

# Preliminary Engineering Report



ENGINEERS

PLANNERS

SURVEYORS

Date: March 12, 2021

To: David O'Brien  
Hampton Town Supervisor  
Chair, Warren-Washington County IDA  
Chair, Lake Champlain Lake George Regional Planning Board

From: Luke Thompson, PE  
Creighton Manning Engineering, LLP

Project: **Lock 8 Way Bridge over Old Feeder Canal – Bridge Replacement; Town of Fort Edward; Washington County, NY; CM# 120-291**

Re: **Preliminary Engineering Report**

## 1. Introduction and Background

The purpose of this Preliminary Engineering Report is to document what, if any, components of the existing bridge can be maintained or reused, and if necessary, recommend new bridge components to allow for long-term operation of the bridge in accordance with current New York State Department of Transportation (NYSDOT) and American Association of State Highway and Transportation Officials (AASHTO) standards. Long-term operation of the bridge will allow vehicular access to the Canalside Energy Park industrial site located directly south of the bridge, which as described in the ED-900, is in a designated Opportunity Zone and provides a major opportunity for economic growth by creating manufacturing jobs in the region. The Energy Park had been abandoned by previous industrial employers, but is still fully equipped to operate, provided that access to the site via the bridge is maintained. This report will summarize the scope of work for the above referenced project, document the existing conditions and environmental concerns, estimate the cost and timeline for the anticipated work, and provide preliminary engineering analyses of alternatives for modifications needed to allow safe continued operation of the bridge. The project components described in this report are consistent with the EDA investment project description provided in Section B.2 of Form ED-900.

## 2. Existing Conditions

The existing structure is a Mabey Truss bridge located at the north end of Lock 8 Way in Kingsbury, NY. The Canalside Energy Park is located in the Town of Fort Edward south of the bridge. Previous investigation and records suggest that the bridge and surrounding roadway were constructed in 2007 to provide access to a dewatering facility located at the Canalside Energy Park during the General Electric Hudson River Dredging project. The facility has since been decommissioned, but the site is slated for future industrial redevelopment and the bridge crossing will be utilized to provide future access.

The existing bridge has one 95.55 ft. span, with two 12 ft. travel lanes, each with a 3 ft. shoulder for total roadway width of 30 ft. Concrete barriers bound each shoulder with galvanized steel trusses outside for a total out-to-out width of approximately 43'-7". The bridge bears on concrete abutments supported by driven steel H-piles. Record drawings of the bridge indicate that it was designed for two lanes of traffic and HS25-44 loading per AASHTO Standard Specifications for Highway Bridges, 17<sup>th</sup> Ed. The bridge is classified as "temporary" and has not been properly rated for permanent use. The bridge manufacturer indicated that with proper maintenance and assuming the intended design load is followed, the bridge would have an expected minimum life span of 25 years from the date of construction. The bridge remains open and serving two-way traffic to present date.

### 3. Site Investigation

At the request of WWIDA, John Geisler, PE, and Timothy Cremins, IE, of Creighton Manning Engineering (CM) performed a site visit on March 3, 2021 to observe the existing bridge site. A visual inspection was performed to determine the existing conditions, and to determine if any issues were present that would impact the potential bridge modifications. Minor leaks were observed on the underside of the deck, as well as minor corrosion of the steel superstructure elements. The superstructure appeared to have a small deflection as observed by previous inspectors noted in the next section of this report, however no measurement was taken. Minor surface cracks were also observed on the abutments, primarily near the weep holes through the abutments. No immediate concerns with the bridge superstructure or substructure were noted at this time. For photos of the site visit, see Appendix D.

### 4. Previous Inspections

Greenman-Pedersen Inc. (GPI) performed the most recent known inspection of the bridge in January of 2020. The inspection was performed at the request of the New York State Canal Corporation (NYSCC), and models NYSDOT bridge inspection format in accordance with the NYS Bridge Inspection Manual. The inspection determined a general recommendation rating of 6 out of 7. This rating indicates that inspectors observed only minor deterioration of the bridge. This would include observations such as paint loss, minor damage to secondary members, and small cracks in substructures. Minor repairs to secondary elements and touch-ups of protective coatings are typical recommendations for this rating.

C.T. Male Associates performed a more detailed investigation of the site in 2019. In addition to an on-site inspection, C.T. Male Associates was provided with as-built drawings, design calculations, and correspondence from the bridge manufacturer. At the conclusion of their inspection, they determined the bridge to be in "good condition" except for a significant deflection observed in the trusses. They could not determine the bridge's anticipated deflection from the design calculations, and recommended the designer comment on the observed deflection for a more accurate determination. The bridge designer also confirmed the expected design life of 25 years for the bridge, provided proper maintenance was performed throughout that period of time.

### 5. Design Criteria

The design criteria for this project are based on the 2020 Edition of the NYSDOT Highway Design Manual, Chapter 2 and the 2019 Edition of the NYSDOT Bridge Design Manual. The NYSDOT Functional Class Viewer indicates that Lock 8 way is within the Glens Falls urban area. However, the roadway primarily serves as an access road to the industrial site at its south end. Within this context, Lock 8 Way is best classified as an urban local road. An annual average daily traffic (AADT) has not been determined at this time; however, the ED-900 documentation suggests that 50 new full-time jobs will be created at the site. With an understanding that the employees and their suppliers will be the primary users of the bridge, a design volume of under 400 vehicles/day is anticipated for the bridge.



## 5.1 Critical Design Elements:

Exhibit 5.1a – Critical Design Elements				
Route No. & Name:		Lock 8 Way	Project Type:	
Roadway Classification:		Urban Local	ETC+30 AADT (2048):	
			Bridge Replacement	
			400 vpd	
Element		Standard	Existing Condition	Proposed Condition
1	Design Speed	20 mph Min, 30 mph Max, – HDM 2.7.4.3	35 mph *	30 mph *
2	Lane Width	10 ft - BM Table R and N, Appendix 2A 12 ft – HDM Sect 2.7.4.3, Exhibit 2-8	12 ft	12 ft
3	Shoulder Width	2 ft - BM Table R and N, Appendix 2A 2 ft – HDM Sect 2.7.4.3, Exhibit 2-8	3 ft	3 ft
4	Maximum Grade	8.0% Max - HDM Sect 2.7.4.3	0.50%	<8.0%
5	Cross Slope	-1.5% Max, -3.0% Max - HDM Sect 2.7.4.3	-2.0%	-2.0%
6	Structural Capacity	NYSDOT LRFD Specifications (BM Section 1.3)	AASHTO HS-25	HL-93

\* Although the nature of the roadway suggests a maximum design speed of 30 mph, CM observed several existing 35 mph speed limit signs on Lock 8 Way near the bridge during the site visit. It is conservative to assume this speed will be maintained for the new bridge.

## 5.2 Additional Design Considerations:

Due to the presence of the feeder canal below the existing and proposed bridge site, hydraulics is important to consider in the design of the bridge. Though no documentation of previous hydraulic analysis on the existing bridge was found, it is likely that some analysis was performed. Therefore, at a minimum, the new bridge low chord should be level with, or higher than, the existing bridge low chord. Ideally, it is recommended that a formal hydraulic analysis be performed to determine any impact the bridge may have on the water flowing through the feeder canal.

## 6. Alternatives Considered

When considering alternatives, cost was a driving factor. Any components of the existing bridge that could be reused would reduce the cost of the project significantly.

An initial evaluation of the existing truss superstructure indicates that with a design life of 25 years under proper maintenance, the existing superstructure is expected to remain adequate for use until 2032. This life span would not achieve the project's long-term use objectives. Retrofitting the existing superstructure could extend the life of the bridge, however, significant deflections have been observed during the bridge's 14 years of service. Additionally, retrofitting the existing truss superstructure would be comparable in cost to installing a new superstructure, so it is not a preferred alternative.

Each of the existing foundations are concrete abutments supported by 30 piles. The record plans suggest that the pile and abutment foundations have significant capacity to sustain long-term traffic over the bridge. Although the piles could not be observed during the previous site investigations, none of the inspectors noted any significant deficiencies in the concrete abutments. Considering the relatively young age of the piles, it is safe to assume that

the existing substructures are in good condition. From a demolition perspective, a significant amount of money and time would be saved if the piles and abutments could remain and accept a new superstructure. Additionally, reusing the existing foundations would eliminate the need for excavation and disturbance of the surrounding soil. It is recommended to reuse the existing concrete foundations and modify as needed to accommodate a new superstructure above.

With the above considerations, two (2) alternatives are evaluated to achieve the project objectives.

#### **Alternative 1 – Steel Multi-Girder Superstructure**

This alternative consists of replacing the existing Mabey truss superstructure with a new steel multi-girder superstructure. The existing substructures will be reused, and the top of the abutment will be modified to accommodate the new superstructure.

