

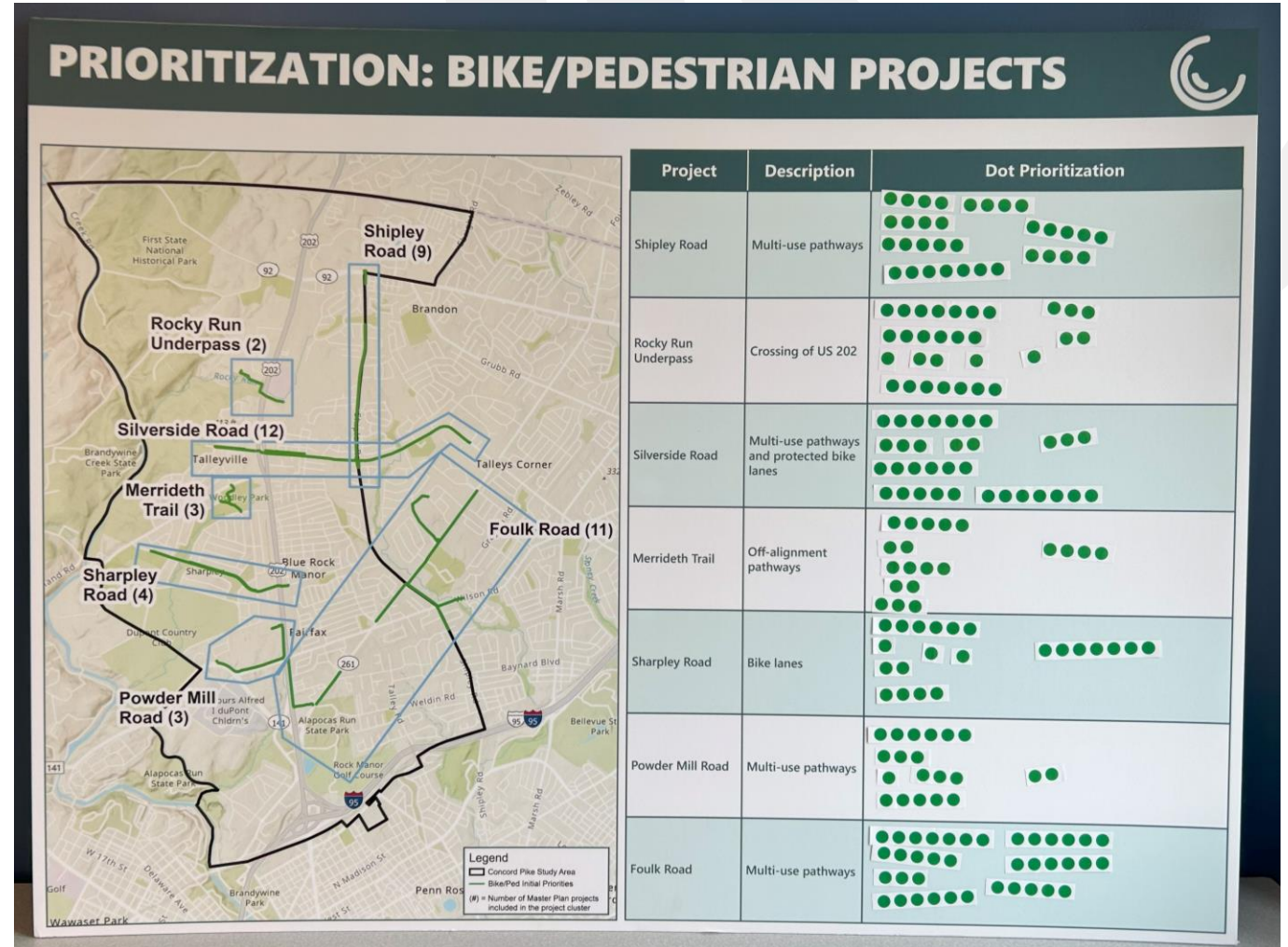
# SPOTLIGHT TOPIC: UNDERPASS NEAR ROCKY RUN



