

EAST BRIDGEWATER, MA

COTTON GIN DAM REMOVAL

DIVISION OF ECOLOGICAL RESTORATION
MASSACHUSETTS DEPT. OF FISH & GAME
251 CAUSEWAY STREET
BOSTON, MA 02114

RECORD DRAWINGS

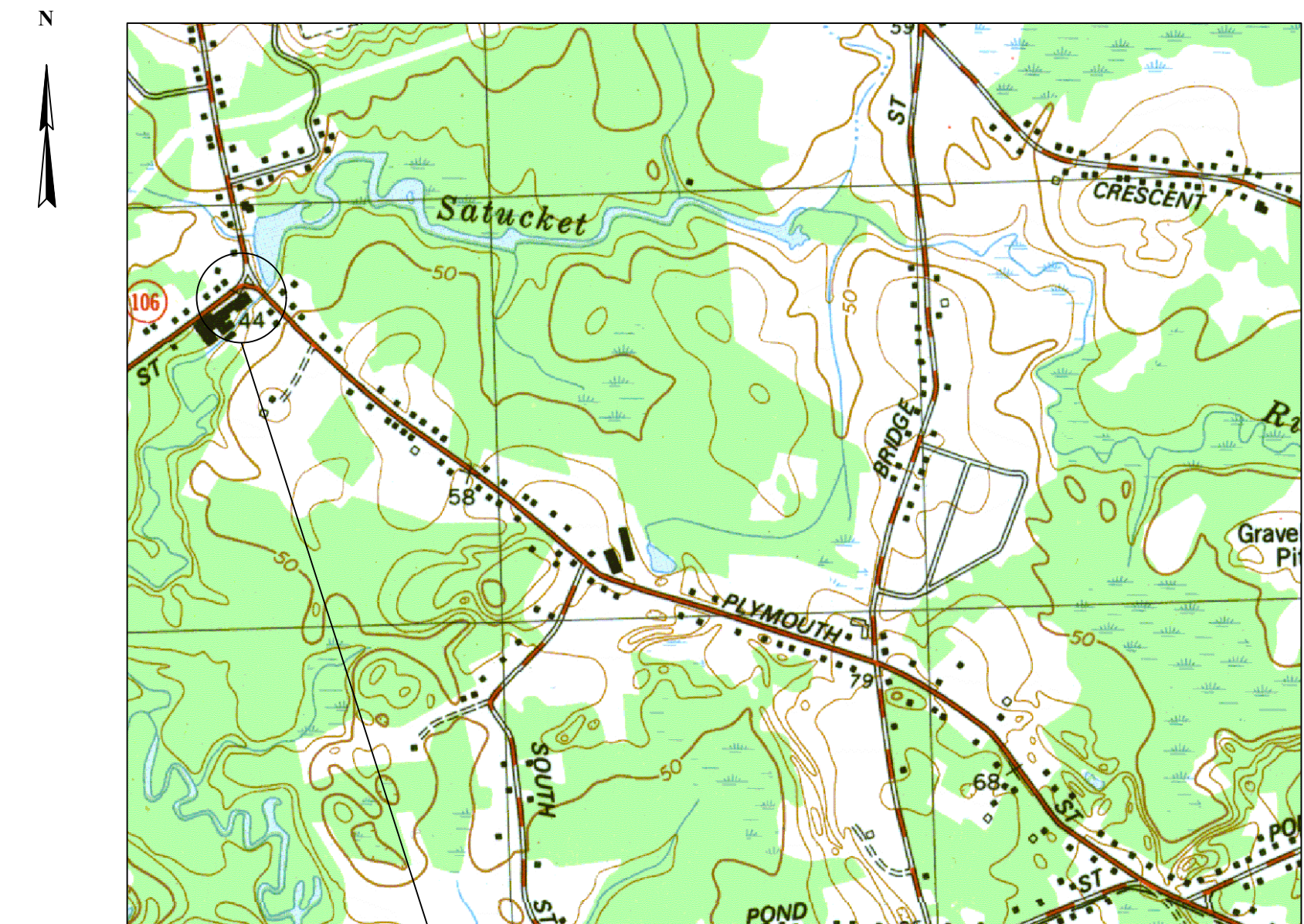
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NOTE:
DRAWINGS 1 THROUGH 13 ARE THE CONSTRUCTION DESIGN DRAWINGS AND DRAWINGS 14, 15, AND 16 ARE THE CONSTRUCTION RECORD DRAWINGS.



SOURCE: USGS


Project Site



SOURCE: BING

COTTON GIN DAM REMOVAL PROJECT

COVER SHEET

 <i>Richard L. Stewart</i>						COVER SHEET
	4/27/18	1	RECORD DRAWINGS	JSC	RLS	
	6/5/17	0	ISSUED FOR BID	JSC	RLS	
	ISSUE #	DESCRIPTION		BY	APP	
	DRAWN BY: JSC					
CHECKED BY: KJC						
APPROVED BY: RLS						
PROJECT NO. 1934 DATE: 4/27/18						
The Nature Conservancy 99 Bedford Street, 5th Floor Boston, MA 02111					Gomez and Sullivan Engineers, D.P.C. 41 Liberty Hill Road PO Box 2179 Henniker, NH 03242	
SCALE: NONE					DRAWING: 1	



PROJECT PARTNERS:
THE NATURE CONSERVANCY
MASSACHUSETTS DIVISION OF ECOLOGICAL RESTORATION
NOAA RESTORATION CENTER
US FISH AND WILDLIFE FOUNDATION
NATIONAL FISH AND WILDLIFE FOUNDATION
MASSACHUSETTS DAM AND SEAWALL REPAIR OR REMOVAL PROGRAM
ATLANTIC COASTAL FISH HABITAT PARTNERSHIP
TOWN OF EAST BRIDGEWATER

DESCRIPTION OF WORK

1. PROJECT CONSISTS OF CONSTRUCTING A SCOUR COUNTERMEASURE AT THE ROUTE 106 BRIDGE (BRIDGE NO. E-1-12), REMOVING THE CARVER COTTON GIN DAM IN THE SATUCKET RIVER, AND CONSTRUCTING A ROCK RIFFLE.
2. THE COTTON GIN DAM CONSISTS OF A RUBBLE FILL CORE WITH A CONCRETE OVERLAY, AND IS APPROXIMATELY 75 FEET LONG AND 15 FEET HIGH.
3. THE WORK CONSISTS OF COMPLETE REMOVAL OF THE DAM EXCEPT FOR A PORTION AT THE RIGHT ABUTMENT WHERE THE DAM IS INTEGRAL WITH THE ADJACENT BUILDING FOUNDATION, AND A PORTION AT THE LEFT ABUTMENT.
4. STAGING AND ACCESS TO THE WORK AREA WILL BE AT THE EAST SIDE OF THE RIVER.
5. PROJECT IS LOCATED AT 15 WHITMAN STREET, EAST BRIDGEWATER, MA 02114, TAX PARCEL 40-49-0.

GENERAL NOTES

1. HORIZONTAL DATUM: NAD 1983 STATE PLANE MASSACHUSETTS MAINLAND (FT).
2. VERTICAL DATUM: NAVD 88. CONTOUR INTERVAL: 2 FT.
3. TOPOGRAPHY DERIVED FROM LIDAR TERRAIN DATA OBTAINED IN 2011 (VERTICAL ACCURACY APPROX. 1 FT; AVAILABLE FROM MASSGIS).
4. EXISTING STRUCTURE ELEVATIONS & TOPOGRAPHY SUPPLEMENTED WITH SURVEY DATA COLLECTED BY GOMEZ AND SULLIVAN ENGINEERS ON SEPTEMBER AND NOVEMBER 2014 USING AN RTK GPS AND TOTAL STATION (ACCURACY APPROX. 0.1 FT HORIZONTALLY AND 0.2 FT VERTICALLY).
5. WETLAND BOUNDARIES DELINEATED BY BRUCE GRIFFIN, CERTIFIED PROFESSIONAL WETLAND SCIENTIST (CERTIFICATION NUMBER 001754), FROM NEW ENGLAND ENVIRONMENTAL, INC. IN NOVEMBER 2014. OTHER REGULATED RESOURCE AREA BOUNDARIES OBTAINED FROM MASSGIS OR DELINEATED ACCORDING TO MASSACHUSETTS REGULATIONS.
6. THE PROPERTY LINES AND RIGHT OF WAYS DEPICTED ARE FROM PROPERTY LINE PLAN PREPARED BY HORSLEY WITTEN GROUP INC, DATED DECEMBER 29, 2016.
7. A GEOPHYSICAL SURVEY WAS PERFORMED IN THE VICINITY OF THE ROUTE 106 BRIDGE ON JUNE 24 AND 25, 2015 BY HAGAR GEOSCIENCE, INC. REFER TO THE REPORT DATED AUGUST 13, 2015 FOR DETAILS.
8. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM VISIBLE FIELD SURVEY INFORMATION. THE ENGINEER OR SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER OR SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED THOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE ENGINEER OR SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING UNDERGROUND UTILITY CHECKS IN ACCORDANCE WITH MASSACHUSETTS STATE REGULATIONS. CONTRACTOR SHALL NOTIFY DIG SAFE MASSACHUSETTS AT 811 OR 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION. SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS ARE NOT TO BE INCLUDED IN THE REQUIRED 72 HOUR NOTICE.
9. CONTRACTOR SHALL CONFIRM THE LOCATION OF ALL UTILITIES PRIOR TO THE COMMENCEMENT OF EXCAVATION.
10. CONTRACTOR SHALL PAY FOR AND OBTAIN ALL RELEVANT CONSTRUCTION PERMITS PRIOR TO THE START OF CONSTRUCTION AND COMPLY WITH ALL CONDITIONS CONTAINED IN RELEVANT PERMITS.
11. THE CONTRACTOR SHALL INSTALL PROPOSED EROSION CONTROL DEVICES PRIOR TO CONSTRUCTION ACTIVITY AND SHALL BE RESPONSIBLE FOR THEIR MAINTENANCE, REPOSITIONING AND REMOVAL.
12. CONTRACTOR SHALL NOT DISTURB ANY MAPPED DOCUMENTED OR POTENTIAL ARCHEOLOGICAL FEATURES DURING CONSTRUCTION.
13. HAZARDOUS MATERIALS EXIST ON THE PROPERTY TO THE SOUTH OF THE PROJECT AREA. ASBESTOS ON THE CREST OF THE DAM MUST BE REMOVED AND PROPERLY DISPOSED. REFER TO THE SITE INSPECTION PRIORITIZATION REPORT PREPARED BY ROY F. WESTON, INC. IN MARCH 28, 1996 FOR DETAILS.

TRAFFIC MANAGEMENT PLAN

1. CONTRACTOR SHALL IMPLEMENT TRAFFIC CONTROL. TRAFFIC MANAGEMENT PLAN PREPARED IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND MASSDOT TRAFFIC CONTROL STANDARDS IS INCLUDED.

CONSTRUCTION WASTE MANAGEMENT PLAN

1. SITE SHALL BE KEPT WELL ORGANIZED, SIGNED, AND FREE OF WASTE MATERIALS, DEBRIS, AND RUBBISH AT ALL TIMES. GOOD HOUSEKEEPING PRACTICES SHALL BE MAINTAINED ON A CONTINUOUS BASIS FROM WORK SITE TO WORK SITE. DISPOSAL OF ANY WASTE MATERIALS ON THE CONSTRUCTION SITE IS PROHIBITED.
2. SANITARY, WASTE DISPOSAL, AND EMPLOYEE FACILITIES SHALL BE PROVIDED BY CONTRACTOR.
3. ALL WATER RESOURCES (E.G., GROUND AND SURFACE WATERS), INCLUDING ALL DRAINS AND CATCH BASINS, SHALL BE PROTECTED FROM LEACHING AND/OR RUN-OFF OF CHEMICAL POLLUTANTS, SOLID WASTES, AND CONSTRUCTION SITE DEBRIS. ALL CATCH BASINS SHALL BE MAINTAINED FREE FLOWING.
4. ALL COMBUSTIBLE WASTE MATERIALS SHALL BE PLACED IN COVERED METAL CONTAINERS AND PROMPTLY DISPOSED OF IN AN APPROVED MANNER AT AN APPROVED WASTE DISPOSAL FACILITY.
5. STORAGE AND/OR USE OF CHEMICALS, FUELS, OILS, GREASES, BITUMINOUS MATERIALS, SOLIDS, WASTE WASHINGS, AND CEMENT SHALL BE HANDLED APPROPRIATELY AS TO PREVENT LEACHING OR SURFACE RUNOFF INTO PUBLIC WATERS OR DRAINS. ALL AUTHORITY APPROVED STORAGE AREAS FOR THESE MATERIALS MUST BE DIKED.
6. ALL ROADWAYS SHALL BE MAINTAINED FREE OF DEBRIS. STABILIZED CONSTRUCTION ENTRANCES SHALL BE CONSTRUCTED TO CAPTURE DEBRIS FROM WHEELS OF CONSTRUCTION VEHICLES. VEHICLES SHALL BE INSPECTED AT ENTRANCES BEFORE TURNING ONTO THE ROADWAY AND EXCESS DEBRIS SHALL BE REMOVED.
7. IDLING OF CONSTRUCTION EQUIPMENT SHALL BE LIMITED TO MINIMIZE EMISSIONS AT THE SITE.

CONSTRUCTION ROAD STABILIZATION

1. DEFINITION: THE STABILIZATION OF TEMPORARY CONSTRUCTION ACCESS ROUTES, ON-SITE VEHICLE TRANSPORTATION ROUTES, AND CONSTRUCTION PARKING AREAS.
2. PURPOSE: TO CONTROL EROSION ON TEMPORARY CONSTRUCTION ROUTES AND PARKING AREAS.

3. CONDITION WHERE PRACTICE APPLIES: ALL TRAFFIC ROUTES AND PARKING AREAS FOR TEMPORARY USE BY CONSTRUCTION TRAFFIC.
4. DESIGN CRITERIA: CONSTRUCTION ROADS SHOULD BE LOCATED TO REDUCE EROSION POTENTIAL, MINIMIZE IMPACT ON EXISTING SITE RESOURCES, AND MAINTAIN OPERATIONS IN A SAFE MANNER. HIGHLY EROSIIVE SOILS, WET OR ROCKY AREAS, AND STEEP SLOPES SHOULD BE AVOIDED. ROADS SHOULD BE ROUTED WHERE SEASONAL WATER TABLES ARE DEEPER THAN 18 INCHES. SURFACE RUNOFF AND CONTROL SHOULD BE IN ACCORDANCE WITH OTHER STANDARDS.
5. ROAD GRADE: A MAXIMUM GRADE OF 12% IS RECOMMENDED, ALTHOUGH GRADES UP TO 15% ARE ACCEPTABLE FOR SHORT DISTANCES.
6. ROAD WIDTH: 14 FT (9 FT MINIMUM) FOR ONE-WAY TRAFFIC.
7. SIDE SLOPE OF ROAD EMBANKMENT: 2:1 OR FLATTER.
8. COMPOSITION: USE A 6-INCH LAYER OF MASSDOT APPROVED GRAVEL SUB-BASE M2.01.3 OR EQUIVALENT. WITH GEOTEXTILE FABRIC MIRAFI HP270 WOVEN OR APPROVED EQUAL UNDERLAID.
9. MAINTENANCE: ACCESS ROUTES AND PARKING AREAS SHALL BE INSPECTED PERIODICALLY FOR CONDITION OF SURFACE AND TOPDRESSED WITH NEW GRAVEL AS NEEDED.

SOIL EROSION AND SEDIMENTATION CONTROL

1. ALL WORK SHALL BE CONDUCTED IN ACCORDANCE WITH THE MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION EROSION AND SEDIMENTATION CONTROL GUIDELINES AND APPLICABLE NPDES STANDARDS.
2. ALL APPLICABLE SOIL EROSION AND SEDIMENT CONTROL PRACTICES ARE TO BE INSTALLED PRIOR TO ANY MAJOR SOIL OR STREAM DISTURBANCE, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
3. ALL DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN FOURTEEN (14) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING WITH AN APPROVED NATIVE SEED MIXTURE. MULCH, WATER AND ANCHOR AS NECESSARY TO ESTABLISH GRASS AND PREVENT LOSS TO WIND OR EROSION. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS SHALL BE MULCHED WITH SMALL GRAIN STRAW AT A RATE OF TWO (2) TONS PER ACRE IN ACCORDANCE WITH STATE STANDARDS.
4. PERMANENT VEGETATION SHALL BE SEEDED WITH AN APPROVED NATIVE SEED MIXTURE ON ALL EXPOSED AREAS IMMEDIATELY AFTER FINAL GRADING. MULCH SHALL BE USED AS NECESSARY FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
5. ANY ADDITIONAL AREAS SUBJECT TO EROSION (E.G. MATERIAL STOCKPILES) SHALL RECEIVE A TEMPORARY SEEDING WITH AN APPROVED NATIVE SEED MIXTURE, IN COMBINATION WITH STRAW MULCH, AT A RATE OF TWO (2) TONS PER ACRE IN ACCORDANCE WITH STATE STANDARDS.
6. SHOULD THE CONTROL OF DUST AT THE SITE BE NECESSARY, THE SITE SHALL BE SPRINKLED WITH WATER UNTIL THE SURFACE IS WET, TEMPORARY VEGETATIVE COVER SHALL BE ESTABLISHED, OR MULCH SHALL BE APPLIED IN ACCORDANCE WITH STATE STANDARDS FOR EROSION CONTROL.
7. ALL SOIL WASHED, DROPPED, SPILLED, OR TRACKED OUTSIDE THE LIMIT OF DISTURBANCE OR ONTO PUBLIC RIGHTS-OF-WAY SHALL BE REMOVED IMMEDIATELY.
8. STOCKPILE AND STAGING LOCATIONS DETERMINED IN THE FIELD SHALL BE PLACED WITHIN THE LIMIT OF WORK. ALL SOIL STOCKPILES SHALL BE TEMPORARILY STABILIZED IN ACCORDANCE WITH NOTE #3 AND PROTECTED BY COMPOST SOCKS ON THE DOWNHILL SIDES.
9. THE CONTRACTOR SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE, AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION AND THAT HAVE NOT BEEN FINALLY STABILIZED, STABILIZATION PRACTICES, STRUCTURAL PRACTICES, AND OTHER CONTROLS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS AFTER THE END OF ANY STORM THAT PRODUCES AT LEAST 0.5 INCHES OF RAINFALL AT THE SITE. WHERE SITES HAVE BEEN FINALLY STABILIZED, SUCH INSPECTION SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH UNTIL FINAL COMPLETION. CRITICAL AREAS AND AREAS WHERE VEHICLES EXIT THE SITE SHALL BE INSPECTED DAILY.

