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

Sweetgrass Application Information
Preliminary plat

Case Number: SUBMAJ 2025-121

Application Type: Preliminary Plat – Major Subdivision

Applicant: Nate Allen, CLD Engineering

Owners: Domain Timberlake Multistate 2, LLC

Location: Approximately 1 mile south of the intersection of US HWY 17 and Scotts Hill Loop Road slightly east of the Pender and New Hanover County line.

Property ID #(s): 3270-86-1779-0000

Description: Major subdivision application for 228 single family units

Total Area of Project: 114.96

Current Zoning: RP, Residential Performance

Technical Review Committee Meeting: February 6th, 2025

Board of County Commissioners/Planning Board Meeting: N/A

Application Materials
Application Package
Site Plan

Pender County
Planning and Community Development

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By-Right Preliminary Plat Submission (Major and Minor Subdivisions)

Applications will be considered for the Technical Review Committee hearing and reviewed by Staff only when deemed complete. The application will be regarded as incomplete until the following items are received by the Planning and Community Development Staff.

1. ✓ **Pre-submittal Meeting**
   Date of Meeting _____
2. ✓ **Signed Application**
3. ✓ **Payment**
   $500 plus $10 per lot for the first 100 lots/units, $5 per lot thereafter
4. ✓ **Paper Plan Sets**
   Two (2) 24 x 36, Four (4) 11 x 17
5. ✓ **Digital Submission**
   For all documents submitted in paper copy, bring a digital copy with paper submission.
6. ✓ **Adjacent Property List**
   A list of names and addresses, as obtained from the county tax listings and tax abstract, to the owners of all properties located within 500-feet of the of the perimeter of the project bounds.
7. ✓ **Adjacent Property Envelopes**
   The applicant shall provide a set of business envelopes addressed to each of the owners of all properties located within 500-feet of the perimeter of the project bounds and accompanied with the amount of postage required for first class postage.
8. ✓ **Permits**
   Please include any permits issued on the project including but not limited to: environmental, traffic analysis, utility, or site specific conditions.
9. ✓ **Site Plan Requirements**
   A prepared site plan in accordance with the Unified Development Ordinance standards Section 6.4, Pender County Collector Street Plan, Pender County Transportation Plan, other approved State of Federal Transportation Improvement Plan, or any other adopted plan in Pender County.
   (See Preliminary Plat Checklist)

I certify that all information presented in this application is accurate to the best of my knowledge.

Signature of Applicant _____ Date 12/30/2024

Printed Name Nathan Allen, PLA

Staff Initials: _____
Date: _____

APPLICATION FOR SUBDIVISION

THIS SECTION FOR OFFICE USE			
Application No.	**SUB**	**Date**	12/30/2024
Application Fee	**$** 2,140.00	**Invoice Number:**	
Master Plan Hearing Date	MDP 2024-68 APPRVD: 11/26/2024	**Preliminary Plat Hearing Date**	

SECTION 1: APPLICANT INFORMATION

Applicant's Name:	MDP 2024-68 APPRVD: 11/26/2024	**Owner's Name:**	Domain Timberlake Multistate 2, LLC
Applicant's Address:	PO BOX 1172	**Owner's Address:**	590 Madison Avenue, 13th Floor
City, State, & Zip	Wilmington, NC 28402	**City, State, & Zip**	New York, NY 10022
Phone Number:	910-254-9333	**Phone Number:**	
Email Address:	nallen@cldeng.com	**Email Address:**	

Legal relationship of applicant to landowner:

SECTION 2: PROJECT INFORMATION

Preliminary Plat	☑ **Residential** *RP, PD, RM, MH District*	☐ **Mixed Use** *PD*	
Subdivision Type	☑ Major (11 lots or more)	☐ Minor (10 lots or less)	
Number of Lots	228		

Property Identification Number (PIN):	3270-86-1779-0000	**Total property acreage:**	114.96 (PROJ. AREA)
Zoning Classification:	RP	**Acreage to be disturbed:**	85.0 AC.
Water Provider:	PENDER COUNTY	**Wastewater Provider:**	PLURIS

Additional Information:

SECTION 3: SIGNATURES

Applicant's Signature	Nathan Allen	**Date:**	12/30/2024
Applicant's Name Printed	Nathan Allen, PLA	**Date:**	12/30/2024
Owner's Signature	Tammy Spivey	**Date:**	1/3/2025
Owner's Name Printed	Tammy Spivey	**Date:**	1/3/2025

NOTICE TO APPLICANT

1. Applicant or agent authorized in writing must attend the public hearing.
2. Once the public hearing has been advertised, the case will be heard unless the applicant withdraws the application or unless the Planning Board or other authorized person agrees to table or delay the hearing.
3. All fees are non-refundable
4. A complete application packet must be submitted prior to the deadline in order to be placed on the next Planning Board Agenda

Office Use Only

☐	**Subdivision Fees:** *$500 + $10/lot-unit for the first 100 lots/units; $5/lot-unit thereafter (Major Subdivision)* *$150 + $10 per lot (Minor Subdivision)*	**Total Fee Calculation: $**

Attachments Included with Application: (Please include # of copies)

CD /other digital version	☐ Y ☐ N	Plan Sets	# of large	# of 11X17	Other documents/Reports	☐ Y ☐ N

Payment Method:	**Cash :** ☐ **$_____**	**Credit Card:** ☐ Master Card ☐ Visa	**Check:** ☐ Check # _____

Application received by:		Date:
Application completeness approved by:		Date:
Date scheduled for public hearing:		

Sweetgrass at Abbey Preserve

Preliminary Plat

PENDER COUNTY, NC

OWNER:
CLAYTON PROPERTIES GROUP, INC
441 WESTERN LANE
IRMO, SC 29063

ENGINEER:
CLD Engineering, PLLC
P.O. Box 1172
Wilmington, NC 28402

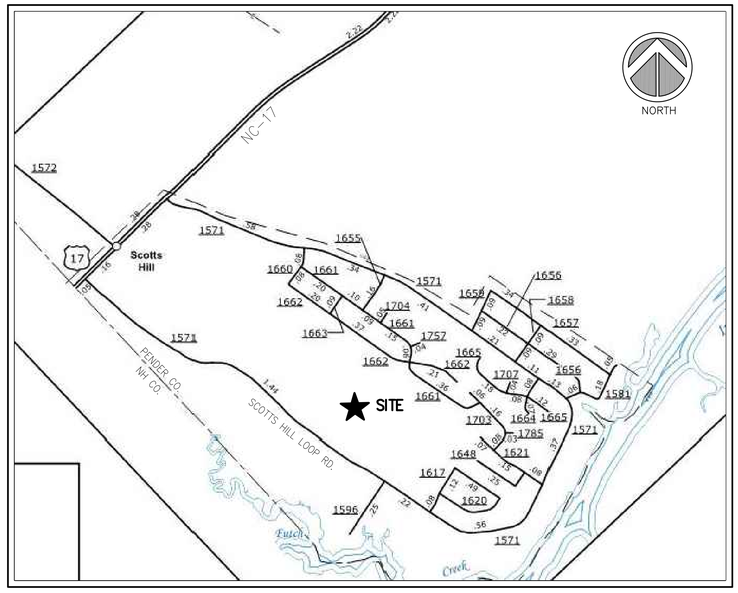
SURVEYOR:
ESP & ASSOCIATES, INC.
211 RACINE DRIVE SUITE 101
WILMINGTON, NC 28403

ENVIRONMENTAL CONSULTANT
SOUTHERN ENVIRONMENTAL GROUP, INC.
5315 SOUTH COLLEGE ROAD, SUITE E
WILMINGTON, NC 28412

GEOTECHNICAL CONSULTANT
ECS SOUTHEAST, LLP
6714 NETHERLANDS DRIVE
WILMINGTON, NC 28405

TRAFFIC ENGINEERING CONSULTANT
DAVENPORT
119 BROOKSTOWN AVE. SUITE PH-1
WINSTON SALEM, NC27101

REVIEW AGENCY	APPROVAL DATE	PERMIT NUMBER
Pender County Planning and Community Development	November 26, 2024	MDP 2024-68 (PIN:3270-86-1779-0000)
NCDEQ – Pender County Utilities	December 10, 2024	Serial No.: 24-01188
NCDEQ – Sediment & Erosion Control Plans	November 12, 2024	PENDE-2025-0142
NCDEQ – Stormwater Management Plans	July 1, 2024	SW8 231007



VICINITY MAP
NOT TO SCALE

PRELIMINARY PLAT CONTENTS

SHEET	NAME
COVER	COVER
SURVEY	SURVEY MB70,PG63
EC-1	EXISTING CONDITIONS
INDEX	PRELIMINARY PLAT INDEX
PP-1	PRELIMINARY PLAT
PP-2	PRELIMINARY PLAT
PP-3	PRELIMINARY PLAT
PP-4	PRELIMINARY PLAT
PP-5	PRELIMINARY PLAT

CONSTRUCTION PLAN CONTENTS

SHEET	NAME
GI-1	GENERAL INFORMATION
DEMO	OVERALL DEMOLITION PLAN
GI-2	GENERAL NOTES AND SHEET INDEX
CG-1 TROUGH CG-6	EROSION AND SEDIMENT CONTROL PLAN
CG-7	OFFSITE EROSION AND SEDIMENT CONTROL PLAN
CG-D1	STANDARD EROSION AND SEDIMENT CONTROL DETAILS
CG-D2	STANDARD EROSION AND SEDIMENT CONTROL DETAILS
CG-D3	STANDARD EROSION AND SEDIMENT CONTROL DETAILS
SW-0 THROUGH SW-6	STORMWATER PLANS
WP-D1	WET DETENTION BASIN #1 DETAILS
WP-D2	WET DETENTION BASIN #2 DETAILS
WP-D3	WET DETENTION BASIN #3 DETAILS
WP-D4	GENERAL POND DETAILS
WP-D5	LEVEL SPREADER FILTER STRIP DETAILS
DD-1	GENERAL CONSTRUCTION DETAILS
DD-2	GENERAL CONSTRUCTION DETAILS
DD-3	GENERAL CONSTRUCTION DETAILS
CP-0 THROUGH 17	UTILITY PLANS
CU-1 THROUGH 7	UTILITY DETAILS

Certification of Submission
A copy of this plat has been submitted. Approval is subject to review; this does not constitute an approval.

Pender County Utilities:_____Date:_____
Pender County Environmental Health:_____Date:_____
Pender County Addressing Coordinator:_____Date:_____
Pender County Fire Marshal:_____Date:_____

Certificate of Preliminary Plat Approval
Preliminary Plat Approved by Pender County for a period of two (2) years subject to the Pender County Unified Development Ordinance requirements and conditions of approval.

Planning Staff: _____Date:_____

CLD Engineering, PLLC
Civil Engineering / Landscape Architecture
Land Planning / Construction Management
NCBELS Firm License P-0369
P.O.Box 1172 Phone: 910-254-9333
Wilmington, NC 28402 Fax: 910-254-0502
www.cldeng.com

Sweetgrass at Abbey Preserve
PRELIMINARY PLAT

COVER

REV	DATE	DESCRIPTION	INIT
A	12/23/2024	INITIAL PRELIMINARY PLAT REVIEW	NAA

DEVELOPER:

CLAYTON
PROPERTIES GROUP,
INC PO BOX 4098
MARYVILLE, TN 37802

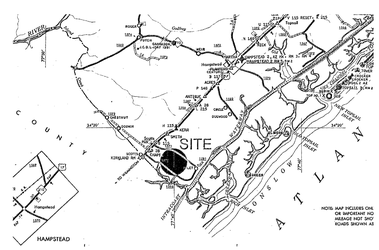
BEFORE YOU DIG, CALL
North Carolina 811
www.nc811.org

ISSUED FOR AGENCY REVIEW ONLY

NOT RELEASED FOR CONSTRUCTION

APPROVED:	JP	PROJECT:	178-07
CHECKED:	JFB	SCALE:	NTS
DESIGNED:	NAA	RELEASE:	MDP

SHEET
COVER



N

PENDER COUNTY, NORTH CAROLINA
VICINITY MAP (NOT TO SCALE)

GPS STATEMENT

THIS SURVEY WAS PERFORMED TO MEET FEDERAL GEOGRAPHIC DATA COMMITTEE STANDARDS AS APPLICABLE; THAT THE ORIGINAL GPS DATA WAS OBTAINED ON FEBRUARY 17, 2022; THAT THE FIELD LOCATION WAS COMPLETED ON FEBRUARY 25, 2021; THE PRIMARY STATE PLANE AZIMUTH COORDINATES SHOWN HEREON ARE NORTH CAROLINA STATE PLANE VALUES (FIPS 3200) BASED ON THE NAD 1983 (NSRS 2011) NAVD 1988 (GEOID 18) ADJUSTMENT AS POSITIONED BY THE NCGS VRS NETWORK FROM OBSERVATIONS MADE BY THIS OFFICE USING TRIMBLE GNSS R-8 MODEL 4 SURVEY GRADE DUAL FREQUENCY RECEIVERS AND OBSERVED USING MULTIPLE SESSIONS A MINIMUM OF 540 EPOCHS; ALL OTHER COORDINATES ARE LOCALIZED GROUND VALUES DERIVED FROM CONVENTIONAL METHODS BY THIS OFFICE; THIS SURVEY WAS COMPILED TO MEET THE ASPRS STANDARDS FOR CLASS 1 MAP ACCURACY AT 1 : 6000 (1" = 500'). ALL REPORTED VALUES ARE U.S. SURVEY FEET.

POINT	NORTHING	EASTING
GPS (TN800)	208916.243	2375461.747
EIP1	209045.274	2375106.268
EIP2	207653.920	2377148.710
NGS INLET	207227.88	2382309.84

ZONING: PER PENDER COUNTY, NC
THE PROPERTY IS ZONED
RP "RESIDENTIAL PERFORMANCE DISTRICT"
FRONT SETBACK 30'
REAR SETBACK 25'
SIDEYARD SETBACK 10'

GEODETIC CONTROL TIE

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED FOR "GPS (TN800)" WITH NAD 83/2011 STATE PLANE GRID COORDINATES OF
NORTHING: 208,916.243(ft)
EASTING: 2,375,461.747(ft)
ELEVATION: 15.45 (NAVD 88, GEOID 18)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS:1.00000578.
ALL LINEAR DIMENSIONS ARE LOCALIZED GROUND HORIZONTAL DISTANCES, UNLESS OTHERWISE NOTED.
VERTICAL DATUM USED IS NAVD 88 (GEOID 18)
OBSERVED HORIZONTAL GRID TIE FROM NGS MONUMENT "INLET" TO "GPS (TN800)": N76°09'01"W, 7053.15' (GRID)

SURVEY NOTES:

1. This plat is derived from information gathered by an actual field survey made by this office and platted March, 2022.
2. Horizontal datum used for this project is NAD 1983 / NSRS 2011 (US Survey Feet).
3. The ground control coordinates are localized coordinates based on State Plane coordinate for "GPS (TN800)".
4. The primary survey control azimuth was established using the NC VRS Network and localized using site control.
5. All distances are horizontal ground measurements unless otherwise noted.
6. All areas computed by coordinate computation method.
7. Subsurface utility investigation was not performed as a part of this project.
8. All "NIP...new iron pin" are 5/8" rebar.
9. This tract is located within FEMA Zone "X" & "AE" per FEMA Flood Insurance Rate Map 3720327000K effective date of February 16, 2007.
10. The property shown hereon has access to (US 17), (S.R.1571) Scott Hill Loop Road, Poplar Grove Road & Abbey Lane, which are Public Streets with Public Right-of-Ways.
11. The property shown hereon is the same property shown in Commitment Number: 22-30043.
12. Although the property shown hereon represents a subdivision of land it is a subdivision exempt from North Carolina Statues per Travis Henley of the Pender County Planning and Community Development.

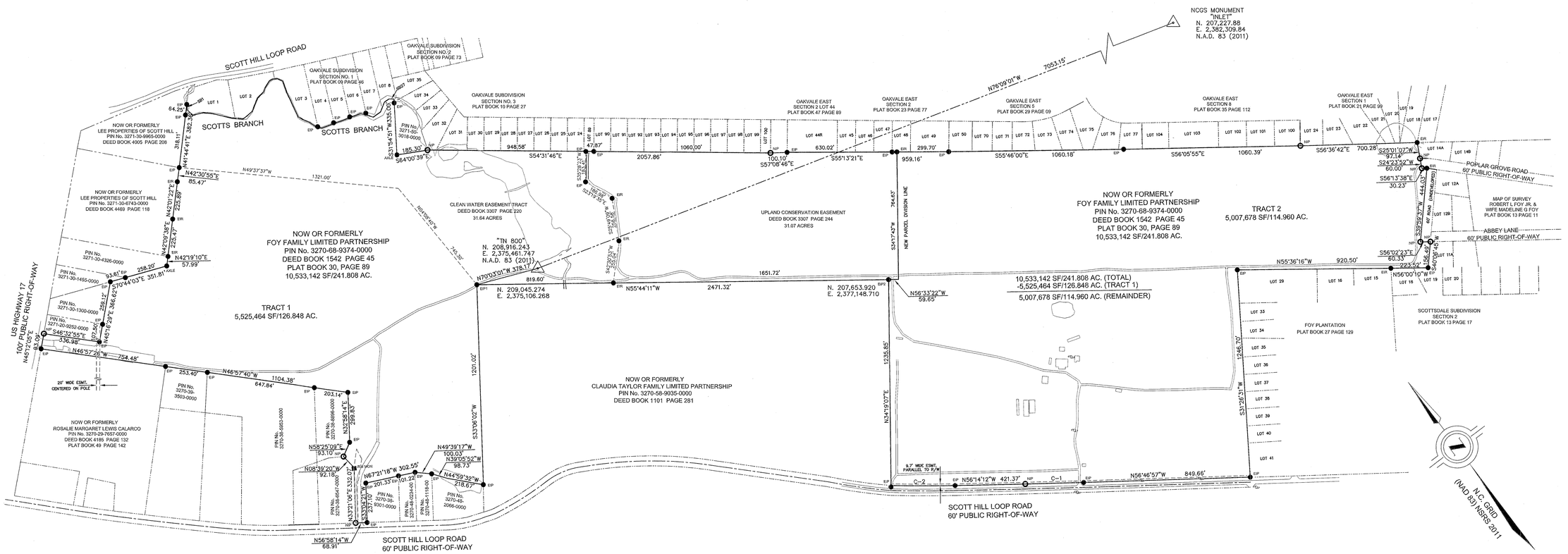
NORTH CAROLINA
PENDER COUNTY

I, Richard A. Pinkham, certify that this field survey and subsequent plat were drawn under my direct supervision from an actual survey made under my direct supervision and referenced in the Pender County Register of Deeds from Deed Book 1542 Page 45; that the boundaries not surveyed are clearly indicated as broken lines and referenced from record information; that the unadjusted conventional ratio of precision as calculated exceeds 1: 20,000; that this survey is of existing parcels of land within the area of a county or municipality that has an ordinance that regulates parcels of land and does not create a new street or change an existing street, road or right-of-way; that this plat was prepared in accordance with G.S.47-30 as amended. Witness my original signature, registration number and seal this 28th day of June, A.D., 2022.

Professional Land Surveyor Number L-4646

Exempt Subdivision
Pender County
Office of Planning
Date 6/29/2022

PROFESSIONAL LAND SURVEYING SERVICES BY:
ESP ASSOCIATES, INC
SUBSURFACE . HYDROGRAPHIC . MOBILE . GEOMATICS
211 Racine Drive, Suite 101
Wilmington, North Carolina 28403
(910) 444-3899 / www.espassociates.com / License # F-1407



BOUNDARY SUBDIVISION SURVEY FOR
FOX NECK LIMITED PARTNERSHIP PROPERTY
PARCEL NO: 3270-68-9374-0000
DEED BOOK 1542, PAGE 45 - MAP BOOK 30, PAGE 89
TOPSAIL TOWNSHIP, PENDER COUNTY, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL L-4646 LAND SURVEYOR RICHARD A. PINKHAM

PARCEL CURVE TABLE				
CURVE #	RADIUS	LENGTH	CHD. BEARING	CHD. LENGTH
C-1	52454.29'	499.71'	N56°30'34"W	499.71'
C-2	8505.45'	384.77'	N54°56'27"W	384.71'

SCALE: 1" = 400'
0 200 400 800 1200 1600

PARCEL OWNERSHIP TABLE		
PARCEL #	OWNER	DEED REFERENCE
PID 3271-20-9252-0000	WILLIAM H SIMMONS II	DB 4675 PG. 834
PID 3271-30-1300-0000	PEANUT ROAD PROPERTIES LLC	DB 4540 PG. 72
PID 3271-30-1455-0000	JATJ INVESTMENTS LLC	DB 3773 PG. 193
PID 3271-30-4326-0000	STORE MASTER FUNDING XVII LLC	DB 4756 PG. 44
PID 3271-50-3018-0000	STEPHANIE C BRADSHAW	DB 4511 PG. 126
PID 3270-48-2066-0000	GEORGE DONALD GREENE JR.	DB 3917 PG. 313
PID 3270-48-1118-0000	JIMMIE LEGRANDE SUGGS TRUSTEE	DB 4447 PG. 151
PID 3270-48-0234-0000	JIMMIE LEGRANDE SUGGS TRUSTEE	DB 4447 PG. 151
PID 3270-38-9301-0000	LARRY L MITCHELL	DB 689 PG. 279
PID 3270-38-6547-0000	DEPARTMENT OF TRANSPORTATION	DB 2016 PG. 334
PID 3270-38-8896-0000	SCOTTS HILL BAPTIST CHURCH	DB 2016 PG. 336
PID 3270-38-5953-0000	SCOTTS HILL BAPTIST CHURCH	DB 1599 PG. 119
PID 3270-39-3503-0000	ROSALIE MARGARET LEWS CALARCO	DB 4185 PG. 120

LEGEND

EIP.....EXISTING IRON PIPE
EIR.....EXISTING IRON REBAR
NS.....NAIL SET
NIP.....NEW IRON PIN (5/8" REBAR)
CP.....COMPUTED POINT
RW MON...R/W MONUMENT
CL.....CENTER LINE
PL.....PROPERTY LINE
CB.....CATCH BASIN, CURB INLET OR DROP INLET
EB.....ELECTRIC BOXES
T.....TELEPHONE/CABLE BOXES
TP.....TELEPHONE PEDESTAL
WM.....WATER METER
WV.....WATER VALVE
HYD.....FIRE HYDRANT
ICV.....IRRIGATION CONTROL VALVE
SCO.....SEWER CLEANOUT
LINE SURVEYED
LINE NOT SURVEYED / R/W
CENTERLINE
EASEMENT LINE
SETBACK LINE

SCOTTS BRANCH CENTERLINE		
LINE	BEARING	DISTANCE
SB1	S 29°20'39" W	33.36'
SB2	S 10°49'52" E	45.51'
SB3	S 68°10'01" E	64.62'
SB4	S 50°26'41" E	48.70'
SB5	S 42°07'26" E	125.79'
SB6	S 50°22'39" E	69.22'
SB7	N 85°07'42" E	69.57'
SB8	N 56°30'46" E	86.59'
SB9	N 79°35'18" E	54.66'
SB10	N 51°59'35" E	21.49'
SB11	N 67°23'46" E	51.58'
SB12	S 85°15'06" E	20.62'
SB13	S 61°41'37" E	29.35'
SB14	S 31°35'48" E	34.72'
SB15	S 15°18'22" W	71.54'
SB16	S 09°39'06" W	93.02'
SB17	S 10°22'49" W	72.26'
SB18	S 30°04'13" E	74.75'
SB19	S 20°56'48" E	54.03'
SB20	S 50°20'13" E	29.20'
SB21	S 74°52'28" E	143.29'
SB22	S 76°03'05" E	105.61'
SB23	S 38°58'05" E	77.81'
SB24	N 90°00'00" E	53.49'
SB25	N 56°47'30" E	63.45'
SB26	N 90°00'00" E	33.23'
SB27	S 53°24'28" E	30.23'

STATE OF NORTH CAROLINA, COUNTY OF PENDER

I, Amy Everett, Review Officer of Pender County, certify that the map or plat which this certification is offixed meets all statutory requirements for recording.

Amy Everett
Review Officer

6/29/22
Date

STATE OF NORTH CAROLINA, COUNTY OF PENDER

Filed for registration :
the Register of Deeds

Doc No: 20104389
Recorded: 06/29/2022 10:26:16 AM
Fee Amt: $21.00 Page 1 of 1

REGISTER OF DEEDS

Pender County North Carolina
Sharon Lear Willoughby, Register of Deeds
BK 70 PG 63 - 63 (1)

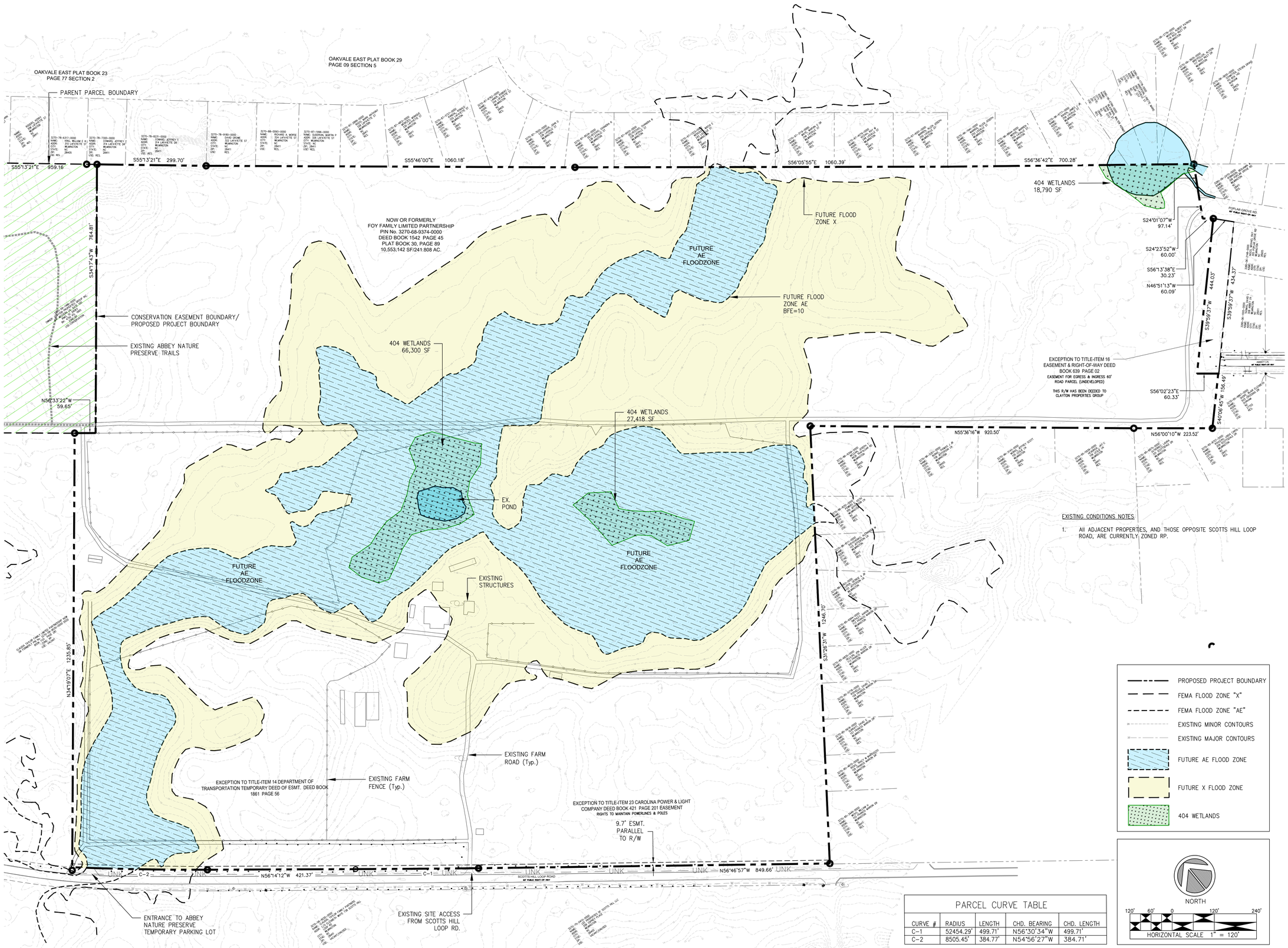
DATE	SCALE
06/28/22	1" = 400'
DRAWN BY	CHECKED BY
AD	RAP

REVISIONS

-DESCRIPTION-
BOUNDARY SURVEY

SHEET
1 OF 1

Recorded in the Pender County Registry at Map Book 70, Page 63



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Sweetgrass at Abbey Preserve
PRELIMINARY PLAT

EXISTING CONDITIONS

REV	DATE	DESCRIPTION	INIT
A	12/23/2024	INITIAL PRELIMINARY PLAT REVIEW	NAA

DEVELOPER:

CLAYTON
PROPERTIES GROUP,
INC PO BOX 4098
MARYVILLE, TN 37802

BEFORE YOU DIG, CALL
North Carolina 811
www.nc811.org

ISSUED FOR AGENCY REVIEW

NOT ISSUED FOR CONSTRUCTION

APPROVED:	JP	PROJECT:	178-07
CHECKED:	JC	SCALE:	1"=120'
DESIGNED:	NAA	RELEASE:	PRELIM.

SHEET
EC-1

NORTH

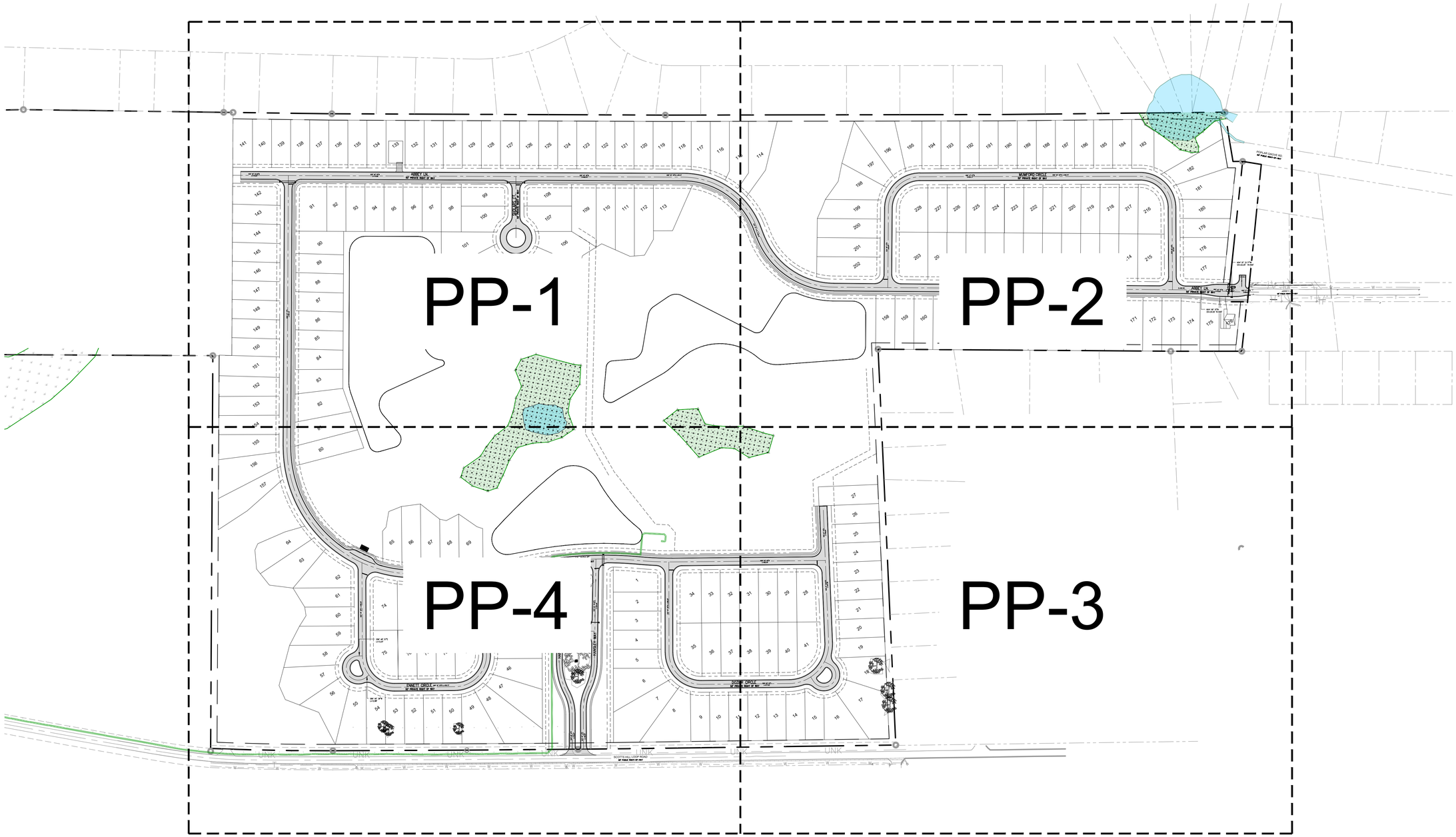
150' 75' 0 150' 300'

HORIZONTAL SCALE 1" = 150'

ISSUED FOR AGENCY REVIEW

NOT ISSUED FOR CONSTRUCTION

BEFORE YOU DIG, CALL North Carolina 811 www.nc811.org



CLD Engineering, PLLC

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Sweetgrass at Abbey Preserve
PRELIMINARY PLAT

INDEX

REV	DATE	DESCRIPTION	INIT
A	12/23/2024	INITIAL PRELIMINARY PLAT REVIEW	NAA

DEVELOPER:

CLAYTON
PROPERTIES GROUP,
INC PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JP	PROJECT:	178-07
CHECKED:	JFB	SCALE:	1"=150'
DESIGNED:	NAA	RELEASE:	PRELIM

SHEET

INDEX

PROPOSED PROJECT BOUNDARY
PROJECT PHASING
20' PERIMETER BUFFER
FEMA FLOOD ZONE "X"
FEMA FLOOD ZONE "AE"
DRAINAGE EASEMENT
RIGHT OF WAY (PRIVATE)
GRASSED OR DIRT PATHS
PASSIVE OPEN SPACE
ABBEY NATURE PRESERVE
FUTURE AE FLOOD ZONE
404 WETLANDS

NORTH

120' 60' 0 120' 240'
HORIZONTAL SCALE 1" = 120'

SITE DATA

CURRENT OWNER:	FOY FAMILY LIMITED PARTNERSHIP
DEVELOPER:	CLAYTON PROPERTIES GROUP, INC 441 WESTERN LANE IRMO, SC 29063
PARCEL:	3270-86-1779-0000 DB 1542 PG 45 PB 70 PG 63
ZONING:	RP – RESIDENTIAL PERFORMANCE
PROJECT AREA:	114.96ac.
DISTURBED AREA:	85.0 Ac.
WETLANDS:	2.91 ACRES
EX USE:	VACANT-AGRICULTURE
PRO USE:	SINGLE FAMILY RESIDENTIAL

DEVELOPMENT DATA

TOTAL AREA:	114.96 AC.
AREA IN R/W:	14.50 AC.
WETLAND AREA:	2.58 AC.
TOTAL LOTS:	228 (SINGLE FAMILY DETACHED UNITS)
DENSITY:	SEE PROJECT DENSITY CALC. THIS SHEET.
TYP LOT AREA:	9,000sf* (TYP 65'x150') *25% REDUCTION ALLOWED. SEE NOTE 7.14 LOW IMPACT DEVELOPMENT
TYP PAD:	40'x70'
MAX HEIGHT:	35'
LARGEST LOT:	20,450.81 SF (LOT 7)
SMALLEST LOT:	9,000 SF (MULTIPLE)

SETBACKS:

	PROPOSED
FRONT	15'
REAR	12.5'
SIDE	5'
CORNER	15'

*50% REDUCTION ALLOWED. SEE NOTE 7.14 LOW IMPACT DEVELOPMENT.

PERIM. BUFFER: AS PER UDO SECTION 8.1.2 BUFFERS ARE NOT A REQUIREMENT OF RES. DEV. OF ONE TYPE IN THE RESIDENTIAL PERFORMANCE ZONE. THESE PLANS SHOW ELECTIVE BUFFERS TO PRESERVE VEGETATION, BUT NO LANDSCAPING REQUIREMENT NEEDS TO BE MET.

OPEN SPACE:
6.84 AC REQUIRED @ 0.03 AC PER LOT
46.12 AC PROPOSED (INCL OS, BUFFER + PONDS)
3.42 AC. REQUIRED ACTIVE OS @ ≥50% OS
ACTIVE OS TO BE MET WITH ADJACENT ABBEY NATURE PRESERVE & CONNECTION TO EXISTING ABBEY NATURE PRESERVE TRAILS, AND PARK LAND DEDICATED TO PENDER COUNTY.

* ALL OPEN SPACE TO BE COMMON/PASSIVE OPEN SPACE.

REC. UNITS : 2.5 REQUIRED
PROPOSED SIDEWALKS TO FULLFILL THIS.

ROADS
R/W WIDTH: 50' LOCAL STREETS
OWNERSHIP: PRIVATE

UTILITIES
SEWER: PLURIS
WATER: PENDER COUNTY

ARCHEOLIGICAL NOTE:
ARCHEOLOGICAL INVESTIGATION CONCLUDED THAT THERE ARE NO HISTORICAL STRUCTURES OR SITES SITES LOCATED ON THIS PROPERTY THAT REQUIRE FURTHER INVESTIGATION. FINDINGS WERE DETERMINED TO BE INSIGNIFICANT ER-22-0562 4/13/2023.

PROJECT DENSITY CALCULATIONS (4.6.7 2)

TOTAL PROPOSED S.F. UNITS	228
TOTAL PROJECT AREA:	114.96
AREA IN R/W:	14.50
TOTAL WETLAND AREA:	2.58
TOTAL REQ. OPEN SPACE:	6.84
TOTAL OPEN SPACE PROVIDED:	46.12
AREAS SUBTRACTED FROM TOTAL ACREAGE	
NON RES. AREA:	0.00
AREA IN R/W:	14.50
WETLAND AREA:	2.58
TOTAL REQ. OPEN SPACE:	6.84
SUM OF AREA SUBTRACTED FROM TOTAL ACREAGE	23.92
DEVELOPABLE ACREAGE	91.04
TOTAL UNITS PROPOSED	228
PROPOSED DENSITY	2.5 U/AC.

NORTH

120' 60' 0 120' 240'
HORIZONTAL SCALE 1" = 120'

ISSUED FOR AGENCY REVIEW

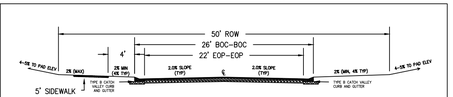
NOT ISSUED FOR CONSTRUCTION

BEFORE YOU DIG, CALL North Carolina 811 www.nc811.org

Table A - ITE Trip Generation
Foy Tract - Pender County, NC

Development						Average Weekday Driveway Volumes	AM Peak Hour		PM Peak Hour	
	Land Use	ITE Land Code	Size		Method/Type	24 Hour Two-Way Volume	Enter	Exit	Enter	Exit
					Phase 1					
Tract A	Single Family Detached Housing	210	135	Dwelling Unit	Adjacent Rate	1273	24	71	80	47
					Full Build					
Tract B	Single Family Detached Housing	210	225	Dwelling Unit	Adjacent Rate	2122	39	119	133	79
Total Unadjusted Trips						**3,395**	**63**	**190**	**213**	**126**

TRACT A (INDIGO AT ABBEY PRESERVE)
TRACT B (SWEETGRASS AT ABBEY PRESERVE)



TYPICAL 50' PRIVATE ROADWAY SECTION
NOT TO SCALE

CLD Engineering, PLLC
Civil Engineering / Landscape Architecture
Land Planning / Construction Management
NCBELS Firm License P-0369
P.O.Box 1172 Phone: 910-254-9333
Wilmington, NC 28402 Fax: 910-254-0502
www.cldeng.com

Sweetgrass at Abbey Preserve PRELIMINARY PLAT

PP-1 Preliminary Plat

REV	DATE	DESCRIPTION	INIT
A	12/23/2024	INITIAL PRELIMINARY PLAT REVIEW	NAA

DEVELOPER:

CLAYTON PROPERTIES GROUP, INC PO BOX 4098 MARYVILLE, TN 37802

APPROVED: JP		PROJECT:	178-07
CHECKED: JFB		SCALE:	1"=120'
DESIGNED: NAA		RELEASE:	MDP

SHEET
PP-1

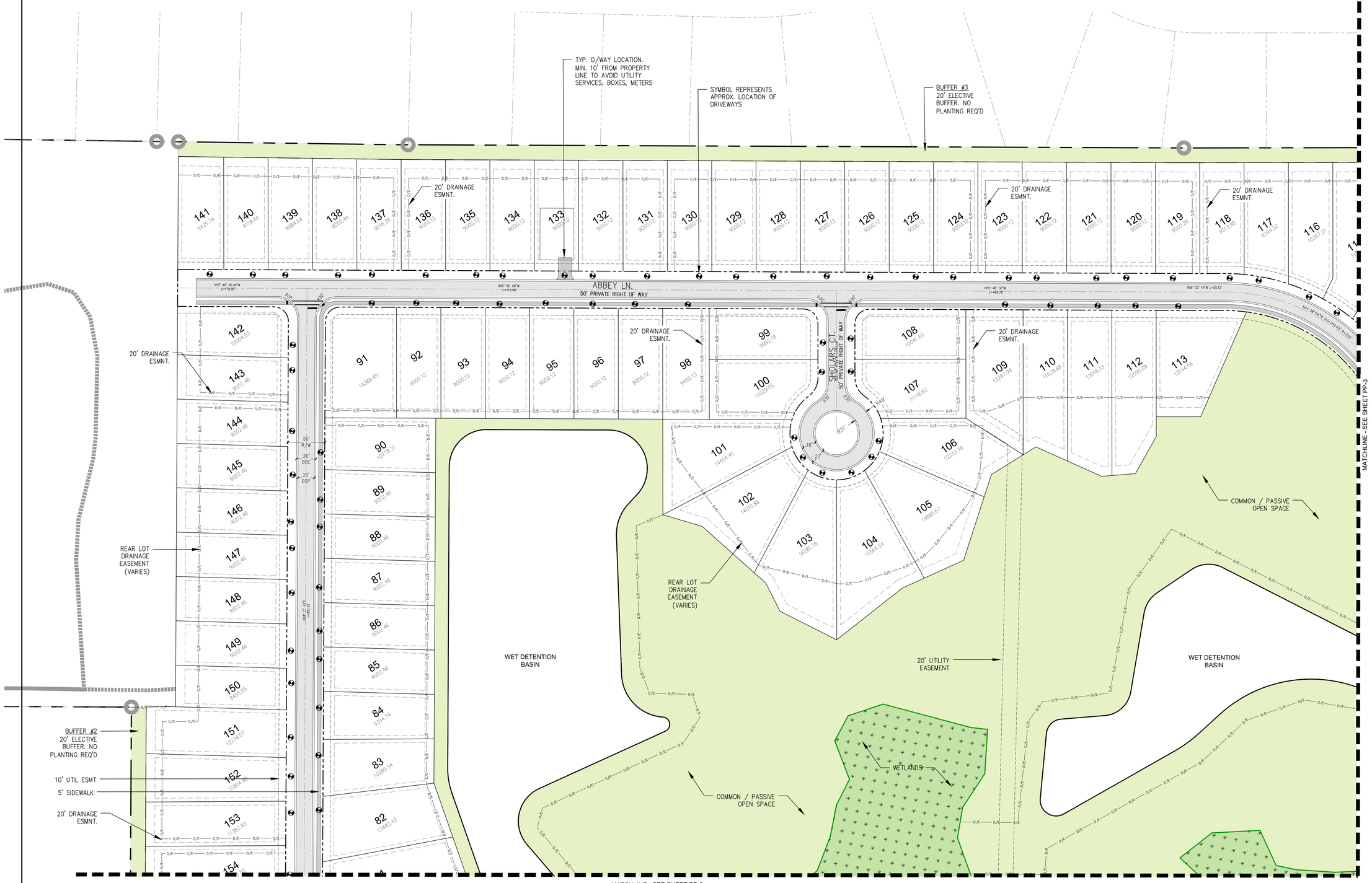
NORTH

HORIZONTAL SCALE 1" = 60'

ISSUED FOR AGENCY REVIEW

NOT ISSUED FOR CONSTRUCTION

BEFORE YOU DIG, CALL North Carolina 811



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Sweetgrass at Abbey Preserve PRELIMINARY PLAT

PP-2 Preliminary Plat

REV	DATE	DESCRIPTION	INIT
A	12/23/2024	INITIAL PRELIMINARY PLAT REVIEW	NAA

DEVELOPER:

CLAYTON PROPERTIES GROUP, INC PO BOX 4098 MARYVILLE, TN 37802

APPROVED:	JP	PROJECT:	178-07
CHECKED:	JFB	SCALE:	1"=60'
DESIGNED:	NAA	RELEASE:	PRELIM

SHEET

PP-2

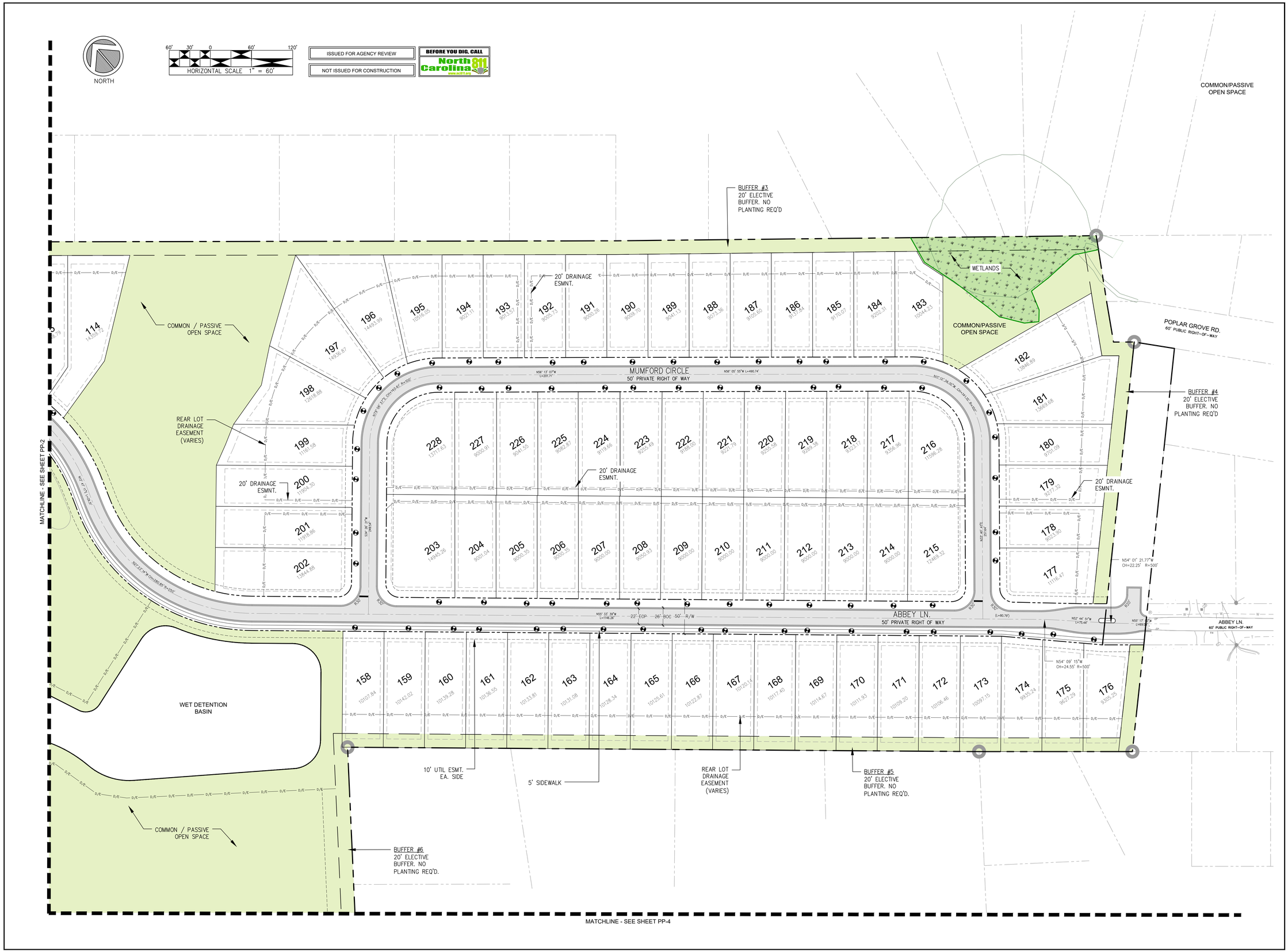
NORTH

HORIZONTAL SCALE 1" = 60'

ISSUED FOR AGENCY REVIEW

NOT ISSUED FOR CONSTRUCTION

BEFORE YOU DIG, CALL North Carolina 811 www.nc811.org



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Wilmington, NC 28402 Fax: 910-254-0502
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Sweetgrass at Abbey Preserve PRELIMINARY PLAT

PP-3 Preliminary Plat

REV	DATE	DESCRIPTION	INIT
A	12/23/2024	INITIAL PRELIMINARY PLAT REVIEW	NAA

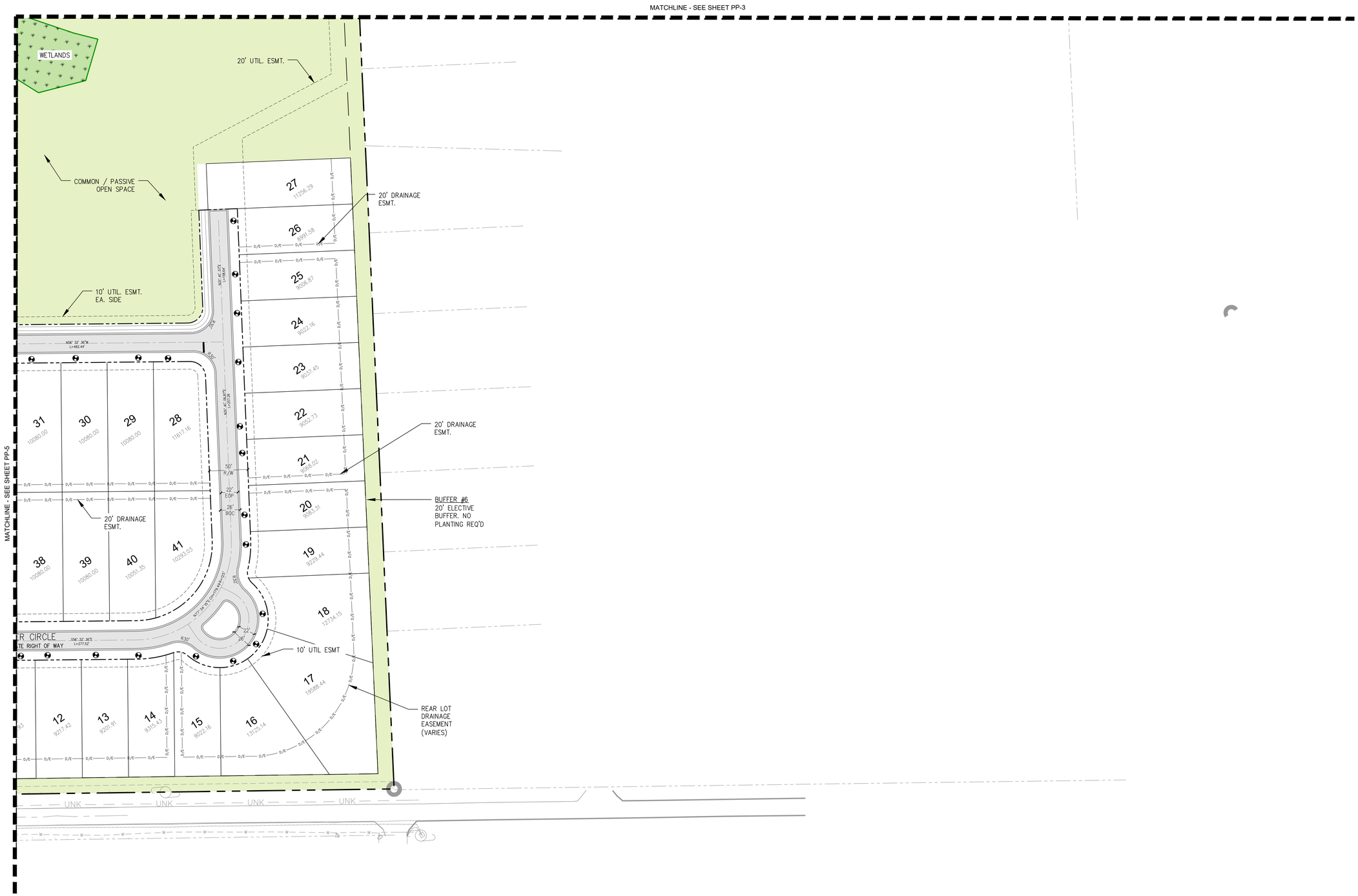
DEVELOPER:

CLAYTON PROPERTIES GROUP, INC PO BOX 4098 MARYVILLE, TN 37802

APPROVED:	JP	PROJECT:	178-07
CHECKED:	JFB	SCALE:	1"=60'
DESIGNED:	NAA	RELEASE:	PRELIM

SHEET

PP-3



NORTH

HORIZONTAL SCALE 1" = 60'

ISSUED FOR AGENCY REVIEW

NOT ISSUED FOR CONSTRUCTION

BEFORE YOU DIG, CALL North Carolina 811 www.nc811.org

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Sweetgrass at Abbey Preserve PRELIMINARY PLAT

PP-4 Preliminary Plat

REV	DATE	DESCRIPTION	INIT
A	12/23/2024	INITIAL PRELIMINARY PLAT REVIEW	NAA

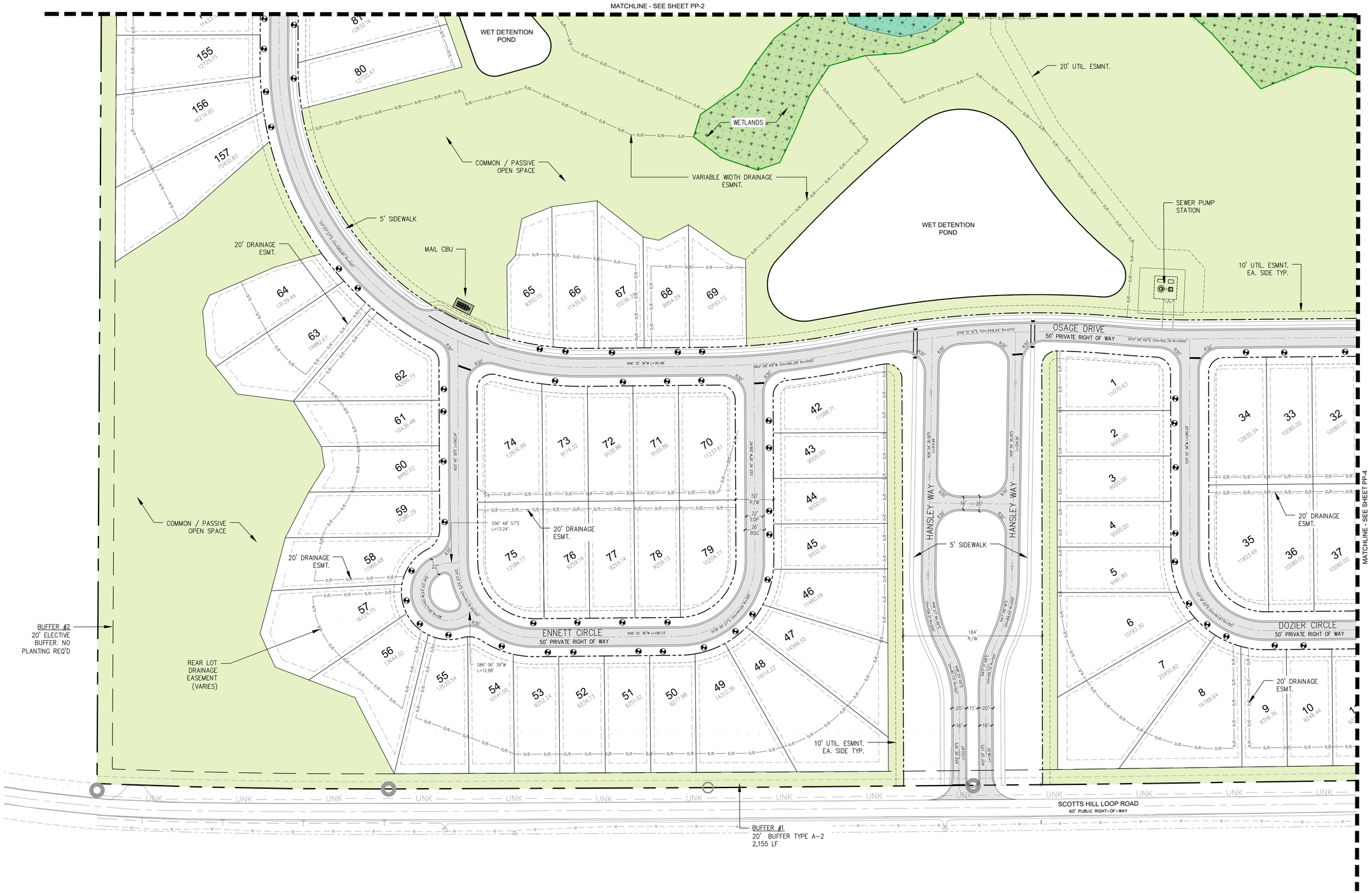
DEVELOPER:

CLAYTON PROPERTIES GROUP, INC PO BOX 4098 MARYVILLE, TN 37802

APPROVED:	JP	PROJECT:	178-07
CHECKED:	JFB	SCALE:	1"=60'
DESIGNED:	NAA	RELEASE:	PRELIM

SHEET

PP-4



NORTH

HORIZONTAL SCALE 1" = 60'

ISSUED FOR AGENCY REVIEW

NOT ISSUED FOR CONSTRUCTION

BEFORE YOU DIG, CALL North Carolina 811 www.nc811.org

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Sweetgrass at Abbey Preserve PRELIMINARY PLAT

PP-5 Preliminary Plat

REV	DATE	DESCRIPTION	INIT
A	12/23/2024	INITIAL PRELIMINARY PLAT REVIEW	NAA

DEVELOPER:

CLAYTON PROPERTIES GROUP, INC PO BOX 4098 MARYVILLE, TN 37802

APPROVED:	JP	PROJECT:	178-07
CHECKED:	JFB	SCALE:	1"=60'
DESIGNED:	NAA	RELEASE:	PRELIM

SHEET

PP-5

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

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

SECTION E: GROUND STABILIZATION

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

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

GROUND STABILIZATION SPECIFICATION

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

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls • Rolled erosion control products with grass seed

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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

EQUIPMENT AND VEHICLE MAINTENANCE

1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
4. Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Remove leaking vehicles and construction equipment from service until the problem has been corrected.
6. 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

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. 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.
5. Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE

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

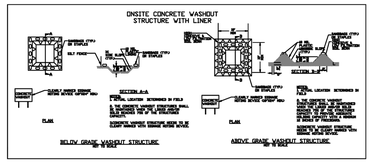
PORTABLE TOILETS

1. 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.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. 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

1. 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.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. 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.

