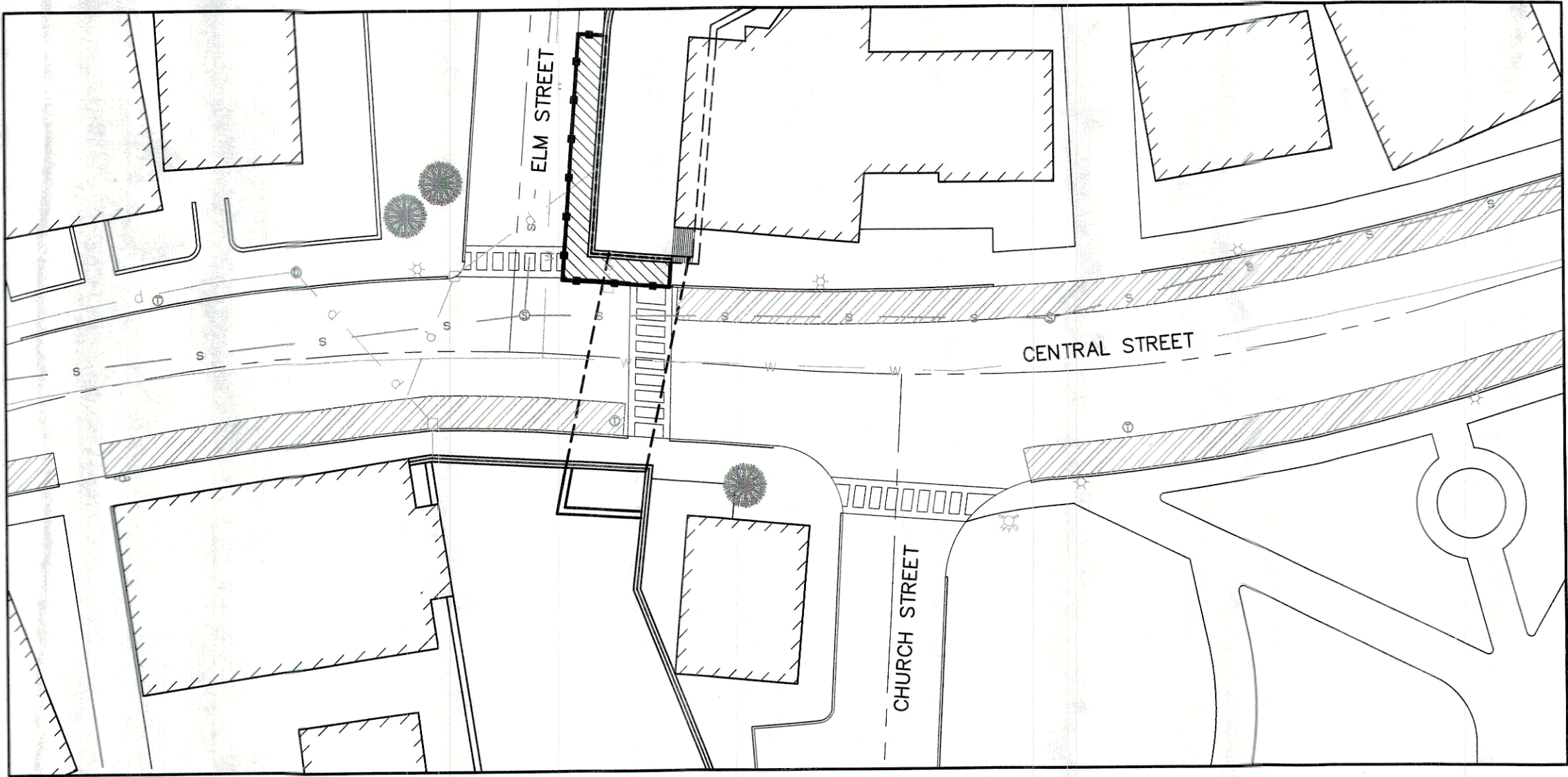


Manchester-by-the-Sea, Massachusetts
Sawmill Brook Culvert Under Central Street
Stone Arch Repairs

