Mixmaster Rehabilitation
NEWSLETTER

January 2022

this issue

Project Status

Route 8 Northbound (Bridge 3190A):

- The new bridge was opened to traffic on 11/1/21, including Exit #33 off-ramp. The Exit #30 on-ramp and the Exit #31 and #32 off-ramps remain closed.
- Final line striping completed.
- Preformed joints completed at all piers.
- Illumination cable and new light poles completed.
- Installation of overhead sign structure #20554 completed. Temporary signage installed until permanent overhead sign structure #20555, 20556 and 20792 could be installed.
- Demo and reconstruction of wingwall 1B in progress.
- Structural steel repairs continued.
- Structural steel painting continued into November before halting due to weather.
- Class S Concrete sub-structure repairs continued.
- Began installation of the fiberglass bridge drainage.

Route 8 Southbound (Bridge 3190B):

- The new bridge was fully opened to traffic on 10/7/21.
- Final line striping completed.
- Preformed joints completed at all piers.
- Structural steel repairs continued.
- Structural steel painting continued into November before halting due to weather.
- Class S Concrete sub-structure repairs continued.
- Illumination cable and light pole installation completed.
- Began installation of the fiberglass bridge drainage.

I-84 Eastbound (Bridge 3191A):

- Deck End reconstruction continued at several piers in the right shoulder and right lane.
- The Highland Ave on ramp and Exit #21 off ramp remain closed.
- Full and Partial Depth patching completed in right shoulder and right auxiliary lane between the Highland Ave on ramp and the Exit #21 off ramp.
- Membrane waterproofing applied to deck in right shoulder from the Highland Ave on ramp to Pier#12, Pier#12 to Pier#24 and in the right shoulder/right auxiliary lane from Pier#24 to Pier#34.
- Placed final pavement in the right shoulder/right auxiliary lane from Pier#24 to Pier#34.
- Parapet cap forming and concrete placement continued.

Project Status (Continued….)

- Existing Overhead Sign Support #20419 has been removed. Right shoulder parapet modifications for new support have begun.
- A portion of the temporary moveable barrier was removed from the right shoulder between Abutment#1 and Pier#4.
- Structural steel repairs continued.
- Structural steel painting continued into November before halting due to weather.
- Class S Concrete sub-structure repairs continued.
- Illumination cable installation in progress.
- Began installation of the fiberglass bridge drainage.

I-84 Westbound (Bridge 3191B):

- The right side Bank St. on-ramp and the right auxiliary lane was re-opened in November.
- Majority of the deck slab has been milled, patched, membraned and temporary/final paved with exception to portion of the center lane between the eastern abutment and Pier#32.
- Complete the left side parapet modifications for Overhead Sign Support #20441.
- Structural steel repairs continued into November before halting due to weather.
- Class S Concrete sub-structure repairs continued.
- Structural steel painting continued.
- Began installation of the fiberglass bridge drainage.

Route 8 Northbound to I-84 Eastbound (Bridge 3190C):

- Exit #31 ramp remains closed.
- Work to replace existing bearings continued.
- Work to install permanent restraints continued.
- Structural steel repairs continued.
- Structural steel painting continued into November before halting due to weather.
- Class S Concrete sub-structure repairs continued.

I-84 Westbound to Route 8 Southbound (Bridge 3190D):

- Structural steel repairs continued.
- Structural steel painting continued. into November before halting due to weather.
- Work to replace existing bearings continued.
- Work to install permanent restraints continued.
- Class S Concrete sub-structure repairs continued.

Route 8 Northbound (Bridge 3190E):

- Exit #32 ramp remains closed.
- Structural steel repairs continued.
- Structural steel painting continued into November before halting due to weather.
- Class S Concrete sub-structure repairs continued.

Route 8 Northbound (Bridge 3190F):

- Exit #33 ramp re-opened on 11/1/21.
- Final paving completed at the trailing end where this bridge ties into 84WB.
- Illumination cable installation completed.
- Structural steel repairs continued.
- Structural steel painting continued into November before halting due to weather.
- Class S Concrete sub-structure repairs continued.
- kment has begun between Temporary Bridge #1 and Temporary Bridge #3.

Bridge 3190F

Project Status (Continued….)

