

APPLICATION PACKAGE

Pender County Planning and Community Development

Planning Division

805 S. Walker Street
PO Box 1519
Burgaw, NC 28425



Phone: 910-259-1202
Fax: 910-259-1295
www.pendercountync.gov

Oyster Creek Landing Application Information Major Site Development Plan

Case Number: SDP 2022-308

Application Type: Major Site Development Plan

Applicant: McKim & Creed

Owners: Hampstead Station, LLC

Location: At the southwest corner of the intersection of Hoover Road and US HWY 17.

Property ID #(s): 3282-98-7567-0000, 3282-98-8323-0000, 3282-98-5392-0000, 3282-98-7116-0000, 3282-98-4294-0000 & 3282-98-6151-0000

Description: Commercial development including three buildings totaling 54,100 square feet.

Current Zoning: GB, General Business

Technical Review Committee Meeting

Thursday, November 3, 2022

Board of County Commissioners/Planning Board Meeting

N/A

Application Materials

Application
Site Plan

Pender County Planning and Community Development

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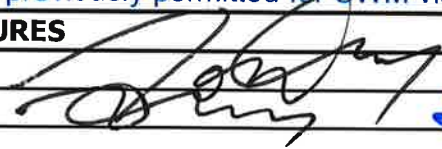

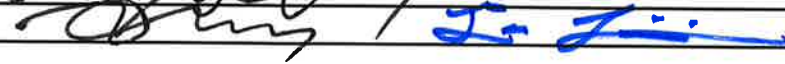
MAJOR AND MINOR SITE DEVELOPMENT APPLICATION

THIS SECTION FOR OFFICE USE					
Date:	Permit Number:	Permit Fee:	Invoice Number:		
*Zoning Approval ONLY: YES / NO		Final Zoning Compliance Approved: YES / NO / N/A			
Type of Site Development Plan:	<input type="checkbox"/> Major	<input type="checkbox"/> Minor			
SECTION 1: GENERAL INFORMATION					
Applicant's Name:	McKim & Creed	Property Owner's Name:	Hampstead Station, LLC		
Applicant's Address:	243 North Front Street	Property Owner's Address:	2324 Pansy Street		
City, State, & Zip	Wilmington, NC 28401	City, State, & Zip	Huntsville, AL 35801		
Phone Number:	910.343.1048	Phone Number:	919.606.3100		
Email Address:	tlivick@mckimcreed.com	Email Address:	lidd12486@gmail.com		
Legal relationship of applicant to land owner:	Consultant				
SECTION 2: PROJECT INFORMATION					
PIN (Property Id #):	See below - multiple PINs	Total property acreage:	5.11		
Zoning :	GB	Acreage to be disturbed:	6.0		
Directions to Site:	From Wilmington, North on Hwy 17 for about 6 miles from 140 interchange, turn left at light onto Hoover Road and then turn left into rear entrance to McDonald's. Continue straight onto dirt road to arrive at site.				
Lot Size: 222,592 SF (5.11 ac)	Sq Ft of Building: 54,100 SF *	Building Height: 39'-6"			
Setbacks	Front: 25'	Side: 10'	Rear: 10'		
NAICS Code/Use:	N/A				
Business Name:	Oyster Creek Landing				
Describe activities to be undertaken on project site:	Proposed activities are in alignment with current zoning.				
	Development is intended as commercial space including retail, general office, and restaurant space.				
Ownership:	Number of Employees:	Number of Members:	Seating Capacity:		
<input checked="" type="checkbox"/> Private <input type="checkbox"/> Public	TBD	N/A		TBD	

**If the applicant is not the owner of the property, a notarized letter from the property owner may be required*

**Zoning approval is for the use being proposed ONLY, other department approvals may be required i.e. Fire Marshal, Environmental Health, Permitting, etc...*

PINs: 3282-98-7567-0000; 3282-98-8323-0000;
3282-98-5392-0000; 3282-98-7116-0000;
3282-98-4294-0000; 3282-98-6151-0000

SECTION 4: ADDITIONAL COMMENTS		
* Three (3) buildings proposed on the site. Two of the bldgs are 2-story with 12,150 sq. ft. per floor. The other building is 5,500 sq. ft. $[(12,150 \text{ SF} \times 4) + 5,500 \text{ SF} = 54,100 \text{ SF}]$.		
Detailed site lighting plan will be designed by DUKE and submitted prior to TRC approval.		
A portion of the site is previously permitted for SWM via Permit # SW8 070226.		
SECTION 5: SIGNATURES		
Applicant: 		Date: 10-6-22
Owner: 		Date: 10-6-2022
Planning Staff:		Date:

Additional Comments continued:

Estimated Trip Generation:

- 2,184 Daily Trips
- 310 vph (AM Peak)
- 463 vph (PM Peak)

(Based from ITE Trip Gen. Manual 11th Edition Land Uses: 822 - Strip Retail Plaza <40K; 710 - General Office Building; and 932 - High Turnover (sit-down) Restaurant)

SITE PLAN(S)

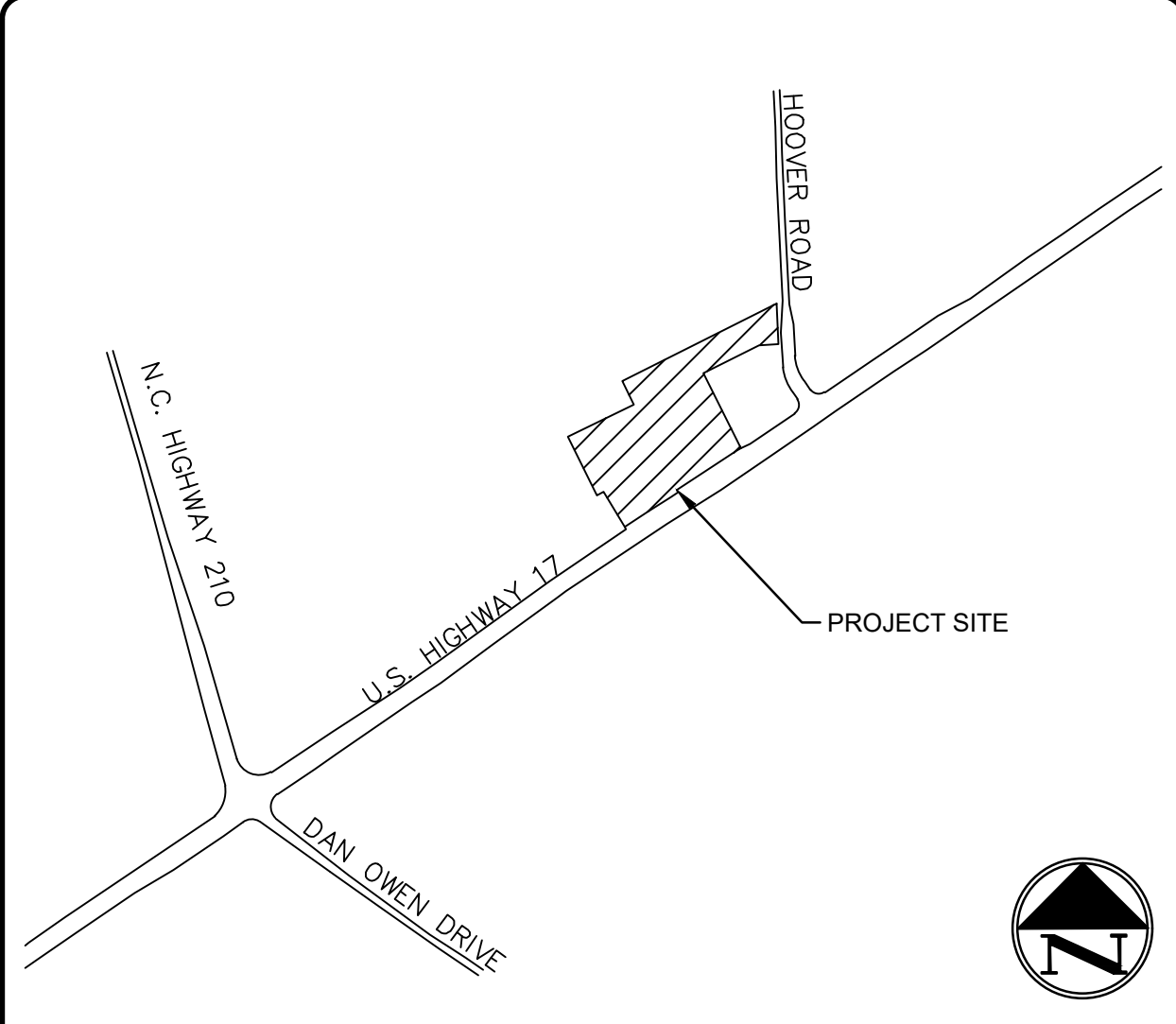
OYSTER CREEK LANDING

308
SDP 2022-305 PERMIT SET
US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA
06/07/2023



Know what's below.
Call before you dig.

OYSTER CREEK LANDING



4 VICINITY MAP SCALE: NOT TO SCALE

NAME:
OYSTER CREEK LANDING

OWNER/DEVELOPER: HAMPSTEAD STATION, LLC
2324 PANSY STREET
HUNTSVILLE, AL 35801
PHONE: (919) 606-3100
EMAIL: LDD12486@GMAIL.COM

PREPARED BY: MCKIM & CREED, INC
243 N. FRONT STREET
WILMINGTON, NC 28401
PHONE: 910.343.1048

PROJECT MANAGER: RICHARD COLLIER, PE
RCOLLIER@MCKIMCREED.COM

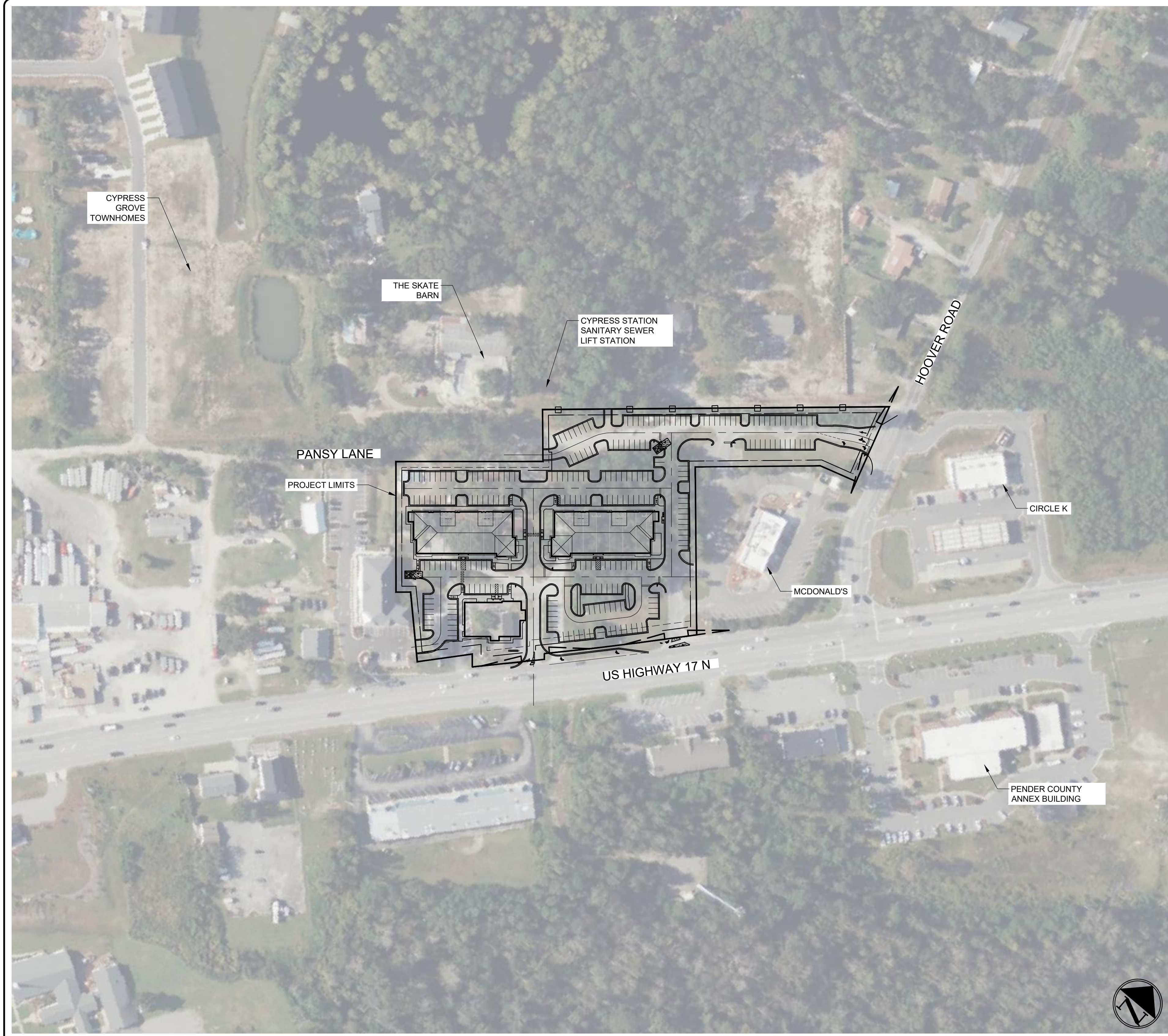
PROJECT ENGINEER: TRAE LIVICK, PE
TLIVICK@MCKIMCREED.COM

LANDSCAPE ARCHITECT: AMANDA MACLEOD, PLA
AMACLEOD@MCKIMCREED.COM

SURVEYOR:
PORT CITY LAND SURVEYING, PLLC
1114 SHIPYARD BLVD.
WILMINGTON, NC 28412
STEVEN BUIE (910) 791-0080
PORTCITYLANDSURVEYING@GMAIL.COM

AND
MATT ROBERTS, LS
MROBERTS@MCKIMCREED.COM

3 PROJECT INFORMATION



2 LOCATION MAP SCALE: NTS

NUMBER	TITLE
C1.0	COVER
C1.1	GENERAL NOTES
C2.0	EXISTING CONDITIONS
C2.1	DEMOLITION PLAN
C2.2	TREE REMOVAL
C3.0	SITE PLAN - OVERALL
C4.0	EROSION CONTROL PLAN - STAGE 1
C5.0	EROSION CONTROL PLAN - STAGE 2
C7.0	GRADING AND DRAINAGE PLAN - OVERALL
C7.1	STORM SCHEDULE
C8.0	UTILITY PLAN - OVERALL
C10.0	LANDSCAPE PLAN - OVERALL
C11.0	SITE DETAILS
C11.1	SITE DETAILS
C11.2	SITE DETAILS
C12.0	EROSION CONTROL DETAILS
C12.1	EROSION CONTROL DETAILS
C12.2	EROSION CONTROL DETAILS
C13.0	GRADING AND DRAINAGE DETAILS
C13.1	GRADING AND DRAINAGE DETAILS
C13.2	GRADING AND DRAINAGE DETAILS
C13.3	GRADING AND DRAINAGE DETAILS
C13.4	SCM-1 DETAIL
C13.5	SCM-2 DETAIL
C14.0	UTILITY DETAILS
C14.1	UTILITY DETAILS
C17.0	LANDSCAPE DETAILS



PENDER COUNTY CERTIFICATIONS
APPROVED BY THE PENDER COUNTY UNIFIED DEVELOPMENT ORDINANCE ADMINISTRATOR
PENDER COUNTY UDO ADMINISTRATOR: _____ Date: 6.8.2023
SITE PLAN VALID FOR TWO (2) YEARS FROM APPROVAL DATE.

NOTES:
1. ESTIMATED GROSS TRIPS GENERATED: 1,008 DAILY TRIPS; 125 TRIPS AM PEAK; 139 TRIPS PM PEAK (ITE LU CODES: 710, 720, 822, & 932). TRAFFIC IMPACT ANALYSIS IS APPROVED BY WMPO / NCDOT AS OF MAY 31, 2023.

1 SHEET INDEX

09110-0001

06/07/2023

CONSTRUCTION NOTES

- 1. CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE NCDOT/PENDER COUNTY UTILITIES/PLURIS HAMPSTEAD, LLC STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR IS FULLY RESPONSIBLE FOR ACQUIRING THE LOCATION OF EXISTING UTILITIES FROM THE APPROPRIATE PARTIES PRIOR TO CONSTRUCTION.
3. CONTRACTOR IS RESPONSIBLE FOR PLACING BARRICADES, USING FLAGMEN, ETC. AS NECESSARY TO INSURE SAFETY TO THE PUBLIC.
...
22. THE CONTRACTOR IS SOLELY RESPONSIBLE TO OBTAIN OFF-SITE SPOIL AREAS FOR DISPOSAL OF EXCESS AND/OR UNSUITABLE MATERIALS AS NECESSARY.

MATERIALS AND EASEMENT NOTES:

- ALL CATCH BASINS ARE NCDOT STD 840.02/840.03
ALL DROP INLETS ARE NCDOT STD 840.16/840.16
ALL STORM DRAINAGE PIPING TO BE POLYPROPYLENE (HP STORM), UNLESS OTHERWISE NOTED
...
SANITARY SEWER MAIN IS PRIVATE - PLURIS HAMPSTEAD, LLC

DEMOLITION NOTES

- 1. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIARIZED WITH FIELD DEMOLITION CONDITIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL DEMOLISHED DEBRIS ASSOCIATED WITH THE PROJECT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
...
9. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING AND CONTACTING THE OWNER'S REPRESENTATIVE FOR THE REQUIRED INSPECTIONS ON THE PROJECT.

EXCAVATION, GRADING, AND BACKFILLING NOTES

- 1. ANY UNDERCUTTING IN GOOD SOIL SHALL BE REPLACED AND THE REPLACEMENT MATERIAL SHALL BE COMPACTED TO NINETY-FIVE (95) PERCENT OF MAXIMUM DENSITY OBTAINED AT OPTIMUM MOISTURE CONTENT, AS DETERMINED BY THE ASTM D 698 STANDARD PROCTOR TEST METHOD.
2. BEFORE BACKFILLING IS COMMENCED OVER PIPES AND OTHER INSTALLATIONS, EARTH FILL SHALL BE TAMPED SOLID AROUND AND ABOVE THE PIPE TO A DEPTH OF ONE (1) FOOT ABOVE THE TOP OF THE PIPE.
...
9. UNLESS OTHERWISE NOTED, GRADES AND SPOT ELEVATIONS NOTED ON PLANS INDICATE FINISHED GRADE OR PAVEMENT SURFACE.

STORM DRAINAGE AND GRADING NOTES

- 1. IN ACCORDANCE WITH NC GENERAL STATUTES, NPDES REGULATIONS, AND NCDENR REQUIREMENTS, STORMWATER DISCHARGE OUTFALLS SHALL BE INSPECTED BY THE CONTRACTOR. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR AFTER EACH STORM EVENT OF 1/2 INCH OR GREATER, WITH ONE WEEKLY INSPECTION MINIMUM.
2. OUTLET PROTECTION SHALL BE INSTALLED AROUND OUTFALL. DEVICES SHALL BE CONSTRUCTED TO FINAL PROPOSED CONDITION UPON STABILIZATION OF CONTRIBUTING GROUND SURFACES AND REMOVAL OF SEDIMENT FROM STORM PIPES.
...
CONTRACTOR SHALL SUBMIT STORM DRAIN AND STRUCTURE MATERIALS SHOP DRAWING DOCUMENTS TO ENGINEER FOR REVIEW AND APPROVAL.

UTILITY NOTES

- 1. SCHEDULE A PRE-CONSTRUCTION MEETING WITH PENDER COUNTY UTILITIES AND PLURIS HAMPSTEAD, LLC AT LEAST 48 HOURS PRIOR TO CONSTRUCTION OF WATER INFRASTRUCTURE AND SANITARY SEWER INFRASTRUCTURE, RESPECTIVELY.
2. WATER INFRASTRUCTURE IS PRIVATE BEYOND THE PROPOSED 2" DOMESTIC AND 6" FIRE SERVICE ASSEMBLIES, SEE SHEET 08.0.
...
13. PLANS ARE IN COMPLIANCE WITH PENDER COUNTY PUBLIC UTILITIES TECHNICAL STANDARDS AND SPECIFICATIONS.

RELATION OF WATER MAINS TO SANITARY SEWERS:

- 1. LATERAL SEPARATION OF SANITARY SEWERS AND WATER MAINS: WATER MAINS SHALL BE LAID AT LEAST 10 FEET LATERALLY FROM EXISTING OR PROPOSED SEWERS UNLESS LOCAL CONDITIONS OR BARRIERS PREVENT A 10 FOOT LATERAL SEPARATION, IN WHICH CASE:
1.1. THE WATER MAIN IS LAID IN A SEPARATE TRENCH, WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, OR
1.2. THE WATER MAIN IS LAID IN THE SAME TRENCH AS THE SEWER WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND ABOVE THE TOP OF THE SEWER.
...
4. CROSSING A SEWER MAIN/WATER MAIN OVER OR UNDER A STORM DRAIN: WHENEVER IT IS NECESSARY FOR A SEWER MAIN/WATER MAIN TO CROSS A STORM DRAIN PIPE, THE SEWER MAIN/WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE OUTSIDE OF THE SEWER MAIN/WATER MAIN NEAREST TO THE OUTSIDE OF THE STORM DRAIN PIPE SHALL MAINTAIN A 24 INCH CLEAR SEPARATION DISTANCE.

DUKE POWER

- 1. CONTRACTOR SHALL COORDINATE WITH DUKE POWER (JON MARSTON, SEE CONTACT INFO ON RIGHT SIDE OF THIS SHEET) TO SCHEDULE A PRE-CONSTRUCTION MEETING.
2. CONTRACTOR RESPONSIBLE FOR INSTALLATION OF CONDUIT RUNS AND CONCRETE TRANSFORMER PADS.

PIEDMONT NATURAL GAS

- 1. CONTRACTOR SHALL INVESTIGATE THE EXISTING DEPTH OF PNG GAS MAIN TO DETERMINE IF THERE IS AN ELEVATION CONFLICT WITH THE PROPOSED UTILITIES (STORM PIPE AND SEWER). REFER TO SHEET C2.0 AND 10" GAS LINE EASEMENT (DB 4742, PG 2928). CONTRACTOR SHALL COORDINATE FIELD CONDITIONS WITH ENGINEER AND PNG CONTACT. UTILITY CONTACT INFO PROVIDED IN UTILITY CONTACTS SECTION, THIS SHEET. ANY COSTS TO ADJUST PNG GAS MAIN WILL BE BILLED TO THE FINANCIALLY RESPONSIBLE PARTY FOR THE DEVELOPMENT.
2. PNG WILL PERMIT INSTALLATION FO ASPHALT PAVEMENT AN DCONCRETE CURBING OVER THE PNG EASEMENT. ANY SHRUBS AND/OR BUSHES MAY BE PLANTED WITHIN THE EASEMENTS SO LONG AS THEY DO NOT HAVE A MATURE GROWTH EXCEEDING 6 FEET IN HEIGHT. ACCESS RIGHTS TO THE PNG EASEMENT WILL BE MAINTAINED IN ACCORDANCE WITH THE EASEMENT. ANY IMPROVEMENTS (ASPHALT, CURBING, LANDSCAPING, ETC.) CONSTRUCTED IN THE EASEMENT MAY BE DESTROYED BY PNG IN SERVICE TO PNG ASSETS AND REPLACEMENT COSTS OF IMPROVEMENTS WILL NOT BE INCURRED BY PNG.
3. COVER FROM TOP OF PNG GAS MAIN TO FINISHED GRADE SHALL BE 30" OR GREATER.

AT&T

- 1. CONTRACTOR SHALL COORDINATE WITH LOCAL AT&T OSWF TECHNICIAN FOR ANY EXCAVATION ACTIVITIES THAT MAY IMPACT AT&T FACILITIES. OSWF TECHNICIAN SHOULD BE ON-SITE DURING ANY SUCH ACTIVITY. OSWF TECHNICIANS CONTACT INFO IS PROVIDED IN UTILITY CONTACTS SECTION, THIS SHEET.

EROSION CONTROL NOTES

- 1. ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
2. GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF STATE LAW AND IS SUBJECT TO A FINE. ANY BUILDER THAT ANTICIPATED THE DISTURBANCE OF MORE THAN ONE ACRE WILL BE REQUIRED TO GET AN EROSION CONTROL PERMIT FROM NCDENR - DLQ.
...
11. INSPECT THE SKIMMER FOR CLOGGING. PULL THE SKIMMER TO THE SIDE OF THE BASIN AND REMOVE ANY DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER AND THE ARM OR BARREL PIPE FOR CLOGGING; IF CLOGGED, REMOVE THE DEBRIS.

EROSION CONTROL MAINTENANCE PLAN:

- 1. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AND REPAIRED, AS NECESSARY, EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF EVERY ONE-HALF (0.5) INCH OR GREATER RAINFALL.
2. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
...
11. INSPECT THE SKIMMER FOR CLOGGING. PULL THE SKIMMER TO THE SIDE OF THE BASIN AND REMOVE ANY DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER AND THE ARM OR BARREL PIPE FOR CLOGGING; IF CLOGGED, REMOVE THE DEBRIS.

NOTE (G.S. 113A-57 (2))

THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 21 CALENDAR DAYS OF COMPLETION OF ANY GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION.

FIRE PROTECTION NOTES

- 1. HYDRANT MUST BE WITHIN 100' OF THE FDC.
2. THE FDC MUST BE WITHIN 40' OF FIRE APPARATUS PLACEMENT.
3. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
...
WATER SUPPLY: PENDER COUNTY PUBLIC UTILITIES: KATIE LEUBNER (910) 663-3776

UTILITY COMPANY CONTACTS

DUKE/PROGRESS ENERGY (DISTRIBUTION): JON MARSTON (919) 429-2370
AT&T (BELLSOUTH): CHRISSEY COSTON (910) 341-7664
LOCAL AT&T OSWF TECHNICIAN: GLENN BOCHENKO (910) 617-8601; GB0660@ATT.COM
AT&T SERVICES, INC. - MANAGER NETWORK SERVICES: CASEY JOHANSEN (860) 689-6559; CJ652@ATT.COM
TIME WARNER CABLE: ROBERT JOHN (910) 216-4494
PIEDMONT NATURAL GAS: CATHY PLEASANT (910) 512-9391
WATER SUPPLY: PENDER COUNTY PUBLIC UTILITIES: KATIE LEUBNER (910) 663-3776
SANITARY SEWER: PLURIS HAMPSTEAD, LLC: NICK EVANS (910) 742-7404; KAARIN WILLIAMS (910) 218-7653

COUNTY AND AGENCY CONTACTS

Pender County Planning Department
805 S Walker Street
Burgaw, NC 28425
(910)341-3255
Contact: Justin Brantley
Email: jbrantley@pendercountync.gov

Pluris Hampstead, LLC
Sanitary Sewer
1095 NC-210
Sneads Ferry, NC 28460
(910) 742-7404
Contact: Nick Evans
Email: nevans@plurisusa.com

NCDENR
Sediment and Erosion Control
127 N Cardinal Dr.
Wilmington, NC 28405
(910) 796-7215
Contact: Dan Sams
Email: dan.sams@ncdenr.gov

Pender County Public Utilities
605 E Fremont St
Burgaw, NC 28425
(910) 259-0212
Contact: Katie Leubner
Email: kleubner@pendercountync.gov

NCDOT Division 3 - District 1
299 Wilmington Hwy
Jacksonville, NC 28540
(910) 455-3777

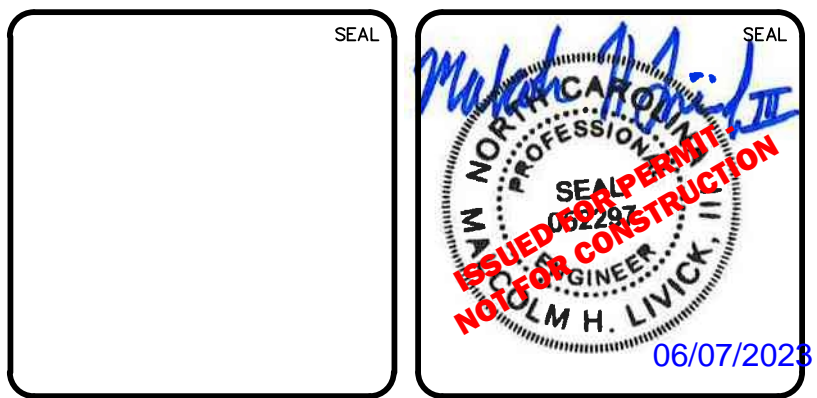
NCDENR
Division of Water Quality
127 Cardinal Drive Ext.
Wilmington, NC 28405
(910) 796-7336
Contact: Tyler Benson
Email: Tyler.Benson@ncdenr.gov

FIRE MARSHAL - PENDER COUNTY
Mark Haraway
(910) 259-1441
(910) 512-0967
mharaway@pendercountync.gov

ELECTRONIC DISCLAIMER

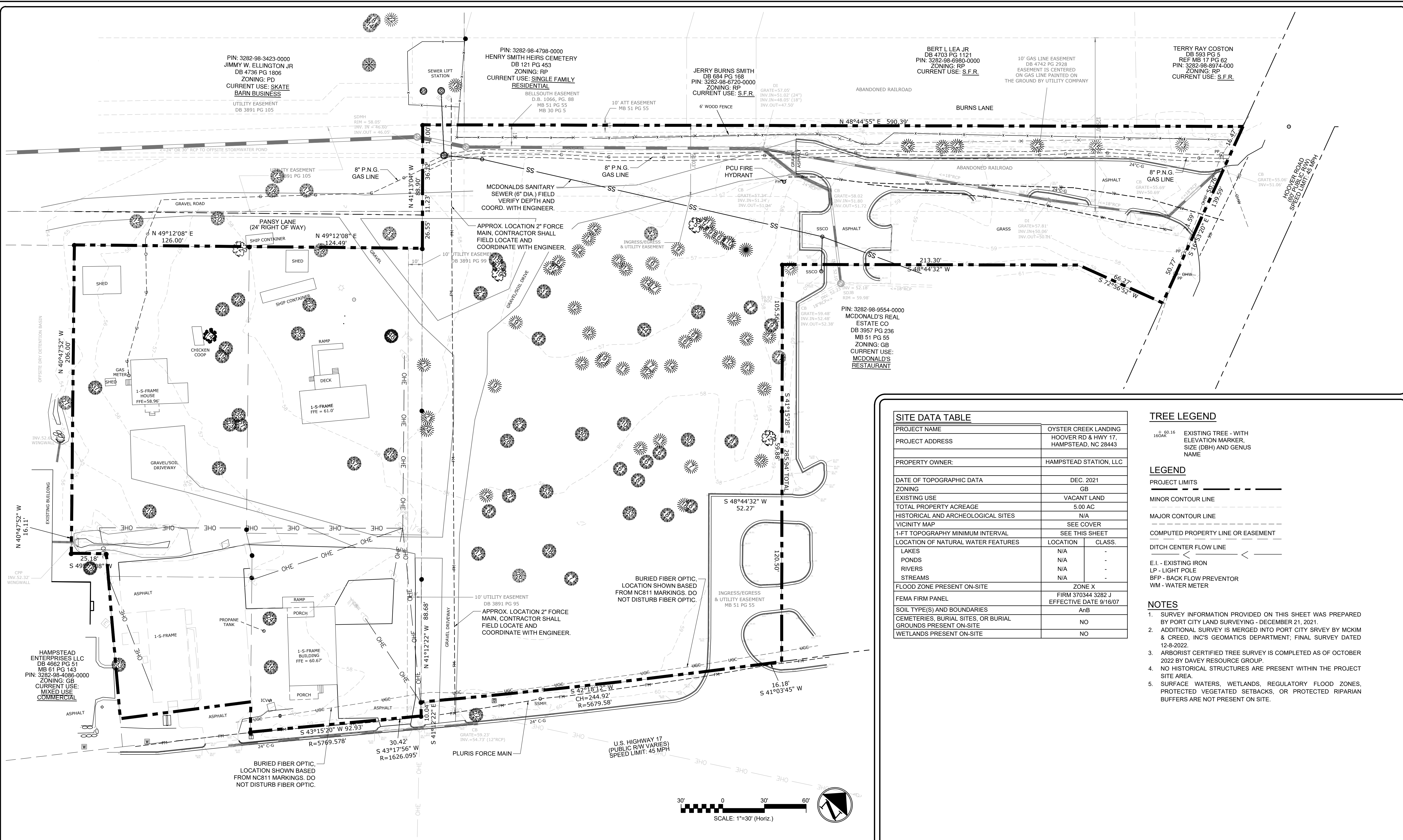
CAD FILES MAY BE REQUESTED BY CONTRACTOR. ELECTRONIC FILES ARE NON-CERTIFIED RECORDINGS OF PRINTED DOCUMENTS PREPARED BY MCKIM & CREED, INC. AND ARE NOT A PART OF THE CONTRACT DOCUMENTS. REQUESTOR WILL BE REQUIRED TO SIGN A DIGITAL WAIVER UPON REQUEST. ENGINEER WILL PROVIDE REQUESTED ELECTRONIC DOCUMENTS WITHIN ONE BUSINESS DAY TIME FRAME UPON RECEIPT OF SIGNED DIGITAL WAIVER.

Table with columns for REV NO, DESCRIPTIONS/REVISIONS, and DATE.



OYSTER CREEK LANDING
US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA
GENERAL NOTES

Table with project metadata: DATE: 06/07/2023, MCE PROJ. #: 09110-0001, DRAWN: DCO/ALM, DESIGNED: ALM/THL, CHECKED: THL, PROJ. MGR: RMC, SCALE: HORIZONTAL: --, VERTICAL: --, C1.1 DRAWING NUMBER, STATUS: SDP 2022-305 PERMIT SET.



SITE DATA TABLE	
PROJECT NAME	OYSTER CREEK LANDING
PROJECT ADDRESS	HOOVER RD & HWY 17, HAMPSTEAD, NC 28443
PROPERTY OWNER:	HAMPSTEAD STATION, LLC
DATE OF TOPOGRAPHIC DATA	DEC. 2021
ZONING	GB
EXISTING USE	VACANT LAND
TOTAL PROPERTY ACREAGE	5.00 AC
HISTORICAL AND ARCHEOLOGICAL SITES	N/A
VICINITY MAP	SEE COVER
1-FT TOPOGRAPHY MINIMUM INTERVAL	SEE THIS SHEET
LOCATION OF NATURAL WATER FEATURES	LOCATION CLASS.
LAKES	N/A
PONDS	N/A
RIVERS	N/A
STREAMS	N/A
FLOOD ZONE PRESENT ON-SITE	ZONE X
FEMA FIRM PANEL	FIRM 370344 3282 J EFFECTIVE DATE 9/16/07
SOIL TYPE(S) AND BOUNDARIES	AnB
CEMETERIES, BURIAL SITES, OR BURIAL GROUNDS PRESENT ON-SITE	NO
WETLANDS PRESENT ON-SITE	NO

- TREE LEGEND**
- + 60.16
160AK EXISTING TREE - WITH ELEVATION MARKER, SIZE (DBH) AND GENUS NAME
- LEGEND**
- PROJECT LIMITS**
- MINOR CONTOUR LINE
- MAJOR CONTOUR LINE
- COMPUTED PROPERTY LINE OR EASEMENT
- DITCH CENTER FLOW LINE
- E.I. - EXISTING IRON
LP - LIGHT POLE
BFP - BACK FLOW PREVENTOR
WM - WATER METER
- NOTES**
1. SURVEY INFORMATION PROVIDED ON THIS SHEET WAS PREPARED BY PORT CITY LAND SURVEYING - DECEMBER 21, 2021.
 2. ADDITIONAL SURVEY IS MERGED INTO PORT CITY SURVEY BY MCKIM & CREED, INC.'S GEOMATICS DEPARTMENT; FINAL SURVEY DATED 12-8-2022.
 3. ARBORIST CERTIFIED TREE SURVEY IS COMPLETED AS OF OCTOBER 2022 BY DAVEY RESOURCE GROUP.
 4. NO HISTORICAL STRUCTURES ARE PRESENT WITHIN THE PROJECT SITE AREA.
 5. SURFACE WATERS, WETLANDS, REGULATORY FLOOD ZONES, PROTECTED VEGETATED SETBACKS, OR PROTECTED RIPARIAN BUFFERS ARE NOT PRESENT ON SITE.

2 EXISTING CONDITIONS

1 LEGEND AND NOTES

REV NO.	DESCRIPTIONS/REVISIONS	DATE

Professional Engineer Seal for M. H. Livick, No. 12508, State of North Carolina, expires 06/07/2023.

MCKIM & CREED
 243 North Front Street
 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: F-1222
 www.mckimcreed.com

HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
 U.S. HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

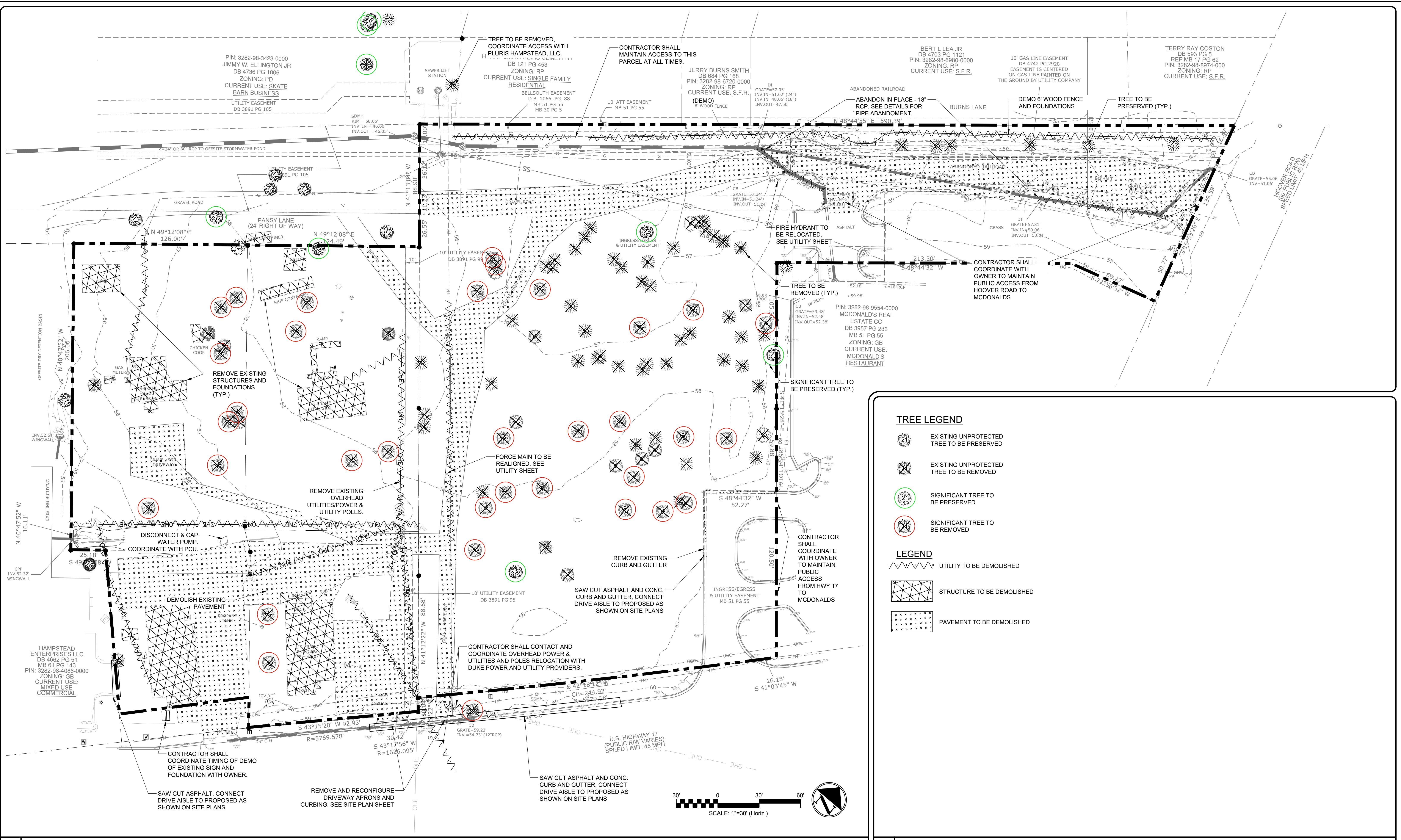
EXISTING CONDITIONS

DATE: 06/07/2023
 MCE PROJ. #: 09110-0001
 DRAWN: DCO/ALM
 DESIGNED: ALM/THL
 CHECKED: THL
 PROJ. MGR.: RMC

SCALE: C2.0
 HORIZONTAL: 1"=30'
 VERTICAL: --

STATUS: SDP 2022-305 PERMIT SET

I:\09110\0001\ENG\80-DRAWINGS\81-Production_Sheets\2_Working_Dwg\C2.0 EXISTING CONDITIONS.dwg, 6/7/2023 2:20:36 PM, _DWG to PDF-2016.pc3



TREE LEGEND

- EXISTING UNPROTECTED TREE TO BE PRESERVED
- EXISTING UNPROTECTED TREE TO BE REMOVED
- SIGNIFICANT TREE TO BE PRESERVED
- SIGNIFICANT TREE TO BE REMOVED

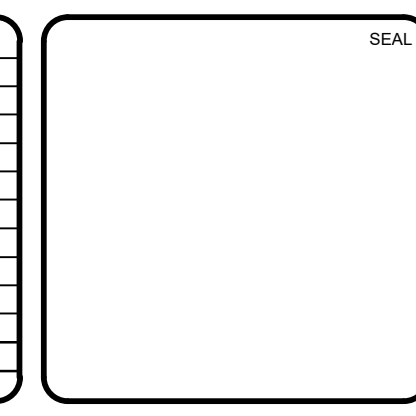
LEGEND

- UTILITY TO BE DEMOLISHED
- STRUCTURE TO BE DEMOLISHED
- PAVEMENT TO BE DEMOLISHED

1 LEGEND AND NOTES

2 DEMOLITION PLAN SCALE: 1"=30'

REV. NO.	DESCRIPTIONS / REVISIONS	DATE



MCKIM & CREED

243 North Front Street
 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: F-1222
 www.mckimcreed.com

HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
 U.S. HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

DEMOLITION PLAN

DATE: 06/07/2023	SCALE: 1"=30'
MCE PROJ. #: 09110-0001	HORIZONTAL: 1"=30'
DRAWN: DCO/ALM	VERTICAL: --
DESIGNED: ALM/THL	C2.1
CHECKED: THL	DRAWING NUMBER
PROJ. MGR: RMC	REVISION
STATUS: SDP 2022-305 PERMIT SET	

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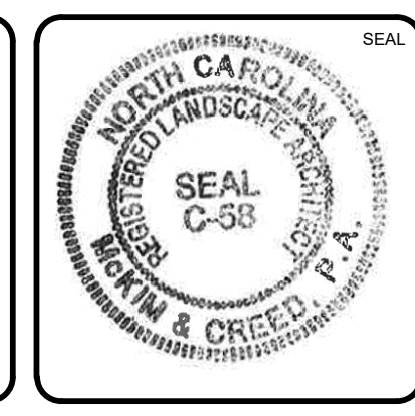
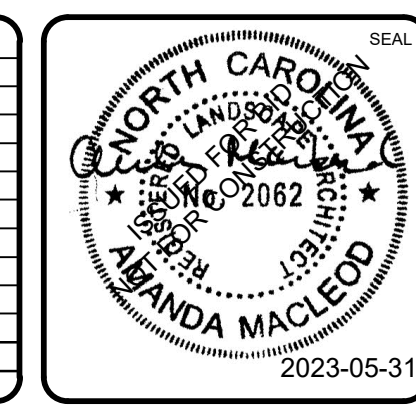
- TREE LEGEND**
- EXISTING UNPROTECTED TREE TO BE PRESERVED
 - EXISTING UNPROTECTED TREE TO BE REMOVED
 - SIGNIFICANT TREE TO BE PRESERVED
 - SIGNIFICANT TREE TO BE REMOVED

- GENERAL NOTES**
1. TREE PROTECTION FENCING SHALL BE PUT IN PLACE PRIOR TO LAND DISTURBANCE
 2. SEE SHEET EROSION CONTROL PLAN - STAGE 1, SHEET C4.0, FOR TREE PROTECTION FENCING LOCATIONS.
 3. SEE DETAIL 2/C12.1 FOR TREE PROTECTION FENCING DETAILS.
 4. SEE DETAIL 1/C11.2 FOR ROOT PRUNING AND AERATION DETAIL FOR USE AT PRESERVED TREE LOCATIONS.



2 TREE REMOVAL WITH SITE PLAN OVERLAY 1 LEGEND AND NOTES

REV. NO.	DESCRIPTIONS / REVISIONS	DATE



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HAMPSTEAD STATION, LLC

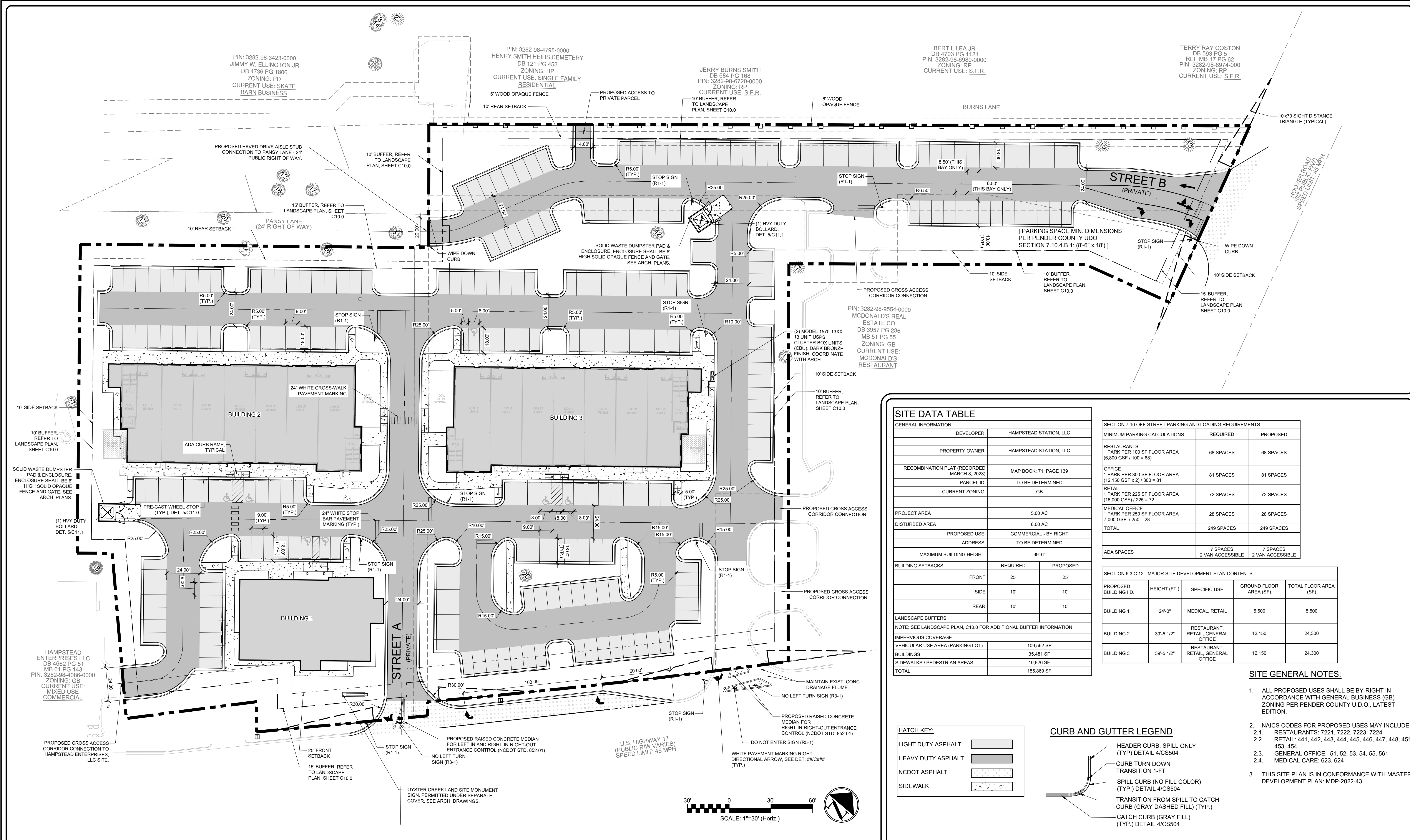
OYSTER CREEK LANDING

US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

TREE REMOVAL

DATE: 05/31/2023	SCALE: 1"=30'	C2.2
MCE PROJ. #: 09110-0001	HORIZONTAL: 1"=30'	
DRAWN: DCO/ALM	VERTICAL: --	DRAWING NUMBER
DESIGNED: ALM/THL		
CHECKED: THL		
PROJ. MGR: RMC		
STATUS: ISSUED FOR BIDS		

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SITE DATA TABLE

GENERAL INFORMATION	
DEVELOPER	HAMPSTEAD STATION, LLC
PROPERTY OWNER	HAMPSTEAD STATION, LLC
RECOMBINATION PLAT (RECORDED MARCH 8, 2023)	MAP BOOK: 71, PAGE 139
PARCEL ID.	TO BE DETERMINED
CURRENT ZONING	GB
PROJECT AREA	5.00 AC
DISTURBED AREA	6.00 AC
PROPOSED USE	COMMERCIAL - BY RIGHT
ADDRESS	TO BE DETERMINED
MAXIMUM BUILDING HEIGHT	39'-6"
BUILDING SETBACKS	
FRONT	25'
SIDE	10'
REAR	10'
LANDSCAPE BUFFERS	
NOTE: SEE LANDSCAPE PLAN, C10.0 FOR ADDITIONAL BUFFER INFORMATION	
IMPERVIOUS COVERAGE	
VEHICULAR USE AREA (PARKING LOT)	109,562 SF
BUILDINGS	35,481 SF
SIDEWALKS / PEDESTRIAN AREAS	10,826 SF
TOTAL	155,869 SF

SECTION 7.10 OFF-STREET PARKING AND LOADING REQUIREMENTS

MINIMUM PARKING CALCULATIONS	REQUIRED	PROPOSED
RESTAURANTS 1 PARK PER 100 SF FLOOR AREA (8,800 GSF / 100 = 88)	68 SPACES	68 SPACES
OFFICE 1 PARK PER 300 SF FLOOR AREA (12,150 GSF x 2) / 300 = 81	81 SPACES	81 SPACES
RETAIL 1 PARK PER 225 SF FLOOR AREA (16,000 GSF) / 225 = 72	72 SPACES	72 SPACES
MEDICAL OFFICE 1 PARK PER 250 SF FLOOR AREA 7,900 GSF / 250 = 28	28 SPACES	28 SPACES
TOTAL	249 SPACES	249 SPACES
ADA SPACES	7 SPACES 2 VAN ACCESSIBLE	7 SPACES 2 VAN ACCESSIBLE

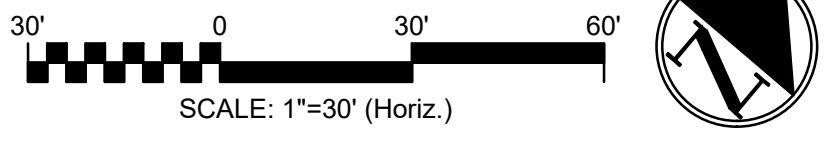
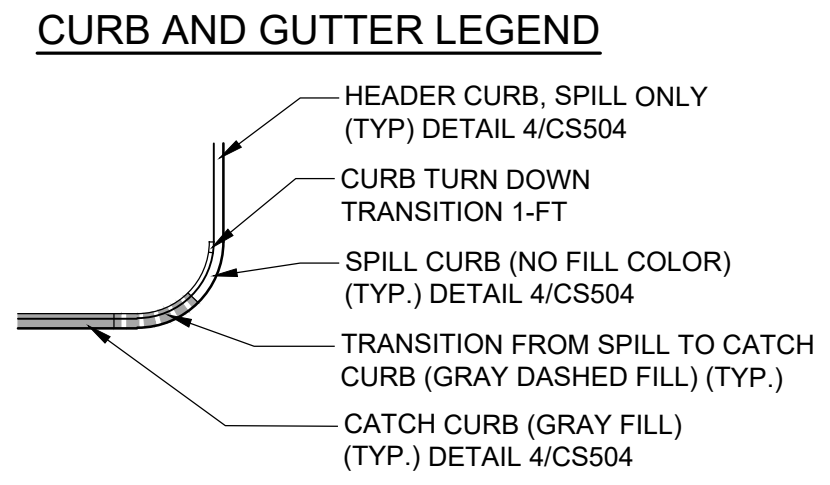
SECTION 6.3.C.12 - MAJOR SITE DEVELOPMENT PLAN CONTENTS

PROPOSED BUILDING I.D.	HEIGHT (FT.)	SPECIFIC USE	GROUND FLOOR AREA (SF)	TOTAL FLOOR AREA (SF)
BUILDING 1	24'-0"	MEDICAL, RETAIL	5,500	5,500
BUILDING 2	39'-5 1/2"	RESTAURANT, RETAIL, GENERAL OFFICE	12,150	24,300
BUILDING 3	39'-5 1/2"	RESTAURANT, RETAIL, GENERAL OFFICE	12,150	24,300

- SITE GENERAL NOTES:**
- ALL PROPOSED USES SHALL BE BY-RIGHT IN ACCORDANCE WITH GENERAL BUSINESS (GB) ZONING PER PENDER COUNTY U.D.O., LATEST EDITION.
 - NAICS CODES FOR PROPOSED USES MAY INCLUDE:
 - 2.1. RESTAURANTS: 7221, 7222, 7223, 7224
 - 2.2. RETAIL: 441, 442, 443, 444, 445, 446, 447, 448, 451, 453, 454
 - 2.3. GENERAL OFFICE: 51, 52, 53, 54, 55, 561
 - 2.4. MEDICAL CARE: 623, 624
 - THIS SITE PLAN IS IN CONFORMANCE WITH MASTER DEVELOPMENT PLAN: MDP-2022-43.

