

Exhibit D
Conditional Zoning District Zoning Conditions

- The total number of dwelling units on the subject property shall not exceed 297 dwelling units and not more than 120 of these dwelling units are permitted to be townhomes. No apartments (multi-family units) shall be permitted.
- A twenty feet (20') wide Type A landscape buffer shall be installed along the subject property's frontage on Rolesville Road and along Mitchell Mill Road. The buffer shall be maintained by the Homeowners Association for the proposed subdivision.
- Sidewalk meeting town standards shall be installed along the subject property's frontage along Mitchell Mill Road at the same time road improvement are being installed on Mitchell Mill Road pursuant to Condition 5 below. The sidewalk shall be dedicated to and maintained by the Town of Rolesville.
- Recreational Amenities: The following recreational amenities shall be provided generally as shown on the attached Exhibit 1 as a part of the development of the subject property and dedicated to and maintained by the Homeowners Association for the proposed subdivision except for the public greenway which shall be dedicated as such to the Town of Rolesville:
 - A swimming pool and cabana, including changing rooms and restrooms shall be constructed prior to the issuance of the 150th building permit;
 - At least one fenced playground shall be constructed prior to the issuance of the 150th building permit;

- At least one fenced dog park shall be constructed prior to the issuance of the 150th building permit;
- Public greenway on a greenway easement at least 25' wide with paved trails at least ten feet wide (10') shall be constructed generally as shown on the attached Exhibit 1 and dedicated to the Town of Rolesville; and
- A private Multi-purpose Trail at least ten feet (10') shall be provided generally as shown on the attached Exhibit 1 and dedicated to and maintained by the Homeowners Association for the proposed subdivision.

- Transportation Improvements: To address transportation impacts reasonably expected to be generated by the development, the following road improvements shall be installed as recommended by the Traffic Impact Analysis for the Wheeler Tract, prepared by Runey Kemp & Associates and dated May 2019, a copy of which is on file with the Town of Rolesville, together with the comments made by the North Carolina Department of Transportation in their Traffic Impact Analysis Review Report dated July 26, 2019:
 - Rolesville Road and Site Drive 1:**
 - Provide site access via full movement intersection with one ingress and one egress lane
 - Provide stop control for westbound drive approach;
 - Construct a designated southbound left-turn lane with at least 100 feet of storage and appropriate deceleration and taper;
 - Provide a designated northbound right-turn lane with at least 100 feet of storage and appropriate deceleration and taper.
 - Mitchell Mill and Site Drive 2:**
 - Provide access via full movement intersection with one ingress lane and one egress lane;
 - Provide stop control for southbound site drive approach; and
 - Provide a designated eastbound left-turn lane with at least 100 feet of storage and appropriate deceleration and taper.

- Rolesville Road and Mitchell Mill Road:** prior to the issuance of a building permit for the 150th dwelling unit, the property owner shall contribute Fifty thousand Dollars (\$50,000.00) to the Town of Rolesville to be used by the Town of Rolesville to install a traffic light at the intersection of Mitchell Mill and Rolesville Road.
- No Extension of Taviston Court:** In addition, the Board of Commissioners has determined that the extension of Taviston Court, including the dedication or preservation of right-of-way for a future extension of Taviston Court, into the subject property is undesirable, does not serve the public interest and shall be prohibited.

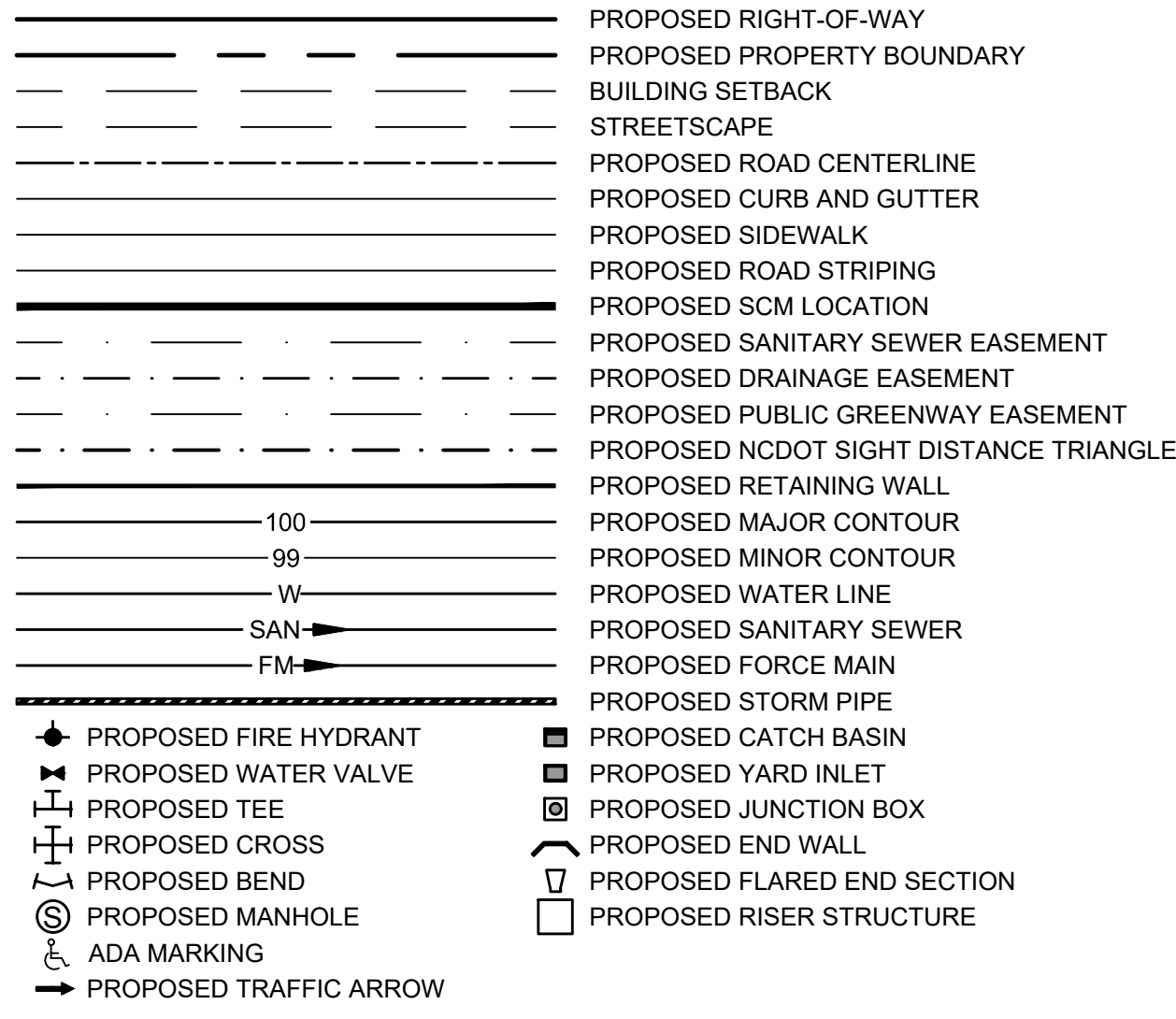
- Conditions Applicable to single-family homes only:**
- All homes shall include either crawl space foundations or stem wall foundations. Any stem wall foundations shall have a brick or stone veneer on all sides facing a public street.
 - The minimum square footage for two-story homes shall be 2,200 square feet. The minimum square footage for one-story homes shall be 1,600 square feet.
 - A twenty-five foot (25') wide Type A landscape buffer shall be installed adjacent the properties to the north currently owned by Dwight and Carolyn Woodlief and more particularly described as Lot 6 on

Book Maps 2011, Page 84, Wake County Registry (Wake County PIN 1767 58 09384). This buffer shall be located within an easement that may be a part of a residential lot. The buffer shall be maintained by the Homeowners Association for the proposed subdivision.

- A twenty foot (20') wide Type A landscape buffer shall be installed along the common boundary line with the following properties. This buffer shall be located within an easement that may be a part of a residential lot. The buffer shall be maintained by the Homeowners Association for the proposed subdivision.
 - 1809 Rolesville Road, Wake Forest, Wake County PIN # 1767375272, Book 12777, Page 1559;
 - 3813 Taviston Court, Wake Forest, Wake County PIN # 1767377282, Book 12779, Page 3611;
 - 3820 Taviston Court, Wake Forest, Wake County PIN # 1767407083, Book 17887, Page 672;
 - 3813 Arbor Rose Lane, Wake Forest, Wake County PIN # 1767472196, Book 9496, Page 2630;
 - 3816 Arbor Rose Lane, Wake Forest, Wake County PIN # 1767474134, Book 16324, Page 1810;
 - 3812 Arbor Rose Lane, Wake Forest, Wake County PIN # 1767465953, Book 11390, Page 1138;
 - 3804 Arbor Rose Lane, Wake Forest, Wake County PIN # 1767466746, Book 13327, Page 1152;
 - 1725 Rolesville Road, Wake Forest, Wake County, PIN # 1767 38 7170, Book 17107, Page 582;
 - 1727 Rolesville Road, Wake Forest, Wake County, PIN # 1767 38 8813; Book 3750, Page 591; and
 - 1709 Rolesville Road, Wake Forest, Wake County, PIN # 1767 38 9615; Book 4572, Page 246.

- Conditions Applicable to townhomes only:**
- No townhome building shall exceed six (6) units.
 - The minimum square footage for townhomes shall be 1,200 square feet.

LEGEND



PARKING SUMMARY

REQUIRED PARKING		
SINGLE FAMILY UNITS	2 SPACES PER DWELLING UNIT	
TOWNHOMES	2 SPACES PER DWELLING UNIT PLUS 1/2 PER BEDROOM OVER TWO BEDROOMS PLUS 1 VISITOR SPACE FOR EACH 4 FOUR DWELLING UNITS	
	PHASE 1	PHASE 2
SINGLE FAMILY UNITS	72	105
TOWNHOMES (3-BEDROOM)	49 (INCL. 18 END UNITS)	71 (INCL. 28 END UNITS)
VISITOR PARKING	13	18
MAIL KIOSK PARKING	7	5
TOTAL SPACES REQUIRED	287	411
PROVIDED PARKING		
	PHASE 1	PHASE 2
GARAGE PARKING	121	176
SINGLE FAMILY	72 UNITS X 1 SPACE = 72	105 UNITS X 1 SPACE = 105
TOWNHOMES	49 UNITS X 1 SPACE = 49	71 UNITS X 1 SPACE = 71
DRIVEWAY PARKING*	139	204
SINGLE FAMILY	72 UNITS X 1 SPACE = 72	105 UNITS X 1 SPACE = 105
TOWNHOMES	(18 END UNITS X 2 SPACES) + (31 UNITS X 1 SPACE) = 67	(28 END UNITS X 2 SPACES) + (43 UNITS X 1 SPACE) = 99
PARKING LOT SPACES (PROVIDED TO SERVE MAIL KIOSKS AND VISITOR SPOTS)	40	61
TOAL PROVIDED PARKING	300	441

*NOTE: TOWNHOME END UNITS PROVIDE 2 DRIVEWAY SPACES

OPEN SPACE CALCULATIONS

PHASE	AREA (AC)	REQUIRED 10% GROSS AREA	PROVIDED
		TOTAL (ACTIVE) (AC)	TOTAL (ACTIVE) (AC)
PHASE 1	41.06	4.11 (2.06)	5.76 (2.06)
PHASE 2	50.61	5.06 (2.53)	8.97 (2.68)
TOTAL	91.67		14.73 (4.74)

PUBLIC IMPROVEMENT QUANTITY TABLE

PHASE	1	2
NUMBER OF LOT(S)	297	
LOT NUMBER(S) BY PHASE	1-60, 126-129, 170-185, 194-216, 280-297	61-125, 130-169, 186-193, 217-279
NUMBER OF SINGLE FAMILY UNITS	72	105
NUMBER OF TOWNHOME UNITS	49	71
LIVABLE BUILDINGS	121	176
OPEN SPACE?	YES	YES
NUMBER OF OPEN SPACE LOTS (AC)	5 (5.76)	14 (8.97)
PUBLIC WATER (LF)	5,860	6,610
PUBLIC SEWER (LF)	5,420	6,760
PUBLIC FORCEMAIN (LF)	4,600	0
PUBLIC STREET (LF) - FULL	5,670	6,930
PUBLIC STREET (LF) - PARTIAL	2,830	0
PUBLIC SIDEWALK (LF)	10,550	13,365
NUMBER OF STREET SIGNS	21	12
WATER SERVICE STUBS	123	176
SEWER SERVICE STUBS	122	176

MAIL KIOSK CALCULATIONS

NUMBER OF MAIL BOXES (UNITS)	REQUIRED PARKING SPACES
52 OR LESS	2
53-78	3
79-104	4
105 OR MORE	4 PLUS 1 PER EACH ADDITIONAL 26 MAIL BOXES

MAIL KIOSK AREA 1 (LOTS 1-177)

MINIMUM REQUIRED PARKING SPACES:	4 + 1 x (177-105) / 26 = 6.77 SPACES TOTAL REQUIRED: 7 SPACES (1 ADA SPACE)
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MAIL KIOSK AREA 2 (LOTS 178-297)

MINIMUM REQUIRED PARKING SPACES:	4 + 1 x (120-105) / 26 = 4.58 SPACES TOTAL REQUIRED: 5 SPACES (1 ADA SPACE)
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STORMWATER SITE DATA

IMPERVIOUS BREAKDOWN FOR LOTS

	# OF LOTS	MAX. IMPERVIOUS ALLOWANCE (SF)	TOTAL IMPERVIOUS (SF)	TOTAL IMPERVIOUS (AC)
22' TOWNHOME	120	1,500	180,000	4.13
SHALLOW LOT	86	3,600	301,000	6.91
DEEP LOT	91	3,600	318,500	7.31
TOTAL UNITS	297	-	799,500	18.35

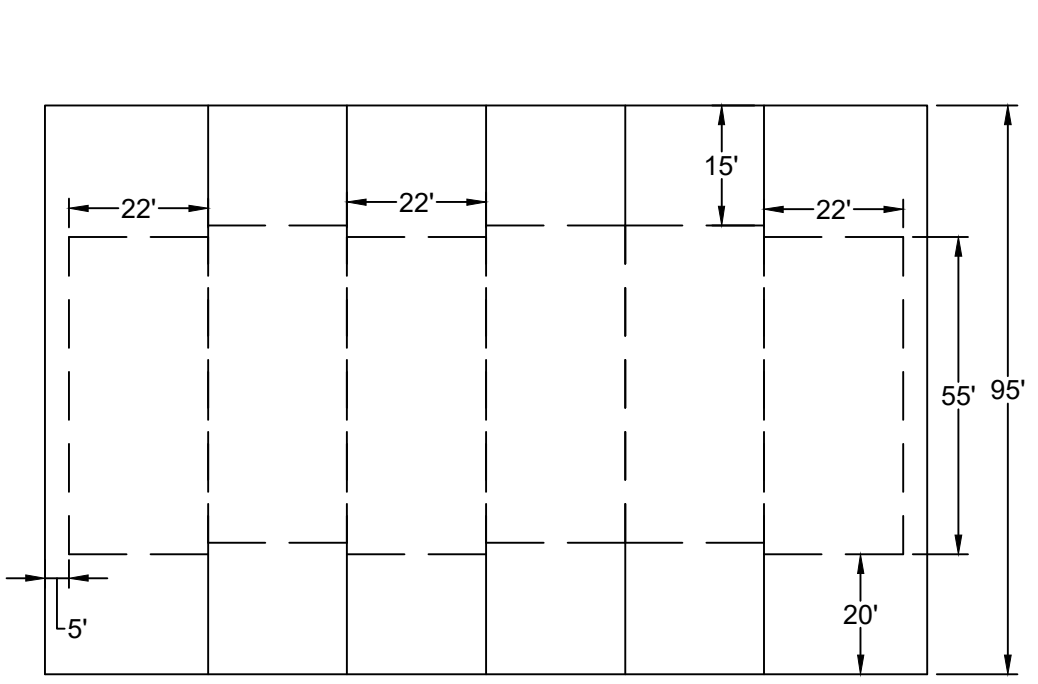
IMPERVIOUS BREAKDOWN FOR TOTAL SITE

	AREA (SF)	AREA (AC)
ONSITE SIDEWALK	160,674	3.69
ONSITE ROAD	407,189	9.35
LOT - ROOF	535,666	12.30
LOT - DRIVEWAY	131,917	3.03
LOT - SIDEWALK	131,917	3.03
TOTAL IMPERVIOUS	1,367,363	31.40

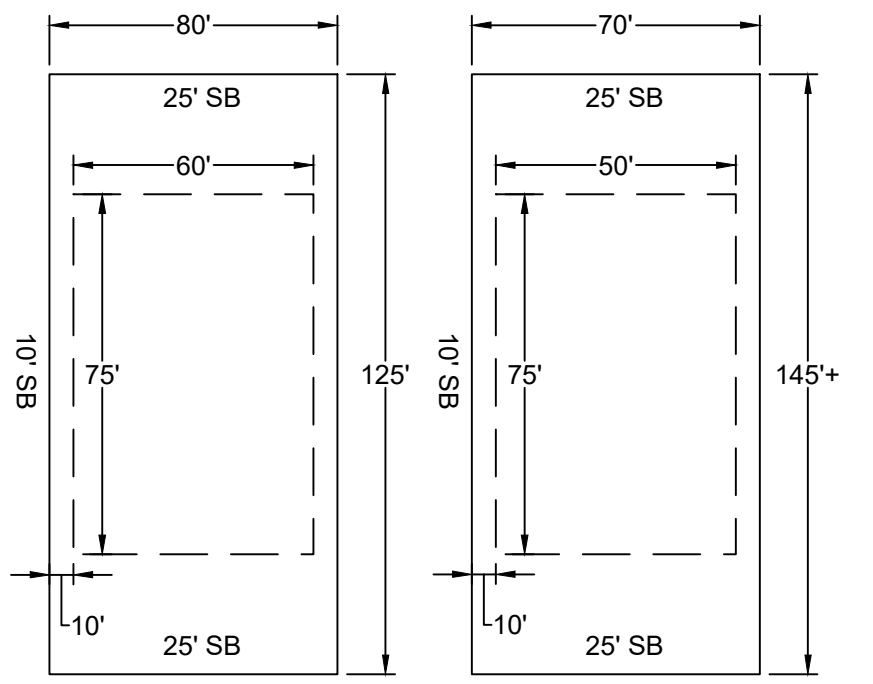
SITE DATA TABLE

PROJECT NAME:	ROLESVILLE CROSSING
APPLICANT:	HOPPER COMMUNITIES
PIN(S):	1767-48-3143 1767-58-6083
DEED REFERENCE:	D.B. 005456 PG. 00627 D.B. 009828 PG. 00902
PLAT REFERENCE:	BM1998-01776
PROPERTY ADDRESS:	1801 ROLESVILLE RD ROLESVILLE, NC 27587
EXISTING ZONING:	R-30 (WAKE COUNTY)
PROPOSED ZONING:	R-3-CZ
CURRENT USE:	RESIDENTIAL
PROPOSED USE:	RESIDENTIAL
UNIT COUNT:	SINGLE FAMILY: 177 TOWNHOUSE: 120
TOTAL PROJECT AREA:	91.39 AC
TOTAL DISTURBED AREA:	90.1 AC
TOWNHOUSE AREA (DENSITY):	15.00 ACRES (8.0 DU/AC)
SINGLE FAMILY AREA (DENSITY):	76.39 ACRES (2.32 DU/AC)
PROPOSED NEW PUBLIC R/W DEDICATION	ROLESVILLE ROAD: 20' R/W (50' FROM CENTER LINE) MITCHELL MILL ROAD: 25' DEDICATION (55' FROM CENTER LINE) INTERNAL ROADS: 50' AND 60' R/W
PROJECT AREA AFTER R/W DEDICATION	90.65 AC
RIVER BASIN:	NEUSE
SURFACE WATER CLASSIFICATION:	C, NSW
WATERSHED:	BUFFALO CREEK
BUILDING SETBACKS (SINGLE FAMILY, DETACHED RESIDENTIAL):	
FRONT:	25'
CORNER:	15'
SIDE:	10'
REAR:	25'
LOT WIDTH:	65'
MINIMUM LOT AREA:	6,000 SF
BUILDING SETBACKS (TOWNHOUSES):	
FRONT:	15' (20' FOR SINGLE CAR GARAGE)
CORNER:	10'
SIDE:	0' WITH 30' MINIMUM BETWEEN STRUCTURES
REAR:	15'
LOT WIDTH:	20'

TYPICAL LOT DIMENSIONS
N.T.S.



TYPICAL LOT DIMENSIONS "TOWNHOMES"



TYPICAL SHALLOW LOT DIMENSIONS "SINGLE FAMILY"
3,500 SF IMPERVIOUS

TYPICAL DEEP LOT DIMENSIONS "SINGLE FAMILY"
3,500 SF IMPERVIOUS



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DATE: 09/17/2021
DRAWN BY: R. WINGATE
DESIGNED BY: P. BARBEAU
CHECKED BY: P. BARBEAU
SCALE: AS SHOWN

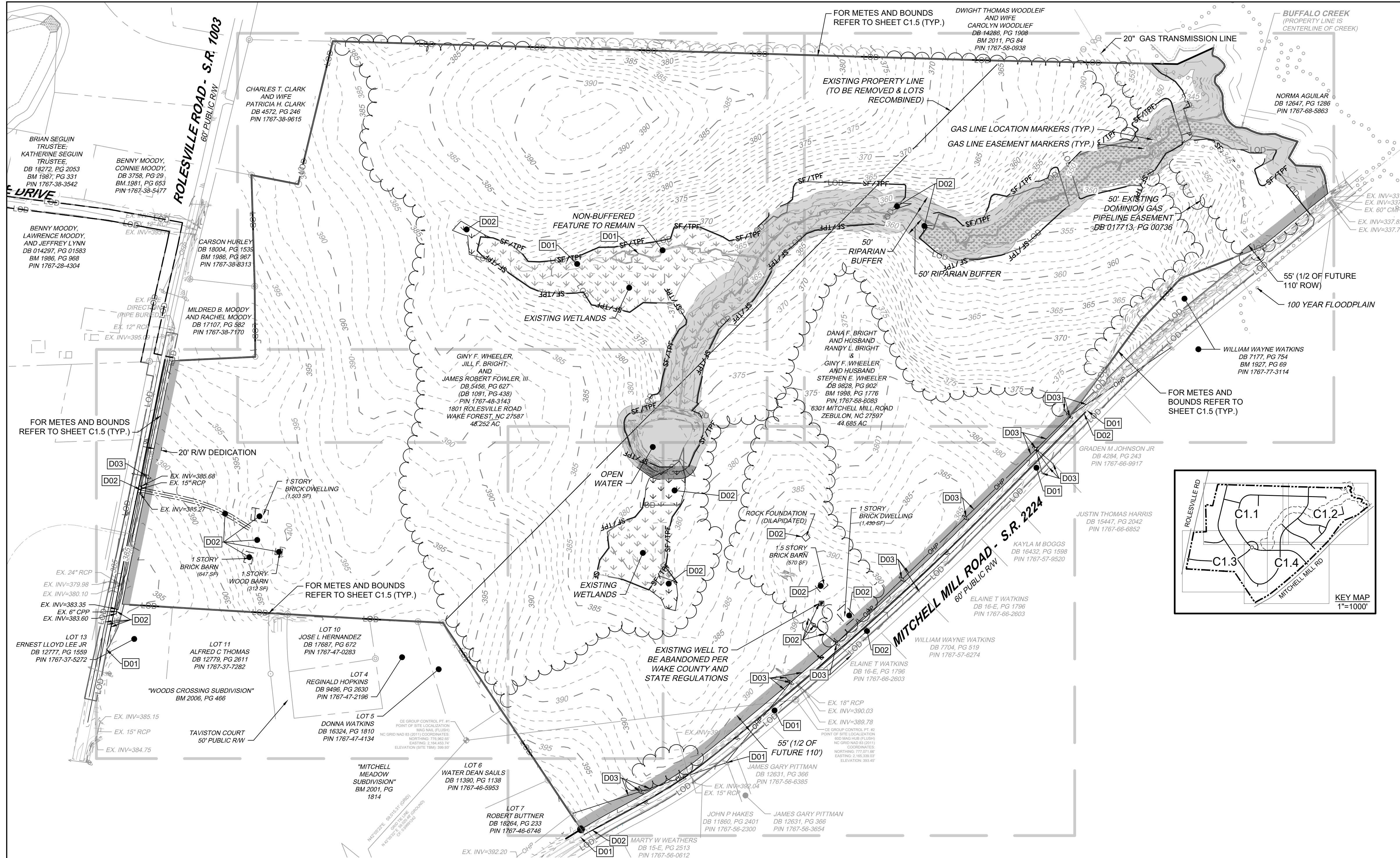
TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

PROJECT NOTES AND SITE DETAILS

JOB NO. 43398
SHEET NO. C0.0

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



SURVEY NOTES

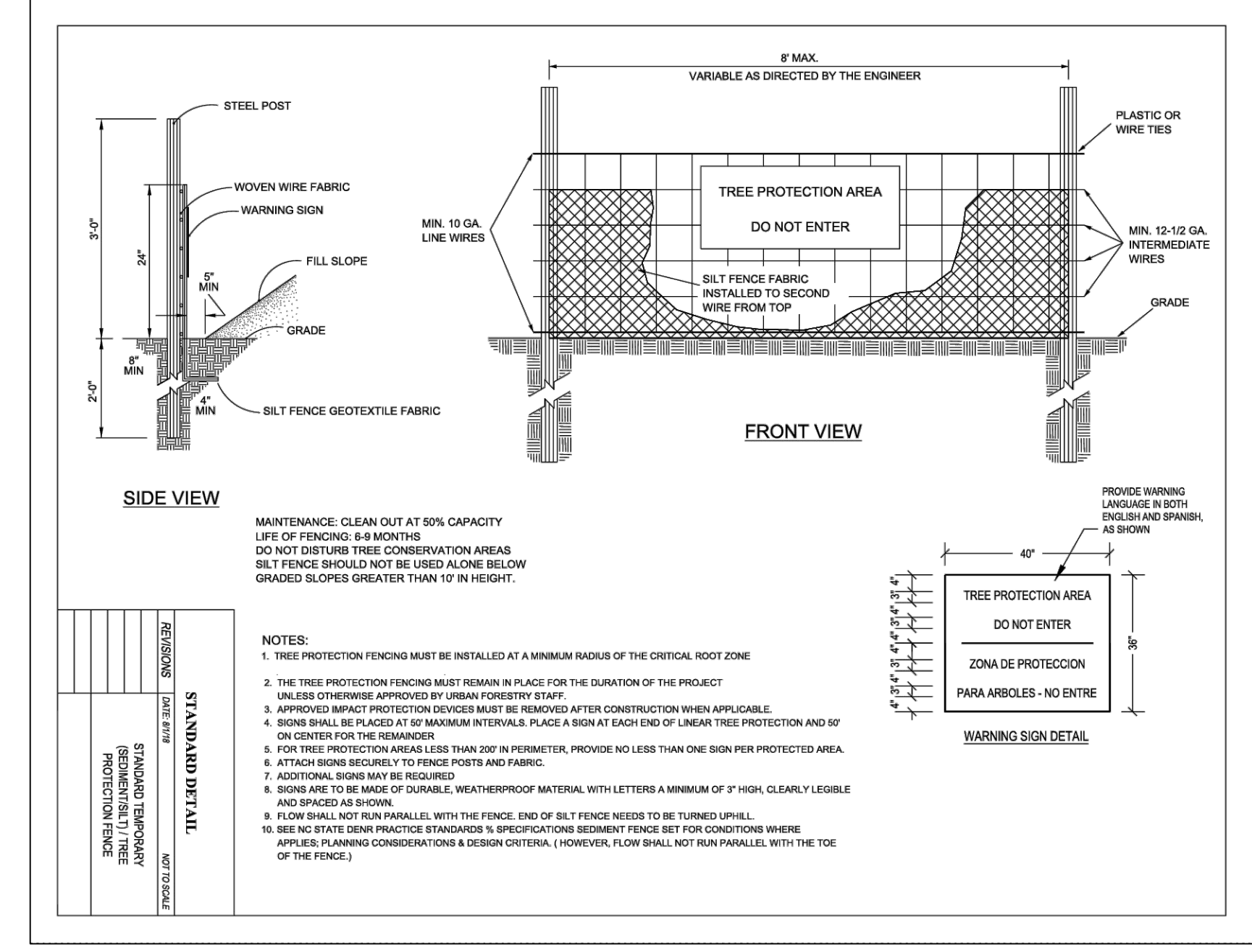
- ON SITE BOUNDARY INFORMATION IS TAKEN FROM A SURVEY BY TIMMONS GROUP DATED 08/19/2019. OFFSITE TOPOGRAPHY AND PLANIMETRIC INFORMATION FROM OTHER SOURCES AND HAS NOT BEEN FIELD VERIFIED BY TIMMONS GROUP. ONSITE TOPOGRAPHY RECEIVED FROM THE CE GROUP ON 01/04/2021
- ONSITE WETLAND LOCATION AND STREAM DELINEATION BY S&EC, PA
- ALL DISTANCES SHOWN ON SURVEY ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED.
- THIS SURVEY DOES NOT REPRESENT A TITLE SEARCH BY THIS FIRM. BASIS OF BEARING SHOWN HEREON IS NC GRID NAD 83 (NSRS 2007).
- VERTICAL DATUM SHOWN HEREON IS NAVD88.
- OTHER SOURCES OF INFORMATION INCLUDE CITY OF RALEIGH GIS AND AERIAL IMAGERY.
- NOT LOCATED IN FLOOD HAZARD AREA PER FEMA MAP #3720176600J (EFFECTIVE 05/02/2006).
- RECORDED PROPERTY DATA:
 - 9.1. DB 005456, PG 00627
 - 9.2. DB 009828, PG 00902
- EXISTING IMPERVIOUS AREA = 0.0 ACRES
- THE UTILITIES ON THESE PLANS ARE APPROXIMATE ONLY, AND ARE NOT ACCURATE FOR CONSTRUCTION PURPOSES. FOR FIELD MARKS CALL 1-800-632-4949.
- OFFSITE TOPOGRAPHY FROM WAKE COUNTY GIS.

DEMOLITION KEYNOTES	
NUMBER	DESCRIPTION
D01	EXISTING FEATURE TO REMAIN.
D02	REMOVE EXISTING FEATURE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. CONTRACTOR TO COORDINATE AS NEEDED WITH LOCAL MUNICIPALITY, INSPECTORS, AND/OR UTILITY COMPANIES.
D03	RELOCATE AND MODIFY EXISTING FEATURE TO REMAIN IN SERVICE IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS. CONTRACTOR TO COORDINATE AS NEEDED WITH LOCAL MUNICIPALITY, INSPECTORS, AND/OR UTILITY COMPANIES.

LEGEND	
SYMBOL	DESCRIPTION
(Dashed line with circles)	100 YEAR FLOODPLAIN
(Solid line)	TREE LINE
(Dashed line with triangles)	50' RIPARIAN BUFFER
(Wavy line)	WETLANDS
(Dotted line)	LIMITS OF DISTURBANCE

DEMOLITION NOTES

- ALL UTILITIES OR STRUCTURES NOT INDICATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN AND BE PROTECTED FROM DAMAGE. CONTRACTOR TO OBTAIN, REFERENCE, AND UTILIZE ALL AVAILABLE ENVIRONMENTAL REPORTS (PHASE 1 ESA, ASBESTOS, ETC.) FROM DEVELOPER.
- ALL WASTE MATERIAL GENERATED FROM CLEARING AND DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS.
- REMOVE/DEMOLISH/ABANDON AFTER EROSION CONTROL MEASURES ARE IN PLACE AN APPROVAL OF THE INSPECTOR. REFER TO EROSION CONTROL PLAN.
- REMOVE TOPSOIL AND STOCKPILE APPROPRIATELY ON-SITE. ON-SITE TEMPORARY STOCKPILES SHALL BE LOCATED WITHIN CONSTRUCTION LIMITS.
- DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED BY THE OWNER OR OTHERS EXCEPT WHEN PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE ACCEPTABLE TEMPORARY UTILITY SERVICES. (1) NOTIFY OWNER NOT LESS THAN ONE WEEK IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS. (2) DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT RECEIVING OWNER WRITTEN PERMISSION. (3) COORDINATE ALL UTILITY RELOCATION WITH APPROPRIATE UTILITY PROVIDER.
- ALL PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT WITH NEW CONSTRUCTION. ANY EXISTING PAVEMENT, SIDEWALK, CURB & GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED AND REPAIRED PER THE SPECIFICATIONS AND DETAILS OR TO MATCH EXISTING CONDITIONS (WHETHER OR NOT SHOWN ON THE DRAWINGS TO BE REMOVED). UTILITY INSTALLATIONS MAY UTILIZE OPEN CUT OF PAVEMENTS UNLESS INDICATED OTHERWISE. TRENCH IN EXISTING ASPHALT SHALL BE PATCHED PER PAVEMENT REPAIR DETAIL.
- PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES. SHOULD DAMAGE OCCUR, NOTIFY ARCHITECT IMMEDIATELY.
- SUBSURFACE FEATURES ARE SHOWN IN APPROXIMATE LOCATION. CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY EXPLORATION TO DETERMINE UTILITY LOCATIONS AND DEPTHS.
- THE CONTRACTOR SHALL USE NC ONE CALL (811) TO LOCATE ALL UNDERGROUND UTILITIES.
- CONTRACTOR TO VERIFY LOCATIONS AND SIZES OF ALL EXISTING FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION. REPAIR AND REPLACE ANY DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR REMOVING OR ABANDONING ALL EXISTING UTILITIES AND STRUCTURES REQUIRED TO COMPLETE SITE CONSTRUCTION, EITHER ONSITE OR IN PUBLIC ROW, IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
- WATER AND SEWER ABANDONMENT SHALL BE DONE IN ACCORDANCE WITH CITY OF RALEIGH STANDARDS INCLUDING DISCONNECT FROM THE MAIN AND REMOVAL OF SERVICES FROM THE RIGHT-OF-WAY.
- ANY EXISTING UNIDENTIFIED SEPTIC SYSTEMS AND WELLS FOUND ON SITE SHALL BE REMOVED OR ABANDONED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AT NO CHARGE TO THE OWNER
- VERIFY ALL ILLUSTRATED KNOWN UNDERGROUND ELEMENTS. EXERCISE REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS. NOTIFY THE ARCHITECT IMMEDIATELY IF UNKNOWN ELEMENTS ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN.
- CONTRACTOR SHALL COORDINATE ALL CONNECTIONS, RELOCATION AND DEMOLITION WORK WITH THE APPROPRIATE COMPANY OR JURISDICTION HAVING AUTHORITY AND SHALL OBTAIN ANY PERMITS AS REQUIRED.
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, AND OSHA REGULATIONS.
- EXISTING MANHOLES, VALVE BOXES, VAULTS, CLEANOUTS, UTILITY POLES ETC. TO REMAIN WITHIN THE GRADING LIMITS SHALL BE ADJUSTED AS NEEDED TO FUNCTION PROPERLY WITH THE PROPOSED FINISHED GRADES (WHETHER OR NOT INDICATED TO BE MODIFIED).
- GENERAL CONTRACTOR TO COORDINATE ALL PEDESTRIAN ACCESS PATHS, LOCATIONS, LIGHTING ETC. WITH THE DEVELOPER.
- CONTRACTOR SHALL NOTIFY APPROPRIATE DEPARTMENTS PRIOR TO BEGINNING ANY WORK WITHIN PUBLIC RIGHT-OF-WAY.



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DATE: 09/17/2021
 DRAWN BY: R. WINGATE
 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

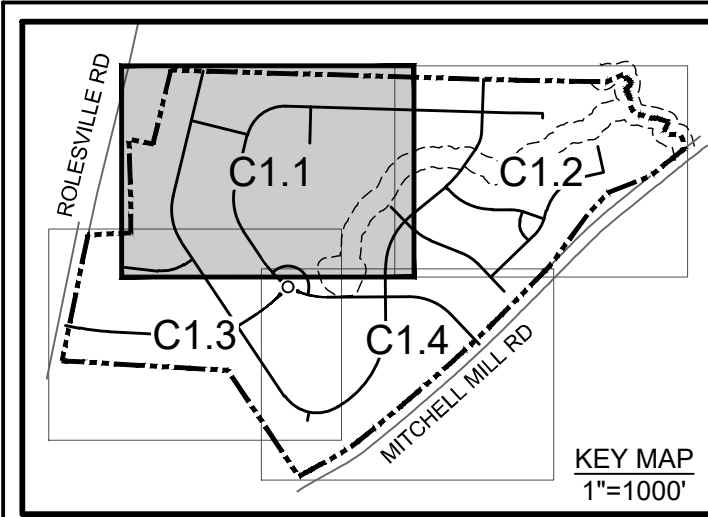
TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

OVERALL EXISTING CONDITIONS AND DEMOLITION PLAN

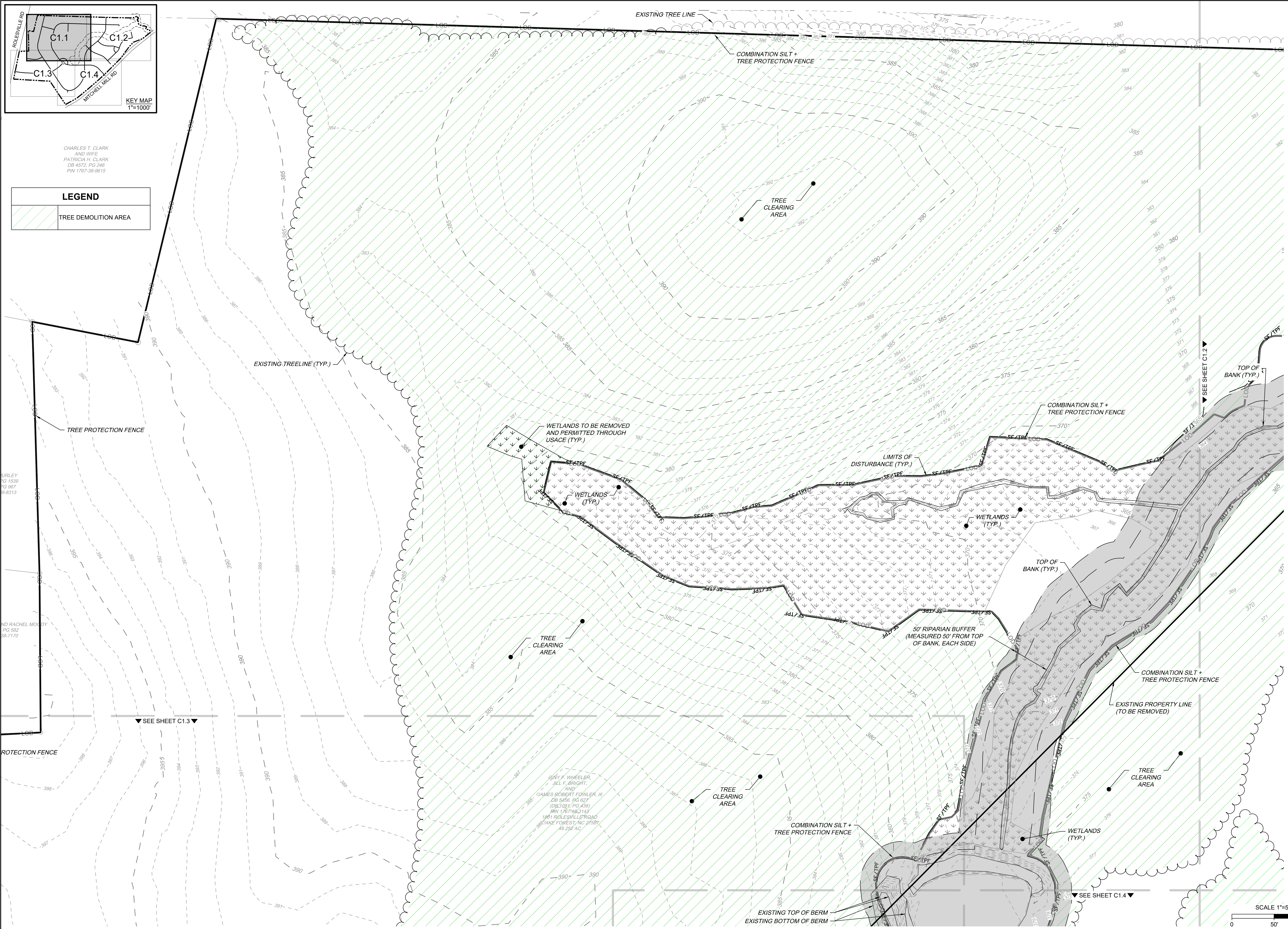
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CHARLES T. CLARK
AND WIFE
PATRICIA H. CLARK
DB-4572, PG 246
PIN 1767-38-9615

LEGEND	
	TREE DEMOLITION AREA



WURLEY
PG 1539
PG 967
S-43113

AND RACHEL MONDY
PG 582
38-7170

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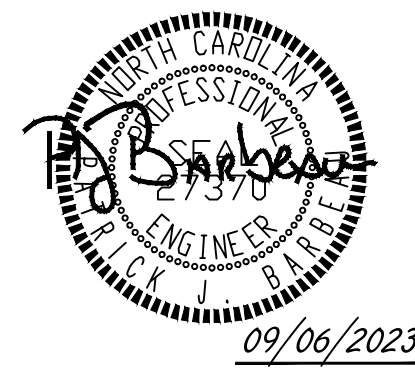
PROTECTION FENCE

SEE SHEET C1.3

GINY F. WHEELER,
JILL F. BRIGHT,
AND
JAMES ROBERT FOWLER, III
DB 5456, PG 627
(DB 2108 V, PG 438)
PIN 1767-38-3143
1891 ROLESVILLE FERRY ROAD
WAKE FOREST, NC 27527
46.256 AC

COMBINATION SILT +
TREE PROTECTION FENCE

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DATE	REVISION DESCRIPTION
04/08/2022	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

DATE	09/17/2021
DRAWN BY	R. WINGATE
DESIGNED BY	P. BARBEAU
CHECKED BY	P. BARBEAU
SCALE	AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

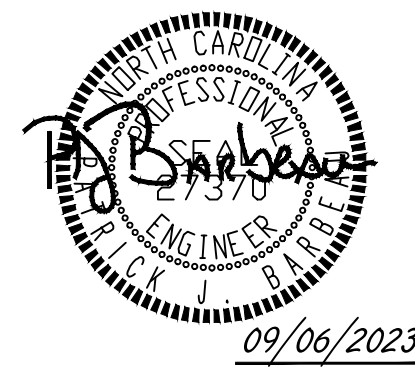
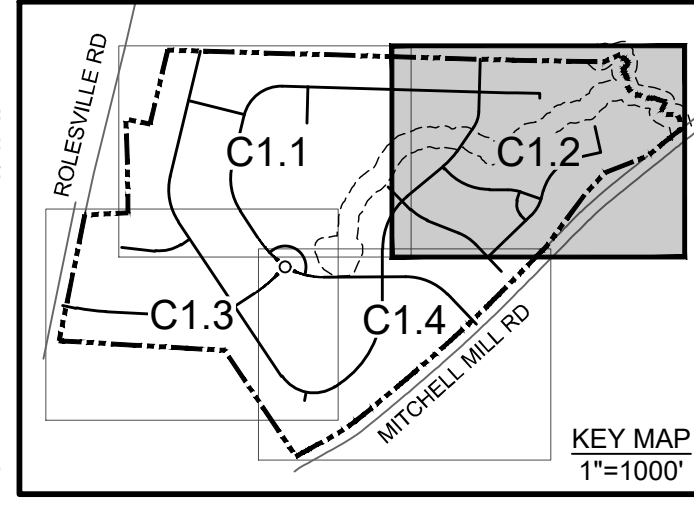
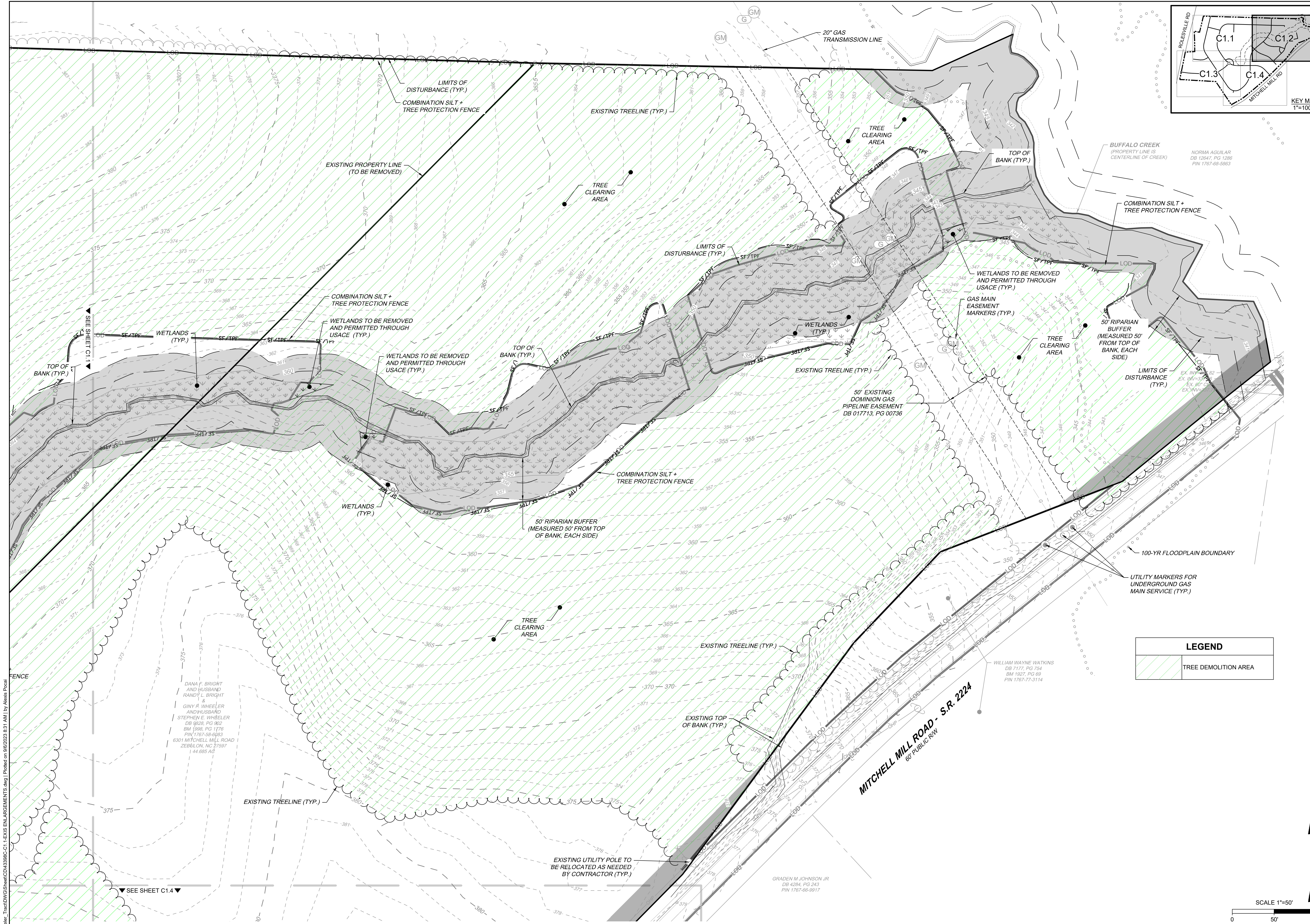
ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

EXISTING CONDITIONS AND DEMOLITION PLAN

JOB NO.	43398
SHEET NO.	C1.1

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REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2023
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2023
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2023
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE
 09/17/2021

DRAWN BY
 R. WINGATE

DESIGNED BY
 P. BARBEAU

CHECKED BY
 P. BARBEAU

SCALE
 AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

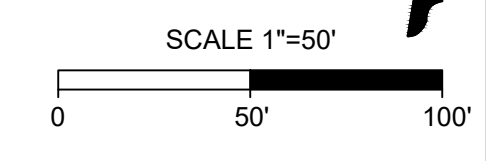
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

EXISTING CONDITIONS AND DEMOLITION PLAN

JOB NO.
43398

SHEET NO.
C1.2

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LEGEND	
	TREE DEMOLITION AREA

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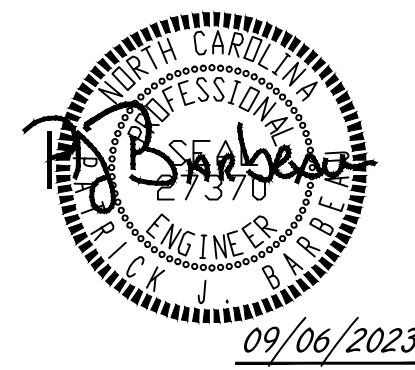
DANA F. BRIGHT
 AND HUSBAND
 RANDY L. BRIGHT
 &
 GINY R. WHEELER
 AND HUSBAND
 STEPHEN E. WHEELER
 DB 9828, PG 902
 BM 1988, PG 1176
 PIN 1787-59-6183
 6301 MITCHELL MILL ROAD
 ZEBULON, NC 27597
 144.685 AC

WILLIAM WAYNE WATKINS
 DB 7177, PG 754
 BM 1927, PG 69
 PIN 1787-77-3114

GRADEN M. JOHNSON JR.
 DB 4284, PG 243
 PIN 1787-66-8917

EXISTING UTILITY POLE TO
 BE RELOCATED AS NEEDED
 BY CONTRACTOR (TYP.)

SEE SHEET C1.4



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DATE
 09/17/2021
 DRAWN BY
 R. WINGATE
 DESIGNED BY
 P. BARBEAU
 CHECKED BY
 P. BARBEAU
 SCALE
 AS SHOWN

TIMMONS GROUP

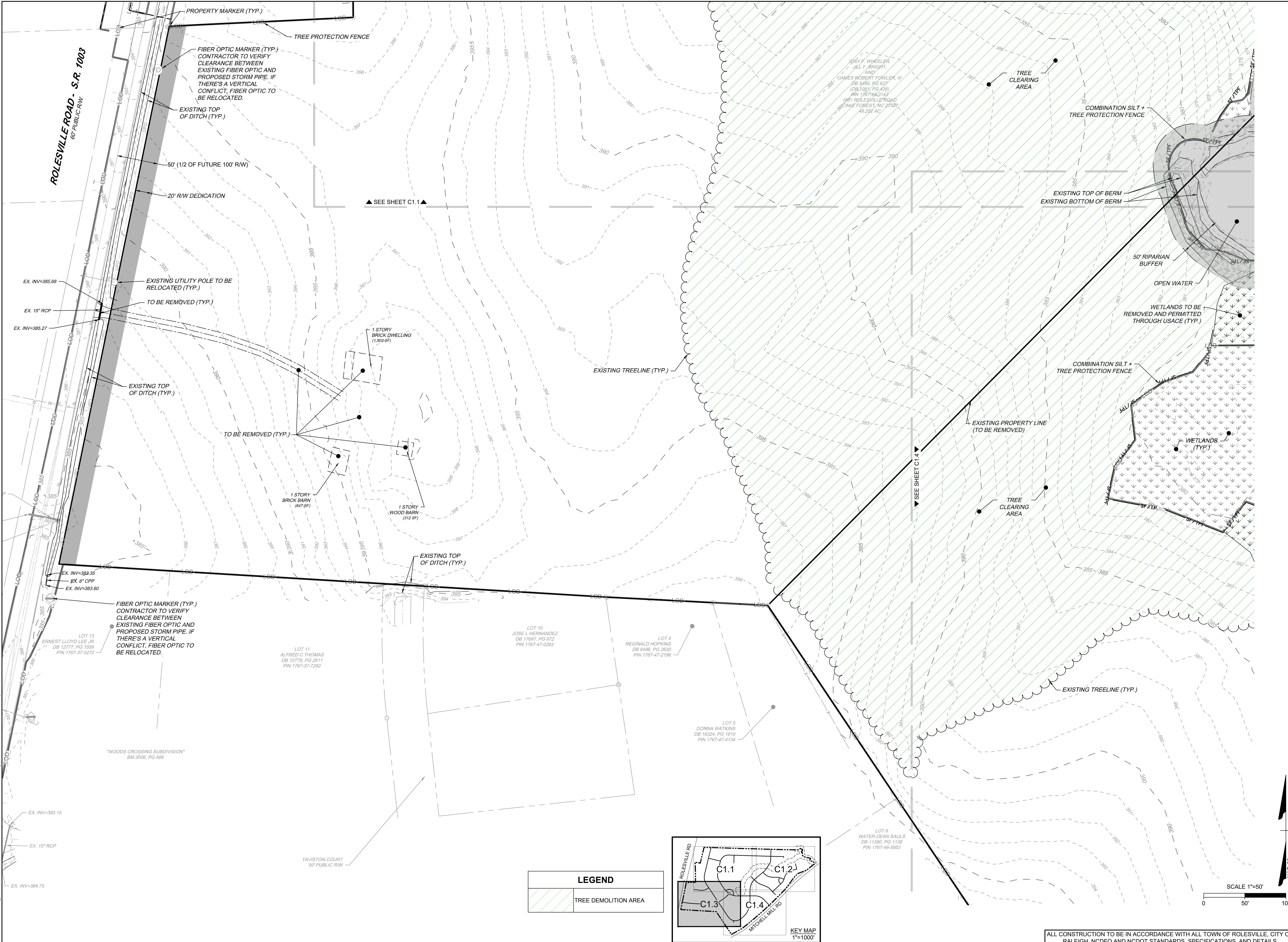
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
EXISTING CONDITIONS AND DEMOLITION PLAN

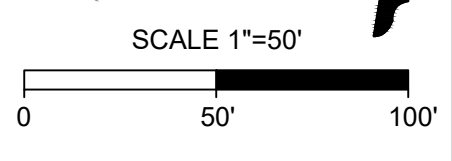
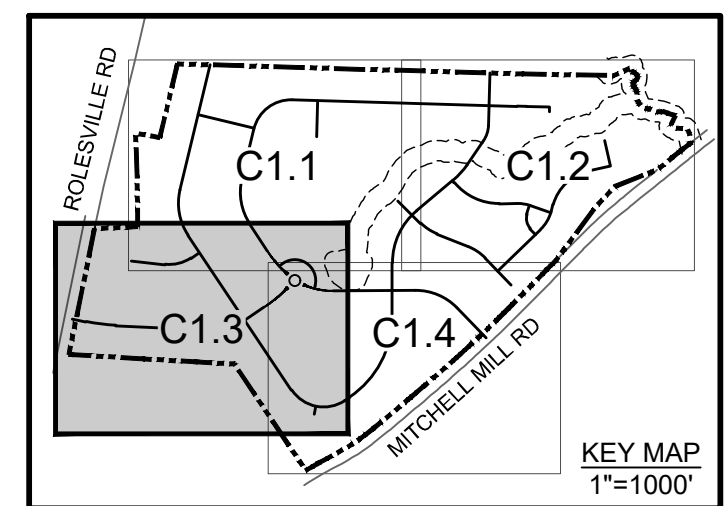
JOB NO.
43398
 SHEET NO.
C1.3

REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2022
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2022
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2022
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

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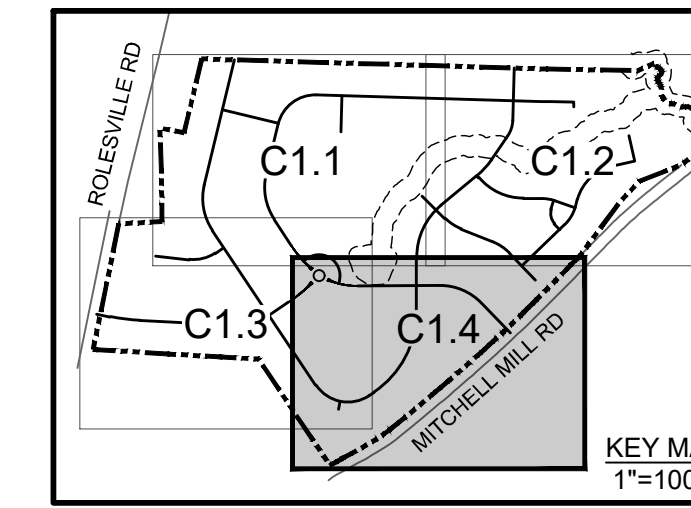
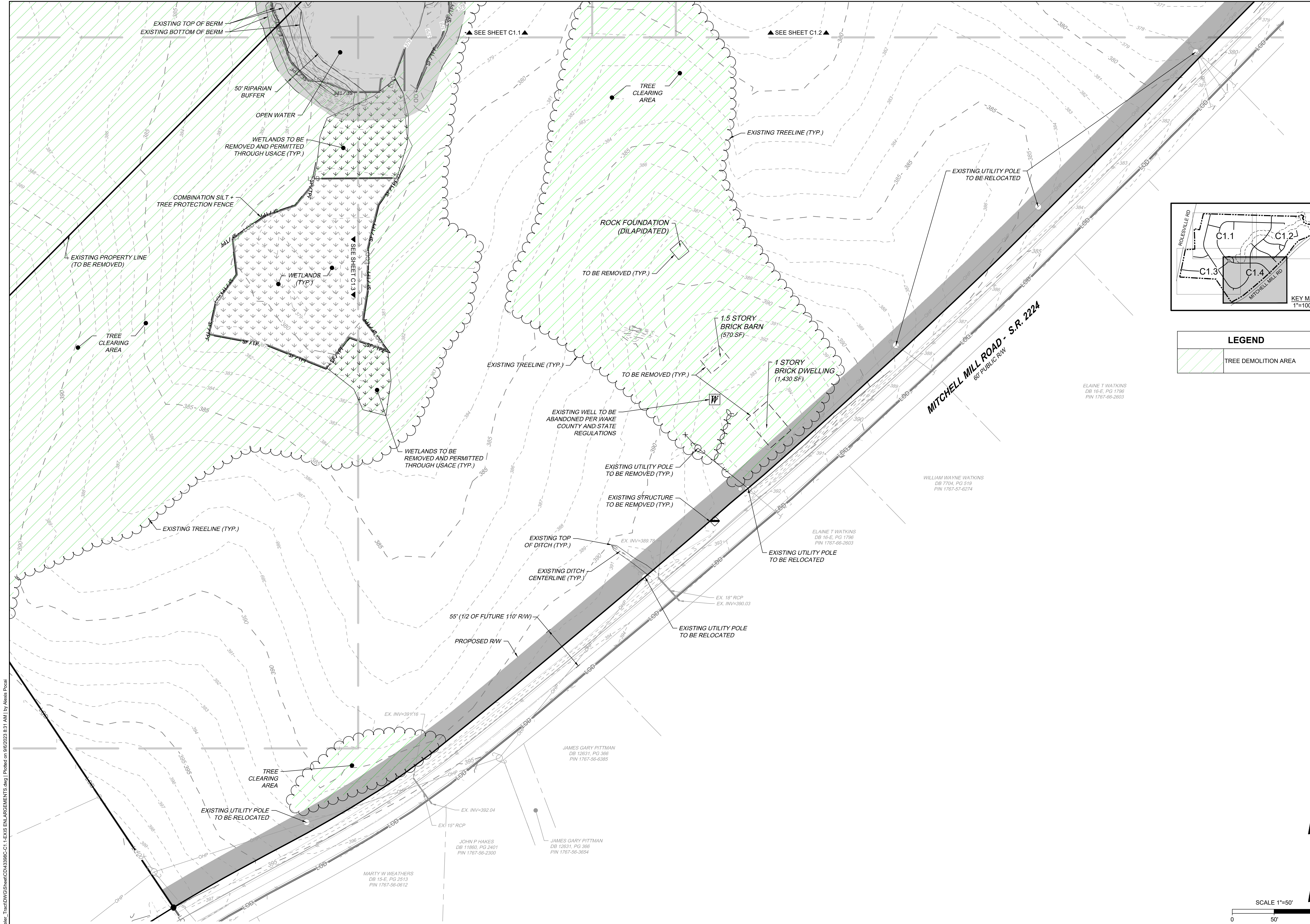


LEGEND	
	TREE DEMOLITION AREA

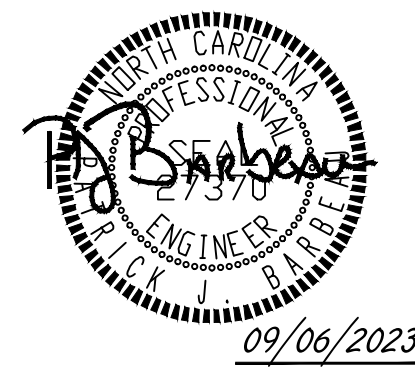
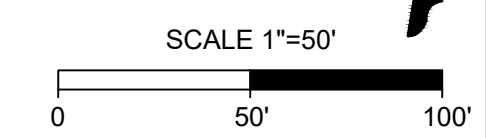


ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

S:\324243398-Wheeler_Timed\DWG\Sheet\C1.3-EXIS ENLARGEMENTS.dwg | Plotted on 08/22/2023 8:31 AM | by Alois Pical



LEGEND	
[Hatched Pattern]	TREE DEMOLITION AREA



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DATE
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 06/24/2022
 07/22/2022
 04/06/2023
 09/06/2023

REVISION DESCRIPTION
 REVISIONS PER WAKE COUNTY COMMENTS
 REVISIONS PER WAKE COUNTY COMMENTS
 CONSTRUCTION DOCUMENT SUBMITTAL
 REVISIONS PER NCDOT COMMENTS
 REVISIONS PER CITY OF RALEIGH COMMENTS

DATE
 09/17/2021

DRAWN BY
R. WINGATE

DESIGNED BY
P. BARBEAU

CHECKED BY
P. BARBEAU

SCALE
AS SHOWN

JOB NO.
43398

SHEET NO.
C1.4

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

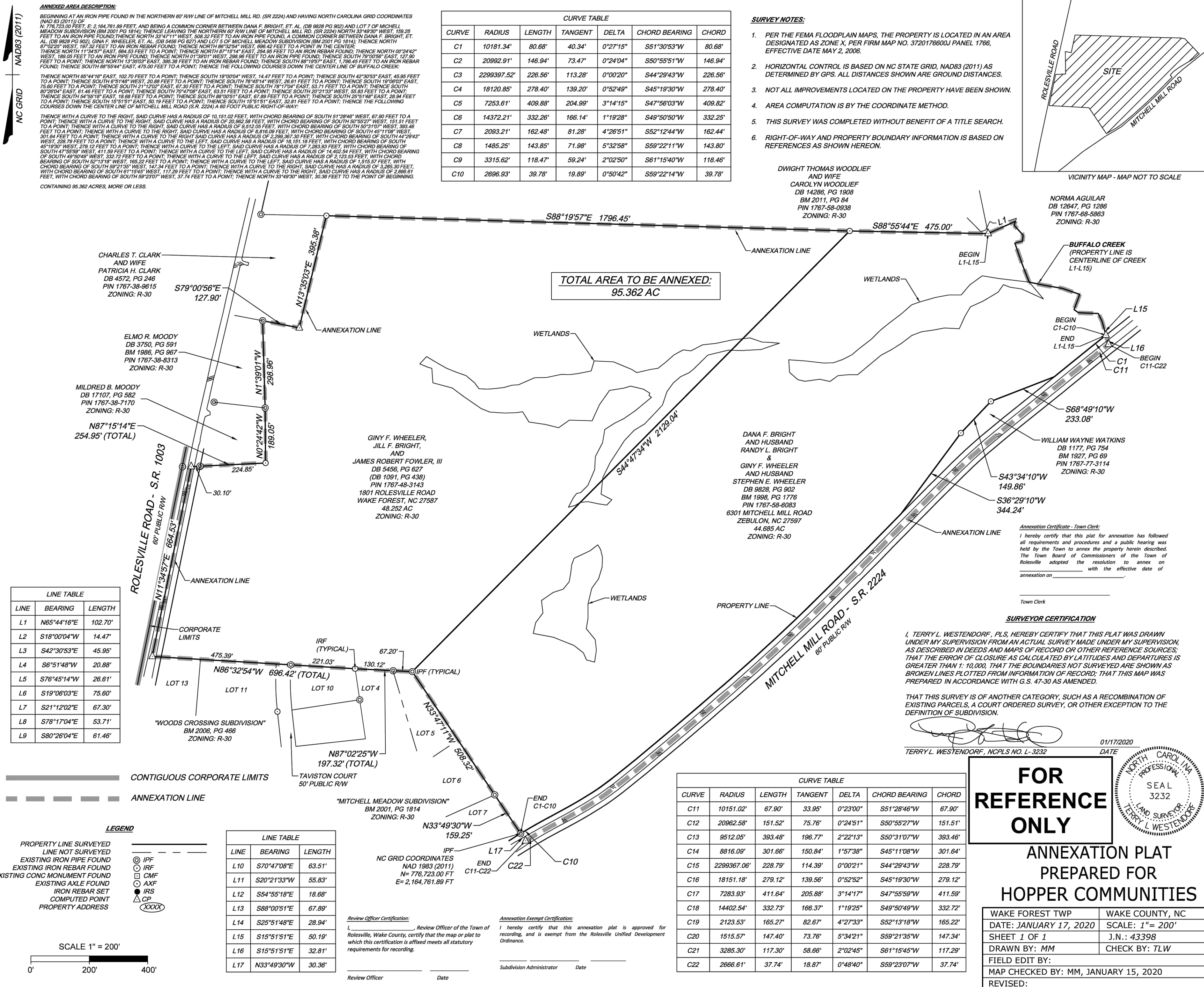
ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

EXISTING CONDITIONS AND DEMOLITION PLAN

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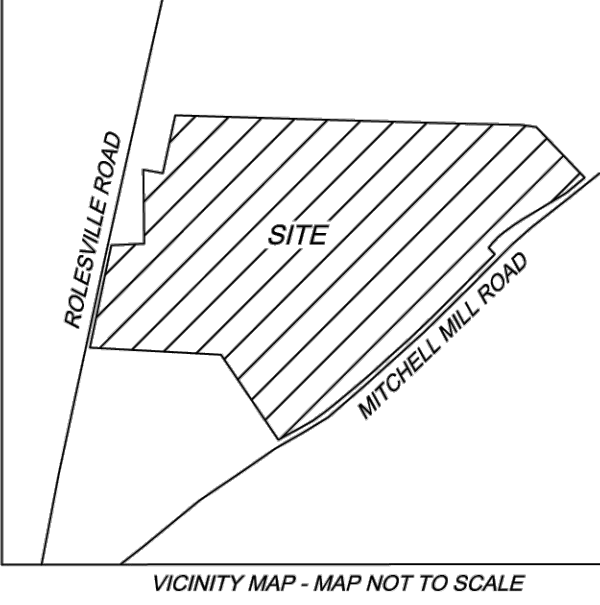
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



ANNEXED AREA DESCRIPTION:
 BEGINNING AT AN IRON PIPE FOUND IN THE NORTHERN 60' RW LINE OF MITCHELL MILL RD. (SR 2224) AND HAVING NORTH CAROLINA GRID COORDINATES (NAD 83 (2011)) OF N= 776,723.00 FEET; E= 2,164,761.89 FEET; AND BEING A COMMON CORNER BETWEEN DANA F. BRIGHT, ET AL. (DB 9828 PG 802) AND LOT 7 OF MITCHELL MEADOW SUBDIVISION (BM 2001 PG 1814); THENCE LEAVING THE NORTHERN 60' RW LINE OF MITCHELL MILL RD. (SR 2224) NORTH 33°49'30" WEST, 139.25 FEET TO AN IRON PIPE FOUND; THENCE NORTH 33°47'11" WEST, 508.32 FEET TO AN IRON PIPE FOUND, A COMMON CORNER BETWEEN DANA F. BRIGHT, ET AL. (DB 9828 PG 802), GINA F. WHEELER, ET AL. (DB 5458 PG 627) AND LOT 5 OF MITCHELL MEADOW SUBDIVISION (BM 2001 PG 1814); THENCE NORTH 87°02'25" WEST, 197.32 FEET TO AN IRON REBAR FOUND; THENCE NORTH 88°05'51" WEST, 698.42 FEET TO A POINT IN THE CENTER; THENCE NORTH 11°34'57" EAST, 884.53 FEET TO A POINT; THENCE NORTH 87°15'14" EAST, 254.95 FEET TO AN IRON REBAR FOUND; THENCE NORTH 00°24'42" WEST, 189.05 FEET TO AN IRON PIPE FOUND; THENCE NORTH 01°39'01" WEST, 298.96 FEET TO AN IRON PIPE FOUND; THENCE SOUTH 79°00'04" EAST, 127.90 FEET TO A POINT; THENCE NORTH 13°30'03" EAST, 395.38 FEET TO AN IRON REBAR FOUND; THENCE SOUTH 88°19'57" EAST, 1,798.45 FEET TO AN IRON REBAR FOUND; THENCE SOUTH 88°55'44" EAST, 475.00 FEET TO A POINT; THENCE THE FOLLOWING COURSES DOWN THE CENTER LINE OF BUFFALO CREEK:
 THENCE NORTH 65°41'16" EAST, 102.70 FEET TO A POINT; THENCE SOUTH 18°00'04" WEST, 14.47 FEET TO A POINT; THENCE SOUTH 42°30'53" EAST, 45.95 FEET TO A POINT; THENCE SOUTH 6°51'48" WEST, 20.88 FEET TO A POINT; THENCE SOUTH 78°45'14" WEST, 26.61 FEET TO A POINT; THENCE SOUTH 19°06'03" EAST, 75.60 FEET TO A POINT; THENCE SOUTH 21°12'02" EAST, 67.30 FEET TO A POINT; THENCE SOUTH 78°17'04" EAST, 53.71 FEET TO A POINT; THENCE SOUTH 80°26'04" EAST, 61.46 FEET TO A POINT; THENCE SOUTH 70°47'08" EAST, 63.51 FEET TO A POINT; THENCE SOUTH 20°21'33" WEST, 55.83 FEET TO A POINT; THENCE SOUTH 64°58'18" EAST, 18.68 FEET TO A POINT; THENCE SOUTH 88°00'51" EAST, 67.89 FEET TO A POINT; THENCE SOUTH 25°51'48" EAST, 28.94 FEET TO A POINT; THENCE SOUTH 15°51'51" EAST, 50.19 FEET TO A POINT; THENCE SOUTH 15°51'51" EAST, 32.81 FEET TO A POINT; THENCE THE FOLLOWING COURSES DOWN THE CENTER LINE OF MITCHELL MILL ROAD (S.R. 2224) A 60 FOOT PUBLIC RIGHT-OF-WAY:
 THENCE WITH A CURVE TO THE RIGHT, SAID CURVE HAS A RADIUS OF 10,151.02 FEET, WITH CHORD BEARING OF SOUTH 51°28'46" WEST, 67.90 FEET TO A POINT; THENCE WITH A CURVE TO THE RIGHT, SAID CURVE HAS A RADIUS OF 20,962.58 FEET, WITH CHORD BEARING OF SOUTH 50°55'27" WEST, 151.51 FEET TO A POINT; THENCE WITH A CURVE TO THE RIGHT, SAID CURVE HAS A RADIUS OF 9,512.05 FEET, WITH CHORD BEARING OF SOUTH 50°31'07" WEST, 393.46 FEET TO A POINT; THENCE WITH A CURVE TO THE RIGHT, SAID CURVE HAS A RADIUS OF 8,916.09 FEET, WITH CHORD BEARING OF SOUTH 45°11'08" WEST, 301.64 FEET TO A POINT; THENCE WITH A CURVE TO THE RIGHT, SAID CURVE HAS A RADIUS OF 2,299.367 FEET, WITH CHORD BEARING OF SOUTH 44°29'43" WEST, 228.79 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT, SAID CURVE HAS A RADIUS OF 18,151.18 FEET, WITH CHORD BEARING OF SOUTH 45°19'30" WEST, 276.12 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT, SAID CURVE HAS A RADIUS OF 7,283.93 FEET, WITH CHORD BEARING OF SOUTH 47°55'59" WEST, 411.59 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT, SAID CURVE HAS A RADIUS OF 14,402.54 FEET, WITH CHORD BEARING OF SOUTH 49°58'49" WEST, 332.72 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT, SAID CURVE HAS A RADIUS OF 2,123.53 FEET, WITH CHORD BEARING OF SOUTH 49°58'49" WEST, 165.22 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT, SAID CURVE HAS A RADIUS OF 1,515.57 FEET, WITH CHORD BEARING OF SOUTH 52°13'18" WEST, 165.22 FEET TO A POINT; THENCE WITH A CURVE TO THE LEFT, SAID CURVE HAS A RADIUS OF 1,515.57 FEET, WITH CHORD BEARING OF SOUTH 59°21'35" WEST, 147.34 FEET TO A POINT; THENCE WITH A CURVE TO THE RIGHT, SAID CURVE HAS A RADIUS OF 3,285.30 FEET, WITH CHORD BEARING OF SOUTH 61°15'45" WEST, 112.29 FEET TO A POINT; THENCE WITH A CURVE TO THE RIGHT, SAID CURVE HAS A RADIUS OF 2,686.61 FEET, WITH CHORD BEARING OF SOUTH 59°23'07" WEST, 37.74 FEET TO A POINT; THENCE NORTH 33°49'30" WEST, 30.36 FEET TO THE POINT OF BEGINNING.
 CONTAINING 95.362 ACRES, MORE OR LESS.

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C1	10181.34'	80.68'	40.34'	0°27'15"	S51°30'53"W	80.68'
C2	20992.91'	146.94'	73.47'	0°24'04"	S50°55'51"W	146.94'
C3	2299397.52'	226.56'	113.28'	0°00'20"	S44°29'43"W	226.56'
C4	18120.85'	278.40'	139.20'	0°52'49"	S45°19'30"W	278.40'
C5	7253.61'	409.88'	204.99'	3°14'15"	S47°56'03"W	409.82'
C6	14372.21'	332.26'	166.14'	1°19'28"	S49°50'50"W	332.25'
C7	2093.21'	162.48'	81.28'	4°26'51"	S52°12'44"W	162.44'
C8	1485.25'	143.85'	71.98'	5°32'58"	S59°22'11"W	143.80'
C9	3315.62'	118.47'	59.24'	2°02'50"	S61°15'40"W	118.46'
C10	2696.93'	39.78'	19.89'	0°50'42"	S59°22'14"W	39.78'

- SURVEY NOTES:**
- PER THE FEMA FLOODPLAIN MAPS, THE PROPERTY IS LOCATED IN AN AREA DESIGNATED AS ZONE X, PER FIRM MAP NO. 3720176600J PANEL 1766, EFFECTIVE DATE MAY 2, 2006.
 - HORIZONTAL CONTROL IS BASED ON NC STATE GRID, NAD83 (2011) AS DETERMINED BY GPS. ALL DISTANCES SHOWN ARE GROUND DISTANCES.
 - NOT ALL IMPROVEMENTS LOCATED ON THE PROPERTY HAVE BEEN SHOWN.
 - AREA COMPUTATION IS BY THE COORDINATE METHOD.
 - THIS SURVEY WAS COMPLETED WITHOUT BENEFIT OF A TITLE SEARCH.
 - RIGHT-OF-WAY AND PROPERTY BOUNDARY INFORMATION IS BASED ON REFERENCES AS SHOWN HEREON.



TOTAL AREA TO BE ANNEXED:
95.362 AC

LINE TABLE		
LINE	BEARING	LENGTH
L1	N65°44'16"E	102.70'
L2	S18°00'04"W	14.47'
L3	S42°30'53"E	45.95'
L4	S6°51'48"W	20.88'
L5	S76°45'14"W	26.61'
L6	S19°06'03"E	75.60'
L7	S21°12'02"E	67.30'
L8	S78°17'04"E	53.71'
L9	S80°26'04"E	61.46'

LINE TABLE		
LINE	BEARING	LENGTH
L10	S70°47'08"E	63.51'
L11	S20°21'33"W	55.83'
L12	S54°55'18"E	18.68'
L13	S88°00'51"E	67.89'
L14	S25°51'48"E	28.94'
L15	S15°51'51"E	50.19'
L16	S15°51'51"E	32.81'
L17	N33°49'30"W	30.36'

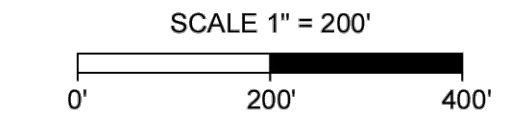
CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	CHORD BEARING	CHORD
C11	10151.02'	67.90'	33.95'	0°23'00"	S51°28'46"W	67.90'
C12	20962.58'	151.52'	75.76'	0°24'51"	S50°55'27"W	151.51'
C13	9512.05'	393.48'	196.77'	2°22'13"	S50°31'07"W	393.46'
C14	8816.09'	301.66'	150.84'	1°57'38"	S45°11'08"W	301.64'
C15	2299367.06'	228.79'	114.39'	0°00'21"	S44°29'43"W	228.79'
C16	18151.18'	279.12'	139.56'	0°52'52"	S45°19'30"W	279.12'
C17	7283.93'	411.64'	205.88'	3°14'17"	S47°55'59"W	411.59'
C18	14402.54'	332.73'	166.37'	1°19'25"	S49°50'49"W	332.72'
C19	2123.53'	165.27'	82.67'	4°27'33"	S52°13'18"W	165.22'
C20	1515.57'	147.40'	73.76'	5°34'21"	S59°21'35"W	147.34'
C21	3285.30'	117.30'	58.66'	2°02'45"	S61°15'45"W	117.29'
C22	2666.61'	37.74'	18.87'	0°48'40"	S59°23'07"W	37.74'

LEGEND

PROPERTY LINE SURVEYED
 LINE NOT SURVEYED
 EXISTING IRON PIPE FOUND
 EXISTING IRON REBAR FOUND
 EXISTING CONC MONUMENT FOUND
 EXISTING AXLE FOUND
 IRON REBAR SET
 COMPUTED POINT
 PROPERTY ADDRESS

--- CONTIGUOUS CORPORATE LIMITS
 - - - ANNEXATION LINE

IPF (TYPICAL)
 IRF (TYPICAL)
 CMF
 AXF
 IRS
 CP
 XXXX



Review Officer Certification:
 I, _____, Review Officer of the Town of Rolesville, Wake County, certify that the map or plat to which this certification is affixed meets all statutory requirements for recording.

Annexation Exempt Certification:
 I hereby certify that this annexation plat is approved for recording, and is exempt from the Rolesville Unified Development Ordinance.

Review Officer _____ Date _____
 Subdivision Administrator _____ Date _____

DANA F. BRIGHT AND HUSBAND RANDY L. BRIGHT & GINY F. WHEELER AND HUSBAND STEPHEN E. WHEELER
 DB 9828, PG 902
 BM 1988, PG 1776
 PIN 1767-58-6083
 6301 MITCHELL MILL ROAD
 ZEBULON, NC 27597
 44.685 AC
 ZONING: R-30

CHARLES T. CLARK AND WIFE PATRICIA H. CLARK
 DB 4572, PG 246
 PIN 1767-38-9615
 ZONING: R-30

ELMO R. MOODY
 DB 3750, PG 591
 BM 1986, PG 967
 PIN 1767-38-8313
 ZONING: R-30

MILDRED B. MOODY
 DB 17107, PG 582
 PIN 1767-38-7170
 ZONING: R-30

GINY F. WHEELER, JILL F. BRIGHT, AND JAMES ROBERT FOWLER, III
 DB 5456, PG 627 (DB 1091, PG 438)
 PIN 1767-48-3143
 1801 ROLESVILLE ROAD
 WAKE FOREST, NC 27587
 48.252 AC
 ZONING: R-30

DWIGHT THOMAS WOODLIEF AND WIFE CAROLYN WOODLIEF
 DB 14286, PG 1908
 BM 2011, PG 84
 PIN 1767-58-0938
 ZONING: R-30

NORMA AGUILAR
 DB 12647, PG 1286
 PIN 1767-68-5863
 ZONING: R-30

WILLIAM WAYNE WATKINS
 DB 1177, PG 754
 BM 1927, PG 69
 PIN 1767-77-3114
 ZONING: R-30

Annexation Certificate - Town Clerk:
 I hereby certify that this plat for annexation has followed all requirements and procedures and a public hearing was held by the Town to annex the property herein described. The Town Board of Commissioners of the Town of Rolesville adopted the resolution to annex on _____ with the effective date of annexation on _____.

Town Clerk _____

SURVEYOR CERTIFICATION

I, TERRY L. WESTENDORF, PLS. HEREBY CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, AS DESCRIBED IN DEEDS AND MAPS OF RECORD OR OTHER REFERENCE SOURCES; THAT THE ERROR OF CLOSURE AS CALCULATED BY LATITUDES AND DEPARTURES IS GREATER THAN 1:10,000, THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS BROKEN LINES PLOTTED FROM INFORMATION OF RECORD; THAT THIS MAP WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED.

THAT THIS SURVEY IS OF ANOTHER CATEGORY, SUCH AS A RECOMBINATION OF EXISTING PARCELS, A COURT ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION.

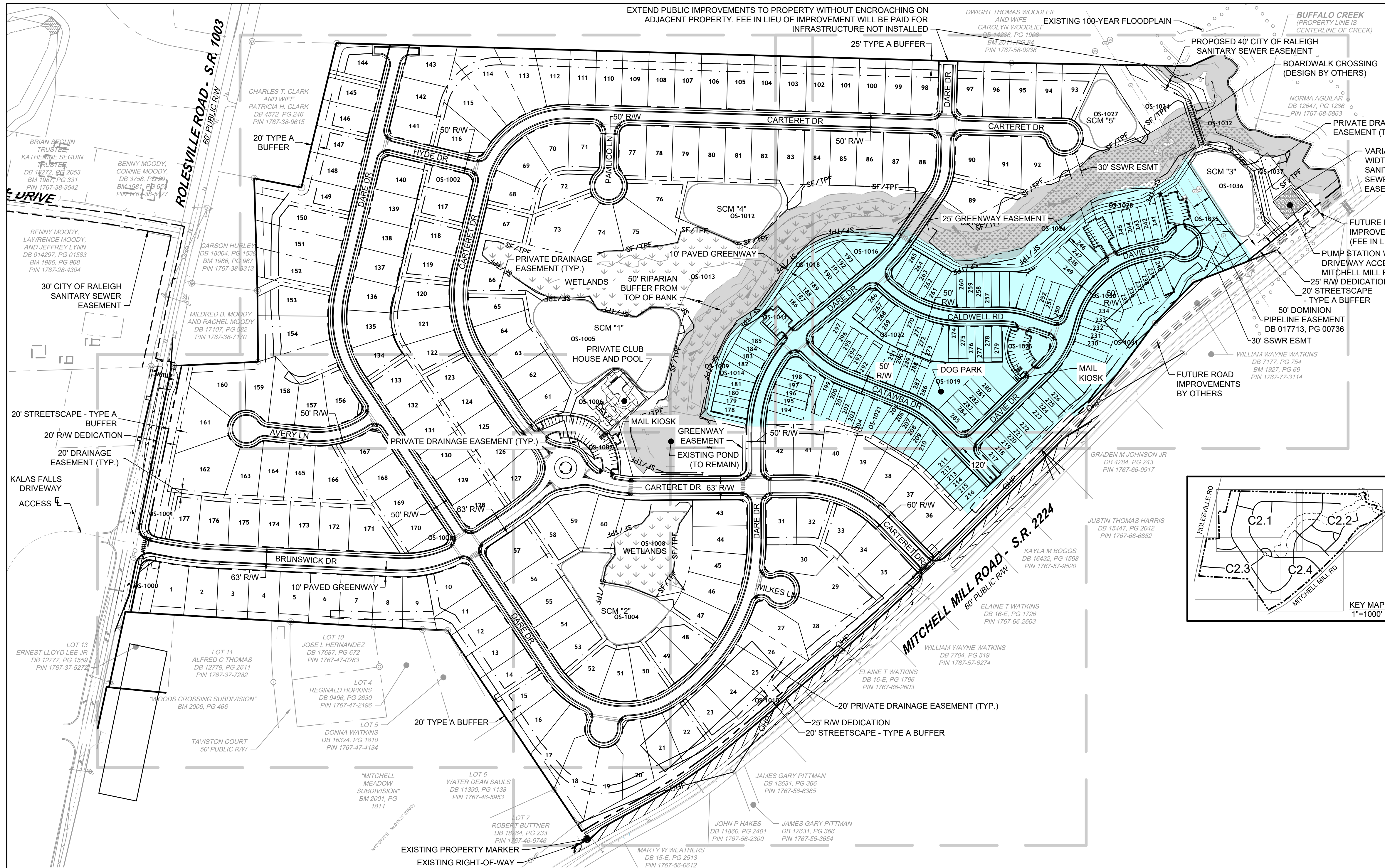
TERRY L. WESTENDORF, NCPLS NO. L-3232
 DATE 01/17/2020

FOR REFERENCE ONLY

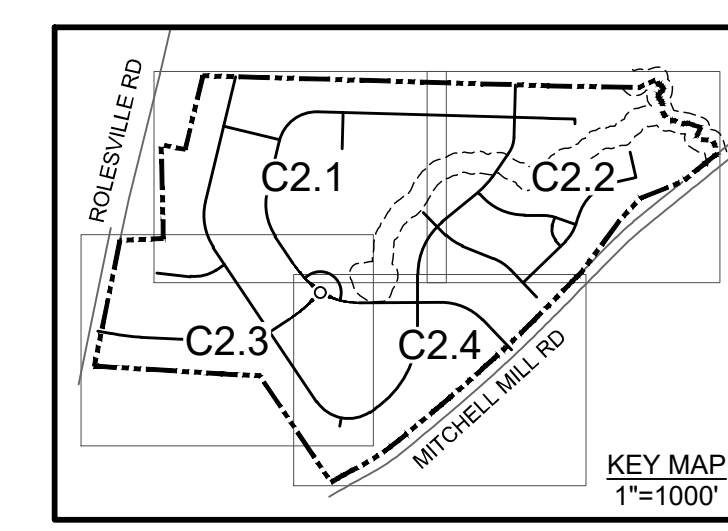
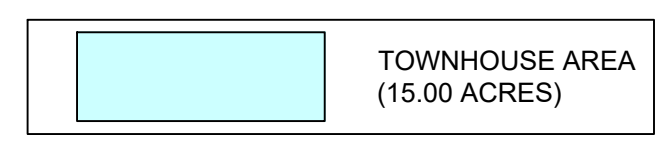


ANNEXATION PLAT PREPARED FOR HOPPER COMMUNITIES

WAKE FOREST TWP	WAKE COUNTY, NC
DATE: JANUARY 17, 2020	SCALE: 1" = 200'
SHEET 1 OF 1	J.N.: 43398
DRAWN BY: MM	CHECK BY: TLW
FIELD EDIT BY:	
MAP CHECKED BY: MM, JANUARY 15, 2020	
REVISED:	



- ### SITE LAYOUT NOTES
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TOWN OF ROLESVILLE AND NCDOT STANDARDS AND SPECIFICATIONS.
 - ALL DIMENSIONS ARE TO FACE OF CURB, EDGE OF PAVING, BUILDING WALL FACE OR PROPERTY LINE UNLESS OTHERWISE NOTED.
 - CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, UTILITIES AND GRADES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY EXISTING DISCREPANCIES PRIOR TO COMMENCING ANY RELATED CONSTRUCTION.
 - AT LEAST 72 HOURS PRIOR TO CONSTRUCTION OR EXCAVATION THE CONTRACTOR SHALL NOTIFY "NORTH CAROLINA ONE CALL" (811) TO HAVE EXISTING UTILITIES LOCATED.
 - PARKING SPACES ARE 9' WIDE X 18' LONG MINIMUM EXCEPT HANDICAP SPACES WHICH ARE 8.0' WIDE MINIMUM WITH 8.0' VAN ACCESS AND 5.0' STANDARD ACCESS AISLES.
 - REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF THE BUILDING(S).
 - CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DIMENSIONAL CONFLICTS PRIOR TO THE BEGINNING OF CONSTRUCTION.
 - ALL CURB AND GUTTER IN THE PUBLIC RIGHT OF WAY SHALL BE 30" WIDE.
 - ALL DISTURBED CURB & GUTTER AND ASPHALT SHALL BE REPLACED PER TOWN OF ROLESVILLE OR NCDOT STANDARDS AND SPECIFICATIONS.
 - ALL DRIVEWAY DESIGN AND CONSTRUCTION MUST COMPLY WITH TOWN OF ROLESVILLE. DRIVEWAYS SHALL BE PERMITTED SEPARATELY.
 - NO SIGHT OBSTRUCTING OR PARTIALLY OBSTRUCTING WALL, FENCE, FOLIAGE, BERING, PARKED VEHICLES OR SIGN BETWEEN THE HEIGHTS OF TWENTY-FOUR (24) INCHES AND EIGHT (8) FEET ABOVE THE CURB LINE ELEVATION, OR THE NEAREST TRAVELED WAY IF NO CURBING EXISTS, SHALL BE PLACED WITHIN A SIGHT TRIANGLE OF A PUBLIC STREET, PRIVATE STREET OR DRIVEWAY CONTAINED EITHER ON THE PROPERTY OR ON AN ADJOINING PROPERTY.
 - PRIVATE CLUB HOUSE AND POOL AREA REQUIRES SEPARATE SITE PLAN APPROVAL PROCESS THROUGH TOWN OF ROLESVILLE.
 - SUBDIVISION STREET NAMES PENDING WAKE COUNTY APPROVAL.
 - REFER TO SHEET C0.0 FOR SETBACK TABLE FOR SINGLE FAMILY AND TOWNHOMES.



THIS DRAWING PREPARED AT THE
RALEIGH OFFICE
5410 Trinity Road, Suite 102 | Raleigh, NC 27607
TEL 919.866.4951 | FAX 919.853.8124 | www.timmons.com

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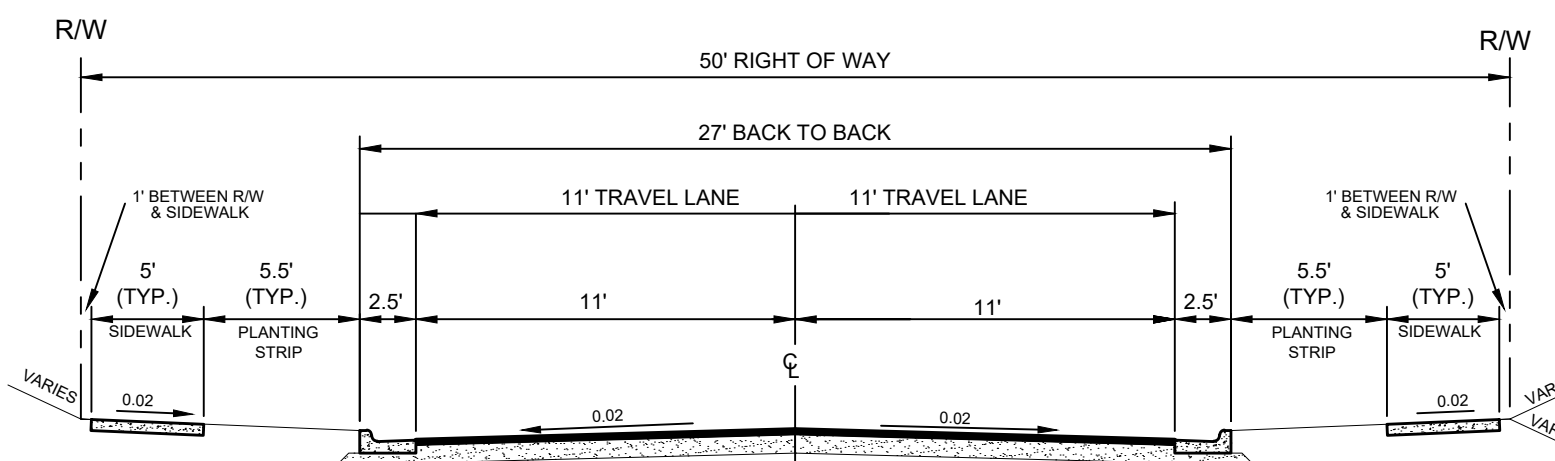
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ROLESVILLE CROSSING - CD 21-08

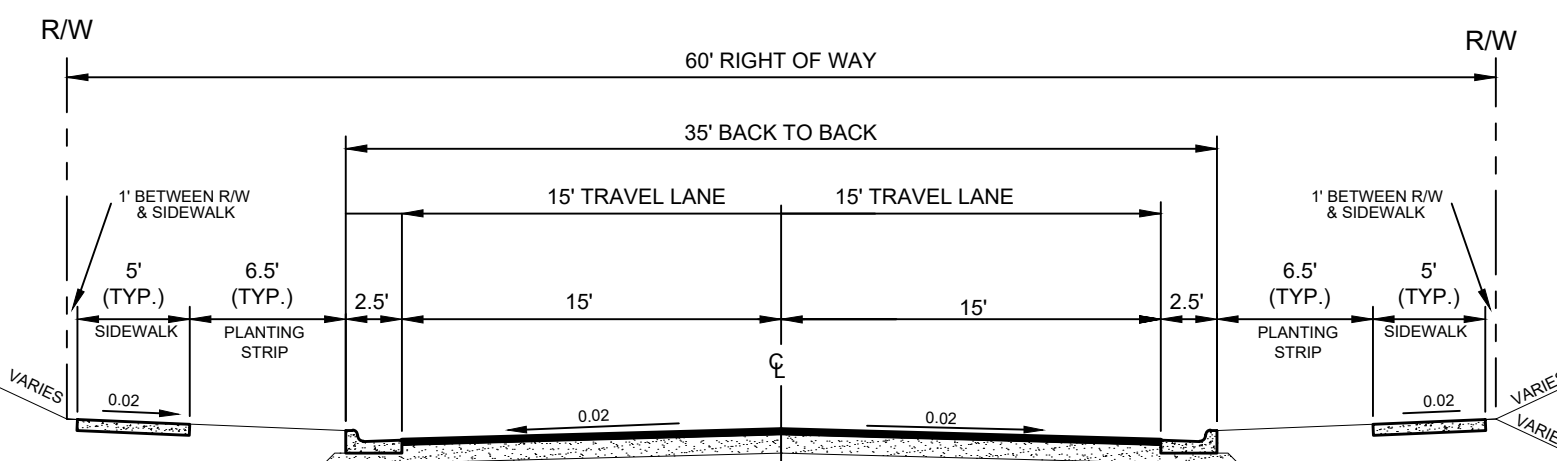
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

OVERALL SITE PLAN

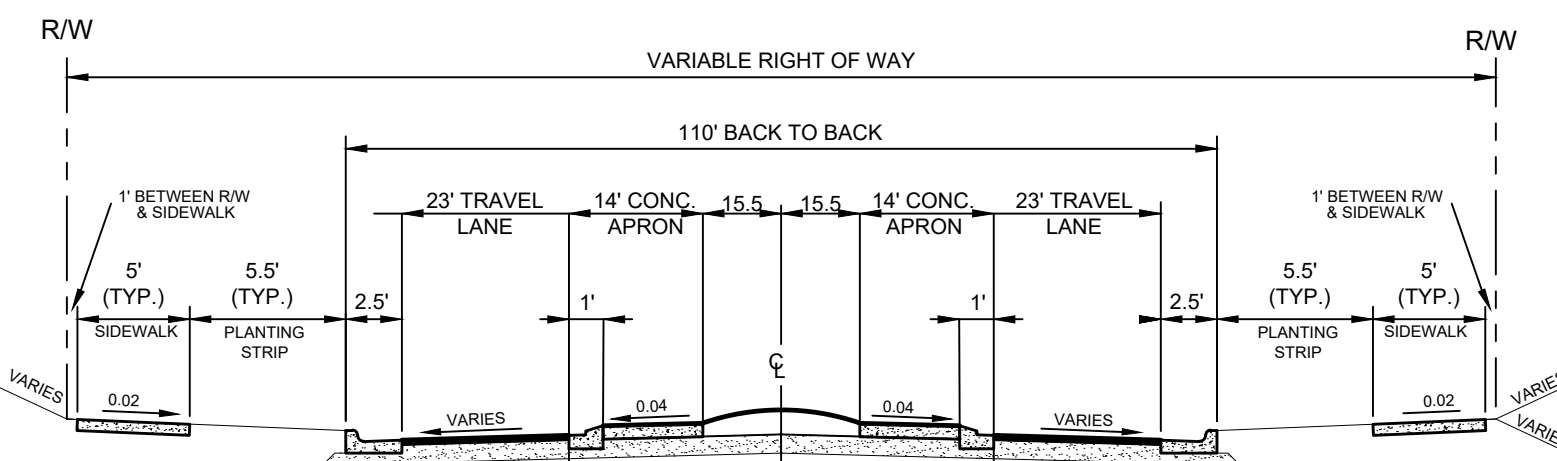
JOB NO. 43398
SHEET NO. C2.0



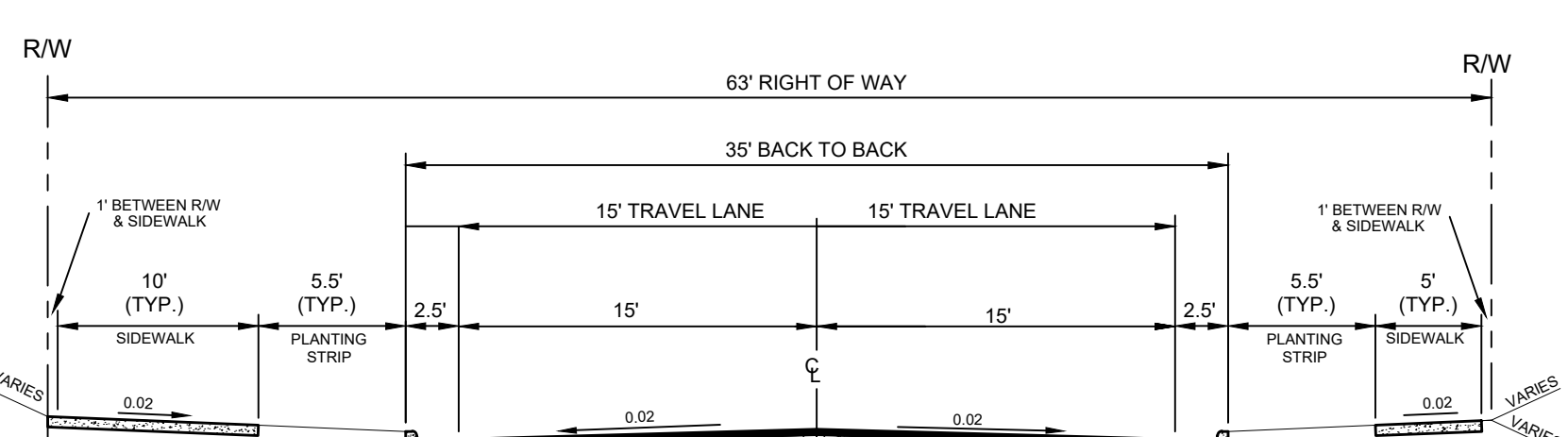
LOCAL RESIDENTIAL STREET
(50' PUBLIC R/W)



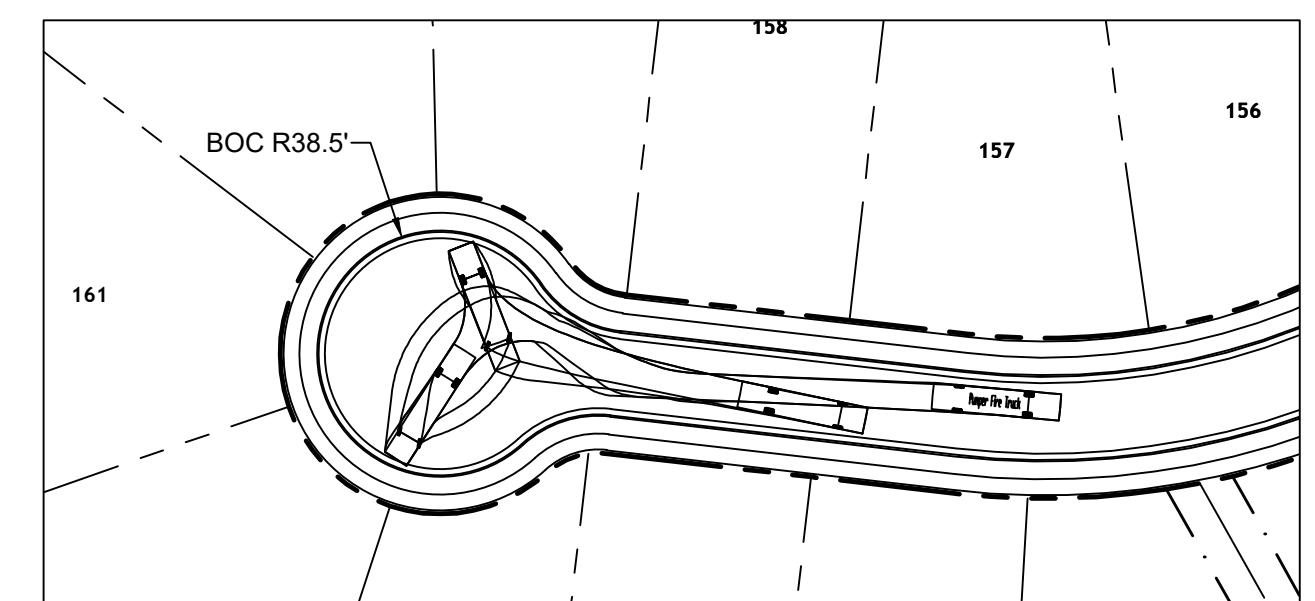
RESIDENTIAL COLLECTOR
(60' PUBLIC R/W)



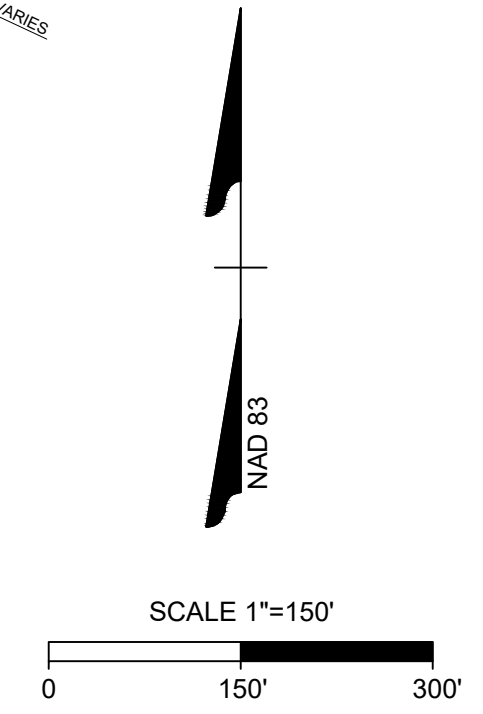
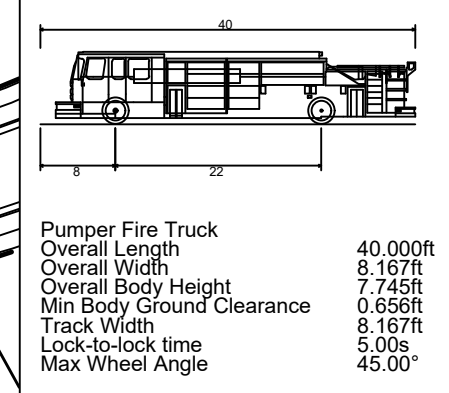
RESIDENTIAL ROUNDABOUT



RESIDENTIAL COLLECTOR WITH GREENWAY
(63' PUBLIC R/W)

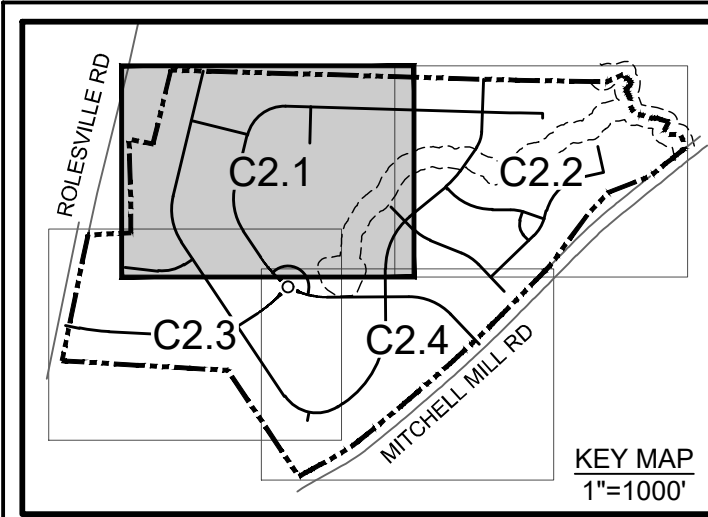


FIRE APPARATUS ACCESS INSET
SCALE: 1" = 60'



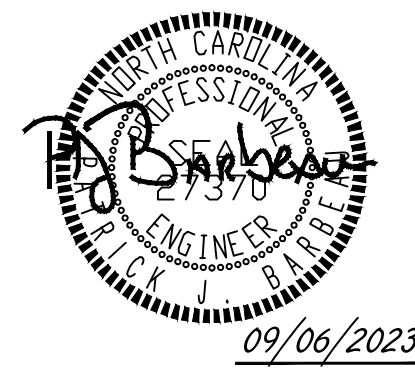
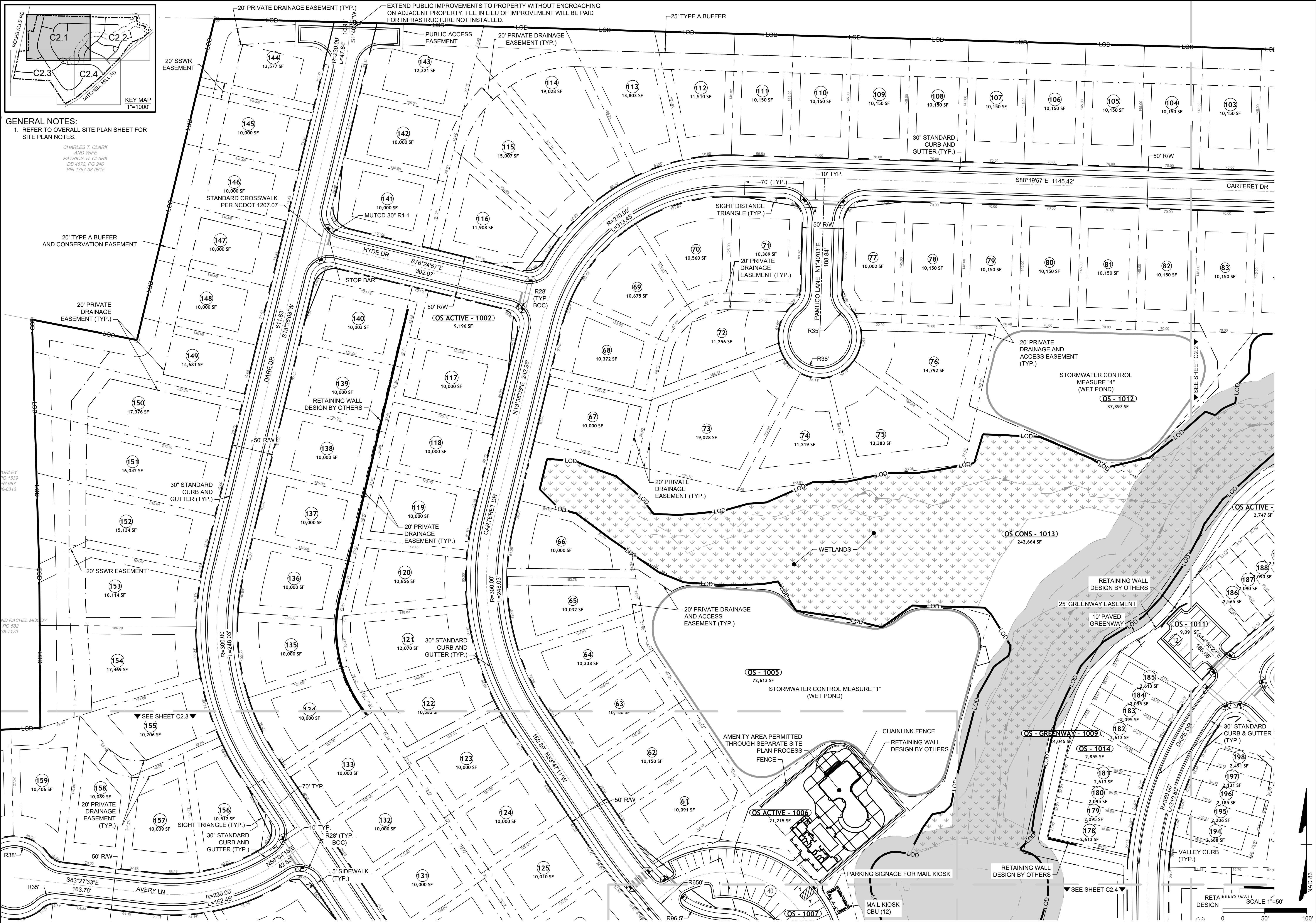
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

S:\324\3388-Wheeler_Timed\DWG\Sheet\CD\43398-C2.0-SITE.dwg | Printed on 9/16/2023 8:31 AM | 1/4 Alexei Pivov



GENERAL NOTES:
 1. REFER TO OVERALL SITE PLAN SHEET FOR SITE PLAN NOTES.

CHARLES T. CLARK
 AND WIFE
 PATRICIA H. CLARK
 DB 4572, PG 246
 PIN 1767-38-9615



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DATE	REVISION DESCRIPTION
04/08/2022	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

09/17/2021
 DRAWN BY
R. WINGATE
 DESIGNED BY
P. BARBEAU
 CHECKED BY
P. BARBEAU
 SCALE
AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

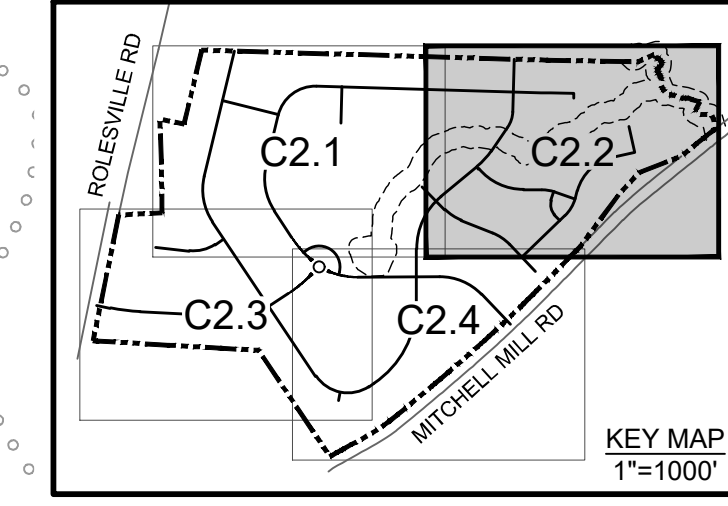
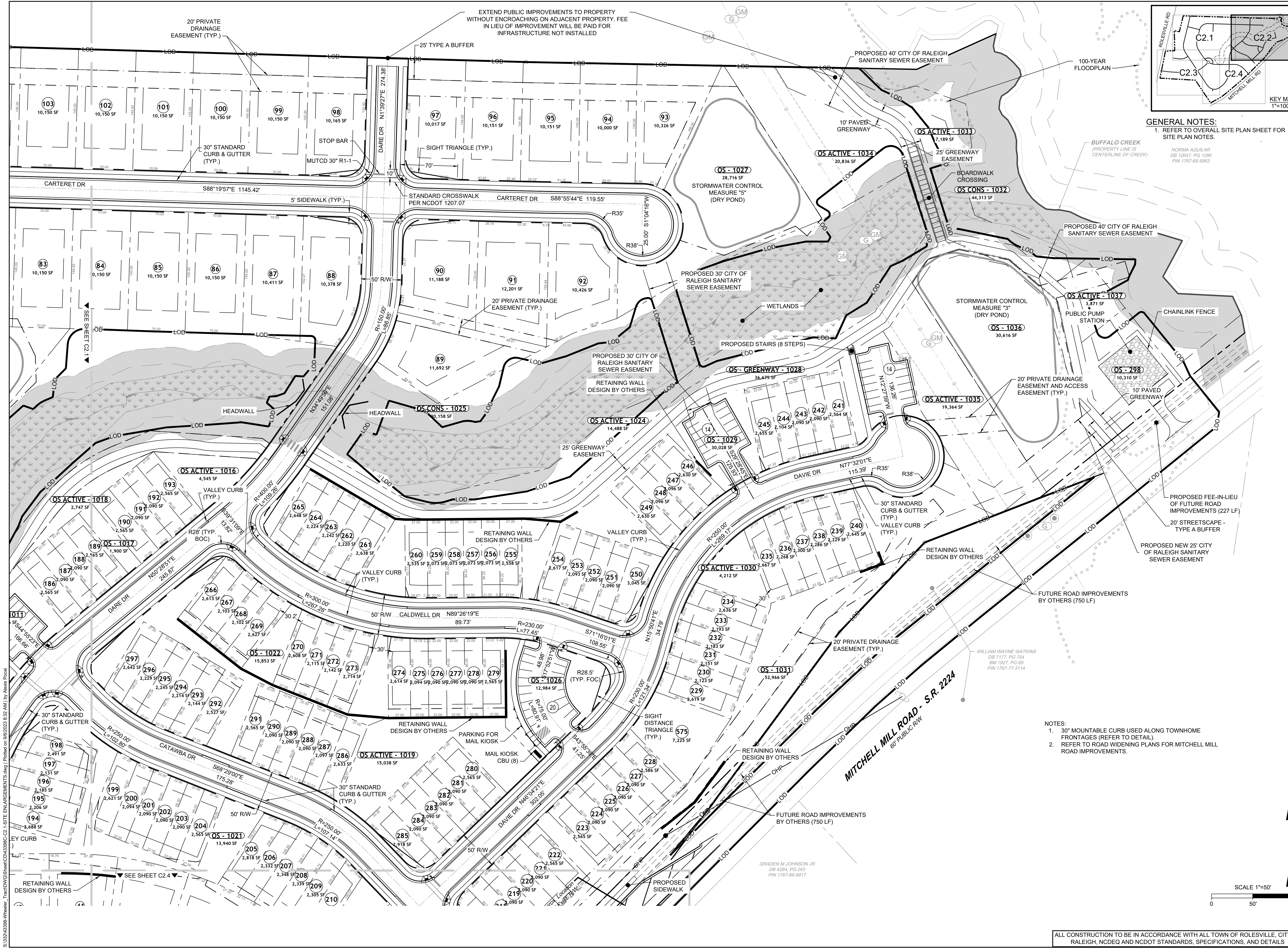
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE PLAN

JOB NO.
43398
 SHEET NO.
C2.1

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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REVISIONS PER WAKE COUNTY COMMENTS	07/22/2022
CONSTRUCTION DOCUMENT SUBMITTAL	04/06/2023
REVISIONS PER NCDOT COMMENTS	09/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE: 09/17/2021
 DRAWN BY: R. WINGATE
 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

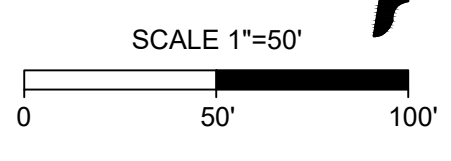
ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE PLAN

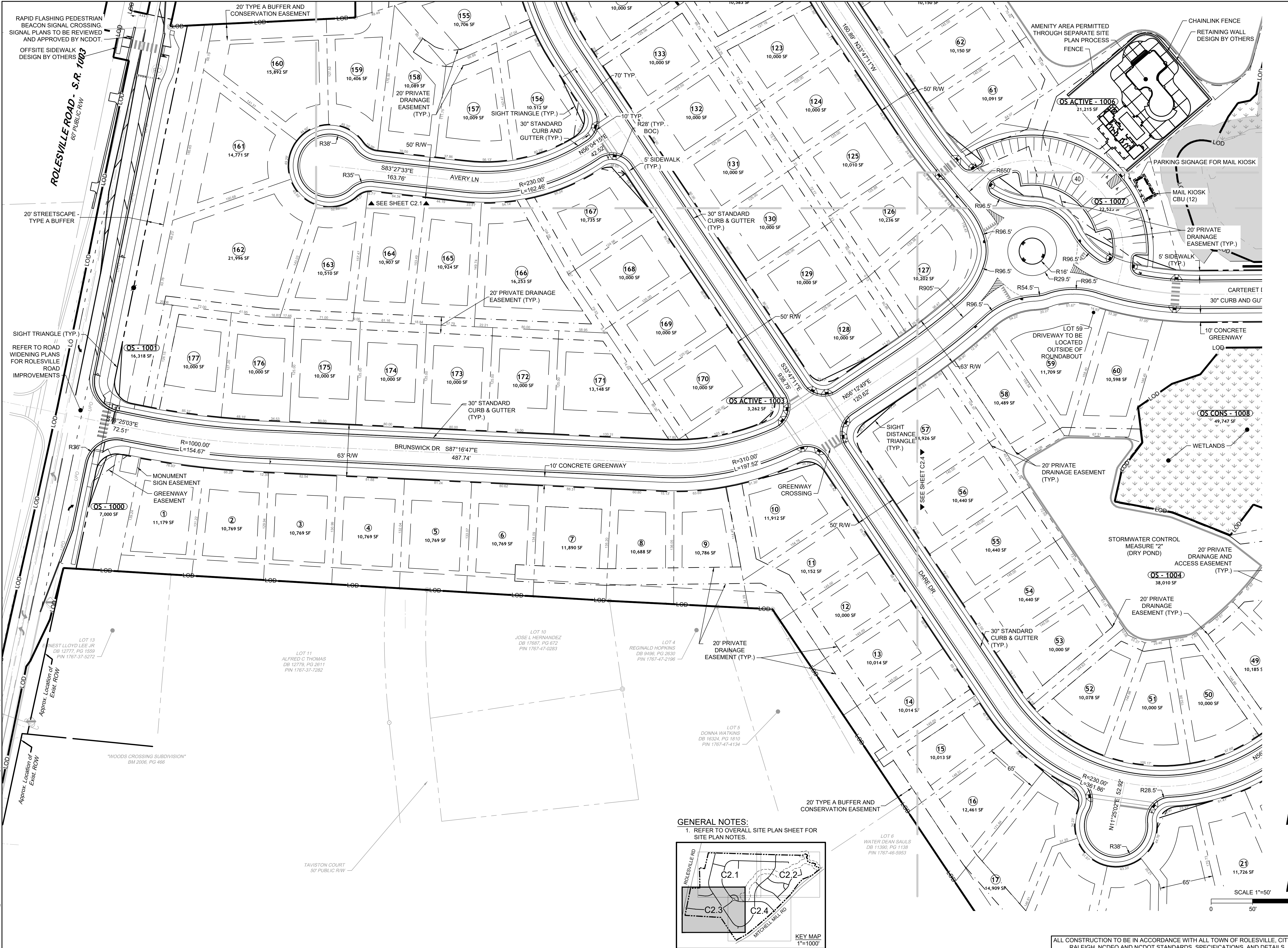
JOB NO.	43398
SHEET NO.	C2.2

NOTES:
 1. 30" MOUNTABLE CURB USED ALONG TOWNHOME FRONTAGES (REFER TO DETAIL).
 2. REFER TO ROAD WIDENING PLANS FOR MITCHELL MILL ROAD IMPROVEMENTS.

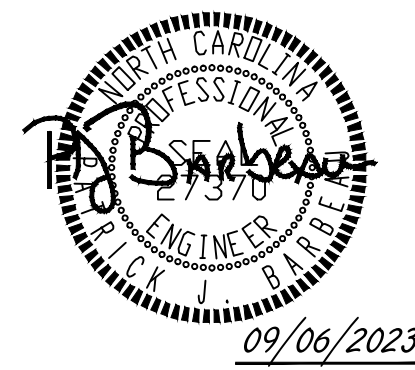
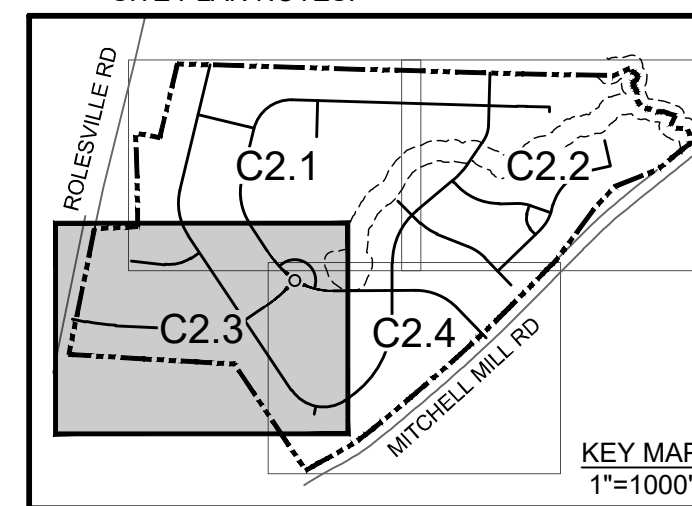


ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

S:\324243398\Wheeler_Timed\DWG\Sheet\C21\CD13398-C2.1 SITE ENLARGEMENTS.dwg | Printed on 08/20/2023 8:37 AM | By: Aloise Pivotal



GENERAL NOTES:
 1. REFER TO OVERALL SITE PLAN SHEET FOR SITE PLAN NOTES.



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06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
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09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

DATE: 09/17/2021
 DRAWN BY: R. WINGATE
 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

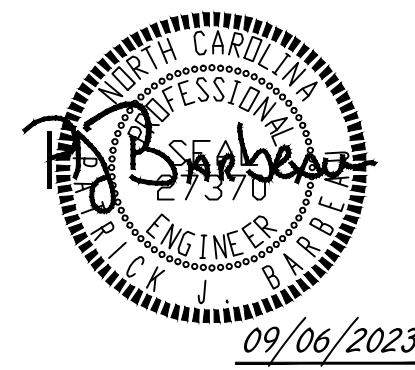
ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE PLAN

JOB NO. 43398
 SHEET NO. C2.3

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

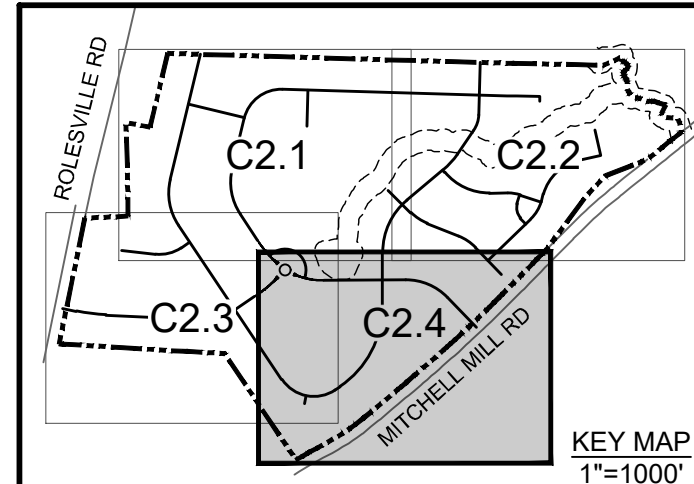


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06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

09/17/2021
 R. WINGATE
 DESIGNED BY
 P. BARBEAU
 CHECKED BY
 P. BARBEAU
 SCALE
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GENERAL NOTES:
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NORTH CAROLINA LICENSE NO. C-1652

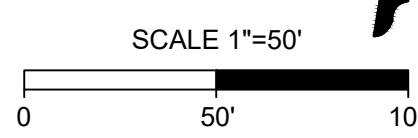
ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SITE PLAN

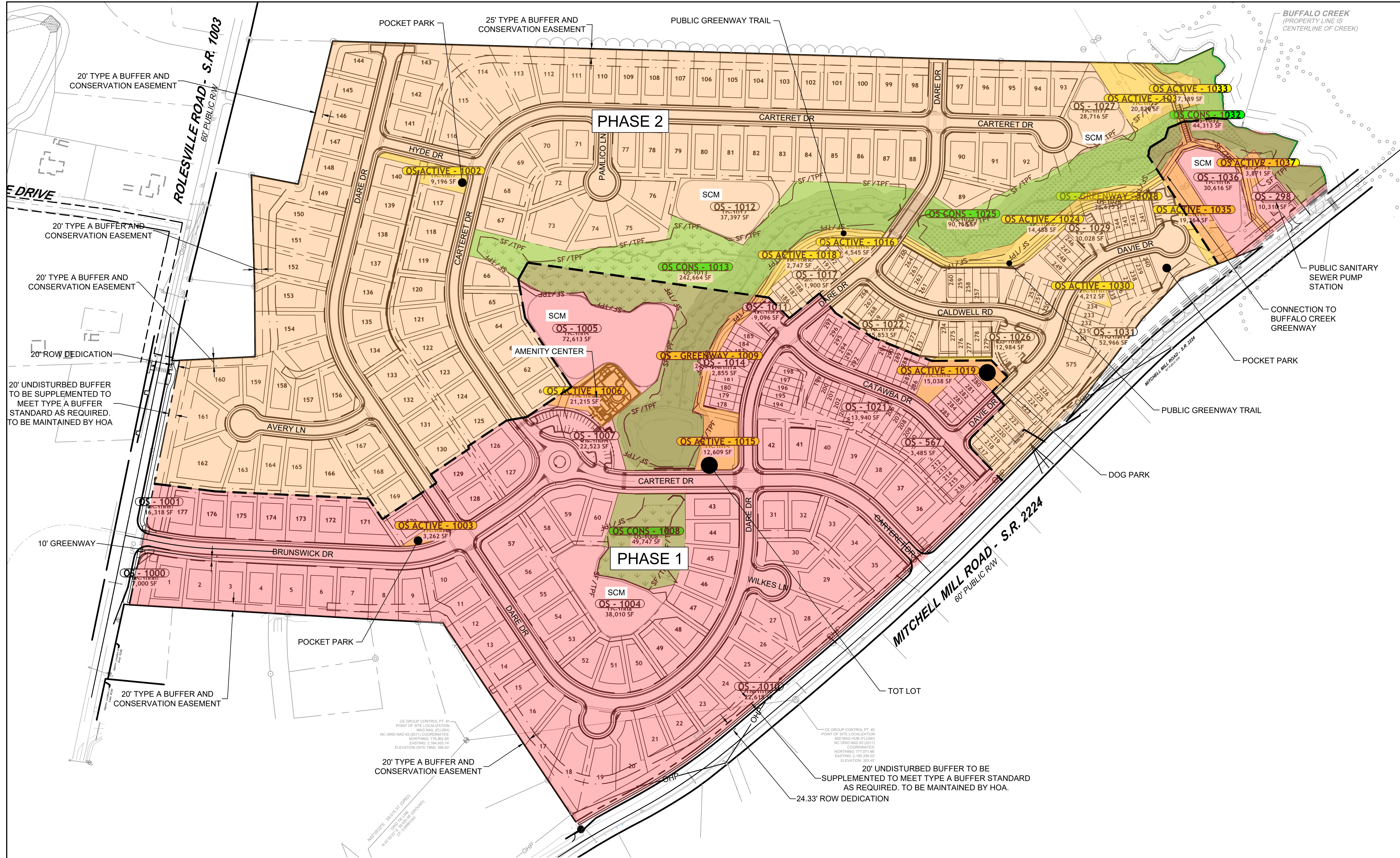
JOB NO. 43398
 SHEET NO. C2.4

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



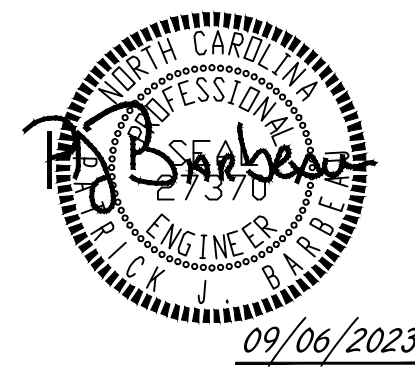
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PHASE LEGEND	
HATCH	DESCRIPTION
[Pink Hatch]	PHASE 1
[Orange Hatch]	PHASE 2

LOT DATA TABLE		
PHASE	1	2
NUMBER OF LOT(S)	1	297
LOT NUMBER(S) BY PHASE	1-60, 126-129, 170-185, 194-216, 280-297	61-125, 130-169, 186-193, 217-279
NUMBER OF SINGLE FAMILY UNITS	72	105
NUMBER OF TOWNHOME UNITS	49	71



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REVISION DESCRIPTION
 REVISIONS PER WAKE COUNTY COMMENTS
 REVISIONS PER WAKE COUNTY COMMENTS
 CONSTRUCTION DOCUMENT SUBMITTAL
 REVISIONS PER NCDOT COMMENTS
 REVISIONS PER CITY OF RALEIGH COMMENTS

DATE
 09/17/2021

DRAWN BY
 R. WINGATE

DESIGNED BY
 P. BARBEAU

CHECKED BY
 P. BARBEAU

SCALE
 AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

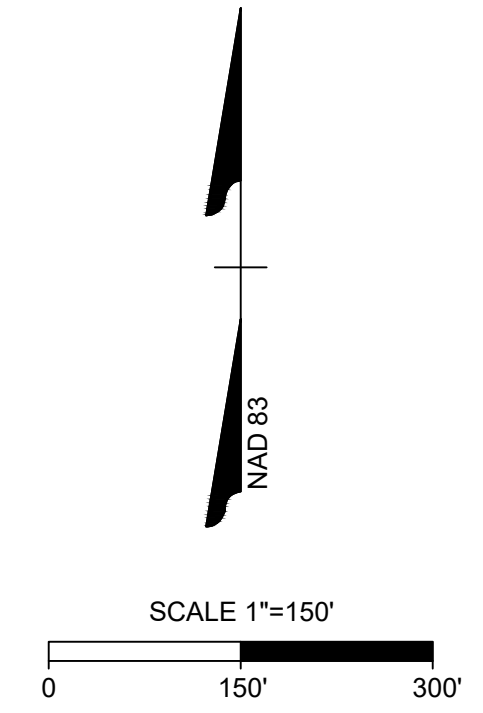
ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

PHASING PLAN

JOB NO.
 43398

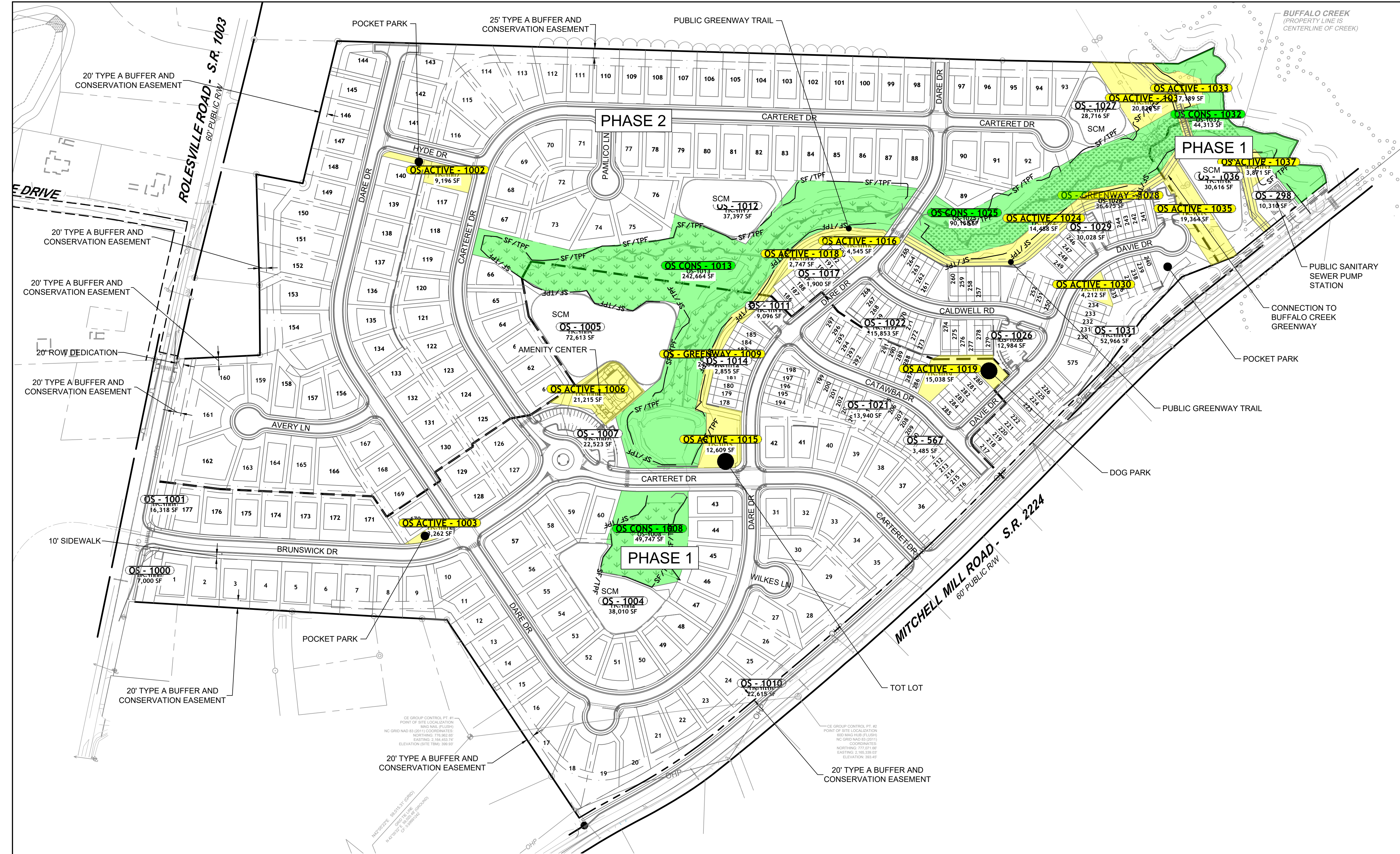
SHEET NO.
 C2.5



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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OPEN SPACE PARCEL TABLE

Lot	Total Area (Acres)
OS - GREENWAY : 1009	0.55
OS - GREENWAY : 1028	0.84
OS ACTIVE : 1002	0.21
OS ACTIVE : 1003	0.07
OS ACTIVE : 1006	0.49
OS ACTIVE : 1015	0.29
OS ACTIVE : 1016	0.10
OS ACTIVE : 1018	0.06
OS ACTIVE : 1019	0.35
OS ACTIVE : 1024	0.33
OS ACTIVE : 1030	0.10
OS ACTIVE : 1033	0.17
OS ACTIVE : 1034	0.48
OS ACTIVE : 1035	0.44
OS ACTIVE : 1037	0.09

OPEN SPACE PARCEL TABLE

Lot	Total Area (Acres)
OS CONS : 1008	1.14
OS CONS : 1013	5.57
OS CONS : 1025	2.07
OS CONS : 1032	1.02
TOTAL CONSERVATION OPEN SPACE	9.82 AC

OPEN SPACE PARCEL TABLE

Lot	Total Area (Acres)
OS : 1000	0.16
OS : 1001	0.37
OS : 1004	0.87
OS : 1005	1.67
OS : 1007	0.52
OS : 1010	0.52
OS : 1011	0.21
OS : 1012	0.86
OS : 1014	0.07
OS : 1017	0.04
OS : 1021	0.32
OS : 1022	0.36
OS : 1026	0.30
OS : 1027	0.66
OS : 1029	0.69
OS : 1031	1.22
OS : 1036	0.70

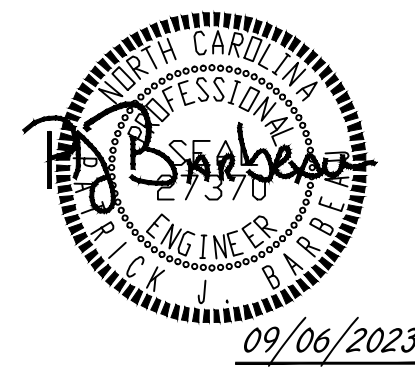
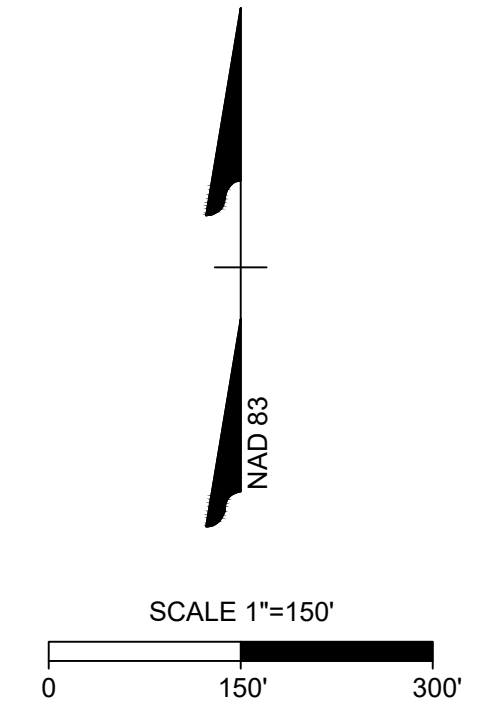
OPEN SPACE CALCULATIONS

PHASE	AREA (AC)	REQUIRED 10% GROSS AREA	PROVIDED
		TOTAL (ACTIVE) (AC)	TOTAL (ACTIVE) (AC)
PHASE 1	41.06	4.11 (2.06)	5.76 (2.06)
PHASE 2	50.61	5.06 (2.53)	8.97 (2.68)
TOTAL	91.67		14.73 (4.74)

OPEN SPACE LEGEND

HATCH	DESCRIPTION
	ACTIVE OPEN SPACE
	CONS. OPEN SPACE

NOTES:
1. REFER TO DETAIL SHEETS FOR REPRESENTATIVE OPEN SPACE IMPROVEMENTS



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REVISION DESCRIPTION
REVISIONS PER WAKE COUNTY COMMENTS
REVISIONS PER WAKE COUNTY COMMENTS
CONSTRUCTION DOCUMENT SUBMITTAL
REVISIONS PER NCDOT COMMENTS
REVISIONS PER CITY OF RALEIGH COMMENTS

DATE
09/17/2021

DRAWN BY
R. WINGATE

DESIGNED BY
P. BARBEAU

CHECKED BY
P. BARBEAU

SCALE
AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

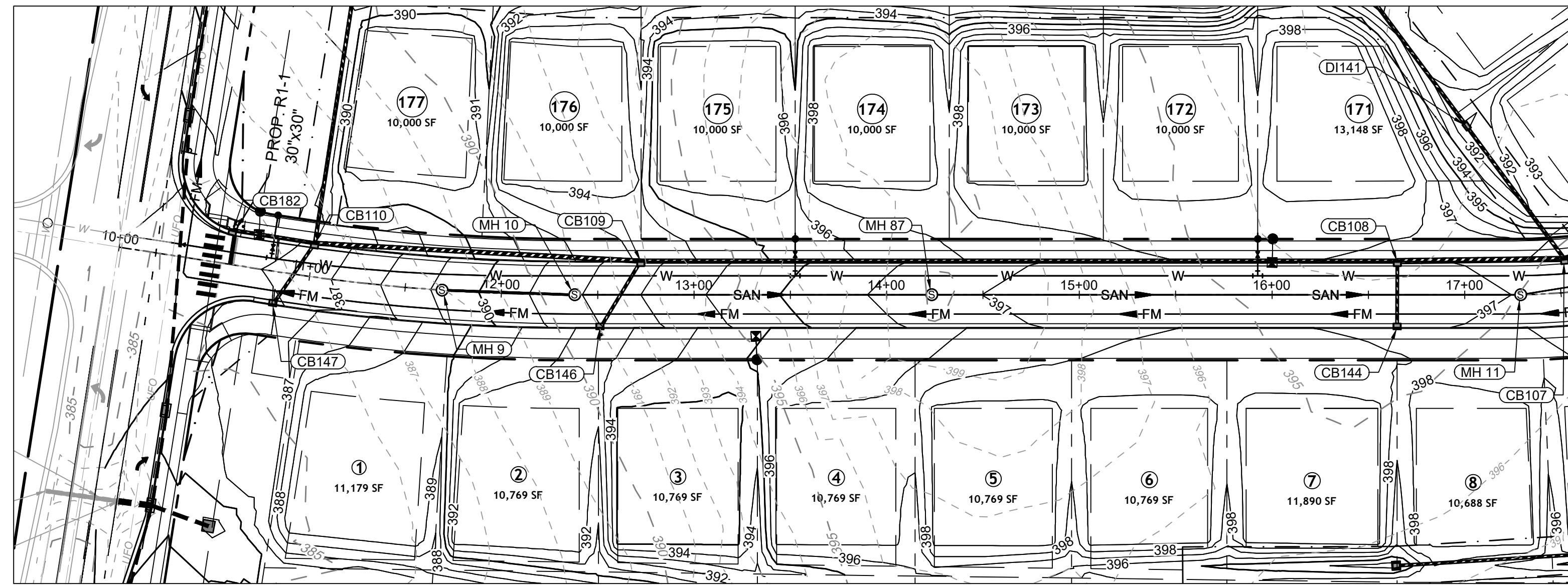
OPEN SPACE PLAN

JOB NO.
43398

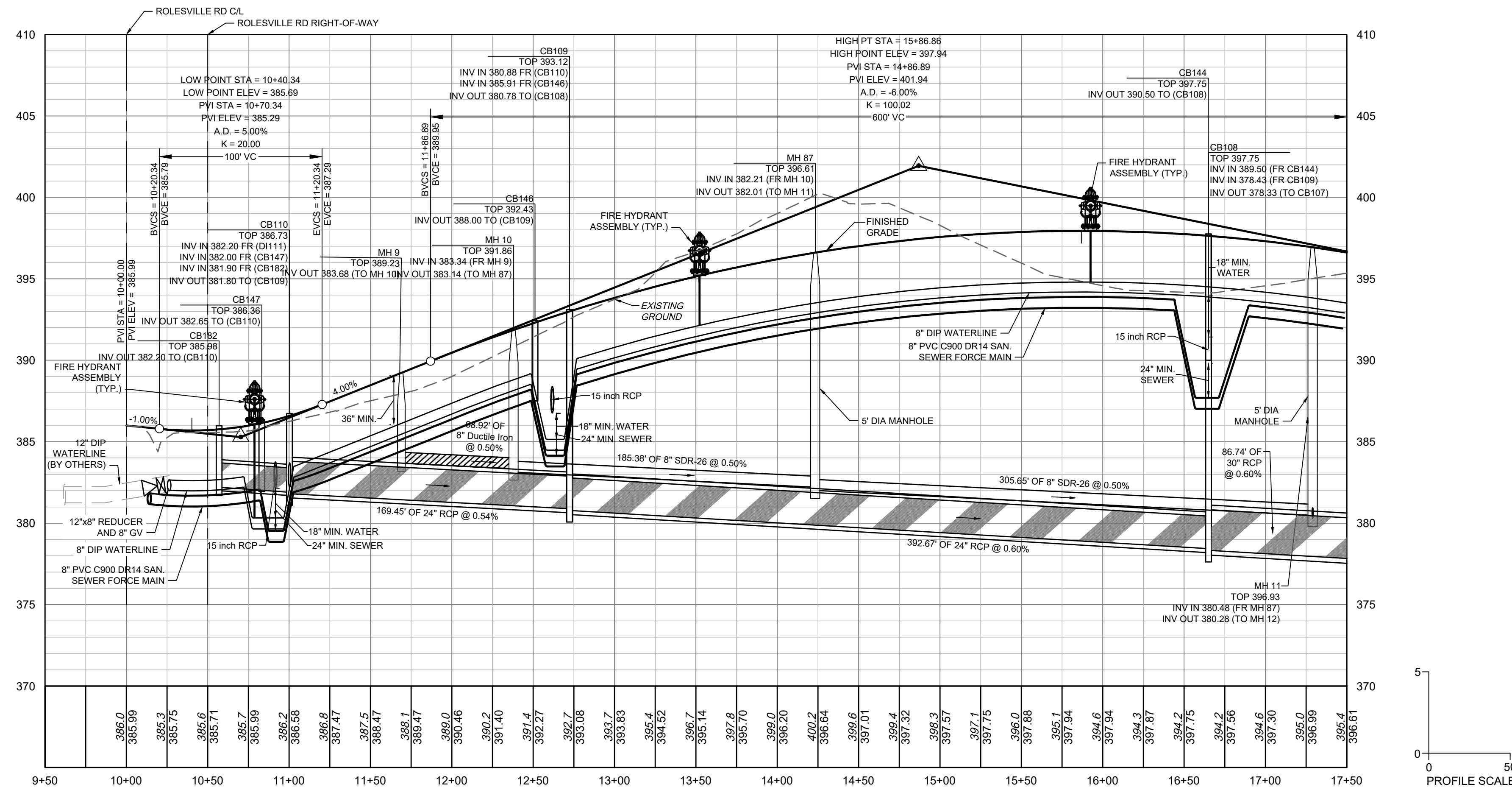
SHEET NO.
C2.6

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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**BRUNSWICK DR PLAN
VIEW
STA 10+00 - 17+50**



**BRUNSWICK DR
PROFILE
STA 10+00 - 17+50**

NOTE: ANY SEWER DEEPER THAN 12' REQUIRES SDR-26 OR DIP SEWER PIPE AND 5' DIAMETER MANHOLES. SEWER DEEPER THAN 20' REQUIRES 6' DIAMETER MANHOLES AND DIP SEWER PIPE.