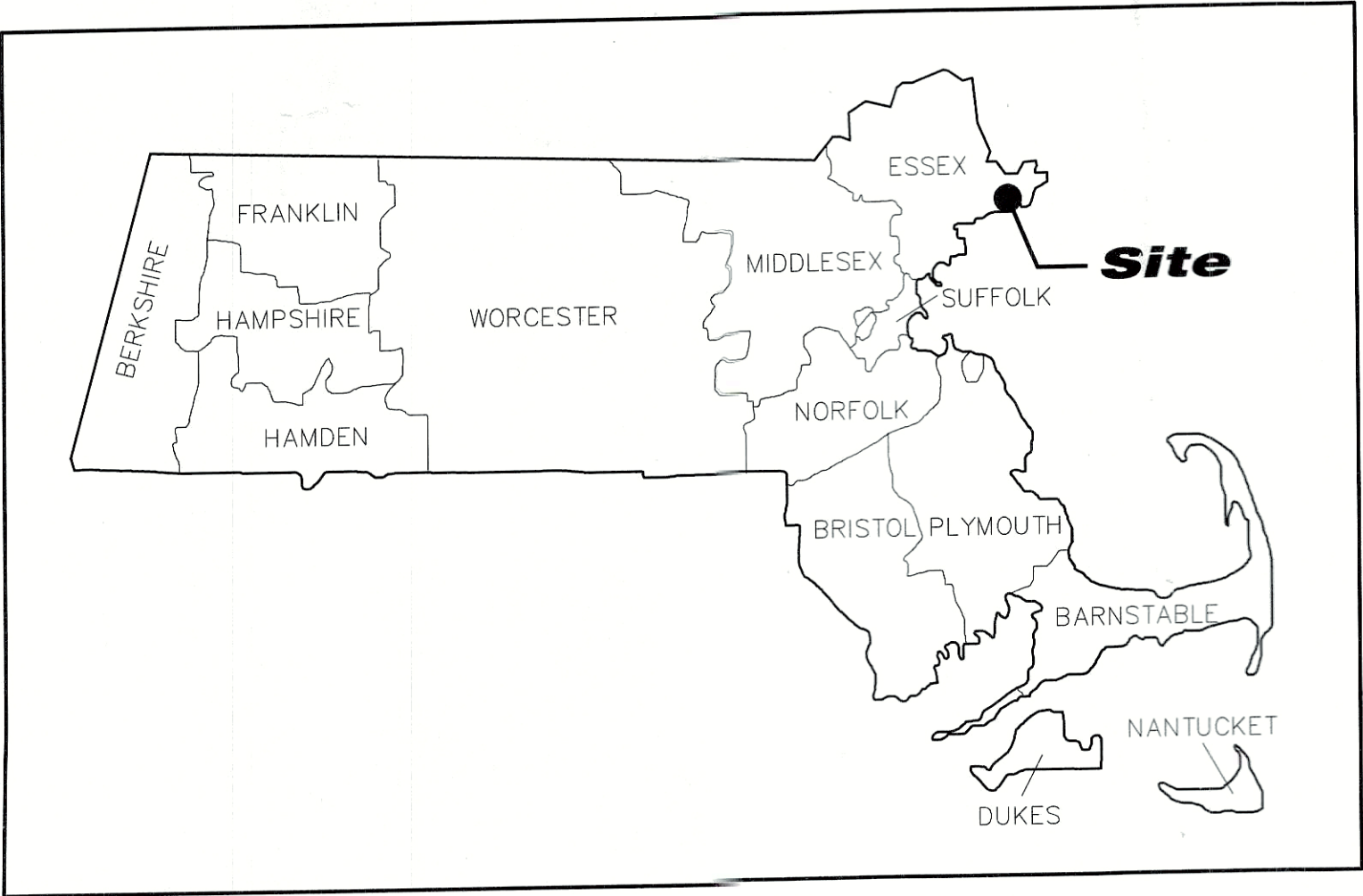
Issued For Bidding
April 2016

Sheet Index

Sheet Number	Sheet Title
--	Cover
2	Plan and Elevation
3	Details



SITE OVERVIEW
SCALE: 1" = 30'



Locus Plan

Prepared For:
Town of Manchester-by-the-Sea
Department of Public Works
10 Central Street
Manchester-by-the-Sea, MA 01944

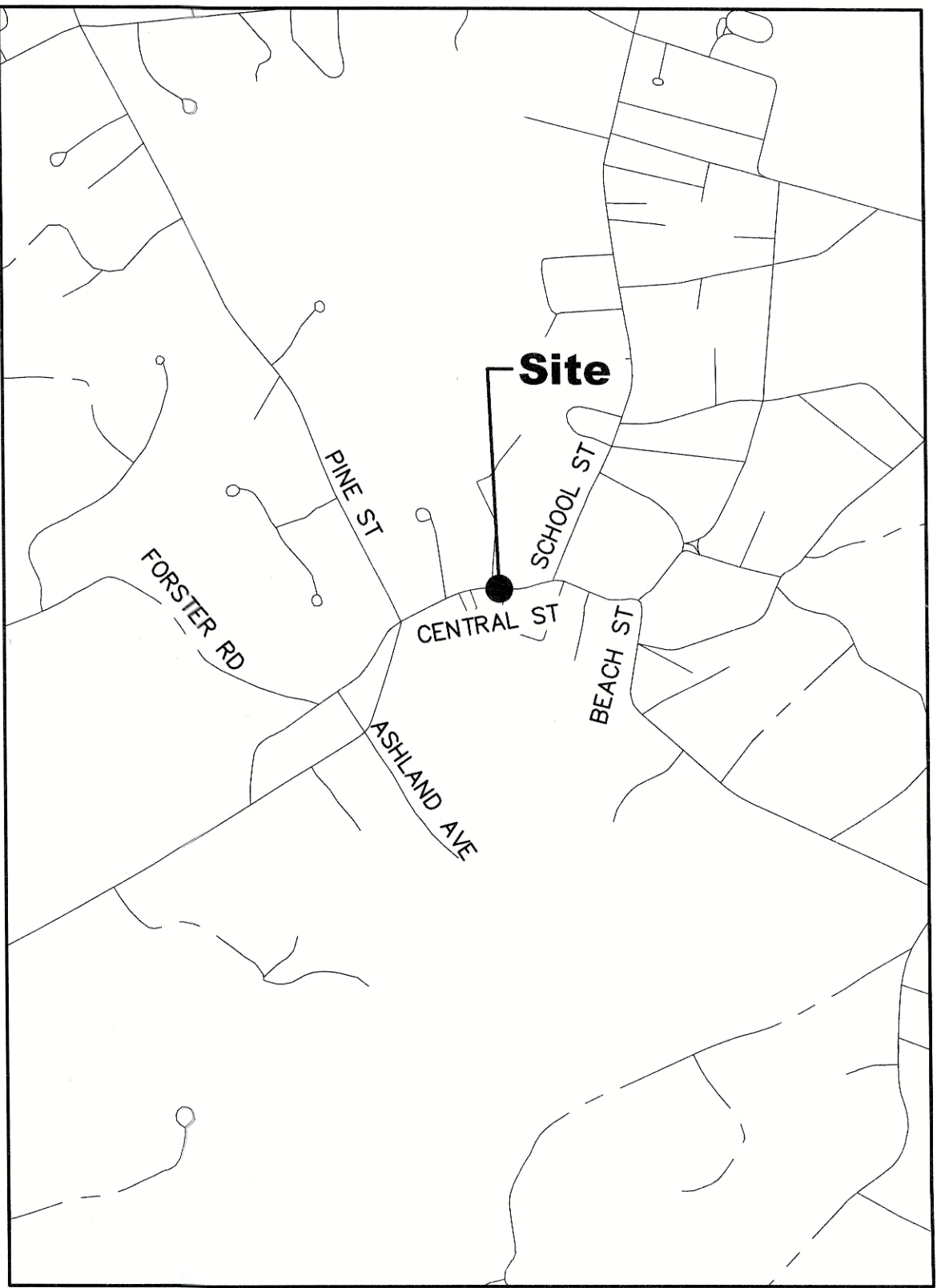


Prepared By:

