	1	0	0	0	0	0	0	0	0	0	0	0	11
02:15 AM	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
02:30 AM	0	8	3	0	0	0	0	0	0	0	0	0	0	0	11
02:45 AM	0	8	2	0	0	1	0	0	0	0	0	0	0	0	11
03:00 AM	0	12	3	0	1	0	0	0	2	0	0	0	0	0	18
03:15 AM	0	6	0	0	1	0	0	0	0	0	0	0	0	0	7
03:30 AM	0	7	2	1	0	0	0	0	0	0	0	0	0	0	10
03:45 AM	0	14	1	0	0	0	0	0	0	0	0	0	0	0	15
04:00 AM	0	11	0	0	0	2	0	0	0	0	0	0	0	0	13
04:15 AM	0	6	3	0	2	3	0	0	1	0	0	0	0	0	15
04:30 AM	1	6	6	0	0	2	0	0	1	0	0	0	0	1	17
04:45 AM	0	11	1	0	1	0	0	0	1	0	0	0	0	0	14
05:00 AM	0	13	1	0	4	0	0	0	0	0	0	0	0	0	18
05:15 AM	0	16	7	2	2	1	0	0	0	0	0	0	0	1	29
05:30 AM	0	23	8	1	8	0	0	0	2	0	0	0	0	0	42
05:45 AM	0	30	12	0	5	0	0	0	0	0	0	0	0	1	48
Day Total															
Percent															
ADT 10182															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	50	18	0	6	0	0	0	3	0	0	0	0	1	78
06:15 AM	0	41	15	1	7	1	0	1	1	0	0	0	0	2	69
06:30 AM	0	45	16	0	7	0	1	0	1	1	0	0	0	1	72
06:45 AM	1	52	12	1	8	4	0	1	2	0	0	0	0	2	83
07:00 AM	0	30	11	4	6	1	0	0	2	0	0	0	0	1	55
07:15 AM	0	49	11	**9**	8	1	0	1	0	2	0	0	0	0	81
07:30 AM	0	64	17	1	8	0	0	2	9	0	0	0	1	0	102
07:45 AM	**3**	98	28	5	11	2	0	2	6	1	0	0	0	3	**159**
08:00 AM	0	95	23	3	10	2	0	4	4	0	0	0	0	1	142
08:15 AM	2	95	29	6	8	4	1	1	5	1	0	0	0	4	156
08:30 AM	0	**109**	13	1	5	3	0	2	4	1	**1**	0	0	2	141
08:45 AM	0	87	13	3	5	1	0	1	5	1	0	0	0	1	117
09:00 AM	0	59	7	1	5	1	0	2	3	0	0	0	0	5	83
09:15 AM	0	40	24	0	8	0	0	2	8	1	0	0	0	4	87
09:30 AM	1	49	14	2	11	4	0	1	8	1	0	0	0	2	93
09:45 AM	1	42	14	1	8	1	**2**	0	10	2	0	0	1	2	84
10:00 AM	1	58	28	6	8	5	0	**5**	10	0	0	0	0	3	124
10:15 AM	0	80	18	1	11	1	1	3	9	0	0	0	1	**10**	135
10:30 AM	0	70	22	4	11	6	1	1	3	**4**	0	0	1	1	124
10:45 AM	2	57	19	3	11	**8**	1	2	7	0	0	0	**2**	3	115
11:00 AM	0	54	29	4	3	2	1	1	9	1	0	0	0	7	111
11:15 AM	0	61	15	2	9	5	0	1	**12**	0	0	0	2	4	111
11:30 AM	0	72	24	4	**15**	4	1	0	7	2	0	0	0	3	132
11:45 AM	1	78	**37**	5	9	4	0	5	9	2	0	0	0	1	151
Day Total															
Percent															
ADT 10182															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	1	90	26	1	16	5	0	5	8	2	0	0	0	4	158
12:15 PM	2	100	22	3	12	3	2	3	6	0	0	0	0	0	153
12:30 PM	4	87	28	3	10	5	2	2	5	1	0	0	1	4	152
12:45 PM	0	99	25	4	13	4	2	3	13	3	0	0	1	3	170
01:00 PM	2	72	26	1	9	3	2	2	3	0	0	0	1	7	128
01:15 PM	0	96	26	5	15	4	1	3	9	0	0	0	0	7	166
01:30 PM	0	103	34	4	12	2	1	3	9	1	0	0	1	2	172
01:45 PM	0	114	27	4	22	1	0	3	9	3	1	0	1	3	188
02:00 PM	1	122	51	1	13	8	0	5	6	4	0	0	1	7	219
02:15 PM	2	123	42	3	17	4	1	1	5	1	0	0	0	0	199
02:30 PM	5	157	63	6	20	1	2	6	4	5	0	0	0	3	272
02:45 PM	7	173	52	3	16	3	2	10	5	0	0	1	0	7	279
03:00 PM	4	158	60	4	23	4	0	10	5	2	0	0	0	6	276
03:15 PM	0	161	43	3	21	3	0	4	5	1	0	1	0	0	242
03:30 PM	2	202	70	5	21	2	2	13	5	2	3	0	1	11	339
03:45 PM	3	193	63	6	17	4	1	2	7	5	0	0	1	5	307
04:00 PM	5	226	47	2	16	5	0	9	5	3	0	0	0	10	328
04:15 PM	7	203	60	3	17	5	0	8	4	2	0	0	0	8	317
04:30 PM	2	190	48	2	11	3	0	7	7	2	0	2	1	5	280
04:45 PM	5	167	38	0	17	2	0	3	3	1	1	0	0	8	245
05:00 PM	5	208	51	4	12	1	1	9	1	0	0	0	0	3	295
05:15 PM	3	179	31	1	17	2	3	6	1	1	1	0	0	8	253
05:30 PM	1	186	43	1	18	3	1	2	2	1	0	1	0	10	269
05:45 PM	3	146	30	2	9	0	0	5	1	1	0	1	0	4	202
Day Total															
Percent															
ADT 10182															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	3	154	33	0	14	3	0	2	0	0	0	0	0	9	218
06:15 PM	0	94	17	2	4	1	0	3	2	0	0	0	0	3	126
06:30 PM	0	77	23	0	4	0	1	2	1	0	0	0	0	0	108
06:45 PM	0	70	9	3	4	0	0	2	3	0	0	0	0	0	91
07:00 PM	0	53	12	1	1	0	0	0	0	0	0	0	0	0	67
07:15 PM	0	57	11	0	8	0	0	0	0	0	0	0	0	2	78
07:30 PM	0	41	9	0	3	0	0	0	0	0	0	1	0	1	55
07:45 PM	0	51	6	0	2	0	0	1	2	0	0	0	0	0	62
08:00 PM	0	42	14	0	2	1	0	0	1	0	0	0	0	2	62
08:15 PM	1	41	14	0	0	0	0	1	0	0	0	0	0	0	57
08:30 PM	0	39	15	0	0	0	0	1	1	0	0	0	0	0	56
08:45 PM	0	47	12	0	3	1	0	0	0	0	0	0	0	1	64
09:00 PM	0	40	6	0	2	0	0	0	1	0	0	0	0	0	49
09:15 PM	0	32	12	0	2	0	0	0	0	0	0	0	0	1	47
09:30 PM	1	45	8	0	2	1	0	0	0	0	0	0	0	1	58
09:45 PM	0	33	6	0	2	0	0	0	1	0	0	0	0	0	42
10:00 PM	1	43	13	0	3	1	0	0	1	0	0	1	0	0	63
10:15 PM	0	29	7	0	4	0	0	0	1	0	0	0	0	0	41
10:30 PM	1	40	11	0	3	1	0	0	0	0	0	0	0	1	57
10:45 PM	0	27	1	0	1	0	0	0	1	0	0	0	0	0	30
11:00 PM	0	32	10	0	3	0	0	0	2	0	0	0	0	1	48
11:15 PM	0	26	7	0	0	0	0	0	0	0	0	0	0	1	34
11:30 PM	0	22	3	0	1	0	0	0	0	0	0	0	0	0	26
11:45 PM	0	22	2	0	2	1	0	0	0	0	0	0	0	0	27
Day Total	84	6527	1790	149	670	156	33	175	291	61	7	8	17	214	10182
Percent	0.8%	64.1%	17.6%	1.5%	6.6%	1.5%	0.3%	1.7%	2.9%	0.6%	0.1%	0.1%	0.2%	2.1%	
ADT 10182															
AM Peak	7:45 AM	8:30 AM	11:45 AM	7:15 AM	11:30 AM	10:45 AM	9:45 AM	10:00 AM	11:15 AM	10:30 AM	8:30 AM	12:00 AM	10:45 AM	10:15 AM	7:45 AM
15-min Vol	3	109	37	9	15	8	2	5	12	4	1	0	2	10	159
PM Peak	2:45 PM	4:00 PM	3:30 PM	2:30 PM	3:00 PM	2:00 PM	5:15 PM	3:30 PM	12:45 PM	2:30 PM	3:30 PM	4:30 PM	12:30 PM	3:30 PM	3:30 PM
15-min Vol	7	226	70	6	23	8	3	13	13	5	3	2	1	11	339

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 AM	0	20	3	0	0	0	0	0	0	0	0	0	0	0	23
12:15 AM	0	10	3	0	1	0	0	0	0	0	0	0	0	0	14
12:30 AM	0	12	6	0	1	0	0	1	1	0	0	0	0	0	21
12:45 AM	0	11	4	0	0	0	0	1	1	0	0	0	0	0	17
01:00 AM	0	14	7	0	0	0	0	0	0	0	0	0	0	0	21
01:15 AM	0	6	2	0	0	0	0	0	0	0	0	0	0	0	8
01:30 AM	0	14	2	0	0	0	0	0	0	0	0	0	0	0	16
01:45 AM	0	12	1	0	0	0	0	0	0	0	0	0	0	0	13
02:00 AM	0	8	4	0	1	0	0	0	0	0	0	0	0	0	13
02:15 AM	0	13	4	0	0	1	0	0	0	0	0	0	0	1	19
02:30 AM	0	4	1	0	2	0	0	0	1	0	0	0	0	1	9
02:45 AM	0	9	1	0	0	0	0	0	0	0	0	0	0	0	10
03:00 AM	0	12	2	0	1	0	0	0	0	0	0	0	0	0	15
03:15 AM	0	14	3	0	0	0	0	0	0	0	0	0	0	0	17
03:30 AM	0	5	2	0	0	0	0	0	1	0	0	0	0	0	8
03:45 AM	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
04:00 AM	0	7	3	0	1	1	0	0	2	0	0	0	0	0	14
04:15 AM	0	10	4	0	2	0	0	0	1	0	0	0	0	0	17
04:30 AM	0	11	5	0	2	2	0	0	0	0	0	0	0	0	20
04:45 AM	0	8	5	0	2	0	0	0	0	0	0	0	0	0	15
05:00 AM	0	10	3	0	1	0	0	0	0	0	0	0	0	0	14
05:15 AM	0	13	4	0	0	3	0	1	0	0	0	0	0	0	21
05:30 AM	0	16	5	1	5	0	0	2	1	0	0	0	0	1	31
05:45 AM	0	28	6	0	2	0	0	0	0	0	0	0	0	2	38
Day Total															
Percent															
ADT 8845															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 AM	0	37	17	0	10	2	0	1	1	0	0	0	0	0	68
06:15 AM	0	44	17	1	6	0	0	2	0	1	0	0	0	2	73
06:30 AM	1	47	16	1	6	0	**1**	0	3	1	0	0	0	1	77
06:45 AM	0	53	19	0	7	2	0	1	4	0	0	0	0	0	86
07:00 AM	0	38	13	1	3	1	0	0	2	0	0	0	0	0	58
07:15 AM	0	62	11	**9**	**14**	2	0	0	3	2	0	0	0	1	104
07:30 AM	1	50	18	3	7	0	0	3	8	1	0	0	0	3	94
07:45 AM	0	75	24	2	12	**6**	1	**5**	7	0	0	0	0	3	135
08:00 AM	1	87	22	7	8	0	0	3	7	1	0	0	0	3	139
08:15 AM	1	**110**	24	2	7	1	0	2	3	**3**	0	0	0	3	**156**
08:30 AM	**4**	82	21	3	13	1	0	2	10	1	0	0	0	**6**	143
08:45 AM	1	68	23	7	13	4	0	0	5	1	0	0	0	6	128
09:00 AM	1	64	25	1	8	1	0	2	8	1	0	0	0	0	111
09:15 AM	2	49	13	0	4	2	0	0	8	0	0	0	0	3	81
09:30 AM	0	48	24	3	5	5	0	1	8	0	0	0	1	4	99
09:45 AM	0	45	15	1	14	2	0	2	5	1	0	0	1	1	87
10:00 AM	0	48	18	3	11	1	0	1	5	2	0	0	0	0	89
10:15 AM	0	48	22	4	8	0	0	3	5	0	0	0	0	1	91
10:30 AM	1	64	24	4	9	3	0	1	10	0	0	0	0	2	118
10:45 AM	0	69	16	1	4	3	0	3	5	2	0	0	0	3	106
11:00 AM	2	41	22	1	10	3	0	2	7	2	0	0	0	2	92
11:15 AM	2	52	18	1	5	0	0	1	10	1	0	0	**2**	2	94
11:30 AM	1	47	24	0	5	2	1	0	**14**	0	0	0	0	2	96
11:45 AM	0	48	**27**	0	7	1	0	1	7	0	0	0	0	2	93
Day Total															
Percent															
ADT 8845															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
12:00 PM	2	57	12	1	7	1	0	1	7	1	0	0	0	1	90
12:15 PM	1	59	26	4	8	2	0	2	5	2	0	0	0	1	110
12:30 PM	1	65	16	0	7	0	0	2	**10**	1	0	0	0	0	102
12:45 PM	0	57	15	**6**	6	4	0	4	8	2	0	0	1	3	106
01:00 PM	1	86	25	4	7	4	0	5	8	0	0	0	0	6	146
01:15 PM	1	73	34	1	10	3	0	0	3	1	0	0	0	3	129
01:30 PM	0	69	28	2	12	2	1	1	9	1	0	1	**2**	2	130
01:45 PM	1	74	20	2	12	2	0	0	9	0	0	0	1	5	126
02:00 PM	1	100	41	3	12	1	0	3	5	2	0	0	0	1	169
02:15 PM	2	85	32	6	14	3	**2**	1	6	0	0	0	2	4	157
02:30 PM	3	128	46	3	19	3	2	**12**	5	4	0	0	0	4	229
02:45 PM	5	148	33	1	15	3	1	5	1	2	0	0	0	2	216
03:00 PM	3	131	48	5	**20**	1	1	6	4	0	0	0	1	7	227
03:15 PM	3	145	43	3	9	1	0	5	3	**5**	0	0	0	5	222
03:30 PM	**9**	152	**56**	2	15	1	1	7	4	2	0	0	0	**8**	257
03:45 PM	4	146	51	0	15	3	1	6	4	1	0	0	1	3	235
04:00 PM	6	**201**	48	2	10	4	1	5	4	0	**1**	1	0	6	**289**
04:15 PM	6	149	51	0	16	4	1	3	0	1	0	0	0	7	238
04:30 PM	5	196	39	0	7	2	0	8	3	2	1	0	1	7	271
04:45 PM	2	163	29	0	8	**5**	0	5	1	0	0	0	0	3	216
05:00 PM	2	187	41	1	13	0	0	3	1	1	0	0	0	2	251
05:15 PM	4	162	31	2	10	1	0	3	1	0	0	0	0	4	218
05:30 PM	0	159	23	2	6	0	0	5	4	1	0	**2**	0	0	202
05:45 PM	1	121	19	0	4	0	2	2	0	0	0	0	1	1	151
Day Total															
Percent															
ADT															
8845															
AM Peak 15-min Vol															
PM Peak 15-min Vol															

Comments:

Quality Counts
DATA THAT DRIVES COMMUNITIES

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
06:00 PM	1	140	25	0	3	1	0	1	1	0	0	1	0	6	179
06:15 PM	1	84	20	1	2	1	0	0	2	0	0	0	0	1	112
06:30 PM	2	88	10	0	2	0	0	2	1	1	0	0	0	1	107
06:45 PM	1	63	12	2	5	1	0	2	1	0	0	0	0	2	89
07:00 PM	0	59	13	0	1	0	0	0	0	0	0	1	0	0	74
07:15 PM	1	55	9	1	8	0	0	0	0	0	0	0	0	0	74
07:30 PM	1	52	10	0	1	1	0	0	1	0	0	0	0	2	68
07:45 PM	1	44	4	0	3	0	0	0	0	0	0	0	0	2	54
08:00 PM	1	47	9	0	0	1	0	1	1	0	0	0	0	0	60
08:15 PM	0	42	10	0	1	0	0	0	0	0	0	0	0	0	53
08:30 PM	0	43	3	0	0	0	0	0	0	0	0	0	0	0	46
08:45 PM	1	33	15	0	1	0	0	0	0	0	0	0	0	0	50
09:00 PM	0	37	4	0	2	2	0	1	0	0	0	0	0	2	48
09:15 PM	0	38	4	0	0	0	0	0	2	0	0	0	0	0	44
09:30 PM	1	36	5	0	1	0	0	0	1	0	0	0	0	1	45
09:45 PM	1	39	6	0	2	0	0	0	0	0	0	0	0	1	49
10:00 PM	0	42	16	0	2	0	0	0	2	0	0	0	0	0	62
10:15 PM	1	59	7	0	2	1	0	2	2	0	0	0	0	0	74
10:30 PM	1	40	10	0	3	0	0	1	0	0	0	0	0	1	56
10:45 PM	0	28	5	0	1	0	1	0	0	0	0	0	0	0	35
11:00 PM	0	37	6	0	4	0	0	1	0	0	0	0	0	1	49
11:15 PM	0	26	8	0	1	1	0	1	0	0	0	0	0	0	37
11:30 PM	0	19	4	0	0	0	0	0	0	0	0	0	0	1	24
11:45 PM	1	34	8	0	1	1	0	0	1	0	0	0	0	1	47
Day Total	96	5749	1585	110	525	109	17	147	273	50	2	6	14	162	8845
Percent	1.1%	65%	17.9%	1.2%	5.9%	1.2%	0.2%	1.7%	3.1%	0.6%	0%	0.1%	0.2%	1.8%	
ADT 8845															
AM Peak	8:30 AM	8:15 AM	11:45 AM	7:15 AM	7:15 AM	7:45 AM	6:30 AM	7:45 AM	11:30 AM	8:15 AM	12:00 AM	12:00 AM	11:15 AM	8:30 AM	8:15 AM
15-min Vol	4	110	27	9	14	6	1	5	14	3	0	0	2	6	156
PM Peak	3:30 PM	4:00 PM	3:30 PM	12:45 PM	3:00 PM	4:45 PM	2:15 PM	2:30 PM	12:30 PM	3:15 PM	4:00 PM	5:30 PM	1:30 PM	3:30 PM	4:00 PM
15-min Vol	9	201	56	6	20	5	2	12	10	5	1	2	2	8	289

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Tube Count - Vehicle Classification Data

SUMMARY - Tube Count - Vehicle Classification Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St
QC JOB #: 15975347
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Chester, PA
DATE: Jan 24 2023 - Jan 25 2023

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Not Classed	Total
Grand Total	180	12276	3375	259	1195	265	50	322	564	111	9	14	31	376	19027
Percent	0.9%	64.5%	17.7%	1.4%	6.3%	1.4%	0.3%	1.7%	3%	0.6%	0%	0.1%	0.2%	2%	
ADT 9513															

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St **QC JOB #:** 15975347

SPECIFIC LOCATION: **DIRECTION:** WB

CITY/STATE: Chester, PA **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		16	23			20			20	
12:15 AM		18	14			16			16	
12:30 AM		19	21			20			20	
12:45 AM		13	17			15			15	
01:00 AM		12	21			17			17	
01:15 AM		14	8			11			11	
01:30 AM		11	16			14			14	
01:45 AM		11	13			12			12	
02:00 AM		11	13			12			12	
02:15 AM		9	19			14			14	
02:30 AM		11	9			10			10	
02:45 AM		11	10			11			11	
03:00 AM		18	15			17			17	
03:15 AM		7	17			12			12	
03:30 AM		10	8			9			9	
03:45 AM		15	10			13			13	
04:00 AM		13	14			14			14	
04:15 AM		15	17			16			16	
04:30 AM		17	20			19			19	
04:45 AM		14	15			15			15	
05:00 AM		18	14			16			16	
05:15 AM		29	21			25			25	
05:30 AM		42	31			37			37	
05:45 AM		48	38			43			43	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		78	68			73			73	
06:15 AM		69	73			71			71	
06:30 AM		72	77			75			75	
06:45 AM		83	86			85			85	
07:00 AM		55	58			57			57	
07:15 AM		81	104			93			93	
07:30 AM		102	94			98			98	
07:45 AM		**159**	135			147			147	
08:00 AM		142	139			141			141	
08:15 AM		156	**156**			**156**			**156**	
08:30 AM		141	143			142			142	
08:45 AM		117	128			123			123	
09:00 AM		83	111			97			97	
09:15 AM		87	81			84			84	
09:30 AM		93	99			96			96	
09:45 AM		84	87			86			86	
10:00 AM		124	89			107			107	
10:15 AM		135	91			113			113	
10:30 AM		124	118			121			121	
10:45 AM		115	106			111			111	
11:00 AM		111	92			102			102	
11:15 AM		111	94			103			103	
11:30 AM		132	96			114			114	
11:45 AM		151	93			122			122	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St **QC JOB #:** 15975347

SPECIFIC LOCATION: **DIRECTION:** WB

CITY/STATE: Chester, PA **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		158	90			124			124	
12:15 PM		153	110			132			132	
12:30 PM		152	102			127			127	
12:45 PM		170	106			138			138	
01:00 PM		128	146			137			137	
01:15 PM		166	129			148			148	
01:30 PM		172	130			151			151	
01:45 PM		188	126			157			157	
02:00 PM		219	169			194			194	
02:15 PM		199	157			178			178	
02:30 PM		272	229			251			251	
02:45 PM		279	216			248			248	
03:00 PM		276	227			252			252	
03:15 PM		242	222			232			232	
03:30 PM		**339**	257			298			298	
03:45 PM		307	235			271			271	
04:00 PM		328	**289**			**309**			**309**	
04:15 PM		317	238			278			278	
04:30 PM		280	271			276			276	
04:45 PM		245	216			231			231	
05:00 PM		295	251			273			273	
05:15 PM		253	218			236			236	
05:30 PM		269	202			236			236	
05:45 PM		202	151			177			177	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 2/1/2023 6:00 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: SR 291 Btwn Ulrich St and Pusey St | **QC JOB #:** 15975347

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Chester, PA | **DATE:** Jan 24 2023 - Jan 25 2023

Start Time	Mon	Tue 24 Jan 23	Wed 25 Jan 23	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		218	179			199			199	
06:15 PM		126	112			119			119	
06:30 PM		108	107			108			108	
06:45 PM		91	89			90			90	
07:00 PM		67	74			71			71	
07:15 PM		78	74			76			76	
07:30 PM		55	68			62			62	
07:45 PM		62	54			58			58	
08:00 PM		62	60			61			61	
08:15 PM		57	53			55			55	
08:30 PM		56	46			51			51	
08:45 PM		64	50			57			57	
09:00 PM		49	48			49			49	
09:15 PM		47	44			46			46	
09:30 PM		58	45			52			52	
09:45 PM		42	49			46			46	
10:00 PM		63	62			63			63	
10:15 PM		41	74			58			58	
10:30 PM		57	56			57			57	
10:45 PM		30	35			33			33	
11:00 PM		48	49			49			49	
11:15 PM		34	37			36			36	
11:30 PM		26	24			25			25	
11:45 PM		27	47			37			37	
Day Total		10182	8845			9537			9537	
% Weekday Average		106.8%	92.7%							
% Week Average		106.8%	92.7%			100%				
AM Peak 15-min Vol		7:45 AM 159	8:15 AM 156			8:15 AM 156			8:15 AM 156	
PM Peak 15-min Vol		3:30 PM 339	4:00 PM 289			4:00 PM 309			4:00 PM 309	

Comments:

Report generated on 2/1/2023 6:00 AM

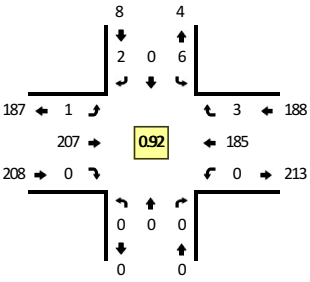
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

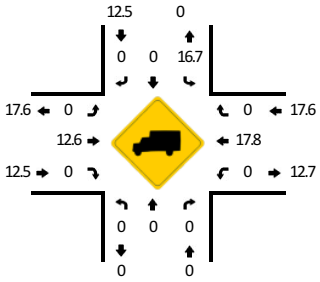
Quality Counts
DATA THAT DRIVES COMMUNITIES

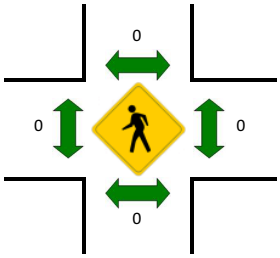
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

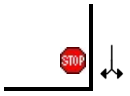
LOCATION: Irving St -- SR 291 | **QC JOB #:** 15975301
CITY/STATE: Trainer, PA | **DATE:** Tue, Jan 24 2023

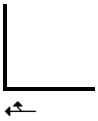
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 8:00 AM -- 8:15 AM

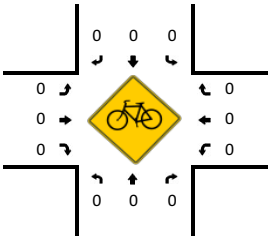


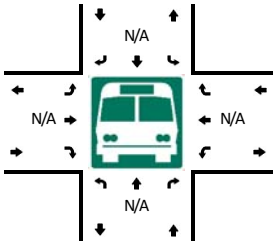


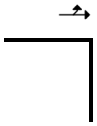




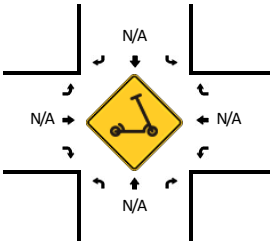












15-Min Count Period Beginning At	Irving St (Northbound)				Irving St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	0	0	0	0	0	0	0	0	22	0	0	0	47	1	0	70	
6:15 AM	0	0	0	0	1	0	0	0	1	28	0	0	0	61	2	0	93	
6:30 AM	0	0	0	0	0	0	0	0	0	44	0	0	0	73	0	0	117	
6:45 AM	0	0	0	0	1	0	1	0	0	42	0	0	0	64	1	1	110	390
7:00 AM	0	0	0	0	2	0	0	0	0	45	0	0	0	28	0	0	75	395
7:15 AM	0	0	0	0	1	0	0	0	0	60	0	0	0	27	1	0	89	391
7:30 AM	0	0	0	0	2	0	1	0	0	53	0	0	0	36	0	0	92	366
7:45 AM	0	0	0	0	1	0	0	0	0	58	0	0	0	47	1	0	107	363
8:00 AM	0	0	0	0	1	0	1	0	0	51	0	0	0	55	2	0	110	398
8:15 AM	0	0	0	0	2	0	0	0	1	45	0	0	0	47	0	0	95	404
8:30 AM	0	0	0	0	0	0	0	0	1	38	0	0	0	45	1	0	85	397
8:45 AM	0	0	0	0	1	0	1	0	0	41	0	0	0	35	0	0	78	368

