

REQUEST FOR CONSTRUCTION BIDS

May 15, 2015

Saw Mill (NY Dam ID #237-0449) Removal Boquet River Willsboro, New York

1.0 *Project Background*

This project includes the removal of the Saw Mill Dam (NY DAM ID #237-0449) on the Boquet River. The structure is owned by the Town of Willsboro, NY. The dam is obsolete and deteriorating and the Town has decided to remove the structure to improve the passage of Atlantic salmon, reduce flood and erosion risks, restore the river, and improve local aesthetics.

The Saw Mill Dam (also locally referred to as the Boquet River Dam) is located on the Boquet River at the top of a bedrock cascade that is nearly 3 miles from Lake Champlain. The dam was reportedly built in the 1890s, sold to the Town in 1972, and is no longer in use for mechanical power. The timber crib structure is deteriorating, and each year shows more sagging of the main spillway after ice loading and flooding.

The dam is founded on the top of a bedrock cascade that is to remain. Approximately 5,000 CY of sediment is accumulated upstream of the dam. The sandy material is located between the bedrock outcrops in the channel. Most of the sediment is located near the dam, and additional material is located between the dam and the NY Route 22 Bridge.

The right abutment of the dam is attached to a concrete fish ladder that is owned and operated by the New York State Department of Environmental Conservation (DEC). Approximately half of the concrete fishway will be removed to open up the primary salmon migration route up the Boquet River Falls.

In addition to the proposed removals, site improvements will be performed to create safe public river viewing locations. An ADA-accessible concrete platform will be created from the remaining portion of the fishway on the east side of the river. The deteriorating sluiceway on the west side of the river will be filled with river sediment to restore the river bank and improve public safety in the area.

The Town of Willsboro is currently seeking competitive bids to remove the dam and perform associated site work. Project construction is anticipated for summer of 2015.

Perspective bidders should be aware that another project will be taking place in 2015 to stabilize an eroding bank on the Boquet River, downstream of the dam and falls. Contractors are encouraged to bid on both projects to provide efficiencies to project costs.

2.0 *General Scope of Work*

Work tasks will generally involve installation and maintenance of erosion and sediment controls; water control to divert water away from the work area; establishing temporary site access; removal of the wooden dam spillway; excavation of accumulated river sediment upstream of dam; partial removal of the concrete fishway; excavation of fill from the eastern river bank; concrete patching and platform creation; and site restoration (Attachment A). A small amount of bedrock removal may be required as determined in the field by the Project Engineer.

Construction will take place during dry weather between August and September of 2015. Work hours will be agreed upon by the Contractor, Town, and Project Engineer prior to construction. All disturbed areas shall be returned to pre-construction conditions, including repairs of the road surface and seeding and mulching all disturbed soil as needed. The extent and duration of disturbance shall be minimized during construction.

3.0 *Owner's Project Representation*

Milone & MacBroom will be the Project Engineer and oversee construction activities. An engineer will be on the work site part time during construction to review key milestones such as water control, structure removal, fish passage restoration, and sediment removal. The Project Engineer will be in daily contact with the construction contractor to track progress. The Project Engineer will also lead a pre-construction site walk and a post-construction site walk. Milone & MacBroom will sign and seal the as-built plans. Oversight assistance will be provided by US Fish and Wildlife Service, the Town of Willsboro, the Greater Adirondack Resource Conservation & Development Council and the Essex County Soil and Water Conservation District.

The Project Engineer will be on-site two to three days each week during construction, and will be in regular conversation with the project team and construction crews to guide design implementation and permit compliance.

The Contractor will be obligated to comply with directives from the Project Engineer and the Town to ensure that the Contractor meets all contract provisions and design specifications while complying with permit requirements.

4.0 *Construction Access*

Construction access will be made from either Gilliland Lane or Mill Lane through existing easements associated with the dam. Access to the channel will be made by driving down the road embankment. Removal of vegetation at each access location shall be minimized. No tree removal is permitted. If the contractor wishes to leave the Town right-of-way or the State of New York property, permission is required from landowners to cross their property. Traffic closures are not anticipated with this project. All proposed impacts to traffic need to be coordinated with the Town of Willsboro.

5.0 *Sequence of Work*

A proposed sequence of work is provided in the construction plans for general information only (Attachment A). The selected Contractor may suggest adjustments to this sequence or a different sequence of events to the Project Engineer. The final sequence of work will ultimately be determined by the Contractor and submitted to the Project Engineer for review and approval prior to construction.

6.0 *Fill Disposal*

All fill disposal operations at all fill disposal sites will be the responsibility of the Contractor. The Contractor will be responsible for submitting the ultimate fill disposal site for approval by the Project Engineer. A suitable location for disposal of all of the removed dam and excavated material has been identified at West's Mabels Sand Pit LCD Landfill in Willsboro, NY that is approximately 5 miles from the project site. This location is listed for disposal of land clearing debris by DEC. Note that some of the removed materials will be deposited on site to fill the sluiceway and portion of the fishway.

Prospective bidders may propose alternative fill disposal locations. Any alternative fill disposal sites must be described on the bid sheet. Include a location map, landowner contact information, and a description of the area to be disturbed. The site must be open and available for inspection by the Project Engineer and the State of New York.

7.0 *Sediment and Erosion Control*

This project will be performed during low flows to minimize the risks of erosion and sedimentation. Nonetheless, some sediment transport downstream is expected with this project and has been deemed to be acceptable by fish biologists at both NYS DEC and US Fish and Wildlife Service.

Erosion control notes, sediment management notes, water control plan, and details are contained in the construction plans (Attachment A). A turbidity curtain will be used to reduce sediment migration downstream. The curtain will remain in the channel throughout the duration of the project and cleaned out as sediment accumulates in front of it. Temporary dewatering basins will be used to settle sediment draining from excavated river sediment, if it is not immediately hauled offsite. Silt fencing will be installed on the river side of staging and stockpile areas. Disturbed slopes of 2:1 or steeper will be stabilized with erosion control blanket.

Sediment removal will be performed in the dry as much as possible. With the intervening bedrock and the lowered water levels from the dam removal, much of the sediment removal work can be done out of the water.

Temporary access ramps will be installed over culverts to allow water to pass under the construction vehicle access. Truck mats will be used to keep excavator tracks out of the water. We anticipate timber mats downstream of the dam and rubber mats on the flatter bedrock areas upstream of the dam. The mats will keep excavator tracks out of the water and will prevent scuffing bedrock that will be exposed following dam removal. Temporary construction entrance anti-tracking pads will be used to prevent the spread of sediment onto nearby roadways.

Temporary coffer dams consisting of large sandbags or a suitable alternative will likely be needed to isolate work areas in several locations to minimize sediment migration and improve construction accuracy and efficiency.

The construction contractor will submit a final sediment and erosion control plan to the Project Engineer for approval prior to the start of work.

8.0 Regulatory Requirements

Federal, state, and local permitting is under way for this project and conditions of each permit must be followed during construction. The Contractor must review permits in full to understand all regulatory requirements prior to construction. All permits must be posted at the project site prior to the start of construction. The following permits apply:

- US Army Corps of Engineers
- NYS DEC Dam Safety
- NYS DEC Wild, Scenic, and Recreational Rivers
- NYS DEC Protection of Waters

9.0 Construction Schedule

Construction is planned for August to September of 2015. A Notice to Proceed will be issued by the Project Engineer prior to the start of work. All project elements in the river must be completed by September 30, 2015. Failure to complete the project on time may result in forfeiture of the performance bond. Site recovery progress will be inspected with the Contractor approximately one month following construction to ensure that the site remains stable and determine if additional site recovery work is needed.

10.0 Performance Bond

The Contractor shall provide performance bond of the amount of \$50,000 which shall be filed with the Town of Willsboro prior to issuance of a Notice to Proceed by the Project Engineer.

11.0 Compensation

Payment for the project will be made in two installments – one after 50% completion and one after project completion and a final site inspection with the Project Engineer and Town. Payment will be based on items complete and lump sum bid prices. All invoices will be delivered to the Town and Project Engineer for review and payment upon approval.

Prior approval is needed from the Town and Project Engineer for all change orders. No additional funds will be paid to the Contractor without prior written approval.

12.0 Bid Submittal Information & Format

Bids must be physically received at the office of the Town of Willsboro no later than 2:00 PM Thursday, June 11, 2015, located at 5 Farrell Road, PO Box 370, Willsboro, NY 12996. Bids will be opened publicly at the Town of Willsboro office at the close of bidding. Notice of contract award is anticipated by June 19th, 2015. Notice to Proceed is anticipated on August 1, 2015.

A pre-bid site showing is scheduled for Friday May 29, 2015. Prospective bidders are strongly advised to attend the site showing to gain an understanding of the project details. Prospective bidders should convene at the NYS DEC Fishway on Gilliland Lane at 1:00 PM.

Bid format shall utilize the provided bid sheet (Attachment B). Please provide two professional references for similar or related projects in the space provided on the bid sheet.

The Town of Willsboro reserves the right to reject any or all bids on its own motion.

Electronic copies of the construction plans are attached to this request. For questions contact Roy Schiff at Milone & MacBroom, Inc. (802-882-8335; rschiff@mminc.com)

13.0 Attachments

- Attachment A: Construction Plans
- Attachment B: Bid Sheet

Attachment A: Construction Plans



Know what's below.
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www.newyork-811.com

SAW MILL DAM (NY DAM ID # 237-0449) REMOVAL BOQUET RIVER

MILL LANE & GILLILAND LANE
WILLSBORO, NEW YORK

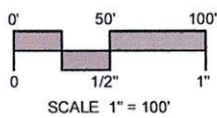
FINAL DESIGN
MARCH 16, 2015



PROJECT SITE:



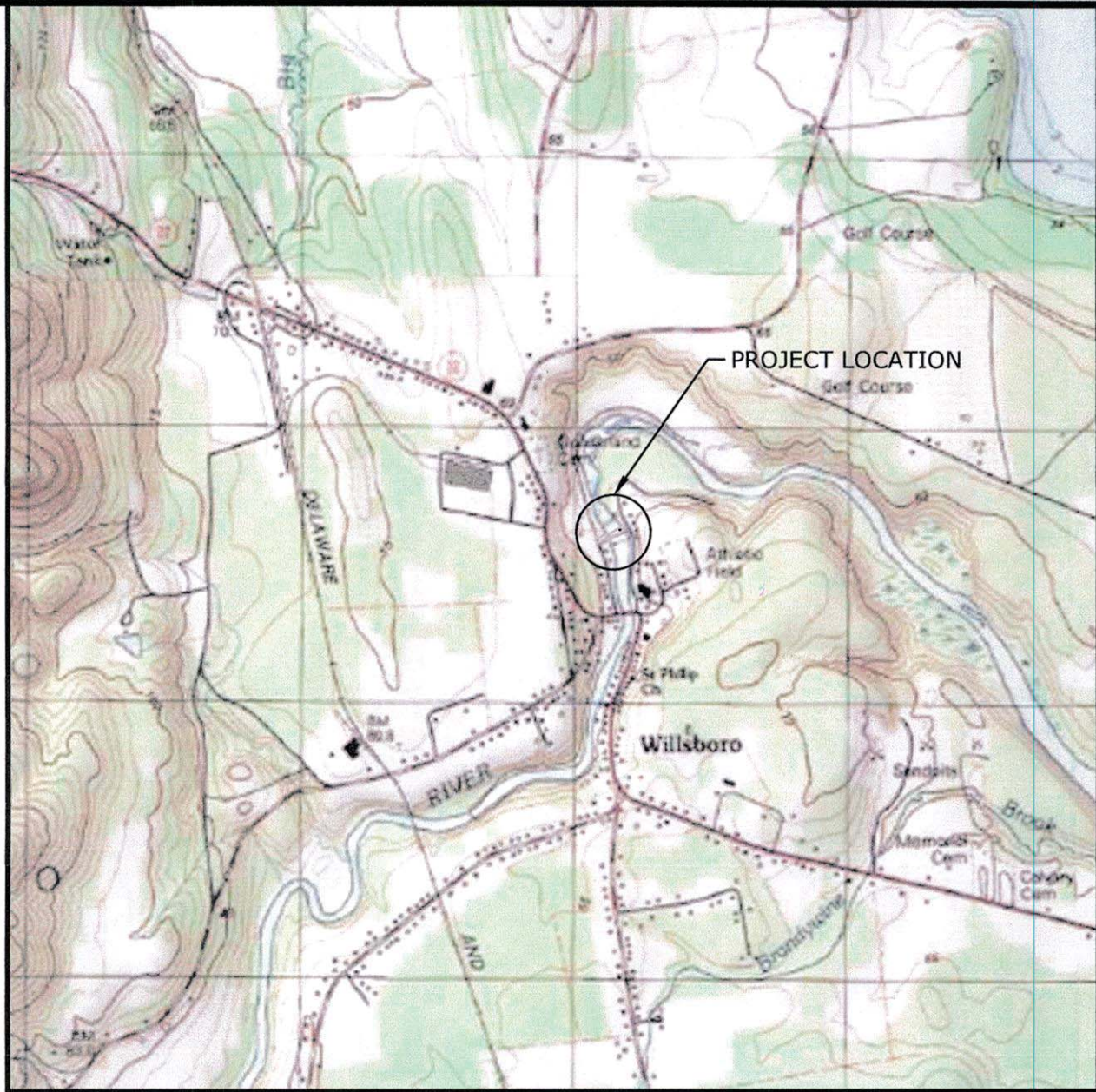
PROJECT SITE VICINITY MAP:



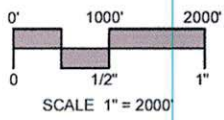
PREPARED BY:



1 South Main Street, 2nd Floor
Waterbury, Vermont 05676
(802) 882-8335 Fax (802) 882-8346
www.miloneandmacbroom.com



LOCATION MAP:



PREPARED FOR:

LAKE CHAMPLAIN BASIN PROGRAM
NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL
COMMISSION

PROJECT PARTNERS:

TOWN OF WILLSBORO, NEW YORK

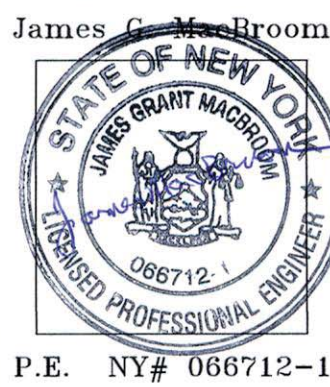
GREATER ADIRONDACK RESOURCE CONSERVATION AND
DEVELOPMENT COUNCIL

US FISH & WILDLIFE SERVICE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION

SHEET LIST:

NO.	NAME	TITLE
01	--	TITLE PAGE & LOCATION MAP
02	SP-1	SITE PLAN - EXISTING CONDITIONS
03	SP-2	SITE PLAN - REMOVALS AND ELEVATION
04	SP-3	SITE PLAN - PROPOSED CONDITIONS
05	CP-1	CONSTRUCTION PLAN - SEQUENCE
06	CP-2	CONSTRUCTION PLAN - SEDIMENT, WATER, & TRAFFIC CONTROL
07	PR-1	PROFILE
08	CS-1	CROSS SECTION - RIVER
09	CS-2	CROSS SECTION - DAM
10	D-1	DETAILS - SITE
11	D-2	DETAILS - SITE
12	D-3	DETAILS - CONSTRUCTION

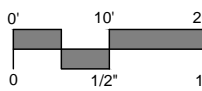
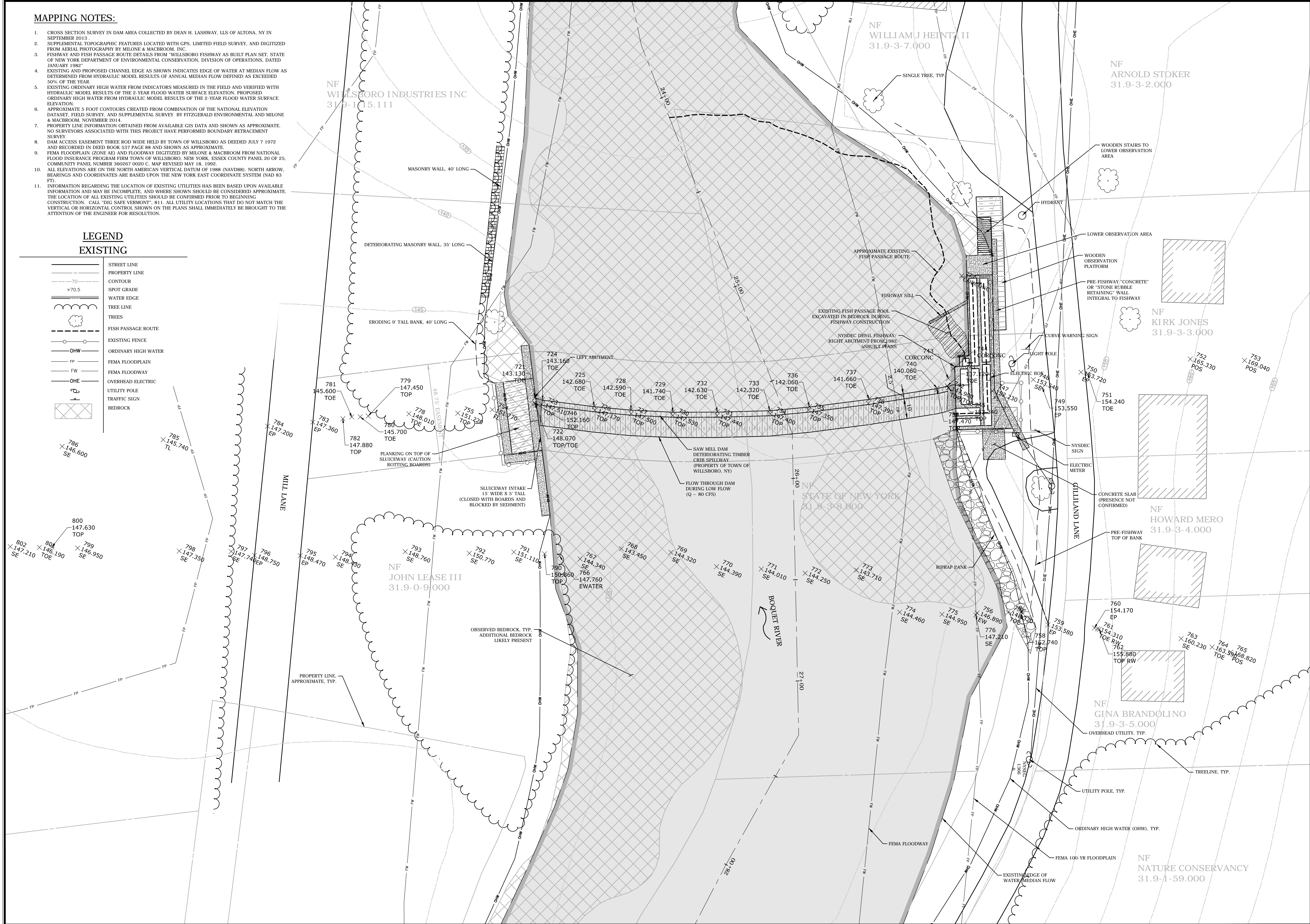


MAPPING NOTES:

- CROSS SECTION SURVEY IN DAM AREA COLLECTED BY DEAN H. LASHWAY, ILS OF ALTONA, NY IN SEPTEMBER 2013.
- SUPPLEMENTAL TOPOGRAPHIC FEATURES LOCATED WITH GPS, LIMITED FIELD SURVEY, AND DIGITIZED FROM AERIAL PHOTOGRAPHY BY MILONE & MACBROOM, INC.
- FISHWAY AND FISH PASSAGE ROUTE DETAILS FROM "WILLSBORO FISHWAY AS BUILT PLAN SET, STATE OF NEW YORK DEPARTMENT OF ENVIRONMENTAL CONSERVATION, DIVISION OF OPERATIONS, DATED JANUARY 1982"
- EXISTING AND PROPOSED CHANNEL EDGE AS SHOWN INDICATES EDGE OF WATER AT MEDIAN FLOW AS DETERMINED FROM HYDRAULIC MODEL RESULTS OF ANNUAL MEDIAN FLOW DEFINED AS EXCEEDED 50% OF THE YEAR.
- EXISTING ORDINARY HIGH WATER FROM INDICATORS MEASURED IN THE FIELD AND VERIFIED WITH HYDRAULIC MODEL RESULTS OF THE 2-YEAR FLOOD WATER SURFACE ELEVATION. PROPOSED ORDINARY HIGH WATER FROM HYDRAULIC MODEL RESULTS OF THE 2-YEAR FLOOD WATER SURFACE ELEVATION.
- APPROXIMATE 5 FOOT CONTOURS CREATED FROM COMBINATION OF THE NATIONAL ELEVATION DATASET, FIELD SURVEY, AND SUPPLEMENTAL SURVEY BY FITZGERALD ENVIRONMENTAL AND MILONE & MACBROOM, NOVEMBER 2014.
- PROPERTY LINE INFORMATION OBTAINED FROM AVAILABLE GIS DATA AND SHOWN AS APPROXIMATE. NO SURVEYORS ASSOCIATED WITH THIS PROJECT HAVE PERFORMED BOUNDARY RETRACEMENT SURVEY.
- DAM ACCESS EASEMENT THREE ROD WIDE HELD BY TOWN OF WILLSBORO AS DEEDED JULY 7 1972 AND RECORDED IN DEED BOOK 537 PAGE 88 AND SHOWN AS APPROXIMATE.
- FEMA FLOODPLAIN (ZONE A) AND FLOODWAY DIGITIZED BY MILONE & MACBROOM FROM NATIONAL FLOOD INSURANCE PROGRAM FIRM TOWN OF WILLSBORO, NEW YORK, ESSEX COUNTY PANEL 20 OF 25, COMMUNITY PANEL NUMBER 360267 0020 C, MAP REVISED MAY 18, 1992.
- ALL ELEVATIONS ARE ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). NORTH ARROW, BEARINGS AND COORDINATES ARE BASED UPON THE NEW YORK EAST COORDINATE SYSTEM (NAD 83 FT).
- INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE. AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "DIG SAFE VERMONT", 811. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.

