

V4 -
SDP-23-08

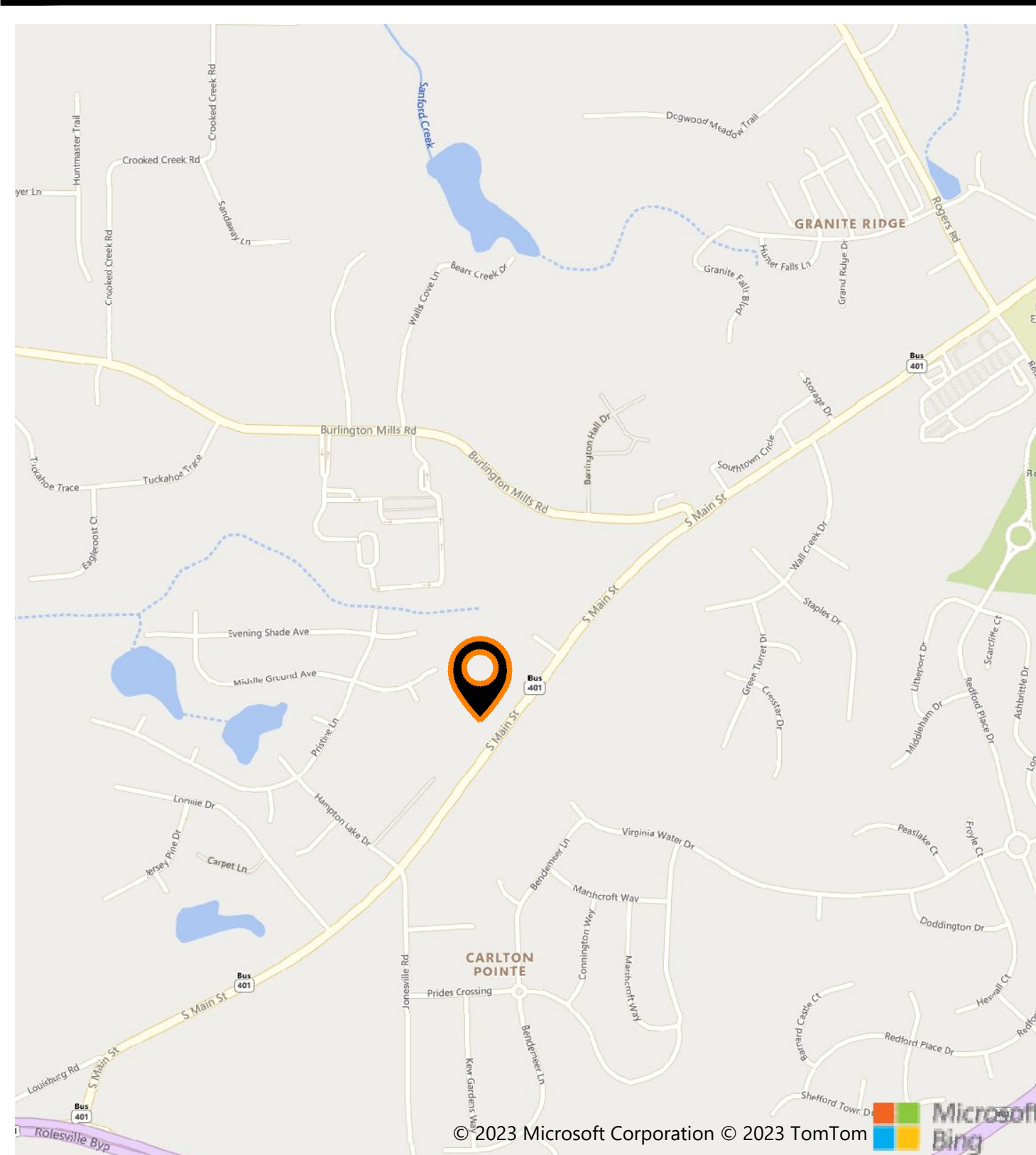
TIDAL WAVE AUTO SPA

ROLESVILLE, NC, USA
TOWN PROJECT ID # V1-SDP-23-08

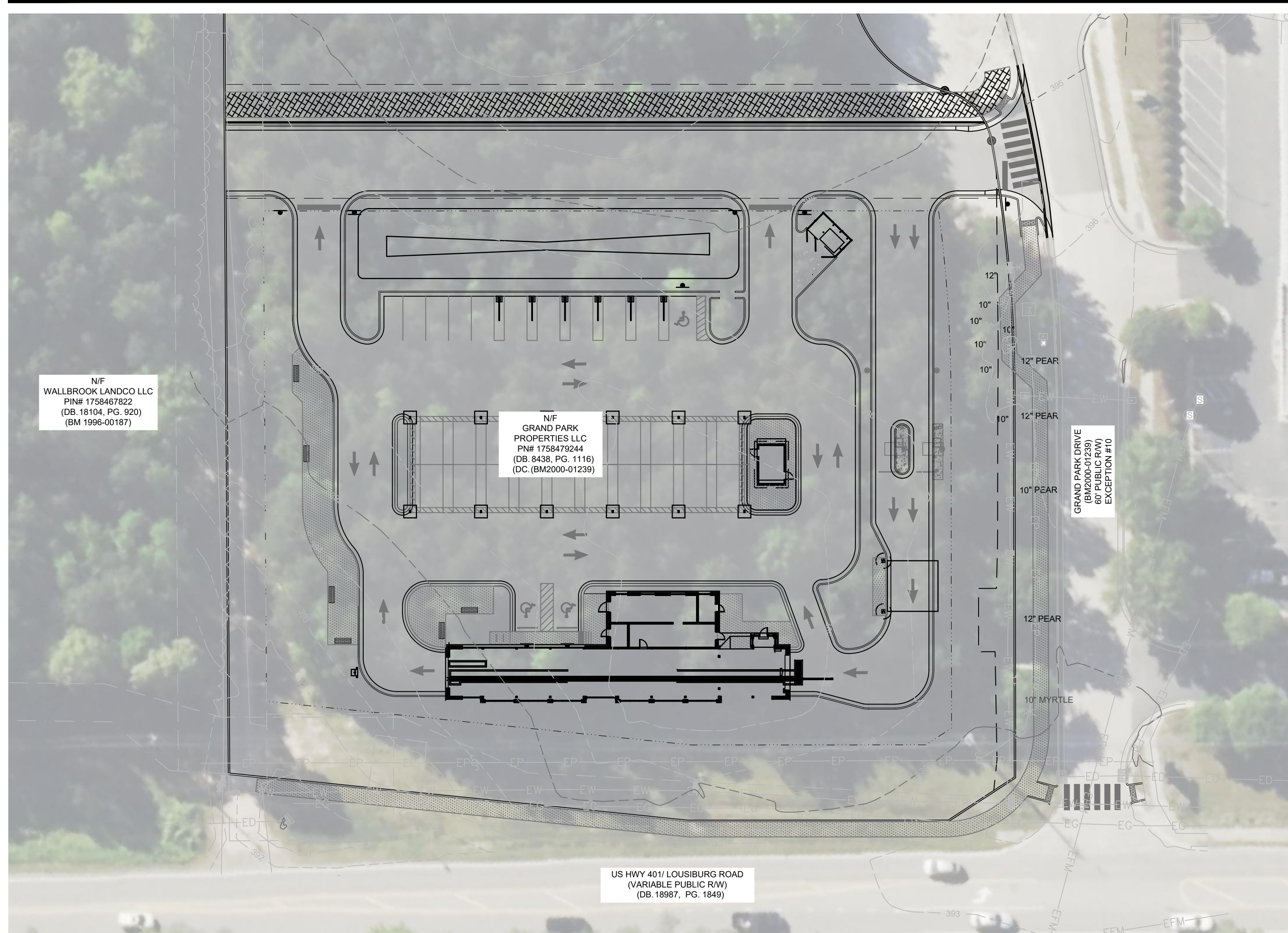


MOUNT PLEASANT, SC
843.884.1667
GREENVILLE, SC
864.298.0534
SUMMERVILLE, SC
843.972.0710
SPARTANBURG, SC
864.272.1272
CHARLOTTE, NC
980.312.5450
WWW.SEAMONWHITESIDE.COM

SITE LOCATION MAP



SITE OVERVIEW



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PROJECT DESCRIPTION

PROJECT DATA:
THIS PROJECT IS LOCATED ON A 1.92 ACRE SITE, IN ROLESVILLE, NC. THE PROPERTY AS IT EXISTS IS AN UNDEVELOPED LOT. THE PROPOSED DEVELOPMENT WILL BE AN AUTOMATED CAR WASH WITH ASSOCIATED PARKING AND INFRASTRUCTURE.

FLOOD ZONE:
THIS PROPERTY IS LOCATED OUTSIDE OF ANY REGULATED FLOOD ZONES, ZONEX (OTHER AREAS), NAVD88, SCALED FROM THE FIRM THE TOWN OF ROLESVILLE, NORTH CAROLINA PANEL NO. 3720175800K.

PROPERTY INFORMATION:
PARCEL ID: 1758479244
ZONING DISTRICT: GI (GENERAL INDUSTRIAL)

GENERAL NOTES

PROJECT SURVEY INFORMATION AND CONTRACTOR VERIFICATION REQUIREMENTS

- BOUNDARY, TOPOGRAPHIC, TREE, WETLAND DELINEATION, AND OTHER EXISTING CONDITIONS SHOWN ARE FROM SURVEY PREPARED BY MSP & ASSOCIATES LAND SURVEYING, INC.
- ALL ELEVATIONS ARE BASED ON NAVD88 DATUM.
- THE CONTRACTOR SHALL VERIFY THE EXISTING TOPOGRAPHIC WORK, EXISTING UTILITY LINE LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING WORK. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES ON THE DRAWINGS PRIOR TO BEGINNING WORK OR DURING CONSTRUCTION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- THE CONTRACTOR SHALL MAINTAIN AND BE SOLELY RESPONSIBLE FOR JOBSITE SAFETY.
- AN AUTOCAD BASE PLAN OF THIS DRAWINGS CAN BE PROVIDED TO THE CONTRACTOR UPON REQUEST. ENGINEER SHALL NOT BE RESPONSIBLE FOR ERRORS IN ELECTRONIC DATA.
- THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL PLANS AND COORDINATION WITH THE TOWN OF ROLESVILLE FOR LANE/ROAD CLOSURE AS NEEDED THROUGHOUT CONSTRUCTION.
- ALL SITE WORK TO BE PERFORMED IN CONFORMANCE WITH THE TOWN OF ROLESVILLE CODE OF ORDINANCE. MATERIAL SPECIFICATIONS ARE PROVIDED IN THE SPECIFICATIONS AND SPECIAL PROVISIONS SECTION.
- ALL UTILITY INSTALLATIONS, PUBLIC AND PRIVATE, SHALL BE PERFORMED IN CONFORMANCE WITH THE TOWN OF ROLESVILLE WATER AND SEWER POLICIES, PROCEDURES, STANDARDS AND SPECIFICATIONS.

EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT

APPROVED

EROSION CONTROL SEC- _____

STORMWATER MGMT. SWF- _____

FLOOD STUDY SWF- _____

DATE _____

ENVIRONMENTAL CONSULTANT SIGNATURE

PROJECT CONTACTS

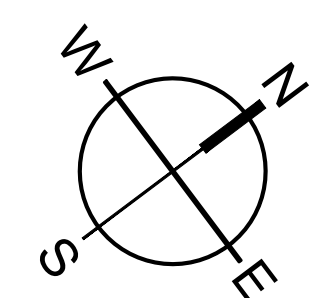
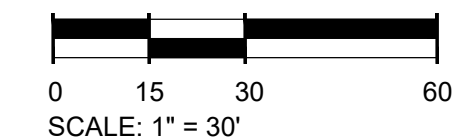
DEVELOPER:
SHJ DEVELOPMENT, LLC
124 EAST THOMPSON STREET
POST OFFICE DRAWER 311
THOMASTON, GA 30286
CONTACT: ALEX PERRY
PHONE: 478-972-2418

OWNER:
GRAND PARK PROPERTIES, LLC
2636 WAIT AVENUE
WAKE FOREST, NC 27587
CONTACT: GEORGE M. UPCHURCH, JR.

CIVIL ENGINEER & LANDSCAPE ARCHITECT:
SEAMON WHITESIDE & ASSOCIATES, LLC
230 E PETERSON DR
CHARLOTTE, NC 28217
CONTACT: TOMMIE LITTLE
PHONE: 980-312-5450

UTILITY CONTACTS:
CITY OF RALEIGH PUBLIC UTILITIES
ONE EXCHANGE PLAZA,
RALEIGH, NC 27601
PHONE: 919-996-3245

SOURCES:
SURVEYOR
MSP & ASSOCIATES
LAND SURVEYING INC.
301 E. HILLCREST DR.
GREENVILLE, SC, 29609
PHONE: (864) 370-2232



SITE DATA TABLE:

ADDRESS: 0 S MAIN STREET, ROLESVILLE, NC
PROPERTY AREA: 1.92 ACRES
PARCEL: 1758479244
EXISTING USE: UNDEVELOPED
PROPOSED USE: CAR WASH
WATERSHED: TOMS CREEK (MILL CREEK)
RIVER BASIN: NEUSE

PROPERTY ZONING: GI (GENERAL INDUSTRIAL)
BUILDING SETBACKS:
FRONT (SE): 30'
CORNER (NE): 25'
REAR (NW): 35'
SIDE (SW): 15'

PERIMETER LANDSCAPE YARDS:
NORTHEAST: 15'

REQUIRED OPEN SPACE (5%) = 0.01 AC (4182 SF)

BUILDING:
BUILDING AREA: 3325 SF
BUILDING HEIGHT: 21'-7"

PRE VS. POST DEVELOPMENT AREA:

SITE AREA:	1.92 AC
PRE-IMPERVIOUS AREA:	0.04 AC (2.08%)
POST-IMPERVIOUS AREA:	1.30 AC (67.7%)

PARKING NOTE:
PARKING REQUIRED:
1 SPACE PER 400 SF GFA OR 5 SPACES MINIMUM = 5 SPACES

PARKING PROVIDED:
EMPLOYEE SPACES: 5 SPACES (1 ADA)
(4 MAX ON SHIFT)
VACUUM STALLS: 34 STALLS

TIDAL WAVE AUTO SPA
ROLESVILLE, NC

SW+ PROJECT: 10772
DATE: 09/04/24
DRAWN BY: CPE
CHECKED BY: TLL

REVISION HISTORY

10/30/23	
A 12/22/23	
B 03/01/24	
C 09/04/24	

TITLESHEET



Know what's below.
Call before you dig.

501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29564 | JUDSON HILL BUILDING 5009 7th FLOOR | GREENVILLE, SC 29614 | 230 PETERSBORO | CHARLOTTE, NC 28217 | 704 GEMAS STREET | SUMMERVILLE, SC 29586 | 104 N. DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301
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DRAWING LEGEND

NOTE: THIS LEGEND DOES NOT APPLY TO 'EXISTING CONDITIONS' SHEET(S). THOSE ARE SHOWN IN THE ORIGINAL FORMAT AS RECEIVED BY THE SURVEYOR

OBJECTS AND SYMBOLS	EXISTING	NEW	OBJECTS AND SYMBOLS	EXISTING	NEW	HATCH PATTERNS	SWPP PLAN LEGEND
Right of Way			Benchmark		N/A		Turf Reinforcement Mat
Lot Line			Sanitary Sewer Manhole			Demo Existing Gravel	Sodding (See Turf and Grasses Specs)
Adjoining Property Line		N/A	Sanitary Sewer Manhole ID #	N/A		Demo Existing Trees	Temporary Seeding (See Schedule in EC Notes)
Easement		N/A	Sanitary Sewer Cleanout			Proposed Sidewalk	Permanent Seeding (See Turf and Grasses Specs)
Setback		(Same as Existing)	TYPE 1 Storm Drainage Structure (CI-1)			Heavy Duty Concrete Pavement	Erosion Control Blanket (See Turf and Grasses Specs)
Sanitary Sewer (Gravity)			Catch Basin (CB)			Standard Duty Concrete Pavement	Concrete Washout Basin
Sanitary Sewer (Force Main)			Storm Drainage Junction Box (JB)			Asphalt Greenway	Block & Stone Inlet Protection
Water Line			Yard Inlet (YI)			Area to be Permanently Stabilized	Filter Fabric Inlet Protection
Curb & Gutter (Straight)			Control Structure (CS)				Construction Entrance
Curb & Gutter (Roll)			Storm Drainage Structure ID #	N/A			Dandy Sack or Grate Gator Inlet Protection
Previous Phase Storm Drain Pipe		N/A	Telephone Box		N/A		
Storm Drain Pipe			Telephone Manhole		N/A		
Drainage Flow Arrow	N/A		Electrical Box		N/A		
Silt Fence, Standard			Electrical Manhole		N/A		
Match Line	N/A		Power Pole				
Drainage Basin Limits	N/A		Light Pole				
Conduit			Fire Hydrant Assembly				
Natural Gas			Water Line Valve				
Overhead Electrical			Water Line Reducer				
Underground Electrical			Sign				
Underground Telephone			ADA Accessible Parking Space				
Fence			Spot Elevation				
Elevation Contour			Drainage Basin Area	N/A			
Revision Cloud (Encloses Revision)	N/A		Parking Count ID #	N/A			
			Revision ID #	N/A			
			Rip Rap at Pipe Outlet	N/A			



MOUNT PLEASANT, SC 843.884.1667
 GREENVILLE, SC 864.298.0534
 SUMMERVILLE, SC 843.972.0710
 SPARTANBURG, SC 864.272.1272
 CHARLOTTE, NC 980.312.5450
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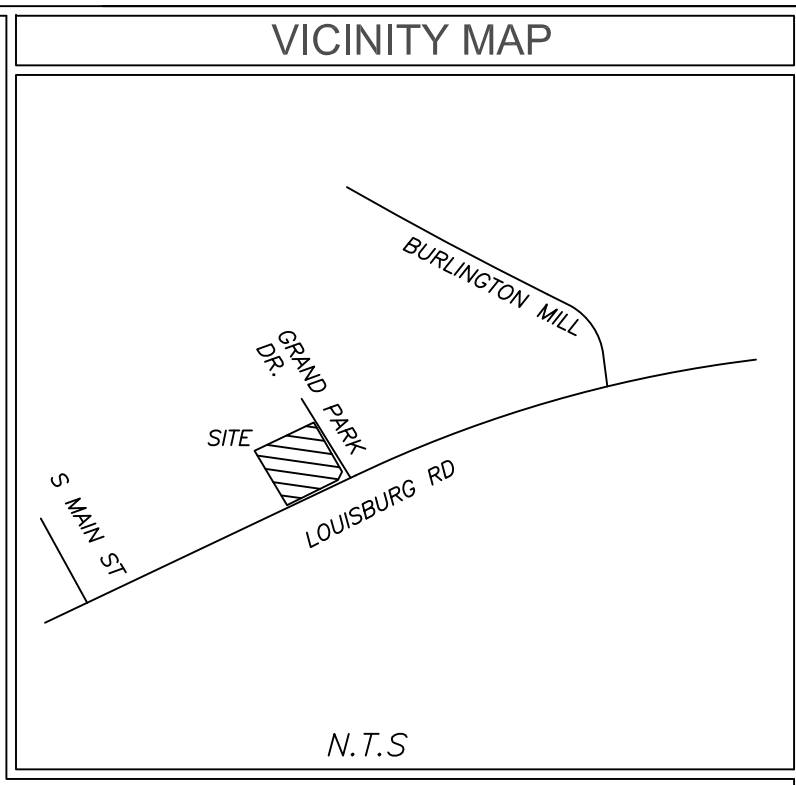


TIDAL WAVE AUTO SPA
 ROLESVILLE, NC

SW+ PROJECT: 10772
 DATE: 09/04/24
 DRAWN BY: CPE
 CHECKED BY: TLL

REVISION HISTORY	
10/30/23	
A 12/22/23	
B 03/01/24	
C 09/04/24	

LEGEND & REVISION NOTES



TITLE EXCEPTIONS

- Schedule B-Section II Title Exceptions
 Fidelity National Title Insurance Company
 Commitment Number: NC252306067V;NACS230520; Effective Date: June 29, 2023
- Easements, rights of ways, boundary lines, and improvements as set forth on Plat recorded in Book of Maps 2000, Page 1239, Book of Maps 1996, Page 1582, Book of Maps 1999, Page 1039, and Book of Maps 2003, Page 614, Wake County Registry. (AFFECTS SITE AS PLOTTED)
 - Deed of Easement Vehicular Access and Utility Services to Elevated Water Tank Facility from Grand Park Properties LLC to the City of Raleigh, dated May 5, 2003 and recorded in Book 10123, Page 2779, Wake County Registry. (AFFECTS SITE AS PLOTTED)
 - Right of way conveyance and easements contained in Deed for Highway Right of Way in favor of the Department of Transportation dated April 1, 2021, recorded April 11, 2022, in Book 18987, Page 1849, Wake County Registry. (AFFECTS SITE AS PLOTTED)
 - Cross Access Easement Agreement between Wallbrook Landco LLC and Grand Park Properties, LLC, dated April 12, 2022 and recorded in Book 18988, Page 1102, Wake County Registry. (AFFECTS SITE: UNABLE TO PLOT; NO DESCRIPTION OR MEASUREMENTS FOR EASEMENT)

SURVEYORS CERTIFICATION

* To: Fidelity National Title Insurance Company and TWAS Properties LLC, a Delaware limited liability company

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1-6a,b,7a,b, 8, 9, 11, 13, 16, 17, 18, 20 and 21 of Table A thereof. The field work was completed on 6/6/23.

NIF
 GRAND PARK PROPERTIES LLC
 PIN# 1758479244
 (BM1999-01039)

6/6/23
 Date

Michael S. Perdue PLS #L-4322

LEGEND

- | | | | |
|--------|--------------------------|--------|------------------------|
| CB CPP | CATCH BASIN | — T — | PHONE LINE |
| CT | CORRUGATED PLASTIC PIPE | — C — | GUY WIRE |
| DI | CRIMPED TOP PIPE | — W — | GAS LINE |
| IE | DROP INLET | — OH — | WATER LINE |
| JB | INVERT ELEVATION | — E — | POWER LINE |
| MH | JUNCTION BOX | | UNDERGROUND POWER LINE |
| OT | MANHOLE | | POWER POLE |
| POB | OPEN TOP PIPE | | SANITARY SEWER MANHOLE |
| POC | POINT OF BEGINNING | | STORM SEWER MANHOLE |
| POC | POINT OF COMMENCEMENT | | CATCH BASIN |
| TBM | TEMPORARY BENCHMARK | | GAS METER |
| RCP | REINFORCED CONCRETE PIPE | | TRANSFORMER |
| SS | SANITARY SEWER | | |
| OHP | OVERHEAD POWER | | |
| EIP | IRON PIN FOUND | | |
| IP | IRON PIN SET | | |
| WP | WATER VALVE | | |
| WM | WATER METER | | |
| GV | GAS VALVE | | |
| GM | GAS METER | | |
| TP | TELEPHONE PEDESTAL | | |
| FH | FIRE HYDRANT | | |
| LP | LIGHT POLE | | |
| PM | POWER METER | | |
| BV | BACKFLOW VALVE | | |
| EB | ELECTRICAL BOX | | |

GENERAL NOTES

This property is in Zone X based on Flood Insurance Rate Map 3720175800K dated 07/19/2022. This determination was made by graphically determining the position of said site on said FIRM Map.

Contact proper Authorities Before building near utility lines, for easement width and restrictions. Underground Utilities are approximate and should be verified prior to any construction. Locations shown are approximate.

This survey has been prepared for the exclusive use of the person or entities named hereon. No express or implied warranties with respect to the information shown hereon is to be extended to any persons or entities other than those shown hereon.

Elevations based on GPS VRS connected to NC GPS Network. Vertical Datum NAVD 88.

Property Zoned GI-CZ
 Setbacks to be verified by Engineer prior to development.

I, Michael S. Perdue certify that this plat was drawn under my supervision from an actual survey made under my supervision and is a portion property as shown in (DB. 8438, PG. 1116); that the ratio of precision as calculated 1: 20,000 +/- and was not adjusted; that this plat was prepared in accordance with G.S. 47-30 as amended. Witness my original signature, registration # and seal this 6th day of June 2023.

That this survey is of an existing parcel of land, existing structures and buildings and does not create a new street or change existing streets.

Michael S. Perdue, PLS# L-4322

All matters shown on recorded plats are shown on survey, if applicable.

There was evidence of recent earth moving work or construction was observed on the property.

There was no visible evidence of cemeteries or burial grounds found.

No evidence of the site being used as a solid waste dump, sump or sanitary landfill.

No evidence of wetlands being marked on subject property.

Property PIN# 1758479244

Survey Reference
 (DB. 8438, PG. 1116)
 (BM. 2000-01239)

ALTA/NSPS LAND TITLE SURVEY
 FOR

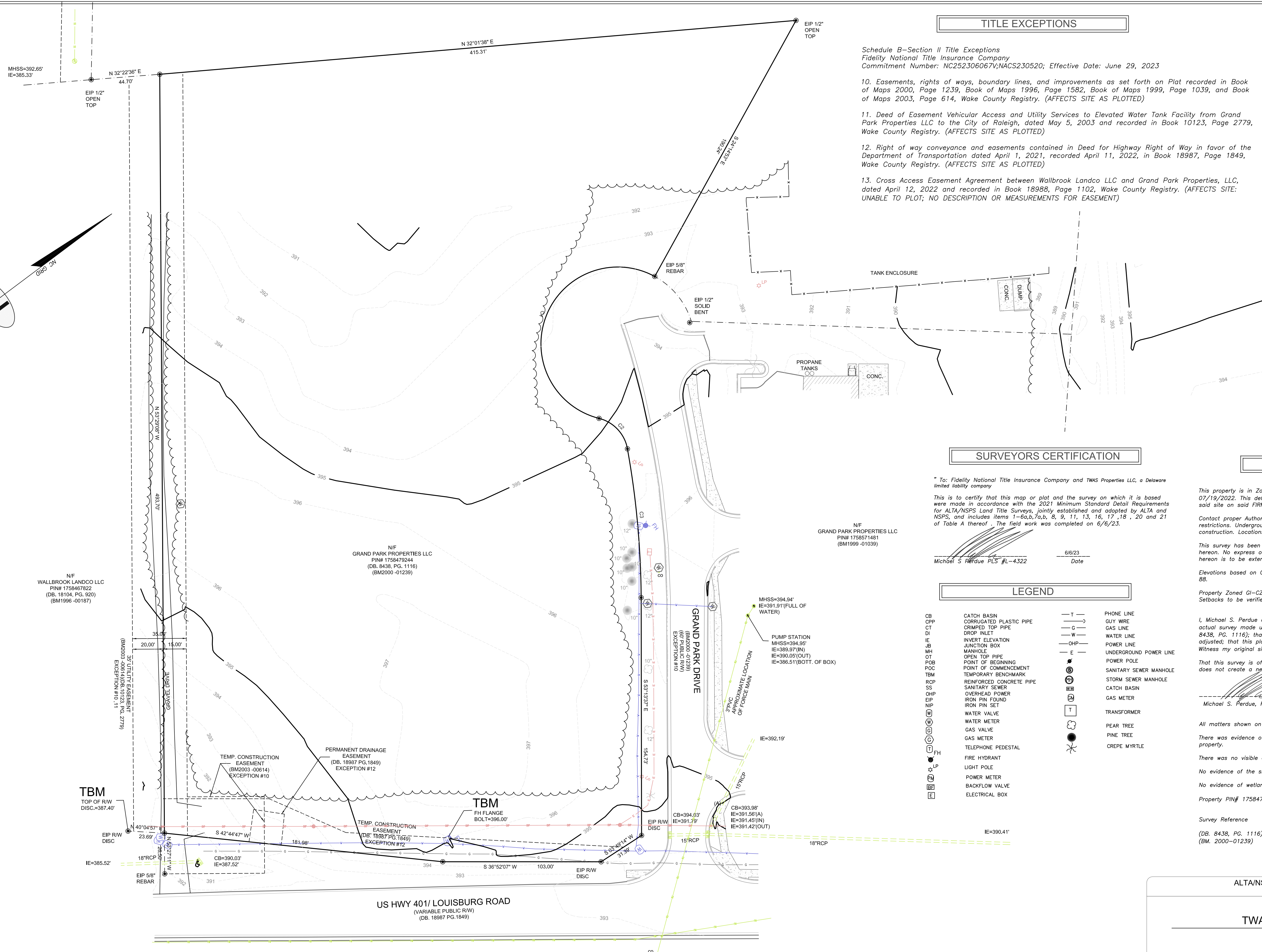
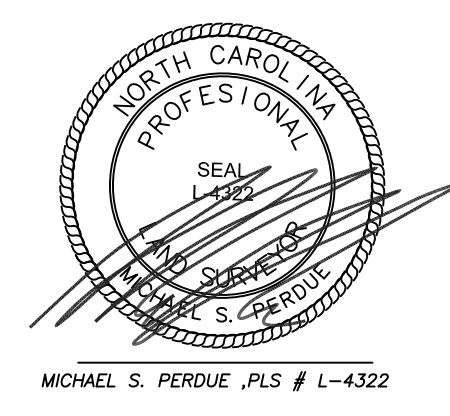
TWAS Properties LLC

TOWN: ROLESVILLE COUNTY: WAKE STATE: NORTH CAROLINA

DATE: 6/6/23 SCALE: 1:30

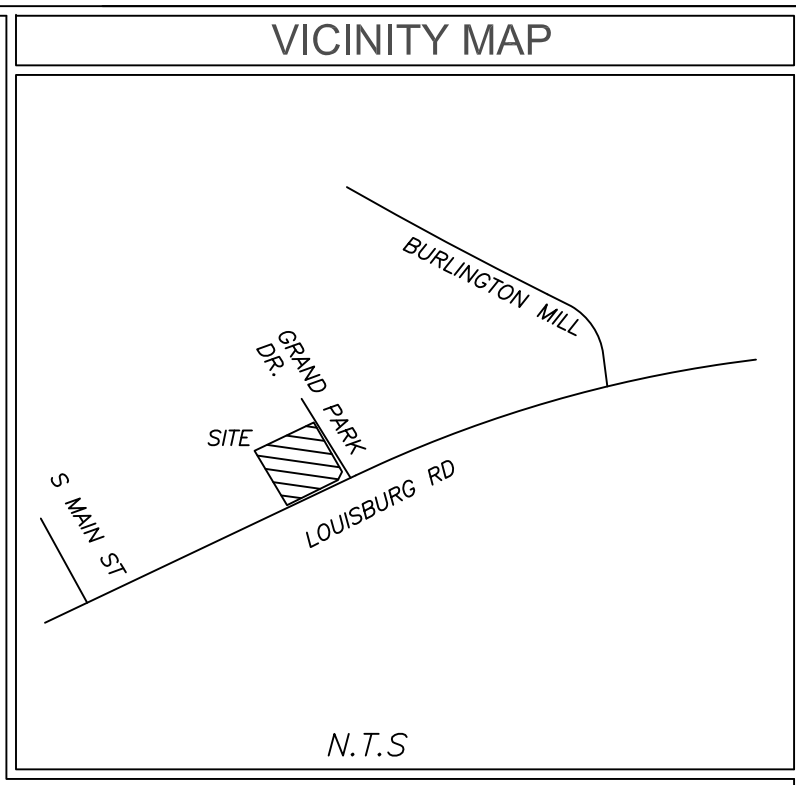
FIELD WORK: MSP DRAWN BY: MSP REVIEWED BY: MSP

MSP FILE: twrolesville MSP JOB#: 231820



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C1	50.00'	1.6977'	99.20'	S 31°42'56" E	1194°32'39"	391.83'
C2	25.01'	28.63'	27.05'	N 83°49'48" E	65°34'40"	16.11'
C3	570.00'	197.34'	97.22'	S 58°23'28" E	9°47'04"	48.79'





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Schedule B-Section II Title Exceptions
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 Commitment Number: NC252306067V;NACS230520; Effective Date: June 29, 2023

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Michael S. Perdue, PLS #L-4322
 Date: 6/6/23

GENERAL NOTES

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That this survey is of an existing parcel of land, existing structures and buildings and does not create a new street or change existing streets.

Michael S. Perdue, PLS# L-4322

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There was evidence of recent earth moving work or construction was observed on the property.

No evidence of the site being used as a solid waste dump, sump or sanitary landfill.

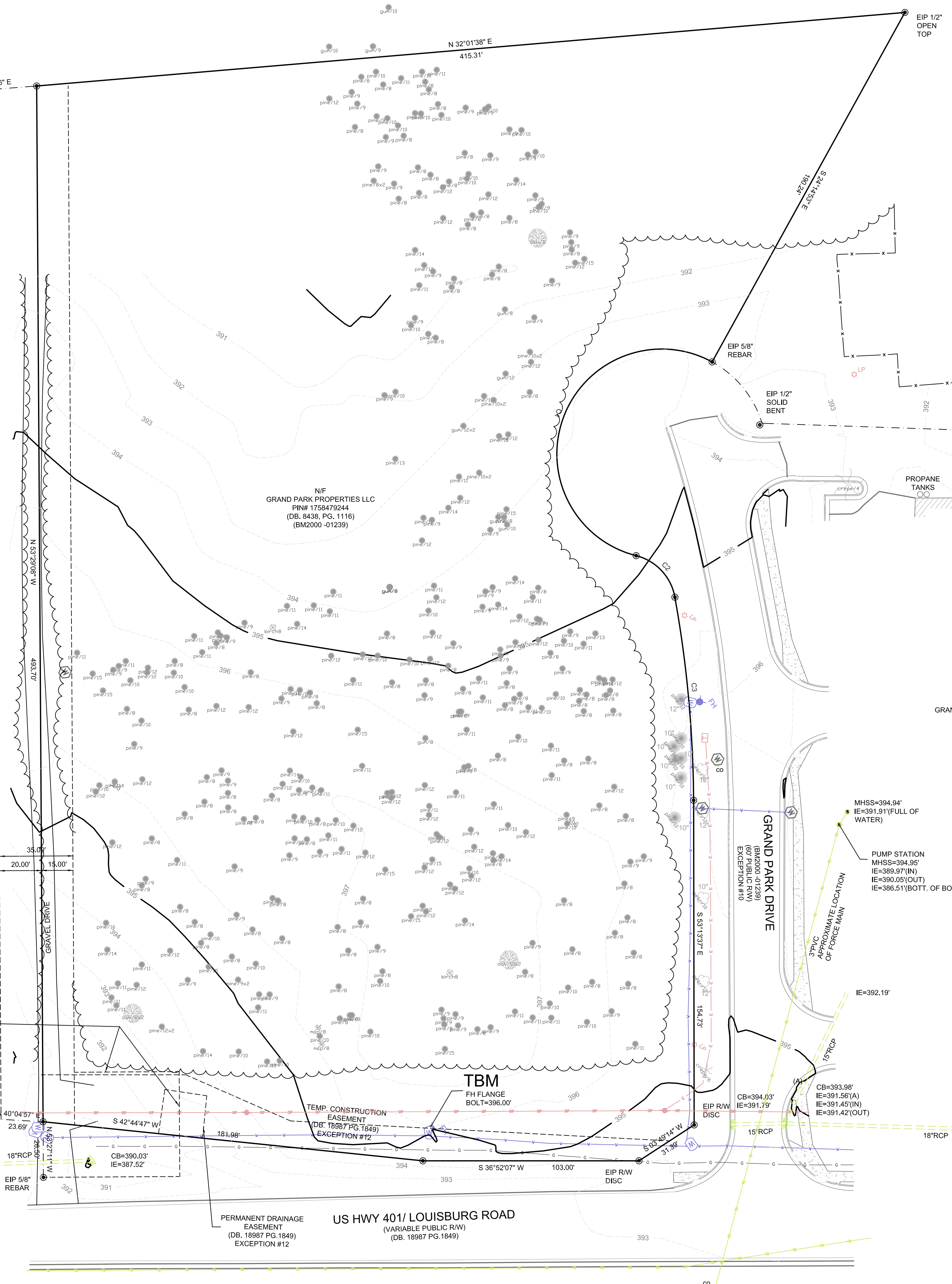
No evidence of wetlands being marked on subject property.

Property PIN# 1758479244

Survey Reference
 (DB, 8438, PG. 1116)
 (BM, 2000-01239)

LEGEND

- CB CPP CORRUGATED PLASTIC PIPE
- CT CRIMPED TOP PIPE
- DI DROP INLET
- IE INVERT ELEVATION
- JB JUNCTION BOX
- MH MANHOLE
- OT OPEN TOP PIPE
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- POC POINT OF COMMENCEMENT
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- RCP REINFORCED CONCRETE PIPE
- SS SANITARY SEWER
- OHP OVERHEAD POWER
- EIP IRON PIN FOUND
- NP IRON PIN SET
- WP WATER VALVE
- WM WATER METER
- GV GAS VALVE
- GM GAS METER
- TP TELEPHONE PEDESTAL
- FR FIRE HYDRANT
- LP LIGHT POLE
- PM POWER METER
- BV BACKFLOW VALVE
- EB ELECTRICAL BOX
- PL PHONE LINE
- GW GUY WIRE
- GL GAS LINE
- WL WATER LINE
- PL POWER LINE
- UL UNDERGROUND POWER LINE
- PP POWER POLE
- SM SANITARY SEWER MANHOLE
- ST STORM SEWER MANHOLE
- CB CATCH BASIN
- GM GAS METER
- TR TRANSFORMER
- PT PEAR TREE
- PN PINE TREE
- CR CREPE MYRTLE



CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE	TANGENT
C1	50.00'	1.6877'	19.20'	S 31°42'56\"/>		

811 Know what's below
 Call before you dig.
 Dial 811
 Or Call 800-282-7411

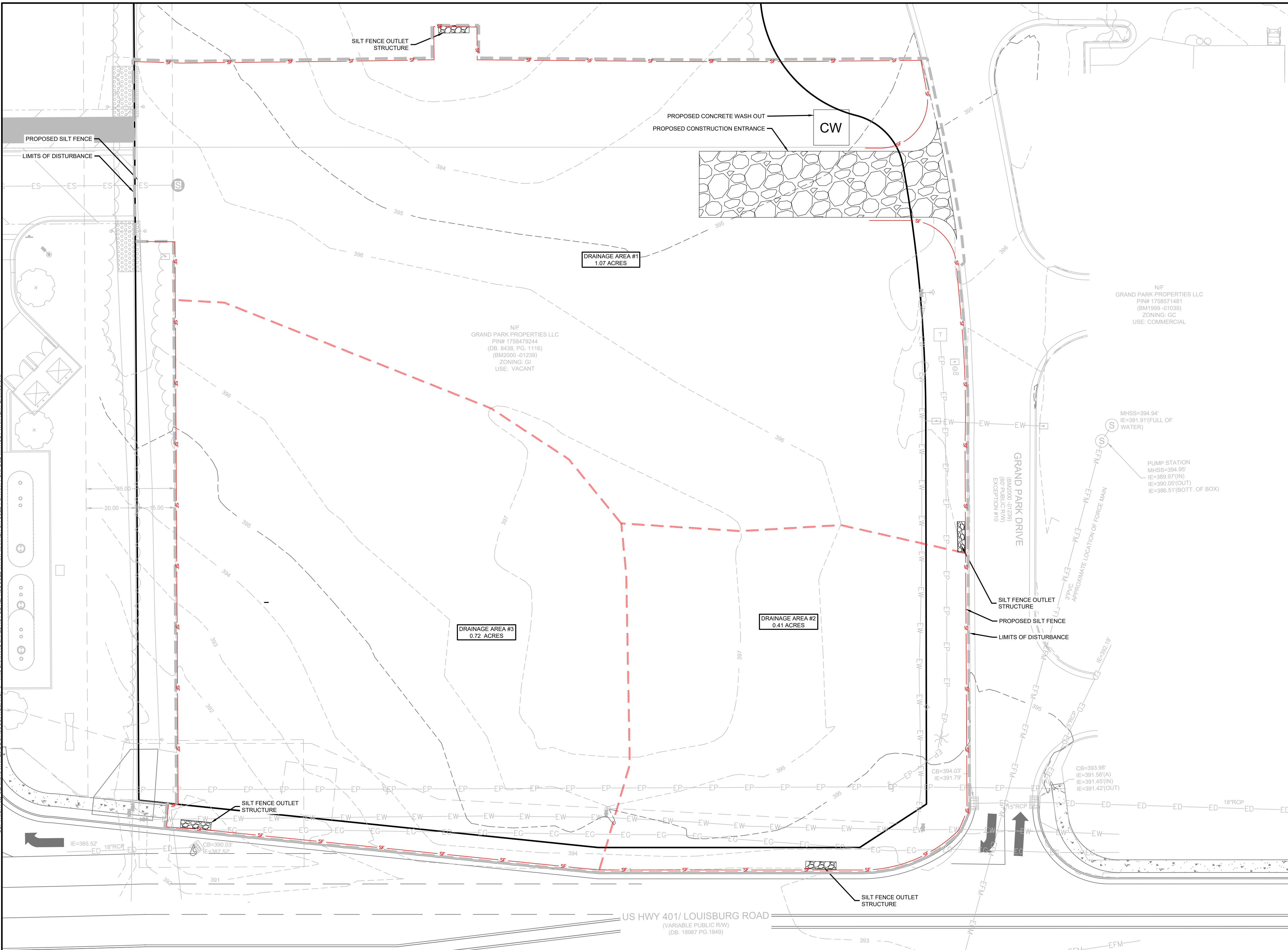
MSP & ASSOCIATES
 LAND SURVEYING, INC.
 301 E HILLCREST DR.
 GREENVILLE, SC, 29609
 864-370-2232
 WWW.MSPSURVEYING.COM

ALTA/NSPS LAND TITLE SURVEY FOR
TWAS Properties LLC

TOWN: ROLESVILLE COUNTY: WAKE STATE: NORTH CAROLINA

DATE: 6/6/23 SCALE: 1:30
 FIELD WORK: MSP DRAWN BY: MSP REVIEWED BY: MSP
 MSP FILE: twrolesville MSP JOB#: 231820

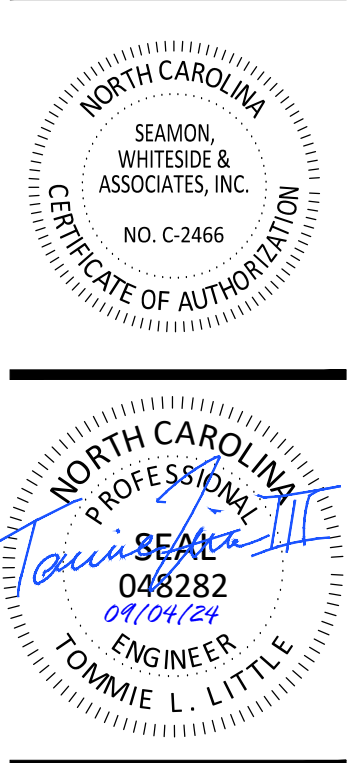
501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29566 | JUDSON MULLIS BUILDING GROUP, 3741 BAKER DRIVE, SUITE 600 | GREENVILLE, SC 29611 | 250 PETERSBORO | CHARLOTTE, NC 28217 | 704 CENAS STREET | SUMMERVILLE, SC 29581 | 104 N. DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301
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- PHASE I SEQUENCING:**
- DRAFT EROSION AND SEDIMENT CONTROL PLAN MUST BE APPROVED AND A LETTER OF APPROVAL (LOA) MUST BE ISSUED PRIOR TO OBTAINING THE CERTIFICATE OF COVERAGE FROM DEQ
 - RECEIVE NPDES COVERAGE FROM NCDEQ.
 - PRE-CONSTRUCTION CONFERENCE TO BE CONDUCTED WITH THE WAKE COUNTY FIELD CONSULTANT (JEEVAN NEUPANE 919-819-8907) TO DISCUSS EROSION CONTROL MEASURE. FAILURE TO SCHEDULE SUCH CONFERENCE PRIOR TO ANY LAND DISTURBING ACTIVITY IS SUBJECT TO FINE. LDP WILL BE ISSUED AT THE PRECONSTRUCTION MEETING (ON-SITE). SITE SHOULD BE FLAGGED PRIOR TO PRE-CONSTRUCTION MEETING.
 - INSTALL SILT FENCE, INLET PROTECTION, BERMS AND OTHER MEASURES AS SHOWN ON PLANS, CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
 - CALL FOR ON-SITE INSPECTION BY WAKE COUNTY FIELD CONSULTANT (JEEVAN NEUPANE 919-819-8907). WHEN APPROVED, INSPECTOR GIVES CONTRACTOR THE ABILITY TO CLEAR AND GRUB SITE.
 - THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES.
 - FOR PHASED EROSION CONTROL PLANS, CONTRACTOR SHALL MEET WITH EROSION CONTROL INSPECTOR PRIOR TO COMMENCING WITH EACH PHASE OF EROSION CONTROL MEASURES.
 - CONTRACTOR SHALL NOT ALLOW MORE THAN 0.25 ACRES OF DISTURBED AREA TO DRAIN TOWARDS 100LF OF SILT FENCE OR PERFORM GRADING IN A MANNER THAT ALLOWS SEDIMENT LADEN WATER TO FLOW LONGITUDINALLY ALONG SILT FENCE LINE. IF A LOW SPOT DEVELOPS ALONG GRADING NEAR SILT FENCE, CONTRACTOR SHALL COORDINATE WITH EROSION CONTROL INSPECTOR TO PLACE A SILT FENCE OUTLET IN OUTLET LOCATIONS.
 - CONTACT WAKE COUNTY FIELD CONSULTANT (JEEVAN NEUPANE 919-819-8907) UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS PRIOR TO PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 - UPON APPROVAL FROM WAKE COUNTY FIELD CONSULTANT (JEEVAN NEUPANE 919-819-8907), COMPLETE DEMOLITION OF ANY SITE FEATURES (PAVEMENT, CURBS, ETC.), CLEARING AND GRUBBING, AND STRIP SITE OF TOP SOIL. ALL DEMOLISHED MATERIAL IS TO BE DISPOSED IN ACCORDANCE WITH APPLICABLE NORTH CAROLINA REGULATIONS. CONTRACTOR TO ENSURE ALL APPLICABLE DEMOLITION PERMITS HAVE BEEN ISSUED AND HAVE ORIGINALS OF THE SAME PRIOR TO COMMENCING DEMOLITION ACTIVITIES.
 - CONTACT WAKE COUNTY FIELD CONSULTANT (JEEVAN NEUPANE 919-819-8907) UPON COMPLETION OF STRIPPING, THE STOCKPILING OF TOPSOIL, THE CONSTRUCTION OF TEMPORARY SEDIMENT AND EROSION CONTROL FACILITIES, DISPOSAL OF ALL WASTE MATERIAL, AND PREPARATION OF THE GROUND.

INLET PROTECTION NOTE:
 PROVIDE APPROPRIATE INLET PROTECTION FOR VARIOUS PHASES OF THE CONSTRUCTION. HARDWARE CLOTH AND GRAVEL PROTECTION SHALL BE PROVIDED FOR INLETS IN NON-PAVED AREA. WEEP FILTERS SHALL BE PROVIDED FOR INLETS IN PAVED AREAS.

SW
 SEAMONWHITESIDE
 MOUNT PLEASANT, SC 843.884.1667
 GREENVILLE, SC 864.298.0534
 SUMMERVILLE, SC 843.972.0710
 SPARTANBURG, SC 864.272.1272
 CHARLOTTE, NC 980.312.5450
 WWW.SEAMONWHITESIDE.COM



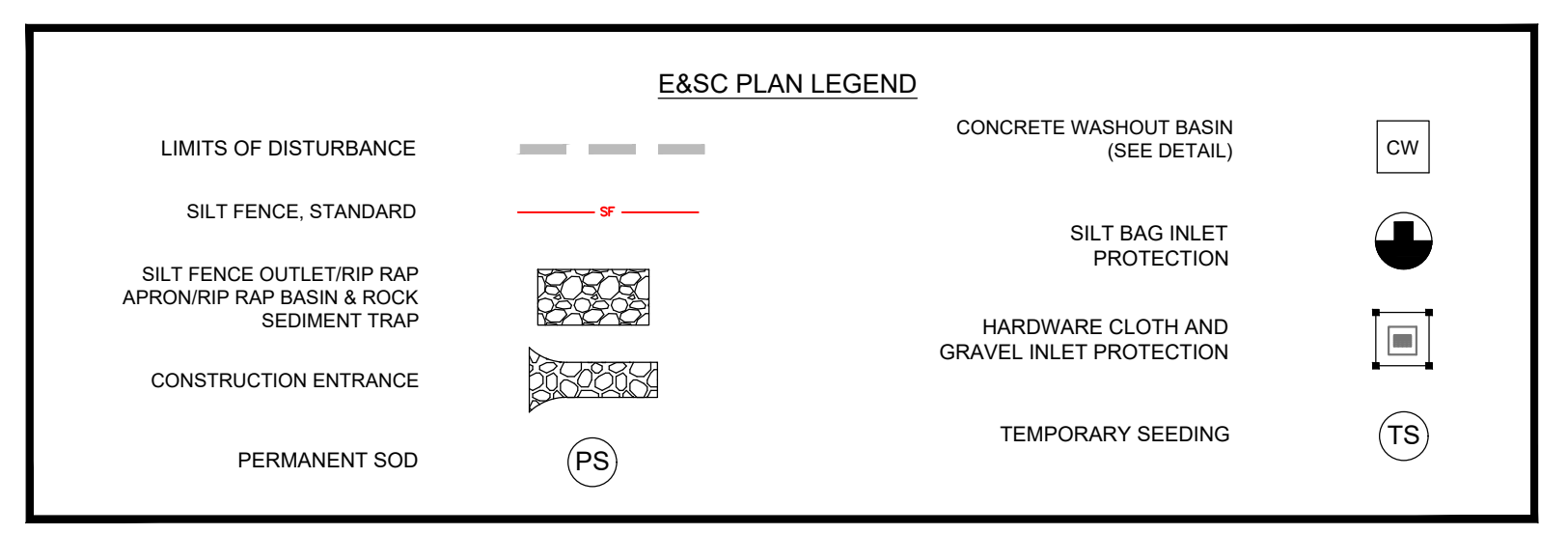
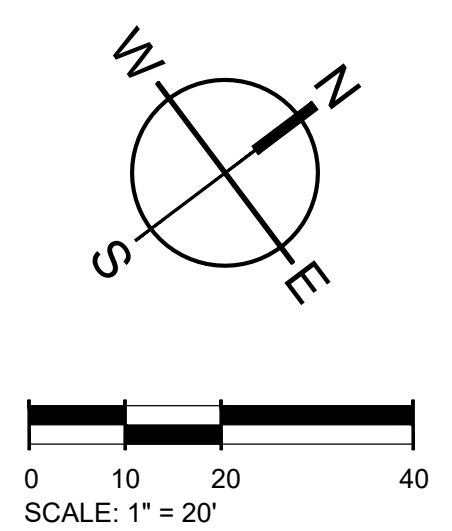
TIDAL WAVE AUTO SPA
 ROLESVILLE, NC

TOTAL SITE ACREAGE
 1.92 ACRES

DISTURBED ACREAGE
 2.22 ACRES

EXISTING UTILITY NOTE:
 THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING ANY WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

STABILIZATION NOTE:
 PROVIDE FINAL STABILIZATION FOR ALL DISTURBED AREAS. REFER TO THE LANDSCAPE PLAN FOR SPECIFIC MATERIALS / PLANTINGS. ANY DISTURBED AREA NOT ADDRESSED IN THE LANDSCAPE PLANS SHALL BE PERMANENT SEEDED.

