

HOLMES PLAYGROUND DAM REMOVAL TOWN BROOK RESTORATION

NEWFIELD STREET
PLYMOUTH, MASSACHUSETTS

75% ADVANCED DESIGN
DECEMBER 21, 2015
REVISED: MARCH 11, 2016
REVISED: MARCH 24, 2016



LOCATION MAP



PREPARED FOR:

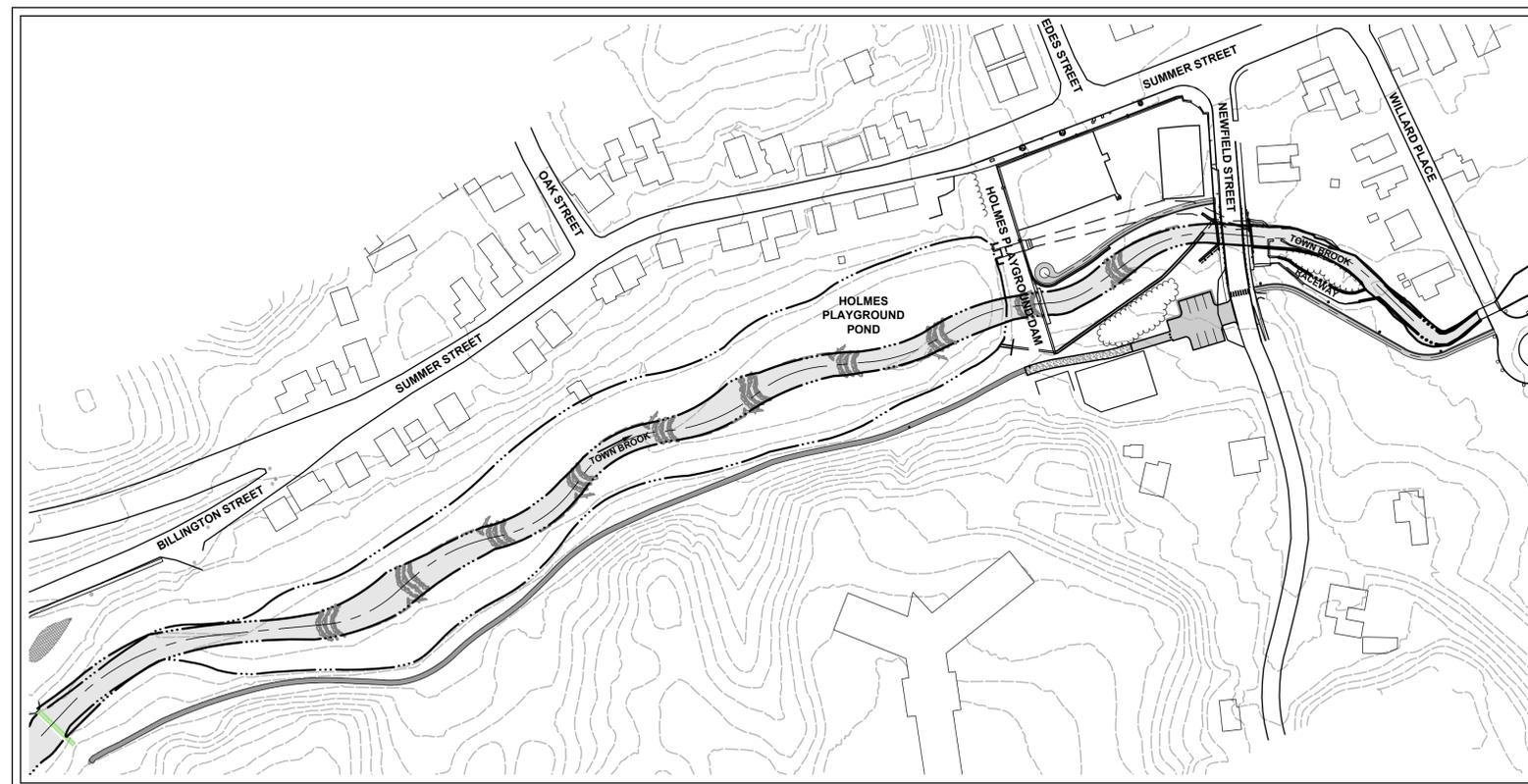


TOWN OF PLYMOUTH, MASSACHUSETTS
11 LINCOLN STREET
PLYMOUTH, MA 02360

TOWN OF PLYMOUTH DEPARTMENT OF MARINE AND ENVIRONMENTAL AFFAIRS
DAVID GOULD, DIRECTOR

MELISSA ARRIGHI, TOWN MANAGER

BOARD OF SELECTMEN
MATTHEW J. MURATORE, CHAIRMAN
BELINDA A. BREWSTER, VICE-CHAIRMAN
JOHN T. MAHONEY, JR.
KENNETH A. TAVARES
ANTHONY F. PROVENZANO, JR.



PROJECT SITE VICINITY MAP:



LIST OF DRAWINGS

NO.	NAME	TITLE
01	--	TITLE SHEET
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04	EX-2	SITE PLAN - EXISTING HOLMES DAM
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07	LA-1	LAYOUT PLAN-IMPONDMENT
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09	GU-1	GRADING AND UTILITIES PLAN-IMPONDMENT
10	GU-2	GRADING AND UTILITIES PLAN-PLAYGROUND
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12	WC-1	WATER CONTROL PLAN
13	RE-1	RESTORATION PLAN
14-17	CS-1 - CS-4	TOWN BROOK CROSS SECTIONS (1)-(4)
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NEWFIELD STREET BRIDGE REPLACEMENT PLANS

TIGHE & BOND PRELIMINARY SET, DATED FEBRUARY 2016

NAME	TITLE
G-001	COVER SHEET
G-002	EROSION CONTROL NOTES & DETAILS
C-001	EXISTING CONDITIONS PLAN
C-002	DEMOLITION PLAN
C-003	BRIDGE PLAN
C-004	UTILITY PLAN
D-001	SECTIONS AND DETAILS
D-002	SECTIONS AND DETAILS
D-003	WATER, SEWER AND PAVEMENT DETAILS

PREPARED BY:

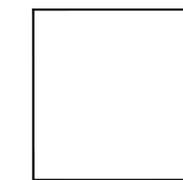


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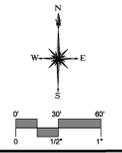
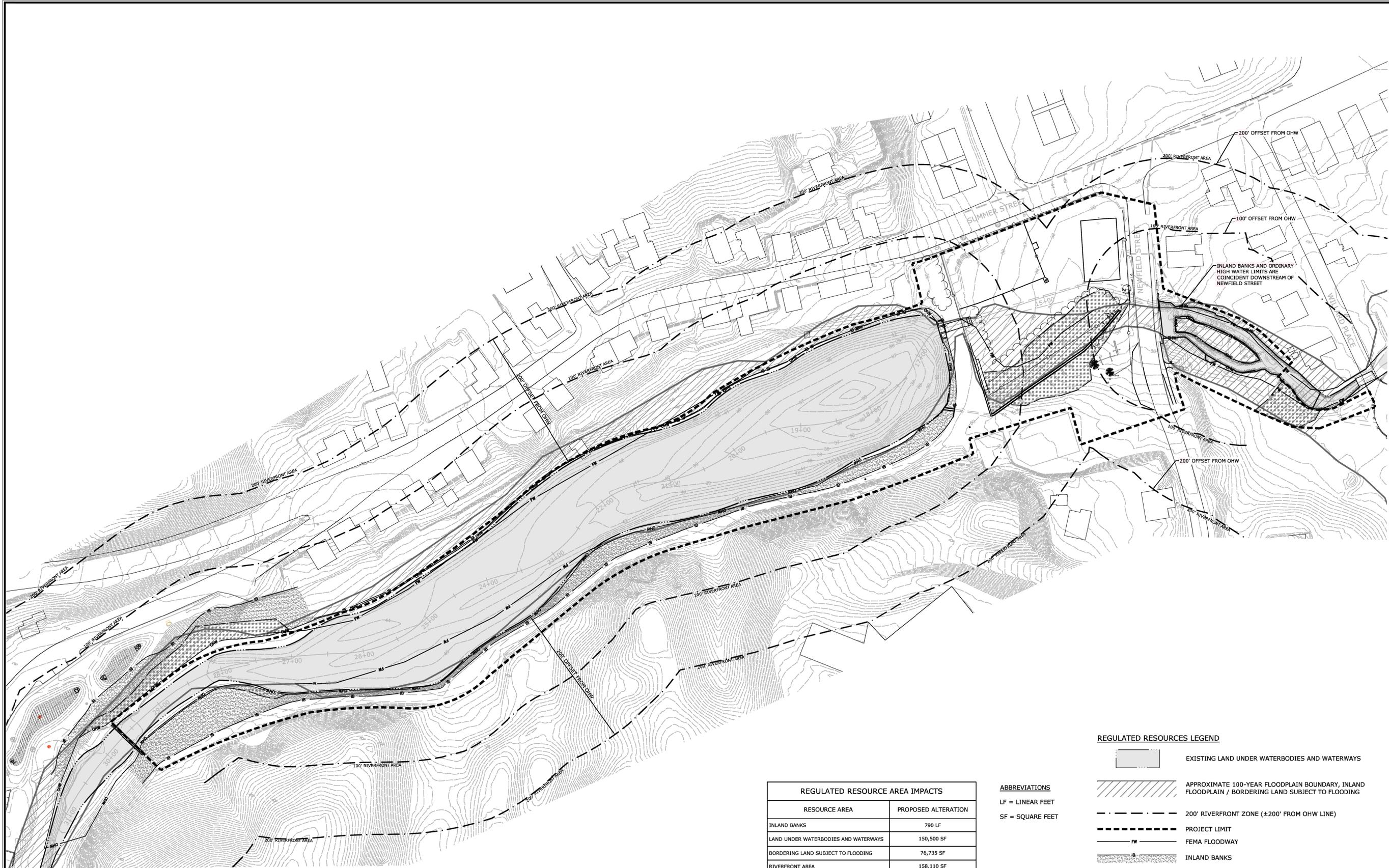
Know what's below.
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W. Andrew Greene



P.E. MA# 49355

MMT NO.: 1982-05
SUBMITTED: MARCH 11, 2016



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 Cheshire, Connecticut 06410
 (203) 271-1773 Fax (203) 272-9733
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DESCRIPTION	DATE	BY
FOR NO SUBMISSION	3/11/2016	BAM

REGULATED RESOURCE AREAS
HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
 NEWFIELD STREET
 PLYMOUTH, MASSACHUSETTS

75% ADVANCED DESIGN

RESOURCE AREA	PROPOSED ALTERATION
INLAND BANKS	790 LF
LAND UNDER WATERBODIES AND WATERWAYS	150,500 SF
BORDERING LAND SUBJECT TO FLOODING	76,735 SF
RIVERFRONT AREA	158,110 SF
BORDERING VEGETATED WETLAND (BVW)	17,285 SF

ABBREVIATIONS
 LF = LINEAR FEET
 SF = SQUARE FEET

REGULATED RESOURCES LEGEND

- EXISTING LAND UNDER WATERBODIES AND WATERWAYS
- APPROXIMATE 100-YEAR FLOODPLAIN BOUNDARY, INLAND FLOODPLAIN / BORDERING LAND SUBJECT TO FLOODING
- 200' RIVERFRONT ZONE (±200' FROM OHW LINE)
- PROJECT LIMIT
- FEMA FLOODWAY
- INLAND BANKS
- ORDINARY HIGH WATER
- LIMIT OF INLAND WETLANDS
- BORDERING VEGETATED WETLAND

MAPPING NOTE:
 1. THE WETLANDS SHOWN DOWNSTREAM OF THE HOLMES PLAYGROUND DAM WERE FLAGGED BY OTHERS AND FIELD LOCATED BY WSP. THE WETLANDS SHOWN ADJACENT TO THE HOLMES PLAYGROUND DAM IMPONDMENT WERE FLAGGED BY MMI WETLAND SCIENTIST MATTHEW J. SANFORD (PWS #1677) ON SEPTEMBER 25, 2014.

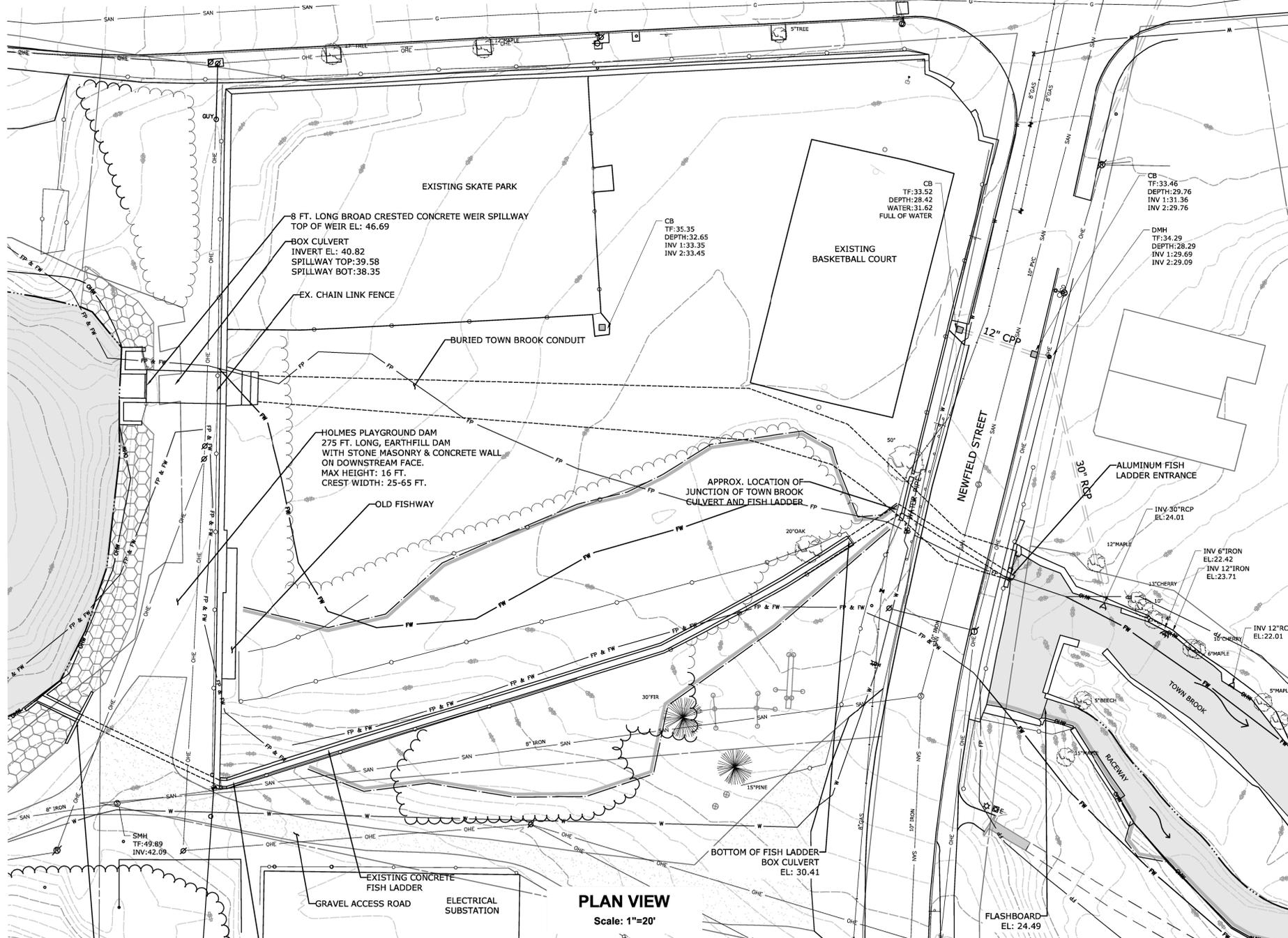
DESIGNED	BAM	WAG

SCALE: 1"=60'
 DATE: DECEMBER 21, 2015
 PROJECT NO. 1982-05
 SHEET NO. 02 OF 21

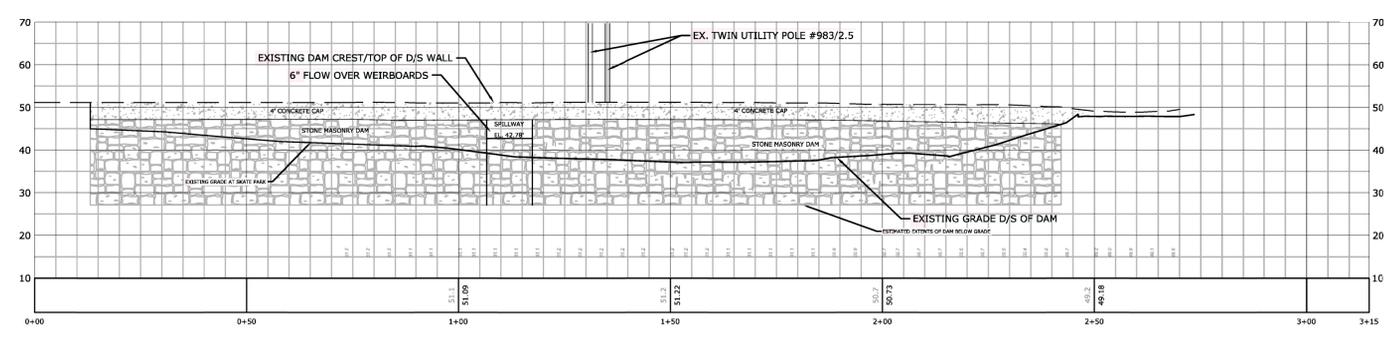
RR-1

SHEET NAME

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PLAN VIEW
Scale: 1"=20'



SECTION AT DAM
Section Looks Downstream, Scale: 1"=20' Hor., 1"=4' Vert.

NOTES

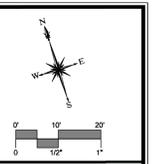
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2. GROUND FIELD SURVEY OF THE PROJECT AREA INCLUDING THE DAM AND ALL DOWNSTREAM AREAS CONDUCTED BY WSP ON JUNE 5, 2014 - JUNE 14, 2014. THIS GROUND SURVEY WAS USED TO DEVELOP AN EXISTING CONDITIONS PLAN PREPARED FOR TIGHE & BOND BY WSP TRANSPORTATION AND INFRASTRUCTURE, DATE: JULY 2, 2014.
3. BATHYMETRY AND TOPOGRAPHY BETWEEN BOY SCOUT BRIDGE AND HOLMES PLAYGROUND DAM COMPLETED BY MILONE & MACBROOM, INC. ON SEPTEMBER 24, 2014.
4. THE HORIZONTAL DATUM SHOWN HEREON REFERENCES MASSACHUSETTS STATE PLANE NAD83.
5. THE VERTICAL DATUM SHOWN HEREON REFERENCES NAVD88.
6. THE WETLANDS SHOWN DOWNSTREAM OF THE HOLMES PLAYGROUND DAM WERE FLAGGED BY OTHERS AND FIELD LOCATED BY WSP.
7. THE WETLANDS SHOWN ADJACENT TO THE HOLMES PLAYGROUND DAM IMPOUNDMENT WERE FLAGGED BY MMI WETLAND SCIENTIST ON SEPTEMBER 25, 2014.
8. PROPERTY LINES AND UTILITY INFORMATION IN SUMMER STREET AND ADJACENT TO IMPOUNDMENT PROVIDED BY TOWN OF PLYMOUTH GIS.
9. LIMITS OF ORDINARY HIGH WATER DELINEATED BY MMI BASED ON HYDRAULIC MODELING OF TOWN BROOK, USING ELEVATIONS ASSOCIATED WITH THE MEAN ANNUAL FLOW (80 CFS).

LEGEND

- PROPERTY LINE (PER TOWN OF PLYMOUTH GIS)
- CHAIN LINK FENCE
- EDGE OF WATERCOURSE (PER MMI FIELD SURVEY)
- WATER MAIN
- SANITARY MAIN
- OVERHEAD ELECTRIC LINES
- TREELINE
- WETLAND (SEE NOTE)
- TREE/SHRUB
- CATCH BASIN
- WATER VALVE
- HYDRANT
- LIGHT POST
- UTILITY POLE
- SIGN
- STREET LIGHT
- SANITARY MANHOLE

WETLAND MAPPING NOTE:

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FOR NO SUBMISSION	3/11/2016	BAM

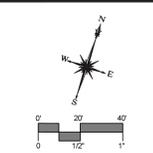
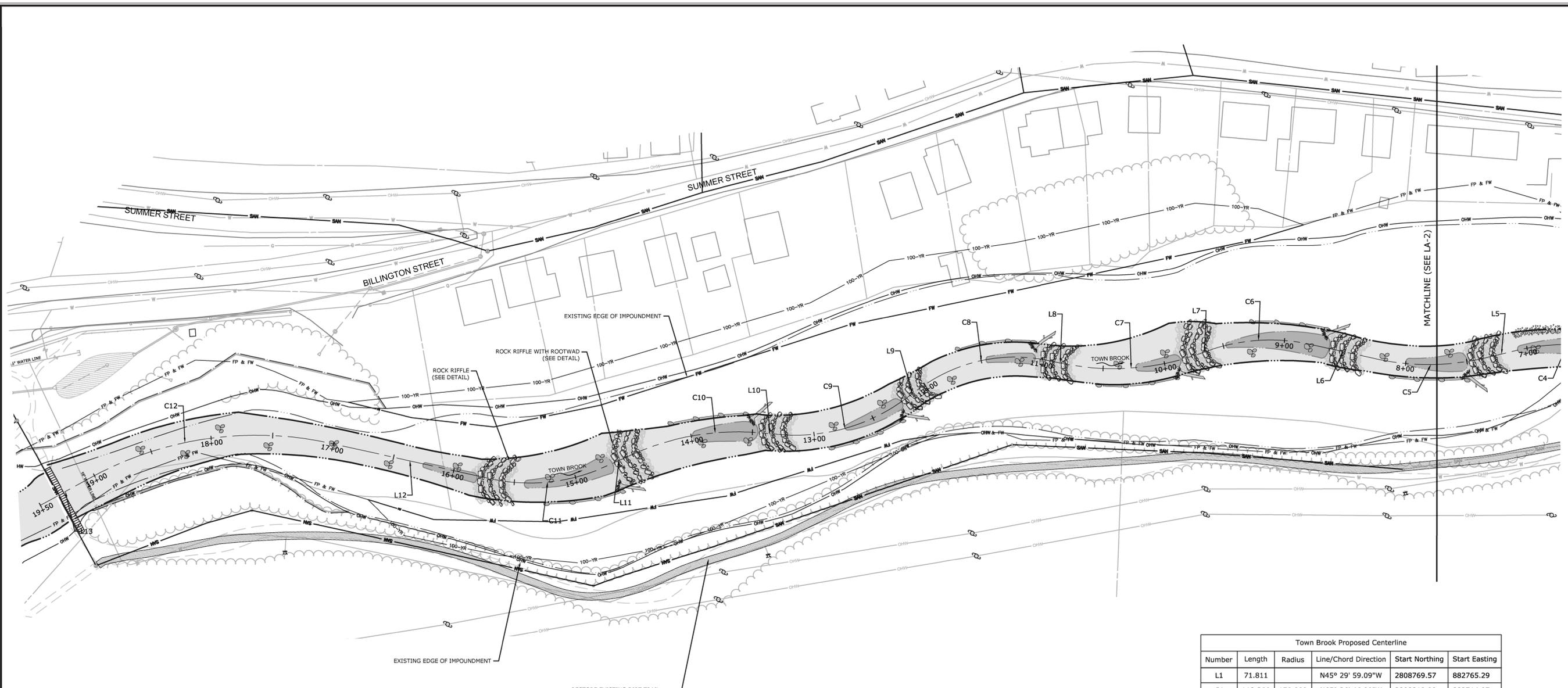
SITE PLAN - EXISTING HOLMES DAM
HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
NEWFIELD STREET
PLYMOUTH, MASSACHUSETTS

DESIGNED	BAM	WAG
DRAWN	CHECKED	

SCALE: 1"=20'
DATE: DECEMBER 21, 2015
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EX-2
SHEET NAME

SEE SHEET LA-1 FOR DAM AND DAM APPROVAL INFORMATION.