LEGEND
EXISTING

- STREET LINE
- PROPERTY LINE
- CONTOUR
- SPOT GRADE
- WATER EDGE
- TREE LINE
- TREES
- FISH PASSAGE ROUTE
- EXISTING FENCE
- ORDINARY HIGH WATER
- FEMA FLOODPLAIN
- FEMA FLOODWAY
- OVERHEAD ELECTRIC
- UTILITY POLE
- TRAFFIC SIGN
- BEDROCK



MILONE & MACBROOM®

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DESCRIPTION	DATE	BY

FINAL DESIGN

SITE PLAN - EXISTING CONDITIONS

SAW MILL DAM (NY DAM ID # 237-0449) REMOVAL

BOQUET RIVER

MILL LANE & GILLILAND LANE

WILLSBORO, NEW YORK

JCL JCL RKS

DESIGNED DRAWN CHECKED

1"=20'

SCALE

MARCH 16, 2015

DATE

4199-06

PROJECT NO.

02 OF 12

SHEET NO.

SP-1

SHEET NAME

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GENERAL NOTES

1. THE PURPOSE OF THIS PROJECT IS TO REMOVE THE TIMBER CRIB DAM SOMETIMES CALLED THE SAW MILL DAM ON THE BOQUET RIVER IN WILLSBORO, NEW YORK. PLANS INCLUDE DETAILS OF DECONSTRUCTION AND SITE RESTORATION.
2. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. CALL "DIG SAFE" AT 1-888-DIG-SAFE (344-7233). THE CONTRACTOR SHALL TAKE PRECAUTIONS NOT TO DISTURB EXISTING UTILITIES.
3. THE CONTRACTOR SHALL DESIGNATE A SUPERINTENDENT AT THE START OF CONSTRUCTION AND THE CONTRACTOR'S SUPERINTENDENT SHALL BE ON-SITE AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR AND HIS/HER JOB SUPERINTENDENT SHALL BE RESPONSIBLE FOR COMPLYING WITH THE JOB SPECIFICATIONS AND PERMIT REQUIREMENTS.
4. ALL STORAGE AND ACCESS ROUTES, PEDESTRIAN FENCES/BARRIERS, WORKING HOURS, AND LIMITS OF CLEARING SHALL BE FLAGGED BY CONTRACTOR PRIOR TO CONSTRUCTION AND APPROVED BY TOWN AND PROJECT ENGINEER.
5. WORKING HOURS SHALL BE APPROVED BY TOWN AND PROJECT ENGINEER.
6. NO CONSTRUCTION VEHICLES SHALL BE STORED, SERVICED, WASHED OR FLUSHED IN A LOCATION WHERE LEAKS, SPILLAGE, WASTE MATERIALS, CLEANERS, OR WATERS WILL BE INTRODUCED OR FLOW INTO WETLANDS OR WATERCOURSES. AN EMERGENCY MANAGEMENT PLAN AND SPILL KIT WILL BE MAINTAINED ON SITE AT ALL TIMES. IN THE EVENT OF AN ACCIDENTAL RELEASE, IMMEDIATELY STOP CONSTRUCTION WORK, CONTAIN THE SPILL, AND NOTIFY THE TOWN, APPROPRIATE AUTHORITIES AND PROJECT ENGINEER.
7. ALL EQUIPMENT AND VEHICLES SHALL BE CLEANED PRIOR TO AND FOLLOWING CONSTRUCTION TO REDUCE THE POTENTIAL FOR SPREAD OF INVASIVE SPECIES AND SEDIMENT.
8. THE PROJECT SITE IS SUBJECT TO FLOODING. THE CONTRACTOR SHALL MONITOR WEATHER FORECASTS AND STABILIZE THE CONSTRUCTION SITE AND REMOVE EQUIPMENT FROM FLOOD PRONE AREAS IN THE EVENT OF FLOOD WARNINGS. WORK SHOULD BE PERFORMED DURING LOW WATER.
9. THERE SHALL BE NO CLAIMS FOR EXTRA COMPENSATION DUE TO DELAYS IN WATER CONTROL ASSOCIATED WITH HIGH WATER LEVELS FROM NATURAL EVENTS SUCH AS FLOODS.
10. THE CONTRACTOR SHALL MAINTAIN ALL ROADWAYS, SIDEWALKS, AND WALKWAYS IN THE AREA FREE OF SOIL, MUD, AND CONSTRUCTION DEBRIS. CONSTRUCTION ENTRANCES MUST BE MAINTAINED AT EACH SITE ACCESS POINT. SEE PLANS AND DETAILS.
11. CONTRACTOR MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL PERMITS THROUGHOUT DURATION OF PROJECT.
12. ALL CONCRETE AND REINFORCING STEEL IS TO BE REMOVED FROM RIVER AND DISPOSED OF OR RECYCLED OFF SITE.
13. PROPOSED LAYOUT, PROFILE, AND CROSS SECTIONS ARE TO BE STAKED BY THE CONTRACTOR WITH THE PROJECT ENGINEER. FINAL DIMENSIONS WILL BE FINE-TUNED IN THE FIELD BY THE PROJECT ENGINEER.
14. DO NOT REMOVE BEDROCK WITHOUT DIRECTION OF PROJECT ENGINEER. SOLID ROCK EXCAVATION MAY BE REQUIRED TO CREATE FISH PASSAGE LOCATION AT THE DAM SITE AS SPECIFIED BY PROJECT ENGINEER IN THE FIELD. WHEN BEDROCK IS ENCOUNTERED CONTACT PROJECT ENGINEER TO REVIEW PROPOSED CROSS SECTION.
15. EXCAVATION TO BE PERFORMED BY MECHANICAL MEANS ONLY - BLASTING AND HYDRAULIC DREDGING ARE NOT PERMITTED. DO NOT REMOVE COARSE NATURAL BED ARMOR LAYER. DO NOT OVER-EXCAVATE. PROJECT ENGINEER TO REVIEW PROPOSED GRADES WITH CONTRACTOR AS WORK PROGRESSES.
16. ANY MATERIAL EXPORTED OFF-SITE SHALL BE LEGALLY DISPOSED OF IN AN UPLAND LOCATION AT NO ADDITIONAL COST. THE CONTRACTOR IS RESPONSIBLE FOR FINDING A SUITABLE RECIPIENT OF THE MATERIAL, GAINING REGULATORY APPROVAL FOR EXPORTED MATERIAL PLACEMENT IF NEEDED, AND HAULING.
17. ALL AREAS SURROUNDING THE PROJECT SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED UPON COMPLETION OF CONSTRUCTION. THE RESTORATION OF THE SITE IS SUBJECT TO APPROVAL BY THE TOWN AND THE PROJECT ENGINEER.
18. FOLLOWING COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL PARTICIPATE IN A FINAL SITE INSPECTION WITH THE TOWN AND PROJECT ENGINEER FOR THE PURPOSE OF VERIFYING THAT THE PROJECT HAS BEEN COMPLETED ACCORDING TO THE CONSTRUCTION PLANS, SPECIFICATIONS AND THE TERMS AND CONDITIONS OF THE CONTRACT.

SEDIMENT MANAGEMENT NOTES

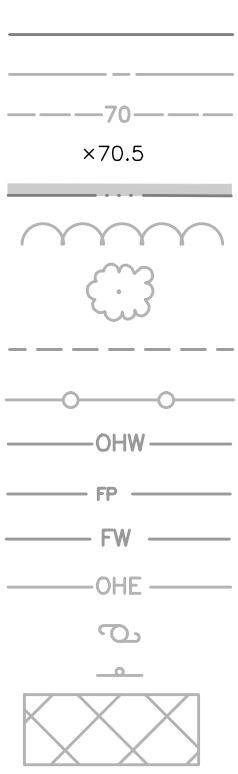
1. EXISTING SEDIMENT VOLUME ACCUMULATED BEHIND DAM = 5,000 CY.
2. EXPECTED MECHANICAL REMOVAL VOLUME = +/- 1,000 CY. REMAINING SEDIMENT EXPECTED TO NATURALLY ERODE DOWNSTREAM OR STABILIZE IN PLACE.
3. DURING CONSTRUCTION SEDIMENT REMOVAL WILL OCCUR BY DRIVING EXCAVATOR OUT ON BEDROCK OUTCROPPINGS DURING LOW FLOW. EXCAVATOR WILL REMOVAL ALL SEDIMENT THAT CAN BE REACHED FROM THE BEDROCK WITHIN THE DESIGNATED SEDIMENT REMOVAL AREA.
4. PROTECT BEDROCK WITH MATS UNDER EXCAVATOR DURING ACCESS FOR SEDIMENT REMOVAL.

RESTORATION NOTES

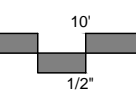
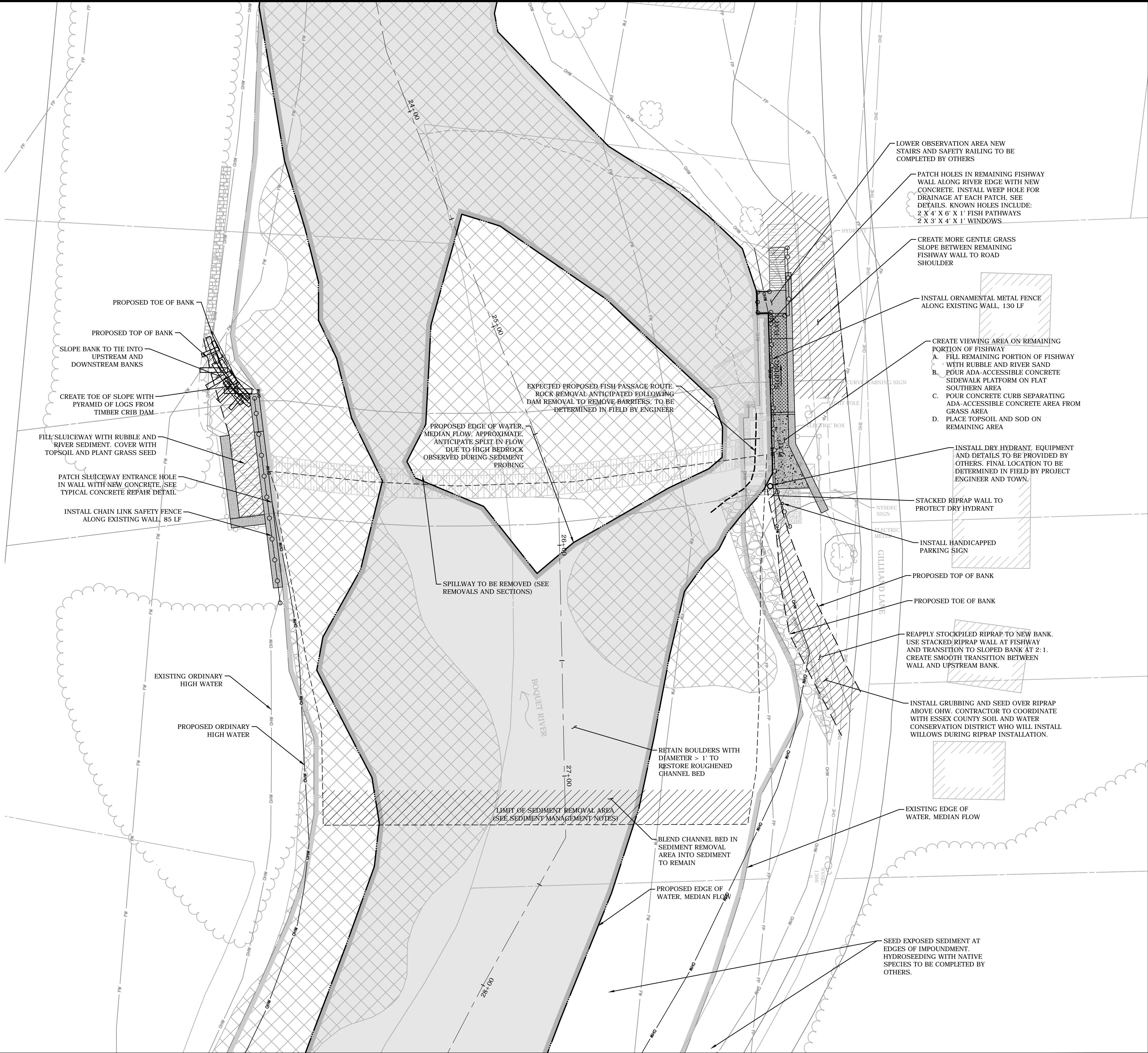
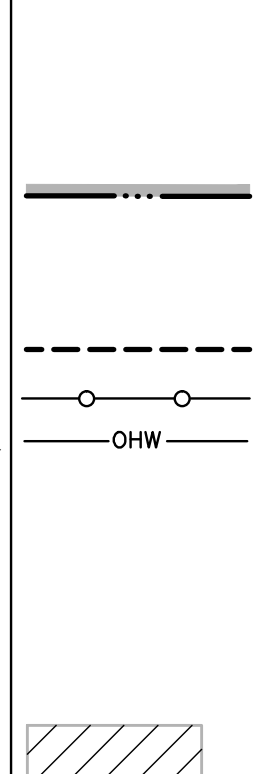
1. PRESERVE EXISTING NATIVE VEGETATION AS MUCH AS POSSIBLE.
2. EXISTING VEGETATION AND TOPSOIL SHOULD BE REMOVED, STOCKPILED, AND REINSTALLED ON EXPOSED SOILS ON SLOPING BANKS AT DAM SITE FOLLOWING CONSTRUCTION.
3. SEED EXPOSED SEDIMENT AT THE EDGES OF THE FORMER IMPOUNDMENT FOLLOWING DAM REMOVAL AND ALL AREAS DISTURBED DURING CONSTRUCTION.
4. SEED NATIVE SPECIES ONLY WITH WET MEADOW / DETENTION BASIN SEED MIX AS PRODUCED BY VERMONT WETLAND PLANT SUPPLY, ORWELL, VT 802-948-2553, OR APPROVED EQUAL.
5. APPLY TWO INCHES OF STRAW MULCH OVER ALL GRASS SEED.
6. REMOVE TEMPORARY ACCESS ROADS AND TEMPORARY STOCKPILE AREAS.
7. RESTORE ENTIRE PROJECT SITE TO ORIGINAL OR IMPROVED CONDITION.

