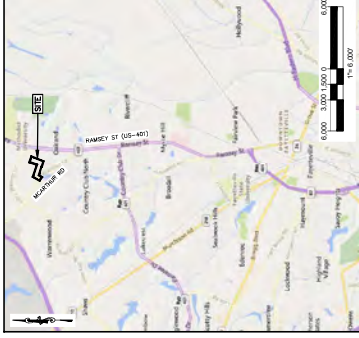


POINT OF DELIVERY 5 (POD 5) CIVIL/GRADING BID DRAWINGS

FAYETTEVILLE, NORTH CAROLINA FOR FAYETTEVILLE PUBLIC COMMISSION FAYETTEVILLE, NORTH CAROLINA



PREPARED BY:



VICINITY MAP
FAYETTEVILLE, CUMBERLAND COUNTY, NC
SCALE: 1"=6,000'

SHEET INDEX

CC001	COVER SHEET
CC002	CONSTRUCTION SEQUENCE, LEGEND, AND NOTES
CC003	GROUND STABILIZATION AND MATERIALS HANDLING
CC004	SELF-INSPECTION, RECORD KEEPING, AND RECORDING
CC005	EXISTING SITE CONDITIONS
CC010	PRE-CLEARING PROJECT DRAINAGE ANALYSIS
CC020	SITE PLAN
CC201	EROSION AND SEDIMENT CONTROL PLAN - CONSTRUCTION PHASE 1 (THIS CONTRACT)
CC202	EROSION AND SEDIMENT CONTROL PLAN - CONSTRUCTION PHASE 2 (THIS CONTRACT)
CC300	GRADING PLAN-ACCESS DRIVES
CC301	GRADING PLAN-SUBSTATION
CC400	ACCESS DRIVE PROFILES
CC401	SUBSTATION PAD PROFILES
CC402	SUBSTATION PAD CROSS-SECTIONS
CC500	Basin Details
CC501	Basin Details
CC600	Grading and Erosion Control Details
CC601	Grading and Erosion Control Details
CC602	Grading and Erosion Control Details
CC603	Grading and Erosion Control Details
CC604	Grading and Erosion Control Details

PROJECT DATA:
PROJECT NAME: POINT OF DELIVERY 5 (POD 5)
DRAWING TITLE: COVER SHEET

PROJECT LOCATION:
CUMBERLAND COUNTY, NC
3148 ACRES

PROPOSED DISTURBANCE AREA:
28311 SOUTHLAND DRIVE
FAYETTEVILLE, NC 28311 (NORTH ENTRANCE)
700 MCARTHUR ROAD
FAYETTEVILLE, NC 28301 (SOUTH ENTRANCE)

COUNTY:
CUMBERLAND COUNTY

12'-0" O.C. HIC INTERSPACED:
16'-0" O.C. HIC INTERSPACED:
8'-0" O.C. HIC INTERSPACED:

CUMBERLAND COUNTY ZONING:
OVERLAY DISTRICT INFORMATION:
RESIDENTIAL, R2A (CUMBERLAND); MIXED RESIDENTIAL, 5 (FAYETTEVILLE)
PROPERTY SHOWN ON THIS PLAN/PLOT IS NOT WITHIN A CUMBERLAND COUNTY OVERLAY DISTRICT

PROPOSED USE:
ELECTRIC UTILITY SUBSTATION

SETBACKS:
FRONT: 10'
SIDE: 10'
REAR: 10'

ADDITIONAL REQUIREMENTS:
100' SETBACK FOR SUBSTATION (PER FAYETTEVILLE ORDINANCE 30-4.5.3.1)

DEVELOPER:
FAYETTEVILLE PUBLIC WORKS COMMISSION

CONTACT:
DAVID BESHAMPS
FAYETTEVILLE, NC 28301
DAVID.BESHAMPS@PWCOM.COM

ENGINEER:
LAURA B. JARRIS, PE
BOOTH & ASSOCIATES, LLC
2300 REXWOODS DRIVE SUITE 300
RALEIGH, NC 27607 919-861-8770
LBOOTH@BOOTHANDASSOCIATES.COM

LAY/ONG
35.127897, -78.883656

PROJECT INFORMATION:
DRAWN BY: REA
CHECKED BY: BJC
DATE: 11/27/2024
AS SHOWN: 12/22/2024
SHEET NUMBER: 02/22/2024
SHEETS: CC001

PROJECT NAME:
POINT OF DELIVERY 5 (POD 5)
DRAWING TITLE:
COVER SHEET

NO. ISSUED FOR BID: 0
NO. REVISIONS: 0
DATE: 11/27/2024
DATE: 04/10/2024
DATE: 02/22/2024

PROFESSIONAL SEAL:
LAURA B. JARRIS, PE
NO. 145748
EXPIRES: 12/31/2026

811
KNOW WHAT'S BELOW
BEFORE YOU DIG
CALL 811
BEFORE YOU DIG

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCGO1 CONSTRUCTION GENERAL PERMIT

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCGO1 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

SECTION E: GROUND STABILIZATION	
Required Ground Stabilization Timeframes	
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7
(b) High Quality Water (HQW) Zones	7
(c) Slopes steeper than 3:1	7
(d) Slopes 3:1 to 4:1	14
(e) Areas with slopes flatter than 4:1	14

Timeframe variations

- None
- None
- If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
- 7 days for slopes greater than 50' in length and with slopes steeper than 4:1
- 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones
- 10 days for Falls Lake Watershed
- 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones
- 10 days for Falls Lake Watershed unless there is zero slope

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

GROUND STABILIZATION SPECIFICATION

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

Temporary Stabilization	Permanent Stabilization
<ul style="list-style-type: none"> Temporary erosion control products with straw or other mulch and tackifiers Hydroseeding Roller erosion control products with or without temporary grass seed Approximately applied straw or other mulch Plastic sheeting 	<ul style="list-style-type: none"> Permanent grass seed concrete with straw or other mulch and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Shrubs or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or retaining walls Roller erosion control products with grass seed

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

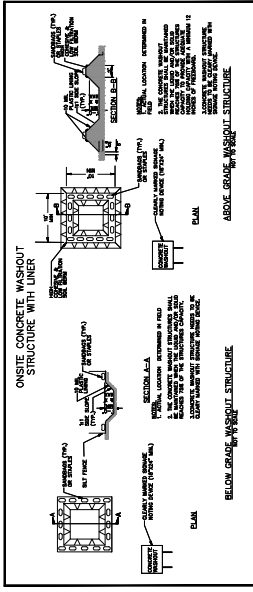
- EQUIPMENT AND VEHICLE MAINTENANCE**
- Maintain vehicles and equipment to prevent discharge of fluids.
 - Provide drip pans under any stored equipment.
 - Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
 - Collect all spent fluids, store in separate containers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

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

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

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

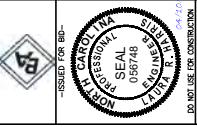
- EARTHEN STOCKPILE MANAGEMENT**
- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
 - Protect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



- CONCRETE WASHOUTS**
- Do not discharge concrete or cement slurry from the site.
 - Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
 - Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
 - Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
 - Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
 - Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
 - Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
 - Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
 - Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
 - At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

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

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

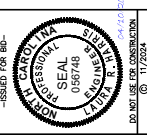


NO.	ISSUED FOR BID	REVISIONS
1	11/19/2024	
2	04/18/2025	
3		
4		
5		
6		
7		
8		
9		
10		

PROJECT NAME:	POINT OF DELIVERY 5 (POD 5)
PROJECT TITLE:	GROUND STABILIZATION AND MATERIALS HANDLING
DRAWN BY:	BOA
CHECKED BY:	BOA
DATE:	11/19/2024
SCALE:	N.T.S.
FILE NUMBER:	10222202
SHEET:	CG003

EFFECTIVE: 04/01/19

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING



NO.	ISSUED FOR BID	DATE	REVISIONS
1	ISSUED FOR BID	04/11/2024	
2	ISSUED FOR BID	11/19/2023	
3	ISSUED FOR BID	04/11/2024	

PROJECT NAME: POINT OF DELIVERY 5 (POD 5)
 DRAWN BY: BSA
 CHECKED BY: BSA
 DATE: 11/19/2024
 SCALE: N.T.S.
 SHEET NUMBER: 05222502
 SHEET: CG004

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING
1. Occurrences that Must be Reported
 Permittees shall report the following occurrences:
 (a) Visible sediment deposition in a stream or wetland.
 (b) Oil spills if:
 • They are 25 gallons or more,
 • They are less than 25 gallons but cannot be cleaned up within 24 hours,
 • They cause sheen on surface waters (regardless of volume), or
 • They are within 100 feet of surface waters (regardless of volume).
 (c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
 (d) Anticipated bypasses and unanticipated bypasses.
 (e) Noncompliance with the conditions of this permit that may endanger health or the environment.

