

Lincoln Drive

Resurfacing and Restoration Project



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Project Team

Project Team Members

- City of Philadelphia
Department of Streets
- PennDOT District 6-0

Engineering Consultant Team

- Michael Baker
International
- Gilmore Associates
- KMJ Consulting
- NTM Engineering

Consulting Party Agencies

- PennDOT District 6-0
- Philadelphia Parks &
Recreation
- Friends of the Wissahickon
- Historic RittenhouseTown
- Pennsylvania Historical and
Museum Commission, Bureau
of Historic Preservation
- Federal Highway
Administration

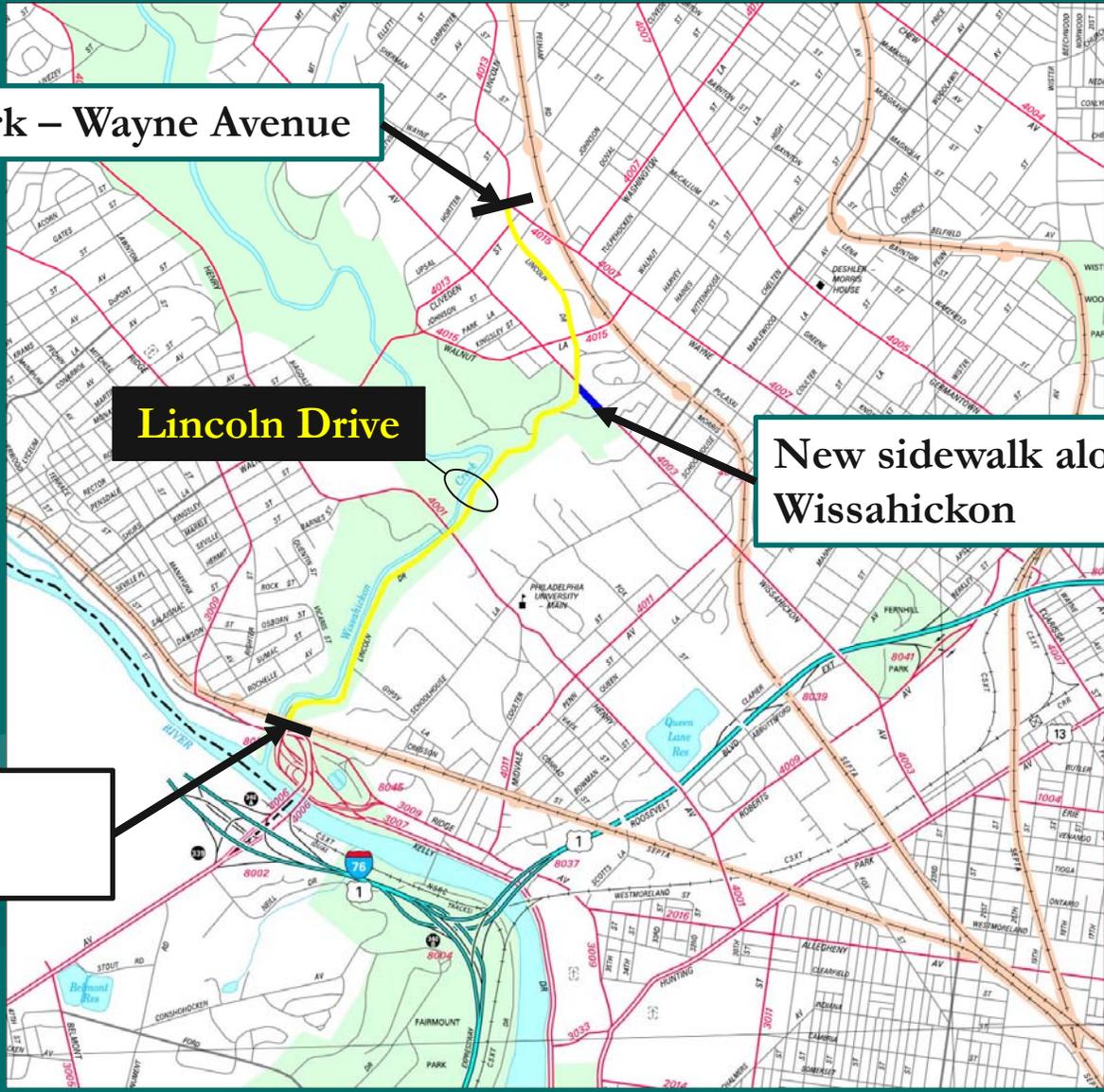
Project Location

Limit of Work – Wayne Avenue

Lincoln Drive

New sidewalk along
Wissahickon

Limit of Work –
Ridge Avenue



Lincoln Drive Construction

Lincoln Drive construction schedule will be closely coordinated with the ongoing construction for the PennDOT Walnut Lane Bridge Project