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	4	0	4	0	0	204	0	0	0	220	8	0	440
Heavy Trucks	0	0	0		4	0	0		0	28	0		0	52	0		84
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

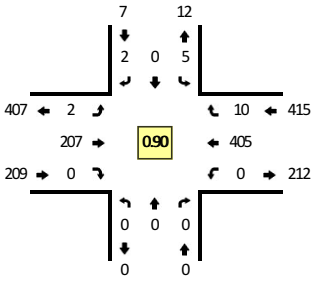
Comments:

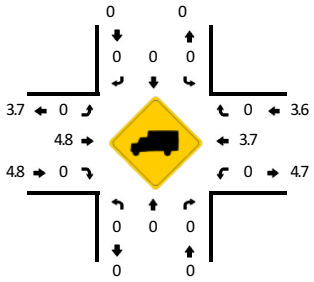
Report generated on 2/6/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

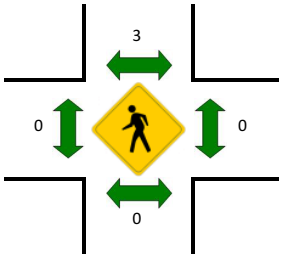
LOCATION: Irving St -- SR 291 | **QC JOB #:** 15975303
CITY/STATE: Trainer, PA | **DATE:** Tue, Jan 24 2023

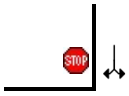
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

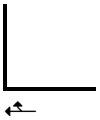


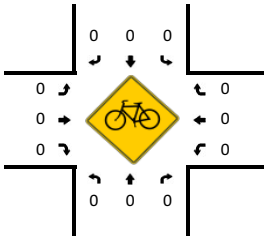


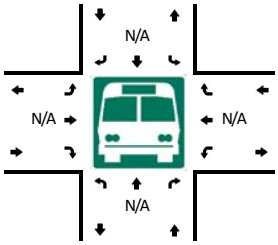
Quality Counts
DATA THAT DRIVES COMMUNITIES

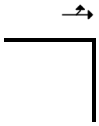




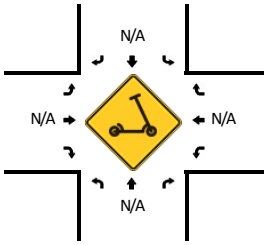












15-Min Count Period Beginning At	Irving St (Northbound)				Irving St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	2	0	0	0	1	61	0	0	0	109	3	0	176	
4:15 PM	0	0	0	0	1	0	1	0	0	48	0	0	0	117	5	0	172	
4:30 PM	0	0	0	0	1	0	0	0	1	56	0	0	0	79	2	0	139	
4:45 PM	0	0	0	0	1	0	1	0	0	42	0	0	0	100	0	0	144	631
5:00 PM	0	0	0	0	2	0	0	0	0	76	0	0	0	93	3	0	174	629
5:15 PM	0	0	0	0	0	0	0	0	0	67	0	0	0	68	1	0	136	593
5:30 PM	0	0	0	0	0	0	0	0	0	48	0	0	0	97	0	0	145	599
5:45 PM	0	0	0	0	0	0	0	0	0	61	0	0	0	70	0	0	131	586
6:00 PM	0	0	0	0	0	0	0	0	0	48	0	0	0	68	0	0	116	528
6:15 PM	0	0	0	0	0	0	0	0	0	33	0	0	0	37	1	0	71	463
6:30 PM	0	0	0	0	1	0	0	0	1	21	0	0	0	37	0	0	60	378
6:45 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	21	2	0	33	280

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	8	0	0	0	4	244	0	0	0	436	12	0	704
Heavy Trucks	0	0	0		0	0	0		0	8	0		0	24	0		32
Buses																	
Pedestrians		0				12				0				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

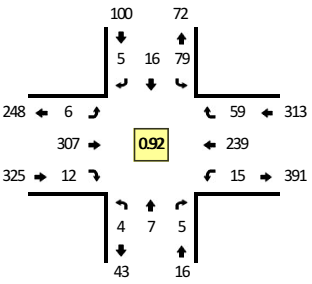
Type of peak hour being reported: Intersection Peak

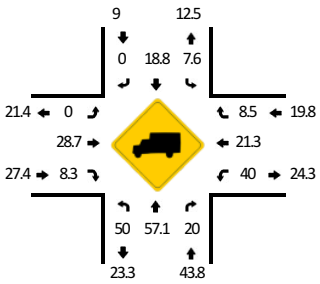
Method for determining peak hour: Total Entering Volume

LOCATION: Highland Ave -- SR 291
CITY/STATE: Chester, PA

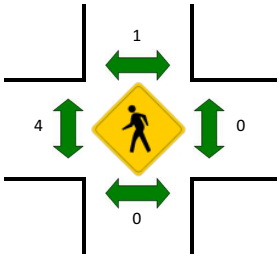
QC JOB #: 15975304
DATE: Tue, Jan 24 2023

Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

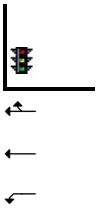


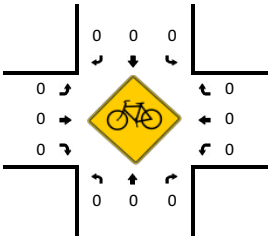


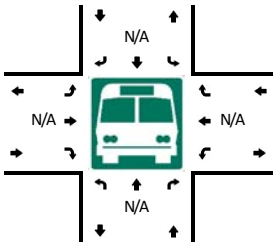
Quality Counts
DATA THAT DRIVES COMMUNITIES

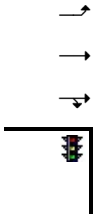


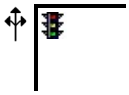


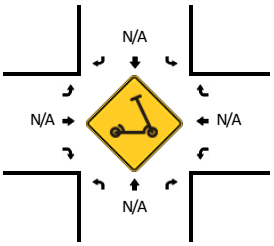












15-Min Count Period Beginning At	Highland Ave (Northbound)				Highland Ave (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	1	1	1	0	1	2	3	0	1	39	1	1	0	49	8	0	108	
6:15 AM	3	3	0	0	3	0	2	0	3	41	1	1	0	63	9	0	129	
6:30 AM	2	1	4	0	5	2	4	0	0	67	2	2	0	67	1	0	157	
6:45 AM	2	0	1	0	9	3	5	0	1	59	4	1	0	73	6	0	164	558
7:00 AM	1	1	1	0	6	2	3	0	2	51	1	0	1	42	5	0	116	566
7:15 AM	0	0	3	0	18	4	3	0	1	77	2	0	7	53	12	0	180	617
7:30 AM	1	2	0	0	18	4	1	0	1	83	5	0	4	53	8	0	180	640
7:45 AM	2	4	2	0	24	5	0	0	3	80	3	0	0	65	16	0	204	680
8:00 AM	1	1	0	0	19	3	1	0	1	67	2	0	4	68	23	0	190	754
8:15 AM	0	3	3	0	16	5	4	0	0	54	2	0	1	62	14	0	164	738
8:30 AM	1	3	1	0	12	5	5	0	1	57	1	0	4	77	11	0	178	736
8:45 AM	0	2	0	0	9	7	9	0	2	60	4	0	1	64	17	0	175	707

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	16	8	0	96	20	0	0	12	320	12	0	0	260	64	0	816
Heavy Trucks	4	8	0		8	4	0		0	96	0		0	40	4		164
Buses																	
Pedestrians		0				0				12				0			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

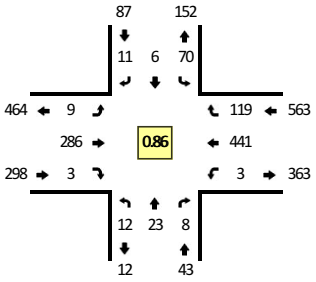
Report generated on 2/6/2023 6:31 PM

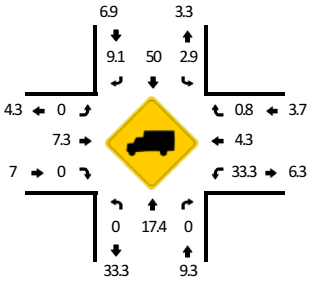
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

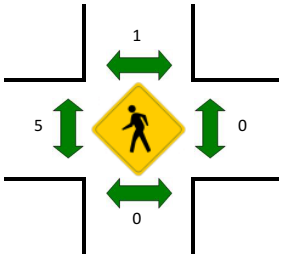
LOCATION: Highland Ave -- SR 291 | **QC JOB #:** 15975306
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

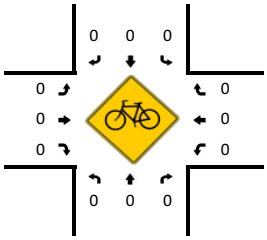
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

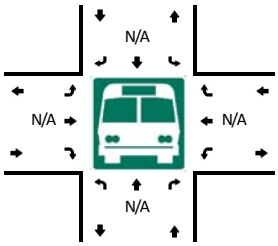


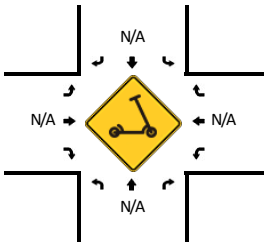


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	Highland Ave (Northbound)				Highland Ave (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	1	3	0	20	0	2	1	2	85	0	0	2	125	31	0	274	
4:15 PM	7	2	3	0	19	1	4	0	0	71	1	0	0	128	31	0	267	
4:30 PM	3	6	1	0	12	1	2	1	1	68	0	0	1	93	28	0	217	
4:45 PM	1	2	0	0	20	3	1	0	3	54	0	0	0	111	25	0	220	978
5:00 PM	1	13	4	0	18	1	4	0	5	93	2	0	2	109	35	0	287	991
5:15 PM	2	3	2	0	12	2	3	0	3	79	2	0	0	82	24	0	214	938
5:30 PM	3	3	3	0	19	3	3	1	2	69	5	0	0	122	23	0	256	977
5:45 PM	1	5	0	0	11	3	2	0	2	74	2	1	0	75	26	0	202	959
6:00 PM	3	2	5	0	21	3	2	0	0	58	0	2	1	71	24	0	192	864
6:15 PM	3	6	1	0	12	2	0	0	1	45	1	0	0	46	20	0	137	787
6:30 PM	1	3	1	0	11	2	2	0	3	35	0	0	0	42	9	0	109	640
6:45 PM	2	0	1	0	9	1	1	0	1	23	0	0	1	29	14	0	82	520

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	52	16	0	72	4	16	0	20	372	8	0	8	436	140	0	1148
Heavy Trucks	0	8	0		0	0	0		0	28	0		4	12	0		52
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

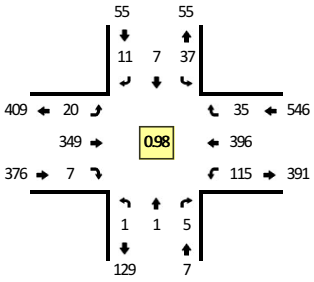
Type of peak hour being reported: Intersection Peak

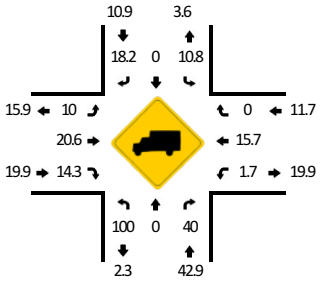
Method for determining peak hour: Total Entering Volume

LOCATION: Engle St -- SR 291
CITY/STATE: Chester, PA

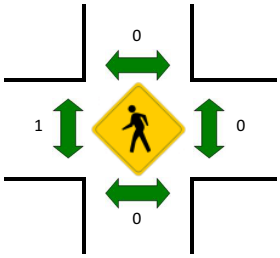
QC JOB #: 15975307
DATE: Tue, Jan 24 2023

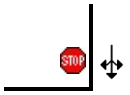
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 8:30 AM -- 8:45 AM

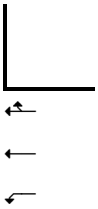


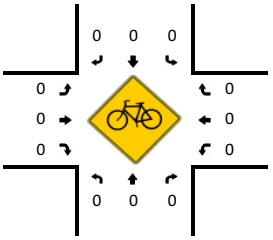


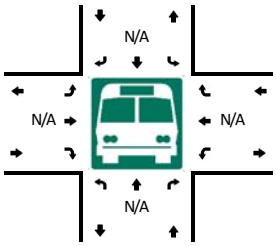
Quality Counts
DATA THAT DRIVES COMMUNITIES

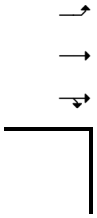


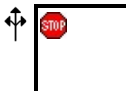


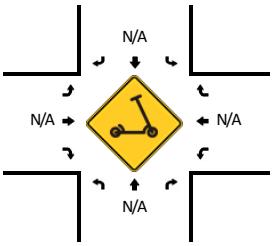












15-Min Count Period Beginning At	Engle St (Northbound)				Engle St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	0	5	0	3	0	0	0	0	37	0	0	3	87	2	0	137	
6:15 AM	0	0	2	0	2	0	5	0	0	55	1	0	6	99	4	0	174	
6:30 AM	0	0	0	0	5	2	2	0	2	77	0	0	2	89	6	0	185	
6:45 AM	0	0	0	0	3	1	7	0	4	78	0	1	2	98	7	0	201	697
7:00 AM	0	0	2	0	6	2	1	0	4	60	4	1	6	55	5	0	146	706
7:15 AM	1	1	1	0	6	1	4	0	3	98	1	1	5	82	12	0	216	748
7:30 AM	0	1	0	0	18	0	3	0	3	114	0	1	13	70	12	0	235	798
7:45 AM	1	0	2	0	14	0	1	0	5	97	3	0	15	103	10	0	251	848
8:00 AM	0	0	0	0	10	2	2	0	3	101	2	1	24	94	9	0	248	950
8:15 AM	0	1	1	0	5	3	5	0	5	75	1	0	34	95	8	0	233	967
8:30 AM	0	0	2	0	8	2	3	0	6	76	1	0	42	104	8	0	252	984
8:45 AM	0	1	3	0	3	1	2	0	3	75	1	0	54	90	8	0	241	974

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	8	0	32	8	12	0	24	304	4	0	168	416	32	0	1008
Heavy Trucks	0	0	4		4	0	0		0	68	0		0	88	0		164
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

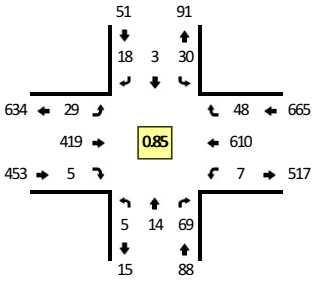
Type of peak hour being reported: Intersection Peak

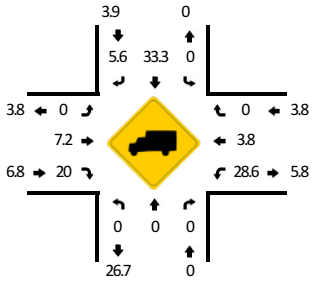
Method for determining peak hour: Total Entering Volume

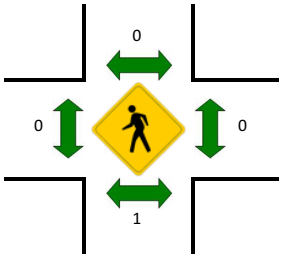
LOCATION: Engle St -- SR 291
CITY/STATE: Chester, PA

QC JOB #: 15975309
DATE: Tue, Jan 24 2023

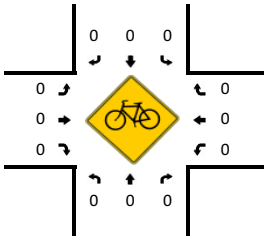
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

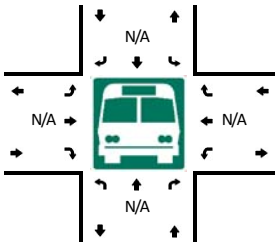




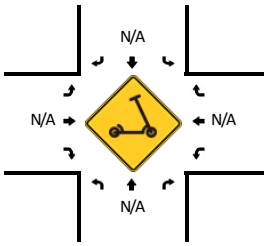












15-Min Count Period Beginning At	Engle St (Northbound)				Engle St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	1	6	0	11	1	5	0	9	130	0	0	1	176	16	0	356	
4:15 PM	0	0	16	0	7	0	3	0	3	101	0	0	4	172	17	0	323	
4:30 PM	1	4	11	0	7	2	6	1	6	96	1	0	0	139	12	0	286	
4:45 PM	1	2	13	0	5	1	4	0	4	97	3	1	0	143	6	0	280	1245
5:00 PM	3	8	29	0	10	0	5	0	15	125	1	0	3	156	13	0	368	1257
5:15 PM	1	6	21	0	8	1	4	0	1	108	0	0	2	128	13	0	293	1227
5:30 PM	1	3	18	0	8	0	2	0	4	94	2	0	1	155	5	1	294	1235
5:45 PM	1	4	14	0	7	0	2	0	2	85	0	0	2	112	14	0	243	1198
6:00 PM	3	4	20	0	5	0	2	0	1	93	0	0	1	109	7	1	246	1076
6:15 PM	2	3	9	0	5	1	2	0	3	64	0	0	0	79	8	0	176	959
6:30 PM	2	1	4	0	8	0	1	0	1	62	0	0	0	61	5	0	145	810
6:45 PM	0	0	2	0	1	0	2	0	3	41	0	0	0	45	6	0	100	667

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	32	116	0	40	0	20	0	60	500	4	0	12	624	52	0	1472
Heavy Trucks	0	0	0		0	0	0		0	36	4		4	24	0		68
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

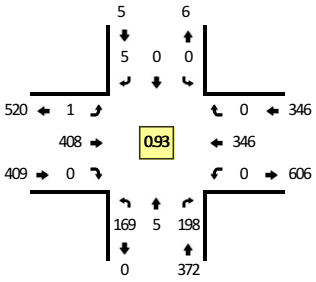
Report generated on 2/6/2023 6:31 PM

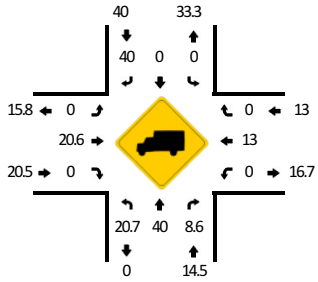
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

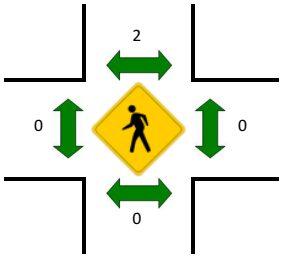
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

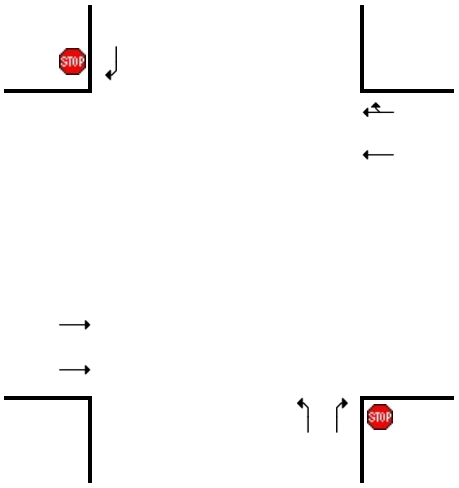
LOCATION: Jeffrey St/US 322 SB Off Ramp -- SR 291 | **QC JOB #:** 15975310
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

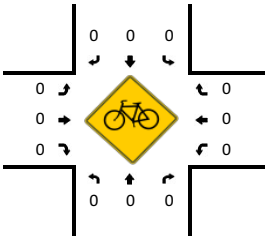
Peak-Hour: 6:45 AM -- 7:45 AM
Peak 15-Min: 6:45 AM -- 7:00 AM

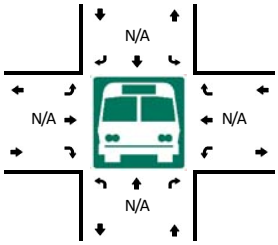


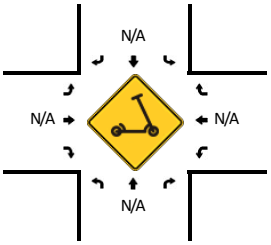












15-Min Count Period Beginning At	Jeffrey St/US 322 SB Off Ramp (Northbound)				Jeffrey St/US 322 SB Off Ramp (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	23	2	30	0	0	0	3	0	0	37	0	0	0	56	0	0	151	
6:15 AM	28	0	46	0	0	0	0	0	0	86	0	0	0	92	0	0	252	
6:30 AM	28	1	60	0	0	0	0	0	0	96	0	0	0	103	0	0	288	
6:45 AM	31	2	61	0	0	0	1	0	0	112	0	0	0	97	0	0	304	995
7:00 AM	38	0	35	0	0	0	2	0	0	97	0	0	0	95	0	0	267	1111
7:15 AM	49	1	51	0	0	0	0	0	1	86	0	0	0	83	0	0	271	1130
7:30 AM	51	2	51	0	0	0	2	0	0	113	0	0	0	71	0	0	290	1132
7:45 AM	67	3	32	0	0	0	1	0	1	85	0	0	0	82	0	0	271	1099
8:00 AM	35	0	42	0	0	0	1	0	0	90	0	0	0	61	0	0	229	1061
8:15 AM	38	3	47	0	0	0	0	0	0	72	0	0	0	61	0	0	221	1011
8:30 AM	44	2	45	0	0	0	1	0	0	52	0	0	0	48	0	0	192	913
8:45 AM	43	3	57	0	0	0	1	0	0	68	0	0	0	58	0	0	230	872

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	124	8	244	0	0	0	4	0	0	448	0	0	0	388	0	0	1216
Heavy Trucks	16	4	20		0	0	0		0	96	0		0	28	0		164
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

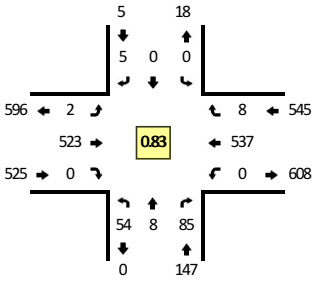
Comments:

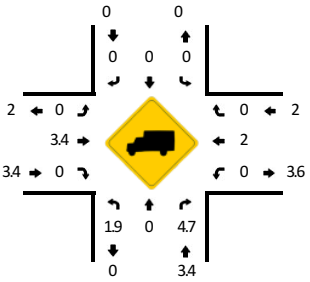
Report generated on 2/6/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

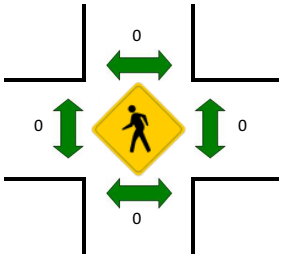
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Jeffrey St/US 322 SB Off Ramp -- SR 291 | **QC JOB #:** 15975312
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

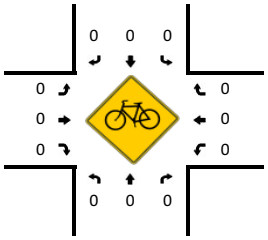
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

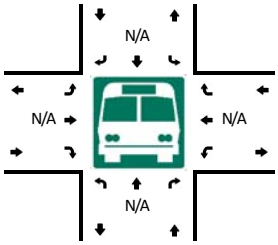


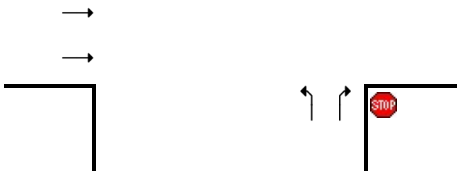


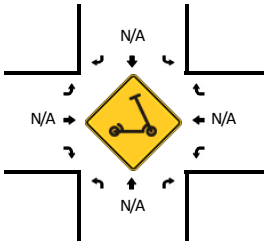












15-Min Count Period Beginning At	Jeffrey St/US 322 SB Off Ramp (Northbound)				Jeffrey St/US 322 SB Off Ramp (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	12	3	23	0	0	0	4	0	0	159	0	0	0	163	2	0	366	
4:15 PM	16	2	22	0	0	0	0	0	0	132	0	0	0	124	3	0	299	
4:30 PM	16	1	19	0	0	0	0	0	1	122	0	0	0	137	2	0	298	
4:45 PM	10	2	21	0	0	0	1	0	1	110	0	0	0	113	1	0	259	1222
5:00 PM	17	2	15	0	0	0	2	0	0	116	0	0	0	100	3	0	255	1111
5:15 PM	22	4	28	0	0	0	2	0	1	78	0	0	0	63	1	0	199	1011
5:30 PM	14	1	17	0	0	0	0	0	0	73	0	0	0	48	2	0	155	868
5:45 PM	12	3	19	0	0	0	5	0	0	43	0	0	0	36	4	0	122	731
6:00 PM	13	2	22	0	0	0	0	0	0	68	0	0	0	35	1	0	141	617
6:15 PM	7	4	18	0	0	0	1	0	0	37	0	0	0	39	3	0	109	527
6:30 PM	14	2	20	0	0	0	3	0	0	43	0	0	0	38	2	0	122	494
6:45 PM	11	0	14	0	1	0	0	0	0	33	0	0	0	39	2	0	100	472

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	48	12	92	0	0	0	16	0	0	636	0	0	0	652	8	0	1464
Heavy Trucks	4	0	8		0	0	0		0	36	0		0	32	0		80
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

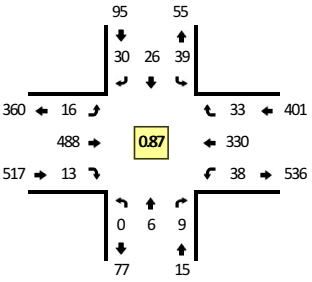
Type of peak hour being reported: Intersection Peak

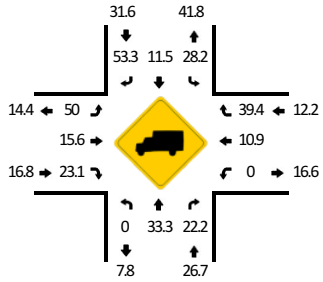
Method for determining peak hour: Total Entering Volume

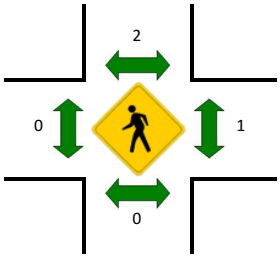
LOCATION: Flower St -- SR 291
CITY/STATE: Chester, PA

QC JOB #: 15975316
DATE: Tue, Jan 24 2023

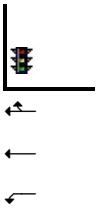
Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