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

NO.	ISSUED FOR BID	DATE	REVISIONS
1	ISSUED FOR BID	04/11/2024	
2	ISSUED FOR BID	11/19/2023	
3	ISSUED FOR BID	04/11/2024	

REPORTING TIMEFRAMES (After Discovery) and Other Requirements

- **Within 24 hours**, an oral or electronic notification.
- **Within 7 calendar days**, a report that contains a description of the sediment and action taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.
- If the stream is named on the [NC 303\(d\) list](#) as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections, or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
- **Within 24 hours**, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
- **A report at least ten days before the date of the bypass, if possible.** The report shall include an evaluation of the anticipated quality and effect of the bypass.
- **Within 24 hours**, an oral or electronic notification.
- **Within 7 calendar days**, a report that includes an evaluation of the quality and effect of the bypass.
- **Within 24 hours**, an oral or electronic notification.
- **Within 7 calendar days**, a report that contains a description of the noncompliance, and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. (40 CFR 122.41(i)(6)).
- Division staff may waive the requirement for a written report on a case-by-case basis.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

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

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

2. Additional Documentation to be Kept on Site
 In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:
 (a) This General Permit as well as the Certificate of Coverage, after it is received.
 (b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.
3. Documentation to be Retained for Three Years
 All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. (40 CFR 122.41)

PART II, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

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

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

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

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

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unobserved days. If no rain is reported, the measurement shall be recorded as "zero." The permittee may use another rain-measuring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event > 2.0 inch in 24 hours	1. Identification of the measures inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indicator of whether the measures were operating properly. 5. Description of maintenance needs for the measures. 6. Description, address, and date of corrective actions taken.
(3) Stormwater discharge outlets (DOs)	At least once per 7 calendar days and within 24 hours of a rain event > 2.0 inch in 24 hours	1. Identification of the discharge outlets inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids, or discoloration. 5. Indicator of visible sediment leaving the site. 6. Description, address, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event > 2.0 inch in 24 hours	1. Actions taken to clean up or stabilize the sediment that has left the site limits. 2. Description, evidence, and date of corrective actions taken, and an explanation as to the actions taken to control future releases.
(5) Streams or wetlands (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event > 2.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activities, the permittee shall record the following: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, item (2)(b) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phases of grading and grubbing, installation of storm drainage facilities, completion of all non-disturbing activities, construction or redevelopment, permanent ground cover). 2. Measures that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

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

PROFESSIONAL SEAL
 BOOTH & ASSOCIATES
 11/22/2024

NO.	REVISIONS	ENG. DATE	APP. DATE
1	ISSUED FOR BID	11/19/2023	
2	REVISED FOR BID	04/16/2024	

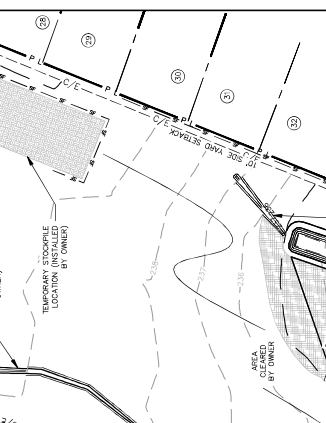
EXISTING SITE CONDITIONS

PROJECT NAME: POINT OF DELIVERY 5 (POD 5) MARTURR ROAD

DRAWN BY: BKA
 CHECKED BY: BKA
 DATE: 11/27/2024
 SCALE: 1" = 100'
 FILE NUMBER: 10222502
 SHEET: CC100

CUMBERLAND COUNTY, NORTH CAROLINA

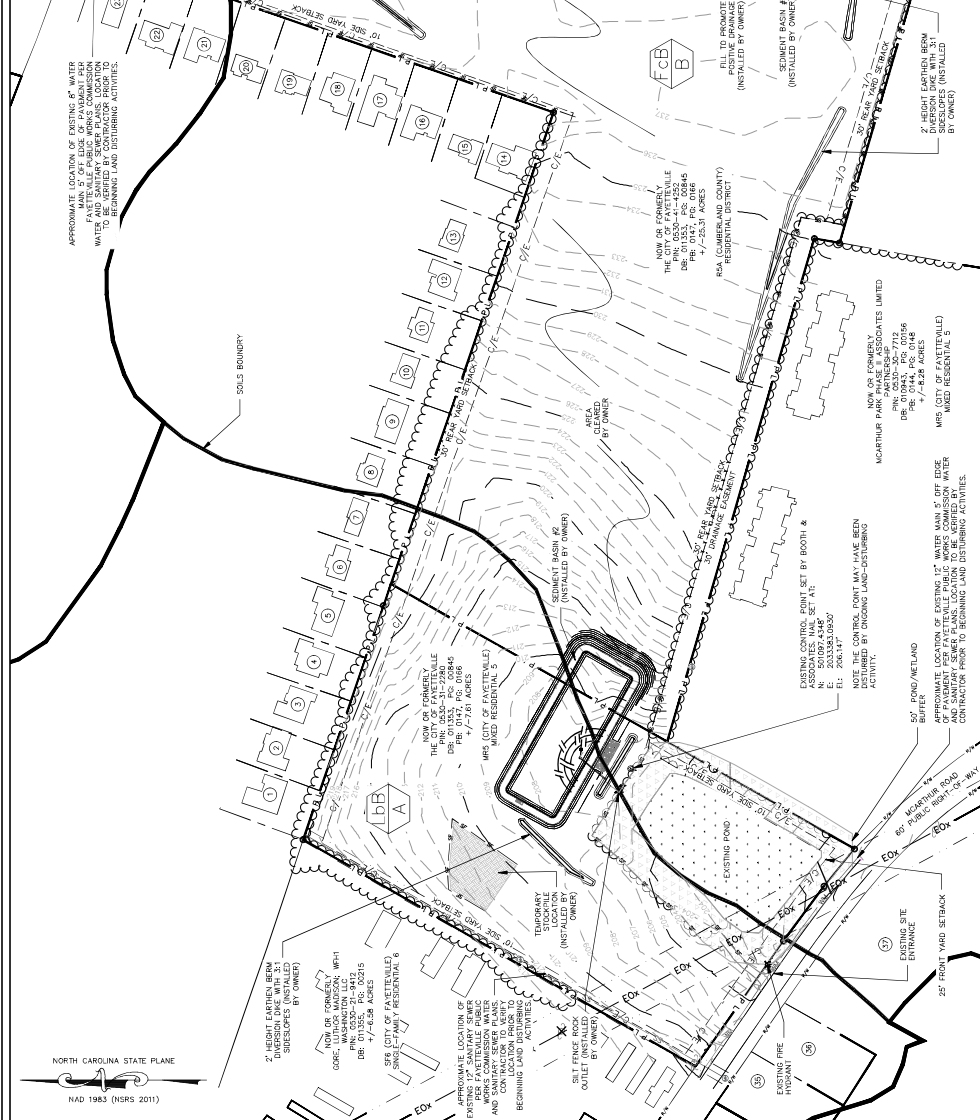
MAP UNIT SYMBOL	MAP UNIT NAME	ADRES IN ADI	PERCENT OF ADRES IN ADI
F59	FACILE-URBAN LAND COMPLEX, 0 TO 6 PERCENT SLOPES	23.01	74.51%
L18	WATERSHED URBAN LAND COMPLEX, 1 TO 8 PERCENT SLOPES	6.63	21.47%
W19	WATERSHED URBAN LAND COMPLEX, 0 TO 6 PERCENT SLOPES	1.24	4.02%
TOTALS FOR AREA OF INTEREST			100.00%



- NOTES:
- LAND BOUNDARIES, PROPERTY LINES, AND POINTS ARE FOR REFERENCE ONLY.
 - PROPERTY IS SUBJECT TO ALL EASEMENTS OF RECORD.
 - COORDINATES FROM CONTROL POINTS SHOWN ARE BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM (NAD 1983) AND ARE BOUND COORDINATES.
 - EXISTING UTILITIES SHOWN ARE BASED ON RECORD DRAWINGS AND FIELD SURVEY. SHOWN UTILITIES NOT SHOWN ON RECORD DRAWINGS SHOULD BE VERIFIED BY FIELD SURVEY. EXISTING UTILITIES NOT SHOWN ON RECORD DRAWINGS SHOULD BE VERIFIED BY FIELD SURVEY. EXISTING UTILITIES NOT SHOWN ON RECORD DRAWINGS SHOULD BE VERIFIED BY FIELD SURVEY.
 - EXISTING UTILITIES AND SERVICE MAIN LOCATIONS SHOWN ARE APPROXIMATE AND WERE OBTAINED FROM RECORDS PROVIDED TO BOTH BY FAYETTEVILLE PUBLIC WORKS DEPARTMENT AND BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY. DATE OF JULY 15, 1983 AND "SOUTH AND NORTH 60° 29' 29" PAT. (N.C. 1983) BEARING A DATE OF AUGUST, 1983. EXISTING UTILITIES OBTAINED FROM AN UNDATED REPORT ENTITLED "REQUEST FOR PRELIMINARY GEOGRAPHICAL DETERMINATION FOR 700 MARTURR ROAD" BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY. DATE OF 07/27/2024. THE DIGIT, WHICH IS IDENTIFIED HEREON, IS THAT SHOWN ON A MAP DATED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY. DATE OF 07/27/2024. THE DIGIT, WHICH IS IDENTIFIED HEREON, IS THAT SHOWN ON A MAP DATED BY THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY. DATE OF 07/27/2024.
 - THE SUBJECT TRACT IS WITHIN AN AREA OF ANIMAL FLOOD HAZARD (ZONE X).
 - NO WATER OR SEWER LINES ARE PROPOSED FOR THIS PROJECT. EXISTING WATERS AND SEWER LINES SHOWN ARE APPROXIMATE LOCATIONS. SEE FAYETTEVILLE PUBLIC WORKS DEPARTMENT RECORDS FOR EXISTING WATERS AND SEWER LINES. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN AND NOT SHOWN IN THE PLANS ARE APPROXIMATE AND SHOULD BE VERIFIED BY FIELD SURVEY.
 - TOPOGRAPHY, EDGE OF PAVEMENT OR MARKING ROAD, EDGE OF CURB AND EDGE OF DRIVEWAY, AND EXISTING ROAD LOCATIONS, EDGE OF DRIVEWAY, AND EXISTING UTILITY AND GAS MAIN PROPERTY BOUNDARIES WERE LOCATED ON OR ABOUT 08/01/2024. ASSOCIATED SURVEY FIELD NOTES WERE PERFORMED IN SEPTEMBER 2024 AND OCTOBER 2025. ALL LOCATIONS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED BY FIELD SURVEY.
 - WERE OBTAINED FROM CUMBERLAND COUNTY GIS.

