



Invitation for Bid No. 2023-003

Stack Road 8” Water Main Extension

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ADDENDUM No. 1

ISSUE DATE: September 1, 2022

Responding Bidders on this project are hereby notified that this Addendum shall be made a part of the above named IFB document.

The following items add to, modify, and/or clarify the IFB documents and shall have the full force and effect of the original Documents. This Addendum shall be acknowledged by the Offeror in the IFB document.

ADDENDUM NO. 1
Union County
Stack Road 8" Water Main Extension
Union County Project No: 2022-003
McKim & Creed Project # 00771-0033

Bids Due: Thursday, September 08, 2022 at 2:00 PM EST

DATE: September 01, 2022

TO: ALL PLAN HOLDERS

Please note the following clarifications, changes, and/or additions to the above referenced project:

Scope

Addendum #1 is issued to answer the following questions:

Questions:

1. Please clarify pipe bedding details. Sheet D.02, Detail 8 Class B demonstrates #67 Stone backfill and detail 8B, Water Trench is Select Material. What is the intent? All #67 Stone or will Select Material be allowed.

Answer: Detail 8 has been deleted from sheet D.02. Pipe bedding shall be select backfill per Detail 8B, with the exception of areas where unsuitable materials/bedding is discovered as defined in Technical Specification 02220 – Excavating, Grading, Trenching, and Backfilling.

2. If #67 Stone is the intent will testing for compaction only be require on the soil above the #67 Stone?

Answer: Compaction testing locations will be at Engineer/Owner's discretion.

3. Are Thrust Blocks Required on all bends?

Answer: Thrust blocking is not allowed. Pipe restraints shall be handled using mechanically restrained joints. Restrained joint lengths shall be per the Restrained Pipe Length Table on sheet D.02.

4. Can the Air Release Manhole be built of block?

Answer: Air release valves are not required and are not included in the bid form. Detail 4 on sheet D.01 has been incorporated for use only in the case of an unforeseen

change in construction. If an unforeseen field condition requires an ARV, only a precast manhole would be permitted.

5. Considering the extremely long lead times for 8" ductile iron pipe, would the Owner consider as an alternate using 8" restrained joint PVC in lieu of ductile iron?

Answer: No. The Owner understands the issues with material lead times. Contract times may be adjusted during the project based on review of a Contractor's claim per Article 12 of the General Conditions.

6. Was any Geotech exploration performed for this project? If not, can a rock excavation unit price be added to the bid form?

Answer: Geotechnical exploration has not been performed for this project. Per Technical Specification 01630 – Measurement & Payment, subsection 1.6 - Excavation and Trenching, there shall be no separate payment for rock excavation, the unit or lump sum price bid for each item of Work shall include all costs for rock excavation.

7. Can we test dig/drill this project to check for rock or the lack thereof? We request one test hole and it would be located adjacent to Armfield Mill Road.

Answer: A single test hole is permitted adjacent to Armfield Mill Road (outside of pavement), within the County's utility easement. The test hole shall be no greater than 6-inches in diameter and test hole shall be backfilled upon completion. As with all work on the project, restoration to all areas disturbed by the work shall be to better than original condition. As part of this effort, the Contractor shall be responsible for locating existing utilities prior to excavation and providing maintenance of traffic confirming to state and local requirements.

8. Are we supposed to put a blow off assembly on the Tee at STA 70+29, or the Cap at STA 70+45? Or neither? The plan view looks like it shows more pipe continuing after the cap going to 70+64, however the profile just shows the cap and the fire hydrant assembly, coming off that tee, ending at STA 70+64. There are also details on pg. D.01 (details 2A/7A), that show blow off assemblies for both of those scenarios.

Answer: The new water main installation will stop with the cap at 70+45. A permanent blow off is not included as part of the project.

9. PG. EC.01 Detail EC-00 shows the list, and measurements, of all the Rip Rap lined swales. On that detail it lists 9 swales total. However, on the plan sheets I only counted 6. Are we to include the other 3 in our bid?

Answer: Detail EC-00 on sheet EC.01 has been revised to include only the six swales locations indicated in the plan set.

10. Since this is a main extension, are we responsible for any new services to the homes/businesses along stack road?

Answer: No.

11. Do you have a cost estimate that you are willing to share?

Answer: No.

Changes to the Plans:

The revised copies of sheets D.02. and EC.01 have been provided as part of this addendum.

Acknowledgement to Bidder:

Please acknowledge receipt of this addendum by inserting the appropriate addendum number and date in paragraph 3.01.A of the bid form.

Union County appreciates your input in this project. Hopefully these revisions and clarifications will improve upon this project. We look forward to receiving your bid on Thursday, September 08, 2022.

