



COLUMBIA-WRIGHTSVILLE BRIDGE REHABILITATION PROJECT

VETERANS MEMORIAL BRIDGE OVER THE SUSQUEHANNA RIVER

PROJECT DESIGN CONSIDERATIONS

REGIONAL IMPACTS

- PA 462 is an incident management route (Green Detour US 30)
- 435-mile long Bicycle PA Route S uses PA 462
- Community emergency services resources are shared
- Some school bus and Rabbit Transit routes cross the bridge
- Norfolk Southern Railroad Crossings
- Amtrak power transmission lines
- Several utilities are attached to the bridge
- Use of US 30 as primary detour requires secondary incident management plans in case of its closure



ENVIRONMENTAL IMPACTS

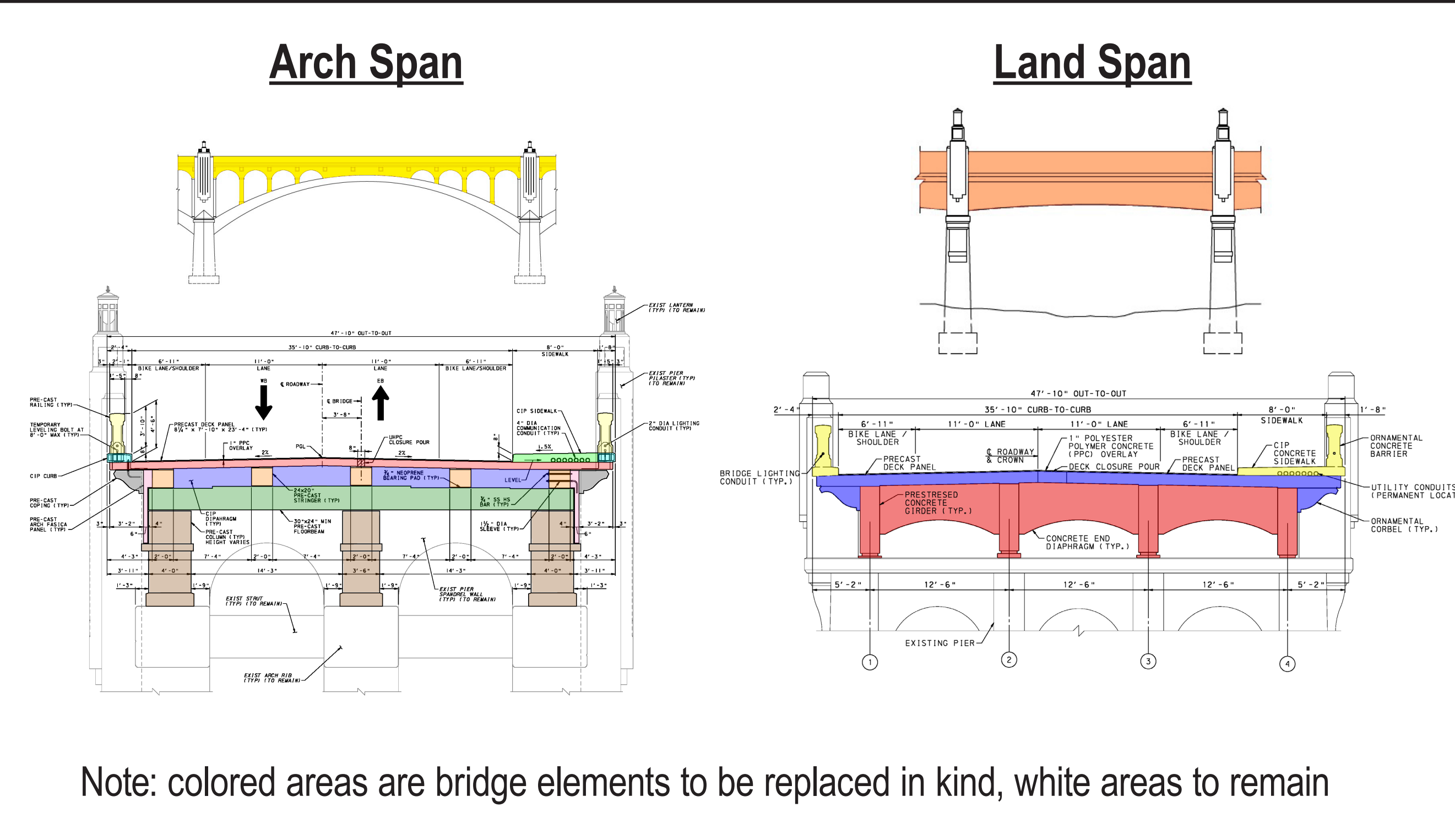
- Preserve historical integrity of the bridge
- Minimize impacts to Threatened and Endangered Species
- Preserve Historic Districts and archaeological sites
- Avoid burdens to environmental justice communities
- Protect the Susquehanna River, its water trail, and wetlands
- Protect adjacent parks
- Other cultural and natural resources

COST AND SCHEDULE

- Design a cost effective solution to build in a short-term but last long-term with minimal future maintenance
- Support the local business economy by minimizing the bridge closure timeframe (currently 3+ years) within the overall construction schedule (currently 5+ years)
- The volume of materials to remove and build back has increased from prior scope of work. Creative techniques to help constructability will reduce schedule as much as practical.