HATCH KEY:

- LIGHT DUTY ASPHALT
- HEAVY DUTY ASPHALT
- NCDOT ASPHALT
- SIDEWALK



2 SITE PLAN - OVERALL

1 LEGEND AND NOTES

REV NO.	DESCRIPTIONS / REVISIONS	DATE

Professional Engineer seal for M. H. Livick, State of North Carolina, No. 10013.

NO CONSTRUCTION

06/07/2023

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HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

SITE PLAN - OVERALL

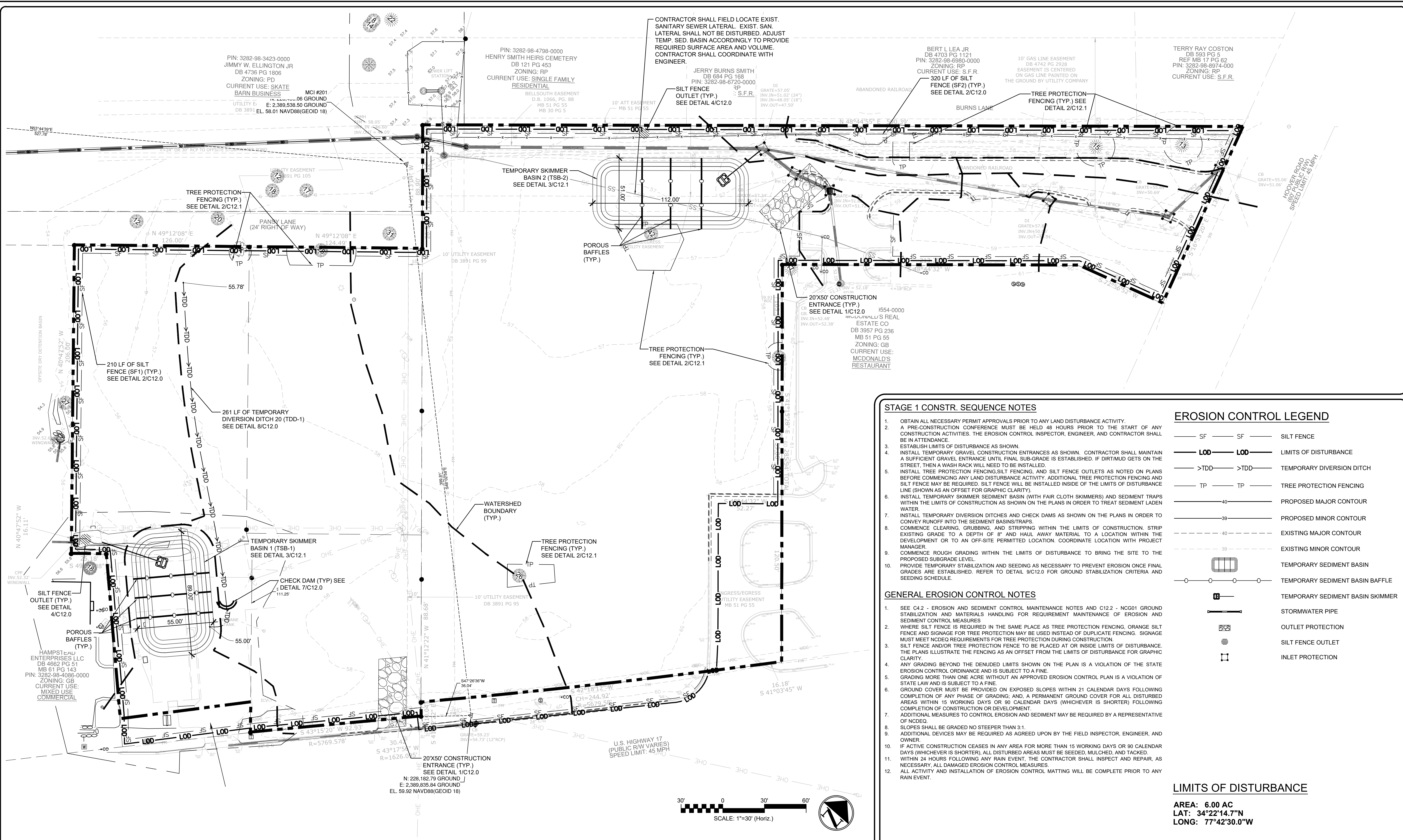
DATE: 06/07/2023
MCE PROJ. #: 09110-0001
DRAWN: DCO/ALM
DESIGNED: ALM/THL
CHECKED: THL
PROJ. MGR: RMC

SCALE: HORIZONTAL: 1"=30' VERTICAL: --

C3.0 DRAWING NUMBER

STATUS: SDP 2022-305 PERMIT SET

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STAGE 1 CONSTR. SEQUENCE NOTES

- OBTAIN ALL NECESSARY PERMIT APPROVALS PRIOR TO ANY LAND DISTURBANCE ACTIVITY.
- A PRE-CONSTRUCTION CONFERENCE MUST BE HELD 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. THE EROSION CONTROL INSPECTOR, ENGINEER, AND CONTRACTOR SHALL BE IN ATTENDANCE.
- ESTABLISH LIMITS OF DISTURBANCE AS SHOWN.
- INSTALL TEMPORARY GRAVEL CONSTRUCTION ENTRANCES AS SHOWN. CONTRACTOR SHALL MAINTAIN A SUFFICIENT GRAVEL ENTRANCE UNTIL FINAL SUB-GRADE IS ESTABLISHED. IF DIRT/MUD GETS ON THE STREET, THEN A WASH RACK WILL NEED TO BE INSTALLED.
- INSTALL TREE PROTECTION FENCING, SILT FENCING, AND SILT FENCE OUTLETS AS NOTED ON PLANS BEFORE COMMENCING ANY LAND DISTURBANCE ACTIVITY. ADDITIONAL TREE PROTECTION FENCING AND SILT FENCE MAY BE REQUIRED. SILT FENCE WILL BE INSTALLED INSIDE OF THE LIMITS OF DISTURBANCE LINE (SHOWN AS AN OFFSET FOR GRAPHIC CLARITY).
- INSTALL TEMPORARY SKIMMER SEDIMENT BASIN (WITH FAIR CLOTH SKIMMERS) AND SEDIMENT TRAPS WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS IN ORDER TO TREAT SEDIMENT LADEN WATER.
- INSTALL TEMPORARY DIVERSION DITCHES AND CHECK DAMS AS SHOWN ON THE PLANS IN ORDER TO CONVEY RUNOFF INTO THE SEDIMENT BASINS/TRAPS.
- COMMENCE CLEARING, GRUBBING, AND STRIPPING WITHIN THE LIMITS OF CONSTRUCTION. STRIP EXISTING GRADE TO A DEPTH OF 8" AND HULL AWAY MATERIAL TO A LOCATION WITHIN THE DEVELOPMENT OR TO AN OFF-SITE PERMITTED LOCATION. COORDINATE LOCATION WITH PROJECT MANAGER.
- COMMENCE ROUGH GRADING WITHIN THE LIMITS OF DISTURBANCE TO BRING THE SITE TO THE PROPOSED SUBGRADE LEVEL.
- PROVIDE TEMPORARY STABILIZATION AND SEEDING AS NECESSARY TO PREVENT EROSION ONCE FINAL GRADES ARE ESTABLISHED. REFER TO DETAIL 9/C12.0 FOR GROUND STABILIZATION CRITERIA AND SEEDING SCHEDULE.

GENERAL EROSION CONTROL NOTES

- SEE C4.2 - EROSION AND SEDIMENT CONTROL MAINTENANCE NOTES AND C12.2 - NCG01 GROUND STABILIZATION AND MATERIALS HANDLING FOR REQUIREMENT MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES.
- WHERE SILT FENCE IS REQUIRED IN THE SAME PLACE AS TREE PROTECTION FENCING, ORANGE SILT FENCE AND SIGNAGE FOR TREE PROTECTION MAY BE USED INSTEAD OF DUPLICATE FENCING. SIGNAGE MUST MEET NCEQ REQUIREMENTS FOR TREE PROTECTION DURING CONSTRUCTION.
- SILT FENCE AND/OR TREE PROTECTION FENCE TO BE PLACED AT OR INSIDE LIMITS OF DISTURBANCE. THE PLANS ILLUSTRATE THE FENCING AS AN OFFSET FROM THE LIMITS OF DISTURBANCE FOR GRAPHIC CLARITY.
- ANY GRADING BEYOND THE DENUDE LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE STATE EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF STATE LAW AND IS SUBJECT TO A FINE.
- GROUND COVER MUST BE PROVIDED ON EXPOSED SLOPES WITHIN 21 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING; AND, A PERMANENT GROUND COVER FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF NCEQ.
- SLOPES SHALL BE GRADED NO STEEPER THAN 3:1.
- ADDITIONAL DEVICES MAY BE REQUIRED AS AGREED UPON BY THE FIELD INSPECTOR, ENGINEER, AND OWNER.
- IF ACTIVE CONSTRUCTION CEASES IN ANY AREA FOR MORE THAN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER), ALL DISTURBED AREAS MUST BE SEED, MULCHED, AND TACKED.
- WITHIN 24 HOURS FOLLOWING ANY RAIN EVENT, THE CONTRACTOR SHALL INSPECT AND REPAIR, AS NECESSARY, ALL DAMAGED EROSION CONTROL MEASURES.
- ALL ACTIVITY AND INSTALLATION OF EROSION CONTROL MATTING WILL BE COMPLETE PRIOR TO ANY RAIN EVENT.

EROSION CONTROL LEGEND

- SF — SILT FENCE
- LOD — LIMITS OF DISTURBANCE
- TDD — TEMPORARY DIVERSION DITCH
- TP — TREE PROTECTION FENCING
- — PROPOSED MAJOR CONTOUR
- — PROPOSED MINOR CONTOUR
- — EXISTING MAJOR CONTOUR
- — EXISTING MINOR CONTOUR
- — TEMPORARY SEDIMENT BASIN
- — TEMPORARY SEDIMENT BASIN BAFFLE
- — TEMPORARY SEDIMENT BASIN SKIMMER
- — STORMWATER PIPE
- — OUTLET PROTECTION
- — SILT FENCE OUTLET
- — INLET PROTECTION

LIMITS OF DISTURBANCE

AREA: 6.00 AC
 LAT: 34°22'14.7"N
 LONG: 77°42'30.0"W

2 EXISTING CONDITIONS

1 LEGEND AND NOTES

REV NO.	DESCRIPTIONS/REVISIONS	DATE

SEAL

M. H. Livick

PROFESSIONAL ENGINEER

NO. 100000001

06/07/2023

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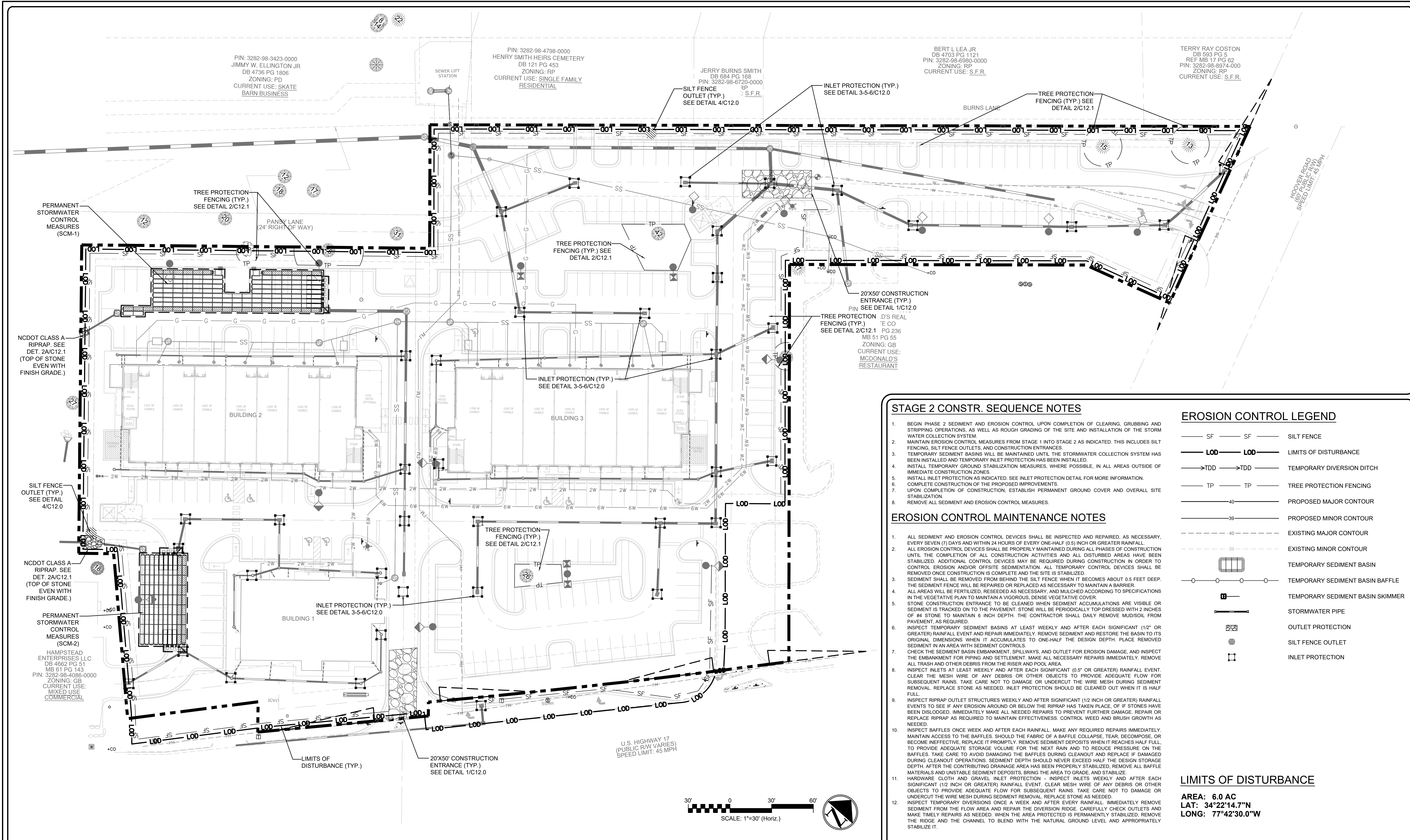
HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING

US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

EROSION CONTROL PLAN - STAGE 1

DATE: 06/07/2023	SCALE: C4.0
MCE PROJ. #: 09110-0001	HORIZONTAL: 1"=30'
DRAWN: DCO/ALM	VERTICAL: --
DESIGNED: ALM/THL	REVISION: --
CHECKED: THL	
PROJ. MGR: RMC	
STATUS: SDP 2022-305 PERMIT SET	



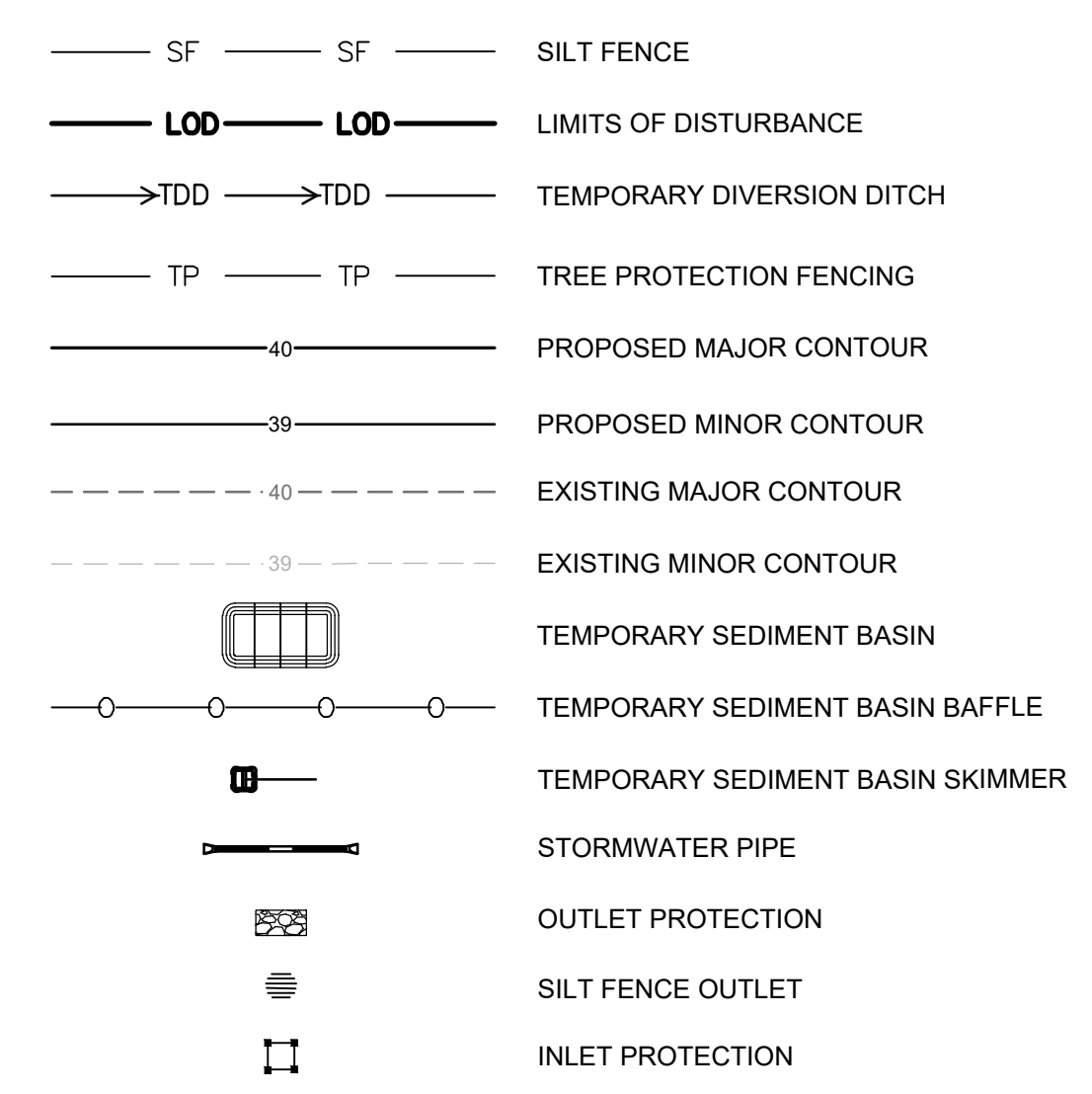
STAGE 2 CONSTR. SEQUENCE NOTES

- BEGIN PHASE 2 SEDIMENT AND EROSION CONTROL UPON COMPLETION OF CLEARING, GRUBBING AND STRIPPING OPERATIONS, AS WELL AS ROUGH GRADING OF THE SITE AND INSTALLATION OF THE STORM WATER COLLECTION SYSTEM.
- MAINTAIN EROSION CONTROL MEASURES FROM STAGE 1 INTO STAGE 2 AS INDICATED. THIS INCLUDES SILT FENCING, SILT FENCE OUTLETS, AND CONSTRUCTION ENTRANCES.
- TEMPORARY SEDIMENT BASINS WILL BE MAINTAINED UNTIL THE STORMWATER COLLECTION SYSTEM HAS BEEN INSTALLED AND TEMPORARY INLET PROTECTION HAS BEEN INSTALLED.
- INSTALL TEMPORARY GROUND STABILIZATION MEASURES, WHERE POSSIBLE, IN ALL AREAS OUTSIDE OF IMMEDIATE CONSTRUCTION ZONES.
- INSTALL INLET PROTECTION AS INDICATED. SEE INLET PROTECTION DETAIL FOR MORE INFORMATION.
- COMPLETE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- UPON COMPLETION OF CONSTRUCTION, ESTABLISH PERMANENT GROUND COVER AND OVERALL SITE STABILIZATION.
- REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES.

EROSION CONTROL MAINTENANCE NOTES

- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AND REPAIRED, AS NECESSARY, EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS OF EVERY ONE-HALF (0.5) INCH OR GREATER RAINFALL.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFF-SITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- SEDIMENT SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FEET DEEP. THE SEDIMENT FENCE WILL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
- ALL AREAS WILL BE FERTILIZED, RESEED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS IN THE VEGETATIVE PLAN TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.
- STONE CONSTRUCTION ENTRANCE TO BE CLEANED WHEN SEDIMENT ACCUMULATIONS ARE VISIBLE OR SEDIMENT IS TRACKED ON TO THE PAVEMENT. STONE WILL BE PERIODICALLY TOP DRESSED WITH 2 INCHES OF #4 STONE TO MAINTAIN 6 INCH DEPTH. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS REQUIRED.
- INSPECT TEMPORARY SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2" OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN IT ACCUMULATES TO ONE-HALF THE DESIGN DEPTH. PLACE REMOVED SEDIMENT IN AN AREA WITH SEDIMENT CONTROLS.
- CHECK THE SEDIMENT BASIN EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT ALL TRASH AND OTHER DEBRIS FROM THE RISER AND POOL AREA.
- INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (0.5" OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED. INLET PROTECTION SHOULD BE CLEANED OUT WHEN IT IS HALF FULL.
- INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE. IF STONES HAVE BEEN DISLODGED, IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE. REPAIR OR REPLACE RIPRAP AS REQUIRED TO MAINTAIN EFFECTIVENESS. CONTROL WEED AND BRUSH GROWTH AS NEEDED.
- INSPECT BAFFLES ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL, TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT AND REPLACE IF DAMAGED DURING CLEANOUT OPERATIONS. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGN STORAGE DEPTH. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS. BRING THE AREA TO GRADE, AND STABILIZE.
- HARDWARE CLOTH AND GRAVEL INLET PROTECTION - INSPECT INLETS WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.
- INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

EROSION CONTROL LEGEND



LIMITS OF DISTURBANCE

AREA: 6.0 AC
 LAT: 34°22'14.7"N
 LONG: 77°42'30.0"W

2 EROSION CONTROL PLAN - STAGE 2

1 LEGEND AND NOTES

REV NO.	DESCRIPTIONS/REVISIONS	DATE

Professional Engineer Seal for Matthew A. Livick, No. 12103, State of North Carolina. License expires 06/07/2023.

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HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
 US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA
EROSION CONTROL PLAN - STAGE 2

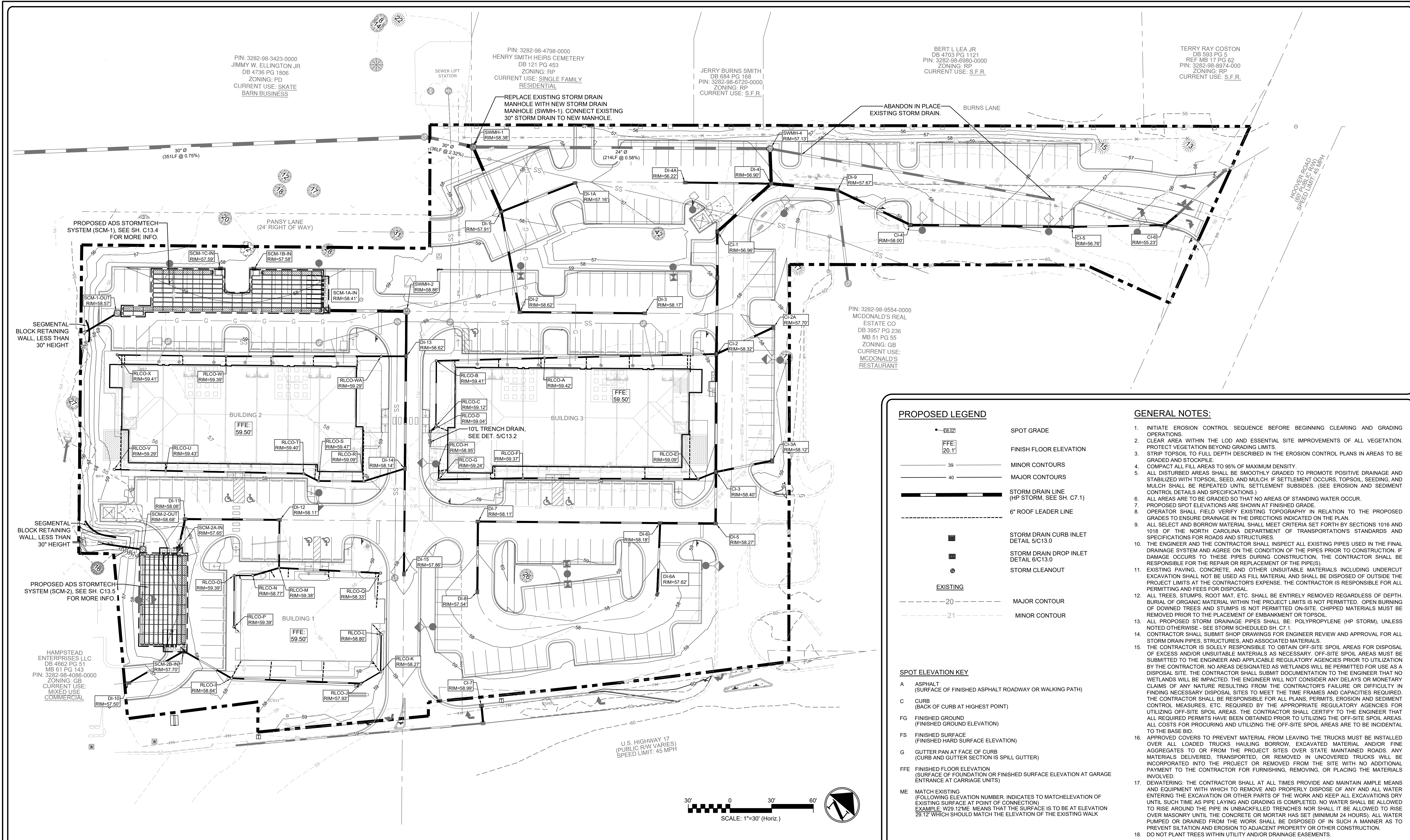
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 MCE PROJ. #: 09110-0001
 DRAWN: DCO/ALM
 DESIGNED: ALM/THL
 CHECKED: THL
 PROJ. MGR: RMC

SCALE: HORIZONTAL: 1"=30'
 VERTICAL: --

C5.0
 DRAWING NUMBER: ---
 REVISION: ---

STATUS: SDP 2022-305 PERMIT SET

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2 GRADING AND DRAINAGE PLAN - OVERALL

PROPOSED LEGEND

- SPOT GRADE
- FINISH FLOOR ELEVATION
- MINOR CONTOURS
- MAJOR CONTOURS
- STORM DRAIN LINE (HP STORM, SEE SH. C7.1)
- 6" ROOF LEADER LINE
- STORM DRAIN CURB INLET DETAIL 5/C13.0
- STORM DRAIN DROP INLET DETAIL 6/C13.0
- STORM CLEANOUT
- MAJOR CONTOUR
- MINOR CONTOUR

SPOT ELEVATION KEY

- A ASPHALT (SURFACE OF FINISHED ASPHALT ROADWAY OR WALKING PATH)
- C CURB (BACK OF CURB AT HIGHEST POINT)
- FG FINISHED GROUND (FINISHED GROUND ELEVATION)
- FS FINISHED SURFACE (FINISHED HARD SURFACE ELEVATION)
- G GUTTER PAN AT FACE OF CURB (CURB AND GUTTER SECTION IS SPILL GUTTER)
- FFE FINISHED FLOOR ELEVATION (SURFACE OF FOUNDATION OR FINISHED SURFACE ELEVATION AT GARAGE ENTRANCE AT CARRIAGE UNITS)
- ME MATCH EXISTING (FOLLOWING ELEVATION NUMBER, INDICATES TO MATCH ELEVATION OF EXISTING SURFACE AT POINT OF CONNECTION) EXAMPLE: W28.12ME MEANS THAT THE SURFACE IS TO BE AT ELEVATION 28.12 WHICH SHOULD MATCH THE ELEVATION OF THE EXISTING WALK

- GENERAL NOTES:**
1. INITIATE EROSION CONTROL SEQUENCE BEFORE BEGINNING CLEARING AND GRADING OPERATIONS.
 2. CLEAR AREA WITHIN THE LOD AND ESSENTIAL SITE IMPROVEMENTS OF ALL VEGETATION. PROTECT VEGETATION BEYOND GRADING LIMITS.
 3. STRIP TOPSOIL TO FULL DEPTH DESCRIBED IN THE EROSION CONTROL PLANS IN AREAS TO BE GRADED AND STOCKPILED.
 4. COMPACT ALL FILL AREAS TO 95% OF MAXIMUM DENSITY.
 5. ALL DISTURBED AREAS SHALL BE SMOOTHLY GRADED TO PROMOTE POSITIVE DRAINAGE AND STABILIZED WITH TOPSOIL, SEED, AND MULCH. IF SETTLEMENT OCCURS, TOPSOIL, SEEDING, AND MULCH SHALL BE REPEATED UNTIL SETTLEMENT SUBSIDES. (SEE EROSION AND SEDIMENT CONTROL DETAILS AND SPECIFICATIONS.)
 6. ALL AREAS ARE TO BE GRADED SO THAT NO AREAS OF STANDING WATER OCCUR.
 7. PROPOSED SPOT ELEVATIONS ARE SHOWN AT FINISHED GRADE.
 8. OPERATOR SHALL FIELD VERIFY EXISTING TOPOGRAPHY IN RELATION TO THE PROPOSED GRADES TO ENSURE DRAINAGE IN THE DIRECTIONS INDICATED ON THE PLAN.
 9. ALL SELECT AND BORROW MATERIAL SHALL MEET CRITERIA SET FORTH BY SECTIONS 1016 AND 1018 OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S STANDARDS AND SPECIFICATIONS FOR ROADS AND STRUCTURES.
 10. THE ENGINEER AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION OF THE PIPES PRIOR TO CONSTRUCTION. IF DAMAGE OCCURS TO THESE PIPES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE PIPES(S).
 11. EXISTING PAVING, CONCRETE, AND OTHER UNSUITABLE MATERIALS INCLUDING UNDERCUT EXCAVATION SHALL NOT BE USED AS FILL MATERIAL AND SHALL BE DISPOSED OF OUTSIDE THE PROJECT LIMITS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING AND FEES FOR DISPOSAL.
 12. ALL TREES, STUMPS, ROOT MAT, ETC. SHALL BE ENTIRELY REMOVED REGARDLESS OF DEPTH. BURIAL OF ORGANIC MATERIAL WITHIN THE PROJECT LIMITS IS NOT PERMITTED. OPEN BURNING OF DOWNED TREES AND STUMPS IS NOT PERMITTED ON-SITE. CHIPPED MATERIALS MUST BE REMOVED PRIOR TO THE PLACEMENT OF EMBANKMENT OR TOPSOIL.
 13. ALL PROPOSED STORM DRAINAGE PIPES SHALL BE POLYPROPYLENE (HP STORM), UNLESS NOTED OTHERWISE - SEE STORM SCHEDULED SH. C7.1.
 14. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW AND APPROVAL FOR ALL STORM DRAIN PIPES, STRUCTURES, AND ASSOCIATED MATERIALS.
 15. THE CONTRACTOR IS SOLELY RESPONSIBLE TO OBTAIN OFF-SITE SPOIL AREAS FOR DISPOSAL OF EXCESS AND/OR UNSUITABLE MATERIALS AS NECESSARY. OFF-SITE SPOIL AREAS MUST BE SUBMITTED TO THE ENGINEER AND APPLICABLE REGULATORY AGENCIES PRIOR TO UTILIZATION BY THE CONTRACTOR. NO AREAS DESIGNATED AS WETLANDS WILL BE PERMITTED FOR USE AS A DISPOSAL SITE. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER THAT NO WETLANDS WILL BE IMPACTED. THE ENGINEER WILL NOT CONSIDER ANY DELAYS OR MONETARY CLAIMS OF ANY NATURE RESULTING FROM THE CONTRACTOR'S FAILURE OR DIFFICULTY IN FINDING NECESSARY DISPOSAL SITES TO MEET THE TIME FRAMES AND CAPACITIES REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PLANS, PERMITS, EROSION AND SEDIMENT CONTROL MEASURES, ETC. REQUIRED BY THE APPROPRIATE REGULATORY AGENCIES FOR UTILIZING OFF-SITE SPOIL AREAS. THE CONTRACTOR SHALL CERTIFY TO THE ENGINEER THAT ALL REQUIRED PERMITS HAVE BEEN OBTAINED PRIOR TO UTILIZING THE OFF-SITE SPOIL AREAS. ALL COSTS FOR PROCURING AND UTILIZING THE OFF-SITE SPOIL AREAS ARE TO BE INCIDENTAL TO THE BASE BID.
 16. APPROVED COVERS TO PREVENT MATERIAL FROM LEAVING THE TRUCKS MUST BE INSTALLED OVER ALL LOADED TRUCKS HAULING BORROW, EXCAVATED MATERIAL AND/OR FINE AGGREGATES TO OR FROM THE PROJECT SITES OVER STATE MAINTAINED ROADS. ANY MATERIALS DELIVERED, TRANSPORTED, OR REMOVED IN UNCOVERED TRUCKS WILL BE INCORPORATED INTO THE PROJECT OR REMOVED FROM THE SITE WITH NO ADDITIONAL PAYMENT TO THE CONTRACTOR FOR FURNISHING, REMOVING, OR PLACING THE MATERIALS INVOLVED.
 17. DEWATERING: THE CONTRACTOR SHALL AT ALL TIMES PROVIDE AND MAINTAIN AMPLE MEANS AND EQUIPMENT WITH WHICH TO REMOVE AND PROPERLY DISPOSE OF ANY AND ALL WATER ENTERING THE EXCAVATION OR OTHER PARTS OF THE WORK AND KEEP ALL EXCAVATIONS DRY UNTIL SUCH TIME AS PIPE LAYING AND GRADING IS COMPLETED. NO WATER SHALL BE ALLOWED TO RISE AROUND THE PIPE IN UNBACKFILLED TRENCHES NOR SHALL IT BE ALLOWED TO RISE OVER MASONRY UNTIL THE CONCRETE OR MORTAR HAS SET (MINIMUM 24 HOURS). ALL WATER PUMPED OR DRAINED FROM THE WORK SHALL BE DISPOSED OF IN SUCH A MANNER AS TO PREVENT SILTATION AND EROSION TO ADJACENT PROPERTY OR OTHER CONSTRUCTION.
 18. DO NOT PLANT TREES WITHIN UTILITY AND/OR DRAINAGE EASEMENTS.

1 LEGEND AND NOTES

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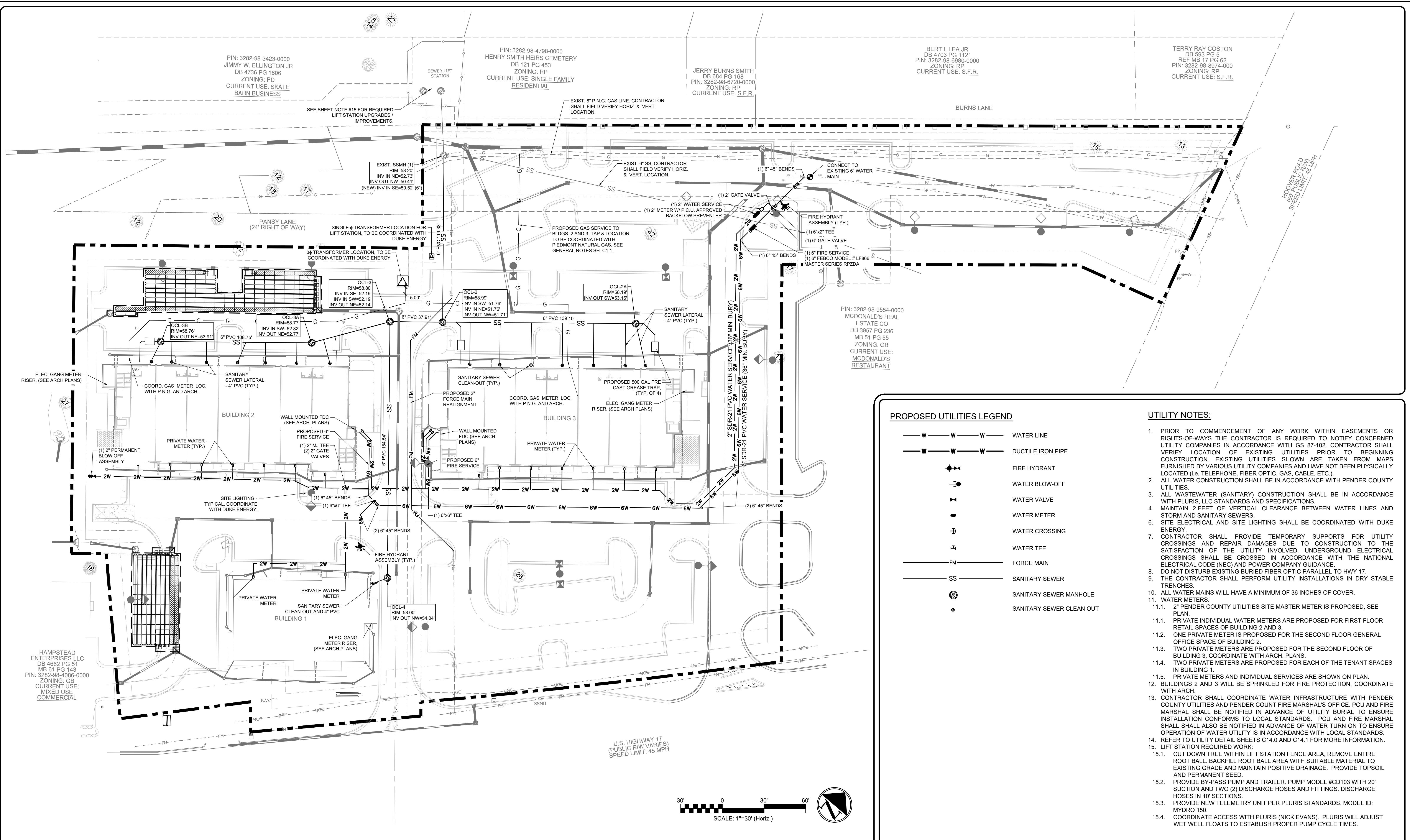
OYSTER CREEK LANDING
US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

GRADING AND DRAINAGE PLAN - OVERALL

DATE: 06/07/2023	SCALE: 1"=30'
MCE PROJ. #: 09110-0001	HORIZONTAL: 1"=30'
DRAWN: DCO/ALM	VERTICAL: --
DESIGNED: ALM/THL	REVISION: --
CHECKED: THL	
PROJ. MGR: RMC	

STATUS: SDP 2022-305 PERMIT SET

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PROPOSED UTILITIES LEGEND

- W — W — W — WATER LINE
- W — W — W — DUCTILE IRON PIPE
- F — FIRE HYDRANT
- B — WATER BLOW-OFF
- V — WATER VALVE
- M — WATER METER
- C — WATER CROSSING
- T — WATER TEE
- FM — FORCE MAIN
- SS — SANITARY SEWER
- SSMH — SANITARY SEWER MANHOLE
- SC — SANITARY SEWER CLEAN-OUT

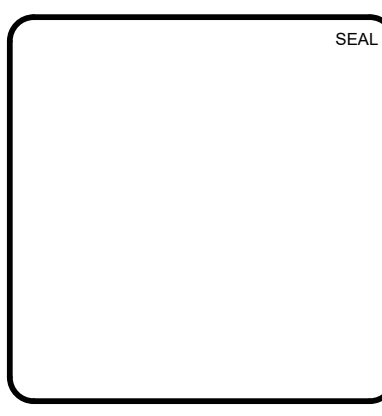
UTILITY NOTES:

1. PRIOR TO COMMENCEMENT OF ANY WORK WITHIN EASEMENTS OR RIGHTS-OF-WAYS THE CONTRACTOR IS REQUIRED TO NOTIFY CONCERNED UTILITY COMPANIES IN ACCORDANCE WITH GS 87-102. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. EXISTING UTILITIES SHOWN ARE TAKEN FROM MAPS FURNISHED BY VARIOUS UTILITY COMPANIES AND HAVE NOT BEEN PHYSICALLY LOCATED (i.e. TELEPHONE, FIBER OPTIC, GAS, CABLE, ETC.).
2. ALL WATER CONSTRUCTION SHALL BE IN ACCORDANCE WITH PENDER COUNTY UTILITIES.
3. ALL WASTEWATER (SANITARY) CONSTRUCTION SHALL BE IN ACCORDANCE WITH PLURIS, LLC STANDARDS AND SPECIFICATIONS.
4. MAINTAIN 2-FEET OF VERTICAL CLEARANCE BETWEEN WATER LINES AND STORM AND SANITARY SEWERS.
5. SITE ELECTRICAL AND SITE LIGHTING SHALL BE COORDINATED WITH DUKE ENERGY.
6. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS FOR UTILITY CROSSINGS AND REPAIR DAMAGES DUE TO CONSTRUCTION TO THE SATISFACTION OF THE UTILITY INVOLVED. UNDERGROUND ELECTRICAL CROSSINGS SHALL BE COORDED WITH THE NATIONAL ELECTRICAL CODE (NEC) AND POWER COMPANY GUIDANCE.
7. DO NOT DISTURB EXISTING BURIED FIBER OPTIC PARALLEL TO HWY 17.
8. THE CONTRACTOR SHALL PERFORM UTILITY INSTALLATIONS IN DRY STABLE TRENCHES.
9. ALL WATER MAINS WILL HAVE A MINIMUM OF 36 INCHES OF COVER.
10. WATER METERS:
 - 11.1. 2" PENDER COUNTY UTILITIES SITE MASTER METER IS PROPOSED, SEE PLAN.
 - 11.2. PRIVATE INDIVIDUAL WATER METERS ARE PROPOSED FOR FIRST FLOOR RETAIL SPACES OF BUILDING 2 AND 3.
 - 11.3. ONE PRIVATE METER IS PROPOSED FOR THE SECOND FLOOR GENERAL OFFICE SPACE OF BUILDING 2.
 - 11.4. TWO PRIVATE METERS ARE PROPOSED FOR THE SECOND FLOOR OF BUILDING 3, COORDINATE WITH ARCH. PLANS.
 - 11.5. TWO PRIVATE METERS ARE PROPOSED FOR EACH OF THE TENANT SPACES IN BUILDING 1.
 - 11.6. PRIVATE METERS AND INDIVIDUAL SERVICES ARE SHOWN ON PLAN.
12. BUILDINGS 2 AND 3 WILL BE SPRINKLED FOR FIRE PROTECTION, COORDINATE WITH ARCH.
13. CONTRACTOR SHALL COORDINATE WATER INFRASTRUCTURE WITH PENDER COUNTY UTILITIES AND PENDER COUNTY FIRE MARSHAL'S OFFICE. PCU AND FIRE MARSHAL SHALL BE NOTIFIED IN ADVANCE OF UTILITY BURIAL TO ENSURE INSTALLATION CONFORMS TO LOCAL STANDARDS. PCU AND FIRE MARSHAL SHALL ALSO BE NOTIFIED IN ADVANCE OF WATER TURN ON TO ENSURE OPERATION OF WATER UTILITY IS IN ACCORDANCE WITH LOCAL STANDARDS.
14. REFER TO UTILITY DETAIL SHEETS C14.0 AND C14.1 FOR MORE INFORMATION.
15. LIFT STATION REQUIRED WORK:
 - 15.1. CUT DOWN TREE WITHIN LIFT STATION FENCE AREA. REMOVE ENTIRE ROOT BALL. BACKFILL ROOT BALL AREA WITH SUITABLE MATERIAL TO EXISTING GRADE AND MAINTAIN POSITIVE DRAINAGE. PROVIDE TOPSOIL AND PERMANENT SEED.
 - 15.2. PROVIDE BY-PASS PUMP AND TRAILER. PUMP MODEL #C0103 WITH 20' SUCTION AND TWO (2) DISCHARGE HOSES AND FITTINGS. DISCHARGE HOSES IN 10' SECTIONS.
 - 15.3. PROVIDE NEW TELEMETRY UNIT PER PLURIS STANDARDS. MODEL ID: MYDRO 150.
 - 15.4. COORDINATE ACCESS WITH PLURIS (NICK EVANS). PLURIS WILL ADJUST WET WELL FLOATS TO ESTABLISH PROPER PUMP CYCLE TIMES.