NORTH CAROLINA *Environmental Quality*



CONCRETE WASHOUTS

1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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.
10. 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

1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. 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.
3. 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.
4. Do not stockpile these materials onsite.

HAZARDOUS AND TOXIC WASTE

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

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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

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

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

PART III, 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:

(a) 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,
(b) 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,
(c) 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,
(d) 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,
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) 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 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 measures 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 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.

Occurrence	Reporting Timeframes [After Discovery] and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days***, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 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.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	• ***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.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	• ***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.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	• ***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.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	• ***Within 24 hours***, an oral or electronic notification. • ***Within 7 calendar days,*** a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NORTH CAROLINA *Environmental Quality*

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

TIME OF SEEDING	SEEDING MIXTURE	RATE LB/ACRE	SOIL AMENDMENTS	MULCH	MAINTENANCE
LATE WINTER AND EARLY SPRING DEC 1 THRU APR 15	RYE (GRAIN)	120	FOLLOW SOIL TEST OR 2,000 LB/AC GROUND AGRICULTURAL LIMESTONE AND 750 LB/AC 10-10-10 FERTILIZER	APPLY 4,000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR MULCH ANCHORING TOOL.	REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR DAMAGE. TOPDRESS WITH 50 LB/AC OF NITROGEN IN MARCH. IF NECESSARY TO EXTEND TEMPORARY COVER BEYOND JUN 15, OVERSEED WITH 50 LB/AC KOBE LESPEDEZA IN LATE FEBRUARY OR EARLY MARCH.
	*KOBE LESPEDEZA	50			
SUMMER APR 15 THRU AUG 15	GERMAN MILLET	40	FOLLOW SOIL TEST OR 2,000 LB/AC GROUND AGRICULTURAL LIMESTONE AND 750 LB/AC 10-10-10 FERTILIZER	APPLY 4,000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR MULCH ANCHORING TOOL.	REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR DAMAGE.
FALL AUG 15 THRU DEC 30	RYE (GRAIN)	120	FOLLOW SOIL TEST OR 2,000 LB/AC GROUND AGRICULTURAL LIMESTONE AND 750 LB/AC 10-10-10 FERTILIZER	APPLY 4,000 LB/AC STRAW. ANCHOR STRAW BY TACKING WITH ASPHALT, NETTING, OR MULCH ANCHORING TOOL.	REFERTILIZE IF GROWTH IS NOT FULLY ADEQUATE. RESEED, REFERTILIZE, AND MULCH IMMEDIATELY FOLLOWING EROSION OR DAMAGE.

* OMIT ANNUAL LESPEDEZA WHEN DURING OF TEMPORARY COVER IS NOT TO EXTEND BEYOND JUNE

COASTAL PLAIN TEMPORARY SEEDING SCHEDULE

GRASS TYPE	AMOUNT/ 1000 SF.	TIME OF SEEDING	INITIAL	FERTILIZATION/1000 SF. MAINTENANCE		
BERMUDA, COMMON	1-2 LBS.	APR. THRU JUNE	25 LBS. 10-10-10	MARCH - APRIL 12 LBS. 10-10-10	EACH 4-8 WEEKS 1-2 LBS. N.	AUG. - SEPT. 12 LBS. 10-10-10
FESCUE, TALL (KENTUCKY 31)	5-7 LBS.	SEPT. THRU OCT. FEB. THRU OCT.	25 LBS. 10-10-10	FEB. - MARCH 12 LBS. 10-10-10	MAY & DEC. 1/2 TO 1 LB. N.	SEPT. - OCT. 12 LBS. 10-10-10
SERICEA LESPEDEZA (SLOPES)	1-2 LBS.	MARCH THRU APR.	25 LBS. 10-10-10	FEB. - MARCH	1/2 TO 1 LB. N.	NA

PERMANENT SEEDING SCHEDULE

GROUND STABILIZATION NOTES

2
GI-1

UTILITY SEPARATION NOTES:

1) THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS FROM THE UTILITY COMPANY AND, WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING UTILITIES. ANY CONFLICTS SHALL BE BROUGHT TO THE OWNER'S AND ENGINEER'S ATTENTION IMMEDIATELY.

15A NCAC 18C .0904: PIPE LAYING
(AMENDED EFFECTIVE JULY 1, 2019)
(A) TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE ACCOMPLISHED IN A MANNER TO PREVENT DAMAGE TO AND MISALIGNMENT OF THE PIPE. WATER MAINS SHALL BE BURIED TO A DEPTH BELOW THE FROST LINE OR TO A DEPTH SUFFICIENT TO PROVIDE A MINIMUM OF 30 INCHES COVER, WHICHEVER IS GREATER. IN CASES WHERE IT IS IMPRACTICABLE TO PROVIDE 30 INCHES OF COVER TAKING INTO CONSIDERATION FEASIBILITY AND COST, A DEVIATION MAY BE APPROVED ON A CASE-BY-CASE BASIS, IF SUPPORTED BY DATA FROM THE DESIGN ENGINEER INCLUDING CONSIDERATION OF PIPE MATERIAL, COVER MATERIAL, LAND COVER, LAND USE, LAND SLOPE, THE DEPTH OF THE FROST LINE, AND THE LOCATION OF OTHER UTILITIES.
(B) TO ALLOW FOR CONSTRUCTION AND REPAIR, A MINIMUM DISTANCE OF 12 INCHES SHALL BE MAINTAINED BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF OTHER UTILITIES

15A NCAC 18C .0906: RELATION OF WATER MAINS TO NON-POTABLE WATER LINES
(AMENDED EFFECTIVE JULY 1, 2019)
(A) FOR THE PURPOSES OF THIS RULE, SEWER SHALL MEAN ANY EXISTING OR PROPOSED GRAVITY OR FORCE MAIN USED TO CONVEY SANITARY OR INDUSTRIAL PROCESS WASTE.
(B) LATERAL SEPARATION OF 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) THE WATER MAIN SHALL BE 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
(2) THE WATER MAIN SHALL BE LAID IN THE SAME TRENCH AS THE SEWER, WITH THE WATER MAIN LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH AND WITH THE ELEVATION OF THE BOTTOM OF THE WATER MAIN AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER.
(C) CROSSINGS. A WATER MAIN THAT CROSSES A SEWER SHALL BE LAID A MINIMUM VERTICAL DISTANCE OF 18 INCHES FROM THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER, EITHER ABOVE OR BELOW THE SEWER, WITH PREFERENCE TO THE WATER MAIN LOCATED ABOVE THE SEWER. ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
(D) WATER MAINS AND STORM SEWER PIPES. PIPES CARRYING STORM DRAINAGE SHALL BE SEPARATED FROM WATER LINES IN ACCORDANCE WITH RULE .0904 OF THIS SECTION.
(E) WATER MAINS AND RECLAIMED WATER DISTRIBUTION LINES. WATER LINES SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY FROM OR AT LEAST 18 INCHES ABOVE WATER PIPES CARRYING TREATED AND DISINFECTED WASTEWATER IN RECLAIMED WATER DISTRIBUTION LINES. CROSSINGS SHALL BE MADE IN ACCORDANCE WITH PARAGRAPH (C) OF THIS RULE.

UTILITY MATERIAL SPECIFICATIONS
1. WATER UTILITY MATERIALS AND INSTALLATION SHALL BE PER THE PENDER COUNTY UTILITY (PCU) STANDARD DETAILS, AND TECHNICAL SPECIFICATIONS PROVIDED ONLINE ON THEIR WEB PAGE.
2. SEWER UTILITY MATERIALS AND INSTALLATION SHALL BE PER THE PLURIS HOLDINGS, LLC STANDARD DETAILS, AND TECHNICAL SPECIFICATIONS PROVIDED ONLINE ON THEIR WEB PAGE.

STORM DRAINAGE SYSTEM INTERCHANGEABLE PIPE TABLE

SPECIFICATION	ALLOWABLE SUBSTITUTIONS BASED UPON COVER
CLASS-III RCP CLASS-IV RCP CLASS-V RCP	CLASS-IV RCP, CLASS-V RCP, CSP, CAAP, HDPE, PP AND PVC CLASS-V RCP, CSP, CAAP, AND PP CSP, CAAP, AND PP
CSP	CLASS-IV RCP, CLASS-V RCP, CAAP, AND PP
CAAP	CLASS-IV RCP, CLASS-V RCP, CSP, AND PP
HDPE	CLASS-III RCP, CLASS-IV RCP, CLASS-V RCP, CSP, CAAP, PP, AND PVC
PP	CLASS-IV RCP, CLASS-V RCP, CSP, AND CAAP
PVC	CLASS-III RCP, CLASS-IV RCP, CLASS-V RCP, CSP, CAAP, HDPE, AND PVC

RCP (REINFORCED CONCRETE) - AASHTO M170
CSP (CORRUGATED STEEL) - AASHTO M36
CAAP (CORRUGATED ALUMINUM) - AASHTO M196
HDPE (HIGH-DENSITY POLYETHYLENE) - AASHTO M294
PP (POLYPROPYLENE) - ASTM F2881, ASTM F2764, OR AASHTO M330
PVC (POLYVINYL CHLORIDE) - ASTM F949 OR AASHTO M304

GENERAL NOTES:

1. THE PROPERTY BOUNDARY, TOPOGRAPHIC, AND UTILITY SURVEY SHOWN ON THESE PLANS WERE PROVIDED BY ESP ASSOCIATES, INC. LOCATED IN WILMINGTON, NORTH CAROLINA.
2. THIS PROJECT WILL INCLUDE APPROXIMATELY 0.3 ACRES OF ISOLATED 404 WETLANDS THAT WILL BE PERMANENTLY IMPACTED AND REMOVED. THE PERMITTING ACTION WILL BE COMPLETED BY OTHERS.
3. THE TOTAL DISTURBANCE THE SUBDIVISION IS APPROXIMATELY 87 ACRES.
4. THE SITE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES ABOVE AND BELOW GROUND BEFORE COMMENCING CONSTRUCTION.
5. THE SITE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL WASTE MATERIALS GENERATED THROUGH DEMOLITION AND GRUBBING ACTIVITIES SHOWN ON THESE PLANS.
6. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SEDIMENT-LADEN RUNOFF IS TREATED PRIOR TO BEING DISCHARGED FROM THE SITE AND MAY BE REQUIRED TO PROVIDE ADDITIONAL MEASURES OF SEDIMENT CONTROL BASED UPON THE PERFORMANCE OF EROSION CONTROL MEASURES PROVIDED ON SITE.
7. DENUDED AREAS MUST BE STABILIZED BASED UPON THE GROUND STABILIZATION REQUIREMENTS PROVIDED ON THE APPROVED EROSION CONTROL DRAWINGS. THIS INCLUDES SLOPES, SWALES, CHANNELS, AND STOCKPILES.
8. MATERIAL AND SOIL STAGING/STOCKPILING AREAS SHALL BE LOCATED WITHIN THE LIMIT OF DISTURBANCE, SURROUNDED BY SILT FENCE, AND STABILIZED AS REQUIRED BY THE STABILIZATION REQUIREMENTS AND SEEDING SCHEDULES.
9. EXCELSIOR MATTING AND SEEDING SHALL BE USED ON ANY VEGETATED SLOPES STEEPER THAN 3:1.
10. ALL STORM DRAIN SYSTEM COMPONENTS ARE DESIGNED TO PROVIDE POSITIVE DRAINAGE TO THE OUTLET.
11. RUNOFF FROM PROJECT DISCHARGES IN THE FUTCH CREEK WATERSHED (I.D.: 18-87-19, CLASSIFICATION: SA;HQW) WITHIN THE WHITE OAK RIVER BASIN.

GENERAL CONSTRUCTION TESTING NOTES:

1. CONTRACTOR SHALL PROVIDE TO THE ENGINEER OF RECORD (EOR) THIRD-PARTY DENSITY AND THICKNESS TESTING RESULTS ON THE ROADWAY SUBBASE, BASE, AND ASPHALT AT INTERVALS AND LOCATIONS RECOMMENDED BY THE GEOTECHNICAL ENGINEER TO ASSURE THE ENTIRE ROADWAY SYSTEM IS APPROPRIATELY EVALUATED AND TESTED IN ACCORDANCE WITH THE GOVERNING MUNICIPAL OR DOT SPECIFICATIONS FOR ROADWAYS.
2. CONTRACTOR SHALL PROVIDE TO THE EOR AN AS-BUILT TOPOGRAPHIC SURVEY OF THE STORMWATER CONTROL MEASURE INCLUDING THE INLETS, OUTLET CONTROL STRUCTURE WITH ALL WEIRS AND ORIFICES IDENTIFIED AND SURVEYED, THE TOP AND BOTTOM OF THE SCM, AND OTHER SCM-RELATED COMPONENTS OF THE PLAN. THIS MAY INCLUDE AS-BUILT SURVEY OF THE UPSTREAM STORM DRAIN SYSTEM. CONTRACTOR SHALL COORDINATE WITH THE EOR TO DETERMINE IF THIS IS REQUIRED. IF A WET DETENTION BASIN IS PART OF THE PROJECT, THE CONTRACTOR SHALL PROVIDE A PHOTOGRAPHIC RECORD OF VEGETATED SHELF PLANTINGS IMMEDIATELY AFTER INSTALLATION.
3. CONTRACTOR SHALL PROVIDE TO THE EOR PRESSURE, LEAKAGE, AND BACTERIOLOGICAL TESTING RESULTS ON THE WATER AND SEWER INFRASTRUCTURE AS REQUIRED BY THE UTILITY PROVIDER IN THEIR STANDARD SPECIFICATIONS FOR INSTALLATION, MATERIALS, AND TESTING. A REPRESENTATIVE OF EITHER THE EOR AND UTILITY PROVIDER IS TYPICALLY REQUIRED TO WITNESS ALL PRESSURE TESTS AND CONNECTIONS TO EXISTING UTILITY INFRASTRUCTURE.
4. CONTRACTOR SHALL PROVIDE TO THE EOR AN AS-BUILT SURVEY OF THE ENTIRE WATER AND SEWER SYSTEM INCLUDING ALL SERVICES IN ACCORDANCE WITH THE UTILITY PROVIDER STANDARDS. CONTRACTOR SHALL ALSO PROVIDE A SET OF MARKUP PLANS TO THE EOR THAT REFLECT ANY PRE-APPROVED FIELD CHANGES THAT OCCURRED DURING CONSTRUCTION. THE CONTRACTOR MAY NOT ALTER THE DESIGN OF THE WATER, SEWER, OR STORM DRAIN SYSTEMS WITHOUT PRIOR CONSENT FROM THE EOR OR UTILITY AUTHORITY. SHOULD UNFORSEEN CONFLICTS ARISE THAT PROHIBIT THE ALLOWABLE CONSTRUCTION OF THE UTILITY SITE INFRASTRUCTURE, THE CONTRACTOR SHALL COORDINATE WITH THE EOR AND UTILITY PROVIDER TO DETERMINE AN ACCEPTABLE COURSE OF ACTION BEFORE CONTINUING WITH CONSTRUCTION IN THAT AREA.

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www.cldeng.com

SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

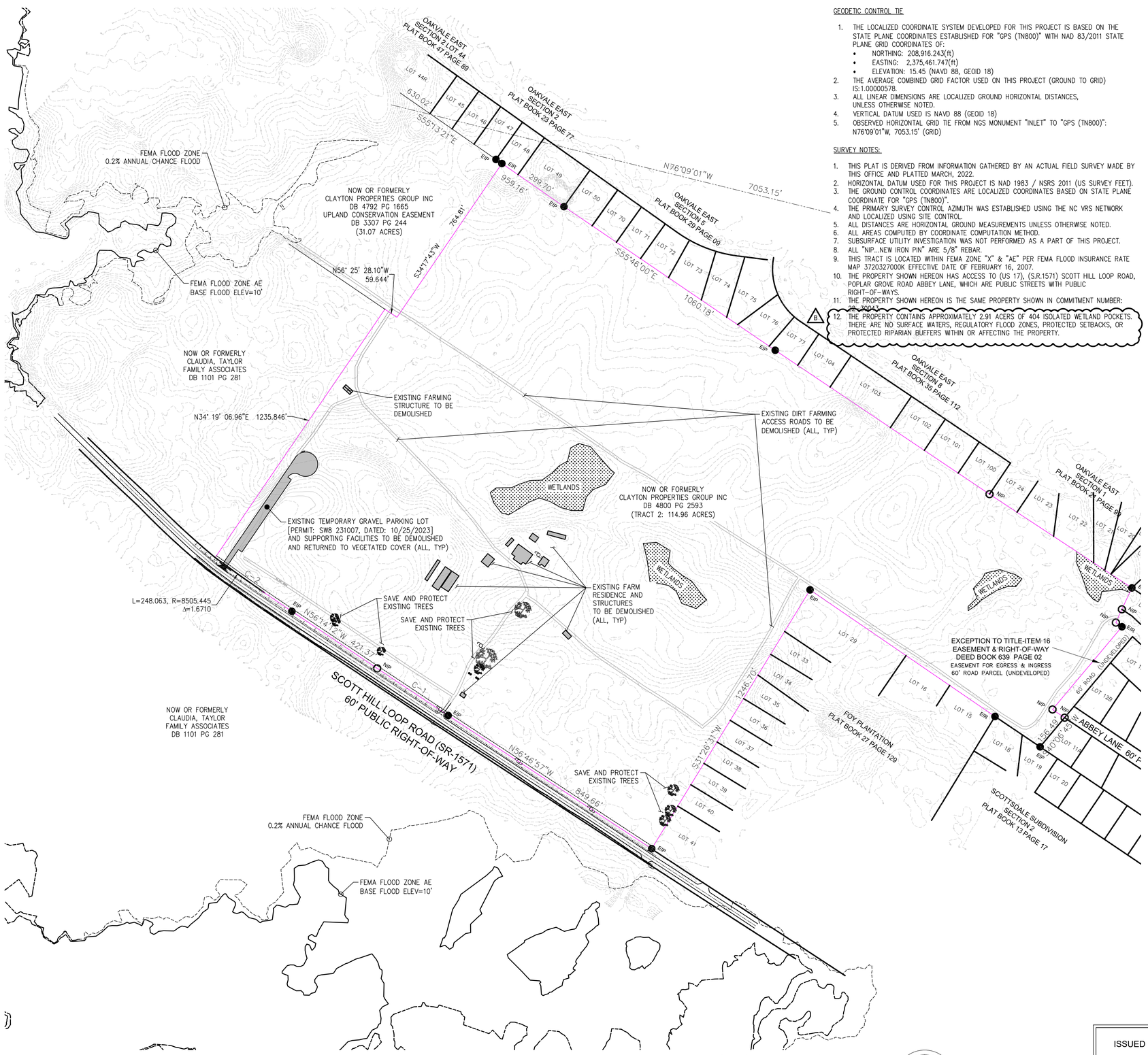
GENERAL INFORMATION

REV	DATE	DESCRIPTION	
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	NTS
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
GI-1



OVERALL DEMOLITION PLAN
1" = 200'

1 DEMO

200' 100' 0 200' 400'
HORIZONTAL SCALE 1" = 200'

GEODETIC CONTROL TIE

1. THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED FOR "GPS (TN800)" WITH NAD 83/2011 STATE PLANE GRID COORDINATES OF:
   - NORTHING: 208,916.243(ft)
   - EASTING: 2,375,461.747(ft)
   - ELEVATION: 15.45 (NAVD 88, GEOID 18)
2. THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS:1.00000578.
3. ALL LINEAR DIMENSIONS ARE LOCALIZED GROUND HORIZONTAL DISTANCES, UNLESS OTHERWISE NOTED.
4. VERTICAL DATUM USED IS NAVD 88 (GEOID 18)
5. OBSERVED HORIZONTAL GRID TIE FROM NGS MONUMENT "INLET" TO "GPS (TN800)": N76°09'01"W, 7053.15' (GRID)

SURVEY NOTES:

1. THIS PLAT IS DERIVED FROM INFORMATION GATHERED BY AN ACTUAL FIELD SURVEY MADE BY THIS OFFICE AND PLATTED MARCH, 2022.
2. HORIZONTAL DATUM USED FOR THIS PROJECT IS NAD 1983 / NSRS 2011 (US SURVEY FEET).
3. THE GROUND CONTROL COORDINATES ARE LOCALIZED COORDINATES BASED ON STATE PLANE COORDINATE FOR "GPS (TN800)".
4. THE PRIMARY SURVEY CONTROL AZIMUTH WAS ESTABLISHED USING THE NC VRS NETWORK AND LOCALIZED USING SITE CONTROL.
5. ALL DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS UNLESS OTHERWISE NOTED.
6. ALL AREAS COMPUTED BY COORDINATE COMPUTATION METHOD.
7. SUBSURFACE UTILITY INVESTIGATION WAS NOT PERFORMED AS A PART OF THIS PROJECT.
8. ALL "NIP...NEW IRON PIN" ARE 5/8" REBAR.
9. THIS TRACT IS LOCATED WITHIN FEMA ZONE "X" & "AE" PER FEMA FLOOD INSURANCE RATE MAP 3720327000K EFFECTIVE DATE OF FEBRUARY 16, 2007.
10. THE PROPERTY SHOWN HEREON HAS ACCESS TO (US 17), (S.R.1571) SCOTT HILL LOOP ROAD, POPLAR GROVE ROAD ABBEY LANE, WHICH ARE PUBLIC STREETS WITH PUBLIC RIGHT-OF-WAYS.
11. THE PROPERTY SHOWN HEREON IS THE SAME PROPERTY SHOWN IN COMMITMENT NUMBER: 25-20043.
12. THE PROPERTY CONTAINS APPROXIMATELY 2.91 ACERS OF 404 ISOLATED WETLAND POCKETS. THERE ARE NO SURFACE WATERS, REGULATORY FLOOD ZONES, PROTECTED SETBACKS, OR PROTECTED RIPARIAN BUFFERS WITHIN OR AFFECTING THE PROPERTY.

GENERAL NOTES:

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2. THE SITE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITIES ABOVE AND BELOW GROUND BEFORE COMMENCING CONSTRUCTION.
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4. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SEDIMENT-LADEN RUNOFF IS TREATED PRIOR TO BEING DISCHARGED FROM THE SITE AND MAY BE REQUIRED TO PROVIDE ADDITIONAL MEASURES OF SEDIMENT CONTROL BASED UPON THE PERFORMANCE OF EROSION CONTROL MEASURES PROVIDED ON SITE.
5. DENUDED AREAS MUST BE STABILIZED BASED UPON THE GROUND STABILIZATION REQUIREMENTS PROVIDED ON THE APPROVED EROSION CONTROL DRAWINGS. THIS INCLUDES SLOPES, SWALES, CHANNELS, AND STOCKPILES.
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7. EXCELSIOR MATTING AND SEEDING SHALL BE USED ON SLOPES STEEPER THAN 2:1 AND IN ANY REGRADED NCDOT DITCHES.
8. ALL STORM DRAIN SYSTEM COMPONENTS ARE DESIGNED TO PROVIDE POSITIVE DRAINAGE TO THE OUTLET.
9. RUNOFF FROM PROJECT DRAINS TO FUTCH CREEK (I.D.: 18-87-19, CLASSIFICATION: SA;HQW) WTHIN THE WHITE OAK BASIN.
10. THE STORMWATER RULES REQUIRE THE FOLLOWING DOCUMENTS TO BE RECORDED WITH THE OFFICE OF THE REGISTER OF DEEDS PRIOR TO THE SALE OF INDIVIDUAL LOTS OR GROUPS OF LOTS:
    - ACCESS AND/OR EASEMENTS
    - OPERATION AND MAINTENANCE AGREEMENT
    - FINAL PLATS
    - DEED RESTRICTIONS AND PROTECTIVE COVENANTS
    - DEEDS FOR INDIVIDUAL LOTS

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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

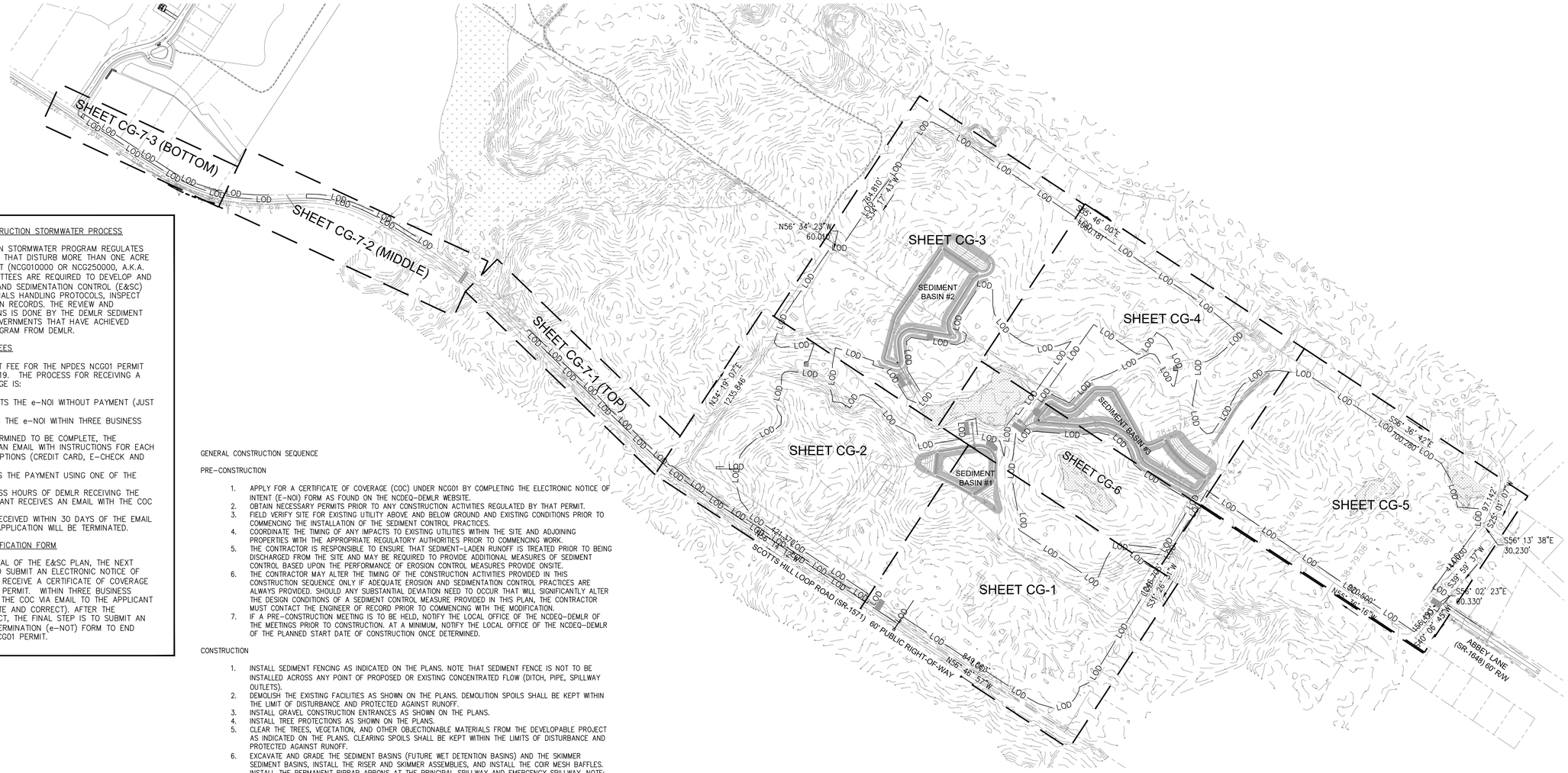
OVERALL DEMOLITION PLAN

REV	DATE	DESCRIPTION	INIT
B	27 JUN 2024	CHANGED GENERAL NOTE	JRC
A	11 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 200'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
DEMO



EROSION CONTROL CONSTRUCTION STORMWATER PROCESS

THE NPDES CONSTRUCTION STORMWATER PROGRAM REGULATES CONSTRUCTION ACTIVITIES THAT DISTURB MORE THAN ONE ACRE UNDER A GENERAL PERMIT (NCG010000 OR NCG250000, A.K.A. NCG01 OR NCG25). PERMITTEES ARE REQUIRED TO DEVELOP AND IMPLEMENT AN EROSION AND SEDIMENTATION CONTROL (E&SC) PLAN, ADHERE TO MATERIALS HANDLING PROTOCOLS, INSPECT THEIR SITES AND MAINTAIN RECORDS. THE REVIEW AND APPROVAL OF E&SC PLANS IS DONE BY THE DEMLR SEDIMENT PROGRAM AND LOCAL GOVERNMENTS THAT HAVE ACHIEVED DELEGATION OF THIS PROGRAM FROM DEMLR.

NCG01 ANNUAL PERMIT FEES

THE $100 ANNUAL PERMIT FEE FOR THE NPDES NCG01 PERMIT BEGAN ON AUGUST 1, 2019. THE PROCESS FOR RECEIVING A CERTIFICATES OF COVERAGE IS:

- THE APPLICANT SUBMITS THE e-NOI WITHOUT PAYMENT (JUST LIKE BEFORE).
- DEMLR STAFF REVIEWS THE e-NOI WITHIN THREE BUSINESS DAYS OF SUBMITTAL.
- IF THE e-NOI IS DETERMINED TO BE COMPLETE, THE APPLICANT RECEIVES AN EMAIL WITH INSTRUCTIONS FOR EACH OF THREE PAYMENT OPTIONS (CREDIT CARD, E-CHECK AND PAPER CHECK).
- THE APPLICANT MAKES THE PAYMENT USING ONE OF THE PAYMENT OPTIONS.
- WITHIN 24-48 BUSINESS HOURS OF DEMLR RECEIVING THE PAYMENT, THE APPLICANT RECEIVES AN EMAIL WITH THE COC ATTACHED.
- IF PAYMENT IS NOT RECEIVED WITHIN 30 DAYS OF THE EMAIL REQUEST, THEN THE APPLICATION WILL BE TERMINATED.

e-NOI, e-NOT, AND MODIFICATION FORM

AFTER RECEIVING APPROVAL OF THE E&SC PLAN, THE NEXT STEP IS TO FILL OUT AND SUBMIT AN ELECTRONIC NOTICE OF INTENT (e-NOI) FORM TO RECEIVE A CERTIFICATE OF COVERAGE (COC) UNDER THE NCG01 PERMIT. WITHIN THREE BUSINESS DAYS, DEMLR WILL ISSUE THE COC VIA EMAIL TO THE APPLICANT (IF THE FORM IS COMPLETE AND CORRECT). AFTER THE COMPLETION OF A PROJECT, THE FINAL STEP IS TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (e-NOT) FORM TO END COVERAGE UNDER THE NCG01 PERMIT.

GENERAL CONSTRUCTION SEQUENCE

PRE-CONSTRUCTION

1. APPLY FOR A CERTIFICATE OF COVERAGE (COC) UNDER NCG01 BY COMPLETING THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AS FOUND ON THE NCDEQ-DEMLR WEBSITE.
2. OBTAIN NECESSARY PERMITS PRIOR TO ANY CONSTRUCTION ACTIVITIES REGULATED BY THAT PERMIT.
3. FIELD VERIFY SITE FOR EXISTING UTILITY ABOVE AND BELOW GROUND AND EXISTING CONDITIONS PRIOR TO COMMENCING THE INSTALLATION OF THE SEDIMENT CONTROL PRACTICES.
4. COORDINATE THE TIMING OF ANY IMPACTS TO EXISTING UTILITIES WITHIN THE SITE AND ADJOINING PROPERTIES WITH THE APPROPRIATE REGULATORY AUTHORITIES PRIOR TO COMMENCING WORK.
5. THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SEDIMENT-LADEN RUNOFF IS TREATED PRIOR TO BEING DISCHARGED FROM THE SITE AND MAY BE REQUIRED TO PROVIDE ADDITIONAL MEASURES OF SEDIMENT CONTROL BASED UPON THE PERFORMANCE OF EROSION CONTROL MEASURES PROVIDE ONSITE.
6. THE CONTRACTOR MAY ALTER THE TIMING OF THE CONSTRUCTION ACTIVITIES PROVIDED IN THIS CONSTRUCTION SEQUENCE ONLY IF ADEQUATE EROSION AND SEDIMENTATION CONTROL PRACTICES ARE ALWAYS PROVIDED. SHOULD ANY SUBSTANTIAL DEVIATION NEED TO OCCUR THAT WILL SIGNIFICANTLY ALTER THE DESIGN CONDITIONS OF A SEDIMENT CONTROL MEASURE PROVIDED IN THIS PLAN, THE CONTRACTOR MUST CONTACT THE ENGINEER OF RECORD PRIOR TO COMMENCING WITH THE MODIFICATION.
7. IF A PRE-CONSTRUCTION MEETING IS TO BE HELD, NOTIFY THE LOCAL OFFICE OF THE NCDEQ-DEMLR OF THE MEETINGS PRIOR TO CONSTRUCTION. AT A MINIMUM, NOTIFY THE LOCAL OFFICE OF THE NCDEQ-DEMLR OF THE PLANNED START DATE OF CONSTRUCTION ONCE DETERMINED.

CONSTRUCTION

1. INSTALL SEDIMENT FENCING AS INDICATED ON THE PLANS. NOTE THAT SEDIMENT FENCE IS NOT TO BE INSTALLED ACROSS ANY POINT OF PROPOSED OR EXISTING CONCENTRATED FLOW (DITCH, PIPE, SPILLWAY OUTLETS).
2. DEMOLISH THE EXISTING FACILITIES AS SHOWN ON THE PLANS. DEMOLITION SPOILS SHALL BE KEPT WITHIN THE LIMIT OF DISTURBANCE AND PROTECTED AGAINST RUNOFF.
3. INSTALL GRAVEL CONSTRUCTION ENTRANCES AS SHOWN ON THE PLANS.
4. INSTALL TREE PROTECTIONS AS SHOWN ON THE PLANS.
5. CLEAR THE TREES, VEGETATION, AND OTHER OBJECTIONABLE MATERIALS FROM THE DEVELOPABLE PROJECT AS INDICATED ON THE PLANS. CLEARING SPOILS SHALL BE KEPT WITHIN THE LIMITS OF DISTURBANCE AND PROTECTED AGAINST RUNOFF.
6. EXCAVATE AND GRADE THE SEDIMENT BASINS (FUTURE WET DETENTION BASINS) AND THE SKIMMER SEDIMENT BASINS, INSTALL THE RISER AND SKIMMER ASSEMBLIES, AND INSTALL THE COIR MESH BAFFLES. INSTALL THE PERMANENT RIPRAP APRONS AT THE PRINCIPAL SPILLWAY AND EMERGENCY SPILLWAY. NOTE: DEWATERING ACTIVITIES FOR THE EXCAVATION, GRADING, AND MAINTENANCE OF THE SEDIMENT BASINS AND THE SKIMMER SEDIMENT BASINS SHALL BE CONDUCTED SUCH THAT PUMPED OR BYPASSED WATER FROM THE SEDIMENT BASINS AND THE SKIMMER SEDIMENT BASINS ARE MECHANICALLY FILTERED PRIOR TO DISCHARGE FROM THE SITE. THE CONTRACTOR SHALL USE FILTRATION BAGS, OR OTHER APPROVED EQUAL, PLACED ON GROUND LEVEL THAT DISCHARGE FILTERED WATER OFF THE SITE IN A NON-EROSIVE MANNER.
7. EXCAVATE THE TEMPORARY CONVEYANCE DITCHES AND TEMPORARY DIVERSION DITCHES. PROVIDE THE SCOUR PROTECTION LINING AS SPECIFIED ON THE PLANS. ENSURE CAPTURED RUNOFF IS DIRECTED TO THE SEDIMENT BASINS. INSTALL THE TEMPORARY RIPRAP APRONS AT EACH DITCH OUTLET INTO THE SEDIMENT BASINS.
8. SPREAD THE EXCAVATION SPOILS AROUND THE SITE AS NECESSARY FOR SOIL AND TERRAIN MANAGEMENT. GRADING ACTIVITIES SHALL BE LOCATED AND TIMED TO ENSURE SITE DRAINAGE IS DIRECTED TO A TREATMENT SYSTEM (SEDIMENT BASIN, SKIMMER SEDIMENT BASIN OR SILT FENCE) OR CONVEYANCE SYSTEM (TEMPORARY CONVEYANCE DITCH, TEMPORARY DIVERSION DITCH OR FUTURE STORM DRAIN SYSTEM) FOR THE REMAINDER OF SITE WORK. NOTE: THE SPREADINGS SHALL BE EITHER STOCKPILED AND PROTECTED FROM RUNOFF PER THE STOCKPILE DETAILS, OR EVENLY SPREAD AROUND THE SITE AND STABILIZED BASED UPON THE TEMPORARY SEEDING SCHEDULE. IT IS RECOMMENDED THAT THE DISTURBED AREAS BE APPROPRIATELY PHASED SUCH THAT THE SITE CAN REMAIN COMPLIANT WITH THE STABILIZATION REQUIREMENTS OF THE PLANS AND PERMIT. GROUND STABILIZATION MUST OCCUR AS SOON AS PRACTICAL AFTER THE CESSATION OF CONSTRUCTION ACTIVITIES IN EACH AREA.
9. PROVIDE FINAL GRADING ELEVATIONS BASED UPON THE PLAN SHEETS. IT IS RECOMMENDED THAT THE CONTRACTOR USE A COMBINATION OF SILT FENCING AS SHOWN ON THE PLANS AS NECESSARY TO PROTECT THE OFFSITE STORMWATER DRAINAGE SYSTEM AND THE OUTLET CULVERT FROM ERODING DURING LOT CONSTRUCTION ACTIVITIES. ANY FAILURE OR DETERIORATION OF THE OFFSITE STORMWATER DRAINAGE SYSTEM AND THE OUTLET CULVERT MUST BE REPAIRED IMMEDIATELY AND PROTECTED FROM ADDITIONAL EROSION.
10. WHEN CONSTRUCTION IS COMPLETE, COMPLETE THE ELECTRONIC THE NOTICE OF TERMINATION (E-NOT) FORM AS FOUND ON THE NCDEQ-DEMLR WEBSITE TO END COVERAGE UNDER NCG01.

THROUGHOUT-CONSTRUCTION

1. SELF-MONITORING AND APPROPRIATE RECORD KEEPING, AND DOCUMENTATION IS REQUIRED EVERY SEVEN DAYS AND WITHIN 24-HOURS OF EVERY HALF-INCH RAINFALL EVENT. THESE REPORTS, A RAIN GAUGE, AND COPIES OF THE APPROVED PLAN AND PERMIT SHALL REMAIN ON SITE FOR THE DURATION OF CONSTRUCTION.
2. DENUDED AREAS MUST BE STABILIZED WITHIN 21 CALENDAR DAYS OF CEASE OF ANY PHASE OF ACTIVITY. THIS INCLUDES SLOPES, SWALES, CHANNELS, AND STOCKPILES.
3. INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES EVERY SEVEN DAYS AND AFTER EACH RAINFALL EVENT. NEEDED REPAIRS SHALL BE MADE IMMEDIATELY.
4. TOP DRESS TEMPORARY SEEDING WITH 50 POUNDS PER ACRE NITROGEN IN MARCH. IF COVER IS NEEDED THROUGH THE FOLLOWING SUMMER, OVERESEED WITH 50 POUNDS PER ACRE OF KOBE LESPEDEZA. MOWING OF GRASSED AREAS SHALL BE ACCOMPLISHED ACCORDING TO THE SEASON. MAXIMUM UNMOWN HEIGHT OF A GRASS AT ANY TIME SHALL BE SIX INCHES.
5. PERMANENT GRASS SHALL BE INSTALLED FOR AREAS AT FINAL GRADE AND IN SEASON. FERTILIZE, WATER AND RESEED TO ESTABLISH A VIGOROUS STAND OF GRASS.
6. AFTER COMPLETION OF CONSTRUCTION WITHIN ANY PHASE, AND THE PHASE IS PROPERLY STABILIZED REMOVE ALL ACCUMULATED SEDIMENT FROM THE SEDIMENTATION CONTROL DEVICES AND SPREAD IT EVENLY ACROSS THE SITE. THE SPREADINGS SHALL BE SEEDED AND STABILIZED BASED UPON THE GROUND STABILIZATION REQUIREMENTS, AND THE TEMPORARY AND PERMANENT SEEDING SCHEDULES.