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DESCRIPTION	DATE	BY
FOR NOI SUBMISSION	3/11/2016	BAM
REVISED TRAIL LOCATION	3/24/2016	BAM

- GENERAL NOTES:**
- CONTRACTOR SHALL PERFORM WORK DURING LOW FLOWS IN TOWN BROOK AS FEASIBLE, WHILE ABIDING BY ALL TIME-OF-YEAR RESTRICTIONS SET FORTH BY THE REGULATORY APPROVALS.
 - SEDIMENT CONTAINS LOW LEVELS OF CONTAMINATION. ALL SEDIMENT DISTURBED SHALL BE REUSED ON SITE AND STABILIZED, OR DISPOSED OF IN APPROVED LANDFILL IN ACCORDANCE WITH ALL PERMITS.
 - TRAFFIC DETOURS AND TRAFFIC MANAGEMENT SHALL BE COORDINATED WITH THE TOWN OF PLYMOUTH.
 - NO SHOT OR CRUSHED ANGULAR ROCK WILL BE ALLOWED IN THE EXPOSED POST-RESTORATION STREAM BED. ONLY NATIVE OR ROUNDED STONE SHALL BE USED FOR STREAM-BED MATERIAL AND ACCESS ROADS IN THE RIVER CHANNEL.
 - EACH PIECE OF EQUIPMENT SLATED FOR USE DURING CONSTRUCTION SHALL BE INSPECTED FOR ANY MAINTENANCE ISSUES INCLUDING LEAKING OIL, GAS, OR HYDRAULIC FLUID.
 - NO EQUIPMENT SHALL BE REFUELED WITHIN THE LIMITS OF THE WETLANDS, OR HISTORIC DAM IMPOUNDMENT.
 - ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 6" TOPSOIL, AND BE SEEDED WITH GRASS, AS SHOWN ON THE PLANS.
 - ALL CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM TO THE TOWN OF PLYMOUTH REQUIREMENTS AND TO THE APPLICABLE SECTIONS OF THE MOST RECENT COMMONWEALTH OF MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
 - ALL FUEL, OIL, CONSTRUCTION EQUIPMENT, OR OTHER HAZARDOUS MATERIALS SHOULD BE STORED ABOVE THE FEMA DESIGNATED 100-YEAR FLOODPLAIN ELEVATION DURING NON-WORK HOURS.
 - PROJECT SITE IS SUBJECT TO FLOODING. CONTRACTOR SHALL MONITOR WEATHER REPORTS, AND BE PREPARED TO STOP WORK AND STABILIZE SITE IF MORE THAN ONE INCH (1") OF RAINFALL IS PREDICTED BY THE NATIONAL WEATHER SERVICE (70% CHANCE OR HIGHER). WORK SHALL BE HALTED UNTIL PRECIPITATION STOPS, AND CHANCE OF FURTHER RAINFALL FALLS BELOW 50%.
 - CONTRACTOR SHALL STAY ON TOWN OWNED PROPERTY, ROADWAY RIGHT OF WAYS, OR DESIGNATED EASEMENT AREAS AT ALL TIMES DURING CONSTRUCTION.
 - CONTRACTOR SHALL SUBMIT A DEWATERING PLAN, AND A CONSTRUCTION SEQUENCE TO THE ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.

- NOTES**
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LEGEND

	PROPOSED EDGE OF WATER (BANKFULL CHANNEL)
	BOULDER REVETMENT
	COIR LOG WITH BOULDER REVETMENT
	COBBLE BED ARMOR
	ROOT WAD
	ROCK RIFFLE FLOW AREA
	POOL FLOW AREA
	RANDOM BOULDER CLUSTER
	PROPOSED RETAINING WALL
	PROPOSED SAFETY FENCE

Town Brook Proposed Centerline					
Number	Length	Radius	Line/Chord Direction	Start Northing	Start Easting
L1	71.811		N45° 29' 59.09"W	2808769.57	882765.29
C1	118.366	170.000	N65° 26' 46.90"W	2808819.90	882714.07
L2	78.263		N85° 23' 34.71"W	2808868.10	882608.57
C2	105.611	150.000	S74° 26' 12.54"W	2808874.39	882530.56
L3	63.204		S54° 15' 59.78"W	2808846.63	882430.91
C3	53.203	100.000	S69° 30' 29.29"W	2808809.72	882379.61
L4	35.861		S84° 44' 58.80"W	2808791.31	882330.36
C4	82.127	180.000	S71° 40' 43.58"W	2808788.03	882294.65
L5	25.955		S58° 36' 28.37"W	2808762.44	882217.36
C5	89.971	200.000	S71° 29' 43.21"W	2808748.92	882195.20
L6	54.827		S84° 22' 58.04"W	2808720.61	882110.60
C6	84.072	150.000	S68° 19' 34.28"W	2808715.24	882056.03
L7	6.094		S52° 16' 10.52"W	2808684.59	881978.92
C7	115.798	210.000	S68° 03' 59.49"W	2808680.86	881974.10
L8	10.440		S83° 51' 48.47"W	2808638.16	881868.04
C8	108.424	130.000	S59° 58' 13.01"W	2808637.04	881857.66
L9	16.922		S36° 04' 37.54"W	2808584.34	881766.49
C9	107.228	150.000	S56° 33' 21.93"W	2808570.66	881756.53
L10	15.135		S77° 02' 06.32"W	2808512.82	881668.95
C10	105.604	210.000	S62° 37' 43.46"W	2808509.42	881654.20
L11	26.589		S48° 13' 20.59"W	2808461.38	881561.40
C11	94.837	150.000	S66° 20' 05.83"W	2808443.66	881541.57
L12	132.148		S84° 26' 51.07"W	2808406.23	881456.15
C12	201.156	280.000	S63° 51' 59.30"W	2808393.44	881324.62
L13	46.352		S43° 17' 07.54"W	2808306.73	881147.89

LAYOUT PLAN-IMPONDMENT
 HOLMES PLAYGROUND DAM REMOVAL
 TOWN BROOK RESTORATION
 NEWFIELD STREET
 PLYMOUTH, MASSACHUSETTS

JGM	BAM	WAG
DESIGNED	DRAWN	CHECKED

SCALE: 1"=40'
 DATE: DECEMBER 21, 2015
 PROJECT NO.: 1982-05
 SHEET NO.: 07 OF 21

LA-1
 SHEET NAME

75% ADVANCED DESIGN

WETZEL & ASSOCIATES, INC. 100 W. MAIN ST. SUITE 100
 LYNN, MASSACHUSETTS 01901-1001



CONTRACTOR IS TO TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING SANITARY SEWER AND WATER MAIN, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE DURING CONSTRUCTION.

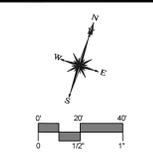
EXCAVATE CHANNEL TO PROPOSED GRADE

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LEGEND

- PROPERTY LINE
- PROPOSED CONTOUR
- CLEARING LIMIT
- PROPOSED EDGE OF WATER (BANKFULL CHANNEL)
- PROPOSED RETAINING WALL
- PROPOSED SAFETY FENCE



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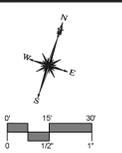
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 PLYMOUTH, MASSACHUSETTS
 75% ADVANCED DESIGN

BAM	BAM	WAG
DESIGNED	DRAWN	CHECKED

SCALE: 1"=40'
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 PROJECT NO.: 1982-05
 SHEET NO.: 09 OF 21

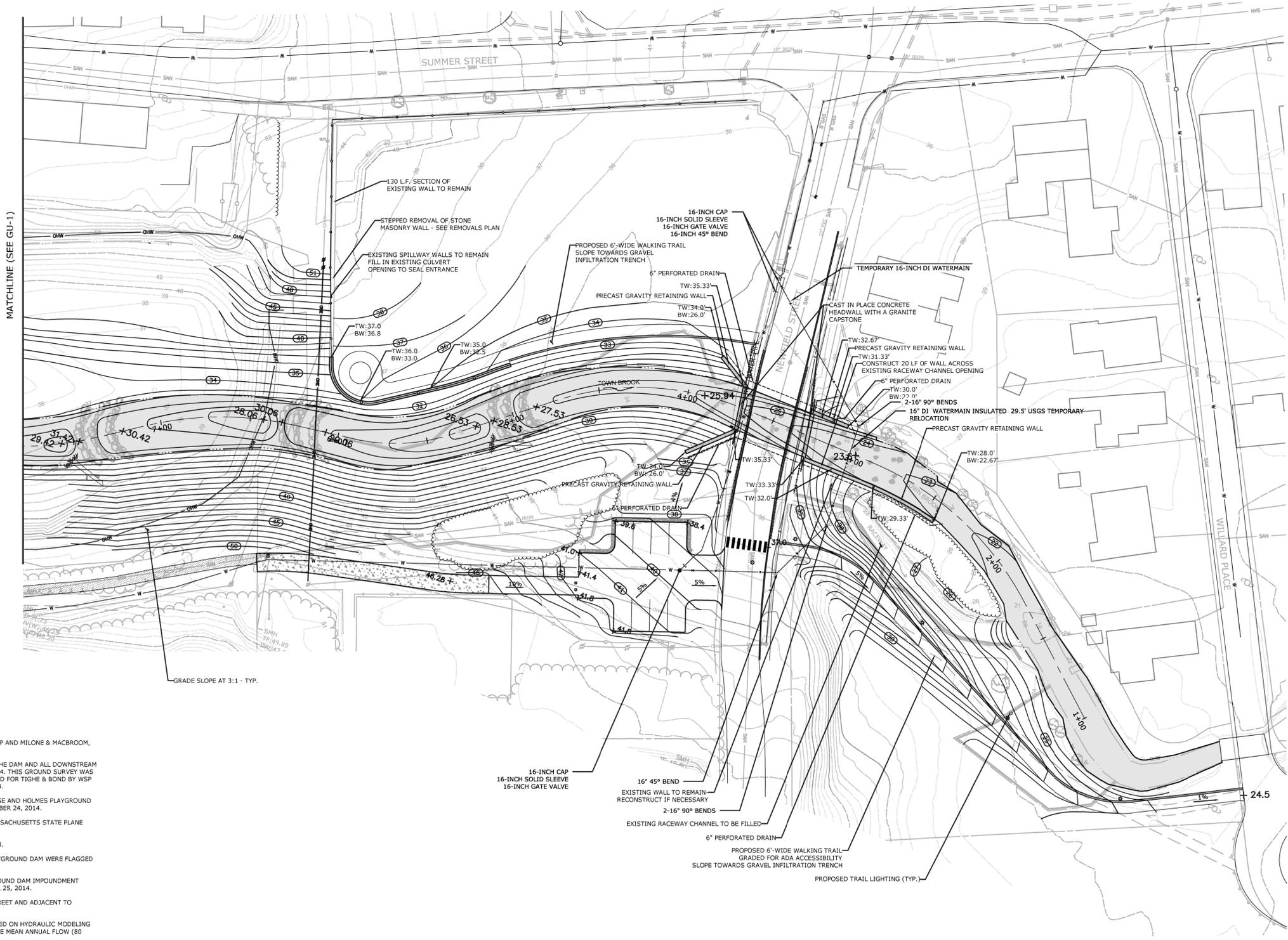
GU-1

10/23/14 - 11:20 AM - 11:21 AM - 11:22 AM - 11:23 AM - 11:24 AM - 11:25 AM - 11:26 AM - 11:27 AM - 11:28 AM - 11:29 AM - 11:30 AM - 11:31 AM - 11:32 AM - 11:33 AM - 11:34 AM - 11:35 AM - 11:36 AM - 11:37 AM - 11:38 AM - 11:39 AM - 11:40 AM - 11:41 AM - 11:42 AM - 11:43 AM - 11:44 AM - 11:45 AM - 11:46 AM - 11:47 AM - 11:48 AM - 11:49 AM - 11:50 AM - 11:51 AM - 11:52 AM - 11:53 AM - 11:54 AM - 11:55 AM - 11:56 AM - 11:57 AM - 11:58 AM - 11:59 AM - 12:00 PM



LEGEND

	PROPERTY LINE
	PROPOSED CONTOUR
	CLEARING LIMIT
	PROPOSED EDGE OF WATER (BANKFULL CHANNEL)
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	PROPOSED SAFETY FENCE



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REVISE TRAIL DESIGN	3/24/2016	BAM

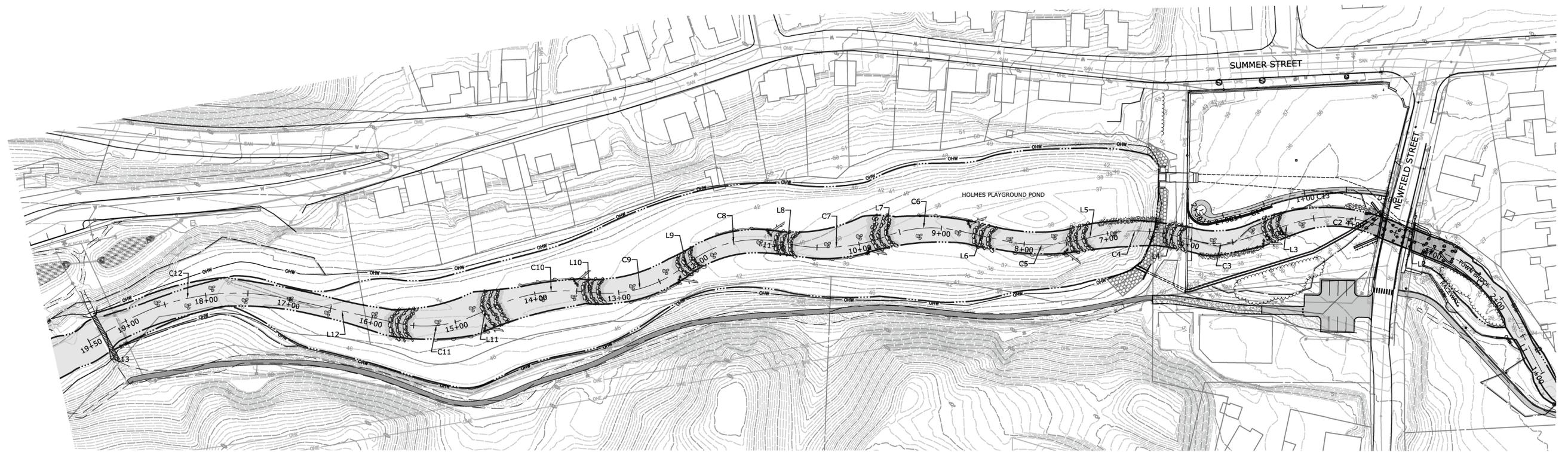
GRADING AND UTILITIES PLAN-PLAYGROUND
HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
 NEWFIELD STREET
 PLYMOUTH, MASSACHUSETTS

BAM	BAM	WAG
DESIGNED	DRAWN	CHECKED
1"=30'		
DECEMBER 21, 2015		
DATE		
PROJECT NO. 1982-05		
DATE		
SHEET NO. 10 OF 21		
DATE		

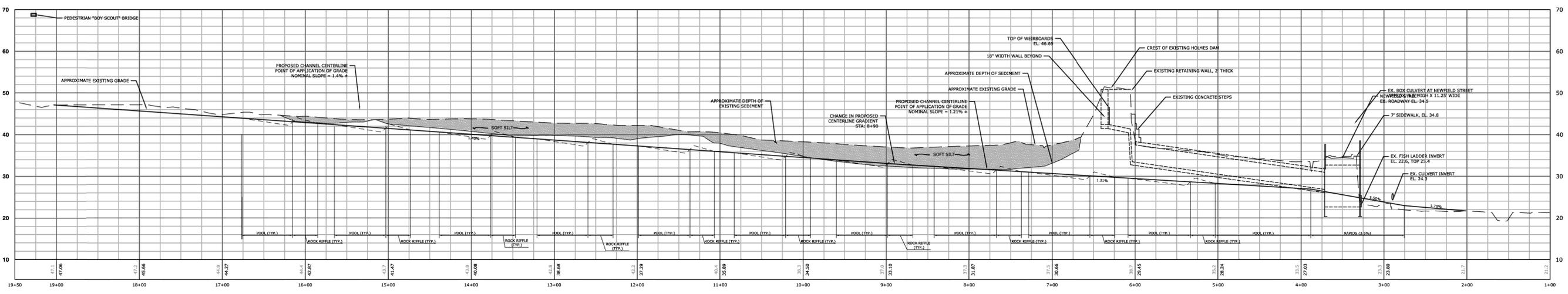
GU-2
 SHEET NAME

75% ADVANCED DESIGN

DRAWING: 100% CONTRACT DOCUMENTS FOR THE TOWN BROOK RESTORATION PROJECT, PLYMOUTH, MASSACHUSETTS
 DATE: 12/21/2015
 PROJECT NO.: 1982-05
 SHEET NO.: 11 OF 21
 SHEET NAME: PR-1



PLAN VIEW
 SCALE: 1"=60'