LEGEND

EXISTING



PROPOSED



MILONE & MACBROOM®

1 South Main Street, 2nd Floor
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Fax: (802) 882-8346
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DESCRIPTION	DATE	BY

FINAL DESIGN

SITE PLAN - PROPOSED CONDITIONS

SAW MILL DAM (NY DAM ID # 237-0449) REMOVAL

BOQUET RIVER

MILL LANE & GILLILAND LANE

WILLSBORO, NEW YORK

JCL	JCL	RKS
DESIGNED	DRAWN	CHECKED
1"=20'		
SCALE		
MARCH 16, 2015		
DATE		
4199-06		
PROJECT NO.		
04 OF 12		
SHEET NO.		

SP-3

THIS PROPOSED DAM REMOVAL SEQUENCE IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED SEQUENCE TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

-
- STEP D: REMOVE SEDIMENT AND THE PORTION OF DAM THAT CAN BE REACHED FROM BANK. CREATE CONSTRUCTION ACCESS TO RIVER. SEE CP-2.
- STEP C: REMOVE SEDIMENT - BLOCKING SLUICWAY OPENING THAT CAN BE REACHED FROM BANK AND OPEN SLUICWAY GATE
- STEP 1- FILL SLUICWAY, COMPLETE MODIFICATIONS, AND ESTABLISH BANK

STEP D: REMOVE SEDIMENT AND THE PORTION OF DAM THAT CAN BE REACHED FROM BANK. CREATE CONSTRUCTION ACCESS TO RIVER. SEE CP-2.

STEP C: REMOVE SEDIMENT —
BLOCKING SLUICWAY OPENING
THAT CAN BE REACHED FROM BANK
AND OPEN SLUICWAY GATE/

STEP 1: FHL SLUICeway,
COMPLETE MODIFICATIONS, AND
ESTABLISH BANK

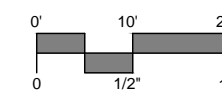
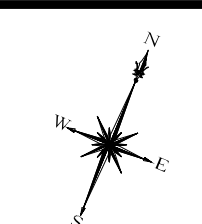
STEP E: REMOVE DAM SPILLWAY
(SEE REMOVALS AND SECTIONS)


STEP F: REMOVE SEDIMENT
ACCUMULATED BEHIND DAM
WITHIN DELINEATED ACTIVE
SEDIMENT REMOVAL AREA

LIMIT OF ACTIVE SEDIMENT REMOVAL AREA

— STEP G: COMPLETE WORK ON FISHWAY INCLUDING PARTIAL REMOVAL AND CONVERSION TO OBSERVATION AREA

✓ STEP H: REMOVE FILL AND RECONSTRUCT RIVER BANK



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[illegible]

FINAL DESIGN

CONSTRUCTION PLAN - SEQUENCE

SAW MILL DAM (NY DAM ID # 237-0449) REMOVAL

MILL LANE & GILLILAND LANE

JCL	JCL	RK
DESIGNED	DRAWN	CHECKED

1"=20'

MARCH 16, 2015

4199-06

05 OF 12

CP-1

SHEET NAME

EROSION CONTROL NOTES

1. THE SEDIMENT AND EROSION CONTROL PRACTICES IMPLEMENTED AS PART OF THE PROJECT SHALL BE IMPLEMENTED AND MAINTAINED ACCORDING TO "THE LOW RISK SITE HANDBOOK FOR EROSION PROTECTION AND SEDIMENT CONTROL" GUIDANCE DOCUMENT FROM THE VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION, WHERE APPLICABLE IN CONSULTATION WITH PROJECT ENGINEER.
2. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
3. CLEARING OF NATIVE VEGETATION FOR CONSTRUCTION ACCESS SHOULD BE MINIMIZED.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES. THE CONTRACTOR WILL VERIFY THE MAINTENANCE WEEKLY AND AFTER RAIN EVENTS AND REPORT TO PROJECT ENGINEER.
5. THE PROJECT ENGINEER IS TO BE NOTIFIED IMMEDIATELY IF EXCESSIVE SEDIMENT EROSION TAKES PLACE. IF SIGNIFICANT FINE GRAIN SEDIMENT IS ENCOUNTERED OR IF POTENTIALLY CONTAMINATED SEDIMENTS ARE ENCOUNTERED (OILY, DARK COLOR, CHEMICAL ODOR).
6. PLAN AND PERFORM WORK FOR LOW FLOW PERIODS.
7. ANY DISTURBED SLOPES 2:1 OR STEEPER SHALL BE STABILIZED WITH EROSION CONTROL BLANKET PER DIRECTION OF PROJECT ENGINEER, SEE DETAIL.

WATER CONTROL PLAN

1. THE PROPOSED WATER CONTROL PLAN IS PROVIDED AS A RECOMMENDED APPROACH TO DEWATER THE WORK AREA. THE CONTRACTOR IS RESPONSIBLE FOR SUBMITTING A PROPOSED WATER CONTROL PLAN TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION
2. BEGIN WORK DURING LOW WATER.
3. TURBIDITY CURTAIN SHALL BE INSTALLED PRIOR TO IN-CHANNEL WORK AND MAINTAINED THROUGH END OF PROJECT.
4. WORK TO BE COMPLETED IN THE DRY TO MINIMIZE RIVER CHANNEL DISTURBANCE. WORK ON EXPOSED BEDROCK OR ON PORTABLE CONSTRUCTION MATS.
5. INSTALL DEWATERING BASIN OR OTHER APPROVED DEWATERING DEVICE TO RECEIVE WET SEDIMENT IF NOT IMMEDIATELY REMOVED FROM THE SITE. NO PERMANENT DISTURBANCE SHOULD TAKE PLACE DUE TO DEWATERING BASIN PLACEMENT.
6. REMOVE BOARDS FROM SLUICeway GATE TO LOWER WATER LEVEL AFTER REMOVING ALL SEDIMENT IN FRONT OF IT THAT CAN BE REACHED FROM THE BANK. WAIT FOR IMPOUNDMENT LEVEL TO LOWER PRIOR TO BEGINNING NEXT STEPS.
7. BREACH LEFT PORTION OF DAM AFTER REMOVING ALL SEDIMENT IN FRONT OF IT THAT CAN BE REACHED FROM THE BANK.
8. ONE TO THREE 36-INCH CULVERTS MAY BE USED TO CONVEY THE SUMMER MEDIAN FLOW (~100 CFS) THROUGH THE SITE IN CONJUNCTION WITH THE SLUICeway. WORK IS ANTICIPATED DURING LOW FLOW. FLOW THROUGH THE GRAVEL RAMP, CONSTRUCTION MATS, AND DAM IS ANTICIPATED.
9. COFFERDAMS MAY BE USED TO DIRECT WATER TO SLUICeway OR INTO CULVERTS UNDER CONSTRUCTION ACCESS DURING DAM REMOVAL. SEE DETAIL. ALL COFFERDAMS NEED TO BE REMOVED AT END OF PROJECT.
10. BUILD COFFERDAMS AS NEEDED TO DIRECT WATER AWAY FROM CURRENT WORK AREAS. USE OF A COFFERDAM IS EXPECTED DURING REMOVAL OF THE FISHWAY AND REMOVAL OF FILL AND RELOCATION OF THE RIPRAP ON THE LEFT BANK.
11. REMOVE DEWATERING BASIN AND TURBIDITY CURTAIN AND DISPOSE OF COLLECTED SEDIMENT IN LEGAL AREA OUTSIDE OF FLOODPLAIN.

