

LOWER CENTRAL INTERCEPTOR IMPROVEMENTS

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CONTRACT NO. PW-25-002-S
TOWN OF WEYMOUTH, MA

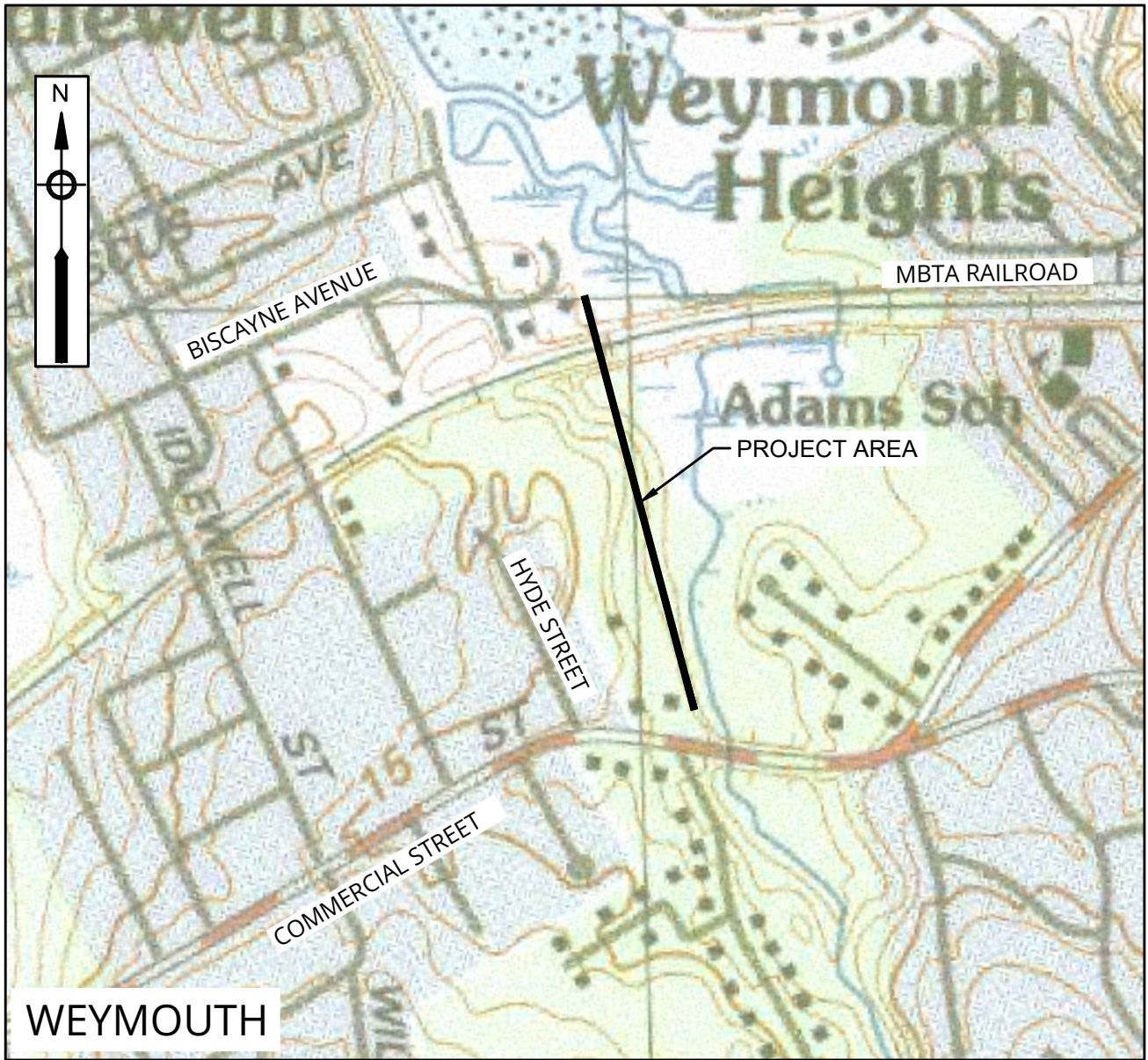
MAY 2025
FOR BID

DEPARTMENT OF PUBLIC WORKS

KENAN CONNELL, DIRECTOR

BRAYDON MAROT, P.E., WATER AND SEWER SUPERINTENDENT

JAY DONOVAN, P.E., TOWN ENGINEER



VICINITY MAP
1"= 500'

3. BASE MAP INFORMATION IS BASED ON A GROUND SURVEY PERFORMED BY ZENITH LAND SURVEYORS (FEBRUARY 2023). ELEVATION REFERENCES ARE BASED UPON WEYMOUTH TOWN DATUM (NAVD 88 = WEYMOUTH TOWN DATUM - 2.22 FEET).
2. IN AREAS WHERE CONSTRUCTION ACTIVITIES ARE ANTICIPATED TO OCCUR WITHIN PRIVATE PROPERTY, PROPERTY LINE LOCATIONS ARE TO BE REVIEWED WITH THE TOWN PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
3. ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS IN ADVANCE, EXCLUDING WEEKENDS AND HOLIDAYS, PRIOR TO ANY EXCAVATION.
4. DO NOT SCALE DRAWINGS UNLESS OTHERWISE NOTED. WRITTEN DIMENSION AND STATIONING SHALL PREVAIL. REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
5. THE CONTRACTOR SHALL RESTORE ALL PUBLIC AND PRIVATE PROPERTY TO ITS PRE-CONSTRUCTION CONDITION AT NO ADDITIONAL COST TO THE OWNER.
6. ALL EXISTING STORM DRAIN LINES ENCOUNTERED DURING CONSTRUCTION ARE TO REMAIN IN SERVICE UNLESS OTHERWISE NOTED. THE CONTRACTOR AT NO ADDITIONAL COST TO THE TOWN SHALL REPAIR ANY EXISTING SEWERS, STORM DRAIN LINES, WATER LINES OR CULVERTS DAMAGED DURING CONSTRUCTION.
7. IN THOSE INSTANCES WHERE POWER OR TELEPHONE POLE SUPPORT IS REQUIRED, THE CONTRACTOR SHALL PROVIDE A MINIMUM 48-HOUR NOTIFICATION TO THE RESPECTIVE UTILITY COMPANY. NO ADDITIONAL PAYMENT WILL BE PROVIDED FOR TEMPORARY BRACING OF UTILITIES.
8. ALL STRUCTURES AND PIPELINES LOCATED ADJACENT TO THE TRENCH EXCAVATION SHALL BE PROTECTED AND FIRMLY SUPPORTED BY THE CONTRACTOR UNTIL THE TRENCH IS BACKFILLED. DAMAGE TO ANY SUCH STRUCTURE CAUSED BY, OR RESULTING FROM, THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. ALL UTILITIES REQUIRING REPAIR, RELOCATION OR ADJUSTMENT AS A RESULT OF THE PROJECT SHALL BE COORDINATED THROUGH THE RESPECTIVE UTILITY AND THE TOWN.
9. THE CONTRACTOR IS TO TAKE SPECIAL CARE NOT TO DAMAGE TREES, BUSHES, PLANTS, PARKING METERS, FLOWERS, STONEWALLS, FENCES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS THEY ARE NOTED TO BE REMOVED. CONTRACTOR SHALL REPLACE AT NO COST TO OWNER, ALL DAMAGED ITEMS.
10. CONTRACTOR SHALL REMOVE AND REPLACE NEW, OR REPAIR, ALL CURBS, SIDEWALKS, PAVEMENT AND OTHER ITEMS DAMAGED BY HIS CONSTRUCTION ACTIVITIES TO AT LEAST THEIR ORIGINAL CONDITION, AND TO THE SATISFACTION OF THE TOWN AND ENGINEER.
11. ANY TRAFFIC SIGNAL EQUIPMENT (LIGHTS, CONDUITS, LOOP DETECTORS) DISTURBED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
12. THE CONTRACTOR SHALL INSTALL AND MAINTAIN TRAFFIC CONTROL DEVICES AS NECESSARY AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
13. THE CONTRACTOR SHALL FURNISH AND MAINTAIN A TELEPHONE NUMBER WHERE THE CONTRACTOR CAN BE REACHED 24 HOURS A DAY, 7 DAYS A WEEK.
14. THE LOCATION AND LIMITS OF ALL ON-SITE WORK AND STORAGE AREAS SHALL BE REVIEWED/COORDINATED WITH, AND ACCEPTABLE TO THE TOWN OF WEYMOUTH. THE CONTRACTOR SHALL LIMIT HIS ACTIVITIES TO THESE AREAS.
15. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR WORK IN ROADWAYS. THE CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL PERMITS AS AN INTEGRAL PART OF HIS WORK.
16. THE CONTRACTOR SHALL HANDLE GROUNDWATER, WHERE ENCOUNTERED, IN AN APPROVED MANNER IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

1. OPENINGS FOR PIPE IN MANHOLE BASES SHALL BE CAST IN THE REQUIRED LOCATIONS DURING MANHOLE MANUFACTURE. FIELD CUT OPENINGS WILL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.
2. FORM BRICK INVERTS IN MANHOLES WITH BRICK ON EDGE TO A DEPTH OF 0.8 INSIDE DIAMETER OF PIPE AND FORM A 1 INCH SLOPED BENCH WITH BRICK FLAT. INVERT SHALL BE SLOPED UNIFORMLY BETWEEN INLET AND OUTLET PIPE AND SHALL BE FORMED AND FILLED AS REQUIRED TO DIRECT THE FLOW AS INDICATED AND TO PREVENT DEPOSITION OF SOLIDS.
3. CALCULATION OF PIPE SLOPES IS BASED ON ELEVATION CHANGES DIVIDED BY THE DISTANCE BETWEEN THE LENGTH OF CENTER TO CENTER OF STRUCTURES.
4. ALL EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING OR COVERING WITH STEEL PLATES.
5. CONTRACTOR TO COORDINATE LOCATING SEWER SERVICES WITH WEYMOUTH DEPARTMENT OF PUBLIC WORKS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
6. CONTRACTOR TO CONDUCT TEST PITS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION TO DETERMINE EXISTING UTILITY ELEVATIONS FOR CROSSINGS.
7. THE CONTRACTOR MUST GIVE 48 HOURS NOTICE TO THE CONSERVATION COMMISSION PRIOR TO PERFORMING ANY WORK IN THE PROJECT SITE AND BUFFER ZONE.

1. ADEQUATE PROTECTION OF PERSONS AND PROPERTY SHALL BE PROVIDED AT ALL TIMES. THE WORK SHALL BE EXECUTED IN SUCH A WAY AS TO AVOID HAZARD TO PERSONS AND PROPERTY. WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE REQUIREMENTS OF LOCAL, STATE AND FEDERAL AUTHORITIES HAVING JURISDICTION OVER THE WORK.
2. PROVIDE ALL NECESSARY TEMPORARY PROTECTION AND BARRIERS TO SEGREGATE THE WORK AREA AND TO PREVENT DAMAGE TO ADJACENT AREAS, AS REQUIRED BY ALL JURISDICTION REGULATIONS.
3. PROVIDE PROPER PROTECTION AND BARRIERS BETWEEN THE WORK OF THIS CONTRACT AND EXISTING STRUCTURES TO REMAIN.

THE TOWN OF WEYMOUTH DEPARTMENT OF PUBLIC WORKS SHALL BE RESPONSIBLE FOR THE LONG-TERM STORMWATER POLLUTION PREVENTION PLAN (SWPPP). THE TOWN'S GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE SUBMITTAL OF THE CONSTRUCTION PERIOD SWPPP. THE CONTRACTOR SHALL SUBMIT THE CONSTRUCTION PERIOD SWPPP TO THE ENGINEER AND CONSERVATION COMMISSION FOR REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION.

2. IN EACH PHASE OF CONSTRUCTION, IMPLEMENT STANDARD EROSION AND SEDIMENT CONTROL PRACTICES PRIOR TO INITIATING EARTH DISTURBING ACTIVITIES, AND MAINTAIN THESE PRACTICES THROUGHOUT THE COURSE OF CONSTRUCTION. ALL CONSTRUCTION SHALL CONFORM TO THE SWPPP PREPARED IN CONFORMANCE WITH THE BEST MANAGEMENT PRACTICES AND ALL REQUIREMENTS ESTABLISHED IN THE ORDER OF CONDITIONS ISSUED BY THE WEYMOUTH CONSERVATION COMMISSION. THE ORDER OF CONDITIONS IS INCLUDED AS AN APPENDIX OF THE CONTRACT SPECIFICATIONS.

3. TYPICAL PRACTICES TO BE APPLIED TO THE SITE INCLUDE THE FOLLOWING:

- A. PRIOR TO EARTH DISTURBANCE IN ANY WORK AREA, CHECK PREVIOUSLY INSTALLED SILTATION BARRIERS (SILT FENCE AND COIR LOGS) BETWEEN THE WORK AREA AND THE WETLANDS AREA TO WHICH IT DRAINS, AND IN FULL ACCORDANCE WITH THE ENVIRONMENTAL PROTECTION AND TEMPORARY STRUCTURES PLANS. EROSION CONTROL MEASURES WILL BE INSPECTED AND REPAIRED AS NEEDED WEEKLY OR FOLLOWING EACH MAJOR RAINFALL EVENT (GREATER THAN 2") WHICHEVER IS SOONER.
- B. DISCHARGE WATER FROM DEWATERING OPERATIONS TO A FILTRATION SYSTEM DESIGNED BY AN ENGINEER RETAINED BY THE CONTRACTOR, LICENSED IN THE STATE OF MASSACHUSETTS.
- C. PROVIDE TEMPORARY BERMS AND SWALES TO DIVERT SURFACE WATER AWAY FROM THE AREAS THAT WILL BE EXPOSED BY CONSTRUCTION ACTIVITY TO MINIMIZE THE AMOUNT OF SURFACE WATER COMING INTO CONTACT WITH EXPOSED SOILS. PROVIDE STABLE OUTLETS FOR THESE DEVICES, AND LINE OR VEGETATE THESE DIVERSIONS TO PROVIDE FOR THEIR STABILITY DURING CONSTRUCTION.
- D. LIMIT THE EXTENT OF EXPOSED SOILS TO AREAS THAT CAN BE WORKED AND RESTABILIZED WITHIN THE CONSTRUCTION SEASON AND DURING THE SPECIFIC CONSTRUCTION PHASE.
- E. WHEN EARTHWORK CONSTRUCTION ACTIVITY IN AN AREA IS COMPLETE, STABILIZE THE AREA WITH A SUITABLE SURFACE AS DESCRIBED BELOW.
- F. EXISTING PAVED DRIVEWAYS, SIDEWALKS, ROADWAYS ADJACENT TO THE SITE WILL BE SWEEPED MANUALLY OR BY MOTORIZED STREET SWEEPER AS NEEDED TO REMOVE LOSE SOIL MATERIALS ACCUMULATED ON PAVED SURFACES FROM CONSTRUCTION ACTIVITIES. IN ADDITION TO THESE PRACTICES, THE CONTRACTOR SHALL FOLLOW THE SPECIAL PRACTICES DESCRIBED BELOW. COMPLY WITH THE DIRECTIONS OF THE ENGINEER TO ADDRESS EROSION AND SEDIMENTATION CONDITIONS THAT MAY ARISE ON A CASE BY CASE BASIS DURING CONSTRUCTION.
- G. TEMPORARY BY-PASS PUMPS AND DEWATERING PUMPS SHALL BE INSTALLED WITHIN SECONDARY CONTAINMENT BASINS TO LIMIT THE RELEASE OF ANY HAZARDOUS MATERIALS INTO THE SURROUNDING SOILS, GROUNDWATER, SURFACE WATER, OR WETLAND RESOURCE AREAS. CONTAINMENT BASINS WILL BE INSPECTED FOLLOWING ALL PRECIPITATION EVENTS. SPILL RESPONSE MATERIALS SHALL BE MAINTAINED ON-SITE AT ALL TIMES.
- H. AGGREGATE MATERIALS (GRAVEL, LOAM, STONE) SHALL NOT BE STOCKPILED WITHIN THE CONSTRUCTION LIMITS OF WORK. MATERIALS SHALL BE STORED OFF-SITE, DELIVERED DAILY AS NEEDED, OR STORED IN THE CONSTRUCTION STAGING AREA.
- I. APPLICATION OF FERTILIZER, HERBICIDES, AND PESTICIDES IS PROHIBITED WITHIN 100-FEET OF THE WETLAND RESOURCE AREA BOUNDARY.
- J. SITE SECURITY FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION TO PREVENT UNAUTHORIZED ACCESS.
- K. CONSTRUCTION MATS SHALL BE TEMPORARILY INSTALLED WITHIN CONSTRUCTION LIMITS OF WORK IN WETLAND RESOURCE AREA.
- L. ALL TEMPORARY FILL AND MATS SHALL BE PLACED OVER BED OF STRAW OR HAY TO DEFINE BOUNDARY BETWEEN EXISTING GRADE AND FILL.




1. STABILIZE ALL BANKS/SLOPES DISTURBED DURING CONSTRUCTION. REFER TO DETAIL ON SHEET CD-2.
2. CONTRACTOR SHALL REMOVE AND DISPOSE OFFSITE THE TOP 1 FOOT OF ORGANIC SOILS DUE TO THE PRESENCE OF INVASIVE SPECIES IN THE RESOURCE AREAS VEGETATED BY COMMON REED.
3. REFER TO WETLAND DELINEATION REPORT AND WETLAND REPLICATION PLANS IN APPENDIX E AND SHEETS C-6 THROUGH C-8 RESPECTIVELY.
4. REGULATORY APPROVALS ARE PROVIDED IN APPENDICES D AND G IN SPECIFICATIONS.

1. SILT FENCE AND COIR LOGS:
 - A. INSTALL PRIOR TO COMMENCEMENT OF THE EARTHWORK OPERATIONS.
 - B. INSPECT EROSION CONTROLS IMMEDIATELY AFTER EACH STORM AND REMOVE ACCUMULATED SEDIMENT AS REQUIRED.
 - C. REPLACE DAMAGED EROSION CONTROLS AS REQUIRED.
2. SITE:
 - A. REGULARLY PICK UP AND REMOVE LITTER FROM THE CONSTRUCTION AREA, ADJACENT PRIVATE PROPERTY AND WETLAND RESOURCE AREAS.
 - B. PAVED SURFACES WITHIN THE WORK AREA SHALL BE SWEEPED AS NEEDED AT THE REQUEST OF THE ENGINEER.
 - C. LAWN AREAS SHALL BE DRESSED WITH LOAM AND RESEEDED AS NEEDED TO MAINTAIN UNIFORM GRASS COVERAGE.
 - D. NO FERTILIZER, HERBICIDES, OR PESTICIDES SHALL BE APPLIED WITHIN 100 FEET OF SURFACE WATER.
3. OWNER INFORMATION:
 - A. THE OWNER OF THE LOWER CENTRAL INTERCEPTOR SEWER IS THE TOWN OF WEYMOUTH DEPARTMENT OF PUBLIC WORKS, 120 WINTER STREET, WEYMOUTH, MA 02188 (781-337-5100).

1. IN ACCORDANCE WITH THE PROJECT'S ORDER OF CONDITIONS ISSUED BY THE WEYMOUTH CONSERVATION COMMISSION, A SIGN, NOT LESS THAN TWO SQUARE FEET OR MORE THAN THREE SQUARE FEET IN SIZE, SHALL BE DISPLAYED AT THE SITE BEARING THE WORDS:

MASS DEP.
FILE NUMBER 81-1313
2. CONTRACTOR SHALL FURNISH AND INSTALL THE SIGN AT LOCATIONS COORDINATED WITH THE ENGINEER PRIOR TO THE START OF CONSTRUCTION. THE SIGN BACKGROUND SHALL BE WHITE AND THE LETTERING SHALL BE BLACK.