2 UTILITY PLAN - OVERALL

1 LEGEND AND NOTES

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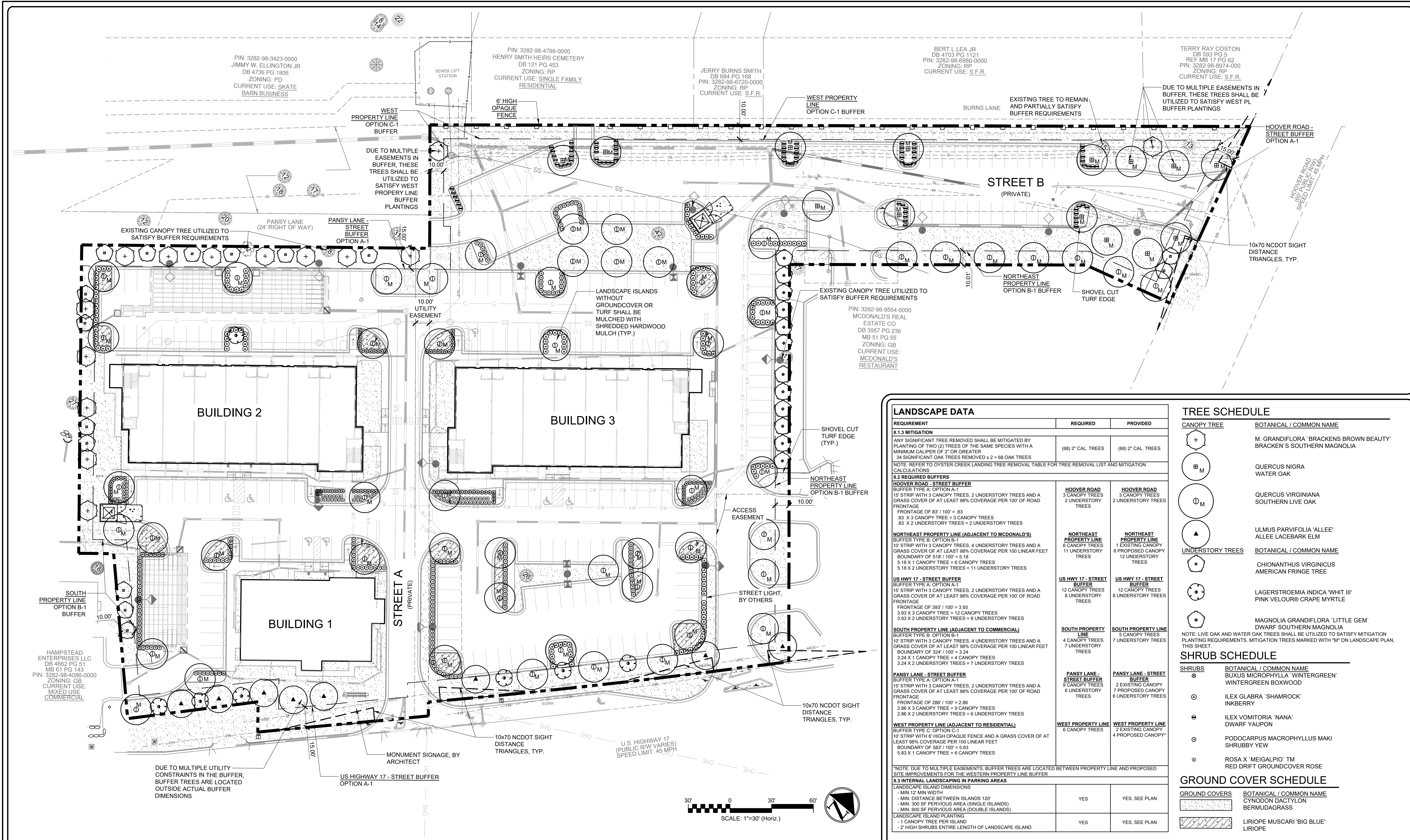
HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
 US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

UTILITY PLAN - OVERALL

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DESIGNED: ALM/THL	C8.0
CHECKED: THL	DRAWING NUMBER
PROJ. MGR: RMC	REVISION
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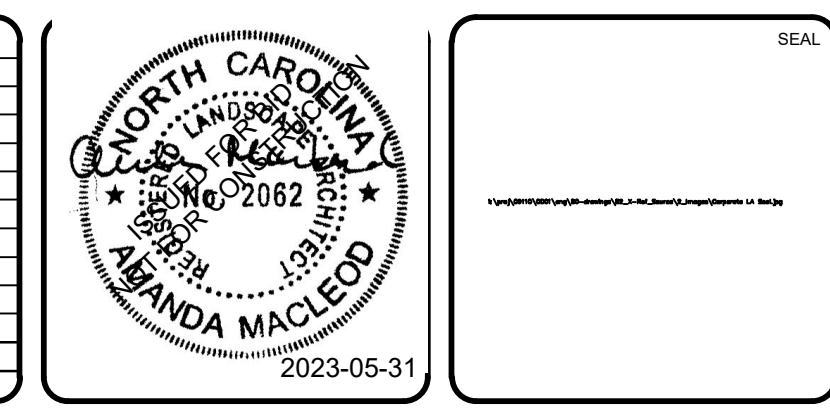
LANDSCAPE DATA		
REQUIREMENT	REQUIRED	PROVIDED
8.1.3 MITIGATION ANY SIGNIFICANT TREE REMOVED SHALL BE MITIGATED BY PLANTING OF TWO (2) TREES OF THE SAME SPECIES WITH A MINIMUM CALIPER OF 2" OR GREATER 34 SIGNIFICANT OAK TREES REMOVED = 2 = 68 OAK TREES NOTE: REFER TO OYSTER CREEK LANDING TREE REMOVAL TABLE FOR TREE REMOVAL LIST AND MITIGATION CALCULATIONS	(68) 2" CAL. TREES	(68) 2" CAL. TREES
8.2 REQUIRED BUFFERS HOOVER ROAD - STREET BUFFER BUFFER TYPE A: OPTION A-1 15' STRIP WITH 3 CANOPY TREES, 2 UNDERSTORY TREES AND A GRASS COVER OF AT LEAST 98% COVERAGE PER 100' OF ROAD FRONTAGE FRONTAGE OF 83' / 100' = 83 83 X 3 CANOPY TREE = 3 CANOPY TREES 83 X 2 UNDERSTORY TREES = 2 UNDERSTORY TREES	HOOVER ROAD - STREET BUFFER 3 CANOPY TREES 2 UNDERSTORY TREES	HOOVER ROAD - STREET BUFFER 3 CANOPY TREES 2 UNDERSTORY TREES
NORTHEAST PROPERTY LINE (ADJACENT TO MCDONALD'S) BUFFER TYPE B: OPTION B-1 10' STRIP WITH 3 CANOPY TREES, 4 UNDERSTORY TREES AND A GRASS COVER OF AT LEAST 98% COVERAGE PER 100 LINEAR FEET BOUNDARY OF 518' / 100' = 5.18 5.18 X 1 CANOPY TREE = 6 CANOPY TREES 5.18 X 2 UNDERSTORY TREES = 11 UNDERSTORY TREES	NORTHEAST PROPERTY LINE 6 CANOPY TREES 11 UNDERSTORY TREES	NORTHEAST PROPERTY LINE 1 EXISTING CANOPY 6 PROPOSED CANOPY 12 UNDERSTORY TREES
US HWY 17 - STREET BUFFER BUFFER TYPE A: OPTION A-1 15' STRIP WITH 3 CANOPY TREES, 2 UNDERSTORY TREES AND A GRASS COVER OF AT LEAST 98% COVERAGE PER 100' OF ROAD FRONTAGE FRONTAGE OF 393' / 100' = 3.93 3.93 X 3 CANOPY TREE = 12 CANOPY TREES 3.93 X 2 UNDERSTORY TREES = 8 UNDERSTORY TREES	US HWY 17 - STREET BUFFER 12 CANOPY TREES 8 UNDERSTORY TREES	US HWY 17 - STREET BUFFER 12 CANOPY TREES 8 UNDERSTORY TREES
SOUTH PROPERTY LINE (ADJACENT TO COMMERCIAL) BUFFER TYPE B: OPTION B-1 10' STRIP WITH 3 CANOPY TREES, 4 UNDERSTORY TREES AND A GRASS COVER OF AT LEAST 98% COVERAGE PER 100 LINEAR FEET BOUNDARY OF 324' / 100' = 3.24 3.24 X 1 CANOPY TREE = 4 CANOPY TREES 3.24 X 2 UNDERSTORY TREES = 7 UNDERSTORY TREES	SOUTH PROPERTY LINE 4 CANOPY TREES 7 UNDERSTORY TREES	SOUTH PROPERTY LINE 5 CANOPY TREES 7 UNDERSTORY TREES
PANSY LANE - STREET BUFFER BUFFER TYPE A: OPTION A-1 15' STRIP WITH 3 CANOPY TREES, 2 UNDERSTORY TREES AND A GRASS COVER OF AT LEAST 98% COVERAGE PER 100' OF ROAD FRONTAGE FRONTAGE OF 286' / 100' = 2.86 2.86 X 3 CANOPY TREE = 9 CANOPY TREES 2.86 X 2 UNDERSTORY TREES = 6 UNDERSTORY TREES	PANSY LANE - STREET BUFFER 9 CANOPY TREES 6 UNDERSTORY TREES	PANSY LANE - STREET BUFFER 2 EXISTING CANOPY 7 PROPOSED CANOPY 6 UNDERSTORY TREES
WEST PROPERTY LINE (ADJACENT TO RESIDENTIAL) BUFFER TYPE C: OPTION C-1 10' STRIP WITH 6' HIGH OPAQUE FENCE AND A GRASS COVER OF AT LEAST 98% COVERAGE PER 100 LINEAR FEET BOUNDARY OF 583' / 100' = 5.83 5.83 X 1 CANOPY TREE = 6 CANOPY TREES	WEST PROPERTY LINE 6 CANOPY TREES	WEST PROPERTY LINE 2 EXISTING CANOPY 4 PROPOSED CANOPY
NOTE: DUE TO MULTIPLE EASEMENTS, BUFFER TREES ARE LOCATED BETWEEN PROPERTY LINE AND PROPOSED SITE IMPROVEMENTS FOR THE WESTERN PROPERTY LINE BUFFER		
8.3 INTERNAL LANDSCAPING IN PARKING AREAS		
LANDSCAPE ISLAND DIMENSIONS - MIN. 12' MIN WIDTH - MIN. DISTANCE BETWEEN ISLANDS 120' - MIN. 300 SF PERVIOUS AREA (SINGLE ISLANDS) - MIN. 600 SF PERVIOUS AREA (DOUBLE ISLANDS)	YES	YES, SEE PLAN
LANDSCAPE ISLAND PLANTING - 1 CANOPY TREE PER ISLAND - 2" HIGH SHRUBS ENTIRE LENGTH OF LANDSCAPE ISLAND	YES	YES, SEE PLAN

TREE SCHEDULE	
CANOPY TREE	BOTANICAL / COMMON NAME
+	M. GRANDIFLORA 'BRACKENS BROWN BEAUTY' BRACKEN'S SOUTHERN MAGNOLIA
⊕	QUERCUS NIGRA WATER OAK
⊙	QUERCUS VIRGINIANA SOUTHERN LIVE OAK
▲	ULMUS PARVIFOLIA 'ALLEE' ALLEE LACEBARK ELM
UNDERSTORY TREES	BOTANICAL / COMMON NAME
⊕	CHIONANTHUS VIRGINICUS AMERICAN FRINGE TREE
⊙	LAGERSTROEMIA INDICA 'WHITE III' PINK VELOUR® CRAPE MYRTLE
⊕	MAGNOLIA GRANDIFLORA 'LITTLE GEM' DWARF SOUTHERN MAGNOLIA
NOTE: LIVE OAK AND WATER OAK TREES SHALL BE UTILIZED TO SATISFY MITIGATION PLANTING REQUIREMENTS. MITIGATION TREES MARKED WITH "M" ON LANDSCAPE PLAN, THIS SHEET.	
SHRUB SCHEDULE	
SHRUBS	BOTANICAL / COMMON NAME
⊕	BUXUS MICROPHYLLA 'WINTERGREEN' WINTERGREEN BOXWOOD
⊙	ILEX GLABRA 'SHAMROCK' INKBERRY
⊕	ILEX VOMITORIA 'NANA' DWARF YAUPOIN
⊙	PODOCARPUS MACROPHYLLUS MAKI SHRUBBY YEW
⊕	ROSA X 'MEIGALPIO' TM RED DRIFT GROUND COVER ROSE
GROUND COVER SCHEDULE	
GROUND COVER	BOTANICAL / COMMON NAME
⊕	CYNODON DACTYLON BERMUDAGRASS
⊙	LIRIOPE MUSCARI 'BIG BLUE' LIRIOPE

2 LANDSCAPE PLAN - OVERALL

1 LEGEND AND NOTES

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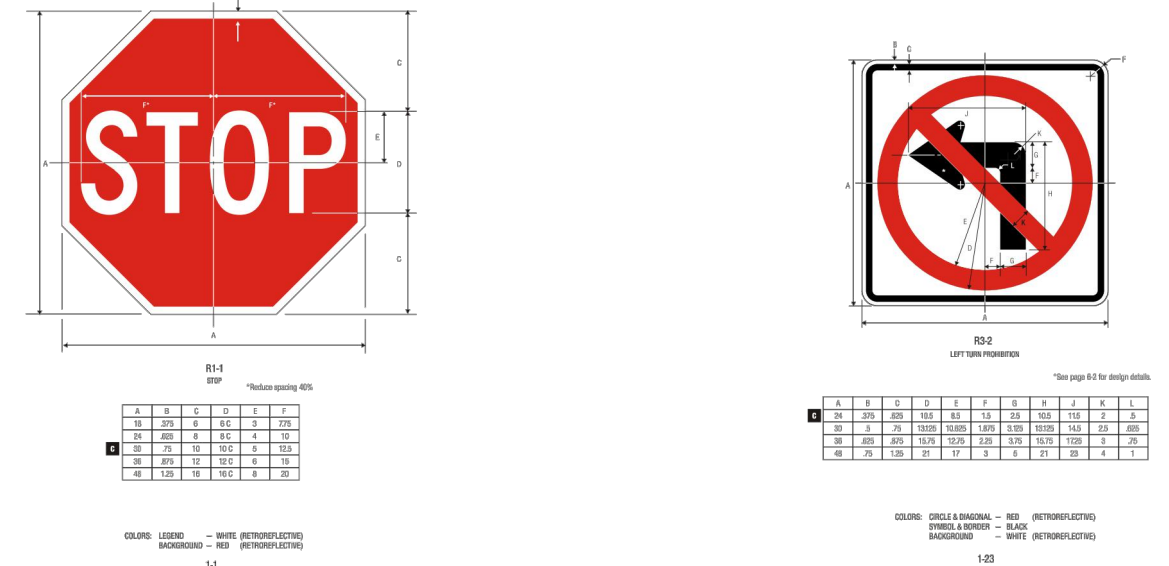


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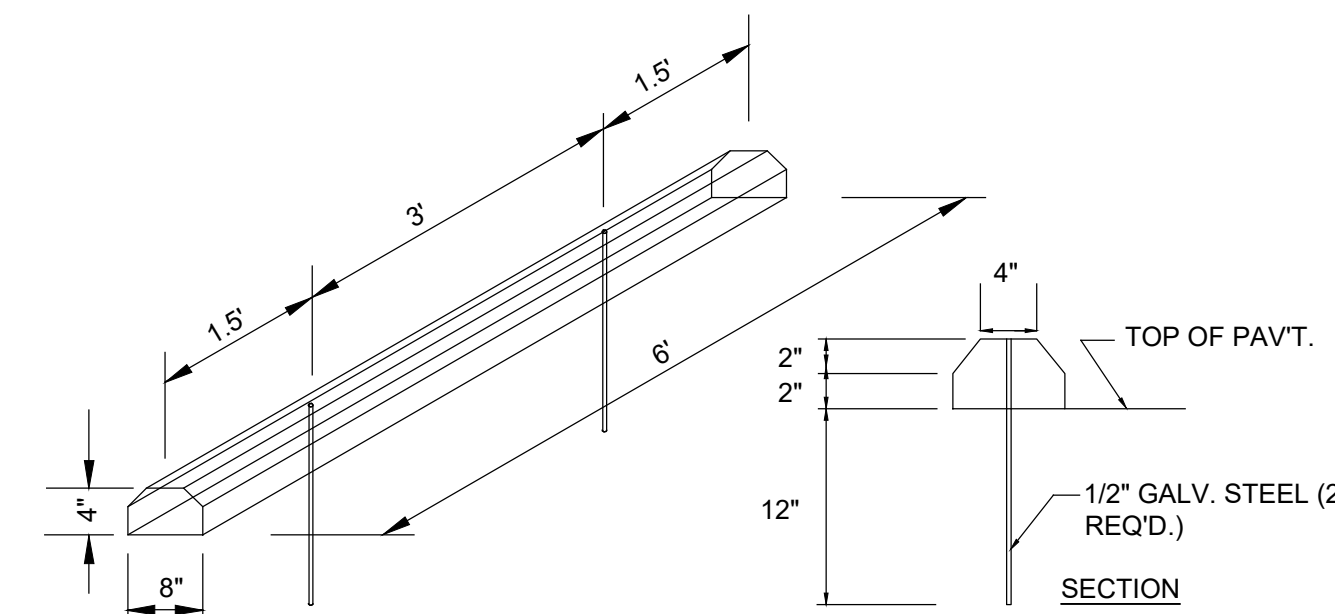
HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
 US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA
LANDSCAPE PLAN - OVERALL

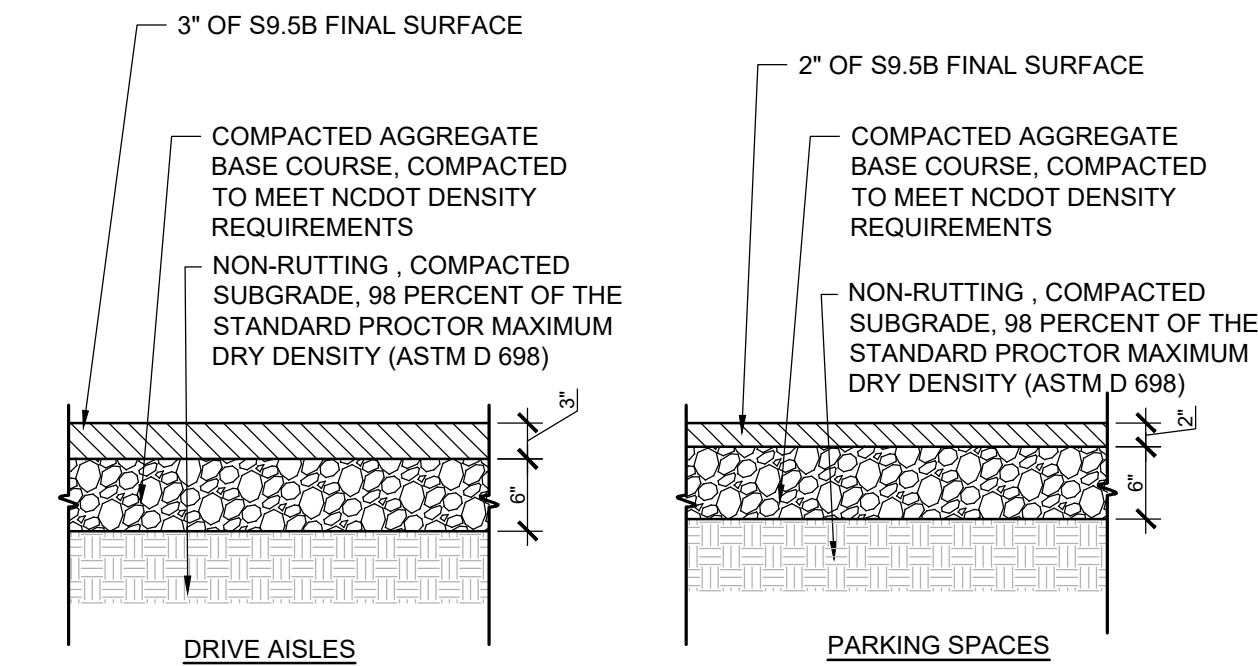
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2 SIGNAGE NTS

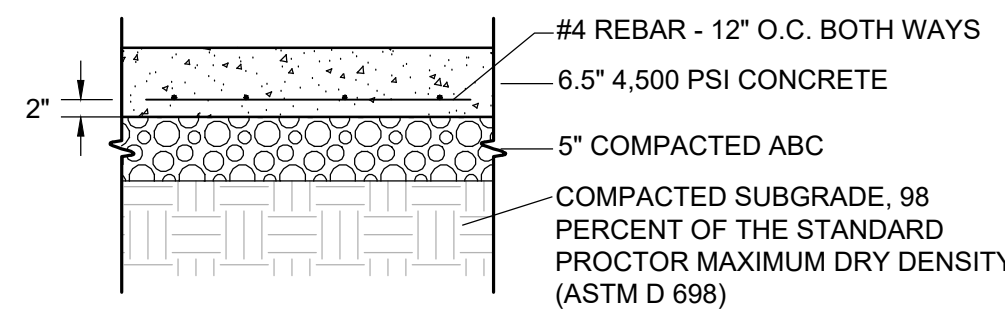


5 WHEEL STOP NTS



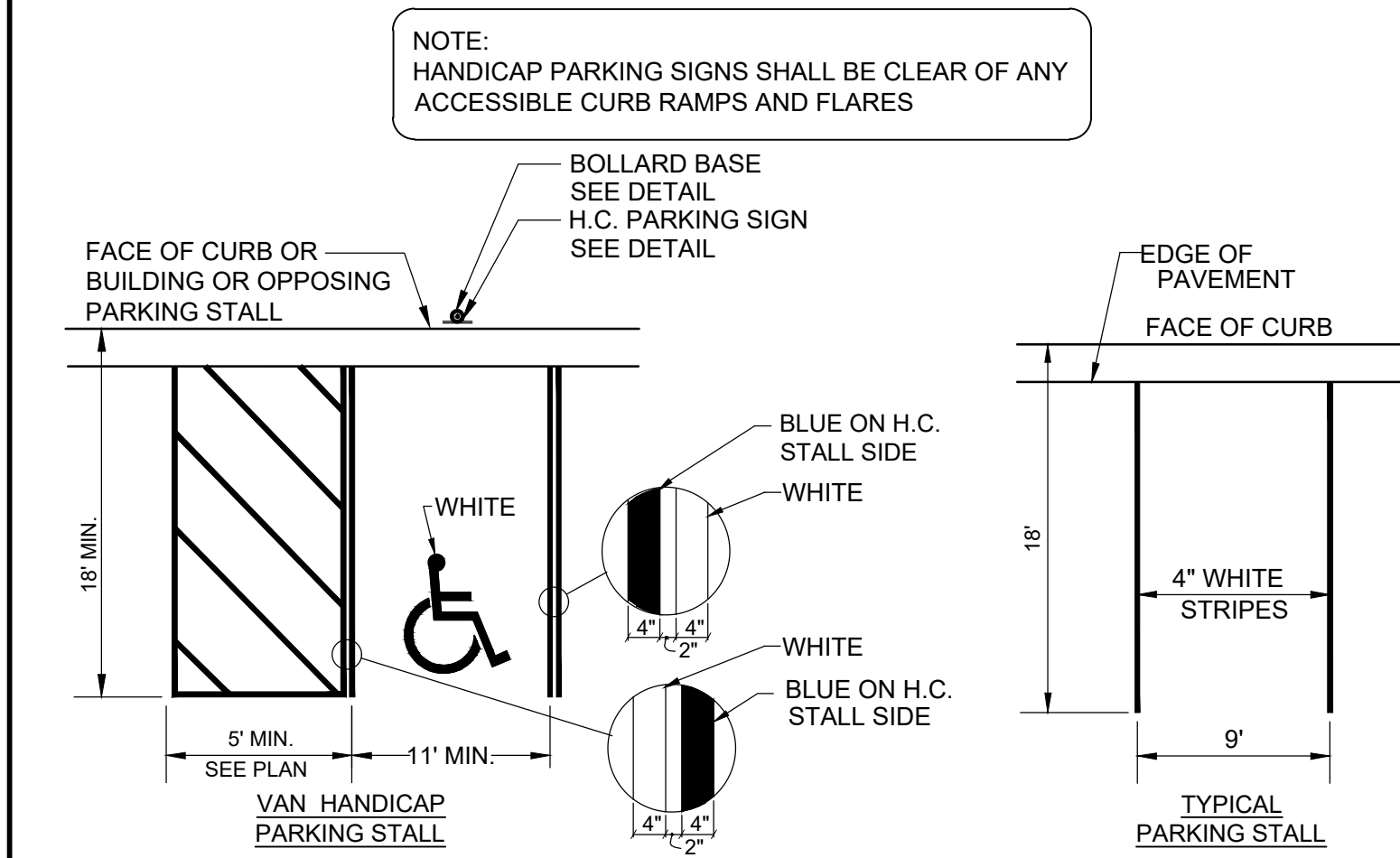
NOTE: ASPHALT PAVEMENT SHALL BE COMPACTED TO AT LEAST 90.0 PERCENT OF THE MATERIAL'S SPECIFIC GRAVITY. CONTRACTOR SHALL COORDINATE ASPHALT TESTING WITH PROJECT GEOTECHNICAL ENGINEER.

7 ASPHALT PAVEMENT NTS



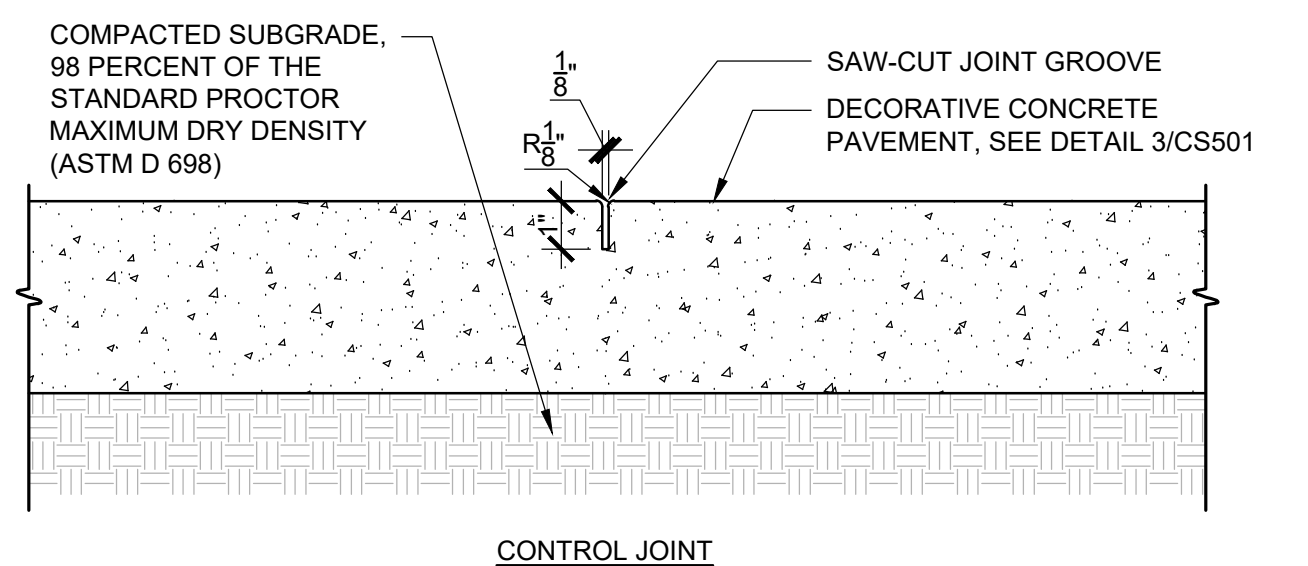
NOTE: PAVEMENT SHALL BE CONSTRUCTED OF 4,500 PSI CONCRETE. REINFORCEMENT SHALL BE #4 REBAR SPACED 12" O. C. BOTH DIRECTIONS, AS INDICATED ABOVE. SURFACE FINISHES AND JOINTS SHALL BE AS INDICATED IN SPECIFICATIONS.

9 HEAVY DUTY CONCRETE PAVEMENT NTS



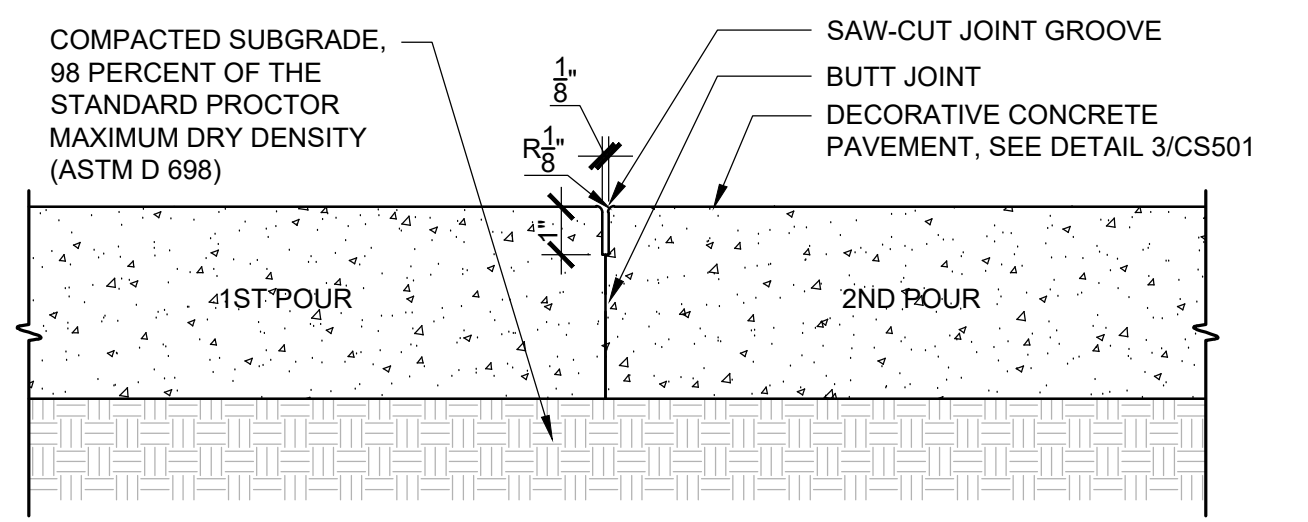
4 ACCESSIBLE AND STANDARD PARKING SPACES NTS

NOTES:
1. CONTROL JOINTS SHALL BE LOCATED APPROXIMATELY 5' O.C. AND EQLIDISTANT.
2. EXTEND JOINT GROOVE 1" BELOW FINISH GRADE OR 25% OF PAVEMENT THICKNESS WHICHEVER IS GREATER.
3. SEE DETAILS BELOW FOR EXPANSION JOINTS AND CONSTRUCTION JOINTS.



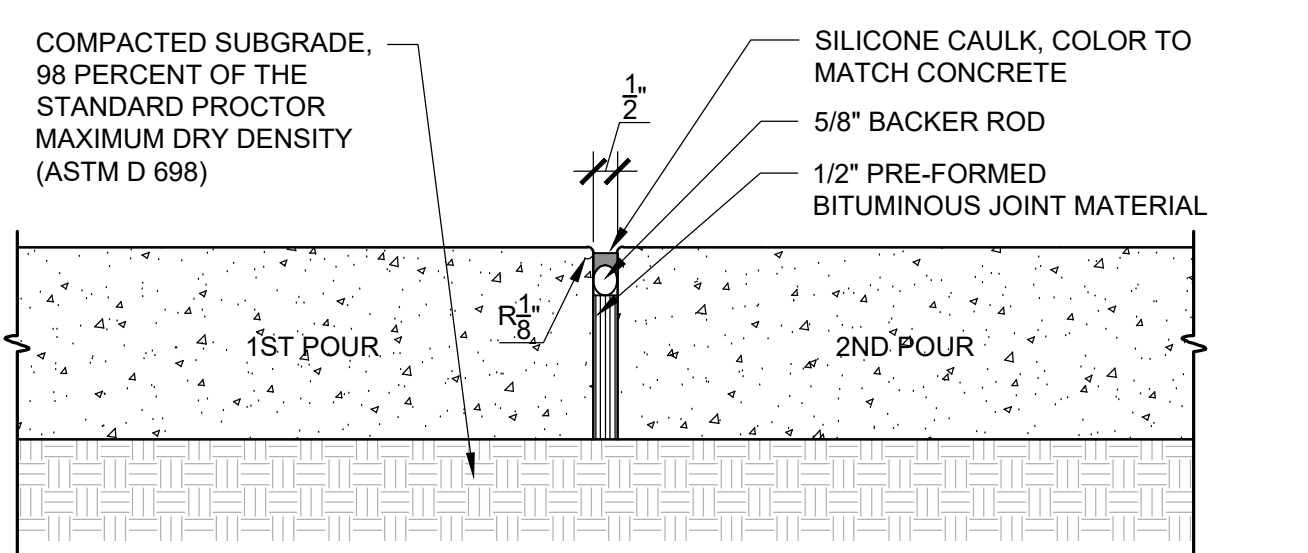
CONTROL JOINT

NOTES:
1. CONSTRUCTION JOINTS AS NEEDED AT CONTROL JOINT LOCATIONS. SEE DETAIL ABOVE FOR LOCATIONS.
2. EXTEND JOINT GROOVE 1" BELOW FINISH GRADE OR 25% OF PAVEMENT THICKNESS WHICHEVER IS GREATER.
3. SEE DETAIL BELOW FOR EXPANSION JOINTS AND ABOVE FOR CONTROL JOINTS.



CONSTRUCTION JOINT

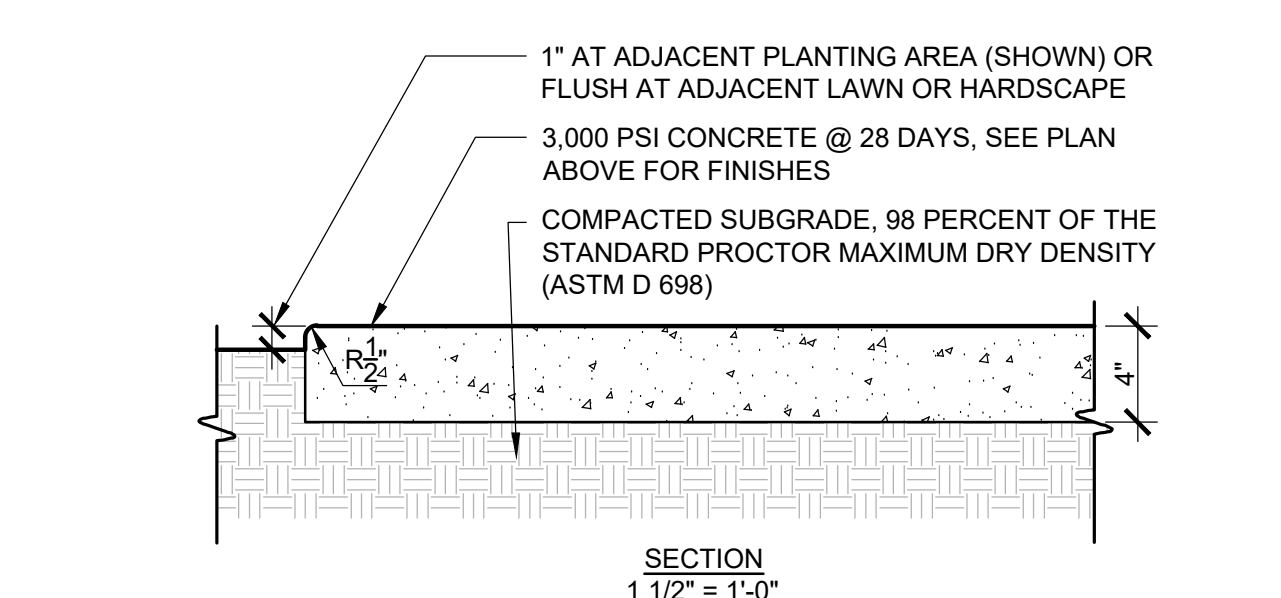
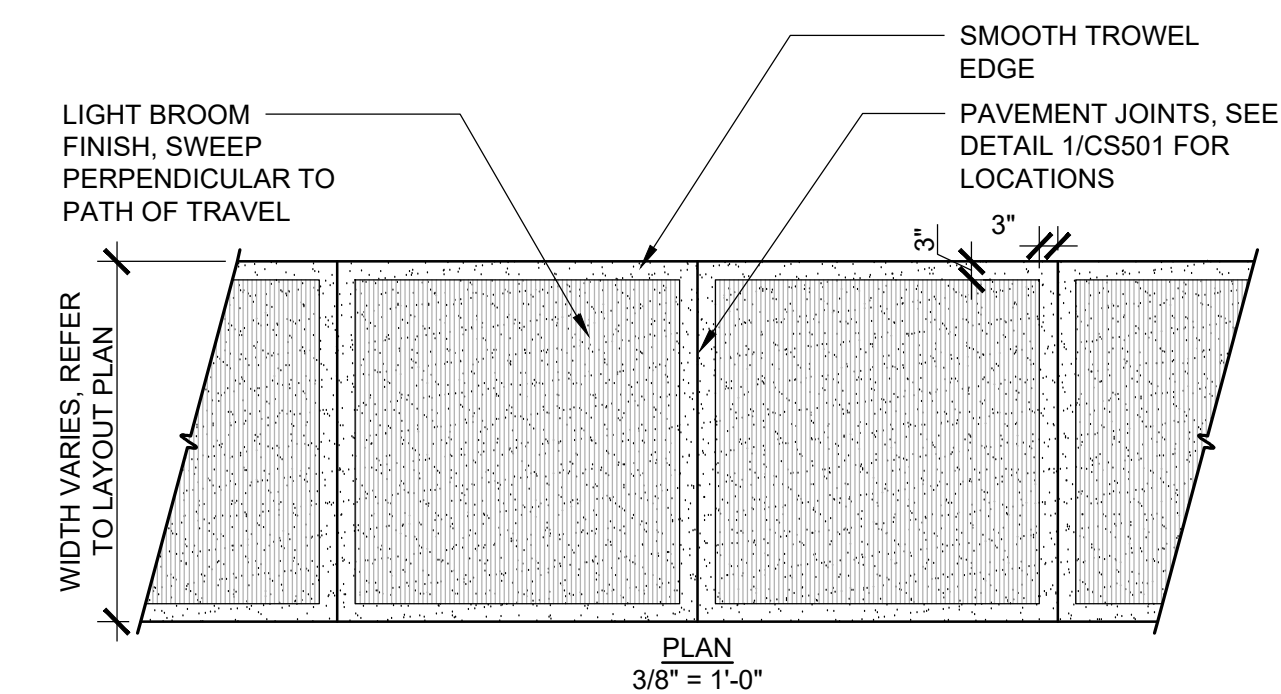
NOTES:
1. EXPANSION JOINTS SHALL BE LOCATED EVERY 50' MIN.
2. EXTEND EXPANSION JOINT 100% THROUGH PAVEMENT SURFACE.
3. ENSURE JOINTS ARE FREE OF NON-COMPRESSIBLE MATERIALS DURING INSTALLATION AND AFTER INSTALLATION.
4. SEE DETAIL AT TOP FOR CONTROL JOINTS AND ABOVE FOR CONSTRUCTION JOINTS.



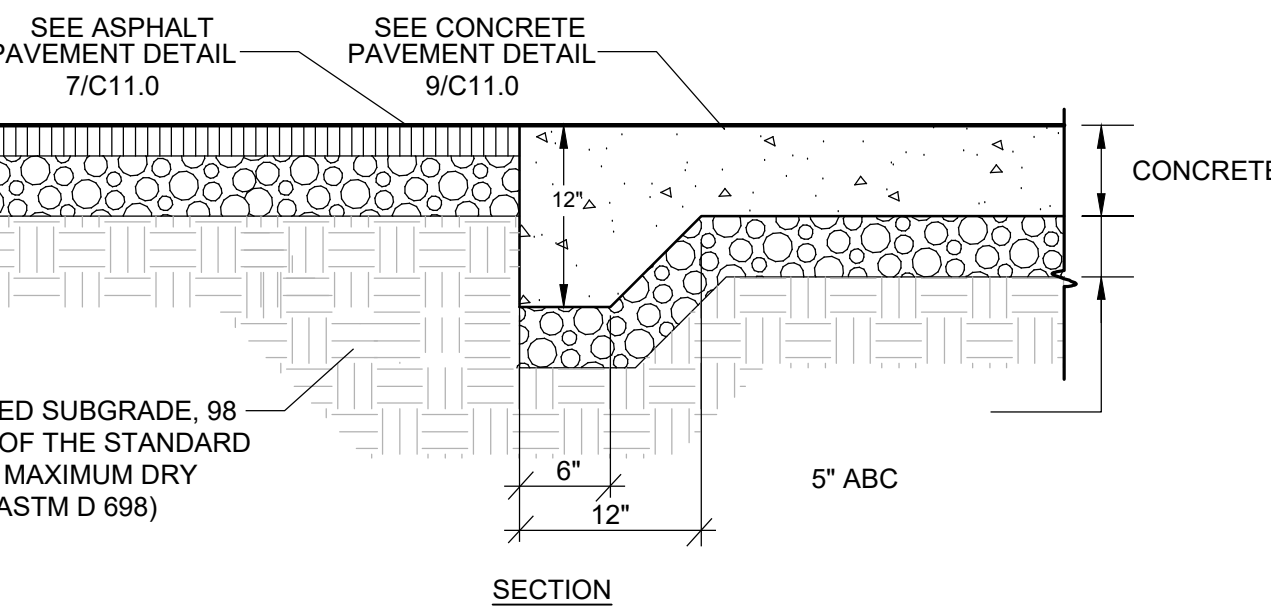
EXPANSION JOINT

1 CONCRETE PAVEMENT JOINTS 3" = 1'-0"

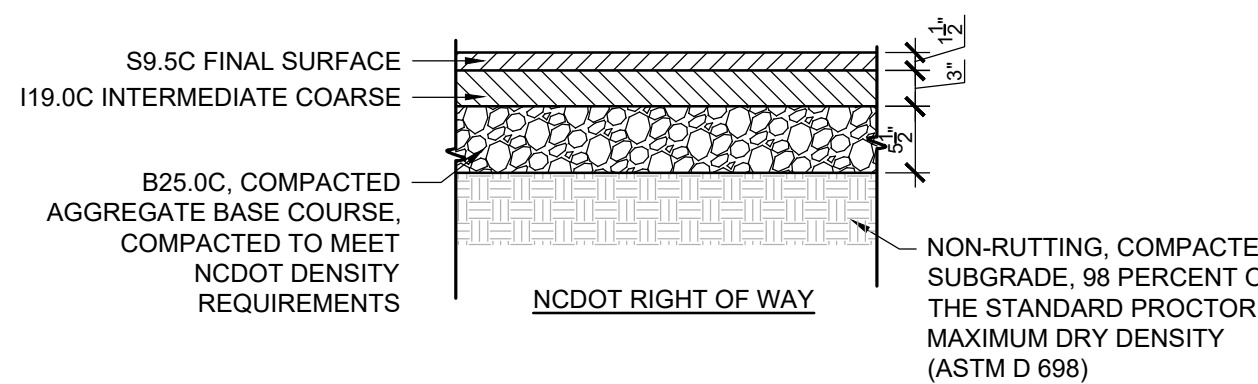
NOTES:
1. ALL WALKWAYS SHALL MEET OR EXCEED GOVERNING MUNICIPALITIES REQUIREMENTS.
2. SUBGRADE SHALL NOT CONTAIN ANY ORGANIC MATTER.
3. REFER TO 1/CS501, 4/CS503 FOR PAVEMENT JOINT TYPES AND LOCATIONS
4. PER ADA REQUIREMENTS; MAXIMUM CROSS SLOPE OF WALKING SURFACE SHALL NOT BE STEEPER THAN 1:48. MAXIMUM RUNNING SLOPE OF WALKING SURFACE SHALL NOT BE STEEPER THAN 1:20. WALKING SURFACES ALONG AN ACCESSIBLE ROUTE STEEPER THAN 1:20 REQUIRE RAMP. RAMP RUNS WITH A RISE GREATER THAN 6" SHALL HAVE HANDRAILS. RAMP RUNS SHALL HAVE A RUNNING SLOPE NOT STEEPER THAN 1:12. MAXIMUM RISE PER RAMP IS 30". LANDINGS MUST BE PROVIDED WHERE NECESSARY. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES.



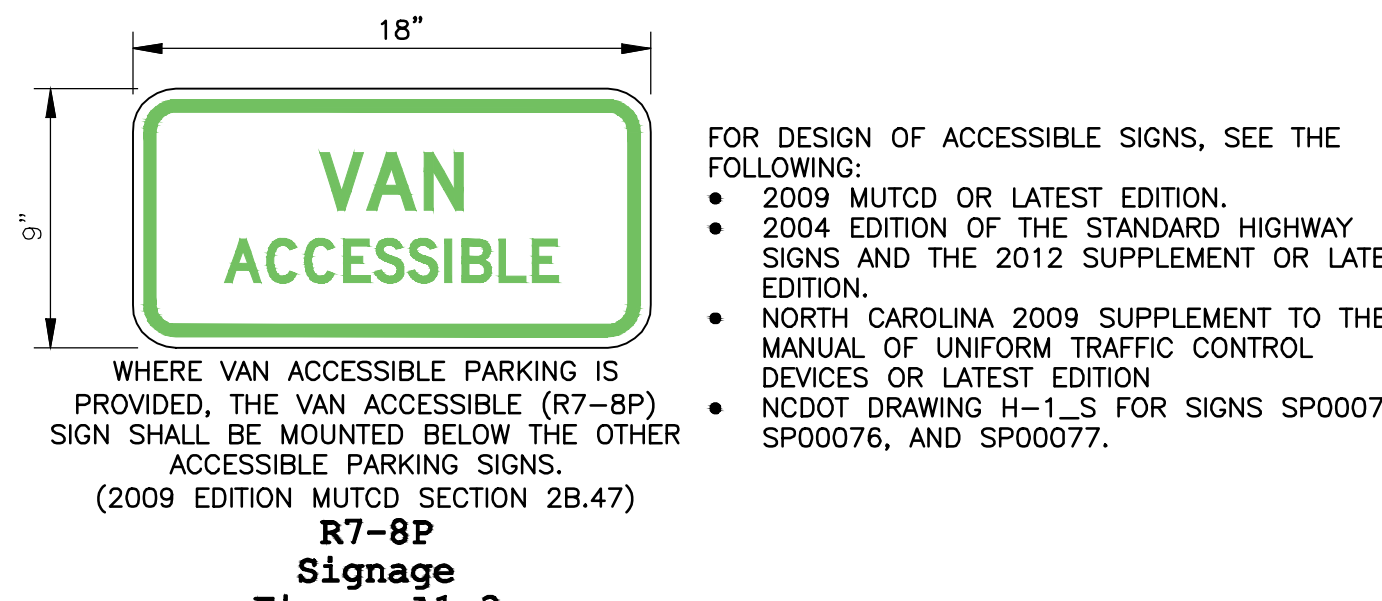
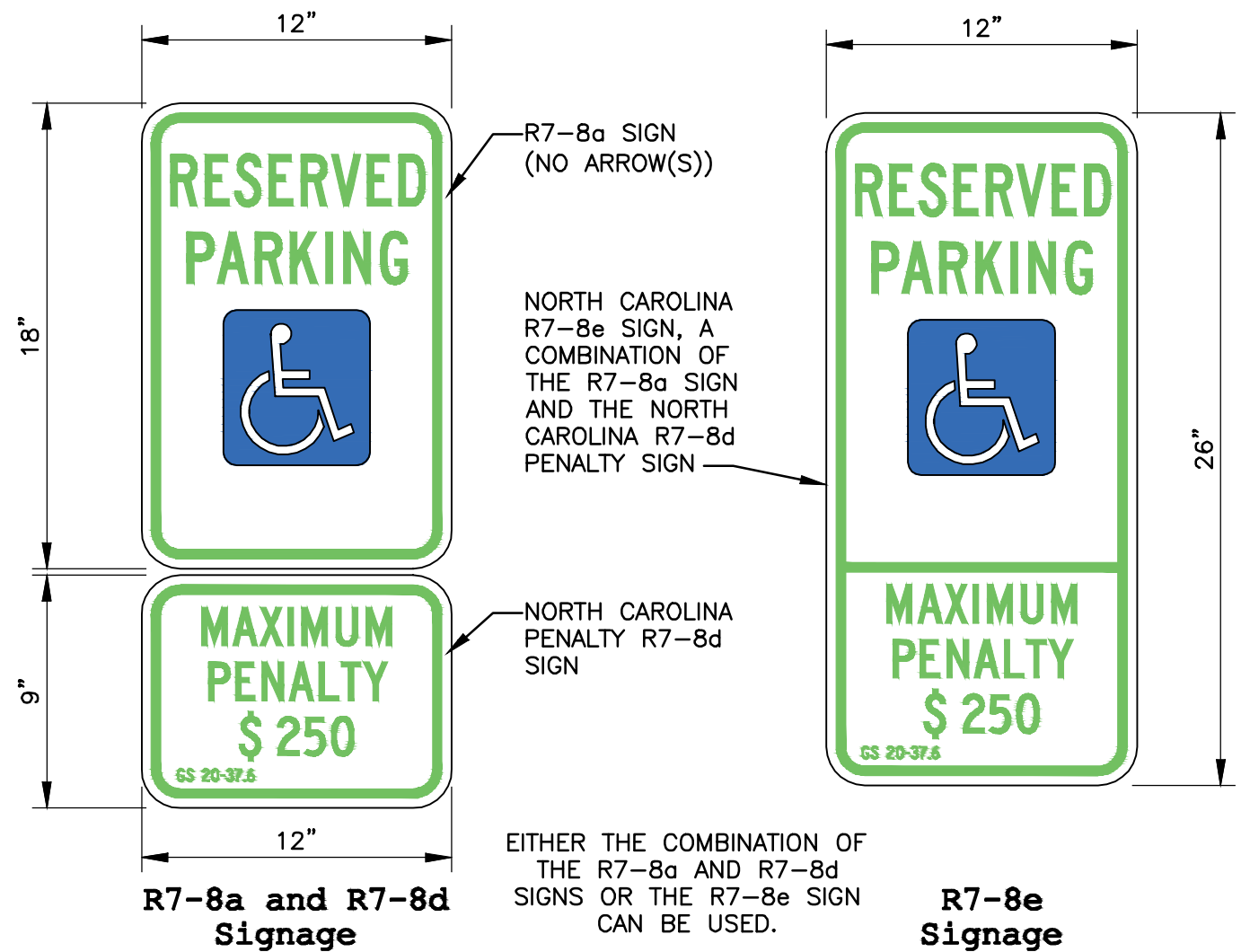
3 CONCRETE SIDEWALK AS SHOWN



8 CONCRETE PAVEMENT TO ASPHALT TRANSITION NTS

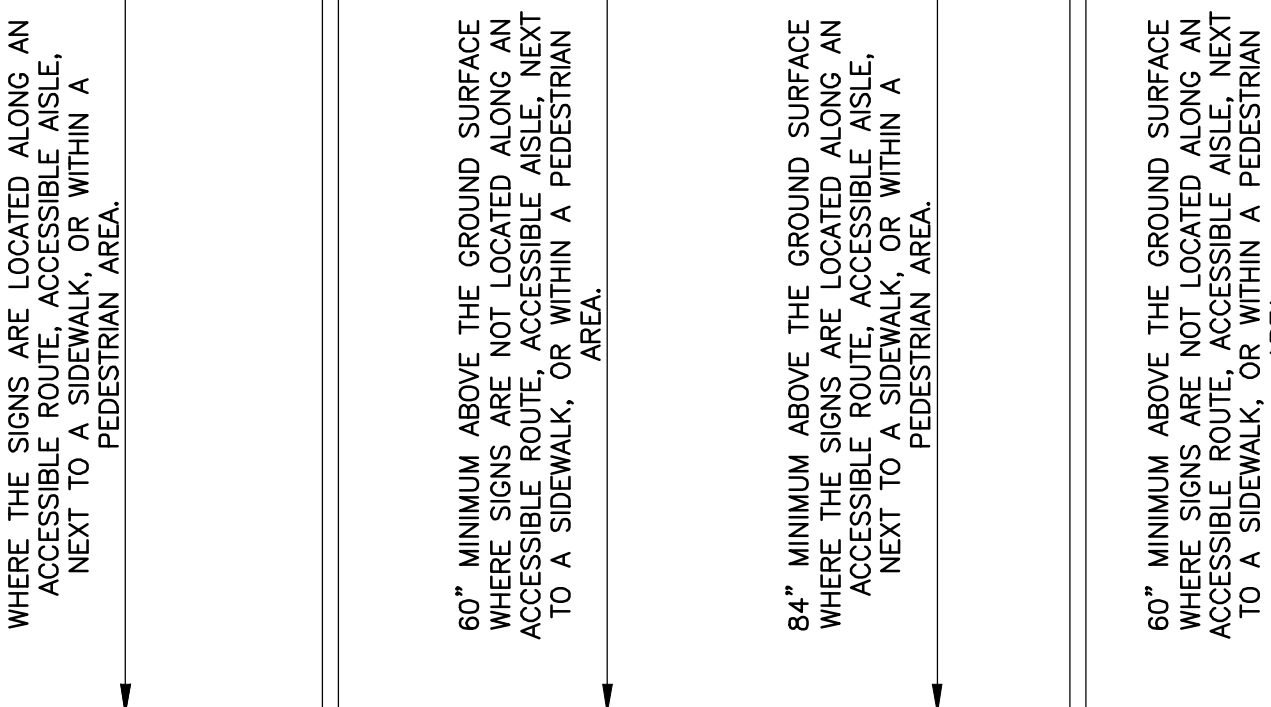


7 ASPHALT PAVEMENT NTS



Signage Height Figure A2.1

6 ADA PARKING SIGNAGE NTS



84" MINIMUM ABOVE THE GROUND SURFACE WHERE SIGNS ARE LOCATED ALONG AN ACCESSIBLE ROUTE, ACCESSIBLE AISLE, NEXT TO A SIDEWALK OR WITHIN A PEDESTRIAN AREA.

60" MINIMUM ABOVE THE GROUND SURFACE WHERE SIGNS ARE NOT LOCATED ALONG AN ACCESSIBLE ROUTE, ACCESSIBLE AISLE, NEXT TO A SIDEWALK, OR WITHIN A PEDESTRIAN AREA.

84" MINIMUM ABOVE THE GROUND SURFACE WHERE THE SIGNS ARE LOCATED ALONG AN ACCESSIBLE ROUTE, ACCESSIBLE AISLE, NEXT TO A SIDEWALK, OR WITHIN A PEDESTRIAN AREA.

60" MINIMUM ABOVE THE GROUND SURFACE WHERE SIGNS ARE NOT LOCATED ALONG AN ACCESSIBLE ROUTE, ACCESSIBLE AISLE, NEXT TO A SIDEWALK, OR WITHIN A PEDESTRIAN AREA.