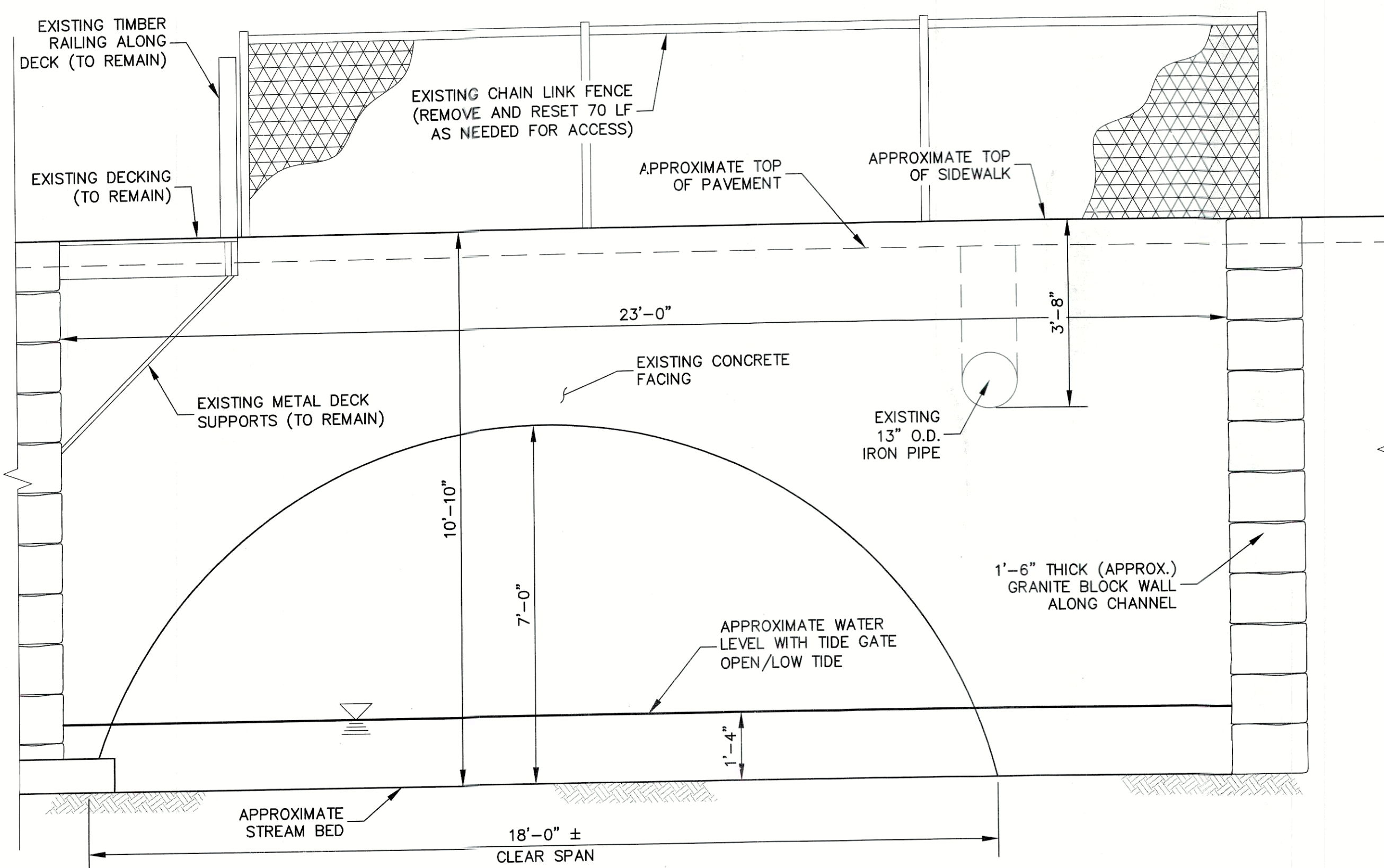
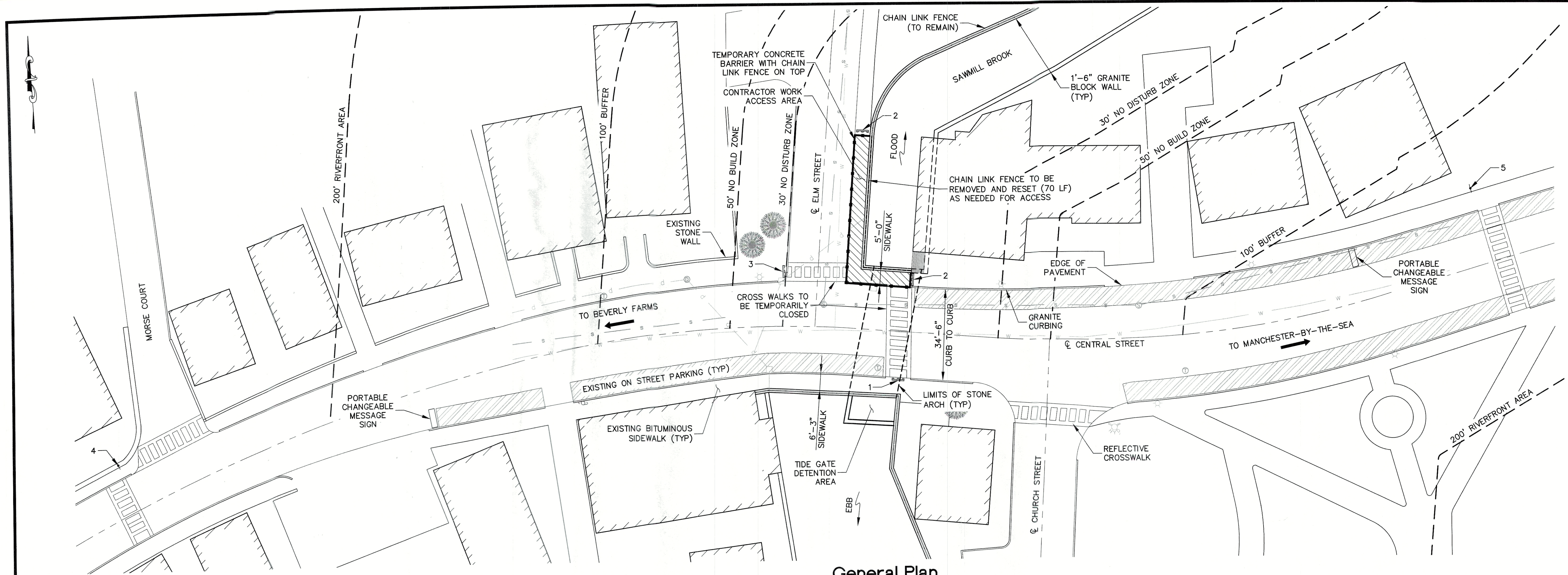
CMA
ENGINEERS
CIVIL/ENVIRONMENTAL ENGINEERS
35 Bow Street
Portsmouth, New Hampshire 03801
Phone: 603/431-6196
Fax: 603/431-5376