# 2023 PRIORITIZATION EXERCISE BIKE/PEDESTRIAN PROJECTS

## Bike/Pedestrian Priorities:

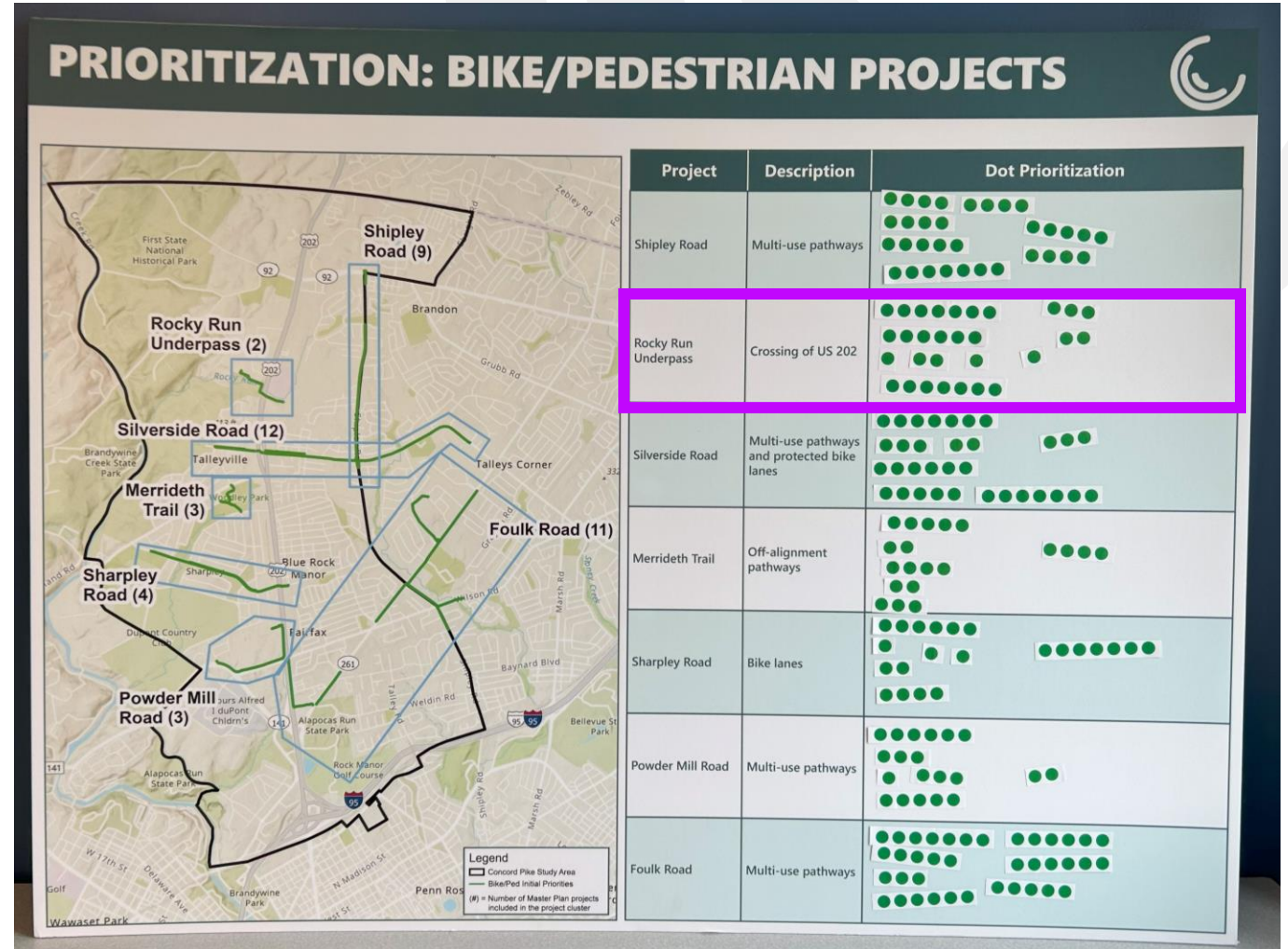
- Foulk Road multi-use pathways
- Silverside Road multi-use pathways and protected bike lanes
- Shipley Road multi-use pathways
- Rocky Run underpass