1. THE FOLLOWING DEWATERING NOTES ARE TO BE USED IN CONJUNCTION WITH REQUIREMENTS OUTLINED IN THE ORDER OF CONDITIONS, SPECIFICATION SECTION 02140, AND THE MBTA AGREEMENT.
2. INSTALL 1-INCH-DIAMETER STANDPIPES TO THE BOTTOM OF EACH WELL TO MONITOR WELL PERFORMANCE AND WATER LEVELS.
3. INSTALL PIEZOMETERS DOWN TO TOP OF ROCK AT JACKING/RECEIVING PITS AND ALONG THE PIPE RUN TO MONITOR GROUNDWATER DRAWDOWN.
4. THE DEWATERING WELLS SHOWN ON THE CONTRACT DRAWINGS ARE TO BE CONSIDERED THE MINIMUM AMOUNT TO COMPLETE THE WORK AND SHOULD BE USED FOR BIDDING PURPOSES ONLY.
5. THE CONTRACTOR SHALL PREPARE THEIR OWN DEWATERING SYSTEM DESIGN THAT IS DESIGNED IN CONJUNCTION WITH THE JACKING/RECEIVING PITS AND MEETS THE REQUIREMENTS HEREIN. THE DESIGN SHALL BE STAMPED BY A MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER ENGAGED BY THE CONTRACTOR.
6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY TO INSTALL THE JACKING/RECEIVING PITS AND DEWATERING SYSTEM AND ANY PERMITS TO DISCHARGE DEWATERING EFFLUENT INTO LOCAL STORM DRAINS.
7. SUBMIT THE CONTRACTOR DEWATERING SYSTEM DESIGN TO THE ENGINEER FOR REVIEW, APPROVAL, AND ACCEPTANCE PRIOR TO INSTALLATION.

		 5/20/25				Scale	AS NOTED	<div><div></div><p>THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING</p></div>	LOWER CENTRAL INTERCEPTOR IMPROVEMENTS		FOR BID
						Date	MAY 2025		GENERAL NOTES	Sheet No.	
						Job No.	290-2101			G-1	
						Designed by	SLC				
						Drawn by	SLC				
						Checked by	RJA				
						Approved by	RJA				
MARK	DATE	DESCRIPTION									

LEGEND

PROPOSED

- SEWER
- SEWER MANHOLE (SMH)
- NEW GRADE
- GRAVEL ACCESS ROAD
- LIMIT OF WORK
- EASEMENT

EXISTING

- SEWER MANHOLE (SMH)
- PROPERTY BOUNDRY
- ASPHALT BERM
- BIT. CURB
- EDGE OF PAVEMENT
- PROPERTY LINE
- STOCKADE FENCE
- CHAIN LINK FENCE
- WETLAND
- EASEMENT
- 100-YEAR FLOODPLAIN
- HIGH TIDE
- RAILROAD
- SEWER MAIN
- MEAN HIGH WATER
- STONEWALL
- OVERHEAD WIRE
- TREELINE
- RIVERFRONT BUFFER ZONE
- WETLAND BUFFER ZONE
- REINFORCED CONCRETE
- VITRIFIED CLAY
- POLYVINYL CHLORIDE
- CORRUGATED METAL
- WATER
- SEWER
- DRAIN
- SINGLE WHITE LINE
- DOUBLE YELLOW LINE
- UTILITY POLE
- GUY WIRE / GUY POLE
- DECIDUOUS TREE
- SHRUB
- MAILBOX (MB)
- WETLAND FLAG
- WETLAND
- BORING



KEY PLAN
SCALE: 1" = 120'



			Scale	AS NOTED
			Date	MAY 2025
			Job No.	290-2101
			Designed by	SLC
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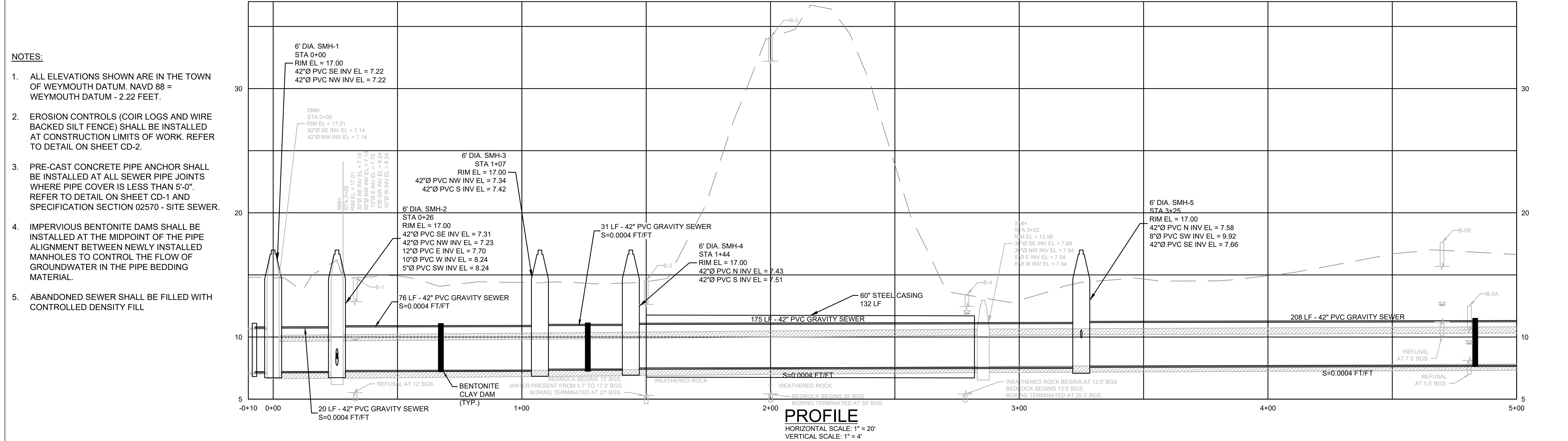
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LOWER CENTRAL INTERCEPTOR IMPROVEMENTS
WEYMOUTH, MASSACHUSETTS

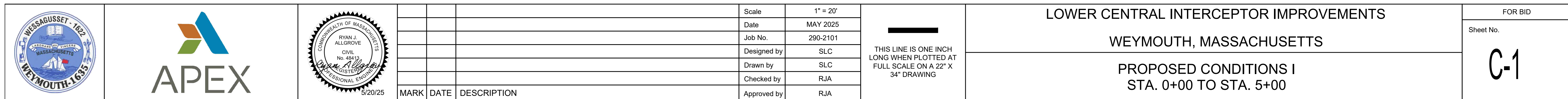
LEGEND AND KEY PLAN

FOR BID
Sheet No.

G-2

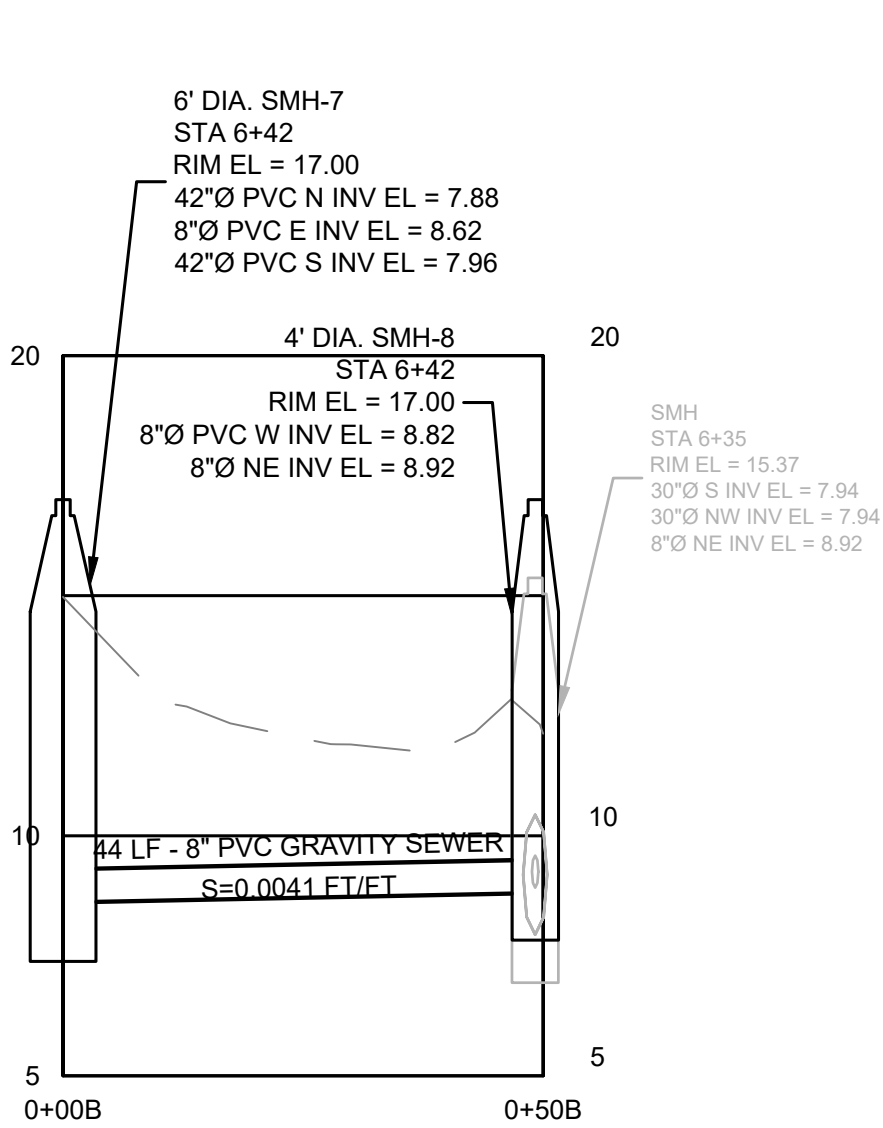
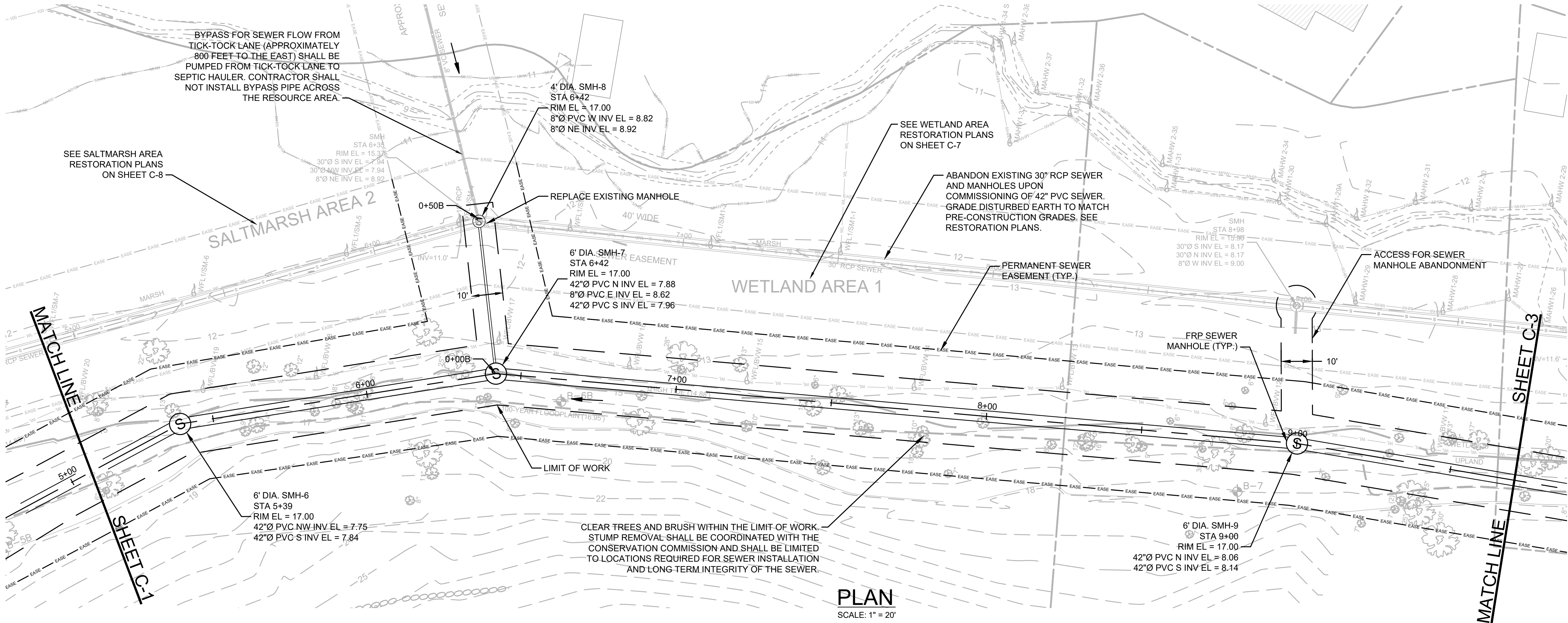


- NOTES:**
1. ALL ELEVATIONS SHOWN ARE IN THE TOWN OF WEYMOUTH DATUM. NAVD 88 = WEYMOUTH DATUM - 2.22 FEET.
 2. EROSION CONTROLS (COIR LOGS AND WIRE BACKED SILT FENCE) SHALL BE INSTALLED AT CONSTRUCTION LIMITS OF WORK. REFER TO DETAIL ON SHEET CD-2.
 3. PRE-CAST CONCRETE PIPE ANCHOR SHALL BE INSTALLED AT ALL SEWER PIPE JOINTS WHERE PIPE COVER IS LESS THAN 5'-0". REFER TO DETAIL ON SHEET CD-1 AND SPECIFICATION SECTION 02570 - SITE SEWER.
 4. IMPERVIOUS BENTONITE DAMS SHALL BE INSTALLED AT THE MIDPOINT OF THE PIPE ALIGNMENT BETWEEN NEWLY INSTALLED MANHOLES TO CONTROL THE FLOW OF GROUNDWATER IN THE PIPE BEDDING MATERIAL.
 5. ABANDONED SEWER SHALL BE FILLED WITH CONTROLLED DENSITY FILL



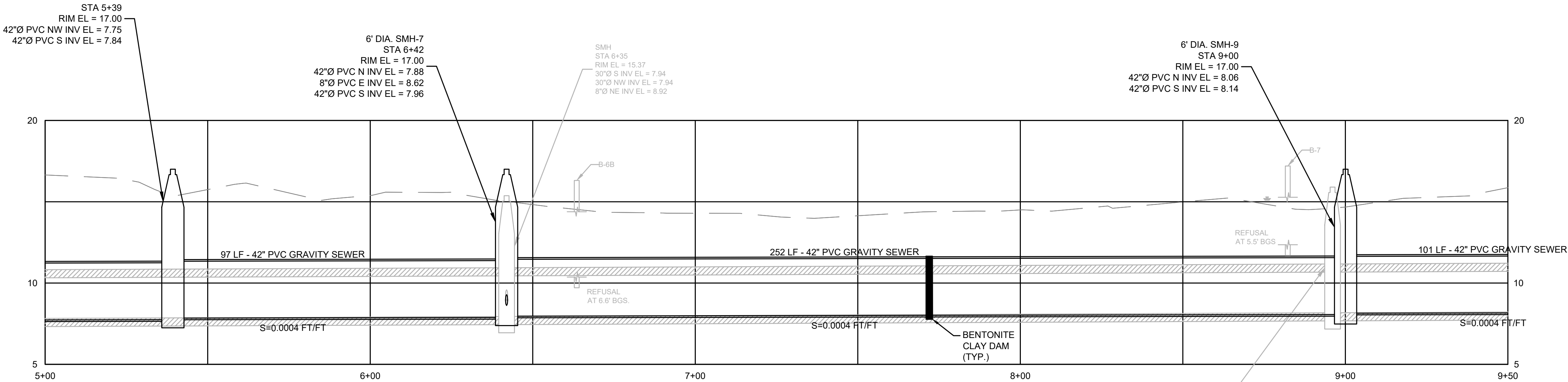
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PROFILE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 4'



PROFILE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 4'



MARK	DATE	DESCRIPTION

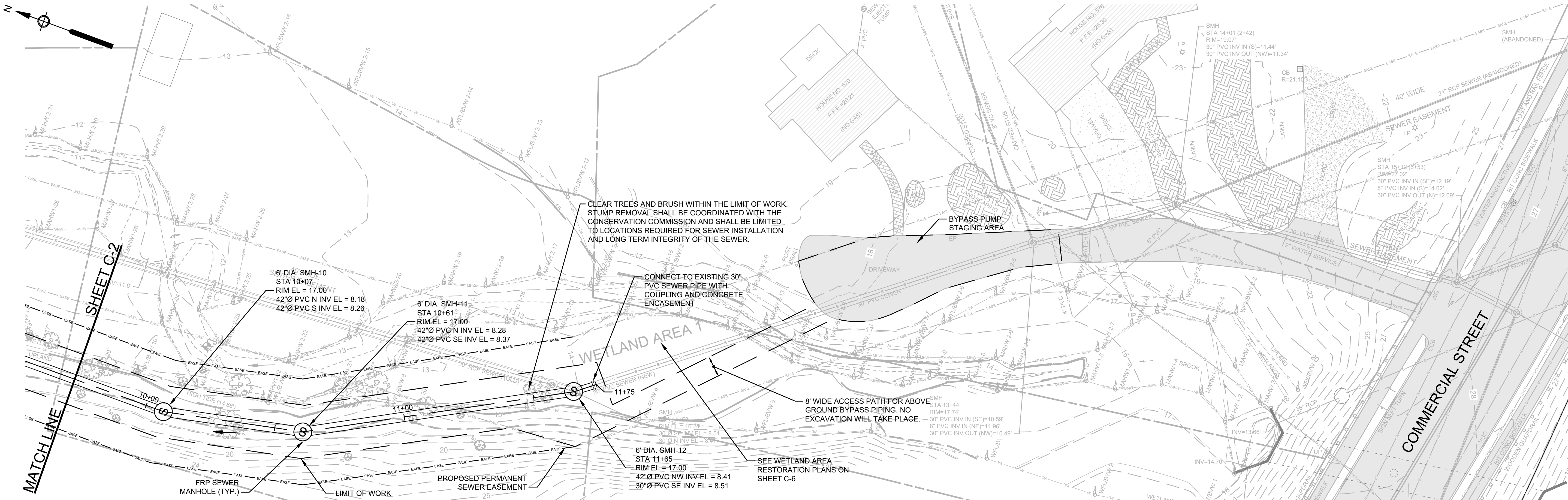
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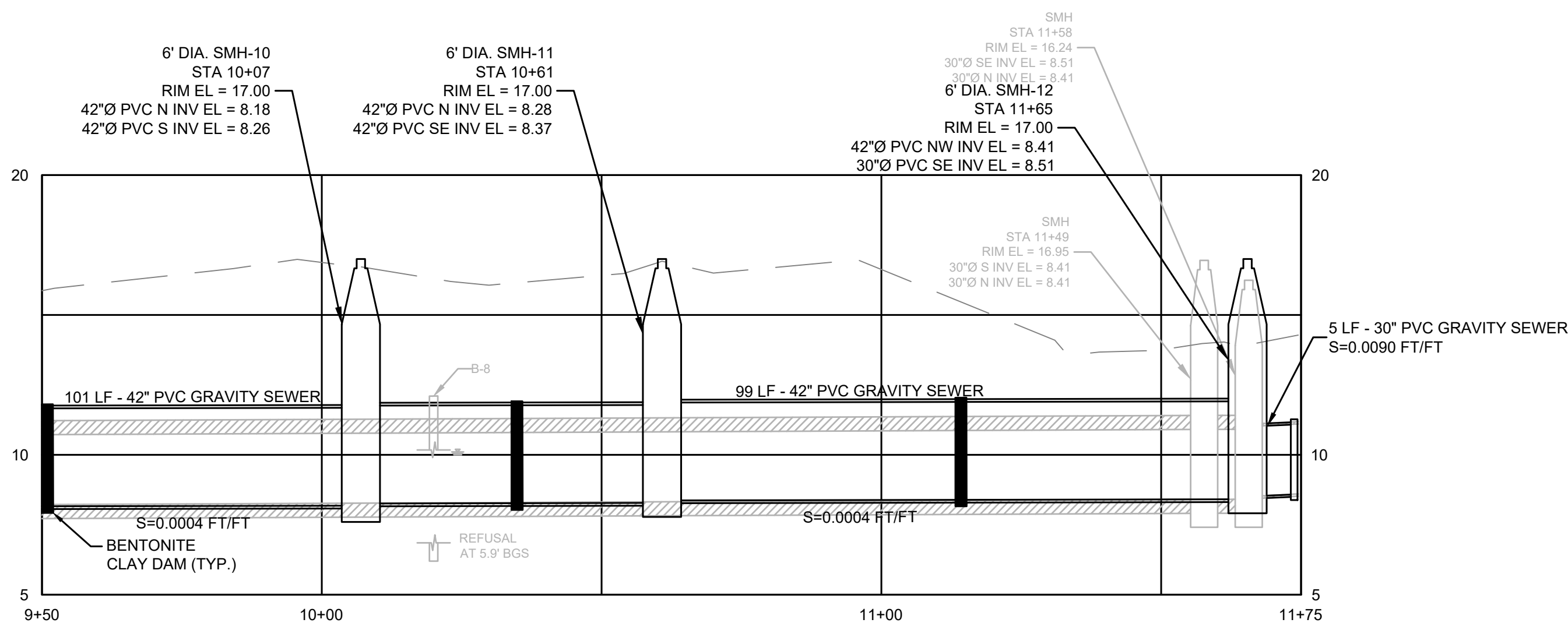
LOWER CENTRAL INTERCEPTOR IMPROVEMENTS
WEYMOUTH, MASSACHUSETTS
PROPOSED CONDITIONS II
STA. 5+00 TO STA. 9+50

FOR BID
Sheet No.