The new superstructure will be a 95'-6", single span bridge on existing reinforced concrete abutments. The deck will be a 9.5" reinforced concrete composite deck supported by steel girders spanning between the abutments. The steel should be given a protective coating, galvanized, or metallized to prevent long-term deterioration. The travel way will consist of two 12'-0" lanes (one in each direction) with 3'-0" shoulders for a total roadway width of 30'-0", similar to the existing bridge. The outsides of the shoulders will be bounded by steel 4-rail bridge railing without curb for a total deck width of 33'-4". The existing pedestals and top of the concrete abutments will be removed and reconstructed as needed to accommodate bearings for the girders. Additionally, if any utilities are required on the bridge, they can easily be mounted adjacent to the girders.

With this alternative, the bridge can safely accommodate the long-term traffic anticipated for the Energy Park and achieves the project objectives. This is the least costly alternative, estimated at approximately \$600,000 for construction.

#### **Alternative 2 – Steel Truss Superstructure**

This alternative consists of replacing the existing Mabey truss superstructure with a new steel truss superstructure. The existing substructures will be reused, and the top of the abutment will be modified to accommodate the new superstructure.

Similar to alternative 1, the new superstructure will be a 95'-6", single span bridge on existing reinforced concrete abutments. The deck will be a 9.5" reinforced concrete composite deck supported by steel stringers and floorbeams. The floorbeams will frame into trusses on either side. The steel should be galvanized, coated, or painted to prevent long-term deterioration. Like alternative one, the travel way will consist of two 12'-0" lanes (one in each direction) with 3'-0" shoulders for a total roadway width of 30'-0", similar to the existing bridge. The outsides of the shoulders will be bounded by steel 2-rail bridge railing on brush curb for a total deck width of 34'-2". A small gap will be required between the deck and trusses, creating an approximate distance between centerline of trusses of 36'-2". The existing pedestals and top of the concrete abutments will be removed and reconstructed as needed to accommodate bearings for the girders. Utilities can also be mounted to the side of the truss if required.

With this alternative, the bridge can safely accommodate the long-term traffic anticipated for the Energy Park and achieves the project objectives. This is the most costly alternative, estimated at approximately \$776,000.



## 7. Constructability and Staging Considerations

All alternatives require replacement of the superstructure, meaning the bridge will need to be closed for the entirety of construction. Access to the south side of the bridge and industrial site is attainable via two entrances to the north and south. The north entrance connects to Lock 8 way via Route 196 but required crossing the bridge which will be closed. South of the Energy Park, there is an access road from East Street which is typically closed, but can be used for traffic to the site during bridge construction.

Proximity to Route 196 would suggest that construction access from the north end is the easiest option. A crane will likely be positioned behind the northern bridge abutment. Trucks could deliver structural members via the north end of Lock 8 way, behind the crane, and the crane could set them in their final position.

## 8. Recommended Alternative

CM recommends Alternative 1 – Steel Multi-Girder Superstructure. Both alternatives achieve the project objectives, but alternative 1 does so at the least cost. Since both alternatives provide the same roadway, require the same amount of disturbance to the surrounding area, and have similar construction durations, neither one offers any structural, environmental, or transportation advantages. Alternative 1 achieves the same goal at a lower price and is therefore preferable.

## 9. Utilities

There are no known utilities located on or adjacent to the existing bridge. The ED-900 documentation indicates that there is no municipal sewer located in the industrial park and that the construction and maintenance of a septic system will be necessary for a business to locate at the park. This report and corresponding cost estimate have been progressed assuming the bridge and septic system are independent and have not included the cost of any wastewater system construction. Given that there are no other utilities to coordinate with, however, the incorporation of wastewater lines onto the bridge should not significantly complicate the bridge design.

## 10. Right of Way

Extents of previous impacts due to construction of the existing bridge are shown in the plan view of Appendix A. All construction for the proposed bridge is anticipated to remain within the established right of way. Therefore, no additional easements or acquisitions should be necessary.

## 11. Environmental

**11.1 SHPO:** The New York State Historic Preservation Office (SHPO) was consulted regarding any potential impact to existing cultural or historic resources within the proposed project's area of effect. SHPO noted that the proposed bridge crosses the National Register eligible Lock 8 Feeder Canal and that the project is adjacent to the New York State Barge Canal, which is listed in the National Registry. However, SHPO assessed that the proposed project would have "No Adverse Effect" to the existing historic and cultural resources in the area.

**11.2 Wetlands:** A wetland screening was performed on January 18, 2021 using the Information for Planning and Consultation (IPaC) web tool provided by the U.S. Fish & Wildlife Service (USFWS). The screening identified three types of wetlands within the project area: freshwater emergent wetland, freshwater forested/shrub wetland, and lake area. These areas extend throughout the entire site with the exception of the northern bridge approach. Extensive excavation and modifications to the ground in these areas would likely require U.S., Army Corps of Engineers permitting. However, a superstructure replacement as recommended previously would not disturb the ground significantly and would likely not impact the surrounding wetlands.

- 11.3 Surface Waterbodies and Watercourses:** The existing bridge traverses the Bond Creek waterway which feeds into the Lake Champlain Canal directly adjacent and parallel to the bridge. The NYSDEC classifies both of these waterways as Class "C" streams. The best usage for Class "C" water is fishing. The water quality is suitable for fish propagation and survival. Water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. Since no work would be done in the water, there would be no impact on the surface water bodies and watercourses.
- 11.4 Endangered Species:** The USFWS IPAC system, accessed January 18, 2021, was used to screen for any endangered or threatened species that could be found within the project area. The Indiana Bat was the only identified endangered species within the project area. Their roosting habitat is in trees greater than 4" in diameter. Though there are a large number of trees near the project site, most of the larger trees where the bats would roost are at least 20 ft away from the existing bridge. This would suggest that the bats are unlikely to be affected by the construction operations. Additionally, a superstructure replacement would require event less, if any, removal of surrounding trees, minimizing any potential effects to the Indian Bat.

## **12. Method of Construction and Related Contracts**

The project can be progressed with a traditional design/bid/build process with sealed competitive bidding. Three main contracts will be necessary during this process: design, construction, and inspection. The first contract will be with a design engineer who will progress a set of construction drawings and a project manual that would be made available to perspective contractors. The advertisement period for construction is recommended to last a minimum of 3 weeks to allow an adequate number of contractors to view and bid the project. The construction contract will be awarded to the lowest responsible bidder. One primary contract will be executed between the owner and contractor. The prime contractor will subcontract out work, as needed, to subcontractors. The contract for the subcontractors will be between the prime contractor and the subcontractor. Construction is anticipated to last 4-5 months. A construction inspection contract will be arranged with a professional engineering firm prior to construction. Any additional contracts for construction support and material testing will be issued after design and prior to construction.

## **13. Required Permits**

### **Anticipated Permits:**

- Army Core of Engineers (USACE) - Nationwide Permit #3
- New York State Department of Environmental Conservation (NYSDEC) – Stream Disturbance

Although no work is anticipated to take place in water, it is recommended to obtain the above permits as work will take place above water. The Joint Application can be submitted simultaneously to both agencies (USACE and NYSDEC) to obtain the necessary permits. Primary construction plans should be available at the time of the application and the permitting process typically takes 2-3 months.

## 14. Project Schedule

Based on the ED-900, work is anticipated to begin in July 2021 after funding has been secured. It is estimated that the engineering and design of the bridge will be completed by April 2022, with construction occurring from August 2022 to August 2023. A detailed project schedule chart will be developed during the design phase to include the following estimated project durations.

Exhibit 14 – Project Schedule	
Milestone	Duration
Bridge Design	6 Months
Environmental Permitting	3 Months
Easement/ROW Acquisitions	None Anticipated
Project Advertisement	1 Month
Project Bidding and Awarding	1 Month
Bridge Construction	5 Months

## 15. Project Budget Breakdown

A summary of the project budget breakdown can be found in the SF-424C located in Appendix B. Descriptions of what each Cost Classification includes can be found below.

- 4. Architectural and engineering fees – Engineering fee related to the design process of the bridge
- 5. Other architectural and engineering fees – Costs of surveying and construction materials testing
- 6. Project inspection fees – Fee for construction inspection services
- 7. Site work – Cost for clearing and grubbing and site restoration services required for construction
- 8. Demolition and removal – Cost for removal of existing superstructure and top of existing abutments
- 9. Construction – Cost of bridge construction (See Alternative 1 & 2 Estimates in Appendix B)
- 10. Equipment – Cost of additional equipment associated with the bridge replacement
- 11. Miscellaneous – Cost to account for incidental or unpredicted costs and adjustments

The total estimated budget required for this project is \$1,132,000.