Route 8 Southbound to I-84 Eastbound (Bridge 3191D):

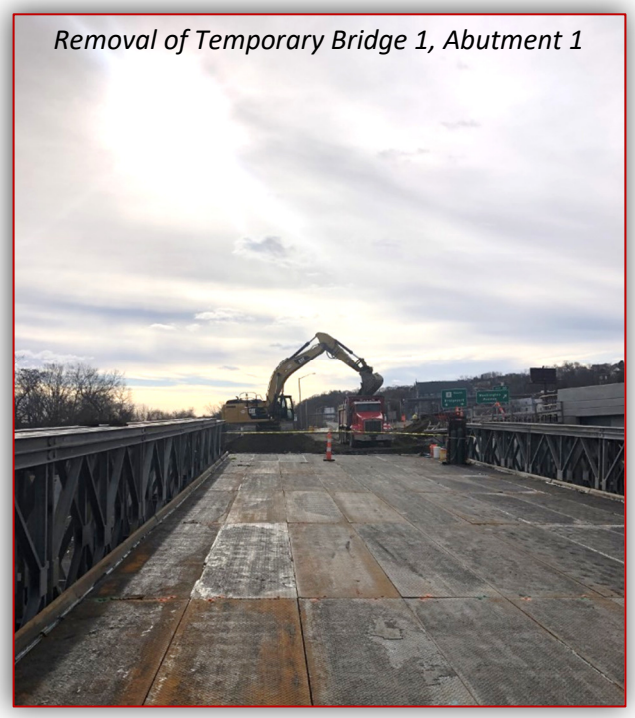
- Ramp remains in Stage 2 traffic configuration.
- Class S Concrete sub-structure repairs continued.
- Structural steel repairs continued.
- Structural steel painting continued into November before halting due to weather.

I-84 Westbound to Route 8 Northbound (Bridge 3191E):

- Ramp realigned into Stage 2 traffic configuration.
- Began parapet modifications and parapet cap for Stage 2.
- Illumination cable installation continued.
- Structural steel repairs continued.
- Class S Concrete sub-structure repairs continued.

Temporary Route 8 Northbound Bypass:

- The Temporary Bypass was taken out of service on 11/1/21 with exception of the Temporary U-Turn which remains in use.
- Temporary Bridge #1 over the Naugatuck River is being disassembled and prepared for de-launching.
- Activity has yet to begin to remove Temporary Bridge #2 over the Naugatuck River.
- Temporary Bridge #3 over Freight St. was de-launched with a weekend closure of Freight St on 12/3/21 and 12/4/21. This temporary bridge has been completely disassembled and removed off site.
- Excavation and removal of the Temporary Bypass asphalt and earth embankment has begun between Temporary Bridge #1 and Temporary Bridge #3.



Removal of Temporary Bridge 1, Abutment 1

Removal of Temporary Bridge 3

The Temporary Bypass of Route 8 Northbound

The ¾ mile long temporary bypass (bypass) of Route 8 Northbound, originally established on August 24, 2019, was utilized to carry traffic around the impending rehabilitation work of Route 8 Northbound. Having this temporary roadway allowed work to progress while limiting the impacts of highway construction to the traveling public.

Dense population and the proximity of historic sites, the Naugatuck River, railways and other active roadways were hurdles that had to be considered during the design. As a result, the bypass not only included the re-grading of the existing soil and a new asphalt riding surface, but three temporary bridges. Two bridges carried traffic over the Naugatuck River while the third was created to carry traffic over Freight Street.

Constructing the bypass had its many challenges given the steep slopes, adjacent waterway, and environmentally sensitive work areas. Before the bridges could be erected, one-hundred-ton cranes were mobilized to build work trestles in the river. Supported by steel pipe piles driven over 60ft to bedrock, trestles were built to stage materials and equipment necessary to successfully construct the temporary bridges.

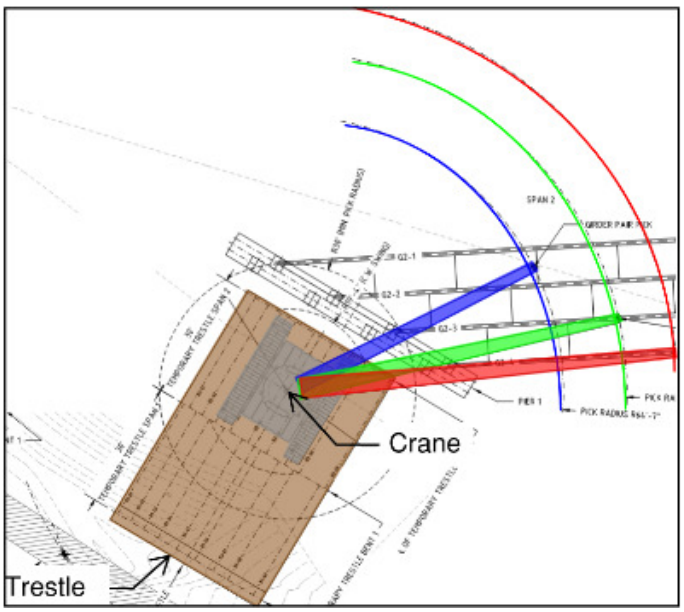
The main objectives with the temporary bridges were to keep them simple to save cost, reduce construction time, and reduce demolition time. In doing so, impacts to the Naugatuck River were minimized to the greatest extent possible.

