



Thomas Island Regional Pump Station &
Interceptor – Division I
Hazen and Sawyer Project Number: 30533-008

July 14, 2020



ADDENDUM NO. 3

To All Bidders:

Contractors submitting proposals for the above named project shall take note of the following changes, additions, deletions, clarifications, etc., in the Contract Documents, which shall become a part of and have precedence over anything contrarily shown or described in the Contract Documents, and as such shall be taken into consideration and be included in the Contractor's Bid Proposal.

Refer to the attached Drawings.

The return receipt requested with this communication will be deemed evidence that the bidder has received this Addendum and has followed the instructions outlined herein. Please sign, date, clearly print company name, and email to jhartwig@hazenandsawyer.com immediately upon receipt. Contractor shall also indicate receipt, where appropriate, on the Bid Form.

Company Name

HAZEN AND SAWYER, P.C.
735 Johnnie Dodds Blvd.
Suite 102
Mt. Pleasant, SC 29464
Tel. (843) 744-6467

Acknowledgement of Receipt

Date

Jared Hartwig, P.E.
HAZEN AND SAWYER, P.C.



**DRAWINGS:**

Drawings C001, C100-C106, C201, C202, C206, M101, and E102

Revised wetland boundaries to reflect latest wetland delineations and limits of disturbance (LOD). Revised drawings per previous addenda. See attached revised Drawings C001, C100-C106, C201, C202, C206, M101, and E102.

Drawing C102

Added a note “**All canopy trees, understory trees, and shrubs outside of the limits of disturbance shown are to remain undisturbed to maintain the existing natural buffer.**”

Drawing C105

Revised Planting Buffer requirements. See attached revised Drawing C105.

Drawing C901

Delete fencing detail and replace with **Vinyl Fencing** detail.

Drawing E101

Delete note 5 and replace with “**Contractor shall coordinate all aspects of utility installation with governing electrical utility. All materials and equipment shall be provided by the Contractor at no additional cost to the Owner. Reference Specification 16000 for details. Coordinate exact meter location with utility.**”

Added electrical utility meter location to generator platform. See attached revised Drawing E101.

**SPECIFICATIONS:**

**INVITATION TO BID**

Page ITB-1

Change bid date to “**August 12, 2020**”.

Location of Bid Opening will be “1<sup>st</sup> Floor Conference Room”. CWS will host a virtual meeting during the opening to allow each bidder to attend. Additional details will be provided via outlook meeting invite.

A Non-mandatory virtual Pre-Bid Meeting will be held at 10 AM on **July 21, 2020** to review the project changes. Additional information will be provided via Zoom meeting invite.

Page ITB-2

All questions must be brought to the Commissioners of Public Works’ attention at least seven (7) days prior to the bid date which is “**August 5, 2020**”.

**SECTION SC – SUPPLEMENTAL CONDITIONS**

Page SC-2

Line Item 1.7 – Replace this section as follows:

## 1.7 PERMITS AND LICENSES

A copy of the permits obtained by the CPW for this project will be provided to the Contractor for his information. Any additional permits or licenses required for the project shall be the sole responsibility of the Contractor. Contractor shall secure such permits and licenses and pay any associated fees and at no additional costs to the CPW. All construction shall adhere to the requirements of these permits and licenses.

The following permits have been obtained by the CPW:

1. SCDOT and Berkeley County Encroachment
2. USACE Nationwide Permit
3. SCDHEC Notice of Intent (NOI)
4. SCDHEC Construction Permit
5. SCDHEC Coastal Zone Certification (CZC)
6. Berkeley County Stormwater Management Program
7. Berkeley County Construction Activity Application (CAA) *<pending>*
8. Berkeley County Notification of Street Address

### SECTION 3 – BID FORM

Page B-4                    Replace Item B.18 from “Galvanized Steel Conduit for Utility Service” to “**Schedule 40 PVC Conduit for Electrical Service**” and change quantity from “650” to “**600**”.

Page B-4                    Replace Allowance on Part C.1 from “\$45,000” to “**\$46,000**”.

### SECTION 02831 – STEEL FENCING

Pages 1 thru 4            Delete in its entirety and replace with **SECTION 02831 – EXTRUDED POLYVINYL CHLORIDE (PVC) FENCING**.

## QUESTIONS AND CLARIFICATIONS

The following questions have been submitted by prospective bidders and responses or clarifications have been provided by the Engineer for bidders’ consideration.

Q1: Will the contractor be able to use the Daniel Island WWTP as a laydown yard?

A1: *Due to the poor condition of the soil at the plant, there a high possibility that heavy equipment will be bogged down and tracking mud/dirt on the HOA maintained roadway. In addition, HOA will not allow contractor’s heavy equipment travel on their road on a daily basis for the entire duration of the project. Therefore, the Daniel Island WWTP cannot be used as contractor’s laydown yard.*

Q2: (Addendum No 1). The 10' (scaled) LOD through the wetlands to the existing PS does not allow enough room for the equipment to install the 12" gravity line. Can we disturb and reinstate the width required?

A2: *Drawing C106 has been revised to reflect the 40' limit of disturbance (LOD) width identified in the Nationwide 12 Permit.*



## MISCELLANEOUS ATTACHMENTS

Attachment No 1 – Drawings C001, C100-C106, C200, C201, C202, C206, C900-C905, M101, E101, and E102

Attachment No 2 – Bid Form

Attachment No 3 – Specification SECTION 02831 – EXTRUDED POLYVINYL CHLORIDE (PVC) FENCING

Attachment No 4 – USACE Nationwide Permit and supporting documentation (Please add the Certificate of Credit Transfer and USACE response email to this permit)

Attachment No 5 – SCDHEC Notice of Intent (NOI)

Attachment No 6 – SCDHEC Construction Permit

Attachment No 7 – SCDHEC Coastal Zone Certification (CZC)

Attachment No 8 – Berkeley County Stormwater Management Program

Attachment No 9 – Berkeley County Construction Activity Application (CAA) <**pending**>

Attachment No 10 – Revised SCDOT Encroachment Permit

Attachment No 11 - Berkeley County Notification of Street Address Letter

**Attachment No 1**

**GENERAL NOTES**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND ALL APPLICABLE PERMITS.
- LOCATION SHOWN FOR UNDERGROUND UTILITIES AND STRUCTURES ARE BASED ON FIELD SURVEYS AND RECORD DRAWINGS AND ARE SHOWN FOR GENERAL INFORMATION ONLY. THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR IN ADVANCE OF THE WORK, BOTH HORIZONTALLY AND VERTICALLY, TO DETERMINE EXACT SIZE, MATERIAL, DEPTH, LOCATION, AND OTHER UTILITIES NOT SHOWN. EXISTING UTILITY CROSSING AND CONFLICTS SHALL BE COORDINATED WITH UTILITY OWNER AT NO ADDITIONAL COST TO THE CLIENT. CALL THE LOCAL PUBLIC UTILITIES LOCATING SERVICE AT LEAST 72 HOURS PRIOR TO DIGGING FOR LOCATION ASSISTANCE. CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITIES PRIOR TO DIGGING.
- WHEN NEW LINE IS WITHIN FIVE FEET OF EXISTING UTILITIES, CONTRACTOR SHALL DIG TEST PITS TO LOCATE EXISTING LINES IN ADVANCE OF PIPE LAYING OPERATIONS TO ALLOW ADEQUATE TIME FOR ANY NECESSARY RE-ALIGNMENTS OR ADJUSTMENTS.
- PROVIDE POWER POLE SUPPORT WHEN OPEN DITCH IS WITHIN 5'-0" OF POLE AND WHEN OWNER AND/OR CONDITIONS WARRANT. COORDINATE WITH POWER UTILITY. ADDITIONAL POLES NOT SPECIFICALLY SHOWN MAY ALSO REQUIRE TEMPORARY SUPPORT IF EXCAVATION IS WITHIN 5' OF POLES.
- ALL ITEMS SUCH AS: FENCES, STORM DRAINS, MAIL BOXES, SIGNS, UNDERGROUND CABLE, PROPERTY PINS, LANDSCAPED SHRUBBERY, ETC., THAT NEED TO BE REMOVED FOR CONSTRUCTION AND REPLACED SHALL BE PROTECTED AND RE-INSTALLED TO THE SATISFACTION OF THE OWNER. CONTRACTOR SHALL RE-ESTABLISH A TEMPORARY RELOCATION IMMEDIATELY AND IN NO CASE LONGER THAN BY THE END OF EACH WORK DAY. CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS AS NECESSARY FOR ITEMS SUCH AS FENCES THAT MUST BE MAINTAINED FOR CONTROL OF LIVESTOCK OR SECURITY. TEMPORARY FENCE LINES, ETC., SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
- PIPELINE SHALL HAVE A MINIMUM COVER OF 3'-6" (UNLESS NOTED OTHERWISE) AND LAID TO AVOID AIR POCKETS ALONG THE TOP OF PIPE. CONTRACTOR SHALL PERFORM HIS OWN GROUND SURVEY PRIOR TO PIPE INSTALLATION TO VERIFY GRADES AND ELEVATIONS.
- ALL AIR RELEASE VALVES TO BE PLACED AT HIGH SPOT OF PIPELINE AT STATIONS INDICATED PLUS OR MINUS ONE PIPE JOINT.
- PIPE DEFLECTIONS NOT EXCEED MAXIMUM ONE-HALF OF MANUFACTURER'S RECOMMENDED DEFLECTION ANGLE.
- ALL AREAS DISTURBED BEYOND THE LIMITS OF CONSTRUCTION SHALL BE RESTORED REGARDLESS OF AREA AFFECTED AT NO ADDITIONAL COST TO THE OWNER.
- ALL AIR RELEASE VALVES ARE TO BE INSTALLED AT LOCATIONS SHOWN +/- ONE PIPE JOINT IN ORDER TO ENSURE INSTALLATION AT HIGH/LOW POINTS RESPECTIVELY. ALL OTHER VALVES AND BENDS SHALL BE INSTALLED AT LOCATIONS INDICATED +/- 3'-0".
- ALL RESTRAINED JOINT LENGTHS ARE MINIMUM DISTANCES REQUIRED FROM AN APPLICABLE BEND/APPURTENANCE. ALL FITTINGS INSTALLED WITHIN RESTRAINED LENGTHS INDICATED SHALL BE RESTRAINED.
- CONTRACTOR SHALL INSTALL PIPELINES AND APPURTENANCES IN LOCATIONS AND AT GRADES INDICATED. CONTRACTOR TO MAKE MINOR ALIGNMENT CHANGES AND DEFLECT PIPE WITHIN ACCEPTABLE DEFLECTIONS TO GENERALLY FOLLOW LAYOUT INDICATED.
- CONTRACTOR SHALL CLEAR AND GRUB RIGHT OF WAY AND TEMPORARY CONSTRUCTION EASEMENT AS NECESSARY TO COMPLETE INSTALLATION OF PIPELINE.
- INSIDE/ALONG ROADWAY RIGHTS-OF-WAY, CONTRACTOR SHALL DISTURB AND RESTORE AREAS NECESSARY FOR CONSTRUCTION IN ACCORDANCE WITH APPROVED SCDOT ENCROACHMENT PERMIT. LIMITS OF CONSTRUCTION EXTEND TO ROADWAY PAVEMENT AS NECESSARY. ALL CONSTRUCTION ACTIVITIES SHALL BE CONTAINED WITHIN ESTABLISHED EASEMENTS AND RIGHT OF WAYS SHOWN ON THE CONSTRUCTION DRAWINGS.
- WHEN FIELD CUTS OF PIPE ARE NECESSARY THE CONTRACTOR SHALL CUT PIPE WITH A PIPE SAW IN ACCORDANCE WITH APPLICABLE AWWA REQUIREMENTS. FIELD WELDING OR TORCH-CUTTING ARE PROHIBITED ON THIS CONTRACT.

- CONTRACTOR SHALL SAW-CUT EXISTING PAVEMENT FOR ALL ASPHALT DRIVES/ROADS AND RESTORE PAVEMENT IN ACCORDANCE WITH SPECIFICATIONS AND DETAIL 1/C900.

**WETLANDS REQUIREMENTS**

- THERE SHALL BE NO DISTURBANCE TO THE WETLANDS AREAS EXCEPT AS INDICATED ON PLANS AND IN THE UNITED STATES ARMY CORPS OF ENGINEERS NATIONWIDE 12 PERMIT.
- CONTRACTOR SHALL INSTALL SEDIMENT CONTROL FENCES TO BORDER LIMITS OF DISTURBANCE, AS SHOWN. INSTALL DOUBLE ROW OF SILT FENCE WHERE INDICATED.
- ANY DEWATERING WILL BE DISCHARGED EITHER INTO A SEDIMENTATION DEVICE OR A SEDIMENT FILTER BAG PRIOR TO DISCHARGE.
- THE CONTRACTOR SHALL STABILIZE THE DISTURBED AREAS ADJACENT TO WETLANDS AND WATERS OF THE STATE IMMEDIATELY FOLLOWING INSTALLATION.

**ADDITIONAL REQUIREMENTS FOR WORK INSIDE OF SCDOT RIGHT-OF-WAY**

- CONTRACTOR SHALL PROVIDE SCDOT WITH A DETAILED TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN SCDOT RIGHT-OF-WAY THAT COMPLIES WITH THE SCDOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, LATEST EDITION, AND EXECUTE TRAFFIC CONTROLS IN ACCORDANCE WITH SCDOT APPROVED TRAFFIC CONTROL PLAN. THE TRAFFIC CONTROL PLAN SHALL BE SUBMITTED TO SCDOT A MINIMUM OF SEVEN DAYS PRIOR TO THE WORK REQUIRING TRAFFIC CONTROL. ALL WORK WITHIN THE PUBLIC HIGHWAY RIGHT-OF-WAY SHALL BE IN STRICT ACCORDANCE WITH THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION (SCDOT) ENCROACHMENT PERMIT AND IN ACCORDANCE WITH THE APPROVED TRAFFIC CONTROL PLAN.
- INSTALL TRAFFIC CONTROL AND SAFETY MEASURES AS NEEDED IN ACCORDANCE WITH SCDOT REQUIREMENTS. TRAFFIC CONTROL DEVICES TO BE MAINTAINED THROUGHOUT THE PROJECT DURATION AS REQUIRED. LANE CLOSURES SHALL BE IN ACCORDANCE WITH SCDOT PERMIT. TRAFFIC CONTROL STANDARDS MUST BE ADHERED TO ON ALL LOCATIONS WITHIN SCDOT'S RIGHT-OF-WAY.
- ALL EROSION CONTROL, CLEARING, GRUBBING, INSTALLATION AND RESTORATION TO BE IN ACCORDANCE WITH SPECIFICATIONS AND DRAWINGS.
- TEMPORARILY STORE AND REMOVE SOILS IN SUCH A WAY TO PROTECT EXISTING ROAD PAVEMENT.
- ALL FILL MATERIAL PLACED SHALL BE IN ACCORDANCE WITH SCDOT REQUIREMENTS.
- FINISH GRADE SWALES. FERTILIZE AND SEED DISTURBED AREAS. RELOCATE AND REPLACE ALL SEDIMENT AND EROSION CONTROL MEASURES AT END OF EACH DAY. ALL SLOPES 2:1 OR GREATER SHALL RECEIVE PERMANENT EROSION CONTROL MATTING OR HYDROSEEDING.
- ALL BACKFILL IN SCDOT RIGHT-OF-WAY SHALL MEET MINIMUM LIFT REQUIREMENTS OF 6 INCHES WHEN COMPACTED.
- ALL PIPE MARKERS IN SCDOT ROW SHALL BE FIBERGLASS AS APPROVED BY SCDOT.
- FOR ALL DITCHES WITHIN THE SCDOT RIGHT-OF-WAY THAT HAVE SIDELINE GRADES DISTURBED, THE DITCH SHOULD BE REPAIRED IN ACCORDANCE WITH DETAIL 0227011 AND AS SHOWN ON PLANS.
- ALL STORM DRAIN INSTALLATIONS AND REPAIRS, IF APPLICABLE, SHALL COMPLY WITH SCDOT STANDARD SPECIFICATIONS AND DRAWINGS.
- ROAD CONSTRUCTION SIGNS SHALL BE UTILIZED AND MAINTAINED PROPERLY IN ACCORDANCE WITH SCDOT STANDARD SPECIFICATIONS AND DRAWINGS.
- THE PROJECT LIMITS ALONG CLEMENTS FERRY ROAD MAY CONTAIN HEADWALLS, STORM DRAIN PIPES, LANDSCAPING AND ETC. THE CONTRACTOR SHALL ADDRESS ANY DISTURBANCE TO THESE ITEMS WITH SCDOT AND/OR PROPERTY OWNERS PRIOR TO CONSTRUCTION.

**SEQUENCE OF CONSTRUCTION OPERATIONS**

- NO WORK TO BE PERFORMED PRIOR TO RECEIPT OF NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COVERAGE FROM SCDHEC.
- CONTRACTOR TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO ANY COMMENCEMENT OF WORK.
- CONTRACTOR SHALL SIGN AND IMPLEMENT THE REQUIREMENTS OF THE APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND CONTACT THE SCDHEC REGIONAL EA OFFICE LISTED BELOW PRIOR TO STARTING ANY LAND-DISTURBING ACTIVITIES. THE CONTRACTOR SHALL ABIDE BY ALL REQUIREMENTS OF THE SOUTH CAROLINA NPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SCR100000. THE SWPPP AND ALL REQUIRED DOCUMENTATION SHALL BE KEPT UP TO DATE AND MAINTAINED IN A SAFE LOCATION ON-SITE AT ALL TIMES DURING CONSTRUCTION.  
  
LOWCOUNTRY EA CHARLESTON  
1362 McMillan Avenue, Suite 300  
Charleston, SC 29405  
(843) 953-0150
- INSTALL PHASE ONE EROSION AND SEDIMENTATION CONTROL MEASURES AS SHOWN ON THE CONTRACT DRAWINGS. NO CONSTRUCTION OR LAND DISTURBANCE ACTIVITIES MAY BEGIN UNTIL ALL EROSION AND SEDIMENTATION CONTROL MEASURES HAVE BEEN INSTALLED AROUND CONSTRUCTION AREAS. IF CLEARING IS REQUIRED FOR INSTALLATION OF A GIVEN MEASURE, ALL OTHER MEASURES SHOWN SHALL BE INSTALLED FIRST. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS BETWEEN THE DISTURBED AREA AND ALL WATERS OF THE STATE (WoS). A 10-FOOT BUFFER SHALL BE MAINTAINED WHERE POSSIBLE BETWEEN THE SILT FENCE AND THE WoS.
- ONCE ALL PHASE ONE MEASURES HAVE BEEN INSTALLED, THE SITE SHALL BE CLEARED AND GRUBBED AS SHOWN ON THE CONTRACT DRAWINGS. CONTRACTOR LAYDOWN/STOCKPILE/CONCRETE WASHOUT AREAS SHALL BE LOCATED AS SHOWN ON THE CONTRACT DRAWINGS.
- UPON COMPLETION OF CLEARING AND GRUBBING, PHASE TWO EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED.
- ONCE ALL PHASE TWO MEASURES HAVE BEEN INSTALLED, CONSTRUCTION ACTIVITIES MAY BEGIN. ONLY THE LENGTH OF TRENCH IN WHICH PIPE CAN BE INSTALLED IN ONE DAY'S TIME SHALL BE OPEN AT ANY TIME, WITH SPOIL MATERIAL PLACED ON THE UPHILL SIDE OF THE TRENCH. PIPING SHALL BE CAPPED AT END OF EACH WORK DAY TO PREVENT SEDIMENT FROM ENTERING. TRENCHES SHALL BE BACKFILLED AT END OF EACH WORK DAY AND DISTURBED AREA SEEDED WITH TEMPORARY SEEDING MEASURES AS NECESSARY.
- EARTHWORK EXCAVATION AND FILL OPERATIONS, AS WELL AS PUMP STATION CONSTRUCTION, SHALL BE PERFORMED IN ACCORDANCE WITH STANDARD CONSTRUCTION TECHNIQUES. ALL EXCAVATION DEWATERING FLOWS SHALL PASS THROUGH A SEDIMENT FILTERING DEVICE PRIOR TO DISCHARGE. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE. TOPSOIL STOCKPILE SHALL HAVE PERIMETER EROSION CONTROL MEASURES INSTALLED AND SEEDED WITH TEMPORARY SEEDING MEASURES DURING CONSTRUCTION ACTIVITIES.
- STORM DRAINAGE DITCHES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES AT ALL TIMES. POSITIVE STORMWATER DRAINAGE AWAY FROM CONSTRUCTION ACTIVITIES SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.
- TEMPORARY SEEDING MEASURES SHALL BE EMPLOYED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT WHERE STABILIZATION MEASURES WOULD BE PRECLUDED BY SNOW OR FROZEN GROUND CONDITIONS, OR WHERE CONSTRUCTION ACTIVITY WILL BE RESUMED WITHIN 14 DAYS.
- ONCE ALL EARTHWORK AND CONSTRUCTION ACTIVITIES ARE COMPLETE, FINAL GRADING MAY BEGIN. CONTRACTOR SHALL FILE A NOTICE OF TERMINATION TO SCDHEC.
- UPON COMPLETION OF FINAL GRADING, PERMANENT SEEDING, MULCHING, AND FERTILIZING MEASURES

SHALL BE EMPLOYED ON ALL DISTURBED AREAS AS SPECIFIED IN THE CONTRACT DOCUMENTS. ALL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ENTIRE SITE HAS BEEN STABILIZED.

**SEDIMENT AND EROSION CONTROL**

- IF NECESSARY, SLOPES WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
  - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
  - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF INDICATED INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
- PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING PER SPECS IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C REG. 72-300 ET SEQ. AND SCR100000.
- TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- ALL WATERS OF THE STATE (WoS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE

CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WoS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WoS.

- LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.

- A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.

- INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.

- MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.

- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.

- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).

- THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
  - WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
  - WASTEWATER FROM WASHOUT AND CLEAN OUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
  - FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
  - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.

- AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.

- IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.

- A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

**SEEDING SCHEDULE**

SCHEDULE NO.	COMMON SEED NAME	APPLICATION RATE (lb/acre)	PLANTING DATES
<b>TEMPORARY</b>			
1	Rye (grain)	56	September 1 - March 15
	Rye (oats)	75	
2	Ryegrass	50	September 1 - April 15
3	Browntop or Japanese Millet	40	March 15 - August 31

**NOTES**

- All seeded areas shall receive 500#/AC 10-10-10 fertilizer and 1500 - 2000#/AC straw mulch.

**PERMANENT**

1	Rye (grain)	10	September 1 - November 10
	Bahiagrass	40	
	Crimson Clover (annual)	5	
2	Browntop Millet	10	March 15 - August 31
	Bahiagrass	30	
	Sericea Lespedeza	40	

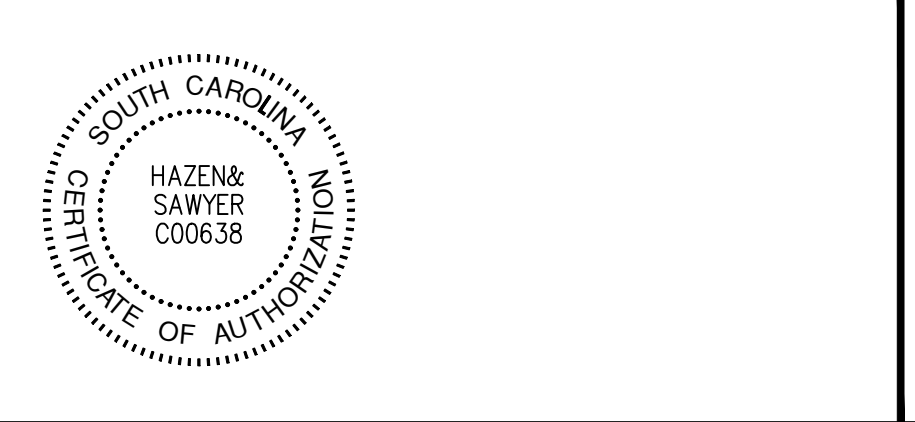
**NOTES**

- Other acceptable coastal grass blends can be found in Appendix C "Temporary and Permanent Seeding Rate Tables" of the SCDHEC Stormwater Management BMP Field Manual.
- All seeded areas shall receive 3000#/AC ground cover textured agricultural limestone, 1000#/AC 10-10-10 fertilizer, and 4000#/AC straw mulch.
- Application Method:

Application Method	Ground Slope
Broadcast Seeding (Unmulched)	0 - 2%
Broadcast Seeding (Mulched)	2 - 10%
Hydroseeding	Greater than 10%

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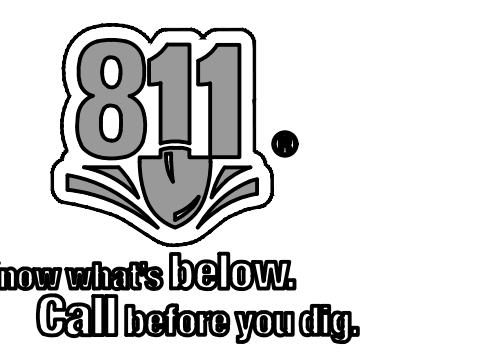
PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	L FANNING
DRAWN BY:	L FANNING
CHECKED BY:	
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
1	CONSTRUCTION
REV	ISSUED FOR



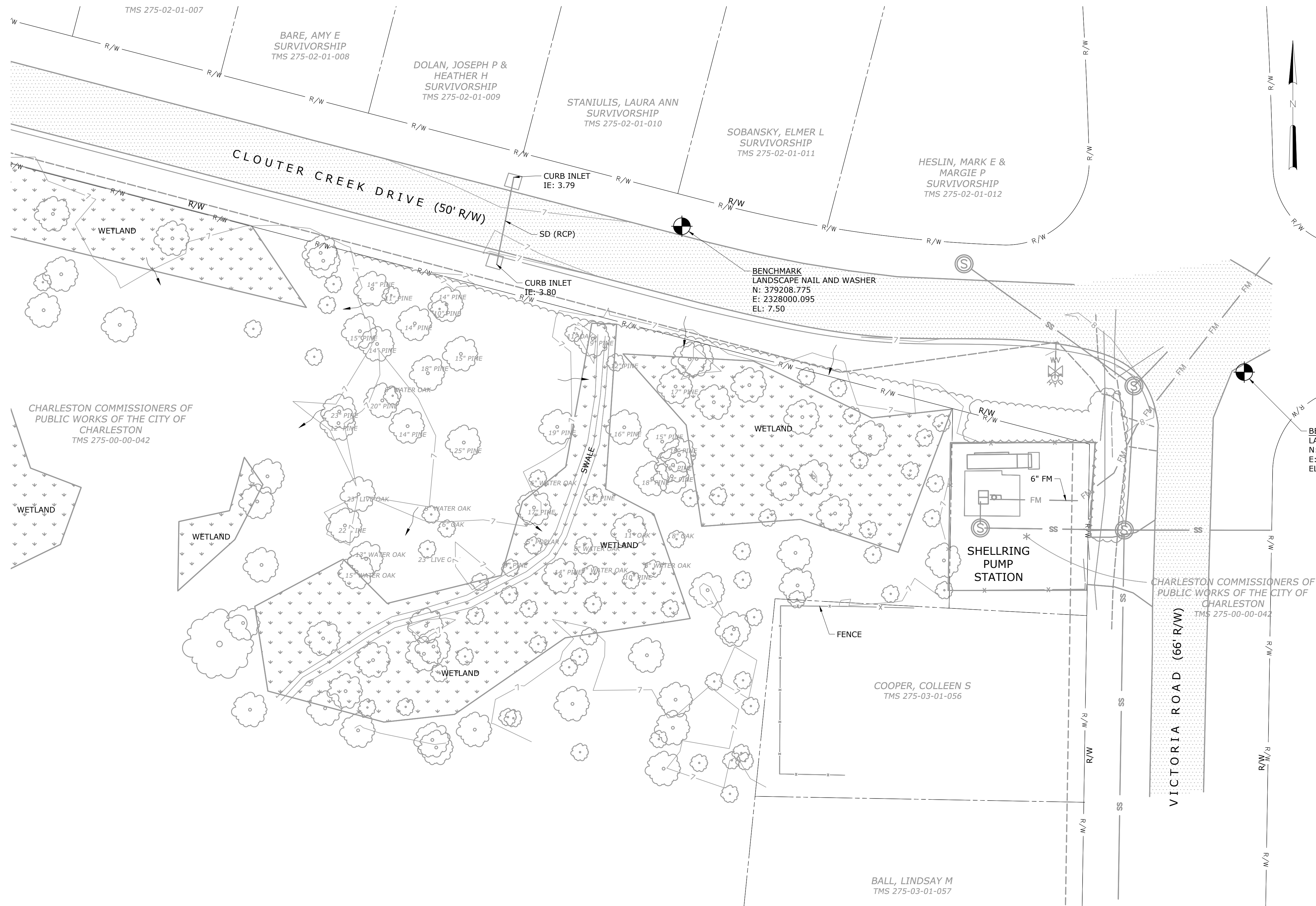
**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC  
**THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I & II**

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C001



**GENERAL CIVIL NOTES**



- NOTES:**
1. TOPOGRAPHIC INFORMATION TAKEN FROM LAND SURVEYS BY: CORNERSTONE SURVEYING AND ENGINEERING, DATED JULY 13, 2017 AND AUGUST 2, 2017
  2. ALL VERTICAL DATUM (ELEVATIONS) ARE NAVD88
  3. ALL HORIZONTAL DATUM ARE SOUTH CAROLINA STATE PLANE COORDINATES, NAD 83 (2011 ADJUSTMENT).
  4. FEMA 100-YEAR FLOOD ELEVATION: 11.00 (NAVD88) ALONG CLEMENTS FERRY ROAD AND 10.00 (NAVD88) AT PUMP STATION SITE, OBTAINED FROM FEMA FLOOD MAP NUMBERS 45015C0760E AND 45015C0720E, DATED DECEMBER 7, 2018.

**EXISTING SITE PLAN**  
1" = 20'

➔ DIRECTION OF SURFACE WATER FLOW

File: D:\0033\CHAR\0033\0033\DESIGN\DRAWINGS\CIVIL\101\_Saved by LFANNING Save Date: 4/22/2020 1:48 PM  
 PLOT DATE: 4/22/2020 8:37 AM BY: LFANNING

PROJECT ENGINEER:	J. HARTWIG		
DESIGNED BY:	L. FANNING		
DRAWN BY:	L. FANNING		
CHECKED BY:	C. RAGOS		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
1	CONSTRUCTION	JAN 2020	HAZEN
REV	ISSUED FOR	DATE	BY



**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC  
**THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I**

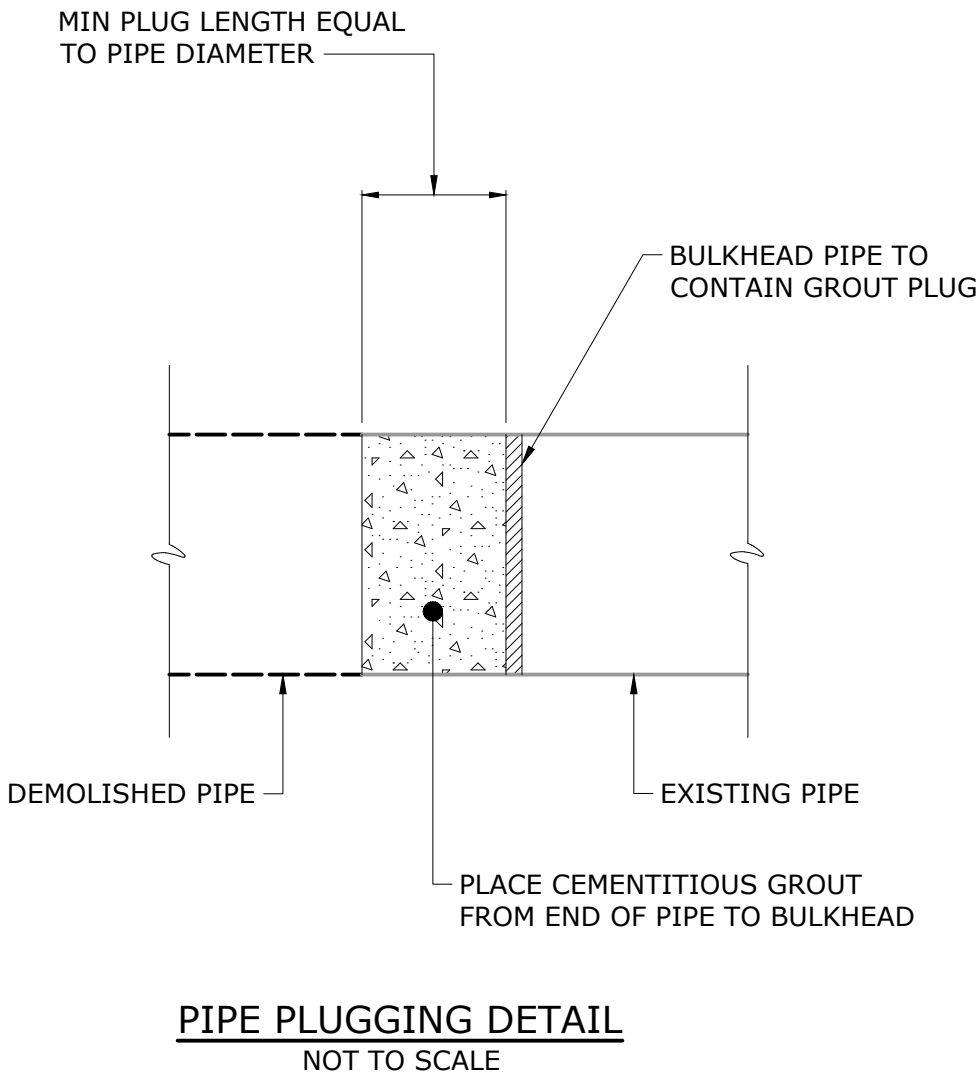
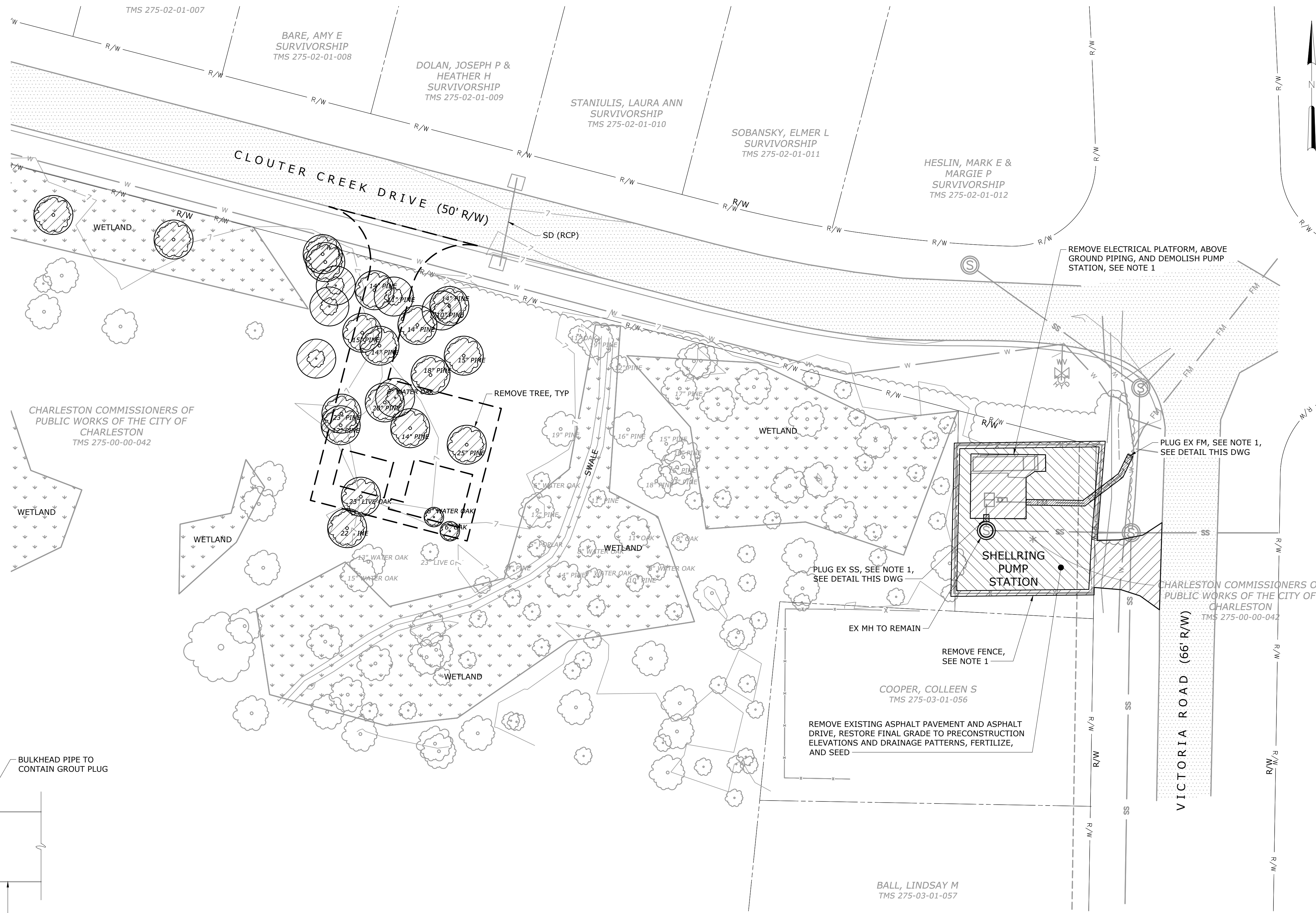
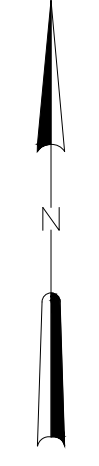
**PUMP STATION  
CIVIL  
EXISTING SITE PLAN**

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C100



**NOTES:**

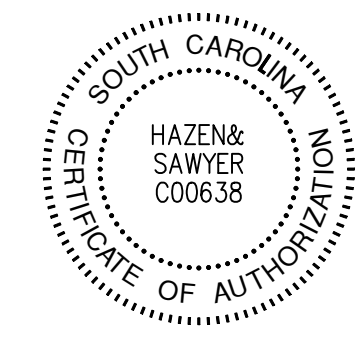
- EXISTING PUMP STATION TO REMAIN IN SERVICE DURING ENTIRE CONSTRUCTION PROCESS. DEMOLITION/ABANDONMENT OF EXISTING PUMP STATION, EXISTING ELECTRICAL PLATFORM, EXISTING SANITARY SEWER, AND EXISTING FORCEMAIN TO BE PERFORMED AFTER RECEIVING SCDHEC PERMIT TO OPERATE THE NEW PUMP STATION AND COMPLETING APPROPRIATE OPERATIONAL PERIOD. CONTRACTOR SHALL CLEAN PUMP STATION WETWELL, PUNCH HOLES IN BOTTOM OF STRUCTURES TO ALLOW FOR NORMAL GROUNDWATER FLUCTUATION, AND DEMOLISH STRUCTURES TO 36-INCHES BELOW GRADE AND FILL WITH SAND OR GRAVEL. RESTORE FINAL GRADE TO PRECONSTRUCTION ELEVATIONS AND DRAINAGE PATTERNS, FERTILIZE, AND SEED.
- SEE SPECIFICATION SECTIONS 01520, 01540, AND 02050 FOR DEMOLITION REQUIREMENTS AND SEQUENCE OF CONSTRUCTION.
- SEE REFERENCE DRAWINGS FOR DETAILS ON EXISTING PUMP STATION.
- REFER TO SPECIFICATION 01540 FOR EQUIPMENT AND MATERIALS TO BE RETAINED BY OWNER.



**DEMOLITION PLAN**  
1" = 20'

REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	JAN 2020	HAZEN

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	J. HARTWIG
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

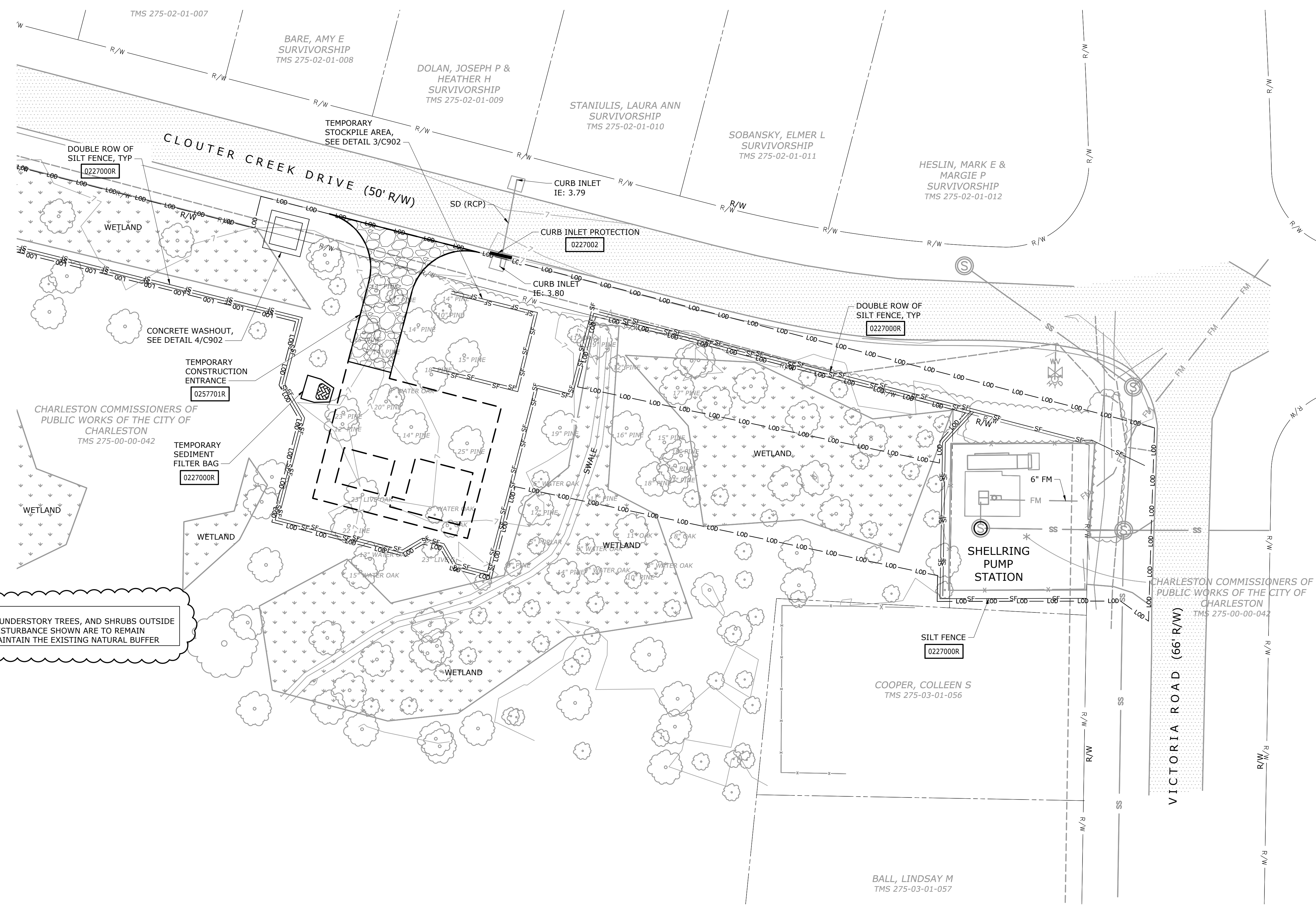
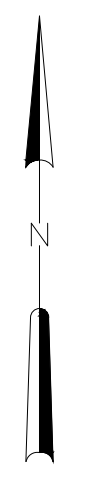
**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC  
**THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I**

**PUMP STATION  
CIVIL  
DEMOLITION PLAN**

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C101

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 PLOT DATE: 4/22/2020 8:37 AM BY: LFANNING

**NOTES:**  
 1. SEE DRAWING C001 FOR ADDITIONAL SEDIMENT AND EROSION CONTROL REQUIREMENTS



**EROSION CONTROL PLAN**  
 1" = 20'

NOTE:  
 ALL CANOPY TREES, UNDERSTORY TREES, AND SHRUBS OUTSIDE OF THE LIMITS OF DISTURBANCE SHOWN ARE TO REMAIN UNDISTURBED TO MAINTAIN THE EXISTING NATURAL BUFFER

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REV	ISSUED FOR	DATE	BY
3	ADDENDUM No. 3	APR 2020	HAZEN
2	ADDENDUM No. 1	JAN 2020	HAZEN
1	CONSTRUCTION	JAN 2020	HAZEN

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	J. HARTWIG
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



**Hazen**  
 HAZEN AND SAWYER  
 735 JOHNNIE DODDS BLVD, SUITE 102  
 MOUNT PLEASANT, SOUTH CAROLINA 29464

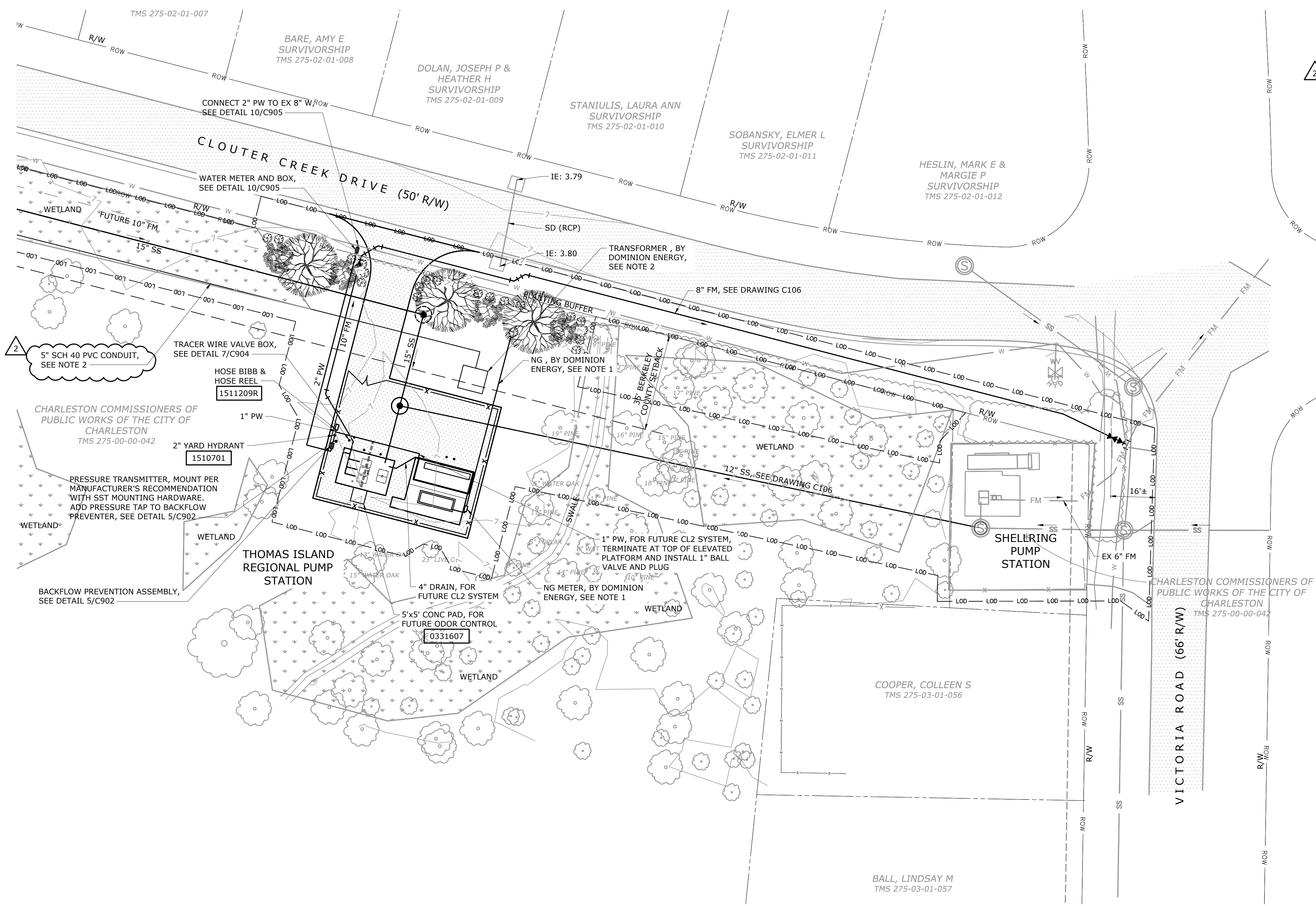


THOMAS ISLAND REGIONAL PUMP STATION  
 AND INTERCEPTOR  
 DIVISION I

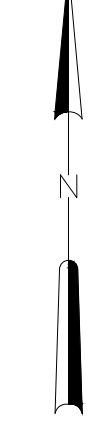
PUMP STATION  
 CIVIL  
 EROSION CONTROL PLAN

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C102





- NOTES:**
1. DOMINION ENERGY TO FURNISH AND INSTALL NATURAL GAS PIPING UP TO NATURAL GAS METER, INCLUDING METER.
  2. CONTRACTOR TO COORDINATE A PRE-CONSTRUCTION MEETING WITH DOMINION ENERGY PRIOR TO INSTALLATION OF 5-INCH SCHEDULE 40 PVC CONDUIT. CONDUIT TO BE INSTALLED 4-FEET BELOW GRADE AND ALL FITTINGS TO BE GALVANIZED STEEL.