Construction on Lincoln Drive will not begin until Walnut Lane Bridge is open

Existing Conditions

- Deteriorating pavement
- Damaged guide rail and median barrier
- Old signal equipment



Deteriorating Pavement



Damaged Impact
Attenuator



Existing Traffic
Signal Equipment

Existing Conditions



Groundwater Seepage



Hillside Runoff



Rittenhousetown Retaining Wall

Project Features

- Available project funding: \$7.6 Million
- Resurfacing and pavement surface treatments
- Replacement of median and guide rail
- New pedestrian connections
- Curb realignment at select intersections
- Drainage improvements
- Traffic signal improvements
- Rittenhousetown retaining wall architectural finish

Resurfacing and Pavement Surface Treatments

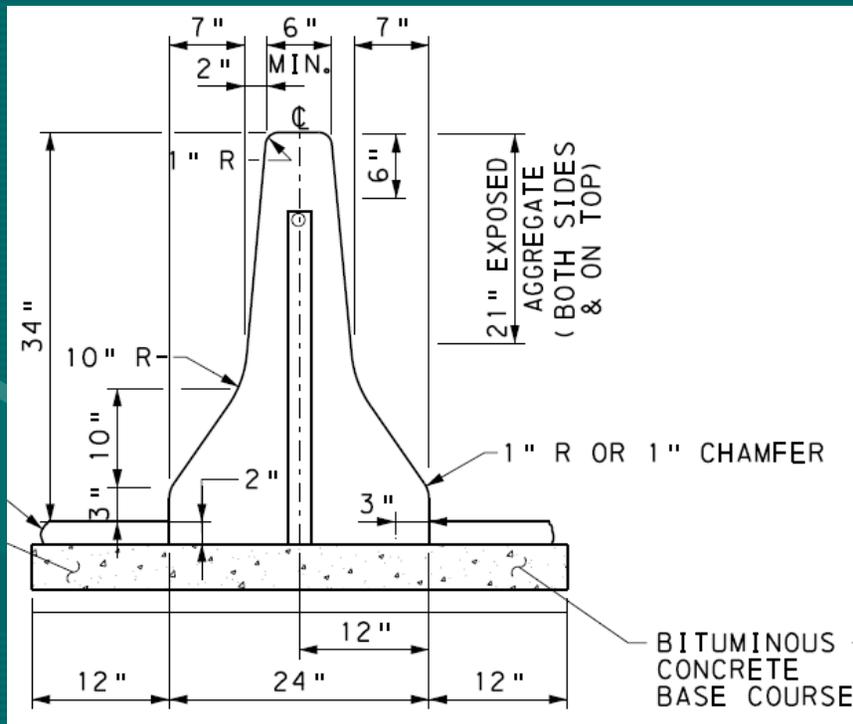
- Mill & Overlay
- Crashes mostly occurred with wet pavement conditions
- NovaChip
 - Pavement surface treatment that is used to mitigate hydroplaning
 - Used on Kelly Drive
- High Friction Surface Treatment
 - Pavement surface treatment used to increase traction (friction) along curves to improve safety



High Friction Surface
Treatment used on SR 724
in Douglasville, PA

Replacement of Median and Guide Rail

- Increase Median Barrier Height to from 30" to 34"
- Replace Guide Rail



Guide Rail to be painted National Park Service Brown as shown above

New Pedestrian Connections

- **New Bituminous Walkway** – Connection to existing sidewalk from Wissahickon Ave. to Johnson St.



- **New Sidewalk** - Wissahickon Ave. from Lincoln Drive to Rittenhouse St.