WATER CONTROL

1. DURING THE ANTICIPATED CONSTRUCTION PERIOD (JULY 1 TO AUGUST 31), THE MEDIAN FLOW IN THE RIVER AT THE PROJECT IS 11 CUBIC FEET PER SECOND (CFS), AND A FLOW OF 42 CFS IS EXCEEDED 10% OF THE TIME. FROM SEPTEMBER 1 TO OCTOBER 30 THE MEDIAN FLOW IN THE RIVER AT THE PROJECT IS 17 CFS AND A FLOW OF 53 CFS IS EXCEEDED 10% OF THE TIME.
2. SEE CONSTRUCTION SEQUENCE PHASES I THROUGH IV FOR WATER CONTROL PHASING.
3. SANDBAGS (SUPER SACKS OR SIMILAR) SHALL BE USED TO DIVERT FLOW AND PROTECT THE WORK AREA.
4. CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT DAMAGE TO WORK OR EQUIPMENT BY HIGH WATER OR STORMS. AT ALL TIMES, THE CONTRACTOR SHALL HAVE THE MATERIALS AND EQUIPMENT ON-SITE TO STABILIZE ANY WORK IN PROGRESS AT THE ROUTE 106 BRIDGE.
5. DURING FLOODS THAT EQUAL OR EXCEED THE 1-YEAR STORM, FLOWS WILL BE ALLOWED TO PASS THROUGH BOTH OPENINGS IN THE ROUTE 106 BRIDGE. SUPER SACKS SHALL ONLY DEWATER THE CONSTRUCTION SITE DURING TYPICAL FLOWS.
6. CONTINUOUS WATER WATER FLOW SHALL BE MAINTAINED THROUGH THE PROJECT SITE FROM SEPTEMBER 1 TO OCTOBER 31 FOR CATADROMOUS EEL PASSAGE

CONSTRUCTION SEQUENCE

SITE PREPARATION AND ACCESS

1. INSTALL VIBRATION MONITORING EQUIPMENT AS NECESSARY ONE WEEK PRIOR TO CONSTRUCTION FOR CALIBRATION PURPOSES. VIBRATION MONITORING SHALL CONTINUE THROUGHOUT CONSTRUCTION UNTIL THE PROJECT IS DEEMED COMPLETE BY THE OWNER'S REPRESENTATIVE.
2. INSTALL 12" DIAMETER COMPOST FILTER SOCK.
3. INSTALL SILT SACKS IN CATCHBASINS.
4. INSTALL OIL BOOM AT THE DOWNSTREAM LIMIT OF WORK UPSTREAM OF THE PEDESTRIAN BRIDGE.
5. INSTALL TEMPORARY CONSTRUCTION ENTRANCE AND ANY ADDITIONAL EROSION CONTROLS THAT MAY BE ADDED AT THE DISCRETION OF OWNER'S REPRESENTATIVE.
6. CONSTRUCT GRAVEL STAGING AREA.
7. FLAG LIMITS OF CLEARING, TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO ANY TREE OR VEGETATION REMOVAL. CLEAR AND GRUB ALONG APPROVED ACCESS ROUTES.
8. CONSTRUCT TEMPORARY STOCKPILE AREA.

9. IF DEEMED NECESSARY TO GAIN CONSTRUCTION ACCESS, EXCAVATE THE SOFT COAL PILE LOCATED ON THE EASTERN ABUTMENT, AND TRANSPORT IT TO AN APPROVED OFF-SITE DISPOSAL FACILITY. HANDLING, TRANSPORTING AND DISPOSAL SHALL BE PERFORMED BY QUALIFIED PERSONNEL IN ACCORDANCE WITH THE APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
10. CONSTRUCT TEMPORARY ACCESS RAMP AND WORK PAD BY FILLING ONLY. THE RAMP AND WORK PAD SHALL TERMINATE UPSTREAM OF THE LIMIT OF THE PROPOSED SCOUR COUNTERMEASURE.
11. A SECOND LOCATION FOR POTENTIAL ACCESS TO THE RIVER BETWEEN THE EXISTING PEDESTRIAN BRIDGE AND THE EXISTING DAM HAS BEEN IDENTIFIED ON SHEET 3.

PHASE I (RIVER WORK)

1. PLACE 3' HIGH SUPER SACKS OR APPROVED EQUAL FOR WATER DIVERSION.
2. INSTALL SUMP PITS UPSTREAM AND DOWNSTREAM OF THE BRIDGE AS SHOWN ON THE PLANS. WATER COLLECTED BY THE SUMP PITS TO BE DISCHARGED DIRECTLY INTO THE DIVERSION CHANNEL.
3. EXCAVATE RIVERBED MATERIAL WITHIN THE EASTERN BRIDGE OPENING AND CONSTRUCT THE SCOUR COUNTERMEASURE. EXCAVATION SHALL NOT EXTEND BELOW THE BOTTOM OF BRIDGE FOOTINGS. INSTALLATION SHALL BE PERFORMED IN SECTIONS NO GREATER THAN 15' LONG SUCH THAT THE BRIDGE FOOTINGS REMAIN BURIED ADJACENT TO WORKING SECTION. MULTIPLE SECTIONS MAY BE CONSTRUCTED CONCURRENTLY WITH A MINIMUM OF 15' BETWEEN SECTIONS REMAINING BURIED. SCOUR COUNTERMEASURE SHALL BE CONSTRUCTED IN 12-INCH LIFTS ABOVE FILTER LAYER AND FINE MATERIAL SHALL BE USED TO CHOKE EACH LIFT PRIOR TO PLACEMENT OF THE SUBSEQUENT LIFT. THE CONTRACTOR SHALL WASH THE FINE MATERIAL INTO THE LIFT OF COARSE MATERIAL WITH A SUFFICIENT QUANTITY OF WATER.
4. EMBED BOULDERS 1/2 OF THEIR RESPECTIVE DIAMETER ALONG THE WALLS OF THE EAST BRIDGE OPENING.

PHASE II (RIVER WORK)

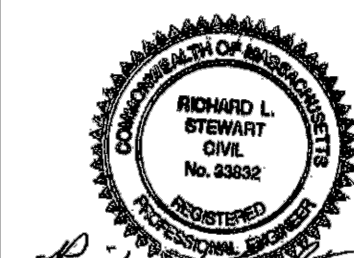
1. INSTALL TEMPORARY CULVERTS AT THE WORKING PAD AREA AND RELOCATE WATER DIVERSION FEATURES TO DIVERT FLOW TO THE EASTERN BRIDGE OPENING WITH COMPLETED EROSION COUNTERMEASURE.
2. INSTALL WESTERN PORTION OF THE WORK PAD.
2. INSTALL SUMP PITS UPSTREAM AND DOWNSTREAM OF THE BRIDGE AS SHOWN ON THE PLANS. WATER COLLECTED BY THE SUMP PITS TO BE DISCHARGED DIRECTLY INTO THE DIVERSION CHANNEL.
3. CONSTRUCT THE SCOUR COUNTERMEASURE IN THE WESTERN BRIDGE OPENING SIMILAR TO THE DESCRIPTION IN PHASE I NOTE 3 ABOVE.
4. REMOVE THE WESTERN PORTION OF THE WORKING PAD.
5. EMBED BOULDERS 1/2 OF THEIR RESPECTIVE DIAMETER ALONG THE WALLS OF THE WEST BRIDGE OPENING.

PHASE III (RIVER WORK)

1. INSTALL WATER DIVERSION FEATURES TO DIVERT FLOW THROUGH THE WESTERN BRIDGE OPENING.
2. EXCAVATE RIVERBED MATERIAL AND CONSTRUCT THE ROCK RIFFLE UPSTREAM OF THE DAM. THE MAIN CHANNEL SHALL BE ESTABLISHED NEAR THE CENTER OF THE RIVER CHANNEL. ROCK RIFFLE SHALL BE CONSTRUCTED IN 12-INCH LIFTS ABOVE FILTER LAYER AND FINE MATERIAL SHALL BE USED TO CHOKE EACH LIFT PRIOR TO PLACEMENT OF THE SUBSEQUENT LIFT. THE CONTRACTOR SHALL WASH THE FINE MATERIAL INTO THE LIFT OF COARSE MATERIAL WITH A SUFFICIENT QUANTITY OF WATER. CONTRACTOR SHALL PLACE FOUR FOOT BOULDERS IN THE ROCK RIFFLE AS DIRECTED BY THE OWNER'S REPRESENTATIVE. EXCAVATION WITHIN TEN FEET OF ANY RETAINING WALL SHALL NOT EXTEND MORE THAN TEN FEET ALONG THE WALL; CONTRACTOR SHALL IMMEDIATELY BACKFILL ALL EXCAVATIONS ALONG RETAINING WALLS.
3. DEMOLISH THE FULL VERTICAL EXTENT OF THE MIDDLE PORTION OF THE COTTON GIN DAM, AS SHOWN ON DRAWINGS. REMOVE THE CONCRETE AND MOVE/REUSE THE RUBBLE FILL (SEE STEPS 4 AND 5).
4. USE RUBBLE FILL FROM THE DAM (MAXIMUM SIZE = 2') TO FILL IN WASHED OUT PORTION OF DAM AND UNDERMINED PORTION OF LEFT RETAINING WALL. PLACE IN MAXIMUM 12 INCH LIFTS AND INJECT WITH GROUT. NO REMNANT CONCRETE SHALL REMAIN AT THE SITE.
5. USE RUBBLE FILL FROM THE DAM TO STABILIZE THE LEFT RETAINING WALL UPSTREAM AND DOWNSTREAM OF THE DAM, AS SHOWN ON THE DRAWINGS. PLACE A 2 FOOT THICK LAYER OF NEW STONE (D₅₀=1.0') OVER THE RUBBLE FILL TO THE SPECIFIED GRADE. THE RUBBLE FILL AND NEW STONE SHALL BE PLACED IN MAXIMUM 12 INCH LIFTS AND CHOKED WITH FINE MATERIAL.
6. DEMOLISH THE FULL VERTICAL EXTENT OF THE LEFT PORTION OF COTTON GIN DAM, TO THE EXTENTS SHOWN ON THE DRAWINGS. REMOVE THE CONCRETE; THE RUBBLE FILL TO REMAIN IN PLACE. CHOKE THE RUBBLE FILL WITH FINE MATERIAL. PLACE A 2 FOOT THICK LAYER OF NEW STONE (D₅₀=1.0') OVER THE RUBBLE FILL TO THE SPECIFIED GRADE. THE NEW STONE SHALL BE PLACED IN MAXIMUM 12 INCH LIFTS AND CHOKED WITH FINE MATERIAL.
7. INSTALL WATER DIVERSION FEATURES TO DIVERT FLOW DOWNSTREAM OF THE DAM.
8. REMOVE FISH LADDER REMNANTS.
9. CONSTRUCT ROCK RIFFLE DOWNSTREAM OF THE DAM. CONSTRUCTION METHODOLOGY DESCRIBED IN NOTE 2 ABOVE SHALL BE APPLIED. NO GEOTEXTILE SHALL BE INSTALLED IN THE MAIN CHANNEL DURING ROCK RIFFLE CONSTRUCTION.
10. CONSTRUCT RESTING POOL.
11. APPLY 4" OF SEDIMENT TO DISTURBED AREAS AND AREAS ABOVE EL. 30' AT THE LEFT ABUTMENT, AS SHOWN ON THE DRAWINGS. APPLY APPROVED NATIVE SOIL SEED MIXTURE. PROTECT SLOPES STEEPER THAN 3H:1V WITH EROSION CONTROL BLANKET.

PHASE IV (RIVER WORK)

1. INSTALL AND RELOCATE WATER DIVERSION FEATURES TO DIVERT FLOW OF THE SATUCKET RIVER THROUGH THE EASTERN BRIDGE OPENING AND LOW FLOW CHANNEL CONSTRUCTED IN PHASE III.
2. REMOVE THE REMAINING WESTERN (RIGHT) PORTION OF THE COTTON GIN DAM, AS SHOWN ON THE DRAWINGS.
3. REMOVE ABANDONED PIPE DOWNSTREAM OF THE DAM. CUT AND PERMANENTLY SEAL THE PIPE AT THE DOWNSTREAM LIMIT OF THE PROJECT WITH MASONRY PLUG OR EQUIVALENT. PERMANENTLY SEAL THE PIPE WITHIN THE DAM BY FILLING IT WITH GROUT.
4. PLACE A 2-FOOT-THICK LAYER OF NEW STONE (D₅₀ = 1.0') OVER THE REMAINING PORTION OF DAM, TO THE SPECIFIED GRADE. THE NEW STONE SHALL BE PLACED IN MAXIMUM 12-INCH LIFTS AND CHOKED WITH FINE MATERIAL.
5. INSTALL 2 FT THICK (MINIMUM) RIPRAP LAYER AROUND MILL BUILDING PIER FOOTINGS AS INDICATED. HEAVY EQUIPMENT SHALL NOT BE OPERATED IN AREAS WHERE THE MILL BUILDING IS OVERHEAD.
6. EXCAVATE RIVERBED MATERIAL AND CONSTRUCT THE WESTERN PORTION OF THE ROCK RIFFLE SIMILAR TO THE DESCRIPTION IN NOTE 2 IN PHASE III ABOVE.
7. APPLY 4" OF SEDIMENT TO DISTURBED AREAS AND APPLY APPROVED NATIVE SEED MIXTURE.



4/27/18	1	RECORD DRAWINGS	JSC	RLS	
6/5/17	0	ISSUED FOR BID	JSC	RLS	
ISSUE #		DESCRIPTION	BY	APP	
DRAWN BY: JSC					
CHECKED BY: KJC					
APPROVED BY: RLS					
PROJECT NO. 1934 DATE: 4/27/18					

SITE RESTORATION

1. REMOVE ANY SUPER SACKS FROM THE SITE.
2. REMOVE CRUSHED STONE, STONE FILL AND GEOTEXTILE FABRIC AT THE ACCESS RAMP AND CONSTRUCTION ENTRANCE.
3. REPAIR PAVED DRIVEWAY, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, IF NECESSARY.
4. REMOVE EROSION CONTROL AND OTHER CONTAINMENT MEASURES ONLY AFTER ALL AREAS ARE STABILIZED WITH VEGETATIVE COVER TO THE SATISFACTION OF OWNER'S REPRESENTATIVE.
5. ANY DISTURBED AREAS WILL BE LOAMED AND SEEDED WITH AN APPROVED NATIVE SEED MIXTURE.

LEGEND

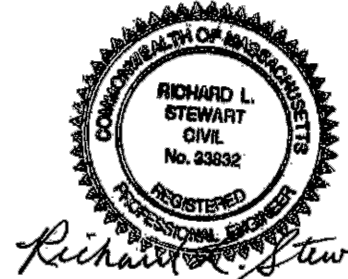
ROAD	
TAX PARCEL BOUNDARIES	
TREE LINE	
TOP OF BANK (TOB) MEAN ANNUAL HIGH WATER (MAHW) ORDINARY HIGH WATER (OHW)	
BORDERING VEGETATED WETLAND (BVW)	
100' BANK BUFFER	
200' RIVERFRONT AREA LIMIT	
100-YR FLOODPLAIN	
100-YR FLOODPLAIN WITH DAM REMOVED	
FLOODWAY	
RETAINING WALL	
OVERHEAD ELECTRICAL LINES	
OVERHEAD CATV LINES	
UNDERGROUND GAS PIPE	
UNDERGROUND WATER PIPE	
COMPOST FILTER SOCK	
OIL BOOM	
EXISTING CONTOUR	
PROPOSED CONTOUR	
CONCRETE	
BUILDING	
RIPRAP (D ₅₀ = 12")	
RIPRAP (D ₅₀ = 9")	
GRAVEL ACCESS SURFACE	
CLEARING EXTENTS	
REMOVAL EXTENTS	
SEDIMENT AND SEED	
SEDIMENT DISPOSAL AREA	
DISTURBED AREA	
ACCESS ROUTE	
TEMPORARY FILL	

COTTON GIN DAM
REMOVAL PROJECT

NOTES AND LEGEND

The Nature Conservancy 99 Bedford Street, 5th Floor Boston, MA 02111	Gomez and Sullivan Engineers, D.P.C. 41 Liberty Hill Road PO Box 2179 Hemiker, NH 03242
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SCALE: NONE	DRAWING:	2
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NOTES:

1. LOCATION OF SOFT COAL PILE IS APPROXIMATE. REFER TO SITE INSPECTION PRIORITIZATION REPORT PREPARED BY ROY F. WESTON, INC AND DATED 3/28/1996 FOR DETAILS.
2. LOCATION OF ABANDONED UNDERGROUND STORAGE TANKS IS APPROXIMATE . REFER TO SITE INSPECTION PRIORITIZATION REPORT PREPARED BY ROY F. WESTON, INC AND DATED 3/28/1996 FOR DETAILS.

NOTES:

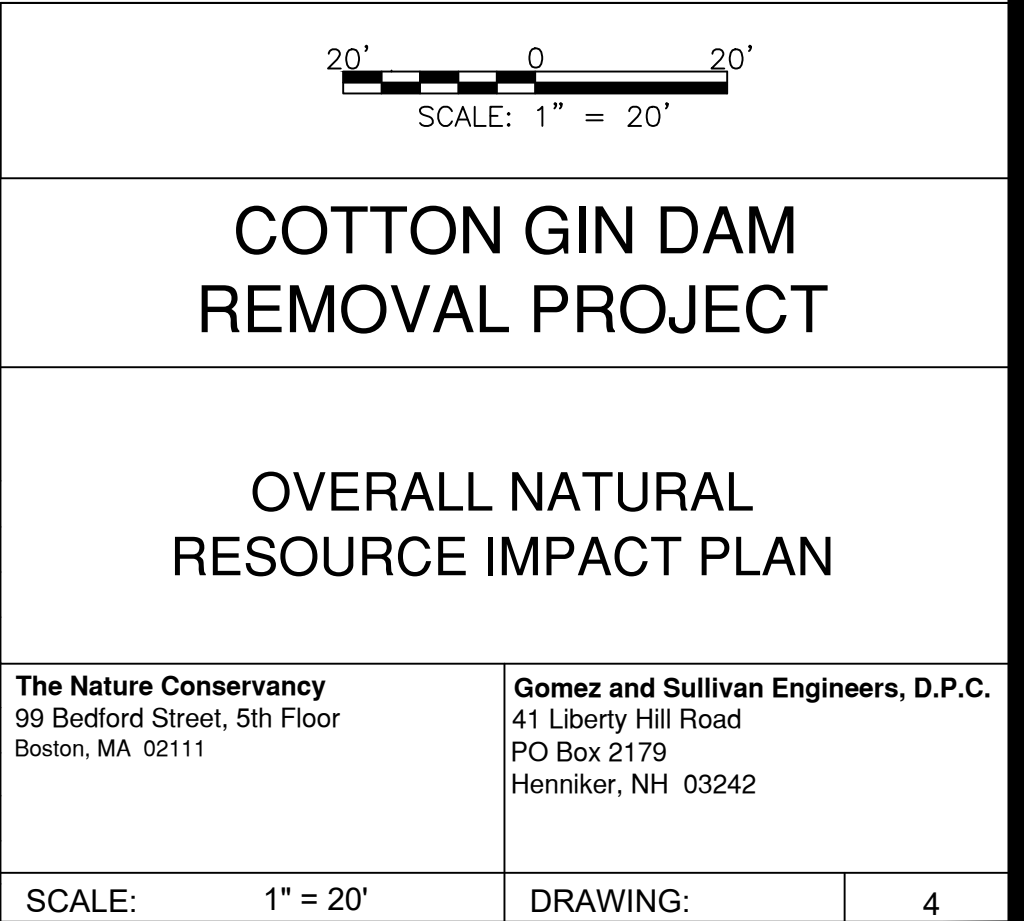
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2. LOCATION OF ABANDONED UNDERGROUND STORAGE TANKS IS APPROXIMATE . REFER TO SITE INSPECTION PRIORITIZATION REPORT PREPARED BY ROY F. WESTON, INC AND DATED 3/28/1996 FOR DETAILS.