**SITE PIPING PLAN**  
1" = 20'

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 PLOT DATE: 4/22/2020 8:30 AM BY: LFANNING

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	J. HARTWIG
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
ADDENDUM No. 1	JAN 2020 HAZEN
CONSTRUCTION	JAN 2020 HAZEN
REV	ISSUED FOR DATE BY



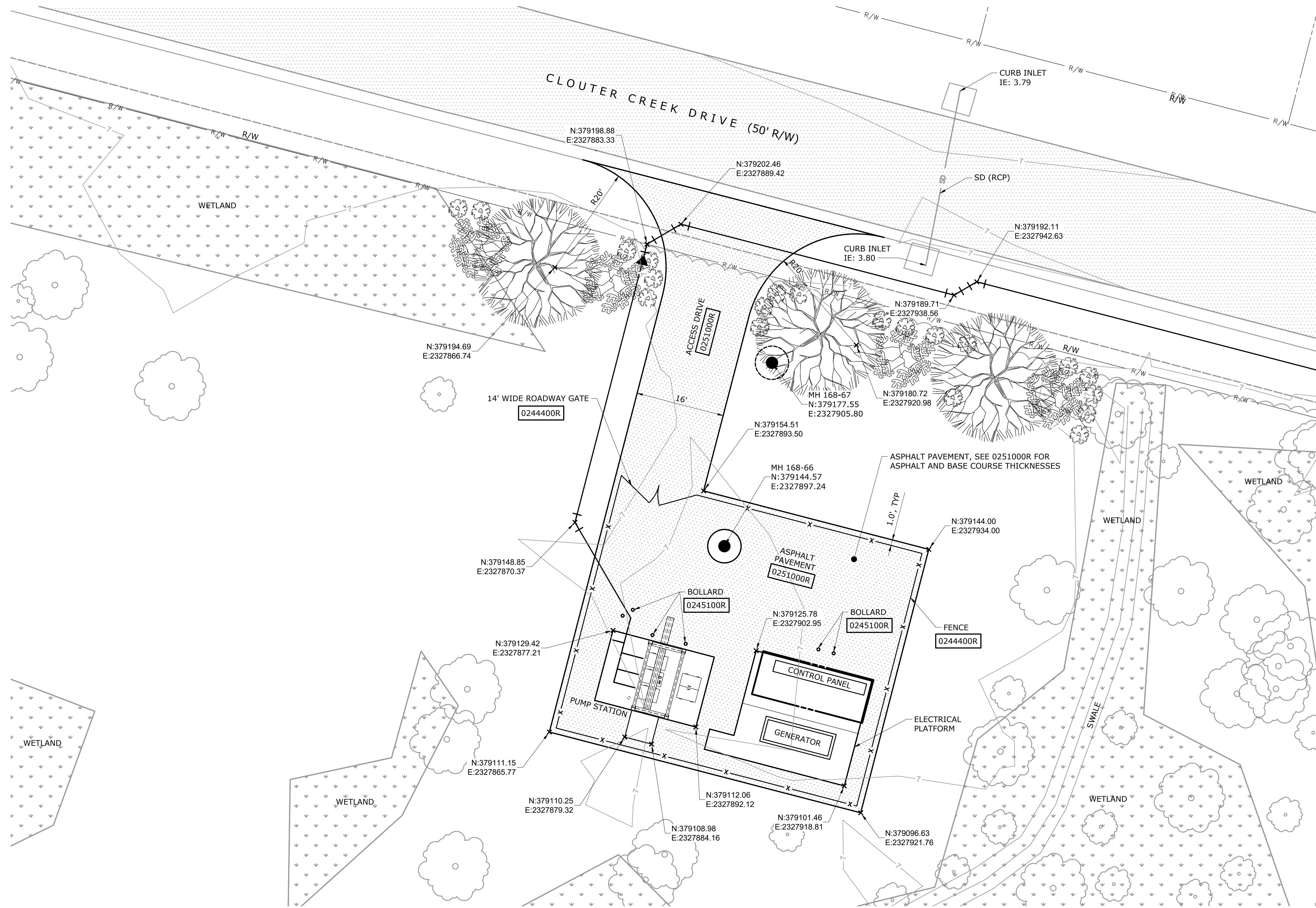
**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464



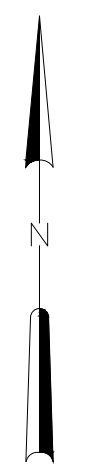
**THOMAS ISLAND REGIONAL PUMP STATION AND INTERCEPTOR DIVISION I**

**PUMP STATION CIVIL SITE PIPING PLAN**

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C103



**STAKING AND PAVING PLAN**  
1" = 10'



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REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	JAN 2020	HAZEN

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	J. HARTWIG
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464



THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I

PUMP STATION  
CIVIL  
STAKING AND PAVING PLAN

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C104



- NOTES:**
1. CONTRACTOR MAY ONLY SUBSTITUTE TREE AND SHRUB SPECIES LISTED WITH SPECIES THAT ARE APPROVED BY BERKELEY COUNTY PLANNING AND ZONING ADMINISTRATOR. BUFFERYARD PLANTINGS TO BE IN ACCORDANCE WITH BERKELEY COUNTY CODE OF ORDINANCE, APPENDIX A - ZONING, ARTICLE 17 - BUFFERYARDS.
  2. EXISTING VEGETATION TO REMAIN UNDISTURBED WITHIN THE 15 FOOT TYPE E BUFFERYARD. IF VEGETATION IS DAMAGED OR REMOVED, CONTRACTOR SHALL PROVIDE NEW PLANTINGS TO MEET TYPE E BUFFERYARD PLANTING REQUIREMENTS AND SCHEDULE AN INSPECTION WITH BERKELEY COUNTY PLANNING AND ZONING AND RECEIVE APPROVAL THAT PLANTINGS SATISFY TYPE E BUFFERYARD REQUIREMENTS.



**GRADING AND DRAINAGE PLAN**  
1" = 10'

**PLANTING PLAN (SEE NOTE 1)**

COVER TYPE	QUANTITY	COMMON NAME	SCIENTIFIC NAME	MINIMUM PLANTING HEIGHT	MINIMUM CONTAINER SIZE
CANOPY	3	RED MAPLE	ACER RUBRUM	8 FEET	N/A
UNDERSTORY	4	SOUTHERN BAYBERRY	MYRICA CERIFERA	6 FEET	N/A
SHRUB	20	FOSTER HOLLY	ILEX X ATTENUATA "FOSTERI"	18-24 INCHES	3 GALLON

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3	ADDENDUM No. 3	APR 2020	HAZEN
2	ADDENDUM No. 1	JAN 2020	HAZEN
1	CONSTRUCTION	JAN 2020	HAZEN

PROJECT ENGINEER: J. HARTWIG  
 DESIGNED BY: J. HARTWIG  
 DRAWN BY: L. FANNING  
 CHECKED BY: C. RAGOS  
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



**Hazen**  
 HAZEN AND SAWYER  
 735 JOHNNIE DODDS BLVD, SUITE 102  
 MOUNT PLEASANT, SOUTH CAROLINA 29464

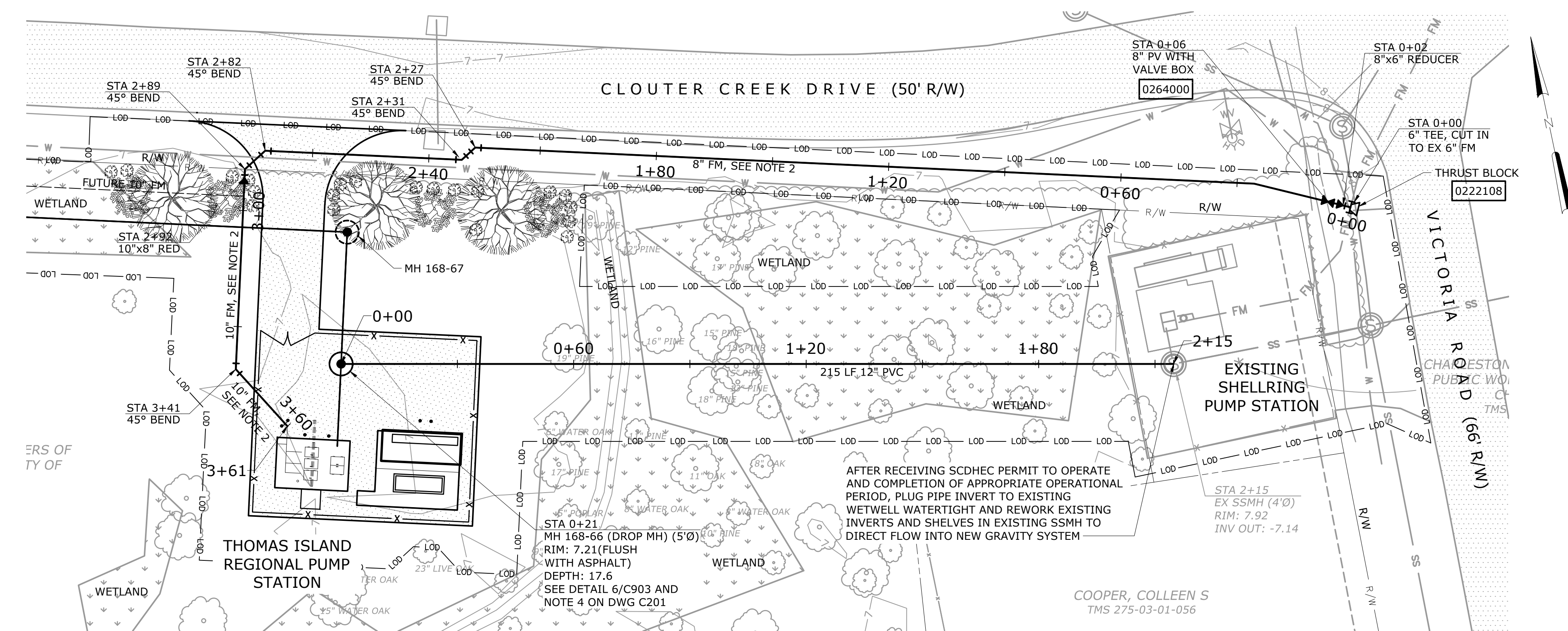


THOMAS ISLAND REGIONAL PUMP STATION  
 AND INTERCEPTOR  
 DIVISION I

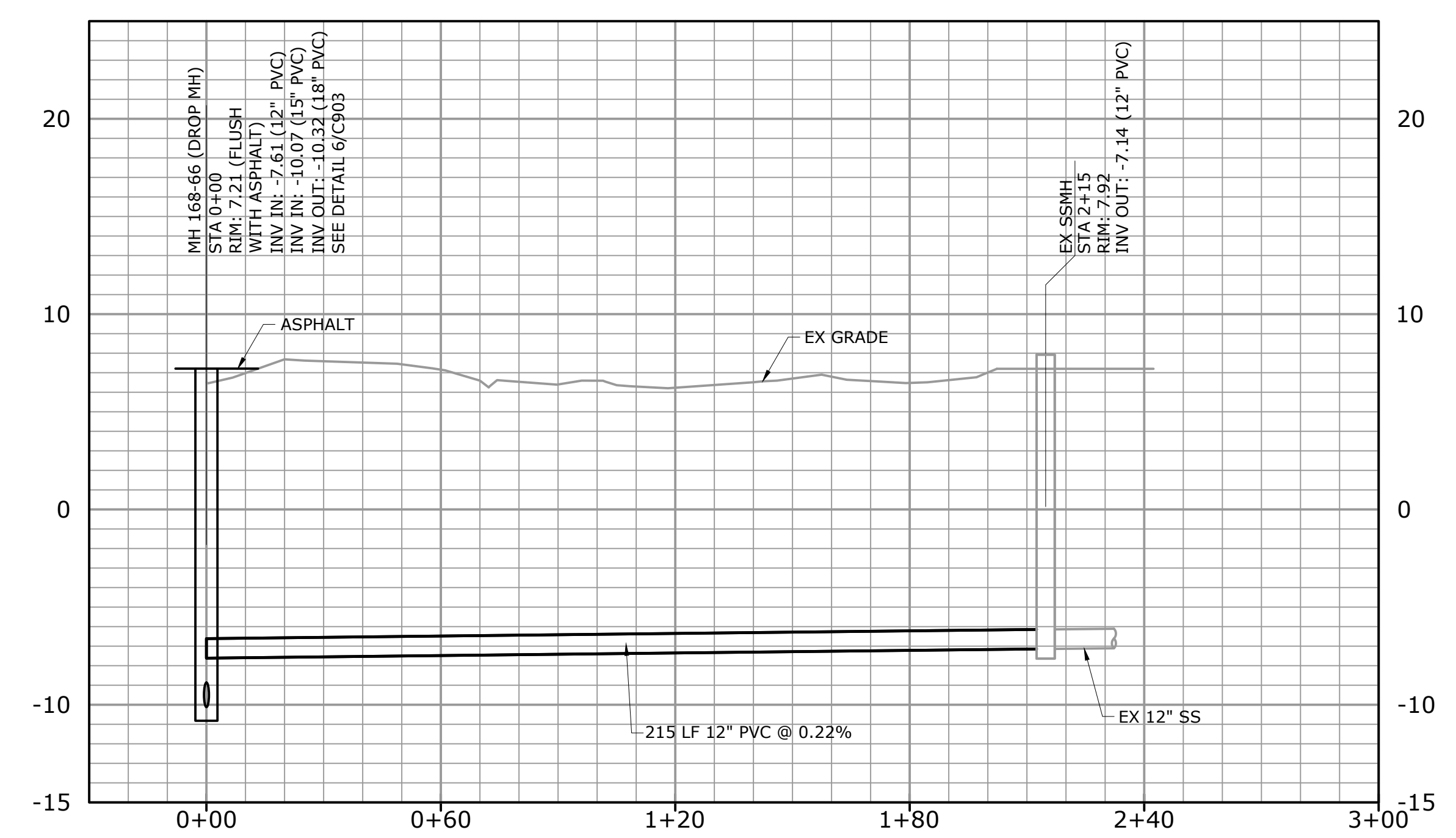
PUMP STATION  
 CIVIL  
 GRADING AND DRAINAGE PLAN

DATE: JANUARY 2020  
 HAZEN NO.: 30533-008  
 CONTRACT NO.: 01  
 DRAWING NUMBER:  
**C105**

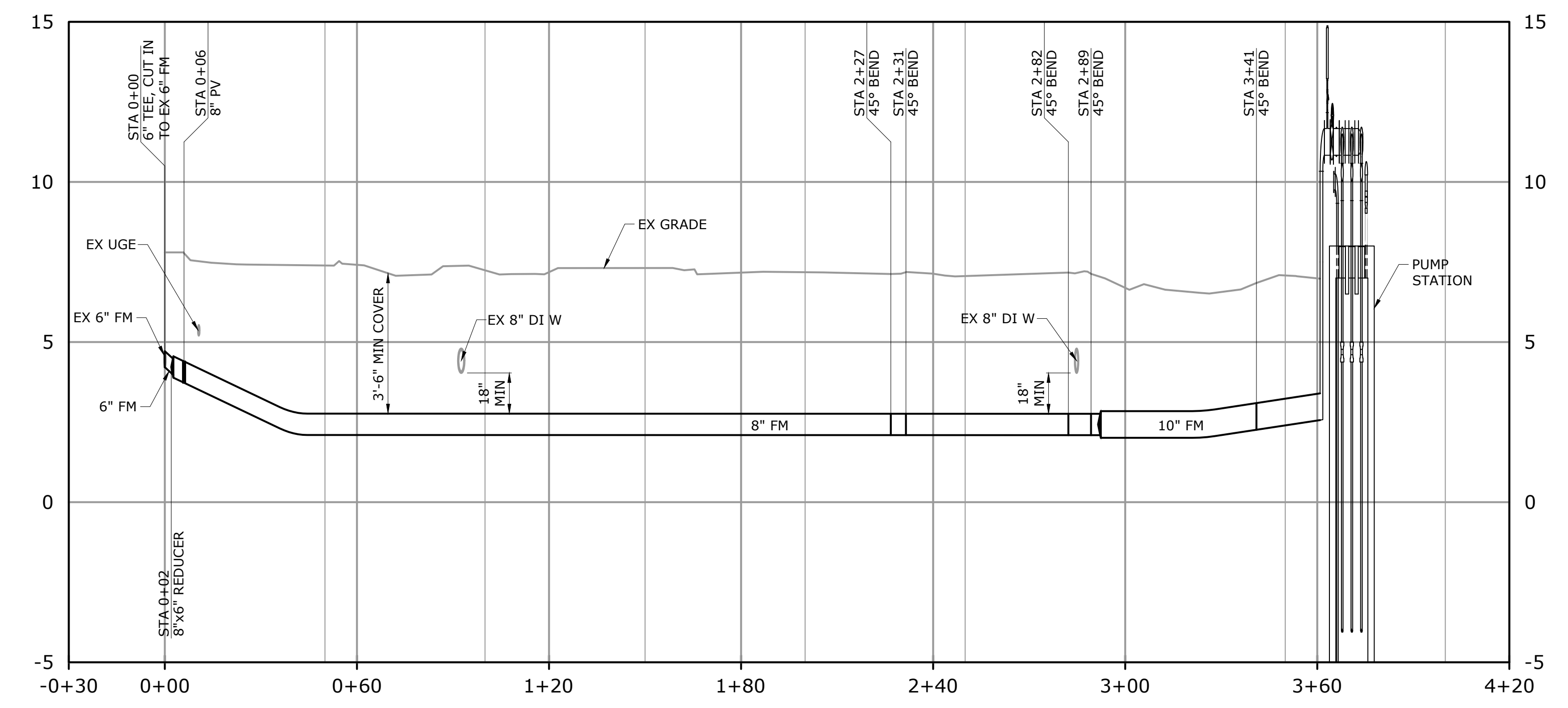
- NOTES:**
- SEE DRAWING C001 FOR ADDITIONAL SCDOT AND WETLAND REQUIREMENTS.
  - ALL FORCEMAIN PIPING TO BE RESTRAINED.



**PLAN - PUMP STATION**  
1" = 20'



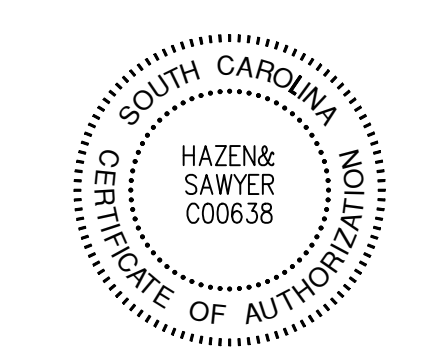
**PROFILE - GRAVITY SEWER**  
H: 1" = 30' V: 1" = 6'



**PROFILE - FORCEMAIN**  
H: 1" = 30' V: 1" = 3'

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 PLOT DATE: 4/22/2020 3:55 AM BY: LFANNING

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	J. HARTWIG
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	
1	CONSTRUCTION
REV	ISSUED FOR
	DATE
	BY

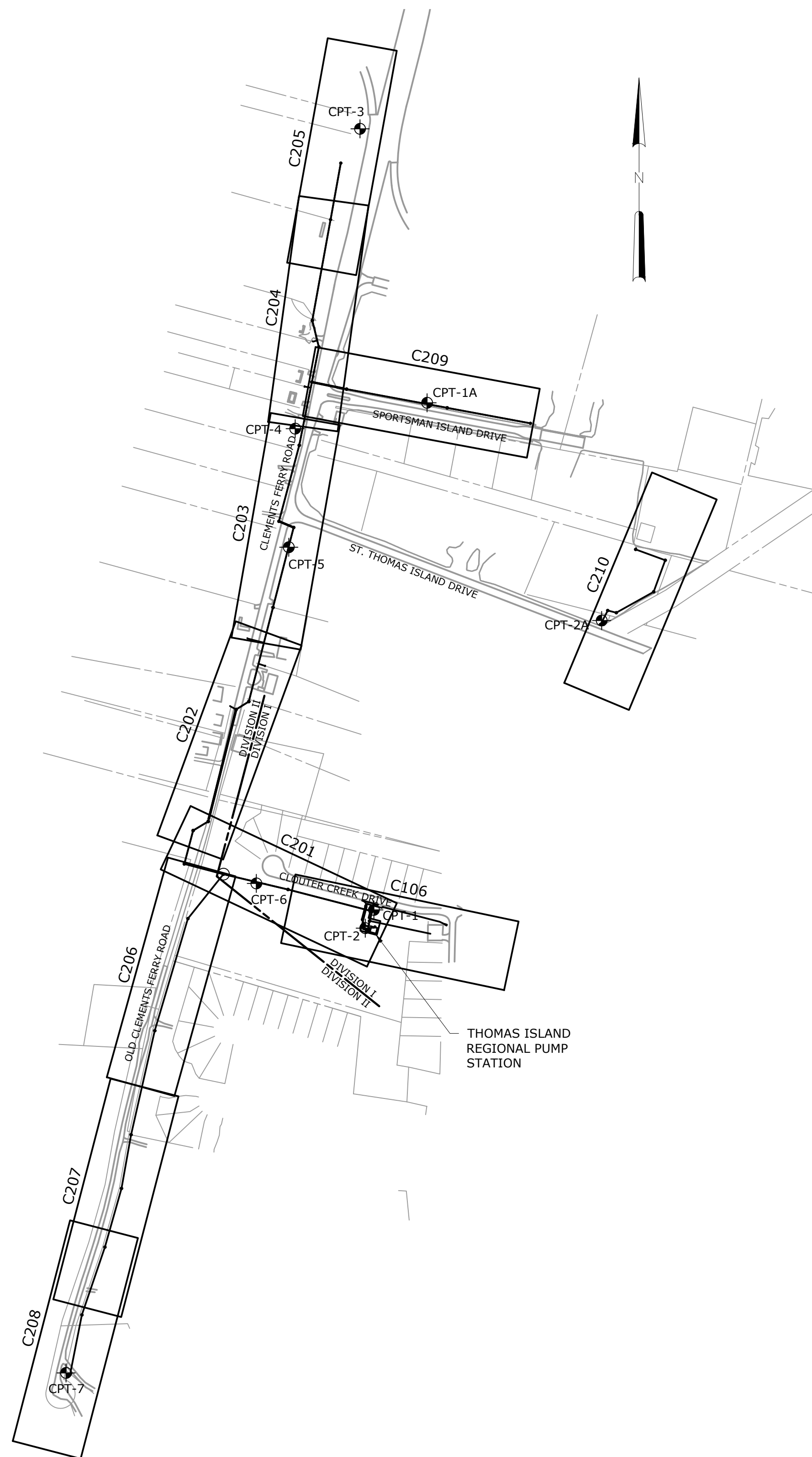


**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC  
**THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I**

**PUMP STATION  
CIVIL  
GRAVITY SEWER AND FORCEMAIN**

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C106



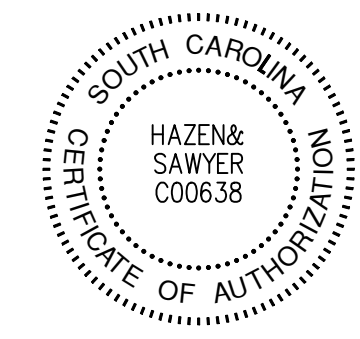
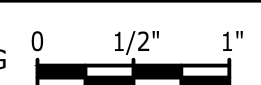
⊕ APPROXIMATE SOIL BORING LOCATION

**OVERALL KEY PLAN**  
1" = 300'

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 PLOT DATE: 02/20/2020 8:38 AM BY: LFANNING

REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	JAN 2020	HAZEN

PROJECT ENGINEER: J. HARTWIG  
 DESIGNED BY: L. FANNING  
 DRAWN BY: L. FANNING  
 CHECKED BY: C. RAGOS  
 IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



**Hazen**  
 HAZEN AND SAWYER  
 735 JOHNNIE DODDS BLVD, SUITE 102  
 MOUNT PLEASANT, SOUTH CAROLINA 29464



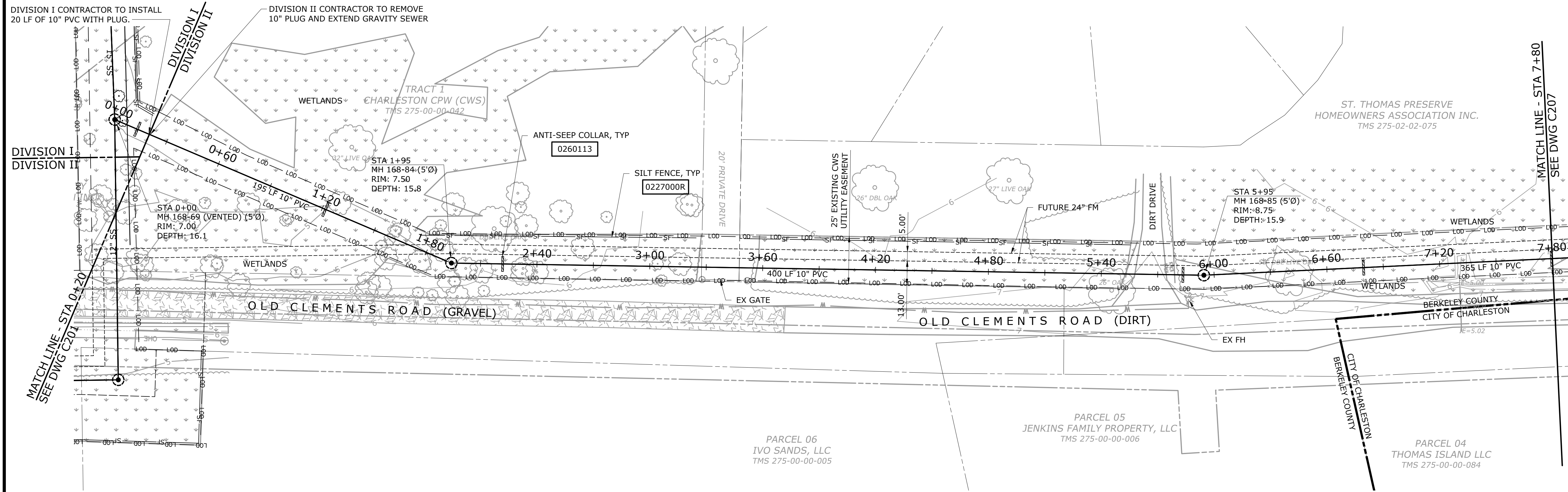
THOMAS ISLAND REGIONAL PUMP STATION  
 AND INTERCEPTOR  
 DIVISION I & II

CLEMENTS FERRY RD  
 GRAVITY SEWER  
 CIVIL  
 OVERALL KEY PLAN

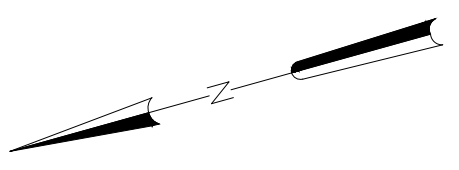
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HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C200





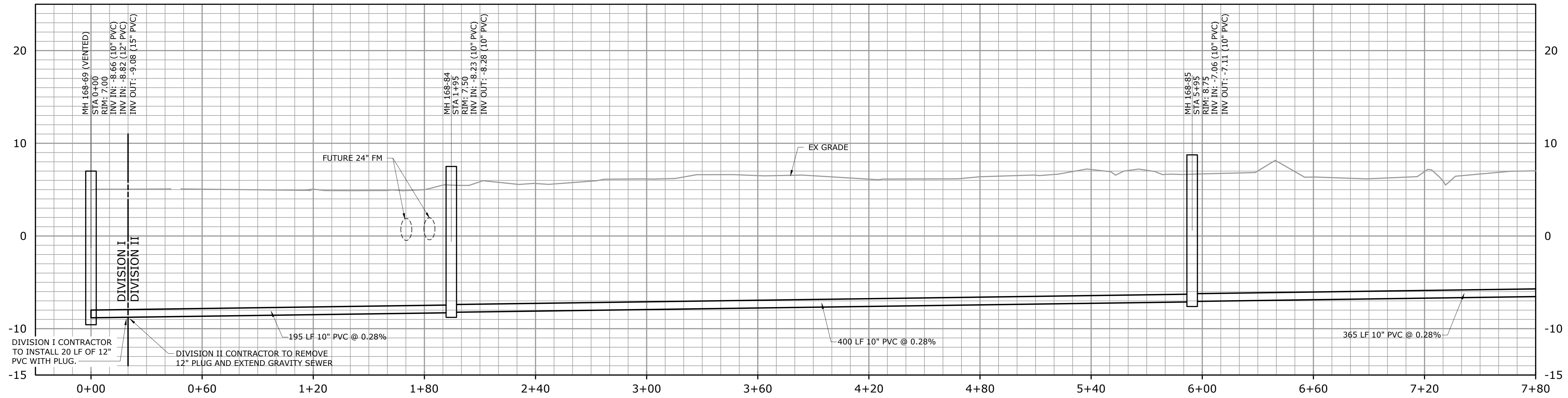


- NOTES:**
- CONTRACTOR TO COORDINATE WITH POWER UTILITY TO PROVIDE POWER POLE SUPPORT WHEN ANY PART OF OPEN TRENCH IS WITHIN 5 FEET OF POWER POLE, GUY WIRES, OR AS CONDITIONS WARRANT.
  - SEE DRAWING C001 FOR WETLAND REQUIREMENTS.



**PLAN - CLEMENTS FERRY RD GRAVITY SEWER**

1" = 30'



**PROFILE - CLEMENTS FERRY RD GRAVITY SEWER**

H: 1" = 30' V: 1" = 6'

File: D:\30533-CHARLESTON REGIONAL PUMP STATION\DRAWING\CONSTRUCT\206.dwg, Saved by: LFANNING, Save Date: 1/7/2020 9:45 AM, PLOT DATE: 01/23/2020 8:38 AM, BY: LFANNING

1	CONSTRUCTION	JAN 2020	HAZEN
REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	L. FANNING
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



**Hazen**

HAZEN AND SAWYER  
 735 JOHNNIE DODDS BLVD, SUITE 102  
 MOUNT PLEASANT, SOUTH CAROLINA 29464

**Charleston Water System**  
 COMMISSIONERS OF PUBLIC WORKS  
 OF THE CITY OF CHARLESTON, SC

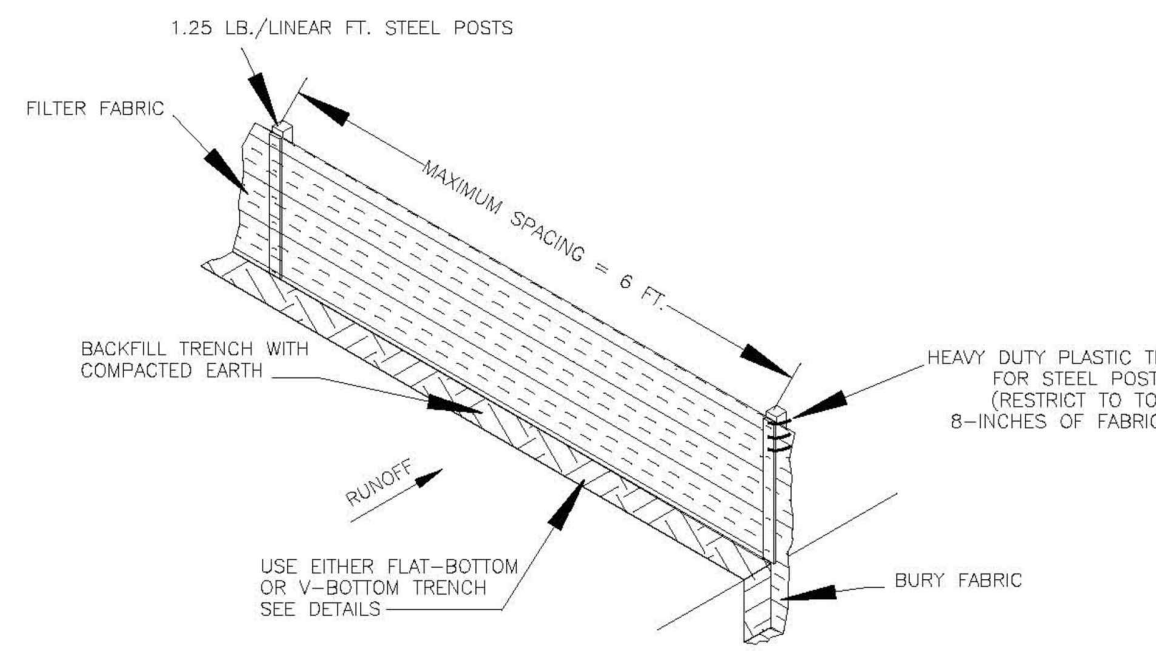
**THOMAS ISLAND REGIONAL PUMP STATION  
 AND INTERCEPTOR  
 DIVISION I & II**

**CLEMENTS FERRY RD  
 GRAVITY SEWER  
 CIVIL  
 STA 0+00 TO STA 7+80**

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C206



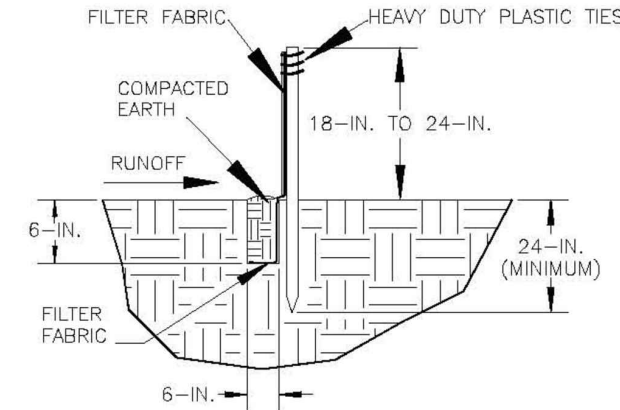
**SILT FENCE INSTALLATION**



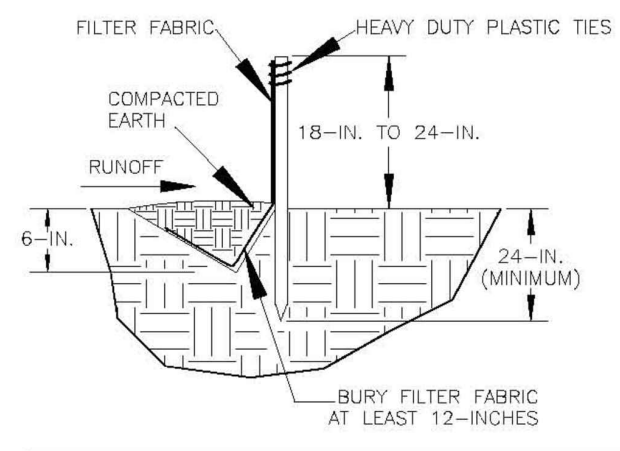
**INSPECTION AND MAINTENANCE:**

- INSPECT EVERY 7 CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2 INCHES OR MORE OF PRECIPITATION. CHECK FOR SEDIMENT BUILDUP AND FENCE INTEGRITY. CHECK WHERE RUNOFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE HAS SAGGED OR COLLAPSED BY FENCE OVERTOPPING.
- IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE SECTION OF FENCE IMMEDIATELY.
- REMOVE SEDIMENT ACCUMULATED ALONG THE FENCE WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED.
- REMOVE TRAPPED SEDIMENT FROM THE SITE OR STABILIZE IT ON SITE.
- REMOVE SILT FENCE WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BEST MANAGEMENT PRACTICES ARE NO LONGER NEEDED.
- PERMANENTLY STABILIZE DISTURBED AREAS RESULTING FROM FENCE REMOVAL.

**FLAT-BOTTOM TRENCH DETAIL**



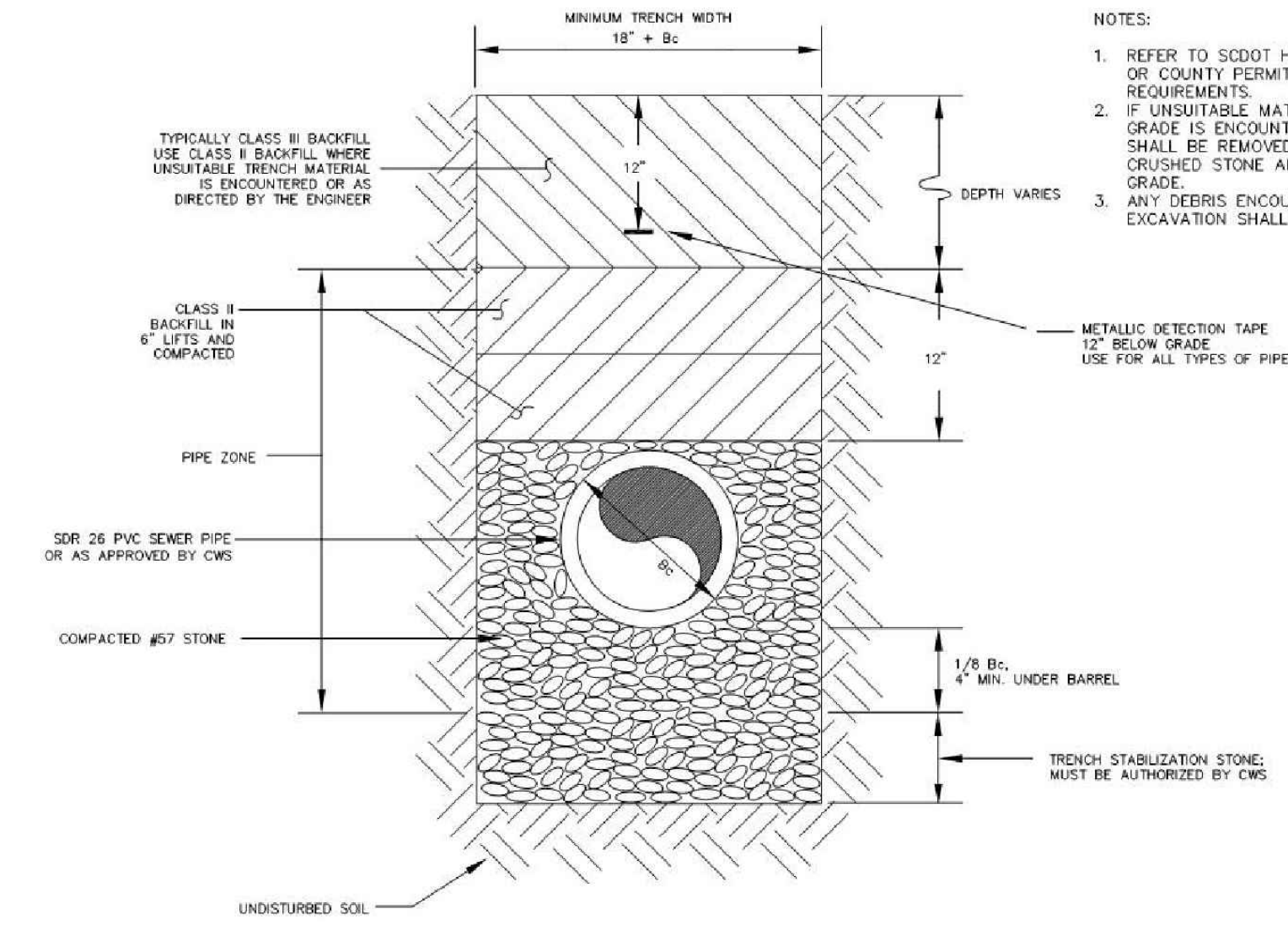
**V-SHAPED TRENCH DETAIL**



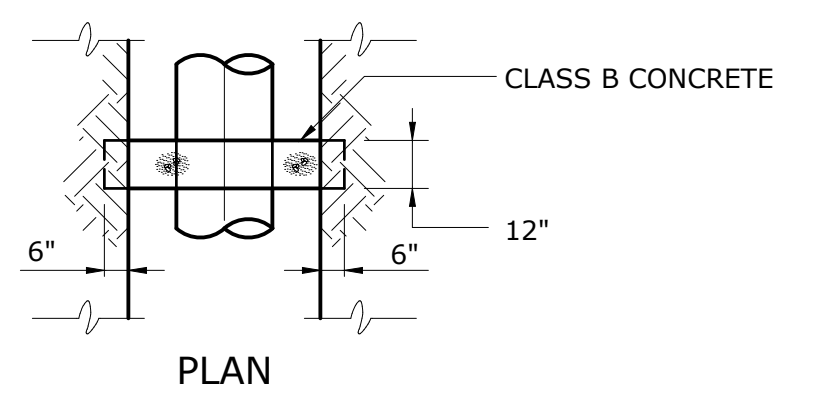
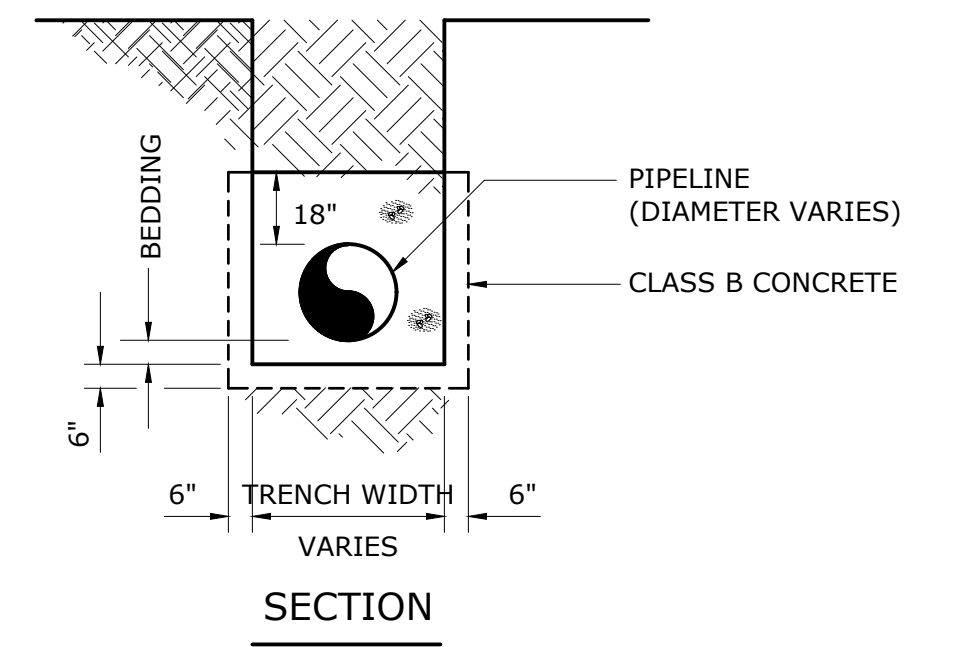
**NOTES:**

- DO NOT PLACE SILT FENCE ACROSS CHANNELS OR IN OTHER AREAS SUBJECT TO CONCENTRATED FLOWS. SILT FENCE SHOULD NOT BE USED AS A VELOCITY CONTROL BMP. CONCENTRATED FLOWS ARE GREATER THAN 0.5cfs.
- MAXIMUM SHEET OR OVERLAND FLOW PATH LENGTH TO THE SILT FENCE SHALL BE 100 FEET.
- MAXIMUM SLOPE STEEPNESS (NORMAL [PERPENDICULAR] TO THE FENCE LINE) SHALL BE 2:1.
- SILT FENCE JOINTS, WHEN NECESSARY, SHALL BE COMPLETED BY ONE OF THE FOLLOWING OPTIONS:
  - WRAP EACH FABRIC TOGETHER AT A SUPPORT POST WITH BOTH ENDS FASTENED TO THE POST, WITH A 1 FOOT MINIMUM OVERLAP;
  - OVERLAP SILT FENCE BY INSTALLING 3 FEET PASSED THE SUPPORT POST TO WHICH THE NEW SILT FENCE ROLL IS ATTACHED. ATTACH OLD ROLL TO NEW ROLL WITH HEAVY-DUTY PLASTIC TIES; OR,
  - OVERLAP ENTIRE WIDTH OF EACH SILT FENCE ROLL FROM ONE SUPPORT POST TO THE NEXT SUPPORT POST.
- ATTACH FILTER FABRIC TO THE STEEL POSTS USING HEAVY-DUTY PLASTIC TIES THAT ARE EVENLY SPACED WITHIN THE TOP 8 INCHES OF THE FABRIC.
- INSTALL THE SILT FENCE PERPENDICULAR TO THE DIRECTION OF THE STORMWATER FLOW AND PLACE THE SILT FENCE THE PROPER DISTANCE FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
- INSTALL SILT FENCE CHECKS (TIE-BACKS) EVERY 50-100 FEET, DEPENDENT ON SLOPE, ALONG SILT FENCE THAT IS INSTALLED WITH SLOPE AND WHERE CONCENTRATED FLOWS ARE EXPECTED OR ARE DOCUMENTED ALONG THE PROPOSED/INSTALLED SILT FENCE.

