

# CR 571 (Washington Rd) Bridge over D&R Canal Bridge Replacement

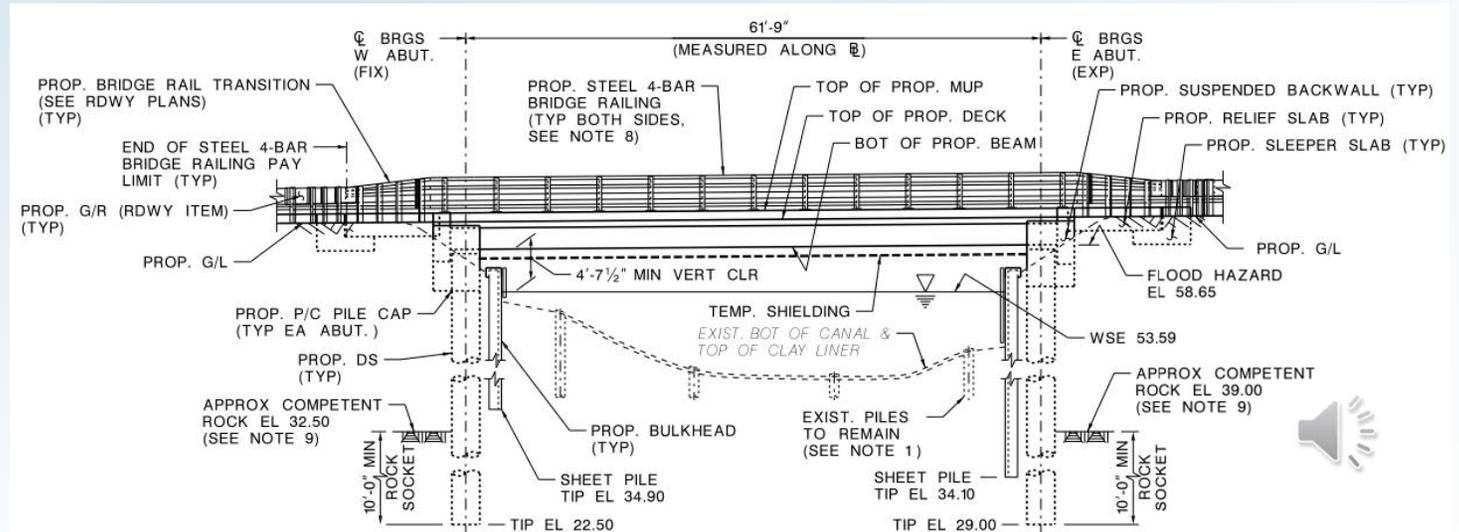
## Construction Public Information Center

August 2023



# Project Status & Schedule

- Traffic detour established night of July 26th.
- Initial demolition and excavation activities beginning.
- Precast concrete and material procurement is ongoing and under review for approval.
- Estimated date to restore traffic is fall 2023.
- Additional work items to be complete by Spring of 2024.



# Detour (EB/SB Route)



# Detour (WB/NB Route)



# Purpose & Need

- Bridge is classified as structurally deficient and carries a heavily used corridor.
- East Abutment destabilized, currently being temporarily supported (shown) to maintain traffic.
- NJDOT monitoring movement regularly with special inspections every month
- The bridge was scheduled to be replaced in 3 years, but due to deterioration of the structure, the project was advanced to Final Design as a priority.