GENERAL CONSTRUCTION SEQUENCE 2 GI-2

SHEET INDEX
1" = 250' (ON 24" X 36" PLAN SHEET)

1 GI-2

250' 125' 0 250' 500'
HORIZONTAL SCALE 1" = 250'

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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

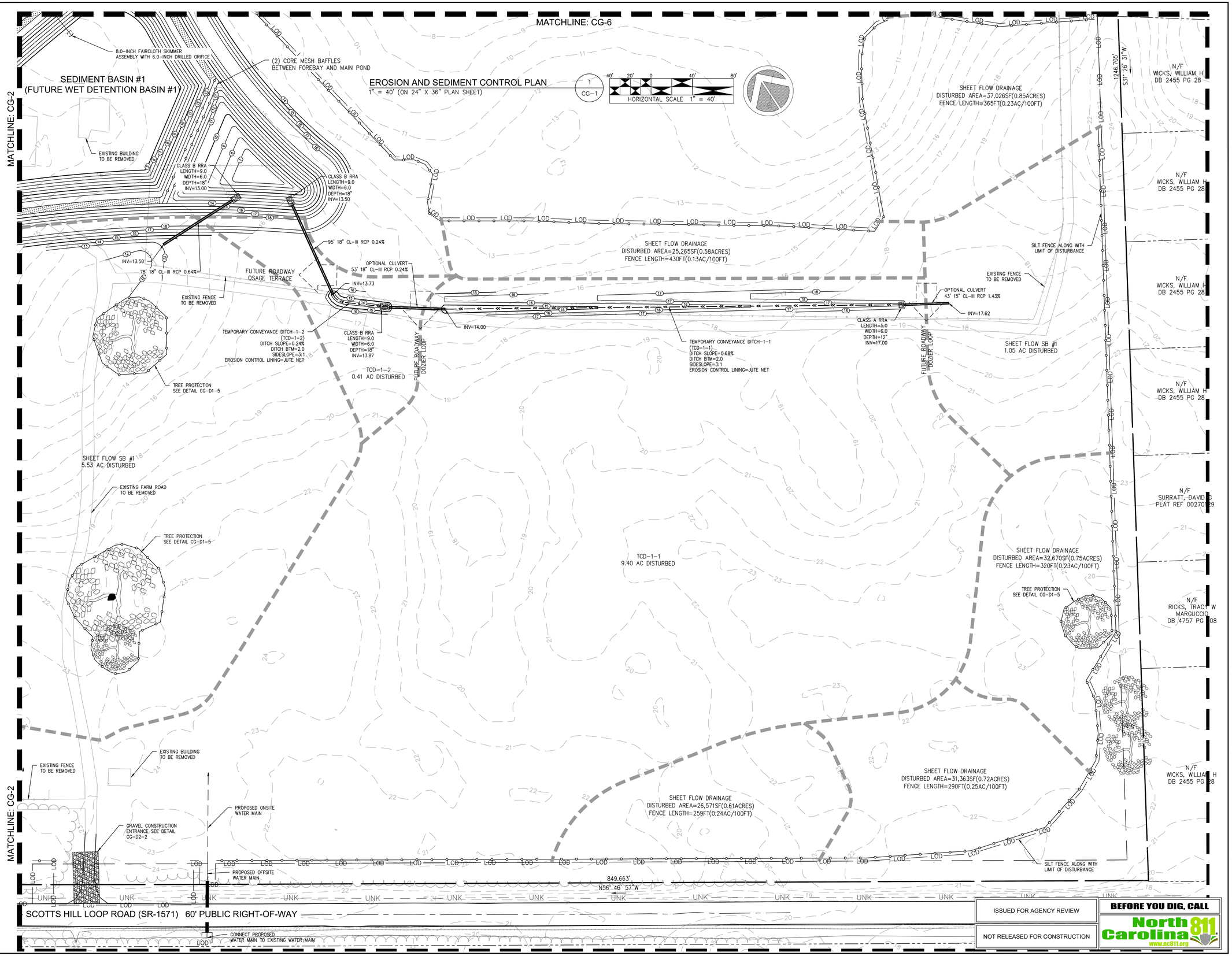
GENERAL NOTES AND SHEET INDEX

REV	DATE	DESCRIPTION						
B	5 NOV 2024	ADDED THE LIMIT OF DISTURBANCE LINE	JRC					
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC					

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 120'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
GI-2



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SWEETGRASS AT ABBEY PRESERVE
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EROSION AND SEDIMENT CONTORL PLAN

REV	DATE	DESCRIPTION	INIT
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC

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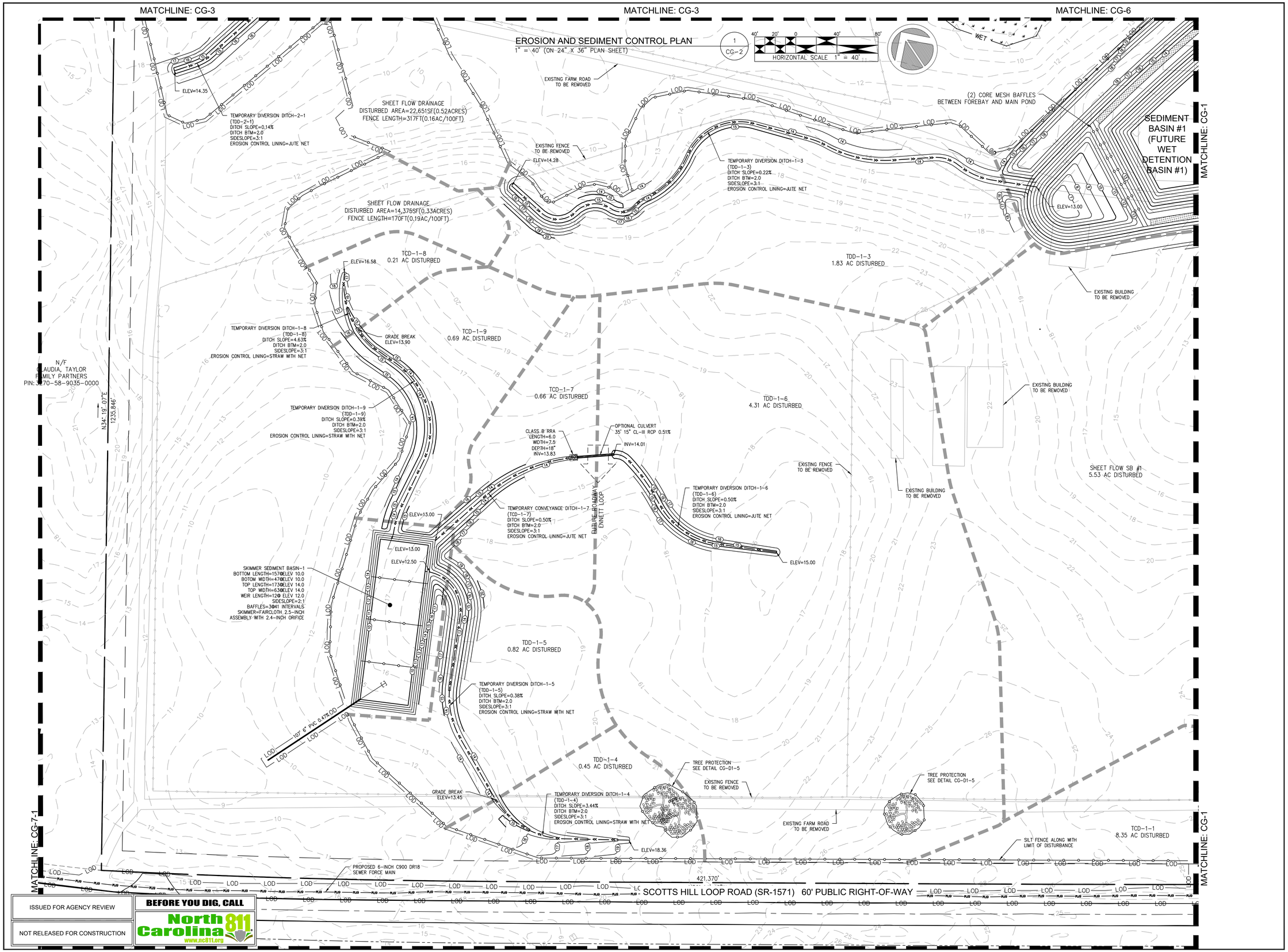
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CG-1



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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

EROSION AND SEDIMENT CONTROL PLAN

REV	DATE	DESCRIPTION	INIT
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
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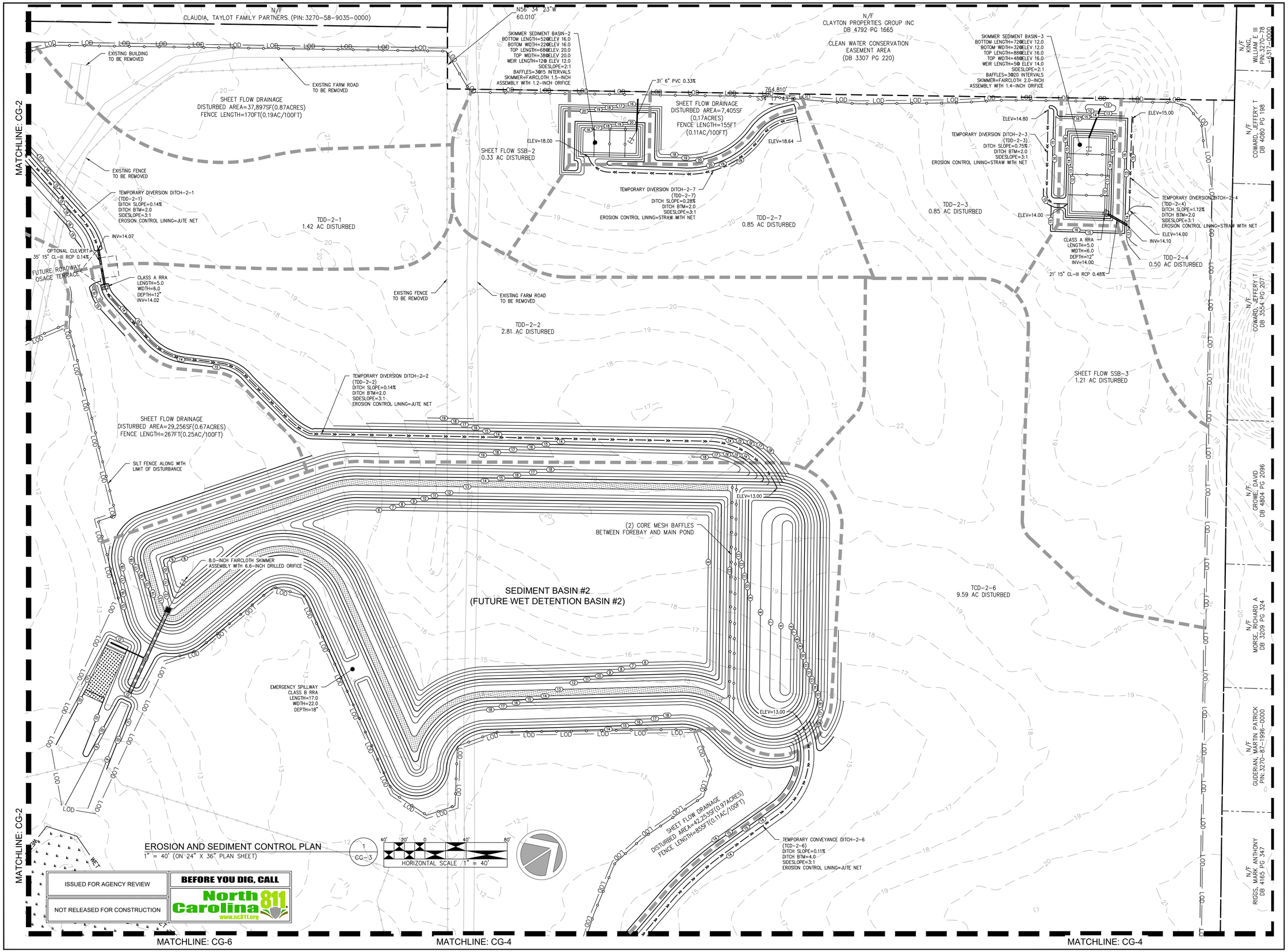
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET

CG-2



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EROSION AND SEDIMENT CONTROL PLAN

REV	DATE	DESCRIPTION	INIT
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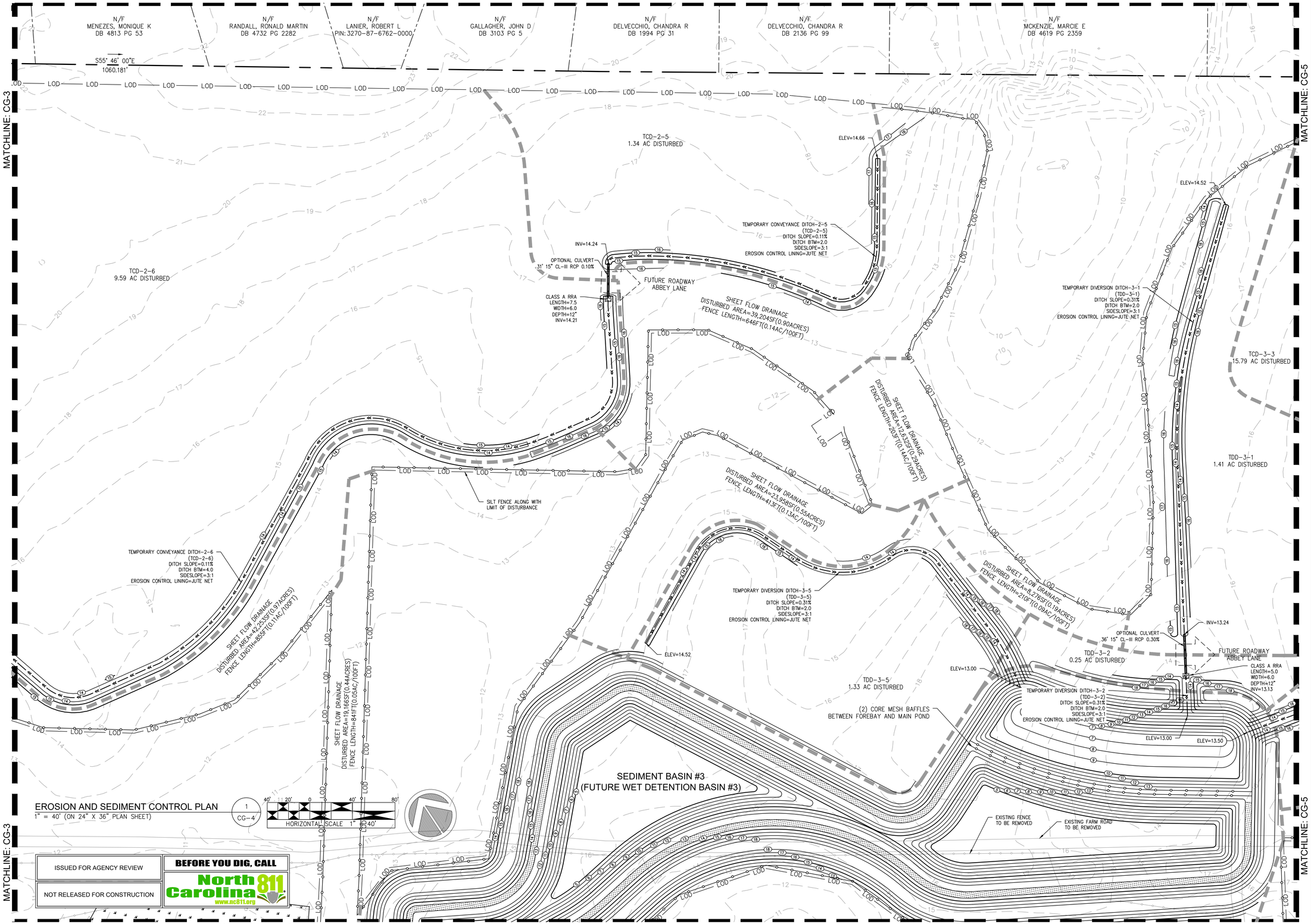
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CG-3



EROSION AND SEDIMENT CONTROL PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)
1
CG-4

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EROSION AND SEDIMENT CONTROL PLAN

REV	DATE	DESCRIPTION	INIT
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
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GROUP, INC.
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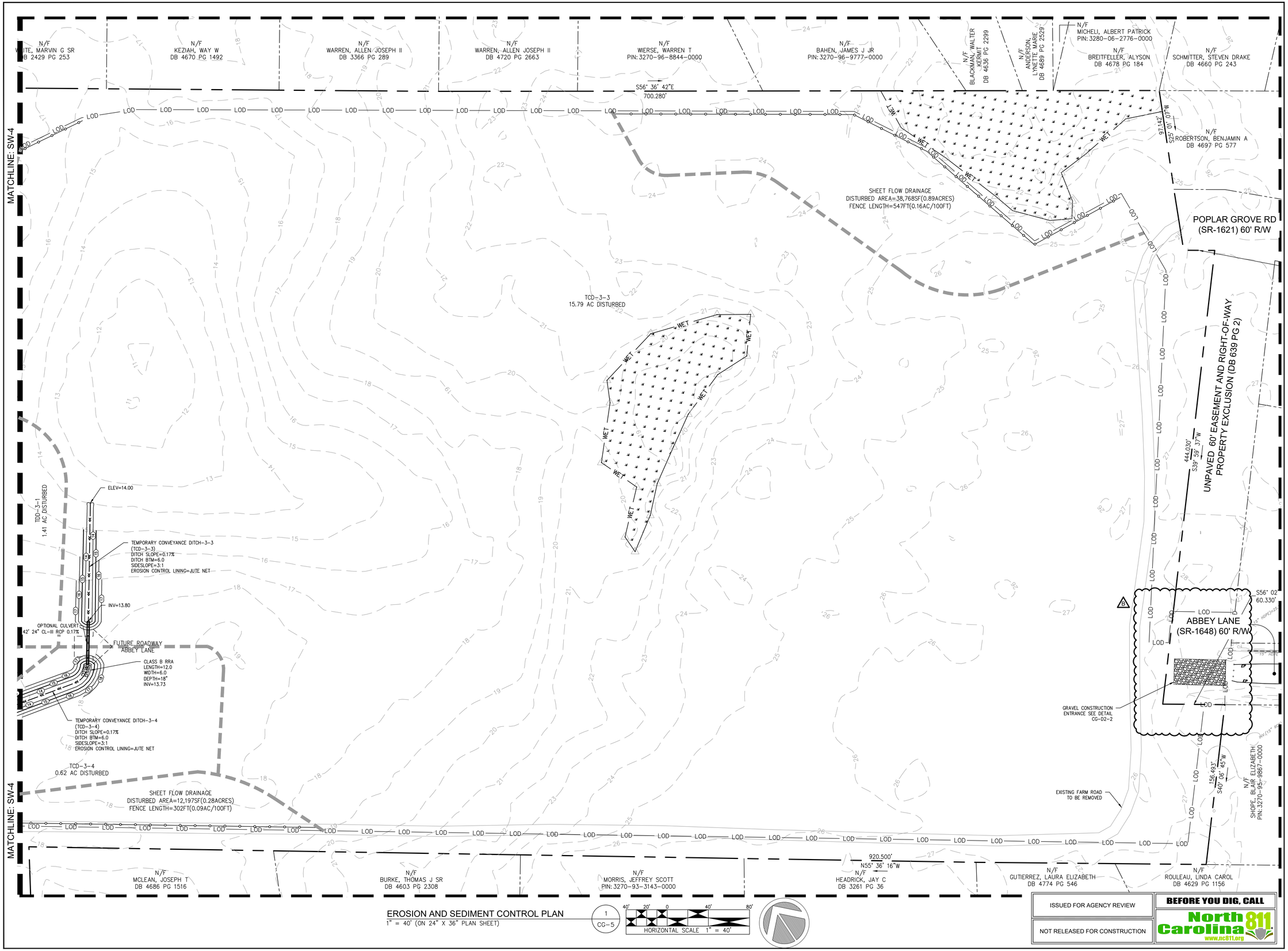
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CG-4



EROSION AND SEDIMENT CONTROL PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)

1 / CG-5

40' 20' 0 40' 80'
HORIZONTAL SCALE 1" = 40'

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PENDER COUNTY, NC

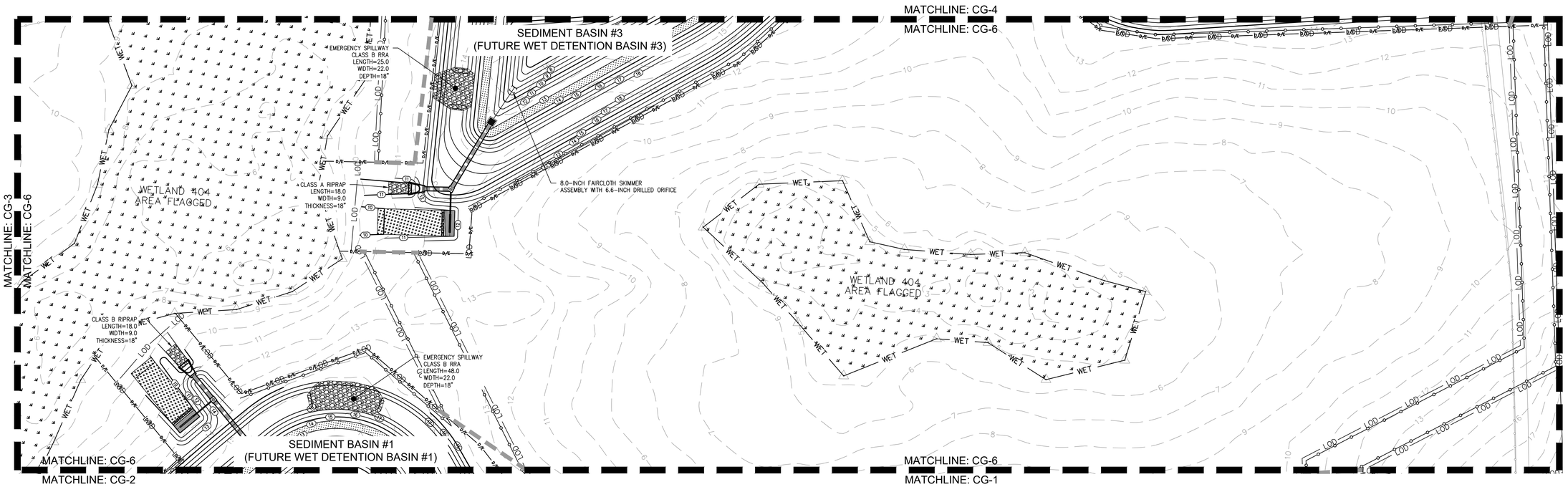
EROSION AND SEDIMENT CONTROL PLAN

REV	DATE	DESCRIPTION	INIT
B	5 NOV 2024	CHANGED THE LIMIT OF DISTURBANCE LINE	JRC
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CG-5



EROSION AND SEDIMENT CONTROL PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)

1
CG-6

40' 20' 0 40' 80'
HORIZONTAL SCALE 1" = 40'

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EROSION AND SEDIMENT CONTROL PLAN

REV	DATE	DESCRIPTION	
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC

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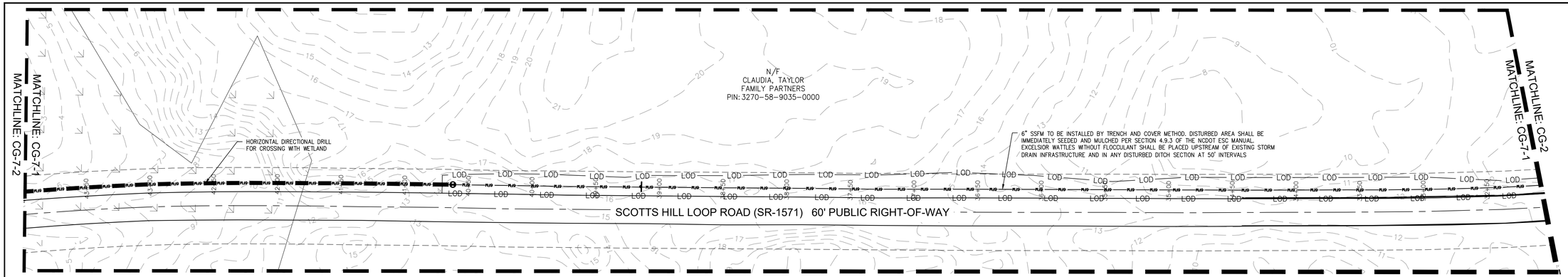
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

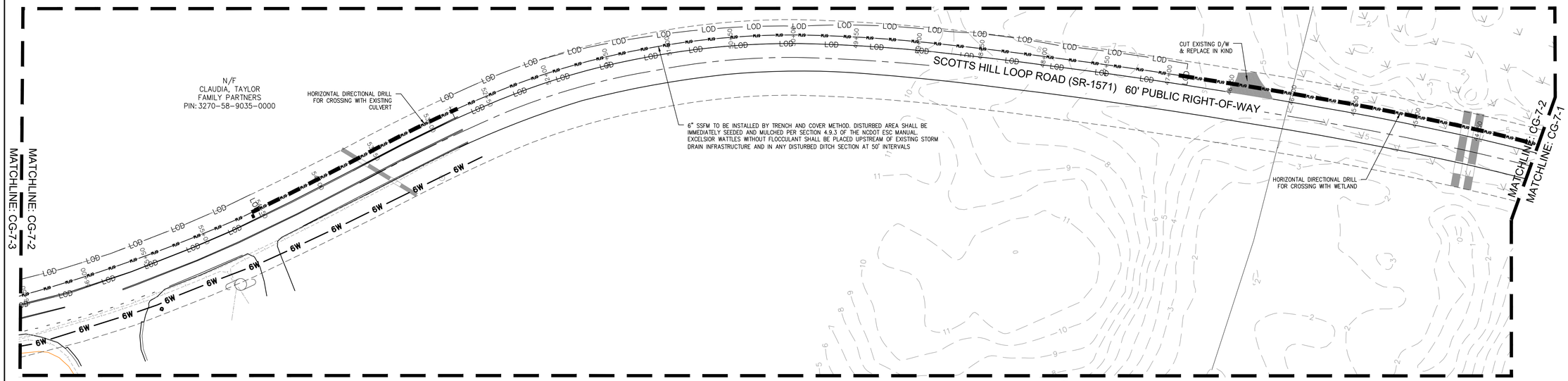
SHEET
CG-6



OFFSITE EROSION AND SEDIMENT CONTROL PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)

1 / CG-7

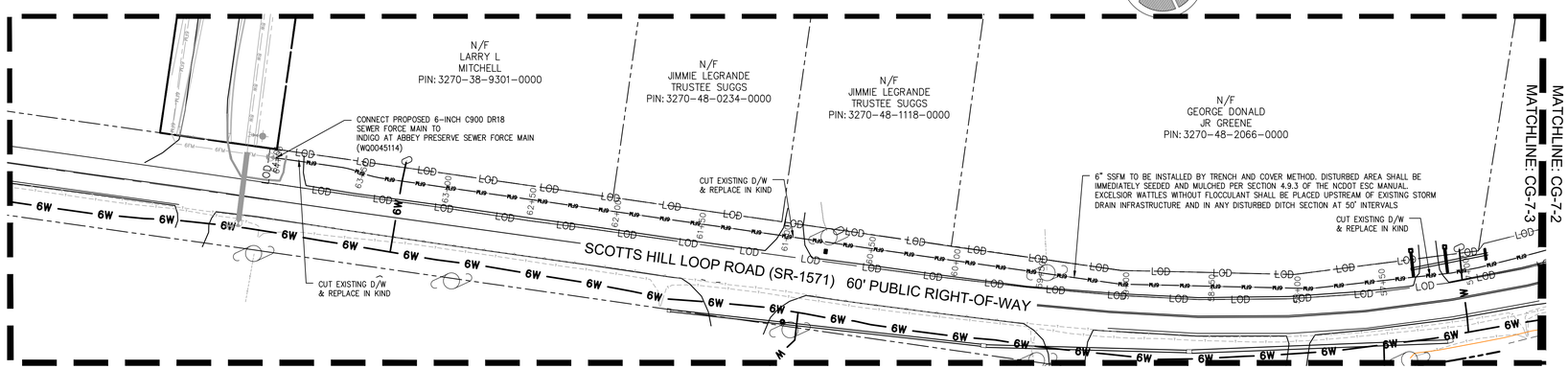
40' 20' 0 40' 80'
HORIZONTAL SCALE 1" = 40'



OFFSITE EROSION AND SEDIMENT CONTROL PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)

2 / CG-7

40' 20' 0 40' 80'
HORIZONTAL SCALE 1" = 40'



OFFSITE EROSION AND SEDIMENT CONTROL PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)

3 / CG-7

40' 20' 0 40' 80'
HORIZONTAL SCALE 1" = 40'

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

OFFSITE EROSION AND SEDIMENT CONTROL PLAN

REV	DATE	DESCRIPTION		
A	23 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC	INIT

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MARYVILLE, TN 37802

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CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CG-7

SKIMMER BASIN CONSTRUCTION SPECIFICATIONS:

SITE PREPARATIONS
1) CLEAR, GRUB, AND STRIP TOPSOIL FROM AREAS UNDER THE EMBANKMENT TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.
2) DELAY CLEARING THE POOL AREA UNTIL THE DAM IS COMPLETED AND THEN REMOVE BRUSH, TREES, AND OTHER OBJECTIONABLE MATERIALS TO FACILITATE SEDIMENT CLEANOUT.
3) STOCKPILE ALL TOPSOIL OR SOIL CONTAINING ORGANIC MATTER FOR USE ON THE OUTER SHELL OF THE EMBANKMENT TO FACILITATE VEGETATIVE ESTABLISHMENT.
4) PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW THE BASIN AS NEEDED.

CUT-OFF-TRENCH
1) EXCAVATE A CUT-OFF-TRENCH ALONG THE CENTER LINE OF THE EARTH FILL EMBANKMENT
2) CUT THE TRENCH TO STABILIZE SOIL MATERIAL, BUT IN NO CASE MAKE IT LESS THAN TWO (2) FEET DEEP
3) THE CUT-OFF-TRENCH MUST BE EXTENDED INTO BOTH ABUTMENTS TO AT LEAST THE ELEVATION OF THE RISER CREST.
4) MAKE THE MINIMUM BOTTOM WIDTH WIDE ENOUGH TO PERMIT OPERATION OF EXCAVATION AND COMPACTION EQUIPMENT, BUT IN NO CASE LESS THAN TWO (2) FEET.
5) MAKE SIDE SLOPES OF THE TRENCH NO STEEPER THAN 1:1.
6) COMPACTION REQUIREMENTS ARE THE SAME AS THOSE FOR THE EMBANKMENT.
7) KEEP THE TRENCH DRY DURING BACKFILLING AND COMPACTION OPERATIONS.

EMBANKMENT
1) TAKE FILL MATERIAL FROM THE APPROVED AREAS SHOWN ON THE PLANS AND MAKE SURE IT IS FREE OF ROOTS, WOODY VEGETATION, ROCKS, AND OTHER OBJECTIONABLE MATERIAL.
2) SCARIFY AREAS ON WHICH FILL IS TO BE PLACED BEFORE PLACING FILL.
3) THE FILL MUST CONTAIN SUFFICIENT MOISTURE SO THAT IT CAN BE FORMED BY HAND INTO A BALL WITHOUT CRUMBLING.
4) IF WATER CAN BE SQUEEZED OUT OF THE BALL, THEN THE SOIL IS TOO WET FOR COMPACTION.
5) PLACE THE FILL MATERIAL IN SIX (6) TO EIGHT (8) INCH CONTINUOUS LAYERS OVER THE ENTIRE LENGTH OF THE FILL AREA AND COMPACT IT.
6) COMPACTION MAY BE OBTAINED BY TOURING THE CONSTRUCTION HAULING EQUIPMENT OVER THE FILL SO THAT THE ENTIRE SURFACE OF EACH LAYER IS TRAVERSED BY AT LEAST ONE WHEEL OR TREAD TRACK OF HEAVY EQUIPMENT, OR A COMPACTOR MAY BE USED.
7) CONSTRUCT THE EMBANKMENT TO AN ELEVATION TEN (10) PERCENT HIGHER THAN THE DESIGN ELEVATION TO ALLOW FOR SETTLING.

CONDUIT SPILLWAYS
1) SECURELY ATTACH THE RISER TO THE BARREL OR BARREL STUB TO MAKE A WATERTIGHT STRUCTURAL CONNECTION.
2) SECURE ALL CONNECTIONS BETWEEN BARREL SECTIONS BY APPROVED WATERTIGHT ASSEMBLIES.
3) PLACE THE BARREL AND RISER ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL.
4) DO NOT USE PERVIOUS MATER SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL ROUND THE PIPE OR ANTI-SEEP COLLARS.
5) PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN FOUR (4)-INCH LAYERS, AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT.
6) CARE MUST BE TAKEN NOT THE RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES.
7) PLACE A MINIMUM DEPTH OF TWO (2) FEET OF COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
8) ANCHOR THE RISER IN PLACE BY CONCRETE OR OTHER SATISFACTORY MEANS TO PREVENT FLOATATION.
9) IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.

EMERGENCY SPILLWAY
1) INSTALL THE EMERGENCY SPILLWAY IN UNDISTURBED SOIL.
2) CONSTRUCT EMERGENCY SPILLWAY TO THE PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES AS SPECIFIED IN PLANS.

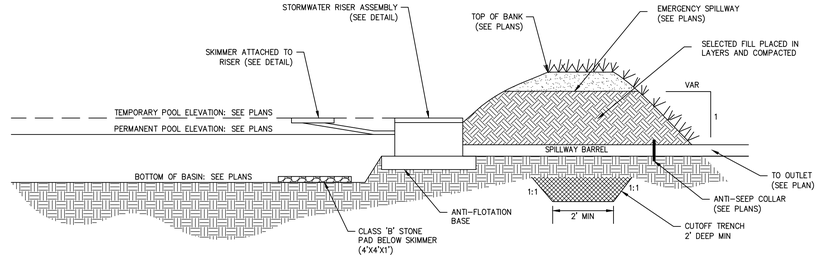
INLETS
1) DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION.
2) USE DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL TO IMPROVE TRAP EFFICIENCY.

EROSION CONTROL
1) CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED.
2) DIVERT SURFACE WATER AWAY FROM BARE AREAS
3) COMPLETE THE EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.

BAFFLES
1) INSTALL POROUS BAFFLES AS SPECIFIED IN THE PLANS.

FAIRCLOTH® SKIMMER DESIGNS IN THIS PROJECT:

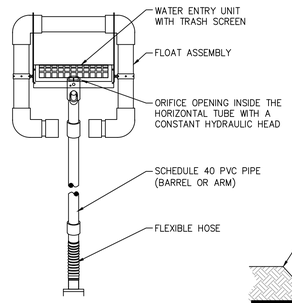
SEDIMENT BASIN 1 (SB1)	8.0-INCH SKIMMER ASSEMBLY WITH 6.0-INCH DRILLED ORIFICE
SEDIMENT BASIN 2 (SB2)	8.0-INCH SKIMMER ASSEMBLY WITH 6.6-INCH DRILLED ORIFICE
SEDIMENT BASIN 3 (SB3)	8.0-INCH SKIMMER ASSEMBLY WITH 6.6-INCH DRILLED ORIFICE
SKIMMER SEDIMENT BASIN 1 (SSB-1)	2.5-INCH SKIMMER ASSEMBLY WITH 2.4-INCH DRILLED ORIFICE
SKIMMER SEDIMENT BASIN 2 (SSB-2)	1.5-INCH SKIMMER ASSEMBLY WITH 1.2-INCH DRILLED ORIFICE
SKIMMER SEDIMENT BASIN 3 (SSB-3)	2.0-INCH SKIMMER ASSEMBLY WITH 1.4-INCH DRILLED ORIFICE



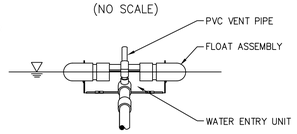
CROSS-SECTION

SKIMMER BASIN MAINTENANCE:

1) INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH IT CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
2) REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
3) IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
4) IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE TO REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
5) CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
6) FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINDER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.



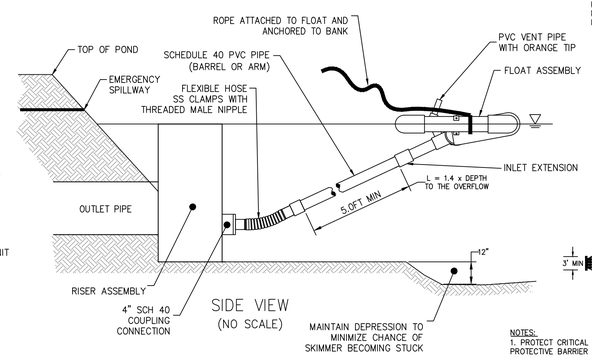
PLAN VIEW
(NO SCALE)



END VIEW
(NO SCALE)

GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.

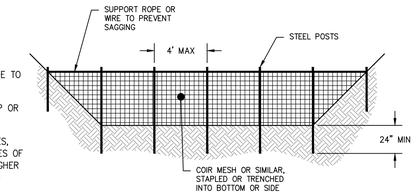


SIDE VIEW
(NO SCALE)

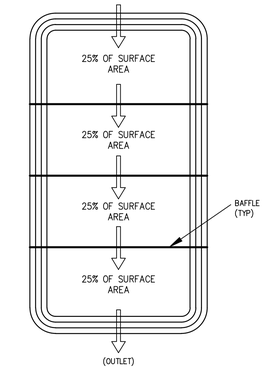
SKIMMER BASIN WITH ORIFICE DETAIL
NOT TO SCALE
1 / CG-D1

BAFFLE CONSTRUCTION SPECIFICATIONS:
(1) GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE
(2) INSTALL POSTS OR SAW HORSES ACROSS THE WIDTH OF THE SEDIMENT TRAP OR BASIN
(3) STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF TWENTY-FOUR (24) INCHES, SPACED A MAXIMUM OF FOUR (4) FEET APART, AND INSTALLED UP THE SIDES OF THE BASIN S WELL. THE TOP OF THE FABRIC SHOULD BE SIX (6) INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE TWO (2) INCHES LOWER THAN THE TOP OF BERMS.
(4) INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN TWENTY (20) FEET IN LENGTH MAY USE TWO (2) BAFFLES.
(5) WHEN USING POSTS, ADD A SUPPORT WIRE OR ROPE ACROSS THE TOP OF THE MEASURE TO PREVENT SAGGING.
(6) WRAP POROUS MATERIAL, SUCH AS JUTE BACKED BY COIR MATERIAL, OVER A SAWHORSE OR THE TOP WIRE. HAMMER REBAR INTO THE SAWHORSE LEGS FOR ANCHORING. THE FABRIC SHOULD HAVE FIVE (5) TO TEN (10) PERCENT OPENINGS IN THE WEAVE. ATTACH FABRIC TO A ROPE AND A SUPPORT STRUCTURE WITH ZIP TIES, WIRE, OR STAPLES.
(7) THE BOTTOM AND SIDES OF THE FABRIC SHOULD BE ANCHORED IN A TRENCH OR PINNED WITH EIGHT (8) INCH EROSION CONTROL MATTING STAPLES.
(8) DO NOT SPLICE THE FABRIC. USE A CONTINUOUS PIECE ACROSS THE BASIN.

BAFFLE MAINTENANCE:-
(1) INSPECT BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
(2) BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF THE BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
(3) REMOVE SEDIMENT DEPOSITS WHEN IT REACHES HALF FULL TO PROVED ADEQUATE STORAGE FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUT. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.
(4) AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS, AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE, AND STABILIZE IT.



BAFFLE CROSS-SECTION

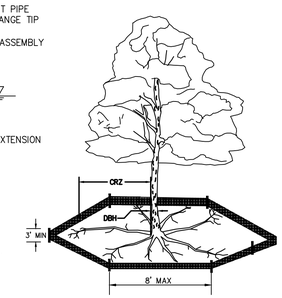


BAFFLE PLAN-VIEW

BAFFLE DETAIL
NOT TO SCALE
2 / CG-D1

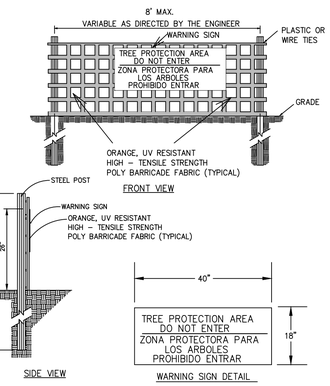
NOTE:
THE CRITICAL ROOT ZONE (CRZ) OF A TREE IS WHERE THE MAJORITY OF A TREE'S ROOTS LAY. 85% OF MOST TREE ROOTS ARE FOUND IN THE TOP 24" OF THE SOIL AND SUPPLY THE MAJORITY OF NUTRIENTS AND WATER. GENERALLY, ROOTS SPREAD OUT 2-3X THE HEIGHT OF THE TREE.

NOTE:
CROWN OF THE TREE IS NEEDED FOR LEAF GROWTH TO PRODUCE OXYGEN, FILTER THE AIR, REDUCE WIND AND SOFTEN NOISE. DO NOT DISFIGURE CROWN WITH INTENSIVE PRUNING.



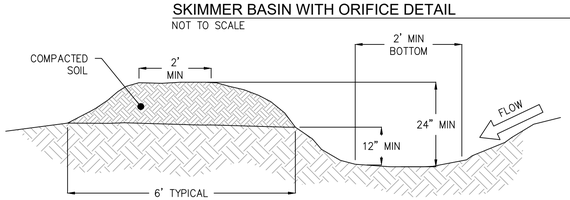
NOTES:
1. PROTECT CRITICAL ROOT ZONE (CRZ) OF TREES PRIOR TO CONSTRUCTION. CLEARLY MARK THE TREES AND ERECT A PROTECTIVE BARRIER AT THE CRZ. BARRIER SHALL BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE.
2. CRZ RADIUS IS 1 FT PER INCH OF TREE DIAMETER AT BREAST HEIGHT (DBH).
3. IF CONSTRUCTION OCCURS WITHIN 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.

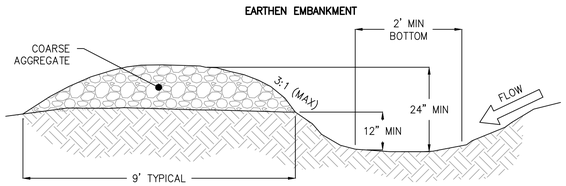


NOTES:
1. THE TREE PROTECTION FENCING SHALL NOT BE VIOLATED FOR THE ENTIRE DURATION OF THE PROJECT WITHOUT APPROVAL FROM URBAN FORESTRY STAFF.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL. LETTERS TO BE 3" HIGH, MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
3. SIGNS SHALL BE PLACED 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.

TREE PROTECTION DETAIL
NOT TO SCALE
5 / CG-D1



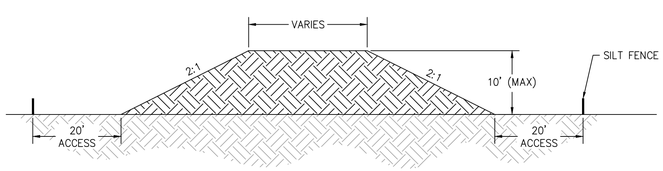
EARTHEN EMBANKMENT



GRAVEL EMBANKMENT

DIVERSION DITCH DETAIL
NOT TO SCALE
3 / CG-D1

TEMPORARY DIVERSION DITCH MAINTENANCE:
1. INSPECT THE BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH SIGNIFICANT RAINFALL (ONE INCH RAINFALL).
2. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE.
3. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.
4. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.



TEMPORARY STOCKPILE DETAIL
NOT TO SCALE
4 / CG-D1

ISSUED FOR AGENCY REVIEW
NOT RELEASED FOR CONSTRUCTION

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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

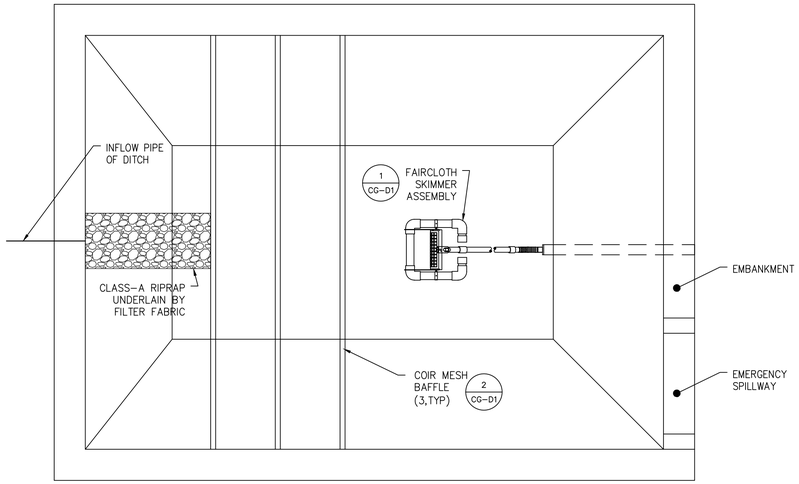
STANDARD EROSION AND SEDIMENT CONTROL DETAILS

REV	DATE	DESCRIPTION	INIT
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC

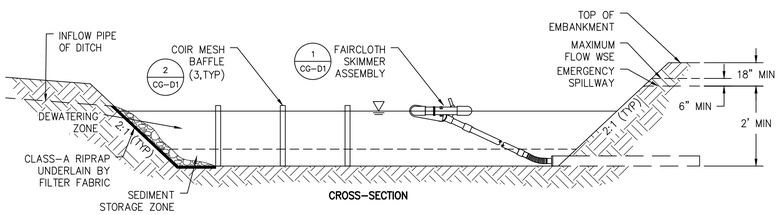
DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	AS SHOWN
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CG-D1



PLAN VIEW



CROSS-SECTION

SKIMMER SEDIMENT BASIN DETAIL

NOT TO SCALE

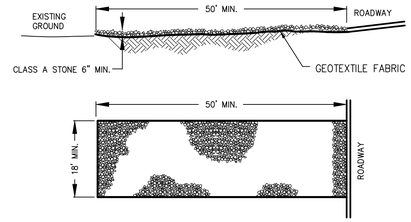
1 / CG-D2

SKIMMER SEDIMENT BASIN CONSTRUCTION SPECIFICATIONS:

1. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURES BELOW BASIN AS NEEDED.
2. ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER, AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVERFILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
3. SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER, OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
4. PLACE THE BARREL (TYPICALLY A 4-INCH SCHEDULE 40 PVC) ON A FIRM, SMOOTH FOUNDATION OF IMPERVIOUS SOIL. DO NO USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS BACKFILL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY AS THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WITH COMPACTING UNDER THE PIPE HAUNCHES. PLACE A MINIMUM DEPTH OF 2 FEET OF COMPACT BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT. IN NO CASE SHOULD THE PIPE CONDUIT BE INSTALLED BY CUTTING A TRENCH THROUGH THE DAM AFTER THE EMBANKMENT IS COMPLETE.
5. ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, OR AS DESIGNED.
6. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE END OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUPPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.
7. EARTHEN SPILLWAYS – INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND END ENTRANCE AND EXIT SLOPE ARE CRITICAL TO THE SUCCESS OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTENDED TO THE TOP OF DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STABLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS.
8. INLETS – DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT-LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY.
9. EROSION CONTROL – CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BASE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION.
10. INSTALL POROUS BAFFLES AS SPECIFIED IN NCDEQ EROSION CONTROL STANDARD PRACTICE 6.65, POROUS BAFFLES.
11. AFTER THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND STABILIZE PROPERLY.

SKIMMER SEDIMENT BASIN MAINTENANCE PLAN:

1. INSPECT SKIMMER BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE-HALF INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE HEIGHT OF THE FIRST BAFFLES. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH THE SKIMMER CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
2. REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF THE WATER IS FLOWING UNDERNEATH OR AROUND THEM.
3. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO, CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
4. IF THE SKIMMER ARM OR BARREL PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBER'S SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
5. CHECK THE FABRIC-LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND OTHER DEBRIS FROM THE SKIMMER AND POOL AREAS.
6. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.



CONSTRUCTION ENTRANCE CONSTRUCTION SPECIFICATIONS:

(1) CLEAR THE ENTRANCE AND EXIST AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL
(2) PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.
(3) PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.
(4) TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET. FILTER FABRIC OR COMPACTED CRUSHER RUN STONE MAY BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
(5) THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED IMMEDIATELY.
(6) WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN SOIL STABILIZATION FABRIC SHALL BE USED.
(7) NCDOT MAY REQUIRE A STANDARD COMMERCIAL DRIVEWAY TO ACCESS THE CONSTRUCTION SITE IF THE DRIVEWAY IS ON A THOROUGHFARE.

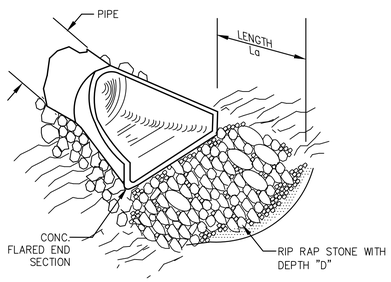
CONSTRUCTION ENTRANCE MAINTENANCE:

(1) MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. REDRESS THE TOP WITH 2" STONE AS NEEDED.
(2) AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY.
(3) IMMEDIATELY REMOVE AL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

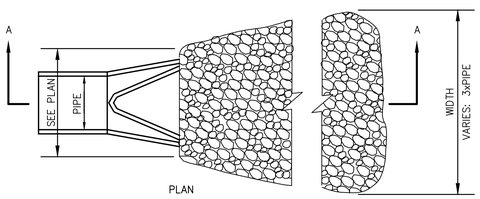
CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

2 / CG-D2



ISOMETRIC VIEW



PLAN

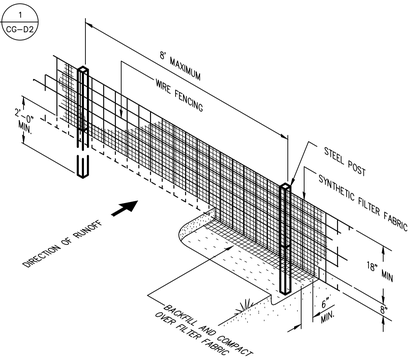
NOTES:
SEE APPROPRIATE SCHEDULE FOR DIMENSIONS

1. LA IS THE LENGTH OF THE RIPRAP APRON.
2. D = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6"
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

RIP RAP APRON DETAIL

NOT TO SCALE

3 / CG-D2



SEDIMENT FENCE CONSTRUCTION SPECIFICATIONS:

(1) SILT FENCE IS TO BE TRENCHED IN WITH TRENCHING MACHINE IN ORDER TO HAVE THE MINIMUM AREA OF DISTURBANCE (NON-EVASIVE) UPON INSTALLATION.
(2) HEIGHT OF SEDIMENT FENCE IS NOT TO EXCEED 18" ABOVE THE GROUND SURFACE.
(3) FILTER FABRIC TO BE CONSTRUCTED FROM CONTINUOUS ROLL CUT TO LENGTH TO AVOID JOINTS. IF JOINTS ARE NECESSARY, FILTER CLOTH IS TO BE SECURELY FASTENED TO SUPPORT POST WITH OVERLAP TO THE NEXT POST.
(4) FILTER FABRIC TO BE SUPPORTED BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY STAPLES AT LEAST 1" LONG OR TIE WIRES. EXTEND WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH.
(5) A MAXIMUM OF 8' STAKE SPACING IS ALLOWED WHEN WIRE MESH SUPPORT FENCE IS USED. SUPPORT POST SHOULD BE DRIVEN SECURELY INTO THE GROUND A DISTANCE OF AT LEAST 18".
(6) EXTRA STRENGTH FILTER FABRIC WITH 6' POST SPACES DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. STAPLE OR WIRE THE FILTER FABRIC DIRECTLY TO POSTS.
(7) EXCAVATE A TRENCH APPROXIMATELY 4" WIDE AND 8" DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
(8) BACKFILL TRENCH WITH COMPACT SOIL OR GRAVEL PLACED OVER THE FILTER FABRIC.
(9) DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

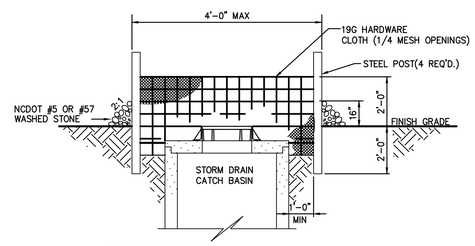
SEDIMENT FENCE MAINTENANCE:

(1) INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH SIGNIFICANT RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY
(2) SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACED IT PROMPTLY. REPLACE BURLAP EVERY 60 DAYS.
(3) REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT.
(4) REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SILT FENCE DETAIL

NOT TO SCALE

4 / CG-D2



MAINTENANCE PLAN:

1. INSPECT THE INLET PROTECTION AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY.
2. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS.
3. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL.
4. REPLACE STONE AS NEEDED.

HARDWARE CLOTH AND GRAVEL INLET PROTECTION

NOT TO SCALE

5 / CG-D2

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

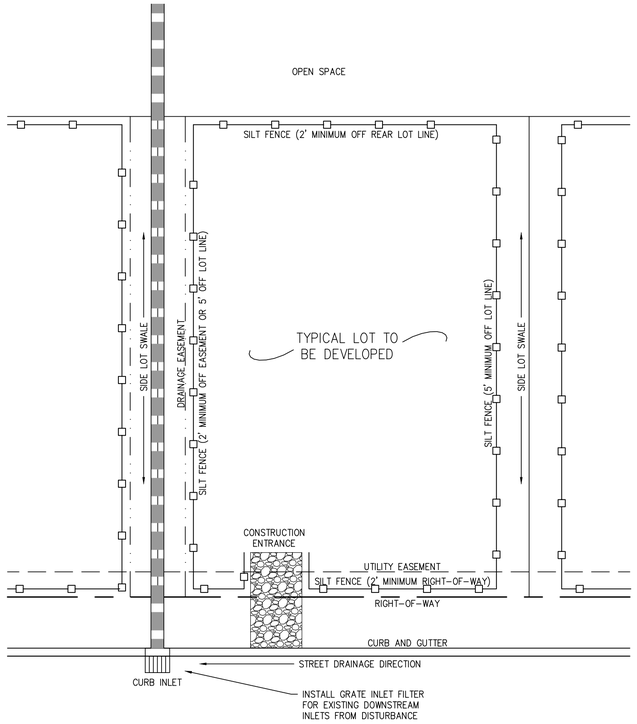
STANDARD EROSION AND SEDIMENT CONTROL DETAILS

REV	DATE	DESCRIPTION	INIT
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC

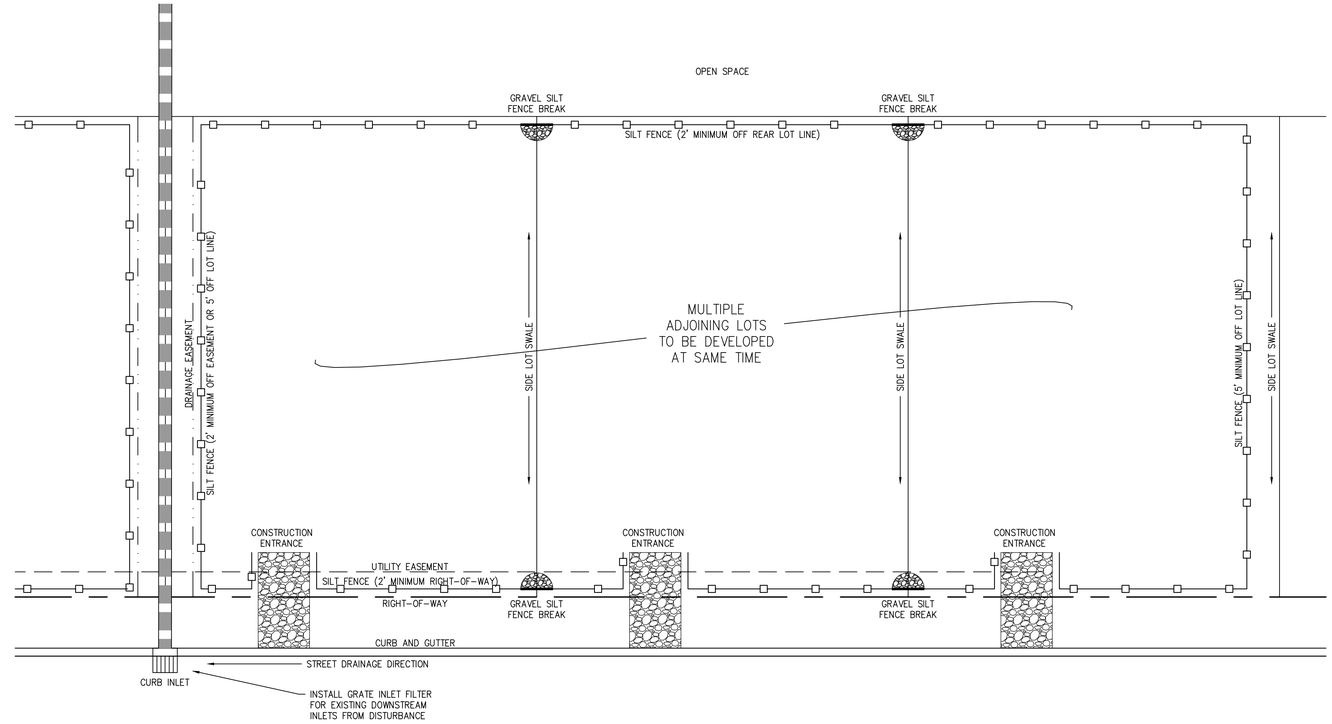
DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	AS SHOWN
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CG-D2



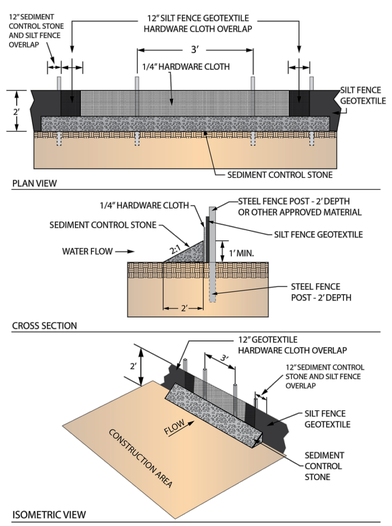
TYPICAL LOT DISTURBANCE EROSION CONTROL DETAIL (1 / CG-D3)
NOT TO SCALE



TYPICAL MULTIPLE LOT DISTURBANCE EROSION CONTROL DETAIL (2 / CG-D3)
NOT TO SCALE

NCDOT ESC Erosion & Sediment CONTROL MANUAL

4.3.4 Silt Fence Breaks — EW — —CFW—



SILT FENCE BREAK MAINTENANCE:

1. IT IS IMPORTANT FOR THE SILT FENCE BREAKS TO BE MAINTAINED UNTIL FINAL INSPECTION OF THE PROJECT OR UNTIL THE SILT FENCE BREAKS ARE REMOVED. UPON REMOVAL, THE CONTRACTOR SHOULD REMOVE AND DISPOSE OF ALL SILT ACCUMULATION.
2. INSPECT THE DEVICE PERIODICALLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT FOR DAMAGE AND SEDIMENT ACCUMULATION TO CONFIRM THE DEVICE IS FUNCTIONING PROPERLY.
3. AT A MINIMUM, REMOVE SEDIMENT FROM THE DEVICE WHEN ACCUMULATIONS REACH ONE–HALF THE HEIGHT OF THE SEDIMENT CONTROL STONE.
4. REPLACE OR CLEAN THE SEDIMENT CONTROLS TONE AS NEEDED TO ALLOW WATER TO DRAIN THROUGH THE DEVICE BETWEEN RAINFALL EVENTS.
5. REBUILD AND/OR REPAIR THE DEVICE WHEN IT IS DAMAGED.
6. REPAIR AREAS WHERE SILT FENCE BREAK BECOMES UNDERMINED DUE TO CONCENTRATED FLOWS.