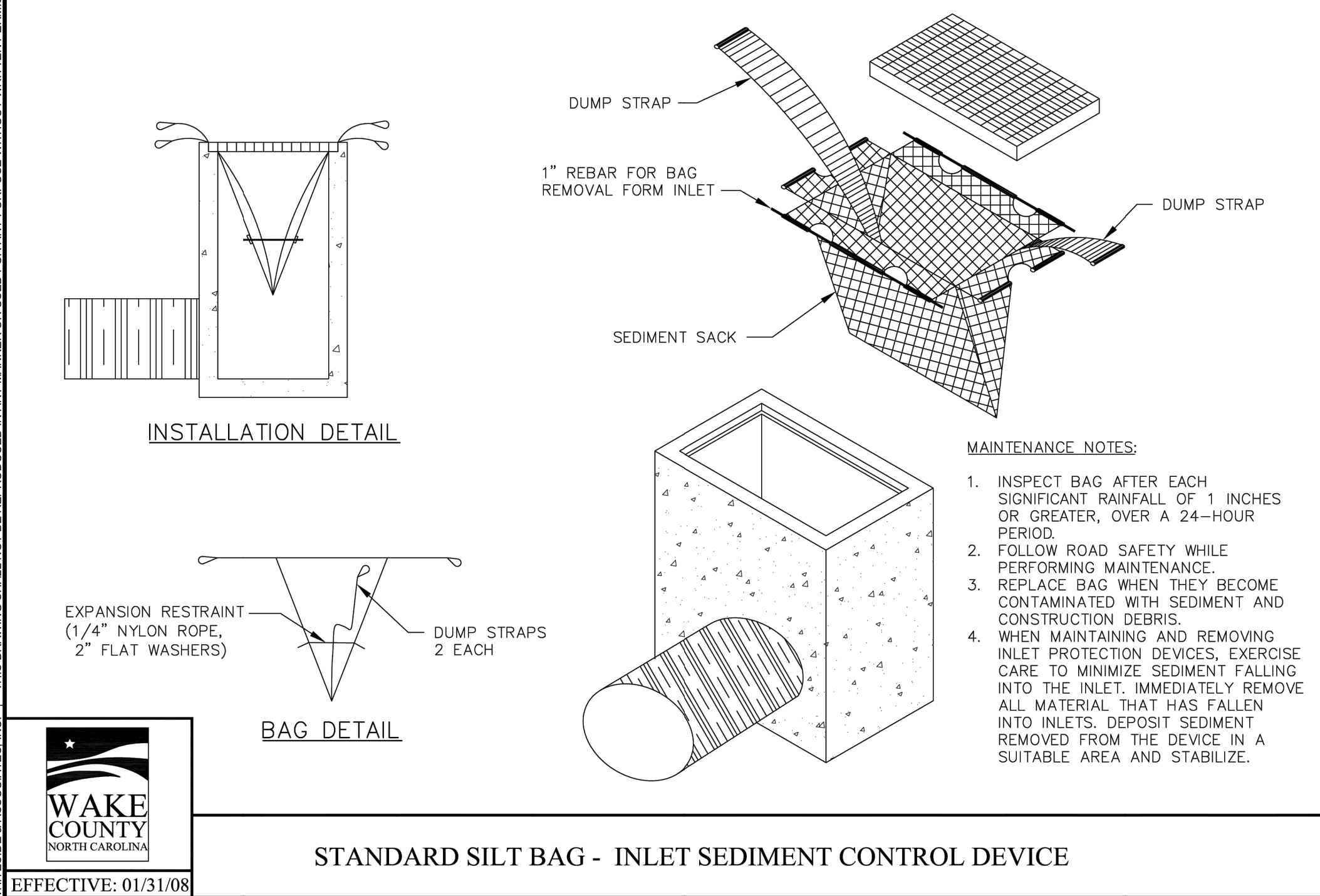
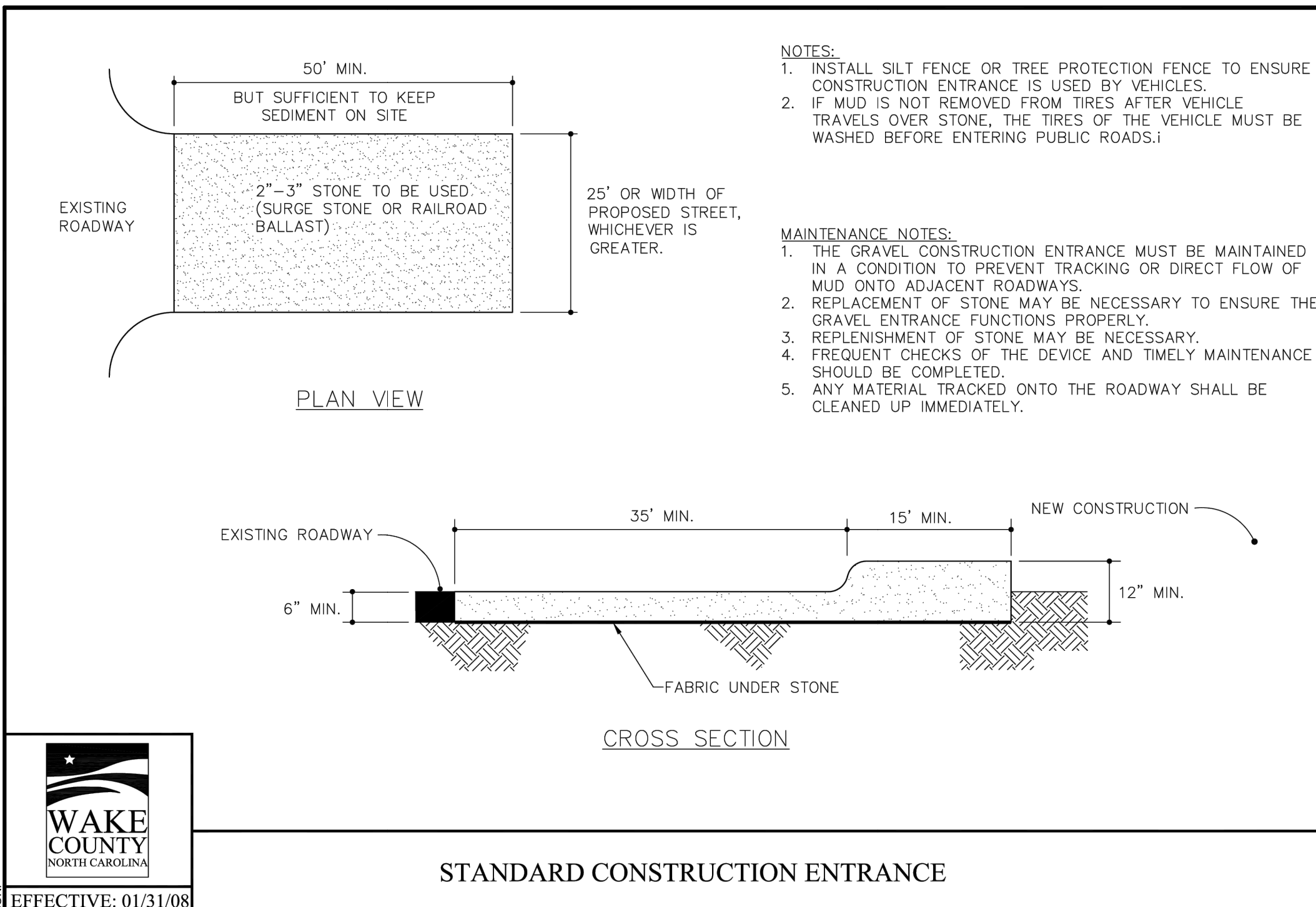


SW+ PROJECT: 10772
 DATE: 09/04/24
 DRAWN BY: CPE
 CHECKED BY: TLL

REVISION HISTORY

10/30/23
A 12/22/23
B 03/01/24
C 09/04/24

EROSION CONTROL PH I

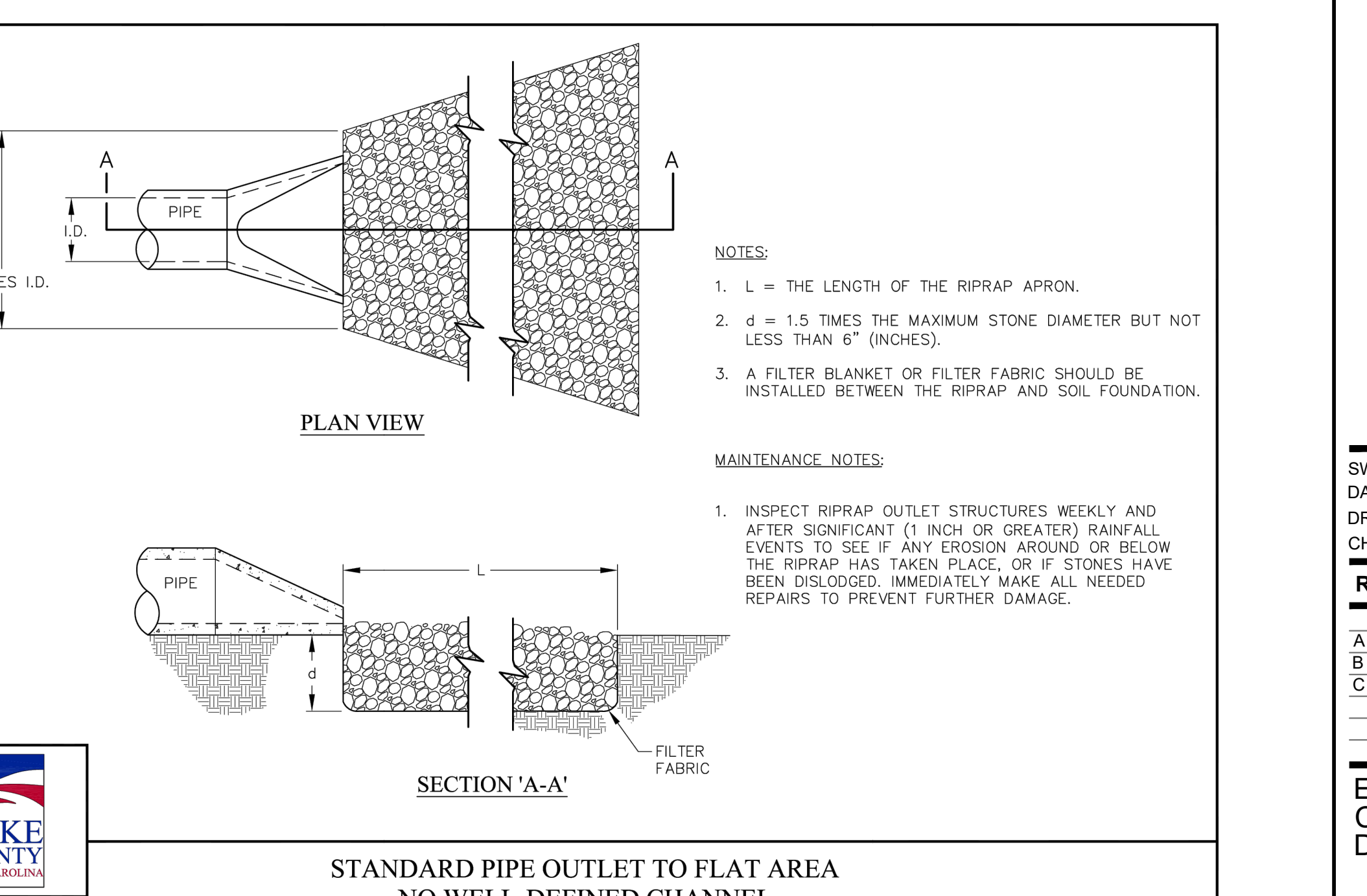
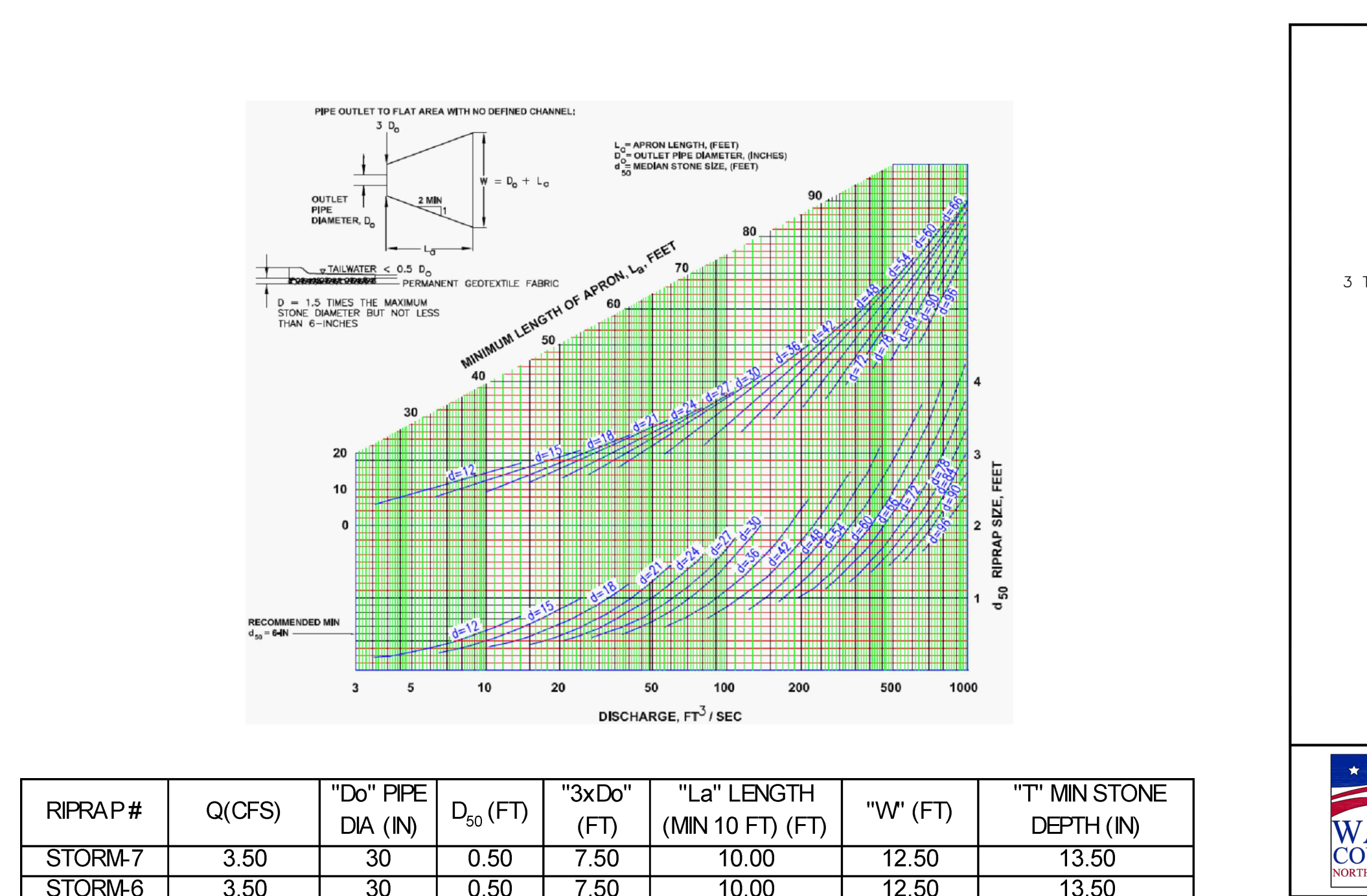
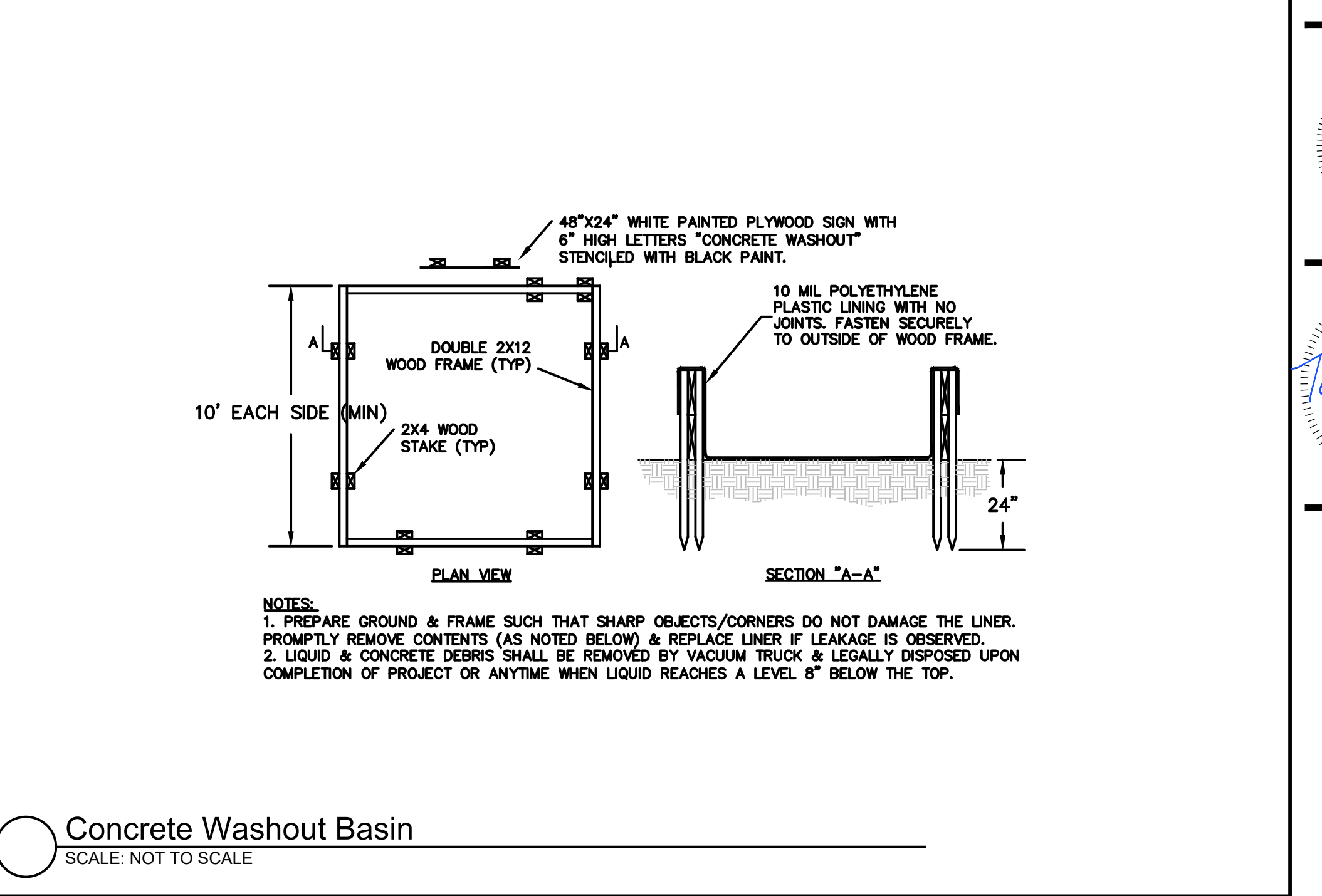
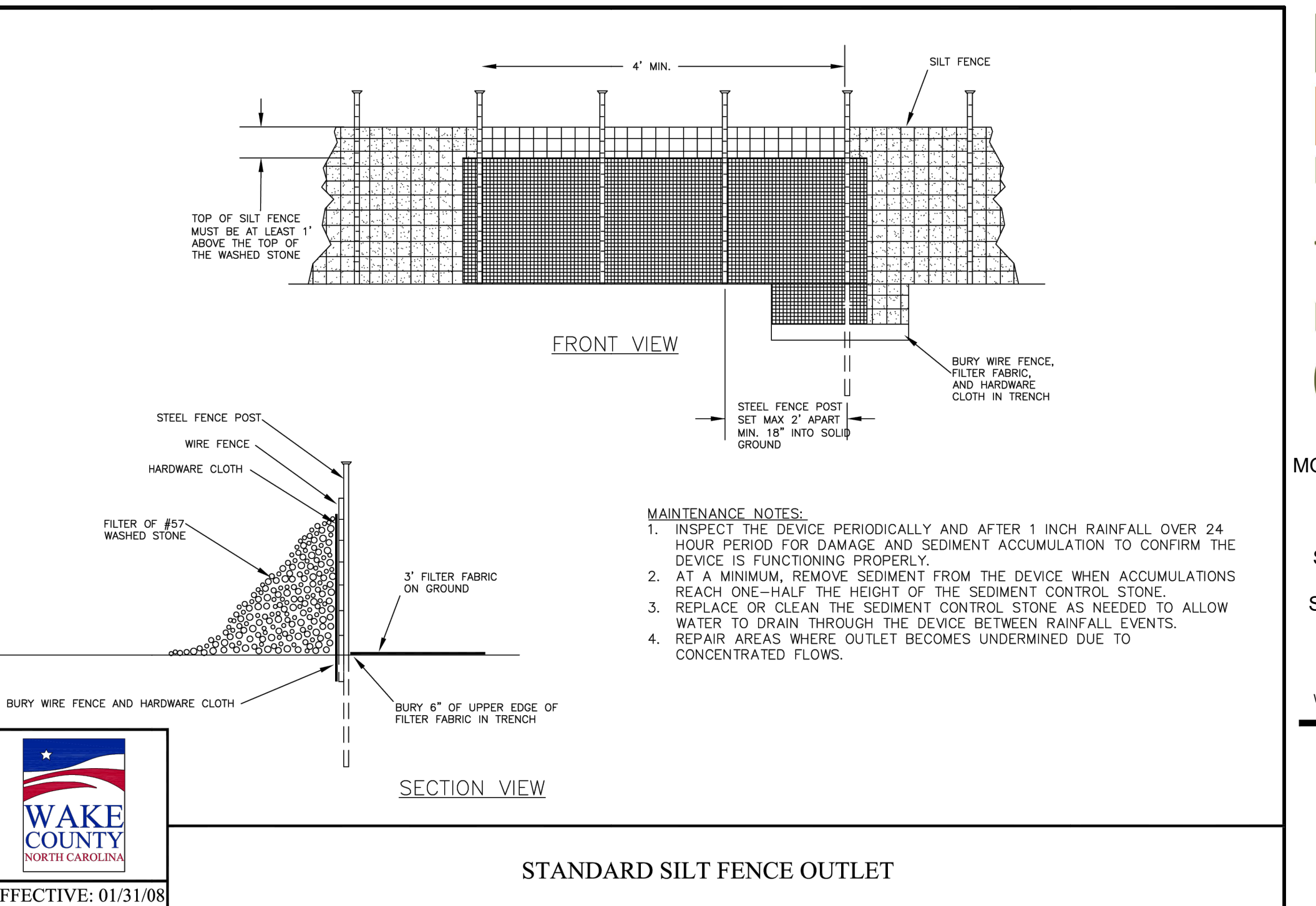
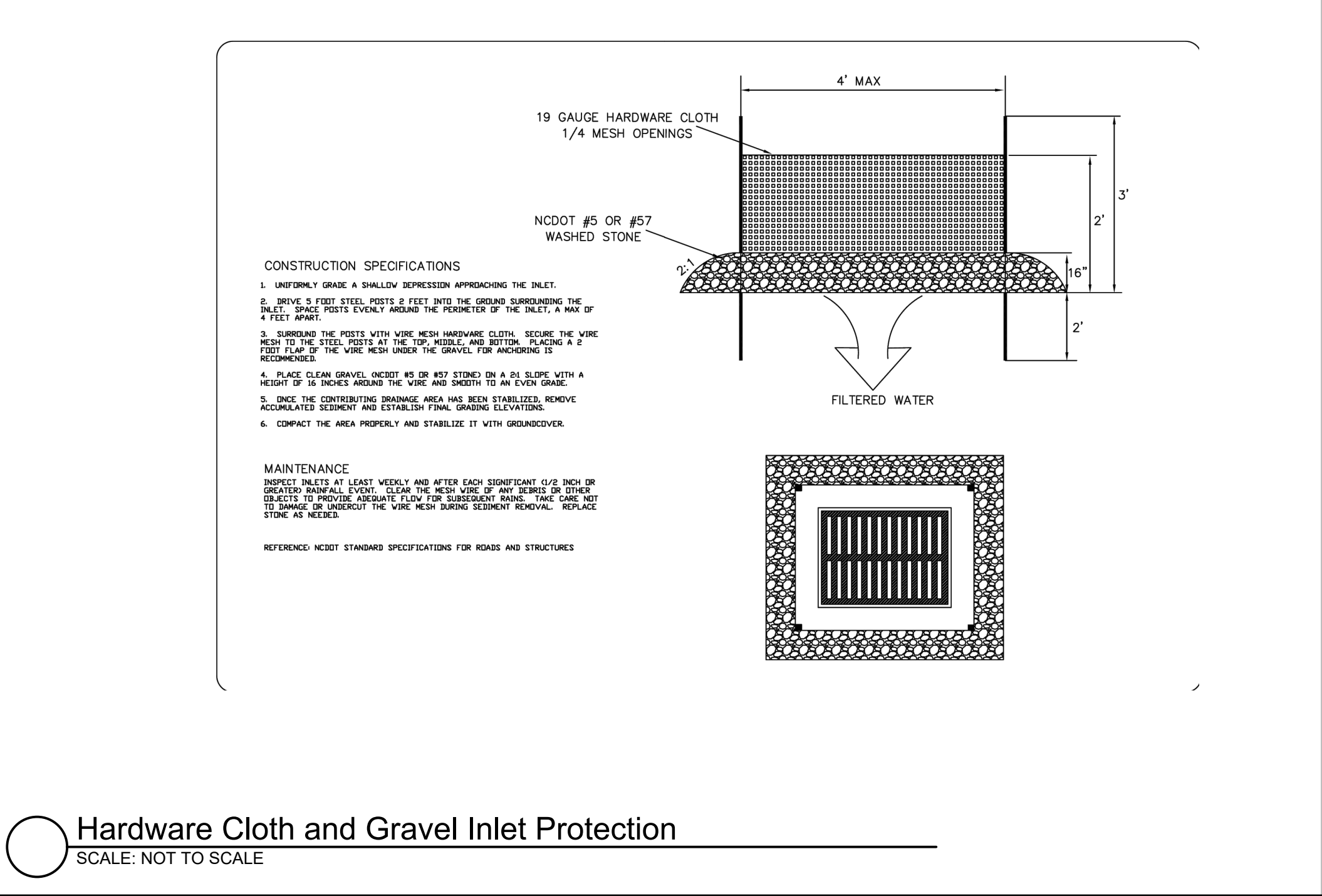
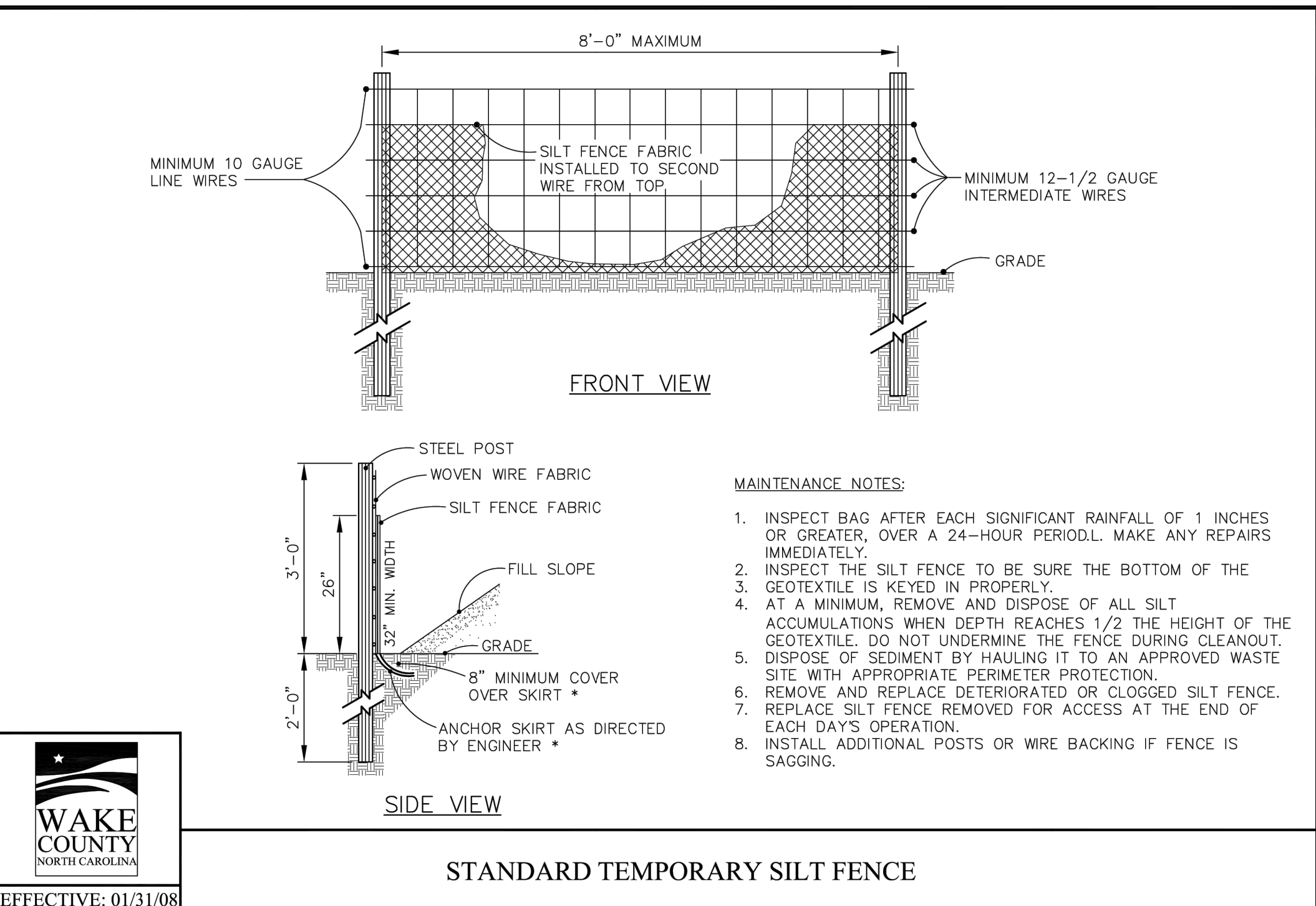


SEEDING PREPARATION
AREAS TO BE SEEDDED SHALL BE THOROUGHLY LOOSENEED AND WORKED TO A MINIMUM DEPTH OF AT LEAST 5 INCHES.
THE AREA SHALL THEN BE RACKED OR OTHERWISE CLEARED OF ROCKS, LARGER THAN 2 INCHES IN DIAMETER, STICKS OR OTHER DEBRIS.

SEASON	SEEDING MIXTURE	SOIL AMENDMENTS	MULCH	MAINTENANCE
FOR LATE WINTER AND EARLY SPRING:	RYE (GRASS) = 120 LB/ACRE ANNUAL LESPEDEZA (KOB) = 50 LB/ACRE (ONE ANNUAL LESPEDEZA WHEN DURATION OF TEMPORARY COVER IS NOT TO EXCEED BEYOND JUNE) SEEDING DATES: JAN. 1 - MAY 1	FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 750 LB/ACRE 10-10-10 FERTILIZER	APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.	REFER FERTILIZER IF GROWTH IS NOT FULLY ADEQUATE. RESEED, FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.
FOR SUMMER:	GERMAN MILLET = 40 LB/ACRE (A SMALL-STEMMED SUBGRASS MAY BE SUBSTITUTED AT A RATE OF 50 LB/ACRE) SEEDING DATES: MAY 1 - AUG. 15	FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER	APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.	REFER FERTILIZER IF GROWTH IS NOT FULLY ADEQUATE. RESEED, FERTILIZE AND MULCH IMMEDIATELY FOLLOWING EROSION OR OTHER DAMAGE.
FOR FALL:	RYE (GRASS) = 120 LB/ACRE SEEDING DATES: AUG. 15 - DEC. 30	FOLLOW RECOMMENDATIONS OF SOIL TESTS OR APPLY 2,000 LB/ACRE GROUND AGRICULTURAL LIMESTONE AND 1,000 LB/ACRE 10-10-10 FERTILIZER	APPLY 4,000 LB/ACRE STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR A MULCH ANCHORING TOOL. A DISK WITH BLADES SET NEARLY STRAIGHT CAN BE USED AS A MULCH ANCHORING TOOL.	REPAIR AND REFER FERTILIZER DAMAGED AREAS IMMEDIATELY. TOPRESS WITH 50 LB/ACRE OF NITROGEN IN MARCH. IF IT IS NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUNE 15, OVERSEED WITH 50 LB/ACRE KOBIE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.

FOR ADDITIONAL INFORMATION, REFER TO NCCNRR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL (ESCPDM), SECTION 6.10. FOR PERMANENT SEEDING SPECIFICATIONS, INCLUDING SEED BED PREP, SEASONAL LIMITATIONS FOR SEEDING OPERATIONS, THE KINDS OF GRADES OF FERTILIZERS, THE KINDS OF SEED, AND THE RATES OF APPLICATION OF LIMESTONE, FERTILIZER, AND SEED, REFER TO NCCNRR ESCPDM SECTION 6.11 PLEASE CONSULT THE NATURAL RESOURCES CONSERVATION SERVICE FOR ADDITIONAL ALTERNATIVES FOR VEGETATING DENuded AREAS. ☺

Temporary Seeding Schedule
SCALE: NOT TO SCALE



501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29566 | JUDSON HILLIS BUILDING GROUP, INC. | CHARLOTTE, NC 28217 | 704.528.8777 | 230 PETERSBORO RD., GREENVILLE, SC 29614 | 800.865.0800 | 214 E. CECIL STREET | SUMMERVILLE, SC 29586 | 803.547.1111 | WWW.SEAMONWHITESIDE.COM | THESE DRAWINGS SHALL NOT BE REPRODUCED IN ANY MANNER, EITHER WHOLLY OR IN PART, WITHOUT THE WRITTEN PERMISSION OF SEAMON WHITESIDE & ASSOCIATES, INC.

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 jeopardized, 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 on daily gauge observations are made during weekend or holiday periods, and no individual day rainfall information is available, then report the cumulative rain measurement for that an attended days (see the self-inspection form for a rain inspection as 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&C Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, date and time of the inspection. 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, silt, slush, floating or suspended solids or discoloration. 5. Description of maintenance needs for the measures, description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDO)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfall inspected, date and time of the inspection. 2. Name of the person performing the inspection. 3. Evidence of indicators of stormwater pollution such as oil, silt, slush, floating or suspended solids or discoloration. 4. 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 ≥ 1.0 inch in 24 hours	1. Evidence of indicators of stormwater pollution such as oil, silt, slush, floating or suspended solids or discoloration. 2. Actions taken to clean up or stabilize the sediment that has left the site limits. 3. Description, evidence, and date of corrective actions taken, and 4. An endorsement as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: a. Description, evidence and date of corrective actions taken, and b. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(c) of this permit. 2. The phases of grading (installation of perimeter E&S&C measures, clearing and grubbing, installation of storm drainage facilities, completion of all base course/grading activity, construction or redevelopment, permanent ground covers. 3. Documentation that the required ground stabilization measures have been provided within the required timeframes or an assurance that they will be provided as soon as possible.
(6) Ground stabilization measures	After each phase of grading	1. Identification of the measures inspected, date and time of the inspection. 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, silt, slush, floating or suspended solids or discoloration. 5. Description, evidence, and date of corrective actions taken.

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

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 infeasible. The circumstances in which it 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&C 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&C 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, properly staked, 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

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&S&C Plan Documentation

The approved E&S&C plan as well as any approved deviation shall be kept on the site. The approved E&S&C plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&S&C 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&C measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&S&C plan.	Initial and date each E&S&C measure on a copy of the approved E&S&C plan or complete, date and sign an inspection report that lists each E&S&C measure shown on the approved E&S&C plan. This documentation is required upon the initial installation of the E&S&C measures or if the E&S&C measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&S&C 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&C plan.	Initial and date a copy of the approved E&S&C 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&C measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&S&C measures.	Initial and date a copy of the approved E&S&C 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&C 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)

Occurrence

(a) Visible sediment deposition in a stream or wetland

Reporting Timeframes (After Discovery) and Other Requirements

- Within 7 calendar days**, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.
- If the stream is named on the [NC 309\(d\) list](#) as impaired for sediment related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determines that additional requirements are needed to assure compliance with the federal or state impaired waters conditions.
- Within 24 hours**, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.

(b) Oil spills and release of hazardous substances per item 1(b) (4) above

- Report at least ten days before the date of the bypass, if possible.**
- Within 24 hours**, an oral or electronic notification. The notification shall include an evaluation of the anticipated quality and effect of the bypass.
- Within 7 calendar days**, a report that includes an evaluation of the quality and effect of the bypass.
- Within 24 hours**, an oral or electronic notification.
- Within 7 calendar days**, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. (40 CFR 122.41(b)(6)).
- Division staff may waive the requirement for a written report on a case-by-case basis.

(c) Anticipated bypasses (40 CFR 122.41(m)(5))

(d) Unanticipated bypasses (40 CFR 122.41(m)(5))

(e) Noncompliance with the conditions of this permit that may endanger health or the environment (40 CFR 122.41(b)(7))

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

- Visible sediment deposition in a stream or wetland.
- Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
- Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- Anticipated bypasses and unanticipated bypasses.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

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. -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
(d) Slopes 3:1 to 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
(e) Areas with slopes flatter than 4:1	14	-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 tackifiers Hydroseeding Roll-on erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Roll-on 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.

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.
- 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 site 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 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 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.

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.
- Use 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 spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove loadings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining loadings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

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 on-site.

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.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

CONCRETE WASHOUT STRUCTURE WITH LINER

BELOW GRADE WASHOUT STRUCTURE

Above Grade Washout Structure

CONCRETE WASHOUT STRUCTURE WITH LINER

BELOW GRADE WASHOUT STRUCTURE

Above Grade Washout Structure

NORTH CAROLINA Environmental Quality

EFFECTIVE: 04/01/19

CONCRETE WASHOUT STRUCTURE WITH LINER

BELOW GRADE WASHOUT STRUCTURE

Above Grade Washout Structure

CONCRETE WASHOUT STRUCTURE WITH LINER

BELOW GRADE WASHOUT STRUCTURE

Above Grade Washout Structure

NORTH CAROLINA Environmental Quality

EFFECTIVE: 04/01/19

SEAMON WHITESIDE

SEAMON WHITESIDE

NORTH CAROLINA Environmental Quality

SEAMON WHITESIDE & ASSOCIATES, INC.

NO. C-2466

PROFESSIONAL ENGINEER

JOYDIE L. LITTLE

048282
01/04/24

NORTH CAROLINA Environmental Quality

EFFECTIVE: 04/01/19

TIDAL WAVE AUTO SPA

ROLESVILLE, NC

SW+ PROJECT: 10772

DATE: 09/04/24

DRAWN BY: CPE

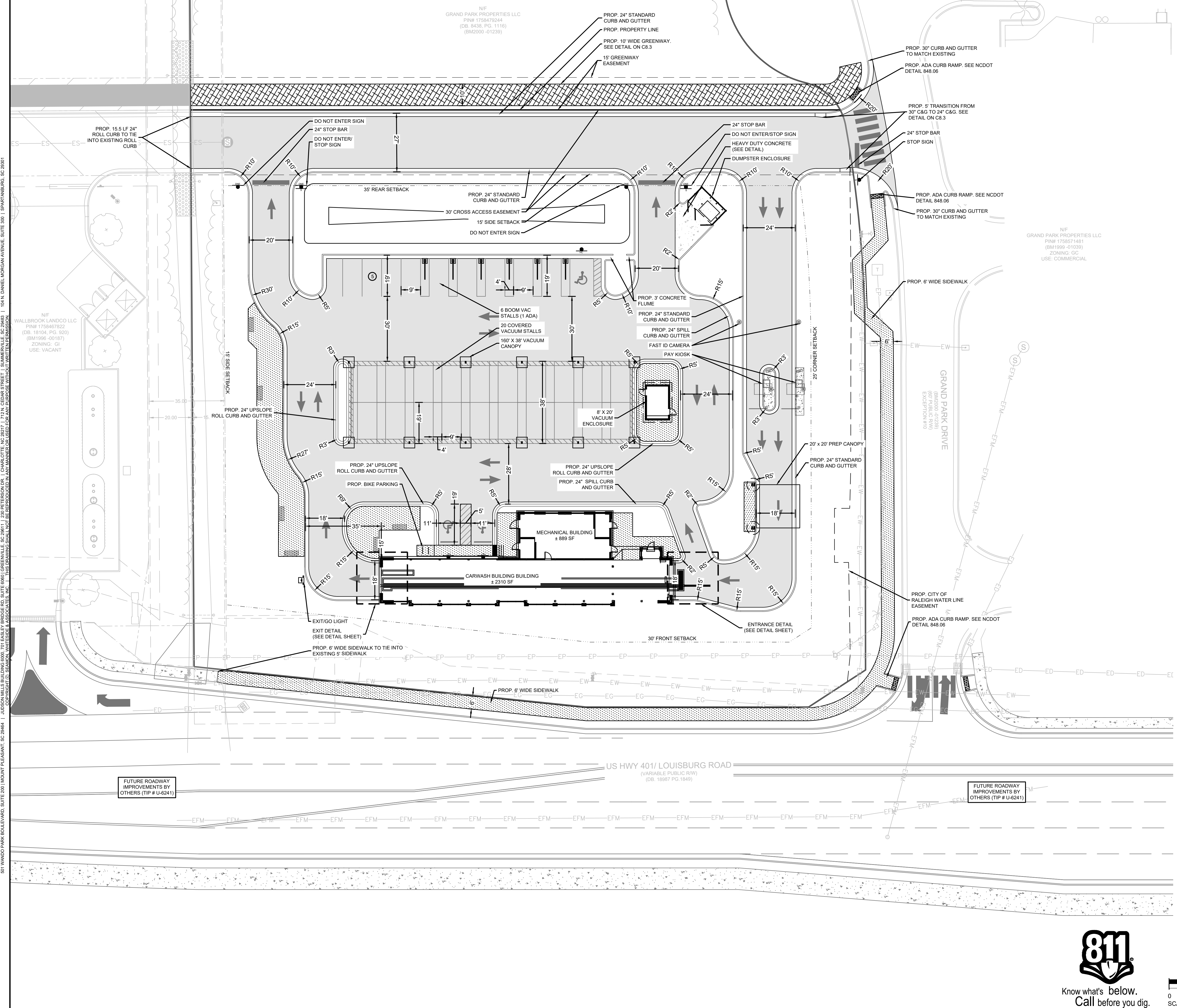
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REVISION HISTORY

Rev	Date	Description
10/30/23		
A	12/22/23	
B	03/01/24	
C	09/04/24	

EROSION CONTROL DETAILS

C4.5



SITE INFORMATION:

ADDRESS: ROLESVILLE, NC
 PROPERTY AREA: 1.92 ACRES
 PARCEL: 1758479244
 EXISTING USE: UNDEVELOPED
 PROPOSED USE: CAR WASH

PROPERTY ZONING: GI-CZ (GENERAL INDUSTRIAL - CONDITIONAL ZONING)
 BUILDING SETBACKS:
 FRONT (SE): 30'
 CORNER (NE): 25'
 REAR (NW): 35'
 SIDE (SW): 15'

PERIMETER LANDSCAPE YARDS:
 NORTHEAST: 15'

REQUIRED OPEN SPACE (5%) = 0.01 AC (4182 SF)

PRE VS. POST DEVELOPMENT AREA:

SITE AREA: 1.92 AC
 PRE-IMPERVIOUS AREA: 0.04 AC (2.08%)
 POST-IMPERVIOUS AREA: 1.30 AC (67.7%)

PARKING NOTE:

PARKING REQUIRED:
 1 SPACE PER 400 SF GFA OR 5 SPACES MINIMUM = 5 SPACES

PARKING PROVIDED:
 EMPLOYEE SPACES: 5 SPACES (4 MAX ON SHIFT)
 VACUUM STALLS: 26 STALLS (1 ADA)
 ADA PARKING: 2 SPACES
 TOTAL PARKING: 33 SPACES

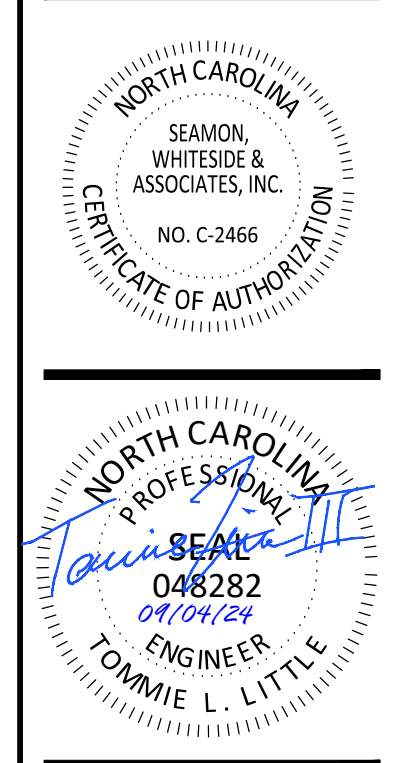
BIKE PARKING:
 REQUIRED: 1 SPACE (1 SPACE PER 5000 SF GFA)
 PROVIDED: 4 SPACES

SITE LAYOUT AND STAKING NOTES:

- CONTRACTOR SHALL CAREFULLY EXAMINE ALL DOCUMENTS AND THE CONSTRUCTION SITE TO OBTAIN FIRST HAND KNOWLEDGE OF EXISTING CONDITIONS.
- ENTIRE SITE SHALL BE DRESSED TO UNIFORM, WELL DRAINED AND VISUALLY APPEALING SURFACE WITH A MINIMUM TOPSOIL LAYER OF FOUR INCHES.
- ALL STRIPING AND SIGNS SHALL CONFORM WITH THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES LATEST EDITION. PARKING STALL STRIPING TO BE WHITE WITH BLUE HANDICAPPED STRIPING.
- ALL HANDICAP PARKING SPACED AND ACCESSIBLE ROUTE SHALL CONFORM WITH THE AMERICAN WITH DISABILITY ACT DESIGN GUIDELINES AND SPECIFICATIONS LATEST EDITION.
- DIMENSIONS AND CURVE RADII ARE GIVEN TO FACE OF CURB, WHERE CURB AND GUTTER IS SHOWN. OTHERWISE DIMENSIONS ARE GIVEN TO THE EDGE OF PAVEMENT. CONTRACTOR IS TO COORDINATE WITH THE ARCHITECTURAL PLANS AS TO THE BUILDING LAYOUT AND DIMENSIONS.

SW
SEAMONWHITESIDE

MOUNT PLEASANT, SC 843.884.1667
 GREENVILLE, SC 864.298.0534
 SUMMERVILLE, SC 843.972.0710
 SPARTANBURG, SC 864.272.1272
 CHARLOTTE, NC 980.312.5450
 WWW.SEAMONWHITESIDE.COM



TIDAL WAVE AUTO SPA
 ROLESVILLE, NC

SW+ PROJECT: 10772
 DATE: 09/04/24
 DRAWN BY: CPE
 CHECKED BY: TLL

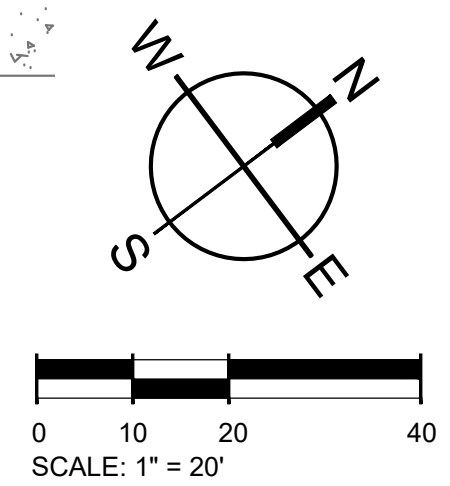
REVISION HISTORY

A	10/30/23
B	12/22/23
C	03/01/24
D	09/04/24

SITE PLAN

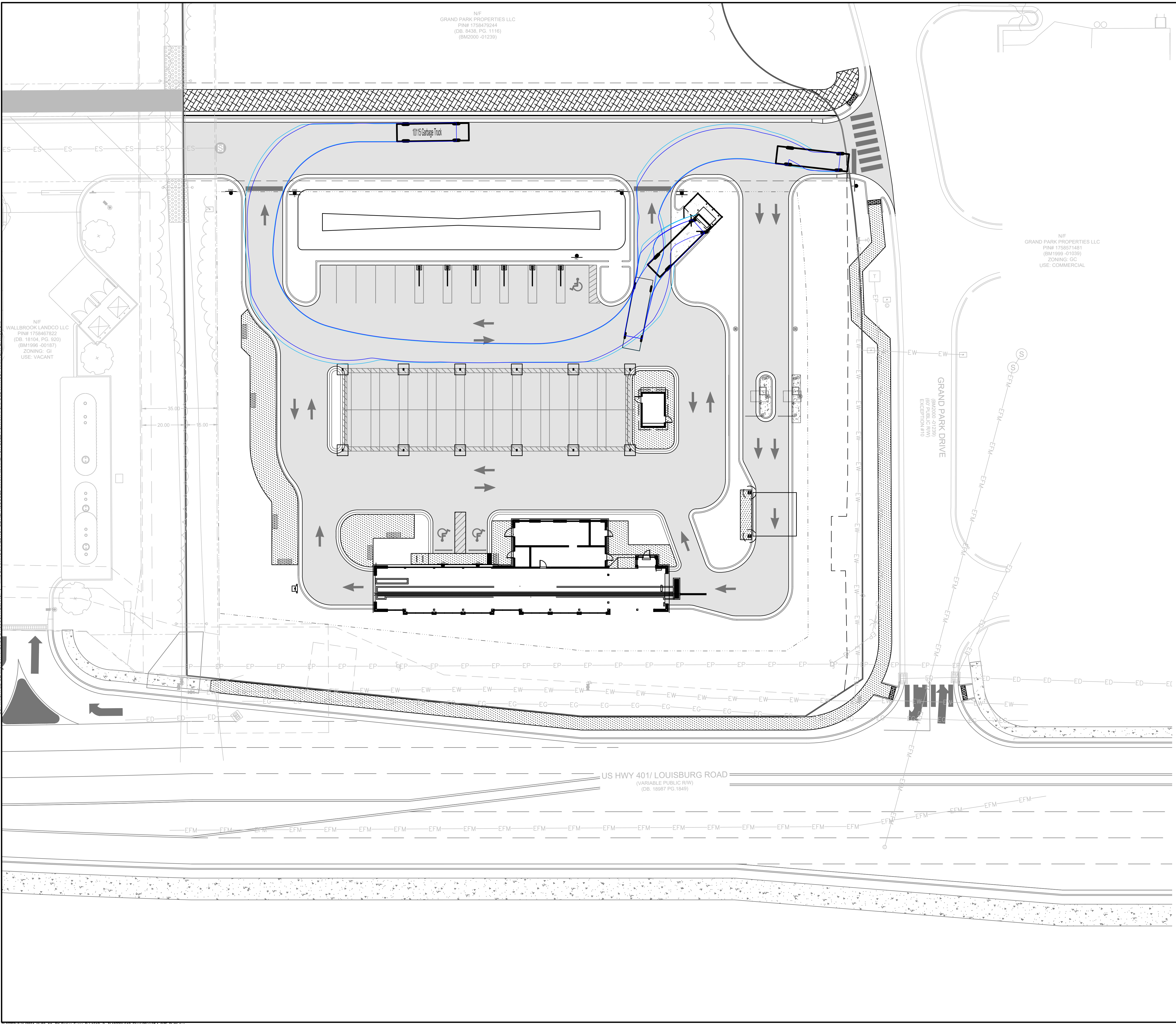
SITE LEGEND

[Pattern]	PROPOSED SIDEWALK
[Pattern]	HEAVY DUTY CONCRETE PAVEMENT
[Pattern]	STANDARD DUTY CONCRETE PAVEMENT
[Pattern]	ASPHALT GREENWAY
[Symbol]	STOP SIGN
[Symbol]	DO NOT ENTER SIGN
[Symbol]	HANDICAP PARKING SIGN



501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29564 | JUDSON MULLIS BUILDING 6009 7TH EAST | GREENVILLE, SC 29611 | 230 PETERSBORO | CHARLOTTE, NC 28217 | 701N. CEDAR STREET | SUMMERVILLE, SC 29585 | 1501 N. DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301

501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29566 | JUDSON MULLS BUILDING GROUP, 3745 BAKER AVENUE, SUITE 600 | GREENVILLE, SC 29611 | 250 PETERSBORO | CHARLOTTE, NC 28217 | 701N. CEDAR STREET | SUMMERVILLE, SC 29586 | 101N. DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301



NF
GRAND PARK PROPERTIES LLC
PIN# 1758479244
(DB: 9438; PG: 11116)
(BM2090 -01238)

NF
GRAND PARK PROPERTIES LLC
PIN# 1758571481
(BM1989 -01038)
ZONING: GI-CZ
USE: COMMERCIAL

NF
WALLBROOK LANDCO LLC
PIN# 1758467822
(DB: 18104; PG: 920)
(BM1996 -00187)
ZONING: GI
USE: VACANT

SITE INFORMATION:

ADDRESS: ROLESVILLE, NC
PROPERTY AREA: 1.82 ACRES
PARCEL: 1758479244
EXISTING USE: UNDEVELOPED
PROPOSED USE: CAR WASH

PROPERTY ZONING: GI-CZ (GENERAL INDUSTRIAL - CONDITIONAL ZONING)

BUILDING SETBACKS:

FRONT (SE):	30'
FRONT (NE):	25'
SIDE (NW):	15'
SIDE (SW):	30'

PERIMETER LANDSCAPE YARDS:

NORTHEAST:	15'
------------	-----

PRE VS. POST DEVELOPMENT AREA:

SITE AREA:	1.82 AC
PRE-IMPERVIOUS AREA:	0.04 AC (2.20%)
POST-IMPERVIOUS AREA:	1.29 AC (70.88%)

PARKING NOTE:

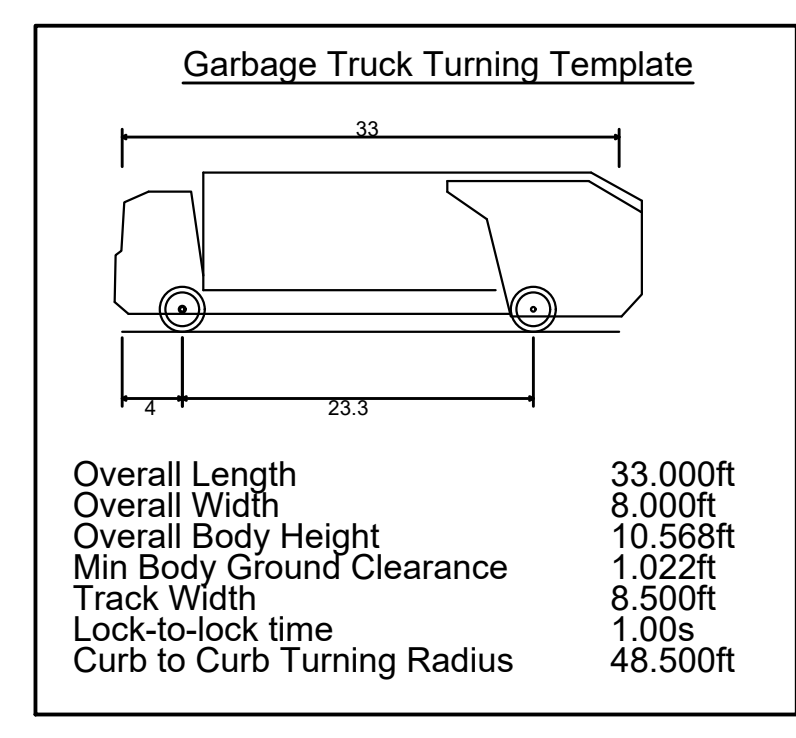
PARKING REQUIRED:
1 SPACE PER 400 SF GFA OR 5 SPACES MINIMUM = 5 SPACES

PARKING PROVIDED:

EMPLOYEE SPACES: (4 MAX ON SHIFT)	5 SPACES (1 ADA)
VACUUM STALLS:	34 STALLS

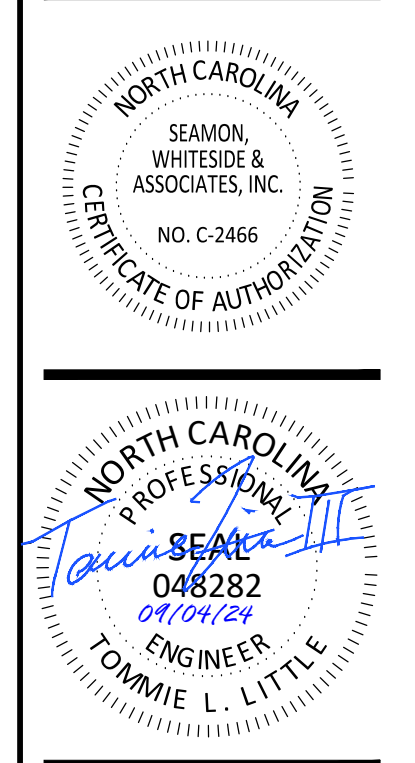
SITE LAYOUT AND STAKING NOTES:

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- ENTIRE SITE SHALL BE DRESSED TO UNIFORM, WELL DRAINED AND VISUALLY APPEALING SURFACE WITH A MINIMUM TOPSOIL LAYER OF FOUR INCHES.
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SW
SEAMONWHITESIDE

MOUNT PLEASANT, SC
843.884.1667
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CHARLOTTE, NC
980.312.5450
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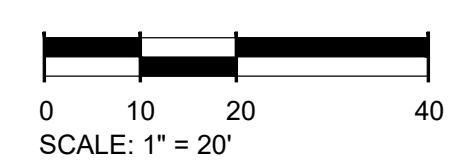
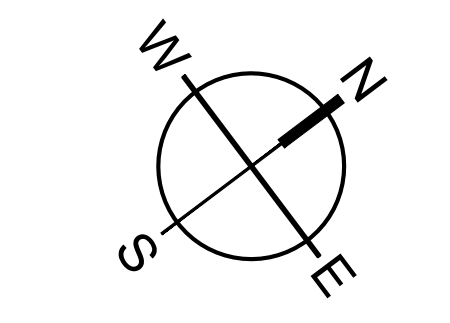
TIDAL WAVE AUTO SPA
ROLESVILLE, NC

SW+ PROJECT: 10772
DATE: 09/04/24
DRAWN BY: CPE
CHECKED BY: TLL

REVISION HISTORY

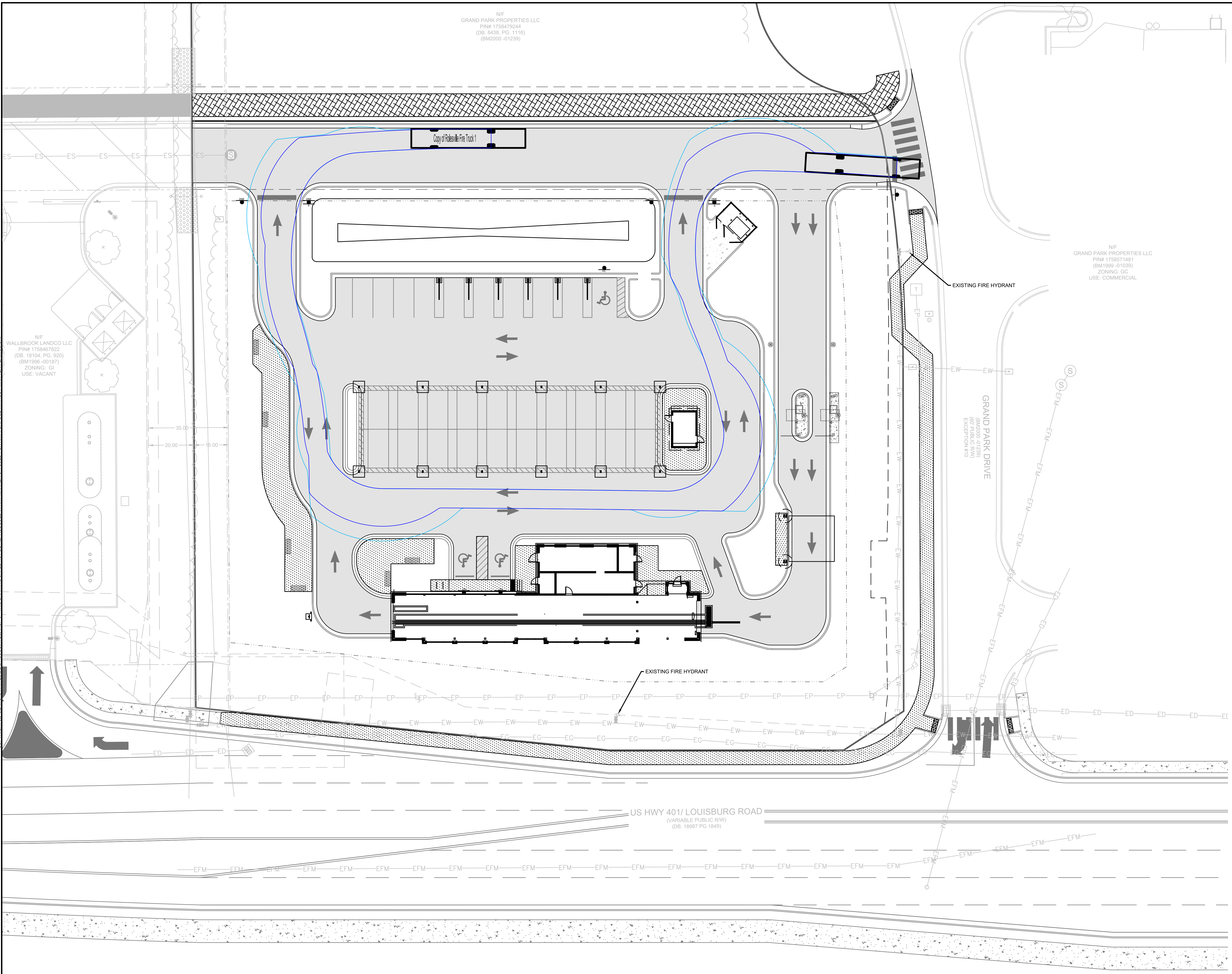
10/30/23	
A	12/22/23
B	03/01/24
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VEHICLE
STACKING &
TURNING
MOVEMENT



501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29566 | JUDICIAL MALL BUILDING 600 | 7th FLOOR | ROLESVILLE, SC 29381 | 200 PETERSBORO | CHARLOTTE, NC 28217 | 7th FLOOR | SPARTANBURG, SC 29301 | 10th FLOOR | DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301

NF
GRAND PARK PROPERTIES LLC
PIN# 1758479244
(DB: 9438; PG: 11116)
(BM2090 -01238)



NF
WALLBROOK LANDCO LLC
PIN# 1758467822
(DB: 18104; PG: 920)
(BM1996 -00187)
ZONING: GI
USE: VACANT

NF
GRAND PARK PROPERTIES LLC
PIN# 1758571481
(BM1999 -01038)
ZONING: GI-C
USE: COMMERCIAL

SITE INFORMATION:

ADDRESS: ROLESVILLE, NC
PROPERTY AREA: 1.82 ACRES
PARCEL: 1758479244
EXISTING USE: UNDEVELOPED
PROPOSED USE: CAR WASH

PROPERTY ZONING: GI-CZ (GENERAL INDUSTRIAL - CONDITIONAL ZONING)

BUILDING SETBACKS:

FRONT (SE):	30'
FRONT (NE):	25'
SIDE (NW):	15'
SIDE (SW):	30'

PERIMETER LANDSCAPE YARDS:

NORTHEAST:	15'
------------	-----

PRE VS. POST DEVELOPMENT AREA:

SITE AREA:	1.82 AC
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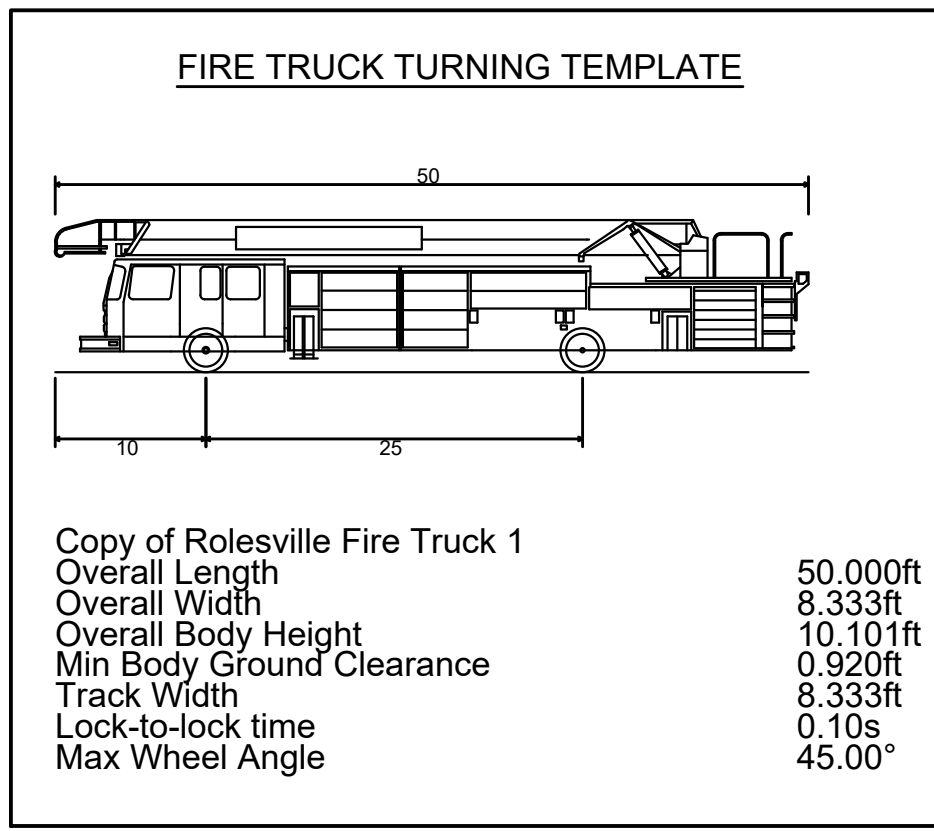
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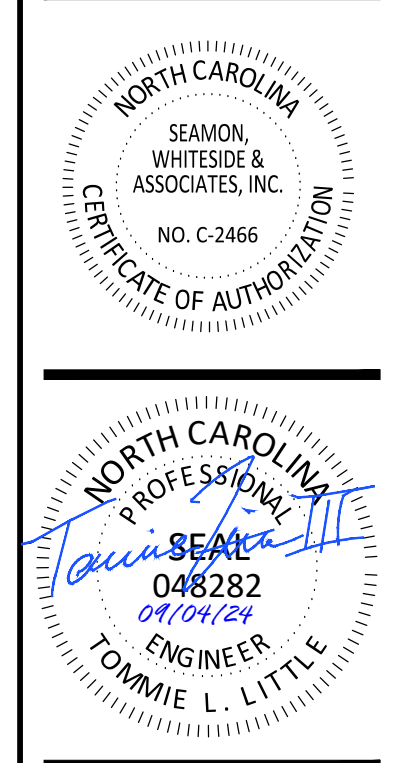
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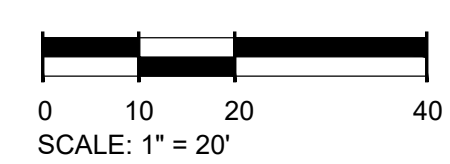
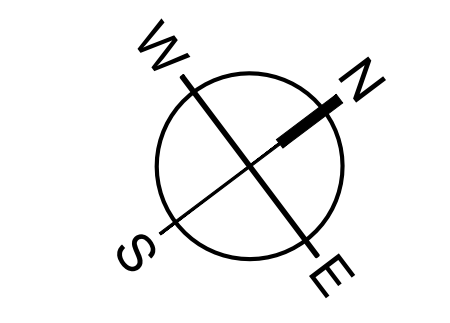
TIDAL WAVE AUTO SPA
ROLESVILLE, NC

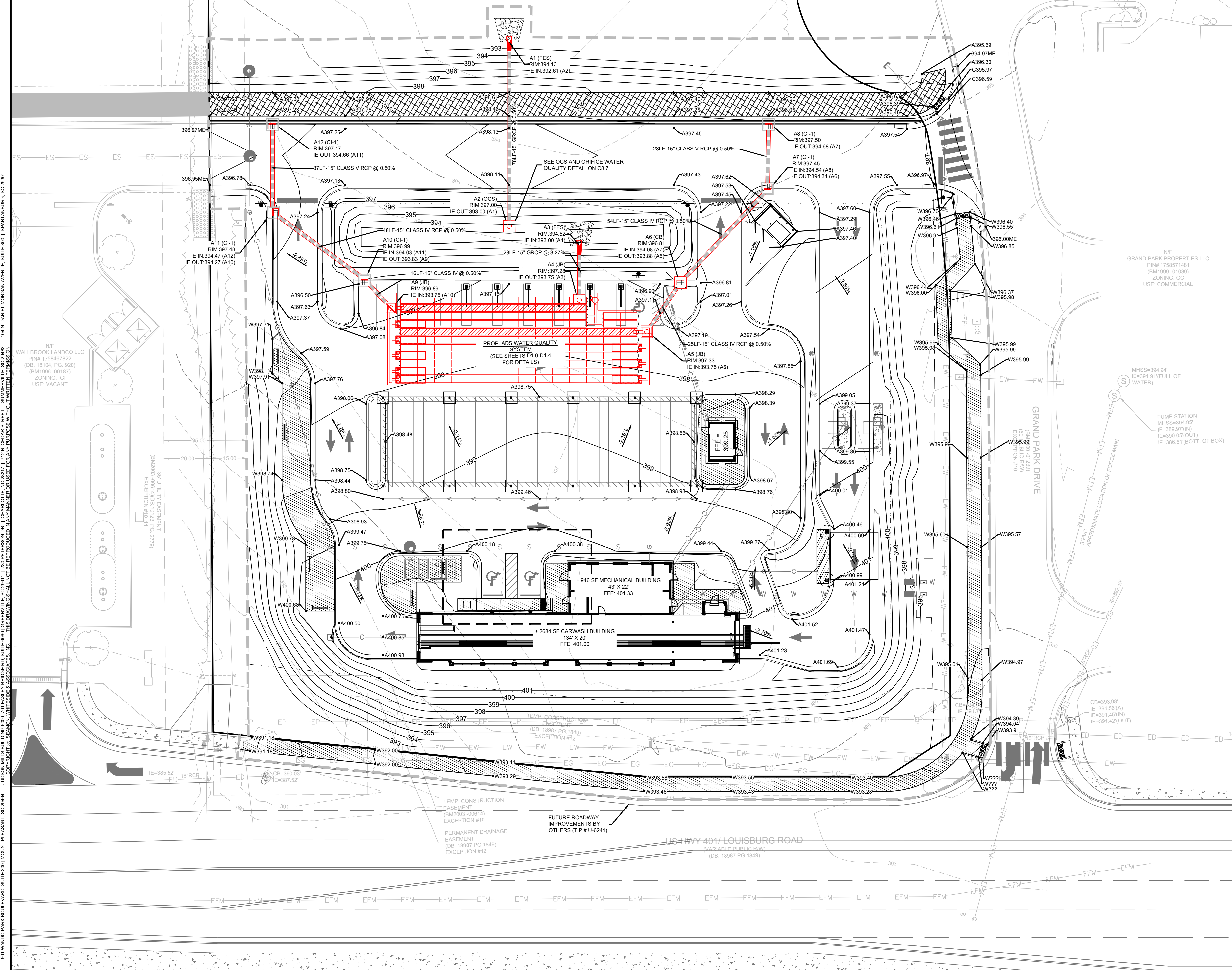
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DRAWN BY: CPE
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REVISION HISTORY

10/30/23	
A	12/22/23
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FIRE PROTECTION PLAN

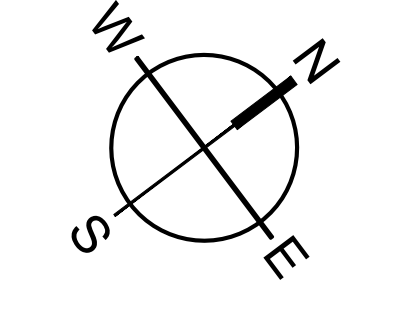




501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29464 | JUDSON MULLIS BUILDING 2000 7th EASLEY BRIDGE, SUITE 600 | GREENVILLE, SC 29611 | 270 PETERSBORO | CHARLOTTE, NC 28217 | 70N CEDAR STREET | SUMMERVILLE, SC 29581 | 104N DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301



Know what's below.
Call before you dig.



SPOT ELEV KEY (FINISHED GRADING)

A-(ASPHALT) SURFACE OF FINISHED ASPHALT ROADWAY OR WALKING PATH
C-(CONCRETE) CONCRETE PAVING
D-(DIRT) FINISHED GROUND ELEVATION
F-(FLOW) ELEVATION AT WHICH SURFACE WATER FLOWS INTO DRAINAGE STRUCTURE
-SURFACE OF ASPHALT ADJACENT TO THROAT OR GRATE AT CURB INLET
-SURFACE OF ACCESS COVER FOR JUNCTION OR ISOLATION BOX
-SURFACE OF GRATE AT OUTSIDE EDGE FOR CATCH BASIN, GUTTER INLET, OR GRATED POND STRUCTURE
FFE - FINISHED FLOOR ELEVATION
G-(GUTTER) SURFACE OF FINISHED GUTTER AT LOWEST POINT (ALONG WATER FLOW PATH)
W-(WALK) SURFACE OF FINISHED CONCRETE OR INTERLOCKING PAVEMENT SIDEWALK, PATIO, PLAZA, OR SLAB
TC - TOP OF CURB ELEVATION
BC - BOTTOM OF CURB ELEVATION
TS - TOP OF STAIRS ELEVATION
BS - BOTTOM OF STAIRS ELEVATION
TW - FINISHED GRADE ELEVATION AT TOP OF WALL
BW - FINISHED GRADE ELEVATION AT BOTTOM OF WALL
ME-(MATCH EXISTING) FOLLOWING ELEVATION NUMBER -
INDICATES TO MATCH ELEVATION OF EXISTING SURFACE AT POINT OF CONNECTION
EXAMPLE: A12.56ME MEANS THAT THE SURFACE OF NEW ASPHALT IS TO BE AT ELEVATION 12.56 WHICH SHOULD MATCH THE ELEVATION OF THE EXISTING ASPHALT SURFACE AT THE JOINT

LEGEND	
RCP DRAINAGE PIPE	
GRADING LIMITS	
HOODED CATCH BASIN (HCB)	
JUNCTION BOX (JB)	



MOUNT PLEASANT, SC 843.884.1667
 GREENVILLE, SC 864.298.0534
 SUMMERVILLE, SC 843.972.0710
 SPARTANBURG, SC 864.272.1272
 CHARLOTTE, NC 980.312.5450
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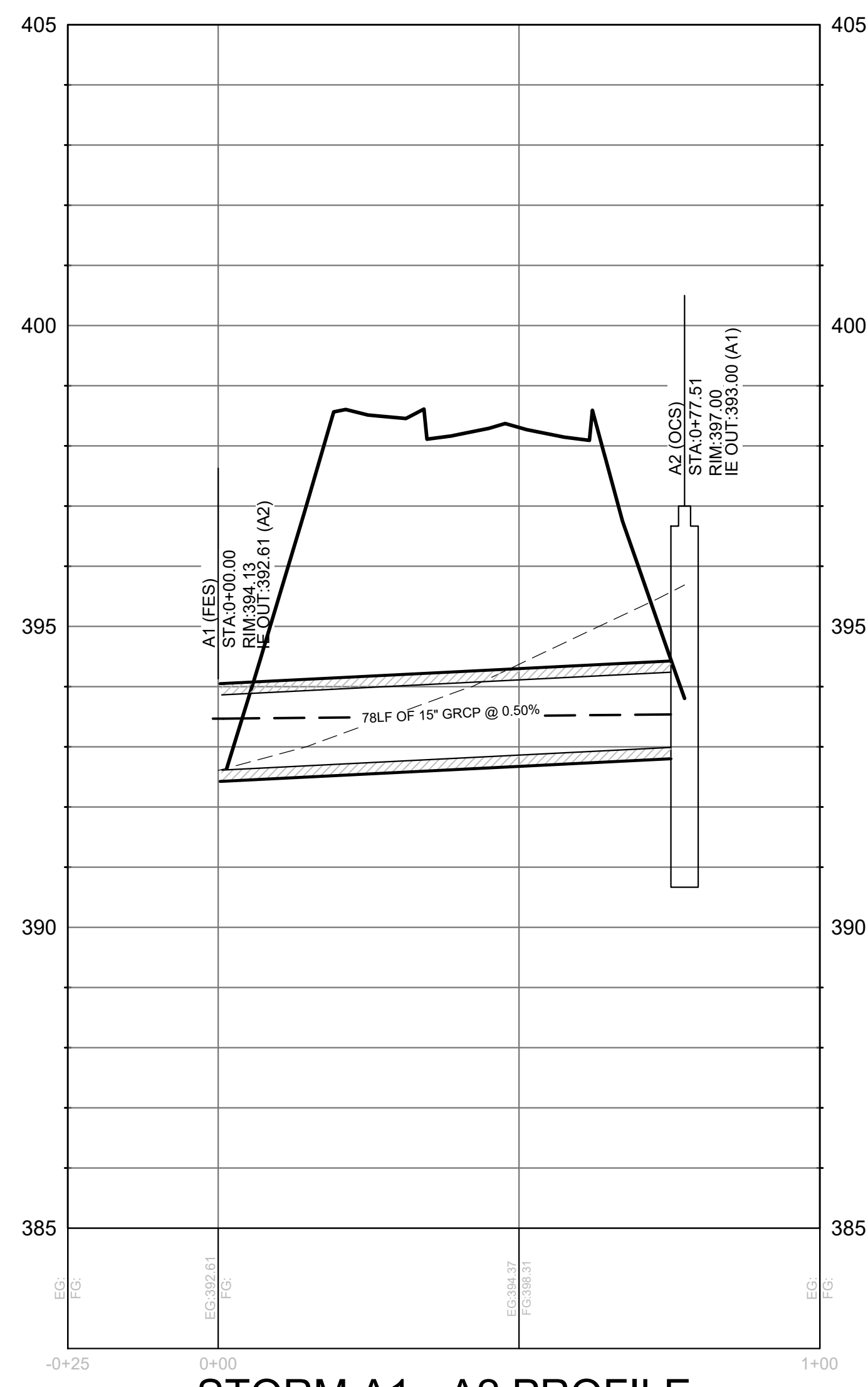


TIDAL WAVE AUTO SPA
ROLESVILLE, NC

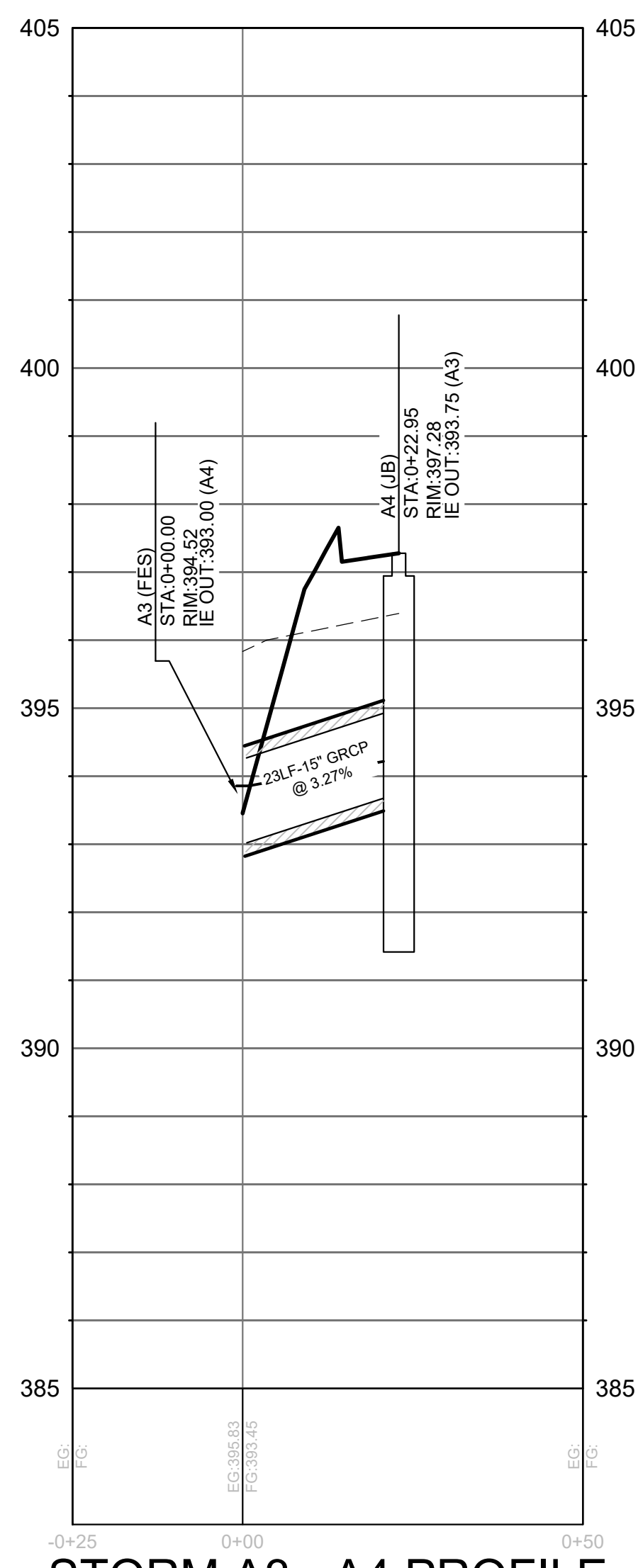
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CHECKED BY:	TLL
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A	10/30/23
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D	09/04/24

OVERALL GRADING AND DRAINAGE PLAN

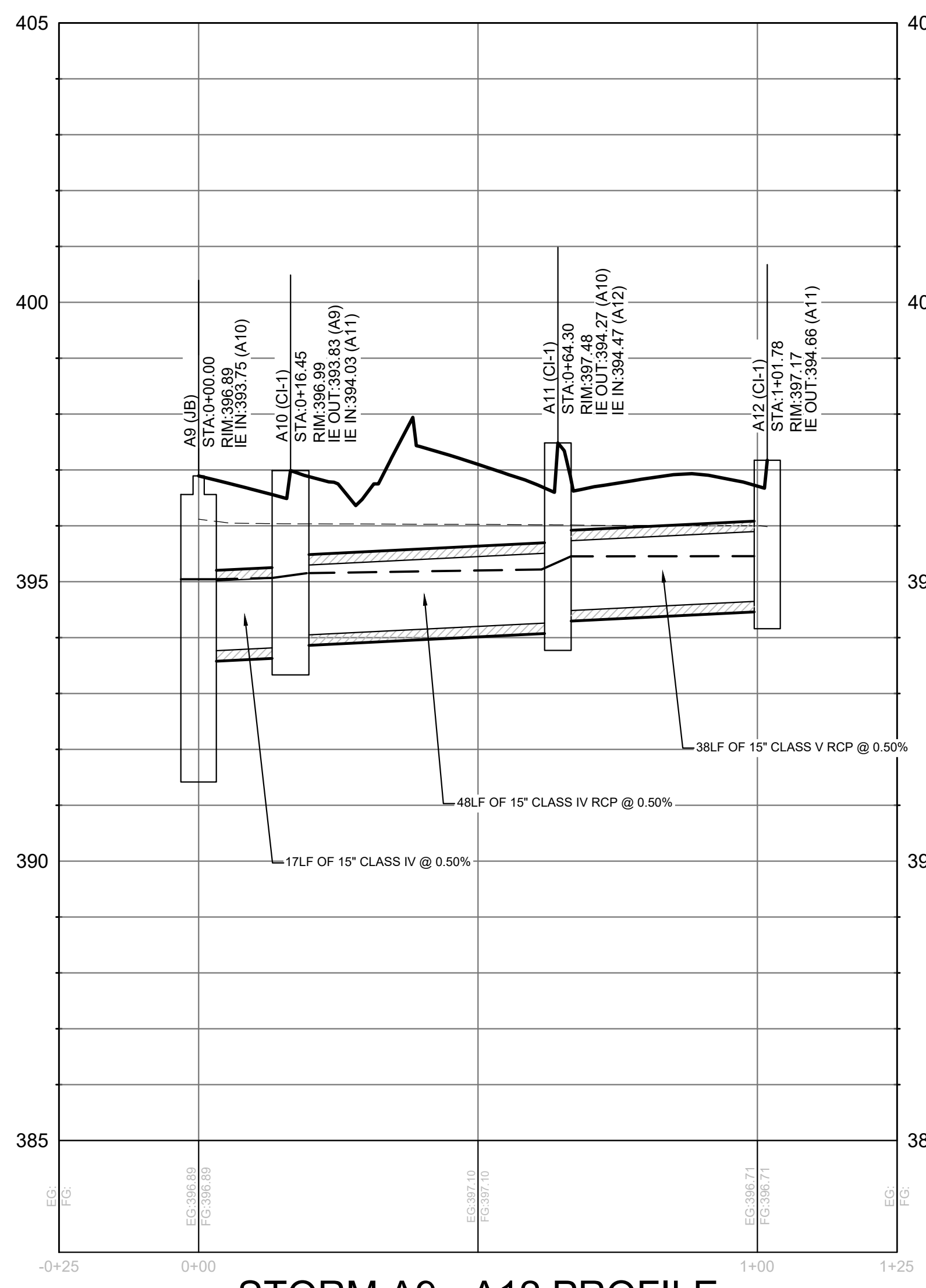
501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29564 | JUDGE WILLIAMS BUILDING, 600 7th EAST | SPARTANBURG, SC 29581 | DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29581
 501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29564 | JUDGE WILLIAMS BUILDING, 600 7th EAST | SPARTANBURG, SC 29581 | DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29581
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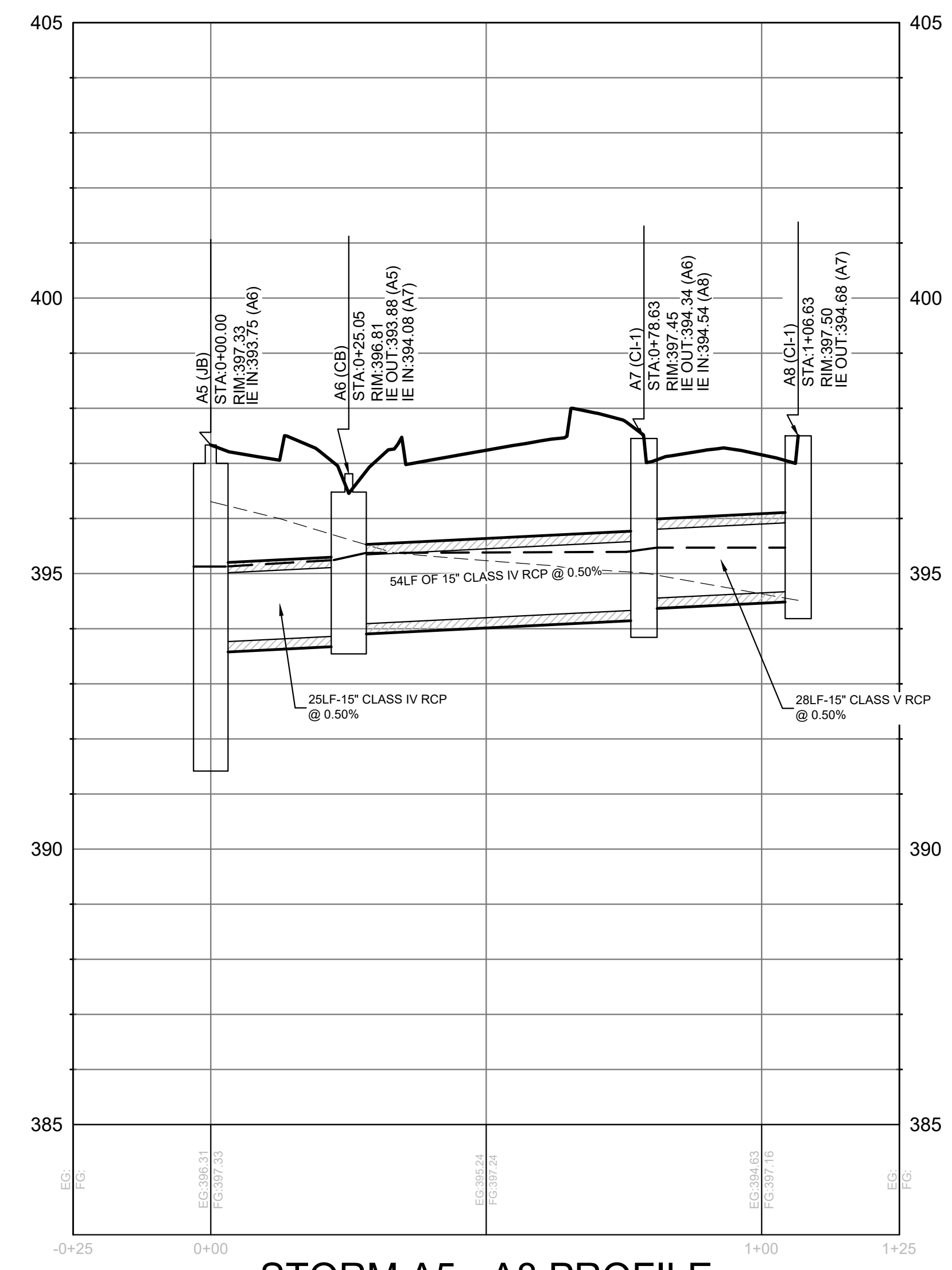
STORM A1 - A2 PROFILE



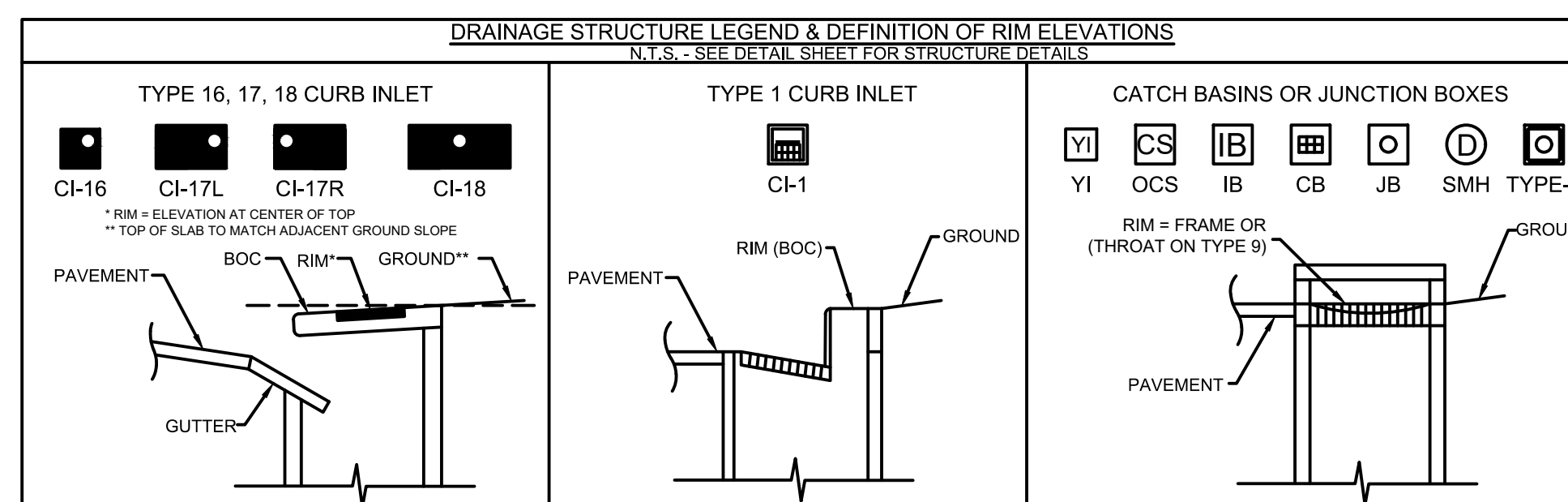
STORM A3 - A4 PROFILE



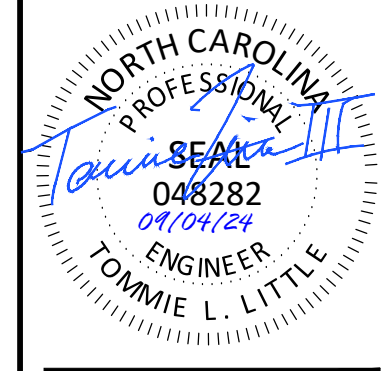
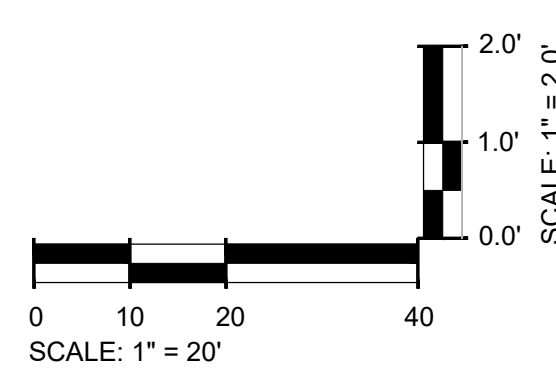
STORM A9 - A12 PROFILE



STORM A5 - A8 PROFILE



Know what's below.
Call before you dig.



TIDAL WAVE AUTO SPA
ROLESVILLE, NC

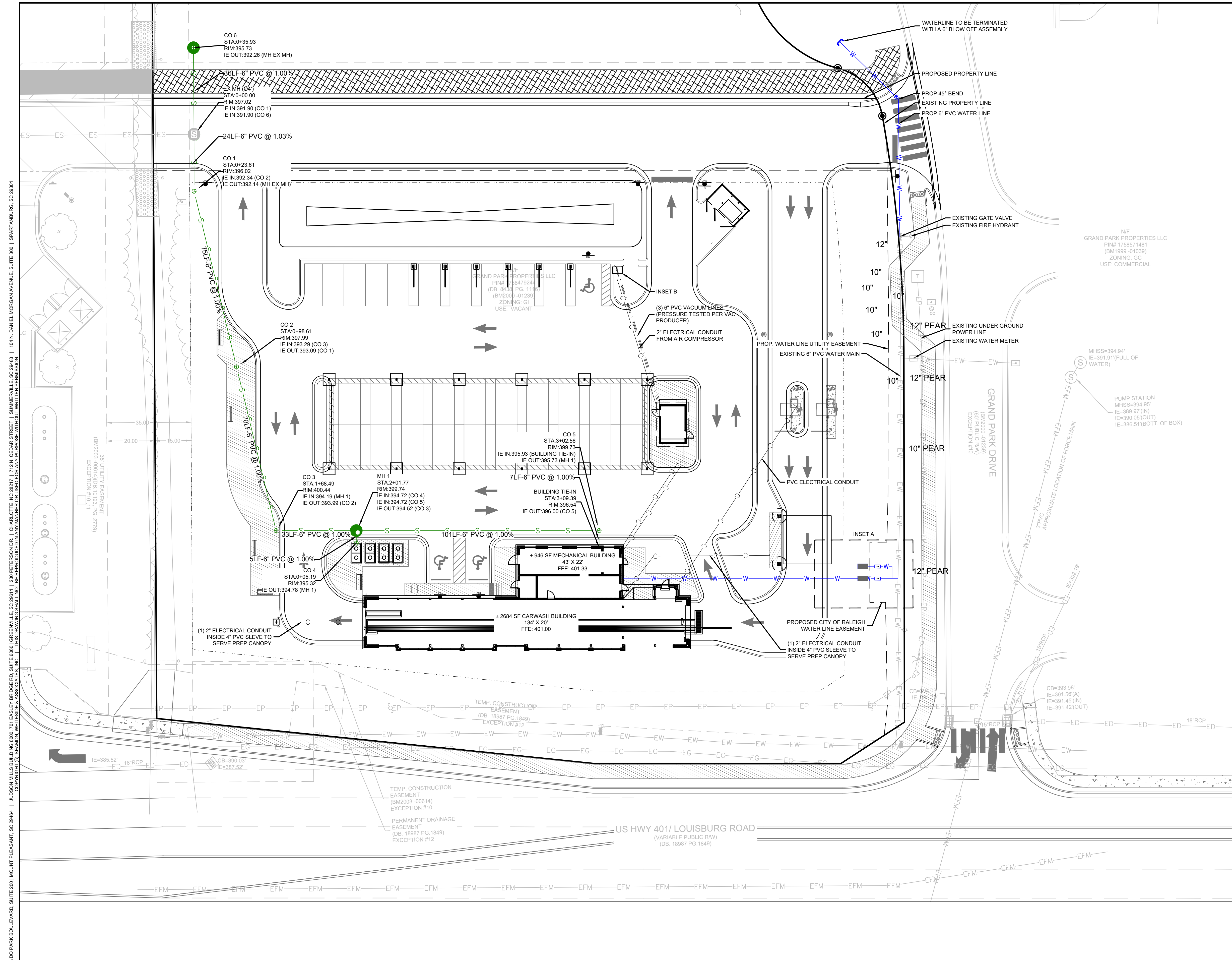
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REVISION HISTORY

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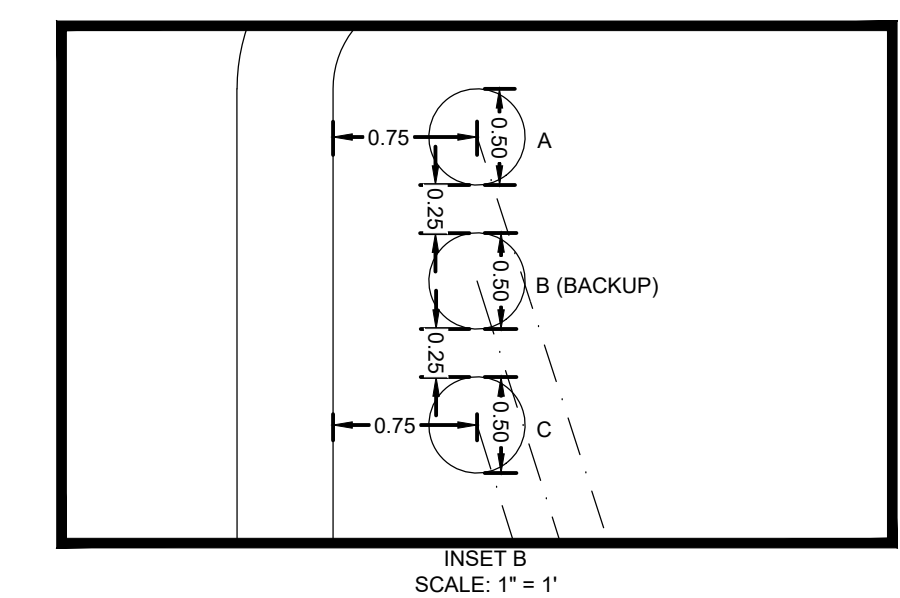
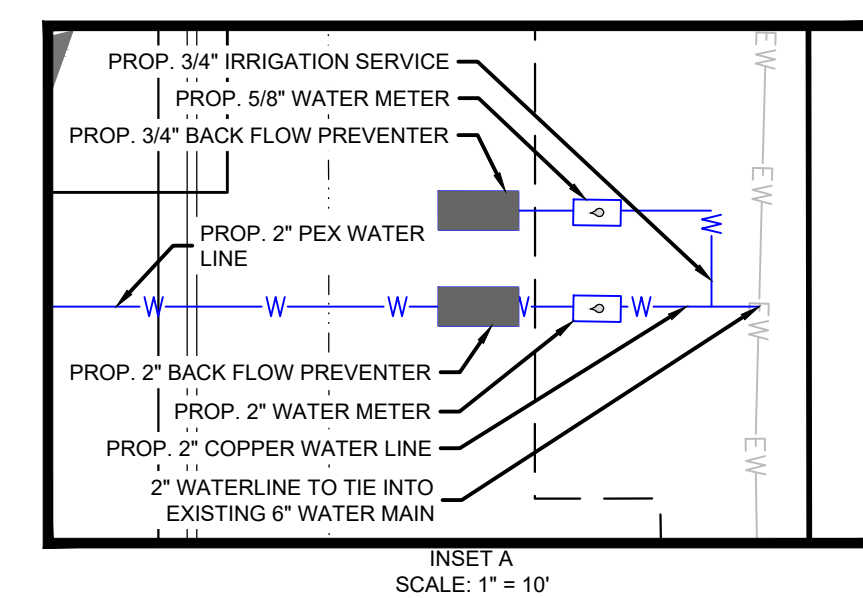
DRAINAGE PROFILES

501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29564 | JUDGE WILLIAMS BUILDING GROUP, 3700 BACKLICK BRIDGE, SUITE 200 | GREENVILLE, SC 29614 | 250 PETERSBURG | CHARLOTTE, NC 28217 | 701 N. GERRARD STREET | SUMMERVILLE, SC 29586 | 101 N. DANIEL MORGAN AVENUE, SUITE 200 | SPARTANBURG, SC 29301



- STANDARD UTILITY NOTES**
1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
 2. UTILITY SEPARATION REQUIREMENTS:
 - 2.a. A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
 - 2.b. WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10". IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - 2.c. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS
 - 2.d. 3.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
 - 2.e. MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W41 & 5-49).
 - 2.f. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
 3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
 4. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
 5. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24-HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
 6. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
 7. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
 8. INSTALL 3/4" AND 2" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE
 9. INSTALL 6 PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
 10. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
 11. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
 12. NCDOT /RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
 13. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RWI FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC AND/OR BUILDING PERMIT. CONTACT (919) 996-4516 OR FOG@RALEIGHNC.GOV FOR MORE INFORMATION.
 14. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA.
 15. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS AND BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST.
 16. THE DEVICE AND INSTALLATION SHALL MEET THE GUIDELINES OF APPENDIX A - GUIDELINES AND REQUIREMENTS FOR THE CROSS CONNECTION PROGRAM IN RALEIGH'S SERVICE AREA.
 17. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT.
 18. NOTICE FOR PROJECTS WITH REPLACED OR OVERSIZED MAINS: IF THE CITY'S REIMBURSEMENT FOR AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT PROJECT IS \$250,000 OR GREATER, THE PROJECT MUST BE PUBLICLY BID.
 19. RALEIGH WATER STAFF MAY NEED TO BE ONSITE WHILE ANY CONSTRUCTION OCCURS IN THE VICINITY OF THE CRITICAL WATER TRANSMISSION MAIN. PLEASE EMAIL WDSERVICEQUEST@RALEIGHNC.GOV AT A MINIMUM 72 HOURS IN ADVANCE TO ANY WORK IN THE VICINITY OF THIS CRITICAL WATER TRANSMISSION MAIN.

- BACKFLOW PREVENTION NOTES**
1. REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY AS APPROVED BY TOWN OF ROLESVILLE AND INSTALLED BY CONTRACTOR DURING CONSTRUCTION. ASSEMBLY TO BE INSTALLED ABOVE GROUND WITHIN INSULATED ENCLOSURE PER TOWN OF ROLESVILLE REQUIREMENTS. ENCLOSURE TO BE LOCATED OUT OF SETBACK.
 2. THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT. CONNECTION POINTS OR OTHER WATER USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS REQUIRED BACKFLOW PREVENTER.
 3. EACH REQUIRED BACKFLOW PREVENTION ASSEMBLY IS REQUIRED TO BE TESTED BY AN APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM IN SERVICE AND YEARLY THEREAFTER. SUBMIT PASSING TEST REPORTS TO TOWN OF ROLESVILLE.
 4. DUCTILE IRON, COPPER, OR OTHER METALLIC PIPING (NO PVC) IS TO BE USED WITHIN 5 FEET OF ALL BACKFLOW PREVENTION DEVICES.
 5. TAMPER SWITCHES SHALL BE INSTALLED ON THE FIRE LINE BACKFLOW PREVENTION. INSTALL 3/4" CONDUIT FROM FIRE LINE BACKFLOW ENCLOSURE/WALL TO BUILDING ALARM SYSTEM INSIDE BUILDING. COORDINATE WITH ELECTRICAL DRAWINGS AND ALARM SYSTEM MANUFACTURER.