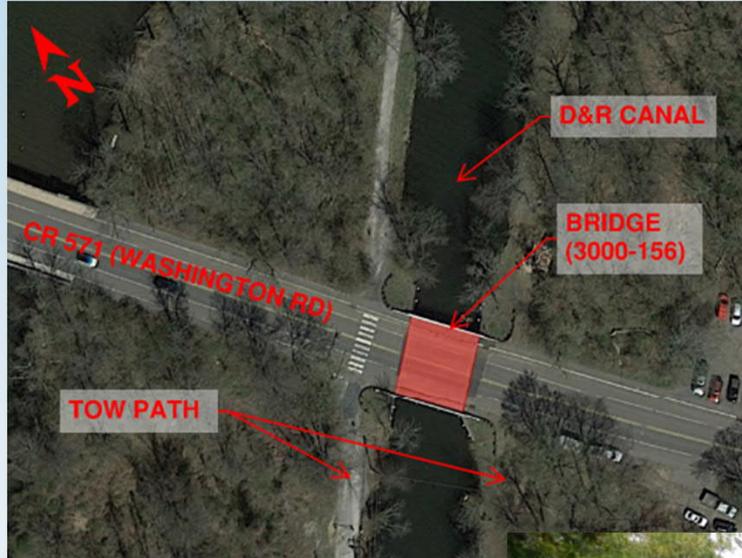
South Elevation



# Purpose & Need

## Existing Conditions

- Construction/Widened Date: 1954 / 1996
- Span Length: (3) 15'-0" +/- spans; 45'-0" +/- total
- Superstructure Type: Composite Concrete & Timber, approx. 10° skew
- Substructure Type: Timber Pile Bents & Bulkheads at Abutments



Project Site

West Approach of CR 571  
at Tow Path Crossing



# Purpose & Need Existing Conditions

Movement noted at  
east abutment  
(July 2022)

Movement at East Abutment



Pile Splitting at East  
Abutment



Roadway Settlement at East  
Abutment



# Temporary Support Installation

Temporary Support Installation



Shoring Installed in August 2022

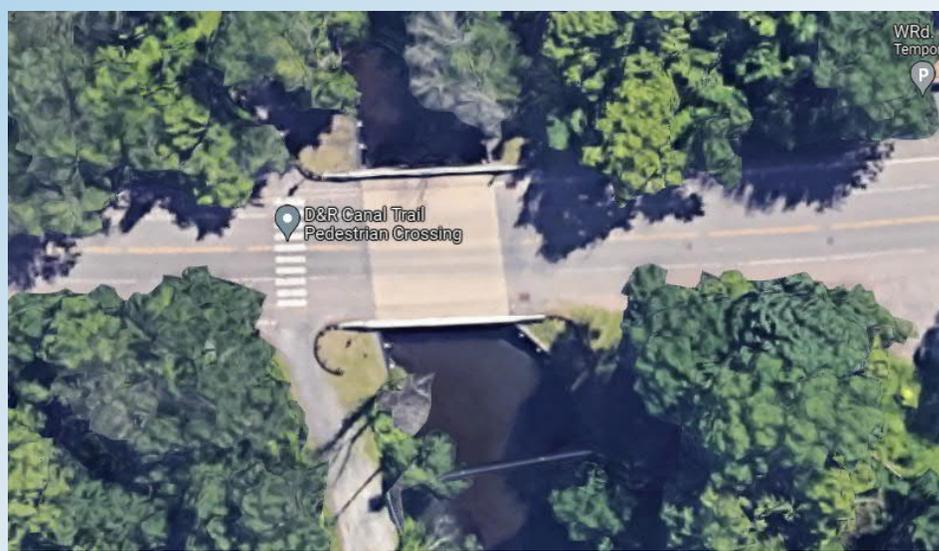


Pier Bracing Installed (reduces clearances)



# Site Constraints

Towpaths



Towpath present at all corners of bridge

Pedestrian Crossing with Beacon at West side of Bridge (note overhead utilities)