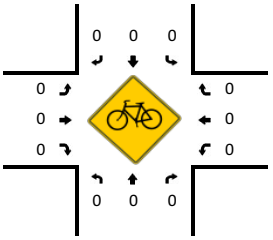


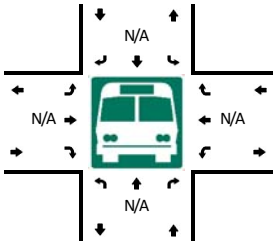


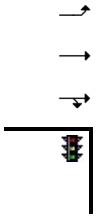


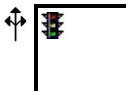


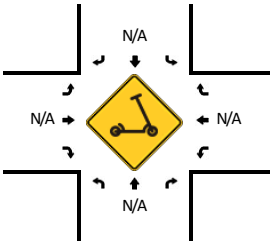












15-Min Count Period Beginning At	Flower St (Northbound)				Flower St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	1	1	0	1	0	7	0	5	57	1	0	1	31	3	0	108	
6:15 AM	0	1	2	0	2	0	8	0	10	97	1	1	1	39	1	0	163	
6:30 AM	1	1	0	0	7	1	14	0	4	112	2	0	0	35	7	0	184	
6:45 AM	0	1	5	0	12	0	11	0	2	110	4	2	7	38	4	0	196	651
7:00 AM	2	0	1	0	7	2	4	0	5	86	0	0	1	25	4	0	137	680
7:15 AM	1	0	1	0	12	2	9	0	3	130	1	0	4	49	5	0	217	734
7:30 AM	1	0	3	0	7	2	5	0	6	151	3	0	3	59	6	0	246	796
7:45 AM	0	1	1	0	17	6	6	0	4	149	4	0	8	88	11	0	295	895
8:00 AM	0	0	1	0	12	6	4	0	6	115	3	0	6	76	12	0	241	999
8:15 AM	0	3	2	0	5	3	14	0	3	119	1	0	8	78	5	0	241	1023
8:30 AM	0	2	5	0	5	11	6	0	3	105	5	0	16	88	5	0	251	1028
8:45 AM	0	2	2	0	10	2	9	0	6	100	0	0	11	70	6	0	218	951

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	4	4	0	68	24	24	0	16	596	16	0	32	352	44	0	1180
Heavy Trucks	0	4	4		8	4	12		4	88	0		0	24	20		168
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

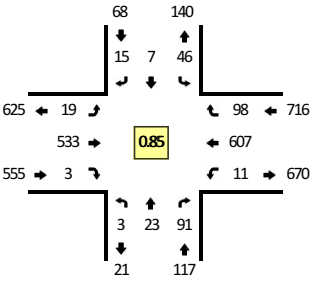
Report generated on 2/6/2023 6:31 PM

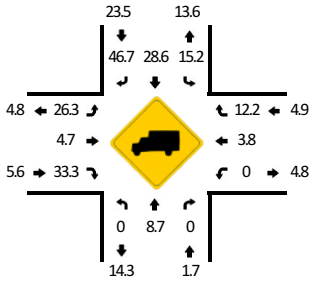
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

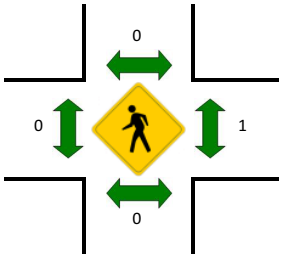
LOCATION: Flower St -- SR 291 | **QC JOB #:** 15975318
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

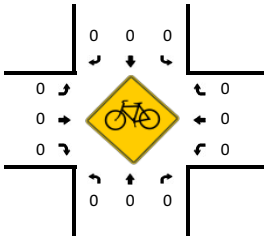
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

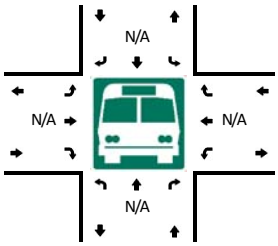


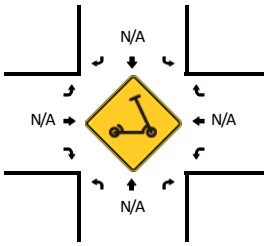


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	Flower St (Northbound)				Flower St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	5	18	0	14	3	5	0	10	143	2	1	4	166	27	0	399	
4:15 PM	1	6	16	0	16	2	1	0	2	130	0	0	2	176	26	0	378	
4:30 PM	1	2	13	0	10	2	7	0	6	115	0	0	2	146	34	0	338	
4:45 PM	0	2	16	0	11	2	1	0	3	119	1	0	6	134	15	0	310	1425
5:00 PM	1	13	46	0	9	1	6	0	8	169	2	0	1	151	23	0	430	1456
5:15 PM	1	11	21	0	12	2	1	0	6	134	0	0	3	123	31	0	345	1423
5:30 PM	1	5	29	0	7	1	1	0	2	132	4	1	5	131	19	0	338	1423
5:45 PM	0	9	22	0	12	1	5	0	9	115	2	1	2	112	19	0	309	1422
6:00 PM	0	5	28	0	2	0	4	0	8	120	4	2	6	98	25	0	302	1294
6:15 PM	0	4	16	0	5	0	5	0	5	103	0	1	4	60	9	1	213	1162
6:30 PM	1	1	13	0	4	0	3	0	2	80	2	1	1	44	5	0	157	981
6:45 PM	1	2	7	0	0	0	3	0	2	48	0	1	2	39	6	0	111	783

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	52	184	0	36	4	24	0	32	676	8	0	4	604	92	0	1720
Heavy Trucks	0	0	0		4	4	12		12	24	4		0	16	8		84
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

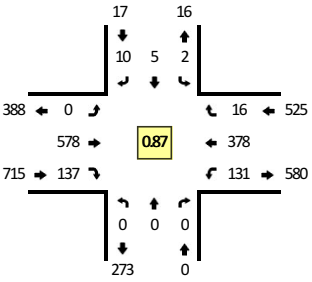
Report generated on 2/6/2023 6:31 PM

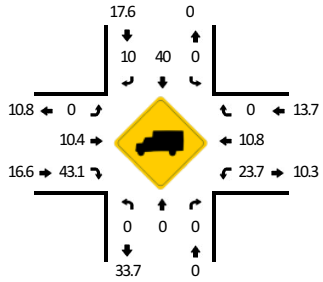
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

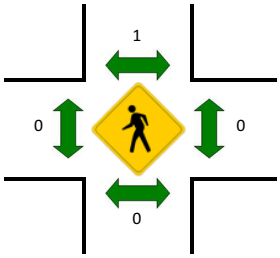
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

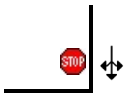
LOCATION: Tilghman St/US 322 NB On Ramp -- SR 291 | **QC JOB #:** 15975319
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

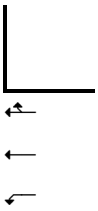
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

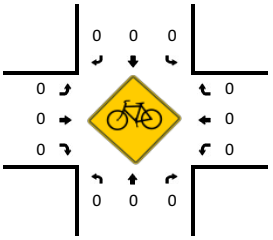


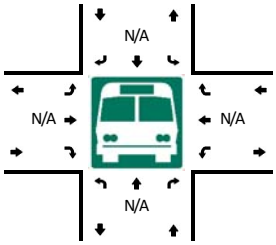


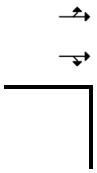




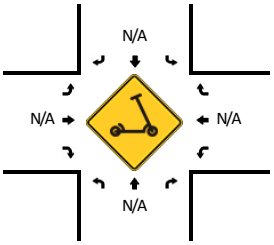












15-Min Count Period Beginning At	Tilghman St/US 322 NB On Ramp (Northbound)				Tilghman St/US 322 NB On Ramp (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	0	0	0	0	1	1	0	1	54	18	0	39	37	2	0	153	
6:15 AM	0	0	0	0	0	0	0	0	1	77	34	1	24	42	2	0	181	
6:30 AM	0	0	0	0	0	4	1	0	2	114	26	0	26	47	1	0	221	
6:45 AM	0	0	0	0	0	1	1	0	1	117	35	0	14	53	0	0	222	777
7:00 AM	0	0	0	0	0	0	0	0	0	96	19	0	23	30	2	0	170	794
7:15 AM	0	0	0	0	0	1	1	0	4	127	42	0	30	58	1	0	264	877
7:30 AM	0	0	0	0	0	0	2	0	0	179	40	0	22	70	6	0	319	975
7:45 AM	0	0	0	0	2	2	3	0	0	154	39	0	44	113	4	0	361	1114
8:00 AM	0	0	0	0	0	2	4	0	0	124	26	0	30	97	1	0	284	1228
8:15 AM	0	0	0	0	0	1	1	0	0	121	32	0	35	98	5	0	293	1257
8:30 AM	0	0	0	0	0	2	2	0	0	97	32	0	27	113	2	0	275	1213
8:45 AM	0	0	0	0	0	1	2	0	1	103	34	0	20	91	2	0	254	1106

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	8	8	12	0	0	616	156	0	176	452	16	0	1444
Heavy Trucks	0	0	0		0	4	0		0	56	56		32	44	0		192
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

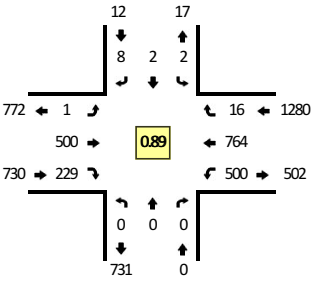
Report generated on 2/6/2023 6:31 PM

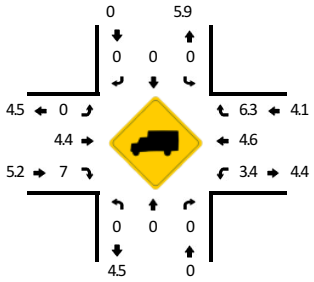
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

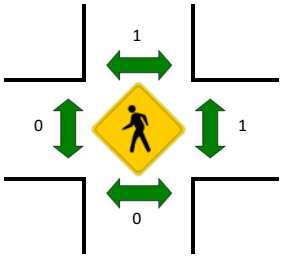
LOCATION: Tilghman St/US 322 NB On Ramp -- SR 291 | **QC JOB #:** 15975321
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

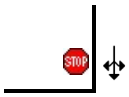
Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

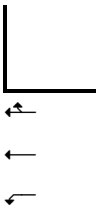


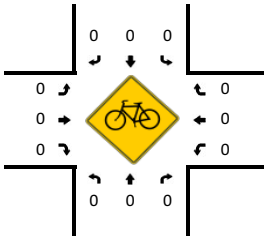


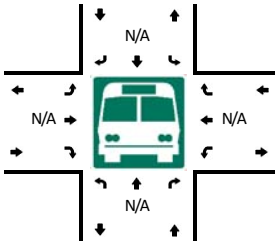
Quality Counts
DATA THAT DRIVES COMMUNITIES

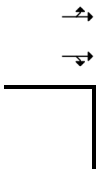




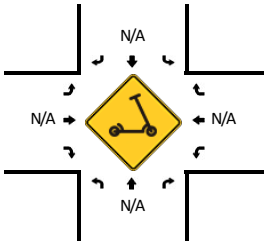












15-Min Count Period Beginning At	Tilghman St/US 322 NB On Ramp (Northbound)				Tilghman St/US 322 NB On Ramp (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	1	0	1	135	57	0	144	211	2	0	551	
4:15 PM	0	0	0	0	0	1	2	0	0	121	53	0	143	216	3	0	539	
4:30 PM	0	0	0	0	2	0	0	0	0	116	48	0	120	193	5	0	484	
4:45 PM	0	0	0	0	0	1	5	0	1	105	43	0	109	161	3	0	428	2002
5:00 PM	0	0	0	0	0	0	1	0	0	158	85	0	128	194	5	0	571	2022
5:15 PM	0	0	0	0	1	0	2	0	0	118	76	0	109	180	1	0	487	1970
5:30 PM	0	0	0	0	0	0	1	0	0	118	76	0	114	156	4	0	469	1955
5:45 PM	0	0	0	0	0	3	1	0	0	110	56	1	71	149	5	0	396	1923
6:00 PM	0	0	0	0	0	0	2	0	1	96	59	0	80	137	2	0	377	1729
6:15 PM	0	0	0	0	1	2	0	0	1	84	38	0	53	74	5	0	258	1500
6:30 PM	0	0	0	0	0	1	0	0	0	71	28	0	40	63	3	0	206	1237
6:45 PM	0	0	0	0	0	2	0	0	1	52	19	1	40	48	3	1	167	1008

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	0	0	4	0	0	632	340	0	512	776	20	0	2284
Heavy Trucks	0	0	0		0	0	0		0	24	12		12	32	4		84
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

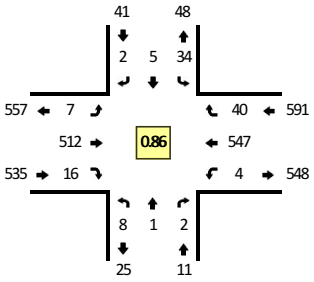
Type of peak hour being reported: Intersection Peak

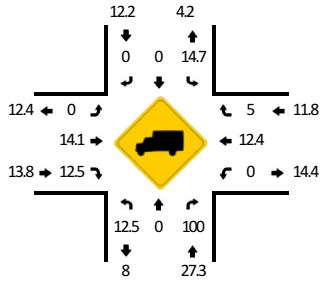
Method for determining peak hour: Total Entering Volume

LOCATION: Penn St -- SR 291
CITY/STATE: Chester, PA

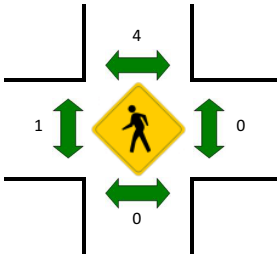
QC JOB #: 15975328
DATE: Tue, Jan 24 2023

Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

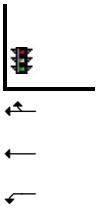


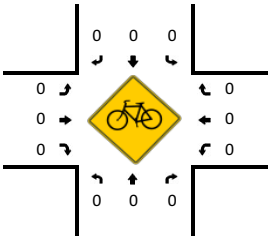


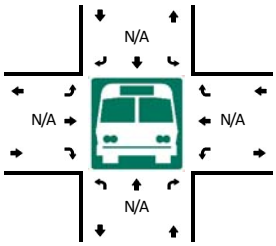
Quality Counts
DATA THAT DRIVES COMMUNITIES

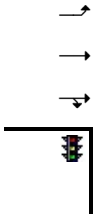


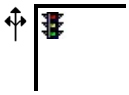


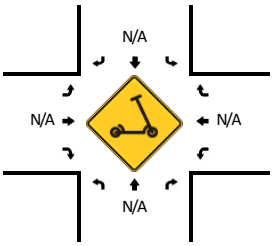












15-Min Count Period Beginning At	Penn St (Northbound)				Penn St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	14	0	0	0	3	0	0	0	1	46	4	0	0	71	4	0	143	
6:15 AM	2	0	1	0	3	1	2	0	0	62	4	0	1	54	0	0	130	
6:30 AM	0	0	0	0	2	0	0	0	2	84	3	0	0	79	1	0	171	
6:45 AM	1	0	0	0	2	0	0	0	1	88	2	0	0	85	4	0	183	627
7:00 AM	1	2	0	0	1	0	1	0	1	82	1	0	0	62	2	0	153	637
7:15 AM	0	0	0	0	5	1	2	0	2	111	1	0	1	87	4	0	214	721
7:30 AM	2	0	1	0	5	1	1	0	2	145	5	0	0	96	10	0	268	818
7:45 AM	1	1	0	0	9	3	1	0	0	151	3	0	2	166	6	0	343	978
8:00 AM	2	0	0	0	7	1	0	0	0	106	4	0	1	143	9	0	273	1098
8:15 AM	3	0	1	0	13	0	0	0	5	110	4	0	1	142	15	0	294	1178
8:30 AM	3	1	0	0	4	0	3	0	1	95	0	0	2	126	11	0	246	1156
8:45 AM	1	1	0	0	9	0	0	0	2	96	3	0	0	116	10	0	238	1051

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	4	0	0	36	12	4	0	0	604	12	0	8	664	24	0	1372
Heavy Trucks	0	0	0		8	0	0		0	88	0		0	80	4		180
Buses																	
Pedestrians		0				8				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

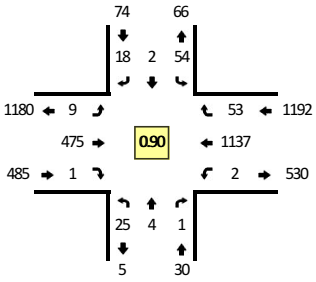
Report generated on 2/6/2023 6:31 PM

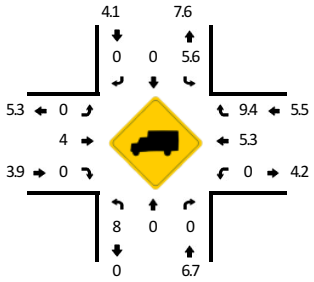
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

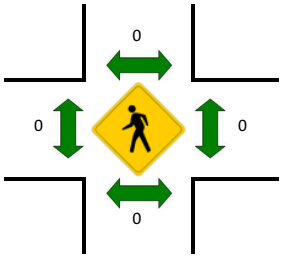
LOCATION: Penn St -- SR 291 | **QC JOB #:** 15975330
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

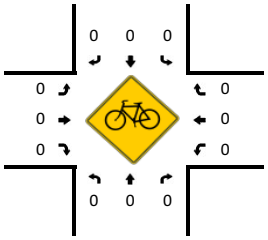
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

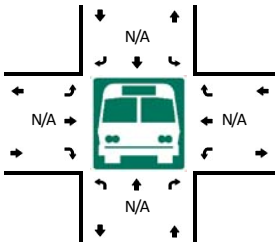


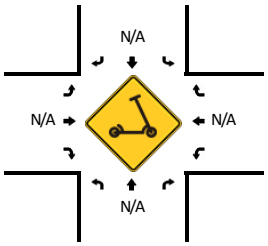


Quality Counts
DATA THAT DRIVES COMMUNITIES









15-Min Count Period Beginning At	Penn St (Northbound)				Penn St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	6	0	0	0	9	1	4	0	1	128	0	0	1	333	14	0	497	
4:15 PM	11	4	0	0	13	1	5	0	3	115	0	0	0	304	17	0	473	
4:30 PM	4	0	0	0	20	0	7	0	1	122	0	0	0	290	14	0	458	
4:45 PM	4	0	1	0	12	0	2	0	4	110	1	0	1	210	8	0	353	1781
5:00 PM	14	0	0	0	13	1	2	0	3	157	6	0	0	283	11	0	490	1774
5:15 PM	3	0	1	0	11	0	2	0	1	119	6	0	0	240	6	1	390	1691
5:30 PM	3	0	0	0	5	0	1	0	2	115	8	0	0	253	9	0	396	1629
5:45 PM	0	1	0	0	4	1	1	0	1	107	2	0	0	197	7	0	321	1597
6:00 PM	19	1	0	0	4	1	1	0	1	99	0	0	0	188	4	0	318	1425
6:15 PM	1	0	0	0	3	0	1	0	2	73	0	0	0	110	11	0	201	1236
6:30 PM	1	0	0	0	4	0	3	0	3	64	0	0	0	96	5	0	176	1016
6:45 PM	1	0	1	0	3	0	2	0	1	50	0	0	0	78	6	0	142	837

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	0	0	0	36	4	16	0	4	512	0	0	4	1332	56	0	1988
Heavy Trucks	0	0	0		4	0	0		0	12	0		0	72	12		100
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

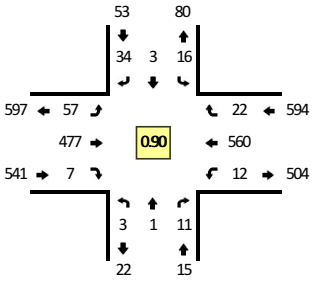
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

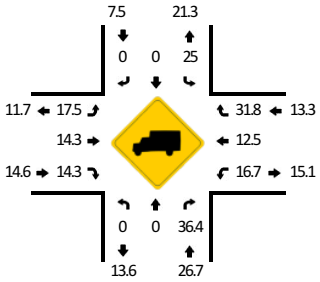
LOCATION: Welsh St -- SR 291
CITY/STATE: Chester, PA

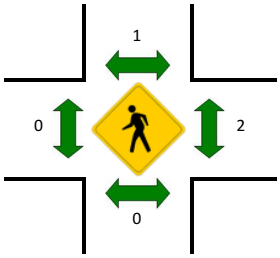
QC JOB #: 15975334
DATE: Tue, Jan 24 2023

Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

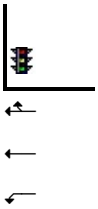


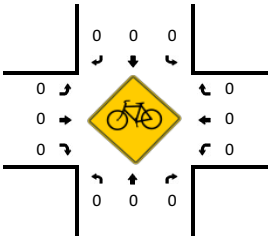
Quality Counts
DATA THAT DRIVES COMMUNITIES

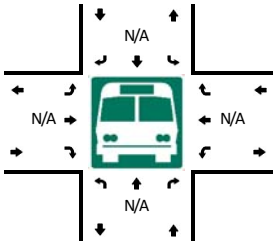


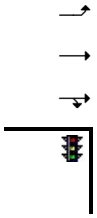


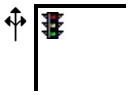


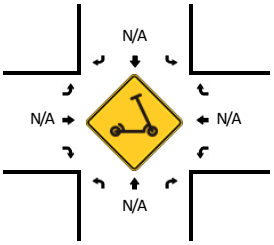












15-Min Count Period Beginning At	Welsh St (Northbound)				Welsh St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	18	6	10	0	5	1	2	0	3	52	1	0	2	52	1	0	153	
6:15 AM	2	1	3	0	2	1	0	0	3	62	4	0	2	57	2	0	139	
6:30 AM	1	1	1	0	6	3	3	0	5	76	2	0	5	77	1	0	181	
6:45 AM	0	0	1	0	3	2	2	0	1	84	3	0	4	86	4	0	190	663
7:00 AM	0	1	0	0	2	1	3	0	4	81	0	0	1	64	0	0	157	667
7:15 AM	0	0	1	0	2	0	3	0	9	111	2	0	2	84	5	0	219	747
7:30 AM	0	0	3	0	4	2	5	0	16	134	2	0	3	108	5	0	282	848
7:45 AM	1	0	3	0	5	0	6	0	18	133	4	0	4	154	6	0	334	992
8:00 AM	1	0	1	0	6	1	11	0	11	105	1	0	1	146	6	0	290	1125
8:15 AM	1	1	4	0	1	0	12	0	12	105	0	0	4	152	5	0	297	1203
8:30 AM	1	0	3	0	6	0	10	0	19	79	2	0	3	130	8	0	261	1182
8:45 AM	0	0	0	0	3	2	12	0	10	87	1	0	5	106	5	0	231	1079

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	12	0	20	0	24	0	72	532	16	0	16	616	24	0	1336
Heavy Trucks	0	0	4		0	0	0		4	76	0		0	80	12		176
Buses																	
Pedestrians		0				4				0				8			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

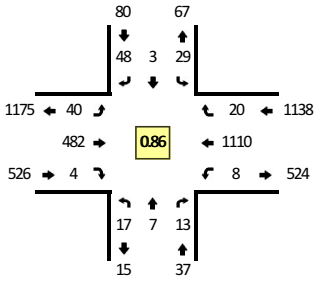
Type of peak hour being reported: Intersection Peak

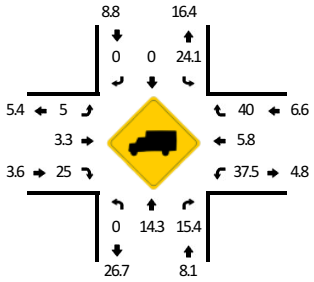
Method for determining peak hour: Total Entering Volume

LOCATION: Welsh St -- SR 291
CITY/STATE: Chester, PA

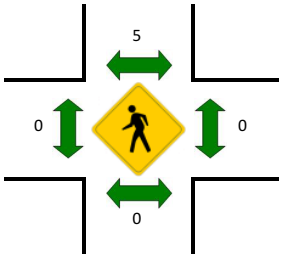
QC JOB #: 15975336
DATE: Tue, Jan 24 2023

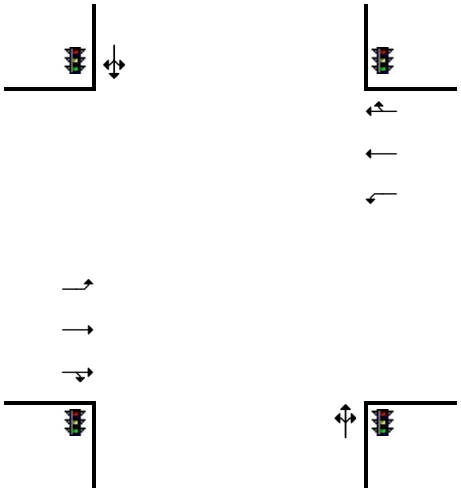
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

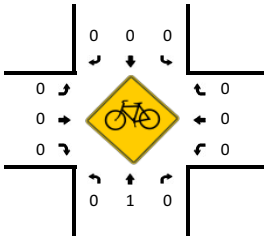


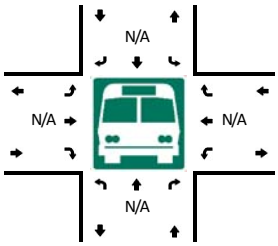


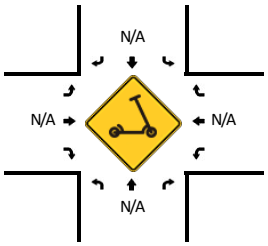
Quality Counts
DATA THAT DRIVES COMMUNITIES











15-Min Count Period Beginning At	Welsh St (Northbound)				Welsh St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	1	8	0	7	0	9	0	12	121	1	0	2	344	6	0	518	
4:15 PM	3	4	2	0	5	1	13	0	13	110	0	0	0	270	5	0	426	
4:30 PM	4	1	3	0	13	1	19	0	7	134	2	0	2	261	2	0	449	
4:45 PM	3	1	0	0	4	1	7	0	8	117	1	0	4	235	7	0	388	1781
5:00 PM	2	2	1	0	12	3	9	0	12	156	3	0	2	266	1	0	469	1732
5:15 PM	3	0	2	0	5	3	9	0	8	130	5	0	4	239	3	0	411	1717
5:30 PM	3	0	7	0	5	4	4	0	5	111	3	0	4	249	2	0	397	1665
5:45 PM	3	1	0	0	7	1	10	0	7	110	3	0	0	182	5	0	329	1606
6:00 PM	31	2	9	0	8	0	8	0	4	99	0	0	2	149	5	0	317	1454
6:15 PM	3	0	1	0	4	0	2	0	5	77	0	0	0	114	6	0	212	1255
6:30 PM	2	0	0	0	4	0	2	0	7	69	0	0	3	88	1	0	176	1034
6:45 PM	0	0	1	0	3	0	2	0	3	55	0	0	0	77	3	0	144	849

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	4	32	0	28	0	36	0	48	484	4	0	8	1376	24	0	2072
Heavy Trucks	0	0	8		12	0	0		4	8	4		8	88	8		140
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