TRAFFIC MANAGEMENT NOTES

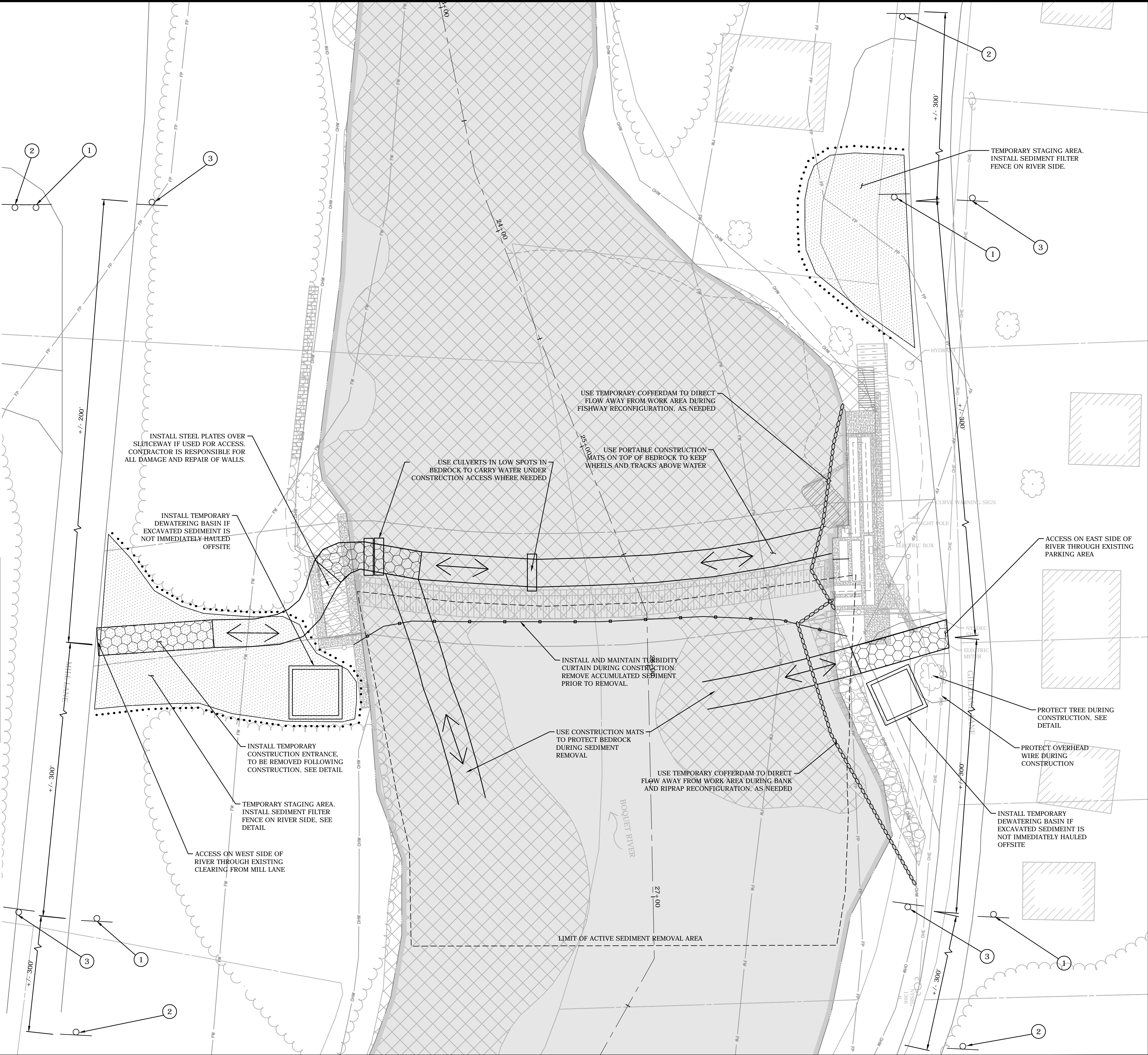
1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS.
2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
3. ALL CONSTRUCTION SIGNS SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF WORK.
4. TOWN POLICE OFFICERS OR UNIFORMED FLAGGERS SHALL BE UTILIZED WHENEVER TRANSPORT OF EQUIPMENT OR MATERIAL TO OR FROM THE CONSTRUCTION SITE IS NECESSARY.
5. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.

CONSTRUCTION SIGN LEGEND

PLAN DESIGNATION	MESSAGE	SIZE	MUTCD DESIGNATION
1	TRUCK CROSSING	60" x 42"	W8-6
2	CONSTRUCTION WORK AHEAD	36" x 36"	W20-SERIES
3	END OF CONSTRUCTION WORK	48" x 10" 48" x 18"	G20-2

LEGEND
CONSTRUCTION

	TEMPORARY STAGING AREA
	TEMPORARY CONSTRUCTION ENTRANCE
	TEMPORARY CONSTRUCTION ACCESS
	TEMPORARY DEWATERING BASIN
	TEMPORARY TURBIDITY CURTAIN
	TEMPORARY SILT FENCE
	TEMPORARY COFFERDAM
	CONSTRUCTION SIGN



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(802) 882-8335
Fax: (802) 882-8346
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DESCRIPTION	DATE	BY

CONSTRUCTION PLAN - SEDIMENT, WATER, & TRAFFIC CONTROL

SAW MILL DAM (NY DAM ID # 237-0449) REMOVAL

BOQUET RIVER

MILL LANE & GILLILLAND LANE
WILLSBORO, NEW YORK

FINAL DESIGN

JCL	JCL	RKS
DESIGNED	DRAWN	CHECKED

SCALE: **1"=20'**

DATE: **MARCH 16, 2015**

PROJECT NO.: **4199-06**

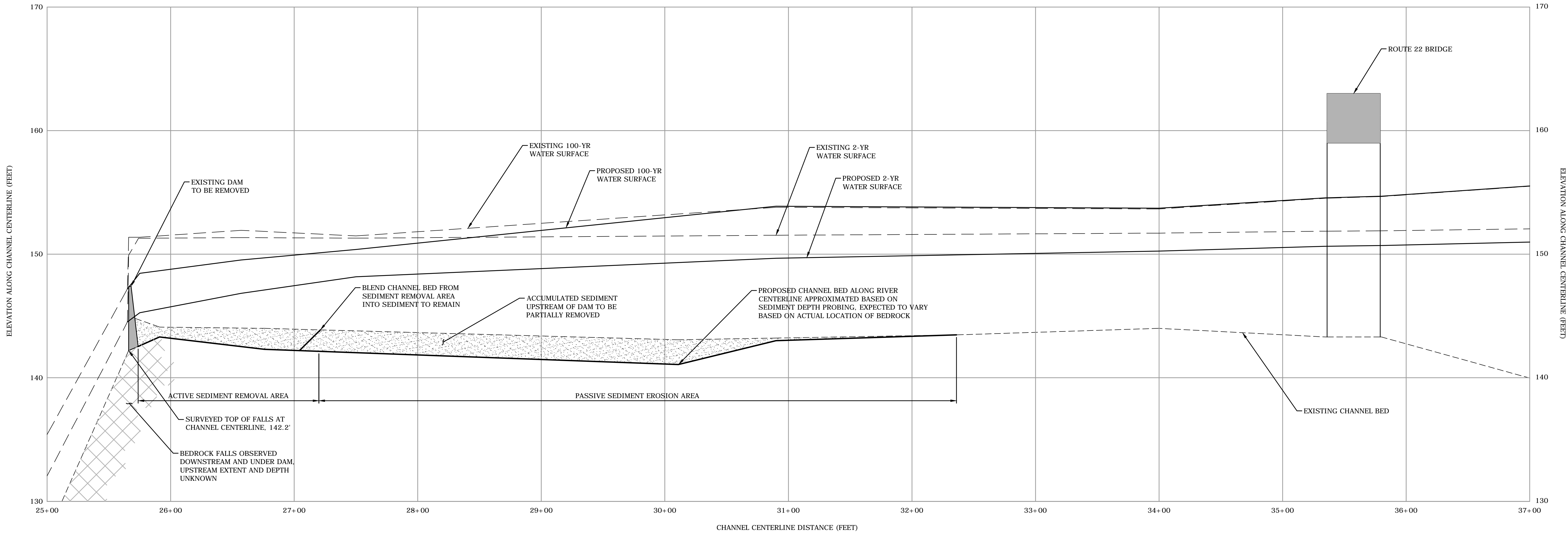
SHEET NO.: **06 OF 12**

CP-2

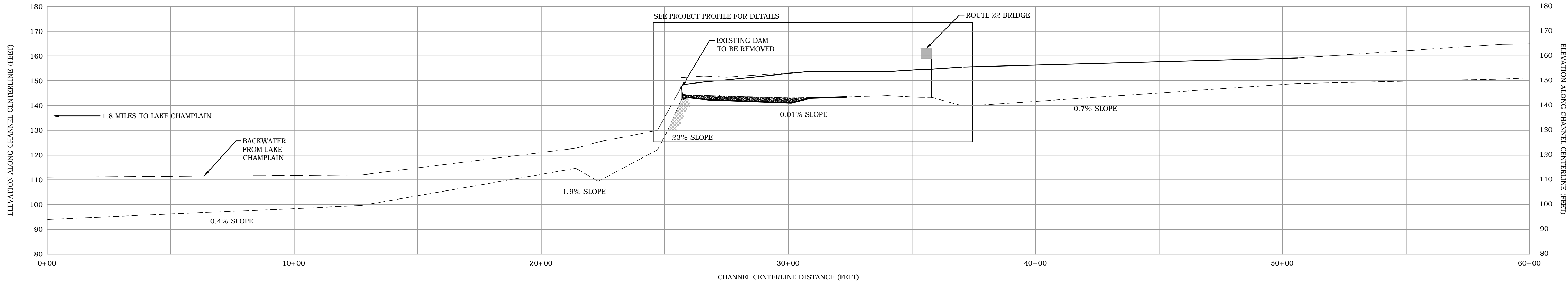
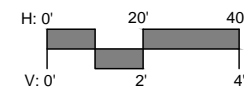
SHEET NAME

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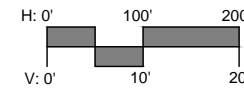
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PROJECT PROFILE
SCALE: H: 1"=40', V: 1"=4'

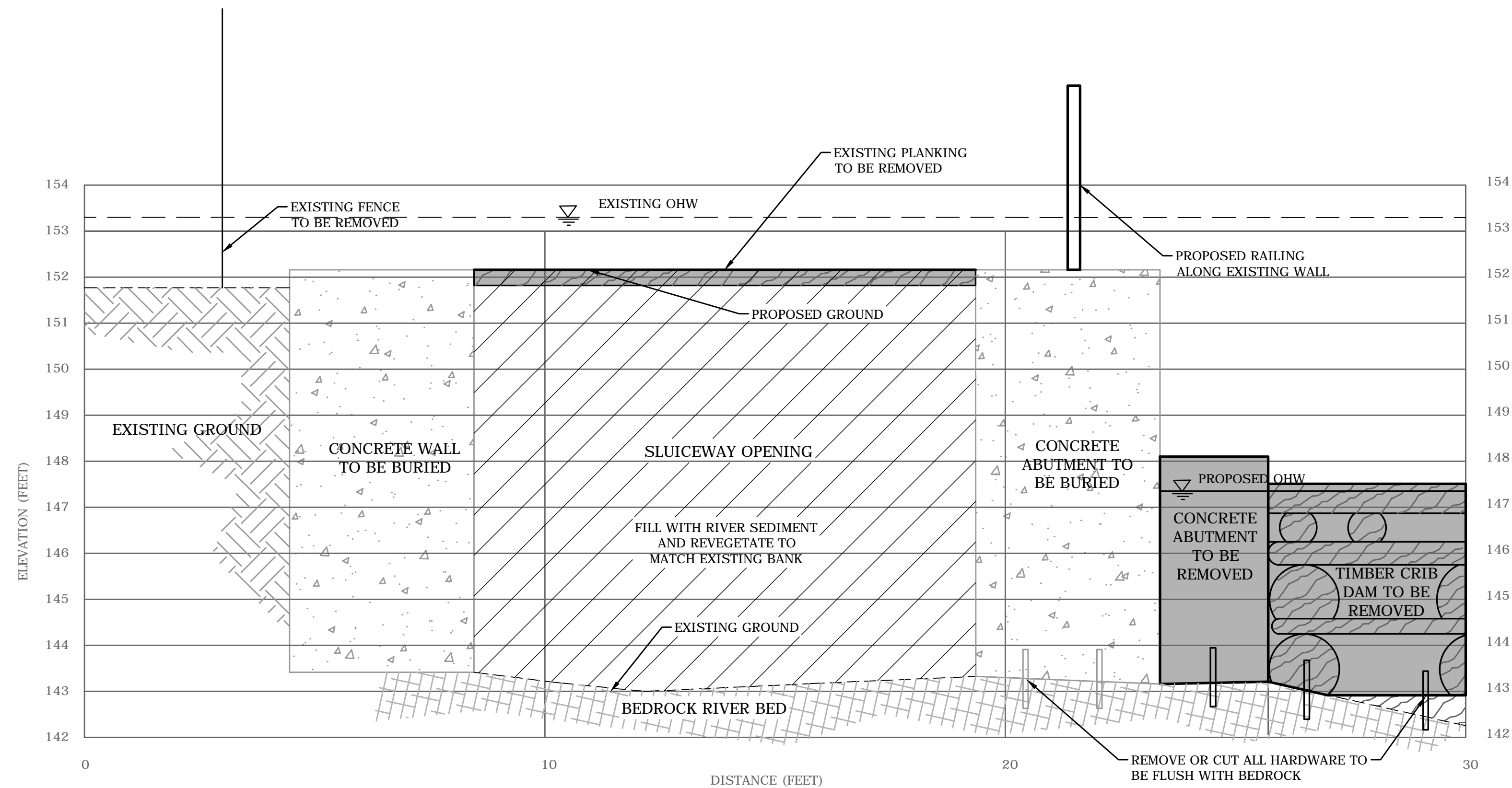


CHANNEL PROFILE
SCALE: H: 1"=200', V: 1"=20'