SEWER MAIN MATERIAL:

- PVC SDR35 MIN. 3' TO 12' NON-TRAFFIC AREA;
MIN. 5' TO 12' TRAFFIC AREA
- PVC SDR26 12'-20' TRAFFIC AND NON-TRAFFIC AREAS
- DIP MIN. 3' TO 5' TRAFFIC AREA (CLASS 1 BEDDING);
GREATER THAN 20' WITH DIRECTOR APPROVAL

ATTENTION CONTRACTORS

THE CONSTRUCTION CONTRACTOR RESPONSIBLE FOR THE EXTENSION OF WATER, SEWER AND/OR REUSE, AS APPROVED IN THESE PLANS, IS RESPONSIBLE FOR CONTACTING THE PUBLIC WORKS DEPARTMENT AT (919) 996-3403 AND THE PUBLIC UTILITIES DEPARTMENT AT (919) 996-4540 AT LEAST TWENTY FOUR HOURS PRIOR TO BEGINNING ANY OF THEIR CONSTRUCTION.

FAILURE TO NOTIFY BOTH CITY DEPARTMENTS IN ADVANCE OF BEGINNING CONSTRUCTION, WILL RESULT IN THE ISSUANCE OF MONETARY FINES, AND REQUIRE REINSTALLATION OF ANY WATER OR SEWER FACILITIES NOT INSPECTED AS A RESULT OF THIS NOTIFICATION FAILURE.

FAILURE TO CALL FOR INSPECTION, INSTALL A DOWNSTREAM PLUG, HAVE PERMITTED PLANS ON THE JOB SITE, OR ANY OTHER VIOLATION OF CITY OF RALEIGH STANDARDS WILL RESULT IN A FINE AND POSSIBLE EXCLUSION FROM FUTURE WORK IN THE CITY OF RALEIGH.

SITE PERMITTING APPROVAL

Water and Sewer Permits (if applicable)

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook, City of Raleigh Public Utilities Department Permit # _____

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook, City of Raleigh Public Utilities Department Permit # _____

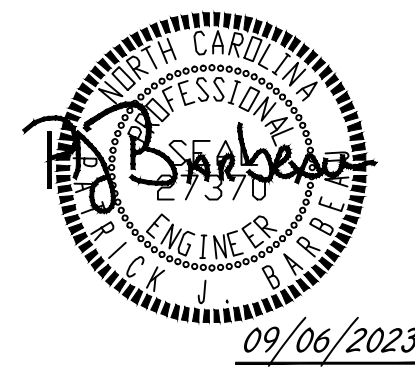
The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City, State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All construction must be in accordance with all Local, State, and Federal Rules and Regulations.

Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with the City. This electronic approval may not be edited once issued. Any modification to this approval once issued will invalidate this approval.

City of Raleigh Development Approval _____
City of Raleigh Review Officer _____



09/06/2023

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07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

09/17/2021
DRAWN BY
R. WINGATE
DESIGNED BY
P. BARBEAU
CHECKED BY
P. BARBEAU
SCALE
AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROAD 1 PLAN & PROFILE

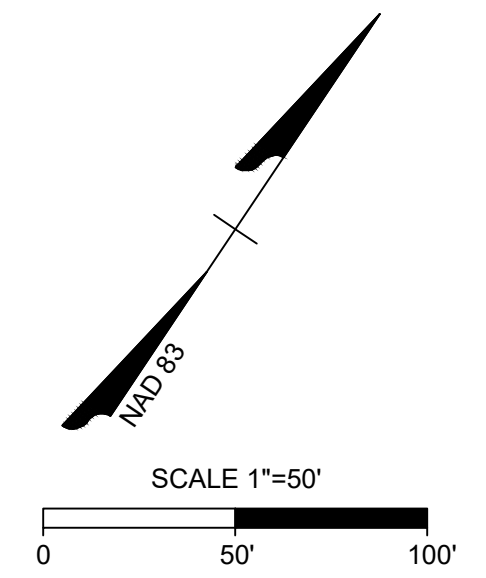
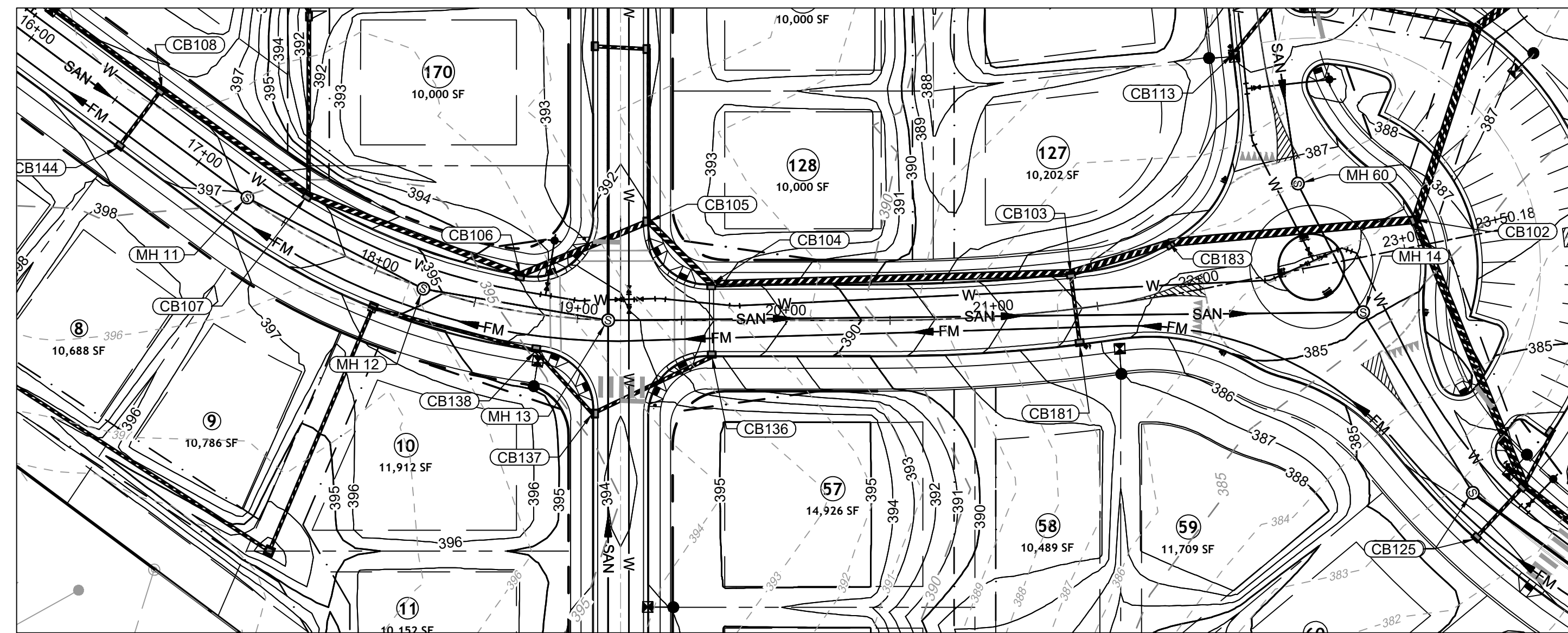
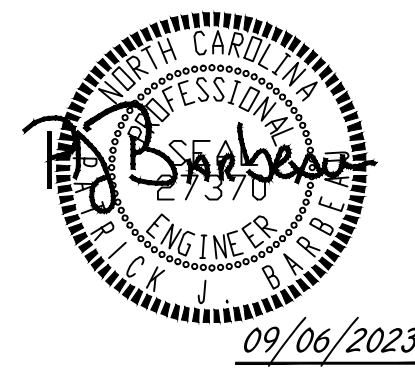
JOB NO.
43398

SHEET NO.
C2.9

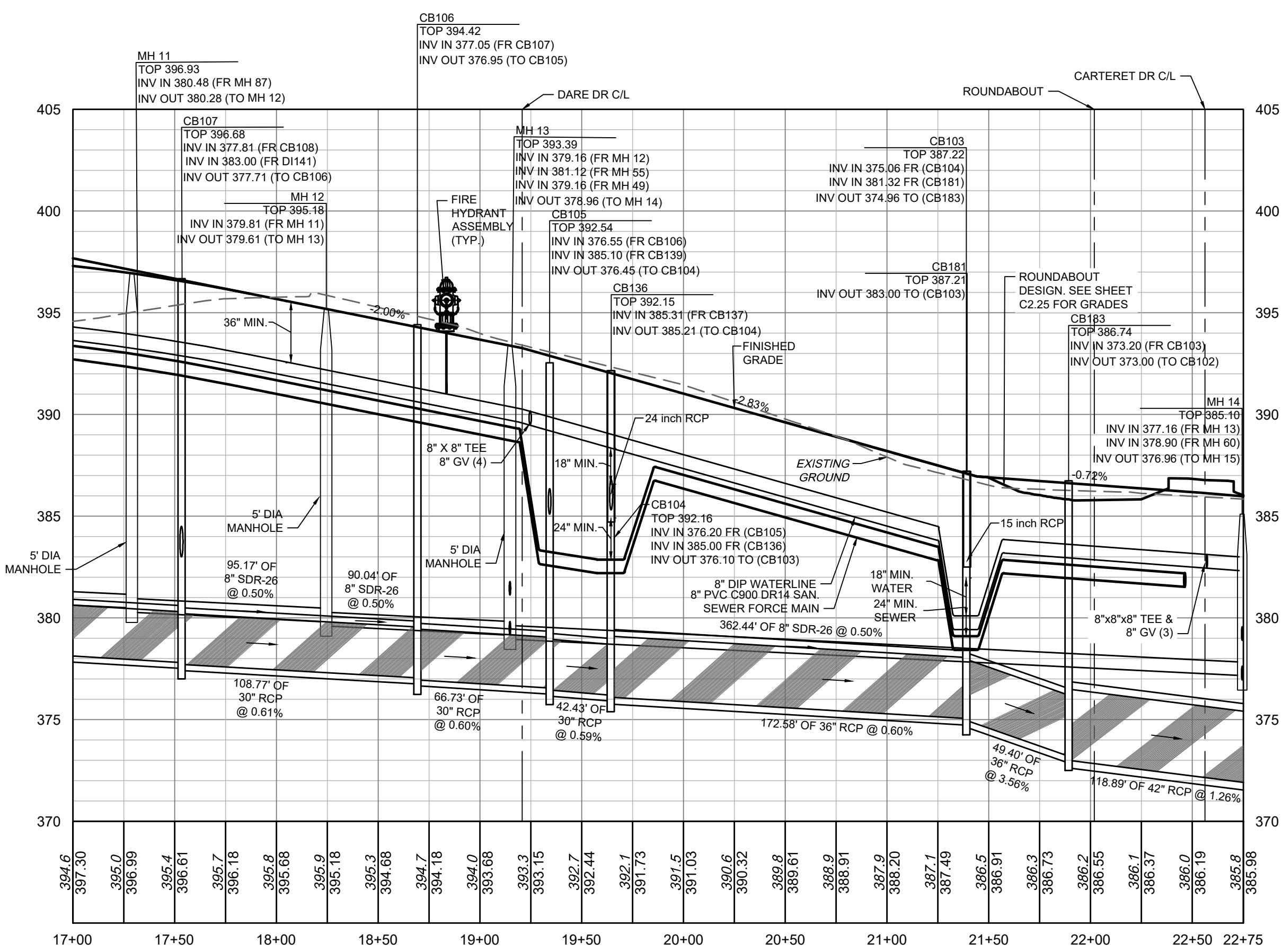


KNOW WHAT'S BELOW.
CALL 811 BEFORE YOU DIG.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



BRUNSWICK DR PLAN VIEW
STA 17+50 - 23+49.78



BRUNSWICK DR PROFILE
STA 17+50 - 23+49.78

SEWER MAIN MATERIAL:

PVC SDR35	MIN. 3' TO 12' NON-TRAFFIC AREA; MIN. 5' TO 12' TRAFFIC AREA
PVC SDR26	12'-20' TRAFFIC AND NON-TRAFFIC AREAS
DIP	MIN. 3' TO 5' TRAFFIC AREA (CLASS 1 BEDDING); GREATER THAN 20' WITH DIRECTOR APPROVAL

NOTE: ANY SEWER DEEPER THAN 12' REQUIRES SDR-26 OR DIP SEWER PIPE AND 5' DIAMETER MANHOLES. SEWER DEEPER THAN 20' REQUIRES 6' DIAMETER MANHOLES AND DIP SEWER PIPE.

SITE PERMITTING APPROVAL

Water and Sewer Permits (if applicable)

The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** _____

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. **City of Raleigh Public Utilities Department Permit #** _____

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CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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City of Raleigh Development Approval _____
City of Raleigh Review Officer _____

ATTENTION CONTRACTORS

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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
ROAD 1 PLAN & PROFILE

JOB NO.
43398
SHEET NO.
C2.10

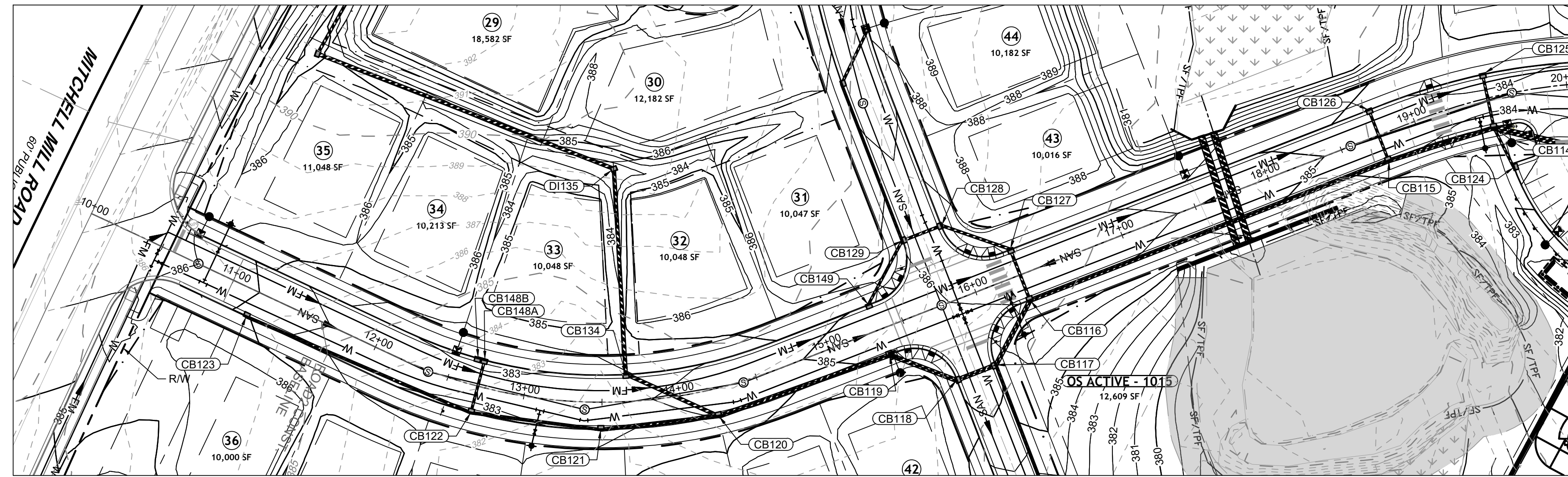
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DATE	04/08/2023	REVISION DESCRIPTION
DATE	06/24/2023	REVISIONS PER WAKE COUNTY COMMENTS
DATE	07/22/2023	REVISIONS PER WAKE COUNTY COMMENTS
DATE	04/06/2023	CONSTRUCTION DOCUMENT SUBMITTAL
DATE	09/06/2023	REVISIONS PER NCDOT COMMENTS
DATE	09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

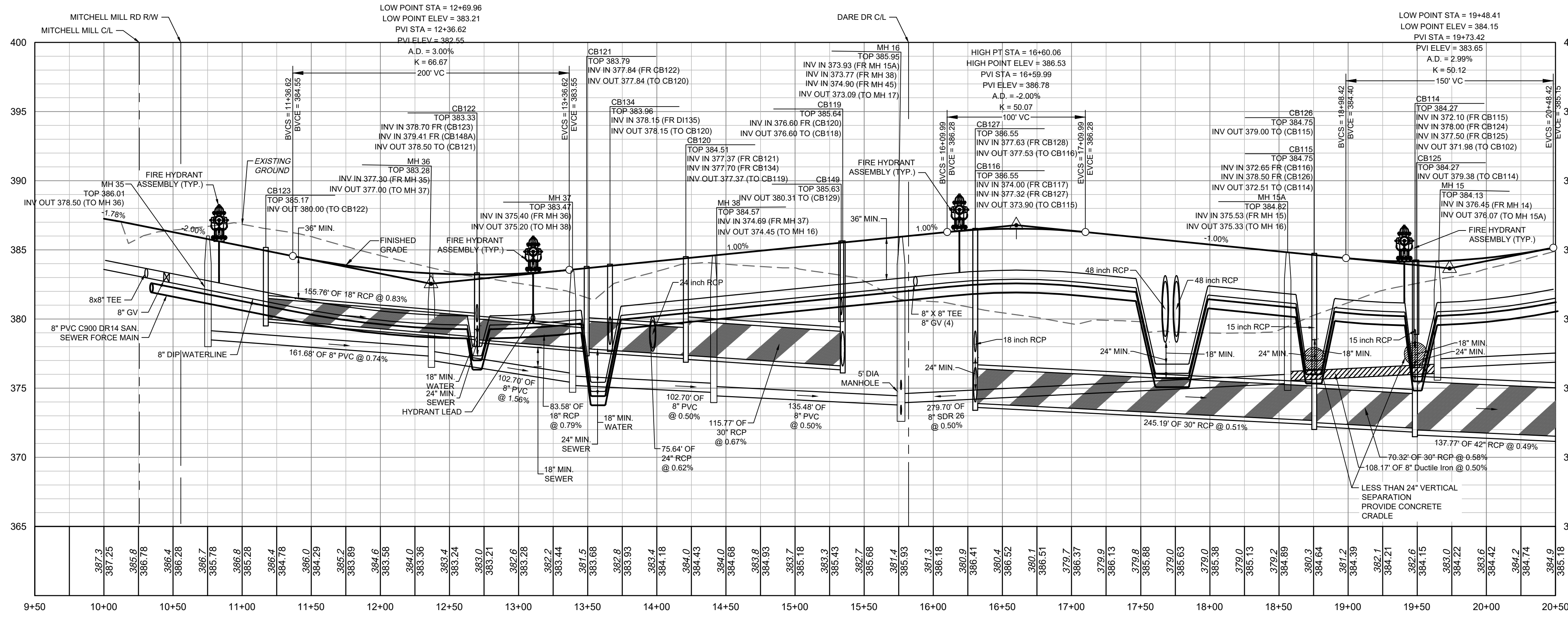
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City of Raleigh Development Approval _____

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07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

09/17/2021
DRAWN BY
R. WINGATE
DESIGNED BY
P. BARBEAU
CHECKED BY
P. BARBEAU
SCALE
AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROAD 2 PLAN & PROFILE

JOB NO.
43398

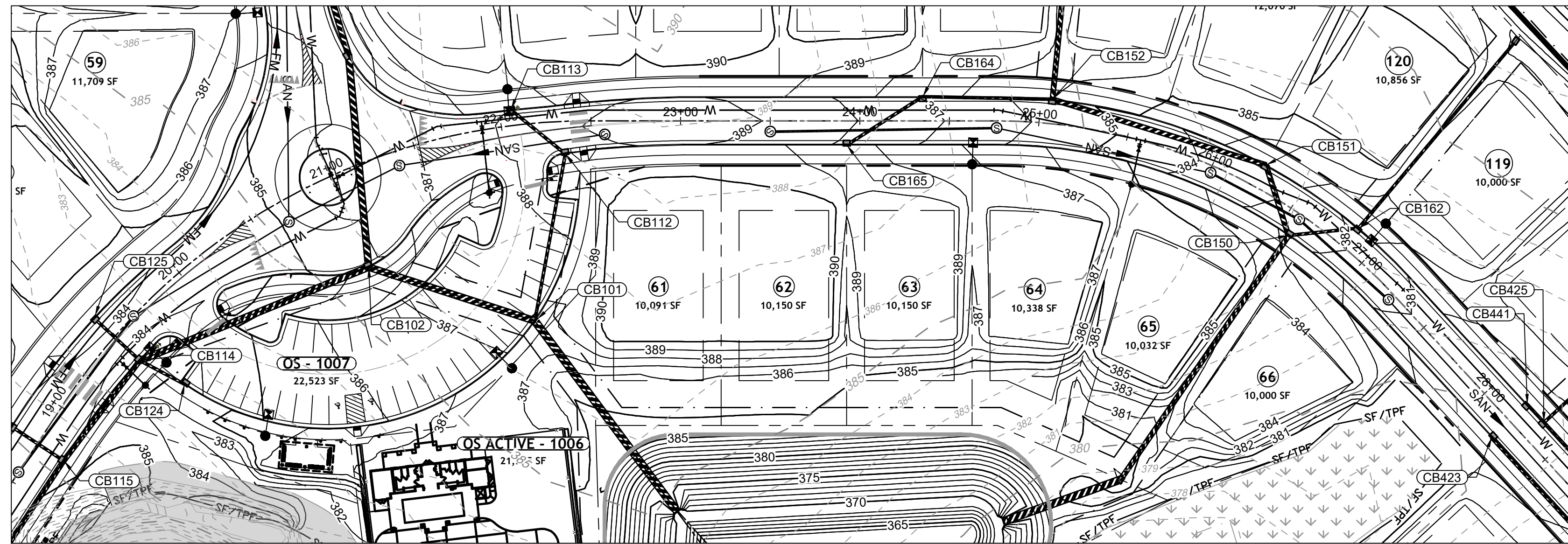
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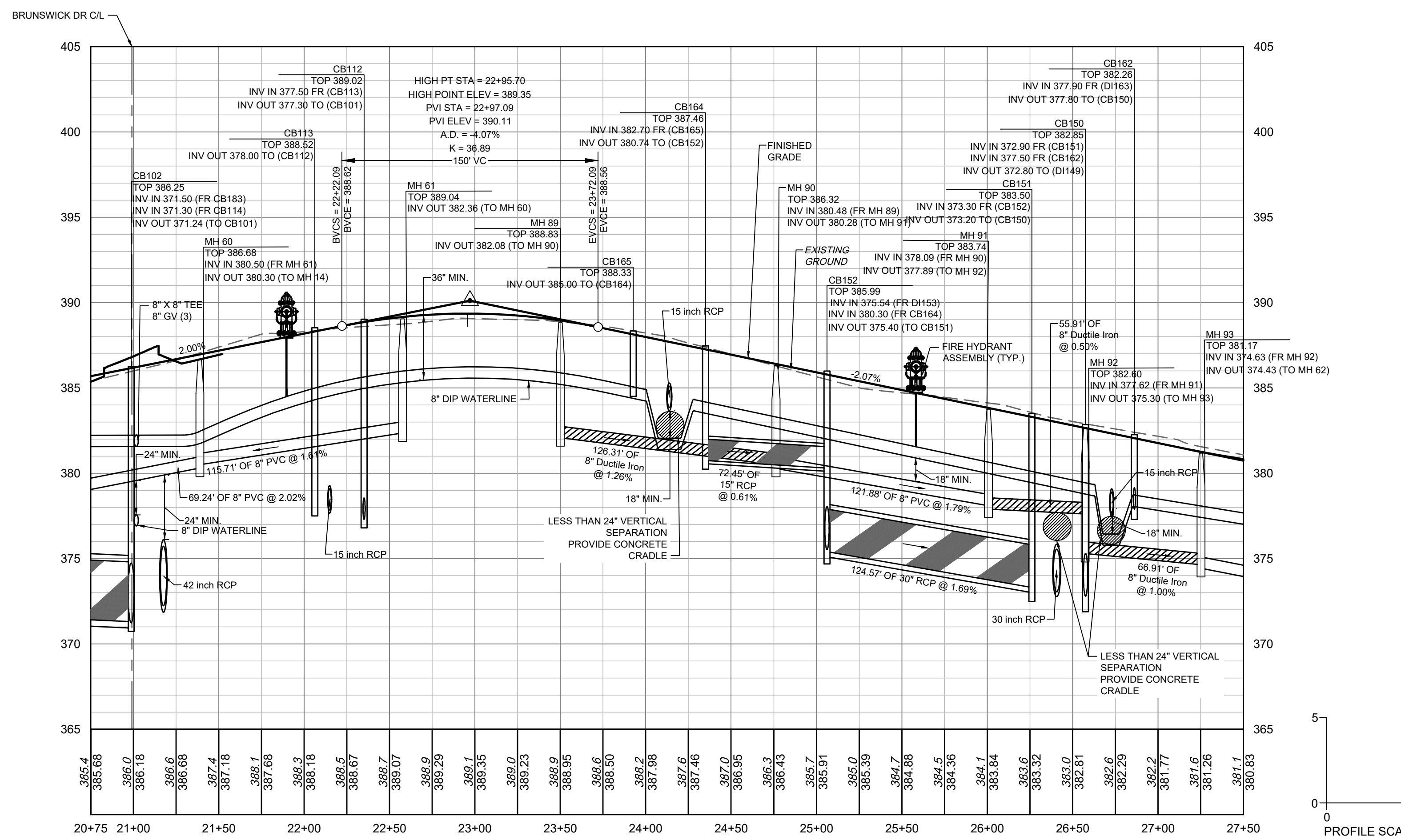
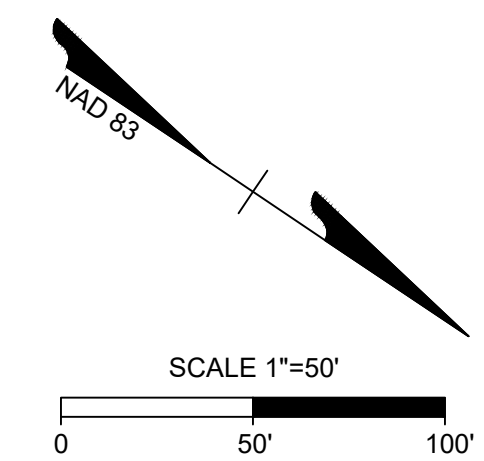


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City of Raleigh Review Officer _____

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



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07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

DATE: 09/17/2021
DRAWN BY: R. WINGATE
DESIGNED BY: P. BARBEAU
CHECKED BY: P. BARBEAU
SCALE: AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

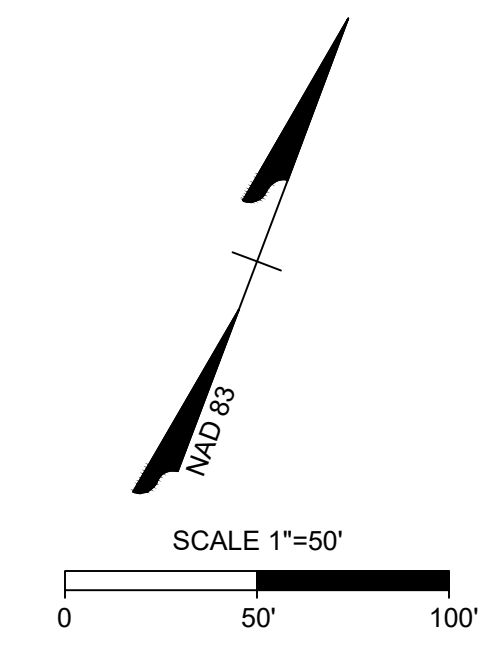
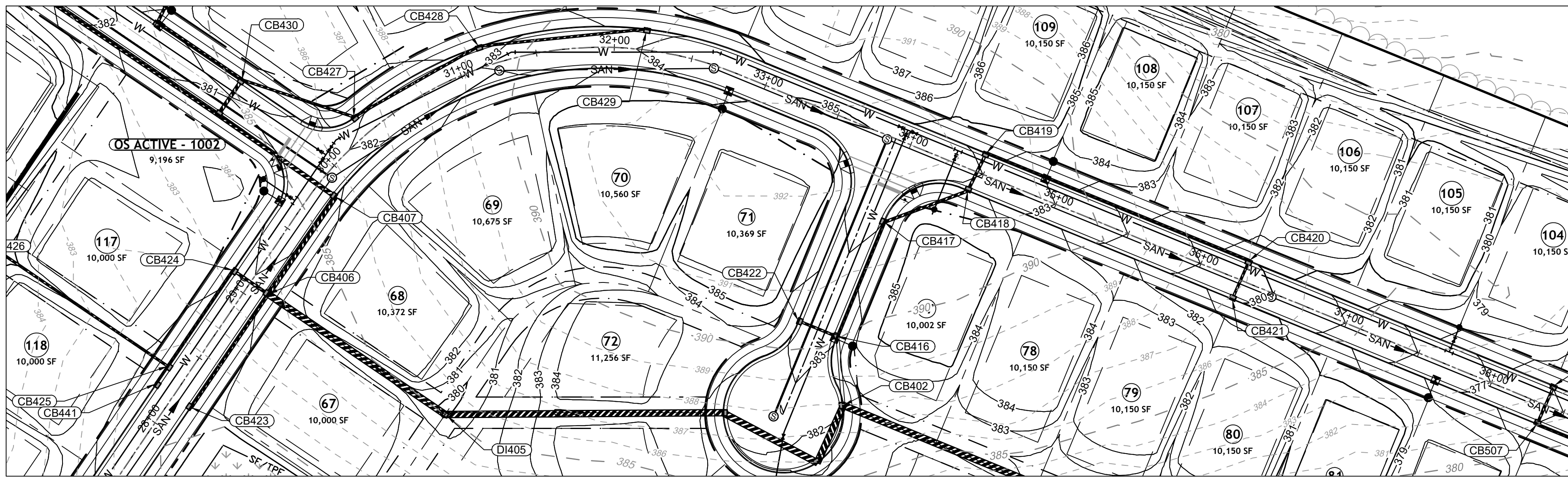
ROAD 2 PLAN & PROFILE

JOB NO. 43398
SHEET NO. C2.12

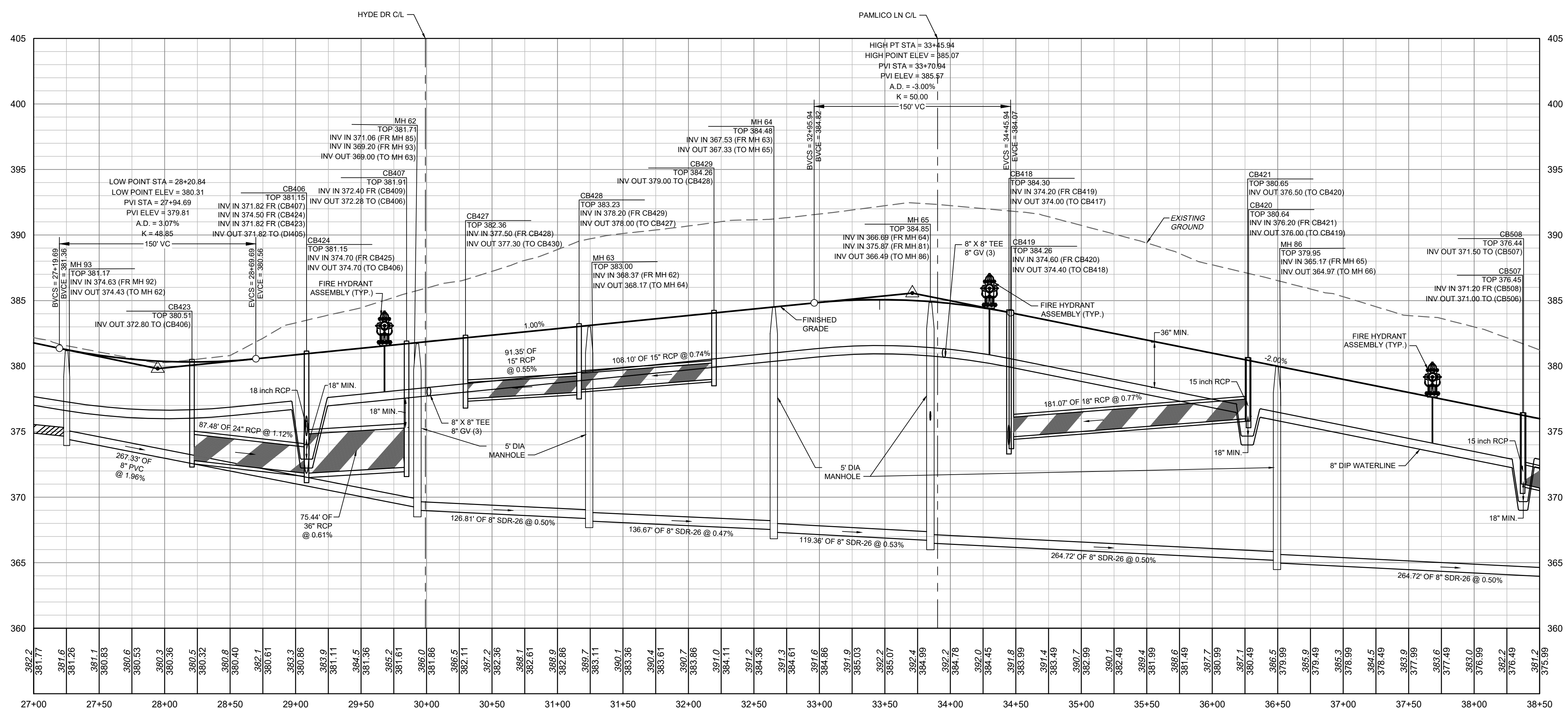


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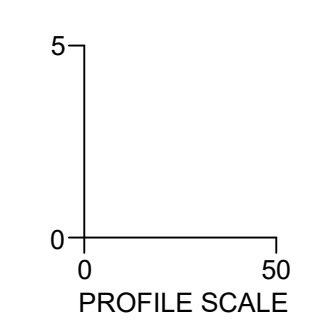
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CARTERET DR PLAN VIEW
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STA 27+00 - 38+50



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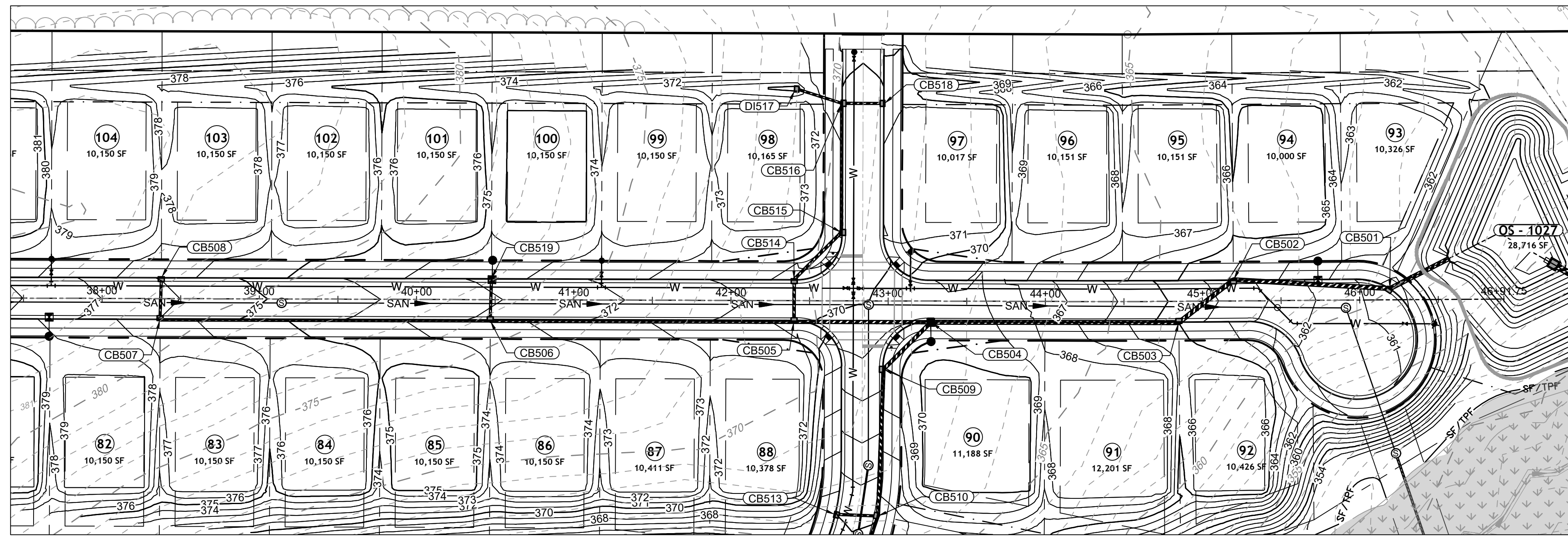
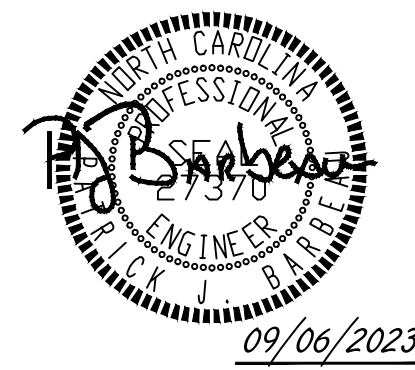
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R. WINGATE
DESIGNED BY
P. BARBEAU
CHECKED BY
P. BARBEAU
SCALE
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TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
ROAD 2 PLAN & PROFILE

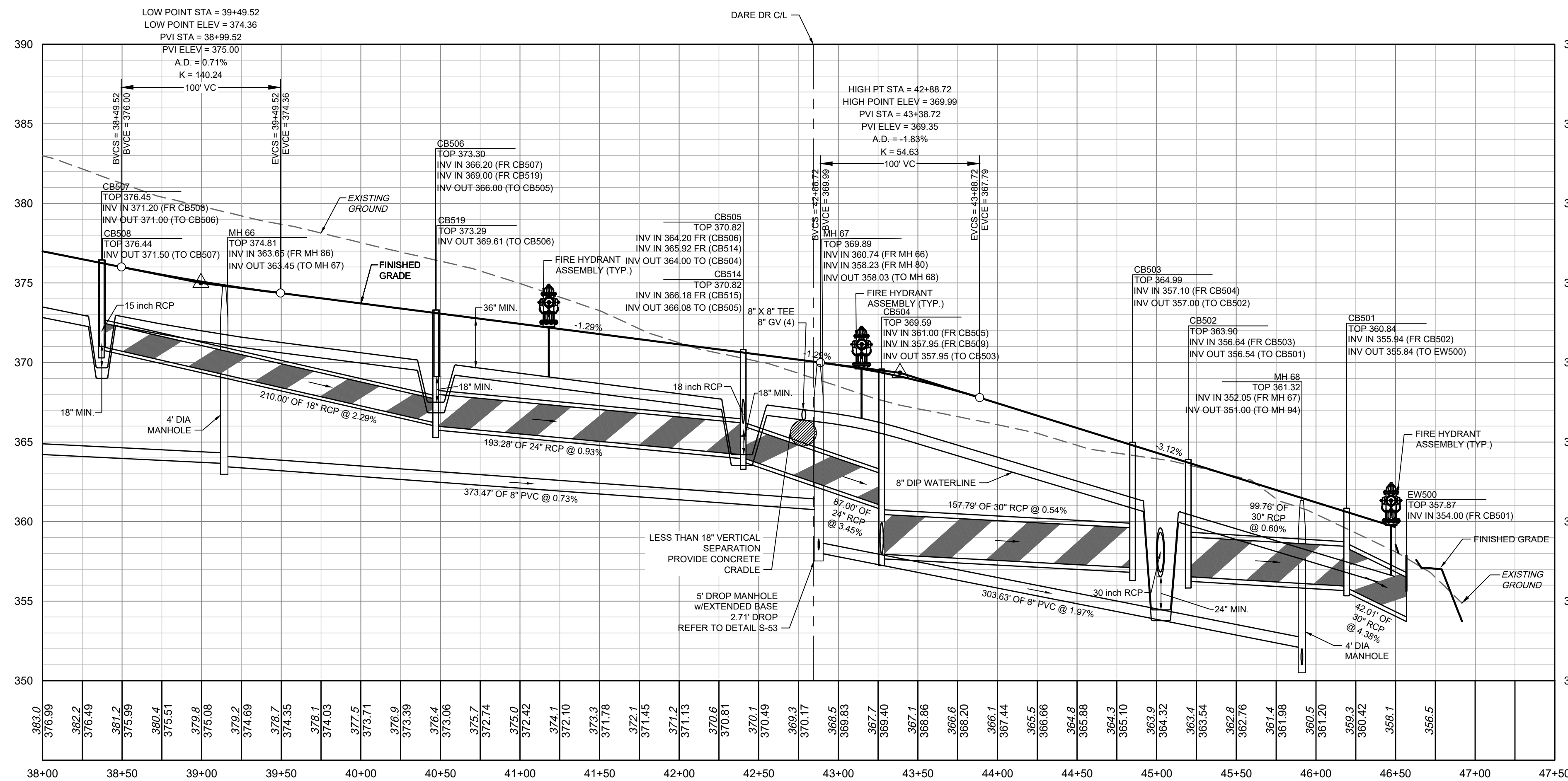
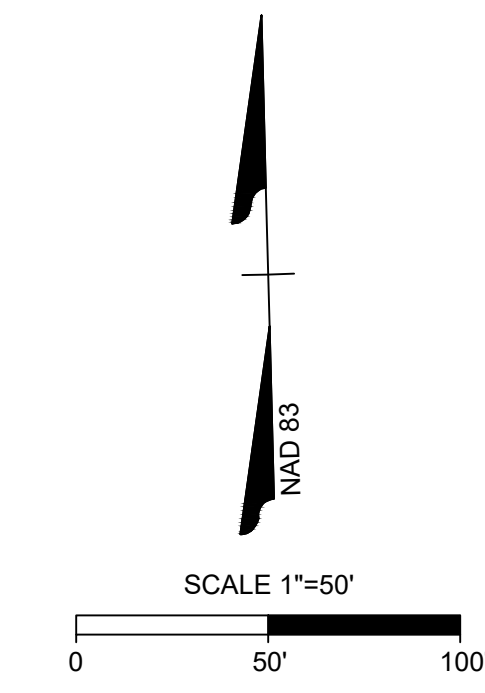
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CARTERET DR PROFILE
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DATE 09/17/2021
DRAWN BY R. WINGATE
DESIGNED BY P. BARBEAU
CHECKED BY P. BARBEAU
SCALE AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

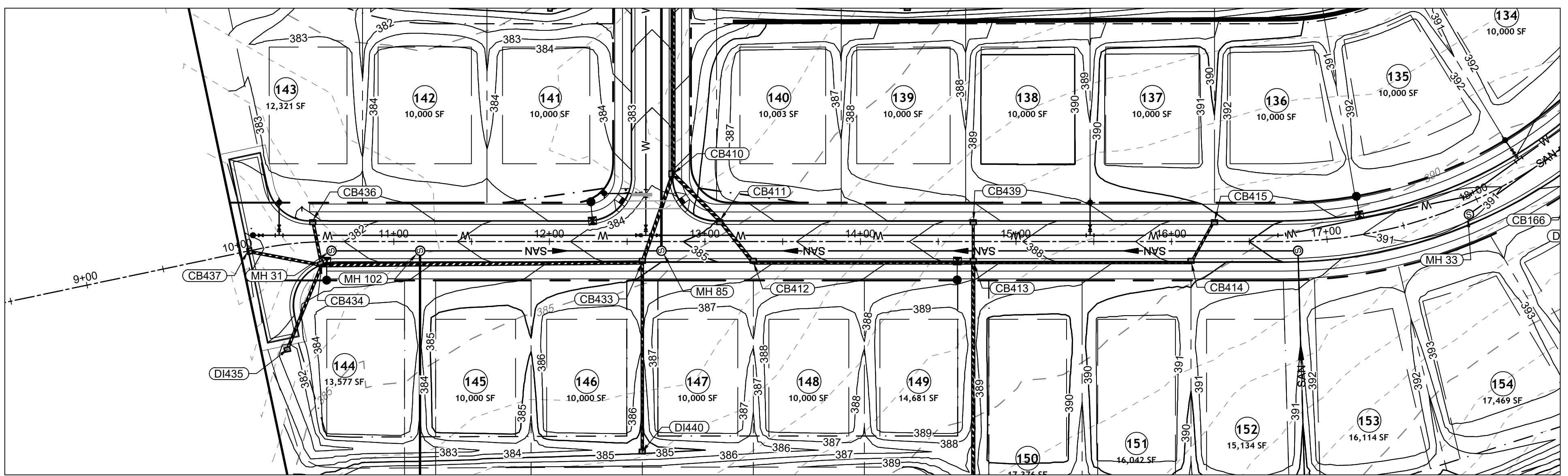
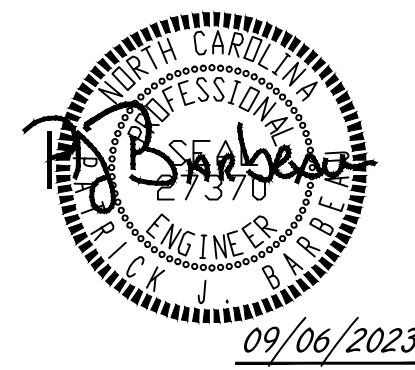
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROAD 2 PLAN & PROFILE

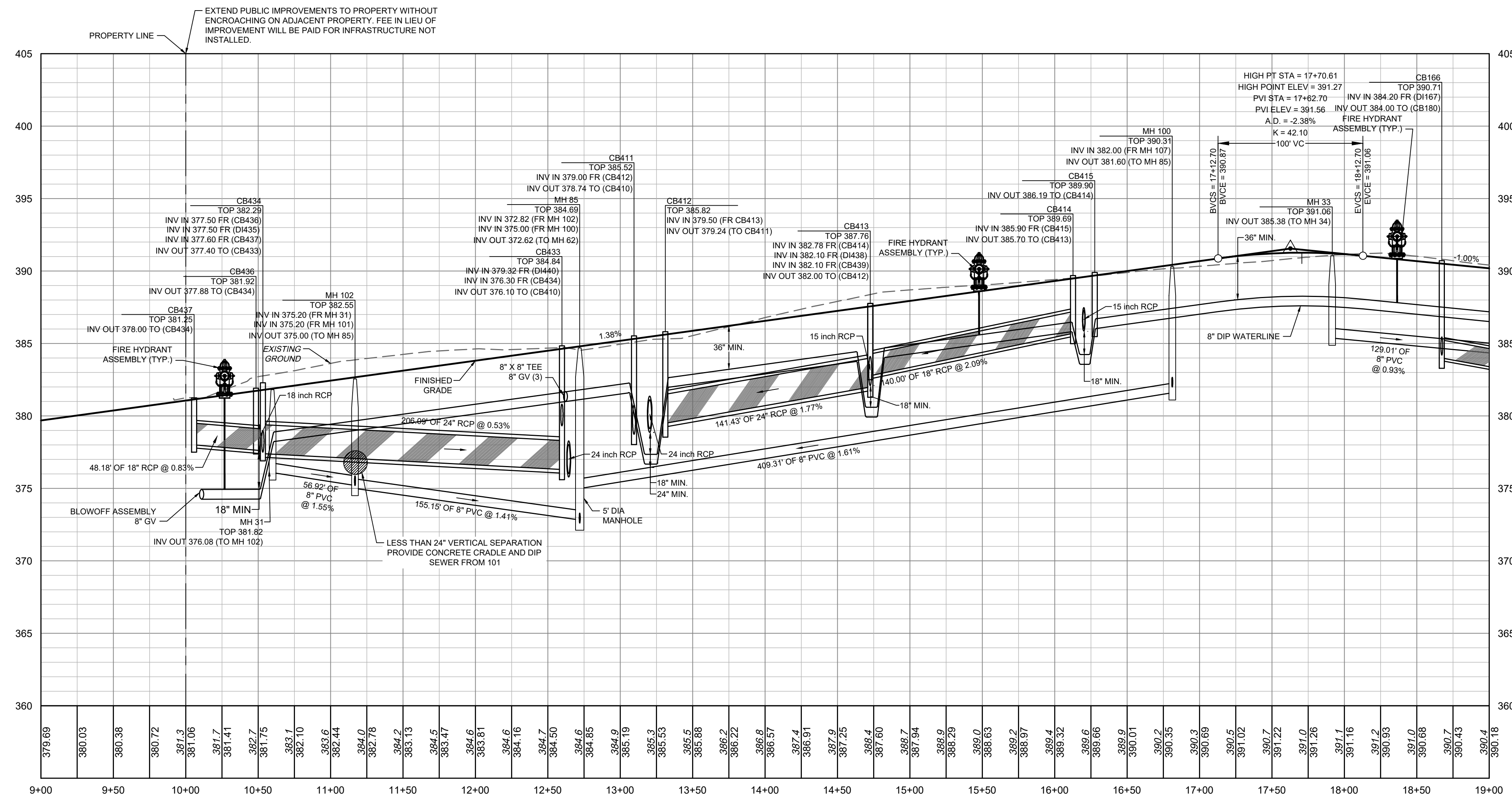
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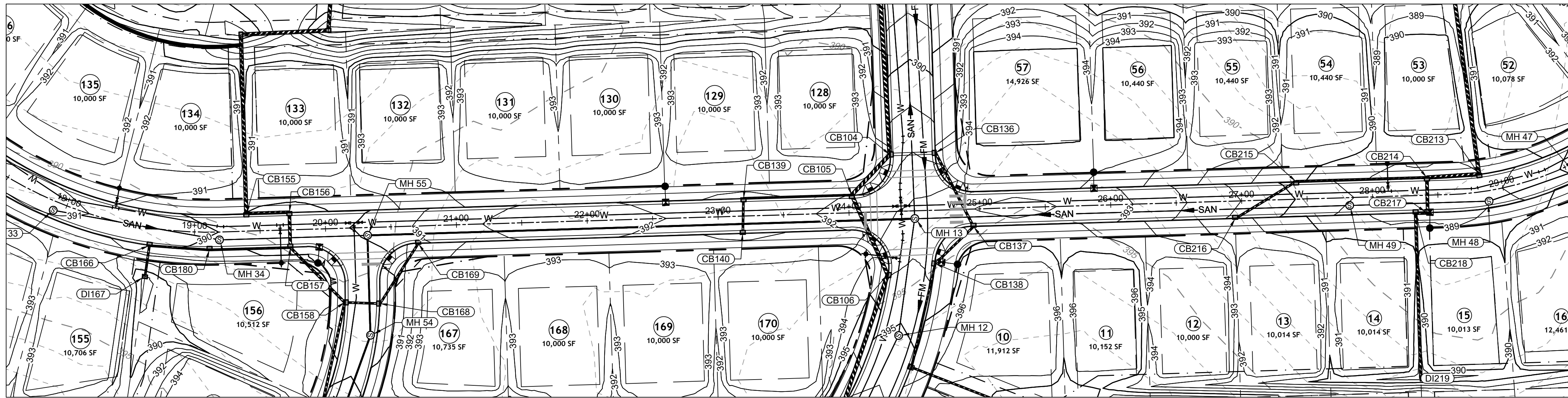
DATE: 09/17/2021
DRAWN BY: R. WINGATE
DESIGNED BY: P. BARBEAU
CHECKED BY: P. BARBEAU
SCALE: AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
ROAD 3 PLAN & PROFILE

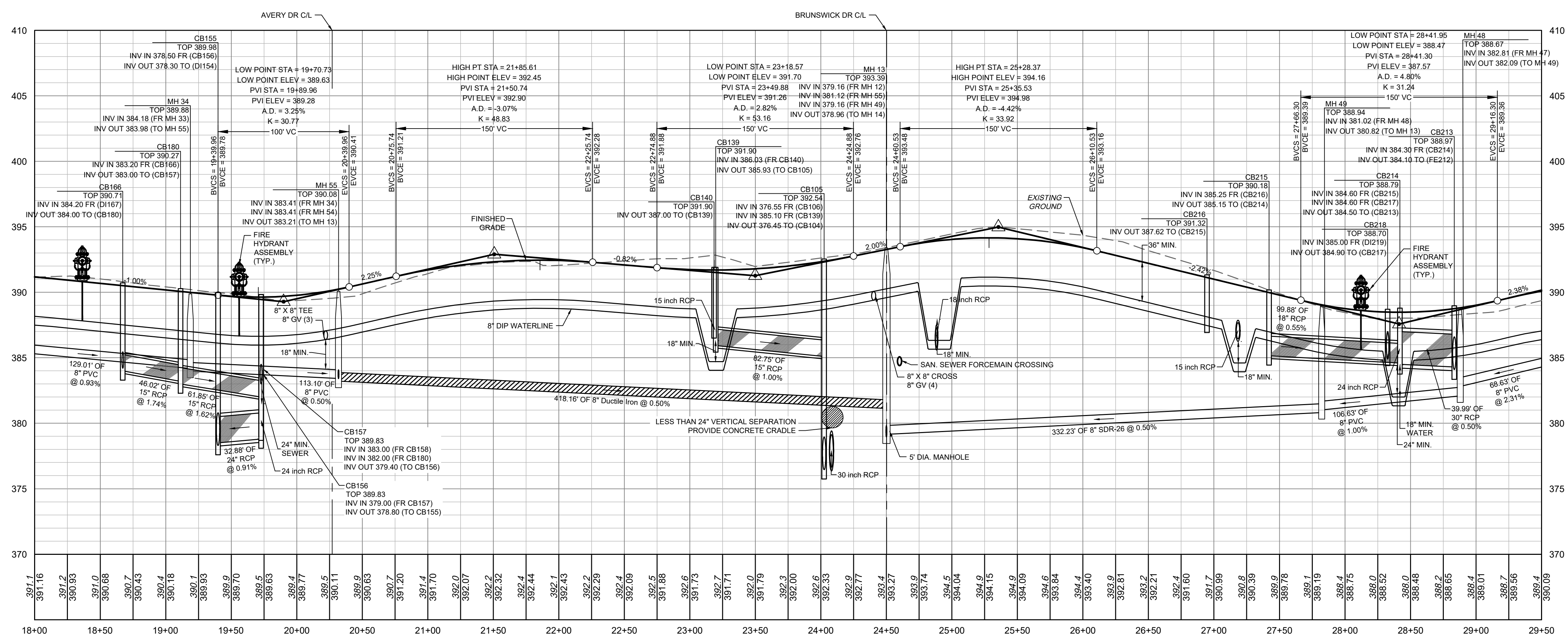
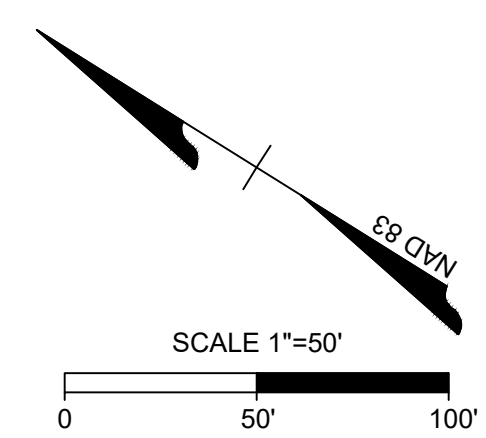
JOB NO. 43398
SHEET NO. C2.15



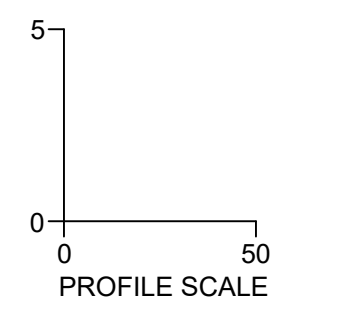
KNOW WHAT'S BELOW.
CALL 811 BEFORE YOU DIG.



DARE DR PLAN VIEW
STA 18+00 - 29+50



DARE DR PROFILE
STA 18+00 - 29+50



ATTENTION CONTRACTORS

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SITE PERMITTING APPROVAL

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City of Raleigh Public Utilities Department Permit # _____

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City of Raleigh Development Approval _____
City of Raleigh Review Officer _____

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



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DATE	REVISION DESCRIPTION
04/08/2022	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

DATE: 09/17/2021
DRAWN BY: R. WINGATE
DESIGNED BY: P. BARBEAU
CHECKED BY: P. BARBEAU
SCALE: AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

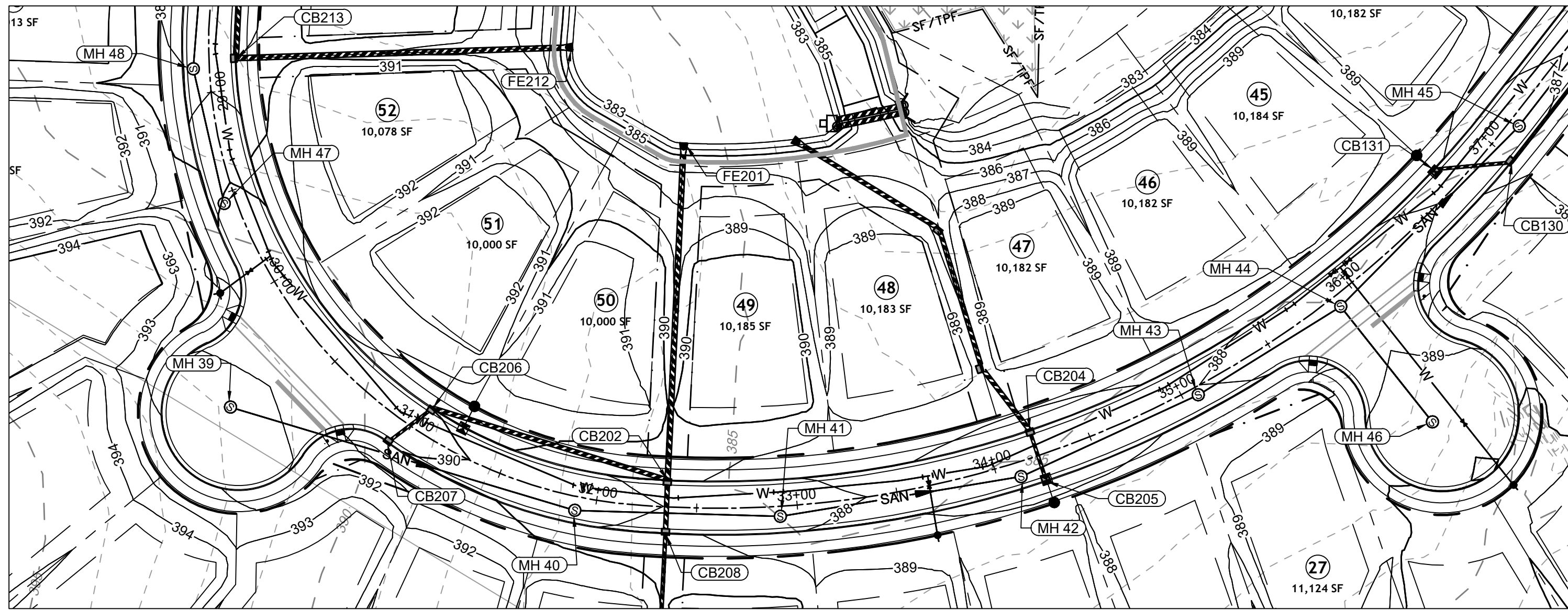
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROAD 3 PLAN & PROFILE

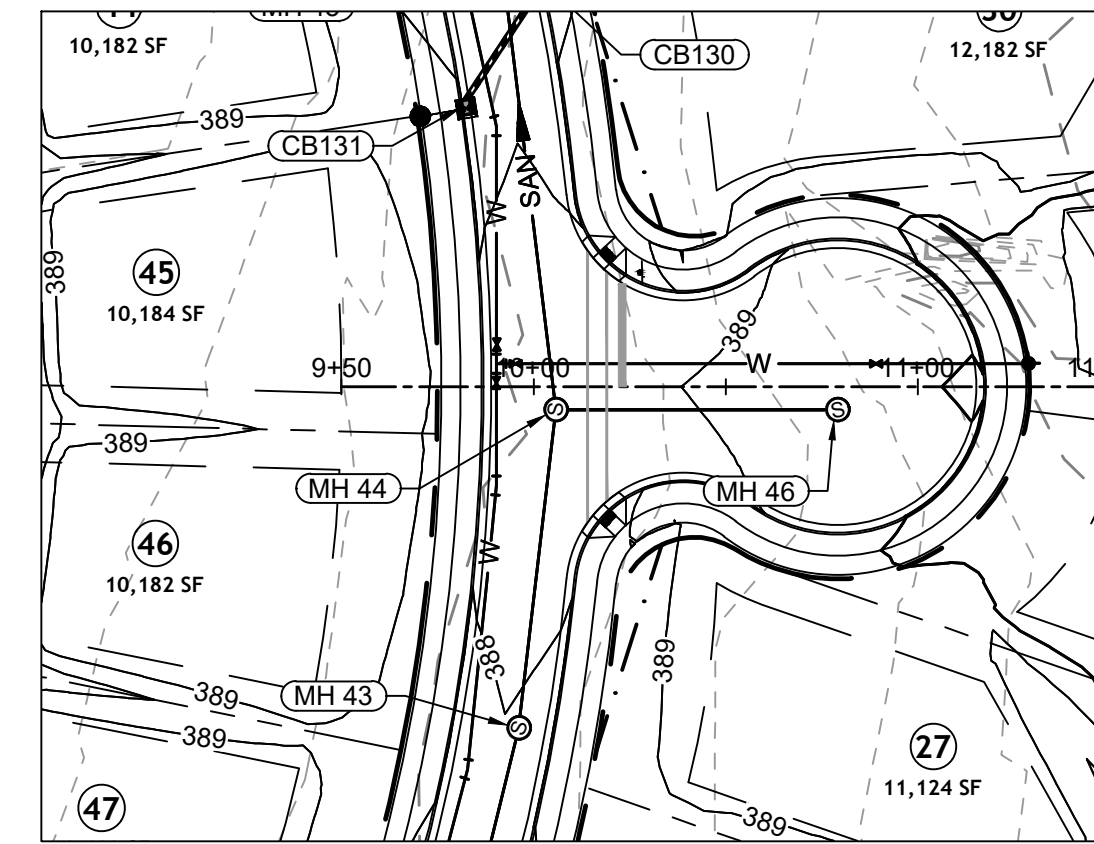
JOB NO. 43398
SHEET NO. C2.16



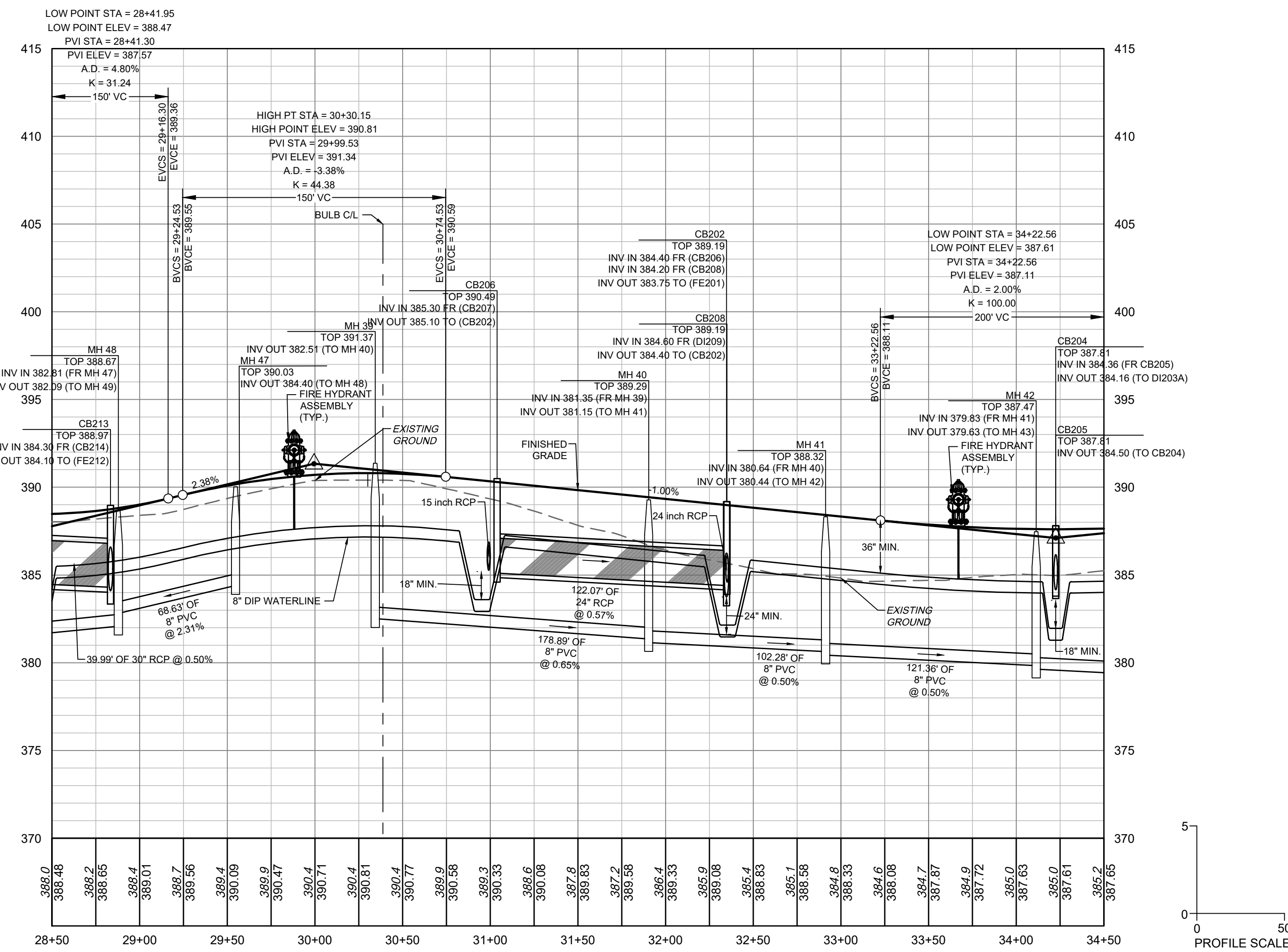
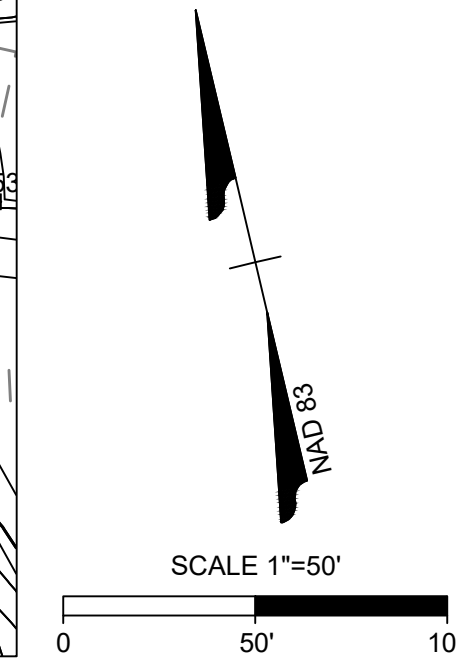
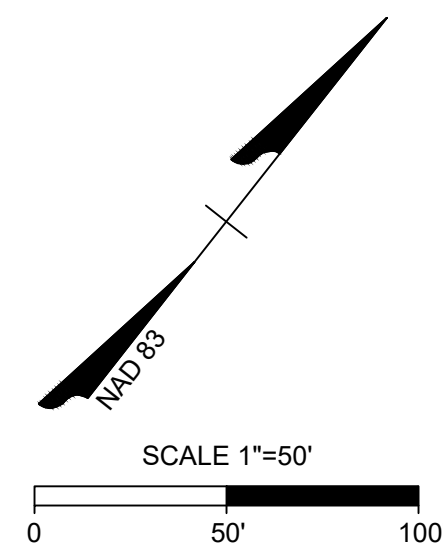
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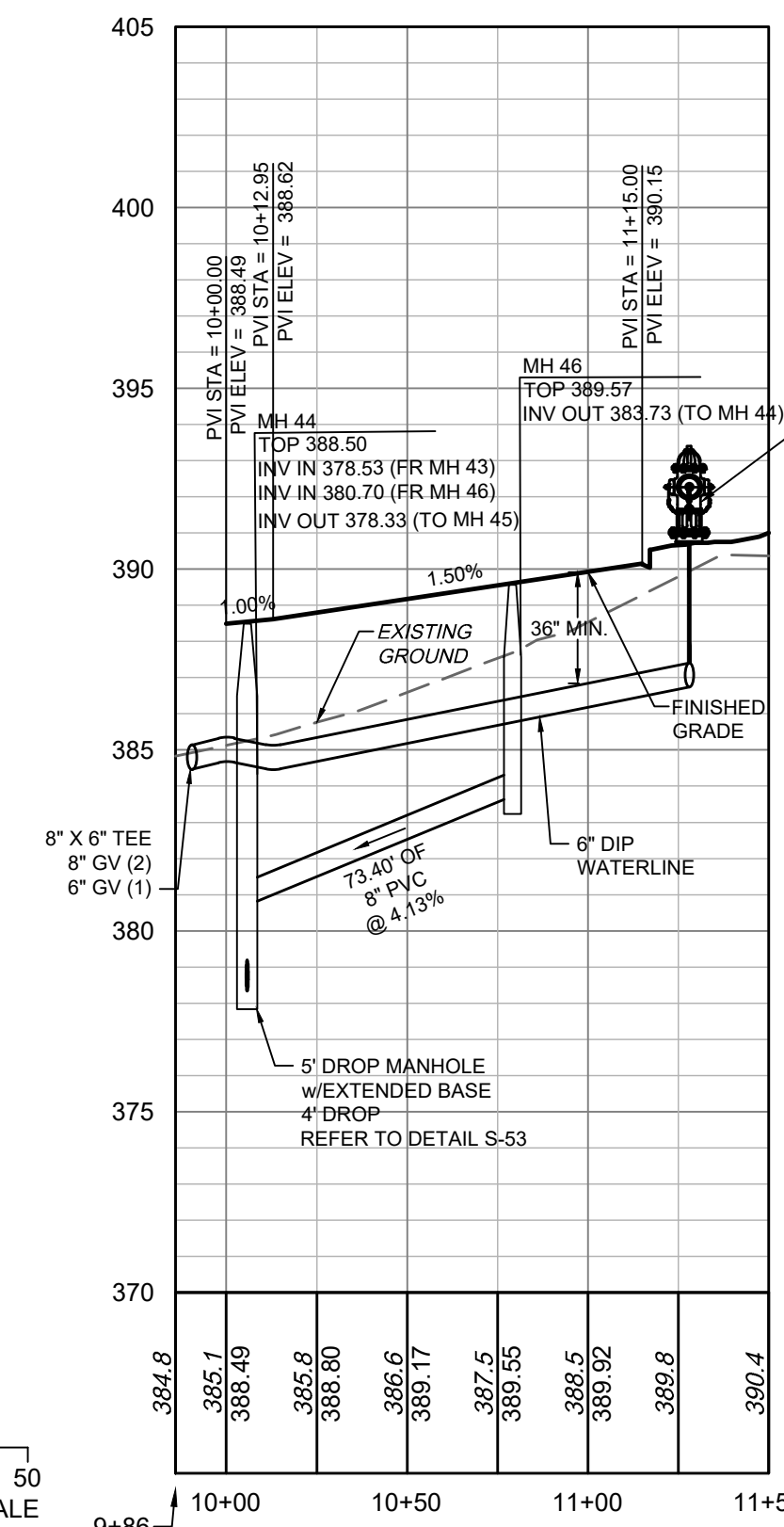
DARE DR PLAN VIEW
STA 28+50 - 34+50



WILKES LANE PLAN VIEW
STA 9+86 - 10+79.15



DARE DR PROFILE
STA 28+50 - 34+50



WILKES LANE PROFILE
STA 9+86 - 10+79.15

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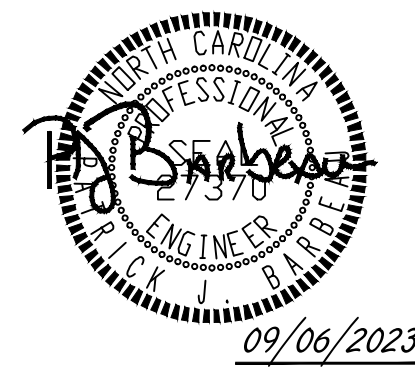
City of Raleigh Public Utilities Department Permit # _____

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City of Raleigh Development Approval _____
City of Raleigh Review Officer _____



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DATE	REVISION DESCRIPTION
04/08/2022	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

DATE: 09/17/2021
DRAWN BY: R. WINGATE
DESIGNED BY: P. BARBEAU
CHECKED BY: P. BARBEAU
SCALE: AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

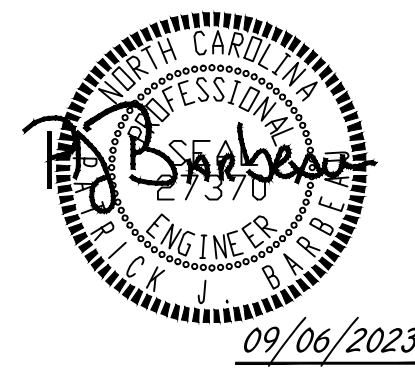
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROADS 3 AND 7 PLAN & PROFILE

JOB NO. 43398
SHEET NO. C2.17



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



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REVISIONS PER WAKE COUNTY COMMENTS	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2022
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2022
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2022
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

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DATE: 09/17/2021
 DRAWN BY: R. WINGATE
 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

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 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

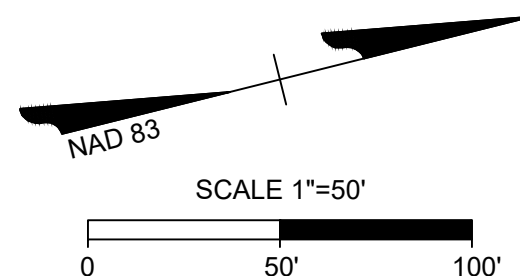
TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

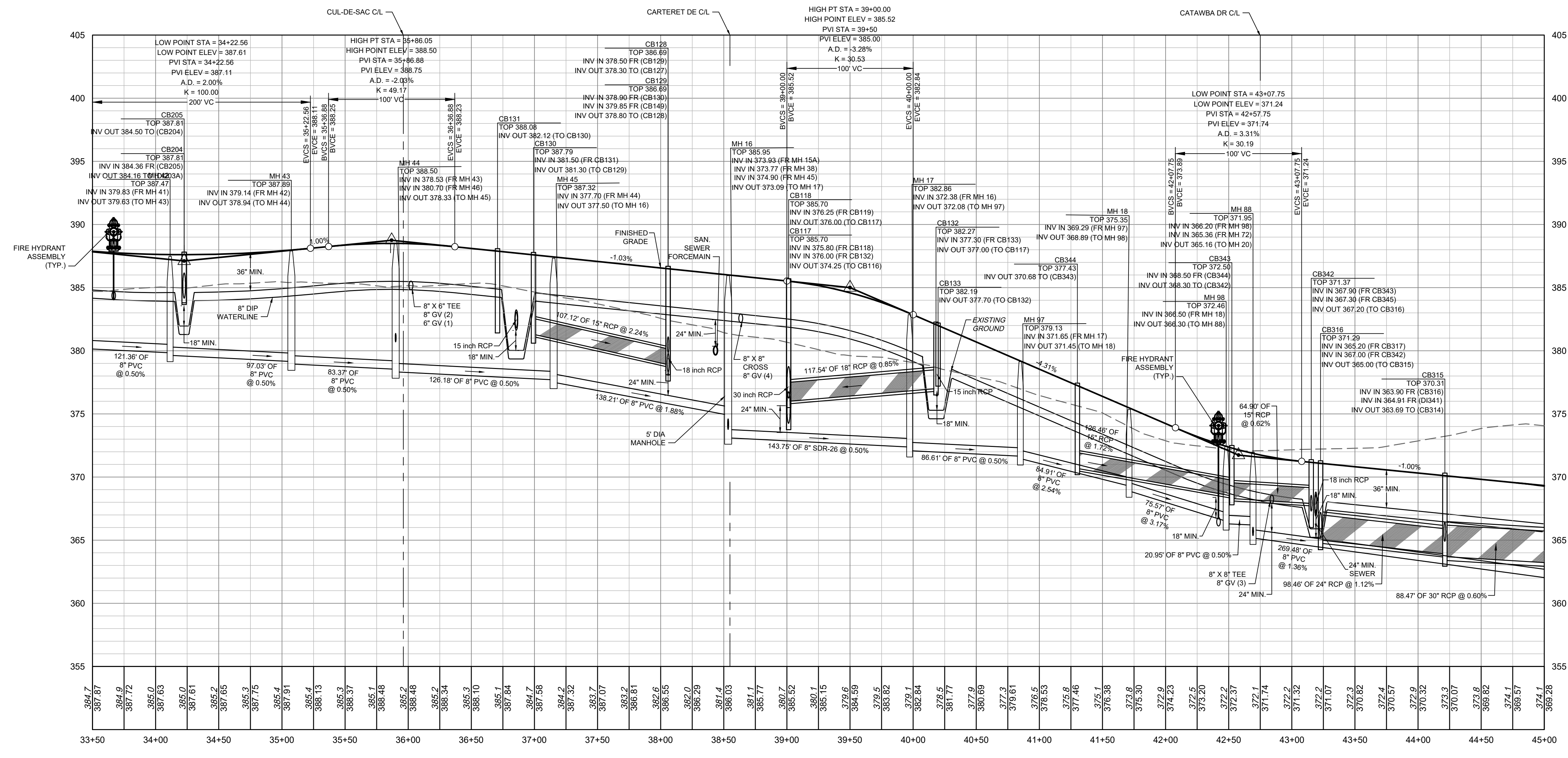
ROAD 3 PLAN & PROFILE

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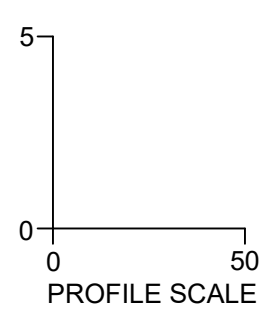
JOB NO. 43398
 SHEET NO. C2.18



DARE DR PLAN VIEW
 STA 33+50 - 45+00



DARE DR PROFILE
 STA 33+50 - 45+00



ATTENTION CONTRACTORS

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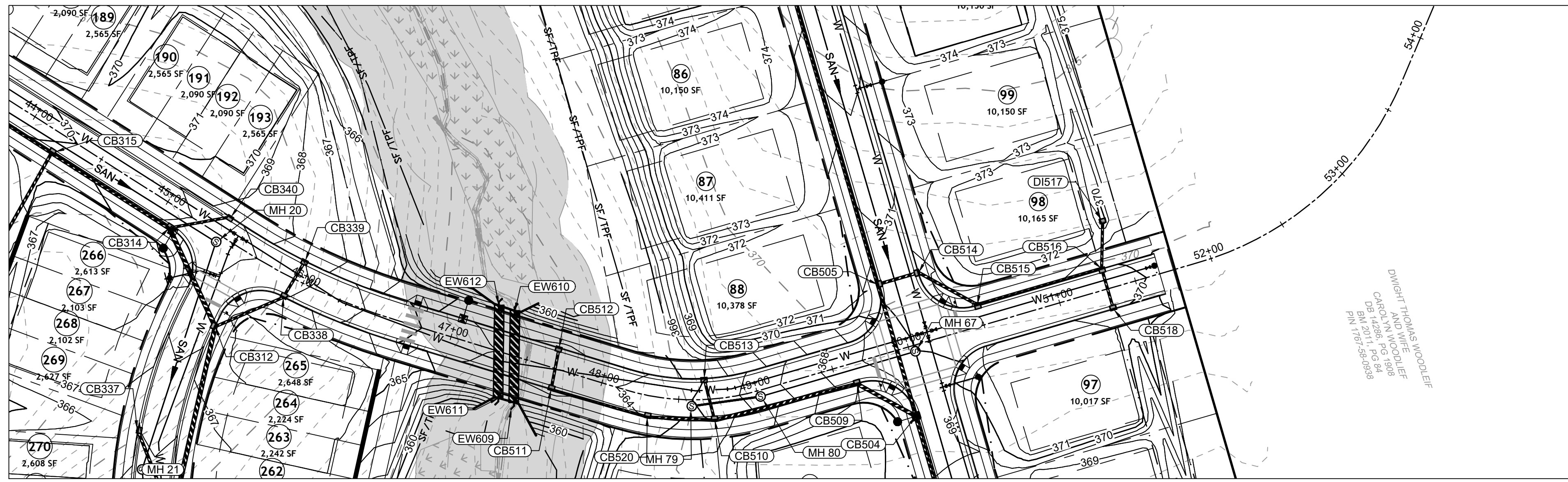
City of Raleigh Development Approval _____
 City of Raleigh Review Officer _____

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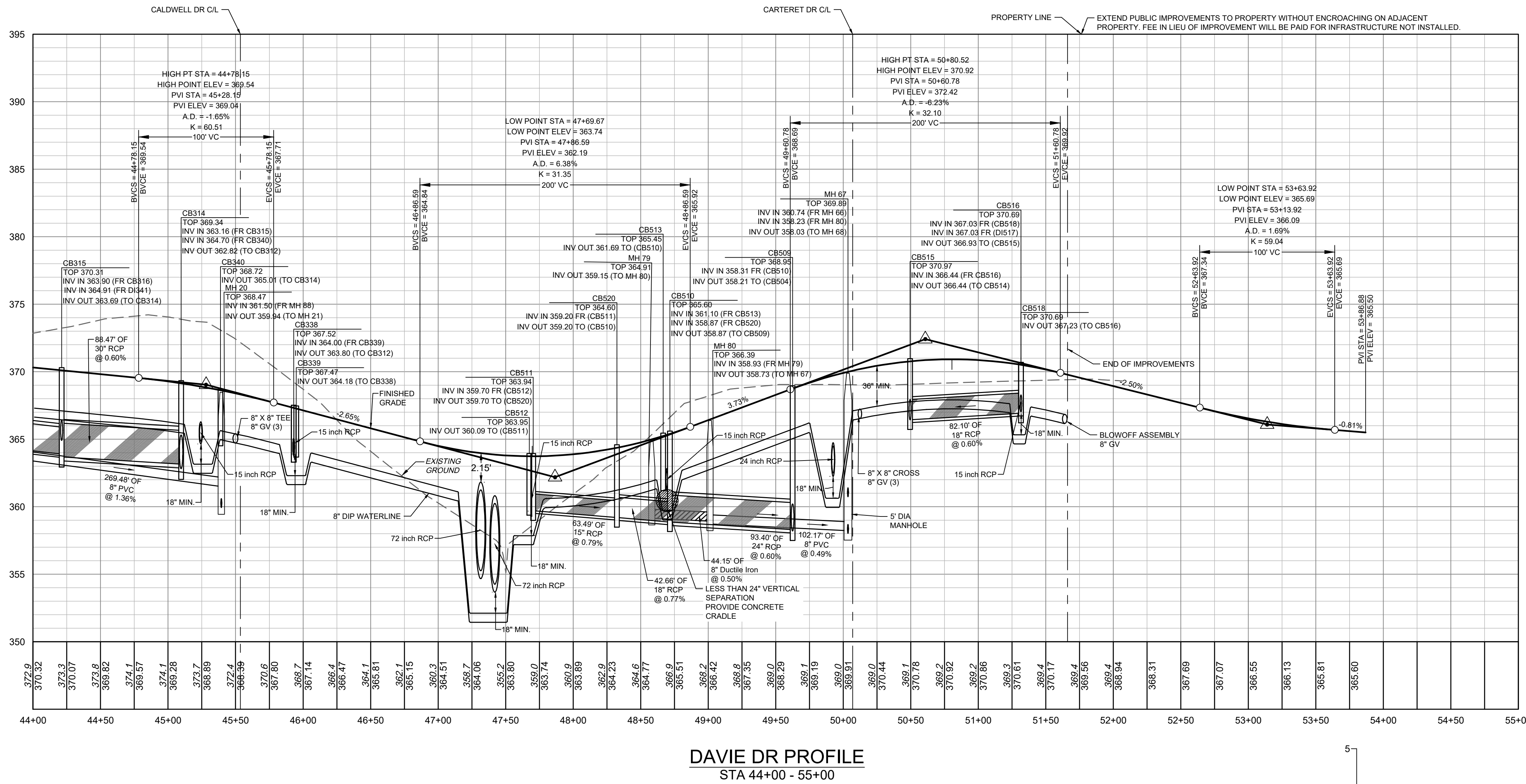
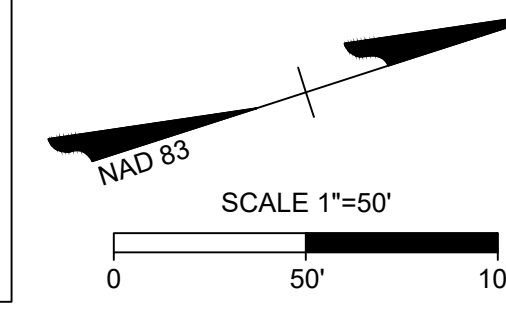
811

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

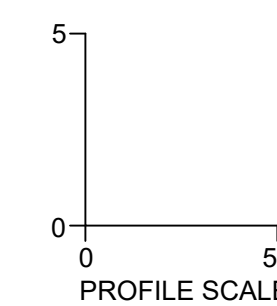
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DAVIE DR PLAN VIEW
STA 44+00 - 55+00



DAVIE DR PROFILE
STA 44+00 - 55+00



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DATE 09/17/2021
DRAWN BY R. WINGATE
DESIGNED BY P. BARBEAU
CHECKED BY P. BARBEAU
SCALE AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

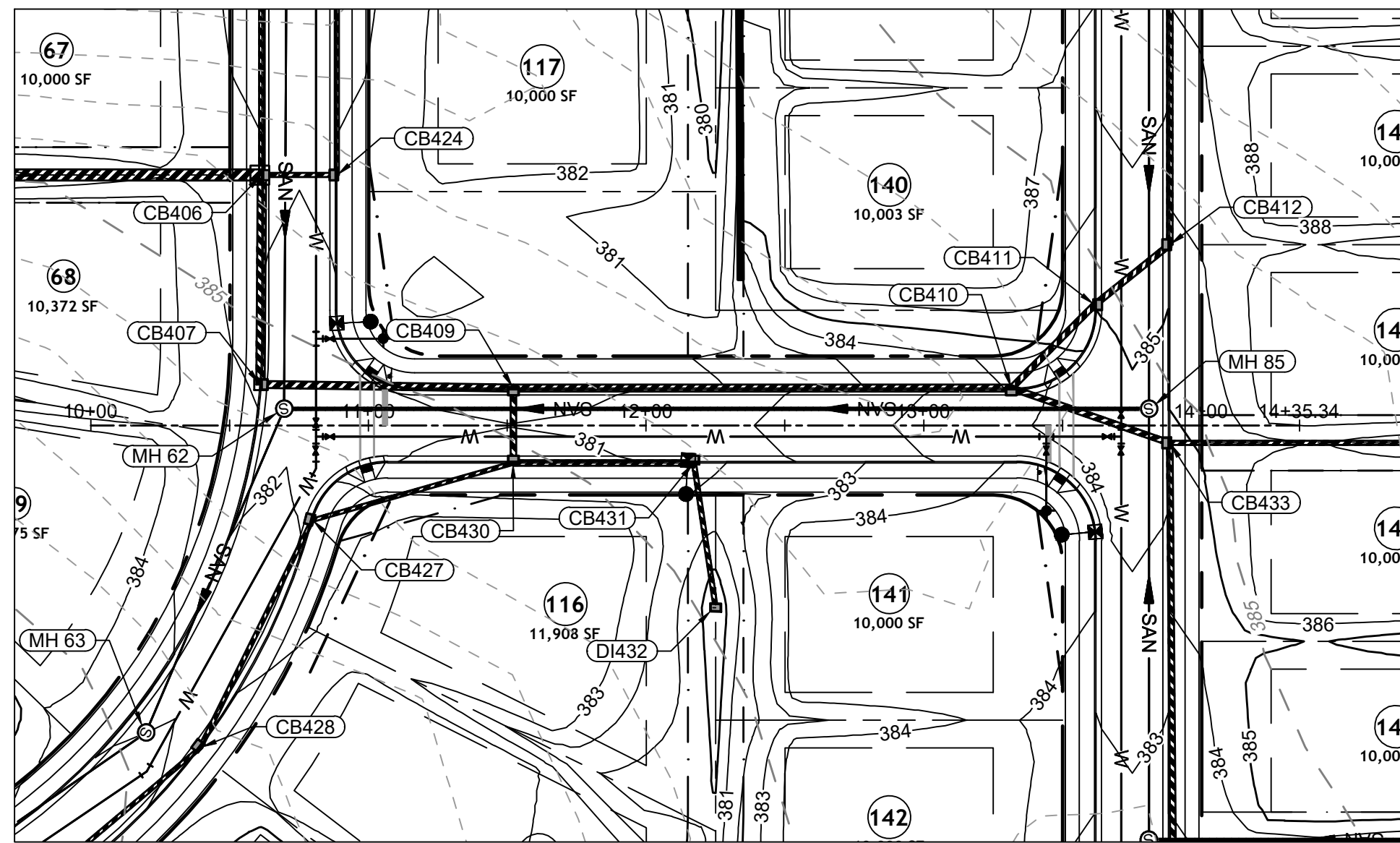
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROAD 3 PLAN & PROFILE

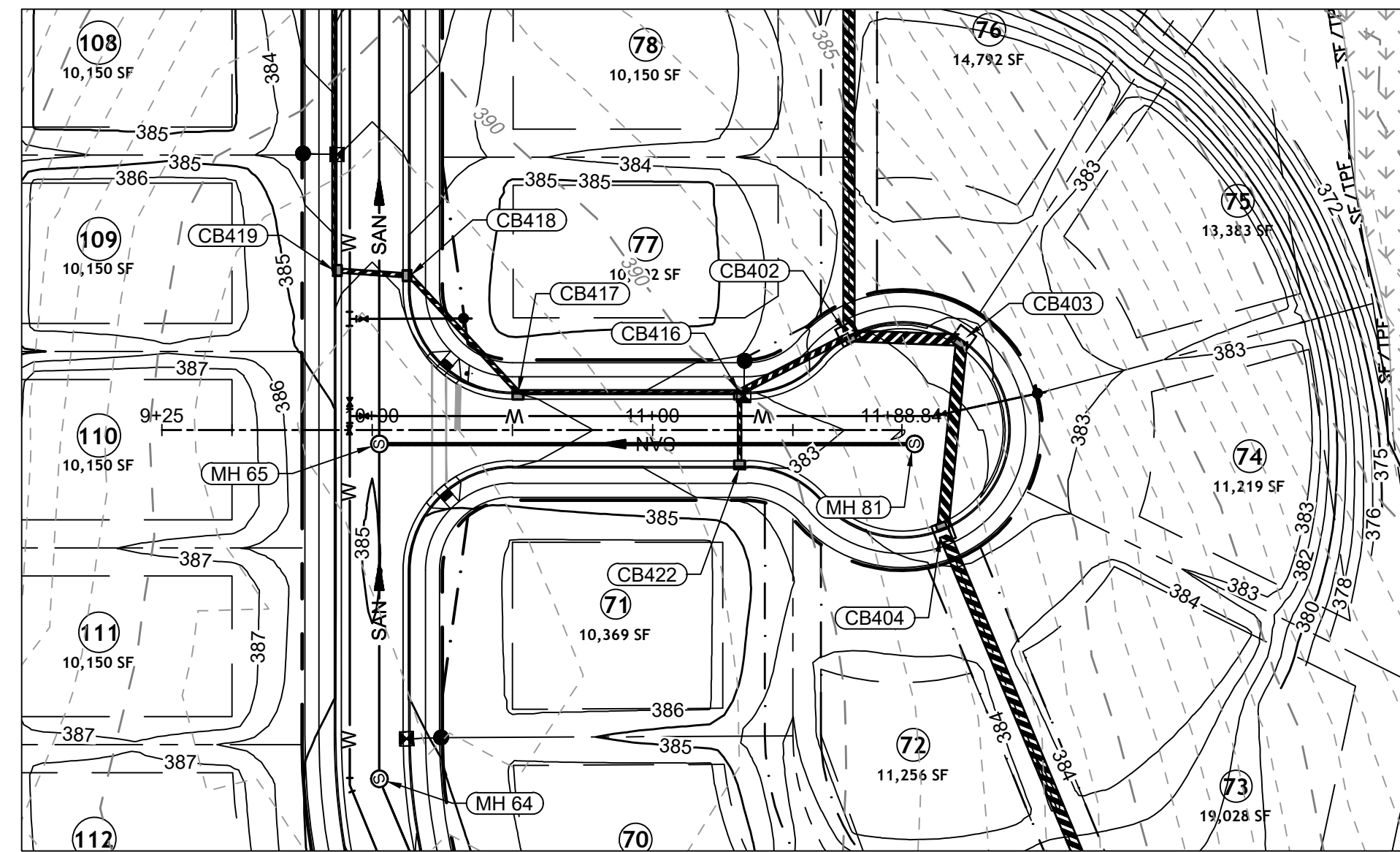
JOB NO. 43398
SHEET NO. C2.19



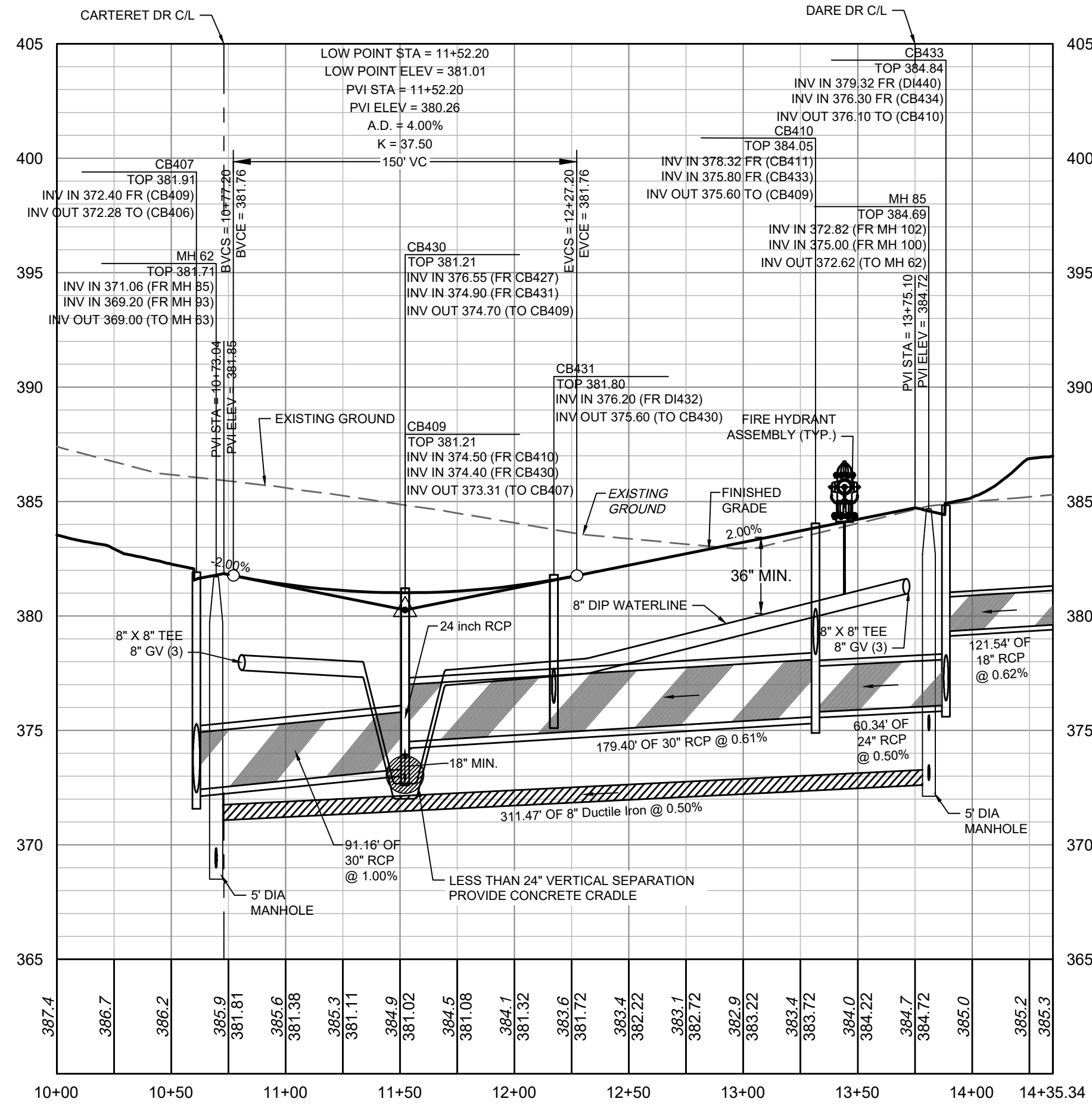
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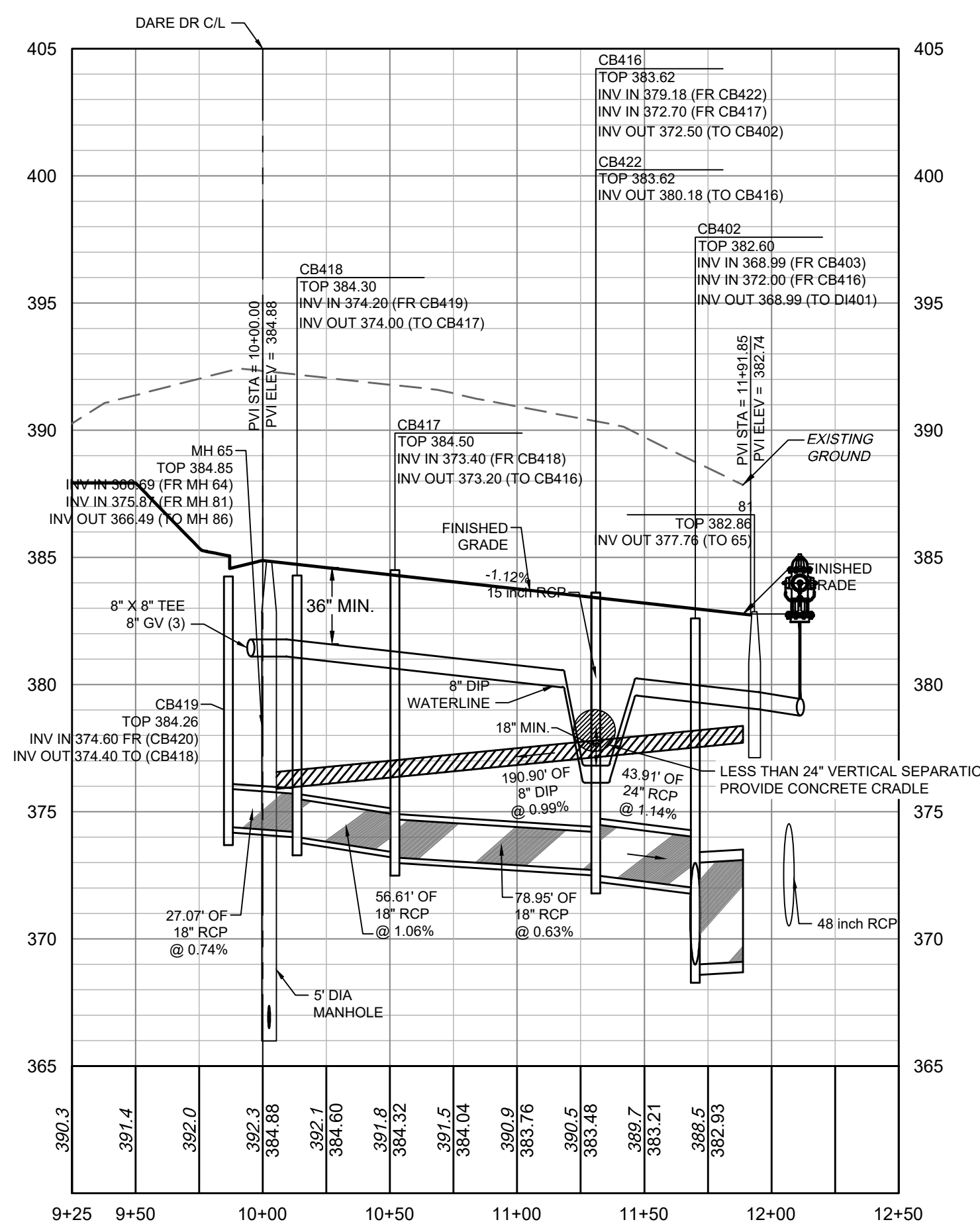
HYDE DR PLAN VIEW
STA 10+00 - 14+35.34



PAMLCO LN PLAN VIEW
STA 10+00 - 12+00



HYDE DR PROFILE
STA 10+00 - 14+35.34



PAMLCO LN PROFILE
STA 10+00 - 12+00

SEWER MAIN MATERIAL:

PVC SDR35	MIN. 3' TO 12' NON-TRAFFIC AREA; MIN. 5' TO 12' TRAFFIC AREA
PVC SDR26	12'-20' TRAFFIC AND NON-TRAFFIC AREAS
DIP	MIN. 3' TO 5' TRAFFIC AREA (CLASS 1 BEDDING); GREATER THAN 20' WITH DIRECTOR APPROVAL

NOTE: ANY SEWER DEEPER THAN 12' REQUIRES SDR-26 OR DIP SEWER PIPE AND 5' DIAMETER MANHOLES. SEWER DEEPER THAN 20' REQUIRES 6' DIAMETER MANHOLES AND DIP SEWER PIPE.

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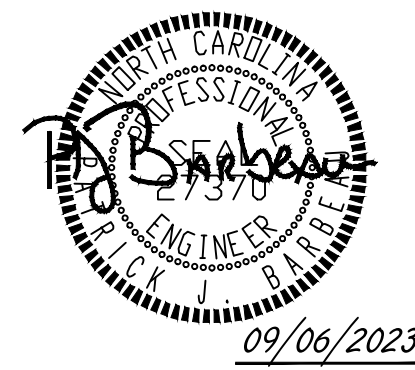
DATE 09/17/2021
DRAWN BY R. WINGATE
DESIGNED BY P. BARBEAU
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SCALE AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

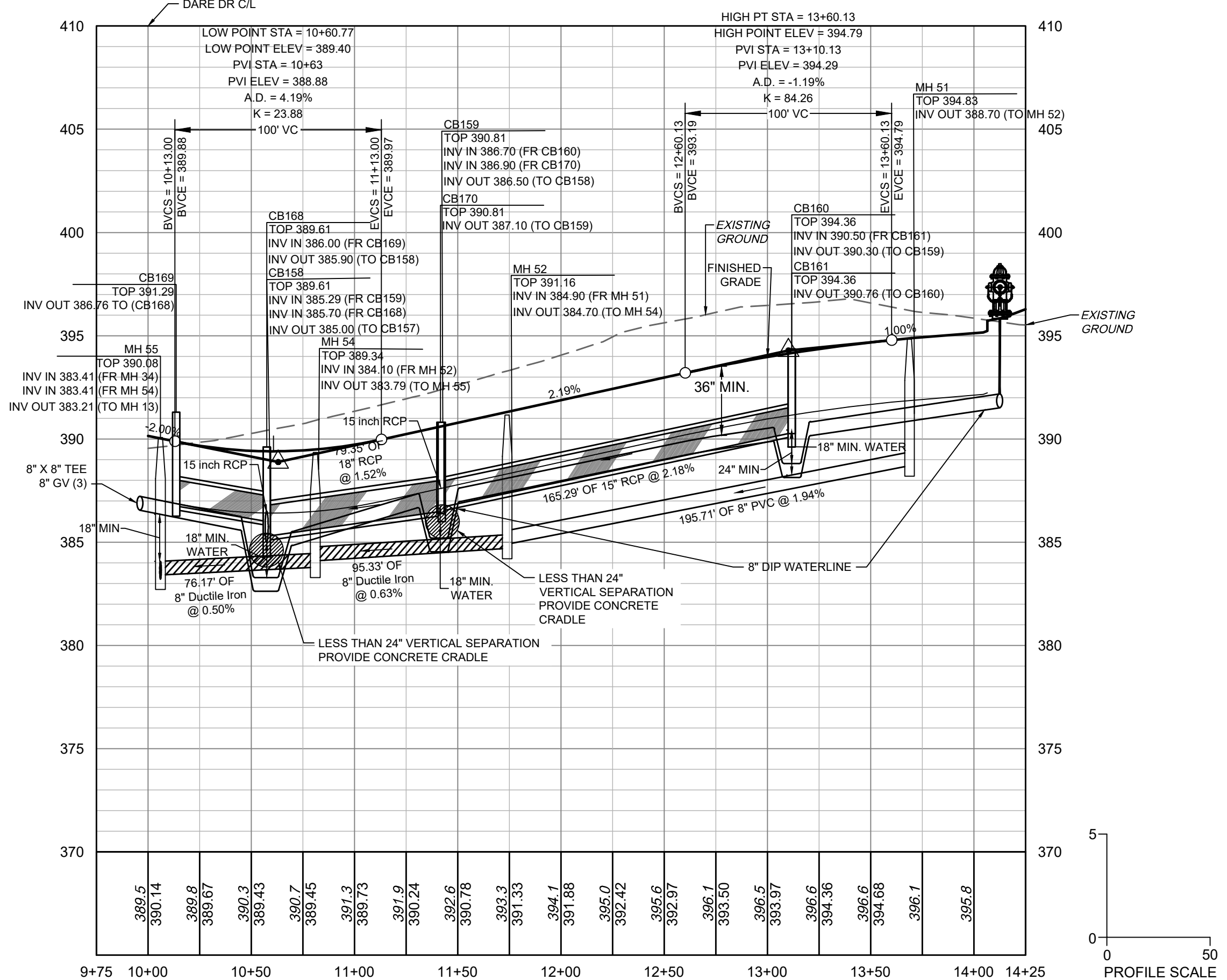
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROADS 4 AND 5 PLAN & PROFILE

JOB NO. 43398
SHEET NO. C2.20



AVERY DRIVE PLAN VIEW
STA 10+00 - 13+68.74



AVERY DRIVE PROFILE
STA 10+00 - 13+68.74

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PVC SDR26	12'-20' TRAFFIC AND NON-TRAFFIC AREAS
DIP	MIN. 3' TO 5' TRAFFIC AREA (CLASS 1 BEDDING); GREATER THAN 20' WITH DIRECTOR APPROVAL

ATTENTION CONTRACTORS

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SITE PERMITTING APPROVAL

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City of Raleigh Public Utilities Department Permit # _____

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City of Raleigh Development Approval _____
City of Raleigh Review Officer _____

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROAD 6 PLAN & PROFILE

YOUR VISION ACHIEVED THROUGH OURS.

DATE: 09/17/2021

DRAWN BY: R. WINGATE

DESIGNED BY: P. BARBEAU

CHECKED BY: P. BARBEAU

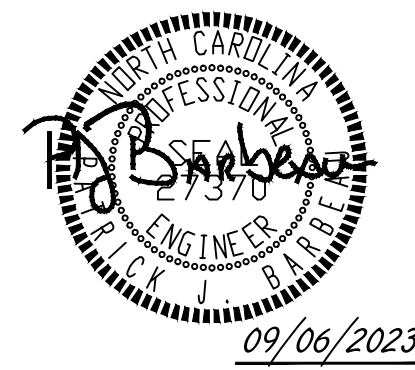
SCALE: AS SHOWN

JOB NO. 43398

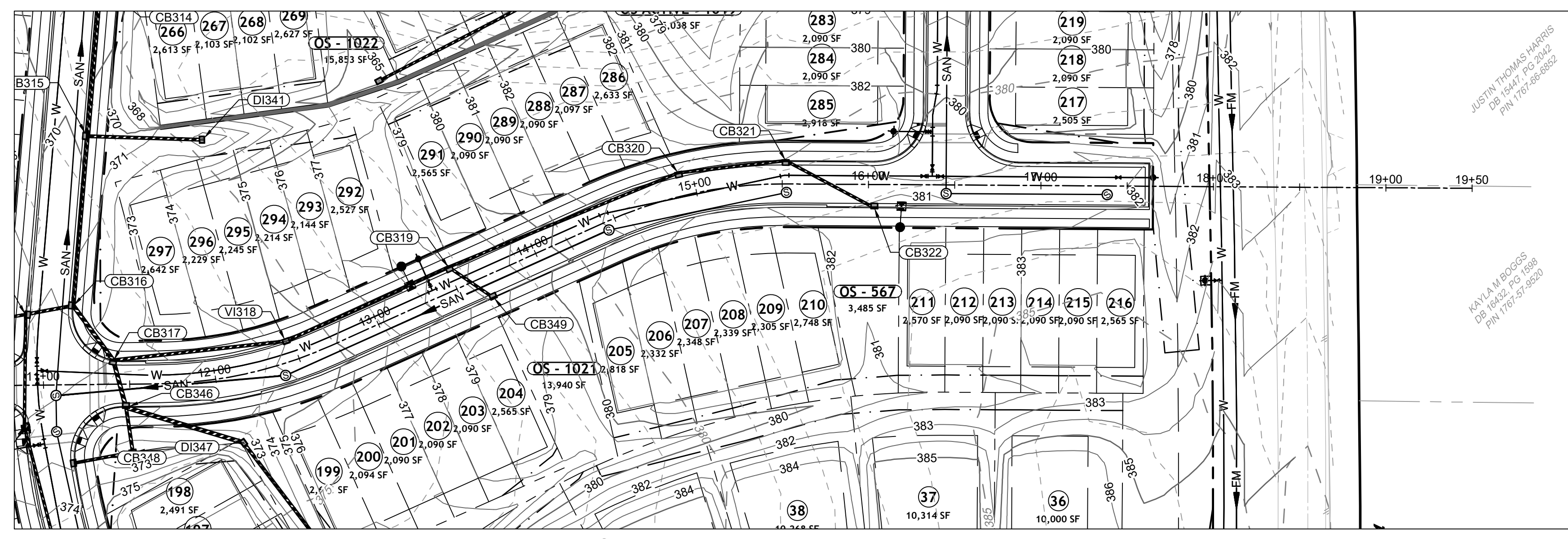
SHEET NO. C2.21

DATE	REVISION DESCRIPTION
04/08/2023	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2023	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2023	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

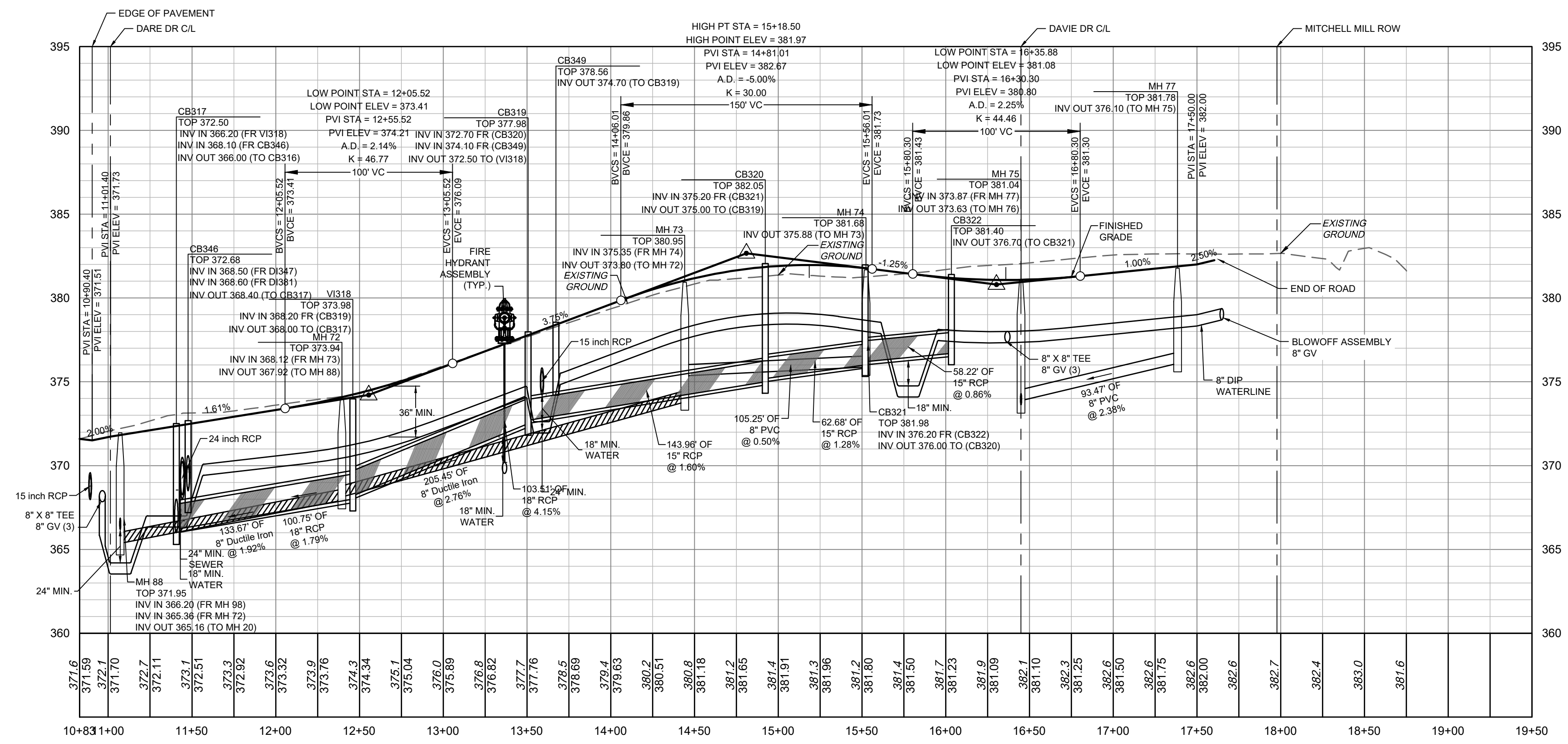
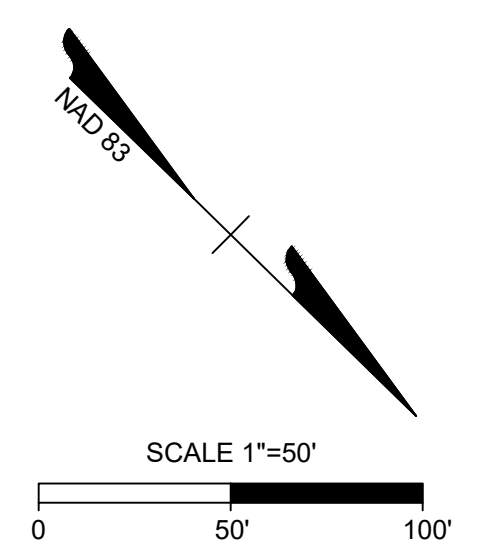
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09/06/2023



CATAWBA DR PLAN VIEW
STA 10+83 - 19+50



CATAWBA DR PROFILE
STA 10+83 - 19+50

SEWER MAIN MATERIAL:

PVC SDR35	MIN. 3' TO 12' NON-TRAFFIC AREA; MIN. 5' TO 12' TRAFFIC AREA
PVC SDR26	12'-20' TRAFFIC AND NON-TRAFFIC AREAS
DIP	MIN. 3' TO 5' TRAFFIC AREA (CLASS 1 BEDDING); GREATER THAN 20' WITH DIRECTOR APPROVAL

NOTE: ANY SEWER DEEPER THAN 12' REQUIRES SDR-26 OR DIP SEWER PIPE AND 5' DIAMETER MANHOLES. SEWER DEEPER THAN 20' REQUIRES 6' DIAMETER MANHOLES AND DIP SEWER PIPE.

ATTENTION CONTRACTORS

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SITE PERMITTING APPROVAL

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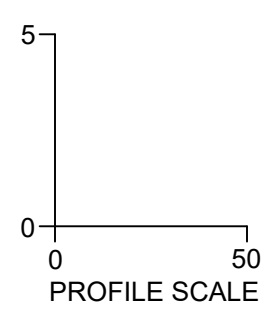
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City of Raleigh Development Approval _____
City of Raleigh Review Officer _____



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YOUR VISION ACHIEVED THROUGH OURS.

DATE	REVISION DESCRIPTION
04/08/2022	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

DATE: 09/17/2021
DRAWN BY: R. WINGATE
DESIGNED BY: P. BARBEAU
CHECKED BY: P. BARBEAU
SCALE: AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

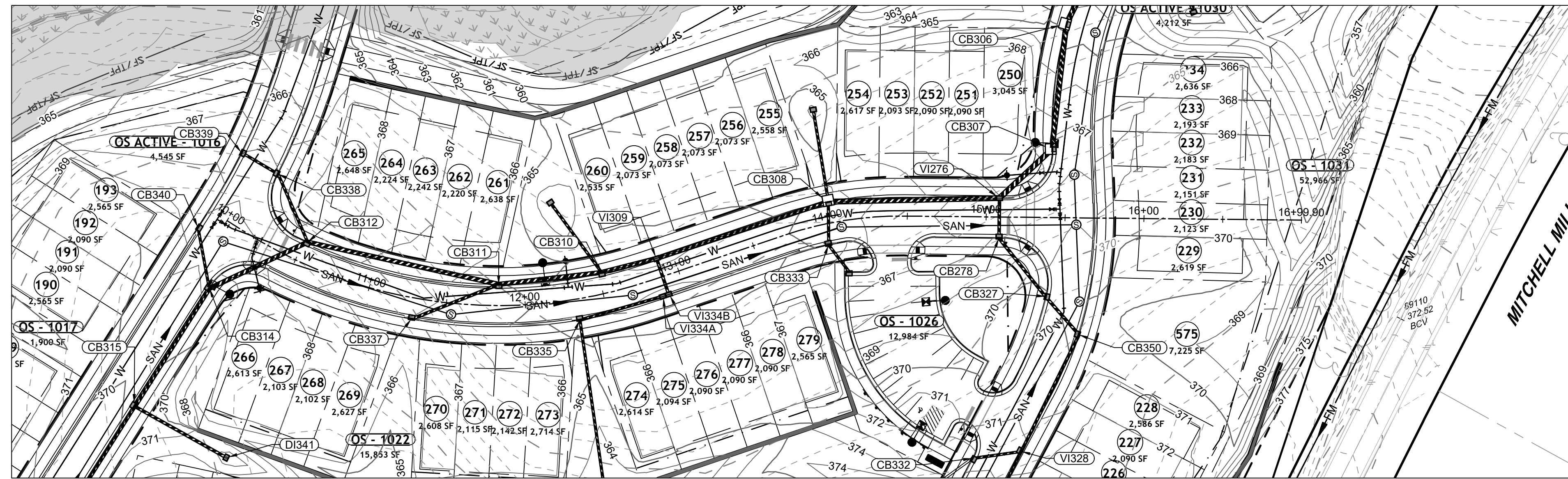
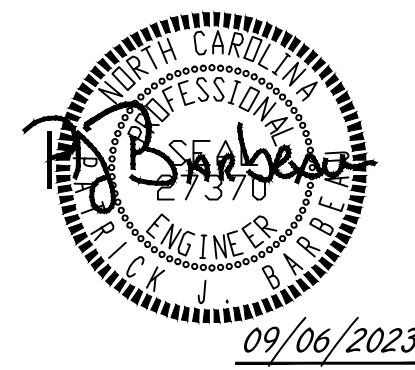
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROAD 8 PLAN & PROFILE

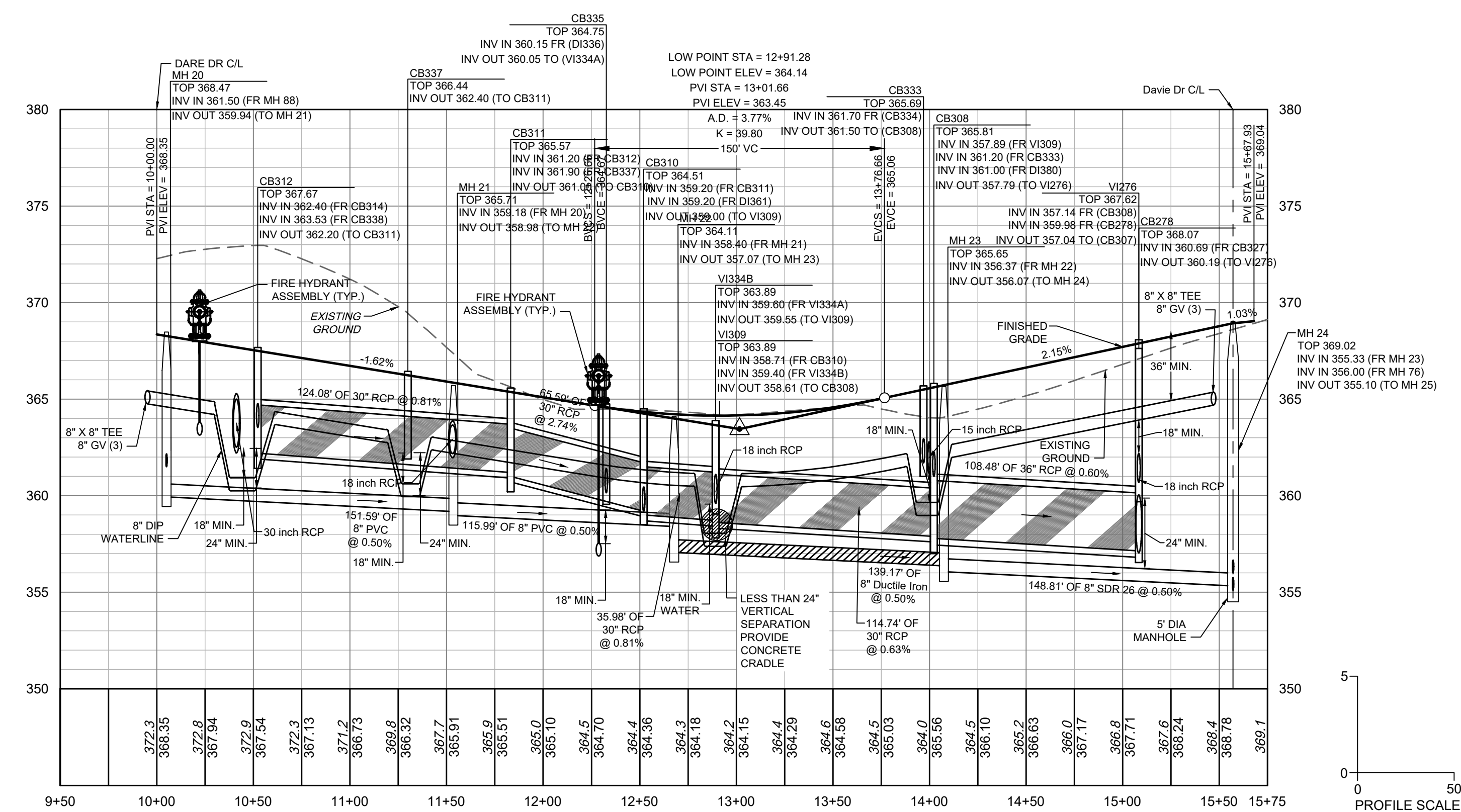
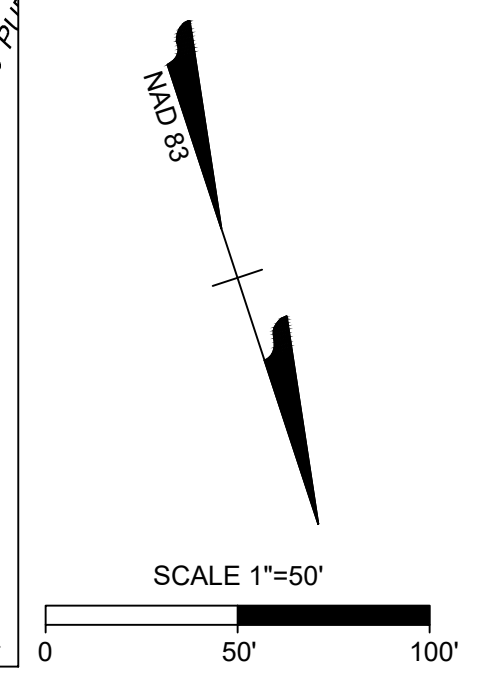
JOB NO. 43398
SHEET NO. C2.22

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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



CALDWELL DR PLAN VIEW
STA 10+00 - 17+00



CALDWELL DR PROFILE
STA 10+00 - 17+00

NOTE: ANY SEWER DEEPER THAN 12' REQUIRES SDR-26 OR DIP SEWER PIPE AND 5' DIAMETER MANHOLES. SEWER DEEPER THAN 20' REQUIRES 6' DIAMETER MANHOLES AND DIP SEWER PIPE.

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City of Raleigh Development Approval _____
City of Raleigh Review Officer _____

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YOUR VISION ACHIEVED THROUGH OURS.