The bridges were designed to support HL-93 and CONNDOT P160 vehicle live loads, or approximately 72,000 lb loads spread over a series of axles.

The steel bridges were assembled on-site and then launched (pushed or dragged) into place. This process required a series of rollers atop temporary columns and, once aligned properly, the bridges were hydraulically jacked or push/pulled onto position using standard construction equipment (bulldozer or excavator).

With the rehabilitation of Route 8 Northbound complete and reopened to traffic on October 31st, removal of the temporary bypass began. Structure removal is following the same procedure in reverse order. The bridges are unsecured from their foundations and pulled off the existing supports through the use of rollers, disassembled, and will be taken off-site. The piles that were driven to bedrock to support the structures were "sacrificial" and will be cut-off 12" below mud line. In doing so, disturbance to the river bottom is again minimized. The bituminous riding surface and thousands of yards of borrow (soil) necessary to create the travelway alignment will be trucked off site and the surfaces restored, including restoration of Riverside Street.

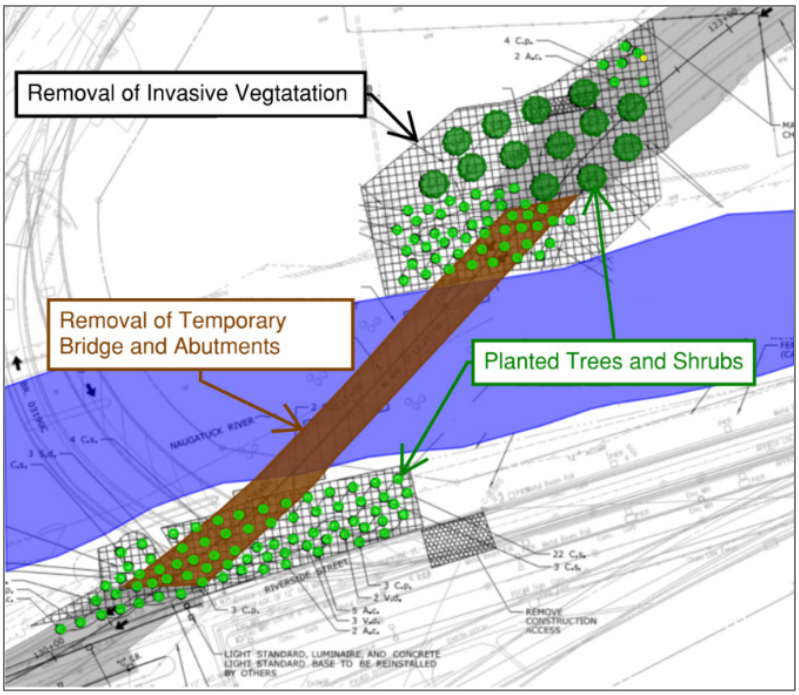
Prior to removing the exposed section of pipe pile, the pile will be filled with crushed stone to within a few feet of the river bottom. A can opener like device will be lowered into the pipe to the depth required to perform the cut-off. Once cut, a crane will lift the detached length of pile out of the river.