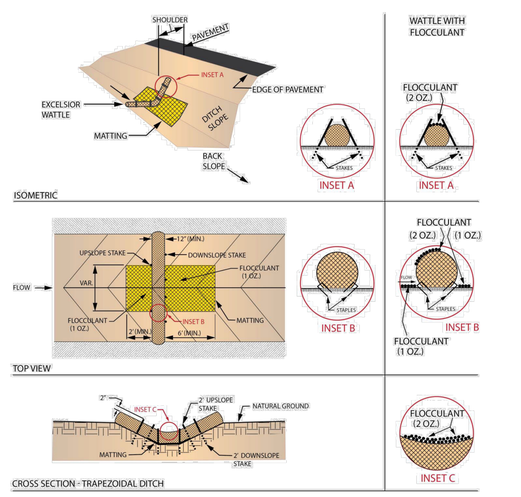
WATTLE MAINTENANCE:

1. IT IS IMPORTANT THAT THE WATTLES BE KEPT CLEAN TO ALLOW WATER TO FLOW THROUGH TEH NATURAL FIBERS AND CONTACT THE FLOCCULANT. THE WATTLES CAN BECOME BLOCKED WITH DEBRIS, SEDIMENT, STRAW, AND OTHER ITEMS.
2. THE UPSIDE SIDE OF THE WATTLE SHOULD BE MAINTAINED TO ALLOW THE WATER TO FLOW THROUGH, REDUCE VELOCITY, DISTRIBUTE FLOCCULANT AND ALLOW SEDIMENT TO OCCUR.
3. IF THE NATURAL FIBERS OF THE WATTLE BECOME TOO SATURATED WITH DEBRIS, SEDIMENT, ETC., AND REMOVAL OF THESE ITEMS IS NOT POSSIBLE, WATTLES SHOULD BE REPLACED.
4. STAKES SHOULD BE USED TO ANCHOR THE WATTLE ADEQUATELY TO THE GROUND TO PREVENT SCOURING AND WASHOUT DURING STORM EVENTS.
5. THE EXCELSIOR PAD BENEATH THE WATTLES IS CRITICAL TO PROPER FUNCTIONING OF THE WATTLES.

NCDOT ESC Erosion & Sediment CONTROL MANUAL

4.5.1 Wattles

With Flocculant Without Flocculant



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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

STANDARD EROSION AND SEDIMENT CONTROL DETAILS

REV	DATE	DESCRIPTION	INIT
A	25 SEP 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	AS SHOWN
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CG-D3

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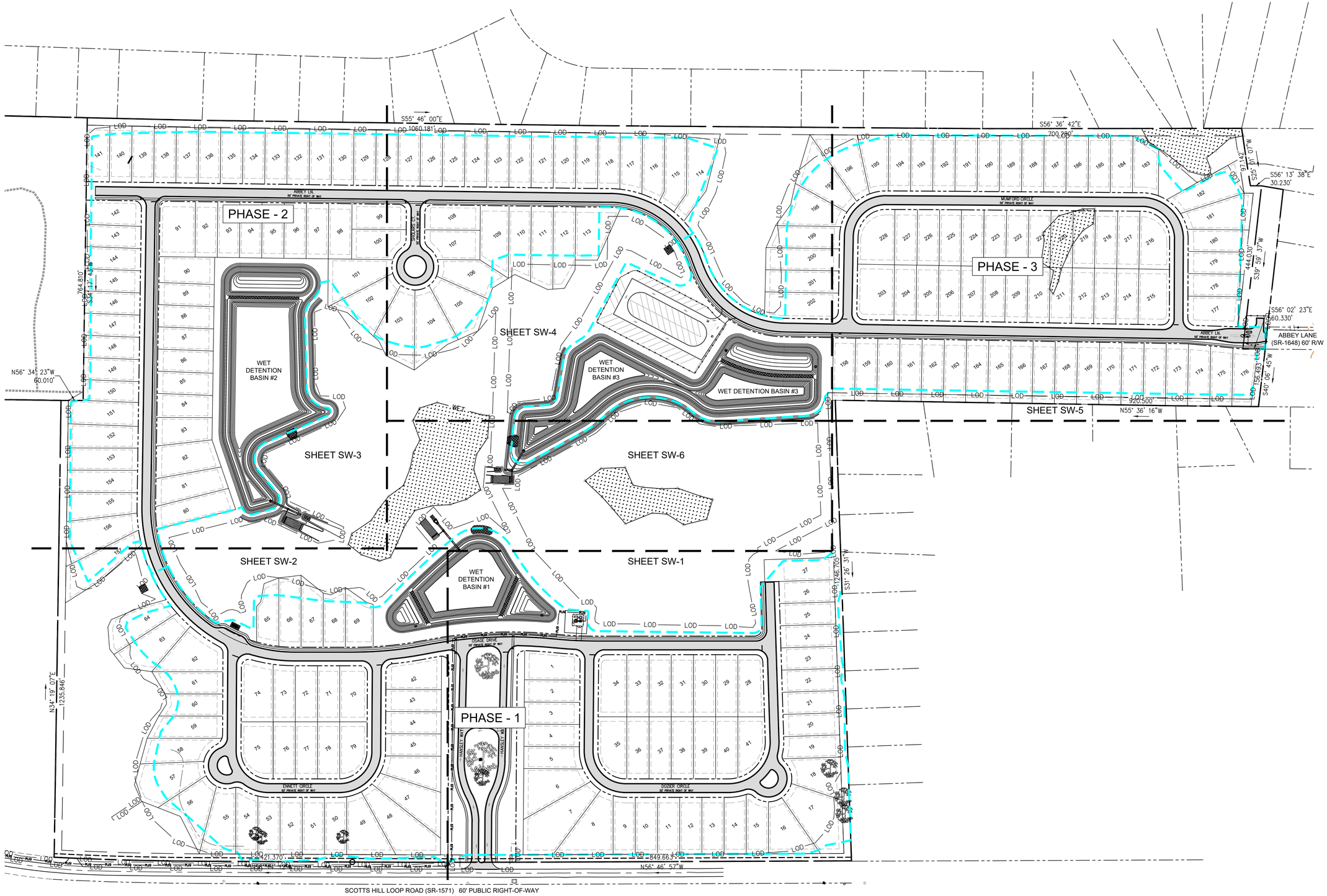

OVERALL STORMWATER PLAN
1" = 120' (ON 24" X 36" PLAN SHEET)

1 SW-0

120' 60' 0 120' 240'
HORIZONTAL SCALE 1" = 120'

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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

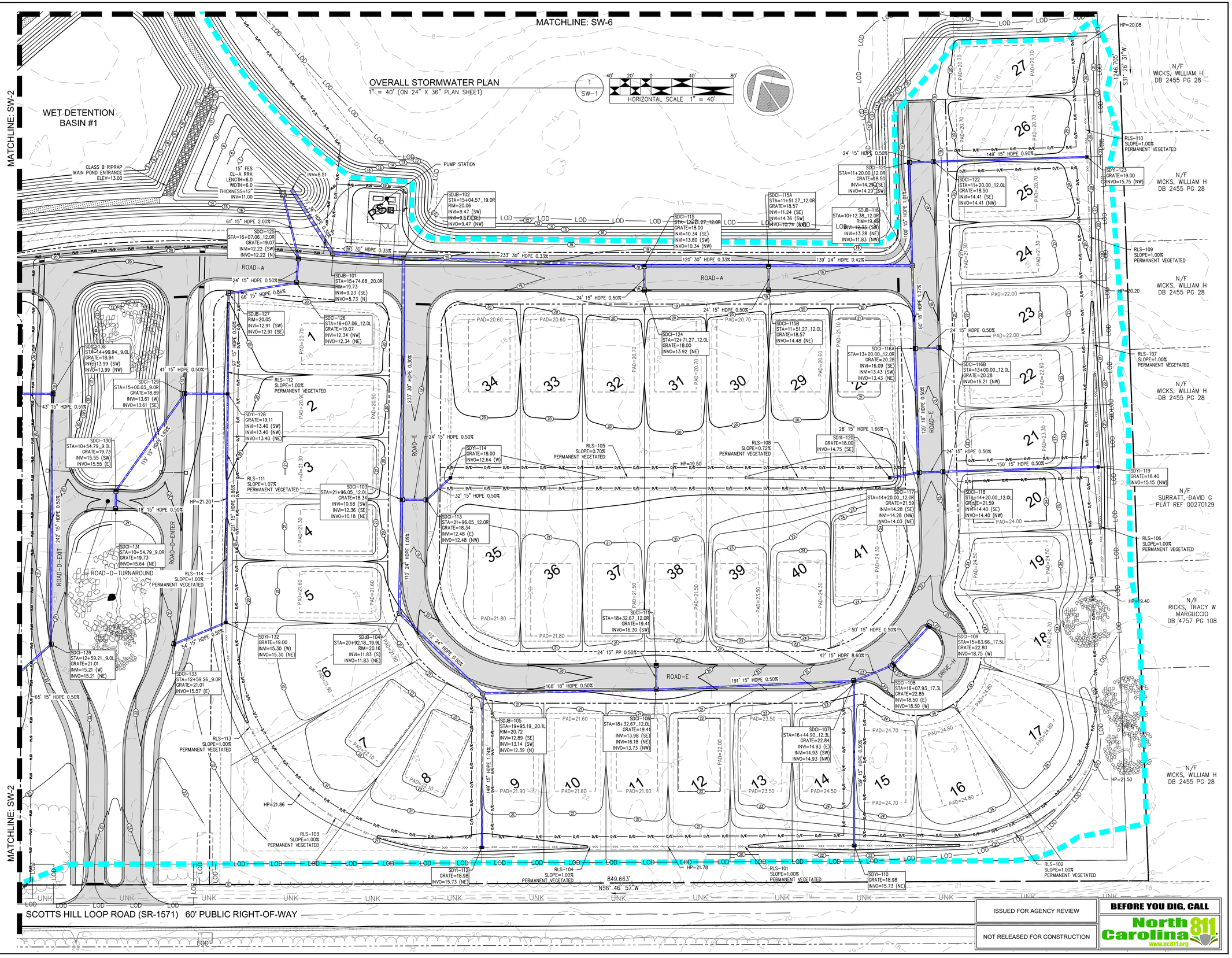
OVERALL STORMWATER PLAN

REV	DATE	DESCRIPTION	INIT
B	5 NOV 2024	ADDED THE LIMIT OF DISTURBANCE LINE	JRC
A	12 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 120'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
SW-0



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PENDER COUNTY, NC

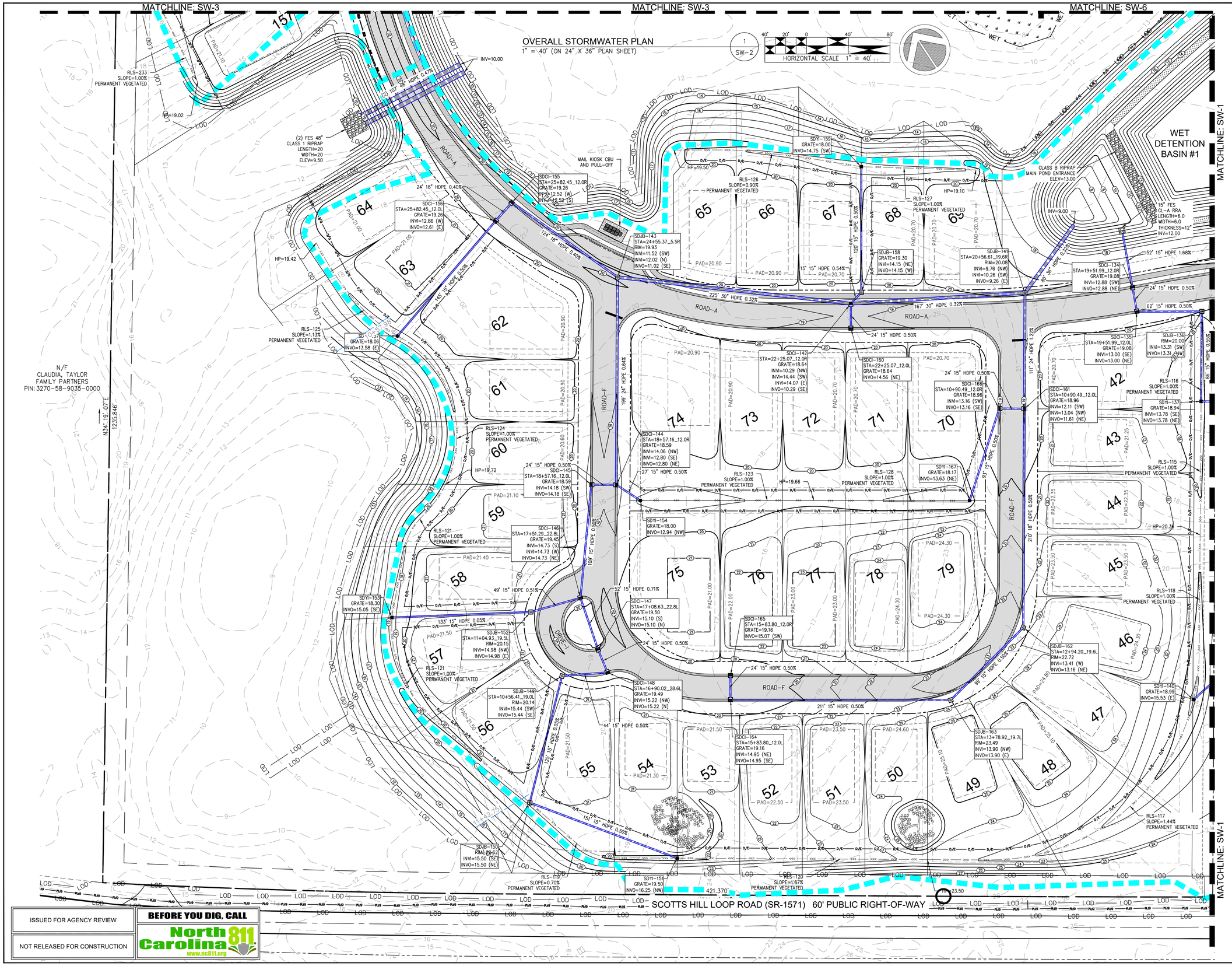
OVERALL STORMWATER PLAN

REV	DATE	DESCRIPTION		
B	5 NOV 2024	ADDED THE LIMIT OF DISTURBANCE LINE	JRC	
A	12 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC	
				INIT

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
SW-1



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PENDER COUNTY, NC

OVERALL STORMWATER PLAN

REV	DATE	DESCRIPTION	INIT
B	5 NOV 2024	ADDED THE LIMIT OF DISTURBANCE LINE	JRC
A	12 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

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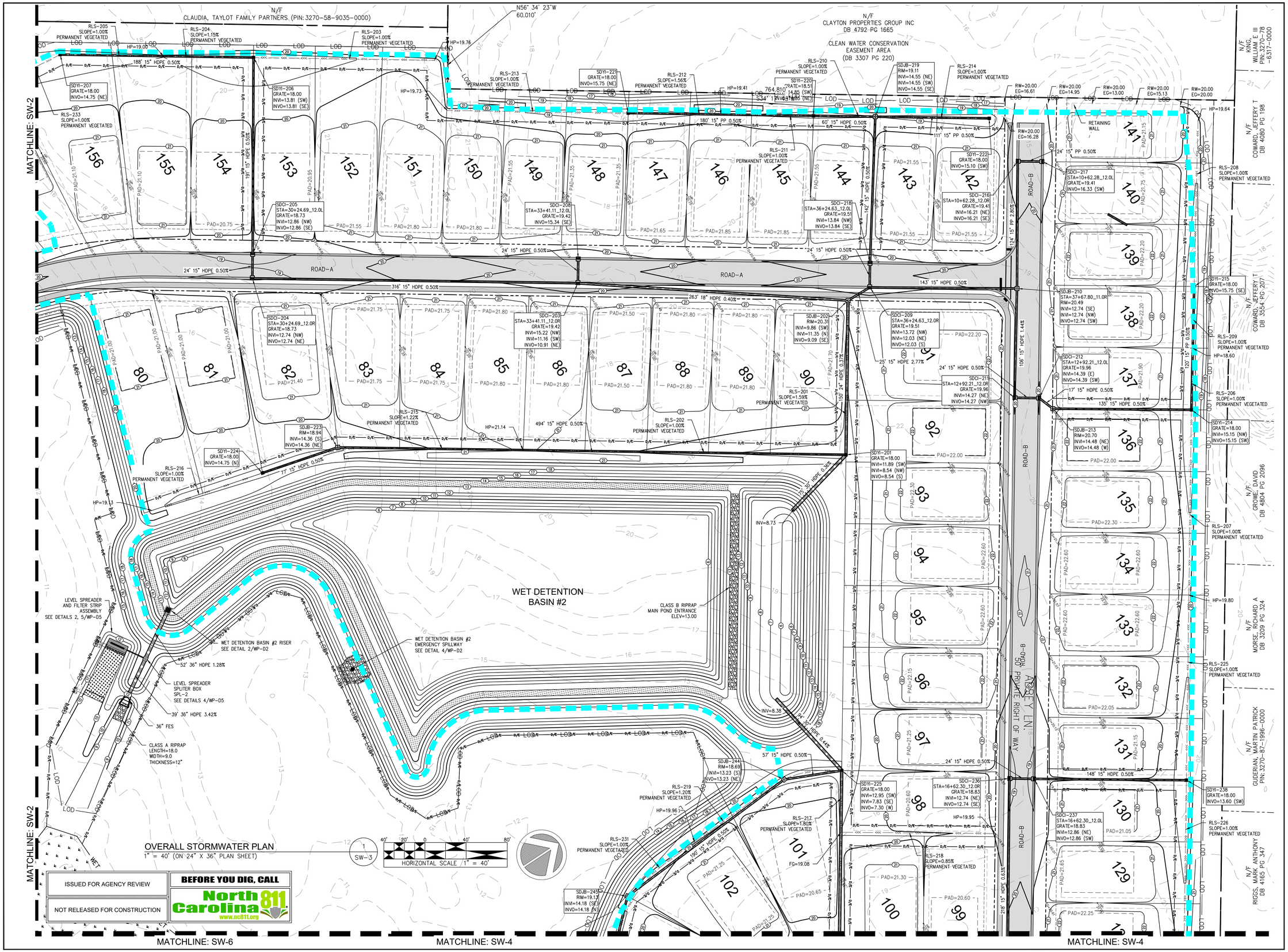
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
SW-2



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PENDER COUNTY, NC

OVERALL STORMWATER PLAN

REV	DATE	DESCRIPTION	INIT
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A	12 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES
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PO BOX 4098
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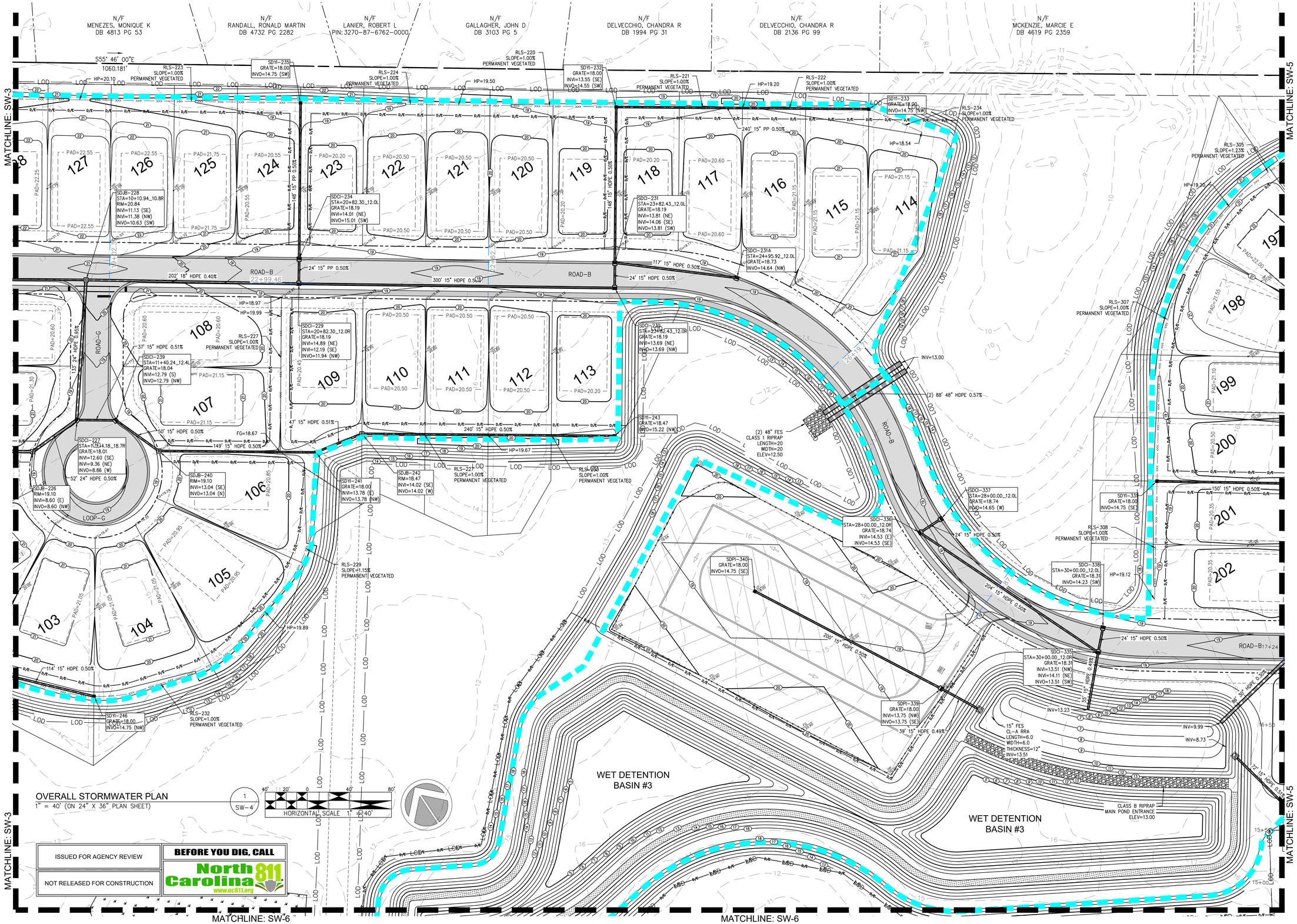
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
SW-3



OVERALL STORMWATER PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)

1 SW-4

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OVERALL STORMWATER PLAN

REV	DATE	DESCRIPTION	INIT
B	5 NOV 2024	ADDED THE LIMIT OF DISTURBANCE LINE	JRC
A	12 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
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PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
SW-4

OVERALL STORMWATER PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)

1 SW-5

HORIZONTAL SCALE 1" = 40'

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

OVERALL STORMWATER PLAN

REV	DATE	DESCRIPTION		INIT
B	5 NOV 2024	ADDED THE LIMIT OF DISTURBANCE LINE	JRC	
A	12 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC	

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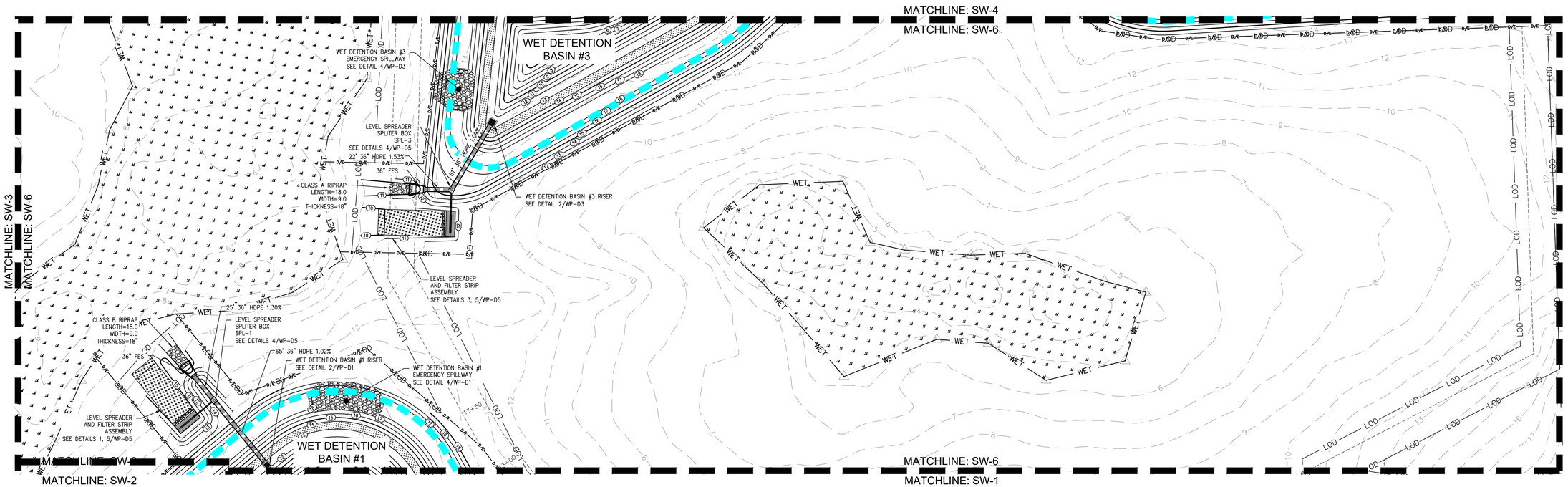
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
SW-5



OVERALL STORMWATER PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)

1
SW-6

40' 20' 0 40' 80'
HORIZONTAL SCALE 1" = 40'

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

OVERALL STORMWATER PLAN

REV	DATE	DESCRIPTION				
B	5 NOV 2024	ADDED THE LIMIT OF DISTURBANCE LINE	JRC			
A	12 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC			
			INIT			

DEVELOPER
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GROUP, INC.
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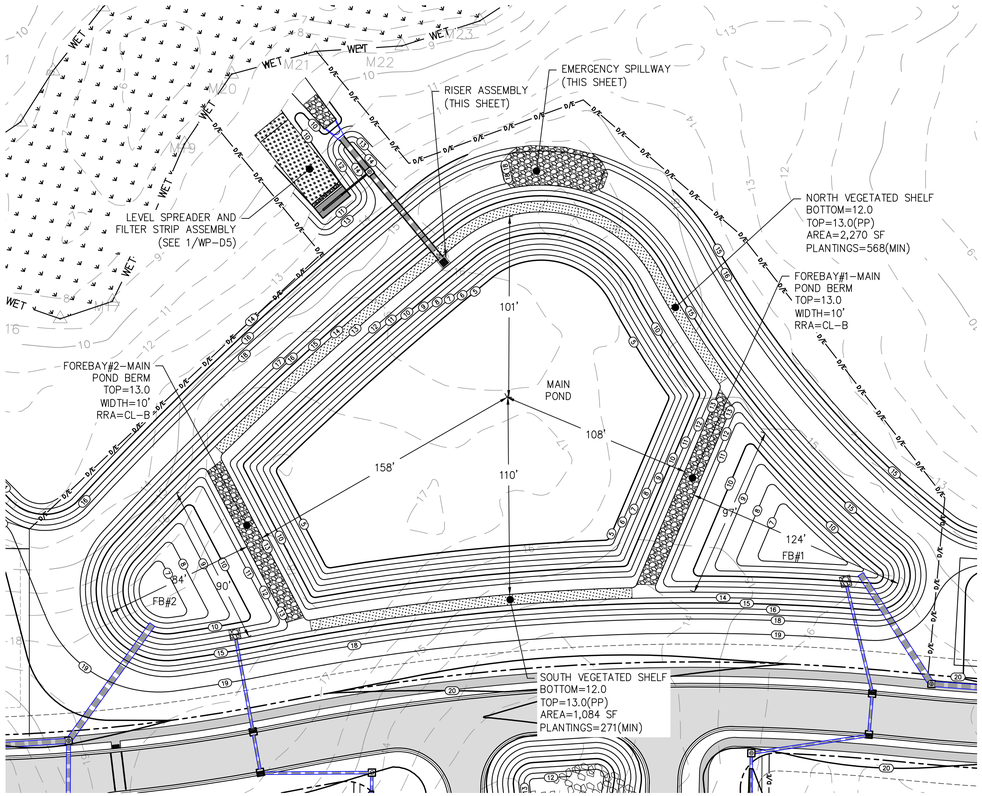
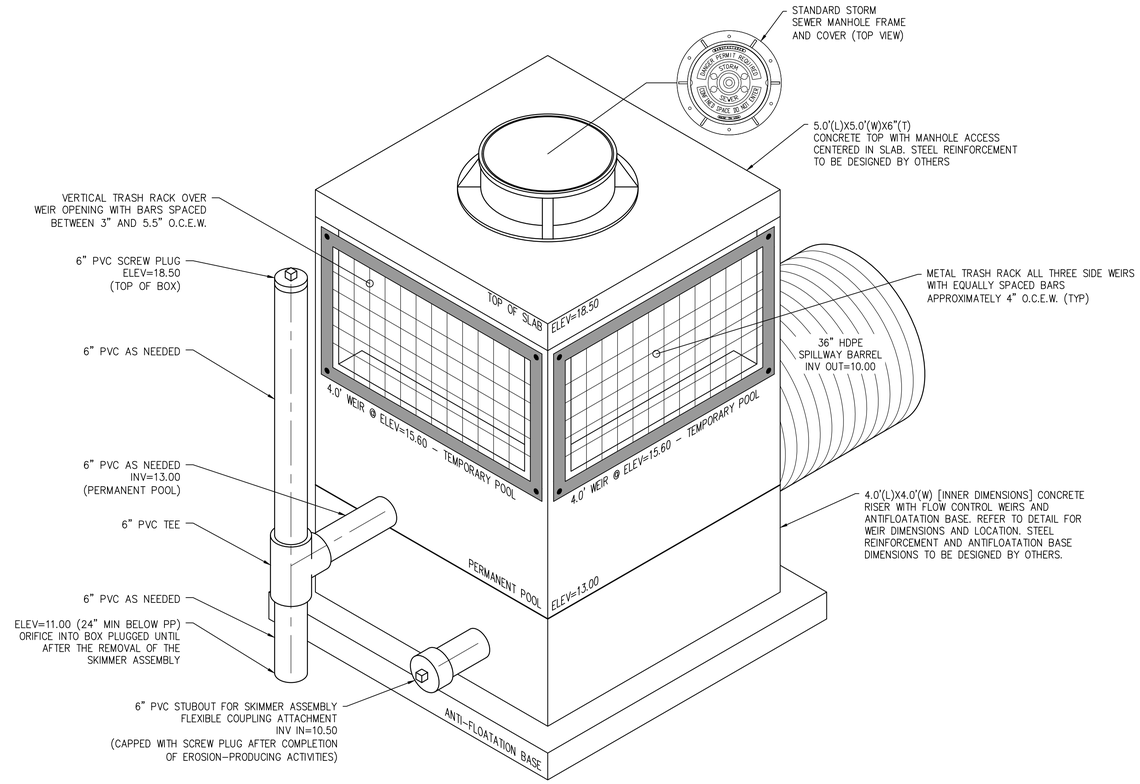
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 40'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
SW-6

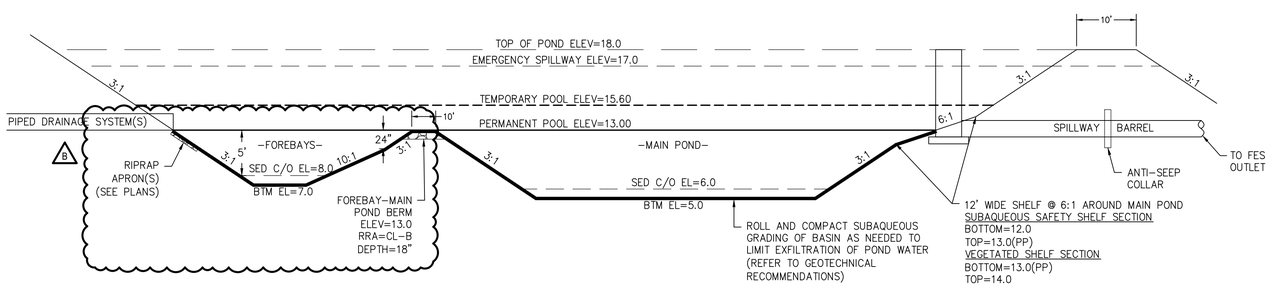


WET DETENTION BASIN #1 PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)
1 WP-D1

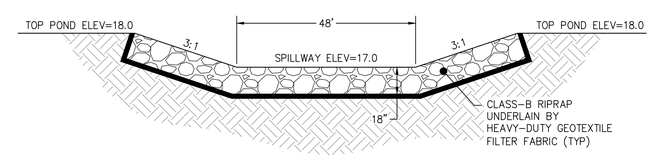
HORIZONTAL SCALE 1" = 40'



WET DETENTION BASIN #1 RISER STRUCTURE
NOT TO SCALE
2 WP-D1



WET DETENTION BASIN #1 CROSS-SECTION DETAIL
NOT TO SCALE
3 WP-D1



WET DETENTION BASIN #1 EMERGENCY SPILLWAY DETAIL
NOT TO SCALE
4 WP-D1

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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

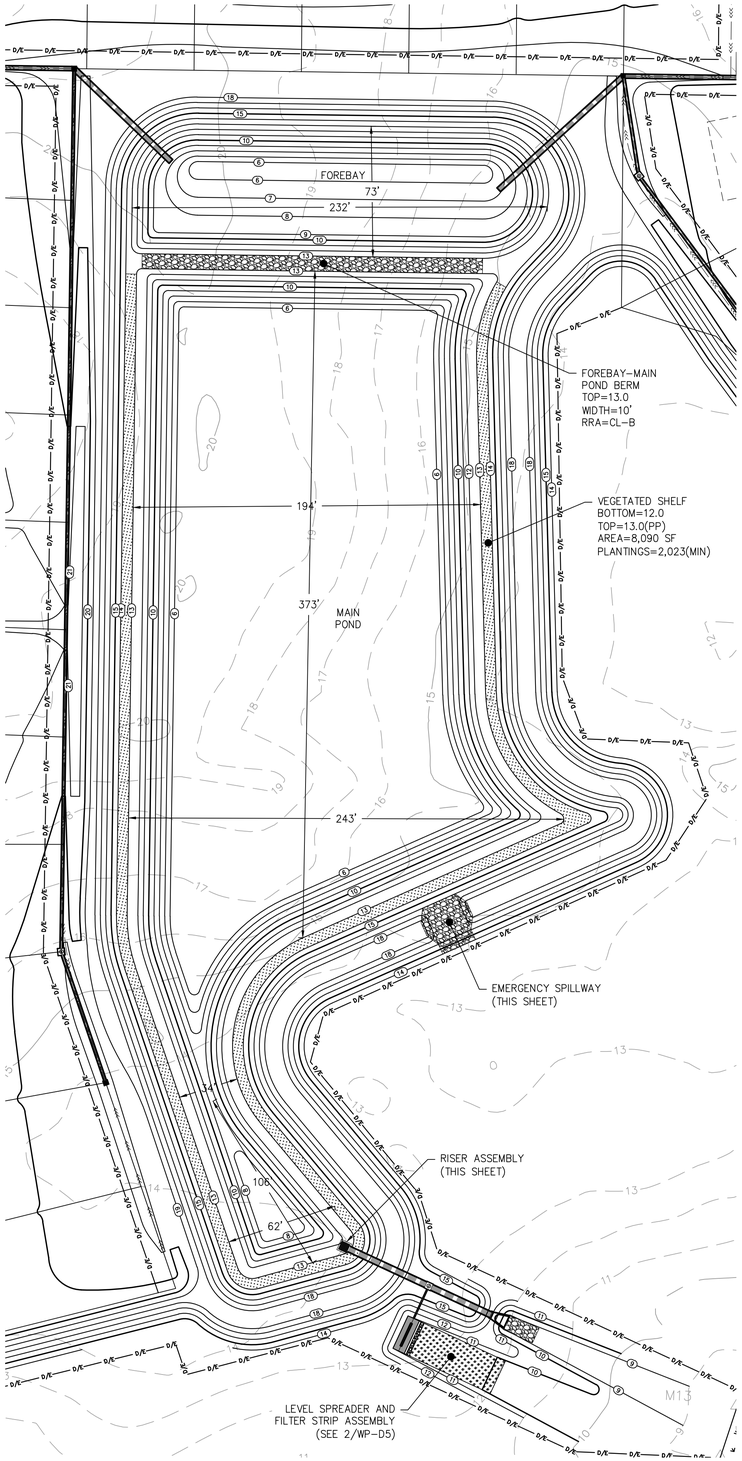
WET DETENTION BASIN #1 DETAILS

REV	DATE	DESCRIPTION			
B	27 JUN 2024	UPDATED WET DETENTION BASIN CROSS SECTION DETAIL	JRC	JRC	INIT
A	7 JUN 2024	INITIAL PLAN SHEET RELEASE			

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

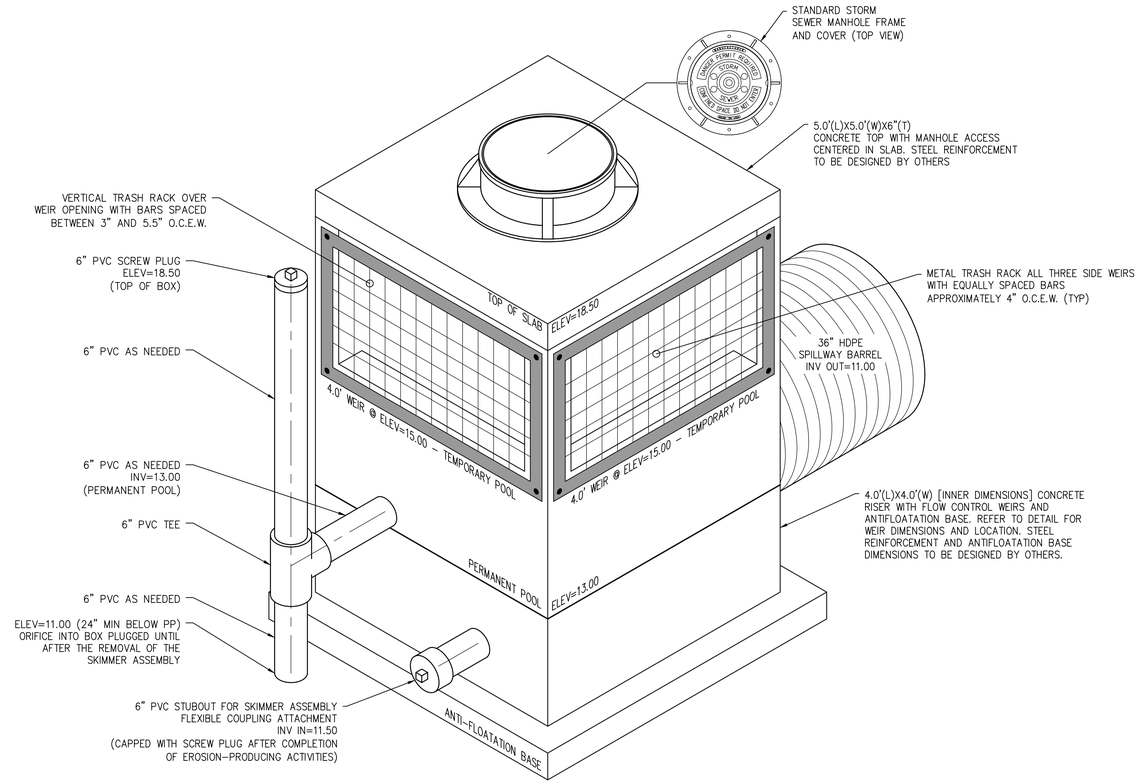
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	VARIES
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
WP-D1

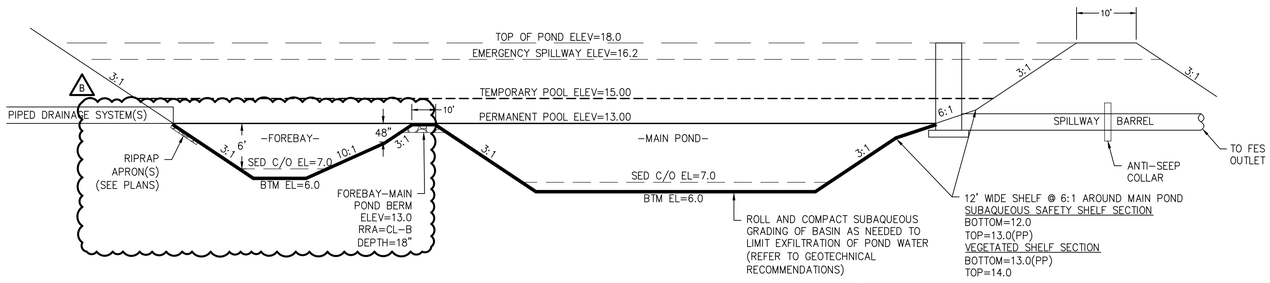


WET DETENTION BASIN #2 PLAN
1" = 40' (ON 24" X 36" PLAN SHEET)
1 WP–D2

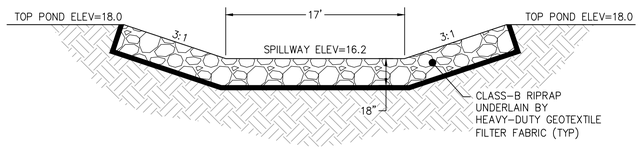
40' 20' 0 40' 80'
HORIZONTAL SCALE 1" = 40'



WET DETENTION BASIN #2 RISER STRUCTURE
NOT TO SCALE
2 WP–D2



WET DETENTION BASIN #2 CROSS-SECTION DETAIL
NOT TO SCALE
3 WP–D2



WET DETENTION BASIN #2 EMERGENCY SPILLWAY DETAIL
NOT TO SCALE
4 WP–D2

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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

WET DETENTION BASIN #2 DETAILS

REV	DATE	DESCRIPTION	INIT
B	27 JUN 2024	UPDATED WET DETENTION BASIN CROSS SECTION DETAIL	JRC
A	7 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	VARIES
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
WP-D2

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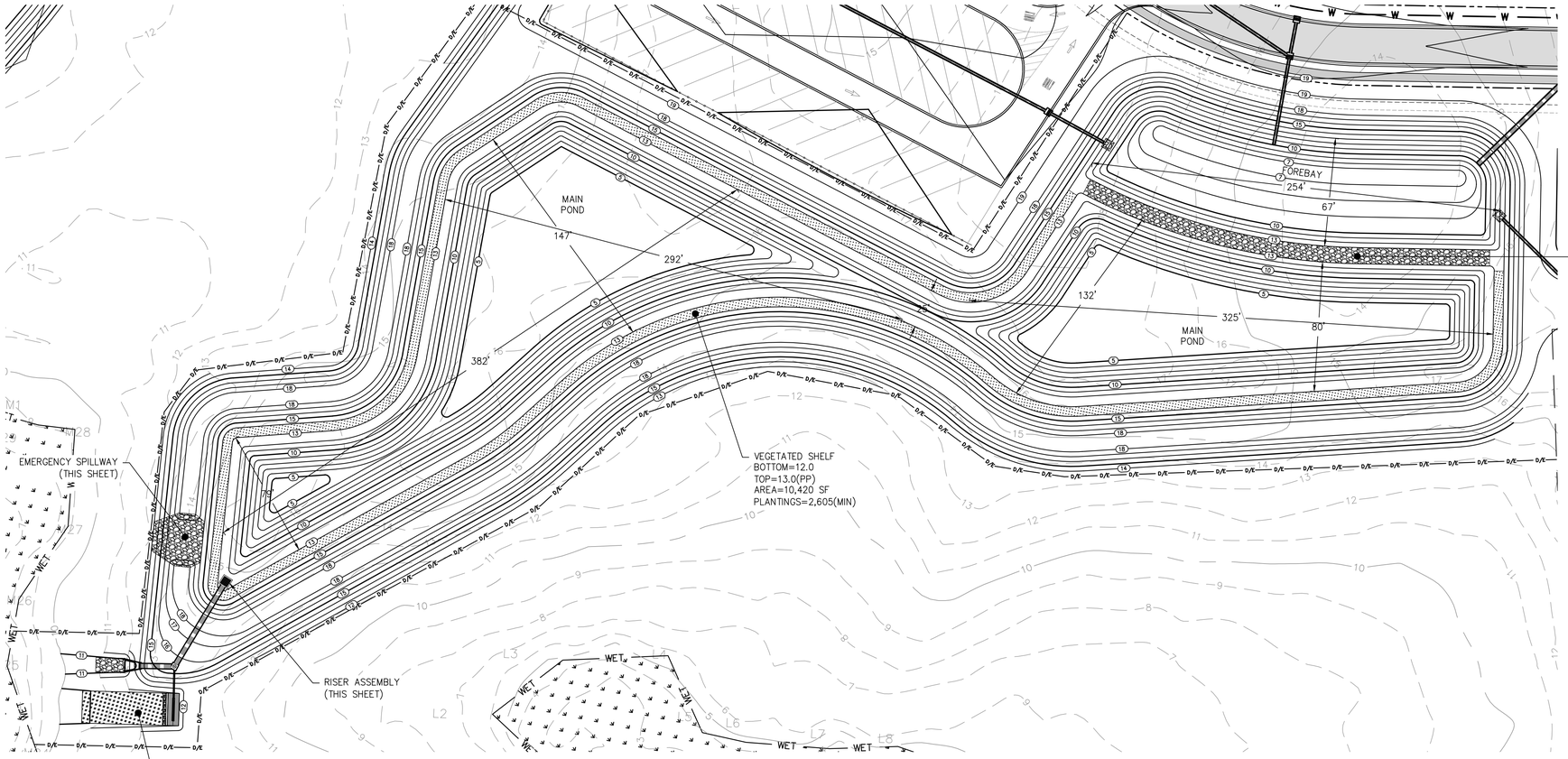
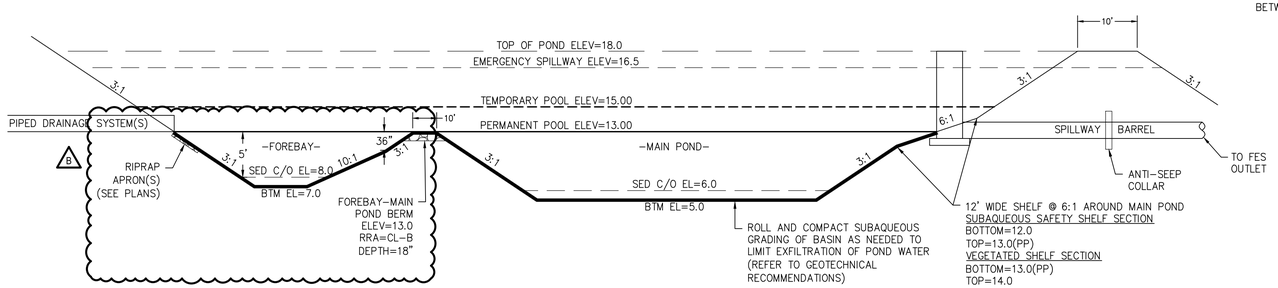


WET DETENTION BASIN #3 PLAN

1" = 40' (ON 24" X 36" PLAN SHEET)

1 WP–D3

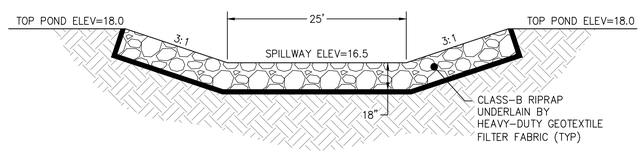
40' 20' 0 40' 80'
HORIZONTAL SCALE 1" = 40'



WET DETENTION BASIN #3 CROSS-SECTION DETAIL

NOT TO SCALE

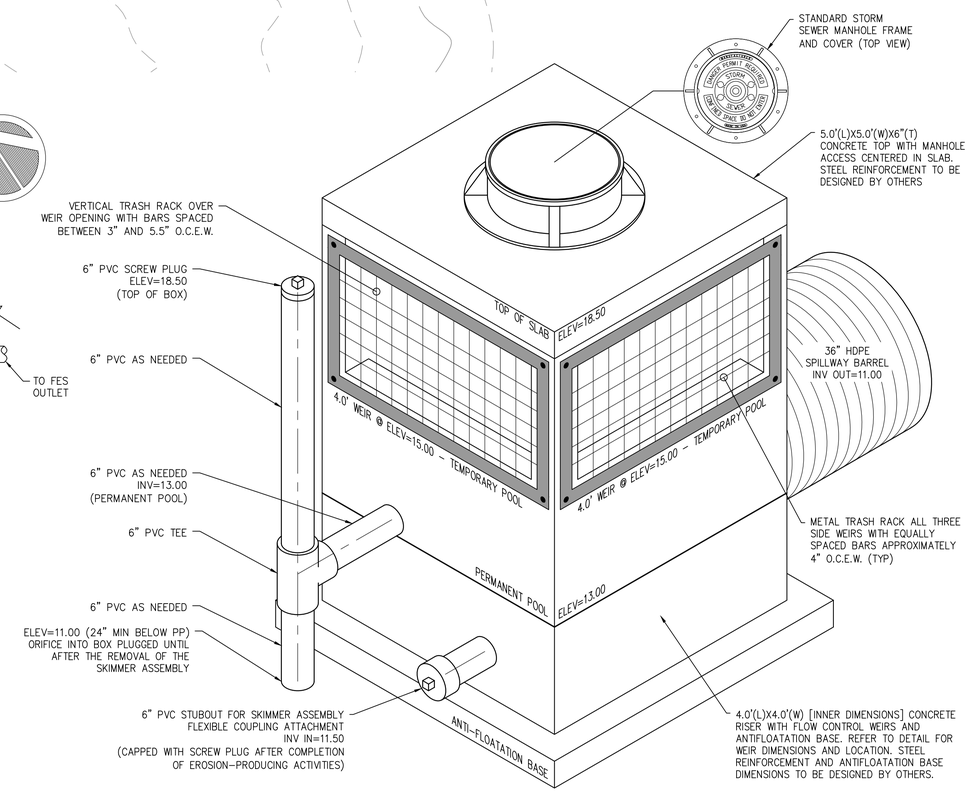
3 WP–D3



WET DETENTION BASIN #3 EMERGENCY SPILLWAY DETAIL

NOT TO SCALE

4 WP–D3



WET DETENTION BASIN #3 RISER STRUCTURE

NOT TO SCALE

2 WP–D3

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

WET DETENTION BASIN #3 DETAILS

REV	DATE	DESCRIPTION	INIT
B	27 JUN 2024	UPDATED WET DETENTION BASIN CROSS-SECTION DETAIL	JRC
A	7 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	VARIES
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
WP-D3

SPECIFICATION NOTES

1. THE VEGETATED SHELF SHALL BE PLANTED WITH A MINIMUM OF THREE DIVERSE SPECIES OF HERBACEOUS, NATIVE VEGETATION AT A MINIMUM DENSITY OF 50 PLANTS PER 200 SQUARE FEET OF SHELF AREA, RECOMMENDED FROM THE NCDEQ-APPROVED TABLE.
2. THE CONTRACTOR MAY SELECT THE ALTERNATE SPECIES OF WETLAND PLANTS BASED UPON NURSERY AVAILABILITY. HOWEVER, THREE DIVERSE SPECIES OF PLANTS MUST BE USED ACROSS THE SHELF REGARDLESS. IT IS HIGHLY RECOMMENDED THAT THE CONTRACTOR OBTAIN APPROVAL FROM THE LICENSED SPECIALIST(S) PRIOR TO INSTALLATION TO ENSURE COMPLIANCE.
3. THE DAM AND EMBANKMENT SLOPES SHALL BE PLANTED WITH PERENNIAL TURF GRASS SUCH AS HYBRID BERMUDA OR CENTIPEDE GRASS. WEEPING LOVE GRASS IS NOT ALLOWED BECAUSE IT DOES NOT PROVIDE LONG-TERM SLOPE STABILIZATION.
4. TREES AND WOODY SHRUBS MAY NOT BE PLANTED ON THE DAM OR EMBANKMENT SLOPES AND ANY VOLUNTEERS SHOULD BE REMOVED AS PART OF REGULAR MAINTENANCE ACTIVITIES. HOWEVER, TREES AND SHRUBS MAY BE PLANTED OUTSIDE OF THE EMBANKMENT SLOPES AND CAN SERVE TO SHADE THE WET POND, ALONG ITS SOUTH, EAST, AND WEST SIDES.
5. SIMILAR SPECIES OF PLANTS ARE TO BE GROUPED TOGETHER IN LARGER SWATHS TO PREVENT GROUP DIE-OFFS OR DISEASE.
6. ALL PLANT MATERIAL SHALL BE PROVIDED IN A MIN. 4 CUBIC INCH CONTAINER FROM THE NURSERY.