# 2023 PRIORITIZATION EXERCISE BIKE/PEDESTRIAN PROJECTS

## Bike/Pedestrian Priorities:

- Foulk Road multi-use pathways
- Silverside Road multi-use pathways and protected bike lanes
- Shipley Road multi-use pathways
- Rocky Run underpass



# CULVERTS 101

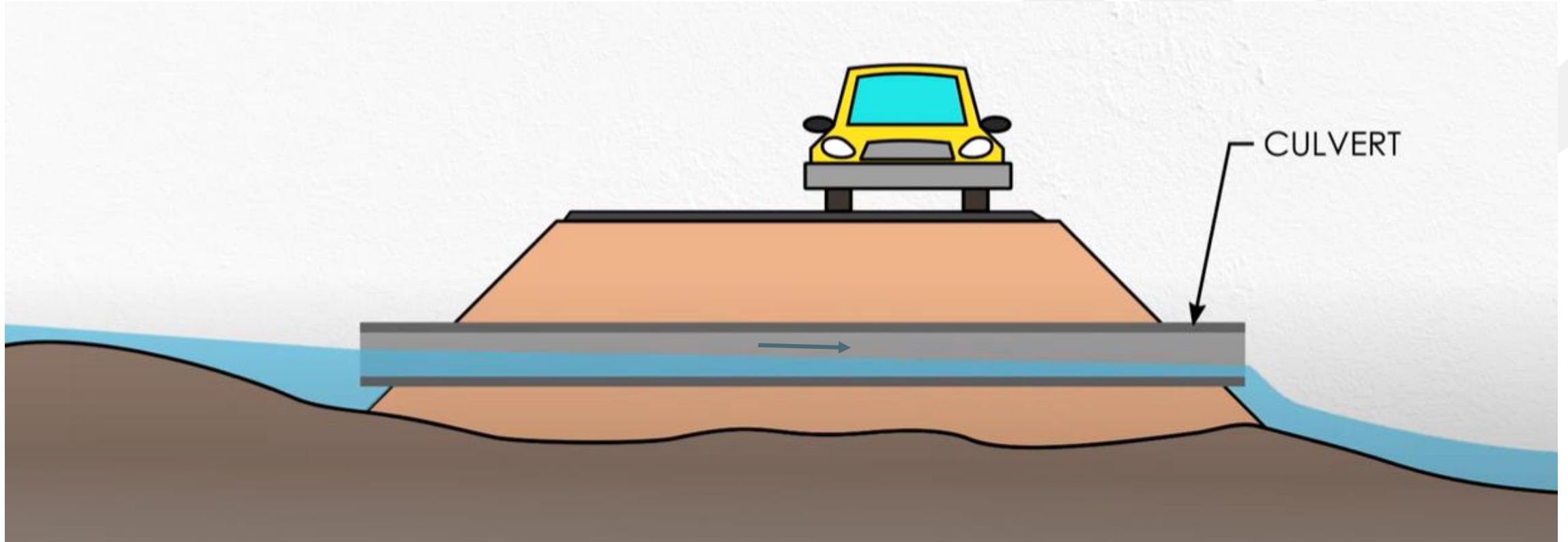
Generally, culverts serve two purposes

- Support loads from above (roadway, traffic)
- Transport the water below



BR 1-024

# HOW DO CULVERTS WORK?



Source: Practical Engineering, What Is a Culvert?