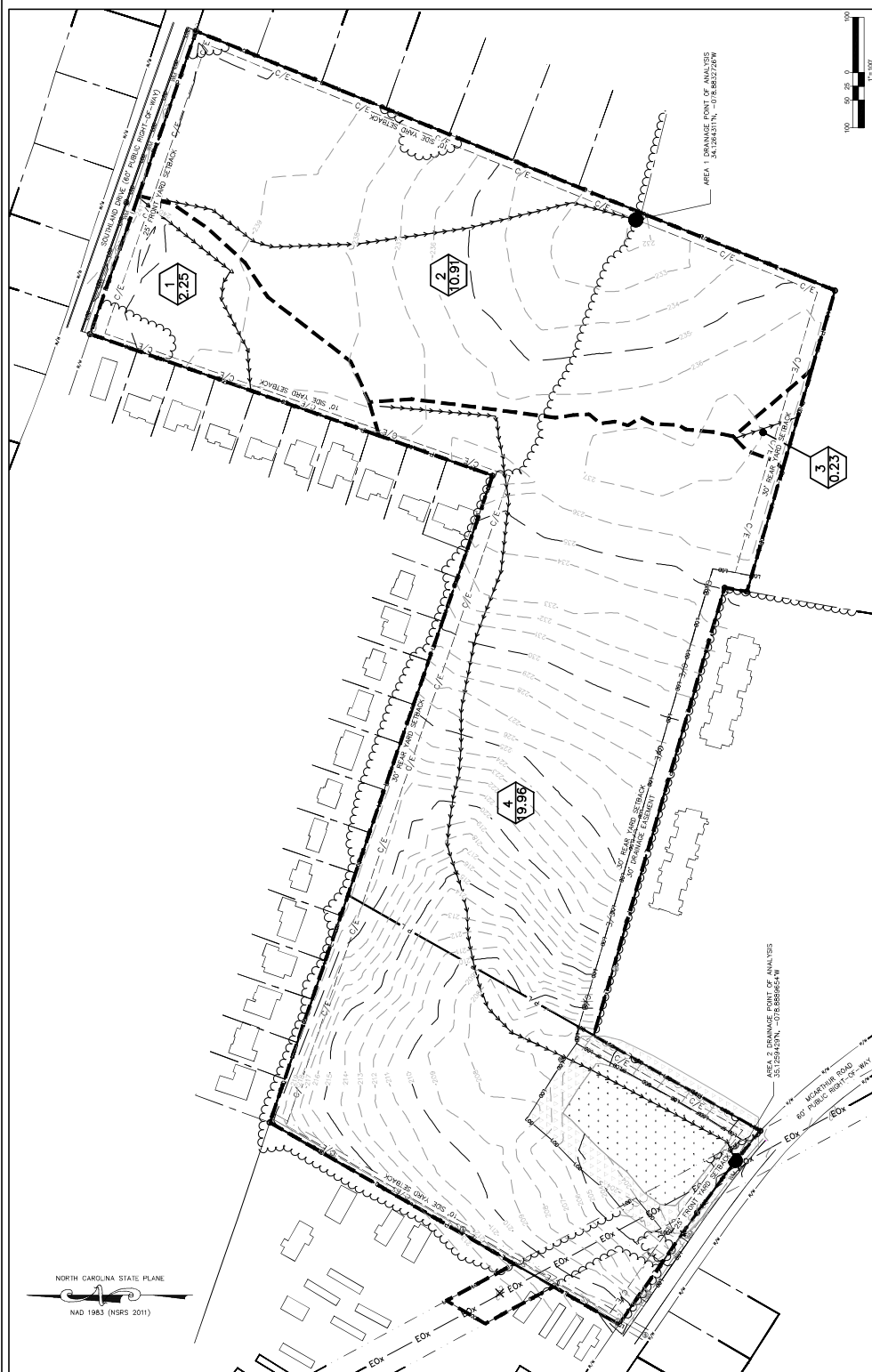
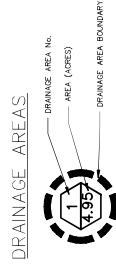
REFERENCES

CONSTRUCTION SEQUENCE, LEGEND, AND NOTES:.....00002



#	OWNER (NOW OR FORMERLY)	ADRES	ZONING/FAYETTEVILLE	ACRES	#	OWNER (NOW OR FORMERLY)	ADRES	ZONING/FAYETTEVILLE	ACRES
1	FRANCIS, KATHLEEN A	0530-31-4637	02832/ 0795	0086/ 0018	20	MITCHELL, CYNTHIA	0530-41-0731	01159/ 0054	0084/ 0332
2	HAYWOOD, BERBIDA	0530-31-4638	00685/ 0140	0066/ 0018	21	CUMMINGS, WYNN LYNN	0530-41-0736	00523/ 0059	0084/ 0332
3	BEST INVESTMENT REALTY LLC	0530-31-4637	01199/ 0054	0066/ 0018	22	GREENE, PHOENIA M	0530-41-0886	005145/ 0132	0084/ 0332
4	THOMPSON, JOSEPH E; THOMPSON, DEBORA D	0530-31-4640	004405/ 0847	0088/ 0028	23	MATHIS, BEATRICE MARBEE	0530-42-8024	01199/ 0462	0084/ 0332
5	KING, JOSEPH P; KING, DEBRA L	0530-31-4627	004177/ 0613	0088/ 0028	24	COATES, BRANDY S	0530-42-8024	01199/ 0571	0025/ 0058
6	MITCHELL, JUSTIN ZAMAR	0530-31-7524	010774/ 0599	0088/ 0028	25	BERMAN, NEWMAN L	0530-41-1223	01152/ 0004	0025/ 0058
7	RUZ, BENJAMIN TOMAS	0530-31-7527	011967/ 0624	0088/ 0028	26	BARBOUR, CAROLYN; BARBOUR, HAROLD W	0530-51-0989	009827/ 0809	0025/ 0058
8	LUNDY, JOHN A	0530-31-4639	004277/ 0545	0067/ 0028	27	SABIN, ARTHUR W; SABA, PATRICIA A	0530-51-2803	008267/ 0246	0025/ 0058
9	LIGHTFOOT, ANDREW; LIGHTFOOT, STEPHAN	0530-31-4636	010297/ 0505	0067/ 0028	28	ALLAN, MARION	0530-51-2807	008257/ 0109	0025/ 0058
10	PARRISH, JAMES S; PARRISH, MICHELLE R	0530-41-0414	007179/ 0274	0067/ 0028	29	WILSON, JAMES W	0530-51-5406	011782/ 0319	0025/ 0058
11	CAUGHTER, THOMAS W II	0530-41-0413	004465/ 0278	0067/ 0028	30	BALDWIN, A	0530-51-5403	011782/ 0306	0025/ 0058
12	MITCHELL, PHASE J; MITCHELL, BRANDA E	0530-41-2548	000715/ 0099	0088/ 0028	31	CHALMERS, A	0530-51-5403	011782/ 0306	0025/ 0058
13	RUZ, LUDAR H	0530-41-2548	000883/ 0519	0088/ 0028	32	JAMES, CAROLLE	0530-01-1223	008456/ 0774	0025/ 0058
14	SMITH, JAMES ROBERT	0530-41-2548	011107/ 0621	0088/ 0028	33	DORE, LUTHER M JR; GORE, SHARON KENDALL	0530-01-1079	003807/ 0815	0025/ 0058
15	ARNOLD, CARROLL E	0530-41-4433	007286/ 0021	0088/ 0028	34	JONES, RONNIE S; JONES, STACY K	0530-50-0268	008097/ 0446	0025/ 0058
16	HENDERSON, ROBERT; REDDERS, H	0530-41-4430	004415/ 0447	0088/ 0028	35	BURNETT, JONES	0530-20-8836	014454/ 0303	N/A
17	WHITE, JAMES O	0530-41-4437	006465/ 0552	0084/ 0332	36	WESTON, JOSEPH F; WESTON, ALMA JEAN	0530-20-8810	008306/ 0478	N/A
18	ANKS, STEVE M; ANKS, BRICETE C	0530-41-4604	004434/ 0707	0084/ 0332	37	CRYSTAL LAKE OWNER LLC	0530-39-8882	011432/ 0740	0132/ 0041