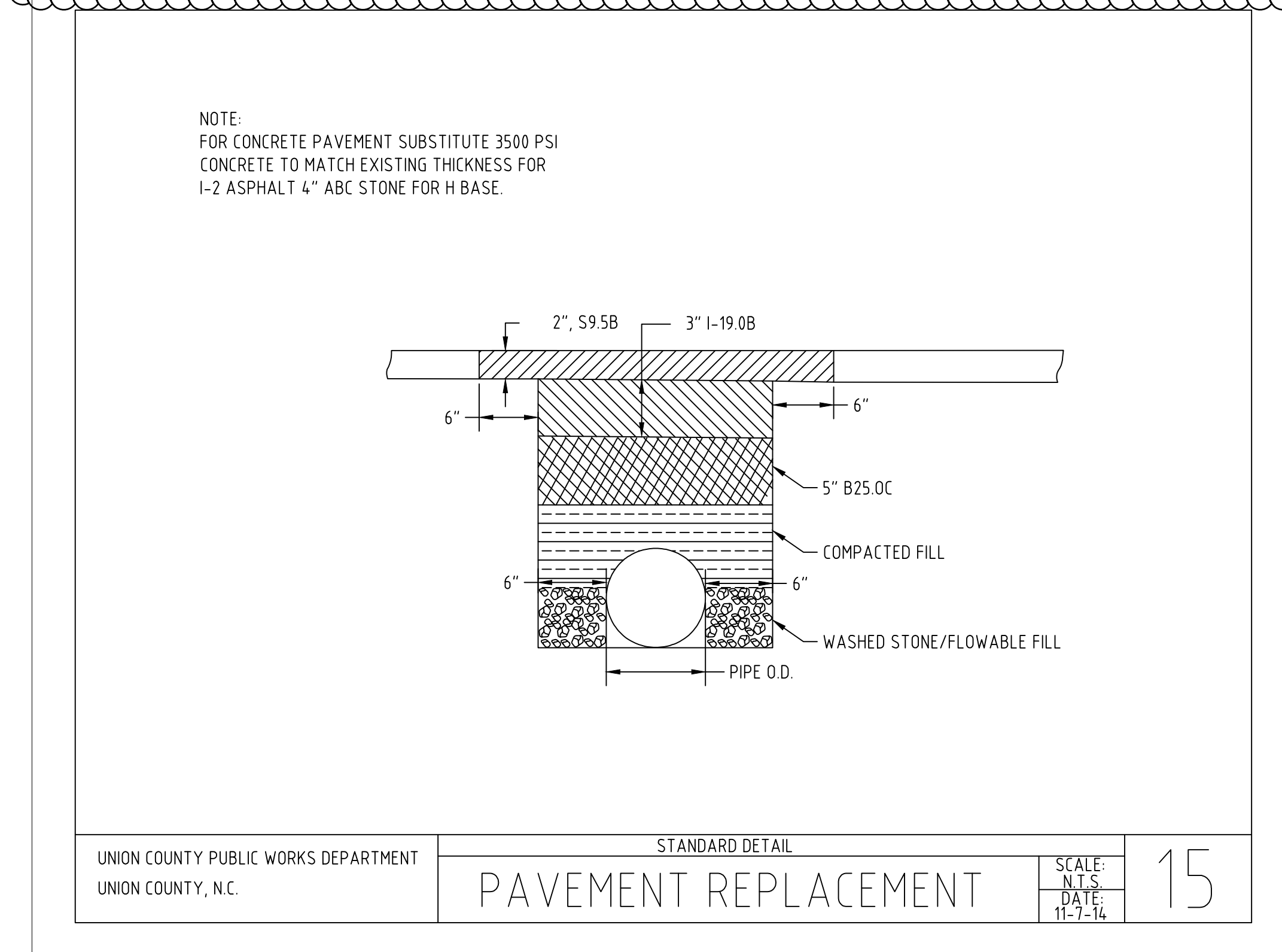
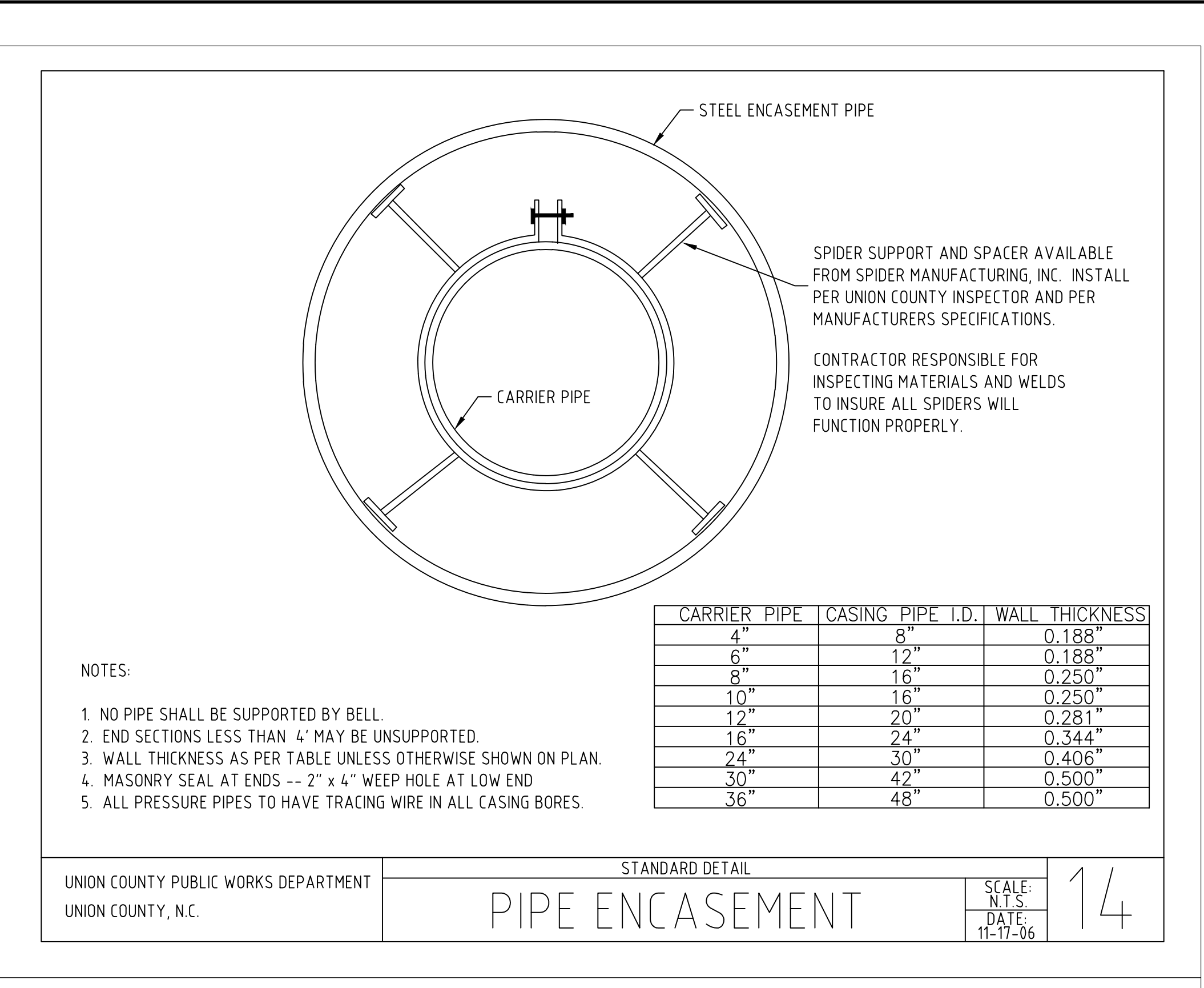
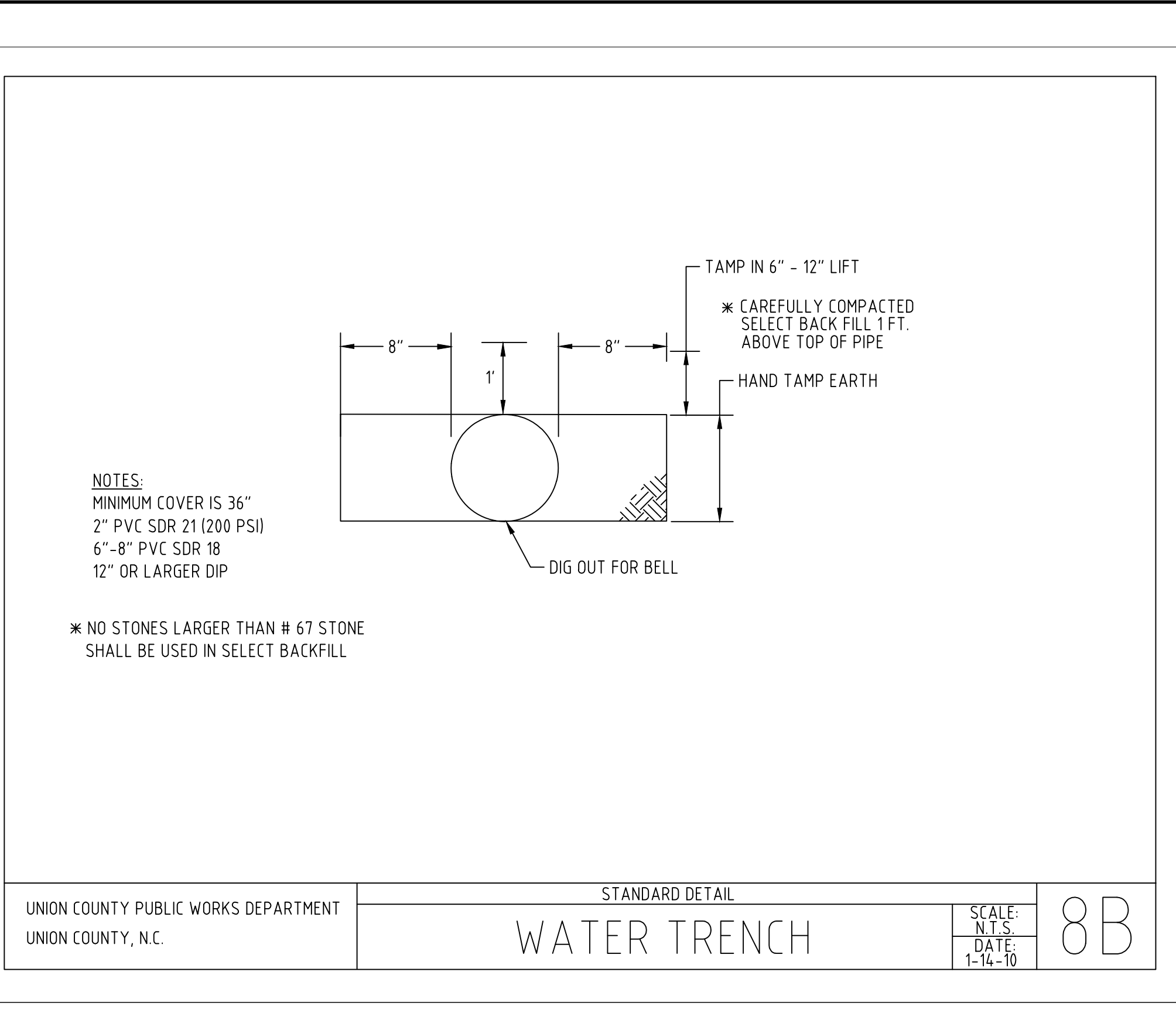
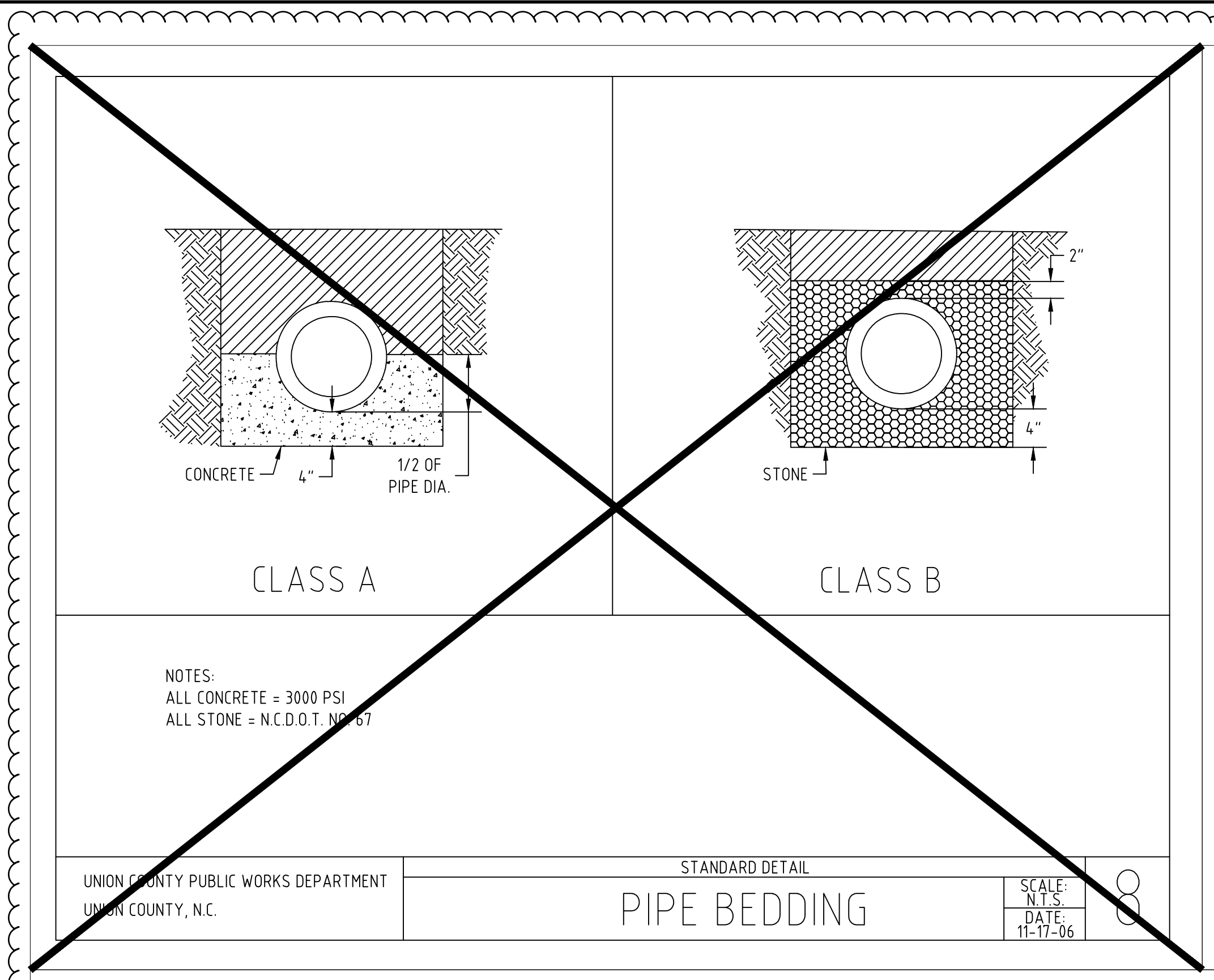
The foregoing changes are hereby incorporated into the Contract, Documents and Drawings for the Stack Road 8" Water Mian Extension Project.

