Welcome!

- We’ll start as close to 7 PM as possible.
- Everyone is joining as an “attendee” in Zoom’s webinar format.
- As we go, please type your questions into the Q&A tool.
Agenda

- **Introduction** (Alison Hastings, DVRPC)
- **Welcome from Chester County** (County Commissioner Josh Maxwell and Brian Styche, CCPC)
- **Project Overview** (Sarah Moran, DVRPC)
- **Traffic Model Results and Recommendations** (Camden Palvino, DVRPC)
- **Bicycle Network Recommendations** (Aaron Fraint, DVRPC)
- **Wrap-Up and Q&A** (Project Team)
Introduction & Ground Rules

- Purposes of this meeting:
  - Review October meeting material and present study results
  - Please enter questions in the Q&A tool as we move through the presentations; we’ll pause at various parts to answer questions
  - Use the chat box for comments or to respond to different questions we may ask
  - Organizers will not address off-topic questions and comments and may combine similar questions
  - Organizers reserve the right to ignore and strike from the materials offensive or inappropriate questions and comments
  - Organizers may remove an attendee if being disruptive, antagonistic, or threatening

Poll #1
Project Welcome - Chester County
Study Purpose

• Quantify traffic impact of transportation projects and developments in the Downingtown area.

• Develop strategies to manage congestion and increase mobility at study intersections and throughout the project study area.

• Provide a platform for the public to have a role in shaping these strategies and the future transportation outlook in the study area.
Project Overview

US 322, West Bradford Township
The DVRPC

- Metropolitan Planning Organization (MPO)
- 9 counties
- 2 states
- 5.7 million people
- 7th largest metro area population in the nation
- 350+ municipalities
- TIP, LRP, and Work Program activities
Project Team

Chester County Planning Commission (CCPC)
• Brian Styche, Environment and Infrastructure Director
• Brian Donovan, Transportation Planner

Delaware Valley Regional Planning Commission (DVRPC)
• Sarah Moran, Manager, Office of Mobility Analysis and Design
• Aaron Fraint, Associate Manager, Office of Mobility Analysis and Design
• Sean Lawrence, Senior GIS Analyst
• Reuben MacMartin, Transportation Planner
• Kelsey McElduff, Transportation Engineer
• Camden Palvino, Transportation Engineer
Stakeholders

- Downingtown Borough
- East Brandywine Township
- Caln Township
- West Bradford Township
- East Bradford Township
- West Whiteland Township
- Uwchlan Township
- East Caln Township

- PennDOT 6-0 and US 30 ITS Project Consultants
- PennDOT Central Office
- SEPTA, Strategic Planning and Service Planning
- TMACC
- Krapf Bus
Study Goal and Objectives

Goal
This study is intended to provide analysis to support further study, capital project development, and funding.

Objectives
• Identify and quantify areas of existing and future transportation bottlenecks within the Downingtown area of southwest Chester County;
• Quantify the impact of new development on traffic circulation and mobility;
• Develop the analytical basis for improvements needed to establish a modern transportation system.
October Public Meetings

• At the meetings:
  – Presented study scope
  – Outlined completed and upcoming tasks
  – Polled attendees on key elements

• Present concerns of **traffic congestion** (28 of 31, 91% of responses) and **development** (20 of 31, 65% of responses)
• A desire to make the future Downingtown area **more bike-friendly** (26 of 33, 79% of responses)
• A desire to maintain a sense of **community** (22 of 33, 67% of responses) and **livability** (15 of 33, 45% of responses) in the future
Purpose of Spring Meetings

- Review goals and area of study
- Review public feedback on priorities for mobility in and around the study area
- Present study results and recommendations
  - Traffic model results and modeled improvements
  - Bike network recommendations
Traffic Modeling
Land Developments January 2016–May 2019
(at least 50 units and/or 50,000 SQ FT)
Planned Transportation Projects

Map of Planned Transportation Projects:
- Creek Road over Branch of Brandywine Creek Bridge Repair/Replacement
- Guthriesville Loop Road Roadway System Expansion
- US 30, Coatesville-Downingtown Bypass Roadway System Expansion
- Hadfield Bridge over Beaver Creek Bridge Repair/Replacement
- Woodbine Road Multi-use Trail Bike/Ped Improvements
- US 30 & PA 82 Interchange Improvement
- G.O. Carlson Boulevard Extension Roadway System Expansion
- US 30, Coatesville-Downingtown Bypass Roadway Rehabilitation
- Downingtown Train Station Rehabilitation Transit Improvements
- Lancaster Ave/Brandywine Bridge Repair/Replacement
- Chestnut Street Bridge over Amtrak Bridge Repair
- Boot Road over Amtrak Bridge Bridge Repair/Replacement
- Gattlen Regional Rail Extension Transit System Expansion (Unfunded)
- Downingtown Pike over East Branch Brandywine Bridge Repair/Replacement
- Chester Valley Trail Extension
- Chester Valley Trail
- East Bradford
- Brandywine Creek Trail
- Downingtown Pike over East Branch Brandywine Bridge 2045 LRP Major Regional Projects (Road Segment)
- Gattlen Regional Rail Extension Transit System Expansion (Unfunded)
- Downingtown Train Station Rehabilitation
- E Pennsylvania Connector (Brandywine Creek Trail)