EXISTING UTILITY NOTE:

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING ANY WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

MOUNT PLEASANT, SC 843.884.1667
 GREENVILLE, SC 864.298.0534
 SUMMERVILLE, SC 843.972.0710
 SPARTANBURG, SC 864.272.1272
 CHARLOTTE, NC 980.312.5450
 WWW.SEAMONWHITESIDE.COM

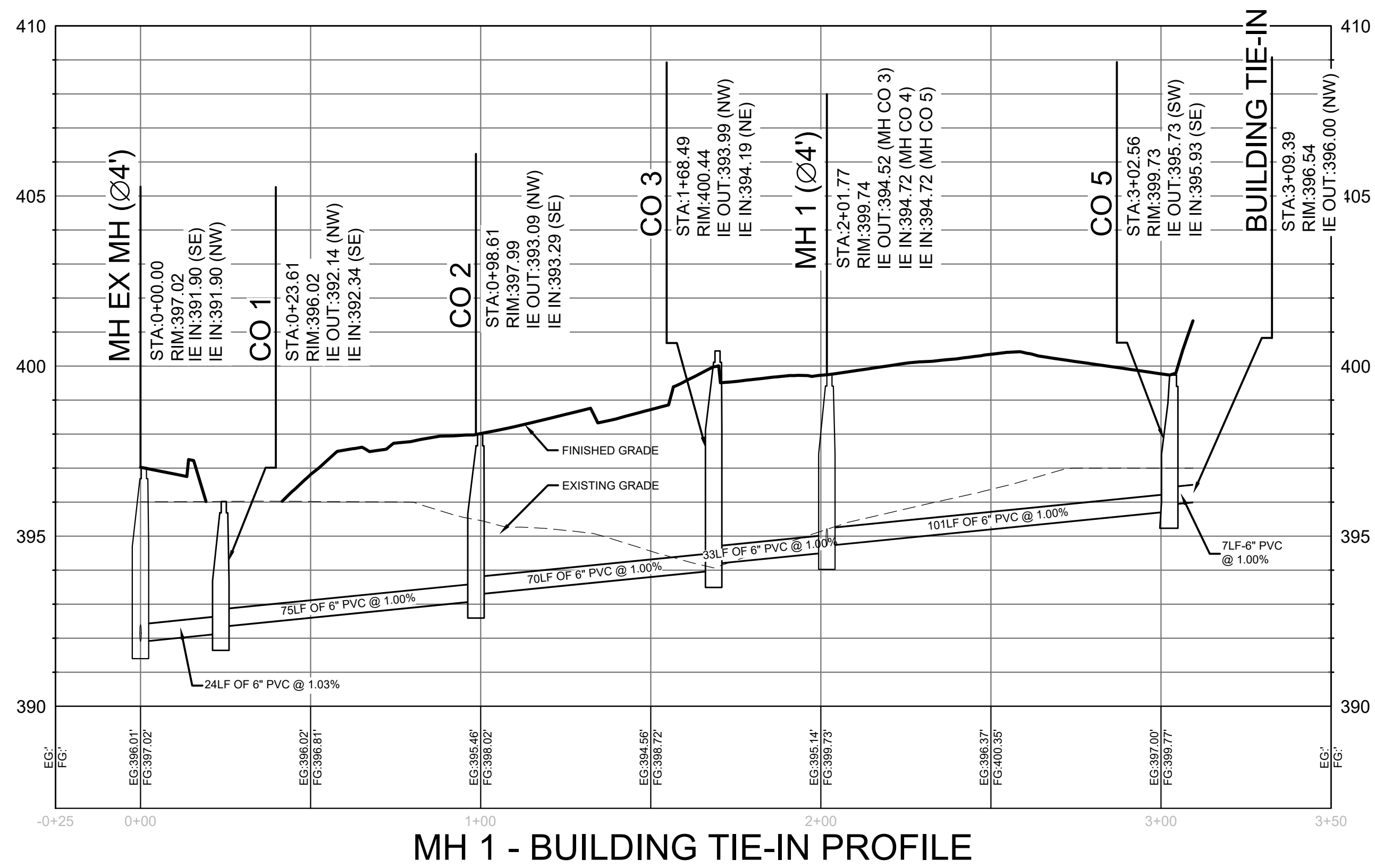
TIDAL WAVE AUTO SPA
 ROLESVILLE, NC

SW+ PROJECT: 10772
 DATE: 09/04/24
 DRAWN BY: CPE
 CHECKED BY: TLL

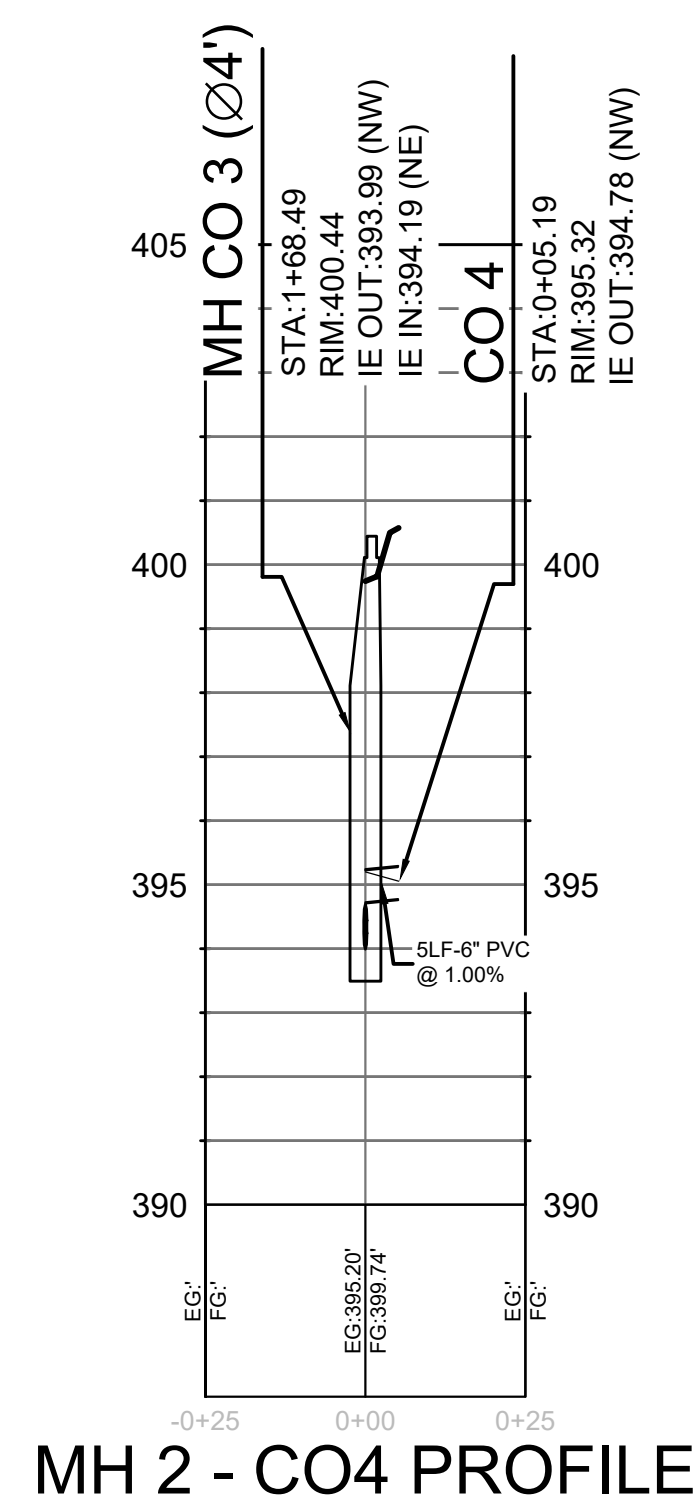
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B 03/01/24	
C 09/04/24	

UTILITY PLAN AND PROFILES

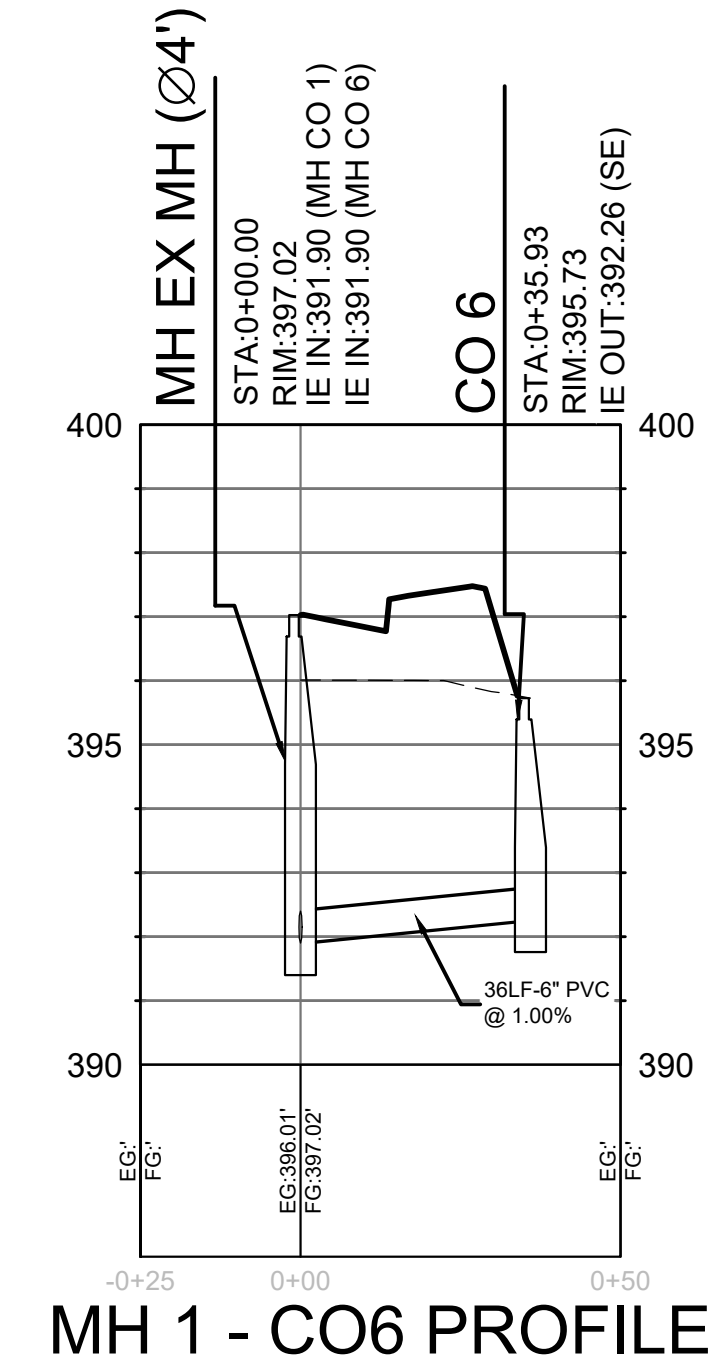
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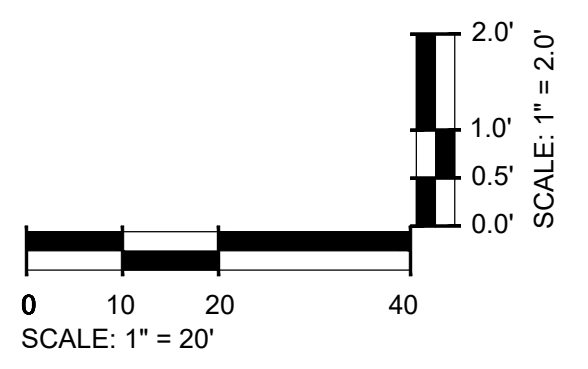
MH 1 - BUILDING TIE-IN PROFILE



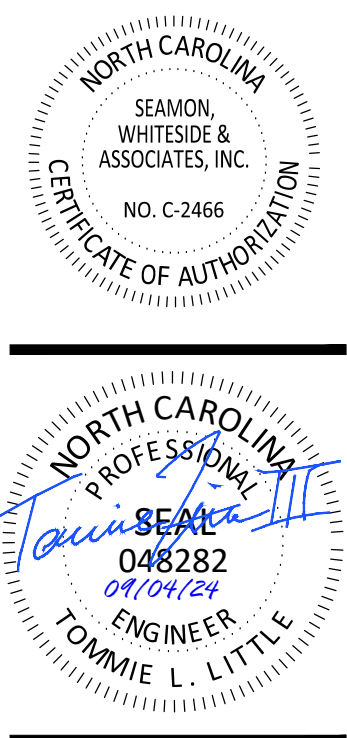
MH 2 - CO4 PROFILE



MH 1 - CO6 PROFILE



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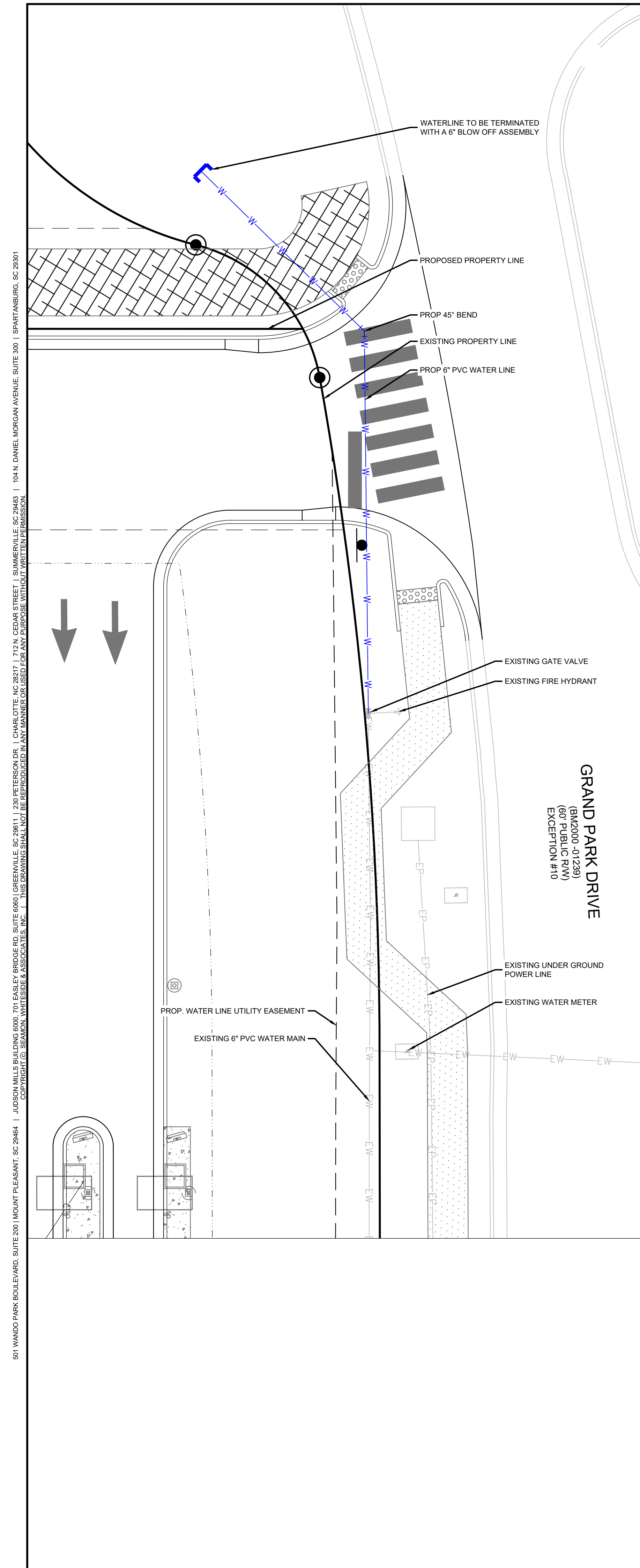


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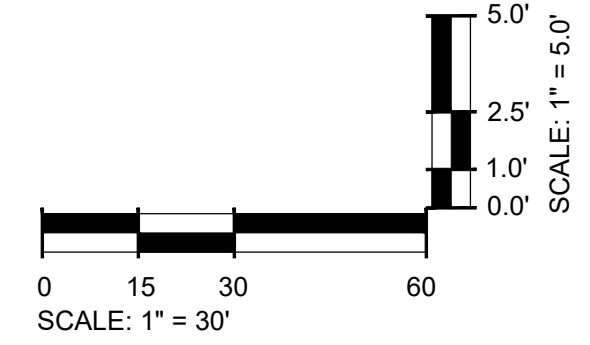
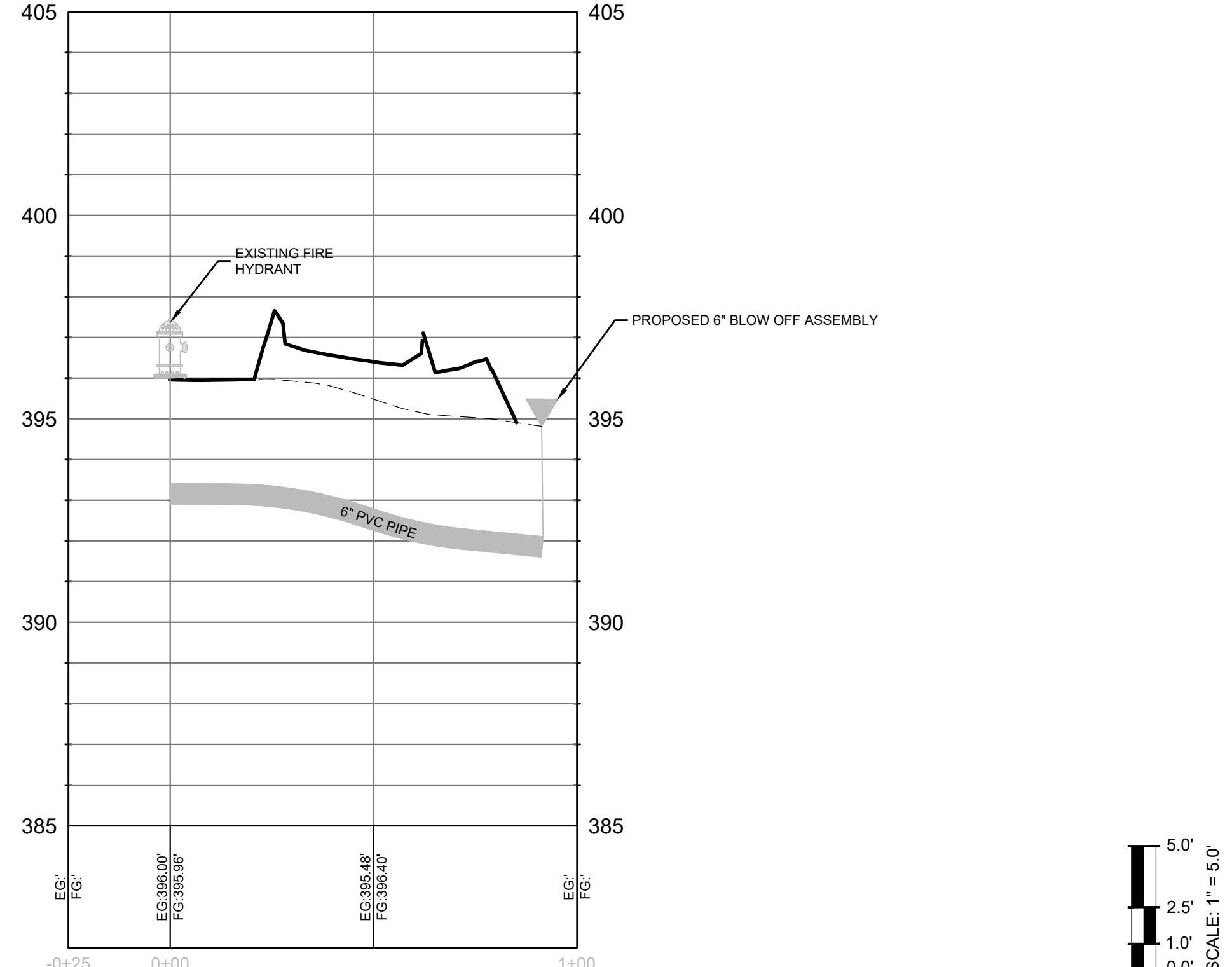
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UTILITY PROFILES



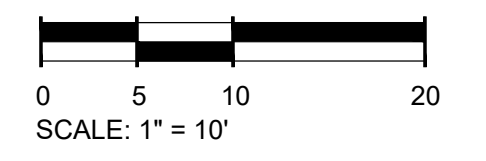
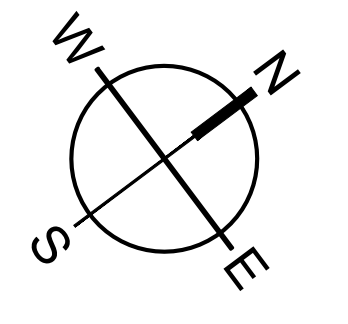
GRAND PARK DRIVE
 (MOUNTAIN VIEW)
 (60" PUBLIC R/W)
 EXEMPTION #10

UTILITY (NEW WATERLINE) ALIGNMENT PROFILE



- STANDARD UTILITY NOTES**
- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
 - UTILITY SEPARATION REQUIREMENTS:
 - A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
 - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS
 - 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER
 - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W41 & S-49).
 - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
 - ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
 - DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
 - CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24-HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
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- BACKFLOW PREVENTION NOTES**
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 - THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPT. CONNECTION POINTS OR OTHER WATER USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS REQUIRED BACKFLOW PREVENTER.
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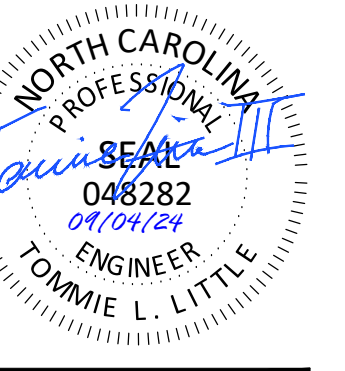


EXISTING UTILITY NOTE:

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SW SEAMON WHITESIDE

MOUNT PLEASANT, SC 843.884.1667
 GREENVILLE, SC 864.298.0534
 SUMMERVILLE, SC 843.972.0710
 SPARTANBURG, SC 864.272.1272
 CHARLOTTE, NC 980.312.5450
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TIDAL WAVE AUTO SPA
 ROLESVILLE, NC

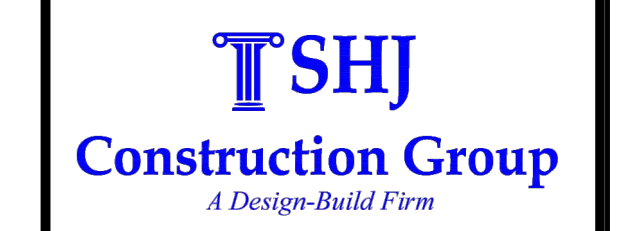
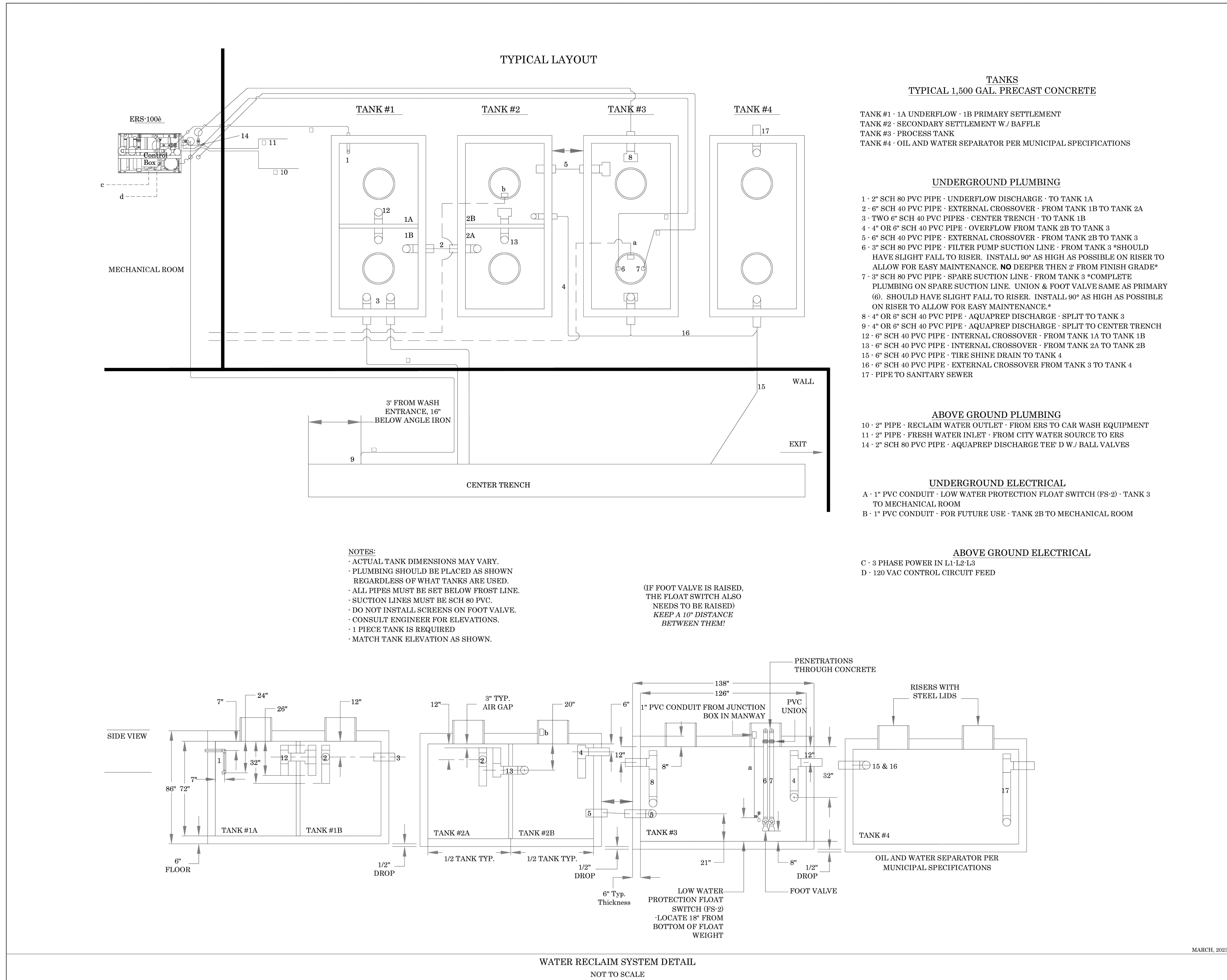
SW+ PROJECT: 10772
 DATE: 09/04/24
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 CHECKED BY: TLL

REVISION HISTORY

10/30/23	
A 12/22/23	
B 03/01/24	
C 09/04/24	

OFFSITE WATER MAIN EXTENSION

501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29564 | JACOBS PLUS BUILDING 6000 7th FLOOR | CHARLOTTE, NC 28217 | 701 CENAS STREET | SUMMERVILLE, SC 29581 | 230 PETERSBORO | SPARTANBURG, SC 29583 | 101 N. DANIEL MORGAN AVENUE SUITE 300 | SPARTANBURG, SC 29581
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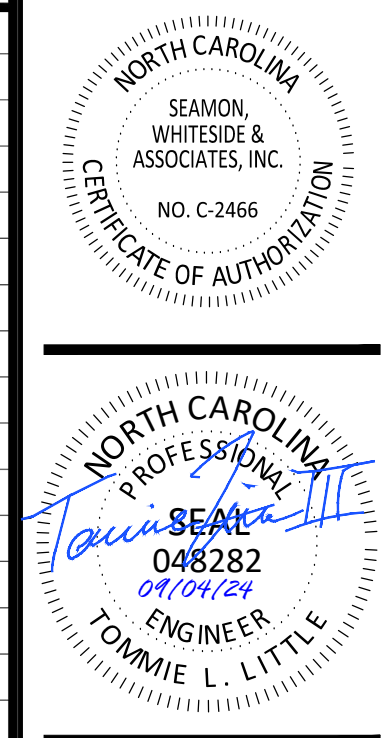
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DATE OF PLANS
03/31/2023

REVISIONS

NO.	DATE	DESCRIPTION
1	-	-
2	-	-
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-



TECHNICAL CRITERIA
 SHJ CONSTRUCTION GROUP
 WATER RECLAIM SYSTEM DETAIL

TIDAL WAVE AUTO SPA
 ROLESVILLE, NC

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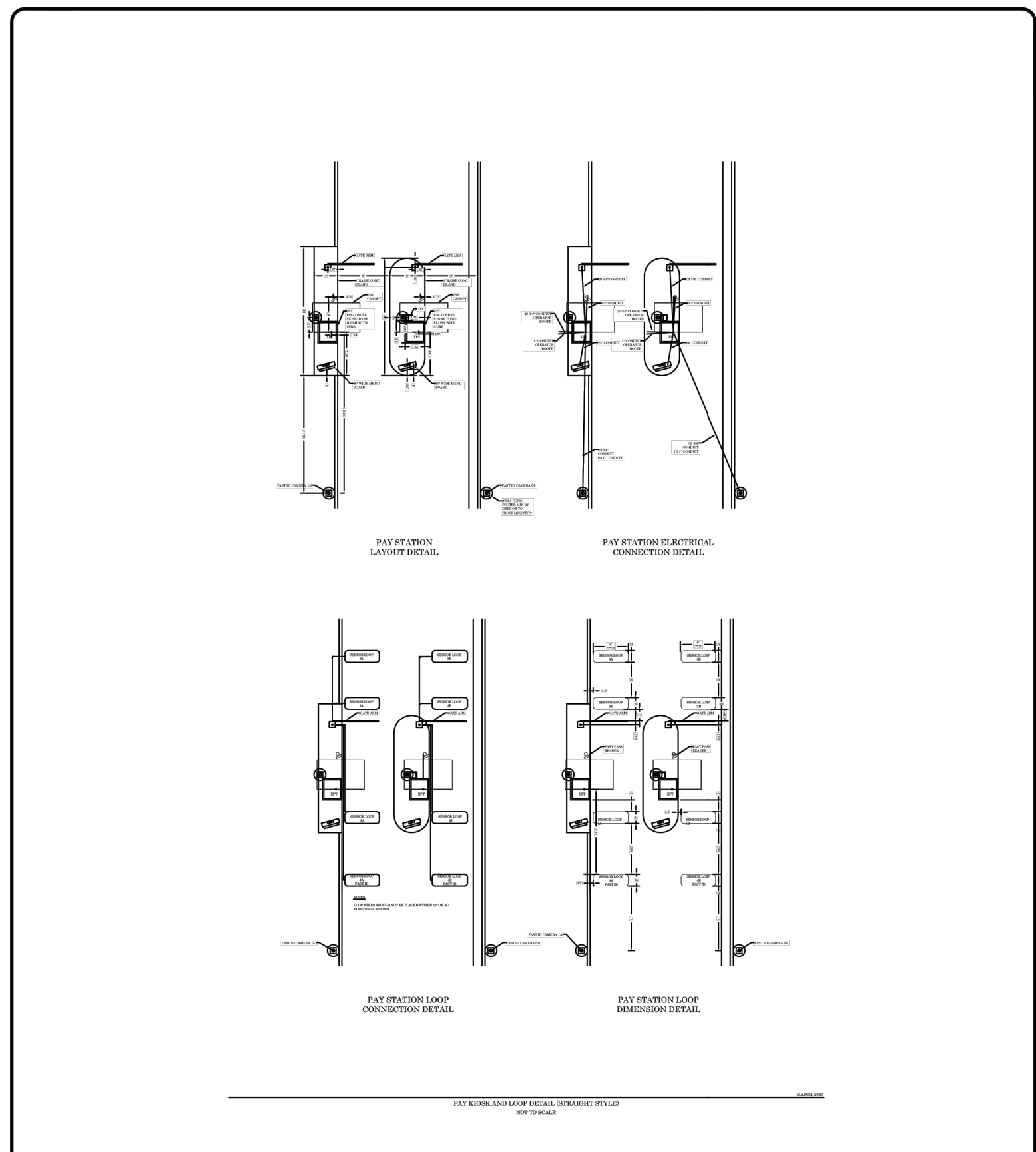
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B 03/01/24
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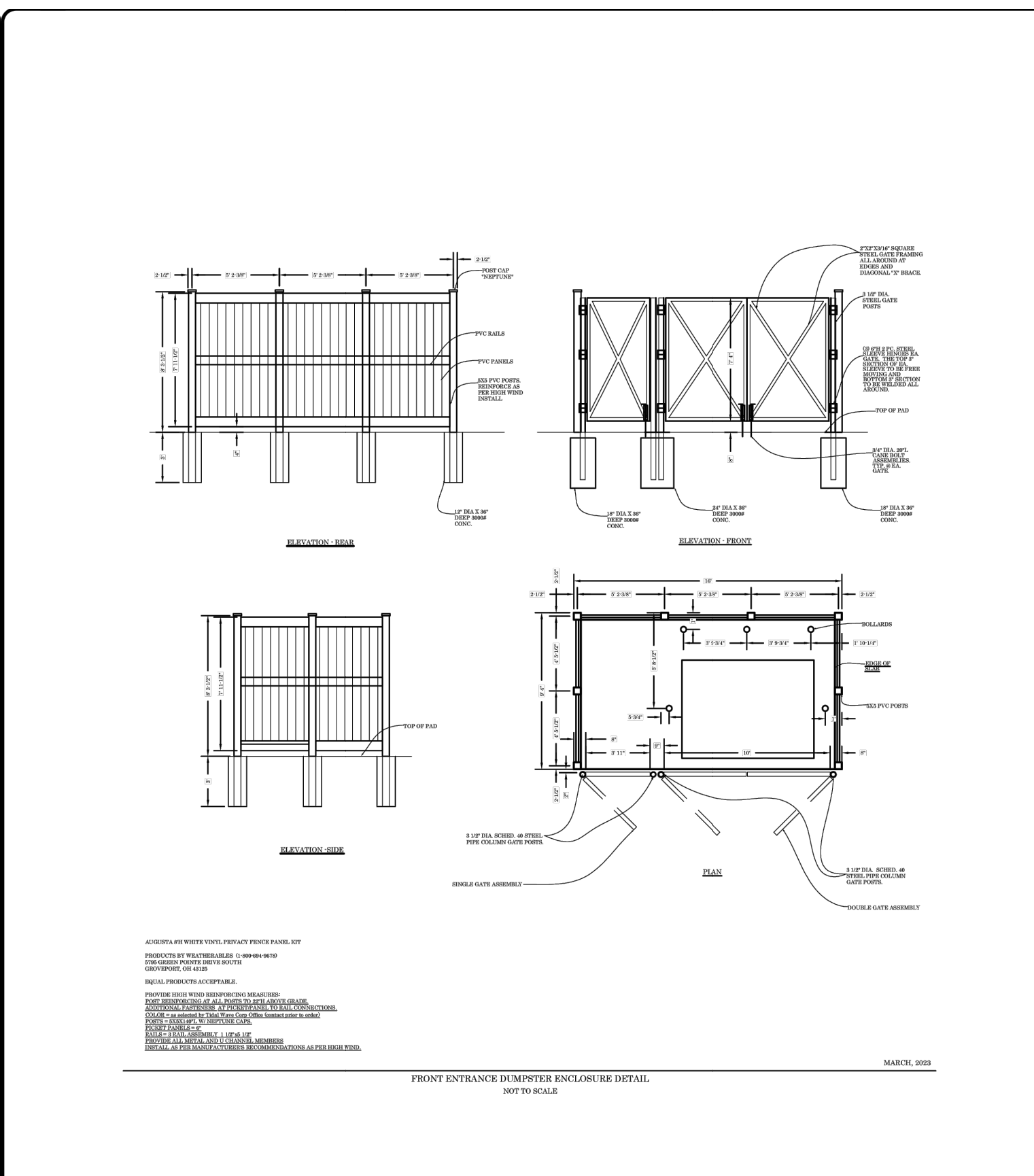
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CONSTRUCTION DETAILS

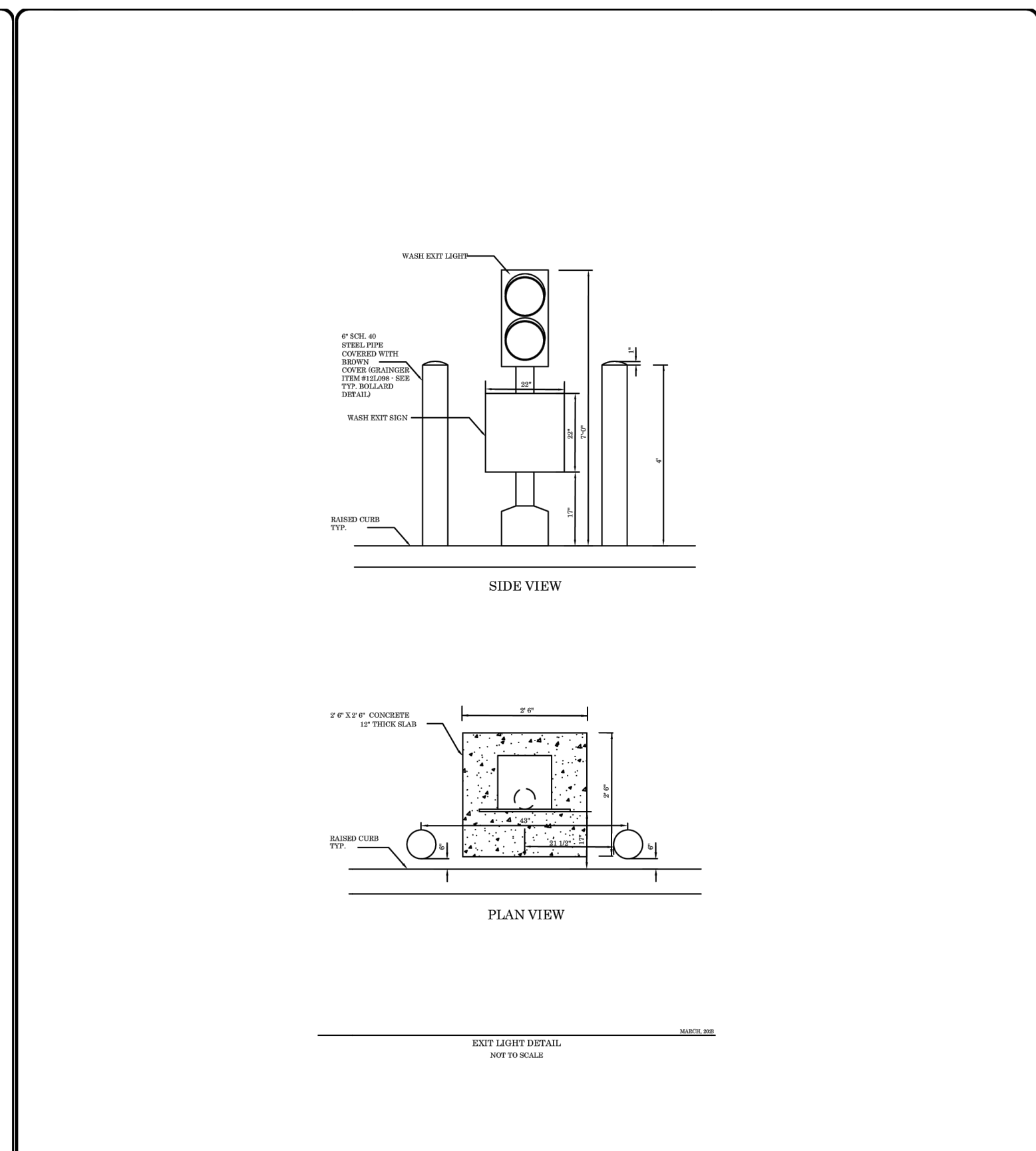
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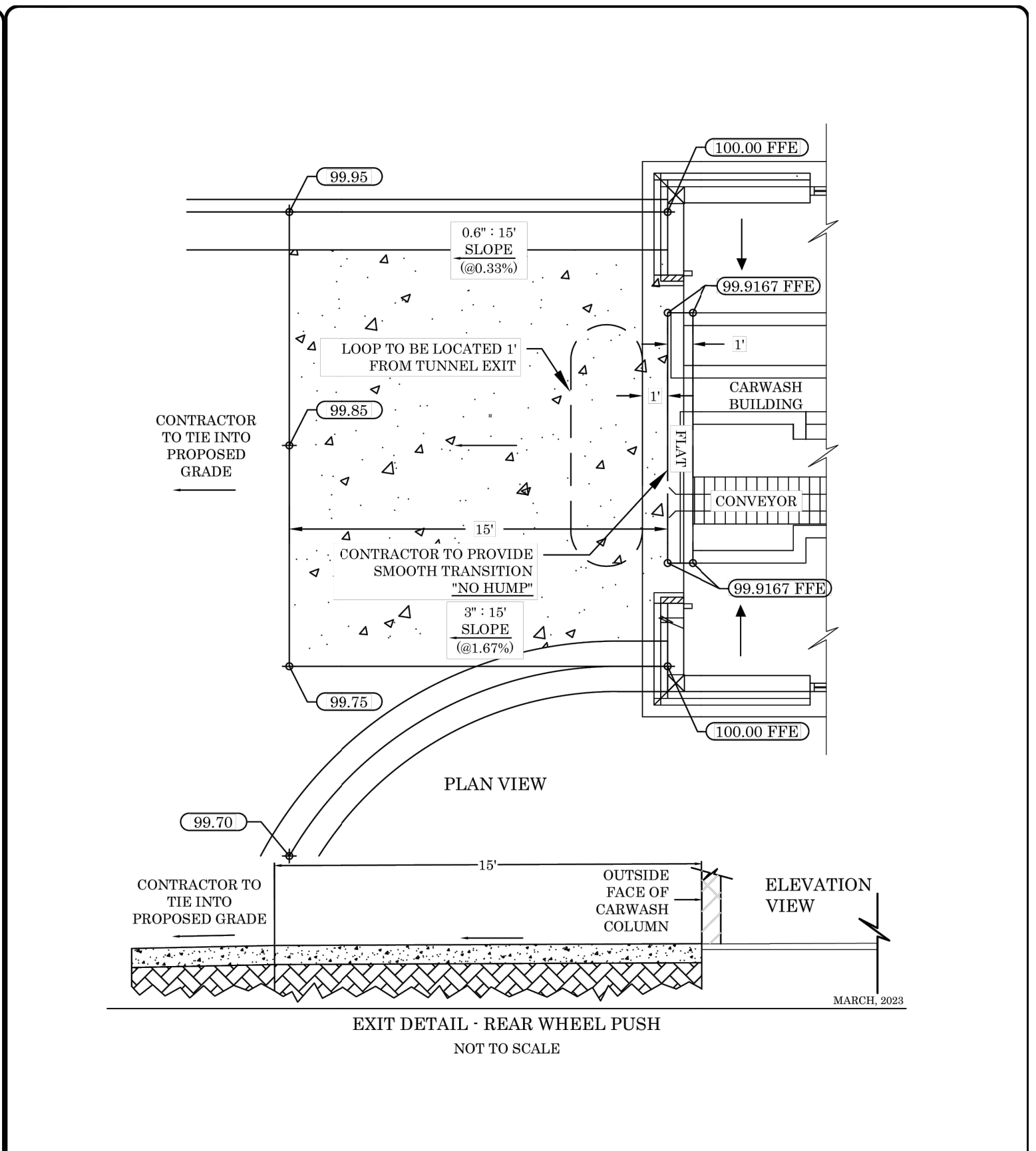
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DATE OF PLANS	SHJ CONSTRUCTION GROUP
03/31/2023	
NOT TO SCALE	



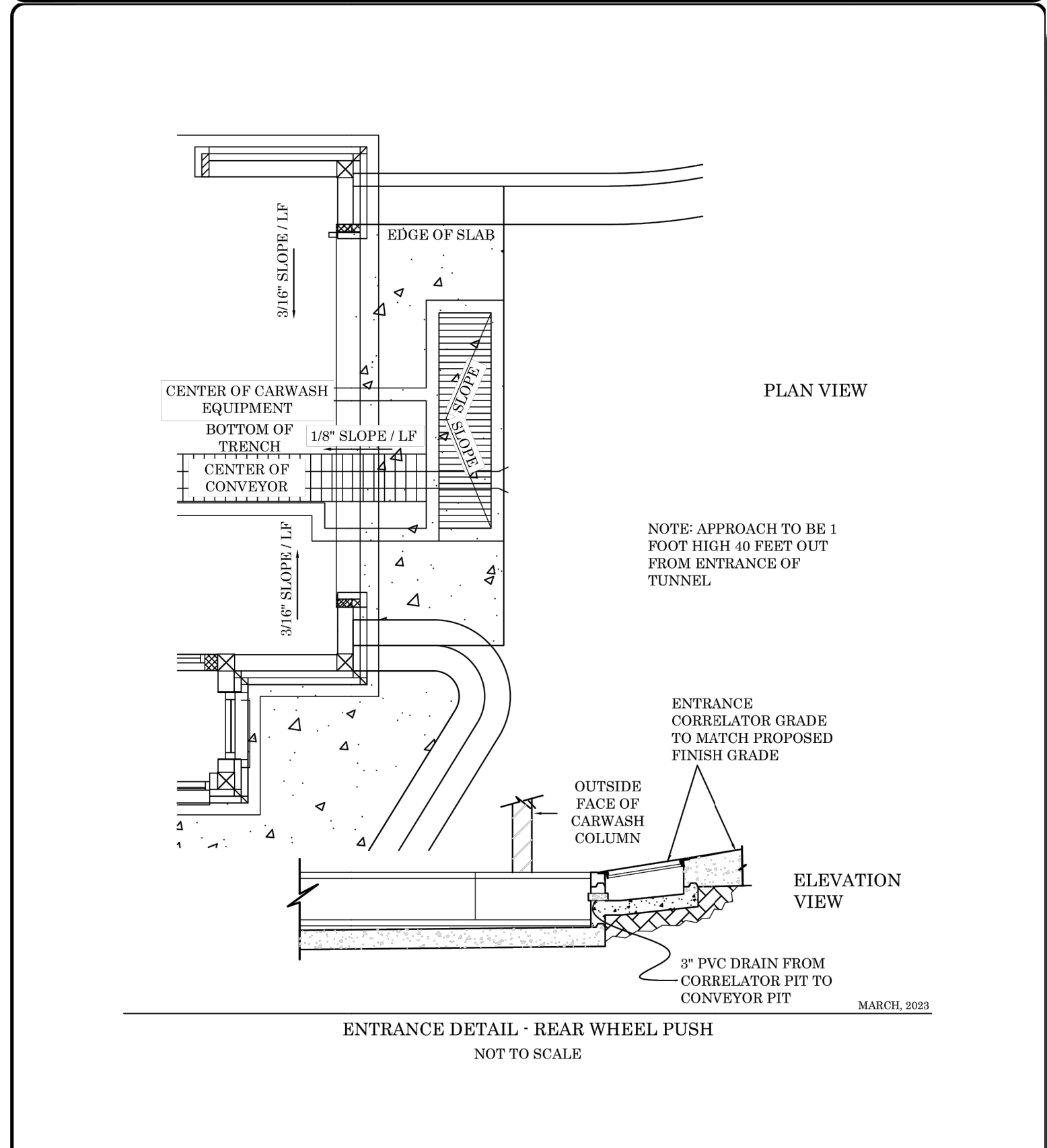
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03/15/2023	
NOT TO SCALE	



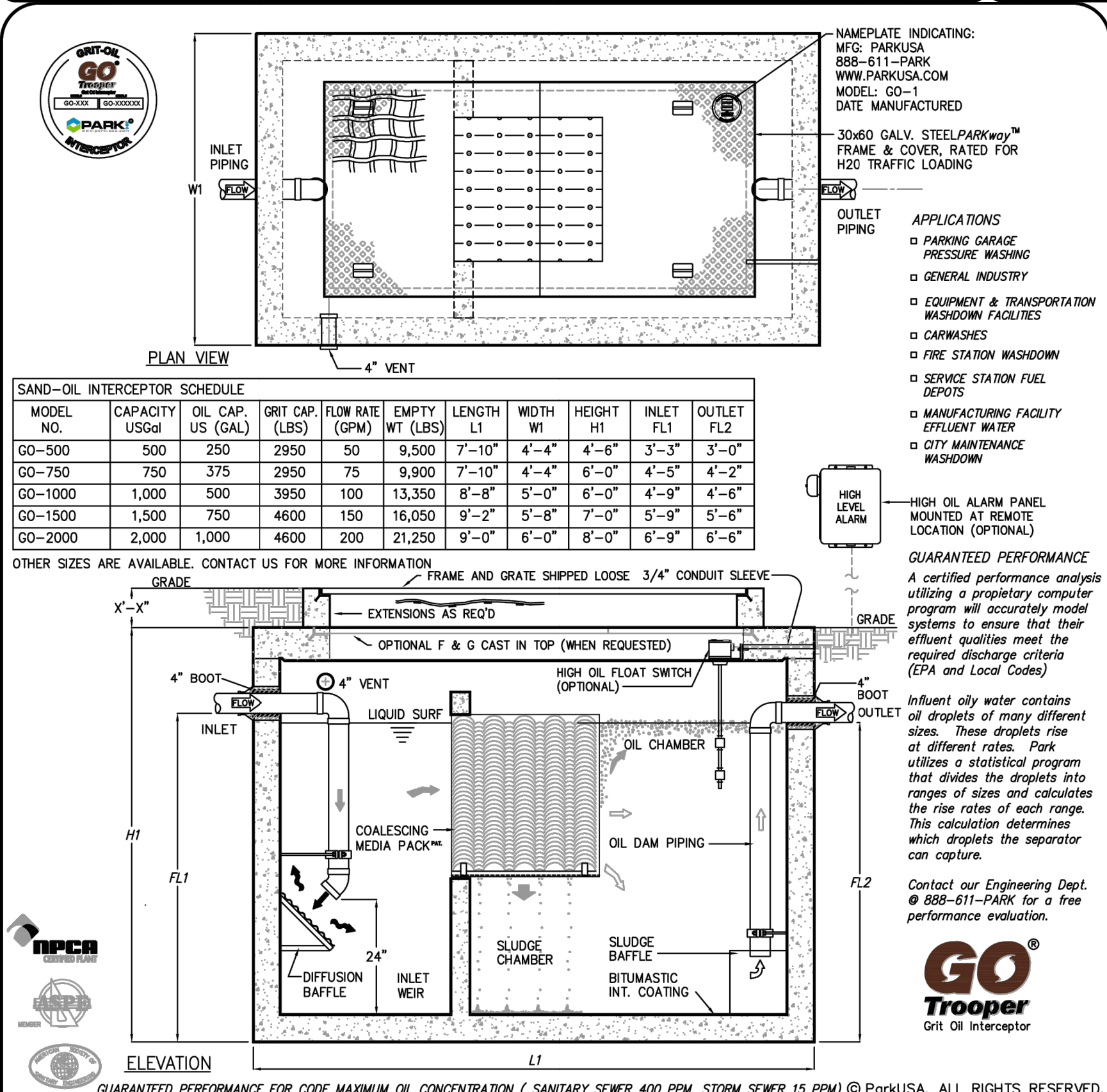
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DATE OF PLANS	SHJ CONSTRUCTION GROUP
03/15/2023	
NOT TO SCALE	



TECHNICAL CRITERIA	
REAR-WHEEL PUSH - EXIT	
DATE OF PLANS	SHJ CONSTRUCTION GROUP
03/15/2023	
NOT TO SCALE	



TECHNICAL CRITERIA	
REAL-WHEEL PUSH - ENTRANCE	
DATE OF PLANS	SHJ CONSTRUCTION GROUP
03/15/2023	
NOT TO SCALE	



PROJECT:				
CUSTOMER:				
ENGINEER:				
ORDER #:				
PROJ #:				
DATE:				
Grit Oil Interceptor Model GO				
Sizes 500 thru 2000				
PM	DRN	ENG	DWG. NO.	REV.
			GO-1	A
DATE				
2018				



MOUNT PLEASANT, SC 843.884.1667
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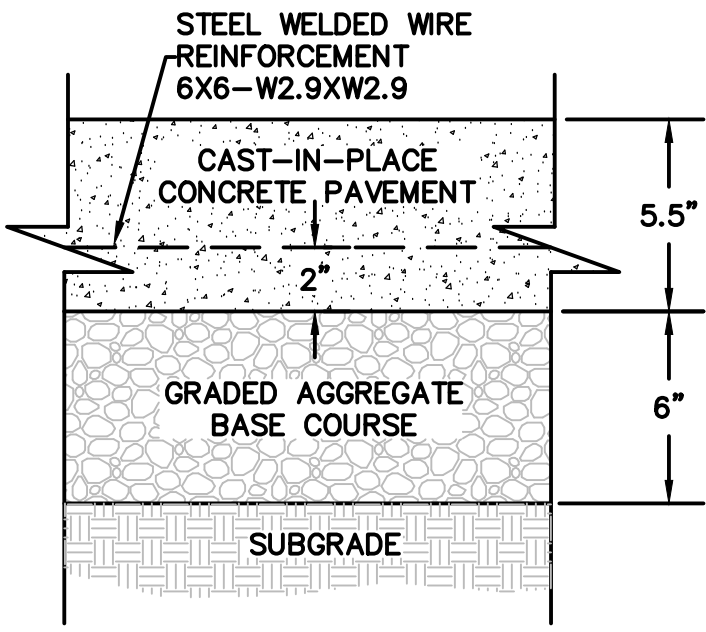
TIDAL WAVE AUTO SPA
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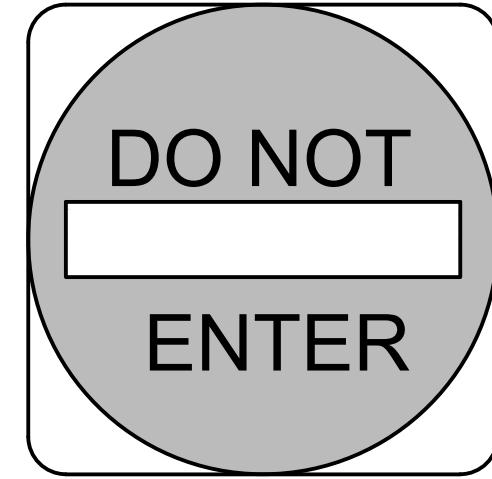
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C 09/04/24	

CONSTRUCTION DETAILS

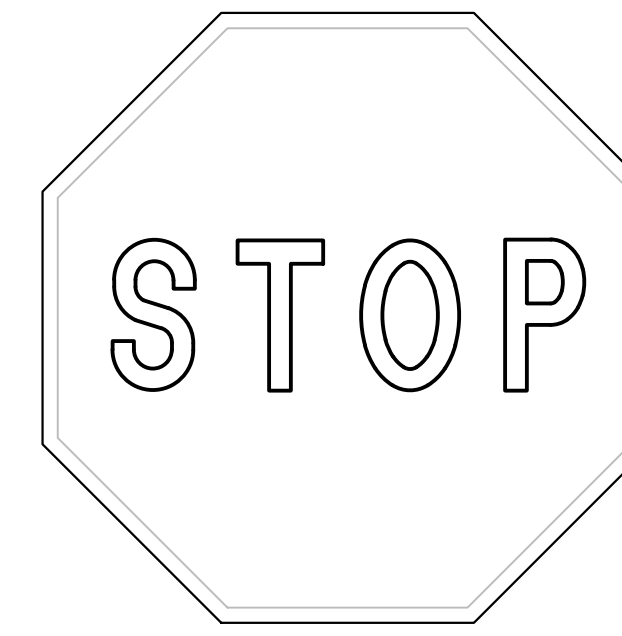
ITEM:	MATERIAL:
SUBGRADE	PREPARED IN-SITU SUBSOIL OR STRUCTURAL FILL
BASE COURSE	GRADED AGGREGATE BASE COURSE
CONCRETE PAVEMENT	CAST-IN-PLACE CONCRETE



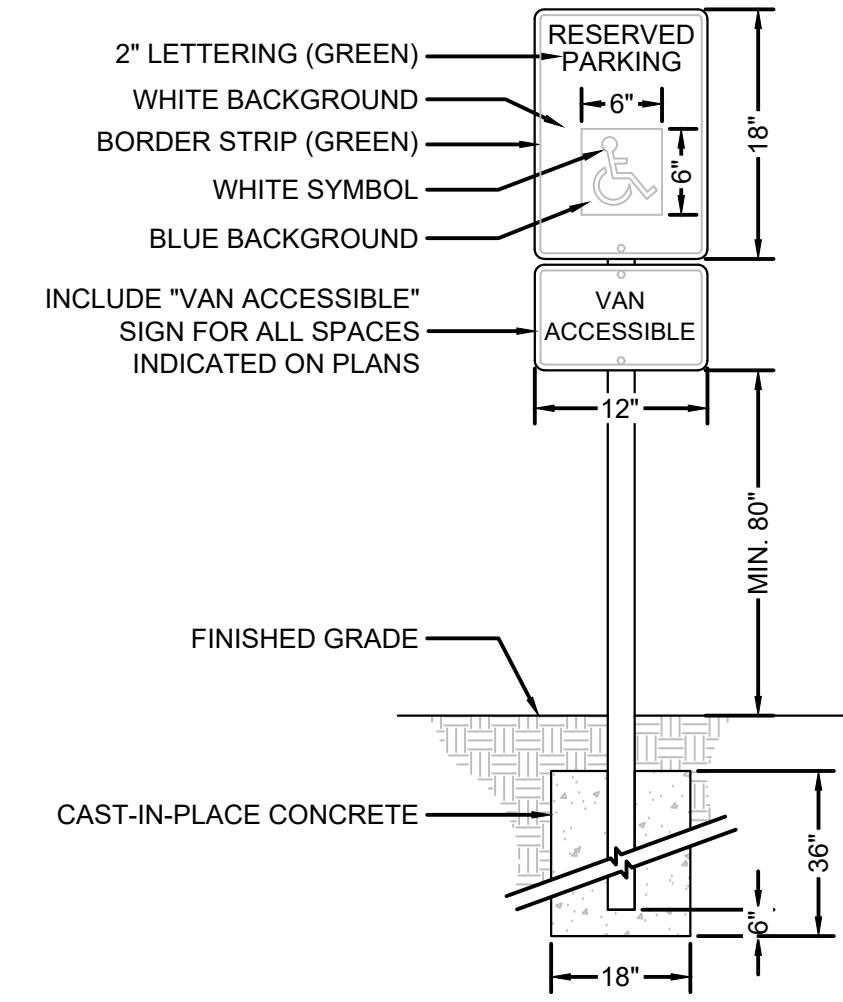
NOTES:
 1. WHERE SHOWN, SEE PLAN FOR EXPANSION AND CONTROL JOINT LOCATIONS. OTHERWISE, SEE SPECS FOR REQUIRED LOCATION AND SPACING.
 2. CONTRACTOR IS ADVISED THAT PAVING DESIGN RECOMMENDED BY GEOTECHNICAL ENGINEER IS BASED ON PREDICTED TRAFFIC LOADING AND ESTABLISHED STRENGTHS FOR PROPERLY INSTALLED PAVEMENTS. CONTRACTOR MUST COORDINATE REQUIRED GEOTECHNICAL TESTING & INSPECTION TO ENSURE THAT SUBGRADE AND PAVEMENT STRENGTH REQUIREMENTS ARE MET.