# Site Constraints

Under-Bridge Utilities



Existing Utility Banks on South side of Structure

Existing Gas Main on North side of Structure



Sunoco pressurized line crossing east approach



# Design Considerations

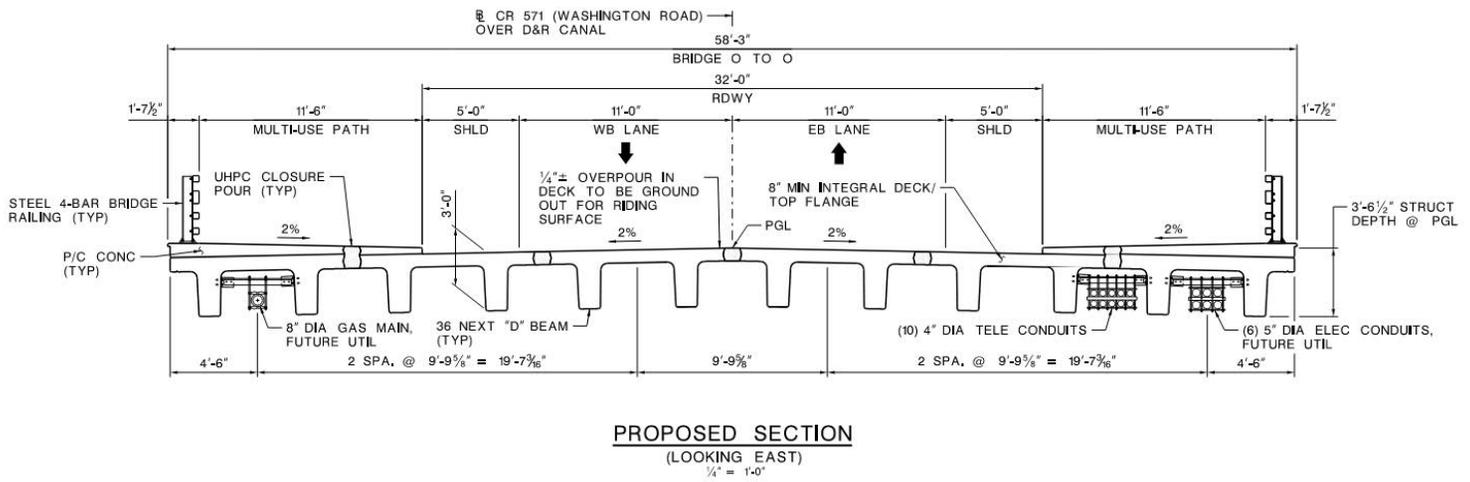
Stakeholder Coordination & Approvals



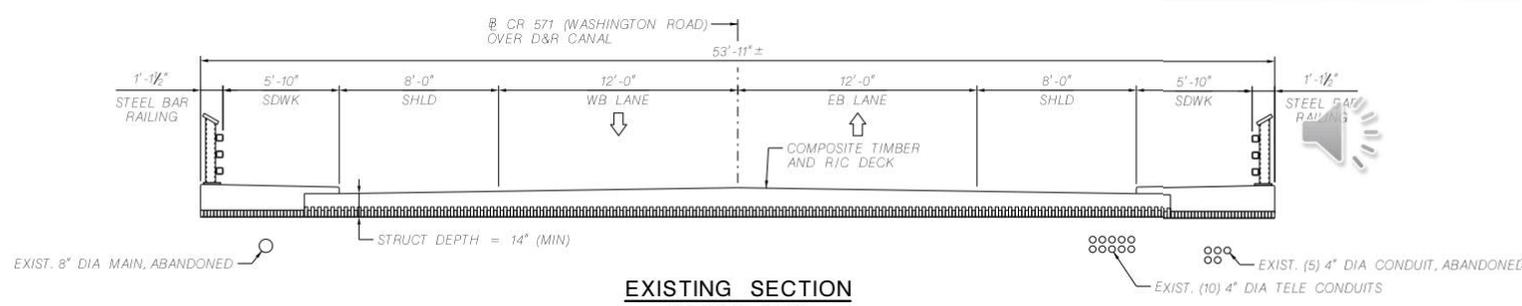
| Stakeholder                   | Needs/Requirements                                                                                                                                                                                                                                             |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Princeton University          | <ul style="list-style-type: none"><li>- Walkways compatible with future development</li><li>- Minimize impacts to fall semester</li></ul>                                                                                                                      |
| Mercer County                 | <ul style="list-style-type: none"><li>- Traffic calming<ul style="list-style-type: none"><li>- 11'-0" Lane width</li><li>- Limit shoulder width</li></ul></li><li>- Detour Considerations (with municipality of Princeton and West Windsor Township)</li></ul> |
| D&R Canal Commission (DRCC)   | <ul style="list-style-type: none"><li>- Bridge Railing &amp; guiderail transition</li><li>- Timber Façade</li><li>- 3'-0" freeboard</li><li>- Protect Canal clay liner</li></ul>                                                                               |
| Historic Preservation (NJHPO) | <ul style="list-style-type: none"><li>- Limit Bridge width, Archeologically sensitive area</li></ul>                                                                                                                                                           |
| NJDEP                         | <ul style="list-style-type: none"><li>- Limit Impacts</li><li>- Interpretive Signage</li></ul>                                                                                                                                                                 |
| Verizon                       | <ul style="list-style-type: none"><li>- Maintain Fiber-Optic utility throughout construction</li></ul>                                                                                                                                                         |