C-2



PLAN
SCALE: 1" = 20'



PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 4'

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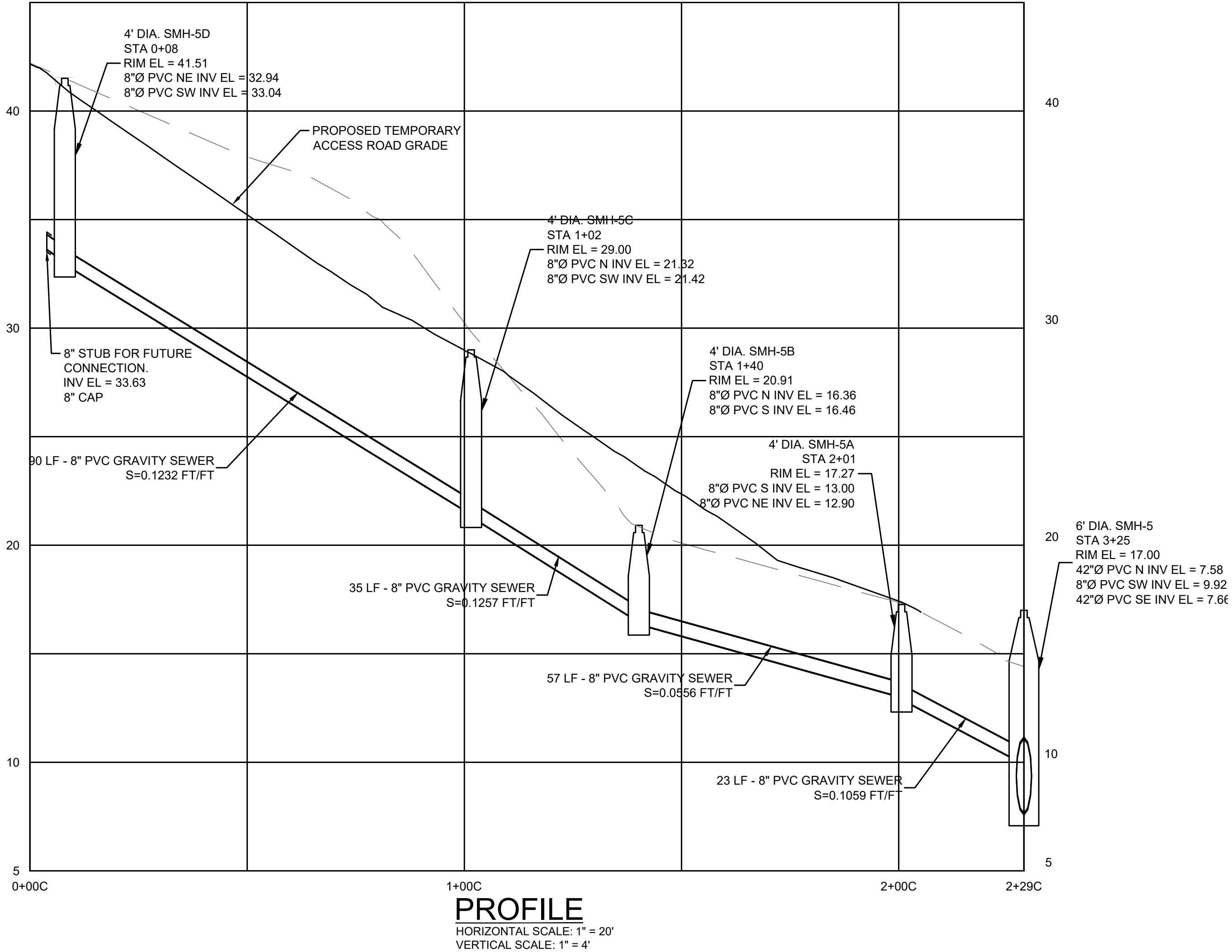
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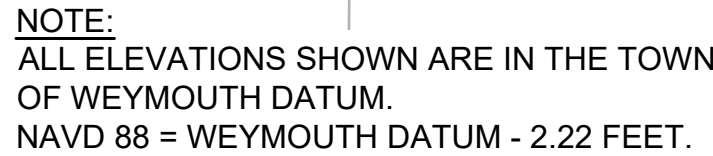
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LOWER CENTRAL INTERCEPTOR IMPROVEMENTS
WEYMOUTH, MASSACHUSETTS
PROPOSED CONDITIONS III
STA. 9+50 TO STA. 11+75

FOR BID
Sheet No.
C-3



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 4. IMPERVIOUS BENTONITE DAMS SHALL BE INSTALLED AT THE MIDPOINT OF THE PIPE ALIGNMENT BETWEEN NEWLY INSTALLED MANHOLES TO CONTROL THE FLOW OF GROUNDWATER IN THE PIPE BEDDING MATERIAL.



PLAN

SCALE: 1" = 20'



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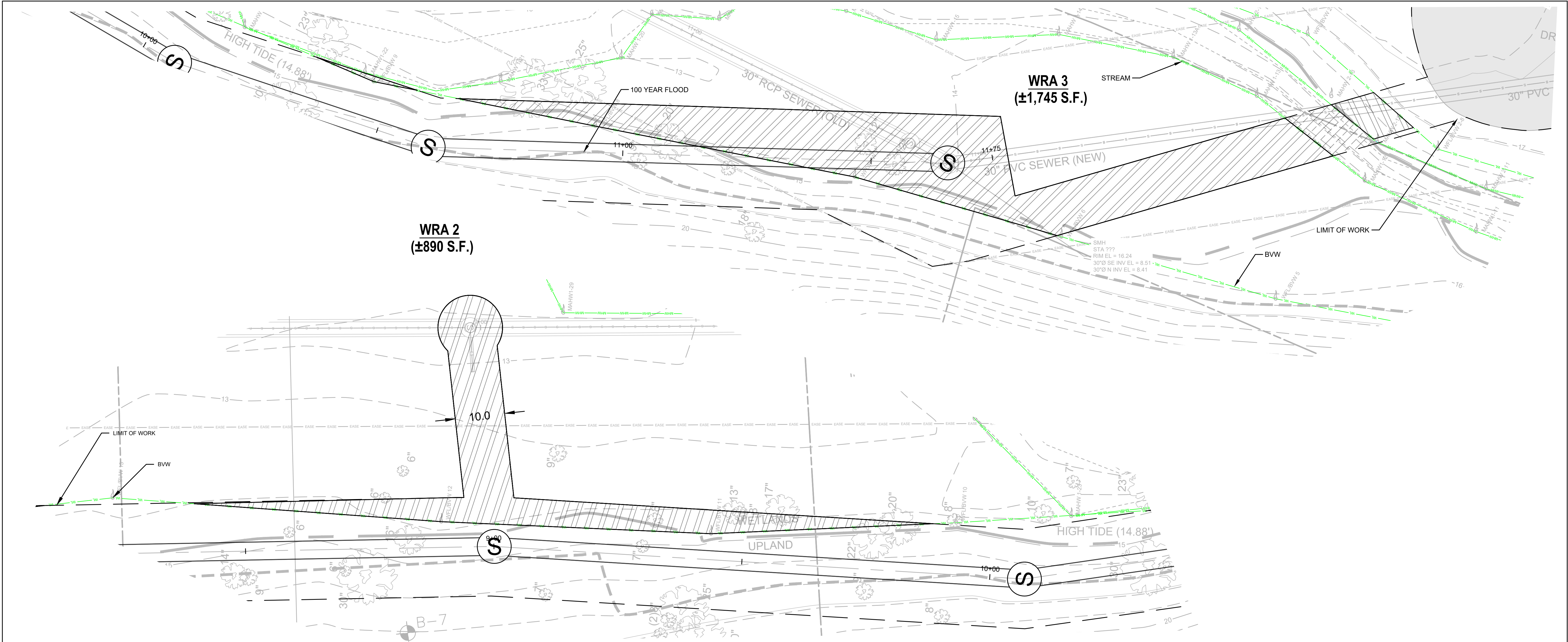
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LOWER CENTRAL INTERCEPTOR IMPROVEMENTS
WEYMOUTH, MASSACHUSETTS
PROPOSED CONDITIONS V
SITE ACCESS

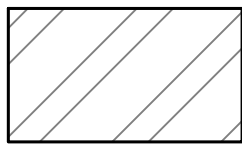
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Sheet No.

C-5



PLAN
SCALE: 1" = 10'



WETLAND RESTORATION AREAS 2 & 3 SEEDMIX

A CUSTOM NEW ENGLAND PARTIAL SHADE WETLAND MIX SHALL BE SPREAD THROUGHOUT THE WETLAND RESTORATION AREAS OR EQUIVALENT NATIVE SEEDMIX APPROVED BY THE WETLAND SCIENTIST MONITOR .

NEW ENGLAND PARTIAL SHADE WETLAND SEED MIX
(CUSTOM ORDER FROM ERNST CONSERVATION SEEDS)

- VIRGINIA WILD RYE (ELYMUS VIRGINICUS)

JUNCUS EFFUSUS (SOFT RUSH)

CAREX LURIDA (LURID SEDGE)

CAREX LUPULINA (HOP SEDGE)

CAREX VULPINOIDEA (FOX SEDGE)

ZIZIA AUREA (GOLDEN ALEXANDERS)

CAREX SCOPARIA (BLUNT BROOM SEDGE)

SENSITIVE FERN (ONOCLEA SENSIBILIS)

PENTHOTHUM SEDOIDES (DITCH STONECROP)

SQUARE STEMMED MONKEY FLOWER (MIMULUS RINGENS)

SEED BOX (LUDWIGIA ALTERNIFLORA)

CALAMAGROSTIS CANADENSIS (CANADA BLUE/JOINT)
- FOWL MANNAGRASS (GLYCERIA STRIATA)

CINNA ARUNDINACEA (WOOD REEDGRASS)

VERBENA HASTATA (BLUE VERVAIN)

ASCLEPIAS INCARNATA (SWAMP MILKWEED)

ASTER NOVAE-ANGLIAE (NEW ENGLAND ASTER)

EUPATORIUM MACULATUM (JOE PYE WEED)

PATH RUSH (JUNCUS TENUIJS)

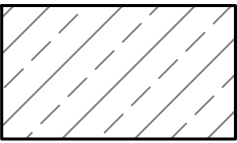
AWL SEDGE (CAREX STIPATA)

FRINGED SEDGE (CAREX CRINITA)

STAR SEDGE (CAREX INTUMESCENS)

PENNSYLVANIA SMARTWEED (POLYGONUM PENNSYLVANICUM)

CARDINAL FLOWER (LOBELIA CARDINALIS)



WRA 3 TEMPORARY STREAM WORK ACTIVITY

WORK ACTIVITY ASSOCIATED WITH TEMPORARY SEWER BYPASS PIPING MAY TEMPORARILY IMPACT THE STREAM BANKS DURING CONSTRUCTION WITHIN WRA 3. A WETLAND SCIENTIST SHALL BE ON-SITE DURING THIS WORK ACTIVITY. TWO 10-FOOT LONG 6-12" DIAMETER STAKED COIR LOGS MAY BE REQUIRED TO STABILIZE/PROTECT STREAM BANKS DURING OR FOLLOWING CONSTRUCTION. WORK ACTIVITY TIMING IS RECOMMENDED TO CONSIDER FORECASTED WEATHER AND POTENTIAL FOR RAIN CAUSED FLOOD EVENTS WITHIN THE STREAM. ANY REQUIRED REVEGETATON SHALL BE SIMILAR TO ADJACENT STREAM BANKS AND/OR SIMILAR TO THE PROPOSED VEGETATION PROPOSED FOR WRA 3.

WETLAND RESTORATION AREA 2 PLUGS

AREA TO BE PLANTED WITH 2" PLUGS OF THE FOLLOWING SPECIES SPACED 8-14" O.C.:

- SEASIDE GOLDENROD (SOLIDAGO SEMPERVIRENS) - ±50
- ROSE MALLOW (HIBISCUS MOSCHEUTOS) - ±50
- CHAIRMAKERS BULRUSH (SCHOENOPLECTUS AMERICANUS) - ±50
- SALT MEADOW RUSH (JUNCUS GERARDII) - ±50

WETLAND RESTORATION AREA 3 FERNS

THE FOLLOWING NATIVE FERNS (HALF GALLON POTS) SHALL BE PLANTED AS GROUNDCOVER AND INSTALLED THROUGHOUT WETLAND RESTORATION AREA #3.

- 30 OSMUNDA CINNAMOMEA (CINNAMON FERN)
- 20 OSMUNDA REGALIS (ROYAL FERN)
- 50 OSMUNDA SENSIBILIS (SENSITIVE FERN)

Scale	1" = 10'
Date	MAY 2025
Job No.	290-2101
Designed by	LEC
Drawn by	LEC
Checked by	LEC
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LONG WHEN PLOTTED AT
FULL SCALE ON A 22" X
34" DRAWING

LOWER CENTRAL INTERCEPTOR IMPROVEMENTS

WEYMOUTH, MASSACHUSETTS

RESOURCE AREA RESTORATION PLAN I

FOR BID

Sheet No.

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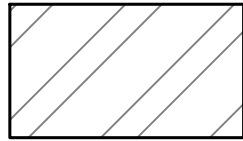
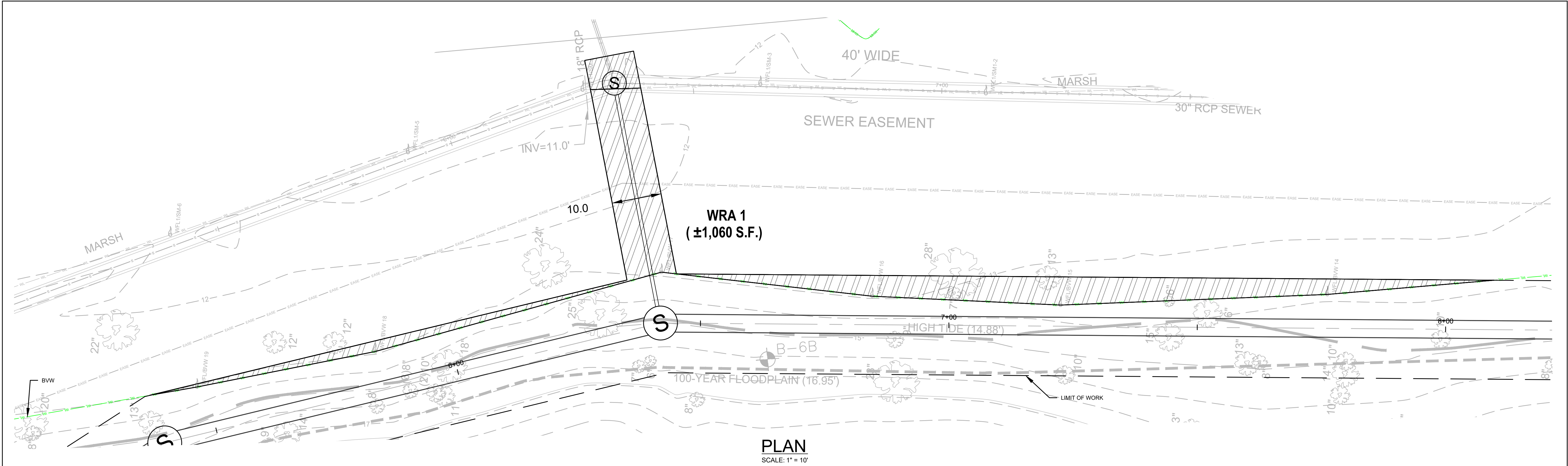
LEC

Environmental Consultants, Inc.



5/15/25

MARK	DATE	DESCRIPTION	



WETLAND RESTORATION AREA 1 GROUNDCOVER

A CUSTOM NEW ENGLAND PARTIAL SHADE WETLAND MIX SHALL BE SPREAD THROUGHOUT WETLAND RESTORATION AREA 1 OR EQUIVALENT NATIVE SEEDMIX APPROVED BY THE WETLAND SCIENTIST MONITOR .

NEW ENGLAND PARTIAL SHADE WETLAND SEED MIX
(CUSTOM ORDER FROM ERNST CONSERVATION SEEDS)

- VIRGINIA WILD RYE (ELYMUS VIRGINICUS)

JUNCUS EFFUSUS (SOFT RUSH)

CAREX LURIDA (LURID SEDGE)

CAREX LUPULINA (HOP SEDGE)

CAREX VULPINOIDEA (FOX SEDGE)

ZIZIA AUREA (GOLDEN ALEXANDERS)

CAREX SCOPARIA (BLUNT BROOM SEDGE)

SENSITIVE FERN (ONOCLEA SENSIBILIS)

PENTHORUM SEDOIDES (DITCH STONECROP)

SQUARE STEMMED MONKEY FLOWER (MIMULUS RINGENS)

SEED BOX (LUDWIGIA ALTERNIFLORA)

CALAMAGROSTIS CANADENSIS (CANADA BLUEJOINT)
- FOWL MANNAGRASS (GLYCERIA STRIATA)

CINNA ARUNDINACEA (WOOD REEDGRASS)

VERBENA HASTATA (BLUE VERVAIN)

ASCLEPIAS INCARNATA (SWAMP MILKWEED)

ASTER NOVAE-ANGLIAE (NEW ENGLAND ASTER)

EUPATORIUM MACULATUM (JOE PYE WEED)

PATH RUSH (JUNCUS TENUIS)

AWL SEDGE (CAREX STIPATA)

FRINGED SEDGE (CAREX CRINITA)

STAR SEDGE (CAREX INTUMESCENS)

PENNSYLVANIA SMARTWEED (POLYGONUM PENSYLVANICUM)

CARDINAL FLOWER (LOBELIA CARDINALIS)

WETLAND RESTORATION AREA 1 GROUNDCOVER PLUGS

AREA TO BE PLANTED WITH 2" PLUGS OF THE FOLLOWING SPECIES SPACED 8-14" O.C.:

- SEASIDE GOLDENROD (SOLIDAGO SEMPERVIRENS) - ±50

ROSE MALLOW (HIBISCUS MOSCHEUTOS) - ±200

CHAIRMAKERS BULRUSH (SCHOENOPLECTUS AMERICANUS) - ±100

SALT MEADOW CORDGRASS (SPARTINA PATENS) - ±100

SALT MEADOW RUSH (JUNCUS GERARDII) - ±100

WETLAND RESTORATION NOTES FOR WRA's 1-3

A QUALIFIED WETLAND SCIENTIST SHALL SUPERVISE PROPOSED WETLAND RESTORATION WORK ACTIVITY.

PRIOR TO CONSTRUCTION, EROSION CONTROLS SHALL BE ESTABLISHED ALONG THE DOWNGRADIENT LIMITS OF PROPOSED RESTORATION WORK ACTIVITY WHERE APPLICABLE ALONG THE LIMIT OF WORK.

RE-USE OF EXISTING EXCAVATED TOPSOILS IS ANTICIPATE AND RECOMMENDED WHERE FEASIBLE. SHOULD RE-USEABLE EXCAVATED WETLAND TOPSOILS REQUIRE STOCKPILING, THE WETLAND SOIL SHALL BE TEMPORARILY STORED ON-SITE, COVERED AND KEPT SEPARATED FROM OTHER SOILS.