Langer Place
55 South Commercial Street
Manchester, New Hampshire 03101
Phone: 603/627-0708
Fax: 603/627-0746

10 Free Street
Portland, Maine 04101
Phone: 207/541-4223
Fax: 207/541-4225



Project Locations

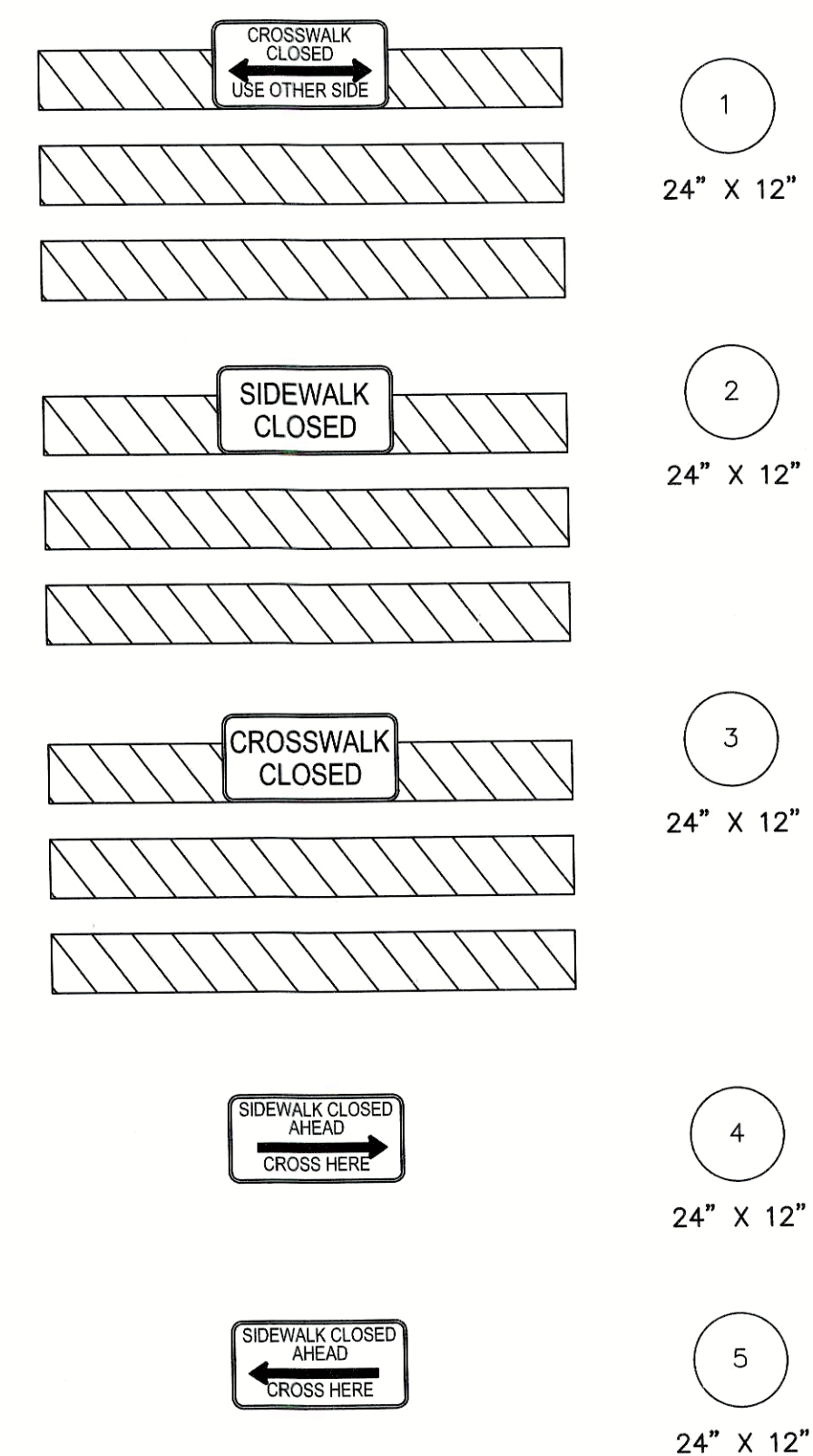


General Notes:

- CONTRACTOR SHALL SEAL FORMWORK AND PROVIDE CONTAINMENT SYSTEM AS NECESSARY TO PREVENT GROUT FROM ENTERING SAWMILL BROOK DURING CRACK INJECTION REPAIRS TO THE ARCH BARREL.
- FORMWORK AND TIMBER SHORING IS SHOWN FOR SCHEMATIC PURPOSES ONLY AND SHALL BE DESIGNED BY A MA REGISTERED PROFESSIONAL ENGINEER.
- LOCATION AND NUMBER OF GROUT INJECTION PORTS SHOWN ON PLANS IS FOR SCHEMATIC PURPOSES ONLY. ACTUAL LAYOUT WILL BE DETERMINED BY THE CONTRACTOR.
- ALL WORK IS TO BE DONE FROM THE UNDERSIDE OF THE ARCH.
- GROUT INJECTION SHALL BEGIN AT THE LOWEST PORTS AND SHALL CONTINUE UPWARDS TOWARDS THE CENTER OF THE ARCH.
- TURBIDITY BOOMS SHALL BE INSTALLED PRIOR TO ANY IN WATER WORK.
- CONTRACTOR SHALL STAGE EQUIPMENT AND MATERIALS ON ELM STREET BEYOND THE LIMITS OF THE 200 FT RIVERFRONT AREA.
- EXISTING DETAIL DEVELOPED USING TOWN OF MANCHESTER-BY-THE-SEA GIS MAPPING AND FIELD MEASUREMENTS BY CMA ENGINEERS, JUNE, 2015. EXTENT OF REPAIRS WILL BE DETERMINED BY FIELD VERIFICATION AT TIME OF CONSTRUCTION OF REPAIRS SHOWN.
- DRAWINGS ARE NOT INTENDED TO BE SCALED. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS, INCLUDING UTILITIES, PRIOR TO THE START OF CONSTRUCTION. IF THERE ARE ANY DISCREPANCIES, CONSULT THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.
- SITE DEWATERING IS NOT PROPOSED FOR REPAIRS SHOWN IN THESE PLANS.
- THE CONTRACTOR IS DIRECTED TO REVIEW THE PERMITTING DOCUMENTATION REGARDING IN WATER WORK, AS INCLUDED IN THE PROJECT SPECIFICATIONS.

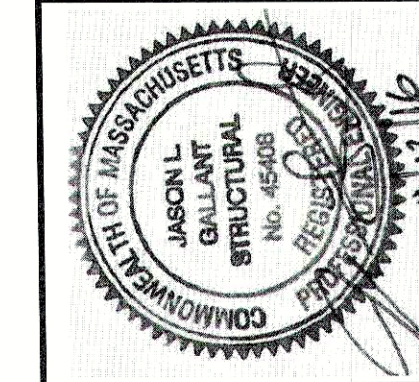
Safety Signing Notes:

- CONTRACTOR IS RESPONSIBLE FOR SUPPLYING AND MAINTAINING ALL SIGNS REQUIRED FOR THE PROJECT.
- SIGNS SHALL BE REMOVED OR COVERED DURING PERIODS IN WHICH THEY ARE NOT REQUIRED.
- LAYOUT SHOWN IS A SUGGESTED LAYOUT.
- CONTRACTOR SHALL SUBMIT A SIGNAGE PLAN FOR APPROVAL PRIOR TO ANY WORK.
- TOTAL ESTIMATED SIGN AREA: 12 SF
- ALL COST FOR PEDESTRIAN CONTROL DEVICES AND SIGNAGE, INCLUDING BUT NOT LIMITED TO, TYPE III BARRICADES, TEMPORARY CONCRETE BARRIER WITH TOP MOUNTED CHAIN LINK FENCE, AND PLACEMENT, RELOCATION, AND REMOVAL OF SIGNS SHALL BE INCLUDED IN ITEM 6 - SAFETY SIGNING FOR TRAFFIC MANAGEMENT.
- TWO PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE INCLUDED IN ITEM 7 - PORTABLE MESSAGE SIGN, EACH FOR HALF OF THE TOTAL NUMBER OF DAYS SHOWN IN THE BID PROPOSAL.



Manchester-by-the-Sea, Massachusetts
Department of Public Works
Sawmill Brook Culvert Under Central Street
Stone Arch Repairs
Stone Arch
Plan, Elevation, and Notes

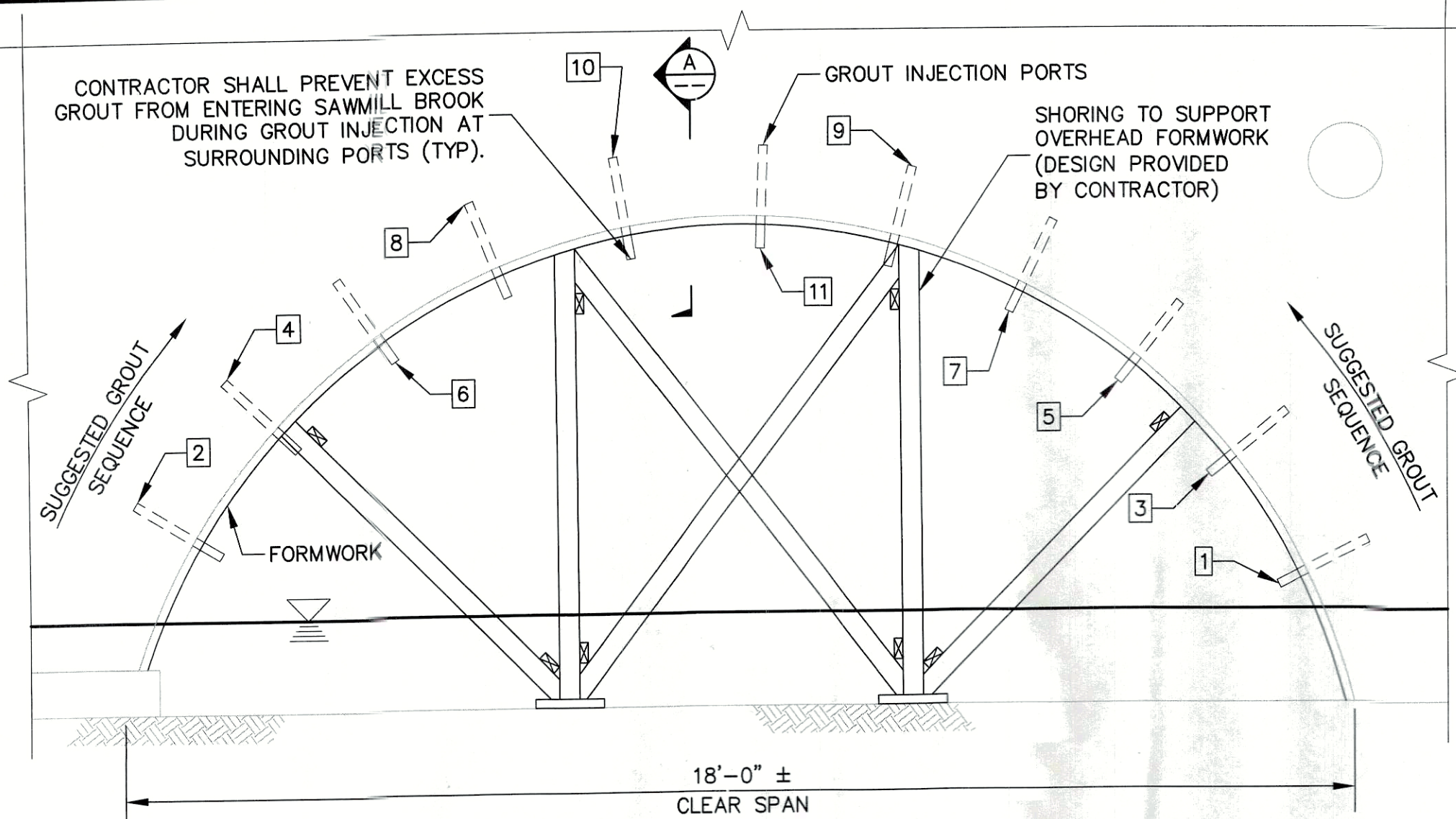
designed by: LBK
drawn by: LBK
approved by: JLG
date: April 2016
project no: 944
file name: 944 - Stone Arch.dwg
scale: As Shown