SILT FENCE  
022700R

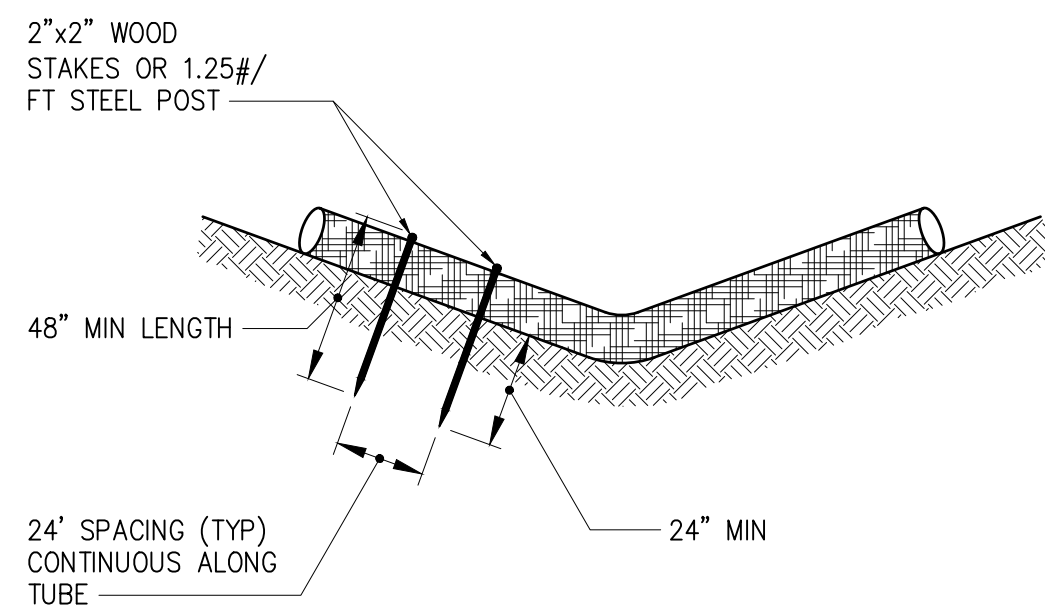


**MINIMUM BEDDING FOR GRAVITY SEWER LINE**  
CWS DETAIL 41

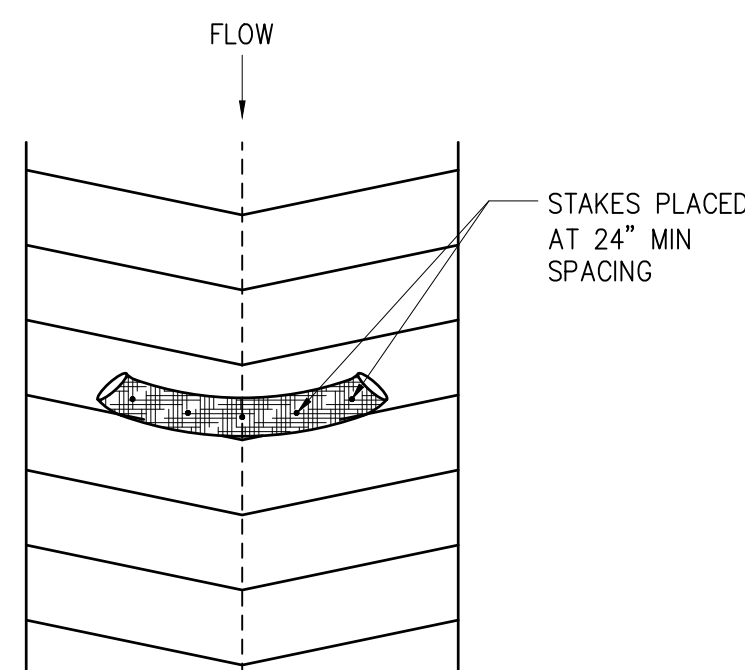


**ANTI-SEEPAGE COLLAR**  
0260113

SEDIMENT TUBE SPACING	
SLOPE	MAXIMUM SEDIMENT TUBE SPACING
LESS THAN 2%	150- FEET
2%	100- FEET
3%	75- FEET
4%	50- FEET
5%	40- FEET
6%	30- FEET
GREATER THAN 6%	25- FEET



**END VIEW OF DITCH**

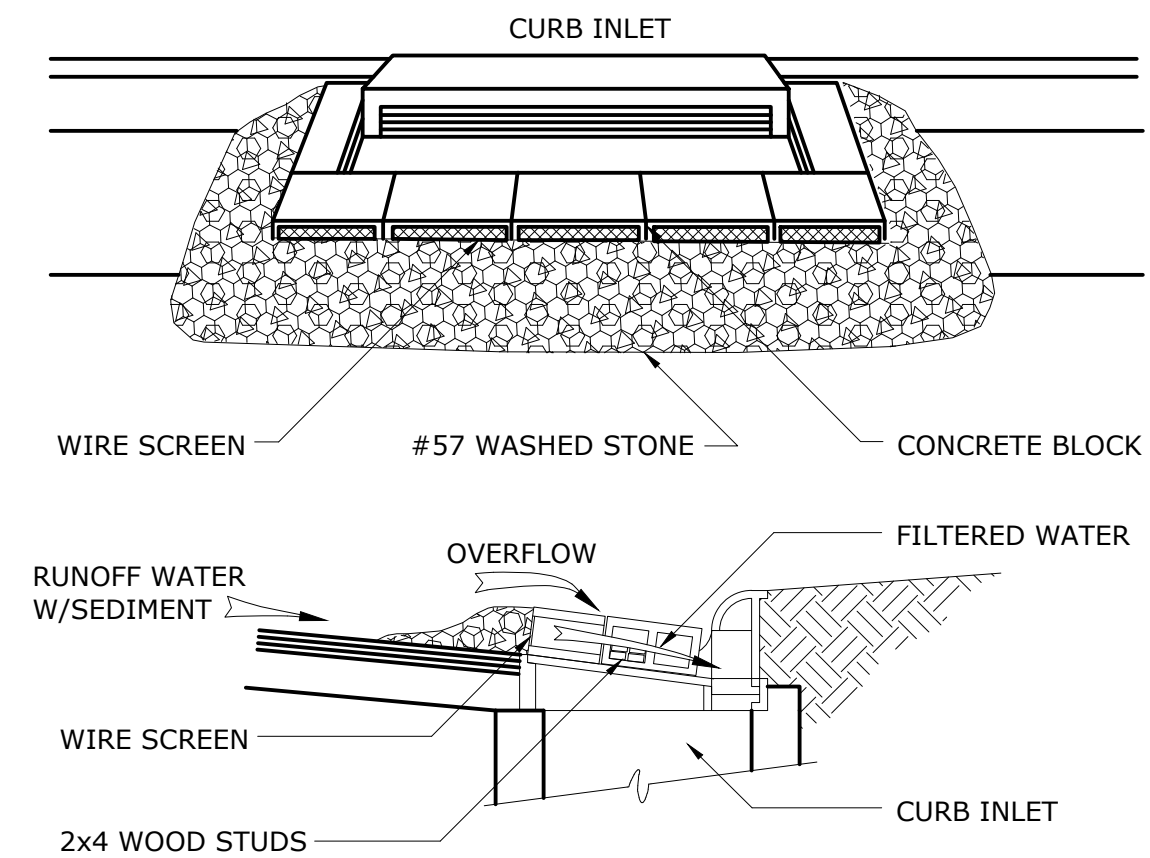


**TOP VIEW OF DITCH**

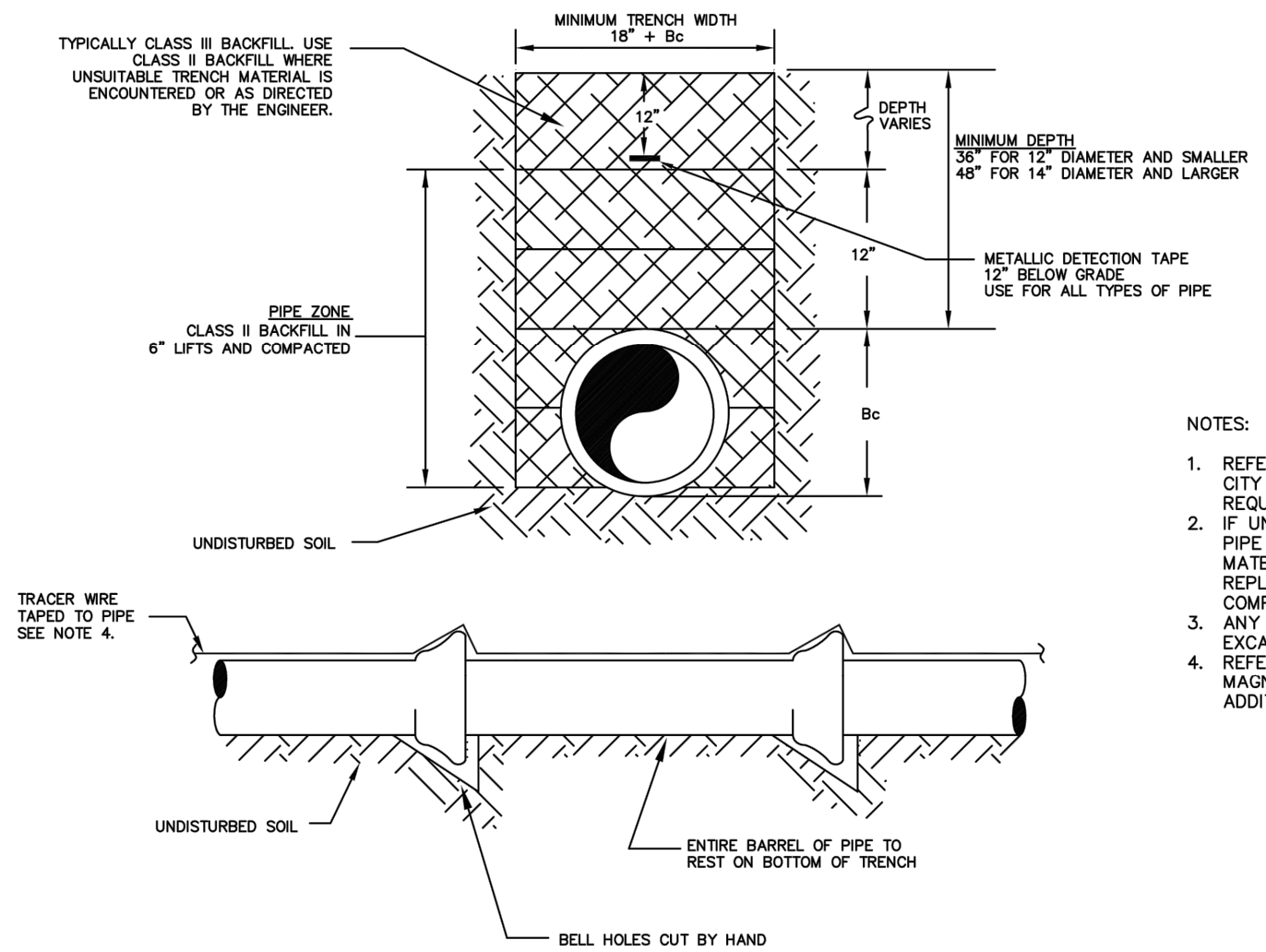
**SEDIMENT TUBE NOTES:**

- SEDIMENT TUBES ARE ELONGATED TUBES OF COMPACTED GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBER OR HARDWOOD MULCH. STRAW, PINE AND LEAF MULCH-FILLED SEDIMENT TUBES ARE NOT PERMITTED.
- INSTALL SEDIMENT TUBES ALONG CONTOURS, IN DRAINAGE CONVEYANCE SWALES, AND AROUND INLETS TO HELP REDUCE THE EFFECTS OF SOIL EROSION BY ENERGY DISSIPATION AND RETAIN SEDIMENT.
- SEDIMENT TUBES FOR DITCH CHECKS AND TYPE A INLET STRUCTURE FILTERS EXHIBIT THE FOLLOWING PROPERTIES:
  - PRODUCED BY A MANUFACTURER EXPERIENCED IN SEDIMENT TUBE MANUFACTURING.
  - COMPOSED OF COMPACTED GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBERS, HARDWOOD MULCH OR A MIX OF THESE MATERIALS ENCLOSED BY A FLEXIBLE NETTING MATERIAL.
  - STRAW, PINE AND LEAF MULCH-FILLED SEDIMENT TUBES ARE NOT PERMITTED.
  - UTILIZES OUTER NETTING THAT CONSISTS OF SEAMLESS, HIGH-DENSITY POLYETHYLENE PHOTODEGRADABLE MATERIALS TREATED WITH ULTRAVIOLETT STABILIZERS OR A SEAMLESS, HIGH-DENSITY POLYETHYLENE NON-DEGRADABLE MATERIALS. DIAMETER RANGING FROM 18-INCH TO 24-INCHES.
  - CURLED EXCELSIOR WOOD, OR NATURAL COCONUT ROLLED EROSION CONTROL PRODUCTS (RECPS) THAT ARE ROLLED UP TO CREATE A SEDIMENT TUBE ARE NOT ALLOWED.
- INSTALL OVER BARE SOIL, MULCH AREAS OR EROSION CONTROL BLANKETS. TO BE COMPOSED OF GEOTEXTILES, CURLED EXCELSIOR WOOD, NATURAL COCONUT FIBER OR HARDWOOD MULCH ENCLOSED BY A FLEXIBLE NETTING MATERIAL.
- THE MINIMUM DIAMETER SHOULD BE 18-INCHES. SEDIMENT TUBES SHOULD BE STAKED USING WOODEN STAKES (2-INCHX2-INCH) OR STEEL POSTS (STANDARD "U" OR "I" SECTIONS WITH A MINIMUM WEIGHT OF 1.25 POUNDS PER FOOT) A MINIMUM OF 48-INCHES IN LENGTH PLACED ON 2-FOOT CENTERS.
- STAKES SHOULD BE INTERTWINED WITH THE OUTER MESH ON THE DOWN STREAM SIDE AND DRIVEN IN THE GROUND TO A MINIMUM DEPTH OF 1.5 FEET LEAVING LESS THAN 1 FOOT OF STAKE EXPOSED ABOVE THE SEDIMENT TUBE. ALWAYS REFER TO THE MANUFACTURER'S RECOMMENDATIONS FOR THE STAKING DETAIL. INSTALL ALL SEDIMENT TUBES INSURING THAT NO GAPS EXIST BETWEEN THE SOIL AND THE BOTTOM OF THE SEDIMENT TUBE. THE ENDS OF ADJACENT SEDIMENT TUBES SHOULD BE LAPPED 6-INCH TO PREVENT FLOW AND SEDIMENT FROM PASSING THROUGH THE FIELD JOINT. IN NO SITUATION SHOULD SEDIMENT TUBES BE STACKED ON TOP OF ONE ANOTHER.
- CONSTRUCT A TRENCH THAT IS 20% OF THE TUBE DIAMETER TO INSTALL THE TUBE IN. AVOID DAMAGE TO SEDIMENT TUBES WHILE INSTALLING THEM. IF THE SEDIMENT TUBES BECOMES DAMAGED DURING INSTALLATION, A STAKE SHOULD BE PLACED ON BOTH SIDES OF THE DAMAGED AREA TERMINATING THE TUBE SEGMENT AND A NEW TUBE SEGMENT SHOULD BE INSTALLED IN SWALES OR DRAINAGE DITCHES PERPENDICULAR TO THE DEPTH. SEDIMENT TUBES SHOULD CONTINUE UP THE SIDE SLOPES A MINIMUM OF 1 FOOT ABOVE THE DESIGN FLOW DEPTH. SEDIMENT TUBES SHOULD BE SPACED ACCORDING TO THE SEDIMENT TUBE SPACING TABLE.
- SEDIMENT TUBE LENGTH SELECTED SHOULD MINIMIZE THE NUMBER OF SEDIMENT TUBES NEEDED TO SPAN THE WIDTH OF THE DRAINAGE CONVEYANCE. IF THE DITCH CHECK LENGTH (PERPENDICULAR TO THE FLOW) IS 15 FEET, THEN ONE 15 FOOT SEDIMENT TUBE IS PREFERRED COMPARED TO TWO OVERLAPPING 10 FOOT SEDIMENT TUBES.

**SEDIMENT TUBE DETAILS** 1  
NOT TO SCALE



**CURB INLET SEDIMENT CONTROL**  
022700Z



**FORCEMAIN BEDDING**  
CWS DETAIL 51

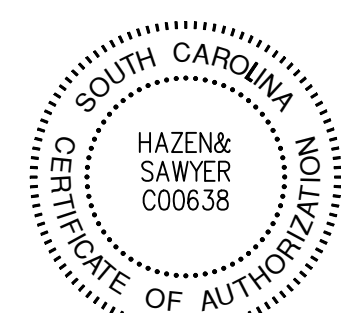
**NOTES:**

- REFER TO SCDOT HIGHWAY DEPARTMENT, CITY OR COUNTY PERMITS FOR ADDITIONAL REQUIREMENTS.
- IF UNSUITABLE MATERIAL BENEATH FINAL PIPE GRADE IS ENCOUNTERED, SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH CRUSHED STONE AND COMPACTED TO PROPER GRADE.
- ANY DEBRIS ENCOUNTERED IN THE TRENCH EXCAVATION SHALL BE REMOVED.
- REFER TO THE TRACER WIRE AND MAGNETIC TAPE DETAIL #84 FOR ADDITIONAL INFORMATION.

File: D:\03533-CHARLESTON\DRAWINGS\CONSTRUCTION\DETAILS\Sheet by L FANNING.dwg Date: 4/22/2020 10:49 AM PLOT DATE: 4/22/2020 8:38 AM BY: L FANNING

1	CONSTRUCTION	JAN 2020	HAZEN
REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	L. FANNING
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

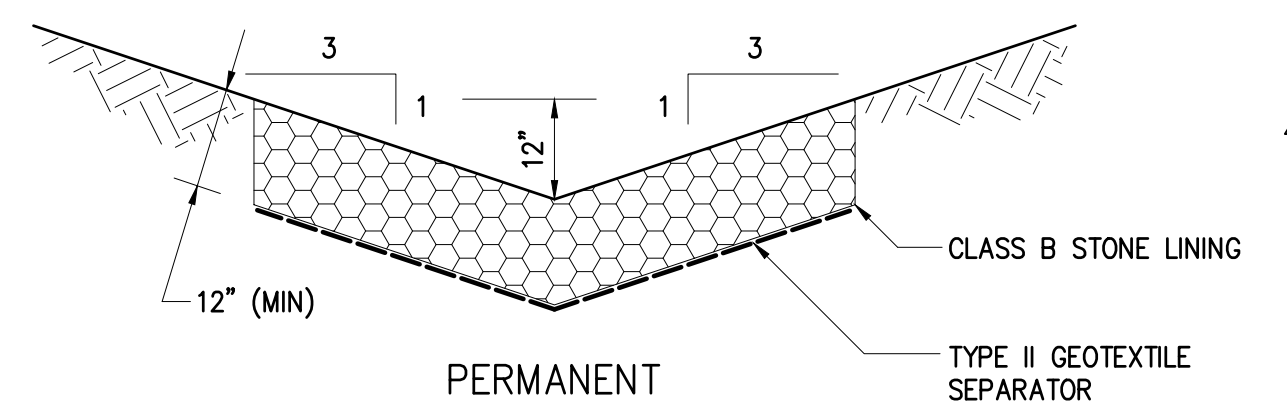
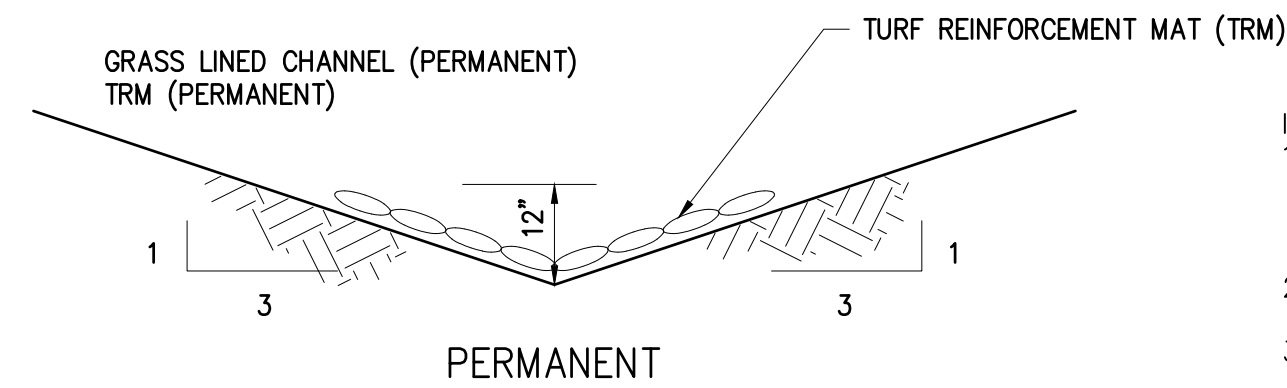
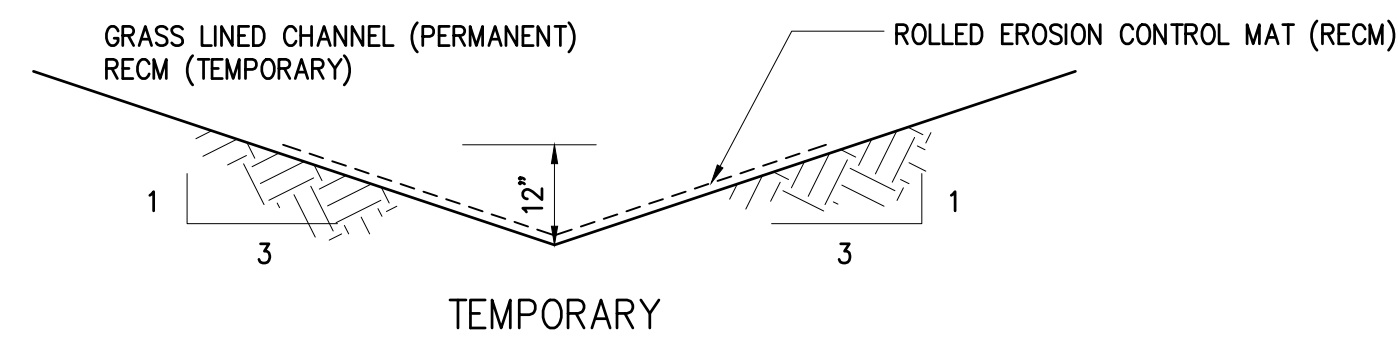
**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC

THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I & II

CIVIL  
STANDARD DETAILS

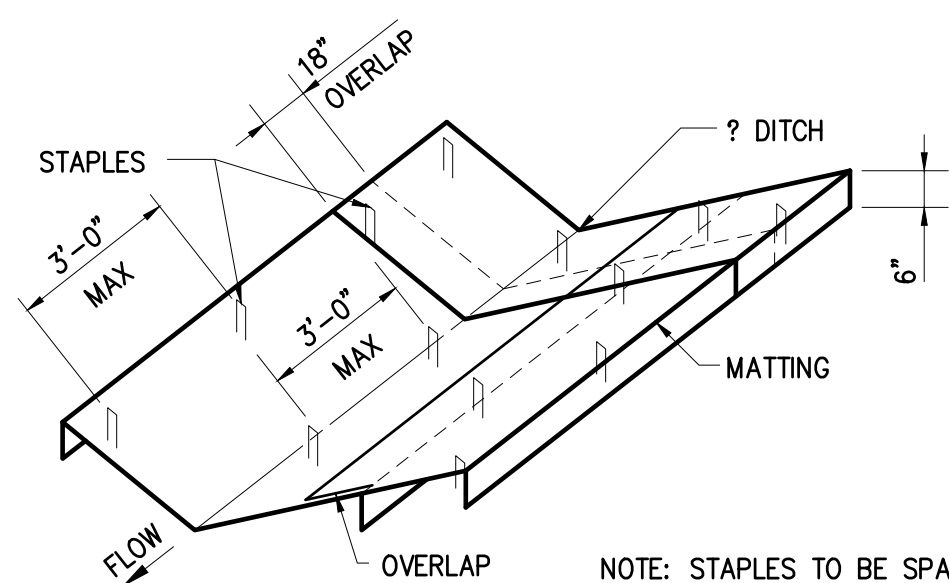
DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C900





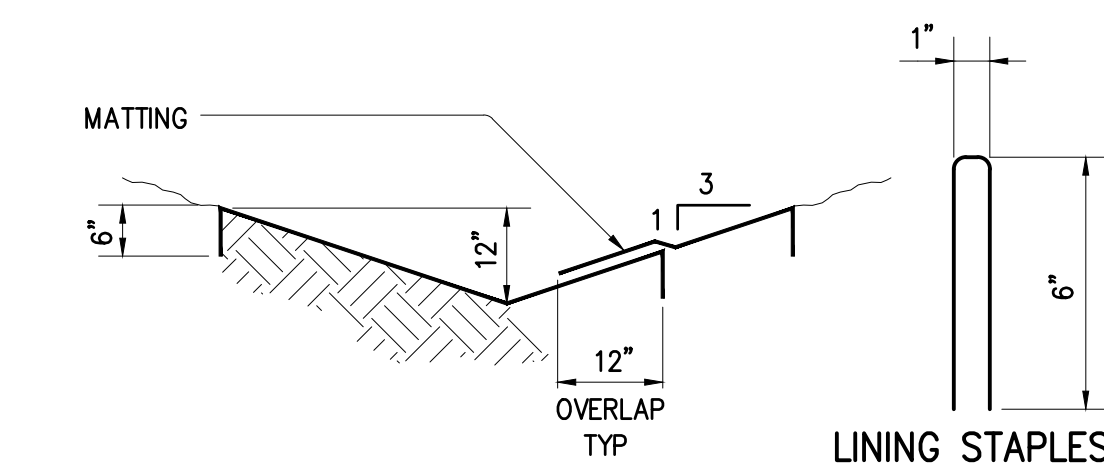
TYPICAL DITCH DETAIL  
SEE DETAIL 0227014 FOR  
INSTALLATION DETAIL  
**0227011**

- INSPECTION AND MAINTENANCE:
- CHECK AREAS PROTECTED BY TRMs FOR DISLOCATION OR FAILURE EVERY 7 CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH STORM THAT PRODUCES 1/2 INCHES OR MORE OF PRECIPITATION.
  - CONDUCT REGULAR INSPECTIONS UNTIL GRASSES ARE FIRMLY ESTABLISHED.
  - ADHERE TO THE PINNING OR STAPLING PATTERN AS SHOWN ON THE MANUFACTURER'S INSTALLATION SHEET. IF THERE IS EVIDENCE THAT THE TRM IS NOT SECURELY FASTENED TO THE SOIL, INSTALL EXTRA PINS OR STAPLES TO INHIBIT THE TRM FROM BECOMING DISLODGED.
  - IF WASHOUT OR BREAKAGE OCCURS, REPAIR ALL DAMAGED AREAS IMMEDIATELY BY RESTORING THE SOIL ON SLOPE OR CHANNELS TO ITS FINISHED GRADE, REAPPLY FERTILIZER AND SEED, AND REPLACING THE APPROPRIATE TRM MATERIAL AS NEEDED.



PERSPECTIVE VIEW

NOTE: STAPLES TO BE SPACED AT 3'-0" MAX IN ALL DIRECTIONS.



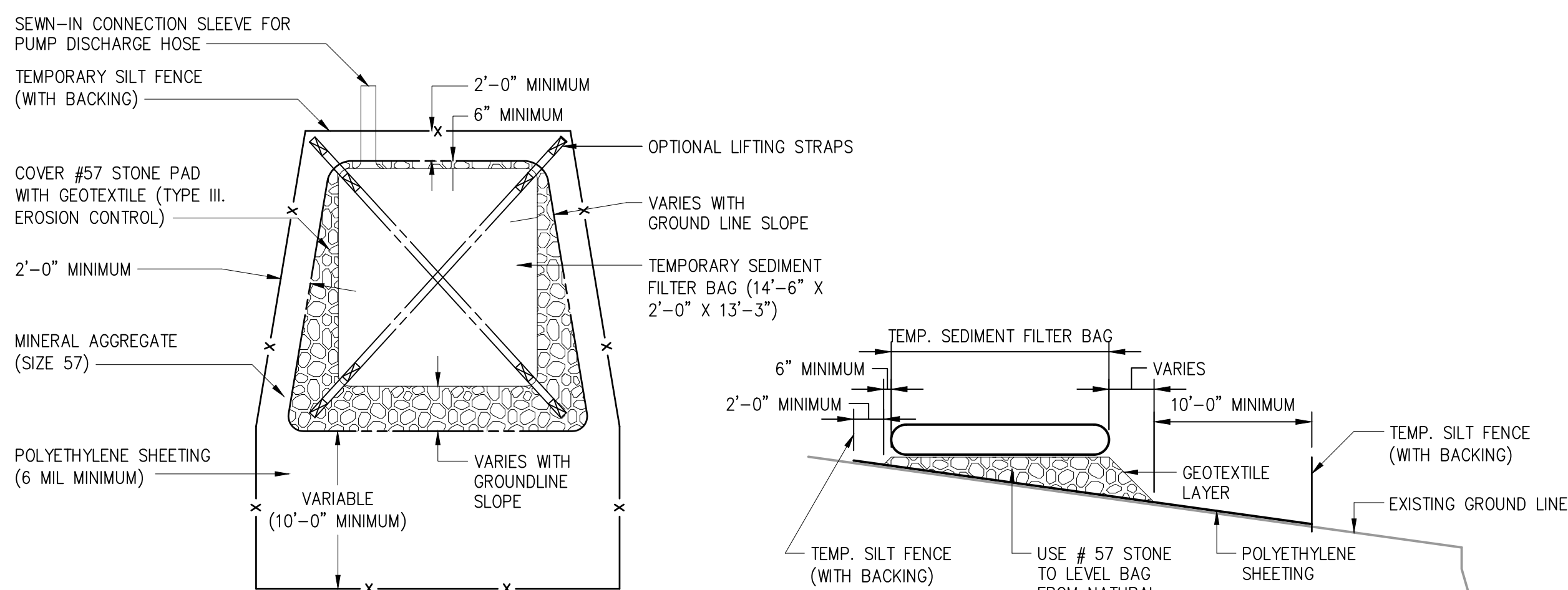
LINING STAPLES

- INSPECTION AND MAINTENANCE:
- CHECK AREAS PROTECTED BY MATTING FOR DISLOCATION OR FAILURE EVERY 7 CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH STORM THAT PRODUCES 1/2 INCHES OR MORE OF PRECIPITATION.
  - CONDUCT REGULAR INSPECTIONS UNTIL GRASSES ARE FIRMLY ESTABLISHED.
  - ADHERE TO THE PINNING OR STAPLING PATTERN AS SHOWN ON THE MANUFACTURER'S INSTALLATION SHEET. IF THERE IS EVIDENCE THAT THE MATTING IS NOT SECURELY FASTENED TO THE SOIL, INSTALL EXTRA PINS OR STAPLES TO INHIBIT THE MATTING FROM BECOMING DISLODGED.
  - IF WASHOUT OR BREAKAGE OCCURS, REPAIR ALL DAMAGED AREAS IMMEDIATELY BY RESTORING THE SOIL ON SLOPE OR CHANNELS TO ITS FINISHED GRADE, REAPPLY FERTILIZER AND SEED, AND REPLACING THE APPROPRIATE MATTING MATERIAL AS NEEDED.

SLOPE PROTECTION MATTING  
**0227014**

NOTES:

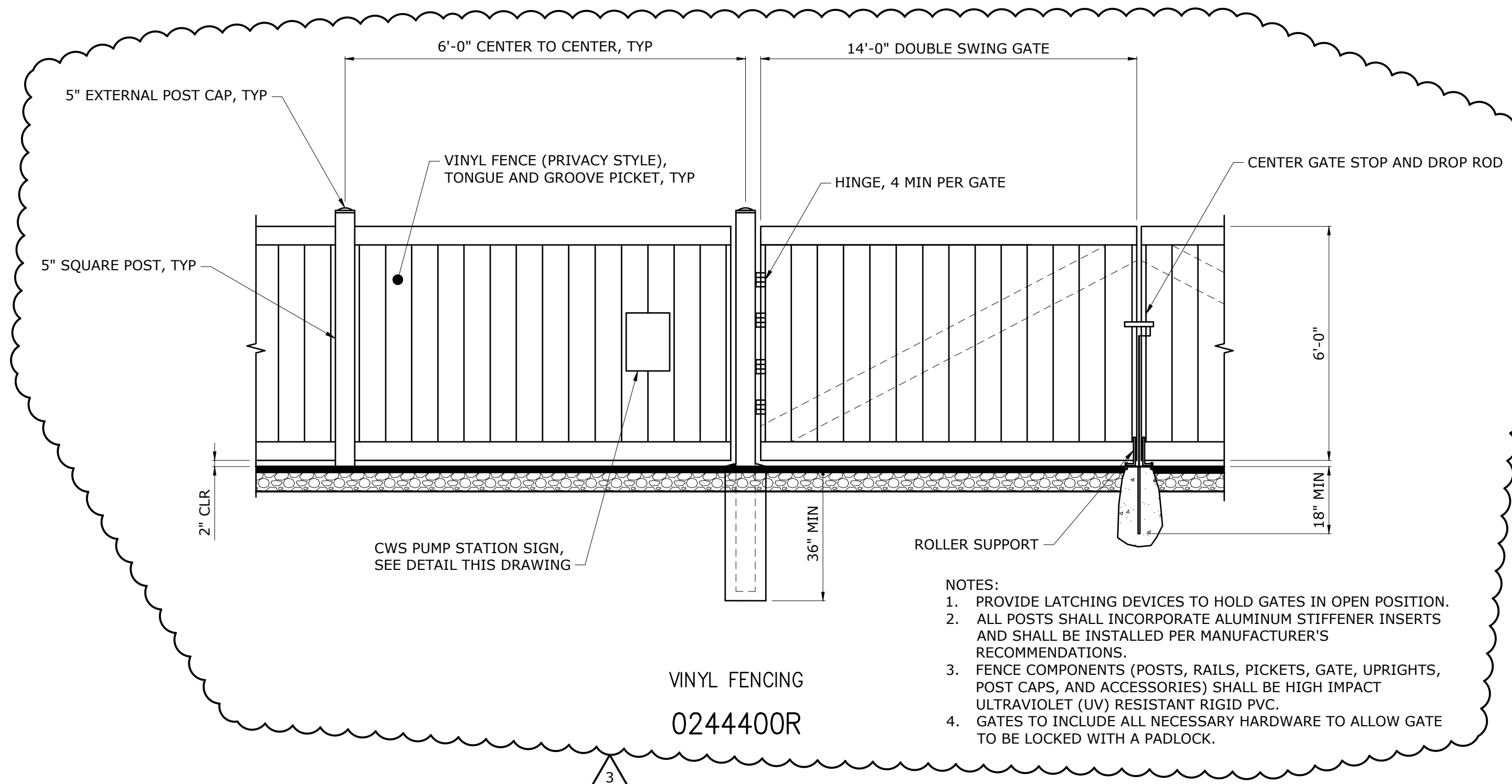
- CONTRACTOR SHALL EXERCISE CAUTION NOT TO BURST OR DAMAGE THE TEMPORARY SEDIMENT FILTER BAG WHEN PUMPING.
- THE LENGTH AND WIDTH OF THE TEMPORARY SEDIMENT BAG SHOWN ON THIS DRAWING MAY VARY PER VENDOR SPECIFICATIONS.
- TEMPORARY SEDIMENT FILTER BAGS SHALL BE EQUIPPED WITH A SEWN-IN SLEEVE OF SUFFICIENT SIZE TO ACCEPT A MINIMUM FOUR-INCH DIAMETER PUMP DISCHARGE HOSE. THE DISCHARGE HOSE SHOULD BE EXTENDED INTO THIS SLEEVE A MINIMUM OF SIX INCHES AND BE TIGHTLY SECURED WITH A HOSE CLAMP OR OTHER SUITABLE MEANS TO PREVENT LEAKAGE. HOSE CONNECTION THROUGH A SLIT IN THE BAG WILL NOT BE ACCEPTABLE.
- THE PUMP DISCHARGE HOSE CONNECTION SLEEVE SHALL BE SECURELY TIED OFF DURING DISPOSAL OF THE TEMPORARY SEDIMENT FILTER BAG IN ORDER TO PREVENT LEAKAGE OF COLLECTED SEDIMENTS.
- TEMPORARY SEDIMENT FILTER BAG SHALL BE REPLACED WHEN 6 INCHES OF SEDIMENT HAS ACCUMULATED OR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.



TOP VIEW

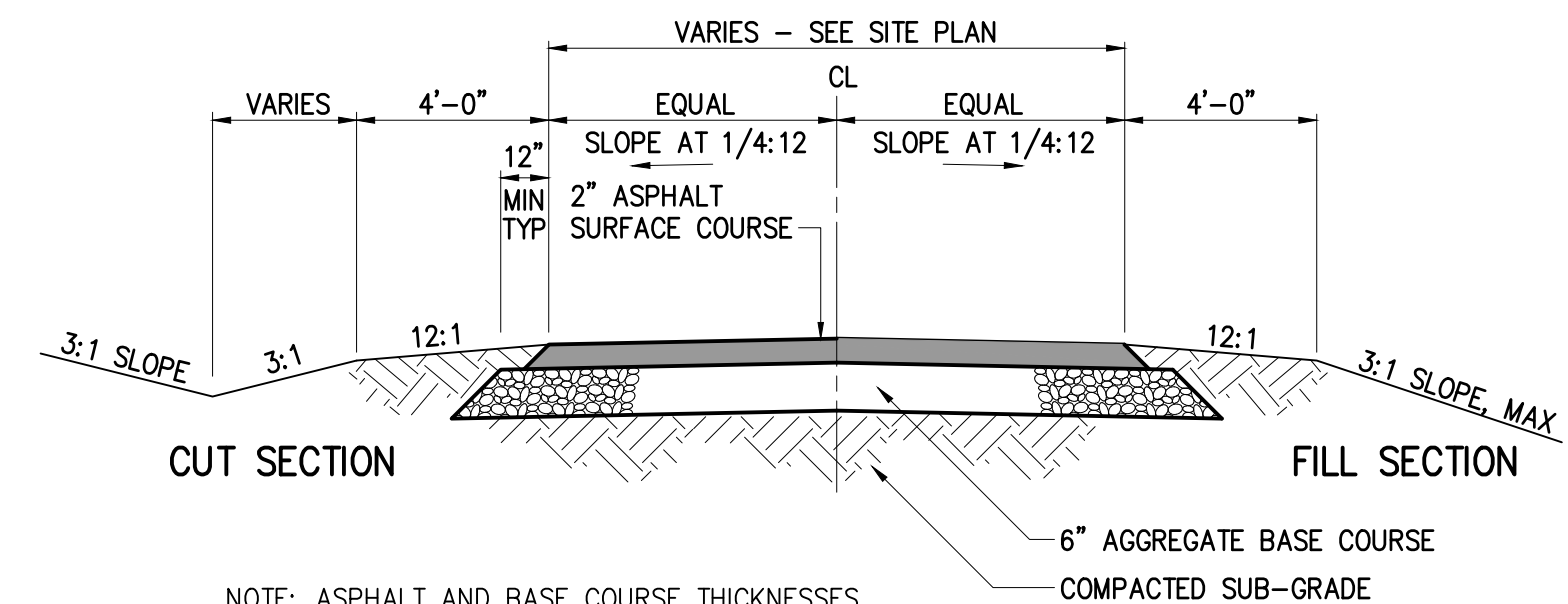
SIDE VIEW

TEMPORARY SEDIMENT FILTER BAG  
**0227038**



VINYL FENCING  
**0244400R**

- NOTES:
- PROVIDE LATCHING DEVICES TO HOLD GATES IN OPEN POSITION.
  - ALL POSTS SHALL INCORPORATE ALUMINUM STIFFENER INSERTS AND SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
  - FENCE COMPONENTS (POSTS, RAILS, PICKETS, GATE, UPRIGHTS, POST CAPS, AND ACCESSORIES) SHALL BE HIGH IMPACT ULTRAVIOLET (UV) RESISTANT RIGID PVC.
  - GATES TO INCLUDE ALL NECESSARY HARDWARE TO ALLOW GATE TO BE LOCKED WITH A PADLOCK.



CUT SECTION

FILL SECTION

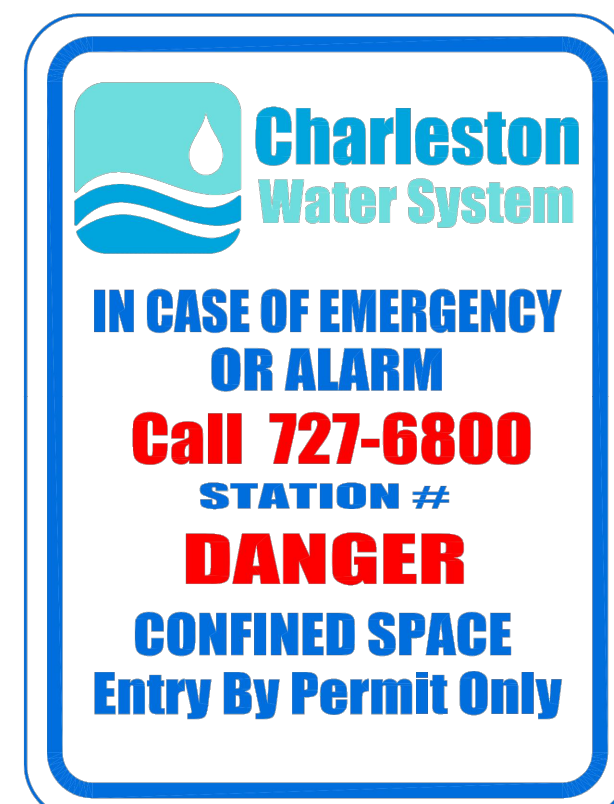
NOTE: ASPHALT AND BASE COURSE THICKNESSES BASED ON "GEOTECHNICAL ENGINEERING REPORT" BY TERRACON DATED JULY 28, 2017

TYPICAL ASPHALT PAVEMENT  
**0251000R**

CWS PUMP STATION SIGN SPECIFICATIONS:

MATERIAL: Anodized Aluminum, #5052 .080 thick  
SIZE: 18" wide x 24" high with 1.5" radius on all corners  
BACKGROUND: 3-M engineer grade Scotchlite reflective film  
All copy and border is 3-M Scotchlite vinyl film, Sapphire blue with the exception of the phone number and "DANGER" which are 3-M Scotchlite Cardinal red. The entire sign is overlaid with Flexcon EVL 400 vinyl #V-29, laminated at 40 psi. All lettering is standard bold condensed except the line STATION #, which is Helvetica medium.

NOTE: ATTACH SIGN TO CHAIN LINK FENCE USING SS BOLTS AND 2" WASHERS

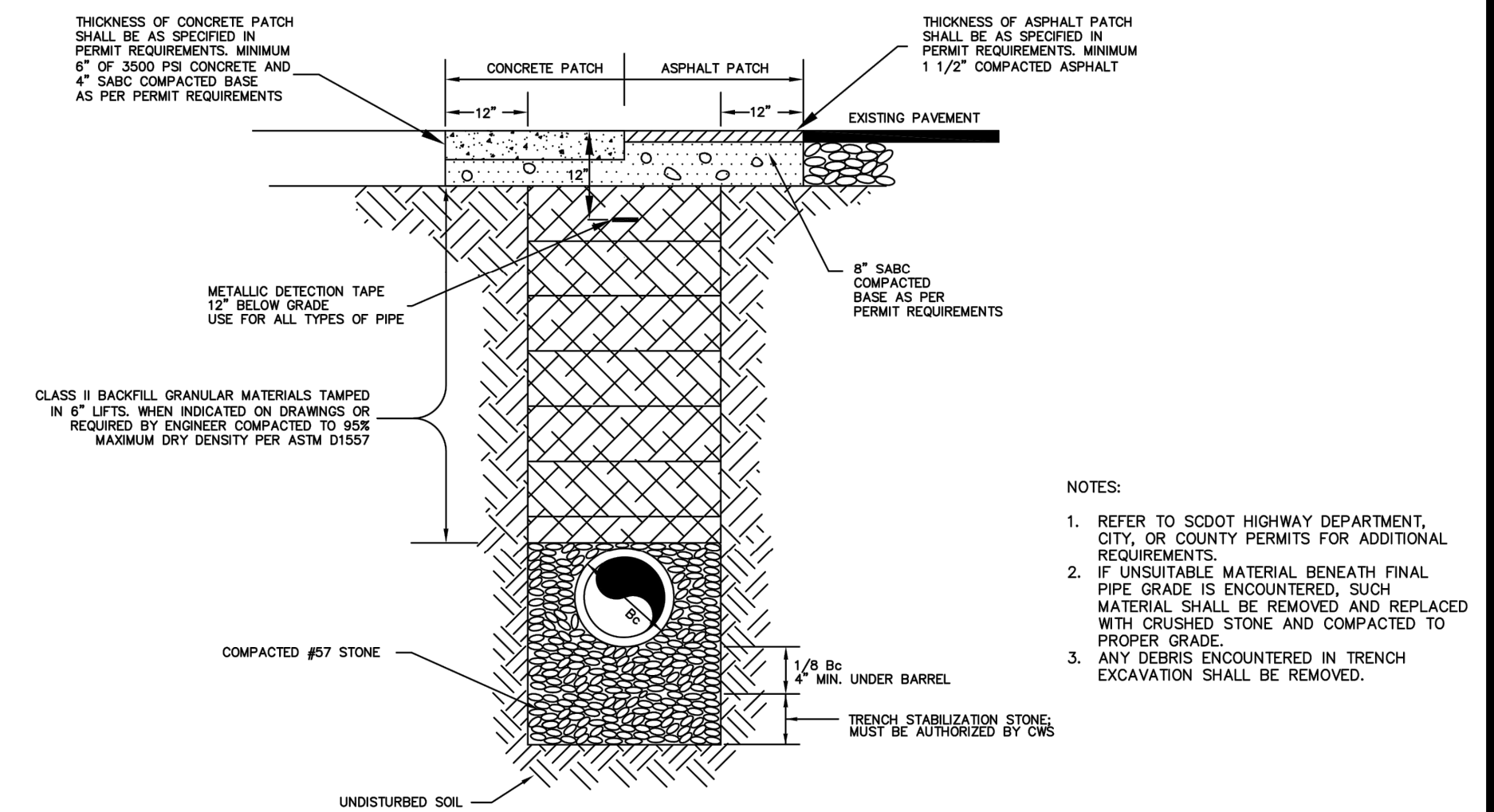


- LOGO = 5" sq.
- 1.2" x 8.3"
  - 1.3" x 8.3"
  - 1.25" x 14"
  - 1.25" x 7"
  - 1.5" x 12"
  - .75" x 7.5" inc. #
  - 1.5" x 8.5"
  - 1.25" x 11.3"
  - 1.25" x 14"
  - .35" w/1" rad.

The recommended source for these signs is Print Charleston, Inc. in North Charleston, SC Phone number 843-554-9321

PUMP STATION SIGN

CWS DETAIL 64



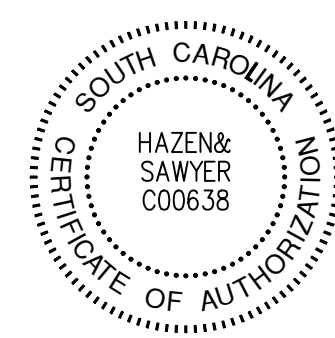
DRIVEWAY CUT AND REPAIR

DETAIL 2  
CWS DETAIL 43

File: D:\0833\CH0833\CONSTRUCTION\DRAWINGS\CONSTRUCTION DETAILS Drawn by: LFANNING Date: 4/22/2020 10:49 AM PLOT DATE: 4/22/2020 8:39 AM BY: LFANNING

REV	ISSUED FOR	DATE	BY
3	ADDENDUM No. 3	APR 2020	HAZEN
2	ADDENDUM No. 1	JAN 2020	HAZEN
1	CONSTRUCTION	JAN 2020	HAZEN

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	L. FANNING
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

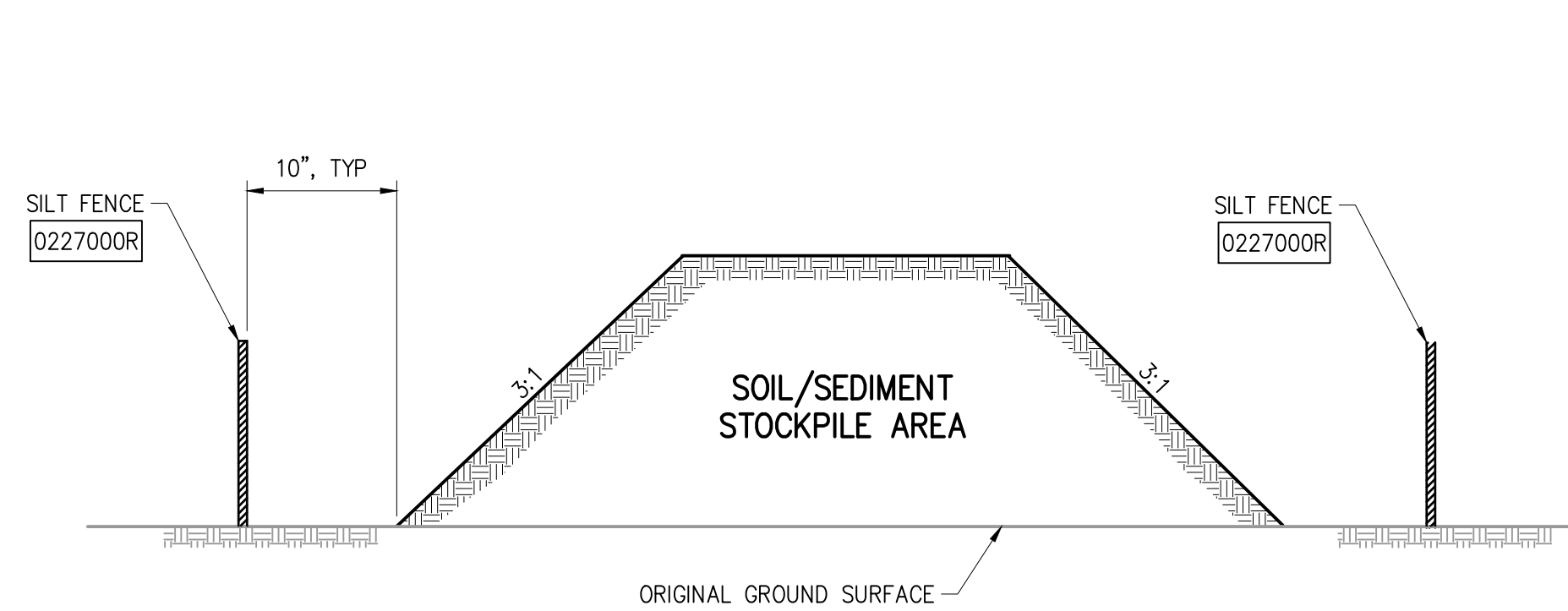
**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC

THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I & II

CIVIL  
STANDARD DETAILS

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C901



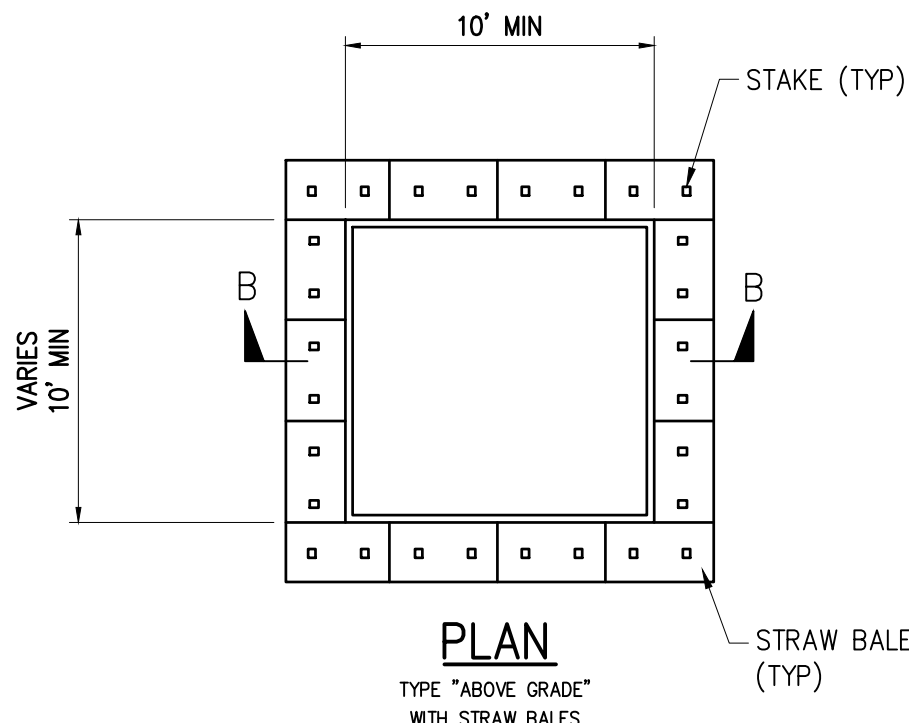


NOTES:

1. SILT FENCE TO EXTEND AROUND ENTIRE PERIMETER OF STOCKPILE, OR IF STOCKPILE AREA IS LOCATED ON/NEAR A SLOP THE SILT FENCE IS TO EXTEND ALONG CONTOURS OF THE DOWN-GRADIENT AREA.
2. IF STOCKPILE IS TO REMAIN FOR MORE THAN 14 DAYS, TEMPORARY STABILIZATION MEASURES MUST BE IMPLEMENTED.
3. SILT FENCE SHALL BE MAINTAINED UNTIL STOCKPILE AREA HAS EITHER BEEN REMOVED OR PERMANENTLY STABILIZED.
4. THE KEY TO FUNCTIONAL TEMPORARY STOCKPILE AREAS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR SEDIMENT REMOVAL.

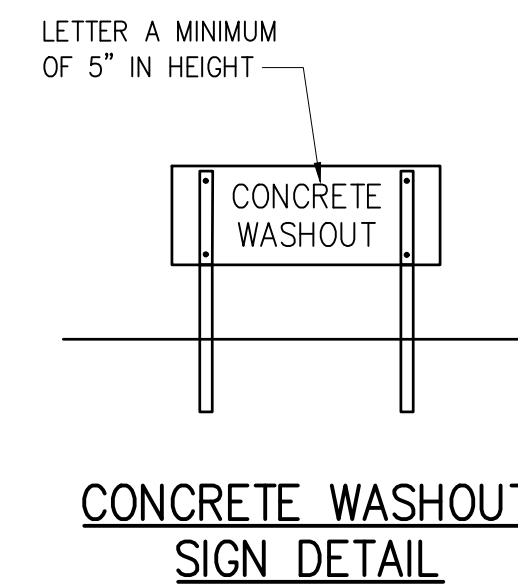
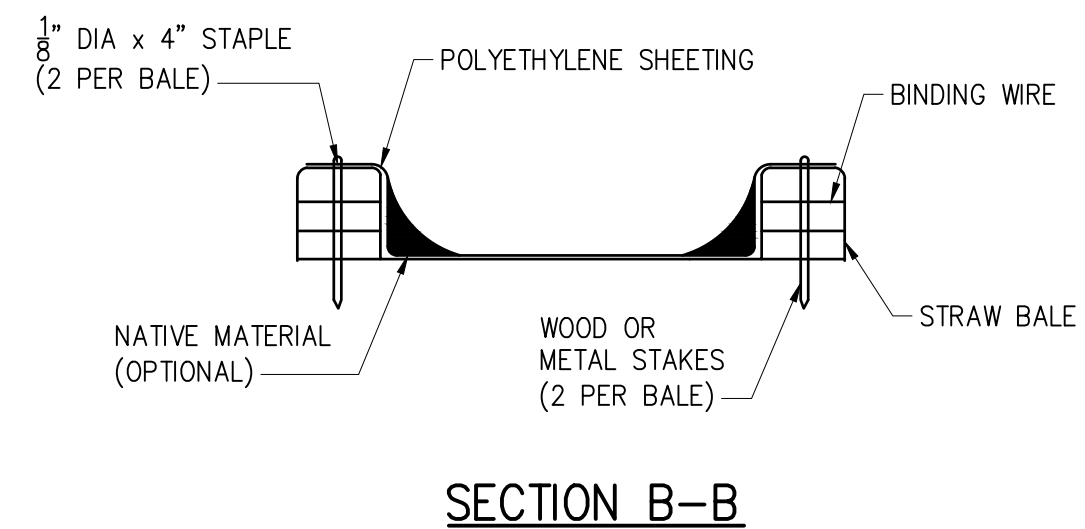
TEMPORARY STOCKPILE AREA

DETAIL	3
NO SCALE	--



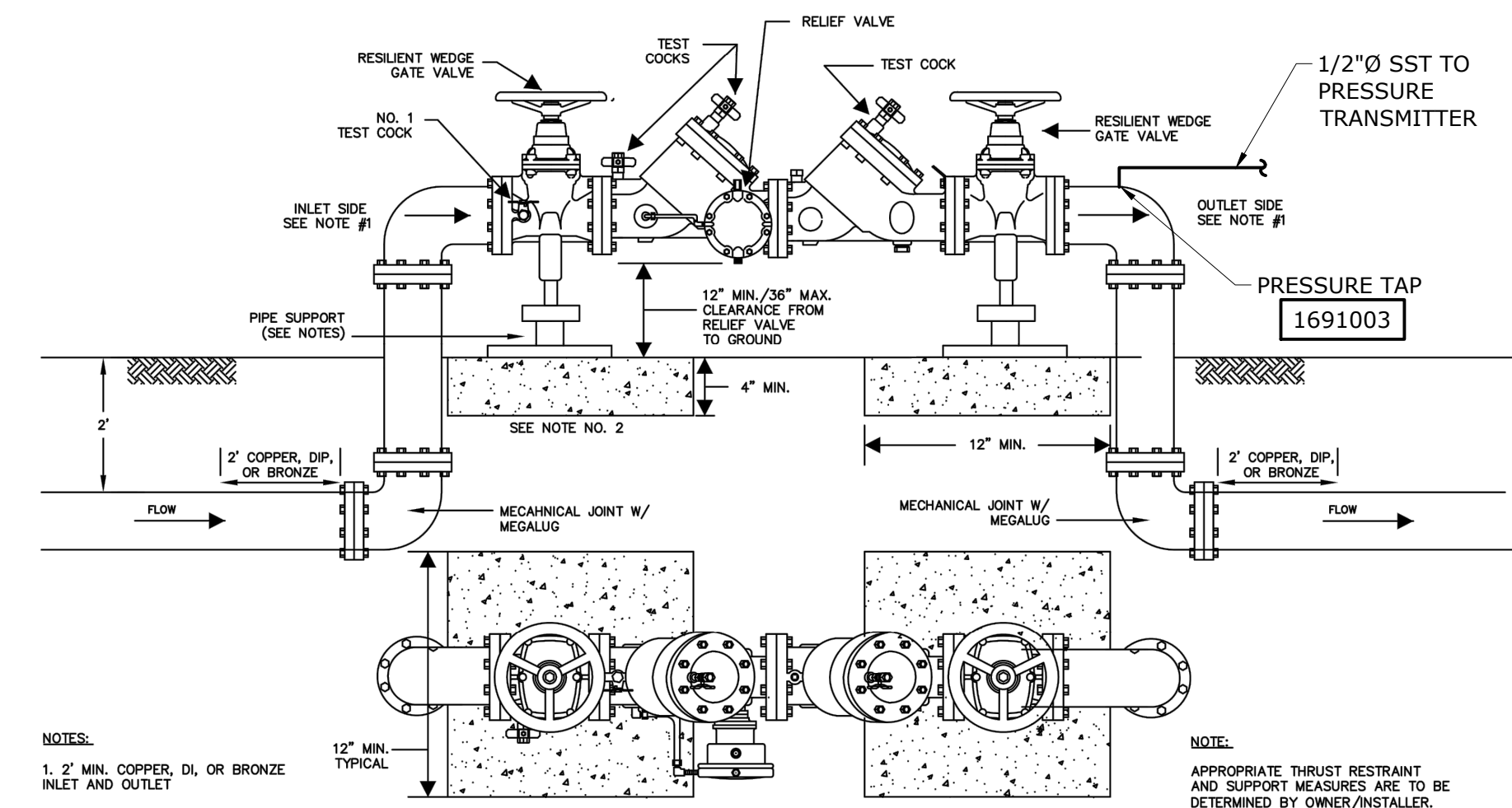
NOTES:

1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN (24"x24", MINIMUM) WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. TEMPORARY WASHOUT AREA MUST BE AT LEAST 50' FROM A STORM DRAIN, CREEK BANK OR PERIMETER CONTROL.
4. CLEAN OUT CONCRETE WASHOUT AREA WHEN 50% FULL.
5. THE KEY TO FUNCTIONAL CONCRETE WASHOUTS IS WEEKLY INSPECTIONS, ROUTINE MAINTENANCE, AND REGULAR CLEAN OUT.
6. SILT FENCE SHALL BE INSTALLED AROUND PERIMETER OF CONCRETE WASHOUT AREA EXCEPT FOR THE SIDE UTILIZED FOR ACCESSING THE WASHOUT.
7. A ROCK CONSTRUCTION ENTRANCE MAY BE NECESSARY ALONG ONE SIDE OF THE WASHOUT TO PROVIDE VEHICLE ACCESS.



STRAW BALE BARRIER CONCRETE WASHOUT

DETAIL	4
NO SCALE	--



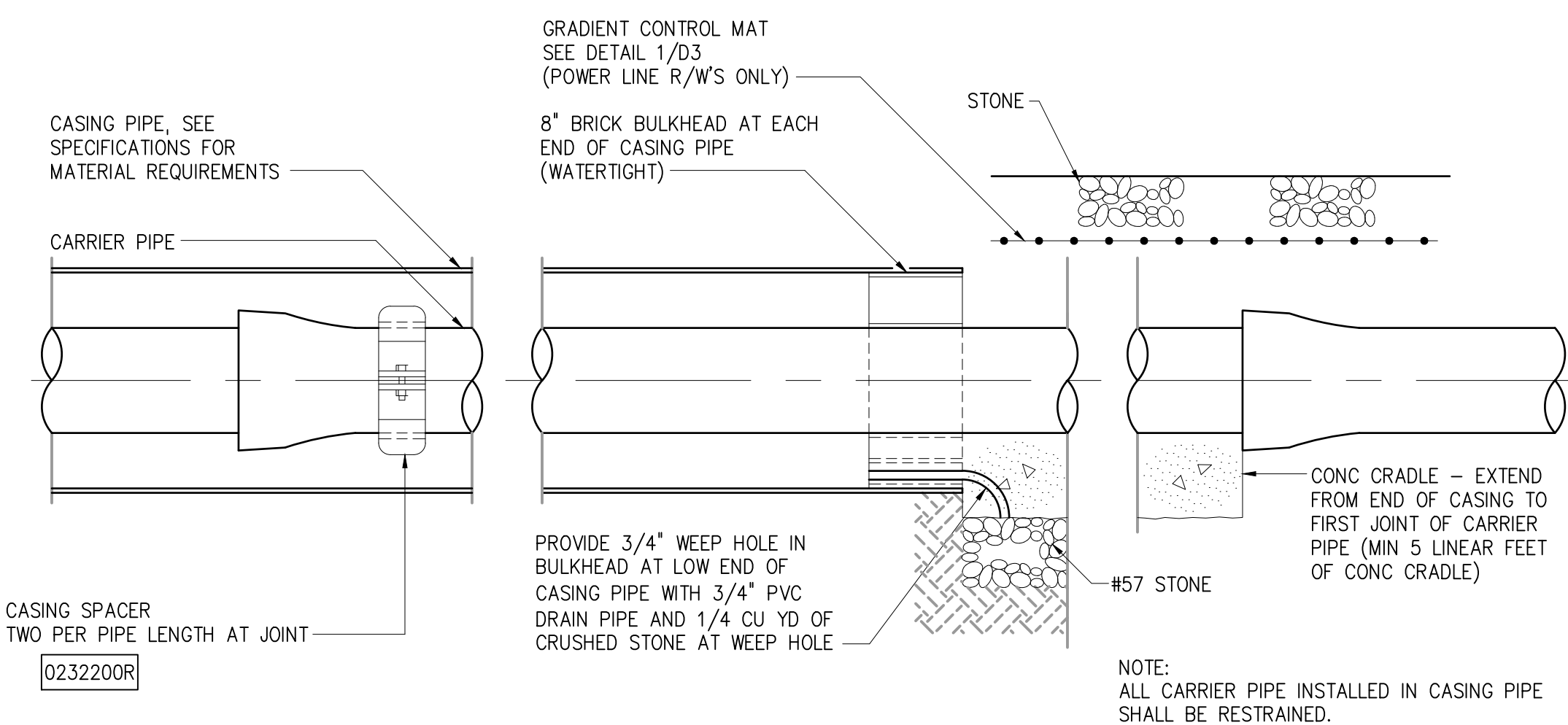
NOTES:

1. 2" MIN. COPPER, DL OR BRONZE INLET AND OUTLET
2. CONCRETE SLAB STABILIZES SUPPORTS BETWEEN BACKFLOW AND GROUND SIZE ACCORDINGLY OR BY MANUFACTURERS' RECOMMENDATIONS.
3. 4" OR GREATER BACKFLOW ASSEMBLIES SHALL REQUIRE PIPE SUPPORT.

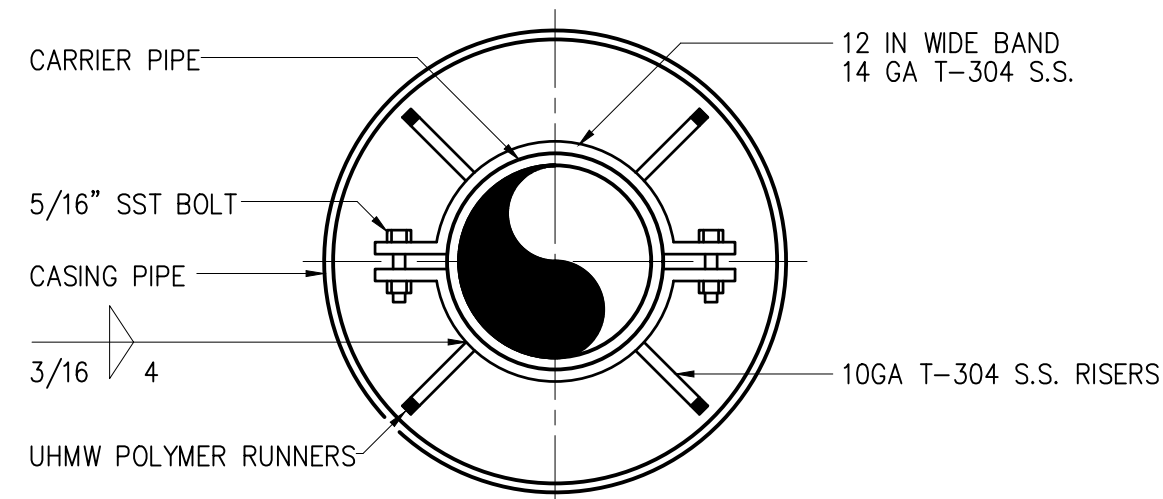
NOTE: APPROPRIATE THRUST RESTRAINT AND SUPPORT MEASURES ARE TO BE DETERMINED BY OWNER/INSTALLER.

BACKFLOW PREVENTION ASSEMBLY

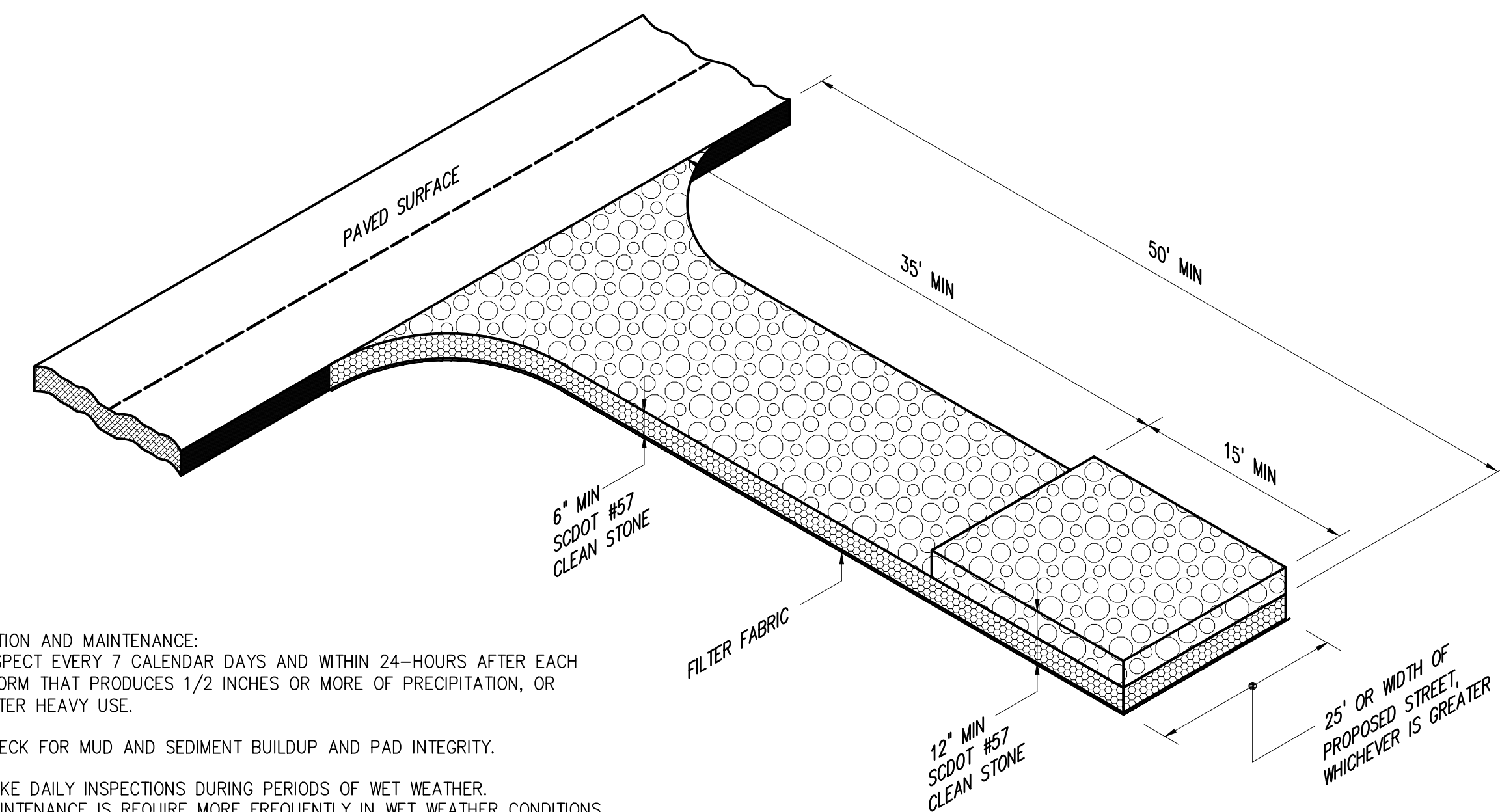
DETAIL	5
CWS DETAIL 33	C103



TYPICAL CASING FOR JACK AND BORE  
0232201R



CASING SPACER  
0232200R



INSPECTION AND MAINTENANCE:

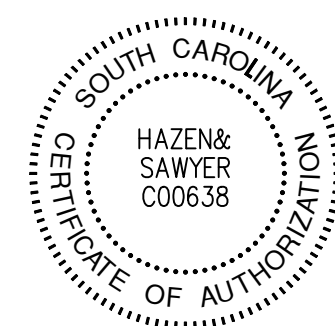
1. INSPECT EVERY 7 CALENDAR DAYS AND WITHIN 24-HOURS AFTER EACH STORM THAT PRODUCES 1/2 INCHES OR MORE OF PRECIPITATION, OR AFTER HEAVY USE.
2. CHECK FOR MUD AND SEDIMENT BUILDUP AND PAD INTEGRITY.
3. MAKE DAILY INSPECTIONS DURING PERIODS OF WET WEATHER. MAINTENANCE IS REQUIRE MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
4. WASH OR REPLACE STONES AS NEEDED.

TEMPORARY GRAVEL CONSTRUCTION  
ENTRANCE / EXIT  
0257701R

File: D:\0033\CHARLESTON\DESIGN\DRAWINGS\CONSTRUCTION\DETAILS Standard by L FANNING Date: 4/22/2020 10:49 AM  
PLOT DATE: 4/23/2020 8:39 AM BY: L FANNING

1	CONSTRUCTION	JAN 2020	HAZEN
REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	L. FANNING
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC

THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I & II

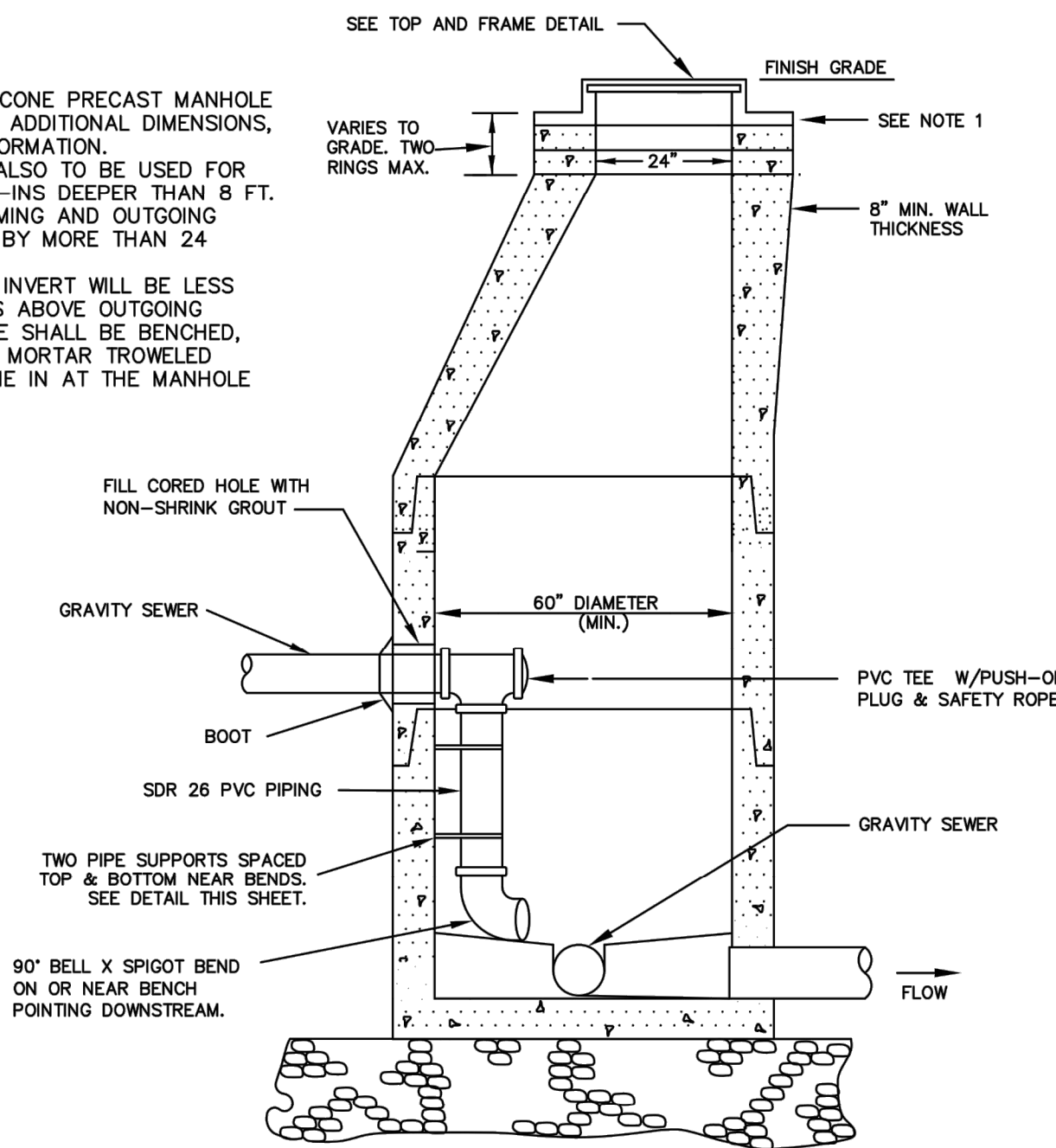
CIVIL  
STANDARD DETAILS

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C902

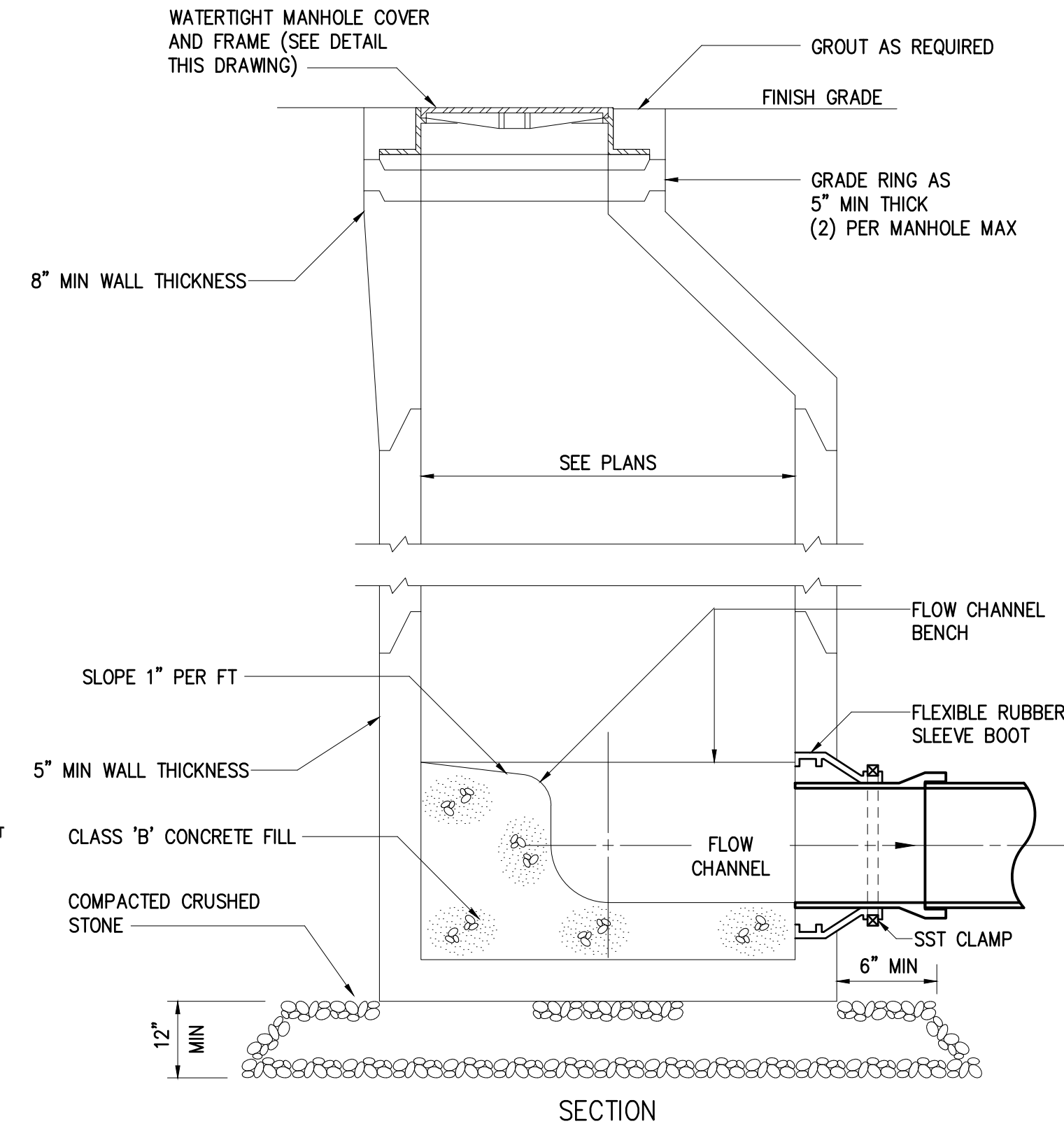
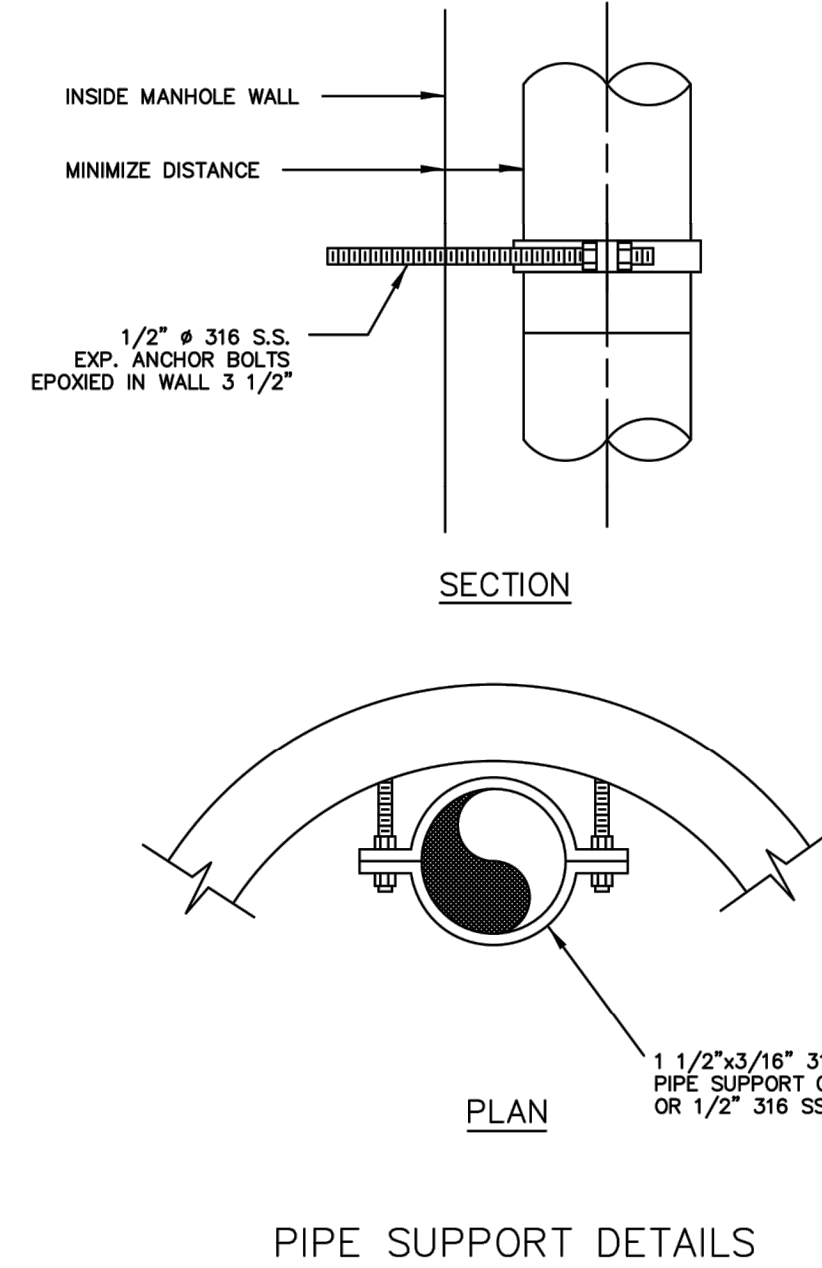


**NOTES:**

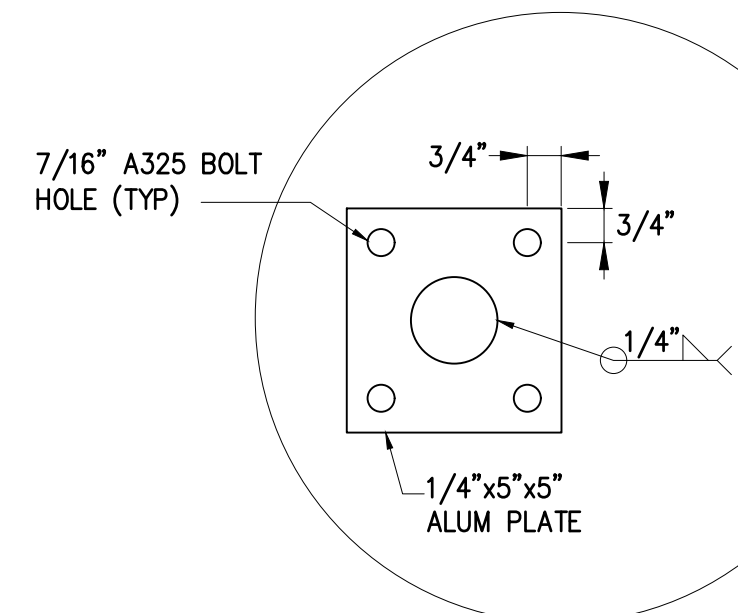
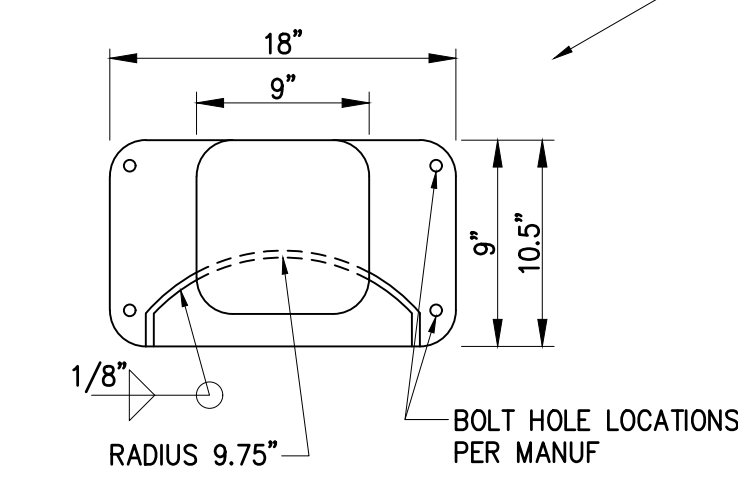
1. SEE ECCENTRIC CONE PRECAST MANHOLE DETAIL #47 FOR ADDITIONAL DIMENSIONS, NOTES, AND INFORMATION.
2. THIS DETAIL IS ALSO TO BE USED FOR FORCE MAIN TIE-INS DEEPER THAN 8 FT.
3. USE WHEN INCOMING AND OUTGOING INVERTS DIFFER BY MORE THAN 24 INCHES.
4. WHEN INCOMING INVERT WILL BE LESS THAN 24 INCHES ABOVE OUTGOING INVERT, THE LINE SHALL BE BENCHED, TROUGHED, AND MORTAR TROWELED SMOOTH TO COME IN AT THE MANHOLE INVERT.



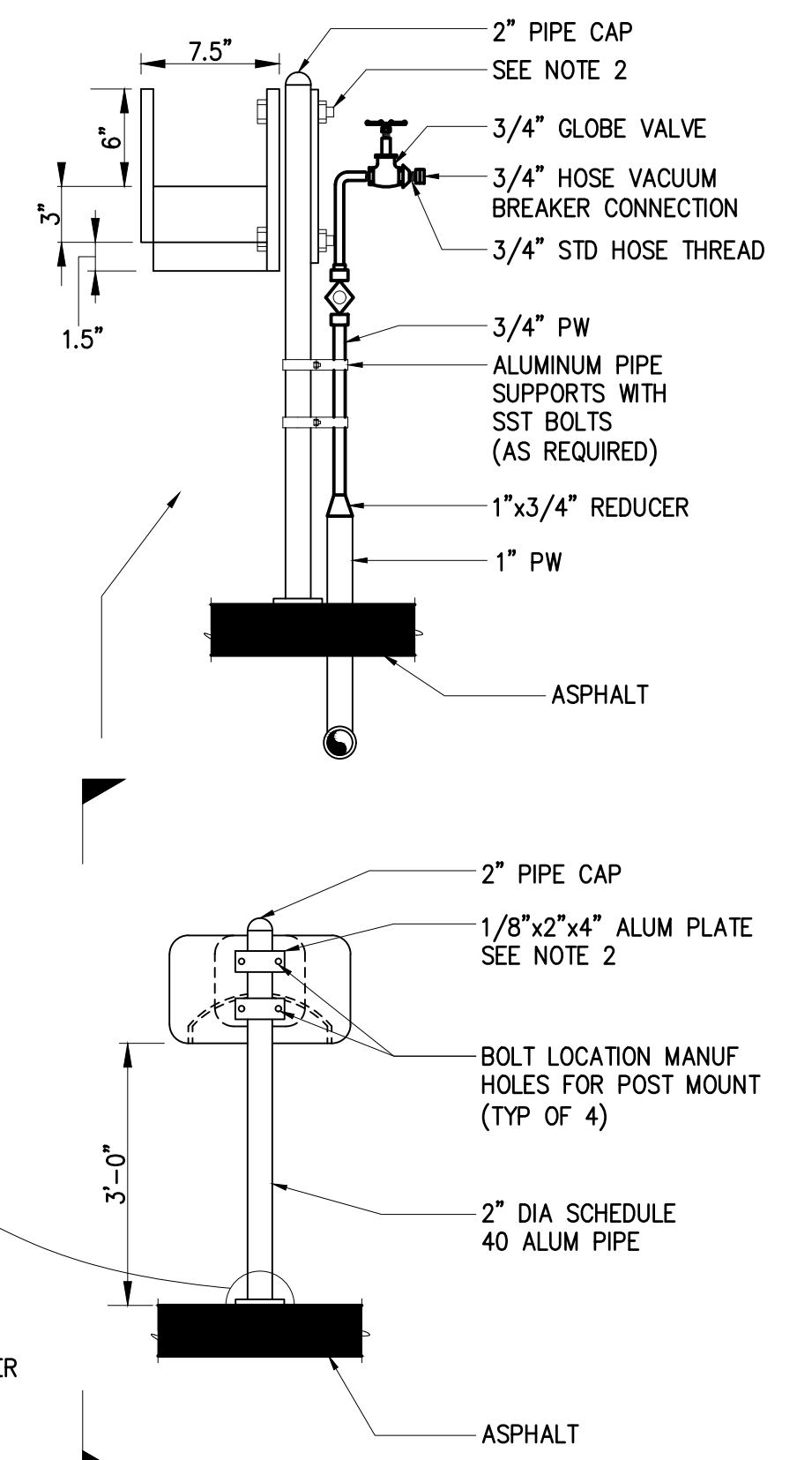
INSIDE DROP MANHOLE  
DETAIL 6  
CWS DETAIL 49



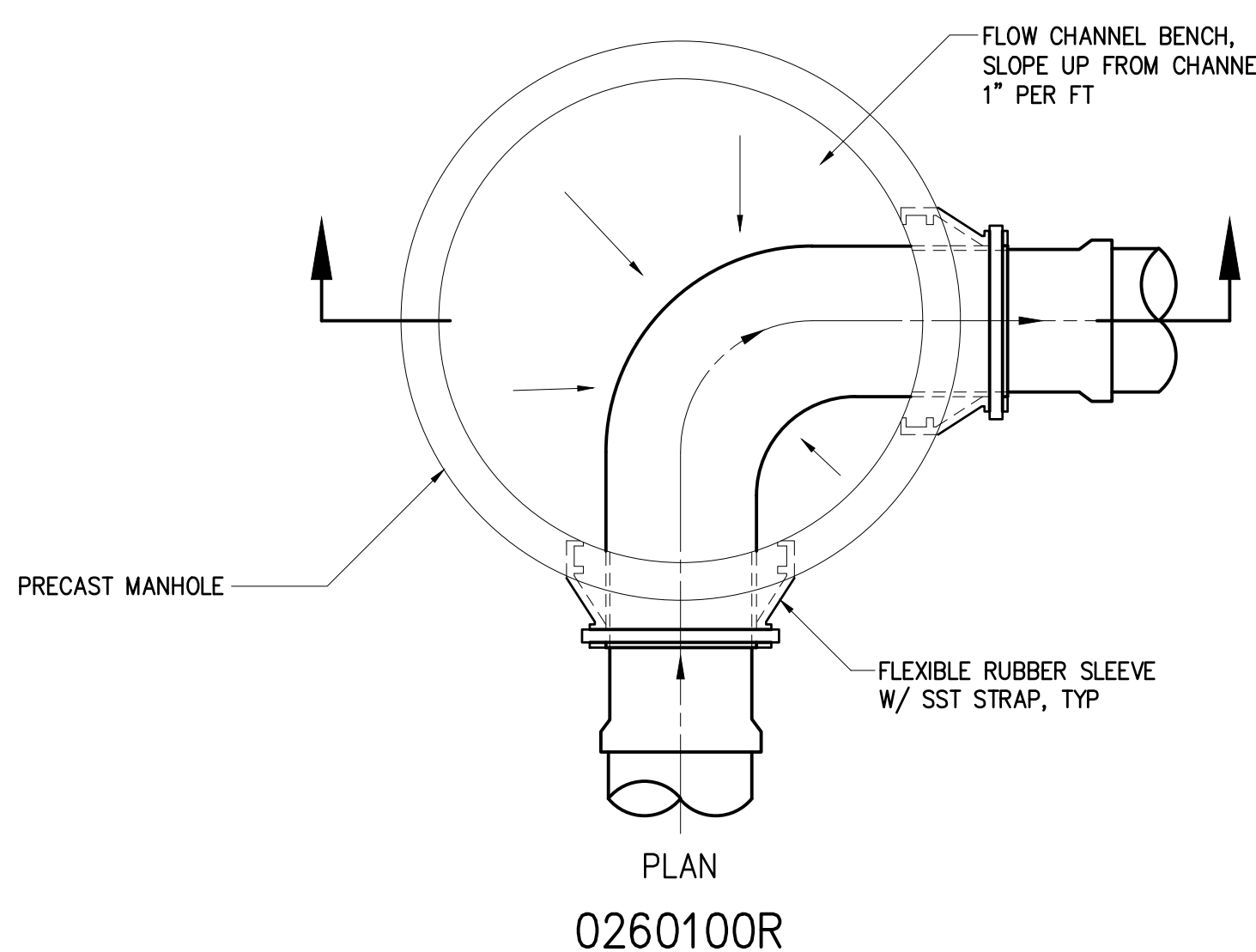
SECTION  
0260101R



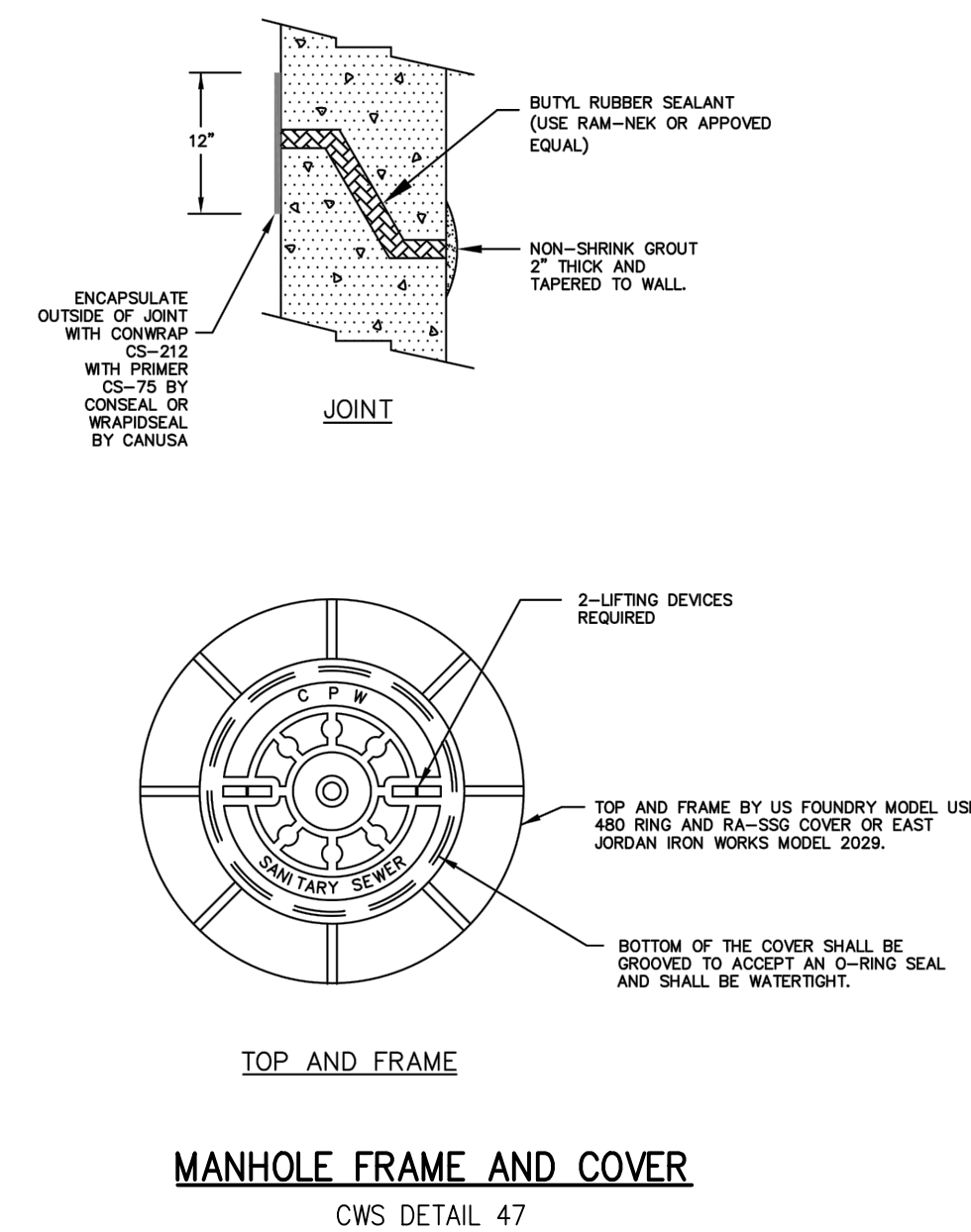
- NOTES:**
1. ALL UNITS SHALL BE FABRICATED FROM 1/8" 6061-T6 ALUMINUM ALLOY PLATE.
  2. ATTACH HOSE RACK TO POST W/ PLATES AND (4)-1/4" SS BOLTS.
  3. VERIFY DIMENSIONS WITH THE HOSE FURNISHED FOR SIZING. INSERT DOUBLE SPACER NUTS BETWEEN POST AND HOSE RACK.
  4. PROVIDE 50' 3/4" HOSE PER SPECIFICATIONS FOR EACH RACK SHOWN.



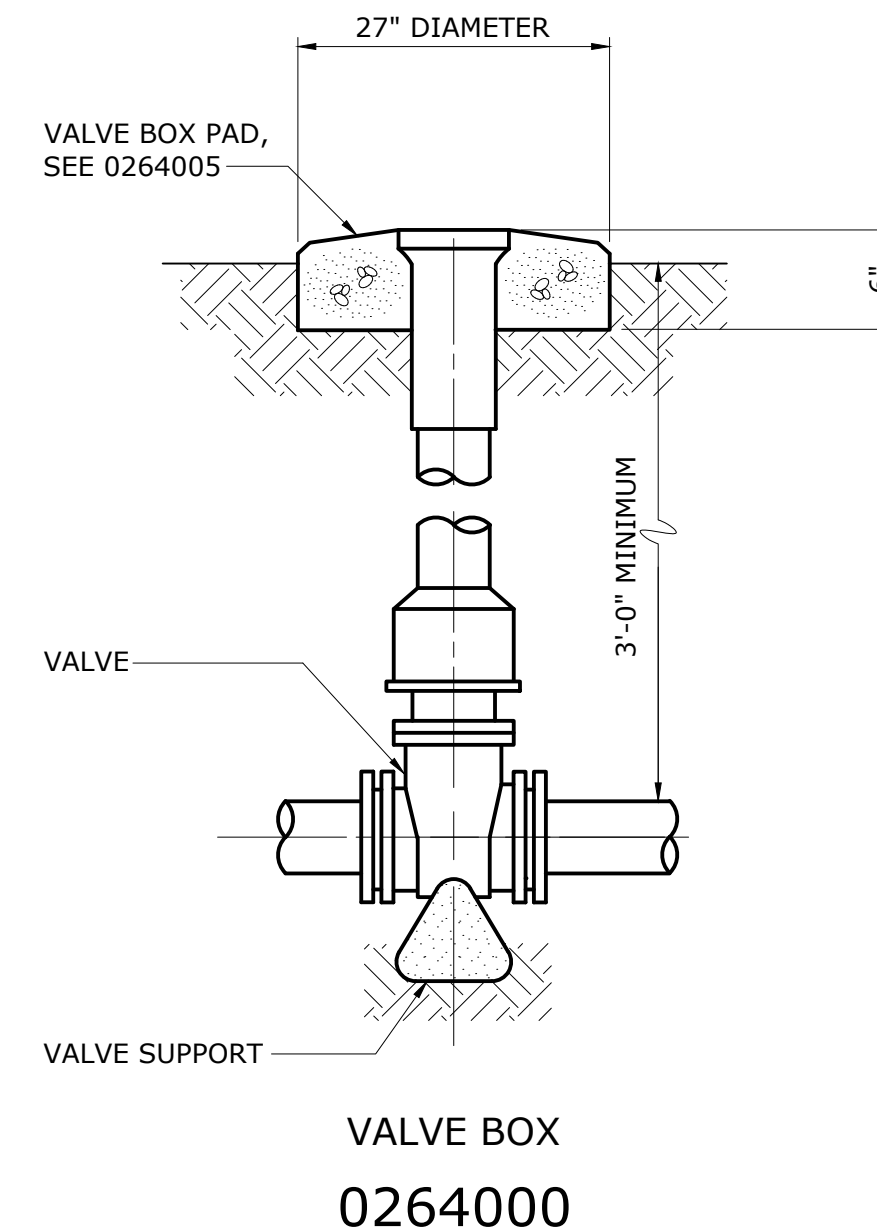
ELEVATION - POST MOUNTED  
HOSE BIBB WITH  
HOSE RACK  
1511209R



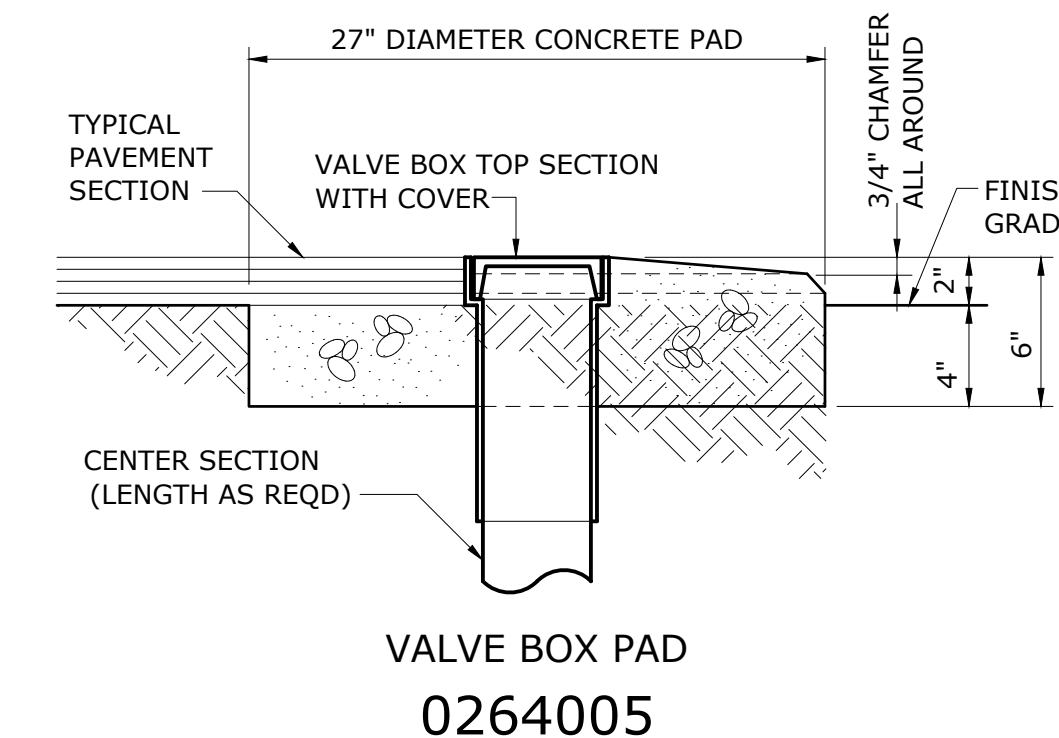
PLAN  
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TOP AND FRAME  
MANHOLE FRAME AND COVER  
CWS DETAIL 47



VALVE BOX  
0264000

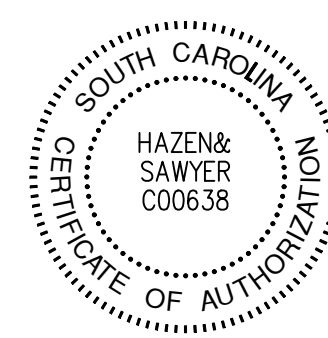


VALVE BOX PAD  
0264005

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Plot Date: 4/22/2020 8:39 AM By: LFANNING

1	CONSTRUCTION	JAN 2020	HAZEN
REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	L. FANNING
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



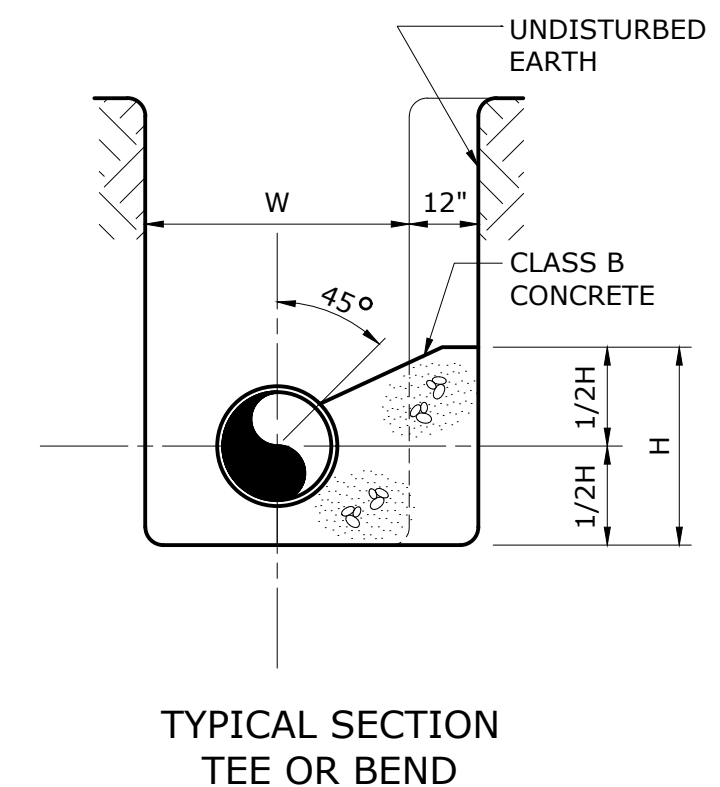
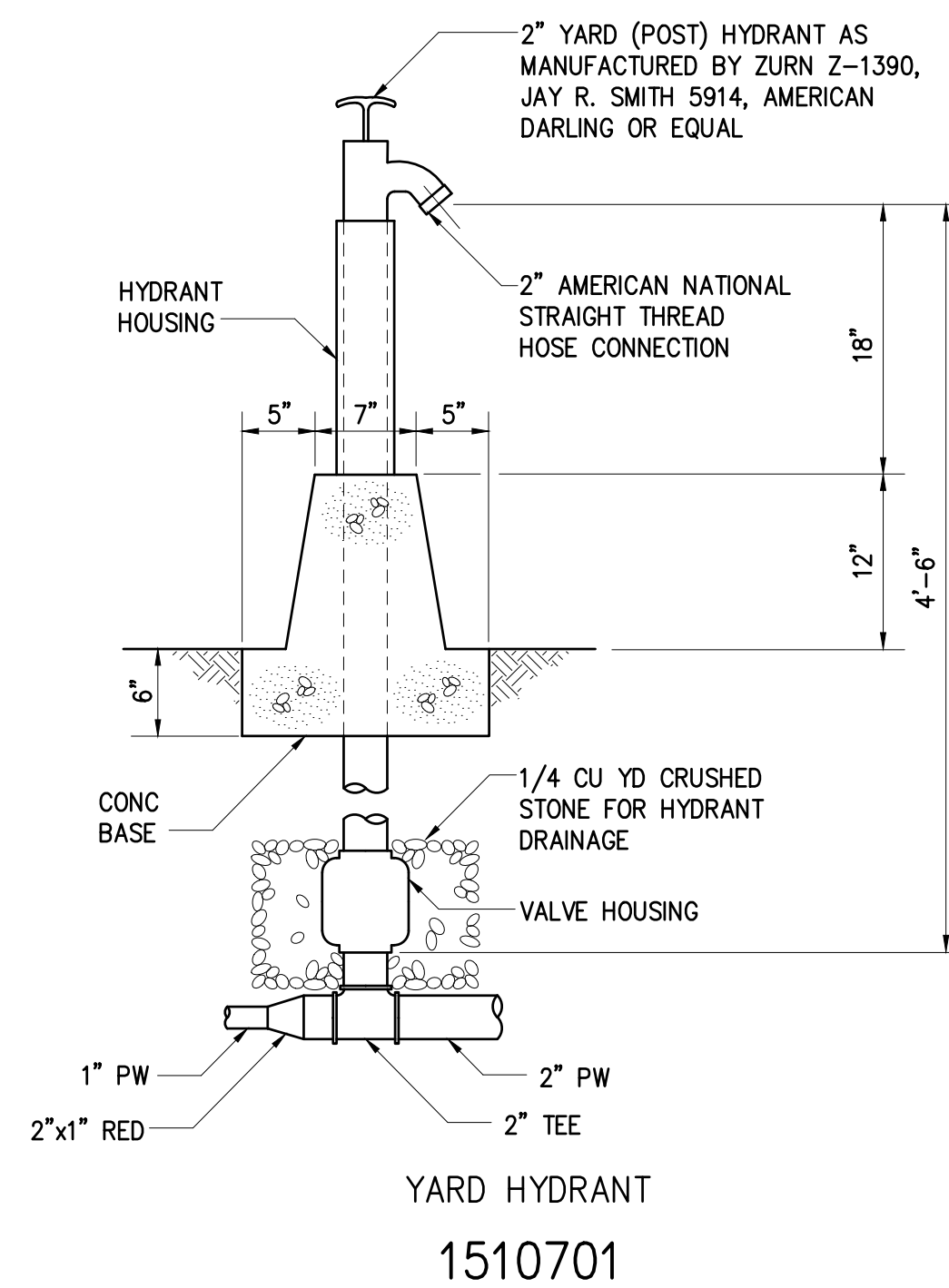
**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC

THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I & II

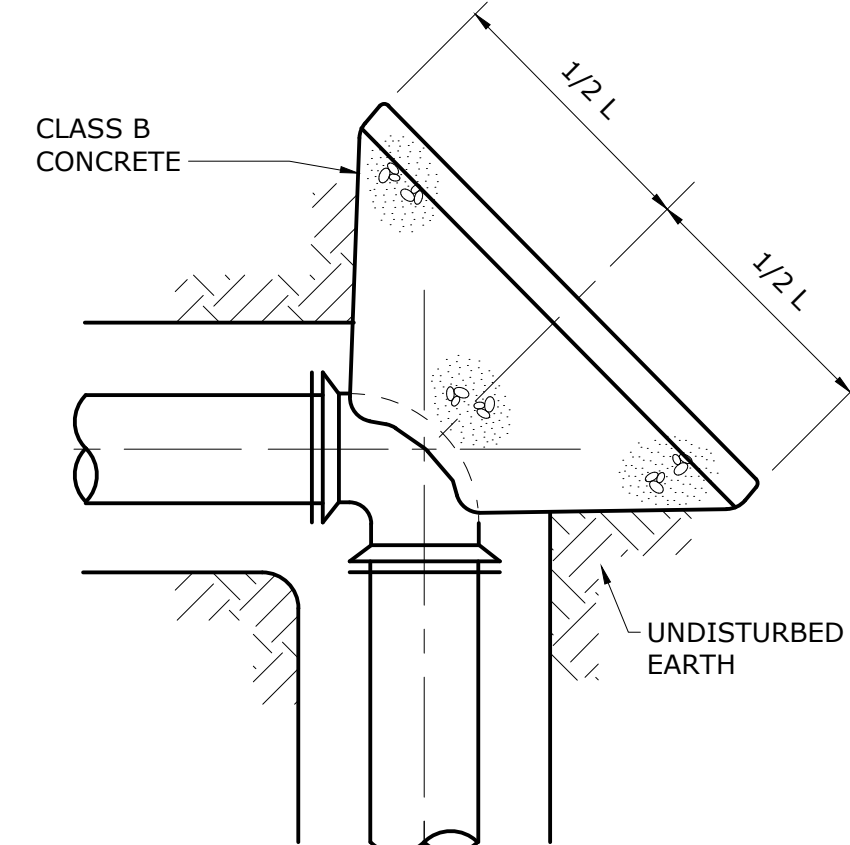
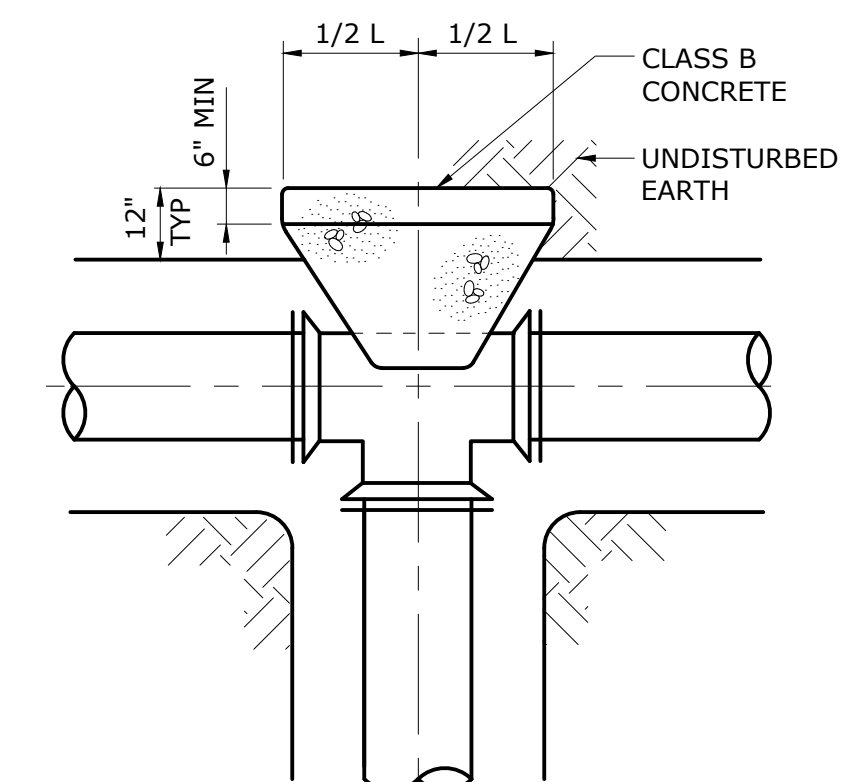
CIVIL  
STANDARD DETAILS

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C903

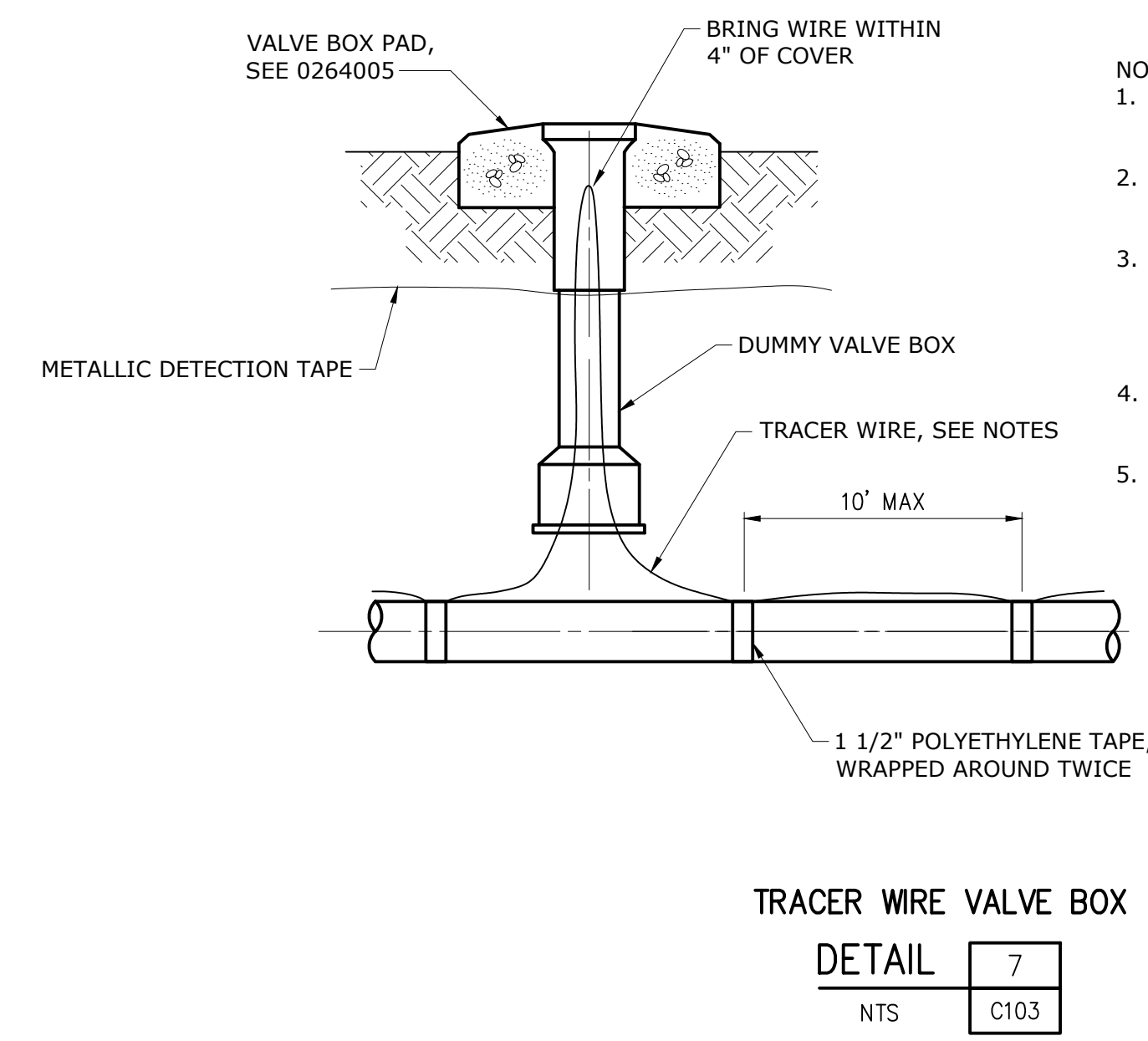


PIPE SIZE (IN)	CONCRETE THRUST BLOCK SCHEDULE*										DESIGN PRESSURE (PSI)
	BEND					TEE					
	90°	45°	22 1/2°	11 1/4°	90°	45°	22 1/2°	11 1/4°			
6	1.7	3.4	1.3	2.5	0.9	1.8	0.6	1.3	1.5	1.5	1.5
8	2.3	4.5	1.7	3.3	1.2	2.4	0.8	1.7	1.5	1.5	1.5
12	3.3	6.6	2.4	4.9	1.7	3.5	1.2	2.5	1.5	1.5	1.5
16	4.3	8.7	3.2	6.4	2.3	4.6	1.6	3.2	1.5	1.5	1.5
24	6.4	12.9	4.7	9.5	3.4	6.8	2.4	4.8	1.5	1.5	1.5
30	8.0	16.0	5.9	11.8	4.2	8.4	3.0	6.0	1.5	1.5	1.5
36	9.6	19.1	7.0	14.1	5.0	10.1	3.6	7.1	1.5	1.5	1.5
42	11.1	22.2	8.2	16.4	5.8	11.7	4.1	8.3	1.5	1.5	1.5
48	12.7	25.4	9.3	18.7	6.7	13.3	4.7	9.5	1.5	1.5	1.5
54	14.3	28.5	10.5	21.0	7.5	15.0	5.3	10.6	1.5	1.5	1.5

\* BASED ON AVERAGE SOIL PASSIVE BEARING STRENGTH OF 2000 PSF USING SF OF 1.5. DIMENSIONS FOR BLOCKS IN FEET

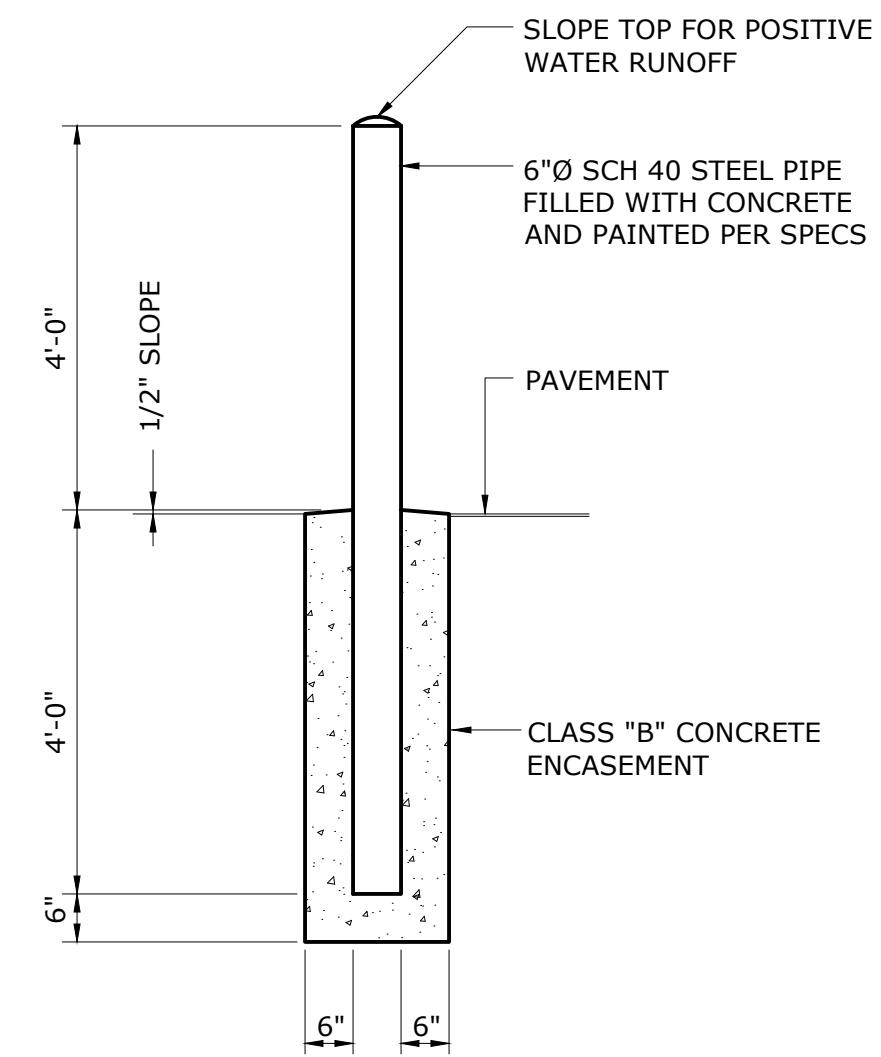


THRUST BLOCKS  
0222108

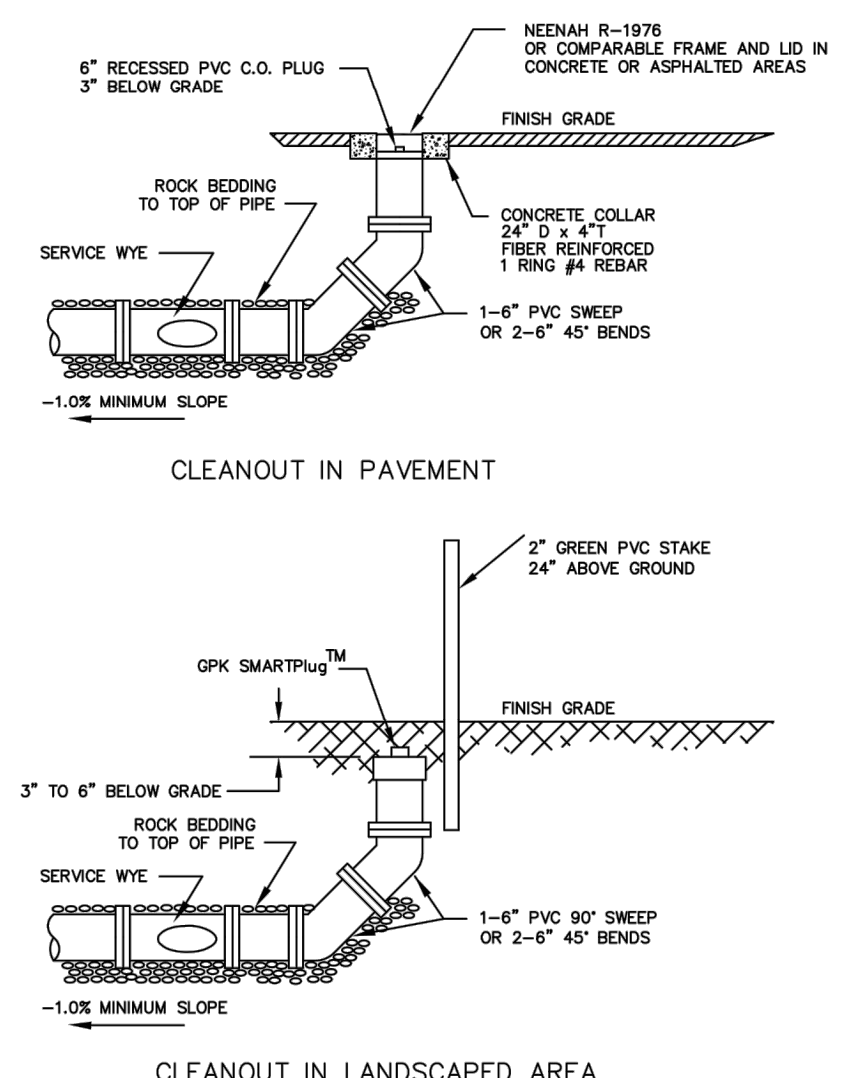
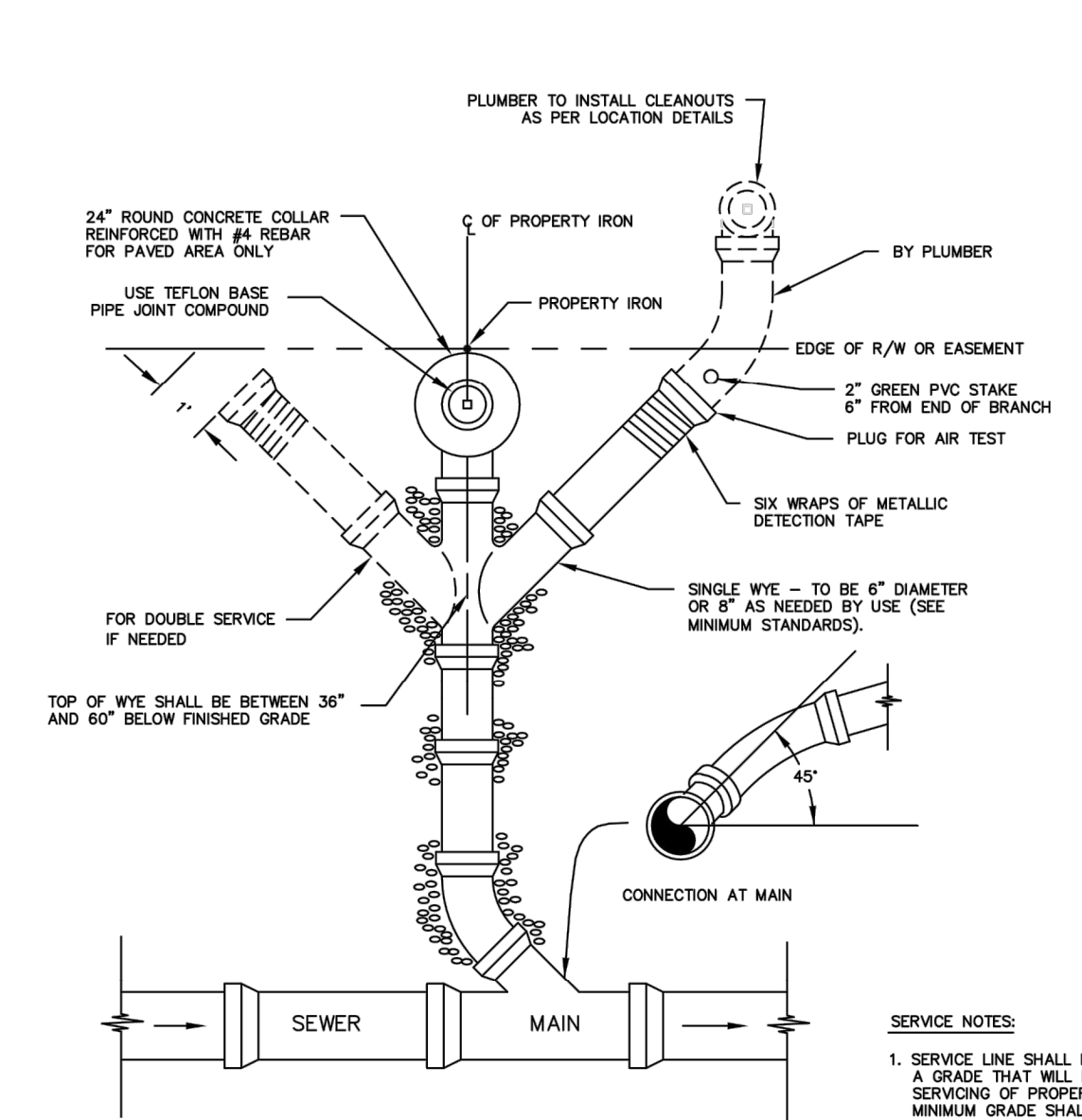


- NOTES:
- OPEN CUT INSTALLATIONS WILL REQUIRE INSULATED 12 GAUGE COPPER WIRE.
  - TRENCHLESS INSTALLATION WILL REQUIRE INSULATED 10 GAUGE STAINLESS STEEL WIRE.
  - CONTRACTOR SHALL INSTALL DUMMY VALVE BOXES AT INTERVALS NO GREATER THAN 1000 FEET, INCLUDING ONE AT THE PUMP STATION AND ONE AT THE DISCHARGE POINT.
  - THE WIRE AND TAPE SHALL MEET THE REQUIREMENTS OF THE CWS MINIMUM STANDARDS.
  - REFER TO FORCE MAIN BEDDING DETAIL FOR ADDITIONAL INFORMATION.

TRACER WIRE VALVE BOX  
DETAIL 7  
NTS C103

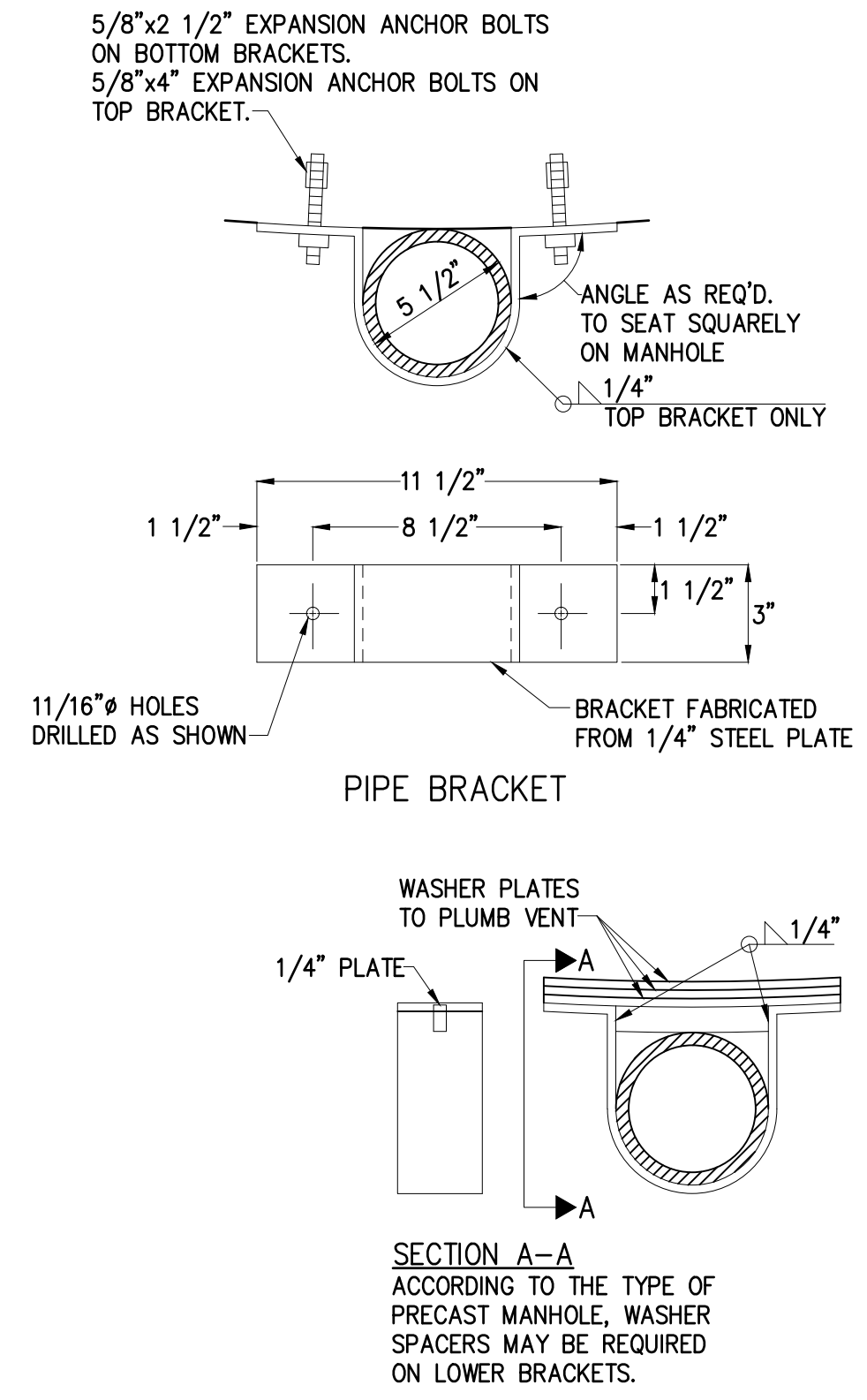


BOLLARD DETAIL  
0245100R

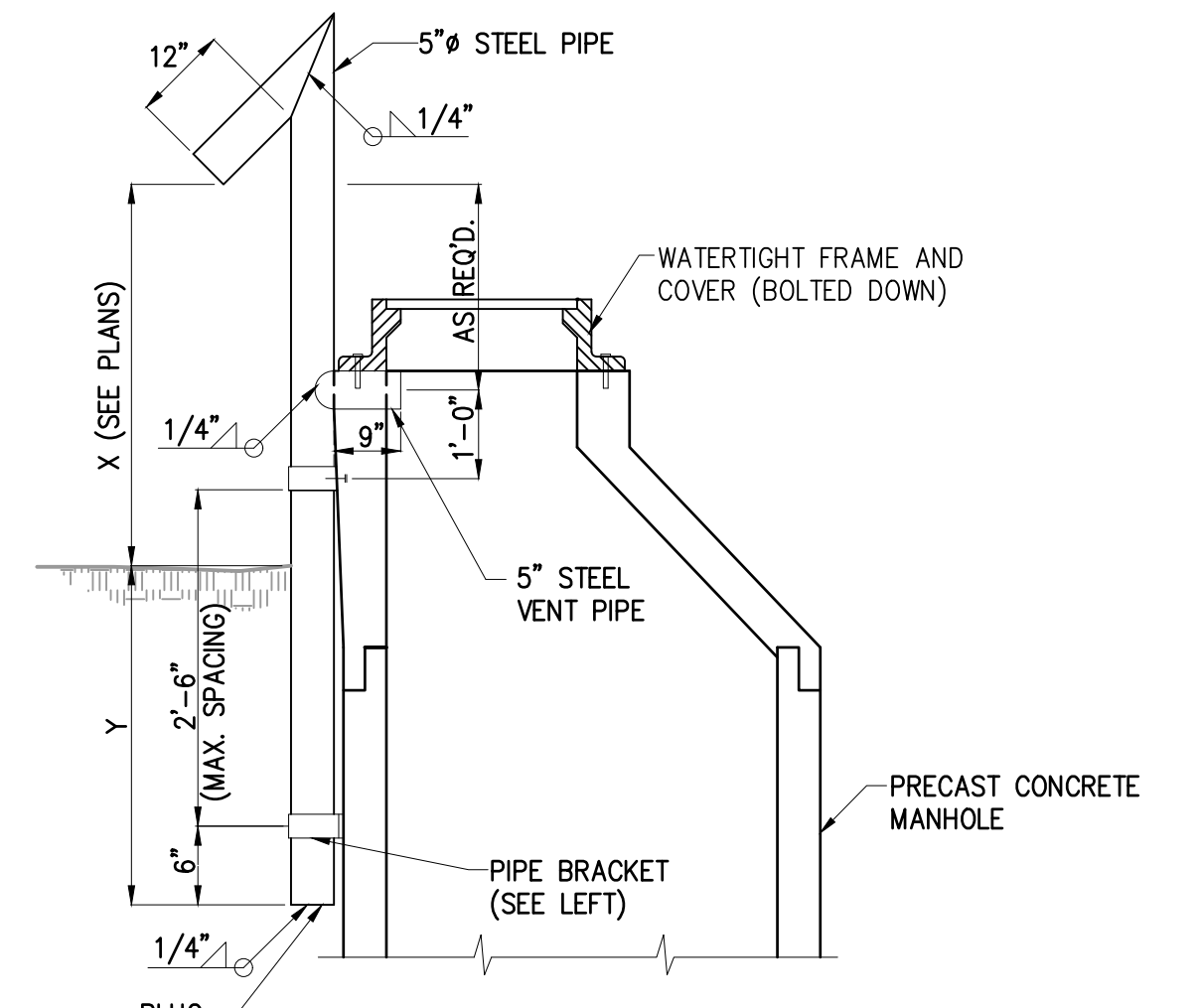


- SERVICE NOTES:
- SERVICE LINE SHALL BE ON SUCH A GRADE THAT WILL PERMIT SERVING OF PROPERTY. MINIMUM GRADE SHALL BE 1.0% MAXIMUM GRADE SHALL BE 3.0%
  - NO VERTICAL STACKING SHALL BE ALLOWED.

SEWER SERVICE CONNECTION TO MAIN  
DETAIL 8  
CWS DETAIL 54



SECTION A-A  
ACCORDING TO THE TYPE OF PRECAST MANHOLE, WASHER SPACERS MAY BE REQUIRED ON LOWER BRACKETS.



X	Y	MIN. NO. OF PIPE BRACKETS
0'-72"	60"	3
72'-84"	66"	3
OVER 84"	72"	3

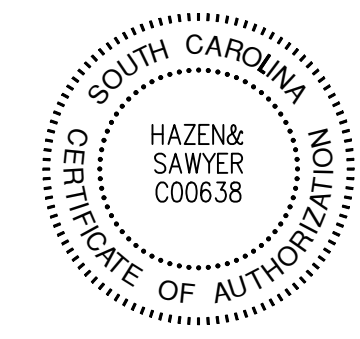
- NOTES:
- VENT SHALL BE ON CREEK SIDE AND POINT DOWNSTREAM.
  - VENT AND BRACKETS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
  - AVOID PLACING PIPE BRACKET AT MANHOLE JOINTS.
  - ANCHOR SLEEVE, THREADED STUD AND NUT SHALL BE STAINLESS STEEL OR GALVANIZED STEEL.
  - ROTATE STRAIGHT WALL OF MANHOLE TO CREEK SIDE.

MANHOLE VENT PIPE  
0264004R

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REV	ISSUED FOR	DATE	BY
1	CONSTRUCTION	JAN 2020	HAZEN

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	L. FANNING
DRAWN BY:	L. FANNING
CHECKED BY:	C. RAGOS
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE	



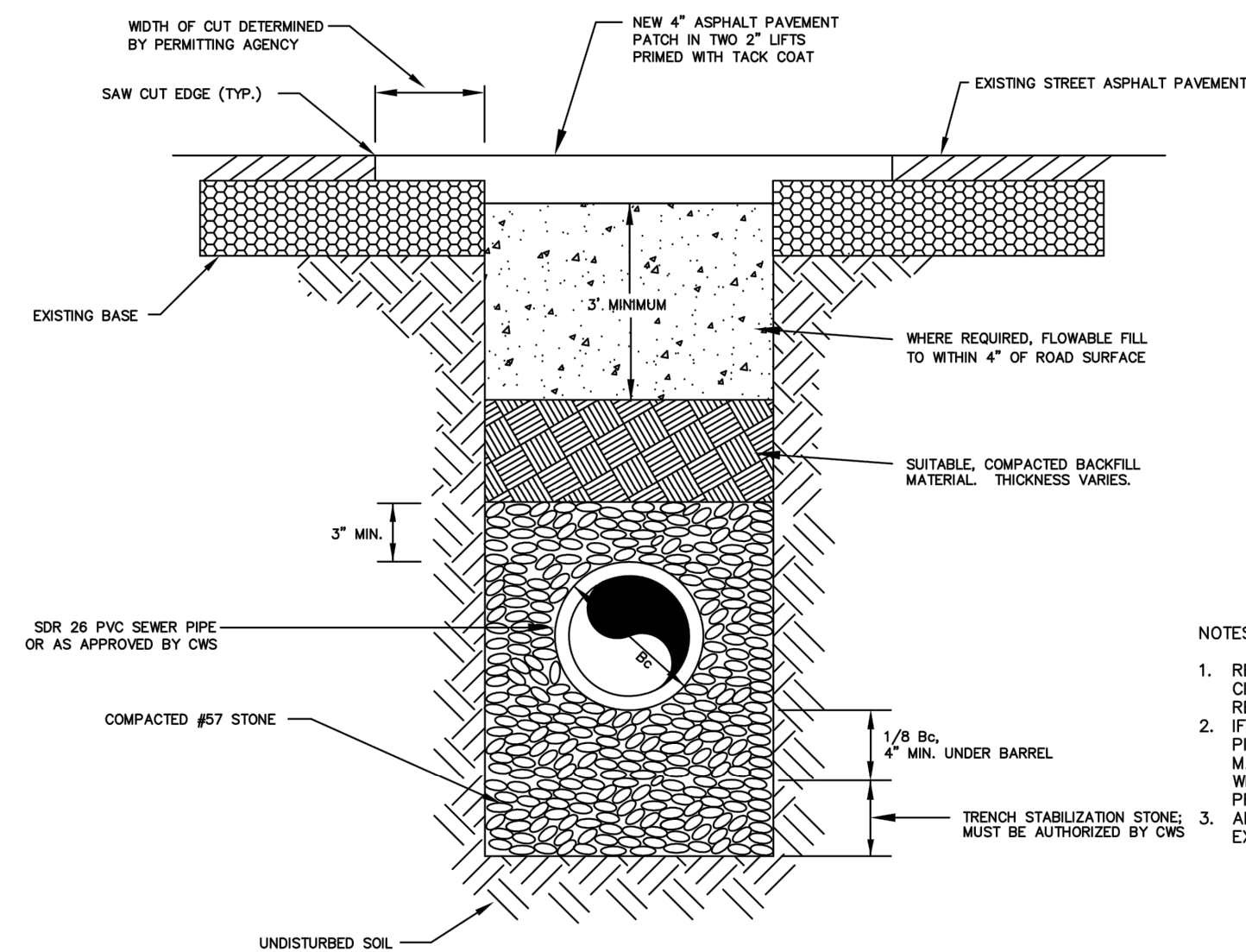
**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464



THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I & II

CIVIL  
STANDARD DETAILS

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C904

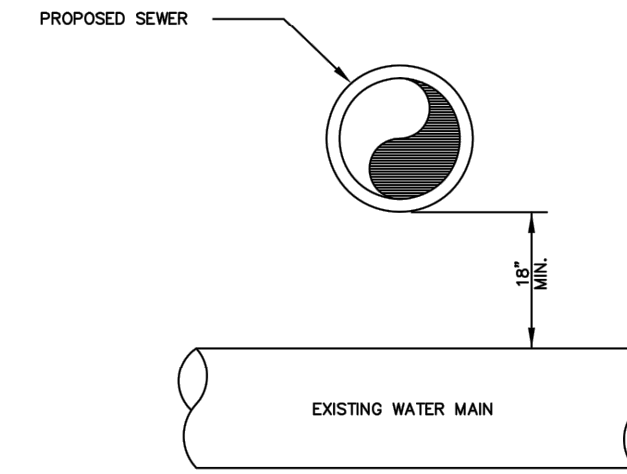


- NOTES:
1. REFER TO SCDOT HIGHWAY DEPARTMENT, CITY, OR COUNTY PERMITS FOR ADDITIONAL REQUIREMENTS.
  2. IF UNSUITABLE MATERIAL BENEATH FINAL PIPE GRADE IS ENCOUNTERED, SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH CRUSHED STONE AND COMPACTED TO PROPER GRADE.
  3. ANY DEBRIS ENCOUNTERED IN TRENCH EXCAVATION SHALL BE REMOVED.

TYPICAL SEWER MAIN ROAD CUT

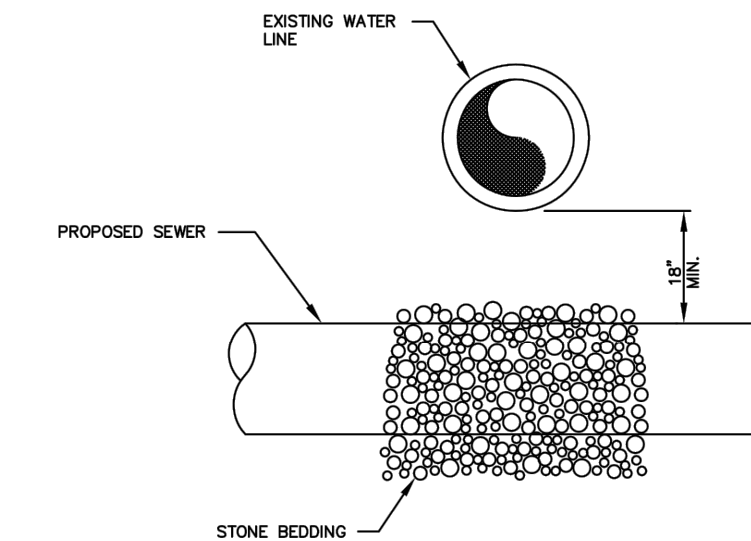
DETAIL	9
CWS DETAIL 42	--

- NOTES FOR SEWER OVER WATER MAIN:
1. INSTALL A FULL JOINT OF PIPE FOR WHICHEVER MAIN IS LAID SECOND. IT IS TO BE CENTERED AT CROSSING.
  2. IF THE WATER IS EXISTING AND THE MINIMUM CLEARANCE IS NOT MET, THE SEWER SHALL BE PVC C900, C905, OR DUCTILE IRON PIPE. PROVIDE RESTRAINED JOINT FITTINGS WHEN TRANSITIONING FROM DIP TO PVC. PLACE FLOWABLE FILL BETWEEN TOP OF WATER MAIN AND BOTTOM OF SEWER.
  3. IF THE SEWER IS EXISTING, THE WATER MAIN SHALL MEET THE MINIMUM CLEARANCE.



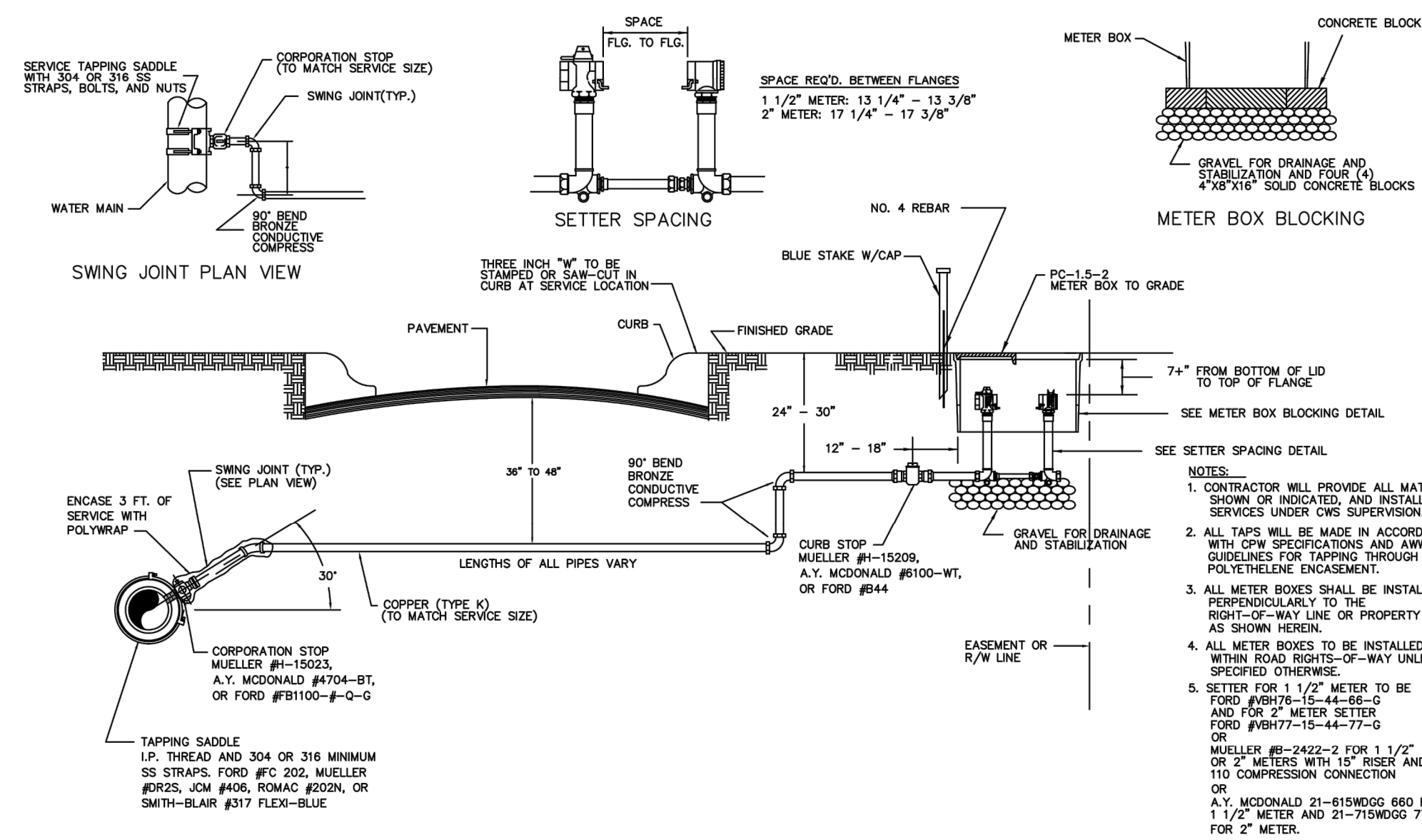
SEWER CROSSING ABOVE WATER MAIN

- NOTES FOR SEWER UNDER WATER MAIN:
1. SOIL REPLACED UNDER THE WATER MAIN SHALL BE COMPACTED AS PER CWS MINIMUM STANDARDS FOR WATER MAIN INSTALLATION.
  2. IF CLEARANCE IS LESS THAN 18", PVC C900, C905 OR DUCTILE IRON PIPE SHALL BE USED. PROVIDE RESTRAINED JOINT FITTINGS WHEN TRANSITIONING FROM DIP TO PVC. PLACE FLOWABLE FILL BETWEEN TOP OF SEWER AND BOTTOM OF WATER MAIN. PLACE A LAYER OF POLYWRAP ABOVE SEWER STONE BEDDING PRIOR TO PLACING FLOWABLE FILL.
  3. INSTALL A FULL JOINT OF PIPE FOR WHICHEVER MAIN IS LAID SECOND. IT IS TO BE CENTERED AT CROSSING.



SEWER CROSSING UNDER WATER MAIN

SEWER MAIN CROSSING WATER MAIN NOT TO SCALE



1 1/2" AND 2" WATER SERVICE NOT TO SCALE

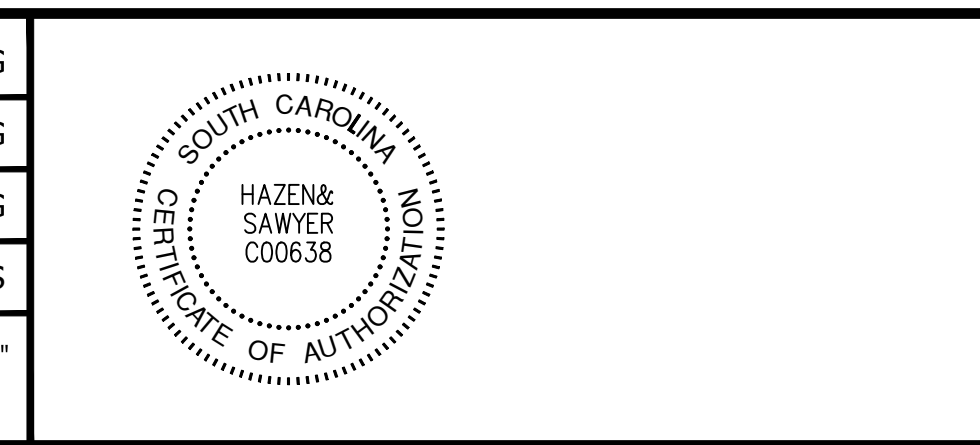
2" WATER SERVICE

DETAIL	10
CWS DETAIL 21	--

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PROJECT ENGINEER:	J. HARTWIG		
DESIGNED BY:	L. FANNING		
DRAWN BY:	L. FANNING		
CHECKED BY:	C. RAGOS		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
1	CONSTRUCTION	JAN 2020	HAZEN
REV	ISSUED FOR	DATE	BY

PROJECT ENGINEER:	J. HARTWIG		
DESIGNED BY:	L. FANNING		
DRAWN BY:	L. FANNING		
CHECKED BY:	C. RAGOS		
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE			
1	CONSTRUCTION	JAN 2020	HAZEN
REV	ISSUED FOR	DATE	BY



**Hazen**  
HAZEN AND SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

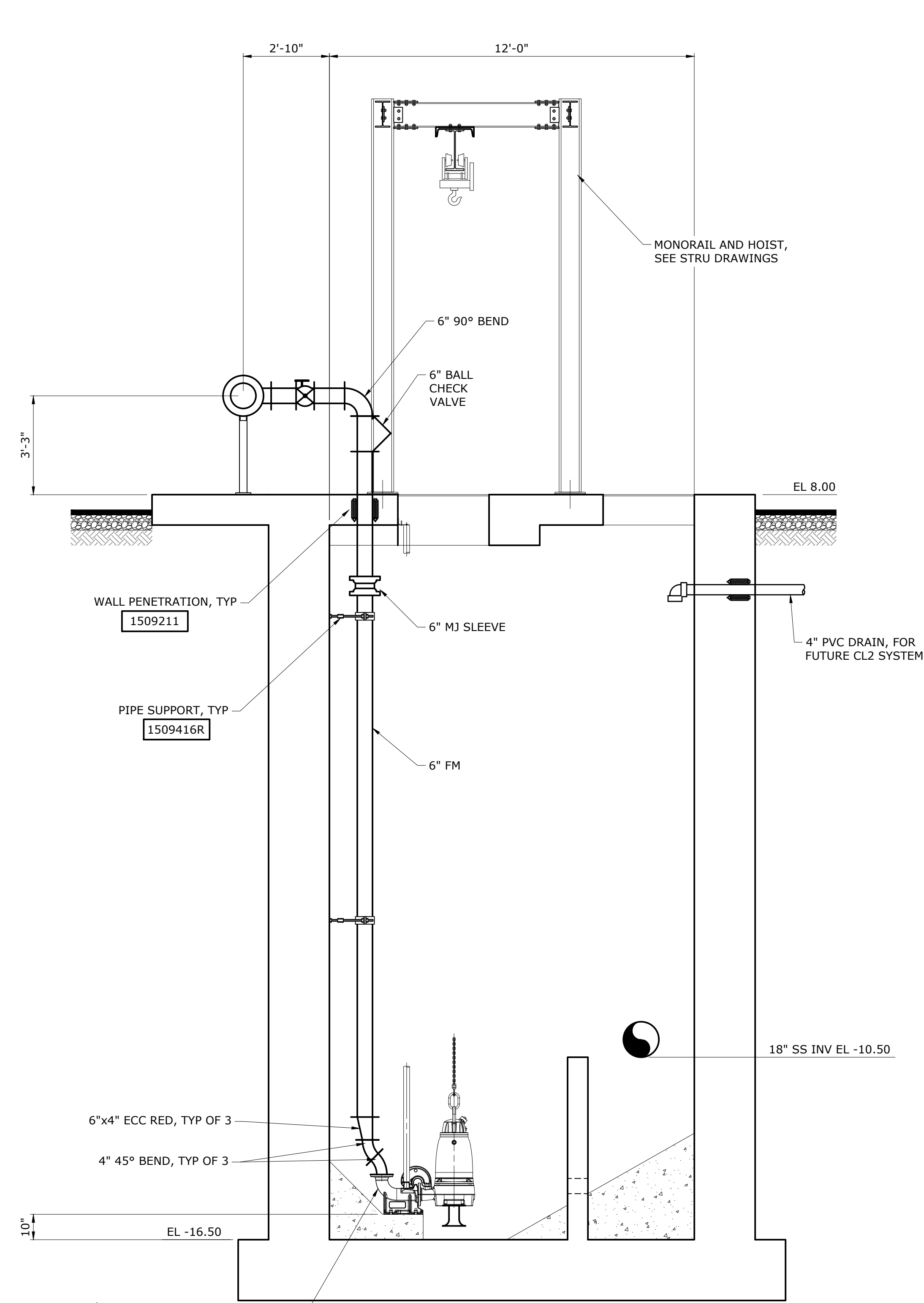
**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC

THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I & II

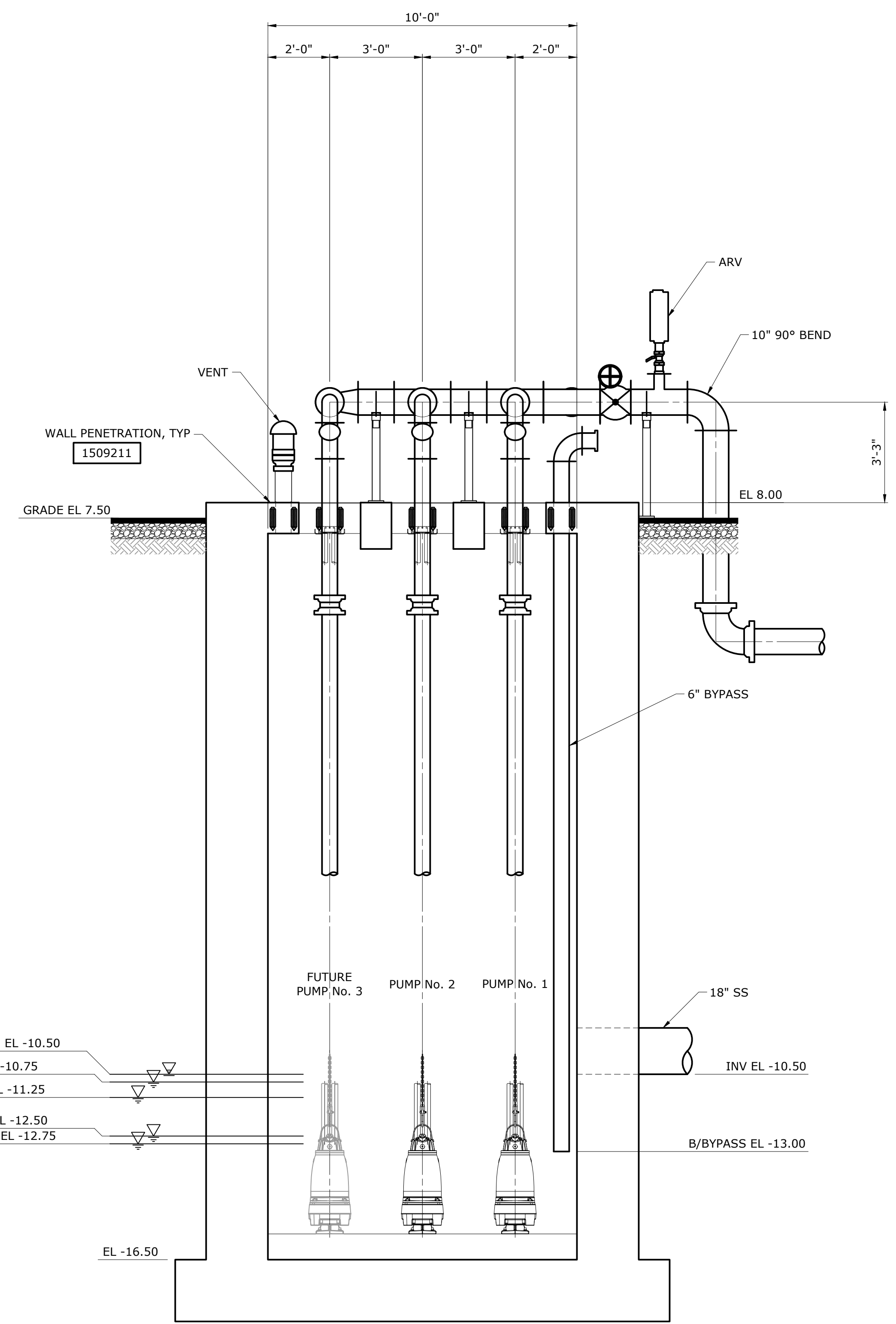
CIVIL  
STANDARD DETAILS

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	C905

**NOTES:**  
 1. ALL DISCHARGE PIPING, GUIDE RAILS, SUPPORTS, AND BASE ELBOW TO BE INSTALLED FOR FUTURE PUMP P-103.



**SECTION A**  
 3/8" = 1'-0" M100



**SECTION B**  
 3/8" = 1'-0" M100

- HIGH LEVEL ALARM EL -10.50
- LAG PUMP "ON" EL -10.75
- LEAD PUMP "ON" EL -11.25
- ALL PUMPS "OFF" EL -12.50
- LOW LEVEL ALARM EL -12.75

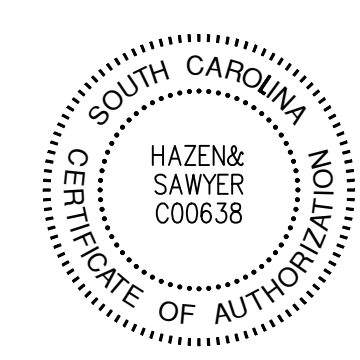
2 PUMP DISCHARGE ELBOW, SEE NOTE 1

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REV	ISSUED FOR	DATE	BY
2	ADDENDUM No. 1	JAN 2020	HAZEN
1	CONSTRUCTION	JAN 2020	HAZEN

PROJECT ENGINEER: J. HARTWIG  
 DESIGNED BY: J. HARTWIG  
 DRAWN BY: L. FANNING  
 CHECKED BY: C. RAGOS

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO FULL SCALE



**Hazen**  
 HAZEN AND SAWYER  
 735 JOHNNIE DODDS BLVD, SUITE 102  
 MOUNT PLEASANT, SOUTH CAROLINA 29464

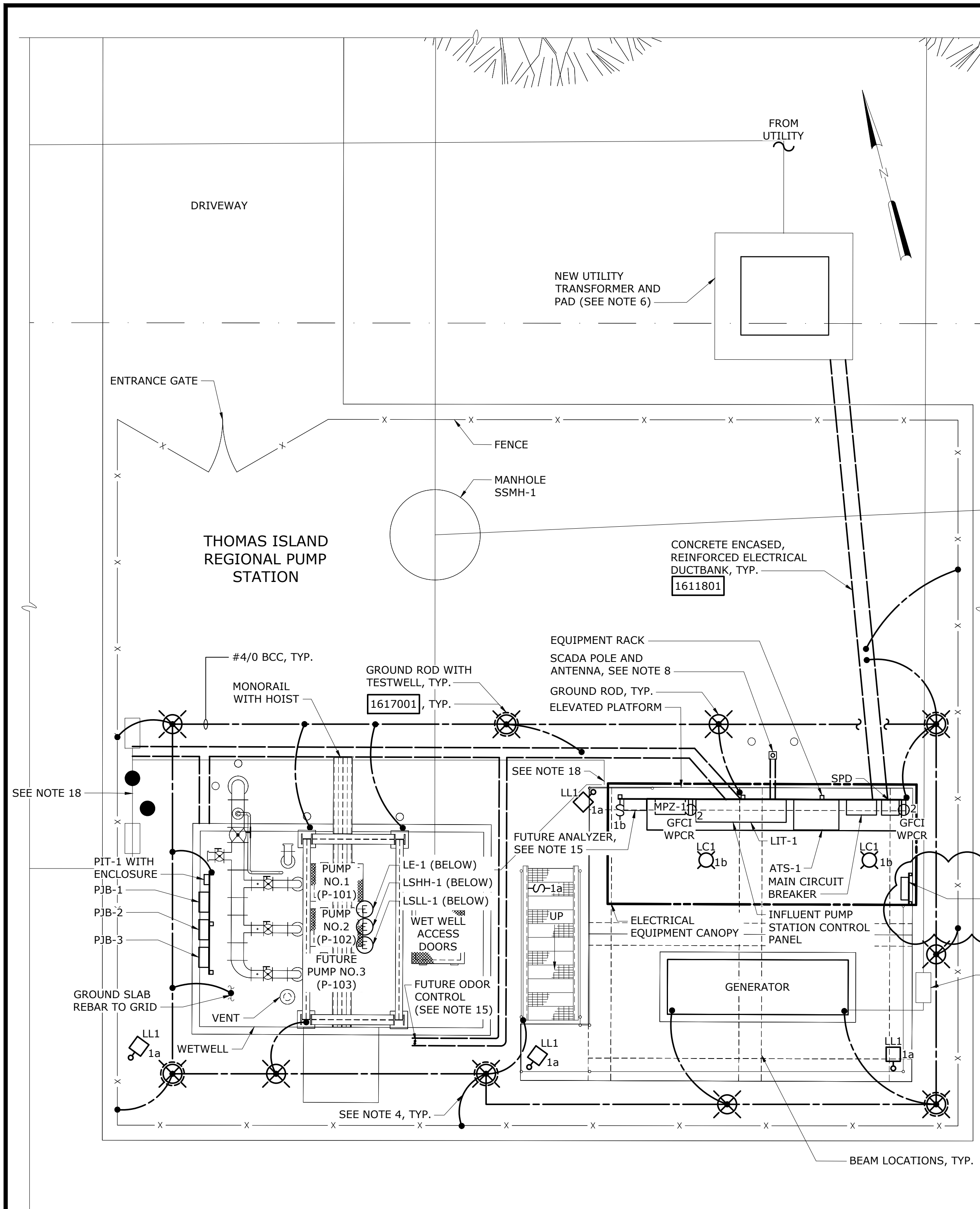


THOMAS ISLAND REGIONAL PUMP STATION  
 AND INTERCEPTOR  
 DIVISION I

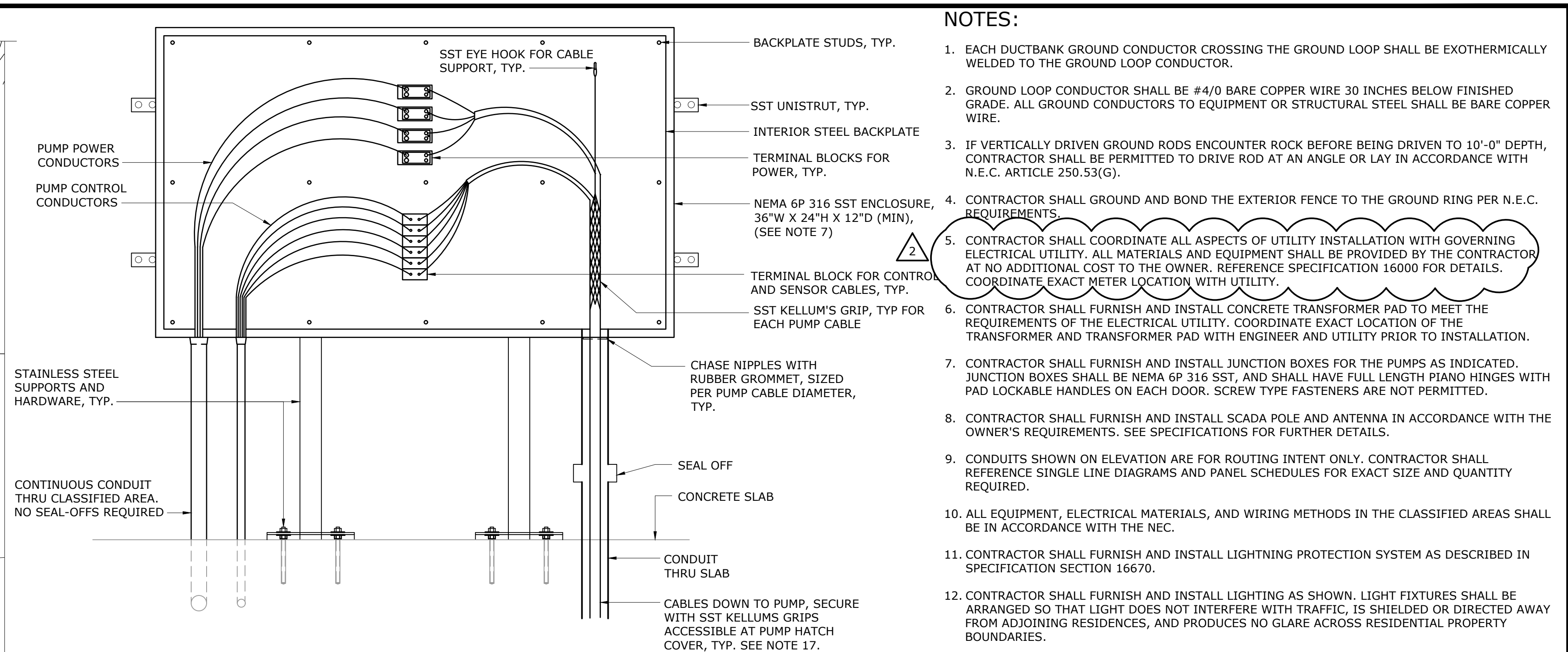
PUMP STATION  
 MECHANICAL  
 SECTIONS

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	M101

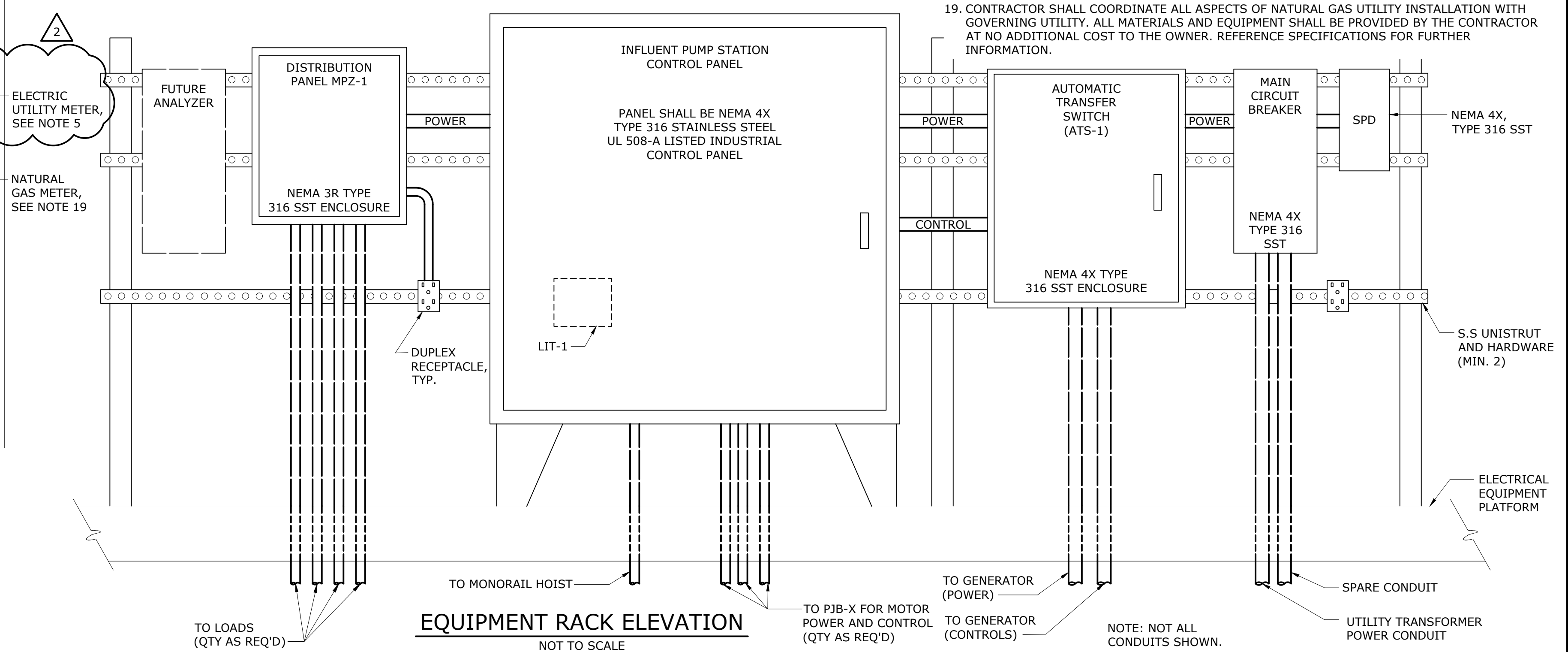




**POWER AND LIGHTING PLAN**  
1" = 5'-0"



**JUNCTION BOX INTERIOR DETAIL (PJB-1 THRU PJB-3)**  
NOT TO SCALE



**EQUIPMENT RACK ELEVATION**  
NOT TO SCALE

- NOTES:**
- EACH DUCTBANK GROUND CONDUCTOR CROSSING THE GROUND LOOP SHALL BE EXOTHERMICALLY WELDED TO THE GROUND LOOP CONDUCTOR.
  - GROUND LOOP CONDUCTOR SHALL BE #4/0 BARE COPPER WIRE 30 INCHES BELOW FINISHED GRADE. ALL GROUND CONDUCTORS TO EQUIPMENT OR STRUCTURAL STEEL SHALL BE BARE COPPER WIRE.
  - IF VERTICALLY DRIVEN GROUND RODS ENCOUNTER ROCK BEFORE BEING DRIVEN TO 10'-0" DEPTH, CONTRACTOR SHALL BE PERMITTED TO DRIVE ROD AT AN ANGLE OR LAY IN ACCORDANCE WITH N.E.C. ARTICLE 250.53(G).
  - CONTRACTOR SHALL GROUND AND BOND THE EXTERIOR FENCE TO THE GROUND RING PER N.E.C. REQUIREMENTS.
  - CONTRACTOR SHALL COORDINATE ALL ASPECTS OF UTILITY INSTALLATION WITH GOVERNING ELECTRICAL UTILITY. ALL MATERIALS AND EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. REFERENCE SPECIFICATION 16000 FOR DETAILS. COORDINATE EXACT METER LOCATION WITH UTILITY.
  - CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE TRANSFORMER PAD TO MEET THE REQUIREMENTS OF THE ELECTRICAL UTILITY. COORDINATE EXACT LOCATION OF THE TRANSFORMER AND TRANSFORMER PAD WITH ENGINEER AND UTILITY PRIOR TO INSTALLATION.
  - CONTRACTOR SHALL FURNISH AND INSTALL JUNCTION BOXES FOR THE PUMPS AS INDICATED. JUNCTION BOXES SHALL BE NEMA 6P 316 SST, AND SHALL HAVE FULL LENGTH PLANO HINGES WITH PAD LOCKABLE HANDLES ON EACH DOOR. SCREW TYPE FASTENERS ARE NOT PERMITTED.
  - CONTRACTOR SHALL FURNISH AND INSTALL SCADA POLE AND ANTENNA IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS. SEE SPECIFICATIONS FOR FURTHER DETAILS.
  - CONDUITS SHOWN ON ELEVATION ARE FOR ROUTING INTENT ONLY. CONTRACTOR SHALL REFERENCE SINGLE LINE DIAGRAMS AND PANEL SCHEDULES FOR EXACT SIZE AND QUANTITY REQUIRED.
  - ALL EQUIPMENT, ELECTRICAL MATERIALS, AND WIRING METHODS IN THE CLASSIFIED AREAS SHALL BE IN ACCORDANCE WITH THE NEC.
  - CONTRACTOR SHALL FURNISH AND INSTALL LIGHTNING PROTECTION SYSTEM AS DESCRIBED IN SPECIFICATION SECTION 16670.
  - CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING AS SHOWN. LIGHT FIXTURES SHALL BE ARRANGED SO THAT LIGHT DOES NOT INTERFERE WITH TRAFFIC, IS SHIELDED OR DIRECTED AWAY FROM ADJOINING RESIDENCES, AND PRODUCES NO GLARE ACROSS RESIDENTIAL PROPERTY BOUNDARIES.
  - MOUNT ALL TYPE LL1 FIXTURES AT 10'-0" ABOVE PLATFORM, OR GRADE.
  - MOUNT ALL TYPE LC1 FIXTURES AT CANOPY HEIGHT.
  - CONTRACTOR SHALL INSTALL CONDUITS FOR FUTURE EQUIPMENT AND STUB-UP AT LOCATIONS OF FUTURE EQUIPMENT.
  - CONTRACTOR SHALL PROVIDE SHOP DRAWINGS INDICATING ELECTRICAL EQUIPMENT RACK LAYOUT BASED ON SELECTED MFR'S FOR THIS PROJECT. SHOP DRAWING TO INCLUDE DIMENSIONED LAYOUT OF PANELS AND INTENT OF CONDUIT ROUTING FOR APPROVAL BY ENGINEER.
  - CONTRACTOR SHALL USE LONG SLOPE 90 DEGREE CONDUIT TO EASILY REMOVE PUMPS IN THE FUTURE.
  - CONTRACTOR SHALL FURNISH AND INSTALL HEAT TRACING FOR ABOVE GROUND PIPING 2" IN DIAMETER AND BELOW. SEE MECHANICAL DRAWINGS FOR FURTHER DETAILS.
  - CONTRACTOR SHALL COORDINATE ALL ASPECTS OF NATURAL GAS UTILITY INSTALLATION WITH GOVERNING UTILITY. ALL MATERIALS AND EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. REFERENCE SPECIFICATIONS FOR FURTHER INFORMATION.

