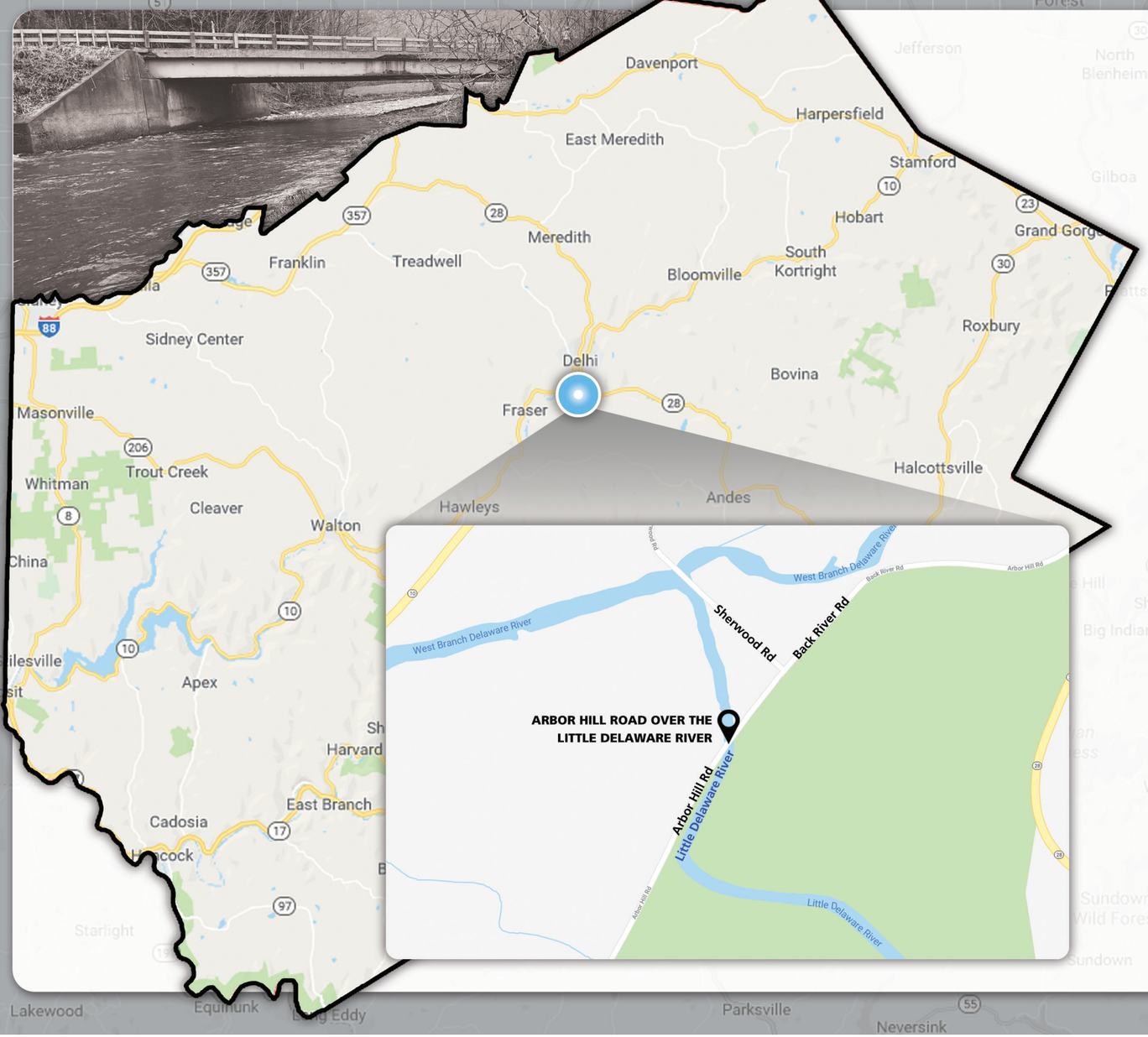
Arbor Hill Road Bridge Replacement / Rehabilitation

The Arbor Hill Road Project focuses on increasing bridge capacity for motorists and pedestrians, as well as providing bridge improvements and protections to extend service life. Both bridge replacement and bridge rehabilitation alternatives are being evaluated. Please use the Public Comment Form to direct your questions and comments to the Delaware County Department of Public Works.

DELAWARE COUNTY D.P.W.

MODJESKI and MASTERS
Delhi | NY



WHY IS THE PROJECT NEEDED?

- Existing lanes are narrow
- Railing and curb are outdated
- No shoulders on bridge for pedestrians or cyclists
- Alignment of Little Delaware River makes bridge susceptible to scour
- Steel girders are starting to deteriorate
- Bridge deck and road surface are in poor condition

PROJECT OBJECTIVES

- Address existing structural deficiencies
- Widen lanes and shoulders to improve pedestrian and bicycle safety
- Update railing
- Improve alignment of the bridge with the Little Delaware River to correct flood prone details
- Arbor Hill Road to remain open to traffic during construction to avoid a lengthy detour

FOR MORE INFORMATION...