ANY REQUIRED SOIL AMENDMENTS SHALL CONSIST OF A MIXTURE OF ORGANIC CLEAN LEAF COMPOST AND INORGANIC SANDY LOAM MINERAL SOIL. THE SOIL MIX SHALL HAVE A TARGET ORGANIC MATTER CONTENT OF APPROXIMATELY BETWEEN 15% - 20%. ANY IMPORTED SOIL SHALL BE INSPECTED BY THE WETLAND SCIENTIST BEFORE PLACEMENT IN THE RESTORATION AREA.

RESTORED WETLAND TOPSOILS ARE ANTICIPATED TO BE A MINIMUM OF 12 INCHES DEEP WHERE EXCAVATION OCCURS WITHIN AREAS OF INVASIVE SPECIES. OTHERWISE SOIL AMENDMENT DEPTH SHALL DEPEND ON EXISTING CONDITIONS FROM TEMPORARY DISTURBANCE. THE WETLAND SCIENTIST SHALL BE ON-SITE DURING ESTABLISHMENT OF FINAL GRADING OF THE WETLAND RESTORATION AREA.

FINAL ELEVATIONS OF THE WETLAND RESTORATION AREA SHALL CLOSELY MIMIC THE PRE-EXISTING GRADES AND THE IMMEDIATELY ADJACENT WETLANDS. FINAL GRADES SHALL BE CONFIRMED USING SURVEY EQUIPMENT DURING CONSTRUCTION IN EFFORT TO COMPARE TO PRE-EXISTING AND ADJACENT ELEVATIONS.

EFFORT SHALL BE MADE TO PREVENT SOIL COMPACTION OF TOPSOILS DURING CONSTRUCTION/ RESTORATION WHEN FEASIBLE TO ACCOMMODATE WORK ACTIVITY. ANY COMPACTED TOPSOILS SHALL BE LOOSENED WHILE RESTORING FINAL GRADES FROM INTERIOR RESTORATION PORTIONS TOWARD THE UPLANDS.

THE PROPOSED SEEDMIX SHALL BE APPLIED ACCORDING TO THE SUPPLIERS INSTRUCTIONS. THE SEED MIX SHALL BE LIGHTLY RAKED INTO THE GROUND SURFACE.

PLUGS IN AREAS WITH POTENTIAL FOR FLOODING SHALL BE SECURED WITH WOODEN CHOPSTICKS INSERTED THOUGH THE SOIL PORTION OF THE PLUG AND ADJACENT EXISTING SOILS IN A MANNER THAT SECURES THE PLUG UNTIL ESTABLISHED. THE ANGLE OF THE WOODEN CHOPSTICKS WHEN INSERTED IS AT AN ANGLE & NEAR PERPENDICULAR TO THE GROUND SURFACE. SECURED BIODEGRADABLE JUTE NETTING MAY ALSO BE USED ALTERNATIVELY TO SECURE PLUGS.

THE FINAL AMOUNT & COMPOSITIONS OF PLUGS MAY BE MODIFIED BY THE WETLAND SCIENTIST MONITOR TO ACCOMODATE EXISTING CONDITIONS SHOULD ANTICIPATED DISTURBANCE BE REDUCED DURING CONSTRUCTION.

FOLLOWING COMPLETION OF THE WETLAND RESTORATION AREA, EROSION AND SEDIMENT

ATION CONTROL MEASURES SHALL BE IMPLEMENTED ALONG THE LANDWARD SIDE OF THE WETLAND RESTORATION AREA IN AREAS WHERE DISTURBED SOILS OCCUR UPGRADIENT.

ALL PLANTINGS SHALL BE NATIVE VARIETIES WITH NO LANDSCAPE CULTIVARS PROPOSED.

WORK ACTIVITY TIMING SHALL TAKE INTO CONSIDERATION POTENTIAL FOR RAIN CAUSED AND COASTAL RELATED FLOOD EVENTS WHEN USING EQUIPMENT WITHIN THE WETLAND RESTORATION AREAS.

A DEWATERING PLAN SHALL BE PREPARED PRIOR TO CONSTRUCTION FOR ANY EXCAVATION WORK WITHIN WETLANDS.

INVASIVE SPECIES ARE EXPECTED TO QUICKLY ATTEMPT TO RE-COLONIZE THE WETLAND RESTORATION AREAS WHEN INVASIVES ARE PRESENT IMMEDIATELY ADJACENT.

INVASIVE COMMON REED & JAPANESE KNOTWEED OCCURS WITHIN AND ADJACENT TO PORTIONS OF WETLAND RESTORATION AREAS. ANY EXCAVATED EXISTING SOILS CONTAINING THE ROOT ZONE OF INVASIVE SPECIES ARE NOT RECOMMENDED FOR RE-USE.

ANY RECOMMENDATIONS FOR INVASIVE SPECIES CONTROL DURING THE MONITORING PERIOD SHALL BE PROVIDED WITHIN ANNUAL MONITORING REPORTS TO PROMOTE INITIAL ESTABLISHMENT OF NATIVE SPECIES TO THE EXTENT PRACTICAL. ANY REQUIRED HERBICIDE TREATMENT OF INVASIVE SPECIES WITHIN THE RESTORATION AREAS SHALL BE CARRIED OUT BY A MASSACHUSETTS LICENSED PESTICED APPLICATOR. INVASIVE SPECIES CONTROL EFFORTS ARE ONLY RECOMMENDED TO BE CARRIED OUT DURING THE MONITORING PERIOD TO THE EXTENT PRACTICAL IN CONSIDERATION OF EXISTING CONDITIONS.

A NATIVE CONSERVATION AND WILDLIFE SEEDMIX FROM NEW ENGLAND WETLAND PLANTS OR EQUIVALENT NATIVE MIX IS RECOMMENDED FOR DISTURBED BUFFER ZONE AREAS.

MARK	DATE	DESCRIPTION

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Drawn by	LEC
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LOWER CENTRAL INTERCEPTOR IMPROVEMENTS

WEYMOUTH, MASSACHUSETTS

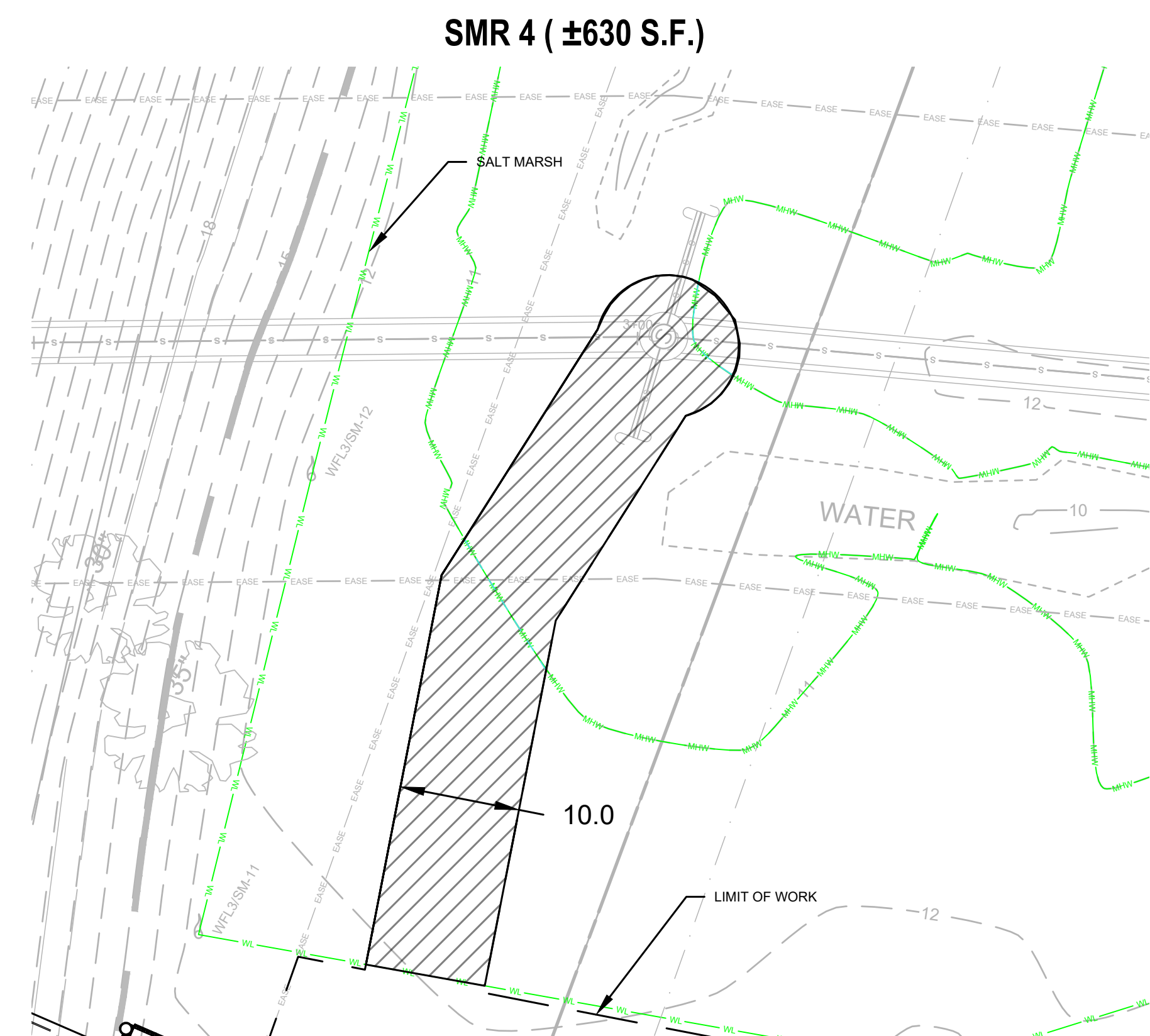
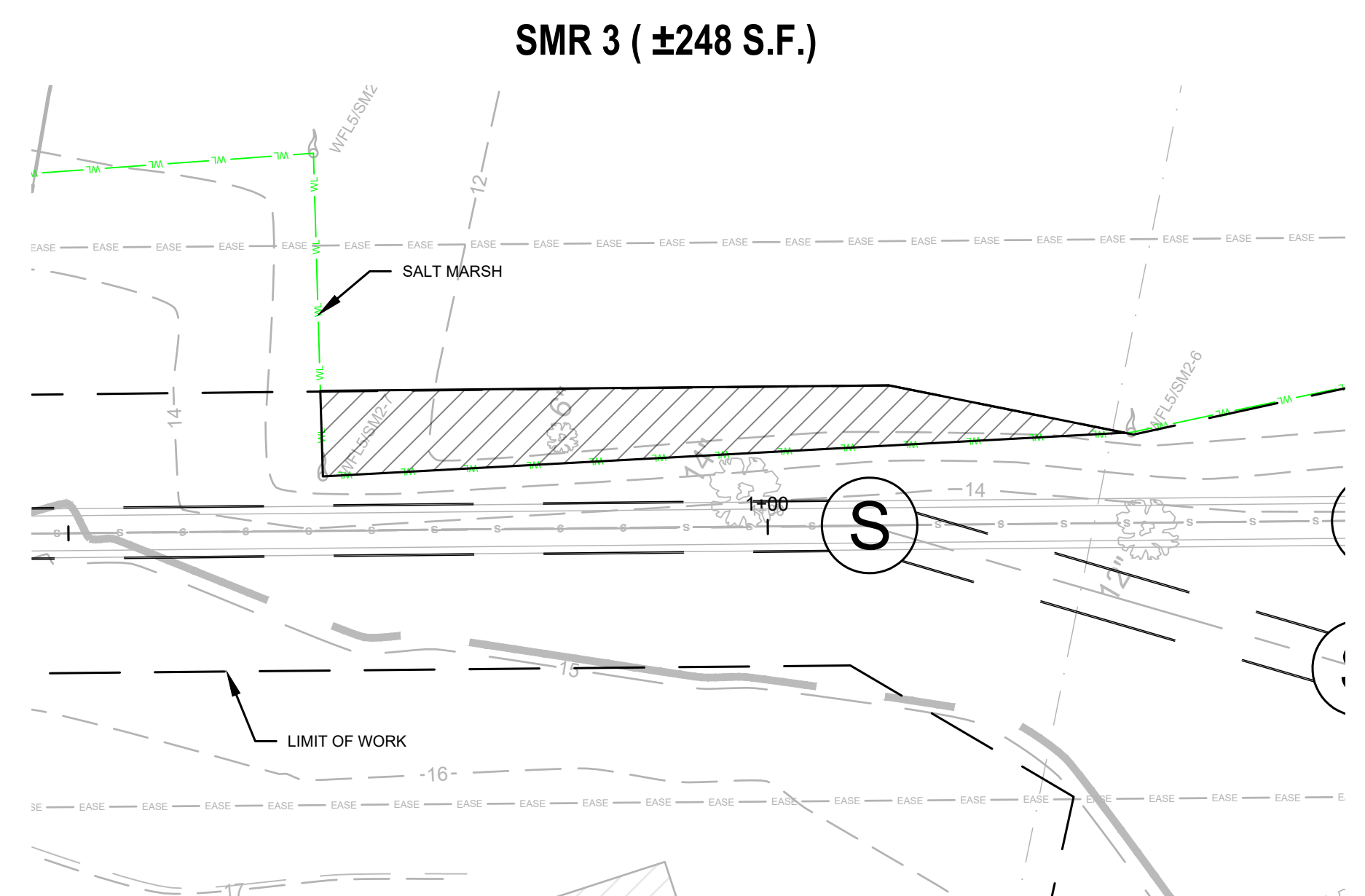
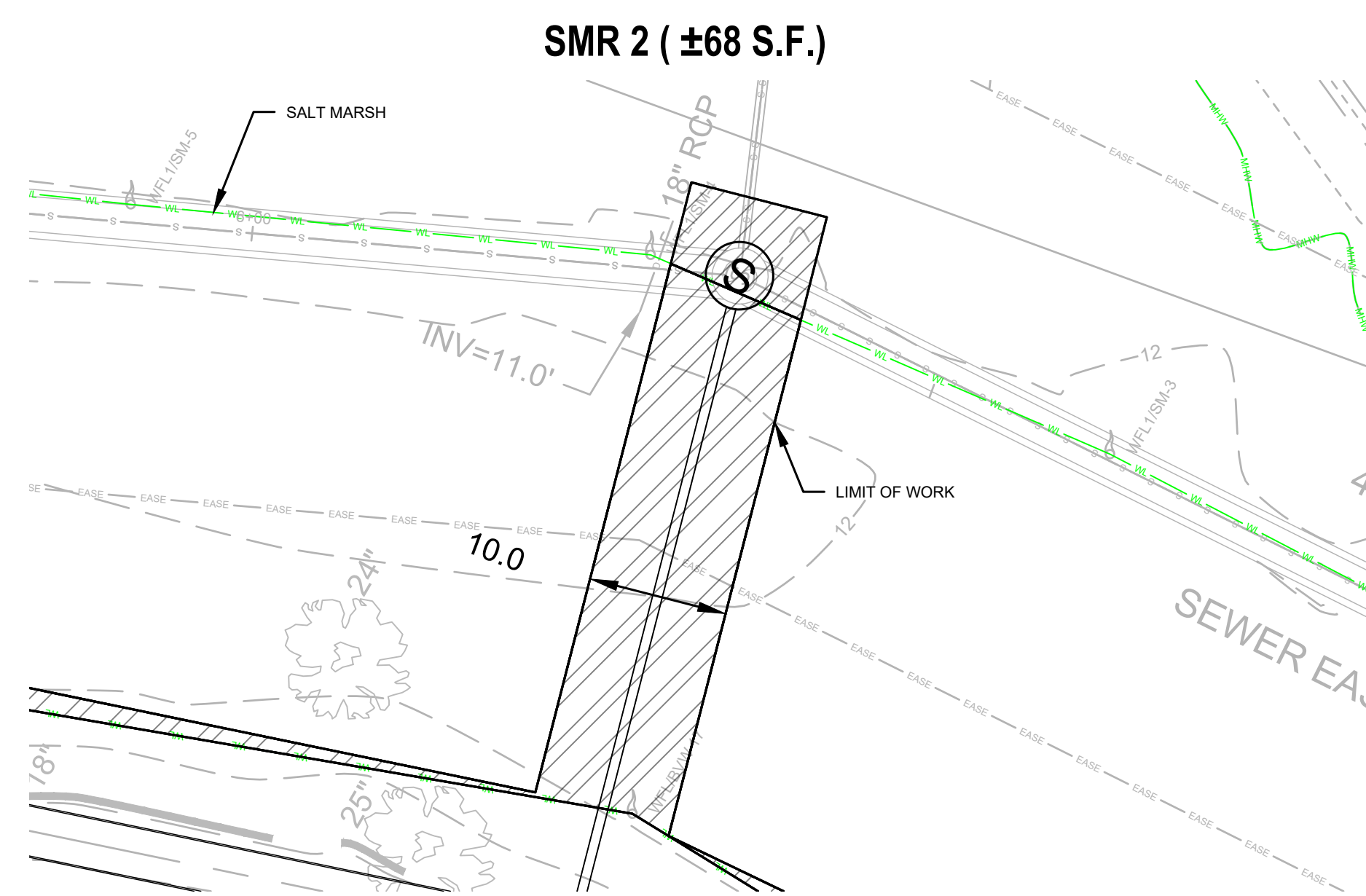
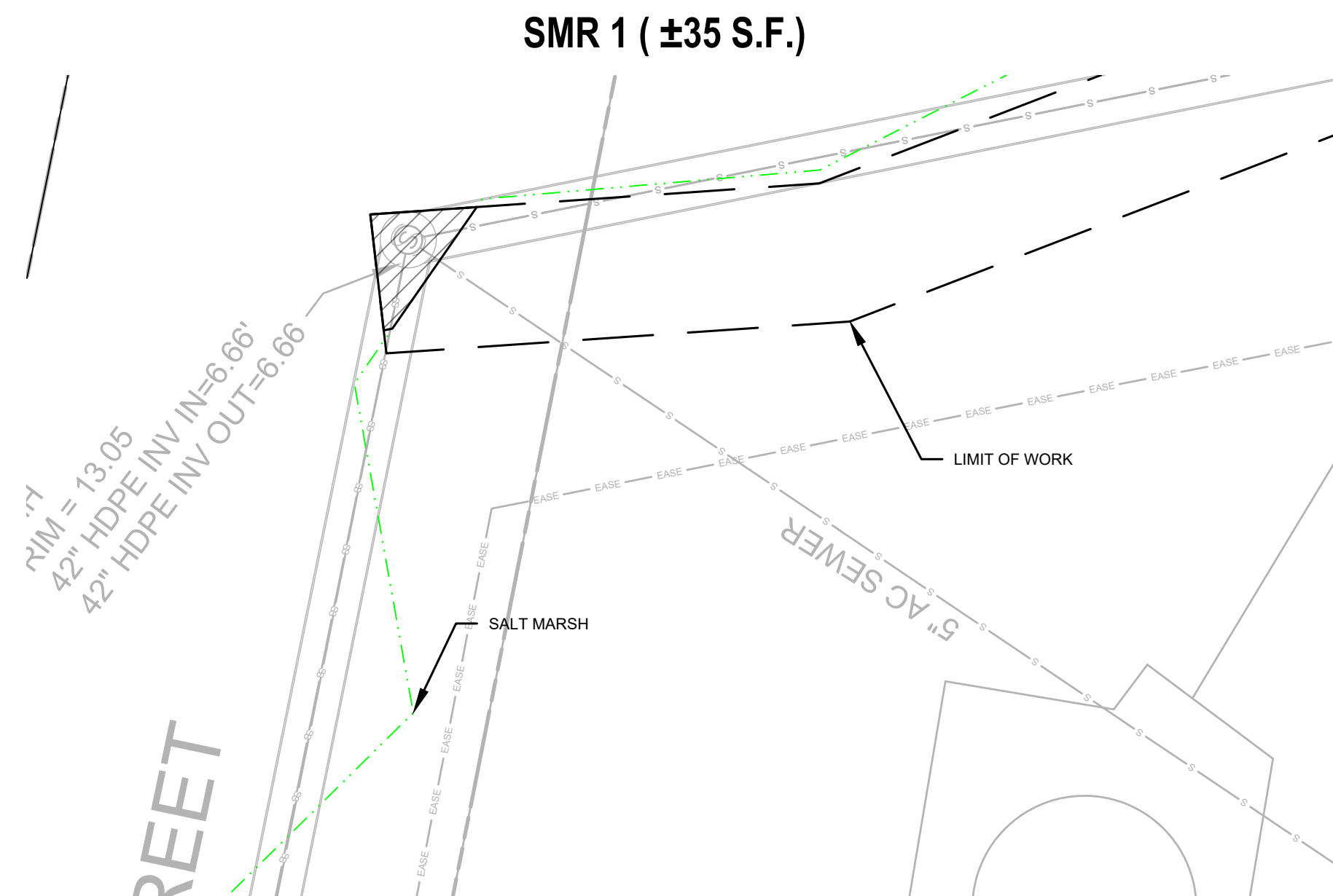
RESOURCE AREA RESTORATION PLAN II

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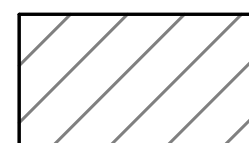
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PLAN
SCALE: 1" = 10'

SCALE: 1" = 10'



SALT MARSH RESTORATION AREAS

LIMITING SOIL DISTURBANCE (E.G USING SWAMP MATS AND/OR LOW GROUND PRESSURE EQUIPMENT) IS RECOMMENDED TO PROTECT EXISTING MARSH VEGETATION TO THE EXTENT PRACTICAL TO ACCOMMODATE PROPOSED WORK ACTIVITY. RE-USE AND PRESERVATION OF EXISTING MARSH VEGETATION IS ANTICIPATED IN RESTORATION AREAS AND IS RECOMMENDED TO THE EXTENT PRACTICAL UNDER THE OVERSIGHT OF THE WETLAND SCIENTIST MONITOR.