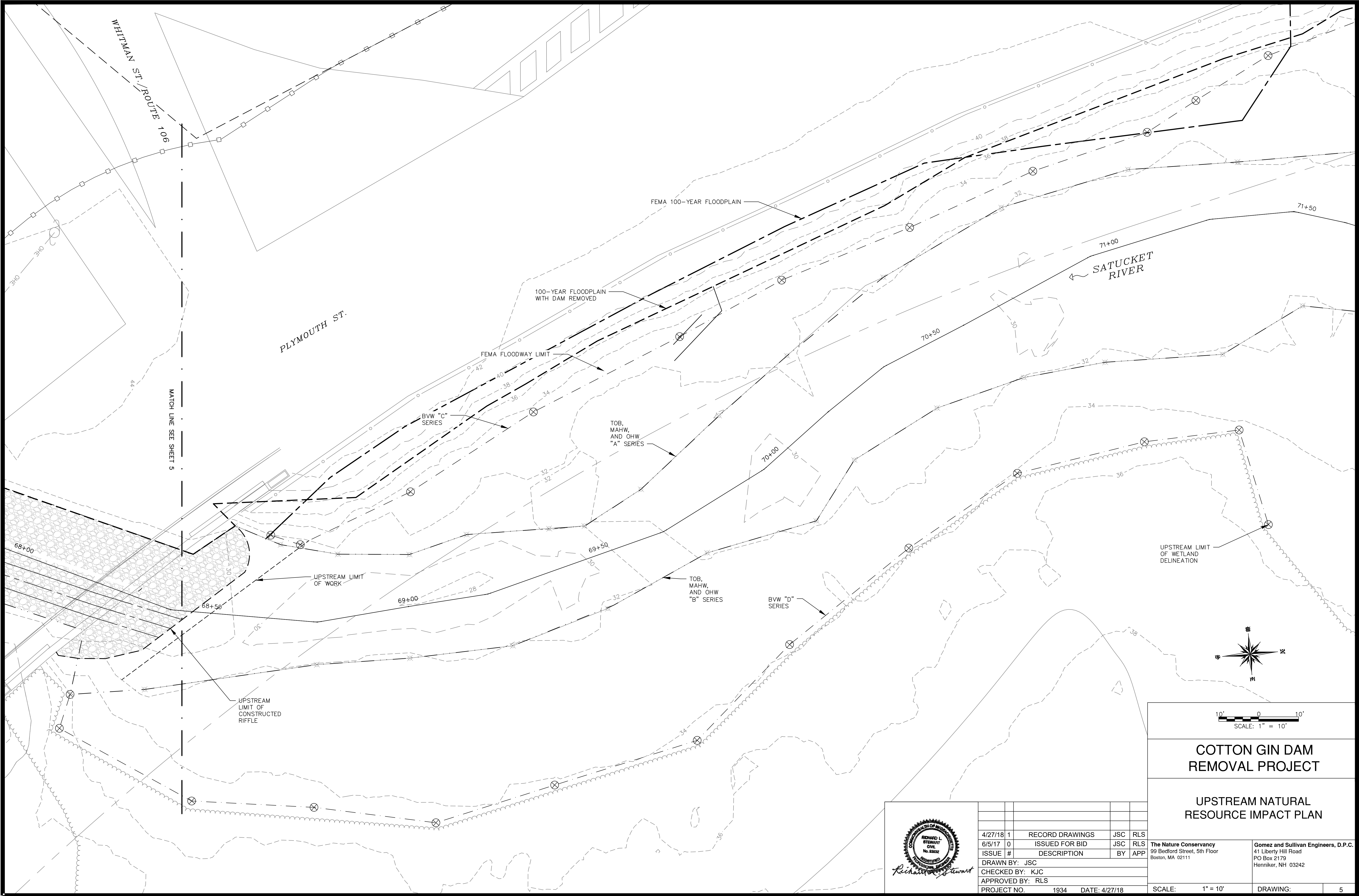
S	The Nature Conservancy	Gomez and Sullivan Engineers, D.P.C.
P	99 Bedford Street, 5th Floor	41 Liberty Hill Road
	Boston, MA 02111	PO Box 2179
		Henniker, NH 03242

SCALE:	1" = 20'	DRAWING:	3
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RESOURCE	AREA (SQUARE FEET, SF)			TEMPORARY (SF)	PERMANENT (SF)
	EXISTING	CHANGE	TOTAL		
BANK (FT)	1,745	0	1,745	744	0
BORDERING VEGETATED WETLANDS	18,610	0	18,610	0	0
ISOLATED VEGETATED WETLANDS	0	0	0	N/A	N/A
LAND UNDER WATER/OHW/MAHW	34,905	0	34,905	16,323	0
BORDERING LAND SUBJECT TO FLOODING	N/A	-836,854	N/A	N/A	836,854
ISOLATED LAND SUBJECT TO FLOODING	0	0	0	N/A	N/A
RIVERFRONT AREA	341,289	0	341,289	~25,000	0
FISH RUNS (LF)	N/A	95	N/A	95	0



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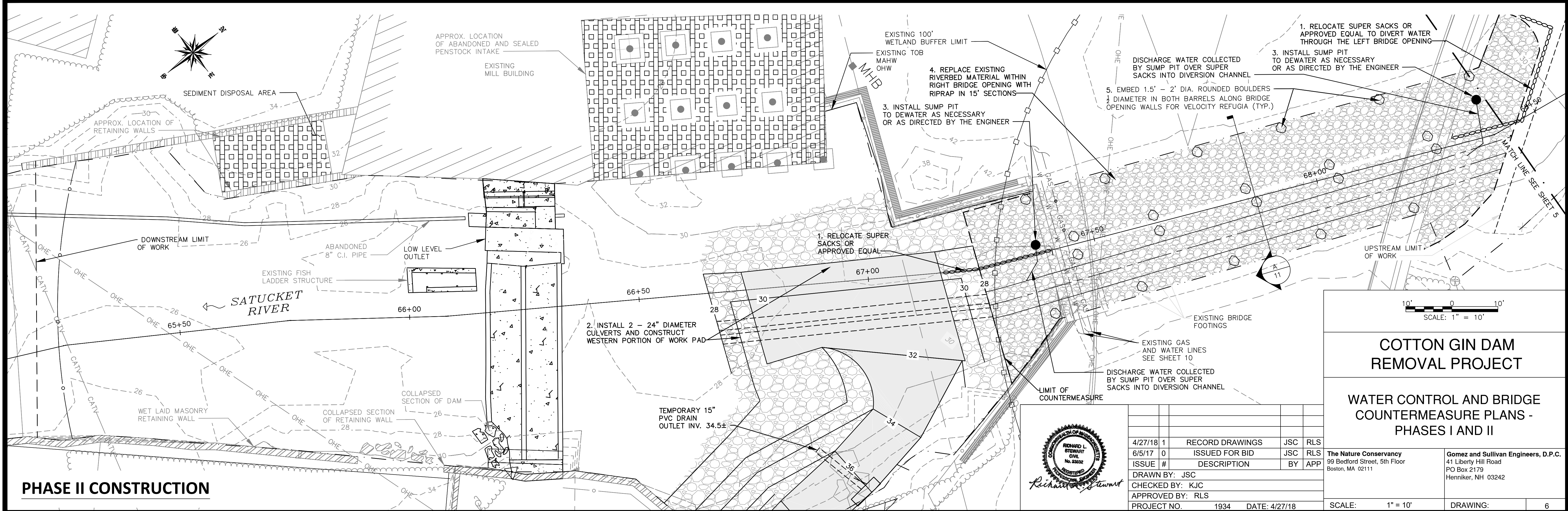
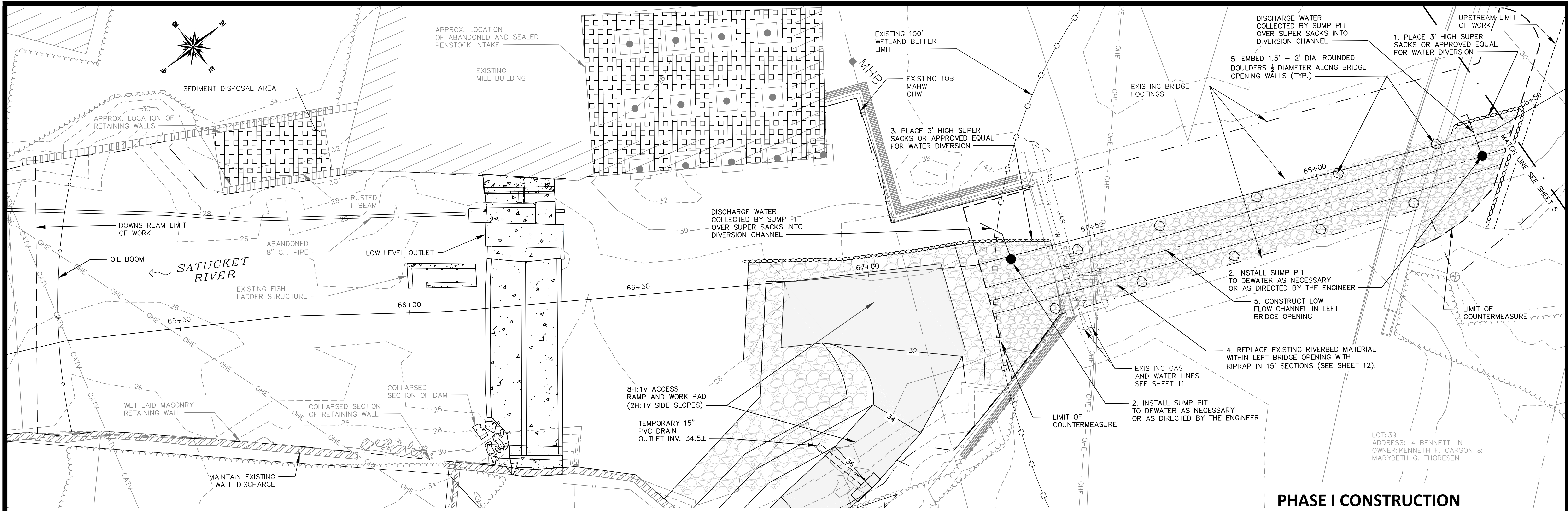
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6/5/17	0	ISSUED FOR BID	JSC	RLS
ISSUE #		DESCRIPTION	BY	APP
DRAWN BY: JSC				
CHECKED BY: KJC				
APPROVED BY: RLS				
PROJECT NO. 1934 DATE: 4/27/18				

10'0"0"10'
SCALE: 1" = 10'

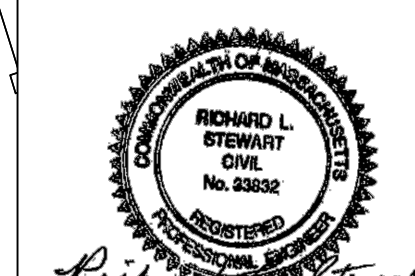
COTTON GIN DAM
REMOVAL PROJECT

UPSTREAM NATURAL
RESOURCE IMPACT PLAN

The Nature Conservancy 99 Bedford Street, 5th Floor Boston, MA 02111	Gomez and Sullivan Engineers, D.P.C. 41 Liberty Hill Road PO Box 2179 Henniker, NH 03242
SCALE: 1" = 10'	DRAWING: 5



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ISSUE #		DESCRIPTION	BY	APP
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CHECKED BY:	KJC			
APPROVED BY:	RLS			
PROJECT NO.	1934	DATE:	4/27/18	

10'0"0"10'
SCALE: 1" = 10'

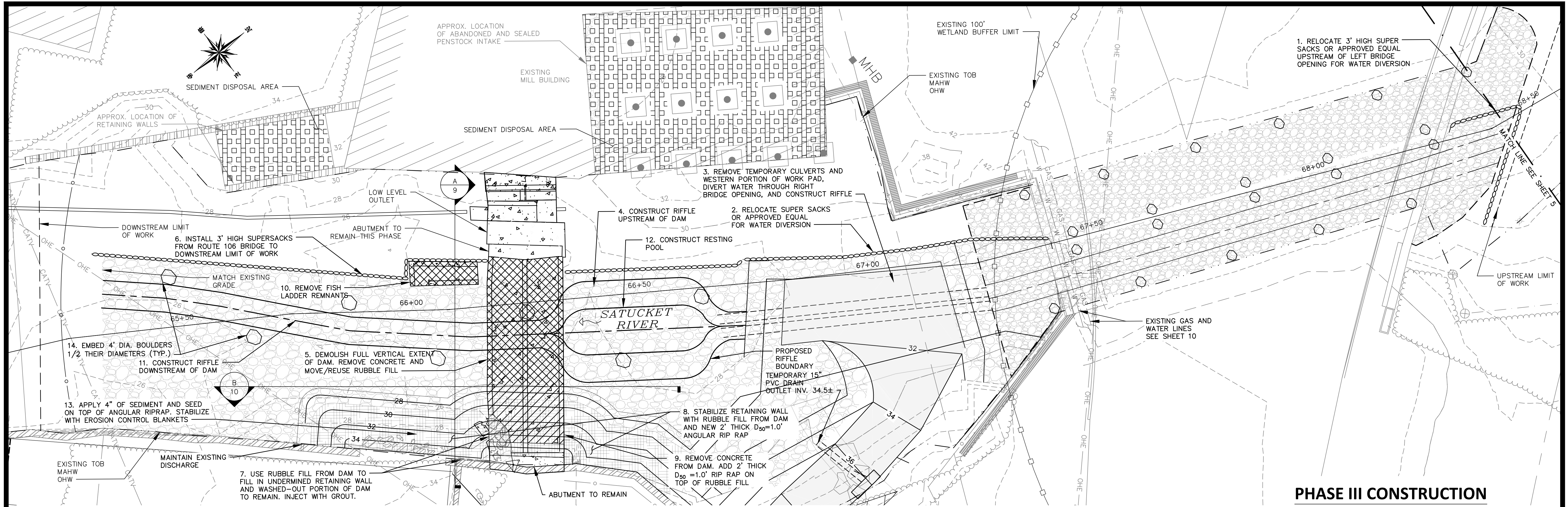
COTTON GIN DAM
REMOVAL PROJECT

WATER CONTROL AND BRIDGE
COUNTERMEASURE PLANS -
PHASES I AND II

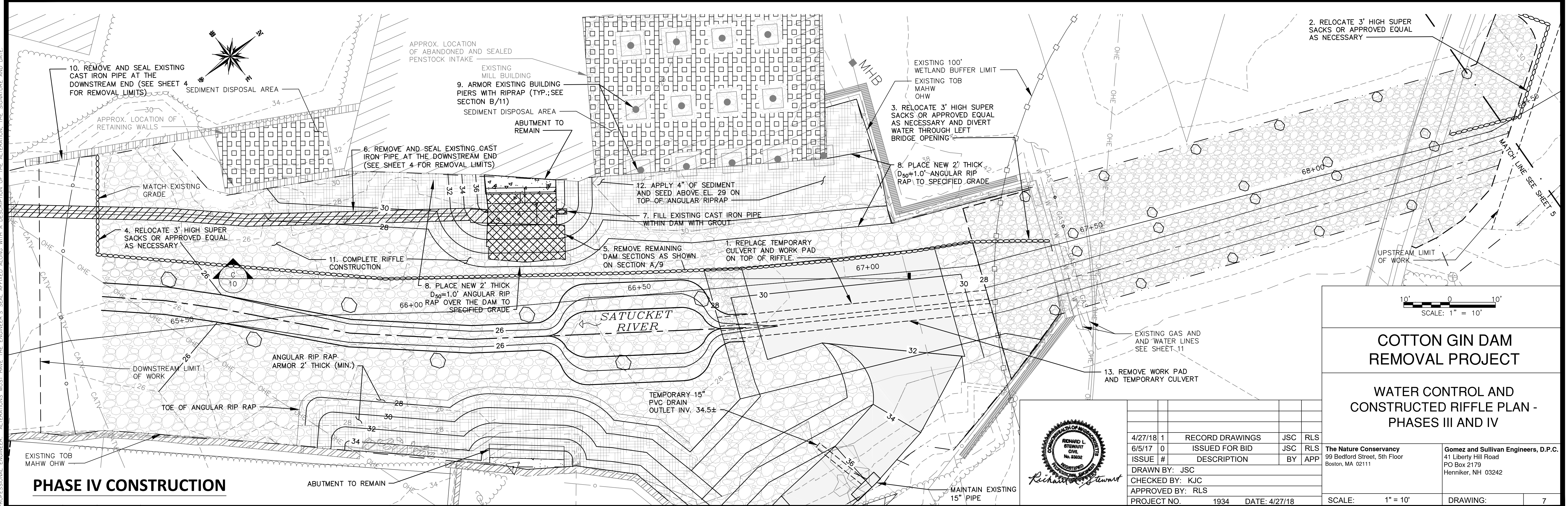
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99 Bedford Street, 5th Floor
Boston, MA 02111

Gomez and Sullivan Engineers, D.P.C.
41 Liberty Hill Road
PO Box 2179
Henniker, NH 03242