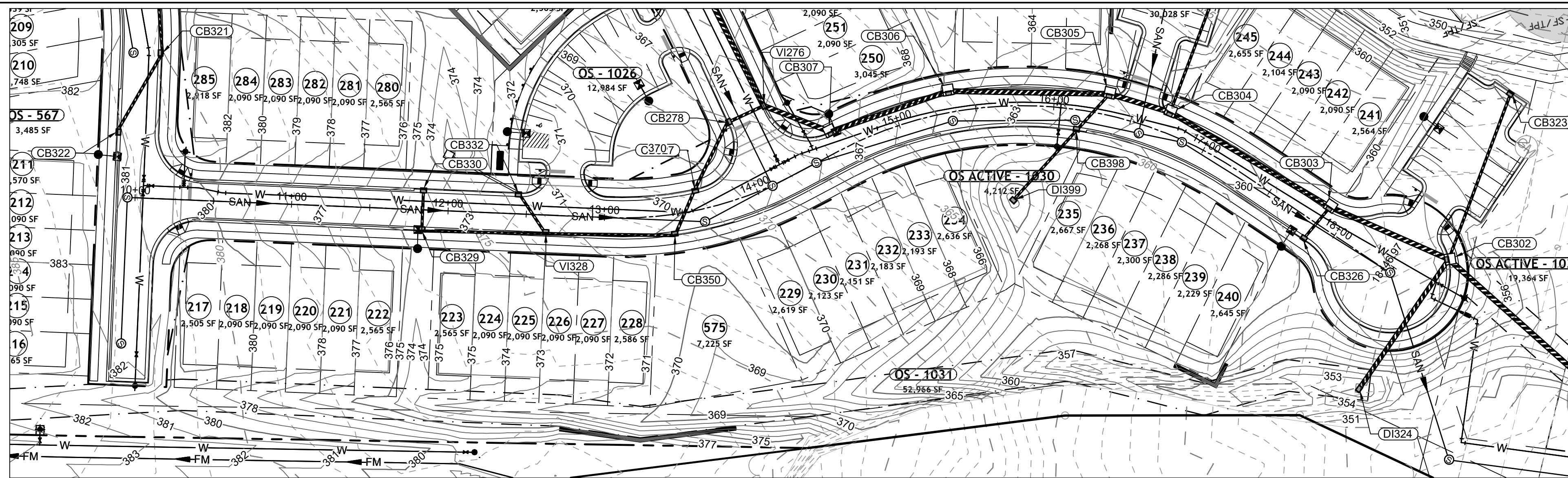
DATE 09/17/2021
DRAWN BY R. WINGATE
DESIGNED BY P. BARBEAU
CHECKED BY P. BARBEAU
SCALE AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

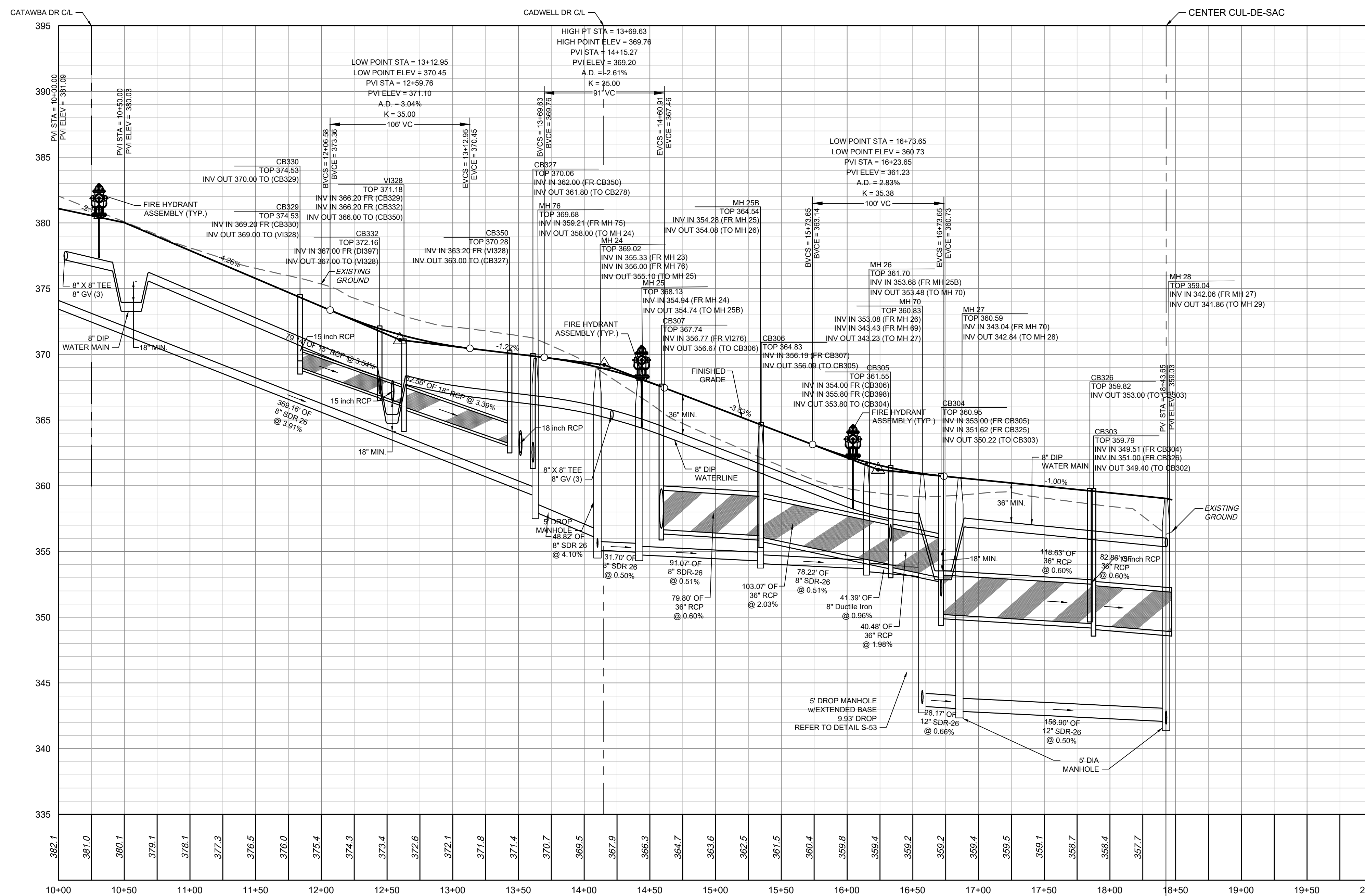
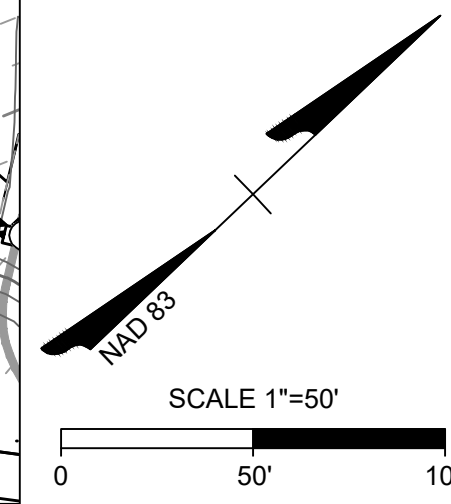
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROAD 9 PLAN & PROFILE

JOB NO. 43398
SHEET NO. C2.23



DAVIE DR PLAN VIEW
STA 10+00 - 19+79.38



DAVIE DR PROFILE
STA 10+00 - 19+79.38

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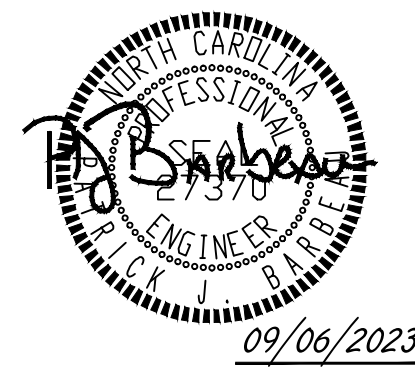
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City of Raleigh Review Officer

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TEL 919-866-4951 FAX 919-833-8124 www.timmons.com

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REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2022
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2022
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2022
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE
09/17/2021

DRAWN BY
R. WINGATE

DESIGNED BY
P. BARBEAU

CHECKED BY
P. BARBEAU

SCALE
AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

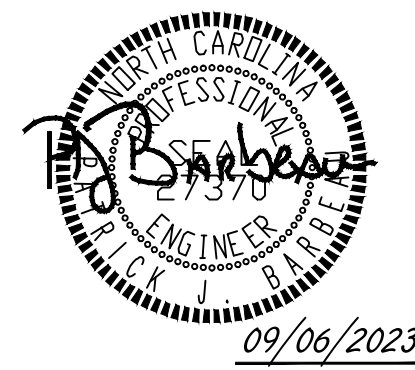
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

ROAD 10 PLAN & PROFILE

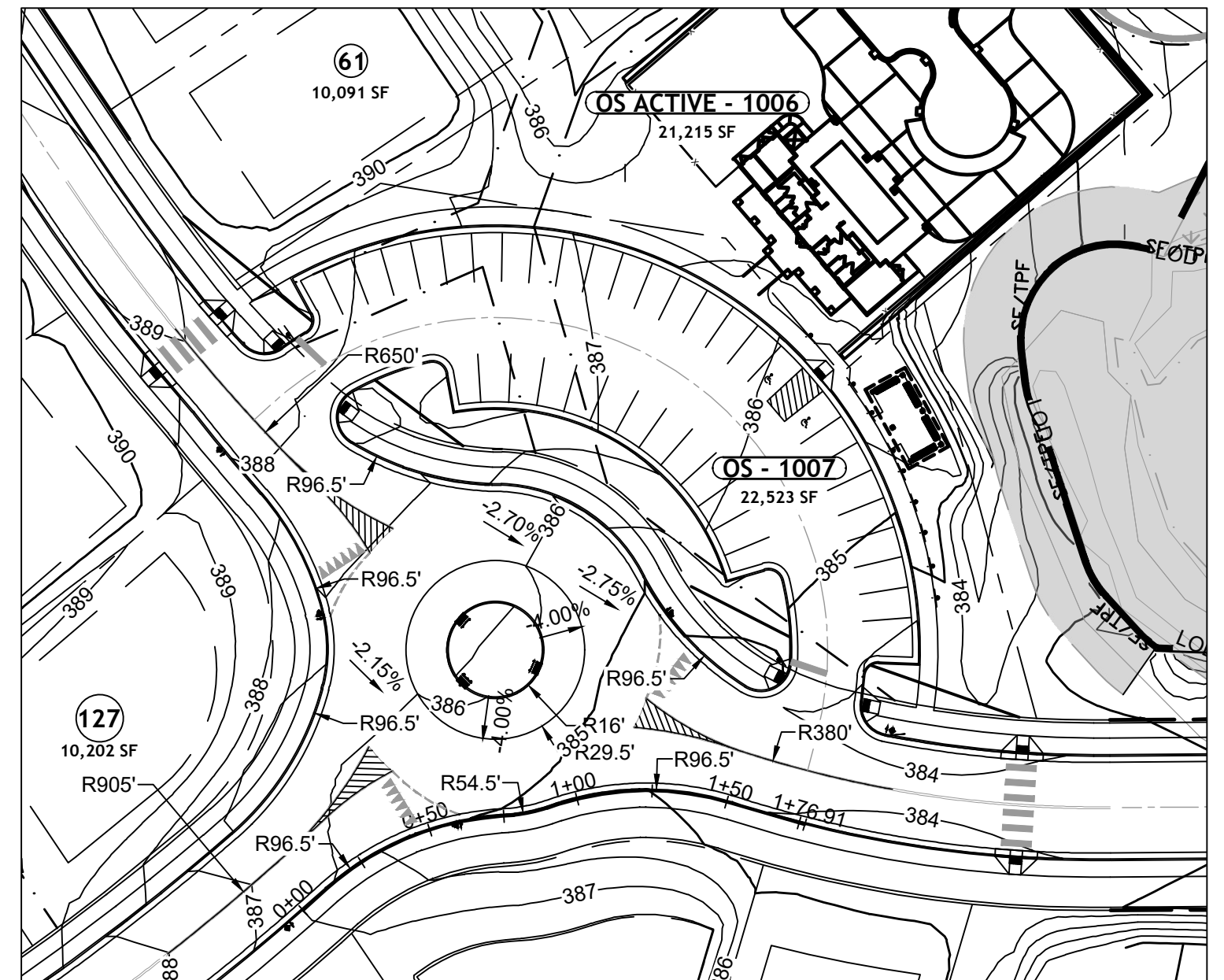
JOB NO.
43398

SHEET NO.
C2.24

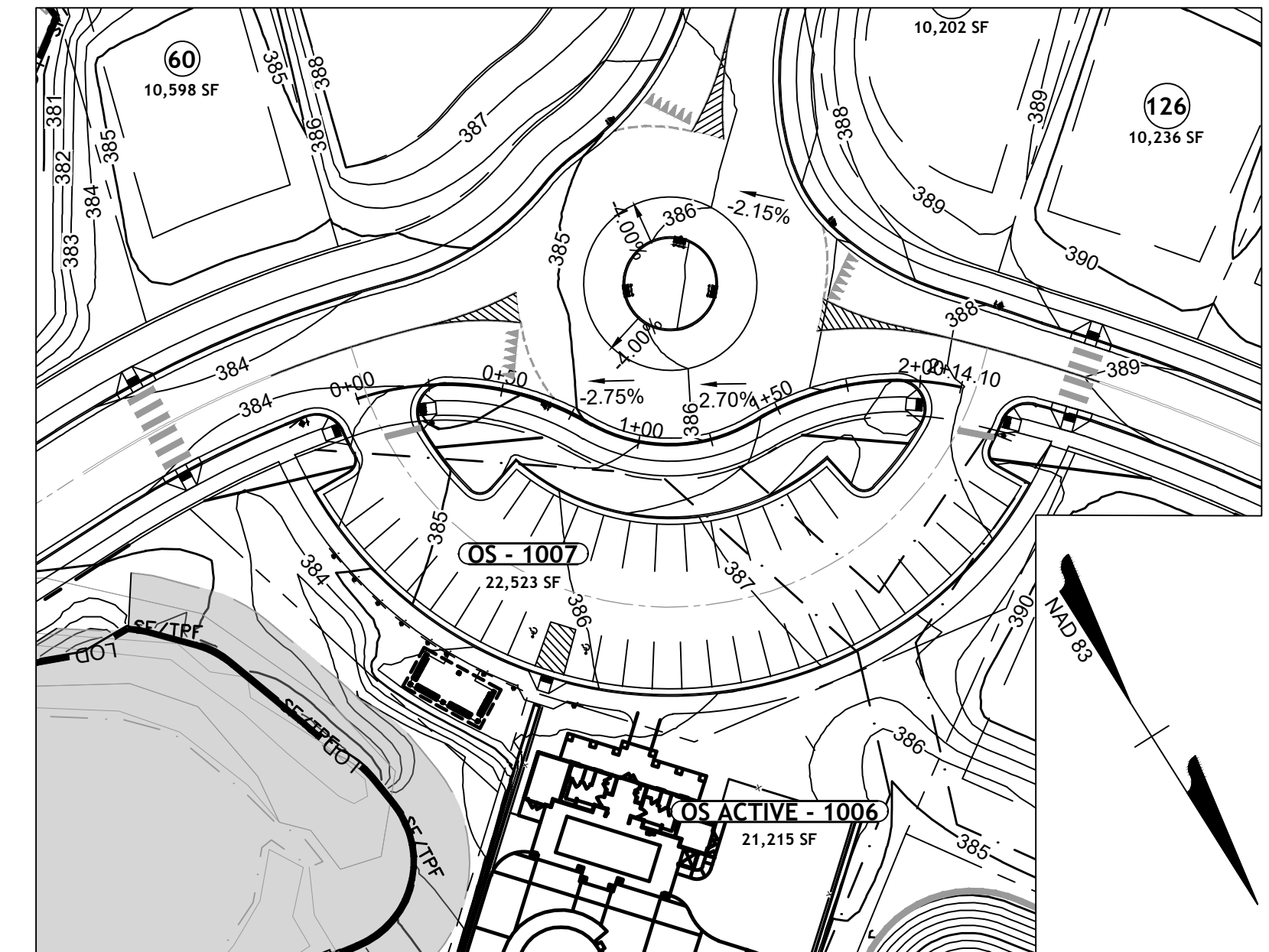
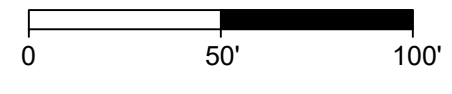
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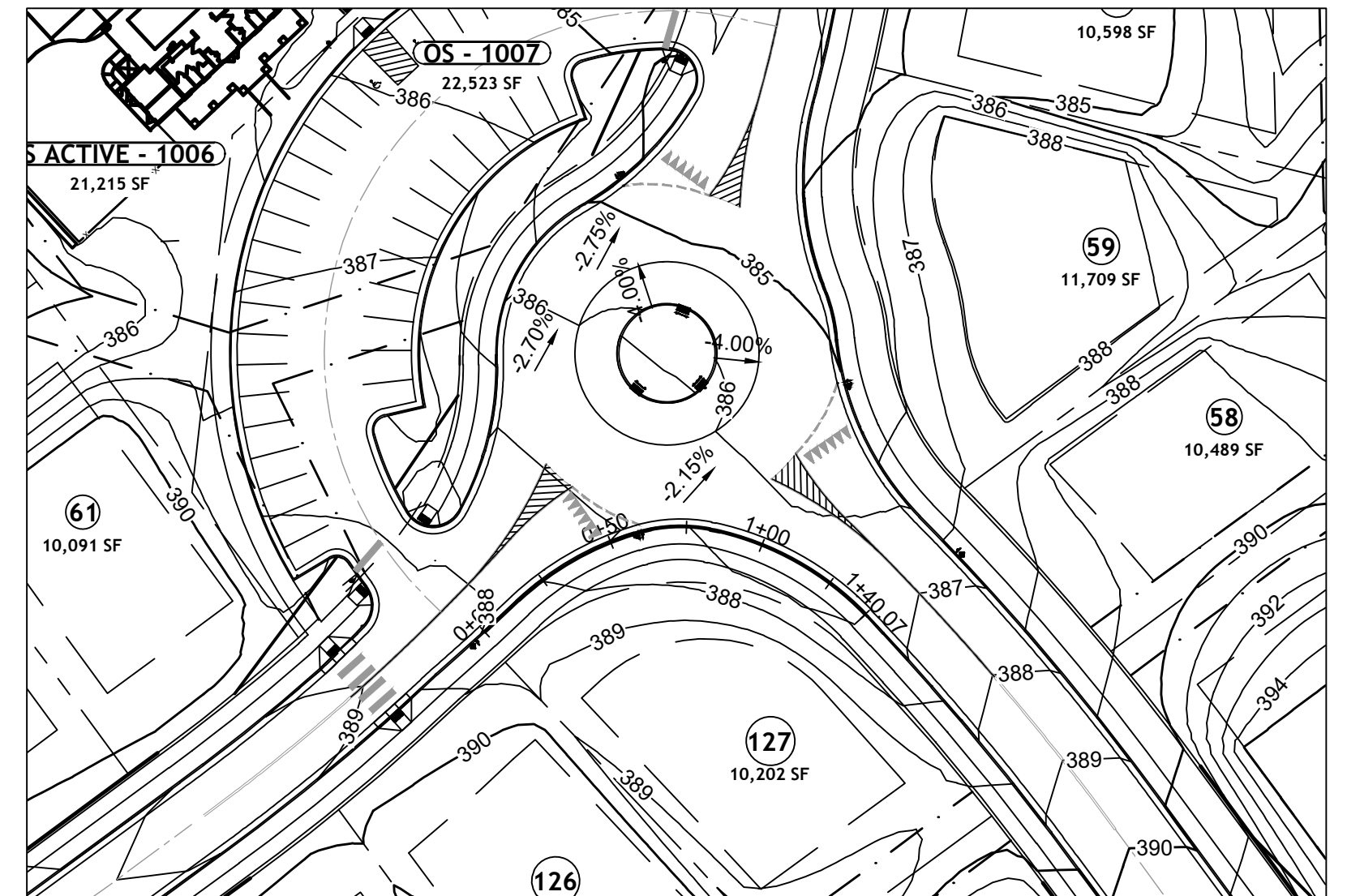
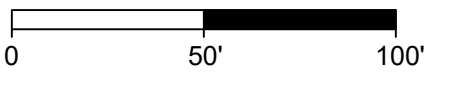
09/06/2023



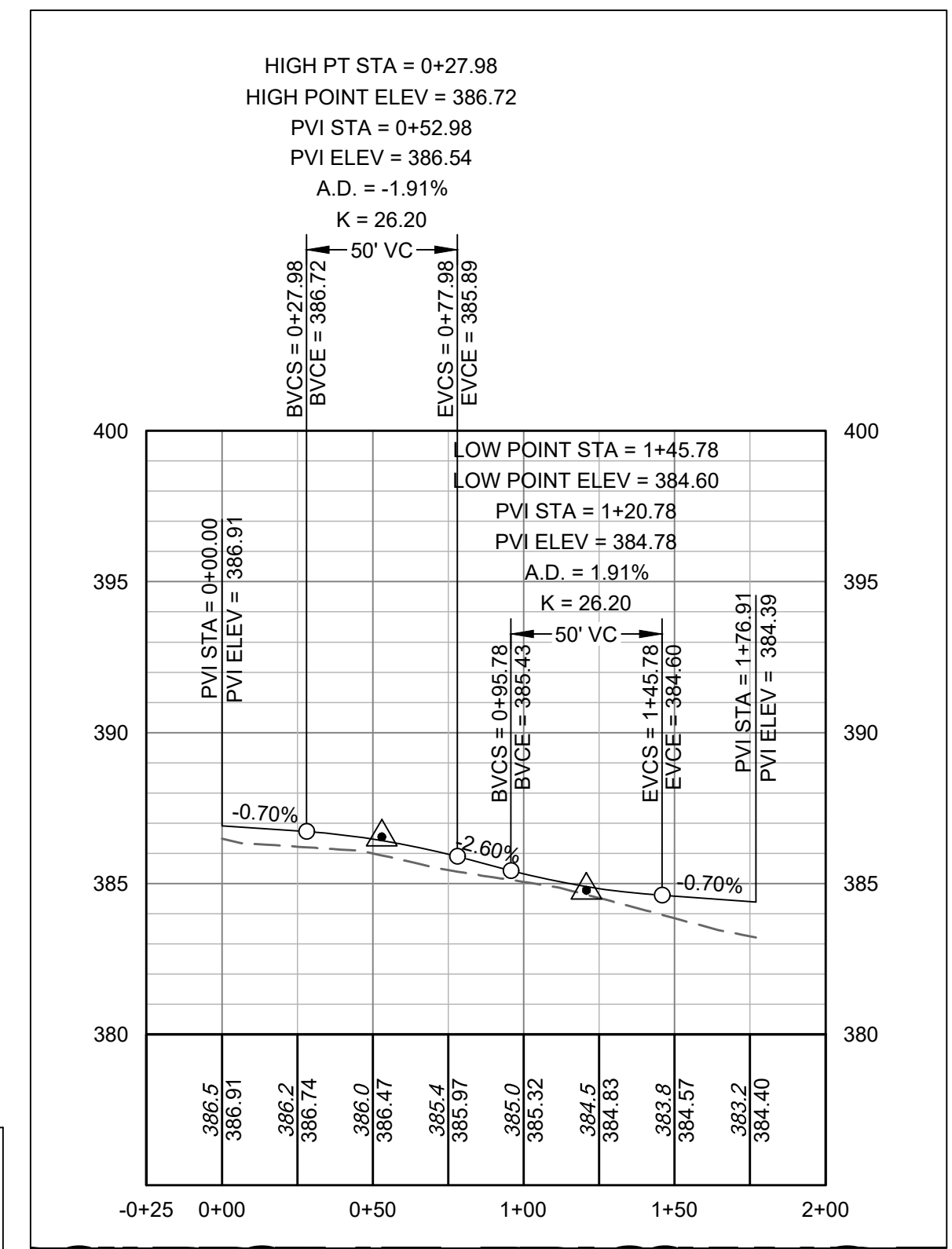
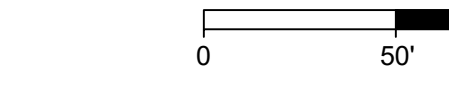
ROUNDABOUT CURB
PLAN VIEW 1



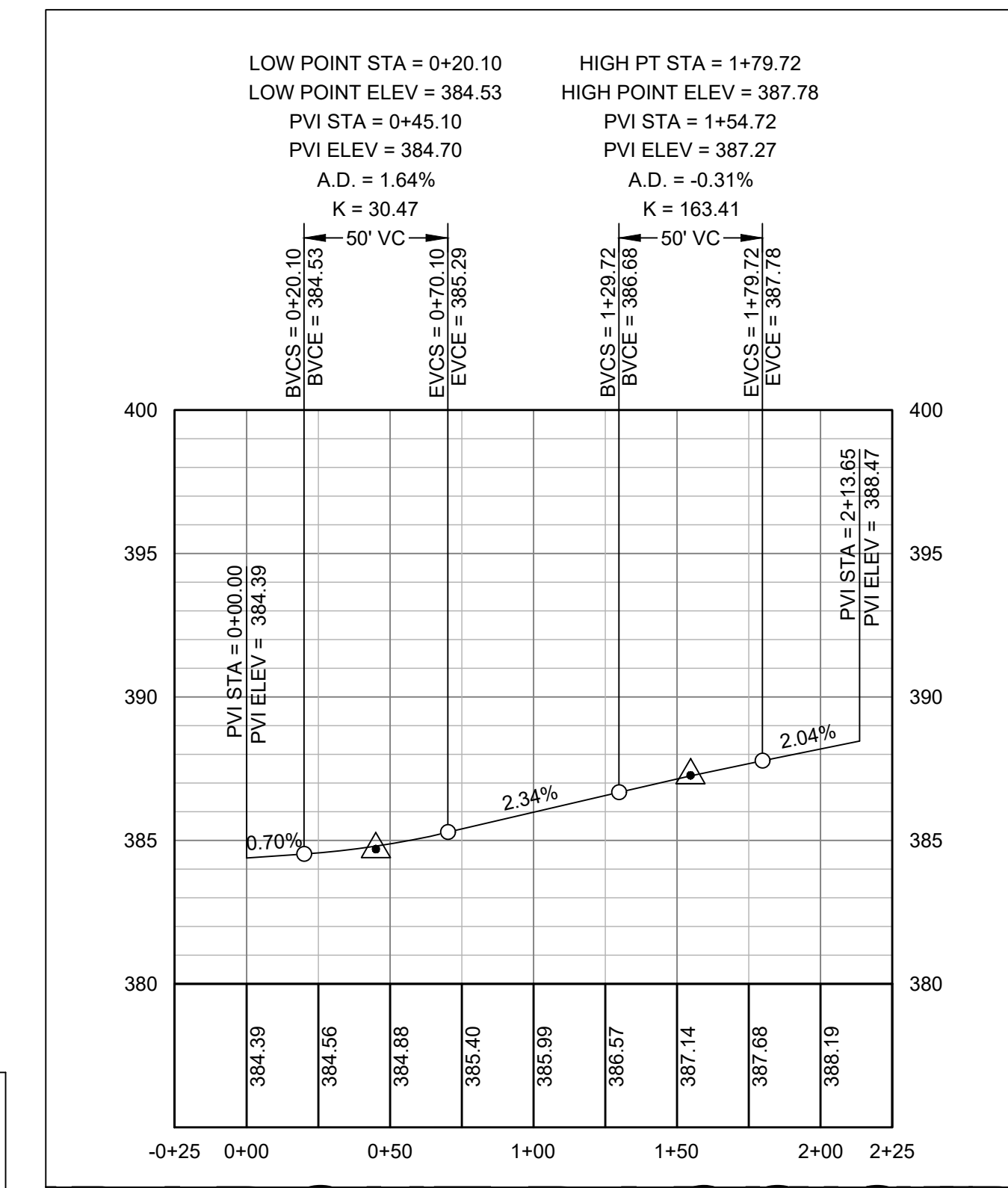
ROUNDABOUT CURB
PLAN VIEW 2



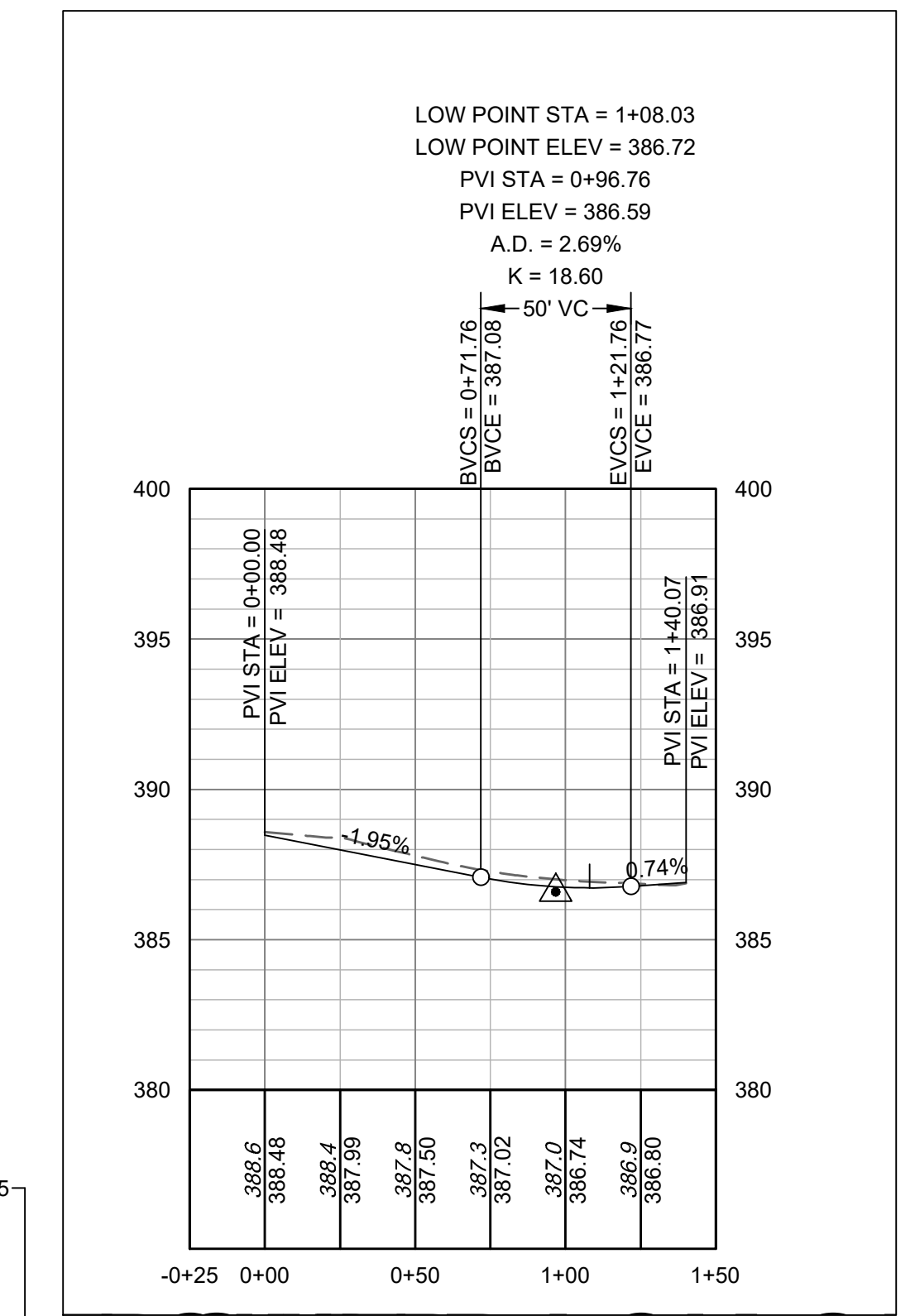
ROUNDABOUT CURB
PLAN VIEW 3



ROUNDABOUT CURB
PROFILE VIEW 1



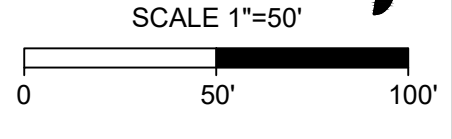
ROUNDABOUT CURB
PROFILE VIEW 2



ROUNDABOUT CURB
PROFILE VIEW 3



- ROUNDABOUT CURB PROFILE NOTES:
1. PROFILES ARE FOR BACK OF CURB ELEVATIONS.
 2. REFER TO GRADING AND DRAINAGE PLANS FOR STORM DRAINAGE.
 3. REFER TO UTILITY PLANS FOR UTILITIES.



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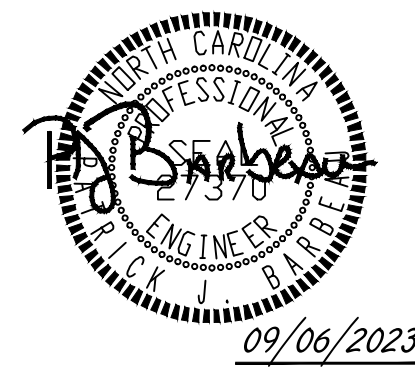
DATE 09/17/2021
DRAWN BY R. WINGATE
DESIGNED BY P. BARBEAU
CHECKED BY P. BARBEAU
SCALE AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
ROUNDABOUT CURB PLAN & PROFILE

JOB NO. 43398
SHEET NO. C2.25

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

S:\324\3388-Wheeler_Timed\DWG\Sheet\C21-08-C2-26-PROF.dwg | Plotted on 9/16/2023 8:50 AM | by Alexis Pociol



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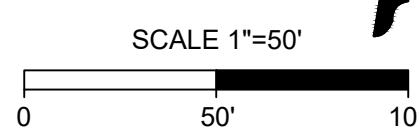
ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

PAVEMENT MARKING & SIGNAGE PLAN

JOB NO. 43398
 SHEET NO. C2.26

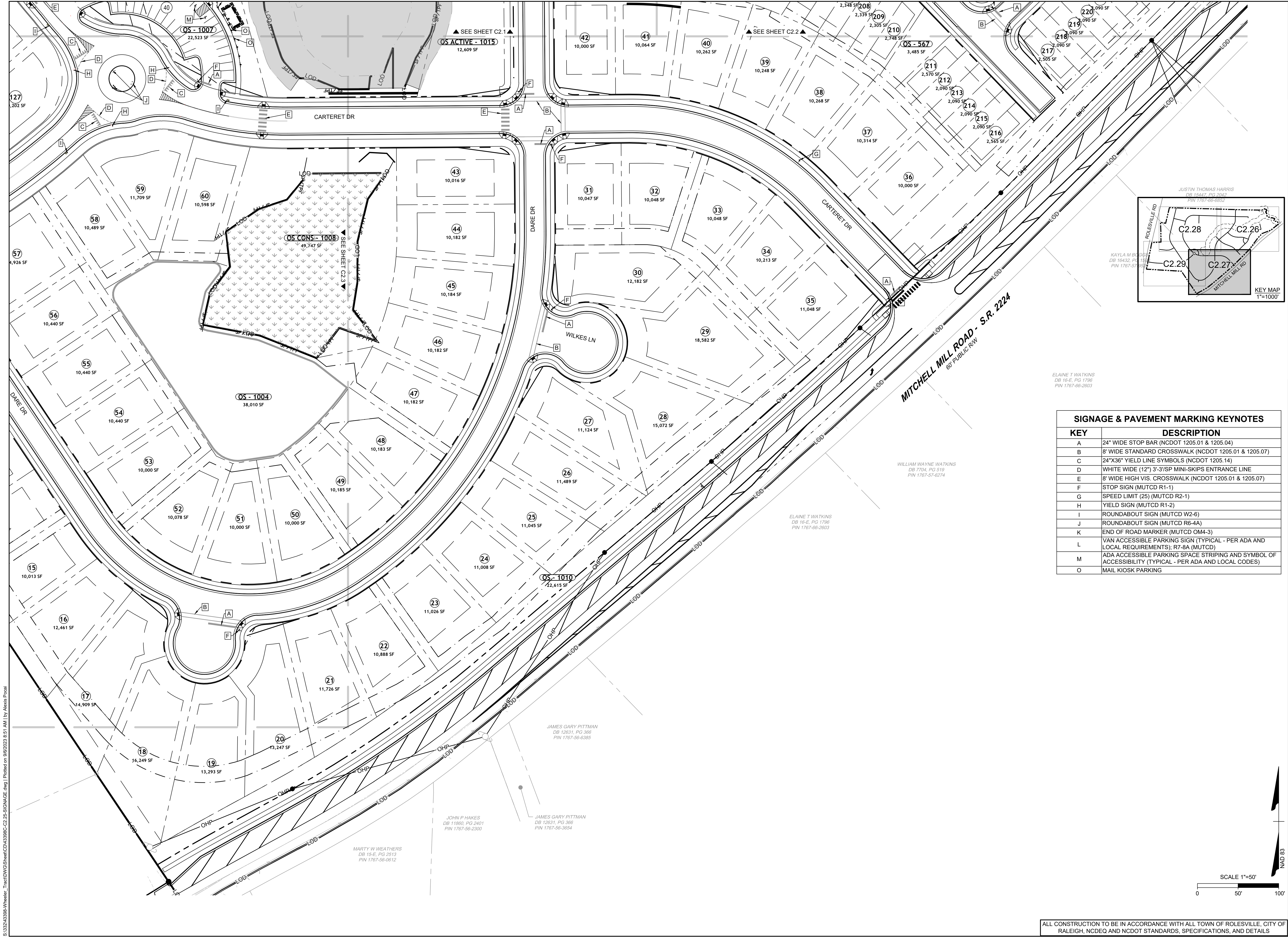
SIGNAGE & PAVEMENT MARKING KEYNOTES	
KEY	DESCRIPTION
A	24" WIDE STOP BAR (NCDOT 1205.01 & 1205.04)
B	8" WIDE STANDARD CROSSWALK (NCDOT 1205.01 & 1205.07)
C	24"x36" YIELD LINE SYMBOLS (NCDOT 1205.14)
D	WHITE WIDE (12") 3'-3"/SP MINI-SKIPS ENTRANCE LINE
E	8" WIDE HIGH VIS. CROSSWALK (NCDOT 1205.01 & 1205.07)
F	STOP SIGN (MUTCD R1-1)
G	SPEED LIMIT (25) (MUTCD R2-1)
H	YIELD SIGN (MUTCD R1-2)
I	ROUNDABOUT SIGN (MUTCD W2-6)
J	ROUNDABOUT SIGN (MUTCD R6-4A)
K	END OF ROAD MARKER (MUTCD OM4-3)
L	VAN ACCESSIBLE PARKING SIGN (TYPICAL - PER ADA AND LOCAL REQUIREMENTS); R7-8A (MUTCD)
M	ADA ACCESSIBLE PARKING SPACE STRIPING AND SYMBOL OF ACCESSIBILITY (TYPICAL - PER ADA AND LOCAL CODES)
O	MAIL KIOSK PARKING



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

S:\3324\3398\Wheeler_Timed\DWG\Sheet\C2\1652\C2-26-SIGNAGE.dwg | Plotted on 9/16/2023 8:51 AM | by Alexis Pociol

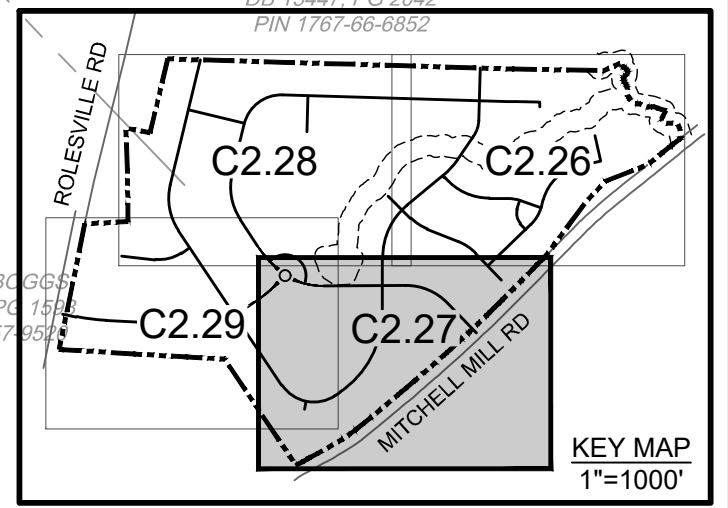
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04/08/2023	REVISED PER WAKE COUNTY COMMENTS
06/24/2023	REVISED PER WAKE COUNTY COMMENTS
07/22/2023	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISED PER NCDOT COMMENTS
09/06/2023	REVISED PER CITY OF RALEIGH COMMENTS



ELAINE T WATKINS
 DB 16-E, PG 1796
 PIN 1767-66-2603

WILLIAM WAYNE WATKINS
 DB 77-D, PG 519
 PIN 1767-57-0274

ELAINE T WATKINS
 DB 16-E, PG 1796
 PIN 1767-66-2603

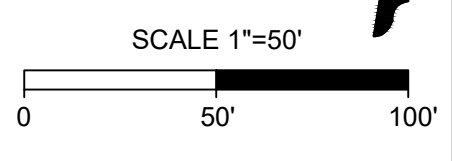
JAMES GARY PITTMAN
 DB 12631, PG 366
 PIN 1767-56-6385

JOHN P HAKES
 DB 11860, PG 2401
 PIN 1767-56-2300

JAMES GARY PITTMAN
 DB 12631, PG 366
 PIN 1767-56-3654

MARTY W WEATHERS
 DB 15-E, PG 2513
 PIN 1767-56-0612

SIGNAGE & PAVEMENT MARKING KEYNOTES	
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O	MAIL KIOSK PARKING



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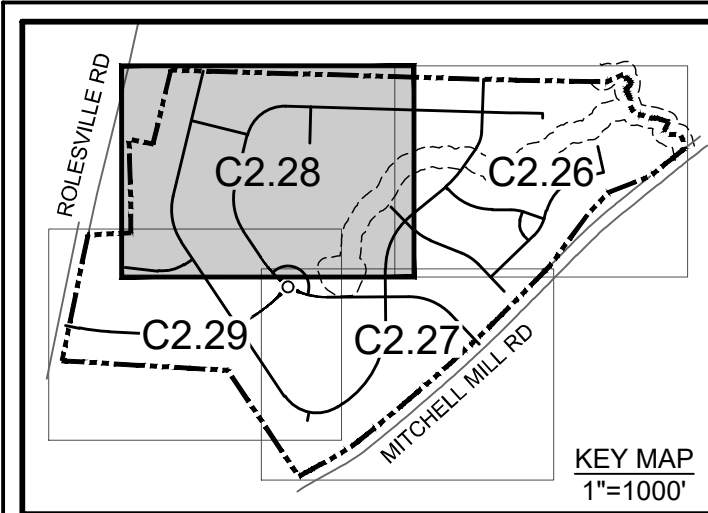
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
PAVEMENT MARKING & SIGNAGE PLAN

JOB NO.
43398
 SHEET NO.
C.27

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CHARLES T. CLARK
AND WIFE
PATRICIA H. CLARK
DB-4572, PG 246
PIN 1767-38-9615

WURLLEY
PG 1539
PG 987
8-8313

AND RACHEL MONROY
PG 582
38-7170

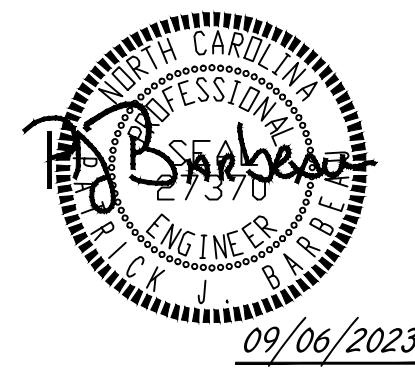
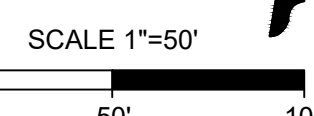
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SIGNAGE & PAVEMENT MARKING KEYNOTES

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O	MAIL KIOSK PARKING

▼ SEE SHEET C2.3 ▼

▼ SEE SHEET C2.4 ▼



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CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2023
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE
09/17/2021
DRAWN BY
R. WINGATE
DESIGNED BY
P. BARBEAU
CHECKED BY
P. BARBEAU
SCALE
AS SHOWN

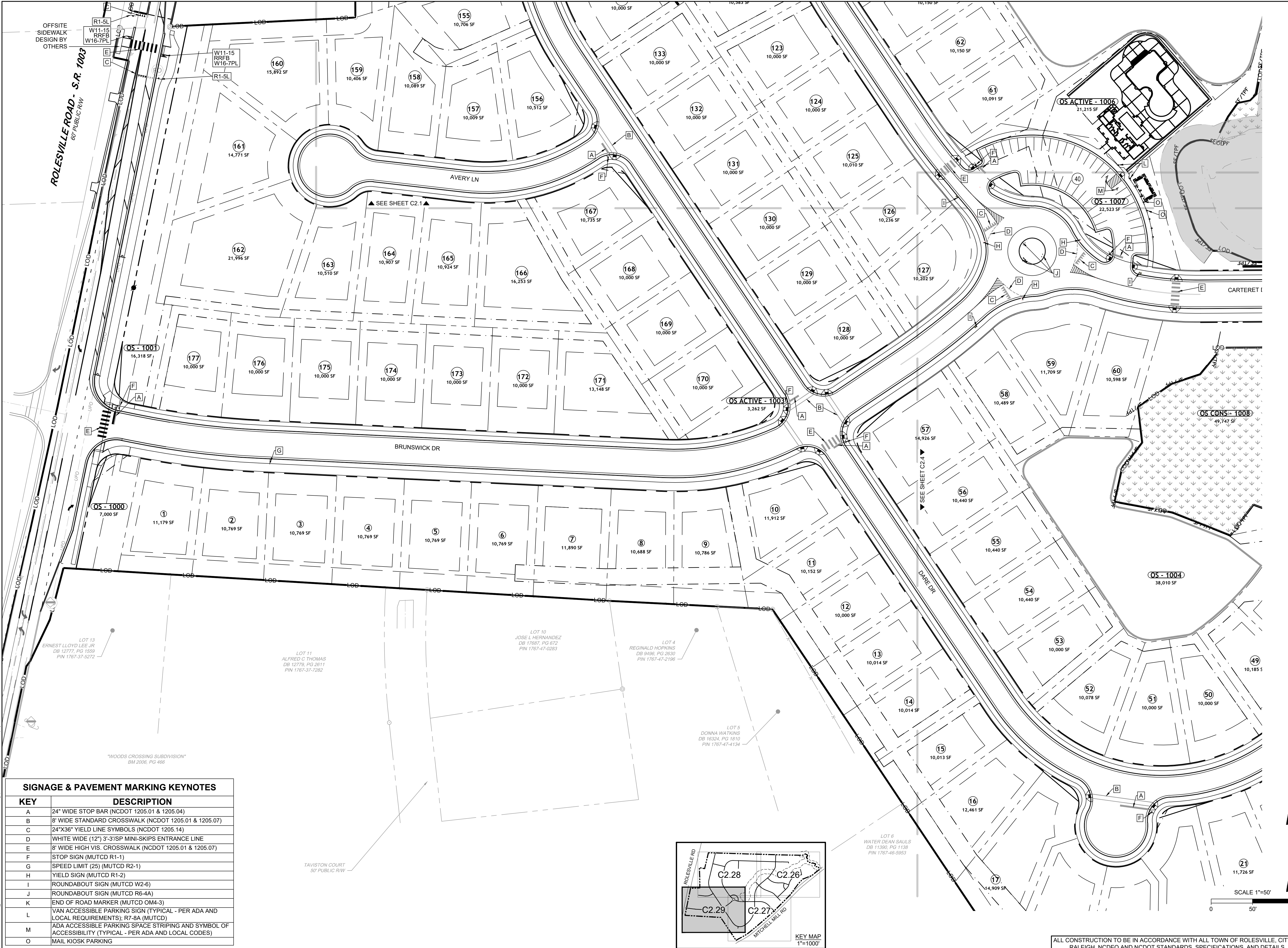
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ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
PAVEMENT MARKING & SIGNAGE PLAN

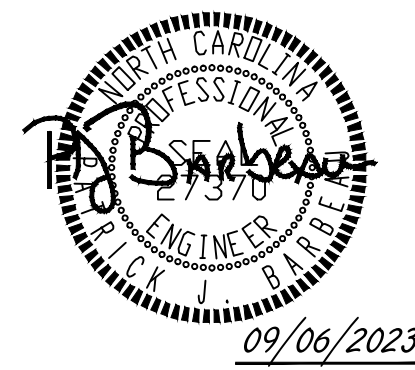
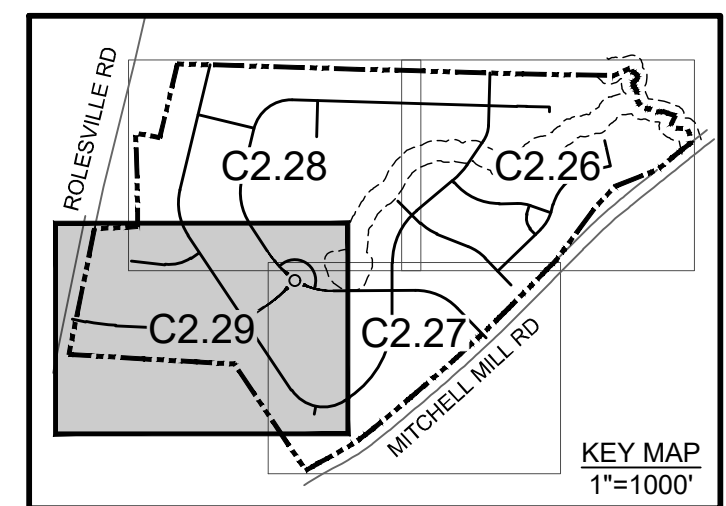
JOB NO.
43398
SHEET NO.
C.28

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SIGNAGE & PAVEMENT MARKING KEYNOTES	
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O	MAIL KIOSK PARKING



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 DESIGNED BY P. BARBEAU
 CHECKED BY P. BARBEAU
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NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

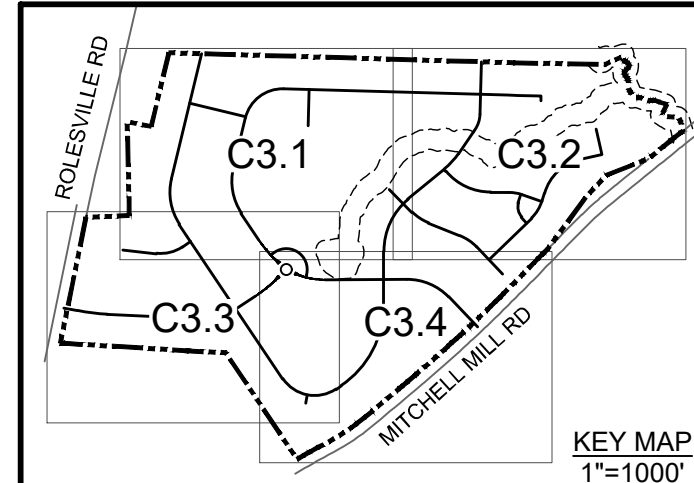
PAVEMENT MARKING & SIGNAGE PLAN

REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2022
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2022
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2022
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

JOB NO. 43398
 SHEET NO. C.29

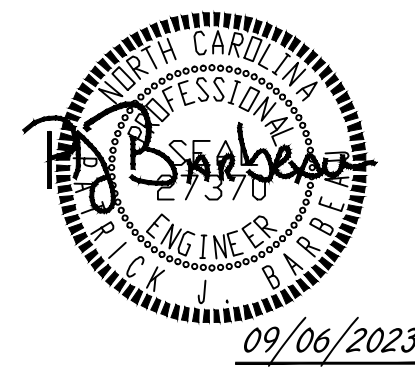
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GRADING AND STORM DRAINAGE NOTES

- CONTRACTOR SHALL CALL "NORTH CAROLINA ONE CALL" (811) AT LEAST 3-12 BUSINESS DAYS PRIOR TO DIGGING TO HAVE EXISTING UTILITIES LOCATED. REPORT ANY DISCREPANCIES TO THE ENGINEER.
- CONTRACTOR TO COORDINATE ACTIVITIES WITH UTILITY COMPANIES INVOLVED IN ANY RELATED RELOCATION (I.E. POWER POLES, TELEPHONE PEDESTALS, WATER METERS, ETC.).
- EXISTING UTILITIES SHOWN ARE BASED ON FIELD SURVEYS AND THE BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY CONDITIONS PRIOR TO BEGINNING CONSTRUCTION. ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE PLANS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- THE CATCH BASINS AND YARD INLETS SHALL BE CONSTRUCTED IN THE LOCATIONS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR REPORTING ANY DISCREPANCIES IN THE CATCH BASIN ELEVATIONS OR THE PROPOSED PIPE SLOPES TO THE ENGINEER. THE CONTRACTOR IS ALSO RESPONSIBLE TO REPORT ANY CONFLICTS BETWEEN ANY UTILITY, STORM DRAIN LINE, WATER LINE, SEWER LINE OR ANY OTHER PROPOSED OR EXISTING STRUCTURE TO THE ENGINEER.
- A LAND DISTURBING PERMIT WILL BE REQUIRED PRIOR TO THE COMMENCEMENT OF ANY LAND-DISTURBING ACTIVITIES.
- ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, VALVE BOXES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISHED GRADE.
- ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNER'S INDEPENDENT TESTING LABORATORY.
- ALL SPOT ELEVATIONS INDICATED ARE AT TOP OF CURB UNLESS NOTED OTHERWISE. ALL ELEVATIONS ARE BASED ON VERTICAL DATUM NAVD88.
- A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO ANY WORK, GRADING OR INSTALLATION OF EROSION CONTROL MEASURES.
- ALL HANDICAP PARKING SPACES AND STRIPED ACCESSIBILITY AISLES ARE TO HAVE NO MORE THAN A 1:50 (2.0%) SLOPE IN ALL DIRECTIONS. ALL SIDEWALKS ARE TO HAVE NO MORE THAN A 1:20 (5.0%) SLOPE FOR THE LENGTH OF THE SIDEWALK AND NO MORE THAN A 1:50 (2.0%) SLOPE FOR THE WIDTH OF THE SIDEWALK.
- CONTRACTOR TO IDENTIFY ALL NECESSARY SPILL CURB SECTION LOCATIONS AND INSTALL TO ENSURE POSITIVE DRAINAGE TO STORM STRUCTURES.
- IF CONTRACTOR NOTICES ANY DISCREPANCIES IN ANY OF THESE SLOPE REQUIREMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE OWNER PRIOR TO POURING ANY CONCRETE SO THAT A SOLUTION CAN BE FOUND.
- SPOT ELEVATIONS ARE GIVEN AT THE MAJORITY OF THE MAJOR BREAK POINTS BUT IT SHOULD NOT BE ASSUMED THAT ALL NECESSARY SPOT ELEVATIONS ARE SHOWN. DUE TO SPACE LIMITATIONS, THERE MAY BE OTHER CRITICAL SPOTS NOT LABELED THAT SHOULD BE TAKEN INTO CONSIDERATION. THE CONTRACTOR SHALL REVIEW THE GRADING PLAN IN DETAIL AND SHALL ENSURE THAT ALL CRITICAL GRADE POINTS ARE STAKED AND FOLLOWED TO PROVIDE POSITIVE DRAINAGE.
- EXISTING VEGETATION WITHIN TREE PROTECTIVE AREAS SHALL REMAIN UNDISTURBED UNLESS NOTED OTHERWISE. ANY AND ALL LANDSCAPING AND EXISTING TREES AND SHRUBS TO REMAIN WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR USING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY THE EROSION CONTROL INSPECTOR OR THE ENGINEER.
- THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING CONSTRUCTION AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
- ALL CATCH BASINS MUST BE MARKED "DUMP NO WASTE DRAINS TO STREAM" OR EQUIVALENT.
- RETAINING WALLS TO BE DESIGNED BY OTHERS' STRUCTURAL ENGINEER. WALLS GREATER THAN 30" IN HEIGHT TO HAVE 42" SAFETY RAIL.



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 REVISIONS PER NCDOT COMMENTS
 REVISIONS PER CITY OF RALEIGH COMMENTS

DATE
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DRAWN BY
R. WINGATE

DESIGNED BY
P. BARBEAU

CHECKED BY
P. BARBEAU

SCALE
AS SHOWN

TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

OVERALL GRADING AND DRAINAGE PLAN

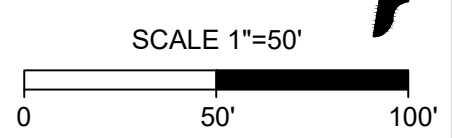
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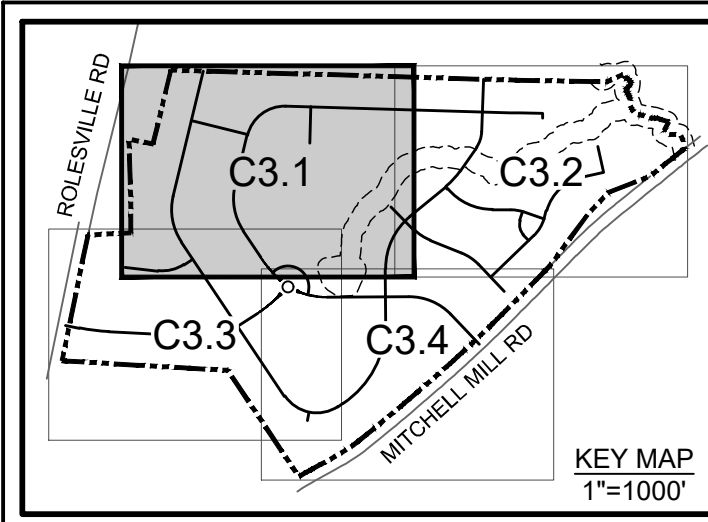
SHEET NO.
C3.0

DITCH NAME	TOP WIDTH "A"	MIN. DITCH DEPTH (FT) "B"	BOTTOM WIDTH (FT) "C"	SIDE SLOPE "D"	LINER TYPE & THICKNESS
PDD-1	7 FT	1 FT	1	3:1	North American Green, S75
PDD-2	7.6 FT	1.1 FT	1	3:1	North American Green, S75
PDD-3	8.2 FT	1.2 FT	1	3:1	North American Green, S75
PDD-4	9.6 FT	1.6 FT	0	3:1	North American Green, S75
PDD-5	10 FT	1 FT	0	3:1	North American Green, S75
PDD-6	20 FT	1 FT	0	3:1	North American Green, S75
PDD-7	8 FT	1 FT	1	3:1	North American Green, S75
PDD-8	8.2 FT	1.2 FT	1	3:1	North American Green, S75
PDD-9	10.8 FT	1.4 FT	1	3:1	North American Green, S75
PDD-10	7 FT	1 FT	1	3:1	North American Green, S75
PDD-11	8.2 FT	1.2 FT	1	3:1	North American Green, S75
PDD-12	6 FT	1 FT	0	3:1	North American Green, SC150
PDD-13	7.2 FT	1.2 FT	0	3:1	North American Green, S75
PDD-14	12 FT	1 FT	0	3:1	North American Green, S75
PDD-15	5.6 FT	1.4 FT	0	3:1	North American Green, S150
PDD-16	7.8 FT	1.3 FT	0	3:1	North American Green, S75
PDD-17	9 FT	1 FT	3	3:1	North American Green, S75
PDD-18	6.6 FT	1.1 FT	0	3:1	North American Green, S75
PDD-19	10 FT	1 FT	0	3:1	North American Green, S75
PDD-20	7.2 FT	1.2 FT	0	3:1	North American Green, S75
PDD-21	6 FT	1 FT	0	3:1	North American Green, S75
PDD-22	6 FT	1 FT	0	3:1	North American Green, S75
PDD-23	8.8 FT	1.3 FT	1	3:1	North American Green, SC150
PDD-24	6 FT	1 FT	0	3:1	North American Green, S75
PDD-25	6.6 FT	1.1 FT	0	3:1	North American Green, S150
PDD-26	6 FT	1 FT	0	3:1	North American Green, S75
PDD-27	8.2 FT	1.2 FT	1	3:1	North American Green, S75
PDD-28	6 FT	1 FT	0	3:1	North American Green, S75
PDD-29	6 FT	1 FT	0	3:1	North American Green, S75
PDD-30	6 FT	1 FT	0	3:1	North American Green, S75

REFER TO SHEETS C3.1-C3.4 FOR LOCATIONS OF PERMANENT DITCHES.

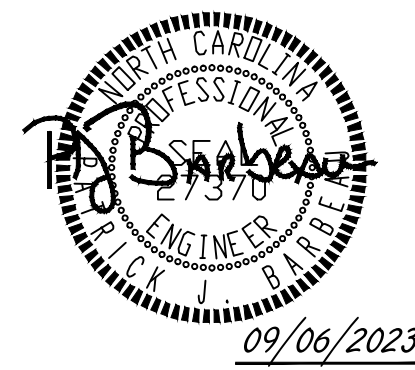


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CHARLES T. CLARK
AND WIFE
PATRICIA H. CLARK
DB 4572, PG 246
PIN 1767-38-9615

- GENERAL NOTES:**
- REFER TO OVERALL GRADING PLAN SHEET FOR GRADING PLAN NOTES.
 - REFER TO PERMANENT DITCH TABLE ON SHEET C3.0 FOR SIZE AND LINER SPECIFICATIONS.



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DESIGNED BY P. BARBEAU
CHECKED BY P. BARBEAU
SCALE AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

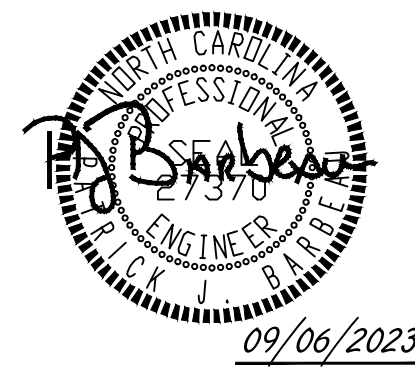
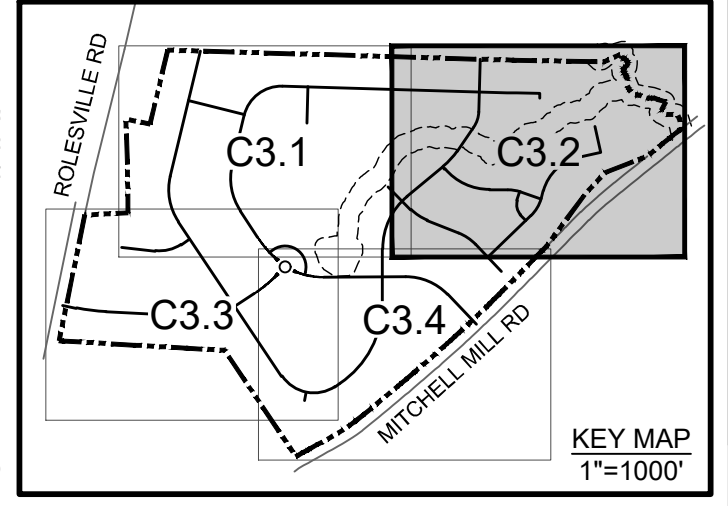
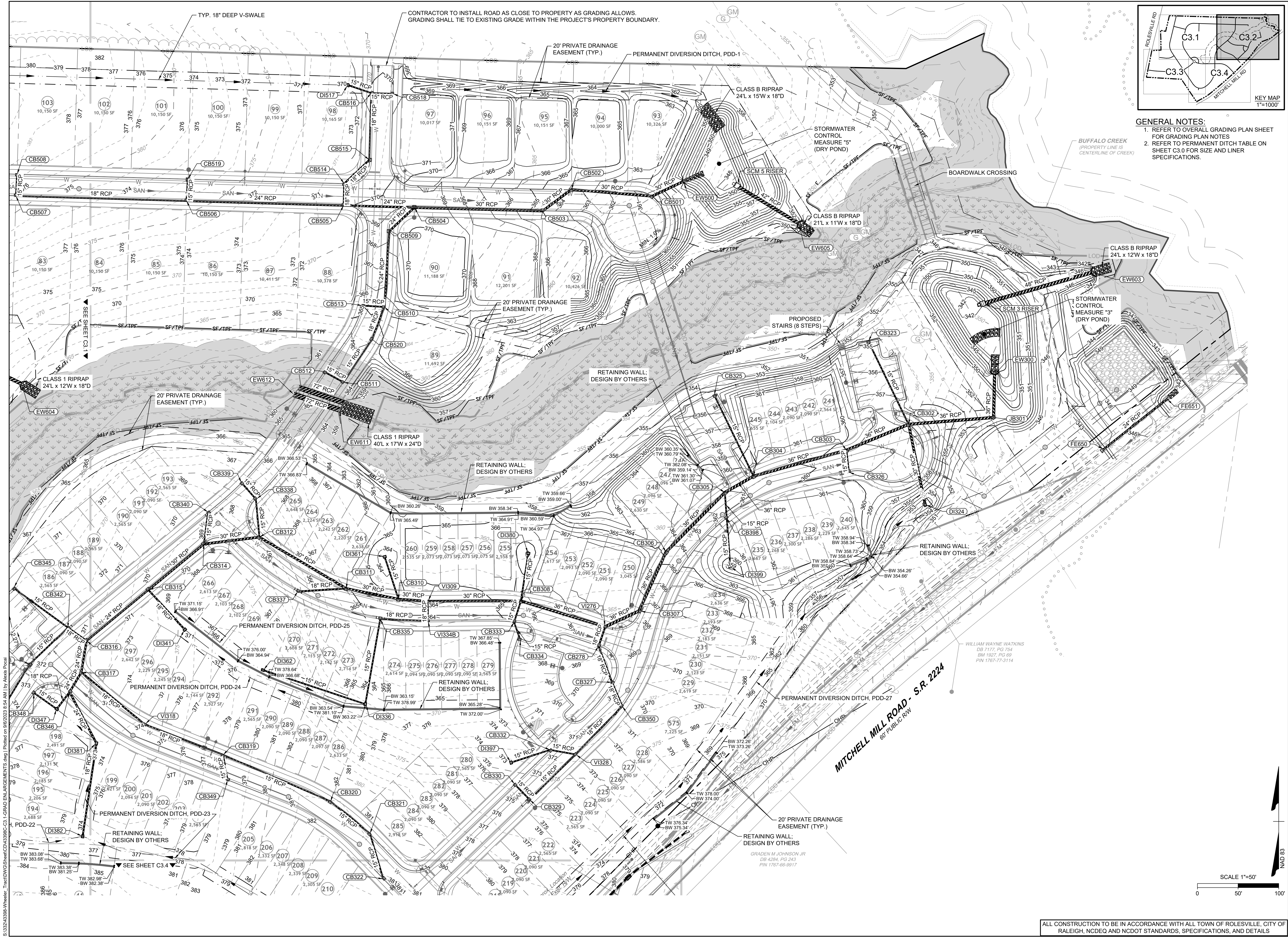
ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

GRADING AND DRAINAGE PLAN

JOB NO. 43398
SHEET NO. C3.1

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09/06/2023

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DATE: 09/17/2021
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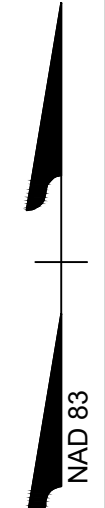
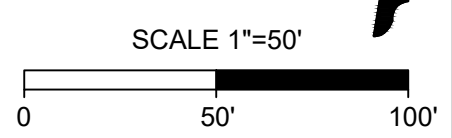
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ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

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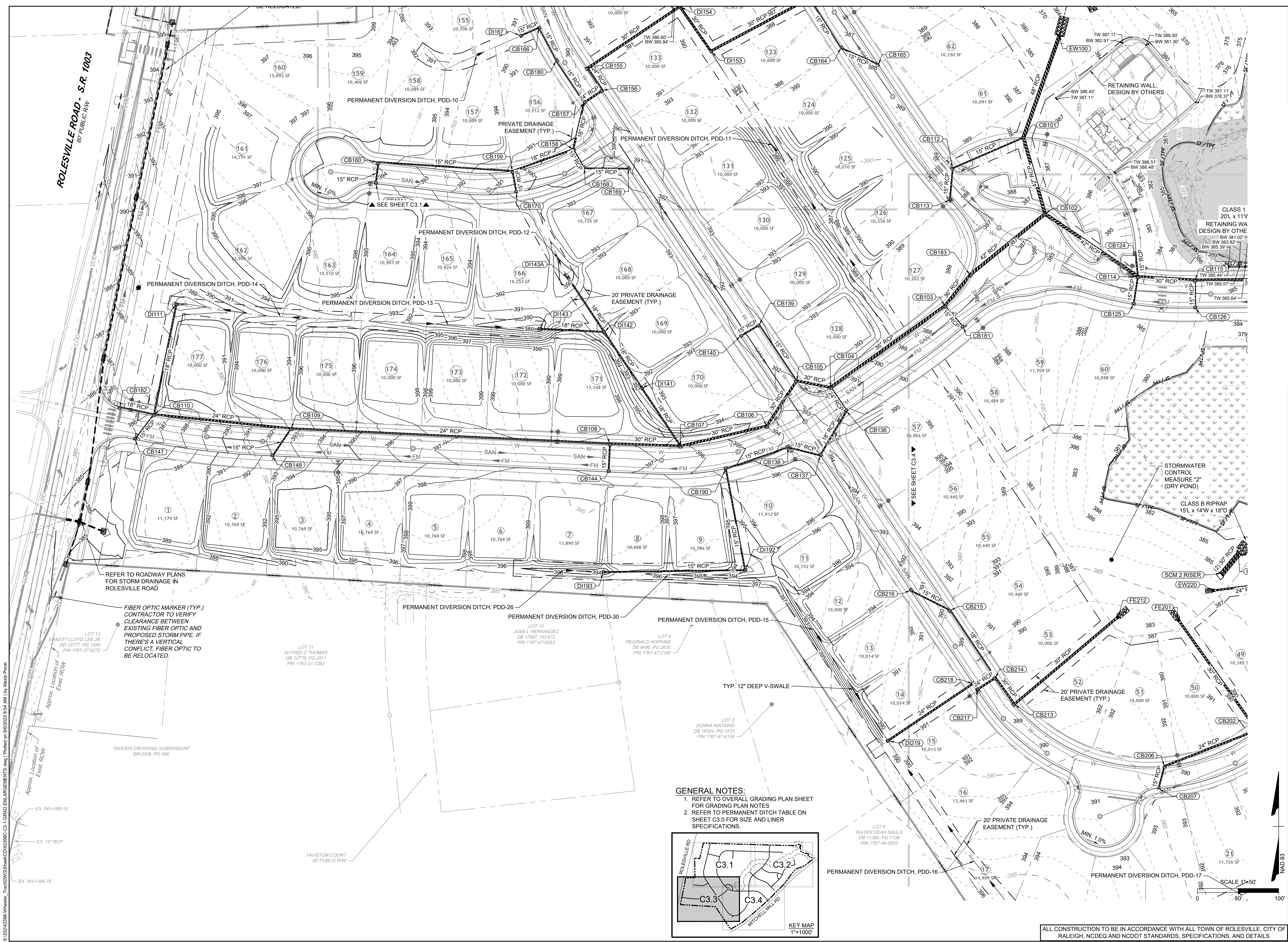
JOB NO. 43398
 SHEET NO. C3.2

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



S:\324243388-Wheelers-Timed\DWG\Sheet\C3\388-C3.1-GRAND ENLARGEMENTS.dwg | Printed on 9/6/2023 8:54 AM | by Alexis Pham

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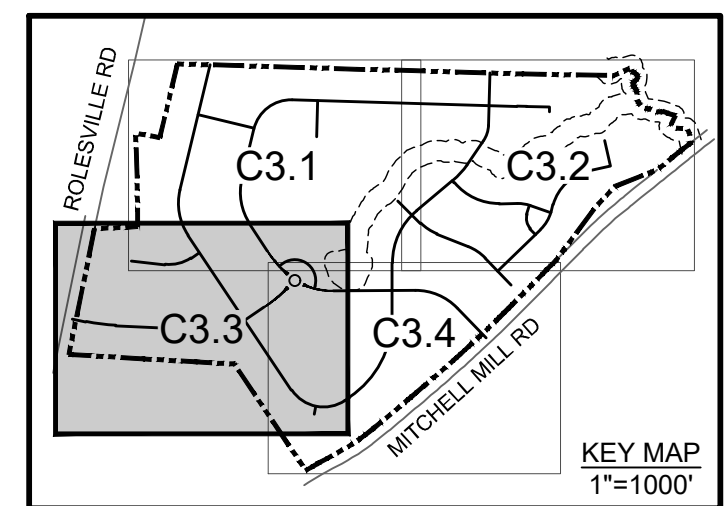


ROLESVILLE ROAD - S.R. 1003
60' PUBLIC ROW

FIBER OPTIC MARKER (TYP.)
CONTRACTOR TO VERIFY
CLEARANCE BETWEEN
EXISTING FIBER OPTIC AND
PROPOSED STORM PIPE. IF
THERE'S A VERTICAL
CONFLICT, FIBER OPTIC TO
BE RELOCATED.

"WOODS CROSSING SUBDIVISION"
BM 2006, PG 466

- GENERAL NOTES:**
- REFER TO OVERALL GRADING PLAN SHEET FOR GRADING PLAN NOTES
 - REFER TO PERMANENT DITCH TABLE ON SHEET C3.0 FOR SIZE AND LINER SPECIFICATIONS.



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



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REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2022
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2022
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2022
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

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DATE	DATE
09/17/2021	

DRAWN BY	R. WINGATE
DESIGNED BY	P. BARBEAU
CHECKED BY	P. BARBEAU
SCALE	AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

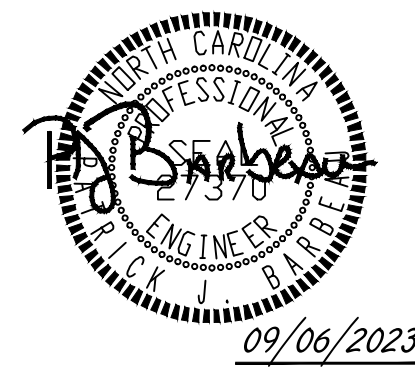
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

GRADING AND DRAINAGE PLAN

JOB NO.
43398

SHEET NO.
C3.3

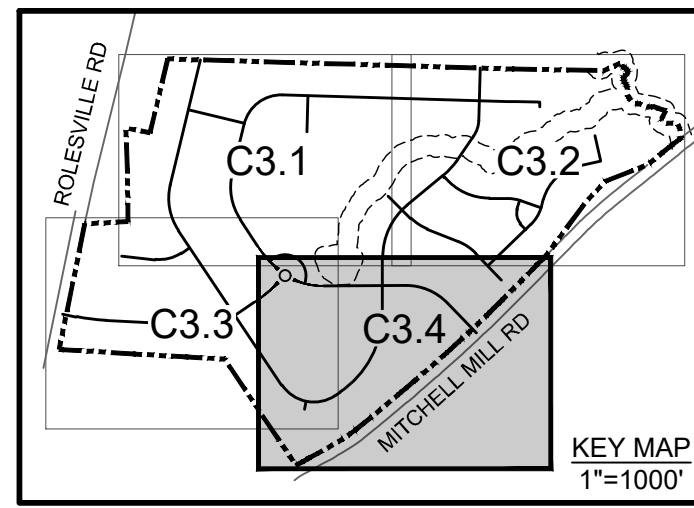
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07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS



GENERAL NOTES:
 1. REFER TO OVERALL GRADING PLAN SHEET FOR GRADING PLAN NOTES
 2. REFER TO PERMANENT DITCH TABLE ON SHEET C3.0 FOR SIZE AND LINER SPECIFICATIONS.

ELAINE T WATKINS
 DB 16-E, PG 1796
 PIN 1767-66-2603

WILLIAM WAYNE WATKINS
 DB 7704, PG 519
 PIN 1767-57-0274

ELAINE T WATKINS
 DB 16-E, PG 1796
 PIN 1767-66-2603

JAMES GARY PITTMAN
 DB 12631, PG 366
 PIN 1767-56-6385

JOHN P HAKES
 DB 11860, PG 2401
 PIN 1767-56-2300

MARTY W WEATHERS
 DB 15-E, PG 2513
 PIN 1767-56-0612

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P. BARBEAU

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ROLESVILLE CROSSING - CD 21-08

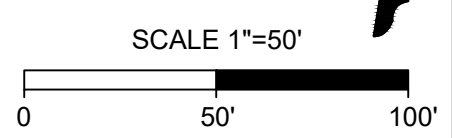
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

GRADING AND DRAINAGE PLAN

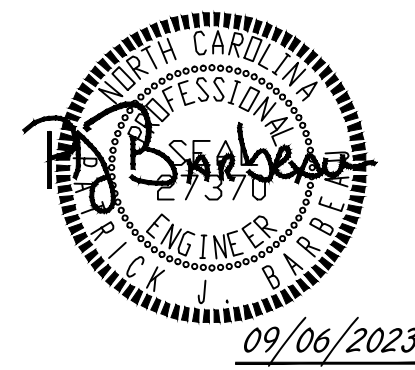
JOB NO.
43398

SHEET NO.
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DATE
 09/17/2021

DRAWN BY
 R. WINGATE

DESIGNED BY
 P. BARBEAU

CHECKED BY
 P. BARBEAU

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 NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

STORM SEWER TABLES

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JOB NO.
43398

SHEET NO.
C.3.5

STORM STRUCTURE TABLE				
STR. #	TOP	INV. IN	INV. OUT	DESCRIPTION
CB101	387.82'	370.75' (42" RCP FROM CB102) 375.00' (15" RCP FROM CB112)	370.65' (48" RCP TO EW100)	NCDOT 840.02 CONCRETE CATCH BASIN
CB102	386.25'	371.50' (42" RCP FROM CB183) 371.30' (42" RCP FROM CB114)	371.24' (42" RCP TO CB101)	NCDOT 840.02 CONCRETE CATCH BASIN
CB103	387.22'	375.06' (36" RCP FROM CB104) 381.32' (15" RCP FROM CB181)	374.96' (36" RCP TO CB183)	NCDOT 840.02 CONCRETE CATCH BASIN
CB104	392.16'	376.20' (30" RCP FROM CB105) 385.00' (24" RCP FROM CB136)	376.10' (36" RCP TO CB103)	NCDOT 840.02 CONCRETE CATCH BASIN
CB105	392.54'	376.55' (30" RCP FROM CB106) 385.10' (15" RCP FROM CB139)	376.45' (30" RCP TO CB104)	NCDOT 840.02 CONCRETE CATCH BASIN
CB106	394.42'	377.05' (30" RCP FROM CB107)	376.95' (30" RCP TO CB105)	NCDOT 840.02 CONCRETE CATCH BASIN
CB107	396.68'	377.81' (30" RCP FROM CB108) 383.00' (18" RCP FROM DI141)	377.71' (30" RCP TO CB106)	NCDOT 840.02 CONCRETE CATCH BASIN
CB108	397.75'	389.50' (15" RCP FROM CB144) 378.43' (24" RCP FROM CB109)	378.33' (30" RCP TO CB107)	NCDOT 840.02 CONCRETE CATCH BASIN
CB109	393.12'	380.88' (24" RCP FROM CB110) 385.91' (15" RCP FROM CB146)	380.78' (24" RCP TO CB108)	NCDOT 840.02 CONCRETE CATCH BASIN
CB110	386.73'	382.20' (18" RCP FROM DI111) 382.00' (15" RCP FROM CB147) 381.90' (18" RCP FROM CB182)	381.80' (24" RCP TO CB109)	NCDOT 840.02 CONCRETE CATCH BASIN
CB112	389.02'	377.50' (15" RCP FROM CB113)	377.30' (15" RCP TO CB101)	NCDOT 840.02 CONCRETE CATCH BASIN
CB113	388.52'	372.10' (30" RCP FROM CB115) 378.00' (15" RCP FROM CB124) 377.50' (15" RCP FROM CB125)	378.00' (15" RCP TO CB112)	NCDOT 840.02 CONCRETE CATCH BASIN
CB114	384.27'	372.10' (30" RCP FROM CB115) 378.00' (15" RCP FROM CB124) 377.50' (15" RCP FROM CB125)	371.98' (42" RCP TO CB102)	NCDOT 840.02 CONCRETE CATCH BASIN
CB115	384.75'	372.65' (30" RCP FROM CB116) 378.50' (15" RCP FROM CB126)	372.51' (30" RCP TO CB114)	NCDOT 840.02 CONCRETE CATCH BASIN
CB116	386.55'	374.00' (30" RCP FROM CB117) 377.32' (18" RCP FROM CB127)	373.90' (30" RCP TO CB115)	NCDOT 840.02 CONCRETE CATCH BASIN
CB117	385.70'	375.80' (30" RCP FROM CB118) 376.00' (18" RCP FROM CB132)	374.25' (30" RCP TO CB116)	NCDOT 840.02 CONCRETE CATCH BASIN
CB118	385.70'	376.25' (30" RCP FROM CB119)	376.00' (30" RCP TO CB117)	NCDOT 840.02 CONCRETE CATCH BASIN
CB119	385.64'	376.60' (30" RCP FROM CB120)	376.60' (30" RCP TO CB118)	NCDOT 840.02 CONCRETE CATCH BASIN
CB120	384.51'	377.37' (24" RCP FROM CB121) 377.70' (24" RCP FROM CB134)	377.37' (30" RCP TO CB119)	NCDOT 840.02 CONCRETE CATCH BASIN
CB121	383.79'	377.84' (18" RCP FROM CB122)	377.84' (24" RCP TO CB120)	NCDOT 840.02 CONCRETE CATCH BASIN
CB122	383.33'	378.70' (18" RCP FROM CB123) 379.41' (15" RCP FROM CB148A)	378.50' (18" RCP TO CB121)	NCDOT 840.02 CONCRETE CATCH BASIN
CB123	385.17'	380.00' (18" RCP TO CB122)	380.00' (18" RCP TO CB122)	NCDOT 840.02 CONCRETE CATCH BASIN
CB124	384.12'	379.41' (15" RCP TO CB114)	379.41' (15" RCP TO CB114)	NCDOT 840.02 CONCRETE CATCH BASIN
CB125	384.27'	379.38' (15" RCP TO CB114)	379.38' (15" RCP TO CB114)	NCDOT 840.02 CONCRETE CATCH BASIN
CB126	384.75'	379.00' (15" RCP TO CB115)	379.00' (15" RCP TO CB115)	NCDOT 840.02 CONCRETE CATCH BASIN
CB127	386.55'	377.63' (18" RCP FROM CB128)	377.53' (18" RCP TO CB116)	NCDOT 840.02 CONCRETE CATCH BASIN
CB128	386.69'	378.50' (18" RCP FROM CB129)	378.30' (18" RCP TO CB127)	NCDOT 840.02 CONCRETE CATCH BASIN
CB129	386.69'	378.90' (15" RCP FROM CB130) 379.85' (15" RCP FROM CB149)	378.80' (18" RCP TO CB128)	NCDOT 840.02 CONCRETE CATCH BASIN
CB130	387.79'	381.50' (15" RCP FROM CB131)	381.30' (15" RCP TO CB129)	NCDOT 840.02 CONCRETE CATCH BASIN
CB131	388.08'	382.12' (15" RCP TO CB130)	382.12' (15" RCP TO CB130)	NCDOT 840.02 CONCRETE CATCH BASIN
CB132	382.27'	377.30' (15" RCP FROM CB133)	377.00' (18" RCP TO CB117)	NCDOT 840.02 CONCRETE CATCH BASIN
CB133	382.19'	377.70' (15" RCP TO CB132)	377.70' (15" RCP TO CB132)	NCDOT 840.02 CONCRETE CATCH BASIN
CB134	383.96'	378.15' (24" RCP FROM DI135)	378.15' (24" RCP TO CB120)	NCDOT 840.02 CONCRETE CATCH BASIN
CB136	392.15'	385.31' (18" RCP FROM CB137)	385.21' (24" RCP TO CB104)	NCDOT 840.02 CONCRETE CATCH BASIN
CB137	394.19'	386.14' (15" RCP FROM CB138)	385.94' (18" RCP TO CB136)	NCDOT 840.02 CONCRETE CATCH BASIN
CB138	394.33'	386.75' (15" RCP FROM CB190)	386.55' (15" RCP TO CB137)	NCDOT 840.02 CONCRETE CATCH BASIN
CB139	391.90'	386.03' (15" RCP FROM CB140)	385.93' (15" RCP TO CB105)	NCDOT 840.02 CONCRETE CATCH BASIN
CB140	391.90'	387.00' (15" RCP TO CB139)	387.00' (15" RCP TO CB139)	NCDOT 840.02 CONCRETE CATCH BASIN
CB144	397.75'	390.50' (15" RCP TO CB108)	390.50' (15" RCP TO CB108)	NCDOT 840.02 CONCRETE CATCH BASIN
CB146	392.43'	388.00' (15" RCP TO CB109)	388.00' (15" RCP TO CB109)	NCDOT 840.02 CONCRETE CATCH BASIN
CB147	386.36'	382.65' (15" RCP TO CB110)	382.65' (15" RCP TO CB110)	NCDOT 840.02 CONCRETE CATCH BASIN
CB148A	383.33'	379.80' (15" RCP FROM CB148B)	379.75' (15" RCP TO CB122)	NCDOT 840.02 CONCRETE CATCH BASIN
CB148B	383.34'	379.90' (15" RCP TO CB148A)	379.90' (15" RCP TO CB148A)	NCDOT 840.02 CONCRETE CATCH BASIN
CB149	385.63'	380.31' (15" RCP TO CB129)	380.31' (15" RCP TO CB129)	NCDOT 840.02 CONCRETE CATCH BASIN
CB150	382.85'	372.90' (30" RCP FROM CB151) 377.50' (15" RCP FROM CB162)	372.80' (30" RCP TO DI149)	NCDOT 840.02 CONCRETE CATCH BASIN
CB151	383.50'	373.30' (30" RCP FROM CB152)	373.20' (30" RCP TO CB150)	NCDOT 840.02 CONCRETE CATCH BASIN
CB152	385.99'	375.54' (30" RCP FROM DI153) 380.30' (15" RCP FROM CB164)	375.40' (30" RCP TO CB151)	NCDOT 840.02 CONCRETE CATCH BASIN
CB155	389.98'	378.50' (24" RCP FROM CB156)	378.30' (30" RCP TO DI154)	NCDOT 840.02 CONCRETE CATCH BASIN
CB156	389.83'	379.00' (24" RCP FROM CB157)	378.80' (24" RCP TO CB155)	NCDOT 840.02 CONCRETE CATCH BASIN
CB157	389.83'	383.00' (18" RCP FROM CB158) 382.00' (15" RCP FROM CB180)	379.40' (24" RCP TO CB156)	NCDOT 840.02 CONCRETE CATCH BASIN

STR. #	TOP	INV. IN	INV. OUT	DESCRIPTION
CB158	389.61'	385.29' (18" RCP FROM CB159) 385.70' (15" RCP FROM CB168)	385.00' (18" RCP TO CB157)	NCDOT 840.02 CONCRETE CATCH BASIN
CB159	390.81'	386.70' (15" RCP FROM CB160) 386.90' (15" RCP FROM CB170)	386.50' (18" RCP TO CB158)	NCDOT 840.02 CONCRETE CATCH BASIN
CB160	394.36'	390.50' (15" RCP FROM CB161)	390.30' (15" RCP TO CB159)	NCDOT 840.02 CONCRETE CATCH BASIN
CB161	394.36'		390.76' (15" RCP TO CB160)	NCDOT 840.02 CONCRETE CATCH BASIN
CB162	382.26'	377.90' (15" RCP FROM DI163)	377.80' (15" RCP TO CB150)	NCDOT 840.02 CONCRETE CATCH BASIN
CB164	387.46'	382.70' (15" RCP FROM CB165)	380.74' (15" RCP TO CB152)	NCDOT 840.02 CONCRETE CATCH BASIN
CB165	388.33'		385.00' (15" RCP TO CB164)	NCDOT 840.02 CONCRETE CATCH BASIN
CB166	390.71'	384.20' (15" RCP FROM DI167)	384.00' (15" RCP TO CB180)	NCDOT 840.02 CONCRETE CATCH BASIN
CB168	389.61'	386.00' (15" RCP FROM CB169)	385.90' (15" RCP TO CB158)	NCDOT 840.02 CONCRETE CATCH BASIN
CB169	391.29'		386.76' (15" RCP TO CB168)	NCDOT 840.02 CONCRETE CATCH BASIN
CB170	390.81'		387.10' (15" RCP TO CB159)	NCDOT 840.02 CONCRETE CATCH BASIN
CB180	390.27'	383.20' (15" RCP FROM CB166)	383.00' (15" RCP TO CB157)	NCDOT 840.02 CONCRETE CATCH BASIN
CB181	387.21'		383.00' (15" RCP TO CB103)	NCDOT 840.02 CONCRETE CATCH BASIN
CB182	385.98'		382.20' (18" RCP TO CB110)	NCDOT 840.02 CONCRETE CATCH BASIN
CB183	386.74'	373.20' (36" RCP FROM CB103)	373.00' (42" RCP TO CB102)	NCDOT 840.02 CONCRETE CATCH BASIN
CB190	395.70'	387.56' (15" RCP FROM DI192)	387.56' (15" RCP TO CB138)	NCDOT 840.02 CONCRETE CATCH BASIN
DI111	387.17'		384.00' (18" RCP TO CB110)	36" X 36" SLAB TOP YARD INLET
DI135	382.00'	378.94' (24" RCP FROM DI188)	378.84' (24" RCP TO CB134)	36" X 36" SLAB TOP YARD INLET
DI141	390.91'	384.20' (18" RCP FROM DI142)	384.00' (18" RCP TO CB107)	36" X 36" SLAB TOP YARD INLET
DI142	391.26'	385.20' (18" RCP FROM DI143) 386.00' (18" RCP FROM DI143A)	385.00' (18" RCP TO DI141)	36" X 36" SLAB TOP YARD INLET
DI143	388.42'		385.80' (18" RCP TO DI142)	36" X 36" SLAB TOP YARD INLET
DI143A	389.14'		386.50' (18" RCP TO DI142)	36" X 36" SLAB TOP YARD INLET
DI149	378.86'	371.10' (30" RCP FROM CB150)	371.00' (48" RCP TO EW148)	60" X 60" SLAB TOP YARD INLET
DI153	382.56'	376.63' (30" RCP FROM DI154)	376.50' (30" RCP TO CB152)	36" X 36" SLAB TOP YARD INLET
DI154	383.86'	377.34' (30" RCP FROM CB155)	377.10' (30" RCP TO DI153)	36" X 36" SLAB TOP YARD INLET
DI163	381.91'		378.60' (15" RCP TO CB162)	36" X 36" SLAB TOP YARD INLET
DI167	388.91'		384.76' (15" RCP TO CB166)	36" X 36" SLAB TOP YARD INLET
DI188	384.27'	380.30' (18" RCP FROM DI195)	380.10' (24" RCP TO DI135)	36" X 36" SLAB TOP YARD INLET
DI192	392.26'	388.60' (15" RCP FROM DI193)	388.40' (15" RCP TO CB190)	36" X 36" SLAB TOP YARD INLET
DI193	393.48'		390.75' (15" RCP TO DI192)	36" X 36" SLAB TOP YARD INLET
DI194	385.64'		383.10' (15" RCP TO DI195)	36" X 36" SLAB TOP YARD INLET
DI195	384.05'	381.90' (15" RCP FROM DI194)	381.80' (18" RCP TO DI188)	36" X 36" SLAB TOP YARD INLET
EW100	374.50'	370.00' (48" RCP FROM CB101)		NCDOT 838.80 CONCRETE ENDWALL
EW148	374.50'	370.00' (48" RCP FROM DI149)		NCDOT 838.80 CONCRETE ENDWALL

STORM STRUCTURE TABLE				
STR. #	TOP	INV. IN	INV. OUT	DESCRIPTION
CB202	389.19'	384.40' (24" RCP FROM CB206) 384.20' (24" RCP FROM CB208)	383.75' (30" RCP TO FE201)	NCDOT 840.02 CONCRETE CATCH BASIN
CB204	387.81'	384.36' (15" RCP FROM CB205)	384.16' (24" RCP TO DI203A)	NCDOT 840.02 CONCRETE CATCH BASIN
CB205	387.81'		384.50' (15" RCP TO CB204)	NCDOT 840.02 CONCRETE CATCH BASIN
CB206	390.49'	385.30' (15" RCP FROM CB207)	385.10' (24" RCP TO CB202)	NCDOT 840.02 CONCRETE CATCH BASIN
CB207	390.58'		385.60' (15" RCP TO CB206)	NCDOT 840.02 CONCRETE CATCH BASIN
CB208	389.19'	384.60' (18" RCP FROM DI209)	384.40' (24" RCP TO CB202)	NCDOT 840.02 CONCRETE CATCH BASIN
CB213	388.97'	384.30' (30" RCP FROM CB214)	384.10' (30" RCP TO FE212)	NCDOT 840.02 CONCRETE CATCH BASIN
CB214	388.79'	384.60' (18" RCP FROM CB215) 384.60' (24" RCP FROM CB217)	384.50' (30" RCP TO CB213)	NCDOT 840.02 CONCRETE CATCH BASIN
CB215	390.18'	385.25' (15" RCP FROM CB216)	385.15' (18" RCP TO CB214)	NCDOT 840.02 CONCRETE CATCH BASIN
CB216	391.32'		387.62' (15" RCP TO CB215)	NCDOT 840.02 CONCRETE CATCH BASIN
CB217	388.67'	384.85' (24" RCP FROM CB218)	384.75' (24" RCP TO CB214)	NCDOT 840.02 CONCRETE CATCH BASIN
CB218	388.70'	385.00' (24" RCP FROM DI219)	384.90' (24" RCP TO CB217)	NCDOT 840.02 CONCRETE CATCH BASIN
DI203	387.24'	383.50' (24" RCP FROM DI203A)	383.40' (24" RCP TO EW220)	36" X 36" SLAB TOP YARD INLET
DI203A	388.55'	383.95' (24" RCP FROM CB204)	383.85' (24" RCP TO DI203)	36" X 36" SLAB TOP YARD INLET
DI209	388.00'		385.40' (18" RCP TO CB208)	36" X 36" SLAB TOP YARD INLET
DI219	388.46'		385.70' (24" RCP TO CB218)	36" X 36" SLAB TOP YARD INLET
EW220	385.25'	383.00' (24" RCP FROM DI203)		NCDOT 838.80 CONCRETE ENDWALL
FE201	N/A	383.20' (30" RCP FROM CB202)		FLARED END SECTION
FE212	N/A	383.00' (30" RCP FROM CB213)		FLARED END SECTION

STORM STRUCTURE TABLE				
STR. #	TOP	INV. IN	INV. OUT	DESCRIPTION
CB278	368.07'	360.69' (18" RCP FROM CB327)	360.19' (18" RCP TO VI276)	NCDOT 840.02 CONCRETE CATCH BASIN
CB302	358.15'	348.90' (36" RCP FROM CB303) 350.87' (15" RCP FROM CB323) 347.92' (30" RCP FROM DI324)	347.72' (36" RCP TO JB301)	NCDOT 840.02 CONCRETE CATCH BASIN
CB303	359.79'	349.51' (36" RCP FROM CB304) 351.00' (15" RCP FROM CB326)	349.40' (36" RCP TO CB302)	NCDOT 840.02 CONCRETE CATCH BASIN
CB304	360.95'	353.00' (36" RCP FROM CB305) 351.62' (15" RCP FROM CB325)	350.22' (36" RCP TO CB303)	NCDOT 840.02 CONCRETE CATCH BASIN
CB305	361.55'	354.00' (36" RCP FROM CB306) 355.80' (15" RCP FROM CB398)	353.80' (36" RCP TO CB304)	NCDOT 840.02 CONCRETE CATCH BASIN
CB306	364.83'	356.19' (36" RCP FROM CB307)	356.09' (36" RCP TO CB305)	NCDOT 840.02 CONCRETE CATCH BASIN
CB307	367.74'	356.77' (36" RCP FROM VI276)	356.67' (36" RCP TO CB306)	NCDOT 840.02 CONCRETE CATCH BASIN
CB308	365.81'	357.89' (30" RCP FROM VI309) 361.20' (15" RCP FROM CB333) 361.00' (15" RCP FROM DI380)	357.79' (36" RCP TO VI276)	NCDOT 840.02 CONCRETE CATCH BASIN
CB310	364.51'	359.20' (30" RCP FROM CB311) 359.20' (15" RCP FROM DI381)	359.00' (30" RCP TO VI309)	NCDOT 840.02 CONCRETE CATCH BASIN
CB311	365.57'	361.20' (30" RCP FROM CB312) 361.90' (18" RCP FROM CB337)	361.00' (30" RCP TO CB310)	NCDOT 840.02 CONCRETE CATCH BASIN
CB312	367.67'	362.40' (30" RCP FROM CB314) 363.53' (15" RCP FROM CB338)	362.20' (30" RCP TO CB311)	NCDOT 840.02 CONCRETE CATCH BASIN
CB314	369.34'	363.16' (30" RCP FROM CB315) 364.70' (15" RCP FROM CB340)	362.82' (30" RCP TO CB312)	NCDOT 840.02 CONCRETE CATCH BASIN
CB315	370.31'	363.90' (24" RCP FROM CB316) 364.91' (18" RCP FROM DI341)	363.69' (30" RCP TO CB314)	NCDOT 840.02 CONCRETE CATCH BASIN
CB316	371.29'	365.20' (24" RCP FROM CB317) 367.00' (18" RCP FROM CB342)	365.00' (24" RCP TO CB315)	NCDOT 840.02 CONCRETE CATCH BASIN
CB317	372.50'	366.20' (18" RCP		

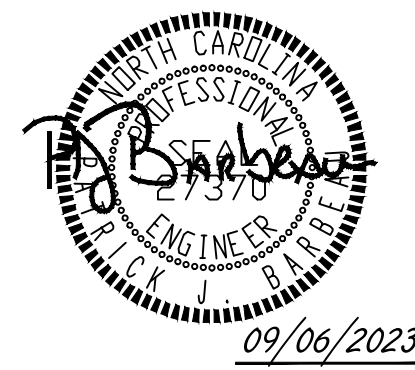
Table with 5 columns: STR. #, TOP, INV. IN, INV. OUT, DESCRIPTION. Rows include DI382, DI397, DI399, EW300, JB301, VI276, VI309, VI318, VI328, VI334A, VI334B.

STORM STRUCTURE TABLE with 5 columns: STR. #, TOP, INV. IN, INV. OUT, DESCRIPTION. Rows include CB402, CB403, CB404, CB406, CB407, CB409, CB410, CB411, CB412, CB413, CB414, CB415, CB416, CB417, CB418, CB419, CB420, CB421, CB422, CB423, CB424, CB425, CB427, CB428, CB429, CB430, CB431, CB433, CB434, CB436, CB437, CB439, CB441, DI401, DI405, DI426, DI432, DI435, DI438, DI440, EW400.

STORM STRUCTURE TABLE with 5 columns: STR. #, TOP, INV. IN, INV. OUT, DESCRIPTION. Rows include CB501, CB502, CB503, CB504, CB505, CB506, CB507, CB508, CB509, CB510, CB511, CB512, CB513, CB514, CB515, CB516, CB518, CB519, CB520, DI517, EW500.

STORM STRUCTURE TABLE with 5 columns: STR. #, TOP, INV. IN, INV. OUT, DESCRIPTION. Rows include EW 601, EW 602, EW601, EW602, EW603, EW604, EW605, EW609, EW610, EW611, EW612, EW613, EW614, EW615, EW616, FE650, FE651, SCM 1 RISER, SCM 2 RISER, SCM 3 RISER, SCM 4 RISER, SCM 5 RISER.

NOTES: 1. TOP REFERS TO: 1.1. CATCH BASIN; TOP OF CURB 1.2. YARD INLET; SILL 1.3. VALLEY GUTTER INLET; FLOW LINE



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Table with 2 columns: DATE, REVISION DESCRIPTION. Rows include 04/08/2023, 06/24/2023, 07/22/2023, 04/06/2023, 09/06/2023.

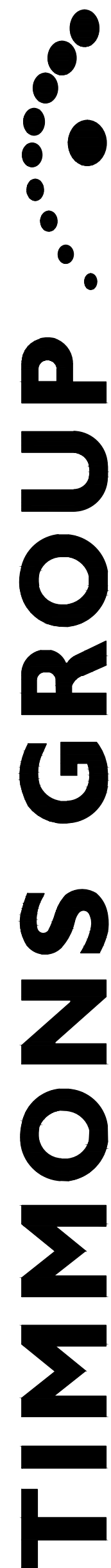
DATE 09/17/2021

DRAWN BY R. WINGATE

DESIGNED BY P. BARBEAU

CHECKED BY P. BARBEAU

SCALE AS SHOWN



ROLESVILLE CROSSING - CD 21-08 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA NORTH CAROLINA LICENSE NO. C-1652

JOB NO. 43398 SHEET NO. C3.6

STORM PIPE TABLE							
FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DIA.	MATERIAL	DESCRIPTION
CB101 - EW100	370.65'	370.00'	0.49%	132.94 LF	48"	RCP	CLASS III
CB102 - CB101	371.24'	370.75'	0.50%	97.43 LF	42"	RCP	CLASS III
CB103 - CB183	374.96'	373.20'	3.56%	49.40 LF	36"	RCP	CLASS III
CB104 - CB103	376.10'	375.06'	0.60%	172.58 LF	36"	RCP	CLASS III
CB105 - CB104	376.45'	376.20'	0.59%	42.43 LF	30"	RCP	CLASS III
CB106 - CB105	376.95'	376.55'	0.60%	66.73 LF	30"	RCP	CLASS III
CB107 - CB106	377.71'	377.05'	0.61%	108.77 LF	30"	RCP	CLASS III
CB108 - CB107	378.33'	377.81'	0.60%	86.74 LF	30"	RCP	CLASS III
CB109 - CB108	380.78'	378.43'	0.60%	392.67 LF	24"	RCP	CLASS III
CB110 - CB109	381.80'	380.88'	0.54%	169.45 LF	24"	RCP	CLASS III
CB112 - CB101	377.30'	375.00'	2.43%	94.73 LF	15"	RCP	CLASS III
CB113 - CB112	378.00'	377.50'	1.28%	39.16 LF	15"	RCP	CLASS III
CB114 - CB102	371.98'	371.30'	0.49%	137.77 LF	42"	RCP	CLASS III
CB115 - CB114	372.51'	372.10'	0.58%	70.32 LF	30"	RCP	CLASS III
CB116 - CB115	373.90'	372.65'	0.51%	245.19 LF	30"	RCP	CLASS III
CB117 - CB116	374.25'	374.00'	0.54%	46.53 LF	30"	RCP	CLASS III
CB118 - CB117	376.00'	375.80'	0.74%	27.00 LF	30"	RCP	CLASS III
CB119 - CB118	376.60'	376.25'	0.77%	45.41 LF	30"	RCP	CLASS III
CB120 - CB119	377.37'	376.60'	0.67%	115.77 LF	30"	RCP	CLASS III
CB121 - CB120	377.84'	377.37'	0.62%	75.64 LF	24"	RCP	CLASS III
CB122 - CB121	378.50'	377.84'	0.79%	83.58 LF	18"	RCP	CLASS III
CB123 - CB122	380.00'	378.70'	0.83%	155.76 LF	18"	RCP	CLASS III
CB124 - CB114	379.41'	378.00'	5.00%	28.29 LF	15"	RCP	CLASS III
CB125 - CB114	379.38'	377.50'	5.37%	35.00 LF	15"	RCP	CLASS III
CB126 - CB115	379.00'	378.50'	1.43%	35.00 LF	15"	RCP	CLASS III
CB127 - CB116	377.53'	377.32'	0.60%	35.00 LF	18"	RCP	CLASS III
CB128 - CB127	378.30'	377.63'	1.45%	46.28 LF	18"	RCP	CLASS III
CB129 - CB128	378.80'	378.50'	1.11%	27.00 LF	18"	RCP	CLASS III
CB130 - CB129	381.30'	378.90'	2.24%	107.12 LF	15"	RCP	CLASS III
CB131 - CB130	382.12'	381.50'	1.58%	39.20 LF	15"	RCP	CLASS III
CB132 - CB117	377.00'	376.00'	0.85%	117.54 LF	18"	RCP	CLASS III
CB133 - CB132	377.70'	377.30'	1.48%	27.05 LF	15"	RCP	CLASS III
CB134 - CB120	378.15'	377.70'	0.69%	64.98 LF	24"	RCP	CLASS III
CB136 - CB104	385.21'	385.00'	0.60%	35.00 LF	24"	RCP	CLASS III
CB137 - CB136	385.94'	385.31'	1.00%	63.35 LF	18"	RCP	CLASS III
CB138 - CB137	386.55'	386.14'	1.00%	40.57 LF	15"	RCP	CLASS III
CB139 - CB105	385.93'	385.10'	1.00%	82.75 LF	15"	RCP	CLASS III
CB140 - CB139	387.00'	386.03'	3.59%	27.03 LF	15"	RCP	CLASS III
CB144 - CB108	390.50'	389.50'	2.86%	35.00 LF	15"	RCP	CLASS III
CB146 - CB109	388.00'	385.91'	5.11%	40.91 LF	15"	RCP	CLASS III
CB147 - CB110	382.65'	382.00'	1.67%	38.92 LF	15"	RCP	CLASS III
CB148A - CB122	379.75'	379.41'	0.97%	35.00 LF	15"	RCP	CLASS V
CB148B - CB148A	379.90'	379.80'	2.22%	4.50 LF	15"	RCP	CLASS III
CB149 - CB129	380.31'	379.85'	1.00%	45.91 LF	15"	RCP	CLASS III
CB150 - DI149	372.80'	371.10'	1.03%	165.28 LF	30"	RCP	CLASS III
CB151 - CB150	373.20'	372.90'	0.72%	41.38 LF	30"	RCP	CLASS III
CB152 - CB151	375.40'	373.30'	1.69%	124.57 LF	30"	RCP	CLASS III
CB155 - DI154	378.30'	377.34'	0.70%	136.50 LF	30"	RCP	CLASS III
CB156 - CB155	378.80'	378.50'	0.91%	32.88 LF	24"	RCP	CLASS III
CB157 - CB156	379.40'	379.00'	1.48%	27.00 LF	24"	RCP	CLASS III
CB158 - CB157	385.00'	383.00'	3.39%	58.95 LF	18"	RCP	CLASS III
CB159 - CB158	386.50'	385.29'	1.52%	79.35 LF	18"	RCP	CLASS III
CB160 - CB159	390.30'	386.70'	2.18%	165.29 LF	15"	RCP	CLASS III
CB161 - CB160	390.76'	390.50'	0.96%	27.00 LF	15"	RCP	CLASS III
CB162 - CB150	377.80'	377.50'	0.76%	39.30 LF	15"	RCP	CLASS III
CB164 - CB152	380.74'	380.30'	0.61%	72.45 LF	15"	RCP	CLASS III
CB165 - CB164	385.00'	382.70'	4.58%	50.25 LF	15"	RCP	CLASS V
CB166 - CB180	384.00'	383.20'	1.74%	46.02 LF	15"	RCP	CLASS III
CB168 - CB158	385.90'	385.70'	0.74%	27.00 LF	15"	RCP	CLASS III
CB169 - CB168	386.76'	386.00'	1.40%	54.16 LF	15"	RCP	CLASS III

STORM PIPE TABLE							
FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DIA.	MATERIAL	DESCRIPTION
CB170 - CB159	387.10'	386.90'	0.74%	27.01 LF	15"	RCP	CLASS V
CB180 - CB157	383.00'	382.00'	1.62%	61.85 LF	15"	RCP	CLASS III
CB181 - CB103	383.00'	381.32'	4.82%	34.89 LF	15"	RCP	CLASS III
CB182 - CB110	382.20'	381.90'	0.70%	43.04 LF	18"	RCP	CLASS III
CB183 - CB102	373.00'	371.50'	1.26%	118.89 LF	42"	RCP	CLASS III
CB190 - CB138	387.56'	386.75'	1.00%	81.09 LF	15"	RCP	CLASS III
DI111 - CB110	384.00'	382.20'	1.30%	138.38 LF	18"	RCP	CLASS III
DI135 - CB134	378.84'	378.15'	0.53%	131.10 LF	24"	RCP	CLASS III
DI141 - CB107	384.00'	383.00'	1.17%	85.54 LF	18"	RCP	CLASS III
DI142 - DI141	385.00'	384.20'	0.96%	83.33 LF	18"	RCP	CLASS III
DI143 - DI142	385.80'	385.20'	0.76%	79.29 LF	18"	RCP	CLASS III
DI143A - DI142	386.50'	386.00'	0.63%	79.29 LF	18"	RCP	CLASS III
DI149 - EW148	371.00'	370.00'	1.44%	69.50 LF	48"	RCP	CLASS III
DI153 - CB152	376.50'	375.54'	0.70%	137.48 LF	30"	RCP	CLASS III
DI154 - DI153	377.10'	376.63'	0.70%	66.89 LF	30"	RCP	CLASS III
DI163 - CB162	378.60'	377.90'	0.51%	136.29 LF	15"	RCP	CLASS III
DI167 - CB166	384.76'	384.20'	2.35%	23.87 LF	15"	RCP	CLASS III
DI188 - DI135	380.10'	378.94'	0.57%	202.55 LF	24"	RCP	CLASS III
DI192 - CB190	388.40'	387.56'	0.66%	126.69 LF	15"	RCP	CLASS III
DI193 - DI192	390.75'	388.60'	1.23%	174.25 LF	15"	RCP	CLASS III
DI194 - DI195	383.10'	381.90'	0.81%	148.33 LF	15"	RCP	CLASS III
DI195 - DI188	381.80'	380.30'	0.59%	254.32 LF	18"	RCP	CLASS III

STORM PIPE TABLE							
FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DIA.	MATERIAL	DESCRIPTION
CB202 - FE201	383.75'	383.20'	0.33%	167.79 LF	30"	RCP	CLASS III
CB204 - DI203A	384.16'	383.95'	0.54%	38.73 LF	24"	RCP	CLASS V
CB205 - CB204	384.50'	384.36'	0.52%	27.04 LF	15"	RCP	CLASS V
CB206 - CB202	385.10'	384.40'	0.57%	122.07 LF	24"	RCP	CLASS III
CB207 - CB206	385.60'	385.30'	1.05%	28.48 LF	15"	RCP	CLASS V
CB208 - CB202	384.40'	384.20'	0.74%	27.00 LF	24"	RCP	CLASS III
CB213 - FE212	384.10'	383.00'	0.66%	167.47 LF	30"	RCP	CLASS III
CB214 - CB213	384.50'	384.30'	0.50%	39.99 LF	30"	RCP	CLASS III
CB215 - CB214	385.15'	384.60'	0.55%	99.88 LF	18"	RCP	CLASS III
CB216 - CB215	387.62'	385.25'	4.34%	54.55 LF	15"	RCP	CLASS III
CB217 - CB214	384.75'	384.60'	0.56%	27.00 LF	24"	RCP	CLASS V
CB218 - CB217	384.90'	384.85'	0.55%	9.13 LF	24"	RCP	CLASS IV
DI203 - EW220	383.40'	383.00'	0.47%	85.03 LF	24"	RCP	CLASS V
DI203A - DI203	383.85'	383.50'	0.48%	72.52 LF	24"	RCP	CLASS V
DI209 - CB208	385.40'	384.60'	0.57%	140.85 LF	18"	RCP	CLASS III
DI219 - CB218	385.70'	385.00'	0.56%	125.90 LF	24"	RCP	CLASS III, O-RING

STORM PIPE TABLE							
FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DIA.	MATERIAL	DESCRIPTION
CB501 - EW500	355.84'	354.00'	4.38%	42.01 LF	30"	RCP	CLASS III
CB502 - CB501	356.54'	355.94'	0.60%	99.76 LF	30"	RCP	CLASS V
CB503 - CB502	357.00'	356.64'	0.82%	44.10 LF	30"	RCP	CLASS III
CB504 - CB503	357.95'	357.10'	0.54%	157.79 LF	30"	RCP	CLASS III
CB505 - CB504	364.00'	361.00'	3.45%	87.00 LF	24"	RCP	CLASS III
CB506 - CB505	366.00'	364.20'	0.93%	193.28 LF	24"	RCP	CLASS III
CB507 - CB506	371.00'	366.20'	2.29%	210.00 LF	18"	RCP	CLASS III
CB508 - CB507	371.50'	371.20'	1.11%	27.01 LF	15"	RCP	CLASS III
CB509 - CB504	358.21'	357.95'	0.61%	42.43 LF	24"	RCP	CLASS III
CB510 - CB509	358.87'	358.31'	0.60%	93.40 LF	24"	RCP	CLASS III
CB511 - CB520	359.70'	359.20'	0.79%	63.49 LF	15"	RCP	CLASS III
CB512 - CB511	360.09'	359.70'	1.44%	27.15 LF	15"	RCP	CLASS III
CB513 - CB510	361.69'	361.10'	2.15%	27.45 LF	15"	RCP	CLASS III
CB514 - CB505	366.08'	365.92'	0.59%	27.00 LF	18"	RCP	CLASS III
CB515 - CB514	366.44'	366.18'	0.61%	42.43 LF	18"	RCP	CLASS III
CB516 - CB515	366.93'	366.44'	0.60%	82.10 LF	18"	RCP	CLASS III
CB518 - CB516	367.23'	367.03'	0.74%	27.00 LF	15"	RCP	CLASS V
CB519 - CB506	369.61'	369.00'	2.26%	27.01 LF	15"	RCP	CLASS III
CB520 - CB510	359.20'	358.87'	0.77%	42.66 LF	18"	RCP	CLASS III
DI517 - CB516	367.23'	367.03'	0.65%	30.15 LF	15"	RCP	CLASS III

STORM PIPE TABLE							
FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DIA.	MATERIAL	DESCRIPTION
CB278 - VI276	360.19'	359.98'	0.82%	25.50 LF	18"	RCP	CLASS III
CB302 - JB301	347.72'	346.12'	1.53%	104.91 LF	36"	RCP	CLASS III, O-RING
CB303 - CB302	349.40'	348.90'	0.60%	82.86 LF	36"	RCP	CLASS III
CB304 - CB303	350.22'	349.51'	0.60%	118.63 LF	36"	RCP	CLASS III
CB305 - CB304	353.80'	353.00'	1.98%	40.48 LF	36"	RCP	CLASS III
CB306 - CB305	356.09'	354.00'	2.03%	103.07 LF	36"	RCP	CLASS III
CB307 - CB306	356.67'	356.19'	0.60%	79.80 LF	36"	RCP	CLASS III
CB308 - VI276	357.79'	357.14'	0.60%	108.48 LF	36"	RCP	CLASS III
CB310 - VI309	359.00'	358.71'	0.81%	35.98 LF	30"	RCP	CLASS III
CB311 - CB310	361.00'	359.20'	2.74%	65.59 LF	30"	RCP	CLASS III
CB312 - CB311	362.20'	361.20'	0.81%	124.08 LF	30"	RCP	CLASS III
CB314 - CB312	362.82'	362.40'	0.61%	68.95 LF	30"	RCP	CLASS III
CB315 - CB314	363.69'	363.16'	0.60%	88.47 LF	30"	RCP	CLASS III
CB316 - CB315	365.00'	363.90'	1.12%	98.46 LF	24"	RCP	CLASS III
CB317 - CB316	366.00'	365.20'	2.04%	39.27 LF	24"	RCP	CLASS III
CB319 - VI318	372.50'	368.20'	4.15%	103.51 LF	18"	RCP	CLASS III
CB320 - CB319	375.00'	372.70'	1.60%	143.96 LF	15"	RCP	CLASS III
CB321 - CB320	376.00'	375.20'	1.28%	62.68 LF	15"	RCP	CLASS III
CB322 - CB321	376.70'	376.20'	0.86%	58.22 LF	15"	RCP	CLASS III
CB323 - CB302	351.75'	350.87'	0.77%	113.78 LF	15"	RCP	CLASS III
CB325 - CB304	352.20'	351.62'	0.52%	110.87 LF	15"	RCP	CLASS V
CB326 - CB303	353.00'	351.00'	7.37%	27.14 LF	15"	RCP	CLASS III
CB327 - CB278	361.80'	360.69'	2.35%	47.18 LF	18"	RCP	CLASS III
CB329 - VI328	369.00'	366.20'	3.54%	79.14 LF	15"	RCP	CLASS III
CB330 - CB329	370.00'	369.20'	2.96%	27.00 LF	15"	RCP	CLASS III
CB332 - VI328	367.00'	366.20'	2.54%	31.51 LF	15"	RCP	CLASS III
CB333 - CB308	361.50'	361.20'	1.09%	27.54 LF	15"	RCP	CLASS III
CB334 - CB333	362.20'	361.70'	2.35%	21.26 LF	15"	RCP	CLASS III
CB335 - VI334A	360.05'	359.75'	0.55%	54.64 LF	18"	RCP	CLASS III
CB337 - CB311	362.40'						



09/06/2023

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DATE	REVISION DESCRIPTION
04/08/2022	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

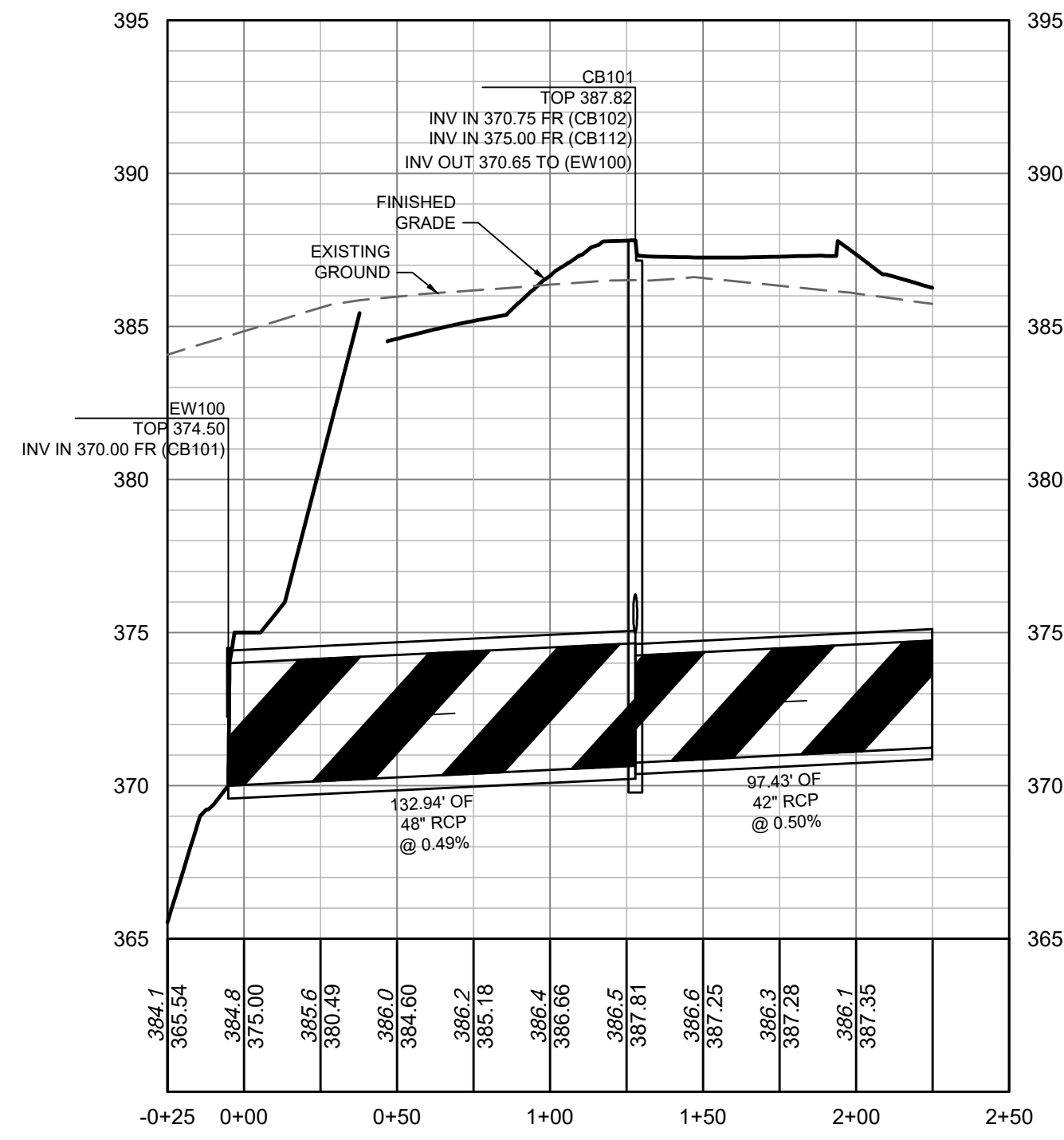
DATE
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DESIGNED BY
P. BARBEAU
CHECKED BY
P. BARBEAU
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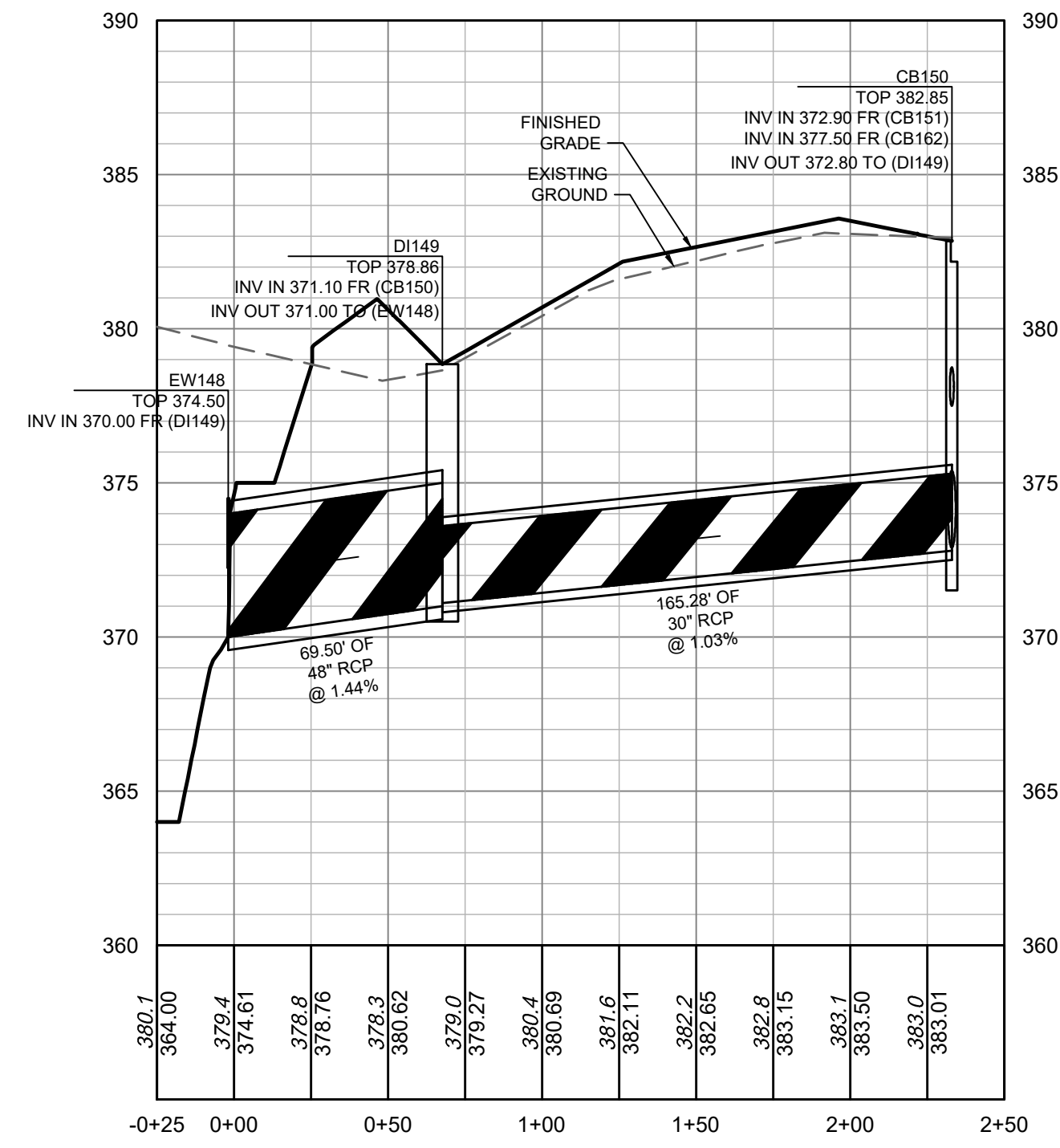
TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
STORM PROFILES

JOB NO.
43398
SHEET NO.
C3.8

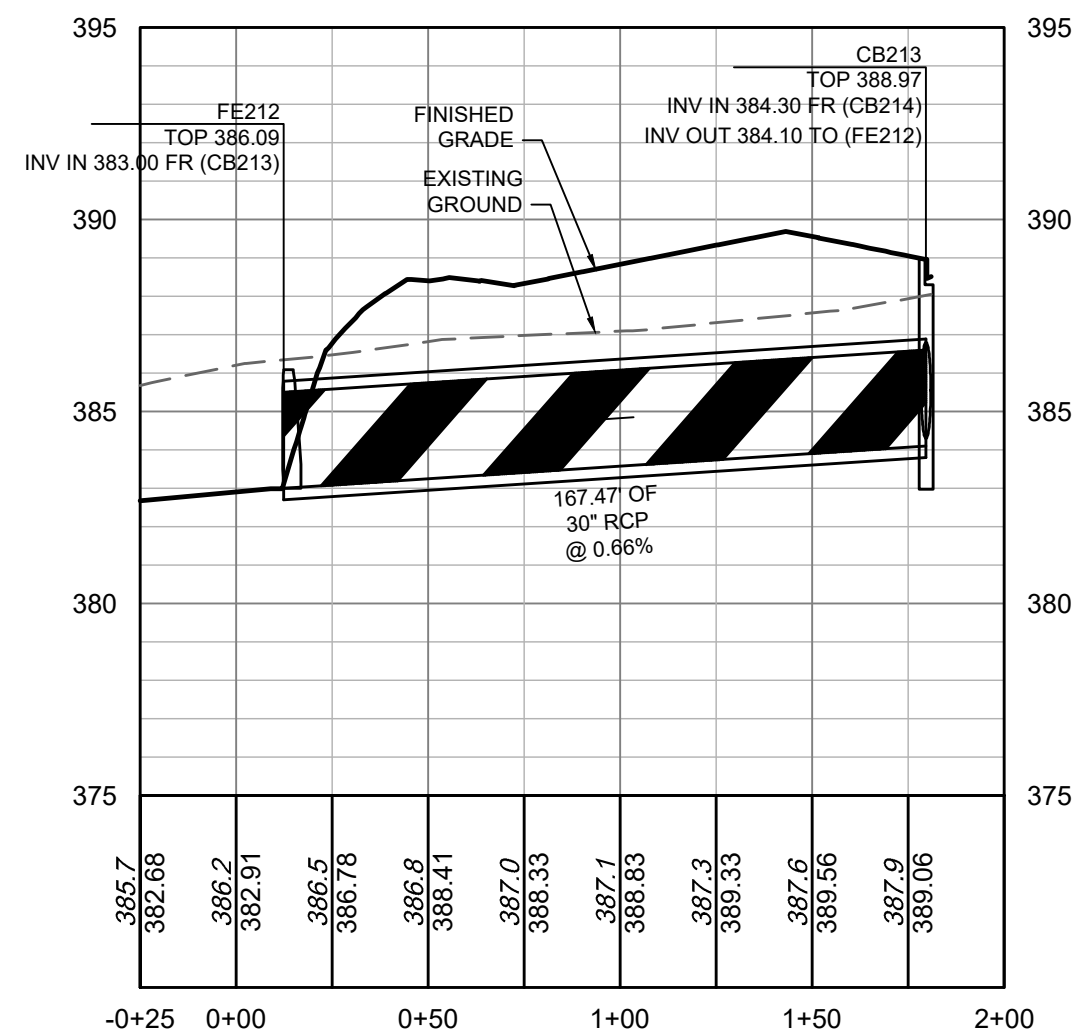
ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



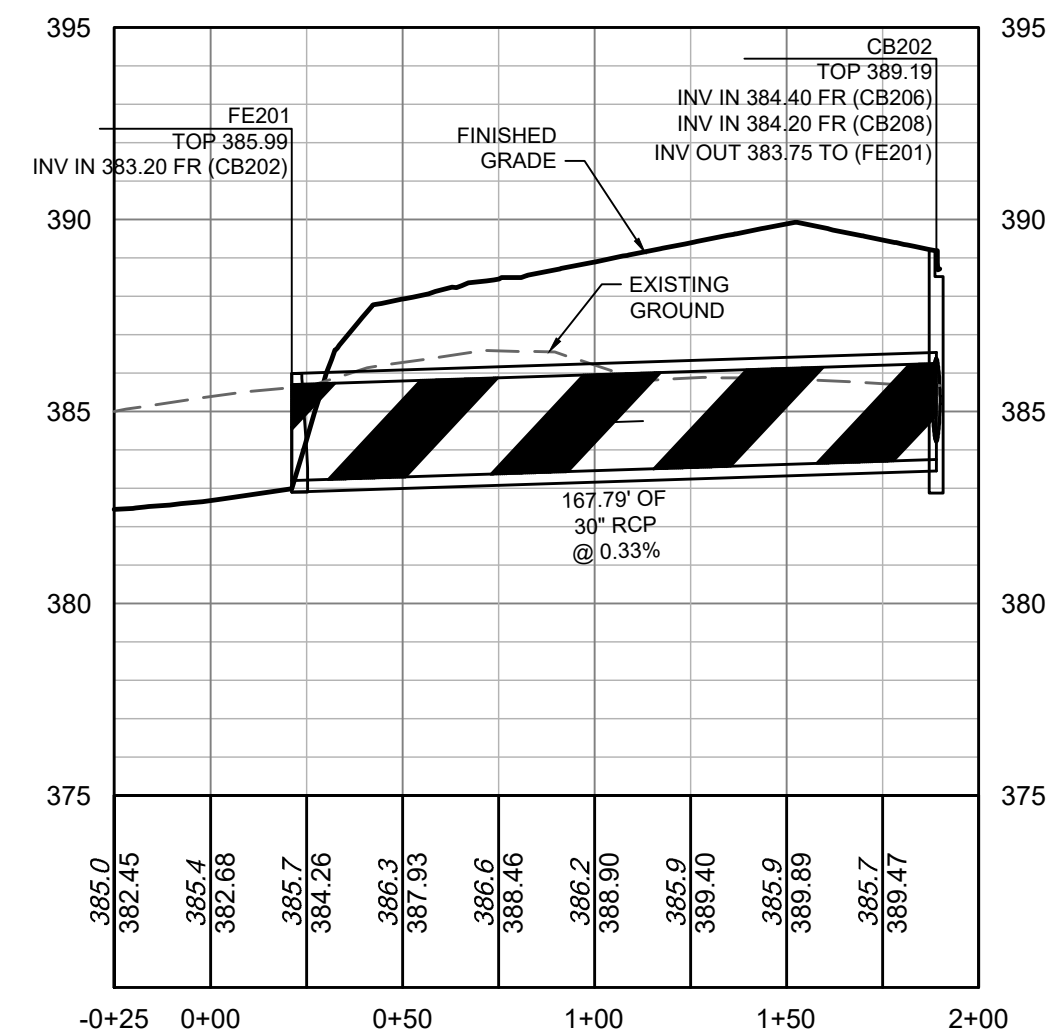
SCM 1 INLET 1
-0+25 - 2+50



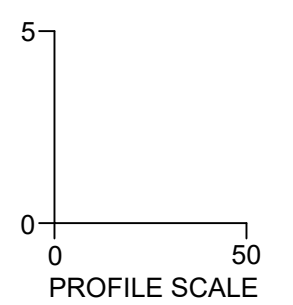
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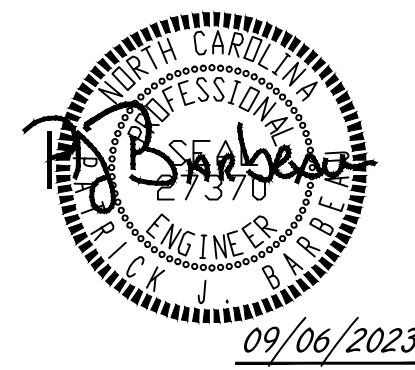


SCM 2 INLET 2
-0+25 - 2+00



SCM 2 INLET 1
-0+25 - 2+00





09/06/2023

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DATE	REVISION DESCRIPTION
04/08/2022	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

09/17/2021
 DRAWN BY
R. WINGATE

DESIGNED BY
P. BARBEAU

CHECKED BY
P. BARBEAU

SCALE
AS SHOWN

TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652

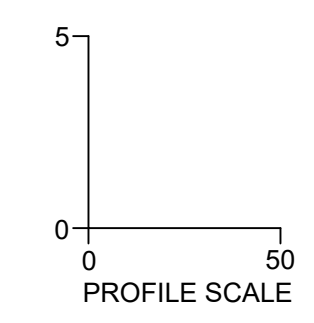
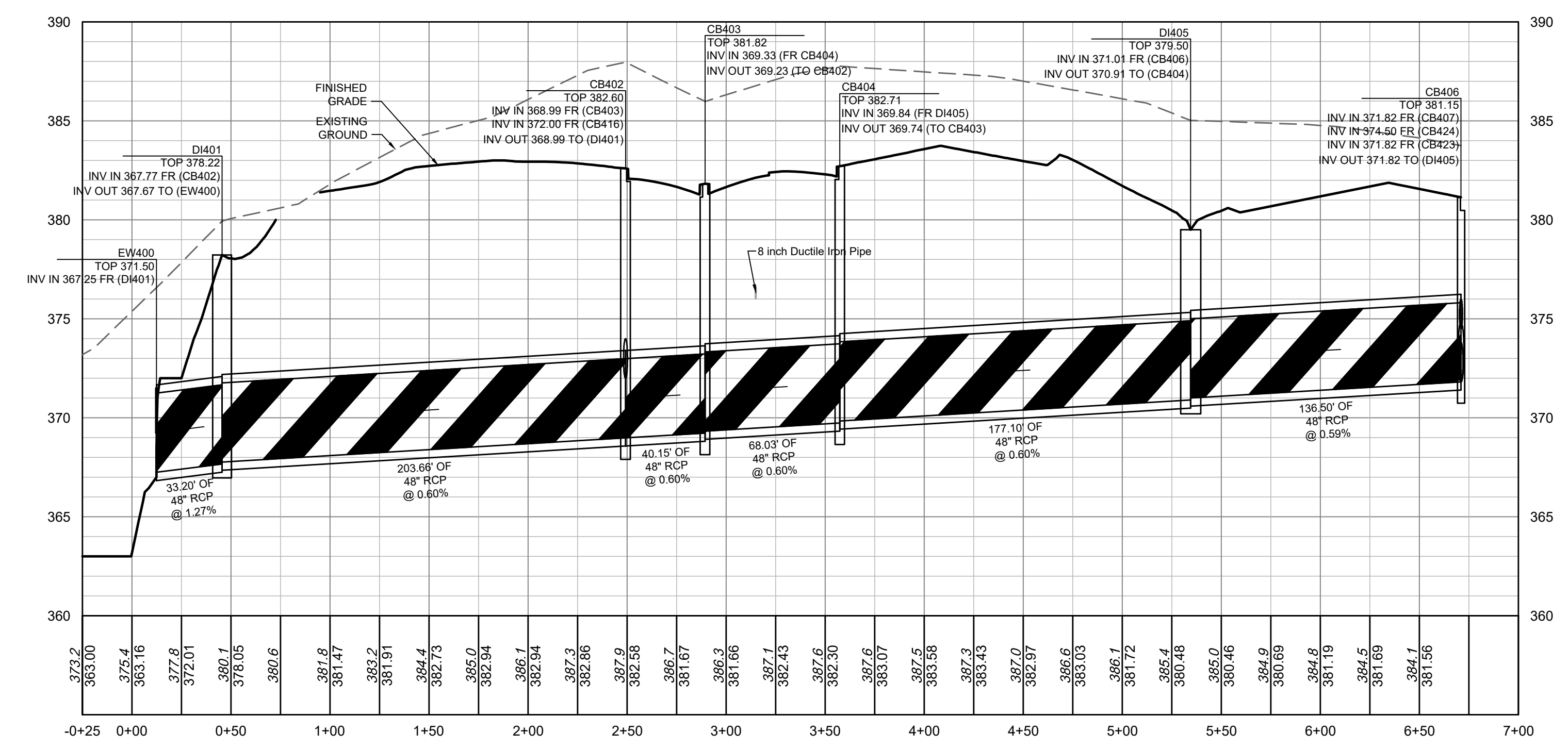
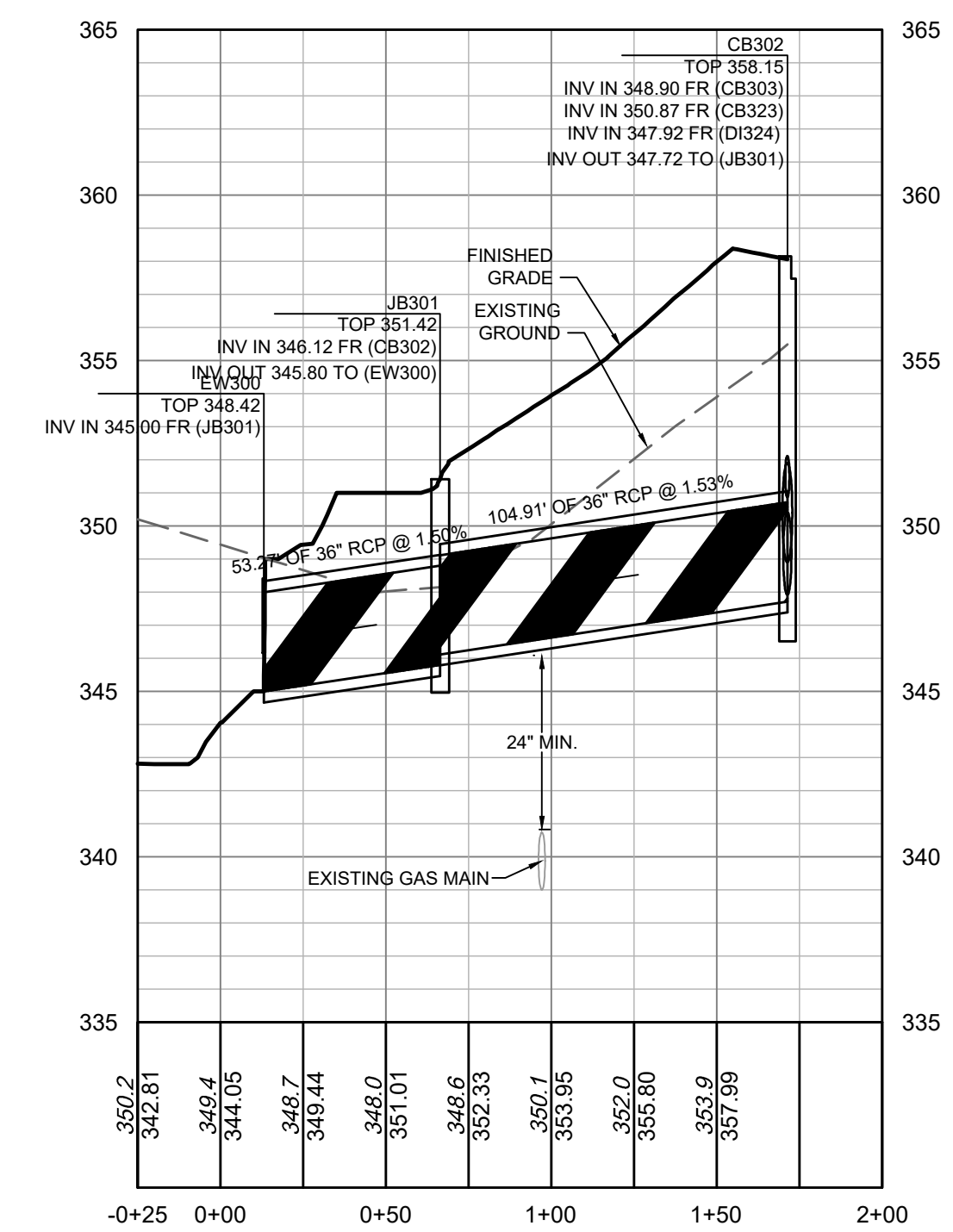
ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

STORM PROFILES

JOB NO.
43398

SHEET NO.
C3.9

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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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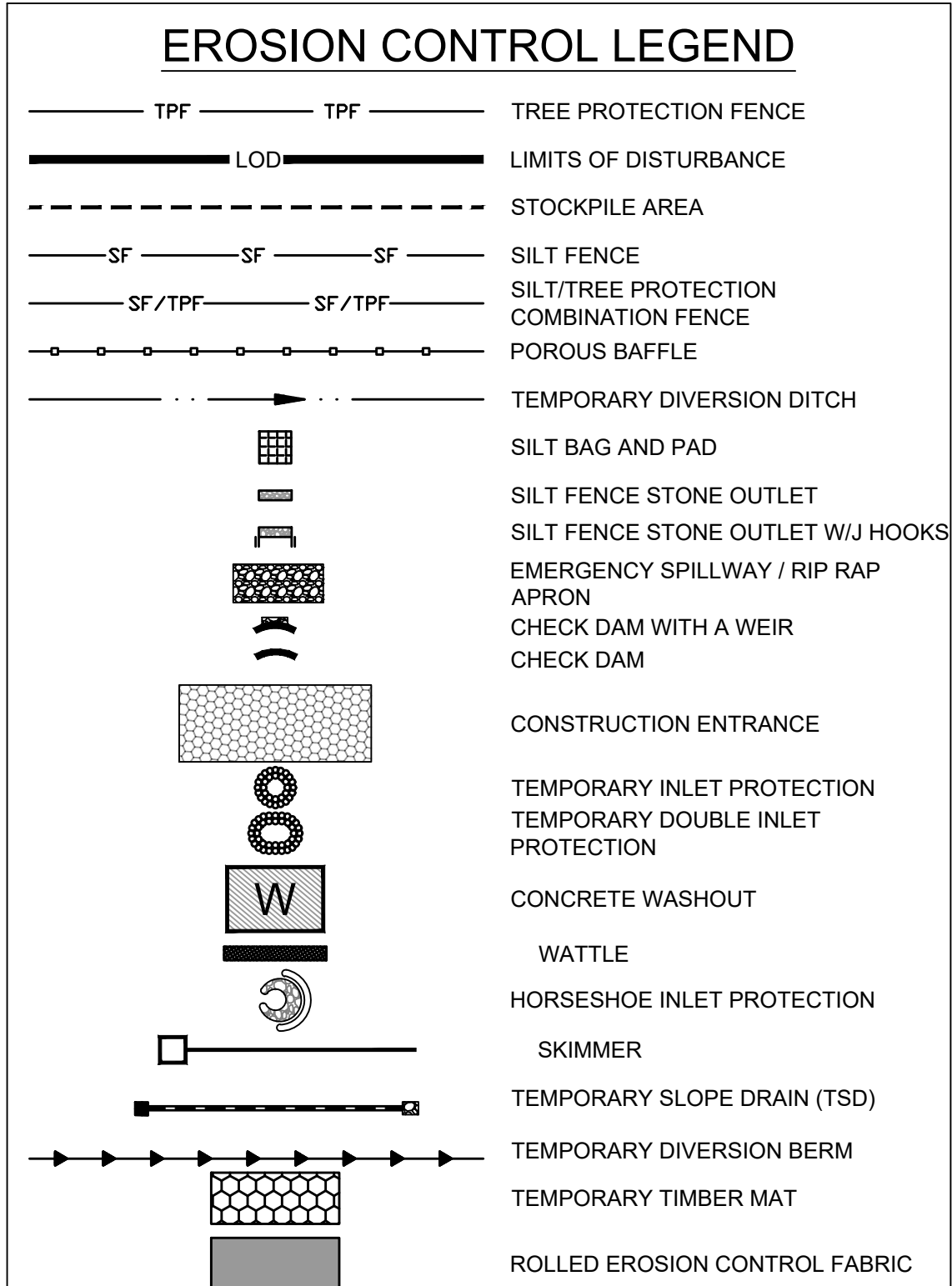


LOD AND SILT FENCE SHOWN FOR OVERALL ILLUSTRATIVE PURPOSES. REFER TO SHEET C4.14 FOR FURTHER DETAILS FOR FORCEMAIN INSTALLATION ALONG AMAZON TRAIL.

ATTENTION CONTRACTORS
 The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.

Failure to notify both **City Departments** in advance of beginning construction, will result in the issuance of **monetary fines**, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for **Inspection**, **Install a Downstream Plug**, have **Permitted Plans** on the **Jobsite**, or any other **Violation of City of Raleigh Standards** will result in a **Fine and Possible Exclusion** from future work in the **City of Raleigh**.



EROSION CONTROL PLAN-STAGE 1 KEYNOTES	
NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP.)
EC103	SILT FENCE OUTLET; REFER TO DETAIL (TYP.)
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE; REFER TO DETAIL (TYP.)
EC106	TREE FENCE; REFER TO DETAIL (TYP.)
EC107	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #1 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.0 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC108	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #2 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.1 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC109	TEMPORARY SKIMMER BASIN #3 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC110	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #4 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.3 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC111	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #5 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.4 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC112	TEMPORARY SKIMMER BASIN #6 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC113	TEMPORARY SKIMMER BASIN #7 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC114	TEMPORARY SKIMMER BASIN #8 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC115	TEMPORARY SKIMMER BASIN #9 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC116	SPILLWAY-REFER TO BASIN SUMMARY ON SHEET C4.1 (TYP.)
EC117	TEMP. DIVERSION DITCH #1A (REFER TO C4.1)
EC118	TEMP. DIVERSION DITCH #1B (REFER TO C4.1)
EC119	TEMP. DIVERSION DITCH #2A (REFER TO C4.1)
EC120	TEMP. DIVERSION DITCH #2B (REFER TO C4.1)
EC121	TEMP. DIVERSION DITCH #3A (REFER TO C4.1)
EC122	TEMP. DIVERSION DITCH #3B (REFER TO C4.1)
EC123	TEMP. DIVERSION DITCH #4A (REFER TO C4.1)
EC124	TEMP. DIVERSION DITCH #4B (REFER TO C4.1)
EC125	TEMP. DIVERSION DITCH #5A (REFER TO C4.1)
EC126	TEMP. DIVERSION DITCH #5B (REFER TO C4.1)
EC127	TEMP. DIVERSION DITCH #6A (REFER TO C4.1)
EC128	TEMP. DIVERSION DITCH #6B (REFER TO C4.1)
EC129	TEMP. DIVERSION DITCH #7A (REFER TO C4.1)
EC130	TEMP. DIVERSION DITCH #7B (REFER TO C4.1)
EC131	TEMP. DIVERSION DITCH #8A (REFER TO C4.1)
EC132	TEMP. DIVERSION DITCH #8B (REFER TO C4.1)
EC133	TEMP. DIVERSION DITCH #9A (REFER TO C4.1)
EC134	TEMP. DIVERSION DITCH #9B (REFER TO C4.1)
EC135	ROCK CHECK DAM REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC137	SILT BAG AND SILT BAG PAD
EC138	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
EC140	STOCKPILE AREA
EC141	CONCRETE WASHOUT
EC142	TEMPORARY CLASS III 18" RCP PIPE FOR DITCH CROSSING
EC143	TEMPORARY HORSESHOE INLET PROTECTION
EC144	PIPE OUTFALL PROTECTION (REFER TO C4.1)
EC145	DIVERSION DITCH OUTLET PROTECTION (REFER TO C4.1 AND STORM PLAN FOR DETAILS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	ROCK CHECK DAM WITH WEIR (REFER TO STREAM CROSSING PLAN)
EC148	SILT FENCE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)

STAGE I WAKE COUNTY EROSION CONTROL SEQUENCE

- SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT KARYN PAGEAU, 919-796-8769. OBTAIN A LAND DISTURBING PERMIT.
- CONTRACTOR SHALL OBTAIN AND READ ALL PERMITS NECESSARY TO COMPLETE THE PROJECT, INCLUDING BUT NOT LIMITED TO LAND DISTURBANCE PERMIT.
- INSTALL GRAVEL CONSTRUCTION PAD, SILT FENCE, ETC. AS SHOWN ON THESE PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- INSTALL SEDIMENT SKIMMER BASINS. IN BASINS 1, 2, 4, AND 5 INSTALL PERMANENT RISER AND OUTFALL WITH TEMPORARY SKIMMER BASIN. PROMPTLY SEED/STABILIZE ALL SLOPES. SEE DETAILS. INSTALL RISER AND CONNECT SKIMMER TO RISER. EMBANKMENTS TO BE CONSTRUCTED AND TESTED AS PERMANENT STRUCTURES PER THE STORMWATER DETAILS WITHIN THIS PLAN SET.
- PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER AROUND BASINS AND DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP SLOPES.
- INSTALL TEMPORARY DIVERSION BERM/DITCHES WITH SEED & LINER. INSTALL ALL REMAINING EROSION CONTROL MEASURES PER THIS PLAN.
- CALL 919.796.8769 FOR AN ONSITE INSPECTION BY THE WAKE COUNTY WATERSHED MANAGER & OBTAIN CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING AND ROUGH SITE GRADING. MAINTAIN DEVICES AS NEEDED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REFINISHED IMMEDIATELY. DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO. SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION.
- PROCEED TO STAGE 2 EROSION CONTROL PLANS / SEQUENCE FOR CONTINUATION.

GENERAL NOTES

- THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
- THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
- THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
- CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
- A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
- UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
- ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
- CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
- SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
- ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM UNLESS OTHERWISE NOTED.
- THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING, INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
- STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

TEMPORARY STOCKPILE NOTES

- STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEVED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

Required Wake County Basin Removal Sequence

- Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
- Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
- Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas immediately.
- Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
- When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.