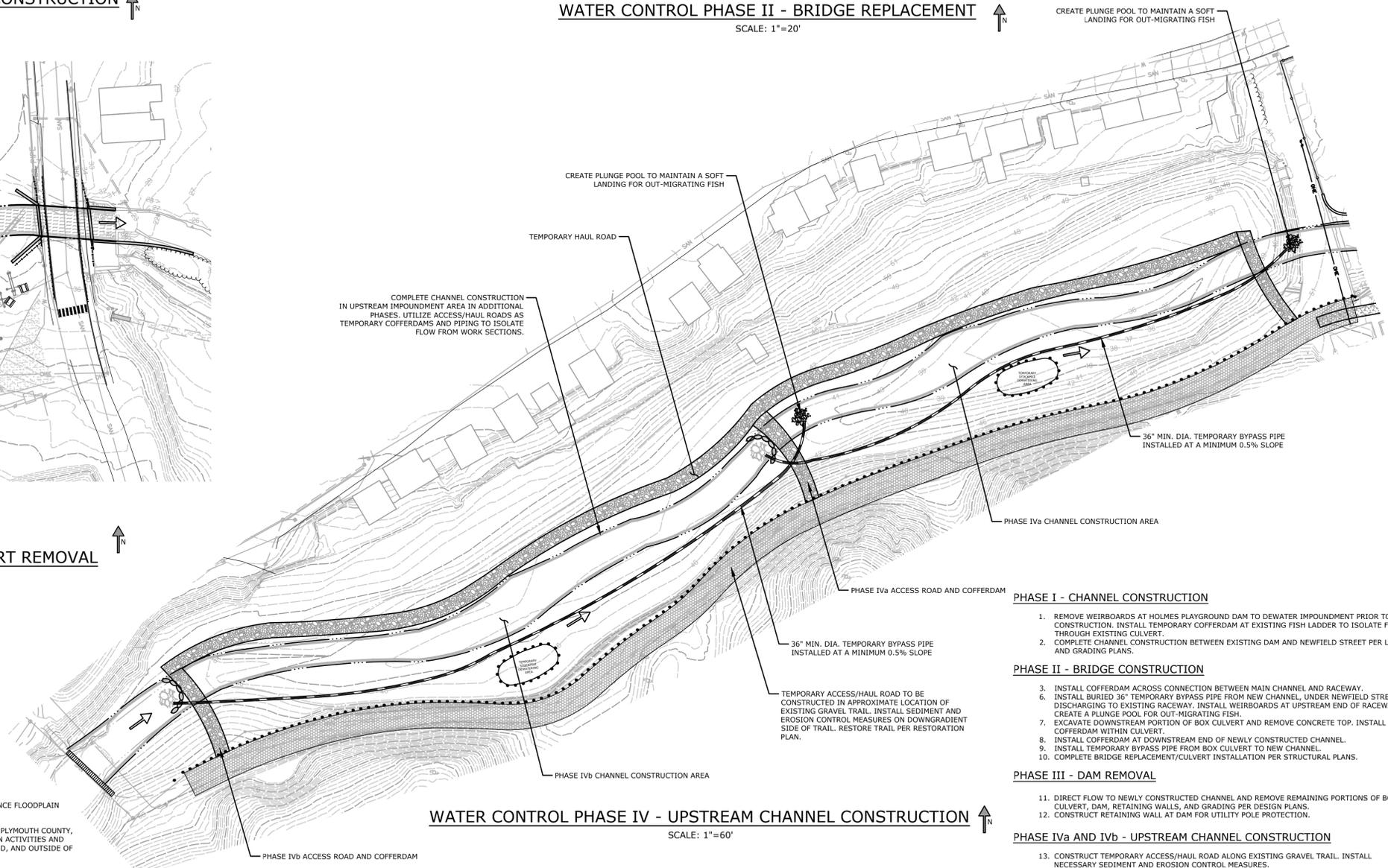
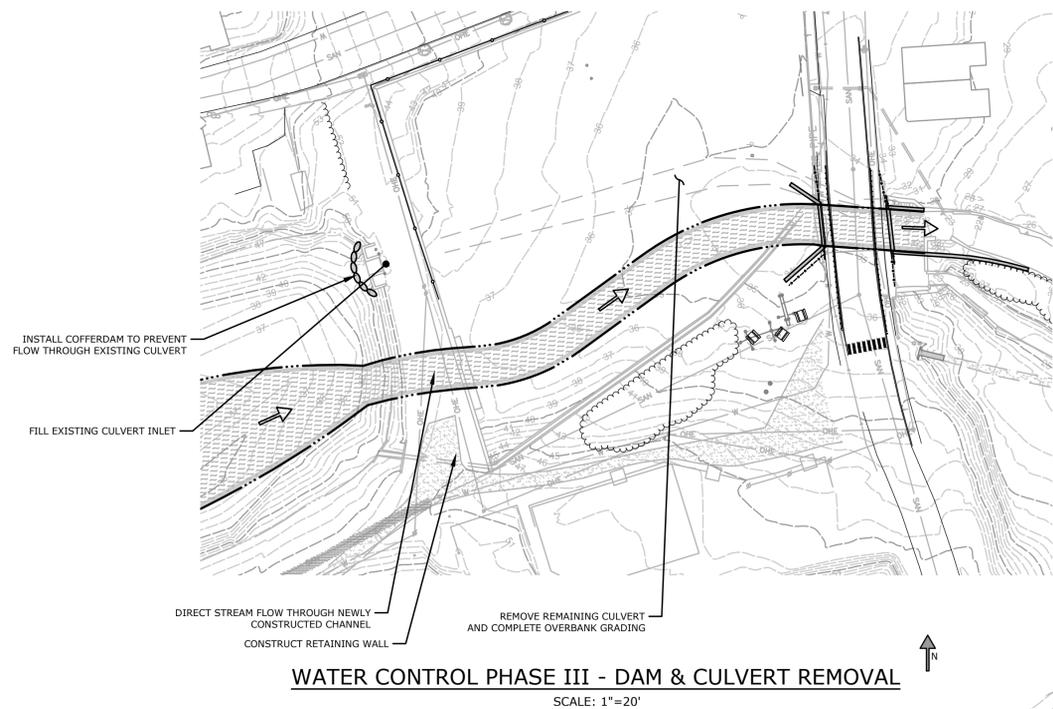
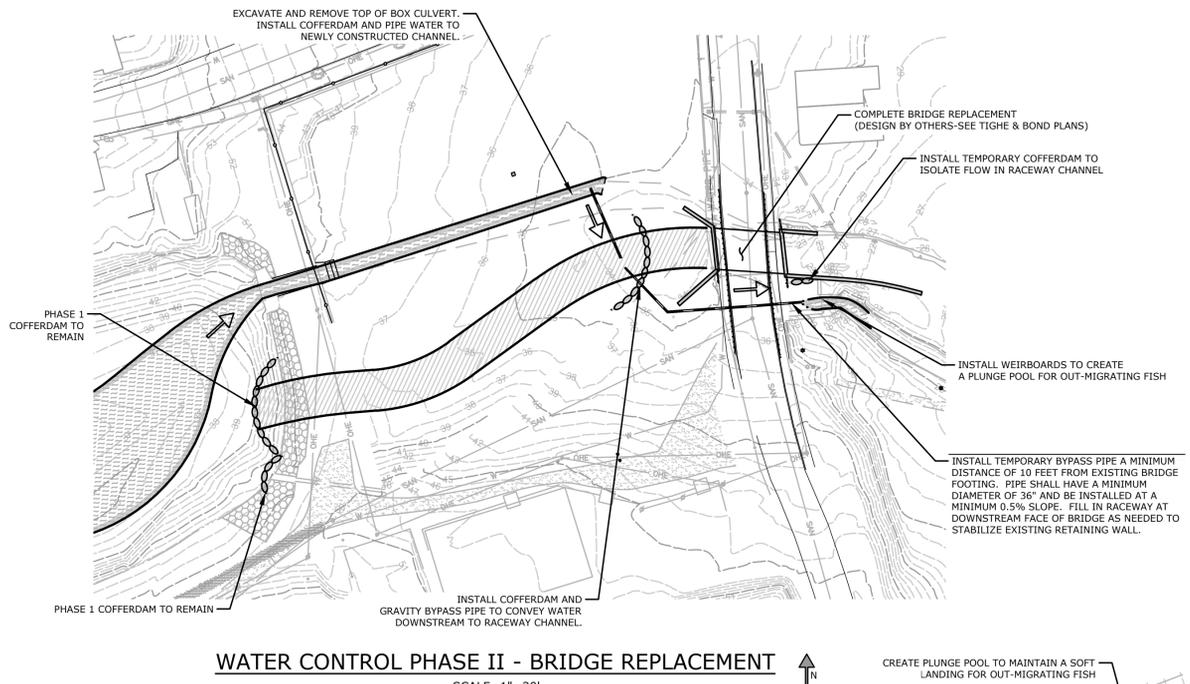
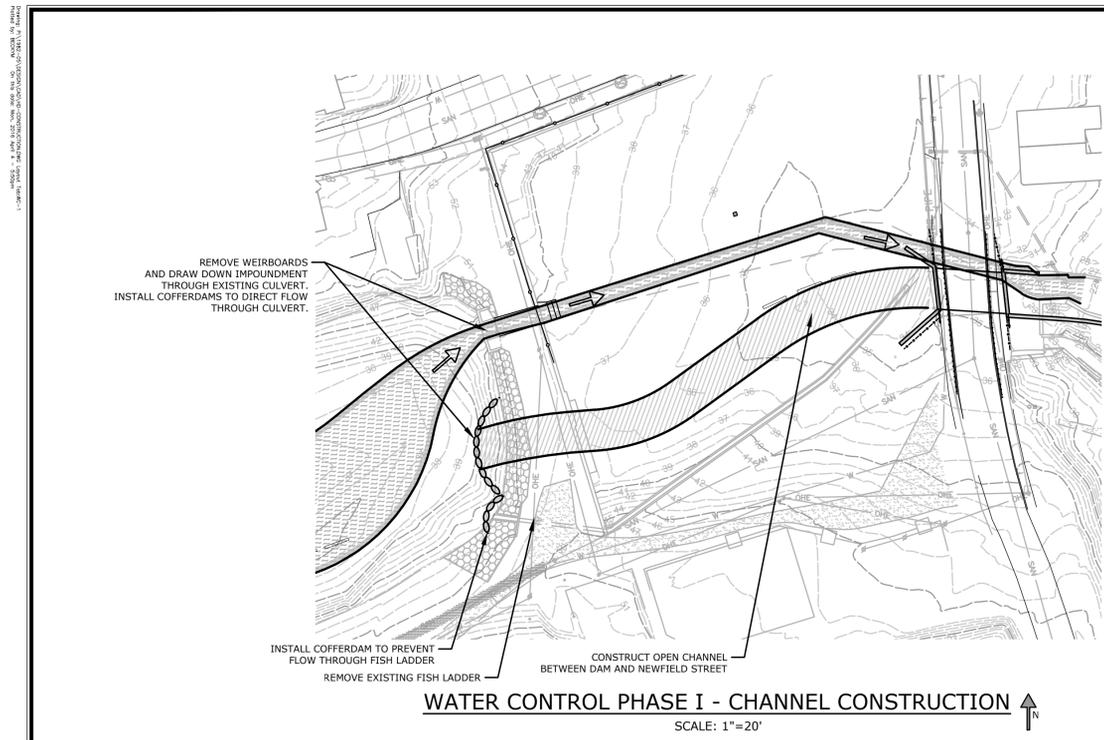
PROFILE
 SCALE: 1"=60' H
 1"= 12' V

MILONE & MACBROOM 99 Reedy Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax: (203) 272-9733 www.miloneandmacbroom.com		
DESCRIPTION FOR NOI SUBMISSION REVISED TRAIL LOCATION	DATE 3/11/2016 3/24/2016	BY BAM BAM

TOWN BROOK PROFILE
HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
 NEWFIELD STREET
 PLYMOUTH, MASSACHUSETTS

DESIGNED WAG	DRAWN BAM	CHECKED WAG
AS NOTED		
DECEMBER 21, 2015		
1982-05		
11 OF 21		

PR-1



WATER CONTROL NOTES:

1. THE WATER CONTROL PLAN PRESENTED HERE-IN IS PROVIDED AS A RECOMMENDED APPROACH. THE CONTRACTOR IS RESPONSIBLE FOR WATER CONTROL DURING THE PROJECT, AND FOR SUBMITTING A PROPOSED WATER CONTROL PLAN TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE START OF CONSTRUCTION.
2. PROJECT SITE IS SUBJECT TO FLOODING. CONTRACTOR SHALL MONITOR WEATHER REPORTS, AND BE PREPARED TO STOP WORK AND STABILIZE SITE IF MORE THAN ONE INCH (1") OF RAINFALL IS PREDICTED BY THE NATIONAL WEATHER SERVICE (70% CHANCE OR HIGHER). WORK SHALL BE HALTED UNTIL PRECIPITATION STOPS, AND CHANCES OF FURTHER RAINFALL FALL BELOW 50%.
3. GRAVITY BYPASS PIPE OR BYPASS PUMP (OR COMBINATION OF PUMPS) SHALL BE RATED TO HANDLE A MINIMUM FLOW 150% OF THE MEAN SUMMER FLOW, WHICH IS 22 CUBIC FEET PER SECOND (9,900 GALLON/MINUTE).
4. THERE SHALL BE NO CLAIMS FOR EXTRA COMPENSATION DUE TO DELAYS OR DAMAGE ASSOCIATED WITH HIGH WATER LEVELS FROM NATURAL EVENTS SUCH AS HEAVY RAINFALL, FLOODS, SNOW MELT, ETC.
5. THE DISCHARGE FROM THE BYPASS PUMPING SHALL BE CLEAR OF TURBIDITY OR DEBRIS. ANY TURBIDITY SHALL BE ADDRESSED THROUGH THE USE OF A SETTLING BASIN OR FRAC TANK, AS REQUIRED.
6. SEDIMENTS IMPOUNDED BEHIND THE DAM CONTAIN LOW LEVELS OF CONTAMINATION. IN THE EVENT OF A FLOOD OR HIGH WATER ON THE PROJECT SITE, THESE SEDIMENTS WILL KEEP FROM WASHING DOWNSTREAM. PROCEDURES TO CONTROL OF SEDIMENT EROSION SHALL BE PART OF THE WATER HANDLING PLAN SUBMITTED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
7. AS SHOWN ON SEDIMENT & EROSION CONTROL PLAN, INSTALL A RIPRAP FILTER BERM ACROSS THE DOWNSTREAM END OF THE RACEWAY CHANNEL. UTILIZE THE RACEWAY CHANNEL AS A SEDIMENTATION BASIN AND EXCAVATE SEDIMENT TO MAINTAIN FLOW DURING CONSTRUCTION.
8. ALL DISCHARGES FROM TEMPORARY BYPASS PIPES SHALL END IN A PLUNGE POOL DESIGNED TO PROVIDE A SOFT LANDING FOR OUT-MIGRATING FISH.

FLOOD CONTINGENCY NOTES

1. THE PROJECT SITE IS LOCATED WITHIN THE 1% ANNUAL CHANCE FLOODPLAIN ZONE, AND IS SUBJECT TO FLOODING.
2. IF 5" OF RAINFALL OR GREATER IS PREDICTED OR OCCURS IN PLYMOUTH COUNTY, THE CONTRACTOR SHALL IMMEDIATELY CEASE CONSTRUCTION ACTIVITIES AND RELOCATE ALL CONSTRUCTION EQUIPMENT/MATERIALS UPLAND, AND OUTSIDE OF THE 1% ANNUAL CHANCE FLOOD ZONE.
3. NO EQUIPMENT OR MATERIAL SHALL BE MOVED BACK TO THE SITE UNTIL THE TOWN BROOK WATER LEVELS RECEDE, AND ARE CONTAINED WITHIN ITS BANKS.

PHASE I - CHANNEL CONSTRUCTION

1. REMOVE WEIRBOARDS AT HOLMES PLAYGROUND DAM TO DEWATER IMPOUNDMENT PRIOR TO CONSTRUCTION. INSTALL TEMPORARY COFFERDAM AT EXISTING FISH LADDER TO ISOLATE FLOW THROUGH EXISTING CULVERT.
2. COMPLETE CHANNEL CONSTRUCTION BETWEEN EXISTING DAM AND NEWFIELD STREET PER LAYOUT AND GRADING PLANS.

PHASE II - BRIDGE CONSTRUCTION

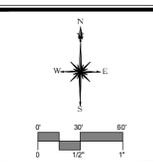
3. INSTALL COFFERDAM ACROSS CONNECTION BETWEEN MAIN CHANNEL AND RACEWAY.
6. INSTALL BURIED 36" TEMPORARY BYPASS PIPE FROM NEW CHANNEL, UNDER NEWFIELD STREET, DISCHARGING TO EXISTING RACEWAY. INSTALL WEIRBOARDS AT UPSTREAM END OF RACEWAY TO CREATE A PLUNGE POOL FOR OUT-MIGRATING FISH.
7. EXCAVATE DOWNSTREAM PORTION OF BOX CULVERT AND REMOVE CONCRETE TOP. INSTALL COFFERDAM WITHIN CULVERT.
8. INSTALL COFFERDAM AT DOWNSTREAM END OF NEWLY CONSTRUCTED CHANNEL.
9. INSTALL TEMPORARY BYPASS PIPE FROM BOX CULVERT TO NEW CHANNEL.
10. COMPLETE BRIDGE REPLACEMENT/CULVERT INSTALLATION PER STRUCTURAL PLANS.

PHASE III - DAM REMOVAL

11. DIRECT FLOW TO NEWLY CONSTRUCTED CHANNEL AND REMOVE REMAINING PORTIONS OF BOX CULVERT, DAM, RETAINING WALLS, AND GRADING PER DESIGN PLANS.
12. CONSTRUCT RETAINING WALL AT DAM FOR UTILITY POLE PROTECTION.

PHASE IVa and IVb - UPSTREAM CHANNEL CONSTRUCTION

13. CONSTRUCT TEMPORARY ACCESS/HAUL ROAD ALONG EXISTING GRAVEL TRAIL. INSTALL NECESSARY SEDIMENT AND EROSION CONTROL MEASURES.
14. CONSTRUCT TEMPORARY HAUL ROAD/COFFERDAMS AT APPROXIMATE LOCATIONS SHOWN TO ISOLATE FLOW FROM WORK AREAS. WORK DOWNSTREAM TO UPSTREAM, COMPLETING CHANNEL GRADING AND INSTALLATION OF INSTREAM FEATURES PER LAYOUT PLAN.
9. COMPLETE PLANTINGS AND SITE RESTORATION PER DESIGN PLANS.



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DESCRIPTION	DATE	BY
FOR NO.1 SUBMISSION	3/11/2016	BAM

75% ADVANCED DESIGN

WATER CONTROL PLAN
HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
NEWFIELD STREET
PLYMOUTH, MASSACHUSETTS

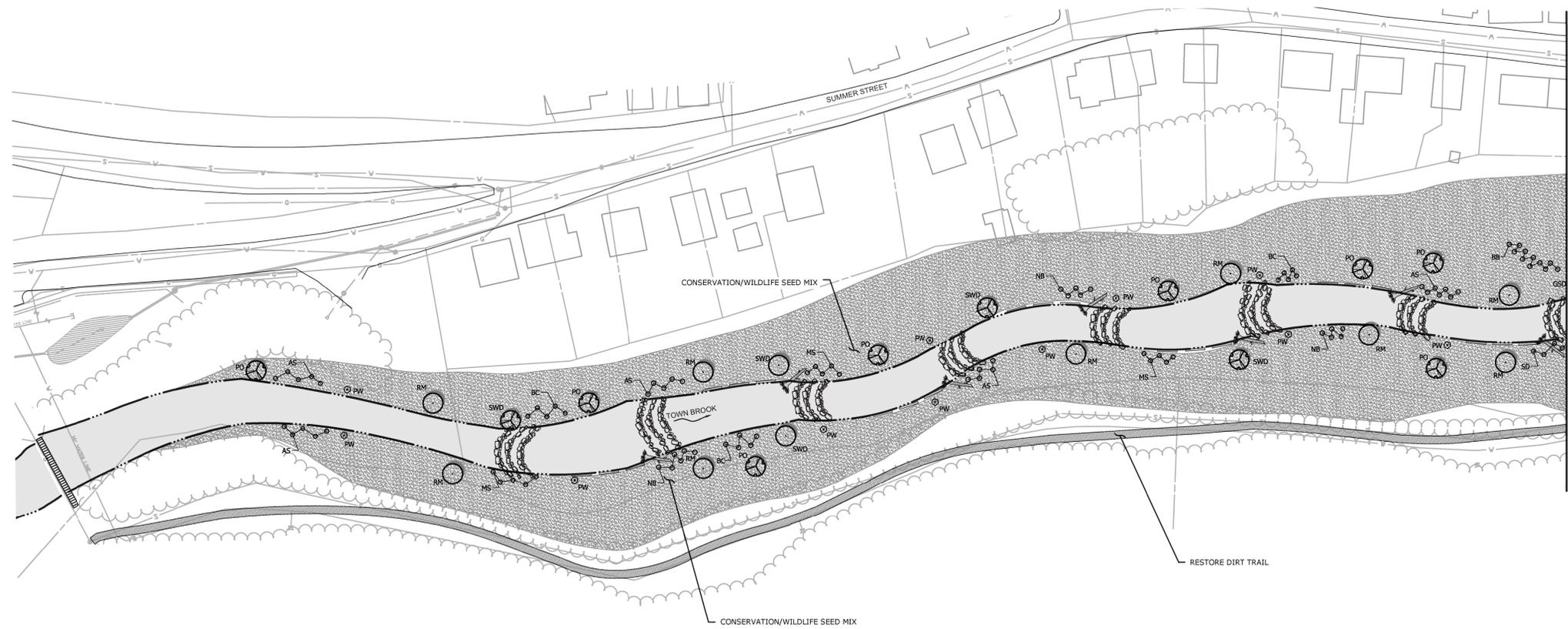
DESIGNED	DRAWN	BAM	WAG
SCALE: 1"=60'			
DATE: DECEMBER 21, 2015			
PROJECT NO.: 1982-05			
SHEET NO.: 12 OF 21			
SHEET NAME: WC-1			

PLANTING NOTES

- EROSION CONTROLS SHALL BE INSTALLED, REPAIRED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD OF THE PROJECT OR UNTIL THE SITE IS FULLY STABILIZED BY VEGETATION (SEED MIX). EROSION CONTROLS SHALL THEN BE REMOVED FROM THE SITE.
- A PROFESSIONAL WETLAND SCIENTIST SHALL BE ON SITE TO MONITOR PLANTING OF FLOODPLAIN AREAS TO ENSURE COMPLIANCE WITH THE APPROVED PLANS.
- GRADING LINES DEPICTED ON THE PLAN FLOODPLAIN WETLAND PLANTING ZONE ARE DRAWN SMOOTHLY, ACTUAL SURFACE GRADES ACROSS FLOOD PLAIN 'FLOOR' SHALL REFLECT HUMMOCK AND HOLLOW TOPOGRAPHY OF NATURAL WETLANDS.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE A 6" MINIMUM DEPTH OF TOPSOIL FOR ALL LAWN AREAS TO BE RESTORED. ALL PLANTING BEDS SHALL HAVE 12" MINIMUM DEPTH OF TOPSOIL.
- THE SURFACE AND GROUNDWATER LEVELS SHALL BE MONITORED PRIOR TO PERMANENT PLANTING. AS A RESULT OF ACTUAL WATER LEVELS, THE CORRESPONDING PLANTINGS MAY NEED TO BE ADJUSTED IN THE FIELD.
- ALL PLANTINGS ARE TO BE PLANTED ONLY AFTER STABILIZATION OF CONTRIBUTING DRAINAGE AREAS.
- WETLAND PLANTINGS SHALL BE LIMITED TO THE PERIODS OF APRIL 15 - JUNE 30, OR SEPTEMBER 15 - OCTOBER 15. ONLY QUALITY NATIVE PLANTS FROM A NURSERY SHALL BE USED.
- ALL WOODY PLANT MATERIAL SHALL BE PROVIDED IN CONTAINERS THAT ARE APPROPRIATELY SIZED FOR THE SPECIFIED PLANT. HERBACEOUS PLANT MATERIAL SHALL BE PLUGS AND CONTAINERIZED. WETLAND PLANTS SHALL HAVE BEEN GROWN IN A LOCAL/REGIONAL NURSERY.
- SUPPLEMENTAL HERBACEOUS PLANTINGS SHALL BE CONCENTRATED IN GROUPINGS, TO BE DETERMINED. HERBACEOUS PLANTINGS TO BE PLUGS TWO FOOT ON CENTER. SHRUB PLANTINGS TO BE 36" O.C. (DEPENDENT UPON SPECIES), OR AS DIRECTED BY THE SUPERVISING WETLAND SCIENTIST.
- ALL TUBERS AND ROOT STOCK SHALL BE PUSHED ONE TO TWO INCHES DEEP INTO THE ORGANIC SOIL & SPACED AS SPECIFIED. PLANTS WITH GROWING STEMS SHALL BE PLANTED SUCH THAT THE GROWING STEM EXTENDS ABOVE THE SOIL SURFACE. WEIGHTING OF TUBERS & ROOT STOCK WITH FENCE STAPLES AND/OR EIGHT PENNY NAILS MAY BE REQUIRED IF DISLODGING & FLOATING IS A PROBLEM.
- THE SOILS IN THE PROJECT AREA SHALL BE SEEDED WITH DESIGNATED NATURALIZED ZONE, RIPARIAN AREA PLANTING ZONE, AND FLOODPLAIN AREA PLANTING ZONE SEED MIXES AS NOTED IN PLANT LIST. ALL PLUGS & SEED MIXES SPECIFIED BY NEW ENGLAND WETLAND PLANTS INC. 800 MAIN ST. AMHERST, MA 01002 (413) 256-1752 OR APPROVED EQUIVALENT.
- ALL PLANT MATERIALS SHALL CARRY A FULL GUARANTEE FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE TOWN AND SUPERVISING WETLAND SCIENTIST. TO INCLUDE PROMPT TREATMENT OR REMOVAL AND REPLACEMENT OF ANY PLANTS FOUND TO BE IN AN UNHEALTHY CONDITION BY THE WETLAND SCIENTIST. ALL REPLACEMENTS SHALL BE OF THE SAME KIND AND SIZE OF PLANTS SPECIFIED IN THE PLANT LIST.
- MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL ACCEPTANCE BY THE WETLAND SCIENTIST. MAINTENANCE SHALL INCLUDE WATERING, MULCHING, TIGHTENING & REPLACING OF GUYS, REPLACEMENT OF SICK OR DEAD PLANTS, RESETTING PLANTS TO PROPER GRADE OR UPRIGHT (PLUMB) POSITION, RESTORATION OF SAUCERS, AND ALL OTHER CARE NEEDED FOR PROPER GROWTH OF THE PLANTS.
- THE LANDSCAPE CONTRACTOR SHALL PROVIDE A 4" MIN. DEPTH OF SHREDDED MULCH OVER ALL PLANTING BEDS AND TREE PLANTINGS.
- ALL PLANT MATERIAL IS SUBJECT TO INSPECTION AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO AND AFTER PLANTING.
- PLANT SPECIES MAY BE ADJUSTED BASED ON AVAILABILITY AT TIME OF PLANTING. ALL PLANT MATERIAL SUBSTITUTIONS ARE SUBJECT TO REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT.
- MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND SHALL CONTINUE UNTIL ACCEPTANCE BY THE LANDSCAPE ARCHITECT. MAINTENANCE SHALL INCLUDE WATERING, MULCHING, TIGHTENING AND REPLACING OF GUYS, REPLACEMENT OF SICK OR DEAD PLANTS, RESETTING PLANTS TO PROPER GRADE OR UPRIGHT (PLUMB) POSITION, RESTORATION OF SAUCERS, AND ALL OTHER CARE NEEDED FOR PROPER GROWTH OF THE PLANTS.
- CONTRACTOR TO REMOVE TREE STAKES AFTER ONE GROWING SEASON.