Highway and Transit Projects:
- PA TIP 2017-2021 (Site)
- PA TIP FY2019-2022 (Site)
- PATIP FY2019-2022 (Road Segment)
- 2045 LRP Major Regional Projects (Road Segment)

Circuit Trails:
- In Progress
- Planned
- Pipeline

Map Information:
- Basemap: ESRI
- dvrpc
Highlight of Area Projects

- 27 known large land development projects
- 6 bridges identified for repair
- 2 planned transit projects
  - Downingtown Train Station relocation
  - Extension of SEPTA Paoli-Thorndale line to Coatesville
- 1 roadway rehabilitation project
  - US 30 Bypass ITS Project
Study Intersections
# Traffic Modeling Scenarios

<table>
<thead>
<tr>
<th>Scenario (Model Year)</th>
<th>Model Component</th>
<th>Fall 2019 traffic counts</th>
<th>Development traffic growth/decline</th>
<th>Programmed transportation projects</th>
<th>Downingtown station move and Coatesville extension at study intersections</th>
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<td>Control Delay (sec/vehicle)-Unsignalized</td>
<td>Qualitative Description of Traffic Operations</td>
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AM 2019 Existing LOS

Intersection Level of Service
Existing Conditions
AM Peak Hour - 7:15 AM - 8:15 AM
lower case indicates unsignalized intersection

Predictable and Stable Flow
Predictable, Approaching Unstable
Unstable and Unpredictable
Intersection Level of Service
2035 No Build Scenario
AM Peak Hour - 7:15 AM - 8:15 AM
lower case indicates unsignalized intersection

Predictable and Stable Flow
Predictable. Approaching Unstable
Unstable and Unpredictable

AM 2035 No Build LOS
Intersection Level of Service
2035 Build Scenario
AM Peak Hour - 7:15 AM - 8:15 AM
lower case indicates unsignalized intersection

AM 2035 Build LOS
Intersection Delay Change
Existing Conditions / 2035 No Build
AM Peak Hour - 7:15 AM - 8:15 AM
green border indicates improvements at intersection

Delay Change
- +/- 0 - 5s
- + 5 - 15s
- + 15 - 30s
- + 30 - 60s
- + >60s

AM Existing to No Build Delay Change
Intersection Delay Change
2035 No Build / 2035 Build
AM Peak Hour - 7:15 AM - 8:15 AM

green border indicates improvements at intersection

Delay Change
- 15 - 30s
- 5 - 15s
+/- 0 - 5s
+ 5 - 15s
+ 15 - 30s
+ 30 - 60s

AM No Build to Build Change
PM 2019 Existing LOS

Intersection Level of Service Existing Conditions
PM Peak Hour - 4:30 PM - 5:30 PM
lower case indicates unsignalized intersection

Predictable and Stable Flow
Predictable, Approaching Unstable
Unstable and Unpredictable

Basemap: ESRI
Intersection Level of Service
2035 No Build Scenario
PM Peak Hour - 4:30 PM - 5:30 PM
lower case indicates unsignalized intersection

Predictable and Stable Flow
Predictable, Approaching Unstable
Unstable and Unpredictable

PM 2035 No Build LOS
Intersection Level of Service
2035 Build Scenario
PM Peak Hour - 4:30 PM - 5:30 PM
lower case indicates unsignalized intersection

Predictable and Stable Flow
Predictable, Approaching Unstable
Unstable and Unpredictable

PM 2035 Build LOS
Intersection Delay Change
Existing Conditions / 2035 No Build
PM Peak Hour - 4:30 PM - 5:30 PM

green border indicates improvements at intersection

Delay Change
- 5 - 15s
+/− 0 - 5s
+ 5 - 15s
+ 15 - 30s
+ 30 - 60s

PM Existing to No Build Delay Change
PM No Build to Build Change

Intersection Delay Change
2035 No Build / 2035 Build
PM Peak Hour - 4:30 PM - 5:30 PM

green border indicates improvements at intersection

Delay Change
- 15 - 30s
- 5 - 15s
+/- 0 - 5s
+ 5 - 15s
+ 15 - 30s
+ 30 - 60s

Basemap: ESRI

dvrpc
Consideration for Improvements

- Improvements were developed at a study intersection if one or more of the following criteria were satisfied:
  - Intersection experiences **LOS E or F** in AM/PM no build or build scenario
  - Intersection experiences **delay increase of over 15s** between AM/PM existing to no build scenario
  - Intersection experiences **delay increase of over 15s** between AM/PM no build to build scenario
  - **Twenty or more crash events** reported at intersection within 5-year study period, in 5-year period of 2014 through 2018
Improvement Development