APPROVAL: \_\_\_\_\_

DATE: \_\_\_\_\_

Dave O'Brien

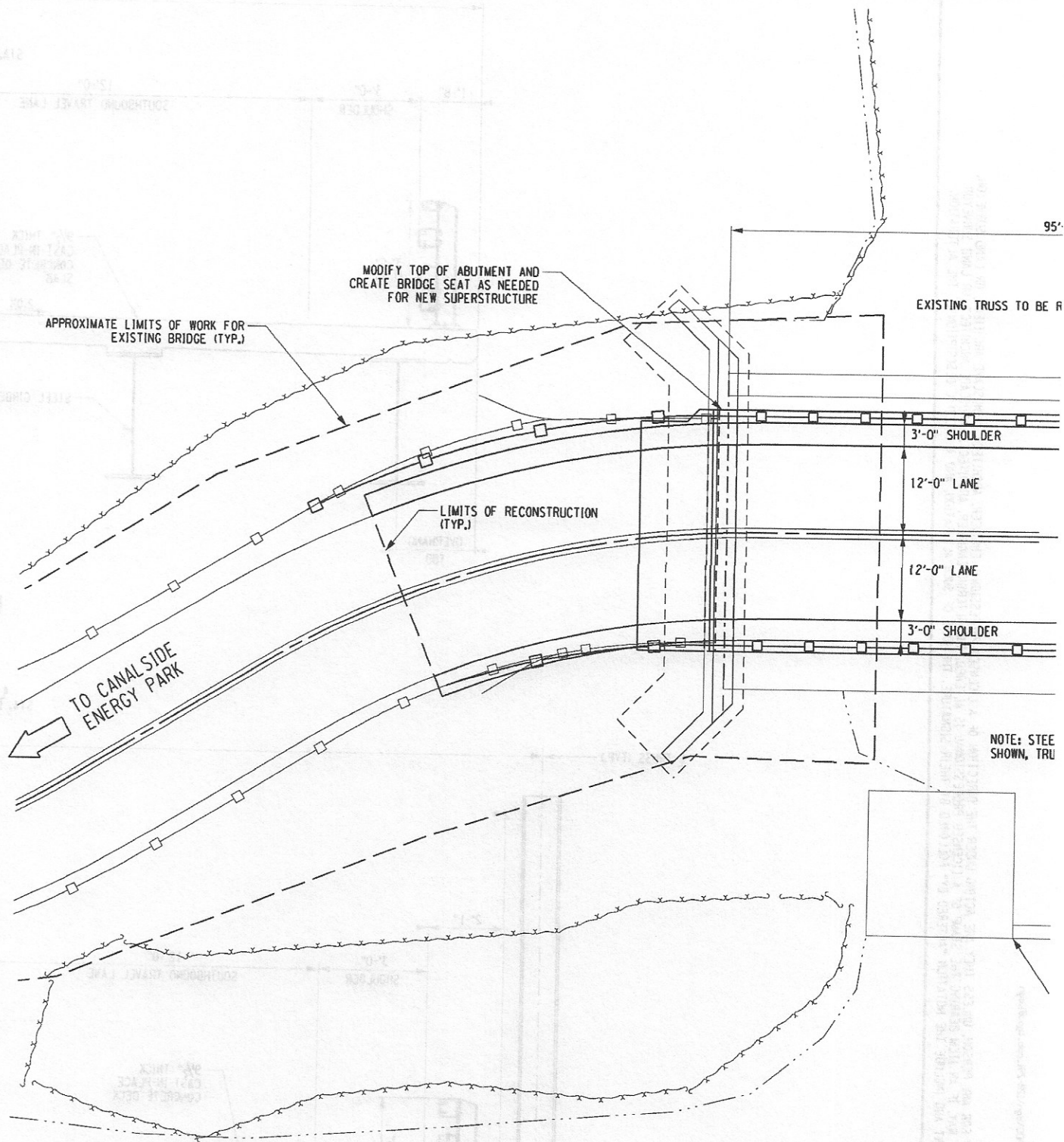
Chair, Warren-Washington County IDA

Chair, Lake Champlain – Lake George Regional Planning Board



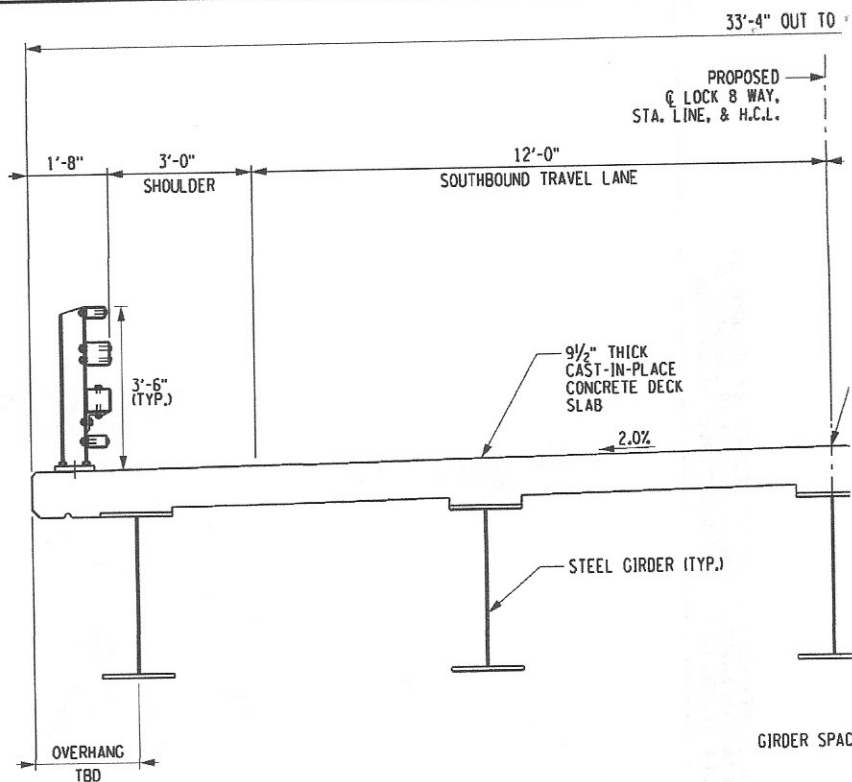
## Appendix A – Plans

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED. THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

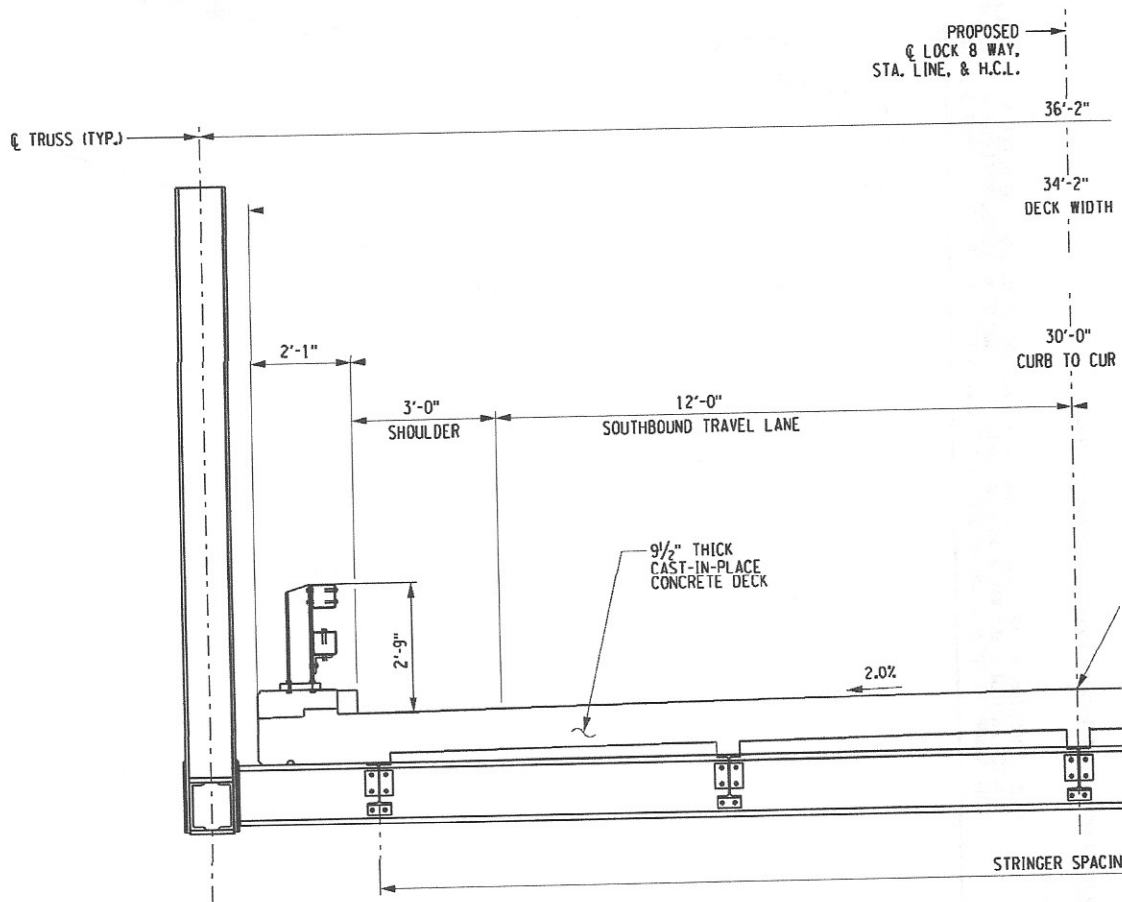


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IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY, IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED. THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.