# Proposed Design



- ❑ Next Type-D Beams - minimize structure depth
- ❑ Stainless Rebar for Superstructure and Galvanized for Substructure
- ❑ Minimized lane and shoulder width for traffic calming
- ❑ Maximized multi-use path width each side
- ❑ Accelerated Design/Permitting Schedule (5 months compared to a typical three-year duration)

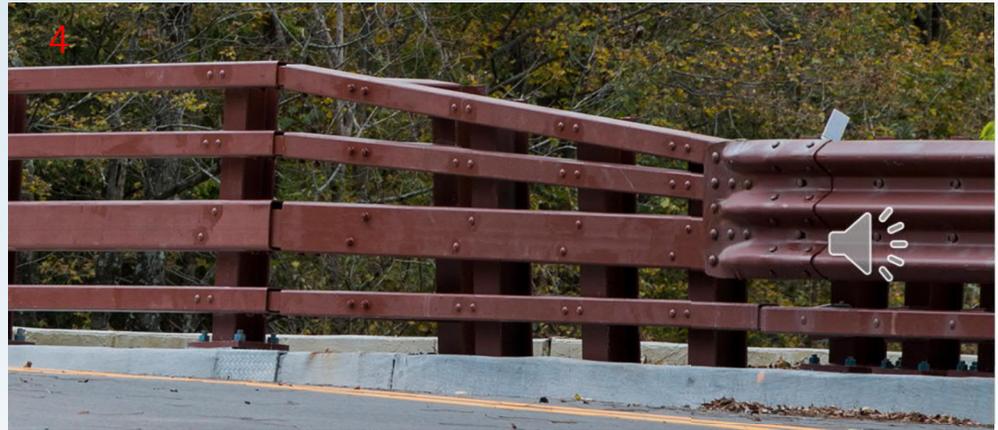
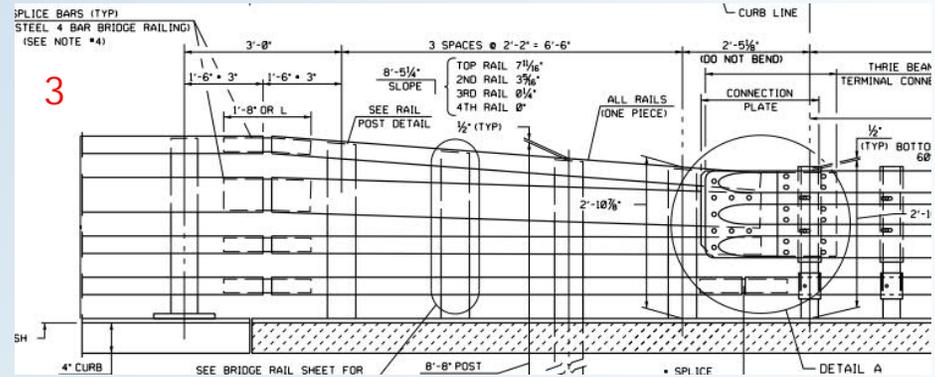


# Site Constraints

## Guiderail/Towpath Accommodations



1. 518 over D&R - Rocky Hill, undesirable by agencies
2. Pylon requirements per latest standards
3. Details for special design
4. Sample installation - NHDOT details



# Bridge Aesthetics

Alexander Rd. over  
D&R Canal



- Timber Façade on exposed concrete surfaces
- Concrete stain on precast concrete beams
- Slope treatment within canal per DRCC guidelines



## Key Contact:

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