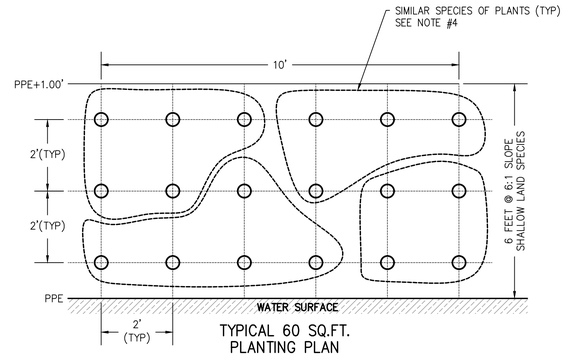
INSTALLATION NOTES

1. DO NOT PLANT THE VEGETATED SHELF WHILE SEDIMENT-LADEN RUNOFF IS BEING DIRECTED TO THE POND OR IF IT IS NOT IN THE PROPER GROWING SEASON FOR THE PLANTINGS.
2. DO NOT "BROADCAST" THE SEEDS OR PLANTINGS FOR THE VEGETATED SHELF. THE SHELF MUST BE APPROPRIATELY PLANTED.
3. THE EMBANKMENT AND DAMS MAY BE SEEDED, SPRAYED, OR PLANTED WITH SOD.

MAINTENANCE NOTES

1. PRUNE REGULARLY ACCORDING TO BEST PROFESSIONAL PRACTICES TO MAINTAIN OPTIMAL PLANT HEALTH.
2. IF PLANTS ARE DEAD, DISEASED, OR DYING, DETERMINE THE SOURCE OF THE PROBLEM (SOILS, HYDROLOGY, DISEASE, ETC.) AND REMEDY THE PROBLEM AND REPLACE THE PLANS. PROVIDE A ONE-TIME FERTILIZER APPLICATION TO ESTABLISH GROUND COVER IF A SOIL TEST INDICATES THAT IT IS NECESSARY.
3. REMOVE WEEDS PREFERABLY BY HAND. IF PESTICIDE IS USED, WIPE IT ON THE PLANTS RATHER THAN SPRAYING.
4. REMOVE VOLUNTEERED SHRUBS OR TREES GROWING ON THE EMBANKMENT IMMEDIATELY.
5. IF EVIDENCE OF MUSKRAT OR BEAVER ACTIVITY IS PRESENT, CONSULT A PROFESSIONAL TO REMOVE THE MUSKRAT OR BEAVER AND REPAIR ANY HOLES OR EROSION.
6. IF AREAS OF BARE SOIL AND/OR EROSIVE GULLIES HAVE FORMED, REGRADE THE SOIL AND IF NECESSARY REMOVE THE GULLY, PLANT GROUND COVER AND WATER UNTIL IT IS ESTABLISHED. PROVIDE LIME IN A ONE-TIME FERTILIZER APPLICATION.

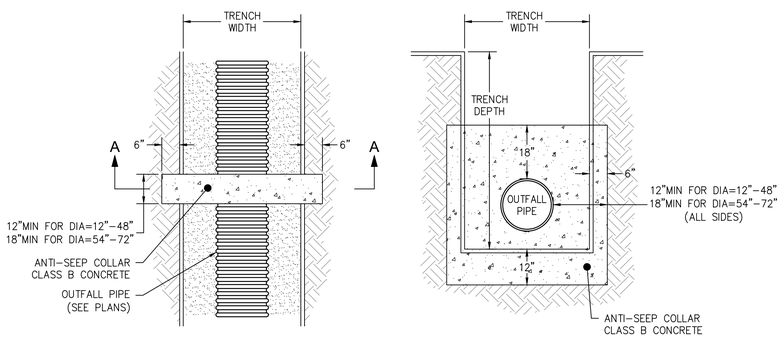
POND VEGETATION SPECIFICATIONS — 1 / WP-D4



VEGETATED SHELF GENERAL PLANTING DETAIL — 2 / WP-D4
NOT TO SCALE

Botanical Name	Common Name
Asclepias incarnata	Swamp Milkweed
Carex tenera	Quill sedge
Chelone glabra	White Turtlehead
Eupatoriadelphus dubius	Dwarf Joe Pye Weed
Eupatoriadelphus fistulosus	Joe Pye Weed
Eupatoriadelphus maculatus	Spotted trumpetweed
Hibiscus coccineus	Scarlet rose mallow
Hibiscus laevis	Halberdleaf rosemallow
Kosteletzkya virginica	Seashore Mallow
Lobelia cardinalis	Cardinal flower
Lobelia elongata	Longleaf lobelia
Lobelia siphilitica	Great blue Lobelia
Rhynchospora colorata	Starrush whitetop
Saccharum baldwinii	Narrow plumegrass

RECOMMENDED VEGETATED SHELF PLANTINGS — 3 / WP-D4



ANTI-SEEP COLLAR DETAIL — 4 / WP-D4
NOT TO SCALE

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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

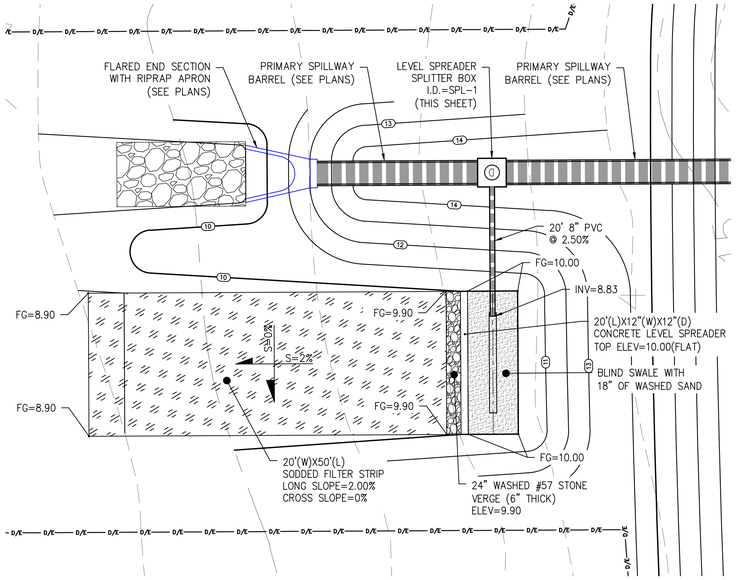
GENERAL POND DETAILS

REV	DATE	DESCRIPTION	INIT
A	7 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	NTS
DESIGNED:	SJ	RELEASE:	DESIGN

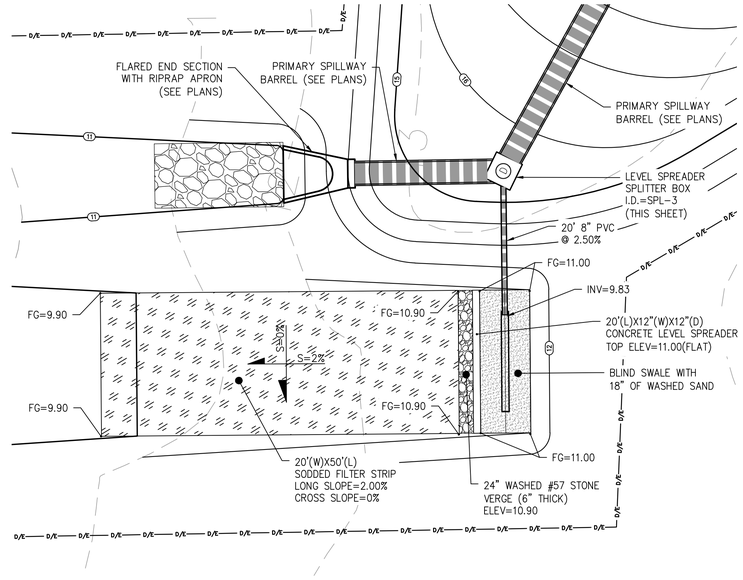
SHEET
WP-D4



WET DETENTION BASIN #1
LEVEL SPREADER-FILTER STRIP PLAN
1" = 10' (ON 24" X 36" PLAN SHEET)

1 SW-D5

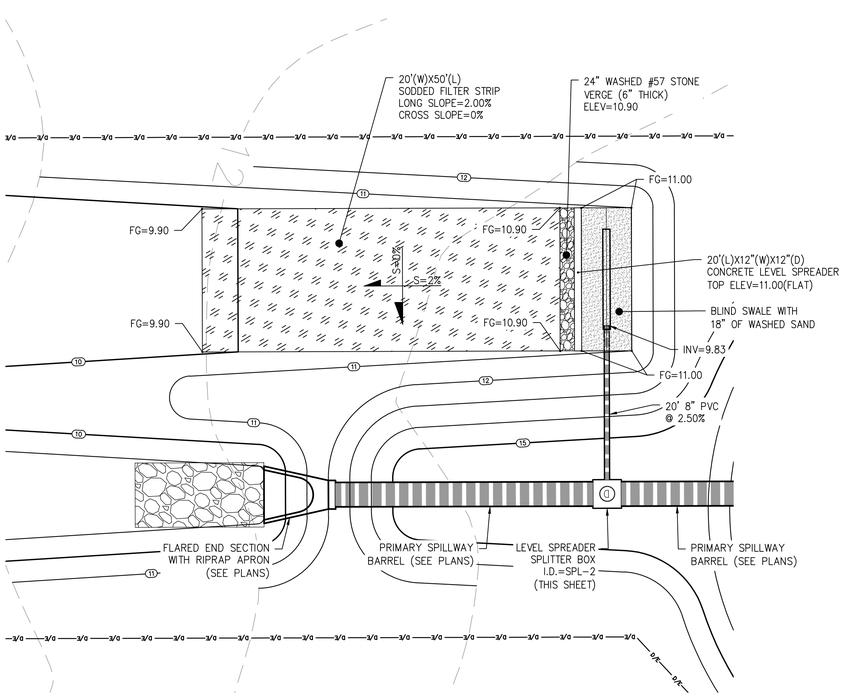
10' 5' 0 10' 20'
HORIZONTAL SCALE 1" = 10'



WET DETENTION BASIN #3
LEVEL SPREADER-FILTER STRIP PLAN
1" = 10' (ON 24" X 36" PLAN SHEET)

3 SW-D5

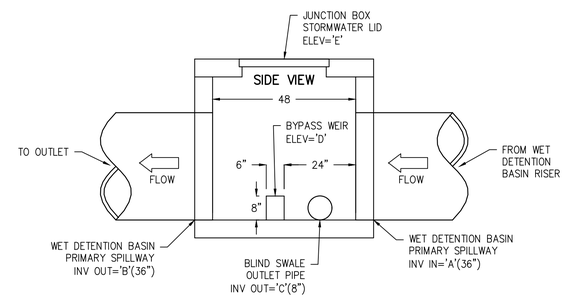
10' 5' 0 10' 20'
HORIZONTAL SCALE 1" = 10'

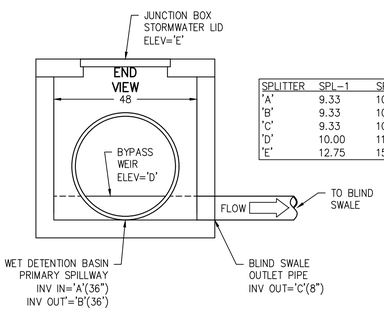


WET DETENTION BASIN #2
LEVEL SPREADER-FILTER STRIP PLAN
1" = 10' (ON 24" X 36" PLAN SHEET)

2 SW-D5

10' 5' 0 10' 20'
HORIZONTAL SCALE 1" = 10'

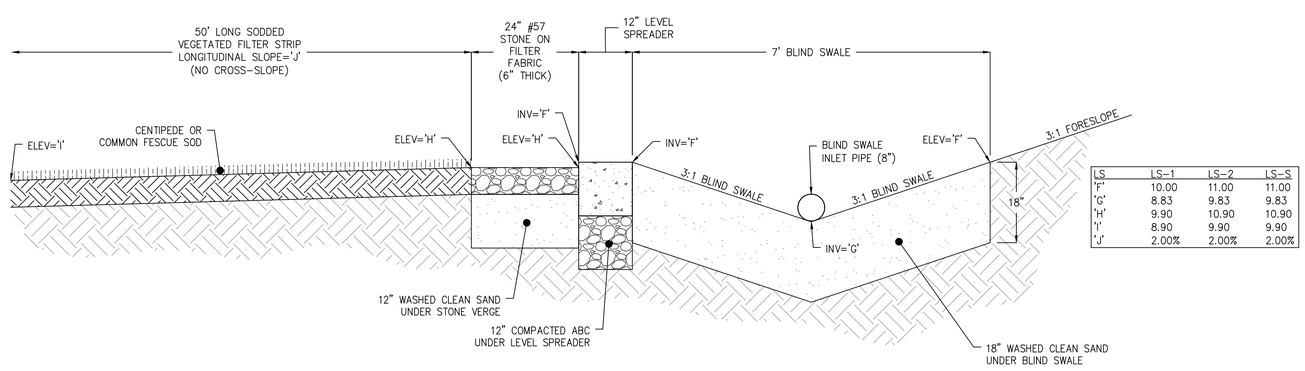




SPLITTER	SPL-1	SPL-2	SPL-3
'A'	9.33	10.33	10.33
'B'	9.33	10.33	10.33
'C'	9.33	10.33	10.33
'D'	10.00	11.00	11.00
'E'	12.75	15.50	15.50

LEVEL SPREADER SPLITTER BOX DETAILS
NOT TO SCALE

4 SW-D5



LS	LS-1	LS-2	LS-S
'F'	10.00	11.00	11.00
'G'	8.83	9.83	9.83
'H'	9.90	10.90	10.90
'I'	8.90	9.90	9.90
'J'	2.00%	2.00%	2.00%

LEVEL SPREADER-FILTER STRIP STANDARD SECTION VIEW
NOT TO SCALE

5 SW-D5

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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

LEVEL SPREADER-FILTER STRIP DETAILS

REV	DATE	DESCRIPTION	INIT
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PO BOX 4098
MARYVILLE, TN 37802

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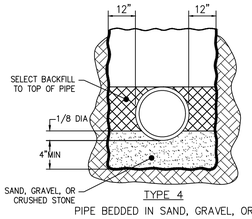
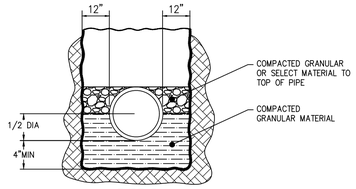
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
WP-D5



TYPE 4

PIPE BEDDED IN SAND, GRAVEL, OR CRUSHED STONE TO A DEPTH OF 1/8 PIPE DIAMETER, 4" MINIMUM WITH BACKFILL COMPACTED TO TOP OF PIPE. (APPROXIMATELY 80 PERCENT STANDARD PROCTOR, AASHTO T-99)



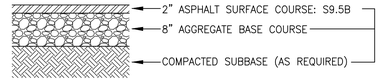
TYPE 5

PIPE BEDDED TO IT'S CENTERLINE IN COMPACTED GRANULAR MATERIAL, 4" MINIMUM UNDER PIPE. COMPACTED GRANULAR OR SELECT MATERIAL TO TOP OF PIPE. (APPROXIMATELY 90 PERCENT STANDARD PROCTOR, AASHTO T-99)
(SELECT MATERIAL IS DEFINED AS NATIVE SOIL EXCAVATED FROM THE TRENCH, FREE OF ROCKS, ORGANIC MATERIAL, FOREIGN MATERIALS AND FROZEN EARTH)

PIPE INSTALLATION DETAIL

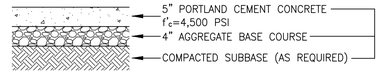
NOT TO SCALE

1 / DD-1



OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER BASED UPON SITE SPECIFIC TESTING AND CONDITIONS. ADDITIONAL DEPTH, COMPACTION, OR STABILIZATION METHODS MAY BE REQUIRED BASED UPON THE RESULTS OF SITE SPECIFIC GEOTECHNICAL TESTING TO ENSURE PROPER COMPACTION.

LIGHT-DUTY FLEXIBLE PAVEMENT SCHEDULE



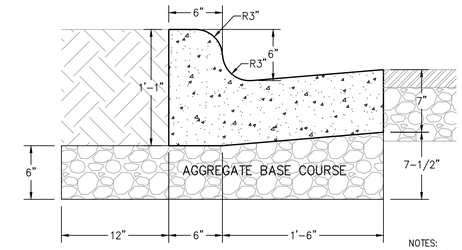
OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER BASED UPON SITE SPECIFIC TESTING AND CONDITIONS. ADDITIONAL DEPTH, COMPACTION, OR STABILIZATION METHODS MAY BE REQUIRED BASED UPON THE RESULTS OF SITE SPECIFIC GEOTECHNICAL TESTING TO ENSURE PROPER COMPACTION.

LIGHT-DUTY (RIGID) CONCRETE SECTION

RIGID AND FLEXIBLE PAVEMENTS SECTIONS

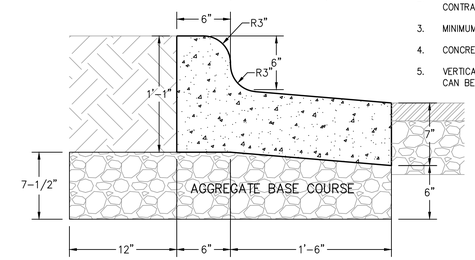
NOT TO SCALE

2 / DD-1

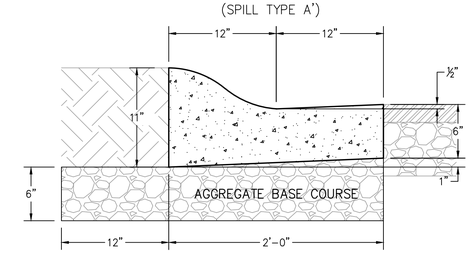


VERTICAL CURB AND GUTTER
(CATCH TYPE A)

NOTES:
1. EXPANSION JOINT MATERIAL TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. 50' MAX EXPANSION JOINT SPACING. 10' MAX CONTRACTION JOINT SPACING.
3. MINIMUM INSTALLATION LENGTH IS 5 FEET.
4. CONCRETE TO BE 3,000 PSI MINIMUM.
5. VERTICAL CURB AND GUTTER AGGREGATE BASE CAN BE SLOPED 3/4" OR USE A FLAT BASE



VERTICAL CURB AND GUTTER
(SPILL TYPE A')

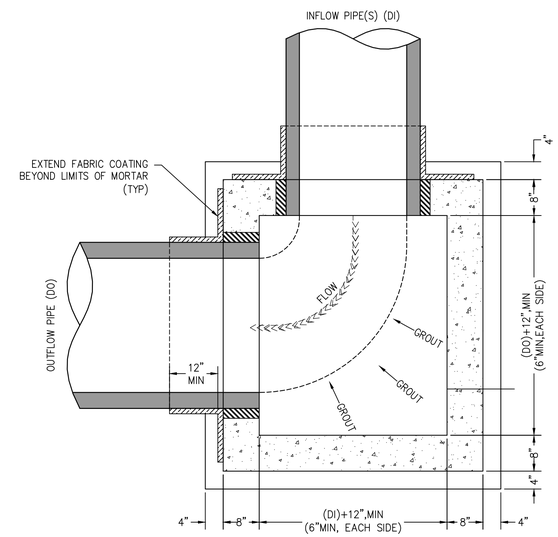


ROLL CURB AND GUTTER
(CATCH TYPE B)

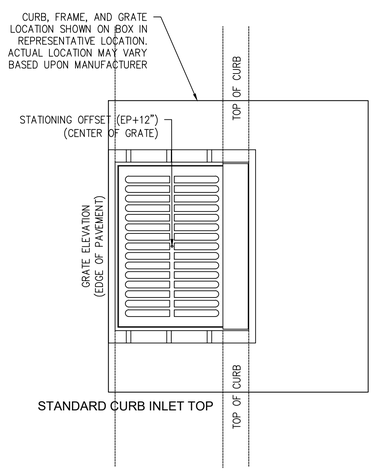
CURB DETAILS

NOT TO SCALE

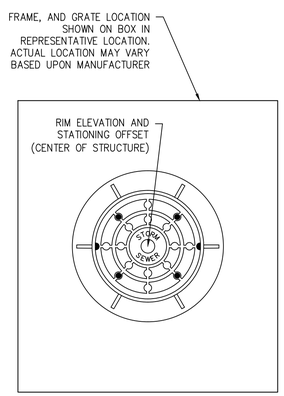
3 / DD-1



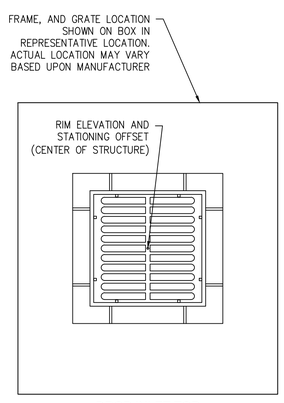
PLAN VIEW SECTION



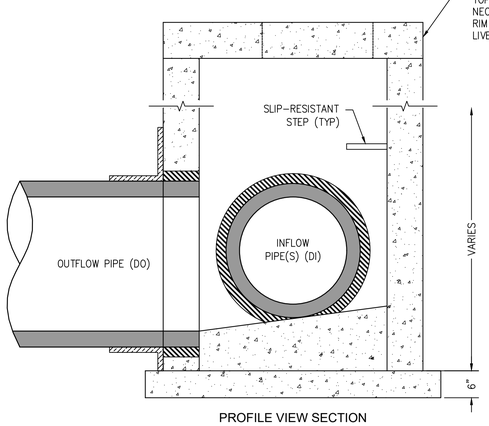
STANDARD CURB INLET TOP



STORMWATER JUNCTION BOX TOP



DROP INLET TOP



PROFILE VIEW SECTION

NOTES:

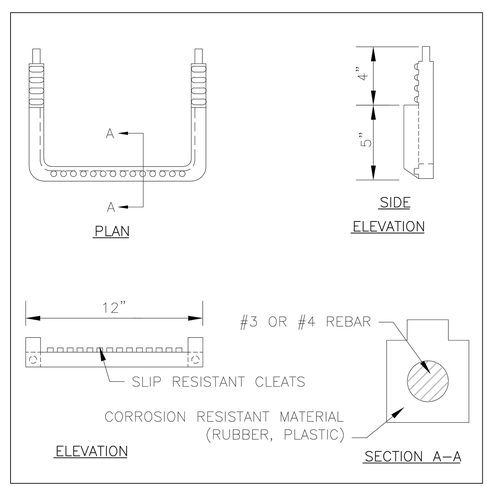
STRUCTURE NOTES:
1. STRUCTURE MAY BE PRECAST OR CAST IN PLACE BUT SHALL MEET NCDOT STANDARDS.
2. STRUCTURE MAY BE CONSTRUCTED FROM 4"X4"X8" OR 4"X8"X16" SOLID CONCRETE BLOCK.
3. STEPS SHALL BE INSTALLED IN ALL BOXES OVER 3'-6" IN DEPTH AS MEASURED FROM THE TOP OF THE GRATE TO THE BOTTOM INVERT OF THE BOX.
4. FOOTER SHALL BE 3000 PSI CONCRETE, MINIMUM.

FABRIC & GROUT CONNECTION TO STRUCTURE
1. PLACE BITUMINOUS COATING (OR APPROVED ADHESIVE) AROUND PIPE, WRAP AND SECURE FABRIC AROUND PIPE LEAVING EXCESS FABRIC TO PRESS AGAINST THE STRUCTURE.
2. INSERT PIPE INTO STRUCTURE, WITH PIPE RESTING ON BEDDING. THE PIPE SHOULD BE IN THE APPROXIMATE CENTER OF THE OPENING.
3. GROUT PIPE INTO CONCRETE STRUCTURE WITH NON-SHRINK GROUT. SOLID MASONRY UNITS, FULLY GROUTED INTO PLACE, MAY BE USED TO HELP FILL THE VOIDS.
4. PLACE BITUMINOUS COATING (OR APPROVED ADHESIVE) ON THE STRUCTURE SURFACE, THEN PRESS EXCESS FABRIC IN PLACE.

STORMWATER BOX DETAIL

NOT TO SCALE

4 / DD-1



SLIP-RESISTANT STEP DETAIL

NOT TO SCALE

5 / DD-1

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

GENERAL CONSTRUCTION DETAILS

REV	DATE	DESCRIPTION	
A	7 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
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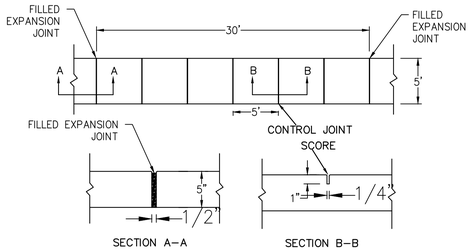
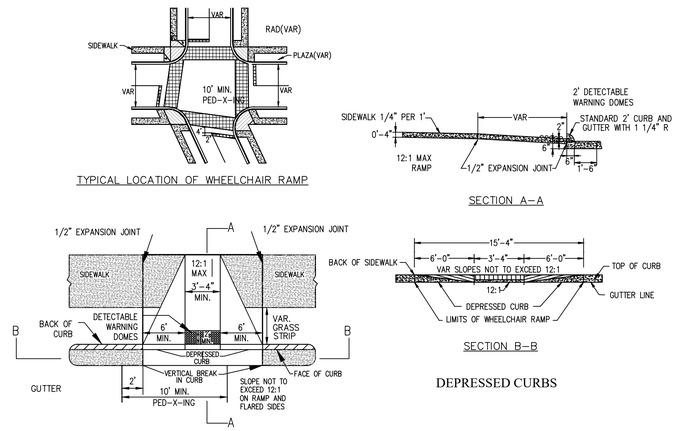
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
DD-1

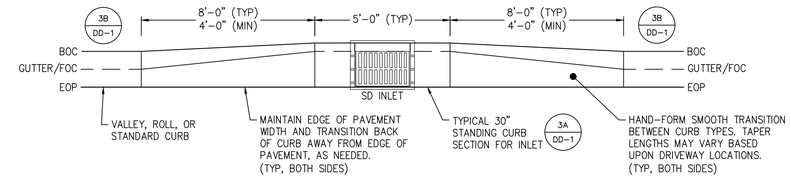


NOTES:
1. JOINT MATERIALS TO COMPLY WITH CURRENT NCDOT STANDARDS.
2. SANITARY SEWER CLEANOUTS, WATER METERS, MANHOLES, AND VALVE LIDS TO BE LOCATED OUTSIDE THE SIDEWALK WHERE FEASIBLE.
3. MINIMUM SIDEWALK WIDTH TO BE 6' IF PLACED AT BACK OF CURB.
4. CONCRETE FOR ALL SIDEWALKS (EXCEPT ANY PORTION CONTAINED WITHIN A DRIVEWAY) SHALL BE CLASS "A" – 3,000 PSI.
5. MINIMUM REPLACEMENT FOR REPAIRS IS A 5'x5' PANEL.
6. 4–INCH STONE BASE MAY BE REQUIRED FOR POOR SOIL CONDITIONS AS DIRECTED BY GEOTECHNICAL RECOMMENDATIONS.
7. MINIMUM SEPARATION FOR TUNNELING BELOW SIDEWALK IS 12–INCHES.
8 MAXIMUM ADJACENT GROUND SLOPE WITHOUT RAILING IS 2:1.
9. MINIMUM GRADE FOR PROPER DRAINAGE IS 1% IN AT LEAST 1 DIRECTION. MAXIMUM CROSS–SLOPE IS 2%. MAXIMUM LONGITUDINAL SLOPE IS 8.3%, 10% IF LIMITED BY EXISTING CONDITIONS, OR NO GREATER THAN THAT OF THE EXISTING ADJACENT ROAD.

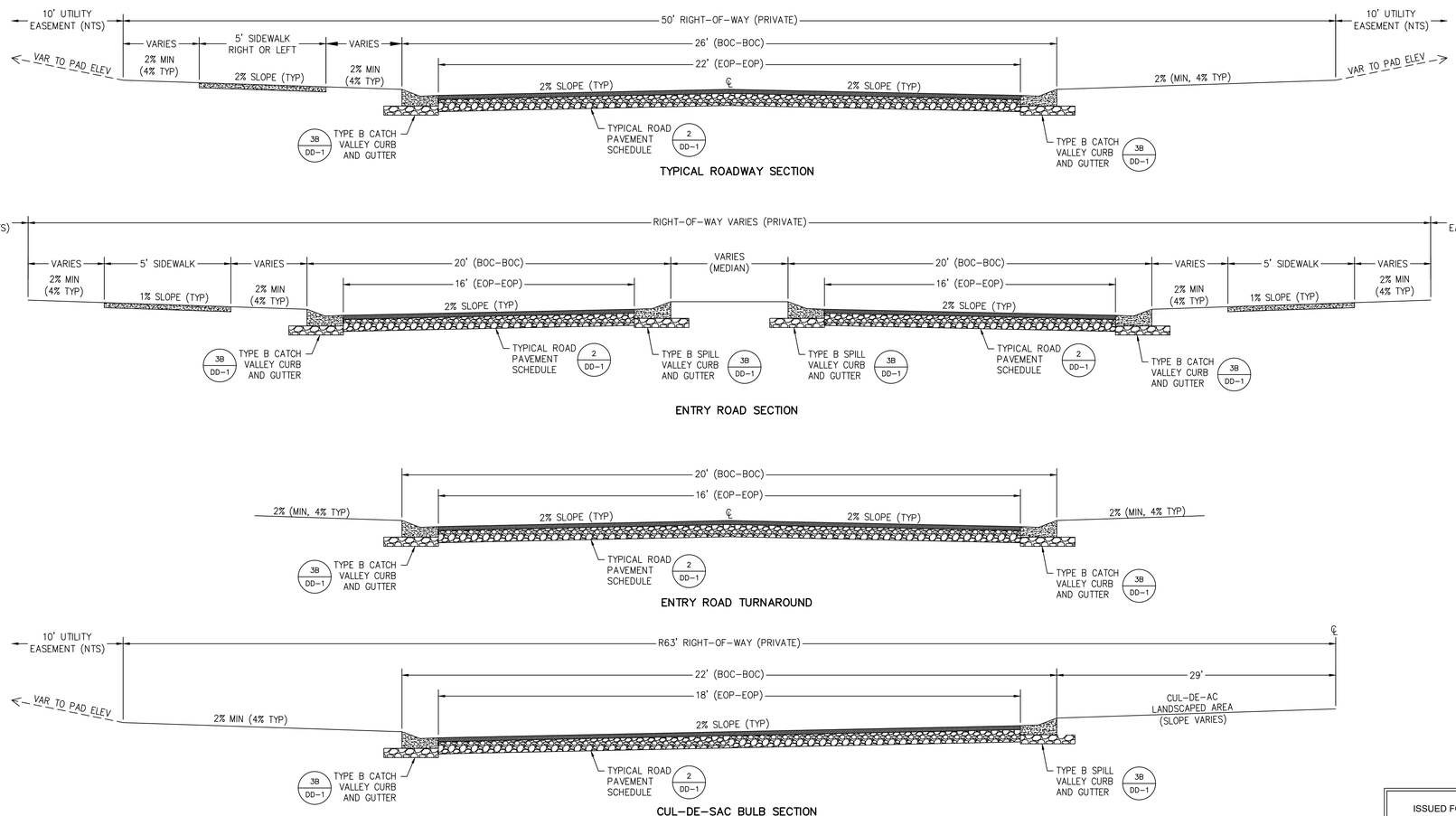
TYPICAL SIDEWALK DETAIL (1 / DD–2)
NOT TO SCALE



WHEEL CHAIR RAMPS DETAIL (2 / DD–2)
NOT TO SCALE



CURB TRANSITION AT INLET DETAIL (3 / DD–2)
NOT TO SCALE



TYPICAL STREET CROSS SECTION (4 / DD–2)
NOT TO SCALE

ISSUED FOR AGENCY REVIEW

NOT RELEASED FOR CONSTRUCTION

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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

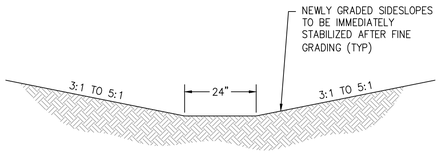
GENERAL CONSTRUCTION DETAILS

REV	DATE	DESCRIPTION	INIT
B	18 DEC 2024	UPDATED ROADWAY CROSS–SECTIONS	JRC
A	7 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	NTS
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
DD-2

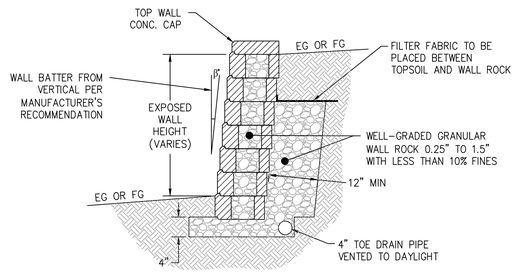


TYPICAL REAR LOT SWALE

SWALE MAINTENANCE:

1. DURING THE ESTABLISHMENT PERIOD, CHECK GRASS-LINED SWALES AFTER EVER RAINFALL.
2. AFTER GRASS IS ESTABLISHED, PERIODICALLY CHECK THE SWALE; CHECK IT AFTER EVERY HEAVY RAINFALL EVENT.
3. IMMEDIATELY MAKE REPAIRS. IT IS PARTICULARLY IMPORTANT TO CHECK THE SALE OUTLET AND ANY ROAD CROSSINGS FOR BANK STABILITY AND EVIDENCE OF SCOUR HOLES.
4. REMOVE ALL SIGNIFICANT SEDIMENT ACCUMULATIONS TO MAINTAIN THE DESIGNED CARRYING CAPACITY.
5. KEEP THE GRASS IN A HEALTHY, VIGOROUS CONDITION.

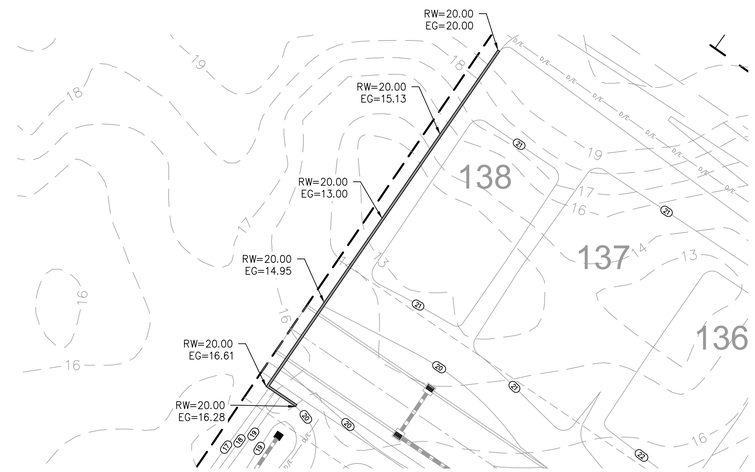
CONSTRUCTION SWALE/DITCH DETAIL (1 / DD-3)
NOT TO SCALE



RETAINING WALL NOTES:

1. THIS RETAINING WALL DETAIL IS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT INTENDED AS A DESIGN DETAIL DOCUMENT.
2. THE RETAINING WALL WILL BE DESIGNED BY OTHERS BASED UPON THE REQUIREMENTS AND DIMENSIONS PROVIDED IN THIS DRAWING SET.
3. THE RETAINING WALL MUST BE INSTALLED SUCH THAT THERE IS NO DISTURBANCE TO THE ADJACENT LAND FOR THE FOOTER AND DRAINAGE SYSTEM

EXAMPLE SEGMENTED BLOCK RETAINING WALL DETAIL (2 / DD-3)
NOT TO SCALE



RETAINING WALL PLAN (3 / DD-3)
NOT TO SCALE

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PENDER COUNTY, NC

GENERAL CONSTRUCTION DETAILS

REV	DATE	DESCRIPTION	
A	7 JUN 2024	INITIAL PLAN SHEET RELEASE	JRC

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	NTS
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
DD-3

SHEET INDEX
1" = 250' (ON 24" X 36" PLAN SHEET)

1
CP-0

250' 125' 0 250' 500'
HORIZONTAL SCALE 1" = 250'

FINAL DESIGN

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

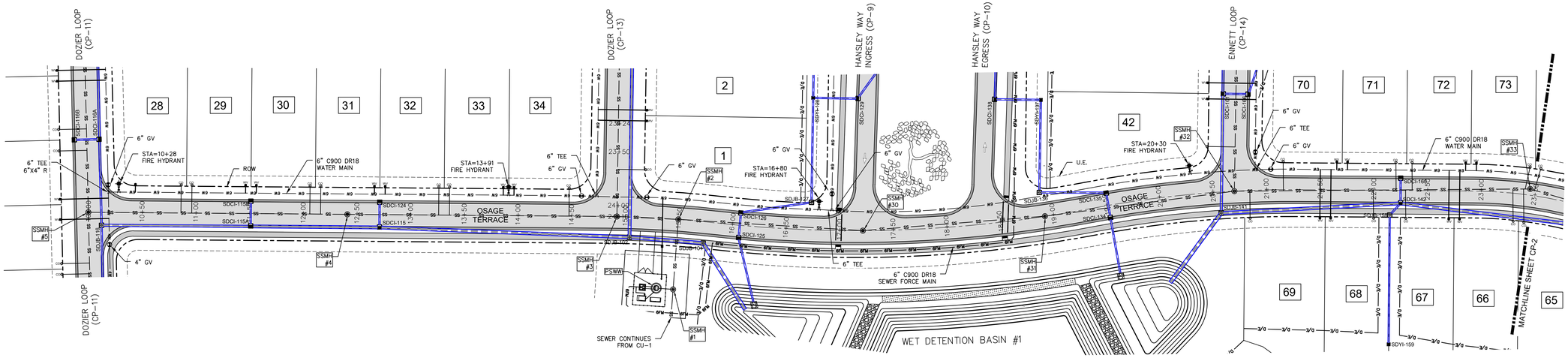
SHEET INDEX

REV	DATE	DESCRIPTION	
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ
			INIT

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 250'
DESIGNED:	SJ	RELEASE:	DESIGN

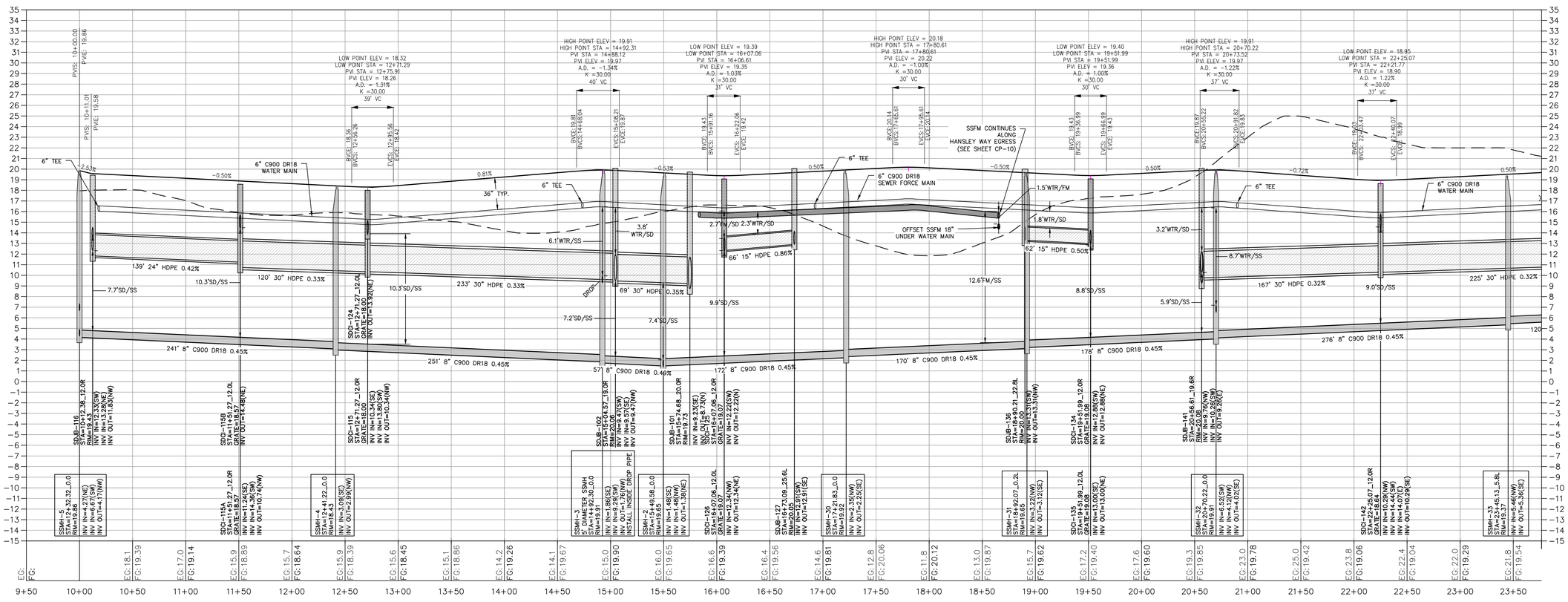
SHEET
CP-0



OSAGE TERRACE PLAN STA: 10+00 THRU 23+50
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-1

HORIZONTAL SCALE 1" = 50'



OSAGE TERRACE CENTERLINE PROFILE
STA: 10+00 THRU 23+50
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-1

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FINAL DESIGN

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OSAGE TERRACE PLAN AND PROFILE
STA:10+00 THRU 23+50

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
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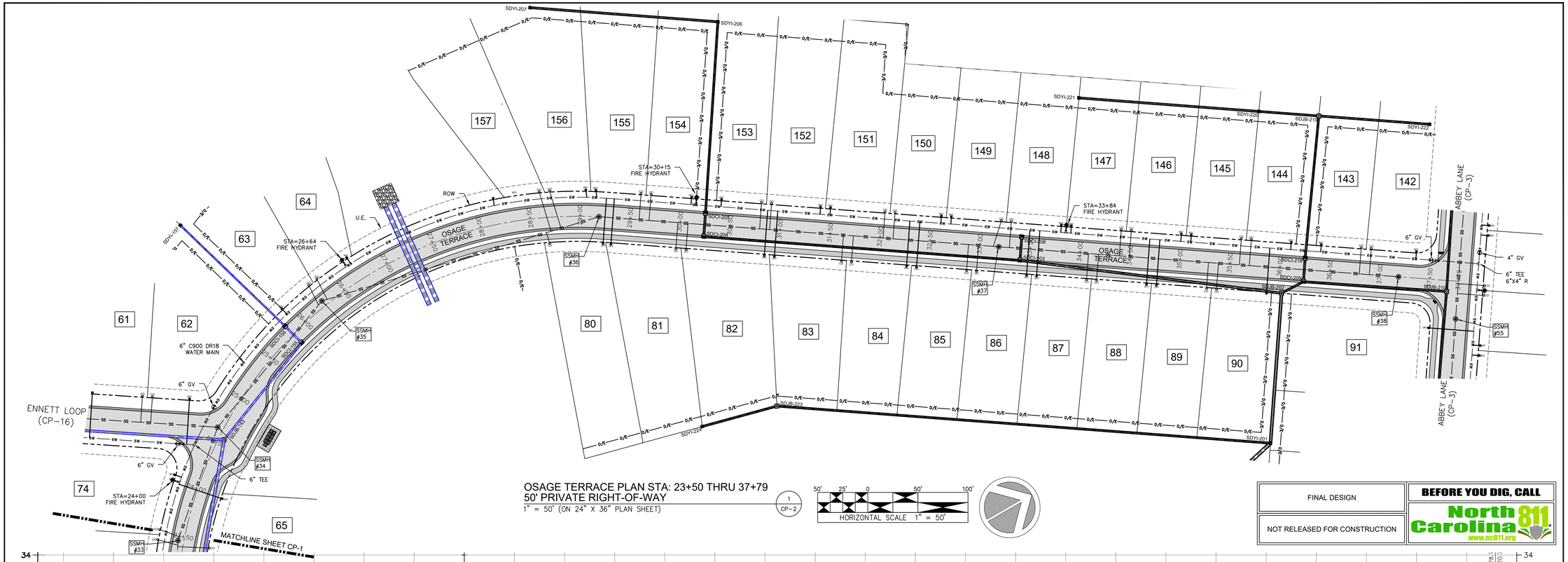
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CP-1

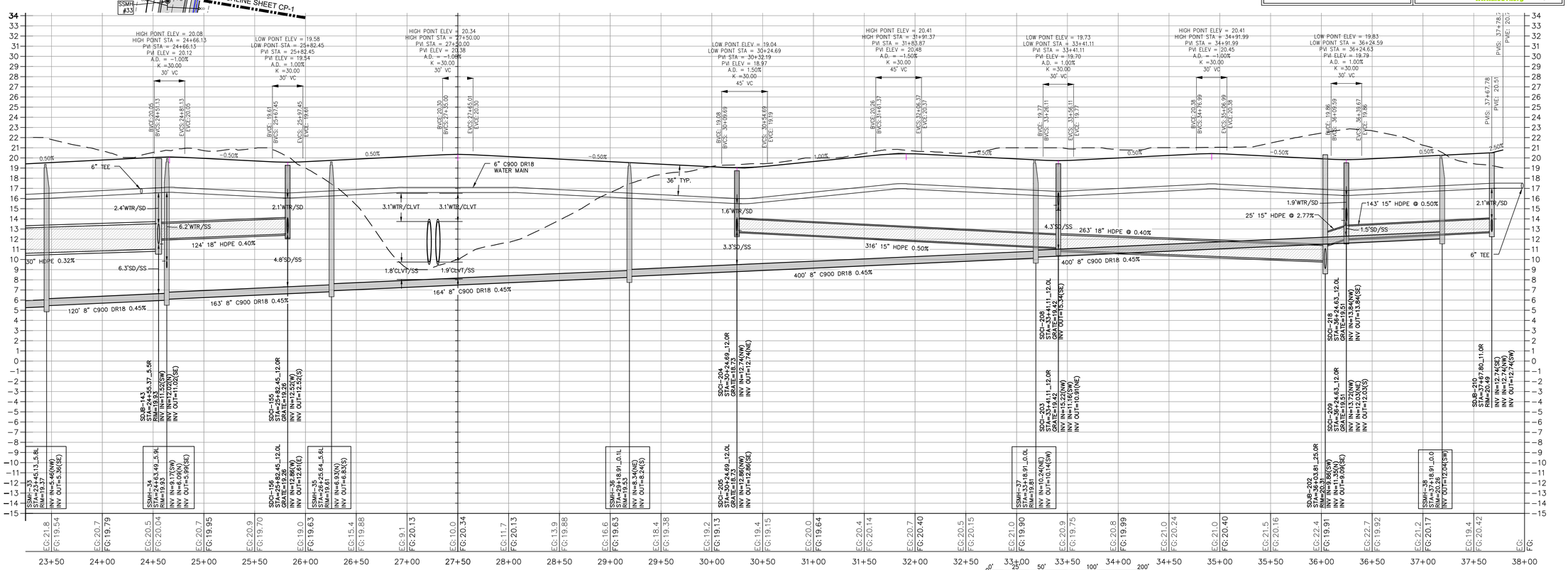


OSAGE TERRACE PLAN STA: 23+50 THRU 37+79
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-2

HORIZONTAL SCALE 1" = 50'

FINAL DESIGN	BEFORE YOU DIG, CALL North Carolina 811 www.nc811.org
NOT RELEASED FOR CONSTRUCTION	



OSAGE TERRACE CENTERLINE PROFILE
STA: 23+50 THRU 37+79
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-2

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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PENDER COUNTY, NC

OSAGE TERRACE PLAN AND PROFILE
STA:23+50 THRU 37+79

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

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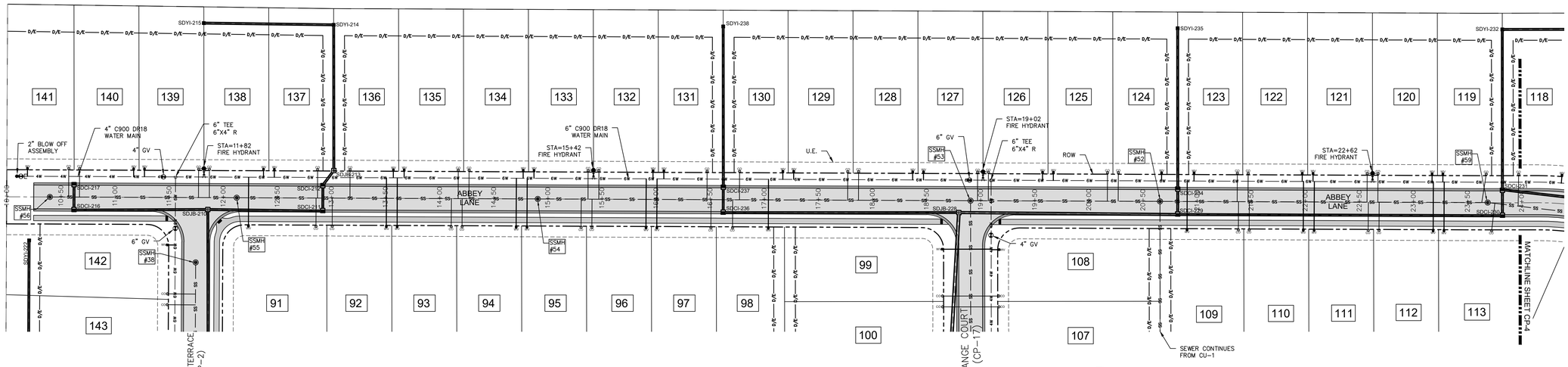
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