Very truly yours,

McKim & Creed, Inc.



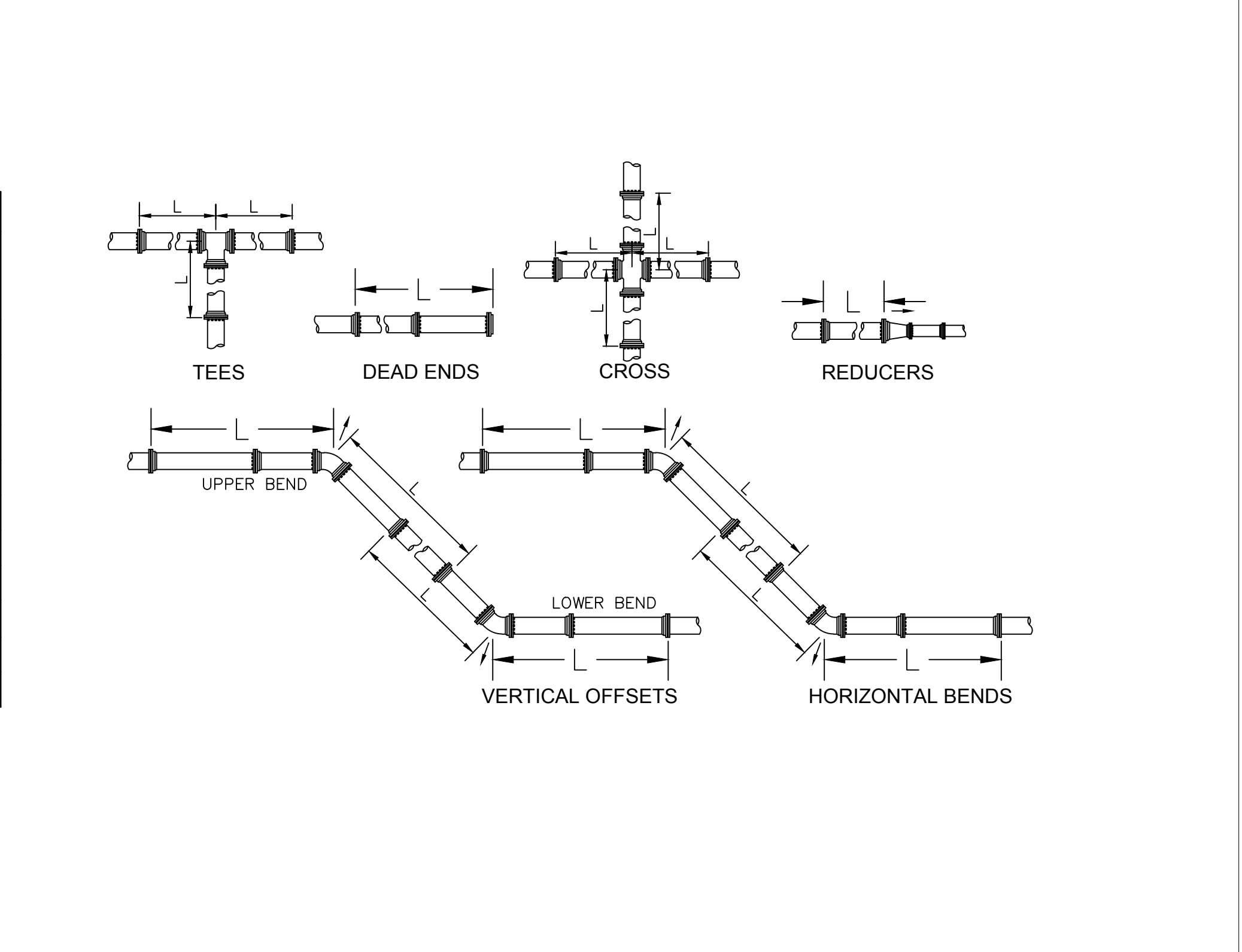
Chris Rosenboom, PE
Project Manager



MINIMUM RESTRAINED PIPE LENGTHS (LINEAR FEET) TABLE

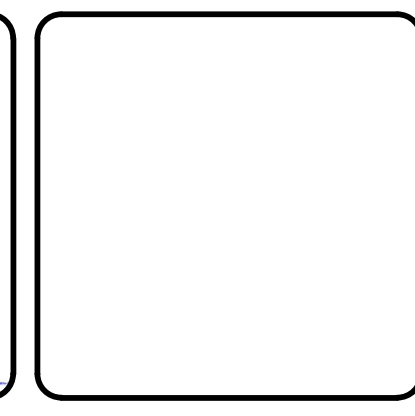
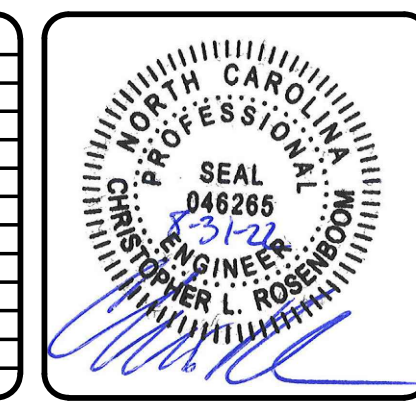
Main Pipe Diameter (inches)	Horizontal Bends (Degrees)				Tees	Reducers (Main Diameter x Reducer Diameter (inches))				Dead Ends	Vertical Offsets (All Bend Angles)	
	90	45	22.5	11.3		x6	x8	x10	x12		Upper	Lower
24	140	58	28	14	10	305	289	268	243	329	137	33
20	121	50	24	12	10	253	233	208	177	282	117	28
18	111	46	23	11	10	226	202	174	140	258	107	26
16	101	42	21	10	10	196	170	138	99	233	97	23
12	80	33	16	8	10	132	96	53		181	75	18
10	68	29	14	7	10	95	52			154	64	15
8	57	24	12	6	10	54				128	53	13
6	44	19	9	5	10					98	41	10
4	32	13	7	4	10					70	29	7
3	27	11	6	3	10					58	24	6

*TABLE ABOVE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. RESTRAINED JOINT LENGTHS SHOWN ON PIPE PROFILES SHALL BE FOLLOWED.



REV. NO.	DESCRIPTION	DATE
B	FINAL DESIGN - REVISED PER ADDENDUM 1	08/31/2022
A	FINAL DESIGN - ISSUED FOR BID	08/06/2022

REVISIONS



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STACK ROAD 8" WATER MAIN EXTENSION

DETAILS
DETAIL 2

PROJ. START DATE: AUG 2021	SCALE: D.02
MCE PROJ. # 00771-0033	HORIZONTAL: N/A
DRAWN: AWB	VERTICAL: N/A
DESIGNED: AWB	REVISION: B
CHECKED: NRD	
PROJ. MGR.: CLR	
STATUS: FINAL DESIGN	REVISED PER ADDENDUM 1

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

Note: After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:	
Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none">Temporary grass seed covered with straw or other mulches and tackifiersHydroseedingRoll erosion control products with or without temporary grass seedAppropriately applied straw or other mulchPlastic sheeting	<ul style="list-style-type: none">Permanent grass seed covered with straw or other mulches and tackifiersGeotextile fabrics such as permanent soil reinforcement mattingHydroseedingShrubs or other permanent plantings covered with mulchUniform and evenly distributed ground cover sufficient to restrain erosionStructural methods such as concrete, asphalt or retaining wallsRoll erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