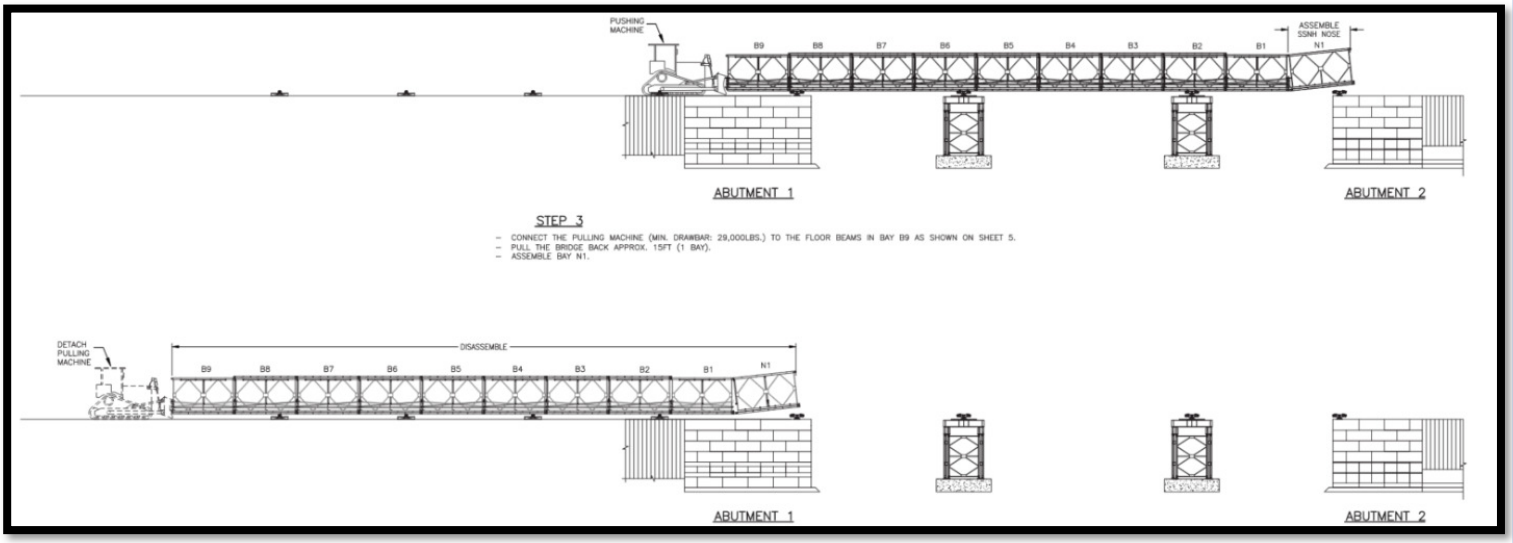


The Temporary Bypass of Route 8 Northbound, Continued

As we vacate the site, there are a few items of interest to note. During the 2-year period the bypass safely hosted over 34 million vehicle trips. With use of the site, the State made efforts to contain and remove some of the soil laden contaminants and invasive species. Additionally, new planting will be installed along the river and an improved fish environment will be established.

During the 2022 construction season, Riverside Street will be restored to its original boulevard-like four (4) lane configuration and safety improvements will be made for pedestrian access through the area.





Project Photos

Membrane Primer
Bridge 3191A

Membrane Application
Bridge 3191A

Deck Patching
Bridge 3191A

Parapet Reconstruction
Bridge 3191A

Project Team Update

Kenneth Fargnoli, PE, CCM
Resident Engineer

Ken Fargnoli is a well-known guiding force in the transportation industry that has gained a significant following during his 40+ years. Ken has most recently served as Resident Engineer on the Route 8 / I-84 Mixmaster Rehabilitation project representing GM2 Associates, Inc., the projects' construction engineering and inspection firm. He has been a mentor to many within the industry as he has an inborn willingness and commitment to share the expertise he has gained throughout his career. Those that work directly with Ken benefit from his selfless nature.

Ken has accumulated many accomplishments throughout his years in the industry specializing in construction administration. Prior to his employment with GM2, Ken worked for the Connecticut Department of Transportation (CTDOT) for over 35 years.

Over the course of his career, Ken has earned numerous awards stemming from leadership, professional excellence and most recently CMAA CT Chapters' 2021 Person of the Year of which will end his career on a high note.

Ken is a visionary and has impacted so many people not only in his professional life but in his personal life. He has volunteered much of his personal time to Hope for Haiti – an organization that works to reduce poverty in Haiti – being a mentor, teacher and counselor to many of the Haitian children.

Ken will retire at the end of April and will hand over the daily reigns to the current Assistant Resident Engineer, Jim Pelletier.

Please join us in wishing Ken the best in his retirement!

James Pelletier, PE
Assistant Resident Engineer

Jim Pelletier had a 30 year career with CTDOT that has provided him with tremendous insight, knowledge and experience in construction engineering and inspection. Jim has most recently functioned as the Assistant Resident Engineer on the Route 8/I-84 Mixmaster Rehabilitation. Working directly with Ken and the District since the project onset, Jim has provided the project with unencumbered guidance and the utmost character in every aspect of his work. His relentless mentoring nature has provided GM2's younger construction inspection staff with tremendous insight and development for future success. Jim will assume the role of Resident Engineer seamlessly and is extremely excited to contribute to the project in his new role.

Together, with James Therrien, Jr. who assumes Jim's place as Assistant Resident Engineer, the duo will provide guidance and complete oversight of all project activities moving forward. Jim and James bring a past working relationship into the mix having worked together at CTDOT for 10 years. Their relationship, managerial style and project specific experience will allow a seamless leadership transition. Their communication and relationships with all project team members will be a great asset in helping guide the project to a successful completion.

Please join us in welcoming Jim and James in their new roles!