NOTES

- THIS PLAN WAS COMPILED FROM MAPPING PREPARED BY WSP AND MILONE & MACBROOM, INC.
- GROUND FIELD SURVEY OF THE PROJECT AREA INCLUDING THE DAM AND ALL DOWNSTREAM AREAS CONDUCTED BY WSP ON JUNE 5, 2014 - JUNE 14, 2014. THIS GROUND SURVEY WAS USED TO DEVELOP AN EXISTING CONDITIONS PLAN PREPARED FOR TIGHE & BOND BY WSP TRANSPORTATION AND INFRASTRUCTURE, DATE: JULY 2, 2014.
- BATHYMETRY AND TOPOGRAPHY BETWEEN BOY SCOUT BRIDGE AND HOLMES PLAYGROUND DAM COMPLETED BY MILONE & MACBROOM, INC. ON SEPTEMBER 24, 2014.
- THE HORIZONTAL DATUM SHOWN HEREON REFERENCES MASSACHUSETTS STATE PLANE NAD83.
- THE VERTICAL DATUM SHOWN HEREON REFERENCES NAVD83.
- THE WETLANDS SHOWN DOWNSTREAM OF THE HOLMES PLAYGROUND DAM WERE FLAGGED BY OTHERS AND FIELD LOCATED BY WSP.
- THE WETLANDS SHOWN ADJACENT TO THE HOLMES PLAYGROUND DAM IMPOUNDMENT WERE FLAGGED BY MMI WETLAND SCIENTIST ON SEPTEMBER 25, 2014.
- PROPERTY LINES AND UTILITY INFORMATION IN SUMMER STREET AND ADJACENT TO IMPOUNDMENT PROVIDED BY TOWN OF PLYMOUTH GIS.
- LIMITS OF ORDINARY HIGH WATER DELINEATED BY MMI BASED ON HYDRAULIC MODELING OF TOWN BROOK, USING ELEVATIONS ASSOCIATED WITH THE MEAN ANNUAL FLOW (80 CFS).



RIPARIAN PLANTINGS

SHRUBS

KEY	BOTANICAL NAME	COMMON NAME	COMMENTS
BB	Morella pennsylvanica	Bayberry	3'-4'
BC	Aronia melanocarpa	Black Chokeberry	3'-4'
AS	Amelanchier laevis	Allegheny Serviceberry	5 GALLON
MSW	Spiraea latifolia	Meadowsweet	3'-4'
NB	Viburnum lentago	Nannyberry	3'-4'
SA	Alnus rugosa	Speckled Alder	3'-4'
SP	Clethra alnifolia	Sweet Pepperbush	3'-4'
SD	Cornus amomum	Silky Dogwood	3'-4'
LB	Vaccinium angustifolium	Lowbush Blueberry	2 GALLON, 48" O.C.
GSD	Cornus racemosa	Grey Stemmed Dogwood	3 GALLON, 48" O.C.
PW	Salix discolor	Pussy Willow	2 GALLON, 48" O.C.

TREES

KEY	BOTANICAL NAME	COMMON NAME	COMMENTS
LT	Liriodendron tulipifera	Tulip Tree	2"-2.5" CAL./B&B
PO	Quercus palustris	Pin Oak	2"-2.5" CAL./B&B
SWO	Quercus bicolor	Swamp White Oak	2"-2.5" CAL./B&B
RM	Acer rubrum	Red Maple	2"-2.5" CAL./B&B
RC	Juniperus virginiana	Eastern Red Cedar	6"-7" HT./B&B
SB	Amelanchier canadensis	Shadblo	8"-10" HT./B&B

NEW ENGLAND CONSERVATION/WILDLIFE MIX

1750 sq ft/lb
 SPECIES: Virginia Wild Rye, (Elymus virginicus), Little Bluestem, (Schizachyrium scoparium), Big Bluestem, (Andropogon gerardii), Creeping Red Fescue, (Festuca rubra), Switch Grass, (Panicum virgatum), Partridge Pea, (Chamaecrista fasciculata), Deer Tongue, (Panicum clandestinum), Indian Grass, (Sorghastrum nutans), Ox Eye Sunflower, (Helopsis helianthoides), Common Milkweed, (Asclepias syriaca), Spotted Joe Pye Weed, (Eupatorium maculatum), Grass Leaved Goldenrod, (Euthamia graminifolia), Blue Vervain, (Verbena hastata), New England Aster, (Aster novae-angliae), Early Goldenrod, (Solidago juncea).

TURF RESTORATION SEED MIX

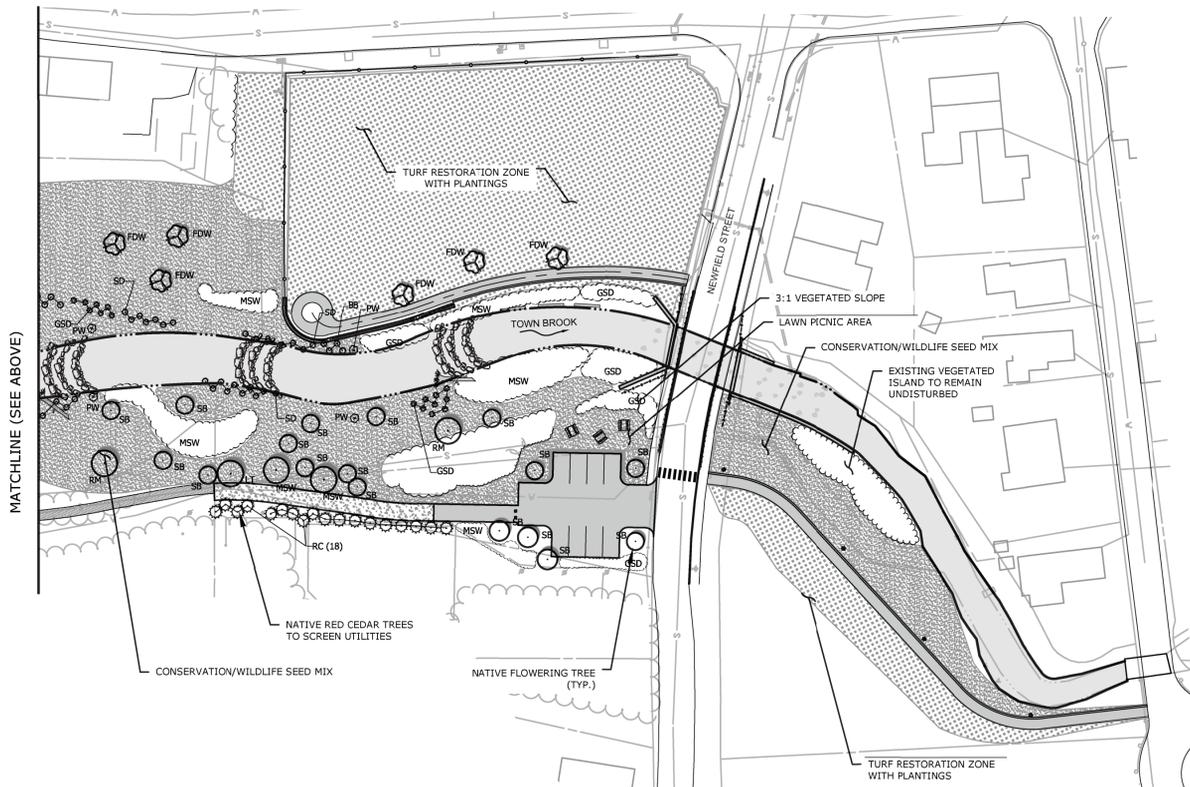
	PERCENT BY WEIGHT	MIN. PURITY	MIN. GERMINATION
Liberator Kentucky Blue Grass (as manufactured by Jacklin Seed)	40	98	98
*Victory II Chewing Fescue (as manufactured by Burlingham Seeds, LLC)	20	98	85
*Epic Strong Creeping Red Fescue (as manufactured by Proseeds Marketing, Inc.)	20	98	85
Spartan Hard fescue (as manufactured by Pickseed West, Inc.)	20	96	85

* High Endophyte

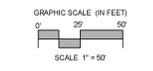
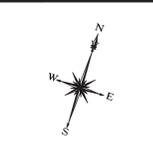
Seeding Rate - 220 lb/acre

The seed mixture is to have no noxious weeds. Other cultivars of Perennial Ryegrass, Chewing Fescue and Creeping Fescue with high endophyte, Hard Fescue, and Kentucky Bluegrass may be substituted for the above listed cultivars with the approval of the owner. However, the same number of species and cultivars with their percentage by weight in the mixtures must remain the same as specified above.

RESTORE DIRT TRAIL



NOTE: ALL DISTURBED AREAS TO RECEIVE 6" TOPSOIL. CONSTRUCTION HAUL ROADS TO RECEIVE 12" TOPSOIL.



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DESCRIPTION	DATE	BY
FOR NOI SUBMISSION	3/11/2016	BAM
REVISE TRAIL DESIGN	3/24/2016	BAM

75% ADVANCED DESIGN

RESTORATION PLAN
HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
 NEWFIELD STREET
 PLYMOUTH, MASSACHUSETTS

MJS	BAM	WAG
DESIGNED	DRAWN	CHECKED

SCALE: 1"=50'

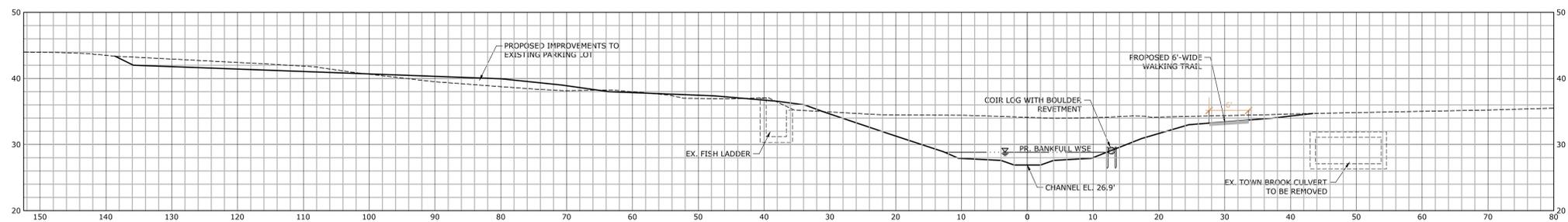
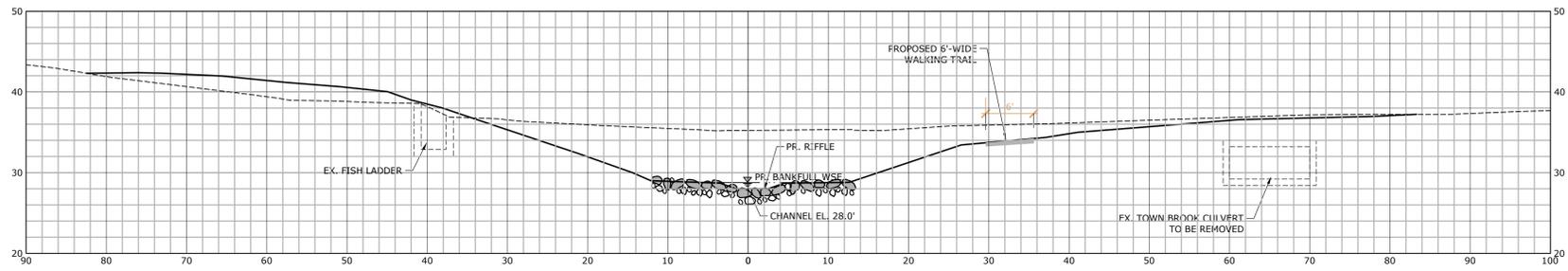
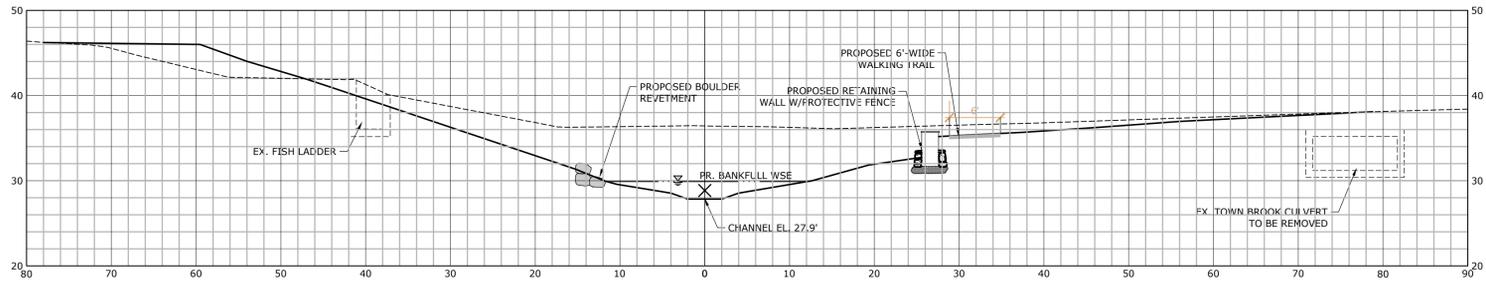
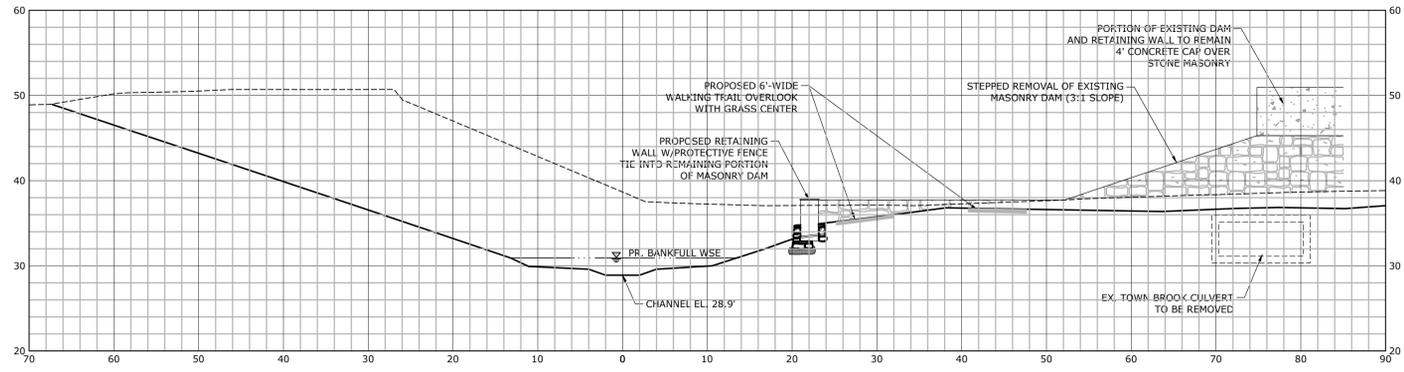
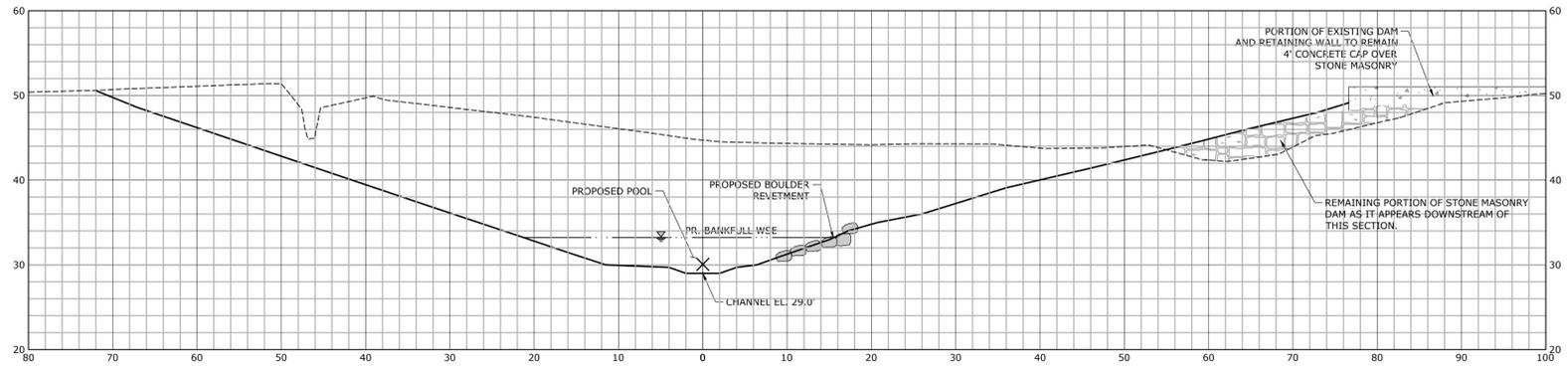
DATE: **DECEMBER 21, 2015**

PROJECT NO: **1982-05**

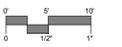
SHEET NO: **13 OF 21**

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NOTE: SECTIONS LOOK UPSTREAM



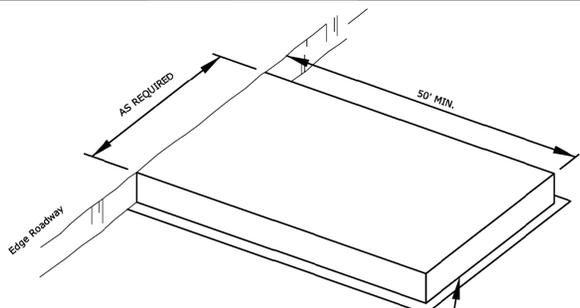
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 www.miloneandmacbroom.com

DESCRIPTION	DATE	BY
FINAL REVIEW COMMENTS	02/12/2016	BAM
REVISE TRAIL LOCATION	03/24/2016	BAM

TOWN BROOK CROSS SECTIONS (2)
HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
 NEWFIELD STREET
 PLYMOUTH, MASSACHUSETTS

BAM	BAM	WAG
DESIGNED	DRAWN	CHECKED
SCALE 1"=10'		
DATE DECEMBER 21, 2015		
PROJECT NO. 1982-05		
SHEET NO. 15 OF 21		

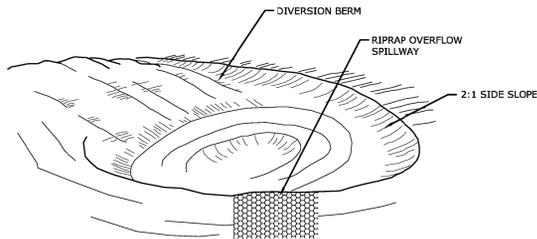
CS-2



NOTE: STABILIZED CONSTRUCTION ENTRANCE SHALL BE INSTALLED AND MAINTAINED DURING OPERATIONS WHICH PROMOTE VEHICULAR TRACKING OF MUD

CONSTRUCTION ENTRANCE PAD
(SCALE: N.T.S.)

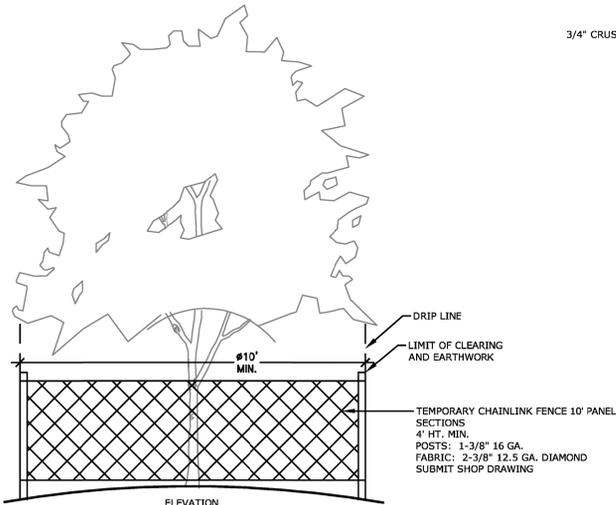
GRAVEL BORROW TYPE A
12" MIN. THICKNESS



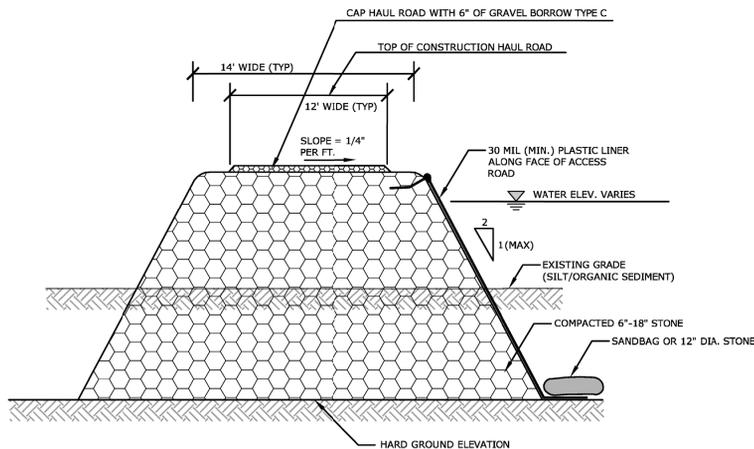
NOTES:
REFER TO SEDIMENT & EROSION CONTROL PLAN FOR APPROXIMATE DIMENSIONS AND REQUIRED VOLUME.