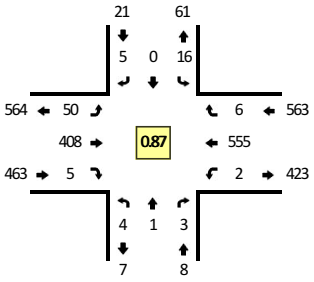
Type of peak hour being reported: Intersection Peak

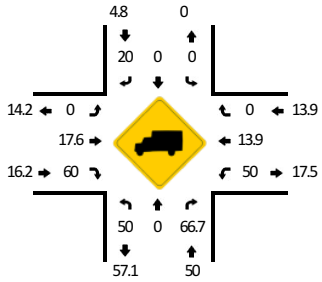
Method for determining peak hour: Total Entering Volume

LOCATION: Madison St -- SR 291
CITY/STATE: Chester, PA

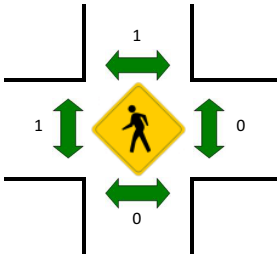
QC JOB #: 15975337
DATE: Tue, Jan 24 2023

Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

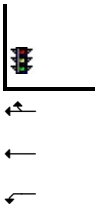


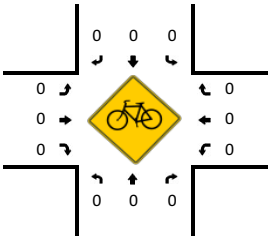


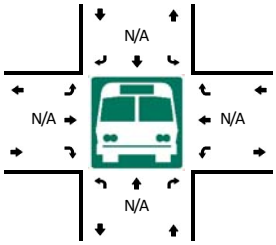
Quality Counts
DATA THAT DRIVES COMMUNITIES

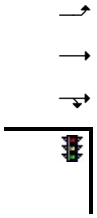


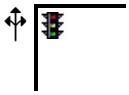


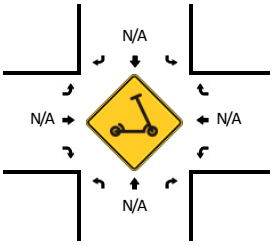












15-Min Count Period Beginning At	Madison St (Northbound)				Madison St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	1	2	0	0	0	2	0	6	78	0	1	0	48	1	0	139	
6:15 AM	0	0	0	0	0	0	0	0	4	64	1	1	0	60	0	0	130	
6:30 AM	0	0	0	0	0	0	1	0	2	83	0	0	0	82	0	0	168	
6:45 AM	1	0	0	0	0	0	0	0	5	81	2	0	0	90	0	0	179	616
7:00 AM	0	1	3	0	1	0	1	1	10	75	0	0	0	63	1	0	156	633
7:15 AM	1	0	0	0	1	0	0	1	7	100	0	0	1	87	1	0	199	702
7:30 AM	0	0	0	0	4	0	1	1	13	117	0	0	1	112	3	0	252	786
7:45 AM	2	0	0	0	5	0	2	1	13	115	2	0	1	159	2	0	302	909
8:00 AM	1	1	2	0	2	0	1	0	10	90	2	0	0	141	1	0	251	1004
8:15 AM	1	0	1	0	1	0	1	2	14	86	1	0	0	143	0	0	250	1055
8:30 AM	0	1	1	0	1	0	1	0	8	80	0	0	0	135	0	0	227	1030
8:45 AM	0	0	0	0	1	0	0	0	13	73	0	0	1	112	0	0	200	928

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	0	0	0	20	0	8	4	52	460	8	0	4	636	8	0	1208
Heavy Trucks	4	0	0		0	0	0		0	64	4		4	92	0		168
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

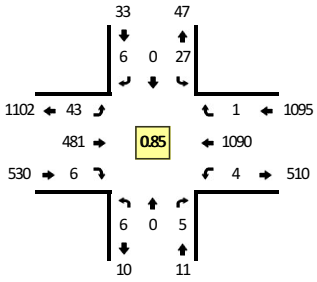
Type of peak hour being reported: Intersection Peak

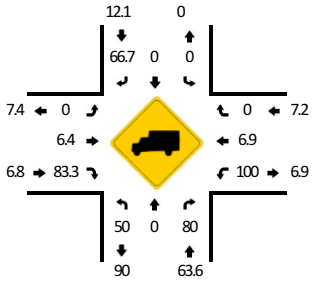
Method for determining peak hour: Total Entering Volume

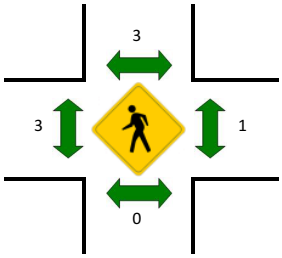
LOCATION: Madison St -- SR 291
CITY/STATE: Chester, PA

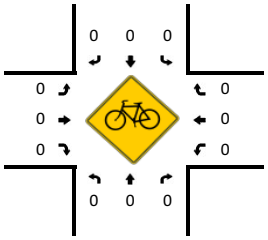
QC JOB #: 15975339
DATE: Tue, Jan 24 2023

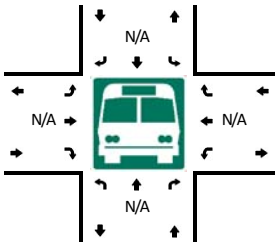
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

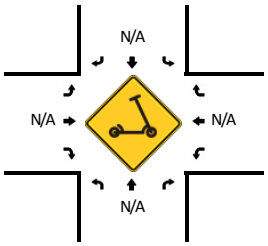












15-Min Count Period Beginning At	Madison St (Northbound)				Madison St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	2	0	7	0	1	1	10	127	1	0	0	342	0	0	491	
4:15 PM	4	0	0	0	3	0	3	1	14	106	2	0	0	266	0	0	399	
4:30 PM	0	0	0	0	8	0	1	0	11	138	1	0	1	248	1	0	409	
4:45 PM	2	0	3	0	6	0	1	1	8	110	2	0	3	234	0	0	370	1669
5:00 PM	1	1	1	0	1	0	1	0	16	157	1	0	0	263	1	0	443	1621
5:15 PM	2	0	1	0	2	0	0	0	7	127	0	0	1	254	0	0	394	1616
5:30 PM	1	1	0	0	1	0	4	0	14	114	2	0	0	245	0	0	382	1589
5:45 PM	0	0	2	0	3	0	0	0	8	110	0	0	0	165	0	0	288	1507
6:00 PM	0	0	0	0	1	0	0	0	15	109	0	0	0	145	0	0	270	1334
6:15 PM	0	2	0	0	3	0	0	0	6	79	0	0	0	113	0	0	203	1143
6:30 PM	0	1	0	0	2	0	0	0	3	75	0	0	0	82	1	0	164	925
6:45 PM	0	0	0	0	1	0	0	0	7	50	1	0	0	74	0	0	133	770

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	8	0	28	0	4	4	40	508	4	0	0	1368	0	0	1964
Heavy Trucks	0	0	8		0	0	0		0	36	4		0	108	0		156
Buses																	
Pedestrians		0				4				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

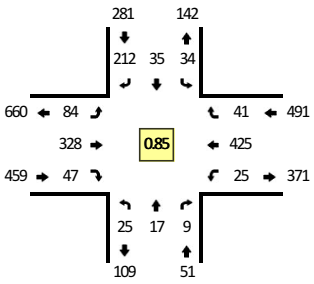
Report generated on 2/6/2023 6:31 PM

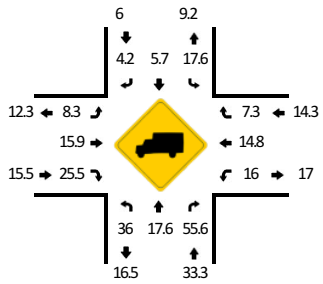
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

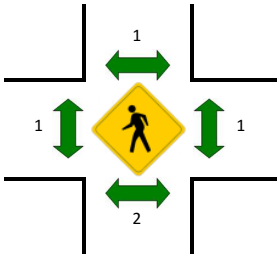
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

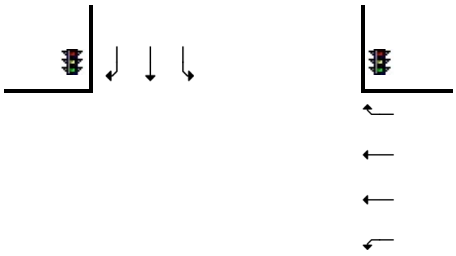
LOCATION: Morton Ave -- SR 291 | **QC JOB #:** 15975340
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

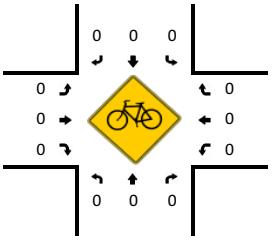
Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

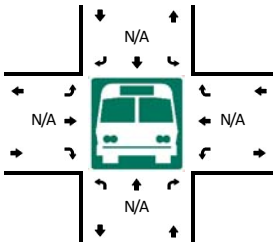


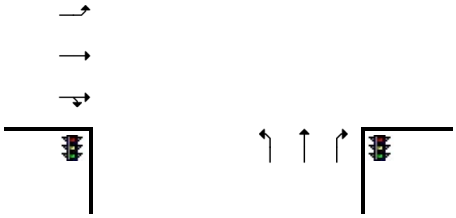


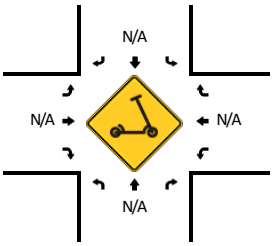












15-Min Count Period Beginning At	Morton Ave (Northbound)				Morton Ave (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	7	6	3	0	6	5	19	0	16	48	9	0	8	29	4	1	161	
6:15 AM	7	5	8	2	3	3	22	0	16	43	7	0	5	35	5	0	161	
6:30 AM	3	5	9	0	5	11	38	0	12	60	12	0	2	45	1	0	203	
6:45 AM	3	5	5	0	5	8	46	0	9	59	13	0	4	49	5	0	211	736
7:00 AM	2	5	3	1	7	5	22	0	12	61	6	0	6	55	5	0	190	765
7:15 AM	4	0	2	0	1	17	32	0	10	84	7	0	2	79	8	0	246	850
7:30 AM	5	5	4	1	10	3	45	0	23	96	18	0	6	93	7	0	316	963
7:45 AM	8	5	2	0	11	18	68	0	21	86	14	0	10	119	13	0	375	1127
8:00 AM	4	6	1	0	9	8	49	0	15	80	8	0	5	106	11	0	302	1239
8:15 AM	6	1	2	1	4	6	50	0	25	66	7	0	4	107	10	0	289	1282
8:30 AM	2	2	3	0	3	3	57	0	18	53	8	0	1	80	6	0	236	1202
8:45 AM	5	2	4	0	4	4	41	0	20	48	4	0	2	66	7	0	207	1034

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	32	20	8	0	44	72	272	0	84	344	56	0	40	476	52	0	1500
Heavy Trucks	16	0	4		8	4	8		12	52	4		4	72	0		184
Buses																	
Pedestrians		4				0				4				4			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

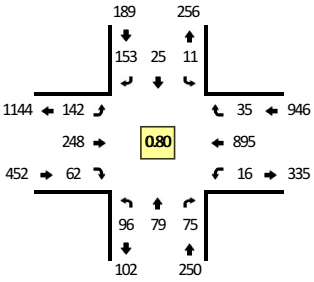
Report generated on 2/6/2023 6:31 PM

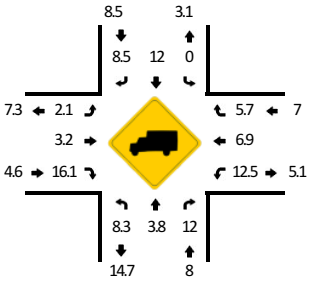
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

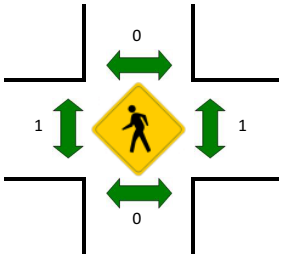
LOCATION: Morton Ave -- SR 291 | **QC JOB #:** 15975342
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

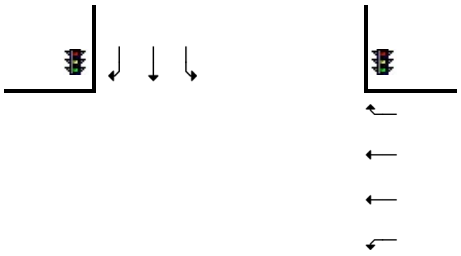
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

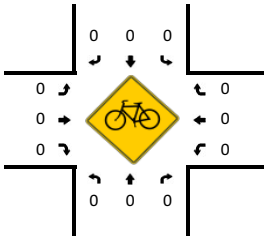


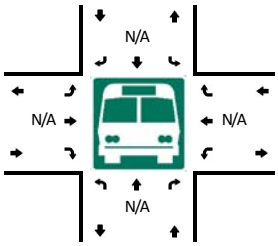


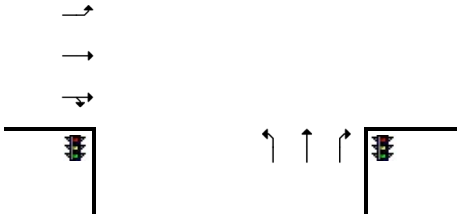
Quality Counts
DATA THAT DRIVES COMMUNITIES

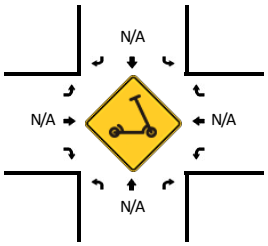












15-Min Count Period Beginning At	Morton Ave (Northbound)				Morton Ave (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	35	37	35	0	5	4	30	0	31	58	17	0	4	297	19	1	573	
4:15 PM	22	14	4	0	2	6	39	0	32	58	19	0	4	214	5	0	419	
4:30 PM	23	18	22	0	1	9	41	0	48	70	10	0	4	193	4	0	443	
4:45 PM	16	10	14	0	3	6	43	0	31	62	16	0	3	191	7	0	402	1837
5:00 PM	26	12	29	0	10	10	47	0	39	78	20	0	3	202	10	0	486	1750
5:15 PM	21	16	24	0	2	14	32	0	41	51	14	0	3	217	9	0	444	1775
5:30 PM	18	11	39	0	3	10	42	0	33	41	13	0	2	203	6	0	421	1753
5:45 PM	11	8	24	0	10	8	34	1	28	42	18	0	3	136	8	0	331	1682
6:00 PM	11	7	25	0	6	5	31	1	30	46	19	0	1	101	2	0	285	1481
6:15 PM	6	10	22	0	0	8	27	1	18	34	13	0	1	86	9	1	236	1273
6:30 PM	11	9	19	0	5	9	21	0	20	20	22	0	1	56	7	0	200	1052
6:45 PM	12	9	14	0	3	8	21	0	12	19	11	0	1	51	2	0	163	884

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	140	148	140	0	20	16	120	0	124	232	68	0	16	1188	76	4	2292
Heavy Trucks	0	4	12		0	0	8		8	8	4		0	96	4		144
Buses																	
Pedestrians		0				0				4				4			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

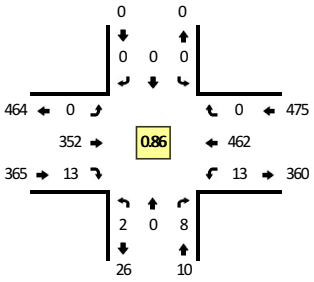
Type of peak hour being reported: Intersection Peak

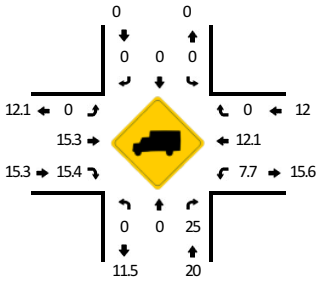
Method for determining peak hour: Total Entering Volume

LOCATION: Harrah's Blvd -- SR 291
CITY/STATE: Chester, PA

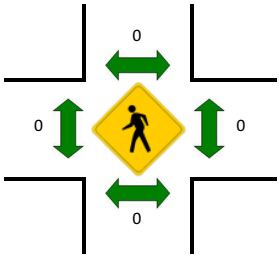
QC JOB #: 15975343
DATE: Tue, Jan 24 2023

Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

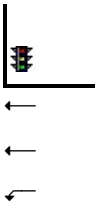


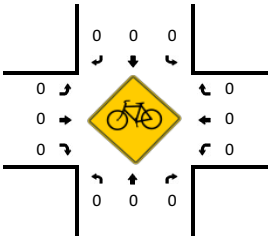


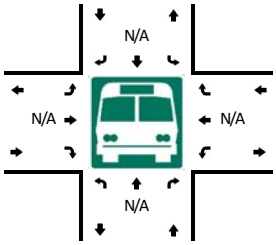
Quality Counts
DATA THAT DRIVES COMMUNITIES

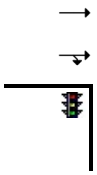


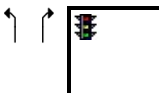


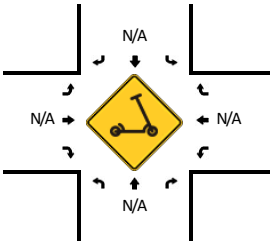












15-Min Count Period Beginning At	Harrah's Blvd (Northbound)				Harrah's Blvd (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	4	0	4	0	0	0	0	0	0	49	6	0	4	36	0	0	103	
6:15 AM	0	0	4	0	0	0	0	0	0	42	3	0	2	39	0	0	90	
6:30 AM	1	0	4	0	0	0	0	0	0	58	11	0	4	56	0	0	134	
6:45 AM	3	0	2	0	0	0	0	0	0	47	12	0	4	57	0	0	125	452
7:00 AM	0	0	8	0	0	0	0	0	0	66	5	0	4	66	0	0	149	498
7:15 AM	0	0	7	0	0	0	0	0	0	81	6	0	2	92	0	0	188	596
7:30 AM	0	0	3	0	0	0	0	0	0	100	4	0	1	100	0	0	208	670
7:45 AM	1	0	2	0	0	0	0	0	0	103	1	0	3	138	0	0	248	793
8:00 AM	0	0	0	0	0	0	0	0	0	86	3	0	3	111	0	0	203	847
8:15 AM	1	0	3	0	0	0	0	0	0	63	5	0	6	113	0	0	191	850
8:30 AM	0	0	1	0	0	0	0	0	0	56	7	0	5	85	0	0	154	796
8:45 AM	1	0	4	0	0	0	0	0	0	50	3	0	7	76	0	0	141	689

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	8	0	0	0	0	0	0	412	4	0	12	552	0	0	992
Heavy Trucks	0	0	0		0	0	0		0	56	0		0	56	0		112
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

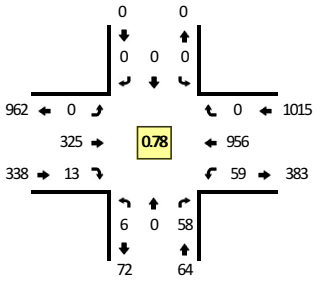
Report generated on 2/6/2023 6:31 PM

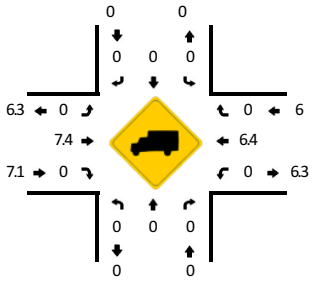
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

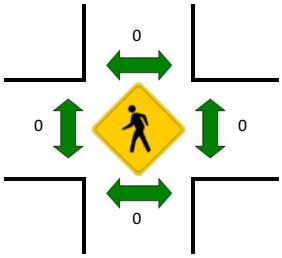
LOCATION: Harrah's Blvd -- SR 291 | **QC JOB #:** 15975345
CITY/STATE: Chester, PA | **DATE:** Tue, Jan 24 2023

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

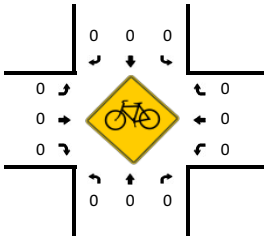


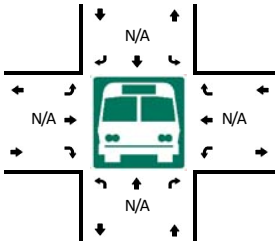


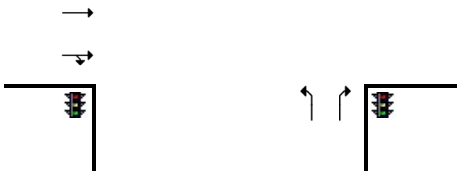
Quality Counts
DATA THAT DRIVES COMMUNITIES

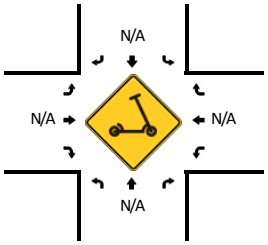












15-Min Count Period Beginning At	Harrah's Blvd (Northbound)				Harrah's Blvd (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	3	0	14	0	0	0	0	0	0	95	5	0	15	321	0	0	453	
4:15 PM	0	0	24	0	0	0	0	0	0	65	1	0	13	235	0	0	338	
4:30 PM	0	0	7	0	0	0	0	0	0	87	5	0	11	204	0	0	314	
4:45 PM	3	0	13	0	0	0	0	0	0	78	2	0	20	196	0	0	312	1417
5:00 PM	3	0	17	0	0	0	0	0	0	102	4	0	16	213	0	0	355	1319
5:15 PM	1	0	15	0	0	0	0	0	0	79	5	0	9	214	0	0	323	1304
5:30 PM	1	0	14	0	0	0	0	0	0	77	1	0	14	210	0	0	317	1307
5:45 PM	4	0	11	0	0	0	0	0	0	70	3	0	14	146	0	0	248	1243
6:00 PM	3	0	11	0	0	0	0	0	0	72	7	0	16	99	0	0	208	1096
6:15 PM	1	0	14	0	0	0	0	0	0	40	7	0	12	89	0	0	163	936
6:30 PM	2	0	10	0	0	0	0	0	0	34	11	0	18	57	0	0	132	751
6:45 PM	0	0	11	0	0	0	0	0	0	29	5	0	18	53	0	0	116	619

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	0	56	0	0	0	0	0	0	380	20	0	60	1284	0	0	1812
Heavy Trucks	0	0	0		0	0	0		0	28	0		0	96	0		124
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 2/6/2023 6:31 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Attachment 3:
Multimodal Toolkit



IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMAKING

SIGNALS & INTERSECTIONS

MULTIMODAL ACCESS

TRAFFIC CALMING

GREENWAY TREATMENTS

SEPARATED BIKE LANE



A separated bike lane is within the street right-of-way and separated from motor vehicle traffic by a physical barrier, such as planters, flexible delineator posts, parked cars, landscape median, or a mountable curb.

SHARED USE PATH / TRAIL



This facility is shared between people biking and walking. A shared use path (SUP) or trail provides the highest level of separation and the lowest level of traffic stress for cyclists.

GREEN PAINT



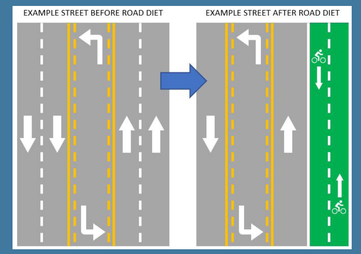
Green and/or white pavement markings draw attention to cyclists moving through or past conflict areas, including intersections and driveways.

BICYCLE SIGNAL



Bicycle signals indicate when bicyclists can cross. They also restrict conflicting vehicle movements. Bicycle-only signals can be used at intersections to provide a separate signal phase that is dedicated to bicyclists.

ROAD DIET



A road diet involves reducing or repurposing lanes to change the purpose, width, directionality, or other characteristics of the roadway. This can slow vehicles and make room for a bicycle facility.

RAISED MEDIAN



A raised median provides horizontal deflection to slow vehicles along a roadway. Raised medians provide an opportunity to incorporate a pedestrian refuge or green stormwater infrastructure.

CURB EXTENSION / BULBOUT



Curb or sidewalk extended into the street, either at an intersection or mid-block, narrows the street width, reduces pedestrian crossing distance, improves visibility of pedestrians, and reduces right-turning vehicle speeds.

INTERSECTION VISIBILITY



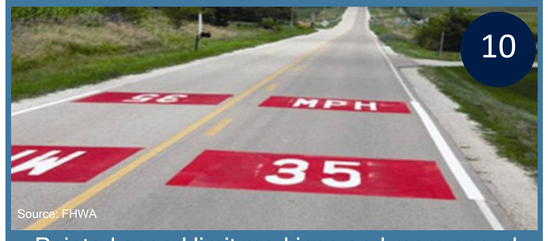
Marking off areas using pavement markings, flexible delineator posts, or other visual or physical elements delineates space where on-street parking is restricted. This maintains visibility at driveways and intersections.

SPEED / RED LIGHT CAMERAS



Speed or red light running cameras can reduce motorist speeds and impact driver behavior where physical infrastructure is less feasible or effective. Additional legislation and certification might be needed to implement.

SPEED LIMIT MARKINGS & SIGNS



Painted speed limit markings and more speed limit signs provide a visual reminder of the desired and allowable roadway speed. Speed limits can also be reduced where appropriate.

BUFFERS & RUMBLE STRIPS



Buffers and/or rumble strips can be used to separate different modes of traffic traveling in opposite directions. These treatments can enforce separation between fast-moving traffic and a parking lane, bike lane, or turn lane.

SIDEWALK WIDENING



A complete and connected sidewalk network increases pedestrian access and safety. Along an urban corridor, the sidewalk clear width should be at least 6-ft wide, or ideally wider.

PEDESTRIAN REFUGE



A pedestrian median refuge island provides added protection for pedestrians and bicyclists crossing at an intersection or mid-block. The refuge improves pedestrian visibility, reduces conflict points, and reduces crossing distance.

MARKED CROSSWALK



High visibility reflective crosswalk markings should be incorporated at controlled intersections and at priority mid-block crossings. According to FHWA, “a high-visibility marked crosswalk can reduce pedestrian crashes up to 40%.”

CROSSWALK VISIBILITY



Signage and warning beacons can be used in advance of marked pedestrian crossings to increase driver yielding.

INTERSECTION MARKINGS



Pavement markings visually separate modes to reduce pedestrian and bicyclist exposure. Separate signal phases for bicyclists and pedestrians eliminate conflict points.

IMPROVING SAFETY ON ROUTE 291

TRUCK ROUTE TREATMENTS

PLACEMAKING

SIGNALS & INTERSECTIONS

MULTIMODAL ACCESS

TRAFFIC CALMING

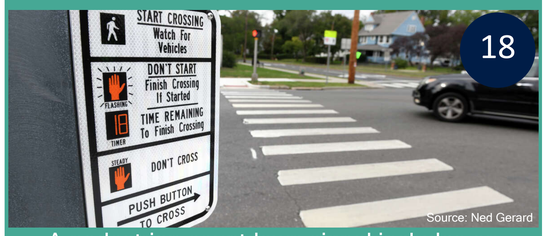
GREENWAY TREATMENTS

FLASHING PEDESTRIAN SIGNAL



Rectangular Rapid Flash Beacons (RRFBs) include a flasher that lets motorists know pedestrians are crossing. These are especially applicable at uncontrolled, mid-block, or trail crossings.