NO.	REV.	DATE	DESCRIPTION
0	ISSUED FOR BID	11/19/2023	
1	REISSUED FOR BID	04/17/2024	

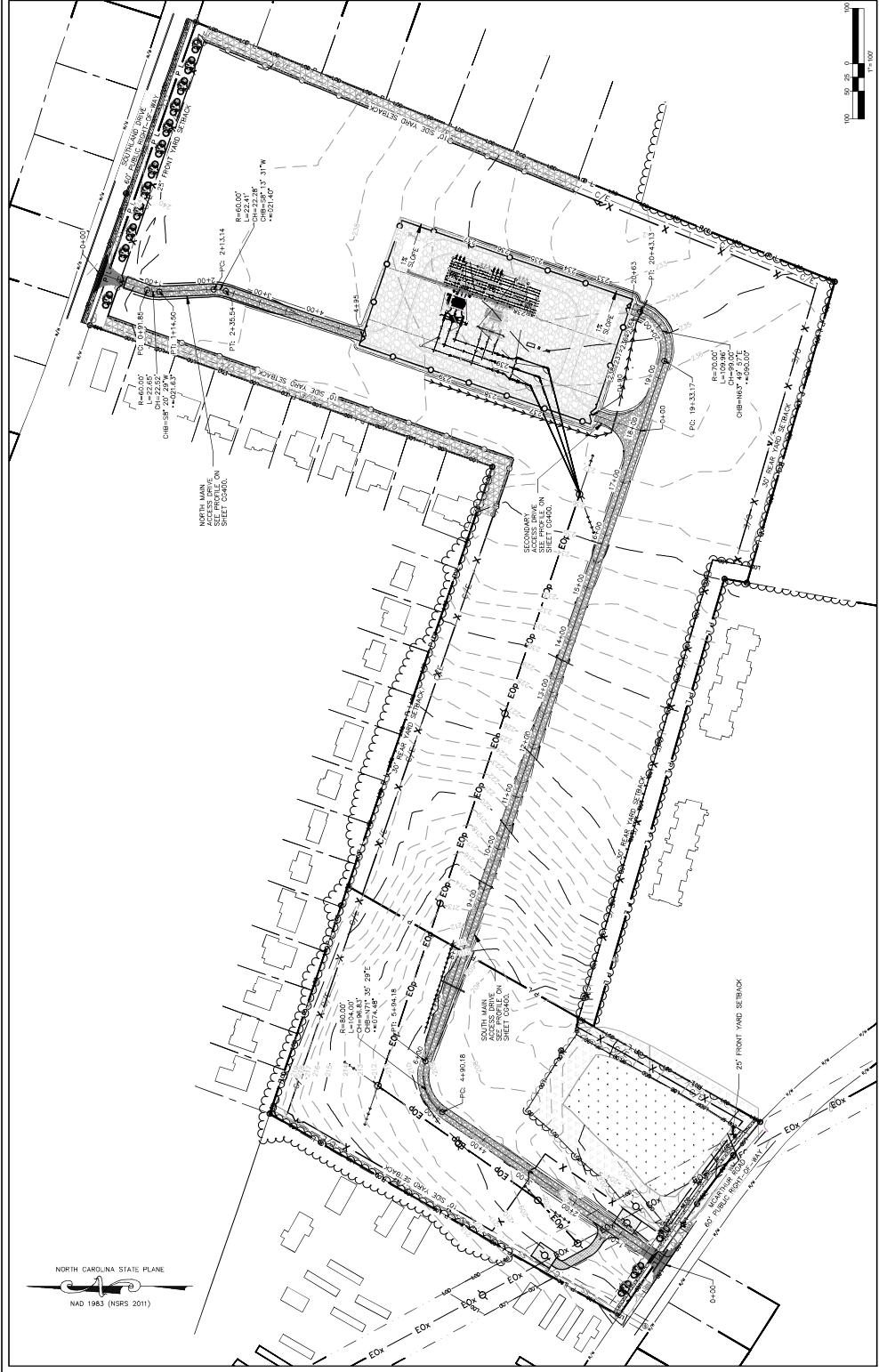


PRE-CLEARING DRAINAGE SUMMARY

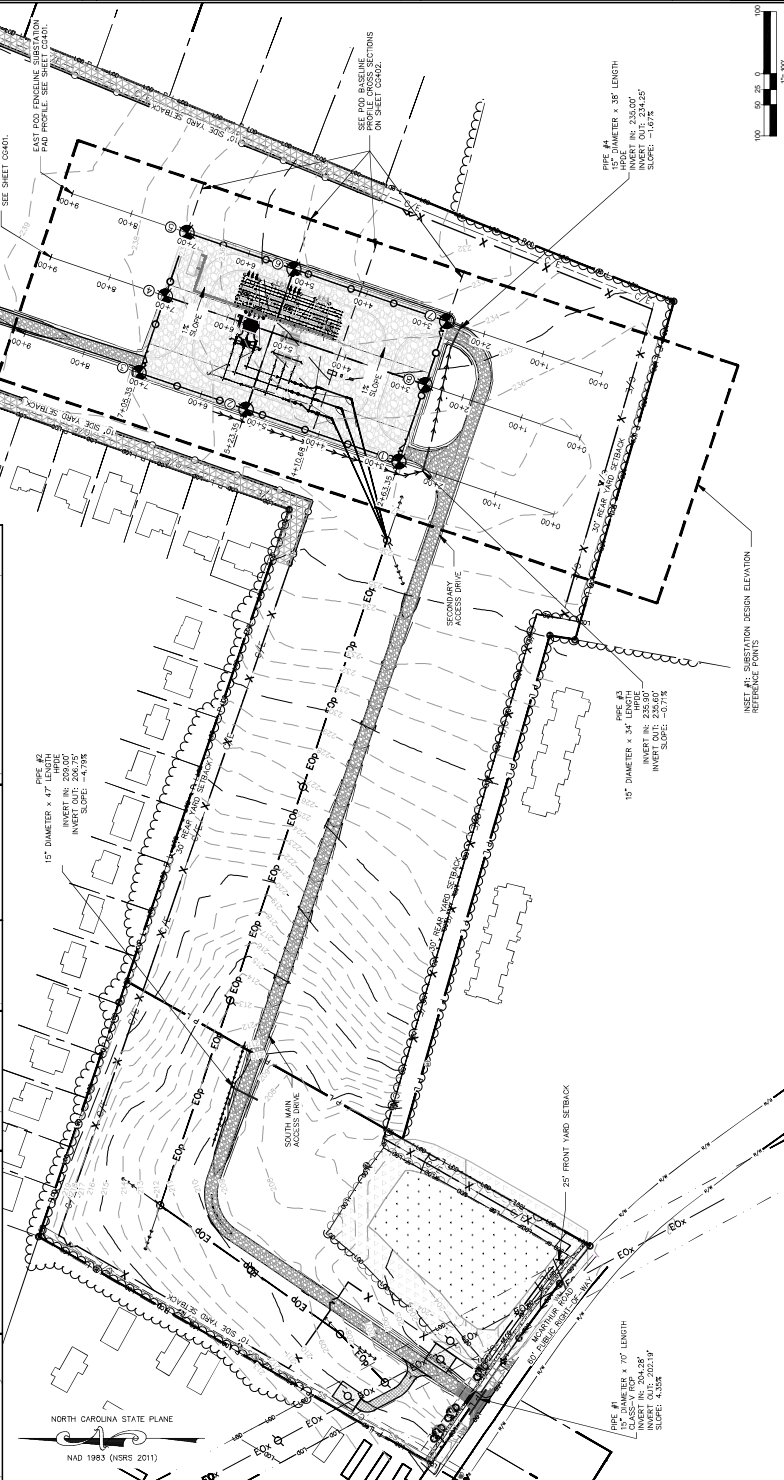
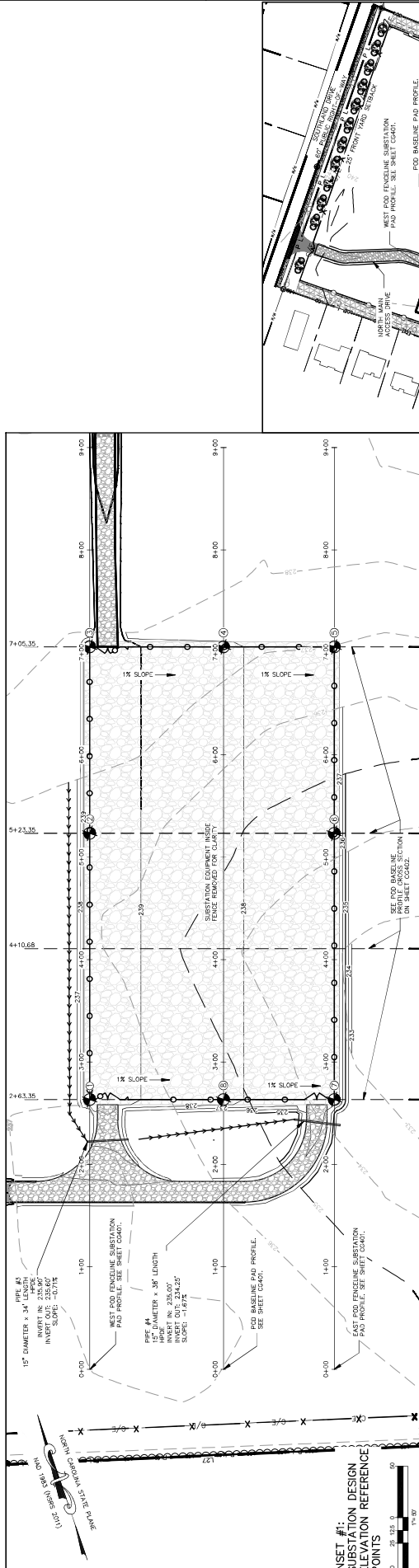
Drainage Area Size (Acres)	Rough Coefficient (C) (Unitless)	Time of Concentration (Tc) (Minutes)	Length of Travel (L) (Feet)	Height of Most Remote Point Above Outlet (H) (Feet)	Average Slope (S) (%)	Percent Impervious
1	0.15	5.69	441.00	3.18	0.7%	0.00%
2	0.15	8.92	596.00	9.39	1.0%	0.00%
3	0.15	4.73	110.00	0.10	0.1%	0.00%
4	0.14	11.19	2017.50	26.80	2.1%	0.00%