SOURCE: 2002 CT. GUIDELINES
FOR SOIL EROSION AND SEDIMENT CONTROL

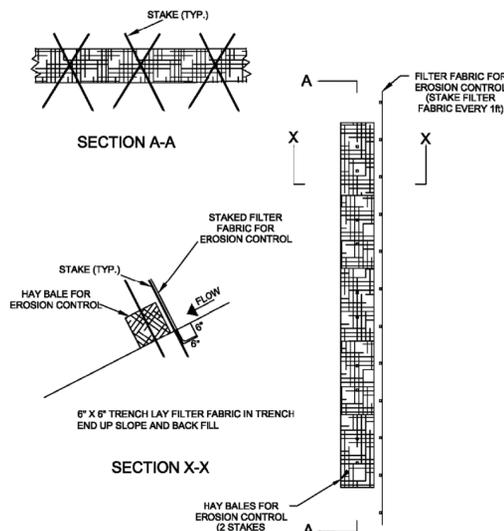
TEMPORARY SEDIMENT TRAP
(SCALE: N.T.S.)



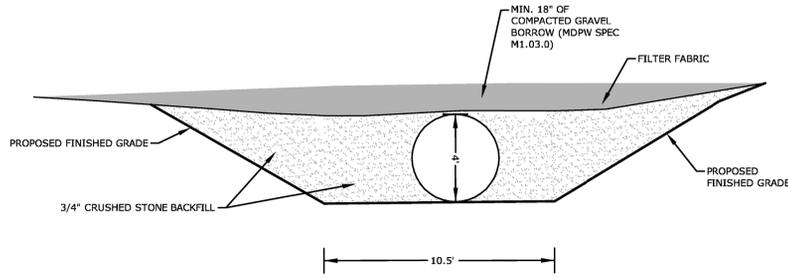
TREE PROTECTION
(SCALE: N.T.S.)



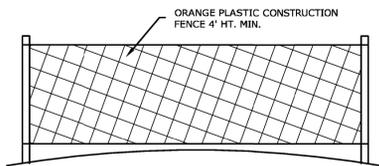
CONSTRUCTION HAUL ROAD DETAIL
(SCALE: N.T.S.)



HAY BALES AND SILT FENCE FOR EROSION CONTROL
(SCALE: N.T.S.)

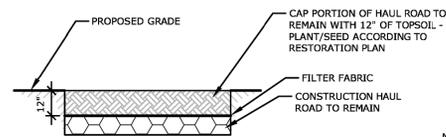


TEMPORARY CULVERT CROSSING
(SCALE: N.T.S.)

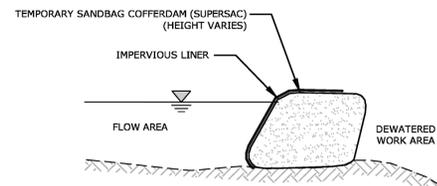


NOTE:
1. CONTRACTOR SHALL COORDINATE TEMPORARY FENCE INSTALLATION WITH OWNERS REPRESENTATIVES.
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVALS PRIOR TO CONSTRUCTION.

ORANGE CONSTRUCTION FENCING
(SCALE: N.T.S.)

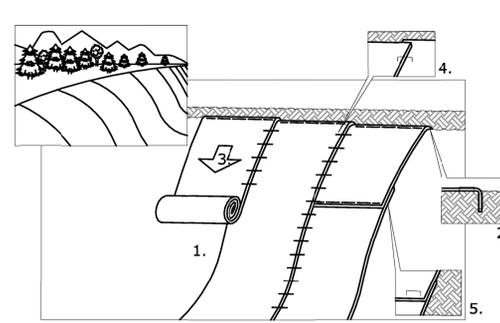


HAUL ROAD RESTORATION
(SCALE: N.T.S.)



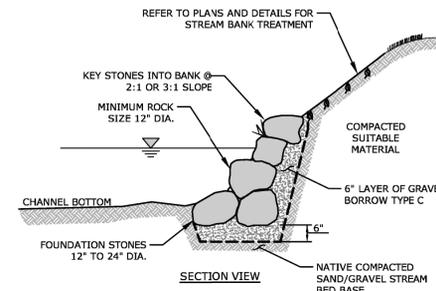
NOTES:
1. COFFER DAM AND PUMP SYSTEM TO BE SIZED FOR NORMAL FLOW CONDITIONS.

TEMPORARY SANDBAG COFFERDAM DETAIL
(SCALE: N.T.S.)



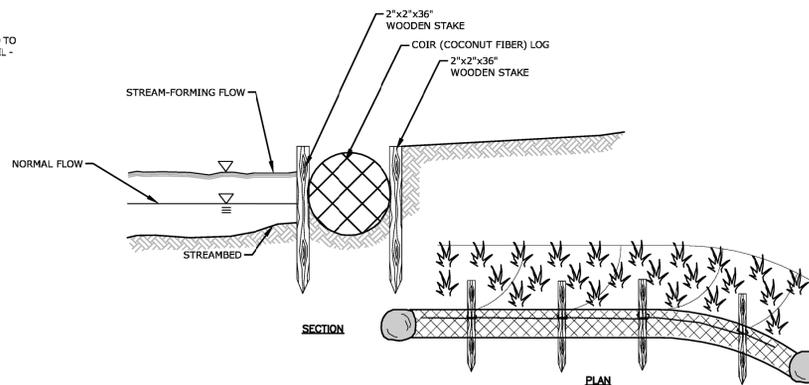
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING SCC225, DO NOT SEED PREPARED AREA. SCC225 MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL THE BLANKETS DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2" OVERLAP.
5. WHEN BLANKETS MUST BE SPICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAP AREA, APPROXIMATELY 12" APART.

APPLICATION OF EROSION CONTROL BLANKET ON SLOPES
(SCALE: N.T.S.)



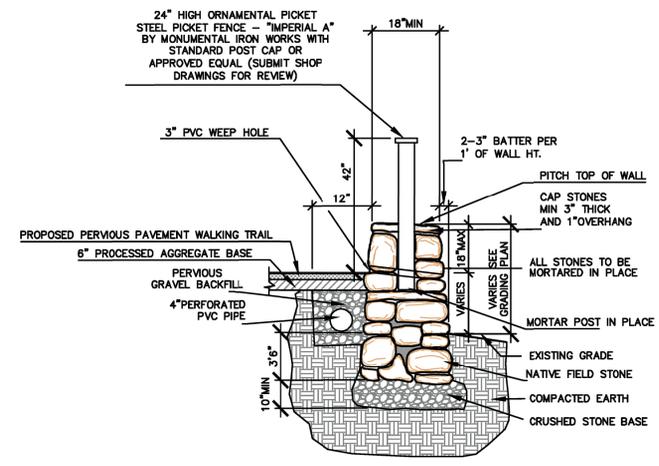
BOULDER REVETMENT
(SCALE: N.T.S.)

NOTES:
1. USE 12" TO 24" DIAMETER WEATHERED ROUNDED STONES.
2. EMBED THE STONE SEVERAL INCHES INTO THE STREAM BANK TO KEY INTO THE BANK.
3. FINISHED ELEVATION OF THE STONES WILL BE DETERMINED IN THE FIELD.
4. STONES SHALL BE PLACED TO CREATE AN IRREGULAR EDGE.
5. PLACE BOULDERS TO IRREGULAR HEIGHT AND HORIZONTAL EXTENT INTO THE CHANNEL. REVETMENT SHALL NOT CREATE THE APPEARANCE OF A WALL.



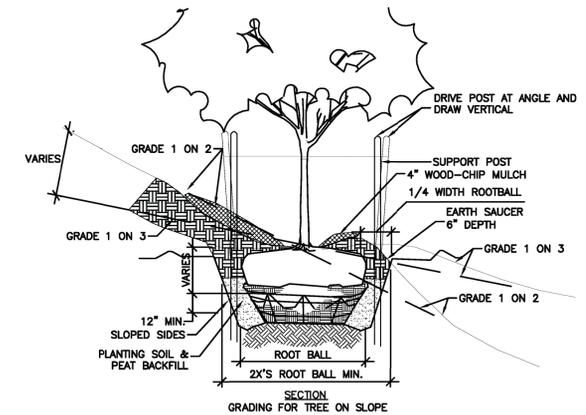
INSTALLATION NOTES:
1. EXCAVATE A SHALLOW (3 TO 4 INCHES DEEP) TRENCH ALONG THE TOE OF THE STREAM BANK.
2. PLACE LOG IN THE TRENCH SO THAT THE BOTTOM AND BACK ARE INTACT WITH THE STREAM SUBSTRATE AND THE STREAMBANK.
3. DRIVE STAKES DOWN ALONG THE SIDES OF THE LOG. DRIVE STAKES FLUSH WITH THE TOP OF THE COIR LOG.
4. WEAVE COIR OR NYLON TWINE BETWEEN AND AROUND THE STAKES.
5. DRIVE STAKES IN FIRMLY, SECURING THE COCONUT FIBER LOG TO THE STREAMBED.
6. STABILIZE STREAMBANK ABOVE LOG USING BANK STABILIZATION TECHNIQUE AS SPECIFIED ON PLANS.
7. PLACE SINGLE BOULDERS FROM BOULDERS REVETMENT BETWEEN SECTIONS OF COIR LOG.

COIR LOG WITH BOULDER REVETMENT
(SCALE: N.T.S.)



NOTES: ALL MORTAR JOINTS SHALL BE DEEPLY RAKED AS TO AVOID MORTAR BEING SHOWN ALONG ANY EXPOSED WALL SURFACE. USE NATIVE FIELD STONE. STONE SHALL MATCH EXISTING FOUNDATION ON GRIST MILL. SUBMIT SAMPLES AND SHOP DRAWING FOR APPROVAL.

WALKING TRAIL STONE WALL & FENCE
N.T.S.



NOTES:
1. SUPPORT STAKES SHALL BE REMOVED BY THE CONTRACTOR ONE YEAR AFTER INSTALLATION

TREE PIT

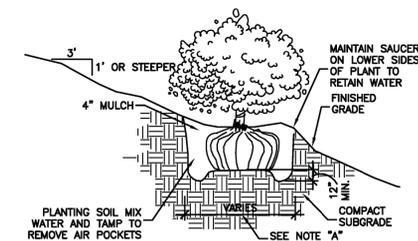
RUBBER HOSE

LIMIT OF BALL

PLAN

DOUBLE STRAND NO. 12 GAUGE GALVANIZED WIRE TWISTED, DO NOT OVERTIGHTEN WIRE

TREE ON SLOPE DETAIL
N.T.S.



MULCHING OF PLANT BEDS: UNLESS OTHERWISE DIRECTED SHREDDED MULCH SHALL BE PLACED TO A LIMIT OF ONE FOOT BEYOND THE CENTER OF THE OUTERMOST SHRUBS IN SHRUB BED.

NOTE "A": FOR WIDTH SEE STANDARD SPECIFICATIONS

SHRUB ON SLOPE DETAIL
N.T.S.

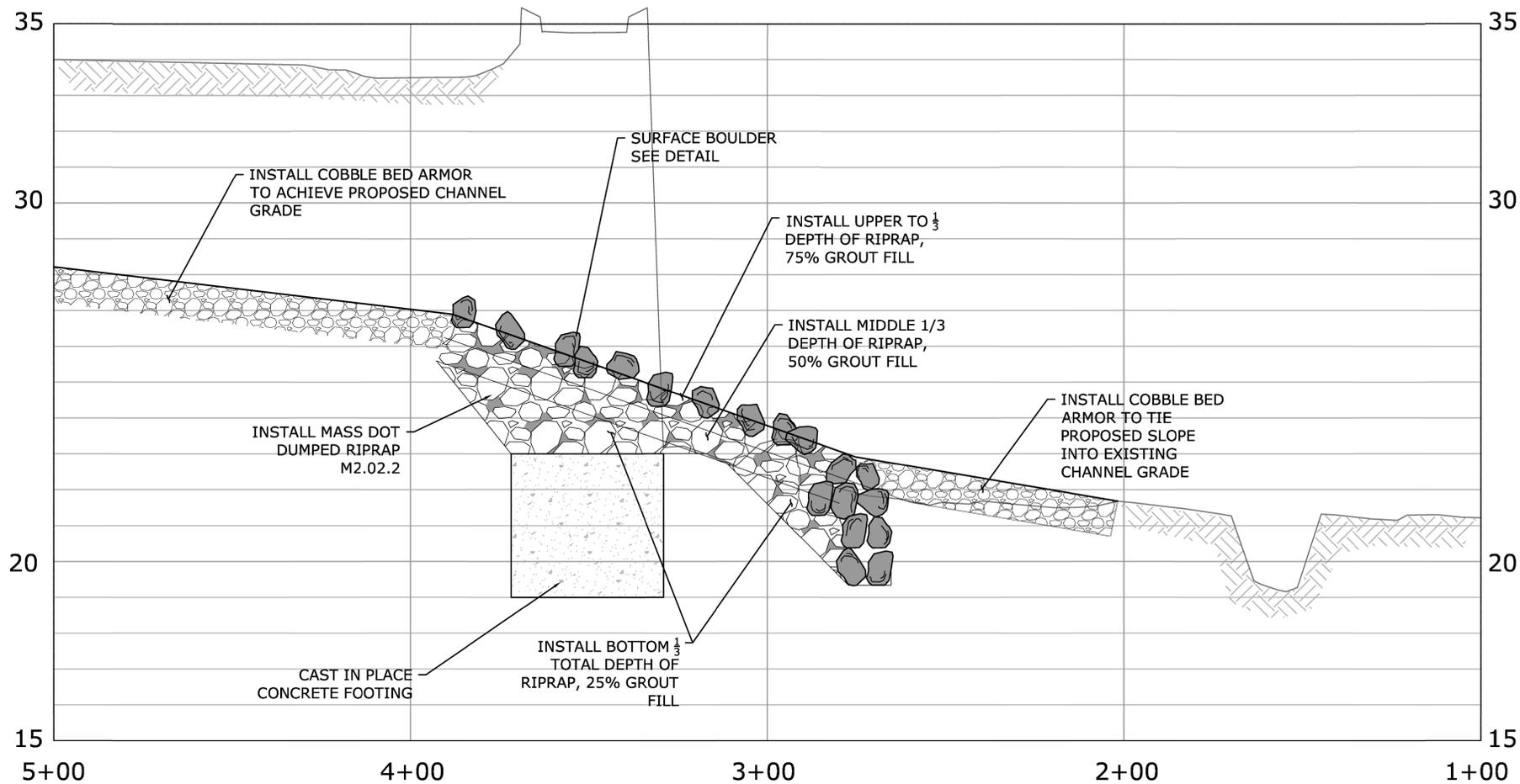
DESCRIPTION	DATE	BY
FOR NO SUBMISSION	3/11/2016	BAM

DETAILS (1)
HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
NEWFIELD STREET
PLYMOUTH, MASSACHUSETTS

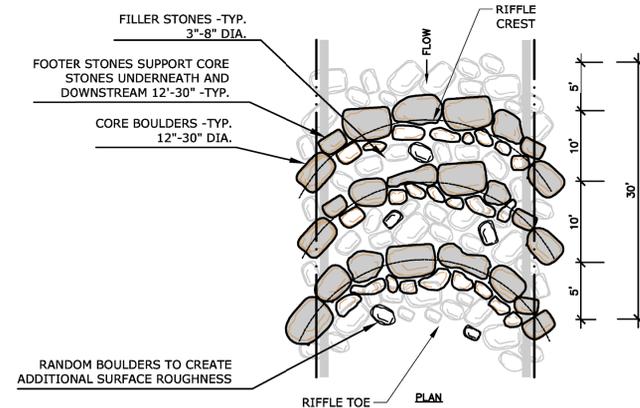
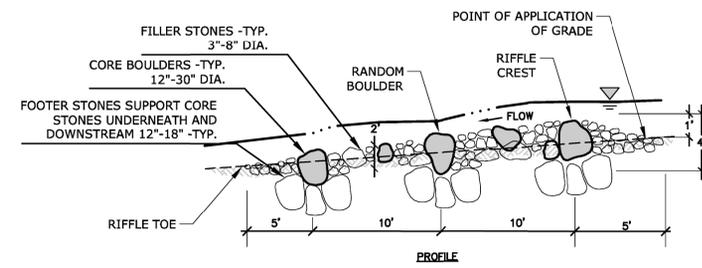
BAM DESIGNED	BAM DRAWN	WAG CHECKED
SCALE: N/A		
DATE: DECEMBER 21, 2015		
PROJECT NO.: 1982-05		
SHEET NO.: 18 OF 21		
SHEET NAME: D-1		

MILONE & MACBROOM
99 Reedy Drive
Cheshire, Connecticut 06410
(203) 271-1773 Fax: (203) 272-9733
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75% ADVANCED DESIGN

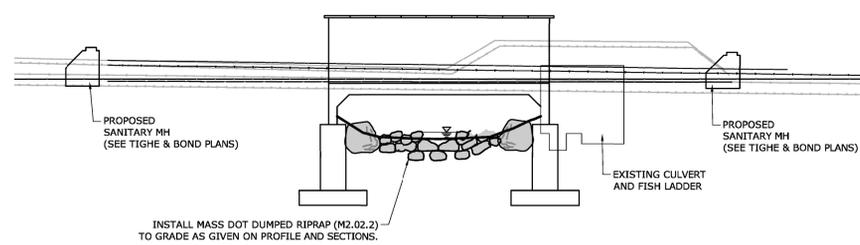


RAPIDS GROUT DETAIL - PROFILE
(SCALE: 1"=20' H; 1"=2' V)

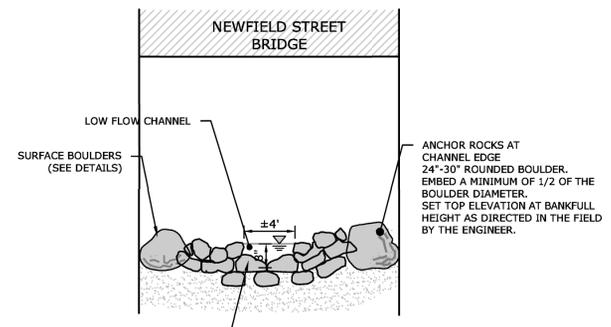


ROCK RIFFLE
(SCALE: N.T.S.)

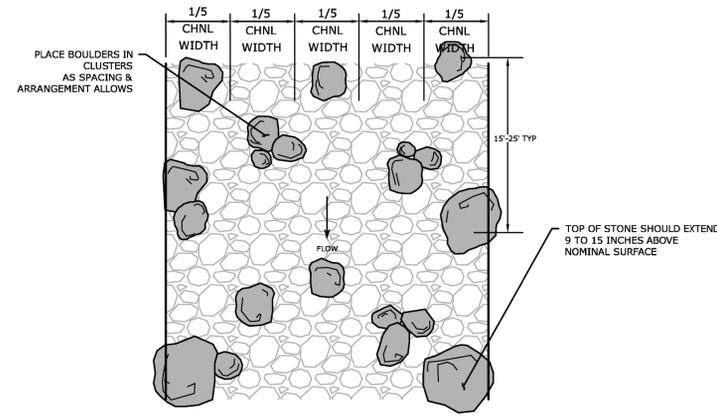
- ROCK RIFFLE NOTES:**
1. SELECTED CORE BOULDERS SHOULD EXTEND ABOVE PROPOSED GRADE. CORE BOULDERS TO BE BURIED BY MINIMUM 1/4 TOTAL ROCK HEIGHT.
 2. PLACE RANDOM BOULDERS OVER FACE OF RIFFLE TO CREATE CHANNEL ROUGHNESS. DO NOT BLOCK MORE THAN 1/4 OF TOTAL CROSS SECTION WITH RANDOM BOULDERS.
 3. USE 10-12 SINGLE RANDOM BOULDERS PER RIFFLE.
 4. SINGLE RANDOM BOULDERS TO BE 18"-36" ROUNDED STONE, AS FOR RANDOM BOULDER CLUSTERS.
 5. ROOTWADS INSTALLED WITH RIFFLES SHOULD BE INSTALLED AT THE BANK ADJACENT TO THE FURTHEST UPSTREAM CREST.



RAPIDS SECTION THROUGH NEWFIELD STREET
(SCALE: 1"=10')



RAPIDS THROUGH NEWFIELD STREET - SECTION
(SCALE: N.T.S.)



SURFACE BOULDERS
(SCALE: N.T.S.)

- NOTES:**
1. USE 18" TO 30" INCH DIAMETER ROUNDED BOULDERS.
 2. BURY BOULDERS IN THE CHANNEL BED MATERIAL 1/4 TO 1/2 THEIR TOTAL HEIGHT.
 3. PLACE BOULDERS IN EACH OF THE FIVE SECTIONS OF THE RAPIDS. POSITION BOULDERS WITH THE LONG AXIS OF EACH BOULDER PARALLEL TO THE CHANNEL FLOW DIRECTION. THE FINISHED ELEVATION OF THE BOULDERS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
 4. PLACE BOULDERS APPROXIMATELY THREE TO FIVE FEET APART IN THE DOWNSTREAM DIRECTION.
 5. PLACE 24"-36" ROUNDED BOULDERS ALONG CHANNEL EDGE EVERY 15' TO 25'. EMBED EDGE BOULDERS A MINIMUM 1/2 DIA.