MAINTENANCE PLAN:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
- REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
- ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
- TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
- REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

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THIS DRAWING PREPARED AT THE
RALEIGH OFFICE
 8410 Trinity Road, Suite 102 | Raleigh, NC 27607
 TEL 919.606.4951 FAX 919.933.8124 www.timmons.com

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09/17/2021
 DRAWN BY
A. BROWN
 DESIGNED BY
P. BARBEAU
 CHECKED BY
P. BARBEAU
 SCALE
AS SHOWN

TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
EROSION CONTROL-STAGE 1 OVERALL

JOB NO.
43398
 SHEET NO.
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BASIN SUMMARY SCHEDULE

BASIN NAME	BASIN 1	BASIN NAME	BASIN 2	BASIN NAME	BASIN 3	BASIN NAME	BASIN 4	BASIN NAME	BASIN 5	BASIN NAME	BASIN 6	BASIN NAME	BASIN 7
BASIN TYPE	RISER	BASIN TYPE	RISER	BASIN TYPE	RISER	BASIN TYPE	RISER	BASIN TYPE	RISER	BASIN TYPE	SKIMMER	BASIN TYPE	SKIMMER
TOTAL DRAINAGE AREA	21.62 acres	TOTAL DRAINAGE AREA	8.07 acres	TOTAL DRAINAGE AREA	1.12 acres	TOTAL DRAINAGE AREA	7.49 acres	TOTAL DRAINAGE AREA	3.44 acres	TOTAL DRAINAGE AREA	3.70 acres	TOTAL DRAINAGE AREA	13.63 acres
Tc (TIME OF CONCENTRATION)	5 min	Tc (TIME OF CONCENTRATION)	5 min	Tc (TIME OF CONCENTRATION)	5 min	Tc (TIME OF CONCENTRATION)	10 min	Tc (TIME OF CONCENTRATION)	10 min	Tc (TIME OF CONCENTRATION)	5 min	Tc (TIME OF CONCENTRATION)	10 min
C VALUE	0.50	C VALUE	0.50	C VALUE	0.50	C VALUE	0.50	C VALUE	0.50	C VALUE	0.50	C VALUE	0.50
I (10 YEAR STORM)	7.20 in/hr	I (10 YEAR STORM)	7.20 in/hr	I (10 YEAR STORM)	7.20 in/hr	I (10 YEAR STORM)	5.76 in/hr	I (10 YEAR STORM)	5.76 in/hr	I (10 YEAR STORM)	7.20 in/hr	I (10 YEAR STORM)	7.20 in/hr
SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:	
Q10 = CIA	78 cfs	Q10 = CIA	29 cfs	Q10 = CIA	4 cfs	Q10 = CIA	22 cfs	Q10 = CIA	10 cfs	Q10 = CIA	13 cfs	Q10 = CIA	49 cfs
SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)	
SURFACE AREA REQUIRED	33,857 ft ²	SURFACE AREA REQUIRED	12,638 ft ²	SURFACE AREA REQUIRED	1,754 ft ²	SURFACE AREA REQUIRED	9,383 ft ²	SURFACE AREA REQUIRED	4,310 ft ²	SURFACE AREA REQUIRED	5,794 ft ²	SURFACE AREA REQUIRED	21,345 ft ²
RECTANGLE BASIN PROVIDED	99.5' X 349.4'	RECTANGLE BASIN PROVIDED	50' X 279'	RECTANGLE BASIN PROVIDED	70' X 140'	RECTANGLE BASIN PROVIDED	99.5' X 349.4'	RECTANGLE BASIN PROVIDED	60' X 120'	RECTANGLE BASIN PROVIDED	60' X 120'	RECTANGLE BASIN PROVIDED	104' X 212'
SURFACE AREA PROVIDED	40,474 ft ²	SURFACE AREA PROVIDED	22,949 ft ²	SURFACE AREA PROVIDED	10,740 ft ²	SURFACE AREA PROVIDED	17,593 ft ²	SURFACE AREA PROVIDED	8,258 ft ²	SURFACE AREA PROVIDED	5,881 ft ²	SURFACE AREA PROVIDED	23,812 ft ²
BASIN VOLUME CALCULATION:		BASIN VOLUME CALCULATION:		BASIN VOLUME CALCULATION:		BASIN VOLUME CALCULATION:		BASIN VOLUME CALCULATION:		BASIN VOLUME CALCULATION:		BASIN VOLUME CALCULATION:	
BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre	
BASIN VOLUME REQUIRED	38,916 ft ³	BASIN VOLUME REQUIRED	14,526 ft ³	BASIN VOLUME REQUIRED	2,016 ft ³	BASIN VOLUME REQUIRED	13,482 ft ³	BASIN VOLUME REQUIRED	6,192 ft ³	BASIN VOLUME REQUIRED	6,660 ft ³	BASIN VOLUME REQUIRED	24,534 ft ³
BASIN VOLUME PROVIDED	0 ft ³	BASIN VOLUME PROVIDED	41,376 ft ³	BASIN VOLUME PROVIDED	42,446 ft ³	BASIN VOLUME PROVIDED	68,733 ft ³	BASIN VOLUME PROVIDED	32,943 ft ³	BASIN VOLUME PROVIDED	13,723 ft ³	BASIN VOLUME PROVIDED	63,172 ft ³
TOP OF EMBANKMENT ELEVATION	376	TOP OF EMBANKMENT ELEVATION	386	TOP OF EMBANKMENT ELEVATION	351	TOP OF EMBANKMENT ELEVATION	374	TOP OF EMBANKMENT ELEVATION	357	TOP OF EMBANKMENT ELEVATION	360	TOP OF EMBANKMENT ELEVATION	371
EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft
BOTTOM ELEVATION	370.00	BOTTOM ELEVATION	383.00	BOTTOM ELEVATION	345.00	BOTTOM ELEVATION	368.00	BOTTOM ELEVATION	350.00	BOTTOM ELEVATION	356.00	BOTTOM ELEVATION	367.00
EMERGENCY SPILLWAY ELEVATION	375.00	EMERGENCY SPILLWAY ELEVATION	385.00	EMERGENCY SPILLWAY ELEVATION	350.00	EMERGENCY SPILLWAY ELEVATION	373.00	EMERGENCY SPILLWAY ELEVATION	356.00	EMERGENCY SPILLWAY ELEVATION	359.00	EMERGENCY SPILLWAY ELEVATION	370.00
BASIN DEPTH	5 ft	BASIN DEPTH	2 ft	BASIN DEPTH	5 ft	BASIN DEPTH	5 ft	BASIN DEPTH	6 ft	BASIN DEPTH	3 ft	BASIN DEPTH	3 ft
EMERGENCY SPILLWAY WIDTH	48.5 ft	EMERGENCY SPILLWAY WIDTH	30 ft	EMERGENCY SPILLWAY WIDTH	10 ft	EMERGENCY SPILLWAY WIDTH	45 ft	EMERGENCY SPILLWAY WIDTH	20 ft	EMERGENCY SPILLWAY WIDTH	15 ft	EMERGENCY SPILLWAY WIDTH	48 ft
SEDIMENT STORAGE VOLUME	28,332 ft ³	SEDIMENT STORAGE VOLUME	12,024 ft ³	SEDIMENT STORAGE VOLUME	6,960 ft ³	SEDIMENT STORAGE VOLUME	28,332 ft ³	SEDIMENT STORAGE VOLUME	4,392 ft ³	SEDIMENT STORAGE VOLUME	5,688 ft ³	SEDIMENT STORAGE VOLUME	19,312 ft ³
	@ 37'		@ 386'		@ 351'		@ 374'		@ 357'		@ 359'		@ 370'
TOP OF RISER ELEVATION	373.00	TOP OF RISER ELEVATION	384.00 ft	TOP OF RISER ELEVATION	348.50	TOP OF RISER ELEVATION	371.00	TOP OF RISER ELEVATION	353.00	TOP OF RISER ELEVATION	353.00	TOP OF RISER ELEVATION	353.00
PROVIDE 3 BAFFLES		PROVIDE 3 BAFFLES		PROVIDE 3 BAFFLES		PROVIDE 3 BAFFLES		PROVIDE 3 BAFFLES		PROVIDE 3 BAFFLES		PROVIDE 3 BAFFLES	
SKIMMER SIZE	5 inch	SKIMMER SIZE	3 inch	SKIMMER SIZE	2.5 inch	SKIMMER SIZE	3 inch	SKIMMER SIZE	3 inch	SKIMMER SIZE	3 inch	SKIMMER SIZE	4 inch
ORIFICE DIAMETER	3 inch	ORIFICE DIAMETER	2 inch	ORIFICE DIAMETER	0.75 inch	ORIFICE DIAMETER	1.75 inch	ORIFICE DIAMETER	1.25 inch	ORIFICE DIAMETER	1.25 inch	ORIFICE DIAMETER	2.25 inch
DEWATERING TIME	3.24 days	DEWATERING TIME	3.14 days	DEWATERING TIME	3.40 days	DEWATERING TIME	3.81 days	DEWATERING TIME	3.43 days	DEWATERING TIME	3.69 days	DEWATERING TIME	3.64 days

BASIN NAME	BASIN 8	BASIN NAME	BASIN 9
BASIN TYPE	SKIMMER	BASIN TYPE	SKIMMER
TOTAL DRAINAGE AREA	8.13 acres	TOTAL DRAINAGE AREA	3.61 acres
Tc (TIME OF CONCENTRATION)	5 min	Tc (TIME OF CONCENTRATION)	5 min
C VALUE	0.50	C VALUE	0.50
I (10 YEAR STORM)	7.20 in/hr	I (10 YEAR STORM)	7.20 in/hr
SURFACE AREA CALCULATION:		SURFACE AREA CALCULATION:	
Q10 = CIA	29 cfs	Q10 = CIA	13 cfs
SURFACE AREA (AC) = 435 SF * Q10 (CFS)		SURFACE AREA (AC) = 435 SF * Q10 (CFS)	
SURFACE AREA REQUIRED	12,732 ft ²	SURFACE AREA REQUIRED	5,653 ft ²
RECTANGLE BASIN PROVIDED	80' X 165'	RECTANGLE BASIN PROVIDED	56' X 112'
SURFACE AREA PROVIDED	14,561 ft ²	SURFACE AREA PROVIDED	7,261 ft ²
BASIN VOLUME CALCULATION:		BASIN VOLUME CALCULATION:	
BASIN VOLUME DESIGN = 1,800 ft ³ /acre		BASIN VOLUME DESIGN = 1,800 ft ³ /acre	
BASIN VOLUME REQUIRED	14,634 ft ³	BASIN VOLUME REQUIRED	6,496 ft ³
BASIN VOLUME PROVIDED	37,314 ft ³	BASIN VOLUME PROVIDED	17,377 ft ³
TOP OF EMBANKMENT ELEVATION	357	TOP OF EMBANKMENT ELEVATION	390
EMBANKMENT WIDTH	10 ft	EMBANKMENT WIDTH	10 ft
BOTTOM ELEVATION	353.00	BOTTOM ELEVATION	386.00
EMERGENCY SPILLWAY ELEVATION	356.00	EMERGENCY SPILLWAY ELEVATION	389.00
BASIN DEPTH	3 ft	BASIN DEPTH	3 ft
EMERGENCY SPILLWAY WIDTH	30 ft	EMERGENCY SPILLWAY WIDTH	20 ft
SEDIMENT STORAGE VOLUME	11,103 ft ³	SEDIMENT STORAGE VOLUME	4,868 ft ³
	@ 356'		@ 389'
PROVIDE 3 BAFFLES		PROVIDE 3 BAFFLES	
SKIMMER SIZE	4 inch	SKIMMER SIZE	3 inch
ORIFICE DIAMETER	1.75 inch	ORIFICE DIAMETER	1.25 inch
DEWATERING TIME	3.58 days	DEWATERING TIME	3.60 days

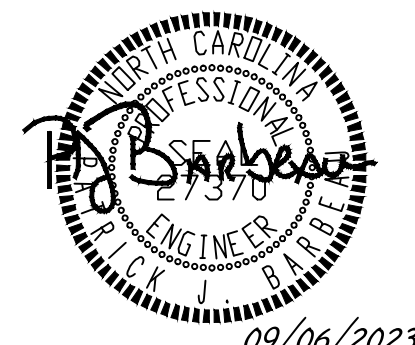
PIPE OUTLET PROTECTION (NYDOT METHOD)					
STRUCTURE NAME	PIPE DIAMETER (in)	RIP RAP CLASS	APRON THICKNESS (in)	APRON LENGTH (ft)	APRON WIDTH (ft)
QULVERT 1	72 (2 PIPES)	1	36	40	22.5
QULVERT 2	44 (2 PIPES)	1	24	20	15.0
EW100	48	B	18	24	12.0
EW148	48	1	24	32	12.0
FE201	30	B	18	15	7.5
FE212	30	B	18	15	7.5
EW220	24	A	12	8	6.0
EW300	36	1	24	24	9.0
EW400	48	1	24	32	12.0
EW500	30	1	24	20	7.5
EW601	30 (3 PIPES)	B	18	15	22.5
EW602	30 (2 PIPES)	B	18	15	14.0
EW603	48	B	18	24	12.0
EW604	48	B	18	24	12.0
EW605	42	B	18	21	10.5
FE651	24	B	18	12	6.0

DIVERSION DITCH SUMMARY SCHEDULE

DITCH NAME	TOP WIDTH "A"	MIN. DITCH DEPTH (FT) "B"	BOTTOM WIDTH (FT) "C"	SIDE SLOPE "D"	LINER TYPE & THICKNESS
TDD 1A	15 FT	2 FT	3	3:1	North American Green, S75
TDD 1B	10 FT	1.5 FT	1	3:1	North American Green, S75
TDD 2A	8.8 FT	1.3 FT	1	3:1	North American Green, S75
TDD 2B	8.2 FT	1.2 FT	1	3:1	North American Green, S75
TDD 3A	7 FT	1 FT	1	3:1	North American Green, S75
TDD 3B	7 FT	1 FT	1	3:1	North American Green, S75
TDD 4A	10.5 FT	1.5 FT	1.5	3:1	North American Green, S75
TDD 4B	7 FT	1 FT	1	3:1	North American Green, S75
TDD 5A	7.6 FT	1.1 FT	1	3:1	North American Green, S75
TDD 5B	8.2 FT	1.2 FT	1	3:1	North American Green, S75
TDD 6A	8.2 FT	1.2 FT	1	3:1	North American Green, S75
TDD 6B	7 FT	1 FT	1	3:1	North American Green, S75
TDD 7A	12 FT	1.75 FT	1.5	3:1	North American Green, S75
TDD 7B	6 FT	1 FT	0	3:1	North American Green, S75
TDD 8A	11 FT	1.5 FT	2	3:1	North American Green, S75
TDD 8B	5.5 FT	0.75 FT	1	3:1	North American Green, S75
TDD 9A	8.2 FT	1.2 FT	1	3:1	North American Green, S75
TDD 9B	7 FT	1 FT	1	3:1	North American Green, S75

DITCH OUTLET PROTECTION (NYDOT METHOD)					
DITCH NAME	APRON WIDTH (ft)	RIP RAP CLASS	APRON THICKNESS (in)	APRON LENGTH (ft)	
TDD1A	15.0	B	18.0	24.0	
TDD1B	10.0	A	12.0	10.0	
TDD2A	8.8	A	12.0	8.0	
TDD2B	8.2	A	12.0	8.0	
TDD3A	7.0	A	12.0	8.0	
TDD3B	7.0	A	12.0	8.0	
TDD4A	10.5	A	12.0	10.0	
TDD4B	7.0	A	12.0	8.0	
TDD5A	8.2	A	12.0	8.0	
TDD5B	8.2	A	12.0	8.0	
TDD6A	8.2	A	12.0	8.0	
TDD6B	7.0	A	12.0	8.0	
TDD7A	12.0	B	18.0	18.0	
TDD7B	6.0	A	12.0	8.0	
TDD8A	11.0	B	18.0	18.0	
TDD8B	5.5	A	12.0	4.0	
TDD9A	8.2	A	12.0	8.0	
TDD9B	7.0	A	12.0	8.0	

NOTE: DIMENSIONS LISTED ARE MINIMUM CRITERIA. RIP RAP APRON SHOULD CONTINUE TO THE TOE OF THE SLOPE FROM POINT OF OUTFALL



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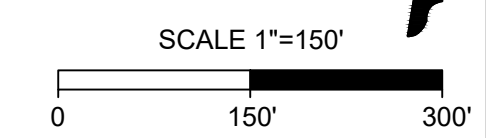
DATE: 09/17/2021
 DRAWN BY: A. BROWN
 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN



ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
 EROSION CONTROL STAGE 1 SPEC TABLES

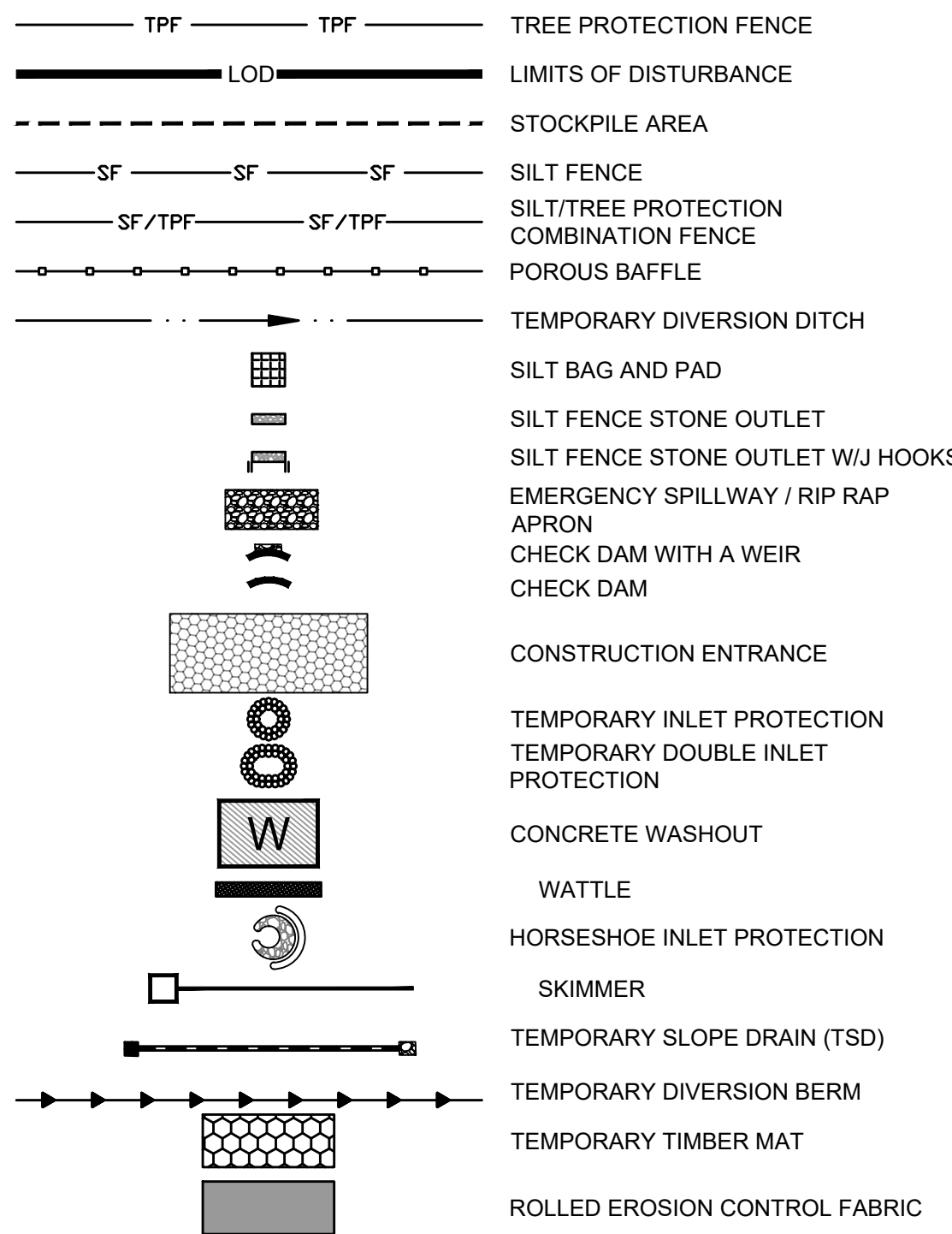
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43398
 SHEET NO.
C4.1

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



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EROSION CONTROL LEGEND



MAINTENANCE PLAN:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
- REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
- ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
- TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
- REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

ATTENTION CONTRACTORS

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for **contacting the Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.

Failure to notify both **City Departments** in advance of beginning construction, will result in the issuance of **monetary fines**, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for **Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite**, or any other **Violation of City of Raleigh Standards** will result in a **Fine and Possible Exclusion** from future work in the **City of Raleigh**.

ROLESVILLE ROAD - S.R. 1003
60' PUBLIC ROW



STAGE I WAKE COUNTY EROSION CONTROL SEQUENCE

- SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT KARYN PAGEAU, 919-796-8769, OBTAIN A LAND DISTURBING PERMIT.
- CONTRACTOR SHALL OBTAIN AND READ ALL PERMITS NECESSARY TO COMPLETE THE PROJECT, INCLUDING BUT NOT LIMITED TO LAND DISTURBANCE PERMIT.
- INSTALL GRAVEL CONSTRUCTION PAD, SILT FENCE, ETC. AS SHOWN ON THESE PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- INSTALL SEDIMENT SKIMMER BASINS. IN BASINS 1, 2, 4, AND 5 INSTALL PERMANENT RISER AND OUTFALL WITH TEMPORARY SKIMMER BASIN. PROMPTLY SEED/STABILIZE ALL SLOPES. SEE DETAILS. INSTALL RISER AND CONNECT SKIMMER TO RISER. EMBANKMENTS TO BE CONSTRUCTED AND TESTED AS PERMANENT STRUCTURES PER THE STORMWATER DETAILS WITHIN THIS PLAN SET.
- PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER AROUND BASINS AND DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP SLOPES.
- INSTALL TEMPORARY DIVERSION BERM/DITCHES WITH SEED & LINER. INSTALL ALL REMAINING EROSION CONTROL MEASURES PER THIS PLAN.
- CALL 919-796-8769 FOR AN ONSITE INSPECTION BY THE WAKE COUNTY WATERSHED MANAGER & OBTAIN CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING AND ROUGH SITE GRADING. MAINTAIN DEVICES AS NEEDED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REFRUBISHED IMMEDIATELY. DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO. SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION.
- PROCEED TO STAGE 2 EROSION CONTROL PLANS / SEQUENCE FOR CONTINUATION.

TEMPORARY STOCKPILE NOTES

- STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYPED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

GENERAL NOTES

- THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
- THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
- THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
- CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NC0910090.
- A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
- UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
- ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
- CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
- SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
- ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
- THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
- STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

EROSION CONTROL PLAN-STAGE 1 KEYNOTES	
NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP.)
EC103	SILT FENCE OUTLET; REFER TO DETAIL (TYP.)
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)
EC106	TREE FENCE. REFER TO DETAIL (TYP.)
EC107	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #1 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.0 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC108	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #2 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.1 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC109	TEMPORARY SKIMMER BASIN #3 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC110	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #4 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.3 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC111	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #5 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.4 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC112	TEMPORARY SKIMMER BASIN #6 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC113	TEMPORARY SKIMMER BASIN #7 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC114	TEMPORARY SKIMMER BASIN #8 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC115	TEMPORARY SKIMMER BASIN #9 (REFER TO BASIN SUMMARY ON SHEET C4.1)
EC116	SPILLWAY-REFER TO BASIN SUMMARY ON SHEET C4.1 (TYP.)
EC117	TEMP. DIVERSION DITCH #1A (REFER TO C4.1)
EC118	TEMP. DIVERSION DITCH #1B (REFER TO C4.1)
EC119	TEMP. DIVERSION DITCH #2A (REFER TO C4.1)
EC120	TEMP. DIVERSION DITCH #2B (REFER TO C4.1)
EC121	TEMP. DIVERSION DITCH #3A (REFER TO C4.1)
EC122	TEMP. DIVERSION DITCH #3B (REFER TO C4.1)
EC123	TEMP. DIVERSION DITCH #4A (REFER TO C4.1)
EC124	TEMP. DIVERSION DITCH #4B (REFER TO C4.1)
EC125	TEMP. DIVERSION DITCH #5A (REFER TO C4.1)
EC126	TEMP. DIVERSION DITCH #5B (REFER TO C4.1)
EC127	TEMP. DIVERSION DITCH #6A (REFER TO C4.1)
EC128	TEMP. DIVERSION DITCH #6B (REFER TO C4.1)
EC129	TEMP. DIVERSION DITCH #7A (REFER TO C4.1)
EC130	TEMP. DIVERSION DITCH #7B (REFER TO C4.1)
EC131	TEMP. DIVERSION DITCH #8A (REFER TO C4.1)
EC132	TEMP. DIVERSION DITCH #8B (REFER TO C4.1)
EC133	TEMP. DIVERSION DITCH #9A (REFER TO C4.1)
EC134	TEMP. DIVERSION DITCH #9B (REFER TO C4.1)
EC135	ROCK CHECK DAM REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC137	SILT BAG AND SILT BAG PAD
EC138	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
EC140	STOCKPILE AREA
EC141	CONCRETE WASHOUT
EC142	TEMPORARY CLASS III 18" RCP PIPE FOR DITCH CROSSING
EC143	TEMPORARY HORSESHOE INLET PROTECTION
EC144	PIPE OUTFALL PROTECTION. (REFER TO C4.1)
EC145	DIVERSION DITCH OUTLET PROTECTION (REFER TO C4.1 AND STORM PLAN FOR DETAILS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	ROCK CHECK DAM WITH WEIR (REFER TO STREAM CROSSING PLAN)
EC148	SILT FENCE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)

Required Wake County Basin Removal Sequence	
1.	Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
2.	Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
3.	Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas immediately.
4.	Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
5.	When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.



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DATE	REVISION DESCRIPTION
04/08/2023	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2023	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2023	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

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DATE: 09/17/2021
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DESIGNED BY: P. BARBEAU
CHECKED BY: P. BARBEAU
SCALE: AS SHOWN

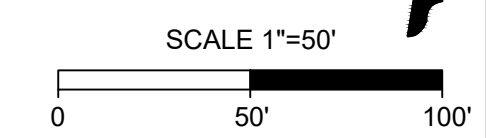
TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SEDIMENT BASIN GRADING DETAIL

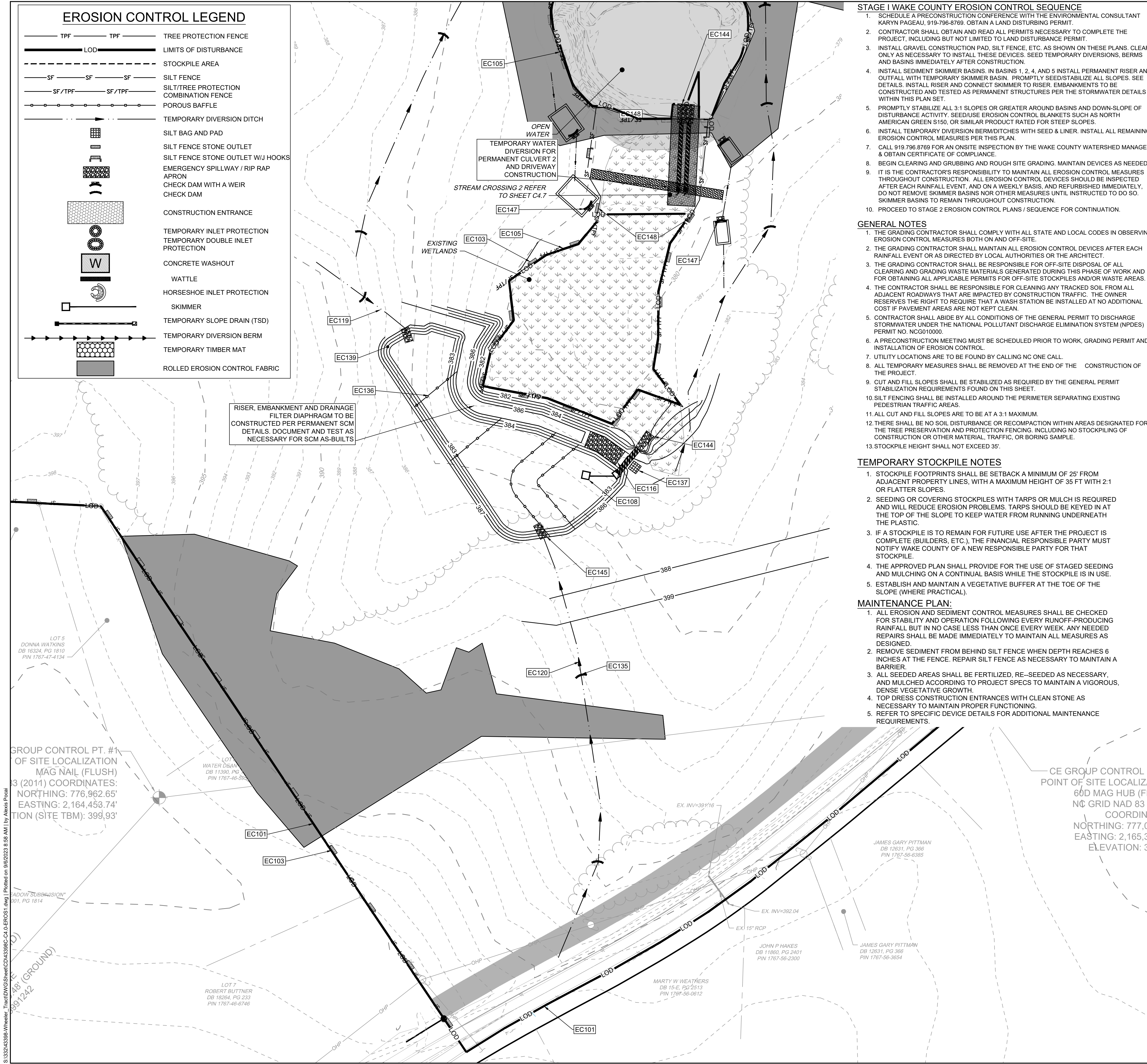
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SHEET NO. C4.2

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



EROSION CONTROL LEGEND

	TPF	TREE PROTECTION FENCE
	LOD	LIMITS OF DISTURBANCE
		STOCKPILE AREA
	SF	SILT FENCE
	SF/TPF	SILT/TREE PROTECTION COMBINATION FENCE
		POROUS BAFFLE
		TEMPORARY DIVERSION DITCH
		SILT BAG AND PAD
		SILT FENCE STONE OUTLET
		SILT FENCE STONE OUTLET W/J HOOKS
		EMERGENCY SPILLWAY / RIP RAP APRON
		CHECK DAM WITH A WEIR
		CHECK DAM
		CONSTRUCTION ENTRANCE
		TEMPORARY INLET PROTECTION
		TEMPORARY DOUBLE INLET PROTECTION
		CONCRETE WASHOUT
		WATTLE
		HORSESHOE INLET PROTECTION
		SKIMMER
		TEMPORARY SLOPE DRAIN (TSD)
		TEMPORARY DIVERSION BERM
		TEMPORARY TIMBER MAT
		ROLLED EROSION CONTROL FABRIC



- STAGE 1 WAKE COUNTY EROSION CONTROL SEQUENCE**
- SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT KARYN PAGEAU, 919-796-8769. OBTAIN A LAND DISTURBING PERMIT.
 - CONTRACTOR SHALL OBTAIN AND READ ALL PERMITS NECESSARY TO COMPLETE THE PROJECT, INCLUDING BUT NOT LIMITED TO LAND DISTURBANCE PERMIT.
 - INSTALL GRAVEL CONSTRUCTION PAD, SILT FENCE, ETC. AS SHOWN ON THESE PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
 - INSTALL SEDIMENT SKIMMER BASINS. IN BASINS 1, 2, 4, AND 5 INSTALL PERMANENT RISER AND OUTFALL WITH TEMPORARY SKIMMER BASIN. PROMPTLY SEED/STABILIZE ALL SLOPES. SEE DETAILS. INSTALL RISER AND CONNECT SKIMMER TO RISER. EMBANKMENTS TO BE CONSTRUCTED AND TESTED AS PERMANENT STRUCTURES PER THE STORMWATER DETAILS WITHIN THIS PLAN SET.
 - PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER AROUND BASINS AND DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP SLOPES.
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 - BEGIN CLEARING AND GRUBBING AND ROUGH SITE GRADING. MAINTAIN DEVICES AS NEEDED.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REFINISHED IMMEDIATELY. DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO. SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION.
 - PROCEED TO STAGE 2 EROSION CONTROL PLANS / SEQUENCE FOR CONTINUATION.

- GENERAL NOTES**
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 - THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
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 - A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK. GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
 - UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
 - ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
 - CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
 - SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
 - ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
 - THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING, INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
 - STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

- TEMPORARY STOCKPILE NOTES**
- STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
 - SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYPED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
 - IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
 - THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
 - ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

- MAINTENANCE PLAN:**
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
 - REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
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 - TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
 - REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

EROSION CONTROL PLAN-STAGE 1 KEYNOTES

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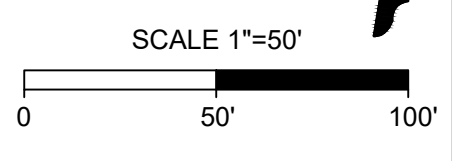
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THIS DRAWING PREPARED AT THE
RALEIGH OFFICE
5410 Trinity Road, Suite 102 | Raleigh, NC 27607
TEL 919.966.4951 | FAX 919.933.8124 | www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

DATE: 09/17/2021
DRAWN BY: A. BROWN
DESIGNED BY: P. BARBEAU
CHECKED BY: P. BARBEAU
SCALE: AS SHOWN

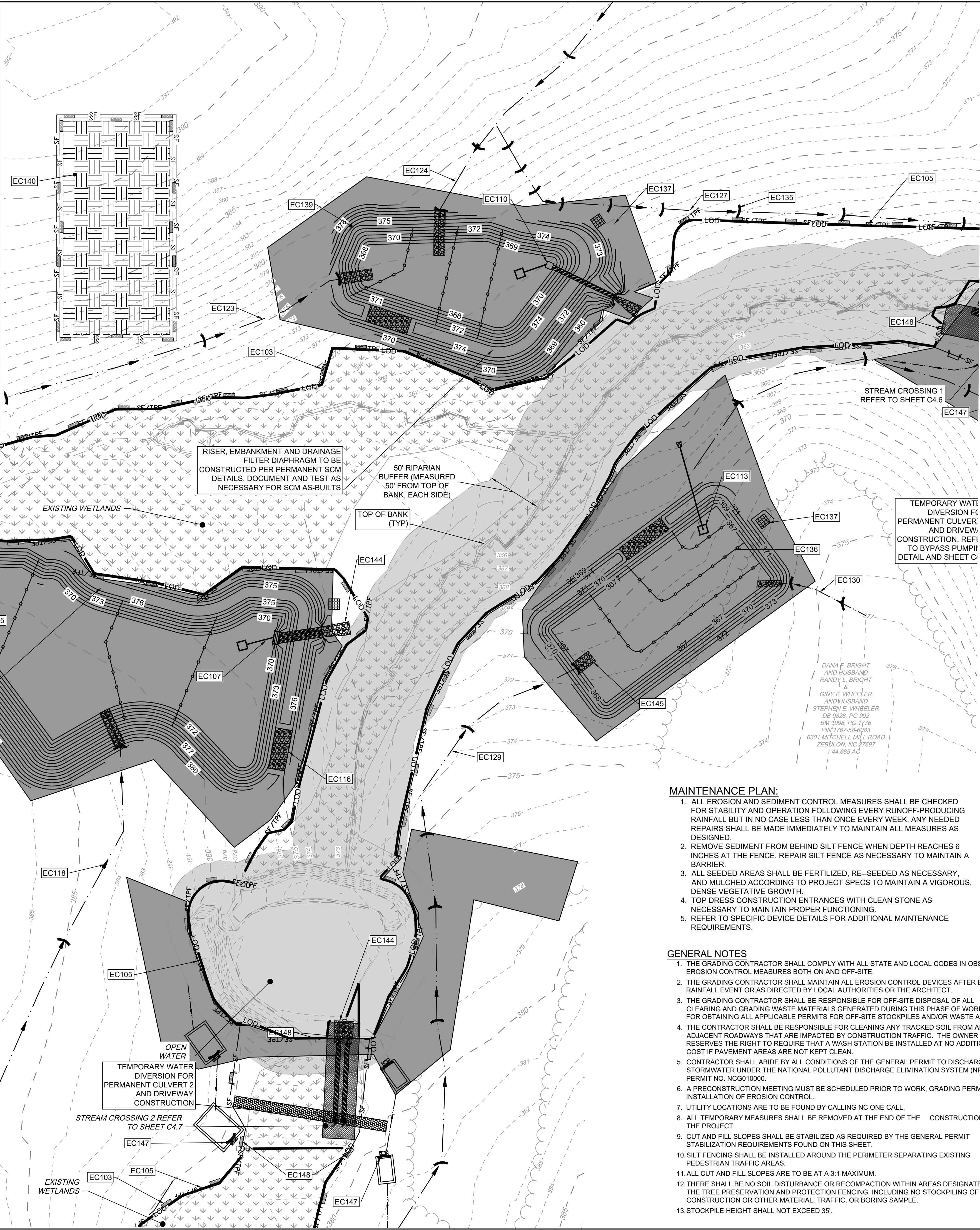
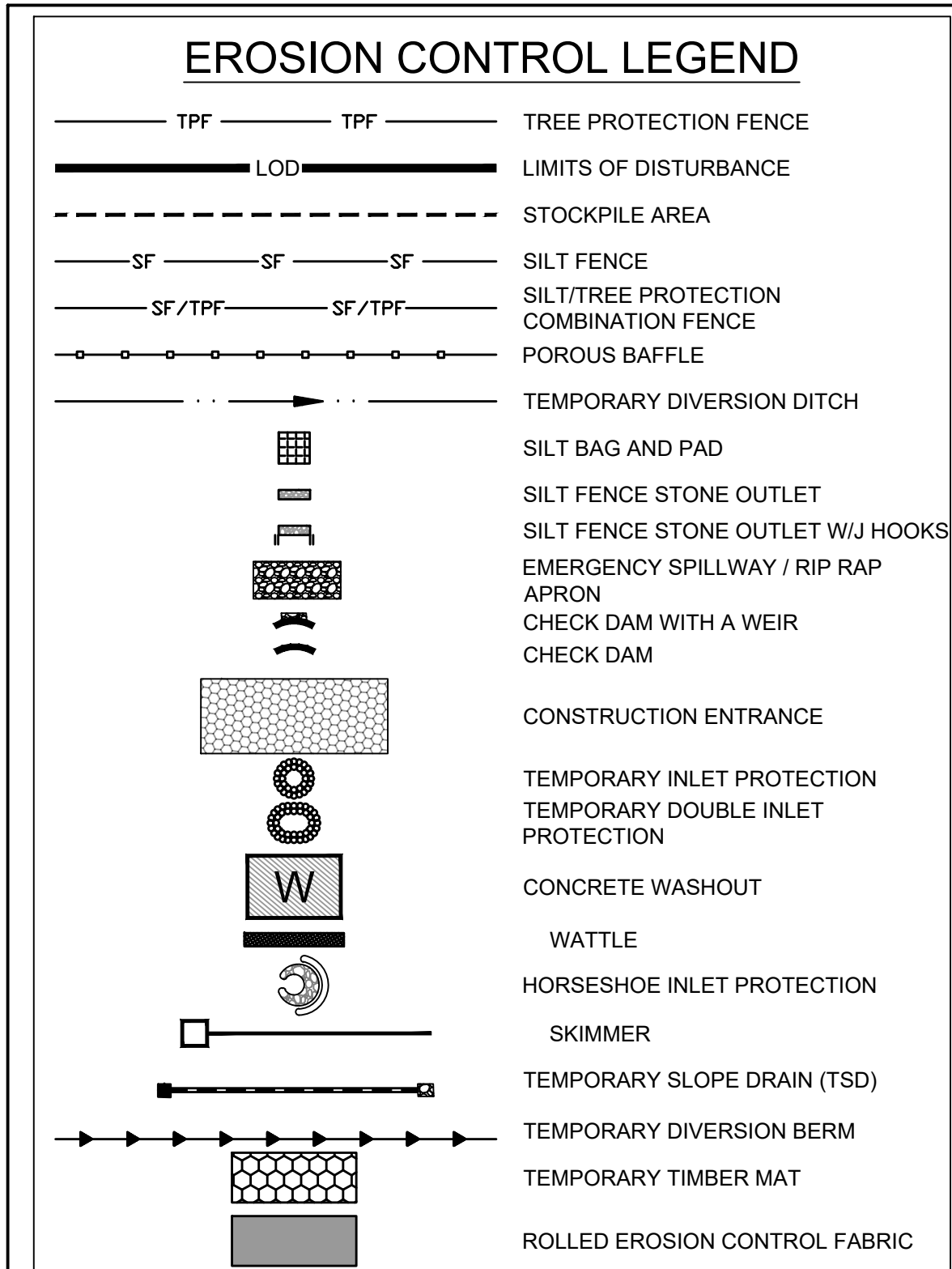
TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SEDIMENT BASIN GRADING DETAIL

JOB NO. 43398
SHEET NO. C4.3

S:\32424398-Wheeler_Timed\DWG\Sheet\C4.3-EROS1.dwg | Plotted on 9/16/2023 8:59 AM | by Alexis Potal



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THIS DRAWING PREPARED AT THE
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REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2023
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2023
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2023
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

YOUR VISION ACHIEVED THROUGH OURS.

DATE: 09/17/2021

DRAWN BY: A. BROWN

DESIGNED BY: P. BARBEAU

CHECKED BY: P. BARBEAU

SCALE: AS SHOWN

Required Wake County Basin Removal Sequence

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- REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
- ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
- TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
- REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

GENERAL NOTES

- THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
- THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
- THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
- CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
- A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
- UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
- ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
- CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
- SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
- ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
- THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
- STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

STAGE I WAKE COUNTY EROSION CONTROL SEQUENCE

- SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT KARYN PAGEAU, 919-796-8769. OBTAIN A LAND DISTURBING PERMIT.
- CONTRACTOR SHALL OBTAIN AND READ ALL PERMITS NECESSARY TO COMPLETE THE PROJECT, INCLUDING BUT NOT LIMITED TO LAND DISTURBANCE PERMIT.
- INSTALL GRAVEL CONSTRUCTION PAD, SILT FENCE, ETC. AS SHOWN ON THESE PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- INSTALL SEDIMENT SKIMMER BASINS. IN BASINS 1, 2, 4, AND 5 INSTALL PERMANENT RISER AND OUTFALL WITH TEMPORARY SKIMMER BASIN. PROMPTLY SEED/STABILIZE ALL SLOPES. SEE DETAILS. INSTALL RISER AND CONNECT SKIMMER TO RISER. EMBANKMENTS TO BE CONSTRUCTED AND TESTED AS PERMANENT STRUCTURES PER THE STORMWATER DETAILS WITHIN THIS PLAN SET.
- PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER AROUND BASINS AND DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP SLOPES.
- INSTALL TEMPORARY DIVERSION BERM/DITCHES WITH SEED & LINER. INSTALL ALL REMAINING EROSION CONTROL MEASURES PER THIS PLAN.
- CALL 919.796.8769 FOR AN ONSITE INSPECTION BY THE WAKE COUNTY WATERSHED MANAGER & OBTAIN CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING AND ROUGH SITE GRADING. MAINTAIN DEVICES AS NEEDED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REPAIR/REPLISHED IMMEDIATELY. DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO. SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION.
- PROCEED TO STAGE 2 EROSION CONTROL PLANS / SEQUENCE FOR CONTINUATION.

TEMPORARY STOCKPILE NOTES

- STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYS IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
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- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

SCALE 1"=50'

NAD 83

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

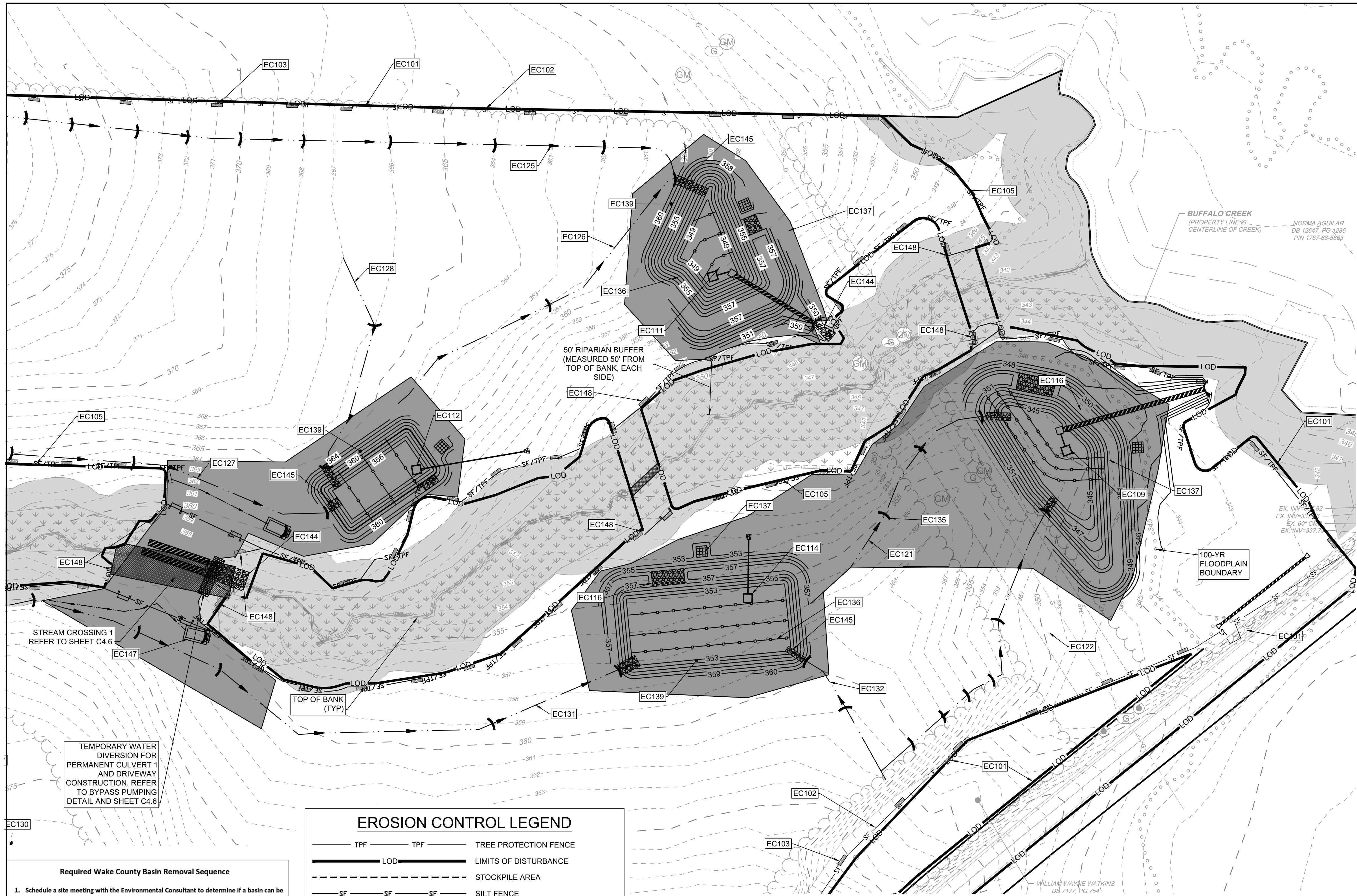
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SEDIMENT BASIN GRADING DETAIL

JOB NO. 43398

SHEET NO. C4.4

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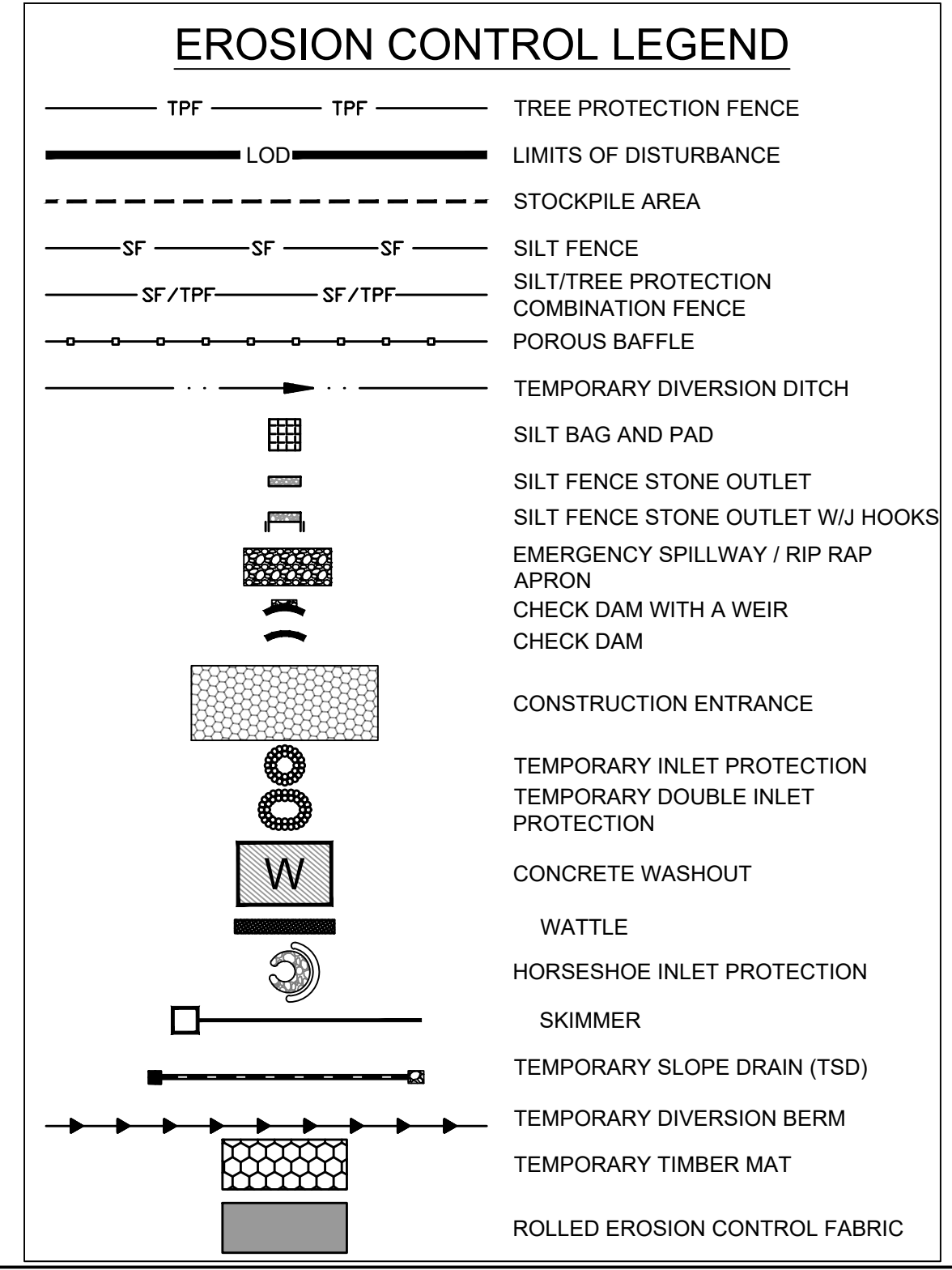
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- ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
- TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
- REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.



STAGE I WAKE COUNTY EROSION CONTROL SEQUENCE

- SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT KARYN PAGEAU, 919-796-8769. OBTAIN A LAND DISTURBANCE PERMIT.
- CONTRACTOR SHALL OBTAIN AND READ ALL PERMITS NECESSARY TO COMPLETE THE PROJECT, INCLUDING BUT NOT LIMITED TO LAND DISTURBANCE PERMIT.
- INSTALL GRAVEL CONSTRUCTION PAD, SILT FENCE, ETC. AS SHOWN ON THESE PLANS. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- INSTALL SEDIMENT SKIMMER BASINS. IN BASINS 1, 2, 4, AND 5 INSTALL PERMANENT RISER AND OUTFALL WITH TEMPORARY SKIMMER BASIN. PROMPTLY SEED/STABILIZE ALL SLOPES. SEE DETAILS. INSTALL RISER AND CONNECT SKIMMER TO RISER. EMBANKMENTS TO BE CONSTRUCTED AND TESTED AS PERMANENT STRUCTURES PER THE STORMWATER DETAILS WITHIN THIS PLAN SET.
- PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER AROUND BASINS AND DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP SLOPES.
- INSTALL TEMPORARY DIVERSION BERM/DITCHES WITH SEED & LINER. INSTALL ALL REMAINING EROSION CONTROL MEASURES PER THIS PLAN.
- CALL 919.796.8769 FOR AN ONSITE INSPECTION BY THE WAKE COUNTY WATERSHED MANAGER & OBTAIN CERTIFICATE OF COMPLIANCE.
- BEGIN CLEARING AND GRUBBING AND ROUGH SITE GRADING. MAINTAIN DEVICES AS NEEDED.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REPAIRS SHOULD BE MADE IMMEDIATELY. DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO. SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION.
- PROCEED TO STAGE 2 EROSION CONTROL PLANS / SEQUENCE FOR CONTINUATION.

GENERAL NOTES

- THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
- THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
- THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
- CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NC0010000.
- A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
- UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
- ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
- CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
- SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
- ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
- THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING, INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
- STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

- Required Wake County Basin Removal Sequence**
- Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
 - Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
 - Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas immediately.
 - Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
 - When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.

ATTENTION CONTRACTORS

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.

Failure to notify both **City Departments** in advance of beginning construction, will result in the issuance of **monetary fines**, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for **Inspection, Install a Downstream Plug, have Permitted Plans** on the Jobsite, or any other **Violation of City of Raleigh Standards** will result in a **Fine and Possible Exclusion** from future work in the **City of Raleigh**.



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RALEIGH OFFICE
 5410 Trinity Road, Suite 102 | Raleigh, NC 27607
 TEL 919.866.9511 FAX 919.853.8124 www.timmons.com

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REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2023
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2023
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2023
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE: 09/17/2021
 DRAWN BY: A. BROWN
 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652

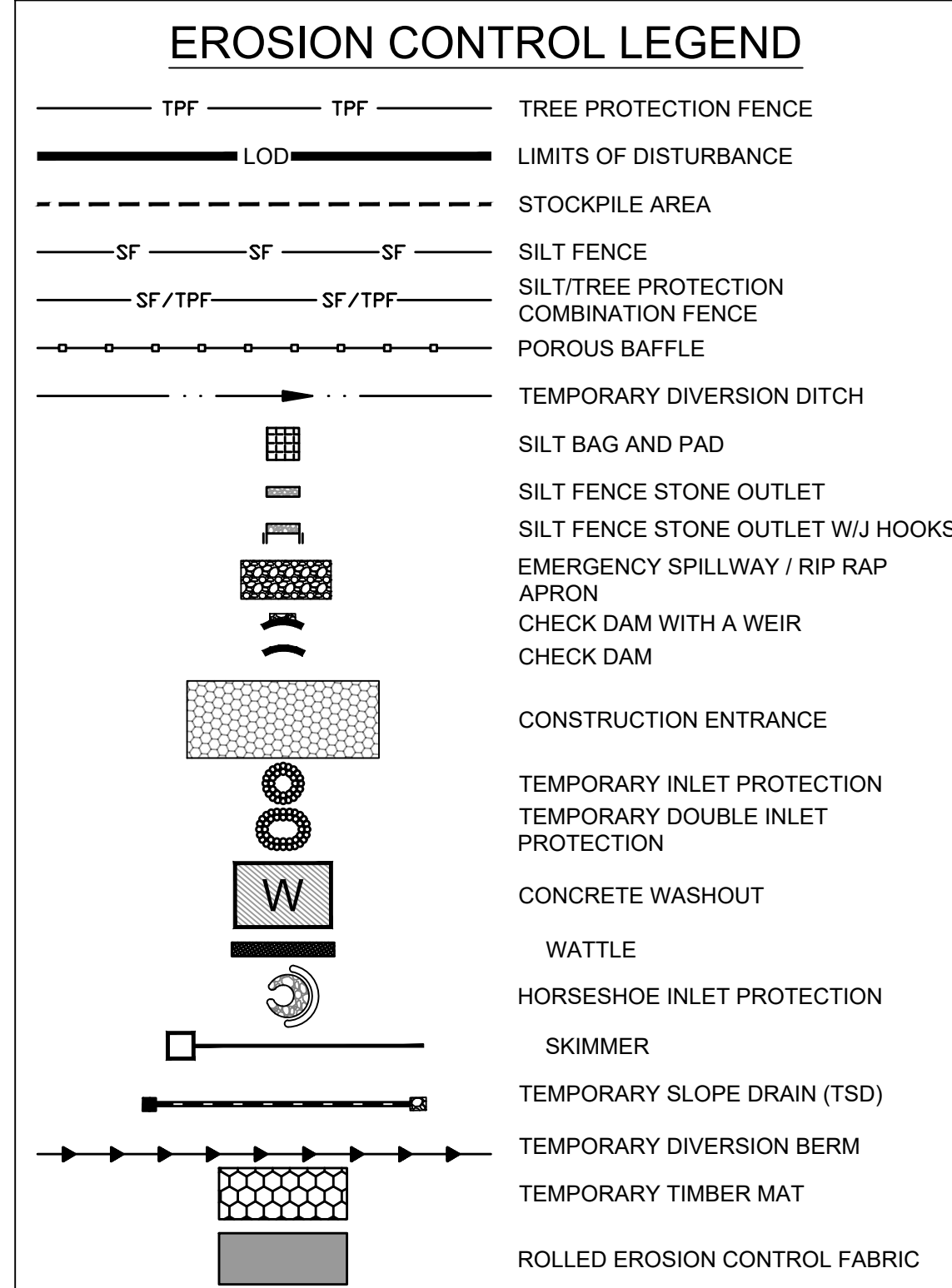
ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

SEDIMENT BASIN GRADING DETAIL

JOB NO. 43398
 SHEET NO. C4.5

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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



STAGE I STREAM CROSSING 1 EROSION CONTROL SEQUENCE

- ONCE PROPER 401/404 BUFFER AUTHORIZATIONS AND ALL OTHER NECESSARY PERMITS ARE OBTAINED BEGIN STREAM CROSSING PROCESS.
- OPERATION AND CONSTRUCTION FOR STREAM CROSSINGS SHOULD BE PERFORMED IN A DRY WEATHER PATTERN OF AT LEAST 3-5 DAYS AND SHOULD NOT BEGIN UNTIL ALL NECESSARY CONSTRUCTION MATERIALS ARE LOCATED ON THE SITE.
- SILT FENCE MUST BE INSTALLED ALONG STREAM BANKS AT THE END OF THE WORK DAY TO MINIMIZE IMPACTS.
- INSTALL CHECK DAM WITH WEIR AT EXISTING GRADES.
- INSTALL THE IMPERVIOUS DIKES (SAND BAGS, SHEET PILING, OR NO. 57 STONE WITH POLYPROPYLENE FOR WIDTH AND DEPTH OF CHANNEL. SET UP AND BEGIN BYPASS PUMPING OF EXISTING FLOW PER THE DETAIL.
- IF A TEMPORARY CROSSING IS REQUIRED, UTILIZE TIMBER MAT.
- STONE APPROACHES WILL BE REQUIRED ON BOTH SIDES AND THE BOARDS WILL HAVE NO GAPS. GEOTEXTILE SHALL BE UNDERLAIN OR OVERLAIN AND SIDE BOARDS WILL BE INSTALLED ALONG THE PERIMETER OF THE MAT.
- INSTALL CULVERT PIPES AND HEADWALLS PER THE STORMWATER AND GRADING SHEETS AND SPECIFICATIONS WITHIN THIS PLAN SET. INFORM THE ENGINEER IF FIELD CONDITIONS DIFFER FROM THE PLANS TO AN EXTENT REQUIRING ANY MODIFICATIONS.
- BRING PERMANENT CROSSING TO GRADE AND PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER. DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP SLOPES.
- ADJUST TEMPORARY DIVERSION DITCHES IN PROXIMITY AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE TO SEDIMENT BASINS.
- PROCEED TO STREAM CROSSING 2 OR OTHER SITE IMPROVEMENTS PER THE PLANS.

Check Dam with a Weir: # 1			
C	0.3		
I	7.2 in/hr		
A	0.037 AC		
Q10	0.08 CFS	Q=C*I*A	
Storage Required	133.2 CF	Volume = A*3600	
Weir Length	0.09 FT	(Q cfs / 0.88)	

Check Dam with a Weir: # 2			
C	0.3		
I	7.2 in/hr		
A	0.060 AC		
Q10	0.13 CFS	Q=C*I*A	
Storage Required	216 CF	Volume = A*3600	
Weir Length	0.15 FT	(Q cfs / 0.88)	

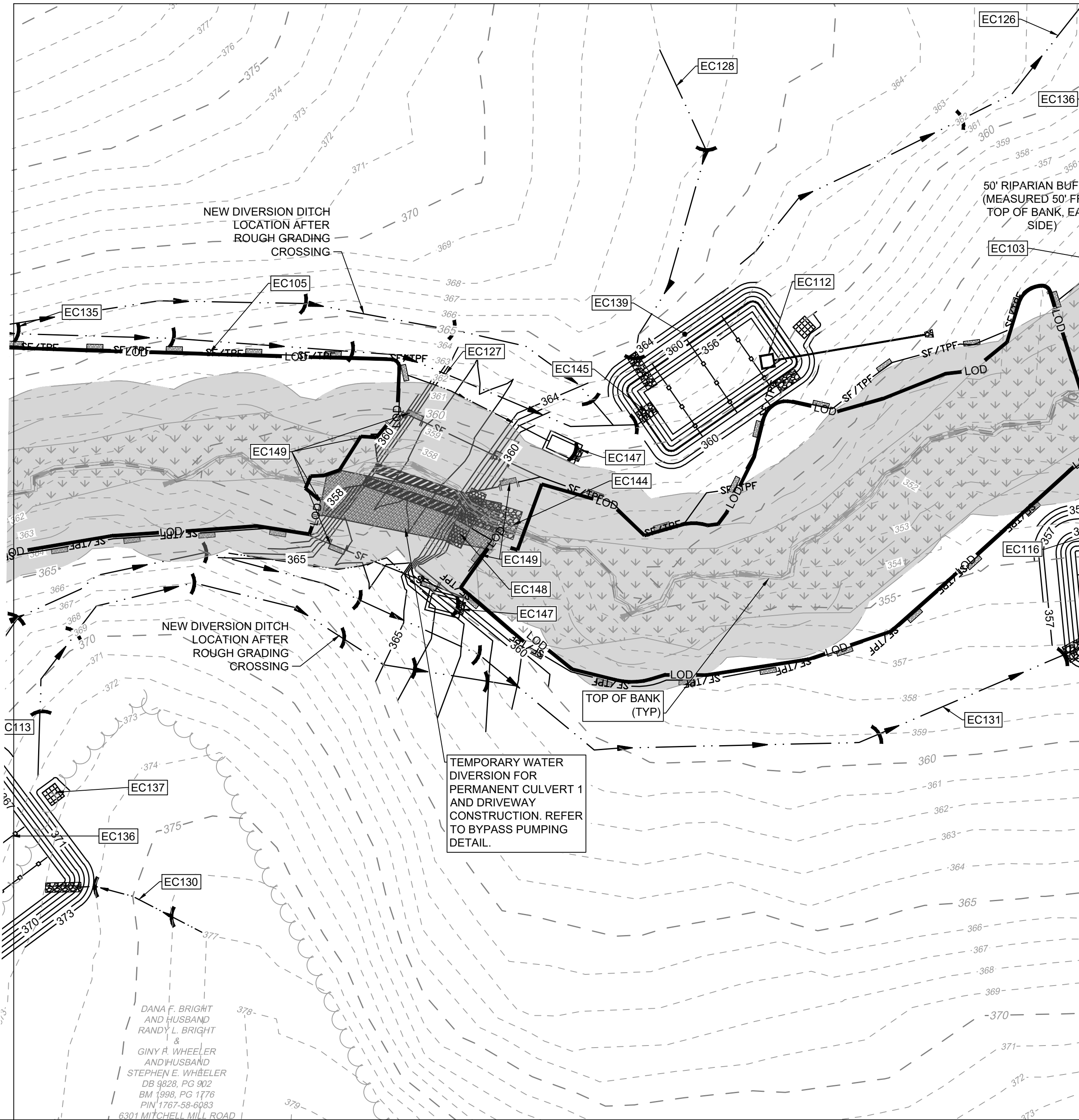
NOTE:

- CHECK DAMS WITH A WEIR TO SERVE AS SEDIMENT STORAGE FOR STREAM CROSSINGS AS NEEDED. CHECK AND REMOVE SEDIMENT AS REQUIRED.

GENERAL NOTES

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- A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
- UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
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- CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
- SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
- ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
- THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
- STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

EROSION CONTROL PLAN-STAGE 1 KEYNOTES	
NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP.)
EC103	SILT FENCE OUTLET; REFER TO DETAIL (TYP.)
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)
EC106	TREE FENCE. REFER TO DETAIL (TYP.)
EC107	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #1 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.0 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC108	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #2 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.1 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC109	TEMPORARY SKIMMER BASIN #3 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC110	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #4 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.3 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC111	PERMANENT RISER WITH TEMPORARY SKIMMER BASIN #5 EMBANKMENT, RISER AND OUTFALL TO BE CONSTRUCTED AS PERMANENT PER SCM DETAILS ON SHEET C8.4 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC112	TEMPORARY SKIMMER BASIN #6 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC113	TEMPORARY SKIMMER BASIN #7 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC114	TEMPORARY SKIMMER BASIN #8 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC115	TEMPORARY SKIMMER BASIN #9 (REFER TO BASIN SUMMARY ON SHEET C4.01)
EC116	SPILLWAY-REFER TO BASIN SUMMARY ON SHEET C4.01 (TYP.)
EC117	TEMP. DIVERSION DITCH #1A (REFER TO C4.01)
EC118	TEMP. DIVERSION DITCH #1B (REFER TO C4.01)
EC119	TEMP. DIVERSION DITCH #2A (REFER TO C4.01)
EC120	TEMP. DIVERSION DITCH #2B (REFER TO C4.01)
EC121	TEMP. DIVERSION DITCH #3A (REFER TO C4.01)
EC122	TEMP. DIVERSION DITCH #3B (REFER TO C4.01)
EC123	TEMP. DIVERSION DITCH #4A (REFER TO C4.01)
EC124	TEMP. DIVERSION DITCH #4B (REFER TO C4.01)
EC125	TEMP. DIVERSION DITCH #5A (REFER TO C4.01)
EC126	TEMP. DIVERSION DITCH #5B (REFER TO C4.01)
EC127	TEMP. DIVERSION DITCH #6A (REFER TO C4.01)
EC128	TEMP. DIVERSION DITCH #6B (REFER TO C4.01)
EC129	TEMP. DIVERSION DITCH #7A (REFER TO C4.01)
EC130	TEMP. DIVERSION DITCH #7B (REFER TO C4.01)
EC131	TEMP. DIVERSION DITCH #8A (REFER TO C4.01)
EC132	TEMP. DIVERSION DITCH #8B (REFER TO C4.01)
EC133	TEMP. DIVERSION DITCH #9A (REFER TO C4.01)
EC134	TEMP. DIVERSION DITCH #9B (REFER TO C4.01)
EC135	ROCK CHECK DAM REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC137	SILT BAG AND SILT BAG PAD
EC138	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
EC140	STOCKPILE AREA
EC141	CONCRETE WASHOUT
EC142	TEMPORARY CLASS 3 18" RCP PIPE FOR DITCH CROSSING
EC143	TEMPORARY HORSESHOE INLET PROTECTION
EC144	PIPE OUTFALL PROTECTION. (REFER TO C4.01)
EC145	DIVERSION DITCH OUTLET PROTECTION (REFER TO C4.01 AND STORM PLAN FOR DETAILS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	ROCK CHECK DAM WITH WEIR (REFER TO DETAIL)
EC148	TIMBER MAT
EC149	SILT FENCE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)



- #### Required Wake County Basin Removal Sequence
- Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
 - Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
 - Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas immediately.
 - Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
 - When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.

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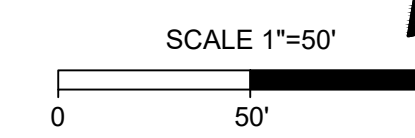
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TEMPORARY STOCKPILE NOTES

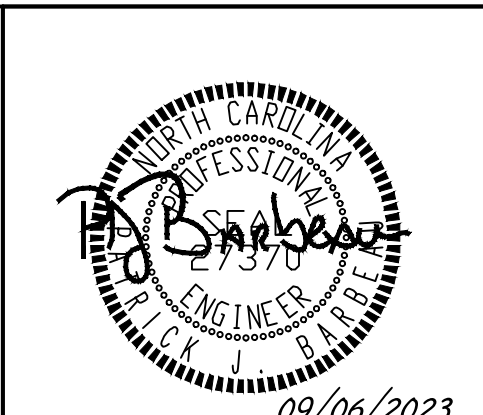
- STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

MAINTENANCE PLAN:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
- REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
- ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
- TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
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REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE: 09/17/2021
DRAWN BY: R. WINGATE
DESIGNED BY: P. BARBEAU
CHECKED BY: P. BARBEAU
SCALE: AS SHOWN

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

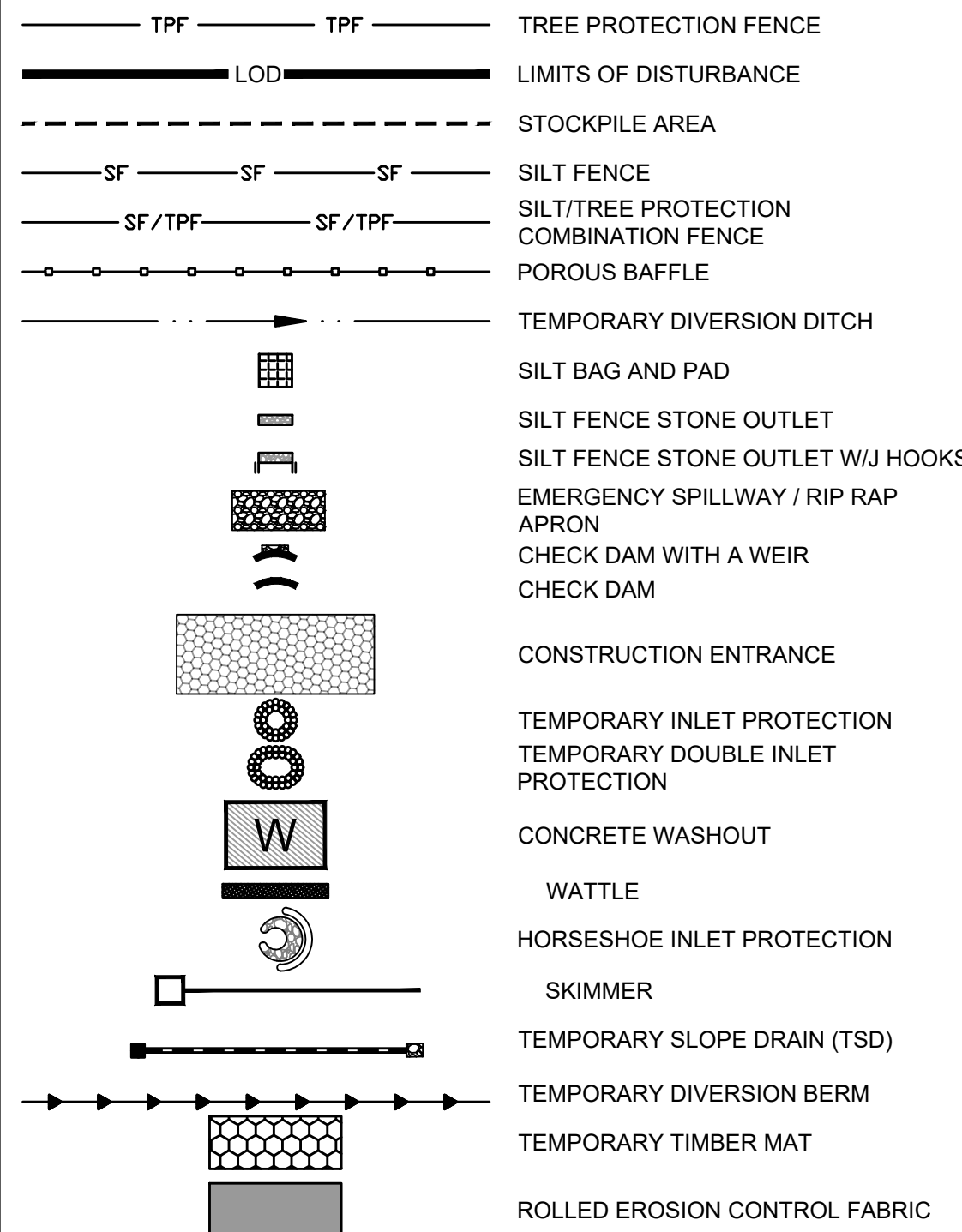
STREAM CROSSING EROSION CONTROL 1

JOB NO.	43398
SHEET NO.	C4.6

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EROSION CONTROL LEGEND



STAGE I STREAM CROSSING 2 EROSION CONTROL SEQUENCE

- 1. ONCE PROPER 401/404 BUFFER AUTHORIZATIONS AND ALL OTHER NECESSARY PERMITS ARE OBTAINED BEGIN STREAM CROSSING PROCESS.
2. OPERATION AND CONSTRUCTION FOR STREAM CROSSINGS SHOULD BE PERFORMED IN A DRY WEATHER PATTERN OF AT LEAST 3-5 DAYS AND SHOULD NOT BEGIN UNTIL ALL NECESSARY CONSTRUCTION MATERIALS ARE LOCATED ON THE SITE.
3. SILT FENCE MUST BE INSTALLED ALONG STREAM BANKS AT THE END OF THE WORK DAY TO MINIMIZE IMPACTS.
4. INSTALL CHECK DAM WITH WEIR AT EXISTING GRADES.
5. INSTALL THE IMPERVIOUS DIKES (SAND BAGS, SHEET PILING, OR NO. 57 STONE WITH POLYPROPYLENE FOR WIDTH AND DEPTH OF CHANNEL. SET UP AND BEGIN BYPASS PUMPING OF EXISTING FLOW PER THE DETAIL.
6. IF A TEMPORARY CROSSING IS REQUIRED, UTILIZE TIMBER MAT.
6.1. STONE APPROACHES WILL BE REQUIRED ON BOTH SIDES AND THE BOARDS WILL HAVE NO GAPS. GEOTEXTILE SHALL BE UNDERLAIN OR OVERLAIN AND SIDE BOARDS WILL BE INSTALLED ALONG THE PERIMETER OF THE MAT.
7. INSTALL CULVERT PIPES AND HEADWALLS PER THE STORMWATER AND GRADING SHEETS AND SPECIFICATIONS WITHIN THIS PLAN SET. INFORM THE ENGINEER IF FIELD CONDITIONS DIFFER FROM THE PLANS TO AN EXTENT REQUIRING ANY MODIFICATIONS.
8. BRING PERMANENT CROSSING TO GRADE AND PROMPTLY STABILIZE ALL 3:1 SLOPES OR GREATER. DOWN-SLOPE OF DISTURBANCE ACTIVITY. SEED/USE EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILAR PRODUCT RATED FOR STEEP SLOPES.
9. ADJUST TEMPORARY DIVERSION DITCHES IN PROXIMITY AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE TO SEDIMENT BASINS.
10. PROCEED WITH OTHER SITE IMPROVEMENTS PER THE PLANS AND PROCEED TO PHASE 2 EROSION CONTROL WHEN POSSIBLE.

Table with 4 columns: Weir #, C, I, A, Q10, Storage Required, Weir Length, Q=C*I*A, Volume = A*3600. Rows for Weir #1, #2, #3, and #4.

NOTE: 1. CHECK DAMS WITH A WEIR TO SERVE AS SEDIMENT STORAGE FOR STREAM CROSSINGS AS NEEDED. CHECK AND REMOVE SEDIMENT AS REQUIRED.

GENERAL NOTES

- 1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
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3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
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11. ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
12. THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
13. STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

EROSION CONTROL PLAN-STAGE 1 KEYNOTES

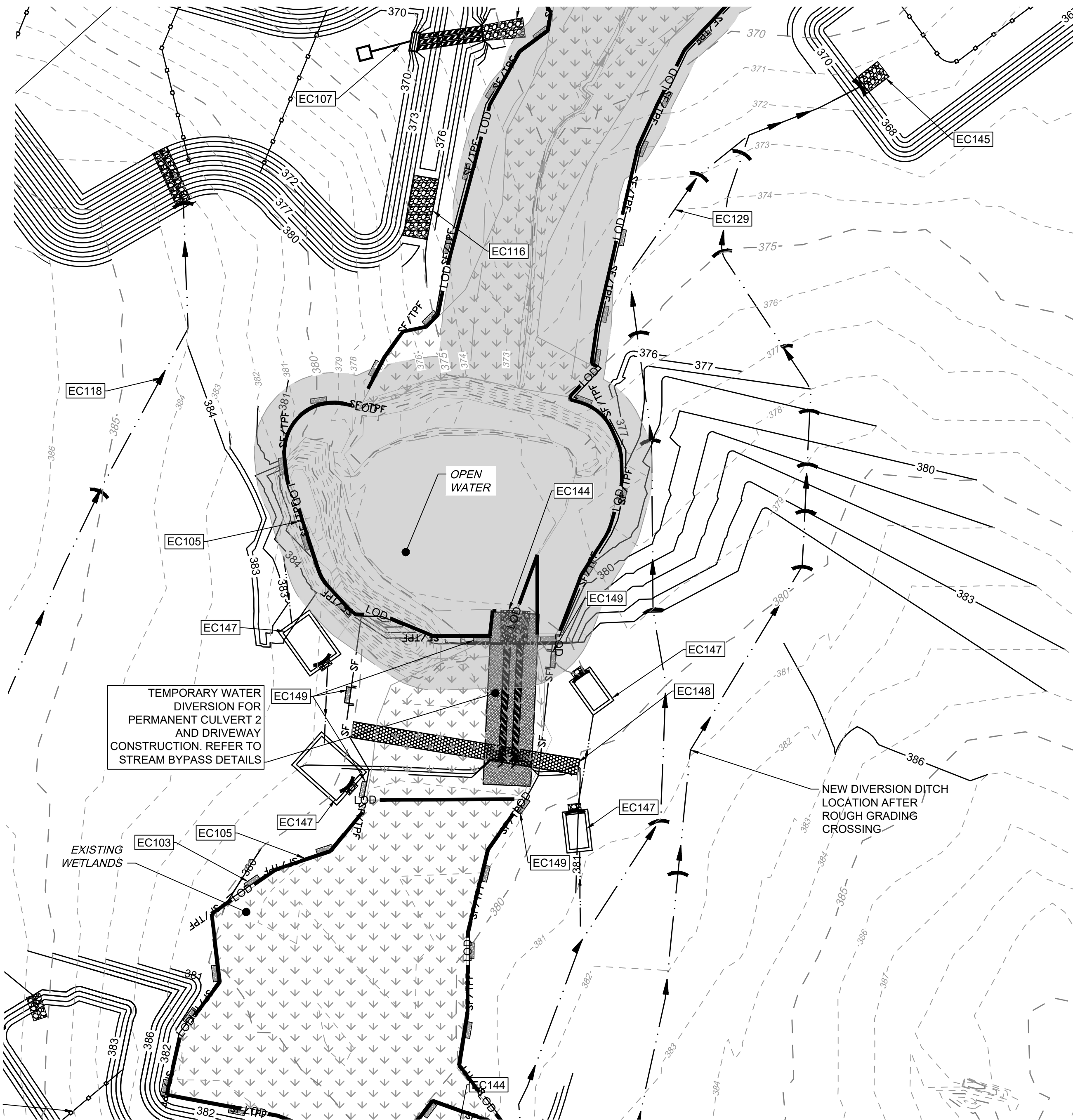
Table with 2 columns: NUMBER, DESCRIPTION. Lists keynotes EC101 through EC149 with their respective descriptions.

TEMPORARY STOCKPILE NOTES

- 1. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
2. SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEPT IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
3. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
4. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
5. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

MAINTENANCE PLAN:

- 1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
3. ALL SEEDING AREAS SHALL BE FERTILIZED, RE-SEED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.



Required Wake County Basin Removal Sequence

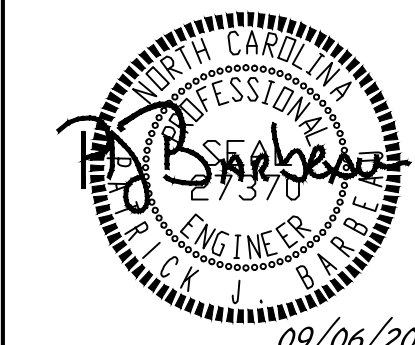
- 1. Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
2. Remove Basin(s) and associated temporary diversion ditches. If culvert pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
3. Perform seedbed preparation, seed, mulch and asphalt tack any resulting bare areas immediately.
4. Install velocity dissipators and/or level spreaders as required on the Erosion Control Plan.
5. When site is fully stabilized, call Environmental Consultant for approval of removing remaining temporary erosion control measures and advice on when site can be issued a Certificate of Completion. Note: A meeting should also be scheduled with the Environmental Consultant to determine when a basin may be converted for stormwater use. Some municipalities may also require this.

ATTENTION CONTRACTORS

The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty four hours prior to beginning any of their construction.

Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.



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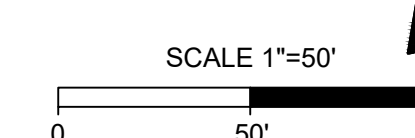
DESIGNED BY P. BARBEAU

CHECKED BY P. BARBEAU

SCALE AS SHOWN

JOB NO. 43398 SHEET NO. C4.7

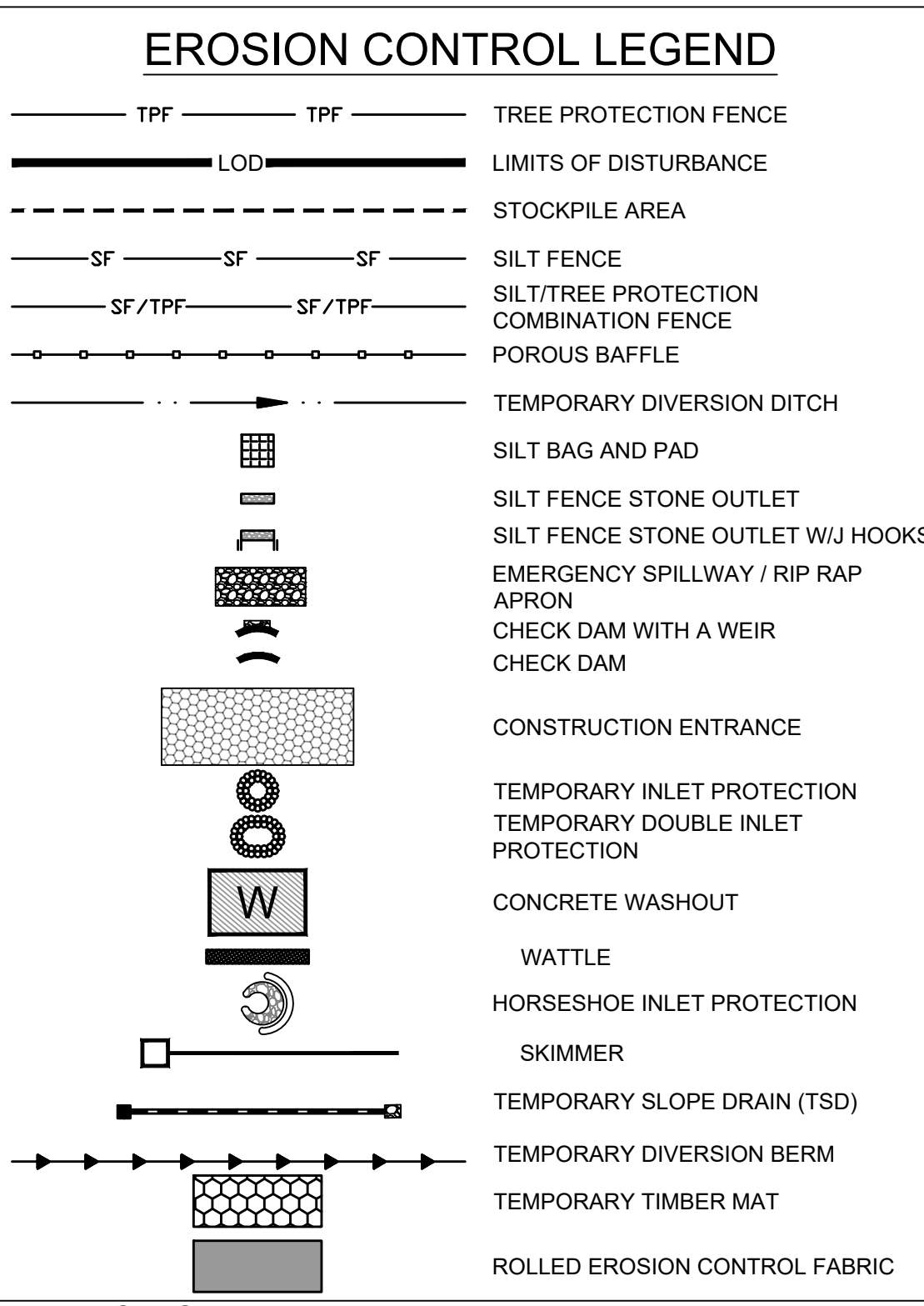
TIMMONS GROUP logo and project title: ROLESVILLE CROSSING - CD 21-08, ROLESVILLE - WAKE COUNTY - NORTH CAROLINA, STREAM CROSSING EROSION CONTROL 2. Includes license information and disclaimer.



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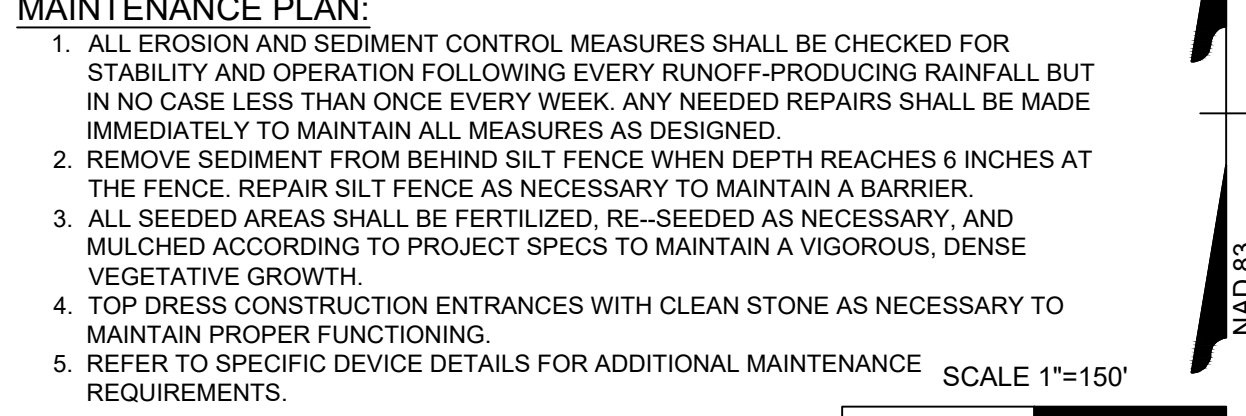
EROSION CONTROL PLAN-STAGE 2 KEYNOTES	
NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP.)
EC103	SILT FENCE OUTLET; REFER TO DETAIL (TYP.)
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE; REFER TO DETAIL (TYP.)
EC106	TREE FENCE; REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC137	SILT BAG AND SILT BAG PAD
EC138	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
EC140	STOCKPILE AREA
EC141	CONCRETE WASHOUT
EC142	TEMPORARY CLASS 3 18" RCP PIPE FOR DITCH CROSSING
EC143	TEMPORARY HORSESHOE INLET PROTECTION
EC144	PIPE OUTFALL PROTECTION (REFER TO C4.1)
EC145	DIVERSION DITCH OUTLET PROTECTION (C3.0 FOR DITCH CHARTS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	TEMPORARY STORM INLET PROTECTION; REFER TO DETAIL (TYP.)
EC148	GREENWAY BOARDWALK BRIDGE
EC149	TEMPORARY STREAM BYPASS AND TIMBER MATTING FOR SEWER CROSSING; REFER TO DETAIL (TYP.)
EC150	2:1 SIDE SLOPE (SOD) STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES
EC151	2.5:1 SIDE SLOPE (SOD) STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES
EC152	TEMPORARY INLET PROTECTION; REFER TO DETAIL (TYP.)
EC153	ROCK CHECK DAM WITH WEIR (REFER TO DETAIL)
EC154	TIMBER MAT
EC155	SILT FENCE STONE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)



- GENERAL NOTES**
- THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
 - THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
 - THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
 - CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
 - A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
 - UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
 - ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
 - CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
 - SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
 - ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM UNLESS OTHERWISE NOTED.
 - THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR TREE PRESERVATION AND PROTECTION FENCING, INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
 - STOCKPILE HEIGHT SHALL NOT EXCEED 35'.
 - FOR UTILITY STREAM CROSSING, DISTURB ONLY THE AREA REQUIRED FOR INSTALLATION. CONSTRUCTION FOR CROSSING TO ONLY BEGIN ONCE ALL NECESSARY MATERIALS ARE ON SITE AND CONDITIONS ARE IN A DRY WEATHER PATTERN OF 3-5 DAYS.

- STAGE II WAKE COUNTY EROSION CONTROL SEQUENCE**
- ALL STAGE I EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE BEGINNING STAGE 2. REFER TO STAGE I EROSION CONTROL PLAN SHEETS. REFURBISH ALL STAGE I EROSION CONTROL MEASURES AS NEEDED BEFORE PROCEEDING WITH STAGE 2.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REFURBISHED IMMEDIATELY. DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO. SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION.
 - CLEAR & GRUB THE SITE. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE THE SITE. AT THE END OF EACH WORKDAY OF GRADING, ALL TEMPORARY DIVERSION DITCHES/BERMS SHALL BE REFURBISHED AS NEEDED TO MAINTAIN DRAINAGE PATTERNS TO BASINS.
 - INSTALL STORM DRAINAGE SYSTEM. INSTALL TEMPORARY INLET PROTECTION AT ALL DRAINAGE INLETS.
 - STABILIZE THE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENuded AREAS PER GROUND STABILIZATION TIME FRAMES. REFER TO GRADING PLAN FOR DITCH SIZE & LINING INFORMATION.
 - REFER TO STREAM CROSSING PLAN ON C4.13 FOR SEWER AND BOARDWALK STREAM CROSSINGS.
 - AFTER SITE IS STABILIZED WITH GRAVEL, ASPHALT, MULCH, SEED ETC., THEN CONTACT WAKE COUNTY EROSION CONTROL & REQUEST PERMISSION TO REMOVE SKIMMER BASINS 6-9 AND CONVERT SKIMMER BASINS 1-5 INTO PERMANENT SCMS PER THE PLANS AS DRAINAGE BASINS TO EACH REACH ADEQUATE STABILIZATION.
 - NOTIFY NCDCEM A MINIMUM OF 10 DAYS PRIOR TO INITIATING THE BASIN REMOVAL/CONVERSION SEQUENCE.
 - ONCE APPROVAL IS OBTAINED, REFER TO BASIN REMOVAL SEQUENCE NOTES ON THIS SHEET.
 - MUCK OUTBASINS. ACCURATELY FINE GRADE SCMS ACCORDING TO SCM DETAILS SHEETS. FIELD SURVEY VERIFY ALL SCM GRADES AND INVERTS. INSTALL GABION WEIR WALL, SIPHON OUTLET, SLOPES, SPILLWAY, BERM, ETC.
 - CONTRACTOR TO PERFORM AS-BUILT SURVEY OF SCMS PER WAKE COUNTY REQUIREMENTS INCLUDING BERM, SPILLWAY, SLOPES, GABION WEIR WALL, FLOOR, FOREBAYS, PIPE INVERTS, OUTLET PIPE, RISER TOP ELEVATION, RISER ORIFICE DIAMETERS, RISER ORIFICE INVERTS, ETC. SUBMIT AS-BUILT SURVEY TO OWNER/ENGINEER, AND SEEK COUNTY APPROVAL OF SCMS.
 - INSTALL RIPRAP APRONS OVER FILTER FABRIC. INSTALL PERMANENT SPILLWAY LINER AND SOD. SOD BERM & ALL BASIN SLOPES PER DETAILS.
 - REMOVE TEMPORARY SKIMMER, CLOSE RISER DRAIN, UNPLUG ALL RISER ORIFICES.
 - CONTACT ENGINEER TO REQUEST FINAL POND INSPECTION & PE CERTIFICATION OF POND.
 - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL 919.796.8799 FOR AN ON-SITE INSPECTION WITH THE WAKE COUNTY WATER AND WASTE MANAGER.
 - IF SITE IS APPROVED, THEN REMOVE TEMPORARY EROSION CONTROL MEASURES INCLUDING TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASINS, ETC. AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS RIPRAP APRONS OVER FILTER FABRIC SHOULD NOW BE INSTALLED.
 - INSTALL RIPRAP APRONS OVER FILTER FABRIC. INSTALL PERMANENT SPILLWAY LINER AND SOD. SOD BERM & ALL BASIN SLOPES PER DETAILS.

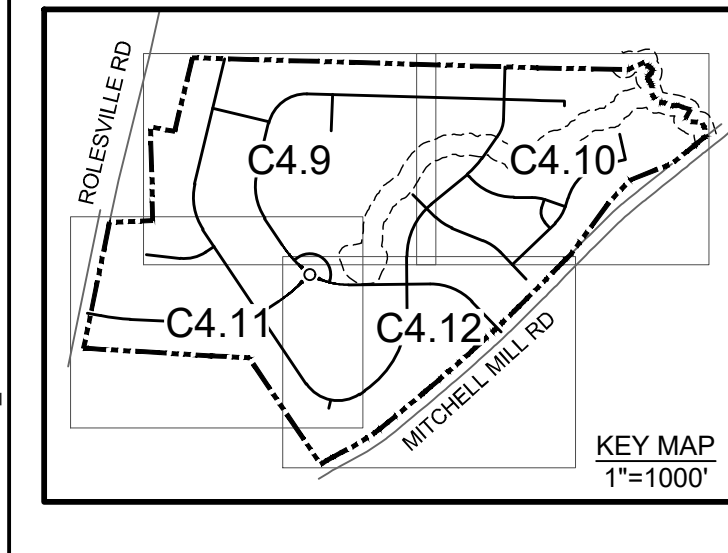
- MAINTENANCE PLAN:**
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
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NPDES GROUND STABILIZATION
 SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:
 1. ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT WITHIN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
 2. ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

- Required Wake County Basin Removal Sequence**
- Schedule a site meeting with the Environmental Consultant to determine if a basin can be removed. Install silt fencing or other temporary erosion control measures as needed prior to removal of the basin.
 - Remove basin(s) and associated temporary diversion ditches. If culvert pipes need to be extended, perform this operation at this time. Fine grade area in preparation for seeding.
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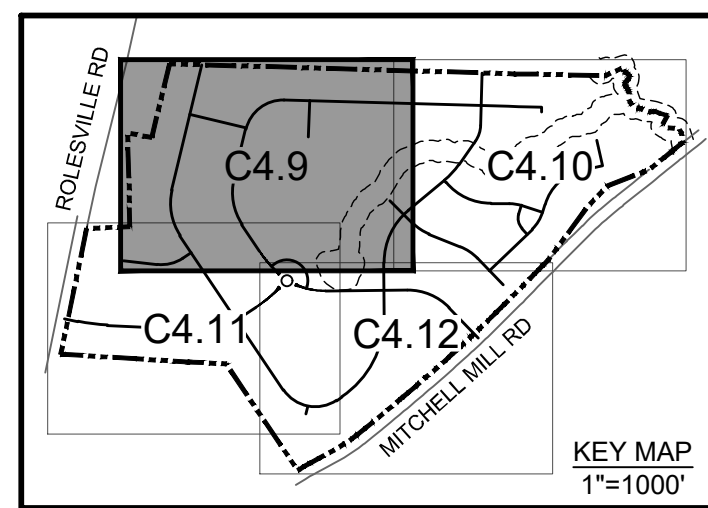
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DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

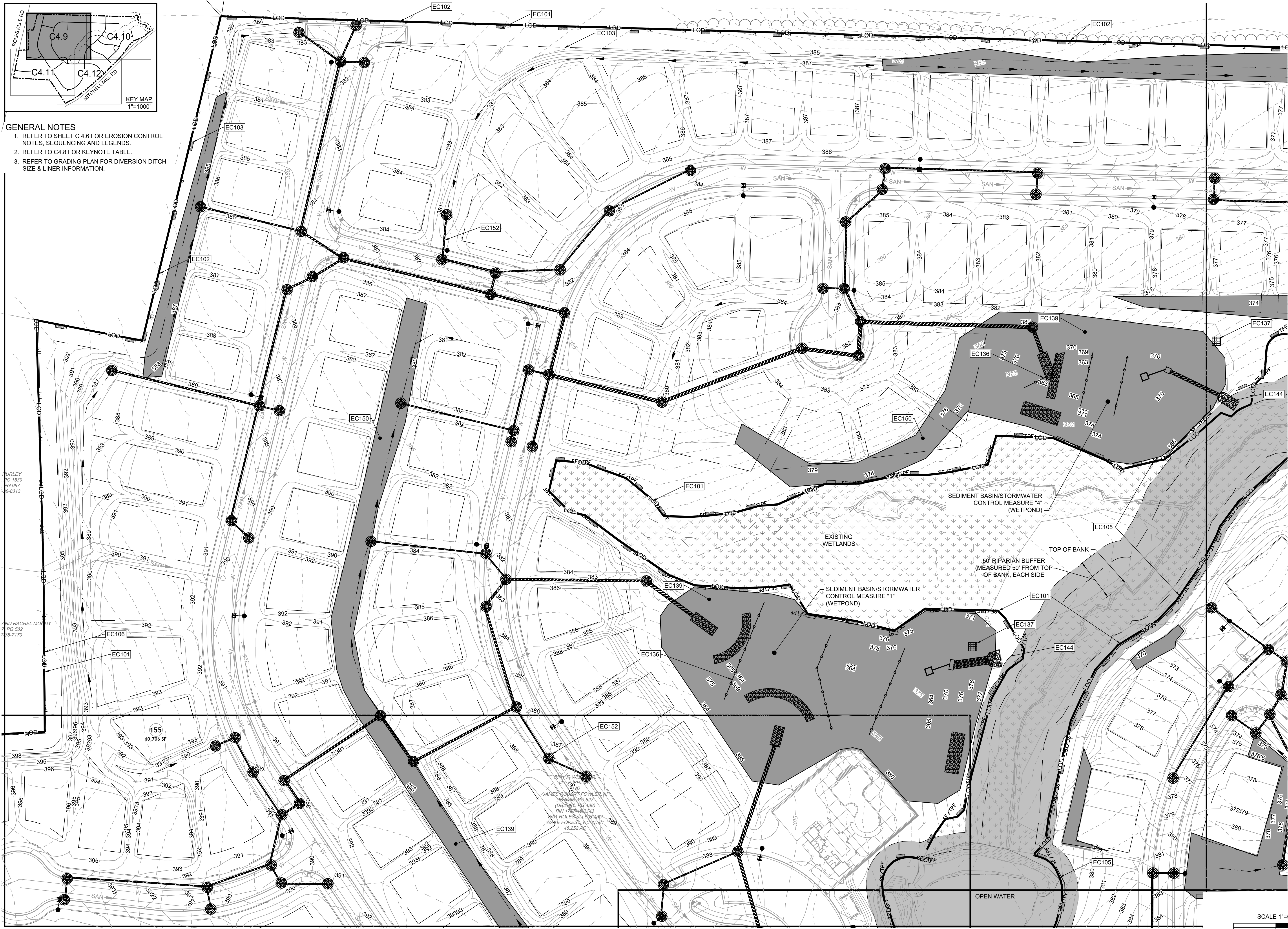
TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
EROSION CONTROL-STAGE 2 OVERALL

JOB NO. 43398
 SHEET NO. C4.8

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- GENERAL NOTES**
1. REFER TO SHEET C.4.6 FOR EROSION CONTROL NOTES, SEQUENCING AND LEGENDS.
 2. REFER TO C4.8 FOR KEYNOTE TABLE.
 3. REFER TO GRADING PLAN FOR DIVERSION DITCH SIZE & LINER INFORMATION.

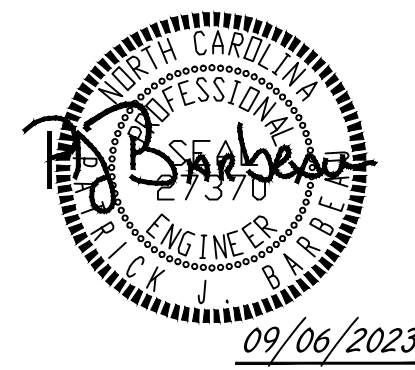


MURLEY
PG 1539
PG 387
PG 8313

AND RACHEL MOODY
PG 582
PG 7170

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GWYNETH WILSON
JULIA WILSON
JAMES ROBERT FOWLER, III
DB 6460, PG 627
(DB 7091, PG 439)
PW 176768, PG 243
101 ROLESVILLE ROAD
WAKE FOREST, NC 27707
40.252 N.C.



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06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

DATE
09/17/2021

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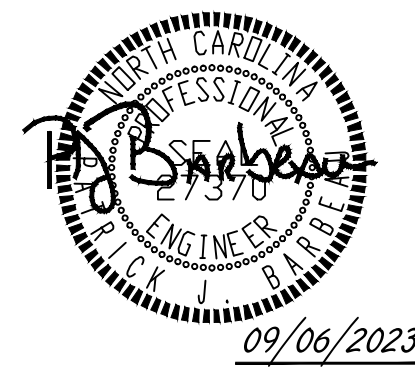
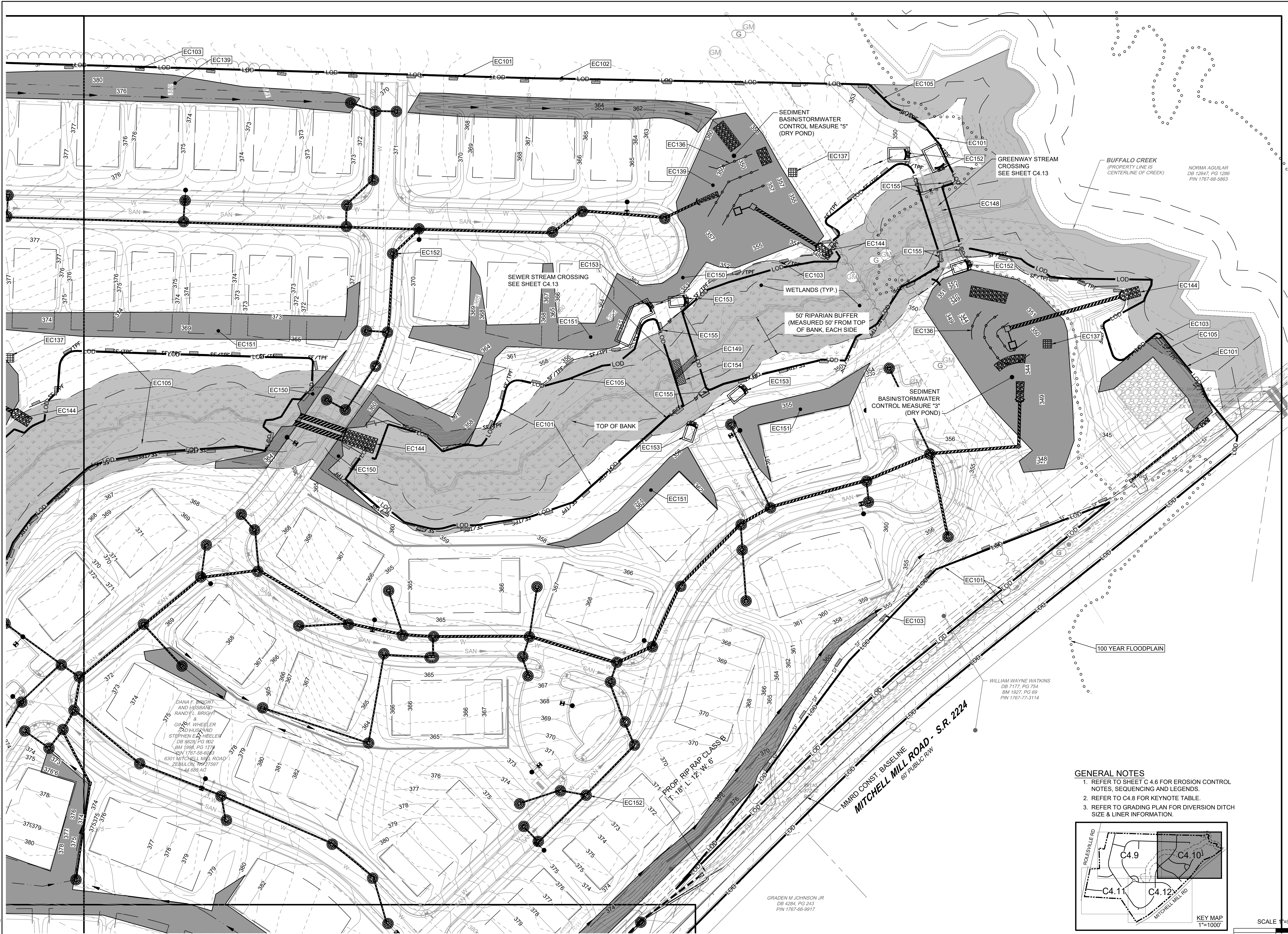
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
EROSION CONTROL STAGE 2

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43398

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DESIGNED BY
P. BARBEAU

CHECKED BY
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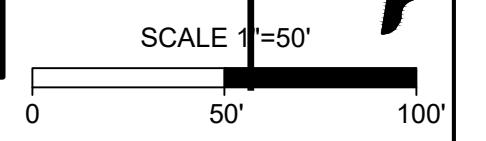
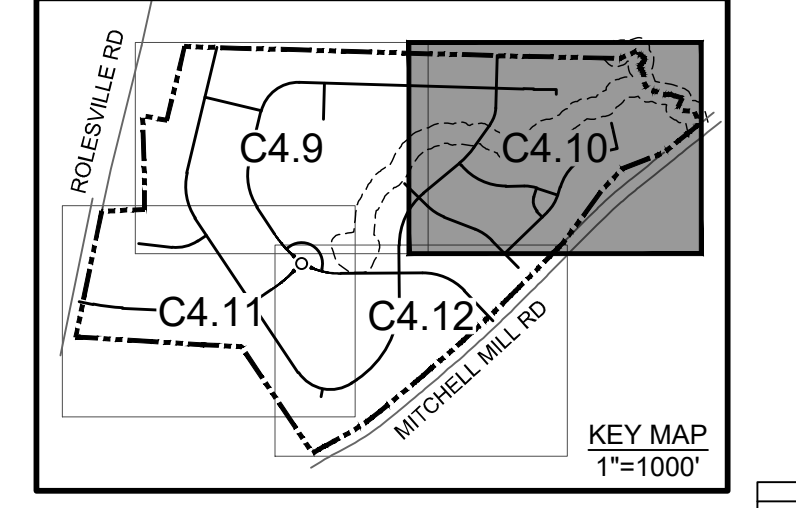
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 NORTH CAROLINA LICENSE NO. C-1652
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
EROSION CONTROL-STAGE 2

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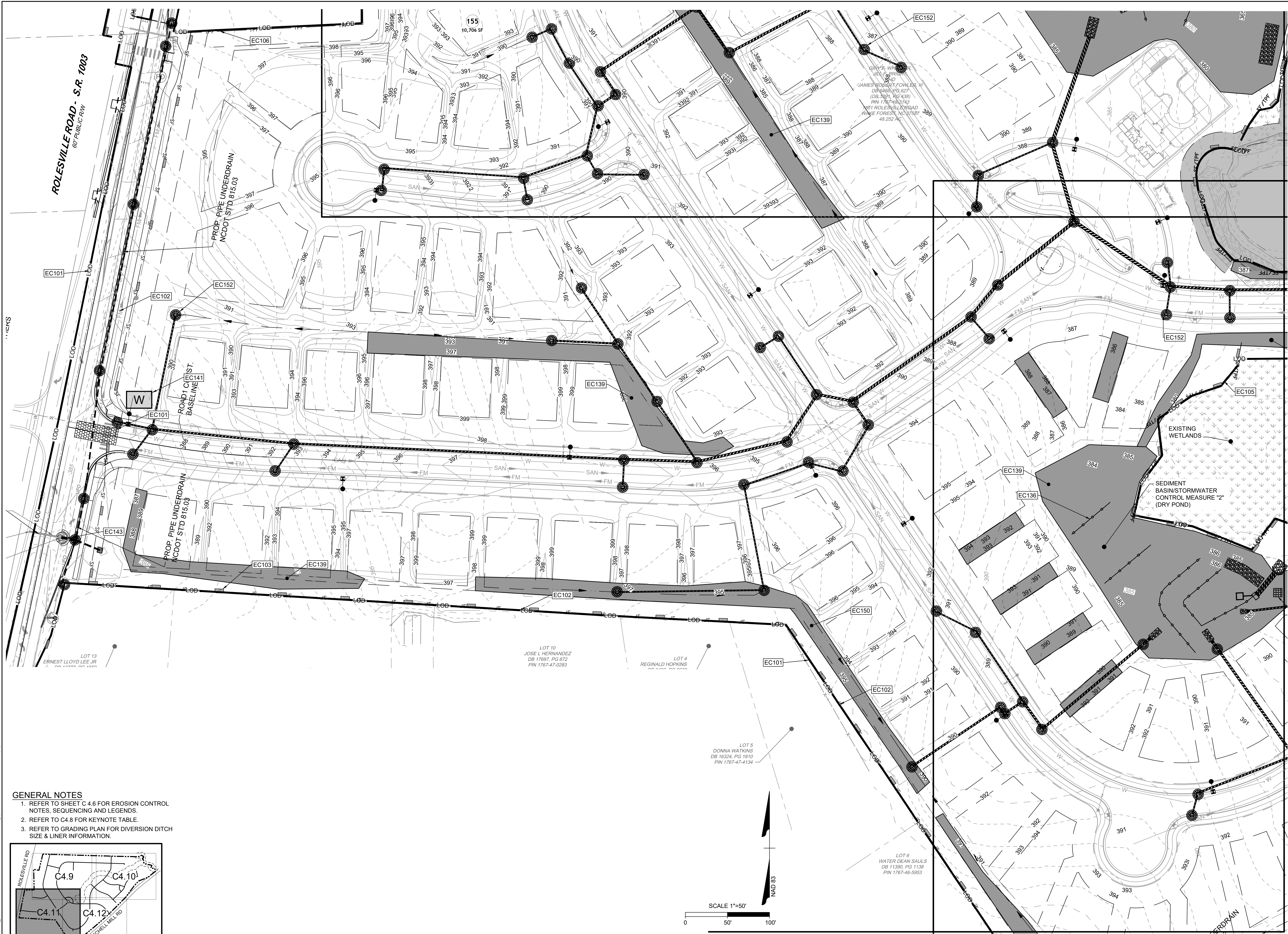
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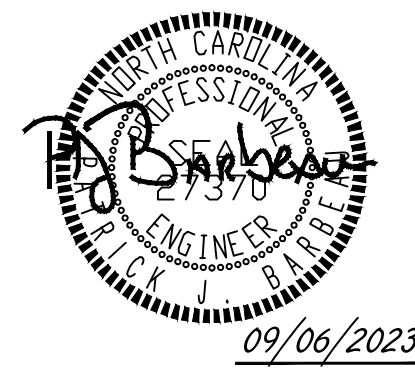
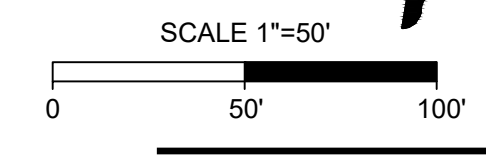
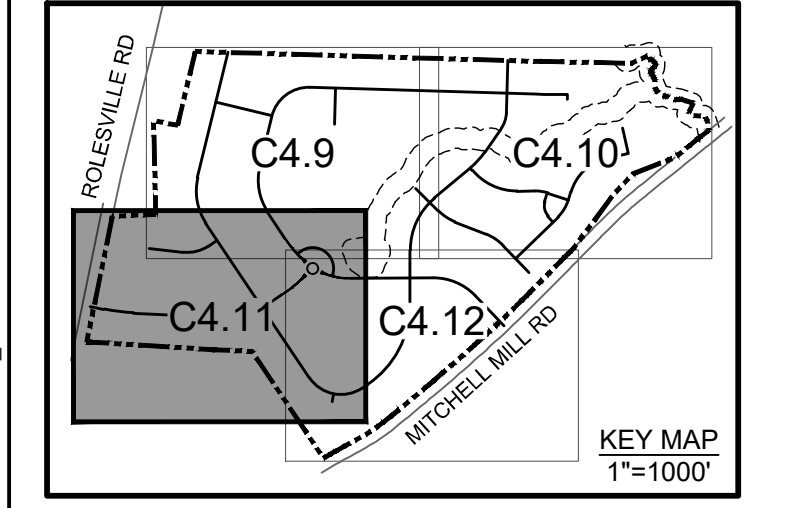
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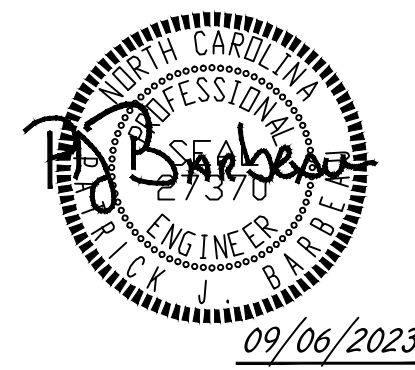
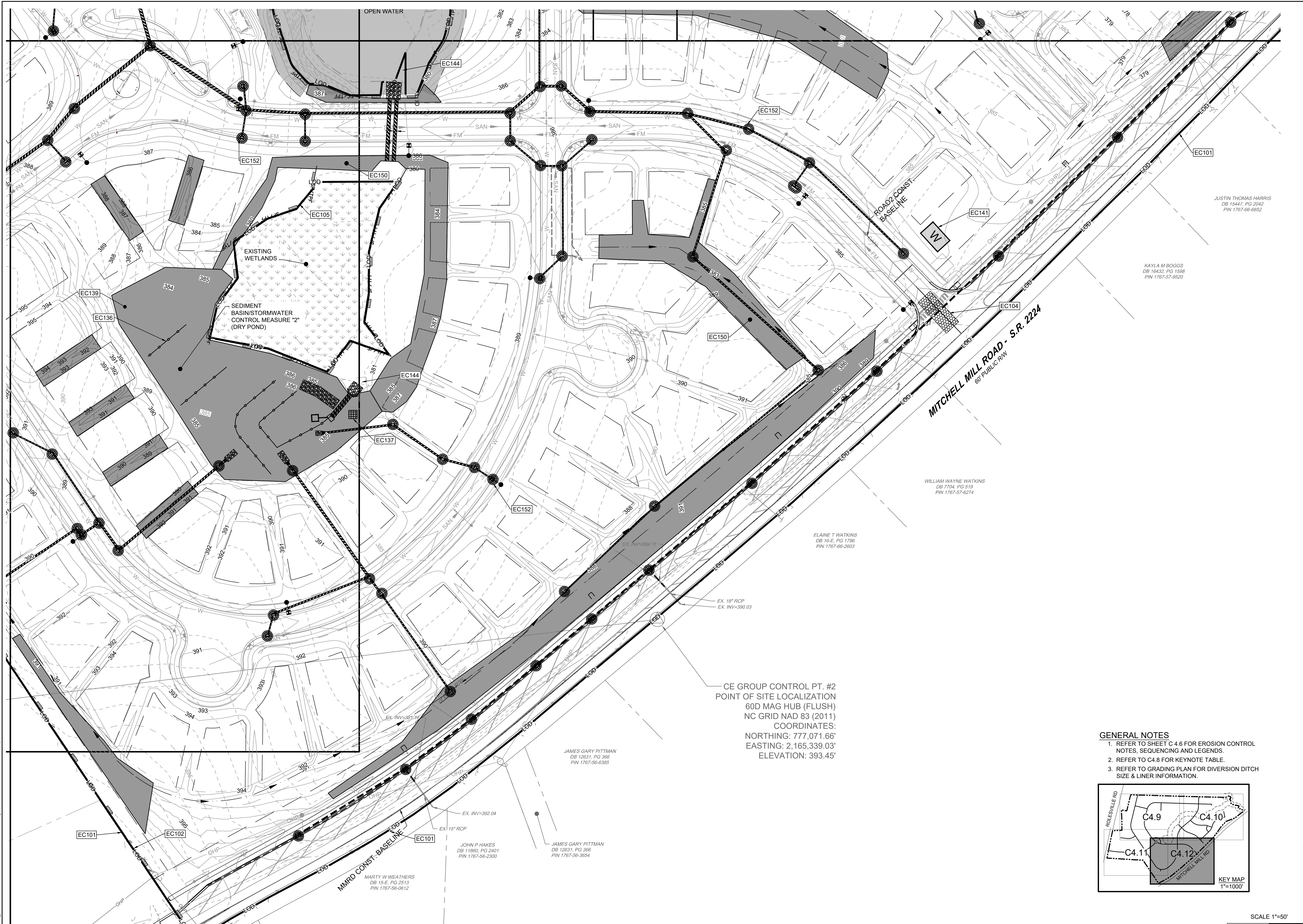
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C4.11

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YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2022
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2022
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2022
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE: 09/17/2021
 DRAWN BY: A. BROWN
 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

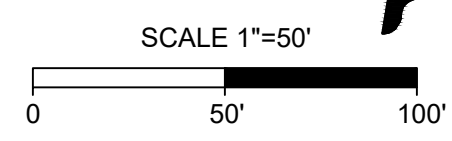
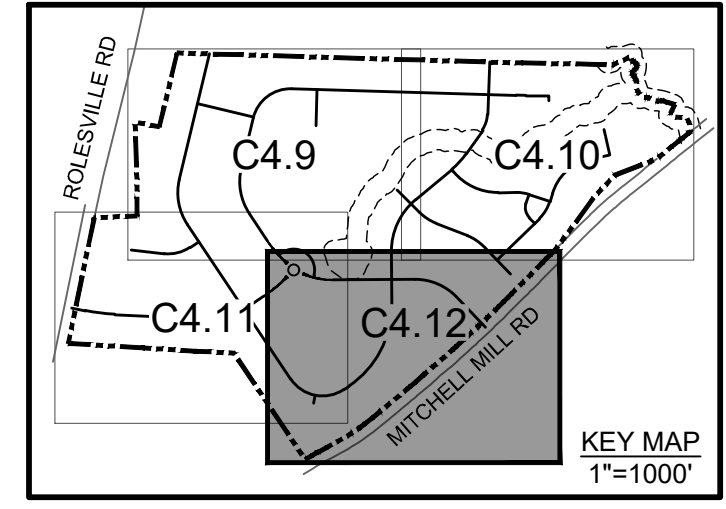
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

EROSION CONTROL-STAGE 2

JOB NO. 43398
 SHEET NO. C4.12

CE GROUP CONTROL PT. #2
 POINT OF SITE LOCALIZATION
 60D MAG HUB (FLUSH)
 NC GRID NAD 83 (2011)
 COORDINATES:
 NORTHING: 777,071.66'
 EASTING: 2,165,339.03'
 ELEVATION: 393.45'

- GENERAL NOTES**
1. REFER TO SHEET C 4.6 FOR EROSION CONTROL NOTES, SEQUENCING AND LEGENDS.
 2. REFER TO C4.8 FOR KEYNOTE TABLE.
 3. REFER TO GRADING PLAN FOR DIVERSION DITCH SIZE & LINER INFORMATION.

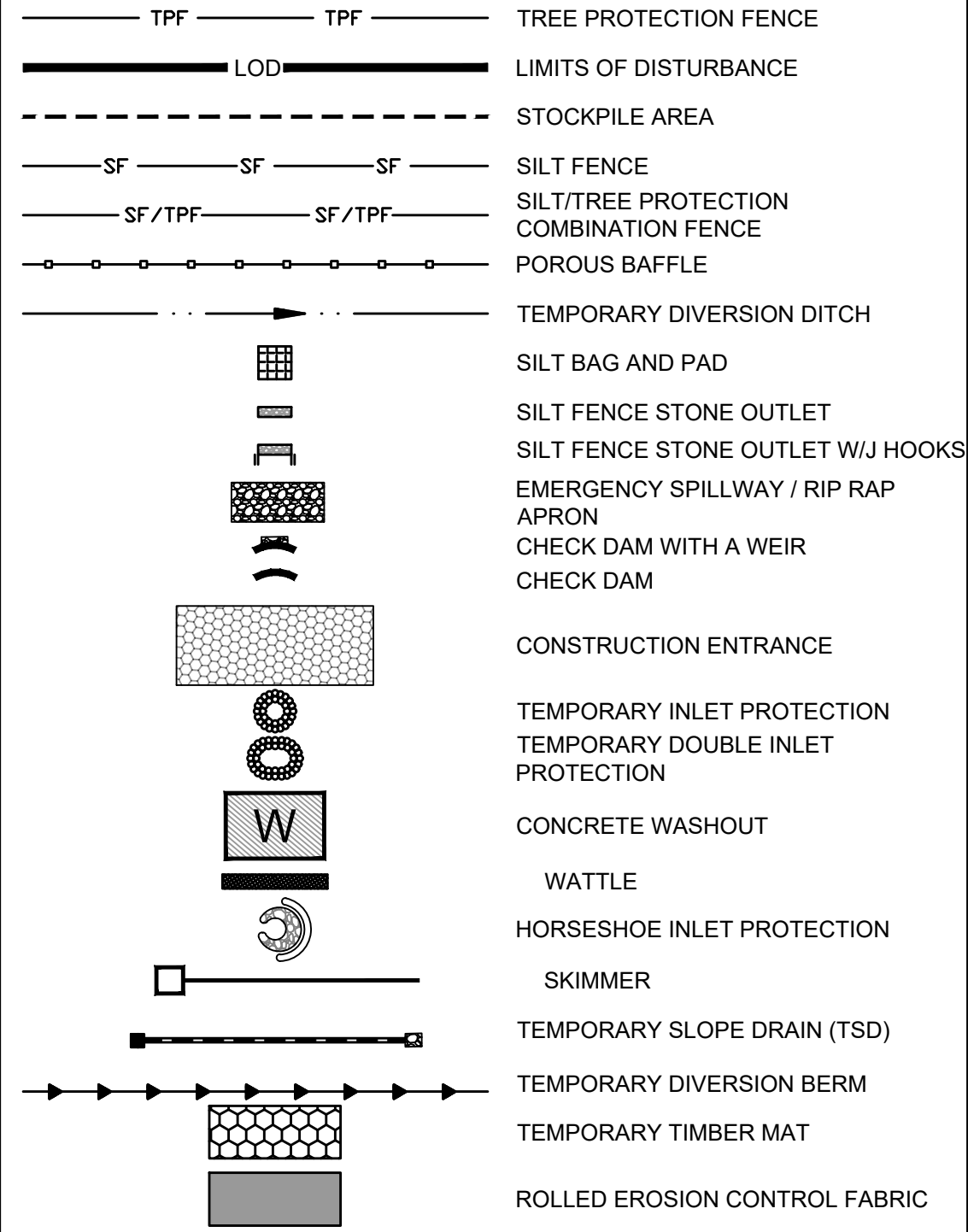


ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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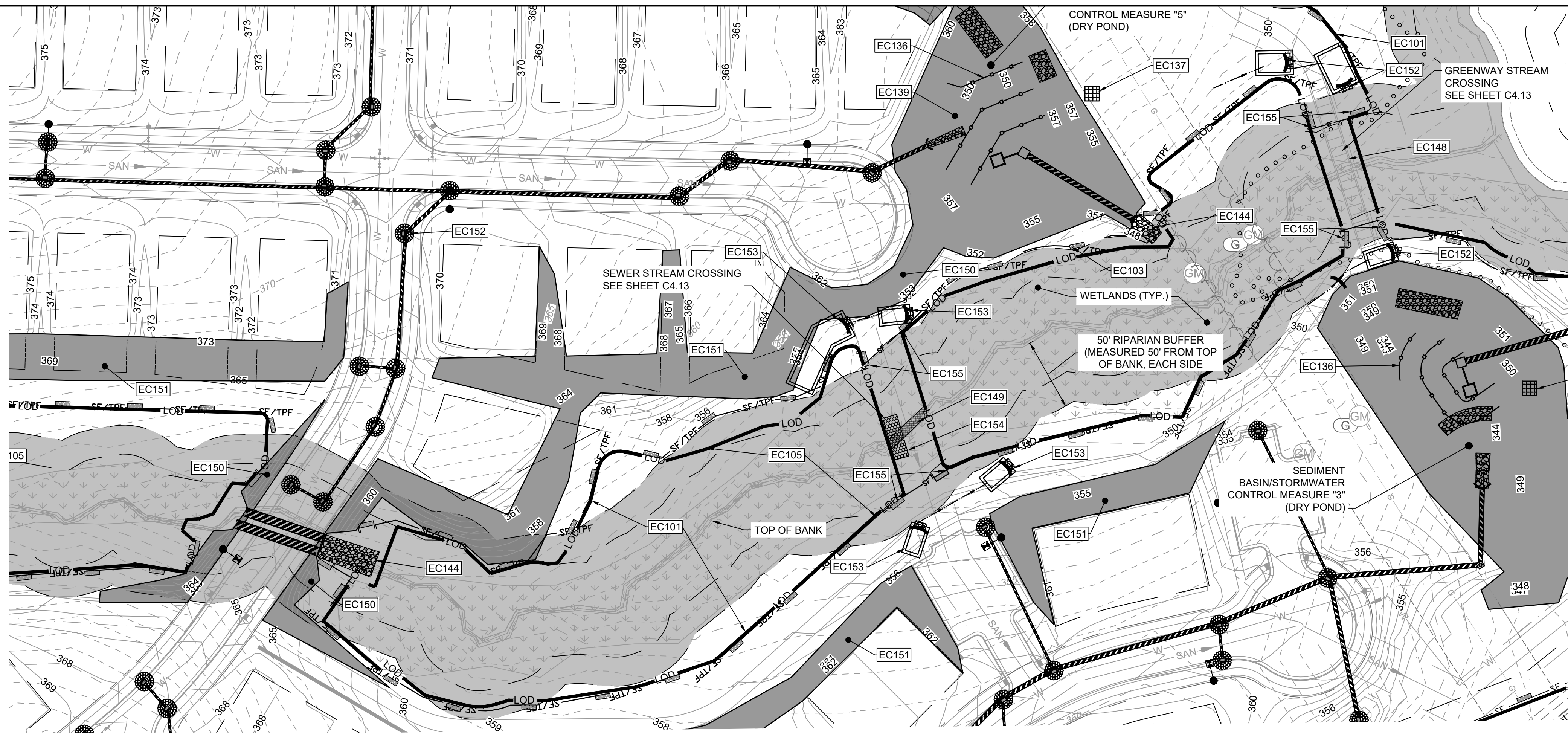
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EROSION CONTROL LEGEND



EROSION CONTROL PLAN-STAGE 2 KEYNOTES

NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP.)
EC103	SILT FENCE OUTLET; REFER TO DETAIL (TYP.)
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE; REFER TO DETAIL (TYP.)
EC106	TREE FENCE; REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC137	SILT BAG AND SILT BAG PAD
EC138	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
EC140	STOCKPILE AREA
EC141	CONCRETE WASHOUT
EC142	TEMPORARY CLASS 3 18" RCP PIPE FOR DITCH CROSSING
EC143	TEMPORARY HORSESHOE INLET PROTECTION
EC144	PIPE OUTFALL PROTECTION (REFER TO C4.1)
EC145	DIVERSION DITCH OUTLET PROTECTION (C3.0 FOR DITCH CHARTS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	TEMPORARY STORM INLET PROTECTION; REFER TO DETAIL (TYP.)
EC148	GREENWAY BOARDWALK BRIDGE
EC149	TEMPORARY STREAM BYPASS AND TIMBER MATTING FOR SEWER CROSSING; REFER TO DETAIL (TYP.)
EC150	2:1 SIDE SLOPE (SOD)/STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES.
EC151	2.5:1 SIDE SLOPE (SOD)/STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES.
EC152	TEMPORARY INLET PROTECTION; REFER TO DETAIL (TYP.)
EC153	ROCK CHECK DAM WITH WEIR (REFER TO DETAIL)
EC154	TIMBER MAT
EC155	SILT FENCE STONE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)



SEWER CROSSING

GREENWAY CROSSING

Check Dam with a Weir: # 1				
C	0.3			
I	7.2 in/hr			
A	0.030 AC			
Q10	0.06 CFS	Q=C ³ *A		
Storage Required	108 CF	Volume = A*3600		
Weir Length	0.07 FT	(Q cfs / 0.88)		

Check Dam with a Weir: # 2				
C	0.3			
I	7.2 in/hr			
A	0.284 AC			
Q10	0.61 CFS	Q=C ³ *A		
Storage Required	1022.4 CF	Volume = A*3600		
Weir Length	0.70 FT	(Q cfs / 0.88)		

Check Dam with a Weir: # 3				
C	0.3			
I	7.2 in/hr			
A	0.030 AC			
Q10	0.06 CFS	Q=C ³ *A		
Storage Required	108 CF	Volume = A*3600		
Weir Length	0.07 FT	(Q cfs / 0.88)		

Check Dam with a Weir: # 4				
C	0.3			
I	7.2 in/hr			
A	0.046 AC			
Q10	0.10 CFS	Q=C ³ *A		
Storage Required	165.6 CF	Volume = A*3600		
Weir Length	0.11 FT	(Q cfs / 0.88)		

Check Dam with a Weir: # 1				
C	0.3			
I	7.2 in/hr			
A	0.147 AC			
Q10	0.32 CFS	Q=C ³ *A		
Storage Required	529.2 CF	Volume = A*3600		
Weir Length	0.36 FT	(Q cfs / 0.88)		

Check Dam with a Weir: # 2				
C	0.3			
I	7.2 in/hr			
A	0.097 AC			
Q10	0.21 CFS	Q=C ³ *A		
Storage Required	349.2 CF	Volume = A*3600		
Weir Length	0.24 FT	(Q cfs / 0.88)		

Check Dam with a Weir: # 3				
C	0.3			
I	7.2 in/hr			
A	0.050 AC			
Q10	0.11 CFS	Q=C ³ *A		
Storage Required	180 CF	Volume = A*3600		
Weir Length	0.12 FT	(Q cfs / 0.88)		

NOTE:
 1. CHECK DAMS WITH A WEIR TO SERVE AS SEDIMENT STORAGE FOR STREAM CROSSINGS AS NEEDED. CHECK AND REMOVE SEDIMENT AS REQUIRED.

NPDES GROUND STABILIZATION

SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:

- ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT WITHIN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

TEMPORARY STOCKPILE NOTES

- STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEVED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

STAGE 2 STREAM CROSSING EROSION CONTROL SEQUENCE

- ONCE PROPER 401/404 BUFFER AUTHORIZATIONS AND ALL OTHER NECESSARY PERMITS OBTAINED BEGIN STREAM CROSSING PROCESS AS NECESSARY FOR FORCE MAIN CONSTRUCTION.
- OPERATION AND CONSTRUCTION FOR STREAM CROSSINGS SHOULD BE PERFORMED IN A DRY WEATHER PATTERN OF AT LEAST 3-5 DAYS AND SHOULD NOT BEGIN UNTIL ALL NECESSARY CONSTRUCTION MATERIALS ARE LOCATED ON AT THE SITE.
- SILT FENCE MUST BE INSTALLED ALONG STREAM BANKS AT THE END OF THE WORK DAY TO MINIMIZE IMPACTS.
- INSTALL CHECK DAM WITH WEIR AT EXISTING GRADES PER SIZING ON THIS SHEET FOR SEDIMENT STORAGE.
- INSTALL THE IMPERVIOUS DIKES (SAND BAGS, SHEET PILING, OR NO. 57 STONE WITH POLYPROPYLENE FOR WIDTH AND DEPTH OF CHANNEL. SET UP AND BEGIN BYPASS PUMPING OF EXISTING FLOW PER THE DETAIL.
- IF A TEMPORARY CROSSING IS REQUIRED, UTILIZE TIMBER MAT.
- STONE APPROACHES WILL BE REQUIRED ON BOTH SIDES AND THE BOARDS WILL HAVE NO GAPS. GEOTEXTILE SHALL BE UNDERLAIN OR OVERLAIN AND SIDE BOARDS WILL BE INSTALLED ALONG THE PERIMETER OF THE MAT.
- INSTALL SEWER MAIN PIPES PER THE UTILITY DESIGN AND SPECIFICATIONS WITHIN THIS PLAN SET. INFORM THE ENGINEER IF FIELD CONDITIONS DIFFER FROM THE PLANS TO AN EXTENT REQUIRING MODIFICATIONS. OR CONSTRUCT GREENWAY BOARDWALK PER PLANS.
- BACKFILL TRENCHING OR BRING CROSSING TO GRADE. RETURN IMPACTED AREAS TO PRE-EXISTING GRADES AND PROMPTLY STABILIZE AREAS.
- MAINTENANCE PLAN:
 - ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
 - REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
 - ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDING AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
 - TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
 - REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

ATTENTION CONTRACTORS

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the **Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.

Failure to notify both **City Departments** in advance of beginning construction, will result in the issuance of **monetary fines**, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for **Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite**, or any other **Violation of City of Raleigh Standards** will result in a **Fine and Possible Exclusion** from future work in the **City of Raleigh**.

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- #### GENERAL NOTES
- THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
 - THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
 - THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
 - CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
 - A PRECONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
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 - SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
 - ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
 - THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTMENT WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING. INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
 - STOCKPILE HEIGHT SHALL NOT EXCEED 35'.



09/06/2023

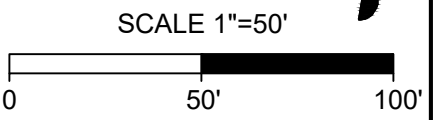
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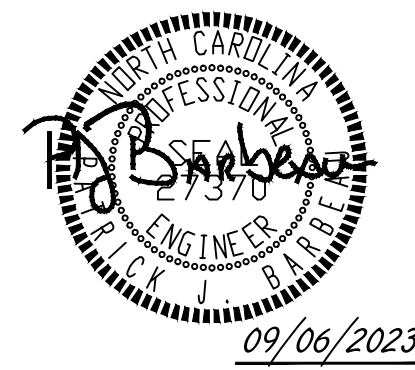
YOUR VISION ACHIEVED THROUGH OURS.
 DATE 09/17/2021
 DRAWN BY R. WINGATE
 DESIGNED BY P. BARBEAU
 CHECKED BY P. BARBEAU
 SCALE AS SHOWN

REVISION DESCRIPTION
 REVISIONS PER WAKE COUNTY COMMENTS
 REVISIONS PER WAKE COUNTY COMMENTS
 REVISIONS PER NCDOT SUBMITTAL
 REVISIONS PER NCDOT COMMENTS
 REVISIONS PER CITY OF RALEIGH COMMENTS

TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
EROSION CONTROL-STAGE 2 STREAM CROSSINGS

JOB NO. 43398
 SHEET NO. C4.13
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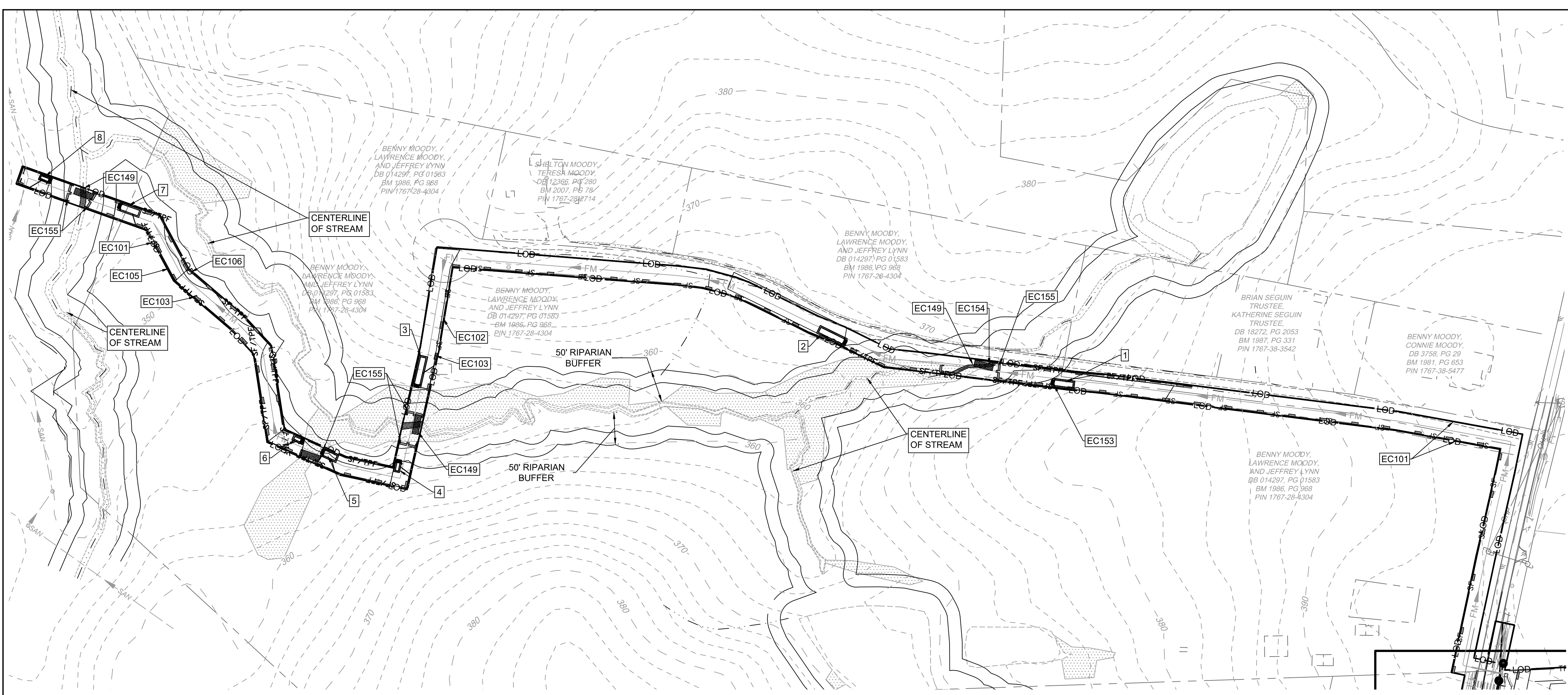
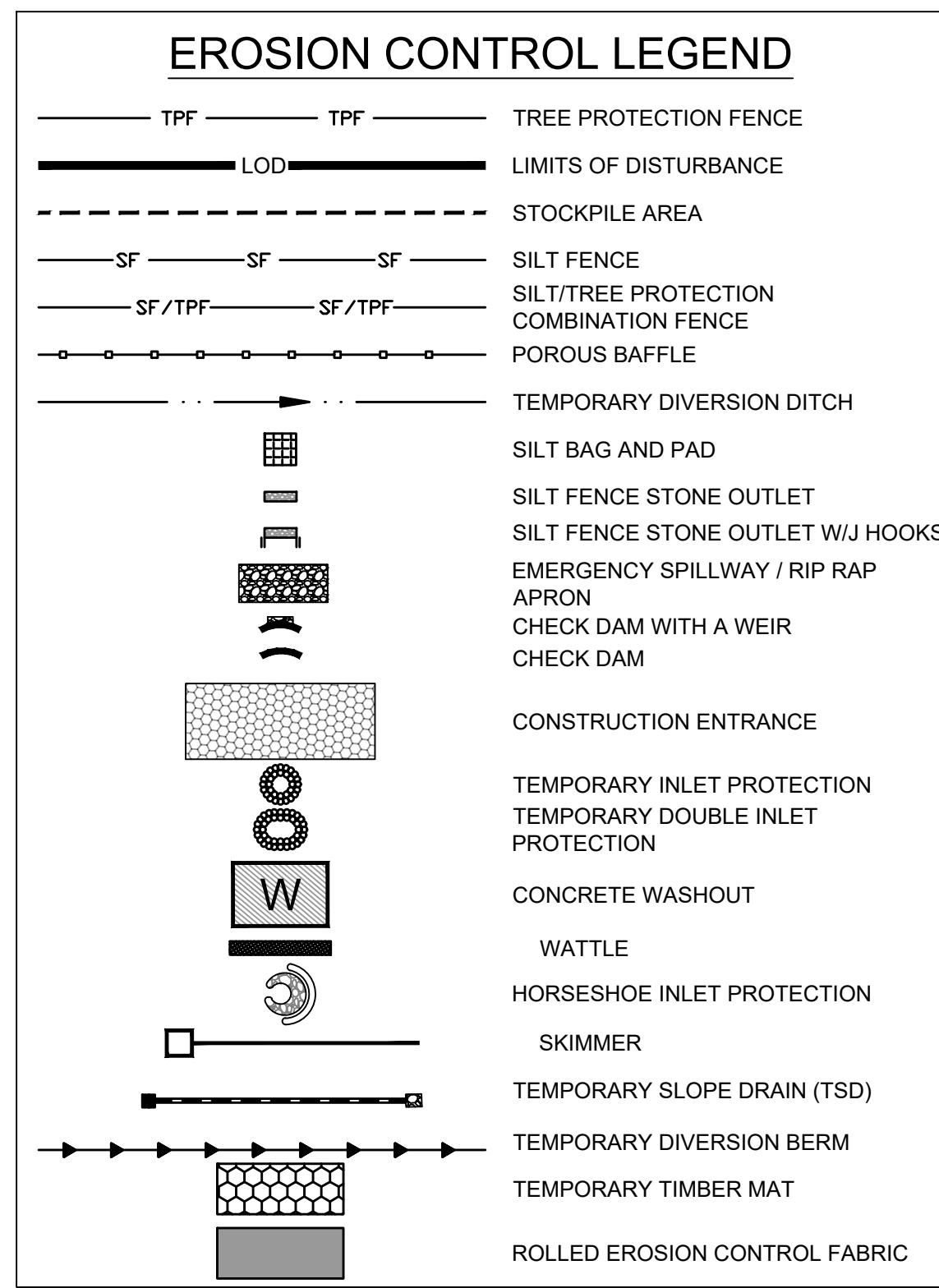


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TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
EROSION CONTROL-STAGE 2 FORCE MAIN
JOB NO.
43398
SHEET NO.
C4.14

EROSION CONTROL PLAN-STAGE 2 KEYNOTES	
NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP.)
EC103	SILT FENCE OUTLET; REFER TO DETAIL (TYP.)
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE. REFER TO DETAIL (TYP.)
EC106	TREE FENCE. REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC137	SILT BAG AND SILT BAG PAD
EC138	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
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EC144	PIPE OUTFALL PROTECTION. (REFER TO C4.1)
EC145	DIVERSION DITCH OUTLET PROTECTION (C3.0 FOR DITCH CHARTS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	TEMPORARY STORM INLET PROTECTION; REFER TO DETAIL (TYP.)
EC148	GREENWAY BOARDWALK BRIDGE.
EC149	TEMPORARY STREAM BYPASS AND TIMBER MATTING FOR SEWER CROSSING; REFER TO DETAIL (TYP.)
EC150	2:1 SIDE SLOPE (SOD) STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES.)
EC151	2.5:1 SIDE SLOPE (SOD) STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES.)
EC152	TEMPORARY INLET PROTECTION; REFER TO DETAIL (TYP.)
EC153	ROCK CHECK DAM WITH WEIR (REFER TO DETAIL)
EC154	TIMBER MAT
EC155	SILT FENCE STONE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)



PROPOSED SANITARY SEWER FORCE MAIN

Check Dam with a Weir:	# 1	Check Dam with a Weir:	# 2	Check Dam with a Weir:	# 3	Check Dam with a Weir:	# 4
C	0.3	C	0.3	C	0.3	C	0.3
I	7.2 in/hr	I	7.2 in/hr	I	7.2 in/hr	I	7.2 in/hr
A	0.100 AC	A	0.130 AC	A	0.140 AC	A	0.024 AC
Q10	0.22 CFS	Q=C*A		Q10	0.30 CFS	Q=C*A	
Storage Required	360 CF	Volume = A*3600		Storage Required	504 CF	Volume = A*3600	
Weir Length	0.25 FT	(Q cfs / 0.88)		Weir Length	0.34 FT	(Q cfs / 0.88)	
Check Dam with a Weir:	# 5	Check Dam with a Weir:	# 6	Check Dam with a Weir:	# 7	Check Dam with a Weir:	# 8
C	0.3	C	0.3	C	0.3	C	0.3
I	7.2 in/hr	I	7.2 in/hr	I	7.2 in/hr	I	7.2 in/hr
A	0.070 AC	A	0.029 AC	A	0.093 AC	A	0.028 AC
Q10	0.15 CFS	Q=C*A		Q10	0.20 CFS	Q=C*A	
Storage Required	252 CF	Volume = A*3600		Storage Required	334.8 CF	Volume = A*3600	
Weir Length	0.17 FT	(Q cfs / 0.88)		Weir Length	0.23 FT	(Q cfs / 0.88)	

NOTE:
1. CHECK DAMS WITH A WEIR TO SERVE AS SEDIMENT STORAGE FOR STREAM CROSSINGS AS NEEDED. CHECK AND REMOVE SEDIMENT AS REQUIRED.

GENERAL NOTES

- THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
- THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
- THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING THIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
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- A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
- UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
- ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
- CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
- SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC AREAS.
- ALL CUT AND FILL SLOPES ARE TO BE AT A 3:1 MAXIMUM.
- THERE SHALL BE NO SOIL DISTURBANCE OR RECOMPACTION WITHIN AREAS DESIGNATED FOR THE TREE PRESERVATION AND PROTECTION FENCING, INCLUDING NO STOCKPILING OF CONSTRUCTION OR OTHER MATERIAL, TRAFFIC, OR BORING SAMPLE.
- STOCKPILE HEIGHT SHALL NOT EXCEED 35'.

MAINTENANCE PLAN:

- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
- REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6 INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
- ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
- TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
- REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

STAGE II WAKE COUNTY EROSION CONTROL SEQUENCE- FORCE MAIN

- ALL STAGE 1 EROSION CONTROL MEASURES MUST BE IN PLACE BEFORE BEGINNING STAGE 2. REFER TO STAGE 1 EROSION CONTROL PLAN SHEETS. REFURBISH ALL STAGE 1 EROSION CONTROL MEASURES AS NEEDED BEFORE PROCEEDING WITH STAGE 2.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL EROSION CONTROL MEASURES THROUGHOUT CONSTRUCTION. ALL EROSION CONTROL DEVICES SHOULD BE INSPECTED AFTER EACH RAINFALL EVENT, AND ON A WEEKLY BASIS, AND REFURBISHED IMMEDIATELY. DO NOT REMOVE SKIMMER BASINS NOR OTHER MEASURES UNTIL INSTRUCTED TO DO SO. SKIMMER BASINS TO REMAIN THROUGHOUT CONSTRUCTION.
- CLEAR & GRUB THE SITE. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE THE SITE. AT THE END OF EACH WORKDAY OF GRADING, ALL TEMPORARY DIVERSION DITCHES/BERMS SHALL BE REFURBISHED AS NEEDED TO MAINTAIN DRAINAGE PATTERNS TO BASINS.
- STABILIZE THE SITE AS AREAS ARE BROUGHT UP TO FINISHED GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDEED AREAS PER GROUND STABILIZATION TIME FRAMES.
- EARTH EXCAVATED FOR SEWER TRENCHING SHOULD BE WITHIN THE LIMITS OF A SILT BAG FENCE. ANY WATER PUMPED FROM EXCAVATED TRENCH SHOULD BE FILTERED THROUGH A SILT BAG PRIOR TO DISCHARGING. PROPERLY DISPOSE OF ANY ACCUMULATED SEDIMENT AS NECESSARY.
- REFER TO STAGE 2 STREAM CROSSING EROSION CONTROL SEQUENCE.
- WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL 919.796.8769 FOR AN ONSITE INSPECTION WITH THE WAKE COUNTY WATERSHED MANAGER.
- IF SITE IS APPROVED, THEN REMOVE TEMPORARY EROSION CONTROL MEASURES INCLUDING TEMPORARY DIVERSIONS, SILT FENCE, SKIMMER BASINS, ETC. AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS RIPRAP APRONS OVER FILTER FABRIC SHOULD NOW BE INSTALLED.
- WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE WAKE COUNTY ENVIRONMENTAL CONSULTANT KARYN PAGEAU, 919.796.8769. OBTAIN A CERTIFICATE OF COMPLETION.

STAGE 2 STREAM CROSSING EROSION CONTROL SEQUENCE

- ONCE PROPER 401/404 BUFFER AUTHORIZATIONS AND ALL OTHER NECESSARY PERMITS OBTAINED BEGIN STREAM CROSSING PROCESS AS NECESSARY FOR FORCE MAIN CONSTRUCTION.
- OPERATION AND CONSTRUCTION FOR STREAM CROSSINGS SHOULD BE PERFORMED IN A DRY WEATHER PATTERN OF AT LEAST 3-5 DAYS AND SHOULD NOT BEGIN UNTIL ALL NECESSARY CONSTRUCTION MATERIALS ARE LOCATED ON AT THE SITE.
- SILT FENCE MUST BE INSTALLED ALONG STREAM BANKS AT THE END OF THE WORK DAY TO MINIMIZE IMPACTS.
- INSTALL CHECK DAM WITH WEIR AT EXISTING GRADES PER SIZING ON THIS SHEET FOR SEDIMENT STORAGE.
- INSTALL THE IMPERVIOUS DIKES (SAND BAGS, SHEET PILING, OR NO. 57 STONE WITH POLYPROPYLENE FOR WIDTH AND DEPTH OF CHANNEL. SET UP AND BEGIN BYPASS PUMPING OF EXISTING FLOW PER THE DETAIL.
- IF A TEMPORARY CROSSING IS REQUIRED, UTILIZE TIMBER MAT.
- STONE APPROACHES WILL BE REQUIRED ON BOTH SIDES AND THE BOARDS WILL HAVE NO GAPS. GEOTEXTILE SHALL BE UNDERLAIN OR OVERLAIN AND SIDE BOARDS WILL BE INSTALLED ALONG THE PERIMETER OF THE MAT.
- INSTALL FORCE MAIN PIPES PER THE UTILITY DESIGN AND SPECIFICATIONS WITHIN THIS PLAN SET. INFORM THE ENGINEER IF FIELD CONDITIONS DIFFER FROM THE PLANS TO AN EXTENT REQUIRING MODIFICATIONS.
- BACKFILL TRENCHING, RETURN IMPACTED AREAS TO PRE-EXISTING GRADES AND PROMPTLY STABILIZE AREAS.