CMA ENGINEERS
CIVIL/ENVIRONMENTAL ENGINEERS
35 Bow Street
Portsmouth, NH 03801
603.431-6196
info@cmaengineers.com
10 Free Street
Portsmouth, NH 03801
603.431-7423
www.cmaengineers.com

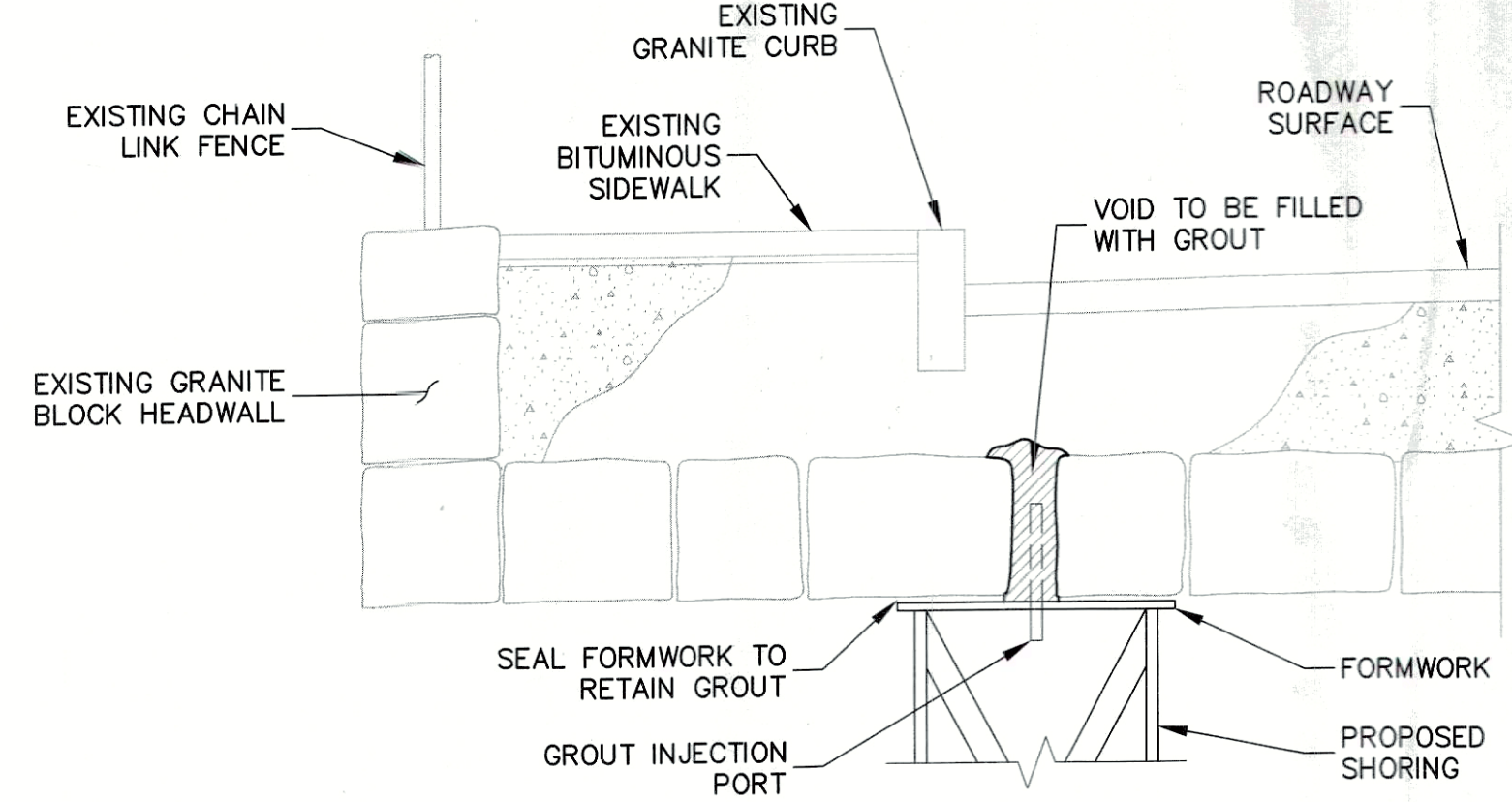
revision	no.	date	by
ISSUED FOR BIDS	0	4/13/16	JLG

NOTE: NUMERIC GROUT PORT LABELS ARE ONLY INTENDED TO SHOW THE SPECIFIED FILLING SEQUENCE, ALTERNATING SIDES OF ARCH BARREL. ACTUAL NUMBER AND SPACING OF PORTS SHALL BE DETERMINED BY CONTRACTOR.