NO.	REV.	DATE	DESCRIPTION
0	ISSUED FOR BID	11/19/2023	
1	REISSUED FOR BID	04/19/2024	

PROJECT NAME:	POINT OF DELIVERY 5 (POD 5)
PROJECT TITLE:	GRADING PLAN - ACCESS DRIVES
DRAWN BY:	REA
CHECKED BY:	BOE
APPROVED BY:	
DATE:	11/27/2024
SCALE:	1" = 100'
FILE NUMBER:	02422502
SHEET:	CC300



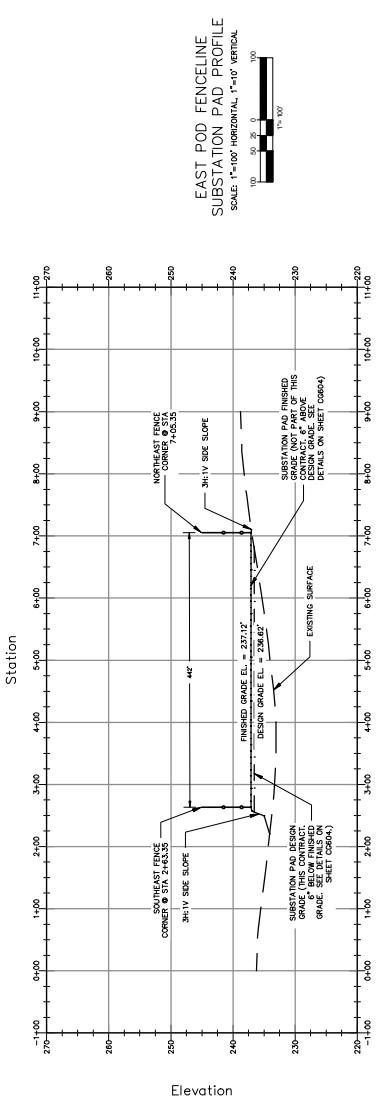
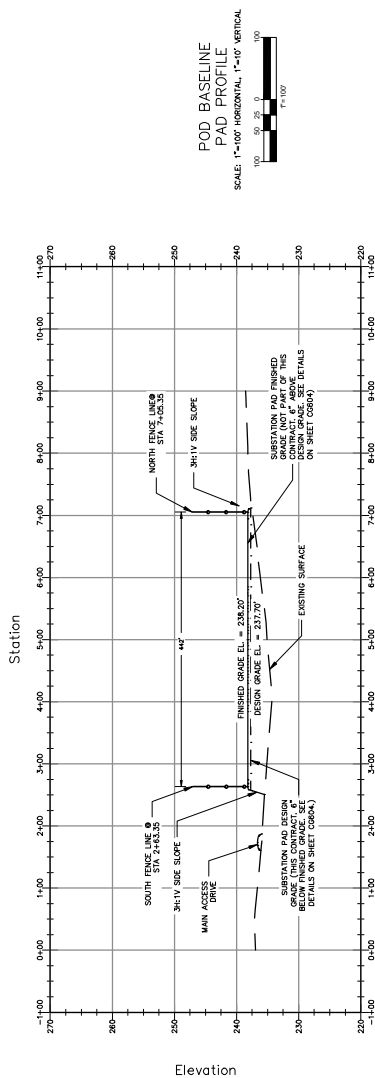
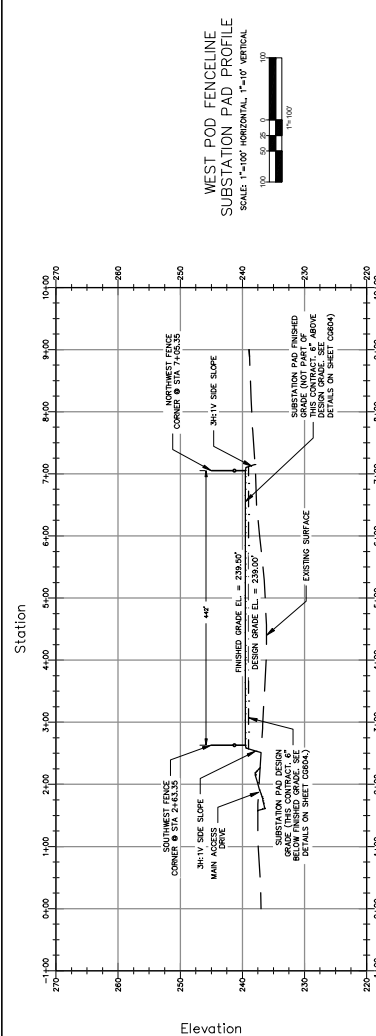
NO.	REVISIONS
1	ISSUED FOR BID
2	REVISED FOR BID
3	REVISED FOR BID
4	REVISED FOR BID
5	REVISED FOR BID
6	REVISED FOR BID
7	REVISED FOR BID
8	REVISED FOR BID
9	REVISED FOR BID
10	REVISED FOR BID



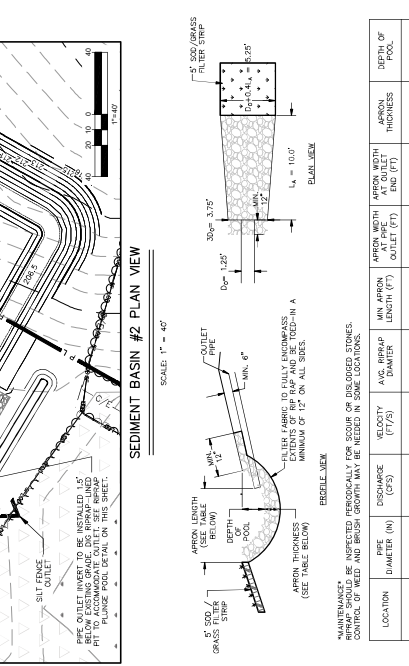
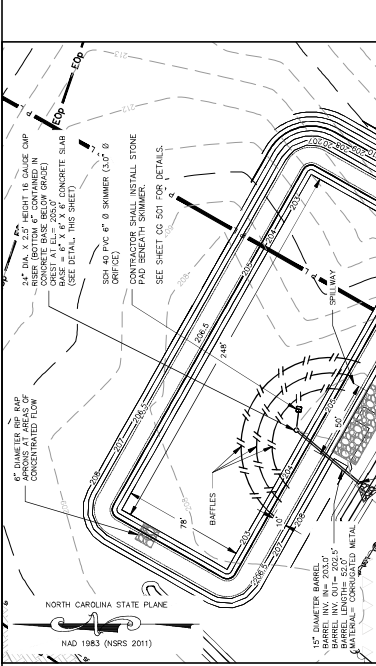
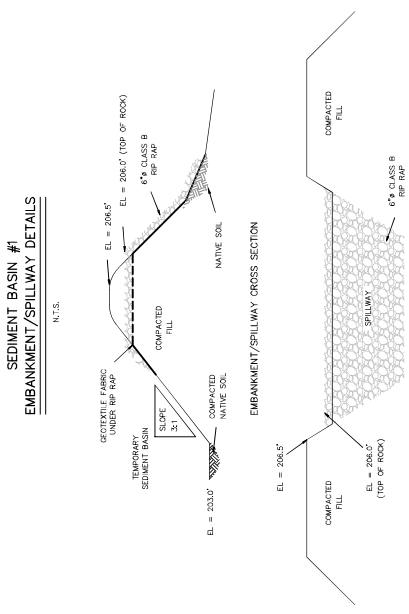
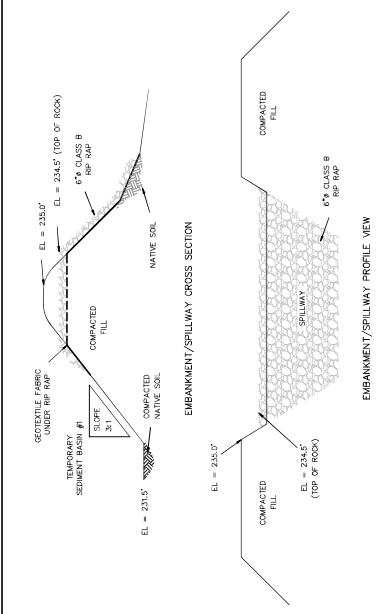
Point Table

Point #	Elevation	Description
1	239.50	FENCE CORNER
2	239.50	FENCE/P.O.D. BASELINE
3	239.50	FENCE CORNER
4	238.20	FENCE/TRANSFORMER CL.
5	237.12	FENCE CORNER
6	237.12	FENCE/P.O.D. BASELINE
7	237.12	FENCE CORNER
8	238.20	FENCE/TRANSFORMER CL.