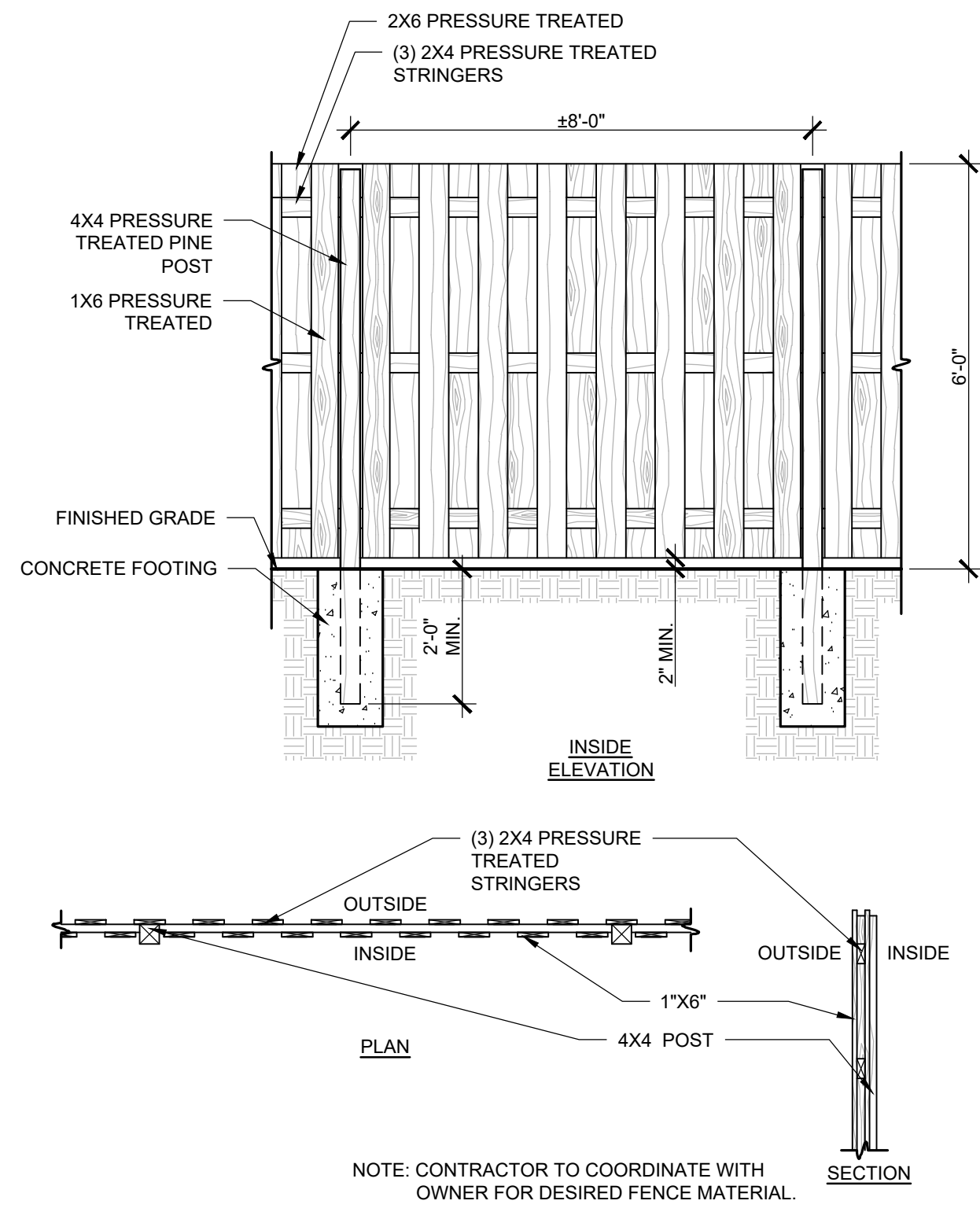
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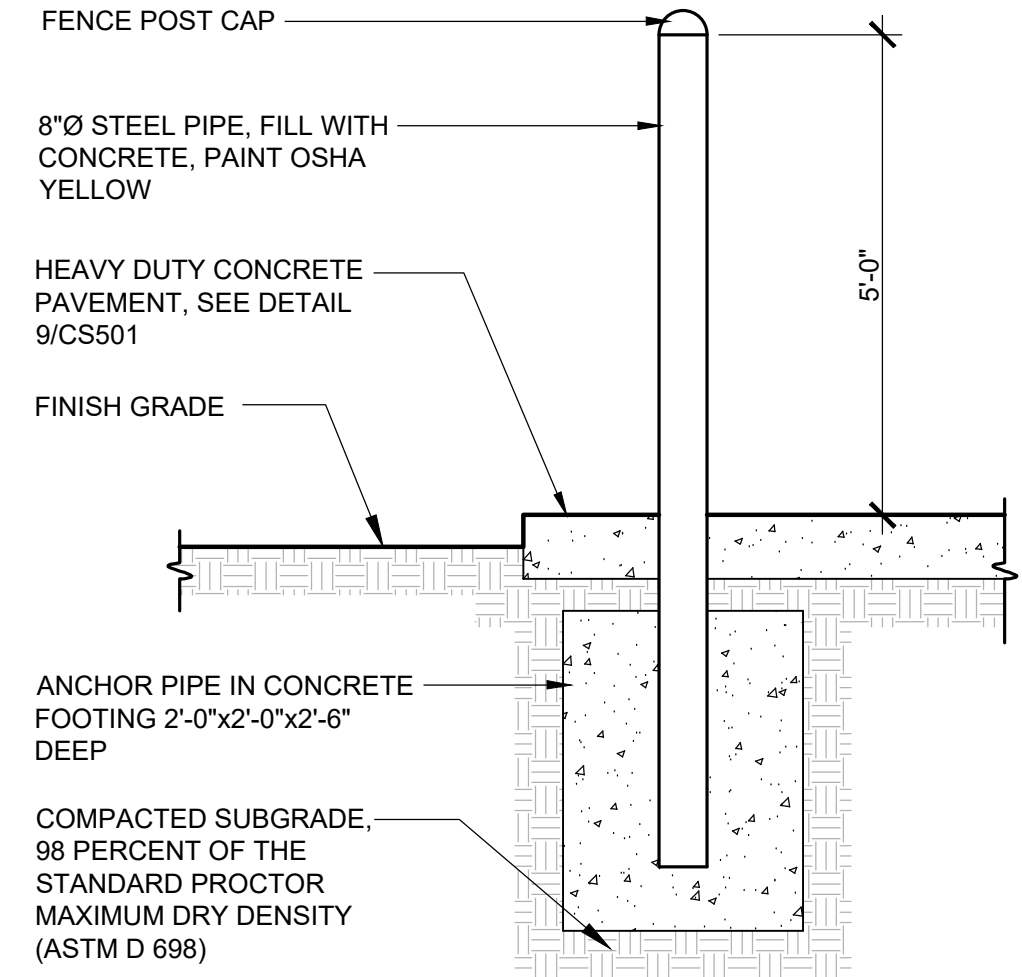
SITE DETAILS

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5 WOOD SHADOWBOX FENCE

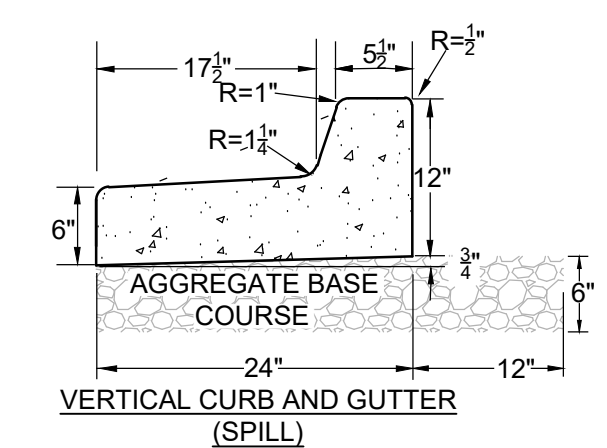
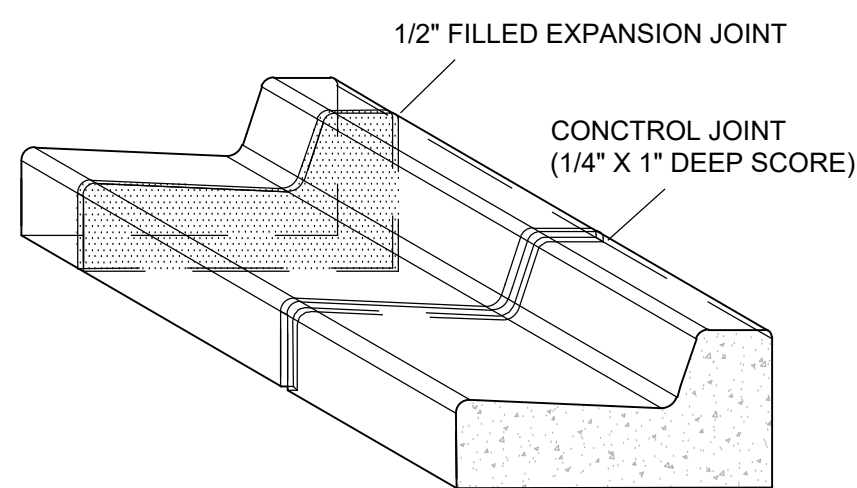
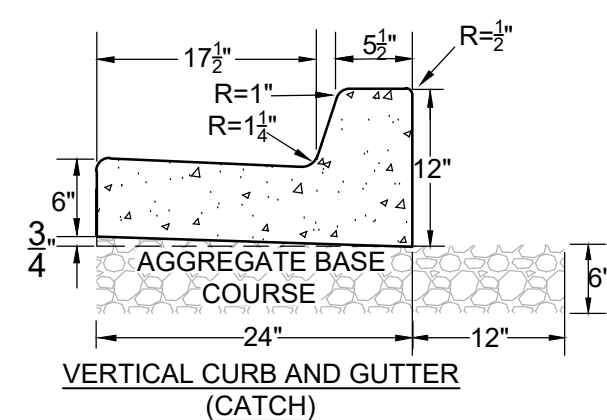
NTS



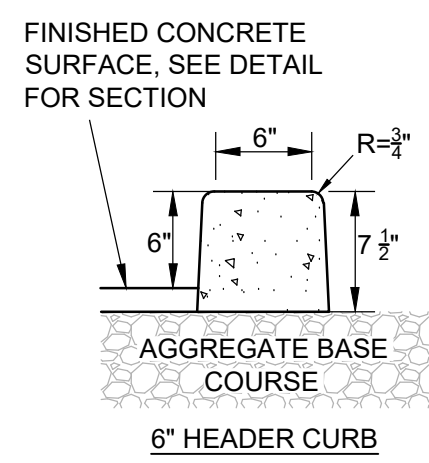
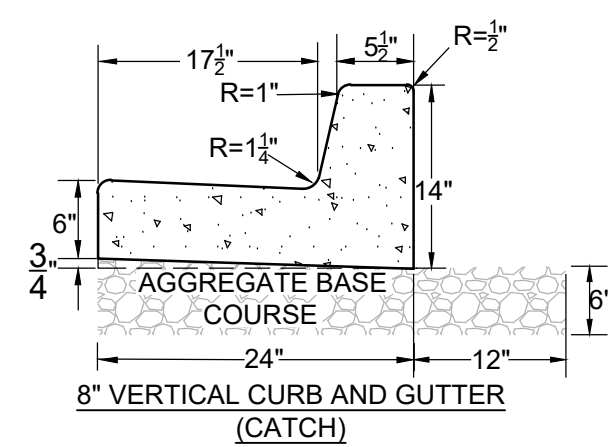
5 HEAVY DUTY BOLLARD

NTS

- NOTES:
1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS
 2. 150' MAX EXPANSION JOINT SPACING, 15' MAX CONTRACTION JOINT SPACING
 3. MINIMUM INSTALLATION LENGTH IS 5 FT.
 4. CONCRETE TO BE 3000 PSI MIN
 5. VERTICAL CURB AND GUTTER BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE

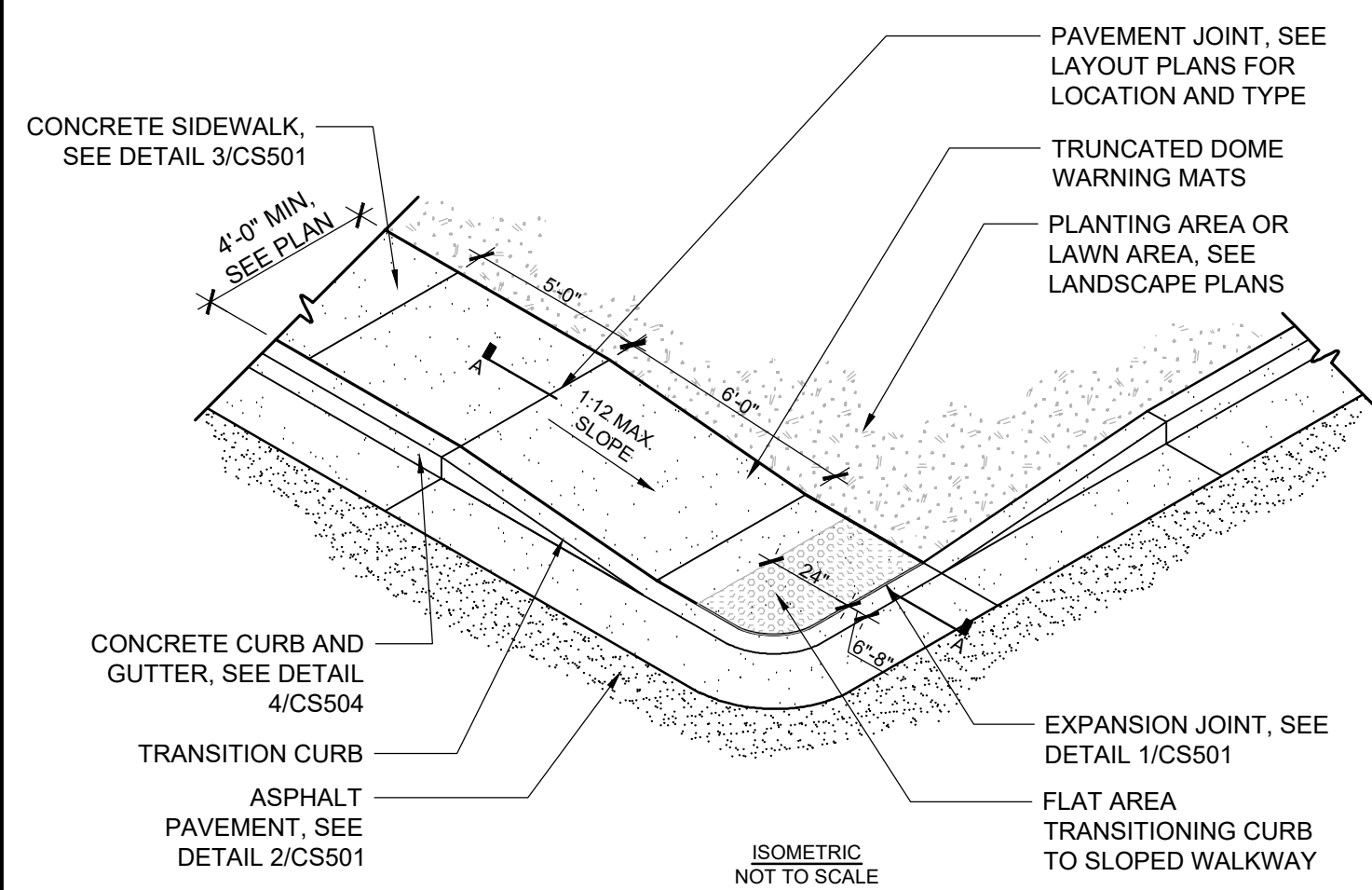
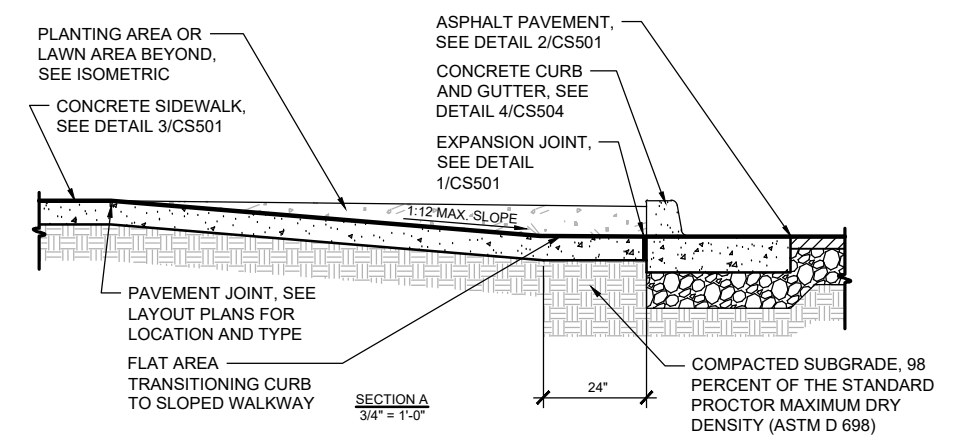


OBLIQUE VIEW VERTICAL CURB AND GUTTER



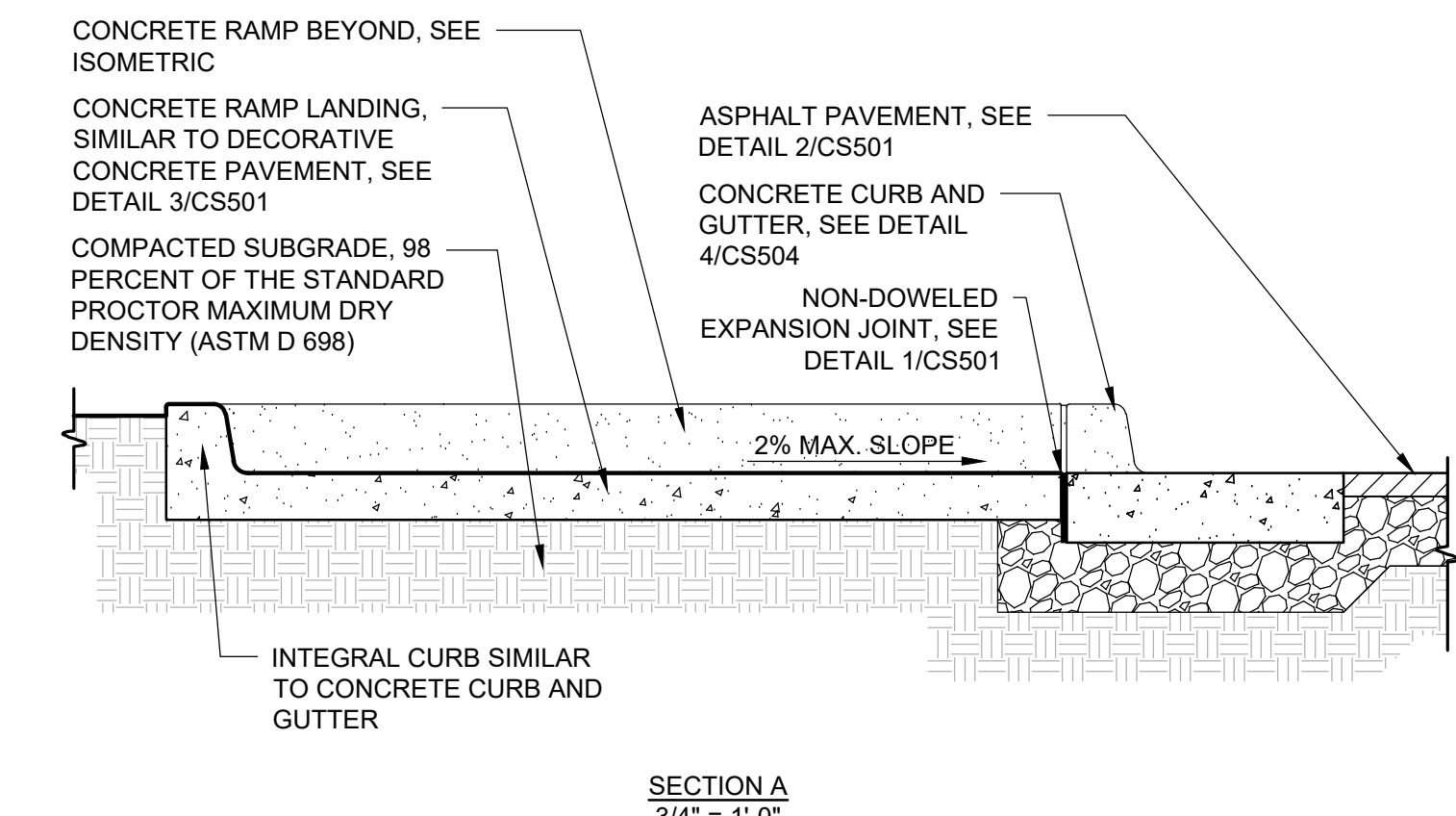
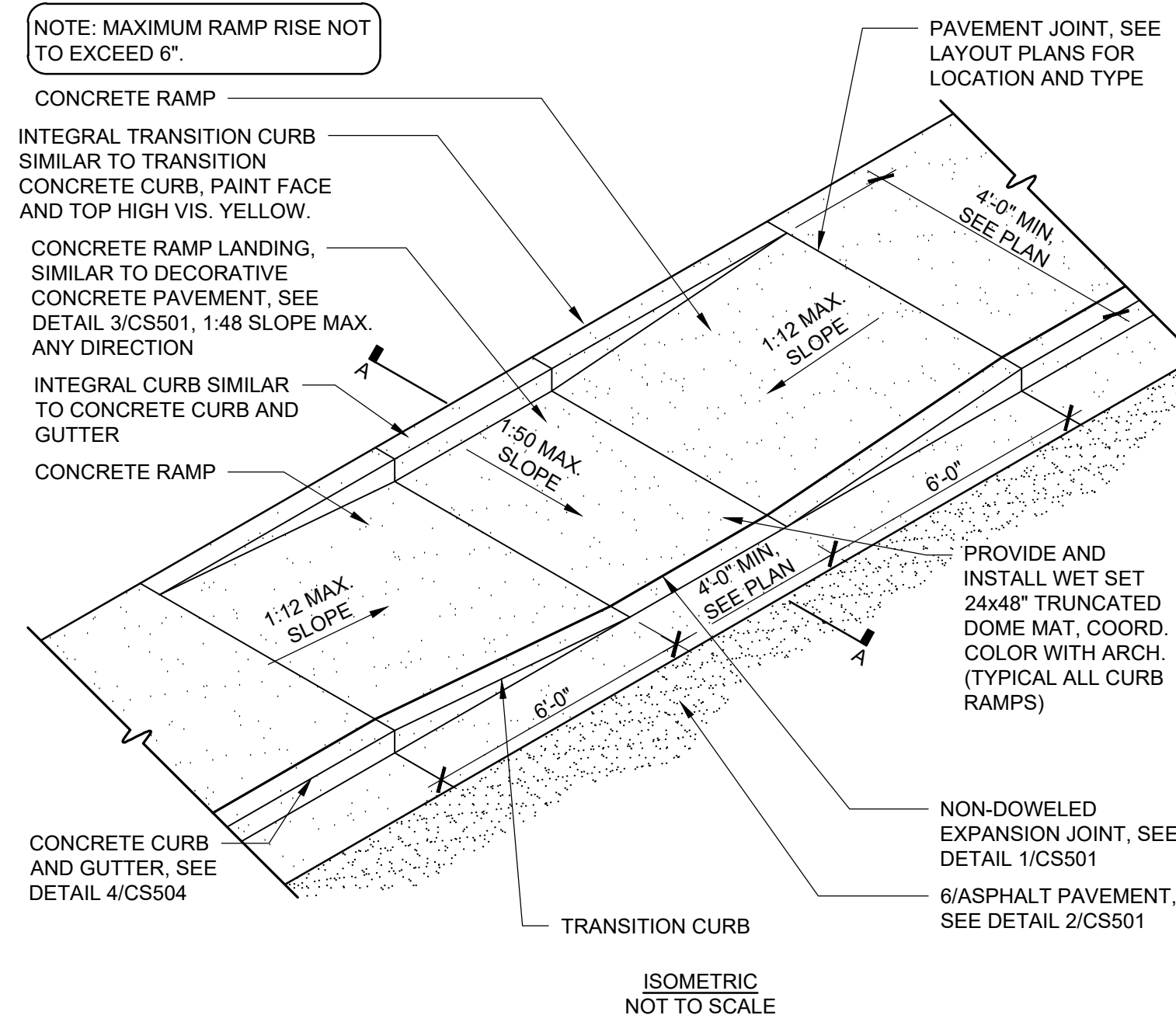
4 CONCRETE CURBING

NTS



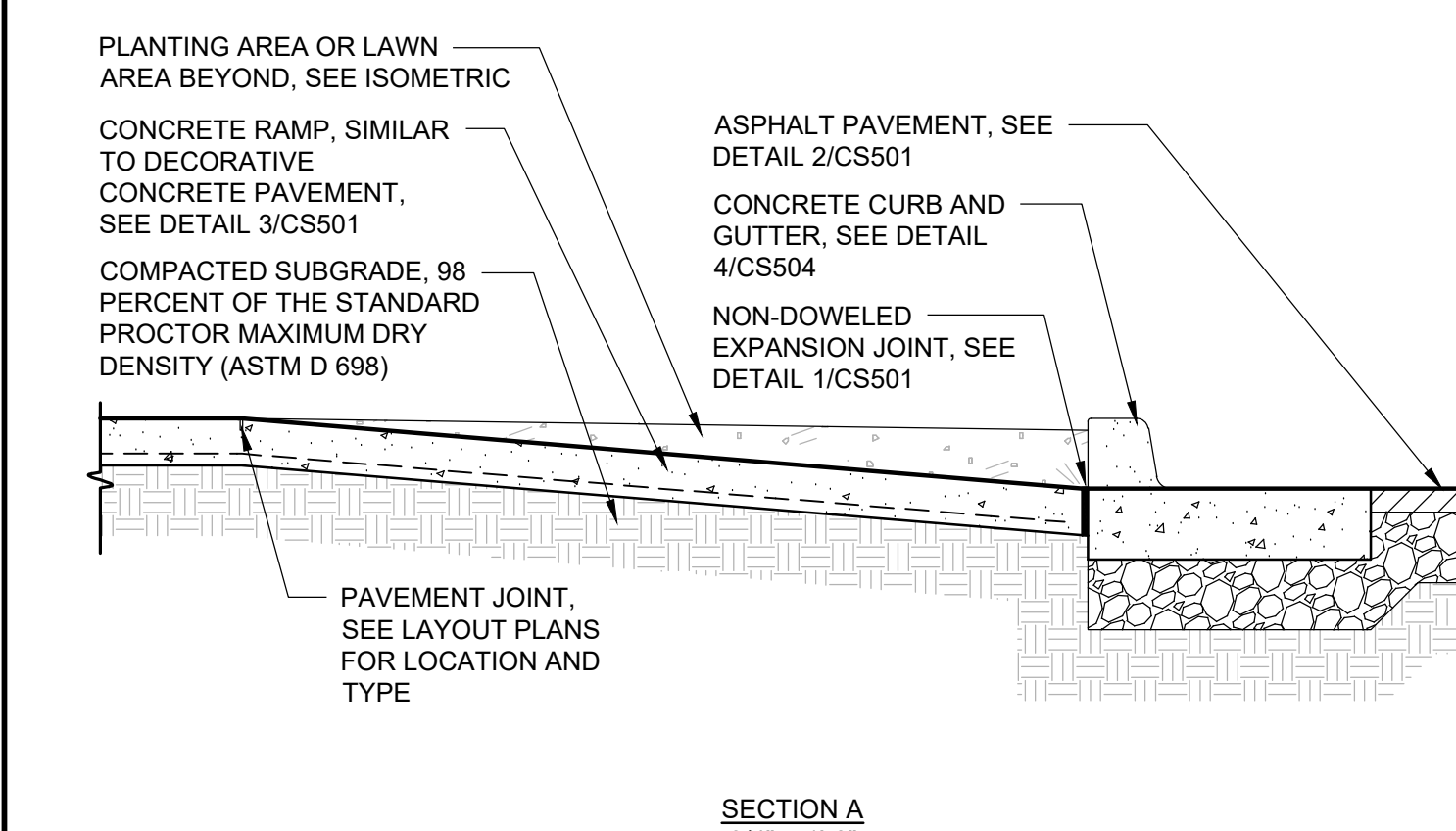
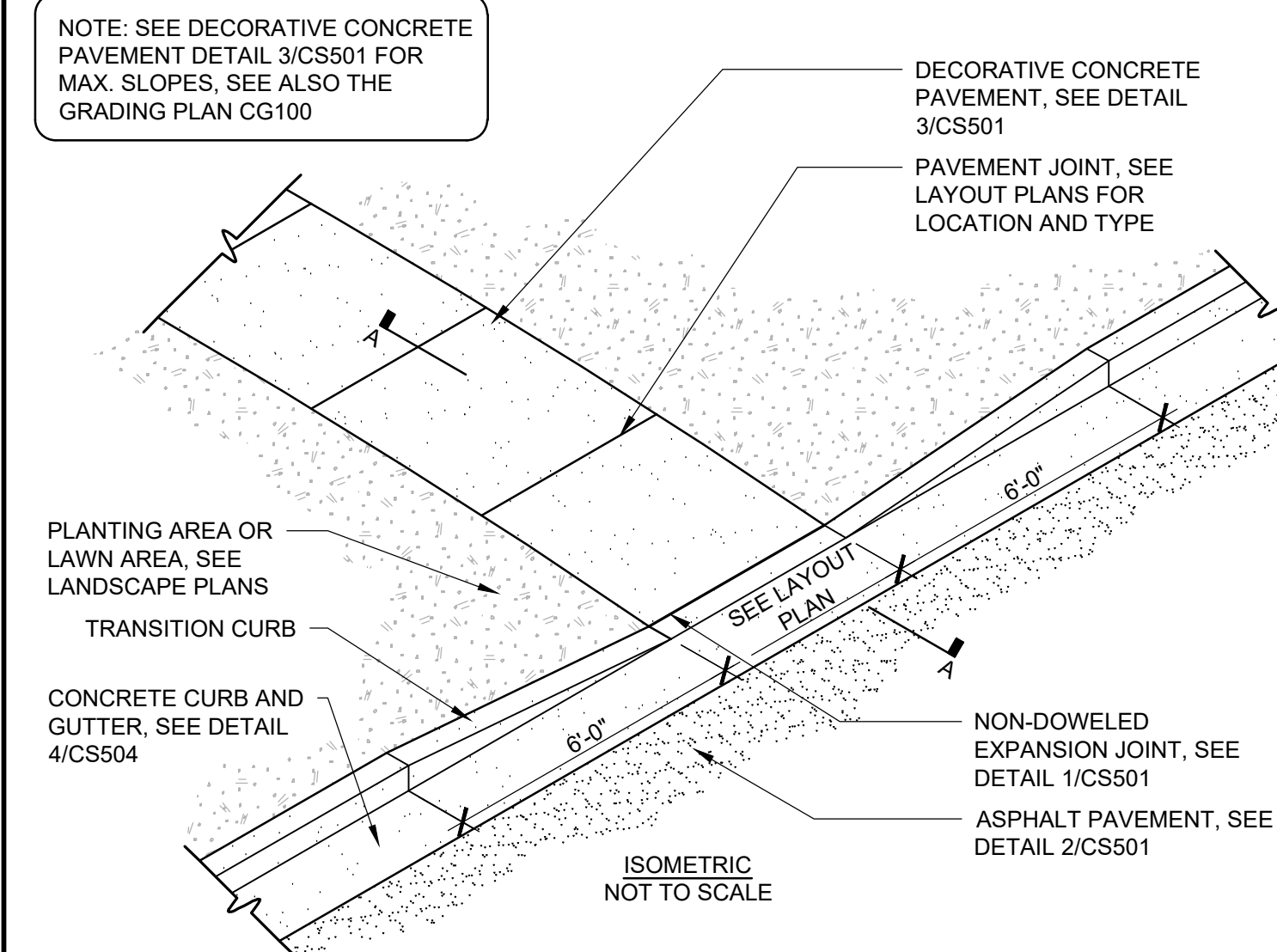
3 CURB RAMP - TYPE C

AS SHOWN



2 CURB RAMP - TYPE B

AS SHOWN



1 CURB RAMP - TYPE A

AS SHOWN

REV. NO.	DESCRIPTIONS	DATE

SEAL

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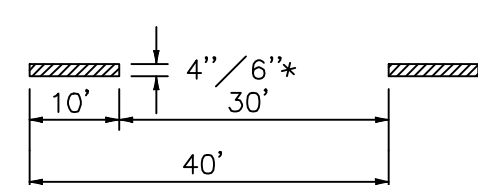
HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
SITE DETAILS

DATE: 06/07/2023	SCALE	C11.1
MCE PROJ. # 09110-0001	HORIZONTAL: -	
DRAWN DCO/ALM	VERTICAL: -	DRAWING NUMBER
DESIGNED ALM/THL		
CHECKED THL		
PROJ. MGR. RMC		
STATUS: SDP 2022-305 PERMIT SET		

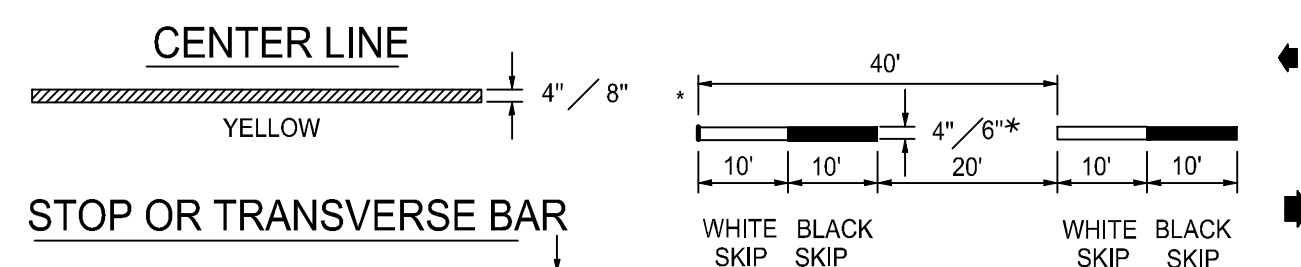
SKIP LINES

10' SKIP LINES
YELLOW OR WHITE

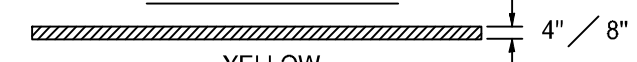


BLACK - WHITE COMBINATION
10' SKIP LINES

FOR USE ON CONCRETE PAVEMENTS TO PROVIDE CONTRAST FOR THE WHITE LANE LINE, ALONG THRU LANES AND RAMP LANES.



CENTER LINE



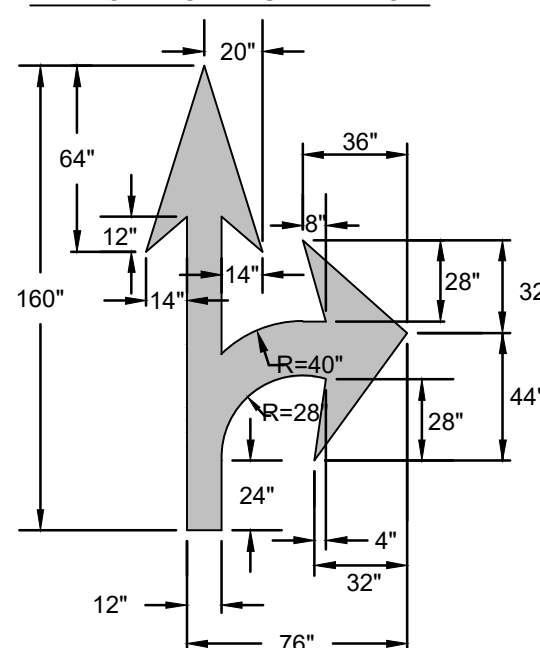
STOP OR TRANSVERSE BAR



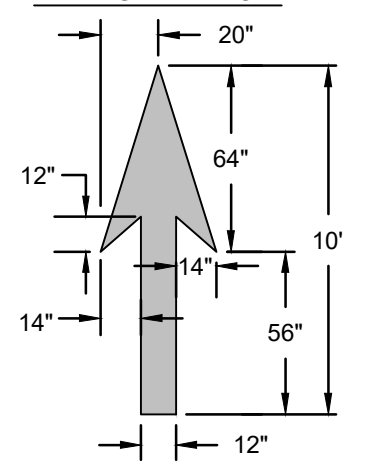
LEGEND

W = WIDTH OF TRAVEL LANE
 ■ DIRECTION OF TRAFFIC FLOW

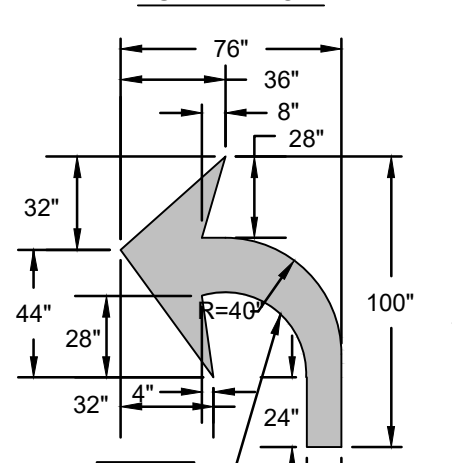
COMBINATION STRAIGHT AND LEFT OR RIGHT TURN ARROW



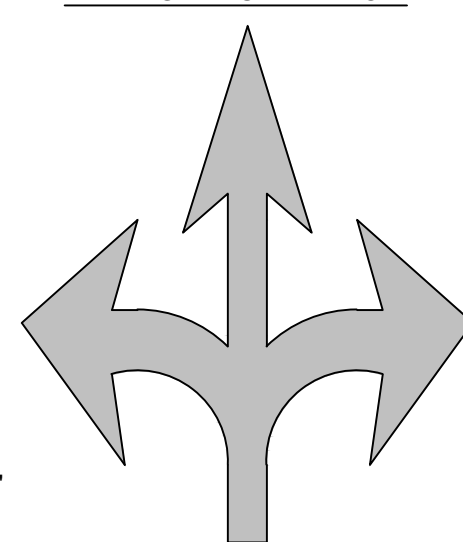
STRAIGHT ARROW



RIGHT OR LEFT TURN ARROW



COMBINATION LEFT AND STRAIGHT AND RIGHT TURN ARROW

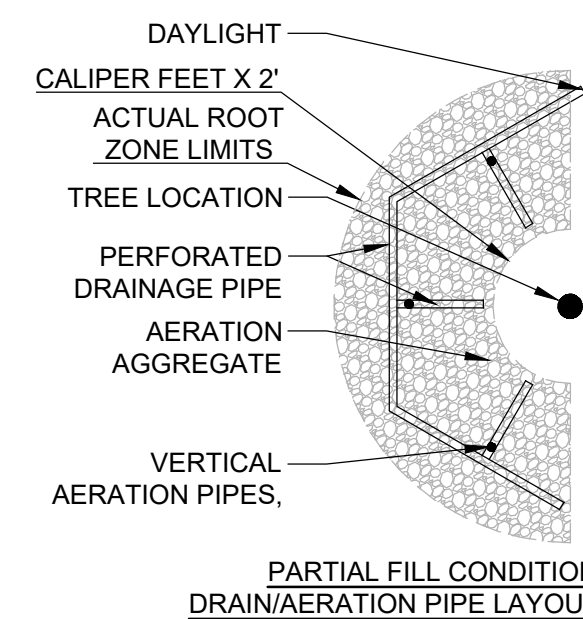


GENERAL NOTES

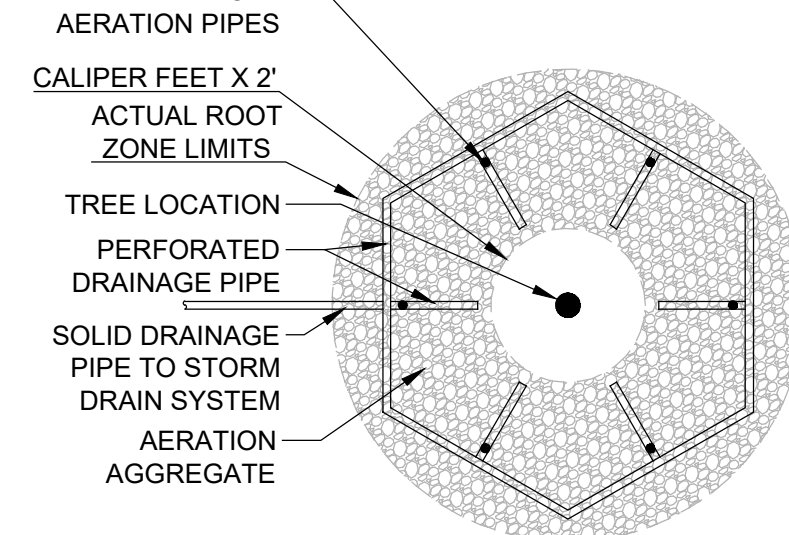
- ALL PAVEMENT MARKING SYMBOLS SHALL BE WHITE IN COLOR.
- PAVEMENT MARKING SYMBOLS SHALL NOT BE LOCATED AS TO ENCR OACH INTO INTERSECTION AREAS.
- ON PORTLAND CEMENT CONCRETE PAVEMENTS, PAVEMENT MARKING SYMBOLS SHALL NOT BE PLACED ACROSS TRANSVERSE EXPANSION JOINTS, UNLESS APPROVED BY THE ENGINEER.
- ALL SYMBOLS SHALL CONFORM TO THE FHWA "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS". (REFER TO SHEETS 4 THRU 7). SYMBOL DIMENSIONS MAY VARY AMONG MANUFACTURERS, THEREFORE SLIGHT VARIANCES ARE ACCEPTABLE, HOWEVER, ALL SYMBOLS ARE REQUIRED TO BE APPROVED BY NCDOT.

NOTES:

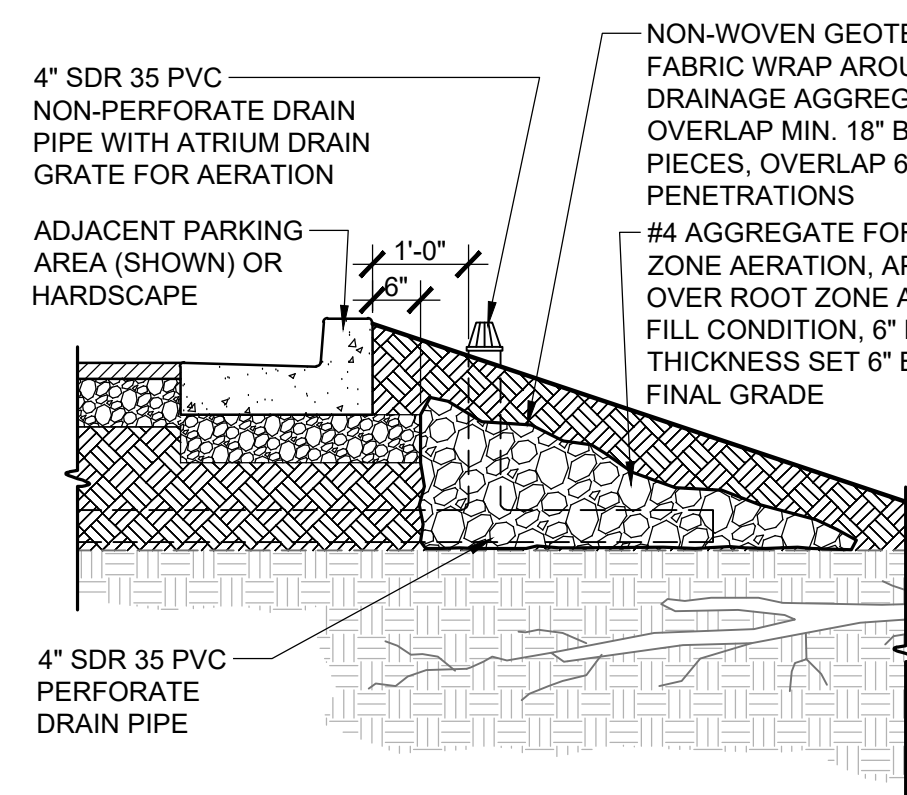
- BACKFILL AGAINST THE TREE TRUNK OR BUTTRESS FLAIR IS PROHIBITED.
- THE CONTRACTOR SHALL ENGAGE AN NC CERTIFIED ARBORIST TO EVALUATE THE HEALTH OF EXISTING TREES SHOWN TO BE PRESERVED ON THE TREE REMOVAL PLAN C2.0 PRIOR TO THE START OF CONSTRUCTION.
- THE ARBORIST SHALL PERFORM OR DIRECT ALL REQUIRED ROOT PRUNING NECESSARY TO: ESTABLISH PROPOSED GRADE, INSTALL UTILITIES, ETC.
- TREE PROTECTION FENCING SHALL BE MAINTAINED AT THE CRITICAL ROOT ZONE (CRZ) LIMITS PRIOR TO LAND DISTURBANCE ACTIVITY WITHIN THE CRZ. ONCE GRADING ACTIVITY IS TO COMMENCE WITHIN THE TREE CRZ, THE TREE PROTECTION FENCE SHALL BE TEMPORARILY SET TO THE PROPOSED DISTURBANCE LIMITS. ONCE THE GRADING ACTIVITY WITHIN THE EXISTING TREES CRZ IS COMPLETED, THE TREE PROTECTION FENCE SHALL BE SET BACK TO THE CRZ LIMITS, OR AT THE EDGE OF PAVEMENT IN THE EVENT PAVEMENT IS PROPOSED WITHIN THE CRZ. TREES WITH NO PROPOSED DISTURBANCE WITHIN THE CRZ SHALL HAVE THE TREE PROTECTION FENCE SET AT THE CRZ LIMITS FOR THE ENTIRETY OF CONSTRUCTION. SEE ALSO TREE PROTECTION FENCING DETAIL 8/C12.0
- USE OF HEAVY CONSTRUCTION EQUIPMENT WITHIN THE CRZ SHALL BE PROHIBITED WHERE IF NO DISTURBANCES ARE PROPOSED WITHIN, OR MINIMIZED WHERE DISTURBANCES ARE PROPOSED WITHIN THE CRZ. USE OF EARTH MOVING EQUIP THAT CAN BE SET OUTSIDE THE CRZ SHALL BE LEVERAGED WHERE FEASIBLE TO MINIMIZE CRUSHING OR DAMAGING ROOTS.
- THE CONTRACTOR SHALL SCHEDULE A MEETING WITH THE ARBORIST AND LANDSCAPE ARCHITECT TO FIELD EVALUATE TREES WITH DISTURBANCE WITHIN THE CRITICAL ROOT ZONE. SEE ALSO SHEET C10.0 FOR IDENTIFIED TREES. SUBSEQUENT TO THE MEETING, THE CONTRACTOR SHALL PROVIDE A SHOP DRAWING FOR EACH ROOT ZONE DRAIN/AERATION DEVICE TO BE INSTALLED.
- ROOT PRUNING SHALL NOT EXCEED GREATER THAN 30% ROOT ZONE AREA. THIS IS DETERMINE BY THE ACTUAL EXISTING ROOT ZONE AS DETERMINED BY THE ARBORIST.



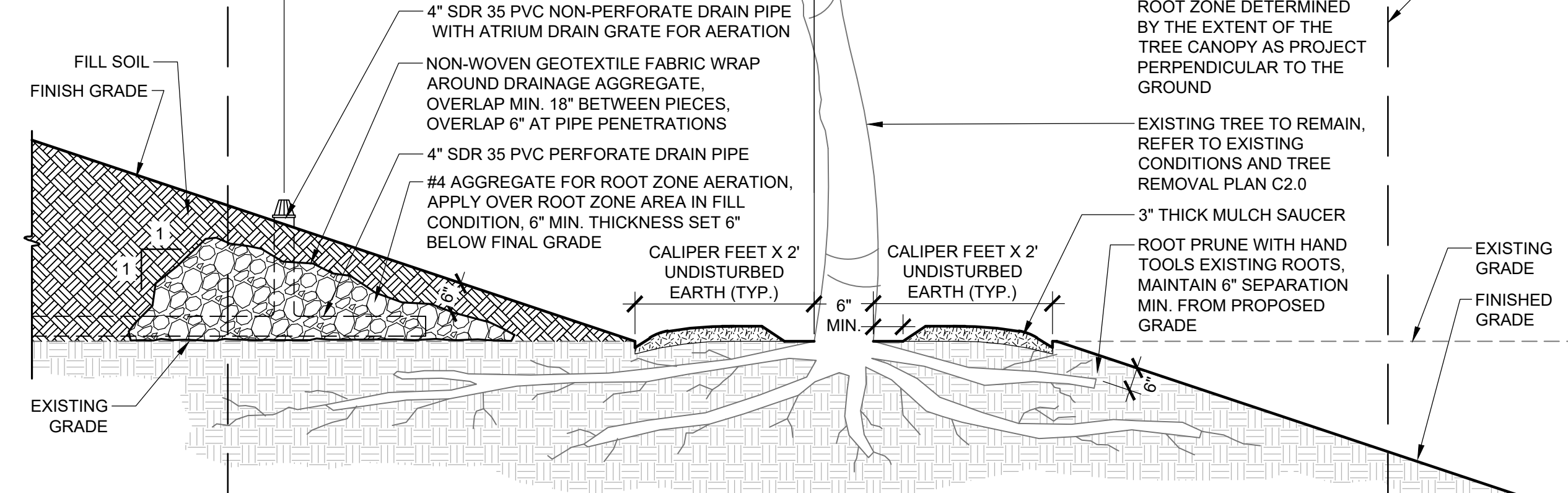
PARTIAL FILL CONDITION DRAIN/AERATION PIPE LAYOUT PLAN



COMPLETE FILL CONDITION DRAIN/AERATION PIPE LAYOUT PLAN



CUT CONDITION IN PARKING/HARDSCAPE AREA SECTION



CUT AND FILL CONDITION IN LANDSCAPE AREA SECTION

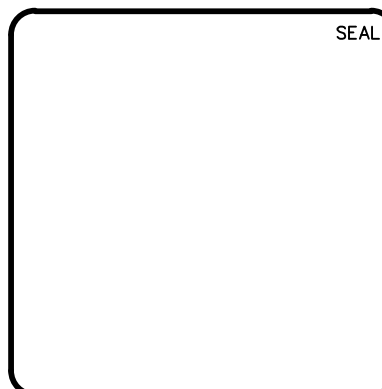
2 PAVEMENT MARKINGS

AS SHOWN

1 EXISTING TREE ROOT PRUNING AND/OR AERATION/DRAINAGE DEVICE

AS SHOWN

REV NO.	DESCRIPTIONS	DATE



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HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING

SITE DETAILS

DATE: 06/07/2023	SCALE: AS SHOWN	C11.2 DRAWING NUMBER
MCE PROJ. #: 09110-0001	HORIZONTAL: AS SHOWN	
DRAWN: DCO/ALM	VERTICAL: --	REVISION
DESIGNED: ALM/THL		
CHECKED: THL		
PROJ. MGR: RMC		
STATUS: SDP 2022-305 PERMIT SET		

SEEDBED PREPARATION:

- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
- RIP THE ENTRANCE AREA TO 6 INCHES DEPTH.
- REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE BELOW*).
- CONTINUE TILLAGE UNTIL A WELL - PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
- SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- INSPECT ALL SEEDING AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- CONSULT CONSERVATION INSPECTOR ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
- APPLY:
 - AGRICULTURAL LIMESTONE - 2 TONS/ACRE
 - FERTILIZER - 1000 LBS/ACRE (10-10-10)
 - SUPERPHOSPHATE - 500 LBS/ACRE (20%)
 - MULCH - 2 TONS/ACRE (SMALL GRAIN STRAW)
 - ANCHOR - ASPHALT EMULSION AT 450 GAL/ACRE

PERMANENT SEEDING

GRASS TYPE	AMOUNT/ 1000 S.F.	TIME OF SEEDING	INITIAL
BERMUDA, COMMON	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10
FESCUE, TALL (KENTUCKY 31)	5-7 LBS	JUNE - AUGUST FEB. - OCT.	25 LBS 10-10-10
SERICEA LESPEDEZA (SLOPES)	1-2 LBS	MARCH - APRIL	25 LBS 10-10-10

TEMPORARY SEEDING

GRASS TYPE	AMOUNT/ 1000 S.F.	TIME OF SEEDING	INITIAL
RYE GRAIN	1-2 LBS.	APRIL - JUNE	25 LBS. 10-10-10
BROWNTOP MILLET	1-2 LBS	JUNE - AUGUST	25 LBS 10-10-10

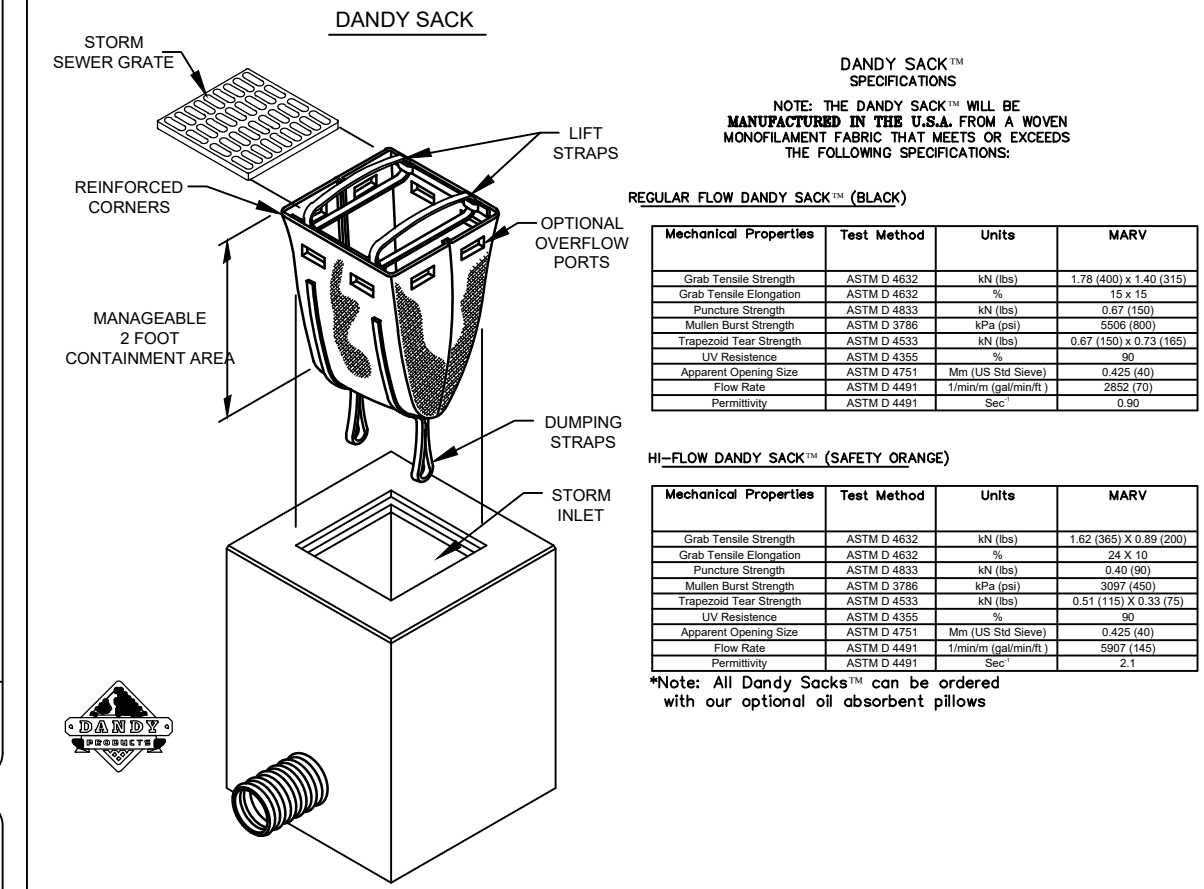
TREE PROTECTION NOTES:

- NO LAND DISTURBANCE INCLUDING TREE REMOVAL IS TO OCCUR OUTSIDE THE LIMITS OF DISTURBANCE SHOWN ON THE PLANS. PROTECTIVE FENCING IS TO BE PROPERLY MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT.
- ANY TREES AND/OR AREAS DESIGNATED TO BE PROTECTED MUST PROPERLY BARRICADED WITH FENCING AND PROTECTED THROUGHOUT CONSTRUCTION TO INSURE THAT NO CLEARING AND GRADING OR STAGING OF MATERIALS WILL OCCUR IN THOSE AREAS.