DO NOT ENTER SIGN AND INSTALLATION TO CONFORM WITH S.C.M.U.T.D. SPECIFICATIONS.
 NUMBER: R5-1-30
 SIZE: 30" X 30"
 CLASS: STANDARD
 LEGEND AND BACKGROUND: WHITE-REFLECTORIZED
 CIRCLE: RED-REFLECTORIZED
 SIGN POST: GALVANIZED U-CHANNEL PER SCDOT SPECIFICATIONS



NOTES:
 STOP SIGN AND INSTALLATION TO CONFORM WITH NCSMUTCD SPECIFICATIONS.
 NUMBER: R1-1-30
 SIZE: 30" X 30"
 CLASS: STANDARD
 BACKGROUND: RED-REFLECTORIZED
 LEGEND AND BORDER: WHITE-REFLECTORIZED
 SIGN POST: GALVANIZED U-CHANNEL PER NCDOT SPECIFICATIONS



NOTES:
 1. SIGN SHALL BE 0.080" THICK ALUMINUM WITH APPLIED REFLECTIVE SHEETING IN ACCORDANCE WITH SCDOT STANDARD SPECIFICATIONS.
 2. POST SHALL BE 3" SQUARE OR 3" DIA. STEEL TUBE WITH WELDED CAP (PAINTED BLACK).
 3. CONTRACTOR TO WALL MOUNT SIGN WHERE SPECIFIED.

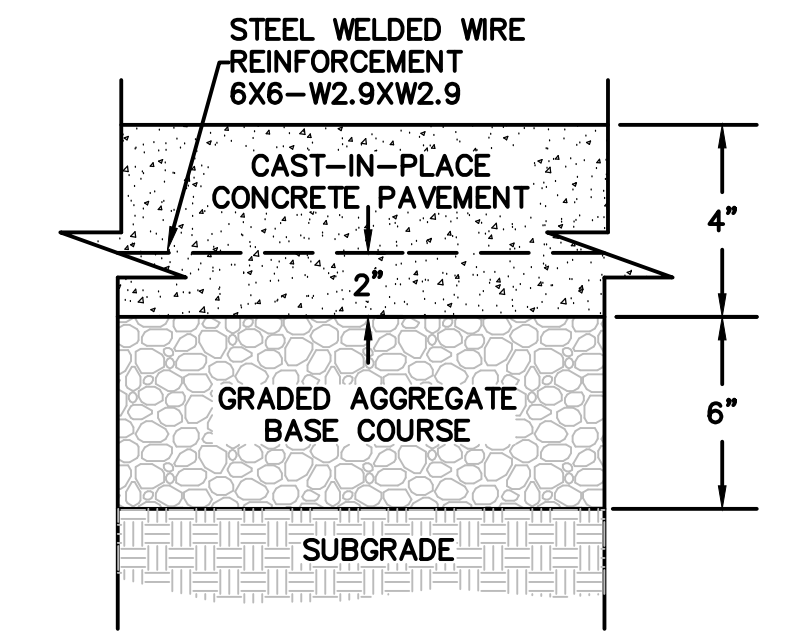
1 CONCRETE PAVEMENT - HEAVY DUTY
 SCALE: NOT TO SCALE

2 SIGN - DO NOT ENTER
 SCALE: NOT TO SCALE

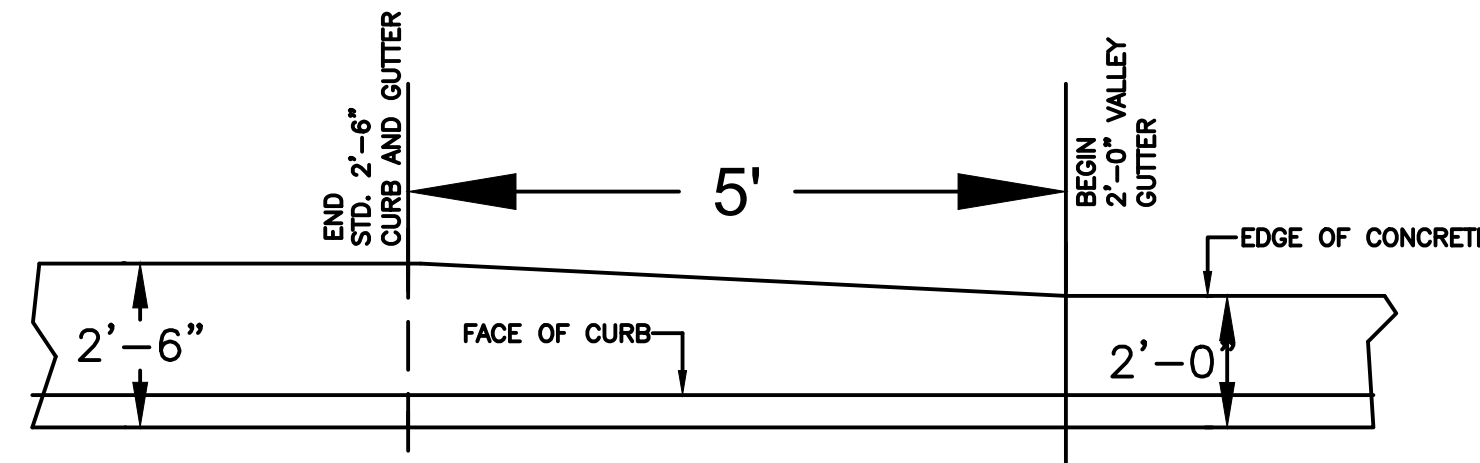
3 SIGN - STOP
 SCALE: NOT TO SCALE

4 ADA PARKING SIGN
 SCALE: NOT TO SCALE

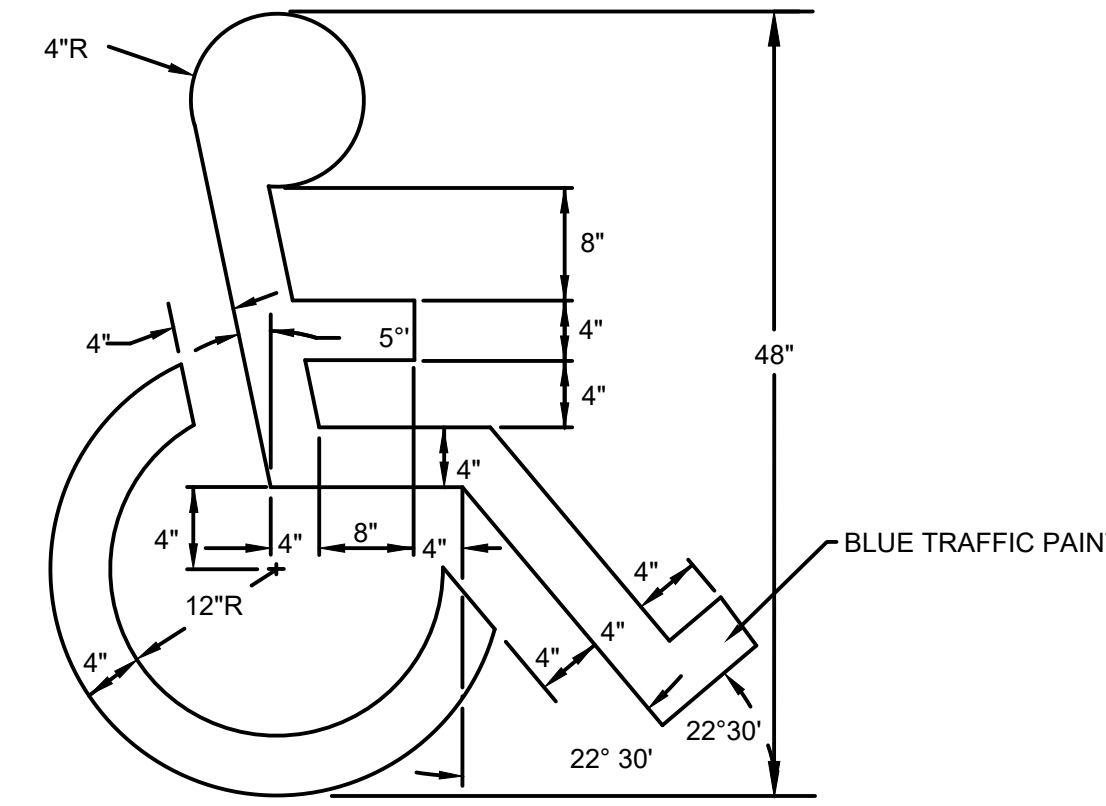
ITEM:	MATERIAL:
SUBGRADE	PREPARED IN-SITU SUBSOIL OR STRUCTURAL FILL
BASE COURSE	GRADED AGGREGATE BASE COURSE
CONCRETE PAVEMENT	CAST-IN-PLACE CONCRETE



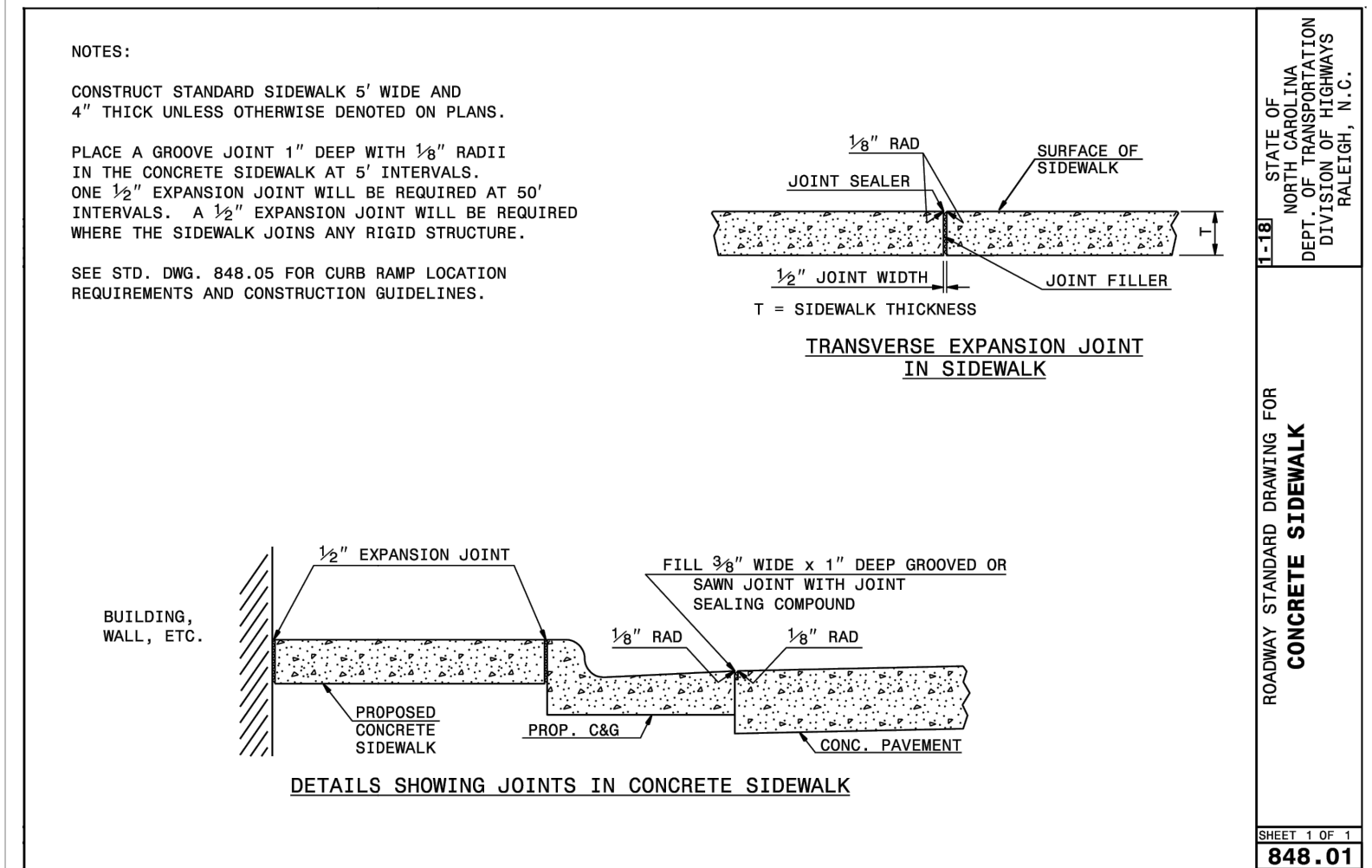
NOTES:
 1. WHERE SHOWN, SEE PLAN FOR EXPANSION AND CONTROL JOINT LOCATIONS. OTHERWISE, SEE SPECS FOR REQUIRED LOCATION AND SPACING.
 2. CONTRACTOR IS ADVISED THAT PAVING DESIGN RECOMMENDED BY GEOTECHNICAL ENGINEER IS BASED ON PREDICTED TRAFFIC LOADING AND ESTABLISHED STRENGTHS FOR PROPERLY INSTALLED PAVEMENTS. CONTRACTOR MUST COORDINATE REQUIRED GEOTECHNICAL TESTING & INSPECTION TO ENSURE THAT SUBGRADE AND PAVEMENT STRENGTH REQUIREMENTS ARE MET.



NOTES:
 1. TRANSITION IS NOT TO BE LOCATED WITHIN THE CURB RADIUS.



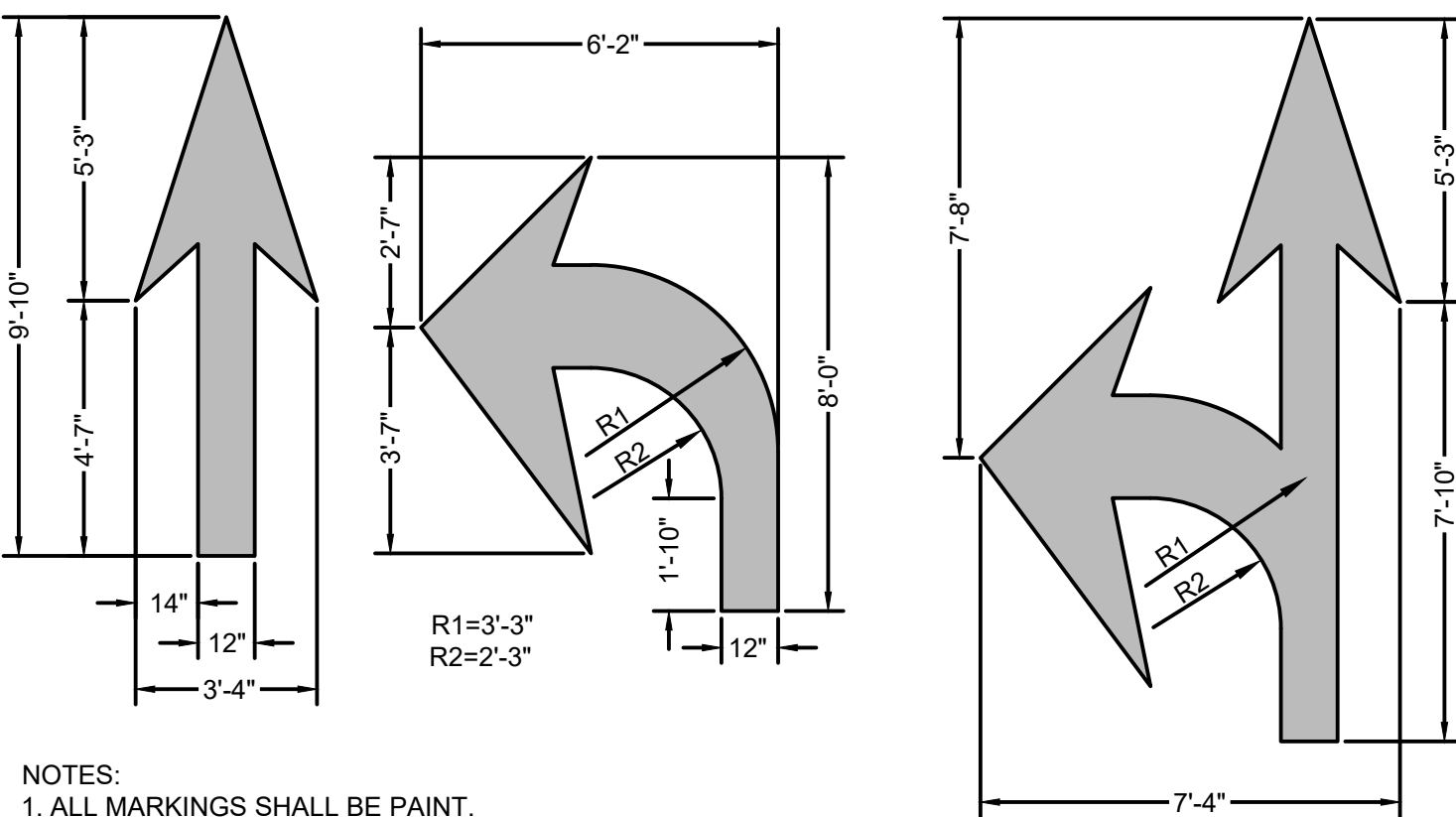
7 PAINTED ADA PARKING SYMBOL
 SCALE: NOT TO SCALE



8 NCDOT CONCRETE SIDEWALK
 SCALE: NOT TO SCALE

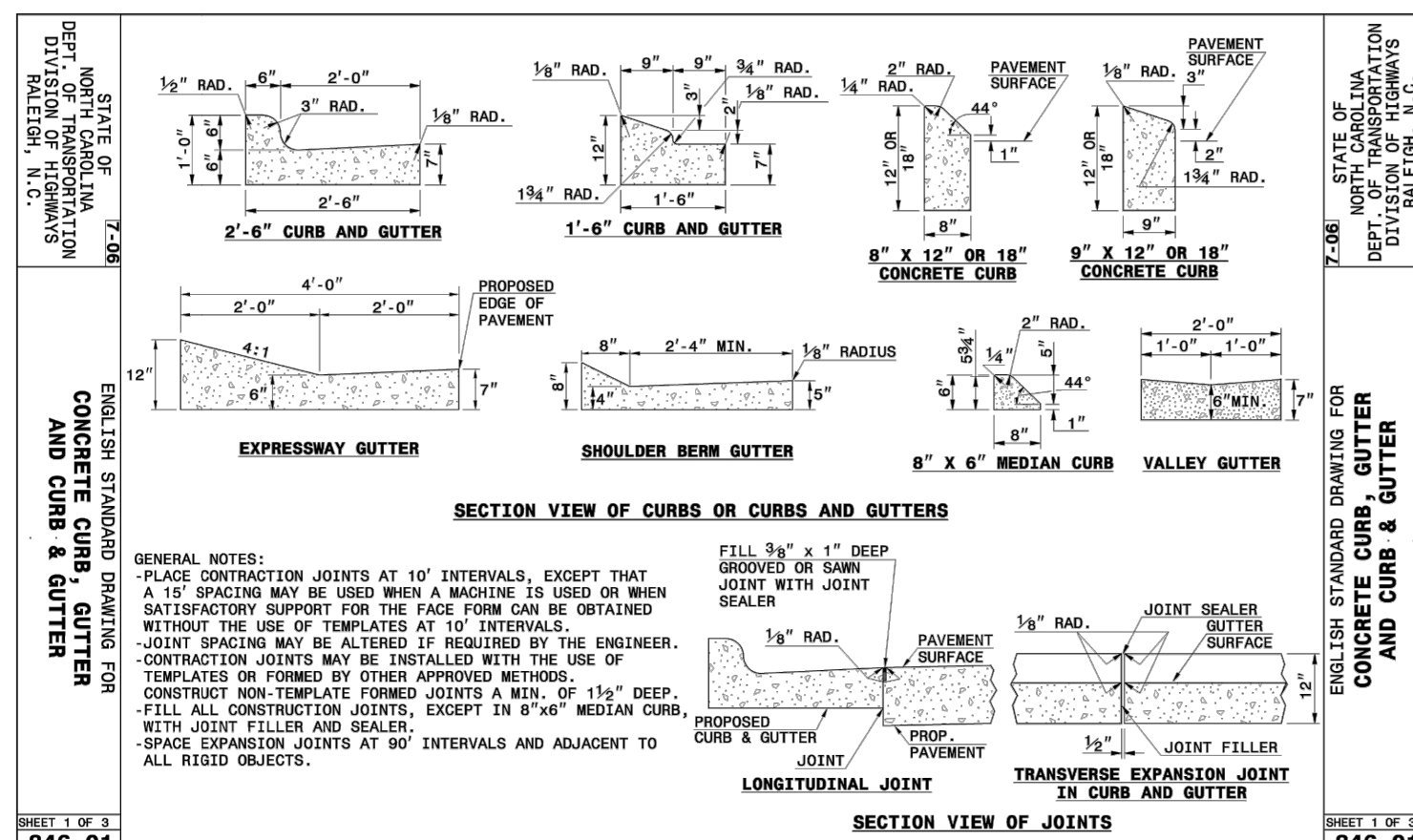
5 CONCRETE PAVEMENT - STANDARD DUTY
 SCALE: NOT TO SCALE

6 24" TO 30" CURB AND GUTTER TRANSITION
 SCALE: NOT TO SCALE

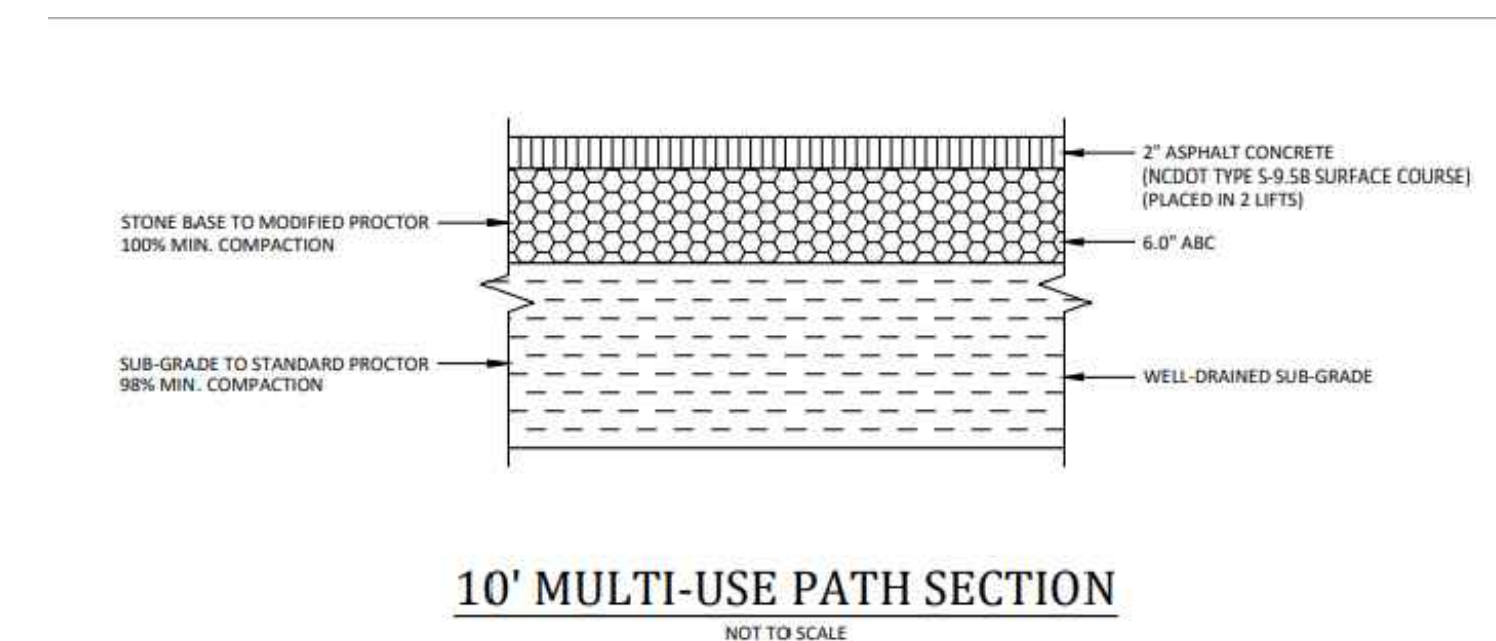


NOTES:
 1. ALL MARKINGS SHALL BE PAINT.
 2. ALL MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH N.C.D.O.T. STANDARD SPECIFICATIONS AND NORTH CAROLINA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

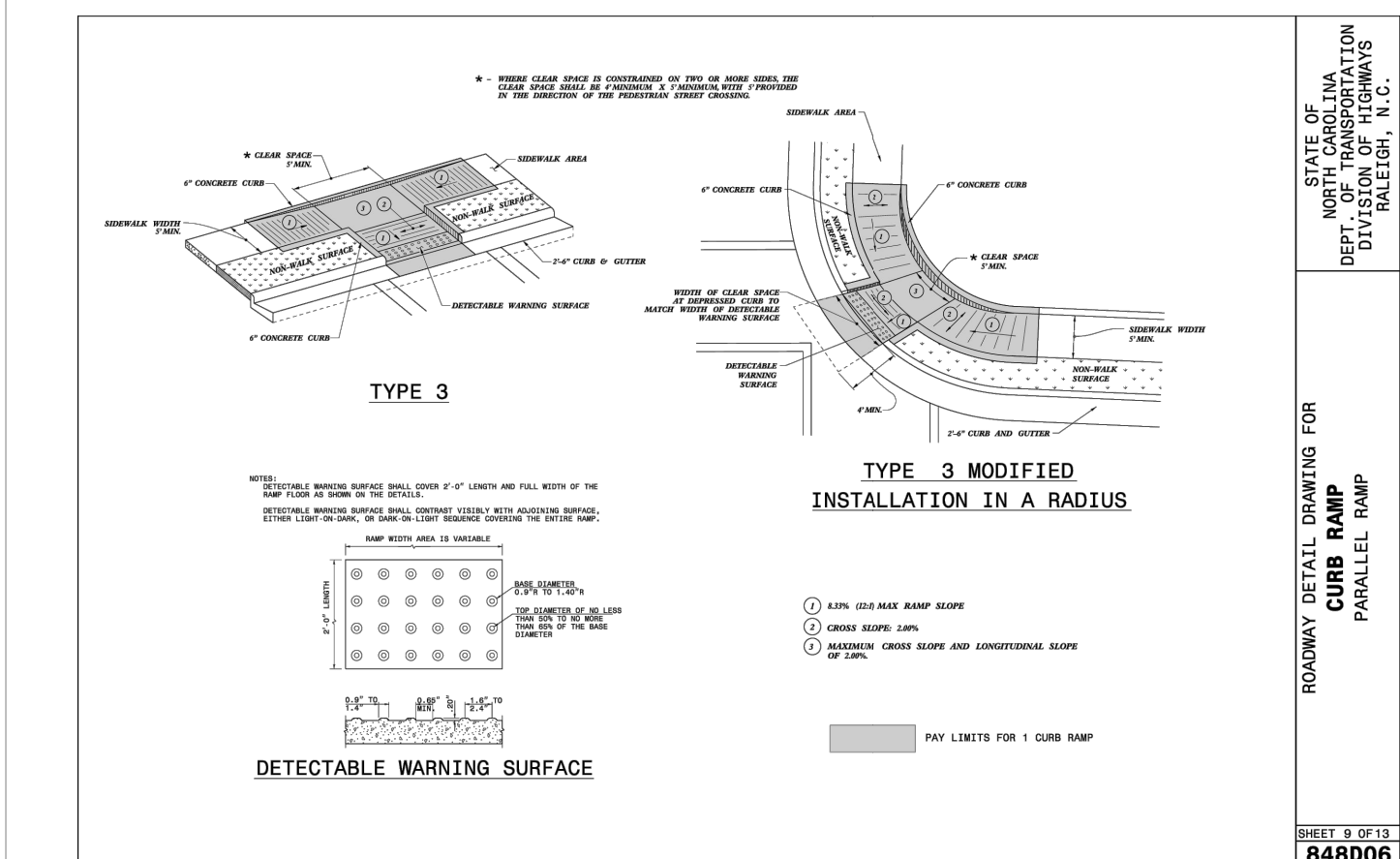
9 PAVEMENT-MARKING
 SCALE: NOT TO SCALE



10 NCDOT 30" CURB AND GUTTER
 SCALE: NOT TO SCALE

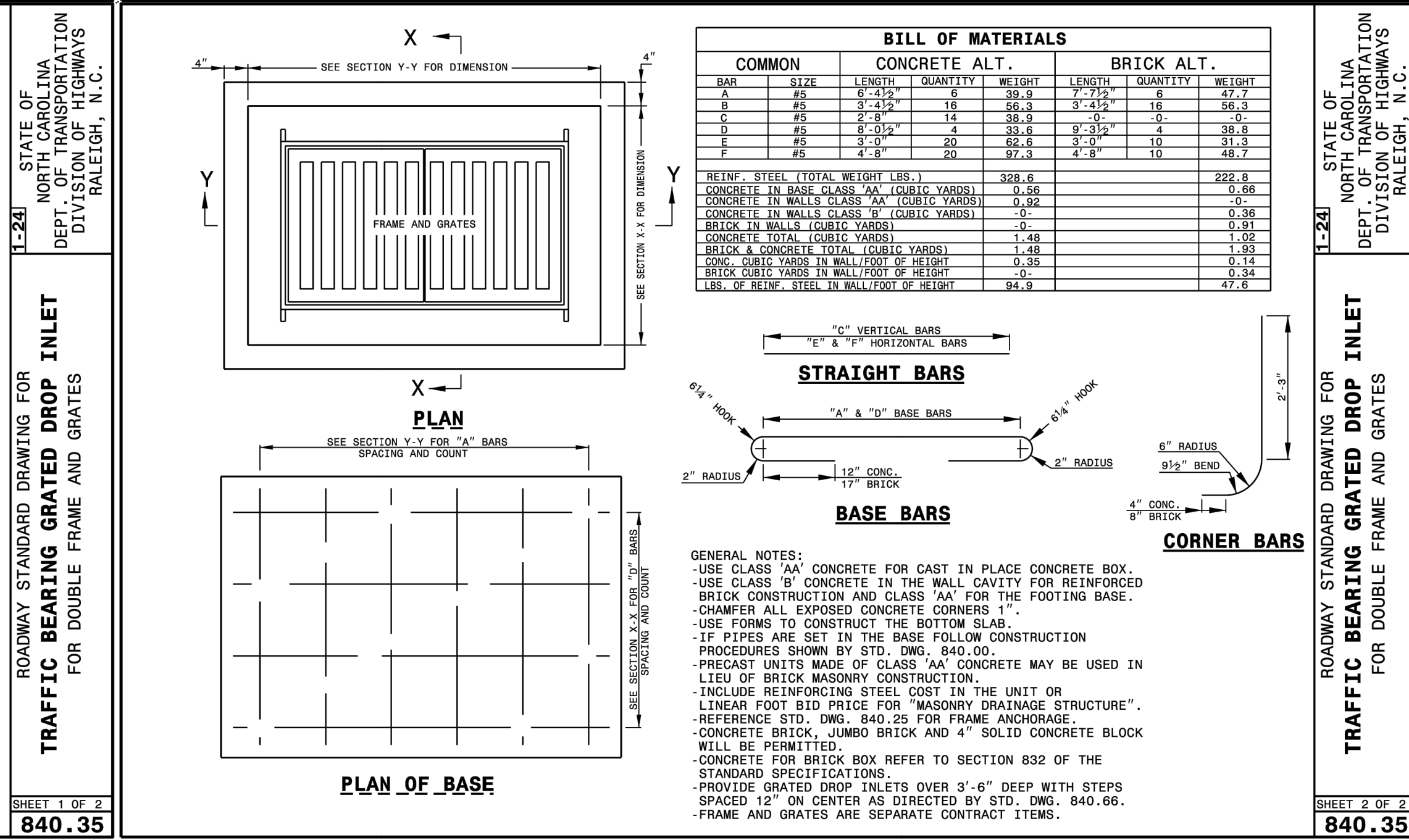
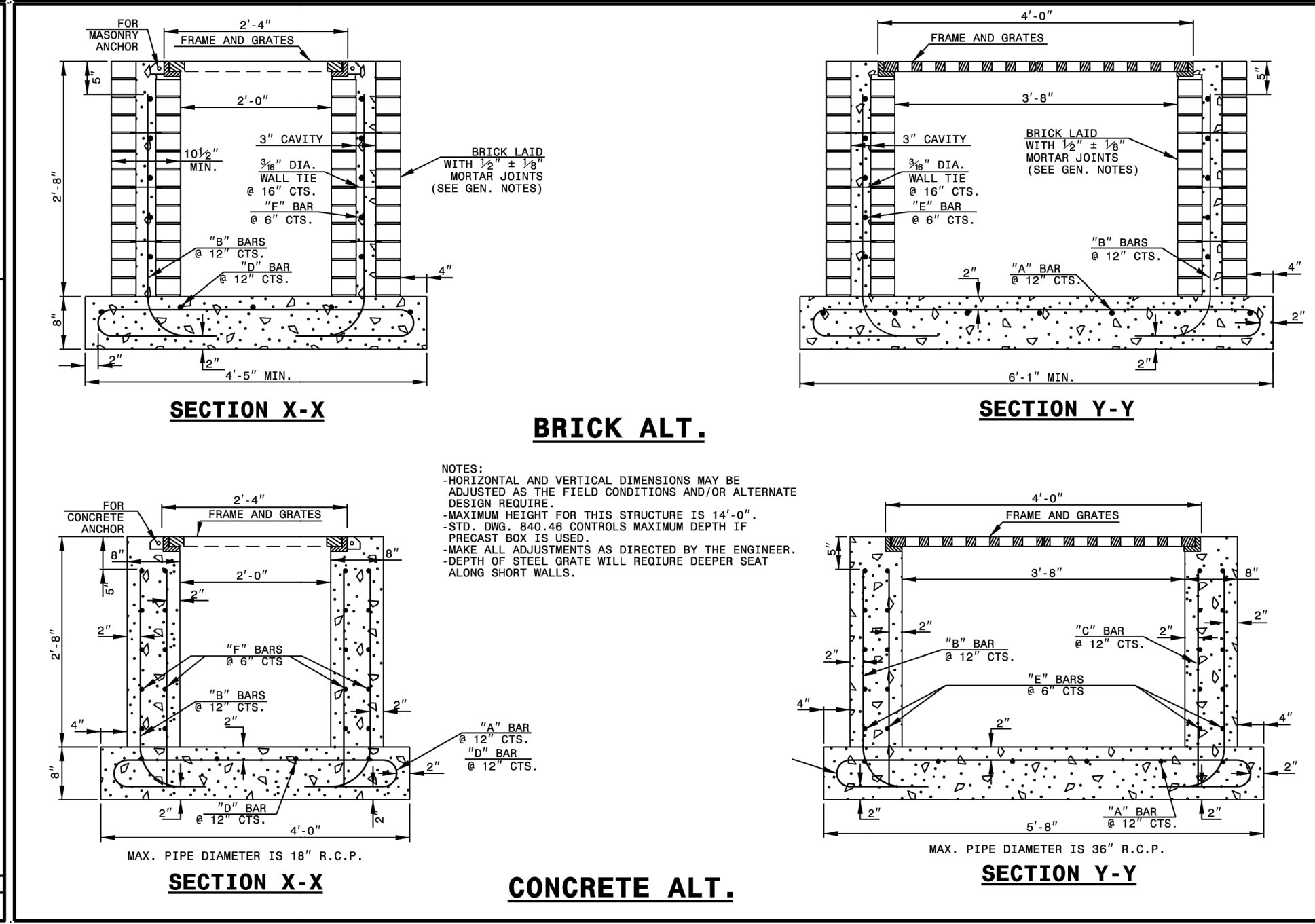
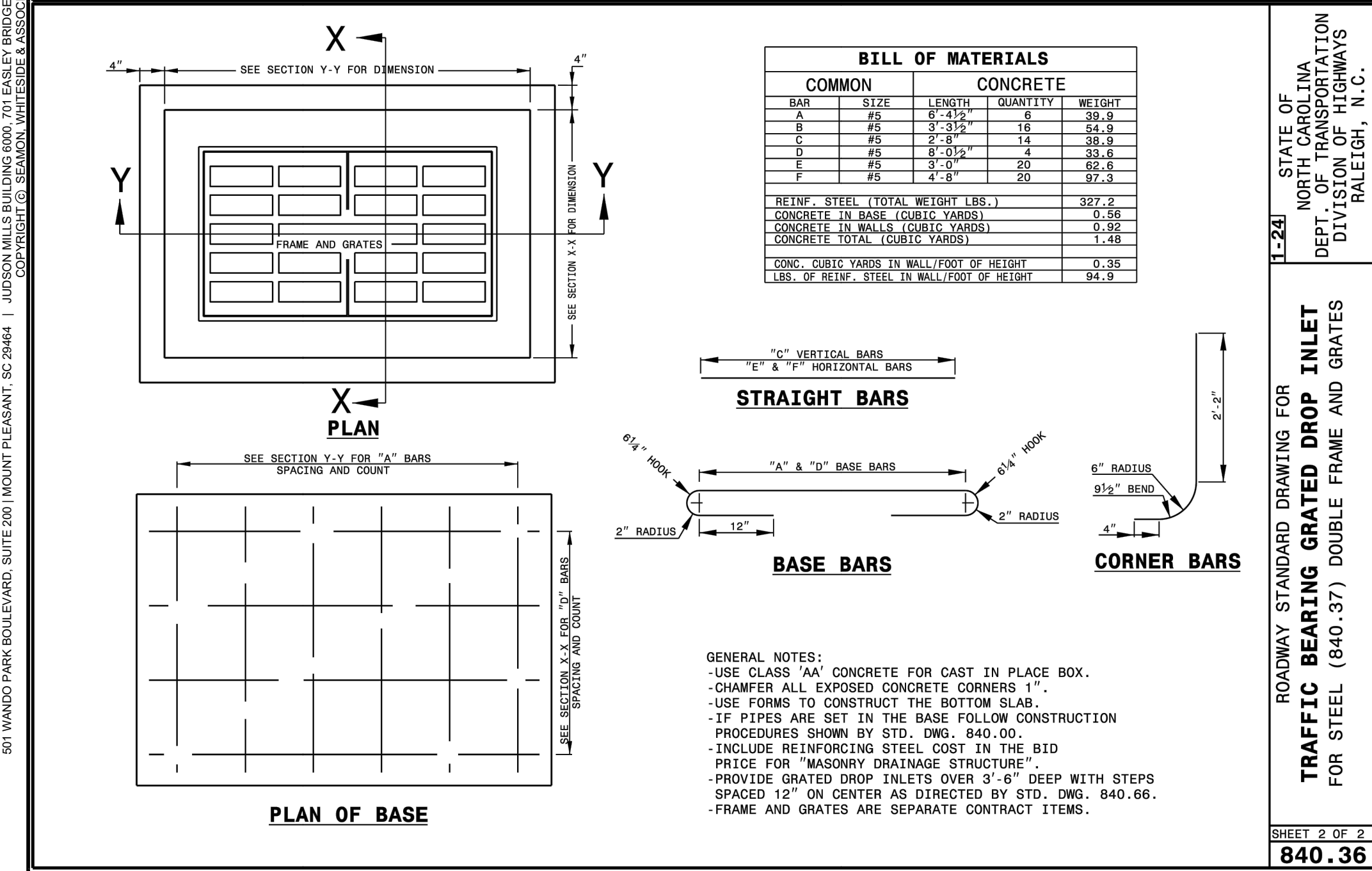
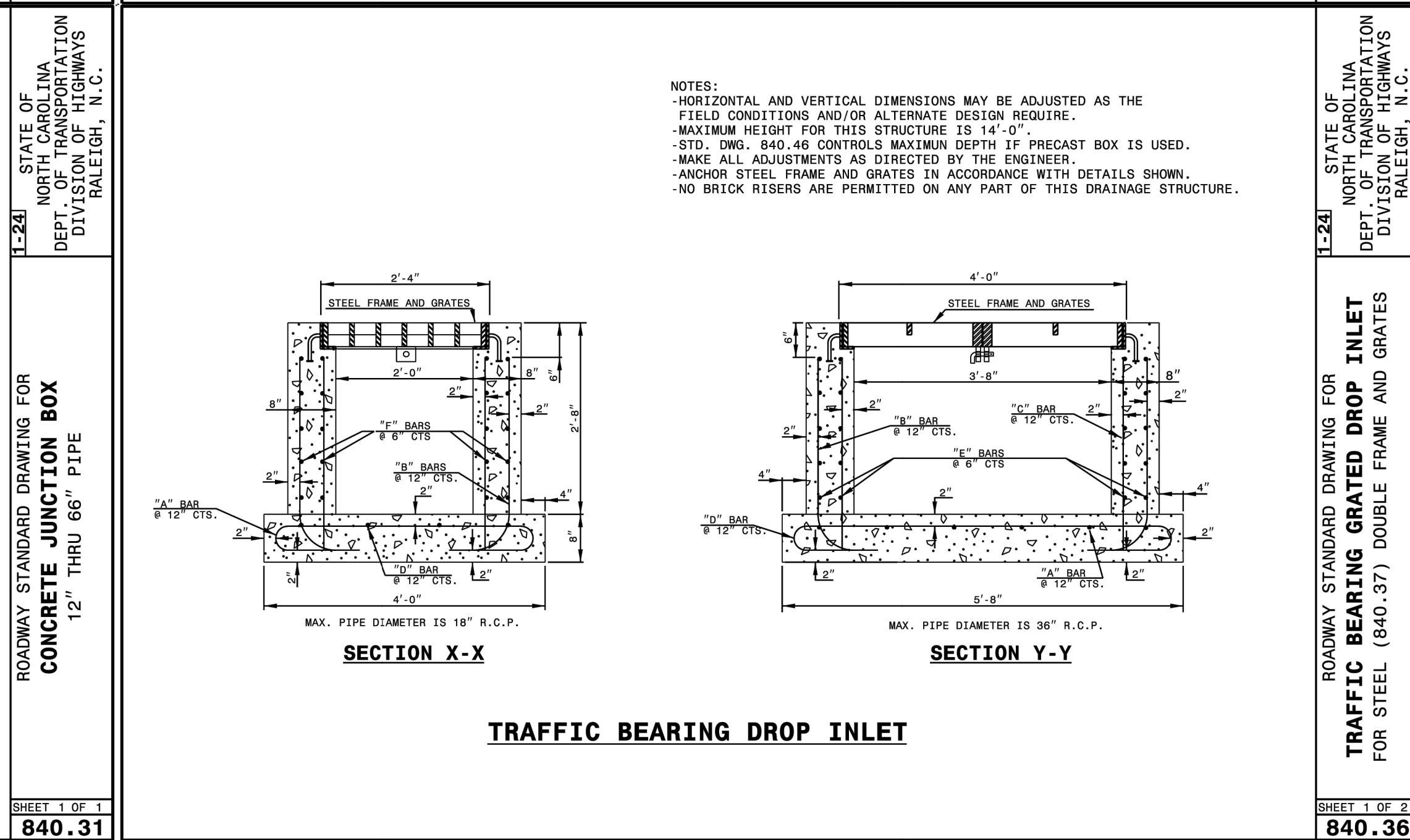
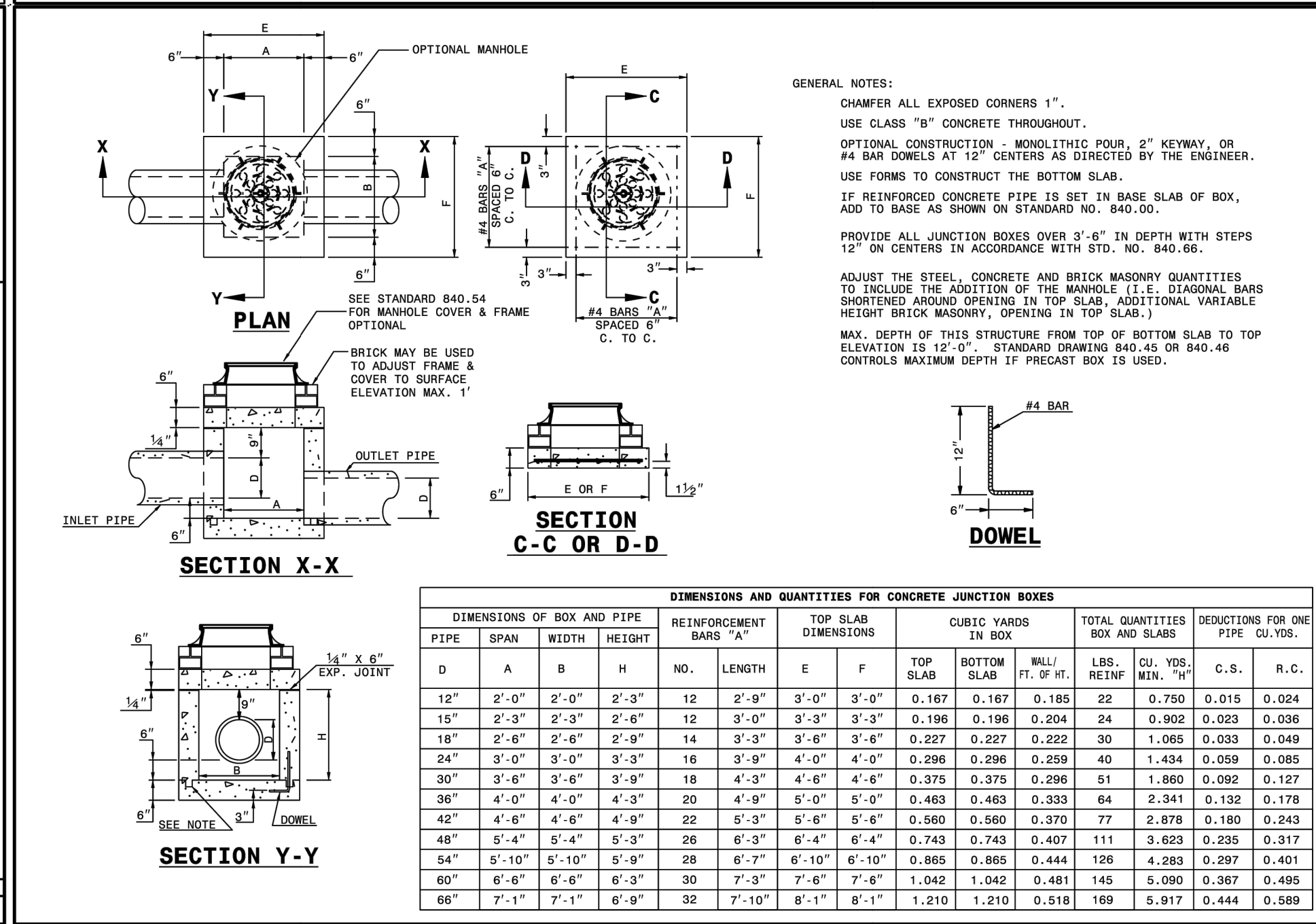
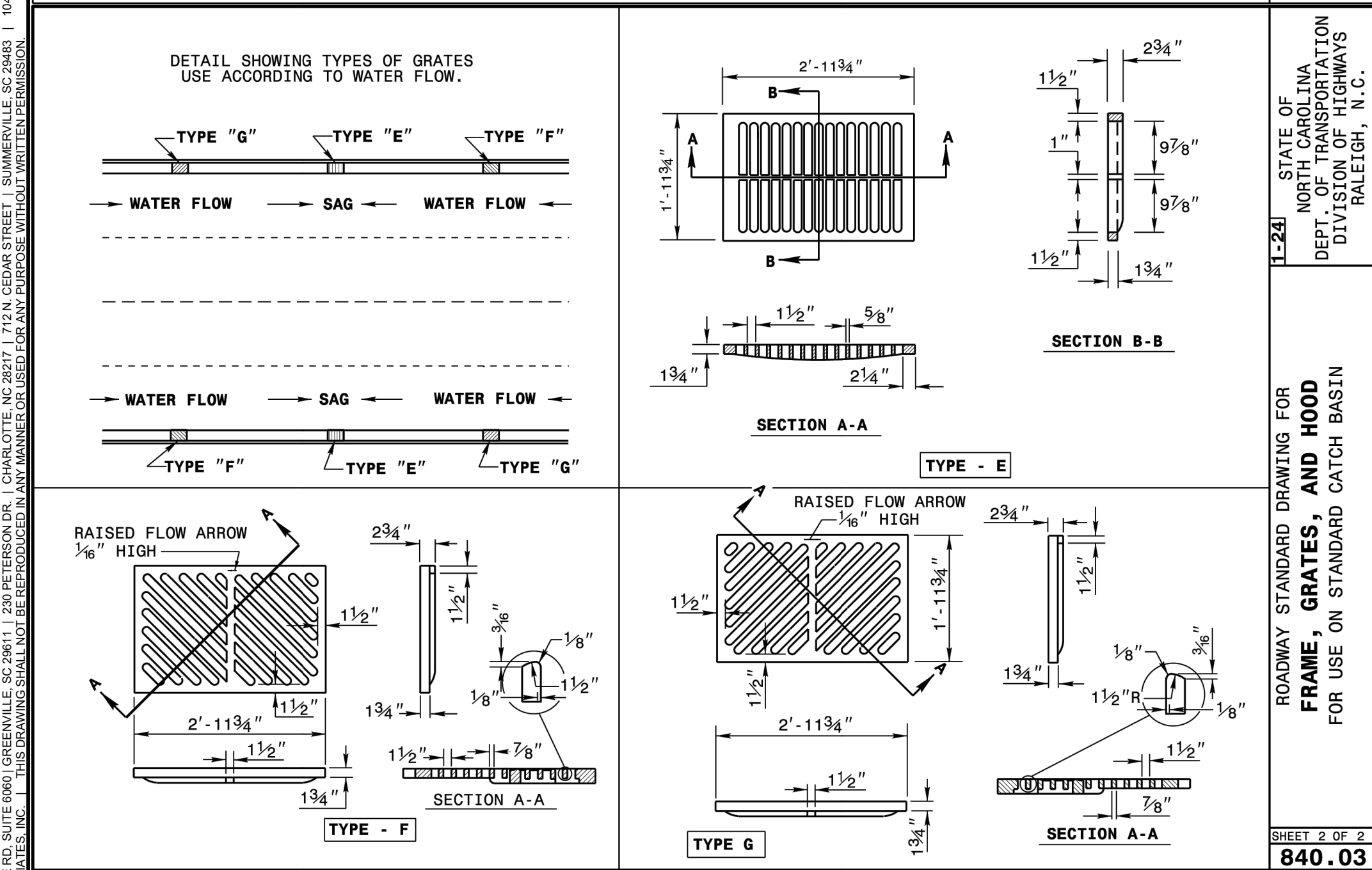
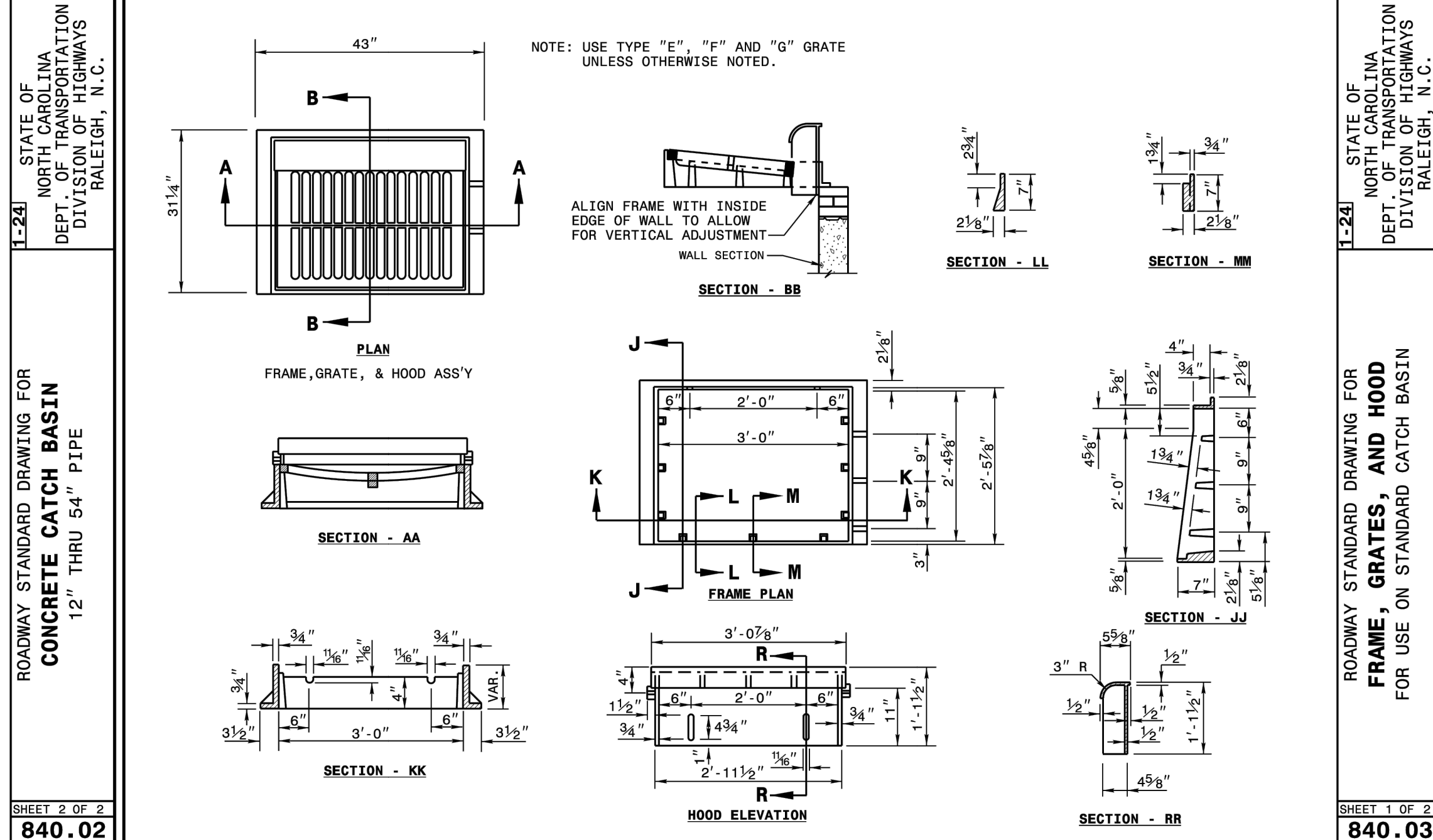
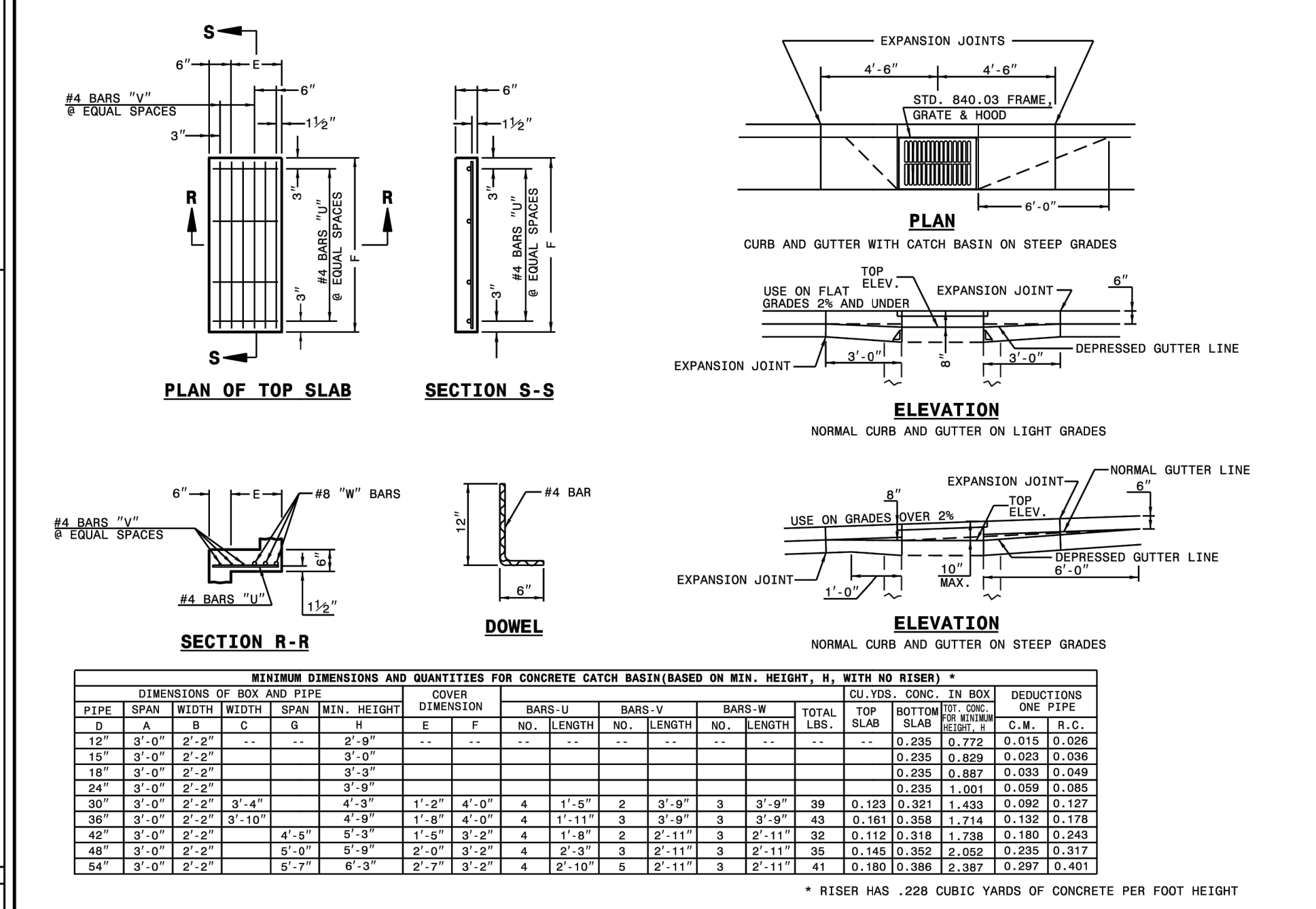
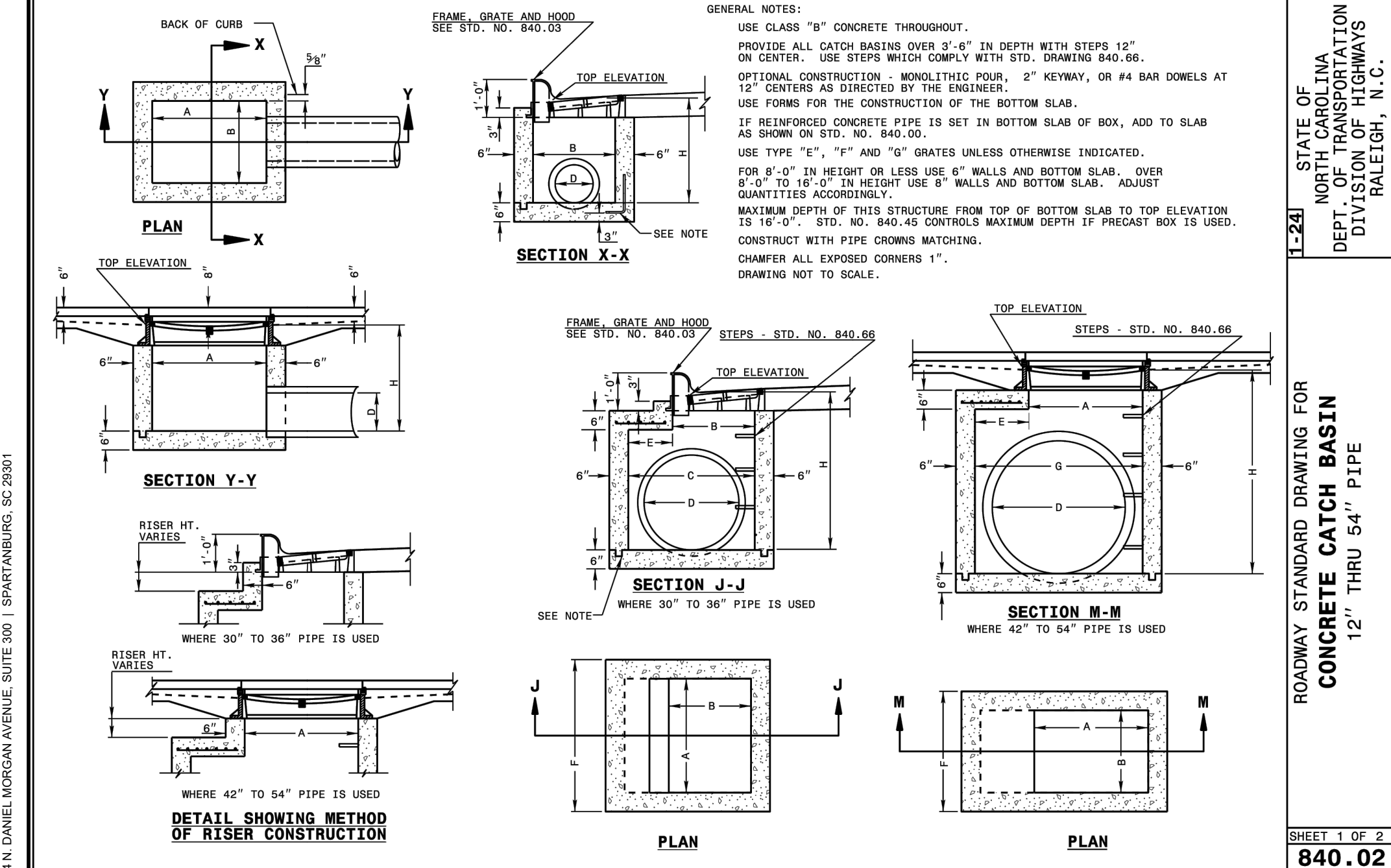