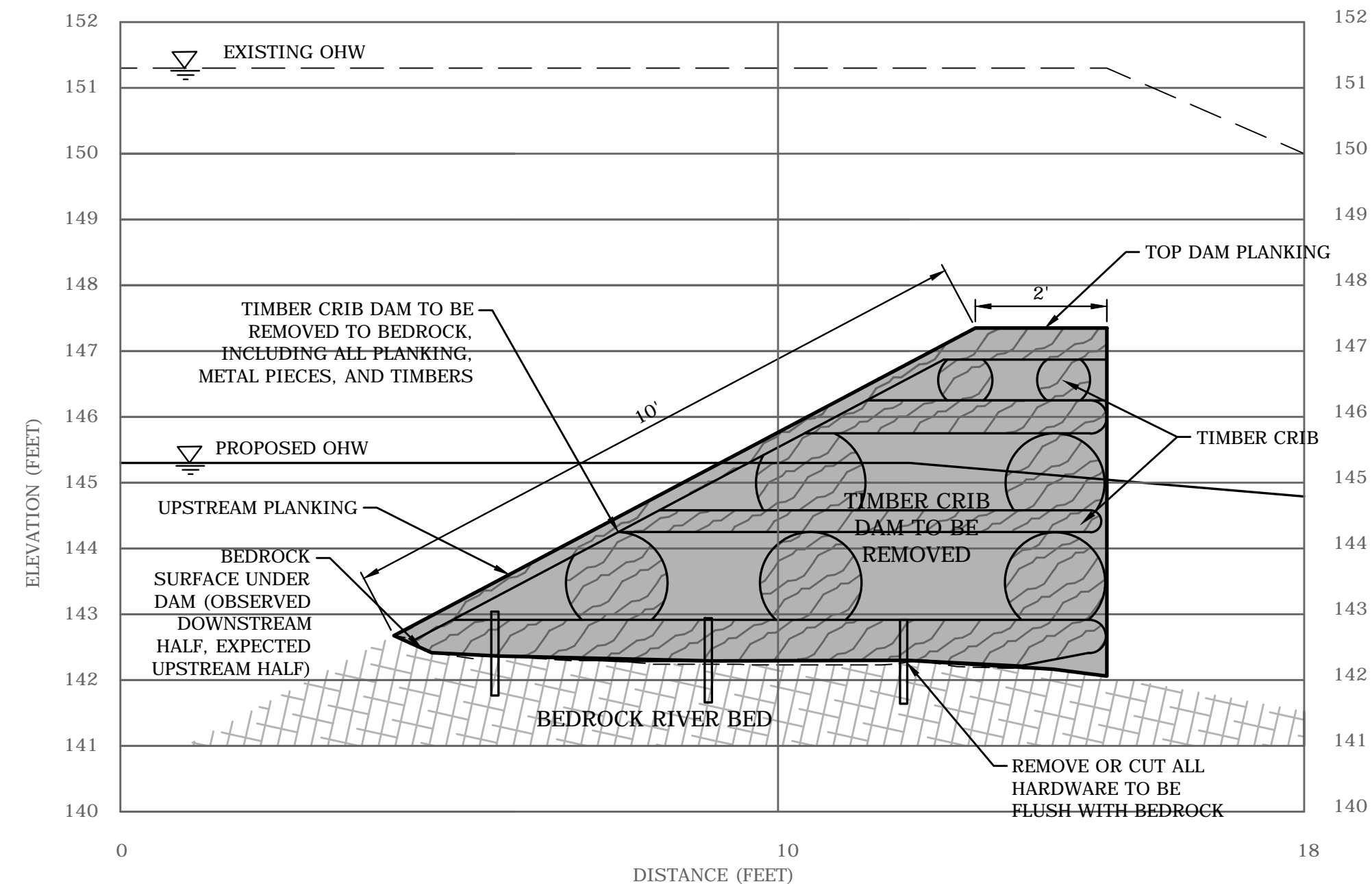


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DESCRIPTION	DATE	BY
PROFILE		
SAW MILL DAM (NY DAM ID # 237-0449) REMOVAL		
BOQUET RIVER		
MILL LANE & GILLILAND LANE		
WILLSBORO, NEW YORK		
JCL DESIGNED	JCL DRAWN	RKS CHECKED
VARIES		
DATE MARCH 16, 2015		
PROJECT NO. 4199-06		
SHEET NO. 07 OF 12		
PR-1		
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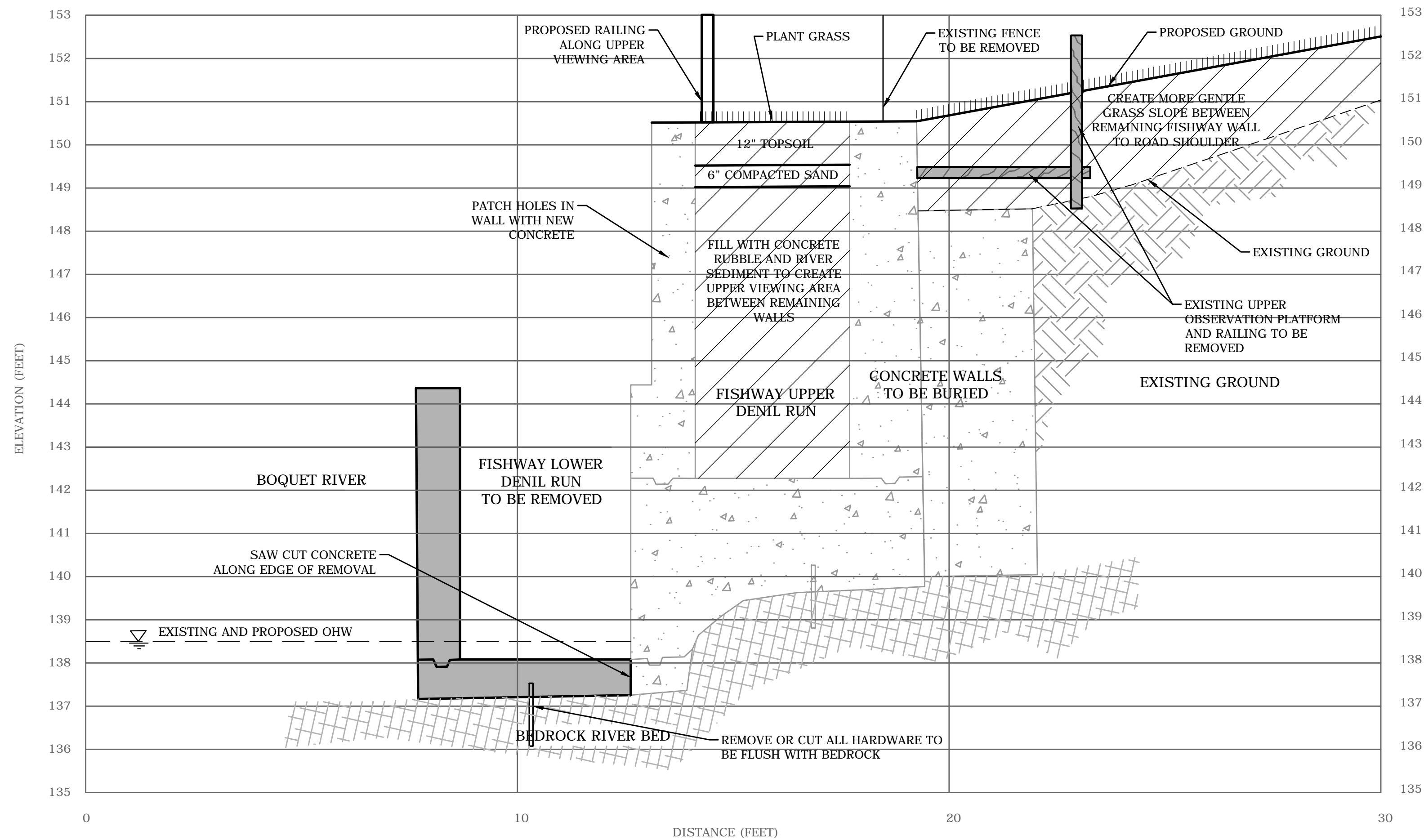
PROJECT: FISHWAY RESTORATION
DRAWN BY: JCL
CHECKED BY: RKS
DATE: 03/16/2015
SCALE: 1"=2'



CROSS SECTION A-A
SCALE: 1"=2'