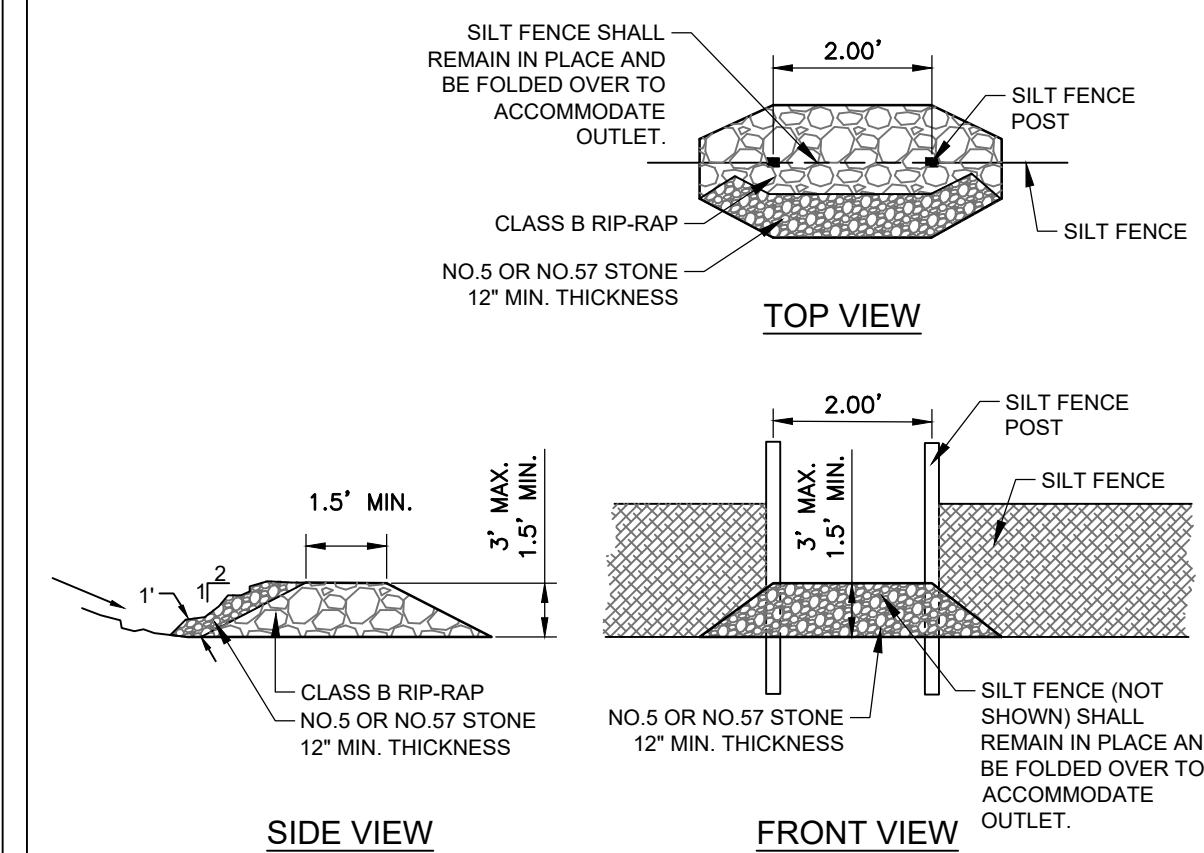
9 GENERAL NOTES

N/A

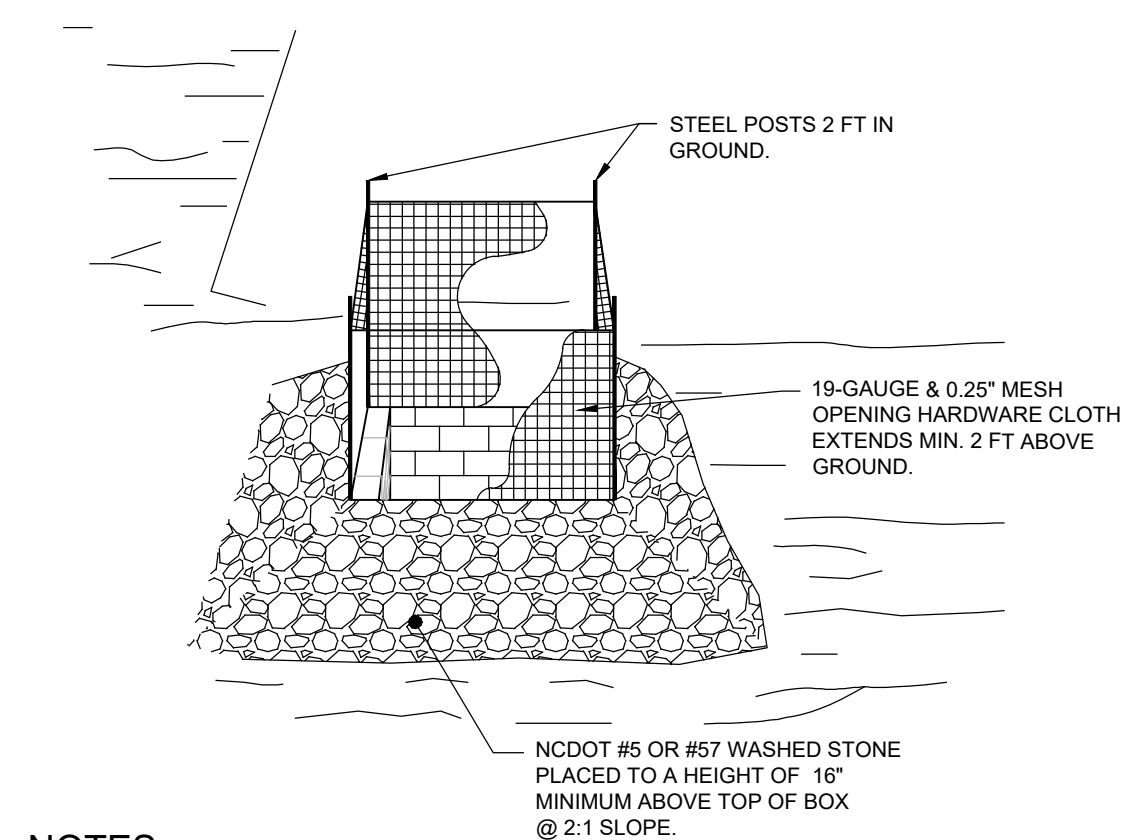
5 DANDY SACK INTLET PROTECTION NTS



4 SILT FENCE OUTLET NTS

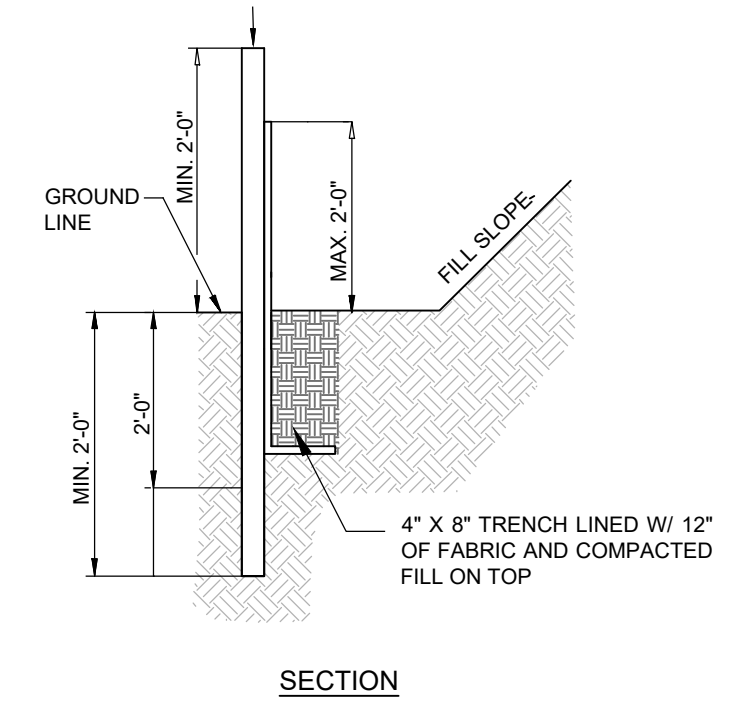
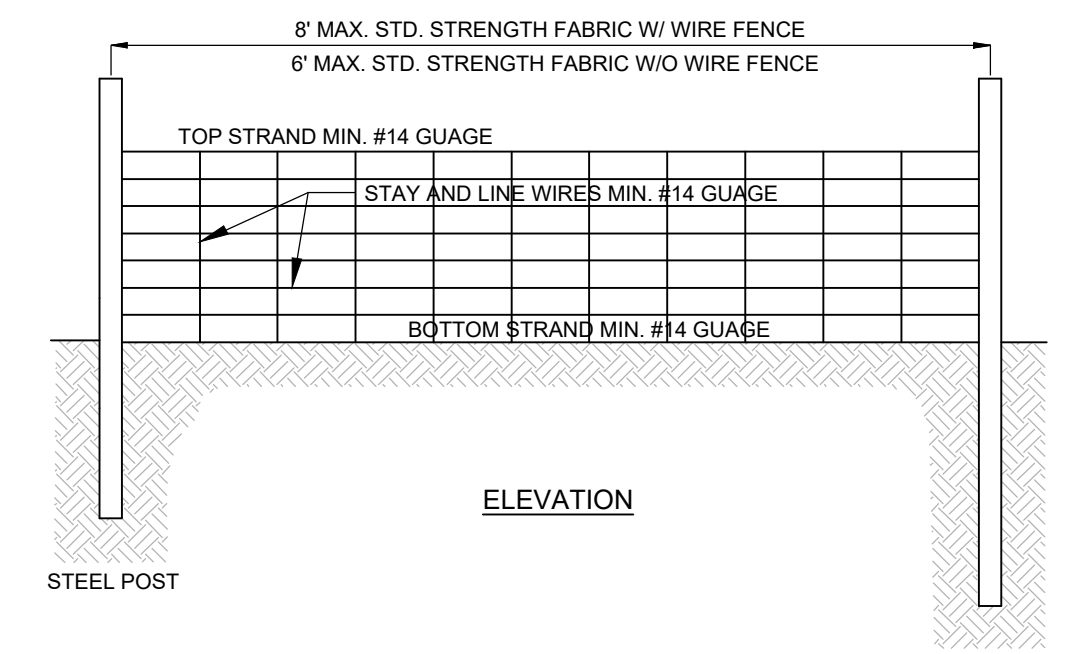


3 HARDWARE CLOTH AND GRAVEL INLET PROTECTION



NOTES:

- DRIVE 5-FOOT STEEL POSTS (125 lb/ft steel) 2 FEET INTO THE GROUND SURROUNDING THE INLET. SPACE POSTS EVENLY AROUND THE PERIMETER OF THE INLET, A MAXIMUM OF 4 FEET APART.
- SURROUND THE POSTS WITH AT LEAST 19-GAUGE HARDWARE CLOTH WITH A 1/4-INCH MESH OPENING. SECURE THE WIRE MESH TO THE STEEL POSTS AT THE TOP, MIDDLE, AND BOTTOM FOR A MIN. 2 FEET ABOVE THE GROUND. PLACING A 2-FOOT FLAP OF THE WIRE MESH UNDER THE GRAVEL FOR ANCHORING AND REMOVAL IS RECOMMENDED.
- UNIFORMLY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET. THE TOP ELEVATION OF THE STRUCTURE MUST BE AT LEAST 12-INCHES LOWER THAN THE SURROUNDING GROUND ELEVATION DOWNSLOPE FROM THE INLET TO ENSURE THAT STORM FLOWS GET INTO THE INTENDED INLET; UNLESS OTHER SEDIMENT-CONTROL DEVICES ARE INSTALLED TO PREVENT OFF-SITE SEDIMENT-RUNOFF.



SILT FENCE CALCULATION TABLE

SILT FENCE No.	Drainage Area ac	Length ft	0.25 Acre per 100 ft	0.25 Acre per 100 ft YES/NO
PHASE 1 SILT FENCE				
SF-1	0.40	210	0.19	YES
SF-2	0.14	320	0.04	YES

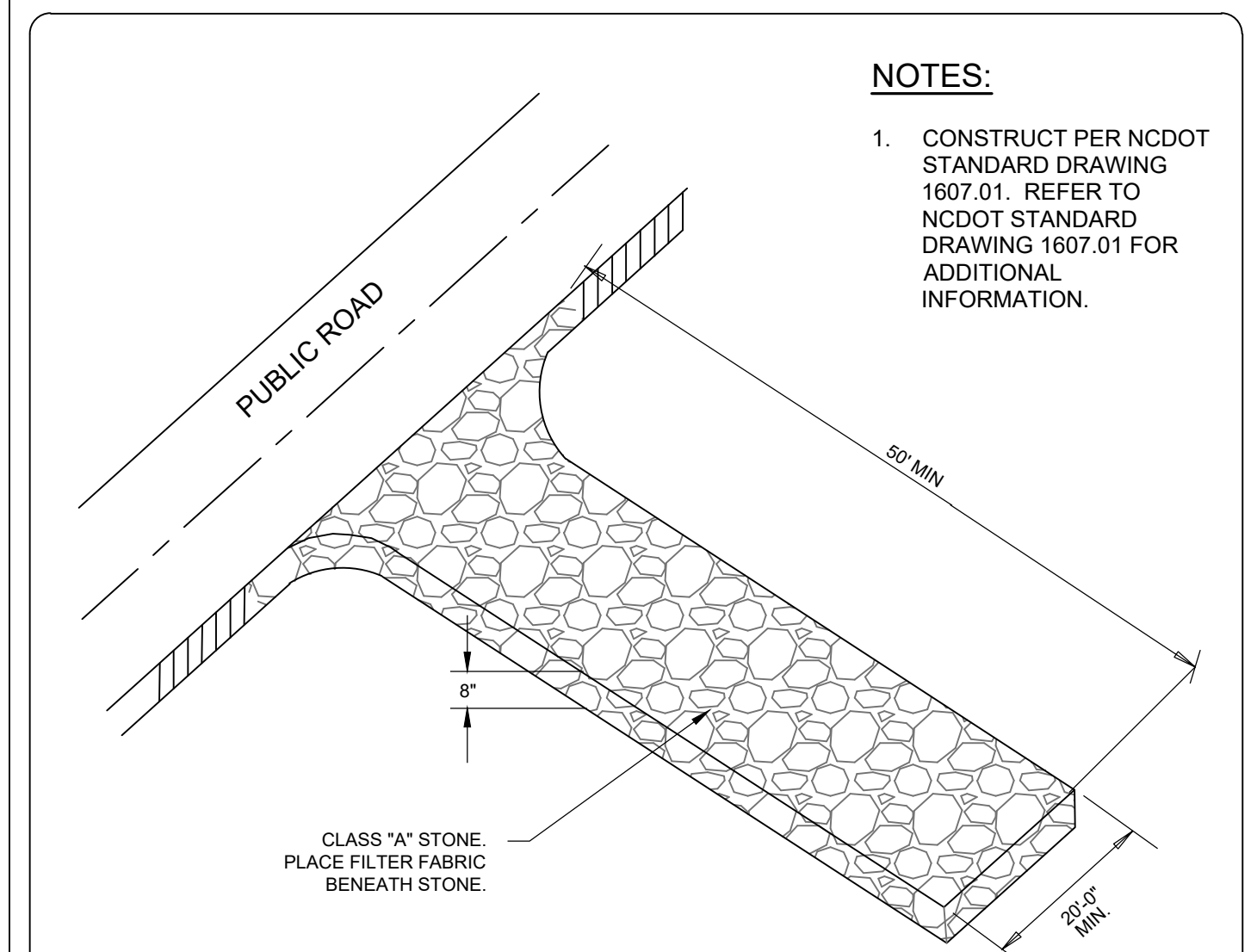
NOTES:

- WIRE FENCE (IF USED) SHALL BE MINIMUM 14 GAUGE WITH A MAXIMUM MESH OPENING OF 6-INCHES.
- SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFINS OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461 AND ALSO SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS ACCORDING TO ASTM D 4355.
- SEE THE NC EROSION CONTROL MANUAL FOR SPECIFICATIONS INSTALLING SEDIMENT FENCE USING THE SLICING METHOD MACHINERY.

2 TEMPORARY SILT FENCING NTS

NOTES:

- CONSTRUCT PER NCDOT STANDARD DRAWING 1607.01. REFER TO NCDOT STANDARD DRAWING 1607.01 FOR ADDITIONAL INFORMATION.

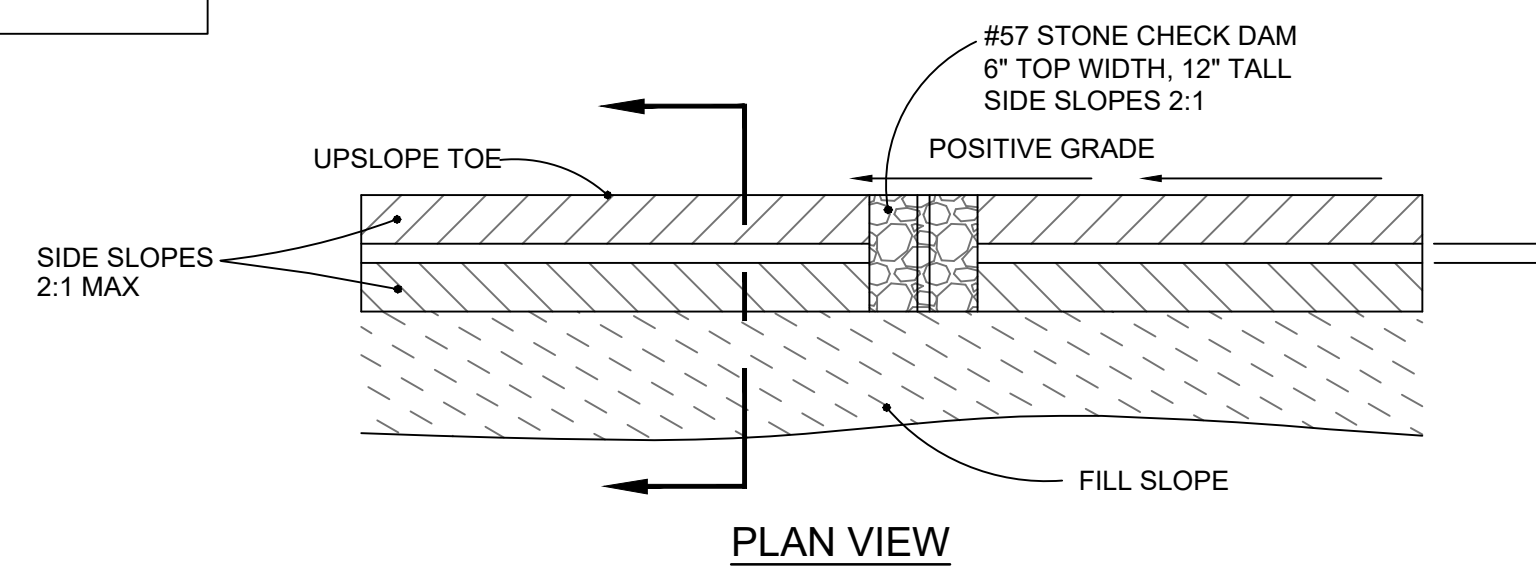
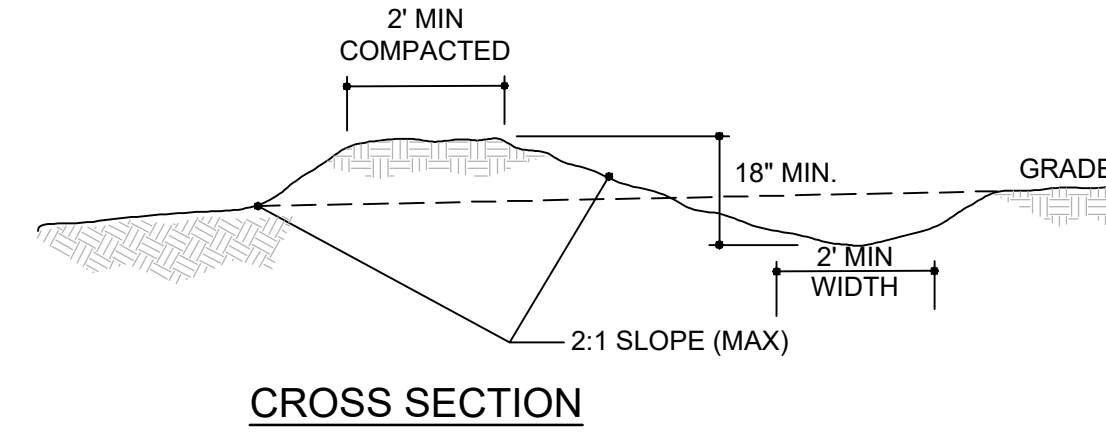


1 CONSTRUCTION ENTRANCE NTS

TEMPORARY DIVERSION DITCH CALCULATION TABLE

TDD NUMBER	DA (AC)	Q 10 (CFS)	LENGTH (FT)	HIGH (FT)	LOW (FT)	ELEVATION DIFF. (FT)	SLOPE (%)	INITIAL LINING	MANNING n	VELOCITY (FPS)	COMMENT
TDD 1	1.33	3.03	261	55.78	55.00	0.78	0.30	BARE EARTH	0.020	1.84	NOLINING

TDD NUMBER	SECONDARY LINING	MANNING n	VELOCITY (FPS)	COMMENT	WATER DEPTH (IN)	DITCH MIN. DEPTH (IN)	CHECK DAM SPACING (FT)	CHECK DAM NUMBER REQUIRED	NUMBER PROVIDED
TDD 1	EXCELSIOR	0.035	1.25	EXCELSIOR OK	5.1	18	669	1	1

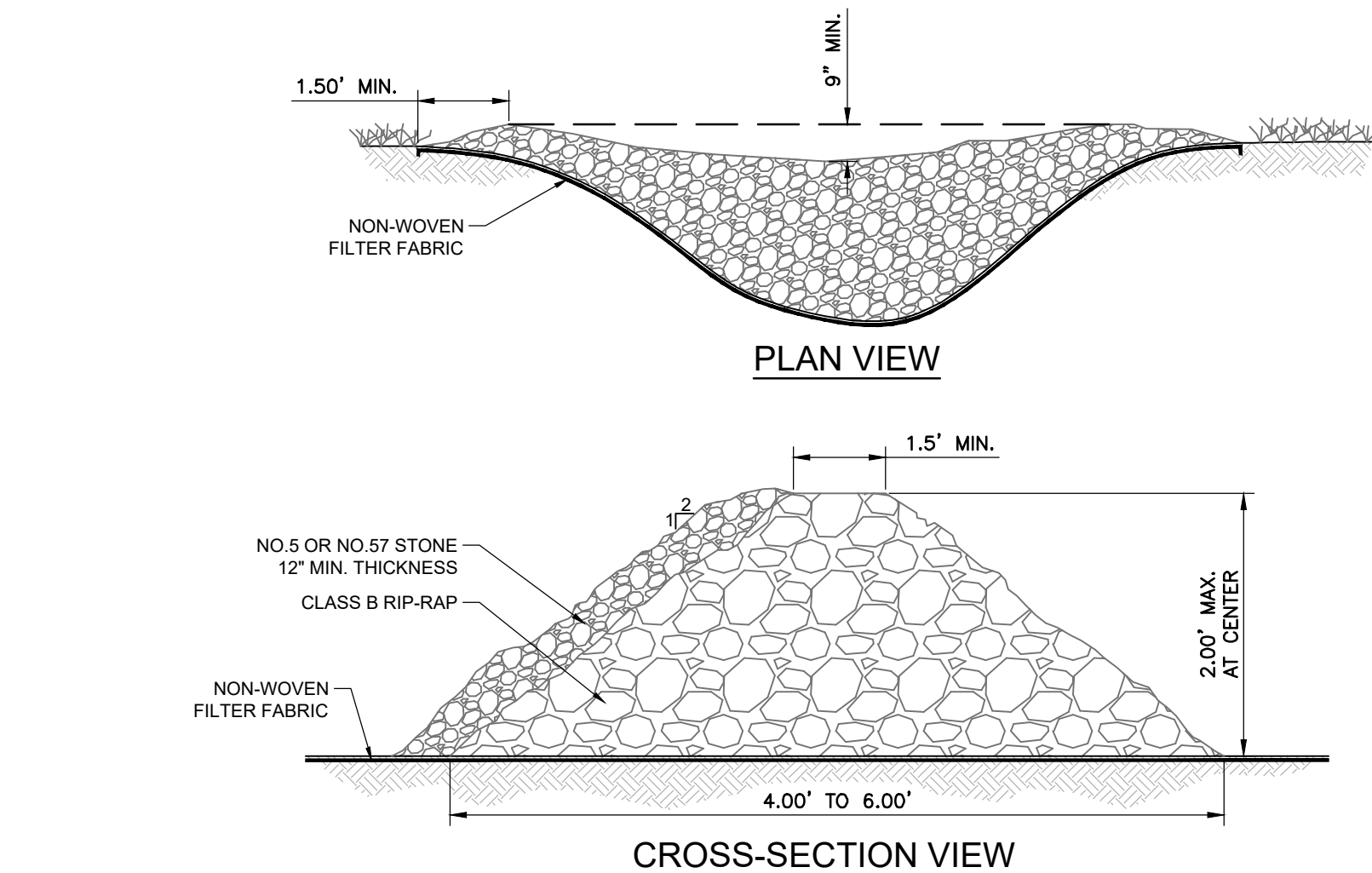


NOTES:

- TEMP. DIVERSION DITCHES SHALL DRAIN INTO SEDIMENT BASINS, AND SEDIMENT TRAPS AND NOT OFF-SITE AS SHOWN.
- LINING SHALL BE EXCELSIOR MATTING AND INSTALLED ACCORDING TO NCDENR STD. EROSION CONTROL PRACTICES.
- INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

8 TEMPORARY DIVERSION DITCHES

NTS

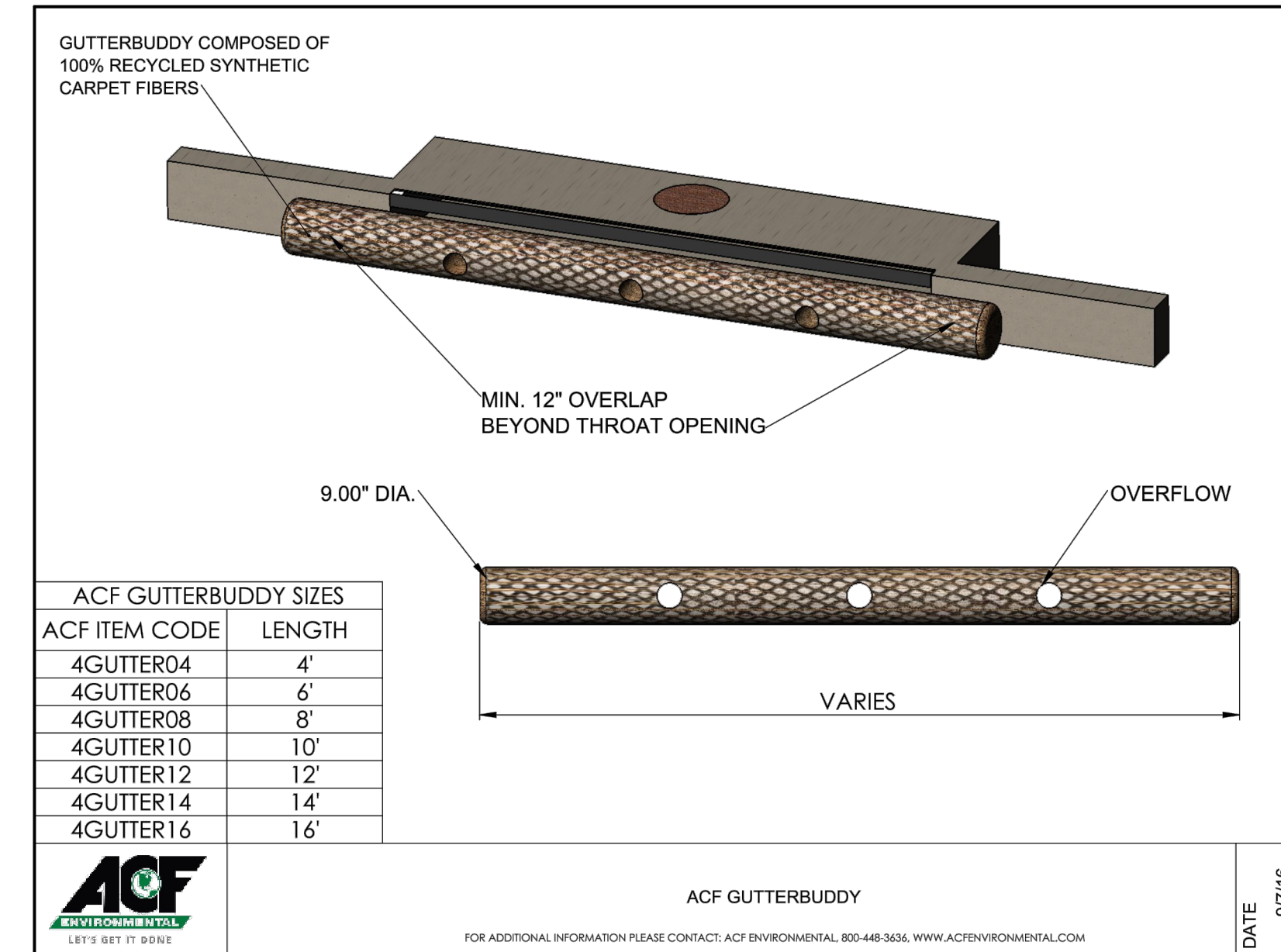


NOTES:

- PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.
- KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.
- EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.
- SET SPACING BETWEEN DAMS TO ASSURE THAT THE ELEVATION AT THE TOP OF THE LOWER DAM IS THE SAME AS THE TOE ELEVATION OF THE UPPER DAM.
- PROTECT THE CHANNEL AFTER THE LOWEST CHECK DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.
- MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.
- ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE CHECK DAMS, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

7 CHECK DAM

NTS



6 GUTTERBUDDY

N/A

REV NO.	DESCRIPTIONS	DATE

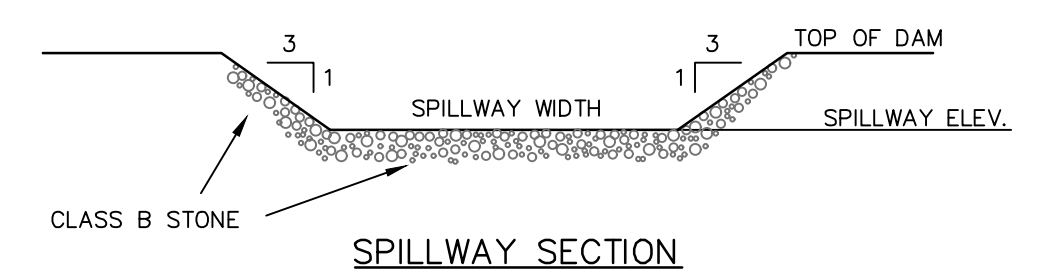
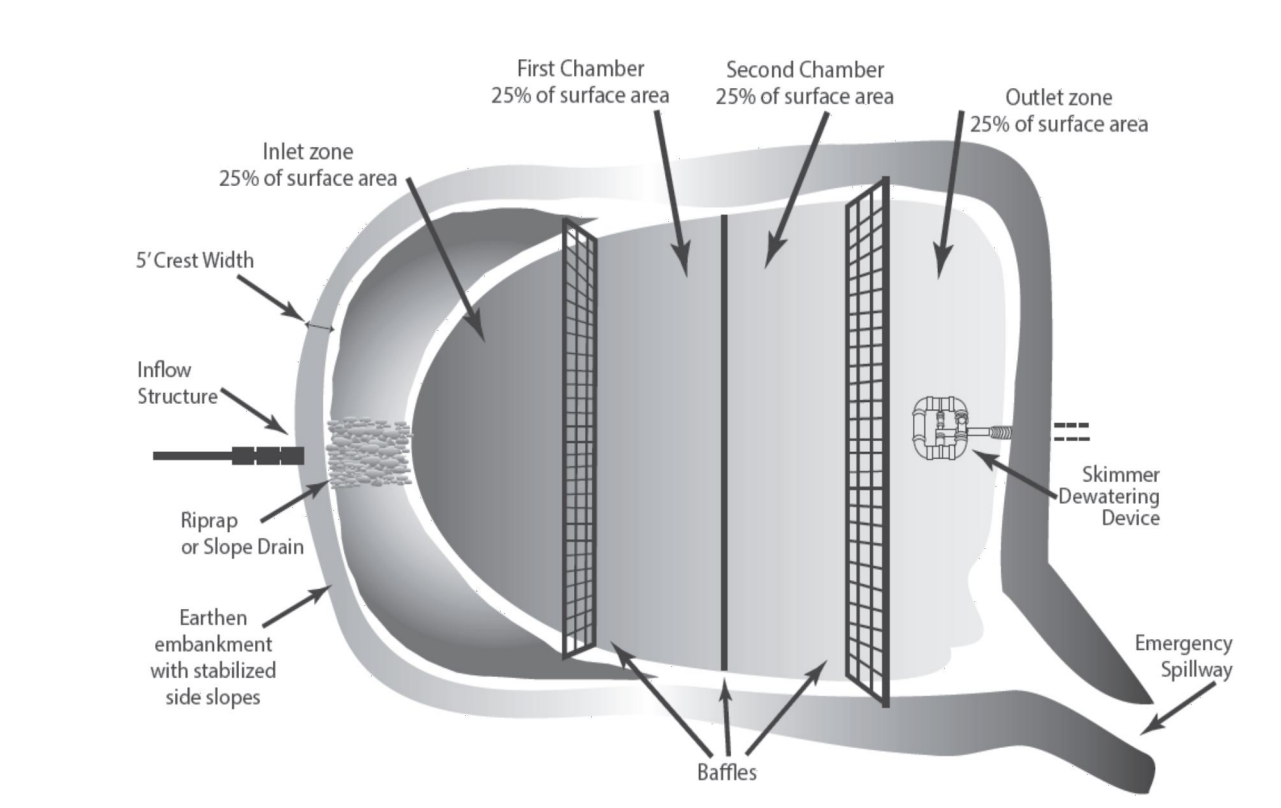
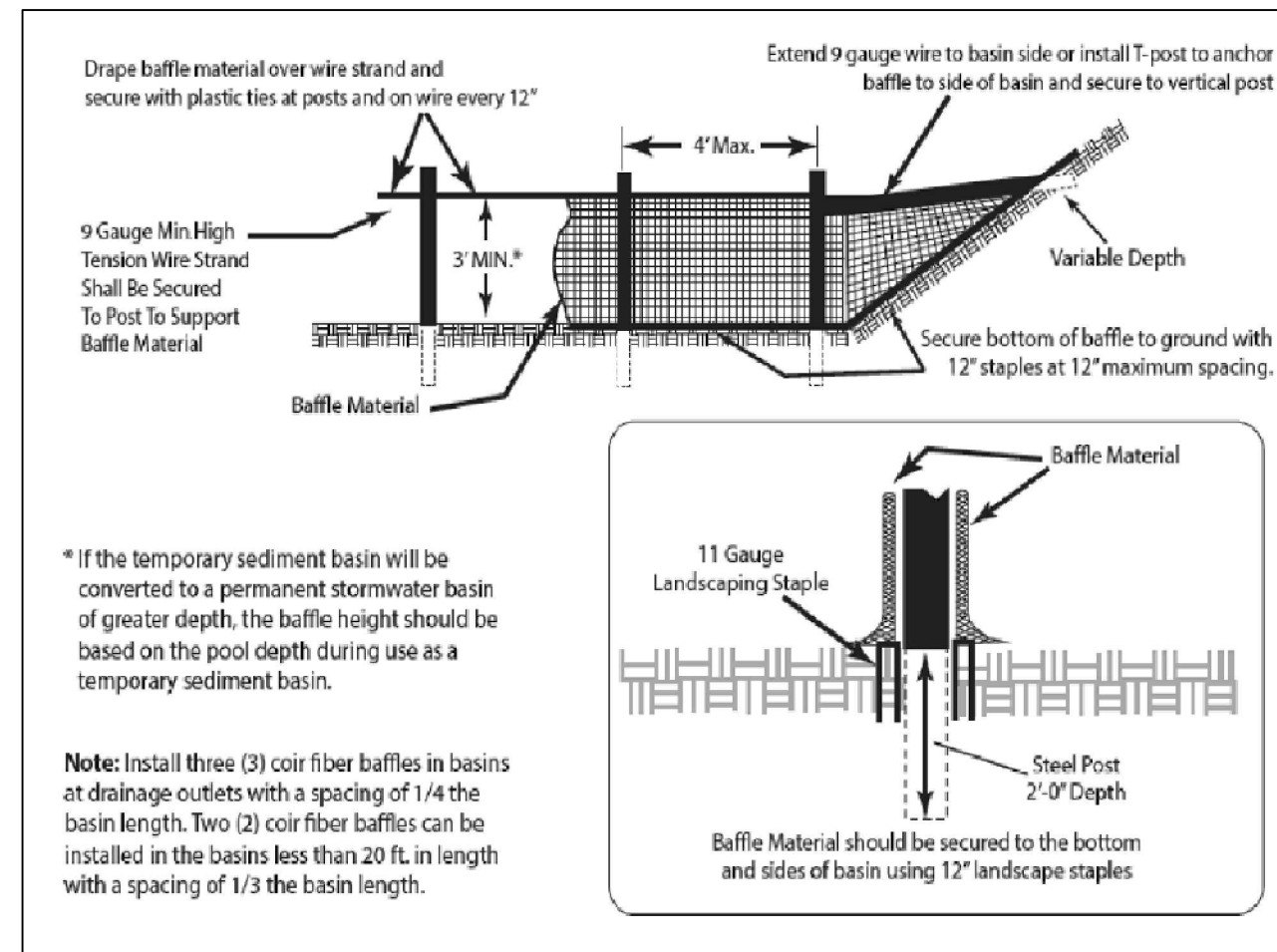
Professional Engineer Seal for M. H. Livick, No. 10001, State of North Carolina, dated 06/07/2023.

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HAMPSTEAD STATION, LLC

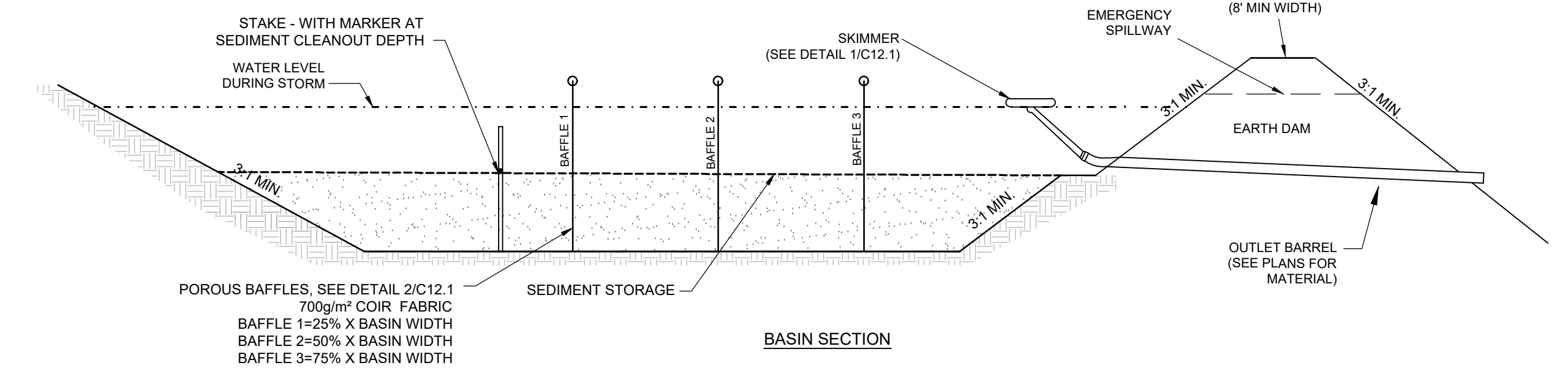
OYSTER CREEK LANDING
 US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA
EROSION CONTROL DETAILS

DATE: 06/07/2023
 MCE PROJ. #: 09110-0001
 DRAWN: DCO/ALM
 DESIGNED: ALM/THL
 CHECKED: THL
 PROJ. MGR: RMC
 STATUS: SDP 2022-305 PERMIT SET
 SCALE: HORIZONTAL: ---, VERTICAL: ---
 C12.0
 DRAWING NUMBER: ---
 REVISION: ---



- NOTES:**
1. BAFFLE MATERIAL SHALL BE MATERIALS SUCH AS 700 G/M COIR EROSION BLANKET, COIR MESH, OR TREE PROTECTION FENCE FOLDED OVER TO REDUCE PORE SIZE.
 2. THE BAFFLE MATERIAL NEEDS TO BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
 3. LOCATE THE EMERGENCY SPILLWAY ON NATURAL SOILS. AVOID PLACING IT THROUGH FILL MATERIAL WHEREVER POSSIBLE.
 4. ALL RUNOFF MUST DISCHARGE TO THE INLET SIDE OF THE BASIN. DISCHARGE RUNOFF INTO THE BASIN IN A MANNER THAT MINIMIZES EROSION.

- NOTES:**
1. Q10 PEAK FLOW WERE TAKEN FROM RATIONAL METHOD.
 2. REQUIRED SURFACE AREAS AND VOLUMES WERE TAKEN FROM NCDENR ESC MANUAL.
 3. FAIRCLOTH SKIMMER SELECTION TABLE TAKEN FROM TABLE 4-2, NCDOT LEVEL III-A DESIGN OF SEDIMENT & EROSION CONTROL PLANS MANUAL.
 4. EMERGENCY WEIR WIDTH TAKEN FROM SKIMMER BASIN CRITERIA SECTION OF NCDENR ESC MANUAL TABLE AND/OR HYDRAULIC ROUTING OF THE BASIN TO ENSURE NON-EROSIVE VELOCITY.
 5. MINIMUM BARREL PIPE ON THE SKIMMER IS 4-INCHES. (ON A 1% SLOPE THE CAPACITY IS 100 GPM)



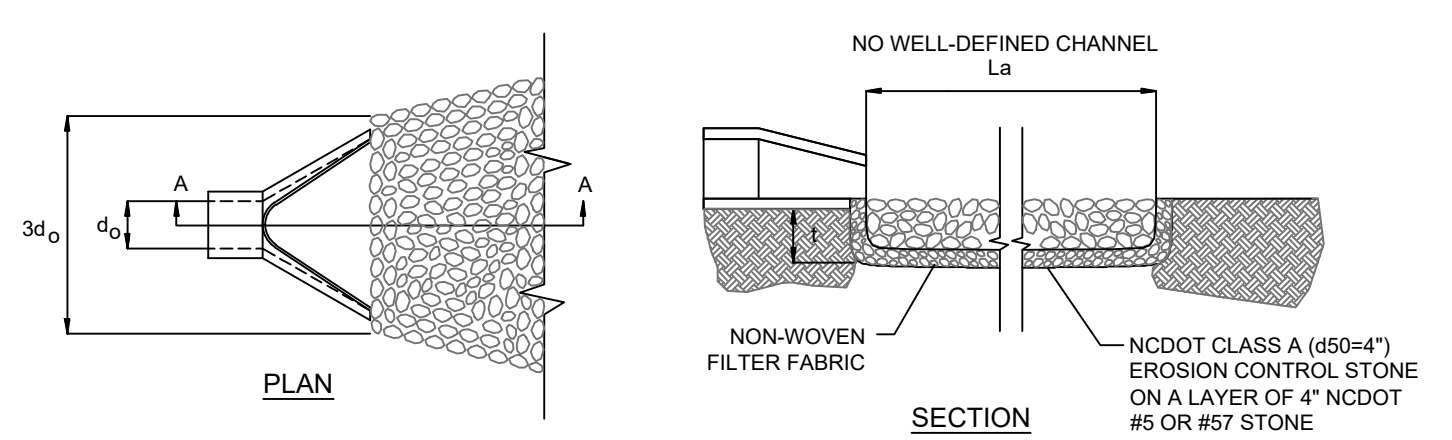
Skimmer No.	Drainage Area ac	Rational C Runoff Coeff.	I10 Intensity in/hr	Q10 Peak Flow cfs	Required SA (435 x Q10) sf	Provided SA sf	Required Vol (1800cf/ac x DA) cf	Provided Vol cf	Storage Depth ft	Storage Vol Drained cf	Weir Width ft
TSB-1	1.58	0.40	7.63	4.83	2,102	2,557	2,851	8,673	2.00	2,851	8.0
TSB-2	2.27	0.40	7.63	6.92	3,009	3,071	4,080	7,689	2.00	4,080	8.0
TSB-3	1.88	0.63	7.63	9.03	3,926	6,685	3,380	16,646	2.00	3,380	10.0

Skimmer No.	Dewatering Time (days)	Skimmer Outflow cf/day	Skimmer Size in	Orifice Diameter in	Orifice Radius in	Barrel Outflow gpm	Barrel Pipe in	Skimmer Basin Bottom Elevation ft	Orifice Elevation ft	Temp. Emergency Spillway Elev ft
TSB-1	3	950	1.5	1.1	0.5	4.9	4.0	52.0	53.0	55.0
TSB-2	3	1,360	1.5	1.3	0.6	7.1	4.0	54.0	54.0	56.0
TSB-3	3	1,127	1.5	1.2	0.6	5.9	4.0	44.0	54.0	56.0

- NOTES:**
1. TSB-3 SKIMMER BASIN IS IN SAME FOOTPRINT AS PERMANENT SCM WET POND. CONNECT TEMPORARY FAIRCLOTH SKIMMER TO PERMANENT WET POND OUTLET STRUCTURE.

4 BAFFLE COIR DETAILS NTS

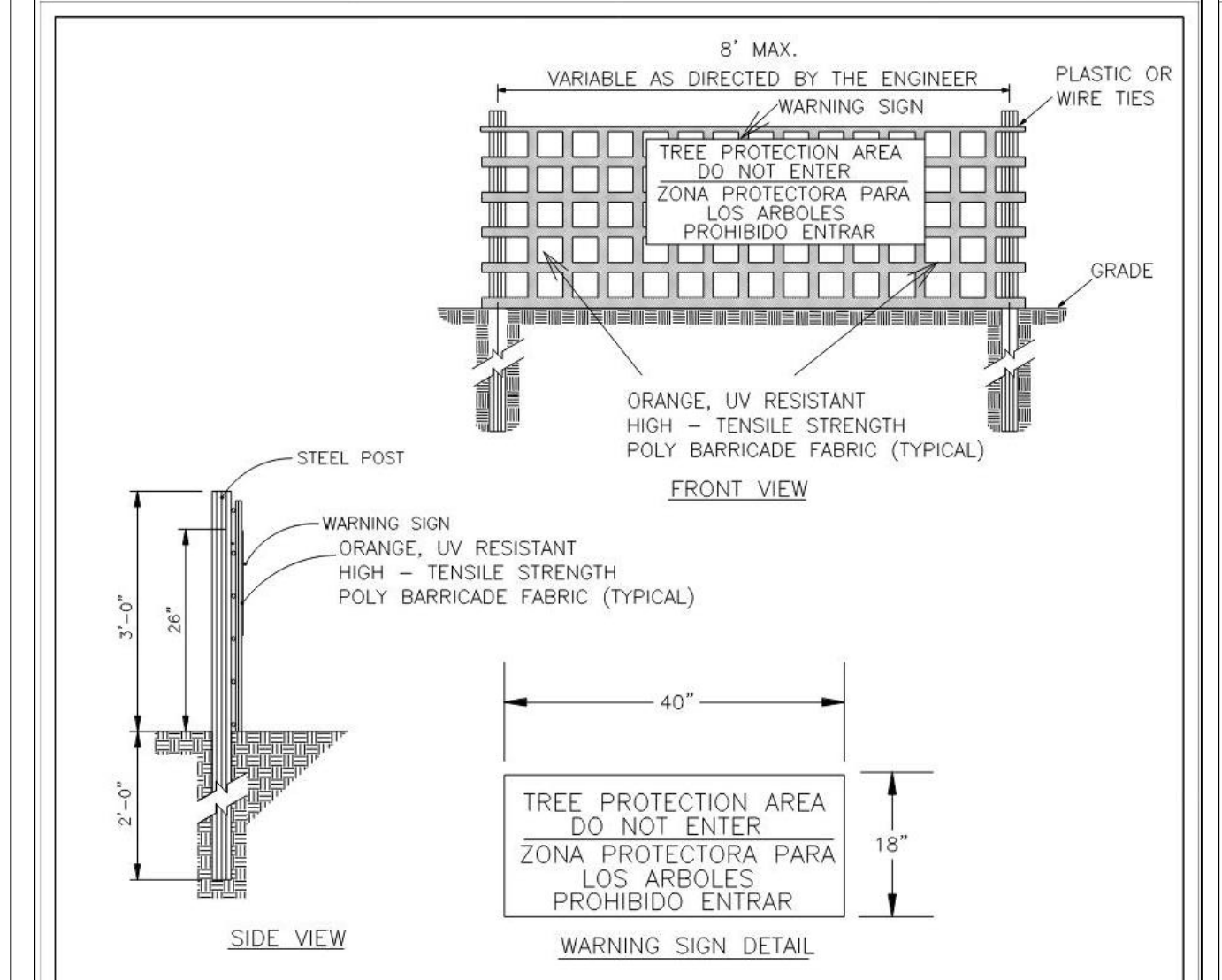
3 TEMPORARY SKIMMER SEDIMENT BASIN NTS



RIP-RAP LOCATIONS	Outlet pipe diameter	Outlet flow rate	Outlet velocity	Material	Apron Length	Apron Width	Max Stone Dia	Thickness
SCM-1 (AKA - TSB-3)	15 in.	7.0 cfs	5.7 ft/sec	Class A	5.0 ft	3.8 ft	6 in.	9 in.