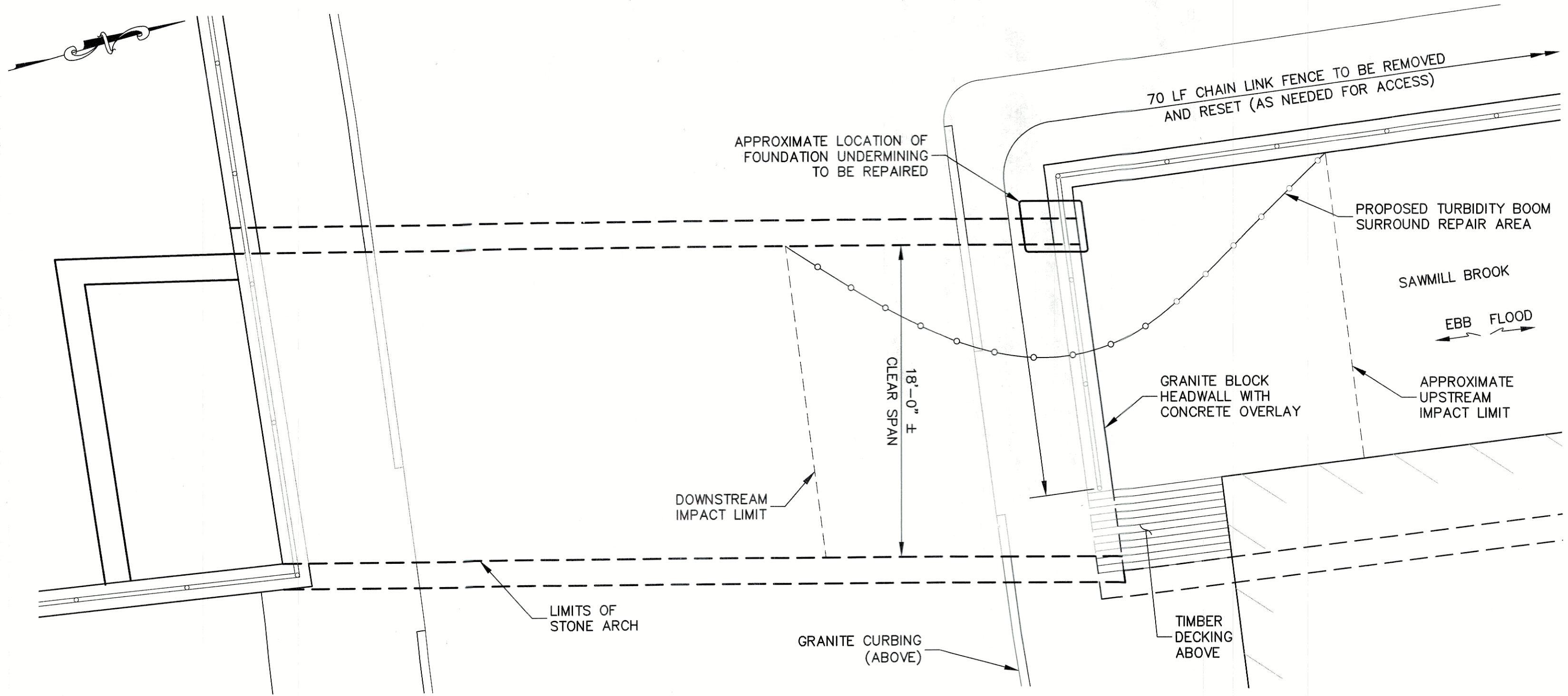
Arch Repair Detail: Elevation

Scale: 1/2" = 1'-0"



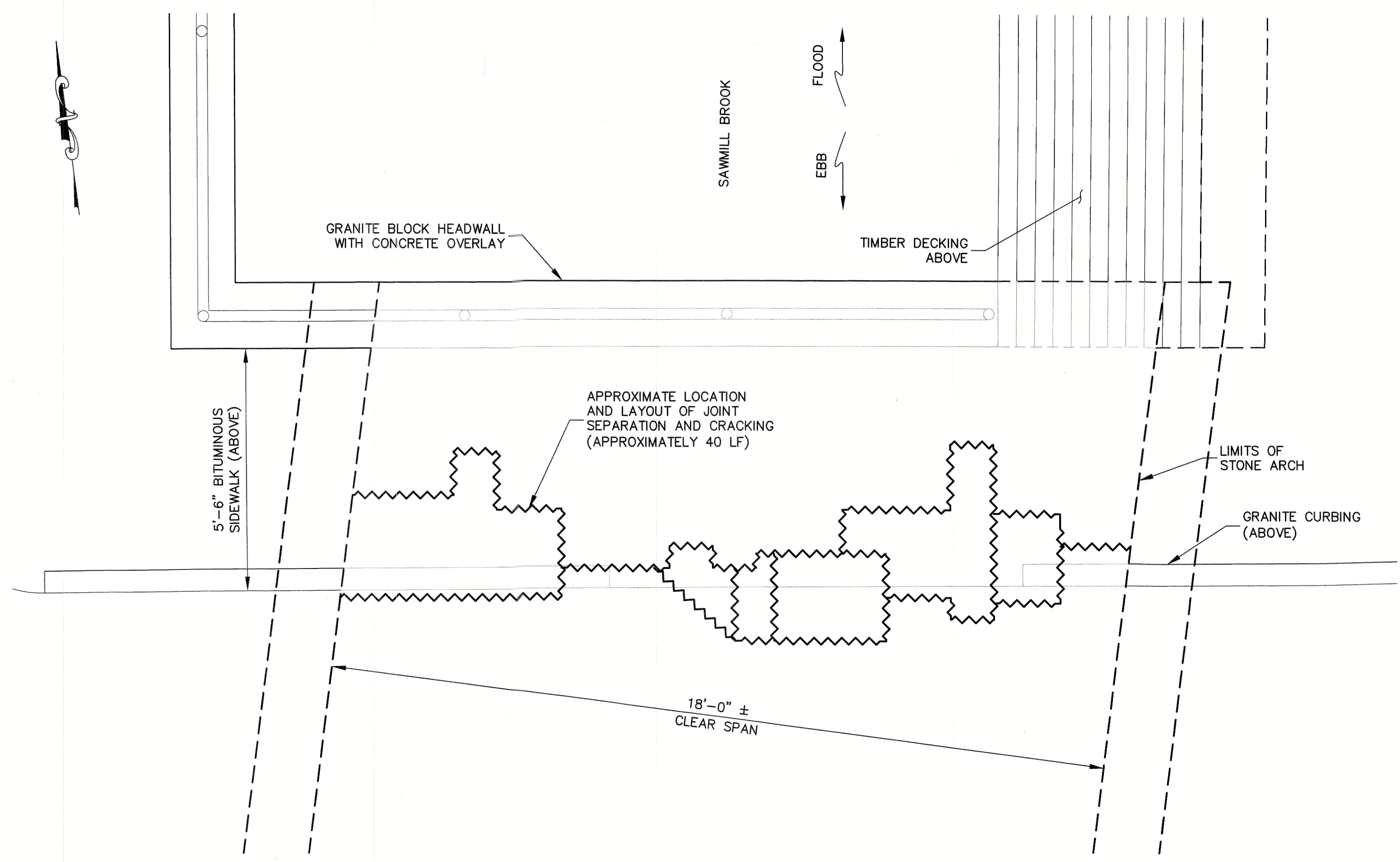
Arch Repair Detail: Section A

Scale: 1/2" = 1'-0"



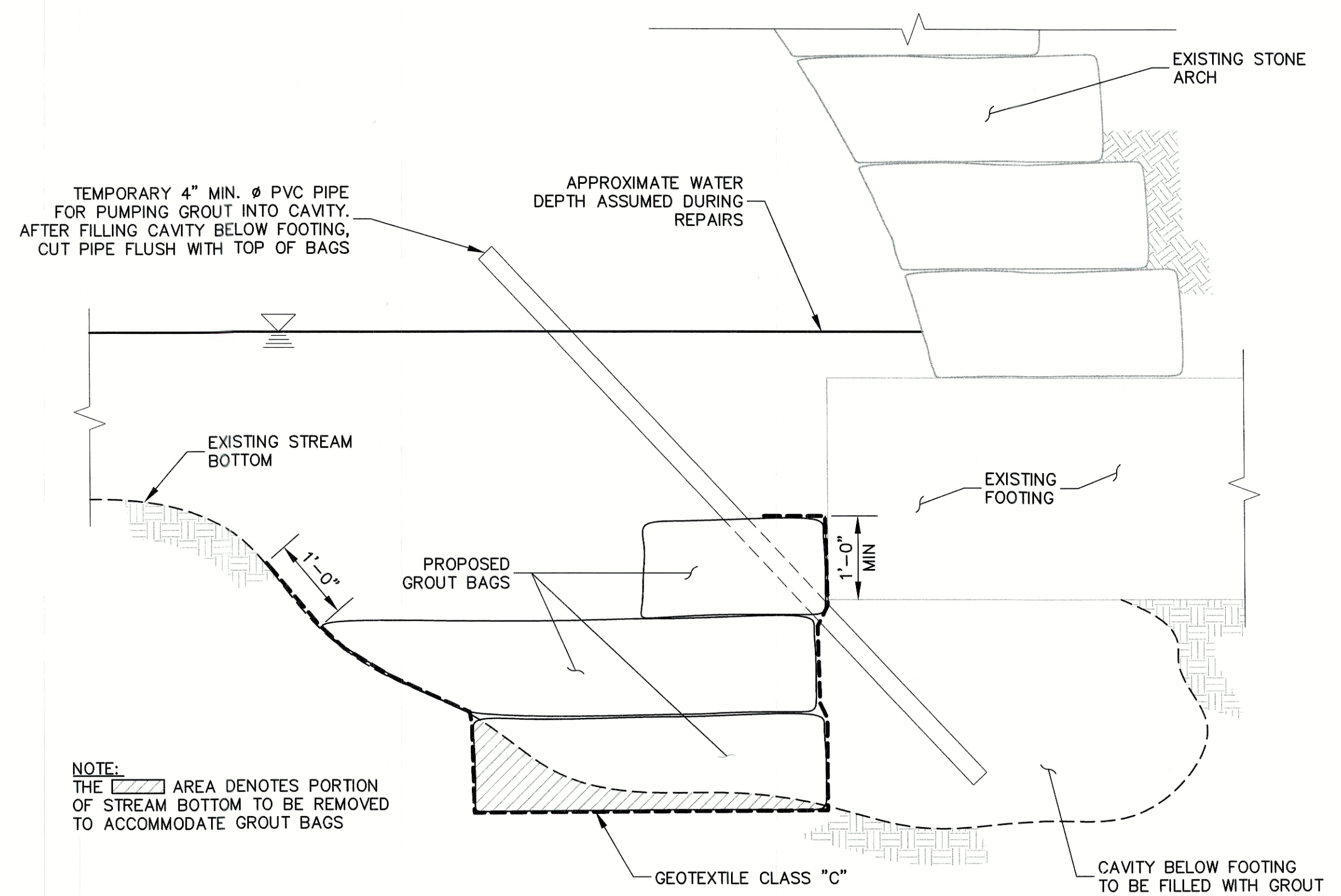
Turbidity Boom Schematic

Scale: 3/16" = 1'-0"



Crack Plan

Scale: 1/2" = 1'-0"



Grout Bag Repair Detail

Not to Scale

<p>MANCHESTER-BY-THE-SEA, MASSACHUSETTS Department of Public Works</p>		<p>SAWMILL BROOK CULVERT UNDER CENTRAL STREET Stone Arch Repairs</p>		<p>Stone Arch Repair Details</p>		<p>designed by: LBK drawn by: LBK approved by: JLG</p>		<p>date: April 2016 project no: 944 file name: 944 - Stone Arch.dwg</p>		<p>scale: As Shown</p>		<p>no. 0</p>		<p>revision</p>		<p>date 4/13/16</p>		<p>by JLG</p>	
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