- Hierarchy of improvements:
  1. No improvements developed: intersection does not meet conditions for consideration
  2. Signal timing optimization
  3. Spot adjustments (e.g. Add turn lane, extend storage lane)
  4. Capacity-adding adjustments
  5. No improvements developed: cost-prohibitive
Build & Improvements Overview

- 15 intersections with project team-recommended improvements
  - Downingtown (6)
  - Caln (3)
  - East Caln (2)
  - West Bradford, East Brandywine, West Whiteland, Uwchlan (1 each)

- 7 intersections with recommended geometric roadway improvements (3 spot, 4 capacity-adding)
Intersection Improvement Type
2035 Build & Improvements Scenario
black dot indicates no improvements modeled

- Signal timing and capacity-adding adjustments
- Signal timing and spot adjustments
- Signal timing adjustments

EAST BRANDYWINE

CALN

WEST BRADFORD

EAST BRADFORD

UWCHLAN

WEST WHITELAND

EAST CALN
US 30 Bypass Ramps & US 30 Business

Intersection Improvement Type
2035 Build & Improvements Scenario
black dot indicates no improvements modeled

Signal timing and capacity-adding adjustments
Signal timing and spot adjustments
Signal timing adjustments

Basemap: ESRI
dvrpc
AM 2035 Build Delay: 31.0s  
AM 2035 B&I Delay: 28.6s  
PM 2035 Build Delay: 96.1s  
PM 2035 B&I Delay: 71.2s

US 30 Bypass Ramps & US 30 Business
Add northbound and southbound through lane

AM 2035 Build Delay: 45.5s
AM 2035 B&I Delay: 35.6s

PM 2035 Build Delay: 87.6s
PM 2035 B&I Delay: 46.4s

US 30 Business (Lincoln Hwy.)
Intersection Level of Service 2035 Build Scenario
AM Peak Hour - 7:15 AM - 8:15 AM
lower case indicates unsignalized intersection

Predictable and Stable Flow
Predictable, Approaching Unstable
Unstable and Unpredictable

AM 2035 Build LOS
Intersection Delay Change
2035 Build / 2035 Build & Improvements
AM Peak Hour - 7:15 AM - 8:15 AM

green border indicates existing improvements at intersection
black dot indicates no improvements modeled

Delay Change
- <60s
- 30 - 60s
- 15 - 30s
- 5 - 15s
+/- 0 - 5s

AM Build to Build + Imp. Delay Change
Intersection Level of Service
2035 Build Scenario
PM Peak Hour - 4:30 PM - 5:30 PM
lower case indicates unsignalized intersection

Predictable and Stable Flow
Predictable, Approaching Unstable
Unstable and Unpredictable
Intersection Level of Service
2035 Build & Improvements Scenario
PM Peak Hour - 4:30 PM - 5:30 PM
lower case indicates unsignalized intersection
black dot indicates no improvements modeled

Predictable and Stable Flow
Predictable, Approaching Unstable
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PM 2035 Build + Improvements LOS
PM Build to Build + Imp. Delay Change

Intersection Delay Change
2035 Build / 2035 Build & Improvements
PM Peak Hour - 4:30 PM - 5:30 PM

green border indicates existing improvements at intersection
black dot indicates no improvements modeled

Delay Change
- 30 - 60s
- 15 - 30s
- 5 - 15s
+/- 0 - 5s
Bicycle Network: Goals

1. Connect the new SEPTA station on Brandywine Ave to the downtown core
2. Provide access to local parks and trails
3. Improve the accessibility of Lancaster Avenue for non-motorized road users
4. Facilitate East/West and North/South travel across Downingtown with a gridded network
Bicycle Network: Design Approach

- Excess street space is rare in Downingtown
- **Bicycle lanes**, where feasible, are recommended
- **Bicycle boulevards** are recommended where there is insufficient space for bicycle lanes
What is a Bicycle Boulevard?

- Streets with low traffic volumes that are redesigned for bicycle priority
- Design elements include signs, markings, and speed/volume management measures

Photo credit: NACTO Urban Bikeway Design Guide
What is a Bicycle Boulevard?

Destination-based guide signs with approximate travel times

Speed management

Volume management

Photo credits: NACTO Urban Bikeway Design Guide
Recommended Bicycle Facilities

Network Improvements
- Bicycle Boulevard
- Bicycle Lane
- Shared Lane
- Signed Route

Circuit Trails
- Existing
- In Progress
- Pipeline
- Planned

Map showing various bicycle facilities and trails in West Bradford and Downingtown, with labeled streets and pathways.
Recommended Network Phases

Network Phasing
- Short-term
- Medium-term
- Long-term

Circuit Trails
- Existing
- In Progress
- Pipeline
- Planned

Map showing various streets and phases.
Wrap Up and Q&A
Thank you.

Camden Palvino
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