SCALE: 1" = 10' DRAWING: 6



PHASE III CONSTRUCTION



PHASE IV CONSTRUCTION

COTTON GIN DAM
REMOVAL PROJECT

WATER CONTROL AND
CONSTRUCTED RIFFLE PLAN -
PHASES III AND IV

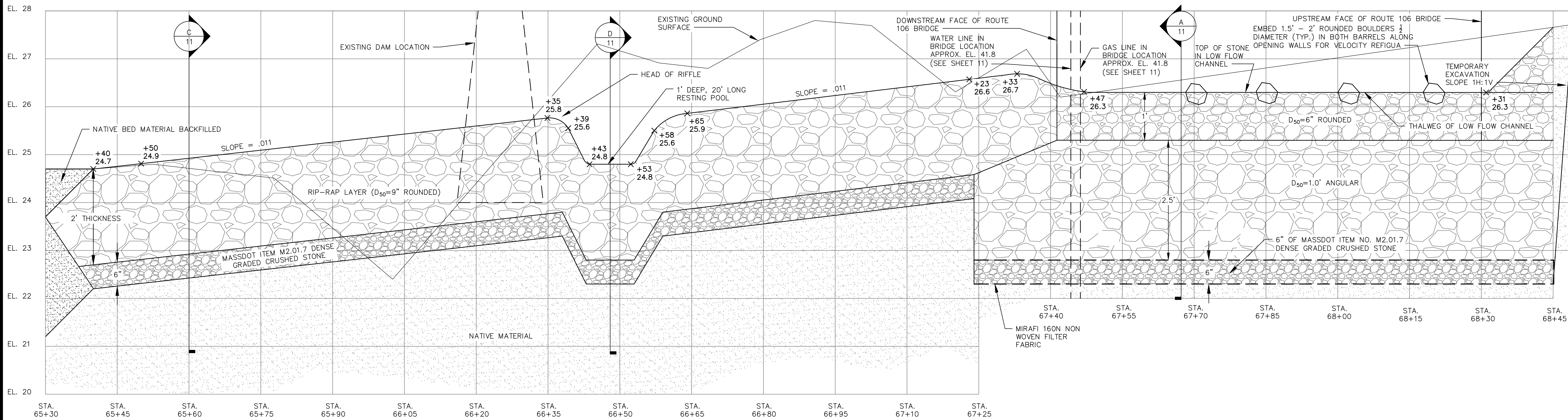


4/27/18	1	RECORD DRAWINGS	JSC	RLS
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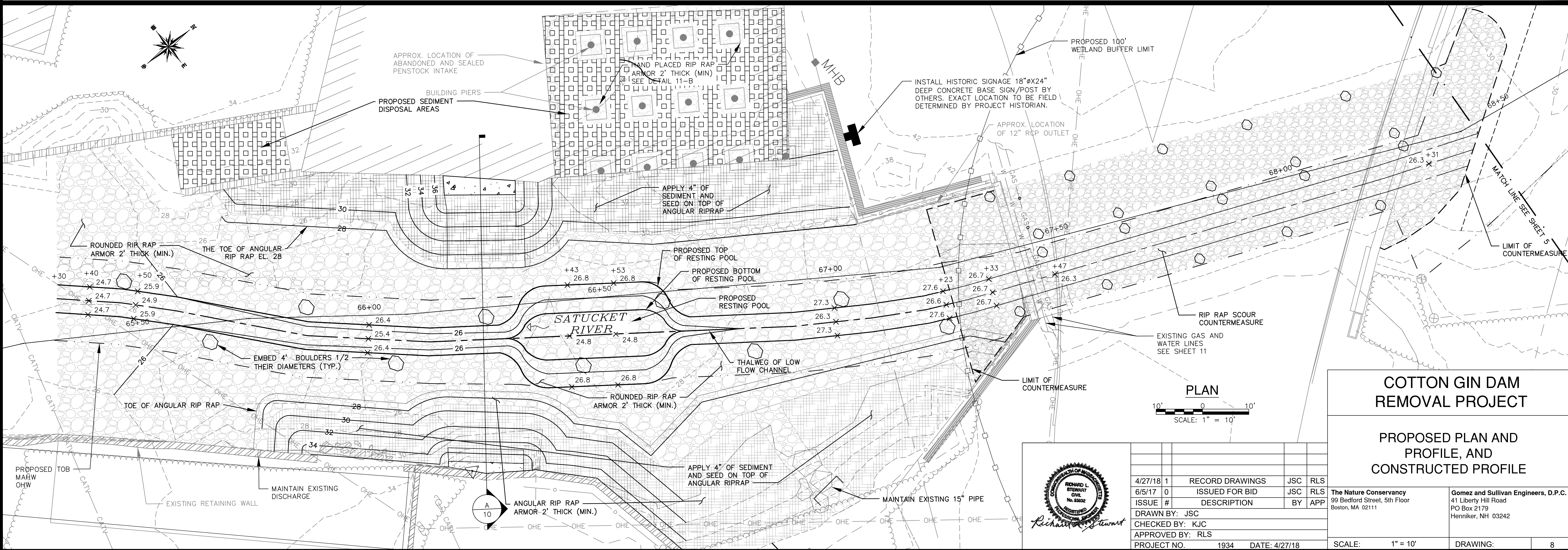
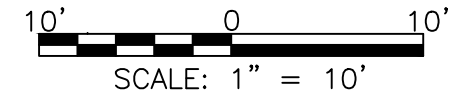
The Nature Conservancy
99 Bedford Street, 5th Floor
Boston, MA 02111

Gomez and Sullivan Engineers, D.P.C.
41 Liberty Hill Road
PO Box 2170
Hemiker, NH 03242

SCALE: 1" = 10' DRAWING: 7



PROPOSED PROFILE (ALONG CENTERLINE OF RIFFLE AND BRIDGE OPENING PROJECTED TO BASELINE)



COTTON GIN DAM REMOVAL PROJECT

PROPOSED PLAN AND PROFILE, AND CONSTRUCTED PROFILE

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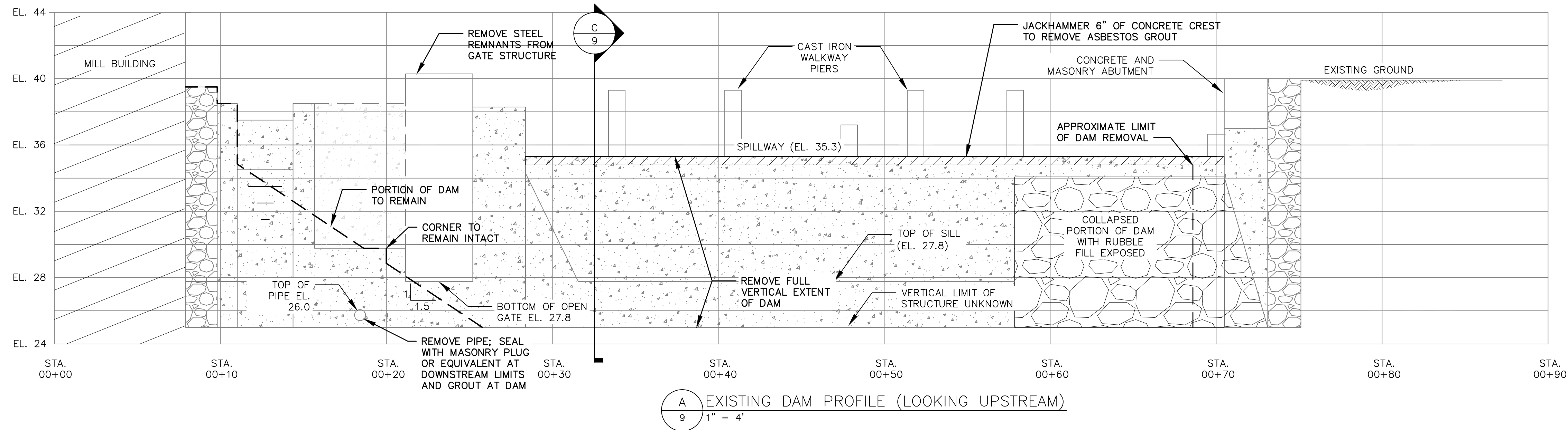
The Nature Conservancy
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Gomez and Sullivan Engineers, D.P.C.
41 Liberty Hill Road
PO Box 2170
Hemiker, NH 03242

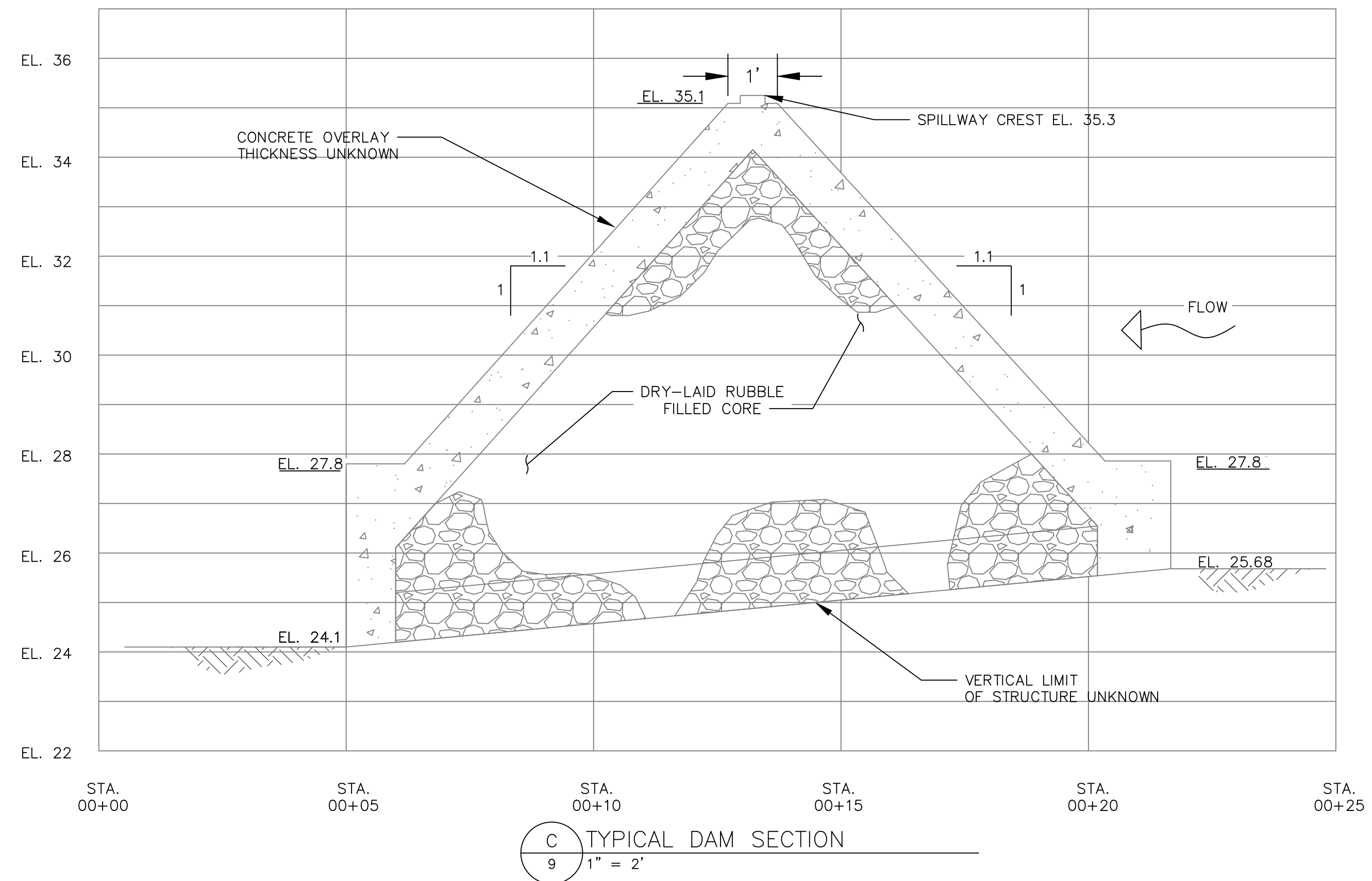
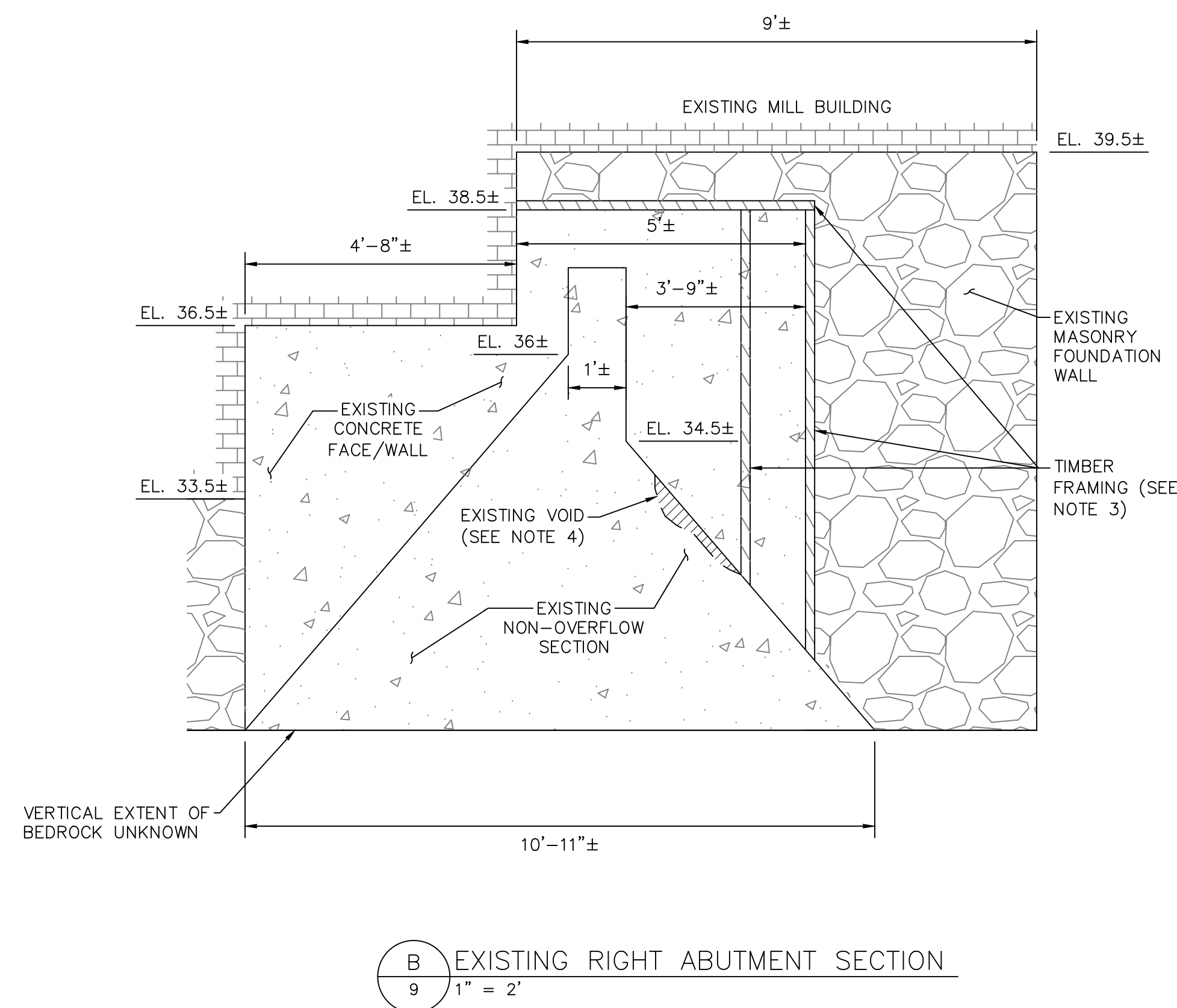
SCALE: 1" = 10'

DRAWING: 8

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- NOTES**
1. GEOMETRY AND EMBEDMENT DEPTHS OF STRUCTURES ARE BASED ON LIMITED INFORMATION AND ARE INTENDED TO BE SHOWN SCHEMATICALLY. THE CONTRACTOR SHALL CONFIRM ACTUAL DIMENSIONS IN THE FIELD.
 2. BASED ON GPR SURVEY OF THE DAM, TOP OF WEATHERED BEDROCK IS ANTICIPATED TO BE AT APPROX. EL. 17', AND TOP OF COMPETENT BEDROCK IS ANTICIPATED TO BE AT APPROX. EL. 11. REFER TO HAGER GEOSCIENCE, INC. AUGUST 13, 2015 REPORT FOR DETAILS.
 3. REMOVE EXISTING TIMBER FRAMING AND REPLACE WITH GROUT.
 4. GROUT IN THE VOID BETWEEN THE NON-OVERFLOW SECTION AND CONCRETE FACED ABUTMENT.



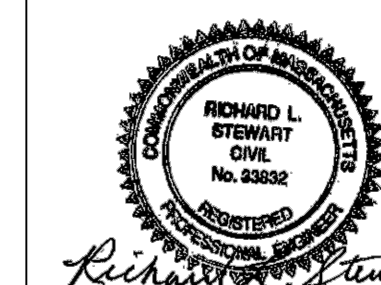
C
9
1" = 2'

B
9
1" = 2'

A
9
1" = 4'

COTTON GIN DAM REMOVAL PROJECT

EXISTING DAM PROFILE AND ABUTMENT SECTIONS



4/27/18	1	RECORD DRAWINGS	JSC	RLS
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CHECKED BY:	KJC			
APPROVED BY:	RLS			
PROJECT NO.	1934	DATE:	4/27/18	

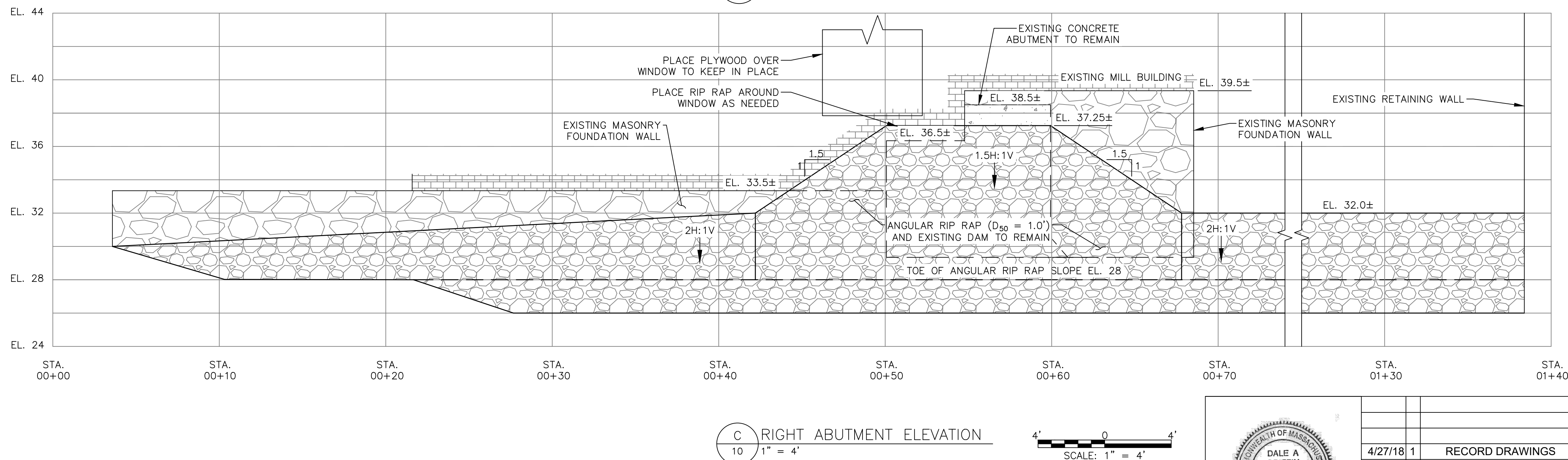
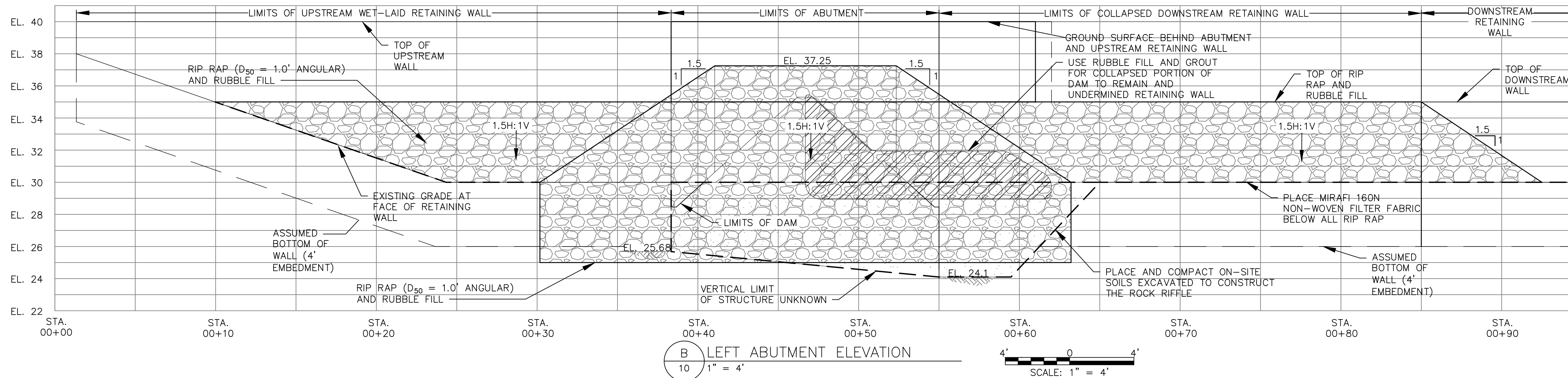
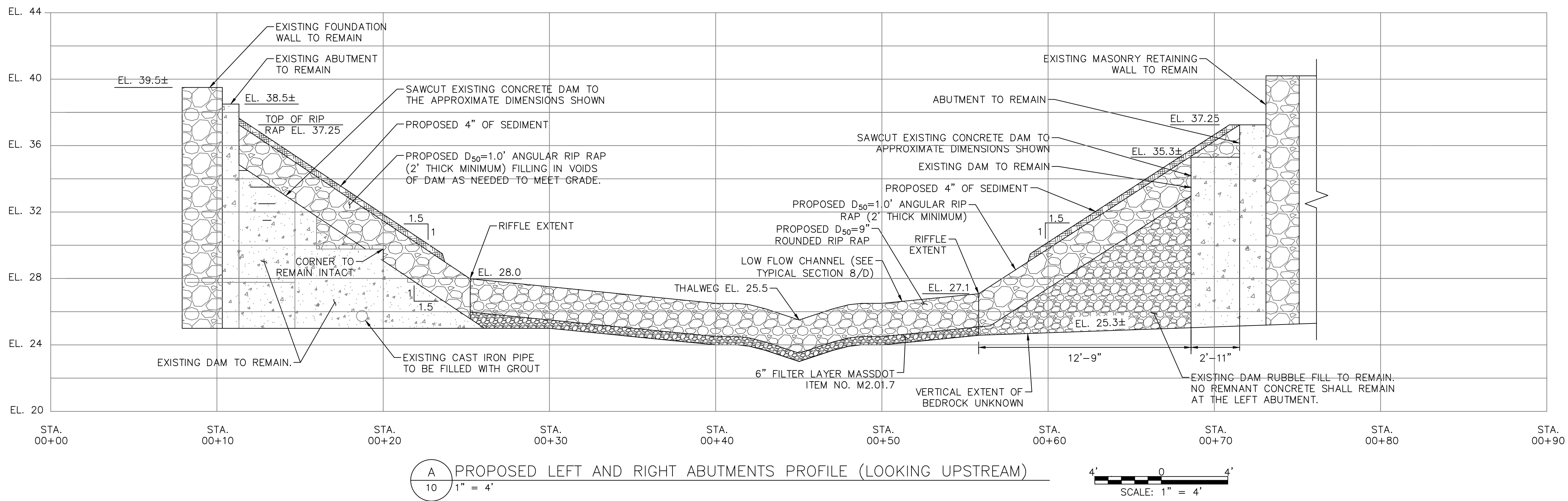
The Nature Conservancy
99 Bedford Street, 5th Floor
Boston, MA 02111

Gomez and Sullivan Engineers, D.P.C.
41 Liberty Hill Road
PO Box 2179
Hemiker, NH 03242

SCALE: AS NOTED

DRAWING: 9

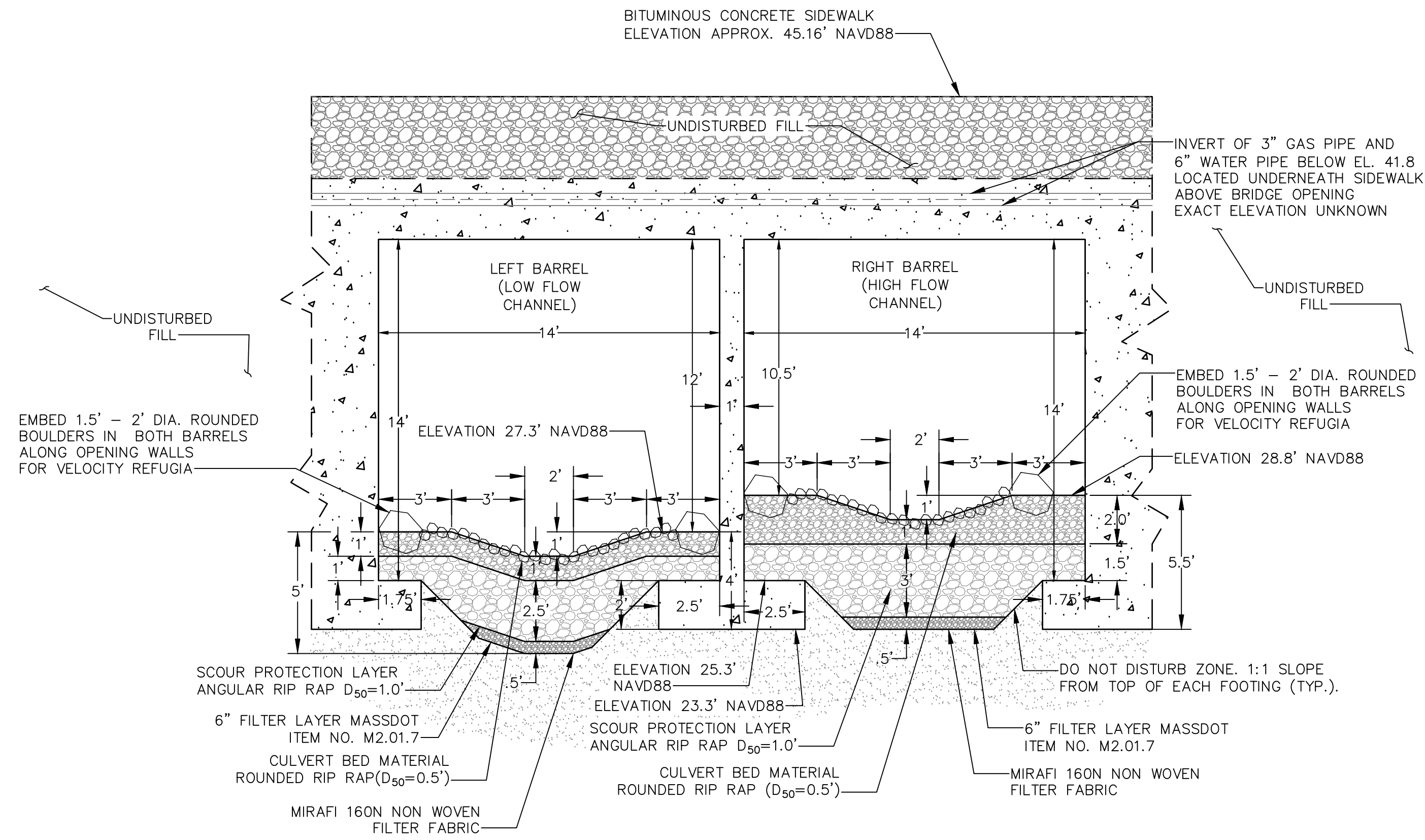
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4/27/18	1	RECORD DRAWINGS	JSC	RLS
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ISSUE #		DESCRIPTION	BY	APP
DRAWN BY: JSC				
CHECKED BY: KJC				
APPROVED BY: DAG				
PROJECT NO. 1934 DATE: 4/27/18				

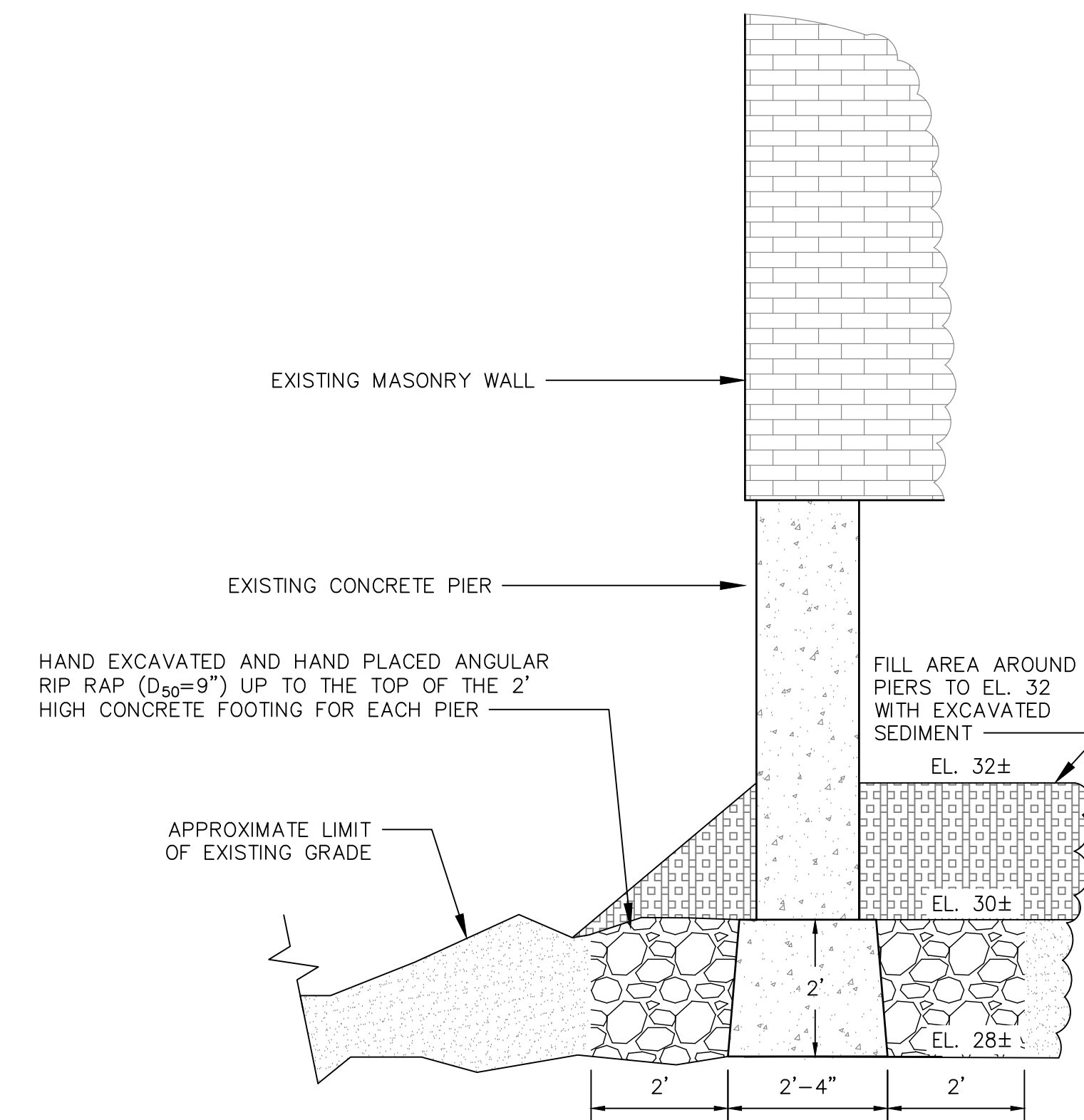
COTTON GIN DAM REMOVAL PROJECT	
PROPOSED REMOVED DAM PROFILE AND ABUTMENT SECTIONS	
The Nature Conservancy 99 Bedford Street, 5th Floor Boston, MA 02111	Gomez and Sullivan Engineers, D.P.C. 41 Liberty Hill Road PO Box 2179 Hemiker, NH 03242
SCALE: AS NOTED	DRAWING: 10

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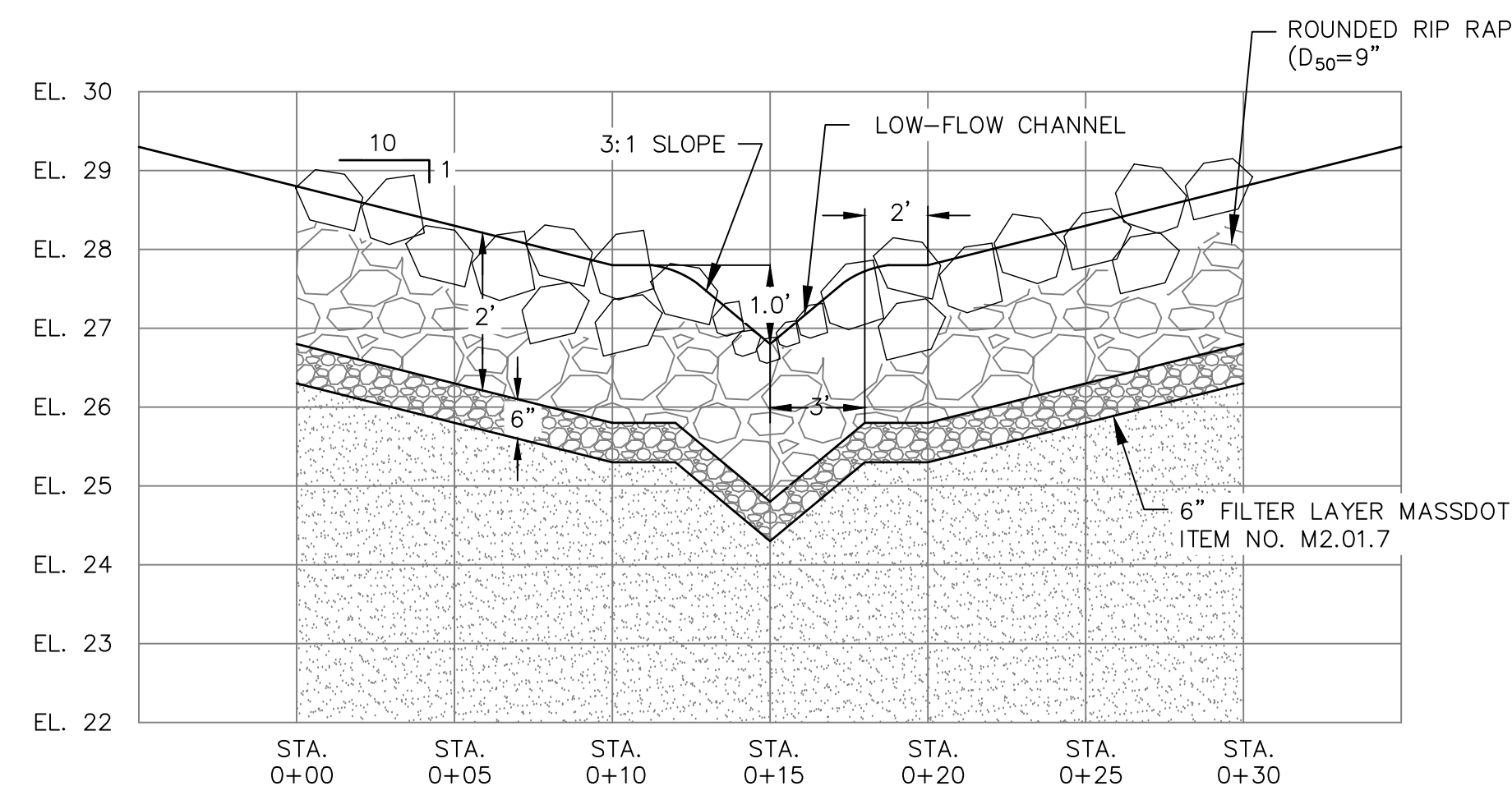


- DESIGN NOTES:
- CULVERT BED MATERIAL IS SIZED BASED ON NEAR-BRIDGE SHEAR STRESSES AND THE ROSEN GRAIN SIZE VERSUS CRITICAL SHEAR STRESS FIGURES FOR THE 100-YEAR FLOW EVENT.
 - THE COUNTERMEASURE WILL EXTEND 15 FEET UPSTREAM AND DOWNSTREAM OF THE BRIDGE.

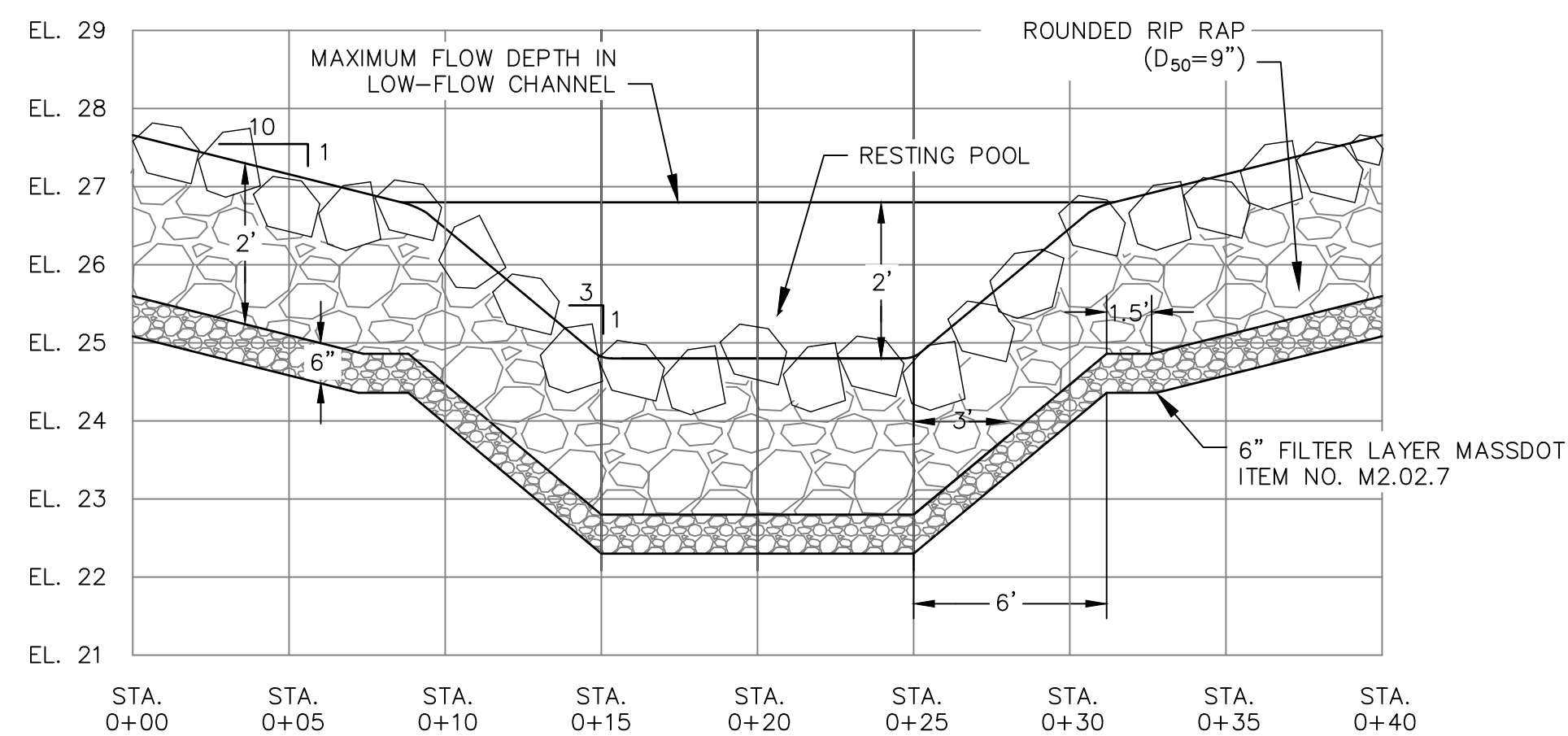
A BRIDGE SECTION — LOOKING DOWNSTREAM
11 1" = 4'



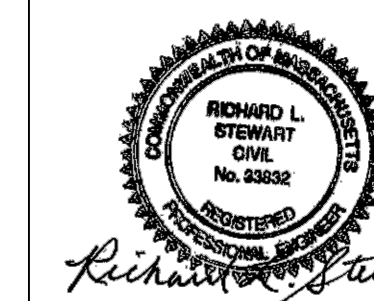
B BUILDING PIER ARMOR DETAIL
11 N.T.S.