- NOTES:**
1. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
 2. REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIPE OF LIKE DIAMETER PER AASHTO M170, TABLE 2, WALL B.
 3. ALL CONCRETE TO BE 4000 P.S.I COMPRESSIVE STRENGTH.
 4. PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
 5. PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
 6. THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE WITH THE TABLE BELOW. MINOR VARIATIONS WILL BE PERMITTED BASED ON THE MANUFACTURER'S STANDARD FORMS AND TEMPLATES.
 7. NOT TO BE USED IN NCDOT MAINTAINED RIGHT OF WAY.

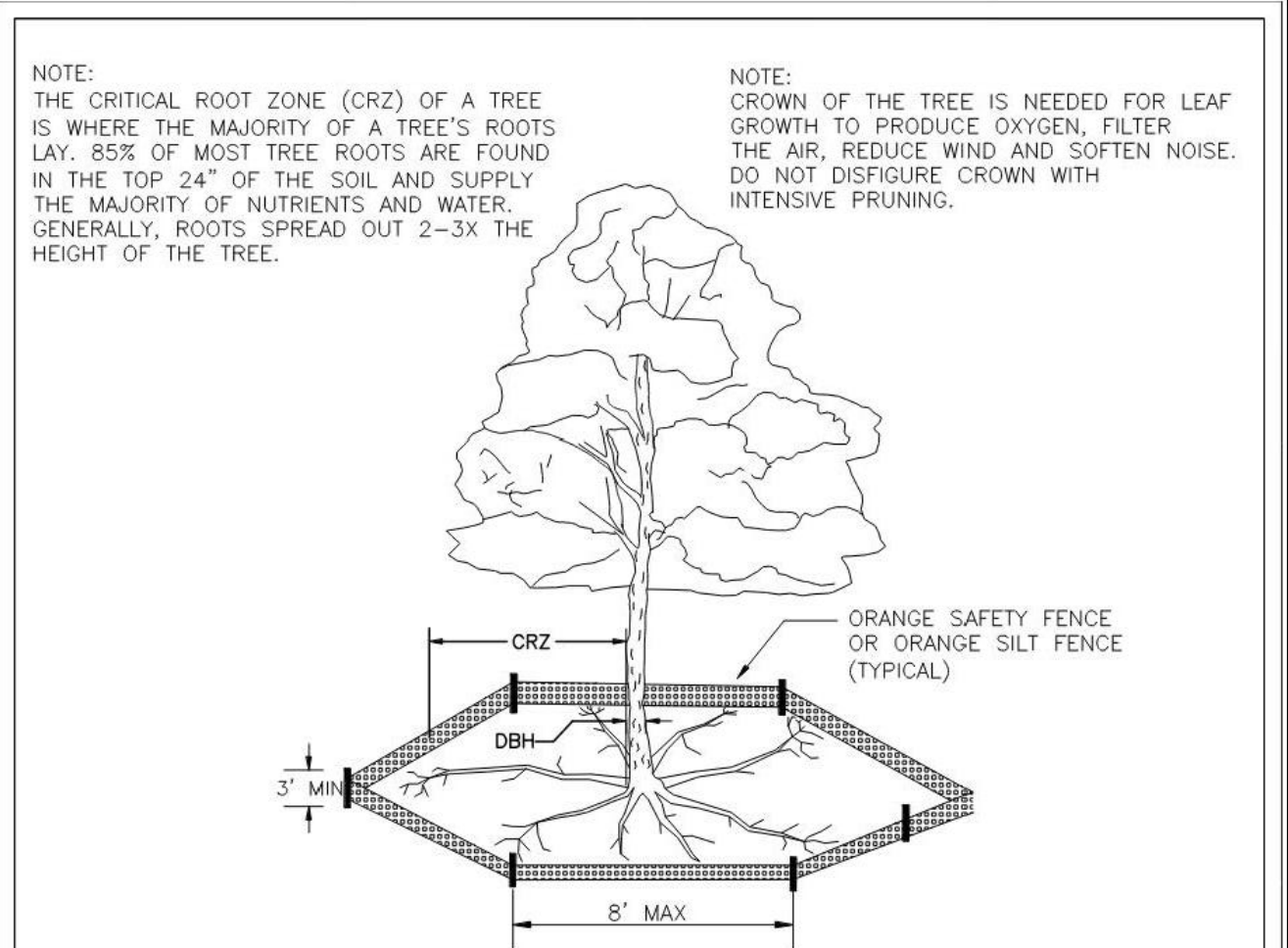
2A PIPE OUTLET PROTECTION NTS



- NOTES:**
1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
 2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
 3. SIGNS SHALL BE PLACED AT 50' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 50' ON CENTER THEREAFTER. FOR TREE PROTECTION AREAS LESS THAN 100' IN PERIMETER, PROVIDE NO LESS THAN TWO SIGNS PER PROTECTION AREA.
 4. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC. MAINTAIN TREE PROTECTION FENCE AND SIGNS THROUGHOUT DURATION OF PROJECT.
 5. TREE PROTECTION FENCING AND SIGNAGE SHALL BE REMOVED AFTER CONSTRUCTION.
 6. ADDITIONAL SIGNS MAY BE REQUIRED BY CITY OF WILMINGTON, BASED ON ACTUAL FIELD CONDITIONS.

DATE: JAN, 2015	<p>TREE PROTECTION DURING CONSTRUCTION</p> <p>SHEET 2 of 2</p> <p>SD 15-09</p>
DRAWN BY: JSR	
CHECKED BY: RDG, P.E.	
SCALE: NOT TO SCALE	

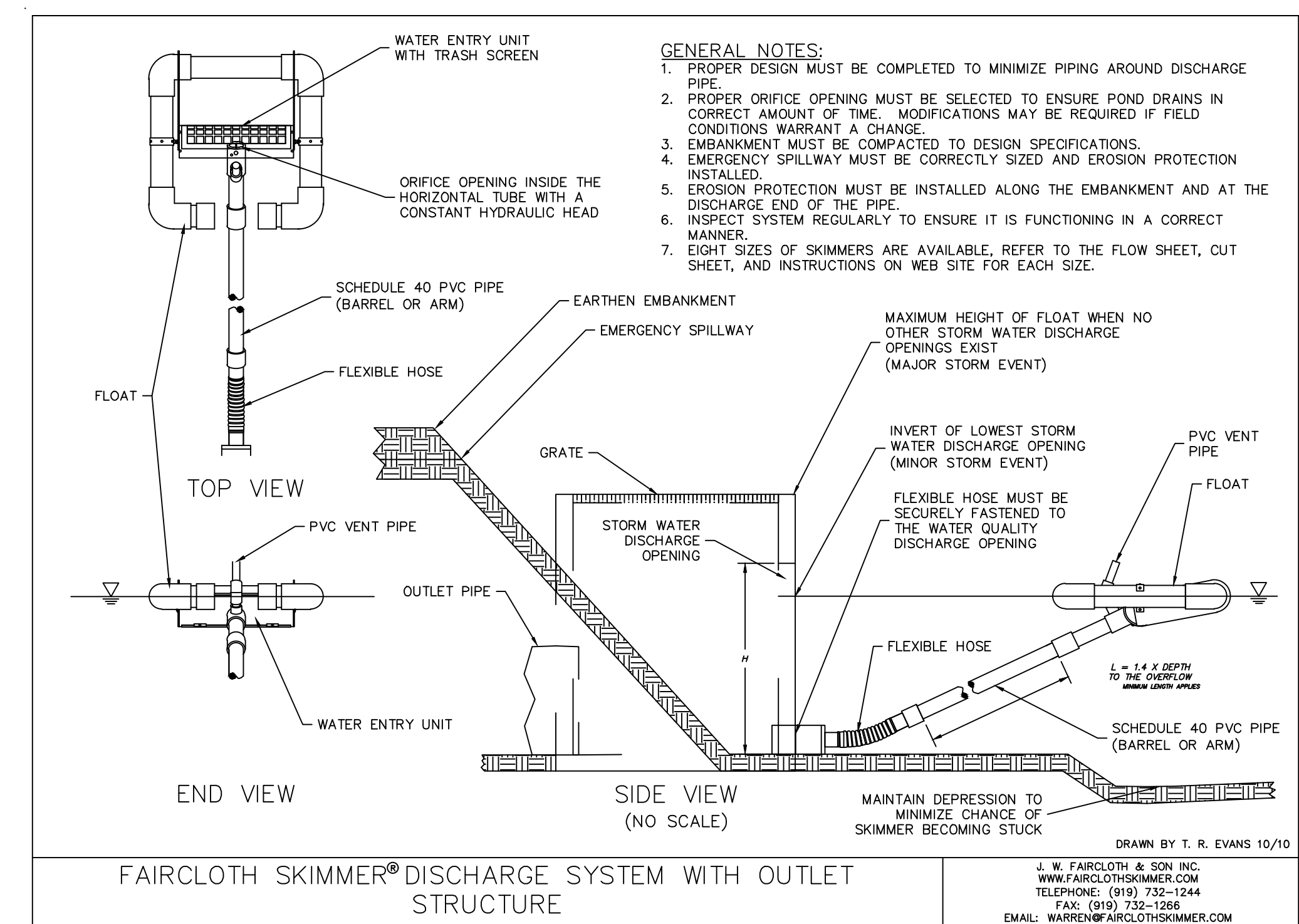
2 TREE PROTECTION FENCING NTS



- NOTES:**
1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
 2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
 3. IF CONSTRUCTION OCCURS WITHIN THE CRZ, AT LEAST 12" OF MULCH AND/OR LOGGING MATS SHALL BE PLACED WHERE MACHINERY MANEUVERS TO REDUCE SOIL COMPACTION IN THIS ZONE.
 4. WHERE SIDEWALKS AND PATHWAYS PASS WITHIN CRZ, EXTRA CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE ROOTS. ALTERNATE CONSTRUCTION METHODS, SUCH AS A REINFORCED SIDEWALK, SHALL BE IMPLEMENTED AS NECESSARY.
 5. FOR ALL TREES, CUTTING OF LARGE STRUCTURAL ROOTS LOCATED NEAR THE BASE OF THE TRUNK IS PROHIBITED. DO NOT COMPACT SOIL BENEATH TREES. NO VEHICLE SHALL BE ALLOWED TO PARK UNDER TREES. NO MATERIALS OR EQUIPMENT SHALL BE STORED BENEATH TREES. DAMAGING THE BARK WITH LAWNMOWERS, CONSTRUCTION EQUIPMENT, OR ANYTHING ELSE IS PROHIBITED. CONTRACTOR SHALL REPAIR DAMAGE TO TREES.
 6. FAILING TO INSTALL OR MAINTAIN PROTECTION MEASURES SHALL RESULT IN A STOP WORK ORDER AND FINE OF \$500/DAY, DISTURBANCE OTHER THAN THAT ALLOWED ON THE APPROVED PLAN WILL REQUIRE OWNER TO POST A LETTER OF CREDIT FOR 3 YRS FOR TREE MITIGATION.

DATE: JAN, 2015	<p>TREE PROTECTION DURING CONSTRUCTION</p> <p>SHEET 1 of 2</p> <p>SD 15-09</p>
DRAWN BY: JSR	
CHECKED BY: RDG, P.E.	
SCALE: NOT TO SCALE	

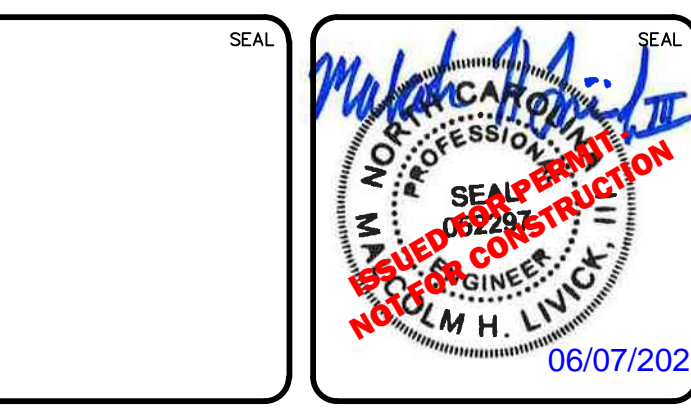
2 TREE PROTECTION DURING CONSTRUCTION NTS



DATE: 06/07/2023	<p>FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH OUTLET STRUCTURE</p> <p>SHEET 1 of 2</p> <p>SD 15-09</p>
MCE PROJ. # 09110-0001	
DRAWN DCO/ALM	
DESIGNED ALM/THL	
CHECKED THL	
PROJ. MGR. RMC	SCALE: HORIZONTAL: - VERTICAL: -
STATUS: SDP 2022-305 PERMIT SET	REVISION: -

1 FAIRCLOTH SKIMMER NTS

REV. NO.	DESCRIPTIONS/REVISIONS	DATE



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HAMPSTEAD STATION, LLC

US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

OYSTER CREEK LANDING

US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

EROSION CONTROL DETAILS

DATE: 06/07/2023
MCE PROJ. # 09110-0001
DRAWN DCO/ALM
DESIGNED ALM/THL
CHECKED THL
PROJ. MGR. RMC

SCALE: HORIZONTAL: - VERTICAL: -

REVISION: -

STATUS: SDP 2022-305 PERMIT SET

9 PRECAST MANHOLE 4', 5', AND 6' DIAMETER

GENERAL NOTES:
 USE 4000 PSI MINIMUM COMPRESSIVE STRENGTH CONCRETE.
 FABRICATE, ASSEMBLE AND DESTON PRECAST MANHOLE COMPONENTS ACCORDANCE WITH ASTM D1799.
 WHERE THE MANHOLE IS EXPOSED TO ROAD TRAFFIC, CONSTRUCT THE TOP OF THE MANHOLE FLUSH WITH THE GROUND AND A MINIMUM OF 8" ABOVE THE GROUND AT OTHER LOCATIONS.
 LINET DEPTH OF FILL TO 30'-0" FROM FINISH GRADE TO TOP OF BOTTOM SLAB.
 THE MIN. SLAB THICKNESS "T" IS THE DIMENSION OF THE THINNEST PORTION OF THE TOP/BOTTOM SLAB.
 * TOP RING REINFORCEMENT MAY BE OMITTED IF TOP SLAB HAS A DISTINGUISHABLE TOP AND BOTTOM.

ENGLISH STANDARD DRAWING FOR PRECAST MANHOLE 4', 5' AND 6' DIAMETER
 FOR USE WITH STD. DWS'S 840.14 AND 840.15

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

SHEET 1 OF 1
840.52

6 DROP INLET FRAME AND GRATES

GENERAL NOTES:
 USE TYPE "E", "F" AND "G" GRATE UNLESS OTHERWISE NOTED.

ENGLISH STANDARD DRAWING FOR DROP INLET FRAME AND GRATES
 FOR USE WITH STD. DWS'S 840.14 AND 840.15

SHEET 1 OF 1
840.16

3 CONCRETE DROP INLET

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL DROP INLETS OVER 3'-0" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WITH CONCRETE WITH STD. DRAWING 840.06.
 OPTIONAL CONSTRUCTION: MONOLITHIC POUR 2" KEYWAY ON #4 BAR DOMELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 12 REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.05.
 CONSTRUCT WITH FINE COARSE BASTINGS.
 SEE STANDARD DRAWING 840.05 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.
 INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.
 INITIAL STONE COATING, OF A MINIMUM OF 1" COARSE PORT OF NO. 788 STONE IN A PORTLAND FERRIC BOND OR WMP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.

ENGLISH STANDARD DRAWING FOR CONCRETE DROP INLET
 12" THRU 30" PIPE

DIMENSIONS OF BOX & PIPE		CUBIC YARDS CONG. IN BOX		DEDUCTIONS FOR ONE PIPE	
PIPE SPAN	MIN. HEIGHT	NO. FRAMES	NO. LENGTH	NO. LENGTH	C.M. B.C.
12"	3'-0"	2'-0"	0.222	0.222	0.015
18"	3'-0"	2'-0"	0.348	0.348	0.023
24"	3'-0"	2'-0"	0.512	0.512	0.034
30"	3'-0"	2'-0"	0.722	0.722	0.048

SHEET 1 OF 1
840.14

8 TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE

GENERAL NOTES:
 THIS PRECAST BOX MAY BE USED FOR THE FOLLOWING STANDARDS: 840.04, 840.05, 840.14, 840.15, 840.31, 840.32, 840.34, 840.35, 840.36 AND 840.41.
 INSTALL AND PAY FOR PRECAST DRAINAGE STRUCTURES IN ACCORDANCE WITH NC DOT STANDARD SPECIFICATION SECTION 840.
 USE 4000 PSI MINIMUM COMPRESSIVE STRENGTH CONCRETE.
 USE ASTM A618 GRADE 60 REINFORCING STEEL. USE ASTM A118 WELDED WIRE FABRIC (W.W.F.).
 LIMIT MAXIMUM DEPTH TO TOP OF BOTTOM SLAB TO 15'-0".
 PLACE LIFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.
 ORIENT STRUCTURES SO THAT CORNERS WILL NOT BE CUT OR MODIFIED UNLESS ALLOWED BY DETAIL IN PLANS.
 PRECAST ALL ELEMENTS 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 4'-0" IN DEPTH WITH STEPS 12" ON CENTER IN ACCORDANCE WITH STD. NO. 840.06.
 WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR IF THE SAME MIN. AREA OF STEEL IS PROVIDED.
 SEAL JOINTS WITH AN APPROVED SEALANT (SEE SECTION 840 OF NC DOT STANDARD SPECIFICATIONS).
 LIMIT MAXIMUM STRUCTURE SIZE INSIDE CLEAR DIMENSIONS TO 4'-0" X 4'-0".
 THE OUTSIDE PIPE DIAMETER PLUS 2" IS THE MINIMUM STRUCTURE SIZE OR THE OPENING REQUIRED FOR GRATE AND FRAME WHICH EVER IS GREATER.
 ROUND MANHOLE MAY BE USED IN LIEU OF SQUARE PROVIDED 2 EXTRA #5'S ARE PLACED ON EVERY SIDE NOT ADJACENT TO A WALL. SEE STD. DWS. 840.34 FOR MANHOLE INSTALLATION.

ENGLISH STANDARD DRAWING FOR TRAFFIC BEARING PRECAST DRAINAGE STRUCTURE
 FOR USE ON STANDARD CATCH BASIN

SHEET 1 OF 1
840.46

5 COMBINATION CURB INLET FRAME AND GRATES

GENERAL NOTES:
 USE TYPE "E", "F" AND "G" GRATE UNLESS OTHERWISE NOTED.

ENGLISH STANDARD DRAWING FOR FRAME, GRATES, AND HOOD
 FOR USE ON STANDARD CATCH BASIN

SHEET 1 OF 2
840.03

2 CONCRETE CATCH BASIN

GENERAL NOTES:
 PROVIDE ALL CURB BASINS OVER 2'-0" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WITH CONCRETE WITH STD. DRAWING 840.06.
 OPTIONAL CONSTRUCTION: MONOLITHIC POUR 2" KEYWAY ON #4 BAR DOMELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 12 REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.05.
 CONSTRUCT WITH FINE COARSE BASTINGS.
 FOR 8"-2" IN HEIGHT OR LESS USE 4" WALLS AND BOTTOM SLAB, OVER QUANTITY AS ACCORDANT.
 CONSTRUCT WITH FINE COARSE BASTINGS.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN
 12" THRU 54" PIPE

MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H)		OVER		UNDER		DEDUCTIONS FOR ONE PIPE	
PIPE SPAN	MIN. HEIGHT	NO. FRAMES	NO. LENGTH	NO. LENGTH	NO. LENGTH	NO. LENGTH	C.M. B.C.
12"	2'-0"	2'-0"	0.222	0.222	0.015	0.015	0.015
18"	2'-0"	2'-0"	0.348	0.348	0.023	0.023	0.023
24"	2'-0"	2'-0"	0.512	0.512	0.034	0.034	0.034
30"	2'-0"	2'-0"	0.722	0.722	0.048	0.048	0.048

SHEET 2 OF 2
840.02

7 ANCHORAGE FOR FRAMES

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

ENGLISH STANDARD DRAWING FOR ANCHORAGE FOR FRAMES
 BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840.25

4 FRAME GRATE AND HOOD

DETAIL SHOWING TYPES OF GRATES USE ACCORDING TO WATER FLOW.

ENGLISH STANDARD DRAWING FOR FRAME, GRATES, AND HOOD
 FOR USE ON STANDARD CATCH BASIN

SHEET 2 OF 2
840.03

1 CONCRETE CATCH BASIN

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL CURB BASINS OVER 2'-0" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WITH CONCRETE WITH STD. DRAWING 840.06.
 OPTIONAL CONSTRUCTION: MONOLITHIC POUR 2" KEYWAY ON #4 BAR DOMELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 12 REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.05.
 CONSTRUCT WITH FINE COARSE BASTINGS.
 FOR 8"-2" IN HEIGHT OR LESS USE 4" WALLS AND BOTTOM SLAB, OVER QUANTITY AS ACCORDANT.
 CONSTRUCT WITH FINE COARSE BASTINGS.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN
 12" THRU 54" PIPE

SHEET 1 OF 2
840.02

REV. NO.	DESCRIPTIONS/REVISIONS	DATE

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HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
 US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

GRADING AND DRAINAGE DETAILS

DATE: 06/07/2023
 MCE PROJ. #: 09110-0001
 DRAWN: DCO/ALM
 DESIGNED: ALM/THL
 CHECKED: THL
 PROJ. MGR: RMC

SCALE: HORIZONTAL: 1"=30'
 VERTICAL: -

C13.0
 DRAWING NUMBER

STATUS: SDP 2022-305 PERMIT SET

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

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
FLEXIBLE PIPE

GENERAL NOTES:
I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.
DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.
SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.
APPROVED SUITABLE LOCAL MATERIAL.
UNDISTURBED EARTH MATERIAL.
SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING, ENCAPSULATE WITH TYPE 2 GEOTEXTILE AS DIRECTED BY THE ENGINEER.

SHEET 1 OF 3
300.01

6 METHOD OF INSTALLATION NTS

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

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
FILL HEIGHT TABLES

FLEXIBLE PIPE

Round Corrugated Steel Pipe
2 2/3 x 1/2 corrugation **

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet)				
		(Ga)	16	12	10	8
12	12	204	256	142	108	84
15	12	162	204	114	84	66
18	12	135	169	93	69	54
21	12	115	145	78	58	45
24	12	100	126	67	50	39
30	12	79	100	52	39	30
36	12	65	83	43	32	24
42	12	55	70	36	27	21
48	12	48	61	30	23	18
54	12	42	54	25	19	15
60	12	37	47	21	16	12
66	12	32	41	18	14	10
72	12	28	36	15	11	9
78	12	24	31	13	9	8
84	12	21	27	11	8	7

Round Corrugated Aluminum Pipe
2 2/3 x 1/2 corrugation **

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet)				
		(Ga)	16	12	10	8
12	12	123	155	213	281	344
15	12	98	123	174	224	275
18	12	81	102	144	187	226
21	12	69	87	123	160	195
24	12	60	76	108	139	171
27	12	53	67	93	123	151
30	12	47	60	85	111	136
36	12	38	50	71	92	113
42	12	32	43	60	78	96
48	12	27	37	52	68	84
54	12	23	32	45	59	74
60	12	20	28	39	51	62
66	12	17	24	34	45	51
72	12	15	21	30	40	41
78	12	13	18	26	35	36
84	12	11	16	23	31	32

** FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.
REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS:
CSP - AASHTO M28
CAAP - AASHTO M196
HDP - AASHTO M294
PVC - ASTM F949 or AASHTO M304

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
1" MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

RIGID PIPE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS:
RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
1" MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

SHEET 3 OF 3
300.01

4 METHOD OF INSTALLATION NTS

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

ENGLISH STANDARD DRAWING FOR
DRAINAGE STRUCTURE STEPS

NOTES:
INSTALL ALL STEPS PROTRUDING 4" FROM INSIDE FACE OF STRUCTURE WALL.
STEPS DIFFERING IN DIMENSIONS, CONFIGURATION, OR MATERIALS FROM THOSE SHOWN MAY ALSO BE USED PROVIDED THE CONTRACTOR HAS FURNISHED THE ENGINEER WITH DETAILS OF THE PROPOSED STEPS AND HAS RECEIVED WRITTEN APPROVAL FROM THE ENGINEER FOR THE USE OF SUCH STEPS.

SHEET 1 OF 1
840.66

2 DRAINAGE STRUCTURE STEPS NTS

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

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

GENERAL NOTES:
I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.
DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.
SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.
APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.
UNDISTURBED EARTH MATERIAL.
SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING, ENCAPSULATE WITH TYPE 2 GEOTEXTILE AS DIRECTED BY THE ENGINEER.

SHEET 2 OF 3
300.01

5 METHOD OF INSTALLATION NTS

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

ROADWAY STANDARD DRAWING FOR
PARALLEL PIPE END SECTION FOR 15" TO 24" PIPE
PREFABRICATED STEEL SECTION

DRIVEWAY PIPE TYPICAL SECTION

END TREATMENT DIMENSIONS

D	L	W	THICK. GAGE
15"	2'-6"	1'-9"	16 MIN.
18"	4'-0"	2'-0"	16 MIN.
24"	7'-0"	2'-6"	16 MIN.

TOE PLATE

PIPE FITTING REQUIRED TO SECURELY HOLD SECTION

SHEET 1 OF 1
310.04

3 PARALLEL PIPE END SECTION NTS

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

ENGLISH STANDARD DRAWING FOR
MANHOLE FRAME AND COVER

SOLID COVER SHOWN PERFORATED. PERFORATED AVAILABLE IF SPECIFIED.
STATE USE OF SYSTEM ON COVER (I.E.: SEWER, STORM DRAIN, ELECTRICAL)

MINIMUM WEIGHTS - LBS.
FRAME - 180
COVER - 120
TOTAL - 300

SHEET 1 OF 1
840.54

1 MANHOLE FRAME AND COVER NTS

REV. NO.	DESCRIPTIONS	DATE

SEAL

M. H. Livick

REGISTERED PROFESSIONAL ENGINEER
NO. 10001
M. H. LIVICK

06/07/2023

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HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

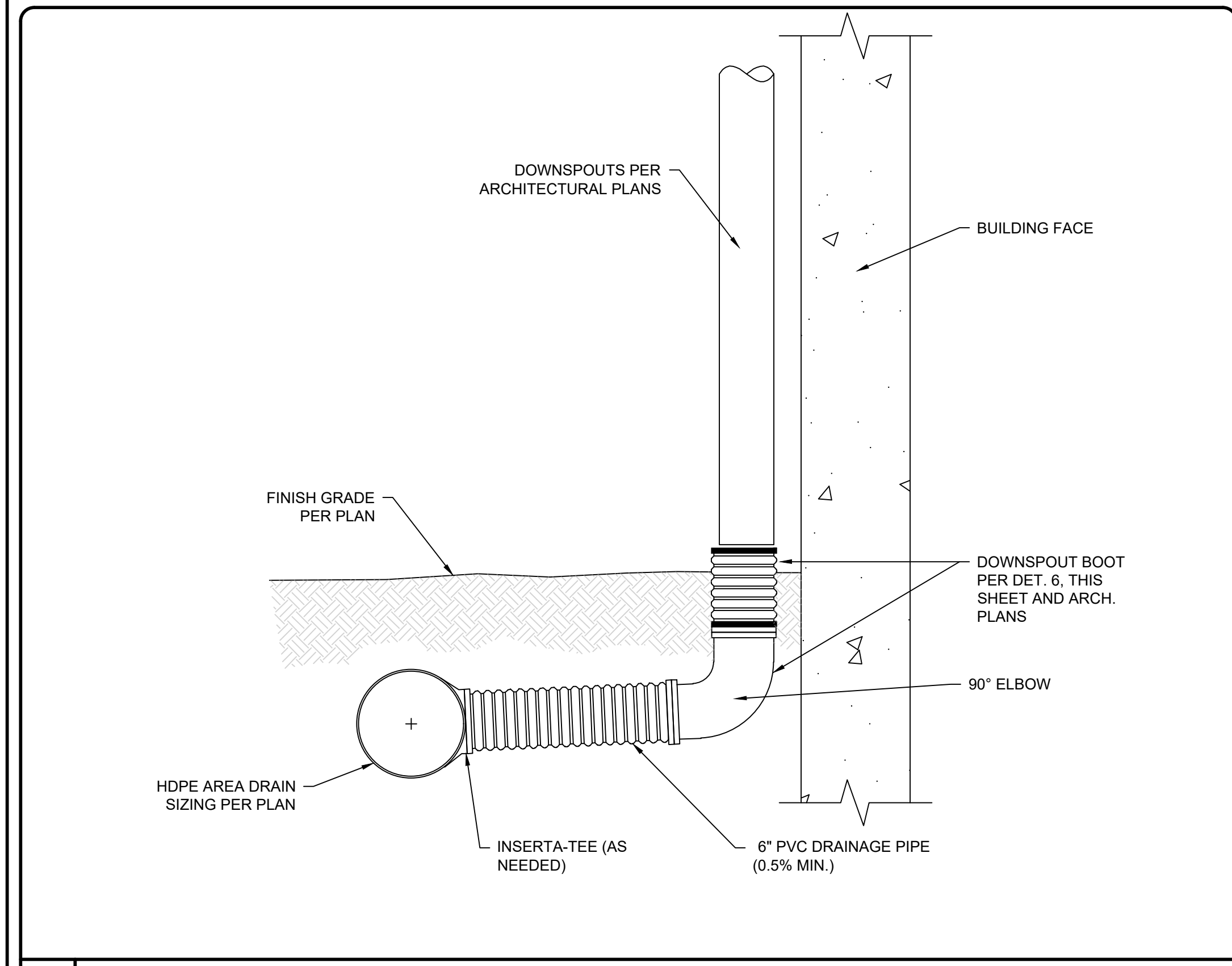
GRADING AND DRAINAGE DETAILS

DATE: 06/07/2023
MCE PROJ. #: 09110-0001
DRAWN: DCO/ALM
DESIGNED: ALM/THL
CHECKED: THL
PROJ. MGR: RMC

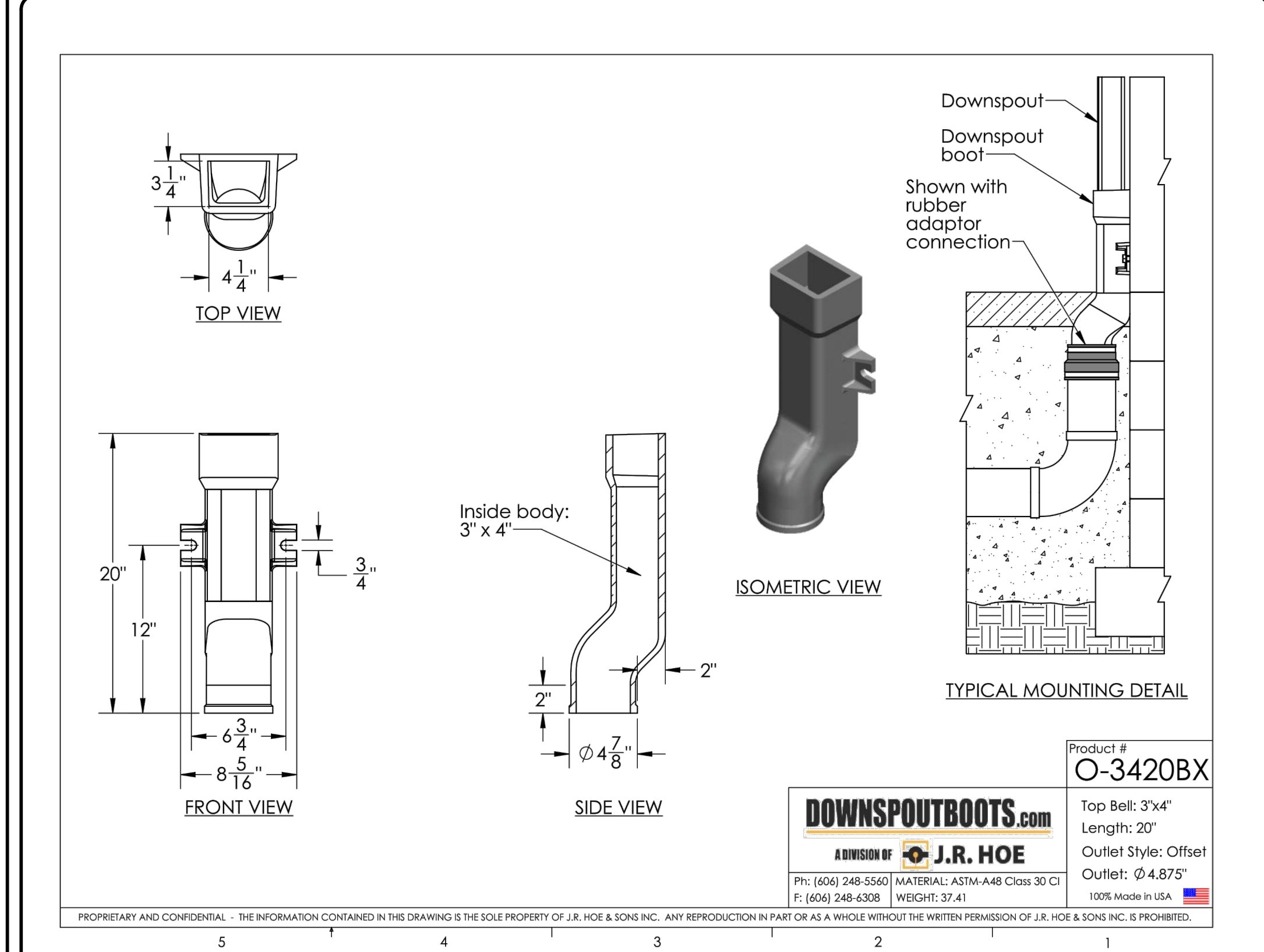
SCALE:
HORIZONTAL: -
VERTICAL: -

C13.1
DRAWING NUMBER

STATUS: SDP 2022-305 PERMIT SET



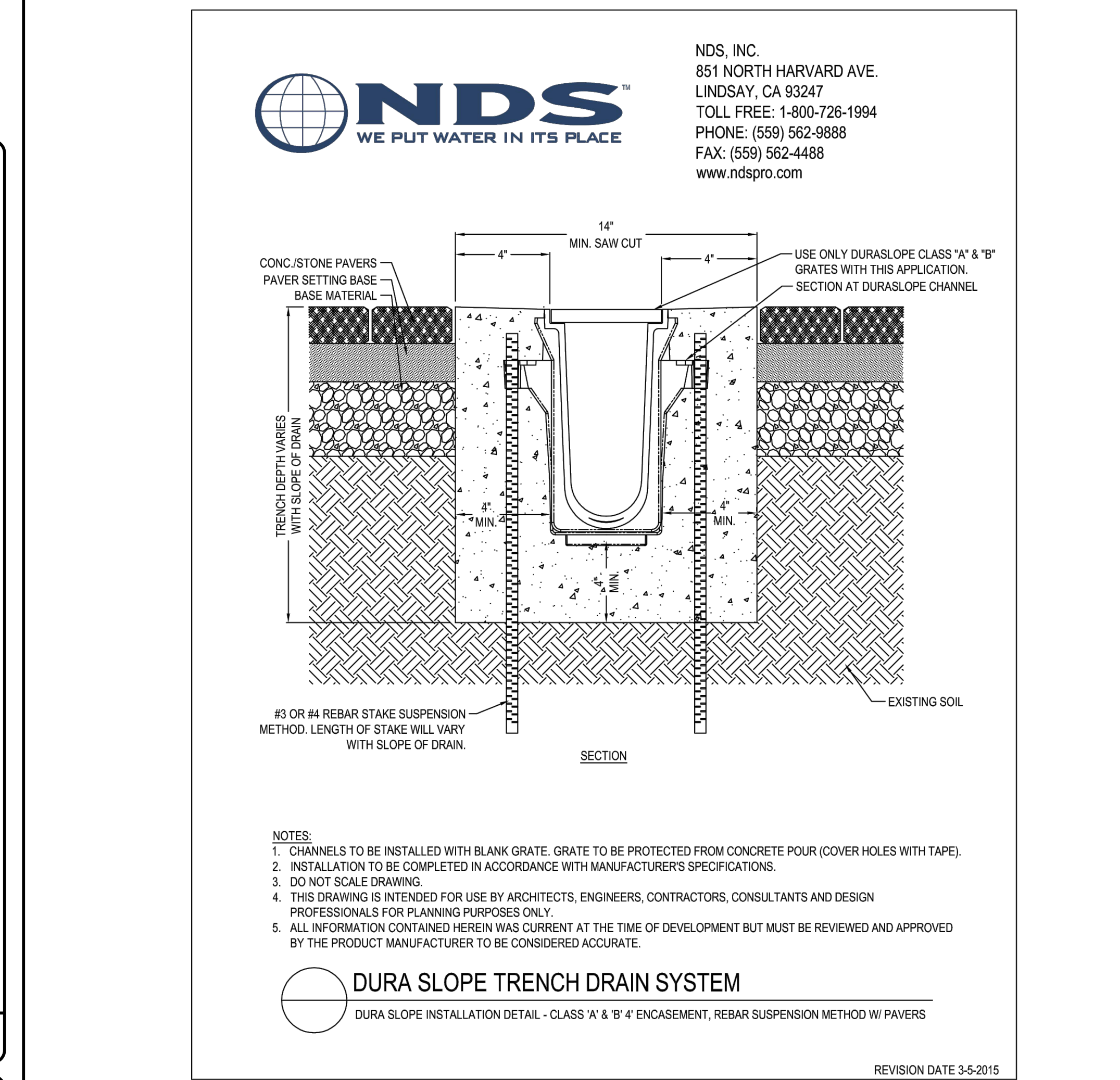
7 ROOF DRAIN CONNECTION NTS



6 DOWNSPOUT BOOT NTS

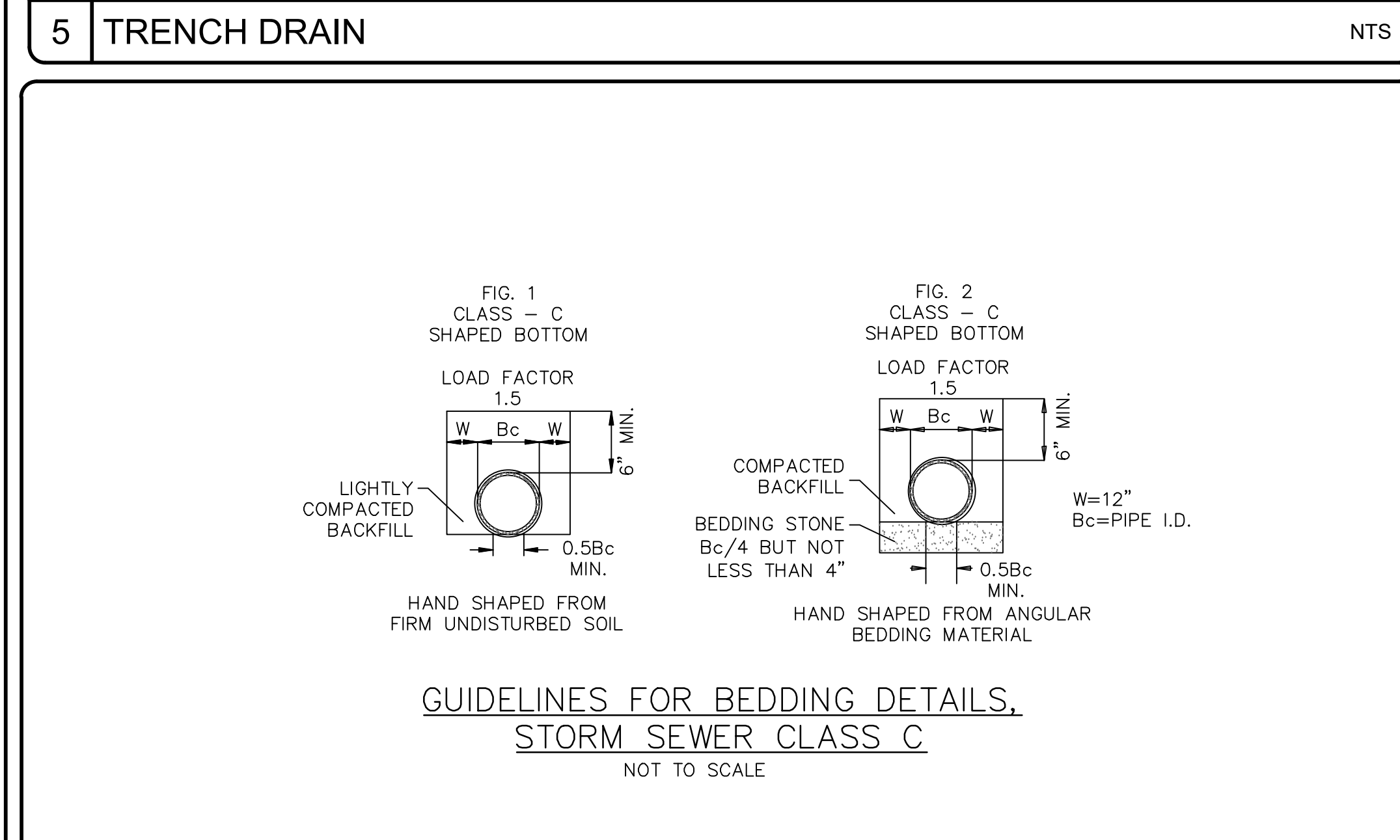
REV. NO.	DESCRIPTIONS	DATE

SEAL



5 TRENCH DRAIN NTS

NOTE:
 • CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR TRENCH DRAIN AND TRENCH DRAIN GRATE. GRATE SHALL BE PEDESTRIAN ACCESSIBLE.

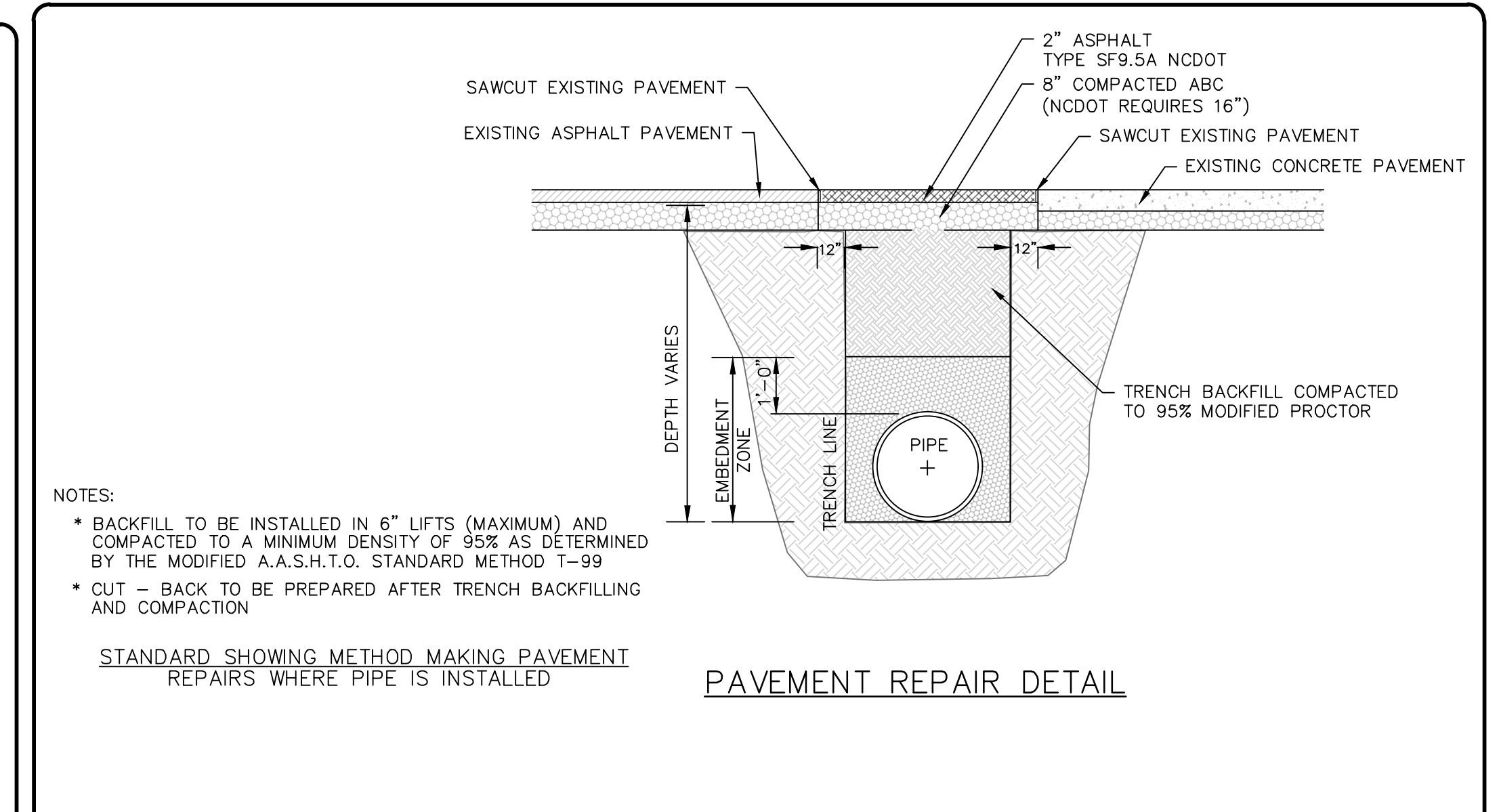


4 BEDDING DETAILS FOR STORM SEWER CLASS C NTS

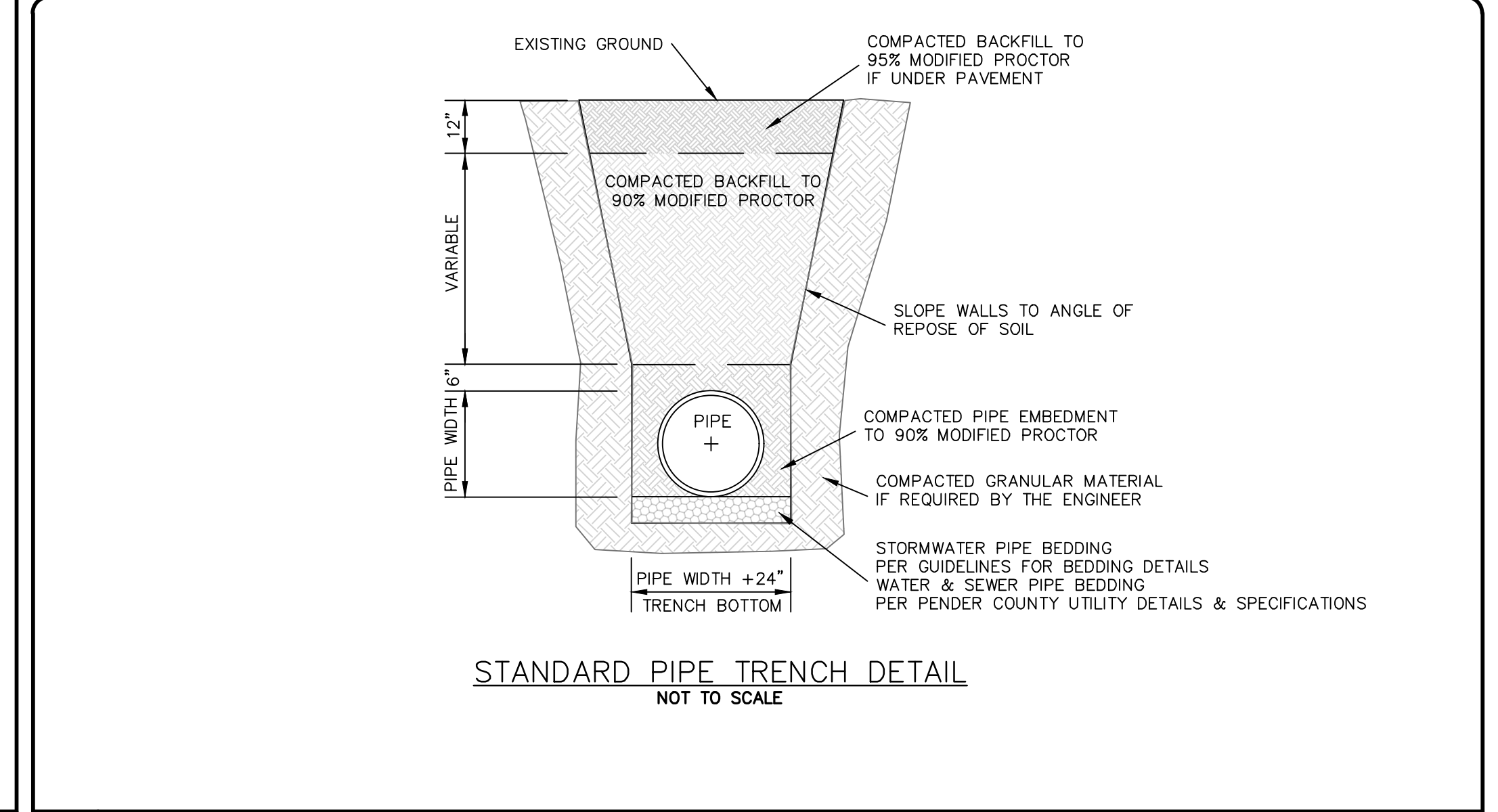
SEAL

MCKIM & CREED
 243 North Front Street
 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: F-1222
 www.mckimcreed.com