TEMPORARY STOCKPILE NOTES

- STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES, WITH A MAXIMUM HEIGHT OF 35 FT WITH 2:1 OR FLATTER SLOPES.
- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEPT IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

NPDES GROUND STABILIZATION

SOIL STABILIZATION SHALL BE ACHIEVED ON ANY AREA OF A SITE WHERE LAND-DISTURBING ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED ACCORDING TO THE FOLLOWING SCHEDULE:

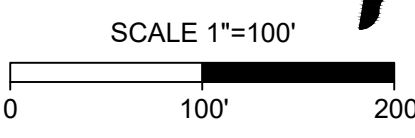
- ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND SLOPES STEEPER THAN 3:1 SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT WITHIN ANY EVENT WITHIN 7 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.
- ALL OTHER DISTURBED AREAS SHALL BE PROVIDED TEMPORARY OR PERMANENT STABILIZATION WITH GROUND COVER AS SOON AS PRACTICABLE, BUT IN ANY EVENT WITHIN 14 CALENDAR DAYS FROM THE LAST LAND-DISTURBING ACTIVITY.

ATTENTION CONTRACTORS

The **Construction Contractor** responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for **contacting the Public Utilities Department** at (919) 996-4540 at least **twenty four hours** prior to beginning any of their construction.

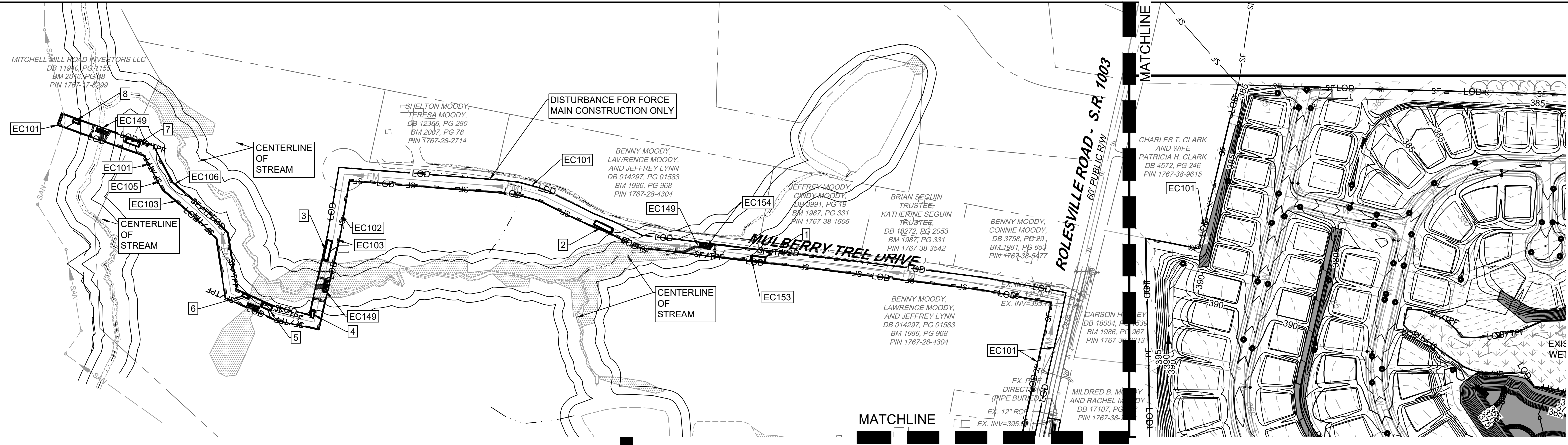
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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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EROSION CONTROL PLAN-STAGE 2 KEYNOTES	
NUMBER	DESCRIPTION
EC101	LIMITS OF DISTURBANCE
EC102	SILT FENCE; REFER TO DETAIL (TYP.)
EC103	SILT FENCE OUTLET; REFER TO DETAIL (TYP.)
EC104	TEMPORARY 25' x 100' CONSTRUCTION ENTRANCE; REFER TO DETAIL
EC105	SILT-TREE COMBINATION FENCE; REFER TO DETAIL (TYP.)
EC106	TREE FENCE; REFER TO DETAIL (TYP.)
EC136	POROUS BAFFLES (TYP.)
EC137	SILT BAG AND SILT BAG PAD
EC138	IMPERMEABLE MEMBRANE APRON
EC139	3:1 SIDE SLOPE
EC140	STOCKPILE AREA
EC141	CONCRETE WASHOUT
EC142	TEMPORARY CLASS 3 18" RCP PIPE FOR DITCH CROSSING
EC143	TEMPORARY HORSESHOE INLET PROTECTION
EC144	PIPE OUTFALL PROTECTION (REFER TO C4.1)
EC145	DIVERSION DITCH OUTLET PROTECTION (REFER TO C4.1 AND STORM PLAN FOR DETAILS)
EC146	TEMPORARY PIPE FOR OUTFALL CROSSING
EC147	TEMPORARY STORM INLET PROTECTION; REFER TO DETAIL (TYP.)
EC148	GREENWAY BOARDWALK BRIDGE
EC149	TEMPORARY STREAM BYPASS AND TIMBER MATTING FOR SEWER CROSSING; REFER TO DETAIL (TYP.)
EC150	2:1 SIDE SLOPE (SOD) STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES)
EC151	2.5:1 SIDE SLOPE (SOD) STABILIZE WITH EROSION CONTROL BLANKETS SUCH AS NORTH AMERICAN GREEN S150, OR SIMILARLY RATED PRODUCT FOR STEEP SLOPES)
EC152	TEMPORARY INLET PROTECTION; REFER TO DETAIL (TYP.)
EC153	ROCK CHECK DAM WITH WEIR (REFER TO DETAIL)
EC154	TIMBER MAT
EC155	SILT FENCE STONE OUTLET WITH J HOOKS (TYP. AT STREAM CROSSINGS)



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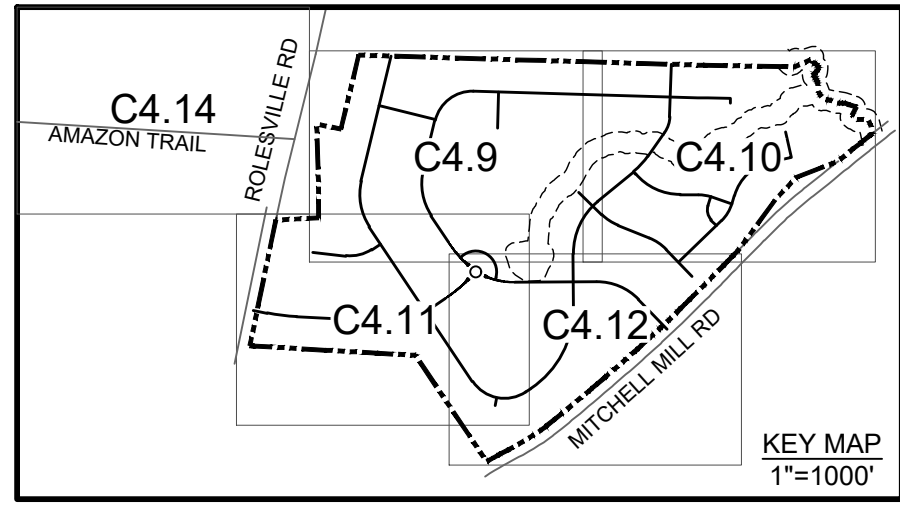
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EROSION CONTROL LEGEND	
	TREE PROTECTION FENCE
	LIMITS OF DISTURBANCE
	STOCKPILE AREA
	SILT FENCE
	SILT/TREE PROTECTION COMBINATION FENCE
	POROUS BAFFLE
	TEMPORARY DIVERSION DITCH
	SILT BAG AND PAD
	SILT FENCE STONE OUTLET
	SILT FENCE STONE OUTLET W/ J HOOKS
	EMERGENCY SPILLWAY / RIP RAP APRON
	CHECK DAM WITH A WEIR
	CHECK DAM
	CONSTRUCTION ENTRANCE
	TEMPORARY INLET PROTECTION
	TEMPORARY DOUBLE INLET PROTECTION
	CONCRETE WASHOUT
	WATTLE
	HORSESHOE INLET PROTECTION
	SKIMMER
	TEMPORARY SLOPE DRAIN (TSD)
	TEMPORARY DIVERSION BERM
	TEMPORARY TIMBER MAT
	ROLLED EROSION CONTROL FABRIC



GENERAL NOTES
 1. REFER TO OTHER SHEETS WITHIN THIS PLAN SET FOR ADDITIONAL NOTES, CONSTRUCTION SEQUENCE, ETC.

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

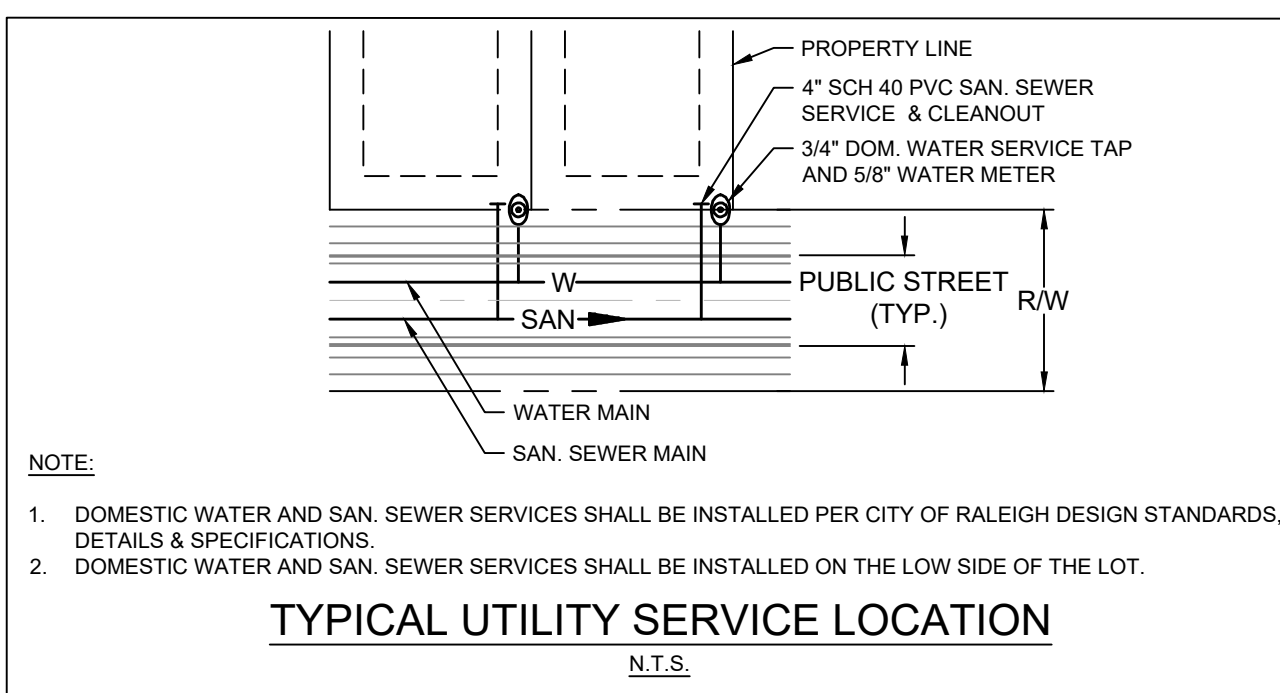
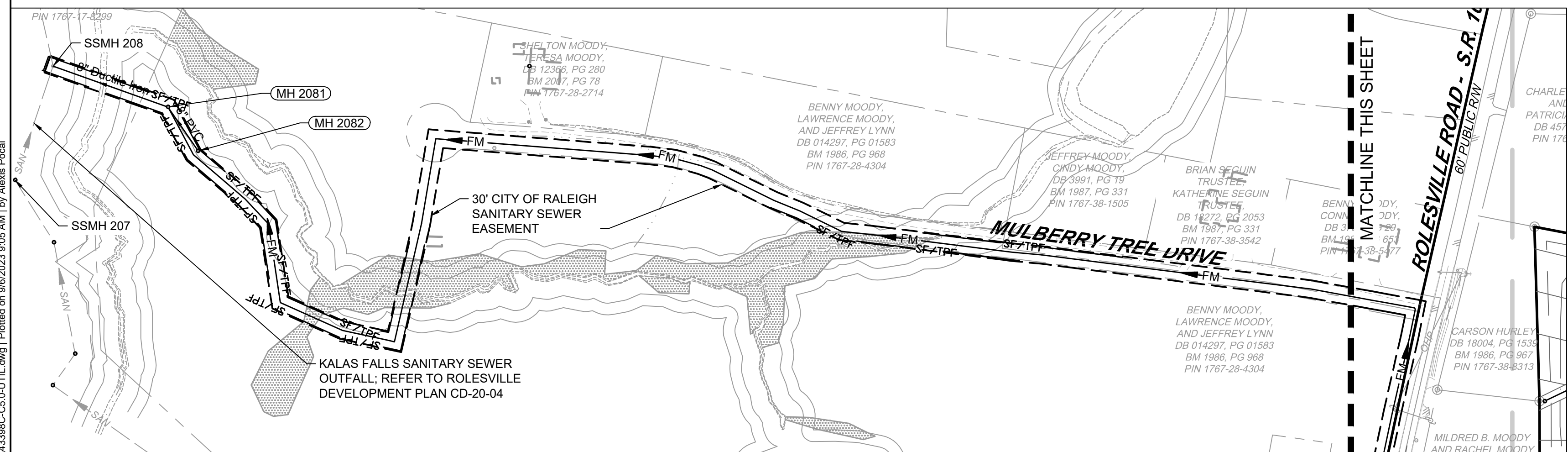
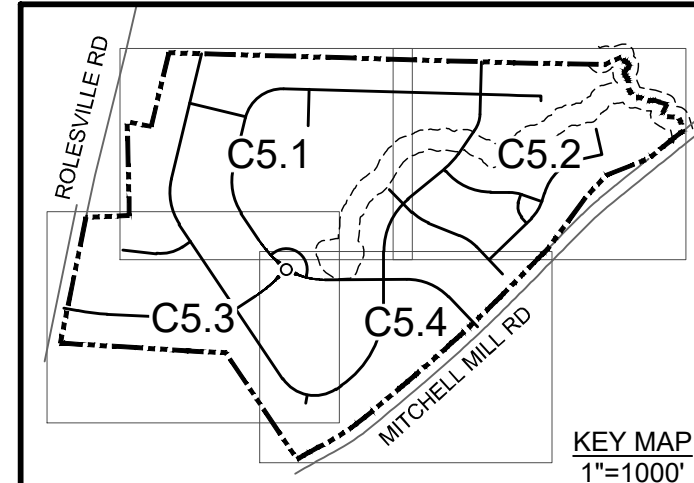
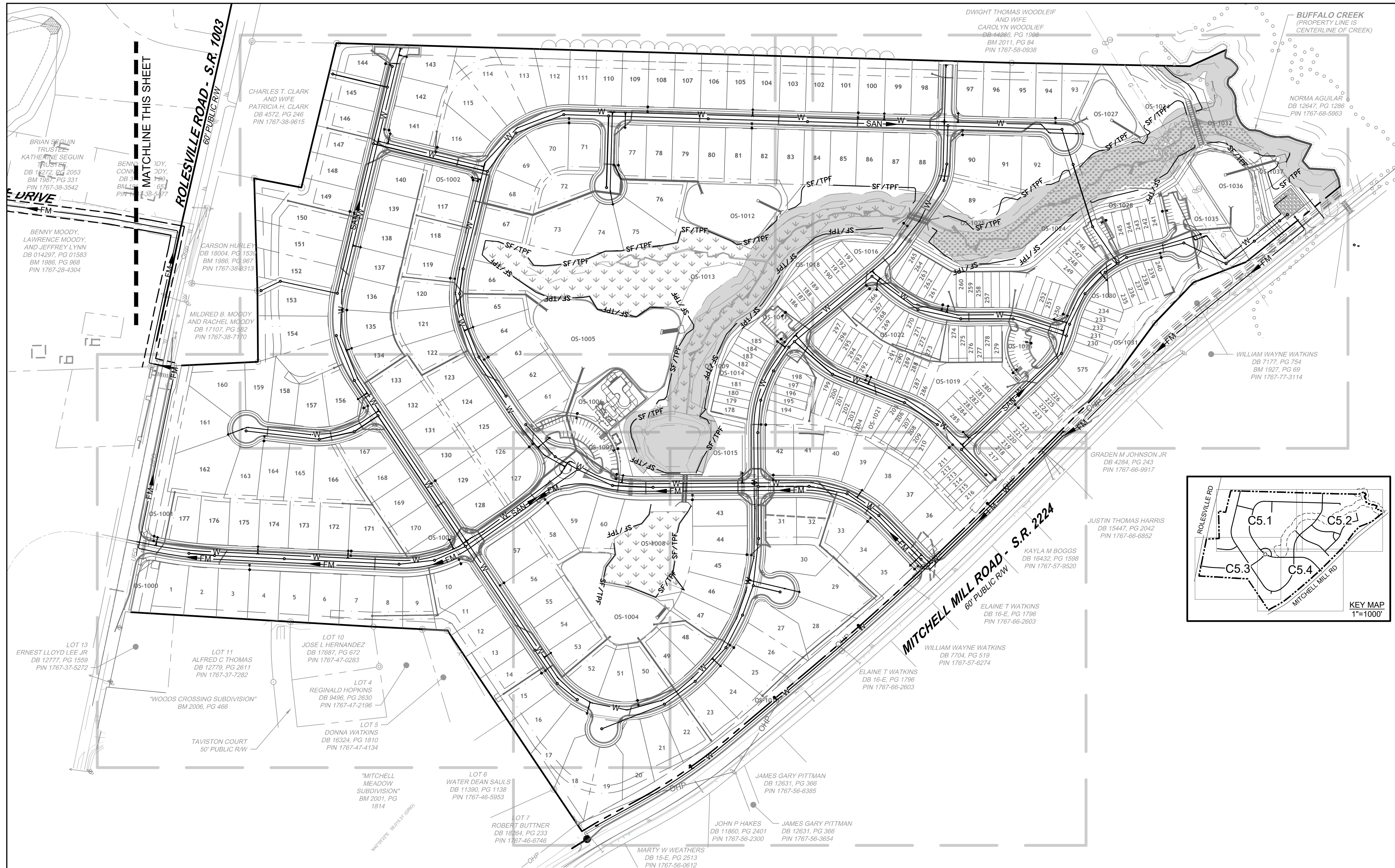
TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

EROSION CONTROL STAGE 2 LIMITS OF DISTURBANCE

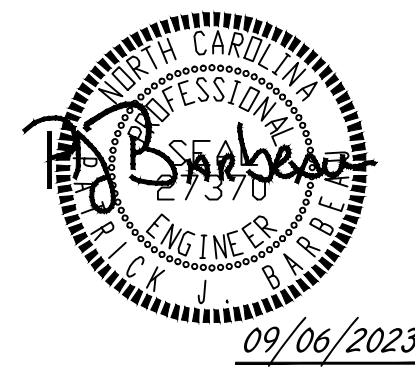
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STANDARD UTILITY NOTES:

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION).
- CONTRACTOR SHALL LOCATE AND PROTECT ALL EXISTING PUBLIC AND PRIVATE UTILITIES AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
- UTILITY SEPARATION REQUIREMENTS:
 - A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
 - WHEN INSTALLING WATER AND/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
 - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATER MAIN, DIP MATERIALS OR STEEL ENCASUREMENT EXTENDED 10" ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
 - 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
 - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATER MAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-49).
 - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24-HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
- CONTRACTOR SHALL COORDINATE THE LOCATION OR RELOCATION OF ALL OVERHEAD AND UNDERGROUND COMMUNICATION LINES, ELECTRIC AND GAS SERVICE WITH THE APPROPRIATE UTILITY COMPANY AND/OR THE CITY PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL PROVIDE CONDUITS AS REQUIRED FOR THESE UTILITIES UNDER PAVED AREAS. CONTRACTOR SHALL ENSURE THAT ALL OVERHEAD UTILITY LINES ARE ADJUSTED BY APPROPRIATE UTILITY COMPANY TO MAINTAIN ACCEPTABLE CLEARANCES FOR FIRE APPARATUS, CONSTRUCTION EQUIPMENT, AND VEHICULAR ACCESS.
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
- INSTALL 2" TYPE "K" COPPER WATER SERVICE WITH METER LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT.
- INSTALL 6" SCHEDULE 40 PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
- PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
- ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE AND/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
- NCDOT ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE ROW PRIOR TO CONSTRUCTION.
- CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 996-5923 OR JOANIE.HARTLEY@RALEIGHNC.GOV FOR MORE INFORMATION.
- CONTRACTORS WORKING (EXCAVATION, BORING, OR OTHER SUBSURFACE BREACH) AROUND OR IN THE VICINITY OF EXISTING WATER LINES 12 INCHES IN DIAMETER OR LARGER SHALL BE REQUIRED TO PHYSICALLY SPOT THE EXISTING LINE TO BE VERIFIED BY P.U.D. DISTRIBUTION STAFF OR INSPECTION STAFF. IF OTHER EXISTING LINES SIZES ARE IN QUESTION OF CONFLICT THE CONTRACTOR SHALL BE DIRECTED BY P.U.D. STAFF OF THE LEVEL OF SUBSURFACE INVESTIGATION NEEDED TO LOCATE THE EXISTING LINE.
- KALAS FALLS SANITARY SEWER MANHOLE 208 AND DOWNSTREAM SANITARY SEWER LINE TO SANITARY SEWER MANHOLE 207 TO BE LINED PER CITY OF RALEIGH DETAILS FOR RECEIVE FLOW FROM SANITARY SEWER FORCE MAIN.
- THIS DEVELOPMENT RELIES UPON KALAS FALLS FOR ACCESS TO PUBLIC WATER AND PUBLIC SANITARY SEWER. IF KALAS FALLS DOES NOT INSTALL NECESSARY INFRASTRUCTURE, THIS DEVELOPMENT MAY BE RESPONSIBLE FOR NECESSARY EXTENSIONS.



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REVISIONS PER WAKE COUNTY COMMENTS	06/24/2023
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2023
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

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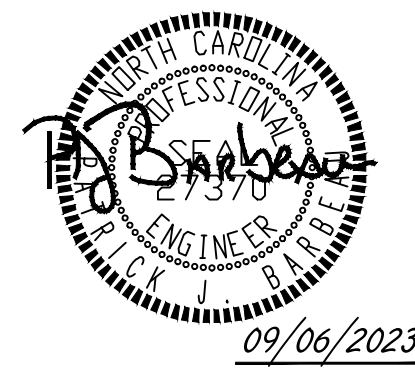
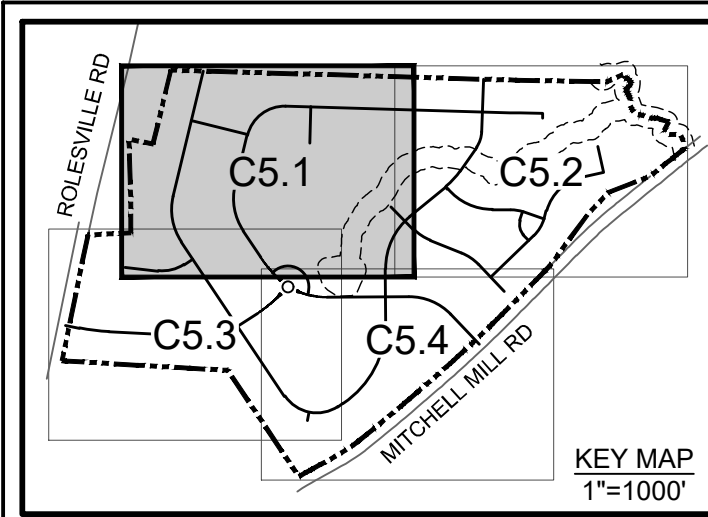
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ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

OVERALL UTILITY PLAN

JOB NO. 43398
SHEET NO. C5.0

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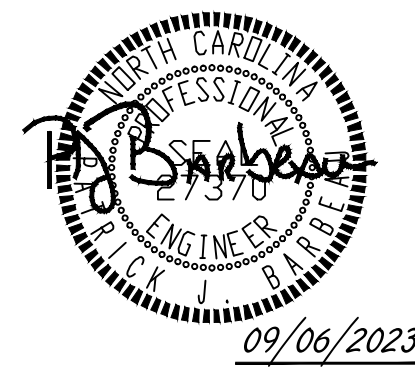
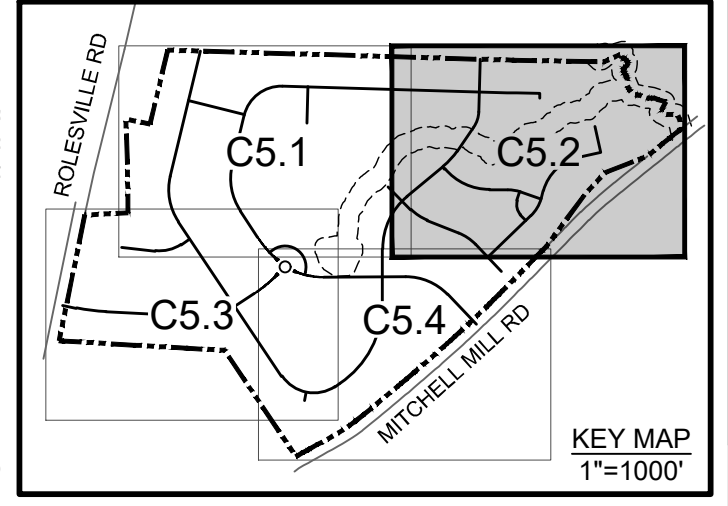
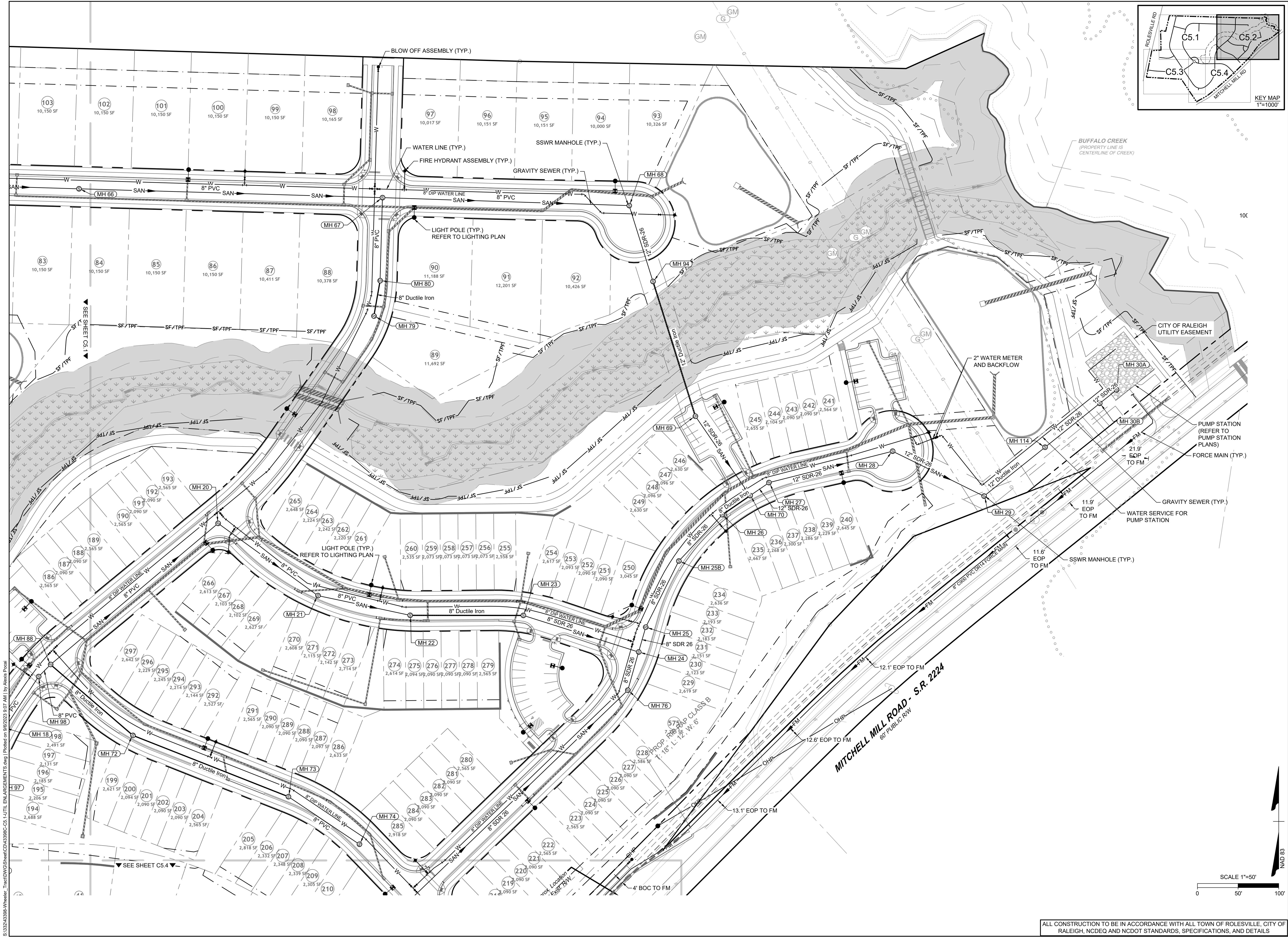
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 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
UTILITY PLAN

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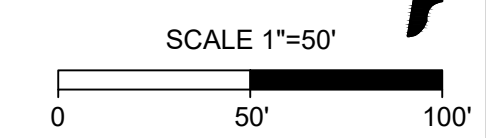
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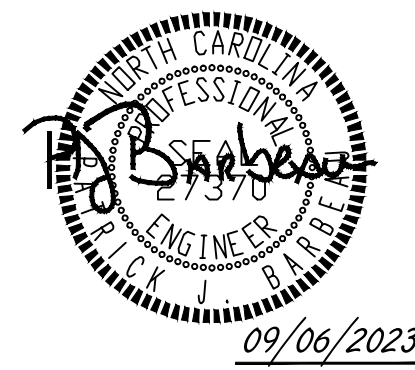
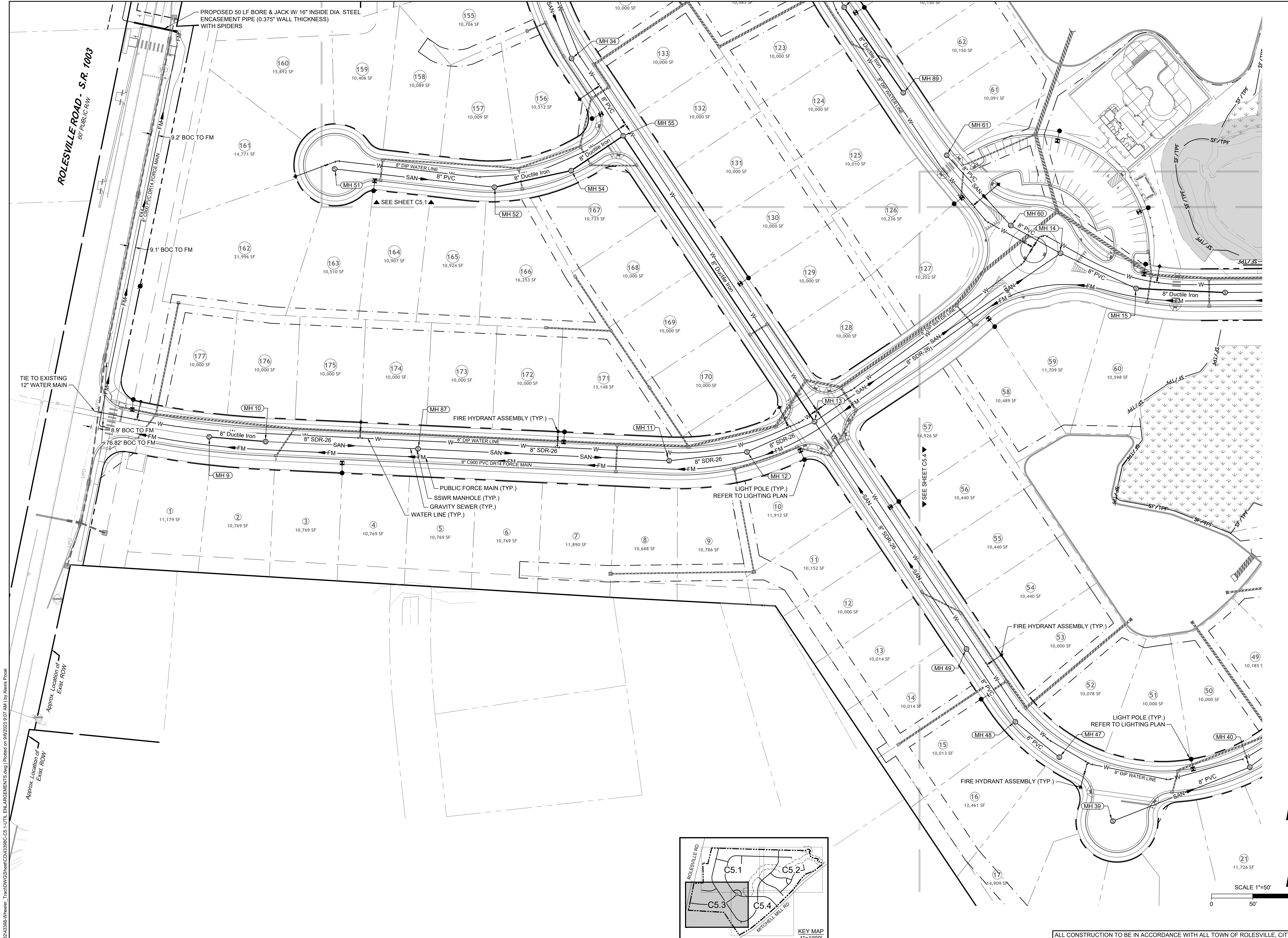
UTILITY PLAN

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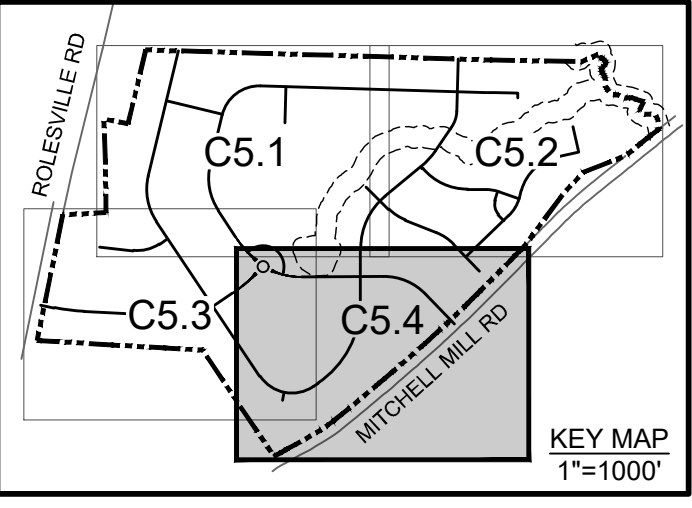
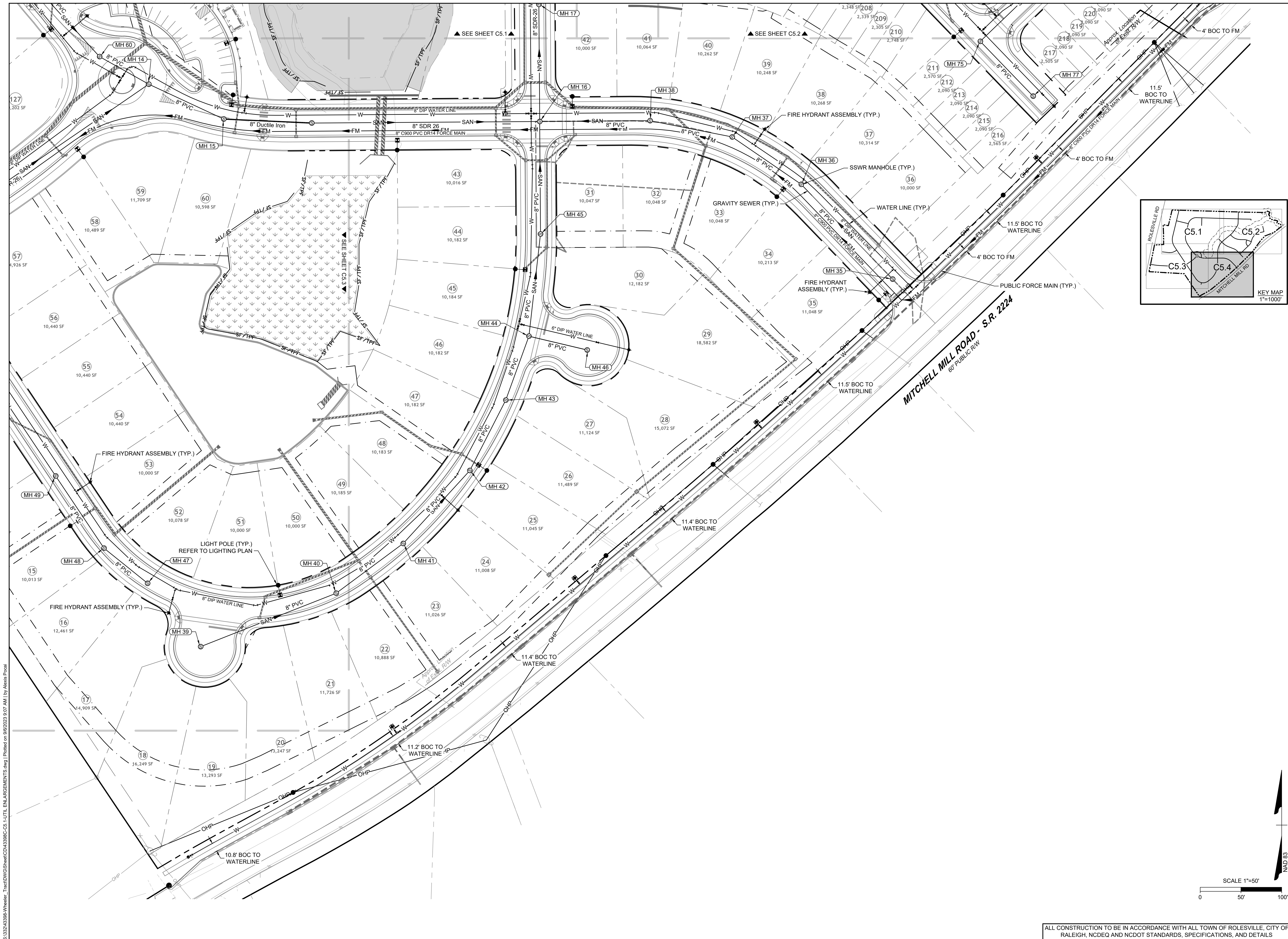
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C5.3

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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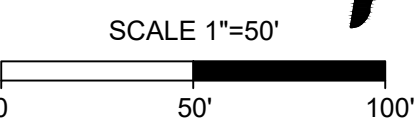
REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2023
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2023
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2023
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE	DRAWN BY
09/17/2021	R. WINGATE
	DESIGNED BY P. BARBEAU
	CHECKED BY P. BARBEAU
	SCALE AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
UTILITY PLAN

JOB NO.
43398
 SHEET NO.
C5.4



ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

S:\324\43398-Wheeler_Timed\DWG\Sheet\CD\43398-C5.4-UTIL_ENLARGEMENTS.dwg | Plotted on 09/20/2023 9:07 AM | by Alexei Pical

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REVISED PER WAKE COUNTY COMMENTS
 REVISED PER WAKE COUNTY COMMENTS
 CONSTRUCTION DOCUMENT SUBMITTAL
 REVISIONS PER NCDOT COMMENTS
 REVISIONS PER CITY OF RALEIGH COMMENTS

DATE

09/17/2021

DRAWN BY

R. WINGATE

DESIGNED BY

P. BARBEAU

CHECKED BY

P. BARBEAU

SCALE

AS SHOWN

TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
SANITARY SEWER TABLES

JOB NO.
43398

SHEET NO.
C5.5

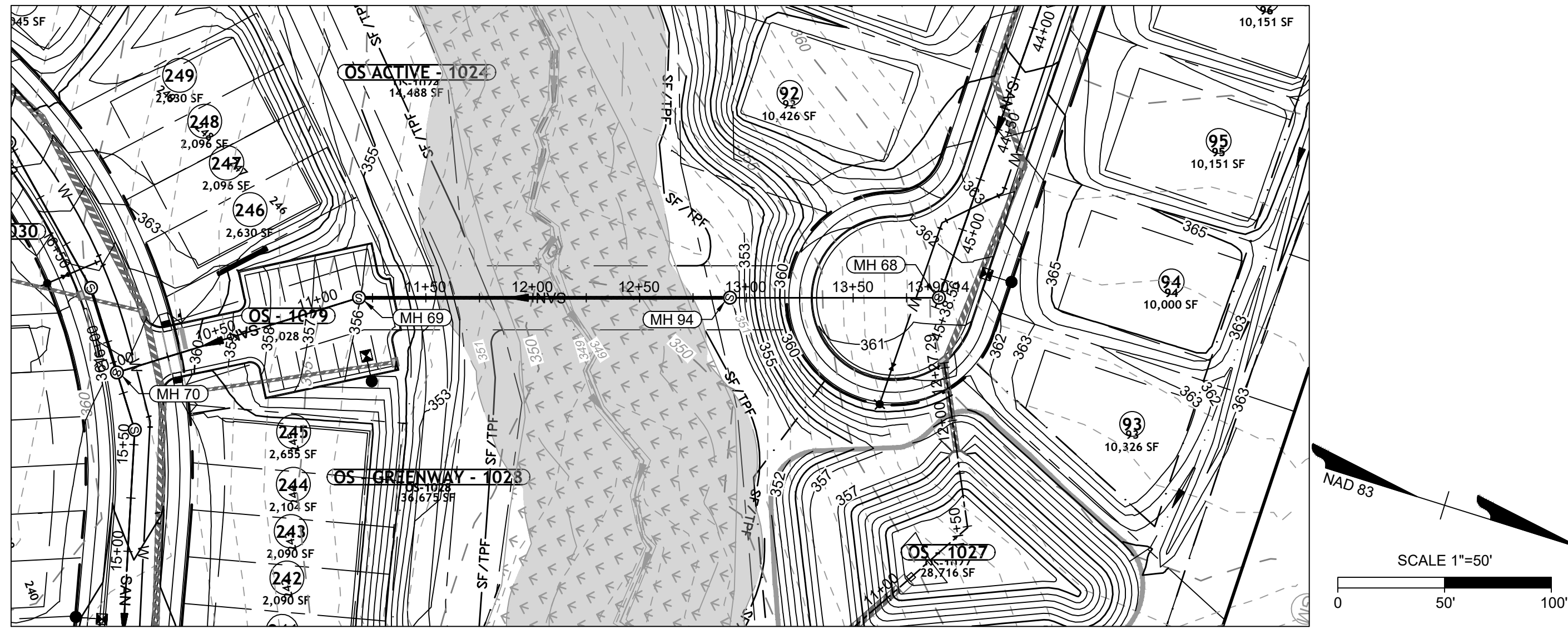
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SANITARY SEWER STRUCTURE TABLE

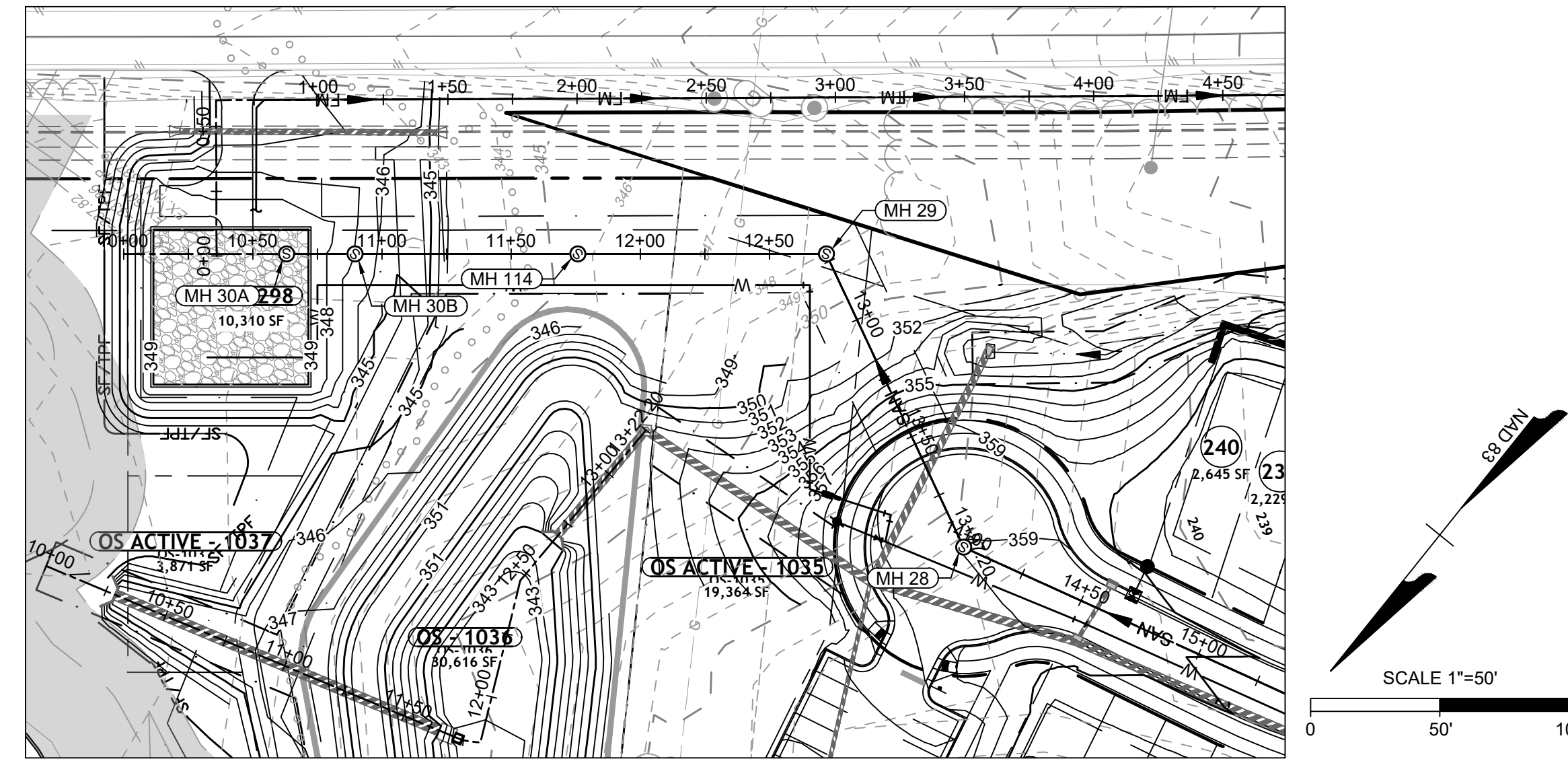
STR. #	TOP	INV. IN	INV. OUT	DESCRIPTION
MH 9	389.23'		383.68' (8" Ductile Iron TO MH 10)	48" Manhole
MH 10	391.86'	383.34' (8" Ductile Iron FROM MH 9)	383.14' (8" SDR-26 TO MH 87)	60" Manhole
MH 11	396.93'	380.48' (8" SDR-26 FROM MH 87)	380.28' (8" SDR-26 TO MH 12)	60" Manhole
MH 12	395.18'	379.81' (8" SDR-26 FROM MH 11)	379.61' (8" SDR-26 TO MH 13)	60" Manhole
MH 13	393.39'	379.16' (8" SDR-26 FROM MH 12) 381.12' (8" Ductile Iron FROM MH 55) 379.16' (8" SDR-26 FROM MH 49)	378.96' (8" SDR-26 TO MH 14)	60" Manhole
MH 14	385.10'	377.16' (8" SDR-26 FROM MH 13) 378.90' (8" PVC FROM MH 60)	376.96' (8" PVC TO MH 15)	48" Manhole
MH 15	384.13'	376.45' (8" PVC FROM MH 14)	376.07' (8" Ductile Iron TO MH 15A)	48" Manhole
MH 15A	384.82'	375.53' (8" Ductile Iron FROM MH 15)	375.33' (8" SDR-26 TO MH 16)	48" Manhole
MH 16	385.95'	373.93' (8" SDR-26 FROM MH 15A) 373.77' (8" PVC FROM MH 38) 374.90' (8" PVC FROM MH 45)	373.09' (8" SDR-26 TO MH 17)	60" Manhole
MH 17	382.86'	372.38' (8" SDR-26 FROM MH 16)	372.08' (8" PVC TO MH 97)	48" Manhole
MH 18	375.35'	369.29' (8" PVC FROM MH 97)	368.89' (8" PVC TO MH 98)	48" Manhole
MH 20	368.47'	361.50' (8" PVC FROM MH 88)	359.94' (8" PVC TO MH 21)	48" Manhole
MH 21	365.71'	359.18' (8" PVC FROM MH 20)	358.98' (8" PVC TO MH 22)	48" Manhole
MH 22	364.11'	358.40' (8" PVC FROM MH 21)	357.07' (8" Ductile Iron TO MH 23)	48" Manhole
MH 23	365.65'	356.37' (8" Ductile Iron FROM MH 22)	356.07' (8" SDR-26 TO MH 24)	48" Manhole
MH 24	369.02'	355.33' (8" SDR-26 FROM MH 23) 356.00' (8" SDR-26 FROM MH 76)	355.10' (8" SDR-26 TO MH 25)	72" Drop Manhole
MH 25	368.13'	354.94' (8" SDR-26 FROM MH 24)	354.74' (8" SDR-26 TO MH 25B)	60" Manhole
MH 25B	364.54'	354.28' (8" SDR-26 FROM MH 25)	354.08' (8" SDR-26 TO MH 26)	48" Manhole
MH 26	361.70'	353.68' (8" SDR-26 FROM MH 25B)	353.48' (8" Ductile Iron TO MH 70)	48" Manhole
MH 27	360.59'	343.04' (12" SDR-26 FROM MH 70)	342.84' (12" SDR-26 TO MH 28)	60" Manhole
MH 28	359.04'	342.06' (12" SDR-26 FROM MH 27)	341.86' (12" SDR-26 TO MH 29)	60" Manhole
MH 29	348.04'	341.24' (12" SDR-26 FROM MH 28)	341.04' (12" Ductile Iron TO MH 114)	48" Manhole
MH 30A	349.00'	329.00' (12" SDR-26 FROM MH 30B)		72" Manhole
MH 30B	348.00'	331.70' (12" SDR-26 FROM MH 114)	329.20' (12" SDR-26 TO MH 30A)	60" Manhole
MH 31	381.82'		376.08' (8" PVC TO MH 102)	48" Manhole
MH 32	397.52'		383.80' (8" PVC TO MH 107)	60" Manhole
MH 33	391.06'		385.38' (8" PVC TO MH 34)	48" Manhole
MH 34	389.88'	384.18' (8" PVC FROM MH 33)	383.98' (8" PVC TO MH 55)	48" Manhole
MH 35	386.01'		378.50' (8" PVC TO MH 36)	48" Manhole
MH 36	383.28'	377.30' (8" PVC FROM MH 35)	377.00' (8" PVC TO MH 37)	48" Manhole
MH 37	383.47'	375.40' (8" PVC FROM MH 36)	375.20' (8" PVC TO MH 38)	48" Manhole
MH 38	384.57'	374.69' (8" PVC FROM MH 37)	374.45' (8" PVC TO MH 16)	48" Manhole
MH 39	391.37'		382.51' (8" PVC TO MH 40)	48" Manhole
MH 40	389.29'	381.35' (8" PVC FROM MH 39)	381.15' (8" PVC TO MH 41)	48" Manhole
MH 41	388.32'	380.64' (8" PVC FROM MH 40)	380.44' (8" PVC TO MH 42)	48" Manhole
MH 42	387.47'	379.83' (8" PVC FROM MH 41)	379.63' (8" PVC TO MH 43)	48" Manhole
MH 43	387.89'	379.14' (8" PVC FROM MH 42)	378.94' (8" PVC TO MH 44)	60" Manhole
MH 44	388.50'	378.53' (8" PVC FROM MH 43) 380.70' (8" PVC FROM MH 46)	378.33' (8" PVC TO MH 45)	72" DROP Manhole
MH 45	387.32'	377.70' (8" PVC FROM MH 44)	377.50' (8" PVC TO MH 16)	60" Manhole
MH 46	389.57'		383.73' (8" PVC TO MH 44)	48" Manhole
MH 47	390.03'		384.40' (8" PVC TO MH 48)	48" Manhole
MH 48	388.67'	382.81' (8" PVC FROM MH 47)	382.09' (8" PVC TO MH 49)	48" Manhole
MH 49	388.94'	381.02' (8" PVC FROM MH 48)	380.82' (8" SDR-26 TO MH 13)	48" Manhole
MH 51	394.83'		388.70' (8" PVC TO MH 52)	48" Manhole
MH 52	391.16'	384.90' (8" PVC FROM MH 51)	384.70' (8" Ductile Iron TO MH 54)	48" Manhole
MH 54	389.34'	384.10' (8" Ductile Iron FROM MH 52)	383.79' (8" Ductile Iron TO MH 55)	48" Manhole
MH 55	390.08'	383.41' (8" PVC FROM MH 34) 383.41' (8" Ductile Iron FROM MH 54)	383.21' (8" Ductile Iron TO MH 13)	48" Manhole
MH 60	386.68'	380.50' (8" PVC FROM MH 61)	380.30' (8" PVC TO MH 14)	48" Manhole
MH 61	389.04'		382.36' (8" PVC TO MH 60)	48" Manhole
MH 62	381.71'	371.06' (8" Ductile Iron FROM MH 85) 369.20' (8" PVC FROM MH 93)	369.00' (8" SDR-26 TO MH 63)	60" Manhole

STR. #	TOP	INV. IN	INV. OUT	DESCRIPTION
MH 63	383.00'	368.37' (8" SDR-26 FROM MH 62)	368.17' (8" SDR-26 TO MH 64)	60" Manhole
MH 64	384.48'	367.53' (8" SDR-26 FROM MH 63)	367.33' (8" SDR-26 TO MH 65)	60" Manhole
MH 65	384.85'	366.69' (8" SDR-26 FROM MH 64) 375.87' (8" DIP FROM MH 81)	366.49' (8" SDR-26 TO MH 86)	72" Drop Manhole
MH 66	374.81'	363.65' (8" SDR-26 FROM MH 86)	363.45' (8" PVC TO MH 67)	48" Manhole
MH 67	369.89'	360.74' (8" PVC FROM MH 66) 358.23' (8" PVC FROM MH 80)	358.03' (8" PVC TO MH 68)	72" DROP Manhole
MH 68	361.32'	352.05' (8" PVC FROM MH 67)	351.00' (12" SDR-26 TO MH 94)	48" Manhole
MH 69	356.03'	344.23' (12" Ductile Iron FROM MH 94)	344.03' (12" SDR-26 TO MH 70)	48" Manhole
MH 70	360.83'	353.08' (8" Ductile Iron FROM MH 26) 343.43' (12" SDR-26 FROM MH 69)	343.23' (12" SDR-26 TO MH 27)	72" DROP Manhole
MH 72	373.94'	368.12' (8" Ductile Iron FROM MH 73)	367.92' (8" Ductile Iron TO MH 88)	48" Manhole
MH 73	380.95'	375.35' (8" PVC FROM MH 74)	373.80' (8" Ductile Iron TO MH 72)	48" Manhole
MH 74	381.68'		375.88' (8" PVC TO MH 73)	48" Manhole
MH 75	381.04'	373.87' (8" PVC FROM MH 77)	373.63' (8" SDR-26 TO MH 76)	48" Manhole
MH 76	369.68'	359.21' (8" SDR-26 FROM MH 75)	358.00' (8" SDR-26 TO MH 24)	48" Manhole
MH 77	381.78'		376.10' (8" PVC TO MH 75)	48" Manhole
MH 79	364.91'		359.15' (8" Ductile Iron TO MH 80)	48" Manhole
MH 80	366.39'	358.93' (8" Ductile Iron FROM MH 79)	358.73' (8" PVC TO MH 67)	48" Manhole
MH 81	382.86'		377.76' (8" DIP TO MH 65)	48" Manhole
MH 85	384.69'	372.82' (8" PVC FROM MH 102) 375.00' (8" PVC FROM MH 100)	372.62' (8" Ductile Iron TO MH 62)	60" Manhole
MH 86	379.95'	365.17' (8" SDR-26 FROM MH 65)	364.97' (8" SDR-26 TO MH 66)	60" Manhole
MH 87	396.61'	382.21' (8" SDR-26 FROM MH 10)	382.01' (8" SDR-26 TO MH 11)	60" Manhole
MH 88	371.95'	366.20' (8" PVC FROM MH 98) 365.36' (8" Ductile Iron FROM MH 72)	365.16' (8" PVC TO MH 20)	48" Manhole
MH 89	388.83'		382.08' (8" Ductile Iron TO MH 90)	48" Manhole
MH 90	386.32'	380.48' (8" Ductile Iron FROM MH 89)	380.28' (8" PVC TO MH 91)	48" Manhole
MH 91	383.74'	378.09' (8" PVC FROM MH 90)	377.89' (8" Ductile Iron TO MH 92)	48" Manhole
MH 92	382.60'	377.62' (8" Ductile Iron FROM MH 91)	375.30' (8" Ductile Iron TO MH 93)	48" Manhole
MH 93	381.17'	374.63' (8" Ductile Iron FROM MH 92)	374.43' (8" PVC TO MH 62)	48" Manhole
MH 94	353.05'	347.19' (12" SDR-26 FROM MH 68)	345.10' (12" Ductile Iron TO MH 69)	48" Manhole
MH 97	379.13'	371.65' (8" PVC FROM MH 17)	371.45' (8" PVC TO MH 18)	48" Manhole
MH 98	372.46'	366.50' (8" PVC FROM MH 18)	366.30' (8" PVC TO MH 88)	48" Manhole
MH 100	390.31'	382.00' (8" PVC FROM MH 107)	381.60' (8" PVC TO MH 85)	48" Manhole
MH 101	387.77'		377.00' (8" Ductile Iron TO MH 102)	48" Manhole
MH 102	382.55'	375.20' (8" PVC FROM MH 31) 375.20' (8" Ductile Iron FROM MH 101)	375.00' (8" PVC TO MH 85)	48" Manhole
MH 107	390.03'	383.20' (8" PVC FROM MH 32)	383.00' (8" PVC TO MH 100)	48" Manhole
MH 114	348.00'	340.55' (12" Ductile Iron FROM MH 29)	339.89' (12" SDR-26 TO MH 30B)	48" Manhole
MH 2081	346.57'	335.99' (8" PVC FROM MH 2082)	335.79' (8" Ductile Iron TO)	48" Manhole
MH 2082	347.52'		338.04' (8" PVC TO MH 2081)	48" Manhole

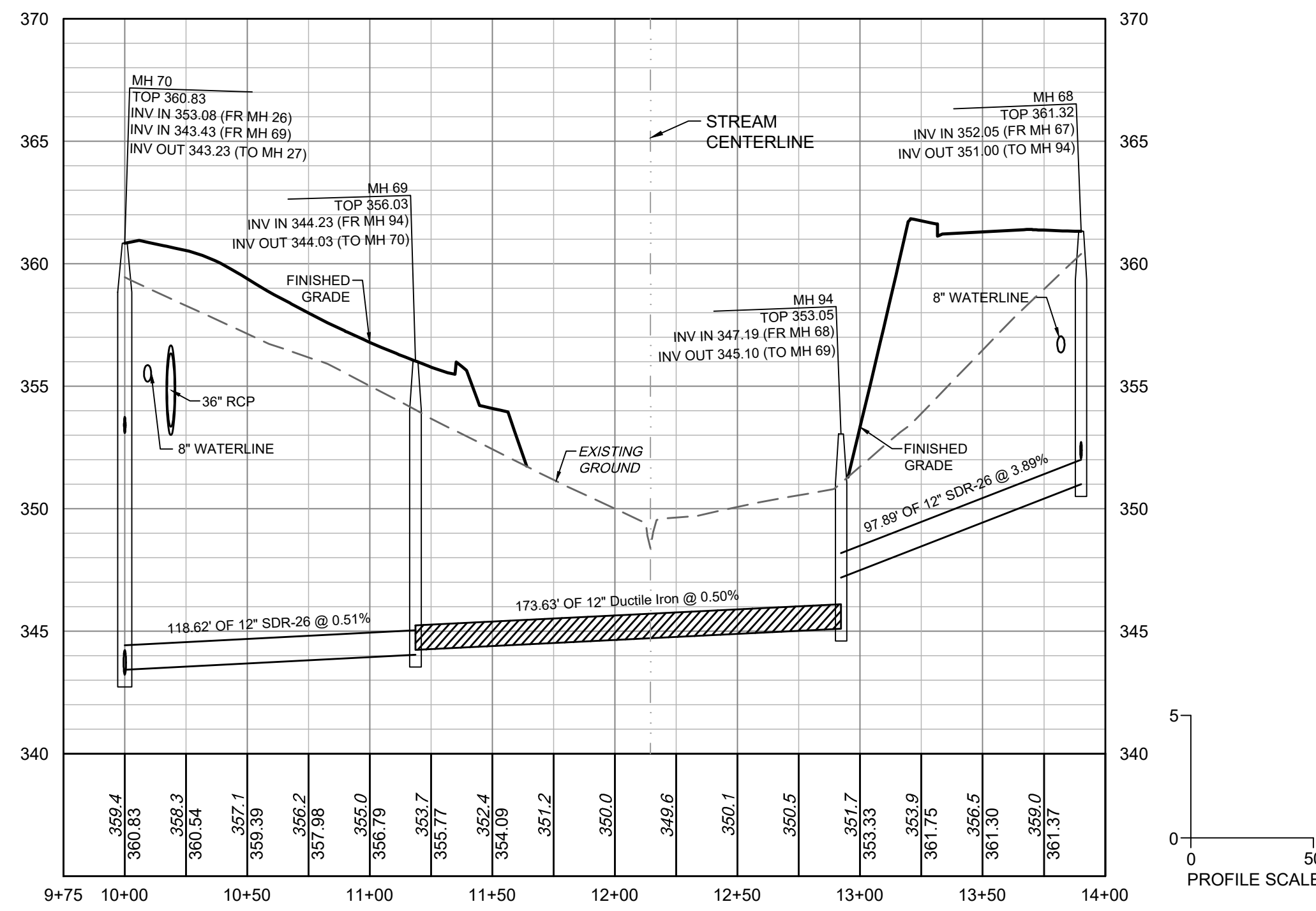
FROM - TO	UPSTREAM INVERT	DOWNSTREAM INVERT	SLOPE	LENGTH	DIA.	MATERIAL
MH 9 - MH 10	383.68'	383.34'	0.50%	68.92 LF	8"	Ductile Iron
MH 10 - MH 87	383.14'	382.21'	0.50%	185.38 LF	8"	SDR-26
MH 11 - MH 12	380.28'	379.81'	0.50%	95.17 LF	8"	SDR-26
MH 12 - MH 13	379.61'	379.16'	0.50%	90.04 LF	8"	SDR-26
MH 13 - MH 14	378.96'	377.16'	0.50%	362.44 LF	8"	SDR-26
MH 14 - MH 15	376.96'	376.45'	0.50%	101.40 LF	8"	PVC
MH 15 - MH 15A	376.07'	375.53'	0.50%	108.17 LF	8"	Ductile Iron
MH 15A - MH 16	375.33'	373.93'	0.50%	279.70 LF	8"	SDR 26
MH 16 - MH 17	373.09'	372.38'	0.50%	143.75 LF	8"	SDR-26
MH 17 - MH 97	372.08'	371.65'	0.50%	86.61 LF	8"	PVC
MH 18 - MH 98	368.89'	366.50'	3.17%	75.57 LF	8"	PVC
MH 20 - MH 21	359.94'	359.18'	0.50%	151.59 LF	8"	PVC
MH 21 - MH 22	358.98'	358.40'	0.50%	115.99 LF	8"	PVC
MH 22 - MH 23	357.07'	356.37'	0.50%	139.17 LF	8"	Ductile Iron
MH 23 - MH 24	356.07'	355.33'	0.50%	148.81 LF	8"	SDR 26
MH 24 - MH 25	355.10'	354.94'	0.50%	31.70 LF	8"	SDR 26
MH 25 - MH 25B	354.74'	354.28'	0.51%	91.07 LF	8"	SDR-26
MH 25B - MH 26	354.08'	353.68'	0.51%	78.22 LF	8"	SDR-26
MH 26 - MH 70	353.48'	353.08'	0.96%	41.39 LF	8"	Ductile Iron
MH 27 - MH 28	342.84'	342.06'	0.50%	156.90 LF	12"	SDR-26
MH 28 - MH 29	341.86'	341.24'	0.50%	125.28 LF	12"	SDR-26
MH 29 - MH 114	341.04'	340.55'	0.50%	96.22 LF	12"	Ductile Iron
MH 30B - MH 30A	329.20'	329.00'	0.75%	26.50 LF	12"	SDR-26
MH 31 - MH 102	376.08'	375.20'	1.55%	56.92 LF	8"	PVC
MH 32 - MH 107	383.80'	383.20'	1.05%	57.07 LF	8"	PVC
MH 33 - MH 34	385.38'	384.18'	0.93%	129.01 LF	8"	PVC
MH 34 - MH 55	383.98'	383.41'	0.50%	113.10 LF	8"	PVC
MH 35 - MH 36	378.50'	377.30'	0.74%	161.68 LF	8"	PVC
MH 36 - MH 37	377.00'	375.40'	1.56%	102.70 LF	8"	PVC
MH 37 - MH 38	375.20'	374.69'	0.50%	102.70 LF	8"	PVC
MH 38 - MH 16	374.45'	373.77'	0.50%	135.48 LF	8"	PVC
MH 39 - MH 40	382.51'	381.35'	0.65%	178.89 LF	8"	PVC
MH 40 - MH 41	381.15'	380.64'	0.50%	102.28 LF	8"	PVC
MH 41 - MH 42	380.44'	379.83'	0.50%	121.36 LF	8"	PVC
MH 42 - MH 43	379.63'	379.14'	0.50%	97.03 LF	8"	PVC
MH 43 - MH 44	378.94'	378.53'	0.50%	83.37 LF	8"	PVC
MH 44 - MH 45	378.33'	377.70'	0.50%	126.18 LF	8"	PVC
MH 45 - MH 16	377.50'	374.90'	1.88%	138.21 LF	8"	PVC
MH 46 - MH 44	383.73'	380.70'	4.13%	73.40 LF	8"	PVC
MH 47 - MH 48	384.40'	382.81'	2.31%	68.63 LF	8"	PVC
MH 48 - MH 49	382.09'	381.02'	1.00%	106.63 LF	8"	PVC
MH 49 - MH 13	380.82'	379.16'	0.50%	332.23 LF	8"	SDR-26
MH 51 - MH 52	388.70'	384.90'	1.94%	195.71 LF	8"	PVC
MH 52 - MH 54	384.70'	384.10'	0.63%	95.33 LF	8"	Ductile Iron
MH 54 - MH 55	383.79'	383.41'	0.50%	76.17 LF	8"	Ductile Iron
MH 55 - MH 13	383.21'	381.12'	0.50%	418.16 LF	8"	Ductile Iron
MH 60 - MH 14	380.30'	378.90'	2.02%	69.24 LF	8"	PVC
MH 61 - MH 60	382.36'	380.50'	1.61%	115.71 LF	8"	PVC
MH 62 - MH 63	369.00'	368.37'	0.50%	126.81 LF	8"	SDR-26
MH 63 - MH 64	368.17'	367.53'				



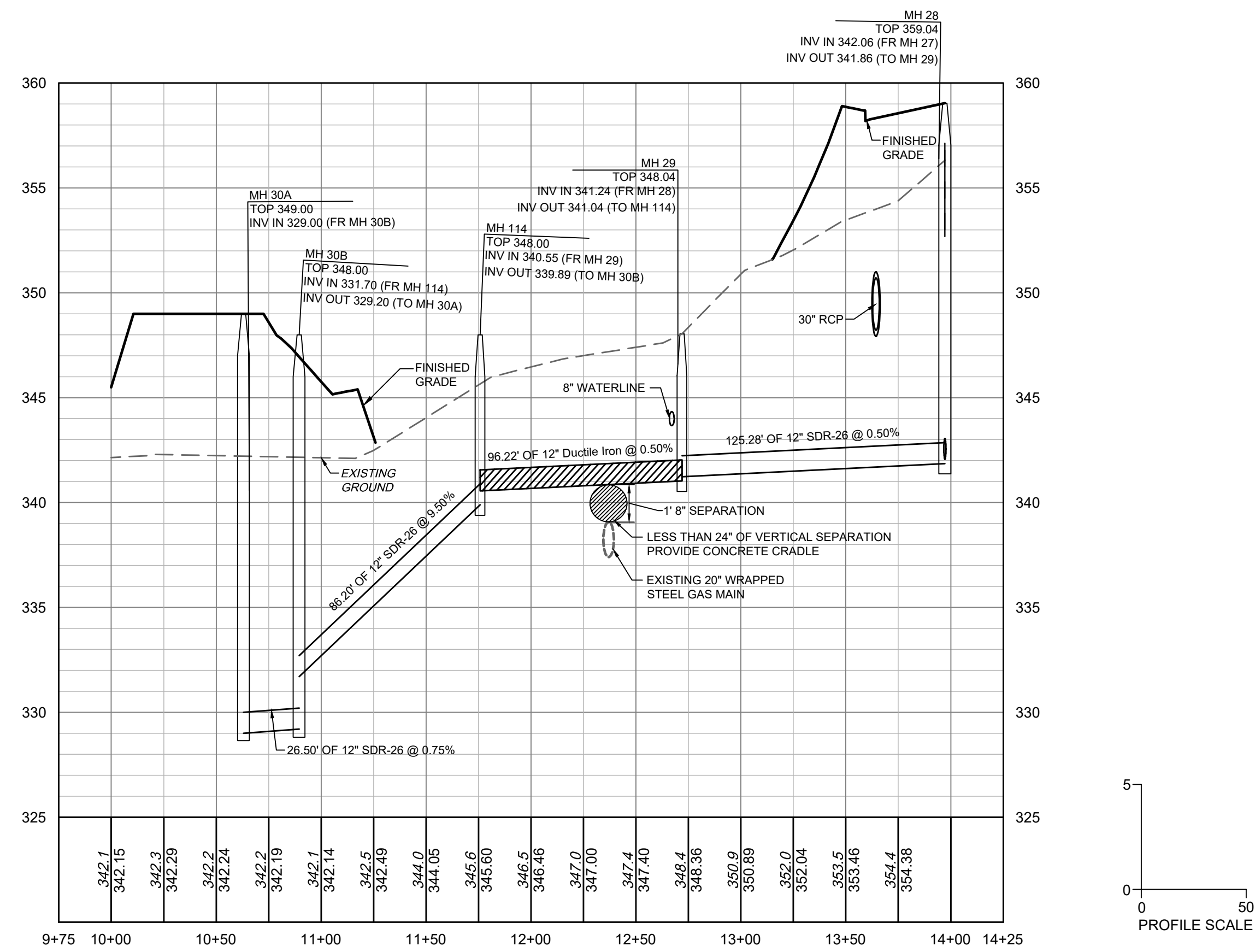
STREAM CROSSING PLAN VIEW
STA 10+00 - 13+92.48



SEWER OUTFALL PLAN VIEW
STA 10+00 - 13+34.20



STREAM CROSSING AND OUTFALL PROFILE VIEW
STA 10+00 - 15+75



SEWER OUTFALL PROFILE VIEW
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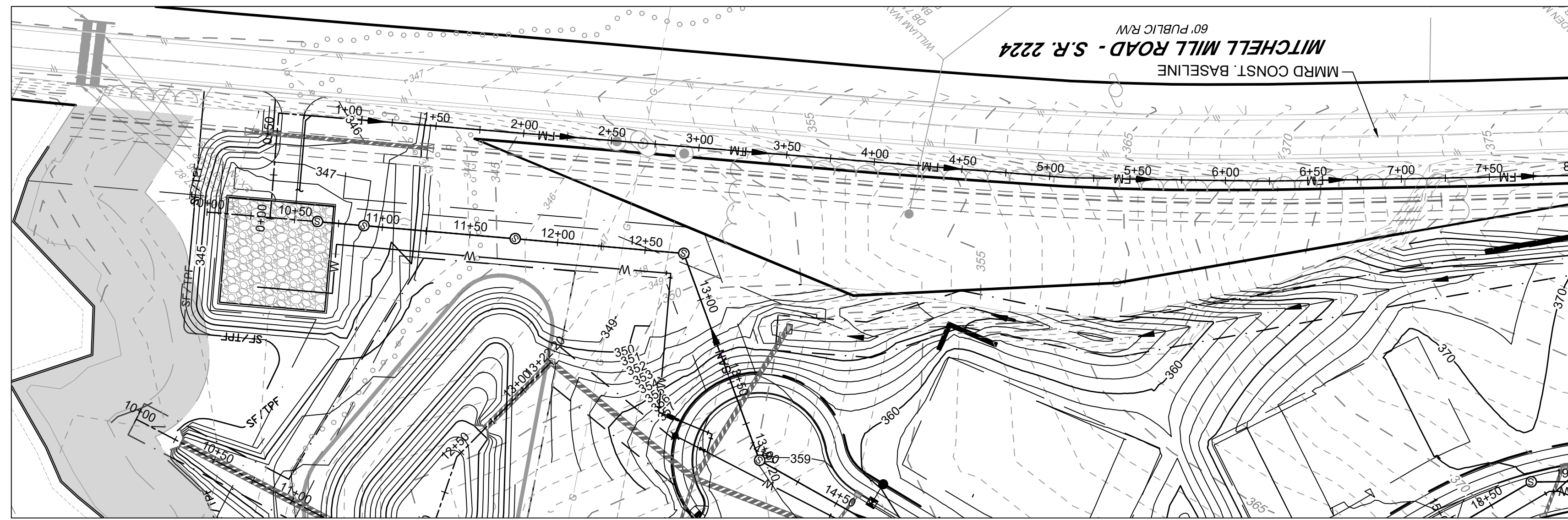
ROLESVILLE CROSSING - CD 21-08

ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
SANITARY SEWER OUTFALL PLAN & PROFILE

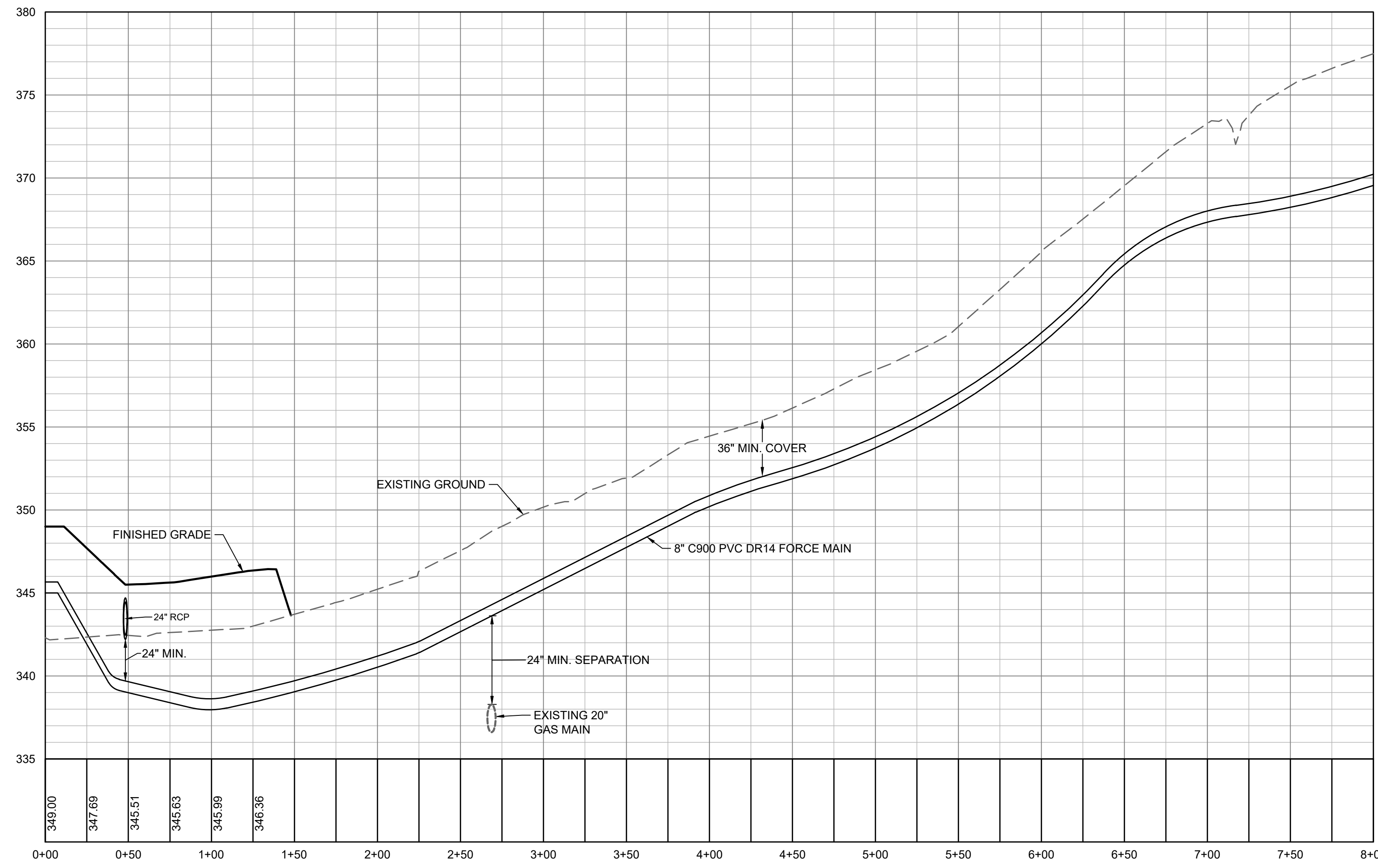
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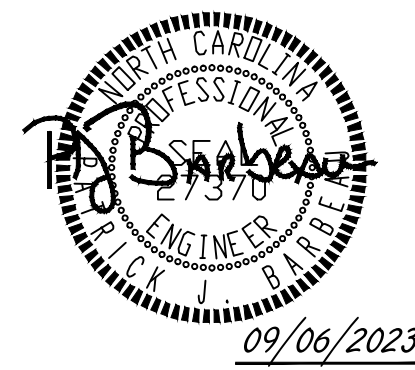
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MITCHELL MILL PUBLIC FORCE MAIN PLAN VIEW
STA 0+00 - 8+00



MITCHELL MILL PUBLIC FORCE MAIN PROFILE VIEW
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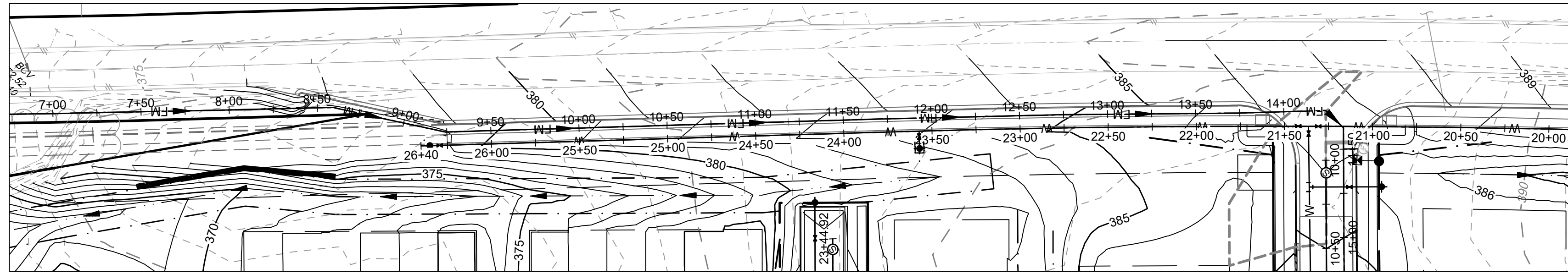
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ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
MITCHELL MILL FORCE MAIN PLAN AND PROFILE

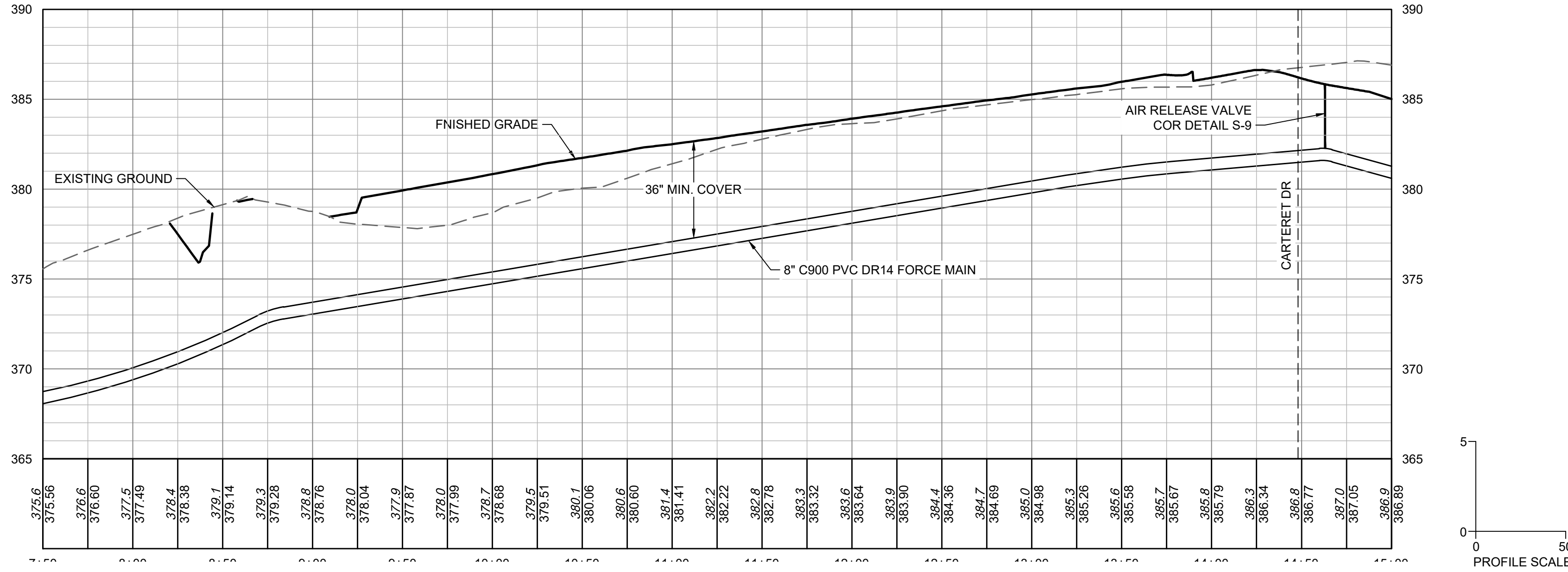
JOB NO.
43398
SHEET NO.
C5.7

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



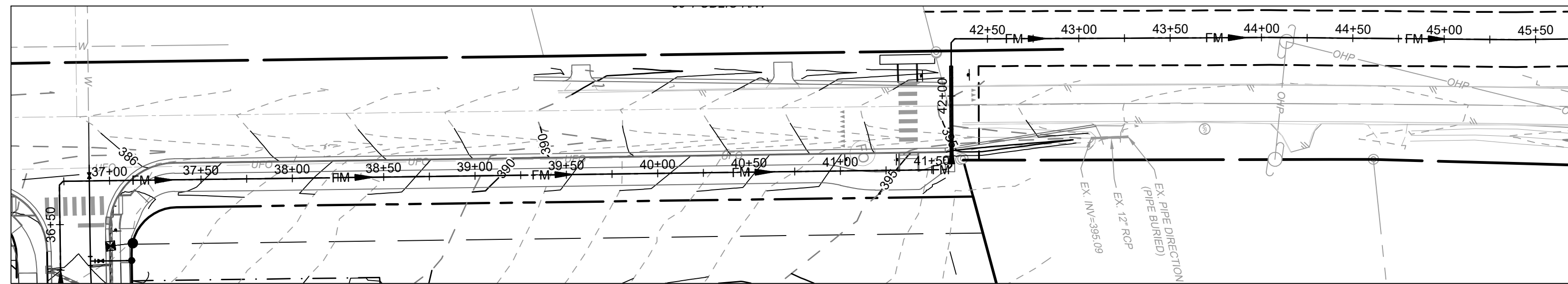
MITCHELL MILL PUBLIC FORCE MAIN PLAN VIEW
STA 0+00 - 8+00

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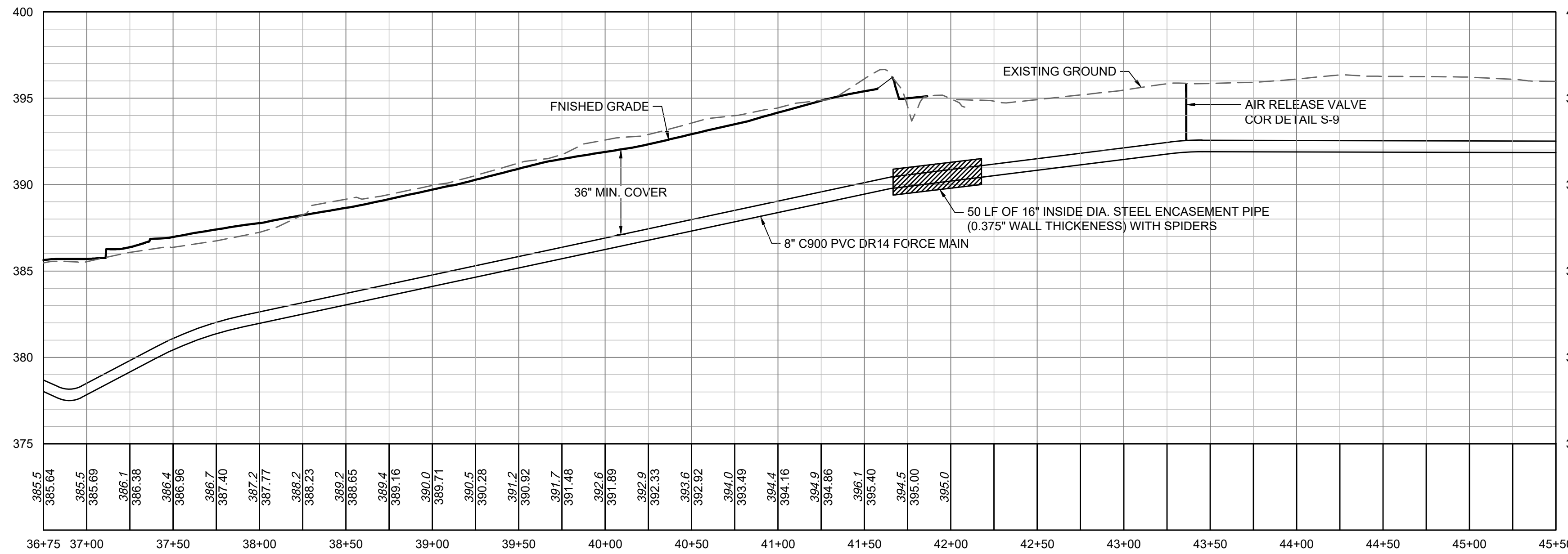


MITCHELL MILL PUBLIC FORCE MAIN PROFILE VIEW
STA 7+50 - 15+50

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PROFILE SCALE

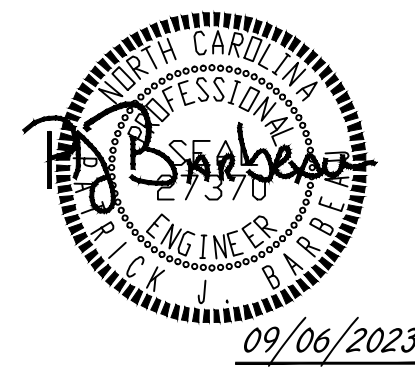


ROLESVILLE RD PUBLIC FORCE MAIN PLAN VIEW
STA 0+00 - 8+00



ROLESVILLE RD PUBLIC FORCE MAIN PROFILE VIEW
STA 7+50 - 15+50

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



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DESIGNED BY
P. BARBEAU
CHECKED BY
P. BARBEAU
SCALE
AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

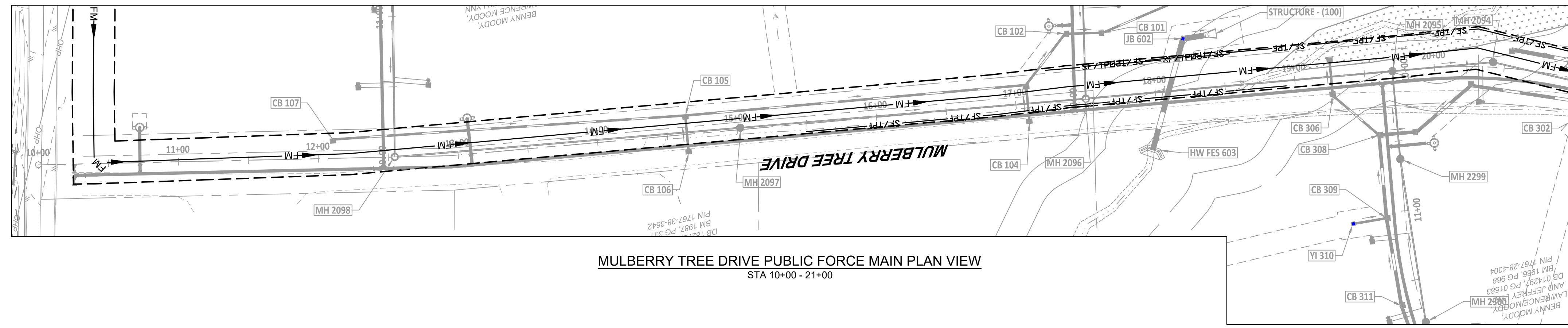
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

MITCHELL MILL AND ROLESVILLE FORCE MAIN PLAN AND PROFILE

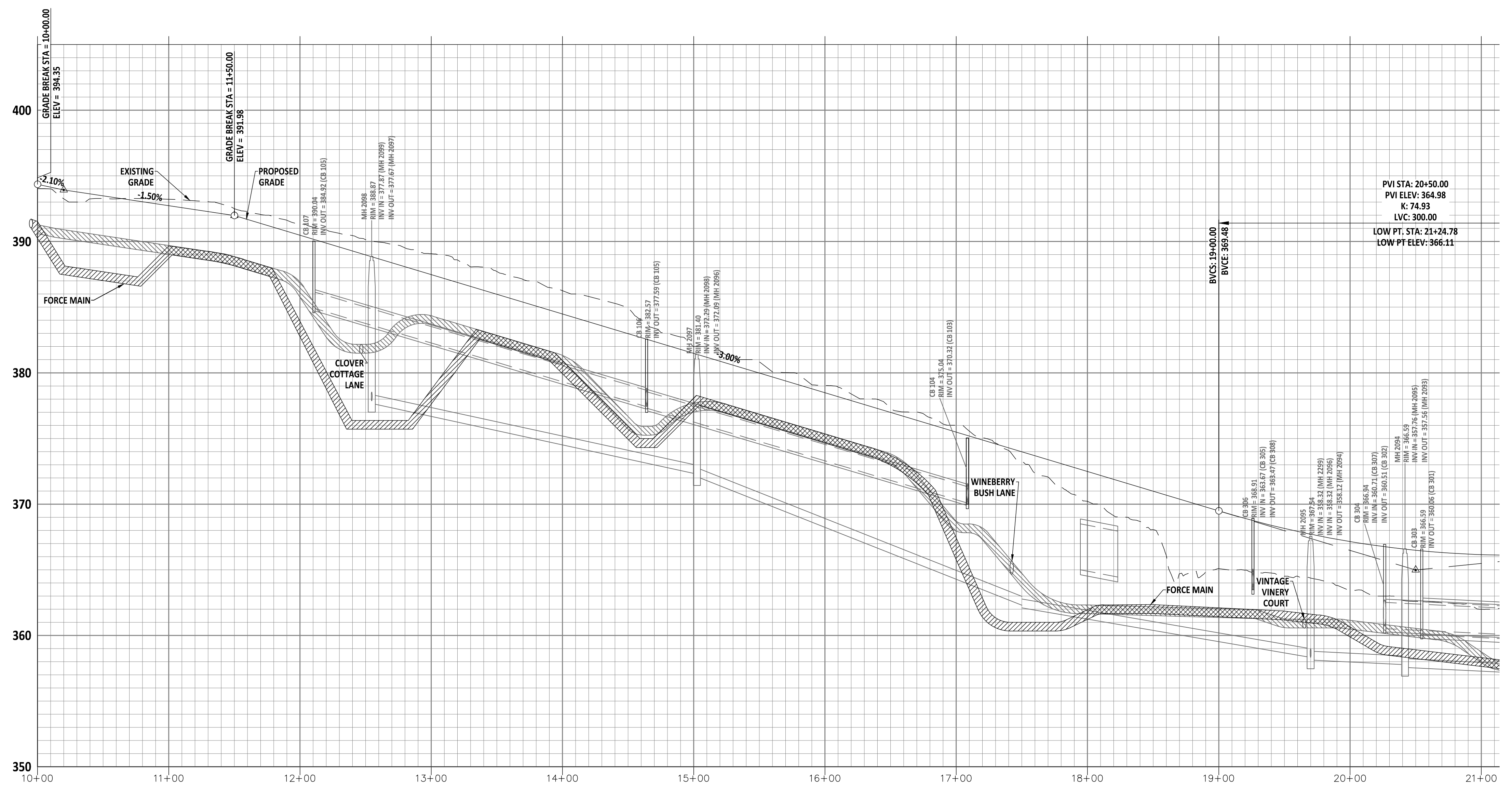
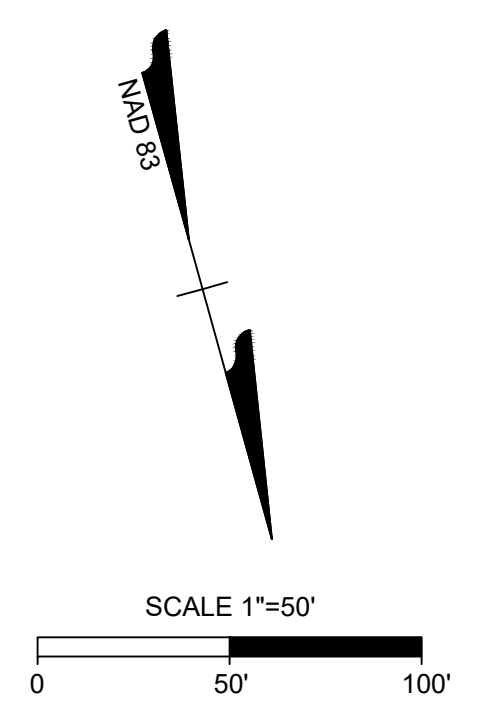
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SHEET NO.
C5.8

DATE	REVISION DESCRIPTION
04/08/2022	REVISIONS PER WAKE COUNTY COMMENTS
06/24/2022	REVISIONS PER WAKE COUNTY COMMENTS
07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

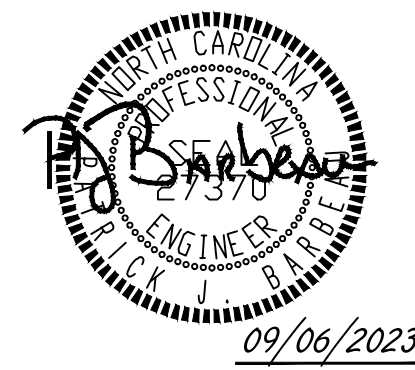
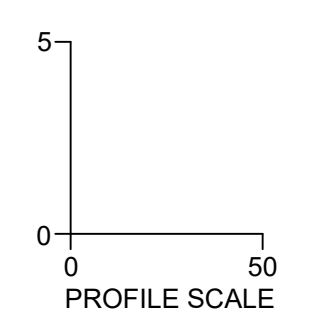
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MULBERRY TREE DRIVE PUBLIC FORCE MAIN PLAN VIEW
STA 10+00 - 21+00



MULBERRY TREE DRIVE PUBLIC FORCE MAIN PROFILE
VIEW
STA 10+00 - 21+00



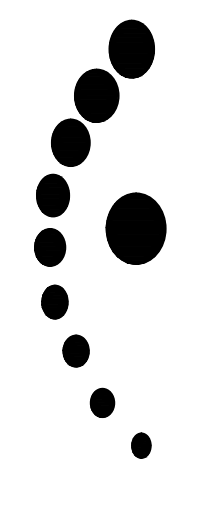
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CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2023
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

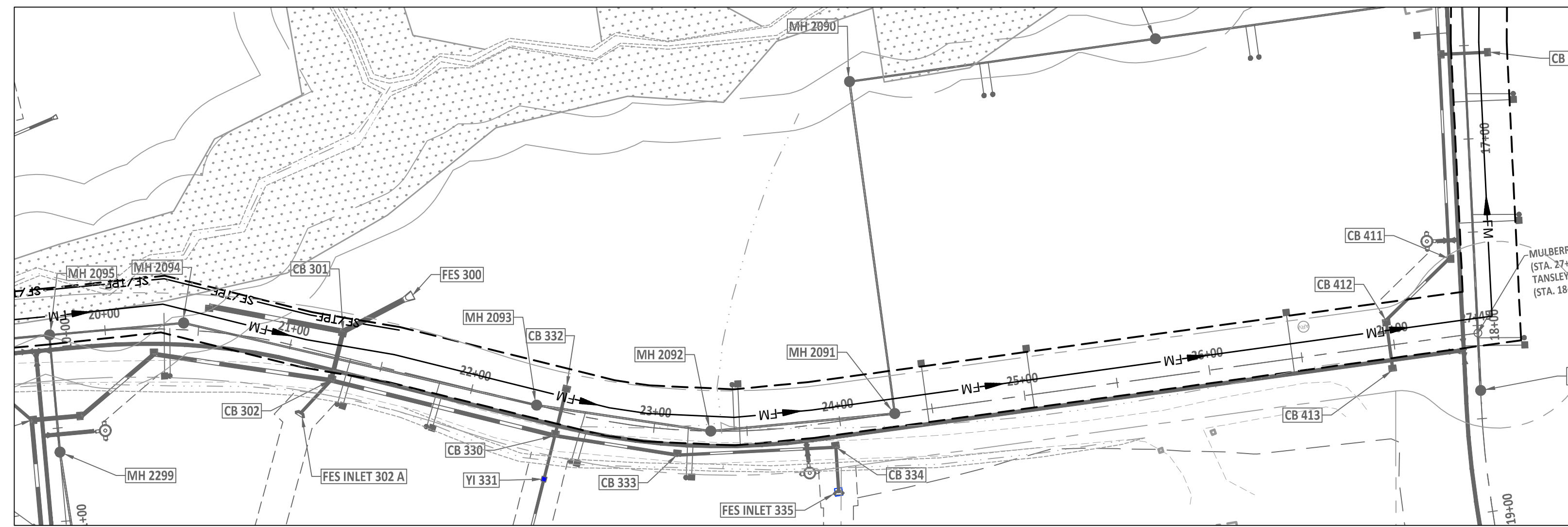
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DRAWN BY
R. WINGATE
DESIGNED BY
P. BARBEAU
CHECKED BY
P. BARBEAU
SCALE
AS SHOWN



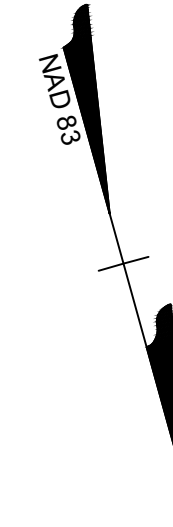
TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
MULBERRY TREE DRIVE FORCE MAIN PLAN AND PROFILE

JOB NO.
43398
SHEET NO.
C5.9

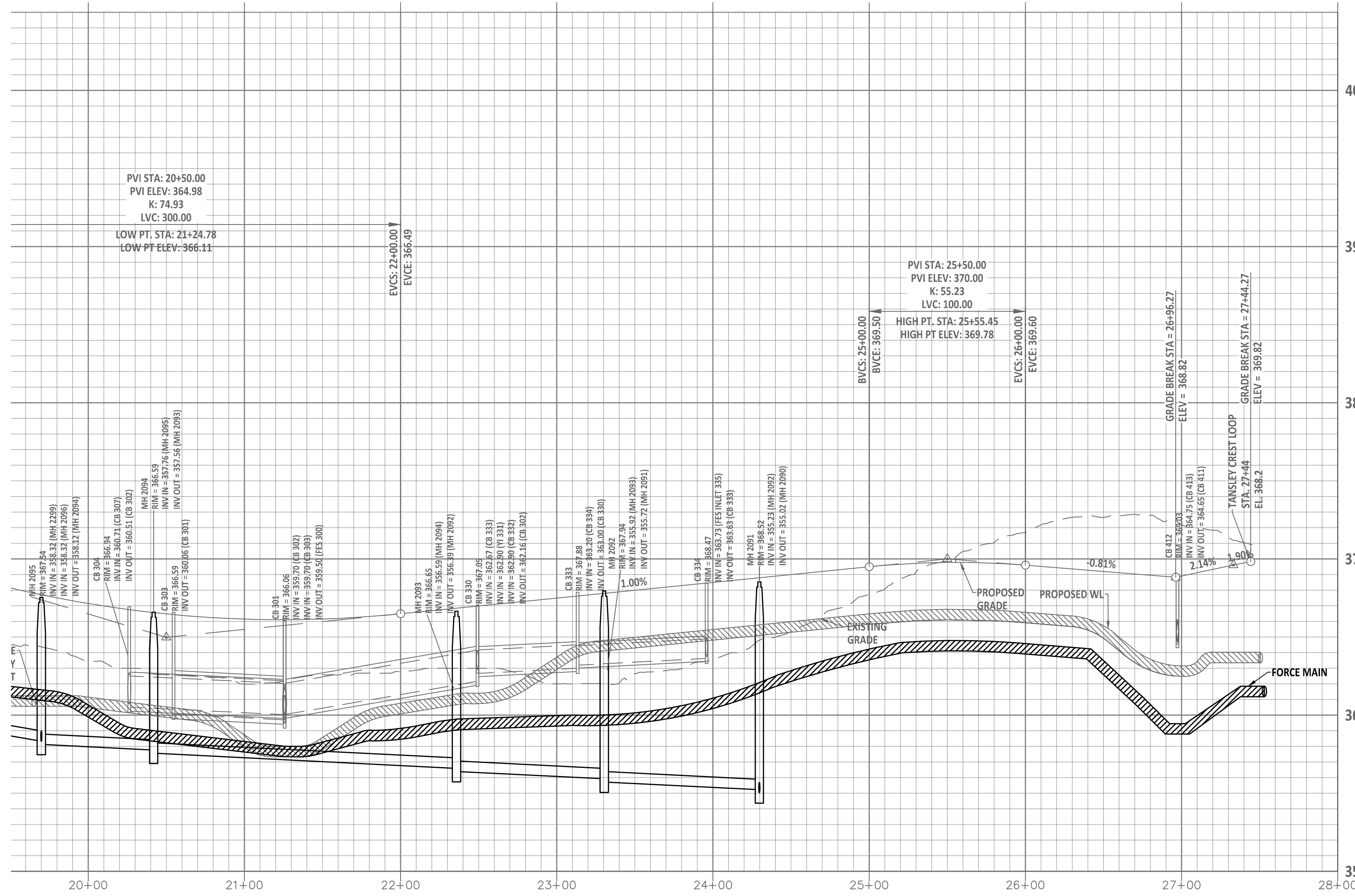
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AMAZON TR PUBLIC FORCE MAIN PLAN VIEW
STA 19+50 - 28+00



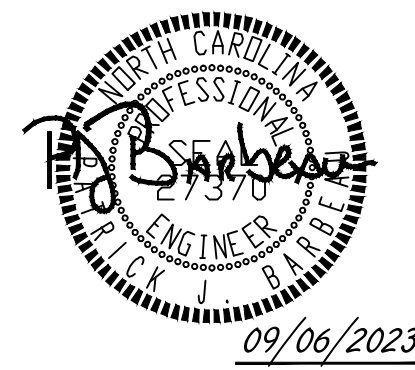
SCALE 1"=50'
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AMAZON TR PUBLIC FORCE MAIN PROFILE VIEW
STA 19+50 - 28+00

PROFILE SCALE
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CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2023
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE

09/17/2021

DRAWN BY
R. WINGATE

DESIGNED BY
P. BARBEAU

CHECKED BY
P. BARBEAU

SCALE
AS SHOWN

TIMMONS GROUP

NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
MULBERRY TREE DRIVE FORCE MAIN PLAN AND PROFILE

JOB NO.
43398

SHEET NO.
C5.10

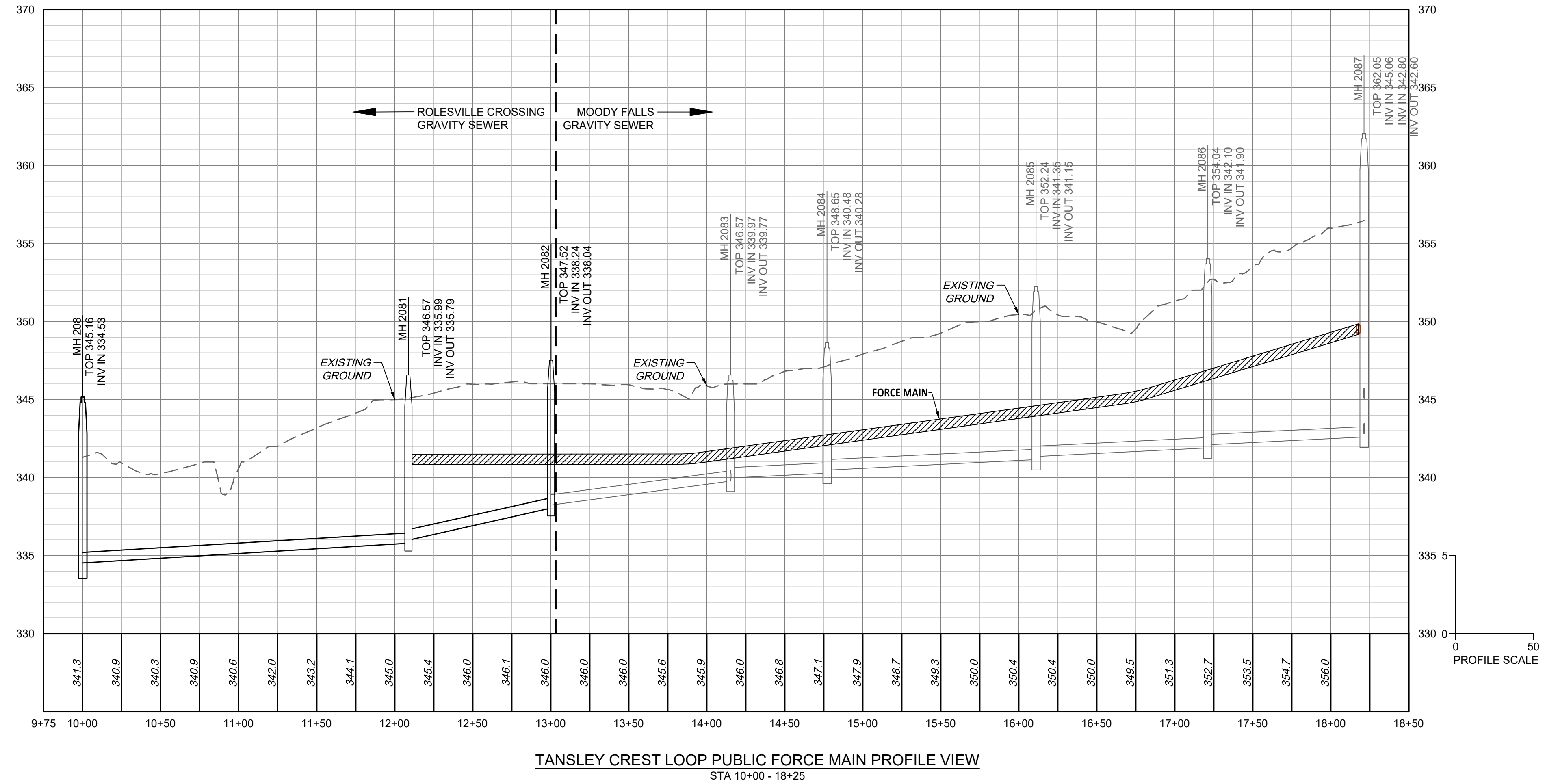
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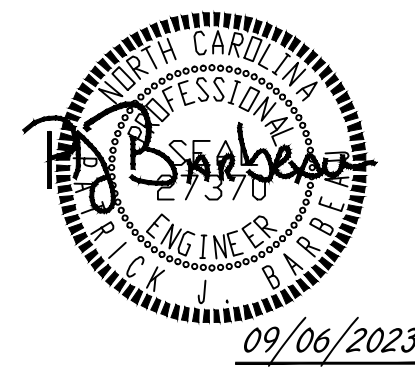
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TANSLEY CREST LOOP PUBLIC FORCE MAIN PLAN VIEW
STA 10+00 - 18+25



TANSLEY CREST LOOP PUBLIC FORCE MAIN PROFILE VIEW
STA 10+00 - 18+25



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07/22/2022	CONSTRUCTION DOCUMENT SUBMITTAL
04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

DATE

09/17/2021

DRAWN BY
R. WINGATE

DESIGNED BY
P. BARBEAU

CHECKED BY
P. BARBEAU

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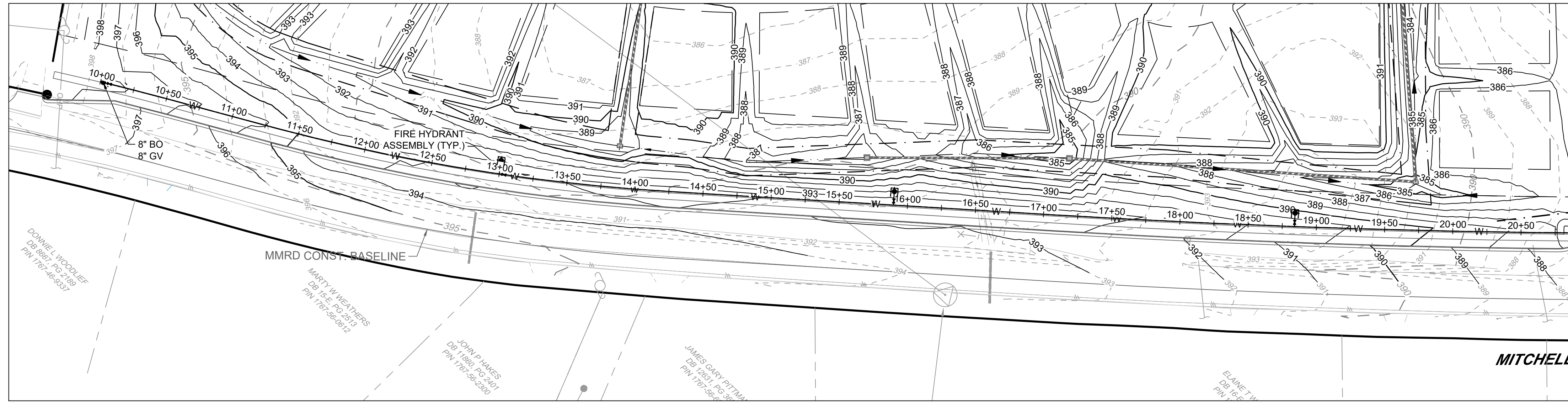
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
TANSLEY CREST LOOP FORCE MAIN PLAN AND PROFILE
NORTH CAROLINA LICENSE NO. C-1652

JOB NO.
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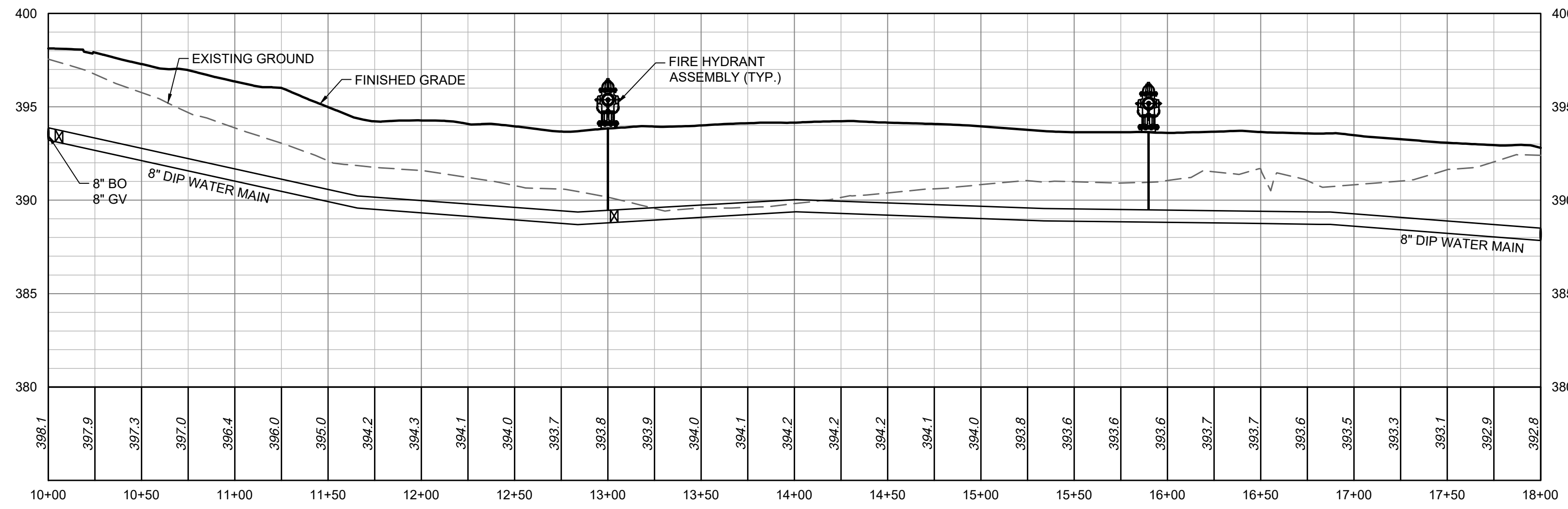
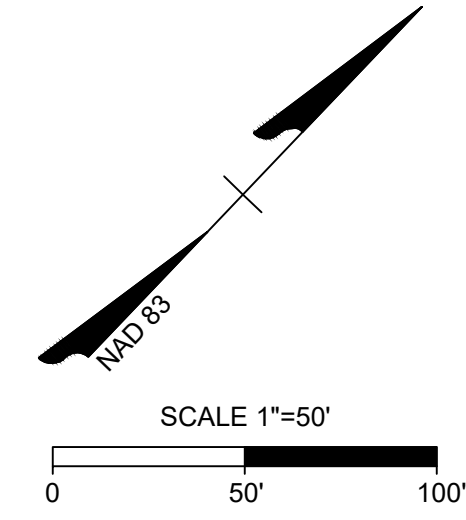
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ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

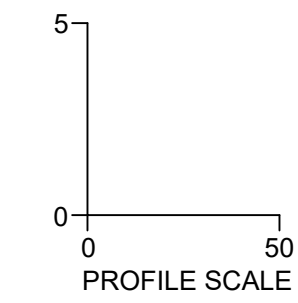
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MITCHELL MILL PUBLIC WATER MAIN PLAN VIEW
STA 10+00 - 18+00



MITCHELL MILL PUBLIC WATER MAIN PROFILE VIEW
STA 10+00 - 18+00



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REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

DATE
09/17/2021
DRAWN BY
R. WINGATE
DESIGNED BY
P. BARBEAU
CHECKED BY
P. BARBEAU
SCALE
AS SHOWN

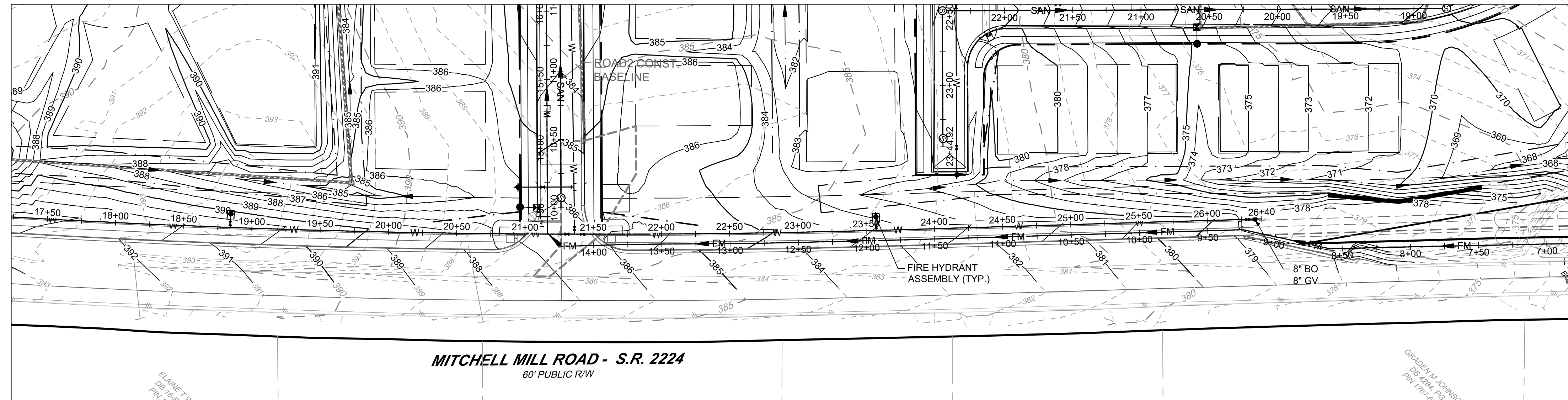
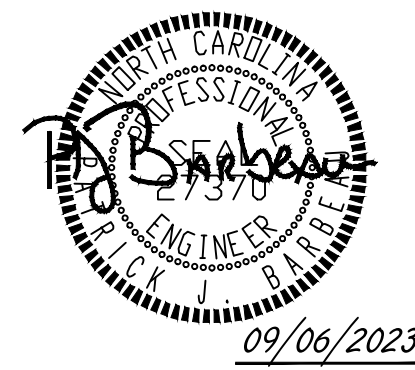


NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
MITCHELL MILL WATER MAIN PLAN AND PROFILE

JOB NO.
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SHEET NO.
C5.12

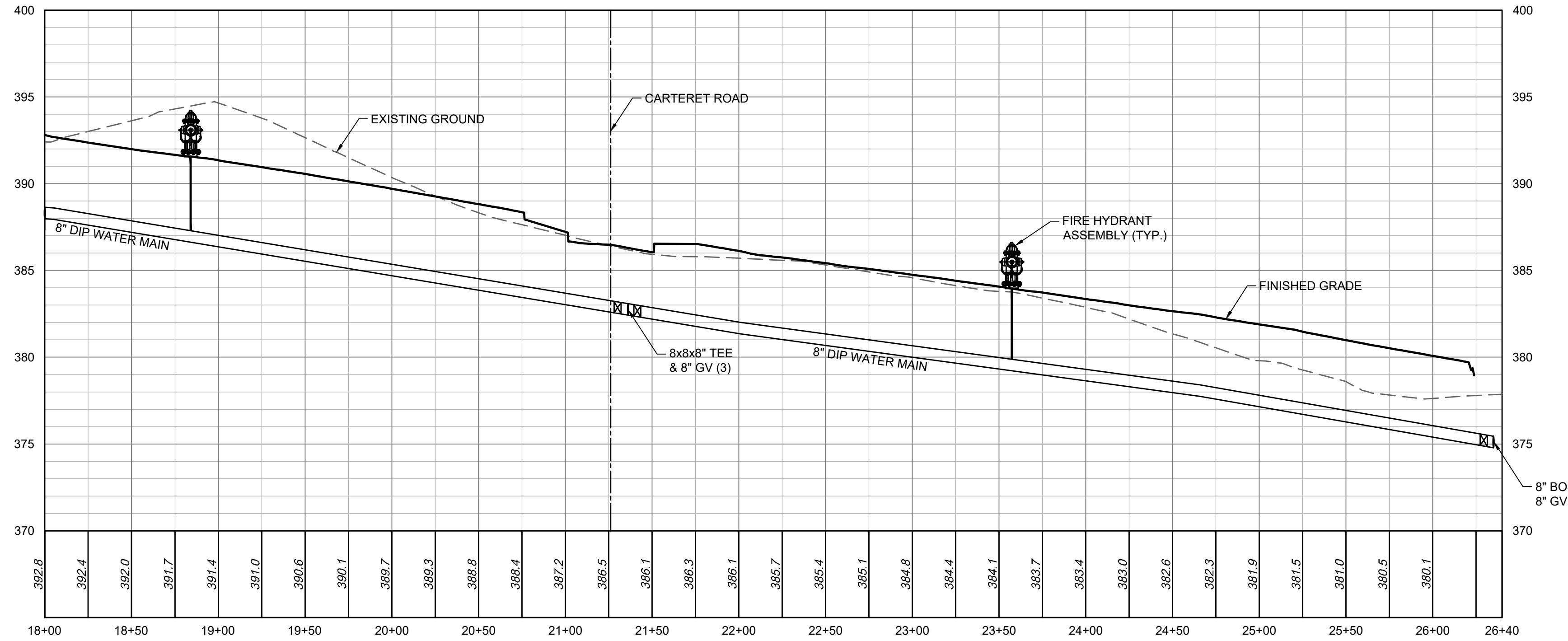
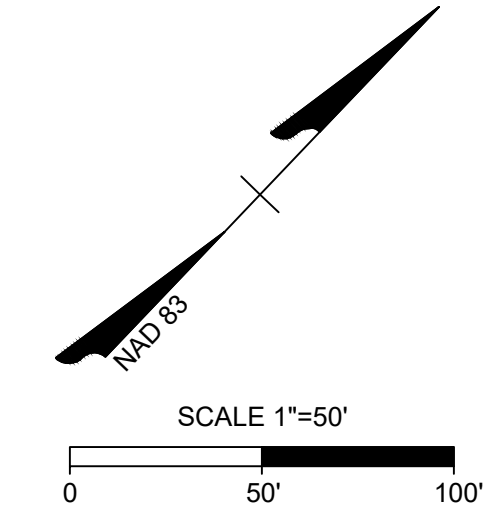
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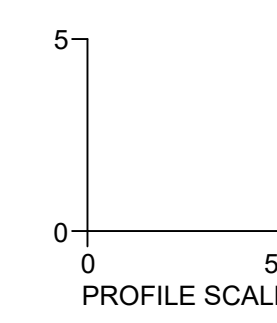


MITCHELL MILL ROAD - S.R. 2224
60' PUBLIC R/W

MITCHELL MILL PUBLIC WATER MAIN PLAN VIEW
STA 18+00 - 26+40



MITCHELL MILL PUBLIC WATER MAIN PROFILE VIEW
STA 18+00 - 26+40



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REVISION DESCRIPTION
REVISIONS PER WAKE COUNTY COMMENTS
REVISIONS PER WAKE COUNTY COMMENTS
CONSTRUCTION DOCUMENT SUBMITTAL
REVISIONS PER NCDOT COMMENTS
REVISIONS PER CITY OF RALEIGH COMMENTS

DATE
09/17/2021

DRAWN BY
R. WINGATE

DESIGNED BY
P. BARBEAU

CHECKED BY
P. BARBEAU

SCALE
AS SHOWN

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08
ROLESVILLE - WAKE COUNTY - NORTH CAROLINA

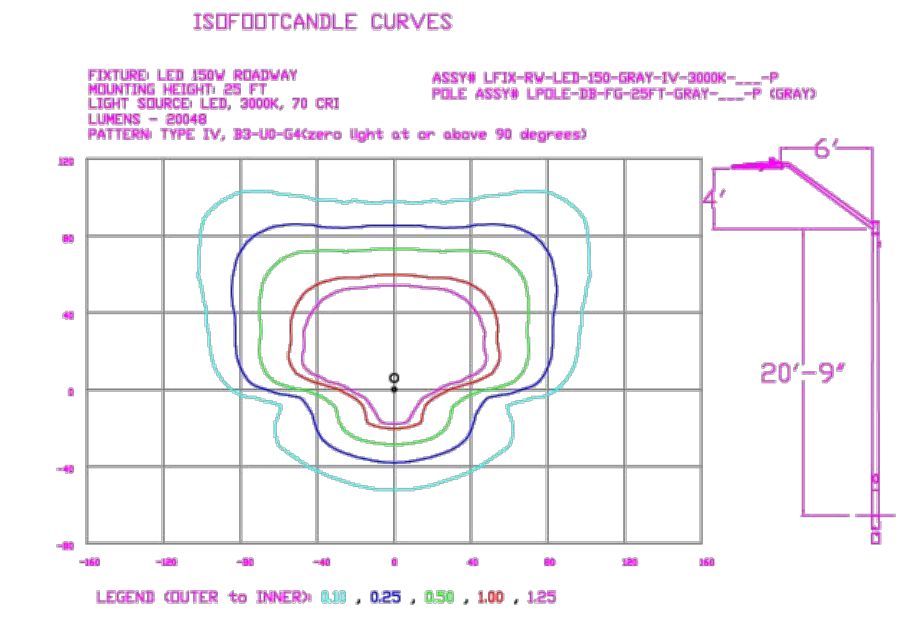
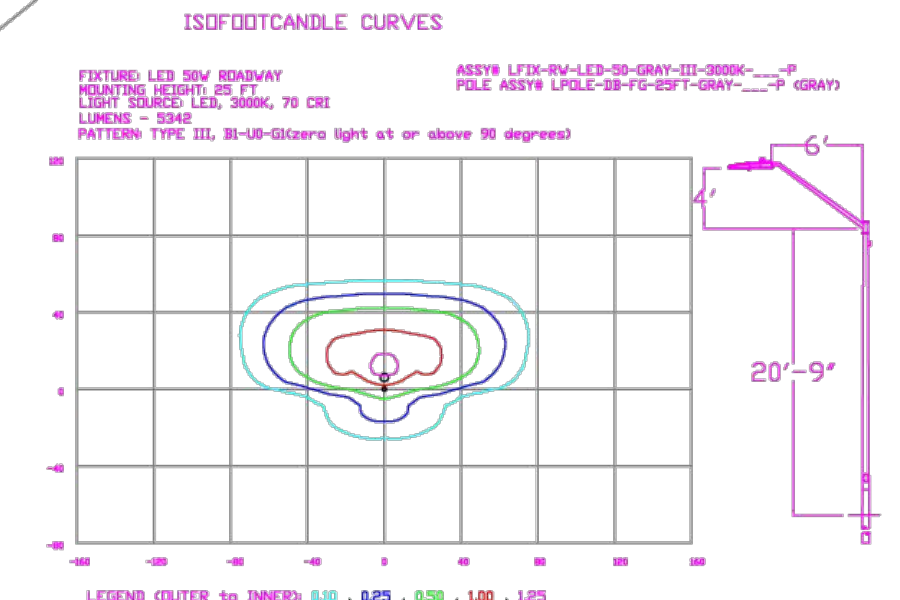
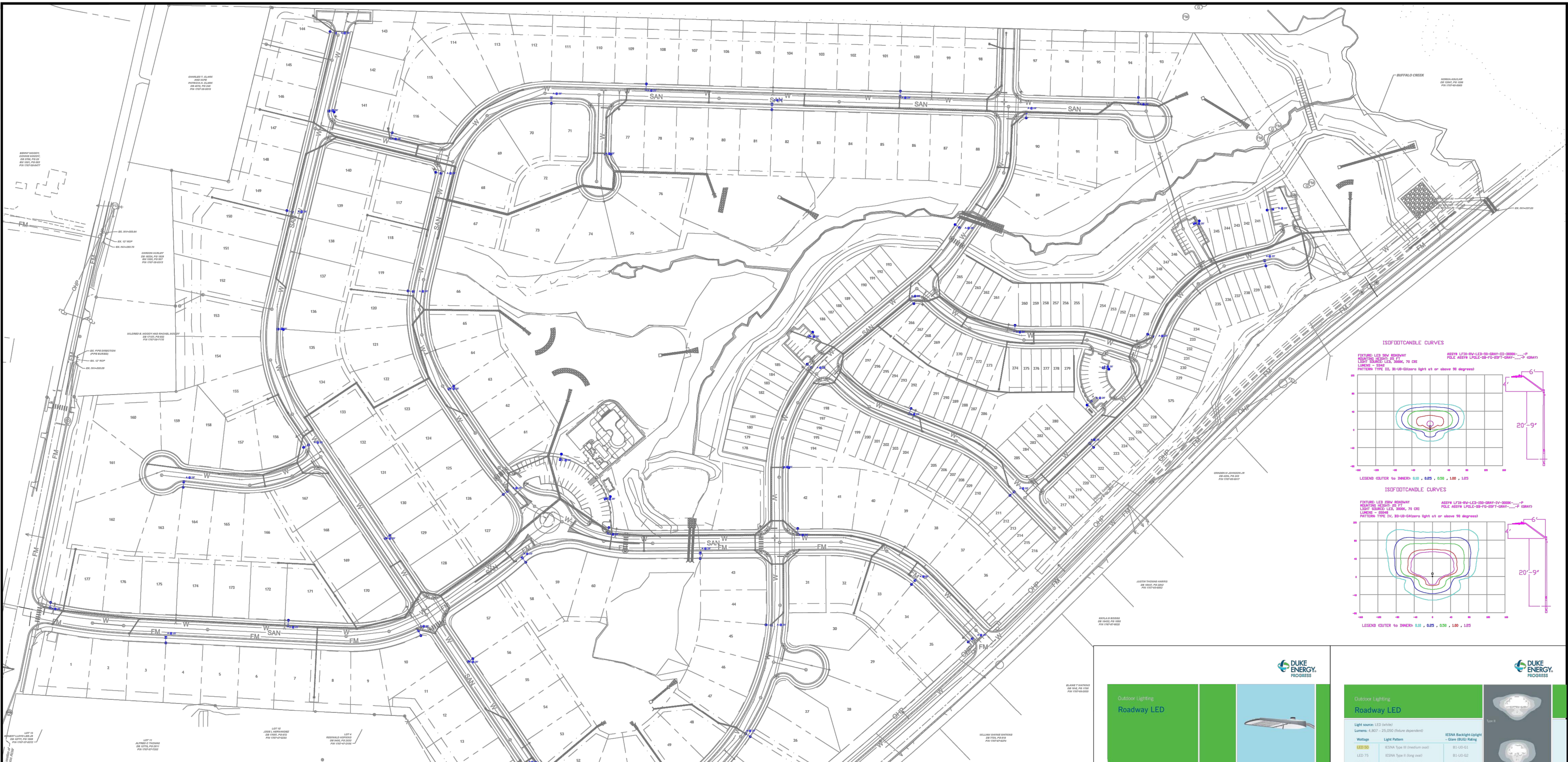
MITCHELL MILL WATER MAIN PLAN AND PROFILE

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C5.13

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Road	X	0.3 fc	1.5 fc	0.0 fc	N/A	N/A

Schedule

Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
⊗	A	44	LED 50w Roadway - Type III - 3000K - Street Lighting	1	5342	0.85
⊗	B	5	LED 50w Roadway - Type III - 3000K - Parking Lighting	1	5342	0.85
⊗	C	2	LED 150w Roadway - Type IV - 3000K - Parking Lighting	1	20049	0.85

Outdoor Lighting
Roadway LED

The Roadway LED is a green solution and great fit for streets, roads, long narrow areas and parking lots. The energy-efficient luminaire delivers the light where it is needed while increasing visibility and reducing spill light to adjoining properties. Choose low to medium light output as road or highway poles for event or an existing pole. Available with one to four fixtures per pole, depending on the fixture/pole combination selected.

LED (Eight Emitting Diodes) | 50 | 75 | 105 | 150 | 215 | 280 watts

Mounting heights | 25', 30', 35'

Color | Gray/black

Poles | Fiberglass, Metal (special conditions), Wood

For additional information, visit our website www.dukeenergy.com/outdoorlighting or call us toll free at 888.765.2423.

Outdoor Lighting
Roadway LED

Light source: LED (variable)

Wattage	Light Pattern	IESNA Backlight (light) - Beam (BGC) Rating
50/75	IESNA Type III (medium beam)	81-100-01
LED 75	IESNA Type III (long beam)	81-100-02
LED 105	IESNA Type III (medium beam)	81-100-03
LED 150	IESNA Type III (medium beam)	81-100-02
LED 215	IESNA Type III (medium beam)	81-100-03
LED 280	IESNA Type III (medium beam)	81-100-04

Color temperature: 2700K
 Warm-up and restrike time: Instant on the warm-up or restrike time

Poles available:

Material	Mounting height	Color
Fiberglass	25', 30', 35'	Gray
Wood	25', 30', 35'	Black (additional cost)
Wood	25', 30', 35'	Standard
Metal (special conditions)*	25', 30', 35'	Gray

Features:

Feature	Benefit
Little or no installation cost	Free up capital for other projects
Design services by lighting professionals included	Meets industry standards and lighting performance
Maintenance included	Eliminates high and associated repair bills
Electricity included	Less expensive than network services
Warranty included	Worry-free
One low monthly cost as your electric bill	Convenience and savings for you
Backed by over 40 years of experience	Proven track record in installation and service
	A name you can trust today... and tomorrow

*Metal foundation available upon request.

REV#	DATE	REVISION	BY
Rev B	07/19/22	Updated Site Plan	NJ
Rev A	12/01/2021	LED 50w & 150w Roadway - 3000K - Gray	NJ

Customer approval
 Date _____

DISTANCE CALIBRATION (INCHES)

LIGHTING DESIGN TOLERANCE

The calculated footcandle light levels in this lighting design are predicted values and are based on specific information that has been supplied to Duke Energy. Any inaccuracies in the supplied information, differences in luminaire installation, lighted area geometry including elevation differences, reflective properties of surrounding surfaces, obstructions (foliage or otherwise) in the lighted area, or lighting from sources other than listed in this design may produce different results from the predicted values. Normal tolerances of voltage, lamp output, and ballast and luminaire manufacture will also affect results.