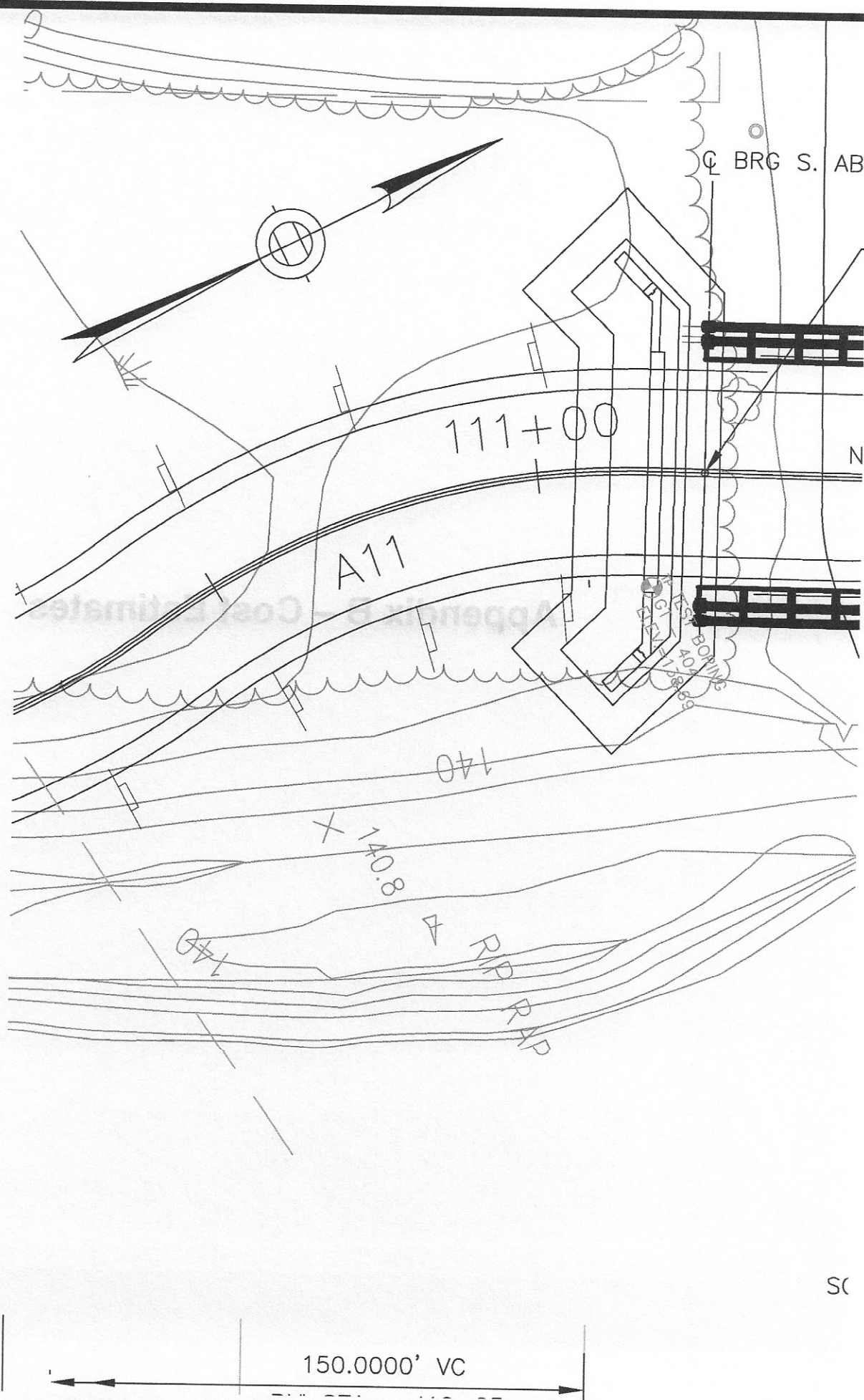
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ALTERNAT  
 TRUSS BRIDGE  
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## **Appendix B – Cost Estimates**

# Lock 8 Way Bridge Replacement

Hudson Falls, Washington County, NY  
CME#: 119-054

## Alternative 1 - Steel Multi-Girder Superstructure

Mar-21

Item No.	Description	Unit	Quantity	Unit Price	Total Cost
1	Excavation	CY	50	\$100.00	\$5,000.00
2	Bridge Rail (4-Rail)	LF	192	\$235.00	\$45,120.00
3	Guide Rail	LF	128	\$160.00	\$20,480.00
4	Superstructure Slab	SY	374	\$375.00	\$140,250.00
5	Approach Slab	SY	78	\$325.00	\$25,350.00
6	Concrete	CY	6	\$2,000.00	\$12,000.00
7	Rebar	LB	1925	\$4.00	\$7,700.00
8	Superstructure Steel	LS	1	\$211,000.00	\$211,000.00
9	Misc. Highway	LS	1	\$50,000.00	\$50,000.00
Bridge Total					\$466,900.00
Highway Total					\$50,000.00
Field Change (5%)					\$26,000.00
<b>Subtotal 1</b>					<b>\$543,000</b>
Mobilization (4%)					<b>\$22,000</b>
<b>Subtotal 2</b>					<b>\$565,000.00</b>
Inflation (3.0%/yr)					<b>\$35,000.00</b>
<b>TOTAL</b>					<b>\$600,000.00</b>



# Lock 8 Way Bridge Replacement

Hudson Falls, Washington County, NY  
CME#: 119-054

## Alternative 2 - Steel Truss Superstructure

Mar-21

Item No.	Description	Unit	Quantity	Unit Price	Total Cost
1	Excavation	CY	51	\$100.00	\$5,100.00
2	Bridge Rail (2-Rail with Curb)	LF	192	\$230.00	\$44,160.00
3	Guide Rail	LF	128	\$160.00	\$20,480.00
4	Superstructure Slab	SY	383	\$375.00	\$143,625.00
5	Approach Slab	SY	80	\$325.00	\$26,000.00
6	Concrete	CY	6	\$2,000.00	\$12,000.00
7	Rebar	LB	1925	\$4.00	\$7,700.00
8	Truss Superstructure	LS	1	\$358,000.00	\$358,000.00
9	Misc. Highway	LS	1	\$50,000.00	\$50,000.00
Bridge Total					\$617,065.00
Highway Total					\$50,000.00
Field Change (5%)					\$34,000.00
<b>Subtotal 1</b>					<b>\$702,000</b>
Mobilization (4%)					<b>\$29,000</b>
<b>Subtotal 2</b>					<b>\$731,000.00</b>
Inflation (3.0%/yr)					<b>\$45,000.00</b>
<b>TOTAL</b>					<b>\$776,000.00</b>

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET.  
SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

### BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	
1. Administrative and legal expenses	\$ 0.00	\$ .00	\$
2. Land, structures, rights-of-way, appraisals, etc.	\$ 0.00	\$ .00	\$
3. Relocation expenses and payments	\$ 0.00	\$ .00	\$
4. Architectural and engineering fees	\$ 130,000.00	\$ .00	\$
5. Other architectural and engineering fees	\$ 30,000.00	\$ .00	\$
6. Project inspection fees	\$ 132,000.00	\$ .00	\$
7. Site work	\$ 10,000.00	\$ .00	\$
8. Demolition and removal	\$ 50,000.00	\$ .00	\$
9. Construction	\$ 600,000.00	\$ .00	\$
10. Equipment	\$ 20,000.00	\$ .00	\$
11. Miscellaneous	\$ 60,000.00	\$ .00	\$
12. SUBTOTAL (sum of lines 1-11)	\$ 1,032,000.00	\$ 0.00	\$
13. Contingencies	\$ 100,000.00	\$ .00	\$
14. SUBTOTAL	\$ 1,132,000.00	\$ 0.00	\$
15. Project (program) income	\$ 0.00	\$ .00	\$
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 1,132,000.00	\$ .00	\$
<b>FEDERAL FUNDING</b>			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.	Enter eligible costs from line 16c Multiply X _____ %		\$

## INSTRUCTIONS FOR THE SF-424C

Public reporting burden for this collection of information is estimated to average 180 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0041), Washington, DC 20503.

**PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET.  
SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.**

This sheet is to be used for the following types of applications: (1) "New" (means a new [previously unfunded] assistance award); (2) "Continuation" (means funding in a succeeding budget period which stemmed from a prior agreement to fund); and (3) "Revised" (means any changes in the Federal Government's financial obligations or contingent liability from an existing obligation). If there is no change in the award amount, there is no need to complete this form. Certain Federal agencies may require only an explanatory letter to effect minor (no cost) changes. If you have questions, please contact the Federal agency.

*Column a.* - If this is an application for a "New" project, enter the total estimated cost of each of the items listed on lines 1 through 16 (as applicable) under "COST CLASSIFICATION."

If this application entails a change to an existing award, enter the eligible amounts *approved under the previous award* for the items under "COST CLASSIFICATION."

*Column b.* - If this is an application for a "New" project, enter that portion of the cost of each item in Column a. which is *not* allowable for Federal assistance. Contact the Federal agency for assistance in determining the allowability of specific costs.

If this application entails a change to an existing award, enter the adjustment [+ or -] to the previously approved costs (from column a.) reflected in this application.

*Column.* - This is the net of lines 1 through 16 in columns "a." and "b."

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Line 1 - Enter estimated amounts needed to cover administrative expenses. Do not include costs which are related to the normal functions of government. Allowable legal costs are generally only those associated with the purchases of land which is allowable for Federal participation and certain services in support of construction of the project.

Line 2 - Enter estimated site and right(s)-of-way acquisition costs (this includes purchase, lease, and/or easements).

Line 3 - Enter estimated costs related to relocation advisory assistance, replacement housing, relocation payments to displaced persons and businesses, etc.

Line 4 - Enter estimated basic engineering fees related to construction (this includes start-up services and preparation of project performance work plan).

Line 5 - Enter estimated engineering costs, such as surveys, tests, soil borings, etc.

Line 6 - Enter estimated engineering inspection costs.

Line 7 - Enter estimated costs of site preparation and restoration which are not included in the basic construction contract.

Line 9 - Enter estimated cost of the construction contract.

Line 10 - Enter estimated cost of office, shop, laboratory, safety equipment, etc. to be used at the facility, if such costs are not included in the construction contract.

Line 11 - Enter estimated miscellaneous costs.

Line 12 - Total of items 1 through 11.

Line 13 - Enter estimated contingency costs. (Consult the Federal agency for the percentage of the estimated construction cost to use.)

Line 14 - Enter the total of lines 12 and 13.

Line 15 - Enter estimated program income to be earned during the grant period, e.g., salvaged materials, etc.

Line 16 - Subtract line 15 from line 14.

Line 17 - This block is for the computation of the Federal share. Multiply the total allowable project costs from line 16, column "c." by the Federal percentage share (this may be up to 100 percent; consult Federal agency for Federal percentage share) and enter the product on line 17.



ERIK KULLESEID  
Commissioner

ANDREW M. CUOMO  
Governor

February 8, 2007

Timothy Oremus  
Assistant Project Engineer  
Christopher Manning Engineering  
2 Wilmers Circle  
Albany, NY 12202

Re: IDA  
120-291 WWMDA - Lock 8 Barge Replacement  
Town of Kingsbury, Washington County, NY  
21PR00452

Dear Timothy Oremus:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the provided documentation in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to historic and cultural resources. They do not include other environmental impacts to New York State. The project is considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

We note that the proposed project crosses the National Register eligible Lock 8 Feeder Canal. In addition, the project is adjacent to New York State Barge Canal, which is listed in the National Register. We understand that the proposed project will include replacement of the existing temporary bridge that was installed in 2007.

Based on this review, it is the opinion of the SHPO that the proposed project will have no Adverse Effect to historic and cultural resources.

If you have any questions, I can be reached at (518) 268-2164.

Sincerely,



Weston Davey  
Historic Site Restoration Coordinator  
Weston.davey@parks.ny.gov



**Parks, Recreation,  
and Historic Preservation**

ANDREW M. CUOMO  
Governor

ERIK KULLESEID  
Commissioner

February 8, 2021

Timothy Cremins  
Assistant Project Engineer  
Creighton Manning Engineering  
2 Winners Circle  
Albany, NY 12205

Re: IDA  
120-291 WWIDA - Lock 8 Bridge Replacement  
Town of Kingsbury, Washington County, NY  
21PR00452

Dear Timothy Cremins:

Thank you for requesting the comments of the New York State Historic Preservation Office (SHPO). We have reviewed the provided documentation in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include other environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

We note that the proposed project crosses the National Register eligible Lock 8 Feeder Canal. In addition, the project is adjacent to New York State Barge Canal, which is listed in the National Register. We understand that the proposed project will include replacement of the existing temporary bridge that was installed in 2007.

Based on this review, it is the opinion of the SHPO that the proposed project will have No Adverse Effect to historic and cultural resources.

If you have any questions, I can be reached at (518) 268-2164.

Sincerely,

Weston Davey  
Historic Site Restoration Coordinator  
Weston.davey@parks.ny.gov

## Attachments

Attachment	Reviewer	Review Type
No Attachment Records		

<https://cris.parks.ny.gov/?type=CR&id=3DERM2BDONDB>

## Project information

NAME  
150-291 WWIDA - Lock 8 Bridge

LOCATION  
Washington County, New York

DESCRIPTION  
None

Local office

New York Ecological Services Field Office

(607) 753-9334  
(607) 753-9699

# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

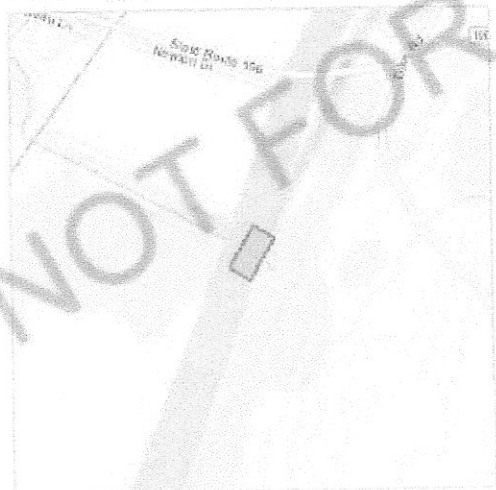
## Project information

### NAME

120-291 WWIDA - Lock 8 Bridge

### LOCATION

Washington County, New York



### DESCRIPTION

None

## Local office

New York Ecological Services Field Office

☎ (607) 753-9334

📠 (607) 753-9699



3817 Luker Road  
Cortland, NY 13045-9385

<http://www.fws.gov/northeast/nyfo/es/section7.htm>

## Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-level information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed activity, and to conduct such study, and to prepare such report, as may be required by the Federal agency. A letter from the Federal office and a species list which fulfill this requirement can only be obtained by request from either the Regulatory Review section in IPaC (see directions below) or from the Federal office directly.

For project evaluations that require USFWS or NOAA review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

listed species, and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the Fisheries Division of the National Oceanic and Atmospheric Administration (NOAA Fisheries).

Species and critical habitats under the sole responsibility of NOAA Fisheries are not shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Mammals

STATUS

NAME

# Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act requires Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can only be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Mammals

NAME

STATUS

Indiana Bat *Myotis sodalis*

Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/5949>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

## Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird



species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

#### Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Dec 1 to Aug 31

#### Black-billed Cuckoo *Coccyzus erythrophthalmus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9399>

Breeds May 15 to Oct 10

#### Bobolink *Dolichonyx oryzivorus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 20 to Jul 31

#### Canada Warbler *Cardellina canadensis*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 20 to Aug 10

#### Prairie Warbler *Dendroica discolor*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 1 to Jul 31



**Snowy Owl** *Bubo scandiacus*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

**Wood Thrush** *Hylocichla mustelina*

Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (–)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures or permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

**What does IPaC use to generate the migratory birds potentially occurring in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

**What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

**How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.



## What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

## Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

## What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

## Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.