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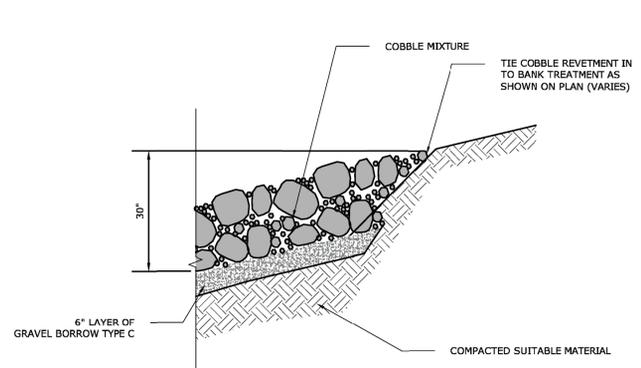
DESCRIPTION	DATE	BY
FOR NO SUBMISSION	3/11/2016	BAM

DETAILS (2)
HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
NEWFIELD STREET
PLYMOUTH, MASSACHUSETTS

JGM	BAM	WAG
DESIGNED	DRAWN	CHECKED
SCALE: N/A		
DATE: DECEMBER 21, 2015		
PROJECT NO.: 1982-05		
SHEET NO.: 19 OF 21		

D-2
SHEET NAME

75% ADVANCED DESIGN

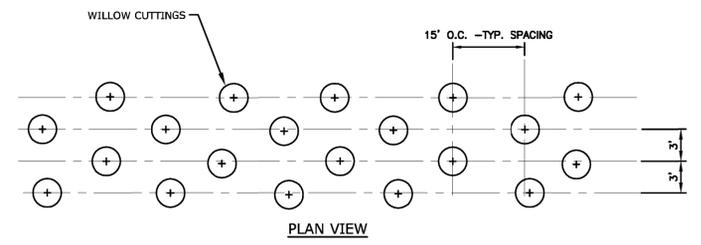


NATURALIZED COBBLE REVETMENT
(SCALE: N.T.S.)

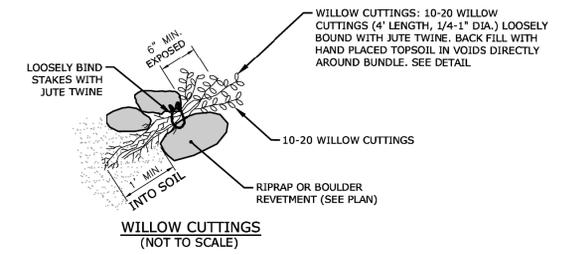
NOTE:

- COBBLE MIXTURE SHALL CONFORM TO THE FOLLOWING GRADATION:

SIEVE DESIGNATION	PERCENT PASSING
4"	100%
3"	75%
NO. 20	10%
NO. 30	5%
- REVEEMENT SHALL BE INSTALLED TO EXTEND VERTICALLY 30" ABOVE CHANNEL INVERT ELEVATION. INSTALL TO LIMITS SHOWN ON PLANS.



PLAN VIEW

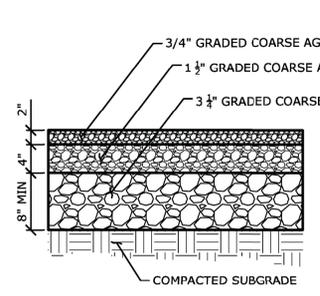


WILLOW CUTTINGS
(NOT TO SCALE)

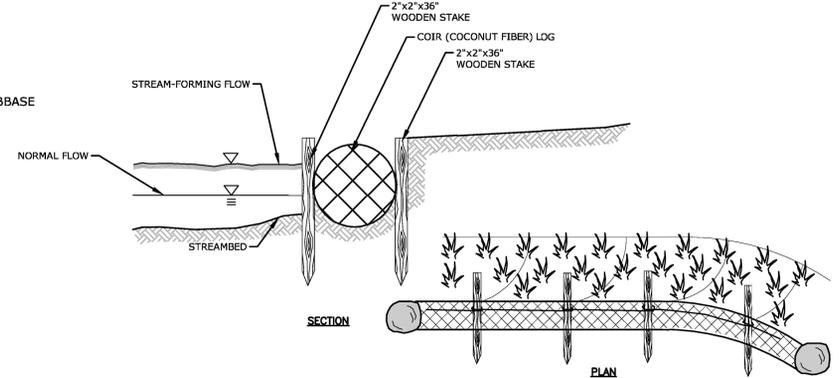
NOTES:

- WILLOW STAKES SHALL BE A SINGULAR WILLOW CUTTING

LIVE WILLOW CUTTING/STAKES



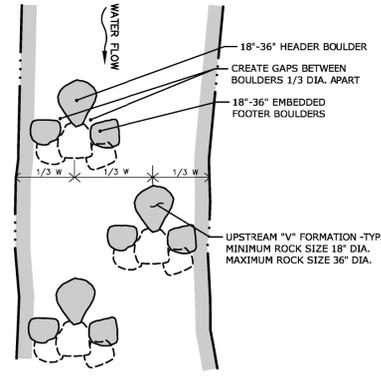
GRAVEL ACCESS DRIVE
NOT TO SCALE



COIR LOG WITH BOULDER REVETMENT
(SCALE: N.T.S.)

INSTALLATION NOTES:

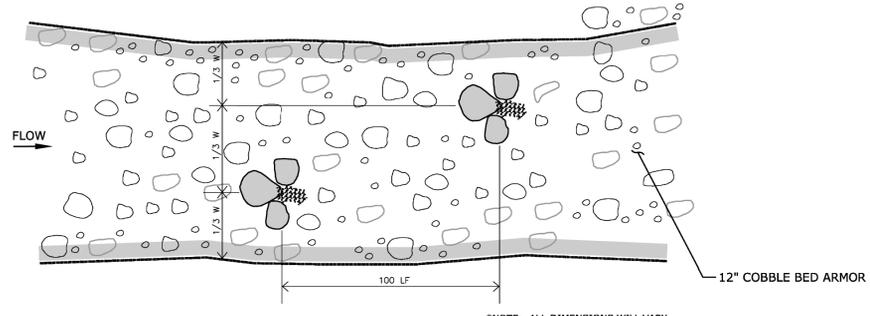
- EXCAVATE A SHALLOW (3 TO 4 INCHES DEEP) TRENCH ALONG THE TOE OF THE STREAM BANK.
- PLACE LOG IN THE TRENCH SO THAT THE BOTTOM AND BACK ARE INTACT WITH THE STREAM SUBSTRATE AND THE STREAMBANK.
- DRIVE STAKES DOWN ALONG THE SIDES OF THE LOG. DRIVE STAKES FLUSH WITH THE TOP OF THE COIR LOG.
- WEAVE COIR OR NYLON TWINE BETWEEN AND AROUND THE STAKES.
- DRIVE STAKES IN FIRMLY, SECURING THE COCONUT FIBER LOG TO THE STREAMBED.
- STABILIZE STREAMBANK ABOVE LOG USING BANK STABILIZATION TECHNIQUE AS SPECIFIED ON PLANS.
- PLACE SINGLE BOULDERS FROM BOULDERS REVETMENT BETWEEN SECTIONS OF COIR LOG.



RANDOM BOULDER CLUSTER
(SCALE: N.T.S.)

RANDOM BOULDER CLUSTER NOTES:

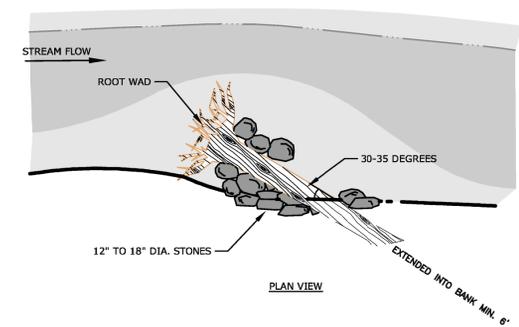
- CLUSTERS SHOULD NOT BE EVENLY SPACED FROM EACH OTHER.
- PLACE 1/2 OF ALL BOULDER CLUSTERS AT TOE OF BANK.
- POSITION BOULDER GROUPS IN AN UPSTREAM OR DOWNSTREAM 'V' FORMATION.
- BOULDERS SHOULD BE 18" TO 36" IN DIAMETER.
- POSITION BOULDERS WITH THEIR LONG AXIS PARALLEL TO THE STREAM FLOW.
- INSTALL FOOTER BOULDER TO WEDGE HEADER BOULDER IN PLACE FROM DOWNSTREAM.
- INSTALL HEADER BOULDERS AT A LOW PROFILE SUCH THAT THEY ARE PARTIALLY SUBMERGED DURING NORMAL LOW FLOW. INSTALL SUCH THAT 1/4 OF ROCK DIAMETER IS BURIED IN STREAM CHANNEL.
- FINISHED ELEVATION OF THE BOULDERS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- PROVIDE A GAP BETWEEN BOULDERS A MINIMUM OF 1/3 THE ROCK DIAMETER.



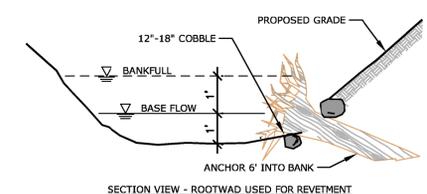
COBBLE BED ARMOR
(SCALE: N.T.S.)

COBBLE BED ARMOR NOTES:

- PLACE 6" TO 9" DIAMETER STONES TO DEPTH SHOWN ON PLAN.
- PLACE 6" DEPTH EXCAVATED CHANNEL MATERIAL OVER COBBLES AND MECHANICALLY WORK SMALLER MATERIAL IN TO COBBLE.
- STONES MAY EXTEND ABOVE NOMINAL CHANNEL GRADE TO CREATE SURFACE ROUGHNESS. STONES SHOULD NOT BLOCK MORE THAN 1/4 OF TOTAL CROSS SECTION.



PLAN VIEW

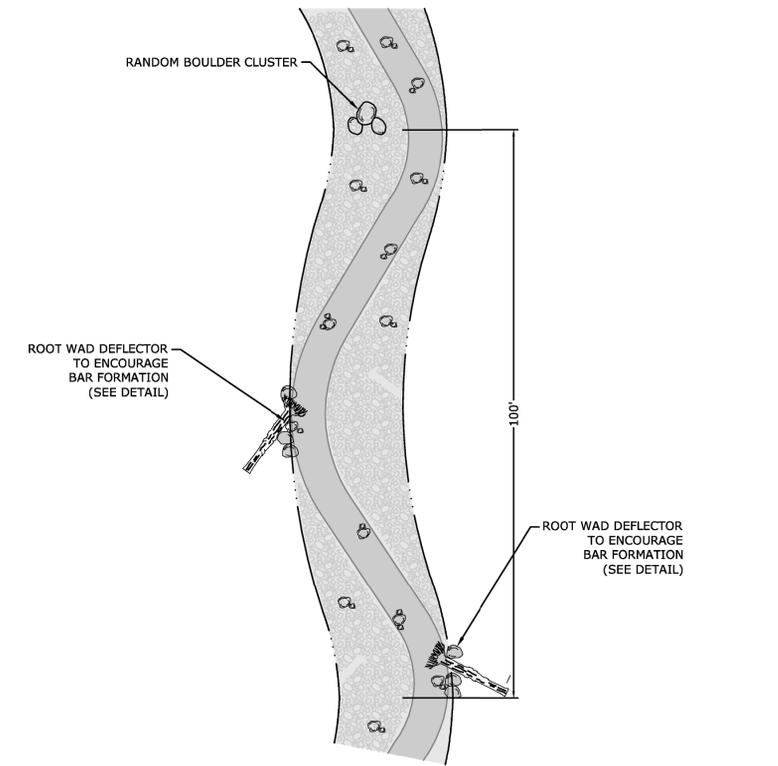


SECTION VIEW - ROOTWAD USED FOR REVETMENT

NOTES:

- USE 8 TO 12 INCH DIAMETER LOGS WITH ROOT WADS.
- INSTALL THE LOG WITH ROOT WAD RESTING ON OR DRIVEN DOWN IN TO THE STREAM BOTTOM AT A 30-35 DEGREE ANGLE FROM THE STREAM BANK.
- ANCHOR THE TRUNK AT LEAST 6 FEET INTO THE STREAM BANK.
- USE 12" TO 18" DIAMETER STONES UPSTREAM AND DOWNSTREAM OF THE STRUCTURE TO PROTECT IT FROM EROSION. STONES SHALL BE ROUNDED RIVER STONES, AS APPROVED BY THE ENGINEER.
- INSTALL AT A LOW PROFILE SUCH THAT THE TRUNK IS RESTING ON PROPOSED GRADE.
- FINISHED ELEVATION OF THE ROOT WAD WILL BE DETERMINED IN THE FIELD.
- CONTRACTOR TO FURNISH AND INSTALL ROOT WAD. WORK SHALL BE INCLUDED IN THE ITEM "INSTREAM FEATURES". CONTRACTOR SHALL RECEIVE APPROVAL FROM ENGINEER FOR USE OF SPECIFIC ROOT WADS.

ROOT WAD INSTALLATION



INSTREAM FEATURES - PLACEMENT OF RANDOM BOULDER CLUSTERS, ROOT WADS, AND RANDOM COBBLE
(SCALE: N.T.S.)

NOTES:

- PURPOSE OF INSTREAM FEATURES IS TO MAINTAIN IRREGULARITY IN LOW FLOW CHANNEL.
- FINAL FEATURES PLACEMENT TO BE AT DIRECTION OF ENGINEER IN FIELD.
- 4 BOULDER CLUSTERS AND 2 ROOT WAD DEFLECTORS EVERY 100 FEET OF INDIVIDUAL QUANTITIES, MAY BE MODIFIED AS APPROVED BY ENGINEER. 5-6 TOTAL FEATURES EVERY 100 FEET.
- ROOT WADS SHALL BE 6" MIN. DIA., X 10' LENGTH, ANCHORED MIN. 6' INTO BANK. FINAL PLACEMENT OF LOG TO BE DIRECTED IN FIELD BY ENGINEER.

<p>MILONE & MACBROOM 99 Reedy Drive Cheshire, Connecticut 06410 (203) 271-1773 Fax (203) 272-9733 www.miloneandmacbroom.com</p>		<p>DATE BY 3/11/2016 BAM</p>

DETAILS (3)

**HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
NEWFIELD STREET
PLYMOUTH, MASSACHUSETTS**

BAM DESIGNED	BAM DRAWN	WAG CHECKED
SCALE: N/A		
DATE: DECEMBER 21, 2015		
PROJECT NO.: 1982-05		
SHEET NO.: 20 OF 21		
SHEET NAME: 20		

LS-15013

ANCHOR BASE PLATE:

- GFR-IC
- Bolt circle 21" (533mm)
- Access door

NOTE:

- 80 Watts
- Type III light distribution
- 4200 lumens
- Warm White 3500k (CCT)
- 3/4"-30" Anchor bolts supplied by others.

C/W
-GFR-IC(120v / 20A) Duplex receptacle with ground fault interrupter and "In use" cover.

Lumca reserves the right to modify the elements on this technical data sheet without prior notice.

PROJECT: LS-15034 NAME: TOWN OF PLYMOUTH - WATER ST. DRAWN: **FOR APPROVAL** **FOR INFORMATION**

LUMCA INC
3645A WAT QUEBEC
QUEBEC-CANADA G1P 3P2
TEL: 418-650-1893 FAX: 418-650-1896
WWW.LUMCA.COM - lumca@lumca.com

DATE: 12/11/04 SCALE: N/A COLOR: Black

LS-8614

Specifications

CONSTRUCTION

CAGE: One piece cast aluminum hexagonal frame.

HOUSING: Cast aluminum hinged cover, opening by means of two pivots and one stainless steel copple screw with decorative zinc aluminum or brass and spun copper finish (color coating not to be applied). A neoprene gasket on the perimeter of the cover ensures the luminaire is weatherproof.

HOLDER: One piece cast aluminum hexagonal ballast compartment, slip fitting on a 2" (51mm) pole or ferron.

All cast aluminum pieces are #356 alloy, free of any porosity or foreign materials. The minimum wall thickness of all castings is 0.188" (4.7mm). All weldings are executed in accordance with CSA W39 regulation. All hardware is in stainless steel.

OPTICAL SYSTEM: The optical system consists of a prismatic impact resistant polycarbonate (PC) sealed lens, an aluminum heat sink dissipator and high intensity white light emitting diodes (LED) divided in 1 to 3 light bars. A hermetic sealing meeting the International standard IP66 protects against lumen depreciation due to dust or insects infiltration, maintaining a higher lumen output over the years and eliminating periodic cleaning of the lens.

Light distributions available in Type III (see chart) according to the Illuminating Engineering Society's standards.

DRIVER: High power factor constant voltage electronic LED driver featuring a 35°C (-31°F) to 70°C (158°F) operating capacity and a power factor exceeding 97%. Rated by UL class 2 operation for maintenance. Line voltage available is 120 to 240 (Other voltages available, consult factory).

FINISH: All metallic parts are pre-treated using an environmentally friendly organic phosphating technology (PLAFORATION) before a polyester powder coating is electrostatically applied. The finish is of 100 microns minimum thickness and meets the ASTM B117 regulation related to salt spray and the ASTM D2247 regulation related to the resistance of the finishes exposed to a 100% relative humidity, 3AL and Custom color matches available.

COLOR: Black

Configuration	Modules Qty	Current (mA)	System consumption	CCT (°K)	Distribution type	CRI	Lumens	Lm/W
18	1	40W	40W	3100	LS	73	4200	73.6
36	2	700 (30)	80W	3500 (35K)	LS	73	4200	73.6
54	3	120W	120W	9300				

Lumca reserves the right to modify the elements on this technical data sheet without prior notice.

PROJECT: LS-15013 NAME: PLYMOUTH - COURT ST. DRAWN: **FOR APPROVAL** **FOR INFORMATION**

LUMCA INC
3645A WAT QUEBEC
QUEBEC-CANADA G1P 3P2
TEL: 418-650-1893 FAX: 418-650-1896
WWW.LUMCA.COM - lumca@lumca.com

DATE: 12/11/04 SCALE: N/A COLOR: Black

M2-CCEBM
Mounting arm

Specifications

Construction

All cast aluminum pieces are #356 alloy, free of any porosity or foreign material. The minimum wall thickness of all castings is 0.188"-4.7mm. Extruded aluminum parts are #C6063-T5 alloy. All hardware is in stainless steel.

All metallic parts are pre-treated using an environmentally friendly organic phosphating technology (PLAFORATION) before a polyester powder coating is electrostatically applied. The finish is of 100 microns minimum thickness and meets the ASTM B117 regulation related to salt spray and the ASTM D2247 regulation related to the resistance of the finishes exposed to a 100% relative humidity.

Colour: Black

Lumca reserves the right to modify the elements on this technical data sheet without prior notice.

PROJECT: LS-15034 NAME: TOWN OF PLYMOUTH - WATER ST. DRAWN: **FOR APPROVAL** **FOR INFORMATION**

LUMCA INC
3645A WAT QUEBEC
QUEBEC-CANADA G1P 3P2
TEL: 418-650-1893 FAX: 418-650-1896
WWW.LUMCA.COM

DATE: 12/11/04 SCALE: N/A COLOR: Black

PL87 round & fluted aluminium pole
Avenue

Specifications

Construction

All metallic parts are pre-treated using an environmentally friendly organic phosphating technology (PLAFORATION) before a polyester powder coating is electrostatically applied. The finish is of 100 microns minimum thickness and meets the ASTM B117 regulation related to salt spray and the ASTM D2247 regulation related to the resistance of the finishes exposed to a 100% relative humidity.

Colour: Black

Lumca reserves the right to modify the elements on this technical data sheet without prior notice.

PROJECT: LS-15034 NAME: TOWN OF PLYMOUTH - WATER ST. DRAWN: **FOR APPROVAL** **FOR INFORMATION**

LUMCA INC
3645A WAT QUEBEC
QUEBEC-CANADA G1P 3P2
TEL: 418-650-1893 FAX: 418-650-1896
WWW.LUMCA.COM

DATE: 12/11/04 SCALE: N/A COLOR: Black

REMOVABLE BOLLARD
N.T.S.

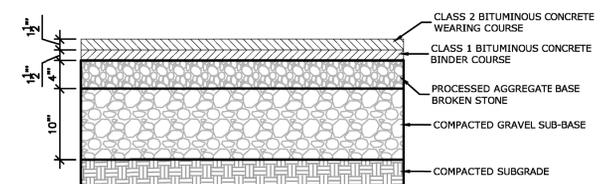
ISOMETRIC VIEW

- BOLLARD WELDMENT
- SECURITY SCREWS
- GASKET
- CAP IS INSTALLED WHEN THE BOLLARD IS REMOVED
- RECEIVER

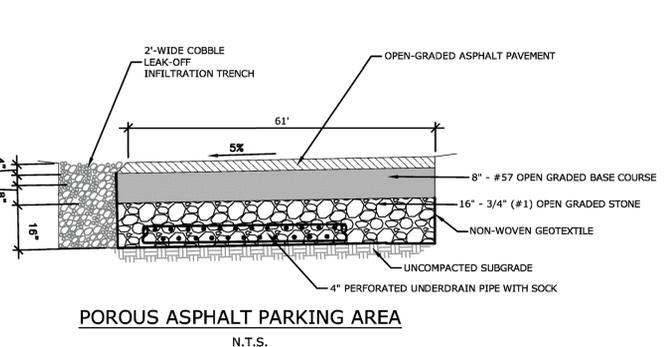
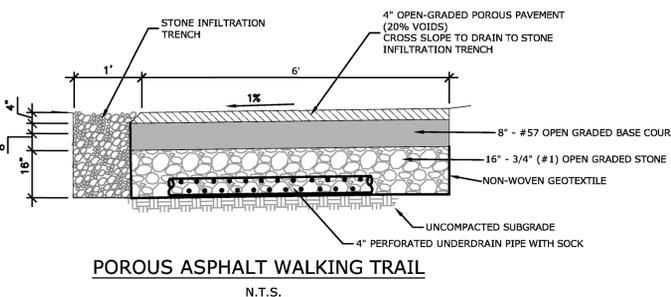
NOTES:

1. FOUNDATION SHALL EXTEND A MINIMUM OF 2' BEYOND THE BOLLARD.
2. ABOVE FOUNDATION SURFACES ARE FINISHED WITH RUST INHIBITIVE PRIMER, REBAR REQUIRED: 100 LBS PER BOLLARD. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. REMOVABLE BOLLARD WEIGHT: 90 LBS.
4. CRASH RATING: 10,000 LBS @ 30 MPH.