ALTHOUGH SUPPLEMENTAL PLANTING IS EXPECTED TO BE MINIMAL, THE FOLLOWING PLANTING NUMBERS ARE BASED ON REPLANTING THE ENTIRE SALT MARSH RESTORATION AREAS IN THE EVENT THAT THE WETLAND SCIENTIST DETERMINES THE RE-USE OF EXISTING VEGETATION IS NOT PRACTICAL FOLLOWING CONSTRUCTION ACTIVITY. SHOULD EXISTING MARSH VEGETATION BE SALVAGEABLE AND RE-USED IN THE RESTORATION AREA, THEN THE BELOW NUMBER OF PLUGS SHALL BE REDUCED ACCORDINGLY TO ENSURE ONE PLUG EVERY 8-14" WITHIN UNPLANTED PORTIONS OF THE RESTORATION AREA. THE WETLAND SCIENTIST SHALL MANAGE SPECIFIC SPECIES PLACEMENT RELATIVE TO HYDROLOGY AND ADJACENT EXISTING CONDITIONS.

SALT MARSH AREAS TO BE PLANTED WITH 2" PLUGS OF THE FOLLOWING SPECIES SPACED 8-14" O.C.:

SALT MEADOW CORDGRASS (SPARTINA PATENS) - ±300
SEASIDE GOLDENROD (SOLIDAGO SEMPERVIRENS) - ±100
SMOOTH CORDGRASS (SPARTINA ALTERNIFLORA) - ±300
ROSE MALLOW (HIBISCUS MOSCHEUTOS) - ±150
SALT GRASS (DISTICHLIS SPICATA)- ±50
SALT MEADOW RUSH (JUNCUS GERARDII) - ±100

SALT MARSH RESTORATION GENERAL NOTES

A WETLAND SCIENTIST SHALL MONITOR THE PROPOSED SALT MARSH RESTORATION WORK ACTIVITY.

COIR NETTING SHALL BE PLACED ON ANY BARE SURFACES OF THE MARSH RESTORATION IN AREAS TO BE ESTABLISHED WITH MARSH PLUGS. COIR MATTING SHALL HAVE $\frac{3}{8}$ INCH OPENINGS OR SIMILAR, AS DIRECTED BY WETLAND SCIENTIST MONITOR.

FOUR FOOT LONG WOODEN STAKES SHALL BE INSTALLED TO SECURE COIR NETTING. STAKES SHALL BE SPACED UNDER OVERSIGHT OF A WETLAND SCIENTIST. BIODEGRADABLE ROPE SHALL BE USED ON THE FINISH SURFACE BETWEEN STAKES TO FURTHER SECURE NETTING IN PLACE.

PLUGS SHALL BE INSTALLED BY CUTTING HOLES AS NECESSARY IN THE COIR NETTING.

FINAL AMOUNT OF PLUGS MAY BE MODIFIED BY THE WETLAND SCIENTIST MONITOR TO ACCOMMODATE EXISTING CONDITIONS SHOULD ANTICIPATED DISTURBANCE BE REDUCED DURING CONSTRUCTION.

IF NECESSARY, ANY REQUIRED SUBSTITUTE SPECIES SHALL BE REVIEWED BY THE WETLAND SCIENTIST PRIOR TO INSTALLATION.

ALL PLANTINGS SHALL BE NATIVE VARIETIES WITH NO LANDSCAPE CULTIVARS PROPOSED.

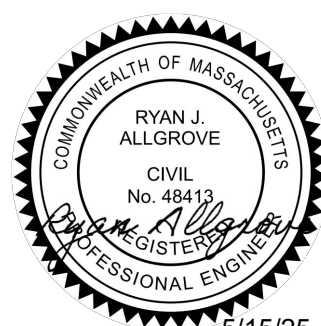
WORK ACTIVITY SHALL TAKE INTO CONSIDERATION POTENTIAL FOR SUBSTANTIAL RAIN AND COASTAL RELATED FLOOD EVENTS WHEN TIMING AND USING EQUIPMENT WITHIN SALT MARSH.

INVASIVE SPECIES ARE EXPECTED TO QUICKLY ATTEMPT TO RE-COLONIZE THE SALT MARSH PORTIONS OF RESTORATION AREAS WHEN PRESENT IMMEDIATELY ADJACENT.

H INVASIVE COMMON REED OCCURS WITHIN AND ADJACENT TO PORTIONS OF SALT MARSH RESTORATION AREAS. ANY EXCAVATED EXISTING SOILS CONTAINING THE ROOT ZONE AND SEED OF INVASIVE SPECIES (E.G. COMMON REED) ARE NOT RECOMMENDED FOR RE-USE WITHIN RESTORATION AREAS.

ANY RECOMMENDATIONS FOR INVASIVE SPECIES CONTROL DURING THE MONITORING PERIOD SHALL BE PROVIDED WITHIN ANNUAL MONITORING REPORTS TO PROMOTE ESTABLISHMENT OF NATIVE SPECIES TO THE EXTENT PRACTICAL. ANY REQUIRED HERBICIDE TREATMENT OF INVASIVE SPECIES WITHIN THE RESTORATION AREAS SHALL BE CARRIED OUT BY A MASSACHUSETTS LICENSED PESTICIDE APPLICATOR. INVASIVE SPECIES CONTROL EFFORTS ARE ONLY RECOMMENDED TO BE CARRIED OUT DURING THE MONITORING PERIOD TO THE EXTENT PRACTICAL. IN CONSIDERATION OF EXISTING CONDITIONS.

SHOULD RE-USEABLE WETLAND SOILS REQUIRE STOCKPILING, THE WETLAND SOIL SHALL BE TEMPORARILY STORED ON-SITE, COVERED AND KEPT SEPARATED FROM OTHER SOILS. ANY REQUIRED REPLACEMENT ORGANIC RICH TOP SOILS FOR SALT MARSH SHALL BE SIMILAR TO THE PROPOSED WETLAND SOILS AND INSTALLED TO A MINIMUM DEPTH OF 12 INCHES.



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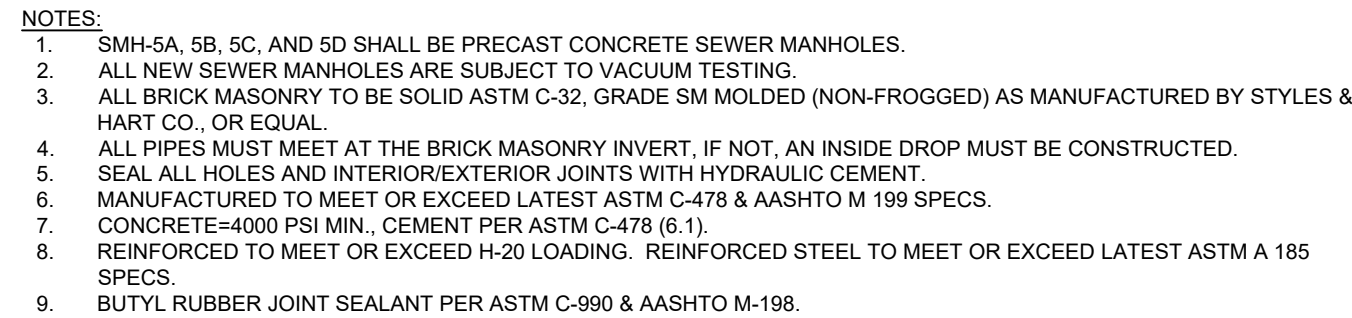
LOWER CENTRAL INTERCEPTOR IMPROVEMENTS
WEYMOUTH, MASSACHUSETTS

RESOURCE AREA RESTORATION PLAN III

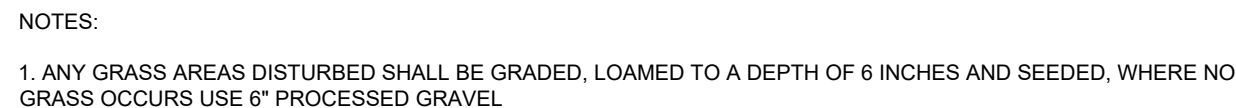
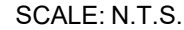
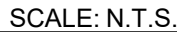
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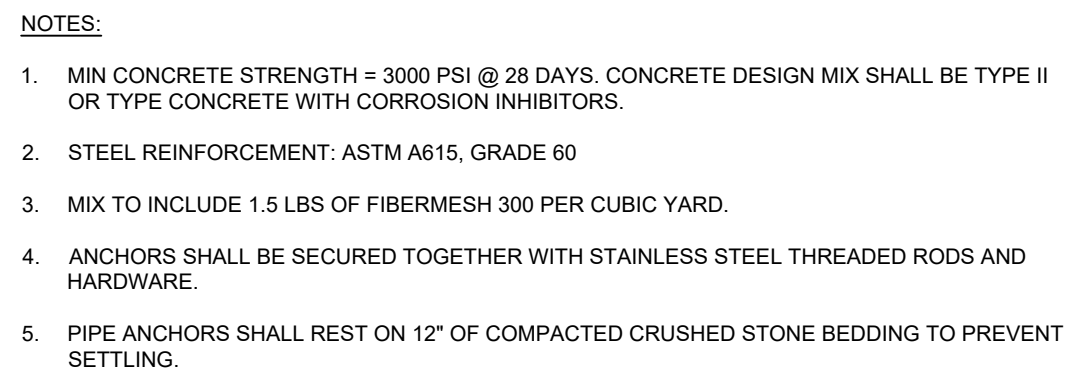
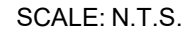
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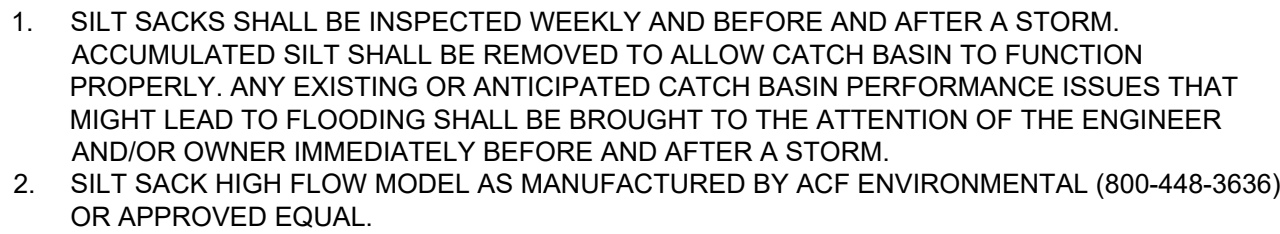
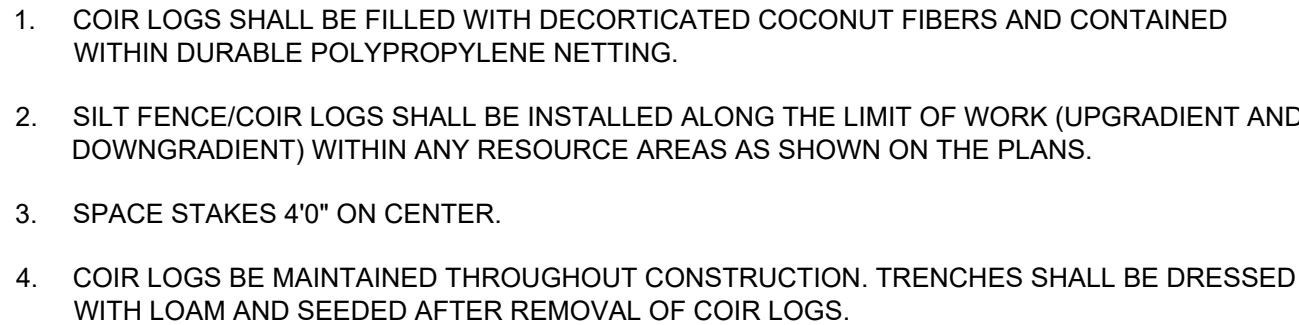
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CIVIL DETAILS I

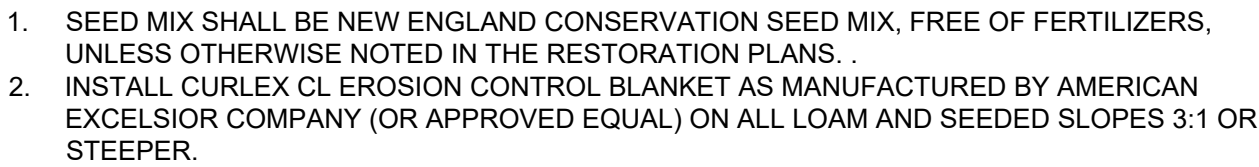
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SILT SACKS SEDIMENTATION CONTROL AT CATCH BASINS

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LOAM AND SEED (DISTURBED AREAS)

SCALE: N.T.S.

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			Date	MAY 2025
			Job No.	290-2101
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			Drawn by	SLC
			Checked by	RJA
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LOWER CENTRAL INTERCEPTOR IMPROVEMENTS

WEYMOUTH, MASSACHUSETTS

CIVIL DETAILS II

FOR BID

Sheet No

CD-2

GENERAL NOTES:

1. THESE DRAWINGS ARE FOR THE SUPPORT OF EXCAVATION (SOE) TO FACILITATE INSTALLATION OF A 60-INCH-DIAMETER CASING PIPE BELOW THE MBTA RAILROAD. THE INFORMATION PROVIDED ON THESE DRAWINGS IS STRICTLY LIMITED TO THE INSTALLATION OF THE SUPPORT OF EXCAVATION SYSTEM REQUIRED TO INSTALL JACKING AND RECEIVING PITS AND THE DEWATERING NEEDED TO SUPPORT THE CONSTRUCTION OF THE JACKED PIPE.
2. THESE DRAWINGS DO NOT ADDRESS SAFETY ISSUES RELATED TO THE WORK. SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.
3. ALL BACKGROUND DRAWINGS ARE FROM AUTOCAD FILES PROVIDED VIA EMAIL FROM ENVIRONMENTAL PARTNERS GROUP, ON 7/25/2024.
4. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, OPENINGS AND VERIFY FIELD CONDITIONS AND SHALL CAREFULLY COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS AND OTHER INFORMATION KNOWN TO THE CONTRACTOR, WITH THE CONTRACT DOCUMENTS, BEFORE COMMENCING WORK AND PRIOR TO ORDERING MATERIALS AND DETAILS. DISCREPANCIES OR INCONSISTENCIES DISCOVERED, WHICH MAY INTERFERE WITH THE PROPER EXECUTION OF THE WORK, SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
5. NO CONTRACTOR, SUBCONTRACTOR, OWNER, AGENT, ETC. SHALL RELY ON DIMENSIONS, GRADES, LOCATIONS OF UTILITY LINES, AND LOCATIONS OF ADJACENT FACILITIES OR OTHER INFORMATION WITHOUT INDEPENDENTLY VERIFYING THE CORRECTNESS OF THE INFORMATION.
6. ELEVATIONS ARE PROVIDED ON THESE DRAWINGS REFERENCE THE TOWN OF WEYMOUTH VERTICAL DATUM (EL. 0 = EL. -6.63 NAVD88)
7. LOCATION OF EXISTING STRUCTURES THAT WILL REMAIN DURING CONSTRUCTION TO BE VERIFIED IN FIELD PRIOR TO START OF WORK.
8. ALL WORK SHOWN SHALL BE INSTALLED IN ACCORDANCE WITH INDUSTRY STANDARD PRACTICES.
9. THESE DRAWINGS SHOULD NOT BE SCALED. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS.
10. DIMENSIONS BETWEEN THE SOE AND THE RAIL ROAD ARE PROVIDED SOLELY FOR USE IN LOCATING THE SOE ELEMENTS. THE CONTRACTOR SHALL NOT LOCATE THE PERMANENT STRUCTURE USING THESE DIMENSIONS FROM AS-BUILT SOE LOCATIONS.
11. PROVIDE SAFE ACCESS TO THE WORK AREA FOR THE ENGINEER TO OBSERVE THE WORK.
12. COORDINATE EXCAVATION WITH LAGGING PLACEMENT. DO NOT EXCAVATE MORE THAN 2 FEET IN ADVANCE OF THE LOWEST INSTALLED LAGGING BOARD. REDUCE THE HEIGHT OF UN-LAGGED FACE IF THE SOIL TO BE RETAINED IS UNSTABLE.
13. MAINTAIN GROUND WATER A MINIMUM OF 2FT BELOW BOTTOM OF EXCAVATION AT ALL TIMES.

MONITORING NOTES:

1. MONITOR SUPPORT OF EXCAVATION FOR LATERAL MOVEMENT USING SURVEY PRISMS (TWO PRISMS ON EACH SIDE OF EXCAVATION) AT THE TOP OF THE SOE. SURVEY THE PRISMS WITH A TOTAL STATION WITH AN ACCURACY OF 0.01FT OR BETTER.
2. OBTAIN BASELINE READINGS TAKEN PRIOR TO THE START OF EXCAVATION AND PROVIDE DATA TO THE ENGINEER.
3. PROVIDE A MINIMUM OF TWO SETS OF SURVEY READINGS PER WEEK TO THE ENGINEER. DATA FOR THE PREVIOUS WEEK TO BE PROVIDED NO LATER THAN TUESDAY OF THE FOLLOWING WEEK. NOTICE OF MOVEMENTS BEYOND 1/2" SHALL BE PROVIDED IMMEDIATELY UPON TAKING THE READINGS.

MATERIALS:

1. STRUCTURAL MEMBERS SHALL CONFORM TO THE FOLLOWING MINIMUM SPECIFICATION:

a. WALES, BEAMS & CHANNELS:

ASTM A572 OR A992, FY = 50 KSI

b. PLATES:

ASTM A572, FY = 50 KSI

c. MICROPILE SOLDIER PILES:

API N80 MILL SECONDARY

d. THREADED BAR:

ASTM A615, GR 75

e. THREADED STUDS:

NELSON CFL FULLY THREADED STUD, MILD STEEL Fy=50KSI

f. WELDING:

E70XX ELECTRODES

g. GROUT:

5,000 PSI MIN. 28-DAY UNCONFINED COMP. STRENGTH
2. TIMBER LAGGING SHALL BE UNTREATED, ROUGH CUT, FULL DIMENSION, 3" THICK. WITH A MINIMUM FB=1,200 PSI.
3. SOLDIER PILE CASING SHALL BE FABRICATED, UNCOATED, STEEL CASING WITH THREADED JOINTS.
4. THREADED JOINTS SHALL PROVIDE A MINIMUM STRENGTH OF 50% BENDING CAPACITY OF THE FULL PILE SECTION.
5. ALL SHOP AND FIELD WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE AMERICAN SOCIETY FOR WELDING IN BUILDINGS AND CONSTRUCTION AWS D1.1.

SOLDIER PILE NOTES:

1. SOLDIER PILES WILL BE DRILLED FROM EXISTING GRADE.
2. DRILLING WILL BE BY INTERNAL FLUSH DUPLEX DRILLING METHOD. THE CONTRACTOR SHALL ADJUST THE DRILLING PROCEDURE AS REQUIRED TO PREVENT LOSS OF GROUND, SETTLEMENT AND/OR LATERAL MOVEMENT OF BUILDINGS, UTILITIES AND OTHER STRUCTURES.
3. UPON ACHIEVING THE DESIGN DEPTH, COMPLETELY FLUSH THE CASING UNTIL CLEAN RETURN IS OBSERVED.
4. AFTER THE CASING IS FLUSHED CLEAN, REMOVE THE INNER DRILL RODS AND TREMIE GROUT THE CASING WITH NEAT CEMENT GROUT OR SAND-CEMENT GROUT.
5. INSTALL FULL LENGTH INNER CASING AS NEEDED FOR PILES CALLED OUT AS PIPE-IN-PIPE WITHIN THIS DRAWING SET.
6. INSTALL TIMBER LAGGING TIGHT AGAINST THE SOIL. BACKFILL ANY VOIDS BEHIND THE LAGGING WITH SOIL PLACED THROUGH THE GAPS BETWEEN THE LAGGING BOARDS. PACK THE GAPS AS NECESSARY TO PREVENT LOSS OF SOIL THROUGH THE GAPS.
7. USE FILTER FABRIC OR HAY BETWEEN LAGGING BOARDS TO PROMOTE DRAINAGE AND PREVENT LOSS OF FINES.

DESIGN REFERENCES AND CRITERIA:

1. THE EAST, WEST, AND SOUTH WALLS OF JACKING PIT AND EAST, WEST, AND NORTH WALLS OF RECEIVING PIT WERE DESIGNED FOR A 600 PSF VERTICAL CONSTRUCTION SURCHARGE 2 FEET BEHIND THE WALL.
2. THE SOUTH WALL OF THE JACKING PIT WAS DESIGNED FOR A UNIFORM JACKING LOAD OF 400 KIPS UNIFORMLY DISTRIBUTED OVER A HEIGHT OF 5 FEET ACROSS FOUR PILES.
3. NO CONSTRUCTION SURCHARGE IS PERMITTED ON THE NORTH AND SOUTH SLOPES OF THE RAILROAD EMBANKMENT.
4. COOPER E80 LOADING ON THE RAILROAD EMBANKMENT WAS INCLUDED IN THE DESIGN OF THE JACKING AND RECEIVING PITS.
5. DEWATERING ASSUMED TO BE ACTIVE DURING CONSTRUCTION AND EXCAVATION ASSUMED TO BE DRY.

CONTRACTOR SUBMITTALS:

SUBMIT THE FOLLOWING AT LEAST FOUR WEEKS PRIOR TO MOBILIZATION:

1. ALL CONTRACTOR SUBMITTALS TO BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS.
2. MICROPILE BOND LENGTH DESIGN.

A. PLUMB MICROPILES WITH BOND ZONES, SERVICE DESIGN TENSION FORCE = 100 KIPS AND MINIMUM BENDING MOMENT OF 51 KIP-FT.




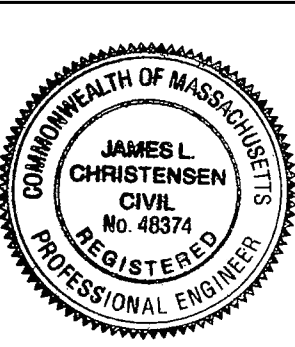

B. BATTERED MICROPILES, SERVICE DESIGN COMPRESSION FORCE = 328 KIPS.
3. THRUST BLOCK DESIGN.
4. BREAKTHROUGH DETAILS TO PREVENT SOIL FROM ENTERING JACKING AND RECEIVING PITS WHEN PIPE PENETRATES THE LAGGING AT THE UPHILL SIDES OF EXCAVATION.

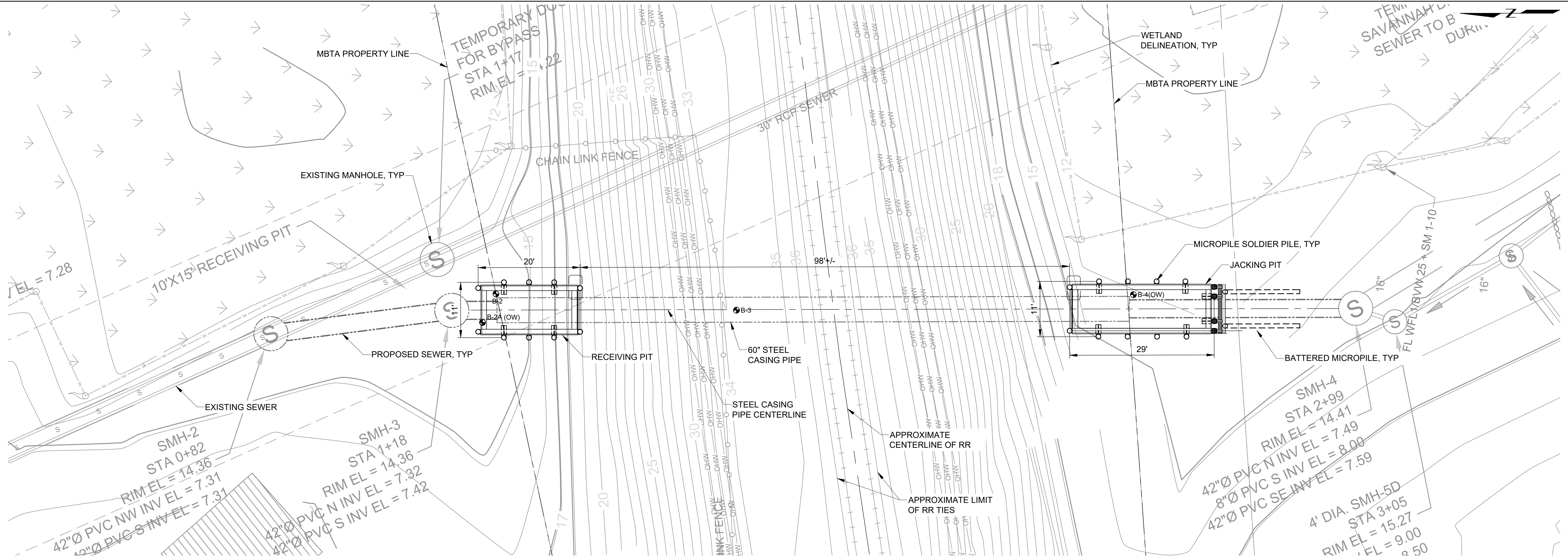
ABBREVIATIONS

CL	CENTERLINE
EA	EACH
EL	ELEVATION
EXIST	EXIST
RR	RAILROAD
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED

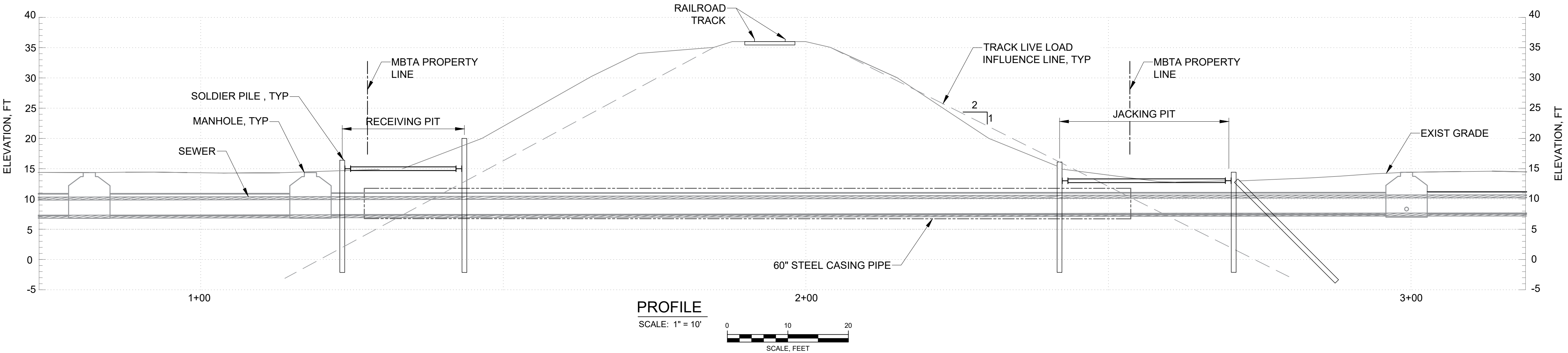
GENERAL CONSTRUCTION SEQUENCE:

1. INSTALL MICROPILE SOLDIER PILES AND BATTERED MICROPILES.
2. EXCAVATE & INSTALL LAGGING TO 2 FEET BELOW THE CENTERLINE OF THE TOP BRACE.
3. INSTALL BRACING.
4. EXCAVATE & INSTALL LAGGING TO FINAL SUBGRADE. DEWATER TO MAINTAIN GROUNDWATER 2-FEET BELOW SUBGRADE ELEVATION.
5. INSTALL STONE BASE AND/OR CONCRETE BASE SLAB.
6. INSTALL REACTION FRAME IN JACKING PIT.
7. INSTALL STEEL CASING PIPE.
8. INSTALL SEWER.
9. BACKFILL EXCAVATION TO WITHIN 2-FEET OF BRACING IN ACCORDANCE WITH PROJECT REQUIREMENTS.
10. REMOVE BRACING.
11. CUT MICROPILES 3-FEET BELOW GRADE.
12. COMPLETE BACKFILLING IN ACCORDANCE WITH PROJECT REQUIREMENTS.




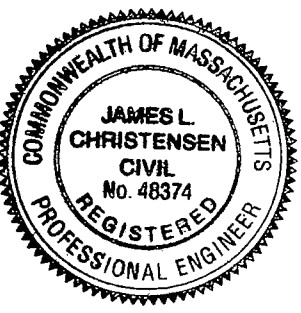

	 					Scale	N/A	 THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING	LOWER CENTRAL INTERCEPTOR IMPROVEMENTS		FOR BID
						Date	MAY 2025		WEYMOUTH, MASSACHUSETTS		Sheet No.
						Job No.	290-2101		GENERAL NOTES AND DRAWING INDEX		SOE-001
						Designed by	B. KARIM				
						Drawn by	D. CHECHURIN				
						Checked by	C. HOPLIN				
			MARK	DATE	DESCRIPTION	Approved by	J. CHRISTENSEN				

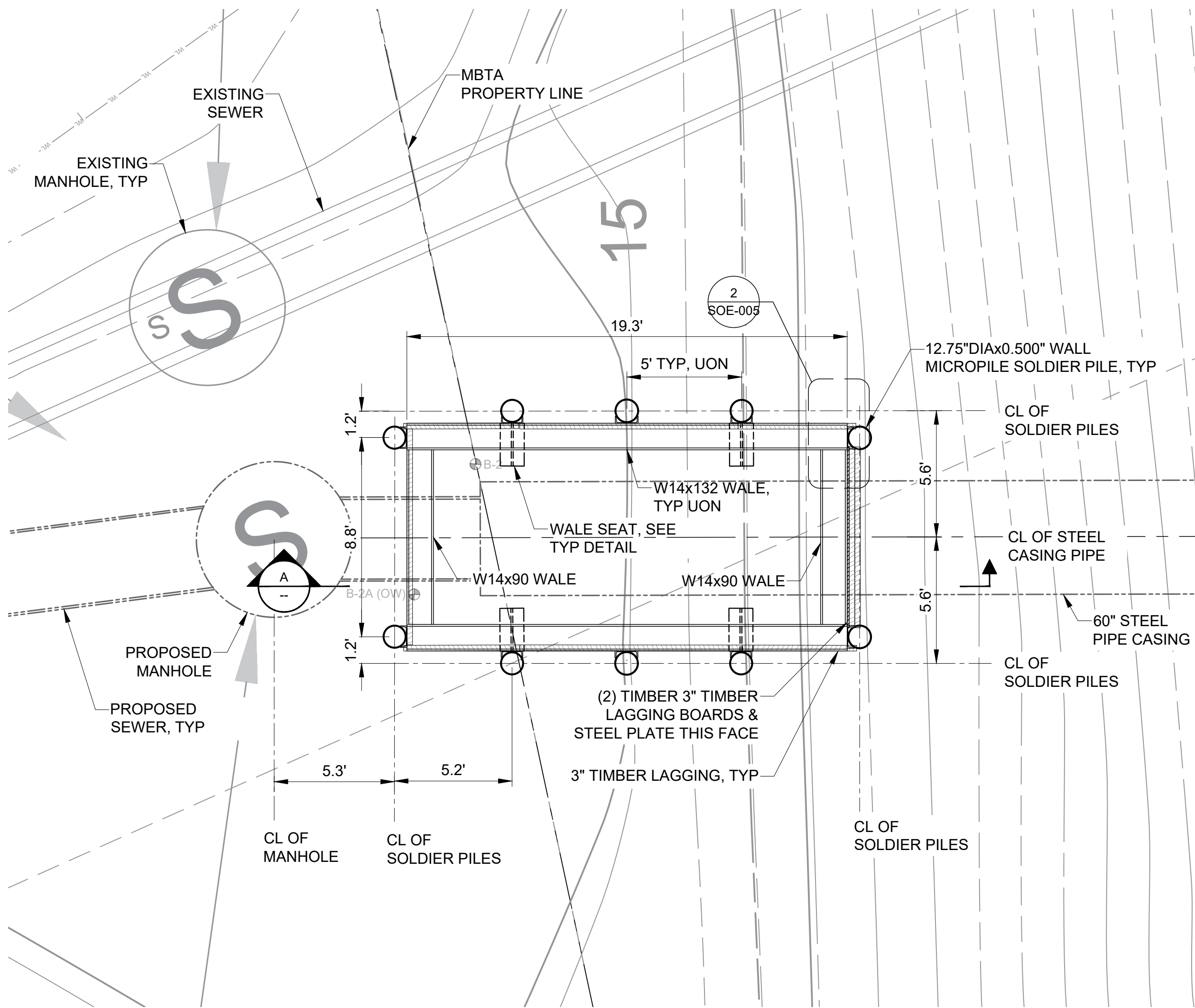


OVERALL PLAN
SCALE: 1" = 10'



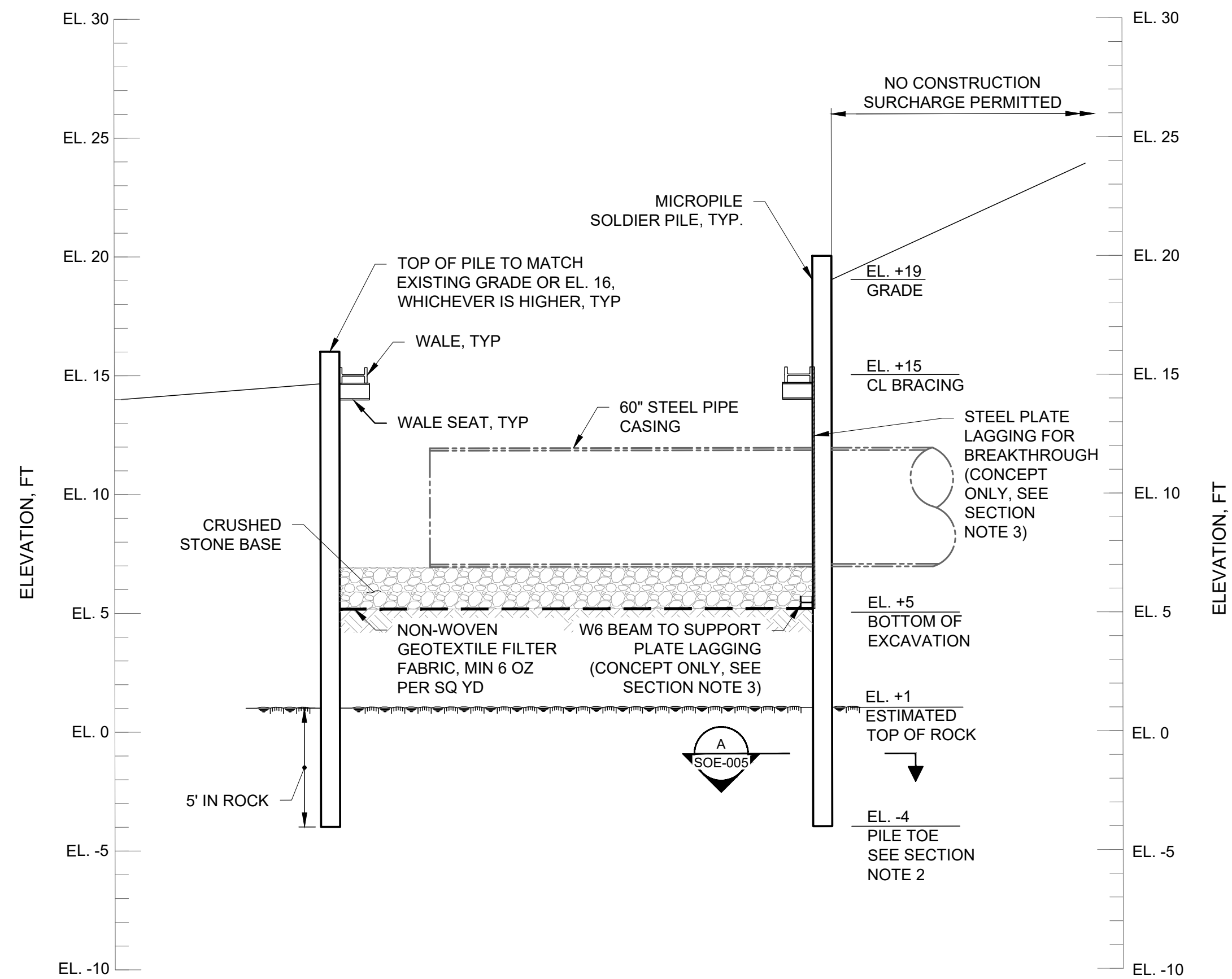
PROFILE
SCALE: 1" = 10'

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SOE PLAN AND PROFILE		Sheet No. SOE-002																																					