PEDESTRIAN COUNTDOWN SIGNAL



A pedestrian countdown signal includes an accessible push button, appropriate signage, and a pedestrian signal that indicates remaining walk time. Fixed, rather than actuated, signals are most preferred in urban areas.

EXTRA PEDESTRIAN CROSSING TIME



A leading pedestrian interval (LPI) gives pedestrians advance signal time to begin crossing before conflicting vehicles start turning. LPIs are especially helpful at wide, busy intersections.

TRANSIT AMENITIES



Transit amenities include shelters, benches, kiosks, and access to other services and amenities. There should be sidewalk access and safe roadway crossings near transit stops.

TRAFFIC SIGNALS AT INTERSECTIONS



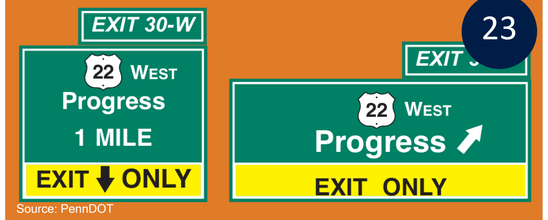
Full signalization of an intersection impacts traffic operations and controls the movements of all road users. This can slow traffic, improve mobility, and accommodate pedestrians and bicyclists.

ROUNDABOUT



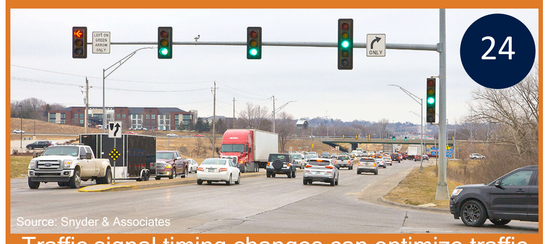
A roundabout is an intersection treatment with channelized approaches that reduce speeds. Roundabouts minimize conflict points and maintain a safe flow of traffic.

DIRECTIONAL SIGNAGE



Providing clear signs and pavement markings along a corridor can reduce confusion and direct motorists to key destinations.

TRAFFIC SIGNAL TIMING



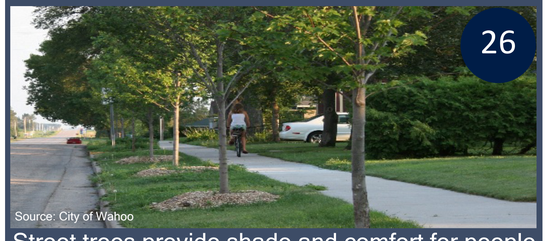
Traffic signal timing changes can optimize traffic operation and reduce queueing and congestion. Signal timing might also provide priority to different modes, such as transit vehicles.

STREET LIGHTING



Pedestrian-scale lighting improves pedestrian security and comfort, especially at crossings, key destinations, and transit stops. Street lights improve visibility for drivers.

STREET TREES



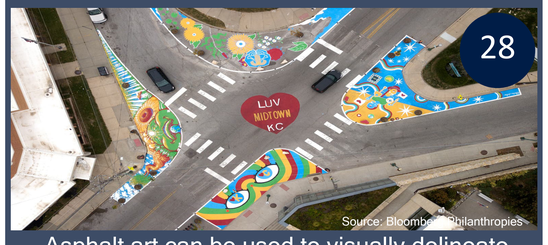
Street trees provide shade and comfort for people on the sidewalk. They also contribute to a lively sense of place. Street trees must be placed and maintained to allow for motorist visibility.

GREEN STORMWATER INFRASTRUCTURE



Green Stormwater Infrastructure (GSI) in sidewalks, medians, and curb extensions collects stormwater runoff and filters it through special soil and plants before it soaks into the ground or is released slowly back into the sewer system.

ASPHALT ART



Asphalt art can be used to visually delineate space in the roadway to improve safety and revitalize public space.

TRAIL WAYFINDING & AMENITIES



Signs direct pedestrians and bicyclists toward destinations in the area, typically including distance and average walking or biking times. Other amenities might include benches, shelters, trees, and art.

CORRIDOR BRANDING



Trail and corridor branding provide a sense of place and direct users to destinations. This branding can connect various facilities within a greater region.

TRUCK SIGNAGE



Signs and pavement markings can be used to direct and restrict truck traffic. Through-movement truck traffic can be discouraged, while trucks accessing industry along the corridor can be directed to make safe, slow movements.

TRUCK APRON



A truck apron is mountable by trucks or buses, but not by smaller vehicles. This means that the radius at intersections or driveways can be tightened to improve safety for pedestrians, while still allowing wider truck turning movements.

Attachment 4:
Analysis Files



Improving Safety Along Route 291 Study
Traffic Operations Analysis Results - LOS, Delay, V/C
Done By: AI
Checked By: JC

PN 283680.000, 289150.000
Jan-24

Intersection	Contol Type	Approach	Existing Conditions (2023)						Alternative A - 5-Lanes (Future 5 Lane Volumes)						Alternative BX - 3-Lanes (Future 3 Lane Volumes)						Alternative B - 3-Lanes (Future 5 Lane Volumes)						Alternative B2 - 3&4-Lanes (Future 5-Lane Volumes)					
			AM Peak			PM Peak			AM Peak			PM Peak			AM Peak			PM Peak			AM Peak			PM Peak			AM Peak			PM Peak		
			LOS	Delay (s)	v/c	LOS	Delay(s)	v/c	LOS	Delay (s)	v/c	LOS	Delay(s)	v/c	LOS	Delay (s)	v/c	LOS	Delay(s)	v/c	LOS	Delay (s)	v/c	LOS	Delay(s)	v/c	LOS	Delay (s)	v/c	LOS	Delay(s)	v/c
1. Irving Street	Two way stop	Overall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		SB	B	11.1	0.01	B	13.2	0.02	B	13.2	0.03	C	17.1	0.03	B	11.6	0.02	B	13.5	0.02	B	13.2	0.03	C	17.1	0.03	B	13.2	0.03	C	17.1	0.03
2. Highland Avenue	Traffic signal	Overall	**A**	**8.2**	**0.23**	**A**	**6.5**	**0.3**	**A**	**6.9**	**0.31**	**A**	**6.1**	**0.41**	**A**	**7.7**	**0.38**	**A**	**6.7**	**0.51**	**A**	**7.6**	**0.5**	**A**	**8.5**	**0.69**	**A**	**7.6**	**0.5**	**A**	**8.1**	**0.67**
		EB	A	3	0.16	A	2.7	0.13	A	3.3	0.25	A	3	0.15	A	3.6	0.34	A	3.2	0.26	A	4.3	0.48	A	3.5	0.29	A	4.3	0.48	A	3.4	0.28
		WB	A	2.9	0.15	A	3	0.25	A	3.1	0.18	A	3.6	0.37	A	3.6	0.34	A	4.1	0.51	A	3.7	0.34	A	7.1	0.71	A	3.7	0.34	A	6.6	0.69
		NB	C	28	0.09	C	28.6	0.15	C	25.7	0.1	C	26.1	0.15	C	25.7	0.1	C	26.1	0.14	C	25.7	0.1	C	27	0.14	C	25.7	0.1	C	26.6	0.14
		SB	D	36.5	0.62	C	34.4	0.57	C	33	0.61	C	32.1	0.58	C	32.5	0.59	C	30.9	0.54	C	33	0.61	C	32.9	0.57	C	33	0.61	C	31.7	0.56
3. Engle Street	Two way stop	Overall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		NB	B	13	0.01	B	11.1	0.1	B	14.2	0.02	B	11.7	0.11	B	12.3	0.01	B	12.9	0.12	C	15	0.02	B	14.9	0.16	B	15	0.02	B	14.6	0.15
		SB	C	15.6	0.16	C	15.6	0.15	C	17	0.19	C	17	0.18	C	15	0.13	C	17.9	0.17	C	18.8	0.22	D	28.3	0.29	C	18.8	0.22	D	26.7	0.28
4. Jeffrey Street	Two way Stop	Overall	-	-	-	-	-	-	**B**	**14.9**	**0.42**	**A**	**5.5**	**0.41**	**B**	**15.9**	**0.39**	**A**	**6.6**	**0.5**	**B**	**16.6**	**0.62**	**A**	**7.7**	**0.66**	**B**	**16.6**	**0.62**	**A**	**7.7**	**0.66**
	converts to signal	EB	-	-	-	-	-	-	A	6.7	0.33	A	4.3	0.35	A	7.4	0.41	A	5.5	0.57	A	10.7	0.6	A	4.4	0.52	A	10.7	0.6	A	4.4	0.52
	control in future	WB	-	-	-	-	-	-	A	5.1	0.17	A	4.7	0.46	A	6.1	0.29	A	5.4	0.56	A	5.1	0.32	A	7.2	0.72	A	5.1	0.32	A	7.2	0.72
		NB	C	16.4	0.49	B	13.2	0.17	C	33.7	0.68	B	13.6	0.24	D	34.7	0.67	B	14.7	0.11	C	37.9	0.68	C	21.4	0.3	C	37.9	0.68	C	21.4	0.3
		SB	A	9.6	0.01	B	10.6	0.01	C	27.6	0	B	13	0.11	C	28.5	0	B	14.1	0	C	27.6	0	C	20.5	0	C	27.6	0	C	20.5	0
5. Flower Street	Traffic signal	Overall	**A**	**5.8**	**0.31**	**A**	**6**	**0.35**	**A**	**5.9**	**0.37**	**A**	**6.2**	**0.42**	**A**	**6**	**0.43**	**A**	**6.7**	**0.46**	**A**	**8.1**	**0.63**	**A**	**9.7**	**0.73**	**A**	**8.1**	**0.63**	**A**	**8.3**	**0.7**
		EB	A	3	0.27	A	2.8	0.22	A	1.9	0.33	A	3.1	0.27	A	2.2	0.42	A	3.6	0.46	A	5.1	0.64	A	4.7	0.52	A	5.1	0.64	A	3.9	0.49
		WB	A	2.7	0.16	A	3.1	0.32	A	2.5	0.18	A	3.6	0.4	A	2.8	0.28	A	3.4	0.41	A	3.7	0.34	A	9.4	0.78	A	3.7	0.34	A	7	0.73
		NB	C	28.1	0.05	C	28.7	0.15	D	35.3	0.04	C	28.5	0.16	D	37.1	0.05	C	28.7	0.14	D	35.3	0.04	C	27.6	0.14	D	35.3	0.04	C	29	0.15
		SB	C	34	0.54	C	32.2	0.49	D	46.4	0.62	C	34.2	0.56	D	42.1	0.5	C	32.2	0.49	D	46.4	0.62	C	31	0.49	D	46.4	0.62	C	33.5	0.53
6. Tilghman Street	One stop	Overall	-	-	-	-	-	-	**A**	**3.6**	**0.42**	**B**	**10.4**	**0.76**	**A**	**4.3**	**0.53**	**B**	**6.4**	**0.68**	**A**	**9.8**	**0.78**	**B**	**12.6**	**0.9**	**A**	**9.8**	**0.78**	**B**	**11.4**	**0.87**
	converts to signal	EB	-	-	-	-	-	-	A	4.2	0.43	B	19.2	0.73	A	5.4	0.57	B	10.2	0.71	B	13.5	0.86	B	17.6	0.82	B	13.5	0.86	B	16.6	0.8
	control in future	WB	-	-	-	-	-	-	A	1.4	0.35	A	5.6	0.73	A	1.6	0.27	A	2.8	0.57	A	3.4	0.43	A	9.7	0.86	A	3.4	0.43	A	8.4	0.84
		NB	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		SB	C	17	0.06	F	228.8	0.48	D	44.2	0.19	C	30.6	0.13	D	44.2	0.18	C	34.6	0.16	D	44.2	0.19	D	39.3	0.15	D	44.2	0.19	D	39.3	0.15
7. Penn Street	Traffic signal	Overall	**A**	**3.5**	**0.3**	**A**	**5**	**0.52**	**A**	**3.9**	**0.41**	**A**	**5.3**	**0.58**	**A**	**3.8**	**0.45**	**A**	**6.6**	**0.67**	**A**	**5.8**	**0.69**	**D**	**35.9**	**0.99**	**A**	**5.8**	**0.69**	**D**	**43.2**	**1.01**
		EB	A	2.3	0.26	A	2.9	0.21	A	2.8	0.4	A	2.9	0.23	A	2.8	0.44	A	3.3	0.38	A	5.4	0.7	A	2.9	0.4	A	5.4	0.7	A	3.1	0.42
		WB	A	2.4	0.28	A	4.1	0.54	A	2.5	0.3	A	4.6	0.61	A	2.8	0.46	A	6.4	0.71	A	3.6	0.56	D	48.7	1.05	A	3.6	0.56	D	59.8	1.09
		NB	C	26.4	0.11	C	24.5	0.19	C	26.3	0.11	C	24.5	0.19	C	26.9	0.1	C	25.6	0.15	C	28.3	0.11	D	36.6	0.24	C	28.3	0.11	D	31.6	0.22
		SB	C	29.5	0.44	C	26.3	0.41	C	31.2	0.52	C	26.3	0.41	C	29.3	0.37	C	27.4	0.38	C	34.5	0.55	D	40.1	0.52	C	34.5	0.55	D	34.2	0.48
8. Welsh Street	Traffic signal	Overall	**A**	**3.6**	**0.26**	**A**	**5.3**	**0.53**	**A**	**3.6**	**0.28**	**A**	**5.6**	**0.6**	**A**	**3.8**	**0.42**	**A**	**6.2**	**0.66**	**A**	**4.8**	**0.59**	**C**	**30**	**0.97**	**A**	**4.4**	**0.59**	**A**	**5.2**	**0.57**
		EB	A	2.1	0.22	A	3	0.23	A	2.3	0.33	A	31.1	0.26	A	2.5	0.41	A	3	0.39	A	3.9	0.62	A	3.1	0.59	A	3.9	0.62	A	3.4	0.46
		WB	A	2.2	0.27	A	4.2	0.55	A	2.3	0.28	A	4.8	0.62	A	2.6	0.44	A	6	0.71	A	3.2	0.54	D	41	1.03	A	2.3	0.28	A	4.2	0.6
		NB	C	26.2	0.05	C	24.2	0.17	C	26.2	0.06	C	24.1	0.17	C	26.2	0.04	C	25.4	0.16	C	26.2	0.06	D	40	0.28	C	26.2	0.06	C	24.8	0.19
		SB	C	27.4	0.22	C	26.6	0.45	C	27.8	0.27	C	26.8	0.48	C	27.2	0.19	C	26.1	0.25	C	27.8	0.27	D	41.1	0.38	C	27.8	0.27	C	25.6	0.3
9. Madison Street	Traffic signal	Overall	**A**	**4.4**	**0.25**	**A**	**8.1**	**0.45**	**A**	**7.2**	**0.31**	**A**	**8.8**	**0.51**	**A**	**5**	**0.4**	**B**	**10.7**	**0.65**	**B**	**11.7**	**0.57**	**F**	**87**	**1.01**	**B**	**10.1**	**0.57**	**A**	**9.2**	**0.56**
		EB	A	3.6	0.22	A	6.1	0.26	A	6.7	0.4	A	6.2	0.33	A	4.2	0.4	A	4.6	0.4	B	12.2	0.76	A	6.3	0.47	B	12.2	0.76	A	5.1	0.49
		WB	A	3.9	0.3	A	8.3	0.58	A	6.5	0.35	A	9.4	0.29	A	4.7	0.48	B	13.5	0.77	A	10.2	0.67	F	126.6	1.23	A	6.5	0.35	B	10.3	0.67
		NB	C	28.6	0.04	C	24.6	0.01	C	24.7	0.03	C	24.6	0.66	C	28.4	0.03	C	33.1	0.01	C	24.7	0.03	C	33.6	0.01	C	24.7	0.03	C	30.3	0.01
		SB	C	28.4	0.02	C	25	0.07	C	24.9	0.06	C	25	0.07	C	28.4	0.01	C	33.2	0.02	C	24.9	0.06	C	33.7	0.03	C	24.9	0.06	C	30.4	0.03
10. Morton Avenue	Traffic signal	Overall	**B**	**10.8**	**0.26**	**C**	**23.2**	**0.78**	**B**	**12.1**	**0.41**	**C**	**22.7**	**0.72**	**B**	**12.1**	**0.47**	**C**	**25.7**	**0.77**	**B**	**19.5**	**0.69**	**F**	**124.6**	**1.15**	**B**	**18.1**	**0.69**	**C**	**22.1**	**0.72**
		EB	A	7.3	0.25	C	38.3	1.03	B	10	0.45	B	11.8	0.69	A	9.5	0.55	B	11.3	0.62	C	22.8	0.87	C	20.7	0.82	B	22.7	0.87	B	13.1	0.69
		WB	A	7.4	0.28	B	15.7	0.63	A	8.9	0.32	C	24.2	0.79	A	8.5	0.45	C	30	0.9	B	13.4	0.61	F	209.2	1.41	A	8.9	0.32	B	22.4	0.79
		NB	C	20.3	0.12	C	23.4	0.29	B	19.9	0.15	C	32.9	0.6	C	21.4	0.14	D	35.5	0.47	B	19.9	0.15	D	36.3	0.65	B	19.9	0.15	D	32.9	0.6
		SB	C	20.9	0.19	C	24.6	0.35	C	21.4	0.32	C	30	0.22	C	22.4	0.24	D	34.3	0.2	C	21.4	0.32	C	33.5	0.34	C	21.4	0.32	C	30	0.22
11. Harrah's Boulevard	Traffic signal	Overall	**A**	**2.9**	**0.26**	**A**	**3.3**	**0.44**	**A**	**3.9**	**0.43**	**A**	**4**	**0.5**	**A**	**4.4**	**0.56**	**A**	**6.6**	**0.71**	**A**	**5.7**	**0.7**	**A**	**9.4**	**0.94**	**A**	**5.5**	**0.68**	**A**	**5**	**0.5**
		EB	A	4.5	0.22	A	2.1	0.17	A	5.5	0.43	A	5.3	0.2	A	6.5	0.55	A	8	0.35	A	8.4	0.71	A	5.9	0.37	A	8.4	0.69	A	9.5	0.37
		WB	A	1.3	0.21	A	1.3	0.4	A	1.2	0.22	A	1.4	0.46	A	1.4	0.34	A	3.3	0.65	A	1.4	0.4	A	8.6	0.87	A	1	0.21	A	1.5	0.46
		NB	C	22.7	0.06	D	41.4	0.31	C	24.4	0.08	D	41.4	0.31	C	27	0.08	D	44.1	0.32	D	34.2	0.08	D	44	0.32	C	34.2	0.08	D	41.4	0.31
12. Kerlin Street	Two way stop	Overall	-	-	-	-	-	-	**A**	**2.3**	**0.26**	**A**	**3.2**	**0.55**	**A**	**2.5**	**0.31**	**A**	**3.5**	**0.6**	**A**	**3**	**0.49**	**C**	**33**	**1**	**A**	**3**	**0.49**	**C**	**25.6**	**0.96**
		EB	-	-	-	-	-	-	A	1.7	0.27	A	1.9	0.24	A	1.8	0.32	A	2	0.39	A	2.5	0.51	A	2.4	0.45	A	2.5	0.51	A	2.4	0.43
		WB	-	-	-	-	-	-	A	1.6	0.19	A	3	0.57	A	1.8	0.3	A	3.3	0.62	A	2.1	0.37	D	46.4	1.05	A	2.1	0.37	D	35.6	1.02
	converts to signal	NB	B	13.5	0.01	A	0	-	C	28.7	0.05	A	0	-	C	29.5	0.05	A	0	-	C	28.6	0.05	A	0	-	C	28.6	0.05	A	0	-
	control in future	SB	B	11.1	0.04	C	23.8	0.19	C	28.3	0.03	C	32.2	0.29	C	29	0.01	C	31.9	0.25	C	28.3	0.03	D	36	0.3	C	28.3	0.03	C	34.1	0.28

Improving Safety Along Route 291 Study
Traffic Operations Analysis Results - Queueing
Done By: AI
Checked By: JC

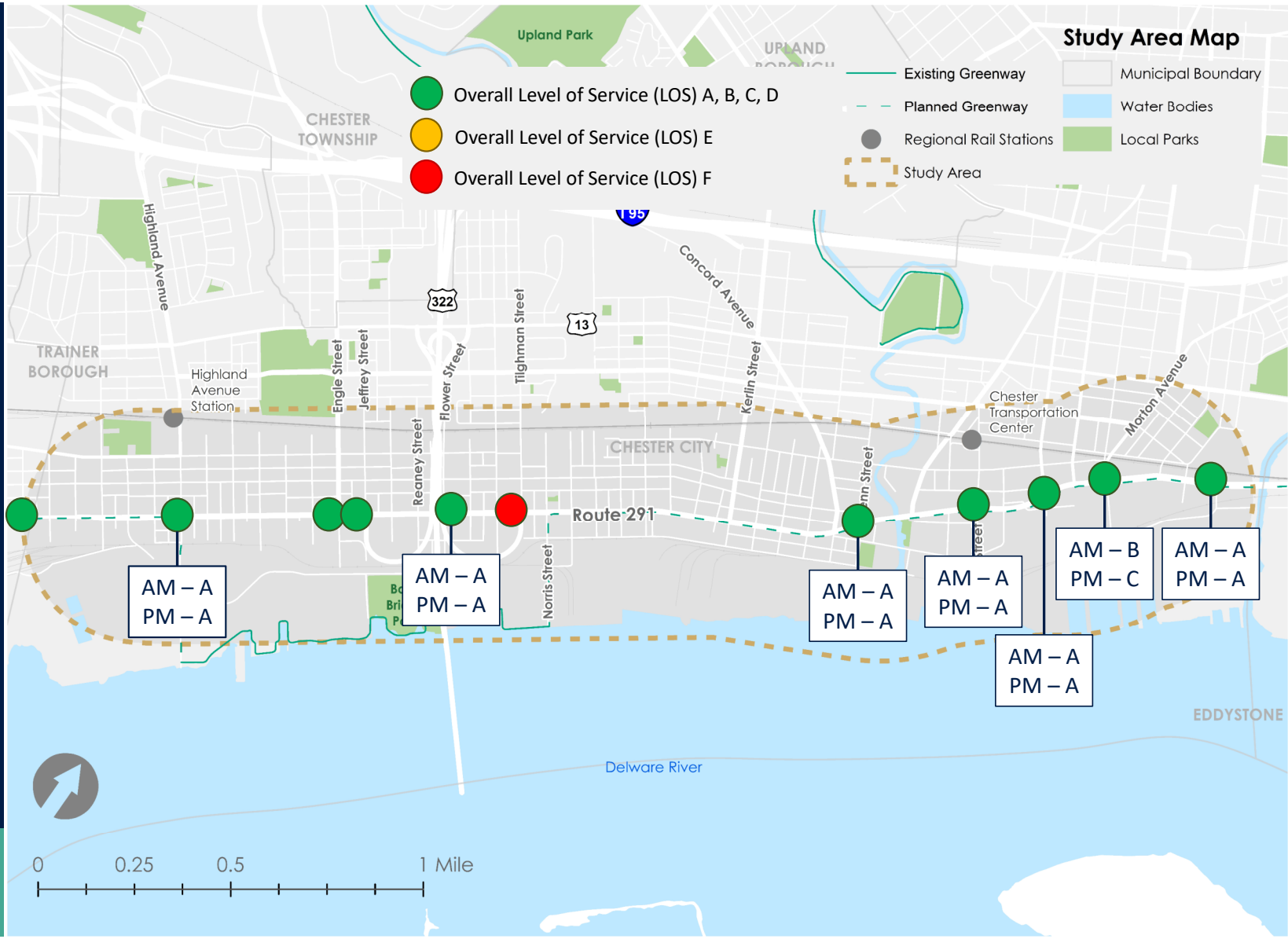
PN 283680.000, 289150.000
Jan-24

Intersection	Contol Type	Approach	Movement	Existing Conditions (2023)						Alternative A - 5-Lanes (Future 5 Lane Volumes)						Alternative BX - 3-Lanes (Future 3 Lane Volumes)						Alternative B - 3-Lanes (Future 5 Lane Volumes)						Alternative B2 - 3&4-Lanes (Future 5-Lane Volumes)					
				AM Peak			PM Peak			AM Peak			PM Peak			AM Peak			PM Peak			AM Peak			PM Peak			AM Peak			PM Peak		
				LOS	Q (ft)	Av.Q(ft)	LOS	Q (ft)	Av.Q(ft)	LOS	Q (ft)	Av.Q(ft)	LOS	Q (ft)	Av.Q(ft)	LOS	Q (ft)	Av.Q(ft)	LOS	Q (ft)	Av.Q(ft)	LOS	Q (ft)	Av.Q(ft)	LOS	Q (ft)	Av.Q(ft)	LOS	Q (ft)	Av.Q(ft)	LOS	Q (ft)	Av.Q(ft)
1. Irving Street	Two way stop	Overall																													
2. Highland Aven	Traffic signal	Overall		**A**			**A**			**A**						**A**			**A**			**A**			**A**			**A**			**A**		
		EB		A		**22.5**	A		**19.5**	A		**34**			**23**	A		**55**	A		**44**	A		**88**	A		**54.5**	A		**88**	A		**55**
			EBL		4			4			5			5			4			5			5			5			5			5	
			EBT		41			35			63			41			106			83			171			104			171			105	
		WB		A		**21.5**	A		**35**	A		**24.5**			**54**	A		**56.5**	A		**100**	A		**58**	A		**199**	A		**58**	A		**202.5**
			WBL		6			3			6			3			6			2			6			3			6			3	
			WBT		37			67			43			105			107			198			110			395			110			402	
		NB		C		**24**	C		**33**	C		**22**			**30**	C		**22**	C		**29**	C		**22**	C		**35**	C		**22**	C		**34**
			NBT		24			33			22			30			22			29			22			35			22			34	
		SB		D		**91**	C		**78**	C		**85**			**75**	C		**83**	C		**72**	C		**85**	C		**88**	C		**85**	C		**84**
			SBT		91			78			85			75			83			72			85			88			85			84	
3. Engle Street	Two way stop	Overall																													
4. Jeffrey Street	Two way Stop	Overall								**B**						**B**			**A**			**B**			**A**			**B**			**A**		
	converts to signal	EB								A		**127**			**57**	A		**195**	A		**134**	A		**349**	A		**151**	A		**349**	A		**151**
			EBT								127			57			195			134			349			151			349			151	
	control in future	WB								A		**61**			**82**	A		**133**	A		**133**	A		**91**	A		**266**	A		**91**	A		**266**
			WBT								61			82			133			133			91			266			91			266	
		NB		C			B			C		**115.5**			**28**	D		**99.5**	B		**30**	C		**160**	C		**46**	C		**115.5**	C		**54**
			NBL								160			31			155			33						54			160				
			NBT								71			25			44			27			160			38			71			54	
		SB		A			B			C						C			B			C			C			C			C	
			SBT																				71								38	
			SBR											0			0			0			0			0			0			0	
5. Flower Street	Traffic signal	Overall		**A**			**A**			**A**						**A**			**A**			**A**			**A**			**A**			**A**		
		EB		A		**40.5**	A		**37.5**	A		**28**			**44.5**	A		**41**	A		**92.5**	A		**128.5**	A		**111**	A		**128.5**	A		**110**
			EBL		9			11			6			13			4			10			8			14			8			14	
			EBT		72			64			50			76			78			175			249			208			249			206	
		WB		A		**26**	A		**50**	A		**23.5**			**64.5**	A		**48.5**	A		**75.5**	A		**67.5**	A		**226**	A		**67.5**	A		**225**
			WBL		11			8			11			8			9			5			13			8			13			8	
			WBT		41			92			36			121			88			146			122			444			122			442	
			NBT		16			43			18			42			18			42			18			44			18			46	
		SB		C		**68**	C		**65**	D		**86**			**69**	D		**68**	C		**64**	D		**86**	C		**74**	D		**86**	C		**75**
			SBT		68			65			86			69			68			64			86			74			86			75	
6. Tilghman Stree	One stop	Overall								**A**						**A**			**B**			**A**			**B**			**A**			**B**		
	converts to signal	EB								A		**82**			**203**	A		**79**	B		**493**	A		**761**	B		**588**	A		**761**	B		**579**
			EBT								82			203			79			493			761			588			761			579	
	control in future	WB								A		**29.5**			**326**	A		**40**	A		**55**	A		**54.5**	A		**239**	A		**54.5**	A		**229.5**
			WBL								25						19						25			182			25			172	
			WBT								34			326			61			55			84			296			84			287	
			WBR											77						101													
		SB		C			F			D		**26**			**17**	D		**23**	C		**19**	D		**26**	D		**18**	D		**26**	D		**19**
			SBT								26			17			23			19			26			18			26			19	
7. Penn Street	Traffic signal	Overall		**A**			**A**			**A**						**A**			**A**			**A**			**D**			**A**			**D**		
		EB		A		**28.5**	A		**29.5**	A		**93**			**61**	A		**62.5**	A		**65.5**	A		**164.5**	A		**83**	A		**164.5**	A		**80.5**
			EBL		4			6									3			5			5			7			5			7	
			EBT		53			53			93			61			122			126			324			159			324			154	
		WB		A		**31**	A		**86.5**	A		**35.5**			**106**	A		**66.5**	A		**188**	A		**104**	D		**618**	A		**104**	D		**562**
			WBL		3			2			3			2			2			1			3			2			3			2	
			WBT		59			171			68			210			131			375			205			1234			205			1122	
		NB		C		**15**	C		**31**	C		**15**			**31**	C		**23**	C		**27**	C		**16**	D		**42**	C		**16**	D		**37**
			NBL														13																