- Please submit any QUESTIONS, COMMENTS, and CONCERNS to:
  Delaware County Department of Public Works,
  PO Box 311, 1 Page Avenue, Delhi, NY 13753
  dan.sanford@co.delaware.ny.us
- For the digital brochure and bridge design report, please visit:
  http://www.co.delaware.ny.us
  https://www.facebook.com/DelCoDPW/
- Copies of the bridge design report can be found at:
  Delhi Town Hall, 5 Elm St, Delhi, NY 13753

Arbor Hill Road Bridge Replacement / Rehabilitation

The Arbor Hill Road Project focuses on increasing bridge capacity for motorists and pedestrians, as well as providing bridge improvements and protections to extend service life. Both bridge replacement and bridge rehabilitation alternatives are being evaluated. Please use the Public Comment Form to direct your questions and comments to the Delaware County Department of Public Works.

DELAWARE COUNTY D.P.W.

MODJESKI and MASTERS
Delhi | NY

ALTERNATIVE 1, OPTION 1
Rehabilitation with a Temporary Bridge

Summary

- Temporary bridge used to maintain one lane of traffic throughout construction
- Temporary land acquisition needed for temporary bridge approach roadways
- Wider lanes and shoulders
- Updated railing, no curb
- Cost estimated to be $2,310,000

Existing

Completed Rehabilitation

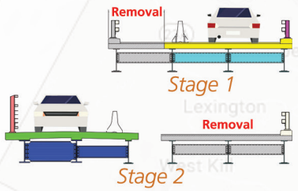
Alternative 1 involves rehabilitating the existing bridge to provide wider lanes and shoulders. To accomplish this, the roadway and bridge rails would be removed, and the existing steel beams would be repaired and painted. To make the roadway wider, two new steel beams would be installed. To support the new beams, the existing concrete bridge abutments would also need to be widened with reinforced concrete supported by steel piles. A new roadway with wider travel lanes and shoulders wide enough for bicycle and pedestrian use would then be constructed. Under this alternative, the roadway layout would not change, and neither would the alignment of the bridge with the Little Delaware River, which does not meet the project objectives. Heavy stone streambank protection would be installed during the rehabilitation to mitigate the existing condition.

Option 1 of the rehabilitation alternative includes the installation of a temporary bridge west of the existing bridge. The temporary bridge would provide one lane of traffic, which would alternate using a temporary traffic light, to maintain use of Arbor Hill Road during construction.

ALTERNATIVE 1, OPTION 2
Rehabilitation with Staged Construction

Summary

- Staged construction used to maintain one lane of traffic throughout construction
- Longer construction duration (approx. 2 - 3 months)
- Wider lanes and shoulders
- Updated railing, no curb
- Cost estimate to be $2,530,000



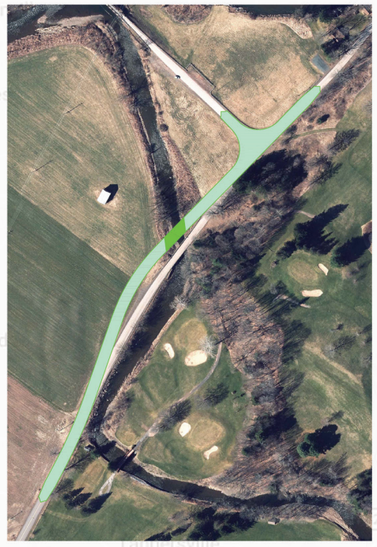
Stage 1

Stage 2

Completed Rehabilitation

The Rehabilitation Alternative has a second option; instead of installing a temporary bridge, traffic will be maintained through staged construction. As with Option 1, the existing abutments would be widened with reinforced concrete supported by steel piles. After making the abutments wider, the existing steel beams would be repaired and two new steel beams would be installed, so the wider roadway can be constructed. The alignment of the bridge with the Little Delaware River would not change, which does not meet the project objectives. Heavy stone streambank protection would be installed during the rehabilitation to mitigate the existing condition.

To maintain traffic, Option 2 has the bridge constructed in stages. In the first stage, half of the existing bridge would remain in place to be used by traffic, while the other half is repaired. When the repairs are done, traffic will be moved to the rehabilitated half of the bridge, and the existing half will be repaired. Under this option, there is no cost to install a temporary bridge, however, construction will take longer and staged construction is more costly. As a result, the cost of this option is more than the first option.



ALTERNATIVE 2
Replacement

Summary

- Existing bridge open throughout construction (two lanes of traffic throughout)
- Permanent land acquisitions required for realignment of roadway
- Wider lanes and shoulders
- Updated railing, no curb
- Improved alignment of the bridge with the stream channel
- Cost estimated to be $3,050,000

Existing

Completed Replacement

TThe second alternative is the replacement of the Arbor Hill Road Bridge. A new bridge would be constructed west (downstream) of the existing bridge. The updated location would improve the alignment of the bridge with the Little Delaware River and heavy stone streambank protection would be installed in front of the new abutments. The new bridge would have wider lanes and shoulders, and standard railing. The new bridge is located downstream of the existing bridge, so both lanes of the existing bridge would remain open to traffic throughout construction.

Preferred Alternative

- Only design that meets all project objectives
- Wider deck, shoulders, and updated railing improve vehicle and pedestrian safety
- Steel girders would be galvanized to extend lifespan and reduce maintenance.
- Allows for two lanes of traffic to be open throughout construction, minimizing the effects of construction on the surrounding community
- While hydraulic performance at the bridge will improve, Arbor Hill Road will not be raised and, therefore will still be overtopped during extreme flood events, similar to the existing condition.