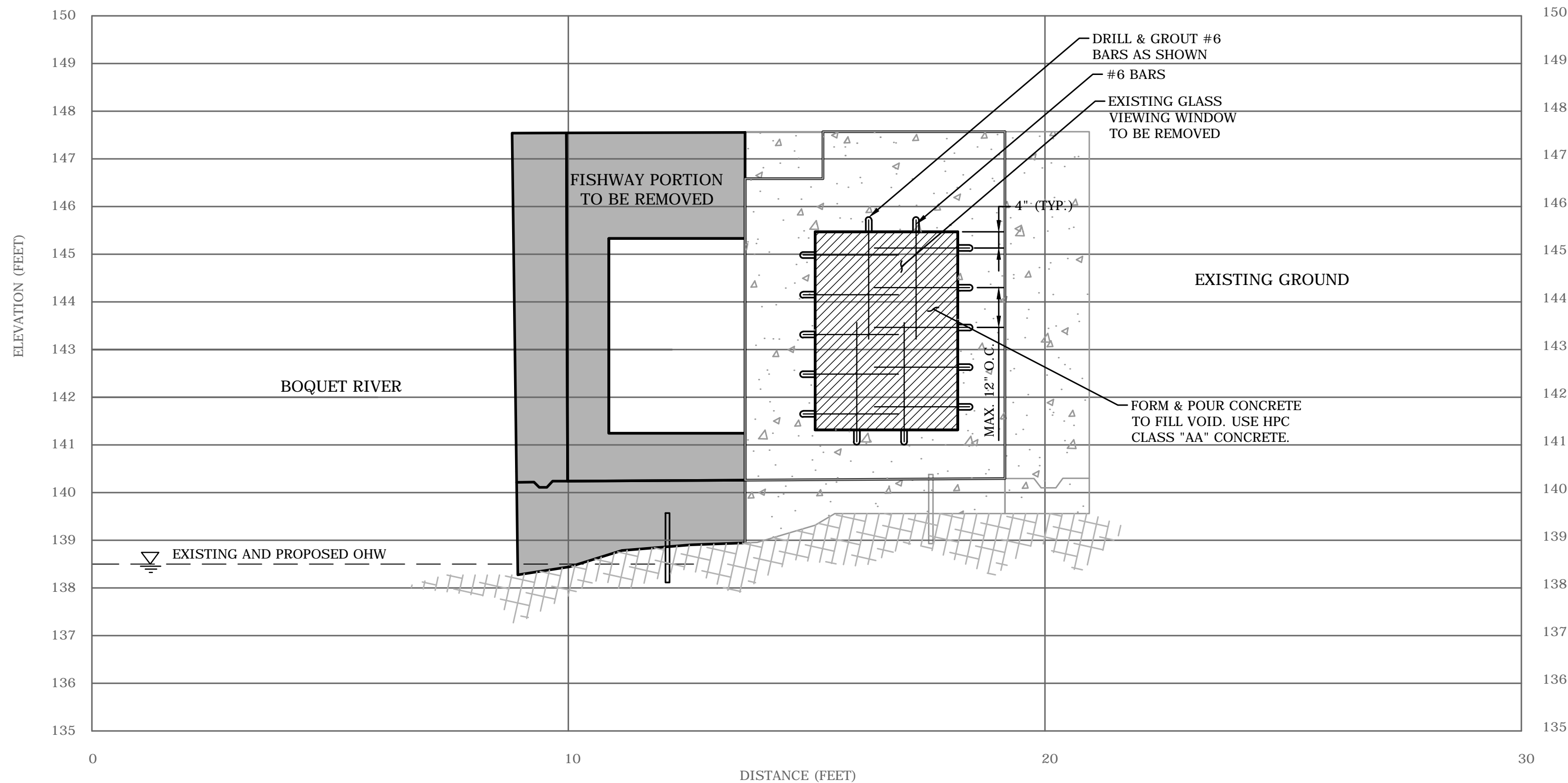
CROSS SECTION B-B
SCALE: 1"=2'



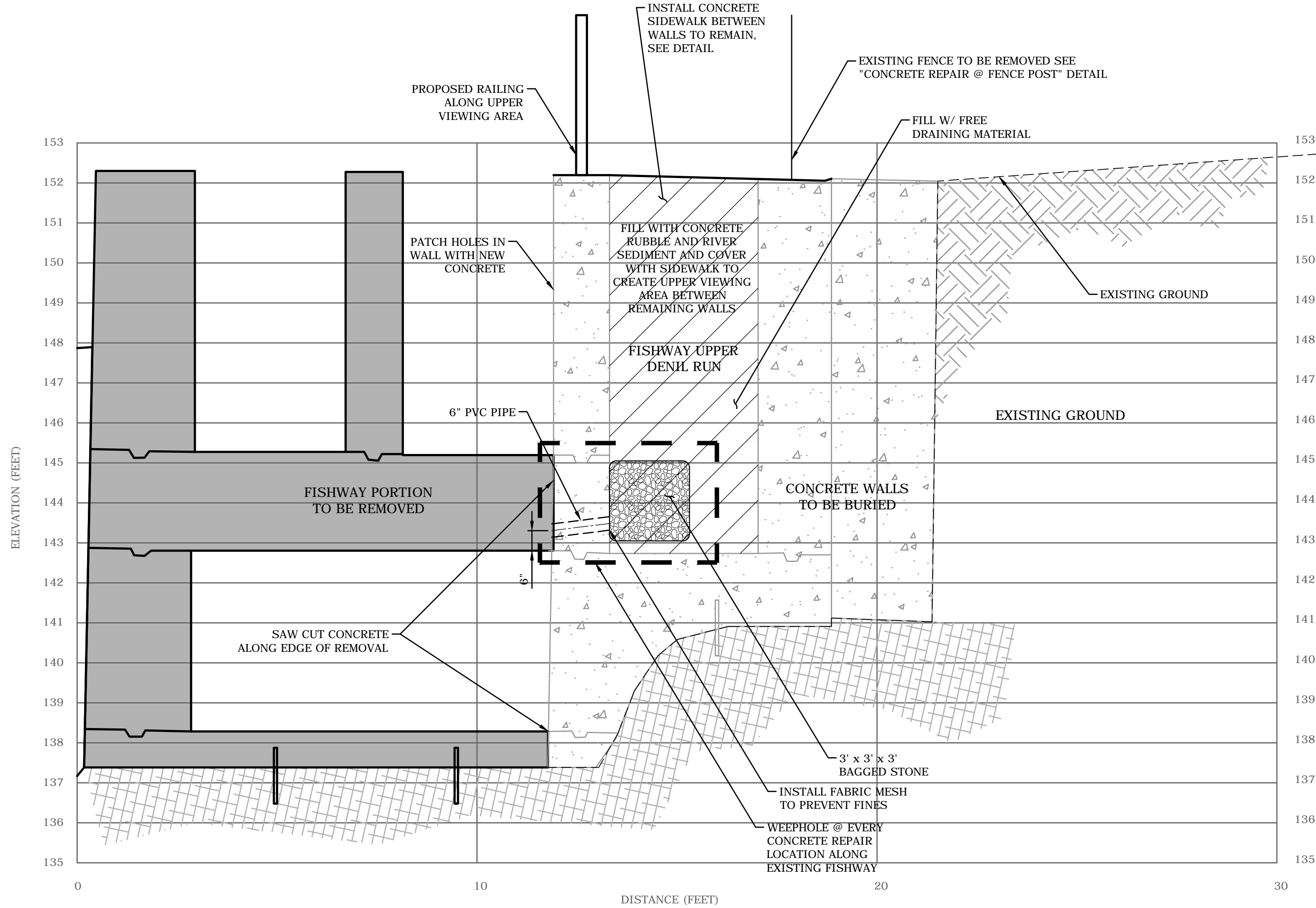
CROSS SECTION C-C
SCALE: 1"=2'

DESCRIPTION	DATE	BY

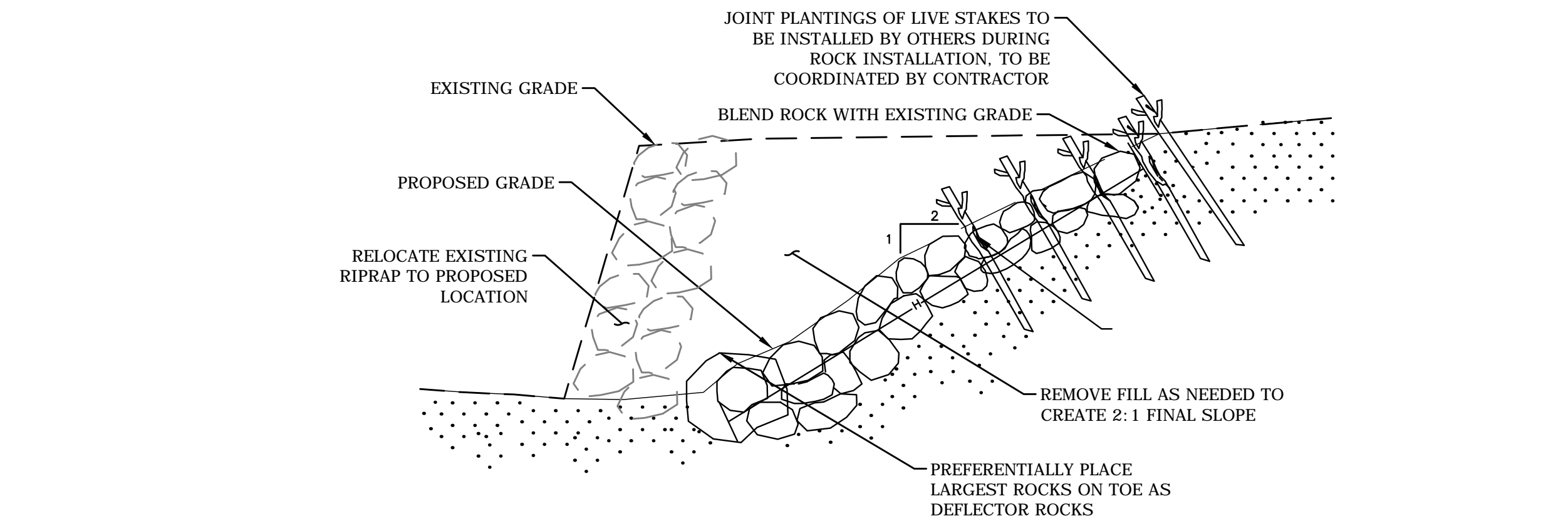
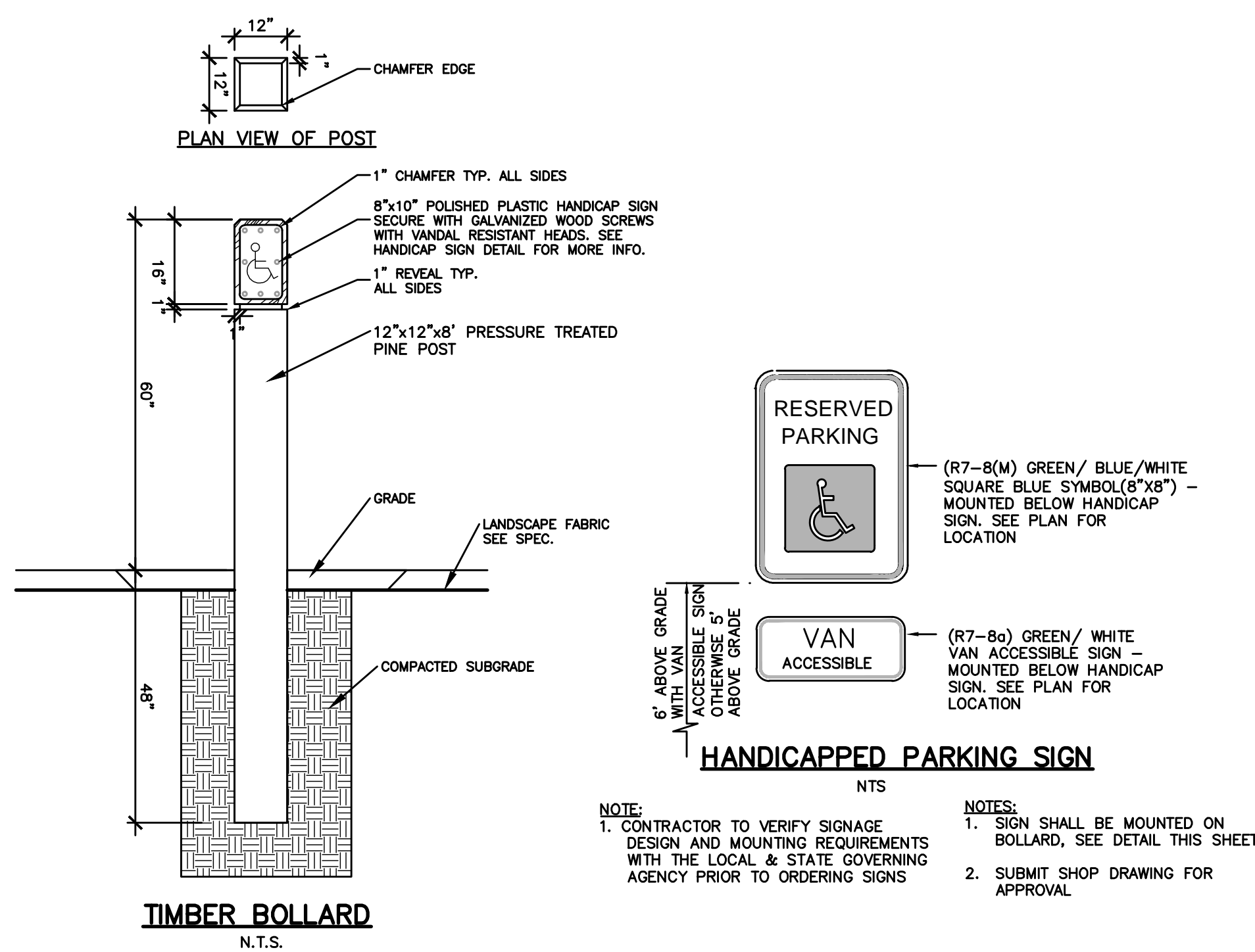
JCL	JCL	RKS
DESIGNED	DRAWN	CHECKED
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DATE: MARCH 16, 2015		
PROJECT NO: 4199-06		
SHEET NO: 09 OF 12		