[https://youtu.be/15XJDmawbYU?si=76cWI\\_DWYaKf\\_9Zj](https://youtu.be/15XJDmawbYU?si=76cWI_DWYaKf_9Zj)

# PRELIMINARY HYDRAULICS CHECK – BR 1-024

- DeIDOT's Bridge Section performed a preliminary check to determine whether one cell of the culvert could be repurposed
  - Structure is currently in **Good** condition
  - Initial results indicate one cell of the existing culvert could be closed
- Preliminary check was not a full model of reconfiguring the culvert to accommodate a pedestrian underpass
  - Project would need to be initiated by another DeIDOT Section
  - DeIDOT Bridge Section will continue to provide technical support

# REDIRECTING WATER

- Would need to physically block water from entering area to be used for pedestrians



# REDIRECTING WATER

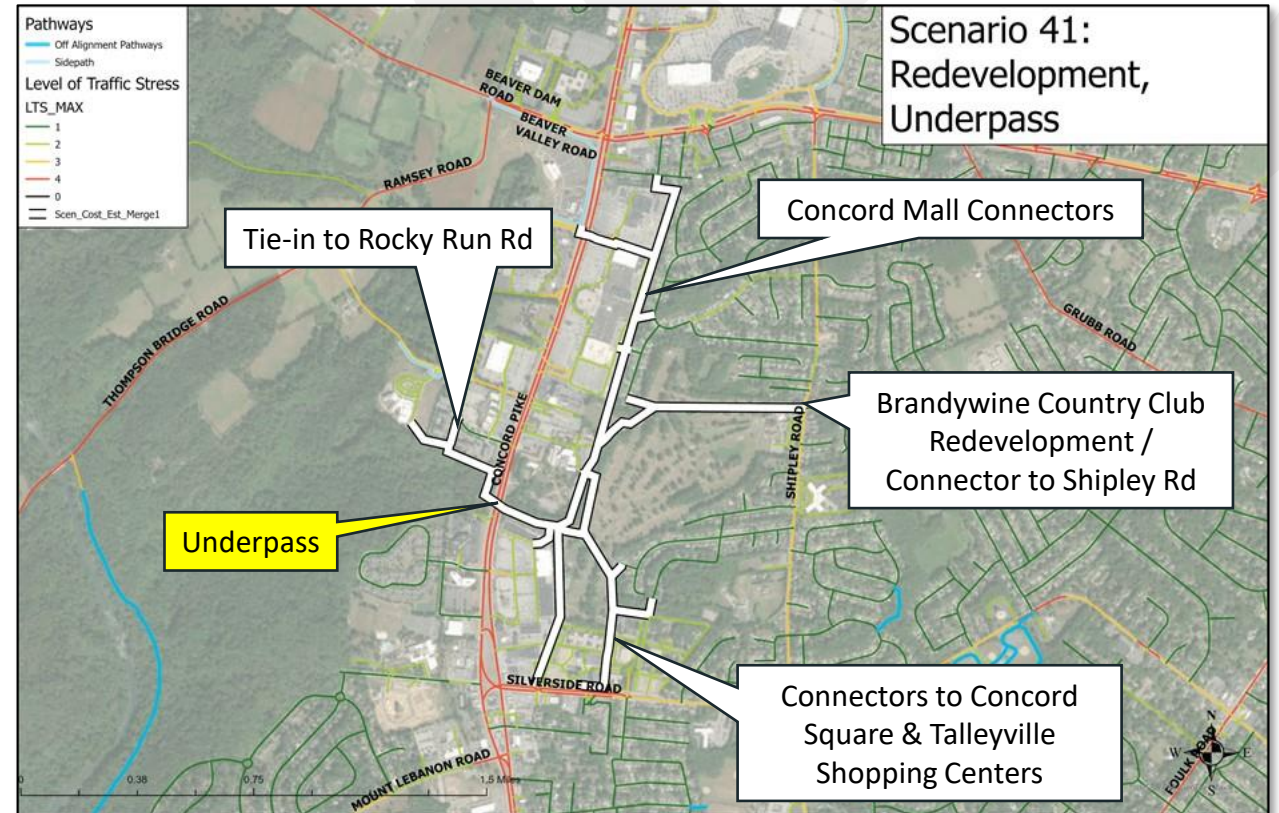
- Includes drainage from the roadway above





# VALUE OF PROPOSED UNDERPASS – CONNECTIVITY

- As a standalone project, underpass ranked #44 (of 55 projects evaluated)
- **Value relies on connectivity to other parts of network**
- When combined with other connectors, overall scenario was #3 high-value scenario