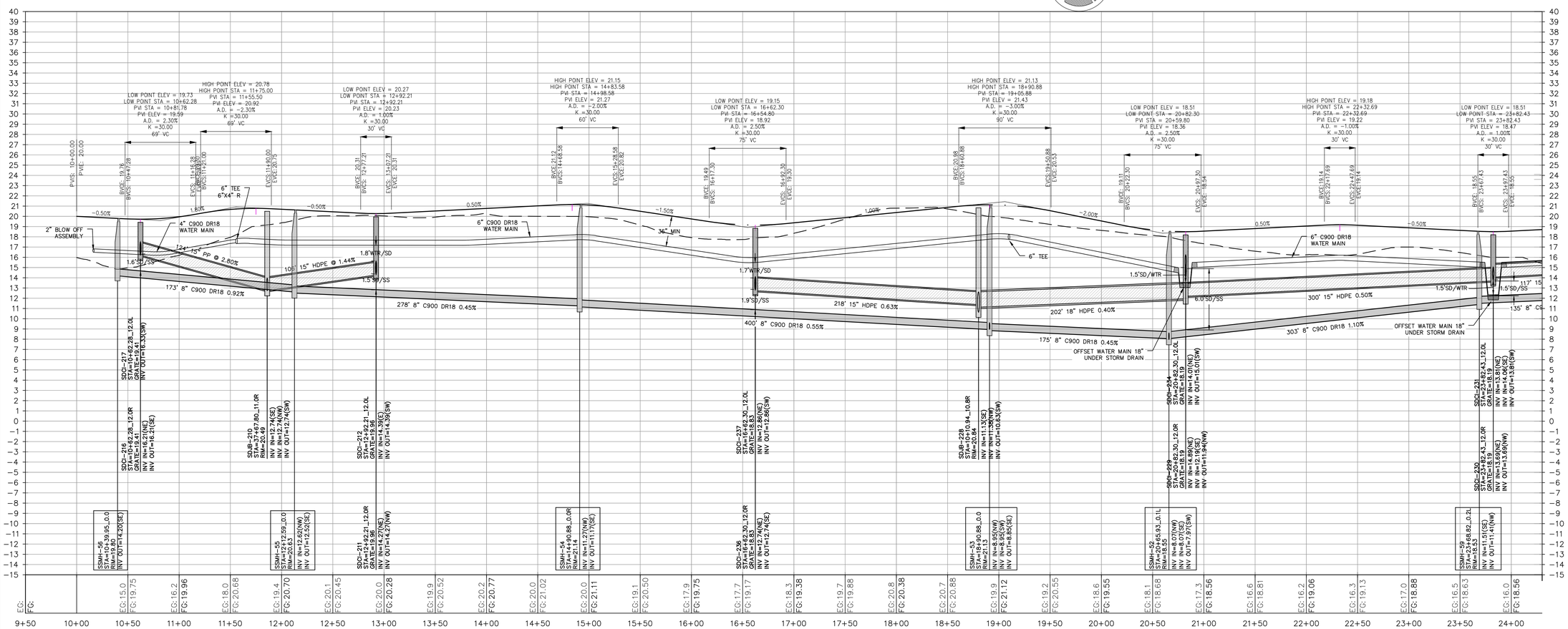
SHEET
CP-2



ABBEY LANE PLAN STA: 10+00 THRU 24+00
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-3

HORIZONTAL SCALE 1" = 50'



ABBEY LANE CENTERLINE PROFILE
STA: 10+00 THRU 24+00
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-3

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FINAL DESIGN

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ABBEY LANE PLAN AND PROFILE
STA: 10+00 THRU 24+00

REV	DATE	DESCRIPTION	INIT
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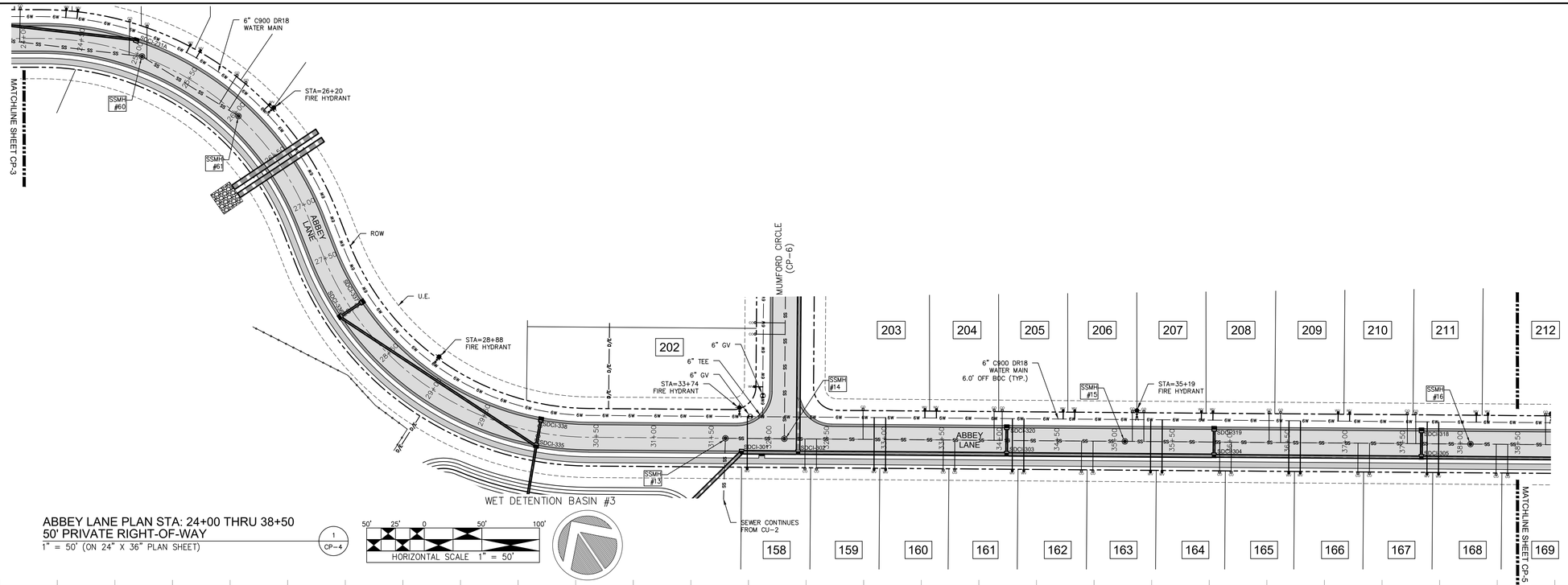
APPROVED: JRC	PROJECT: 178-09		
CHECKED: JRC	SCALE: 1" = 50'		
DESIGNED: SJ	RELEASE: DESIGN		

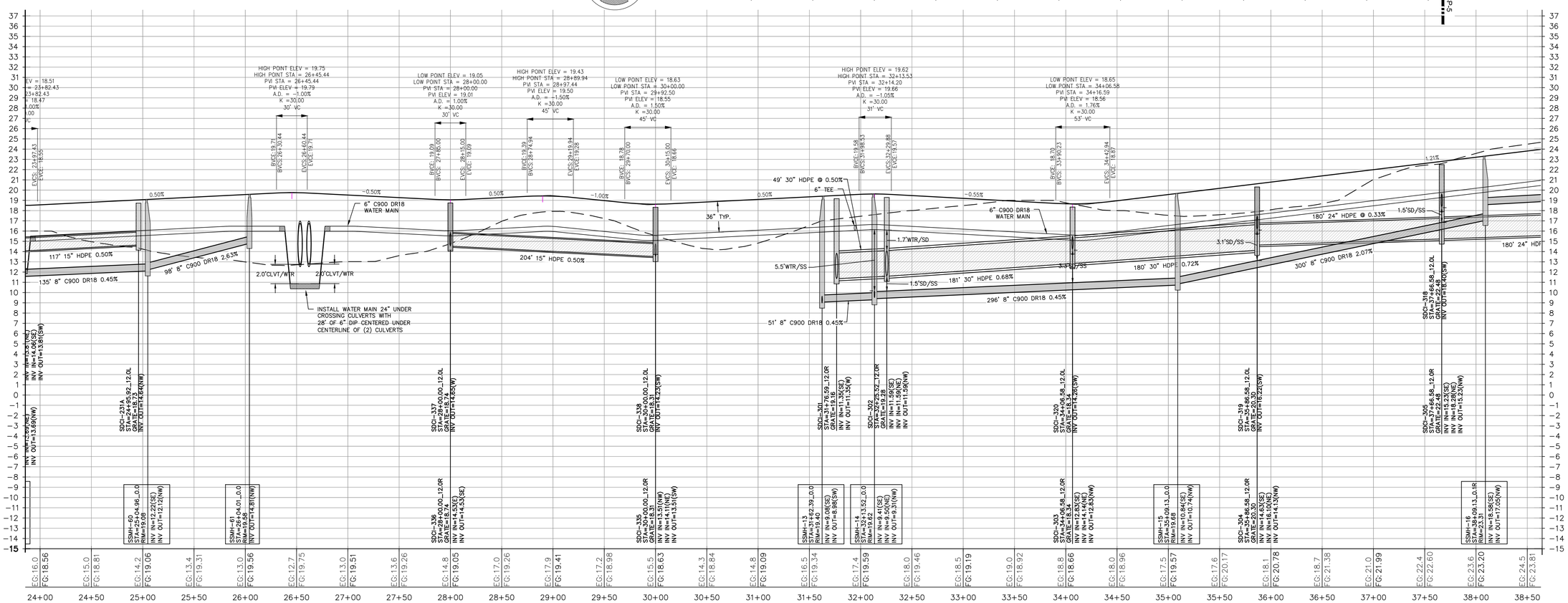
SHEET
CP-3



ABBEY LANE PLAN STA: 24+00 THRU 38+50
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-4

50' 25' 0 50' 100'
HORIZONTAL SCALE 1" = 50'



ABBEY LANE CENTERLINE PROFILE
STA: 24+00 THRU 38+50
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-4

0' 25' 50' 100' 200'
1' 2' 3' 4' 5'
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FINAL DESIGN

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ABBEY LANE PLAN AND PROFILE
STA: 24+00 THRU 38+50

REV	DATE	DESCRIPTION	INIT
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DEVELOPER
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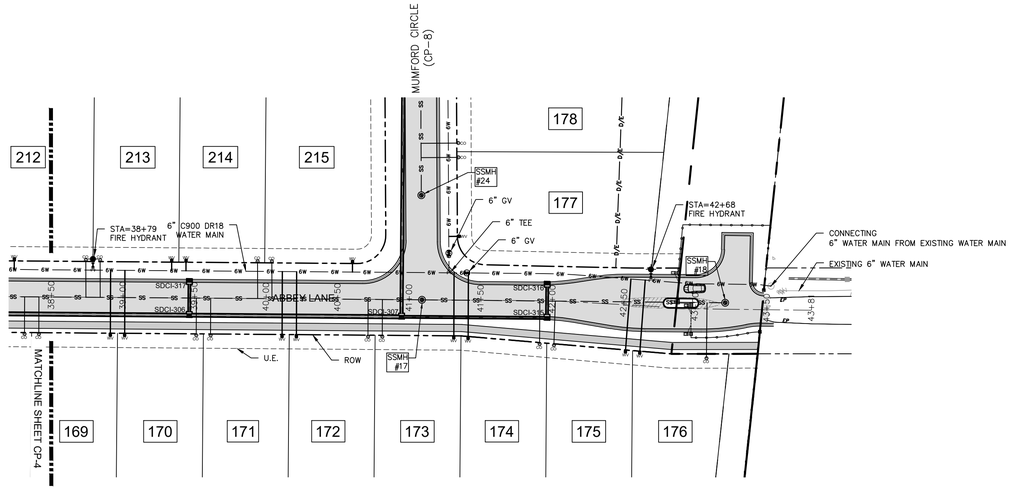
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

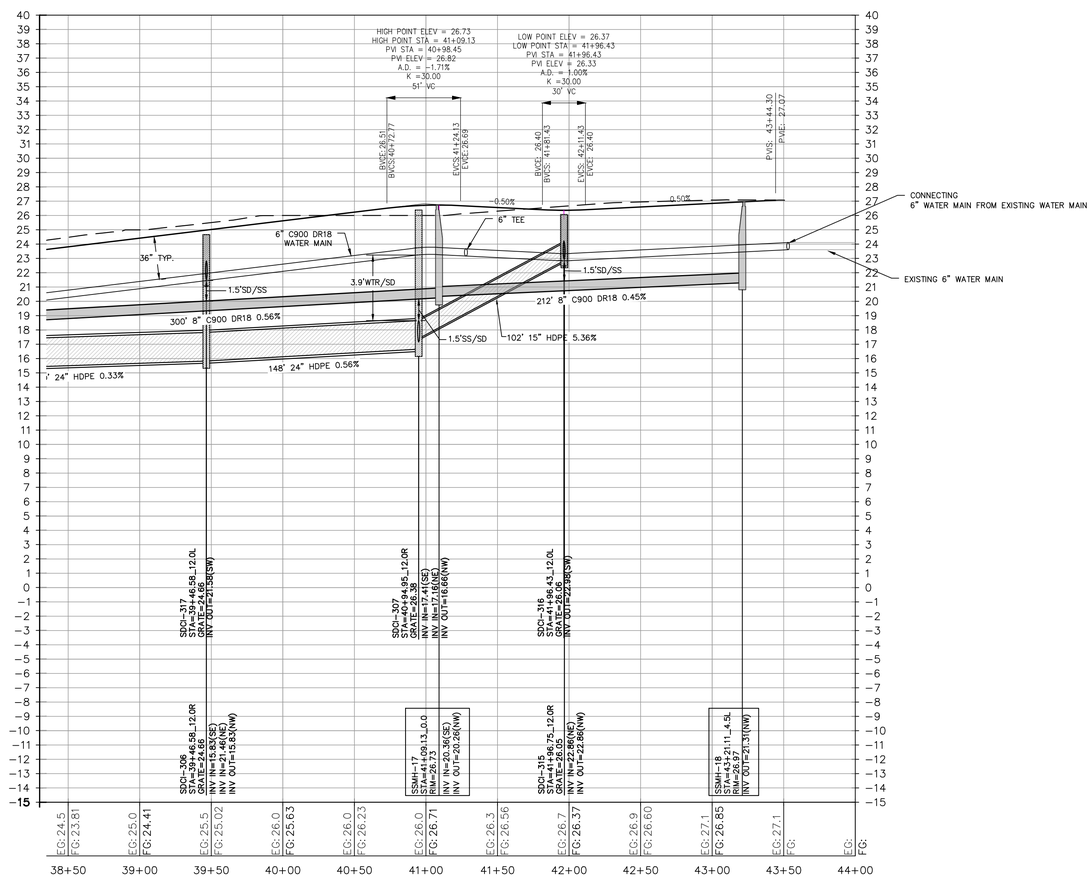
SHEET
CP-4



ABBEY LANE PLAN STA: 38+50 THRU 43+44
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-5

50' 25' 0 50' 100'
HORIZONTAL SCALE 1" = 50'



ABBEY LANE CENTERLINE PROFILE
STA: 38+50 THRU 43+44
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-5

0' 25' 50' 100' 200'
1' 2' 3' 4' 5'
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FINAL DESIGN

NOT RELEASED FOR CONSTRUCTION

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SWEETGRASS AT ABBEY PRESERVE

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ABBEY LANE PLAN AND PROFILE
STA: 38+50 THRU 43+44

REV	DATE	DESCRIPTION	INIT
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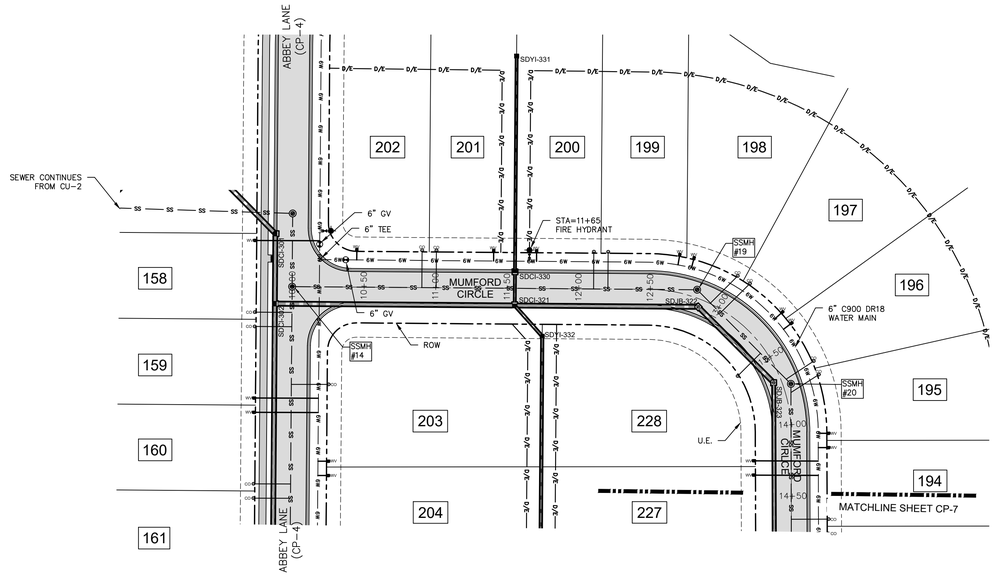
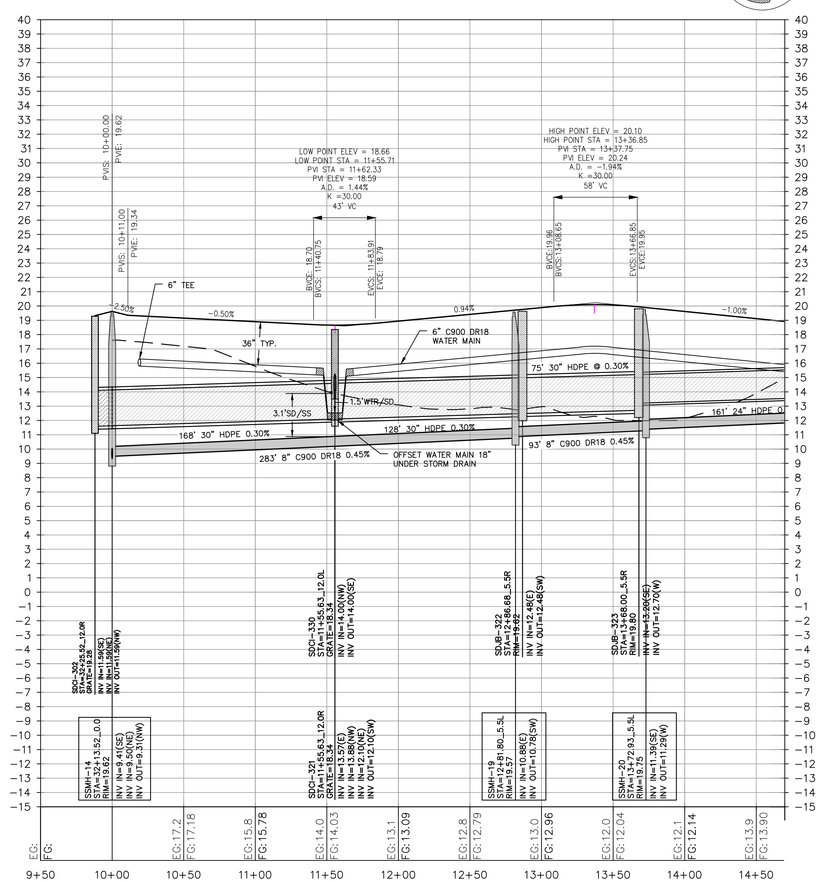
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CP-5



MUMFORD CIRCLE PLAN STA: 10+00 THRU 14+50
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)
1 CP-6

HORIZONTAL SCALE 1" = 50'



MUMFORD CIRCLE CENTERLINE PROFILE
STA: 10+00 THRU 14+50
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)
2 CP-6

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FINAL DESIGN

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STA: 10+00 THRU 14+50

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

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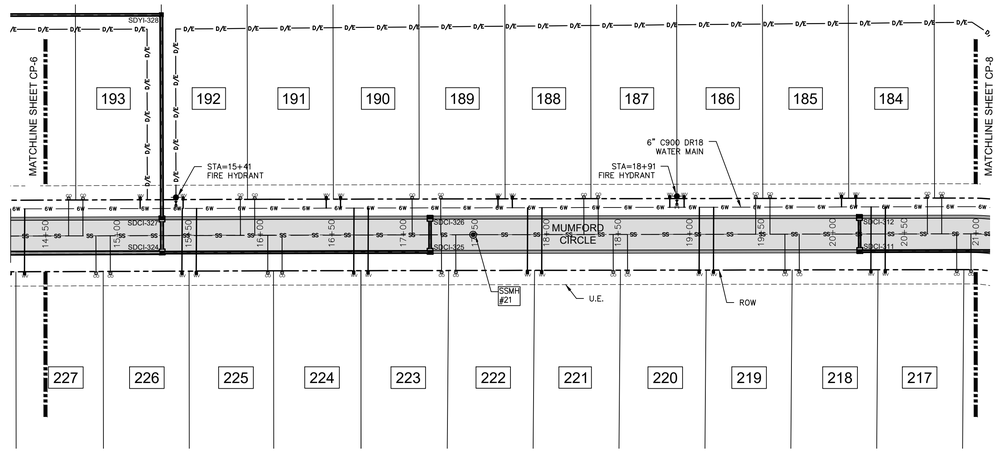
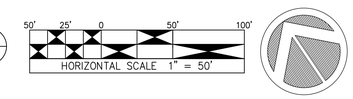
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

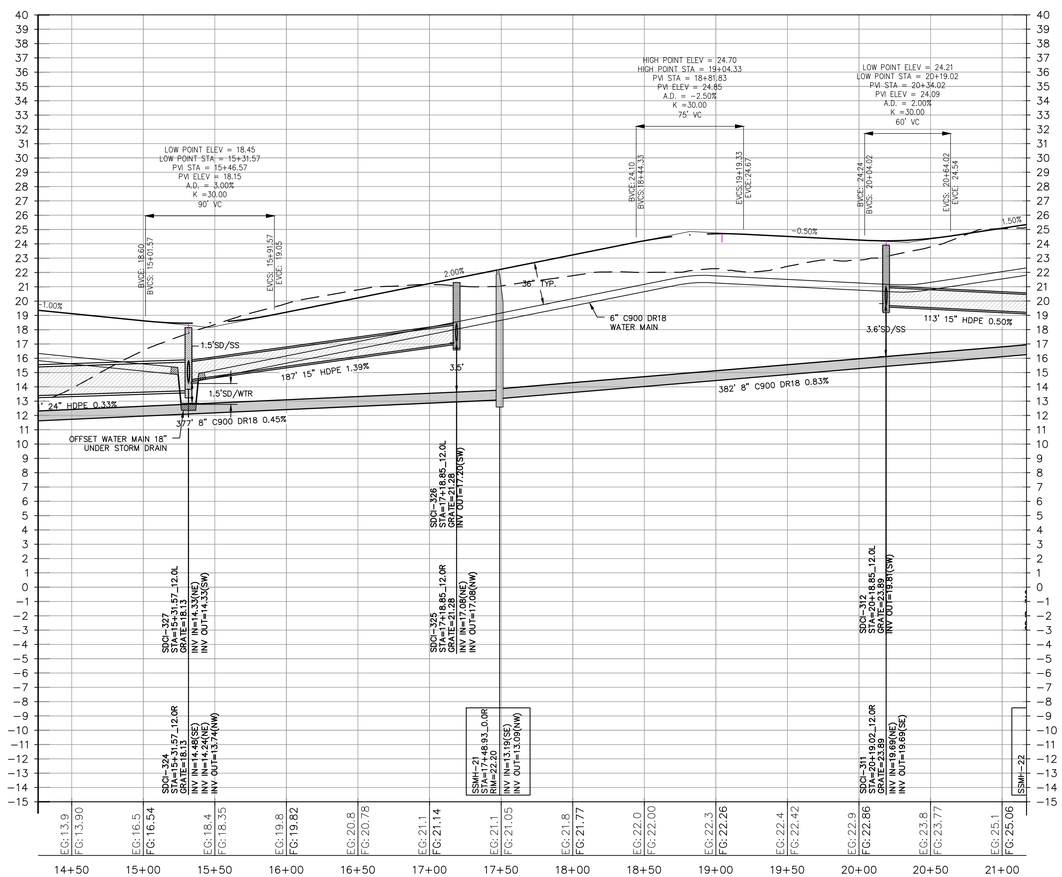
SHEET
CP-6



MUMFORD CIRCLE PLAN STA: 14+50 THRU 21+00
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

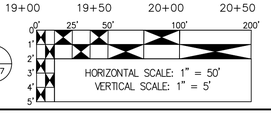
1
CP-7





MUMFORD CIRCLE CENTERLINE PROFILE
STA: 14+50 THRU 21+00
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2
CP-7



FINAL DESIGN

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PENDER COUNTY, NC

MUMFORD CIRCLE PLAN AND PROFILE
STA: 14+50 THRU 21+00

REV	DATE	DESCRIPTION	INIT
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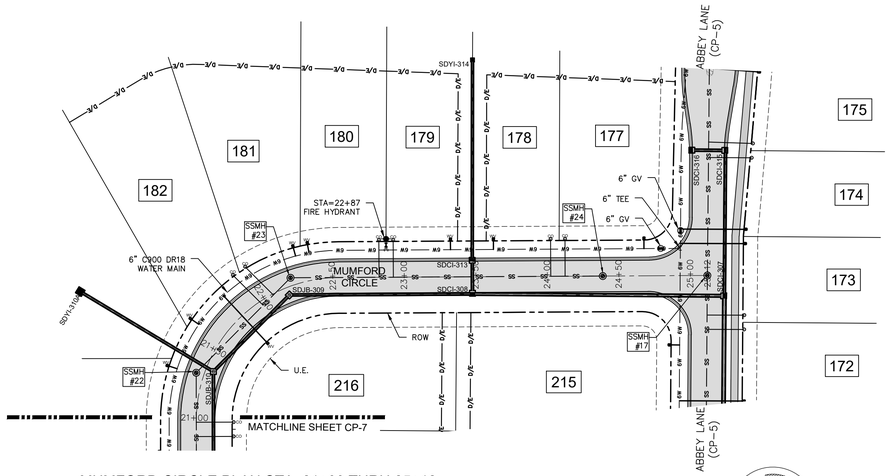
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

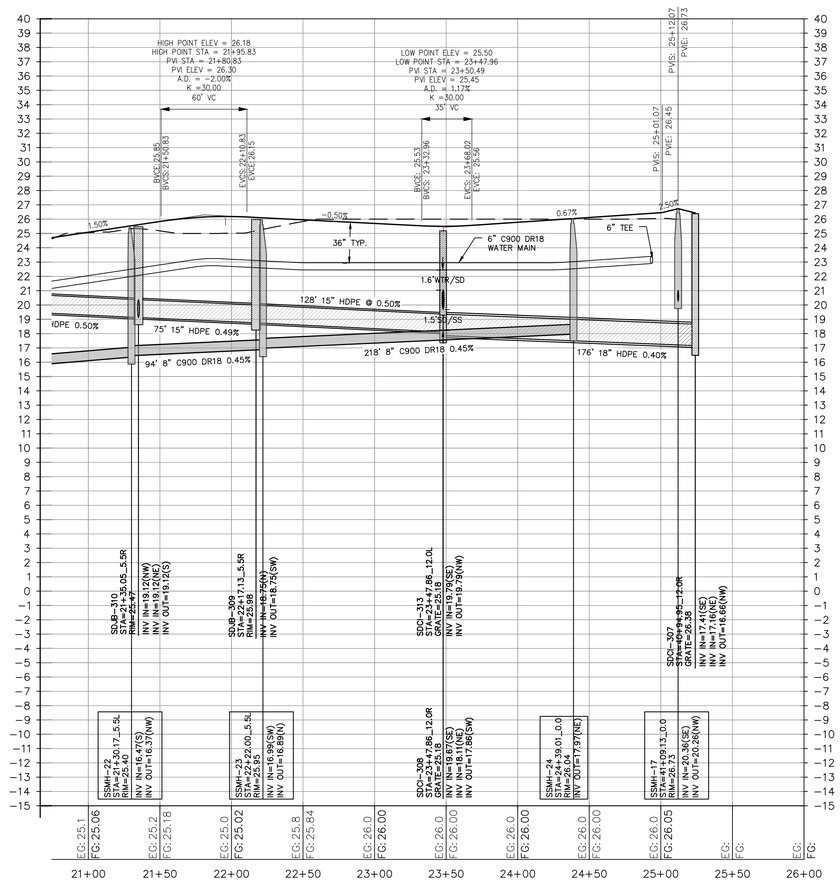
SHEET
CP-7



MUMFORD CIRCLE PLAN STA: 21+00 THRU 25+12
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-8

HORIZONTAL SCALE 1" = 50'



MUMFORD CIRCLE CENTERLINE PROFILE
STA: 21+00 THRU 25+12
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-8

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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PENDER COUNTY, NC

MUMFORD CIRCLE PLAN AND PROFILE
STA: 21+00 THRU 25+12

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CP-8

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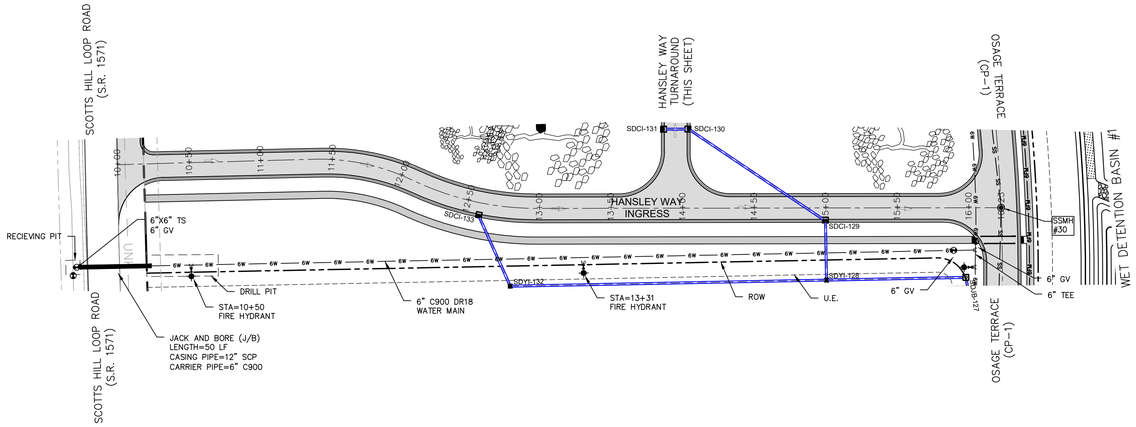
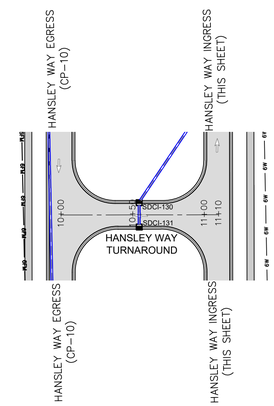
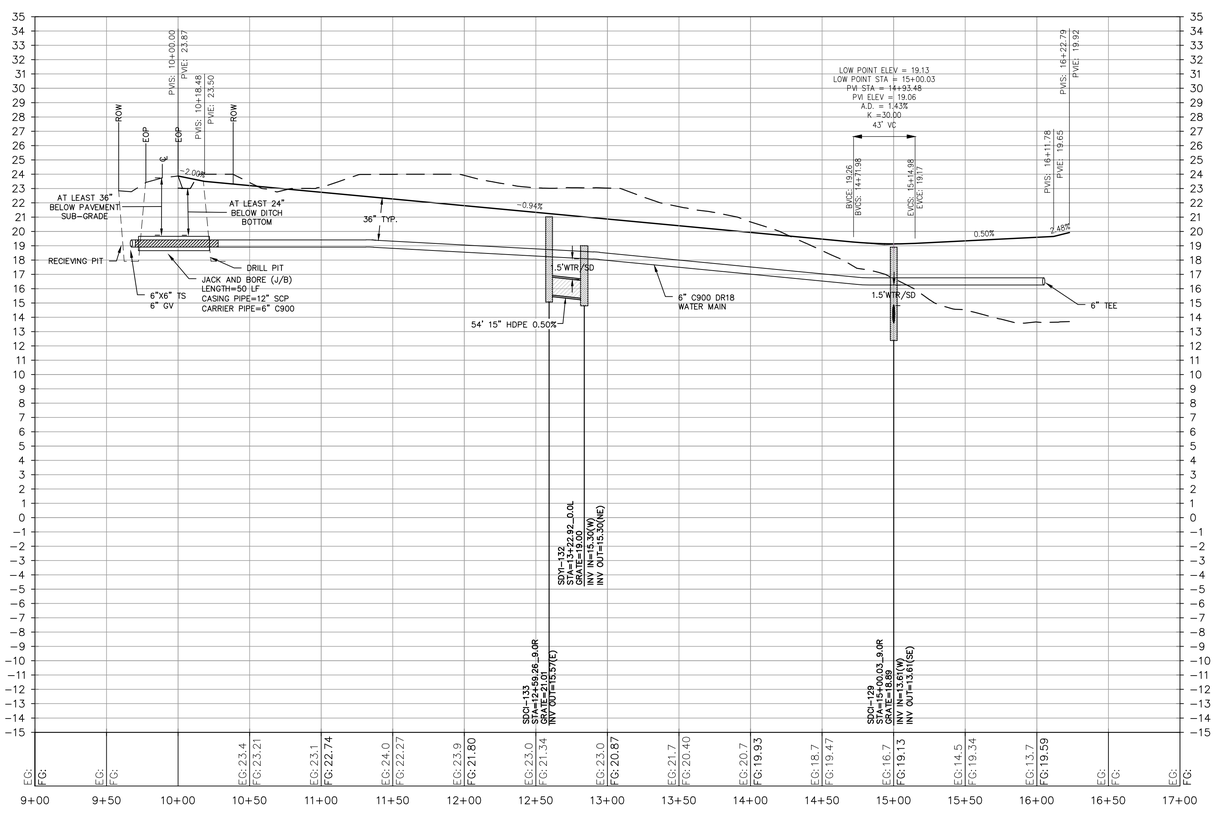
HANSLEY WAY PLAN AND PROFILE
INGRESS STA: 10+00 THRU 16+23
TURNAROUND STA: 10+00 THRU 11+10



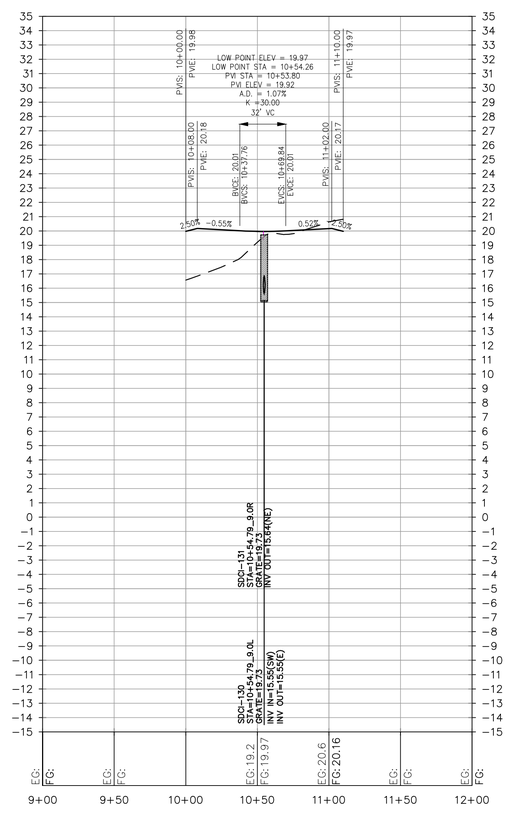
HANSLEY WAY INGRESS PLAN STA: 10+00 THRU 16+23
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)
1 CP-9
HORIZONTAL SCALE 1" = 50'



HANSLEY WAY TURNAROUND PLAN STA: 10+00 THRU 11+10
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)
3 CP-9
HORIZONTAL SCALE 1" = 50'



HANSLEY WAY INGRESS CENTERLINE PROFILE
STA: 10+00 THRU 16+23
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)
2 CP-9
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



HANSLEY WAY TURNAROUND CENTERLINE PROFILE
STA: 10+00 THRU 11+10
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)
4 CP-9
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

REV	DATE	DESCRIPTION	INIT
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CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

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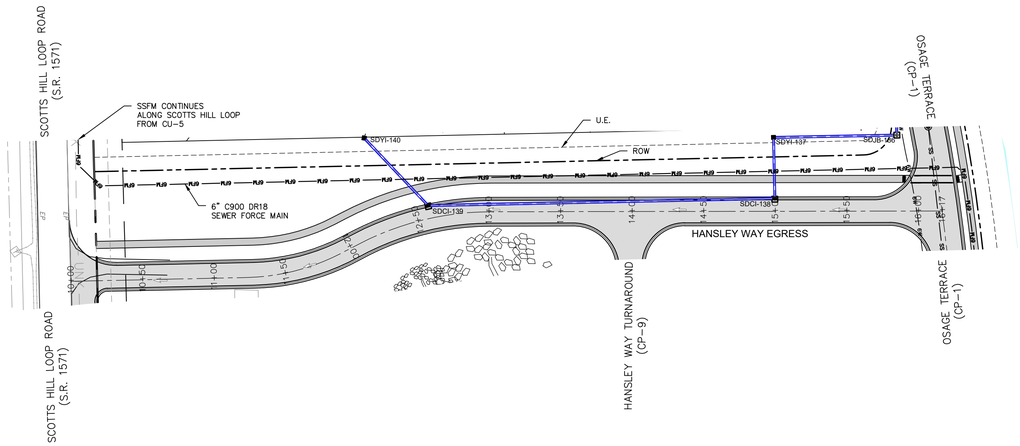
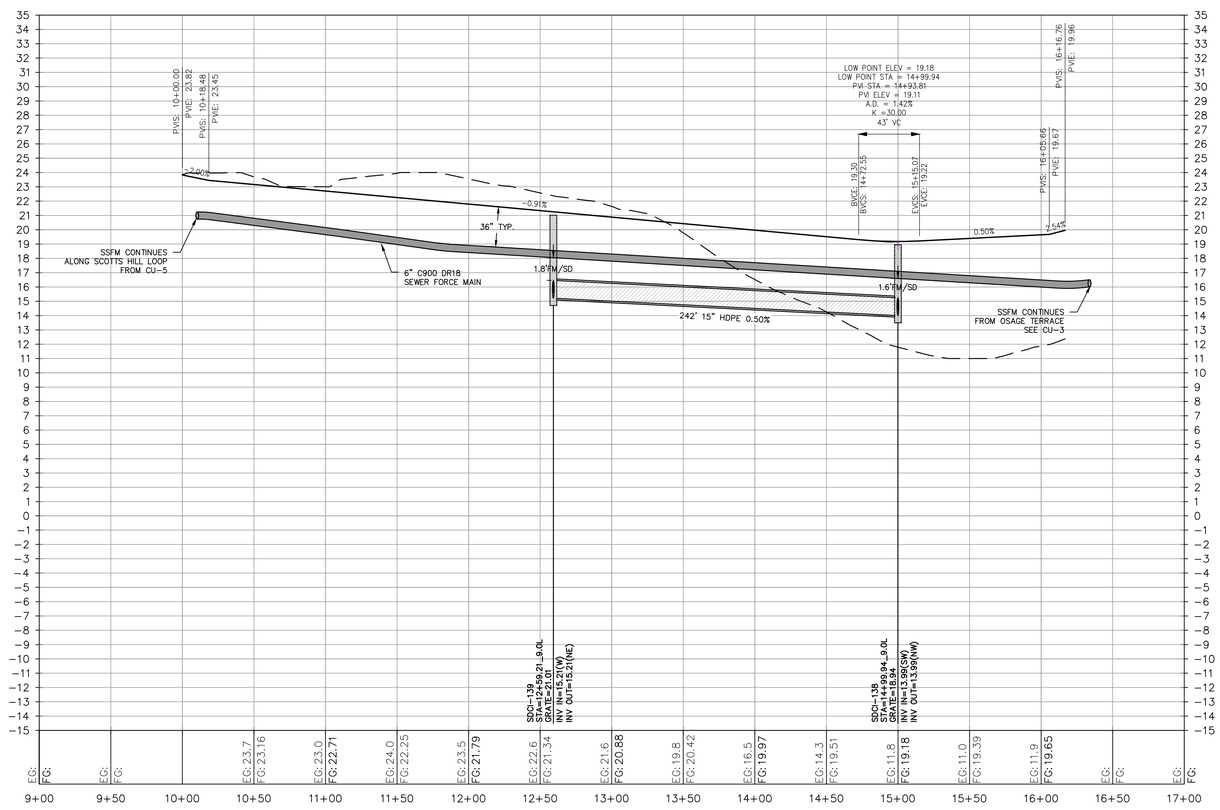
CP-9



HANSLEY WAY EGRESS PLAN STA: 10+00 THRU 16+17
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-10

HORIZONTAL SCALE 1" = 50'



HANSLEY WAY EGRESS CENTERLINE PROFILE
STA: 10+00 THRU 16+17
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-10

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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HANSLEY WAY EGRESS PLAN AND PROFILE
STA: 10+00 THRU 16+17

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CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

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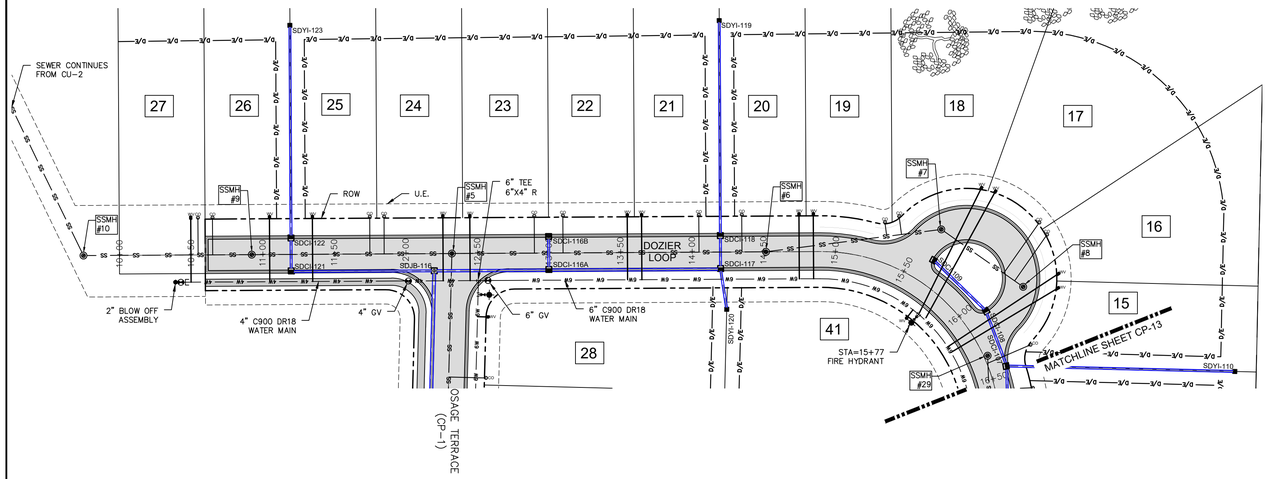
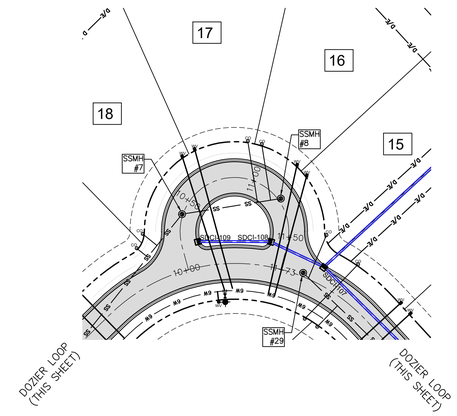
DOZIER LOOP PLAN AND PROFILE
DOZIER LOOP STA:10+00 THRU 16+50
EYEBROW STA:10+00 THRU 11+73



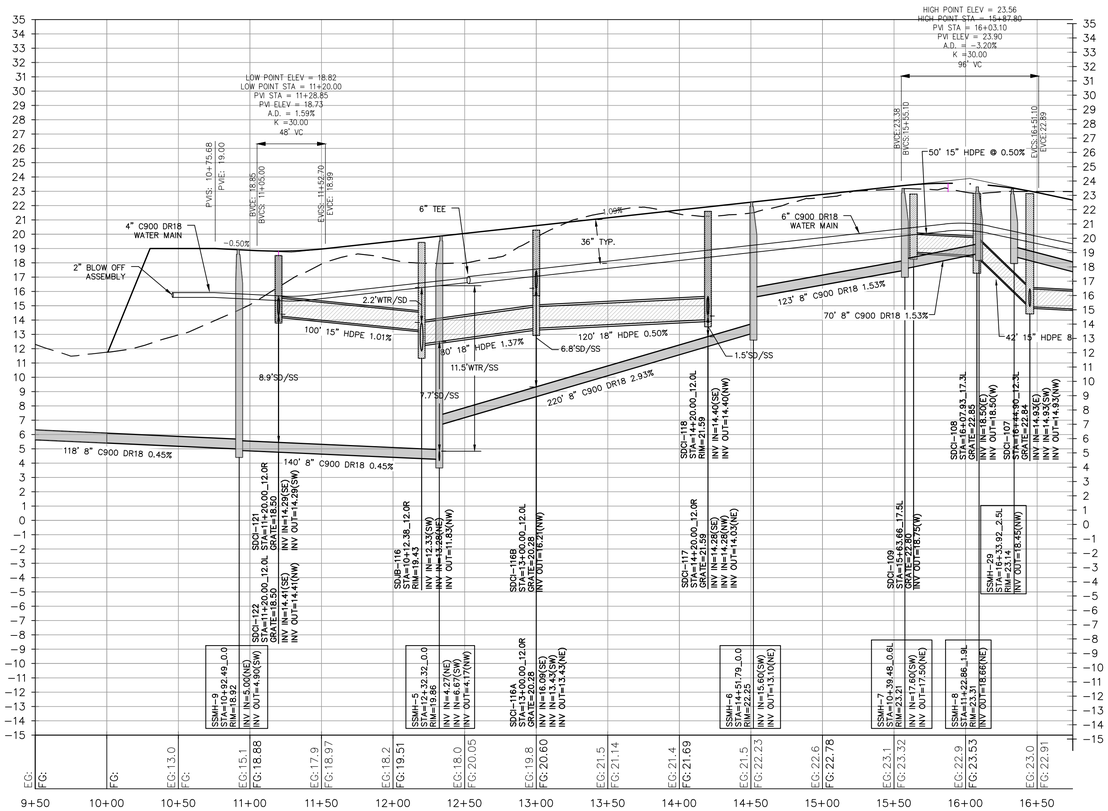
DOZIER LOOP PLAN STA: 10+00 THRU 16+50
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)
1 CP-11

HORIZONTAL SCALE 1" = 50'



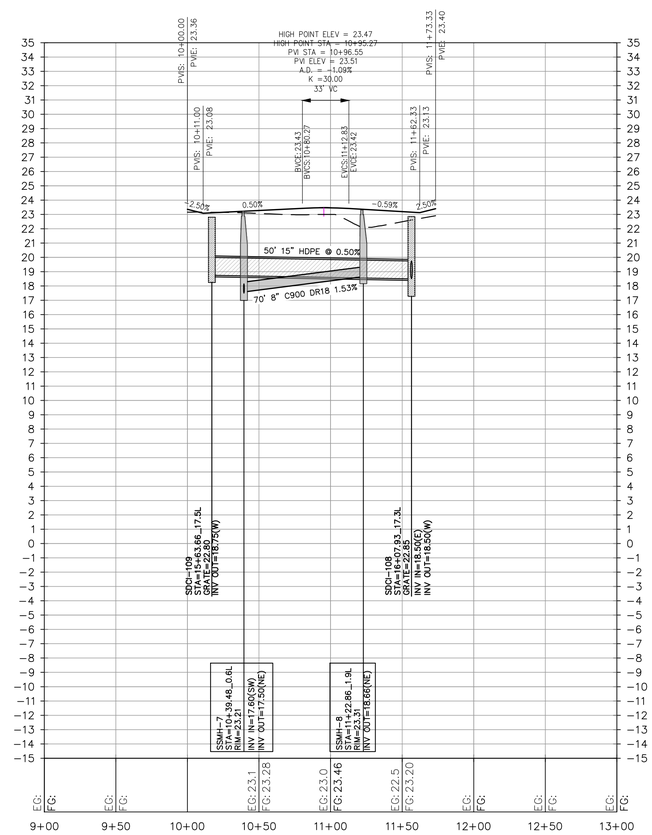
DOZIER LOOP EYEBROW PLAN STA: 10+00 THRU 11+73
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)
3 CP-11

HORIZONTAL SCALE 1" = 50'



DOZIER LOOP CENTERLINE PROFILE
STA: 10+00 THRU 15+50
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)
2 CP-11

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



DOZIER LOOP EYEBROW CENTERLINE PROFILE
STA: 10+00 THRU 11+73
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)
4 CP-11

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

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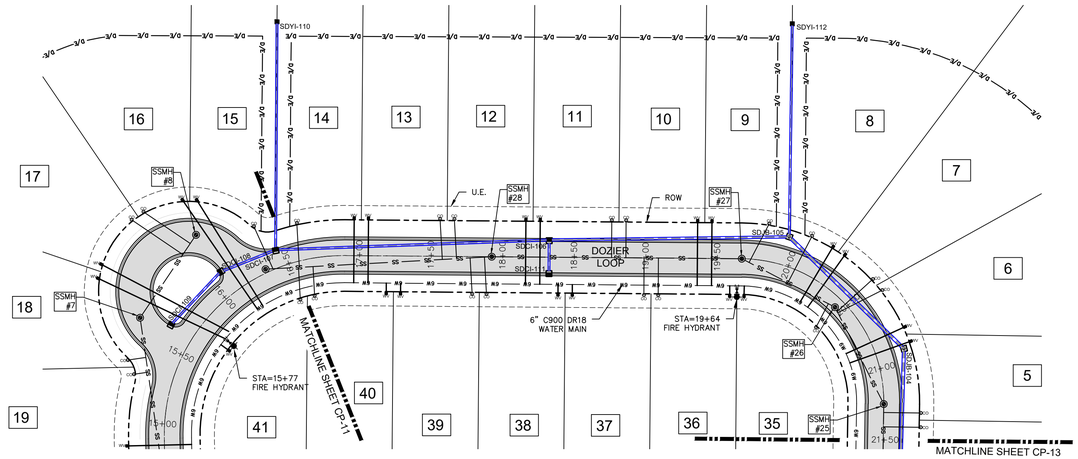
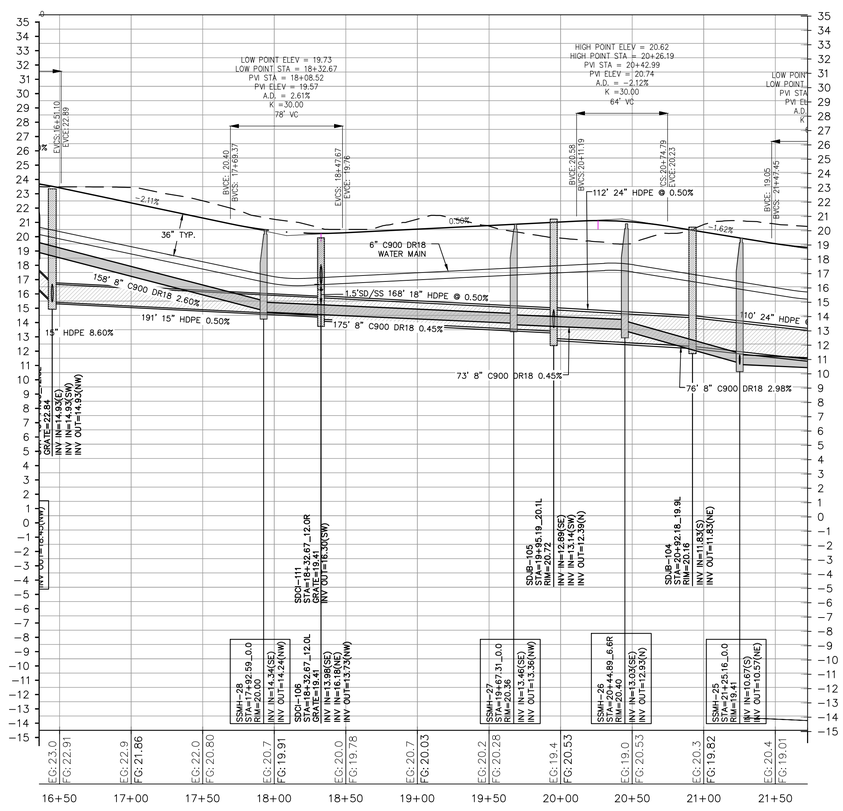
CP-11