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 PLOT DATE: 4/22/2020 9:33 AM BY: LFANNING

PROJECT ENGINEER:	J. HARTWIG
DESIGNED BY:	B. PICKETT
DRAWN BY:	P. BOWLES
CHECKED BY:	B. PICKETT
ADDENDUM No. 3	APR 2020 HAZEN
CONSTRUCTION	JAN 2020 HAZEN
ISSUED FOR	DATE BY



**Hazen**  
HAZEN & SAWYER  
735 JOHNNIE DODDS BLVD, SUITE 102  
MOUNT PLEASANT, SOUTH CAROLINA 29464

**Charleston Water System**  
COMMISSIONERS OF PUBLIC WORKS  
OF THE CITY OF CHARLESTON, SC  
**THOMAS ISLAND REGIONAL PUMP STATION  
AND INTERCEPTOR  
DIVISION I**

**PUMP STATION  
ELECTRICAL  
POWER AND LIGHTING PLAN**

DATE:	JANUARY 2020
HAZEN NO.:	30533-008
CONTRACT NO.:	01
DRAWING NUMBER:	E101



## Attachment No 2

**BID FORM**

PROJECT NAME: **Thomas Island Regional Pump Station and Interceptor –  
Division I**  
CPW JOB NUMBER: **0764-0006**  
BID NUMBER: **1947**

TO: Commissioners of Public Works  
of the City of Charleston, South Carolina  
103 Saint Philip Street  
Charleston, South Carolina 29403

FROM:

\_\_\_\_\_ (Bidder)  
\_\_\_\_\_ (Address)  
\_\_\_\_\_ (City, State & Zip Code)

Gentlemen:

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Proposal as principal or principals is or are named herein and that no other person than herein mentioned has any interest in this Proposal or in the Contract to be entered into; that this Proposal is made without connection with any other person, company or parties making a bid or Proposal; and that it is in all respects fair and made in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the work and informed himself fully in regard to all conditions pertaining to the place where the work is to be done; that he has examined the Drawings and the Specifications for the work and contractual documents relative thereto; that he has satisfied himself relative to the work to be performed; that he has contacted the owner and engineer concerning addenda to these documents and is familiar with the following addenda.

Addendum Number: \_\_\_\_\_

Date: \_\_\_\_\_



Having closely examined these documents, the Bidder proposes to furnish all services, labor, materials and equipment called for in the Contract Documents for the entire work for the lump sum prices indicated on the attached schedule, which is hereafter called the Bid.

The Bidder proposes and agrees, if this bid is accepted, to contract with the CPW, in the form of contract specified, to furnish all necessary products, machinery, tools, apparatus, means of transportation and labor necessary to complete the construction of the work in full and complete accordance with the shown, noted, and reasonably intended requirements of the Specifications and Contract Documents to the full and entire satisfaction of the CPW with a definite understanding that no money will be allowed for extra work except as set forth in the attached General Conditions and Contract Documents, for the prices as listed in the Bid Schedule.

The Bidder understands that the Commissioners of Public Works reserves the right to reject any and all bids and to waive any informality in the bidding.

The Bidder further agrees that this Bid shall be good and may not be withdrawn for a period of ninety (90) calendar days after the scheduled closing time for receiving bids.

The Bidder declares that he understands that the quantities shown for unit price items are subject to either increase or decrease, and that should the quantities of any of the items of work be increased, the Bidder proposes to do the additional work at the unit prices stated herein; and should the quantities be decreased, the Bidder also understands that payment will be made on the basis of actual quantities at the Unit Bid Price and will make no claim for anticipated profits for any decrease in quantities; and that actual quantities will be determined upon completion of work, at which time adjustment will be made to the contract amount by direct increase or decrease.

Upon receipt of a written notice of the acceptance of this Bid, the Bidder will execute the formal contract attached hereto within fourteen (14) calendar days of his receipt of such notice. If the Contractor fails to execute a Contract within the fourteen (14) calendar day period, the Commissioners of Public Works reserves the right to reject his Bid.

**BID SCHEDULE**

PROJECT NAME: **Thomas Island Regional Pump Station and Interceptor – Division I**  
 CPW JOB NUMBER: **0764-0006**  
 BID NUMBER: **1947**

**BASE BID**

<u>Description</u>		<u>Bid Amount</u>			
<b>- A. LUMP SUM ITEMS -</b>					
A.1	New Thomas Island Regional Pump Station and All Work Not Included in Items Below (See 01025 – Measurement and Payment)	\$	<hr/>		
A.2	Mobilization and Demobilization (Max. of 3% of Total Construction Cost)	\$	<hr/>		
A.3	Shell Ring Pump Station Demolition and Improvements	\$	<hr/>		
<b>- B. UNIT PRICE ITEMS -</b>					
	<u>Unit</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Bid Amount</u>	
B.1.	18" PVC Gravity Sewer (16'– 18')	LF	21	\$	<hr/>
B.2.	15" PVC Gravity Sewer (16'-18')	LF	331	\$	<hr/>
B.3.	15" PVC Gravity Sewer (14'-16')	LF	227	\$	<hr/>
B.4.	12" PVC Gravity Sewer (14'-16')	LF	95	\$	<hr/>
B.5.	12" PVC Gravity Sewer (12'-14')	LF	140	\$	<hr/>
B.6.	10" PVC Gravity Sewer (14'-16')	LF	20	\$	<hr/>

B.7.	5' Diameter Manhole (16'-18')	EA	4		\$
B.8.	Manhole Vent Pipe	EA	1		\$
B.9.	Raven 405 Coating for Manhole	VF	35.2		\$
B.10.	10" Restrained Joint Force Main	LF	69		\$
B.11.	8" Restrained Joint Force Main	LF	292		\$
B.12.	Fittings	TON	0.3		\$
B.13.	8" Plug Valve with Box	EA	1		\$
B.14.	Cut-in to Existing Force Main	LS	1		\$
B.15.	Erosion and Sedimentation Control	LS	1		\$
B.16.	Grassing	LS	1		\$
B.17.	Clearing and Grubbing	AC	0.6		\$
B.18.	Schedule 40 PVC Conduit for Utility Service	LF	600		\$

- C. ALLOWANCE ITEMS -

C.1	Electrical 3-way underground service by Dominion Energy				\$ 46,000
C.2	Natural Gas underground service by Dominion Energy				\$ 15,000

C.3 Contingency Cash Allowance \$ 200,000 \_\_\_\_\_

Total Base Bid Amount, Items A – C Inclusive \$ \_\_\_\_\_

---

(DOLLARS AND CENTS)

Indicate the Total Base Bid Amount above in both figures and words. In case of a discrepancy, the amount shown in words will govern.

Notes:

1. Contingency Cash Allowance shall be used at OWNER'S discretion for project overruns or changes in scope of work. Contingency shall not be used at BIDDER'S discretion. Contingency shall only be used with approval and authorization by OWNER or OWNER'S REPRESENTATIVE.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Contractor: \_\_\_\_\_

S.C. Contractor's License Number: \_\_\_\_\_

## Attachment No 3

SECTION 02831

EXTRUDED POLYVINYL CHLORIDE (PVC) FENCING

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. Drawings and general provisions of the contract apply to this section.
- B. Polyvinyl chloride (PVC) fence, gate components, and accessories.
- C. Gate hardware.
- D. Reinforcing steel for concrete-filled, reinforced fence posts.
- E. Concrete for post footings and for concrete filled reinforced fence posts.

1.02 RELATED SECTIONS

- A. Section 02200 - Earthwork.
- B. Section 02510 - Paving and Surfacing.
- C. Section 03300 - Cast-in-Place concrete.

1.03 REFERENCES

- A. ASTM A615 - Deformed and Plain Billet Steel Bars for Concrete Reinforcement.
- B. ASTM C33 - Concrete Aggregates.
- C. ASTM C150 - Portland Cement.
- D. ASTM C387 - Standard Specification for Packaged, Dry, Combined Materials for Mortar and Concrete.
- E. ASTM D1784 - Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds.

1.04 DEFINITIONS

- A. Posts are the vertical structure support members of the fence.
- B. Rails are the horizontal structural support members of the fence or gate frame.
- C. Pickets are the vertical, non-structural members between bottom and top rails.

- D. Gate Uprights are the vertical structural support members of the gate frame.

#### 1.05 SUBMITTALS FOR REVIEW

- A. Section 01300 - Submittals.
- B. Product Data: In the form of manufacturer's technical data, specifications, and installations for fence, posts, gate uprights, post caps, gates, gate hardware and accessories.
- C. Samples for verification of PVC color in form of 3-inch lengths of actual product to be used in color selection.
- D. Shop Drawings showing fence design and gate layout and design.

#### 1.06 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced installer who has at least three years experience and has completed at least five PVC fence projects with same material and of similar scope to that indicated for this project with a successful construction record of in-service performance.
- B. Single-Source Responsibility: Obtain PVC fences and gates, including accessories, fittings, and fastenings, from a single source.

#### 1.07 PROJECT CONDITIONS

- A. Field Measurements: Verify layout information for fences and gates shown on the drawings in relation to the property survey and existing structures. Verify dimensions by field measurements.

#### 1.08 WARRANTY

- A. Manufacturer's Warranty: Provide lifetime non-prorated limited warranty.

### PART 2 -- PRODUCTS

#### 2.01 FENCE MATERIALS

- A. General: Provide PVC fence materials recognized to be of type indicated and tested to show compliance with indicated performances.
- B. Manufacturer: Master Halco, Inc. 110 E. La Habra Blvd., La Habra, California 90631 (Phone: 1-800-883-8384). No substitutes.
- C. PVC FENCE:  
Style: Legend Series Vinyl Fence Universal III Style with steel reinforcement.  
Height: 6 feet.

## 2.02 POLYVINYL CHLORIDE (PVC) FENCE COMPONENTS

- A. General: Posts, rails, pickets, gate uprights, post caps, and accessories shall be of high impact, Ultra-Violet (U.V.) resistant, rigid PVC, and shall comply with ASTM D1784, Class 14344B and have the following characteristics:

Specific Gravity (+/- 0.02)	1.4
Using 0.125 specimen Izod impact ft. lbs./in. notch	23.0
Tensile strength, PSI	6,910
Tensile modulus, PSI	336,000
Flexural yield strength, PSI	10,104
Flexural modulus, PSI	385,000
DTUL at 264 PSI	67°C

- B. Pickets: (Size) 7/8" x 6"
- C. Rails: (Size) 6" x 3 1/2"
- D. Line and Corner Posts: (Size) 6 inch (with steel reinforcement).
- E. Post & Gate Caps: Pyramid internal post & gate caps. (i.e. all vertical elements shall be capped)
- F. Color: Green or white. Contractor to send color palette during submittal.
- G. Gate Uprights: As recommended by Manufacturer and as indicated on shop drawings.
- H. Accessories: Manufacturers' standard gate brace, screw caps, rail end reinforcers, and other accessories as required.

## 2.03 MISCELLANEOUS MATERIALS

- A. Stiffener Channels: Galvanized steel structural channel. Configure channels for concealed installation within PVC rails with pre-drilled holes for drainage. Aluminum extruded channel available upon request.
1. Cross Section: 3.00" x 3.00" x 1.500" hourglass shape to grip picket.
  2. Thickness: 0.040 Gauge (minimum)
- B. Fasteners and Anchorage: Stainless Steel. All fasteners shall be concealed or colored heads to match. Provide sizes as recommended by fence manufacturer.
- C. PVC Cement: As recommended by fence manufacturer.

## 2.04 GATES AND ACCESSORIES

- A. General:
1. Gate Types, Opening Widths and Directions of Operation: As indicated on Drawings.
  2. Factory assemble gates.



3. Design gates for operation by one person.
  4. Fabricate gates to permit 180-degree swing.
- B. Gate Hardware: Center gate stop and drop rod; two 180-degree non lift-off type gate hinges (color: black) per leaf, latch and hardware for padlock, and padlock keyed to Owner's standard.

## 2.05 CONCRETE

- A. Concrete: Provide concrete consisting of Portland cement per ASTM C150, aggregates per ASTM C33, and potable water. Mix materials to obtain concrete with a minimum 28-day compressive strength of 4,000 psi. Use at least four sacks of cement per cubic yard, 1-inch maximum size aggregate, 3-inch maximum slump. Use ½-inch maximum size aggregate in post where required.
- B. Packages Concrete Mix: Mix dry-packaged normal-weight concrete conforming to ASTM C387 with clean water to obtain a 2 to 3-inch slump.

## 2.06 REINFORCEMENT FOR POSTS

- A. Aluminum Stiffeners:
1. Aluminum stiffeners shall be provided as per manufacturer's specification.

## PART 3 -- EXECUTION

### 3.01 EXAMINATION

- A. Verify areas to receive fencing are completed to final grades and elevations.
- B. Ensure property lines and legal boundaries of work are clearly established.

### 3.02 INSTALLATION

- A. Install fence in compliance with manufacturer's written instructions. During installation, PVC components shall be carefully handled and stored to avoid contact with abrasive surfaces. Install components in sequence as recommended by fence manufacturer.
- B. Set gate posts for gate opening specified in the construction drawings as per manufacturer's instructions. Posts shall be placed 36" (minimum) in the ground and set in concrete. An aluminum stiffener shall be installed in each post according to manufacturer's recommendations.
- C. Place assembled fence sections into position and slide rails into posts. The rails are secured into posts by tabs which are notched into the rails and catch on the inside wall of the post.
- D. Check each post for vertical and top alignment, and maintain in position during placement and finishing operation.

3.03 GATE INSTALLATION

- A. Install gates plumb, level and secure using bolt-on hardware supplied by the manufacturer.
- B. Adjust hardware for smooth operation.

3.04 ACCESSORIES

- A. Install post caps and other accessories to complete fence.

3.05 CLEANING

- A. Clean up debris and unused material and remove from site. Remove all traces of dirt and soiled areas from completed fence.

3.06 DEMONSTRATION

- A. Instruct the Owner's personnel on proper operation and maintenance of fence components.

- END OF SECTION -

## Attachment No 4

MITIGATION CREDIT PURCHASE AGREEMENT  
BETWEEN  
ICA ENGINEERING, INC.

AND

Commissioners of Public Works of the City of Charleston (d/b/a Charleston Water System)

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This Purchase Agreement (Agreement) is entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2020, by and between ICA ENGINEERING, INC. a Kentucky limited liability company (hereinafter referred to as the "Banker") and Charleston Water System (hereinafter referred to as the "Purchaser") (both referred to as "Party" or in combination "Parties") in regard to purchase of mitigation credits from the CATON CREEK MITIGATION BANK (hereinafter the "Bank").<sup>1</sup>

RECITALS

- A. Whereas, the Banker is a lawfully organized corporation in good standing under the laws of the State of Kentucky and is qualified to do business in South Carolina as the Banker; and
- B. Whereas, the Banker has obtained the necessary permits for Banker's operation of the Bank as approved through the South Carolina Interagency Review Team (IRT) and through the U. S. Army Corps of Engineers (USACE) Permit Number SAC 2014-01105 (hereinafter referred to as the "Permit"); and
- C. Whereas, Banker has the authority to sell mitigation credits from its Bank to Purchaser and such mitigation credits are released by the USACE and currently available for sale to Purchaser; and
- D. Whereas, Banker has developed the Bank as approved by the USACE for the development and use of mitigation credits as may be required and allowed by the USACE for permitted impacts to waters of the United States in portions of South Carolina; and
- E. Whereas, Purchaser desires to obtain mitigation credits from an approved bank that may be used to mitigate the impacts to wetlands and/or streams caused now or in the future, and such mitigation credits can be obtained from the Bank including Freshwater Wetland Preservation Credits, Freshwater Wetland Restoration/Enhancement Credits, Stream Preservation Credits, and/or Stream Restoration Credits; and
- F. Whereas, it is the Purchaser's intent to achieve its desired wetlands and/or stream mitigation through the purchase of mitigation credits from the Banker (hereinafter referred to as the "Credits"); and
- G. Whereas, Banker and Purchaser desire to enter into this Purchase Agreement for the purpose of establishing the terms on which the Banker will sell and the Purchaser will buy Credits from the Bank.

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<sup>1</sup> The Bank includes Credits for (a) Freshwater Wetland Enhancement/Restoration, (b) Freshwater Wetland Preservation, (c) Stream Restoration, and (d) Stream Preservation.

## TERMS

NOW, THEREFORE, in consideration of the above promises, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Banker and Purchaser do hereby agree as follows:

1. Recitals: The recitals set forth above are true and correct and are incorporated herein by reference.
2. Agreement to Purchase: The Banker hereby agrees to sell, and Purchaser hereby agrees to purchase Credits, shown on Attachment A, subject to the terms and conditions of this Agreement.
3. Purchase Price: The Purchase Price for each type of Credit purchased under this Agreement is shown on Attachment A, which is incorporated into and made a part hereof. The total amount required to purchase all Credits is **Forty Eight Thousand Dollars and Zero Cents (\$48,000.00)** (hereinafter referred to as the "Purchase Price").
4. Failure to Purchase: If Purchaser does not purchase all of the Credits on or before the Purchase Deadline by paying Banker the full amount due under this Agreement, then Purchaser shall have no rights to any Credits not purchased. Upon such default Banker and Purchaser shall have no further rights or obligations under this Agreement.
5. Delivery Date: The Banker shall deliver a receipt (hereinafter referred to as the "Certificate of Credit Transfer") to Purchaser within thirty (30) days after Banker receives the full amount of the Purchase Price from Purchaser for the Credits purchased and Purchaser's written request therefore with all necessary information for such Certificate.
6. Credits Approval for Usage: Purchaser shall be solely responsible for obtaining all necessary agency approvals for the use of the Credits and Banker has no responsibility regarding such approvals except for delivery of a Credit Purchase Receipt, if applicable.
7. Purchaser's Permit(s): If applicable, Purchaser shall provide a copy of the final permit(s) where the Credits are used to the Banker.
8. Attorney's Fees: In any action, including breach, enforcement or interpretation, arising out of this Agreement, the prevailing party in such action shall be entitled to recover its reasonable attorney's fees, costs and expenses, including those incurred on appeal.
9. Applicable Law: This Agreement and the rights and obligations hereunder of both the banker and Purchaser shall be construed in accordance with the laws of the State of South Carolina.
10. Assignable: This Agreement is not assignable by the Purchaser to another party without the written consent of the Banker.
11. Binding Effect: This Agreement shall inure to the benefit and be binding upon the successors, administrators and assigns of the Parties.

Wherefore, the Banker and Purchaser have hereunto set their hands the day and year first above written.

\_\_\_\_\_  
BANKER (signature)

\_\_\_\_\_  
PURCHASER (signature)

\_\_\_\_\_  
BANKER (printed name & title)  
ICA Engineering, Inc.  
555 Fayetteville St., #900  
Raleigh, NC 27601

\_\_\_\_\_  
Russell L. Huggins, Jr., PE  
PURCHASER (printed name)  
Commissioners of Public Works of the City of  
Charleston (d/b/a Charleston Water System)  
103 St. Philip Street  
Charleston, SC 29403

Billing Customer Name	Commissioners of Public Works of the City of Charleston (d/b/a Charleston Water System)
Address	103 St. Philip Street
City	Charleston
State	South Carolina
Zip	29403
Billing Contact Name	Russell L. Huggins, Jr., PE
Email	hugginsrl@charlestoncpw.com
Phone	(843) 727-6879

ATTACHMENT A  
MITIGATION CREDIT PURCHASE AGREEMENT  
BETWEEN  
ICA ENGINEERING, INC.

AND

Commissioners of Public Works of the City of Charleston (d/b/a Charleston Water System)  
\_\_\_\_\_

CREDITS BEING PURCHASED BY TYPE:

Freshwater Wetland Enhancement/Restoration Credits: 4.8 at \$10,000.00 ;

Freshwater Wetland Preservation Credits: n/a at \$ n/a ;

TOTAL WETLAND CREDITS: 4.8 totaling \$48,000.00

Stream Restoration Credits: n/a at \$ n/a ;

Stream Preservation Credits: n/a at \$ n/a ;

TOTAL STREAM CREDITS: n/a totaling \$ n/a

Purchase Deadline. Purchaser will pay, and Banker will accept Purchase Price within a period of thirty (30) days from the date of this Agreement (hereinafter, "Purchase Deadline").

Refund of Purchase Price. Any refund shall be subject to a fee equal to **twenty percent (20%)** of the Purchase Price to be retained by Banker. Banker agrees to refund the balance of the Purchase Price to Purchaser only if all of the purchased Credits under this Agreement are sold to other parties.

Hold Harmless. Provided Banker has complied with the terms of this Agreement, Purchaser agrees to and hereby does waive all claims against Banker under this Agreement and otherwise covenants not to sue Banker.

Date of Agreement: \_\_\_\_\_

## Attachment No 5





March 16, 2020

Russell L. Huggins, Jr., PE  
Charleston Water System  
103 St. Philip Street  
Charleston, SC 29403

RE: Thomas Island Regional Pump Station & Interceptor - Division I, Berkeley County  
NPDES Coverage Number: SCR10Z5CK

Dear Russell L. Huggins, Jr., PE:

The Department of Health and Environmental Control (Department or DHEC) has received approval of and the Notice of Intent for the above-referenced project from **Berkeley County**. Based on your submission of this documentation and in accordance with the NPDES General Permit for Stormwater Discharges from Construction Activities SCR100000 (CGP), this project has been granted coverage under the CGP on **March 16, 2020**. This project's general permit coverage number is **SCR10Z5CK**. The total disturbed area for this site is **0.9 acres**.

See attached DHEC Office of Ocean and Coastal Resource Management (DHEC-OCRM) certification dated February 28, 2020 for additional conditions related to the Coastal Zone Consistency determination.

An as-built survey(s), signed and sealed by a S.C. Licensed Land Surveyor or Professional Engineer, should be submitted to **Berkeley County** for all detention structure(s) on this site. The survey(s) should show grades, contours, and depths for all structure(s) and should include the elevations and dimensions of all outlet structures, including but not limited to pipes, orifices, risers, weirs, and emergency spillways. A statement signed by the project's S.C. Registered Engineer indicating that the structure(s) was installed and is operating as shown on approved plans and in approved calculations is required. If the elevations or dimensions of the structures listed above do not match those used in the approved plans, provide a certification statement signed by the project's S.C. Registered Engineer indicating that the structure, as built, will function as shown in approved calculations. A new analysis of the structure (routing) may be necessary.

The CGP can be downloaded at the following website: <http://www.scdhec.gov/Environment/docs/CGP-permit.pdf> or you may request a copy from us via email ([stormwatercgp@dhec.sc.gov](mailto:stormwatercgp@dhec.sc.gov)). You are responsible for ensuring your contractor(s) complies with the approved SWPPP and the minimum requirements of the CGP. Also, you are responsible for overall compliance with the Storm Water Management and Sediment Reduction Act of 1991 (1991 Act), SC Pollution Control Act, and the Federal Clean Water Act (CWA). Failure to comply with the approved SWPPP or applicable statutes and regulations may result in enforcement actions.

You must notify the local DHEC EA office prior to starting any land-disturbing activity. The address and telephone number are as follows:

Lowcountry EA Charleston  
1362 McMillan Avenue, Suite 300  
Charleston, SC 29405  
843-953-0150

Inspections of this site must be performed by qualified personnel as described in Section 4.2.E of the CGP.

You should be aware that this approval is only applicable for the Stormwater Pollution Prevention Plan (SWPPP) that was submitted for this project. Any additional construction or land disturbing activity beyond the scope of the approved plans is not authorized. Any future work for this project not shown on the stamped, approved plans will require that you submit another site plan for review and approval. All major modifications require review and approval by **Berkeley County**; the Department must be notified in writing by **Berkeley County** of the approval of major modifications if the disturbed area changes. Minor modifications to the approved SWPPP may be made by the SWPPP preparer and do not require review and approval by the Department; these changes should be signed and dated by the SWPPP preparer. If you have a question about whether a modification is major or minor, contact the Coastal Stormwater Permitting Section at (843) 953-0200.

A copy of the stamped, approved SWPPP (including a copy the CGP, contractor certifications, inspection records, rainfall data, etc), NOI, and CGP coverage letter from DHEC must be retained and available at the construction site (or accessible within 30 minutes during normal business hours) from the date of commencement of construction activities to the date of final stabilization. If an on-site location is unavailable to store the SWPPP when no personnel are present, notice of the plan's location must be posted near the main entrance at the construction site.

All contractors who will conduct land-disturbing activities at the site must complete a Contractor Certification Form. You are also responsible for listing all contractors in the SWPPP and for holding a pre-construction conference with each contractor before they can conduct land-disturbing activity at the site.

The Department may conduct periodic inspections of your site. Any violations found during these inspections may result in enforcement action.

This NPDES coverage should be terminated by the permittee when one of the conditions listed in Section 5.1 of the CGP has been met. You must submit a Notice of Termination (NOT) to cancel your NPDES coverage under the CGP. Please see section 5.1 of the CGP for additional information required to be submitted with the NOT.

You are responsible for obtaining any other federal, state, or local permit that may be required for this project. In particular, any permits through the U.S. Army Corps of Engineers for the placement of fill material in Waters of the United States. Please note we have not sent a copy of this letter to any county or city building official. You must send a copy of this letter to these agencies, if necessary.

***If material excavated during construction activities leaves the site, a mine operating permit may be needed. You are responsible for contacting the Mining and Reclamation Section to determine if a mining permit is required for the site. The Mining and Reclamation Section can be reached at (803)898-1362 or via e-mail at [AskMines@dhec.sc.gov](mailto:AskMines@dhec.sc.gov).***

Please see the enclosed "Notice of Appeal Procedure" document for information about the procedures for appealing this NPDES coverage.

If you have any questions or cannot access the referenced websites, please call me at 843-953-8421.

Sincerely,



Katherine Hart  
Coastal Stormwater Permitting Section

CC: Leon Fanning, Hazen and Sawyer  
EC: Jason Stuck, Lowcountry EA Charleston  
Kevin Kubiak, Berkeley County



**NOTICE OF INTENT (NOI)**  
**For Coverage(s) of Primary Permittees**  
**Under South Carolina NPDES General Permit**  
**For Stormwater Discharges From Construction Activities SCR100000**  
 (Maintain As Part of On-Site SWPPP)

**For Official Use Only**

File Number: \_\_\_\_\_  
 Permit Number: SCR10  
 Submittal Package Complete: \_\_\_\_\_

Submission of this Notice of Intent constitutes notice that the Applicant identified in Section II intends to be authorized as a Primary Permittee in the state of South Carolina under NPDES General Permit SCR100000. Fees required for review and NPDES coverage of each application type are as listed on page 2 of the Instructions.

SOUTH CAROLINA  
 DEPT. OF HEALTH AND ENVIRONMENTAL CONTROL  
 DAM SAFETY AND STORMWATER PERMITTING DIVISION  
 CONSTRUCTION STORMWATER PERMITTING  
 APPROVED - FOR CONSTRUCTION ONLY

DATE OF PERMIT: SCR10Z-5CK  
 DATE ISSUED: 3-16-2020  
 BY: [Signature]

Date: 01/15/2020

Project/Site Name: Thomas Island Regional Pump Station & Interceptor - Division I County: Berkeley  
 (Modification or Change of Information Only) Prior Approved NPDES Permit or File Number: \_\_\_\_\_

Do you want this project to be considered for the Expedited Review Program (ERP)?  Yes or  No (See instructions)

**I. Notice of Intent (NOI) Application Type(s)**

- A. Project (Application/Review) Type(s) (Select ALL that apply):  
 New Project (Initial Notification) Ongoing Project:  Permitted or  Un-Permitted  
 Late Notification  Low Impact Development (LID) or Project Design Above Regulatory Requirements  
 New Owner/Operator or Company Name Change (see instructions, attach Form A (Transfer of Ownership))  
 Major Modification: (see instructions, attach Form B (Major Modifications))  
 MS4 Project Review  
 Ocean and Coastal Resource Management (OCRM) Review  
 Change of Information/Other (Specify): \_\_\_\_\_

B. If Applicable, identify the entity designated as MS4 Reviewer and MS4 Operator (i.e., Lexington County, City of Greer, etc.): MS4 Reviewer Berkeley County MS4 Operator Berkeley County

**II. Primary Permittee Information**

Person or  Company If a Company, are you a  Lending Institution or  Government Entity?  
 Company EIN (if applicable): EIN: [Redacted]  Change of Information

- A. Primary Permittee Name: Charleston Water System  
 Mailing Address: 103 St. Philip Street City: Charleston State: SC Zip: 29403  
 Phone: (843) 727-6876 Fax: \_\_\_\_\_ Email Address: benjamind@charlestoncpw.com
- B. Contact /ODSA Name (If different from above OR if owner is a company): \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email Address: \_\_\_\_\_
- C. Property Owner Name (If different from above): \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_ City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email Address: \_\_\_\_\_

**III. Comprehensive Stormwater Pollution Prevention Plan (C-SWPPP) Preparer Information**  Change of Information

- A. C-SWPPP Preparer Name: Leon Fanning  
 B. Registered Professional  Engineer  Landscape Architect  Tier B Land Surveyor S. C. Registration #: 33993  
 C. Company/Firm Name: Hazen and Sawyer S. C. COA #: 00638  
 Mailing Address: 735 Johnnie Dodds Blvd, Suite 102 City: Mount Pleasant State: SC Zip: 29464  
 Phone: (843) 414-1406 Fax: \_\_\_\_\_ Email Address: lfanning@hazenandsawyer.com

**IV. Project/Site Information**

- A. Type of Construction Activity(ies) (Select ALL that apply):  Commercial  Industrial  Institutional  Mass Grading  Linear  Utility/Infrastructure  
 Residential: Single-family  Residential: Multi-family  Multi-use (Commercial & Residential)  
 Site Preparation (No New Impervious Area)  Other (Specify) \_\_\_\_\_  Change of Information
- B. Site Address/Location (street address, nearest intersection, etc.) Near intersection of Clouter Creek Dr. and Victoria Rd  
 City/Town (If in limits): Charleston Zip Code: 29492  
 Latitude: 32° 52' 15" N Longitude: - 79° 55' 56" W (Source):  GPS  Web Site: Google Earth  
 Tax Map Number (s) (List all): See Attached

- C. Is this site located on Indian Land?  Yes  No
- D. Proposed Start Date: 04/01/2020 Proposed Completion Date: June 30, 2021
- E. Disturbed Area (nearest tenth of an acre): 0.9 Total Area (acres): 6.3
- F. Modification Only: (nearest tenth of an acre): Disturbed Area: Current (Approved) Area: n/a  
 Disturbed Area Change (Increase Only): n/a Total Disturbed Area (After Change): n/a
- G. Is this project part of a Larger Common Plan for Development or Sale (LCP)?  Yes  No  
 LCP/ Overall Development Name: n/a Check here if this is the First Phase.   
 Previous State Permit/File Number: n/a Previous NPDES Coverage Number: SCR10 n/a
- H. Any Flooding Problems exist downstream of or adjacent to this site?  Yes  No (If yes, provide detailed description of flooding problems and applicable floodway/flood zone information in the C-SWPPP).
- I. Active S.C. DHEC Warning Notice, Notice to Comply or Notice of Violation for this site or LCP?  Yes  No
- J. List Relevant State and Federal Environmental Permits or Approvals applied for or obtained for this site (e.g., RCRA, USACOE, Nationwide, etc.). If None, list None.  
SCDHEC Construction Permit & CZC Certification, JPA for WoUS
- K. Any Waiver(s)/Variances/Exceptions Requested for this Project? (If yes, identify below and include Waiver Request and Justifications in the C-SWPPP for each proposed request).
- |  |                           |  |
|--|---------------------------|--|
| 1. Small Construction Activity Waiver(s) From NPDES permitting (Section 1.4 & Appendix B)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>If yes, identify requested waiver: <input type="checkbox"/> Rainfall Erosivity Waiver <input type="checkbox"/> TMDL Waiver <input type="checkbox"/> Equivalent Analysis Waiver |                           |  |
| 2. Detention Waiver (72-302(B))? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No   | 3. Other (Specify): _____ |  |

V. Waterbody Information (Attach additional sheet(s) as needed)  Change of Information

A. Receiving Waterbody(s) (RWB) Information (List the nearest and next nearest receiving waterbodies to which the sites stormwater discharges will drain. If stormwater discharges drain to multiple waterbodies, list all such waterbodies).

1. Name of Receiving Waterbodies (RWB)	2. Distance to RWB (feet)	3. Classification of RWB
a. Nearest: <u>Clouter Creek</u>	1,950	FW
b. Next Nearest: <u>Cooper River</u>	2,439	FW
c. Coastal Zone ONLY: Coastal Receiving Water (CRW): <u>Clouter Creek</u>	1,950	Not Applicable
d. Other Waterbodies: <u>n/a</u>	n/a	n/a

B. Waters of the U.S. / State Information (Attach additional sheet(s) as needed)

Waters of the U.S./ State	1. On the site?	2. Delineated/ Identified?	3. Impacts?	4. Amount of impacts
a. Jurisdictional wetlands	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>0.02</u> Ac
b. Non-jurisdictional wetlands	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____ Ac
c. Other Water(s): _____	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____ Ac _____ Feet
d. Coastal Zone ONLY: Direct Critical Area	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	_____ Ac _____ Feet

5. If yes for impacts in B.3, describe each impact and activity, and list all permits (e.g., USACOE Nationwide Permit, DHEC General Permit) and certifications that have been applied for or obtained for each impact:  
Conversion of forested wetlands to maintained corridor Section 401 and 404 of the Clean Water Act

C. S.C. Navigable Waters (SCNW) Information (Section 2.6.5) The Department will address any issues related to State Navigable Waters' Program under SC Regulation 19-450 during the review of the C-SWPPP for activities that will **NOT** require a 404 permit or a 401 certification. (Attach additional sheet(s) as needed).

1. Are S. C. Navigable Waters (SCNW) on the site: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
a. If no, do not complete this question. Proceed to Section D (Impaired Waterbodies).		
b. If yes, provide the name of S.C. Navigable Waters (SCNW) on the site: _____		
2. If yes for C.1, will construction activities cross over or occur in, under, or thru the SCNW? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe SCNW activities (e.g., road crossing, sub-aqueous utility line, temporary or permanent structures, etc.) and proceed to Section C.3: _____		
3. Identify permits providing coverage of SCNW activities proposed for your site. If NONE, list none.		
Permits/Certifications	Permit or Certification No.	Corresponding Covered SCNW Activity(ies)
a. DHEC General/ Other DHEC Permit	none	
b. USACOE 404 Permit or 401 Certification	pending	
c. SCNW Permit If applied for or issued, identify Date applied for or issued: _____	none	<input type="checkbox"/> All Activities or <input type="checkbox"/> Some Activities (Describe): _____
d. If a SCNW Permit has <b>NOT</b> been applied for provide an additional plan sheet that shows plan and profile views (drawn to scale) of the SCNW and associated activities. Include a description of all proposed activities on this plan.		

**D. Impaired Waterbodies Information** (Attach additional sheet(s) as needed)

1. 303(d) Listed Impaired Waterbodies					
a. Name of Nearest DHEC Water Quality Monitoring Stations (WQMS)(s) that receives stormwater from your construction site and/or thru an MS4 and the Name of the Corresponding Waterbody?		b. Is this WQMS(s) listed on the <u>most current 303(d) List</u> ? If No, proceed to Section 2 of this table. If Yes, complete items c thru f.	c. List the pollutant(s) identified as "CAUSES" of the impairment	d. Will any pollutants causing the impairment be present in your site's construction stormwater discharges?	e. If yes for d, list the "USE SUPPORT" impairment(s) affected by the pollutant(s) identified in c.
Nearest DHEC WQMS(s)	Corresponding Waterbody				
MD-045	Cooper River	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
MD-043	Cooper River	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	

f. If yes for d above, will use of the BMPs proposed for your project ensure the site's discharges will NOT contribute to or cause further WQS violations for the impairment(s) listed in c?  Yes  No  
 (NOTE: If no for f, this site is NOT eligible for coverage under the CGP). See Instructions.

**2. TMDL Impaired Waterbodies**

a. Name of Nearest DHEC Water Quality Monitoring Stations (WQMS)(s) that receives stormwater from your construction site and/or thru an MS4?	b. Has a TMDL(s) been developed for this WQMS(s)? If No, identify as such below and proceed to Section VI. If Yes, complete items c thru f of this table.	c. If yes for b, what pollutants are listed as "CAUSES" or causing the impairment?	d. If yes for b, has the standard been "ATTAINED" or "Fully Supported" for the impairment(s)?	e. If no for d (Not Attained), will any pollutants causing the impairment be present in your site's construction stormwater discharges?
MD-248	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
MD-045	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

f. If yes for e above, are your discharges consistent with the assumptions and requirements of the TMDL(s)?  Yes  No  
 (NOTE: If no for f, this site is NOT eligible for coverage under the CGP). See Instructions.

**VI. Signatures and Certifications DO NOT SIGN IN BLACK INK! Read the Certifications below (in entirety). Provide date, printed name, and signatures below. If you are a New Owner/Operator, as Primary Permittee you must also sign and date the applicable Comprehensive SWPPP Acceptance & Compliance Agreement below.**

**C-SWPPP PREPARER:** "One copy of the C-SWPPP, all specifications and supporting calculations, forms, and reports are herewith submitted and made a part of this application. I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of Title 48, Chapter 14 of the Code of Laws of SC, 1976 as amended, pursuant to Regulation 72-300 et seq. (if applicable), and in accordance with the terms and conditions of SCR100000." (This should be the person identified in Section III).

Leon Fanning

*Leon Fanning*

33993

Printed Name of C-SWPPP Preparer

Signature of C-SWPPP Preparer

S. C. Registration #

**PRIMARY PERMITTEE:** "I or I (on behalf of my company and its contractors and agents), as the case may be, certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I understand that DHEC enforcement actions may be taken if the terms and conditions of the C-SWPPP are not met and I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"I or I (on behalf of my company and its contractors and agents), as the case may be, also hereby certify that all land-disturbing construction and associated activity pertaining to this site shall be accomplished pursuant to and in keeping with the terms and conditions of the approved plans and SCR100000. I also certify that a responsible person will be assigned to the project for day-to-day control. I hereby grant authorization to the to S. C. Department of Health and Environmental Control (DHEC) and/or the local implementing agency the right of access to the site at all times for the purpose of on site inspections during the course of construction and to perform maintenance inspections following the completion of the land-disturbing activity." (See Section 122.22 of S.C. Reg. 61-9 for signatory authority information.) Having understood the above information, I am signing this certification as Primary Permittee to the aforementioned NPDES general permit."

Donald Benjamin, PE

Director of Engineering and Construction

Printed Name of Primary Permittee

Title/Position

Signature of Primary Permittee

Date Signed

1/15/20



**BERKELEY  
COUNTY SC**

Stormwater Management Program  
212 Oakley Plantation Drive  
Moncks Corner, SC 29461  
berkeleycountysc.gov  
843.719.4195

March 12, 2020

Mr. Leon Fanning, PE  
Hazen and Sawyer  
735 Johnnie Dodds Blvd. Suite 102  
Mount Pleasant, SC 29464

**RE: Thomas Island Regional Pump Station – Division 1  
Clouter Creek Drive, Unincorporated Berkeley County  
Disturbed Area: 0.9 Acres  
Plan Case #: PLSP-032198-2020**

Dear Mr. Fanning:

Berkeley County Engineering has reviewed the stormwater management plans submitted for the above referenced project located within the Berkeley County MS4 Regulated Area. The information submitted for review consists of a Stormwater Analysis, C-SWPPP (including Detention Waiver Request) and plan set containing 38 sheets (Cover through R002) with revisions through January 2020. The proposed construction activity (labelled in plans as Division I) has been found to meet or exceed the minimum standards and criteria set forth by the Berkeley County Stormwater Management Ordinance.

**The approval of this Stormwater Management Plan does not constitute, in any way, the right to start construction activities.** No construction on the pump station site and lines from Sta. 0+00 to Sta. 6+00 (includes 10" line from 0+00 to 0+20) may commence until South Carolina DHEC-BOW Coastal Stormwater approves the Notice of Intent (NOI), issues coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP), and Berkeley County approves the Construction Activity Application (CAA).

Please provide the engineering department with a copy of the approved NOI, letter granting coverage under the CGP, SCDHEC-OCRM issued CZC, and approved encroachment permits. Upon receipt of those documents we may issue CAA Approval. We will also need three (3) full size, three (3) 11x17 and one (1) pdf copy of the plans for stamping. Please let me know if you have any questions or if our office can be of further assistance.