PROPOSED TRAIL LIGHTING
N.T.S.

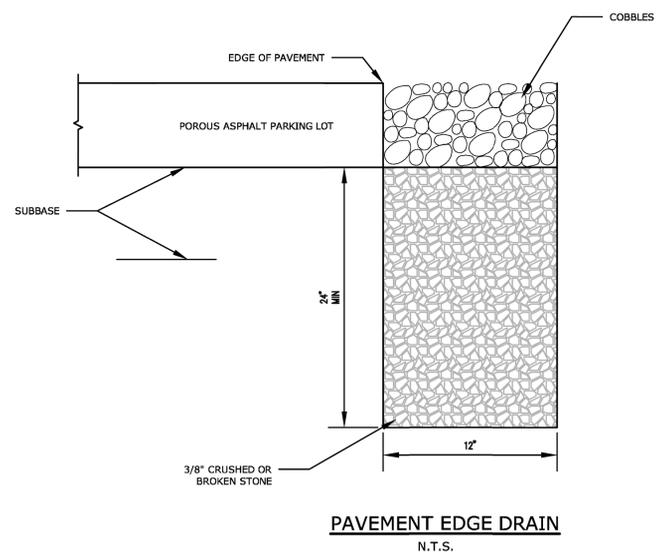


RECONSTRUCTED BITUMINOUS CONCRETE DRIVES AND ROADS
N.T.S.



CUSTOM PARK & LEISURE LTD. PIC SERIES B1 PICNIC TABLE OR EQUIVALENT
NOTE:
6' OR 8' SULLIVAN RECTANGULAR WOOD PICNIC TABLE, AS MANUFACTURED BY: BARCO PRODUCTS COMPANY
11 N. BATAVIA AVE. BATAVIA, IL 60510
1-800-338-2697

PICNIC TABLE
N.T.S.



PAVEMENT EDGE DRAIN
N.T.S.

MILONE & MACBROOM
99 Reedy Drive
Chester, Connecticut 06410
(203) 271-1773 Fax: (203) 272-9733
www.miloneandmacbroom.com

DATE BY
3/11/2016 BAM

DESCRIPTION FOR NO. SUBMISSION

DETAILS (4)

BAM DESIGNED
BAM DRAWN
WAG CHECKED

SCALE: N/A

DATE: DECEMBER 21, 2015

PROJECT NO. 1982-05

SHEET NO. 21 OF 21

21

SHEET NAME

HOLMES PLAYGROUND DAM REMOVAL
TOWN BROOK RESTORATION
NEWFIELD STREET
PLYMOUTH, MASSACHUSETTS

75% ADVANCED DESIGN

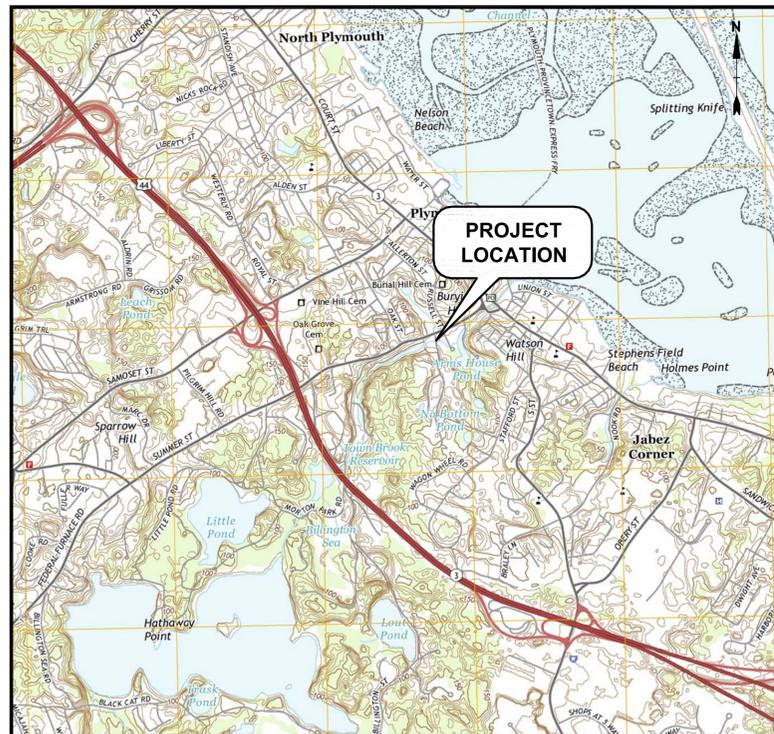
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NEWFIELD STREET BRIDGE REPLACEMENT

PLYMOUTH, MASSACHUSETTS

FEBRUARY 2016

SHEET NO.	SHEET TITLE
G-001	COVER SHEET
G-002	EROSION CONTROL NOTES & DETAILS
C-001	EXISTING CONDITIONS PLAN
C-002	DEMOLITION PLAN
C-003	BRIDGE PLAN
C-004	UTILITY PLAN
D-001	SECTIONS AND DETAILS
D-002	SECTIONS AND DETAILS
D-003	WATER, SEWER AND PAVEMENT DETAILS



SCALE: 1" = 2,000'



BOARD OF SELECTMEN

KENNETH A. TAVARES, CHAIRMAN
 ANTHONY F. PROVENZANO JR., VICE CHAIRMAN
 JOHN T. MAHONEY JR.
 DAVID F. MALAGUTI
 SEAN P. PAGE

DEPARTMENT OF PUBLIC WORKS

JONATHAN BEDER, DIRECTOR
 SID KASHI, P.E., M.P.S., TOWN ENGINEER

Tighe & Bond
www.tighebond.com

COMPLETE SET 9 SHEETS

PROJECT NAME AND LOCATION:
NEWFIELD STREET BRIDGE REPLACEMENT
NEWFIELD STREET BRIDGE REPLACEMENT
PLYMOUTH, MA 02169

41°-57'08"-57"N
70°-40'03"-65"W

DESCRIPTION:
THE PROJECT CONSISTS OF THE REPLACEMENT OF AN EXISTING BRIDGE GRANITE ABUTMENTS AND WING WALLS WILL BE ABANDONED AND REMOVED. NEW FOUNDATIONS AND PRECAST BRIDGE WILL BE INSTALLED. NEW UTILITY CROSSINGS WILL ALSO BE CONSTRUCTED. THE WORK IS ANTICIPATED TO START IN FALL OF 2016, AND BE COMPLETED BY SPRING OF 2016.

DISTURBED AREA:
THE TOTAL LIMIT OF WORK IS APPROXIMATELY 0.5 ACRES.

GENERAL NOTES:
1. THIS PLAN IS BASED ON A DRAWING TITLED "EXISTING CONDITIONS PLAN, NEWFIELD STREET, PLYMOUTH, MASSACHUSETTS" PREPARED BY WSP TRANSPORTATION AND INFRASTRUCTURE, INC, DATED JULY 2, 2014.

2. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS ILLUSTRATED, AND ESTABLISH SURVEY CONTROL ADEQUATE TO RE-ESTABLISH EXISTING STRUCTURE FEATURE POSITIONS/ELEVATIONS AND AS NECESSARY FOR NEW WORK LOCATION CONTROL.
3. LOCATION AND DEPTH OF UNDERGROUND UTILITIES IS APPROXIMATE ONLY AND IS NOT WARRANTED TO BE CORRECT. UNDERGROUND UTILITIES ARE SHOWN BASED ON A VISUAL INSPECTION OF SURFACE OBSERVABLE FEATURES ONLY AND HAVE BEEN FIELD INSPECTED FOR CONNECTIONS WHERE POSSIBLE. ADDITIONAL UTILITIES MAY EXIST WHICH ARE NOT INDICATED ON THESE PLANS. ALL EXISTING UTILITIES SHALL BE VERIFIED FOR SERVICE, SIZE, INVERT ELEVATION, LOCATIONS, ETC. PRIOR TO NEW CONNECTIONS TO OR RELOCATION OF SAME. CONTRACTOR MUST NOTIFY DIG-SAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION. NOTIFY DAS/LVA SURVEY AND THE ENGINEER IN WRITING OF ANY AND ALL DISCREPANCIES PRIOR TO COMMENCING ANY WORK.

4. THE CONTRACTOR SHALL NOT RELY ON SCALED DIMENSIONS AND SHALL CONTACT THE ENGINEER FOR CLARIFICATION IF A REQUIRED DIMENSION IS NOT PROVIDED ON THE PLANS.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS AND FOR SITE CONDITIONS THROUGHOUT CONSTRUCTION. NEITHER THE PLANS NOR THE SEAL OF THE ENGINEER AFFIXED HEREON EXTEND TO OR INCLUDE SYSTEMS REQUIRED FOR THE SAFETY OF THE CONTRACTOR, THEIR EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND IMPLEMENTING SAFETY PROCEDURES AND SYSTEMS AS REQUIRED BY THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND ANY STATE OR LOCAL SAFETY REGULATIONS.

6. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES LEGAL OR OTHERWISE RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION OF TIGHE & BOND.

7. ALL WORK SHALL CONFORM TO THE TOWN OF PLYMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS UNLESS OTHERWISE NOTED.

8. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.

9. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, SILT FENCES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.

10. PROVIDE INLET PROTECTION AROUND ALL EXISTING CATCHBASIN INLETS WITHIN THE WORK LIMITS AND MAINTAIN FOR THE DURATION OF THE PROJECT UNTIL PAVEMENT HAS BEEN INSTALLED.

11. INSTALL STABILIZED CONSTRUCTION ENTRANCES AS NECESSARY.

12. INSPECT INLET PROTECTION AND SILT FENCES DAILY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR AND MAINTAIN AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.

13. ALL DISTURBED AREAS IN THE LIMITS OF THE PROJECT NOT TO BE PAVED OR OTHERWISE TREATED, SHALL RECEIVE 6" LOAM, SEED, AND/OR MULCH.

14. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.

15. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION. CONSTRUCTION SHALL INCLUDE, BUT NOT BE LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.

16. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.

17. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN STABILIZED.

18. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED BY SILT FENCE OR SILT SOCK. STOCKPILE AREAS TO BE LOCATED OUTSIDE OF 100 FOOT BUFFER, UNLESS OTHERWISE APPROVED BY THE TOWN OF PLYMOUTH CONSERVATION COMMISSION.

19. TEMPORARY FENCING SHALL BE PROVIDED AS NECESSARY TO RESTRICT PUBLIC ACCESS TO ACTIVE LAYDOWN AND STAGING AREAS AND AREAS UNDER CONSTRUCTION.

20. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MASSACHUSETTS HIGHWAY DEPARTMENT (MHD), STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.

21. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILE) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A LAND SURVEYOR OR PROFESSIONAL ENGINEER LICENSED IN THE COMMONWEALTH OF MASSACHUSETTS.

22. PUBLIC STREETS SHALL NOT BE USED FOR CONSTRUCTION LAYDOWN OR STAGING.

23. THE CONTRACTOR SHALL NOT PERFORM WORK BEYOND THE LIMIT OF WORK AS SHOWN ON THE PLANS.

24. VEHICLES ARE PROHIBITED FROM WORKING BEYOND THE LIMIT OF WORK AS SHOWN ON THE PLANS.

25. STRUCTURAL WORK SHALL CONFORM TO MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, LRFD BRIDGE MANUAL 2013 EDITION, INCLUDING MOST RECENT ADDENDA, AND CONTRACT DOCUMENTS. IN CASE OF CONFLICT, MOST STRINGENT REQUIREMENT SHALL GOVERN.

26. CONTRACTOR SHALL VERIFY AND COORDINATE DIMENSIONS RELATED TO THIS PROJECT.

27. EXPANDED SEALANT AT ALL CONTROL JOINTS. PROVIDE COMPRESSIBLE FILLER AND SEALANT AT ALL EXPANDED JOINTS AND ISOLATION JOINTS.

28. FERTILIZER SHALL NOT BE USED WITHIN THE LIMITS OF WORK.

29. PRIVATELY OWNED EXISTING FEATURES LOCATED ON PRIVATE PROPERTY THAT ARE IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO THEIR PRE-CONSTRUCTION STATE PRIOR TO THE COMPLETION OF CONSTRUCTION.

30. PROVIDE GEOTEXTILE UNDER RESET REVEITEMENT (TYP) UNLESS NEW STONES BEAR DIRECTLY ON EXISTING STONE LAYER WITH STONES LARGER THAN 12".

31. REVEITEMENT STONES SHALL BE MACHINE PLACED (NOT DUMPED) IN A TIGHT INTERLOCKING MANNER WITH STONES FIRMLY SEATED AND BEARING ON OTHER STONES AT A MINIMUM OF THREE SEPARATE LOCATIONS. EXPOSED SURFACE SHALL BE GENERALLY PARALLEL WITH THE SLOPE.

32. BEDDING STONE BACKFILL SHALL BE A WELL GRADED DENSE MASS OF ANGULAR BROKEN ROCK, FULLY COMPACTED BEFORE COVERING.

33. THE ENGINEER (TIGHE & BOND), THE TOWN OF PLYMOUTH, MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (MADEP), AND MASSACHUSETTS DIVISION OF MARINE FISHERIES (DMF) SHALL BE NOTIFIED IMMEDIATELY IN THE EVENT A BREACH OF SEWAGE PIPES OR RELATED STRUCTURES OCCURS DURING CONSTRUCTION.

34. CONTRACTOR SHALL TAKE CARE WHEN DEMOLISHING THE EXISTING STRUCTURE, DEBRIS SHALL NOT FALL INTO THE WATER DURING DEMOLITION.

35. ALL WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL COORDINATE WORK ACTIVITIES AROUND THE TIDES.

- REINFORCEMENT:**
1. DETAILING, FABRICATION, AND ERECTION OF REINFORCEMENT, UNLESS OTHERWISE NOTED, SHALL CONFORM TO MASSDOT LRFD BRIDGE MANUAL, 2013 EDITION AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION.
 2. STEEL REINFORCEMENT, UNLESS OTHERWISE SHOWN, SHALL CONFORM TO ASTM A615 GRADE 60 MINIMUM (YIELD STRENGTH = 60,000 PSI). ALL STEEL REINFORCEMENT SHALL BE HOT-DIP GALVANIZED COATED PER ASTM A767. BARS SHALL BE HANDLED AND REPAIRED WHERE NECESSARY IN ACCORDANCE WITH ASTM D3963.
 3. PROVIDE AND SCHEDULE ON SHOP DRAWINGS, ALL NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE: HIGH CHAIRS, 4"-0" ON CENTER, #5 SUPPORT BAR FOR HIGH CHAIRS, SLAB BOLSTERS, 3'-6" ON CENTER. ALL CHAIRS SHALL BE AZTEC CASTLE CHAIRS OR APPROVED PLASTIC EQUAL.
 4. THE CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT SHALL BE 3 INCHES, UNLESS OTHERWISE SHOWN.
 5. WHERE REINFORCEMENT IS CALLED FOR IN SECTION, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER THE SECTION APPLIES.
 6. REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
 7. WELDED WIRE FABRIC SHALL LAP 12" OR TWO SPACES, WHICHEVER IS LARGER, AND SHALL BE WIRED TOGETHER.
 8. REINFORCEMENT COUPLER SPLICES SHALL BE MECHANICAL DEVICES CAPABLE OF TRANSMITTING THE ULTIMATE TENSILE AND COMPRESSIVE STRENGTH OF THE BAR.
 9. INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO SCHEDULED CONCRETE PLACEMENT. NOTIFY ENGINEER OF COMPLETION AT LEAST 24 HOURS PRIOR TO SCHEDULED COMPLETION OF PLACEMENT OR REINFORCEMENT.
 10. REINFORCEMENT SHALL BE SET BEFORE PLACING CONCRETE. SETTING ANY REINFORCEMENT INTO WET CONCRETE IS PROHIBITED.

REBAR SPLICE LENGTH SCHEDULE NOTES:

BAR SIZE DESIGNATION	DEVELOPMENT LENGTH (IN.)	SPLICE LENGTH (IN.)	
		CLASS B	CLASS B TOP BARS
ENGLISH METRIC	Ld		
#3	#10	15	19
#4	#13	19	25
#5	#16	24	31
#6	#19	29	37
#7	#22	42	54
#8	#25	48	62
#9	#29	54	70
#10	#32	61	79

- REBAR SPLICE LENGTH SCHEDULE:**
1. IF CLEAR SPACING BETWEEN THE REBARS IS LESS THAN THREE BAR DIAMETERS, OR IF COVER IS LESS THAN TWO BAR DIAMETERS, INCREASE THE SPLICE LENGTH BY AN ADDITIONAL 50%.
 2. IF EPOXY COATED REBAR IS USED, INCREASE THE SPLICE LENGTH BY AN ADDITIONAL 50%.
 3. IF LIGHTWEIGHT CONCRETE IS USED, INCREASE THE SPLICE LENGTH BY AN ADDITIONAL 30%.
 4. THE MINIMUM REBAR SPLICE LENGTH SCHEDULE IS BASED ON $f_c = 4,000$ PSI AND $f_y = 60,000$ PSI. ADJUST FOR OTHER STRENGTHS USING ACI-318.
 5. FOR HORIZONTAL REINFORCEMENT SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW, INCREASE THE DEVELOPMENT LENGTH BY AN ADDITIONAL 30%.
 6. WHEN BARS OF DIFFERENT SIZE ARE LAP SPICED, THE SPLICE LENGTH SHALL BE THE LARGER OF EITHER THE DEVELOPMENT LENGTH OF THE LARGER BAR OR THE SPLICE LENGTH OF THE SMALLER BAR.
- CONCRETE:**
1. CONCRETE WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE MASSDOT LRFD BRIDGE MANUAL, 2013 EDITION AND AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION.
 2. CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED, AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY OR THE ENGINEER.
 3. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL HAVE A COMPRESSIVE STRENGTH OF 5,000 PSI AT 28 DAYS, UNLESS OTHERWISE NOTED, AND SHALL BE AIR ENTRAINED (SEE SPECS).
 4. THE USE OF CONSTRUCTION JOINTS WHERE SHOWN ON THE DRAWINGS IS MANDATORY. OMISSIONS, ADDITIONS, OR CHANGES SHALL NOT BE MADE EXCEPT WITH THE SUBMISSION OF A WRITTEN REQUEST TOGETHER WITH DRAWINGS OF THE PROPOSED JOINT LOCATIONS FOR APPROVAL OF THE STRUCTURAL ENGINEER.
 5. WHERE CONSTRUCTION JOINTS ARE NOT SHOWN, DRAWINGS SHOWING LOCATION OF CONSTRUCTION JOINTS AND CONCRETE PLACING SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PREPARATION OF THE REINFORCEMENT SHOP DRAWINGS.
 6. CONCRETE SLABS SHALL BE CAST SO THAT THE SLAB THICKNESS IS AT NO POINT LESS THAN THAT INDICATED ON THE DRAWINGS.
 7. CONCRETE STEMS AND WALLS SHALL BE CAST ALTERNATELY OR IN A CHECKERBOARD FASHION SO THAT ADJACENT SECTIONS ARE PLACED NO SOONER THAN THREE DAYS APART. AT LEAST TWO DAYS MUST ELAPSE AFTER PLACING CONCRETE IN WALLS BEFORE PLACING FLOOR SYSTEM SUPPORTED THEREON.
 8. CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED.
 9. EXPOSED EDGES OF CONCRETE ELEMENTS SHALL HAVE CHAMFERED CORNERS.
 10. NO CONCRETE SHALL BE PLACED IN WATER OR ON FROZEN GROUND.

- TIDAL ELEVATIONS:**
1. THE ELEVATIONS NOTED BELOW ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) BASED ON TIDAL DATA REFERRED TO MEAN LOWER LOW WATER (MLLW) FOR NUT ISLAND, QUINCY BAY, MASSACHUSETTS STATION ID 8444525 AS PROVIDED BY THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.

MEAN HIGH WATER (MHW)	=	4.4'
MEAN LOW WATER (MLW)	=	-5.1'
MEAN HIGHER HIGH WATER (MHHW)	=	4.2'
MEAN LOWER LOW WATER (MLLW)	=	-5.2'

- SEQUENCE OF MAJOR ACTIVITIES:**
1. CONSTRUCT TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS
 - NEW CONSTRUCTION
 - DISPOSAL OF SEDIMENT SPOIL, STUMP, AND OTHER SOLID WASTE
 - FLOOD PLAIN EXCAVATION WORK
 - CONTROL OF DUST
 - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
 - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
 2. SET UP TRAFFIC CONTROL.
 3. TEMPORARILY RELOCATE 16-INCH DIAMETER WATERMAIN (SHEET C-004).
 4. COORDINATE WITH NSTAR FOR TEMPORARY GAS SERVICE AND PROTECTION OF ELECTRICAL SERVICE.
 5. DEMOLISH AND DISPOSE OF EXISTING BRIDGE.
 6. CONSTRUCT NEW FOUNDATIONS.
 7. SET PRECAST BRIDGE.
 8. SET WINGWALLS AND RETAINING STRUCTURES.
 9. COORDINATE AND REPLACE UTILITIES CROSSINGS.
 10. CONSTRUCT NEW SIDEWALKS AND RAILS.
 11. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
 12. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.
- NOTE: THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.

- EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES:**
- A. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES AND DISTURBED AREAS, ON THE LANDSIDE OF THE SEAWALL, WHERE CONSTRUCTION ACTIVITY WILL NOT OCCUR FOR MORE THAN TWENTY ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
1. TEMPORARY SEEDING
 2. MULCHING
 3. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING, OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY NOVEMBER 15.
 4. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
 1. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED.
 2. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED.
 3. A MINIMUM OF 1" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED.
 4. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
 5. WINTER STABILIZATION PRACTICES:
 1. ALL PROPOSED POST-DEVELOPMENT VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATED GROWTH BY NOVEMBER 15TH, OR WHICH ARE DISTURBED AFTER NOVEMBER 15TH, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 4:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURE WITH ANCHOR NETTING, ELSEWHERE.
 2. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOOD CONDITION.
 3. AFTER NOVEMBER 15TH, INCOMPLETE ROAD OR PARKING SURFACES SHALL BE PROTECTED WITH A MINIMUM OF 1" OF CRUSHED GRAVEL, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON, BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT.