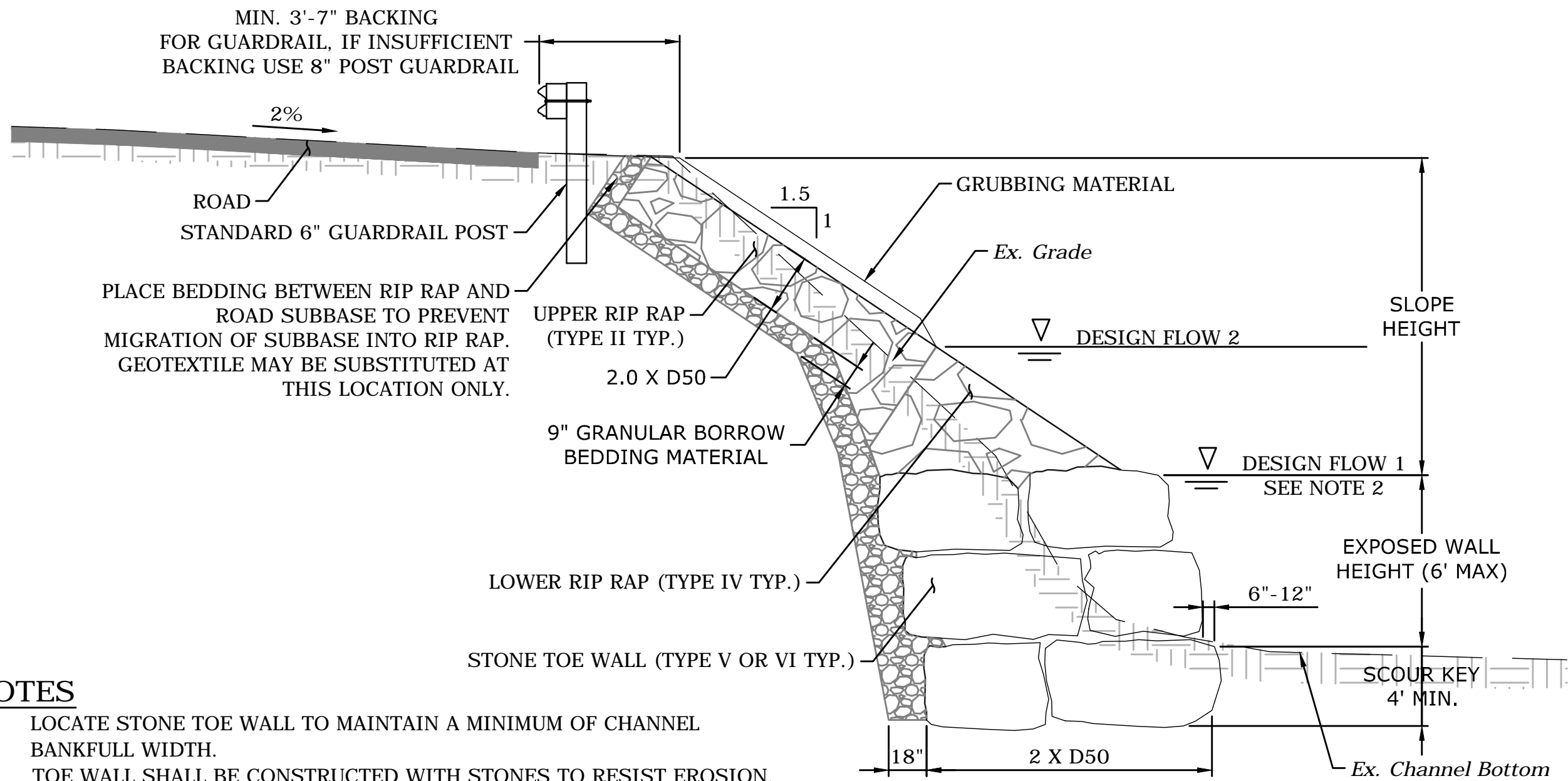
TYPICAL CONCRETE REPAIR
NOT TO SCALE



**TYPICAL SECTION AT
OBSERVATION PLATFORM**
NOT TO SCALE



RIPRAP SLOPE
NOT TO SCALE



PLACED RIP RAP WALL
NOT TO SCALE

- NOTES**
1. LOCATE STONE TOE WALL TO MAINTAIN A MINIMUM OF CHANNEL BANKFULL WIDTH.
 2. TOE WALL SHALL BE CONSTRUCTED WITH STONES TO RESIST EROSION, AND IN NO CASES SHALL THE INTERMEDIATE DIMENSION OF ANY STONE BE LESS THAN 3'.
 3. WALL SHALL BE CONSTRUCTED WITH STAGGERED JOINTS BETWEEN ROCKS ON ADJACENT TIERS.
 4. FOOTER ROCK SHALL BE EMBEDDED BELOW THE CHANNEL BOTTOM A MINIMUM OF 4'. CONTRACTOR TO CAREFULLY SELECT AND PLACE INDIVIDUAL STONES TO MAXIMIZE CONTACT WITH ADJACENT STONES.
 5. BACKFILL VOIDS WITH GRANULAR MATERIAL TO FILL VOIDS.
 6. TO THE EXTENT PRACTICAL STONES SHALL DIP TOWARD THE EMBANKMENT TO BETTER RESIST SLIDING FORCES.

DESCRIPTION	DATE	BY

JCL	JCL	RKS
DESIGNED	DRAWN	CHECKED
VARIES		
MARCH 16, 2015		
4199-06		
10 OF 12		



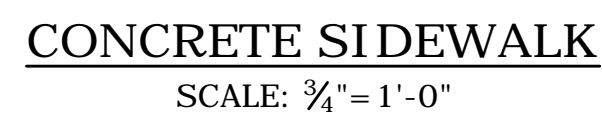
- NOTES**
1. THE CONTRACTOR SHALL SUBMIT FENCE SHOP DRAWINGS FOR APPROVAL.
 2. ALL FENCE HARDWARE SHALL BE BLACK PVC COATED.



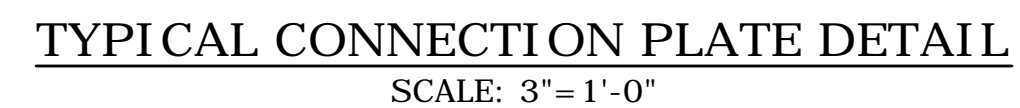
- ## NOTES
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.
 2. ALL HARDWARE AND FENCE TO BE BLACK PVC COATED.



CONCRETE CURB DETAIL
SCALE: 1/2" = 1'-0"



- ## NOTES
1. EXP. JOINTS 20' O.C. MAX. CONTROL JOINTS 5' O.C. TYP. (OR AS SHOWN ON PLANS)
 2. SIDEWALK WIDTH VARIES.
 3. EXPANSION JOINTS SHALL BE PROVIDED AT INTERVALS THAT DO NOT EXCEED 144 SF.

[illegible]

DETAILS - SITE

SAW MILL DAM (NY DAM ID # 237-0449) REMOVAL

SAW MILL DAM (NY DAM III)

KP	NP	KP
DESIGNED	DRAWN	CHECKED

AS NOTED

MARCH 16, 2015

DATE _____

PROJECT NO. **4199-06**

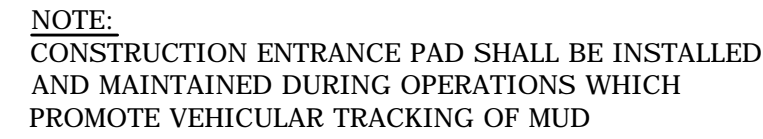
11 OF 12

SHEET NO.

D-2

D-2

SHEET NAME



NOT TO SCALE



NOT TO SCALE



NOTE:

1. IF PUMPING VOLUME EXCEEDS BASIN CAPACITY, BASIN MAY BE USED IN TANDEM OR TIERS.
2. INCREASE RIPRAP SIZE ON BASIN BOTTOM AS NECESSARY TO MAINTAIN SEDIMENT-FREE DISCHARGE WATERS

NOT TO SCALE



SCALE: $\frac{1}{2}" = 1'-0"$

[illegible]

DETAILS - CONSTRUCTION

**SAW MILL DAM (NY DAM ID # 237-0449) REMOVAL
BOQUET RIVER**

**MILL LANE & GILLILAND LANE
WILLSBORO, NEW YORK**

JCL	JCL	RKS
DESIGNED	DRAWN	CHECKED

VARIES

MARCH 16, 2015

4199-06

12 OF 12

D-3

SHEET NAME _____

FINAL DESIGN

Attachment B: Bid Sheet

BID SHEET**Saw Mill (NY Dam ID #237-0449) Removal, Boquet River****Willsboro, New York****May 7, 2015**

Company:

Contact:

Address:

Phone:

Email:

Reference 1:

Reference 2:

Bid Item	Typical Tasks	Item Cost (\$)
A. MOBILIZATION / DEMOBILIZATION	Job site setup, sediment and erosion controls, construction signage, and site access.	
B. WATER CONTROL AND SEDIMENT CONTROL	Water control during removals, cofferdams, culverts, truck mats, and access ramps.	
C. DEMOLITION AND REMOVALS	Removal and hauling of timber crib dam, fishway concrete sill, and part of fishway.	
D. CONCRETE	Furnish and install patch in remaining fishway (3 CY), patch in remaining sluiceway (5 CY), and sidewalk on portion of fishway (6 CY).	
E. RIVER CHANNEL	Remove sediment accumulated upstream of dam (800 CY) and place onsite or haul offsite. Remove riprap and fill on right bank (400 CY). Reinstall riprap on right bank (200 CY).	
F. SITE AMENITIES	Railing at proposed observation area at remaining fishway (130 LF) and remaining sluiceway (85 LF). Install dry hydrant (equipment provided by others).	
G. SITE RESTORATION	Apply topsoil in portion of remaining fishway and sluiceway (30 CY). Finish grade slope adjacent to fishway and other areas. Seed and mulch all disturbed surfaces.	
TOTAL BID		

Add Alternative:		Unit Cost (\$/CY)
H. ROCK EXCAVATION	Use hydraulic hammer to remove bedrock in fish passage area (0 to 10 CY).	