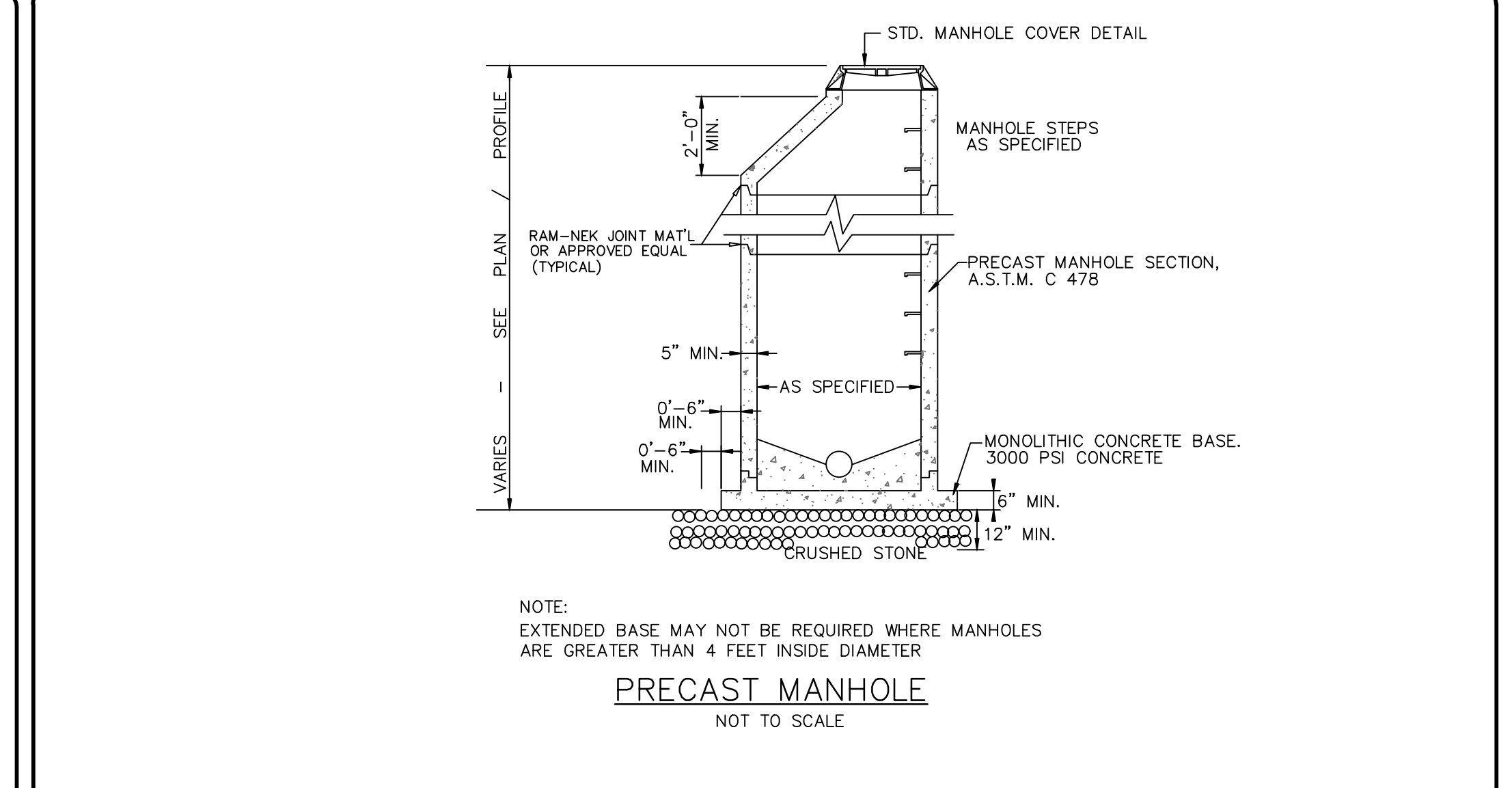
HAMPSTEAD STATION, LLC



3 PAVEMENT REPAIR DETAIL NTS



2 STANDARD PIPE TRENCH DETAIL NTS



1 PRECAST MANHOLE NTS

OYSTER CREEK LANDING
 US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

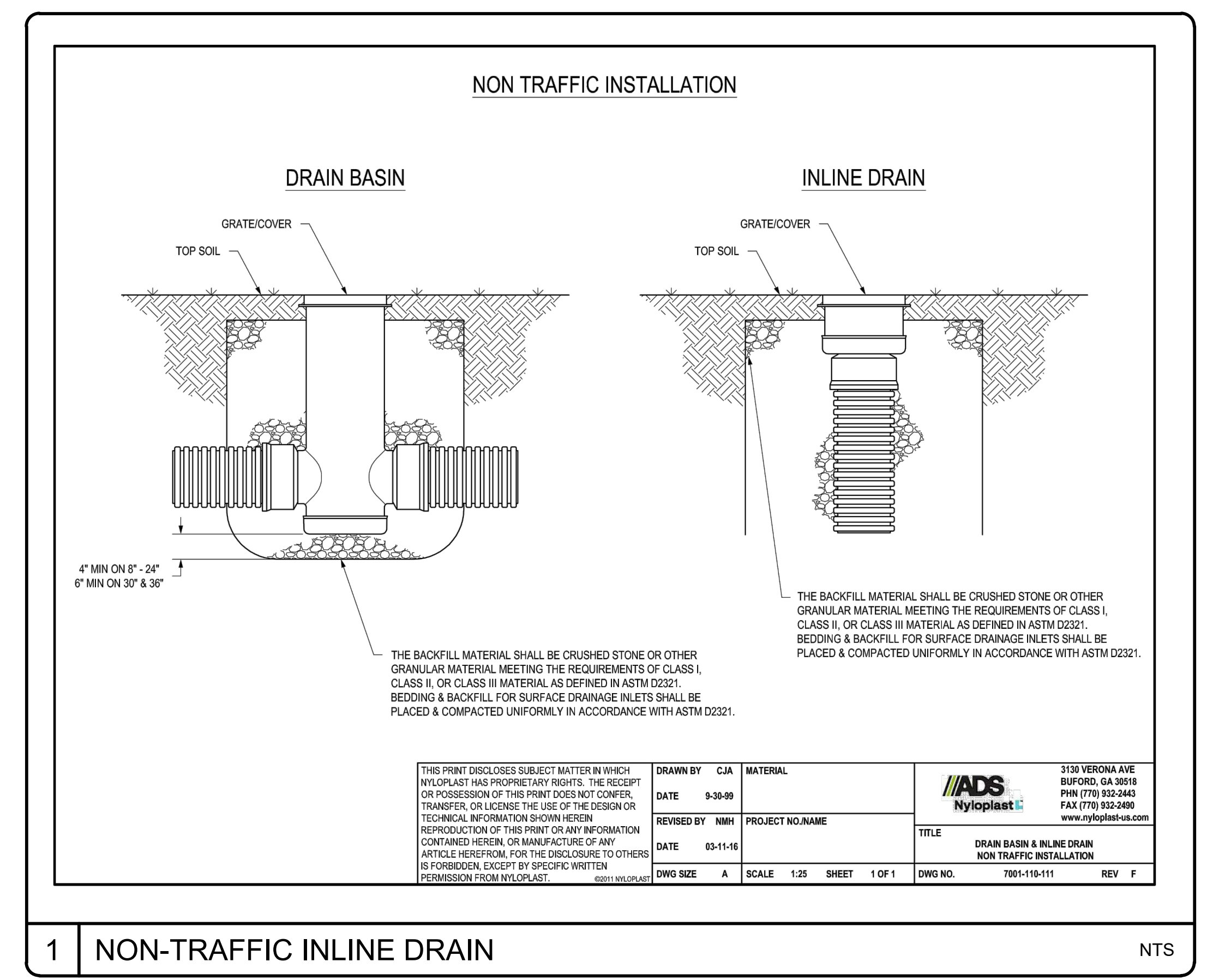
GRADING AND DRAINAGE DETAILS

DATE:	06/07/2023	SCALE:	
MCE PROJ. #:	09110-0001	HORIZONTAL:	C13.2
DRAWN:	DCO/ALM	VERTICAL:	
DESIGNED:	ALM/THL	REVISION:	
CHECKED:	THL		
PROJ. MGR.:	RMC		

STATUS: SDP 2022-305 PERMIT SET

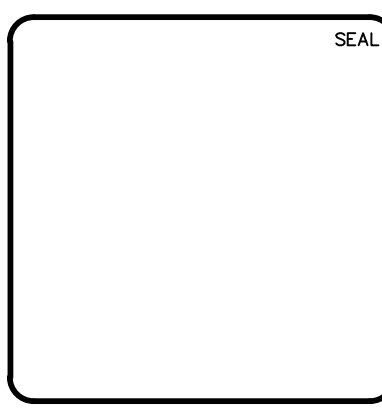
I:\09110\0001\ENG\80-DRAWINGS\81_PRODUCTION_SHEETS\2_WORKING_DWG\13.0 GRADING AND DRAINAGE DETAIL.DWG 6/7/2023 2:24:22 PM _DWG To PDF-2016.pc3

I:\09110\0001\ENG\80-DRAWINGS\81-PRODUCTION_SHEETS\2-WORKING_DWG\80-C13.0 GRADING AND DRAINAGE DETAIL.dwg, 6/7/2023 2:24:26 PM, DWG to PDF-2016.pc3



1 NON-TRAFFIC INLINE DRAIN NTS

REV. NO.	DESCRIPTIONS REVISIONS	DATE



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243 North Front Street
Wilmington, North Carolina 28401
Phone: (910)343-1048, Fax: (910)251-8282
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www.mckimcreed.com

HAMPSTEAD STATION, LLC

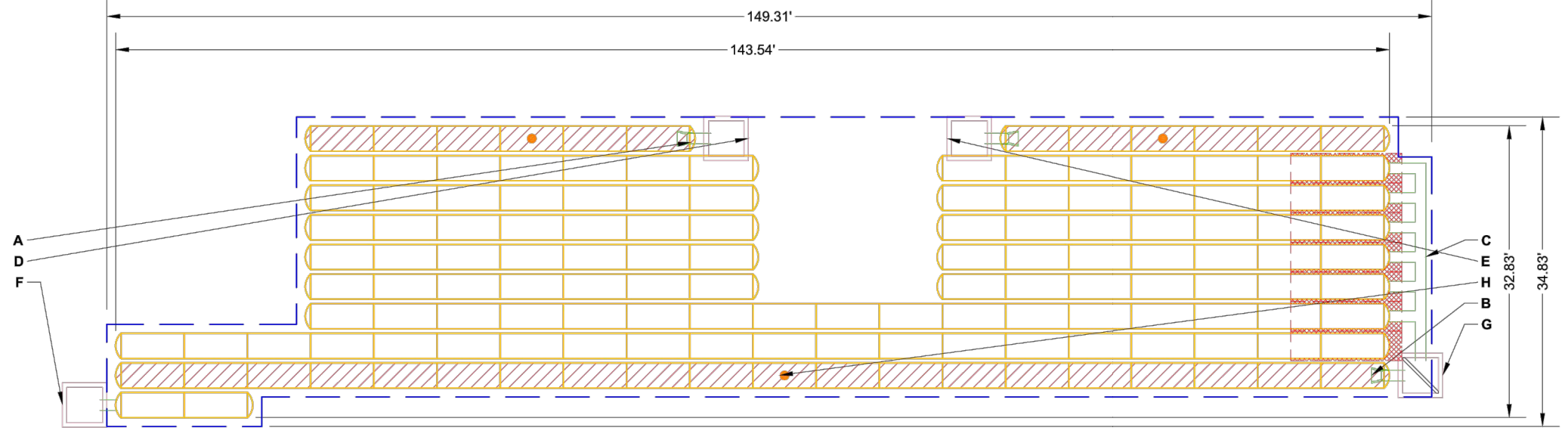
OYSTER CREEK LANDING

US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

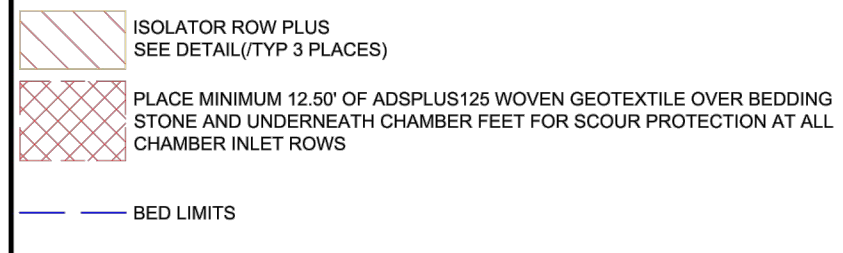
GRADING AND DRAINAGE DETAILS

DATE:	06/07/2023	SCALE:	C13.3
MCE PROJ. #	09110-0001	HORIZONTAL:	---
DRAWN	DCO/ALM	VERTICAL:	---
DESIGNED	ALM/THL	DRAWING NUMBER	---
CHECKED	THL	REVISION	---
PROJ. MGR.	RMC	SDP 2022-305 PERMIT SET	

PROPOSED LAYOUT		PROPOSED ELEVATIONS:		PART TYPE		ITEM ON LAYOUT		DESCRIPTION		*INVERT ABOVE BASE OF CHAMBER	
141	STORMTECH SC-310 CHAMBERS	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT UNPAVED)	63.33								
32	STORMTECH SC-310 END CAPS	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)	57.33								
9	STONE ABOVE (IN)	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)	56.83								
12	STONE BELOW (IN)	MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT)	56.83								
40	STONE VOID	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	56.83								
6061	INSTALLED SYSTEM VOLUME (CF)	TOP OF SC-310 CHAMBER	59.33								
	PERIMETER STONE INCLUDED	12" x 12" BOTTOM MANFOLD INVERT	59.33								
	(BASE STONE INCLUDED)	12" ISOLATOR ROW PLUS INVERT	54.00								
4246	SYSTEM AREA (SF)	12" ISOLATOR ROW PLUS INVERT	54.00								
368.3	SYSTEM PERIMETER (R)	12" ISOLATOR ROW PLUS INVERT	54.00								
		12" BOTTOM CONNECTION INVERT	54.00								
		12" INSPECTION PORT	54.00								
		BOTTOM OF SC-310 CHAMBER	54.00								
		BOTTOM OF STONE	53.00								



I, MALCOM (TRAE) LIVICK, P.E., CERTIFY THAT THE STORMWATER MANAGEMENT DRAINAGE PLAN FOR THIS PROJECT SATISFACTORILY COMPLIES WITH THE REQUIREMENTS OF THE PENDER COUNTY UDO SECTION 7.9



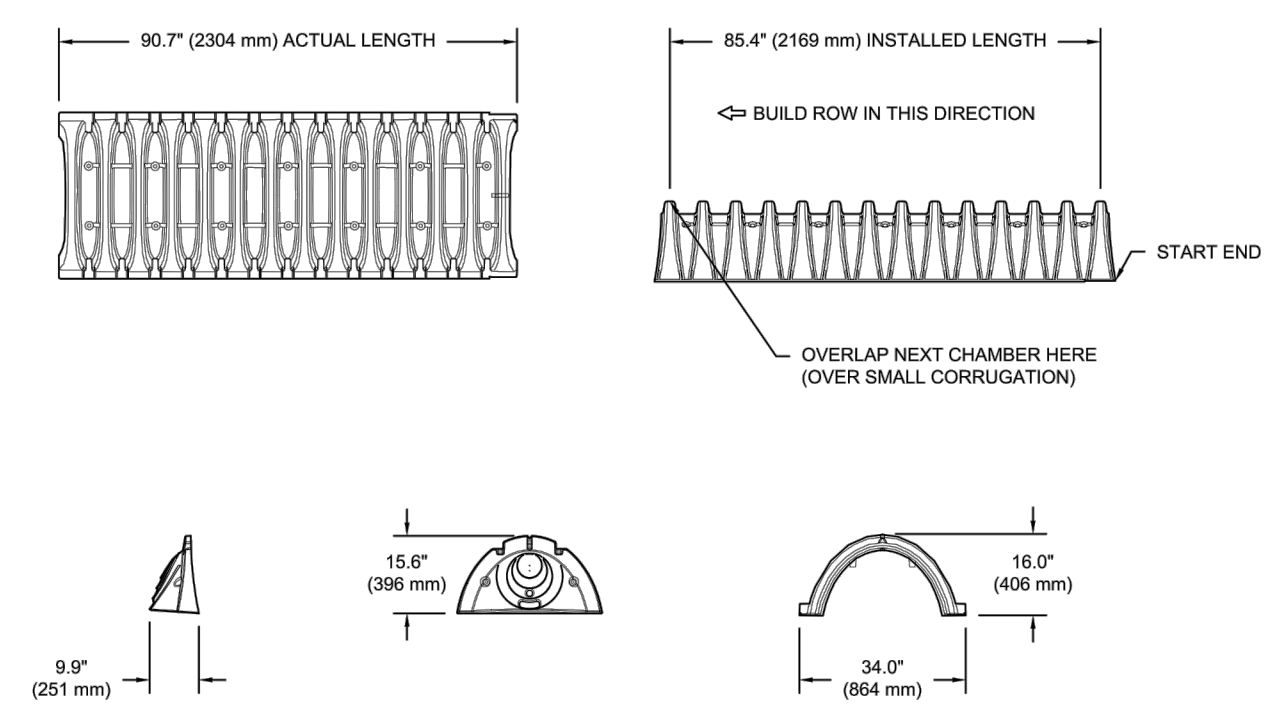
NOTES

- MANHOLE SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #32 FOR MANHOLE SIZING GUIDANCE.
- BEFORE THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANHOLE COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
- NOT FOR CONSTRUCTION:** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

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SPACE INTENTIONALLY LEFT BLANK

SC-310 TECHNICAL SPECIFICATION



NOMINAL CHAMBER SPECIFICATIONS

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

*ASSUMES 6\"/>

PART #	STUB	A	B	C
SC310EP007 / SC310EP06TPC	6\"/>			

ALL STUBS, EXCEPT FOR THE SC310E02Z 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 1-888-892-2864.

*FOR THE SC310E02Z THE 12\"/>

NOTE: ALL DIMENSIONS ARE NOMINAL.

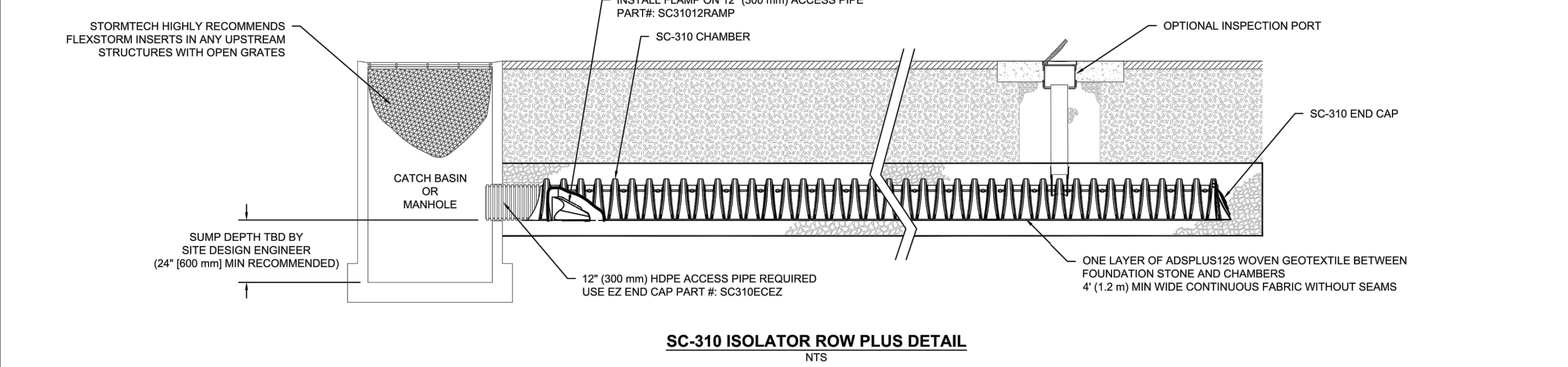
2 SC-310 TECHNICAL SPECIFICATION

ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

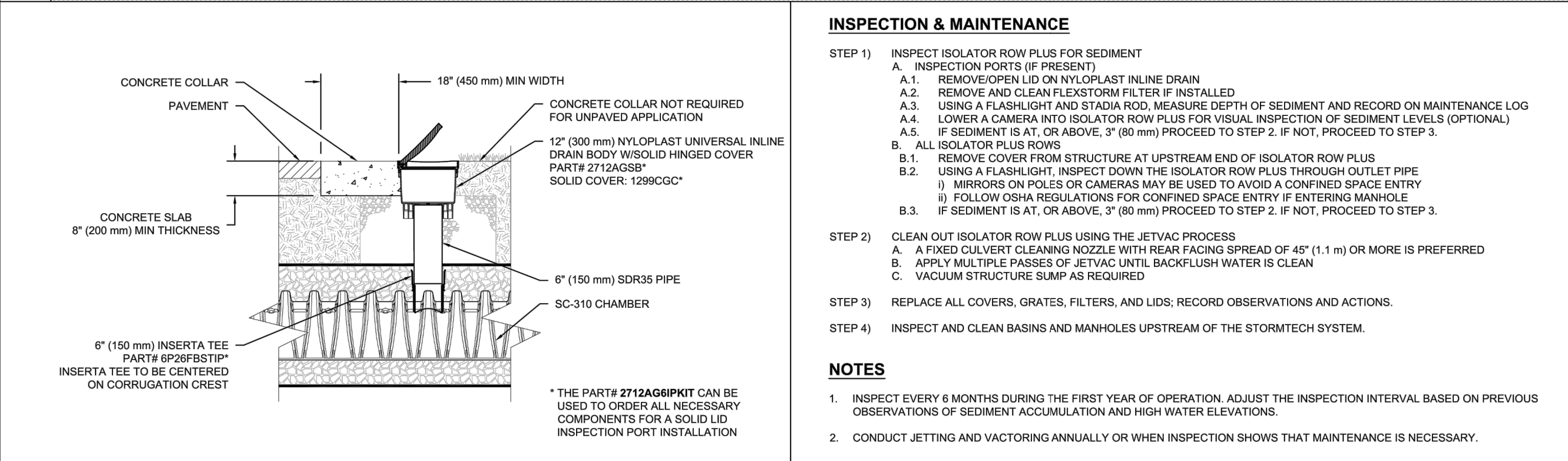
MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBBASE REQUIREMENTS.	N/A
C	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18\"/>		

PLEASE NOTE:

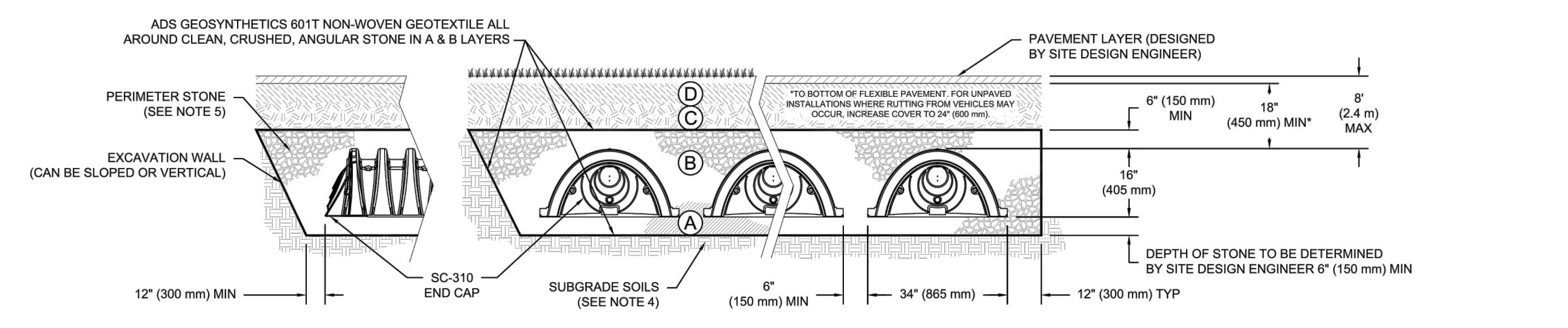
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'X' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6\"/>



3 SC-310 ISOLATOR ROW PLUS DETAIL



4 SC-310 6\"/>



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.
- 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, THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 400 LBS/FT². 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.

1 SC-310 CROSS SECTION DETAIL

OYSTER CREEK LANDING (BEHIND BLDG 2)

HAMPSTEAD, NC, USA

DATE: 06/07/2023
 PROJECT #: 09110-0001
 DRAWN: DCO/ALM
 DESIGNED: ALM/THL
 CHECKED: THL
 PROJ. MGR: RMC

DRAWN: KR
 CHECKED: N/A
 REV: NOT TO SCALE

StormTech Chamber System
 888-892-2864 | WWW.STORMTECH.COM

4640 TRUEMAN BLVD
 HILLIARD, OH 43026
 1-800-733-7473

ADS

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SHEET 1 OF 1

REV NO.	DESCRIPTIONS / REVISIONS	DATE

SEAL

MALCOM (TRAE) LIVICK
 PROFESSIONAL ENGINEER
 STATE OF NORTH CAROLINA
 LICENSE NO. 34287
 06/07/2023

MCKIM & CREED

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 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: F-1222
 www.mckimcreed.com

HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
 US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

SCM-1 DETAIL

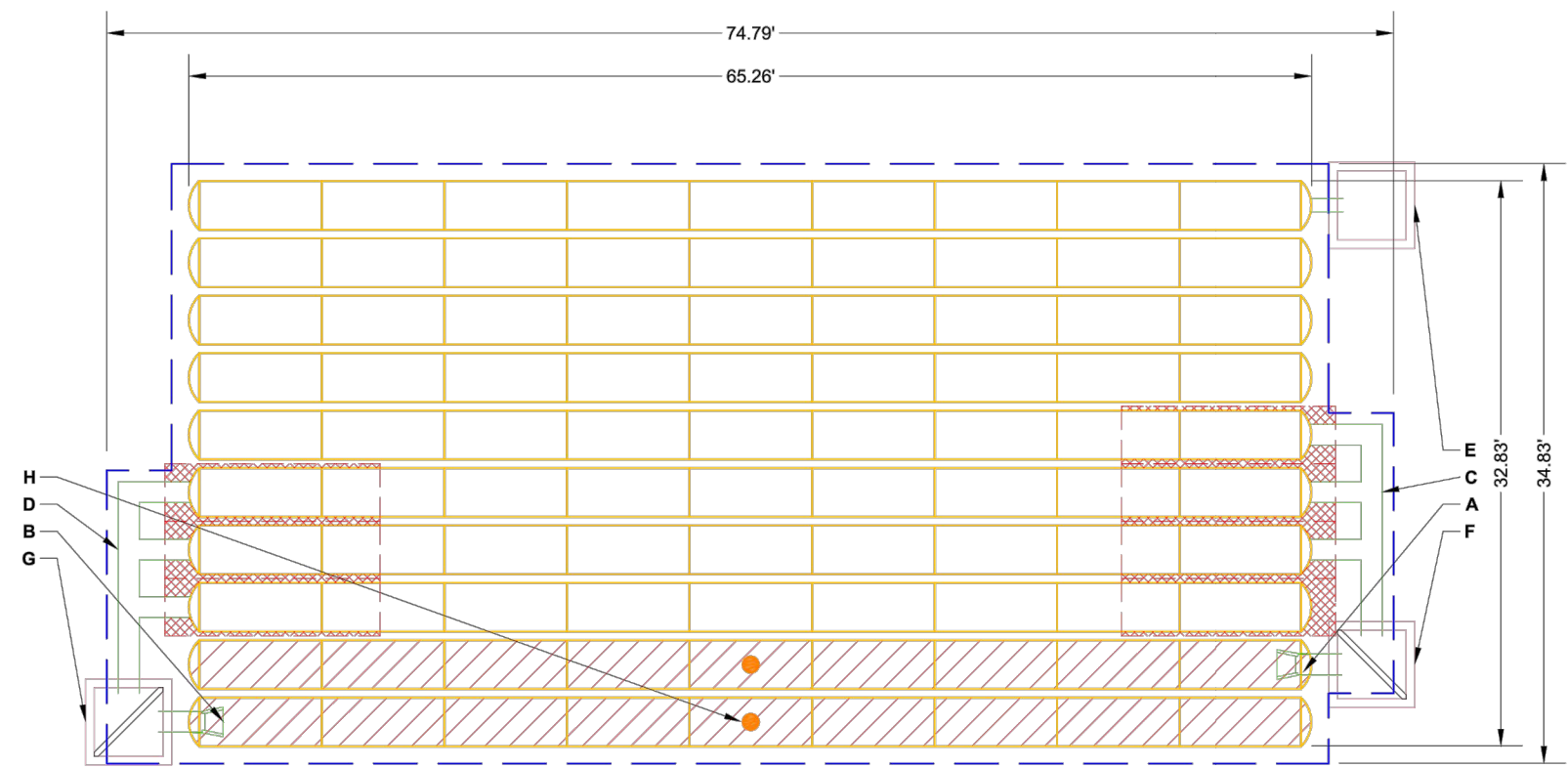
DATE: 06/07/2023
 MCE PROJ. #: 09110-0001
 DRAWN: DCO/ALM
 DESIGNED: ALM/THL
 CHECKED: THL
 PROJ. MGR: RMC

SCALE: HORIZONTAL: ---
 VERTICAL: ---

C13.4
 DRAWING NUMBER
 REVISION

STATUS: SDP 2022-305 PERMIT SET

PROPOSED LAYOUT		PROPOSED ELEVATIONS:		PART TYPE		ITEM ON LAYOUT		DESCRIPTION		*INVERT ABOVE BASE OF CHAMBER	
NO	DESCRIPTION	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)	NO	DESCRIPTION	INVERT	MAX FLOW	NO	DESCRIPTION	INVERT	MAX FLOW
90	STORMTECH SC-310 CHAMBERS	62.83	56.83	A	12" BOTTOM PREFABRICATED EZ END CAP PART# SC310E0EZ / TYP OF ALL 12" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	0.90'					
20	STORMTECH SC-310 END CAPS	56.33	56.33	B	12" x 12" BOTTOM MANFOLD ADS N-12	0.90'					
9	STONE ABOVE (in)	56.33	56.33	C	12" x 12" BOTTOM MANFOLD ADS N-12	0.90'					
6	STONE BELOW (in)	56.33	56.33	D	12" x 12" BOTTOM MANFOLD ADS N-12	0.90'					
49	STONE VOID	56.33	56.33	E	12" x 12" BOTTOM MANFOLD ADS N-12	0.90'					
3101	INSTALLED SYSTEM VOLUME (CF) PERIMETER STONE INCLUDED (BASE STONE INCLUDED)	56.33	56.33	F	CONCRETE STRUCTURE (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		0.7 CFS OUT				
2486	SYSTEM AREA (SF)	56.33	56.33	G	CONCRETE STRUCTURE (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.3 CFS IN				
219.3	SYSTEM PERIMETER (ft)	56.33	56.33	H	CONCRETE STRUCTURE (DESIGN BY ENGINEER / PROVIDED BY OTHERS)		5.3 CFS IN				



I, MALCOM (TRAE) LIVICK, P.E., CERTIFY THAT THE STORMWATER MANAGEMENT DRAINAGE PLAN FOR THIS PROJECT SATISFACTORILY COMPLIES WITH THE REQUIREMENTS OF THE PENDER COUNTY UDO SECTION 7.9

NOTES

- MANHOLE SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #32 FOR MANHOLE SIZING GUIDANCE.
- BEFORE THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANHOLE COMPONENTS IN THE FIELD.
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED.
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ISOLATOR ROW PLUS (SEE DETAIL/TYP 2 PLACES)
 PLACE MINIMUM 12.5' OF ADS PLUS 125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS
 BED LIMITS

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SC-310 TECHNICAL SPECIFICATION

NOMINAL CHAMBER SPECIFICATIONS

SIZE (W X L X INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE*	WEIGHT
34.0\"/>			

*ASSUMES 6\"/>

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
SC310EP00T / SC310EP00TPC	6\"/>			

ALL STUBS, EXCEPT FOR THE SC310E0EZ 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 1-888-892-2864.

*FOR THE SC310E0EZ THE 12\"/>

NOTE: ALL DIMENSIONS ARE NOMINAL.

DATE: _____
 PROJECT #: _____
 DRAWN: KR
 CHECKED: N/A
 REV: _____
 NOT TO SCALE

OYSTER CREEK LANDING (UP FRONT)
 HAMPSTEAD, NC, USA

2 SC-310 TECHNICAL SPECIFICATION

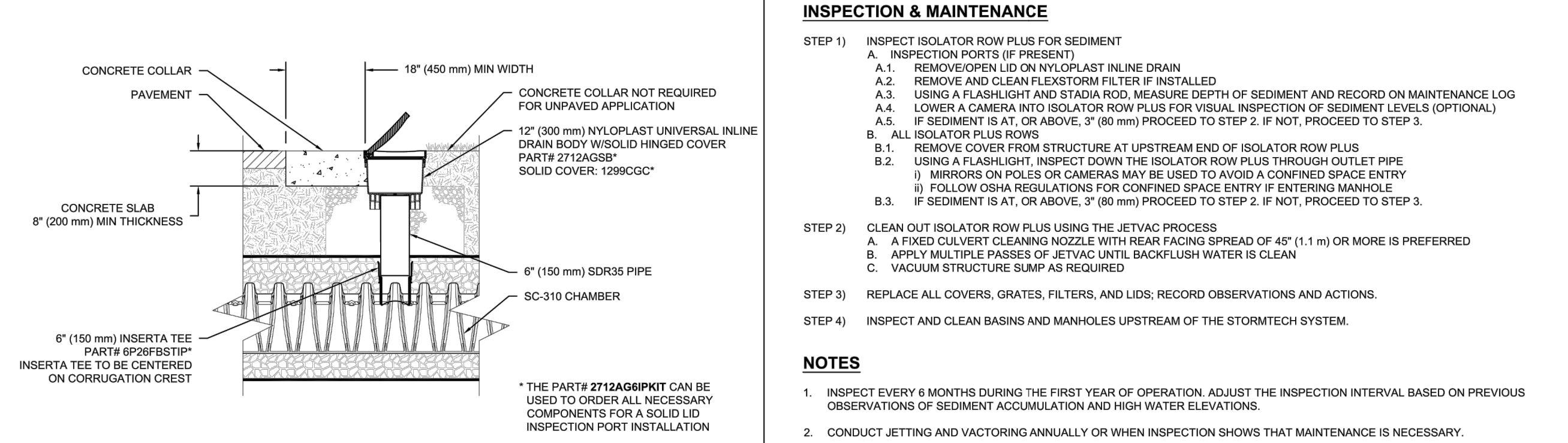
ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

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.	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\"/>	AASHTO M145 ¹ A-1, A-2, A-3 OR AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12\"/>
B	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 ² 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.	AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{2,3}

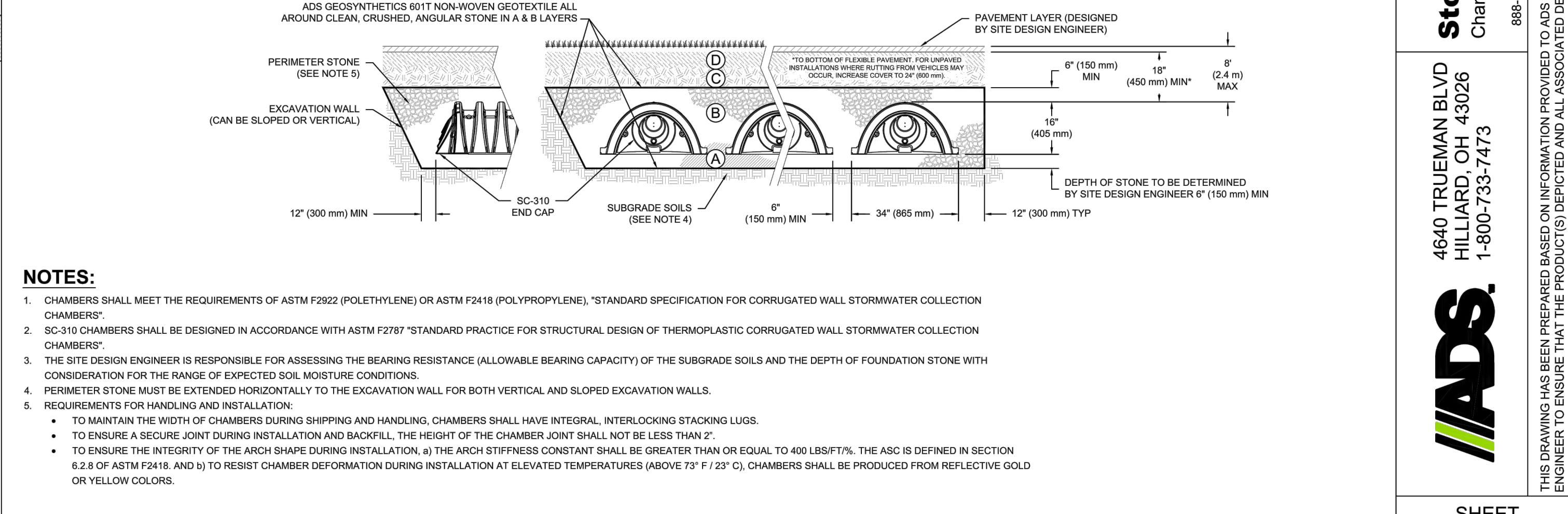
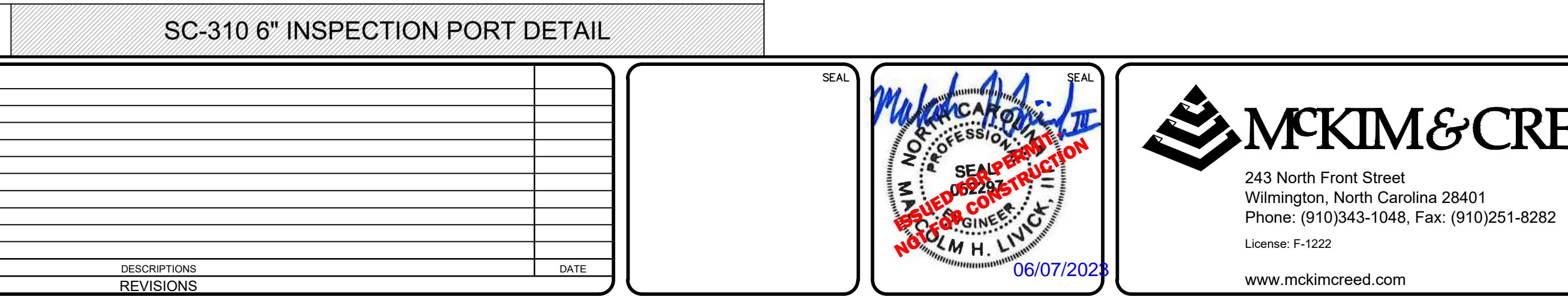
PLEASE NOTE:

- 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 'X' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6\"/>

3 SC-310 ISOLATOR ROW PLUS DETAIL



4 SC-310 6\"/>



1 SC-310 CROSS SECTION DETAIL

4640 TRUEMAN BLVD
 HILLIARD, OH 43026
 1-800-733-7473

StormTech
 Chamber System
 888-892-2864 | WWW.STORMTECH.COM

ADS

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SHEET
 1 OF 1

DATE: 06/07/2023
 MCE PROJ. #: 09110-0001
 DRAWN: DCO/ALM
 DESIGNED: ALM/THL
 CHECKED: THL
 PROJ. MGR: RMC

SCALE:
 HORIZONTAL: ---
 VERTICAL: ---

C13.5
 DRAWING NUMBER
 REVISION

STATUS: SDP 2022-305 PERMIT SET

PIPE DIAMETER (INCHES)	D. I. P.				P. V. C.			
	90°	45°	22 1/2°	11 1/4°	90°	45°	22 1/2°	11 1/4°
3"	30"	15"	10"	5"	40"	20"	10"	5"
4"	35"	15"	10"	5"	55"	25"	15"	10"
6"	55"	25"	10"	5"	80"	35"	20"	10"
8"	65"	30"	15"	10"	90"	40"	20"	10"
10"	80"	35"	20"	10"	110"	50"	25"	15"
12"	95"	40"	20"	10"	130"	55"	30"	15"
16"	120"	50"	25"	15"	165"	70"	35"	20"
20"	150"	65"	30"	15"	200"	85"	40"	20"
24"	180"	75"	35"	20"	210"	90"	45"	25"
30"	195"	80"	40"	20"	250"	105"	50"	25"
36"	220"	90"	45"	25"	0"	0"	0"	0"
42"	245"	105"	50"	25"	0"	0"	0"	0"
48"	260"	120"	60"	30"	0"	0"	0"	0"

PIPE DIAMETER (INCHES)	Restrained Length in Feet For Reducer										
	3"	4"	6"	8"	10"	12"	16"	20"	24"	30"	
3"	0	0	0	0	0	0	0	0	0	0	0
4"	40	0	0	0	0	0	0	0	0	0	0
6"	50	45	0	0	0	0	0	0	0	0	0
8"	75	70	40	0	0	0	0	0	0	0	0
10"	95	90	70	40	0	0	0	0	0	0	0
12"	120	115	100	75	40	0	0	0	0	0	0
16"	160	155	140	125	100	70	0	0	0	0	0
20"	200	195	180	170	150	130	75	0	0	0	0
24"	190	185	170	140	130	120	90	50	0	0	0
30"	195	190	185	180	170	160	130	105	70	0	0
36"	220	220	210	210	200	195	180	150	125	70	0
42"	245	240	235	230	225	220	205	180	155	105	0
48"	255	250	245	240	235	230	215	195	175	125	0

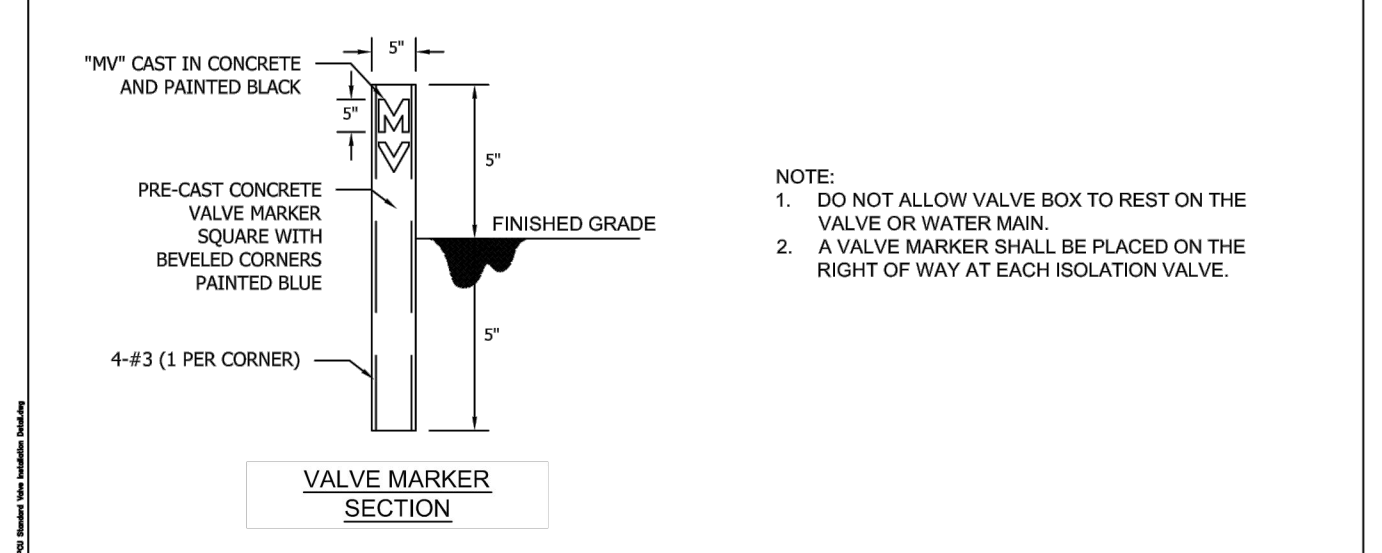
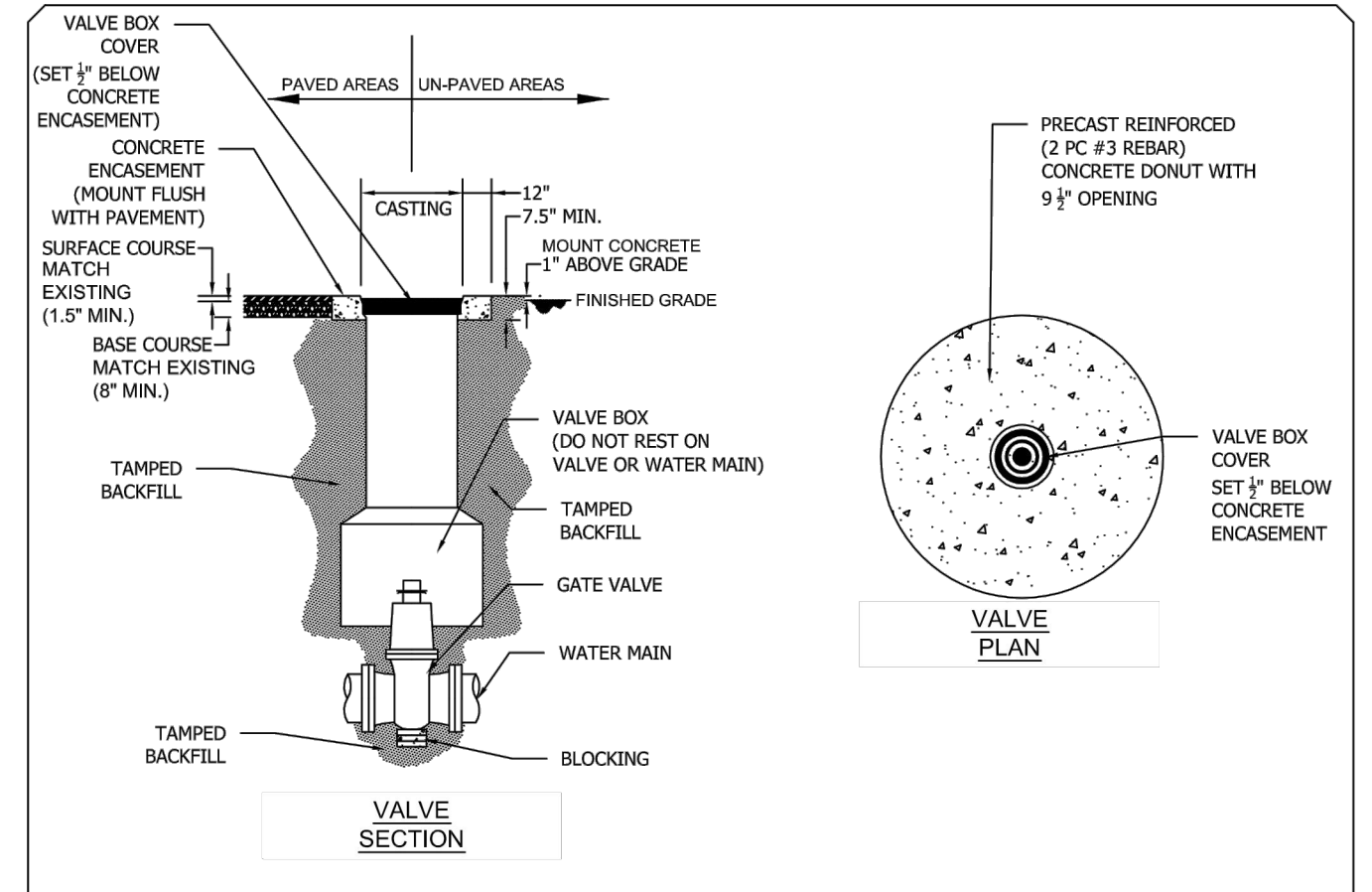
Length of restrained joint for larger diameter pipe

NOTES:
 1. PENDER COUNTY STANDARD RESTRAINT METHOD IS MJ "GRIP RING" TYPE. ALL RJ TO BE MJ "GRIP RING" TYPE, UNLESS SPECIFICALLY APPROVED BY PCU IN WRITING.
 2. ALL FITTINGS AND JOINTS SHALL BE RESTRAINED JOINT.
 3. "L" ABOVE IS GIVEN IN FEET FROM FITTING JOINT.