- GENERAL INSPECTION AND MAINTENANCE PRACTICES FOR EROSION AND SEDIMENT CONTROLS:**
1. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 1/2 INCH OR GREATER.
 2. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS.
 3. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE OR HAYBALE BARRIERS WHEN IT HAS REACHED ONE THIRD (1/3) THE HEIGHT OF THE FENCE OR BALE.
 4. ALL DIVERSION DIKES WILL BE INSPECTED AND ANY BREACHES PROMPTLY REPAIRED.
 5. TEMPORARY SEEDING AND PLANTING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND UNHEALTHY GROWTH.
 6. ALL DRAINAGE OUTFALLS SHALL BE INSPECTED FOR SIGNS OF EROSION AND BUILD UP OF SEDIMENT QUARTERLY, AT A MINIMUM.
 7. A MAINTENANCE INSPECTION REPORT WILL BE MADE AFTER EACH INSPECTION.
 8. A REPRESENTATIVE OF THE SITE CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTIONS, MAINTENANCE AND REPAIR ACTIVITIES, AND FILLING OUT THE INSPECTION AND MAINTENANCE REPORT.
 9. THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SPECIFICATION _____.
 10. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE, OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES, AND CONDUITS, ETC., SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL CODES OR SPECIFICATIONS.
 11. THE USE OF SAND FOR THE PURPOSE OF PEDESTRIAN SAFETY AND SAFE DRIVING CONDITION SHALL BE MINIMIZED.
 12. THE OWNER SHALL CLEAN ALL CATCH BASINS, DRAIN MANHOLES, AND TIDE GATE STRUCTURES ON AN ANNUAL BASIS.
 13. STREET SWEEPING:
 - A. CONTRACTOR SHALL PERFORM WEEKLY SWEEPING OF PAVED AREAS UTILIZED FOR TEMPORARY CONSTRUCTION ACCESS OR WORK.
 - B. CONTRACTOR SHALL DISPOSE OF STREET SWEEPING WASTE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES AND LAWS.

- CONCRETE WASHOUT AREA:**
1. THE CONCRETE CONTRACTOR SHOULD BE ENCOURAGED, WHERE POSSIBLE, TO USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY.
 2. IF IT IS NECESSARY, SITE CONTRACTOR SHALL WASH OUT ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED.
 3. ATTEMPTS SHOULD BE MADE TO LOCATE WASHOUT AREA AT LEAST 50 YARDS AWAY FROM STORM DRAINS AND WATERWAYS WHENEVER POSSIBLE.
 4. NO OTHER WASHOUT WILL BE ALLOWED.

- ALLOWABLE NON-STORMWATER DISCHARGES:**
1. DISCHARGES FROM FIREFIGHTING ACTIVITIES
 2. FIRE HYDRANT FLUSHINGS
 3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED
 4. WATER USED TO CONTROL DUST
 5. POTABLE WATER
 6. PAVEMENT WASH WATERS - NO SPILLS OR DETERGENTS
 7. LANDSCAPE IRRIGATION
 8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATE
 9. UNCONTAMINATED GROUND WATER OR SPRING WATER
 10. FOUNDATION OR FOOTING DRAINS - NOT CONTAMINATED

- WASTE DISPOSAL:**
- A. WASTE MATERIALS
ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN A DUMPSTER. NO CONSTRUCTION WASTE MATERIALS WILL BE BURIED ON SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
- B. HAZARDOUS WASTE
ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
- C. SANITARY WASTE
ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

LEGEND

⊙	SEWER MANHOLE
⊗	HYDRANT
⊕	DRAIN MANHOLE
⊞	CATCH BASIN
—	SIGN
⊖	UTILITY POLE
⊗	GAS GATE
⊗	WATER GATE
□ EM	ELECTRIC METER
X-0.7	SPOT ELEVATION
□ WHH	WATER HAND HOLE
• FP	FLAG POLE
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
CONC	CONCRETE
SGE	SLOPED GRANITE EDGING
EOP	EDGE OF PAVEMENT
BCC	BITUMINOUS CONCRETE CURB
VCC	VERTICAL CONCRETE CURB
VGC	VERTICAL GRANITE CURB
TSW	TOP OF SEA WALL
TGW	TOP OF GRANITE BLOCK SEA WALL
TW	TOP OF WALL
B-4	BORING LOCATION W/LABEL
A-1	SEDIMENT LOCATION W/LABEL
⊕	WETLAND FLAG
— D	DRAIN LINE
— S	SEWER LINE
— G	GAS LINE
— W	WATER LINE
— OHW	OVERHEAD ELECTRIC LINE
— 2.0	1 FOOT CONTOUR LINE
— 5.0	5 FOOT CONTOUR LINE
	PROPOSED CONCRETE

**PRELIMINARY SET
NOT FOR BIDDING**

**Town of
Plymouth**

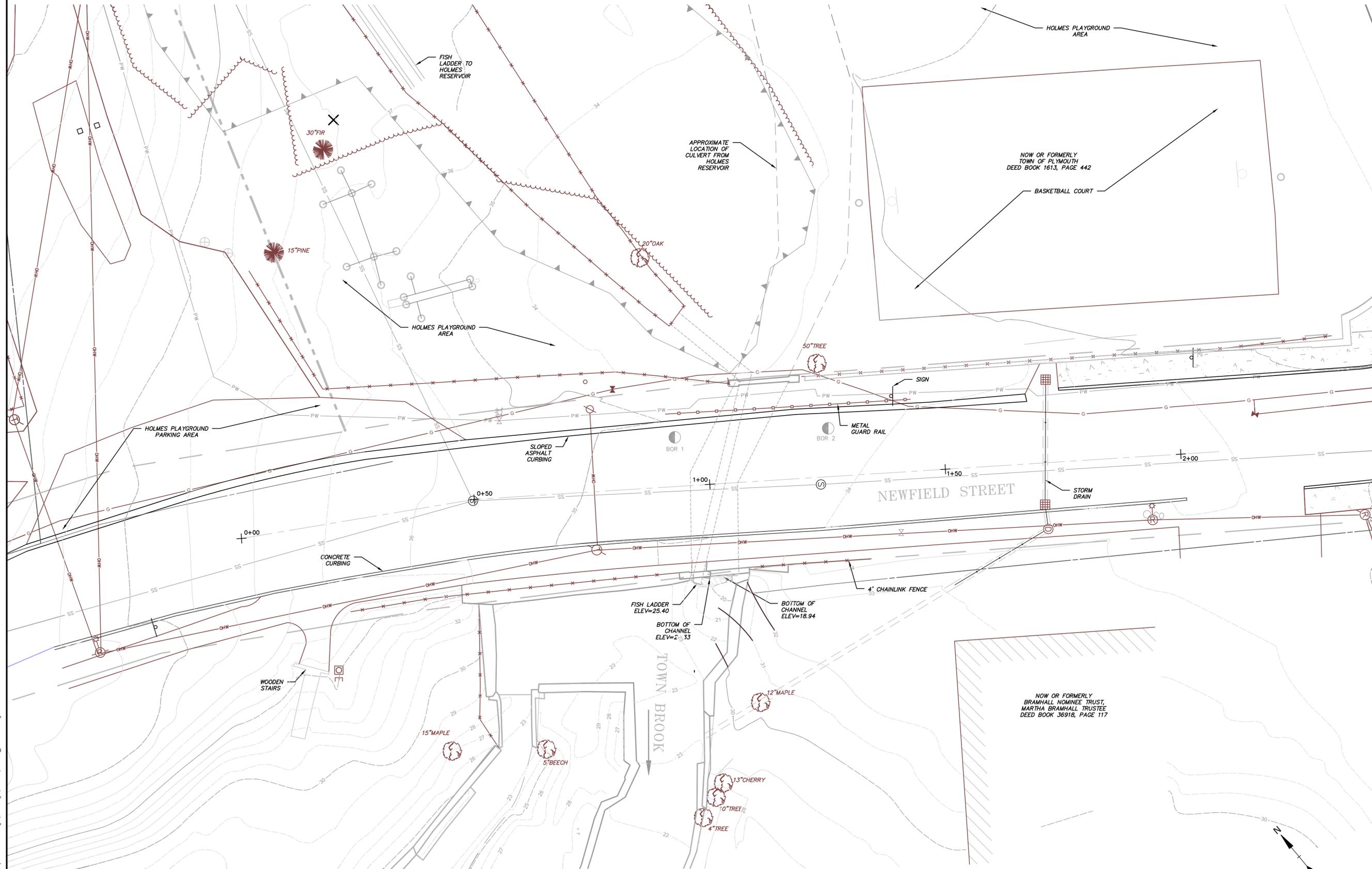
Newfield Street
Bridge
Replacement
Project

Plymouth,
Massachusetts

February 18, 2016

Mark	Date	Description
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DRAWN BY:	BJL	
CHECKED:	WJD	
APPROVED BY:	DAM	
EROSION CONTROL NOTES & DETAILS		
SCALE:	NO SCALE	
G-002		

**PRELIMINARY SET
 NOT FOR BIDDING**



**Town of
 Plymouth**

 Newfield Street
 Bridge
 Replacement
 Project

 Plymouth,
 Massachusetts

February 18, 2016

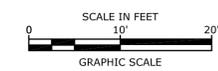
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FILE:		P-0685_SHEETS.DWG
DRAWN BY:		BJL
CHECKED BY:		WJD
APPROVED BY:		DAM

EXISTING CONDITIONS PLAN

SCALE: AS SHOWN

C-001

- NOTES:**
1. "EXISTING CONDITIONS PLAN" DATED JULY 2, 2014 PREPARED BY WSP TRANSPORTATION & INFRASTRUCTURE OF NASHUA, NH.
 2. APPROXIMATE LOCATIONS OF BORINGS DRILLED BY NEW ENGLAND BORING CONTRACTORS OF BROCKTON, MA ON MAY 22 AND 23, 2014.
 3. APPROXIMATE LOCATION OF CULVERT FROM MILL POND OBTAINED FROM "WORKING PLOT OF HOLMES PLAYGROUND" PREPARED FOR THE PLYMOUTH PARKS DEPARTMENT.



Feb 18, 2016 4:57pm Plotted By: BIL Tighe & Bond, Inc. J:\P\0685 Plymouth Drainage\Drawings\Sheets\P-0685_SHEETS.dwg

**PRELIMINARY SET
 NOT FOR BIDDING**



**Town of
 Plymouth**

**Newfield Street
 Bridge
 Replacement
 Project**

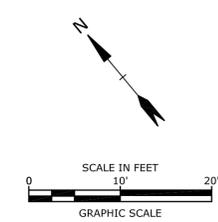
 Plymouth,
 Massachusetts

February 18, 2016

Mark	Date	Description
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FILE:	P-0685_SHEETS.DWG	
DRAWN BY:	BJL	
CHECKED:	WJD	
APPROVED BY:	DAM	

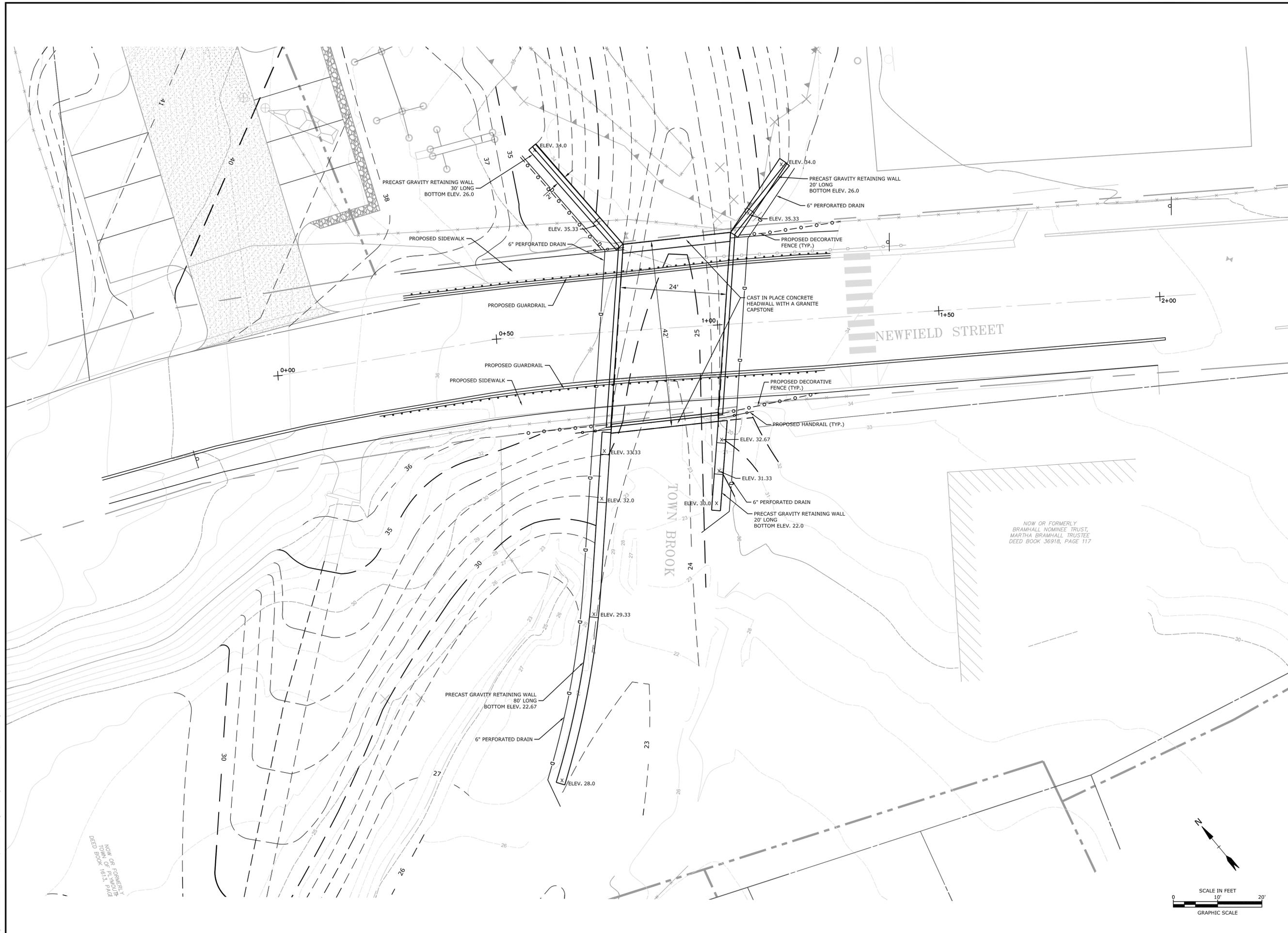
DEMOLITION PLAN
 SCALE: AS SHOWN
 C-002

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Feb 18, 2016 4:54pm Plotted By: BIL
 Tighe & Bond, Inc. \\P0685 Plymouth Drainage\Drawings\Sheets\P-0685_SHEETS.dwg

**PRELIMINARY SET
 NOT FOR BIDDING**

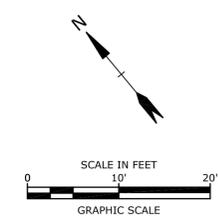


**Town of
 Plymouth**
 Newfield Street
 Bridge
 Replacement
 Project
 Plymouth,
 Massachusetts

February 18, 2016

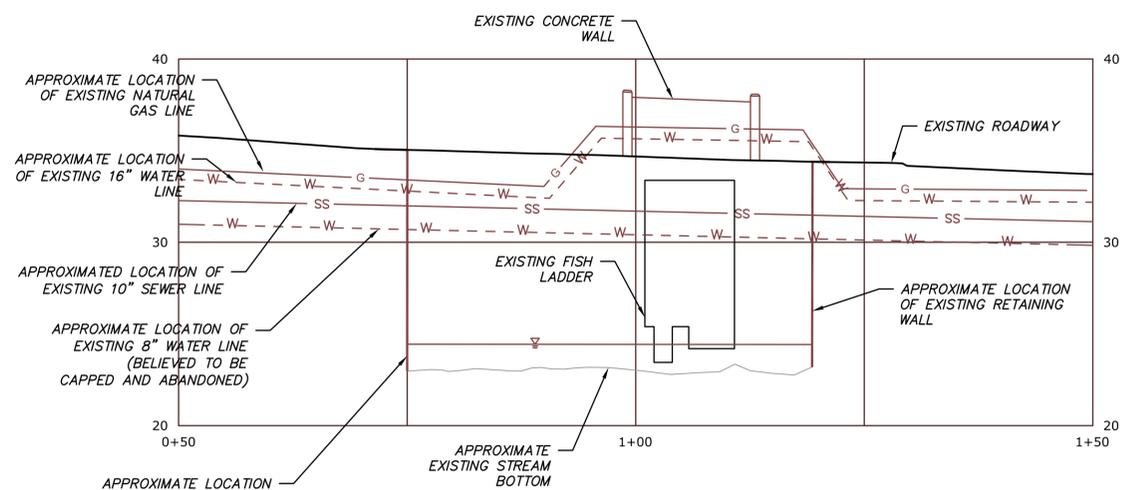
Mark	Date	Description

PROJECT NO:	P0685
FILE:	P-0685_SHEETS.DWG
DRAWN BY:	BJL
CHECKED BY:	WJD
APPROVED BY:	DAM
BRIDGE PLAN	
SCALE:	AS SHOWN
C-003	



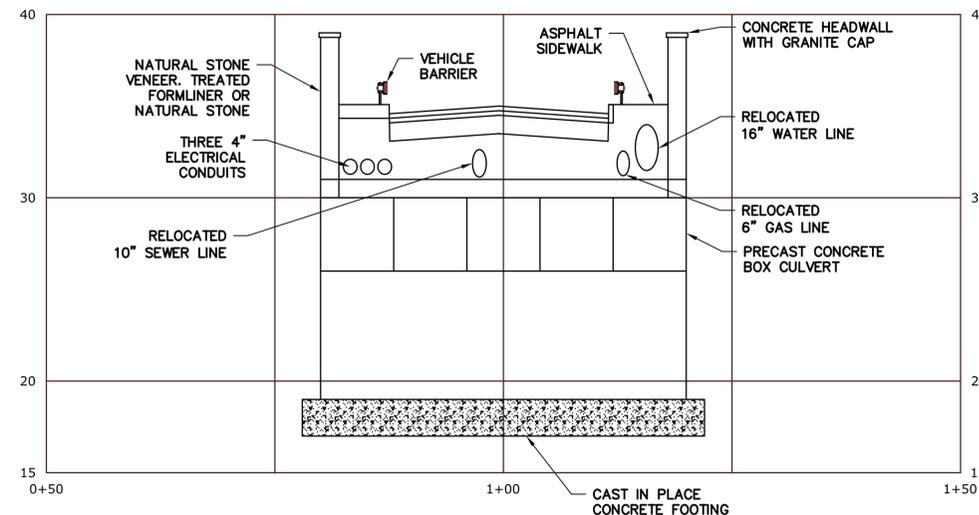
Feb 18, 2016 4:52pm Plotted By: BIL
 Tighe & Bond, Inc. J:\P0685 Plymouth Drainage\Drawings\Sheets\P-0685_SHEETS.dwg

**PRELIMINARY SET
 NOT FOR BIDDING**



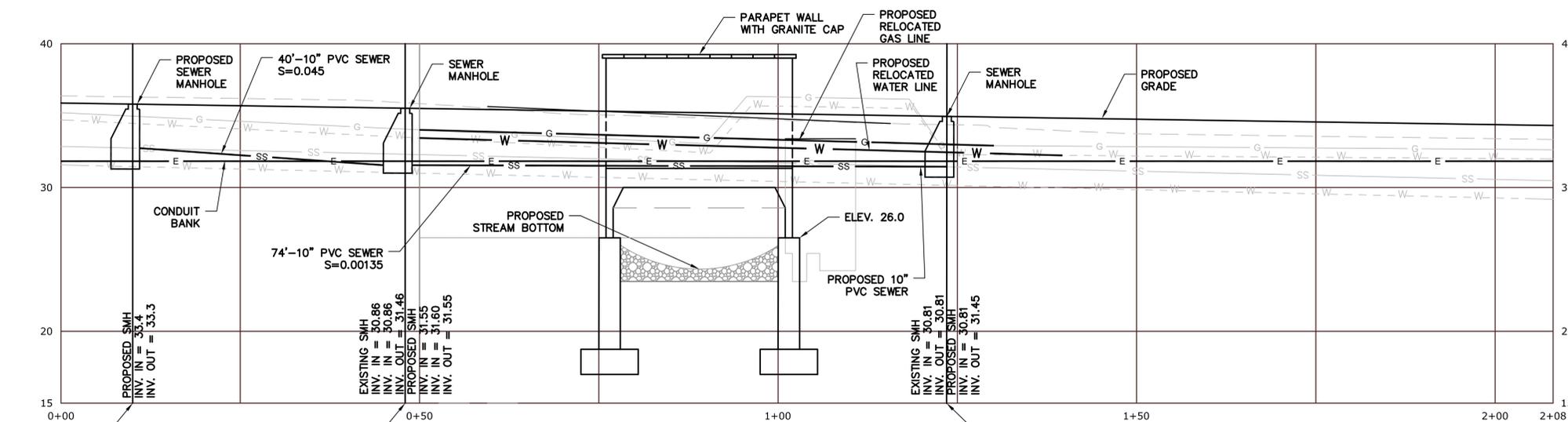
EXISTING ELEVATION VIEW - EAST WALL

HOR. 1" = 10'-0"
 VER. 1" = 5'-0"



PROPOSED ELEVATION VIEW - SOUTH

HOR. 1" = 10'-0"
 VER. 1" = 5'-0"



PROPOSED ELEVATION VIEW - EAST WALL

HOR. 1" = 10'-0"
 VER. 1" = 5'-0"

**Town of
 Plymouth**

**Newfield Street
 Bridge
 Replacement
 Project**

Plymouth,
 Massachusetts

February 18, 2016

Mark	Date	Description
PROJECT NO:		P0685
FILE:		P-0685_SHEETS.DWG
DRAWN BY:		BJL
CHECKED BY:		WJD
APPROVED BY:		DAM

SECTIONS AND DETAILS

SCALE: AS SHOWN

D-001