11 10' MULTI-USE PATH SECTION
 SCALE: NOT TO SCALE



12 ADA CURB RAMP
 SCALE: NOT TO SCALE

REVISION HISTORY	
A	12/22/23
B	03/01/24
C	09/04/24



ROADWAY STANDARD DRAWING FOR TRAFFIC BEARING GRATED DROP INLET FOR STEEL (840.37) DOUBLE FRAME AND GRATES
 SHEET 2 OF 2
 840.36

ROADWAY STANDARD DRAWING FOR TRAFFIC BEARING GRATED DROP INLET FOR DOUBLE FRAME AND GRATES
 SHEET 1 OF 2
 840.35

ROADWAY STANDARD DRAWING FOR TRAFFIC BEARING GRATED DROP INLET FOR DOUBLE FRAME AND GRATES
 SHEET 2 OF 2
 840.35

50 WANDO PARK BOULEVARD, SUITE 200 MOUNT PLEASANT, SC 29564 | JUDGE WILLIAMS BUILDING 600 N. EAST 10TH STREET, GREENVILLE, SC 29601 | 1701 CEDAR STREET | SPARTANBURG, SC 29301 | 100 N. DANIEL HOPKINS AVENUE, SUITE 300 | SPARTANBURG, SC 29301

SEAMON WHITESIDE

MOUNT PLEASANT, SC 843.884.1667
 GREENVILLE, SC 864.298.0534
 SUMMERVILLE, SC 843.972.0710
 SPARTANBURG, SC 864.272.1272
 CHARLOTTE, NC 980.312.5450
 WWW.SEAMONWHITESIDE.COM

ROADWAY STANDARD DRAWING FOR TRAFFIC BEARING GRATED DROP INLET FOR DOUBLE FRAME AND GRATES
 SHEET 2 OF 2
 840.35

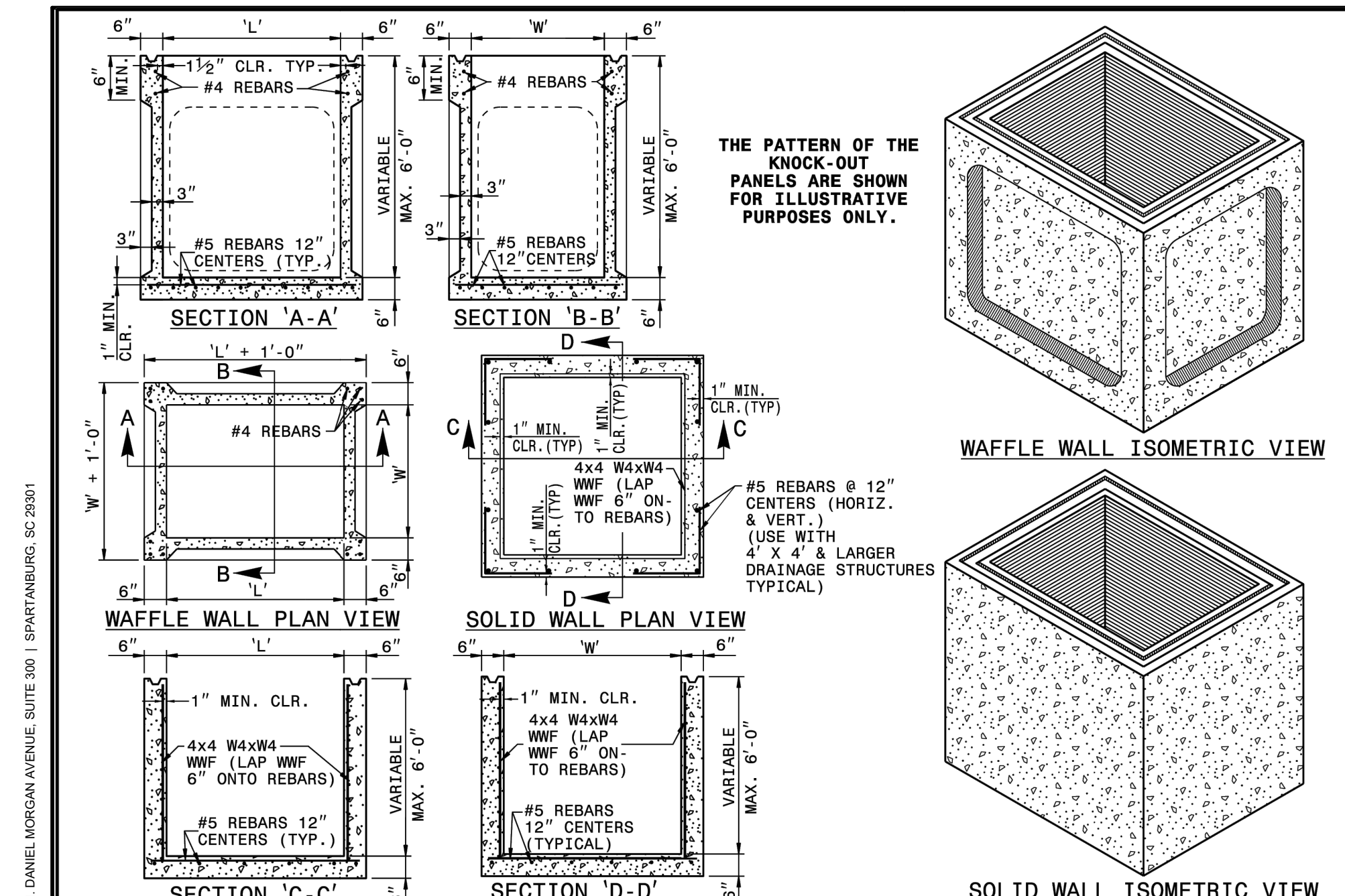
SW+ PROJECT: 10772
 DATE: 09/04/24
 DRAWN BY: CPE
 CHECKED BY: TLL

REVISION HISTORY

NO.	DATE	DESCRIPTION
A	12/23/23	
B	03/01/24	
C	09/04/24	

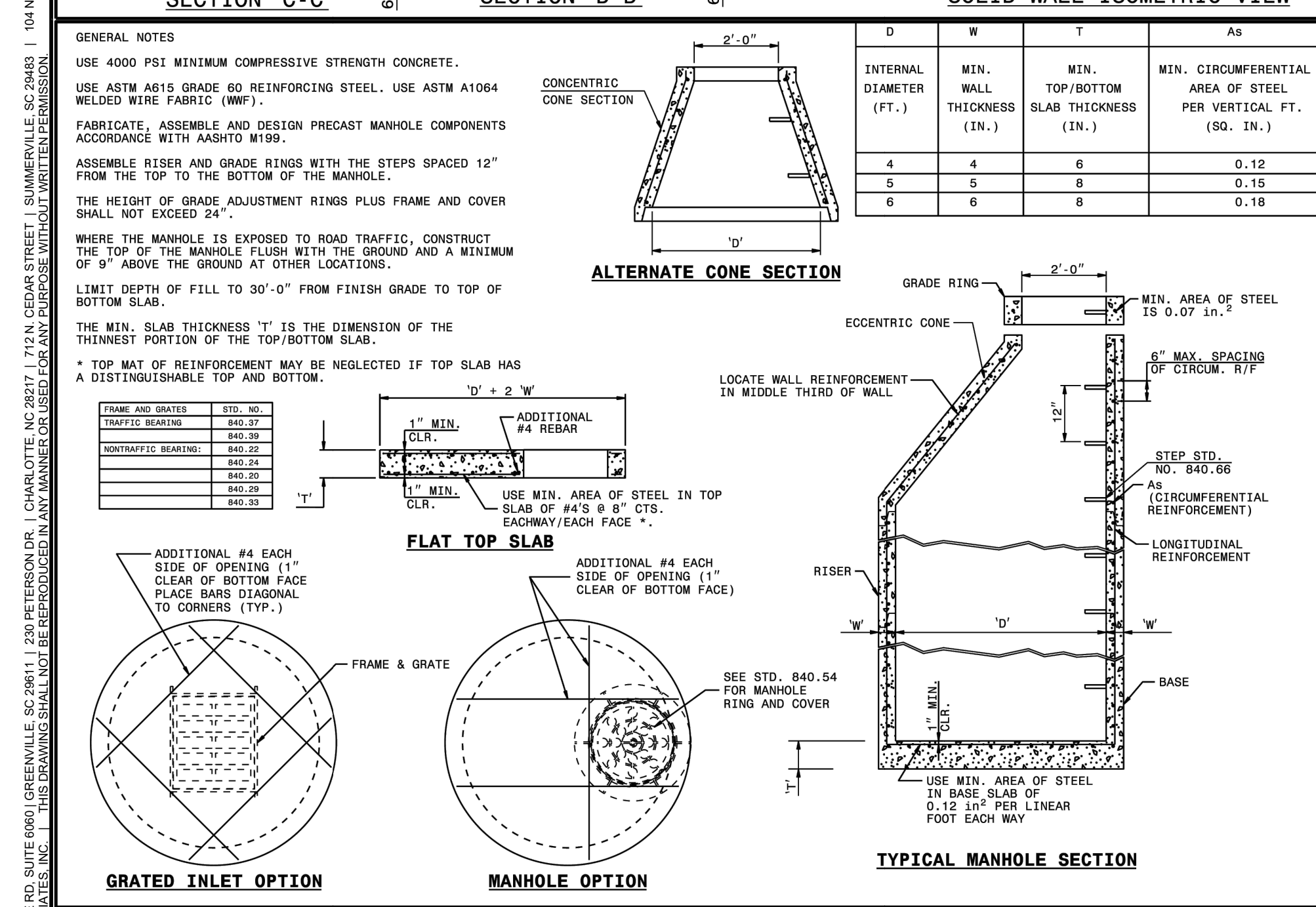
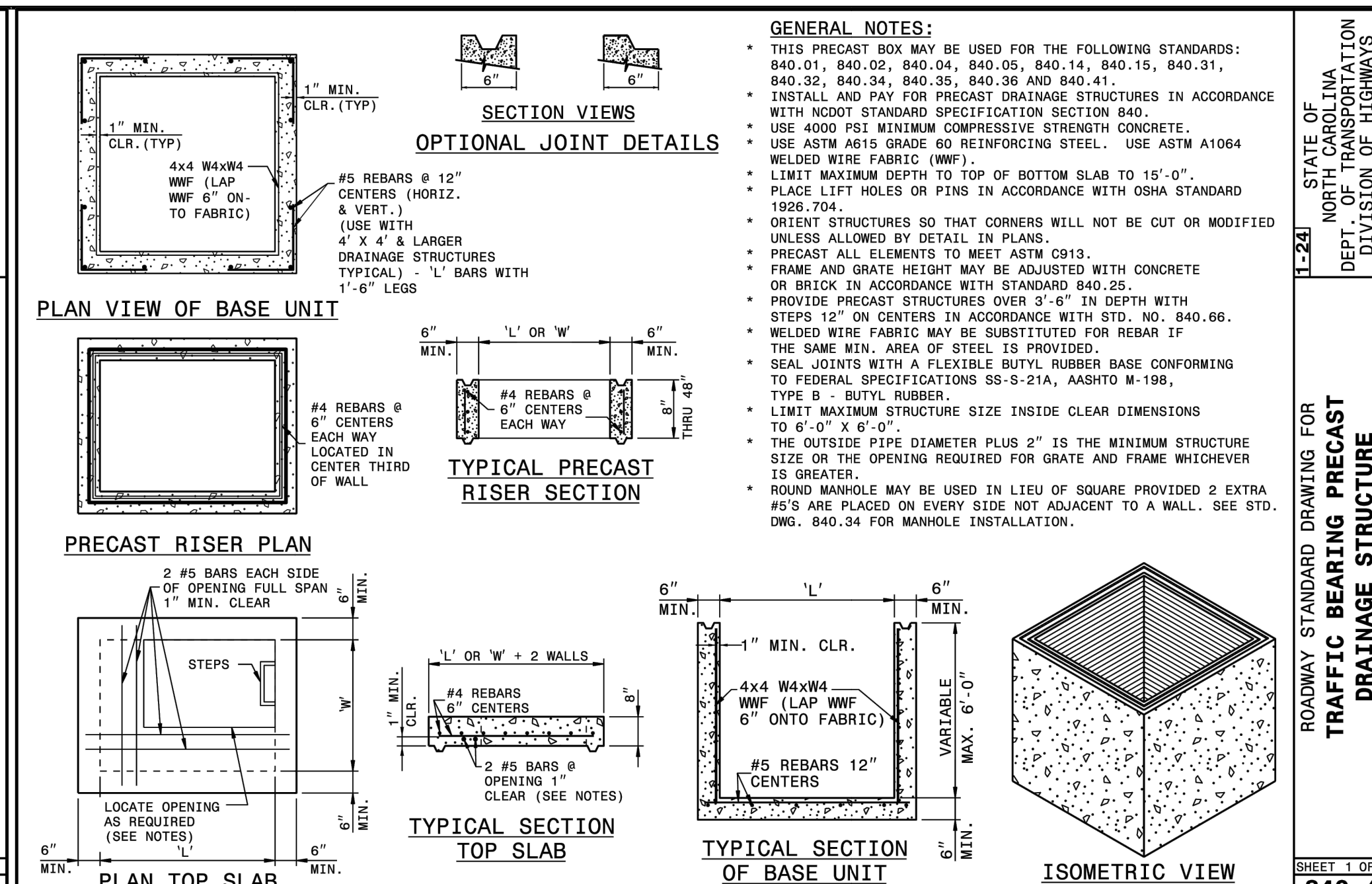
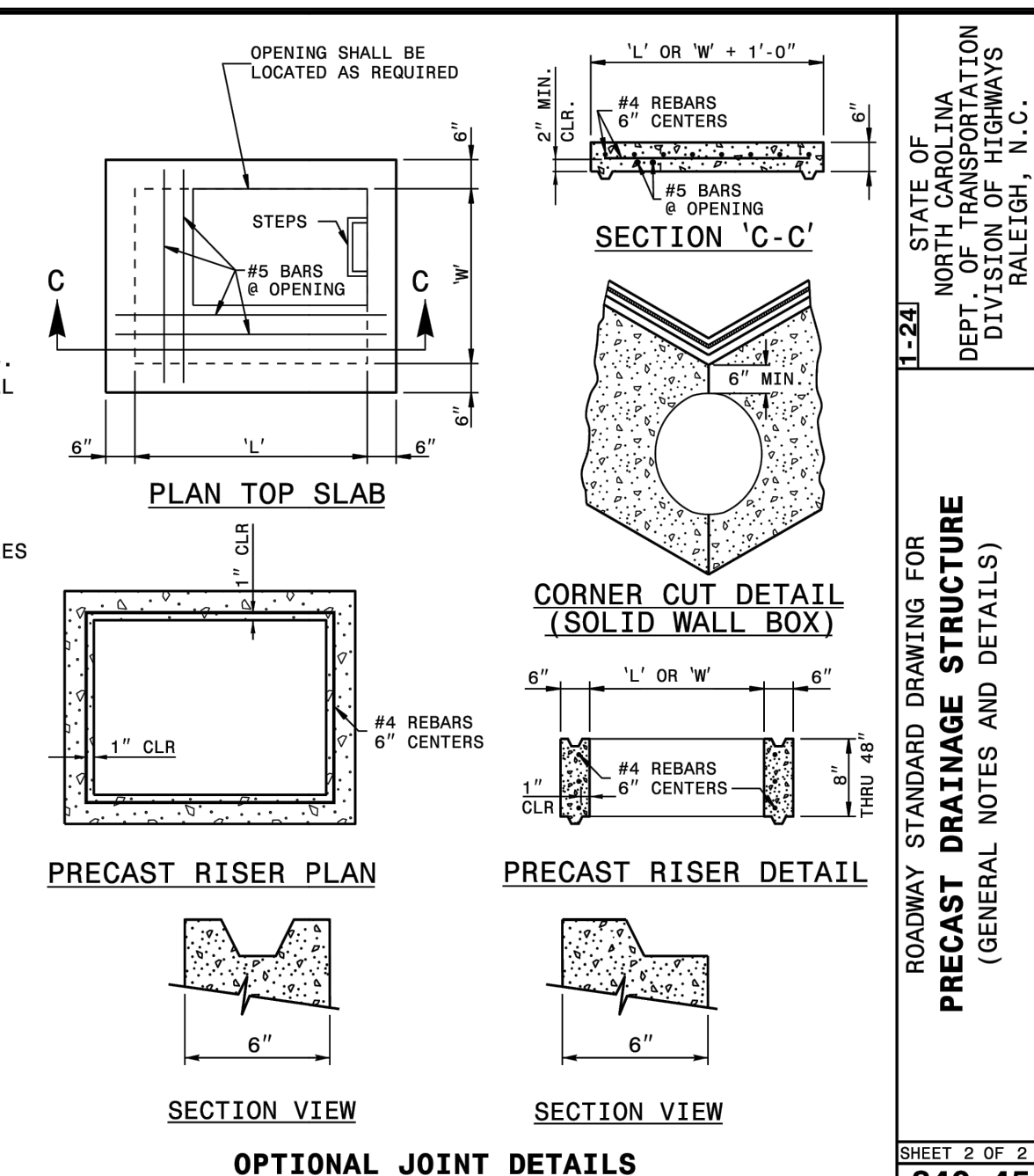
CONSTRUCTION DETAILS

C8.4



GENERAL NOTES:

- THIS PRECAST BOX MAY BE USED FOR THE FOLLOWING STANDARDS: 840.01, 840.02, 840.04, 840.05, 840.13, 840.14, 840.15, 840.17, 840.18, 840.19, 840.26, 840.27, 840.28, 840.31, 840.32 AND 840.41.
- INSTALL PRECAST DRAINAGE STRUCTURES AND PAY FOR IN ACCORDANCE WITH SPECIFICATION SECTION 840.
- DO NOT PLACE PRECAST DRAINAGE STRUCTURES UNDER TRAFFIC. WHEN TRAFFIC WILL BE DETOURED, USE 4000 PSI CONCRETE.
- PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A1064.
- LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB FOR WAFFLE WALL STRUCTURE TO 10'-0"; LIMIT SOLID WALL STRUCTURE TO 15'-0".
- PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
- CUT OR FORM OPENINGS FOR PIPE TO PROVIDE REQUIRED SIZE AND LOCATION. ORIENT WAFFLE WALL STRUCTURES SO THAT PIPES ENTER THROUGH THE KNOCK-OUT/WAFFLE PANELS ONLY. PIPES MAY ENTER THROUGH THE CORNERS OF SOLID WALL BOXES IF A MINIMUM OF 6" OF WALL IS PROVIDED ABOVE THE HOLE.
- ALL ELEMENTS PRECAST TO MEET ASTM C913.
- FRAME AND GRATE HEIGHT MAY BE ADJUSTED WITH CONCRETE OR BRICK IN ACCORDANCE WITH STANDARD 840.25.
- PROVIDE PRECAST STRUCTURES OVER 3'-6" IN DEPTH WITH STEPS AS DIRECTED BY THE ENGINEER.
- WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR AS LONG AS THE SAME AREA OF STEEL IS PROVIDED.
- SEAL JOINTS WITH A FLEXIBLE BUTYL RUBBER BASE CONFORMING TO FEDERAL SPECIFICATION SS-S-21A, AASHTO M-198, TYPE B - BUTYL RUBBER.
- LIMIT MAXIMUM STRUCTURE SIZE TO INSIDE CLEAR DIMENSIONS OF 5'-0" X 5'-0".
- THE OUTSIDE PIPE DIAMETER PLUS 2" OR THE OPENING REQUIRED FOR FRAME AND GRATE IS THE MINIMUM STRUCTURE SIZE WHICH EVER IS GREATER.
- USE MANHOLE FRAME AND COVER AS INDICATED ON THE PLANS. REINFORCE OPENING AS SHOWN ON THIS SHEET.



GENERAL NOTES:

- CLASS OR MESH SIZE OF RIPRAP AND LENGTH, WIDTH AND DEPTH OF APRON TO BE DESIGNED BY THE ENGINEER.
- REFER TO THE CHARLOTTE MEDICINEBOND STORM WATER DESIGN MANUAL FOR RIPRAP APRON DESIGN STANDARDS.
- REBAR SHOULD EXTEND UP FROM SIDES OF APRON AND AROUND THE END OF THE PIPE OR CHANNEL. THE AREA TO BE REBAR OR RIPRAPPED SHALL BE UNDERCUT TO THE INVERT OF THE APRON SHALL BE THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR THE WALL AT THE DOWNSTREAM END.
- THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 6:1.
- ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 98% OR GREATER.
- THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL, SHALL NOT BE ALLOWED.
- NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.
- FILTER FABRIC SHALL BE INSTALLED ON COMPACTED SUBGRADE PRIOR TO PLACEMENT OF RIP RAP.
- ANY DISTURBED AREA FROM END OF APRON TO RECEIVING CHANNEL MUST BE STABILIZED.

USE USDA MONOGRAPH FROM SOIL SEDIMENT AND EROSION CONTROL MANUAL OR CHARLOTTE MEDICINEBOND STORM WATER DESIGN MANUAL FOR DESIGN DATA.

DIAMETER (FT.)	MIN. WALL THICKNESS (IN.)	MIN. TOP/BOTTOM SLAB THICKNESS (IN.)	MIN. AREA OF STEEL PER VERTICAL FT. (SQ. IN.)
4	4	6	0.12
5	5	8	0.15
6	6	8	0.18

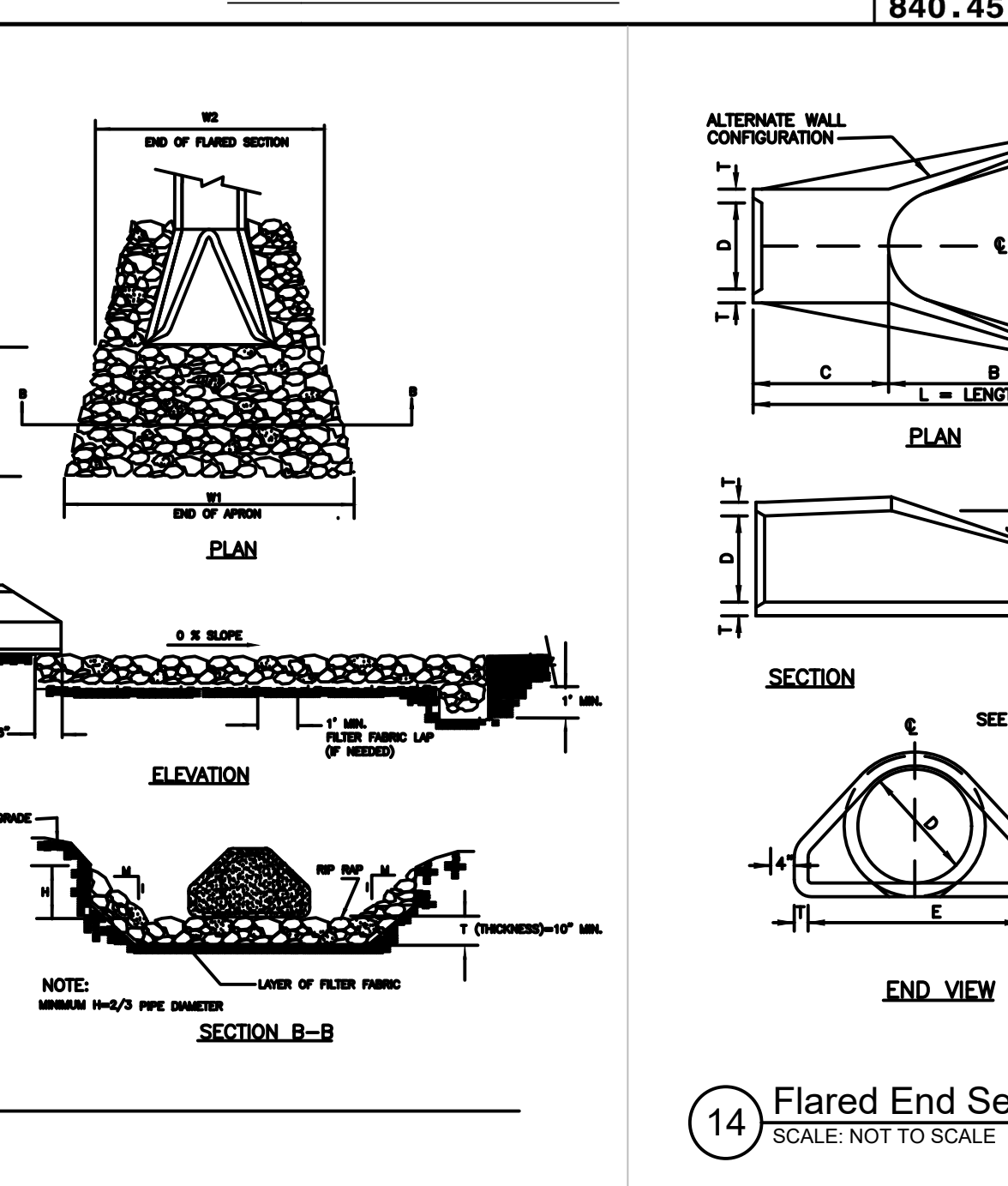
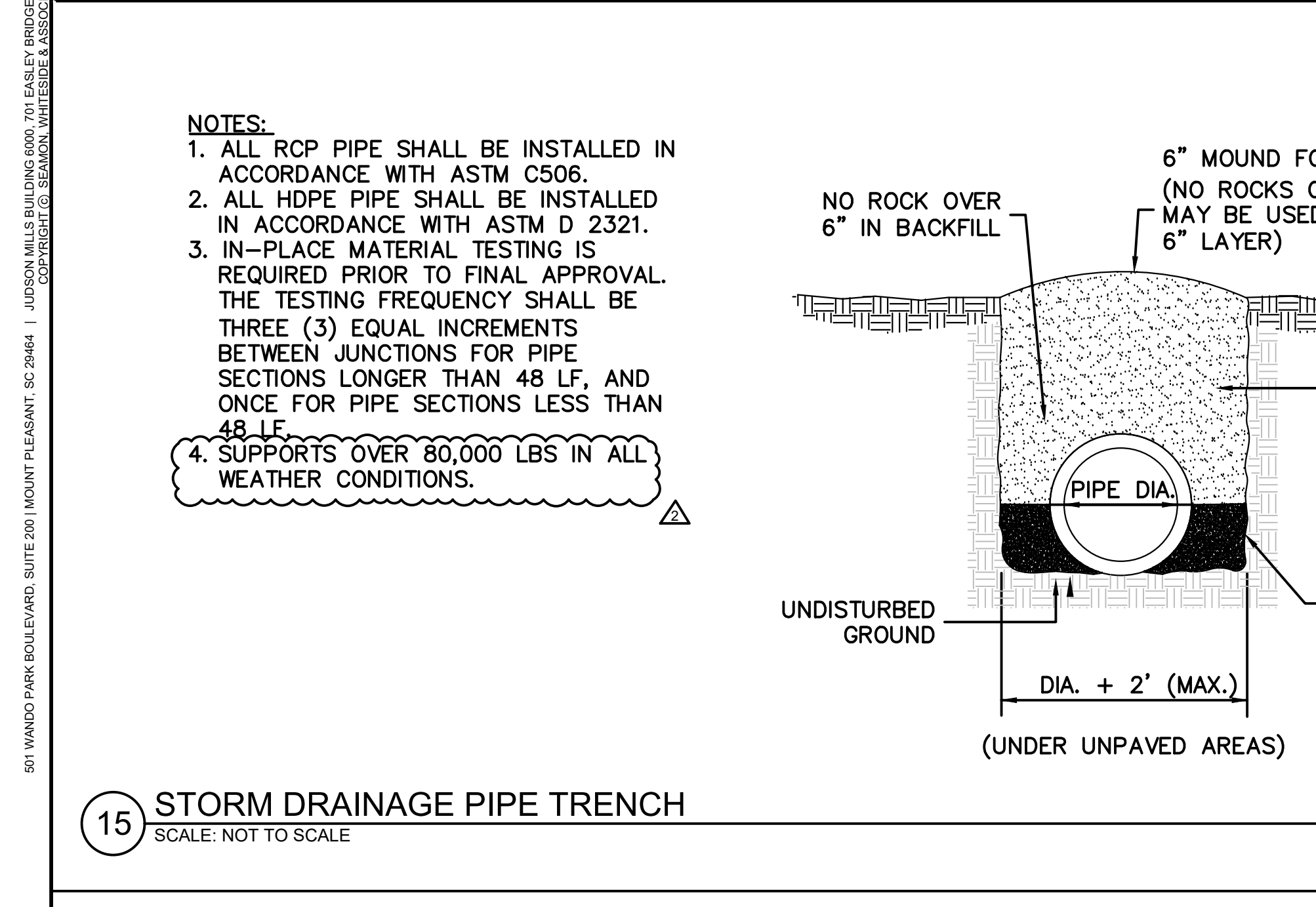


TABLE OF DIMENSIONS

D	T	A	B	C	E	L	WT.
12"	2'-7/8"	4"	2'-0"	4'-1"	2'-0"	6'-1"	730
15"	3'-1/2"	4"	2'-3"	3'-10"	2'-0"	6'-1"	730
18"	3'-1/2"	6"	2'-3"	3'-10"	3'-0"	6'-1"	1190
24"	3"	10"	3'-0"	2'-8"	4'-0"	6'-2"	1770
30"	3'-1/2"	12"	3'-0"	2'-8"	4'-0"	6'-2"	2390
36"	4"	11'-0"	3'-0"	2'-11"	6'-0"	6'-2"	3390
42"	4'-1/2"	1'-0"	3'-0"	2'-11"	6'-0"	6'-2"	5820
48"	3"	2'-0"	3'-0"	2'-8"	7'-0"	6'-2"	7470
54"	3'-1/2"	2'-3"	3'-0"	2'-10"	7'-0"	6'-2"	8910
60"	6"	2'-0"	3'-0"	3'-3"	8'-0"	6'-3"	11190
66"	3'-1/2"	3'-0"	3'-0"	2'-3"	8'-0"	6'-3"	12930
72"	7"	3'-0"	3'-0"	1'-9"	8'-0"	6'-3"	13990

GENERAL NOTES:

- SEE FORMER NCDOT STANDARD 310.01 FOR DETAILS.
- REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIPE OF LIKE DIAMETER PER AASHTO M170, TABLE 2, WALL B.
- ALL CONCRETE TO BE 3800 P.S.I. COMPRESSIVE STRENGTH.
- PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
- PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
- THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE WITH THE TABLE. MINOR VARIATIONS WILL BE PERMITTED BASED ON THE MANUFACTURER'S STANDARD FORMS AND TEMPLATES.
- NOT TO BE USED IN NCDOT MAINTAINED RIGHT OF WAY.



NOTES:

- ALL RCP PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM C506.
- ALL HDPE PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D 2321.
- IN-PLACE MATERIAL TESTING IS REQUIRED PRIOR TO FINAL APPROVAL. THE TESTING FREQUENCY SHALL BE THREE (3) EQUAL INCREMENTS BETWEEN JUNCTIONS FOR PIPE SECTIONS LONGER THAN 48 LF, AND ONCE FOR PIPE SECTIONS LESS THAN 48 LF.
- SUPPORTS OVER 80,000 LBS IN ALL WEATHER CONDITIONS.

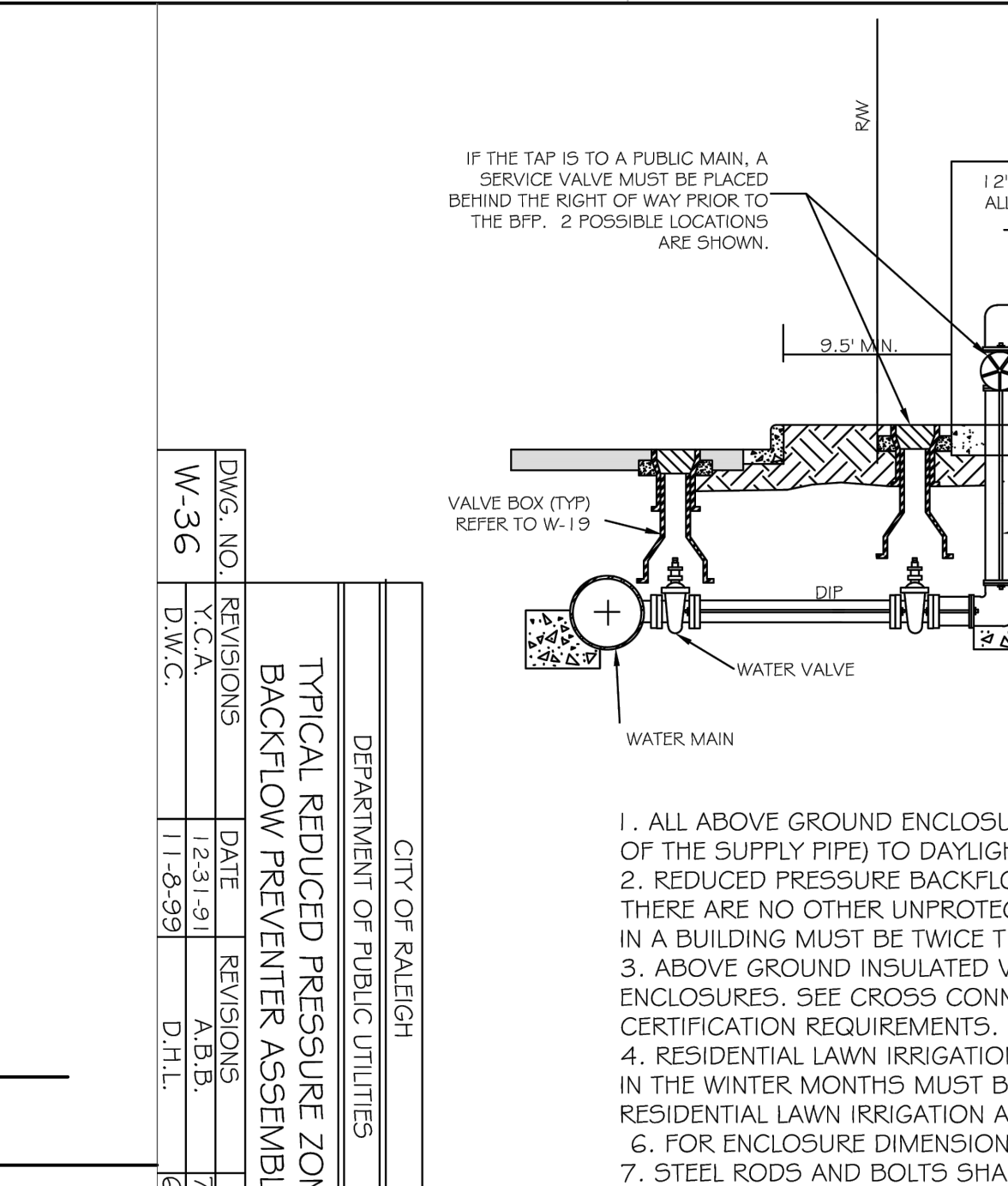
6" MOUND FOR SETTLEMENT (NO ROCKS OVER 1-1/2" MAY BE USED IN THE LAST 6" LAYER)

NO ROCK OVER 6" IN BACKFILL

SUITABLE ONSITE GRANULAR MATERIAL

COMPACT SOIL MATERIALS TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D698:

- 98% STANDARD PROCTOR UNDER STRUCTURES, BUILDING SLABS, STEPS, AND PAVEMENTS.
- 95% STANDARD PROCTOR UNDER WALKWAYS
- 90% STANDARD PROCTOR FOR LAWNS AND UNPAVED AREAS.
- 90% STANDARD PROCTOR FOR UTILITY TRENCHES UNDER LAWNS AND UNPAVED AREAS.



GENERAL NOTES:

- ALL ABOVE GROUND ENCLOSURES MUST HAVE ADEQUATE DRAINAGE (TWICE THE DIAMETER OF THE SUPPLY PIPE) TO DAYLIGHT ABOVE GRADE.
- REDUCED PRESSURE BACKFLOW PREVENTERS MAY BE LOCATED IN A BUILDING PROVIDED THERE ARE NO OTHER UNPROTECTED TAPS BETWEEN THE MAIN AND THE BUILDING. DRAINAGE IN A BUILDING MUST BE TWICE THE DIAMETER OF THE SUPPLY PIPE.
- ABOVE GROUND INSULATED VAULTS MUST BE ASSE 1060 APPROVED ABOVE GROUND ENCLOSURES. SEE CROSS CONNECTION MANUAL FOR ENCLOSURE FREEZE PROTECTION AND CERTIFICATION REQUIREMENTS.
- RESIDENTIAL LAWN IRRIGATION R.P. ASSEMBLIES ARE TO BE REMOVED TO PREVENT FREEZING IN THE WINTER MONTHS MUST BE CAPPED OFF. ALL ABOVE GROUND ASSEMBLIES, EXCEPT RESIDENTIAL LAWN IRRIGATION ASSEMBLIES, MUST BE PROTECTED FROM FROST.
- FOR ENCLOSURE DIMENSIONS SEE DETAIL W-34.
- STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
- ALL ASSEMBLIES MUST BE ON THE CURRENT APPROVAL LIST.