		NBT		15			31			15			31			33			27			16			42			16			37	
		SB	C		39	C		54	C		46			54	C		0	C		56	C		49	D		76	C		49	D		67
		SBT		39			54			46			54						56			49			76			49			67	
8. Welsh Street	Traffic signal	Overall	A			A			A						A			A			A			C			A			C		
		EB	A		22.333	A		36	A		48			41.5	A		62	A		64	A		135.5	A		90	A		135.5	A		80.5
		EBL		17			19			23			23			14			14			23			33			23			21	
		EBT		45			53			73			60			110			114			248			147			248			140	
		EBR		5																												
		WB	A		30	A		81	A		33			100.5	A		63	A		157.5	A		95	D		583	A		33	C		90
		WBL		5			5			5			5			4			3			5			5			5			5	
		WBT		55			157			61			196			122			312			185			1161			61			175	
		WBR																														-	
		NB	C		16	C		30	C		18			30	C		14	C		29	C		18	D		43	C		11.5	D		30
		NBL																										5				
		NBT		16			30			18			30			14			29			18			43			18			30	
		SB	C		34	C		57	C		37			60	C		30	C		41	C		37	D		60	C		37	D		44
		SBT		34			57			37			60			30			41			37			60			37			44	
9. Madison Street	Traffic signal	Overall	A			A			A						A			B			A			F			A			A		
		EB	A		73	A		84	A		116.5			95.5	A		143	A		111	A		345	A		140	A		344	A		140.5
		EBL		38			43			39			53			32			19			41			22			39			22	
		EBT		108			125			194			138			254			203			649			258			649			259	
		WB	A		82	A		175.5	A		88.5			212	A		173	B		360	A		278	F		709	A		88.5	B		209
		WBL		4			7			4			7			4			4			4			7			4			7	
		WBT		160			344			173			417			342			716			552			1411			173			411	
		NB	C		11	C		7	C		13			7	C		9	C		0	C		13	C		0	C		13	C		0
		NBT		11			7			13			7			9			0			13			0			13			0	
		SB	C		14	C		23	C		22			23	C		12	C		0	C		22	C		5	C		22	C		5
		SBT		14			23			22			23			12			0			22			5			22			5	
10. Morton Avenu	Traffic signal	Overall	B			C			B						B			C			B			F			B			C		
		EB	A		85	C		182.5	A		157.5			79.5	A		176	B		109	B		414.5	C		164.5	B		412	B		126
		EBL		66			257			77			95			68			80			82			174			77			95	
		EBT		104			108			238			64			284			138			747			155			747			157	
		WB	A		74.5	B		225.5	A		95			238	A		121.5	C		359	B		240.5	F		596.5	A		96.5	B		202
		WBL		24			23			29			20			18			6			32			6			32			17	
		WBT		125			428			161			456			225			712			449			1187			161			387	
		NB	C		15	C		39	B		16.333			69	C		14.333	D		63.667	B		16.333	D		73.667	B		16.333	D		69
		NBL		25			57			24			103			21			81			24			110			24			103	
		NBT		18			44			18			77			19			82			18			82			18			77	
		NBR		2			16			7			27			3			28			7			29			7			27	
		SB	C		44	C		50.5	C		57			34.5	C		43.5	D		35.5	C		57	C		52	C		57	C		34.5
		SBL		31			11			48			19			36			20			48			20			48			19	
		SBT		57			90			66			50			51			51			66			84			66			50	
11. Harrah's Boule	Traffic signal	Overall	A			A			A						A			A			A			A			A			A		
		EB	A		67	A		27	A		137			98	A		236	A		198	A		216.5	A		127	A		510	A		263
		EBL																				429											
		EBT		67			27			137			98			236			198			4			127			510			263	
		WB	A		17.5	A		41.5	A		18			48.5	A		32.5	A		98	A		42	A		213	A		17.5	A		48.5
		WBL		5			12			4			12			4			9			4			12			4			12	
		WBT		30			71			32			85			61			187			80			414			31			85	
		NB	C		6	D		21	C		7.5			21	C		8.5	D		21.5	D		9	D		21.5	D		8.5	D		21
		NBL		5			17			6			17			7			17			7			17			7			17	
		NBR		7			25			9			25			10			26			11			26			10			25	
12. Kerlin Street	Two way stop	Overall							A						A			A			A			C			A			C		
		EB							A		28			29.5	A		39	A		58	A		83	A		9	A		81.5	A		72
		EBL								4			6			3			5			4						4			8	
		EBT								52			53			75			111			162			9			159			136	
		WB							A		36			173	A		69	A		254	A		97	D		144	A		95	D		978
		WBL														69																	
		WBT								36			173						254			97			144			95			978	
	converts to signal	NB	B			A			C		8			0	C		8	A		0	C		8	A		1066	C		8	A		0

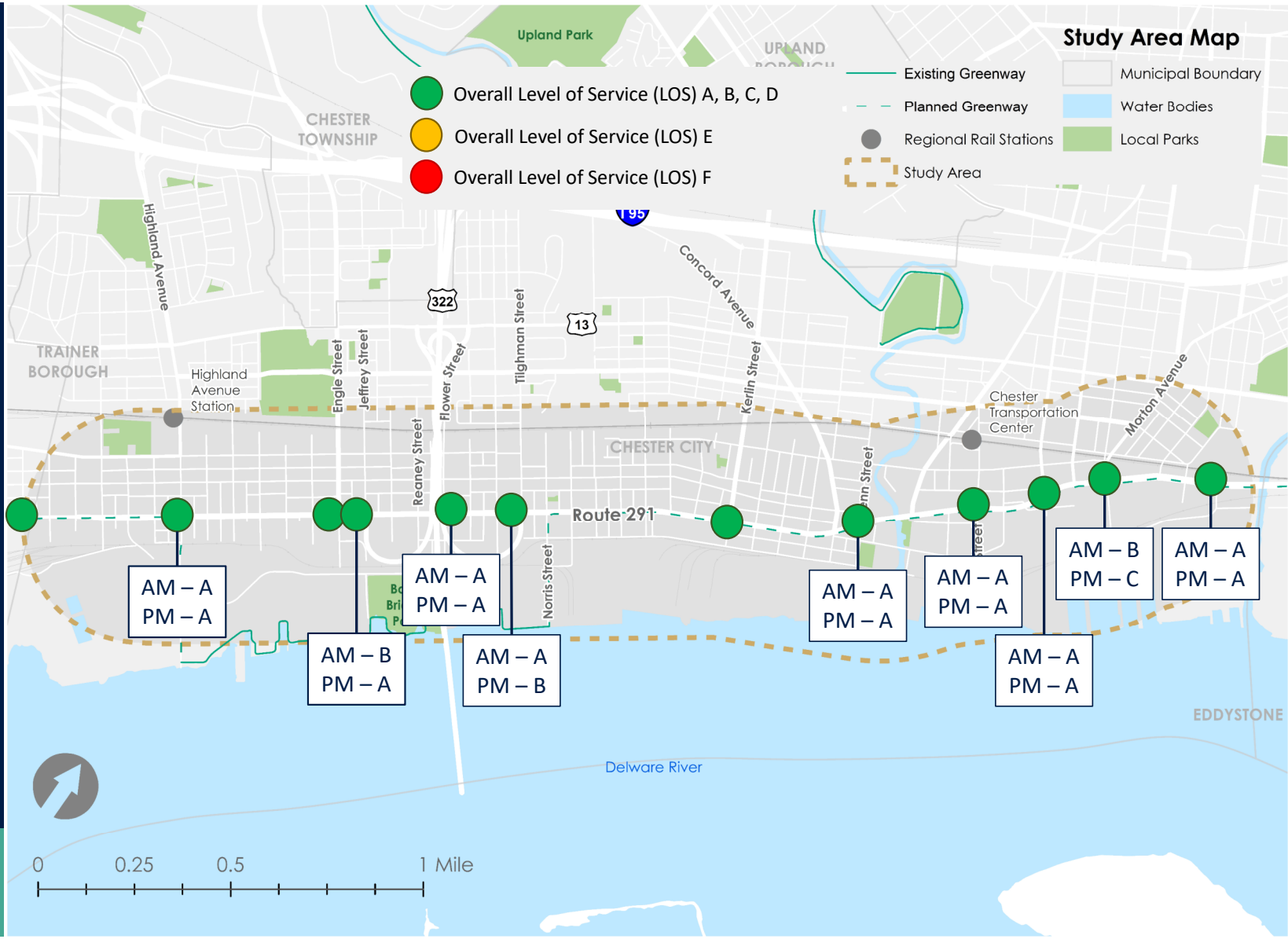
		NBT								8						8						8			1066			8					
	control in future	SB	B			C			C		**18**			**37**	C		**15**	C		**31**	C		**18**	D		**39**	C		**18**	C		**36**	
		SBT								18			37			15			31			18			39			18			36		

Existing Conditions



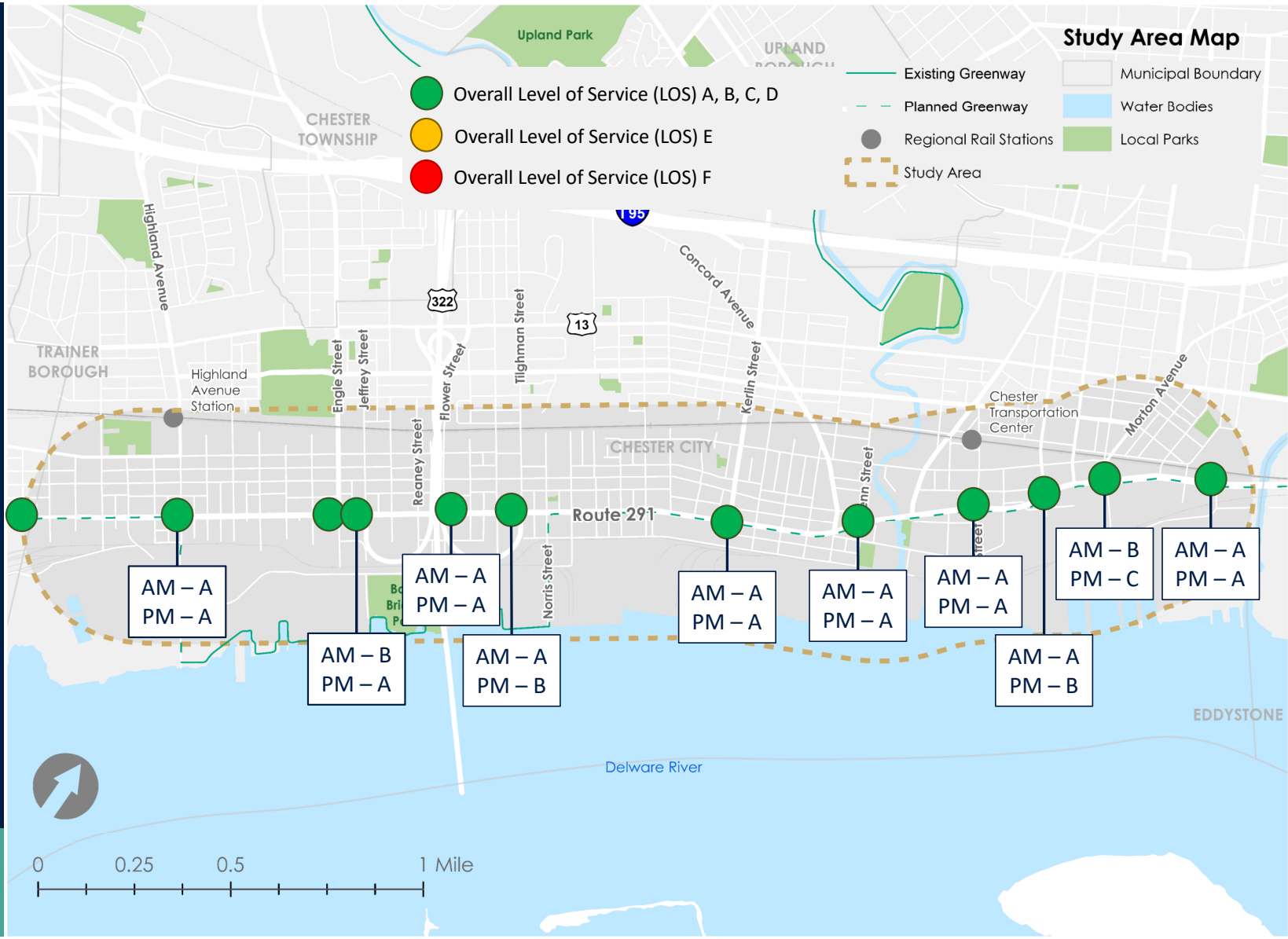
Route 291 Study

Alternative A – 5-Lanes



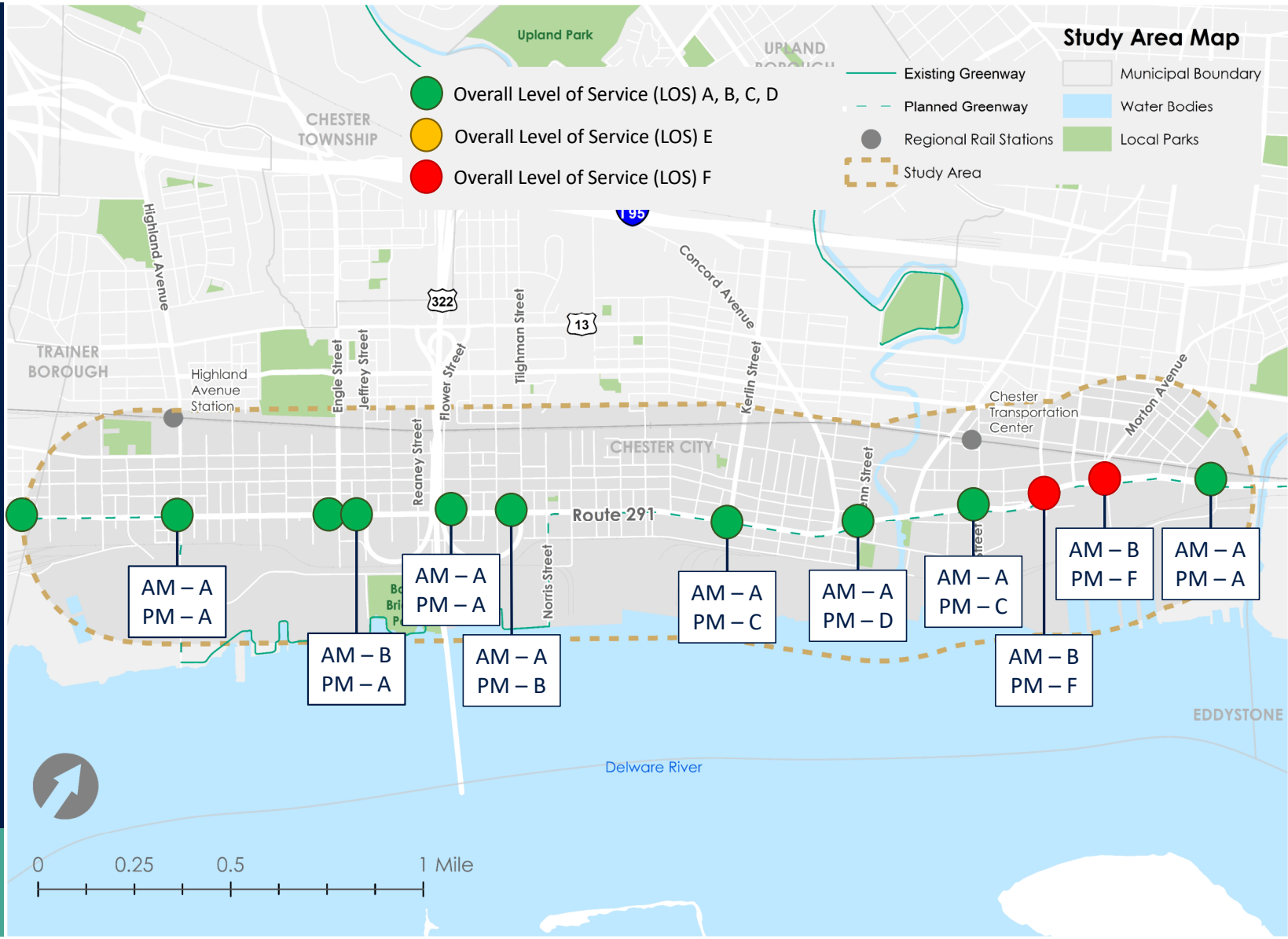
Route 291 Study

Alternative B – 3-Lanes (with 3-lane volumes)



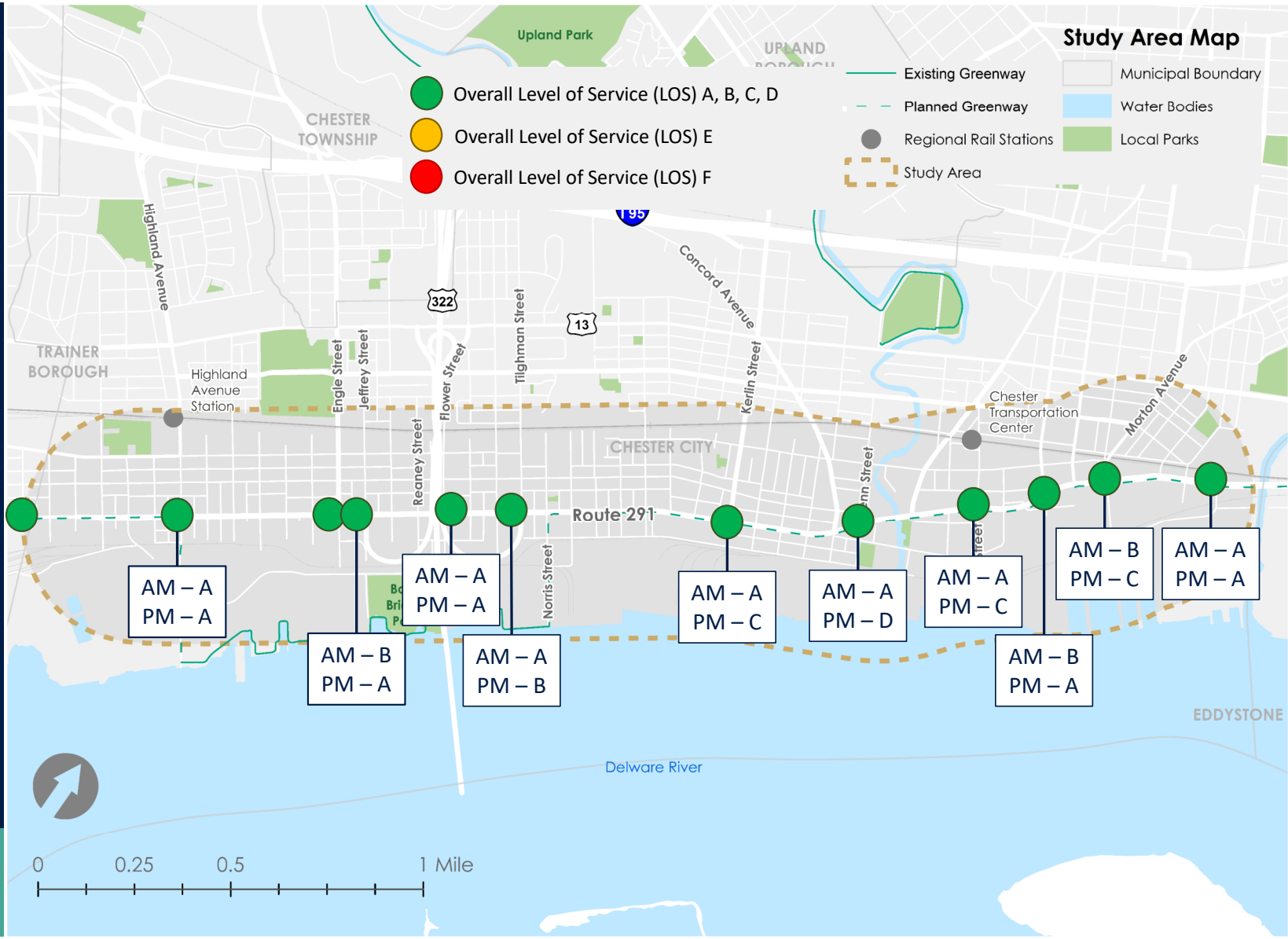
Route 291 Study

Alternative B – 3-Lanes (with 5-lane volumes)



Route 291 Study

Alternative B – Hybrid 3/4-Lanes (with 5-lane volumes)



Route 291 Study

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Existing Average Queue

Existing Maximum Queue



Queues are for Westbound approach during the PM Peak Hour

Route 291 Study

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Alternative A Average Queue

Alternative A Maximum Queue



Queues are for Westbound approach during the PM Peak Hour

Route 291 Study

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Alternative B* Average Queue

Alternative B* Maximum Queue

**Using 5-lane volumes*

Queues are for Westbound approach during the PM Peak Hour



Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Alternative B2* Average Queue

Alternative B2* Maximum Queue

**Using 5-lane volumes*



Queues are for Westbound approach during the PM Peak Hour

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Existing Average Queue

Existing Maximum Queue



Queues are for Westbound approach during the PM Peak Hour

Route 291 Study

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Alternative A Average Queue

Alternative A Maximum Queue



Queues are for Westbound approach during the PM Peak Hour

Route 291 Study

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Alternative B* Average Queue

Alternative B* Maximum Queue

**Using 5-lane volumes*



Queues are for Westbound approach during the PM Peak Hour

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Alternative B2* Average Queue

Alternative B2* Maximum Queue

**Using 5-lane volumes*



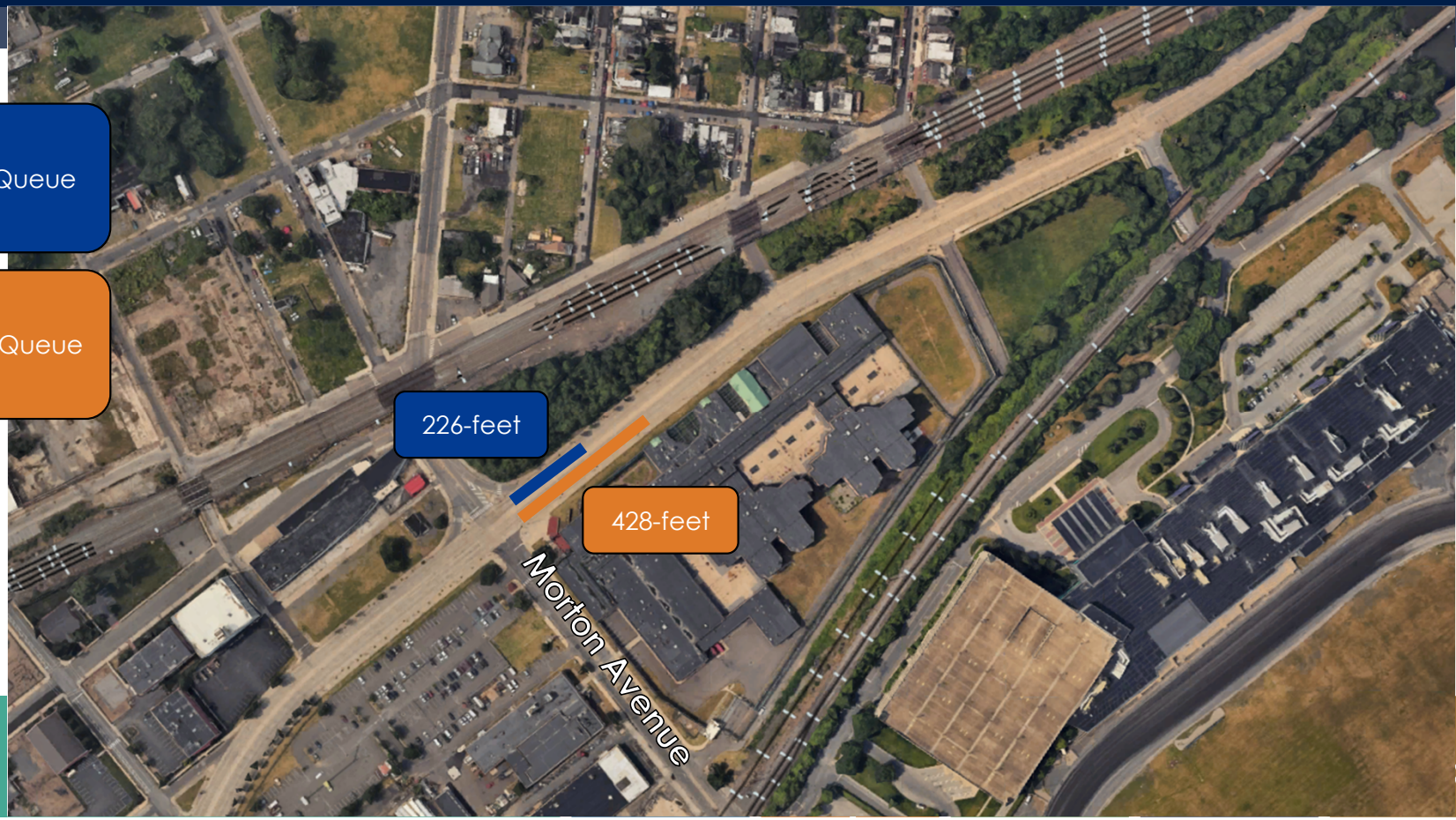
Queues are for Westbound approach during the PM Peak Hour