C LOW FLOW CHANNEL TYPICAL SECTION
11 HORIZONTAL SCALE: 1"=5' VERTICAL SCALE: 1"=2'



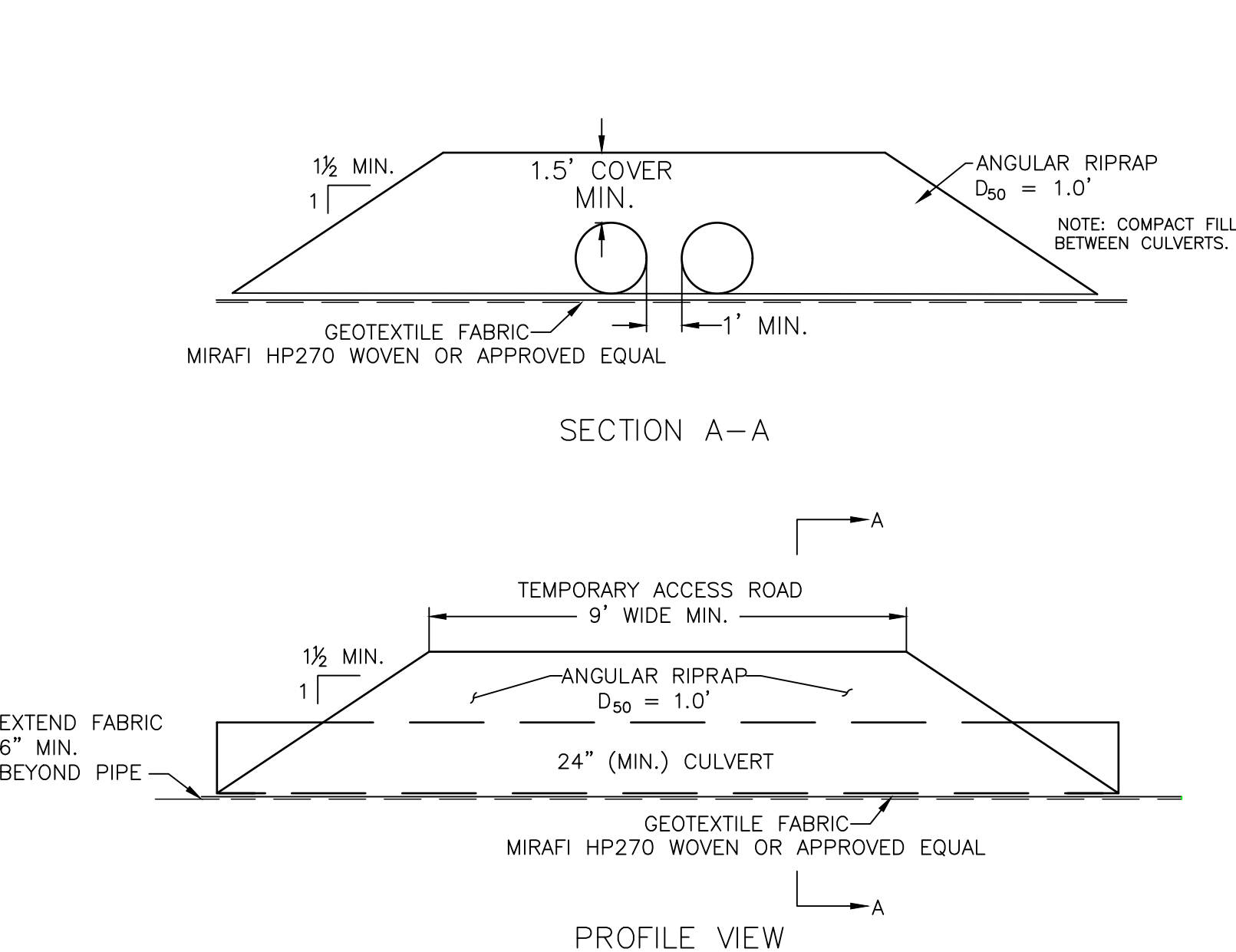
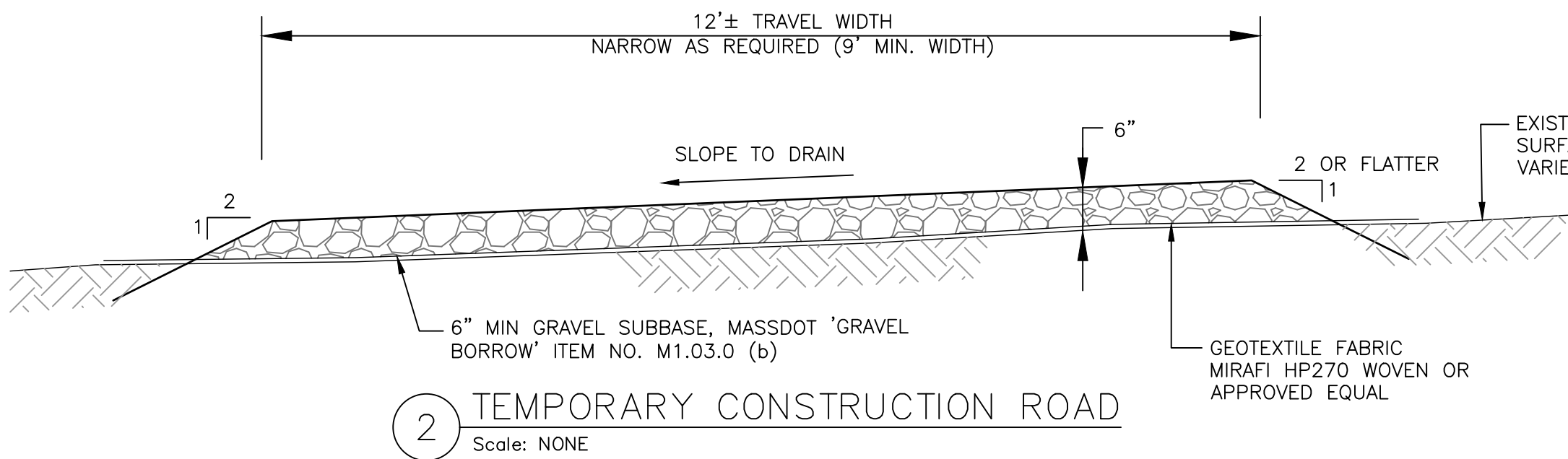
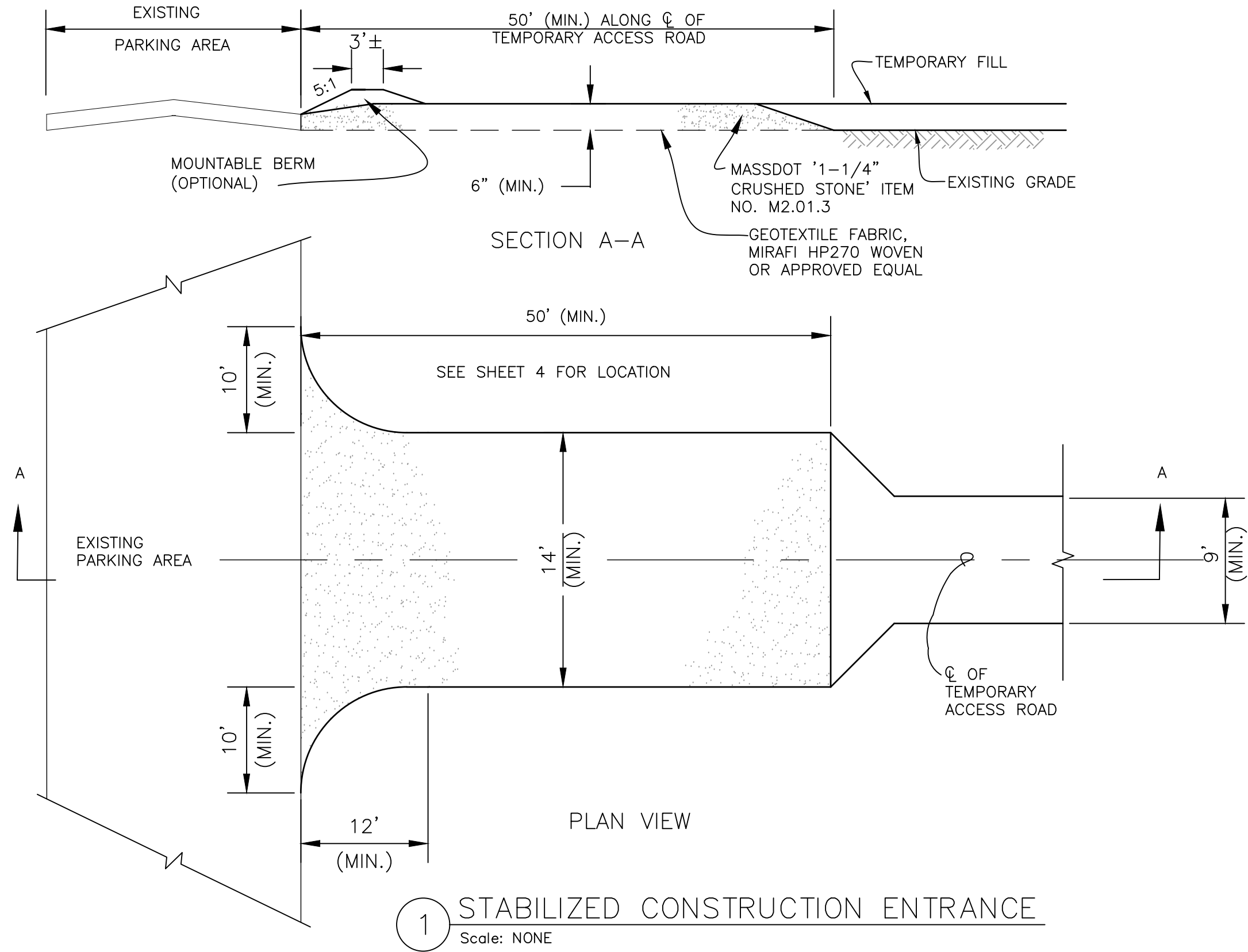
D RESTING POOL TYPICAL SECTION
11 HORIZONTAL SCALE: 1"=5' VERTICAL SCALE: 1"=2'



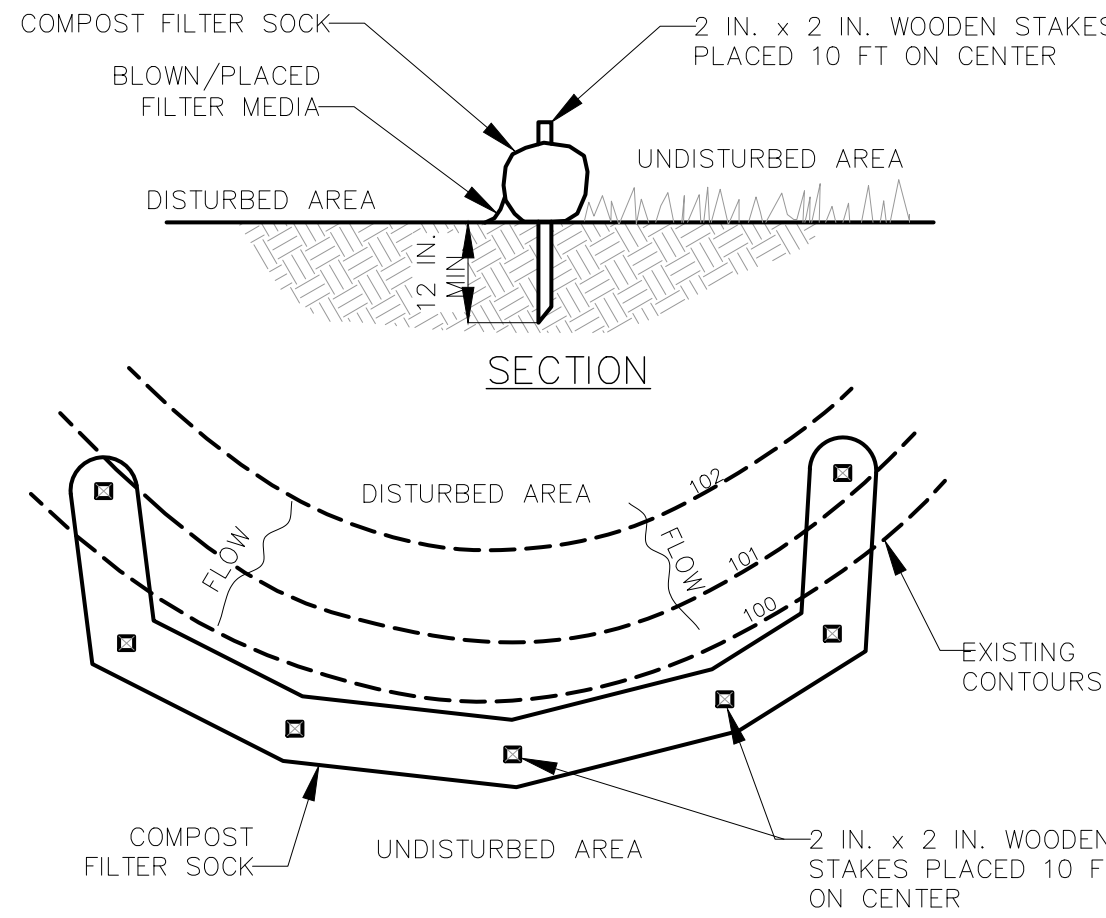
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ISSUE #		DESCRIPTION	BY	APP
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APPROVED BY: RLS				
PROJECT NO. 1934 DATE: 4/27/18				

COTTON GIN DAM REMOVAL PROJECT	
CONSTRUCTION DETAILS	
The Nature Conservancy 99 Bedford Street, 5th Floor Boston, MA 02111	Gomez and Sullivan Engineers, D.P.C. 41 Liberty Hill Road PO Box 2179 Henriker, NH 03242
SCALE: NONE	DRAWING: 11

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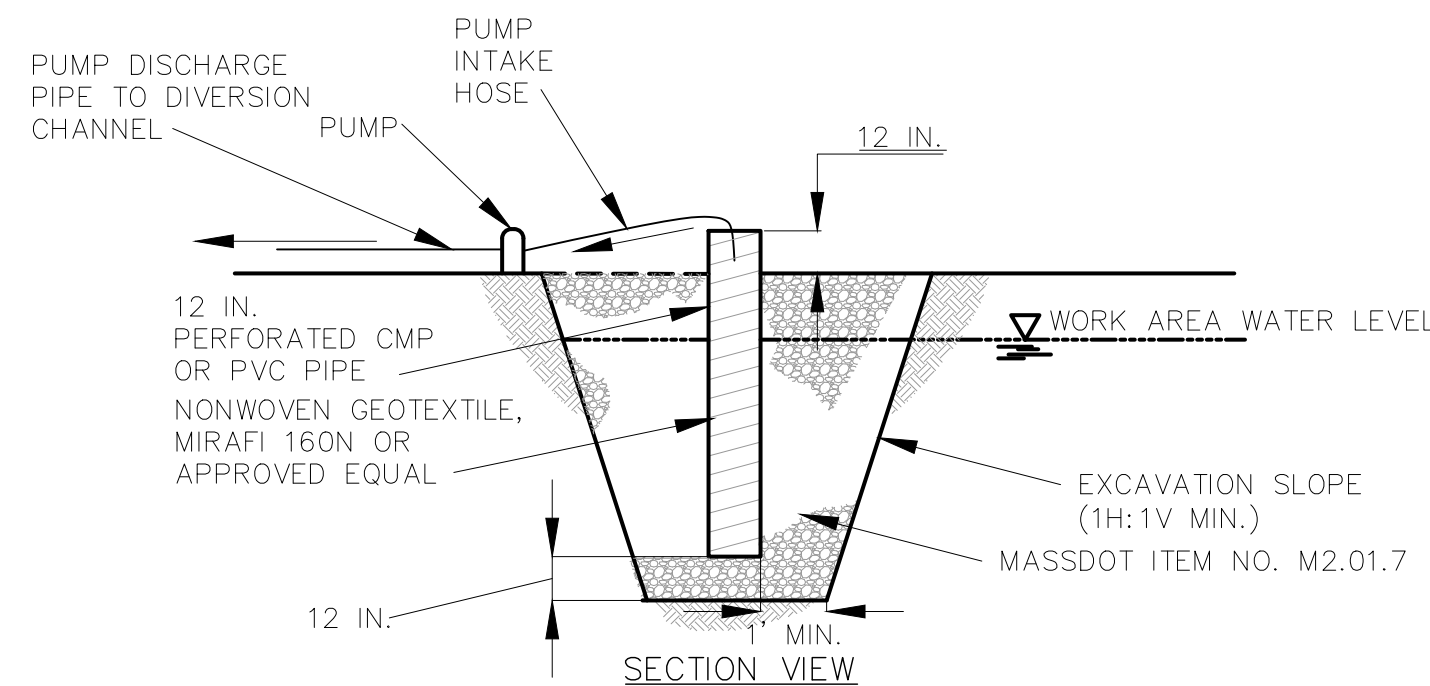


- NOTES:
- PIPE SHALL BE 15" (MIN.) FOR TEMPORARY DRAIN.
 - PIPES SHALL BE 24" (MIN.) FOR TEMPORARY RIVER DIVERSION.



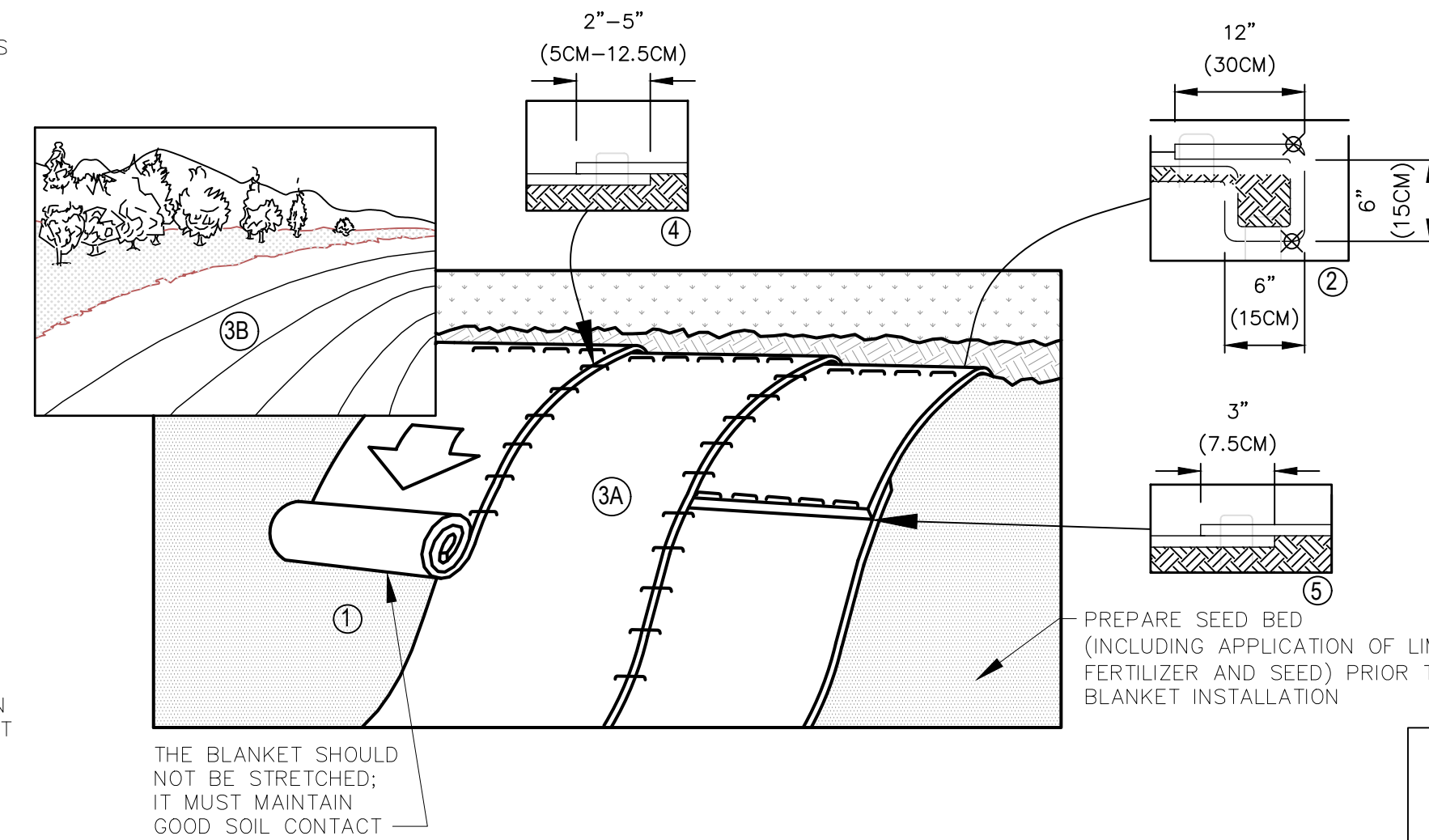
- NOTES:
- SOCK FABRIC SHALL MEET MADEP STANDARDS.
- COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
- TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
- ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
- COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
- UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.
- IF THERE ARE SEAMS WHERE ONE SOCK ABUTS ANOTHER, THERE NEEDS TO BE OVERLAP AND STAKING PER MANUFACTURERS SPECIFICATIONS.

4 COMPOST FILTER SOCK DETAIL
Scale: NONE



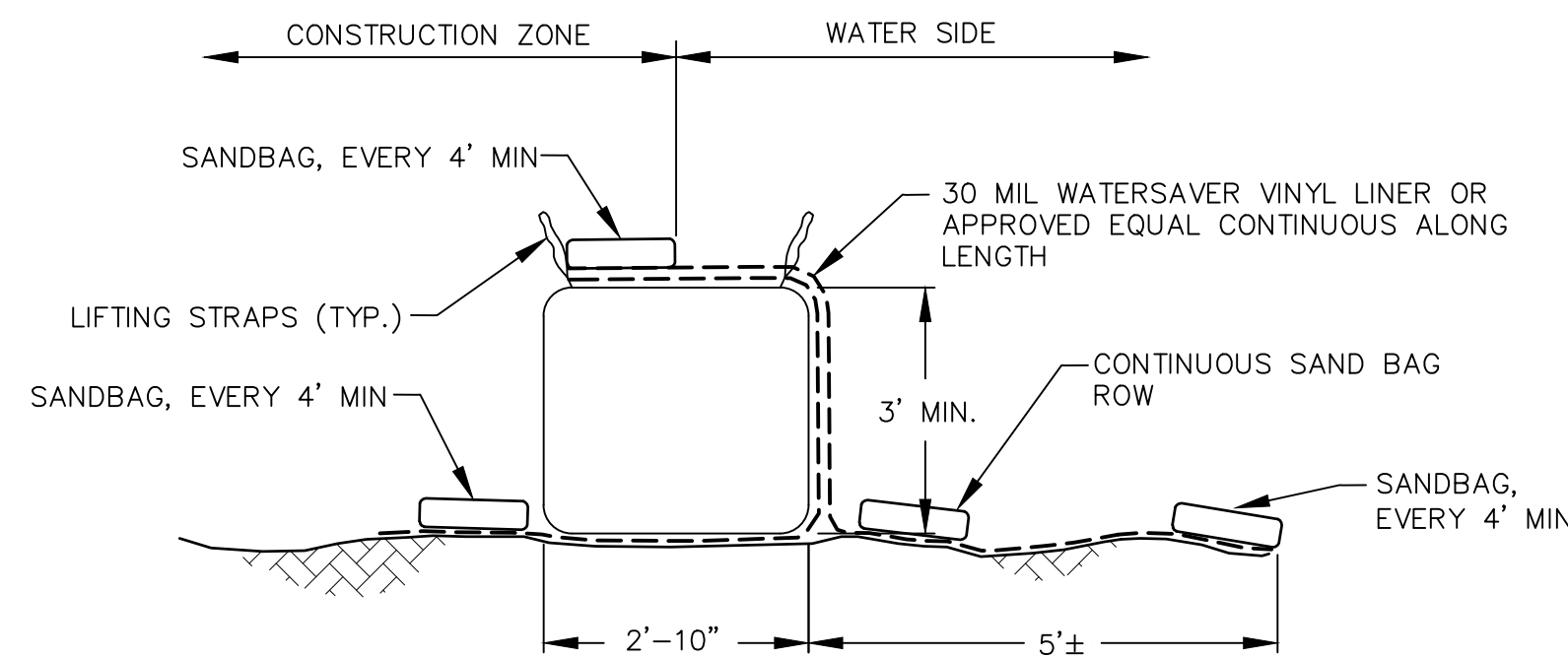
- NOTES:
- NOTIFY ENGINEER PRIOR TO SUMP PIT EXCAVATION. LOCATE SUMPS AT LOW POINTS IN THE WORK AREA.
- MAXIMUM DEPTH OF SUMP PIT EXCAVATION SHALL BE NO GREATER THAN 3 FEET BELOW THE MINIMUM ROUTE 108 BRIDGE FOOTING ELEVATION. DO NOT EXCAVATE BELOW ELEVATION 20.3 FT. NAVD88.
- 12\"/>
- THE AREA AROUND THE PIPE SHALL BE BACKFILLED WITH 3/4\"/>
- SET PUMP INTAKE INSIDE STANDPIPE. SUBMERSIBLE PUMP MAY BE SUBSTITUTED.
- GEOTEXTILE FABRIC SHALL BE NONWOVEN MIRAFI 160N OR APPROVED EQUAL.
- DISCHARGE FROM PUMP SHALL BE TO A SEDIMENT FILTER BAG.

5 SUMP PIT DETAIL
Scale: NONE

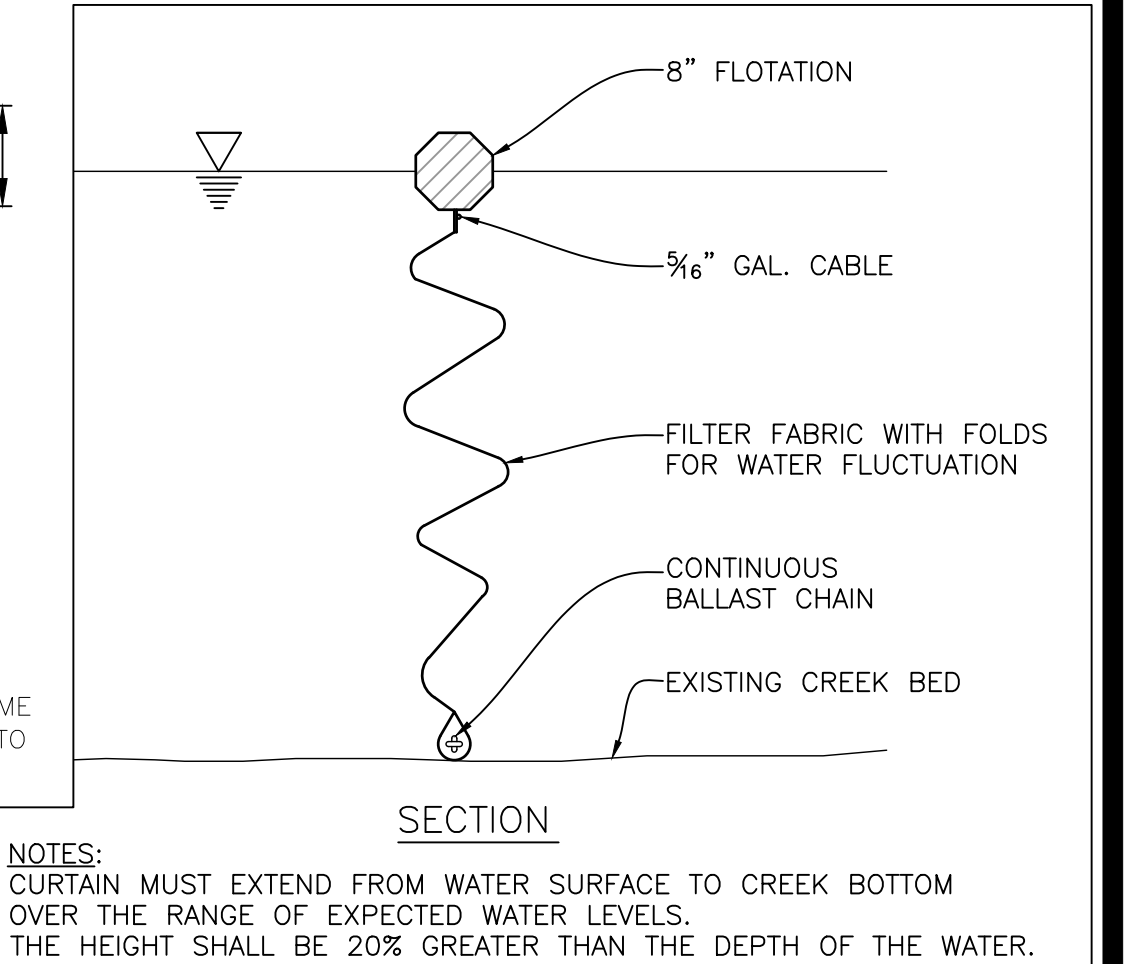


- INSTALLATION NOTES
- PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-0-SEED DO NOT SEED PREPARED AREA. CELL-0-SEED MUST BE INSTALLED WITH PAPER
 - BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15CM) DEEP X 6" (15CM) WIDE TRENCH WITH APPROXIMATELY 12" (30CM) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30CM) APART ACROSS THE WIDTH OF THE BLANKET.
 - ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/ STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
 - THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5CM-12.5CM) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
 - CONSECUTIVE BLANKETS SPICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30CM) APART ACROSS ENTIRE BLANKET WIDTH.
- NOTES:
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - DO NOT SCALE DRAWINGS.
 - IN LOOSE SOIL CONDITIONS THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.
 - CONTRACTOR'S NOTE: FOR PRODUCT AND PURCHASING INFORMATION VISIT www.CADdetails.com/info REFERENCE NUMBER 140-003.
 - SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
 - SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
 - BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 70% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

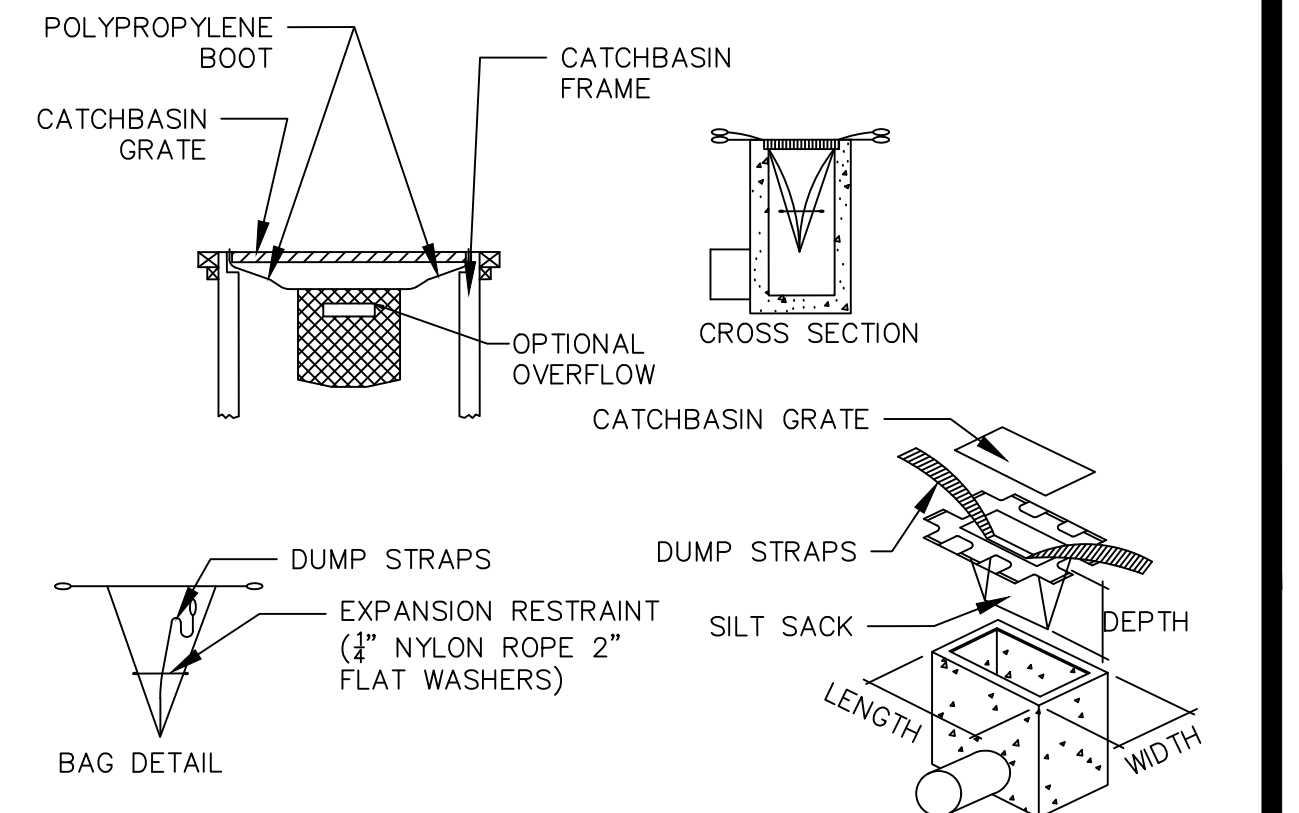
6 ROLLED EROSION CONTROL PRODUCT
Scale: NONE



7 SUPERSACKS OR SIMILIAR
Scale: NONE



8 OIL BOOM
Scale: NONE

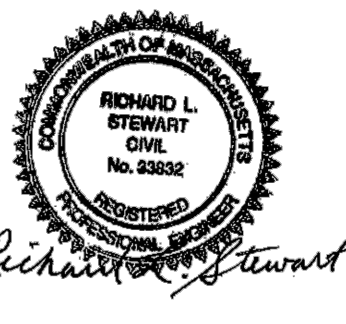


- THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS SHEET, OVERLAND AND CONCENTRATED FLOWS (NOT GREATER THAN 1 CFS). THE METHOD CAN DRAIN FLAT AREA TO STEEP SLOPES. INLET CAPACITY WILL DECREASE WITH THIS METHOD AND CONTRACTOR SHALL EXPECT FLOODING TO OCCUR DURING HIGH FLOW EVENTS.
- INSPECTION SCHEDULE SHALL COMPLY WITH EPA GUIDELINES.
- MAINTENANCE SHALL OCCUR WHEN NECESSARY. SILT SACKS SHALL BE CLEANED ONCE THE BAG IS FILLED HALF WAY WITH DEBRIS. CONTRACTOR SHALL REMOVE SILT SACK AND PLACE NEW UNIT. DO NOT EMPTY SILT SACK CONTENTS INTO THE CATCHBASIN.