15 STORM DRAINAGE PIPE TRENCH
SCALE: NOT TO SCALE

13 Riprap Apron At Pipe Outfalls
SCALE: NOT TO SCALE

14 Flared End Section
SCALE: NOT TO SCALE

15 STORM DRAINAGE PIPE TRENCH
SCALE: NOT TO SCALE

501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29566 | JUDGE HALL BUILDING 6000 7TH EAST | GREENVILLE, SC 29611 | 230 REVEREND DR. | CHARLOTTE, NC 28207 | 701 N. CENTAS STREET | SPARTANBURG, SC 29307 | 101 N. DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29307

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.45

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST MANHOLE 4', 5' AND 6' DIAMETER 12" THRU 48" PIPE

SHEET 1 OF 1
840.52

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR TYPICAL REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY

SHEET 1 OF 1
W-36

DEPARTMENT OF PUBLIC UTILITIES
CITY OF RALEIGH

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-36	T.C.A.	11-23-19	A.B.B.	7-10-04
D.W.C.		11-23-99	D.H.L.	6/18/05

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.46

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.45

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.46

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.45

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.46

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.45

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.46

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.45

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.46

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.45

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.46

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.45

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.46

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.45

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.46

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.45

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
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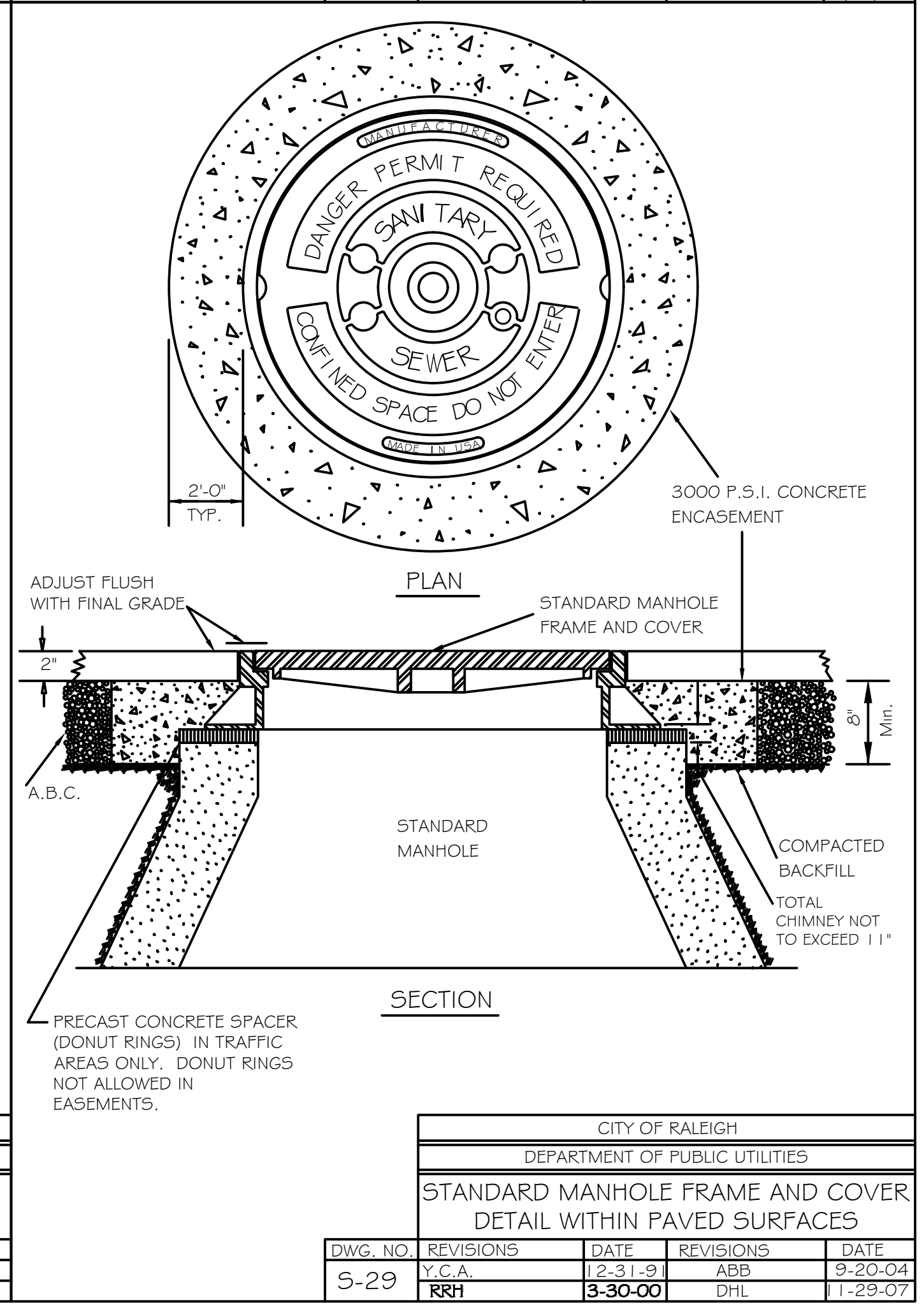
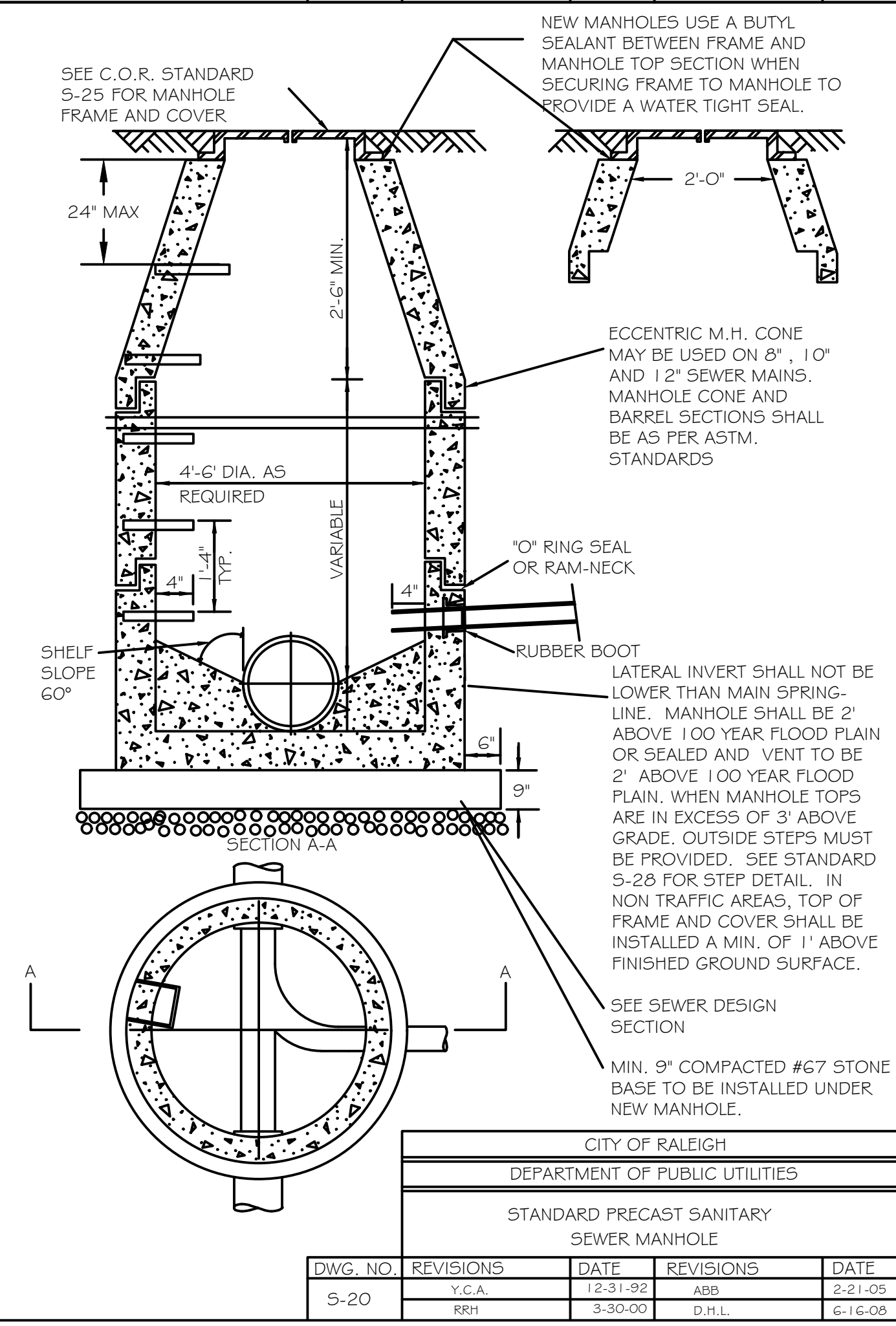
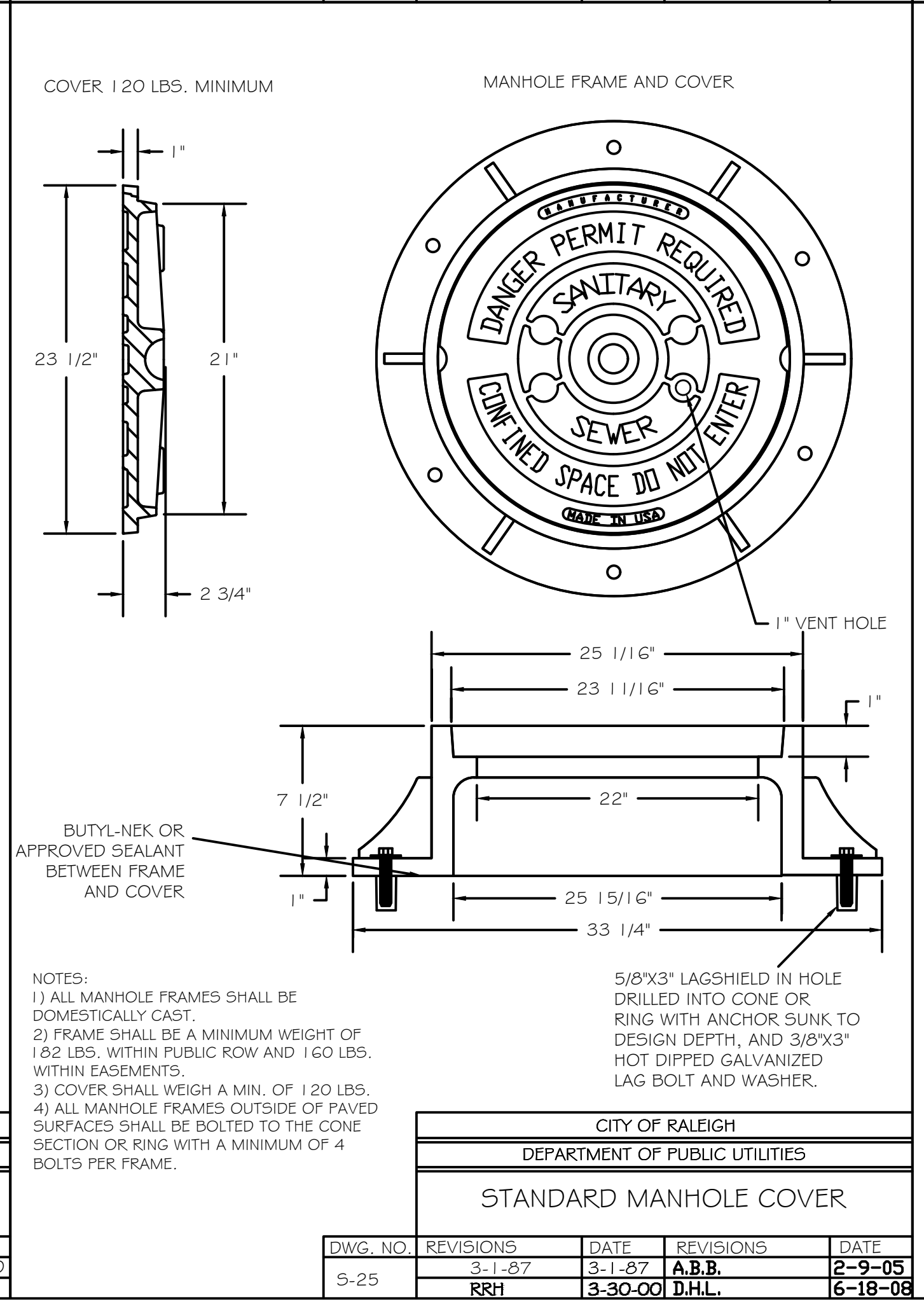
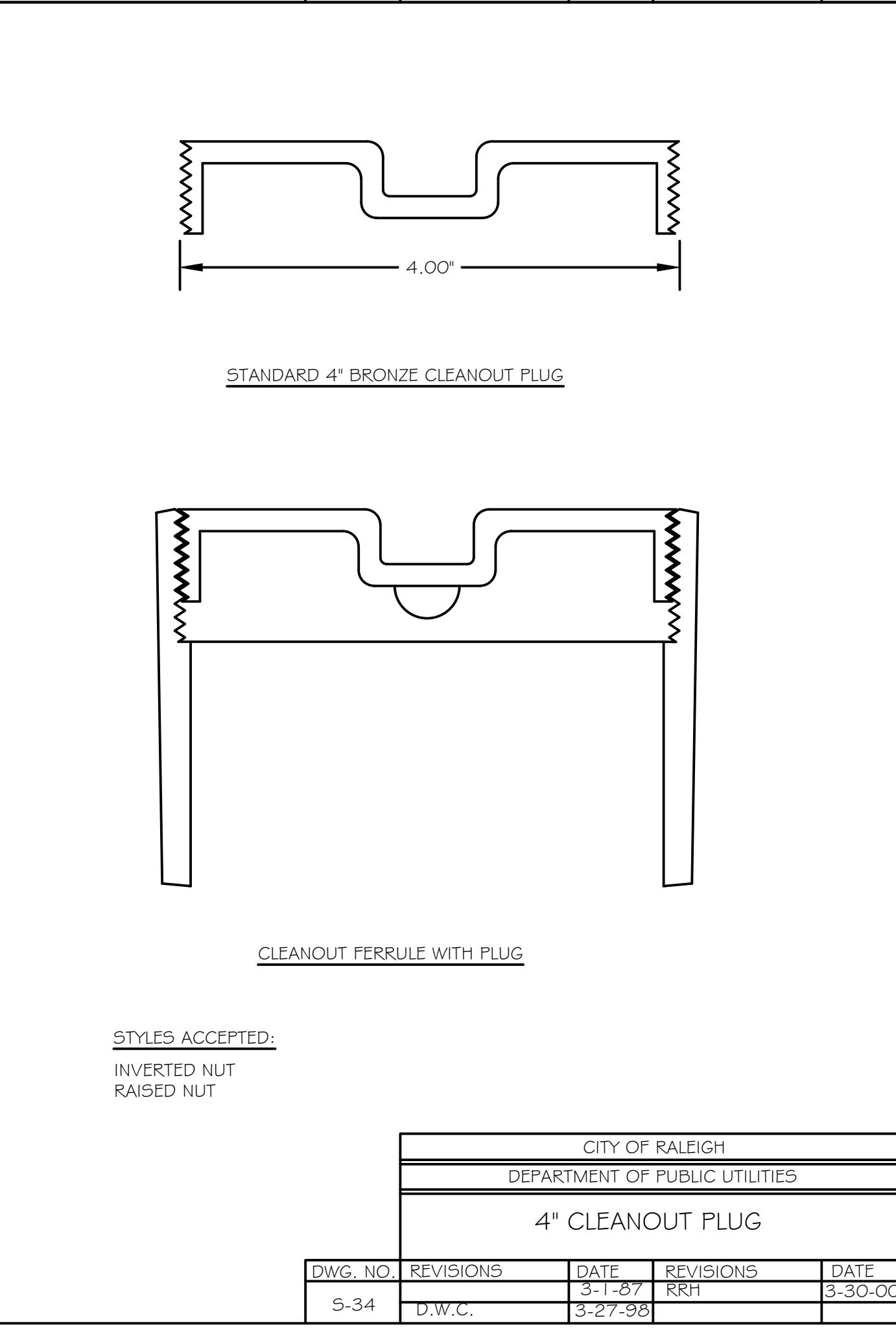
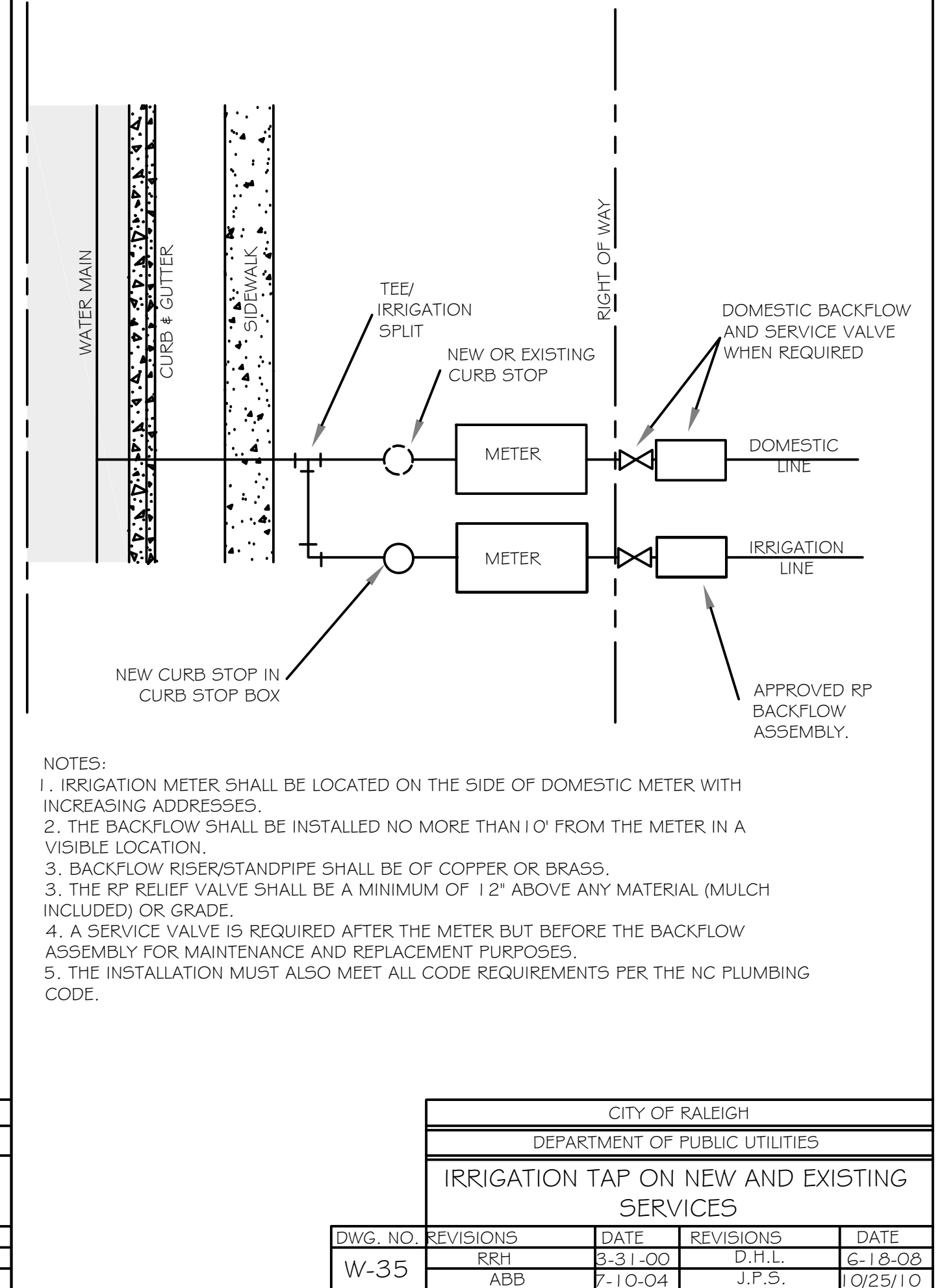
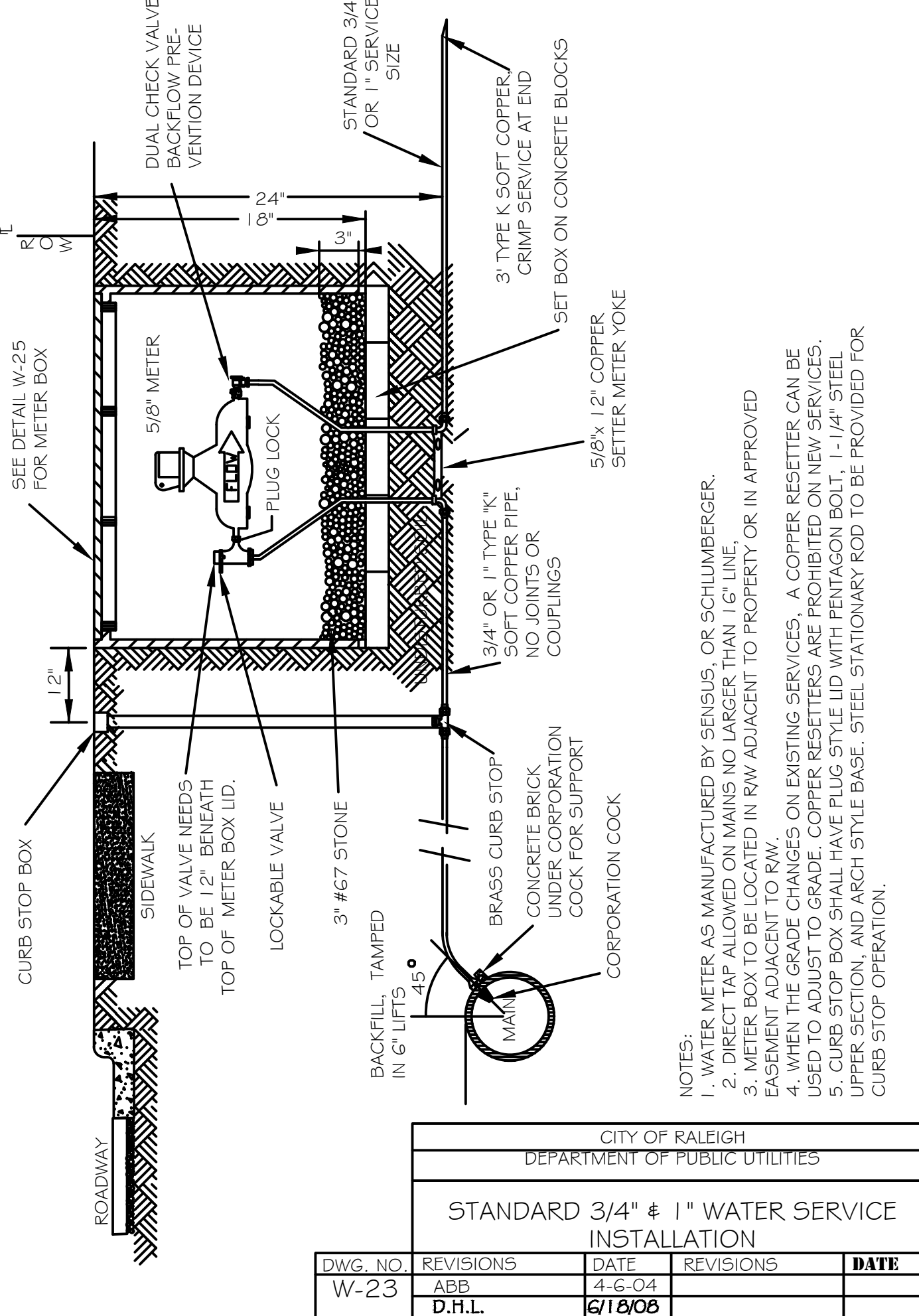
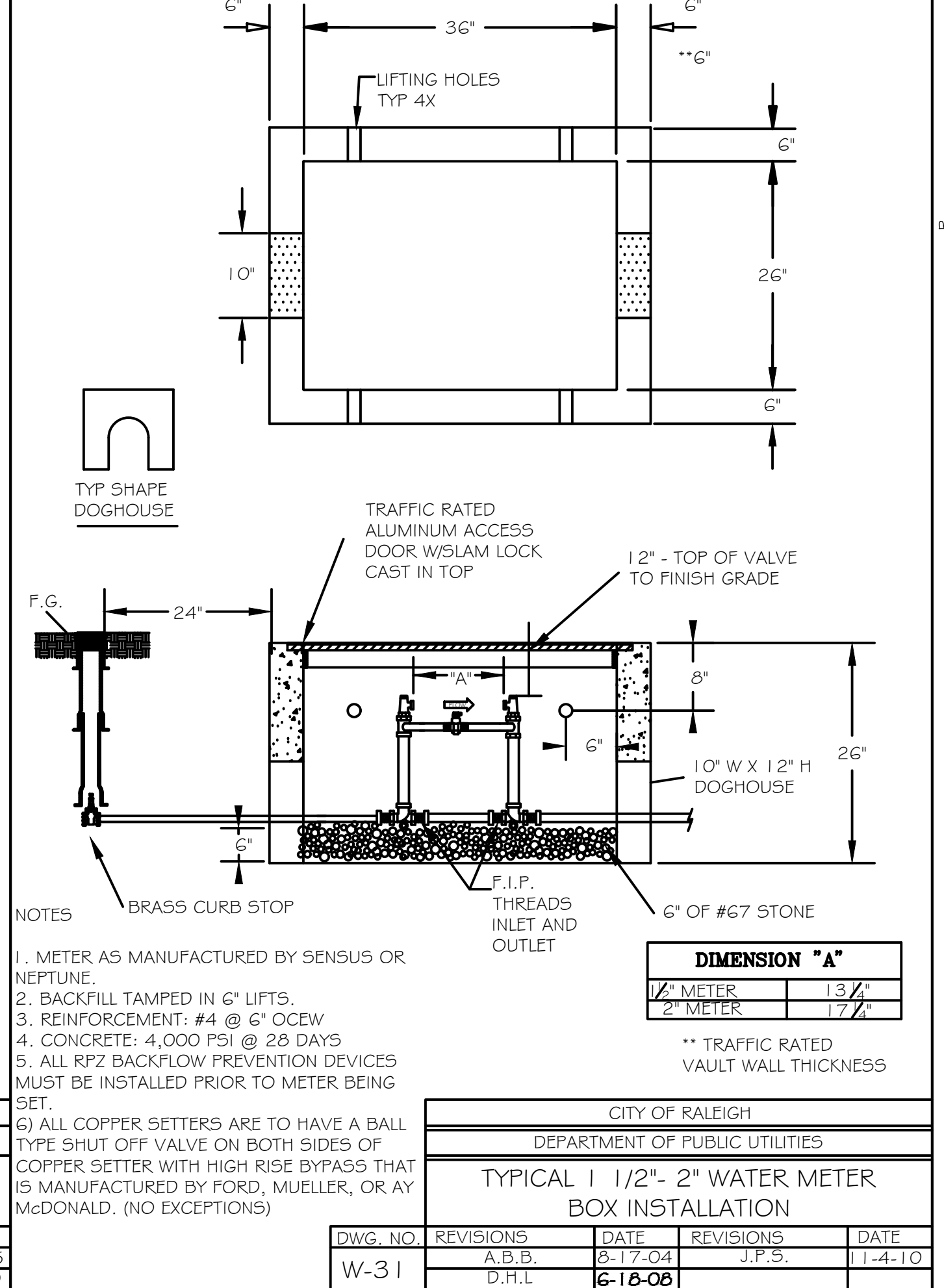
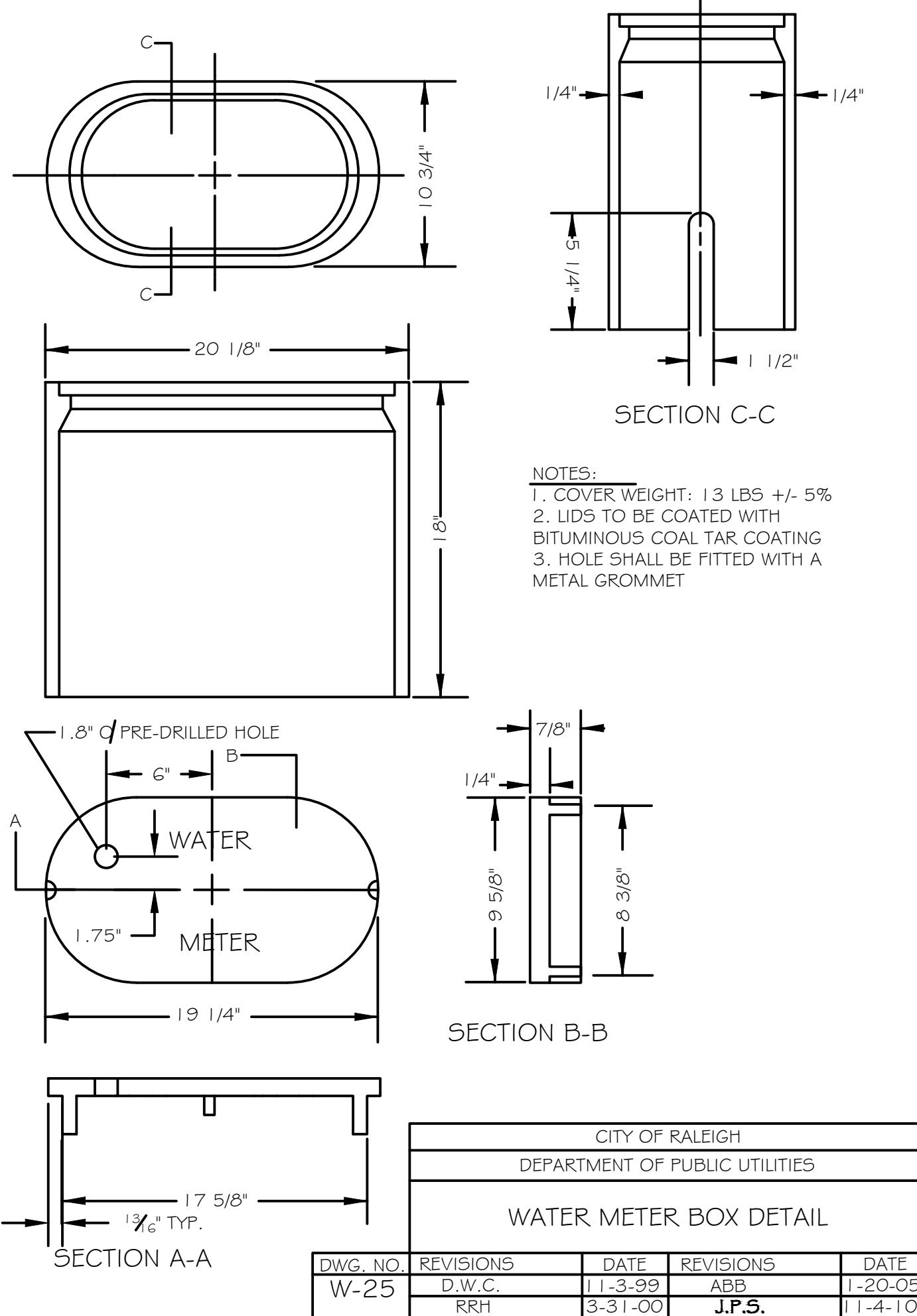
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ROADWAY STANDARD DRAWING FOR PRECAST TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

SHEET 1 OF 1
840.46

50 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29566 | JUDICIALS BUILDING 6000 WYBACKEN BRIDGE, SUITE 600 | GREENVILLE, SC 29611 | 230 PETERSBORO | CHARLOTTE, NC 28217 | 701 S. GARDEN STREET | SUMMERVILLE, SC 29582 | 104 N. DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301



MOUNT PLEASANT, SC 843.884.1667
 GREENVILLE, SC 864.298.0534
 SUMMERVILLE, SC 843.972.0710
 SPARTANBURG, SC 864.272.1272
 CHARLOTTE, NC 980.312.5450
 WWW.SEAMONWHITESIDE.COM



TIDAL WAVE AUTO SPA
 ROLESVILLE, NC

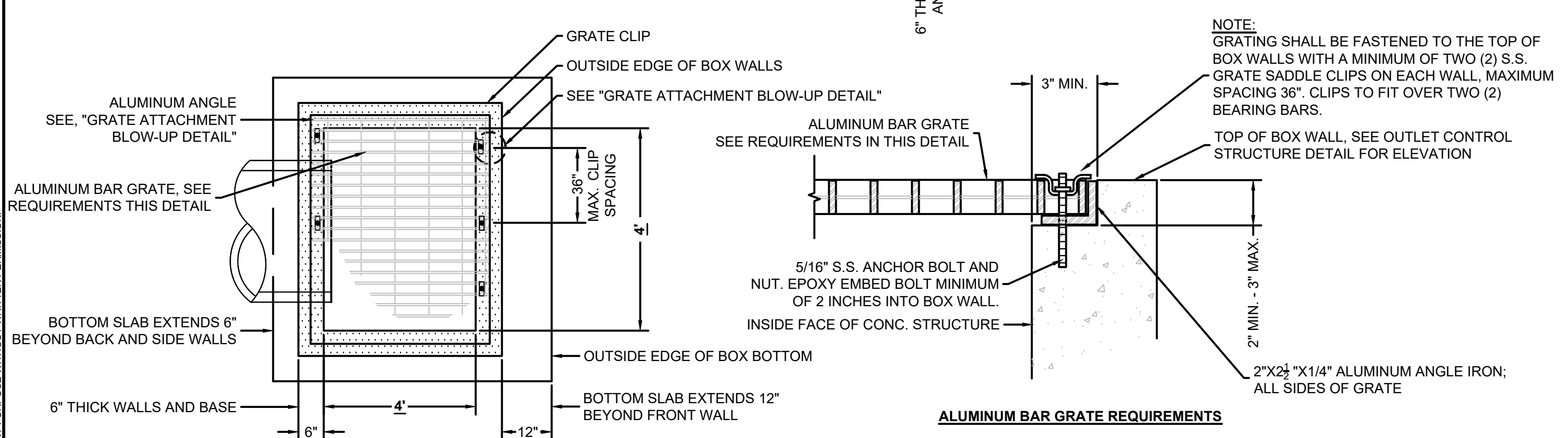
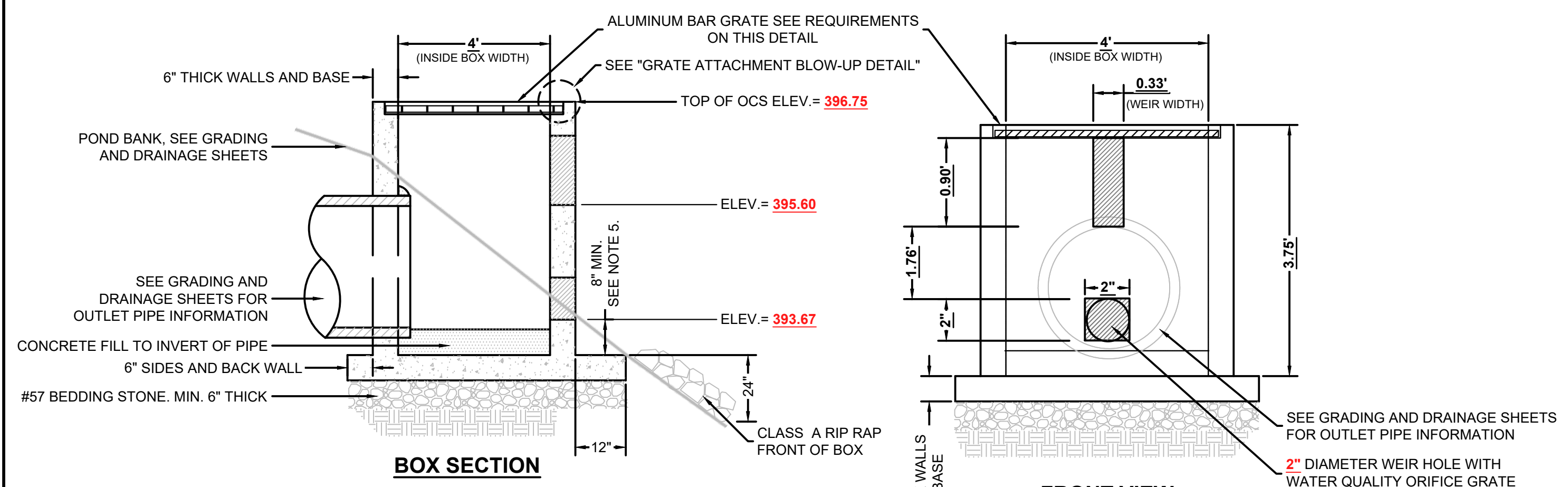
SW+ PROJECT: 10772
 DATE: 09/04/24
 DRAWN BY: CPE
 CHECKED BY: TLL

REVISION HISTORY

NO.	DATE	DESCRIPTION
A	12/22/23	
B	03/01/24	
C	09/04/24	

CONSTRUCTION DETAILS

501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29564 | JUDGE WILLIAMS BUILDING 500 W. BAKER STREET | SPARTANBURG, SC 29301 | 104 N. DANIEL HOGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301
 501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29564 | JUDGE WILLIAMS BUILDING 500 W. BAKER STREET | SPARTANBURG, SC 29301 | 104 N. DANIEL HOGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301
 501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29564 | JUDGE WILLIAMS BUILDING 500 W. BAKER STREET | SPARTANBURG, SC 29301 | 104 N. DANIEL HOGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29301



ALUMINUM BAR GRATE REQUIREMENTS

RECTANGULAR BAR SWAGE-LOCK 19-SR-4 OR; PRESS-LOCKED 19-AP-4 OR STRONGER

SPANS < OR = 54" - USE 1-1/2" X 3/16" OR STRONGER

SPANS > 55" - USE 2" X 3/16" OR STRONGER

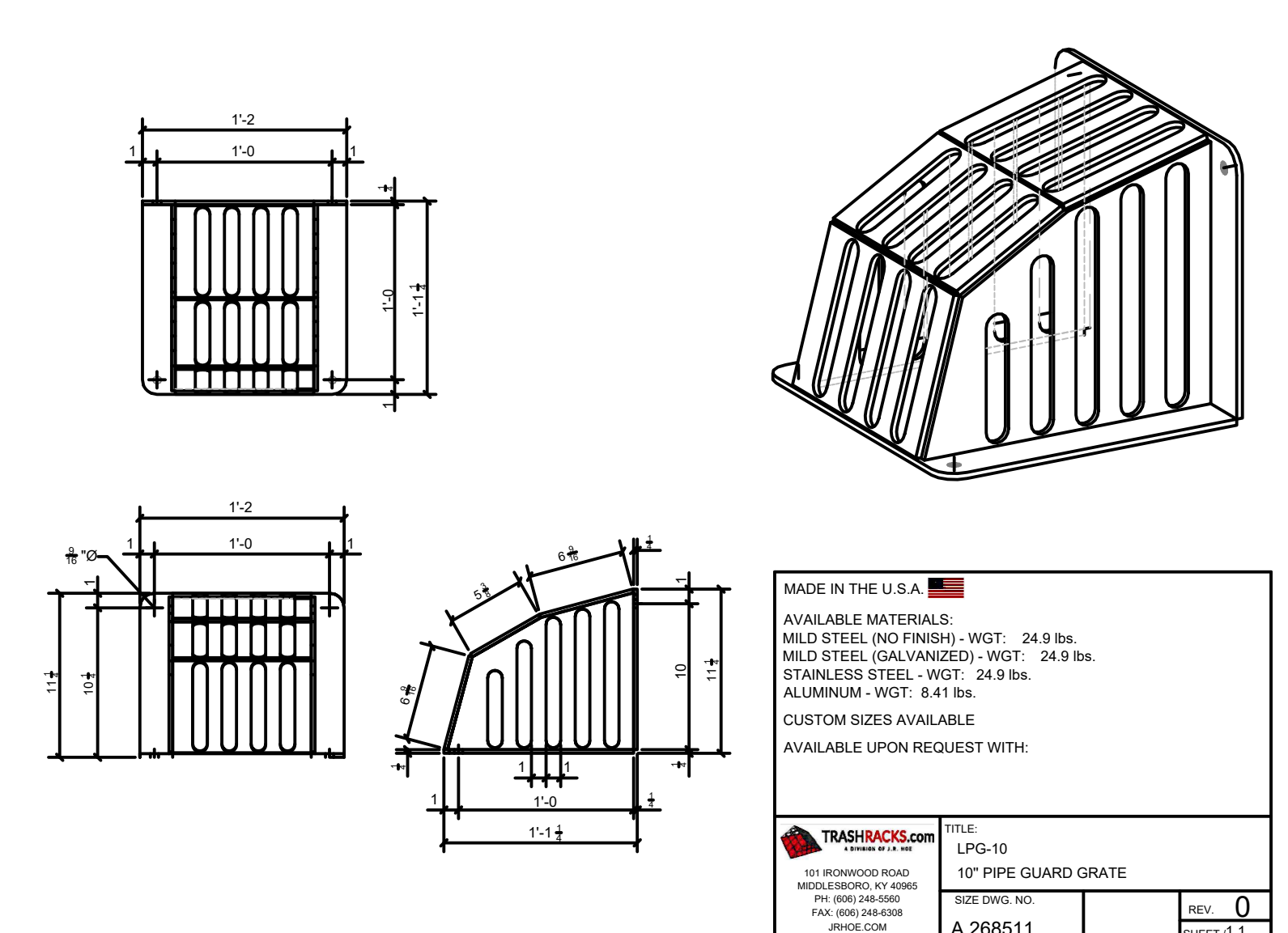
ANY GRATE SELECTED MUST BE ABLE TO SUPPORT 500 LBS OR MORE.

GRATE ATTACHMENT BLOW-UP DETAIL

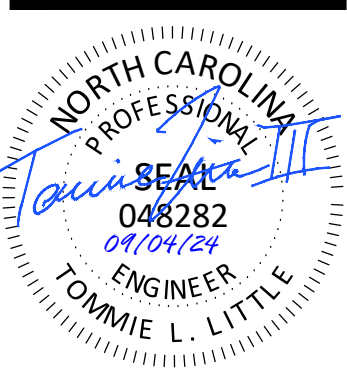
Outlet Control Structure (OCS) with Aluminum Bar Grate
SCALE:

- NOTES:**
- SEE GRADING AND DRAINAGE PLAN FOR PIPE SIZE, PIPE ARRANGEMENT INTO BOX AND INVERT ELEVATIONS.
 - BOX SHALL BE PRECAST WITH 6" THICK WALLS AND BOTTOM.
 - BOTTOM OF BOX TO BE CONCRETE FILLED TO INVERT OF PIPE AS SHOWN.
 - SEE SEPARATE "TRASH RACK" DETAIL AND "OCS RECESS STRUCTURE" DETAIL WHEN APPLICABLE.
 - THIS DIMENSION MAY BE GREATER DEPENDING ON PIPE INVERT ELEVATION.

15 Water Quality Orifice Grate
SCALE: NOT TO SCALE



MOUNT PLEASANT, SC 843.884.1667
 GREENVILLE, SC 864.298.0534
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TIDAL WAVE AUTO SPA
 ROLESVILLE, NC

SW+ PROJECT: 10772
 DATE: 09/04/24
 DRAWN BY: CPE
 CHECKED BY: TLL

REVISION HISTORY

10/30/23	
A 12/22/23	
B 03/01/24	
C 09/04/24	

CONSTRUCTION DETAILS

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	



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ROLESVILLE, NC, USA

SC-310 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH SC-310.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE OR POLYETHYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
 - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
 - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
 - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2922 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
- MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
- ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310 SYSTEM

- STORMTECH SC-310 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOTER LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH SC-310 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
 - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.


PROPOSED LAYOUT		PROPOSED ELEVATIONS:		*INVERT ABOVE BASE OF CHAMBER				
				PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
146	STORMTECH SC-310 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	403.08					
26	STORMTECH SC-310 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	397.08					
6	STONE ABOVE (in)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	396.58	PREFABRICATED EZ END CAP	A	12" BOTTOM PREFABRICATED EZ END CAP, PART#: SC310ECEZ / TYP OF ALL 12" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	0.90"	
6	STONE BELOW (in)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):	396.58	FLAMP	B	INSTALL FLAMP ON 12" ACCESS PIPE / PART#: SC31012RAMP (TYP 2 PLACES)		
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	396.58	MANIFOLD	C	8" x 8" BOTTOM MANIFOLD, MOLDED FITTINGS	0.60"	
5090	INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED) (COVER STONE INCLUDED) (BASE STONE INCLUDED)	TOP OF STONE:	395.58	MANIFOLD	D	8" x 8" BOTTOM MANIFOLD, MOLDED FITTINGS	0.60"	
		TOP OF SC-310 CHAMBER:	395.08	PIPE CONNECTION	E	8" BOTTOM CONNECTION	0.60"	
		8" x 8" BOTTOM MANIFOLD INVERT:	393.80	CONCRETE STRUCTURE	F	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		4.5 CFS IN
		12" ISOLATOR ROW PLUS INVERT:	393.83	W/WEIR	G	(DESIGN BY ENGINEER / PROVIDED BY OTHERS)		4.5 CFS IN
4068	SYSTEM AREA (SF)	12" ISOLATOR ROW PLUS INVERT:	393.83	CONCRETE STRUCTURE	H	30" DIAMETER (DESIGN BY ENGINEER)		1.4 CFS OUT
297.8	SYSTEM PERIMETER (ft)	8" x 8" BOTTOM MANIFOLD INVERT:	393.80	UNDERDRAIN	I	4" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		
		8" BOTTOM CONNECTION INVERT:	393.80					
		12" x 8" BOTTOM MANIFOLD INVERT (8" PIPE):	393.80					
		BOTTOM OF SC-310 CHAMBER:	393.75					
		12" x 8" BOTTOM MANIFOLD INVERT (12" PIPE):	393.45					
		UNDERDRAIN INVERT:	393.25					
		BOTTOM OF STONE:	393.25					

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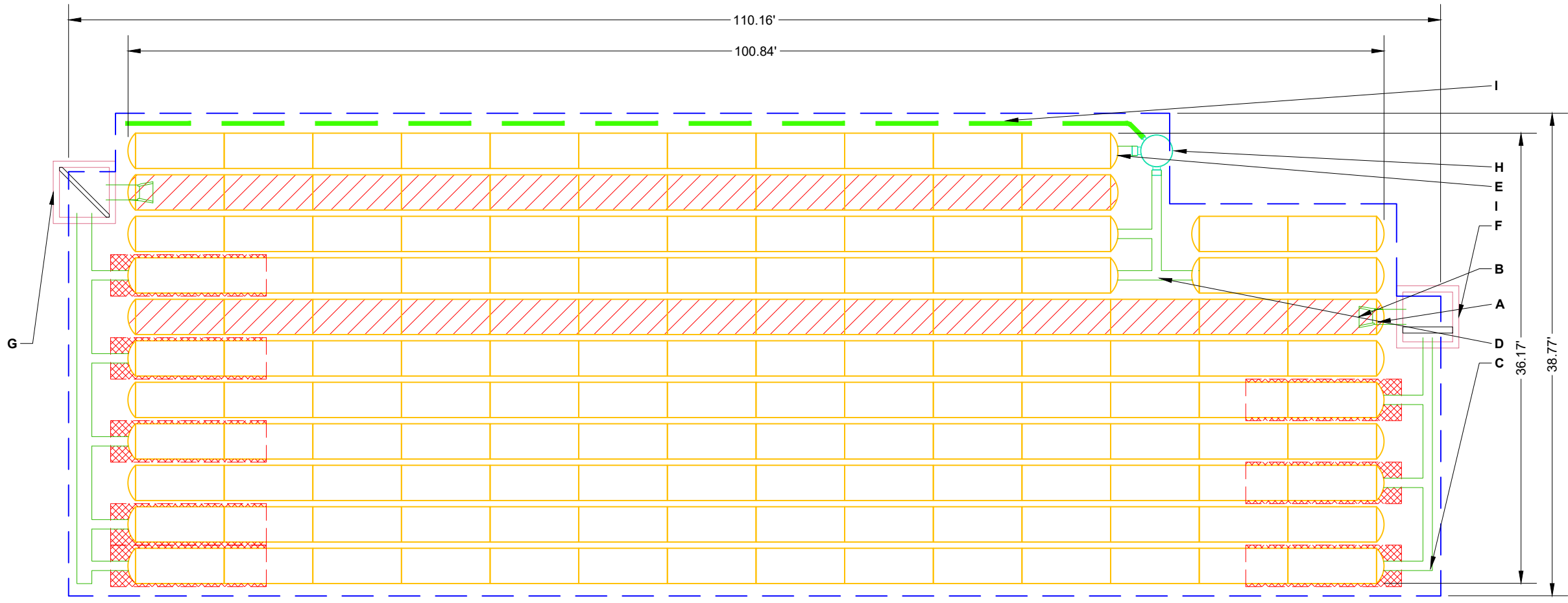
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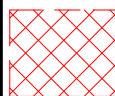

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4640 TRUEMAN BLVD
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-  ISOLATOR ROW PLUS (SEE DETAIL)
-  PLACE MINIMUM 12.50' OF ADSPLUS625 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS
-  BED LIMITS

NOTES

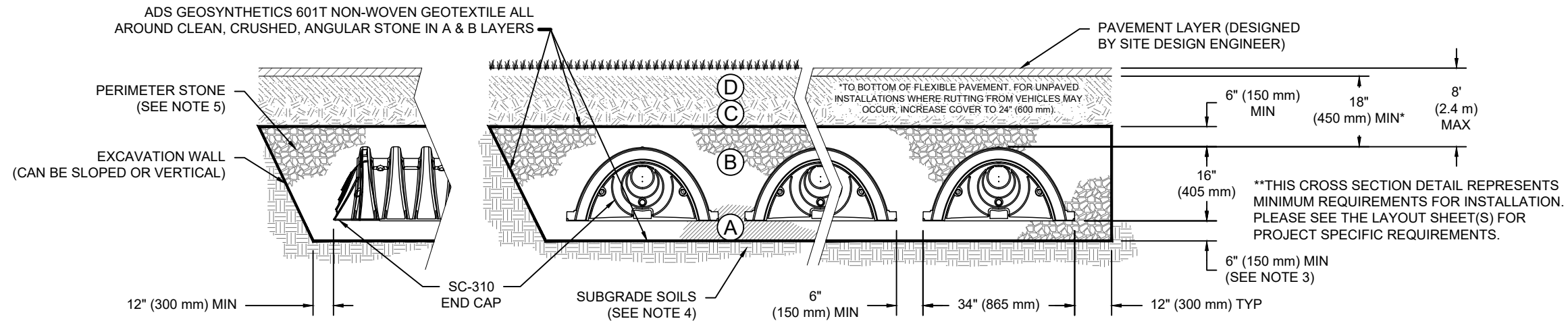
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2-4, A-3 OR AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE ⁵	AASHTO M43 ¹ 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

PLEASE NOTE:

- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
- WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
- WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2922 (POLETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-310 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
 - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
 - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 2".
 - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT/%. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

TWAS REV C

ROLESVILLE, NC, USA

DATE: 08/22/2024

PROJECT #:

CHECKED: N/A

DESCRIPTION

CHK

DATE

DRW

DATE

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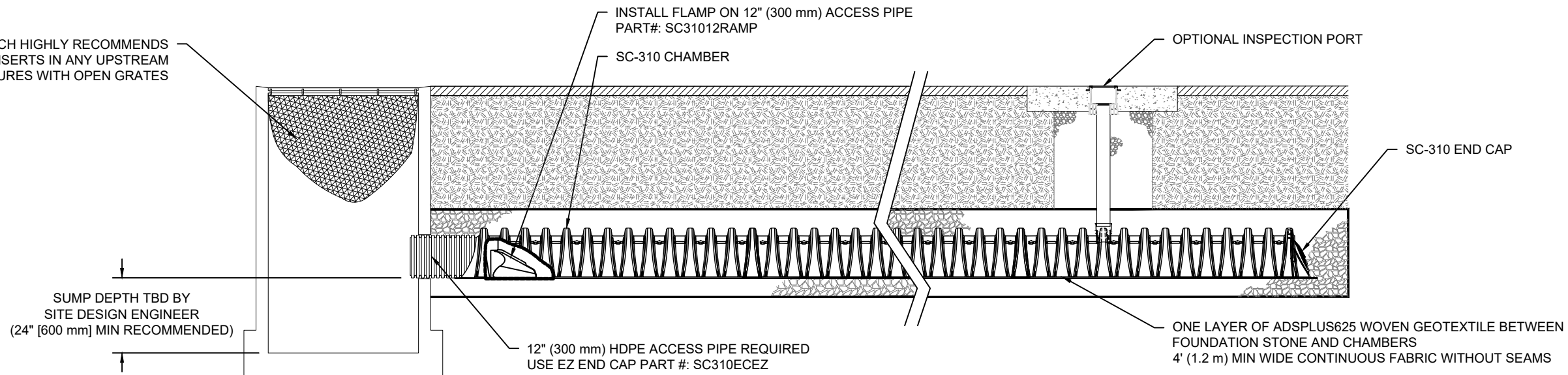
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STORMTECH HIGHLY RECOMMENDS FLEXSTORM INSERTS IN ANY UPSTREAM STRUCTURES WITH OPEN GRATES



SC-310 ISOLATOR ROW PLUS DETAIL

NTS

INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
 - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
 - B. ALL ISOLATOR PLUS ROWS
 - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
 - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
 - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS PREFERRED
 - B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
 - C. VACUUM STRUCTURE SUMP AS REQUIRED
- STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

TWAS REV C
ROLESVILLE, NC, USA
DATE: 08/22/2024
DRAWN: KH
PROJECT #: CHECKED: N/A

DATE	DRW	CHK	DESCRIPTION

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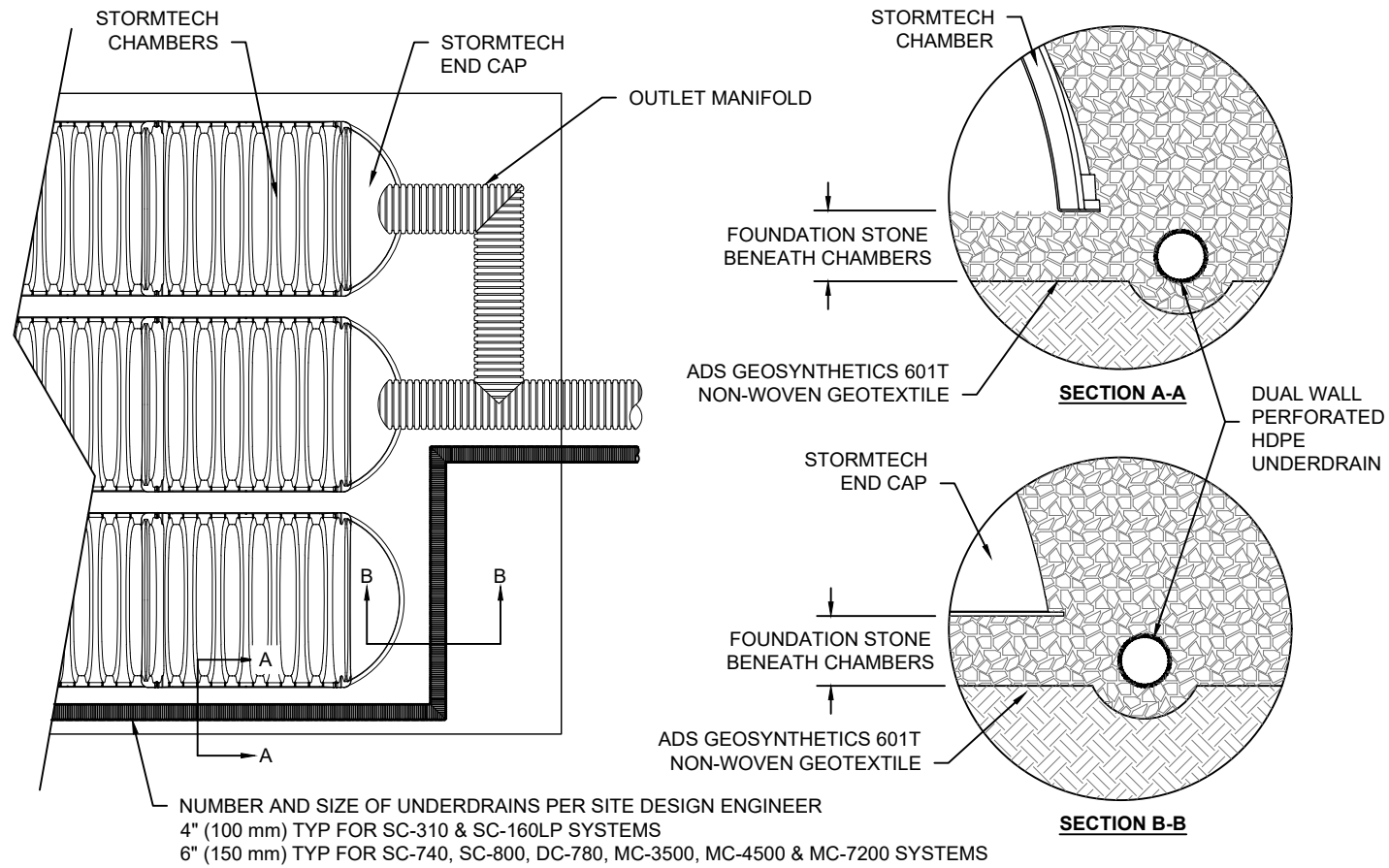
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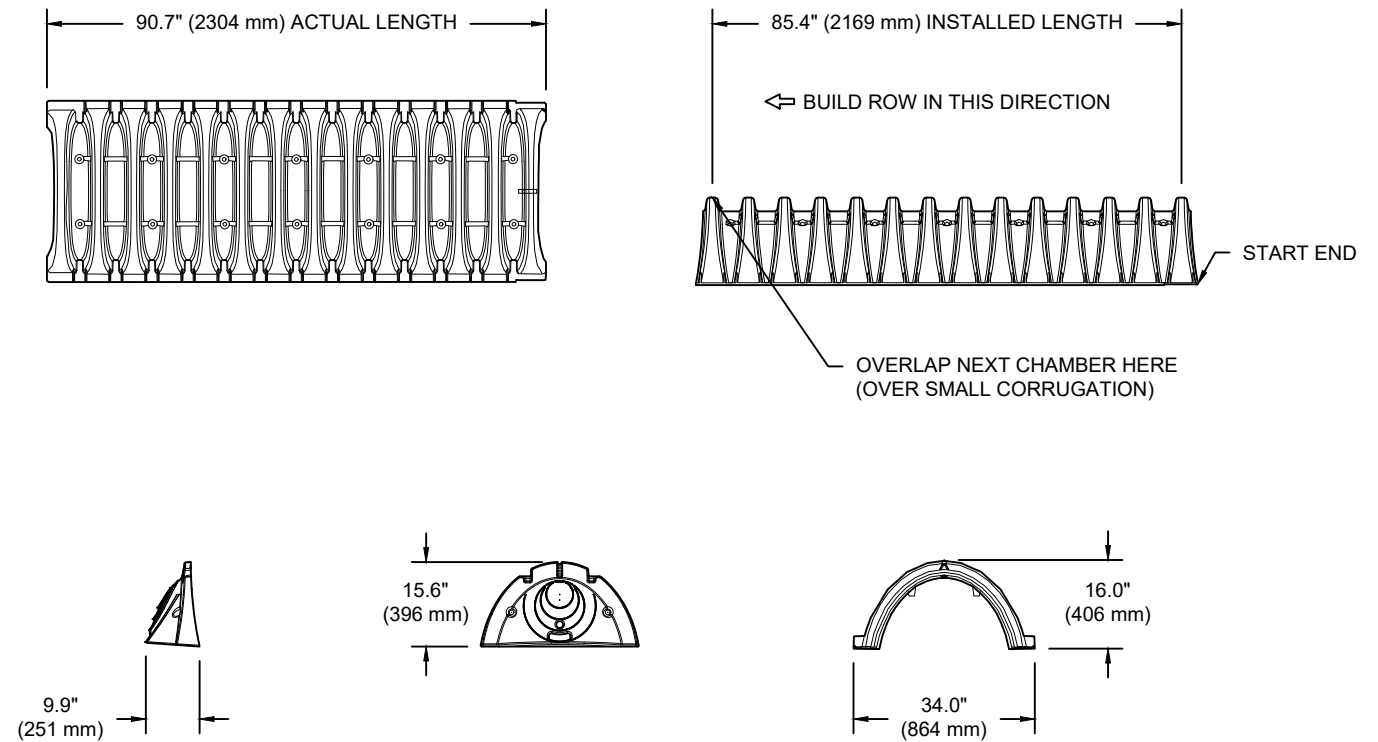
UNDERDRAIN DETAIL

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SC-310 TECHNICAL SPECIFICATION

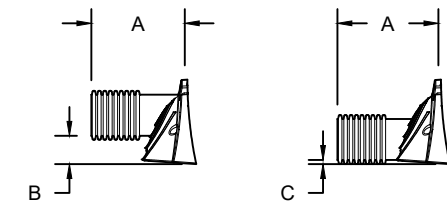
NTS



NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X H X INSTALLED LENGTH)	34.0" X 16.0" X 85.4"	(864 mm X 406 mm X 2169 mm)
CHAMBER STORAGE	14.7 CUBIC FEET	(0.42 m ³)
MINIMUM INSTALLED STORAGE*	31.0 CUBIC FEET	(0.88 m ³)
WEIGHT	35.0 lbs.	(16.8 kg)

*ASSUMES 6" (152 mm) ABOVE, BELOW, AND BETWEEN CHAMBERS



PRE-FAB STUB AT BOTTOM OF END CAP WITH FLAMP END WITH "BR"
 PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"
 PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"
 PRE CORED END CAPS END WITH "PC"

PART #	STUB	A	B	C
SC310EPE06T / SC310EPE06TPC	6" (150 mm)	9.6" (244 mm)	5.8" (147 mm)	---
SC310EPE06B / SC310EPE06BPC			---	0.5" (13 mm)
SC310EPE08T / SC310EPE08TPC	8" (200 mm)	11.9" (302 mm)	3.5" (89 mm)	---
SC310EPE08B / SC310EPE08BPC			---	0.6" (15 mm)
SC310EPE10T / SC310EPE10TPC	10" (250 mm)	12.7" (323 mm)	1.4" (36 mm)	---
SC310EPE10B / SC310EPE10BPC			---	0.7" (18 mm)
SC310ECEZ*	12" (300 mm)	13.5" (343 mm)	---	0.9" (23 mm)

ALL STUBS, EXCEPT FOR THE SC310ECEZ ARE PLACED AT BOTTOM OF END CAP SUCH THAT THE OUTSIDE DIAMETER OF THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-800-821-6710.