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Existing Average Queue

Existing Maximum Queue



Queues are for Westbound approach during the PM Peak Hour

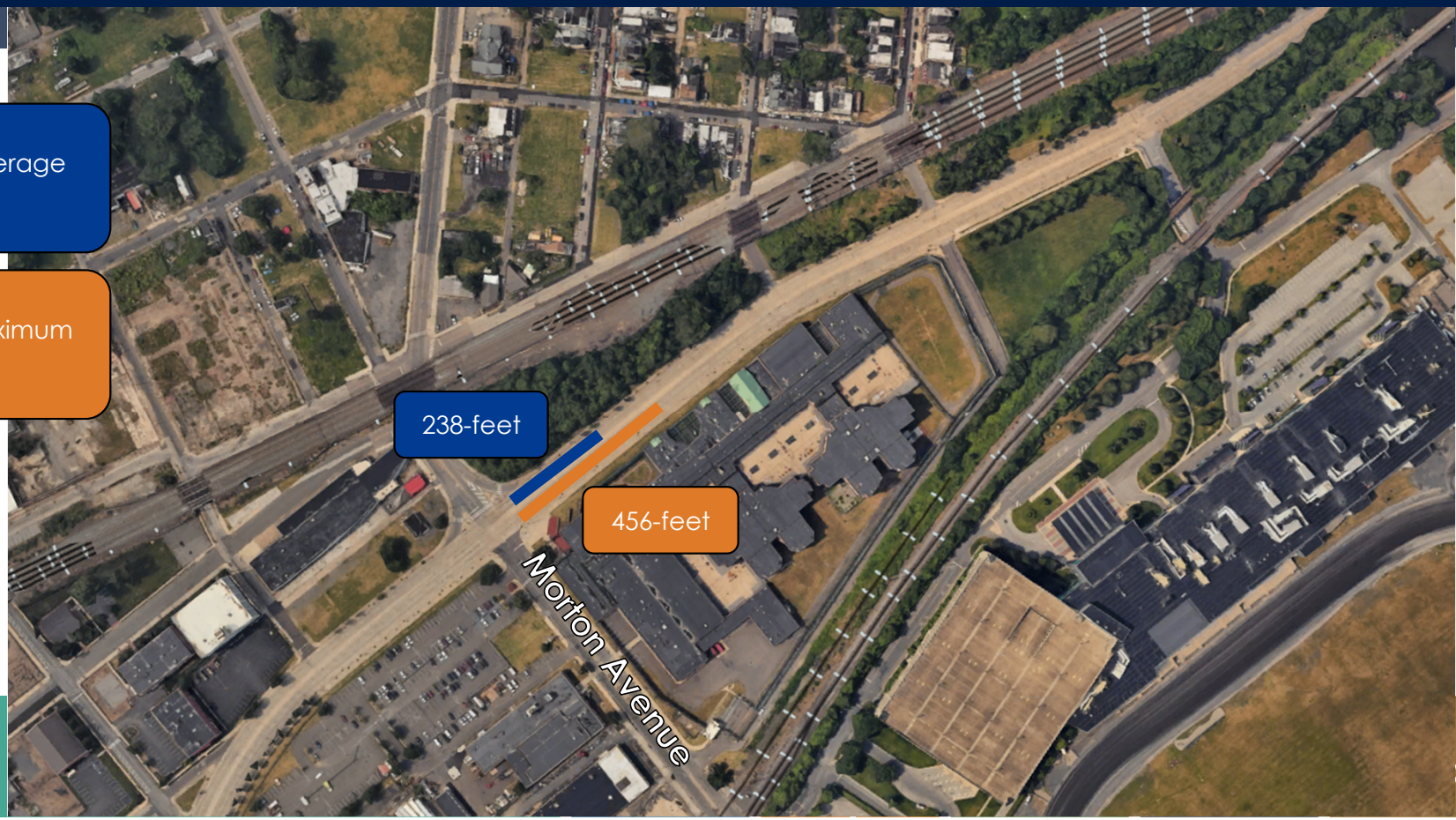
Route 291 Study

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Alternative A Average Queue

Alternative A Maximum Queue



Queues are for Westbound approach during the PM Peak Hour

Route 291 Study

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Alternative B* Average Queue

Alternative B* Maximum Queue

**Using 5-lane volumes*



Queues are for Westbound approach during the PM Peak Hour

Route 291 Study

Minimize Vehicular Traffic Signal Queues

Minimize Vehicular Traffic Signal Queues

Alternative B2* Average Queue

Alternative B2* Maximum Queue

**Using 5-lane volumes*

Queues are for Westbound approach during the PM Peak Hour



Route 291 Study

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Kerlin St -- SR 291
CITY/STATE: Chester, PA

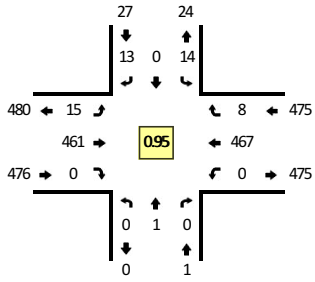
QC JOB #: 16263801
DATE: Tue, Jul 25 2023

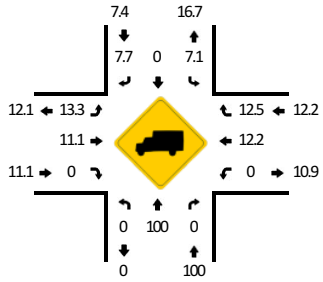
Minor Approach #1

Major Approach #2

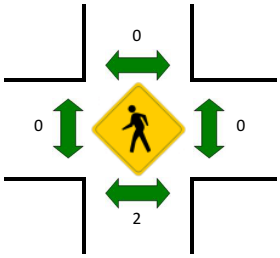
Major Approach #1

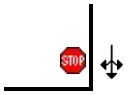
Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:45 AM -- 9:00 AM

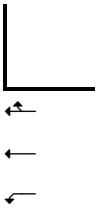


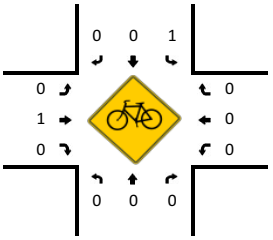


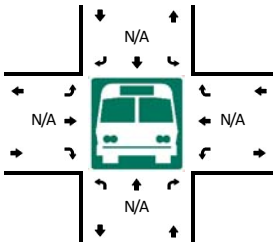
Minor Approach #2

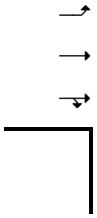


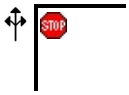


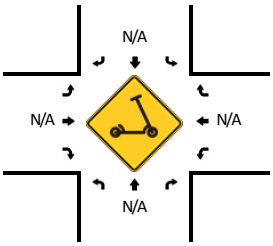












15-Min Count Period Beginning At	Kerlin St (Northbound)				Kerlin St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	0	2	0	3	0	1	0	1	60	0	0	0	94	2	0	163	
6:15 AM	0	0	0	0	3	0	3	0	4	83	0	0	0	84	2	0	179	
6:30 AM	0	0	0	0	3	0	4	0	4	87	0	0	0	72	2	0	172	
6:45 AM	0	0	1	0	4	0	5	0	1	101	0	0	0	88	4	0	204	718
7:00 AM	0	0	1	0	4	0	5	0	7	77	0	0	0	77	2	0	173	728
7:15 AM	0	0	0	0	7	0	2	0	3	107	0	0	0	82	0	0	201	750
7:30 AM	1	0	1	0	5	0	8	0	3	109	0	0	0	96	2	0	225	803
7:45 AM	0	0	1	0	2	0	2	0	3	128	1	0	0	112	4	0	253	852
8:00 AM	0	0	0	0	3	0	4	0	3	93	0	0	0	115	4	0	222	901
8:15 AM	0	1	0	0	1	0	2	0	3	113	0	0	0	135	1	0	256	956
8:30 AM	0	0	0	0	4	0	1	0	6	117	0	0	0	114	2	0	244	975
8:45 AM	0	0	0	0	6	0	6	0	3	138	0	0	0	103	1	0	257	979

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	24	0	24	0	12	552	0	0	0	412	4	0	1028
Heavy Trucks	0	0	0		0	0	0		0	76	0		0	64	0		140
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		4	0	0		0	0	0		0	0	0		4
Scooters																	

Comments:

Report generated on 7/31/2023 8:57 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

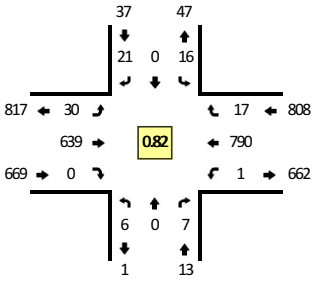
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

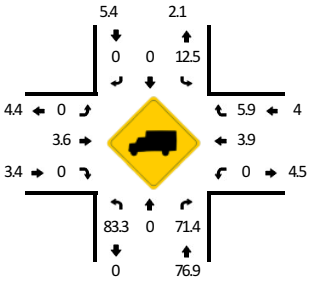
LOCATION: Kerlin St -- SR 291
CITY/STATE: Chester, PA

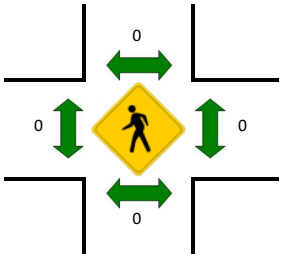
QC JOB #: 16263802
DATE: Tue, Jul 25 2023

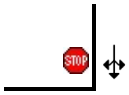
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

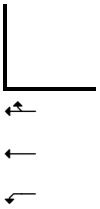


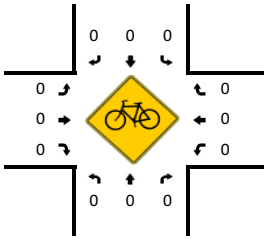


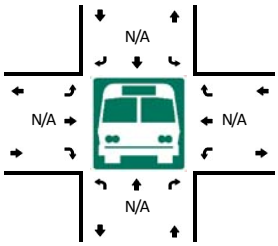


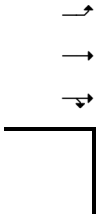


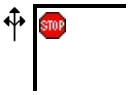


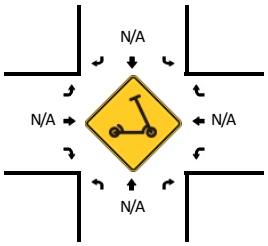












15-Min Count Period Beginning At	Kerlin St (Northbound)				Kerlin St (Southbound)				SR 291 (Eastbound)				SR 291 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	5	0	8	0	6	75	0	0	0	259	6	0	359	
4:15 PM	0	0	0	0	4	0	8	0	0	66	0	0	0	255	6	0	339	
4:30 PM	0	0	0	0	6	1	6	0	7	66	0	0	0	249	7	0	342	
4:45 PM	0	0	0	0	6	0	4	0	3	80	0	0	0	196	4	0	293	1333
5:00 PM	0	0	0	0	6	0	7	0	10	121	0	0	1	229	7	0	381	1355
5:15 PM	2	0	2	0	3	0	1	0	11	213	0	0	0	227	4	0	463	1479
5:30 PM	1	0	2	0	4	0	7	0	4	155	0	0	0	196	2	0	371	1508
5:45 PM	3	0	3	0	3	0	6	0	5	150	0	0	0	138	4	0	312	1527
6:00 PM	0	0	0	0	6	0	7	0	3	117	0	0	0	165	2	0	300	1446
6:15 PM	0	0	0	0	2	0	7	0	1	128	0	0	0	120	1	0	259	1242
6:30 PM	0	0	2	0	3	0	4	0	5	116	0	0	0	111	6	0	247	1118
6:45 PM	0	0	1	0	3	1	3	0	5	57	0	0	0	96	5	0	171	977

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	0	8	0	12	0	4	0	44	852	0	0	0	908	16	0	1852
Heavy Trucks	4	0	8		4	0	0		0	52	0		0	36	0		104
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 7/31/2023 8:57 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Pennsylvania Department of Transportation
Intersection Control Evaluation (ICE) Form
Stage I: Screening

To fulfill the requirements of Stage 1 (Screening) of PennDOT's ICE procedures, complete the following form and append all supporting documentation. Completed forms can be submitted to the District Traffic Engineer (DTE) for the project's location.

Project Information

Project Name	DVRPC RT 291 Road Diet Study	Project Setting	Urban	Project ICE Reference Number	
Submitted By	KJN	Agency/Company	Kittelson & Associates	Email	knorris@kittelson.com

Project Purpose and Goals (*What is the catalyst for this project and what are the intended outcomes?*)	The purpose of the Route 291 Road Diet Study is to determine safe, multimodal solutions for the corridor; and integrate the other planning efforts occurring in the City of Chester. It must build on the planning and community engagement efforts already undertaken in re-envisioning the riverfront and the City of Chester's future.
Project Setting Description (*Describe the area surrounding the intersection*)	The project intersection is RT 291 and Kerlin St. It's located in the City of Chester, and is about 0.76 miles east of the RT 322 overpass. RT 291 is a minor regional arterial connecting communities along the Delaware River and runs parallel to I-95. Kerlin St is an urban collector through Chester that connects RT 291 and RT 13. There are businesses on the two northern quadrants and empty lots on the two southern quadrants. There are sidewalks on all approaches, and pedestrian crossings on the minor legs. The terrain is flat through the city.

County	Delaware	Project Locality (Township/Borough/City)	City of Chester
PennDOT District	District 6	Project Type (select most appropriate)	Safety Improvement Project

Multimodal Context (*Describe pedestrian, bicycle, and transit activity in the area and the potential for activity based on surrounding land uses and development pattern*)	There are residences and businesses along the corridor, and there are sidewalks on both sides of the road. There are no bike lanes along the corridor. Strava Heat Map indicates that RT 291 is used by cyclists, largly as a through road. Most of RT 291 is on the East Coast Greenway (ECG), and east of the Commodore Berry Bridge the road is classified by ECG as "High-Stress Road/Extreme Caution". There is bus and train transit in the surrounding area. SEPTA bus #113 operates along RT 291. Subaru Park to the south of RT 291 is a large trip generator.

Basic Intersection Information

Major Street

Major Street Route Number(s)	RT 291	Major Street Route Name(s)	W. 2nd St	SR Segment #		SR Offset	
Primary Functional Classification	Minor Arterial	Secondary Functional Class. (if app.)		Existing AADT	12,119	Existing Control	Two-way Stop-Controlled
Major Street Ownership				Sidewalks are present along:		Both sides of the roadway	

Crosswalks? ☐ On-Street Bike Facilities? ☐ Multi-Use Path? ☐ Scheduled Bus Service? ☐ Bus stop at intersection? ☐

Approach #1	Number of Lanes (Count Shared Lanes as Through):	Left-Turn	0	Through	2	Right-Turn	0
	AM Peak Hour Traffic Volumes:	Left-Turn	0	Through	467	Right-Turn	8
	PM Peak Hour Traffic Volumes:	Left-Turn	1	Through	790	Right-Turn	17
Approach #2	Number of Lanes (Count Shared Lanes as Through):	Left-Turn	0	Through	3	Right-Turn	0
	AM Peak Hour Traffic Volumes:	Left-Turn	15	Through	461	Right-Turn	0
	PM Peak Hour Traffic Volumes:	Left-Turn	30	Through	639	Right-Turn	0

Minor Street

Existing ☐ New ☐

Minor Street Route Number(s)		Minor Street Route Name(s)	Kerlin St	SR Segment #		SR Offset	
Primary Functional Classification	Urban Collector	Secondary Functional Class. (if app.)				Existing AADT (if available)	4,098
Minor Street Ownership				Sidewalks are present along:		Both sides of the roadway	

Crosswalks? ☐ On-Street Bike Facilities? ☐ Multi-Use Path? ☐ Scheduled Bus Service? ☐ Bus stop at intersection? ☐

Approach #1	Number of Lanes (Count Shared Lanes as Through):	Left-Turn	0	Through	2	Right-Turn	0
	AM Peak Hour Traffic Volumes:	Left-Turn	14	Through	0	Right-Turn	13
	PM Peak Hour Traffic Volumes:	Left-Turn	16	Through	0	Right-Turn	21
Approach #2	Number of Lanes (Count Shared Lanes as Through):	Left-Turn	0	Through	2	Right-Turn	0
	AM Peak Hour Traffic Volumes:	Left-Turn	0	Through	1	Right-Turn	0
	PM Peak Hour Traffic Volumes:	Left-Turn	6	Through	0	Right-Turn	7
Approach #3	Number of Lanes (Count Shared Lanes as Through):	Left-Turn		Through		Right-Turn	
	AM Peak Hour Traffic Volumes:	Left-Turn		Through		Right-Turn	
	PM Peak Hour Traffic Volumes:	Left-Turn		Through		Right-Turn	

Crash History (Existing Intersections Only)

Append the most recent five-years of crash data for the intersection from the CDART. If the crash data evidences any issues relating to safety performance, discuss briefly here:

Kittelson obtained crash data using the Pennsylvania Crash Information Tool (PCIT) for the period between January 2017 and December 2021. In those five years, there were eleven crashes reported at the intersection. There were five angle crashes, two head-on crashes, two rear-end crashes, one hit fixed object crash, and one non-collision crash. Seven crashes resulted in injuries and four crashes resulted in property damage. The primary crash scenario involved a left turning vehicle from Kerlin St to RT 291 being struck by a westbound through vehicle traveling along RT 291.

Screening Evaluation			
Provide a brief justification as to why each of the following control strategies should be advanced or not. Justification should consider potential environmental impacts.			
Note: FHWA's CAP-X tool is helpful for assessing the viability of alternative intersection forms.			
Control Strategy	**Strategy Viable?**	**Justification**	**Strategy to be Advanced?**
Two-way Stop-Controlled	No	Two-way stop-control is the current intersection control, and maintaining that would not address the safety concerns.	No
All-way Stop-Controlled	Yes	All-way stop control would reduce crashes but may negatively effect operations during peak hour.	No
Signalized Control	Yes	Siganlized control would reduce crashes and minimize impacts to operations during peak hour. No ROW acquisition anticipated.	Yes
Roundabout	Yes	A roundabout control would address the dominant crash type (angle) and reduce overall crashes. Effective at minimizing impacts to operations during peak hour, the construction cost may be prohibitive. Could be a good solution if the roundabouts were installed along the whole corridor, not just at one location.	No
Median U-Turn	Yes	Median U-Turn would reduce crashes, but effective operations would require corresponding singal timing to allow for turns. If the intersection was unsiganlized, it would not be effective to address pedestrian safety.	No
Restricted Crossing U-Turn (RCUT) Signalized	Yes	Signalized restricted crossing U-turn would require ROW acquisition, which would make the cost prohibitive. It would not be effective to address pedestrian safety.	No
Restricted Crossing U-Turn (RCUT) Unsignalized	No	Unsignalized restricted crossing U-turn would require ROW acquisition, which would make the cost prohibitive. It would not be effective to address pedestrian safety.	No
Jughandle	No	Jughandle would require ROW acquisition, which would make the cost prohibitive. It would not be effective to address pedestrian safety.	No
Displaced Left-Turn	No	A displaced left-turn would require ROW acquisition, which would make the cost prohibitive. It would not be effective to address pedestrian safety.	No
Continuous Green Tee	No	Continuous green tee is not applicable because the instersection has four approaches.	No
Quadrant Roadway	No	A quadrant roadway would require ROW acquisition, which would make the cost prohibitive. It would not be effective to address pedestrian safety.	No
Other			

Resolution				
To be filled out by PennDOT District Traffic Engineer or designee only.				
Project Determination				
Comments				
DTE or Designee Name *(Type)*		Signature		Date

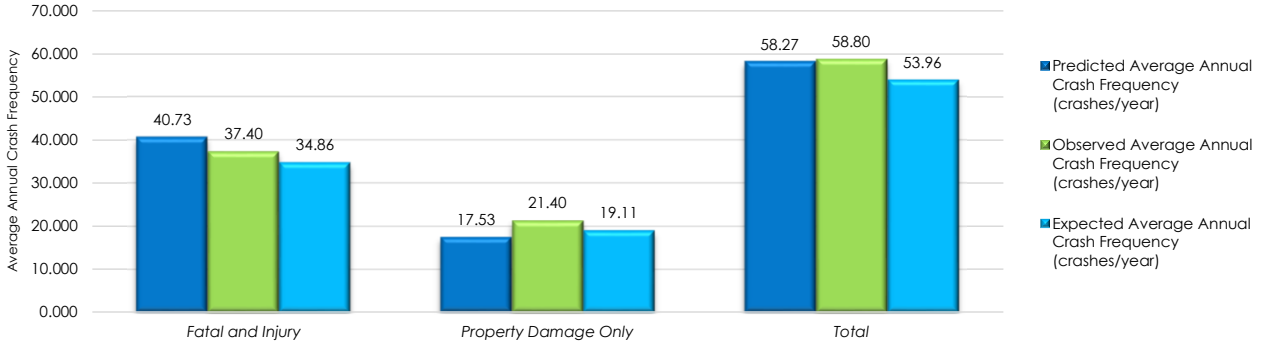
Existing Condition
Tool A Analysis

- 5 Lane Cross Section

Project Safety Performance Summary Report

Project Description	RT 291 Corridor Study
Date	7/19/2023
Analysis Year	2023
Analysis Type	Site Level Analysis
Facility Type(s)	Urban/Suburban Arterials

Summary of Average Safety Performance for the Project (crashes/year)



Project Totals	*Fatal and Injury Crashes*	*Property Damage Only Crashes*	*Total Crashes*
Predicted Average Annual Crash Frequency	40.73	17.53	58.27
Observed Average Annual Crash Frequency	37.40	21.40	58.80
Expected Average Annual Crash Frequency	34.86	19.11	53.96
Potential for Safety Improvement (PSI)	-5.88	1.57	-4.30

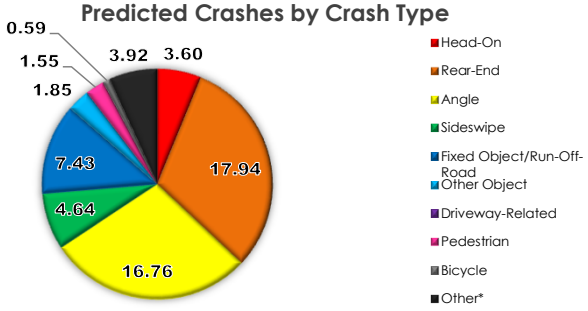
Total Project Summary

Segments	*Fatal and Injury*	*Property Damage Only*	*Total*
Predicted Average Annual Crash Frequency (crashes/yr)	28.86	10.25	39.11
Observed Average Annual Crash Frequency (crashes/yr)	20.00	10.20	30.20
Expected Average Annual Crash Frequency (crashes/yr)	21.73	10.04	31.76

Intersections	*Fatal and Injury*	*Property Damage Only*	*Total*
Predicted Average Annual Crash Frequency (crashes/yr)	11.87	7.28	38.30
Observed Average Annual Crash Frequency (crashes/yr)	17.40	11.20	28.60
Expected Average Annual Crash Frequency (crashes/yr)	13.13	9.07	22.20

Total	*Fatal and Injury*	*Property Damage Only*	*Total*
Predicted Average Annual Crash Frequency (crashes/yr)	40.73	17.53	58.27
Observed Average Annual Crash Frequency (crashes/yr)	37.40	21.40	58.80
Expected Average Annual Crash Frequency (crashes/yr)	34.86	19.11	53.96

Project Total: Predicted Crashes by Crash Type



No Observed Crash Data Provided

*Note: "Other Crashes" include animal, overturn, parked vehicle, noncollisions, and other single-/multiple-vehicle crashes

Project Safety Performance Detailed Report

Urban and Suburban Arterials

Project Description RT 291 Corridor Study
Date 7/19/2023
Analysis Year 2023
Analysis Type Site Level Analysis
Facility Type(s) Urban/Suburban Arterials

Urban and Suburban Arterials: Segments

Segment Name	*PennDOT Segment*	*PennDOT Offset*	*Total Predicted Crashes*	*Total Observed Crashes*	*Total Expected Crashes*	*Potential for Safety Improvement*
Segment 1	RT 291 - 01	0	2.80	3.00	3.06	0.26
Segment 2	RT 291 - 02	0	3.65	7.20	6.94	3.30
Segment 3	RT 291 - 03	0	1.06	0.40	0.50	-0.55
Segment 4	RT 291 - 04	0	5.57	3.40	3.72	-1.85
Segment 5	RT 291 - 05	0	5.41	0.40	0.80	-4.60
Segment 6	RT 291 - 06	0	2.44	0.60	0.77	-1.67
Segment 7	RT 291 - 07	0	2.42	0.60	0.77	-1.65
Segment 8	RT 291 - 08	0	3.72	2.00	2.22	-1.49
Segment 9	RT 291-09	0	2.78	2.80	2.90	0.11
Segment 10	RT 291-10	0	9.28	9.80	10.09	0.81

Project Safety Performance Detailed Report

Urban and Suburban Arterials

Project Description RT 291 Corridor Study
Date 7/19/2023
Analysis Year 2023
Analysis Type Site Level Analysis
Facility Type(s) Urban/Suburban Arterials

Urban and Suburban Arterials: Intersections

Intersection Name	*Major Road*	*Minor Road*	*Total Predicted Crashes*	*Total Observed Crashes*	*Total Expected Crashes*	*Potential for Safety Improvement*
Intersection 1	RT 291 (W. 2nd St)	Highland Ave	0.84	2.40	1.19	0.35
Intersection 2	RT 291 (W. 2nd St)	Jeffrey St	0.92	4.40	1.82	0.90
Intersection 3	RT 291 (W. 2nd St)	SR 3005 (Flower St)	1.92	4.80	3.09	1.17
Intersection 4	RT 291 (W. 2nd St)	Penn St	2.61	1.40	2.08	-0.53
Intersection 5	RT 291 (W. 2nd St)	Welsh St	1.53	2.00	1.72	0.18
Intersection 6	RT 291 (W. 2nd St)	SR 0320 (Madison St)	2.21	0.80	1.64	-0.57
Intersection 7	RT 291 (W. 2nd St)	SR 0013 (Morton Ave)	4.78	4.80	4.89	0.10
Intersection 8	RT 291 (W. 2nd St)	Harrah's Blvd	1.00	1.40	1.12	0.12
Intersection 9	RT 291 (W. 2nd St)	Tilghman St	1.74	4.40	2.81	1.07
Intersection 10	RT 291 (W. 2nd St)	Kerlin St	1.59	2.20	1.84	0.25