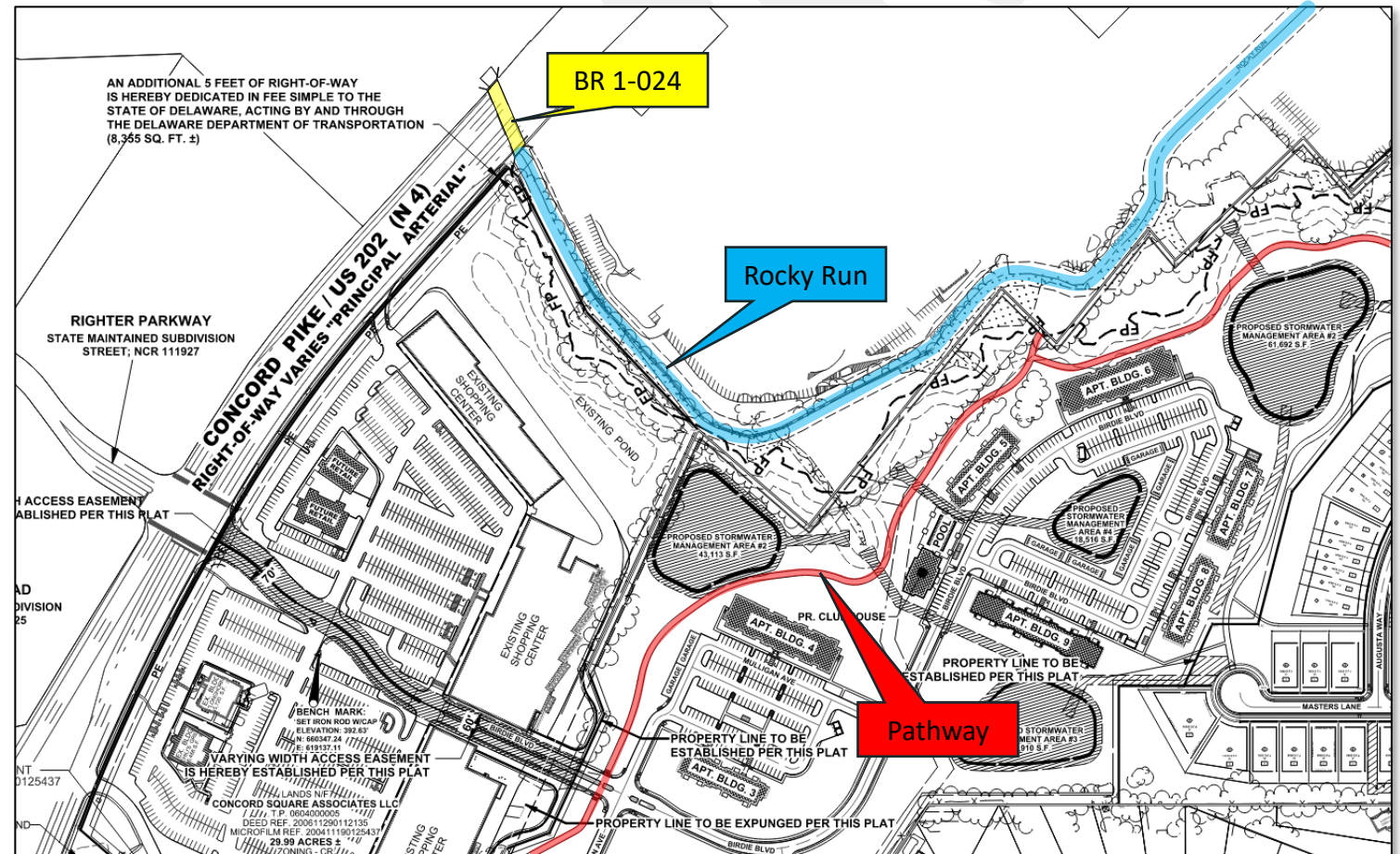
# COORDINATION WITH MULTIPLE PROPERTY OWNERS