Pedestrian Improvements

- ADA Curb Ramp Improvements at all intersections
- Sidewalk bump outs at Wayne Ave., Cliveden St., and Rittenhouse St. intersections in order to shorten crosswalks.
- Pedestrian signal heads



Drainage Improvements

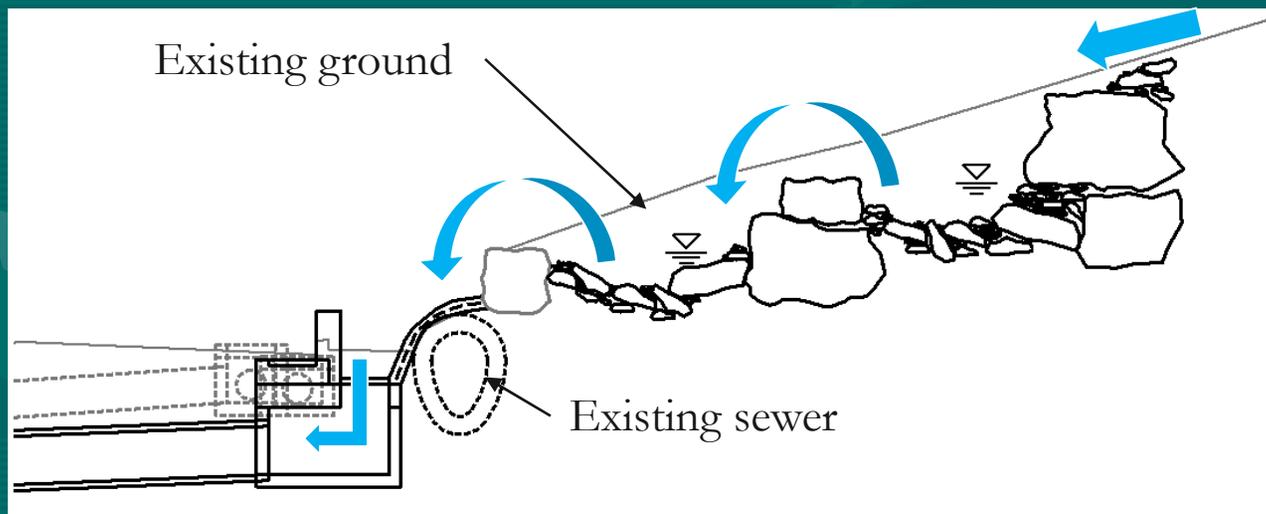
- Drainage Features
 - Runoff from hillside channeled using natural flow paths to new drainage step pools
 - Drainage pipes carry water under Lincoln Drive to Wissahickon Creek



Drainage step pool locations

Drainage Step Pools

- Designed to work with natural terrain
- As part of the environmental coordination activities, Consulting Parties agreed with drainage step pool drainage features



Traffic Signal Improvements

- Lincoln Drive and Rittenhouse Street
- Lincoln Drive and Wissahickon Avenue
- Lincoln Drive and Johnson Street
- Lincoln Drive and Cliveden Street
- Lincoln Drive and Wayne Avenue
- Rittenhouse Street and Wissahickon Avenue