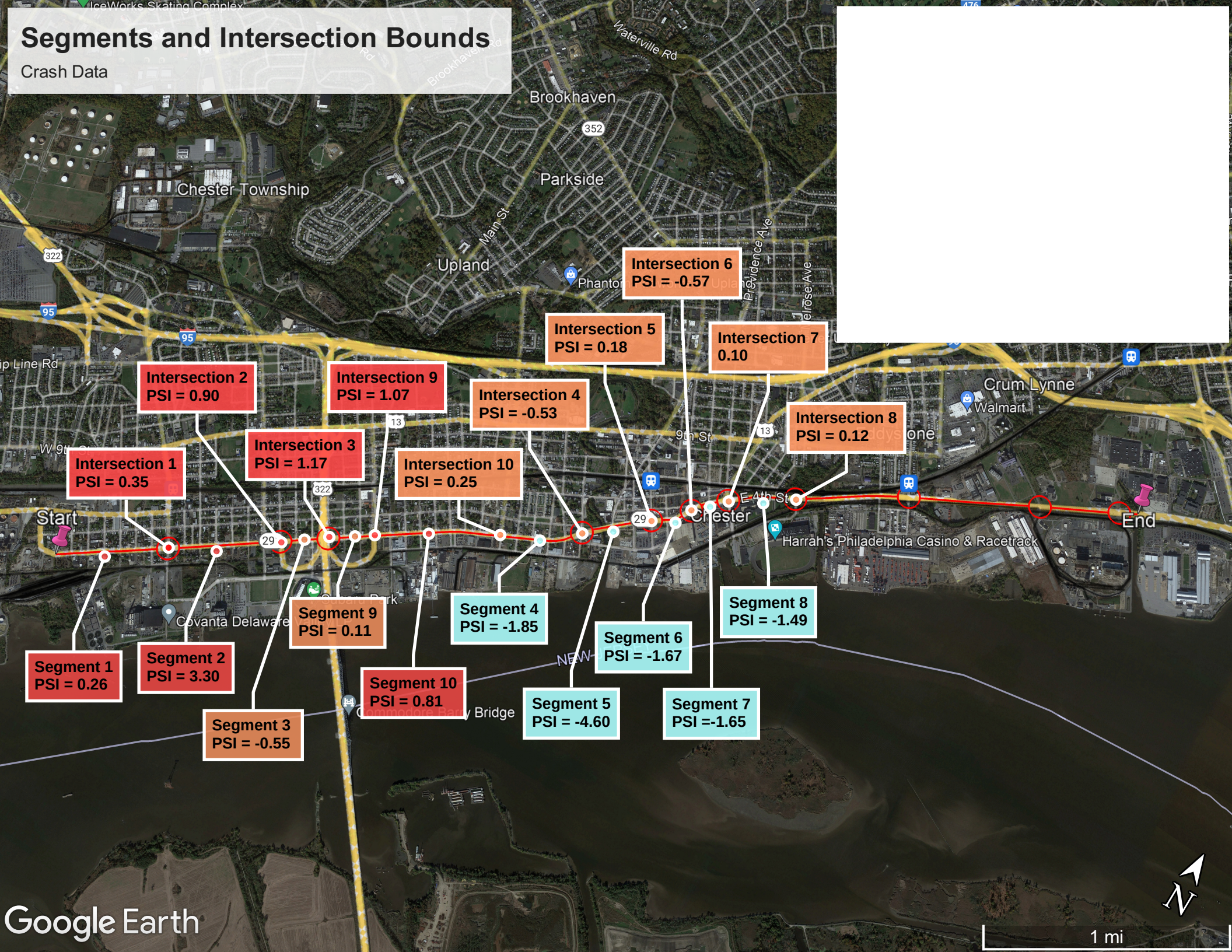
Existing Condition
Tool A Analysis

- 5 Lane Cross Section

Graphical Presentation

Segments and Intersection Bounds

Crash Data

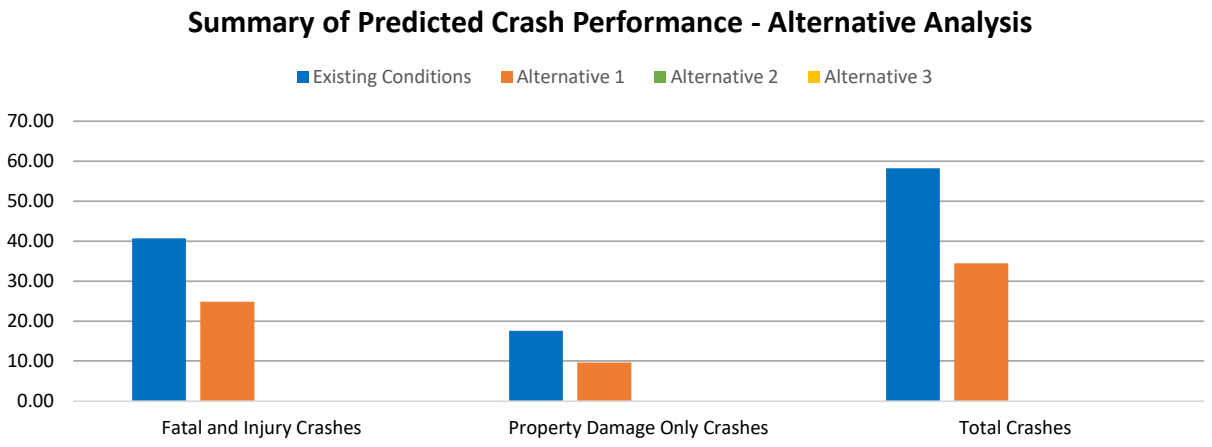


Proposed Condition
Tool B Analysis

- Existing 5 Lane Cross Section with CMF Application

Alternatives Analysis - Safety Performance Summary

Project Description	RT 291 Corridor Study
Date	7/19/2023
Analysis Year	2023
Analysis Type	



Safety Performance Summary

Project Totals	**Total Crashes**			
	Existing Conditions	*Alternative 1*	*Alternative 2*	*Alternative 3*
Predicted Average Annual Crash Frequency	58.27	34.48	--	--
Expected Average Annual Crash Frequency	--	--	--	--
Change from Existing Conditions	--	-23.78	--	--

Project Totals	**Fatal and Injury Crashes**			
	Existing Conditions	*Alternative 1*	*Alternative 2*	*Alternative 3*
Predicted Average Annual Crash Frequency	40.73	24.88	--	--
Expected Average Annual Crash Frequency	--	--	--	--
Change from Existing Conditions	--	-15.86	--	--

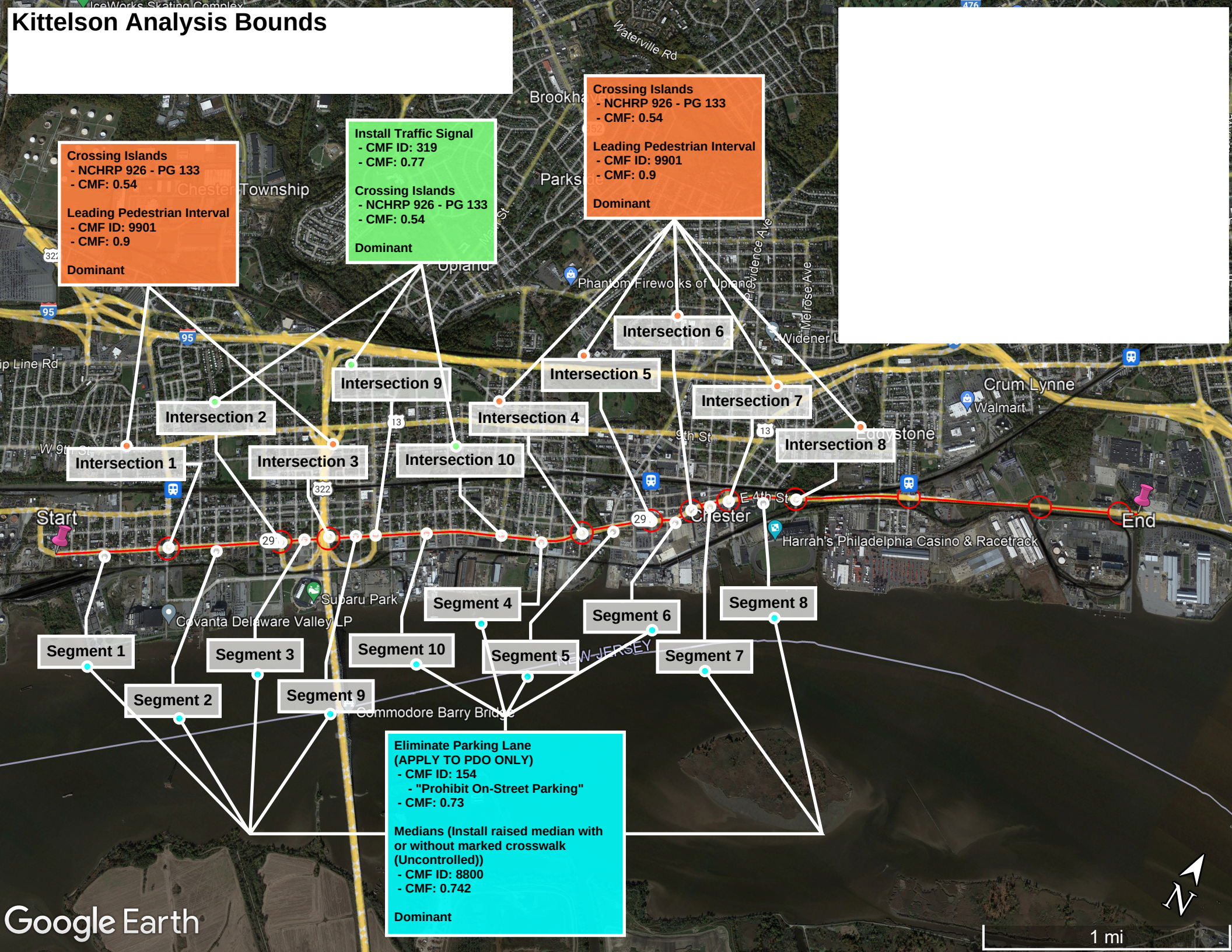
Project Totals	**Property Damage Only Crashes**			
	Existing Conditions	*Alternative 1*	*Alternative 2*	*Alternative 3*
Predicted Average Annual Crash Frequency	17.53	9.61	--	--
Expected Average Annual Crash Frequency	--	--	--	--
Change from Existing Conditions	--	-7.92	--	--

Proposed Condition
Tool B Analysis

- Existing 5 Lane Cross Section with CMF Application

Graphical Presentation

Kittelson Analysis Bounds



Existing Condition
Tool A Analysis
(5 Lane Cross Section)

For theoretical analysis of a three lane section

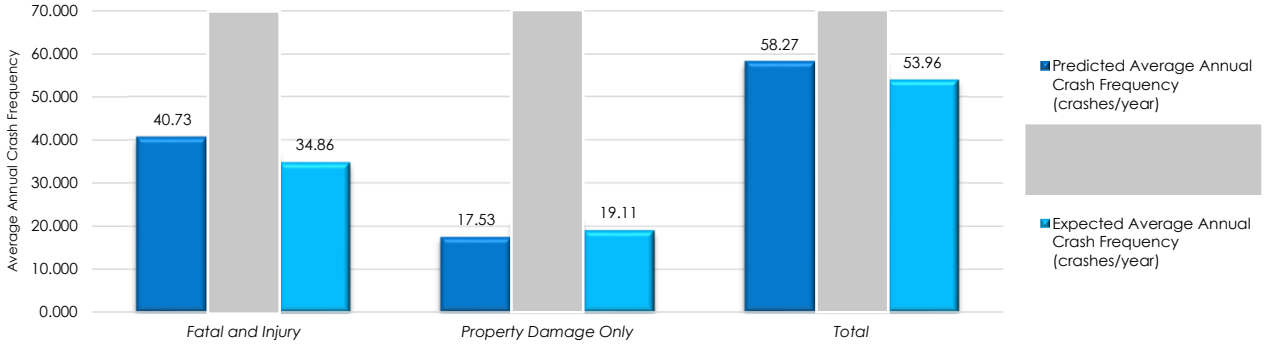
- 'Observed' category not applicable for this analysis type

Project Safety Performance Summary Report

Project Description	RT 291 Corridor Study
Date	7/19/2023
Analysis Year	2023
Analysis Type	Site Level Analysis
Facility Type(s)	Urban/Suburban Arterials

Roadway Cross-Section: 5T

Summary of Average Safety Performance for the Project (crashes/year)



Project Totals	*Fatal and Injury Crashes*	*Property Damage Only Crashes*	*Total Crashes*
Predicted Average Annual Crash Frequency	40.73	17.53	58.27
Expected Average Annual Crash Frequency	34.86	19.11	53.96
Potential for Safety Improvement (PSI)	-5.88	1.57	-4.30

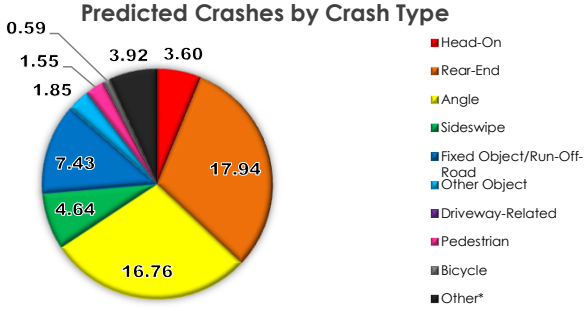
Total Project Summary

Segments	*Fatal and Injury*	*Property Damage Only*	*Total*
Predicted Average Annual Crash Frequency (crashes/yr)	28.86	10.25	39.11
Expected Average Annual Crash Frequency (crashes/yr)	21.73	10.04	31.76

Intersections	*Fatal and Injury*	*Property Damage Only*	*Total*
Predicted Average Annual Crash Frequency (crashes/yr)	11.87	7.28	38.30
Expected Average Annual Crash Frequency (crashes/yr)	13.13	9.07	22.20

Total	*Fatal and Injury*	*Property Damage Only*	*Total*
Predicted Average Annual Crash Frequency (crashes/yr)	40.73	17.53	58.27
Expected Average Annual Crash Frequency (crashes/yr)	34.86	19.11	53.96

Project Total: Predicted Crashes by Crash Type



No Observed Crash Data Provided

*Note: "Other Crashes" include animal, overturn, parked vehicle, noncollisions, and other single-/multiple-vehicle crashes

Project Safety Performance Detailed Report

Urban and Suburban Arterials

Project Description RT 291 Corridor Study
Date 7/19/2023
Analysis Year 2023
Analysis Type Site Level Analysis
Facility Type(s) Urban/Suburban Arterials

Urban and Suburban Arterials: Segments

Segment Name	*PennDOT Segment*	*PennDOT Offset*	*Total Predicted Crashes*		*Total Expected Crashes*	*Potential for Safety Improvement*
Segment 1	RT 291 - 01	0	2.80		3.06	0.26
Segment 2	RT 291 - 02	0	3.65		6.94	3.30
Segment 3	RT 291 - 03	0	1.06		0.50	-0.55
Segment 4	RT 291 - 04	0	5.57		3.72	-1.85
Segment 5	RT 291 - 05	0	5.41		0.80	-4.60
Segment 6	RT 291 - 06	0	2.44		0.77	-1.67
Segment 7	RT 291 - 07	0	2.42		0.77	-1.65
Segment 8	RT 291 - 08	0	3.72		2.22	-1.49
Segment 9	RT 291-09	0	2.78		2.90	0.11
Segment 10	RT 291-10	0	9.28		10.09	0.81

Project Safety Performance Detailed Report

Urban and Suburban Arterials

Project Description RT 291 Corridor Study
Date 7/19/2023
Analysis Year 2023
Analysis Type Site Level Analysis
Facility Type(s) Urban/Suburban Arterials

Urban and Suburban Arterials: Intersections

Intersection Name	*Major Road*	*Minor Road*	*Total Predicted Crashes*		*Total Expected Crashes*	*Potential for Safety Improvement*
Intersection 1	RT 291 (W. 2nd St)	Highland Ave	0.84		1.19	0.35
Intersection 2	RT 291 (W. 2nd St)	Jeffrey St	0.92		1.82	0.90
Intersection 3	RT 291 (W. 2nd St)	SR 3005 (Flower St)	1.92		3.09	1.17
Intersection 4	RT 291 (W. 2nd St)	Penn St	2.61		2.08	-0.53
Intersection 5	RT 291 (W. 2nd St)	Welsh St	1.53		1.72	0.18
Intersection 6	RT 291 (W. 2nd St)	SR 0320 (Madison St)	2.21		1.64	-0.57
Intersection 7	RT 291 (W. 2nd St)	SR 0013 (Morton Ave)	4.78		4.89	0.10
Intersection 8	RT 291 (W. 2nd St)	Harrah's Blvd	1.00		1.12	0.12
Intersection 9	RT 291 (W. 2nd St)	Tilghman St	1.74		2.81	1.07
Intersection 10	RT 291 (W. 2nd St)	Kerlin St	1.59		1.84	0.25

Proposed Condition
Tool A Analysis
(3 Lane Cross Section)

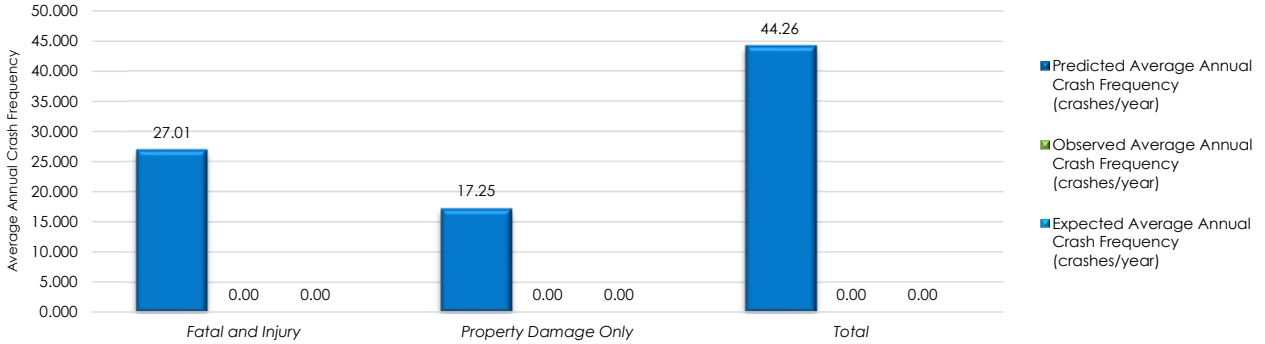
For theoretical analysis of a three lane section,
- ONLY lane reduction applied to existing condition

(from 5 lane to 3 lane, both with two way turn lanes)

Project Safety Performance Summary Report

Project Description	RT 291 Corridor Study
Date	7/19/2023
Analysis Year	2023
Analysis Type	Site Level Analysis
Facility Type(s)	Urban/Suburban Arterials

Summary of Average Safety Performance for the Project (crashes/year)



Project Totals	*Fatal and Injury Crashes*	*Property Damage Only Crashes*	*Total Crashes*
Predicted Average Annual Crash Frequency	27.01	17.25	44.26
Observed Average Annual Crash Frequency	0.00	0.00	0.00
Expected Average Annual Crash Frequency	--	--	--
Potential for Safety Improvement (PSI)	--	--	--

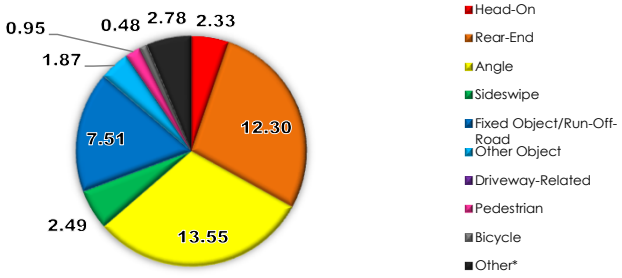
Total Project Summary

Segments	*Fatal and Injury*	*Property Damage Only*	*Total*
Predicted Average Annual Crash Frequency (crashes/yr)	15.16	9.97	25.14
Observed Average Annual Crash Frequency (crashes/yr)	0.00	0.00	0.00
Expected Average Annual Crash Frequency (crashes/yr)	--	--	--

Intersections	*Fatal and Injury*	*Property Damage Only*	*Total*
Predicted Average Annual Crash Frequency (crashes/yr)	11.85	7.28	38.25
Observed Average Annual Crash Frequency (crashes/yr)	0.00	0.00	0.00
Expected Average Annual Crash Frequency (crashes/yr)	--	--	--

Total	*Fatal and Injury*	*Property Damage Only*	*Total*
Predicted Average Annual Crash Frequency (crashes/yr)	27.01	17.25	44.26
Observed Average Annual Crash Frequency (crashes/yr)	0.00	0.00	0.00
Expected Average Annual Crash Frequency (crashes/yr)	--	--	--

Project Total: Predicted Crashes by Crash Type



No Observed Crash Data Provided

*Note: "Other Crashes" include animal, overturn, parked vehicle, noncollisions, and other single-/multiple-vehicle crashes

Project Safety Performance Detailed Report

Urban and Suburban Arterials

Project Description RT 291 Corridor Study
Date 7/19/2023
Analysis Year 2023
Analysis Type Site Level Analysis
Facility Type(s) Urban/Suburban Arterials

Urban and Suburban Arterials: Segments

Segment Name	*PennDOT Segment*	*PennDOT Offset*	*Total Predicted Crashes*	*Total Observed Crashes*	*Total Expected Crashes*	*Potential for Safety Improvement*
Segment 1	RT 291 - 01	0	1.93	0.00	--	--
Segment 2	RT 291 - 02	0	2.04	0.00	--	--
Segment 3	RT 291 - 03	0	0.59	0.00	--	--
Segment 4	RT 291 - 04	0	3.55	0.00	--	--
Segment 5	RT 291 - 05	0	3.68	0.00	--	--
Segment 6	RT 291 - 06	0	1.64	0.00	--	--
Segment 7	RT 291 - 07	0	1.63	0.00	--	--
Segment 8	RT 291 - 08	0	2.39	0.00	--	--
Segment 9	RT 291-09	0	1.77	0.00	--	--
Segment 10	RT 291-10	0	5.92	0.00	--	--

Project Safety Performance Detailed Report

Urban and Suburban Arterials

Project Description RT 291 Corridor Study
Date 7/19/2023
Analysis Year 2023
Analysis Type Site Level Analysis
Facility Type(s) Urban/Suburban Arterials

Urban and Suburban Arterials: Intersections

Intersection Name	*Major Road*	*Minor Road*	*Total Predicted Crashes*	*Total Observed Crashes*	*Total Expected Crashes*	*Potential for Safety Improvement*
Intersection 1	RT 291 (W. 2nd St)	Highland Ave	0.84	0.00	--	--
Intersection 2	RT 291 (W. 2nd St)	Jeffrey St	0.92	0.00	--	--
Intersection 3	RT 291 (W. 2nd St)	SR 3005 (Flower St)	1.92	0.00	--	--
Intersection 4	RT 291 (W. 2nd St)	Penn St	2.61	0.00	--	--
Intersection 5	RT 291 (W. 2nd St)	Welsh St	1.53	0.00	--	--
Intersection 6	RT 291 (W. 2nd St)	SR 0320 (Madison St)	2.21	0.00	--	--
Intersection 7	RT 291 (W. 2nd St)	SR 0013 (Morton Ave)	4.78	0.00	--	--
Intersection 8	RT 291 (W. 2nd St)	Harrah's Blvd	1.00	0.00	--	--
Intersection 9	RT 291 (W. 2nd St)	Tilghman St	1.74	0.00	--	--
Intersection 10	RT 291 (W. 2nd St)	Kerlin St	1.59	0.00	--	--

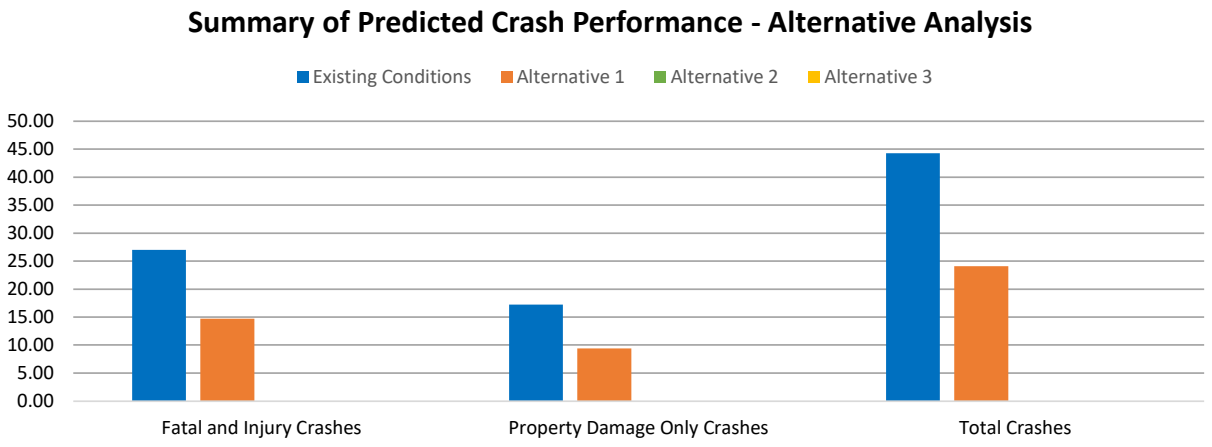
Proposed Condition
Tool B Analysis
(3 Lane Cross Section)

For theoretical analysis of a three lane section,

- lane reduction applied to existing condition
- CMFs applied

Alternatives Analysis - Safety Performance Summary

Project Description	RT 291 Corridor Study
Date	7/19/2023
Analysis Year	2023
Analysis Type	



Safety Performance Summary

Project Totals	**Total Crashes**			
	Existing Conditions	*Alternative 1*	*Alternative 2*	*Alternative 3*
Predicted Average Annual Crash Frequency	44.26	24.11	--	--
Expected Average Annual Crash Frequency	--	--	--	--
Change from Existing Conditions	--	-20.15	--	--

Project Totals	**Fatal and Injury Crashes**			
	Existing Conditions	*Alternative 1*	*Alternative 2*	*Alternative 3*
Predicted Average Annual Crash Frequency	27.01	14.71	--	--
Expected Average Annual Crash Frequency	--	--	--	--
Change from Existing Conditions	--	-12.30	--	--

Project Totals	**Property Damage Only Crashes**			
	Existing Conditions	*Alternative 1*	*Alternative 2*	*Alternative 3*
Predicted Average Annual Crash Frequency	17.25	9.40	--	--
Expected Average Annual Crash Frequency	--	--	--	--
Change from Existing Conditions	--	-7.85	--	--