CONCRETE WASHOUTS

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive

EQUIPMENT AND VEHICLE MAINTENANCE

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

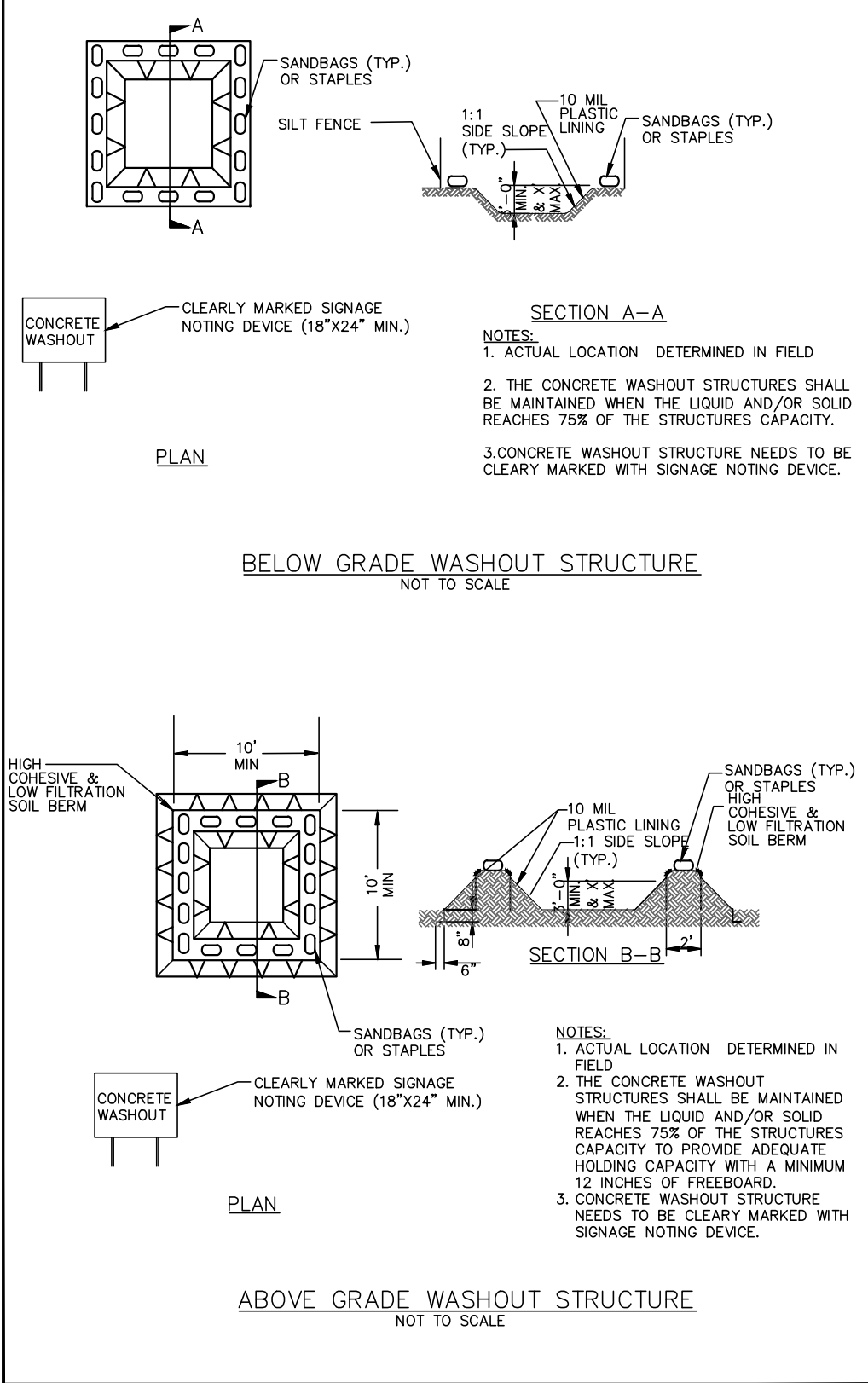
PORTABLE TOILETS

- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown that no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



HERBICIDES, PESTICIDES AND RODENTICIDES

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero". The permittee may use another rain-measuring device approved by the Division.
(2) E&S Measures	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	1. Identification of the perimeter SDOs inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event \geq 1.0 inch in 24 hours	1. Identification of the stream or wetland inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&S measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover), 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&S measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&S plan.	Initial and date each E&S measure on a copy of the approved E&S plan or complete, date and sign an inspection report that lists each E&S measure shown on the approved E&S plan. This documentation is required upon the initial installation of the E&S measures or if the E&S measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&S plan.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&S measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&S measures.	Initial and date a copy of the approved E&S plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

2. Additional Documentation to be Kept on Site

In addition to the E&S plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- This General Permit as well as the Certificate of Coverage, after it is received.

- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

3. Documentation to be Retained for Three Years

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

PART II, SECTION G, ITEM (4)

DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

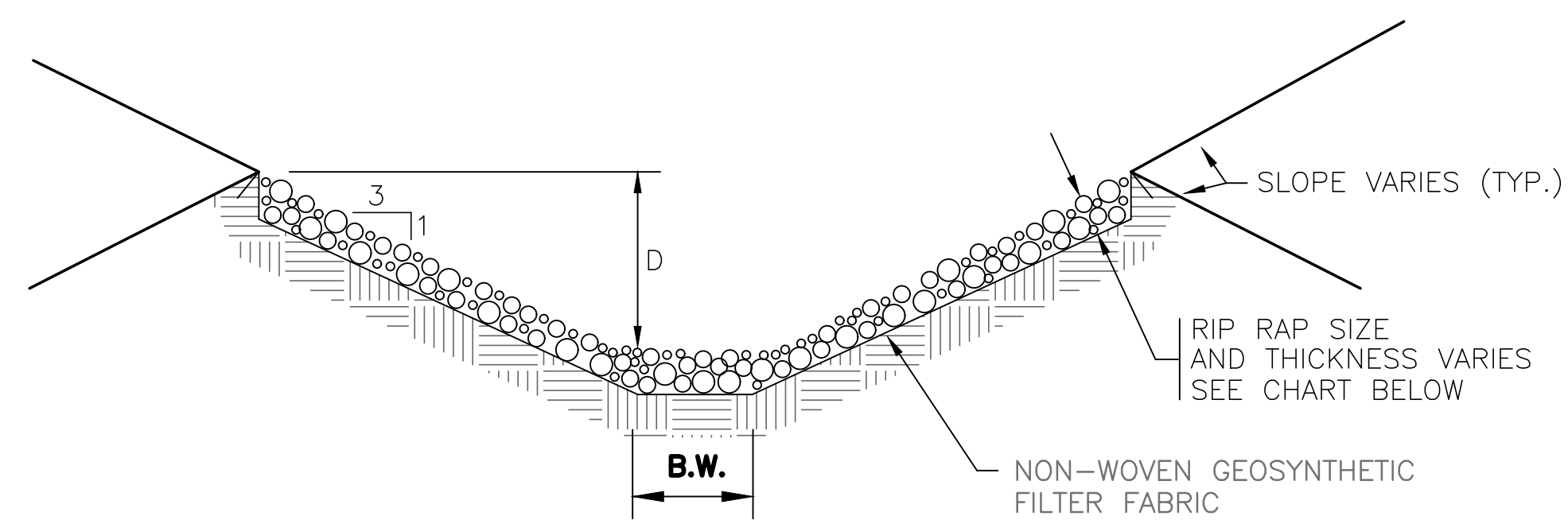
Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- The E&S plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&S plan authority has approved these items.
- The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit.
- Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems.
- Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.
- Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

EC-00 TEMPORARY RIP RAP LINED SWALE DETAIL



- NOTES:**
- RIP RAP SIZE IS PER NCDOT STANDARD SPECIFICATION SECTION 1042.
 - CLASS A RIP RAP SHALL BE 9" THICK
 - CLASS B RIP RAP SHALL BE 23" THICK
 - CLASS 1 RIP RAP SHALL BE 24" THICK
 - CLASS 2 RIP RAP SHALL BE 27" THICK

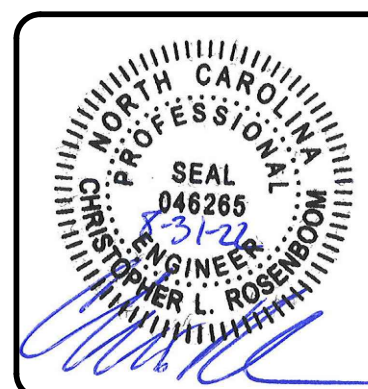
SWALE STA	MAX SLOPE	TYPE	D (FT)	B.W. (FT)	RIP RAP CLASS
1+6+50	3.4%	TRAPEZOIDAL	0.6	1.00	A
2+6+90	2.9%	TRAPEZOIDAL	1.0	2.00	A
6+46+50	1.2%	TRAPEZOIDAL	2.1	8.00	A
7+50+15	1.5%	TRAPEZOIDAL	2.1	2.00	A
8+56+25	1.7%	TRAPEZOIDAL	2.0	7.00	A
9+62+25	1.6%	TRAPEZOIDAL	2.0	5.00	A

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

REV. NO.	DESCRIPTION	DATE
B	FINAL DESIGN - REVISED PER ADDENDUM 1	08/31/2022
A	FINAL DESIGN - ISSUED FOR BID	08/08/2022

REVISIONS



MCKIM & CREED

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US HIGHWAY 29 WATER BOOSTER PUMP STATION

EROSION CONTROL DETAILS
E&S DETAIL 1

PROJ. START DATE: DEC. 2021
MCE PROJ. # 01222-0007
DRAWN: AWB
DESIGNED: AWB
CHECKED: NRD
PROJ. MGR: CLR

SCALE: HORIZONTAL: AS NOTED VERTICAL: N/A

STATUS: FINAL DESIGN REVISED PER ADDENDUM 1

EC.01
DRAWING NUMBER
B
REVISION