Traffic Signal Improvements

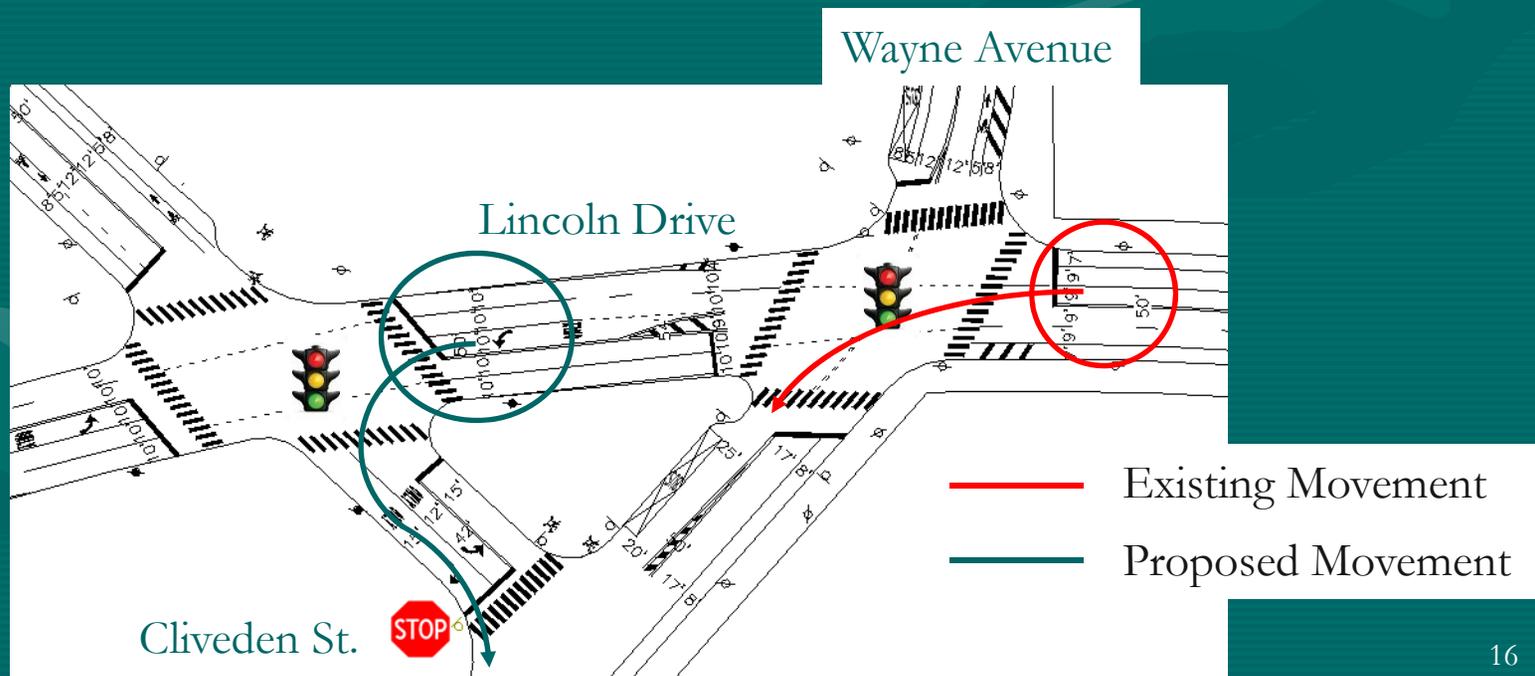
- New traffic signal poles
- New traffic signal mast arms
- New controller cabinets
- Signals timing are going to be coordinated and synchronized to manage traffic more effectively along the corridor



Typical new intersection equipment

Intersection at Lincoln Drive, Wayne Ave., and Cliveden St.

- Two intersections will be working as one system using the same signal controller
- Lincoln Drive Southbound left at Wayne Ave. moved to Cliveden St.



Multi-Use Trail Improvements

- A curb will be constructed to channelize runoff along the multi-use trail. Water will flow along the curb using the natural terrain to a drainage inlet that runs out to the creek.
- Existing drainage features will be cleaned to promote positive drainage along the multi-use trail.

Rittenhousetown Retaining Wall

- Located just north of Forbidden Drive
- 2011 Emergency Repairs
 - Concrete wall with tie-backs/bolts and pipe extensions

Original Wall



Existing Wall



Retaining Wall Architectural Finish

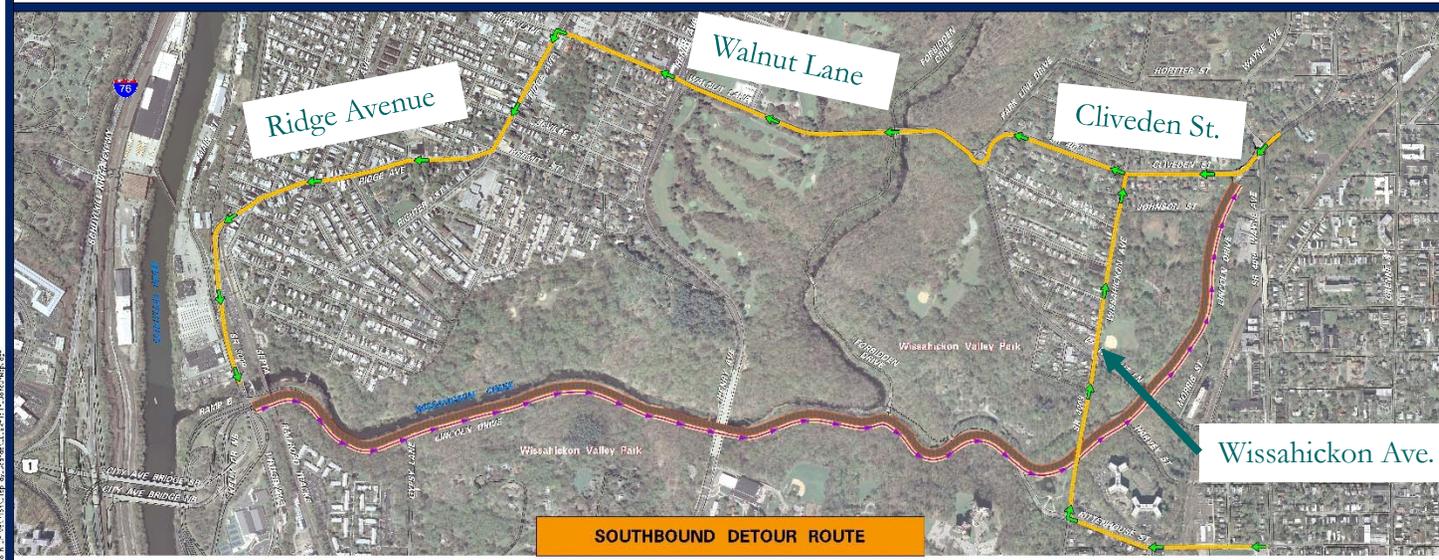
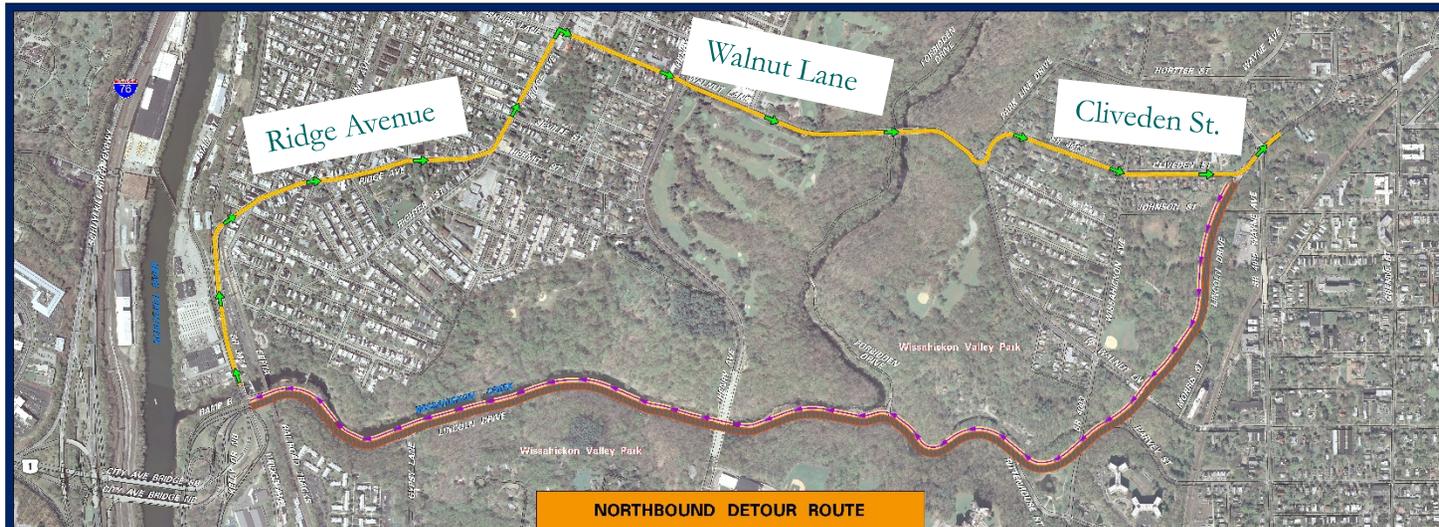
- Form-liner will be constructed to look similar to original wall
- Worked with Consulting Parties to determine the optimal finish



Construction Traffic Impacts

- **Construction on Lincoln Drive will not begin until Walnut Lane Bridge is open**
- **Night Work**
 - 9:00 PM to 6:00 AM
- **Full Nighttime Closure with Detour**
 - Detour uses Ridge Ave., Walnut Lane, and Cliveden St.
- **One Lane Northbound: Gypsy Lane to Forbidden Drive (approximately 2 months)**
- **Southbound lane closures during retaining wall construction (approximately 2 weeks)**

Detour Route



Project Schedule

- The project schedule is contingent on the opening of Walnut Lane Bridge anticipated in fall 2016
- Construction Begins: Early 2017
- Construction Ends: Early 2018

Questions?

Thank You



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PHILADELPHIA