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ROLESVILLE CROSSINGS
 Rolesville, NC

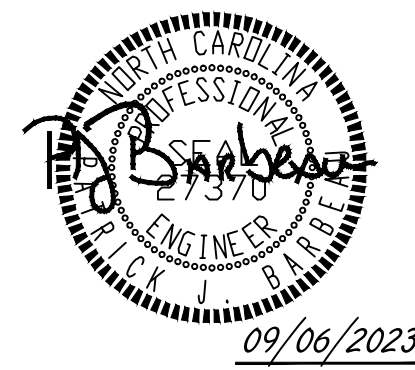
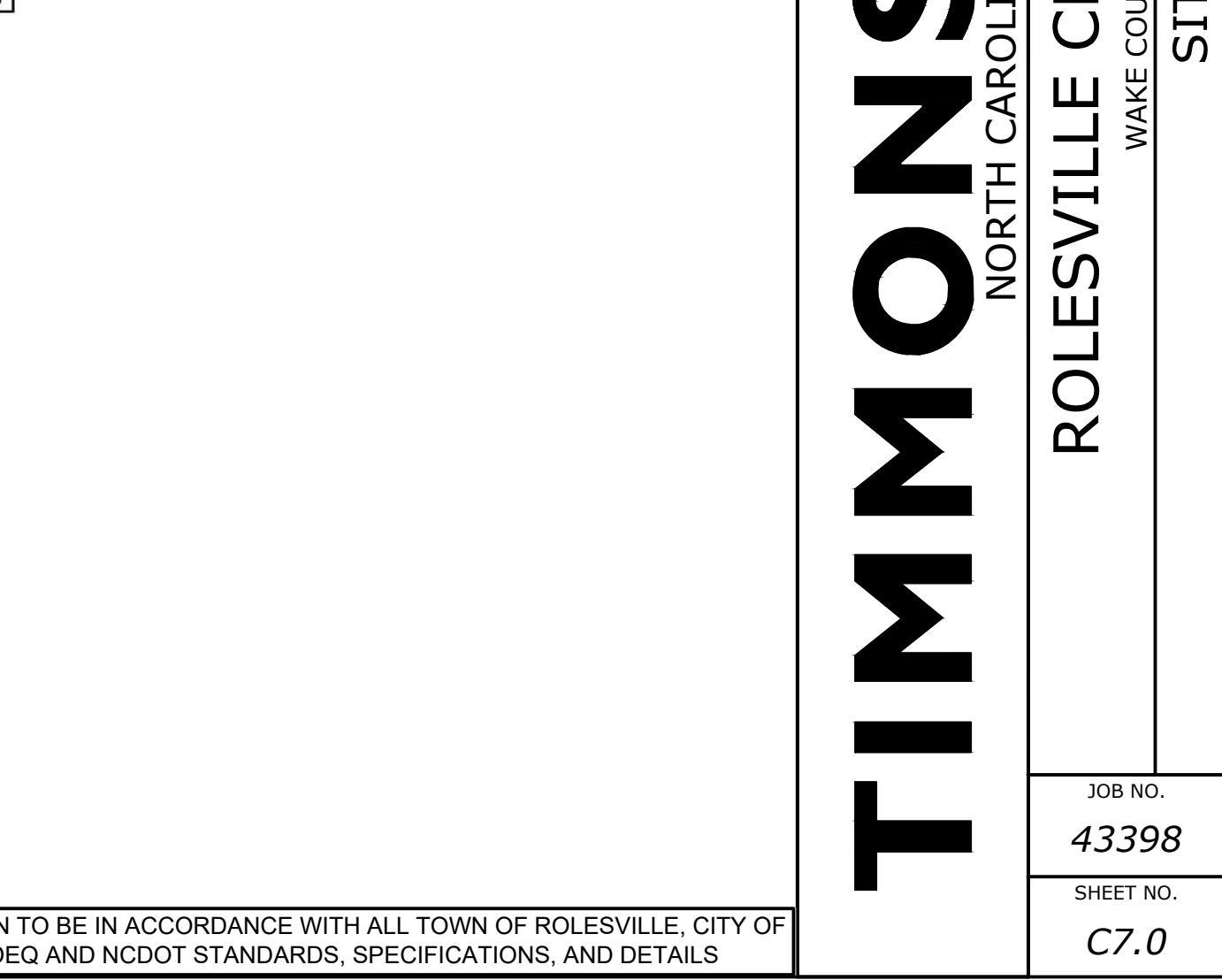
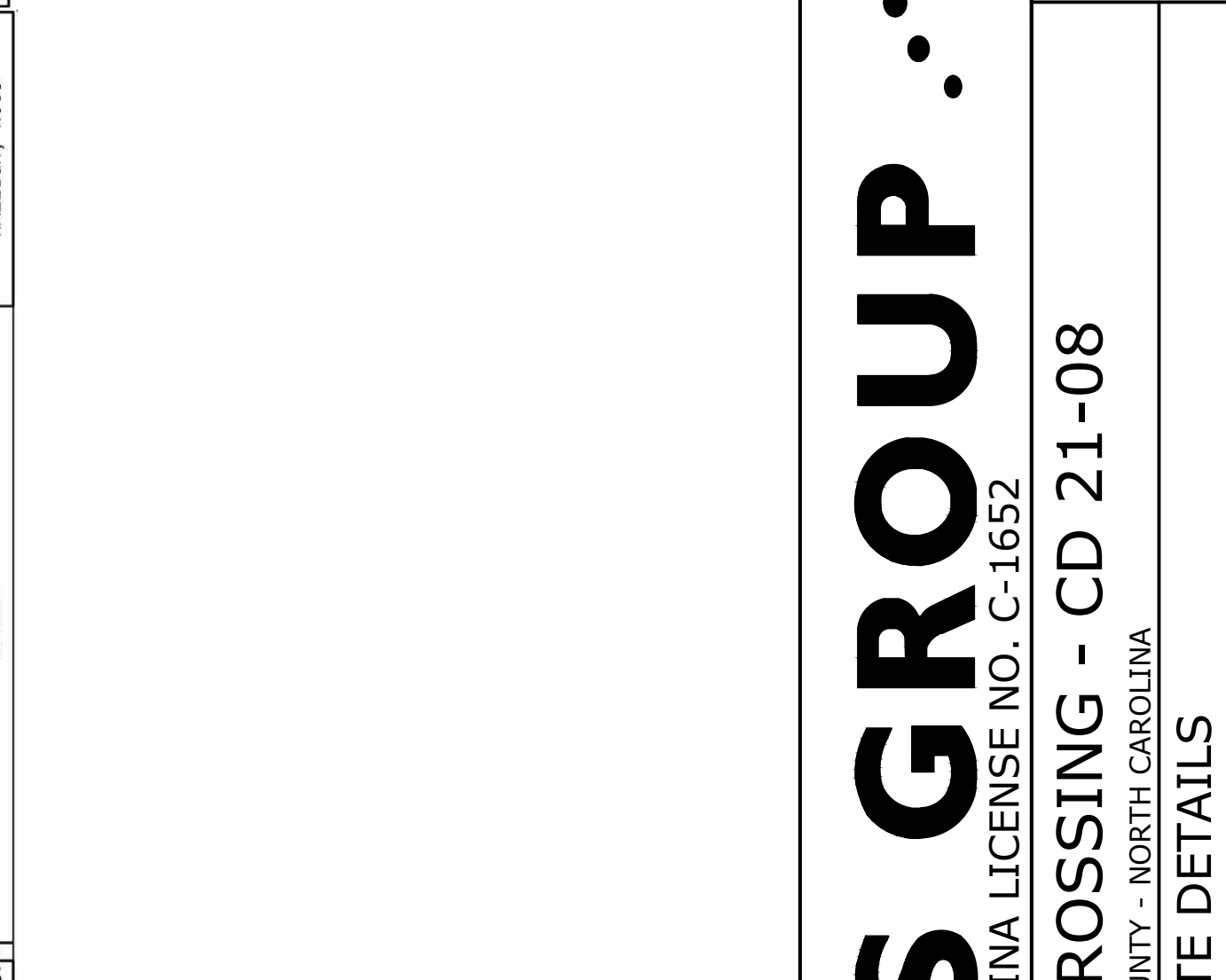
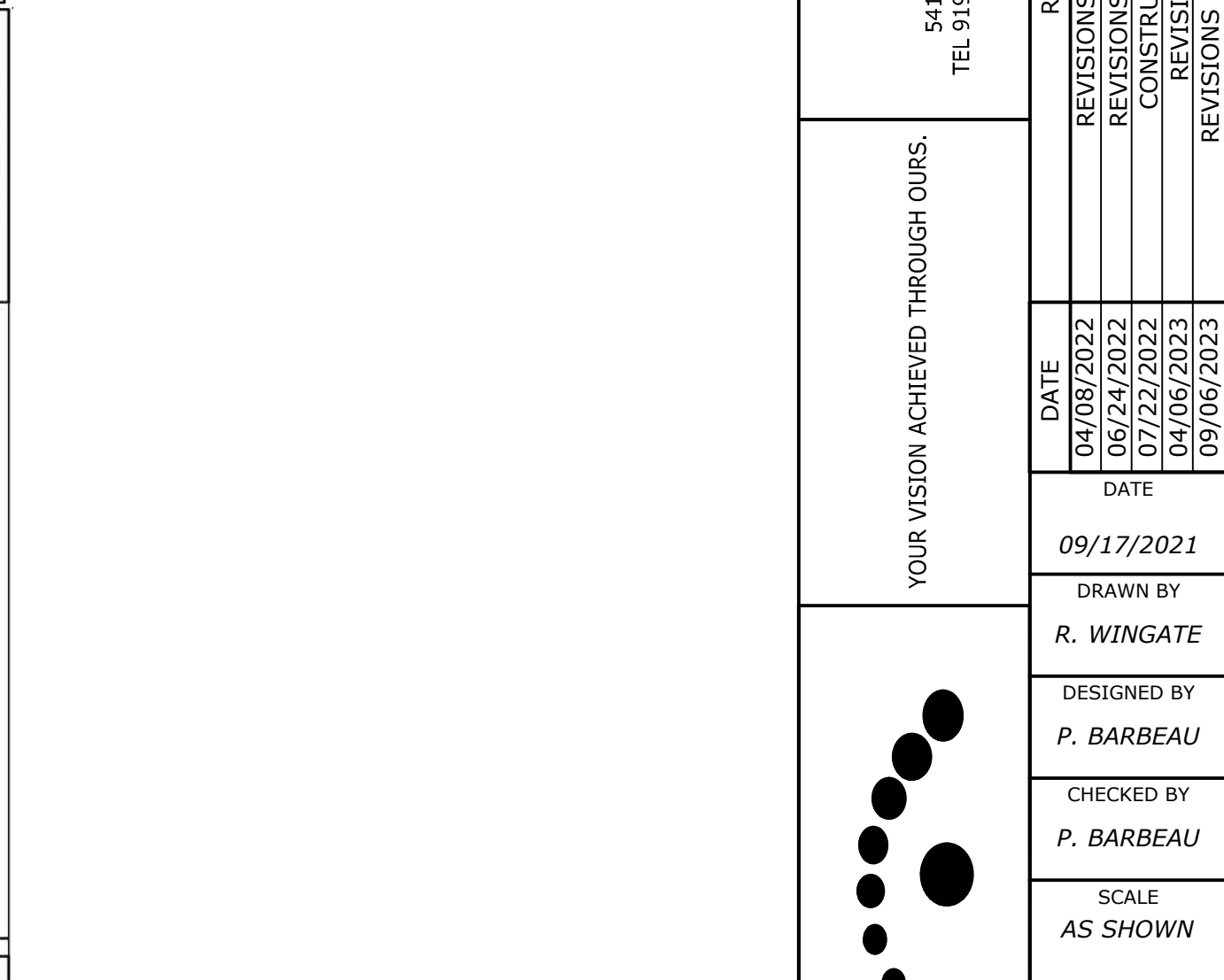
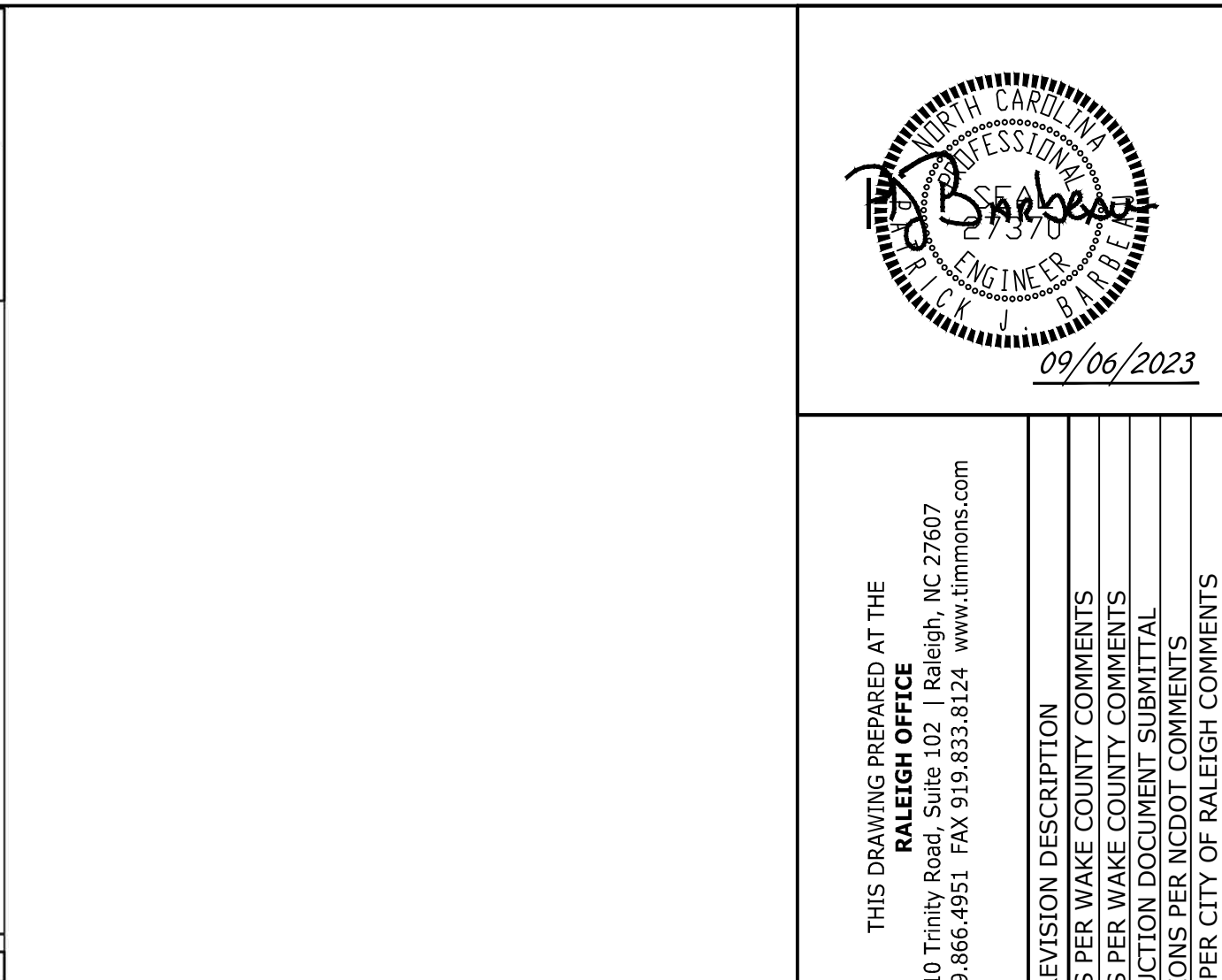
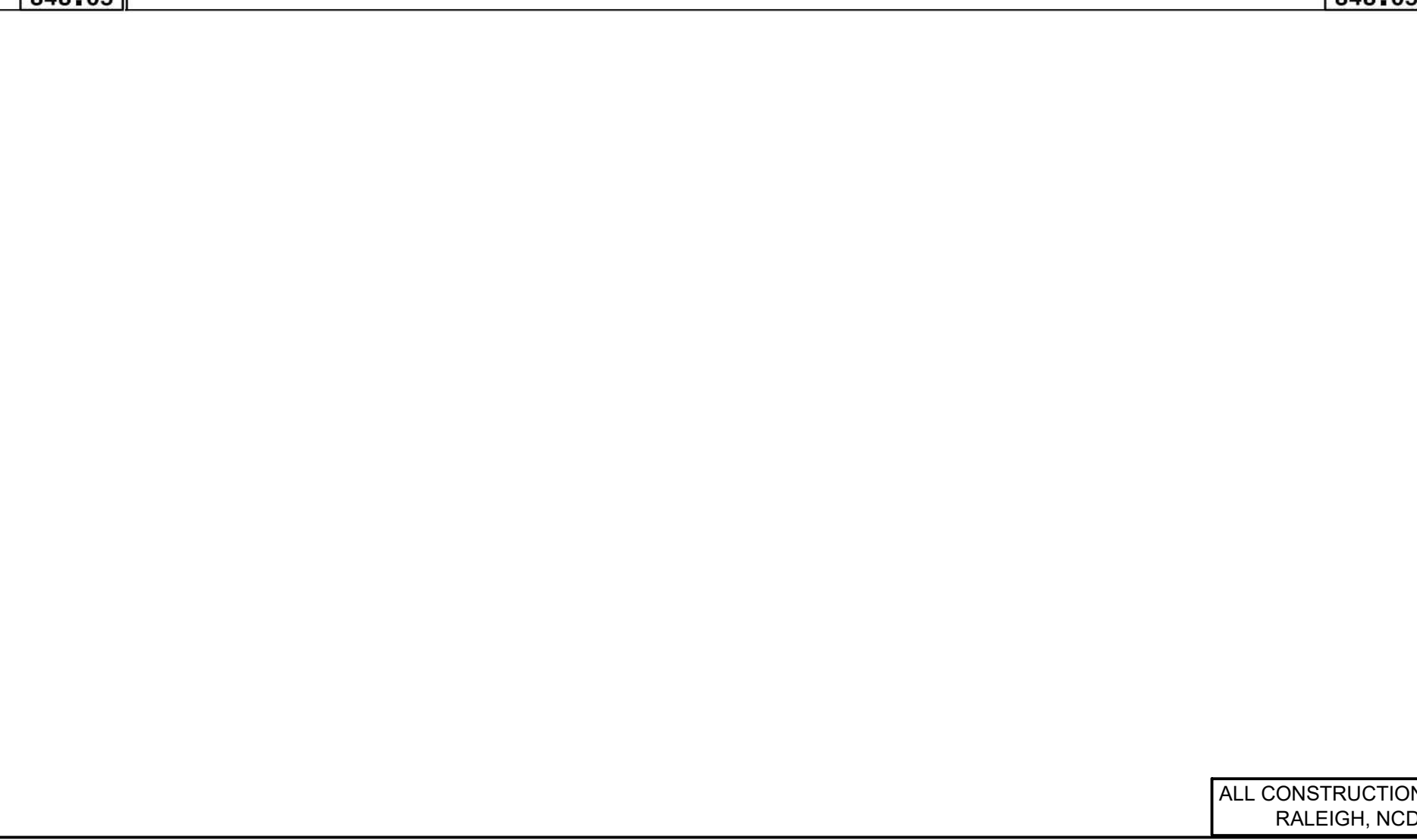
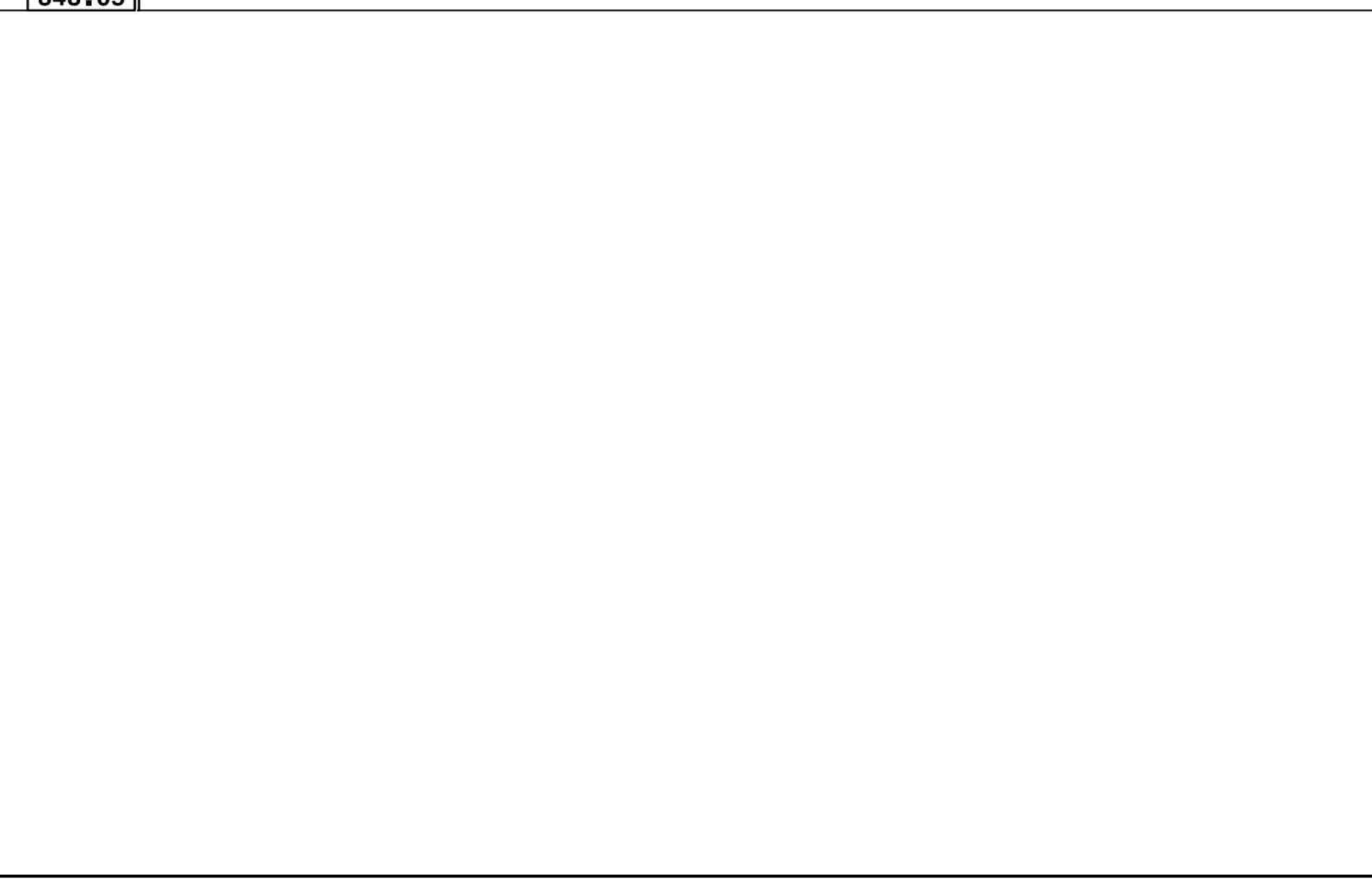
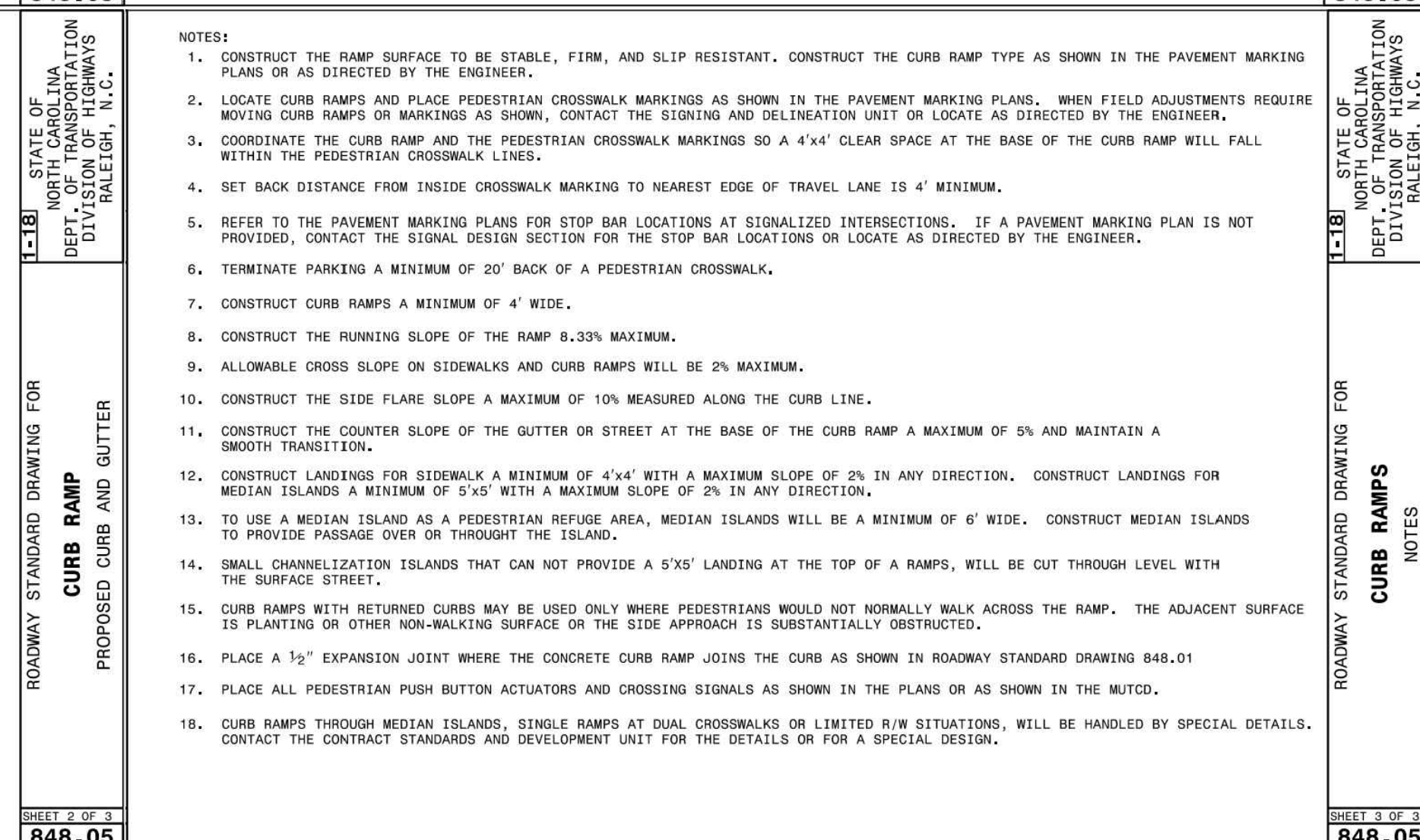
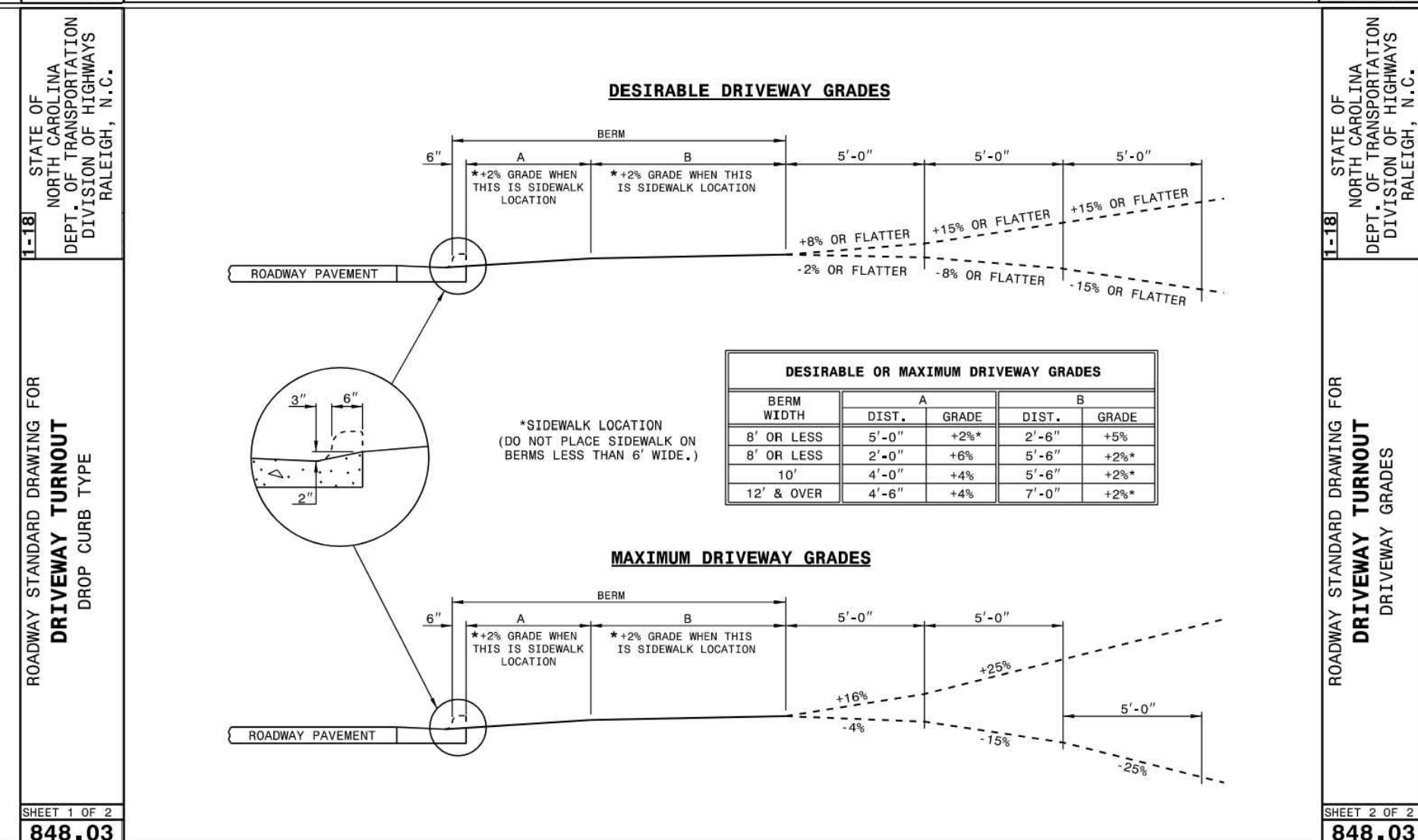
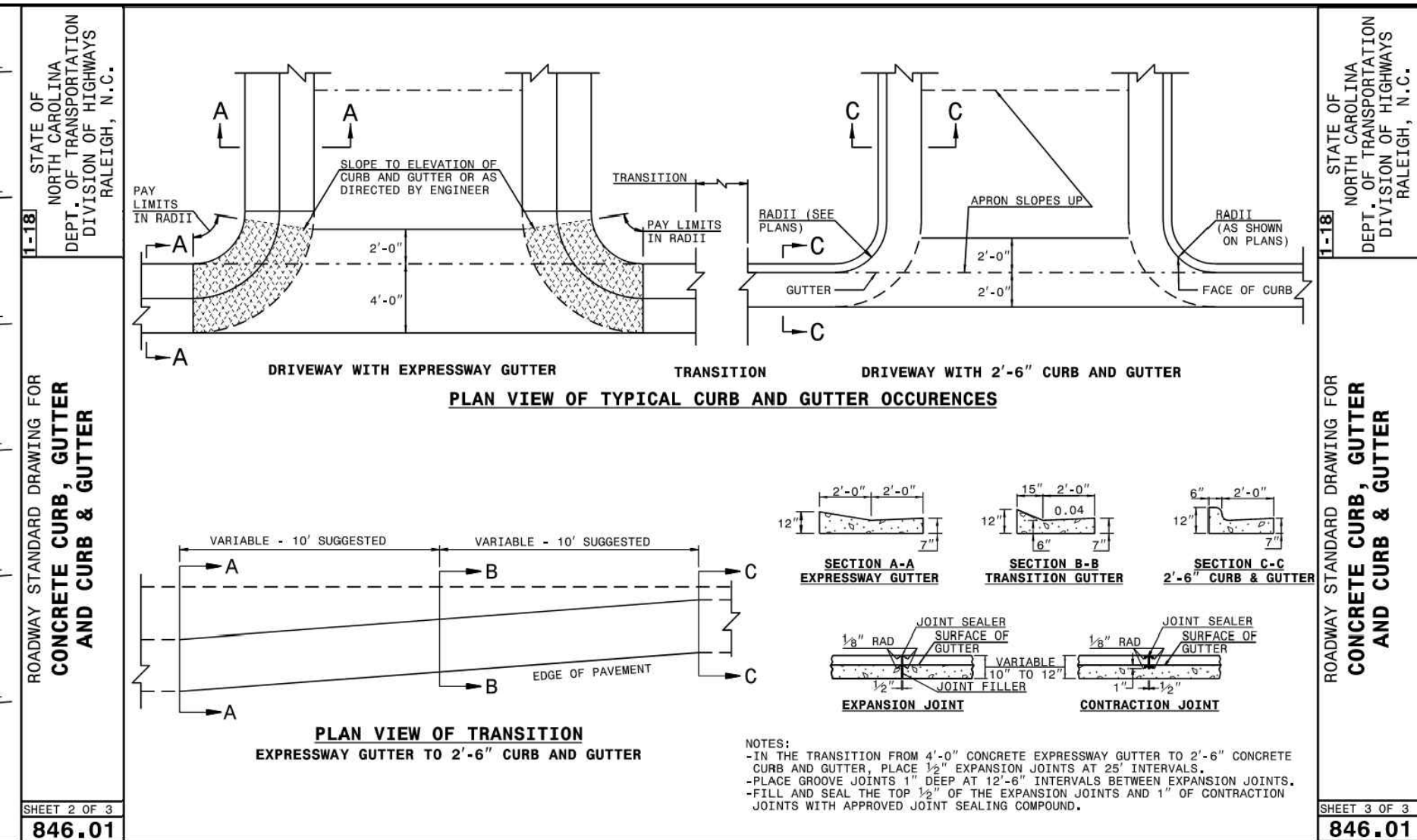
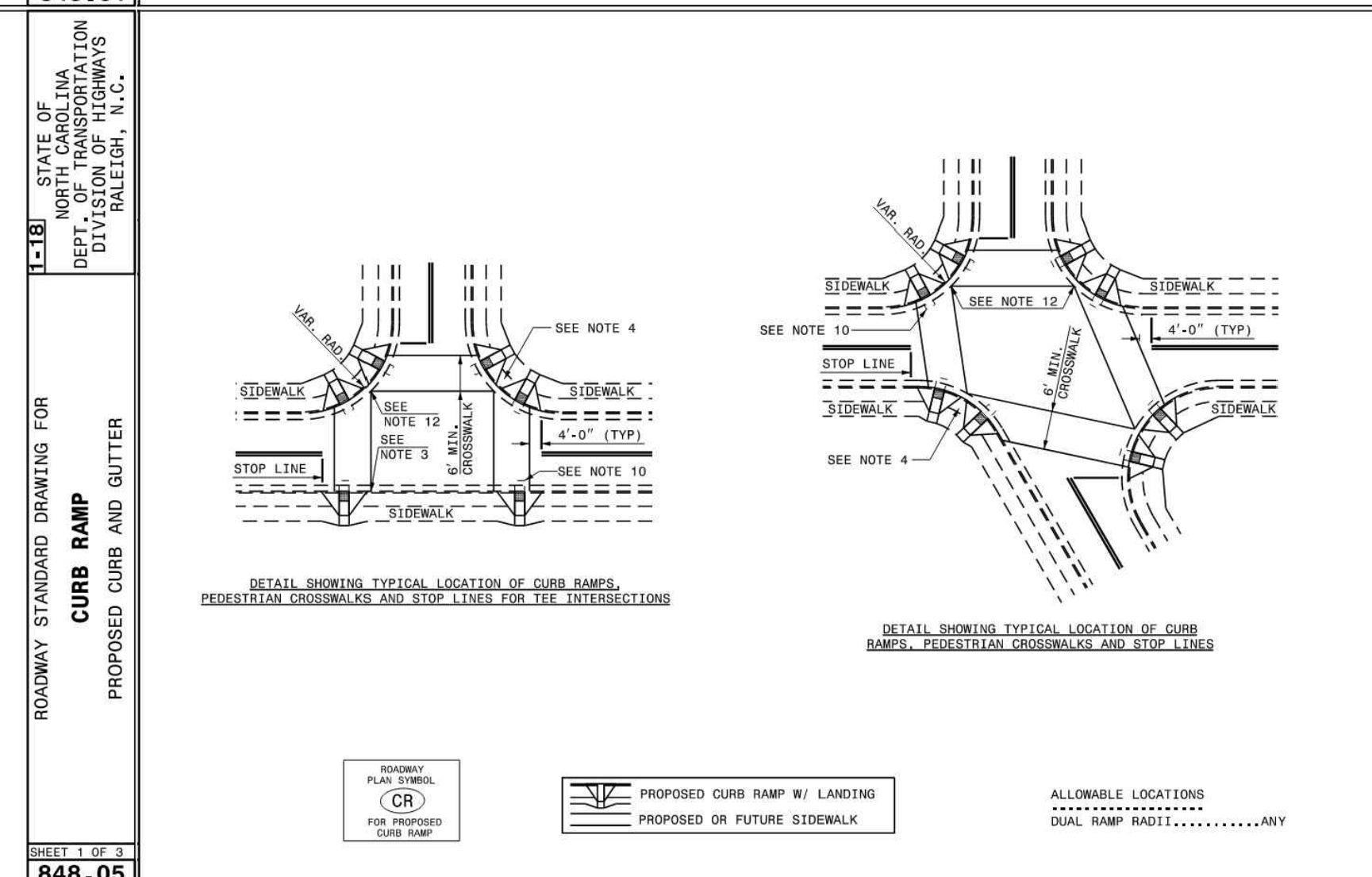
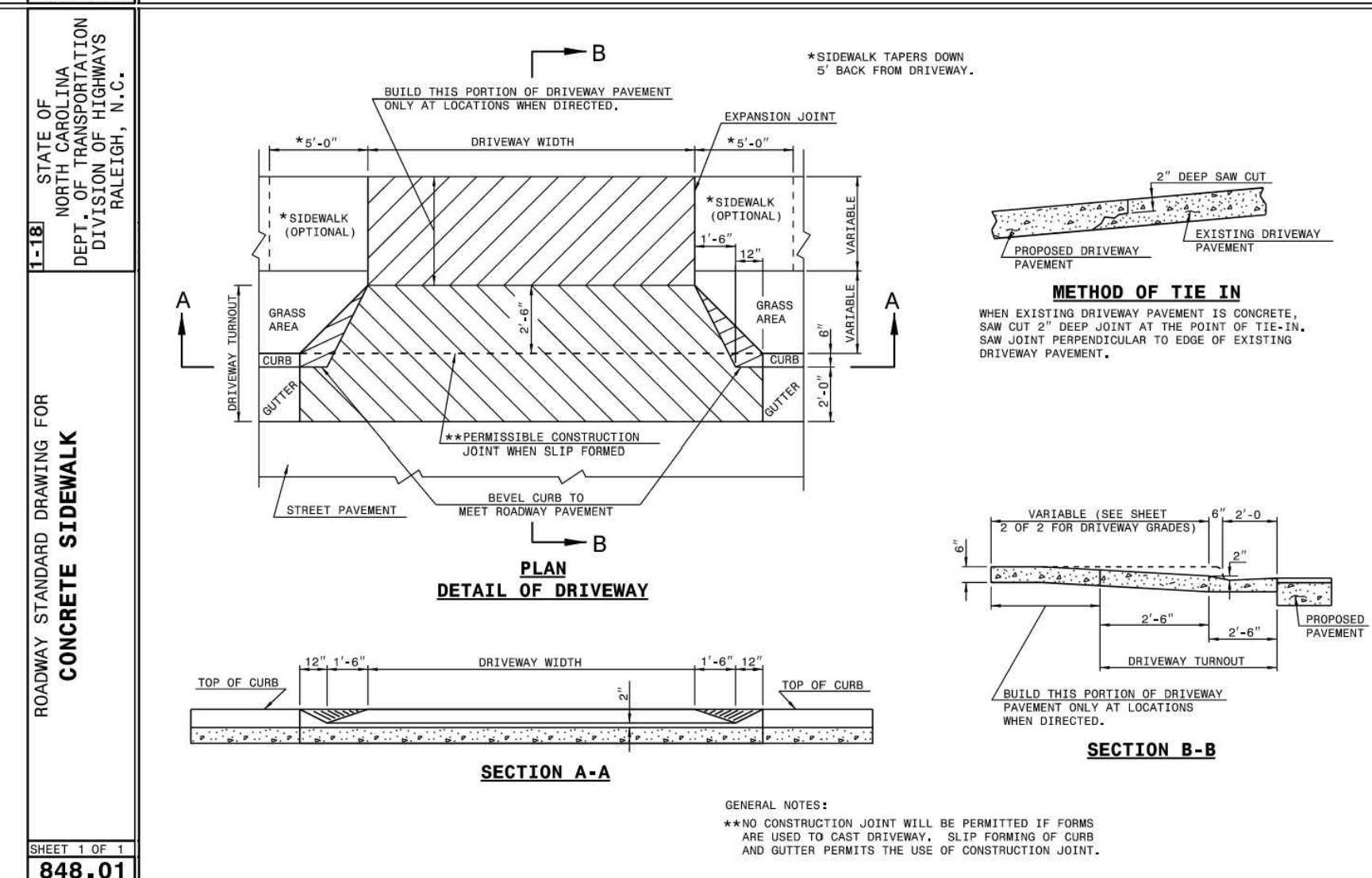
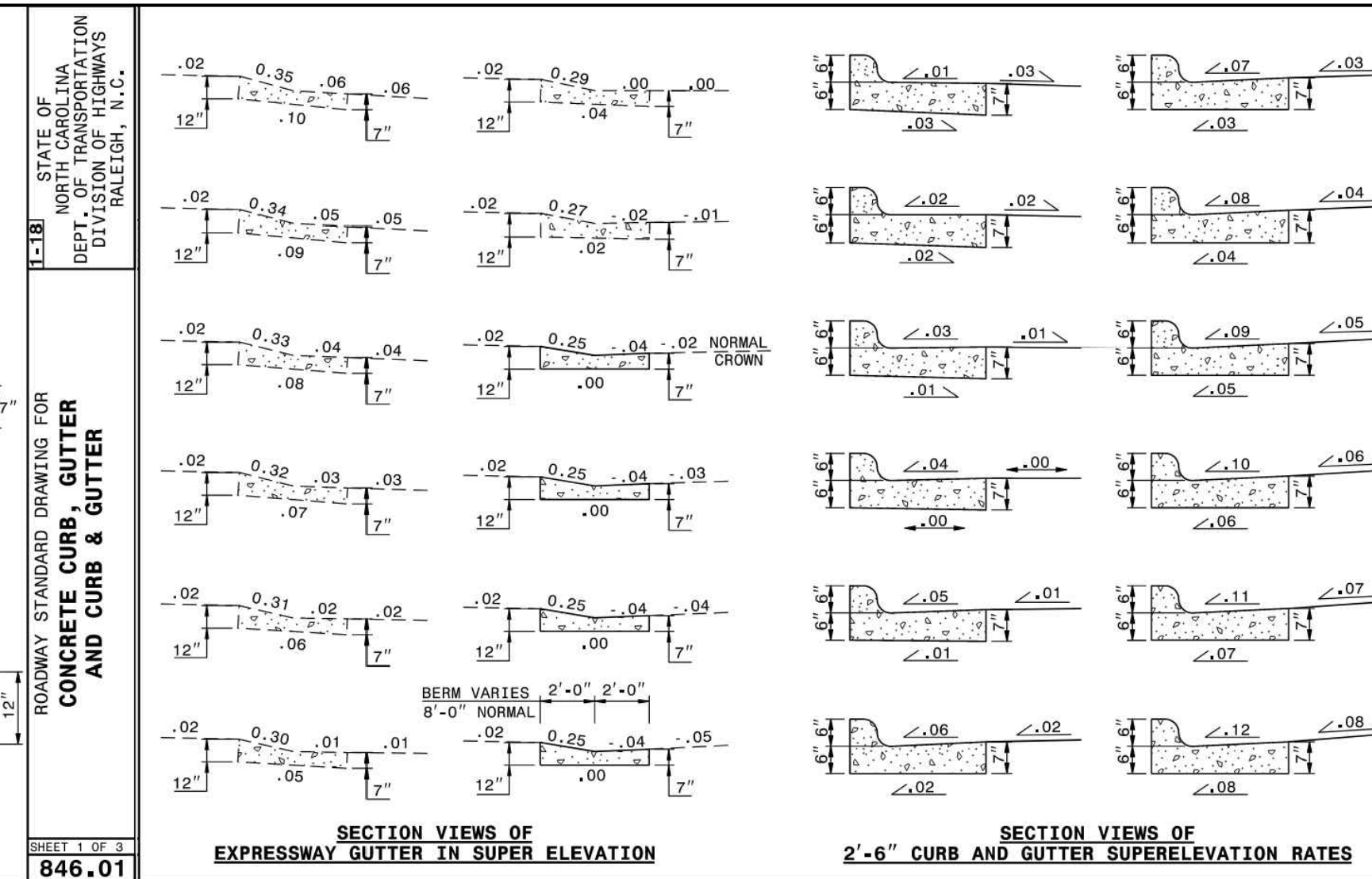
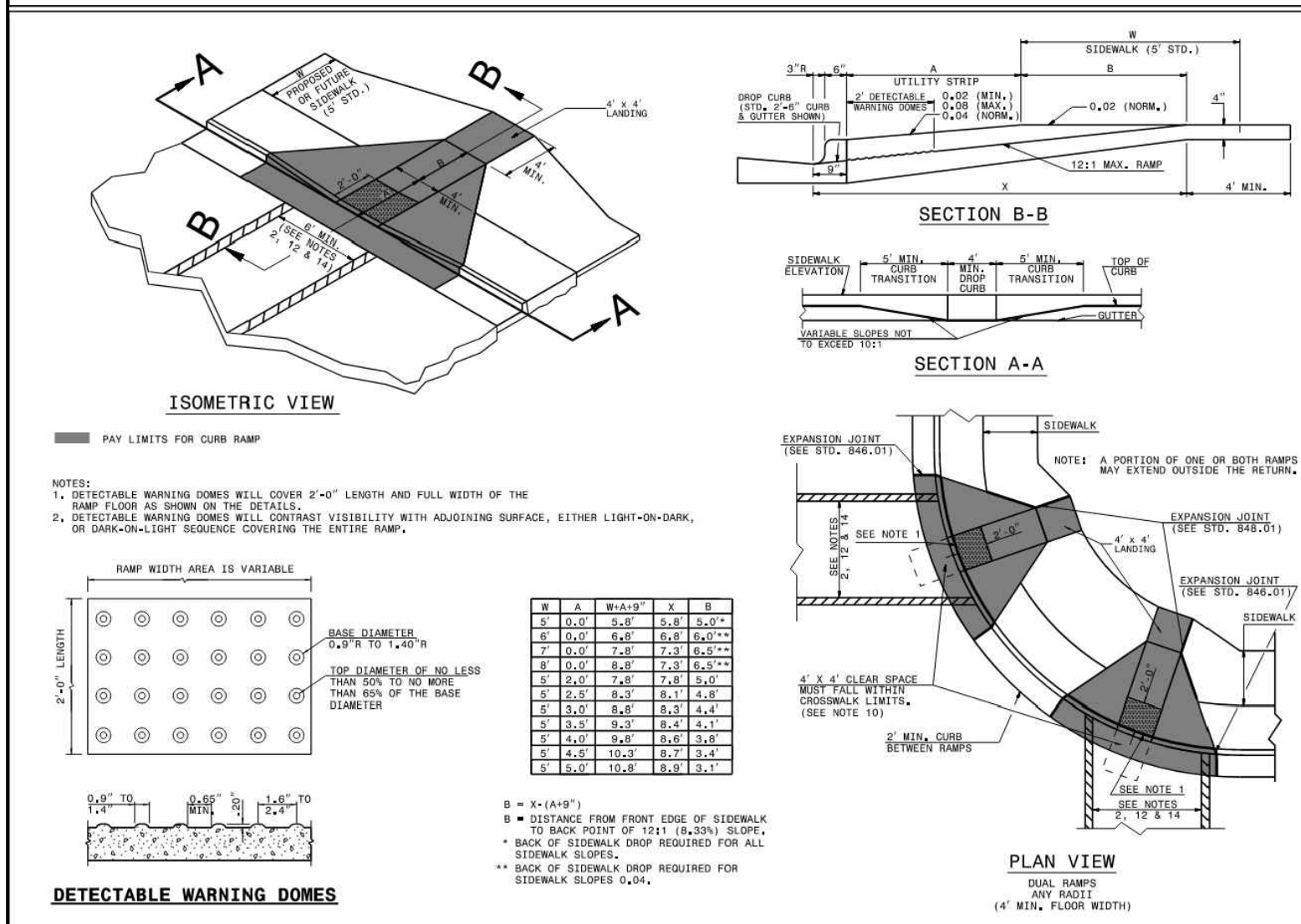
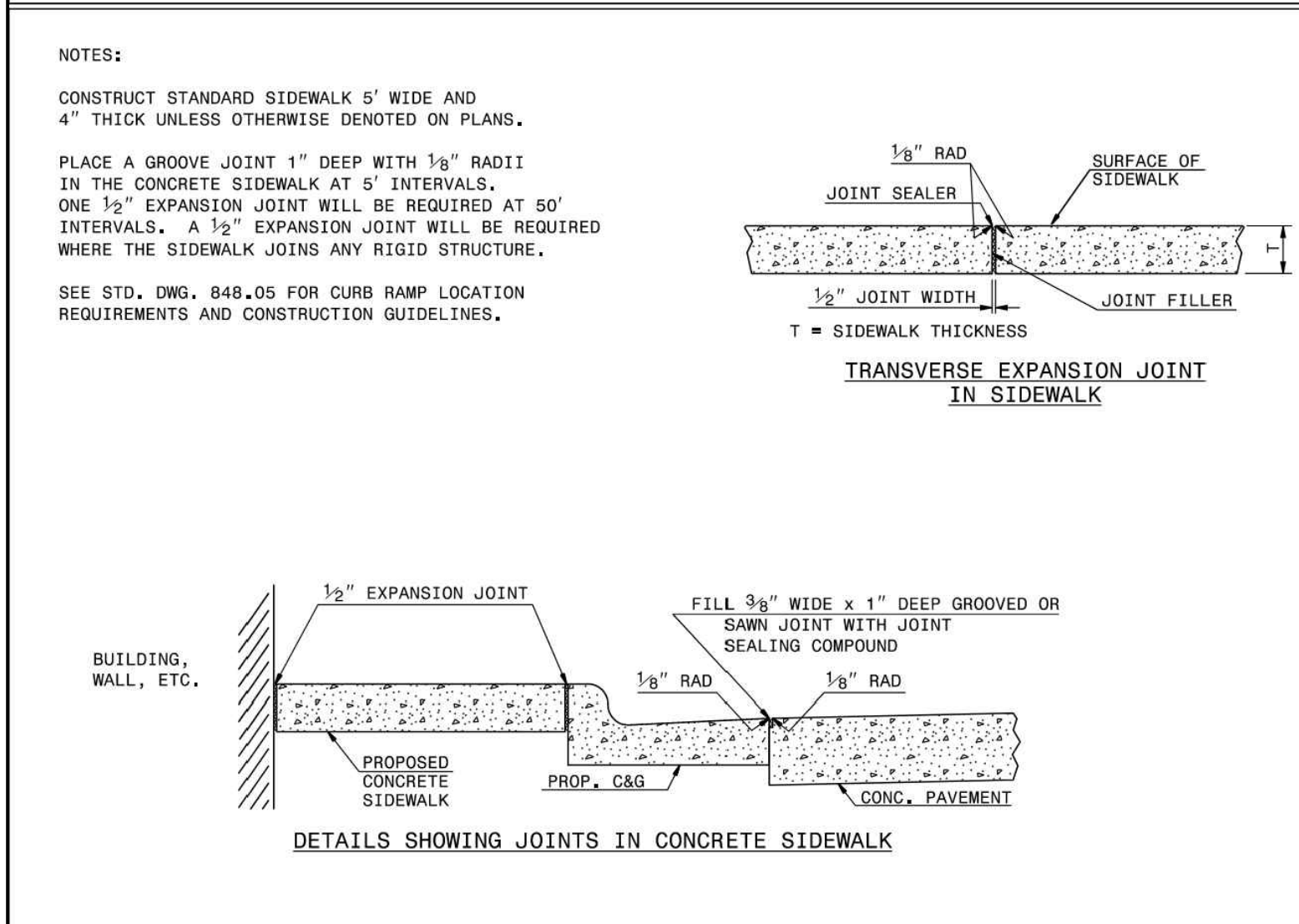
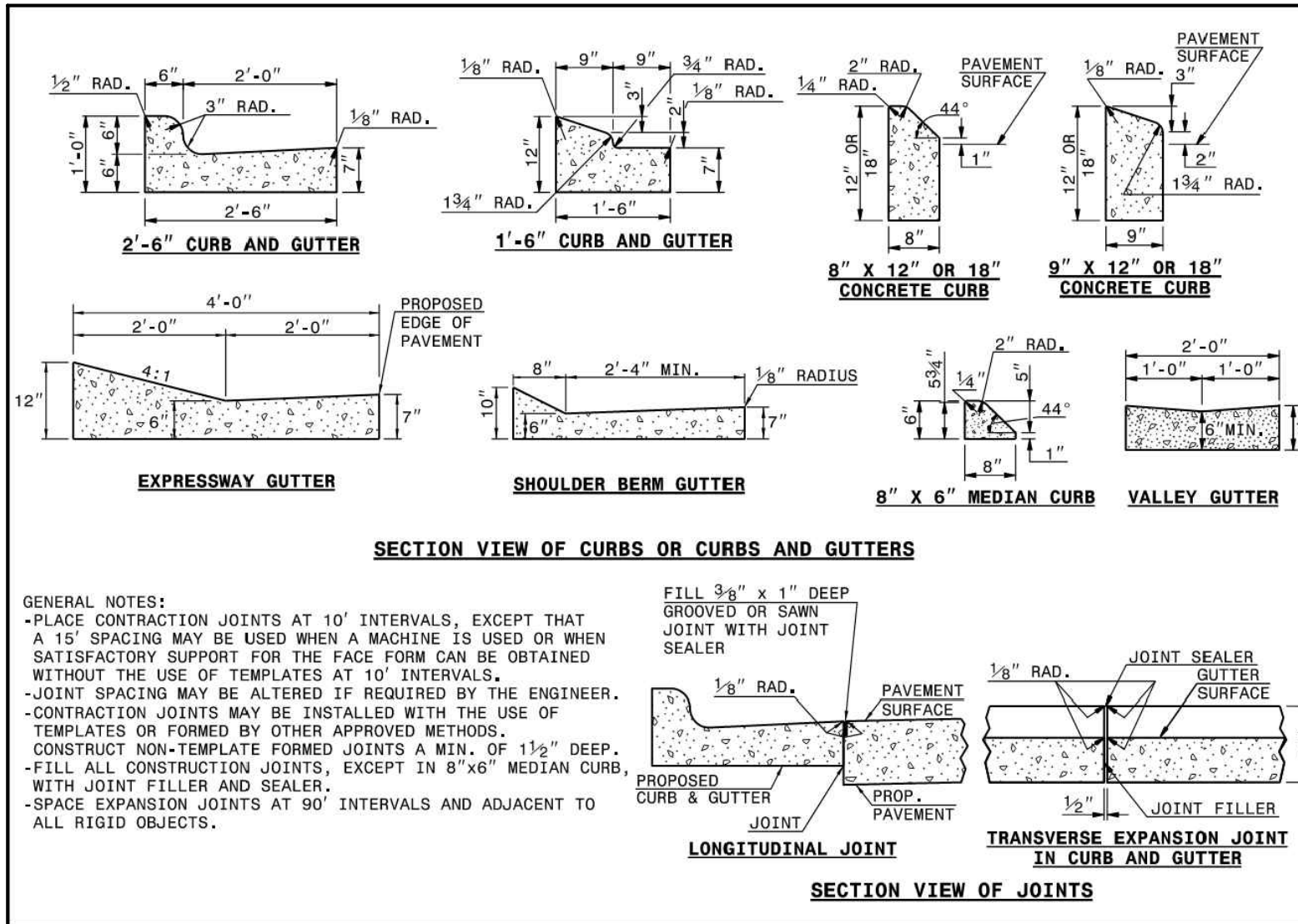
SITE LIGHTING PLAN

Designed by DEP LIGHTING SOLUTIONS

Reviewed by N. Johnson Scale 1" = 100'

Date 07/19/2022 Size Arch D

Drawing No. 21-0394B Sht. 1 OF 1



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04/06/2023	REVISIONS PER NCDOT COMMENTS
09/06/2023	REVISIONS PER CITY OF RALEIGH COMMENTS

09/17/2021
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R. WINGATE
 DESIGNED BY
P. BARBEAU
 CHECKED BY
P. BARBEAU
 SCALE
AS SHOWN

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NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

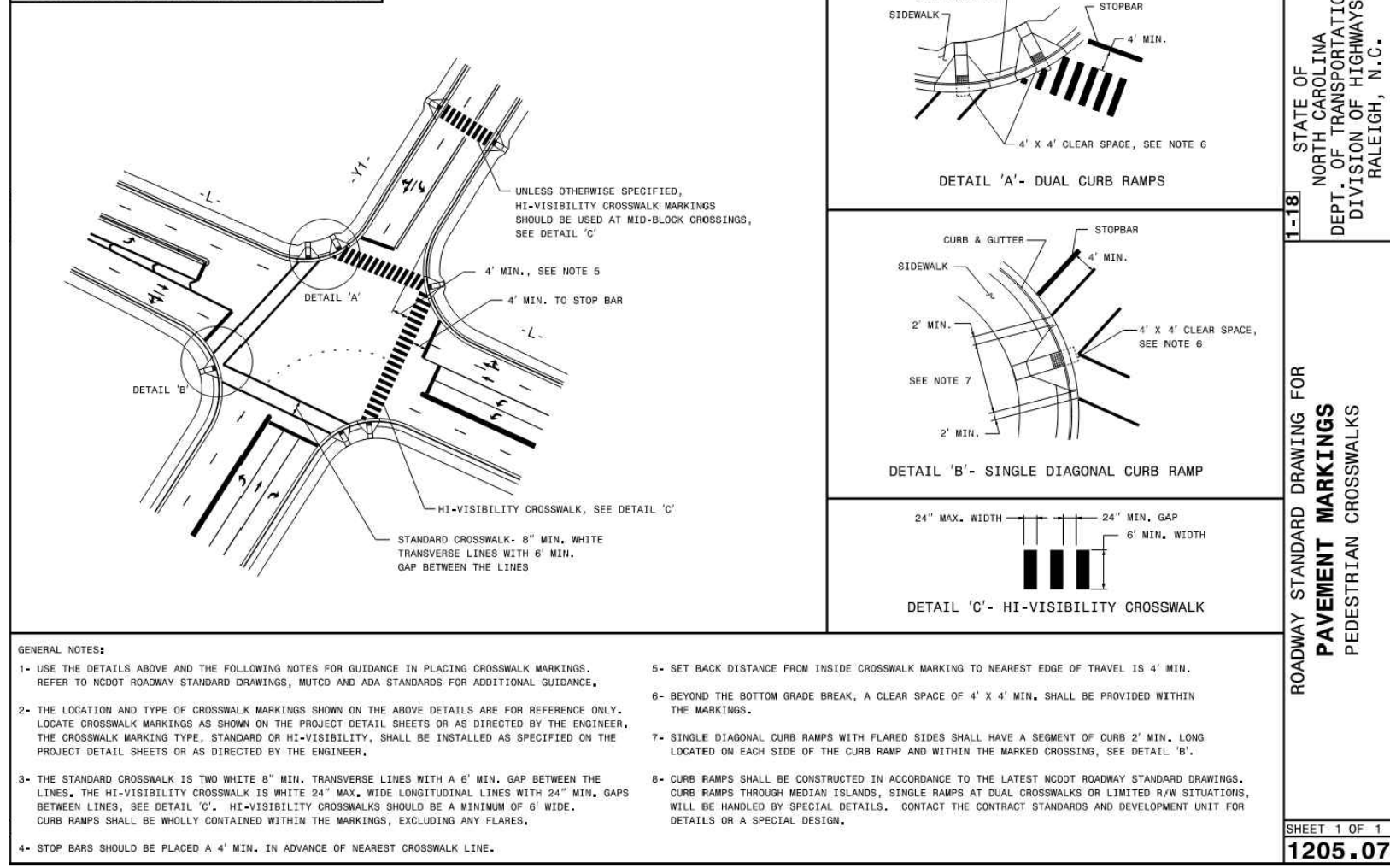
WAKE COUNTY - NORTH CAROLINA

SITE DETAILS

JOB NO.
43398
 SHEET NO.
C7.0

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

CROSSWALK PLACEMENT GUIDANCE

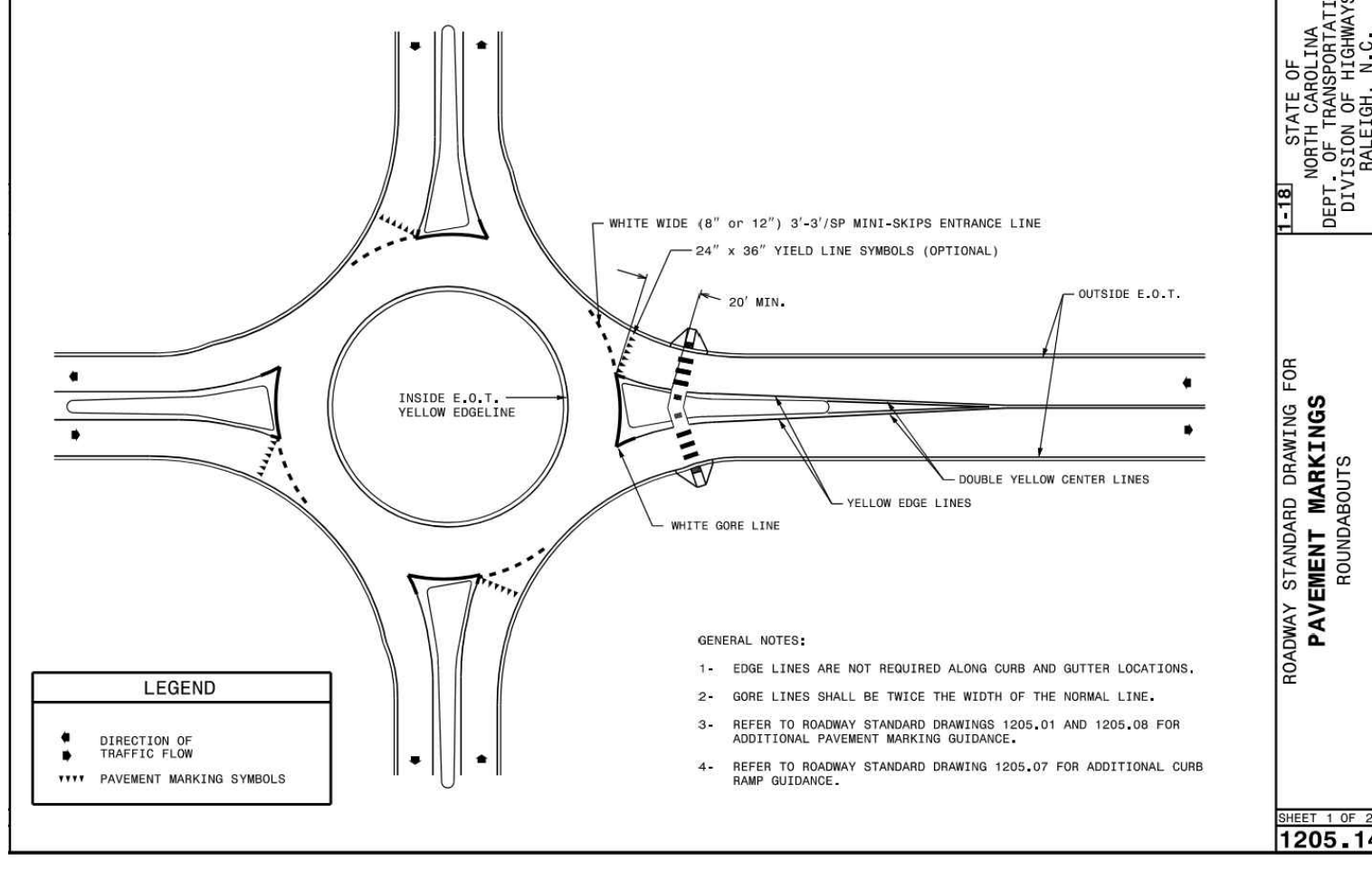


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ROADWAY STANDARD DRAWING FOR
 PAVEMENT MARKINGS
 PEDESTRIAN CROSSWALKS

SHEET 1 OF 1
 1205.07

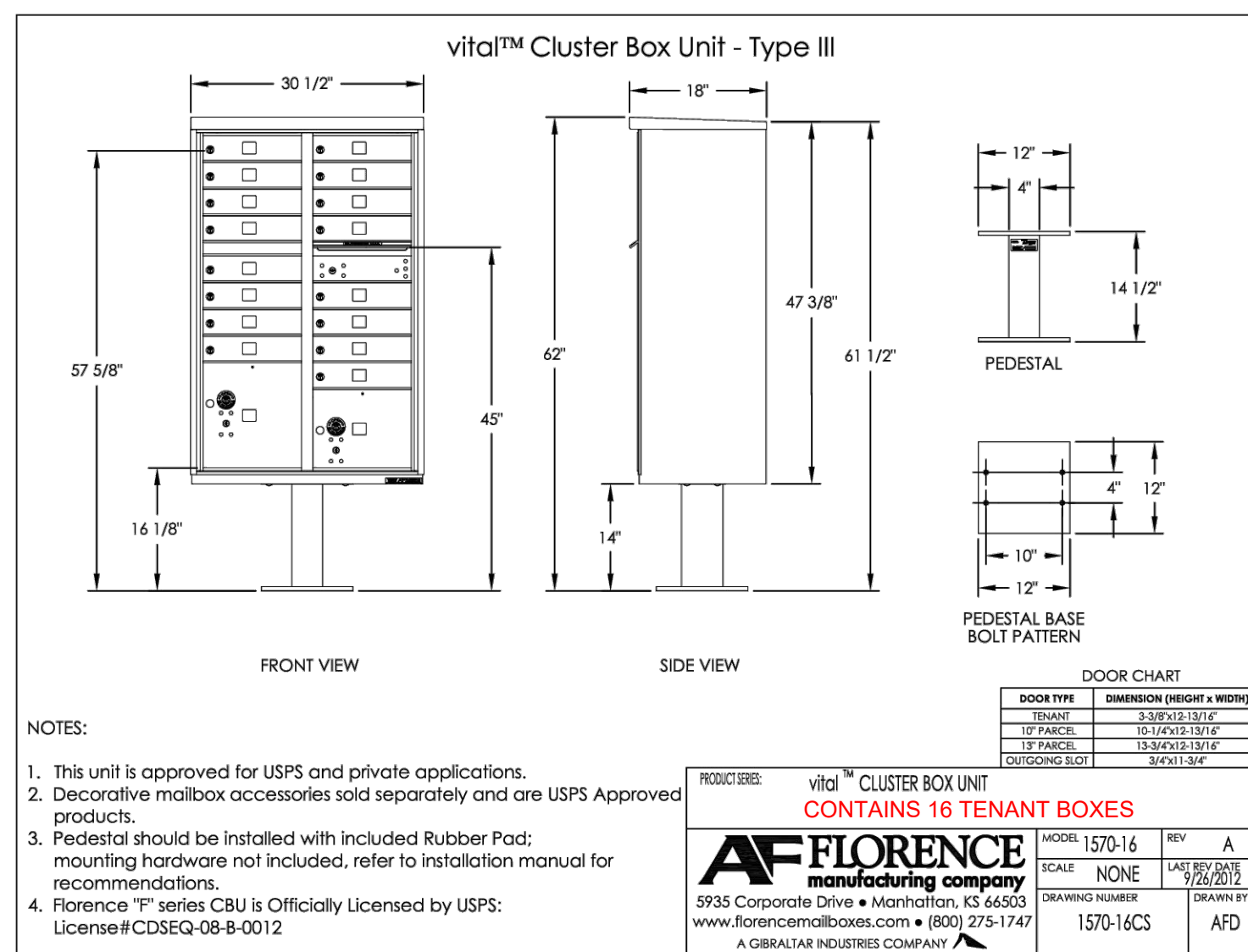
SINGLE-LANE ROUNDABOUT



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ROADWAY STANDARD DRAWING FOR
 PAVEMENT MARKINGS
 ROUNDABOUTS

SHEET 1 OF 1
 1205.14

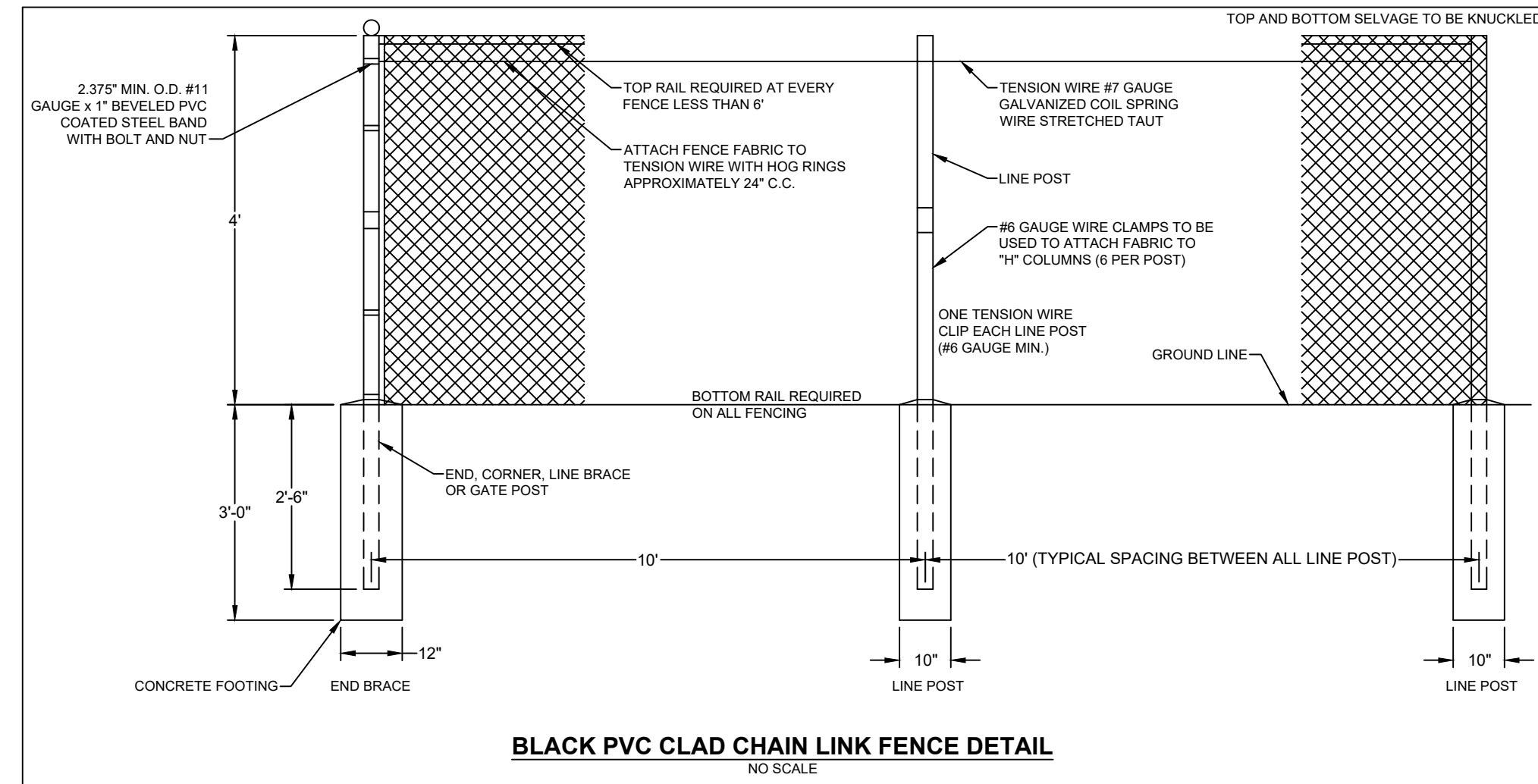
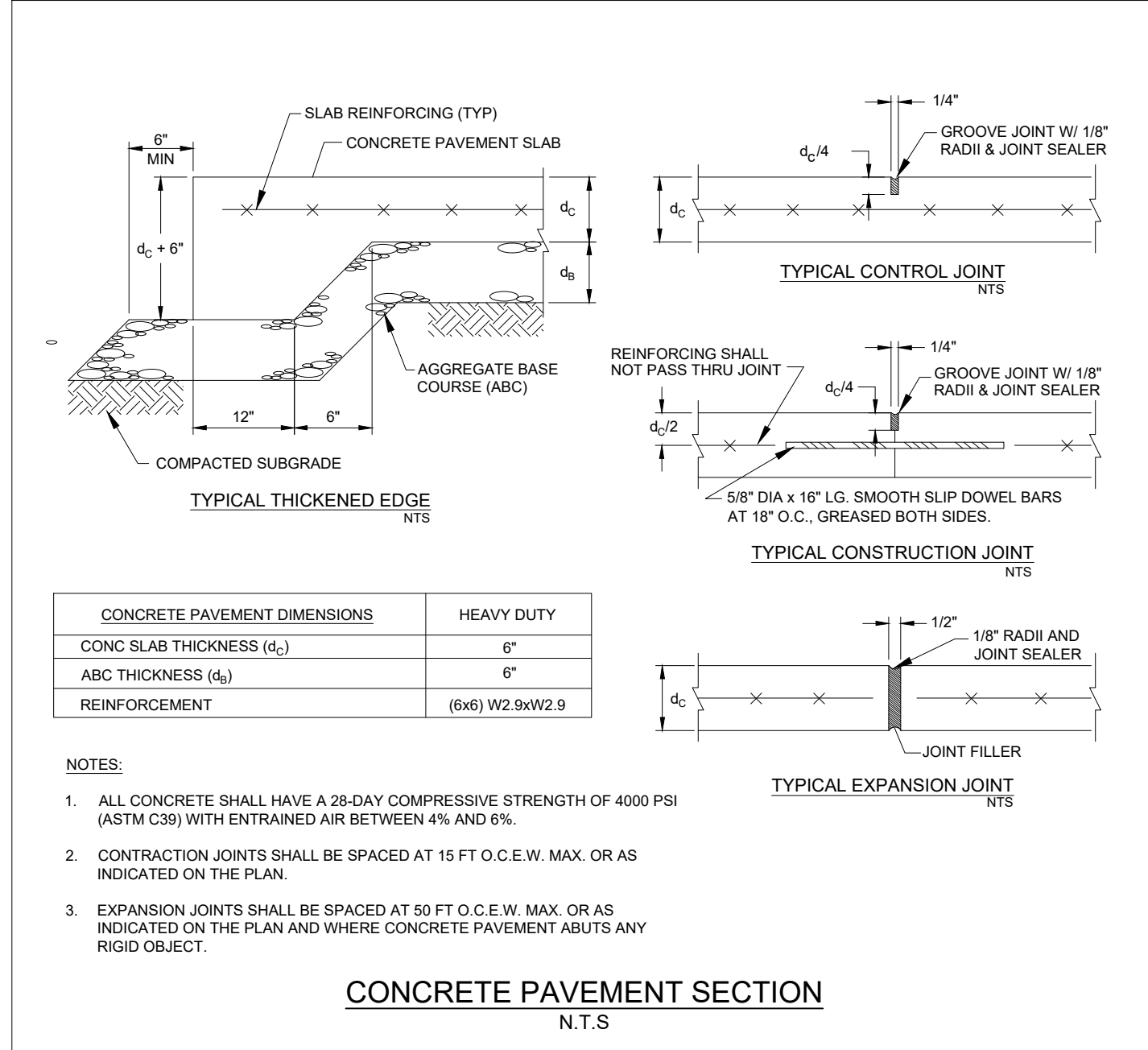
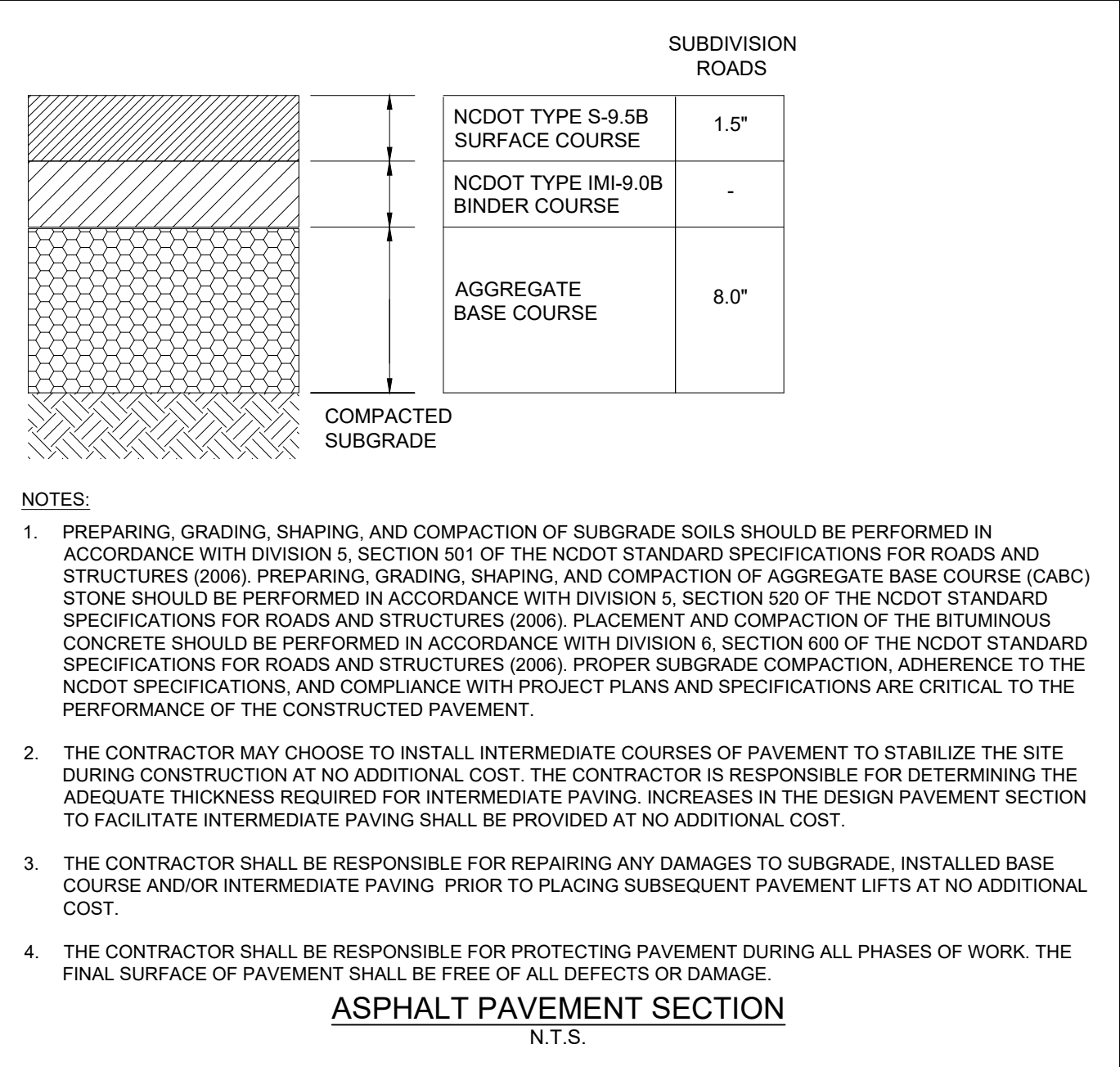
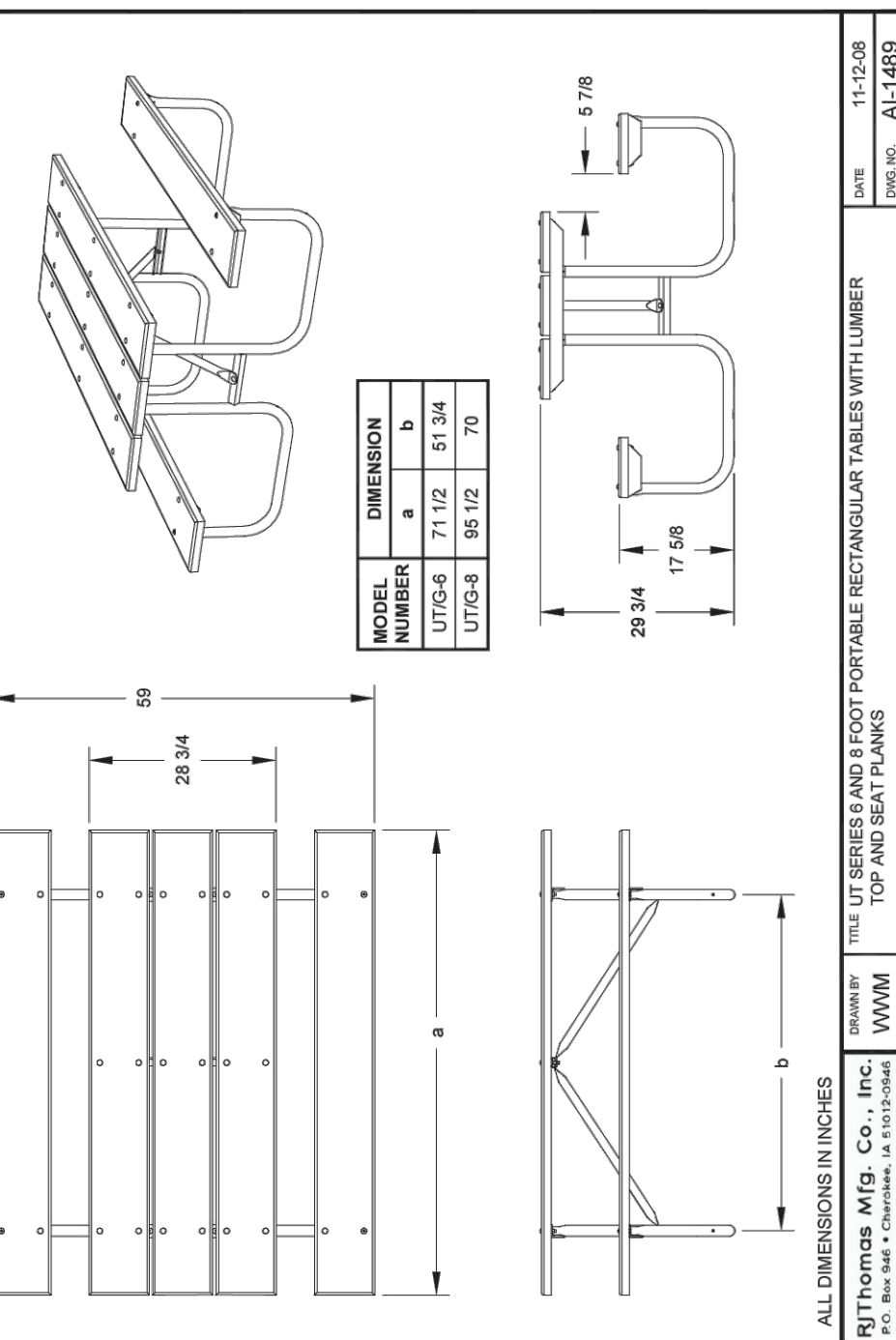
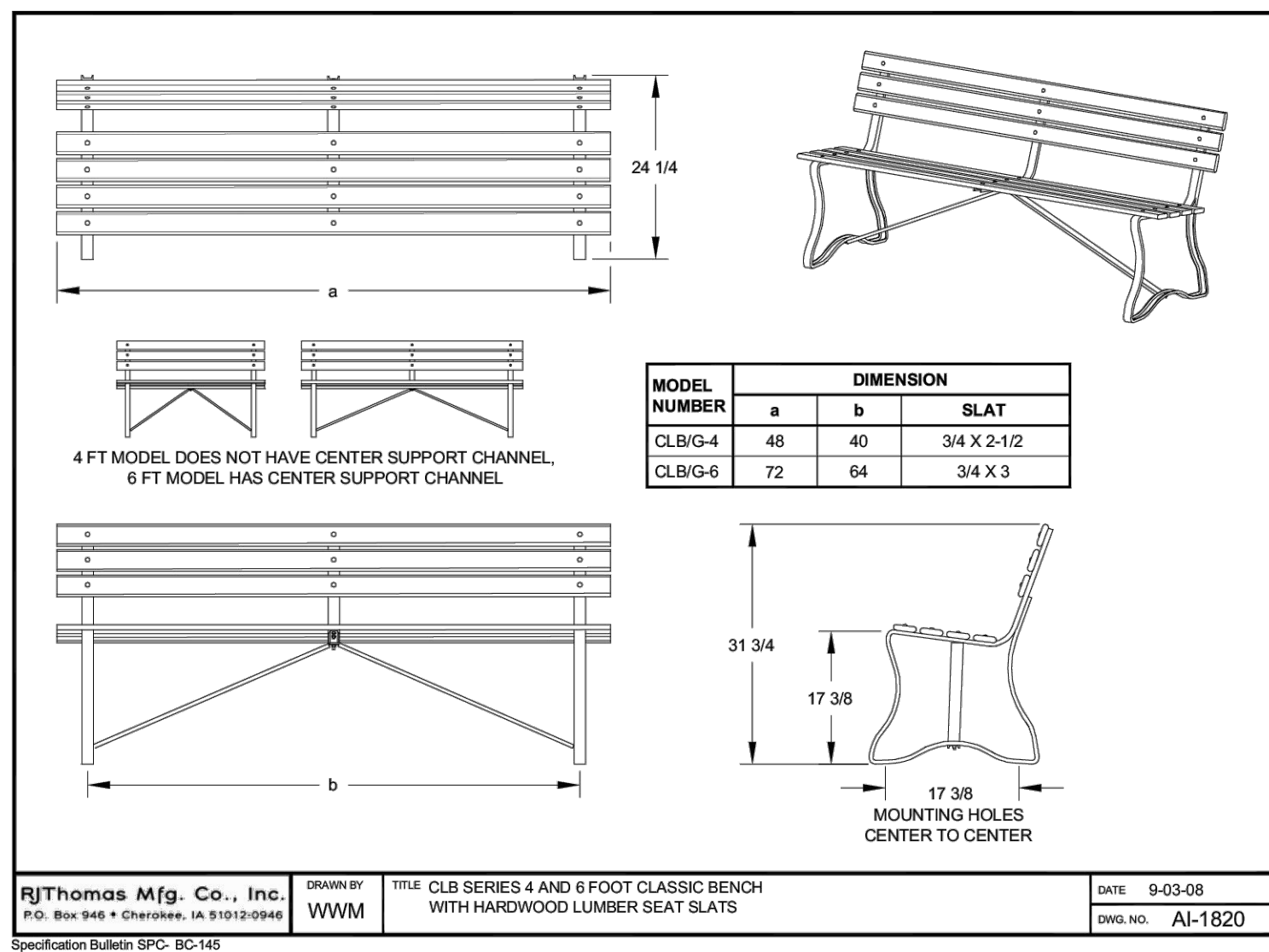
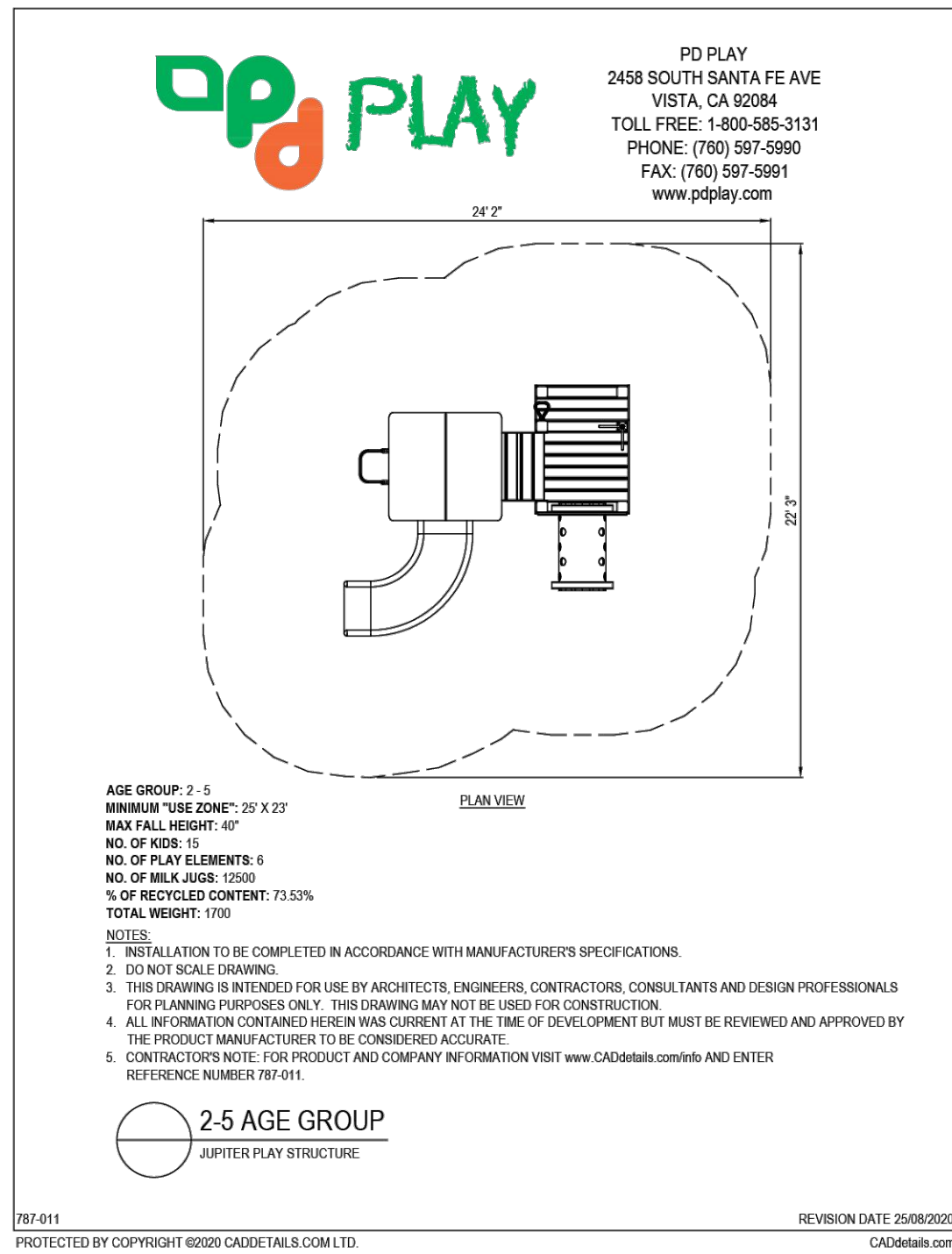
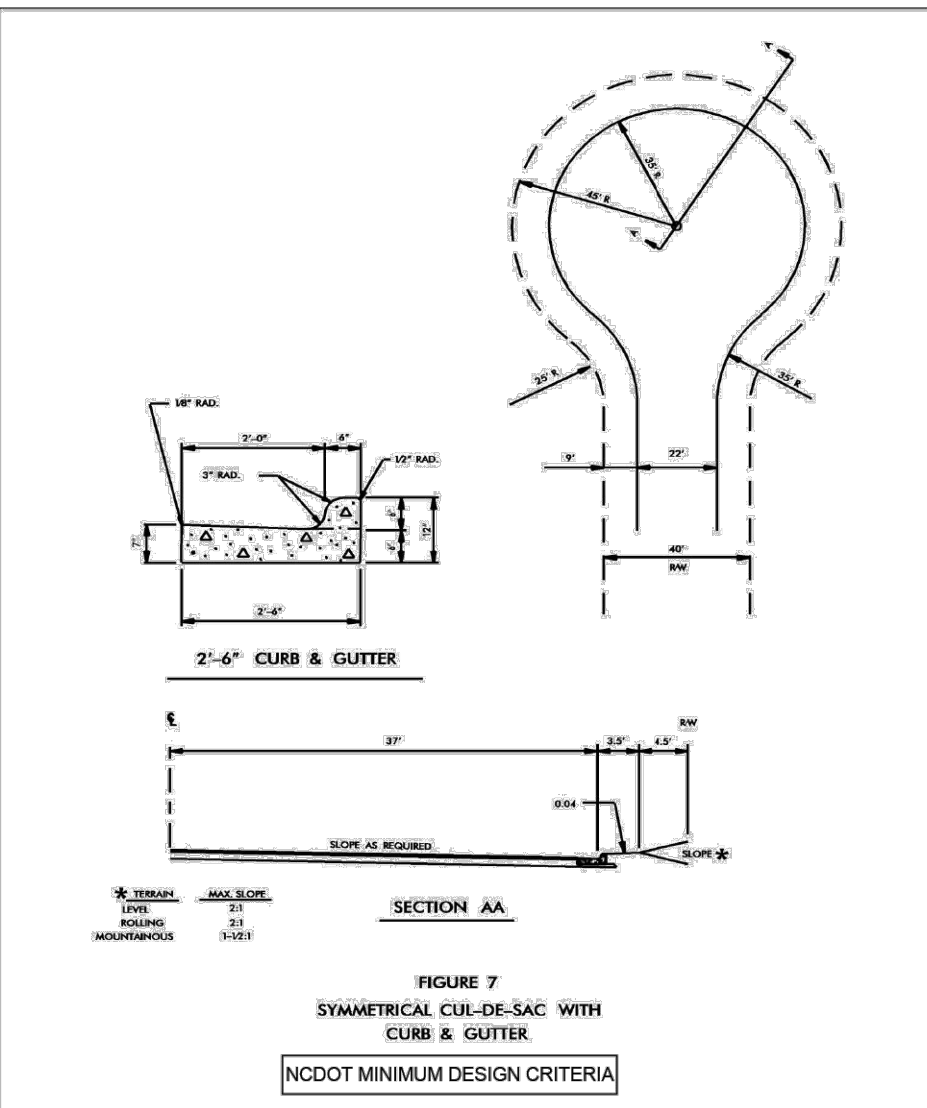


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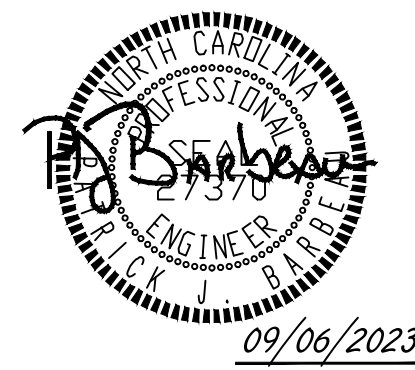


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ROLESVILLE CROSSING - CD 21-08
 WAKE COUNTY - NORTH CAROLINA
 NORTH CAROLINA LICENSE NO. C-1652
 SITE DETAILS

JOB NO. 43398
 SHEET NO. C7.1

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ROLESVILLE CROSSING - CD 21-08

WAKE COUNTY - NORTH CAROLINA

STORM DRAINAGE DETAILS

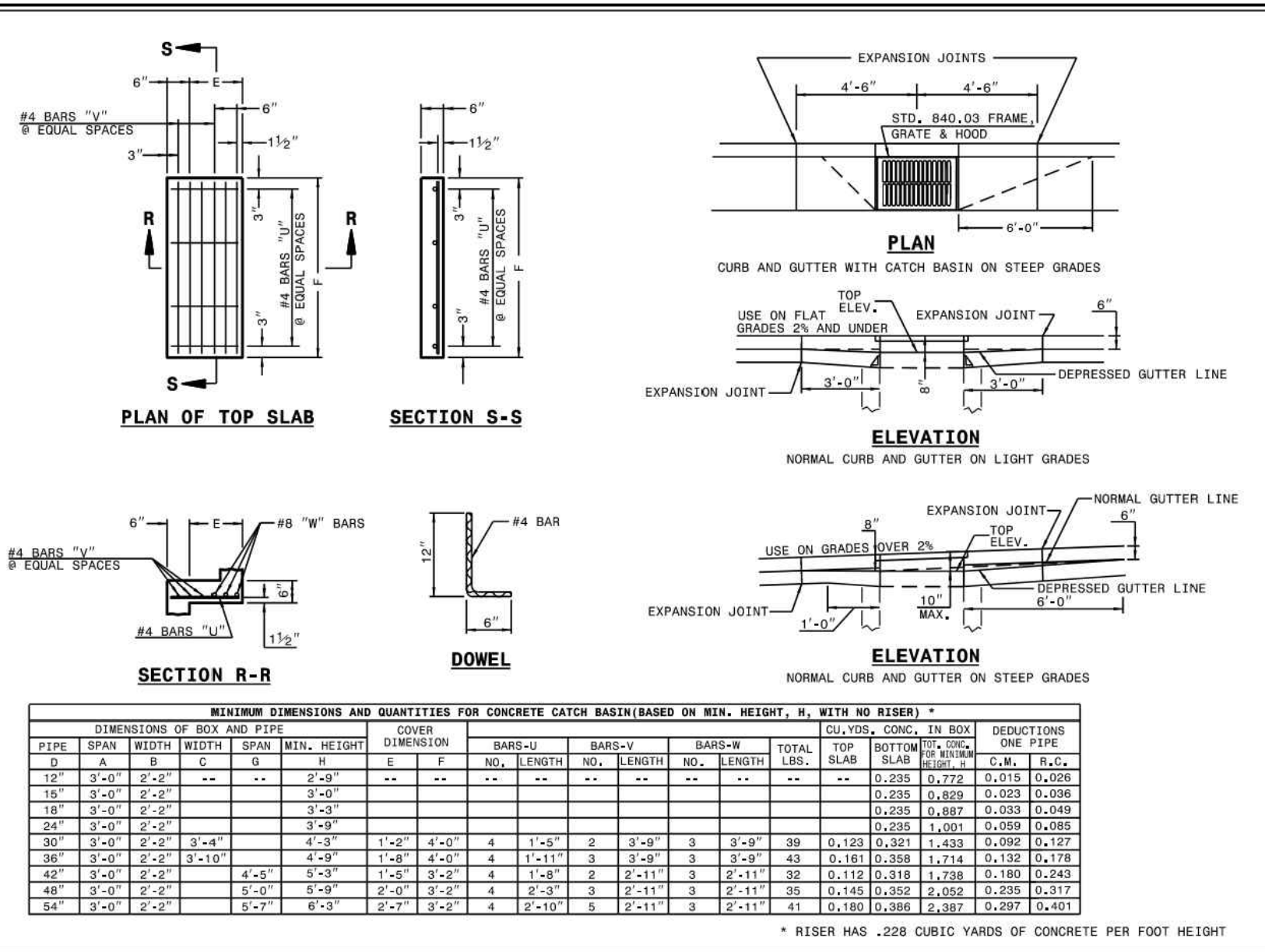
JOB NO.
43398
 SHEET NO.
C7.2

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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 RALEIGH, N.C.

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

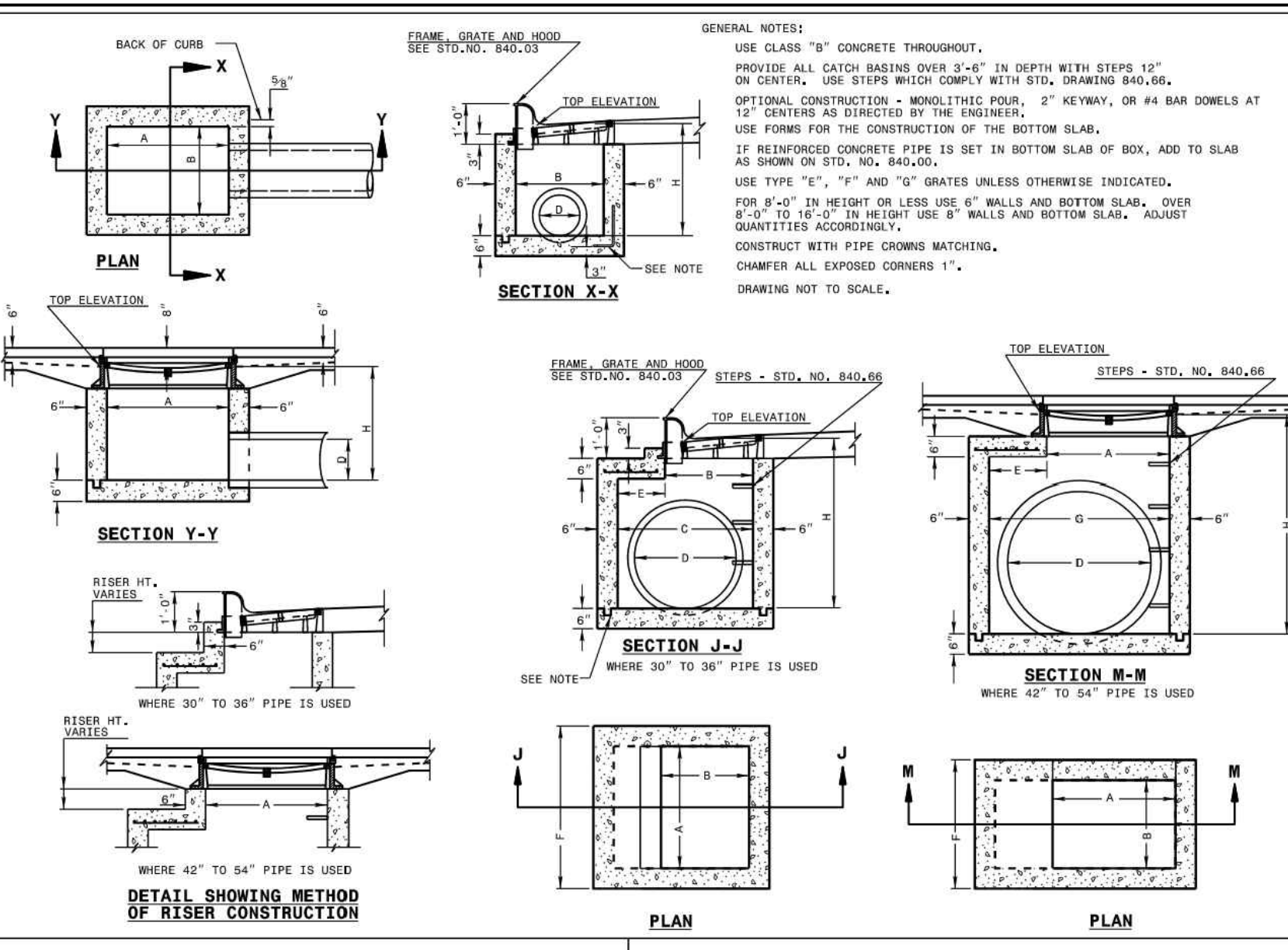
SHEET 2 OF 3
840.02



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 RALEIGH, N.C.

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

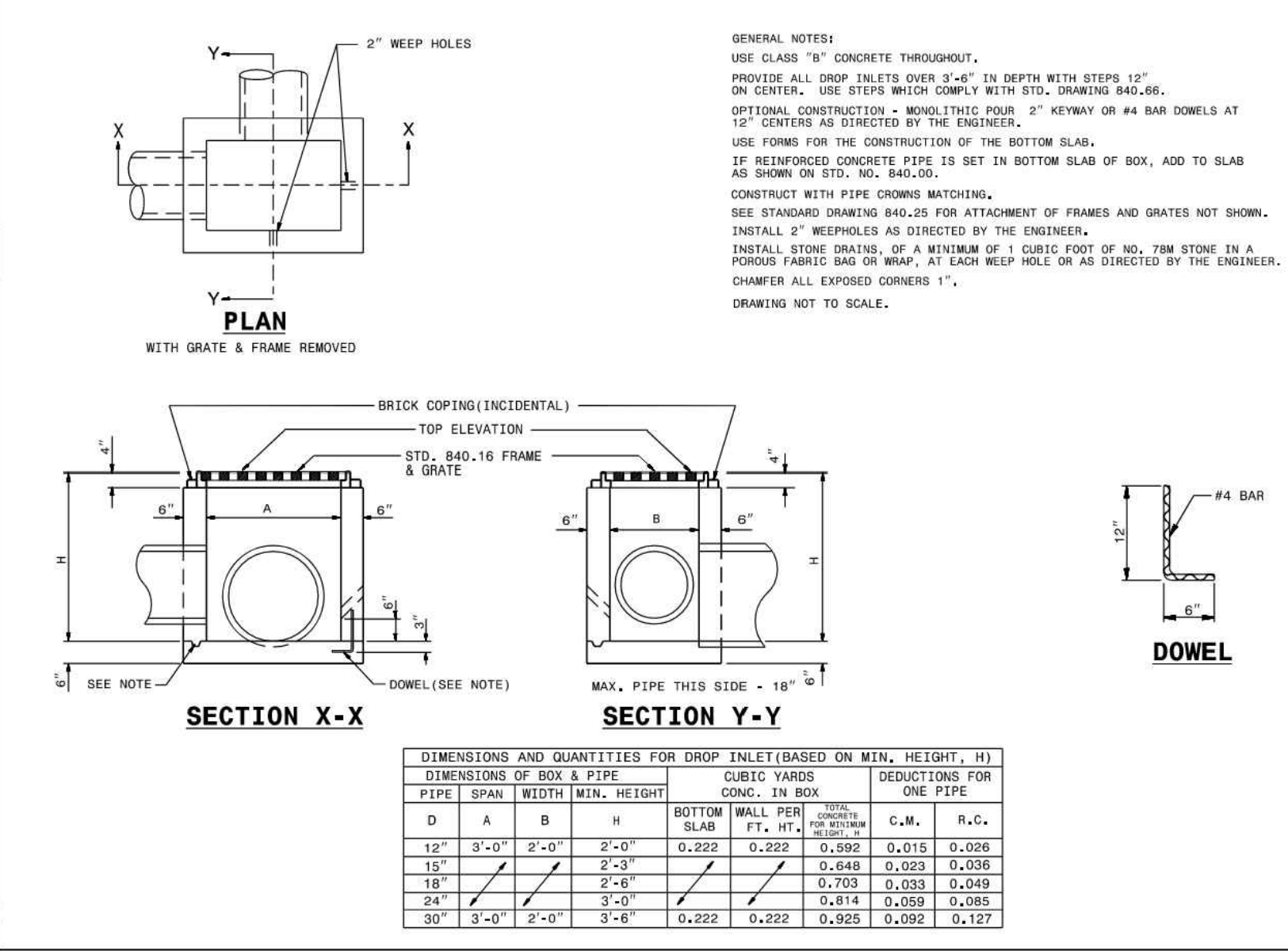
SHEET 1 OF 3
840.03



STATE OF NORTH CAROLINA
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ROADWAY STANDARD DRAWING FOR
CONCRETE DROP INLET
 12" THRU 30" PIPE

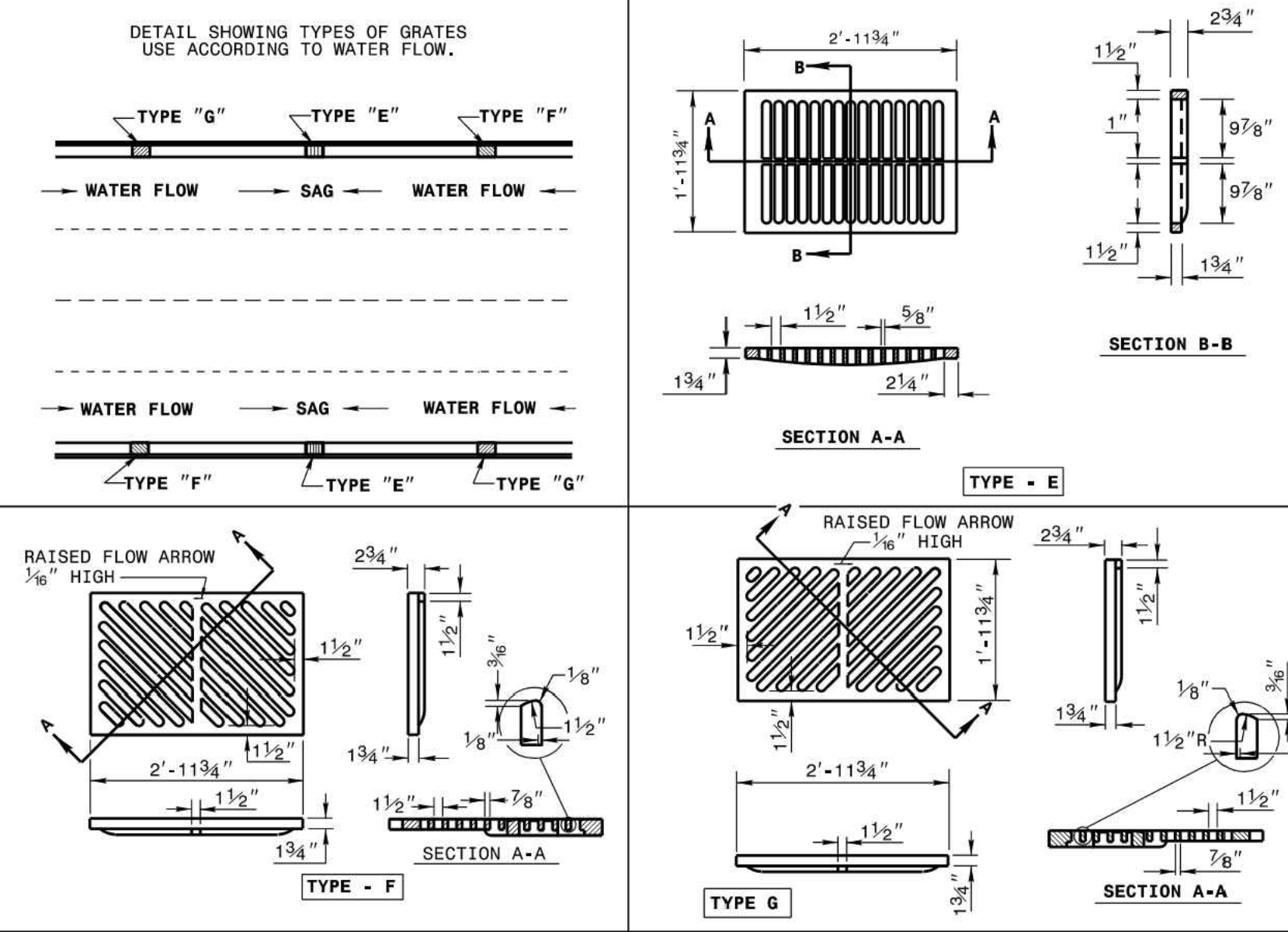
SHEET 1 OF 1
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ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
 FOR USE ON STANDARD CATCH BASIN

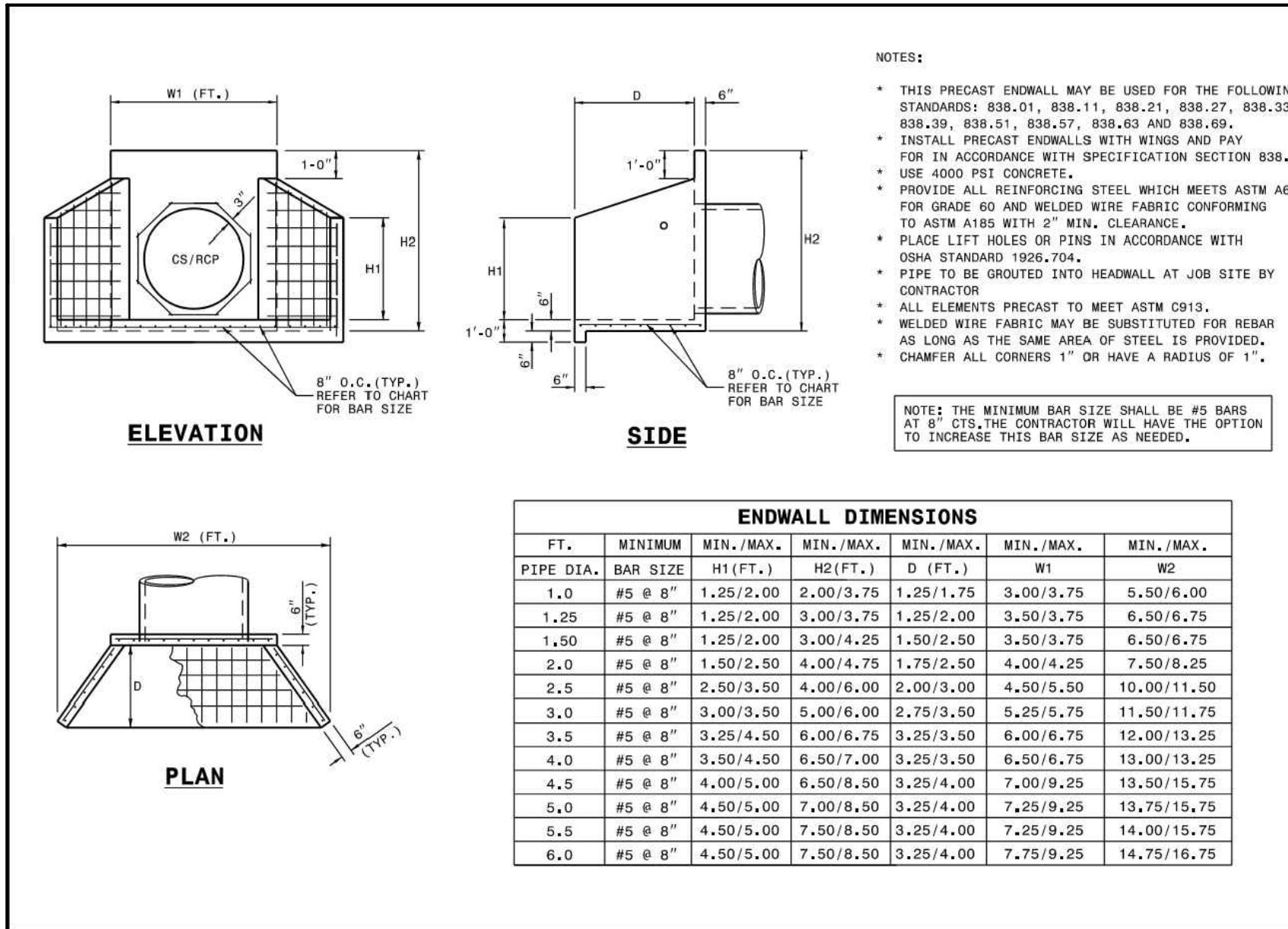
SHEET 3 OF 3
840.03



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ROADWAY STANDARD DRAWING FOR
PRECAST CONCRETE ENDWALL
 FOR SINGLE 12" THRU 72" PIPE - 90° SKEW

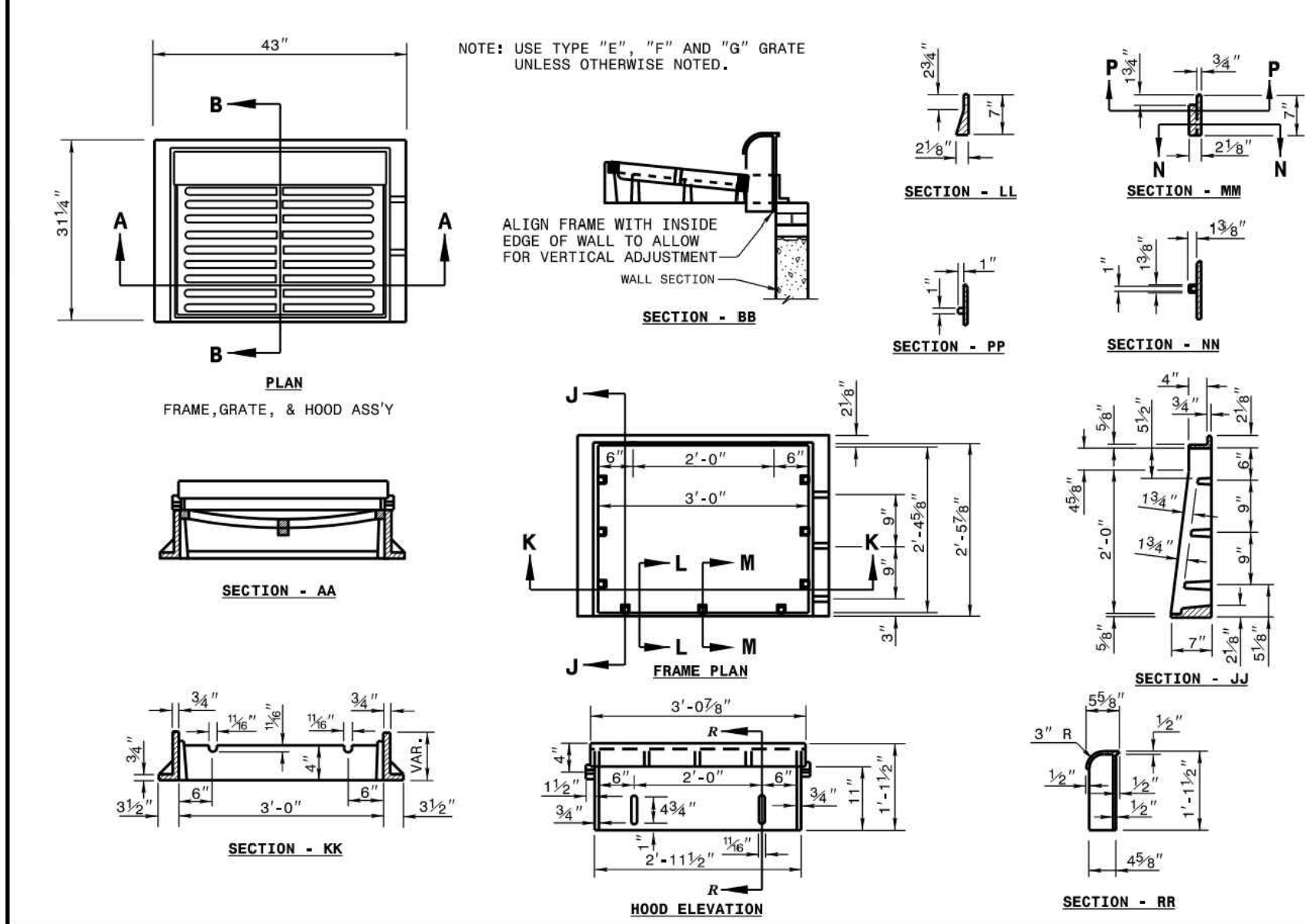
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ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
 FOR USE ON STANDARD CATCH BASIN

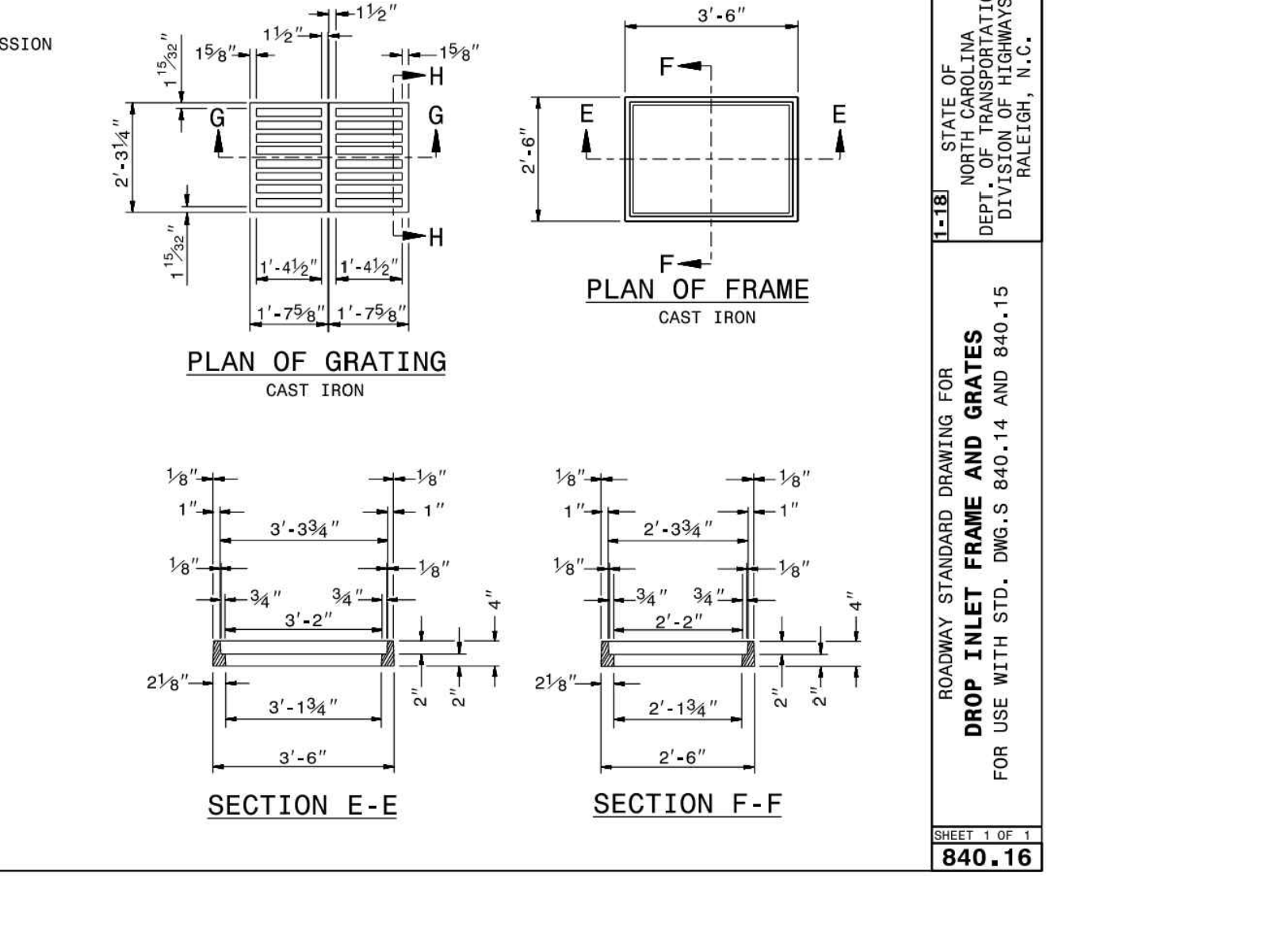
SHEET 1 OF 3
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ROADWAY STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
 FOR USE WITH STD. DWG.S 840.14 AND 840.15

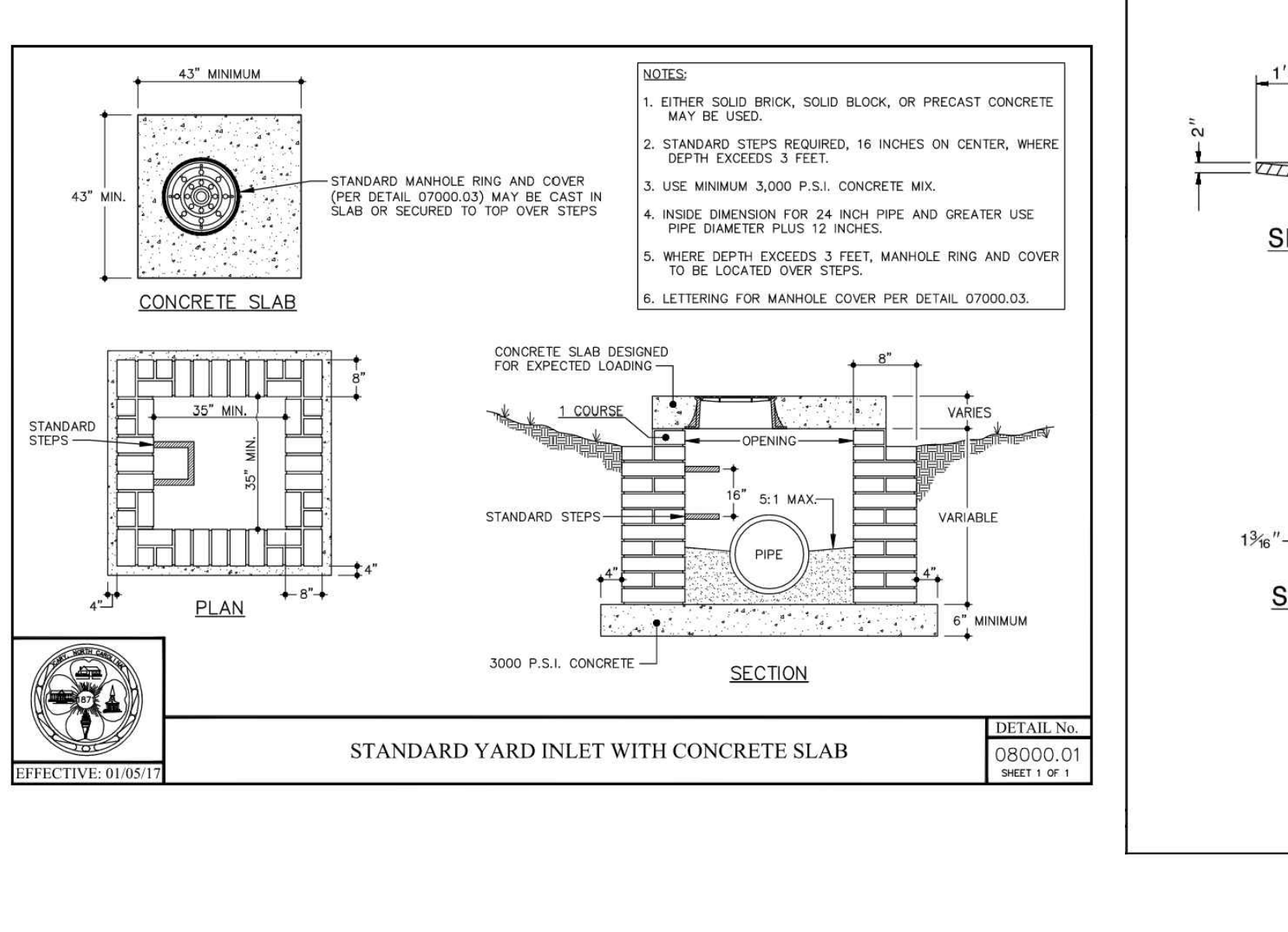
SHEET 1 OF 1
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ROADWAY STANDARD DRAWING FOR
REINFORCED CONCRETE ENDWALL
 FOR DOUBLE AND TRIPLE 72" PIPE 90° SKEW

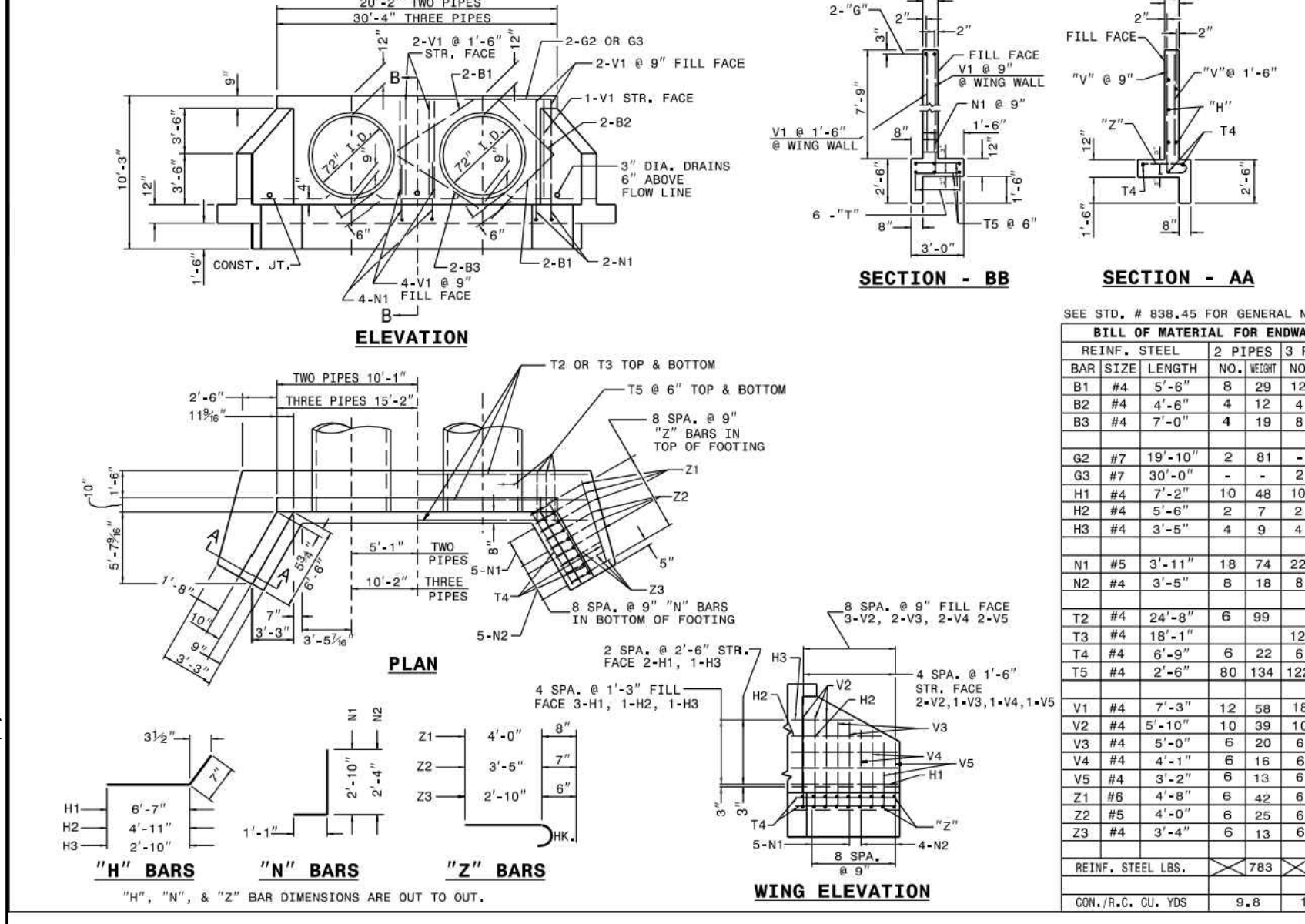
SHEET 1 OF 2
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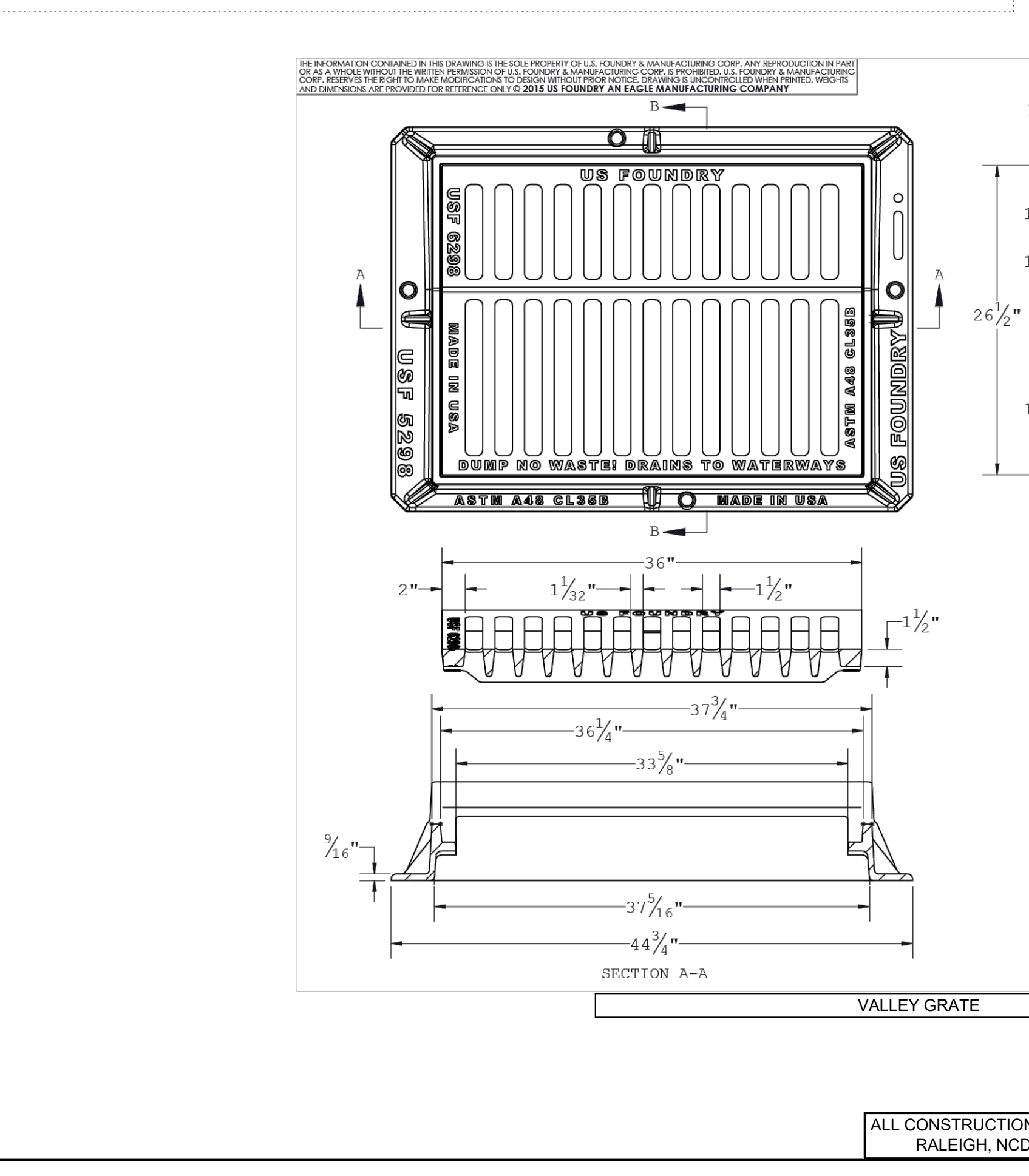
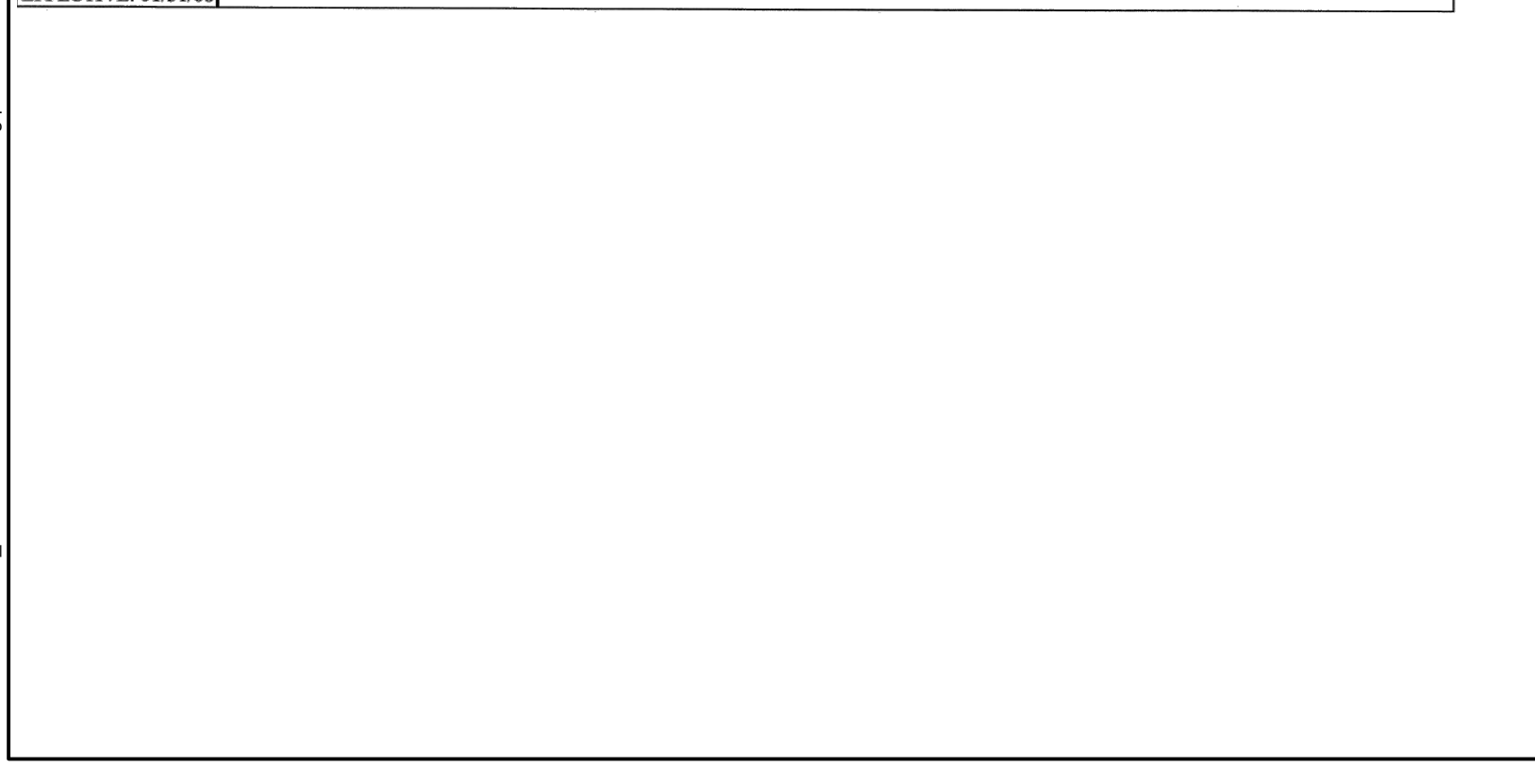
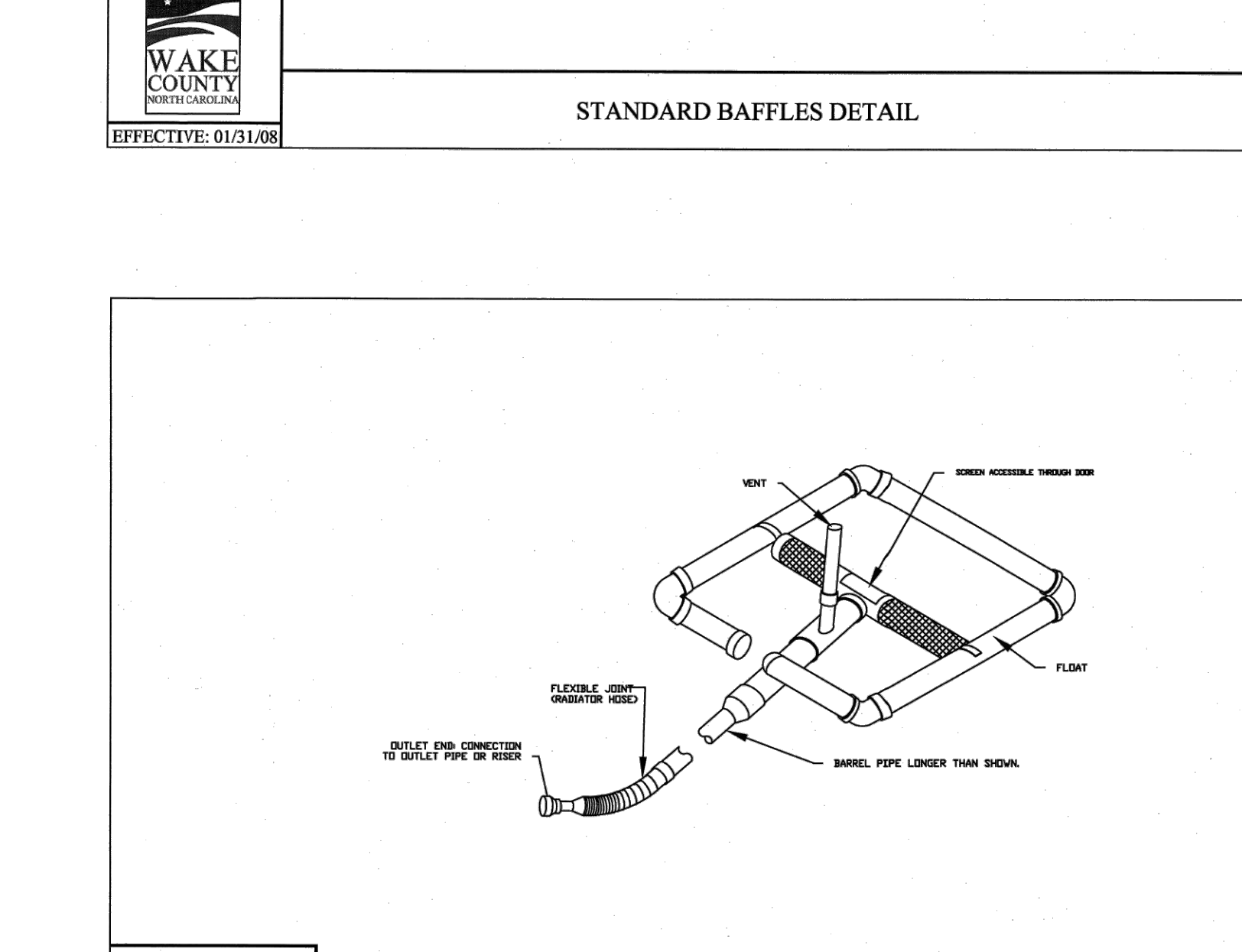
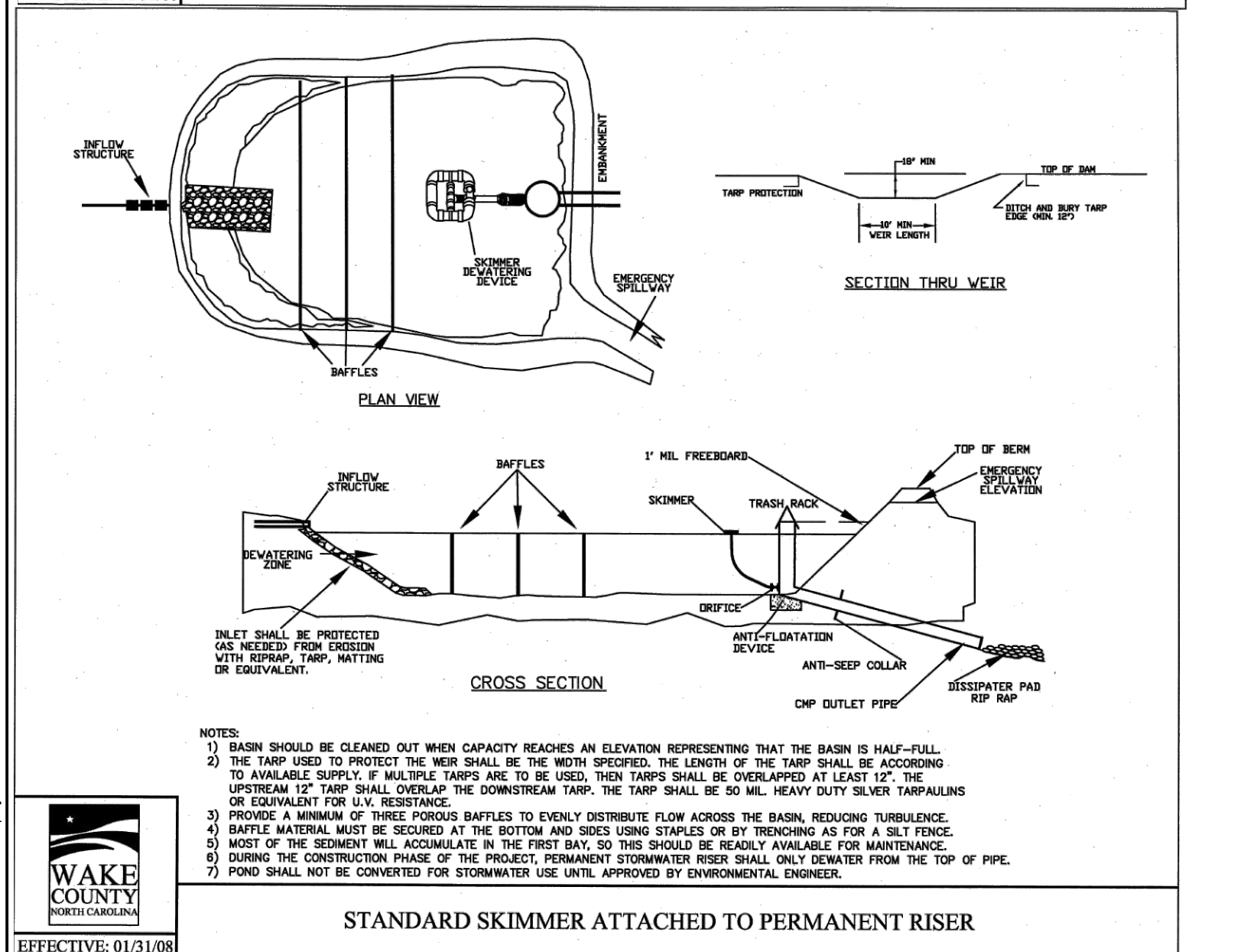
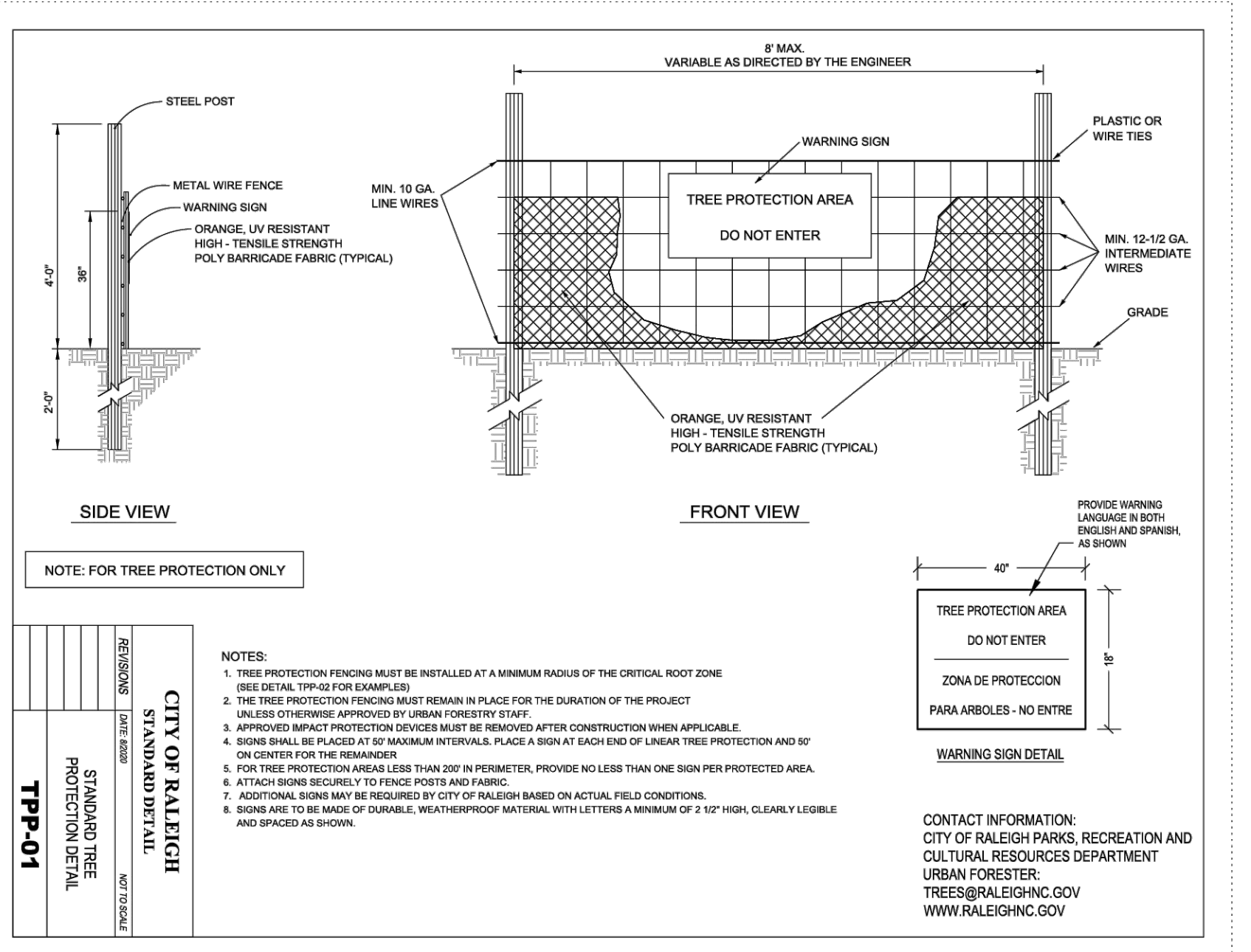
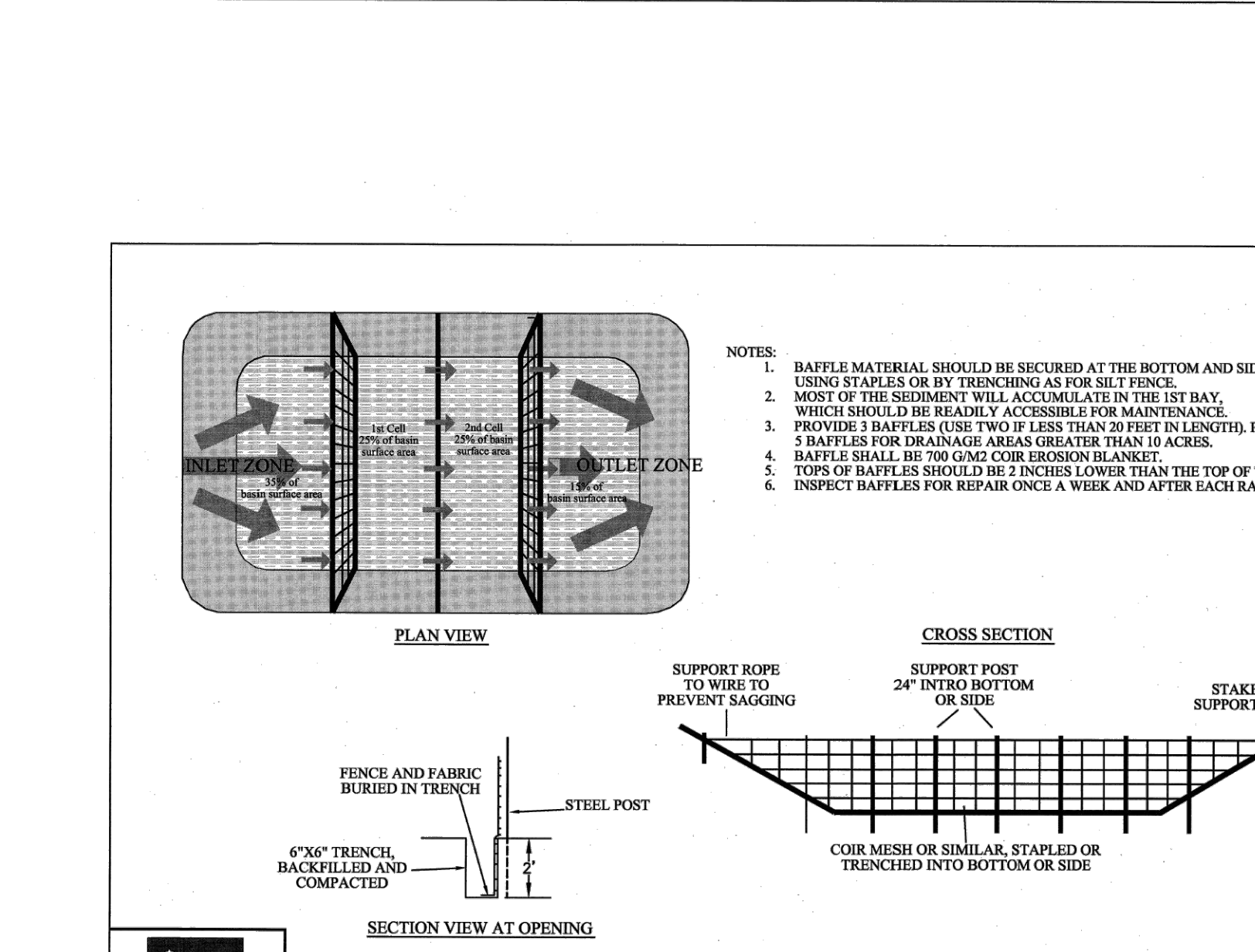
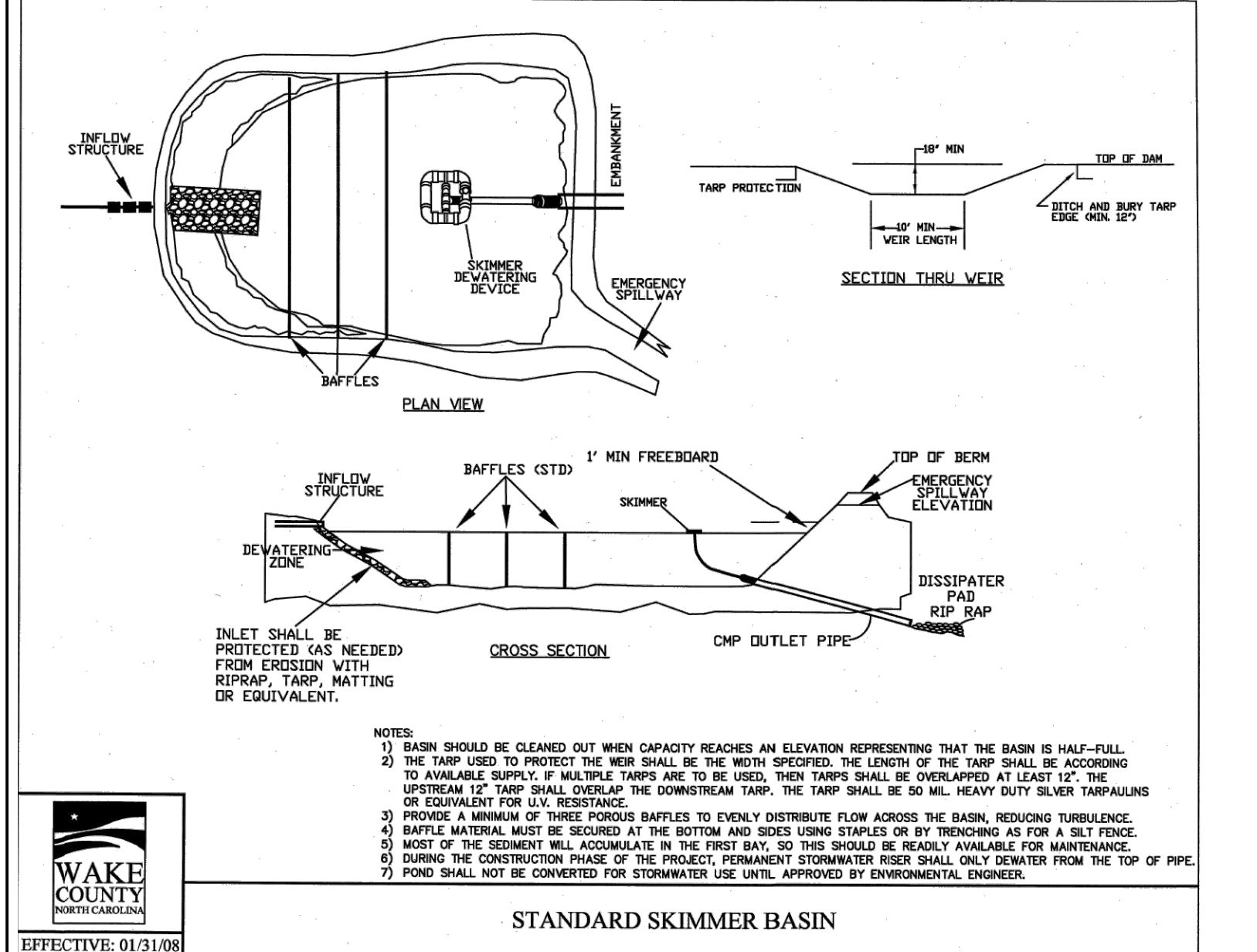
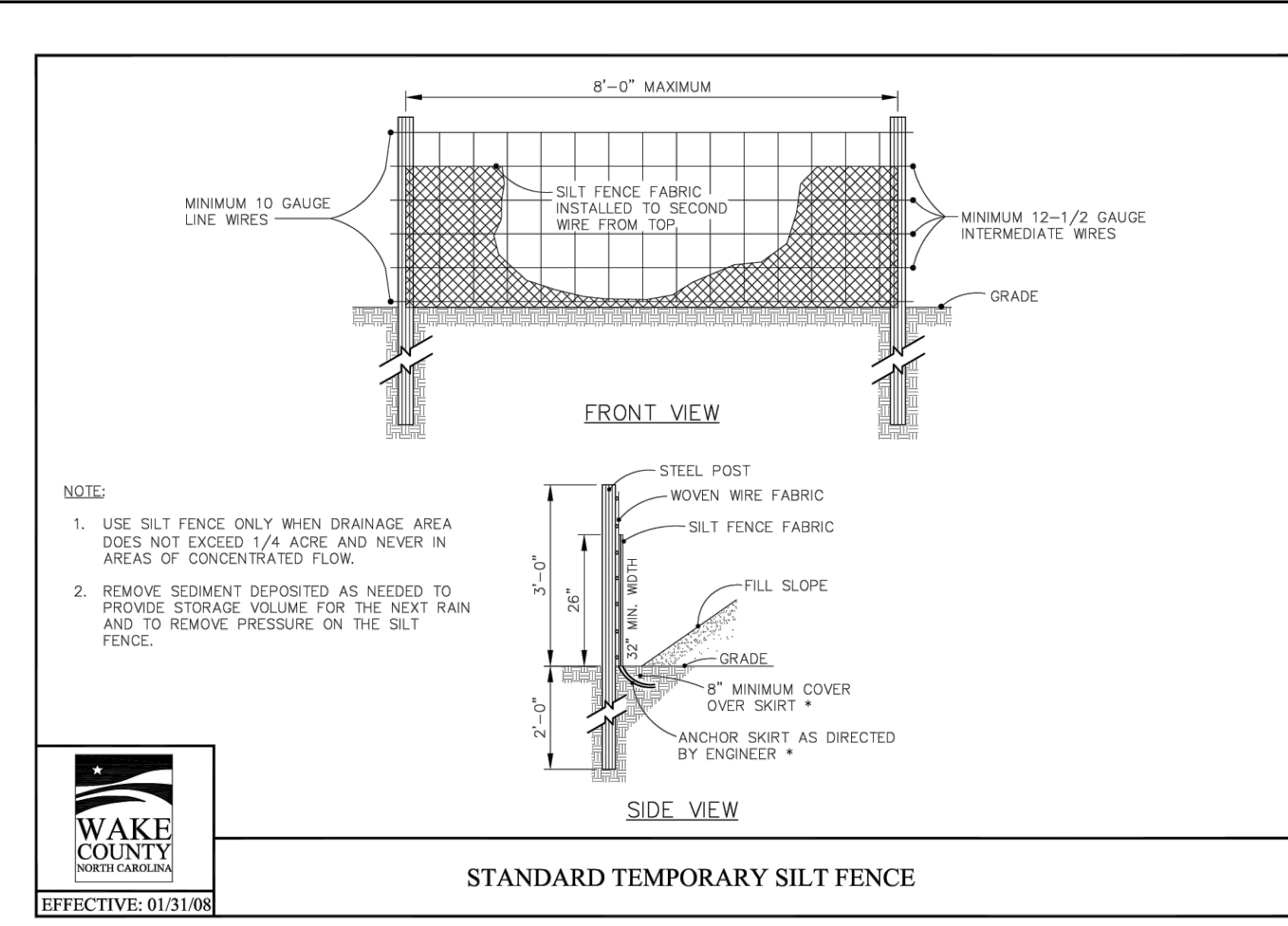
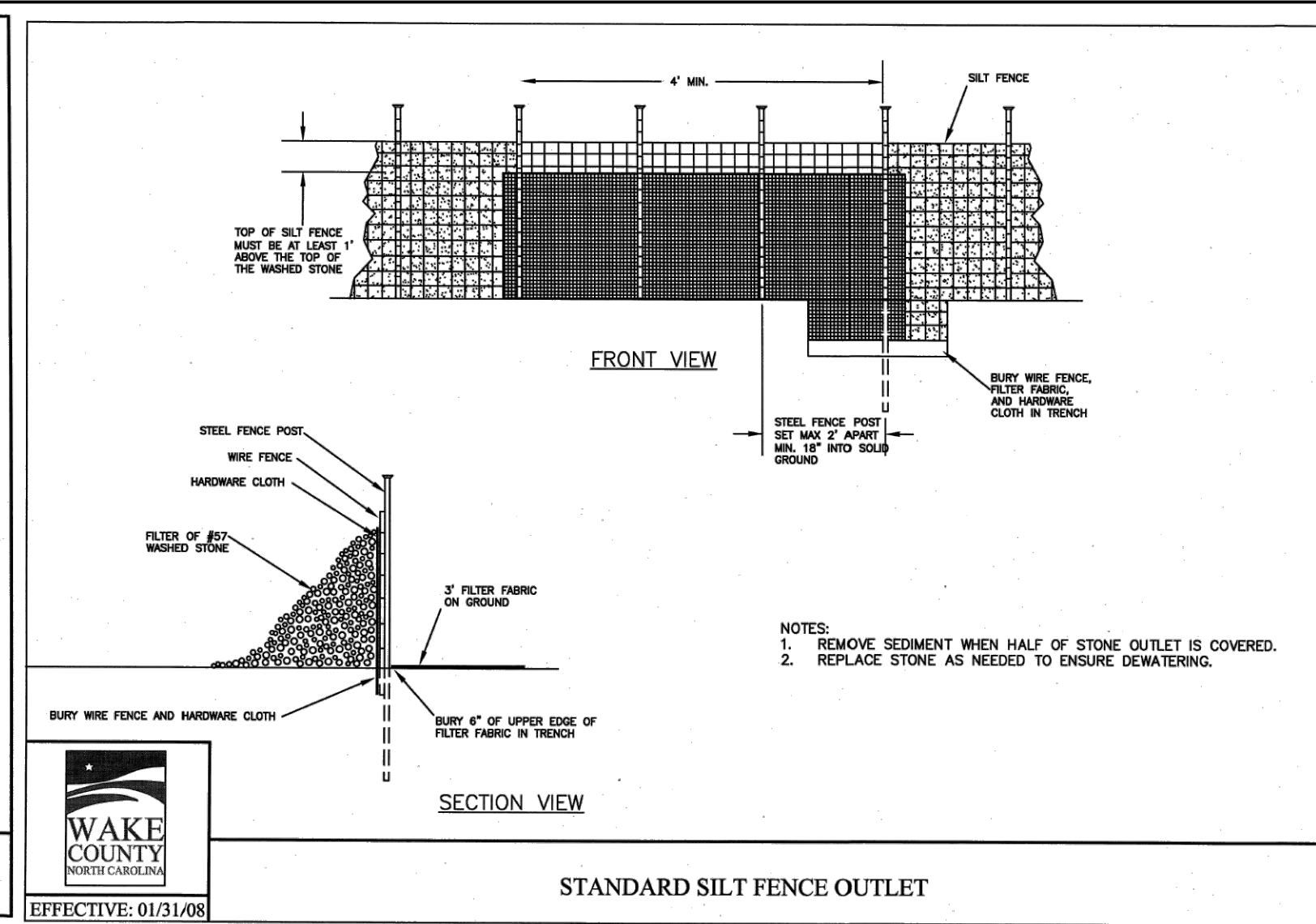
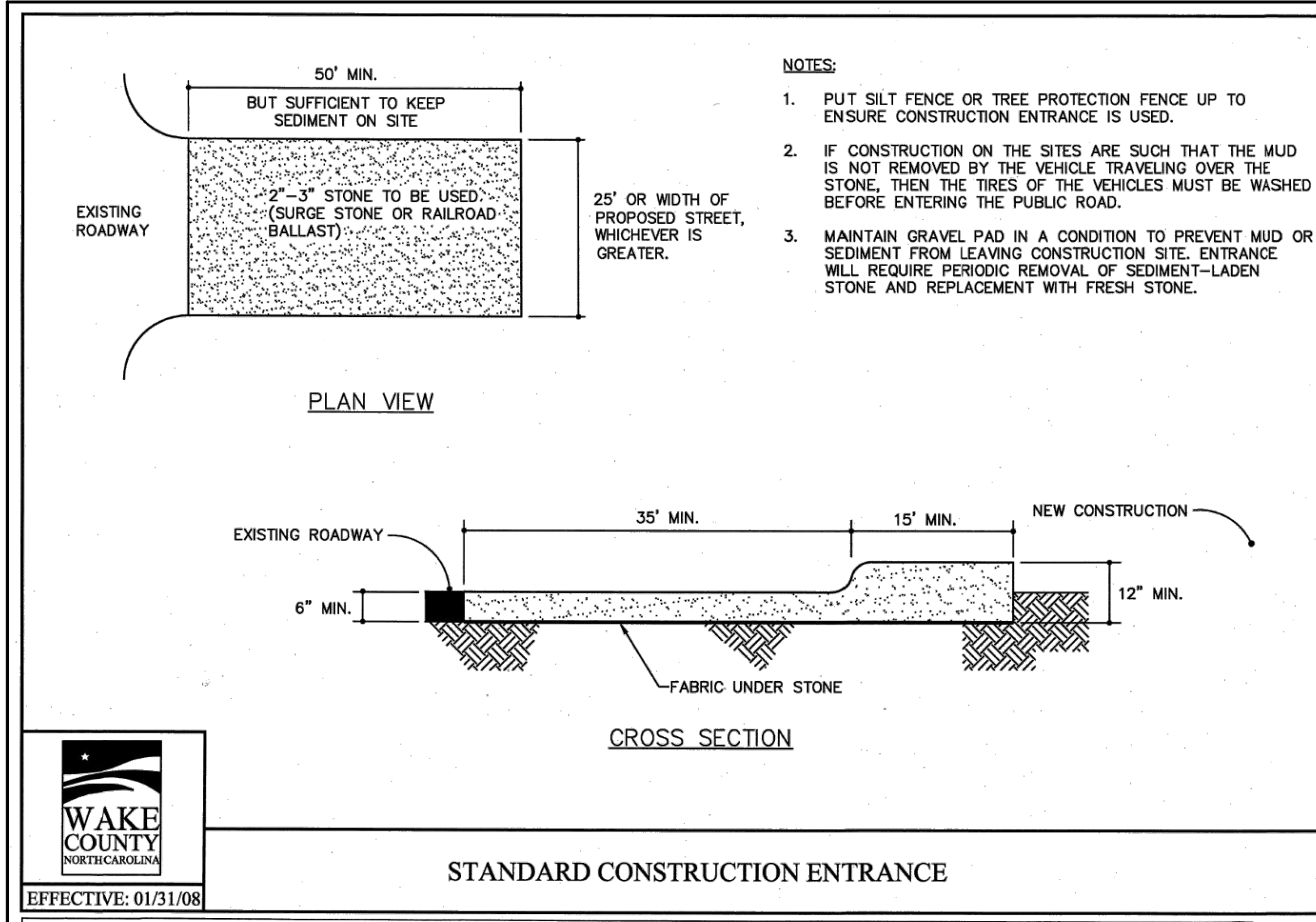
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ROADWAY STANDARD DRAWING FOR
REINFORCED CONCRETE ENDWALL
 FOR DOUBLE AND TRIPLE 72" PIPE 90° SKEW