NO.	REVISIONS	ENG.	DATE
1	ISSUED FOR BID	UJH	04/17/2024
0	REISSUED FOR BID	UJH	11/19/2023

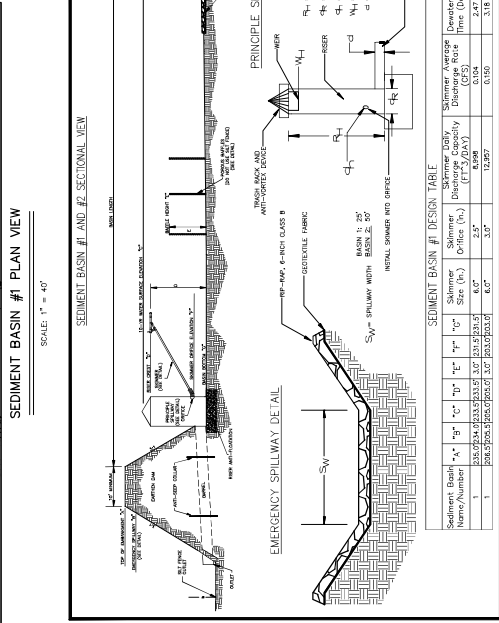
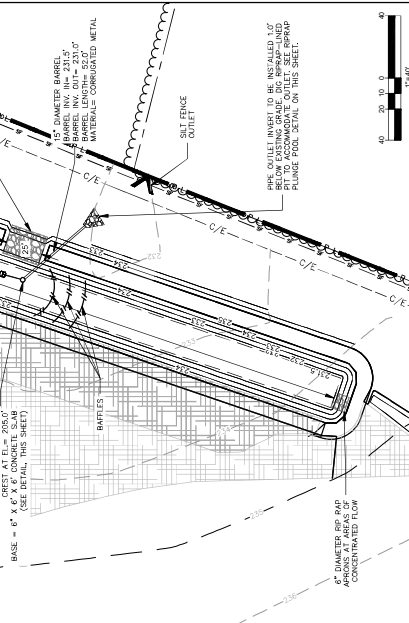
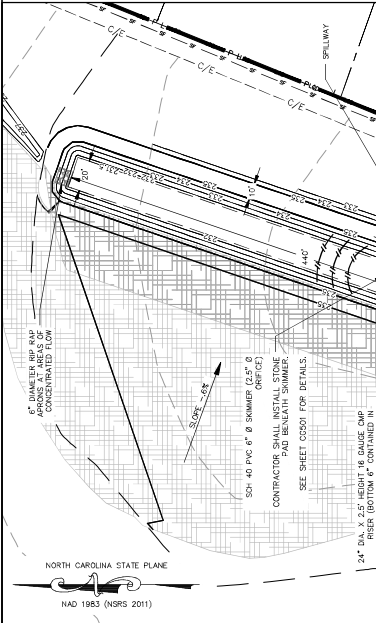
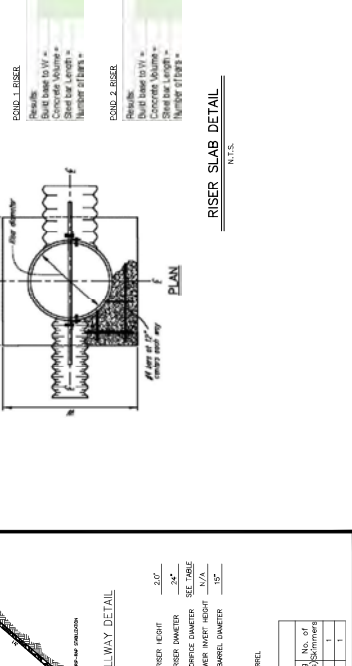


NO.	REVISIONS	ENG.	DATE
1	ISSUED FOR BID	LMH	11/19/2024
0	REVISED FOR BID	LMH	04/14/2024
0	REVISED FOR BID	LMH	04/14/2024



RIP RAP PLUNGE POOL

APRON THICKNESS (IN)	APRON WIDTH (IN)	APRON LENGTH (FT)	APRON DEPTH (FT)	APRON AREA (SQ FT)	APRON VOLUME (CU YD)
13.5"	5.25	3.75	1.0'	19.7	1.0
13.5"	5.25	3.75	1.5'	29.6	1.5



SEDIMENT BASIN #1 DESIGN TABLE

Sediment Basin Number	Flow Rate (MGD)	Flow Rate (CFS)	Flow Rate (GPM)	Basin Length (ft)	Basin Width (ft)	Basin Depth (ft)	Basin Volume (cu yd)	Basin Area (sq ft)	Basin Perimeter (ft)	No. of Discharge Baffles
1	0.150	10.8	648	12.0	12.0	1.0	129.6	144	84.0	1
2	0.150	10.8	648	12.0	12.0	1.5	194.4	144	84.0	1

NO.	REV.	DATE	DESCRIPTION
1	ISSUED FOR BID	11/19/2025	
2	REVISED FOR BID	04/01/2026	
3			
4			
5			
6			
7			
8			
9			
10			

Practic's Standard and Specifications

6.2.2 PD

DIVERSION DIKE (Perimeter Protection)

Definition A dike or dike and channel constructed along the perimeter of a disturbed construction site.

Purpose To prevent storm runoff from entering the work area, or to prevent sediment from exiting the construction site.

Conditions Where Practice Applies Diversion dikes may be located at the upper side of a construction site to prevent storm runoff from entering the work area, or to prevent sediment from exiting the construction site. Diversion dikes do not usually enclose the entire site.

Planning Considerations The purpose of a diversion dike is to prevent storm runoff from entering the work area and to prevent sediment from exiting the construction site. A diversion dike is a rigid application of a temporary or permanent structure. It differs from other structures in that the location and grade are determined by the site conditions. The dike must be constructed on firm ground and must be capable of resisting the forces of water. The dike must be constructed with a minimum of 18" of compacted earth and 12" of compacted aggregate. The dike must be constructed with a minimum of 18" of compacted earth and 12" of compacted aggregate. The dike must be constructed with a minimum of 18" of compacted earth and 12" of compacted aggregate.

Design Criteria

Drainage area - 2' across of dike.

Capacity - consistent with the lowest involved and design life with a 10 year return period.

Vehicle - 20-ton truck, 10-ton trailer.

Dike slope - side slope: 2:1 or flatter

Height - 1.5 feet minimum

Aggregate - 1/2" to 1" aggregate

Channel design - side slope: 2:1 or flatter

Grade - dependent on the topography. Channel should have positive grade.

Outlet - outlet should be located at the top of the dike in a location and grade that will prevent storm runoff from entering the work area, or to prevent sediment from exiting the construction site.

Construction Specifications

- Remove and properly dispose of all trees, bushes, stumps, and other vegetation within the dike area.
- Construct the dike by tracking with construction equipment.
- Ensure that the top of the dike is not lower at any point than the design elevation plus the specified settlement after it has been completed.
- Leave sufficient area along the dike to permit machine to grade and compact the dike.
- Immediately seal and backfill the dike after its construction, and stabilize the flow profile to meet the design requirements.

Maintenance

Inspect diversion dikes every 2 weeks and after every rainfall. Immediately remove sediment from the flow area and repair the dike. Check water, and make timely repairs as needed to avoid gully formation. Remove the dike, and fill and stabilize the channel to meet the design criteria.

6.2.3

EARTHEN BERM DIVERSION DIKE
N.T.S.

TEMPORARY CONSTRUCTION ENTRANCE DETAIL (SOUTH ENTRANCE)
N.T.S.

TEMPORARY CONSTRUCTION ENTRANCE DETAIL (NORTH ENTRANCE)
N.T.S.

CHANNEL (TYP.)
N.T.S.

EARTHEN BERM
N.T.S.

TEMPORARY STOCKPILE
N.T.S.

SILT FENCE OUTLET
N.T.S.

CONSTRUCTION SPECIFICATIONS

- ATTACH THE SILT FENCE TO THE SECOND WIRE FROM THE TOP OF THE POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- ATTACH WIRE FENCING TO THE POSTS.
- ATTACH THE SILT FENCE TO THE SECOND WIRE FROM THE TOP OF THE POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- EXTEND THE SILT FENCE TO THE END OF THE SLOPE. THE SILT FENCE SHOULD BE TURNED UPHILL TO BE TURNED UPHILL.
- DO NOT ALLOW THE SILT FENCE TO BE TURNED UPHILL.

CONSTRUCTION OF A SILT FENCE
N.T.S.