DOZIER LOOP PLAN STA: 16+50 THRU 21+50
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-12

HORIZONTAL SCALE 1" = 50'



DOZIER LOOP CENTERLINE PROFILE
STA: 16+50 THRU 21+50
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-12

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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DOZIER LOOP PLAN AND PROFILE
STA: 16+50 THRU 21+50

REV	DATE	DESCRIPTION	INIT
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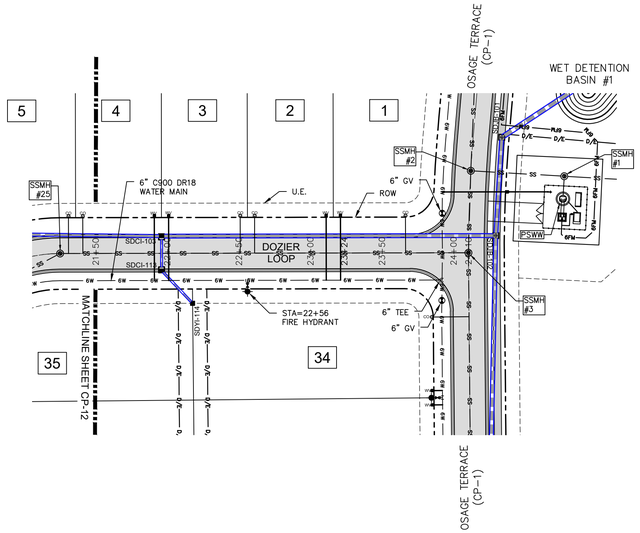
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

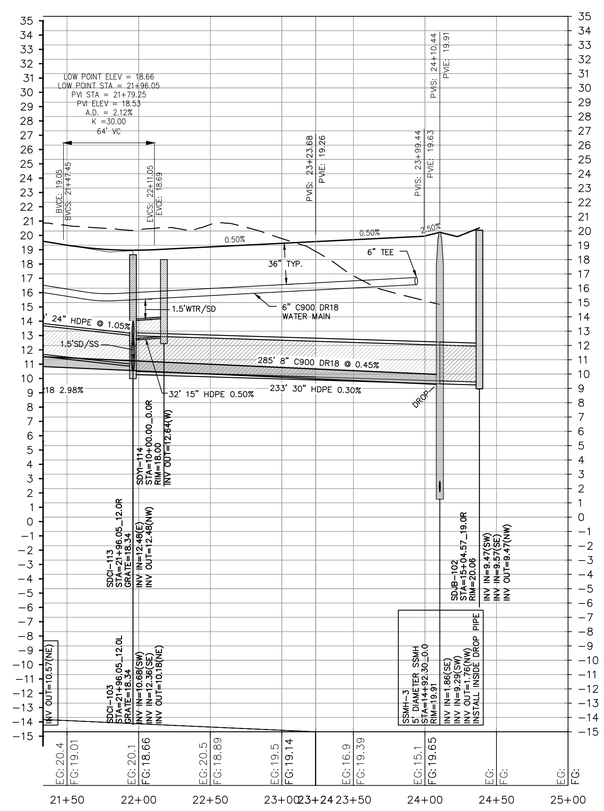
SHEET
CP-12



DOZIER LOOP PLAN STA: 21+50 THRU 24+10
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-13

50' 25' 0 50' 100'
HORIZONTAL SCALE 1" = 50'



DOZIER LOOP CENTERLINE PROFILE
STA: 21+50 THRU 24+10
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-13

0' 25' 50' 100' 200'
1' 2' 3' 4' 5'
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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DOZIER LOOP PLAN AND PROFILE
STA: 21+50 THRU 24+10

REV	DATE	DESCRIPTION	INIT
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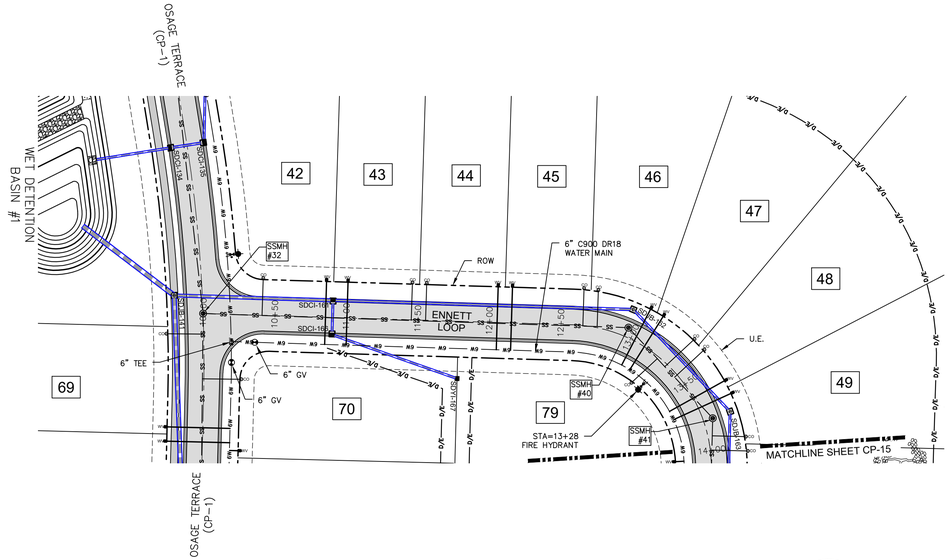
OSAGE TERRACE (CP-1)
WET DETENTION BASIN #1
42
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SSMH #32
SDCI-133
SDCI-134
SDCI-135
SDCI-136
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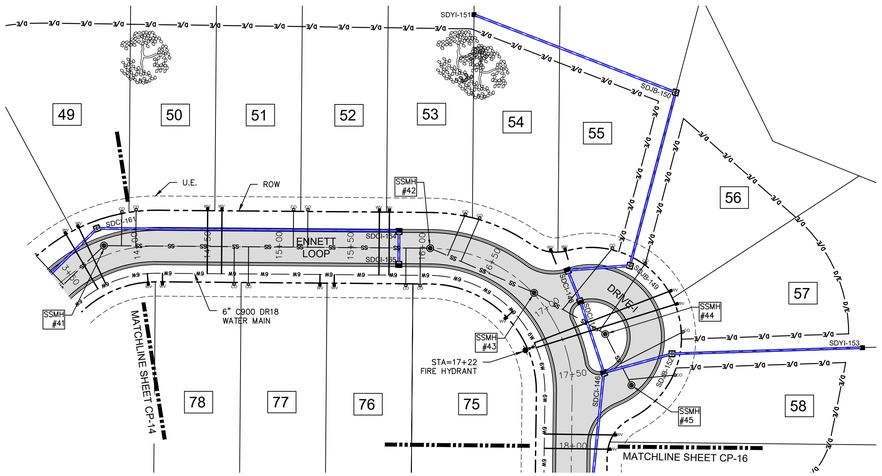
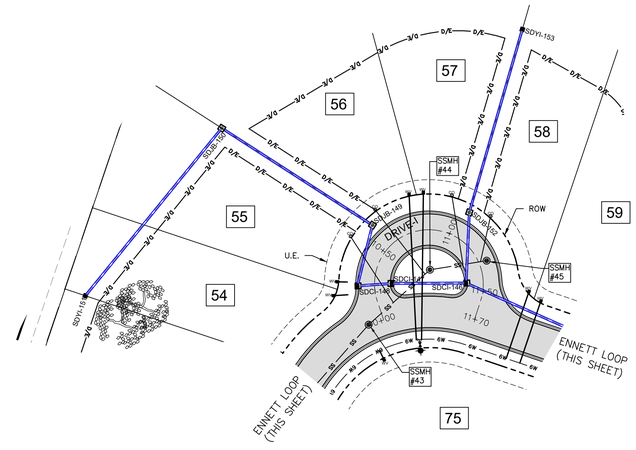


ENNETT LOOP PLAN STA: 14+00 THRU 18+00
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-15

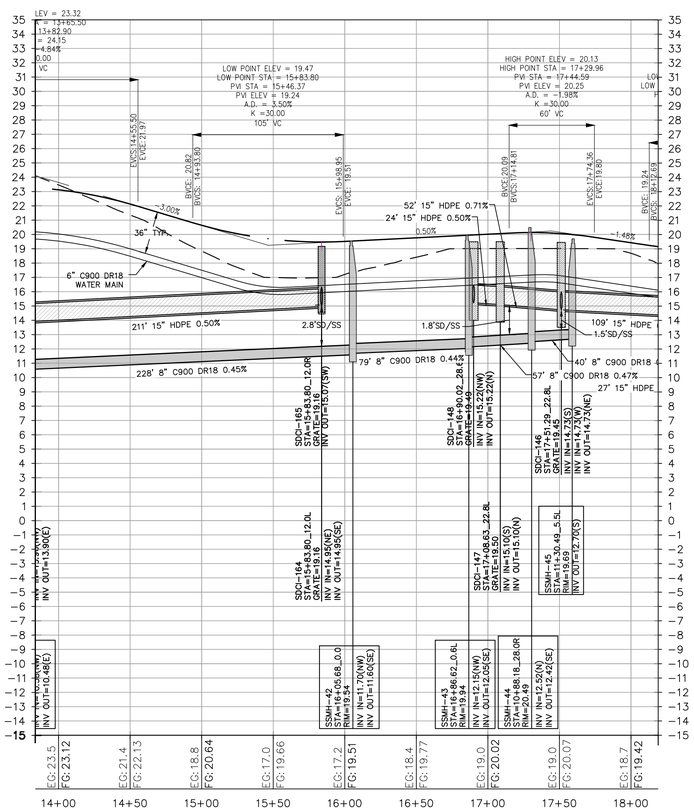
HORIZONTAL SCALE 1" = 50'



ENNET LOOP EYEBROW PLAN STA: 14+00 THRU 11+70
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

3 CP-15

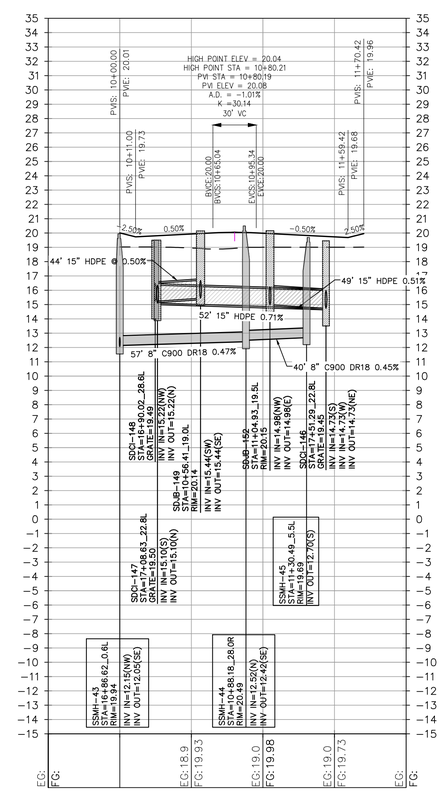
HORIZONTAL SCALE 1" = 50'



ENNETT LOOP CENTERLINE PROFILE
STA: 14+00 THRU 18+00
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-15

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



ENNETT LOOP EYEBROW CENTERLINE PROFILE
STA: 10+00 THRU 11+70
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

4 CP-15

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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ENNETT LOOP PLAN AND PROFILE
ENNETT LOOP STA: 14+00 THRU 18+00
EYEBROW STA: 10+00 THRU 11+70

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CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

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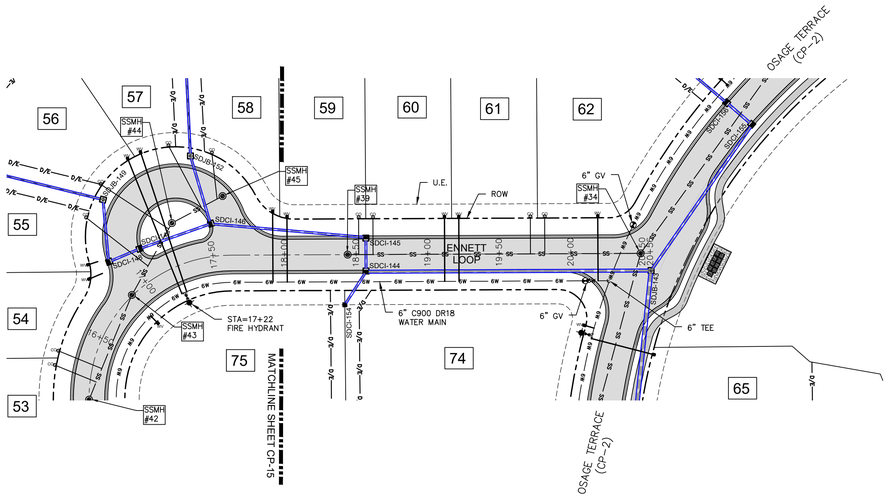
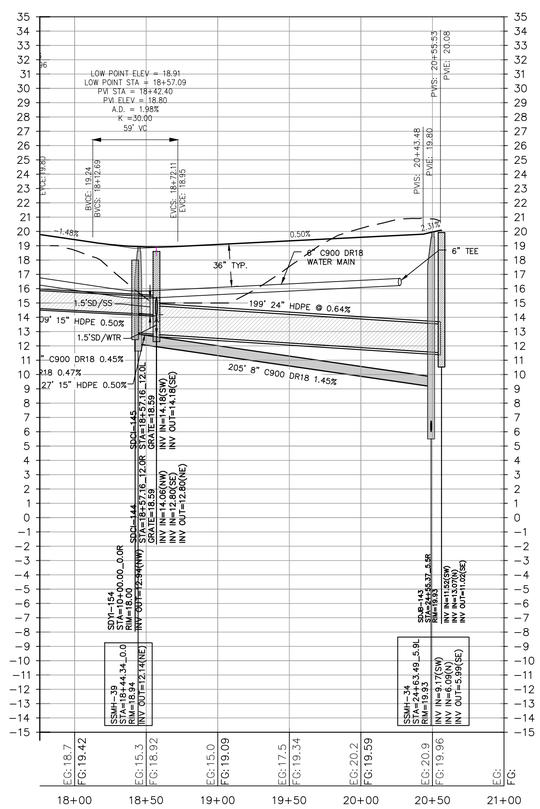
CP-15



ENNETT LOOP PLAN STA: 18+00 THRU 20+56
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CP-16

HORIZONTAL SCALE 1" = 50'



ENNETT LOOP CENTERLINE PROFILE
STA: 18+00 THRU 20+56
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CP-16

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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ENNETT LOOP PLAN AND PROFILE
STA: 18+00 THRU 20+56

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DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CP-16

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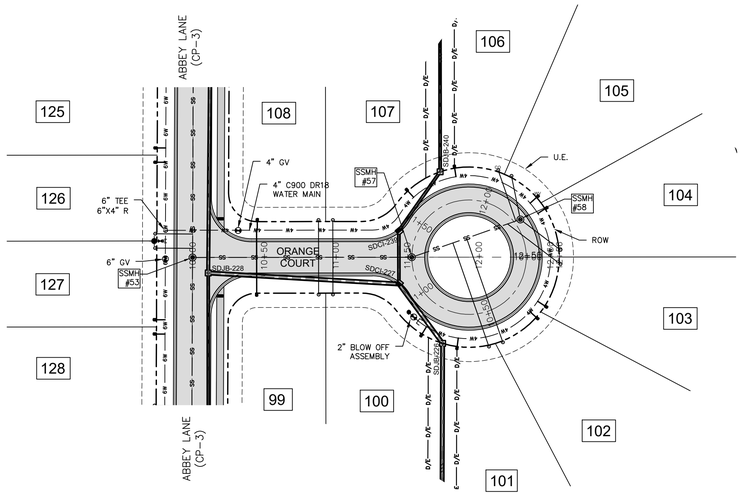
SWEETGRASS AT ABBEY PRESERVE

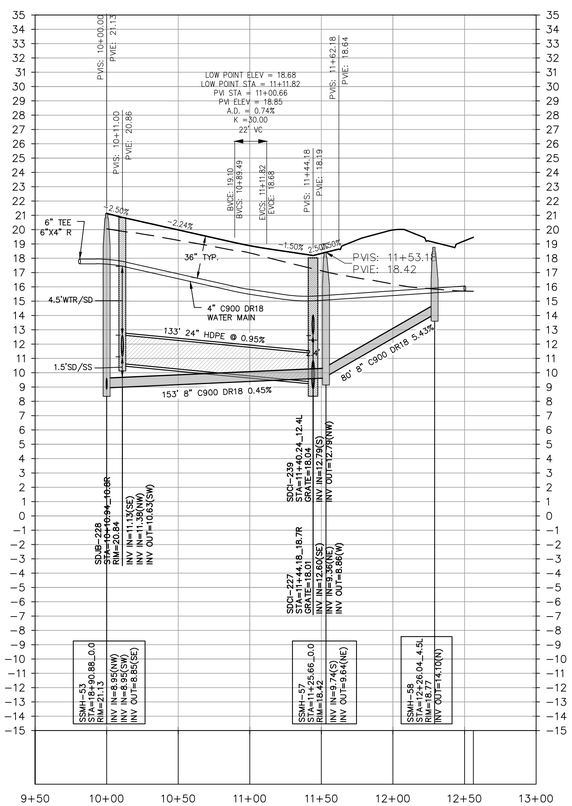
PENDER COUNTY, NC

ORANGE COURT PLAN AND PROFILE
ORANGE COURT STA: 10+00 THRU 11+53
ORANGE COURT LOOP STA: 10+00 THRU 12+50



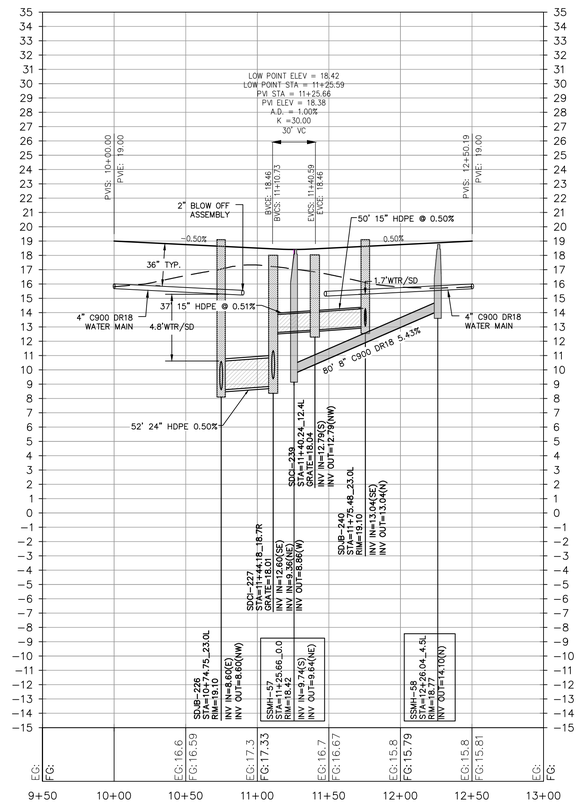
ORANGE COURT PLAN STA: 10+00 THRU 11+53
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)
1 CP-17

HORIZONTAL SCALE 1" = 50'



ORANGE COURT CENTERLINE PROFILE
STA: 10+00 THRU 11+53
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)
2 CP-17

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'



ORANGE COURT LOOP CENTERLINE PROFILE
STA: 10+00 THRU 12+50
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)
3 CP-17

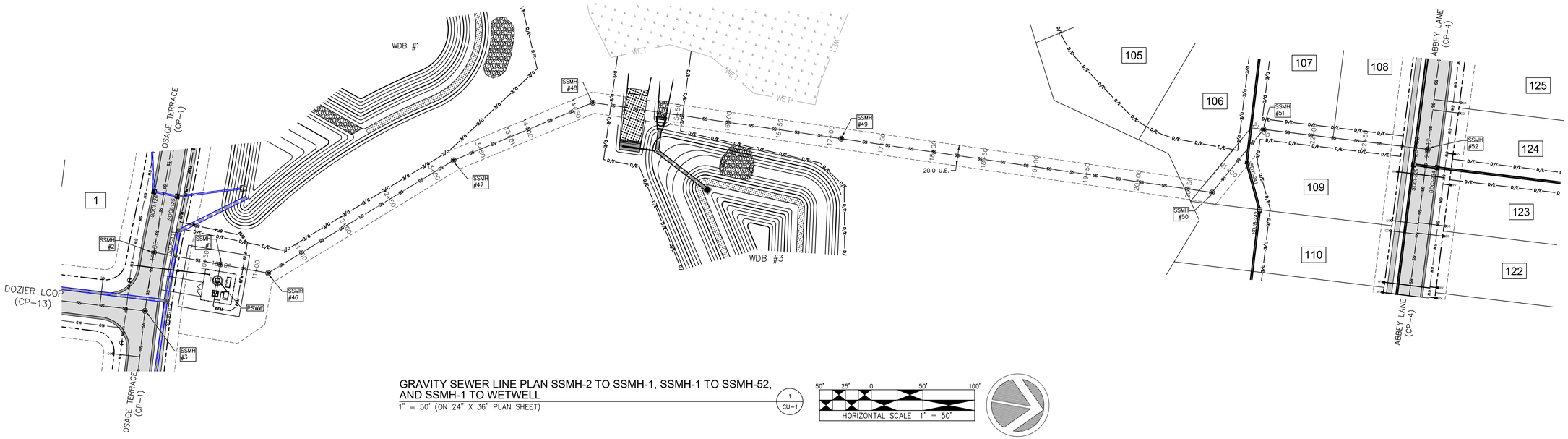
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

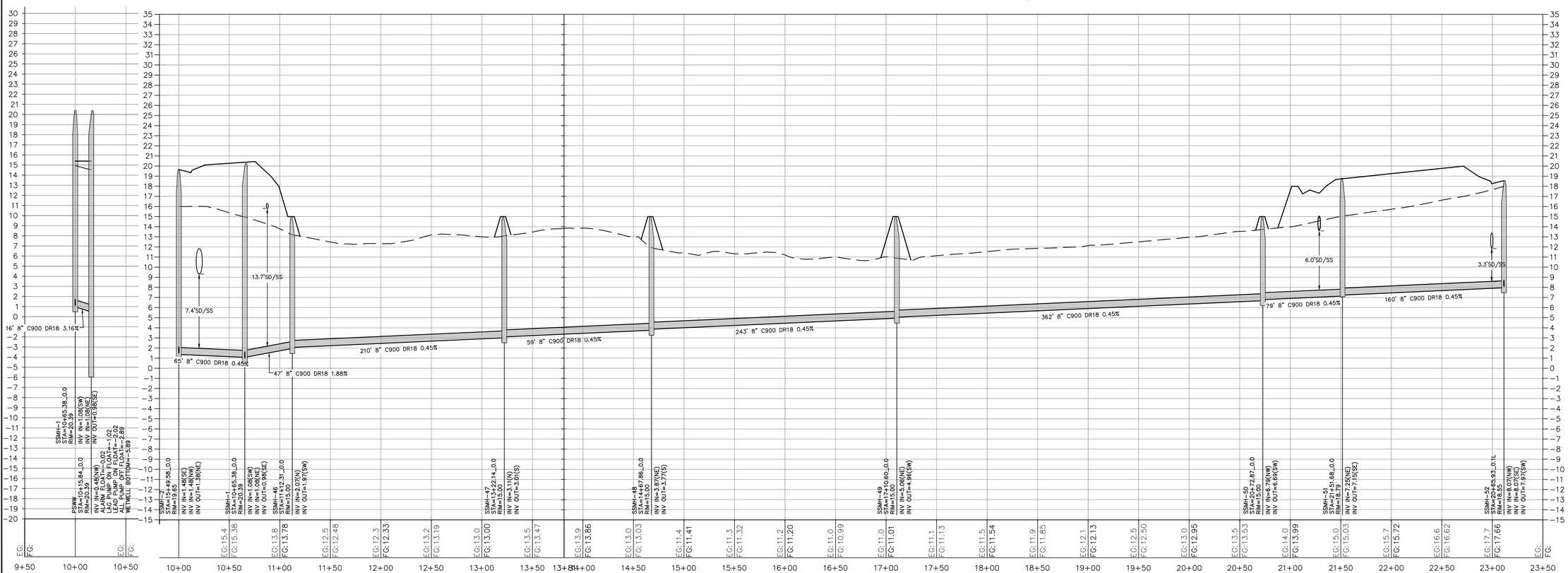
APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
CP-17



GRAVITY SEWER LINE PLAN SSMH-2 TO SSMH-1, SSMH-1 TO SSMH-52, AND SSMH-1 TO WETWELL
1" = 50' (ON 24" X 36" PLAN SHEET)
1 CU-1

HORIZONTAL SCALE 1" = 50'



GRAVITY SEWER LINE CENTERLINE PROFILE
SSMH-1 TO WETWELL
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)
3 CU-1

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

GRAVITY SEWER LINE CENTERLINE PROFILE
SSMH-2 TO SSMH-1 AND SSMH-1 TO SSMH-52
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)
2 CU-1

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FINAL DESIGN

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

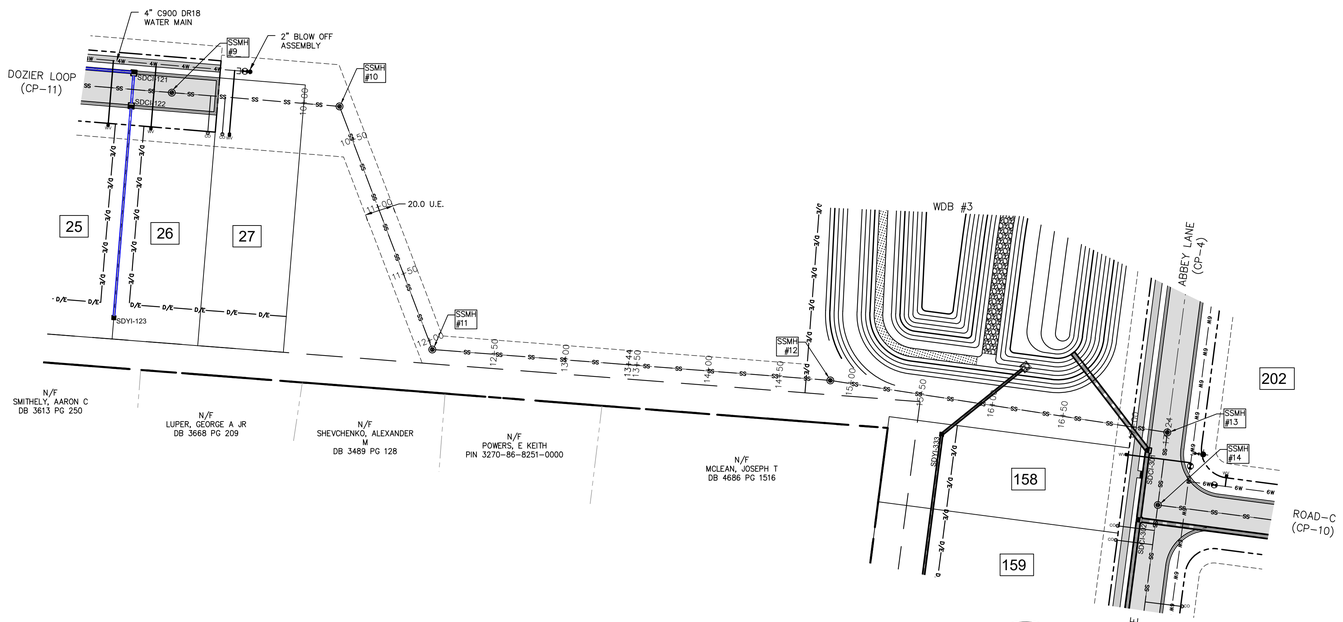
GRAVITY SEWER LINE PLAN AND PROFILE SSMH-2 TO SSMH-1, SSMH-1 TO SSMH-52, AND SSMH-1 TO WETWELL

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
CLAYTON PROPERTIES GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

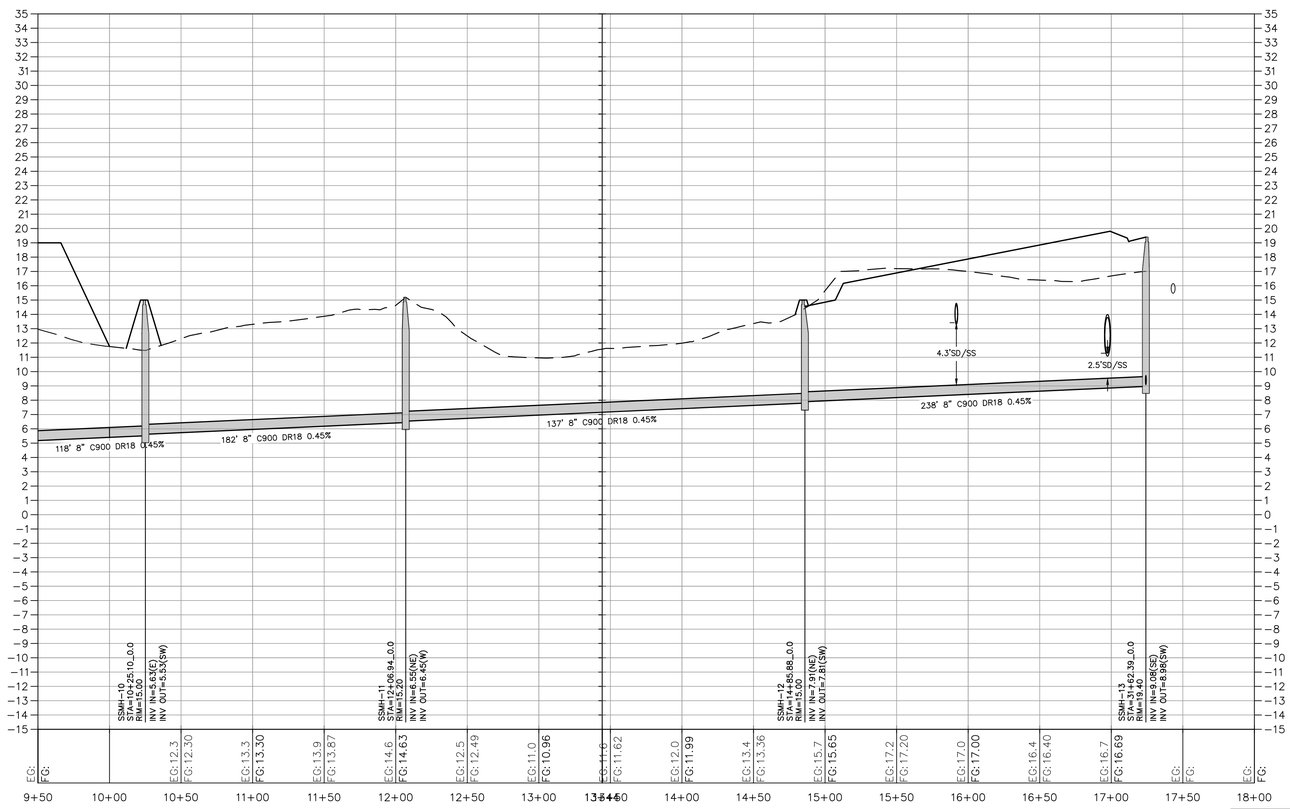
SHEET
CU-1



GRAVITY SEWER LINE PLAN SSMH-9 TO SSMH-13
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CU-2

HORIZONTAL SCALE 1" = 50'



GRAVITY SEWER LINE CENTERLINE PROFILE
SSMH-9 TO SSMH-13
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CU-2

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

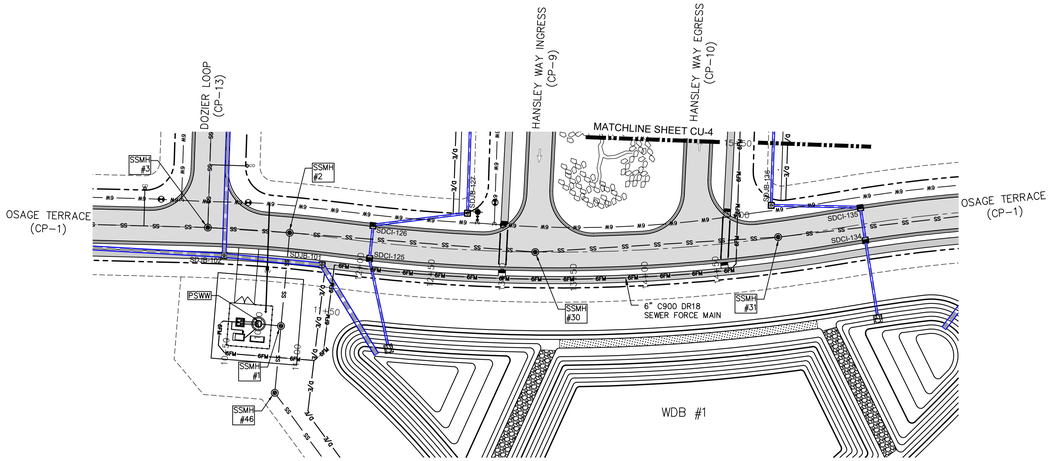
GRAVITY SEWER LINE PLAN AND PROFILE SSMH-9 TO SSMH-13

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 80'
DESIGNED:	SJ	RELEASE:	DESIGN

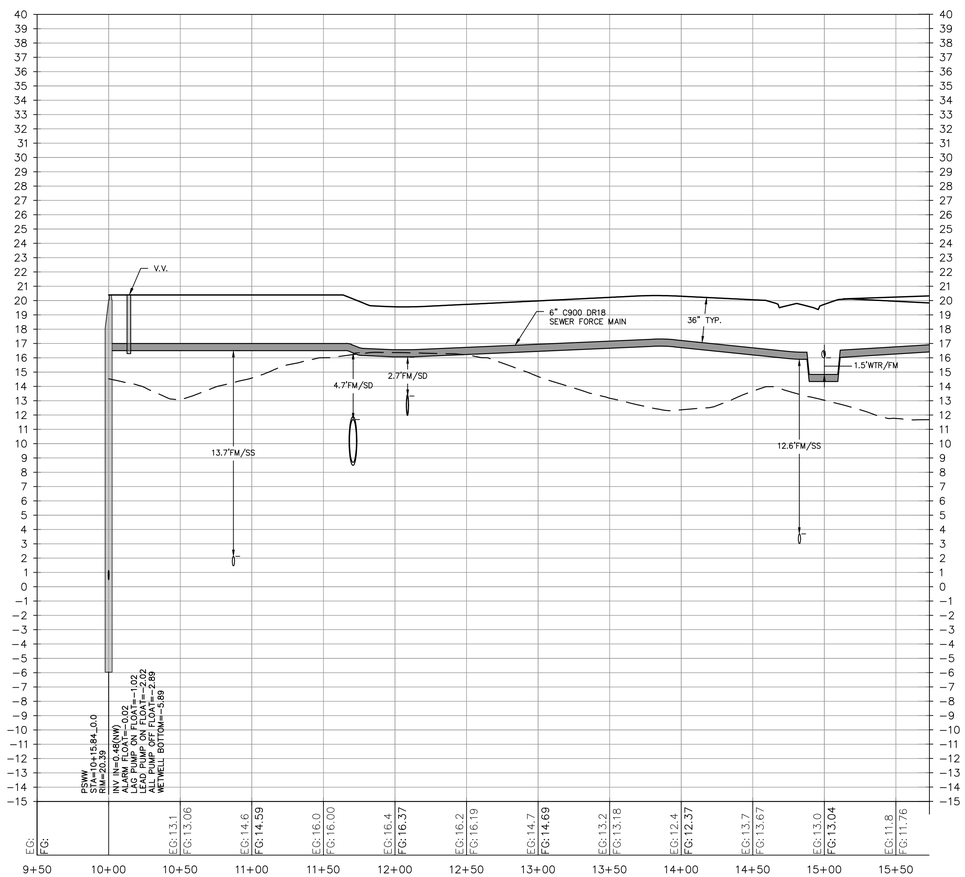
SHEET
CU-2



SEWER FORCE MAIN LINE PLAN STA: 10+00 THRU 15+50
50' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 / CU-3

HORIZONTAL SCALE 1" = 50'



SEWER FORCE MAIN CENTERLINE PROFILE
STA: 10+00 THRU 15+50
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 / CU-3

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

SEWER FORCE MAIN PLAN AND PROFILE
STA: 10+00 THRU 15+50

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

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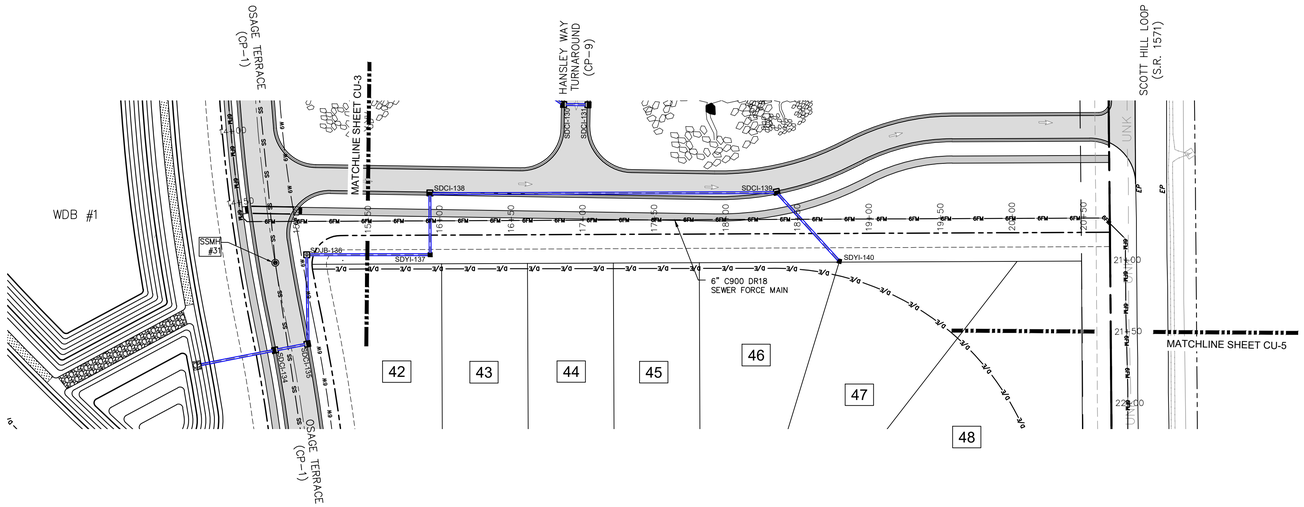
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

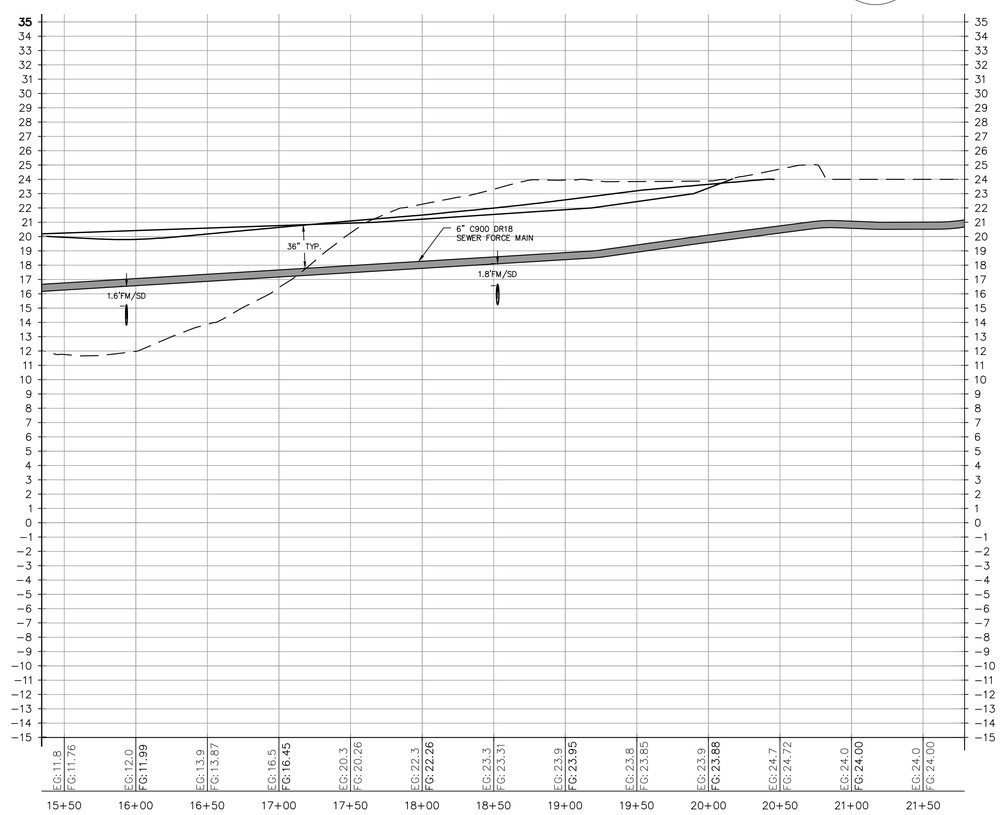
SHEET
CU-3



SEWER FORCE MAIN LINE PLAN STA: 15+50 THRU 21+50
166' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CU-4

HORIZONTAL SCALE 1" = 50'



SEWER FORCE MAIN CENTERLINE PROFILE
STA: 15+50 THRU 21+50
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CU-4

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

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PENDER COUNTY, NC

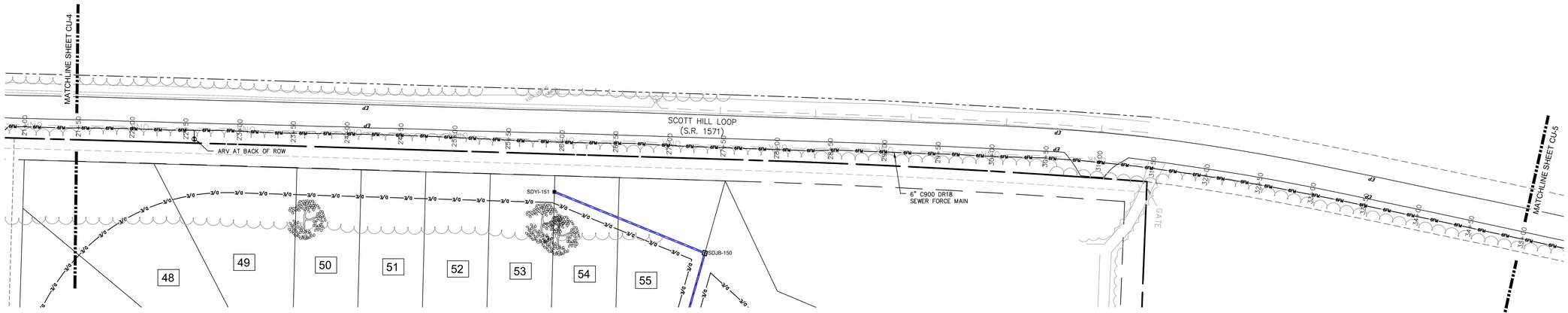
SEWER FORCE MAIN PLAN AND PROFILE
STA: 15+50 THRU 21+50

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

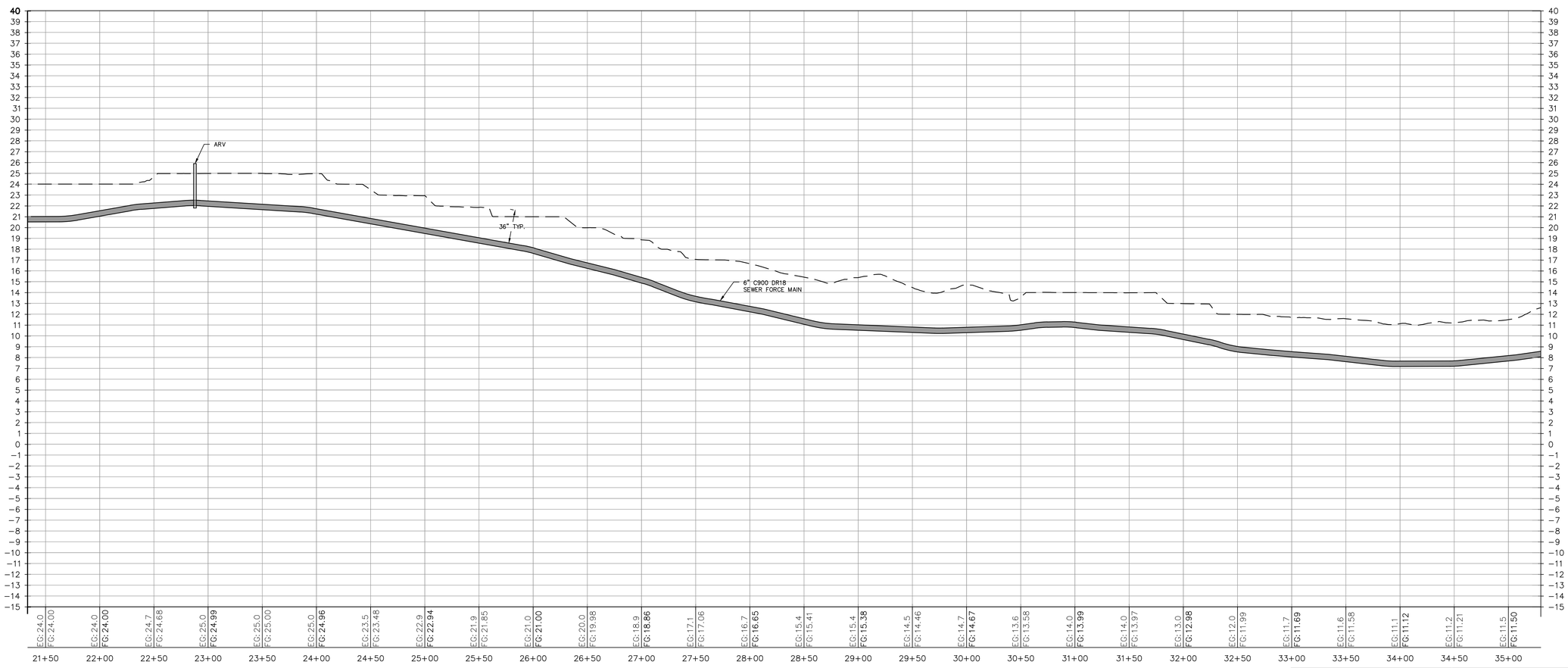
SHEET
CU-4



SEWER FORCE MAIN LINE PLAN STA: 21+50 THRU 35+00
60' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1 CU-5

HORIZONTAL SCALE 1" = 50'



SEWER FORCE MAIN CENTERLINE PROFILE
STA: 21+50 THRU 35+00
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2 CU-5

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FINAL DESIGN

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

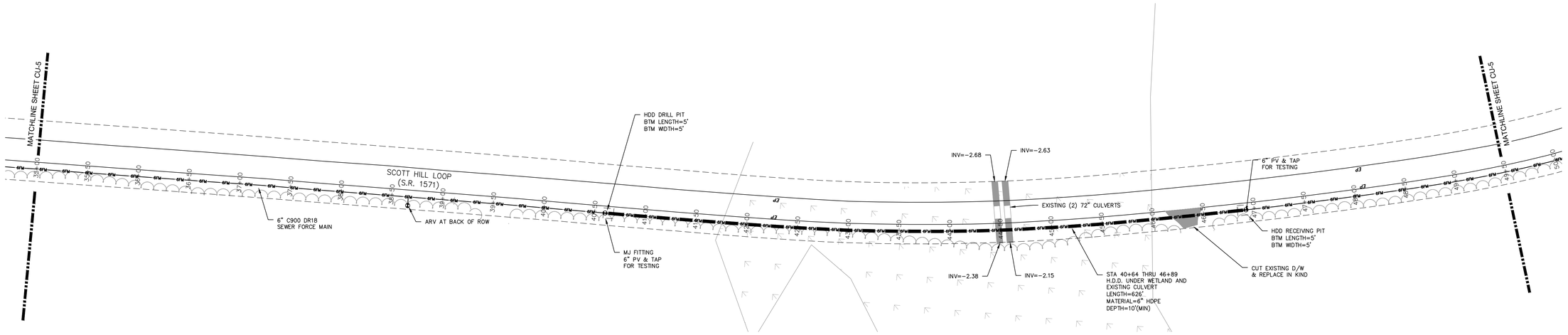
SEWER FORCE MAIN PLAN AND PROFILE
STA: 21+50 THRU 35+00

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

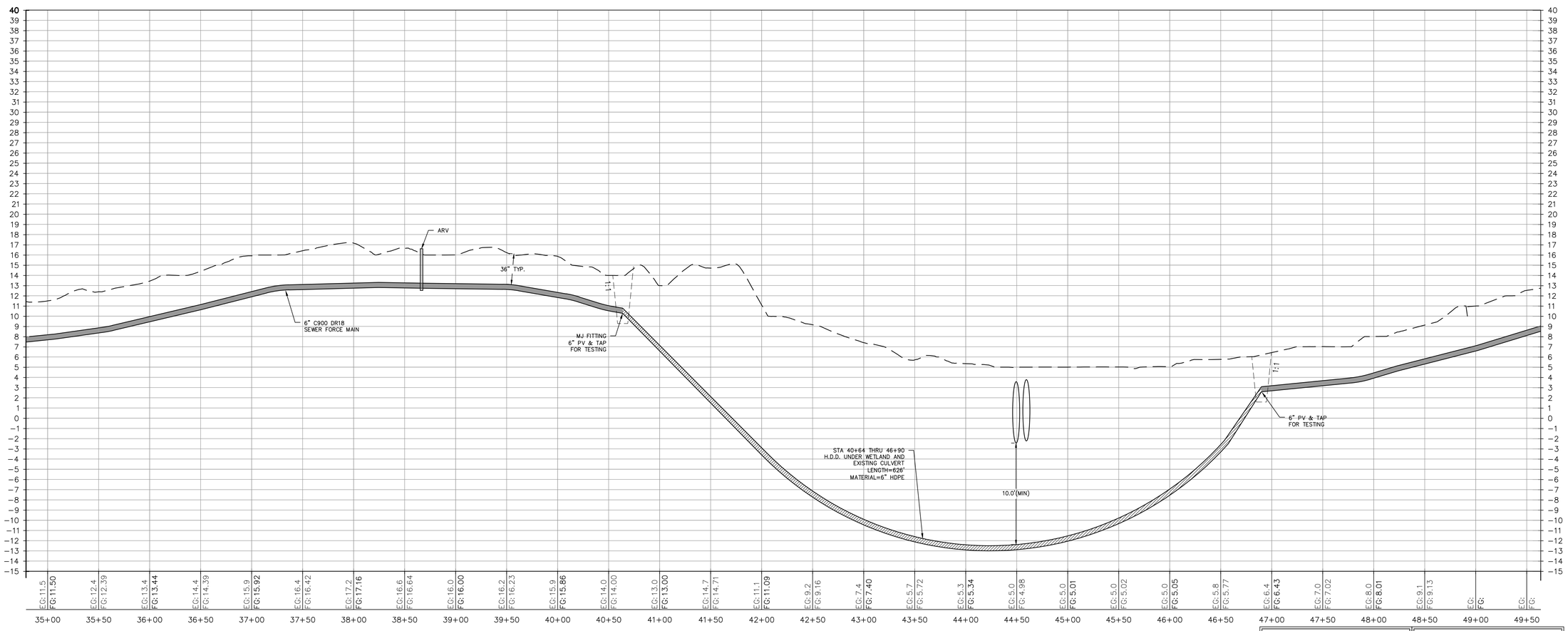
SHEET
CU-5



SEWER FORCE MAIN LINE PLAN STA: 35+00 THRU 49+50
60' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1
CU-6

50' 25' 0 50' 100'
HORIZONTAL SCALE 1" = 50'



SEWER FORCE MAIN CENTERLINE PROFILE
STA: 35+00 THRU 49+50
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2
CU-6

0' 25' 50' 100' 200'
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FINAL DESIGN

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

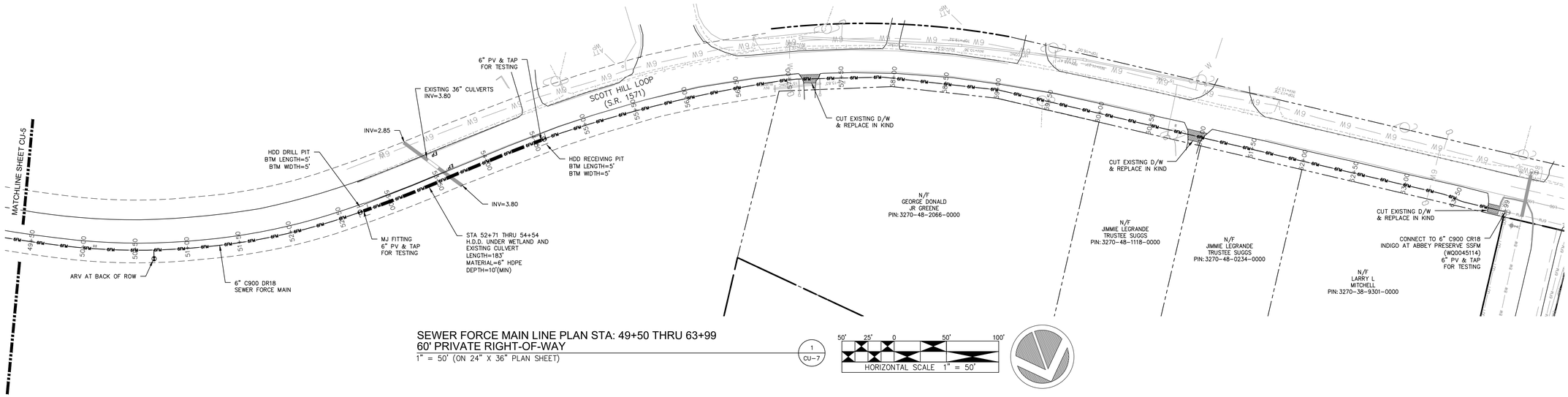
SEWER FORCE MAIN PLAN AND PROFILE
STA: 35+00 THRU 49+50

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

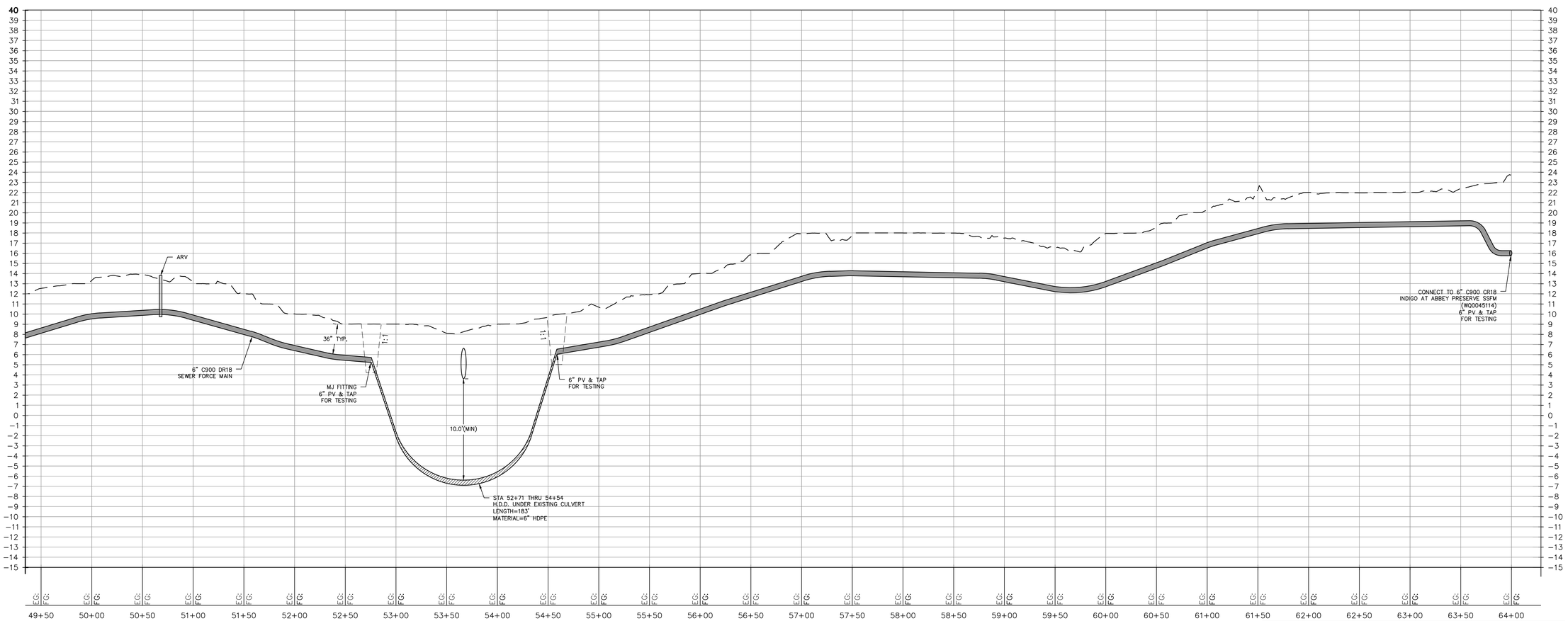
SHEET
CU-6



SEWER FORCE MAIN LINE PLAN STA: 49+50 THRU 63+99
60' PRIVATE RIGHT-OF-WAY
1" = 50' (ON 24" X 36" PLAN SHEET)

1
CU-7

50' 25' 0 50' 100'
HORIZONTAL SCALE 1" = 50'



SEWER FORCE MAIN CENTERLINE PROFILE
STA: 49+50 THRU 63+99
HORIZONTAL: 1" = 50' (ON 24" X 36" PLAN SHEET)
VERTICAL: 1" = 5' (ON 24" X 36" PLAN SHEET)

2
CU-7

0' 25' 50' 100' 200'
HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

FINAL DESIGN

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SEWER FORCE MAIN PLAN AND PROFILE
STA: 49+50 THRU 63+99

REV	DATE	DESCRIPTION	INIT
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DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	1" = 50'
DESIGNED:	SJ	RELEASE:	DESIGN

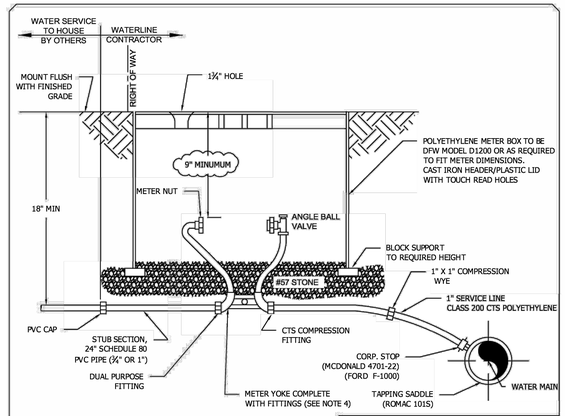
SHEET
CU-7

PCU STANDARD NOTES

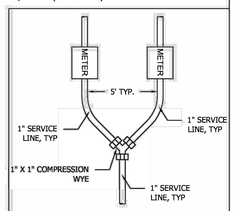
1. A PRE-CONSTRUCTION MEETING IS REQUIRED BEFORE BEGINNING WORK. THE MEETING MUST BE SCHEDULED WITH PENDER COUNTY UTILITIES (PCU) AT LEAST ONE WEEK IN ADVANCE. ATTENDEES MUST INCLUDE PCU, THE UTILITY CONTRACTOR'S SUPERINTENDENT, THE SUPPLIER, AND THE CONSULTING ENGINEER.
2. ALL MATERIALS USED SHALL CONFORM TO PENDER COUNTY UTILITIES REQUIREMENTS. NON-CONFORMING MATERIAL WILL NOT BE ACCEPTED FOR FINAL CERTIFICATION.
3. ALL PIPE SHALL BE C900 CR18 PVC, UNLESS OTHERWISE NOTED (SEE PCU STANDARD DETAIL). PCU MUST APPROVE THE USE OF DIP IN THE FIELD BEFORE INSTALLATION. PIPE SHOULD NEVER BE UNDER THE ROADWAY, PARKING LOT, OR SIDEWALKS. PENDER COUNTY UTILITIES DOES NOT ALLOW SIZE-ON-SIZE TAPS.
4. PCU STANDARD WATERLINE PIPE RESTRAINING METHOD IS MEGA LUGS. 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 SMAPLES. CONTACT PENDER COUNTY 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 RECORDS DRAWINGS (PDF & GIO REFERENCED 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.

PENDER COUNTY UTILITIES
605 E FREMONT STREET
PO BOX 995. BURGAW. NC 28425

STANDARD NOTES
PCU WATER SYSTEMS
VERSION #4 – OCTOBER 2023



NOTE:
1. CONTRACTOR SHALL PLACE METER BOX IN NON-TRAFFIC AREA ONLY.
2. ALL TAPS TO BE MADE ON THE TOP QUARTER OF THE WATER MAIN.
3. CONTRACTOR SHALL CENTER METER YOKE IN METER BOX.
4. (¾") MCDONALD 26-702WX2D 33, FORD FVB727W4143NL (1") MCDONALD 26-410WX2D 44, FORD FVB7410W4144NL
5. BOX TO BE ADJUSTED VERTICALLY TO ACCEPT COUNTY'S STANDARD SERVICE METER. (NEPTUNE T-10, PRO READ REGISTER, R900 MIU)
6. METER TO BE SET BY COUNTY UPON RECEIPT OF WATER SERVICE FEES, AND SATISFACTORY INSPECTION OF WATER SERVICE TO HOUSE.
7. TAPS ON WATER MAINS LARGER THAN 16" SHALL BE MADE WITH DUAL WIDE BAND, STAINLESS STEEL TAPPING SADDLES (ROMAC 202S).
8. 1 ½" METERS REQUIRE 2" TAP AND 2" SQUARE NUT GATE VALVE PER 2" METER DETAIL. REDUCE TO 1 ½" SERVICE
9. INSTALL WYE TO PROVIDE A DOMESTIC METER SETTER AND IRRIGATION METER SETTER PER SPLIT SERVICE INSET.

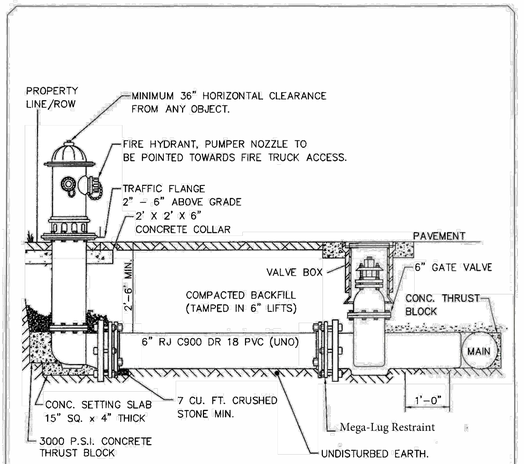


WYE PLAN VIEW FOR WATER/IRRIGATION SPLIT SERVICE

STANDARD WATER SERVICE DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

WATER SERVICE (¾" - 1")
STANDARD DETAIL
VERSION #4 - FEB 2016

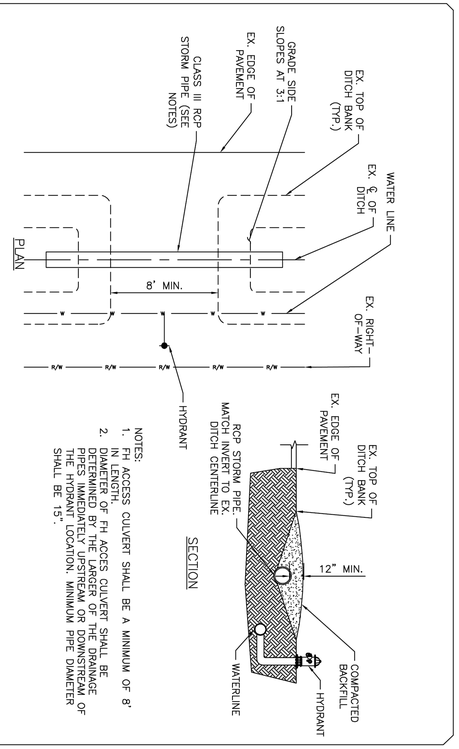


NOTES:
1. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION.
2. FIRE HYDRANTS TO BE LOCATED IN RIGHT–OF–WAY.
3. INSTALL WITH BURY LINE FLUSH TO FINAL GRADE.
4. HYDRANTS TO BE EJ5CD250 OR CLOW MEDALLION WITH STAINLESS STEEL STEMS.
5. HYDRANTS SHALL BE NOSTALGIC STYLE DRY BARREL.
6. HYDRANTS TO BE RED WITH SILVER CAPS AND BONNET.

FIRE HYDRANT ASSEMBLY DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

FIRE HYDRANT ASSEMBLY
STANDARD DETAIL
VERSION #2 - APRIL 2016



NOTES:
1. FH ACCESS CULVERT SHALL BE A MINIMUM OF 8' IN LENGTH.
2. DIAMETER OF FH ACCES CULVERT SHALL BE DETERMINED BY THE LARGER OF THE DRAINAGE PIPE WITHIN THE DITCH OR THE DIAMETER OF THE HYDRANT LOCATION. MINIMUM PIPE DIAMETER SHALL BE 15".

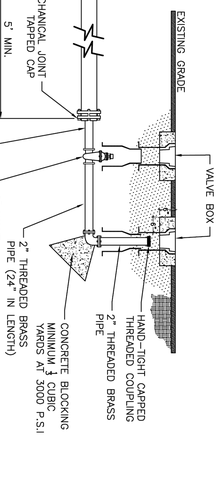
FIRE HYDRANT ACCESS DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

FIRE HYDRANT ACCESS
STANDARD DETAIL
VERSION #1 - SEPTEMBER 2015

NOTE:
1. A BLOW OFF MARKER SHALL BE PLACED ON THE ROADWAY ADJACENT TO THE BLOW OFF VALVE. MARKER EXCEPT DENOTE "BO" ON MARKER RATHER THAN "MV"

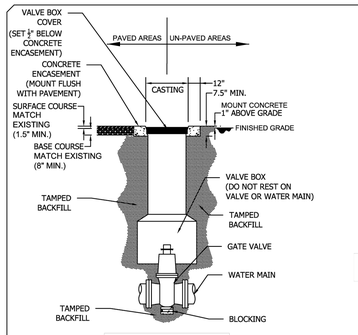
NOTES:
1. ALL PVC SHALL BE RESTRAINED PER THE RESTRAINED LENGTH SCHEDULE PROVIDED ELSEWHERE.



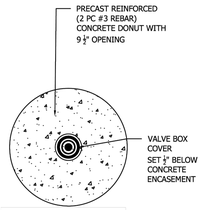
PERMANENT BLOW-OFF ASSEMBLY DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

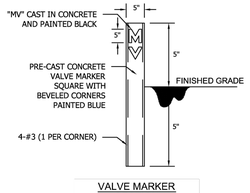
PERMANENT BLOW-OFF ASSEMBLY
STANDARD DETAIL
VERSION #1 - SEPTEMBER 2015



VALVE SECTION



VALVE PLAN



VALVE MARKER SECTION

NOTE:
1. DO NOT ALLOW VALVE BOX TO REST ON THE VALVE OR WATER MAIN.
2. A VALVE MARKER SHALL BE PLACED ON THE RIGHT OF WAY AT EACH ISOLATION VALVE.
3. VALVES MAY NOT BE LOCATED IN DITCHES, DITCH OR SWELL, ASPHAULT OR SIDEWALKS.

VALVE INSTALLATION DETAIL
NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

VALVE INSTALLATION
STANDARD DETAIL
VERSION #3 - JUNE 2016

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Wilmington, NC 28402 Fax: 910-254-0502
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SWEETGRASS AT ABBEY PRESERVE
PENDER COUNTY, NC

PENDER COUNTY UTILITY (PCU) DETAILS

REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

FINAL DESIGN

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APPROVED:	JRC	PROJECT:	178-09
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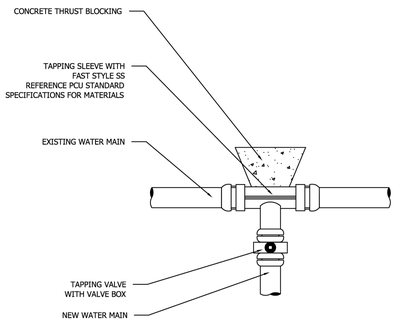
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
U-D1



TAPPING SLEEVE AND VALVE ASSEMBLY 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

Restrained Length In Feet Each Side of Fitting Joint

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'	70'	35'	20'	210'	90'	45'	25'
30"	190'	80'	40'	20'	285'	105'	50'	25'
36"	220'	95'	45'	25'	0	0	0	0
42"	245'	105'	50'	25'	0	0	0	0
48"	280'	120'	60'	30'	0	0	0	0

Restrained lengths for valves, dead ends and branches from tees shall be the same as for 90° (degree) bends

Restrained Length In Feet For Reducer

PIPE DIAMETER (INCHES)	3"	4"	6"	8"	10"	12"	16"	20"	24"	30"
3"	0	0	0	0	0	0	0	0	0	0
4"	40'	0	0	0	0	0	0	0	0	0
6"	50'	45'	0	0	0	0	0	0	0	0
8"	75'	70'	40'	0	0	0	0	0	0	0
10"	95'	90'	70'	40'	0	0	0	0	0	0
12"	120'	115'	100'	75'	40'	0	0	0	0	0
16"	160'	155'	140'	125'	100'	70'	0	0	0	0
20"	200'	195'	185'	170'	150'	130'	75'	0	0	0
24"	160'	155'	150'	140'	135'	120'	90'	50'	0	0
30"	195'	190'	185'	180'	170'	160'	120'	105'	70'	0
36"	225'	220'	215'	210'	205'	195'	180'	150'	125'	70'
42"	245'	240'	235'	230'	225'	220'	205'	185'	155'	105'
48"	255'	250'	245'	240'	235'	230'	215'	195'	175'	125'

Length of restrained joint for larger diameter pipe

NOTES:
1. PENDER COUNTY STANDARD RESTRAINT METHOD IS MEGA LUGS, 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
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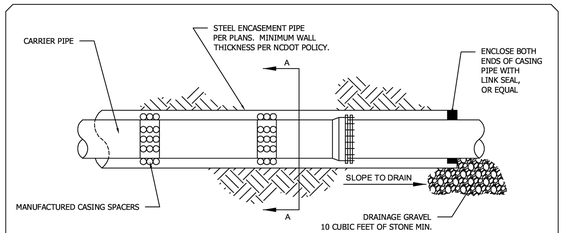
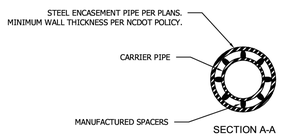
RESTRAINED JOINT TABLE
STANDARD DETAIL
VERSION #2 – OCTOBER 2023



ELEVATION



SECTION A-A

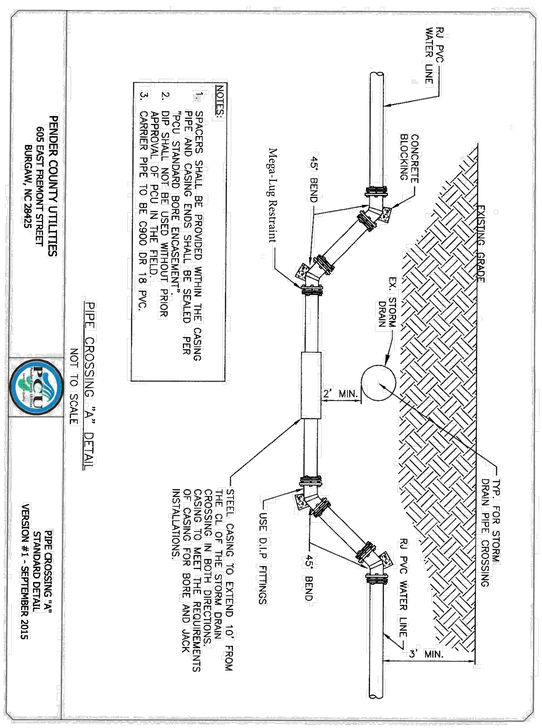
NOTE:
1. EITHER STAINLESS STEEL OR HDPE CASING SPACERS ARE ACCEPTABLE, BUT IN EITHER CASE, THE SPACERS MUST BE MANUFACTURED.
2. CARRIER PIPE SHALL BE C900 DR 18 PVC WITH RESTRAINED JOINTS.
3. ENCASEMENT PIPE TO BE STEEL WITH MINIMUM WALL THICKNESS IN ACCORDANCE WITH NCDOT MINIMUM REQUIREMENTS OR BETTER.
4. TOP OF ENCASEMENT PIPE SHALL BE INSTALLED A MINIMUM OF THREE FEET BELOW EXISTING AND/OR PROPOSED PAVEMENT SUB-GRADE.

STANDARD BORE ENCASEMENT DETAIL

NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

BORE ENCASEMENT
STANDARD DETAIL
VERSION #3 - APRIL 2017



NOTES:
1. SPACERS SHALL BE PROVIDED WITHIN THE CASING PIPE AND CASING ENDS SHALL BE SEALED PER "PCU STANDARD BORE ENCASEMENT". DIP SHALL NOT BE USED WITHOUT PRIOR APPROVAL OF PCU IN THE FIELD.
2. CARRIER PIPE TO BE C900 DR 18 PVC.

STEEL CASING TO EXTEND 10' FROM THE CL OF THE STORM DRAIN CROSSING IN BOTH DIRECTIONS. COMPLY WITH THE REQUIREMENTS OF CASING FOR BORE AND JACK INSTALLATIONS.

PIPE CROSSING "A" DETAIL

NOT TO SCALE

PENDER COUNTY UTILITIES
605 EAST FREMONT STREET
BURGAW, NC 28425

PIPE CROSSING "A"
STANDARD DETAIL
VERSION #1 - SEPTEMBER 2015

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PENDER COUNTY UTILITY (PCU) DETAILS

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A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

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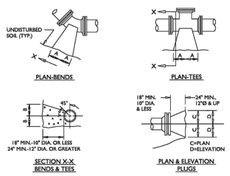
CHECKED:	JRC	SCALE:	NTS
DESIGNED:	SJ	RELEASE:	DESIGN

SHEET
U-D2



PIPE SIZE	90° BEND		45° BEND		22-1/2° BEND		11-1/4° BEND		TEE		PLUG
	A	B	A	B	A	B	A	B	A	B	C	D
4"	18"	12"	10"	13"	7"	10"	7"	10"	12"	14"	13"	6"
6"	18"	12"	10"	13"	7"	10"	7"	10"	12"	14"	19"	9"
8"	24"	18"	13"	18"	10"	12"	10"	12"	16"	18"	25"	11"
10"	28"	22"	15"	22"	12"	15"	12"	15"	20"	22"	31"	14"
12"	32"	28"	19"	28"	14"	18"	14"	18"	22"	28"	37"	17"
16"	54"	38"	30"	36"	18"	36"	18"	36"	36"	42"	54"	24"

ASSUME 2000 PSF SOIL (SAND & GRAVEL WITH CLAY)

NOTES:

1. BASED ON 200 PSI STATIC PRESSURE PLUS AWWA WATER HAMMER ALLOWANCE.
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.
3. THRUST BLOCKS TO BE USED AT ALL LINES OPERATING UNDER PRESSURE.
4. CONCRETE SHALL NOT CONTACT BOLTS OR MECHANICAL FITTINGS.
5. CONCRETE SHALL BE 3000 PSI.
6. TRENCHES SHALL CONFORM WITH STANDARD EMBEDMENT DETAIL.
7. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING.
8. SEE STD. THRUST BLOCK SHEET 2 OF 4 FOR OTHER SOILS.

PSD NO. 1 - THRUST BLOCKING DETAIL

NOT TO SCALE

REACTION BEARING AREAS FOR HORIZONTAL WATER/SEWER PIPE BENDS

BASED ON TEST PRESSURE OF 200 P.S.I.

ALL AREAS GIVEN IN SQUARE FEET.

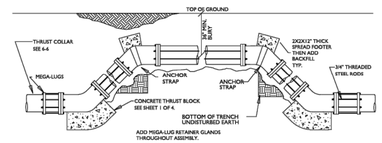
SIZE AND DEGREE OF BEND	TOTAL THRUST IN POUNDS	CONCRETE ON UNDISTURBED EARTH	BRICK ON UNDISTURBED EARTH	CONCRETE ON UNDISTURBED EARTH WITH 1/2" BRICK	BRICK ON UNDISTURBED EARTH WITH 1/2" BRICK	MASS CONCRETE WITH 1/2" BRICK	MASS CONCRETE WITH 1/2" BRICK WITH 1/2" BRICK	CONCRETE ON UNDISTURBED EARTH WITH 1/2" BRICK	BRICK ON UNDISTURBED EARTH WITH 1/2" BRICK
6"									
11 1/4 °	1,108	1	1	1	1	1	1	2	1
22 1/2 °	2,207	1	2	2	1	1	1	3	1
45 °	4,328	2	3	3	1	1	2	5	1
90 °	7,996	3	4	5	1	1	3	8	1
PLUG	5,655	2	3	4	1	1	2	6	1
8"									
11 1/4 °	1,970	1	1	2	1	1	1	2	1
22 1/2 °	3,922	1	2	3	1	1	1	4	1
45 °	7,694	3	4	5	1	1	2	8	1
90 °	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1
12"									
11 1/4 °	4,433	2	3	3	1	1	2	5	1
22 1/2 °	8,826	3	5	6	2	2	3	9	1
45 °	17,310	5	9	11	3	3	5	18	2
90 °	31,982	8	16	19	4	4	8	32	4
PLUG	22,619	6	12	14	3	3	6	23	3
16"									
11 1/4 °	7,881	2	4	5	1	1	2	8	1
22 1/2 °	15,691	4	8	10	3	3	4	16	2
45 °	30,779	8	16	19	4	4	8	31	4
90 °	56,861	15	29	35	8	8	15	57	6
PLUG	40,213	10	21	25	5	5	10	41	5

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE 6" - 90° BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

PSD NO.2 - THRUST BLOCKING DESIGN QUANTITY TABLE

NOT TO SCALE



ROD REQUIREMENTS

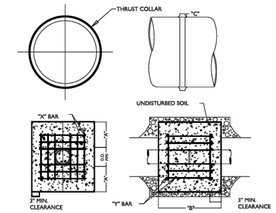
SIZE OF 45 BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	4
8"	7,694	4
12"	17,312	4
14"	30,779	8
24"	69,252	8

GENERAL NOTES:

1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT OR COLD DIPPED GALVANIZED.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
3. MEGA-LUGS TO BE USED AT ALL FITTINGS.
4. MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.

PSD NO. 3 - VERTICAL BEND DETAIL

NOT TO SCALE



REINFORCING REQUIREMENTS

I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQUIRED
6" - 36"	#5	2'-2"+ O.D. PIPE	1.043 LBS/FT	1'-1"	1.1 LBS. EACH	X-24, Y-12
48" & greater	#6	2'-0"+ O.D. PIPE	1.502 LBS/FT	1'-3"	1.9 LBS. EACH	X-24, Y-12

THRUST COLLAR, AND THRUST SCHEDULE

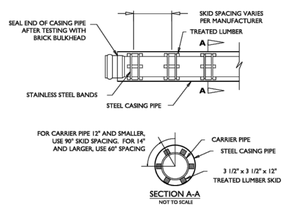
I.D. PIPE	"A"	"B"	"C"-6"-16", 20"-24", 30"-36", 48"
6" - 36"	1'-4"	1'-2"	2" 3" 4"
48" & greater	1'-8"	1'-9"	6"

NOTES:

1. CONCRETE SHALL BE 3000 PSI AND TRANSIT MIXED.
2. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.
3. TRENCH BOTTOM WIDTH IN VICINITY OF THRUST BLOCK INSTALLATION SHALL BE THE MINIMUM WIDTH AS SHOWN ON STANDARD EMBEDMENT DETAIL.
4. BACKFILL TAMPED IN 6" LIFTS PER STANDARD EMBEDMENT DETAIL.
5. THRUST COLLAR MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.

PSD NO. 4 - THRUST COLLAR DETAIL

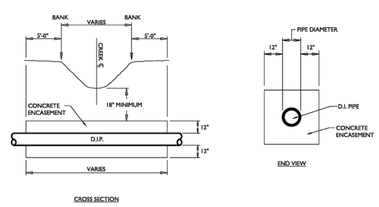
NOT TO SCALE



NOTES:
1. SKID TO BE PLACED TO PROVIDE PROPER SUPPORT, ALIGNMENT, AND GRADE AS SPECIFIED. CONTINUOUS SKIDS MAY BE USED AS ALTERNATIVE. 2. OIL, GREASE, OR PETROLEUM PRODUCT MAY NOT BE USED AS LUBRICANT.
3. CASING PIPE TO BE OF FERROUS METAL AND HAVE A MINIMUM DIAMETER TWICE THATOF THE CARRIER PIPE.
4. CASING PIPE TO HAVE A MINIMUM THICKNESS OF .25".
5. FOR ALL BORES UNDER NCDOT RIGHT OF WAYS FOLLOW ALL NCDOT GUIDELINES FOR PIPE SIZE AND THICKNESS.

PSD NO. 5 - PIPE CASING DETAIL

NOT TO SCALE

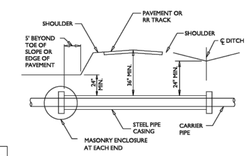


NOTES:

1. CONCRETE SHALL BE 3,000 P.S.I.
2. CONCRETE ENCASEMENT NOT REQUIRED WHEN PIPE IS AT LEAST THREE (3) FEET UNDER CENTERLINE OF CREEK BOTTOM.
3. ALL STREAM CROSSINGS TO BE PERMITTED BY NCDENR.
4. ALL WETLAND CROSSINGS AND COASTAL WETLAND CROSSINGS TO BE PERMITTED BY ALL APPROPRIATE AGENCIES.

PSD NO. 6 - STREAM/WETLAND CROSSING DETAIL DETAIL

NOT TO SCALE



TYPICAL PIPE CROSSING

CASING PIPE SIZE (O.D.)	WALL THICKNESS
4" - 12 3/4"	0.250"
16"	0.250"
18"	0.250"
20"	0.250"
24"	0.250"
30"	0.312"
36"	0.375"
48"	0.500"

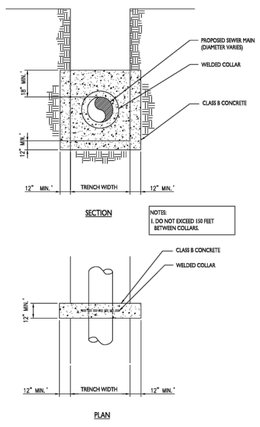
ENCASEMENTS SHALL EXTEND FROM DITCH LINE TO DITCH LINE IN CUT SECTIONS, FIVE (5) FEET BEYOND THE TOE OF SLOPES IN FILL SECTIONS, AND TEN (10) FEET BEYOND EDGE OF PAVEMENT IN SECTIONS WITH NO DITCH OR FILL AREA.

NOTES:

1. STEEL ENCASEMENT PIPE SHALL CONFORM TO ASTM A-139 WITH WALL THICKNESS AND GRADE AS DEFINED IN THE SPECIFICATIONS. MINIMUM ALLOWABLE YIELD STRENGTH IS 35,000 PSI.
2. CARRIER PIPE SHALL BE ADEQUATELY SUPPORTED THE ENTIRE LENGTH WITHIN THE CASING BY USING "SPIDER" STEEL SUPPORTS AT A MAXIMUM OF 9 FOOT CENTERS (ONE AT EACH JOINT AND ONE INTERMEDIATE). OTHER METHODS MUST MEET APPROVAL OF THE ENGINEER.
3. NO EXCAVATED MATERIAL SHALL BE PLACED IN ANY STREAM, DITCH OR DRAINAGE WAY.
4. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
5. THE CONTRACTOR IS RESPONSIBLE FOR ANY SEDIMENT AND EROSION CONTROL PRACTICES REQUIRED DURING CONSTRUCTION AND THE SUBSEQUENT STABILIZATION OF ALL DISTURBED AREAS AFTER CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAY DOWN AND STOCKPILE AREAS.
7. FOR BORES ON THE NCDOT RIGHT OF WAY, NO WORK WILL BEGIN UNTIL THE CONTRACTOR HAS A COPY OF THE NCDOT ENCROACHMENT PERMIT FOR THE PROJECT.

PSD NO. 7 - BORE DETAIL DETAIL

NOT TO SCALE



PSD NO. 8 - ANTI SEEP COLLAR DETAIL

NOT TO SCALE

STANDARD DETAILS SHEET A

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SWEETGRASS AT ABBEY PRESERVE

PENDER COUNTY, NC

PLURIS SEWER DETAILS

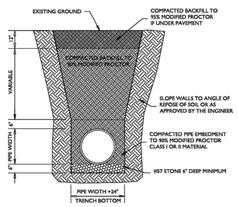
REV	DATE	DESCRIPTION	INIT
A	9 OCT 2024	INITIAL PLAN SHEET RELEASE	SJ

DEVELOPER
CLAYTON PROPERTIES
GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	NTS
DESIGNED:	SJ	RELEASE:	DESIGN

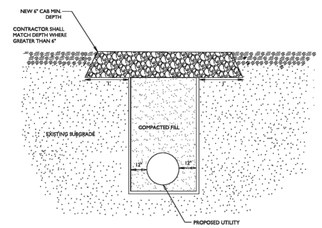
SHEET

U-D3



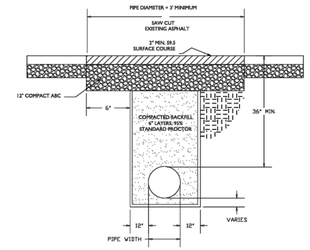
NOTES:
1. MINIMUM BURY DEPTH FOR ALL FORCE MAINS AND GRAVITY LINES IS 36" UNLESS SPECIFICALLY ALLOWED BY THE ENGINEER. ALL LINES SHALLOWER THAN 36" MUST GIVE CONSIDERATION TO USING HIGHER PRESSURE AND THICKNESS CLASSES OF DIP.
2. ALL LINES TO BE BEDDED IN 6" OF #57 STONE MINIMUM. FOR LINES INSTALLED BELOW THE WATER TABLE #57 STONE SHOULD EXTEND TO THE SPRING LINE OF THE PIPE AT A MINIMUM.
3. THE USE OF #57 STONE BEDDING AND BACKFILL SHOULD BE COMMENSURATE WITH THE CONDITIONS IN THE TRENCH. THE CONTRACTOR IS RESPONSIBLE FOR PROPER BEDDING AND BACKFILLING TO INSURE PIPE STABILITY AND UNIFORM GRADE.

PSD NO. 9 - PIPE TRENCH AND BEDDING DETAIL
NOT TO SCALE



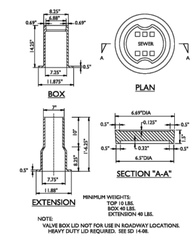
NOTES:
1. THE REPLACED STONE SHALL CONSIST OF ABC MATERIAL, COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH ASHTTO T-80 AS MODIFIED BY NCDOT.

PSD NO. 10 - GRAVEL DRIVEWAY REPAIR DETAIL
NOT TO SCALE

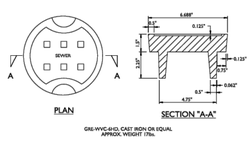


NOTES:
1. THE PAVEMENT SHALL BE DEFINED BY A STRAIGHT EDGE, PREFERABLY A MACHINED SAW CUT.
2. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH DRY SOIL OR ABC STONE USING MAXIMUM 6" LIFTS TO WITHIN 18" OF THE ROAD.
   SHALL BE COMPACTED TO A DENSITY OF 95% COMPACTED PER ASTM D698 TO A DENSITY OF 95% OF THE STANDARD PROCTOR DENSITY.
3. WITHIN ROADS MAINTAINED BY NCDOT, THE TRENCH SHALL BE BACKFILLED AND COMPACTED USING FLOWABLE FILL OR ABC STONE TO WITHIN 12" OF THE ROAD SURFACE. WHERE ABC STONE IS USED, IT SHALL BE COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-180 AS MODIFIED BY NCDOT.
4. THE ROAD SURFACE MATERIAL SHALL BE COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH ASHTTO T-180 AS MODIFIED BY NCDOT. BITUMINOUS BASE OR BINDER MAY BE SUBSTITUTED IF APPROVED BY THE ENGINEER.
5. THE ENTIRE THICKNESSVERTICAL EDGE OF THE CUT SHALL BE TACKED.
6. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 2" THICK.
7. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY TO ACHIEVE A SMOOTH LEVEL PATCH.

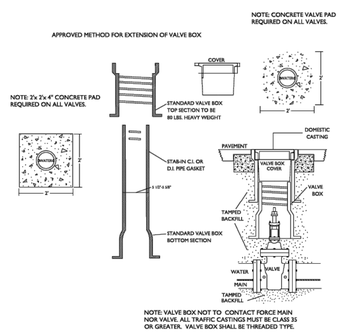
PSD NO. 11 - ASPHALT PAVING REPAIR DETAIL
NOT TO SCALE



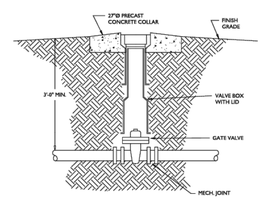
PSD NO. 12 - CAST IRON VALVE BOX DETAIL
NOT TO SCALE



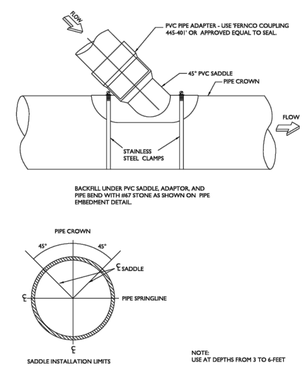
PSD NO. 13 - HEAVY DUTY CAST IRON VALVE BOX LID DETAIL
NOT TO SCALE



PSD NO. 14 - VALVE BOX INSTALLATION AND EXTENSION DETAIL
NOT TO SCALE



PSD NO. 15 - GATE VALVE DETAIL
NOT TO SCALE



PSD NO. 16 - SADDLE INSTALLATION DETAIL
NOT TO SCALE

STANDARD DETAILS SHEET B

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GROUP, INC.
PO BOX 4098
MARYVILLE, TN 37802

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CHECKED:	JRC	SCALE:	NTS
DESIGNED:	SJ	RELEASE:	DESIGN

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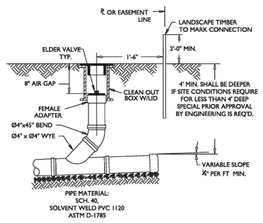
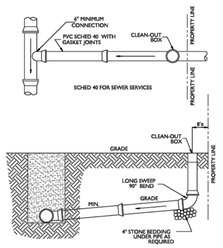


NOTE: ALL SEVICES FOR SINGLE FAMILY RESIDENCES AND SINGLE COMMERCIAL STRUCTURES ARE TO BE INSTALLED WITH AN ELDER VALVE .

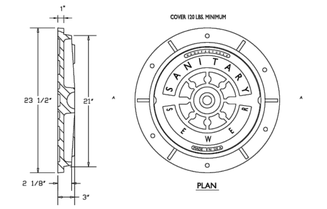
PSD NO. 17A - STANDARD SERVICE CLEAN OUT DETAIL

NOT TO SCALE



PSD NO. 17 - STANDARD SERVICE DETAIL

NOT TO SCALE

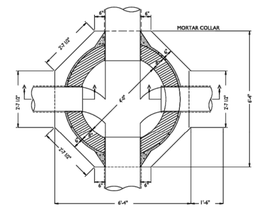


NOTES:

1. ALL MANHOLE FRAMES SHALL BE GOOD QUALITY HEAVY DUTY CASTINGS
2. FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS.
3. COVER SHALL WEIGH A MIN. OF 120 LBS.
4. MANHOLES WITHIN PAVED SURFACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH DETAIL.
5. CONSEAL SHALL BE USED BETWEEN RING AND CONE

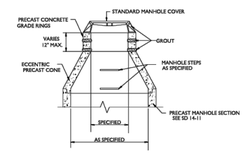
PSD NO. 18 - STANDARD MANHOLE RING AND COVER DETAIL

NOT TO SCALE



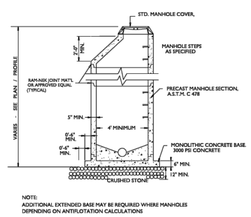
PSD NO. 19 - SANITARY SEWER MANHOLE PLAN VIEW DETAIL

NOT TO SCALE



PSD NO. 20 - SANITARY SEWER PRECAST RING EXTENSION DETAIL

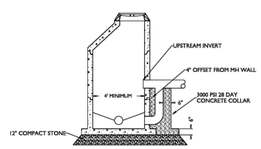
NOT TO SCALE



NOTE:
ADDITIONAL EXTENDED BASE MAY BE REQUIRED WHERE MANHOLES DEPENDING ON ANTIFLOTATION CALCULATIONS

PSD NO. 21 - SANITARY SEWER PRECAST MANHOLE DETAIL

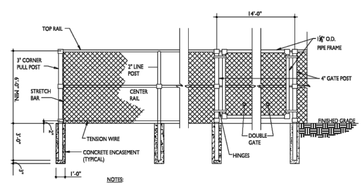
NOT TO SCALE



NOTE:
CONCRETE COLLAR TO EXTEND 6" ON EACH SIDE OF DROP PIPE. USE OUTSIDE DROP MANHOLE WHEN UPSTREAM INVERT IS OVER 24" HIGHER THAN DOWNSTREAM INVERT.

PSD NO. 22 - OUTSIDE DROP MANHOLE DETAIL

NOT TO SCALE

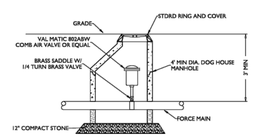


NOTES

1. DOUBLE GATE SHALL HAVE A LOCKING MECHANISM, DROP ROD, AND TRUSS ROD.
2. ALL FENCE COMPONENT MATERIALS SHALL BE EITHER HOT DIPPED GALVANIZED STEEL OR IRON. FENCE FABRIC SHALL BE ALUMINUM COATED.
3. PRIVACY SLATS WHEN INDICATED

PSD NO. 23 - LIFT STATION FENCING DETAIL

NOT TO SCALE



NOTE:
AIR RELEASE VALVES TO BE LOCATED AT HIGH POINTS OF THE FORCE MAIN WHERE GRADE DIFFERENCES EXCEED 18' IN ELEVATION.

PSD NO. 24 - AIR RELEASE MANHOLE DETAIL

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PO BOX 4098
MARYVILLE, TN 37802

APPROVED:	JRC	PROJECT:	178-09
CHECKED:	JRC	SCALE:	NTS
DESIGNED:	SJ	RELEASE:	DESIGN

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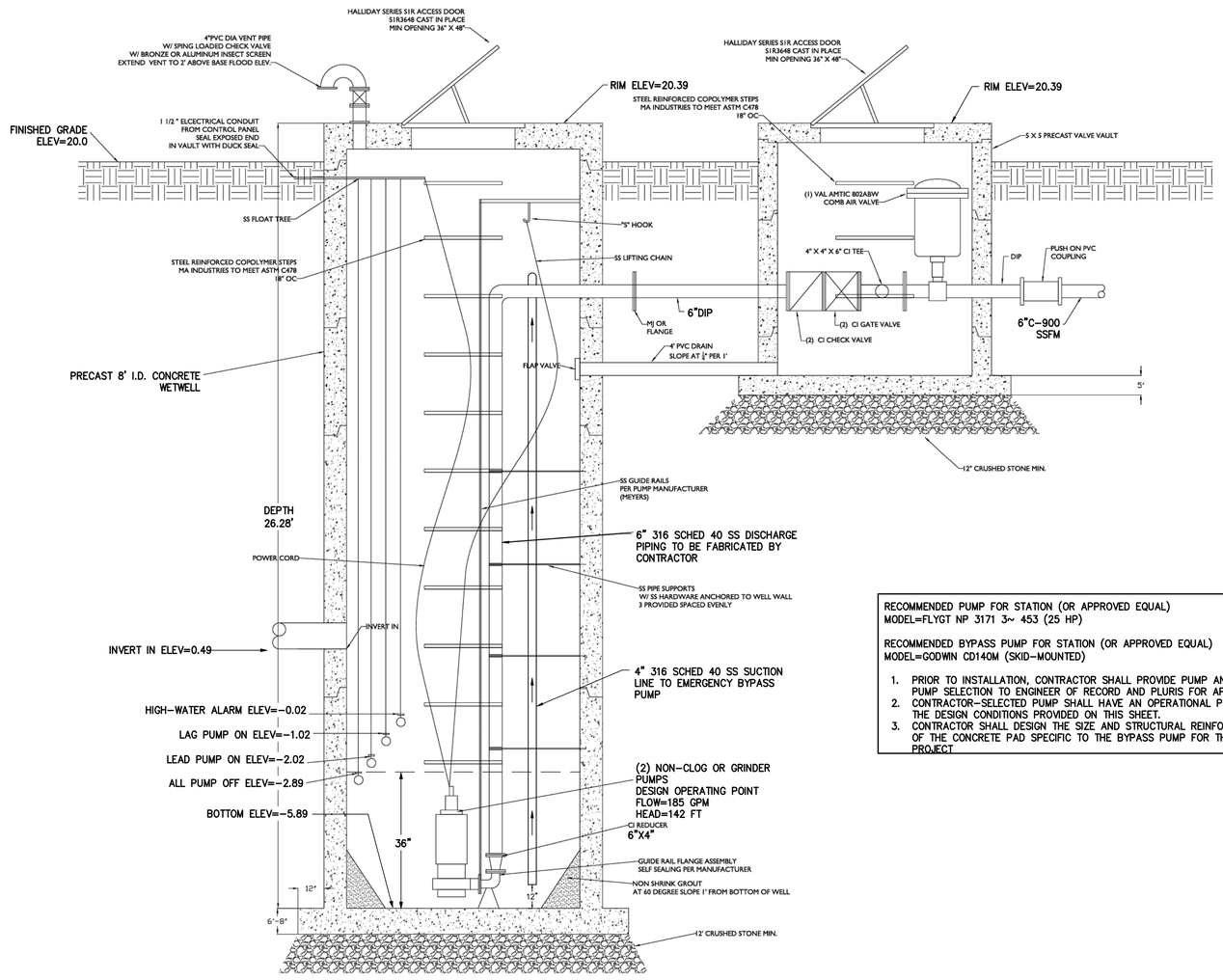
U-D5



RECOMMENDED PUMP FOR STATION (OR APPROVED EQUAL)
MODEL=FLYGT NP 3171 3~ 453 (25 HP)

RECOMMENDED BYPASS PUMP FOR STATION (OR APPROVED EQUAL)
MODEL=GODWIN CD140M (SKID-MOUNTED)

1. PRIOR TO INSTALLATION, CONTRACTOR SHALL PROVIDE PUMP AND BYPASS PUMP SELECTION TO ENGINEER OF RECORD AND PLURIS FOR APPROVAL.
2. CONTRACTOR-SELECTED PUMP SHALL HAVE AN OPERATIONAL POINT AT THE DESIGN CONDITIONS PROVIDED ON THIS SHEET.
3. CONTRACTOR SHALL DESIGN THE SIZE AND STRUCTURAL REINFORCEMENT OF THE CONCRETE PAD SPECIFIC TO THE BYPASS PUMP FOR THIS PROJECT

PSD NO. 25 - TYPICAL DUPLEX LIFT STATION SECTION DETAIL

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STANDARD DETAILS SHEET D

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DESIGNED:	SJ	RELEASE:	DESIGN

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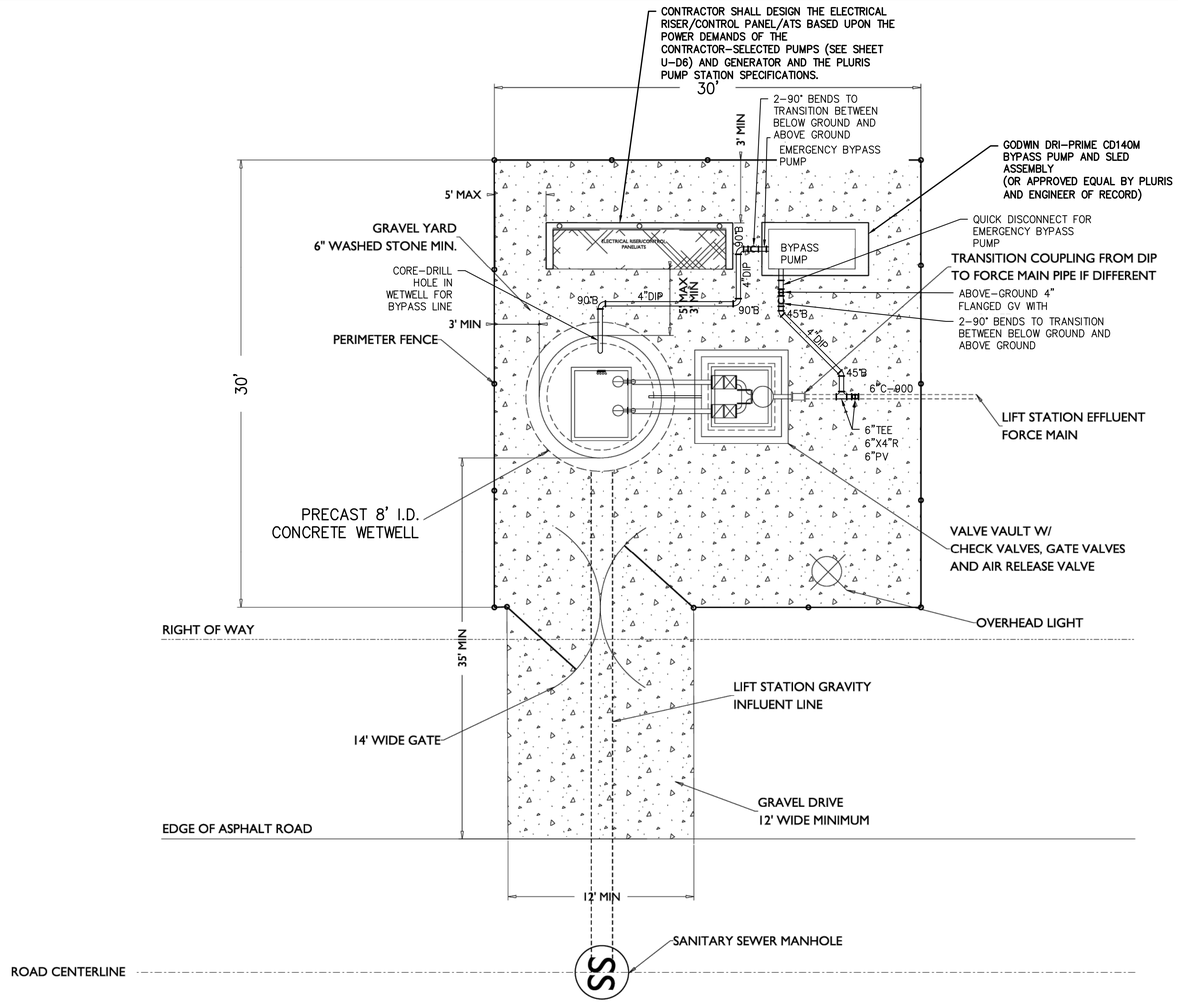

NOTE:

CONCRETE THRUST BLOCKING IS REQUIRED FOR ALL BELOW-GROUND BENDS OF THE SEWER FORCE MAIN, SUCTION LINE, AND BYPASS LINE. REFER TO STANDARD DETAILS FOR SPECIFICATION ON CONCRETE THRUST BLOCKING.

PSD NO. 26 - TYPICAL DUPLEX LIFT STATION PLAN DETAIL

NOT TO SCALE

STANDARD DETAILS SHEET E

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CHECKED:	JRC	SCALE:	NTS
DESIGNED:	SJ	RELEASE:	DESIGN

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