- Woodlawn Trustees / First State National Historical Park
- Widener University
- Brandywine Country Club Redevelopment (Capano)
- Concord Square Shopping Center
- Talleyville Shopping Center
- Brandywine Commons / Marriott / Holiday Inn

# BRANDYWINE COUNTY CLUB REDEVELOPMENT

- Latest record plan includes:
  - Sidewalks to Shipley Road
  - Shared use paths that are near but do not connect to culvert area
- Additional connections through other private properties would be needed



# ADA REQUIREMENTS

Both the underpass and connections must be accessible and usable by people with disabilities. Consider:

- Slopes/grades
- Widths
- Transitions
- And more



# ADA REQUIREMENTS

Both the underpass and connections must be accessible and usable by people with disabilities. Consider:

- Slopes/grades
- Widths
- Transitions
- And more



**Not Optional:** Required under the ADA Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG)

# ADDITIONAL SAFETY & SECURITY CONSIDERATIONS

- Pedestrian lighting
- Surveillance
- Bigger storm events – what happens downstream with Brandywine River

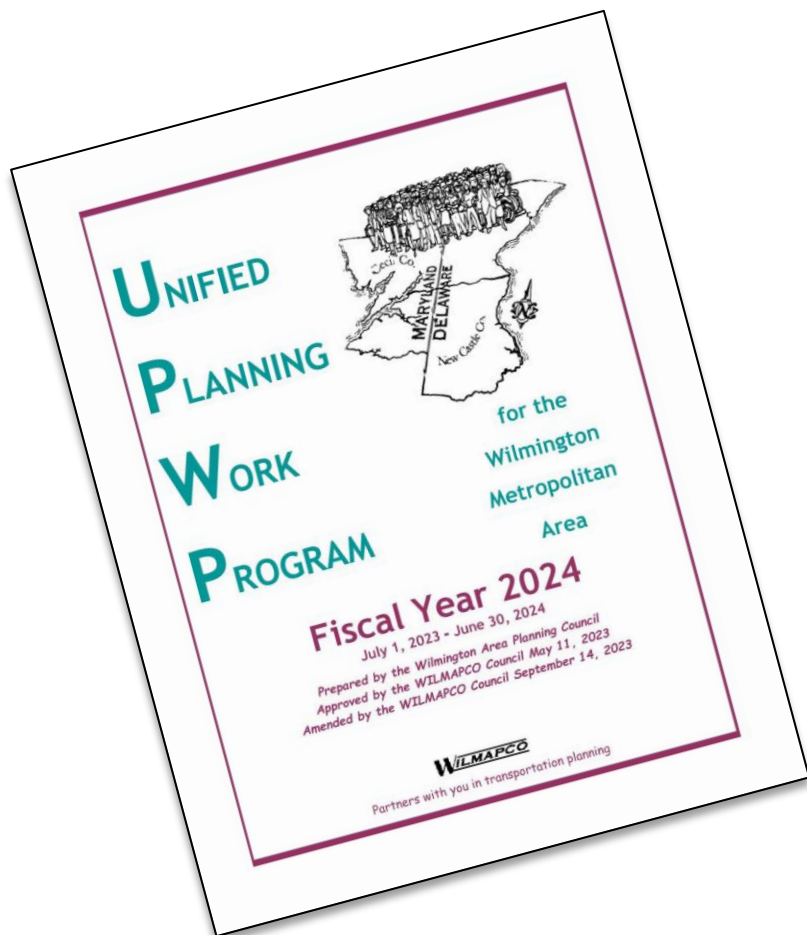


**Inside BR 1-024**

**Example pedestrian lighting in shared-use path underpass in North Carolina**



# UNIFIED PLANNING WORK PROGRAM (UPWP) FEASIBILITY STUDY



- February** • Project ideas for Staff to perform in upcoming UPWP: COMPLETE
- March** • Draft review by TAC and PAC
- April** • Draft UPWP release for 30-Day Public Comment Period
- Final draft approval by TAC and PAC
- May** • Council Approval
- Submission to DeIDOT, MDOT, FHWA, and FTA
- July** • Study Kickoff