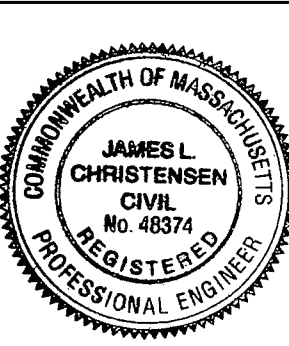



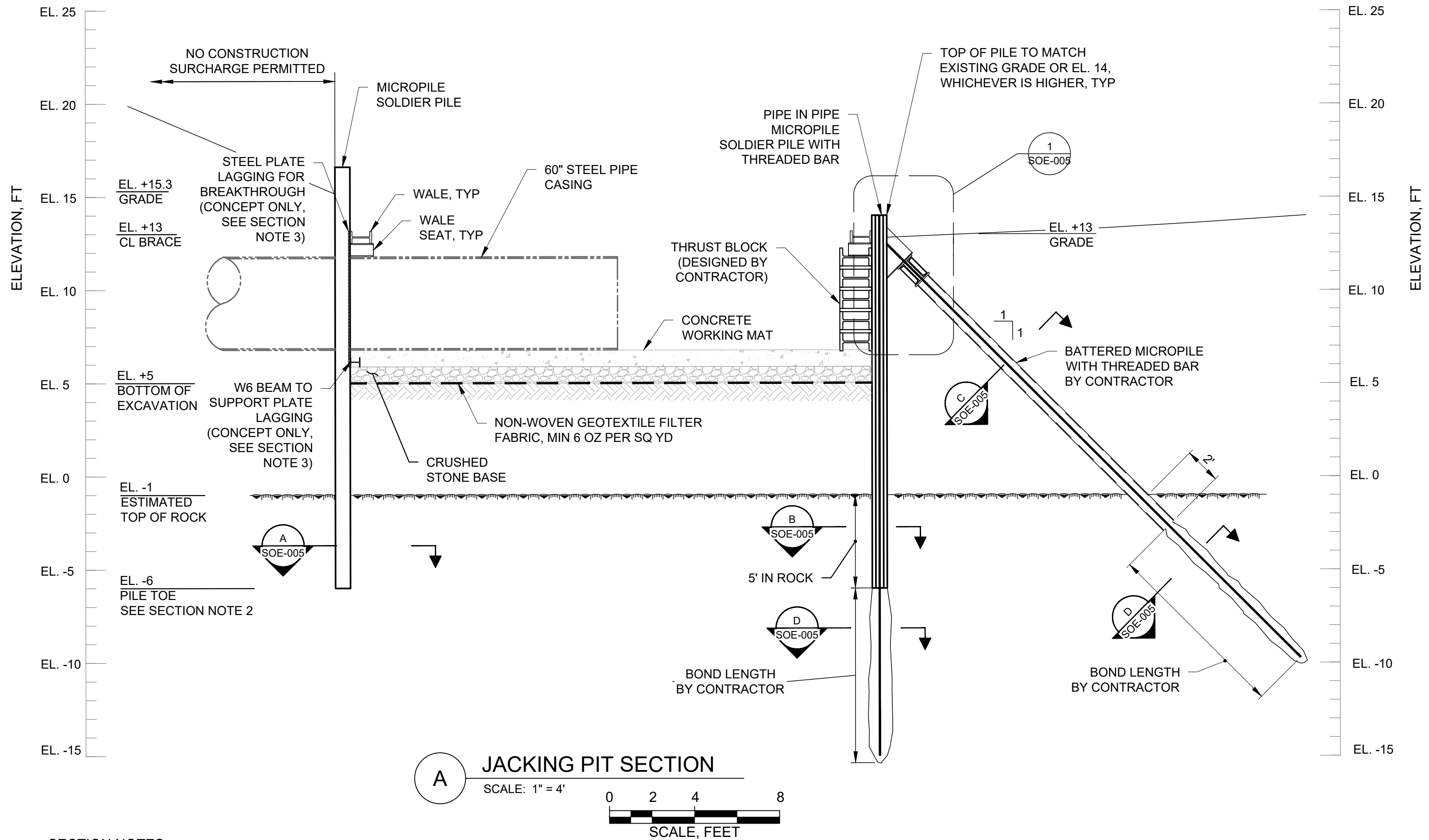
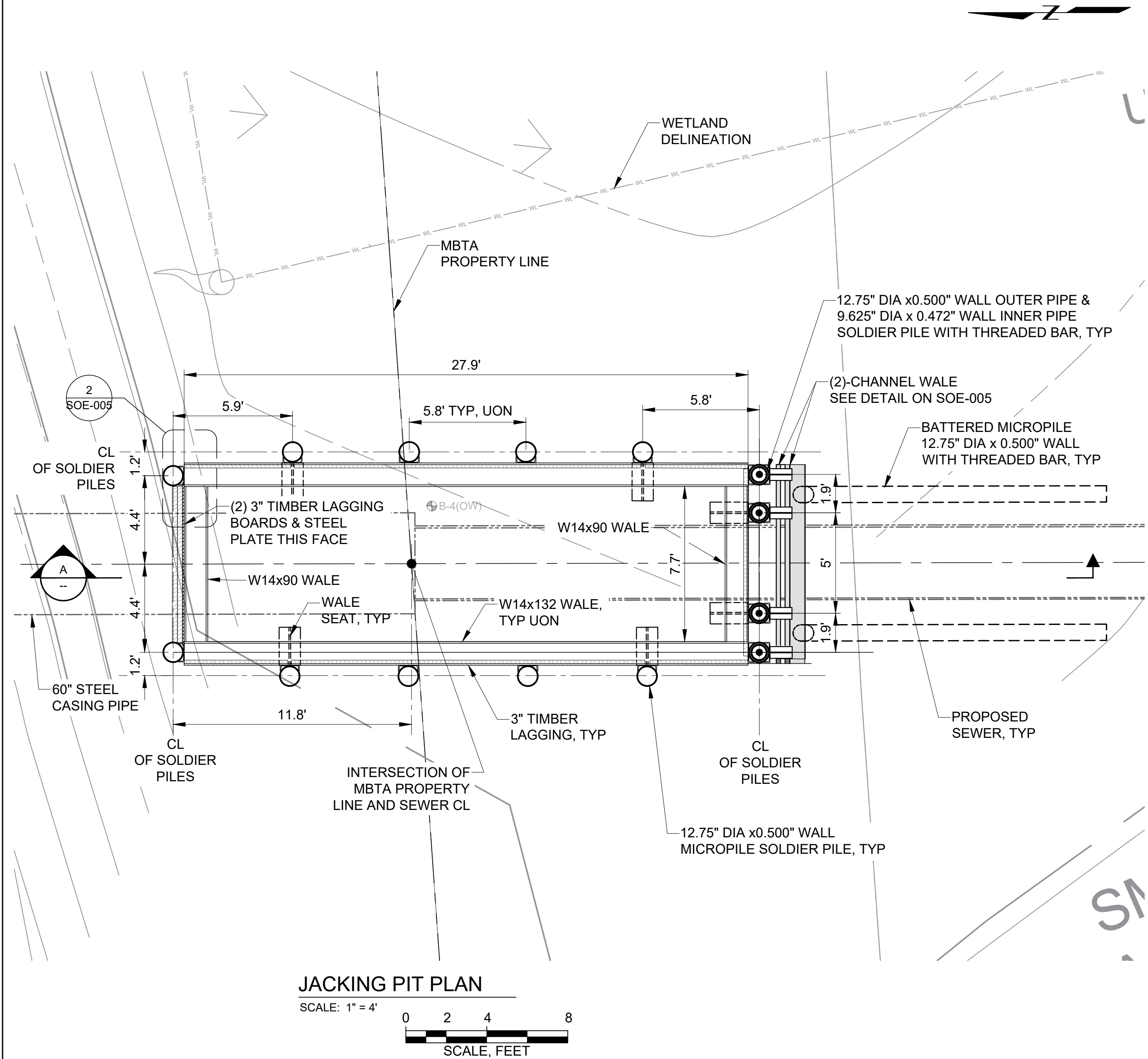
RECEIVING PIT PLAN
SCALE: 1" = 4'

- SECTION NOTES:
1. STRATIGRAPHY BASED ON BORING B-2A (OW).
 2. ELEVATION REFERENCED IS THE HIGHEST ALLOWABLE TOE ELEVATION. BOTTOM OF PILE MAY BE LOWER TO ACHIEVE 5' MINIMUM EMBEDMENT IN ROCK
 3. STEEL PLATE LAGGING TO SPAN LOCATION OF THE PIPE BREAKTHROUGH TO PREVENT SOIL COLLAPSE. CONTRACTOR TO DESIGN AND PROVIDE FINAL BREAKTHROUGH DETAILS.




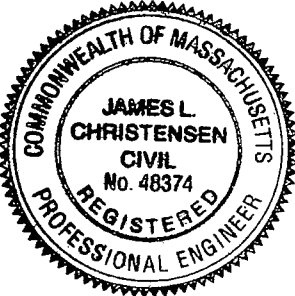



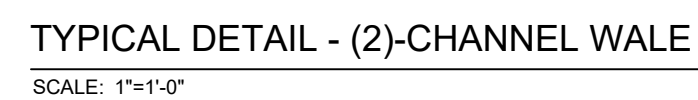
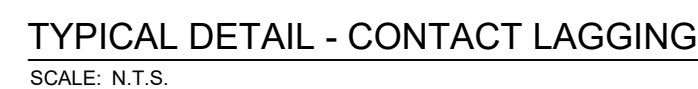
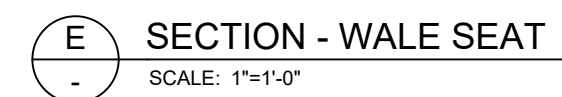
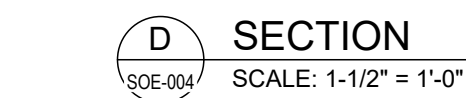
A RECEIVING PIT SECTION
SCALE: 1" = 4'

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RECEIVING PIT PLAN AND SECTION		SOE-003																																								



- SECTION NOTES:
1. STRATIGRAPHY BASED ON BORING B-4(OW).
 2. ELEVATION REFERENCED IS THE HIGHEST ALLOWABLE TOE ELEVATION. BOTTOM OF PILE MAY BE LOWER TO ACHIEVE 5' MINIMUM EMBEDMENT IN ROCK
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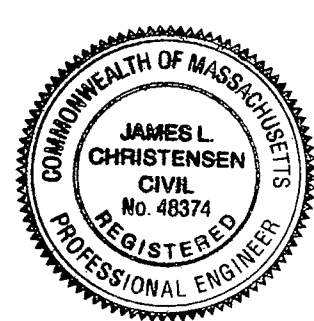
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JACKING PIT PLAN AND SECTION	Sheet No. SOE-004																																									



THIS LINE IS ONE INCH
LONG WHEN PLOTTED AT
FULL SCALE ON A 22" X
34" DRAWING

DETAILS

SOE-005



GENERAL NOTES:

- THESE DRAWINGS ARE FOR THE SCHEMATIC DESIGN FOR DEWATERING TO FACILITATE INSTALLATION OF A 60-INCH-DIAMETER CASING PIPE BELOW THE MBTA RAILROAD. THE INFORMATION PROVIDED ON THESE DRAWINGS IS STRICTLY LIMITED TO THE DEWATERING NEEDED TO SUPPORT THE CONSTRUCTION OF THE JACKED PIPE.
- THESE DRAWINGS DO NOT ADDRESS SAFETY ISSUES RELATED TO THE WORK. SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL BACKGROUND DRAWINGS ARE FROM AUTOCAD FILES PROVIDED VIA EMAIL FROM ENVIRONMENTAL PARTNERS GROUP, ON 7/25/2024.
- THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, OPENINGS AND VERIFY FIELD CONDITIONS AND SHALL CAREFULLY COMPARE SUCH FIELD MEASUREMENTS AND CONDITIONS AND OTHER INFORMATION KNOWN TO THE CONTRACTOR, WITH THE CONTRACT DOCUMENTS, BEFORE COMMENCING WORK AND PRIOR TO ORDERING MATERIALS AND DETAILS. DISCREPANCIES OR INCONSISTENCIES DISCOVERED, WHICH MAY INTERFERE WITH THE PROPER EXECUTION OF THE WORK, SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- NO CONTRACTOR, SUBCONTRACTOR, OWNER, AGENT, ETC. SHALL RELY ON DIMENSIONS, GRADES, LOCATIONS OF UTILITY LINES, AND LOCATIONS OF ADJACENT FACILITIES OR OTHER INFORMATION WITHOUT INDEPENDENTLY VERIFYING THE CORRECTNESS OF THE INFORMATION.
- ELEVATIONS ARE PROVIDED ON THESE DRAWINGS REFERENCE THE TOWN OF WEYMOUTH VERTICAL DATUM (EL. 0 = EL. -6.63 NAVD88)
- PRIOR TO THE START OF WORK, VERIFY THE LOCATION OF EXISTING STRUCTURES THAT WILL REMAIN.
- ALL WORK SHOWN SHALL BE INSTALLED IN ACCORDANCE WITH INDUSTRY STANDARD PRACTICES.
- THESE DRAWINGS SHOULD NOT BE SCALED. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS.
- DIMENSIONS BETWEEN THE DEWATERING WELLS AND THE RAILROAD ARE PROVIDED SOLELY FOR USE IN LOCATING THE WELL ELEMENTS. THE CONTRACTOR SHALL NOT LOCATE THE PERMANENT STRUCTURE USING THESE DIMENSIONS OR FROM AS-BUILT SUPPORT OF EXCAVATION LOCATIONS.
- INSTALLATION, OPERATION AND DECOMMISSIONING OF THE DEWATERING SYSTEM SHALL NOT FOUL THE RAILROAD BALLAST.
- CONTAMINATED BALLAST SHALL BE REMOVED AND REPLACED TO THE SATISFACTION OF MBTA AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE SAFE ACCESS TO THE WORK AREA FOR THE ENGINEER TO OBSERVE THE WORK.
- OBTAIN ALL NECESSARY PERMITS PRIOR TO THE START OF WORK.
- MONITOR THE RAILS FOR MOVEMENT THROUGHOUT THE DEWATERING PROGRAM IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- MONITOR GROUND WATER LEVELS CONTINUOUSLY USING VIBRATING WIRE PIEZOMETERS INSTALLED IN THE OBSERVATION WELLS.

CONTRACTOR SUBMITTALS:

- SUBMIT THE FOLLOWING AT LEAST FOUR WEEKS PRIOR TO MOBILIZATION. SUBMITTALS SHALL BE PREPARED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE COMMONWEALTH OF MASSACHUSETTS AND ENGAGED BY THE CONTRACTOR.
 - DEEP WELL DESIGN AND FINAL LAYOUT.
 - SHOP DRAWINGS FOR DEEP WELLS.
 - SUMP PIT LAYOUT AND DESIGN.
 - DEWATERING EQUIPMENT AND DETAILS.
 - GROUNDWATER SEDIMENTATION/TREATMENT SYSTEM DETAILS.
 - EFFLUENT DISCHARGE DETAILS INCLUDING VELOCITY DISSIPATION DETAILS.
 - DECOMMISSIONING PROCEDURES AND DETAILS.

DEWATERING NOTES:



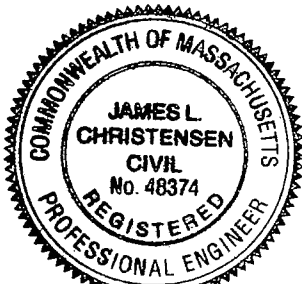


- THE FOLLOWING DEWATERING NOTES ARE TO BE USED IN CONJUNCTION WITH REQUIREMENTS OUTLINED IN THE ORDER OF CONDITIONS AND SPECIFICATION SECTION 02140.
- THE SCHEMATIC DEWATERING DESIGN PRESENTED IS BASED ON THE SUBSURFACE CONDITIONS AT THE BORING LOCATIONS SHOWN. SUBSURFACE CONDITIONS ARE ASSUMED TO BE CONSISTENT BETWEEN BORINGS. WHERE CONDITIONS VARY, ADJUSTMENTS TO THE LAYOUT OR QUANTITY OF DEWATERING WELLS MAY BE REQUIRED.
- THE DEWATERING SYSTEM SHALL CONSIST OF A MINIMUM OF 13 WELLS APPROXIMATELY AS SHOWN IN THESE PLANS. SEE PLAN (DW-002) FOR LOCATIONS, ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD.
- THE DEWATERING WELLS SHOWN ON THE CONTRACT DRAWINGS ARE TO BE CONSIDERED THE MINIMUM AMOUNT TO COMPLETE THE WORK AND SHOULD BE USED FOR BIDDING PURPOSES ONLY.
- THE CONTRACTOR SHALL PREPARE THEIR OWN DEWATERING SYSTEM DESIGN THAT IS DESIGNED IN CONJUNCTION WITH THE JACKING/RECEIVING PITS AND MEETS THE REQUIREMENTS HEREIN. THE DESIGN SHALL BE STAMPED BY A MASSACHUSETTS REGISTERED PROFESSIONAL ENGINEER ENGAGED BY THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY TO INSTALL THE JACKING/RECEIVING PITS AND DEWATERING SYSTEM AND ANY PERMITS TO DISCHARGE DEWATERING EFFLUENT INTO LOCAL STORM DRAINS OR INTO WATER WAYS, INCLUDING TESTING AND PRETREATMENT OF DEWATERING EFFLUENT.
- SUBMIT THE CONTRACTOR DEWATERING SYSTEM DESIGN TO THE ENGINEER FOR REVIEW, APPROVAL AND ACCEPTANCE PRIOR TO INSTALLATION.
- EACH 8-IN (NOM.) DIAMETER WELL SHALL BE INSTALLED WITHIN A 24-IN DIAMETER BOREHOLE AND SHALL HAVE A 15-FT SLOTTED SCREENED ZONE. SLOT SIZE SHALL BE 0.02IN (20 SLOT) UNLESS OTHERWISE REQUIRED BASED ON THE SELECTED FILTER. PVC RISER SHALL BE PLACED ABOVE THE SCREENED ZONE. WELL SPECIFICS TO BE PROVIDED BY CONTRACTOR IN THE SHOP DRAWING SUBMITTAL.
- FILTER PACK SHALL BE PLACED WITHIN THE SCREENED ZONE OF THE WELL. DESIGN WELL FILER GRADATION TO BE VERIFIED BASED ON IN-SITU CONDITIONS. THE REMAINDER OF THE BOREHOLE WILL BE FILLED WITH CLEAN SAND TO GROUND SURFACE.
- INSTALL 1-INCH-DIAMETER STANDPIPES TO THE BOTTOM OF EACH WELL TO MONITOR WELL PERFORMANCE AND WATER LEVELS.
- INSTALL PIEZOMETERS INTO ROCK AT JACKING/RECEIVING PITS AND ALONG THE PIPE RUN TO MONITOR GROUNDWATER DRAWDOWN.
- EACH WELL SHALL BE FURNISHED WITH AN ELECTRIC WELL PUMP CAPABLE OF MAINTAINING THE ESTIMATED FLOW RATES PER THE DESIGN SUBMITTAL.
- STANDBY EQUIPMENT AND STANDBY POWER SUPPLY SHALL BE PROVIDED.
- CONTRACTOR MAY CONSIDER WELLPOINTS FOR SHALLOW WELLS.
- DISCHARGE, TREATMENT AND MONITORING OF GROUNDWATER SHALL BE CONDUCTED IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS AND ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS. AT A MINIMUM, PUMPED GROUNDWATER SHALL PASS THROUGH A SEDIMENTATION TANK AND DEWATERING SEDIMENT BAG(S) PRIOR TO DISCHARGE. DISCHARGE FLOW TO BE MONITORED AND SAMPLED AT THE FREQUENCY REQUIRED BY APPLICABLE PERMITS.
- MAINTAIN THE WELLS AND EQUIPMENT THROUGHOUT THE DEWATERING PROGRAM.

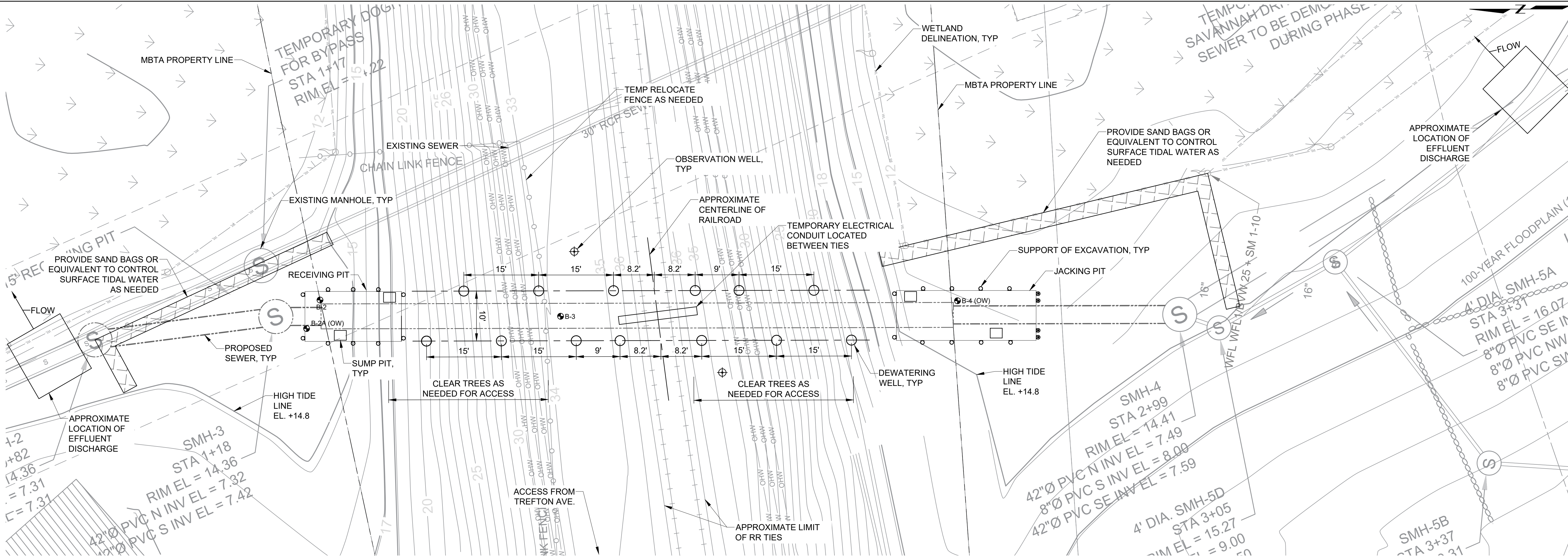
DEEP WELL CONSTRUCTION SEQUENCE:

- LAYOUT AND INSTALL A MINIMUM OF ONE (1) WELL AND ANCILLARY PIPING TO SEDIMENTATION TANK(S). WELL AND ANCILLARY PIPING TO BE INSTALLED AND MAINTAINED IN ACCORDANCE TO CONTRACT REQUIREMENTS.
- DEVELOP WELL(S) THAT HAVE BEEN INSTALLED AND PERFORM PUMP TEST.
- EVALUATE AQUIFER CHARACTERISTICS BASED ON THE RESULTS OF THE PUMP TEST. WELL SYSTEM SPACING, NUMBER, FILER CRITERIA AND DEPTHS WILL BE ADJUSTED BASED ON THE RESULTS OF THE PUMP TEST.
- LAYOUT AND INSTALL REMAINING WELLS AND ANCILLARY PIPING TO SEDIMENTATION TANK(S).
- BEGIN PUMPING OF WELLS AND MONITOR DRAW-DOWN AND PUMPING RATES.
- MONITOR AND TREAT DISCHARGED GROUNDWATER IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS.
- CONFIRM GROUNDWATER ELEVATIONS AT BREAK-IN / BREAK-OUT AND BEGIN JACKING OPERATIONS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
- DECOMMISSION DEWATERING WELLS AND OBSERVATION WELLS BY TREMIE GROUTING WITH CEMENT-BENTONITE GROUT AFTER COMPLETION OF PROJECT.
- REMOVE ALL WELLS TO A DEPTH OF 3 FEET AND BACKFILL WITH BALLAST TO THE GROUND SURFACE.

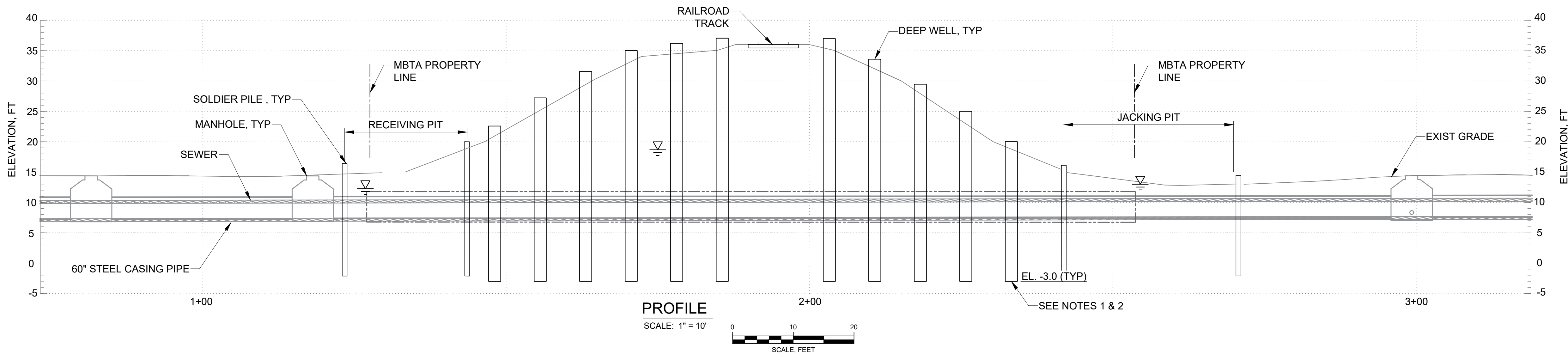
ABBREVIATIONS

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						Job No.	290-2101		DEWATERING NOTES		DW-001
					Designed by	J. CHRISTENSEN					
					Drawn by	D. CHECHURIN					
					Checked by	D. PECORINI					
					Approved by	J. CHRISTENSEN					
			MARK	DATE	DESCRIPTION						

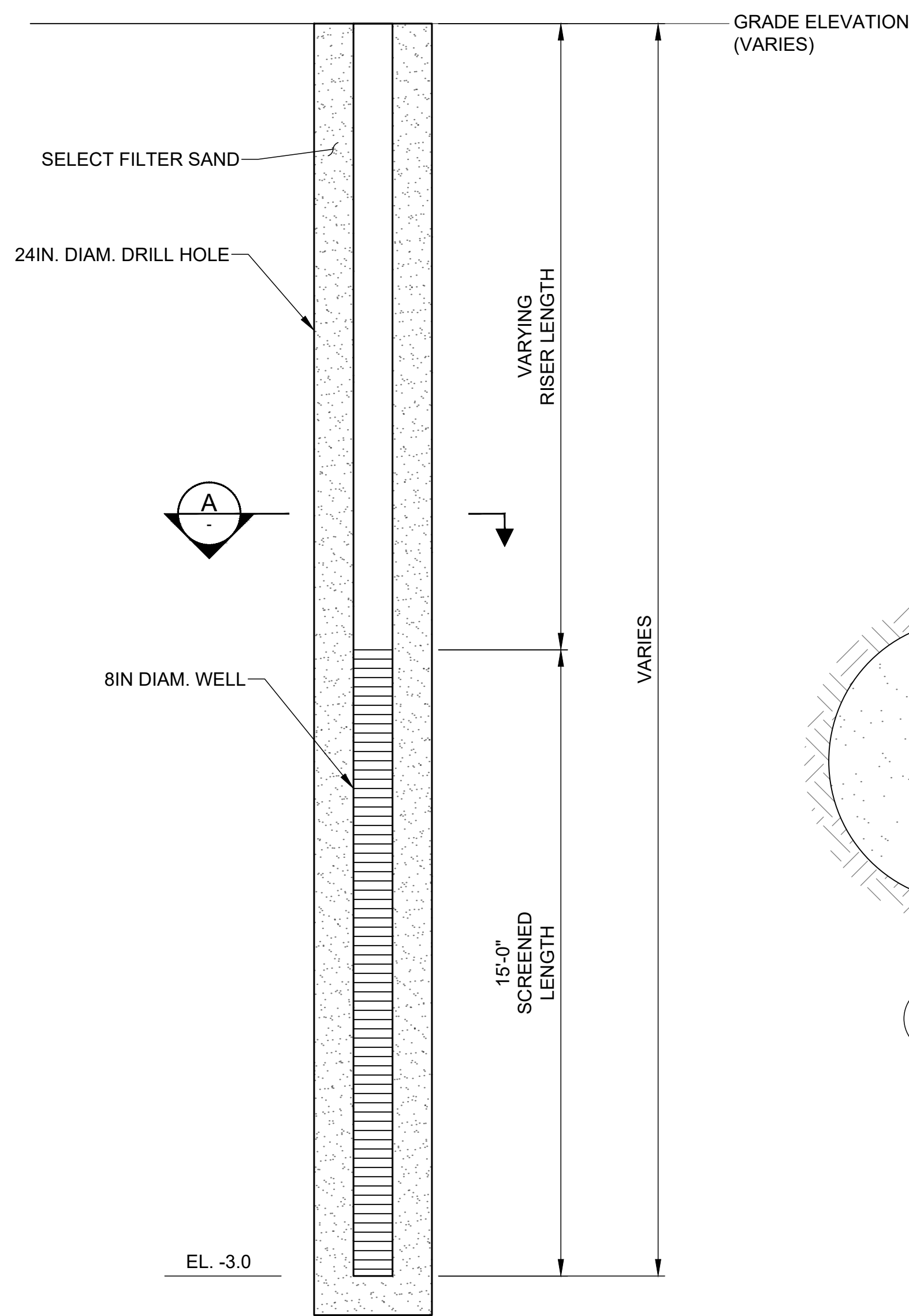


OVERALL PLAN
SCALE: 1" = 10'

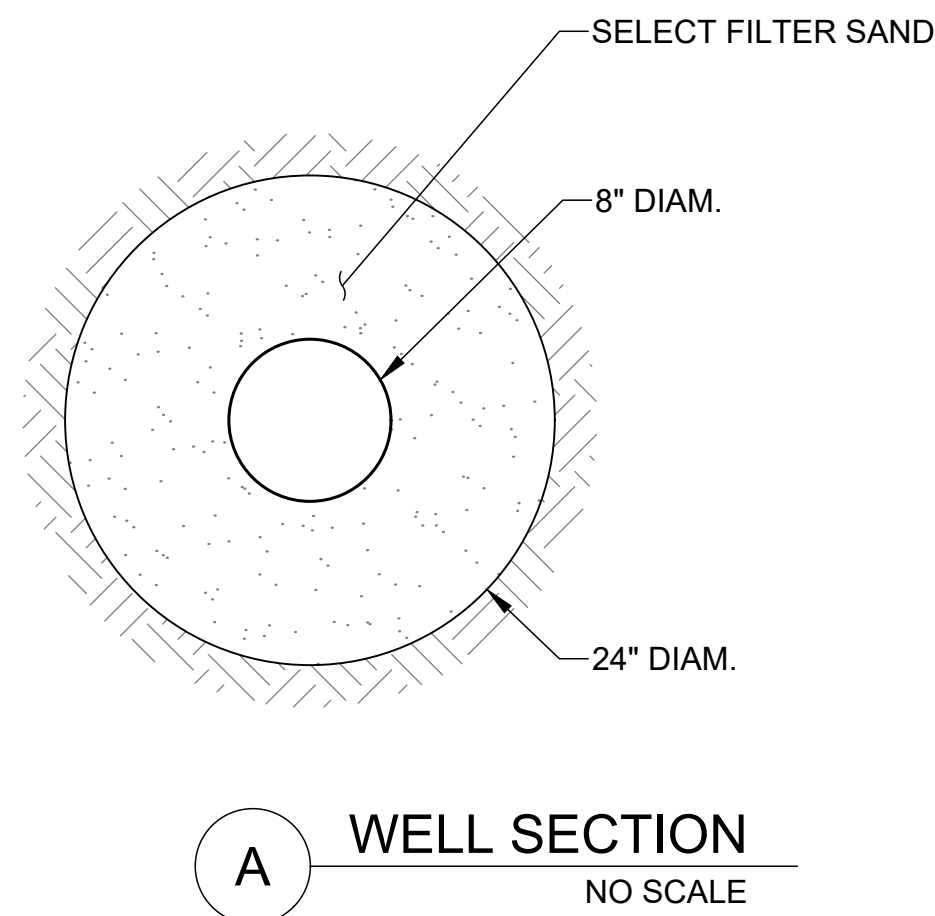


- NOTES:
1. WELLS WILL BE ADVANCED THROUGH DENSE GLACIAL TILL AND WEATHERED ROCK.
 2. DEPTHS AND EFFECTIVENESS OF DEWATERING WELLS WILL BE LIMITED BY THE UNDERLYING WEATHERED ROCK. ADJUST DEPTHS AND SPACING AS NECESSARY TO ACHIEVE THE REQUIRED DRAWDOWN.

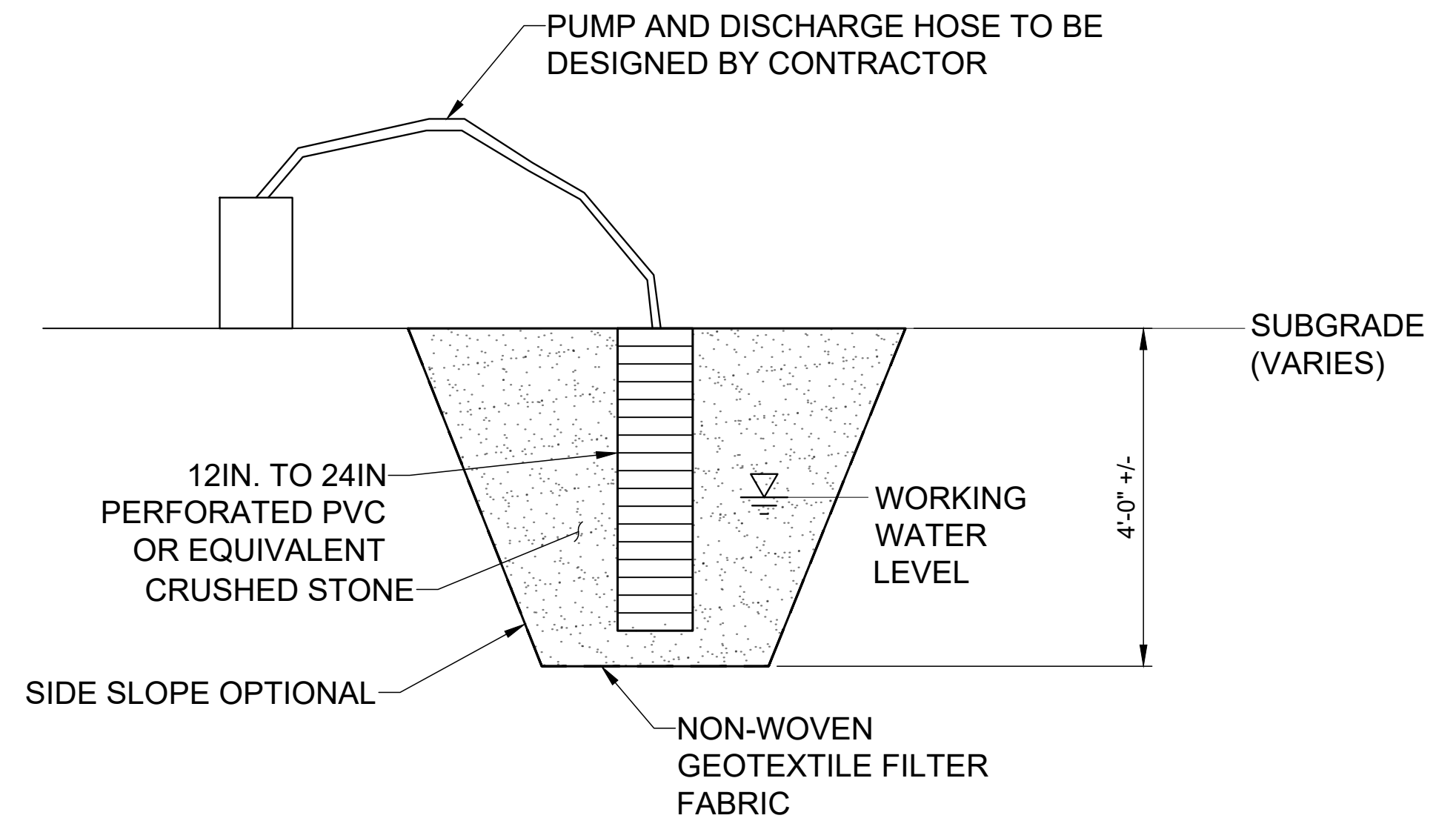
	 				Scale	AS NOTED	 THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING	LOWER CENTRAL INTERCEPTOR IMPROVEMENTS		FOR BID
					Date	MAY 2025		WEYMOUTH, MASSACHUSETTS		Sheet No.
		Job No.	290-2101			SCHEMATIC DEWATERING PLAN AND PROFILE		DW-002		
		Designed by	J. CHRISTENSEN							
		Drawn by	D. CHECHURIN							
		Checked by	D. PECORINI							
		Approved by	J. CHRISTENSEN							
			MARK	DATE	DESCRIPTION					



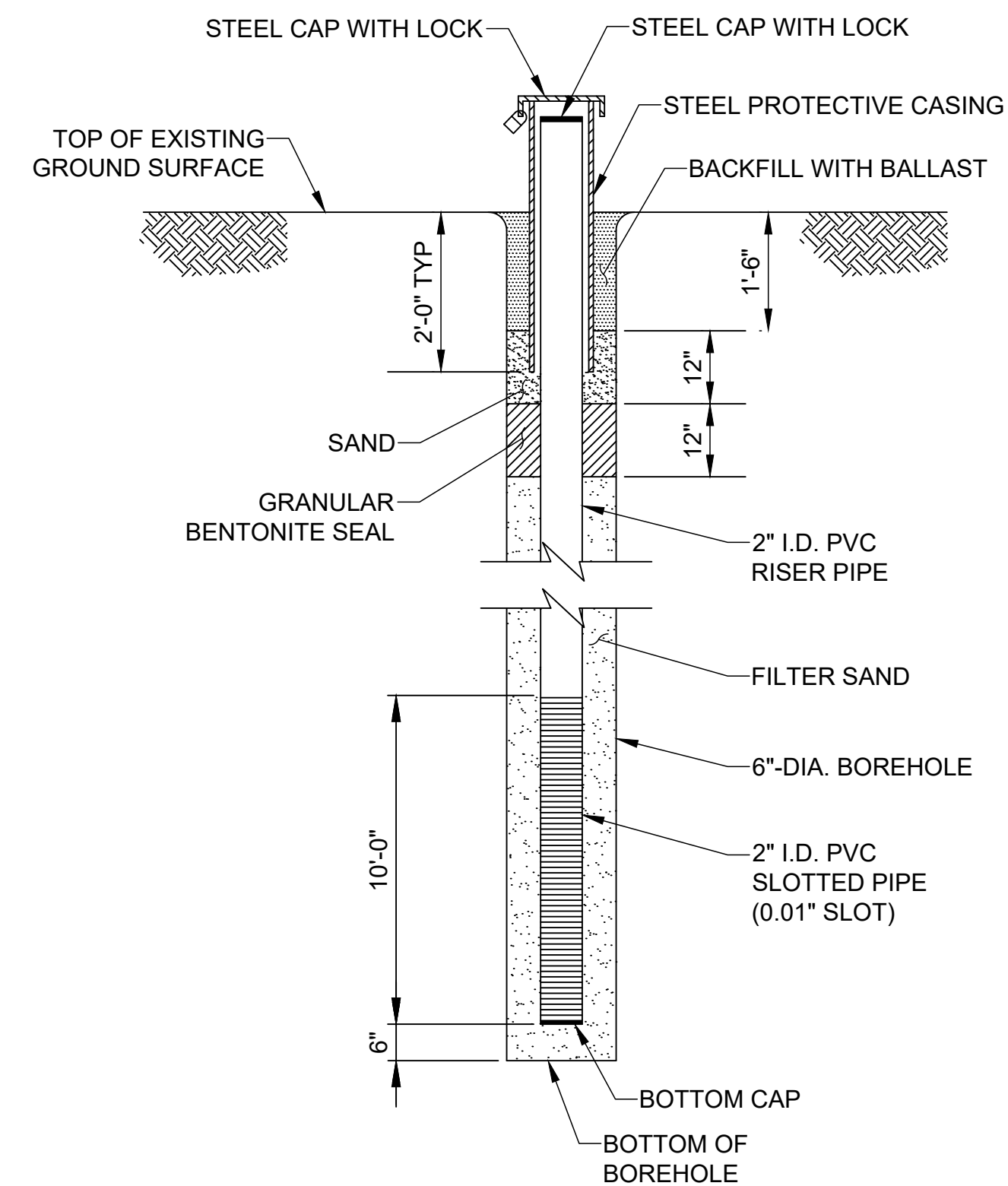
TYPICAL WELL DETAIL
NO SCALE






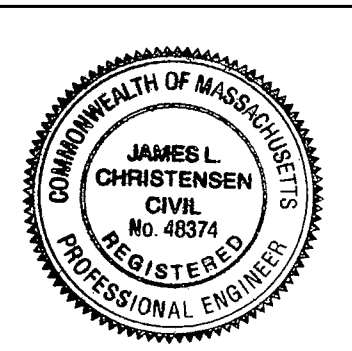

WELL SECTION
NO SCALE



TYPICAL SUMP DETAIL
NO SCALE



TYPICAL OBSERVATION WELL DETAIL
NO SCALE

	 					Scale	NO SCALE	 THIS LINE IS ONE INCH LONG WHEN PLOTTED AT FULL SCALE ON A 22" X 34" DRAWING	LOWER CENTRAL INTERCEPTOR IMPROVEMENTS		FOR BID
						Date	MAY 2025		WEYMOUTH, MASSACHUSETTS		Sheet No.
			Job No.	290-2101	SCHEMATIC DEWATERING DETAILS		DW-003				
			Designed by	J. CHRISTENSEN							
			Drawn by	D. CHECHURIN							
			Checked by	D. PECORINI							
			Approved by	J. CHRISTENSEN							
MARK			DATE	DESCRIPTION							