* FOR THE SC310ECEZ THE 12" (300 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 0.25" (6 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

TWAS REV C

ROLESVILLE, NC, USA

DATE: 08/22/2024

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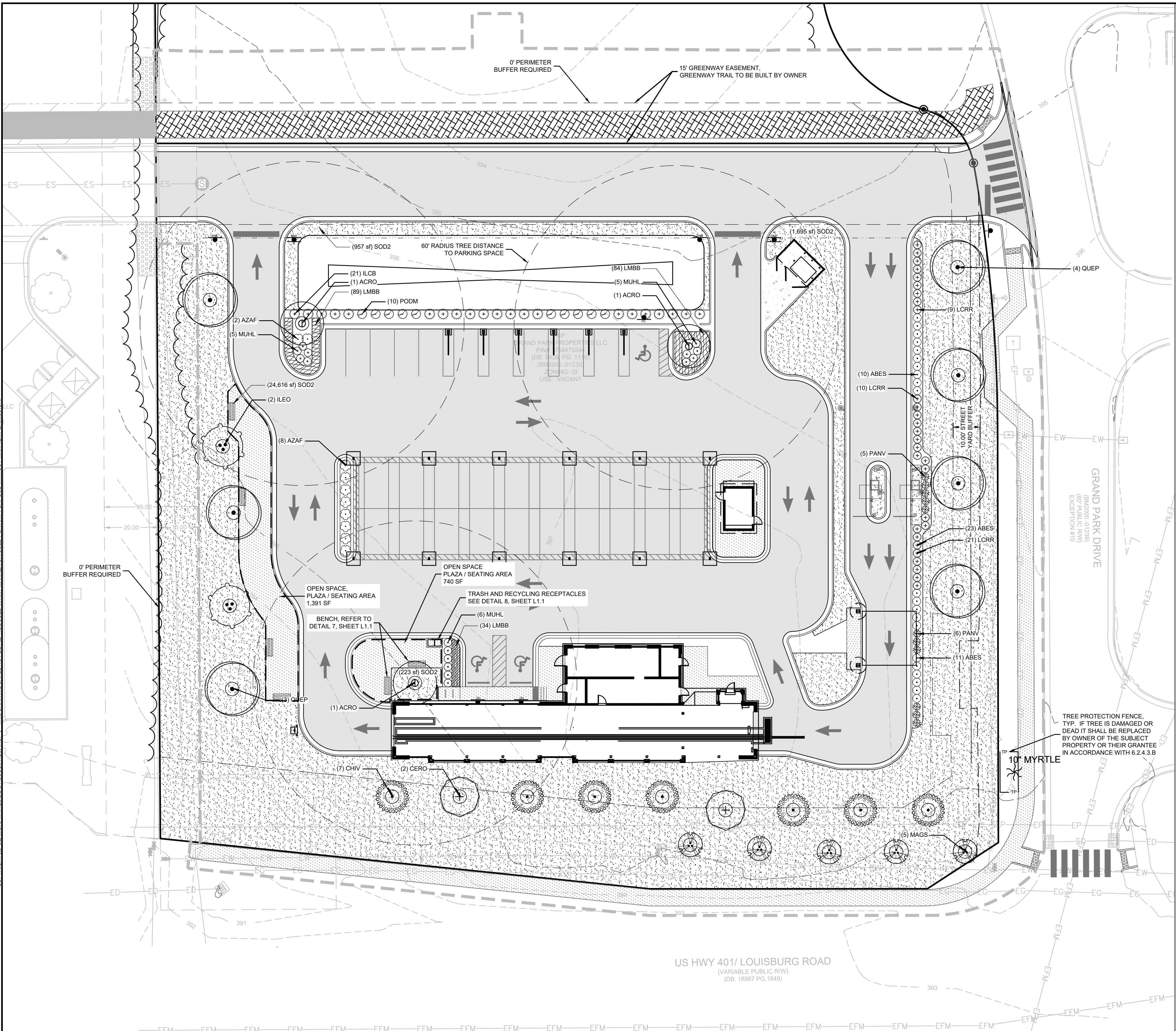
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501 WANDO PARK BOULEVARD, SUITE 200 | MOUNT PLEASANT, SC 29566 | JUDSON HILLIS BUILDING GROUP, 374 EASTY BRIDGE, SUITE 600 | GREENVILLE, SC 29611 | 250 PETERSBORO | SPARTANBURG, SC 29583 | 104 N. DANIEL MORGAN AVENUE, SUITE 300 | SPARTANBURG, SC 29581



GENERAL NOTES:

- SEE EROSION CONTROL PLANS (SHEETS C4.1 - C4.3) FOR SILT FENCE LOCATIONS, TREE PROTECTION ZONES AND BARRICADES, AND ADDITIONAL NOTES AND DETAILS.
- FOR TREE REMOVALS, PLEASE REFER TO SHEETS C3.1.
- FOR REQUIRED TREE MITIGATION AND DEVELOPMENT INCHES PER THE TOWN OF ROLESVILLE ZONING ORDINANCE, PLEASE REFER TO SHEET L1.1 FOR PLANT SCHEDULE QUANTITY AND SIZES.
- THE OVERALL PLANT QUANTITY FOR THE ENTIRE SITE CAN BE FOUND ON THE MASTER PLAN SCHEDULE, SHEET L-1.1.
- SEE SITE PLAN (C5.1) FOR SITE LABELS, INFORMATION AND DETAILS.
- CONTRACTOR TO CONTACT CIVIL ENGINEER OR LANDSCAPE ARCHITECT REGARDING ANY SITE WORK MODIFICATIONS FROM THESE PLANS PRIOR TO CHANGES IN THE FIELD.
CONTACT: 980-312-5450
- OWNER OR GRANTEE SHALL BE RESPONSIBLE FOR TREE REPLACEMENT TO ANY TREES THAT ARE DAMAGED OR DIE DURING CONSTRUCTION.

OPEN SPACE

SITE AREA = 83,635 SF
 OPEN SPACE REQUIREMENTS = 5% OF TOTAL SITE AREA
 OPEN SPACE REQUIRED = 4,182 SF
 OPEN SPACE PROVIDED = 4,182 SF
 + ACTIVE OPEN SPACE = 2,091 SF OF PLAZA / SEATING AREA
 + PASSIVE OPEN SPACE = 2,091 SF OF LAWN / NATURAL AREA

US HWY 401 / LOUISBURG ROAD (317 LF)			
	STREET BUFFER	PLANTINGS REQUIRED	PLANTINGS PROVIDED
MINIMUM BUFFER WIDTH	30' MIN.		
CANOPY TREE	1 TREE PER 40 LF	1	1
UNDERSTORY TREE*	2 TREES PER 40 LF	14	14

*UNDERSTORY TREES SHALL BE USED WHERE OVERHEAD UTILITIES CONFLICTS WITH STREET BUFFER

PLANT SCHEDULE HWY 401 BUFFER									
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING	REMARKS	
UNDERSTORY TREES									
+	CERO	2	CERCIS CANADENSIS 'OKLAHOMA' / OKLAHOMA REDBUD	1.5" CAL	8' MIN	8'	AS SHOWN	FWF, SP	
○	CHV	7	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	1.5" CAL	8' MIN	8'	AS SHOWN	FWF, SP	
⊗	MAGS	5	MAGNOLIA X SOULANGIANA / SAUCER MAGNOLIA	1.5" CAL	8' MIN	8'	AS SHOWN	MS, FWF, SP	

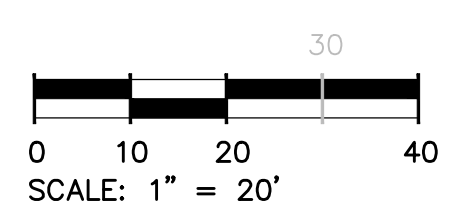
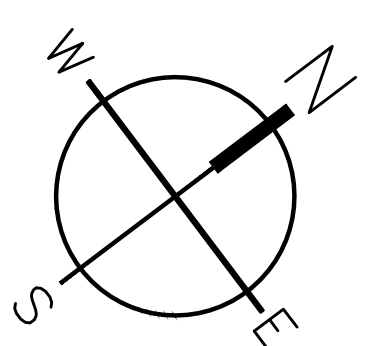
GRAND PARK DRIVE (275 LF)			
	STREET BUFFER	PLANTINGS REQUIRED	PLANTINGS PROVIDED
MINIMUM BUFFER WIDTH	10' MIN.		
CANOPY TREE	1 TREE PER 60 LF	5	5 (4 PROPOSED TREES, 1 EX. TREE TO REMAIN*)

*(1) 10" CRAPE MYRTLE (LAGEROSTROEMIA INDICA)

PLANT SCHEDULE GRAND PARK DRIVE									
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING	REMARKS	
TREES									
○	QUEP	4	QUERCUS PALUSTRIS / PIN OAK	2.5" CAL	8' MIN	4'-6"	AS SHOWN	FWF, SP	

PLANT SCHEDULE									
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING	REMARKS	
TREES									
○	ACRO	3	ACER RUBRUM 'OCTOBER GLORY' TM / OCTOBER GLORY MAPLE						
⊕	ILEO	2	ILEX OPACA / AMERICAN HOLLY						
○	QUEP	8	QUERCUS PALUSTRIS / PIN OAK						
UNDERSTORY TREES									
+	CERO	2	CERCIS CANADENSIS 'OKLAHOMA' / OKLAHOMA REDBUD						
○	CHV	7	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE						
⊗	MAGS	5	MAGNOLIA X SOULANGIANA / SAUCER MAGNOLIA						
SHRUBS									
○	ABES	21	ABELIA X GRANDIFLORA 'SHERWOODII' / DWARF ABELIA						
○	AZAF	10	AZALEA INDICA 'FORMOSA' / FORMOSA AZALEA						
○	ILCB	21	ILEX CORNUTA 'BURFORDII NANA' / DWARF BURFORD HOLLY						
+	LCRR	26	LOROPETALUM CHINENSE RUBRUM 'RUBY' / DWARF RUBY FRINGE FLOWER						
○	PODM	10	PODOCARPUS MACROPHYLLUS / SOUTHERN YEW						
GRASSES									
+	MUHL	16	MUHLENBERGIA FILIPES / SWEETGRASS						
+	PANV	11	PANICUM VIRGATUM 'HEAVY METAL' / HEAVY METAL SWITCH GRASS						
GROUND COVERS									
+	LMBB	207	LIRIOPE MUSCARI 'BIG BLUE' / BIG BLUE LILYTURF						

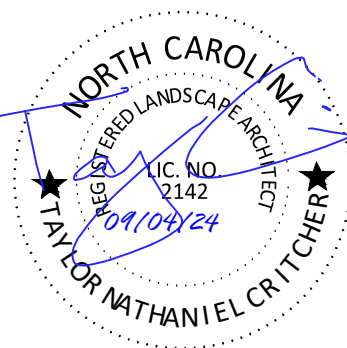
- TIDAL WAVE LANDSCAPE NOTES**
- ALL DISTURBED AREAS NOT COVERED BY STRUCTURES, PAVING OR LANDSCAPING SHALL BE SODDED. NO SEEDING SHALL BE USED.
 - ALL PLANT BEDS SHALL BE UNDERLAIN WITH LANDSCAPING FABRIC AND HAVE 3" OF DYED BROWN OR BLACK WOOD MULCH WITH EDGING AS REQUIRED. NO PINE STRAW MULCH WILL BE ALLOWED.
 - ALL RIVER ROCK SHALL BE 4"-6" MINIMUM IN DIAMETER AND SHALL BE UNDERLAIN WITH LANDSCAPING FABRIC.
 - AN UNDERGROUND IRRIGATION SYSTEM, SHALL BE INSTALLED AND SHALL COMPLY WITH ALL LOCAL MUNICIPAL CODES AND REGULATIONS AND ALSO COMPLY WITH THE LATEST NATIONAL ELECTRIC CODE RULES FOR ALL ELECTRIC WORKS AND MATERIALS.
 - IF THERE IS NO PLANT BED AGAINST THE CAR WASH TUNNEL, VAC HOUSE(S), OR DUMPSTER ENCLOSURE, THEN THERE SHALL BE A 18 INCH MINIMUM STRIP OF RIVER ROCK INSTALLED.



Know what's below.
Call before you dig.



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 GREENVILLE, SC 29611
 SUMMERVILLE, SC 29583
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 CHARLOTTE, NC 28202
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 WWW.SEAMONWHITESIDE.COM



TIDAL WAVE AUTO SPA
 ROLESVILLE, NC

SW+ PROJECT: 10772
 DATE: 09/04/24
 DRAWN BY: CPE
 CHECKED BY: TLL

REVISION HISTORY

A	10/30/23
B	12/22/23
C	03/01/24
D	09/04/24

LANDSCAPE PLAN

GENERAL PLANTING NOTES:

- THE LANDSCAPE CONTRACTOR SHALL MEET WITH LANDSCAPE ARCHITECT PRIOR TO BEGINNING WORK SO THAT THERE IS A CLEAR UNDERSTANDING OF PROJECT REQUIREMENTS. FAILURE TO DO SO JEOPARDIZES FINAL ACCEPTANCE OF WORK.
- THE LANDSCAPE CONTRACTOR IS HEREBY NOTIFIED OF THE EXISTENCE OF UNDERGROUND UTILITIES WITHIN THE LIMITS OF THE PROJECT AREA. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITY LINES PRIOR TO COMMENCEMENT OF DIGGING OPERATIONS. THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND REPAIRING ALL DAMAGE TO BUILDINGS, UTILITIES, PAVEMENT, AND CURB & GUTTER. ANY REPAIRS SHALL BE DONE PROMPTLY AT LANDSCAPE CONTRACTOR'S EXPENSE. NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY OF ANY POSSIBLE CONFLICTS BETWEEN PROPOSED IMPROVEMENTS AND UTILITIES, SIGNS, AND/OR OTHER STRUCTURES.
- IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO VERIFY THAT EACH EXCAVATED TREE OR SHRUB PIT WILL PERCOLATE (DRAIN) PRIOR TO ADDING TOPSOIL AND INSTALLING TREES OR SHRUBS. THE LANDSCAPE CONTRACTOR SHALL FILL THE BOTTOM OF HOLES WITH SIX (6) INCHES OF FINE PERCOLATE WITHIN A TWENTY-FOUR (24) HOUR PERIOD. IF WATER DOESN'T PERCOLATE, THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLING PLANTS.
- SHOULD THE LANDSCAPE CONTRACTOR ENCOUNTER UNSATISFACTORY SURFACE OR SUBSURFACE DRAINAGE CONDITIONS, SOIL DEPTH, SOILS, HARD PANS, STEAM OR OTHER UTILITY LINES OR OTHER CONDITIONS THAT WILL JEOPARDIZE THE HEALTH AND VIGOR OF THE PLANTS, THE LANDSCAPE CONTRACTOR MUST ADVISE THE LANDSCAPE ARCHITECT IN WRITING OF THE CONDITIONS PRIOR TO INSTALLING THE PLANTS. OTHERWISE, THE LANDSCAPE CONTRACTOR WARRANTS THAT THE PLANTING AREAS ARE SUITABLE FOR PROPER GROWTH AND DEVELOPMENT OF THE PLANTS TO BE INSTALLED.
- THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR STAKING AND LAYOUT OF PLANTINGS ON THIS PROJECT. THE LANDSCAPE ARCHITECT OR OWNER SHALL BE ADVISED WHEN STAKES ARE READY FOR INSPECTION ON VARIOUS PLANTING AREAS. ALL LAYOUT WORK SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT AND OWNER PRIOR TO OPENING ANY PLANTING PITS.
- PLANT MATERIAL QUANTITIES PROVIDED IN THE PLANT SCHEDULE ARE FOR REFERENCE ONLY AND THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR THE FINAL PLANT MATERIAL COUNTS. DISCREPANCIES BETWEEN QUANTITIES SHOWN ON THE PLANTING PLAN AND THOSE IN THE PLANT SCHEDULE SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION. IF CLARIFICATION OF DISCREPANCIES FROM THE LANDSCAPE ARCHITECT IS NOT POSSIBLE, THEN QUANTITIES SHOWN ON THE PLANTING PLAN SHALL TAKE PRECEDENCE.**
- REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING AND BURLAPPING OF PLANTS IN THE PLANT LIST SHOULD FOLLOW OR EXCEED THE STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN THE AMERICAN STANDARD FOR NURSERY STOCKS (ANSI Z60.1), UNLESS OTHERWISE SPECIFIED, ANY SIZE SPECIFIED SHALL BE CONSIDERED MINIMUM. **MINIMUMS FOR HEIGHT, SPREAD, OR CALIPER SHALL TAKE PRECEDENCE OVER A SPECIFIED CONTAINER SIZE.**
- ALL PLANTS SHALL HAVE A WELL FORMED HEAD WITH MINIMUM CALIPER, HEIGHT AND SPREAD OF THE SIDE BRANCHES AS SHOWN ON THE PLANT LIST. TRUNKS SHALL BE UN Damaged AND SHAPE SHALL BE TYPICAL OF THE SPECIES.
- MEASUREMENT OF CONIFER HEIGHT SHALL INCLUDE NOT MORE THAN FIFTY (50) PER CENT OF THIS YEAR'S VERTICAL GROWTH (TOP CANDLE).
- NO EXCAVATION OR PLANTING PIT SHALL BE LEFT UNATTENDED OVERNIGHT.
- REMOVE BURLAP STRAPPING AND WIRE BASKET FROM TOP 1/3 OF ROOT BALL ON TREES.
- REMOVE PAPER, PLASTIC OR METAL AROUND ROOT BALLS OF SHRUBS.
- DO NOT WRAP TREES.
- WATER ALL PLANT MATERIAL IMMEDIATELY AFTER PLANTING.
- TREE GUYING MATERIAL SHALL BE "ARBOR-TIE" OR EQUIVALENT.
- ALL PLANT BEDS TO BE MULCHED WITH 4" OF DOUBLE SHREDDED HARDWOOD MULCH UNLESS OTHERWISE SPECIFIED.
- ALL AREAS OF PLANTING, INCLUDING AREAS OF GRASS SEEDING AND SOD, SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AND SHALL BE PROVIDED APPROPRIATE SOIL FOR THE PROPOSED PLANTINGS. SEE SOIL NOTES.
- ALL EXISTING VEGETATION WITHIN AREAS TO BE PLANTED, SODDED AND/OR SEEDDED SHALL BE REMOVED PRIOR TO PLANTING, SODDING, AND SEEDING. ALL AREAS INDICATED TO BE GRASS SEED SHALL BE SEED PER GRASSING SPECIFICATIONS FOR PERMANENT STABILIZATION.
- ALL DISTURBED AREAS NOT SPECIFICALLY CALLED OUT ON THIS PLAN SHALL BE SEED PER THE PROVIDED SEEDING SCHEDULE. ALL DISTURBED NATURAL AREAS SHALL BE MULCHED (SEE MULCH SPECIFICATIONS).
- DRAINAGE TO BE PROVIDED FOR ALL ABOVE GROUND PLANTERS.
- PLANTINGS SHALL BE PRUNED TO CONFORM WITH THE REQUIREMENTS OF ALL AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO THE CITY, COUNTY, STATE AND FEDERAL REQUIREMENTS.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP THE SITE AT THE COMPLETION OF THE PROJECT AND SHALL MAINTAIN THE SITE IN A REASONABLY NEAT AND CLEAN STATE THROUGHOUT THE INSTALLATION PROCESS. STREETS AND PAVED AREAS SHALL BE CLEANED REGULARLY TO REMOVE CONSTRUCTION MATERIALS AND OTHER DEBRIS RESULTING FROM WORK OF THE PROJECT.
- REPLACEMENTS OF DEAD OR UNSATISFACTORY MATERIAL SHALL BE MADE AS SPECIFIED IN THE PLANT LIST. THE OWNER OR LANDSCAPE ARCHITECT SHALL INSPECT REPLACED PLANTS WHEN ALL REPLACEMENTS HAVE BEEN MADE. REPLACEMENTS ARE TO BE ALIVE AND IN A HEALTHY CONDITION WHEN THE REPLACEMENTS ARE COMPLETE. REPLACEMENTS ARE NOT SUBJECT TO AN ADDITIONAL GUARANTEE. BUT THE LANDSCAPE CONTRACTOR SHALL CONSULT WITH THE LANDSCAPE ARCHITECT ON REASON FOR PLANT DECLINE/DEATH AND HOW TO AVOID FUTURE INSTANCES.
- SHOULD THE LANDSCAPE CONTRACTOR NOT MAKE REPLACEMENTS IN A SATISFACTORY AND TIMELY FASHION IN ACCORD WITH THE PLANTING NOTES, THE OWNER, AFTER PROPER NOTIFICATION TO THE LANDSCAPE CONTRACTOR MAY UTILIZE THE FUNDS OF THE RETAINAGE TO HAVE THE REPLACEMENTS MADE IN ACCORDANCE WITH THE SPECIFICATIONS BY ANOTHER CONTRACTOR.

SOIL NOTES:

- FOR EACH UNAMENDED SOIL TYPE, FURNISH SOIL ANALYSIS AND A WRITTEN REPORT BY A QUALIFIED SOIL-TESTING LABORATORY STATING PERCENTAGES OF ORGANIC MATTER, GRADATION OF SAND, SILT, AND CLAY CONTENT; CATION EXCHANGE CAPACITY; BUFFER RATIO; DELETERIOUS MATERIAL; BUFFER PH LEVELS; AND MINERAL AND PLANT-NUTRIENT CONTENT OF THE SOIL.
- A MINIMUM OF THREE REPRESENTATIVE SAMPLES SHALL BE TAKEN FROM VARIED LOCATIONS FOR EACH SOIL TO BE USED OR AMENDED FOR PLANTING PURPOSES.
- LANDSCAPE CONTRACTOR SHALL SUBMIT TO LANDSCAPE ARCHITECT THE LAB RECOMMENDATIONS FOR SOIL TREATMENTS AND SOIL AMENDMENTS TO BE INCORPORATED. INDICATE LAB RECOMMENDATIONS IN WEIGHT PER 1000 SQ. FT. OR VOLUME PER CU. YD. FOR NITROGEN, PHOSPHORUS, AND POTASH NUTRIENTS AND ORGANIC AND INORGANIC SOIL AMENDMENTS TO BE ADDED TO PRODUCE PLANTING SOIL SUITABLE FOR HEALTHY, VIABLE PLANTS.
- ALL SOILS USED FOR PLANTING SHALL BE PREPARED AS NECESSARY USING ORGANIC AND INORGANIC SOIL AMENDMENTS AND FERTILIZERS IN THE QUANTITIES RECOMMENDED IN THE SOIL ANALYSIS REPORT TO PRODUCE SATISFACTORY PLANTING SOIL FOR HEALTHY, VIABLE PLANTS. PLANTING SOILS SHALL HAVE A PH LEVEL BETWEEN 6.0 AND 7.0.
- IN ALL PLANTING AREAS, SPREAD PLANTING SOIL TO A DEPTH OF 8 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT.

IRRIGATION NOTES:

- LANDSCAPE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF PROPOSED IRRIGATION SYSTEM TO LANDSCAPE ARCHITECT AND OWNER FOR ACCEPTANCE. LANDSCAPE CONTRACTOR TO SUPPLY AUTOMATIC IRRIGATION SYSTEMS, COMPLETE AND INSTALLED. SYSTEM TO INCLUDE ALL VALVES, PIPES, HEADS, FITTINGS, RAIN SENSOR, AND CLOCK AND TO PROVIDE 100% HEAD TO HEAD COVERAGE OF ALL NEW SODDED AND IMPROVED EXISTING GRASS AREAS, TREES, SHRUBS AND PLANTING BEDS. COORDINATE IRRIGATION WITH OWNER'S REPRESENTATIVE.
- LANDSCAPE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR AUTOMATIC IRRIGATION SYSTEMS. LANDSCAPE CONTRACTOR SHALL PROVIDE ELECTRIC METER, BACKFLOW PREVENTER AND SERVICE IN ACCORDANCE WITH STATE AND LOCAL CODES FOR IRRIGATION SYSTEM. LOCATION OF METERS AND CONTROL PANELS FOR IRRIGATION SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION. COORDINATE WATER METER REQUIREMENTS WITH CIVIL ENGINEER.
- LANDSCAPE CONTRACTOR TO PROVIDE DRIP IRRIGATION TO ALL ABOVE GROUND PLANTERS. IRRIGATION LINE TO BE INSTALLED BENEATH ADJACENT HARDSCAPE AS NECESSARY.
- IRRIGATION PIPING, SPRINKLERS, AND OTHER EQUIPMENT MAY BE SHOWN OUTSIDE OF LANDSCAPE AREAS ON DRAWING FOR GRAPHIC CLARITY. ALL VALVE BOXES AND EQUIPMENT VAULTS SHALL BE LOCATED IN MULCH BEDS.
- NO IRRIGATION COMPONENTS, INCLUDING BUT NOT LIMITED TO, VALVE BOXES, CONTROL BOXES, BACKFLOW PREVENTERS, AND/OR RAIN SENSORS ARE ALLOWED TO BE INSTALLED WITHIN DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY.

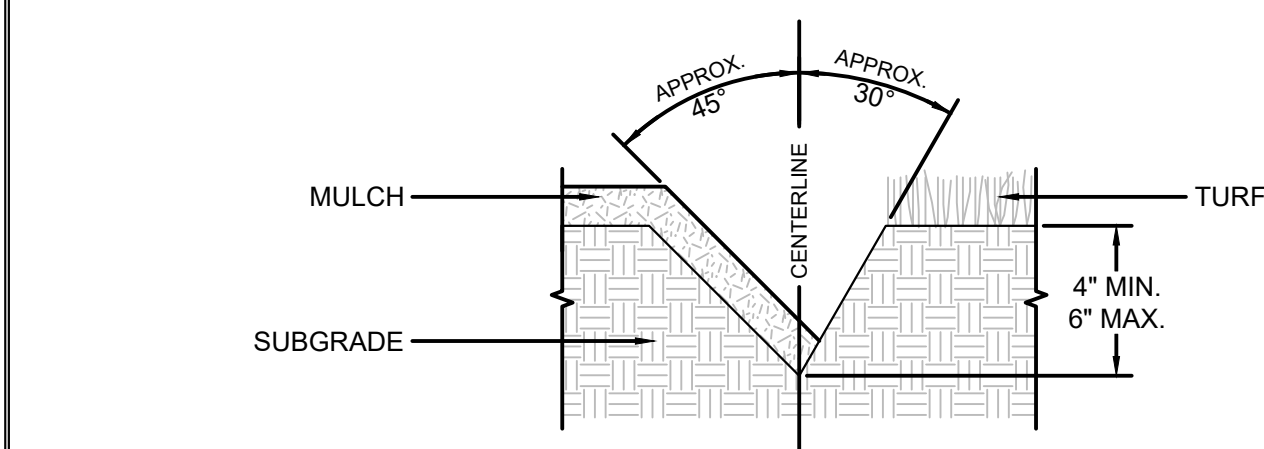
PLANT SCHEDULE NOTES:

- THE TECHNICAL SPECIFICATIONS ARE MADE A PART OF THESE PLANS AND SHALL BE CONSULTED BY THE LANDSCAPE CONTRACTOR. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING WORK AS SPECIFIED IN THE TECHNICAL SPECIFICATIONS AND PLANS.
- THE LANDSCAPE CONTRACTOR SHALL NOTIFY THIS OFFICE OF ANY DISCREPANCIES PRIOR TO BEGINNING OR CONTINUING WORK.
- THERE WILL BE NO SUBSTITUTIONS, DELETIONS OR ADDITIONS WITHOUT APPROVAL OF THIS OFFICE.
- SIZE OF PLANT MATERIALS SHALL CONFORM WITH THE CURRENT EDITION OF AMERICAN STANDARD FOR NURSERY STOCK FOR NUMBER ONE GRADE UNLESS OTHERWISE ADOPTED BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND AMERICAN NATIONAL STANDARDS INSTITUTE.
- THE QUANTITIES ON THE SCHEDULE ARE ONLY A GUIDE. ALL QUANTITIES SHALL BE VERIFIED BY THE LANDSCAPE CONTRACTOR ON THE PLANTING PLAN.

ABBREVIATIONS:

B&B = BALLED & BURLAPPED	CT = CLEAR TRUNK	GAL = GALLON CONTAINER	RF = REFOULATED
BR = BARE ROOT MATERIAL	ESP = ESPALIER	HC = HURRICANE CUT	SP = SPECIMEN MATERIAL
CAL = TRUNK CALIPER (MIN)	FTG = FULL TO GROUND	MS = MULTI-STEMMED TRUNK	TF = TREE FORM HABIT
CON = CONTAINERIZED MATERIAL	FWF = FULL WELL FORMED	OC = ON-CENTER	TYP = TYPICAL

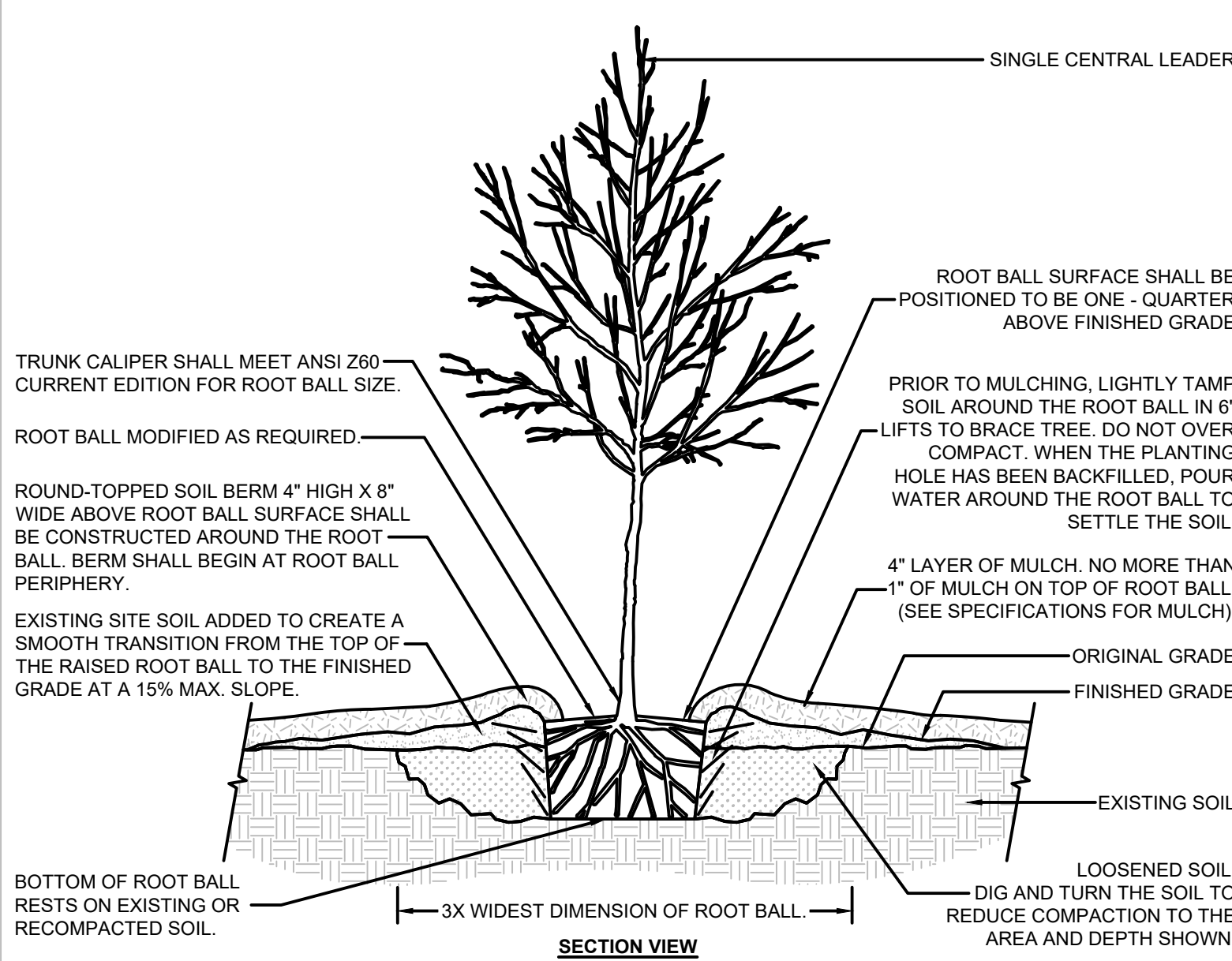
1 Landscape Notes
SCALE: NOT TO SCALE



NOTES:

- SEE LANDSCAPE NOTES AND SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.
- EXCAVATE TRENCH BY HAND WITH SPADE.
- ADD EXCESS SOIL TO ADJACENT PLANT BED AFTER PULLING BACK EXISTING MULCH. RAKE SOIL AND SMOOTH BEFORE MULCHING.

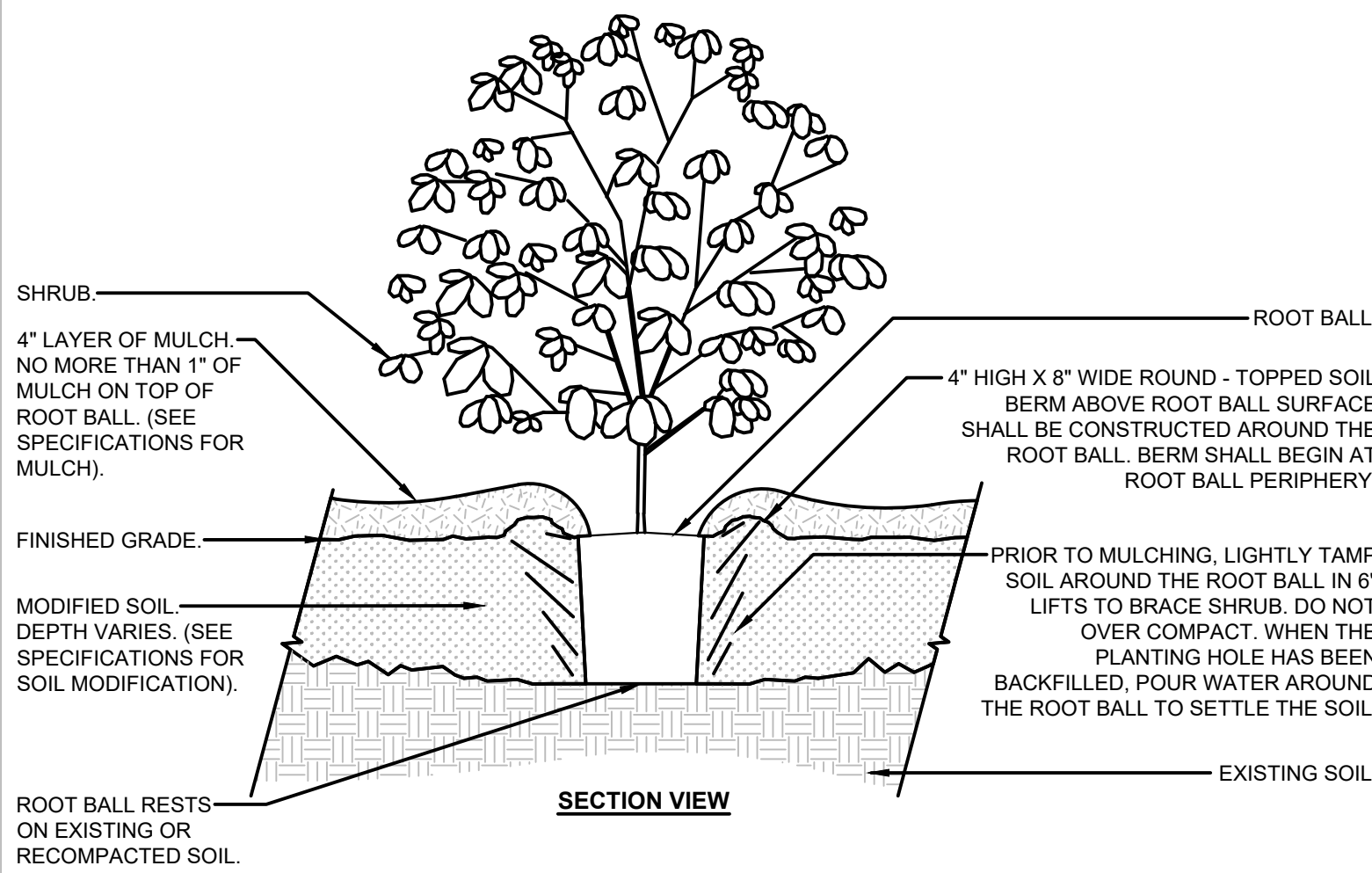
2 Lawn Edge Detail
SCALE: NOT TO SCALE



NOTES:

- SEE LANDSCAPE NOTES AND SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

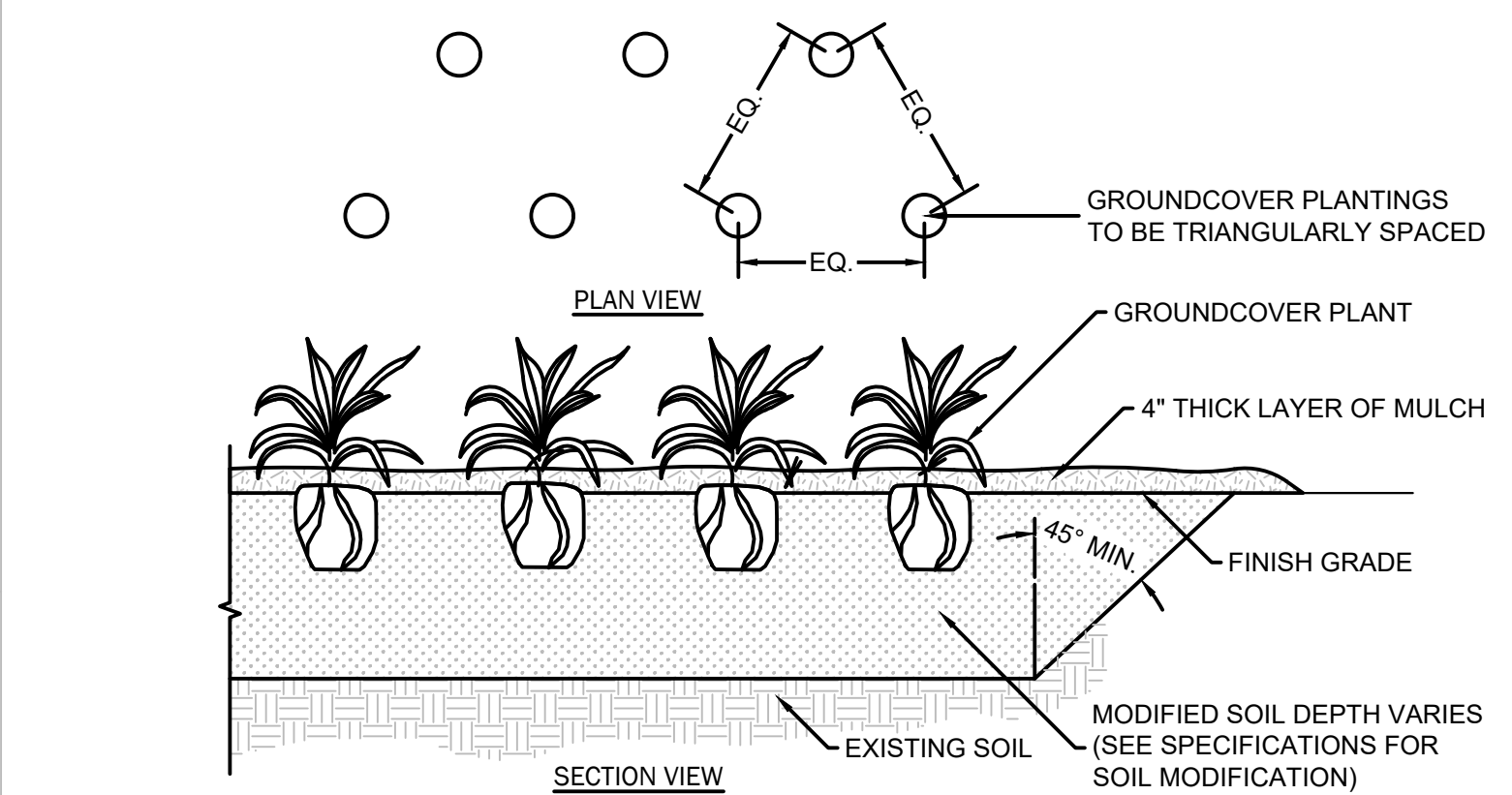
3 Tree in Poorly Drained Soil
SCALE: NOT TO SCALE



NOTES:

- SEE LANDSCAPE NOTES AND SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.

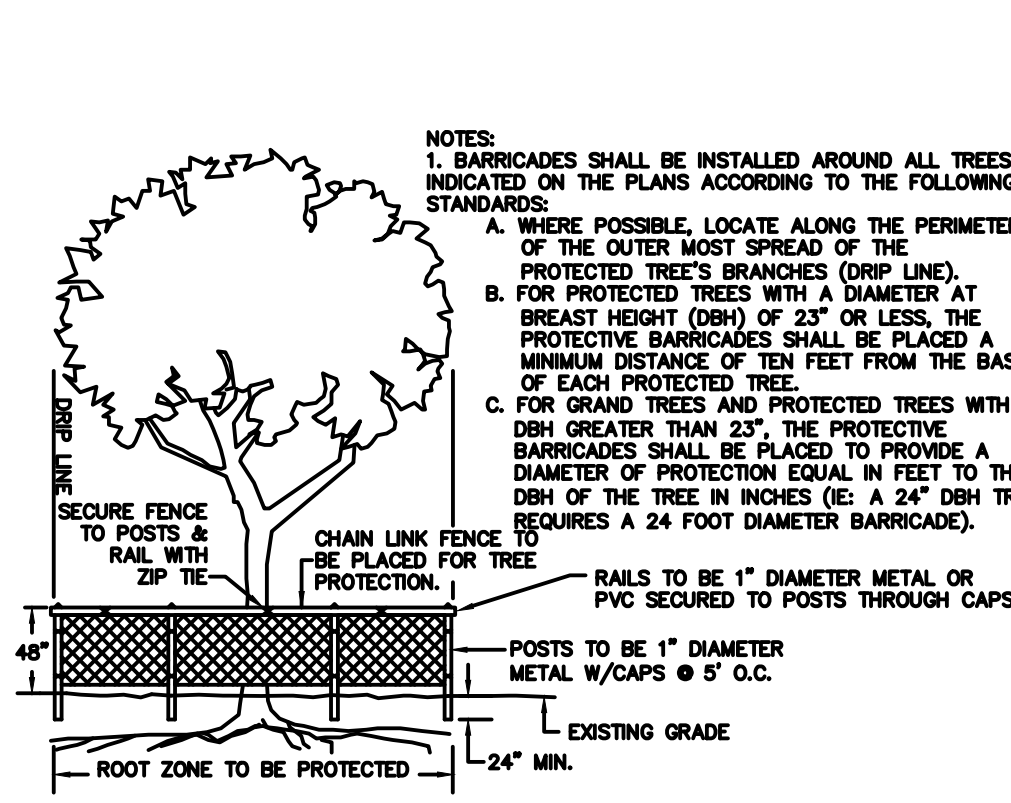
4 Shrub Planting - Modified Soil
SCALE: NOT TO SCALE



NOTES:

- SEE LANDSCAPE NOTES AND SPECIFICATIONS FOR FURTHER REQUIREMENTS RELATED TO THIS DETAIL.
- SEE PLANT SCHEDULE FOR PLANT SPECIES, SIZE, AND SPACING DIMENSION.
- SMALL ROOTS (1/2\"/>

5 Groundcover / Ornamental Grass Planting Detail
SCALE: NOT TO SCALE



7 Tree Protection
SCALE: NOT TO SCALE



8 Bench
SCALE: NOT TO SCALE

MANUFACTURER	BELSON OUTDOORS
PRODUCT	CBPB-6SB-BK
WEBSITE	BELSON.COM
MATERIAL	STEEL
COLOR	BLACK
FINISH	RIVER
MOUNTING	SURFACE MOUNT
REMARKS	INSTALL PER MANUFACTURER SPECIFICATIONS
QUANTITY	1



9 Trash And Recycling Receptacles
SCALE: NOT TO SCALE

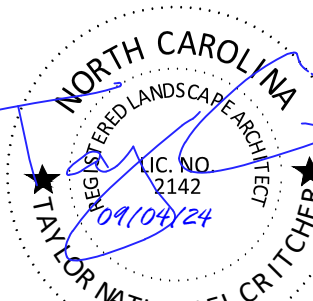
MANUFACTURER	BELSON OUTDOORS
PRODUCT	TF19S3
WEBSITE	BELSON.COM
MATERIAL	PLASTIC
COLOR	CHARCOAL
FINISH	N/A
MOUNTING	N/A
REMARKS	ONE RECEPTACLE WILL HAVE RECYCLING DECAL AND THE OTHER WILL HAVE TRASH DECAL
QUANTITY	2

PLANT SCHEDULE									
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	SPREAD	SPACING	REMARKS	
TREES									
	ACRO	3	ACER RUBRUM 'OCTOBER GLORY' TM / OCTOBER GLORY MAPLE	2.5" CAL	8' MIN	4'-6"	AS SHOWN	FWF, SP	
	ILEO	2	ILEX OPACA / AMERICAN HOLLY	2.5" CAL	6'-8"	4'-6"	AS SHOWN	FWF, SP	
	QUEP	8	QUERCUS PALUSTRIS / PIN OAK	2.5" CAL	8' MIN	4'-6"	AS SHOWN	FWF, SP	
UNDERSTORY TREES									
	CERO	2	CERCIS CANADENSIS 'OKLAHOMA' / OKLAHOMA REDBUD	1.5" CAL	8' MIN	8'	AS SHOWN	FWF, SP	
	CHIV	7	CHIONANTHUS VIRGINICUS / WHITE FRINGETREE	1.5" CAL	8' MIN	8'	AS SHOWN	FWF, SP	
	MAGS	5	MAGNOLIA X SOULANGIANA / SAUCER MAGNOLIA	1.5" CAL	8' MIN	8'	AS SHOWN	MS, FWF, SP	
SHRUBS									
	ABES	21	ABELIA X GRANDIFLORA 'SHERWOODII' / DWARF ABELIA	3 GAL	18"-24"	18"-24"	AS SHOWN	FWF, SP	
	AZAF	10	AZALEA INDICA 'FORMOSA' / FORMOSA AZALEA	3 GAL	18"-24"	18"-24"	AS SHOWN	FWF, SP	
	ILCB	21	ILEX CORNUTA 'BURFORDII NANA' / DWARF BURFORD HOLLY	3 GAL	18"-24"	18"-24"	AS SHOWN	FWF, SP	
	LCRR	29	LOROPETALUM CHINENSE RUBRUM 'RUBY' / DWARF RUBY FRINGE FLOWER	3 GAL	18"-24"	18"-24"	AS SHOWN	FWF, SP	
	PODM	10	PODOCARPUS MACROPHYLLUS / SOUTHERN YEWE	3 GAL	18"-24"	18"-24"	AS SHOWN	FWF, SP	
GRASSES									
	MUHL	16	MUHLENBERGIA FILIPES / SWEETGRASS	3 GAL	18"-24"	18"-24"	AS SHOWN	FWF, SP	
	PANV	11	PANICUM VIRGATUM 'HEAVY METAL' / HEAVY METAL SWITCH GRASS	3 GAL	18"-24"	18"-24"	AS SHOWN	FWF, SP	
GROUND COVERS									
	LMBB	207	LIRIOPE MUSCARI 'BIG BLUE' / BIG BLUE LILYTURF	4" POT	8"-12"	8"-12"	24"	FWF, SP	
SOD/SEED									
	SOD2	27,830 SF	CYNODON DACTYLON 'TIFTUF' / TIFTUF BERMUDA GRASS	SOD	N/A	N/A	N/A	SP	

6 Plant Schedule
SCALE: NOT TO SCALE



MOUNT PLEASANT, SC 843.884.1667
GREENVILLE, SC 864.298.0551
SUMMERVILLE, SC 843.972.0710
SPARTANBURG, SC 864.272.1272
CHARLOTTE, NC 980.312.5450
WWW.SEAMONWHITESIDE.COM



TIDAL WAVE AUTO SPA
ROLESVILLE, NC

SW+ PROJECT: 10772
DATE: 09/04/24
DRAWN BY: CPE
CHECKED BY: TLL

REVISION HISTORY

NO.	DATE	DESCRIPTION
A	12/22/23	
B	03/01/24	
C	09/04/24	

PLANT SCHEDULE & DETAILS & NOTES