CONSTRUCTION SPECIFICATIONS

- INSTALL SILT FENCE ALONG THE LINE OF POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- ATTACH WIRE FENCING TO THE POSTS.
- ATTACH THE SILT FENCE TO THE SECOND WIRE FROM THE TOP OF THE POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- EXTEND THE SILT FENCE TO THE END OF THE SLOPE. THE SILT FENCE SHOULD BE TURNED UPHILL TO BE TURNED UPHILL.
- DO NOT ALLOW THE SILT FENCE TO BE TURNED UPHILL.

CONSTRUCTION OF A SILT FENCE
N.T.S.

CONSTRUCTION SPECIFICATIONS

- INSTALL SILT FENCE ALONG THE LINE OF POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- ATTACH WIRE FENCING TO THE POSTS.
- ATTACH THE SILT FENCE TO THE SECOND WIRE FROM THE TOP OF THE POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- EXTEND THE SILT FENCE TO THE END OF THE SLOPE. THE SILT FENCE SHOULD BE TURNED UPHILL TO BE TURNED UPHILL.
- DO NOT ALLOW THE SILT FENCE TO BE TURNED UPHILL.

CONSTRUCTION OF A SILT FENCE
N.T.S.

CONSTRUCTION SPECIFICATIONS

- INSTALL SILT FENCE ALONG THE LINE OF POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- ATTACH WIRE FENCING TO THE POSTS.
- ATTACH THE SILT FENCE TO THE SECOND WIRE FROM THE TOP OF THE POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- EXTEND THE SILT FENCE TO THE END OF THE SLOPE. THE SILT FENCE SHOULD BE TURNED UPHILL TO BE TURNED UPHILL.
- DO NOT ALLOW THE SILT FENCE TO BE TURNED UPHILL.

CONSTRUCTION OF A SILT FENCE
N.T.S.

CONSTRUCTION SPECIFICATIONS

- INSTALL SILT FENCE ALONG THE LINE OF POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- ATTACH WIRE FENCING TO THE POSTS.
- ATTACH THE SILT FENCE TO THE SECOND WIRE FROM THE TOP OF THE POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- EXTEND THE SILT FENCE TO THE END OF THE SLOPE. THE SILT FENCE SHOULD BE TURNED UPHILL TO BE TURNED UPHILL.
- DO NOT ALLOW THE SILT FENCE TO BE TURNED UPHILL.

CONSTRUCTION OF A SILT FENCE
N.T.S.

CONSTRUCTION SPECIFICATIONS

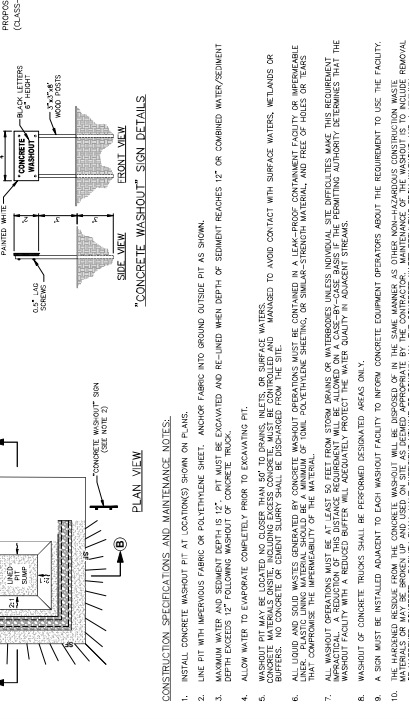
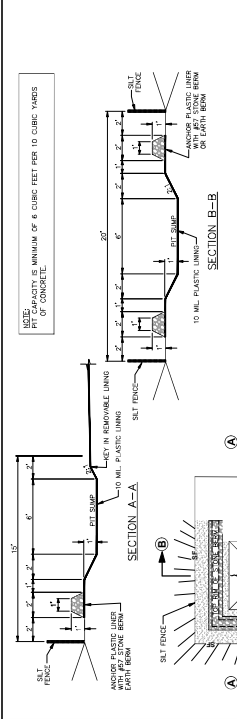
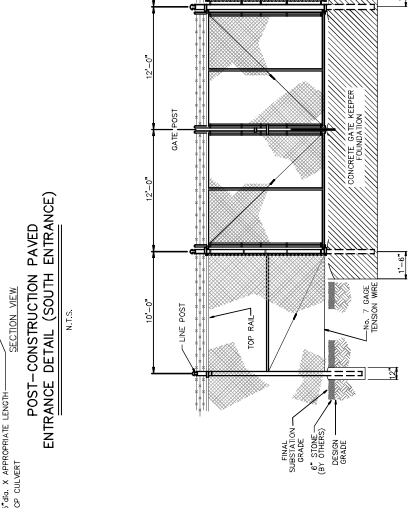
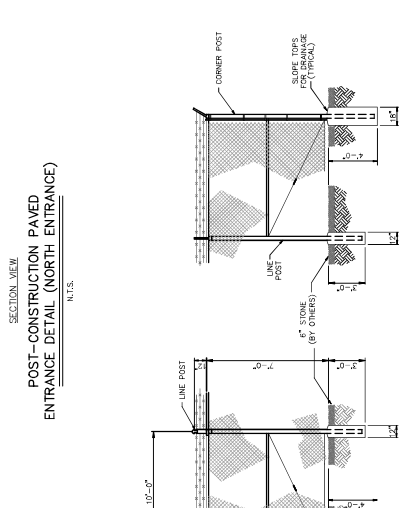
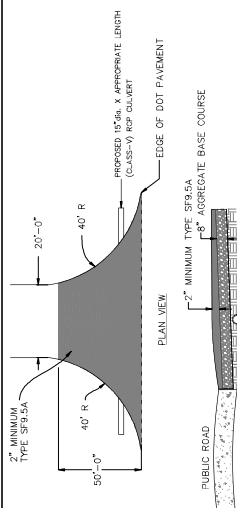
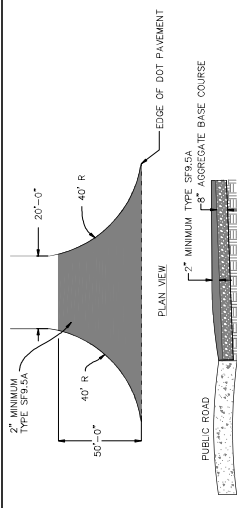
- INSTALL SILT FENCE ALONG THE LINE OF POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- ATTACH WIRE FENCING TO THE POSTS.
- ATTACH THE SILT FENCE TO THE SECOND WIRE FROM THE TOP OF THE POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- EXTEND THE SILT FENCE TO THE END OF THE SLOPE. THE SILT FENCE SHOULD BE TURNED UPHILL TO BE TURNED UPHILL.
- DO NOT ALLOW THE SILT FENCE TO BE TURNED UPHILL.

CONSTRUCTION OF A SILT FENCE
N.T.S.

CONSTRUCTION SPECIFICATIONS

- INSTALL SILT FENCE ALONG THE LINE OF POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- ATTACH WIRE FENCING TO THE POSTS.
- ATTACH THE SILT FENCE TO THE SECOND WIRE FROM THE TOP OF THE POSTS. (SEE PLAN AND SECTION A-A FOR TRENCH LOCATIONS ALONG THE LINE OF THE SILT FENCE.)
- EXTEND THE SILT FENCE TO THE END OF THE SLOPE. THE SILT FENCE SHOULD BE TURNED UPHILL TO BE TURNED UPHILL.
- DO NOT ALLOW THE SILT FENCE TO BE TURNED UPHILL.

NO.	REVISIONS	DATE	ENG.
1	ISSUED FOR BID	11/19/2023	UJH
2	REVISED FOR BID	04/10/2024	UJH

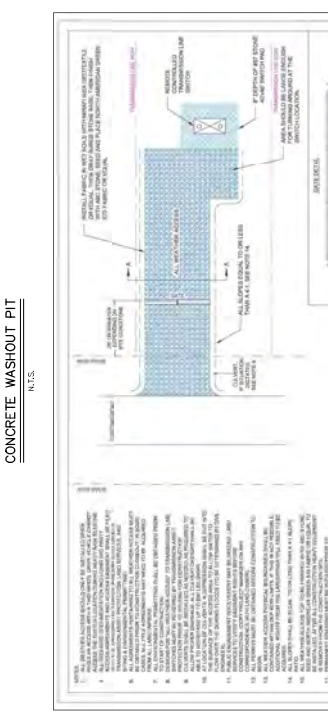
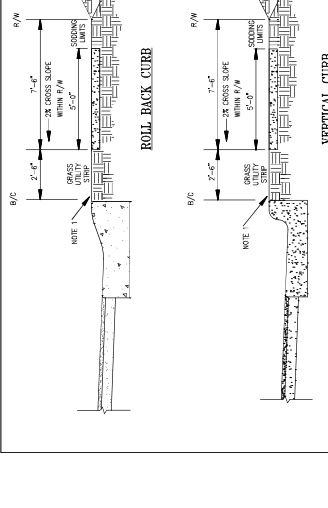
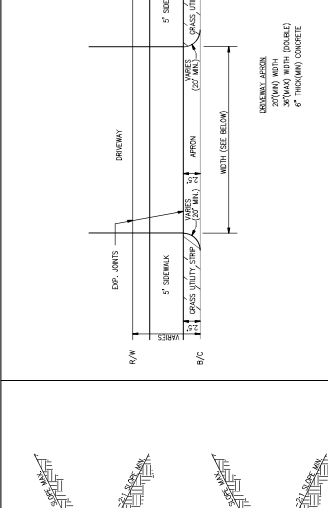


TYPICAL CORNER POST DETAIL
N.T.S.