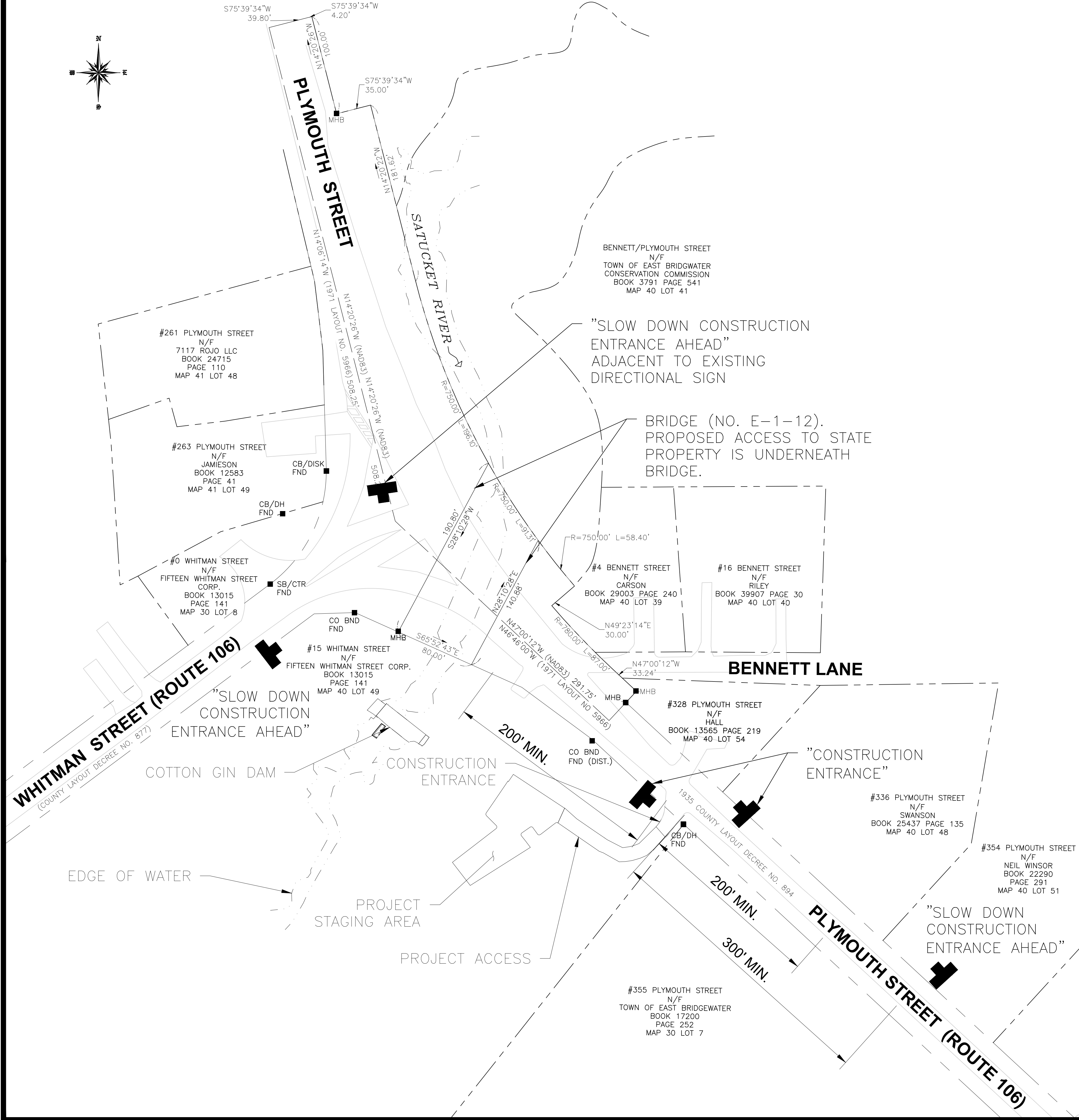
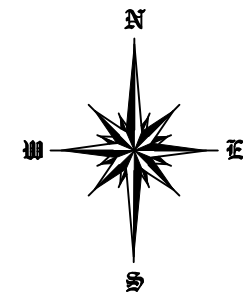
9 SILT SACK
Scale: NONE

COTTON GIN DAM REMOVAL PROJECT

EROSION CONTROL DETAILS

 <i>Richard L. Stewart</i>							EROSION CONTROL DETAILS		
	4/27/18	1	RECORD DRAWINGS	JSC	RLS				
	6/5/17	0	ISSUED FOR BID	JSC	RLS				
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	PROJECT NO. 1934 DATE: 4/27/18								
SCALE: NONE							DRAWING: 12		
The Nature Conservancy 99 Bedford Street, 5th Floor Boston, MA 02111							Gomez and Sullivan Engineers, D.P.C. 41 Liberty Hill Road PO Box 2179 Henniker, NH 03242		



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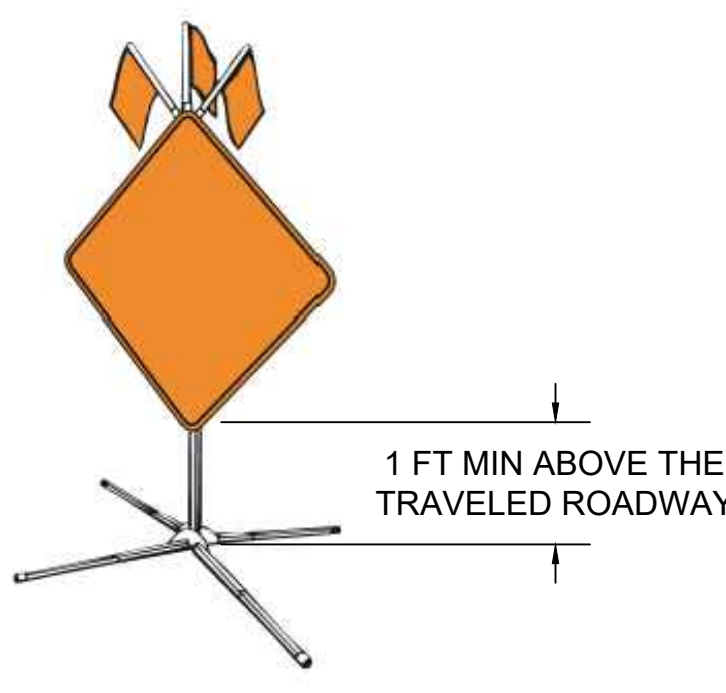
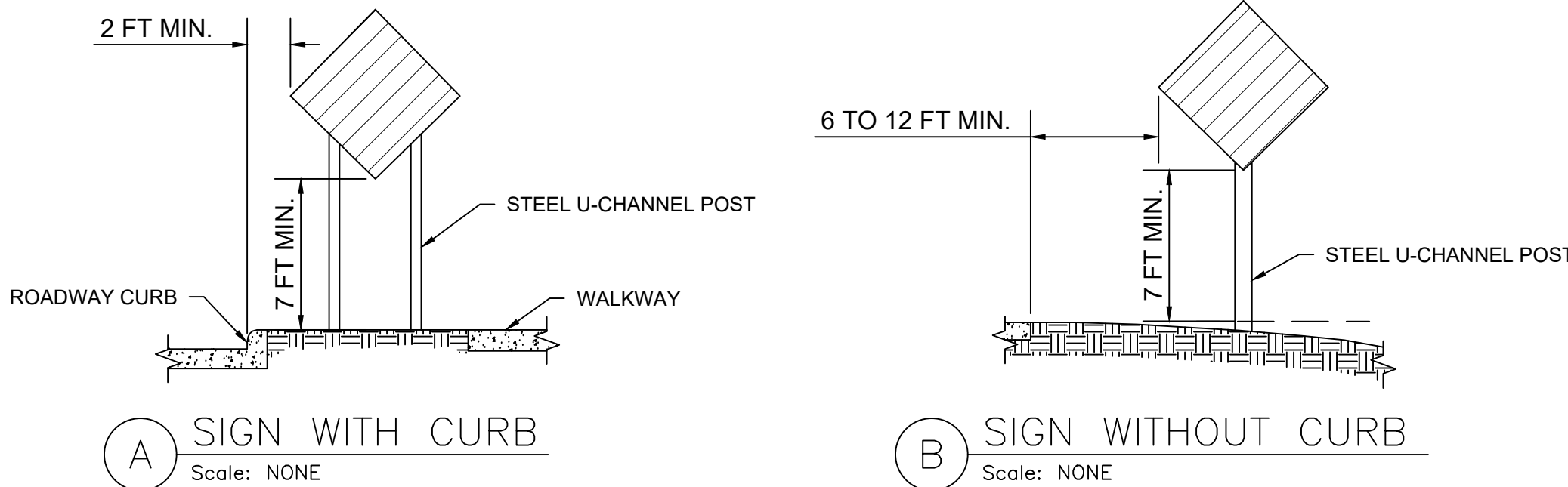


LEGEND

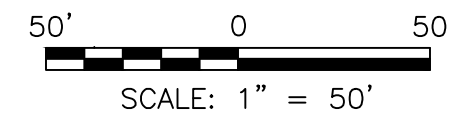
- RIGHT OF WAY BOUNDARY
- PROPOSED TEMPORARY CONSTRUCTION SIGN LOCATION

SIGN LEGEND

-  "SLOW DOWN CONSTRUCTION ENTRANCE AHEAD" (36" X 36")
-  "CONSTRUCTION ENTRANCE" (36" X 36")



- NOTES:
1. POSTED SPEED IS 25MPH ON EACH ROAD SHOWN.
 2. SIGN SUPPORTS SHALL BE CRASHWORTHY.
 3. SIGNS SHOULD BE PROPERLY MAINTAINED FOR CLEANLINESS, VISIBILITY, AND CORRECT POSITIONING.
 4. SIGNS THAT HAVE LOST SIGNIFICANT LEGIBILITY SHOULD BE PROMPTLY REPLACED.





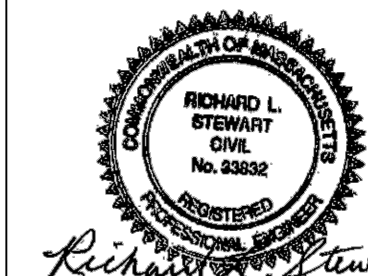
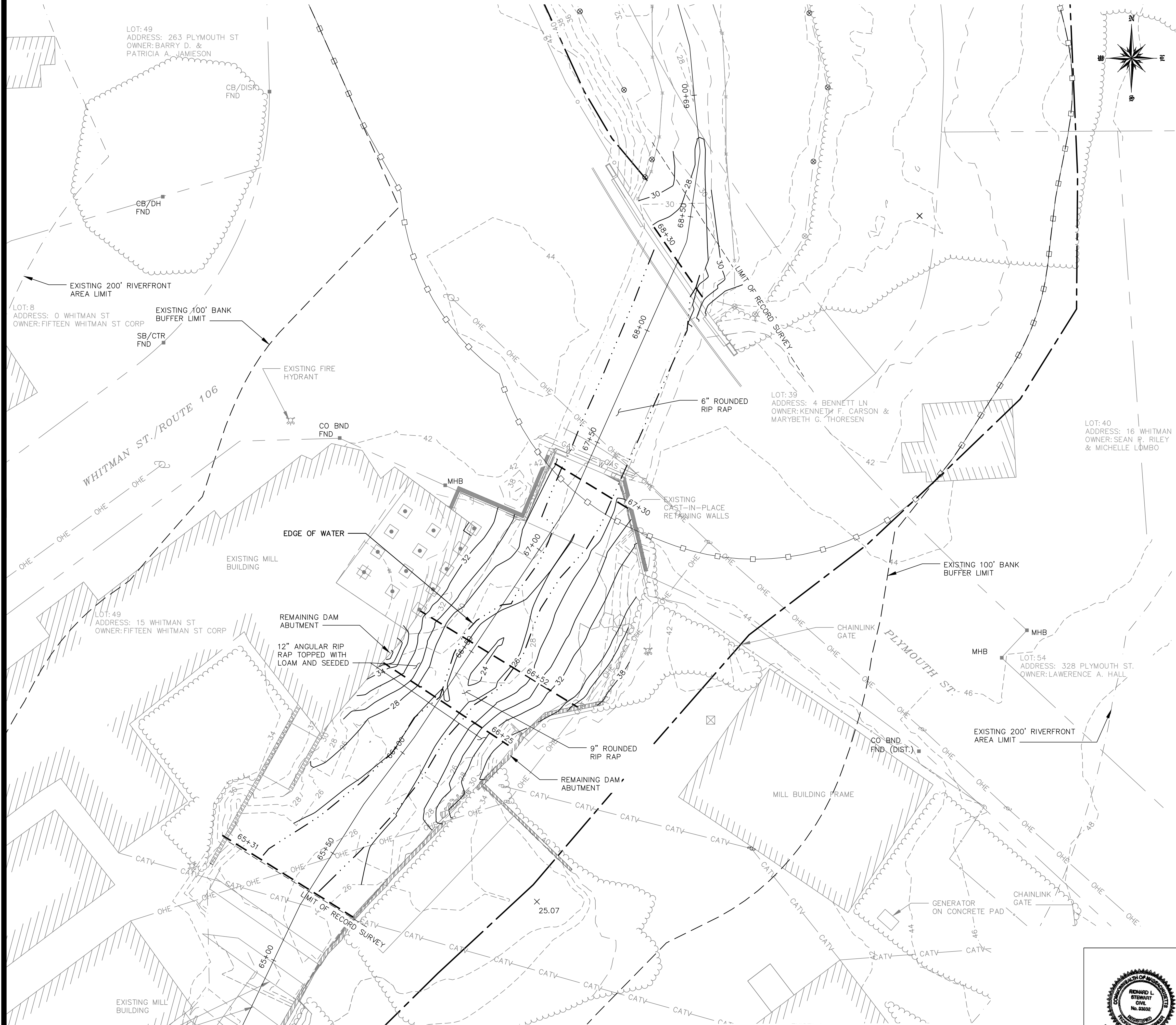
4/27/18	1	RECORD DRAWINGS	JSC	RLS
6/5/17	0	ISSUED FOR BID	JSC	RLS
ISSUE #		DESCRIPTION	BY	APP
DRAWN BY: JSC				
CHECKED BY: KJC				
APPROVED BY: RLS				
PROJECT NO.		1934	DATE: 4/27/18	

COTTON GIN DAM REMOVAL PROJECT

TRAFFIC MANAGEMENT PLAN

The Nature Conservancy 99 Bedford Street, 5th Floor Boston, MA 02111		Gomez and Sullivan Engineers, D.P.C. 41 Liberty Hill Road PO Box 2179 Henniker, NH 03242	
SCALE: 1" = 50'		DRAWING:	13

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4/27/18	1	RECORD DRAWINGS	JSC	RLS
6/5/17	0	ISSUED FOR BID	JSC	RLS
ISSUE	#	DESCRIPTION	BY	APP
DRAWN BY: JSC				
CHECKED BY: KJC				
APPROVED BY: RLS				
PROJECT NO.		1934	DATE: 4/27/18	

20'020'
SCALE: 1" = 20'

COTTON GIN DAM
REMOVAL PROJECT

RECORD PLAN

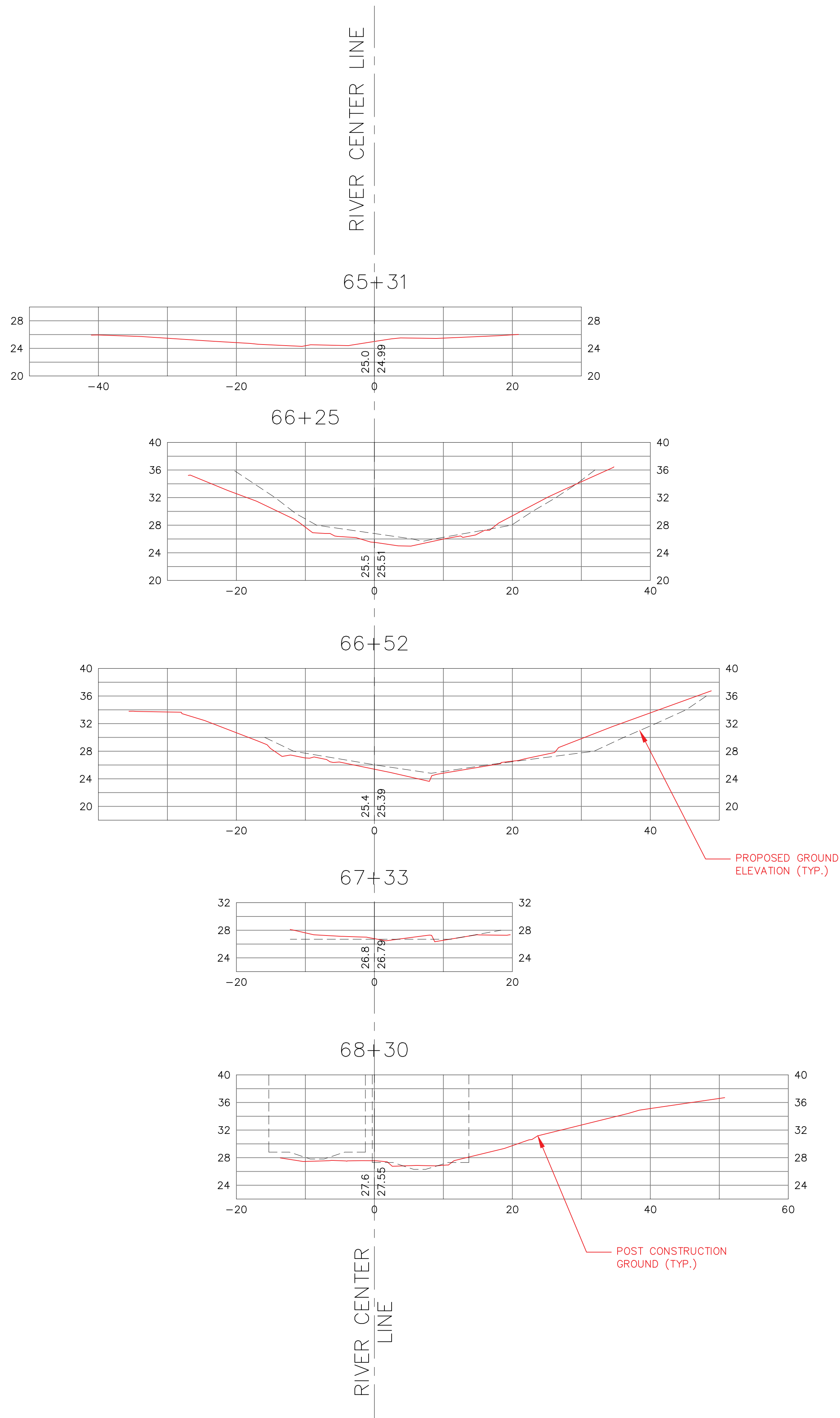
The Nature Conservancy 99 Bedford Street, 5th Floor Boston, MA 02111	Gomez and Sullivan Engineers, D.P.C. 41 Liberty Hill Road PO Box 2179 Hemiker, NH 03242
SCALE: 1" = 20'	DRAWING: 14

NOTE:
1. RECORD SURVEY BY MARTINEZ COUCH & ASSOCIATES
ON JANUARY 18, 2018.

LEGEND

- RECORD CONTOUR
RECORD CROSS SECTION (SEE SHEET 15)

IT IS A VIOLATION OF THE LAW FOR ANY PERSON TO ALTER THIS DRAWING IN ANYWAY UNLESS HE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. ALTERATIONS MUST HAVE THE ENGINEER'S SEAL AFFIXED ALONG WITH A DESCRIPTION OF THE ALTERATION, THE SIGNATURE AND DATE.

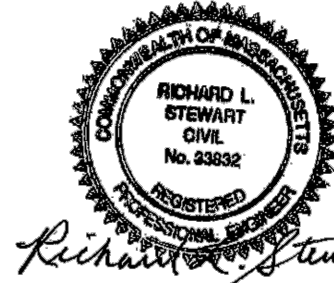


- NOTES:
1. RECORD SURVEY BY MARTINEZ COUCH & ASSOCIATES ON JANUARY 18, 2018.
 2. CROSS SECTIONS ARE LOOKING UPSTREAM.

10' 0 10'
SCALE: 1" = 10'

COTTON GIN DAM REMOVAL PROJECT

RECORD CROSS SECTIONS



4/27/18	1	RECORD DRAWINGS	JSC	RLS
6/5/17	0	ISSUED FOR BID	JSC	RLS
ISSUE #		DESCRIPTION	BY	APP
DRAWN BY: JSC				
CHECKED BY: KJC				
APPROVED BY: RLS				
PROJECT NO. 1934 DATE: 4/27/18				

The Nature Conservancy
99 Bedford Street, 5th Floor
Boston, MA 02111

Gomez and Sullivan Engineers, D.P.C.
41 Liberty Hill Road
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Henniker, NH 03242

SCALE: 1" = 10'

DRAWING:

15