Sincerely,

Kevin A. Kubiak, P.E.  
Deputy County Engineer

CC: Chris Troutman, PE – Charleston Water Systems  
Tom Moore – Berkeley County Planning and Zoning  
Pam Winkler – SCDHEC BOW – Coastal Stormwater  
File



# BERKELEY COUNTY STORMWATER MANAGEMENT PROGRAM

## CONSTRUCTION ACTIVITY APPLICATION

Sites within Regulated Area and disturbing one-half (1/2) acre or more

### For Official Use Only

Date Received: \_\_\_\_\_

Application No: *RECEIVED*  
BERKELEY COUNTY  
*PLSP-032198-2020*  
*JAN 21 2020*

PLAN CASE ADMINISTRATOR  
by: *[Signature]*

### I. Owner Information

Owner (Company or person): Charleston Water System  
Contact Person: Donald Benjamin, PE Company EIN: 57-6000227  
Address: 103 St. Philip Street  
City: Charleston State: SC Zip: 29403  
Phone: (Day) 843-727-6876 (Mobile) \_\_\_\_\_ (Fax) \_\_\_\_\_  
Email address: benjamind@charlestoncpw.com

### II. Operator Information

Company or person: Charleston Water System  
Contact Person: Donald Benjamin, PE Company EIN: 57-6000227  
Address: 103 St. Philip Street  
City: Charleston State: SC Zip: 29403  
Phone: (Day) 843-727-6876 (Mobile) \_\_\_\_\_ (Fax) \_\_\_\_\_  
Email address: benjamind@charlestoncpw.com

### III. Contractor Information

Company or person: \_\_\_\_\_  
License #: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: (Day) \_\_\_\_\_ (Mobile) \_\_\_\_\_ (Fax) \_\_\_\_\_  
Email address: \_\_\_\_\_

### IV. Plan Preparer Information

Plan Preparer: Leon Fanning, PE S.C. Registration #: 33993  
Company/Firm: Hazen and Sawyer S.C. COA #: 00638  
Mailing Address: 735 Johnnie Dodds Blvd., Suite 102  
City: Mount Pleasant State: SC Zip: 29464  
Phone: (Day) 843-414-1406 (Mobile) \_\_\_\_\_ (Fax) \_\_\_\_\_  
Email address: lfanning@hazenandsawyer.com

**V. Project Information**

A. Project Name: Thomas Island Regional Pump Station and Interceptor - Division I  
 Location (street address, nearest intersection, etc.): Near the Clouter Creek Drive/Victoria Road intersection

Tax map # (list all): 275-00-00-042

Disturbed area (to the nearest tenth of an acre): 0.9  
 Total area: 6.3 Impervious area: 0.9

B. Is this project part of a Larger Common Plan for Development or Sale (LCP)?  Yes  No  
 LCP/Overall Development Name: \_\_\_\_\_  
 Check here if this is the first phase.   
 Previous state permit/file no.? \_\_\_\_\_ Previous NPDES coverage number: SCR10

C. Type of Construction Activity (check all that apply):  
 Commercial  Residential: Single-family  Linear (Roads, utility lines, etc.)  
 Institutional  Residential: Multi-family  Site Preparation (No new impervious)  
 Industrial  Re-development  Other: wastewater pump station

VI. Waterbody Information  
 A. Nearest receiving waterbody(s): Clouter Creek Distance to this waterbody (feet): 1,950  
 Next/Nearest named receiving waterbody(s): Cooper River

**B. Wetlands/ Waters of the State**

Waters of the U.S./ State	On the site?	If yes, delineated/ identified?	Impacts?	Amount of impacts
a. Jurisdictional wetlands	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>0.02</u> Ac <u>    </u> Feet
b. Non-jurisdictional wetlands	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>    </u> Ac <u>    </u> Feet
c. Other (List): _____	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>    </u> Ac <u>    </u> Feet

If yes for delineation, has documentation of the delineation from the USACOE been provided?  Yes  No  N/A

If yes for impacts, has a USACOE permit been applied for or obtained for those impacts?  Yes  No  N/A  
 If yes, provide copy of the approved USACOE permit. Permit is pending

**C. Special Protection Areas**

- Are there any flooding problems downstream of or adjacent to this site?  Yes  No  
 If yes, see attached instruction.
- Are any portions of the site located in a designated floodplain?  Yes  No  
 If yes, what are the FIRM Numbers? 45015C0760E, 45015C0720E
- List the nearest DHEC water quality monitoring station(s) [WQMS(s)] to which stormwater (SW) discharges will drain and the corresponding waterbody(s). MD-045, MD-043
  - Is this WQMS listed on the most current 303(d) List for Impaired Waters?  Yes  No
    - If yes for (3.1), list the impairment(s). \_\_\_\_\_
    - If yes for (3.1) will SW discharges from your site contain the pollutant(s) of impairment?  Yes  No
    - If yes for (b) will use of the proposed BMPs ensure that the site's discharges will not contribute to or cause further water quality standard violations?  Yes  No
  - Has a TMDL(s) been developed?  Yes  No
    - If yes for (3.2), list the waterbody \_\_\_\_\_  
 list the impairment(s). \_\_\_\_\_
    - Has the standard been attained for the impairment(s)?  Yes  No



- c. If no for (b), will SW discharges from your site contain the pollutant of impairment?  Yes  No
- d. If yes for (c), are your discharges consistent with the assumptions and requirements of the TMDL(s)?  Yes  No
- e. If no for (d), will use of the selected BMPs ensure that the site's discharges will not contribute to or cause further water quality standard violations?  Yes  No

\*Projects located in the Special Protection Areas may require a pre-submittal meeting.

## VII. Signatures and Certifications

- A. One copy of the stormwater plan, all specifications and supporting calculations, forms, and reports are herewith submitted and made a part of this application. I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief that the design is consistent with the requirements of the Berkeley County Stormwater Management Ordinance and the Berkeley County Stormwater Design Standards. (This should be the person identified in Section IV)

Leon Fanning, PE  
Printed name of Plan Preparer

Leon Fanning  
Signature of Plan Preparer

33993  
S.C. Registration #

- B. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I hereby certify that all construction and associated activity pertaining to this site shall be accomplished pursuant to and in keeping with the terms and conditions of the approved plans. I also certify that a responsible person will be assigned to the project for day-to-day control. I hereby grant authorization to Berkeley County the right of access to the site at all times for the purpose of on site inspections during the course of construction and to perform maintenance inspections following the completion of the land-disturbing activity.

Donald Benjamin, PE  
Printed name of Owner/Operator\*\*

Donald Benjamin  
Signature of Owner/Operator

Director of Engineering  
and Construction  
Title/ Position

\*\*In such cases where an operator signs the certification, a copy of the maintenance agreement between the owner and operator as required by the Stormwater Management Ordinance must be submitted with this application.



## Coastal Zone Consistency Determination

To: Katherine Hart, BOW Coastal Stormwater Permitting Section  
Melanie Williams, BOW Construction Permitting Section

From: Sara L Carper, OCRM Coastal Zone Consistency Section *SC*

Applicant: Russell L. Huggins, Jr., PE, Charleston Water System

Project Name: Thomas Island Regional Pump Station & Interceptor - Division I

Finding: Conditionally Consistent with the SC Coastal Zone Management Program

Site Location: Near intersection of Clouter Creek Dr. and Victoria Rd., Charleston, Berkeley County, South Carolina (TMS#: 275-00-00-042)

Reference #: HNV-9ABY-7SW0J, WS/WW not assigned

Date: February 28, 2020 (revised)

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The staff of the Office of Ocean and Coastal Resource Management (OCRM) reviewed the above referenced Coastal Zone Consistency project request for land disturbance associated with the construction of a wastewater pump station, miscellaneous pump station piping and valves, 360 LF of 10" and 8" restraint joint force main, 21 LF of 18" gravity sewer, 559 LF of 15" gravity sewer, 235 LF of 12" gravity sewer, 20 LF of 10" gravity sewer, 4 manholes, electrical building and standby generator, electrical switch gear, motor control center and variable frequency drives, instrumentation and control hardware and software, and all associated appurtenances. **This portion of the overall project proposes to impact 0.046 acres of federal jurisdictional freshwater wetlands. The proposed federally jurisdictional wetland impacts are authorized under US Army Corps of Engineers Permit SAC-2019-01909.** The total area of disturbance will be 0.9 acres of a 6.3 acre project site.

We hereby certify that the above referenced project is **Conditionally Consistent** with the **Guidelines for Evaluation of All Projects** as well as the Public Services and Facilities (*Sewage Treatment*), and Stormwater Management (*Runoff*) policies contained in the S.C. Coastal Zone Management Program provided the following conditions are included in the permits and adhered to by the applicant.

1. In the event that any historic or cultural resources and/or archaeological materials are found during the course of work, the applicant must notify the State Historic Preservation Office and the South Carolina Institute of Archaeology and Anthropology. Historic or cultural resources consist of those sites listed in the National Register of Historic Places and those sites that are eligible for the National Register. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items

include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal and glass objects, and human skeletal materials.

2. Prior to any impacts to jurisdictional wetlands of 0.046 acres, applicant must apply for and receive a permit from the US Army Corps of Engineers. The applicant must fully comply with all general, special and regional terms and conditions of the US Army Corps of Engineers Permit as well as SCDHEC requirements for Water Quality and Coastal Zone Certifications. SCDHEC must be sent a copy of the US Army Corps of Engineers Permit before any wetland impacts onsite.
3. All construction BMPs must be installed, inspected and maintained to hold sediment onsite and to protect any adjacent or downstream critical area, wetlands and waters through the life of the project. Upon completion of construction activities, all disturbed (includes undeveloped) areas, including those impacted for access, must be immediately stabilized.
4. The project must be fully consistent with local zoning and comprehensive plans prior to work being conducted.

This determination shall serve as the SCDHEC OCRM Coastal Zone Consistency Determination for the work described above. However, this determination **does not** serve as a Department permitting decision and **does not** alleviate the applicant's responsibility to obtain any applicable State or Federal permit(s) for the work. Local government authorizations **may also** be required.

# South Carolina Board of Health and Environmental Control

## Guide to Board Review

### Pursuant to S.C. Code Ann. § 44-1-60

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of \$100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation or settlement discussions during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference. In matters pertaining to decisions under the South Carolina Mining Act, appeals should be made to the South Carolina Mining Council.

#### I. Filing of Request for Final Review

1. A written Request for Final Review (RFR) and the required filing fee of one hundred dollars (\$100) must be received by Clerk of the Board within fifteen (15) calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after 5:00 p.m.
2. RFRs shall be in writing and should include, at a minimum, the following information:
  - The grounds for amending, modifying, or rescinding the staff decision;
  - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
  - the relief requested;
  - a copy of the decision for which review is requested; and
  - mailing address, email address, if applicable, and phone number(s) at which the requestor can be contacted.
3. RFRs should be filed in person or by mail at the following address:  
South Carolina Board of Health and Environmental Control  
Attention: Clerk of the Board  
2600 Bull Street  
Columbia, South Carolina 29201  
Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail ([boardclerk@dhec.sc.gov](mailto:boardclerk@dhec.sc.gov)).
4. The filing fee may be paid by cash, check or credit card and must be received by the 15th day.
5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.
6. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor. All personal and financial identifying information will be redacted from the RFR and accompanying documentation before the RFR is released to the Board, Department staff or the public.
7. If an RFR pertains to an emergency order, the Clerk will, upon receipt, immediately provide a copy of the RFR to all Board members. The Chairman, or in his or her absence, the Vice-Chairman shall based on the circumstances, decide whether to refer the RFR to the RFR Committee for expedited review or to decline in writing to schedule a Final Review Conference. If the Chairman or Vice-Chairman determines review by the RFR Committee is appropriate, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response and RFR Committee review will be provided on an expedited schedule defined by the Chairman or Vice-Chairman.
8. The Clerk will email the RFR to staff and Office of General Counsel and request a Department Response within eight (8) working days. Upon receipt of the Department Response, the Clerk will forward the RFR and Department Response to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within a twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by

regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. Contested case guidance will be included within the letter.

*NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.*

9. If the RFR is to be considered by the RFR Committee, the Clerk will notify the Presiding Member of the RFR Committee and the Chairman that further review is requested by the Board. RFR Committee meetings are open to the public and will be public noticed at least 24 hours in advance.
10. Following RFR Committee or Board consideration of the RFR, if it is determined no Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Conference. Contested case guidance will be included within the letter.

## II. Final Review Conference Scheduling

1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.
2. The Clerk will request Department staff provide the Administrative Record.
3. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publically noticed and should:
  - include the place, date and time of the Conference;
  - state the presentation times allowed in the Conference;
  - state evidence may be presented at the Conference;
  - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
  - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.
4. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

## III. Final Review Conference and Decision

1. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:
  - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:
    - Type of decision (permit, enforcement, etc.) and description of the program.
    - Parties
    - Description of facility/site
    - Applicable statutes and regulations
    - Decision and materials relied upon in the administrative record to support the staff decision.
  - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
  - Rebuttal by Department staff [15 minutes]
  - Rebuttal by Requestor(s) [10 minutes]

Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.
2. Parties may present evidence during the conference; however, the rules of evidence do not apply.
3. At any time during the conference, the officers conducting the Conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the Conference.
4. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
5. All Conferences are open to the public.
6. The officers may deliberate in closed session.
7. The officers may announce the decision at the conclusion of the Conference or it may be reserved for consideration.
8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court or in matters pertaining to decisions under the South Carolina Mining Act, to request a hearing before the South Carolina Mining Council.. The FAD will be sent by certified mail, return receipt requested.
9. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.

## Attachment No 6



# Wastewater Construction Permit

## Bureau of Water



PROJECT NAME: Thomas Island Regional Pump Station & Interceptor	COUNTY: Berkeley
LOCATION: Intersection of Victoria Rd. & Clouter Creek Dr. SC	

**PERMISSION IS HEREBY GRANTED TO:** CHARLESTON WATER SYSTEM  
103 ST PHILIP ST  
CHARLESTON, SC29403

For the construction of a sanitary sewer system in accordance with the construction plans, specifications, design calculations and the Construction Permit Application signed by Jared Hartwig, Registered Professional Engineer, S.C Registration Number: 30379.

**Project Description:** Approximately 21 LF of 18" PVC gravity sewer, 559 LF of 15" PVC gravity sewer, 3375 LF of 12" PVC gravity sewer, 1600 LF of 10" PVC gravity sewer, 764 LF of 8" gravity sewer, 33 manholes, a 0.57 MGD duplex pump station, 68 LF of 10" PVC force main, 292 LF of 8" PVC force main and all other necessary appurtenances to serve future development

**TREATMENT FACILITY:** The wastewater will be discharged to the Plum Island WPCP-SC0021229 at a design flow rate of 0 GPD.

### STANDARD CONDITION:

**NOTE:** In accepting this permit, the owner agrees to the admission of properly authorized persons at all reasonable hours for the purpose of sampling and inspection. This is a permit for construction only and does not constitute DHEC approval, temporary or otherwise, to place the system in operation. An Approval to Place in Operation is required and can be obtained following the completion of construction by contacting the Lowcountry EA Charleston at 843-953-0150. Additional permits may be required prior to construction (e.g., Stormwater).

### SPECIAL CONDITIONS:

- See attached (to original construction permit) DHEC Office of Ocean and Coastal Resource Management (DHEC-OCRM) certification for additional conditions related to the Coastal Zone Consistency determination.

PERMIT NUMBER:	WW042081
ISSUANCE DATE:	February 20, 2020
EXPIRATION DATES:	Construction must be completed and the Approval to Place in Operation granted prior to February 20, 2023 or this permit will expire.

A handwritten signature in black ink, appearing to read 'Douglas B. Kinard', is written over a horizontal line.

Douglas B. Kinard, P.E., Director  
Drinking Water and Recreational  
Waters Protection Division



## Attachment No 7





## Coastal Zone Consistency Determination

To: Katherine Hart, BOW Coastal Stormwater Permitting Section  
Melanie Williams, BOW Construction Permitting Section

From: Sara L Carper, OCRM Coastal Zone Consistency Section *SC*

Applicant: Russell L. Huggins, Jr., PE, Charleston Water System

Project Name: Thomas Island Regional Pump Station & Interceptor - Division I

Finding: Conditionally Consistent with the SC Coastal Zone Management Program

Site Location: Near intersection of Clouter Creek Dr. and Victoria Rd., Charleston, Berkeley County, South Carolina (TMS#: 275-00-00-042)

Reference #: HNV-9ABY-7SW0J, WS/WW not assigned

Date: January 28, 2020

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The staff of the Office of Ocean and Coastal Resource Management (OCRM) reviewed the above referenced Coastal Zone Consistency project request for land disturbance associated with the construction of a wastewater pump station, demolition of the existing pump station, gravity sewer, and force main, and necessary appurtenances. The total area of disturbance will be 0.9 acres of a 6.3 acre project site.

We hereby certify that the above referenced project is **Conditionally Consistent** with the **Guidelines for Evaluation of All Projects** as well as the Public Services and Facilities (*Sewage Treatment*), and Stormwater Management (*Runoff*) policies contained in the S.C. Coastal Zone Management Program provided the following conditions are included in the permits and adhered to by the applicant.

1. In the event that any historic or cultural resources and/or archaeological materials are found during the course of work, the applicant must notify the State Historic Preservation Office and the South Carolina Institute of Archaeology and Anthropology. Historic or cultural resources consist of those sites listed in the National Register of Historic Places and those sites that are eligible for the National Register. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal and glass objects, and human skeletal materials.

2. Prior to any impacts to jurisdictional wetlands of 0.02 acres, applicant must apply for and receive a permit from the US Army Corps of Engineers. The applicant must fully comply with all general, special and regional terms and conditions of the US Army Corps of Engineers Permit as well as SCDHEC requirements for Water Quality and Coastal Zone Certifications. SCDHEC must be sent a copy of the US Army Corps of Engineers Permit before any wetland impacts onsite.
3. All construction BMPs must be installed, inspected and maintained to hold sediment onsite and to protect any adjacent or downstream critical area, wetlands and waters through the life of the project. Upon completion of construction activities, all disturbed (includes undeveloped) areas, including those impacted for access, must be immediately stabilized.
4. The project must be fully consistent with local zoning and comprehensive plans prior to work being conducted.

This determination shall serve as the SCDHEC OCRM Coastal Zone Consistency Determination for the work described above. However, this determination **does not** serve as a Department permitting decision and **does not** alleviate the applicant's responsibility to obtain any applicable State or Federal permit(s) for the work. Local government authorizations **may also** be required.

## Attachment No 8



Stormwater Management Program  
212 Oakley Plantation Drive  
Moncks Corner, SC 29461  
berkeleycountysc.gov  
843.719.4195

March 12, 2020

Mr. Leon Fanning, PE  
Hazen and Sawyer  
735 Johnnie Dodds Blvd. Suite 102  
Mount Pleasant, SC 29464

**RE: Thomas Island Regional Pump Station – Division 1  
Clouter Creek Drive, Unincorporated Berkeley County  
Disturbed Area: 0.9 Acres  
Plan Case #: PLSP-032198-2020**

Dear Mr. Fanning:

Berkeley County Engineering has reviewed the stormwater management plans submitted for the above referenced project located within the Berkeley County MS4 Regulated Area. The information submitted for review consists of a Stormwater Analysis, C-SWPPP (including Detention Waiver Request) and plan set containing 38 sheets (Cover through R002) with revisions through January 2020. The proposed construction activity (labelled in plans as Division I) has been found to meet or exceed the minimum standards and criteria set forth by the Berkeley County Stormwater Management Ordinance.

**The approval of this Stormwater Management Plan does not constitute, in any way, the right to start construction activities.** No construction on the pump station site and lines from Sta. 0+00 to Sta. 6+00 (includes 10" line from 0+00 to 0+20) may commence until South Carolina DHEC-BOW Coastal Stormwater approves the Notice of Intent (NOI), issues coverage under the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP), and Berkeley County approves the Construction Activity Application (CAA).

Please provide the engineering department with a copy of the approved NOI, letter granting coverage under the CGP, SCDHEC-OCRM issued CZC, and approved encroachment permits. Upon receipt of those documents we may issue CAA Approval. We will also need three (3) full size, three (3) 11x17 and one (1) pdf copy of the plans for stamping. Please let me know if you have any questions or if our office can be of further assistance.

Sincerely,

Kevin A. Kubiak, P.E.  
Deputy County Engineer

CC: Chris Troutman, PE – Charleston Water Systems  
Tom Moore – Berkeley County Planning and Zoning  
Pam Winkler – SCDHEC BOW – Coastal Stormwater  
File

## Attachment No 9

### PENDING RECEIPT FROM BERKELEY COUNTY

## Attachment No 10

**SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION**  
**Encroachment Permit**

Permit No : 228981

Permit Decision Date :  
11/7/2019

Expiration Date : 11/7/2020

Type Permit :SEWER

Location:

<u>District</u>	<u>Work County</u>	<u>Type</u>	<u>Route</u>	<u>Aux</u>	<u>Begin MP</u>	<u>End MP</u>
6	Berkeley, SC	S-	33	None	8.258	8.366
6	Berkeley, SC	S-	33	None	8.590	8.590
6	Berkeley, SC	S-	913	None	0.067	0.067
6	Berkeley, SC	S-	1127	None	0.471	0.471

Contact Information

Applicant: CharlestonWaterSystem

Phone:

Contact: Christopher E.  
Troutman, P.E.

Address: 103 St Philip Street,

City: Charleston

State: SC

Zip: 29403

Comments

Along Clements Ferry Rd below I-526; see attached plans

Special Provisions:

9999 - See Attached for Additional Special Provisions



**9999 SPECIAL PROVISIONS**  
**Sewer**

**\*REVISION added 1-24-2020\***

**The existing driveway on Victoria Road (plan sheet C101 dated 1-8-2020) is to be removed completely. This shall include the removal of the existing asphalt surface to the road edge and the base material. Edge of existing pavement is to be saw-cut as required to form straight and even edge before the final grading. Shoulder and ditch shall be re-established to promote positive drainage flow with erosion control measures put in place to promote a good stand of grass.**

**Any damage to SCDOT assets within the right-of-way as a result of this operation shall immediately be repaired by the permittee in accordance with SCDOT requirements**

The South Carolina Department of Transportation reserves the right to impose additional conditions, provisions, and/or requirements on this permit to respond to any unforeseen, specific problems that might arise during the life of this permit, and to take any enforcement action necessary to ensure compliance with SCDOT specifications, standards, or policies.

If in the future the proposed utility work to be performed under this permit is requested to be removed by the SCDOT because of roadway improvements and the facilities are left in place by the permittee, and the improvements are made and the facilities are then located under new pavement or construction, any future access, taps, ties, or maintenance on the covered facilities may be denied by SCDOT.

**All of the following provisions may not apply to work being performed under this permit. Any provision listed below along with those stated on the application form, and any other provision added to and made part of this permit, will be required to be executed to the extent expressed in these provisions.**

The permittee fully understands and agrees with all conditions, requirements, provisions, and specifications associated with or listed on this permit with the start of any construction described or shown on this permit.

This permit has been approved with one year life duration; all work shown or detailed on this permit must be completed and accepted in that time frame. If all of the work is not finished the permit will be considered in noncompliance and the permittee will be legally responsible for any actions which may result from the construction deficiencies.

**Approval of this permit is for the installation of a 12" PVC sewer main within the right-of-way of Clements Ferry Road (S-8-33 & S-8-913) and St. Thomas Island Drive (S-8-33). Project will include the installation of a 45' of 24" steel casing, 100' of 24" steel casing, 715' of 12" PVC sewer main, 190' of 8" PVC sewer main, and (6) SSMH. Installation method will be jack and bore and trenching. All shown fully on the plans.**

The contractor is to confirm all existing utilities' location and depth prior to construction. Contractor shall notify CWS and SCDOT Berkeley Maintenance of any location and elevation discrepancies that differ from the plans.

**No lane closures or traffic disruptions will be allowed without prior permission. Any work requiring a traffic disruption or lane closure will be done at night between the hours of 9:00 PM and 5:00 AM with all traffic control removed from the roadway at that time. Any closure will require notifying SCDOT and all required media outlets and all emergency agencies a minimum of one week prior to the implementation of the closure.**

**Any SCDOT assets damaged during the installation of this sewer line must be repaired/replaced by the permittee to SCDOT standards and specifications immediately.**

- Let it be known that this utility company will need to coordinate with other utilities that may be in the vicinity. This concurrence does not relieve them of conflicts with other utilities. They will also need to make sure that they will be underneath our storm drain and all minimum vertical and horizontal clearances are met per standard. In addition, they need to ensure that the proposed driveway elevations align with all the improvements which includes but limited to sidewalk, roadway, curb and gutter.

**All driveways cut during installation of utility lines will be restored and completely patched immediately to ensure property owner's access, and shall meet all South Carolina Department of Transportation specifications that apply. Each driveway will be patched with the same material used in the construction of the driveway. Concrete driveways will be cut at an existing joint or at a location that will not leave small areas of less than 4'-0" between patch edge and existing joint or edge of pavement.**

- If any settlement occurs within the open cut driveways, the permittee shall repair the settled area and provide an overlay of asphalt covering the entire driveway.

- Backfilling of trenches is to be accomplished immediately after placement of pipe.

### **OPEN CUT(S) AND POTHOLING (If required)**

1. This office must be contacted a minimum of 48 hours before project is to begin to schedule an SCDOT Inspector (if available) to be on site when open cut is performed
2. The open cut repairs to any portion of the roadway shall include the following: milling 2" deep on each side of open cut to **extend 5' beyond each side of open cut the entire width of all travel lanes affected.** Entire depth of open cut(s) shall be flowable filled and steel plated with steel plate secured to the road surface. Once setup then top four inches of flowable fill removed and patched with a minimum of 4" hot asphalt surface course and/or the thickness and type of existing asphalt, whichever is greater. Milled area shall be replaced with 220 lbs/sy asphalt surface course Type B.
3. Steel plate ahead signs shall be placed approx. 500' before the excavation in both directions
4. If any settlement occurs within the open cut(s), the permittee shall repair the settled area and provide an overlay of asphalt covering the entire repair and any additional area to be determined by SCDOT at that time.
5. ***The open cut(s), potholing, repairs to the road structure, and the final mill and overlay of the travel lanes will be performed at night between the hours of 9:00 pm and 5:00 am with all traffic control removed from the roadway at that time. Any closure will require notifying all required media outlets, SCDOT, and emergency agencies a minimum of one week prior to the implementation of the closure.***

**This office must be contacted a minimum of 48 hours before project is to begin to schedule an SCDOT Inspector (if available) to be on site when any open cut is performed.**

**If any settlement occurs within the open cut(s), the permittee shall repair the settled area and provide an overlay of asphalt covering the entire repair and any additional area to be determined by SCDOT at that time.**

- The South Carolina Department of Transportation reserves the right to impose additional conditions, provisions, and/or requirements on this permit to respond to any unforeseen, specific problems that might arise during the life of this permit, and to take any enforcement action necessary to ensure compliance with SCDOT specifications, standards, or policies.

- If in the future the facilities left in place by the permittee and the facilities are located under new pavement or construction, any future access, taps, ties, or maintenance on the covered facilities may be denied by SCDOT.
- All of the following provisions may not apply to work being performed under this permit. Any provision listed below along with those stated on the application form, and any other provision added to and made part of this permit, will be required to be executed to the extent expressed in these provisions.
- The permittee fully understands and agrees with all conditions, requirements, provisions, and specifications associated with or listed on this permit with the start of any construction described or shown on this permit.
- **Prior to the start of any work shown on this permit the permittee, the contractor, and SCDOT will meet on site to discuss proposed work, these provisions, and all required safety requirements and signage pertaining to this permit.**
- All construction signage is to be placed and maintained during the construction of this project until SCDOT final approval of work is given for all work shown on this permit. All signage is the responsibility of the permittee.
- Any boring operation being made on this project shall be made by method shown in permit and in such a manner as not to disturb the existing pavement. Notice will be given to the South Carolina Department of Transportation a minimum of 48 hours prior to the start of the boring operation, and immediately if the bore turns and damages the existing roadway pavement or shoulders in any way.
- At all locations of jack and bore crossings, casing will extend from right-of-way line to right-of-way line.
- All ingress and egress from and to the work area must be made from a safe location providing adequate and safe sight distance for the workers and motorists.
- Traffic Control to follow SCDOT Standard Drawing 610-005-00 for a Flagging Operation.
- Traffic Control to follow SCDOT Standard Drawing 610-205-00 for a Shoulder Closure.
- This office is to be notified a minimum of 24 hours prior to any work inside SCDOT rights-of-way being started by calling, faxing or emailing the Permit Construction Notification form or by immediately calling if an accident should occur during this construction. (843) 761-8481
- Any installation of this water/sewer main between the ditch line and edge of pavement must have a cover depth of 42 inches below the top of pavement.
- Any installation of this water/sewer main between the ditch line and right-of-way line must have a minimum cover depth of 36 inches.
- The utility company to the extent required by law shall hold harmless the Department, its employees, contractors and agents, from any damages caused to the utility installations by routine maintenance operations. The utility company shall be responsible for any damages it causes to other utility installations on the Department right-of-way.
- All work shown on attached drawings to be done by Chas. Water Systems.

- All pavement markings (edge line and/or center line) shall be restored to SCDOT standards and specifications.
- Any existing pavement markings or traffic signage altered during the installation of this permitted construction will be replaced by the permittee to their original condition as soon as possible. All existing and required construction signage will be maintained at all times during this permit.
- **No trenches or open excavations are to be left open overnight.**
- All areas disturbed inside SCDOT rights-of-way are to be compacted, graded and grassed as soon as possible to prevent any erosion or sedimentation in the drainage system.
- The open cut repairs to any portion of the roadway shall include the following: milling 2" deep on each side of open cut to extend 5' beyond each side of open cut. Entire depth of open cut shall be flowable filled and steel plated then secured to allow setup then top four inches of flowable fill removed and patched with a minimum of 4" hot asphalt surface course and/or the thickness and type of existing asphalt, whichever is greater. Milled area shall be replaced with 220 lbs/sy asphalt surface course Type B.
- The open cut(s) in the roadway is/are to be patched by backfilling with SCDOT approved flowable fill, plated and when setup
- **Any sidewalk or curbing damaged or removed during construction must be replaced by the permittee to SCDOT standards and specifications.**
- All construction signage is to be placed and maintained during the construction of this project until SCDOT final approval of work is given for all work shown on this permit. All signage is the responsibility of the permittee.
- No excavated material is to be placed or let accumulate on roadway surface during the construction of this project. All material is to be removed from roadway as soon as possible.
- **Any excavation within 5' of the edge of pavement will be backfilled entirely with flowable fill. The excavated area will be backfilled entirely with flowable fill.**
- Any boring operation being made on this project shall be made by method shown in permit and in such a manner as not to disturb the existing pavement. The bore pit must not be any closer than five to six feet from the edge of pavement and constructed as shown. **The cover over the casing shall not be less than 48 inches at any point in the casing length from the lowest point of the roadway cross sections to the top of the casing.** Notice will be given to the South Carolina Department of Transportation a minimum of 24 hours prior to the start of the boring operation, and immediately if the bore turns and damages the existing roadway pavement or shoulders in any way.
- Bore pits shall be closed immediately after installation. Disturbed area will be backfilled in 6" lifts, compacted as required, graded to provide positive drainage, raked, and cleared of all debris, then grassed as required.
- This office is to be notified 24 hours prior to the start of any boring or open roadway cut operation is to begin. All necessary equipment and materials needed to accomplish these tasks are to be on site, and inspected by SCDOT inspector prior to the start of each operation. This also includes all traffic control devices and signage. Call (843) 761-8481

#### UTILITY LINE CONSTRUCTION PROVISIONS

- 1.) All work to be performed under this permit will be in accordance with South Carolina Department of Transportation manual "A Policy for Accommodating Utilities on Highway Right-of-way", latest edition.
- 2.) All underground utility lines are to be placed as indicated on attached drawings or detailed in the permit. The line is to be placed in a uniform distance either off edge of roadway or right-of-way lines with the least amount of deflective changes as possible. All lines are to be buried with a minimum cover as shown on drawings or indicated in the permit.
- 3.) Contractor will maintain access to all property owners at all times during construction, and until final inspection, and approval is obtained. If in the course of construction driveways are to be cut and access impaired the contractor will be responsible to inform each resident of the inconvenience and the time, date and length of the work to be done.
- 4.) All utility valves, meters, vaults, air release valves, manholes, and others utility structures are to be installed outside existing or proposed roadway surface, flush with the existing ground, and behind ditches if at all possible, and/or 3'-0" inside the right-of-way lines.
- 5.) Any existing pavement markings or traffic signage altered during the installation of this permitted construction will be replaced by the permittee to their original condition as soon as possible. All existing and required construction signage will be maintained at all times during this permit. Some new construction will require new pavement markings and permanent signage, see permit for details.
- 6.) Any request for a final inspection of a utility project will be made by either sending this office a letter or email requesting final inspection or by calling and requesting the inspection.

#### **UTILITY LINE BORING PROVISIONS**

- 7.) Any boring operation being made on this project shall be made by method shown in permit and in such a manner as not to disturb the existing pavement. The bore pit must not be any closer than five to six feet from the edge of pavement and constructed as detailed in provision number 8. The cover over the casing shall not be less than 48 inches at any point in the casing length from the lowest point of the roadway structure to the top of the casing. Notice will be given to the South Carolina Department of Transportation a minimum of 24 hours prior to the start of the boring operation, and immediately if the bore turns and damages the existing roadway pavement or shoulders in any way.
- 8.) At all locations of jack and bore crossings, casing will extend from right-of-way line to right-of-way line. Boring pit location will be determined by the depth of boring, i.e. the distance from edge of pavement to the front edge of the pit will be the same or greater than the depth of line crossing, minimum of five or six feet.
- 9.) Bore pits shall be closed immediately after installation. Disturbed area will be backfilled in 6" lifts, compacted as required, graded to provide positive drainage, raked, and cleared of all debris, then grassed as required.
- 10.) This office is to be notified 24 hours prior to the start of any boring or open roadway cut operation is to begin. All necessary equipment and materials needed to accomplish these tasks are to be on site, and inspected by SCDOT inspector prior to the start of each operation. This also includes all traffic control devices and signage. Call (843) 761-8481

#### **PAVEMENT PROVISIONS**

- 11.) Any pavement to be used in the construction shown on this permit is to be placed as specified and in accordance with the South Carolina Department of Transportation standard specifications for highway construction (latest edition), whichever is greater. The

pavement structure listed or shown will be used in all areas where asphalt is to be placed inside SCDOT right-of-way unless indicated differently on the permit.

- 12.) Any existing roadway pavement damaged or removed in connection with this work will be replaced, using the same thickness and type of material destroyed, or according to specifications called for in the South Carolina Department of Transportation construction manual (latest edition), whichever is greater.
- 13.) Where pavement is cut and replaced, the contractor shall cut the edges to a straight and even line before removing the pavement. No ragged edges will be allowed or accepted. All patches and repairs will have squared corners. Prior to placing new asphalt all existing edges are to be tacked as per current SCDOT specifications. In some cases an asphalt surface overlay may be required to smooth riding surface of roadway at patch, see permit for details.
- 14.) Where roadway pavement is cut and is to be replaced, the trench is to be backfilled with SCDOT approved flowable fill from top of pipe to riding surface, and steel plating is to be placed over cut and secured as required. Then maintained until backfill has setup and then surface treatment can to be placed. The top two inches (minimum) of flowable fill is to be removed and the equivalent amount and type of existing roadway asphalt (minimum two inches) is to be placed in patch.

#### **EXCAVATION PROVISIONS**

- 15.) Any required excavation or mucking in connection with this work, will be backfilled in six inch layers, and thoroughly compacted in a manner satisfactory to the South Carolina Department of Transportation specifications. Density tests may be required with the results to be furnished to the departments utility inspector on a weekly basis during construction, see permit for details.
- 16.) Compaction requirements in these provisions apply to crosscuts and longitudinal trench cuts from shoulder break to shoulder break. If compaction tests are required the maximum distance between tests shall be 500 feet. In some cases additional tests may be required, see permit for details.
- 17.) If unsuitable material is excavated, it will not be put back in the excavation, and will be removed from the right-of-way as soon as possible. The material will be replaced with suitable approved backfill, and be in compliance with the South Carolina Department of Transportation specifications for backfill.
- 18.) There shall be no excavation of soil nearer than two feet from any public utility pole or appurtenant facility without the written consent of the owner thereof. Special permission of the South Carolina Department of Transportation after an opportunity to be heard is given the owner of such pole or appurtenant facility may be given.
- 19.) If the side of the trench, pit, or any excavation is less than 3'-0" from the existing edge of pavement, the excavated area will be backfilled entirely with flowable fill to an elevation 6 inches from the existing ground elevation. Then brought to grade with suitable topsoil, compacted, graded, and grassed as required to eliminate any erosion.
- 20.) Existing ditch slopes, if excavated, shall be backfilled in six inch layers and well tamped with a mechanical tamp to 95% density (standard proctor). These lifts will be benched into the existing embankment as required. The new slopes will then be graded to match existing typical roadway cross section.
- 21.) No excavated material or spoil is to be placed on the pavement without the permission of the South Carolina Department of Transportation, and if permission is granted, this material must be removed daily, as soon as possible. The roadway is to be

cleaned of all material in a manner as to protect the existing pavement. Any pavement destroyed, or marked by this operation will be removed and replaced as required.

- 22.) When shoulders and ditch slopes are reshaped and graded to a typical section, the section will match existing road section. Where the existing section is less than state standards (6' wide shoulder @ 12:1, front slope of ditch @ 4:1, ditch bottom as required to accommodate existing runoff, and back slope of ditch min. 3:1 or to right-of-way line) the section will be upgraded to the standard. In either case positive drainage must be established and approved by SCDOT.
- 23.) Contractor will maintain positive drainage at all times during construction and until final inspection and approval from South Carolina Department of Transportation is obtained.
- 24.) No excavation located between the edge of roadway pavement and the center of sideline ditch or 15'0" where no ditch is present is to be left open overnight. The excavation is to be either temporarily backfilled or a steel plate is to be secured over hole. In either case reflective traffic cones are to be placed around the area of the excavation until the excavation has been permanently backfilled as required and graded.

#### **CONSTRUCTION CLEANUP PROVISIONS**

- 25.) All areas in SCDOT right-of-way disturbed during construction are to be restored to original condition as soon as possible and maintained during entire length of project,
- 26.) All disturbed areas inside SCDOT rights-of-way will be seeded with a mixture of grass seed as specified in the South Carolina Department of Transportation standard specifications for highway construction, section 109b2, or latest edition. No rye grass will be allowed inside SCDOT rights-of-way. A satisfactory stand of grass will be required, prior to any acceptance or final approval is granted on this permit.
- 27.) All rocks, pebbles, boards, other debris along with any spoil material will be kept clear of roadway at all times as the work progresses.

#### **TRAFFIC CONTROL PROVISIONS**

- 28.) The permittee, owner, and/or contractor will be responsible for all required traffic control for this construction. SCDOT will be available for any questions concerning the required signage, types, size and placement.
- 29.) Any time personnel or equipment is required to be inside right-of-way. Signs are to be covered or removed each night or if no activity is present inside right-of-way.
- 30.) All men working in the SCDOT right-of-way will wear approved safety vests as required.
- 31.) **Traffic control, lights, signs, and flagmen will be furnished by the permittee and/or contractor and will conform to "Manual on Uniform Traffic Control Devices", latest edition. All devices and signs will be maintained during all phases of construction. Signs not in use will be removed or covered as required.**

#### **GENERAL PROVISIONS**



- 32.) All work to be performed under this permit will be in accordance with South Carolina Department of Transportation specifications, latest edition.
- 33.) All work indicated on this permit is to be completed within one (1) year of the approval date of the permit. All utility line construction is to include the surface treatment and all shoulder and ditch stabilization required.
- 34.) All roadway and work performed in the SCDOT right-of-way under this permit including any utility installations will be the responsibility of the owner for the life of the utility placed. If for any reason the utility line fails, this office is to be notified immediately. If in the construction of the project detailed on the permit, the roadway or right-of-way construction or any part of that construction is performed in a manner not specified in the permit or according to SCDOT standards or specifications shall be corrected immediately.
- 35.) Appropriate South Carolina Department of Transportation officials will be notified as of the start of any construction on this project, 24 hours prior to the start, and be kept informed of the progress during construction, and when a final inspection is wanted at the completion of the project.
- 36.) A reliable, properly insured, and licensed contractor will perform this construction.
- 37.) Any construction materials or equipment to be stored or parked alongside of roadway or in the right-of-way will be placed a minimum of 30' from the edge of pavement, or have warning devices as required and approved by this office.
- 38.) Field changes, if necessary must be submitted in writing and approved prior to the start of any actual construction on proposed change. An as-built set of plans will be required upon completion of the project reflecting any and all changes to the original plans.
- 39.) If a time extension or a revision to an approved permit is required, a written request along with any drawings required is to be submitted to this department for review and approval. No work is to be performed on any item not indicated on the permit, either shown in a sketch or indicated in a description, prior to an amended permit being issued.
- 40.) The permittee shall be responsible for any and all damages that occur as a direct result of this installation.
- 41.) A copy of this approved permit will be made available to the South Carolina Department of Transportation at the work site at all times.



**Permit Construction Notification**

Submit To: Encroachment Permit Manager  
SCDOT Berkeley Encroachment Permit Office  
Email: [Carswelljs@scdot.org](mailto:Carswelljs@scdot.org) Fax: 843-761-5100

This notification is to inform the Department of the upcoming construction commencement of the following permitted work:

Permit Number:  
\_\_\_\_\_

Road Name/Number:  
\_\_\_\_\_

Project Name:  
\_\_\_\_\_

Name of Permittee:  
\_\_\_\_\_

Contractor Name & Contact:  
\_\_\_\_\_

Contractor Office & Mobile Phone No:  
\_\_\_\_\_

Proposed Preconstruction Date:  
\_\_\_\_\_

Estimated Project Completion Time:  
\_\_\_\_\_

Notes:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- ❖ Upon completion of all work you must contact the SCDOT-Berkeley Maintenance Permit Office at (843) 761-8481 to schedule a final inspection.
- ❖ Once work has been satisfactorily completed SCDOT will issue a Letter of Compliance.



## Attachment No 11

Berkeley County, South Carolina  
GIS Department  
1003 Hwy 52 PO Box 6122  
Moncks Corner, SC 29461-3707  
843.719.4113 | fax: 843.719.4190

**DO NOT DISPOSE OF THIS DOCUMENT, FILE IT WITH YOUR IMPORTANT DOCUMENTS**

2/13/2020

**OFFICIAL NOTIFICATION OF  
YOUR NEW STREET ADDRESS:**

**PROPERTY LOCATION ADDRESS:**

THOMAS ISLAND REGIONAL PUMP  
STATION AND INTERCEPTOR  
117 CLOUTER CREEK DR  
WANDO, SC 29492  
TMS# 2750000042

Dear Resident/Property Owner:

Berkeley County E-911 Address Information Department is responsible for naming and addressing roads in our area. The rapid response of our Fire, Police, and EMS Ambulance Service utilizing our E-911 computer-based system is dependent on one factor - a **CORRECT STREET ADDRESS** on each house or business.

Ordinance 93-9-23 adopted by County Council establishing a uniform numbering system for the County requires that each resident or business display their new number so that it may be seen clearly from the road. **NUMBERS MUST BE (4) inches or greater for residential buildings and (8) inches or greater for commercial.** This system of addressing is best for locating you in time of emergency with the enhanced 911 telephone service. **WHENEVER YOUR NUMBERS ARE NOT CLEARLY VISIBLE FROM THE STREET THE NUMBERS MUST BE PLACED NEAR THE COMMON ENTRANCE AND ON THE MAILBOX UNOBSTRUCTED BY THE FLAG.** Your assigned number must be displayed no later than 21 days from the date of this notification or before final inspection of future structure. Violation of this ordinance constitutes a misdemeanor and subjects you to a fine not exceeding \$500.00 or to an imprisonment for a term not exceeding 30 days. Although you may presently receive your mail through a post office box, you should use your address as a means of locating your residence.

The Post Office will furnish you with change of address cards and assist you in whatever way they can with the forwarding of your mail. Please note that this address **DOES NOT** constitute a legal description of your property; your ten digit Tax Map Sequence (TMS #) number that appears on your tax notice serves this purpose. **PLEASE KEEP THIS LETTER WITH YOUR PERSONAL RECORDS.**

We regret any inconvenience this may cause you, but we need your attention and cooperation to ensure that emergency services, as well as day-to-day mail service can be rendered as efficiently as possible. Should you have any questions please call the County Office Building in Moncks Corner at 723-3800, 761-6900, 567-3136 extension 4113.

Sincerely,

Aimee Ward  
E-911 Address Information Technician