CONSTRUCTABILITY

- Minimize traffic impacts by reconstructing river spans through a hybrid approach of using river causeways and gantry crane system to expedite reopening bridge up to all traffic after 3+/- years of closure
- Bridge closure to all traffic modes achieves greatest degree of safety, efficiency, and construction quality
- An 8'-wide sidewalk and 5'-buffered bike lanes were determined important for daily bike/pedestrian use post construction
- Need ability to maintain utilities on bridge, Norfolk Southern below and Amtrak above aerial lines
- River spans - rehabilitation includes replacing the deck, barrier, beams and columns, with arches and piers to remain
- Land spans - deck, barrier and beam removal. Piers to remain. Other bridge or decorative element repairs as needed for preservation.



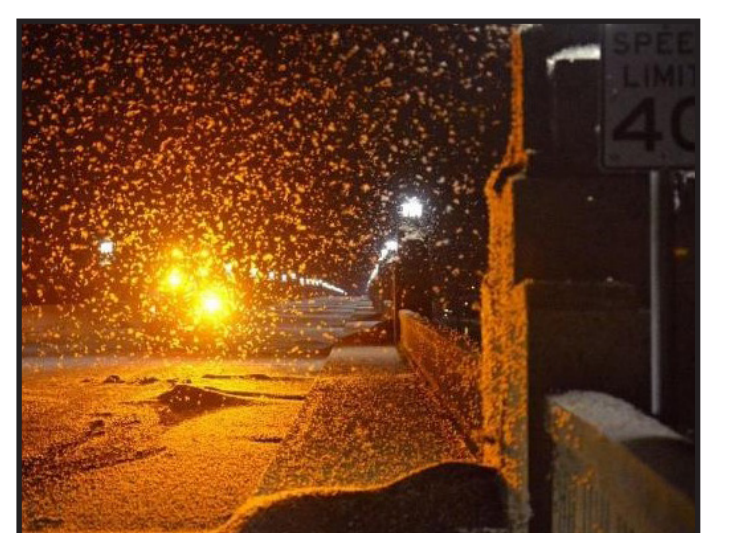
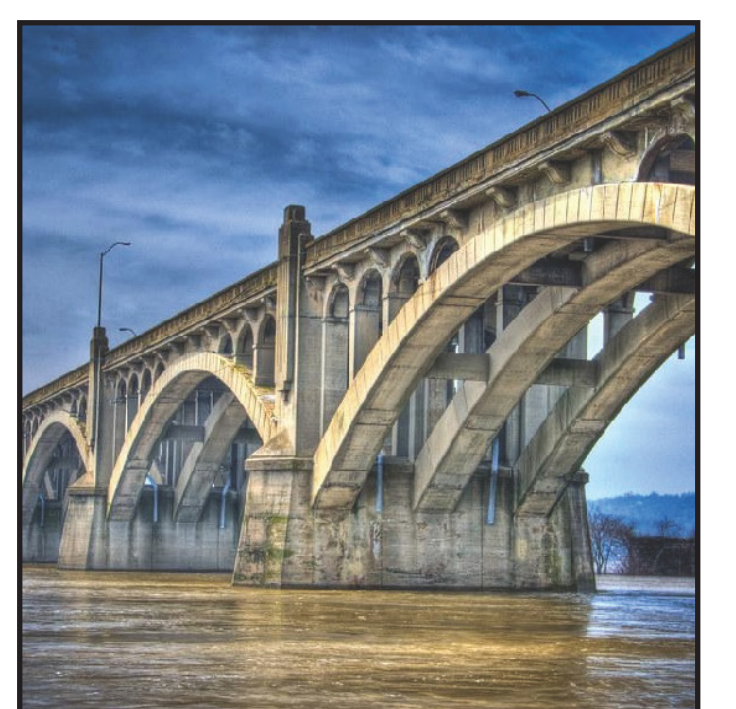
MAINTENANCE

- An 8' sidewalk works well for the snow removal process
- Access panels to maintain utilities and lighting are evenly spaced within the sidewalk
- Extensive bridge rehabilitation improves service life to 75 years and reduces maintenance needs



IMPROVEMENTS

- Functional areas created:
 - 5' delineated bike lanes with 2' buffer
 - Sidewalk widened from 6' to 8' to accommodate mixed use
 - 11' lanes (narrowed from 19' existing)
- New, safer barrier while replicating architectural details
 - Meets bike safety height (54")
 - Meets current crash width (12" min) and height standards
- Bridge above deck lighting modified to reduce annual mayfly safety issues
- Bike/pedestrian connection to Wrightsville's Riverfront Park and Mason-Dixon Trail
- Bike/pedestrian connection to Columbia's River Park and Northwest River Trail
- Utilities consolidated and hidden under sidewalk to enhance the bridge's historic integrity
- Landscaped roundabout improvement at Wrightsville SR 462/SR 624/2nd Street intersection during bridge closure along with adding traffic calming features at the Columbia SR 462/2nd Street Intersection



HISTORICAL CONTEXT

- The 1930-built bridge is a unique historic gem connecting the river towns
- PA 462 bridge posted for 10 ton weight restriction in July 2023 requiring trucks to currently detour.
- Interim bridge repairs are ongoing and frequent inspections occurring to monitor bridge conditions. Potential of future inspections requiring interim bridge closure to all traffic.
- Completion of major bridge rehabilitation will remove all traffic restrictions

CONSTRUCTION IMPACTS

- Maintaining traffic for vehicles, trail users, railroad, and water trails:
 - N. Front St. (SR 441) and S. Front St. (SR 624)
 - Norfolk Southern Railroad
 - Susquehanna River waterway and Water Trail
 - PA Bicycle Route S
 - Northwest Lancaster County River Trail
 - Mason-Dixon Trail
- Right-of-Way and other use issues
 - Parking and access
 - Construction easements
 - Utility relocations/Amtrak power lines
- Emergency services coordination
 - PA 462 Bridge closure
 - US 30 Incident management