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

RESTRAINED JOINT TABLE
STANDARD DETAIL
VERSION #1 - OCTOBER 2015

8 RESTRAINED JOINT TABLE

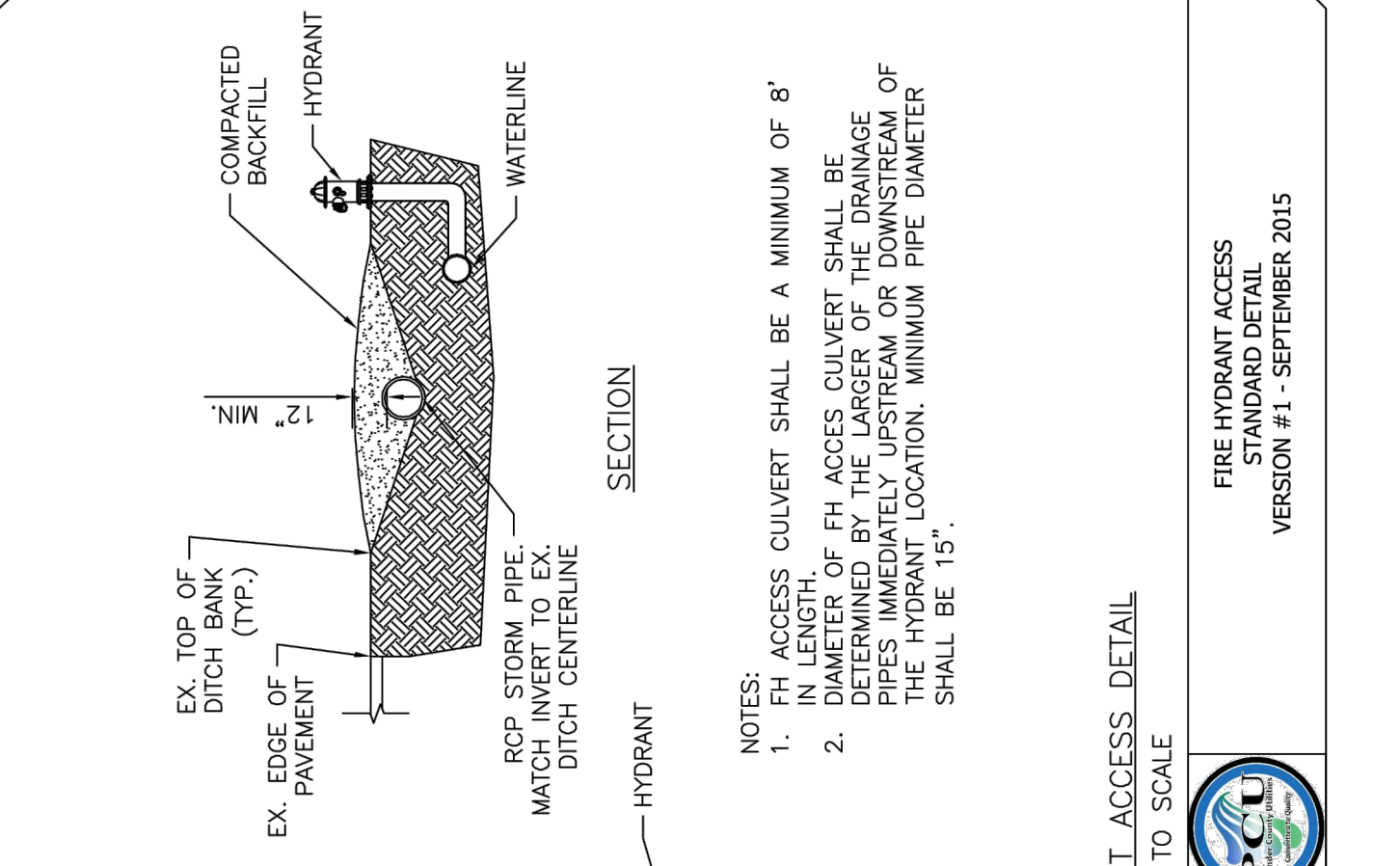


VALVE INSTALLATION STANDARD DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

VALVE INSTALLATION STANDARD DETAIL
VERSION #3 - JUNE 2016

6 VALVE INSTALLATION

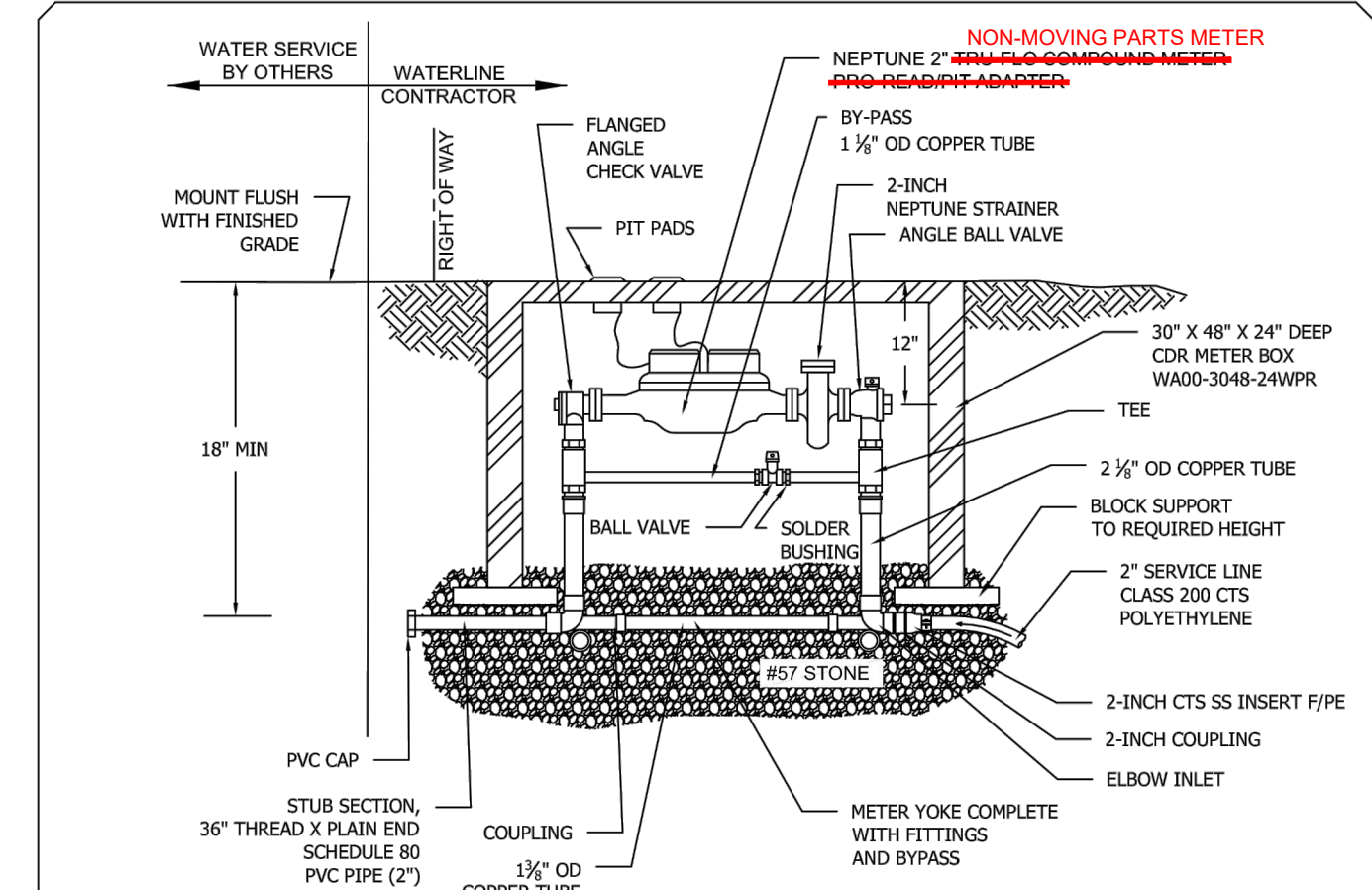


FIRE HYDRANT ACCESS DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

FIRE HYDRANT ACCESS DETAIL
VERSION #1 - SEPTEMBER 2015

4 FIRE HYDRANT ACCESS

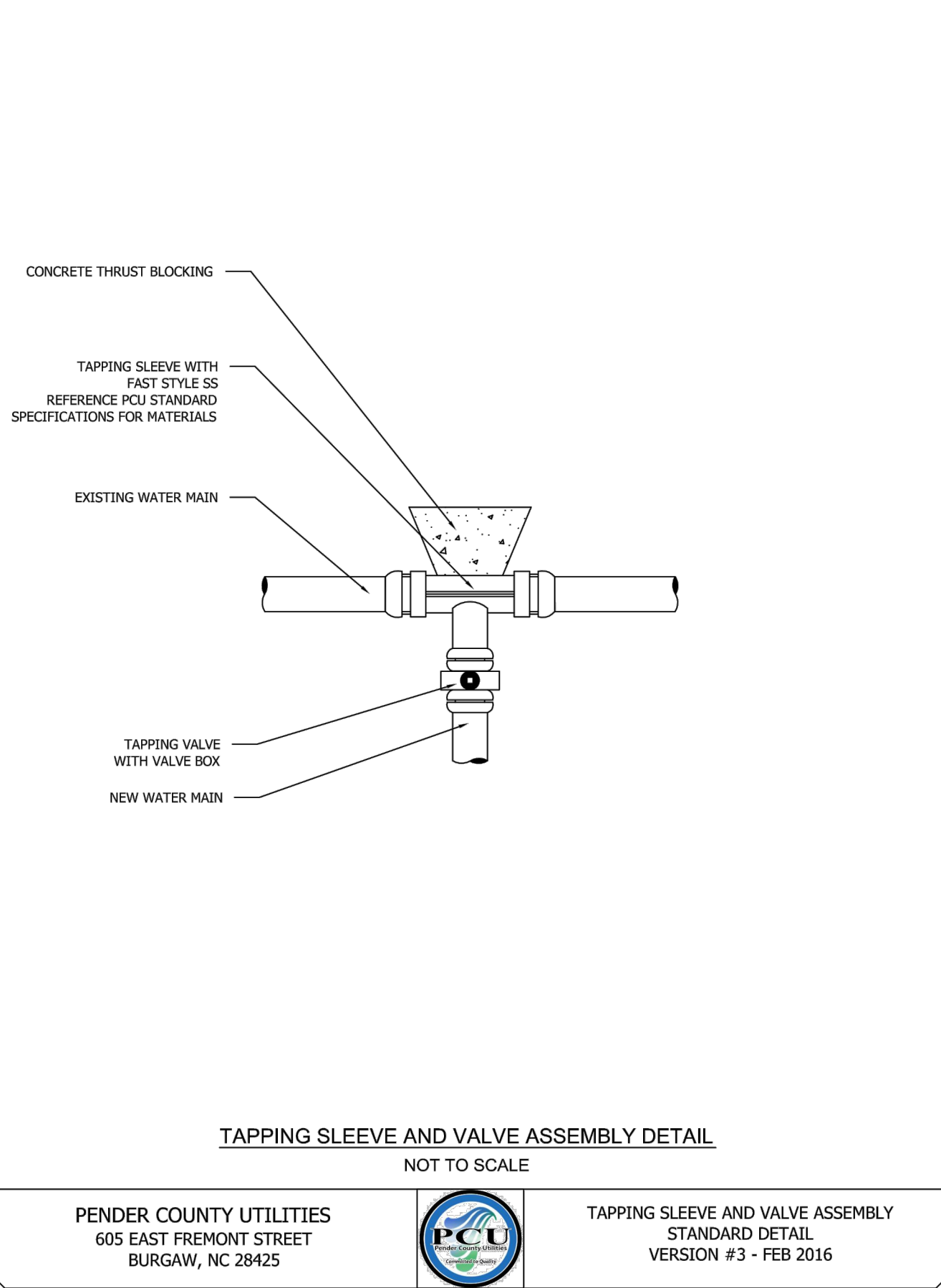


2-INCH WATER SERVICE STANDARD DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

2-INCH WATER SERVICE STANDARD DETAIL
VERSION #1 - AUGUST 2010

2 2-INCH WATER SERVICE

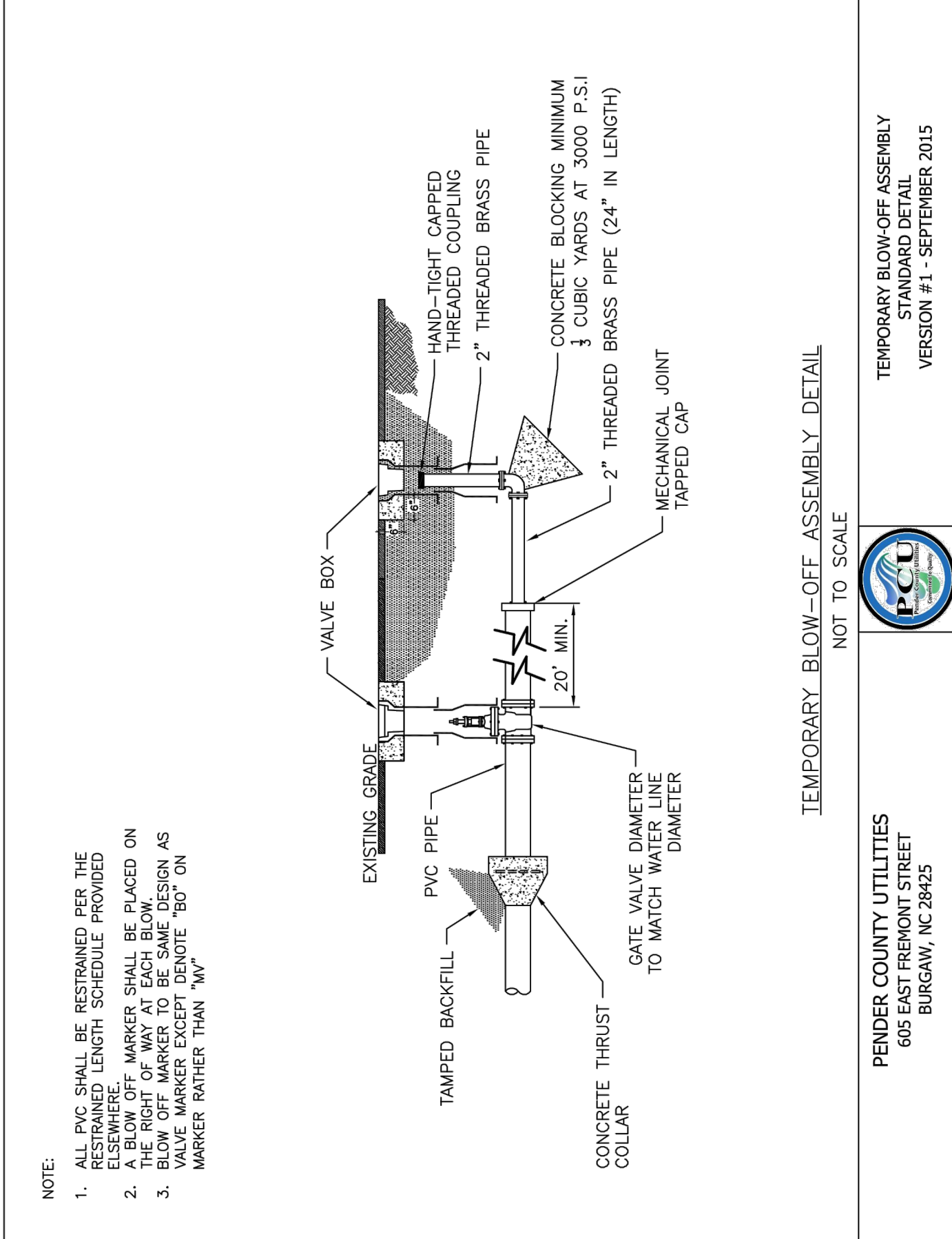


TAPPING SLEEVE AND VALVE ASSEMBLY STANDARD DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

TAPPING SLEEVE AND VALVE ASSEMBLY STANDARD DETAIL
VERSION #3 - FEB 2016

7 TAPPING SLEEVE AND VALVE ASSEMBLY

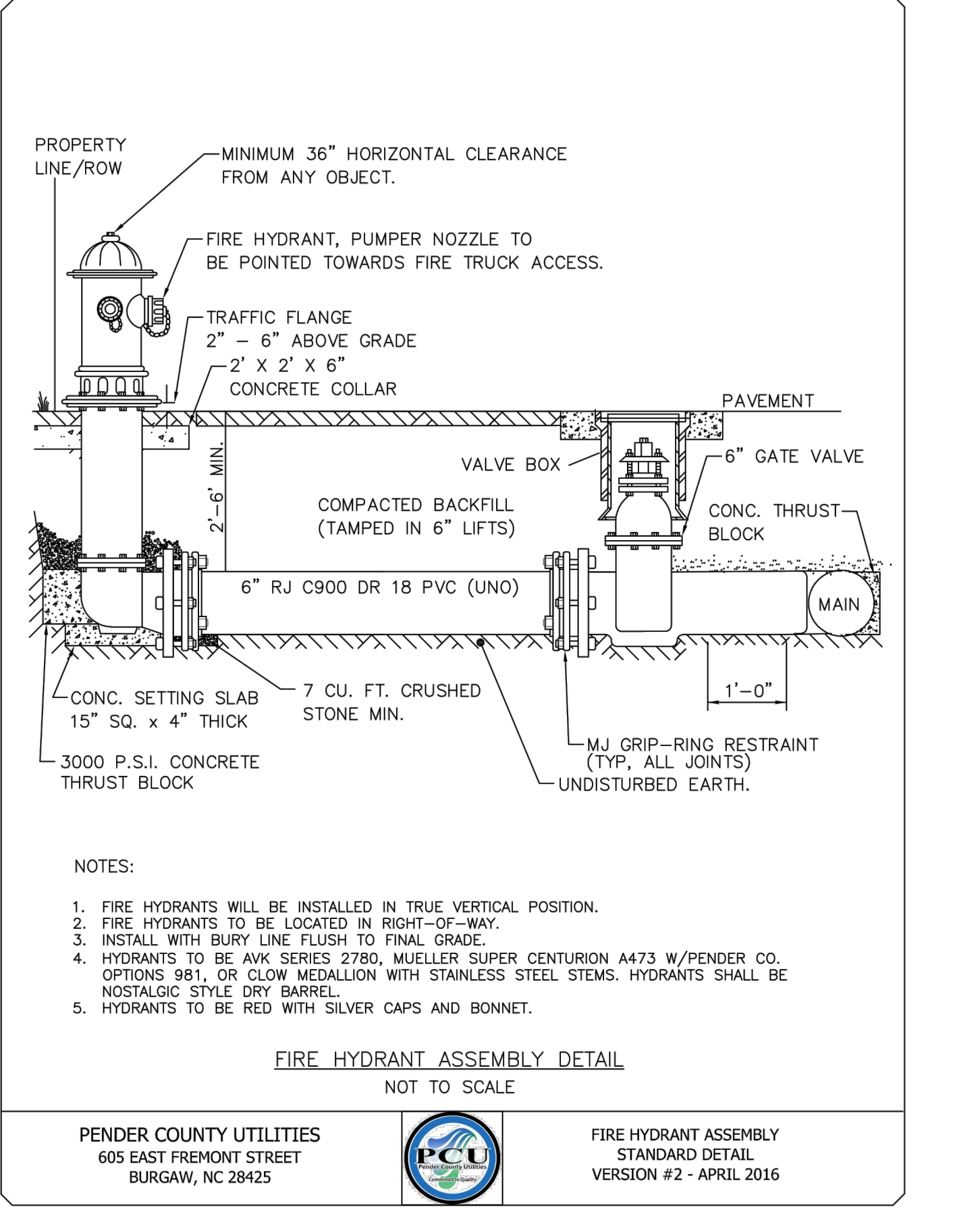


TEMPORARY BLOW-OFF ASSEMBLY DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

TEMPORARY BLOW-OFF ASSEMBLY DETAIL
VERSION #1 - SEPTEMBER 2015

5 TEMPORARY BLOW-OFF ASSEMBLY



FIRE HYDRANT ASSEMBLY STANDARD DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

FIRE HYDRANT ASSEMBLY STANDARD DETAIL
VERSION #2 - APRIL 2016

3 FIRE HYDRANT ASSEMBLY

PCU STANDARD NOTES

1. A PRE-CONSTRUCTION MEETING IS REQUIRED BEFORE BEGINNING WORK. THE MEETING MUST BE SCHEDULED WITH PENDER COUNTY UTILITIES (PCU) AT LEAST ONE WEEK IN ADVANCE. ATTENDEES MUST INCLUDE PCU, THE UTILITY CONTRACTOR'S SUPERINTENDENT, THE SUPPLIER, AND THE CONSULTING ENGINEER.
2. ALL MATERIALS USED SHALL CONFORM TO PENDER COUNTY UTILITIES REQUIREMENTS. NON-CONFORMING MATERIAL WILL NOT BE ACCEPTED FOR FINAL CERTIFICATION.
3. ALL PIPE SHALL BE C900 DR18 PVC, UNLESS OTHERWISE NOTED (SEE PCU STANDARD DETAIL). PVC PIPE TO BE SDR 21 WHERE C900 IS UNAVAILABLE. THE USE OF DUCTILE IRON PIPE (DIP) IS REQUIRED UNDER PAVED AREAS. PCU MUST APPROVE THE USE OF DIP IN THE FIELD BEFORE INSTALLATION IN OTHER LOCATIONS.
4. PCU STANDARD WATERLINE PIPE RESTRAINING METHOD IS MJ GRIP RINGS. AT A MINIMUM ALL FITTINGS, VALVES, ETC. MUST BE RESTRAINED (SEE PCU STANDARD DETAIL).
5. PCU MUST INSPECT CASING INSTALLATIONS PRIOR TO BACKFILL. PCU MUST WITNESS PRESSURE TESTS, AND WITHDRAWAL OF BACTERIOLOGICAL SAMPLES. CONTACT PCU UTILITIES INSPECTOR TO SCHEDULE.
6. CLOSE-OUT DOCUMENTS WHICH MUST BE RECEIVED PRIOR TO PCU SIGNING THE NCDEQ PWSS APPLICANT CERTIFICATION INCLUDE: BACTERIOLOGICAL TESTS, PRESSURE TESTS, DEED OF DEDICATION, AFFIDAVIT/RELEASE OF LIENS, WARRANTY, AND RECORD DRAWINGS (PDF & CAD).
7. AN 18-MONTH WARRANTY PERIOD APPLIES TO ALL WATERLINE CONSTRUCTION. THIS WARRANTY PERIOD DOES NOT BEGIN UNTIL FINAL APPROVAL OF THE SYSTEM HAS BEEN RECEIVED FROM NCDEQ PWSS.

STANDARD NOTES
PCU WATER SYSTEMS
VERSION #3 - APRIL 2022

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
PO BOX 995, BURGAW, NC 28425

1 STANDARD NOTES

REV NO.	DESCRIPTIONS/REVISIONS	DATE

243 North Front Street
Wilmington, North Carolina 28401
Phone: (910)343-1048, Fax: (910)251-8282
License: F-1222
www.mckimcreed.com

HAMPSTEAD STATION, LLC

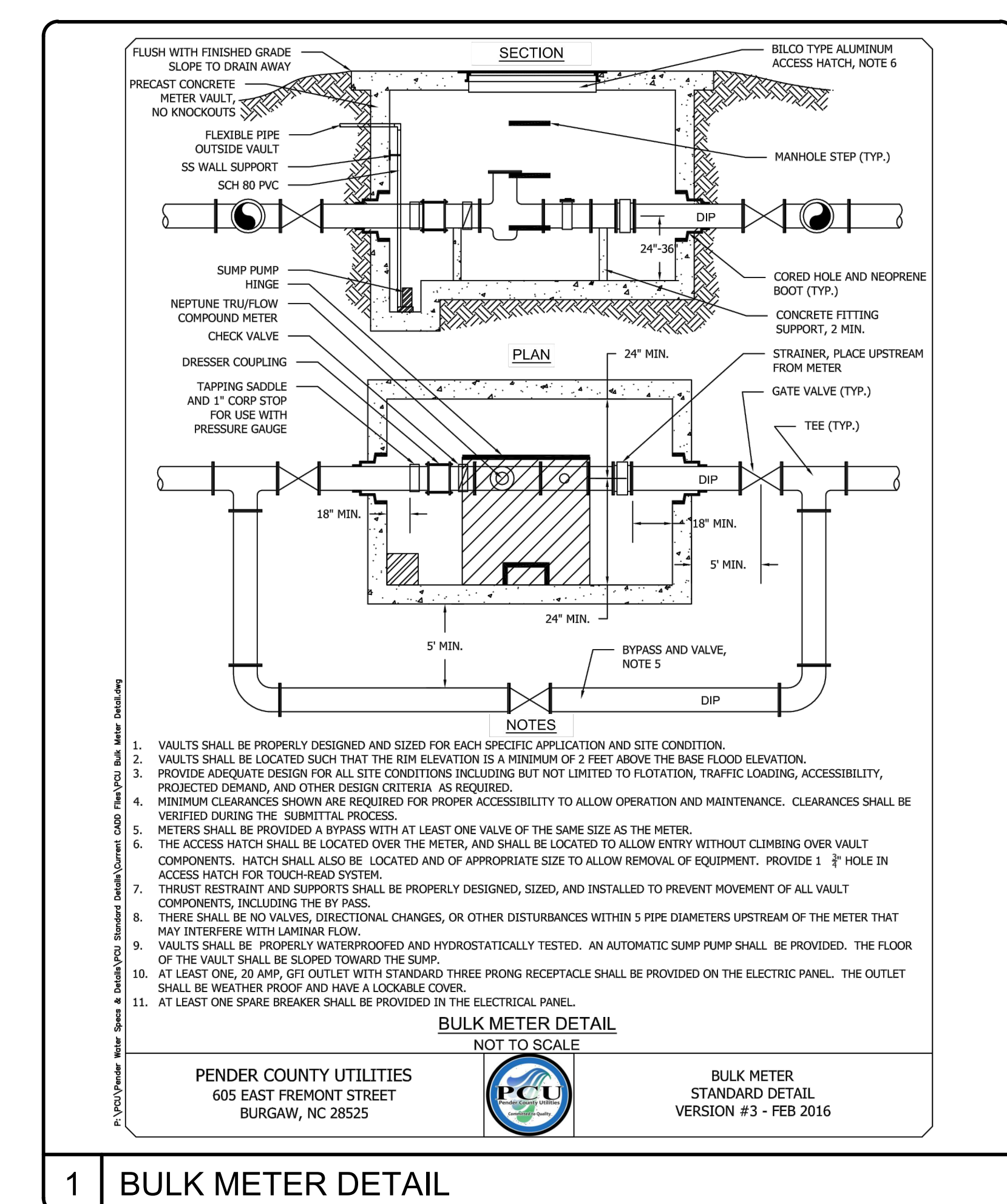
OYSTER CREEK LANDING
US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

UTILITY DETAILS

DATE: 06/07/2023	SCALE: C14.0
MCE PROJ. #: 09110-0001	HORIZONTAL: --
DRAWN: DCO/ALM	VERTICAL: --
DESIGNED: ALM/THL	REVISION: --
CHECKED: THL	
PROJ. MGR: RMC	

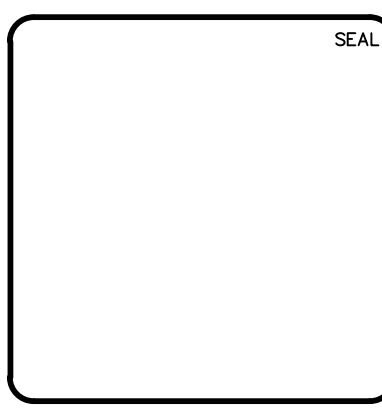
STATUS: SDP 2022-305 PERMIT SET

I:\091100001\ENG\80-DRAWINGS\81-Production_Sheets\2-Working_Dwgs\C14.0 UTILITY DETAIL.dwg, 6/7/2023 2:24:56 PM, _DWG To PDF-2016.pc3



1 BULK METER DETAIL

REV NO.	DESCRIPTIONS	DATE



MCKIM & CREED
 243 North Front Street
 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: F-1222
 www.mckimcreed.com

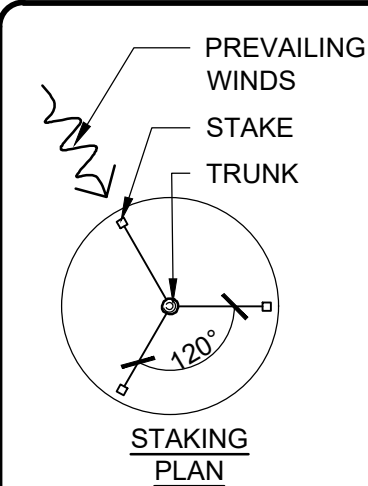
HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
 US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

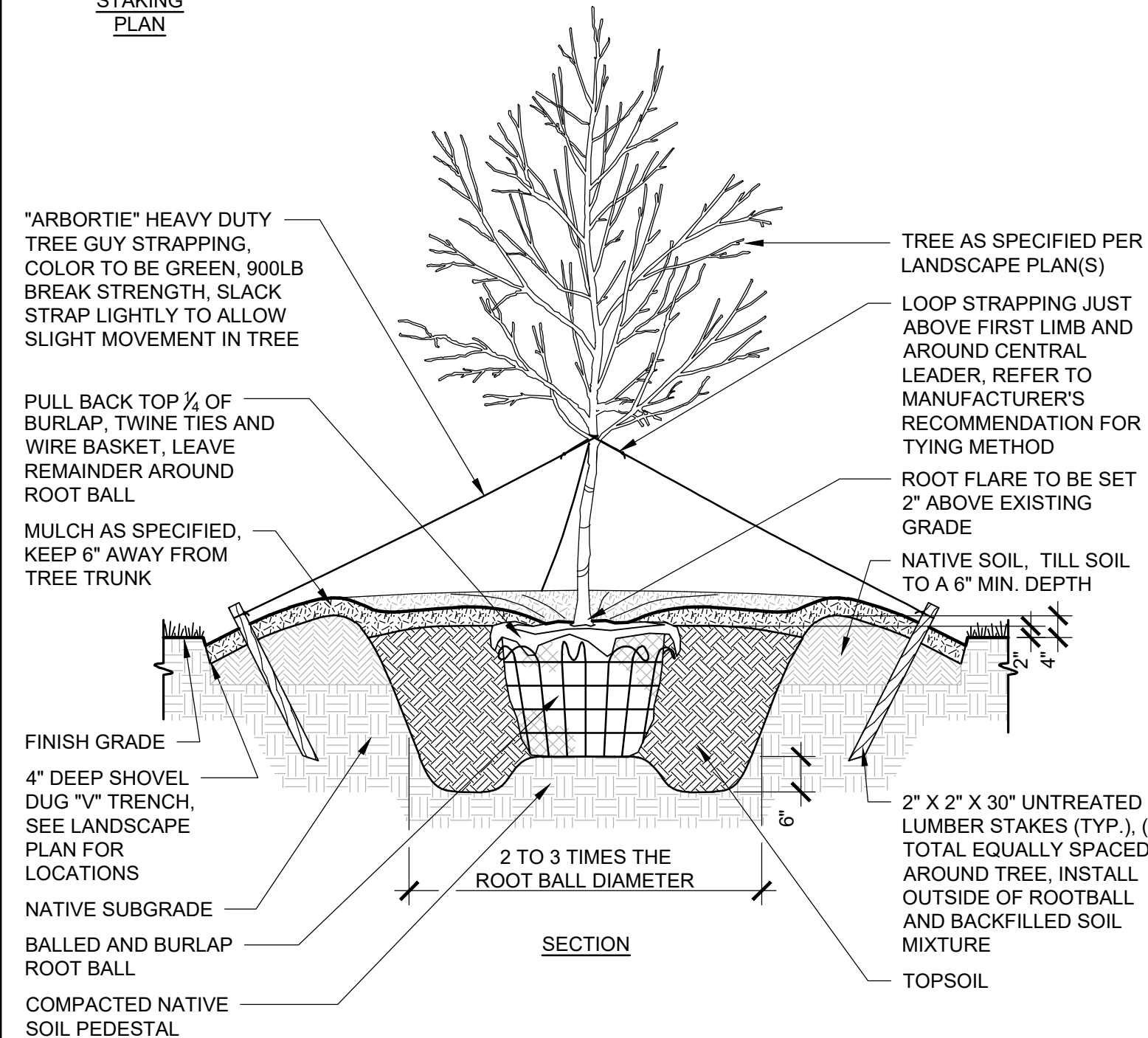
UTILITY DETAILS

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DRAWN: DCO/ALM	VERTICAL: --
DESIGNED: ALM/THL	REVISION: ----
CHECKED: THL	
PROJ. MGR: RMC	
STATUS: SDP 2022-305 PERMIT SET	

- ALL EXISTING VEGETATION THAT IS USED TO MEET LANDSCAPING REQUIREMENTS, ALL REQUIRED PLANTED LIVING MATERIAL, AND ALL REQUIRED BERMS SHALL BE MAINTAINED BY THE OWNER OF THE PROPERTY ON A CONTINUING BASIS. ANY PLANTED MATERIAL WHICH BECOMES DAMAGED OR DISEASED OR DIES SHALL BE REPLACED BY THE OWNER WITHIN 60 DAYS OF THE OCCURRENCE OF SUCH CONDITION. IF, IN THE OPINION OF THE ZONING ADMINISTRATOR THERE ARE SEASONAL CONDITIONS WHICH WILL NOT PERMIT THE TIMELY REPLACEMENT OF THE VEGETATION (E.G. TOO HOT OR TOO COOL FOR SUCCESSFUL REPLANTING) THIS REQUIREMENT MAY BE ADMINISTRATIVELY WAIVED UNTIL A TIME CERTAIN WHEN THE REPLANTING WOULD BE SUCCESSFUL.
- VERIFICATION OF TOTAL LANDSCAPE MATERIAL QUANTITIES AS SHOWN ON THE LANDSCAPE PLANS AND IN THE PLANT SCHEDULE SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES PRIOR TO FINAL BIDDING OR INSTALLATION.
- ALL PLANTING TYPES SHALL COMPLY WITH LOCAL GOVERNING CODES AND REGULATIONS, CONFORM TO REQUIREMENTS OF PLANT LIST AND TO THE AMERICAN ASSOCIATION OF NURSERYMEN "AMERICAN STANDARD OF NURSERY STOCK" AND "HORTICULTURAL STANDARDS" AS TO SPECIES, AGE, SIZE, AND PLANTING RECOMMENDATIONS.
- LANDSCAPE MATERIAL PLACED IN PREPARED HOLES SHALL BE PROPERLY BACKFILLED PRIOR TO THE END OF THE WORKING DAY.
- ALL SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING INSTALLATION.
- LANDSCAPE ARCHITECT SHALL APPROVE ANY ON-SITE PLANT STORAGE AREA FOR ACCESSIBILITY, SHADE CONDITIONS, HEALING-IN MULCH MATERIAL AND TEMPORARY WATERING METHODS.
- ALL ROPE AND WRAPPING TWINE SHALL BE CUT AND REMOVED FROM AROUND THE UPPER PARTS OF THE ROOT BALL. METAL BASKET WIRES AND BURLAP SHALL BE PULLED BACK AND TUCKED UNDER THE EDGES OF THE SAUCER RINGS ON ALL TREES AND LARGE SHRUBS. ALL SYNTHETIC BURLAP SHALL BE REMOVED FROM PLANT BALLS PRIOR TO BACK FILLING.
- ALL PLANT BEDS OR RAISED SAUCER RINGS SHALL BE EDGED WITH SMOOTH, CONTINUOUS CURVES.
- ALL PLANT MATERIAL SHALL BE PLANTED AT HEIGHTS AND WIDTHS AS ILLUSTRATED IN PLANTING DETAILS.
- TREE GUYING SHALL BE PERFORMED WITHIN A WEEK OF PLANTING. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL TREE GUYING STRAPPING AND STAKES AFTER THE FIRST FULL GROWING SEASON OR ONE YEAR, WHICH EVER COMES FIRST.
- CONTRACTOR SHALL VERIFY LOCATIONS OF UNDERGROUND UTILITIES PRIOR TO PLANTING.
- ANY EXPOSED OR UNCOVERED LINES SHALL BE SHOWN TO GENERAL CONTRACTOR PRIOR TO BACKFILLING.
- ALL PLANT BEDS AND RAISED SAUCER RINGS SHALL BE GRADED TO PROVIDE ADEQUATE DRAINAGE AND SHALL BE MULCHED AS SPECIFIED.
- ALL MATERIALS, PLANTING AND LANDSCAPE WORK SHALL CONFORM TO THE CURRENT MUNICIPAL AUTHORITIES STANDARD SPECIFICATIONS AND DETAILS.
- ALL LANDSCAPE AREAS THAT ARE NOT PLANTED, MULCHED OR PAVED SHALL BE SEEDED OR SODDED.
- FIRST YEAR PRUNING OF TREE CROWN SHALL BE LIMITED TO REMOVAL OF DEAD & DAMAGED WOOD.
- TREE PROTECTION FENCE SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO CLEARING, GRADING AND CONSTRUCTION ACTIVITY OR ISSUANCE OF ANY RELATED PERMITS. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN THE TREE PROTECTION FENCING.
- MULCH LINE SHALL CONSIST OF SMOOTH CONTINUOUS CURVES.
- ALL TREES NOT WITHIN A PLANT BED SHALL BE TREATED WITH A 6" DIAMETER MULCH RING TYPICAL, UNLESS OTHERWISE INDICATED ON THE PLANTING PLANS.
- TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR AS OTHERWISE DICTATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
- SUBSTITUTIONS OF PLANT MATERIALS SPECIFIED CAN ONLY OCCUR WITH PRIOR APPROVAL BY LANDSCAPE ARCHITECT.
- ESTABLISH PLANT BED CONFIGURATION. LANDSCAPE ARCHITECT TO APPROVE BED LAYOUT IN FIELD.
- AREAS DAMAGED BY ACTIVITIES OF CONTRACTOR SHALL BE RE-ESTABLISHED TO PRE-DISTURBANCE CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- USE HERBICIDES, PESTICIDES, AND FERTILIZER IN A MANNER CONSISTENT WITH THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT AND IN ACCORDANCE WITH LABEL RESTRICTIONS.
- CONTRACTOR SHALL INSURE THAT ALL PLANT MATERIAL IS FREE OF FIRE ANTS PRIOR TO INSTALLATION.
- LANDSCAPE ARCHITECT OR OWNER SHALL APPROVE PLACEMENT OF TREES PRIOR TO PLANTING.
- STREET TREES SHALL BE MAINTAINED TO PROVIDE 13'-6" CLEAR HEIGHT FOR THE PORTION OF THE TREE CANOPY THAT EXTENDS OVER THE VEHICULAR NETWORK.
- STREET TREES SHALL BE LOCATED A MINIMUM OF 15 FEET FROM STREETLIGHTS.
- LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS. A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF THE HYDRANT AND FDC.
- DEEPROOT ROOT BARRIER OR APPROVED EQUAL SHALL BE INSTALLED AT ALL STREET TREE LOCATIONS AND WHERE A TREE IS WITHIN 10' OF A UTILITY OR HARDCAPE. THE ROOT BARRIER SHALL BE INSTALLED ACCORDING TO MANUFACTURER RECOMMENDATION.
- LANDSCAPE CONTRACTOR SHALL PROVIDE IRRIGATION DESIGN AND INSTALL IRRIGATION SYSTEM.
- MULCH SHALL BE SHREDDED HARDWOOD, SPREAD AT THICKNESS OF 3" DEEP ACROSS PLANTING AREAS.

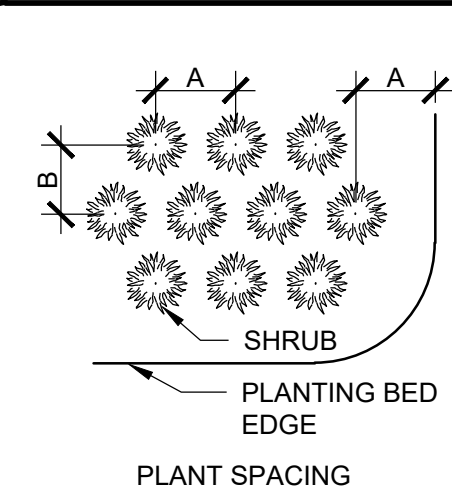


- GENERAL NOTES:**
- TREE TO BE STRAIGHTENED PRIOR TO BACKFILL AND GUYING
 - SCARIFY BOTTOM AND SIDES OF PLANT PIT.
 - STAKE AND GUY TREE 3" CALIPER OR GREATER, OR TREES IN WINDING LOCATIONS AS DIRECTED BY LANDSCAPE ARCHITECT.
 - DO NOT WRAP TREE TRUNK.
 - MARK NORTH SIDE OF TREE AT NURSERY AND PLANT WITH MARKING FACING NORTH.
 - BACKFILL PLANTING PITS WITH TOPSOIL MIXTURE AS SPECIFIED, PACK SOIL AROUND BASE OF ROOTBALL TO STABILIZE, INSTALL REMAINDER IN 6" LAYERS, HAND TAMP TO REMOVE VOIDS AND WATER EACH LAYER



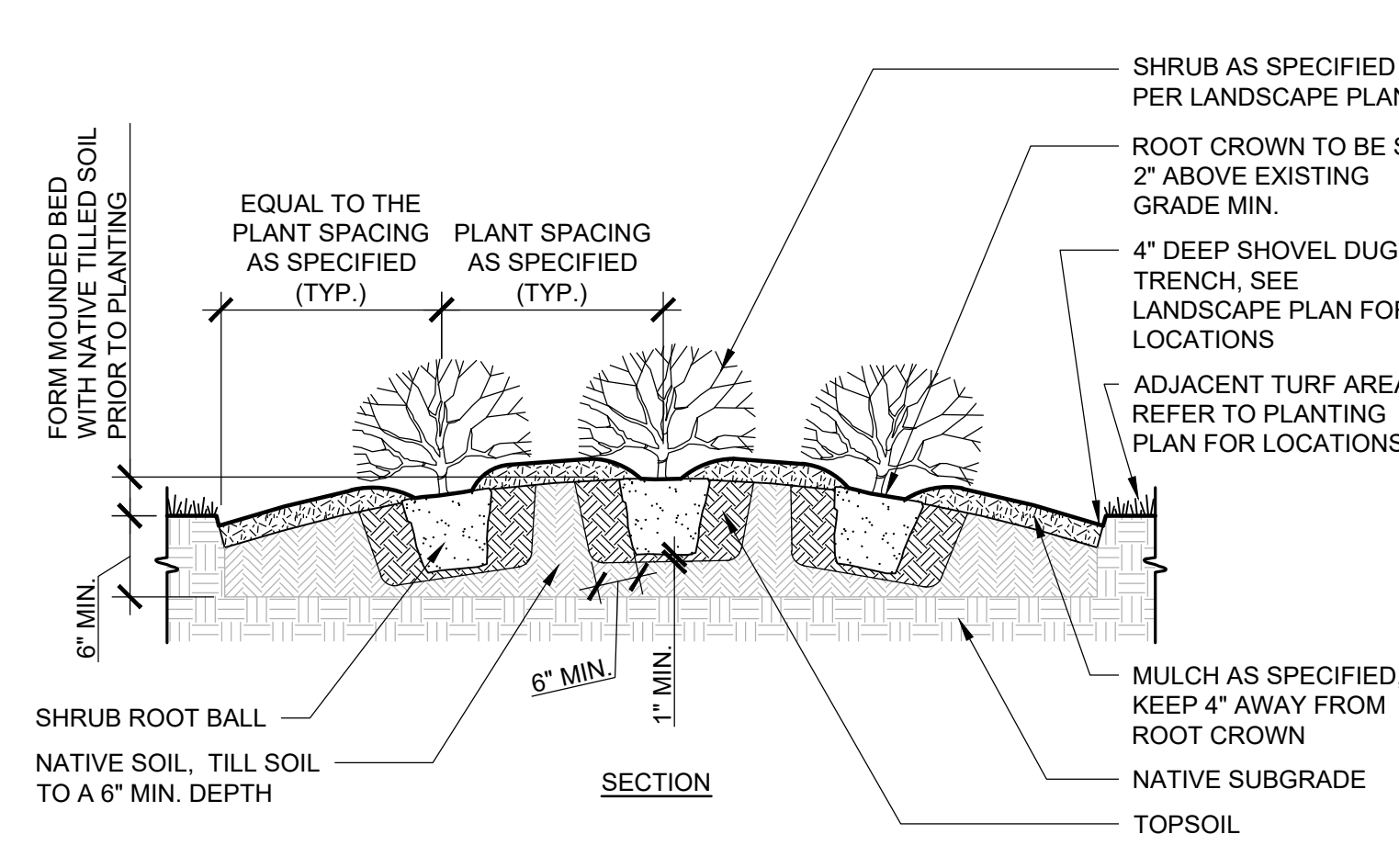
4 GENERAL LANDSCAPE NOTES

3 TYPICAL TREE PLANTING



SPACING (A)	ROW OFFSET (B)	SPACING (A)	ROW OFFSET (B)
1'-0" O.C.	10" O.C.	5'-0" O.C.	4'-4" O.C.
1'-6" O.C.	1'-4" O.C.	6'-0" O.C.	5'-2" O.C.
2'-0" O.C.	1'-9" O.C.	7'-0" O.C.	6'-1" O.C.
2'-6" O.C.	2'-2" O.C.	8'-0" O.C.	6'-11" O.C.
3'-0" O.C.	2'-7" O.C.	9'-0" O.C.	7'-10" O.C.
3'-6" O.C.	3'-0" O.C.	10'-0" O.C.	8'-8" O.C.
4'-0" O.C.	3'-6" O.C.		

- GENERAL NOTES:**
- SCARIFY BOTTOM AND SIDES OF PLANTING PIT.
 - THE BOTTOM OF SHRUB ROOT BALLS SHALL NOT PROJECT INTO THE NATIVE SUBGRADE. LARGER PLANTS WILL REQUIRE ADDITIONAL TOPSOIL DEPTH.
 - BACKFILL PLANTING PITS WITH TOPSOIL MIXTURE AS SPECIFIED, INSTALL IN 6" LAYERS, HAND TAMP TO REMOVE VOIDS AND WATER EACH LAYER
 - ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED BY HAND PRIOR TO PLACEMENT AND BACKFILLING WITH PREPARED SOILS. HAND TOOLS SHALL NOT BE USED TO SCARIFY ROOT BALLS.



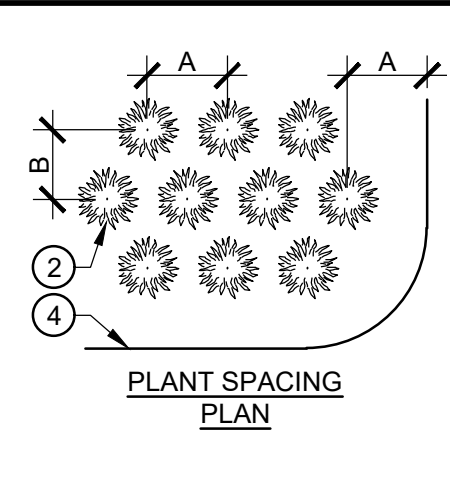
2 TYPICAL SHRUB PLANTING

CANOPY TREE	SIZE	CALIPER	HEIGHT	QTY	REMARKS
MAGNOLIA GRANDIFLORA 'BRACKENS BROWN BEAUTY'	B & B	2" CAL.	10'-12' HT.	14	SINGLE DOMINANT LEADER, UNIFORM CANOPY & MATCHED
BRACKEN'S SOUTHERN MAGNOLIA	B & B	2" CAL.	10'-12' HT.	14	SINGLE DOMINANT LEADER, UNIFORM CANOPY & MATCHED
QUERCUS NIGRA WATER OAK	B & B	2" CAL.	10'-12' HT.	54	SINGLE DOMINANT LEADER, UNIFORM CANOPY & MATCHED
QUERCUS VIRGINIANA SOUTHERN LIVE OAK	B & B	2" CAL.	10'-12' HT.	8	SINGLE DOMINANT LEADER, UNIFORM CANOPY & MATCHED
ULMUS PARVIFOLIA 'ALLEE'	B & B	2" CAL.	10'-12' HT.		
ALLEE LACEBARK ELM	B & B	2" CAL.	10'-12' HT.		
UNDERSTORY TREES	SIZE	CALIPER	HEIGHT	QTY	REMARKS
CHIONANTHUS VIRGINICUS AMERICAN FRINGE TREE	B & B	1.5" CAL.	4' HT. MIN.	15	UNIFORM CANOPY & MATCHED
LAGERSTROEMIA INDICA 'WHIT III'	B & B	1.5" CAL.	4' HT. MIN.	7	MULTI-STEM, 3 TRUNK MINIMUM, UNIFORM CANOPY & MATCHED.
PINK VELOUR® CRAPE MYRTLE	B & B	1.5" CAL.	4' HT. MIN.		
MAGNOLIA GRANDIFLORA 'LITTLE GEM'	B & B	1.5" CAL.	4' HT. MIN.	12	SINGLE DOMINANT LEADER, UNIFORM CANOPY, FULL TO GROUND & MATCHED
DWARF SOUTHERN MAGNOLIA	B & B	1.5" CAL.	4' HT. MIN.		

SHRUBS	SIZE	HEIGHT	SPREAD	SPACING	QTY	REMARKS
BUXUS MICROPHYLLA 'WINTERGREEN'	7 GAL.	24" HT. MIN.	24"-30" SPD.	3' O.C.	87	MATCHED
WINTERGREEN BOXWOOD						
ILEX GLABRA 'SHAMROCK'	3 GAL.	24" HT. MIN.	24"-30" SPD.	3.5' O.C.	154	UNIFORM HEAD & MATCHED
INKBERRY						
ILEX VOMITORIA 'NANA'	7 GAL.	24" HT. MIN.	18"-24" SPD.	3' O.C.	79	UNIFORM HEAD & MATCHED
DWARF YAUPON						
PODOCARPUS MACROPHYLLUS MAKI	7 GAL.	24" HT. MIN.	24"-30" SPD.	3' O.C.	174	UNIFORM HEAD & MATCHED
SHRUBBY YEWE						
ROSA X 'MEIGALPIO'™	3 GAL.	12"-15" HT.	12"-15" SPD.	2.5' O.C.	81	UNIFORM HEAD & MATCHED
RED DRIFT GROUNDCOVER ROSE						

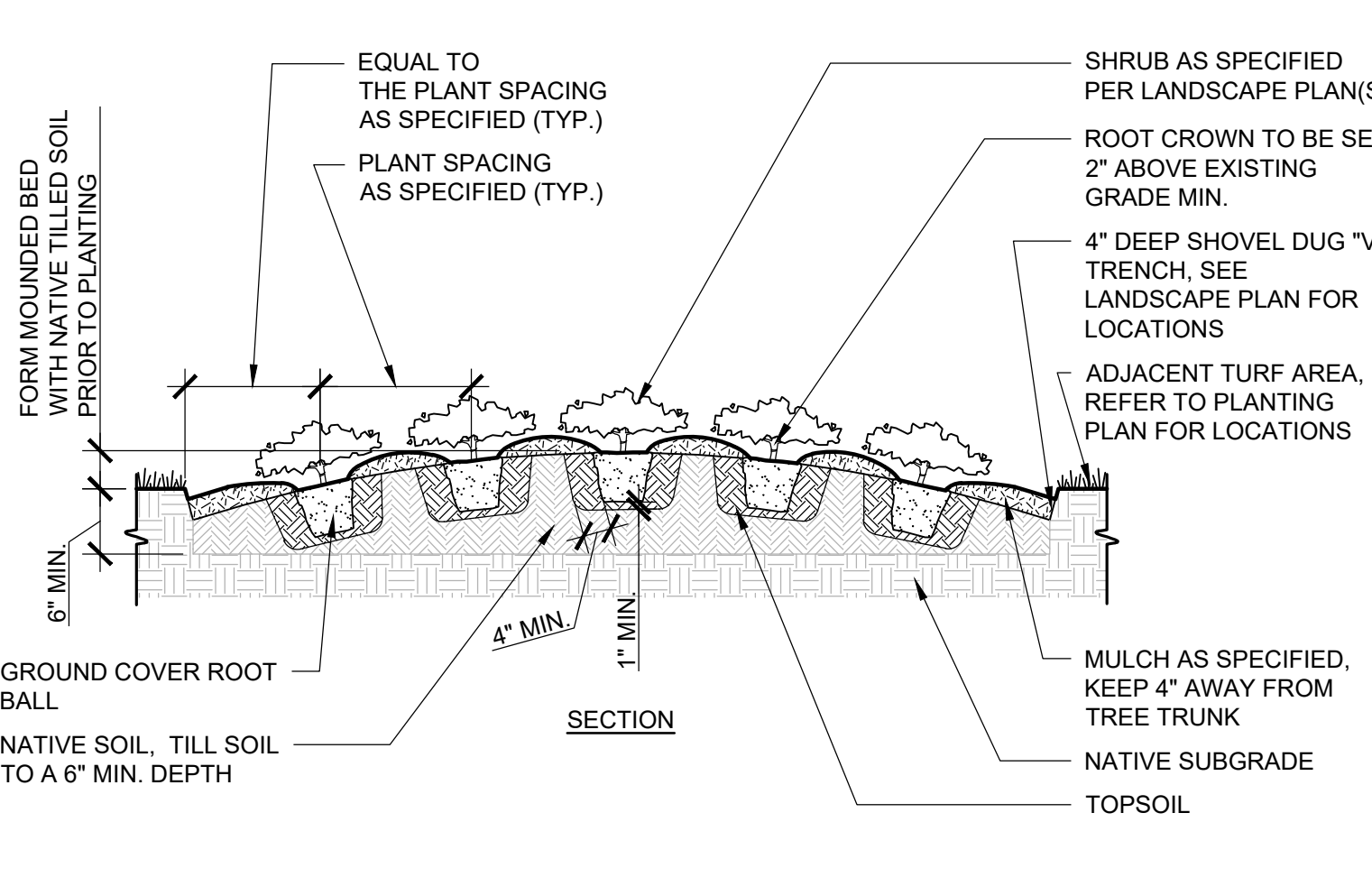
GROUND COVERS	SIZE	SPACING	QTY	REMARKS
CYNODON DACTYLON BERMUDAGRASS	SOD	-	51,646 SF	
LIRIOPE MUSCARI 'BIG BLUE'	1 QT.	15" O.C.	1,904	MATCHED
LIRIOPE				

5 PLANT LEGEND



SPACING (A)	ROW OFFSET (B)	SPACING (A)	ROW OFFSET (B)
6" O.C.	5" O.C.	24" O.C.	1'-9" O.C.
8" O.C.	7" O.C.	36" O.C.	2'-7" O.C.
12" O.C.	10" O.C.	4'-0" O.C.	3'-6" O.C.
15" O.C.	1'-1" O.C.	5'-0" O.C.	4'-4" O.C.
18" O.C.	1'-4" O.C.	6'-0" O.C.	5'-2" O.C.

- GENERAL NOTES:**
- SCARIFY BOTTOM AND SIDES OF PLANTING PIT.
 - THE BOTTOM OF GROUND COVER ROOT BALLS SHALL NOT PROJECT INTO THE NATIVE SUBGRADE. LARGER PLANTS WILL REQUIRE ADDITIONAL TOPSOIL DEPTH.
 - BACKFILL PLANTING PITS WITH TOPSOIL MIXTURE AS SPECIFIED, INSTALL IN 6" LAYERS, HAND TAMP TO REMOVE VOIDS AND WATER EACH LAYER
 - ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED BY HAND PRIOR TO PLACEMENT AND BACKFILLING WITH PREPARED SOILS. HAND TOOLS SHALL NOT BE USED TO SCARIFY ROOT BALLS.



1 TYPICAL GROUND COVER PLANTING

REV. NO.	DESCRIPTIONS	DATE



MCKIM & CREED
 243 North Front Street
 Wilmington, North Carolina 28401
 Phone: (910)343-1048, Fax: (910)251-8282
 License: F-1222
 www.mckimcreed.com

HAMPSTEAD STATION, LLC

OYSTER CREEK LANDING
 US HIGHWAY 17, HAMPSTEAD, PENDER COUNTY, NORTH CAROLINA

LANDSCAPE DETAILS

DATE: 05/31/2023	SCALE: HORIZONTAL: 1"=30'	C17.0
MCE PROJ. #: 09110-0001	VERTICAL: --	DRAWING NUMBER
DRAWN: DCO/ALM		REVISION
DESIGNED: ALM/THL		
CHECKED: THL		
PROJ. MGR: RMC		
STATUS: ISSUED FOR BIDS		