# Facilities

## National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

## Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

## Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1Ed](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PFO1E](#)

LAKE

[L1UBHh](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error

is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

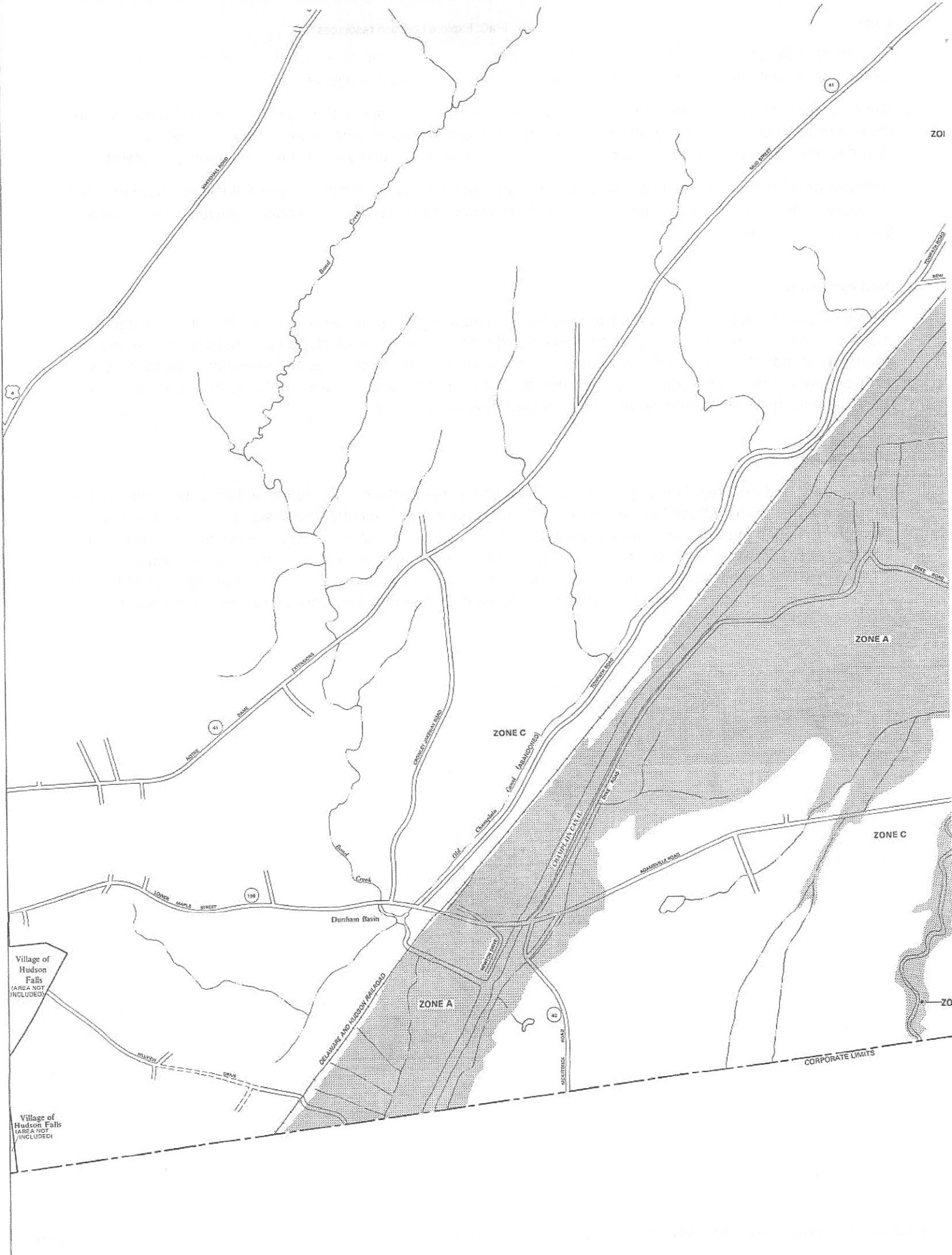
Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### Data exclusions

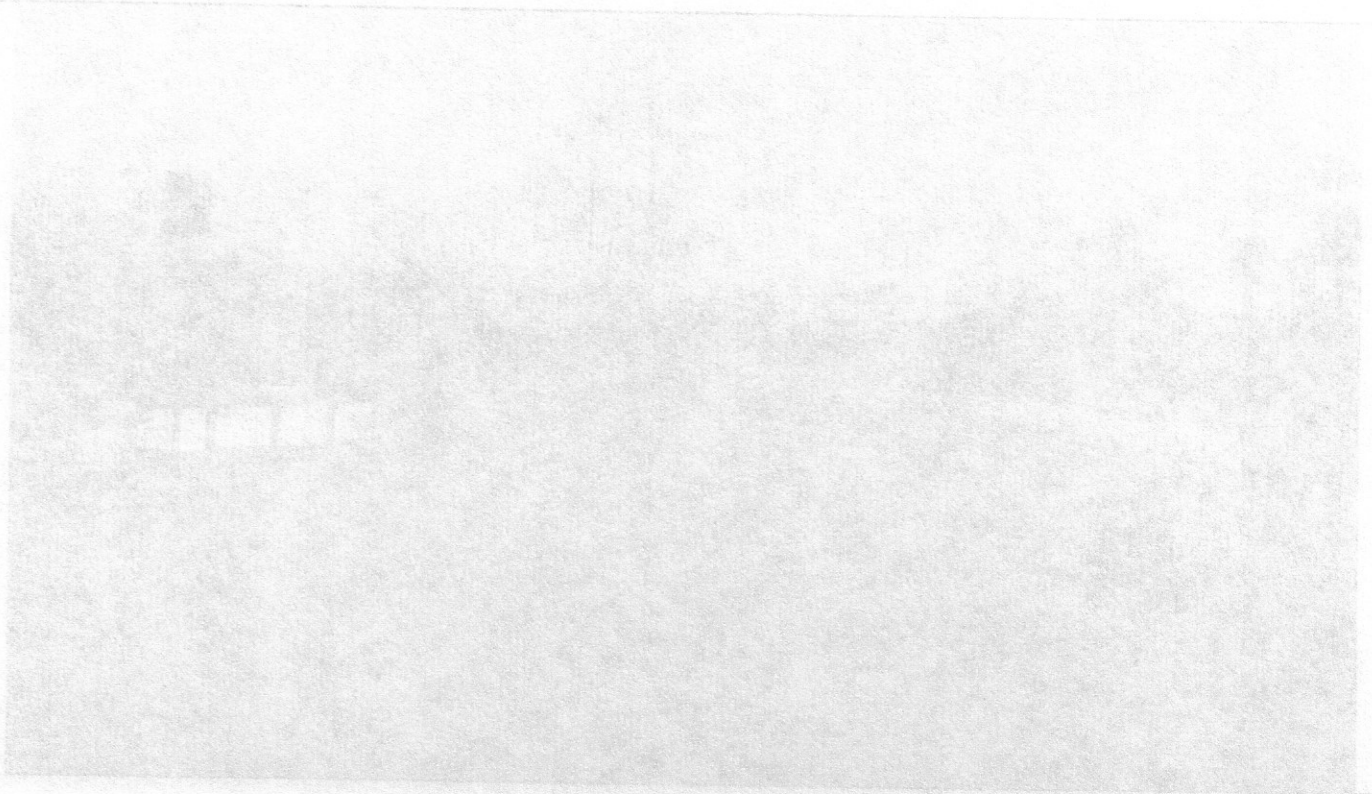
Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.







## Appendix D – Site Visit Photos

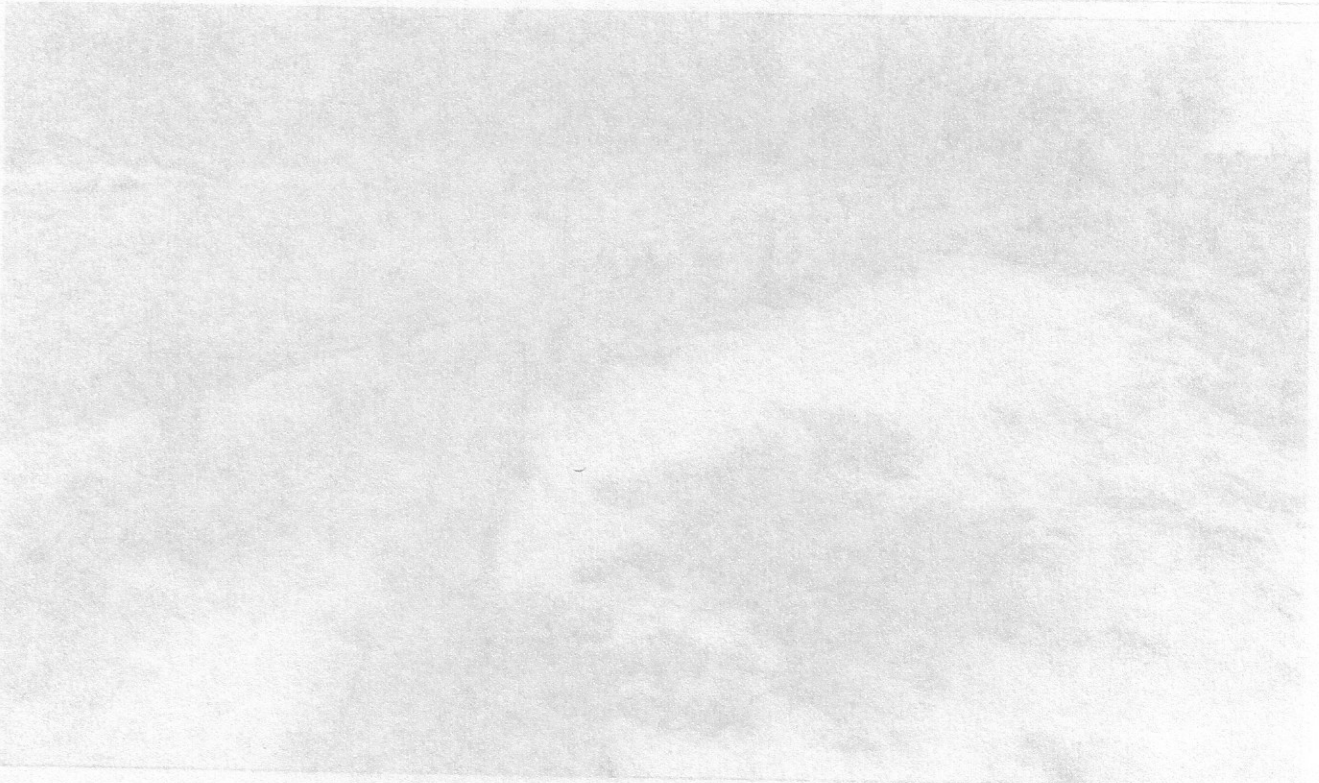


Photo 2 – North side Bridge Approach, looking south toward bridge



Photo 1 – South side Bridge Approach, looking north toward bridge



Photo 2 – North side Bridge Approach, looking south toward bridge





Photo 3 – East side Elevation of Bridge, looking west from southeast side

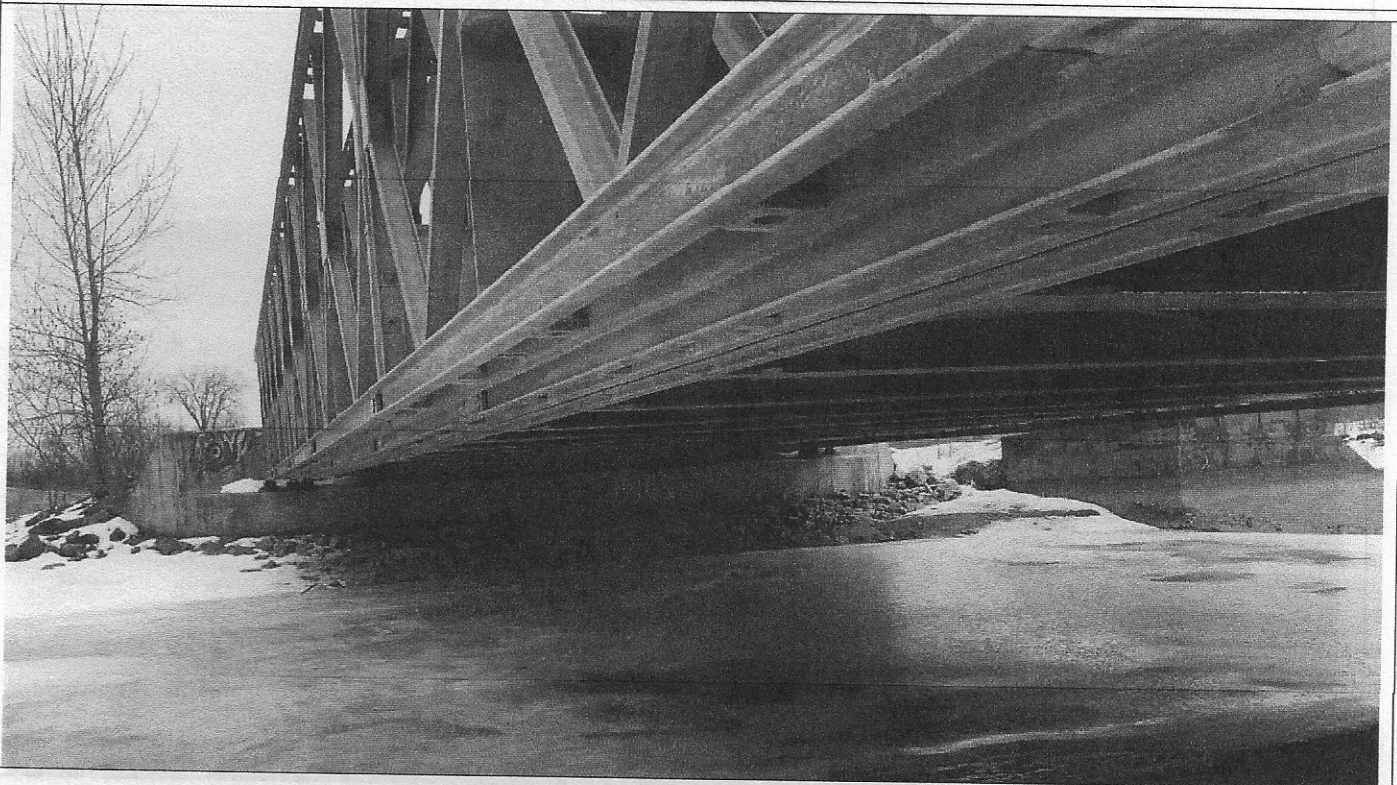


Photo 4 – North Abutment, looking north from south end underside of bridge

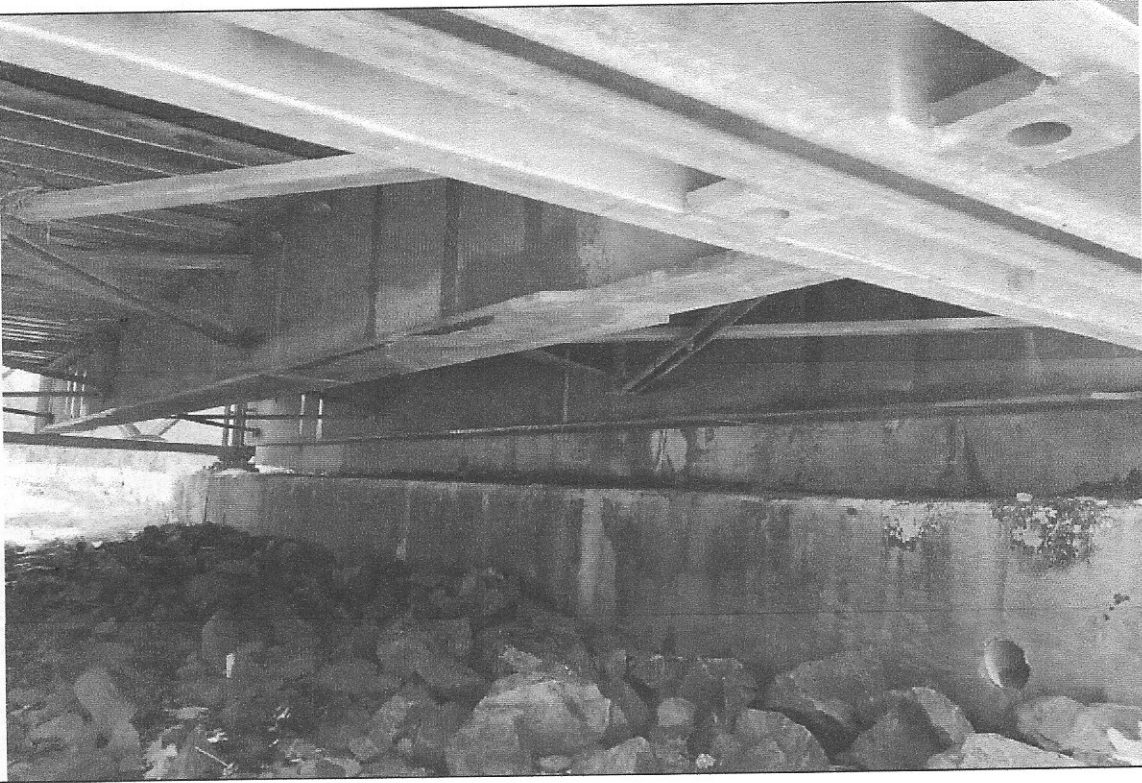


Photo 5 – South Abutment, looking south from underside of bridge



Photo 6 – Feeder Canal, looking west from bridge



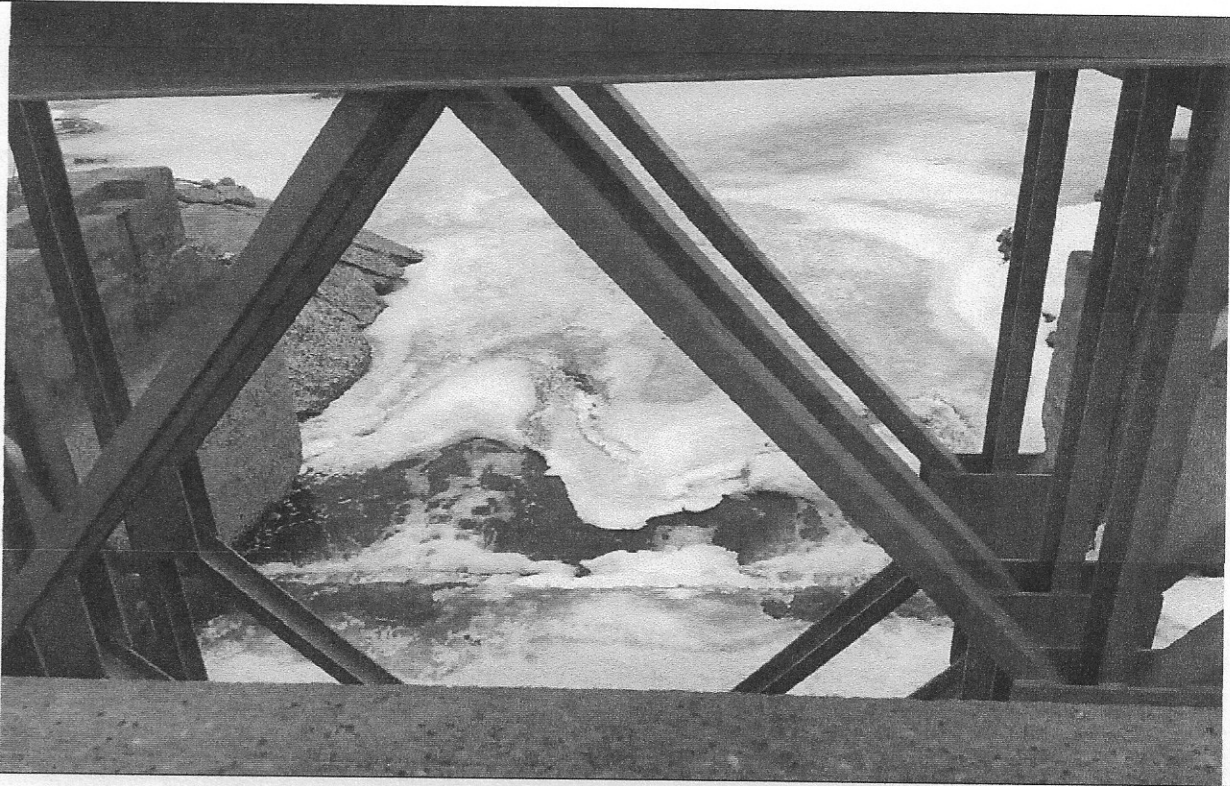
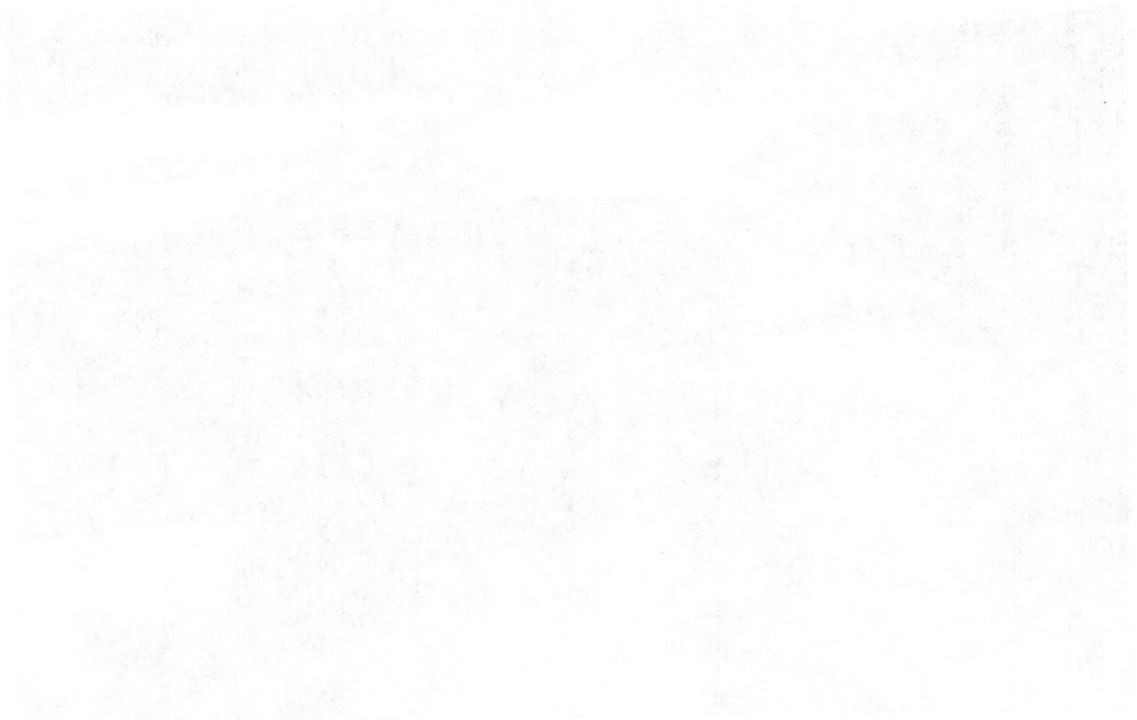
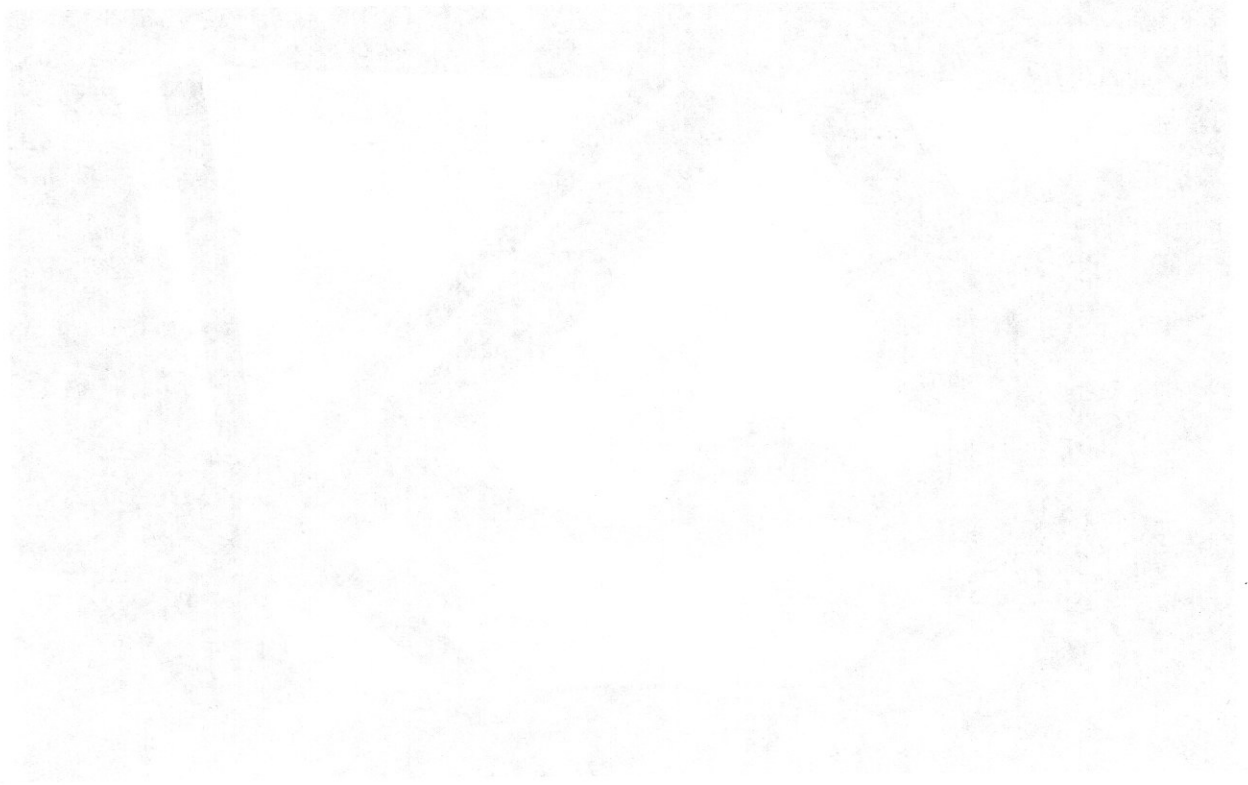


Photo 7 – Feeder Canal downstream from bridge, looking east



Photo 8 – Canal Spillway/Dam structure downstream of bridge, looking north



THE ... OF ...