SHEET 2 OF 2
838.40



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WAKE COUNTY - NORTH CAROLINA

EROSION CONTROL & STORM DRAINAGE DETAILS

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REVISIONS PER NCDOT COMMENTS
REVISIONS PER CITY OF RALEIGH COMMENTS

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Customer Drawing

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SHEET NO. C7.3

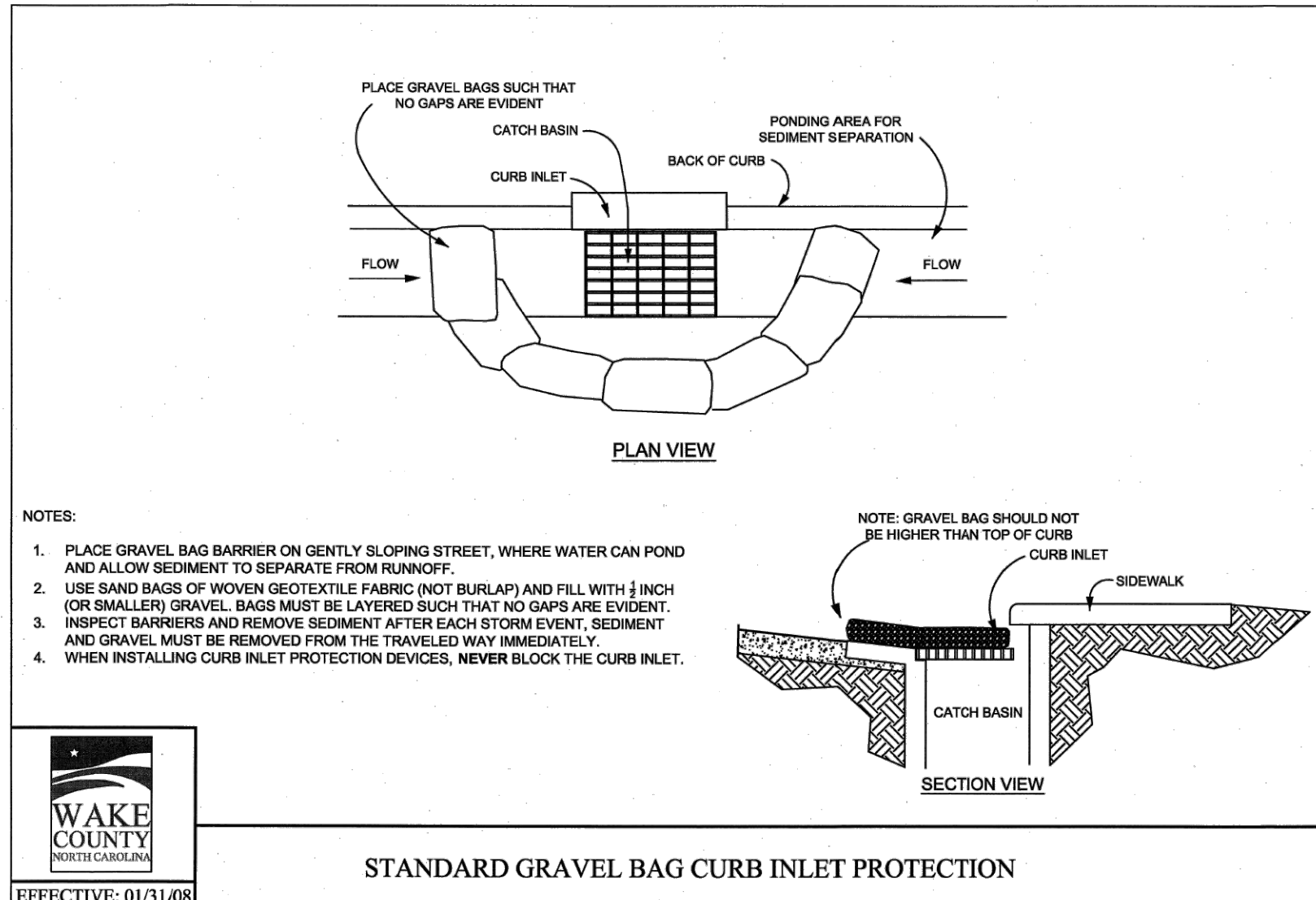
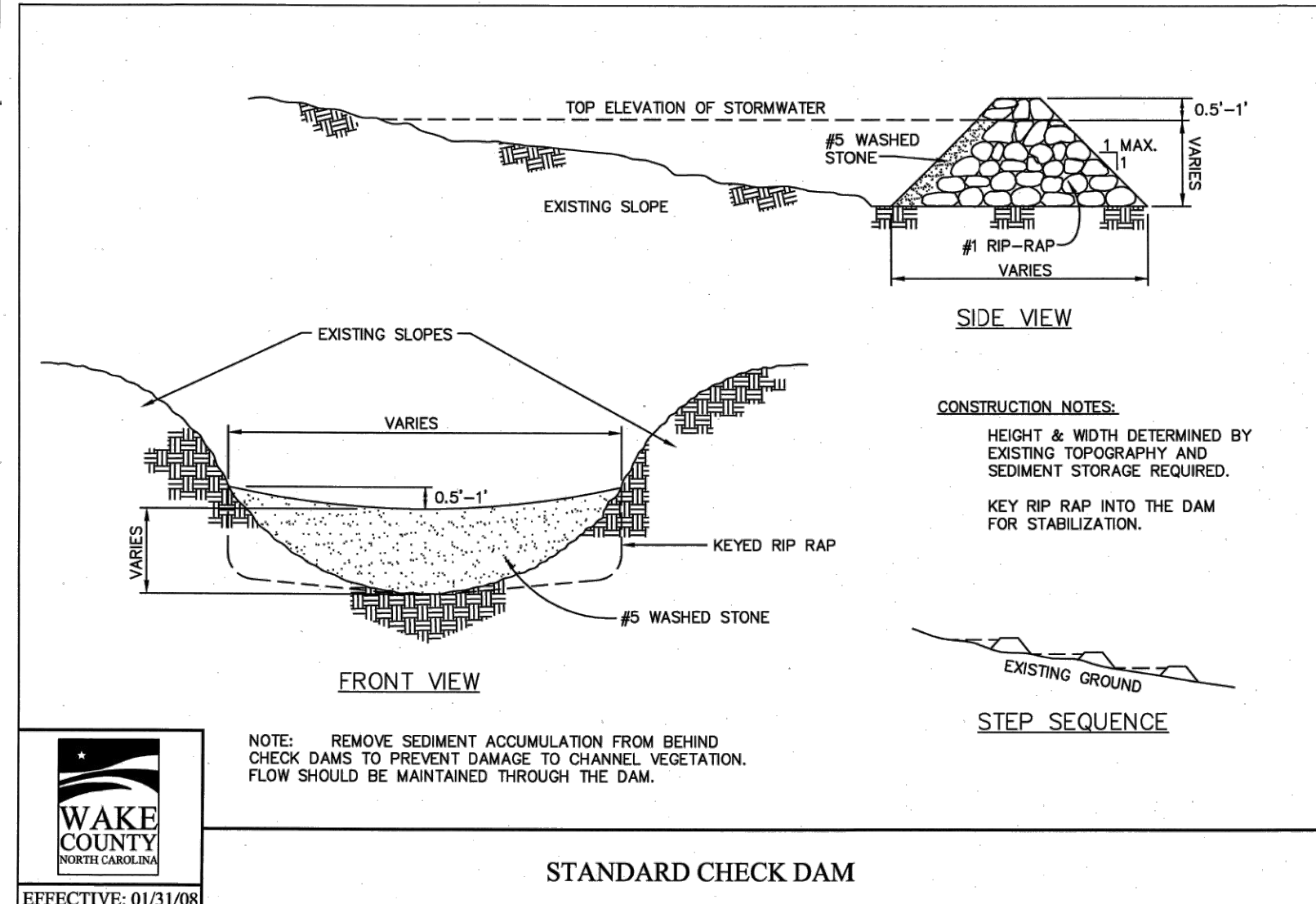
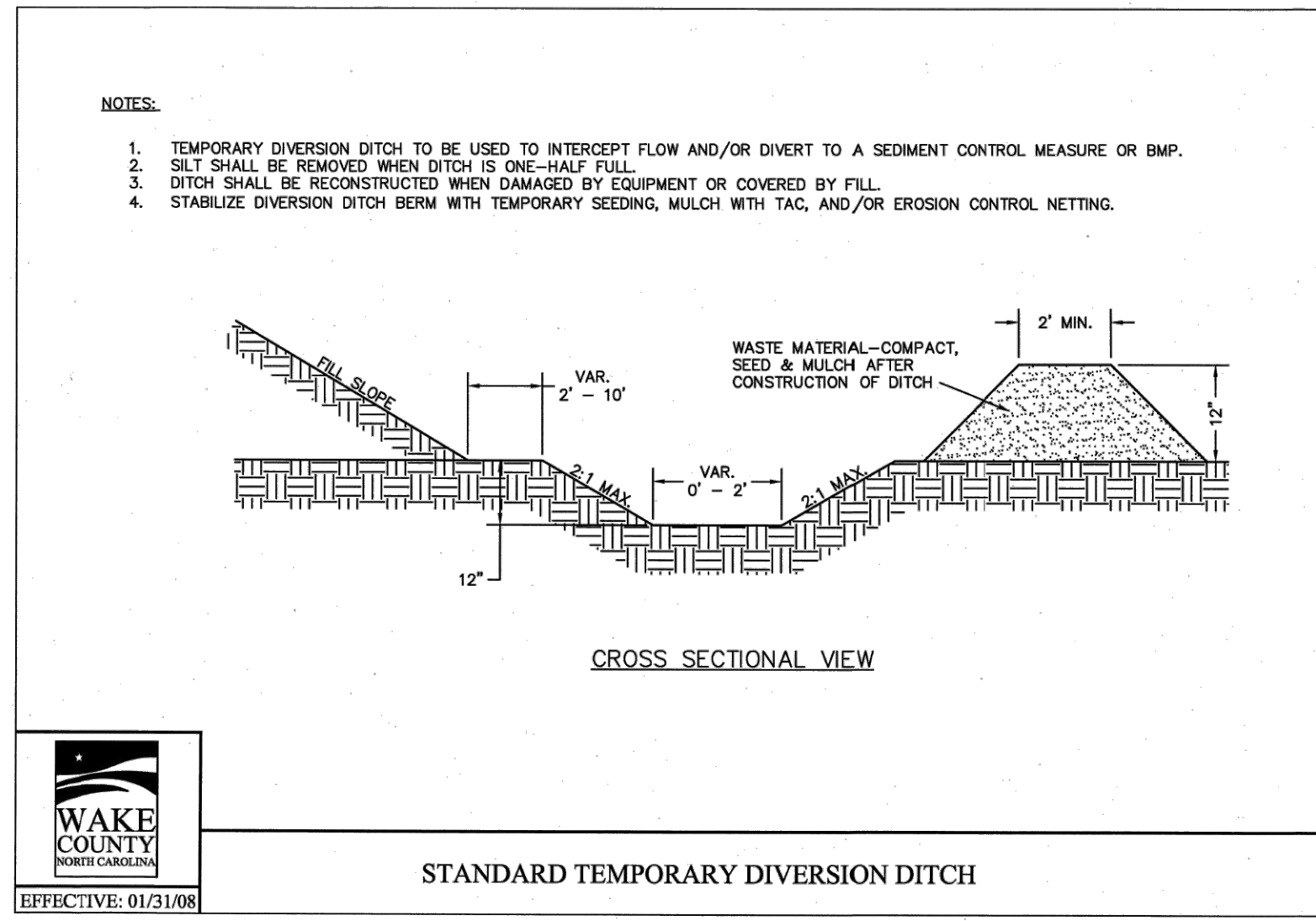
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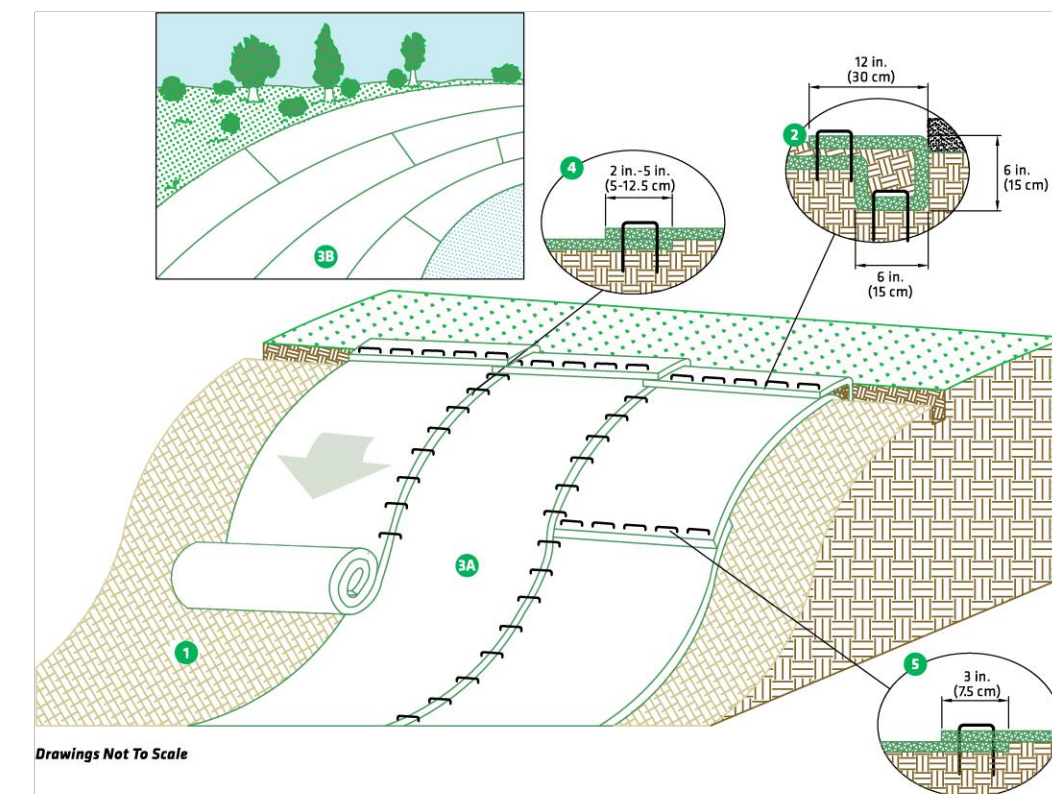
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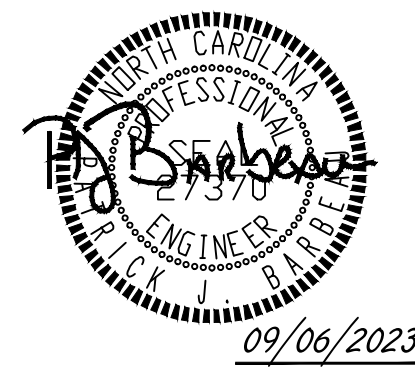
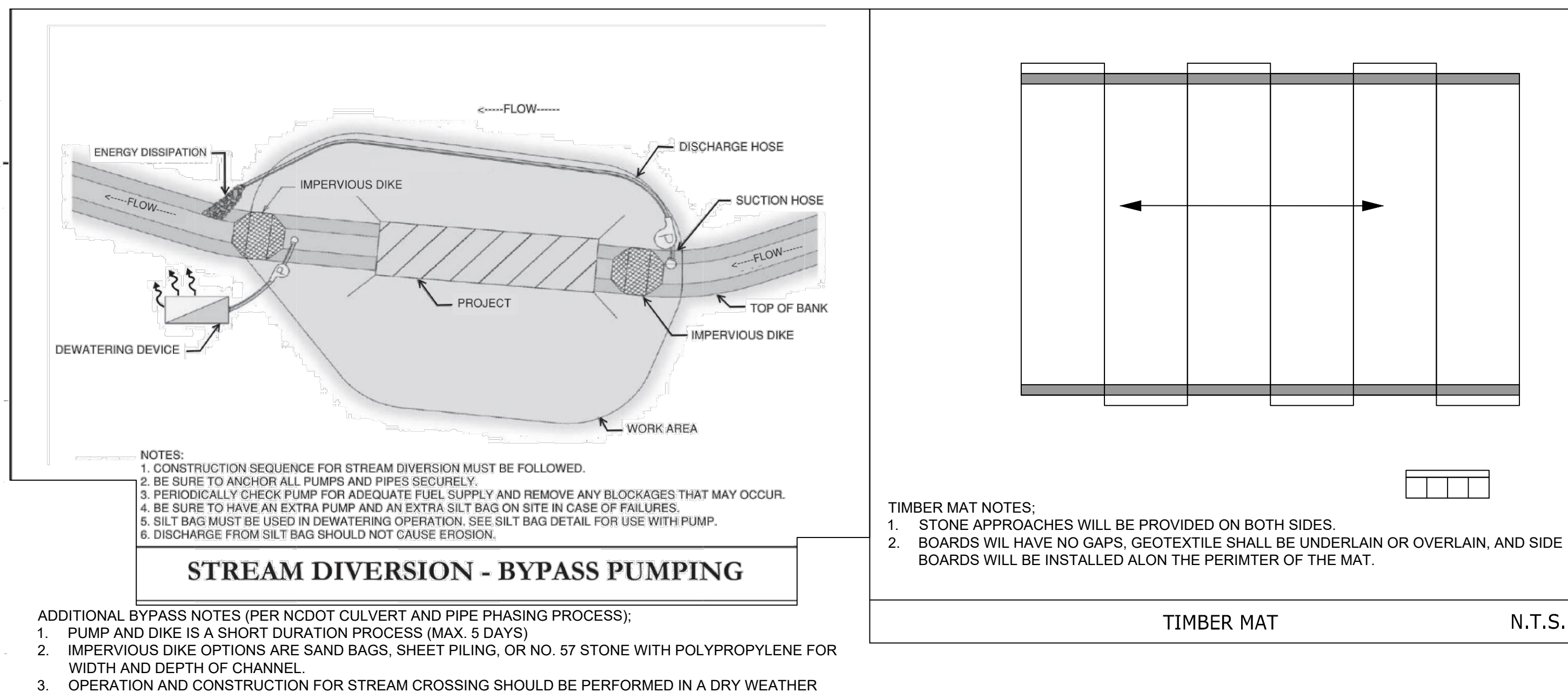
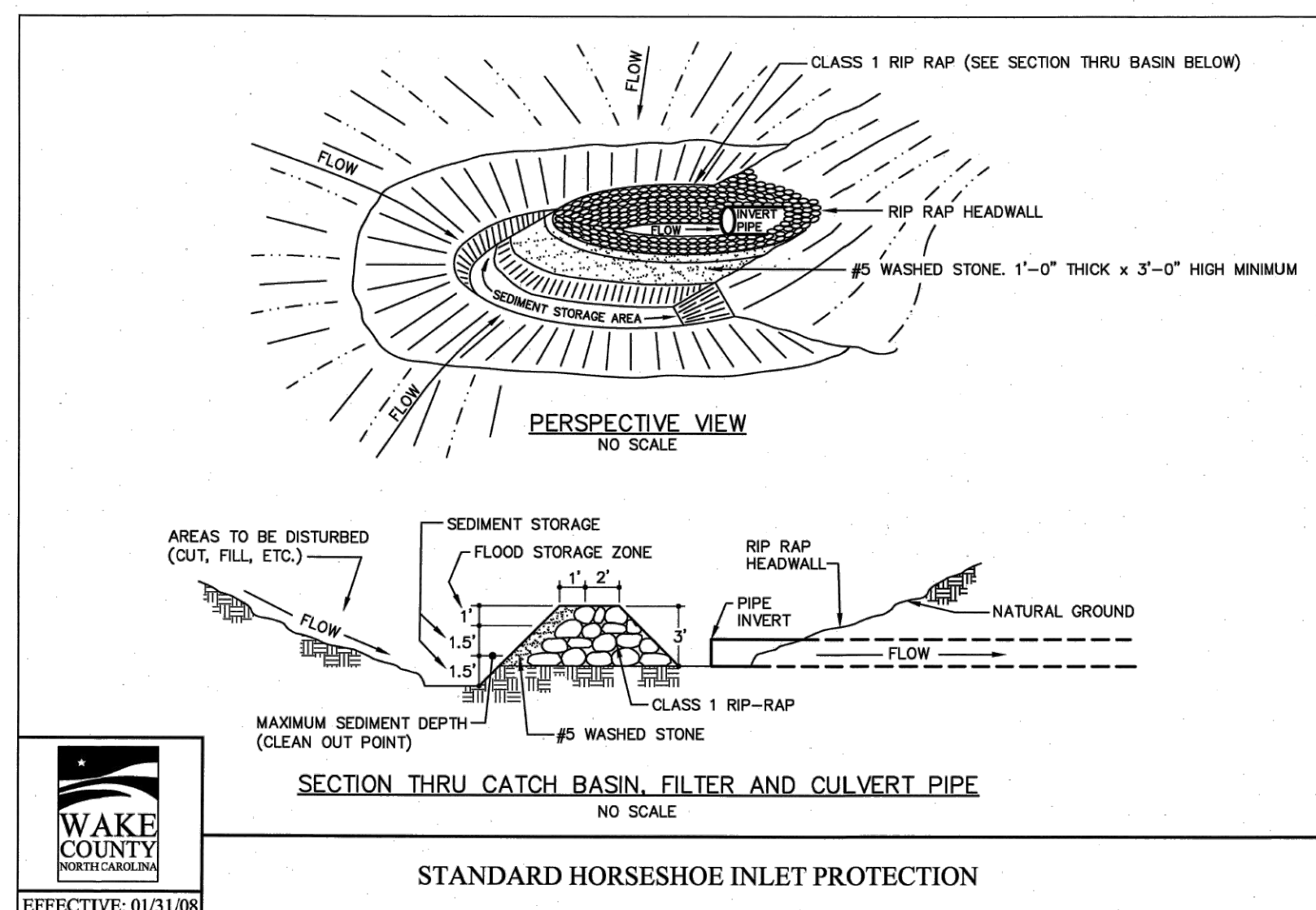
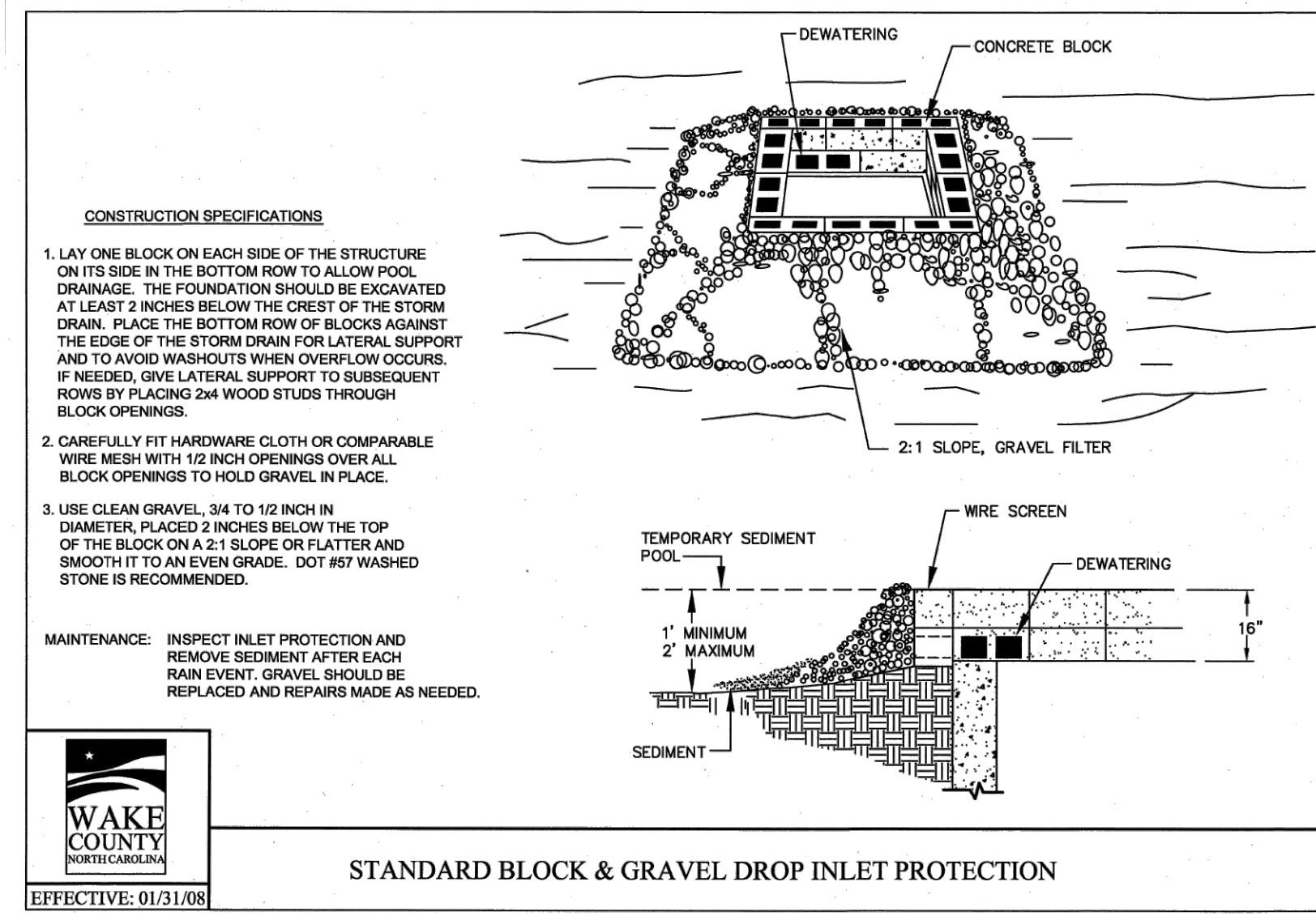
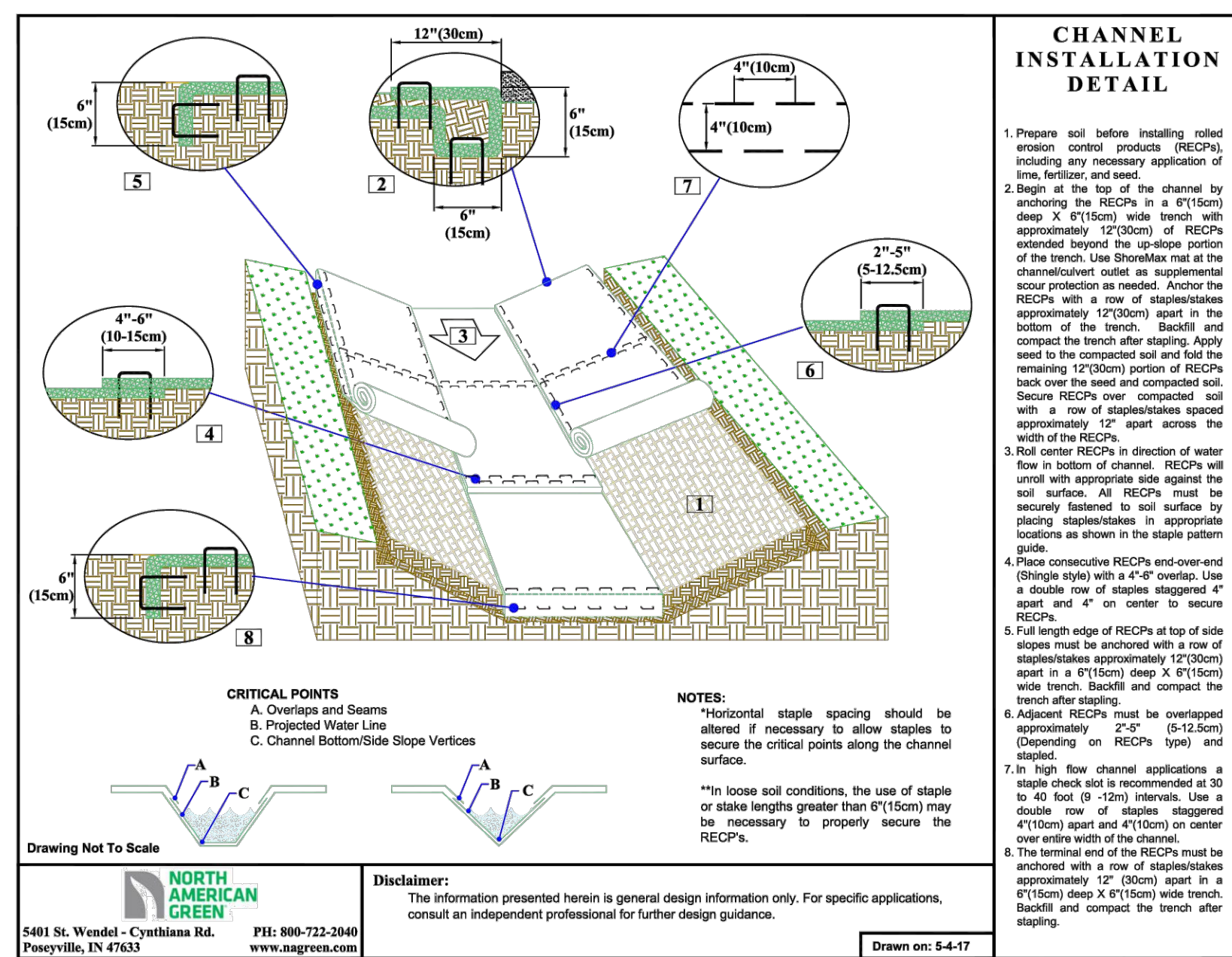
Slope Installation

The following slope guide outlines general recommendations for installing RollMax™ System temporary and/or permanent RECPS on sloping applications. Consult the staple pattern guide (Figure 1) for fastener spacing recommendations based on the slope severity.



SLOPE INSTALLATION STEPS

1. Prepare soil before installing RECPS, including any necessary application of lime, fertilizer and seed.
 2. Begin at the top of the slope by anchoring the RECPS in a 6 in. (15 cm) deep x 6 in. (15 cm) wide trench with approximately 12 in. (30 cm) of RECPS extended beyond the upslope portion of the trench. Anchor the RECPS with a row of staples/stakes approximately 12 in. (30 cm) apart in the bottom of the trench. Backfill and compact the trench after stapling. Apply seed to the compacted soil and fold the remaining 12 in. (30 cm) portion of RECPS back over the seed and compacted soil. Secure RECPS over compacted soil with a row of staples/stakes spaced approximately 12 in. (30 cm) apart across the width of the RECPS.
 3. Roll the RECPS (3A) down or (3B) horizontally across the slope. RECPS will unroll with appropriate side against the soil surface. All RECPS must be securely fastened to soil surface by placing staples/stakes in appropriate locations as shown in the staple pattern guide.
 4. The edges of parallel RECPS must be stapled with an approximately 2 in. (5 in. (5-12.5 cm) overlap depending on the RECPS type.
 5. Consecutive RECPS split down the slope must be end-over-end (shingle style) with an approximate 3 in. (7.5 cm) overlap. Staple through overlapped area, approximately 12 in. (30 cm) apart across entire RECPS width.*
- *NOTE:** In adverse soil conditions longer staples/stakes or earth anchors may be necessary to properly secure the RECPS.



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 DESIGNED BY
P. BARBEAU
 CHECKED BY
P. BARBEAU
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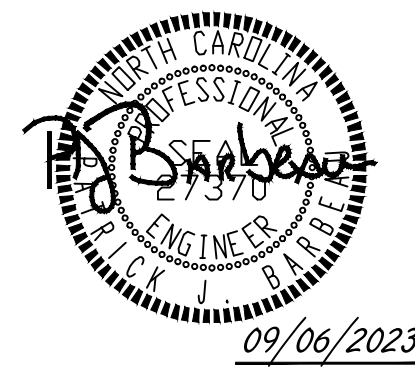
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 WAKE COUNTY - NORTH CAROLINA

EROSION CONTROL DETAILS

JOB NO.
43398

SHEET NO.
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 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
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 NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
 WAKE COUNTY - NORTH CAROLINA
EROSION CONTROL NOTES AND DETAILS

JOB NO. 43398
 SHEET NO. C7.5

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

6

Construction Specifications

- Place structural stone (Class B) to the lines and dimensions shown on the plan on a filter fabric foundation. The crest width of the dam should be a minimum of 2 feet.
- Keep the center stone section at least 9 inches below the end where the dam abuts the channel banks.
- Place sediment control stone (#5 or #57) on the upstream side of the dam that is a minimum of 1 foot thick.
- Provide an apron that is 3 times the height of the dam. The apron width is at least 4 feet long. Undercut the apron so that the top of the apron is flush with the surrounding grade.
- Extend the stone at least 1.5 feet beyond the ditch bank to keep water from cutting around the ends of the check dam.
- Excavate sediment storage area to the dimensions shown on the plan.

Maintenance

Inspect check dams and channels at least weekly and after each significant (1/2 inch or greater) rainfall event and repair immediately. Clean out sediment, straw, limbs, or other debris that could clog the channel when needed.

Anticipate submergence and deposition above the check dam and erosion from high flows around the edges of the dam. Correct all damage immediately. If significant erosion occurs between dams, additional measures can be taken such as, installing a protective riprap liner in that portion of the channel (Practice 6.31, *Riprap-line and Paved Channels*).

Remove sediment accumulated behind the dams as needed to prevent damage to channel vegetation, allow the channel to drain through the stone check dam, and prevent large flows from carrying sediment over the dam. Add stones to dams as needed to maintain design height and cross section.

References

Runoff Conveyance Measures
 6.31, Riprap-lined and Paved Channels

North Carolina Department of Transportation
 Standard Specifications for Roads and Structures

Practice Standards and Specifications

6.87

CHECK DAM WITH A WEIR

Definition A small stone dam structure with a weir outlet with a sediment storage area on the upper side.

Purpose To reduce erosion in a drainage channel by restricting the velocity of flow. This structure also has some ability to provide sediment control.

Conditions Where Practice Applies This temporary practice may be used in the following locations:

- At outlets of temporary diversions, graded channels, and temporary slope drains;
- In small natural drainage turnouts; and
- In locations where the dams can be easily cleaned and maintained on a regular basis.

Do not use a check dam with a weir in intermittent or perennial streams.

Planning Considerations Check dams are an expedient way to reduce gullying in the bottom of channels that will be filled or stabilized at a later date. The dams should only be used while permanent stabilization measures are being put into place.

Check dams installed in grass-lined channels may kill the vegetative lining if submergence after it rains is too long and/or sedimentation is excessive. All stone and riprap must be removed if mowing is planned as part of vegetative maintenance.

Design Criteria The following criteria should be used when designing a check dam with a weir:

- Keep the weir at least 9 inches lower than the outer edges at natural ground elevation. The weir length is variable to the size of the drainage area and peak runoff. The weir length may be sized as:

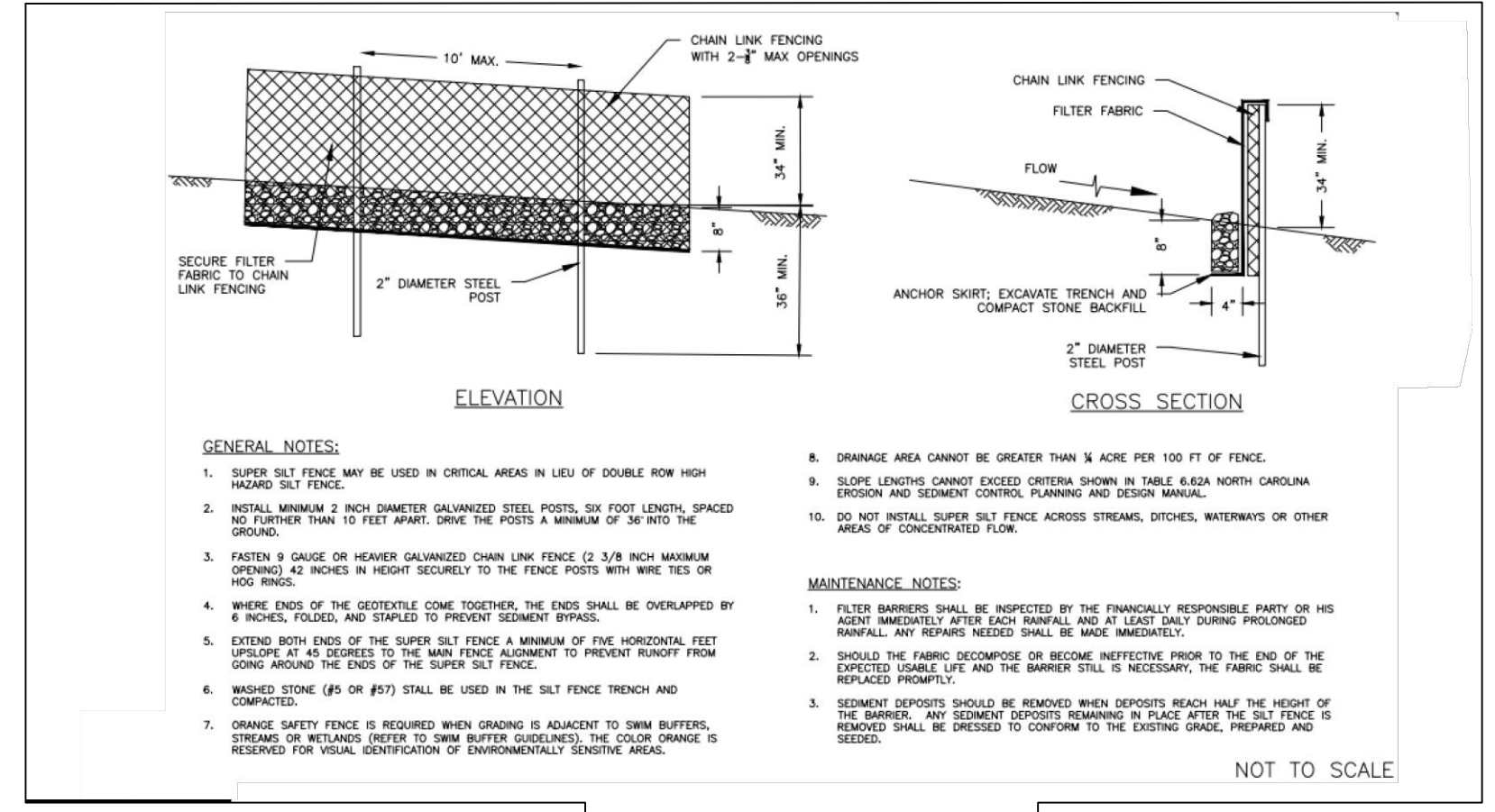
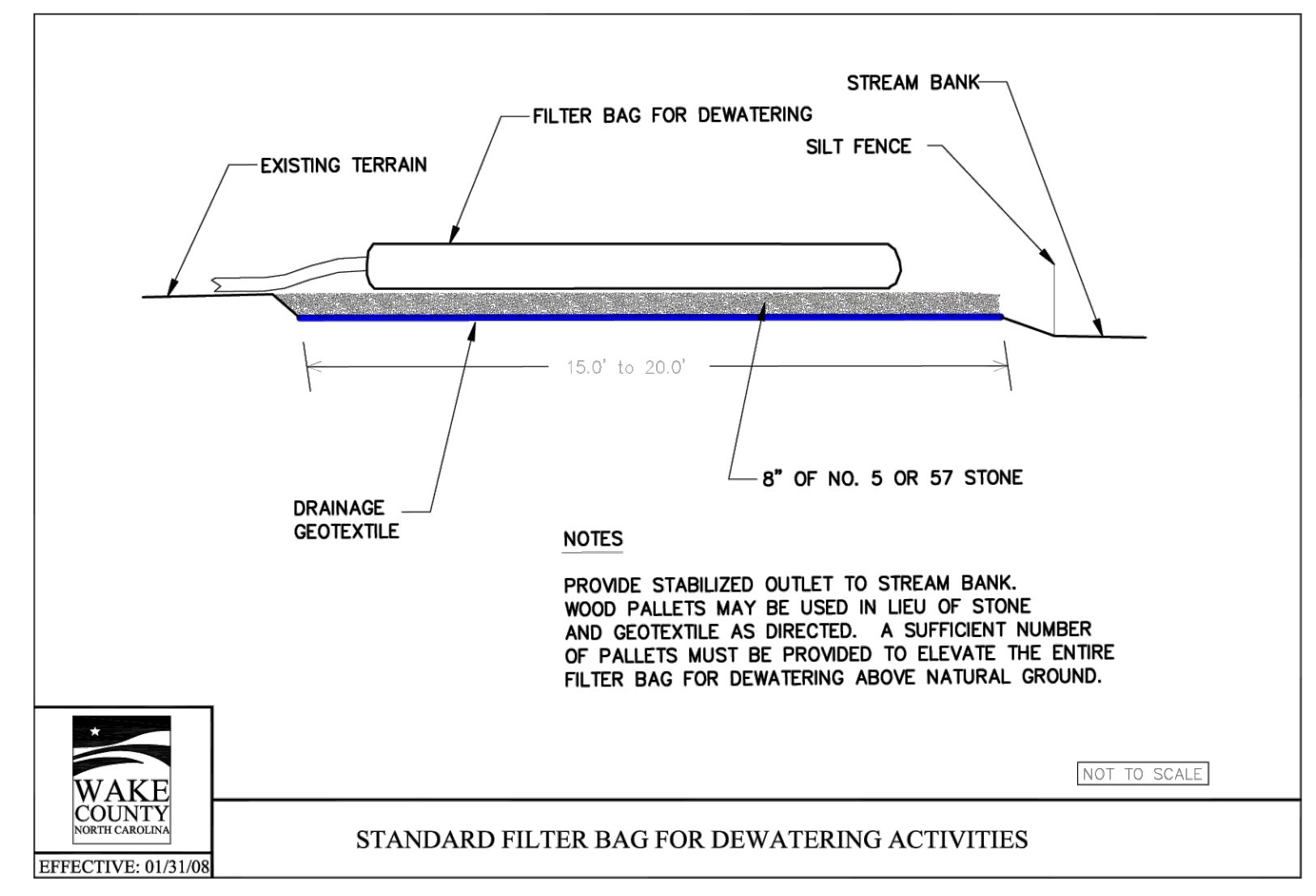
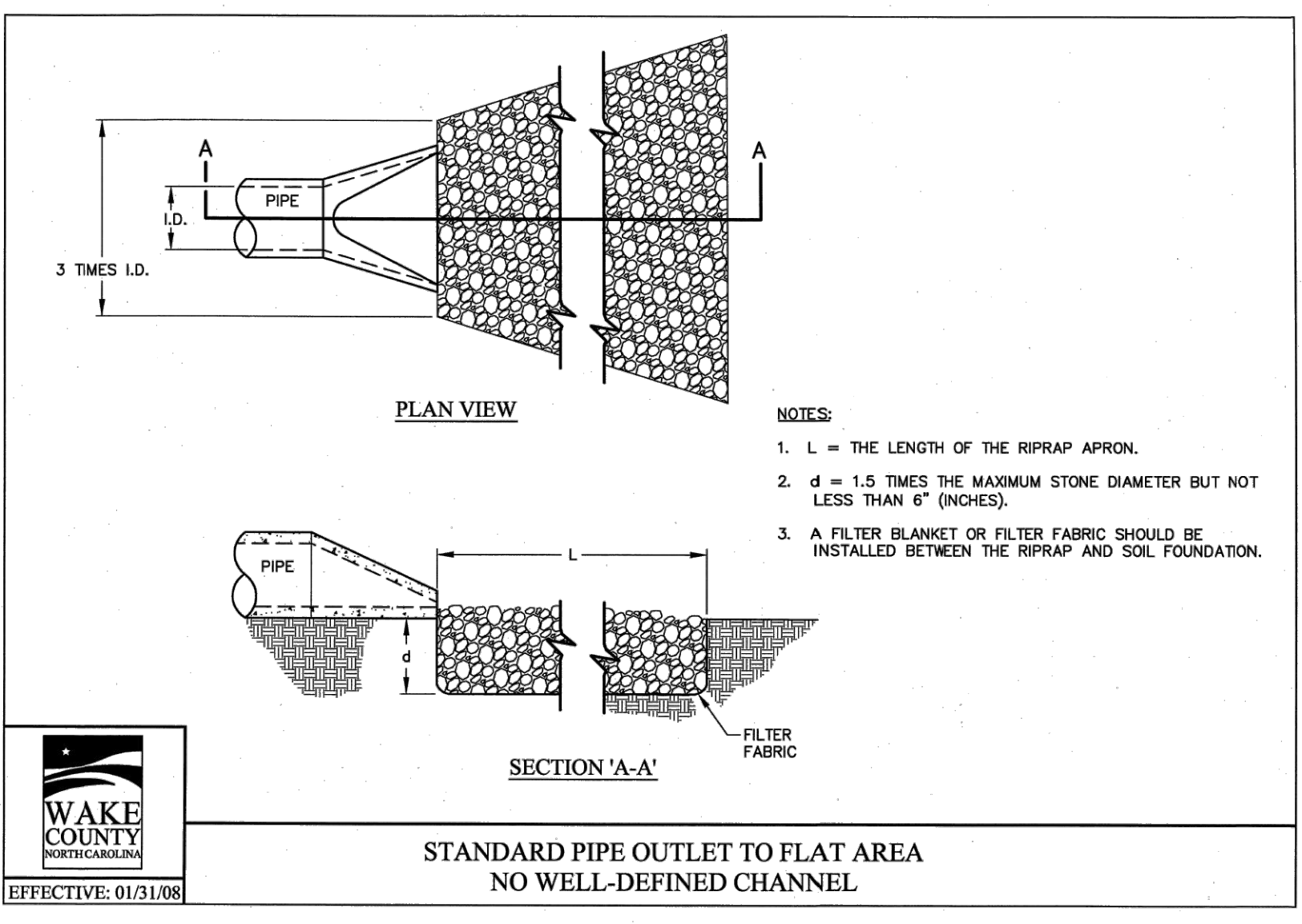
$$L (ft) = \frac{Q \text{ peak (cfs)}}{0.88}$$
- Keep the side slope of the stone at 2:1 or flatter.
- The apron length (lower side of dam) should be approximately three times the height of the dam with a minimum length of 4 feet. Stabilize outflow areas along the channel to resist erosion.
- The maximum spacing between dams places the top of the upstream dam at the same elevation as the top of the downstream dam (Figure 6.84a).
- Use NC DOT Class B stone and line the upstream side of the dam with NC DOT #5 or #57 stone.
- Key the stone into the ditch banks and extend it beyond the abutments a minimum of 1.5 feet to avoid washouts from overflow around the dams.
- Sediment storage area should be sized for the anticipated volume of sedimentation.

Rev. 6/96

6.87.1

6.87.2

Rev. 6/96



SUPER SILT FENCE

S:\324\43398-Wheeler_Timed\DWG\Sheet\CD\43398-C7-D\NTD.rvt (Printed on 8/16/2023 9:20 AM) by Aileen Pical

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

Table with 3 columns: Site Area Description, Stabilize within this many calendar days after ceasing land disturbance, Timeframe variations

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...

GROUND STABILIZATION SPECIFICATION

Table with 2 columns: Temporary Stabilization, Permanent Stabilization

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS
1. Select flocculants that are appropriate for the soils being exposed during construction...

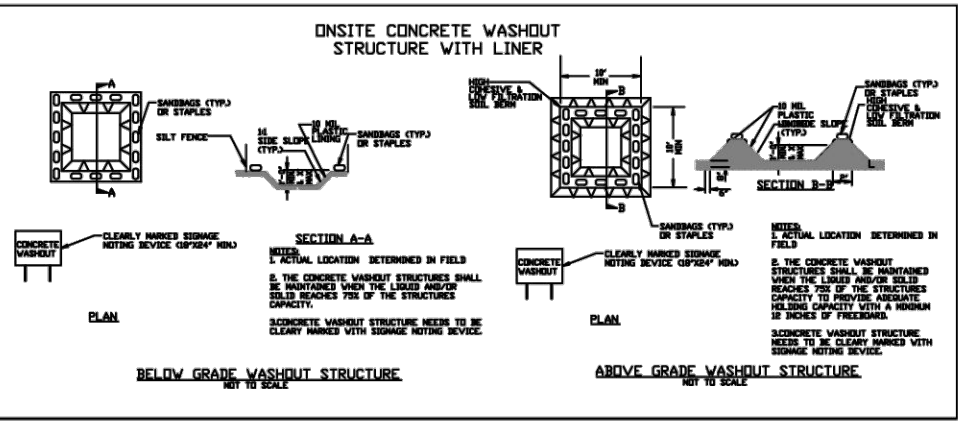
- EQUIPMENT AND VEHICLE MAINTENANCE
1. Maintain vehicles and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.

- 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.

- 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.

- 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.

- 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.



- 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.

- 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.

- HAZARDOUS AND TOXIC WASTE
1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.

SEEDING SCHEDULE (REVISED: 1-1-86)
SHOULDER, SIDE DITCHES, SLOPES (MAX 3:1)
Table with columns: DATE, TYPE, PLANTING RATE

- SEEDBED PREPARATION
1.) CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2.) RIP THE ENTIRE AREA TO 6 INCHES DEPTH.

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.

Table with 3 columns: Inspect (during normal business hours), Frequency, Inspection records must include

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

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING
The approved E&S plan as well as any approved deviation shall be kept on the site. The approved E&S plan must be kept up-to-date throughout the coverage under this permit.

Table with 2 columns: Item to Document, Documentation Requirements

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

- (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.

PART II, SECTION 6, 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.

- (a) The E&S plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur.
(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.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING
1. Occurrences that Must be Reported
Permittees shall report the following occurrences:

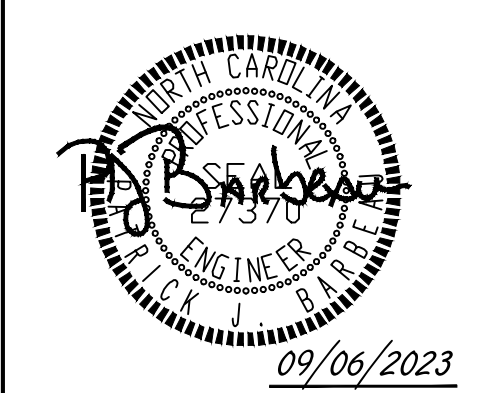
- (a) Visible sediment deposition in a stream or wetland.
(b) Oil spills if:
• They are 25 gallons or more.
• They are less than 25 gallons but cannot be cleaned up within 24 hours.
• They cause sheen on surface waters (regardless of volume), or
• They are within 100 feet of surface waters (regardless of volume).

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.

Table with 2 columns: Occurrence, Reporting Timeframes (After Discovery) and Other Requirements



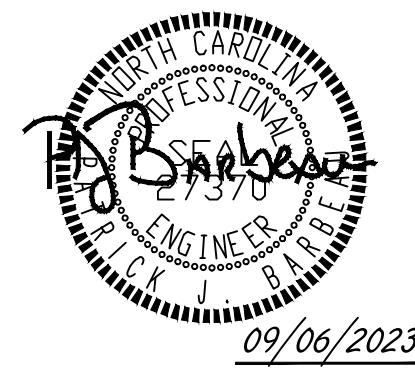
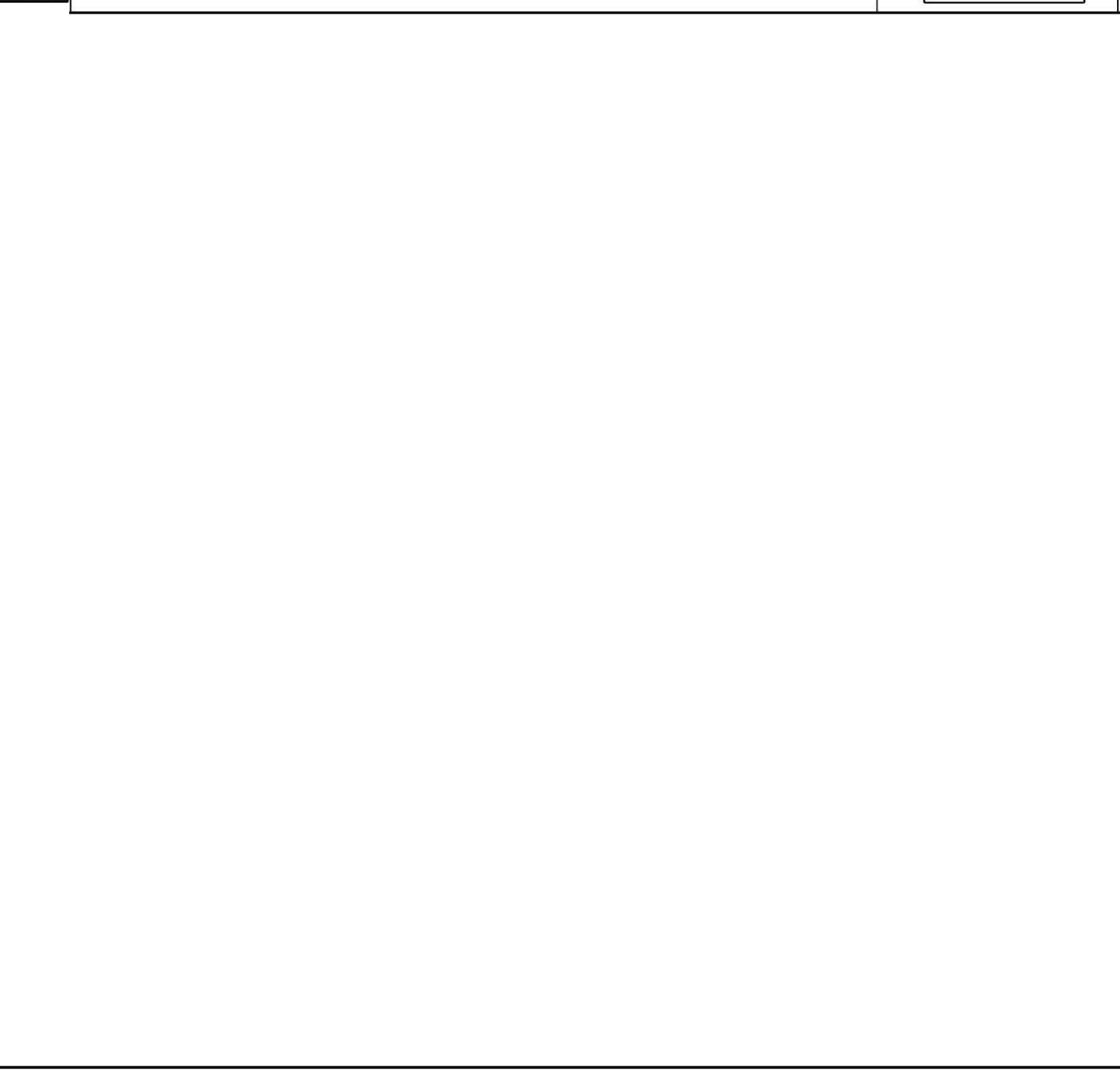
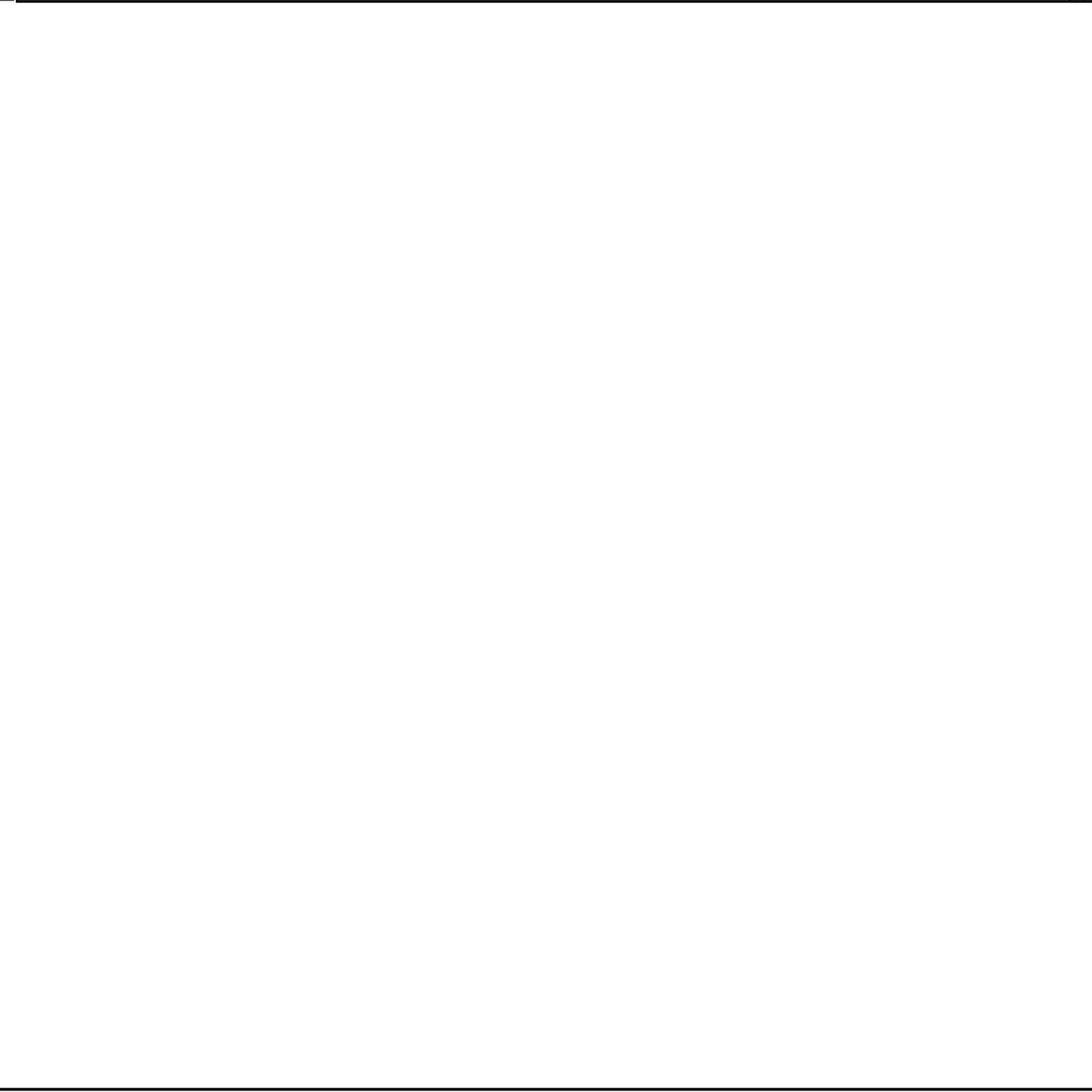
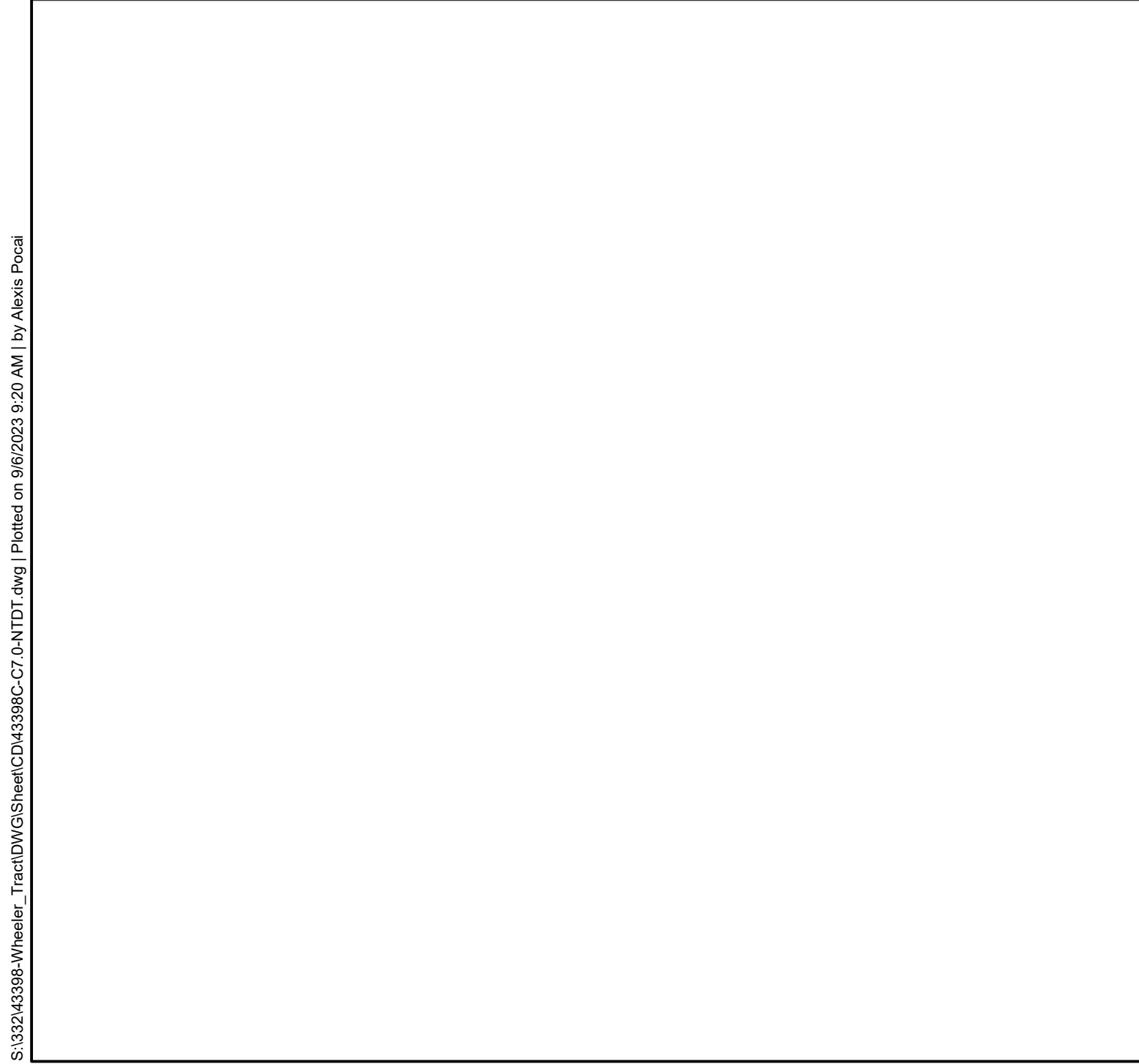
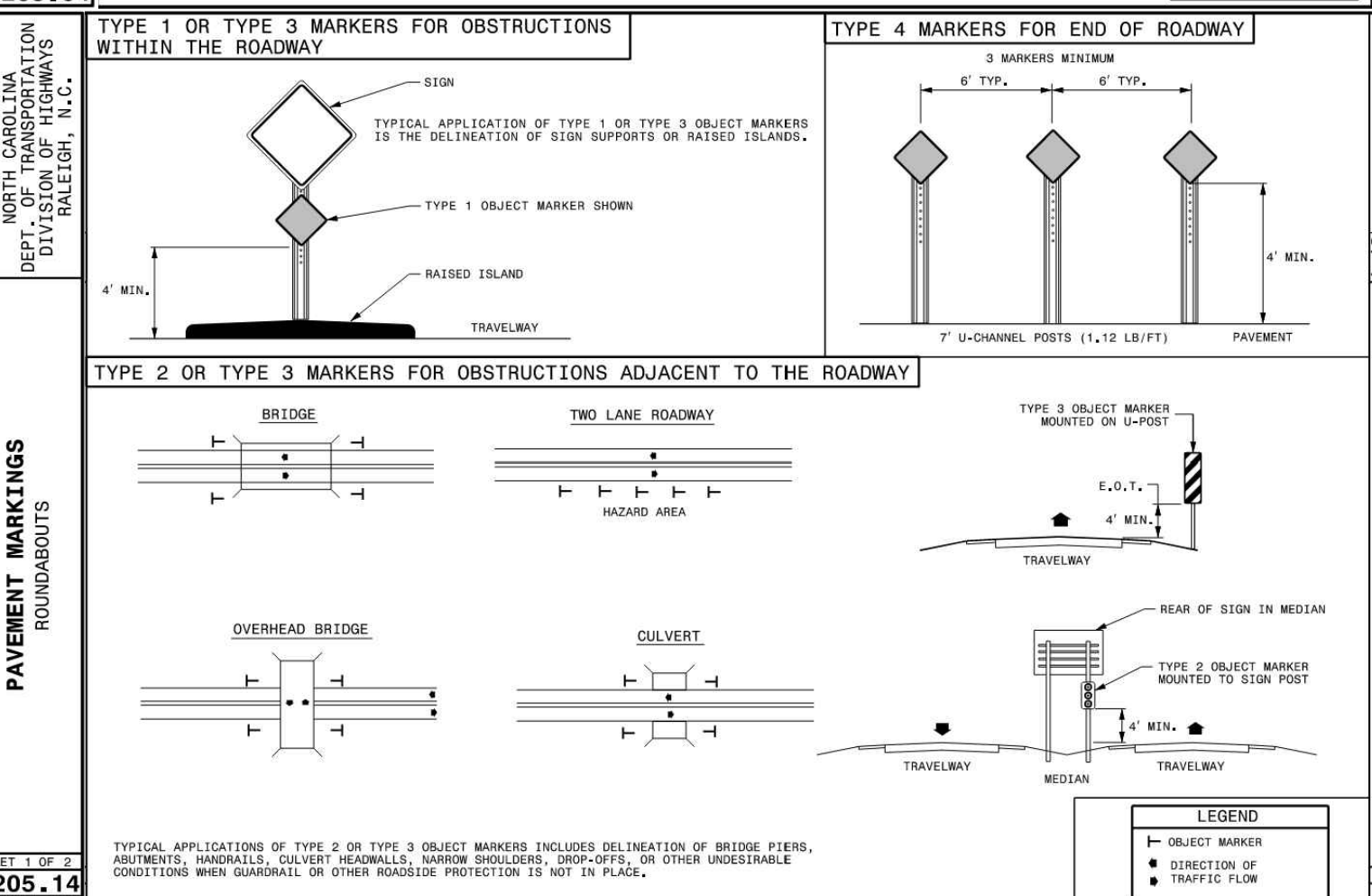
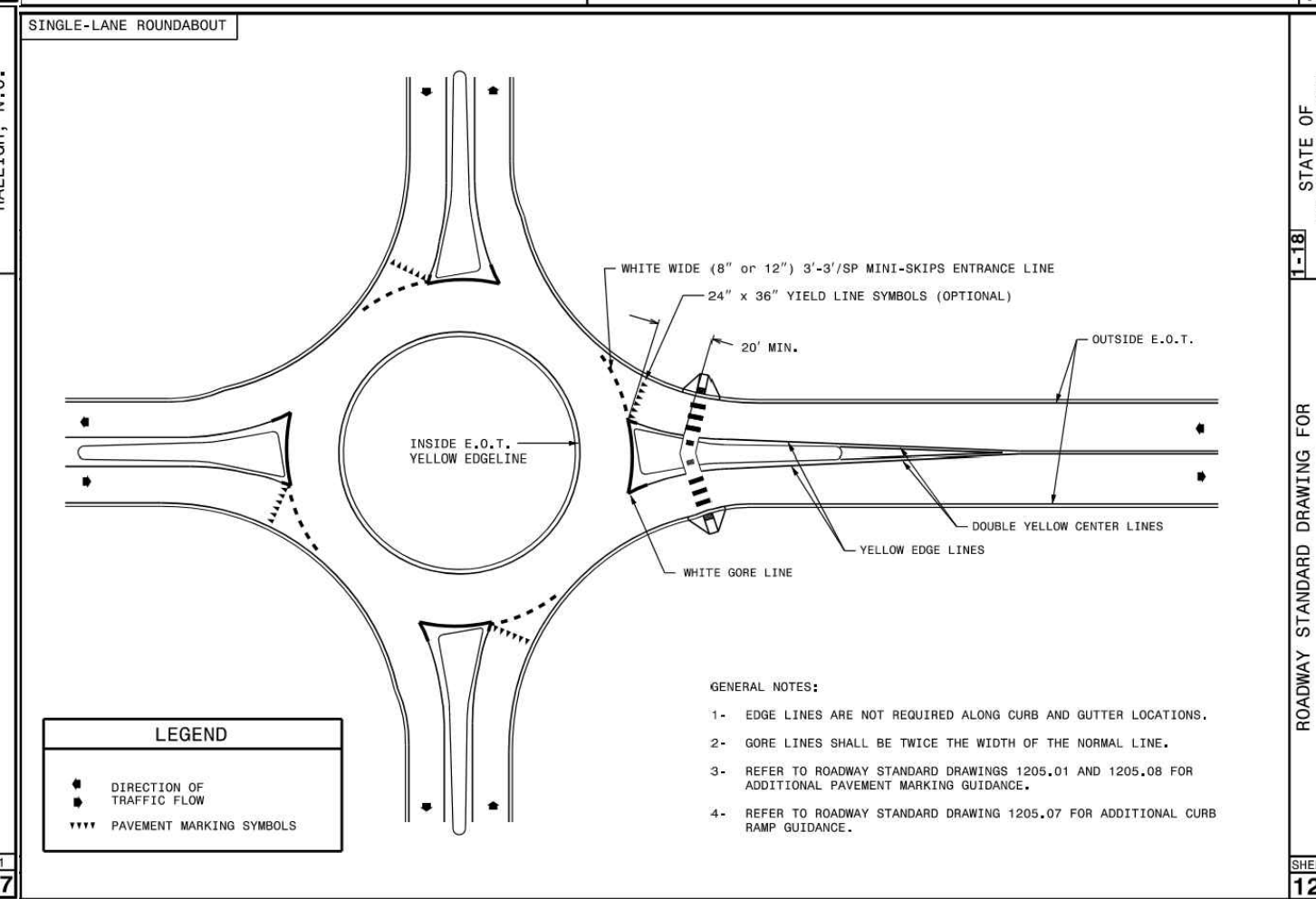
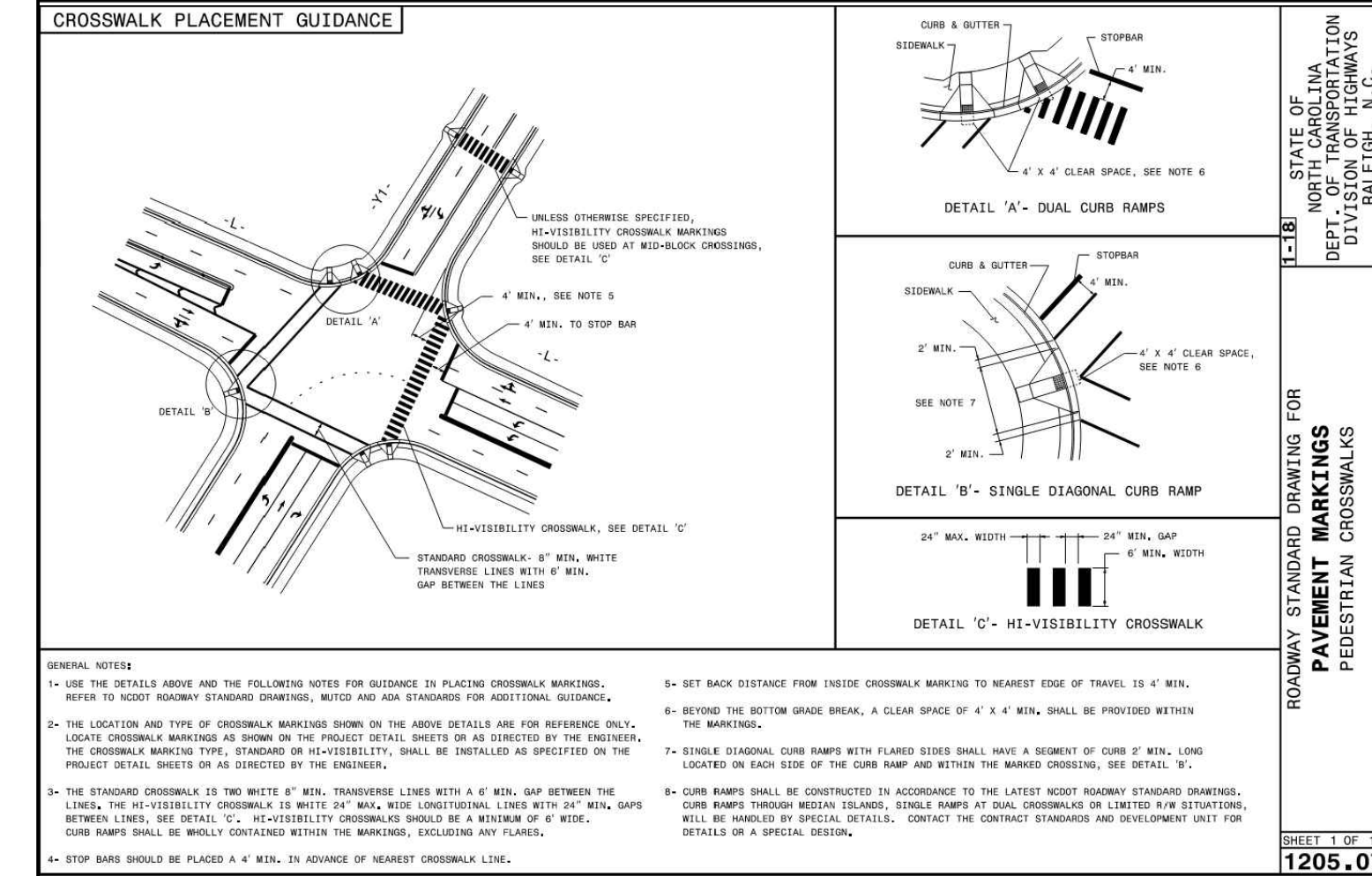
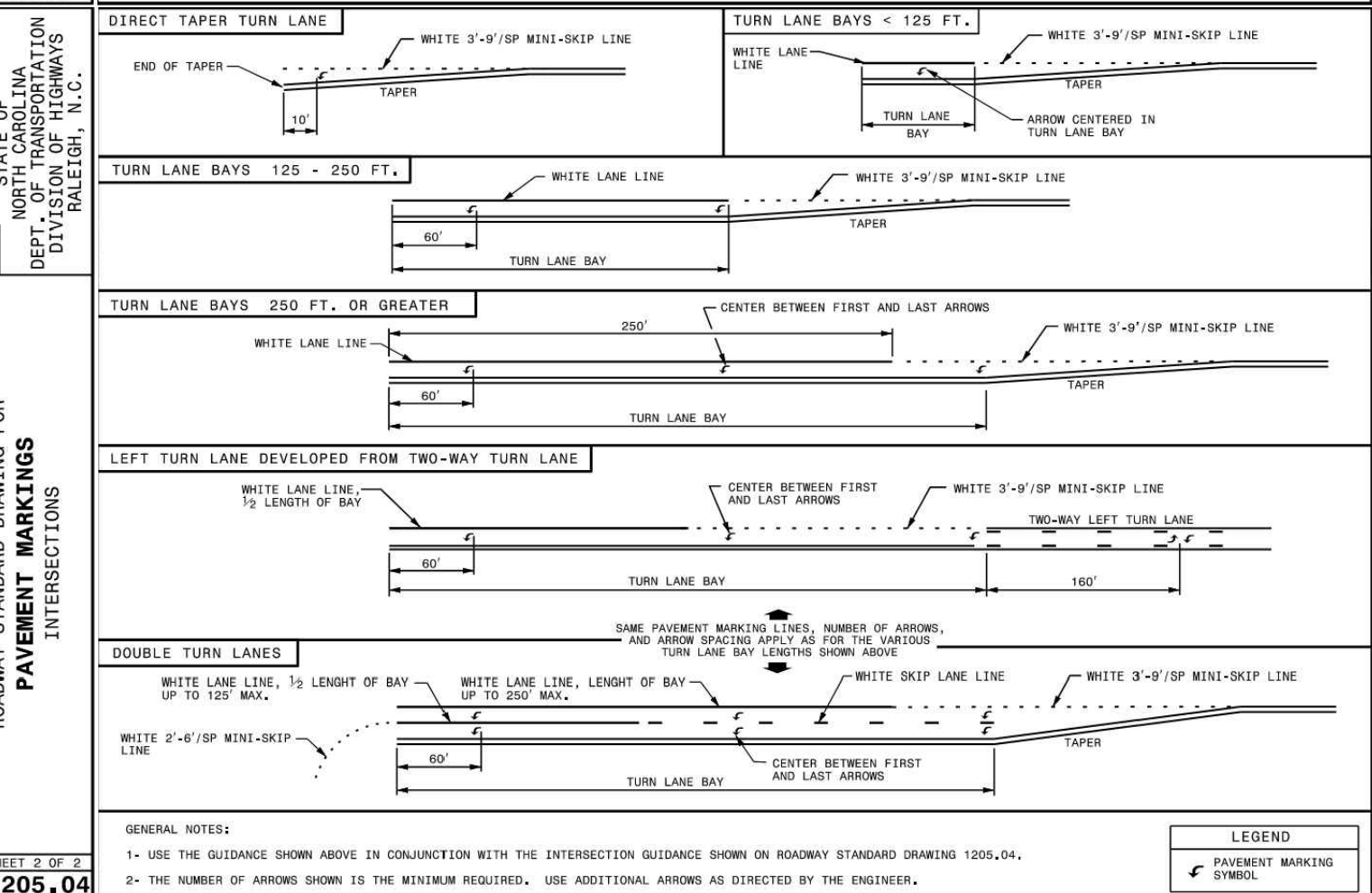
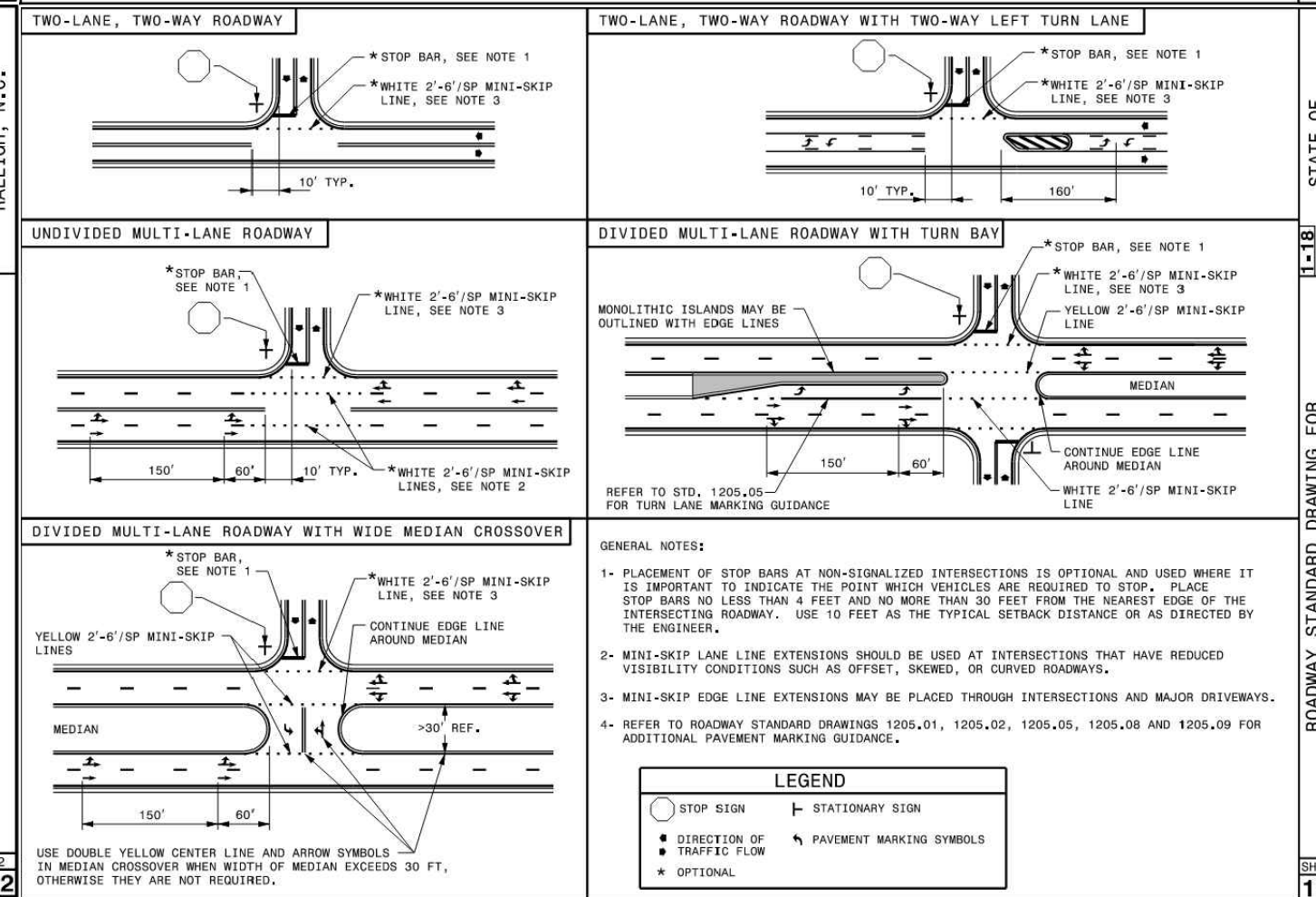
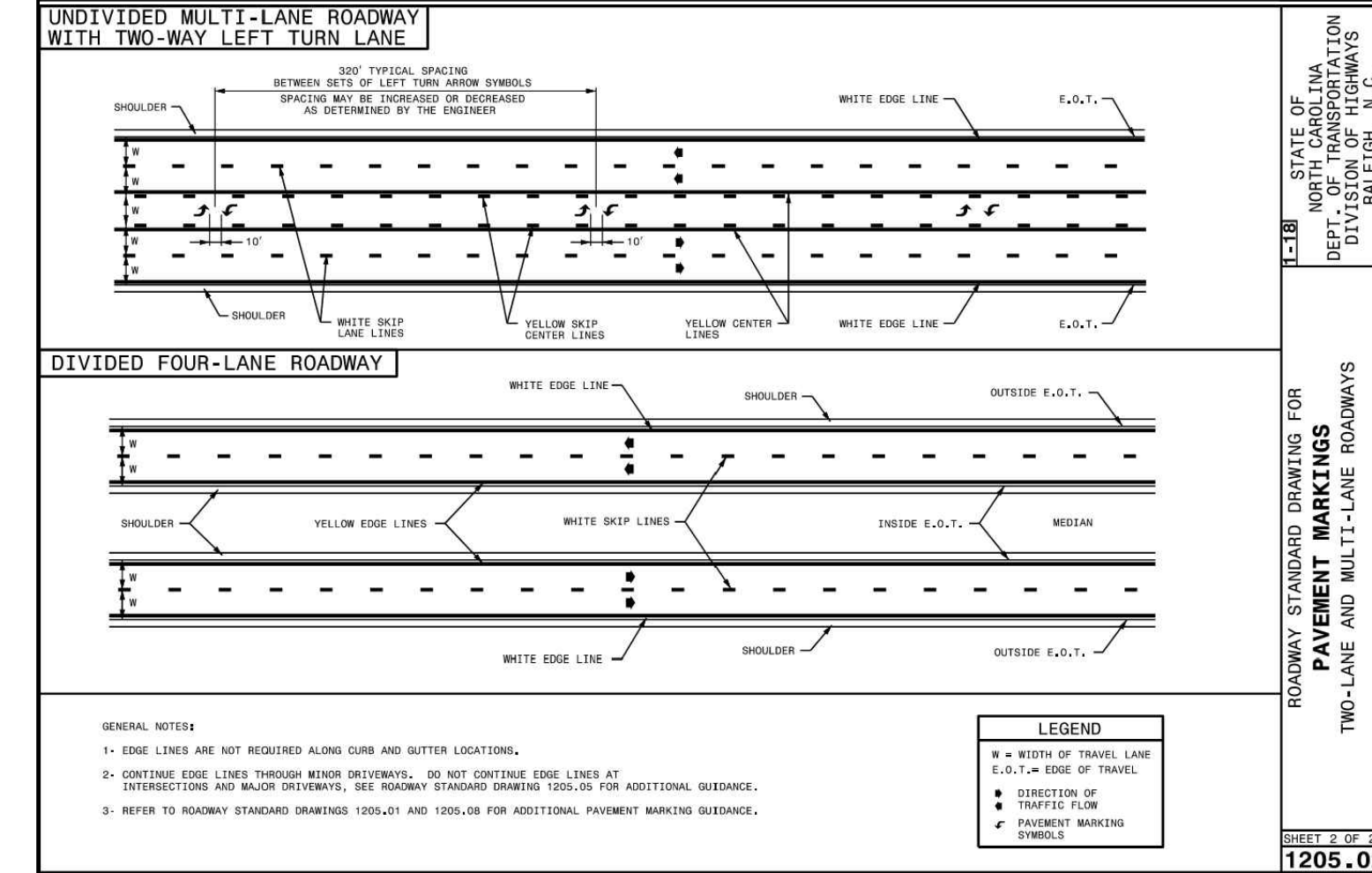
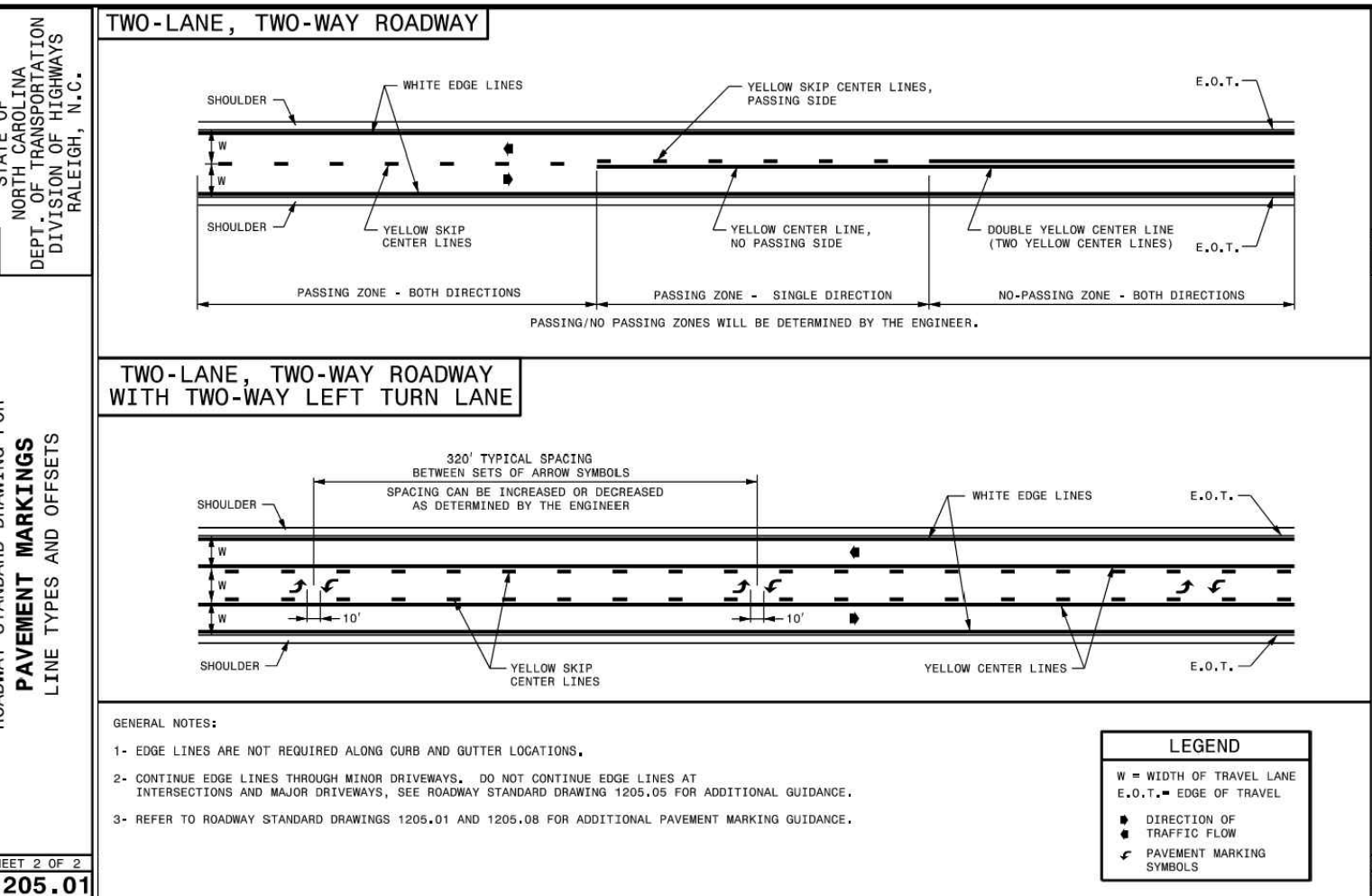
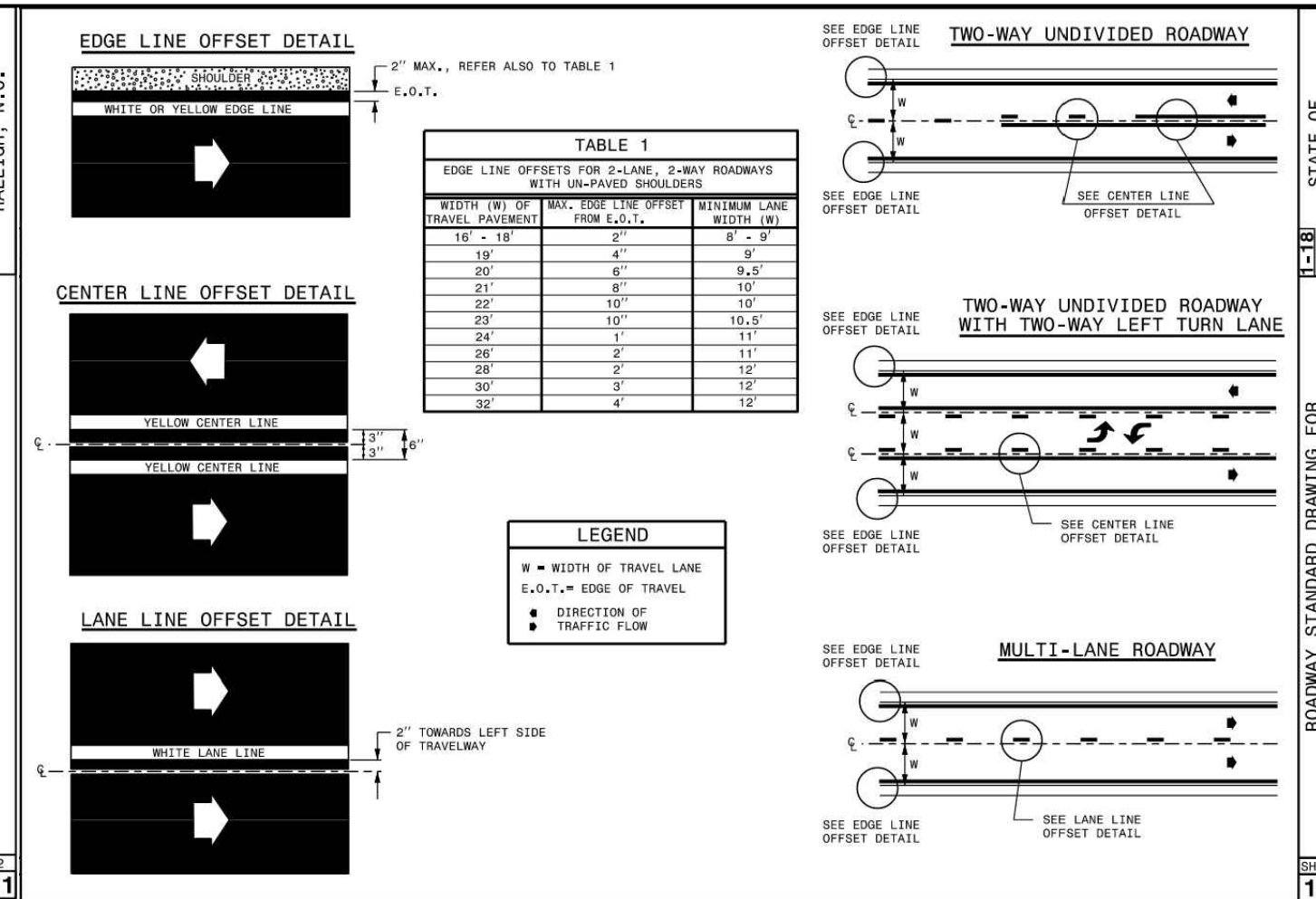
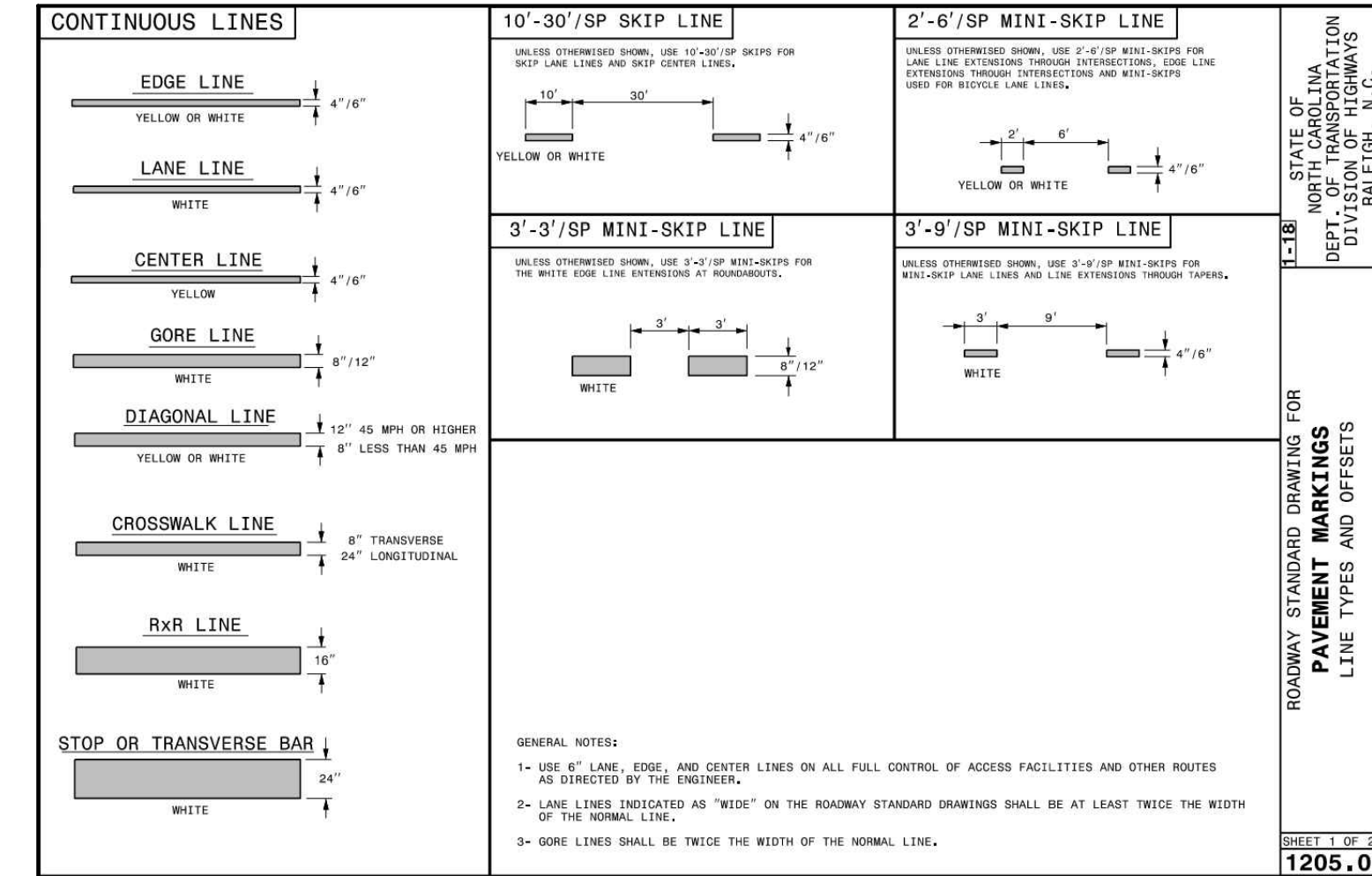
NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING EFFECTIVE: 04/01/19



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Table with columns: DATE, REVISIONS PER WAKE COUNTY COMMENTS, CONSTRUCTION DOCUMENT SUBMITTAL, REVISIONS PER NCDOT COMMENTS, REVISIONS PER CITY OF RALEIGH COMMENTS

TIMMONS GROUP logo and contact information for ROLESVILLE CROSSING - CD 21-08 WAKE COUNTY - NORTH CAROLINA EROSION CONTROL NOTES AND DETAILS



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DATE: 09/10/2021
 DRAWN BY: R. WINGATE
 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

REVISION DESCRIPTION
 REVISIONS PER WAKE COUNTY COMMENTS
 REVISIONS PER WAKE COUNTY COMMENTS
 CONSTRUCTION DOCUMENT SUBMITTAL
 REVISIONS PER NCDOT COMMENTS
 REVISIONS PER CITY OF RALEIGH COMMENTS

09/06/2023

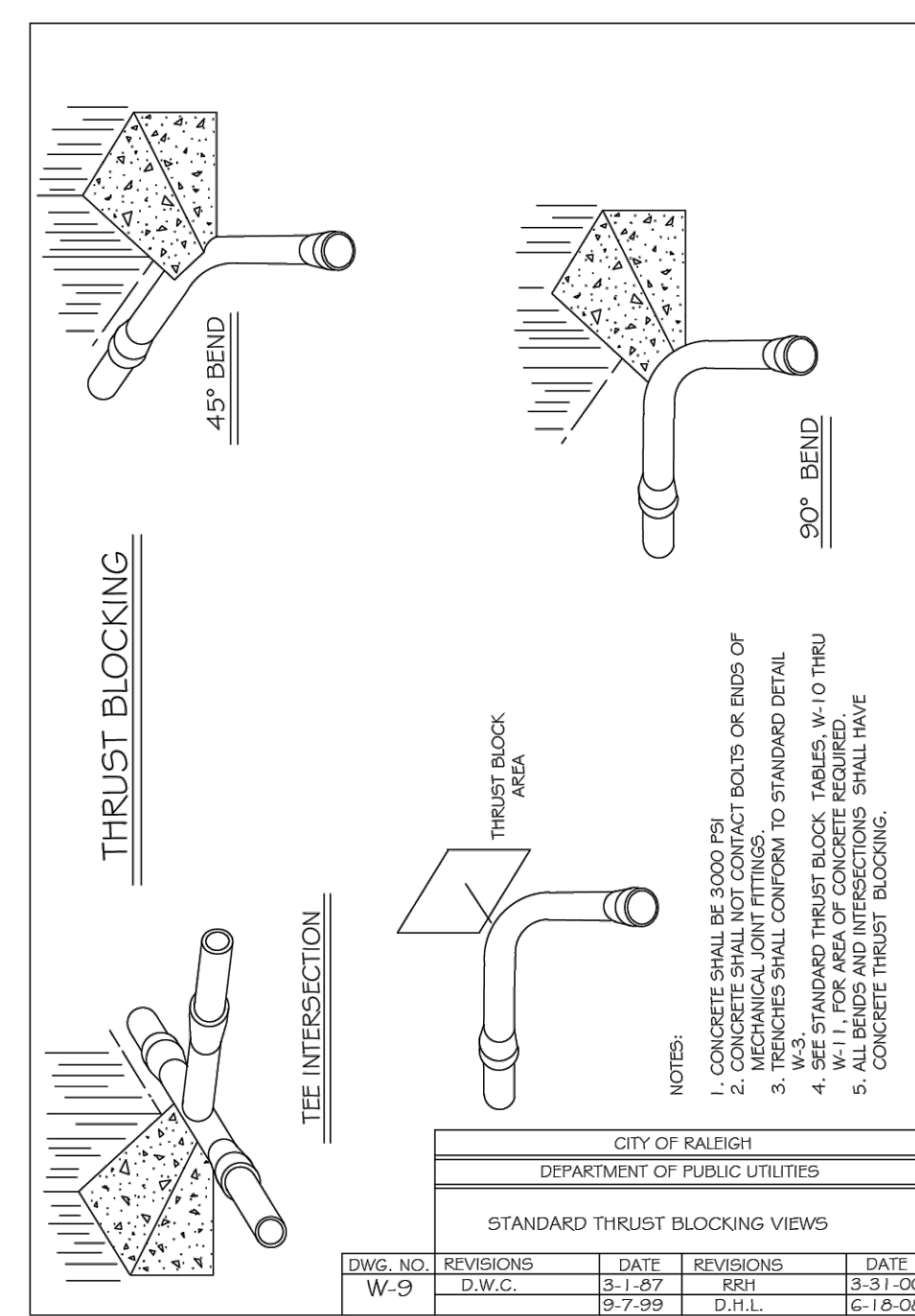
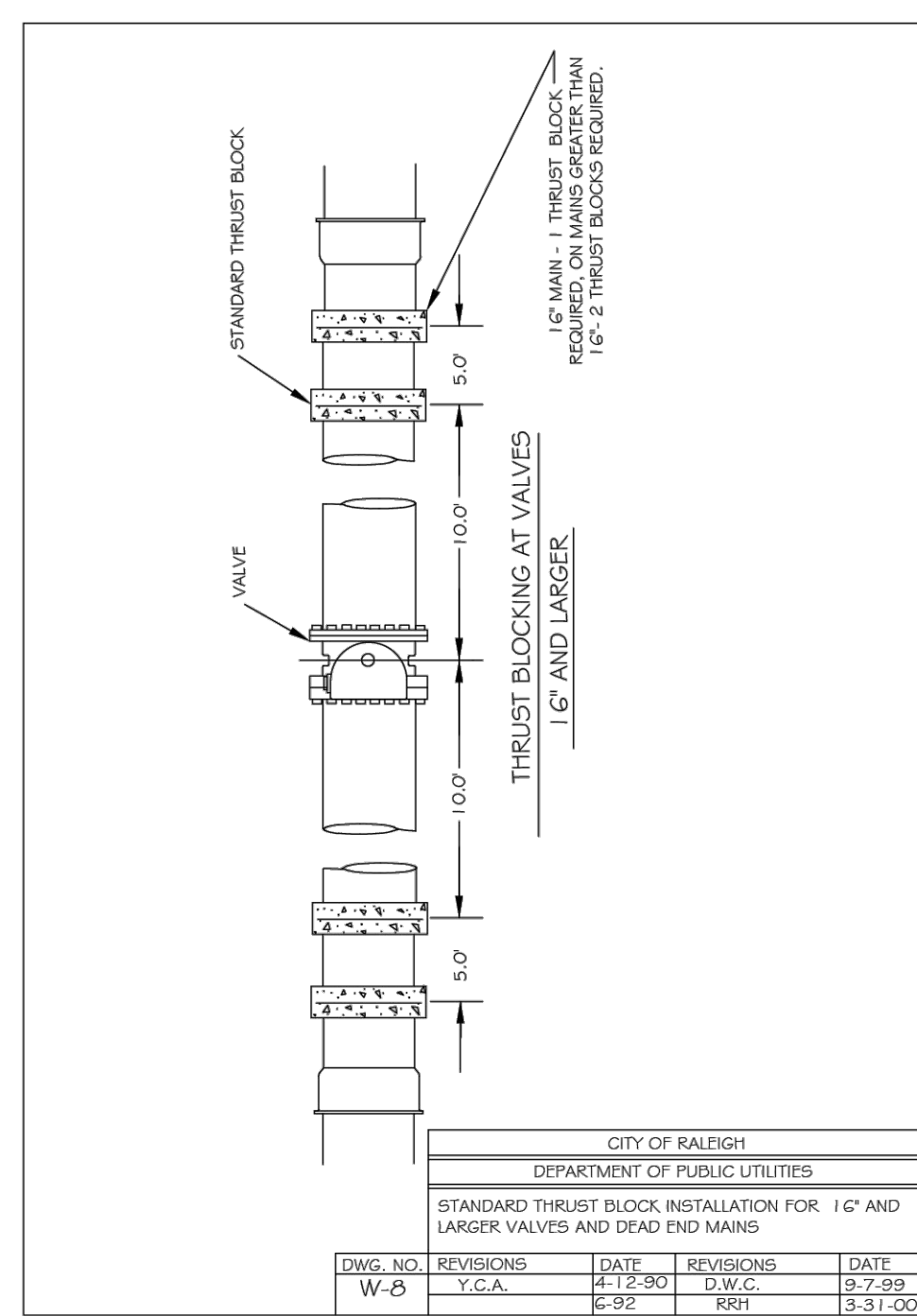
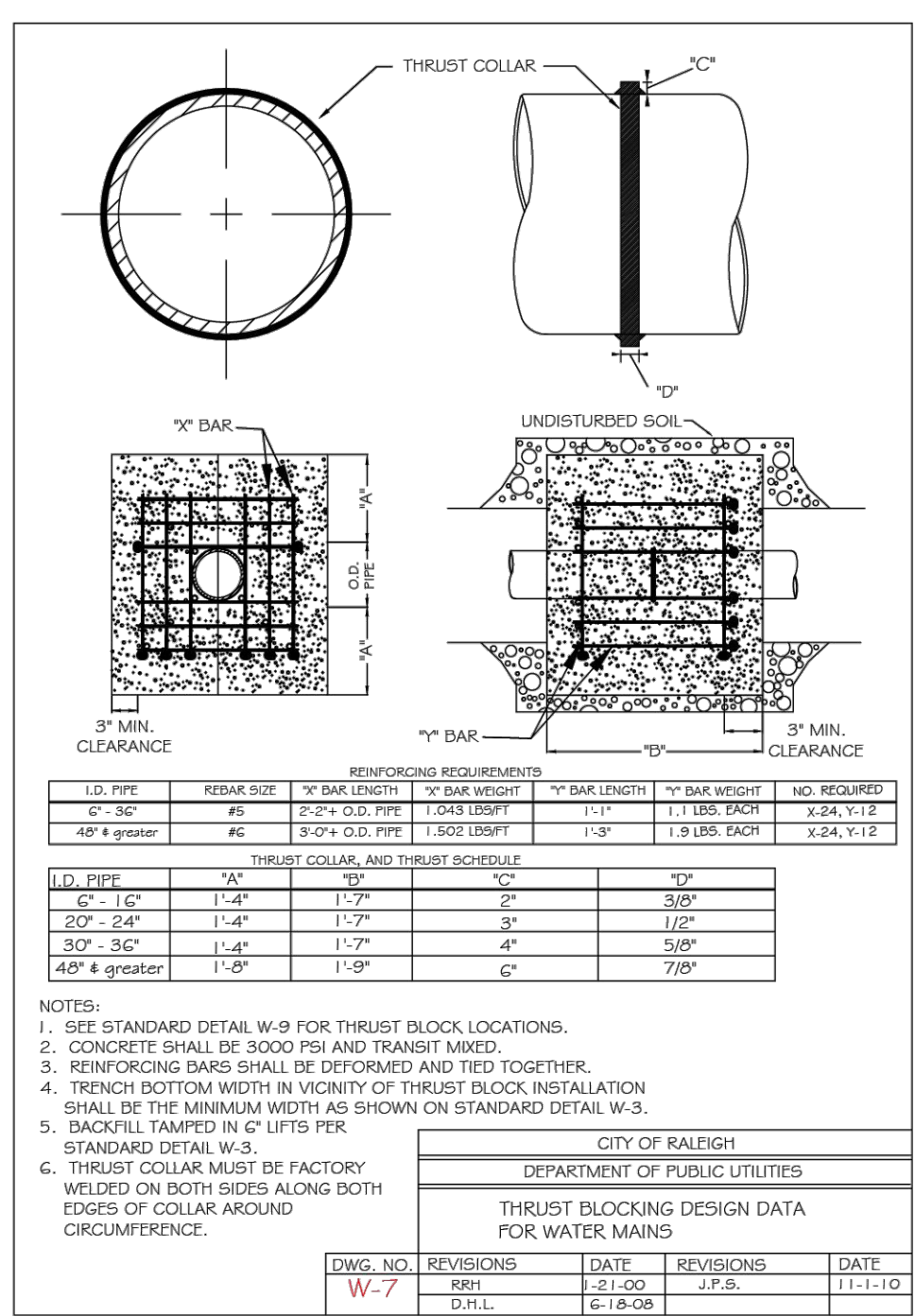
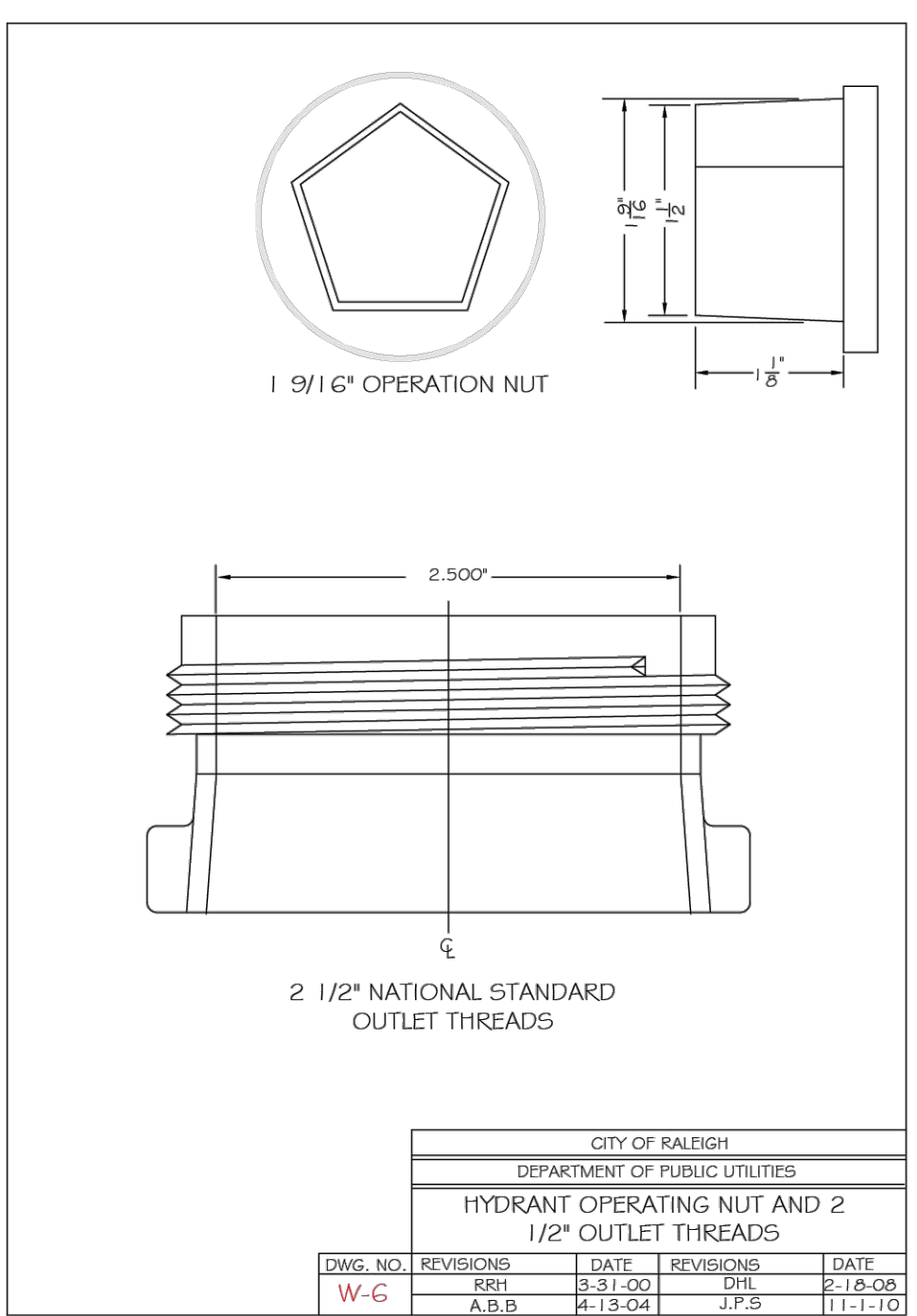
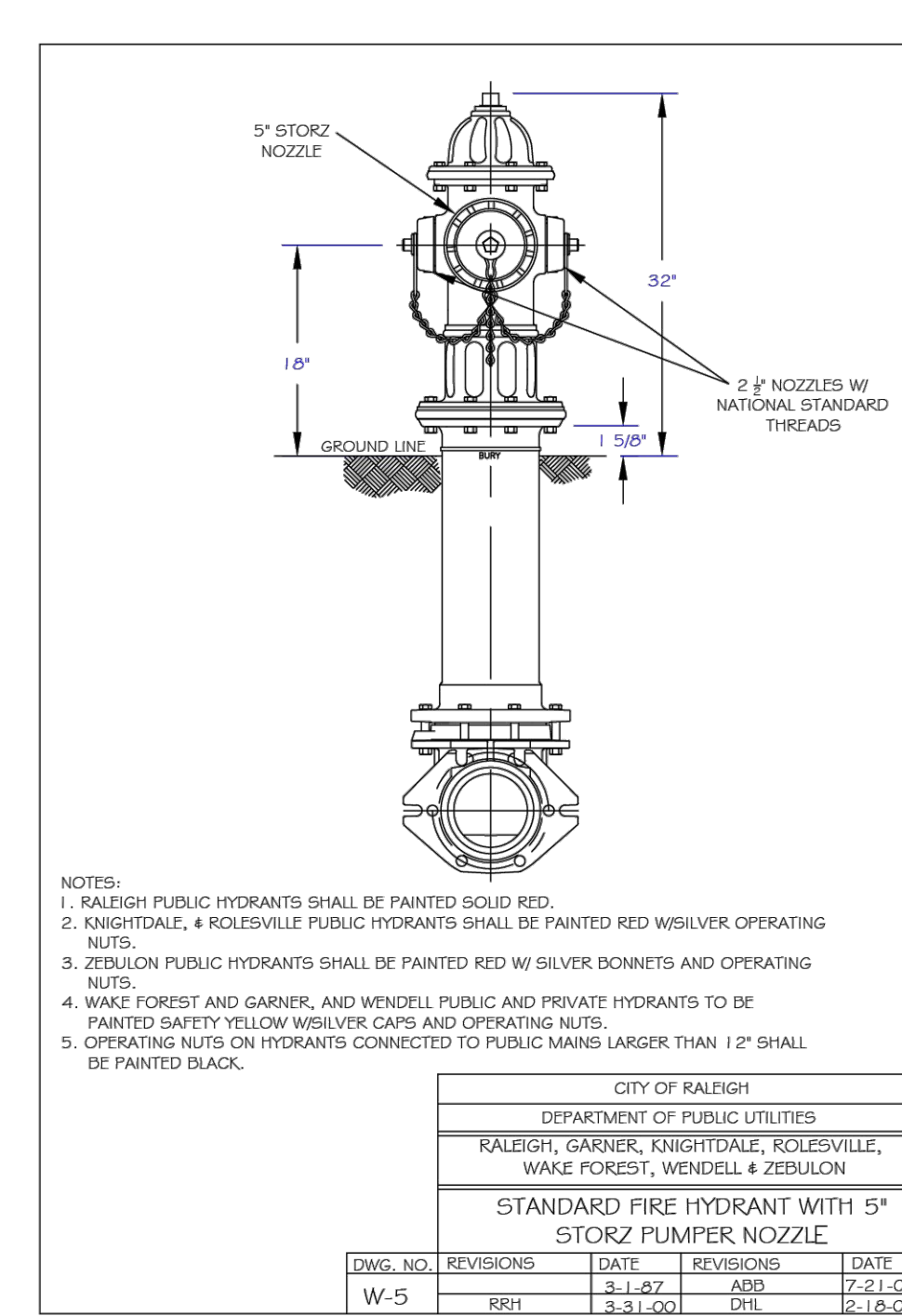
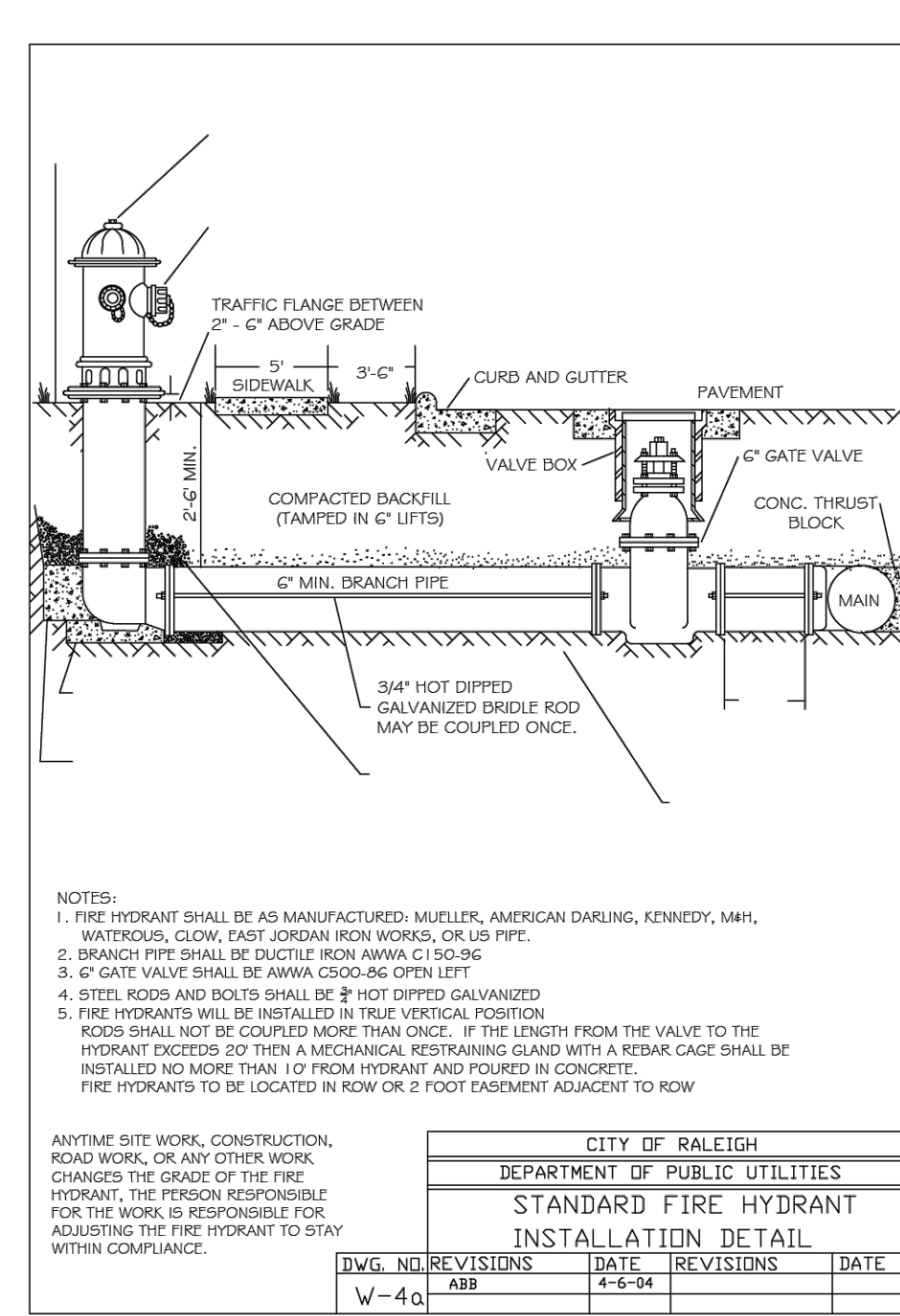
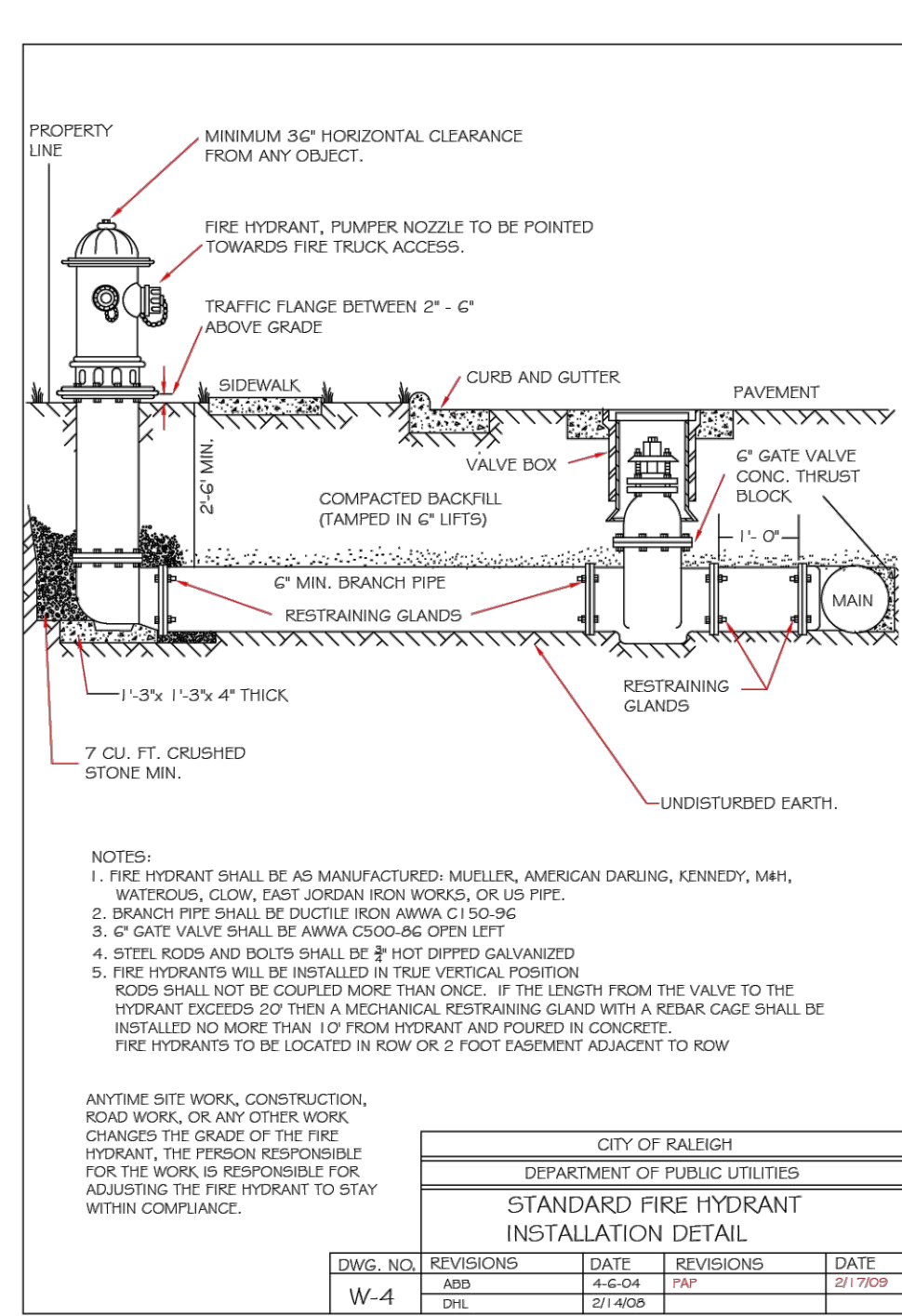
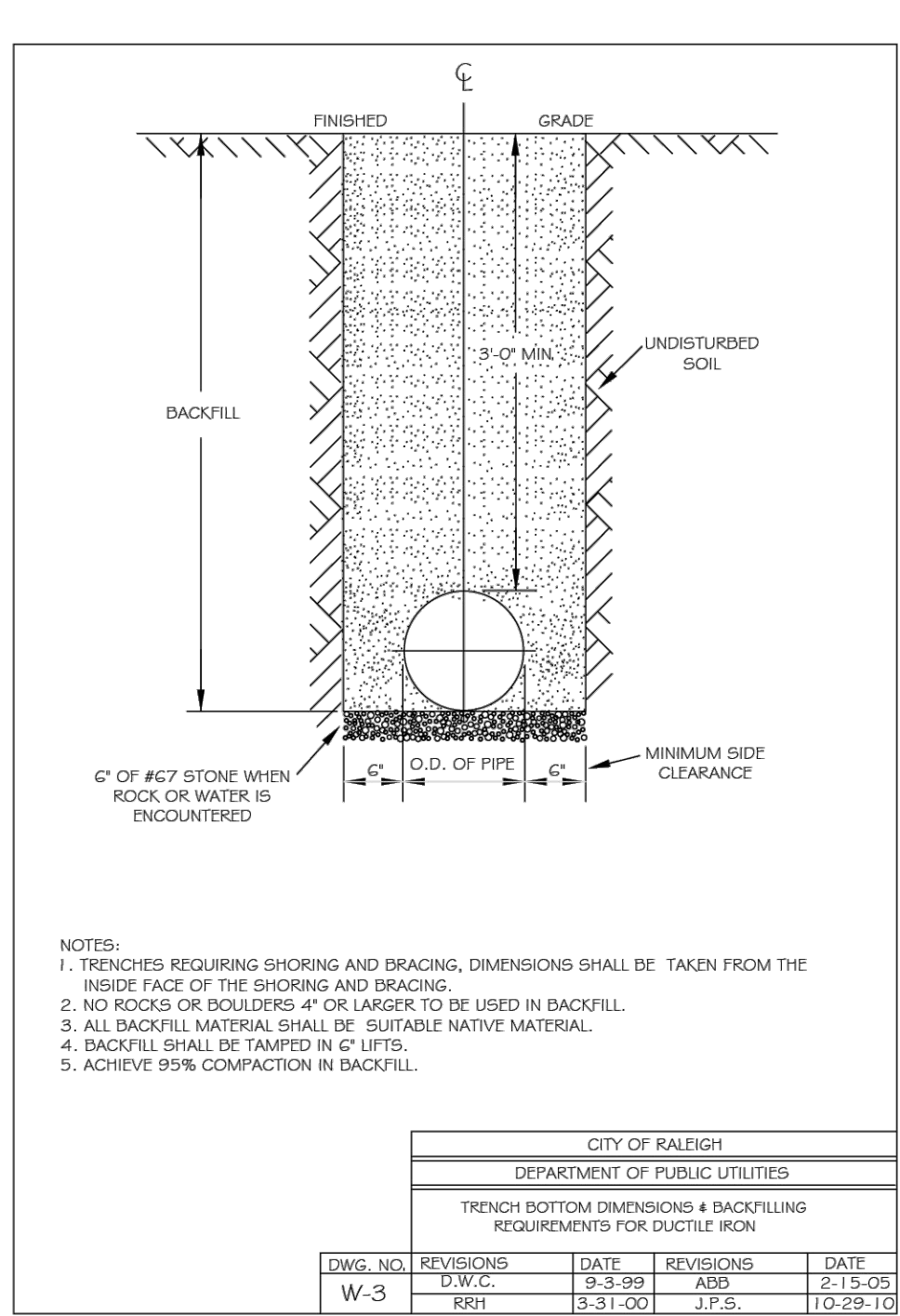
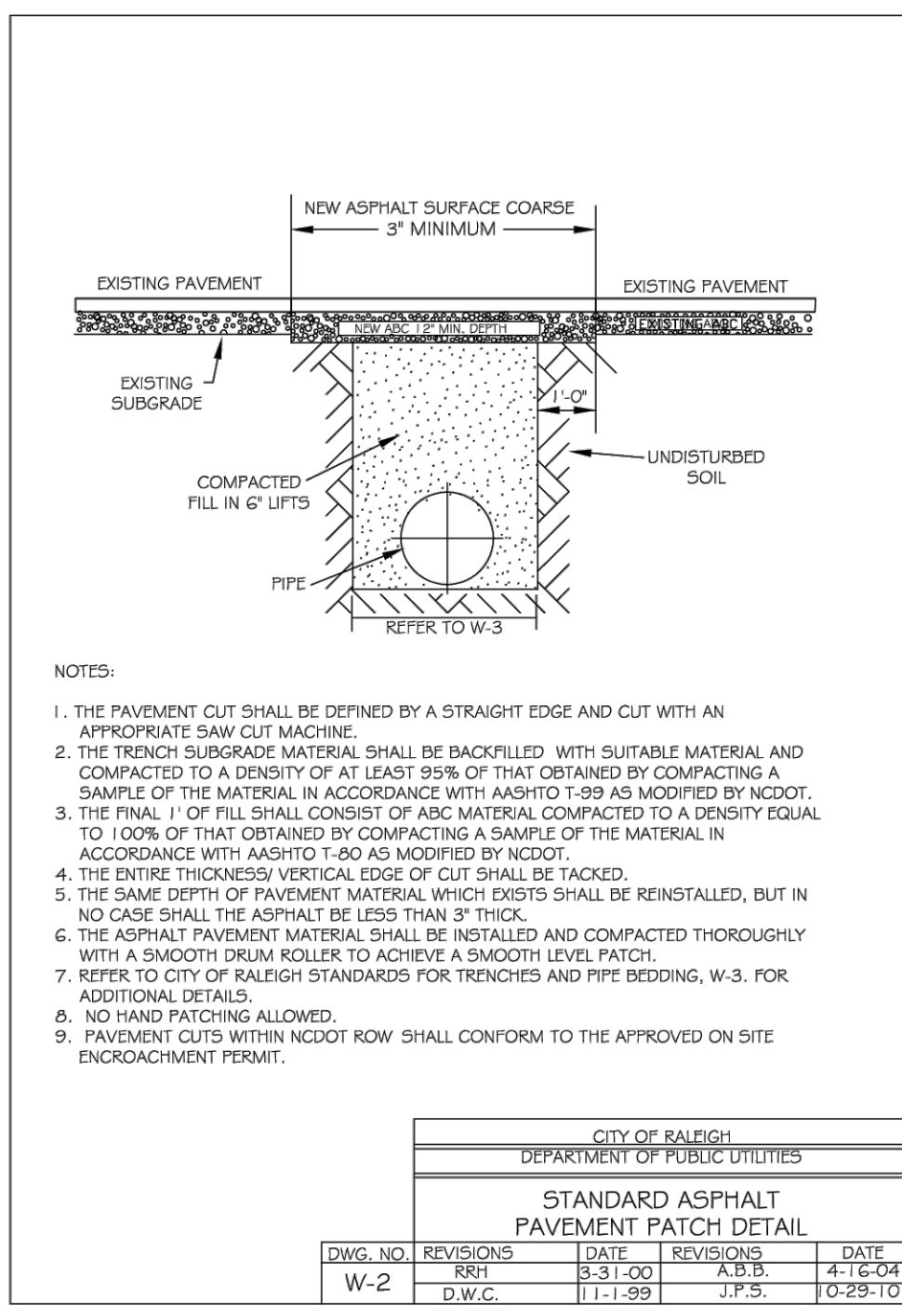
09/10/2021

R. WINGATE
 P. BARBEAU
 P. BARBEAU
 AS SHOWN

ROLESVILLE CROSSING - CD 21-08
 WAKE COUNTY - NORTH CAROLINA
 NCDOT DETAILS

JOB NO. 43398
 SHEET NO. C7.7

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 200 P.S.I.