TYPICAL CHAIN LINK FENCE GATE & LINE POST DETAIL
N.T.S.

"CONCRETE WASHOUT" SIGN DETAILS
N.T.S.

CONCRETE WASHOUT PIT
N.T.S.



TYPICAL SIDEWALK SECTION
N.T.S.

TYPICAL SIDEWALK SECTION
N.T.S.

TYPICAL SIDEWALK SECTION
N.T.S.

FAYETTEVILLE
ENGINEERING DIVISION
1111 W. 10TH ST. SUITE 100
FAYETTEVILLE, NC 28404
http://www.fayetteville.gov

TYPICAL COMMERCIAL DRIVEWAY APRON
SD-9.1
Rev. Date: 28 JAN 21
Revised By: BSA, UJH

NOTE: DISTANCE FROM 8/4" TO 8/4" MARKS ON DIFFERENT STREETS.

FAYETTEVILLE
ENGINEERING DIVISION
1111 W. 10TH ST. SUITE 100
FAYETTEVILLE, NC 28404
http://www.fayetteville.gov

TYPICAL SIDEWALK SECTION
SD-12
Rev. Date: 28 JAN 21
Revised By: BSA, UJH

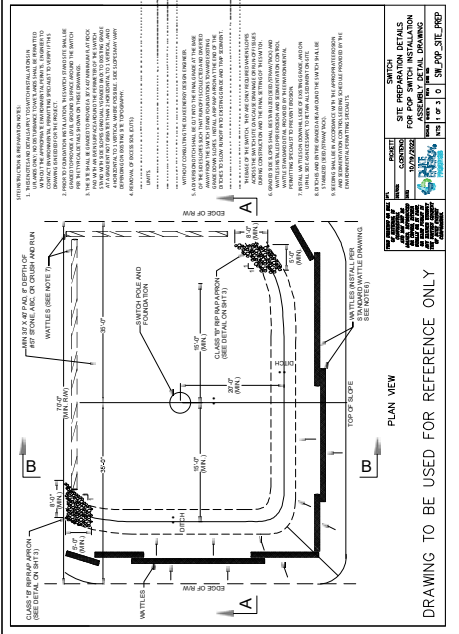
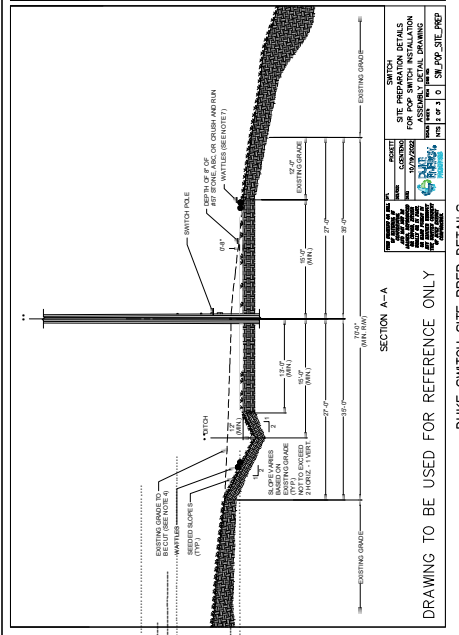
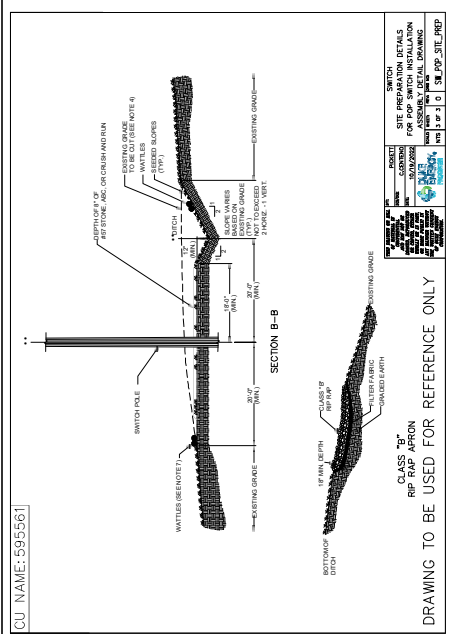
NOTE: DISTANCE FROM 8/4" TO 8/4" MARKS ON DIFFERENT STREETS.

FAYETTEVILLE
ENGINEERING DIVISION
1111 W. 10TH ST. SUITE 100
FAYETTEVILLE, NC 28404
http://www.fayetteville.gov

DUKE ALL WEATHER ACCESS PAD AND DRIVE
N.T.S.

NOTE: DISTANCE FROM 8/4" TO 8/4" MARKS ON DIFFERENT STREETS.

NO.	REVISIONS	ENG.	DATE
1	ISSUED FOR BID	UHM	11/19/2023
0	REVISED FOR BID	UHM	04/01/2024
1	REVISED FOR BID	UHM	11/2024



DRAWING TO BE USED FOR REFERENCE ONLY

DUKE SWITCH SITE PREP DETAILS

SECTION B-B

SECTION A-A

PLAN VIEW

DRAWING TO BE USED FOR REFERENCE ONLY

DUKE SWITCH SITE PREP DETAILS

SECTION B-B

SECTION A-A

PLAN VIEW

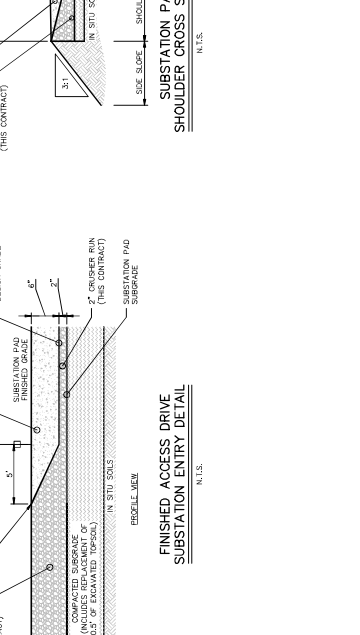
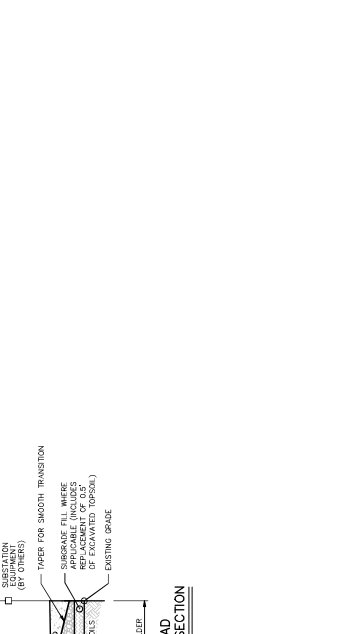
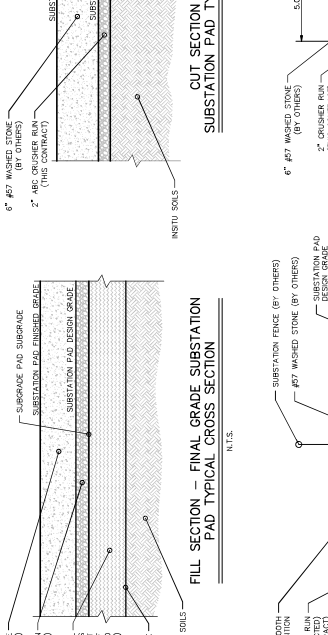
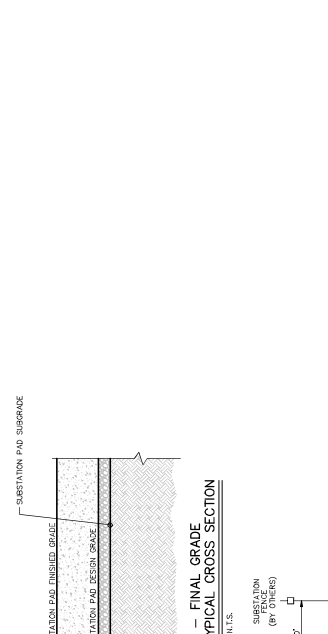
DRAWING TO BE USED FOR REFERENCE ONLY

DUKE SWITCH SITE PREP DETAILS

SECTION B-B

SECTION A-A

PLAN VIEW



OUT SECTION - FINAL GRADE SUBSTATION PAD TYPICAL CROSS SECTION

FILL SECTION - FINAL GRADE SUBSTATION PAD TYPICAL CROSS SECTION

FINISHED ACCESS DRIVE SUBSTATION ENTRY DETAIL

SUBSTATION PAD SHOULDER CROSS SECTION

SUBSTATION PAD SHOULDER CROSS SECTION

SUBSTATION PAD SHOULDER CROSS SECTION

NO.	REVISIONS	ENG.	DATE
1	ISSUED FOR BID	UHM	11/19/2023
0	REVISED FOR BID	UHM	04/01/2024
1	REVISED FOR BID	UHM	11/2024