SIZE AND DIRECTION OF BEND	STATIC THRUST IN POUNDS	CONCRETE REQUIRED IN SQUARE FEET	CONCRETE REQUIRED IN CUBIC FEET	CONCRETE REQUIRED IN CUBIC YARDS
11 1/4"	1,108	1	1	1
22 1/2"	2,207	2	2	2
45"	4,326	4	4	4
90"	7,996	8	8	8
PLUG	5,655	6	6	6

THRUST BLOCKING DESIGN QUANTITY TABLE

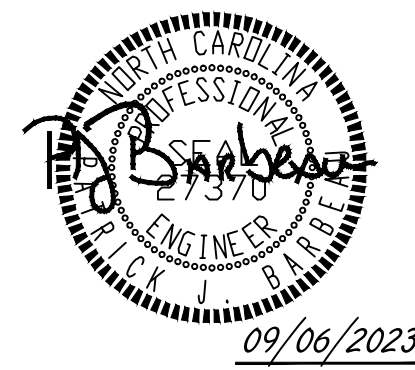
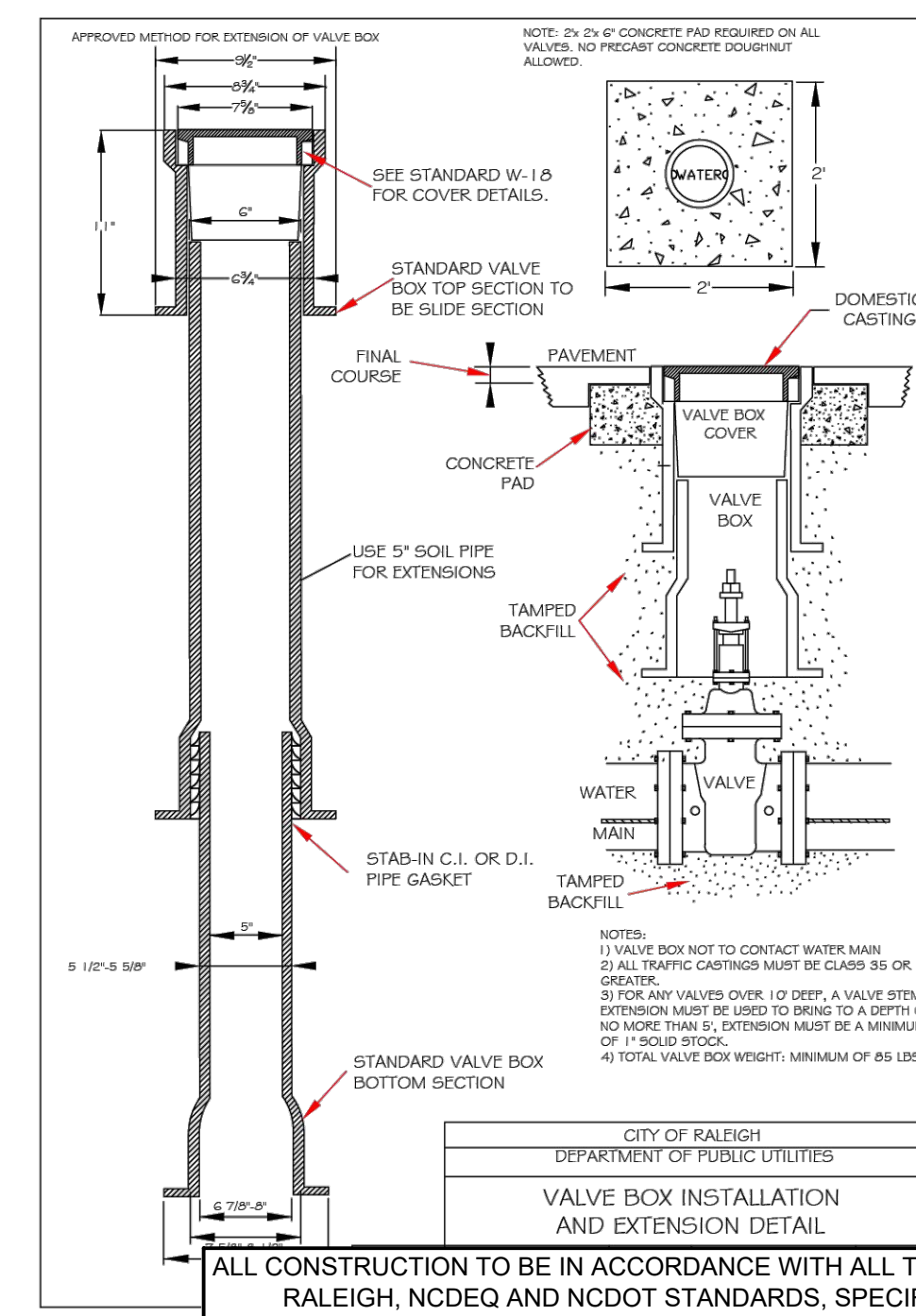
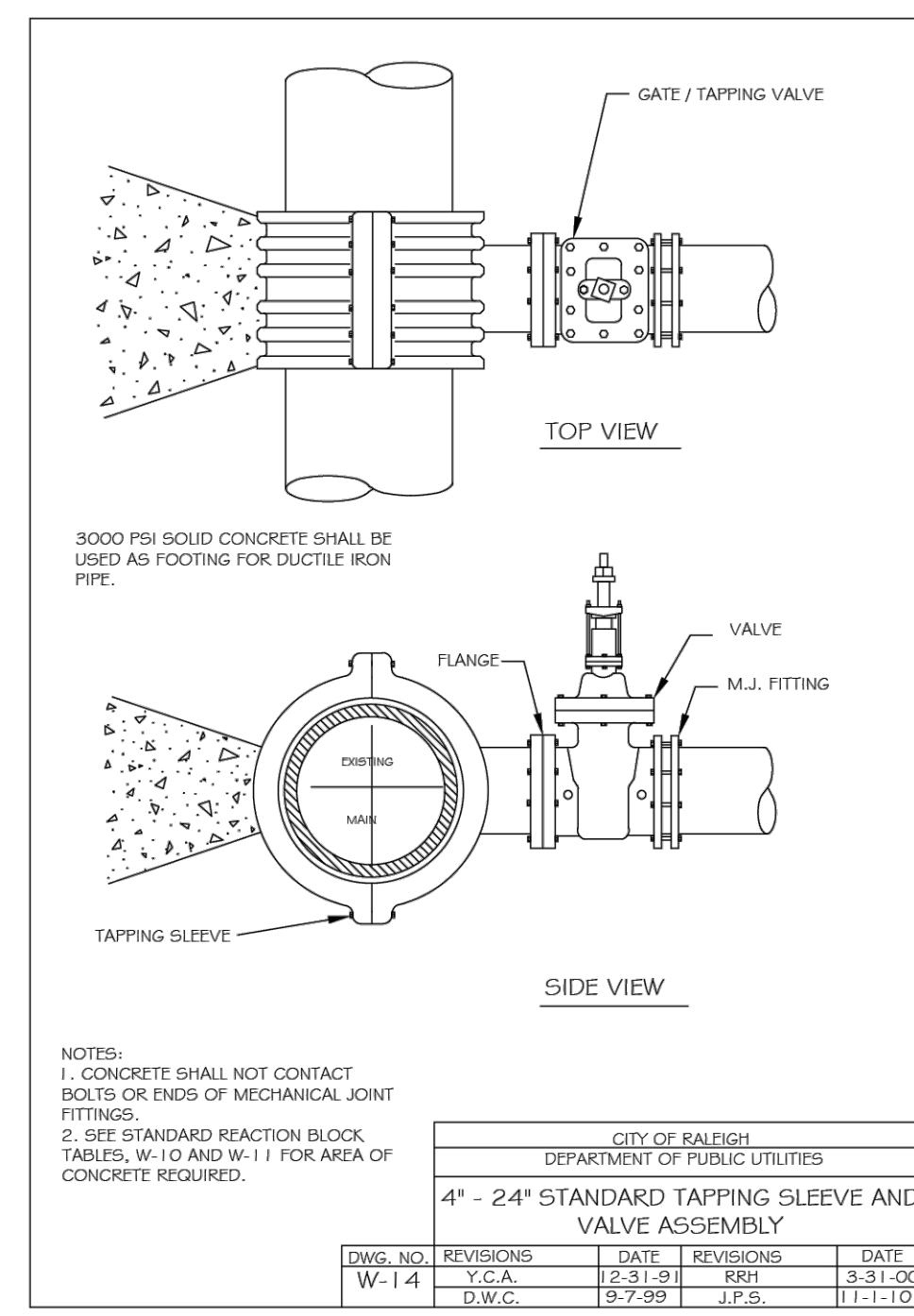
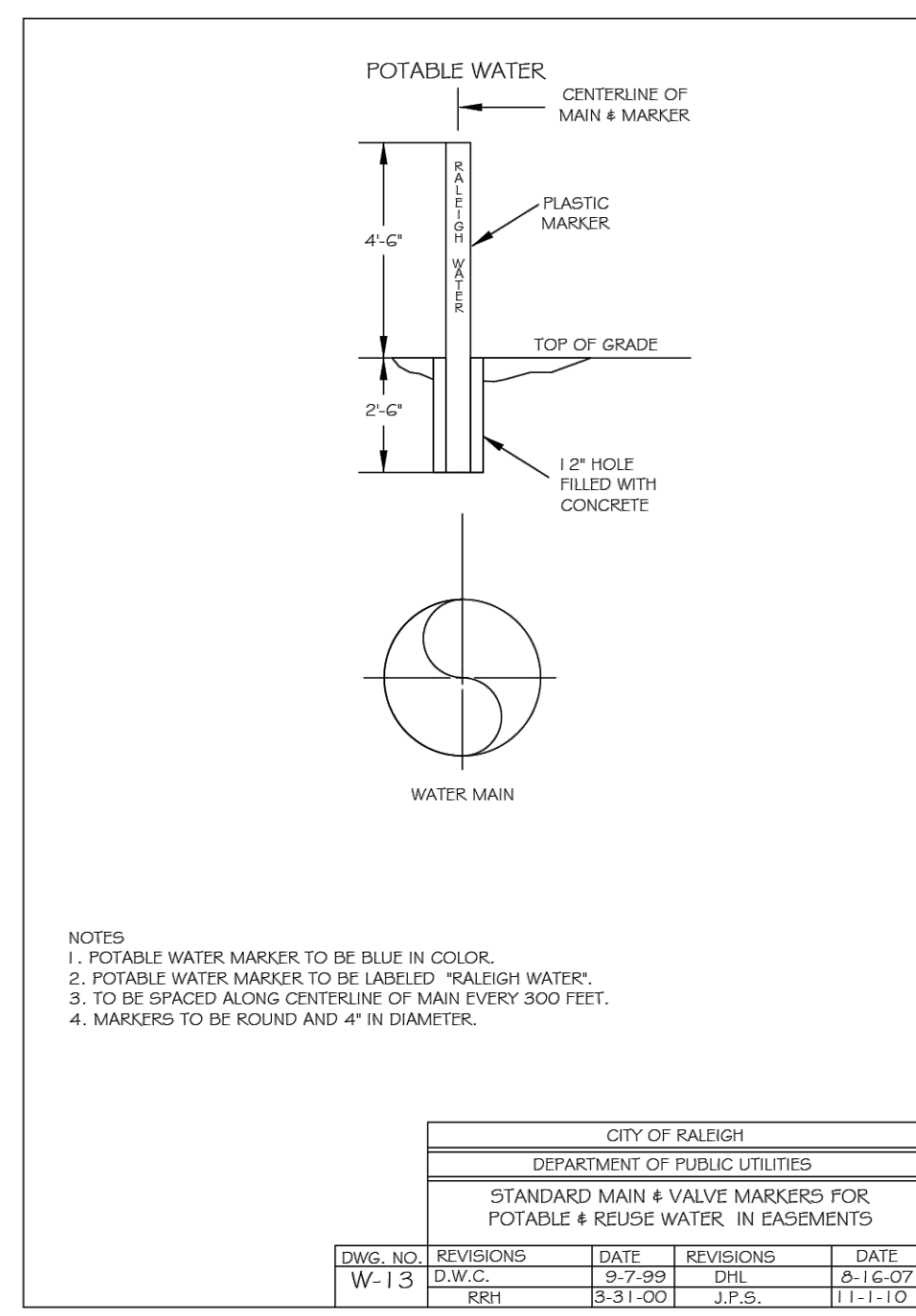
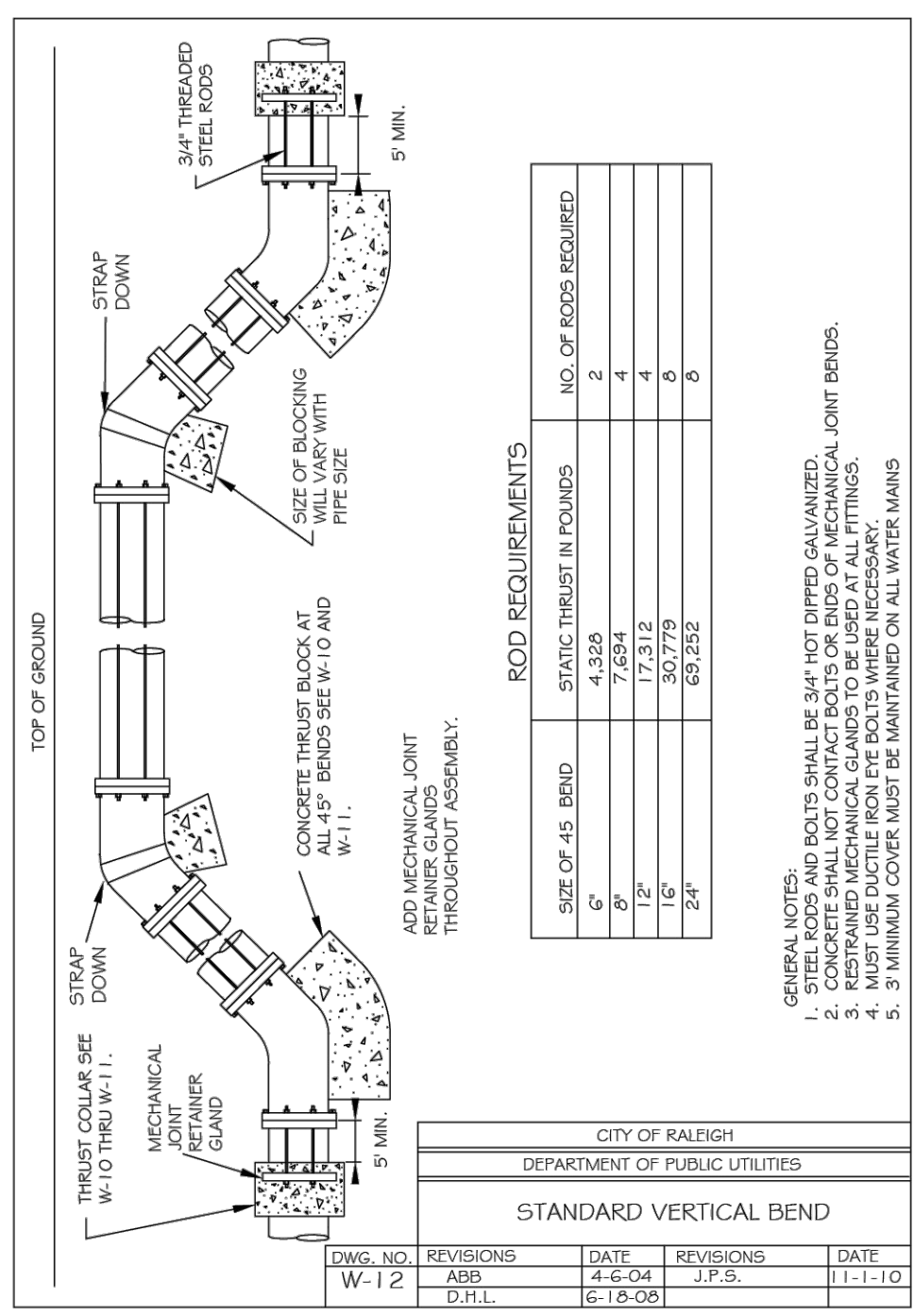
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-10	D.W.C.	6-23-99		

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS
BASED ON TEST PRESSURE OF 200 P.S.I.

SIZE AND DIRECTION OF BEND	STATIC THRUST IN POUNDS	CONCRETE REQUIRED IN SQUARE FEET	CONCRETE REQUIRED IN CUBIC FEET	CONCRETE REQUIRED IN CUBIC YARDS
24"	11,734	11	11	11
30"	15,643	15	15	15
45"	23,505	23	23	23
90"	42,922	42	42	42
PLUG	28,936	28	28	28

THRUST BLOCKING DESIGN QUANTITY TABLE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
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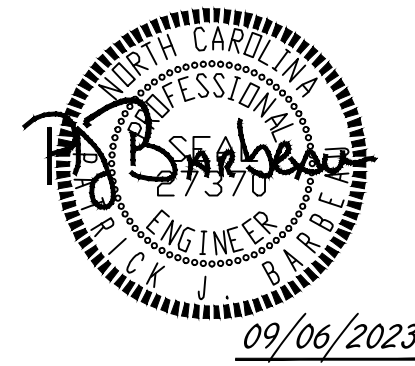
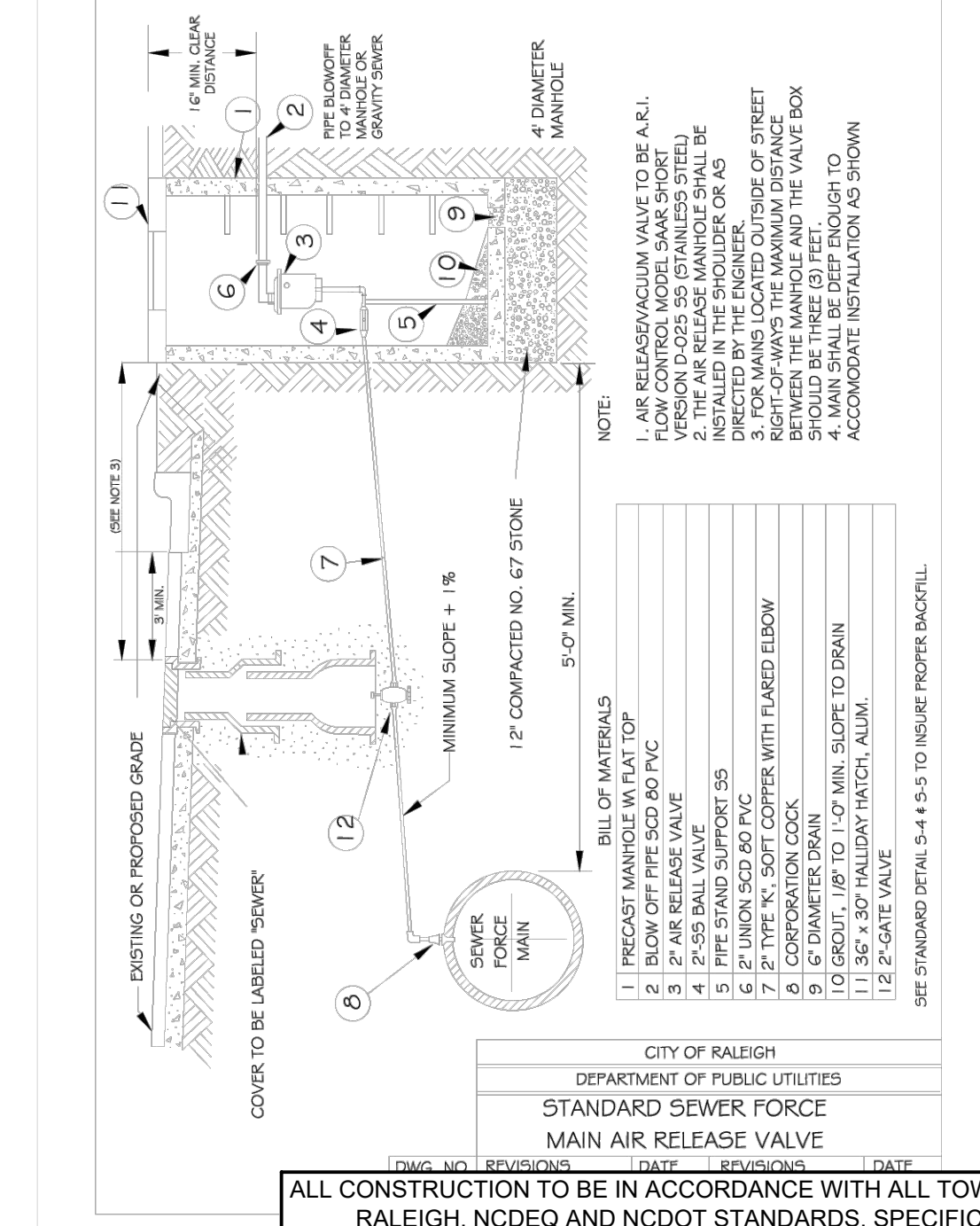
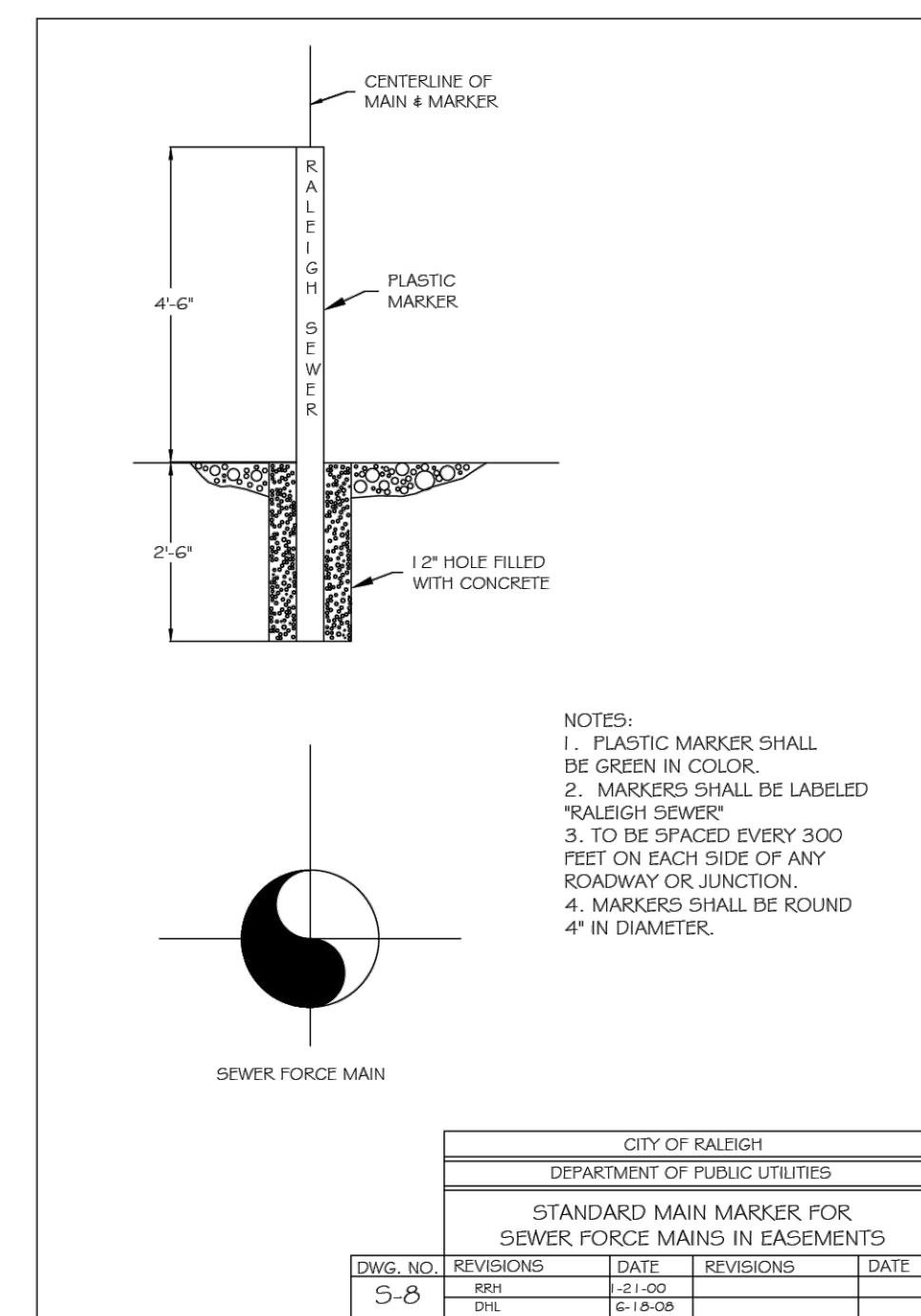
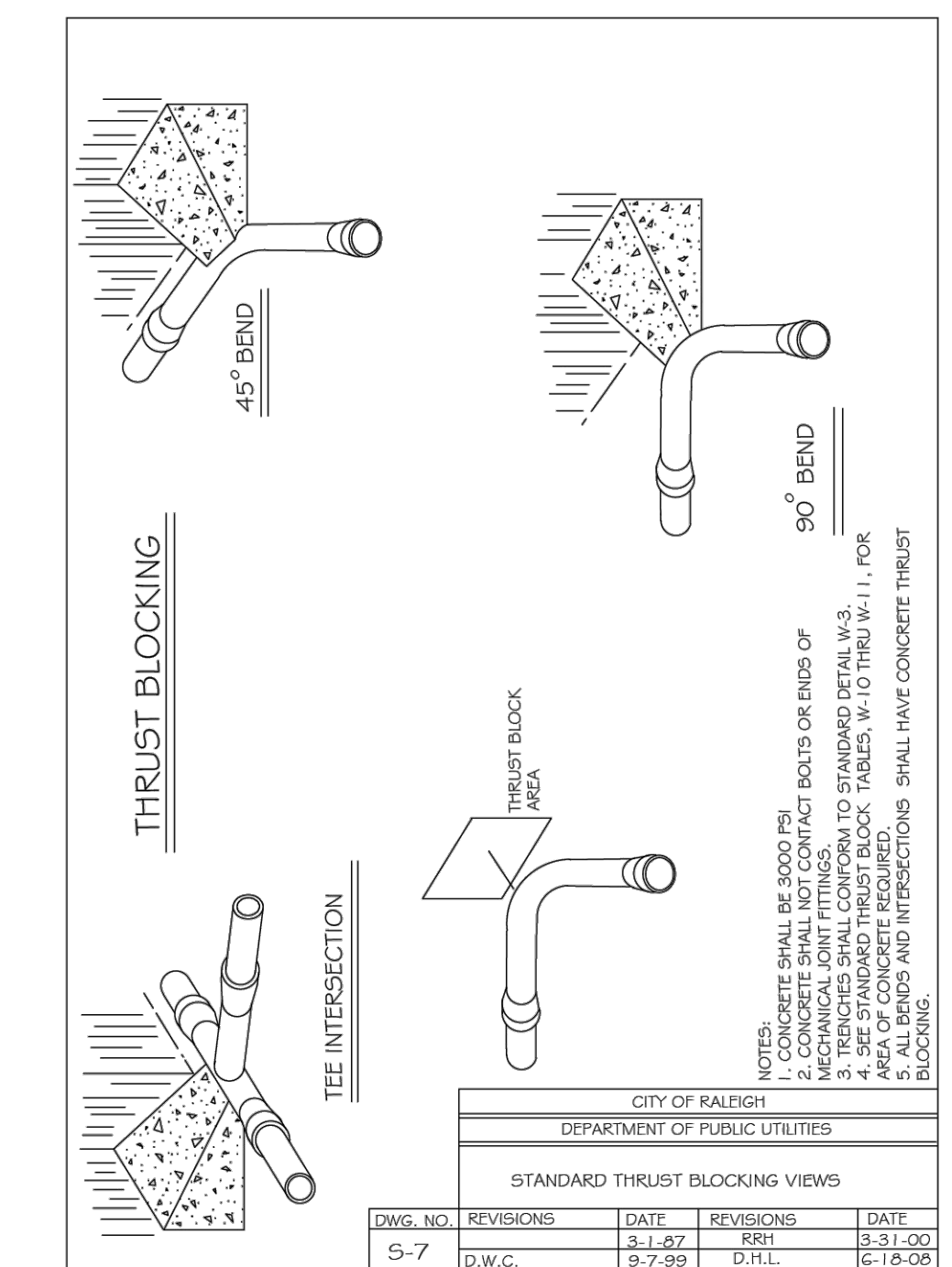
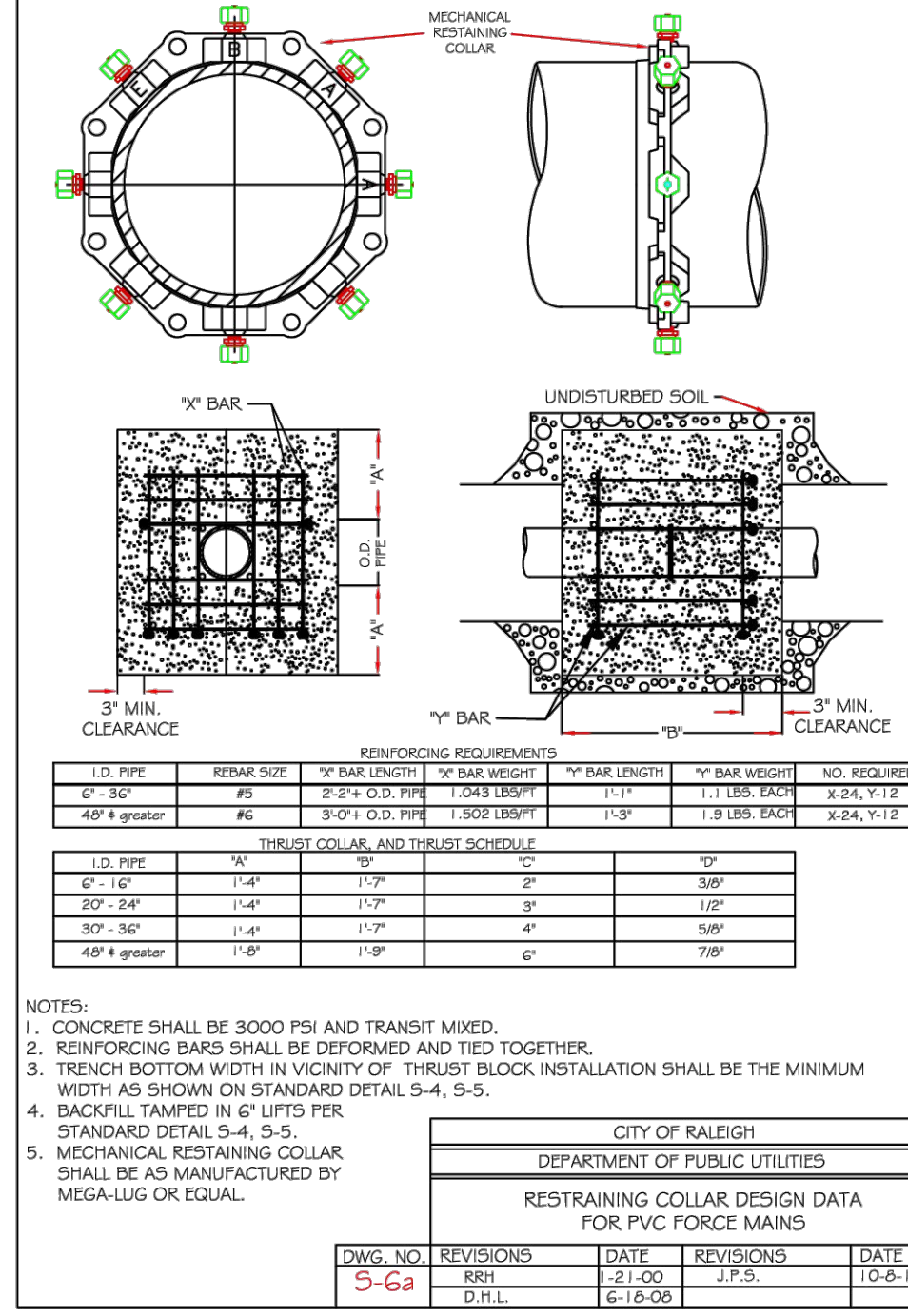
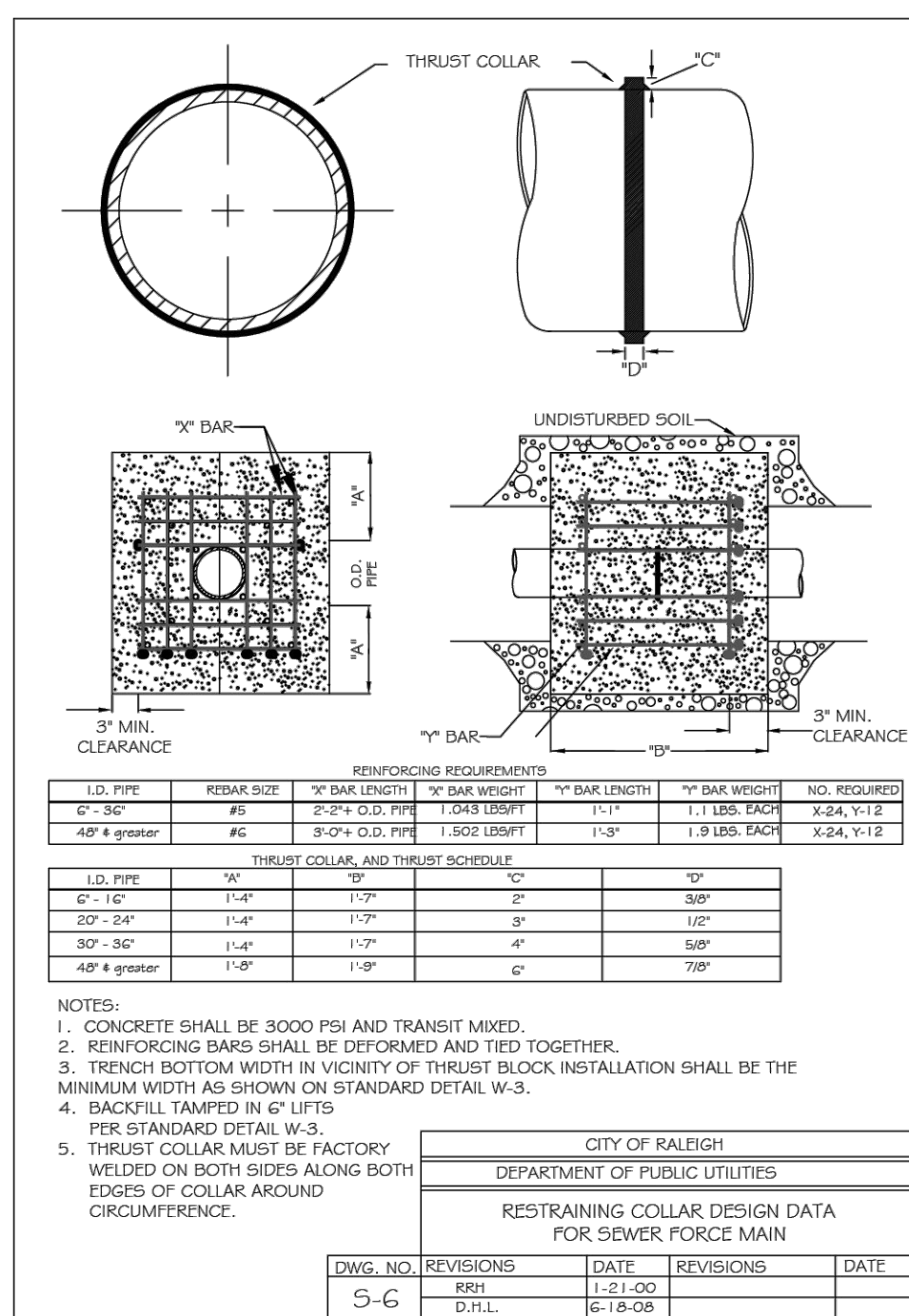
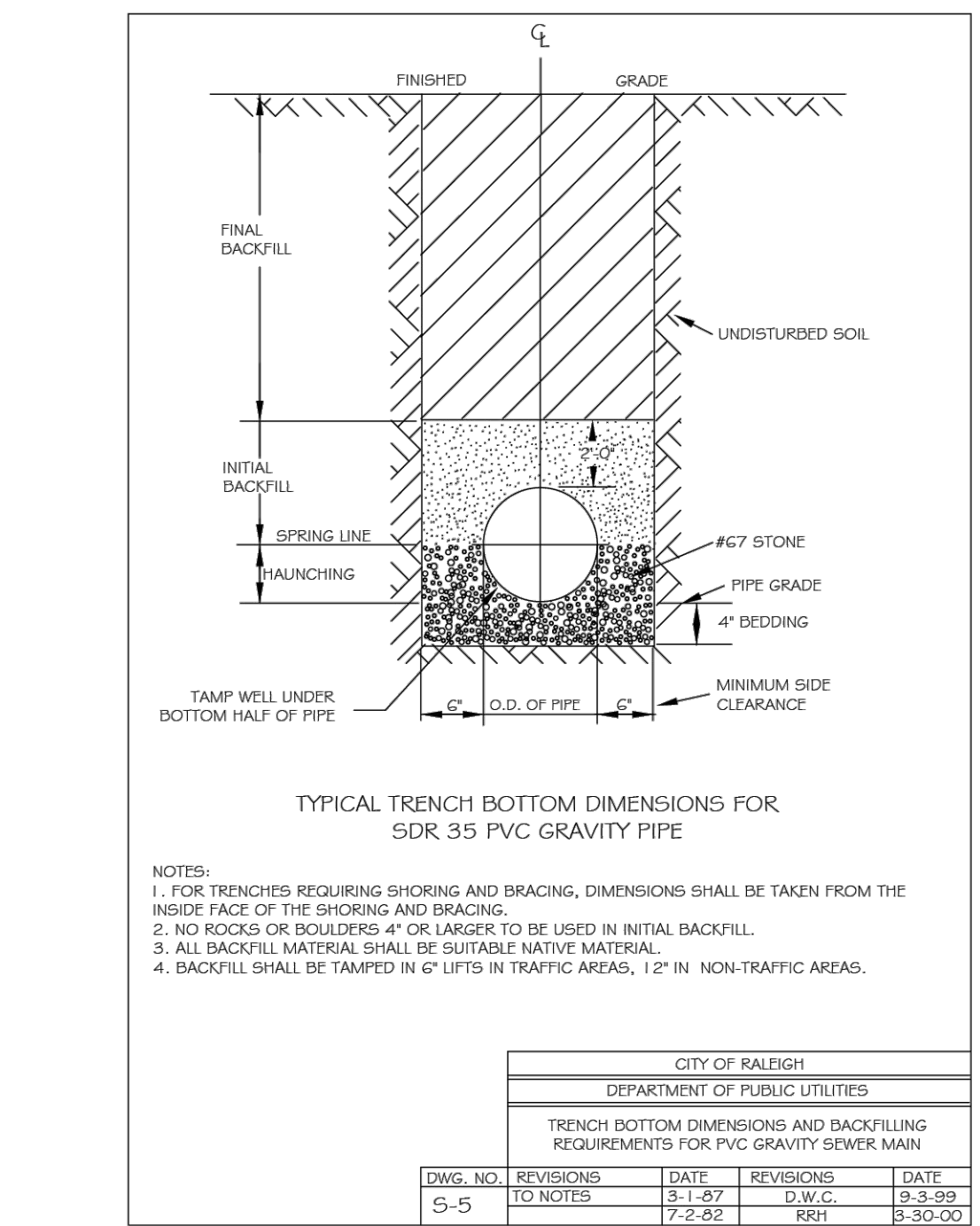
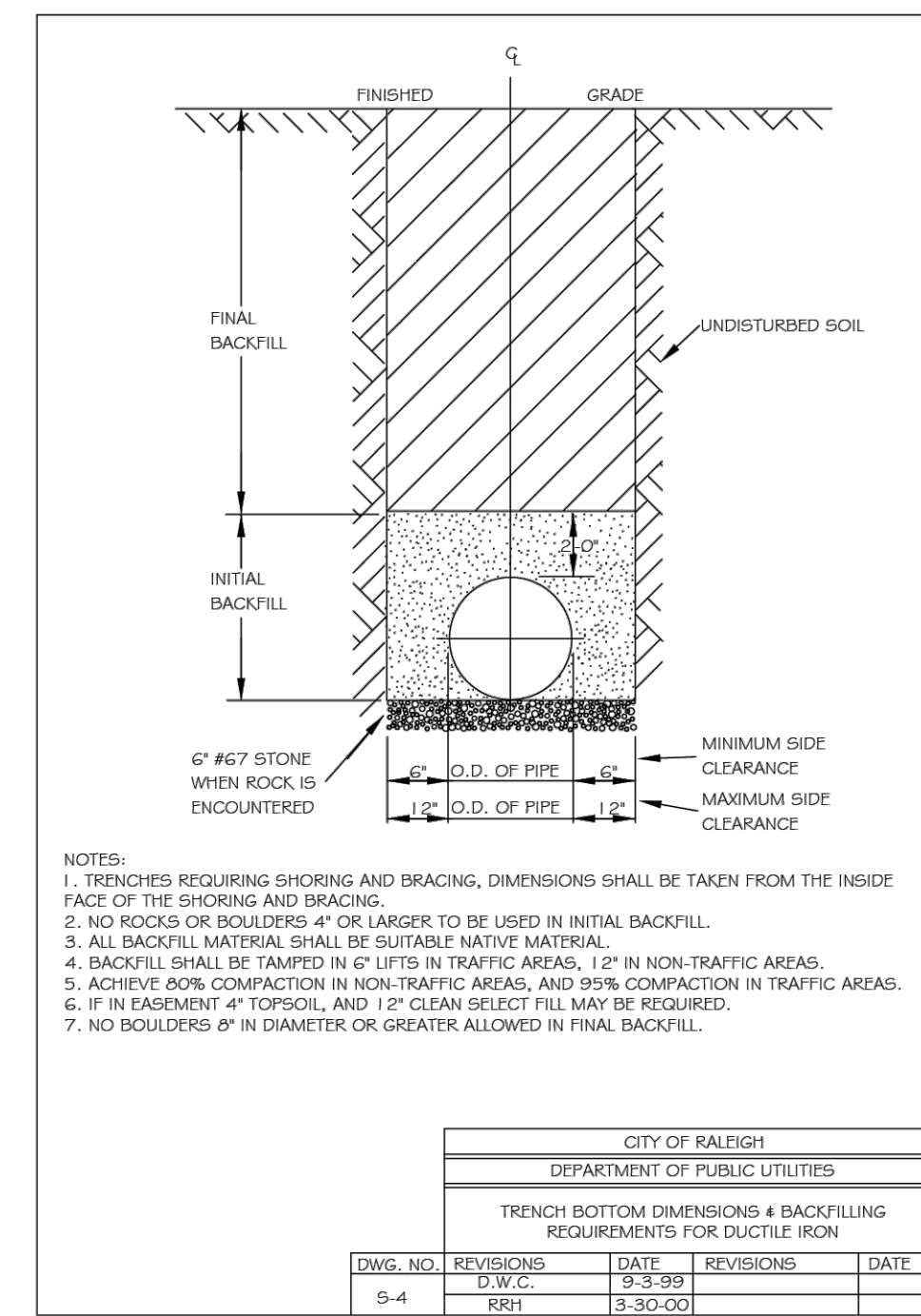
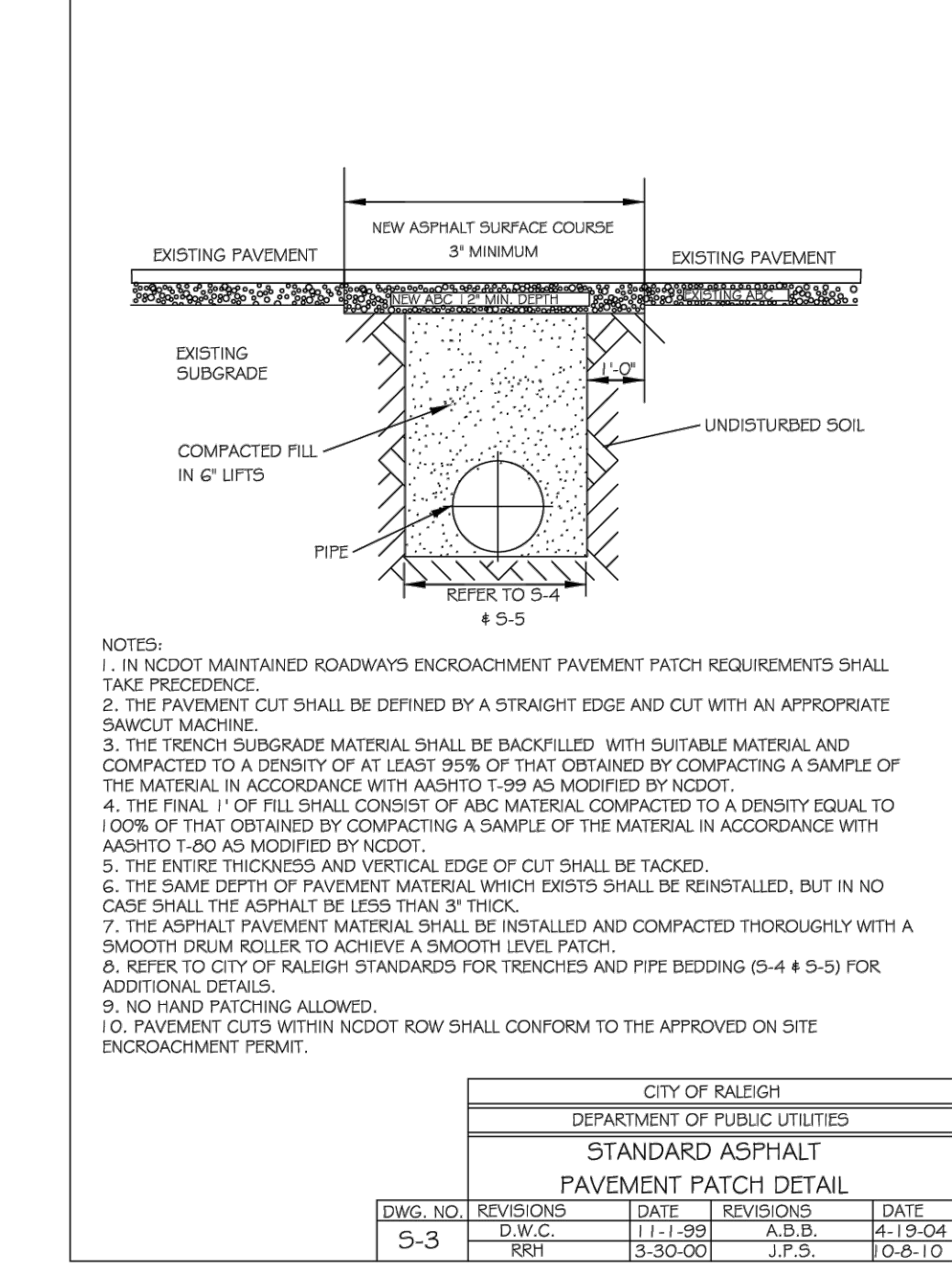
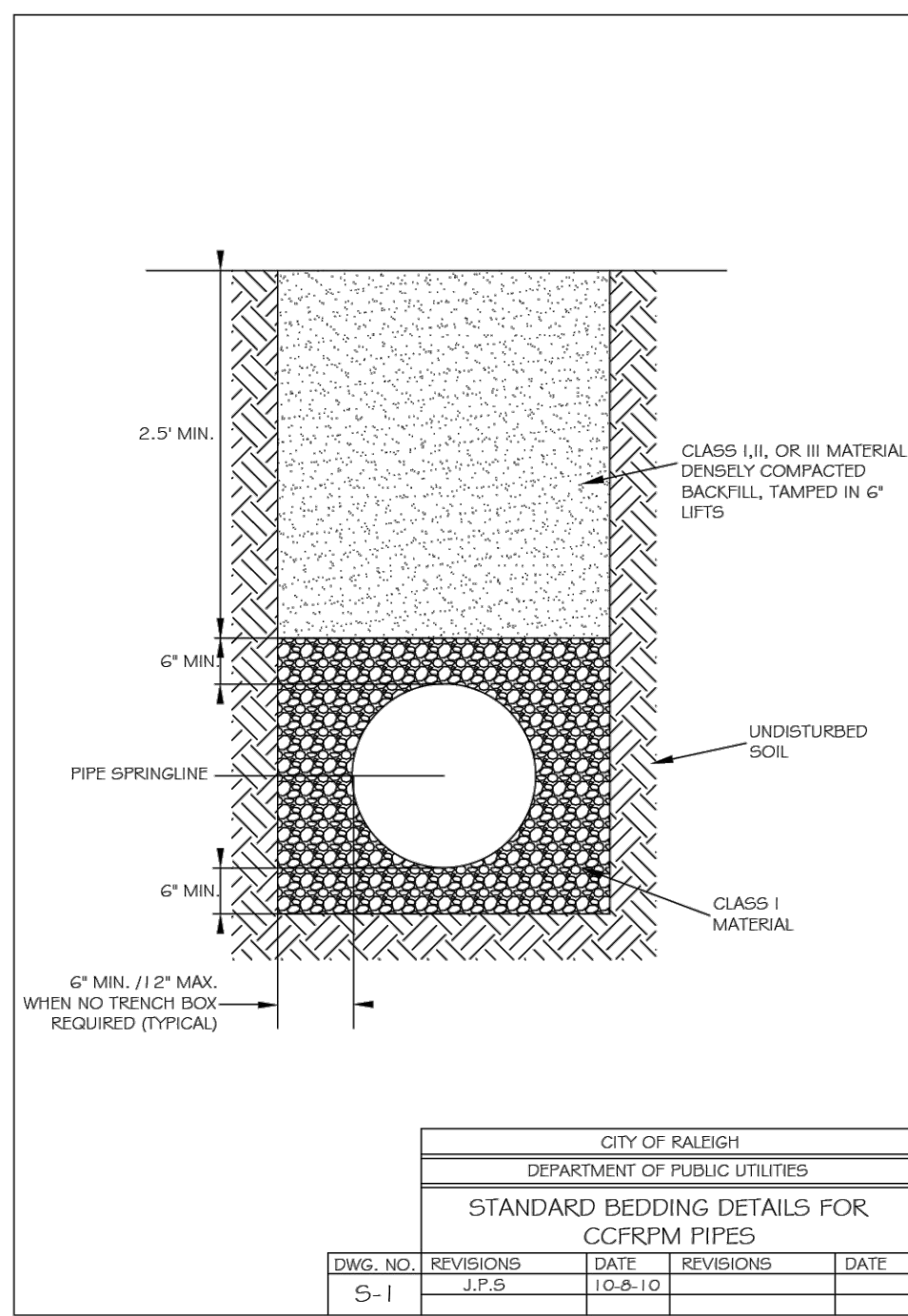
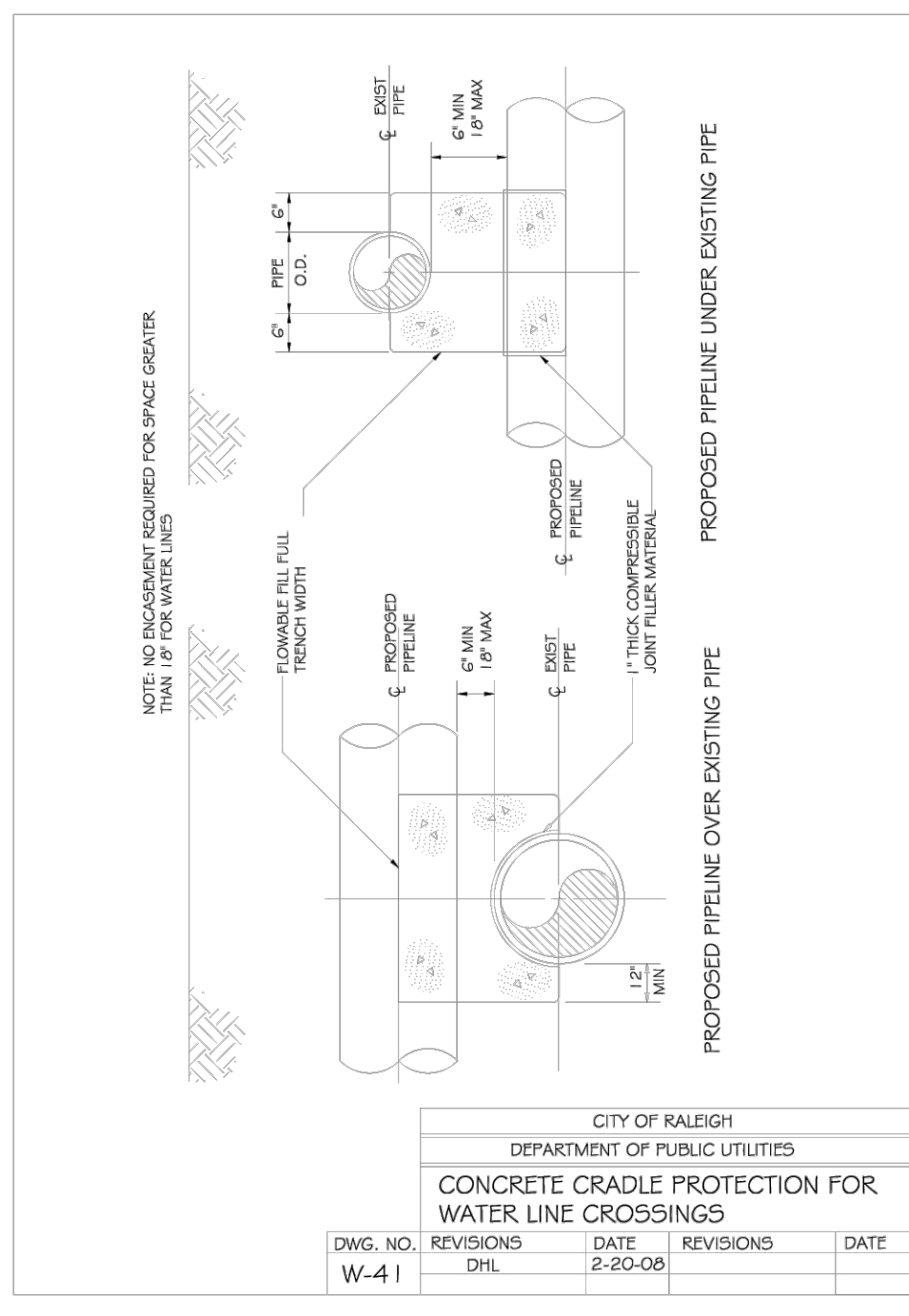
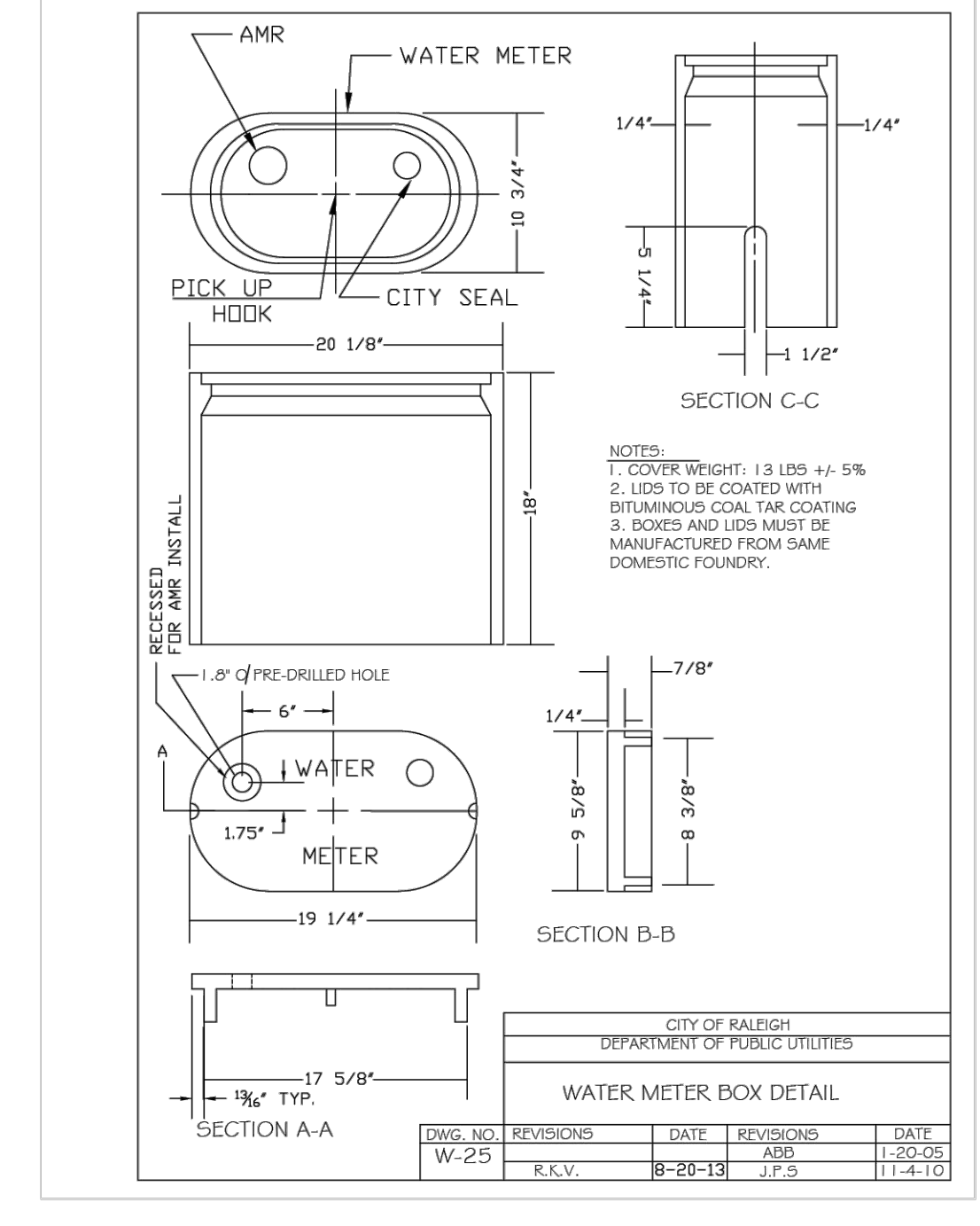
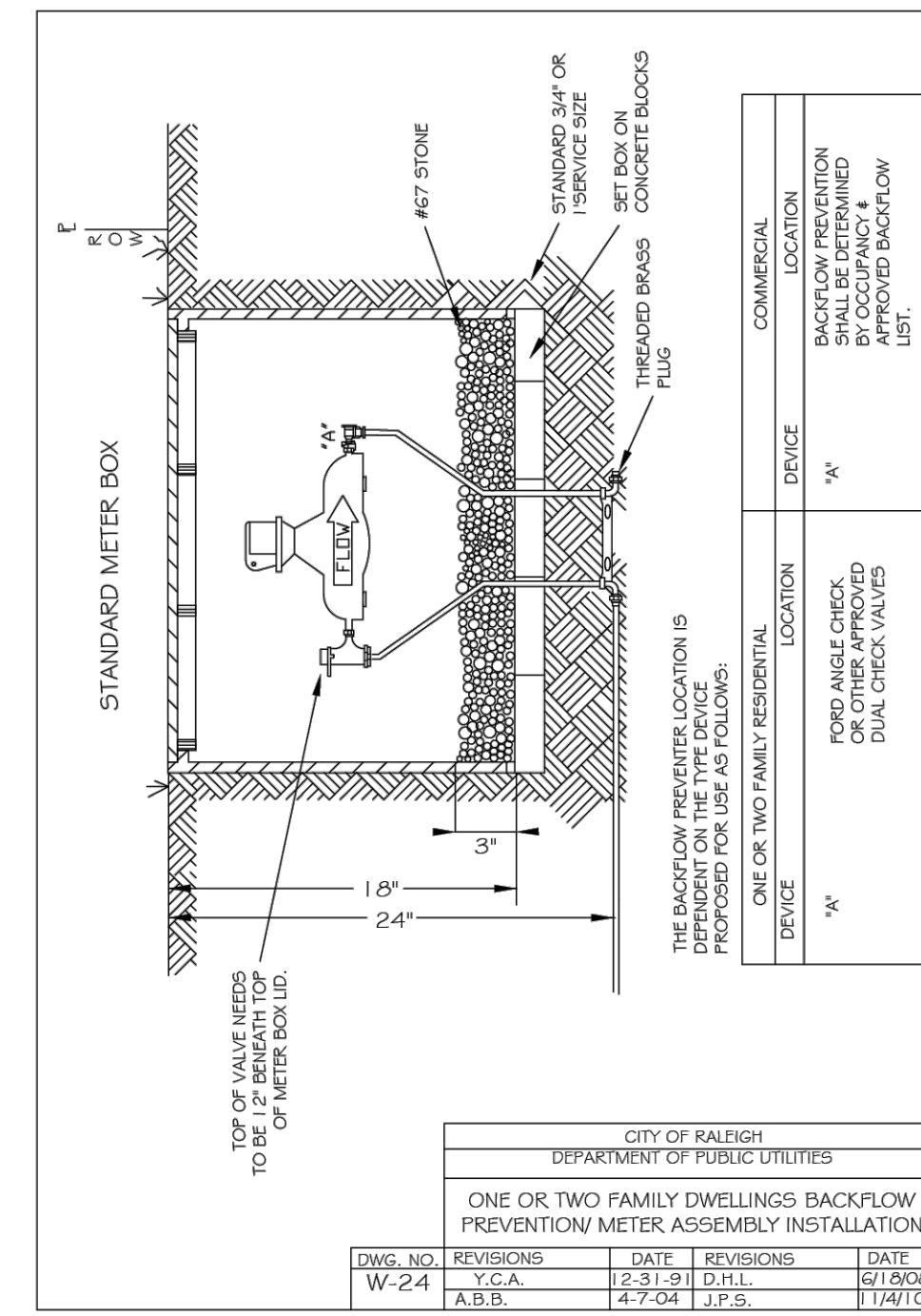
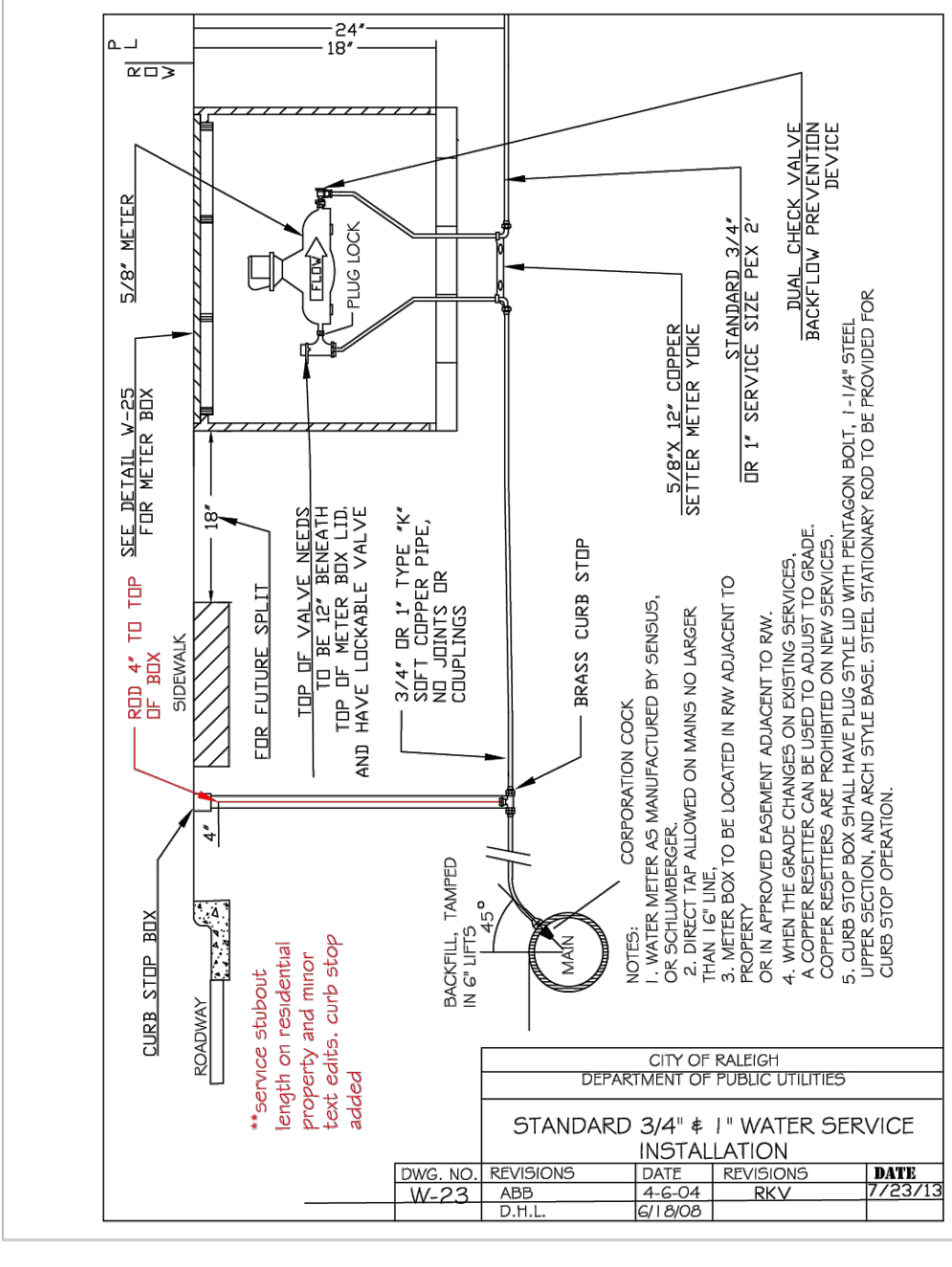
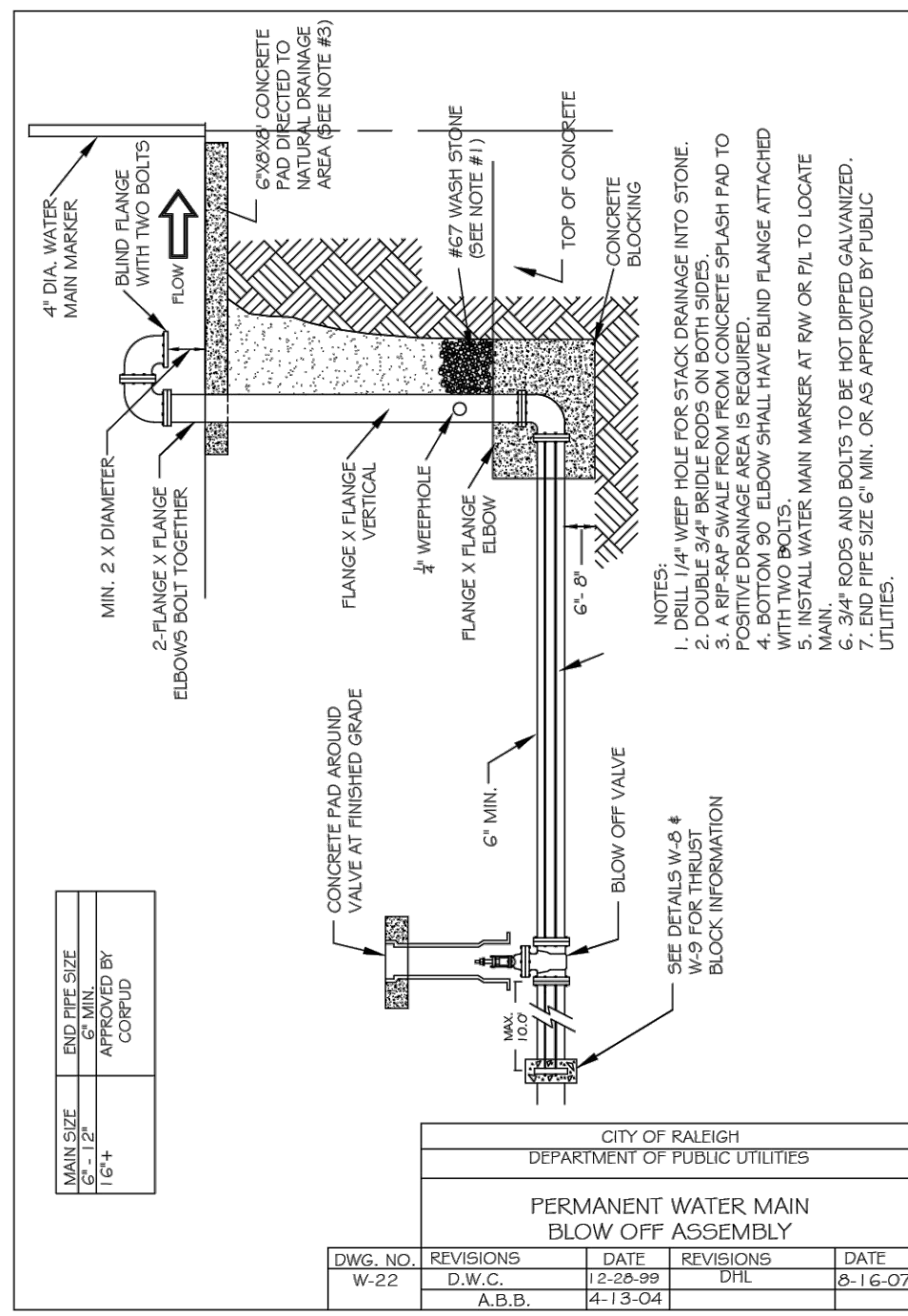
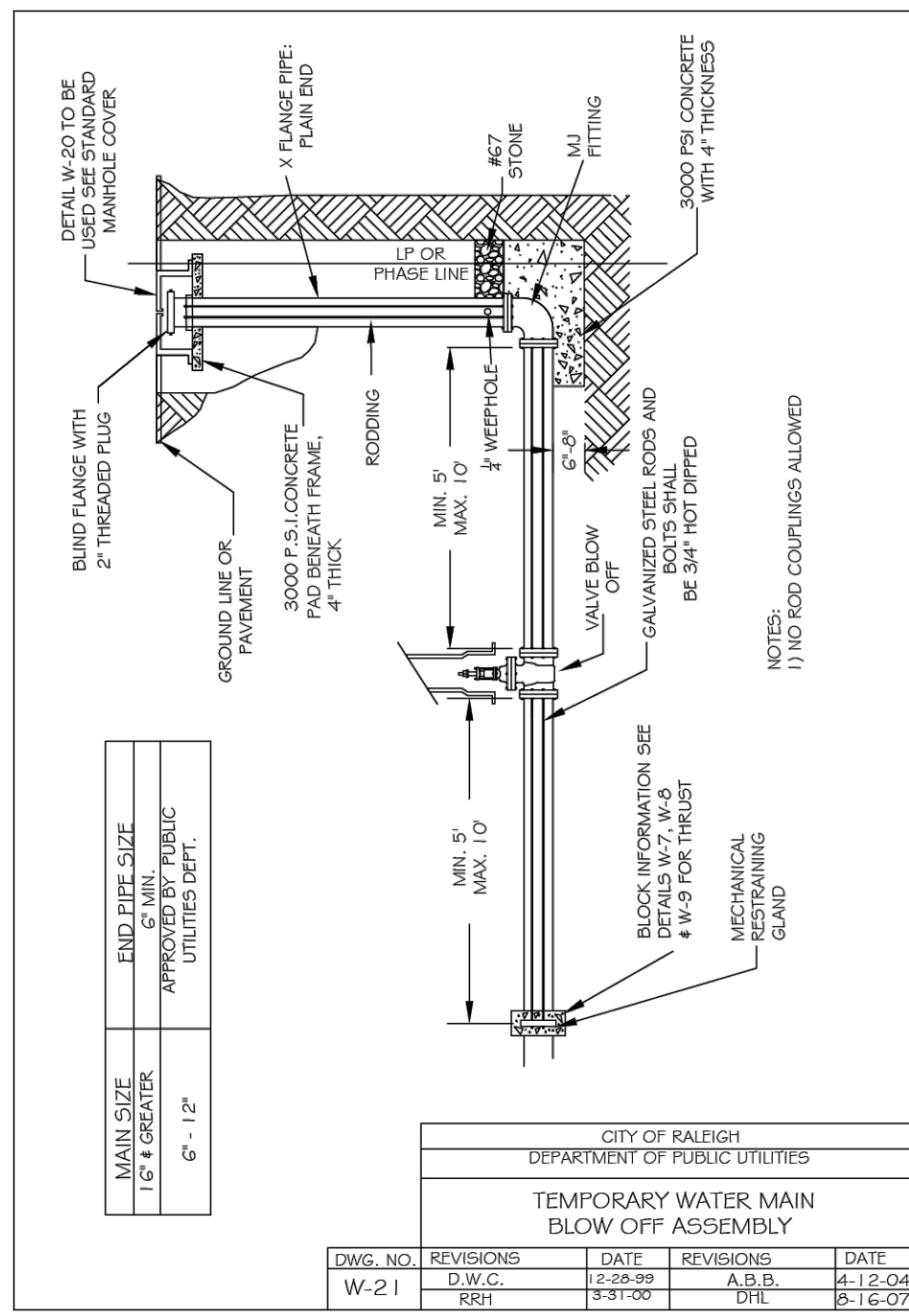
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 DESIGNED BY: P. BARBEAU
 CHECKED BY: P. BARBEAU
 SCALE: AS SHOWN

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ROLESVILLE CROSSING - CD 21-08
 WAKE COUNTY - NORTH CAROLINA
 UTILITY DETAILS

JOB NO. 43398
 SHEET NO. C7.8

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CHECKED BY: P. BARBEAU
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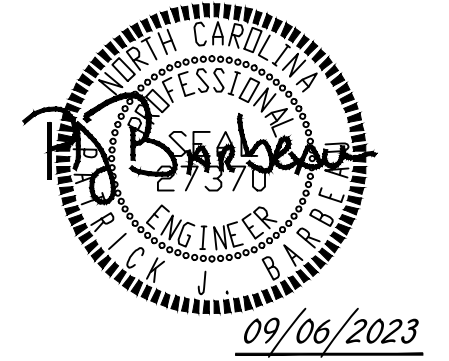
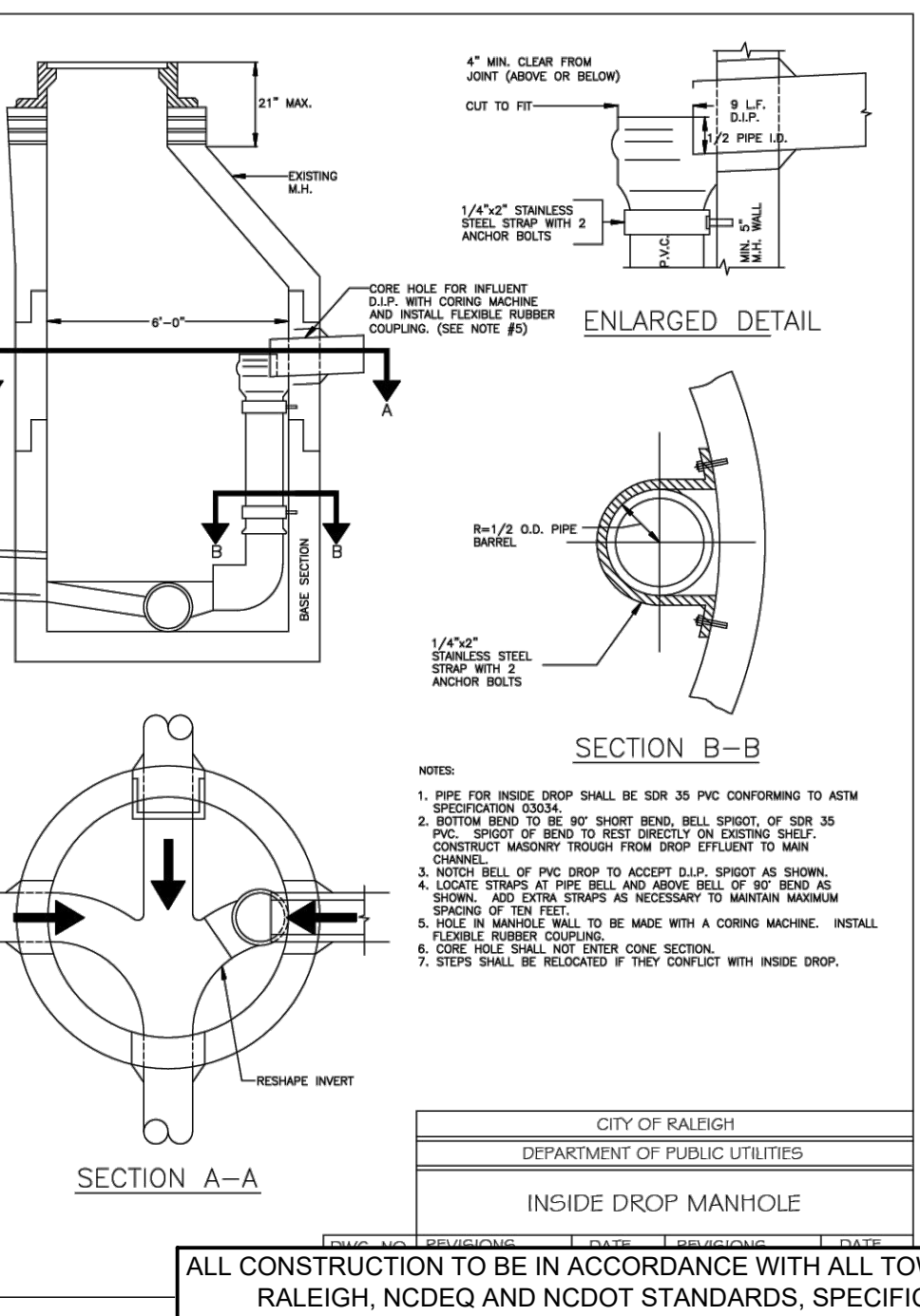
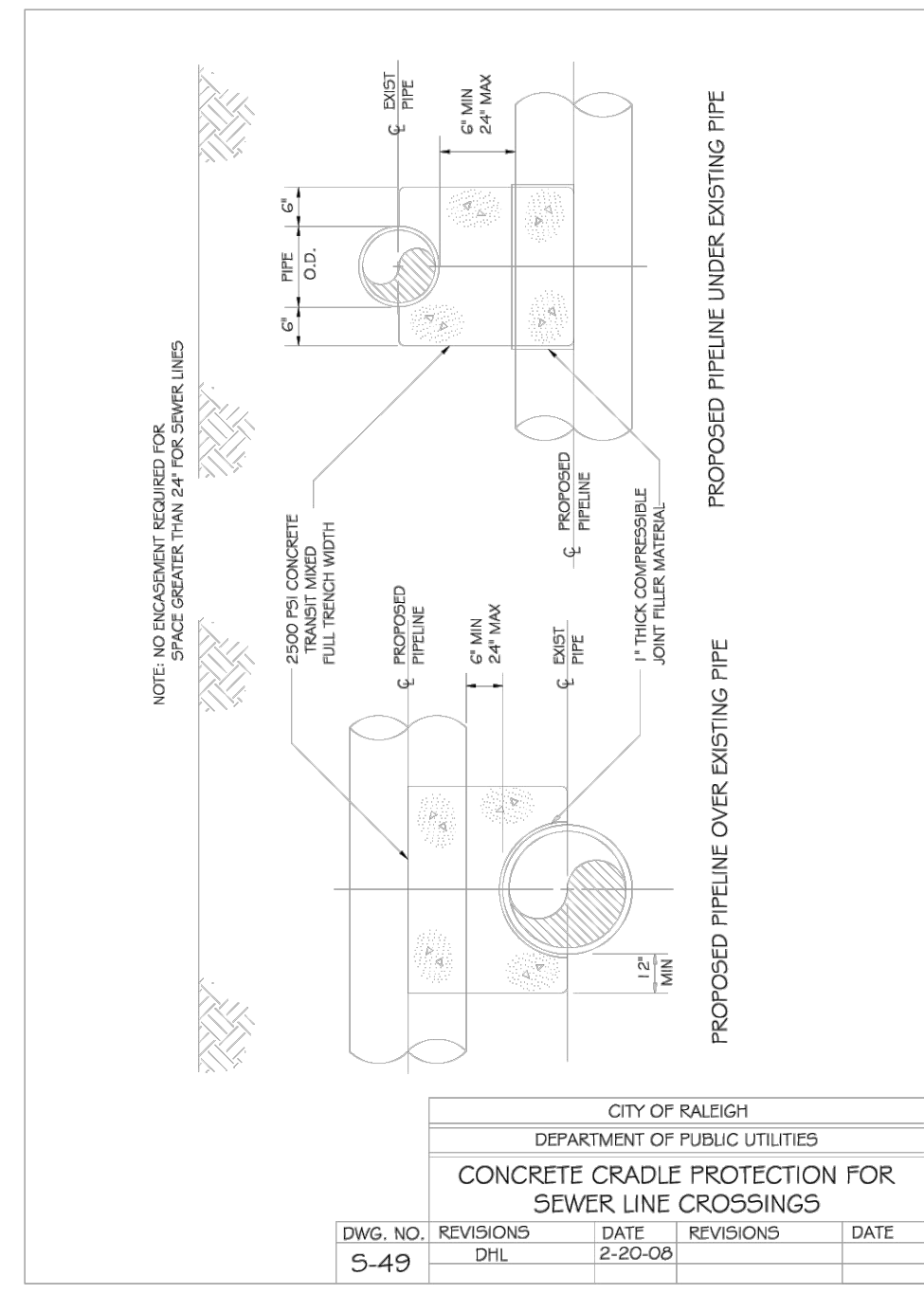
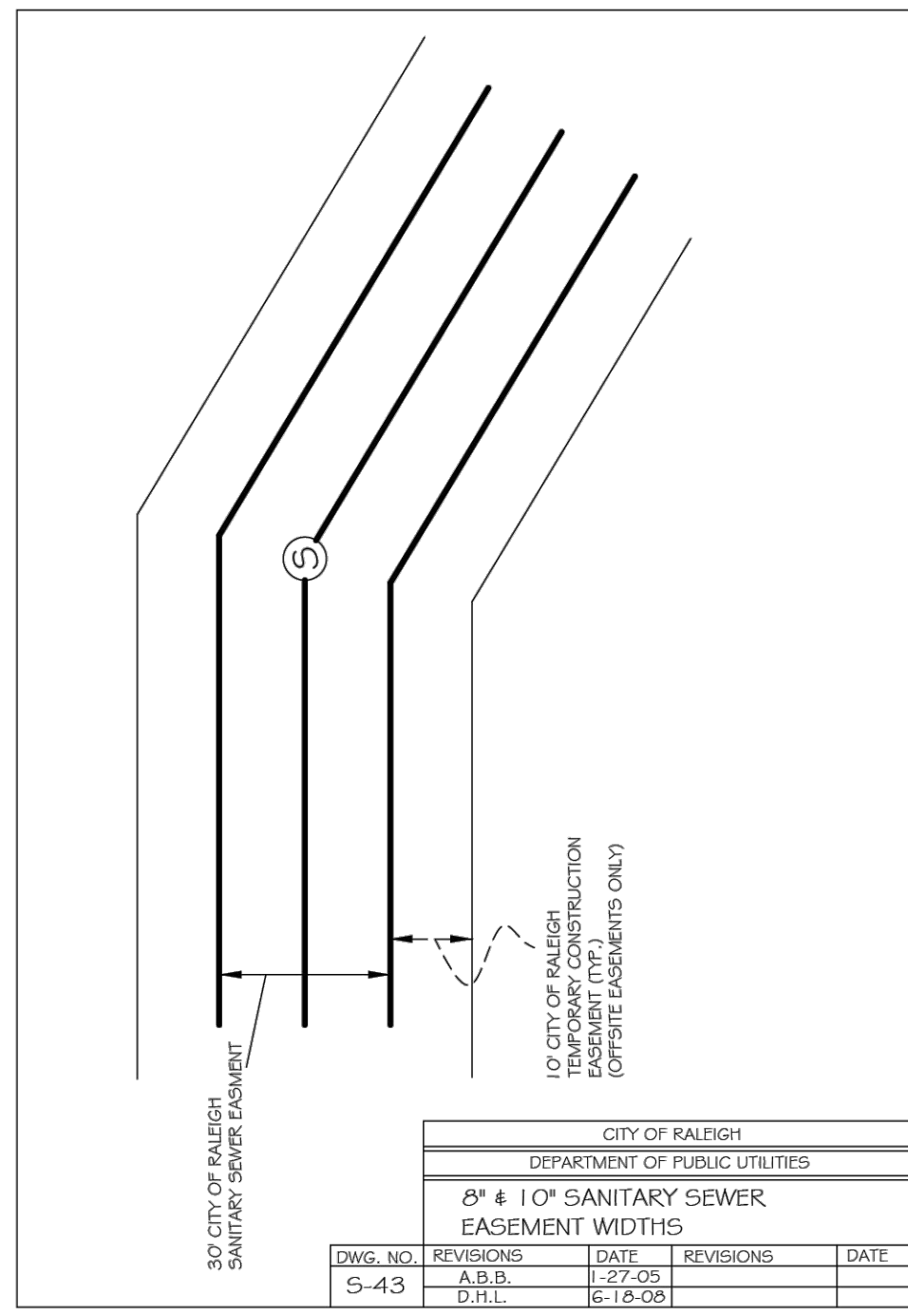
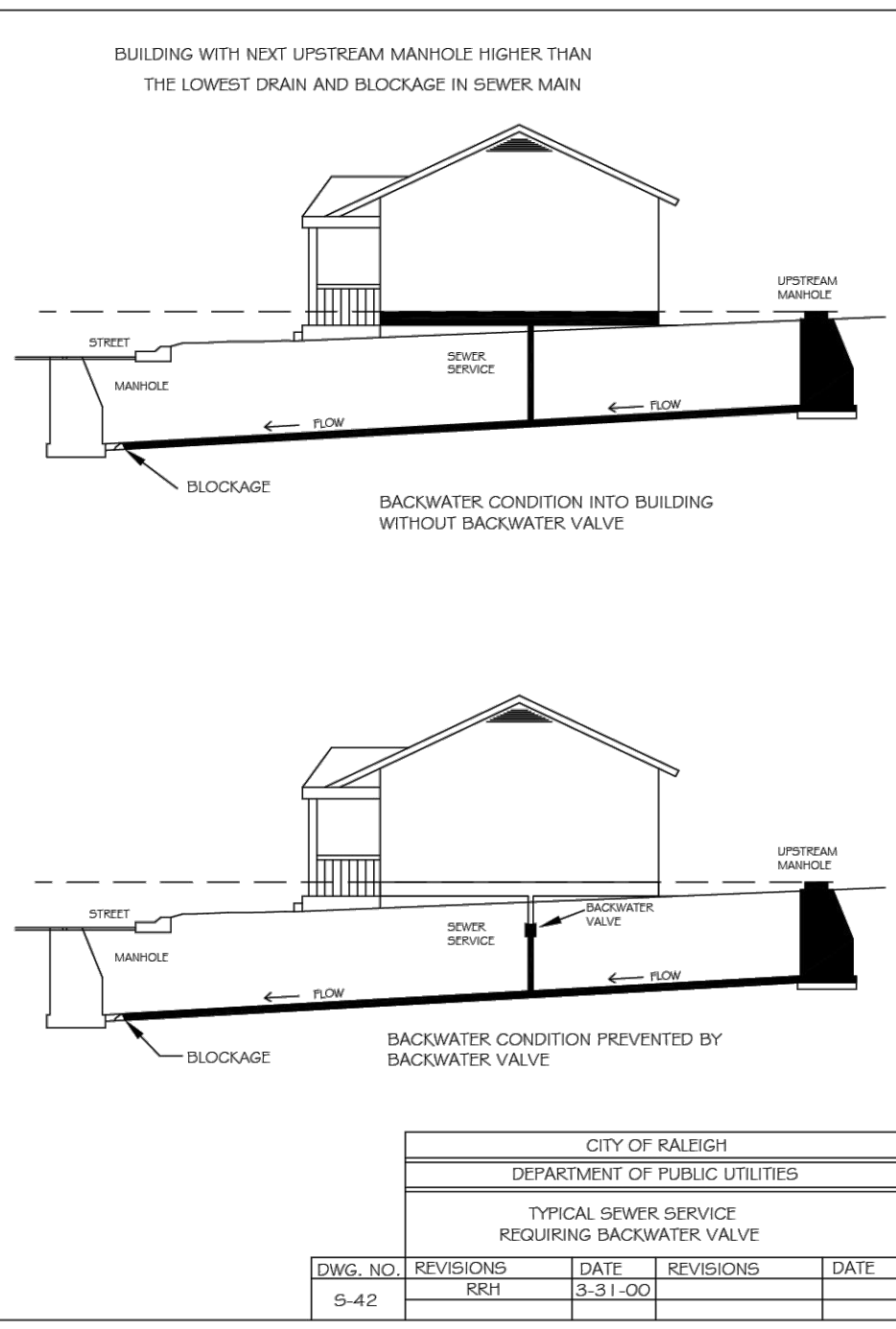
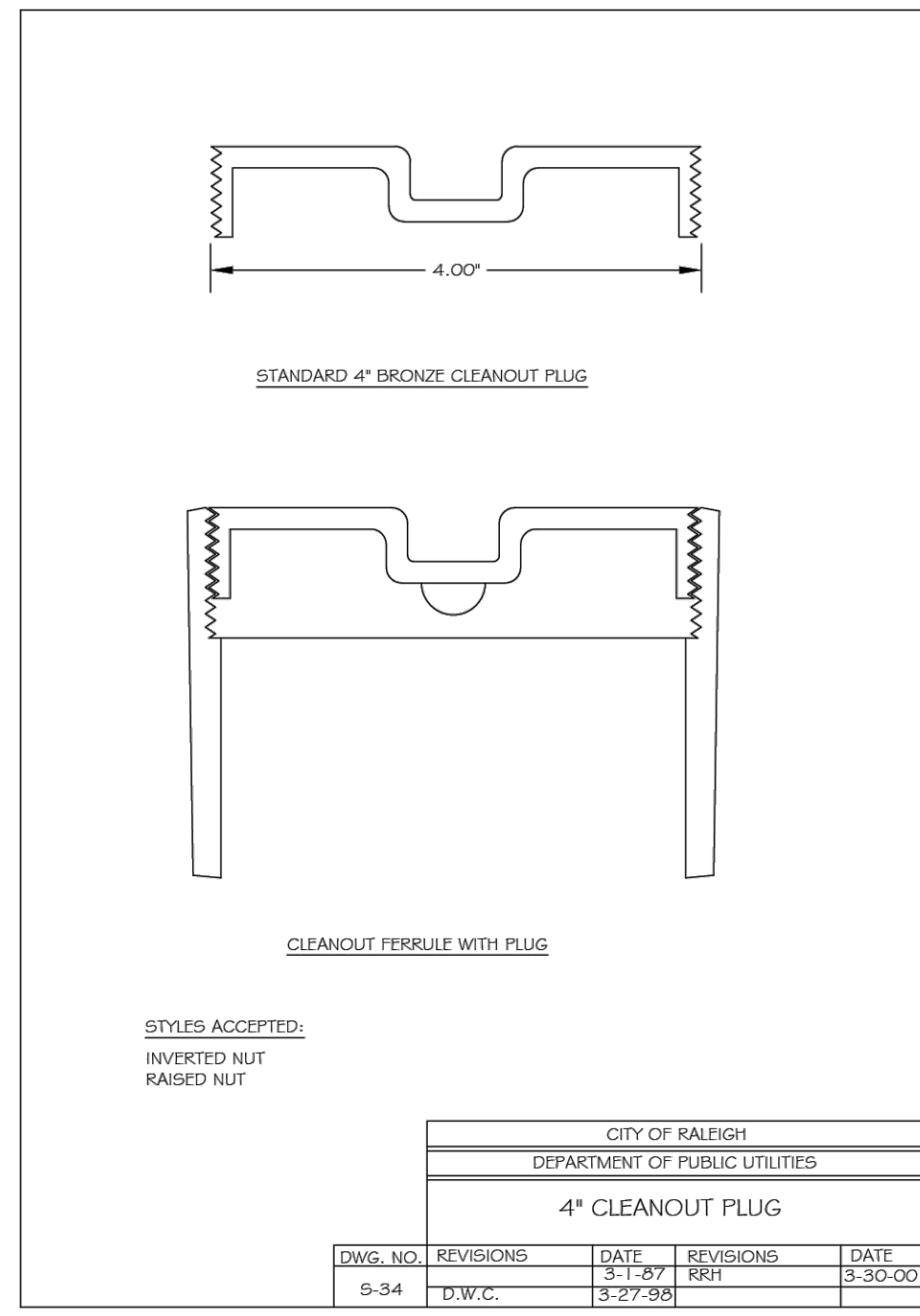
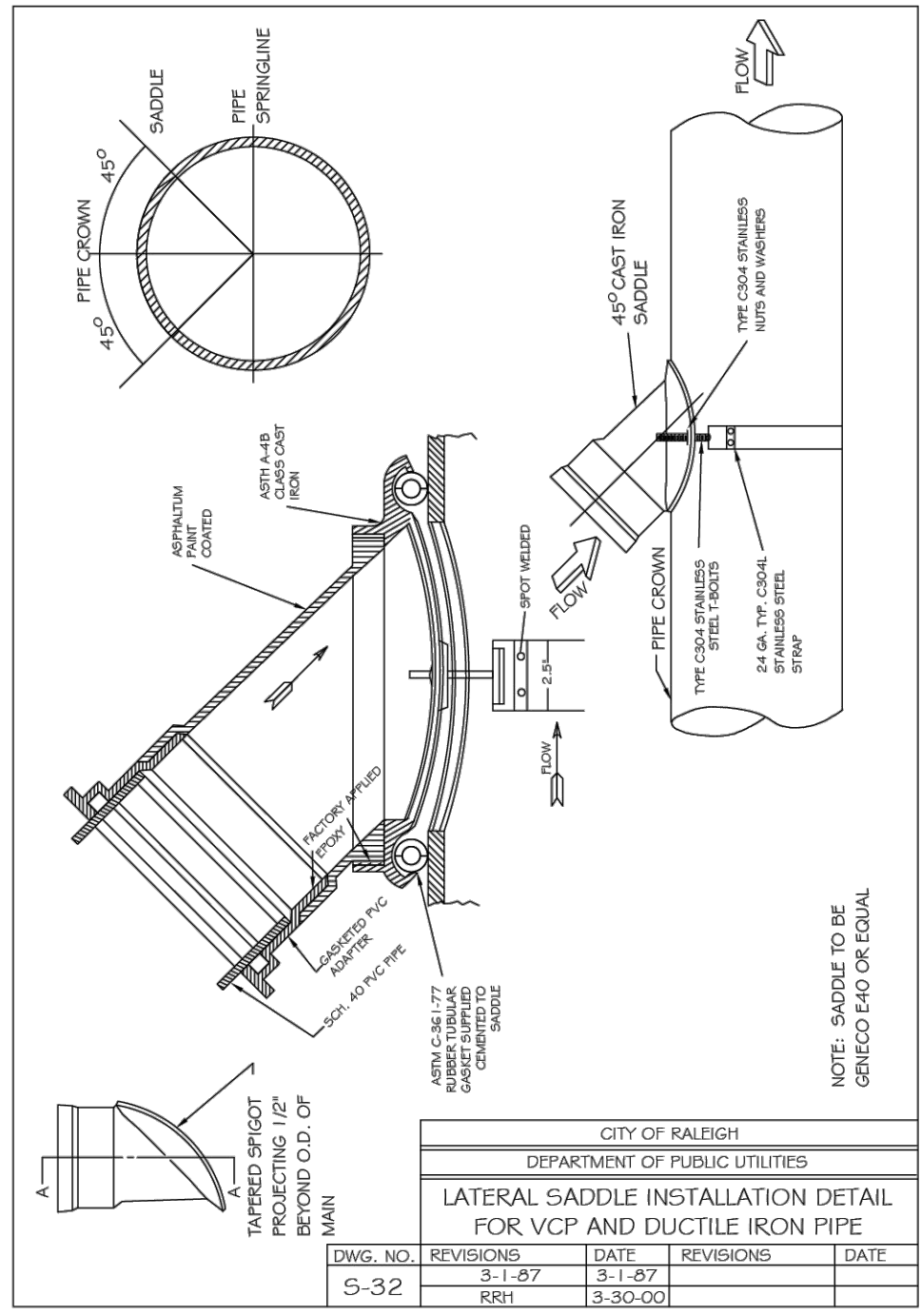
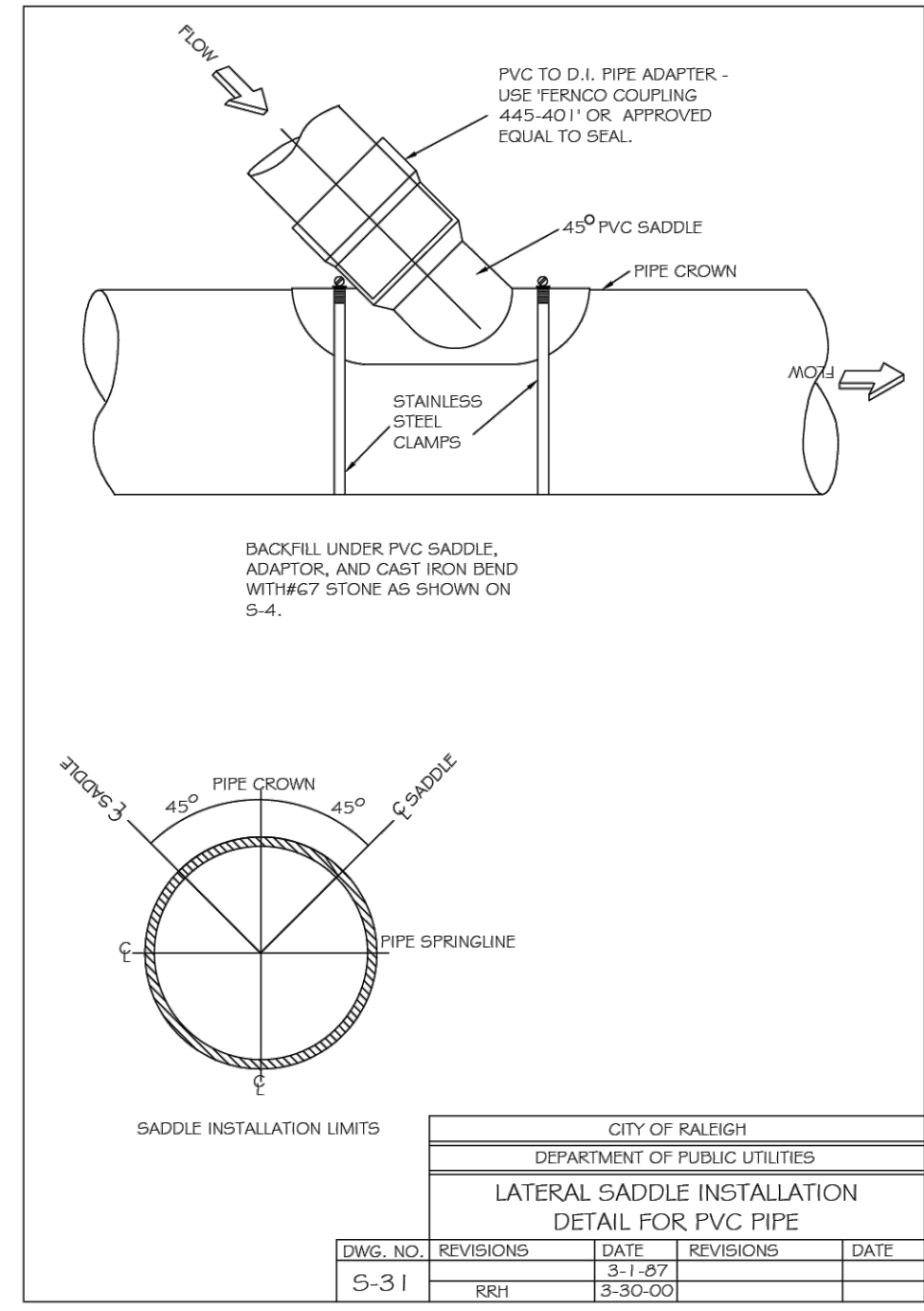
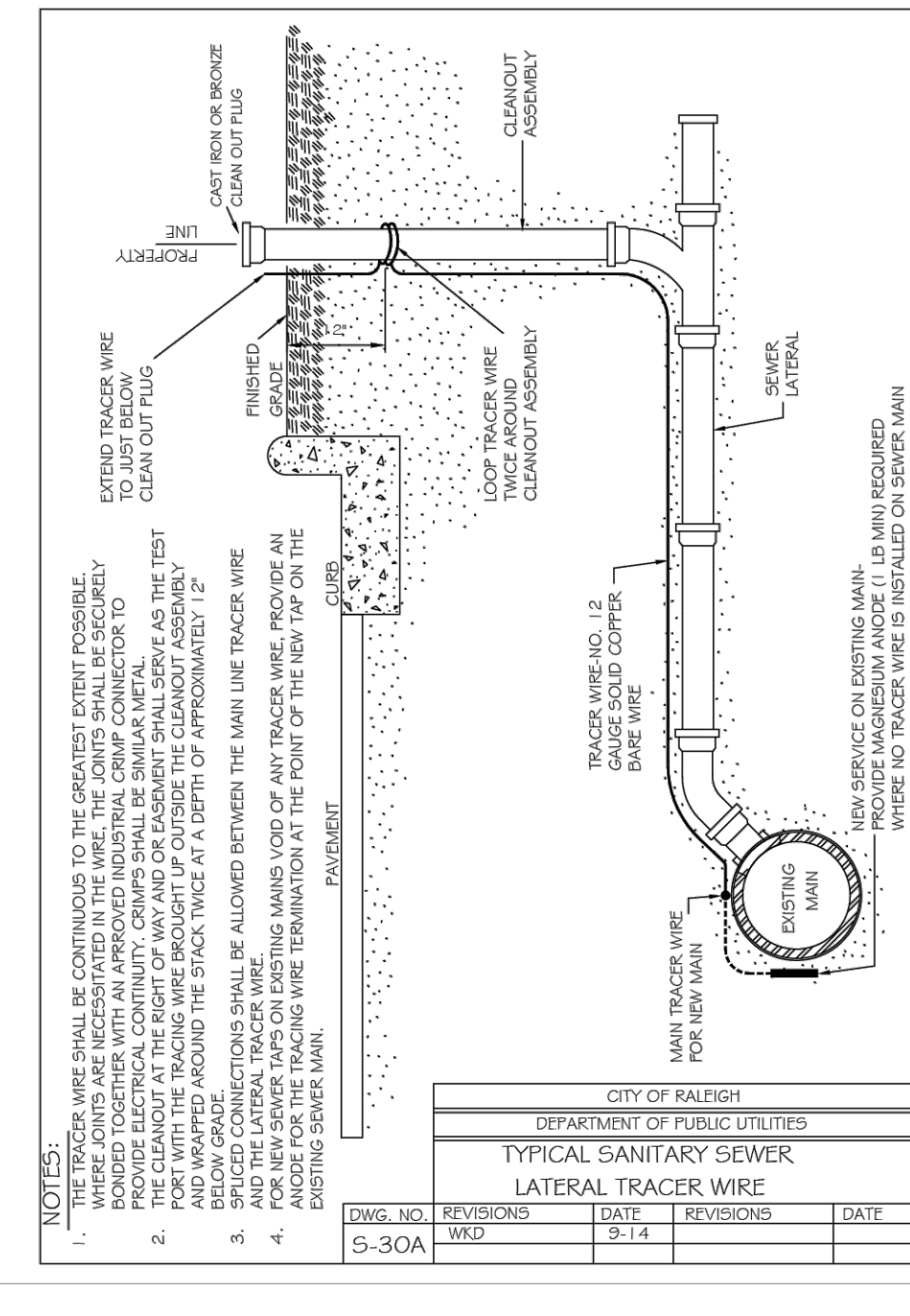
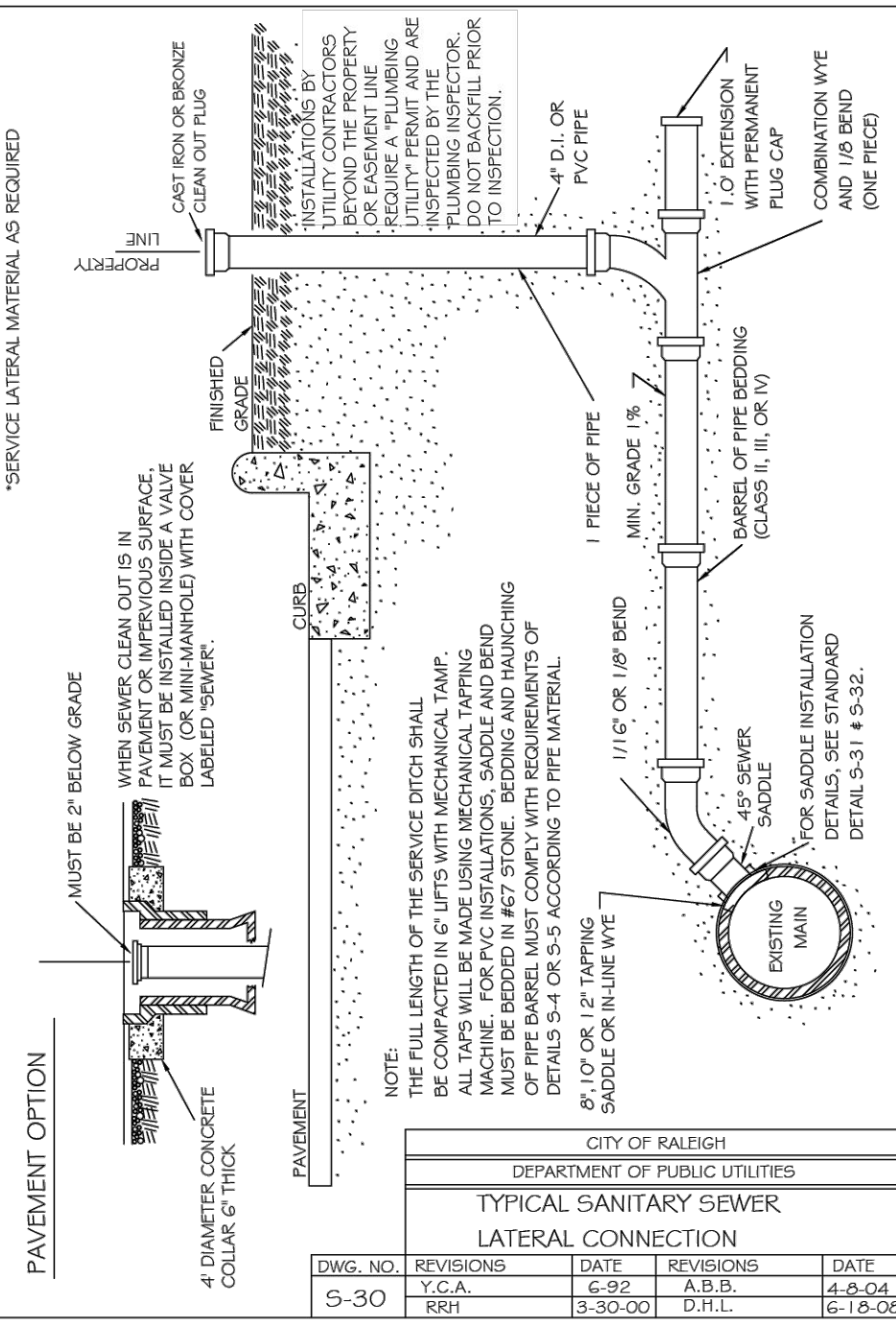
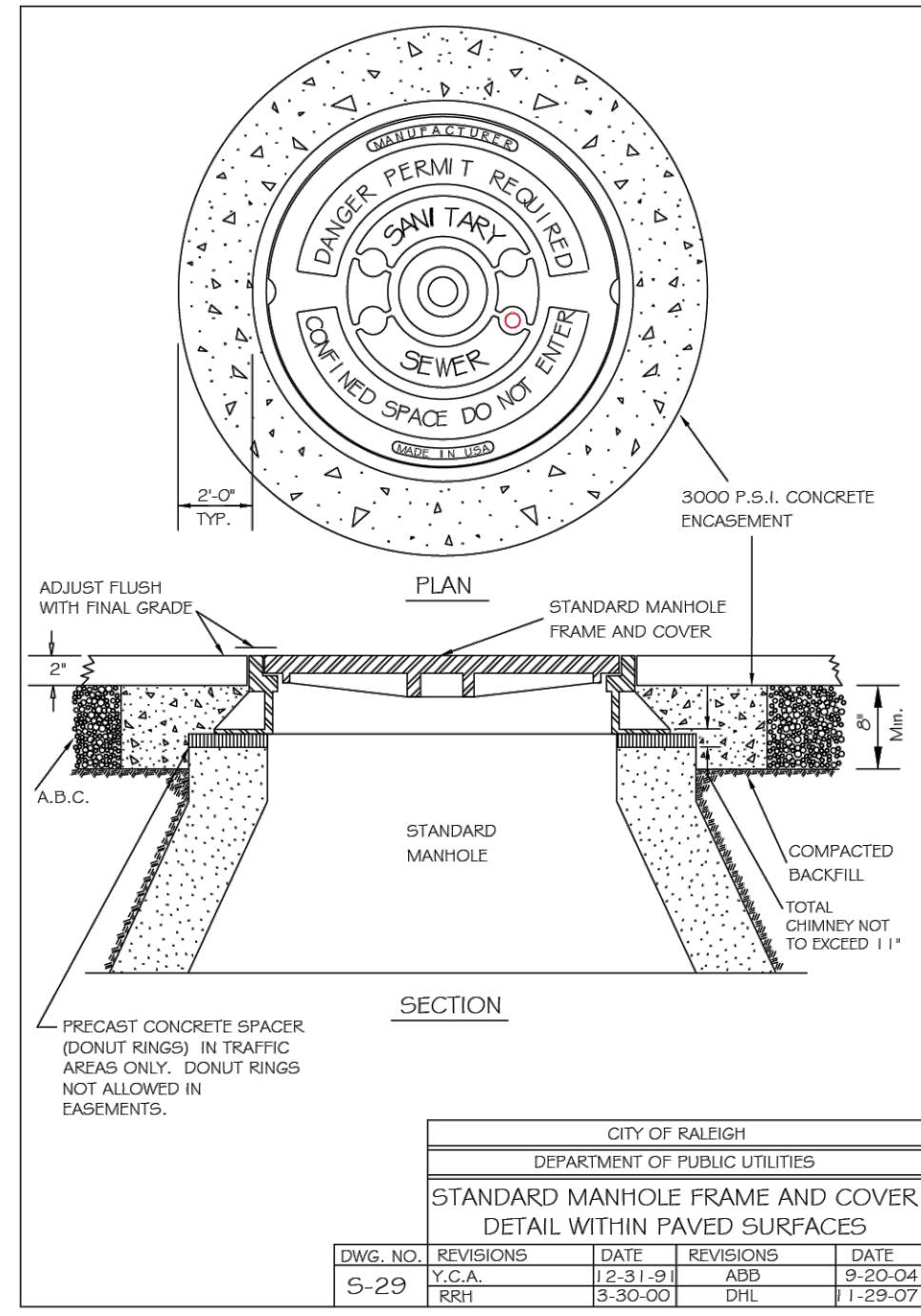
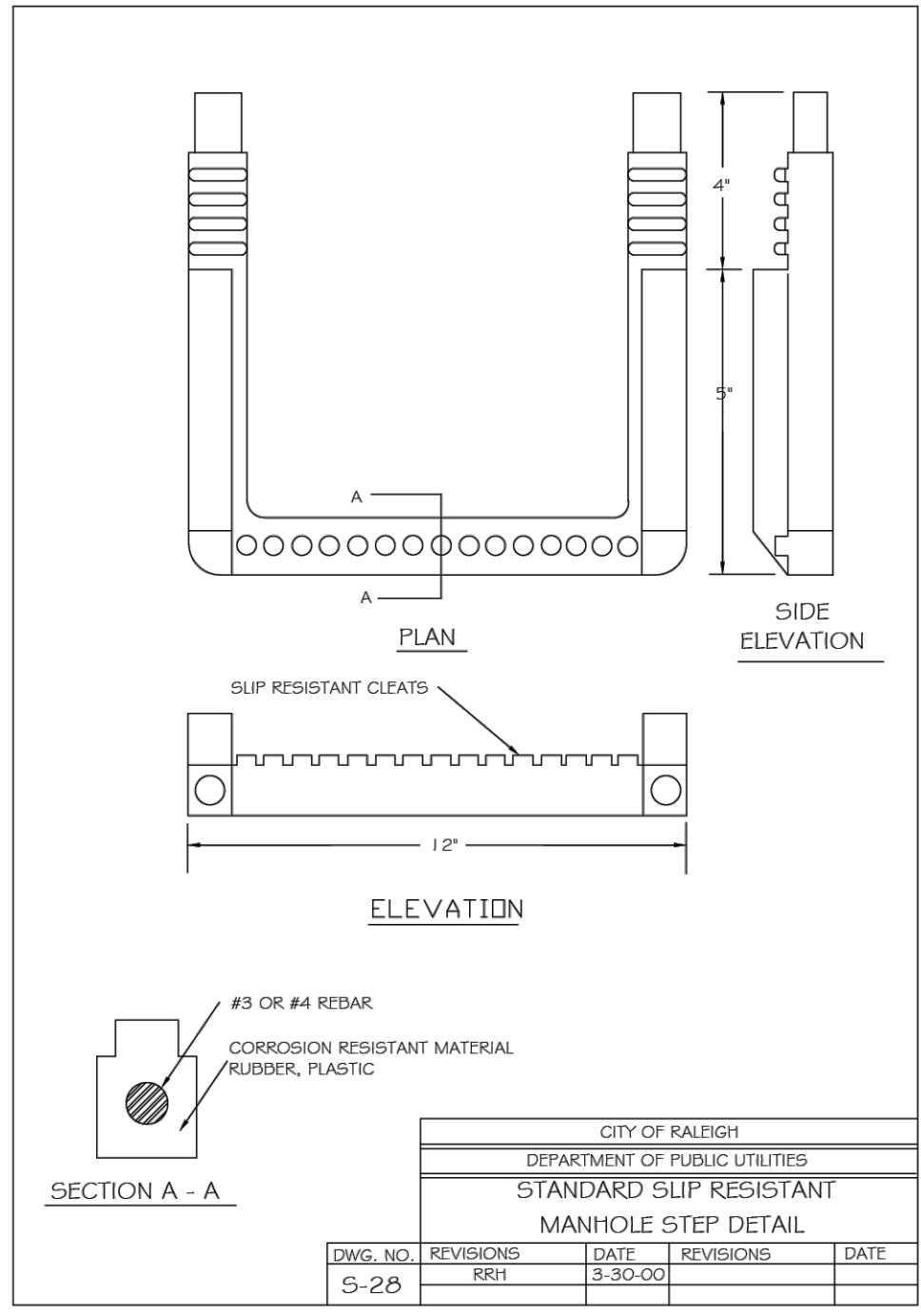
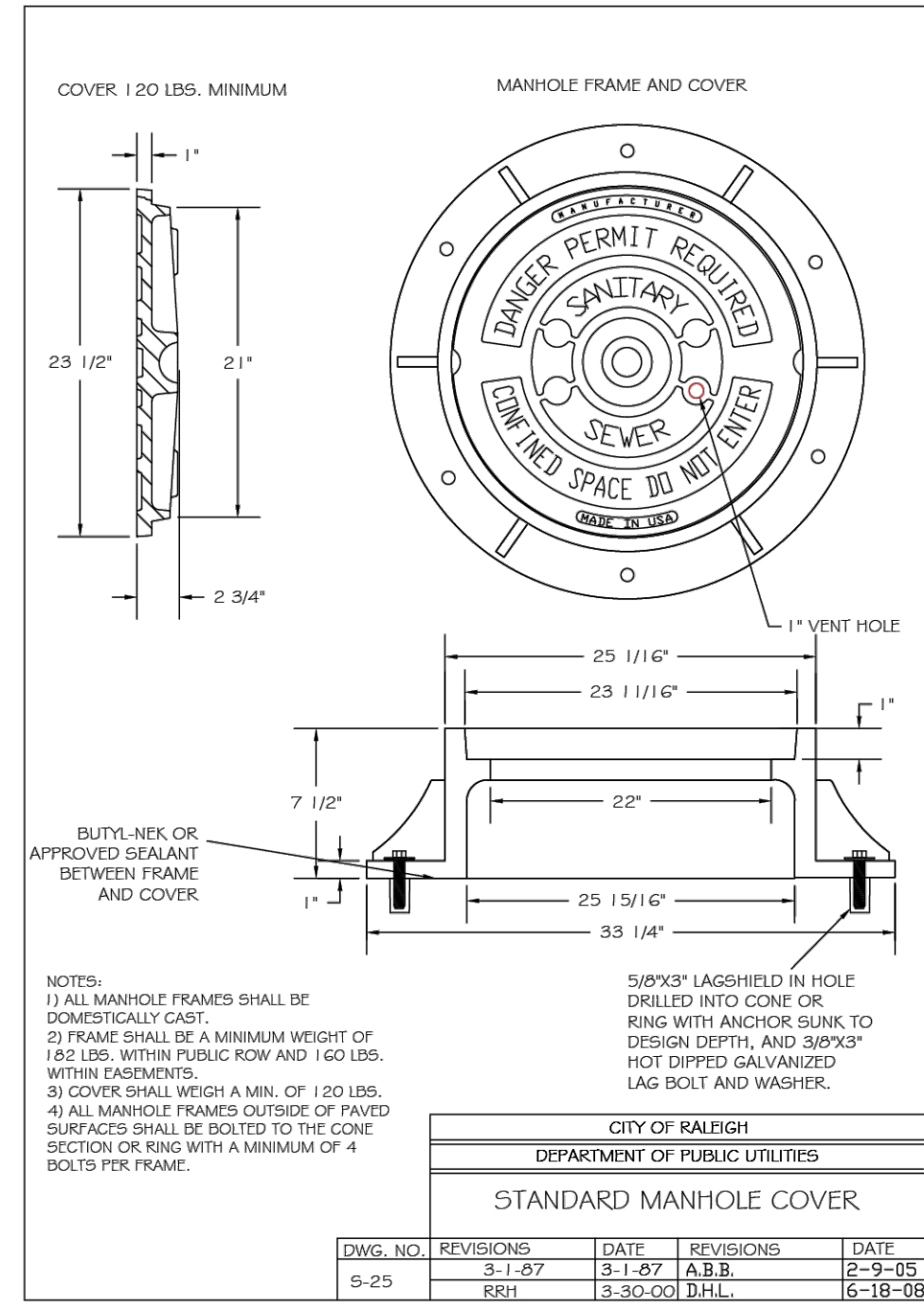
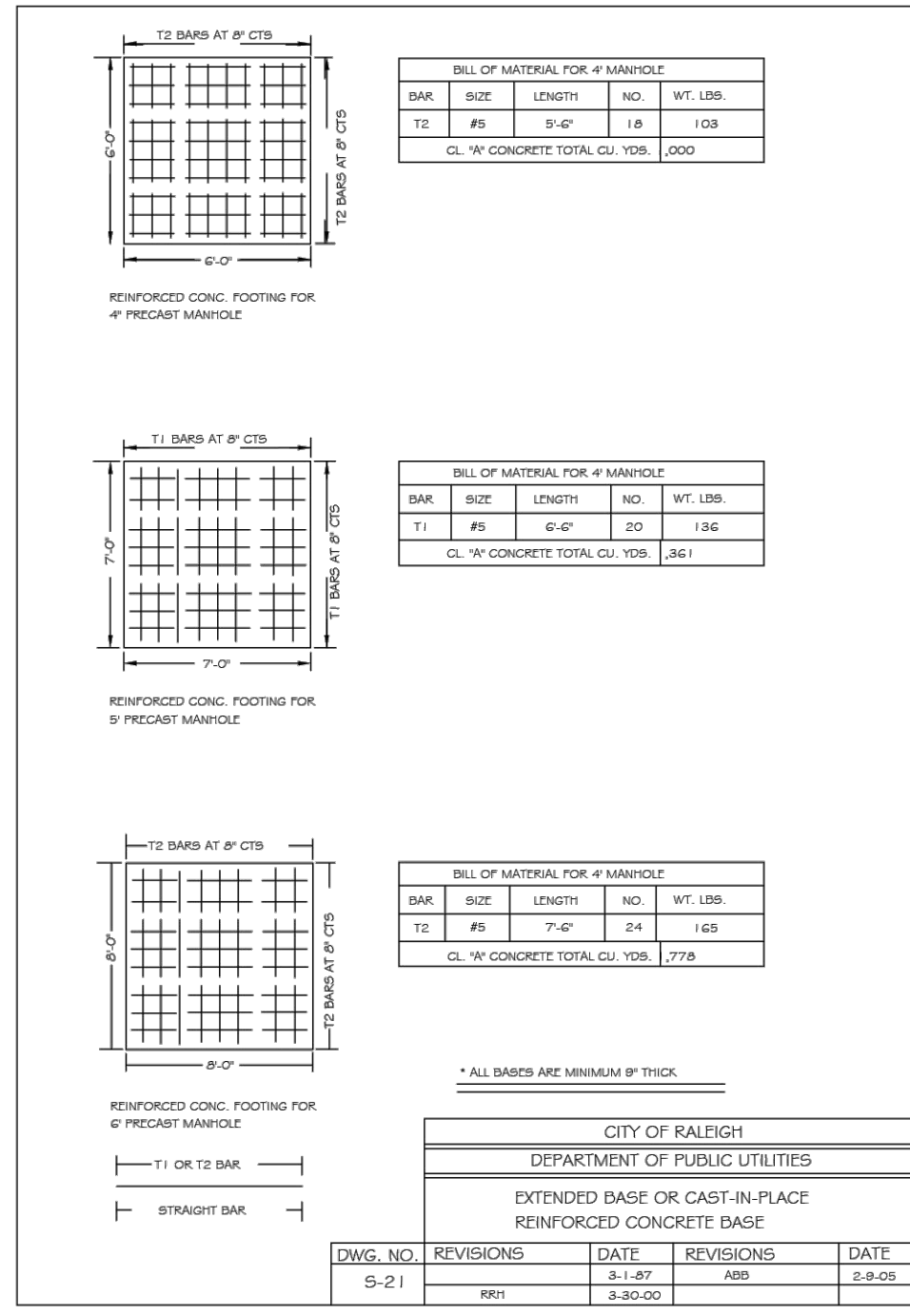
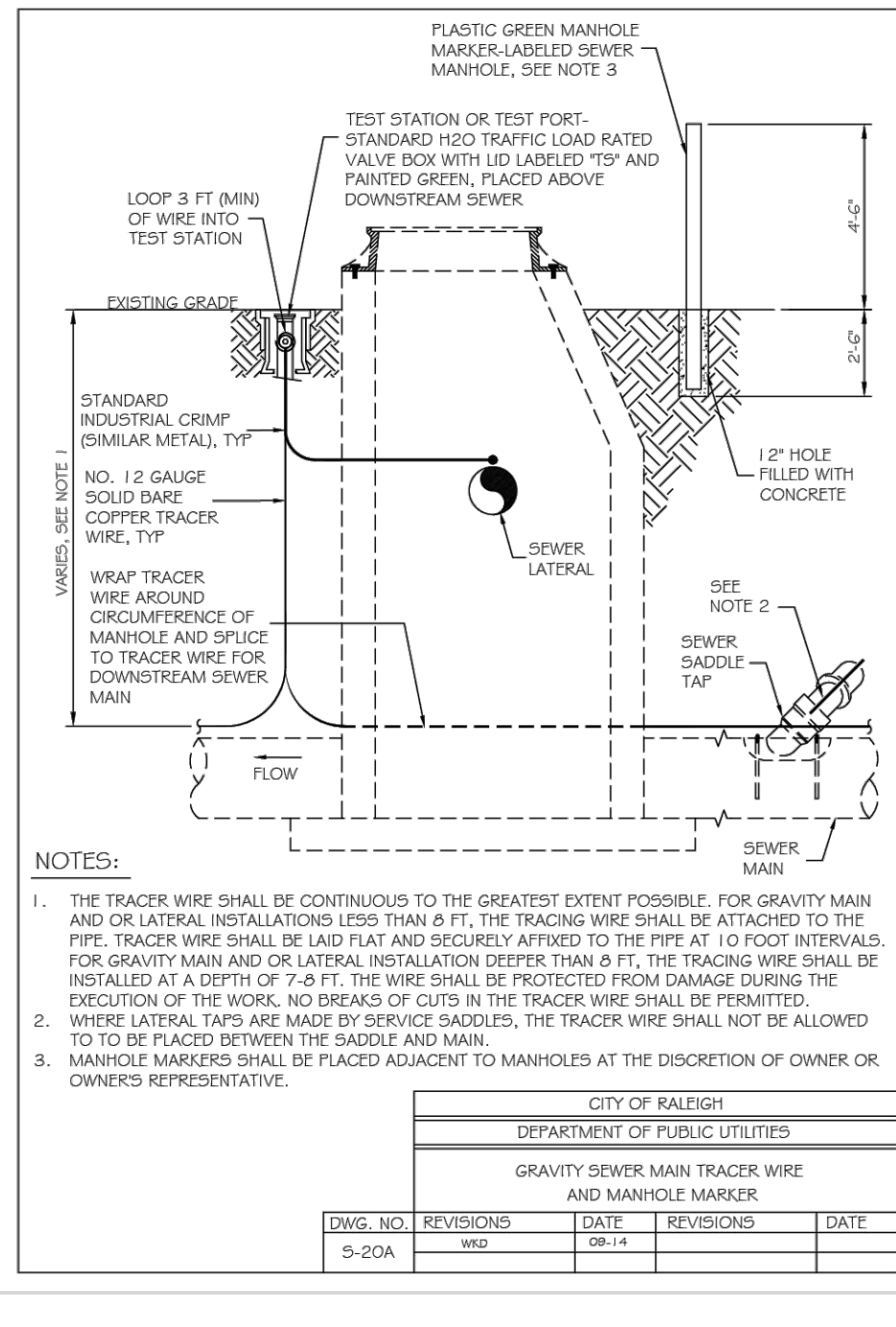
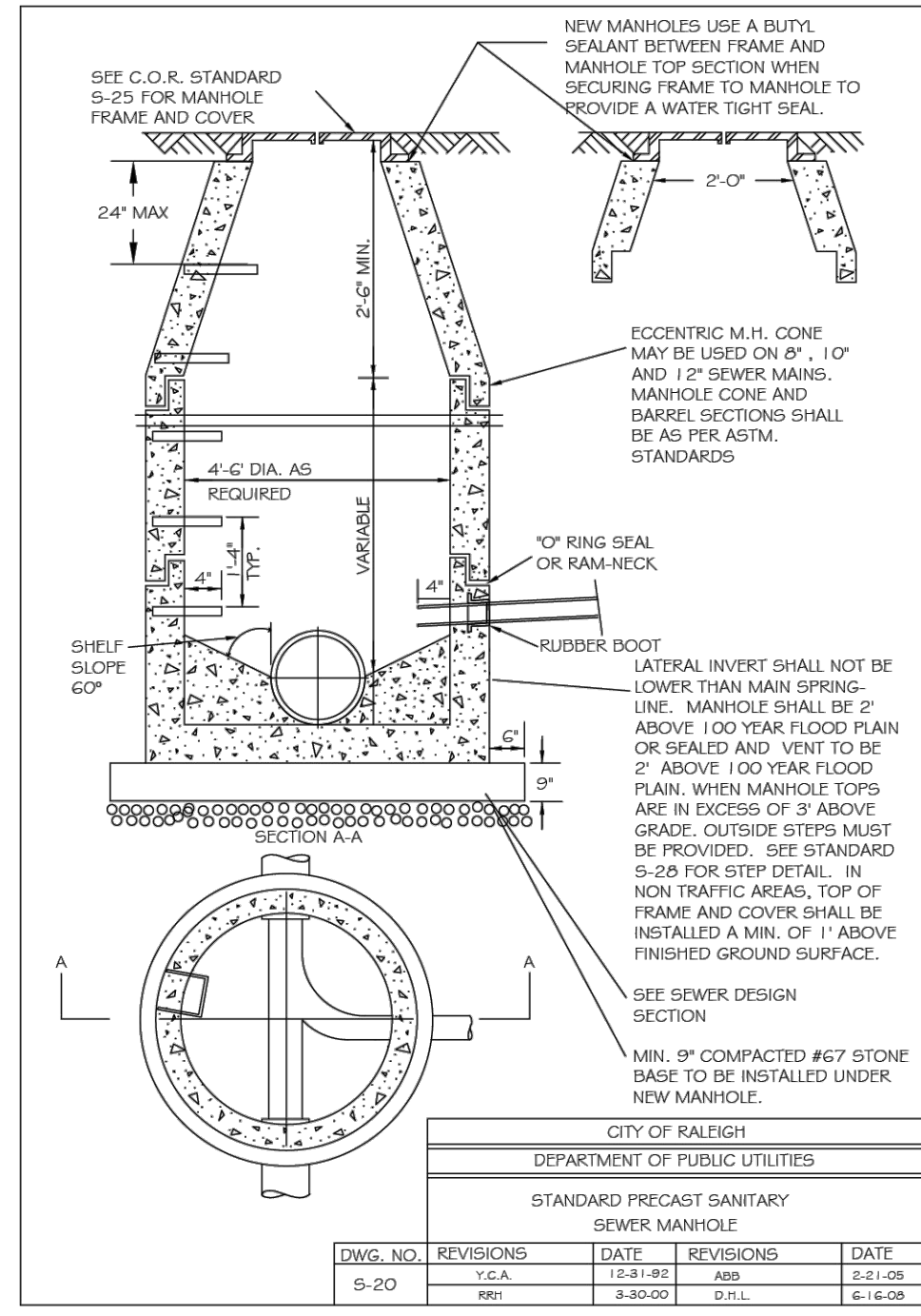
NORTH CAROLINA LICENSE NO. C-1652

ROLESVILLE CROSSING - CD 21-08

WAKE COUNTY - NORTH CAROLINA

UTILITY DETAILS

JOB NO. 43398
SHEET NO. C7.9



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TEL 919-866-4951 FAX 919-855-8124 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

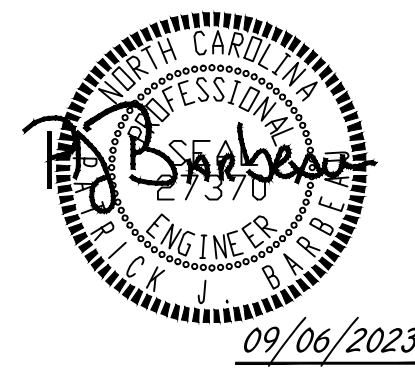
DATE 09/17/2021
DRAWN BY R. WINGATE
DESIGNED BY P. BARBEAU
CHECKED BY P. BARBEAU
SCALE AS SHOWN

REVISIONS PER WAKE COUNTY COMMENTS
REVISIONS PER WAKE COUNTY COMMENTS
CONSTRUCTION DOCUMENT SUBMITTAL
REVISIONS PER NCDOT COMMENTS
REVISIONS PER CITY OF RALEIGH COMMENTS

TIMMONS GROUP
NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
WAKE COUNTY - NORTH CAROLINA
UTILITY DETAILS

JOB NO. 43398
SHEET NO. C7.10

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDOT AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS



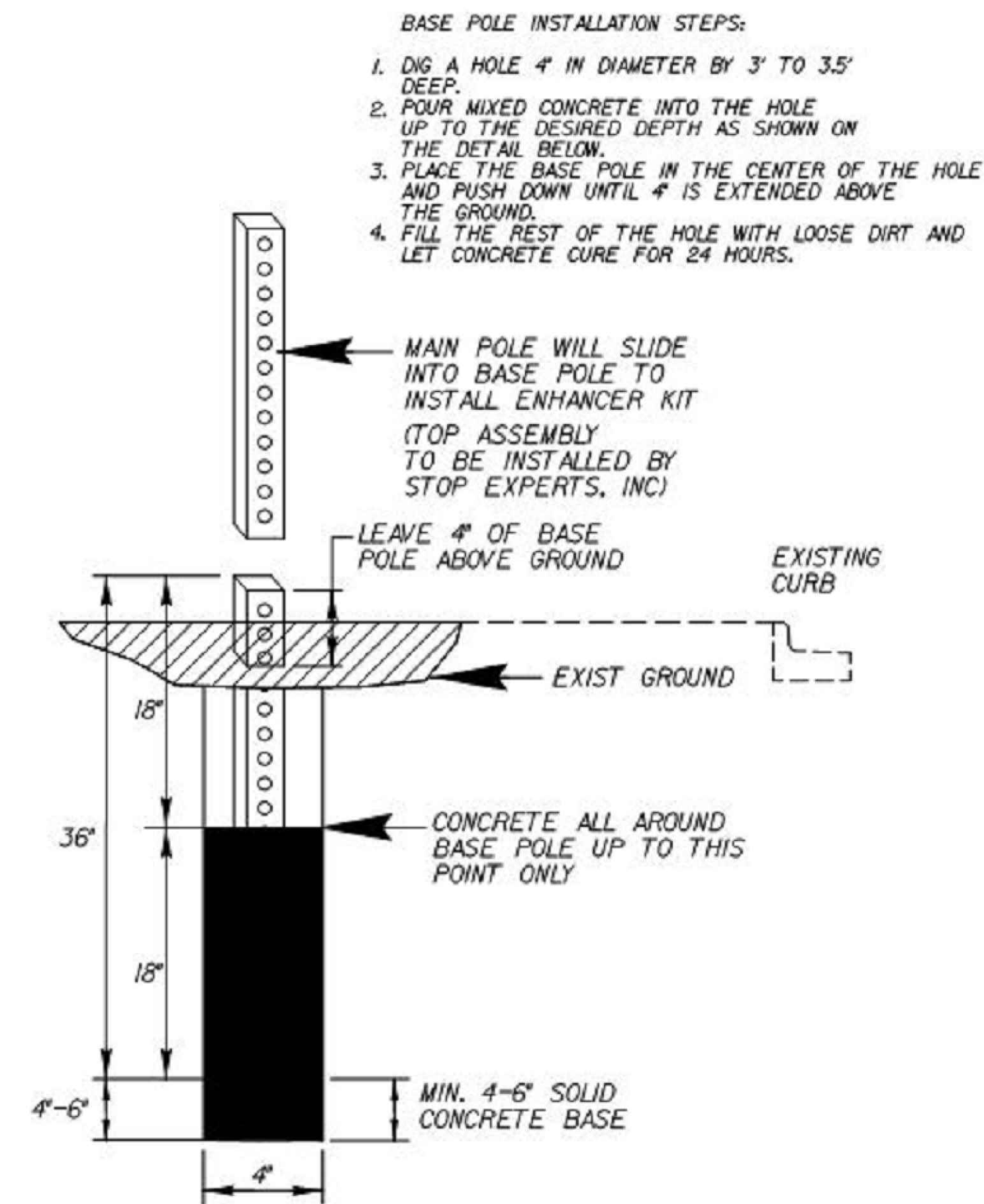
ROADWAY STANDARD DRAWINGS:

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD.NO.	TITLE
654.01	PAVEMENT REPAIRS
848.05	CURB RAMP - PROPOSED CURB AND GUTTER
904.50	MOUNTING OF TYPE 'D', 'E', AND 'F' SIGNS ON 'U' CHANNEL POSTS
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1250.01	PAVEMENT MARKER SPACING
1743.02	PEDESTALS - NORMAL DUTY TYPE II

NOTES

- REFER TO "ROAD STANDARD DRAWINGS NCDOT" DATED JANUARY 2018, "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.
- RRFB SHALL BE MOUNTED TO POWDER COATED BLACK AND THE CONTROLLER BOX SHALL BE LOCATED BEHIND THE SIGNS AND MOUNTED ON A TYPE II PEDESTAL (4.5" OD ALUMINUM POLES WITH TRANSFORMER BASES). REFER TO THE NCDOT ROADWAY STANDARD DRAWING 1743.02.



- BASE POLE INSTALLATION STEPS:**
- DIG A HOLE 4" IN DIAMETER BY 3' TO 3.5' DEEP.
 - POUR MIXED CONCRETE INTO THE HOLE UP TO THE DESIRED DEPTH AS SHOWN ON THE DETAIL BELOW.
 - PLACE THE BASE POLE IN THE CENTER OF THE HOLE AND PUSH DOWN UNTIL 4" IS EXTENDED ABOVE THE GROUND.
 - FILL THE REST OF THE HOLE WITH LOOSE DIRT AND LET CONCRETE CURE FOR 24 HOURS.

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YOUR VISION ACHIEVED THROUGH OURS.

DATE
 09/17/2021
 DRAWN BY
 R. WINGATE
 DESIGNED BY
 P. BARBEAU
 CHECKED BY
 P. BARBEAU
 SCALE
 AS SHOWN

TIMMONS GROUP
 NORTH CAROLINA LICENSE NO. C-1652
ROLESVILLE CROSSING - CD 21-08
 ROLESVILLE - WAKE COUNTY - NORTH CAROLINA
SITE DETAILS

REVISION DESCRIPTION	DATE
REVISIONS PER WAKE COUNTY COMMENTS	04/08/2022
REVISIONS PER WAKE COUNTY COMMENTS	06/24/2022
CONSTRUCTION DOCUMENT SUBMITTAL	07/22/2022
REVISIONS PER NCDOT COMMENTS	04/06/2023
REVISIONS PER CITY OF RALEIGH COMMENTS	09/06/2023

JOB NO.
43398
SHEET NO.
C7.11

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE, CITY OF RALEIGH, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS