

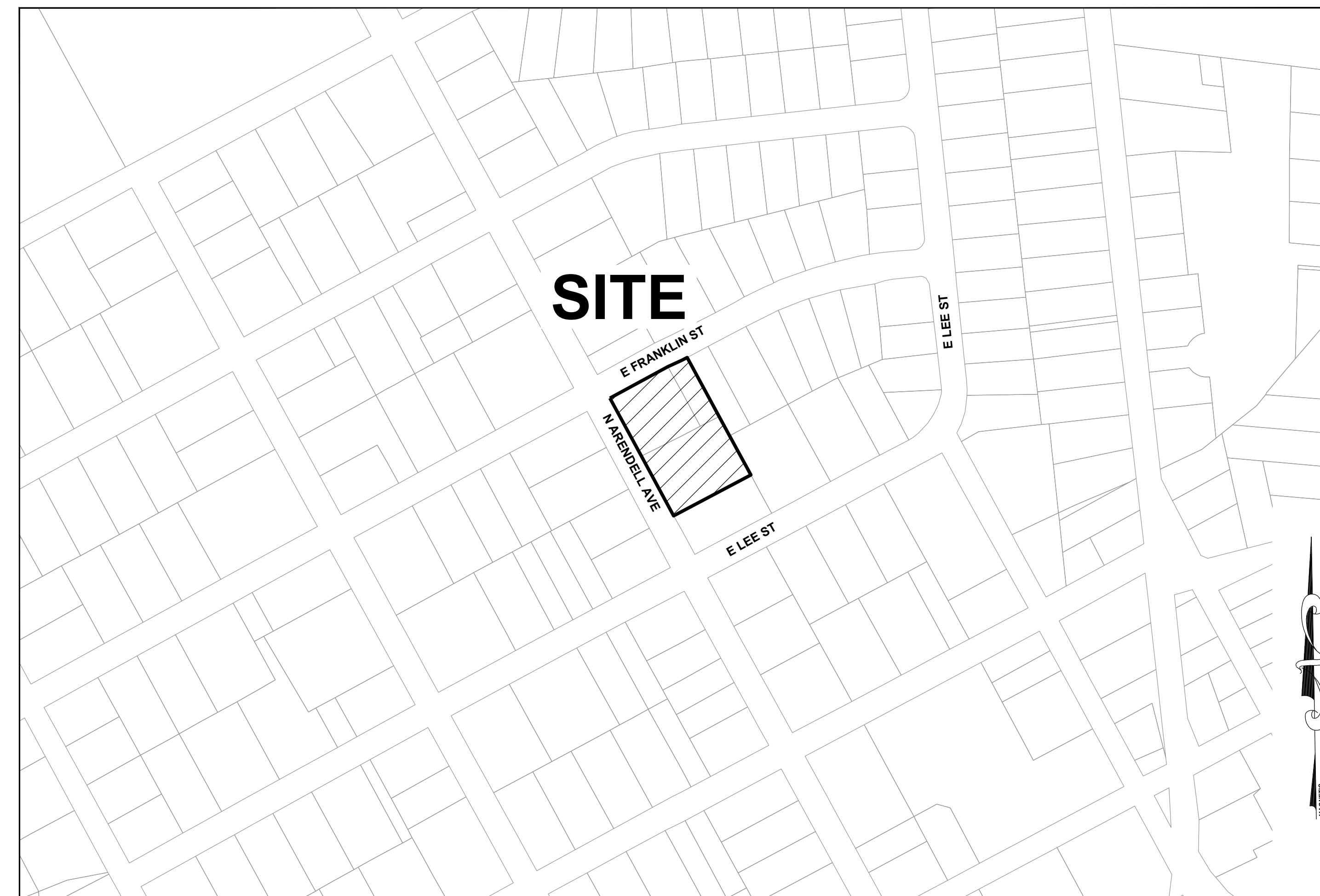
Approved  
 Town of Zebulon  
 Adam Culpepper  
 08/03/2023

# ARENDELL AVE

## SITE PLAN SET

### PROJECT #561602

SITE INFORMATION:	
LOCATION:	706 N ARENDELL AVE, ZEBULON
COUNTY:	WAKE
PARENT PIN:	2705274195
PMPG:	2006/02452
ZONING:	DTP
ACREAGE:	1.38 ACRES
CURRENT LAND USE MAP CLASSIFICATION:	TN
PROPOSED LAND USE MAP CLASSIFICATION:	TN
LAND CLASS:	RESIDENTIAL
<b>MINIMUM BUILDING SETBACKS:</b>	
FRONT YARD:	25'
SIDE YARD:	0' OR 5'
REAR YARD:	4'
CORNER YARD:	5'
<b>RIGHT OF WAY &amp; OTHER AREAS:</b>	
RIGHT OF WAY DEDICATION:	0.00 AC
NATURAL WETLANDS:	0.00 AC
STREAM BUFFER:	0.00 AC
<b>LOT ACREAGE:</b>	
TOTAL NUMBER PROPOSED LOTS:	12
MAXIMUM ALLOWED DENSITY:	10 DU/AC
PROPOSED DENSITY:	8.70 DU/AC
MINIMUM ALLOWED LOT SIZE:	3,000 SF
MINIMUM PROPOSED LOT SIZE:	3,090 SF
MAXIMUM PROPOSED LOT SIZE:	3,427 SF
AVERAGE PROPOSED LOT SIZE:	3,152 SF
MINIMUM ALLOWABLE LOT WIDTH:	30'
MINIMUM PROPOSED LOT WIDTH:	30'
MAXIMUM ALLOWED LOT COVERAGE:	85%
MAXIMUM PROPOSED LOT COVERAGE:	63%
<b>OPEN SPACE BREAKDOWN:</b>	
PROPERTY BOUNDARY:	60,200 SF (1.38 AC)
REQUIRED URBAN SET-ASIDE:	6,020 SF (10% OF TOTAL SITE)
PROVIDED URBAN SET-ASIDE:	9,079 SF (0.21 AC)
<b>IMPERVIOUS AREAS:</b>	
ROADWAYS / PARKING:	7,085 SF (0.16 AC)
SIDEWALKS:	3,017 SF (0.07 AC)
LOTS (1,710 SF/LOT):	20,520 SF (0.47 AC)
TOTAL ON-SITE IMPERVIOUS AREA:	30,622 SF (0.7 AC)
TOTAL ON-SITE IMPERVIOUS PERCENT:	50.72%
<b>UTILITY DEMANDS:</b>	
SEWAGE USAGE:	4,320 GPD 3 BED X 120 GPD/BED X 12 UNITS
WATER USAGE:	4,320 GPD 3 BED X 120 GPD/BED X 12 UNITS
<b>DISTURBED AREA:</b>	
TOTAL DISTURBED AREA:	61,002 SF (1.4 AC)
<b>STREET TYPE SUMMARY:</b>	
16' ROW SECTION:	390 LF



**VICINITY MAP**  
1" = 200'

SHEET INDEX	
C-00	COVER SHEET
C-1.0	EXISTING CONDITIONS PLAN
C-2.0	SITE PLAN
C-3.0	UTILITY PLAN
C-4.0	OFF-SITE SANITARY SEWER PLAN & PROFILE
C-5.0	GRADING PLAN
C-6.0	STORMWATER PLAN
C-7.0	EROSION CONTROL NOTE
C-7.1	EROSION CONTROL PLAN - STAGE 1
C-7.2	EROSION CONTROL PLAN - STAGE 2
C-8.0	LANDSCAPING PLAN
D-1.0	BUILDING ELEVATIONS
D-1.1	BUILDING ELEVATIONS
D-2.0	STORM DRAINAGE DETAILS
D-2.1	STORM DRAINAGE DETAILS
D-2.2	STORM DRAINAGE DETAILS
D-2.3	WATER DETAILS
D-2.4	SEWER DETAILS
D-2.5	SITE DETAILS
D-2.6	SITE DETAILS
D-2.7	EROSION CONTROL DETAILS
D-2.8	EROSION CONTROL DETAILS
D-2.9	EROSION CONTROL DETAILS
D-2.10	LIGHTING DETAILS

**PUBLIC UTILITY IMPROVEMENTS:**

WATER MAIN: 0 SF  
SEWER MAIN: 76 SF  
WATER STUBS: 14  
SEWER STUBS: 16

NOTE: STUB QUANTITY INCLUDES REMOVAL OF EXISTING STUBS.

**EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT**

**APPROVED**

EROSION CONTROL  S-\_\_\_\_\_

STORMWATER MGMT.  S-\_\_\_\_\_

FLOOD STUDY  S-\_\_\_\_\_

DATE \_\_\_\_\_

ENVIRONMENTAL CONSULTANT SIGNATURE

**PERMIT INFORMATION:**

(PERMITTING AUTHORITY, PERMIT IDENTIFIERS, & EFFECTIVE DATES)

**TOWN OF ZEBULON PLANNING AND ZONING:**

- EFFECTIVE DATE OF ZONING APPROVAL: \_\_\_\_\_ XX-XX-2020

- EFFECTIVE DATE OF MASTER PLAN APPROVAL: \_\_\_\_\_ XX-XX-2020

**WAKE COUNTY ENVIRONMENTAL:**

-LAND DISTURBANCE PERMIT: \_\_\_\_\_ SEC-XXXXXX-XXXX

-STORMWATER PERMIT: \_\_\_\_\_ SWF-XXXXXX-XXXX

**NCDWR/CITY OF ZEBULON PUBLIC UTILITIES:**

-WATER EXTENSION PERMIT: \_\_\_\_\_ W-XXXX

-SEWER EXTENSION PERMIT: \_\_\_\_\_ S-XXXX

**NC DEPT. OF TRANSPORTATION:**

-DRIVEWAY PERMIT: \_\_\_\_\_ D51-XXX-XXXX (DATE: XX-XX-XXXX)

-2 PARTY ENCROACHMENT AGMT: \_\_\_\_\_ E51-XXX-XXXX (DATE: XX-XX-XXXX)

-3 PARTY ENCROACHMENT AGMT: \_\_\_\_\_ E51-XXX-XXXX (DATE: XX-XX-XXXX)

**U.S. ARMY CORPS OF ENGINEERS:**

-IMPACT PERMIT: \_\_\_\_\_ NOT REQUIRED

**NC DIVISION OF WATER QUALITY:**

-BUFFER IMPACT AUTHORIZATION: \_\_\_\_\_ NOT REQUIRED

**SURVEYOR:**

TAYLOR LAND CONSULTANTS  
5448 APEX PEAKWAY  
APEX, NC 27502  
919-801-1104 (O)  
919-337-7998 (M)  
CONTACT: JEREMY TAYLOR, PL  
jeremy@taylorlc.com

**CIVIL ENGINEERING:**

STRONG ROCK ENGINEERING GROUP, PLLC  
PO BOX 55992  
RALEIGH, NC 27624  
COMPANY LICENSE #: P-2166  
CONTACT:  
984-200-1932 (P)  
information@strongrockengineering.com

**SITE PERMITTING APPROVAL:**

WATER AND SEWER PERMITS (IF APPLICABLE)

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT 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 PUBLIC UTILITIES DEPARTMENT PERMIT # S-3936

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT 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 PUBLIC UTILITIES DEPARTMENT PERMIT # N/A

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT - PLANS AUTHORIZED FOR CONSTRUCTION

ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A TOWN OF ZEBULON 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 PUBLIC UTILITIES DEPARTMENT DEVELOPMENT APPROVAL

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT WATER REVIEW OFFICER



NO.	DATE	BY

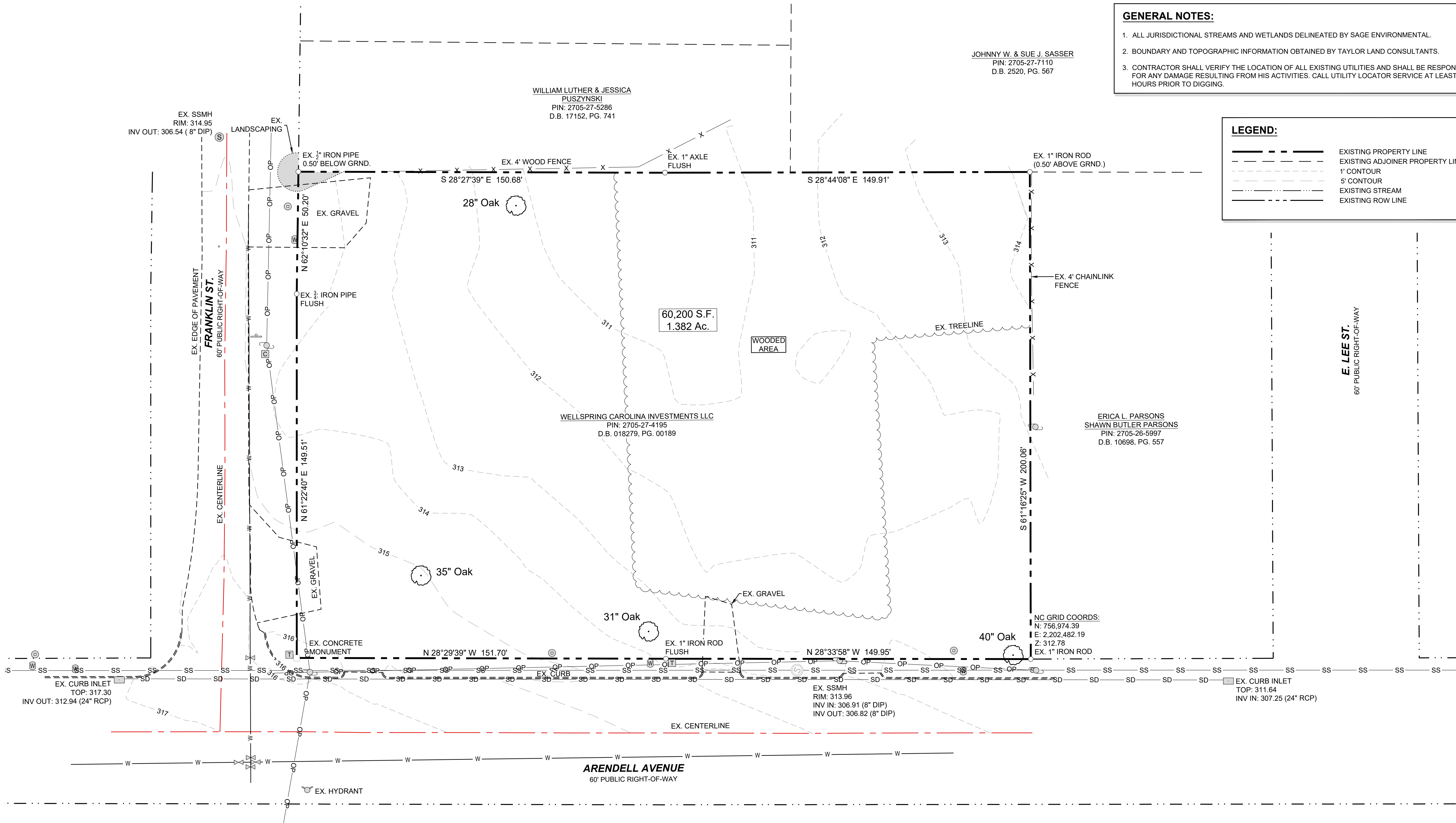
**STRONGROCK ENGINEERING GROUP**  
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166  
6801 FALLS OF NEUSE RD. SUITE 108 RALEIGH, NC 27615 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE AS SHOWN	DESIGNED BY JWL	DRAWN BY SRG	CHECKED BY JWL
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TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS

COVER SHEET

DRAWING SHEET	C-0.0
01 OF 24	



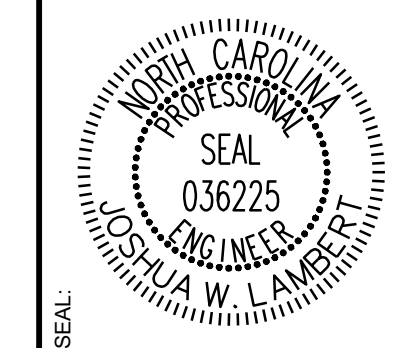
**GENERAL NOTES:**

- ALL JURISDICTIONAL STREAMS AND WETLANDS DELINEATED BY SAGE ENVIRONMENTAL.
- BOUNDARY AND TOPOGRAPHIC INFORMATION OBTAINED BY TAYLOR LAND CONSULTANTS.
- CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES AND SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM HIS ACTIVITIES. CALL UTILITY LOCATOR SERVICE AT LEAST 48 HOURS PRIOR TO DIGGING.

**LEGEND:**

- EXISTING PROPERTY LINE
- EXISTING ADJOINER PROPERTY LINE
- 1' CONTOUR
- 5' CONTOUR
- EXISTING STREAM
- EXISTING ROW LINE

NO.	REVISIONS	DATE	BY



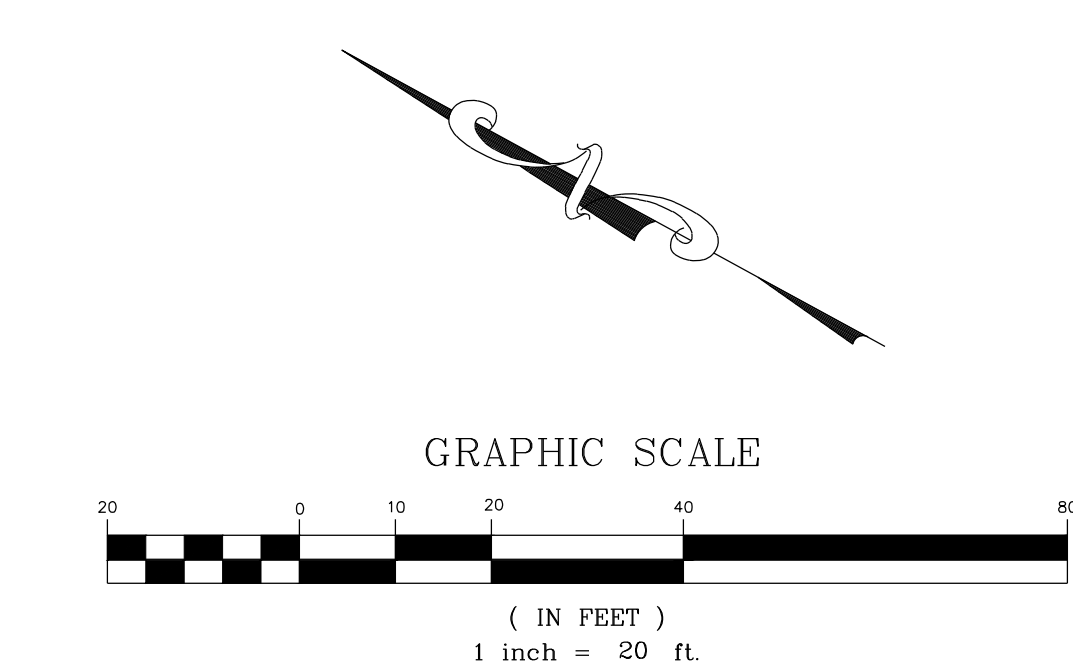
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CONSTRUCTION PLANS  
EXISTING CONDITIONS PLAN

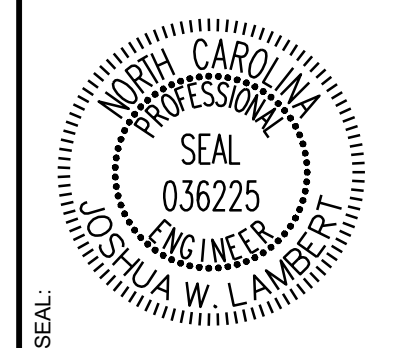
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**C-1.0**  
02 OF 24



**GENERAL NOTES:**

1. ALL CONSTRUCTION SHALL BE PER TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, RIGHT-OF-WAYS AND UTILITIES, PUBLIC OR PRIVATE BEFORE WORKING IN THESE AREAS.
3. PROTECT ALL PROPERTY MONUMENTS AND PINS. MONUMENTS AND PINS THAT WILL BE DISTURBED DURING CONSTRUCTION SHALL BE REFERENCED AND REPLACED BY A LICENSED LAND SURVEYOR AT THE COST OF THE CONTRACTOR.
4. CONTRACTOR SHALL MAINTAIN THE SITE IN SUCH A MANNER THAT WORKMEN AND THE PUBLIC WILL BE PROTECTED FROM INJURY AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
5. CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
6. CONTRACTOR IS RESPONSIBLE FOR DAMAGE TO ANY EXISTING ITEM AID/OR MATERIAL DUE TO CONSTRUCTION OPERATIONS. ALL STREET SURFACES, UTILITY POLES, CULVERTS, DITCHES, CURB AND GUTTER OR OTHER STRUCTURES THAT ME DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR IN ACCORDANCE WITH THE APPROPRIATE SPECIFICATIONS.
7. ANY AND ALL QUANTITIES SHOWN OR IMPLIED ON THE PLANS ARE FOR ESTIMATION PURPOSES ONLY.
8. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFFSITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS.
9. ENTRY SIGNS SHALL BE LOCATED IN A DEDICATED EASEMENT.
10. ANY SPECIALITY STREET SIGNS INCLUDING POSTS SHALL BE SUBMITTED TO THE TOWN OF ZEBULON FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
11. ALL PUBLIC AND PRIVATE EASEMENTS SHALL BE RECORDED AS PART OF THE FINAL PLAT OF THE SUBDIVISION. EASEMENTS BASED OF CENTER OF UTILITY OR PIPE SHALL BE PER AS-BUILT LOCATIONS.
12. AREAS OF PARENT PARCEL THAT ARE NOT SUBDIVIDED TO CREATE SINGLE FAMILY RESIDENTIAL LOTS ARE TO REMAIN AS ONE PARCEL TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION OF THE NEIGHBORHOOD.
13. PRIOR TO FINAL PLAT, DEVELOPER SHALL SUBMIT A LIGHTING PLAN TO THE TOWN OF ZEBULON SHOWING LIGHT FIXTURE DETAILS AND PHOTOMETRICS.
14. PRIOR TO FINAL PLAT, DEVELOPER SHALL SUBMIT CUT SHEETS FOR PARK BENCHES, MAIL BOX KIOSK, AND PEDESTRIAN WAYFINDING.
15. ALL DWELLINGS WILL BE IN COMPLIANCE WITH REQUIREMENTS OF ARTICLE 4 OF UDO.

NO.	REVISIONS	DATE	BY



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ENGINEERING GROUP

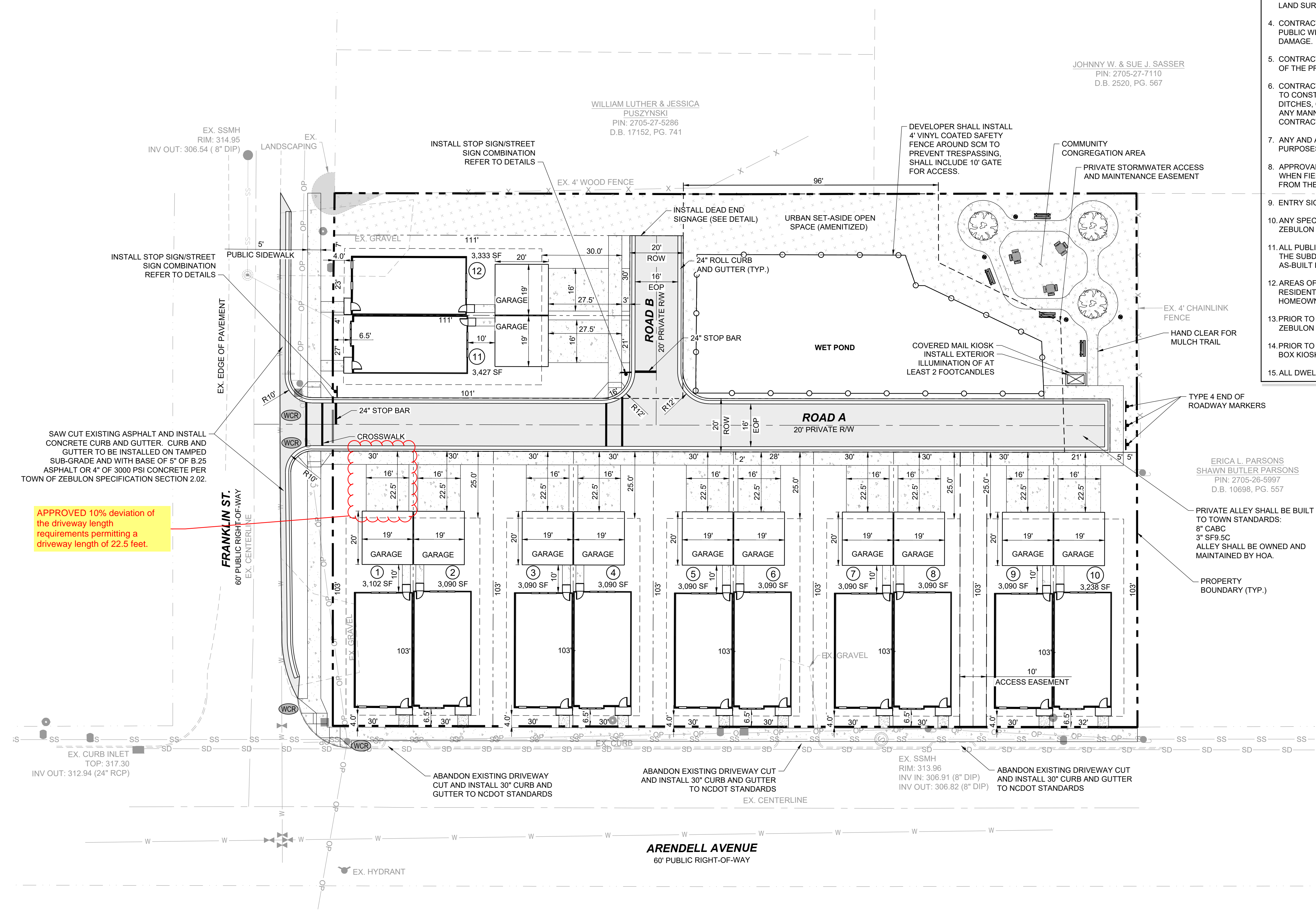
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TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS

**SITE PLAN**

DRAWING SHEET  
**C-2.0**  
03 OF 24

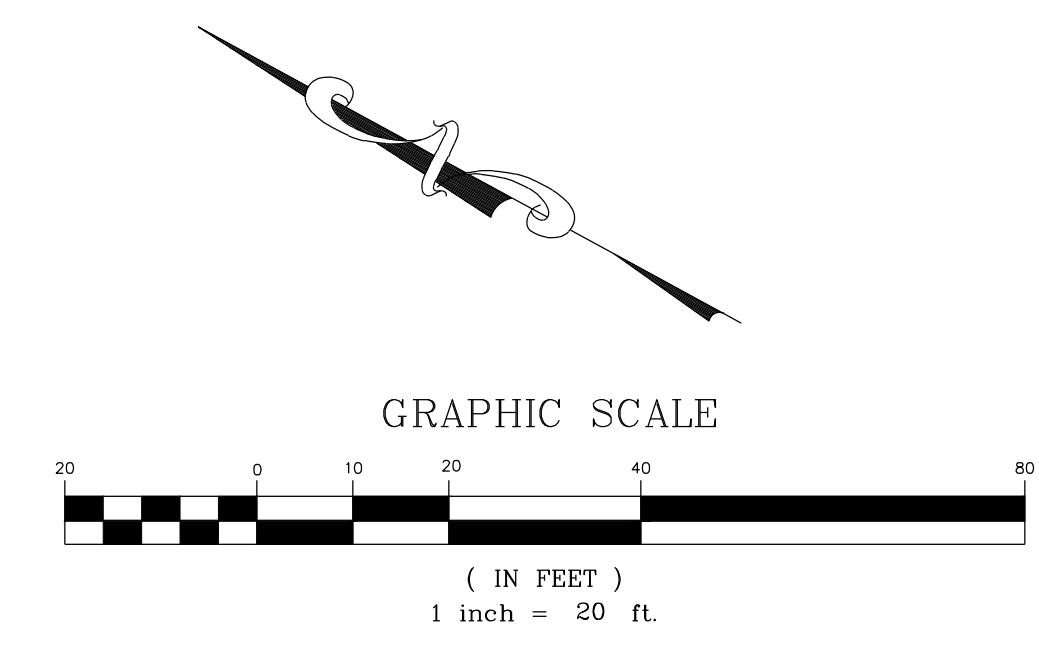


SAW CUT EXISTING ASPHALT AND INSTALL CONCRETE CURB AND GUTTER. CURB AND GUTTER TO BE INSTALLED ON TAMPED SUB-GRADE AND WITH BASE OF 5" OF B.25 ASPHALT OR 4" OF 3000 PSI CONCRETE PER TOWN OF ZEBULON SPECIFICATION SECTION 2.02.

APPROVED 10% deviation of the driveway length requirements permitting a driveway length of 22.5 feet.

**LEGEND:**

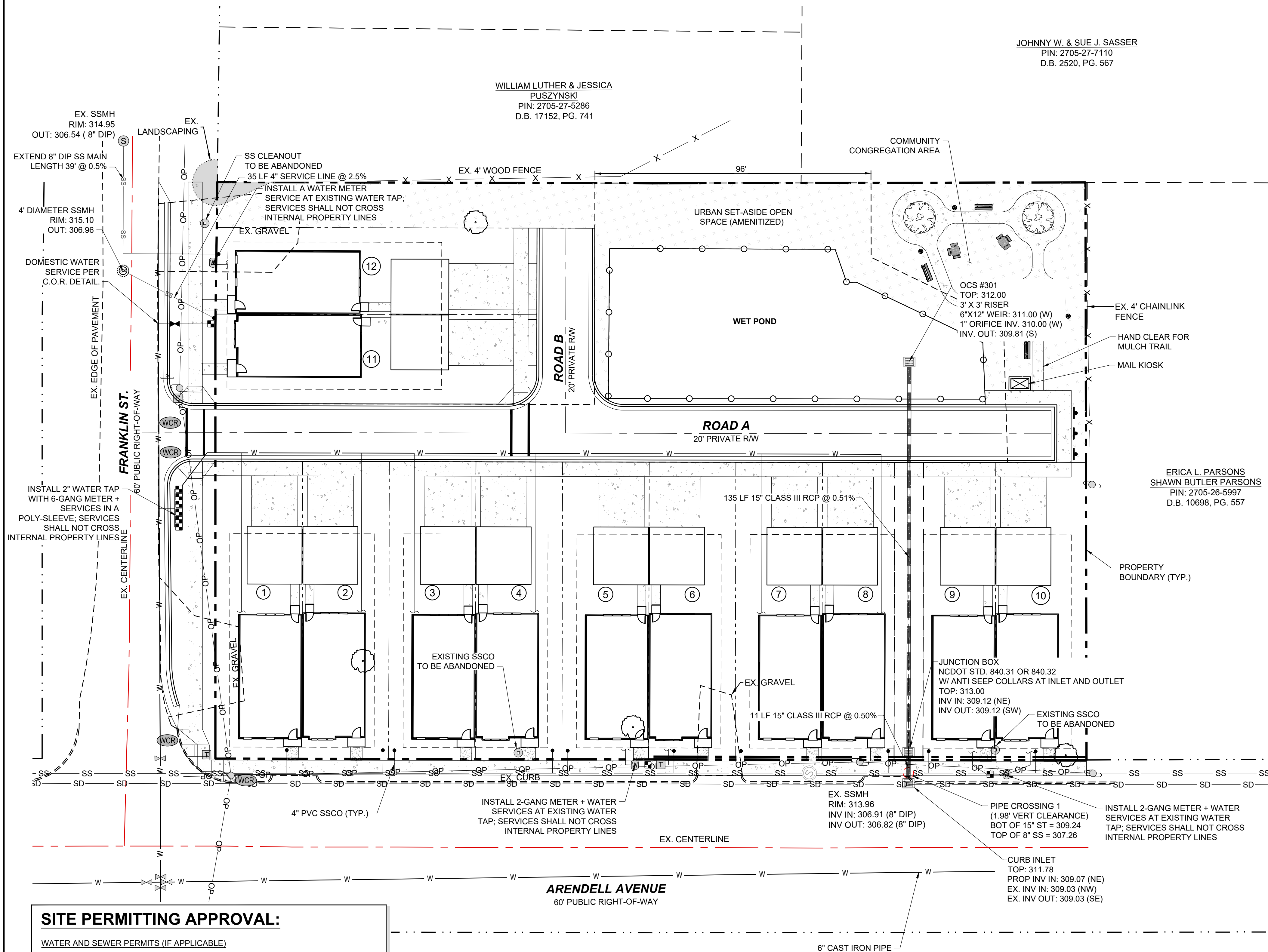
- EXISTING PROPERTY LINE
- ROADWAY CENTER LINE
- PROPOSED PROPERTY LINE
- STANDARD CURB & GUTTER
- ASPHALT PAVEMENT
- OPEN SPACE
- STREET LIGHT
- SIGN
- STOP BAR
- WHEELCHAIR RAMP
- FENCE LINE



JOHNNY W. & SUE J. SASSER  
PIN: 2705-27-7110  
D.B. 2520, PG. 567

WILLIAM LUTHER & JESSICA  
PUSZYNSKI  
PIN: 2705-27-5286  
D.B. 17152, PG. 741

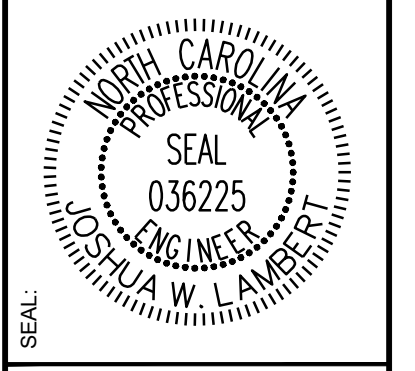
ERICA L. PARSONS  
SHAWN BUTLER PARSONS  
PIN: 2705-26-5997  
D.B. 10698, PG. 557



**UTILITY NOTES:**

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF ZEBULON DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
  - UTILITY SEPARATION REQUIREMENTS (TAKEN FROM CORPUD HANDBOOK, 2014 EDITION, SEWER DESIGN, MATERIAL, & CONSTRUCTION STANDARDS, SECTION 1, A. 15.):
    - A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
    - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
    - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL 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 WATERMAIN & 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 ZEBULON 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 ZEBULON PUBLIC UTILITIES DEPARTMENT.
  - 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE 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 ZEBULON PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
  - INSTALL 3/4" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.
  - INSTALL 4" 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.
  - A 3-PARTY ENCROACHMENT AGREEMENT BETWEEN THE NCDOT, THE CITY OF ZEBULON PUBLIC UTILITIES, AND THE DEVELOPER MAY BE NEEDED FOR WATER AND SEWER SERVICE TAPS WITHIN THE NDDOT MAINTAINED RIGHT OF WAY.
- 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.
  - PROPOSED PRIVATE UTILITIES (POWER, TELEPHONE, NATURAL GAS, CABLE TV) ARE NOT SHOWN ON THIS PLAN. THE DEVELOPER SHALL COORDINATE THE INSTALLATION OF THOSE UTILITIES WHEN INSTALLING PUBLIC UTILITIES.
  - CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES PRIOR TO ANY LAND DISTURBANCE ACTIVITIES. IF ANY EXISTING UTILITIES ARE LOCATED THAT CAUSE A CONFLICT WITH PROPOSED UTILITIES, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CIVIL ENGINEER OF RECORD IN WRITING. IF SUCH A SCENARIO ARISES, THE PROPOSED UTILITY IN QUESTION SHALL NOT BE INSTALLED UNTIL AN ACCEPTABLE SOLUTION IS PREPARED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.
  - CONTRACTOR SHALL ADJUST ALL CLEANOUTS, VALVE BOXES, MANHOLES, ETC. TO THE FINISHED GRADES ESTABLISHED BY THE PROJECT.
  - ALL UNDERGROUND ELECTRICAL CONDUITS SHALL HAVE A MINIMUM COVER OF 36"; GAS AND COMMUNICATION LINES SHALL HAVE DEPTH AND SPACING AS SPECIFIED BY SERVICE COMPANY.
  - MAXIMUM SPACING FOR SANITARY SEWER CLEANOUTS IS 75 FEET. ALL CLEANOUTS LOCATED IN DRIVE AISLES AND/OR PARKING AREAS SHALL BE TO BE TRAFFIC RATED.
  - INVERT AT CLEANOUT IS INVERT ELEVATION AT THE CONNECTION OF THE HORIZONTAL BEND.
  - A 3-FOOT CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF FIRE HYDRANTS.
  - CONTRACTOR SHALL PROVIDE PROPER NOTIFICATION TO AUTHORITIES HAVING JURISDICTION AS SPECIFIED IN AGENCY PERMIT CONDITIONS. AS A COURTESY, CIVIL ENGINEER OF RECORD REQUESTS NOTIFICATION.
  - THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH CITY OF ZEBULON STANDARD SPECIFICATIONS.
  - WATER LINE TESTING AND STERILIZATION SHALL BE IN ACCORDANCE WITH CITY OF ZEBULON STANDARD SPECIFICATIONS.
  - ALL NEW MANHOLES SHALL BE ECCENTRIC UNLESS OTHERWISE NOTED.
  - ALL WATER AND SEWER SERVICE CONNECTIONS SHALL BE INSTALLED BY A LICENSED PLUMBER.

NO.	REVISIONS	DATE	BY



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ENGINEERING GROUP  
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**SITE PERMITTING APPROVAL:**

WATER AND SEWER PERMITS (IF APPLICABLE)

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT 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 PUBLIC UTILITIES DEPARTMENT PERMIT # S-3936

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CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT - PLANS AUTHORIZED FOR CONSTRUCTION

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CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT DEVELOPMENT APPROVAL

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT WATER REVIEW OFFICER

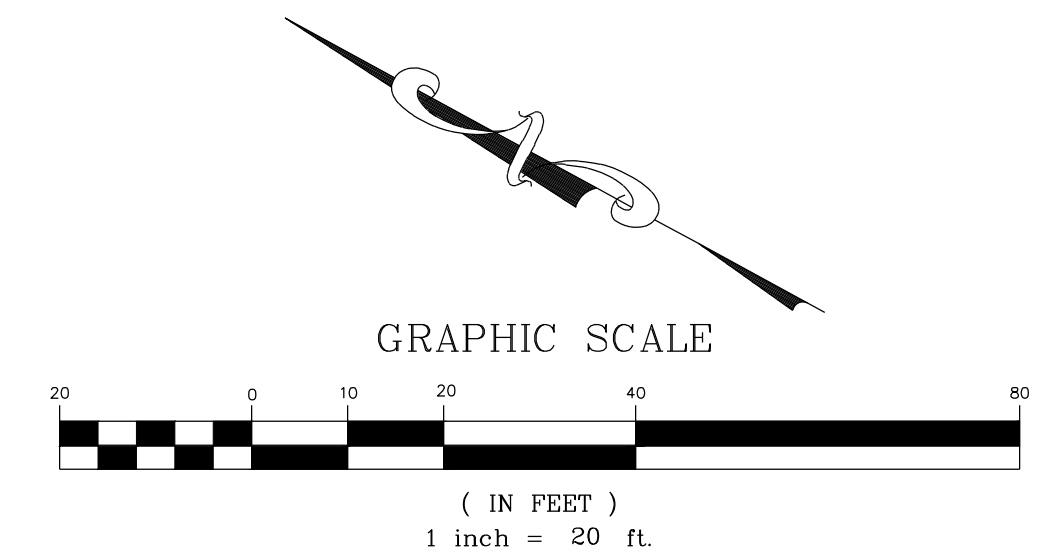
**NOTE:**

WHERE PROPOSED SS PASSES OVER WATER AND STORM, SS MUST BE DUCTILE IRON WITH CONCRETE COLLAR, REFER TO DETAIL S-49.

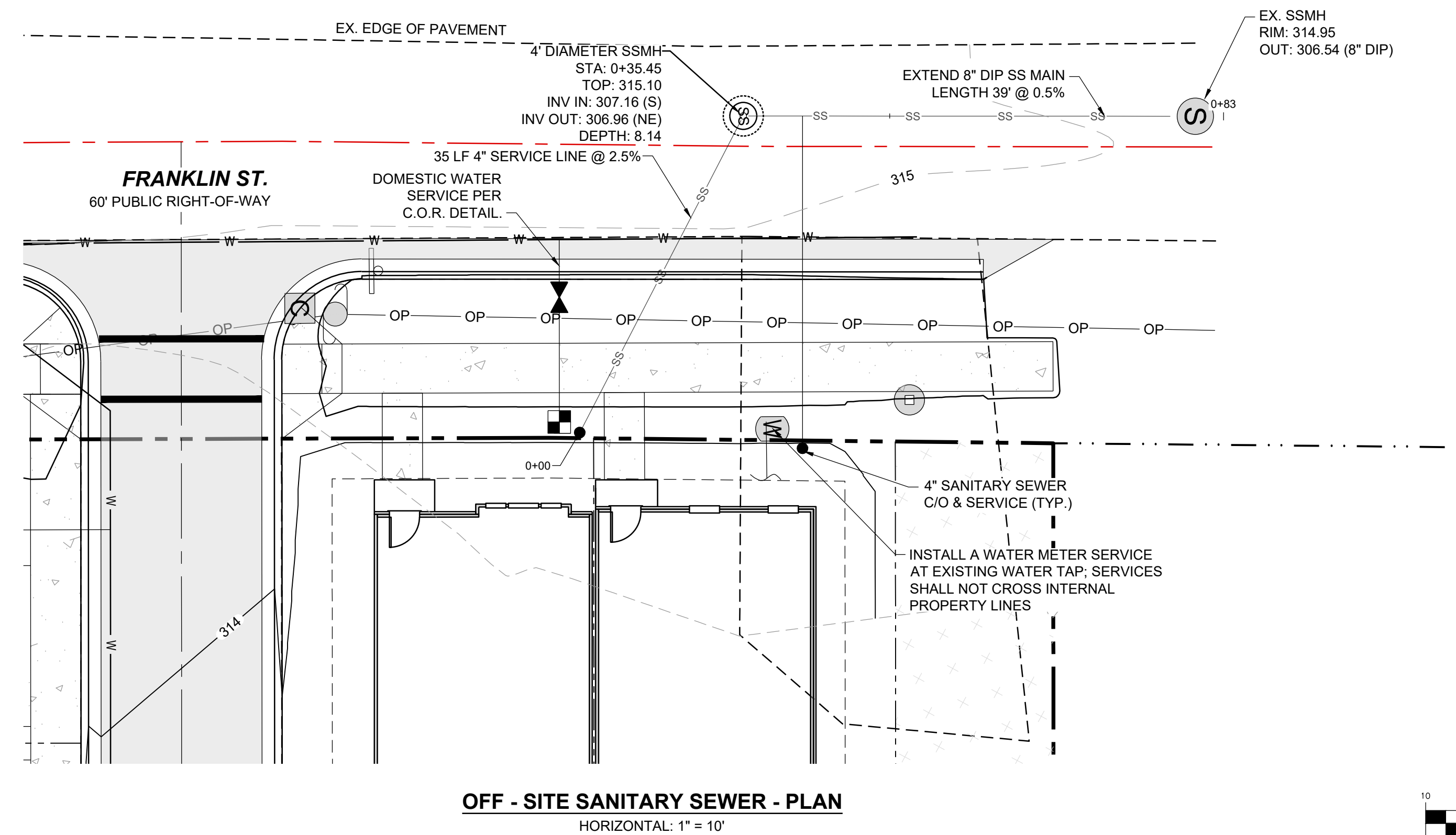
MAINTAIN 5' SEPARATION BETWEEN UTILITY SERVICE LINES AND TREE'S DRIPLINE.

**LEGEND:**

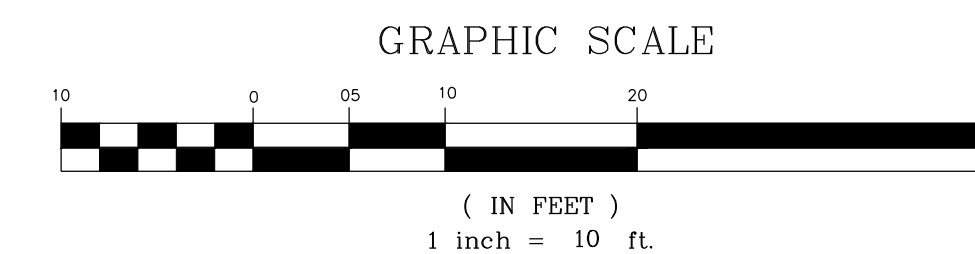
	MASTER PLAN BOUNDARY
	ADJOINER PROPERTY LINE
	EXISTING WATERLINE
	EXISTING SANITARY SEWER
	PROPOSED WATERLINE
	PROPOSED SANITARY SEWER
	PROPOSED LOT LINE
	PROPOSED ROLL CURB AND GUTTER
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING TELEPHONE PEDEST
	PROPOSED GATE VALVE (GV)
	PROPOSED TEE
	PROPOSED CLEANOUT
	FENCE LINE



TRUE-ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
UTILITY PLAN  
DRAWING SHEET  
C-3.0  
04 OF 24



**OFF - SITE SANITARY SEWER - PLAN**  
HORIZONTAL: 1" = 10'



**SITE PERMITTING APPROVAL:**

**WATER AND SEWER PERMITS (IF APPLICABLE)**

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT 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 PUBLIC UTILITIES DEPARTMENT PERMIT # S-3938

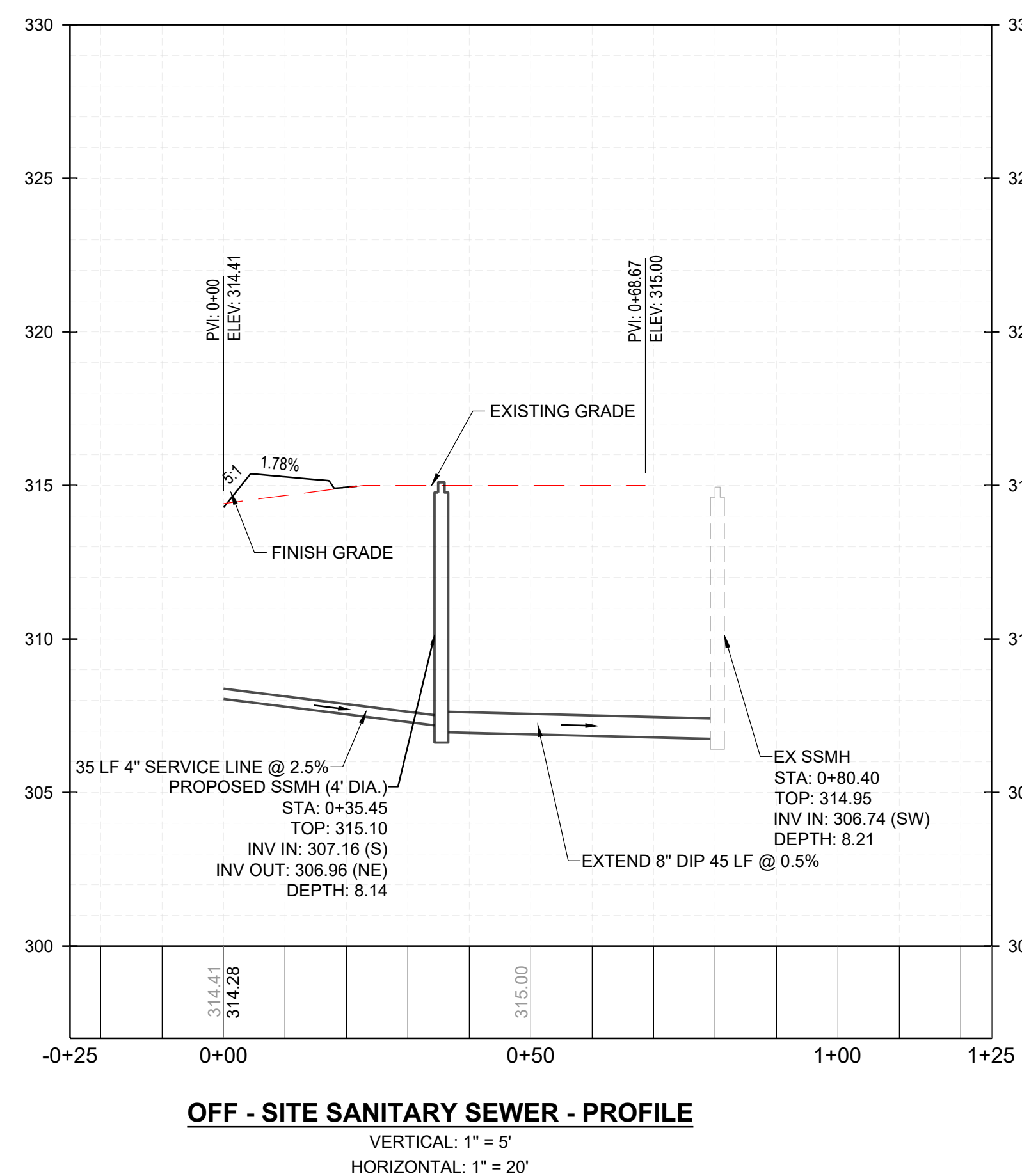
CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT CONSENTS TO THE CONNECTION AND EXTENSION OF THE CITY'S PUBLIC WATER SYSTEM AS SHOWN ON THIS PLAN. THE MATERIAL AND CONSTRUCTION METHODS USED FOR THIS PROJECT SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY'S PUBLIC UTILITIES HANDBOOK. CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PUBLIC UTILITIES DEPARTMENT PERMIT # N/A

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT - PLANS AUTHORIZED FOR CONSTRUCTION

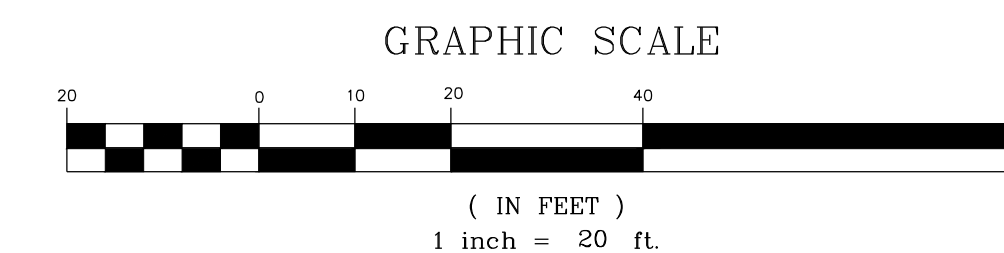
ELECTRONIC APPROVAL: THIS APPROVAL IS BEING ISSUED ELECTRONICALLY. THIS APPROVAL IS VALID ONLY UPON THE SIGNATURE OF A TOWN OF ZEBULON REVIEW OFFICER BELOW. THE CITY WILL RETAIN A COPY OF THE APPROVED PLANS. ANY WORK AUTHORIZED BY THIS APPROVAL MUST PROCEED IN ACCORDANCE WITH THE PLANS KEPT ON FILE WITH 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 PUBLIC UTILITIES DEPARTMENT DEVELOPMENT APPROVAL

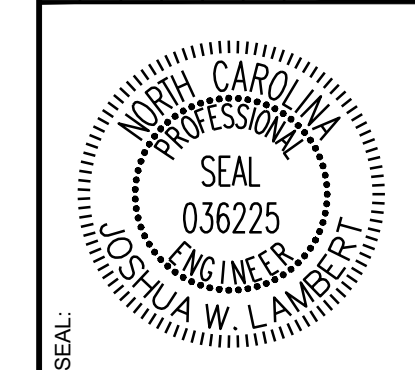
CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT WATER REVIEW OFFICER



**OFF - SITE SANITARY SEWER - PROFILE**  
VERTICAL: 1" = 5'  
HORIZONTAL: 1" = 20'



NO.	REVISIONS	DATE	BY



**STRONGROCK**  
ENGINEERING GROUP  
STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166  
6801 FALLS OF NEUSE RD. SUITE 108 RALEIGH, NC 27615 | INFORMATION@STRONGROCKGROUP.COM

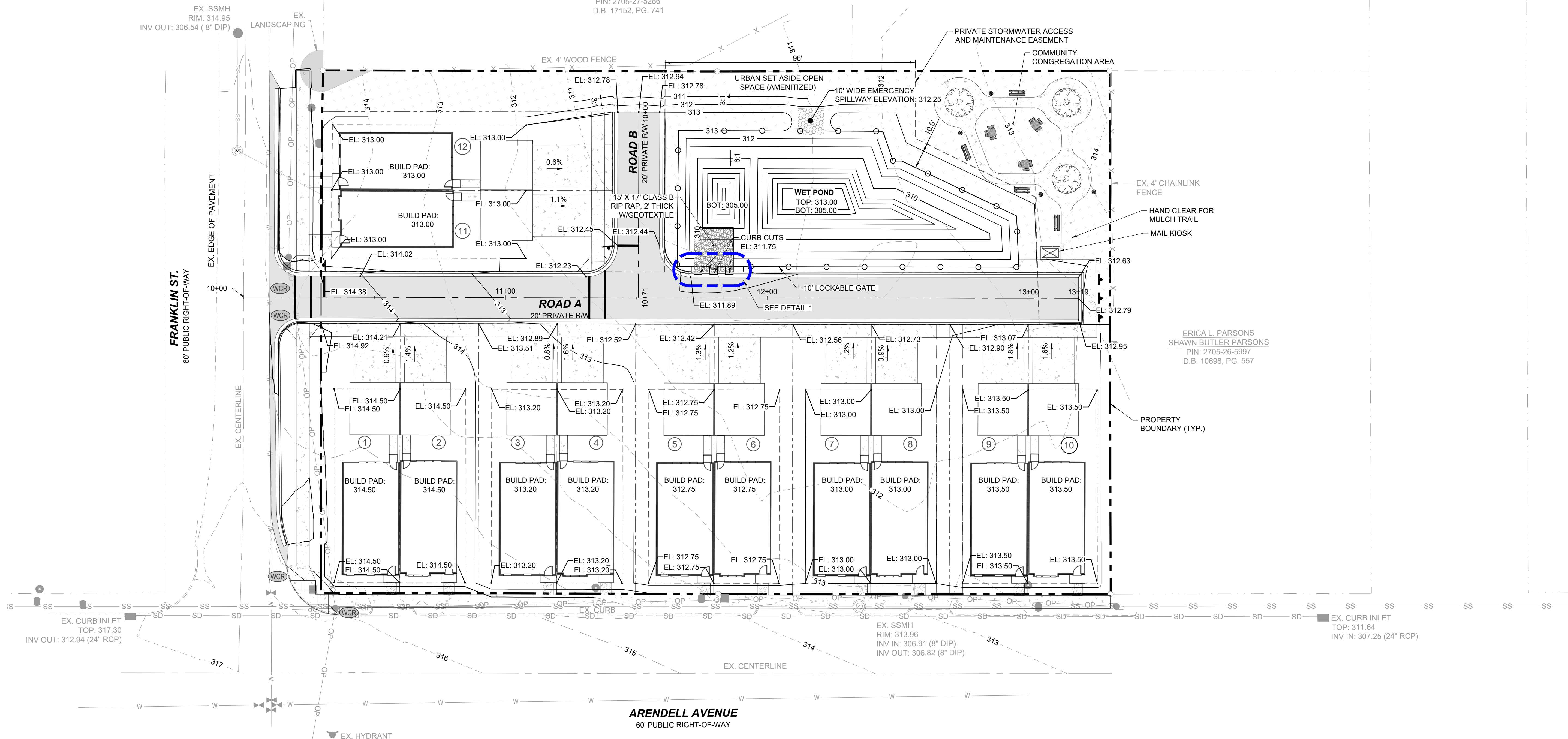
STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE AS SHOWN	DESIGNED BY	DRAWN BY	CHECKED BY
			JWL	SRG	JWL

TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
**CONSTRUCTION PLANS**  
**OFF-SITE SANITARY SEWER**  
**PLAN & PROFILE**

DRAWING SHEET  
**C-4.0**

JOHNNY W. & SUE J. SASSER  
 PIN: 2705-27-7110  
 D.B. 2520, PG. 567

WILLIAM LUTHER & JESSICA  
 PUSZYNSKI  
 PIN: 2705-27-5286  
 D.B. 17152, PG. 741

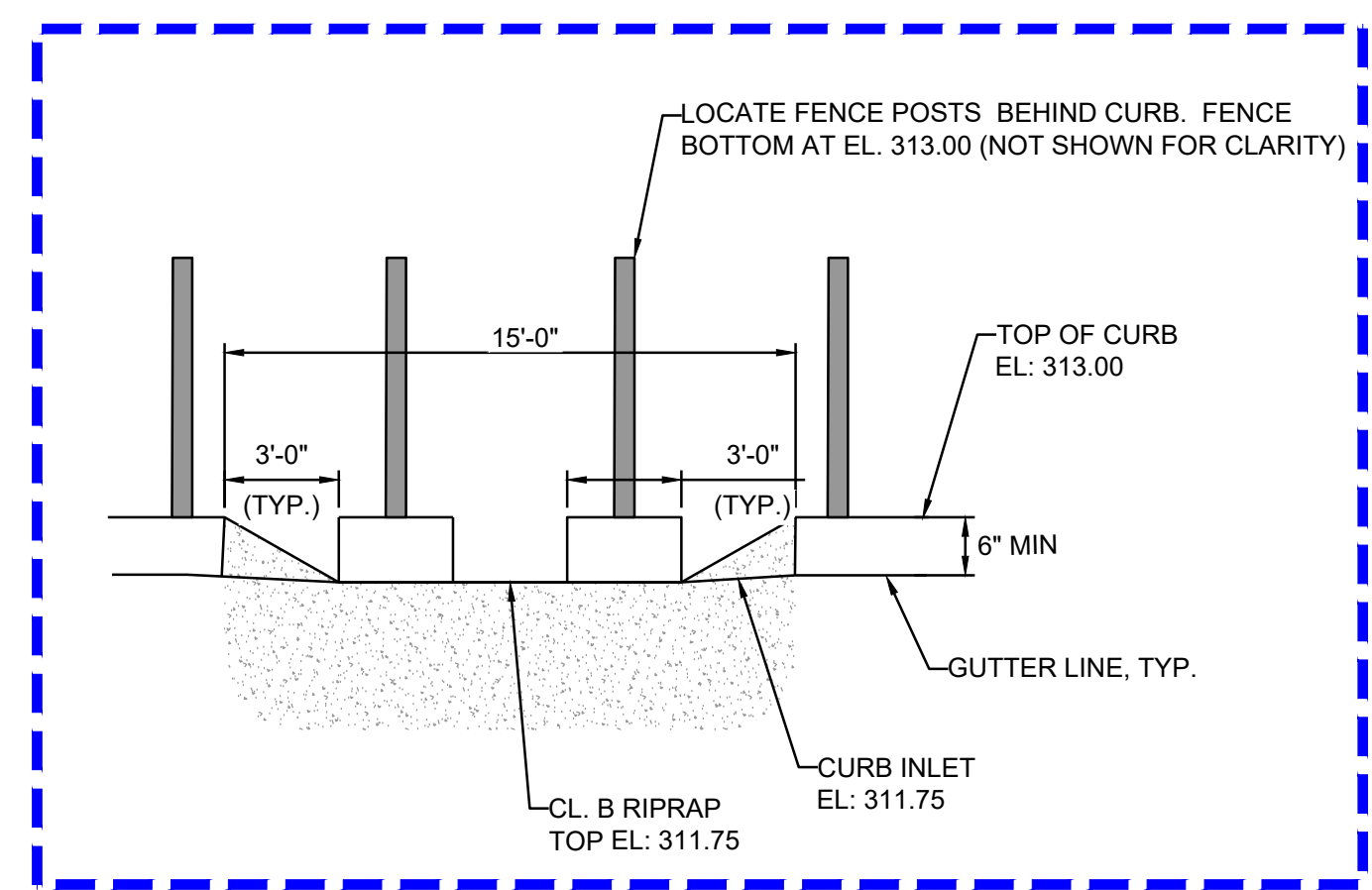


ERICA L. PARSONS  
 SHAWN BUTLER PARSONS  
 PIN: 2705-26-5997  
 D.B. 10698, PG. 557

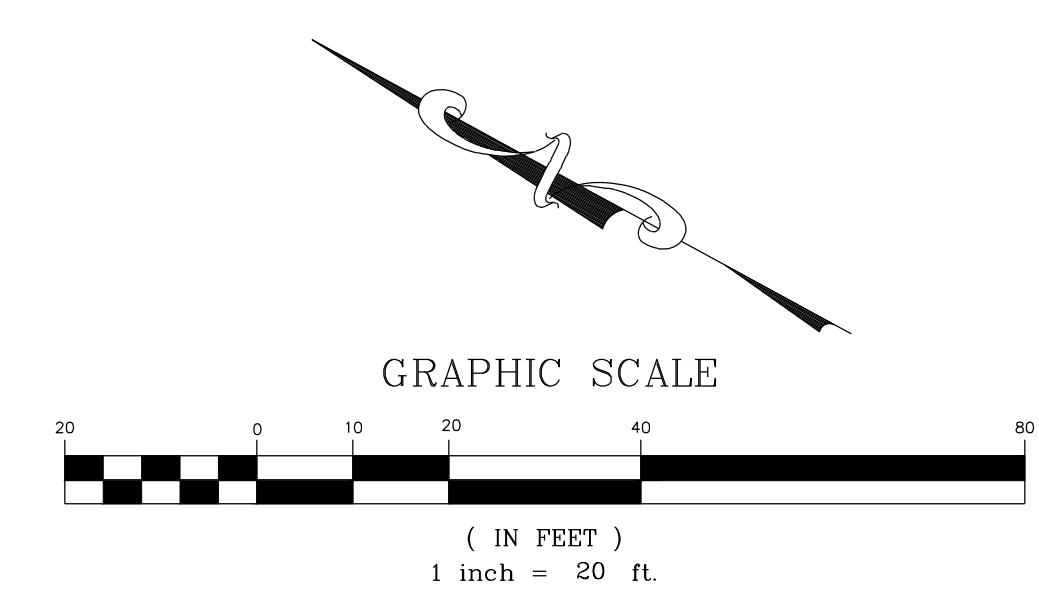
**LEGEND:**

	MASTER PLAN BOUNDARY
	ADJOINER PROPERTY LINE
	EXISTING WATERLINE
	EXISTING SANITARY SEWER
	PROPOSED LOT LINE
	PROPOSED ROLL CURB AND GUTTER
	EXISTING MAYOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAYOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING FIRE HYDRANT
	EXISTING WATER VALVE
	EXISTING UTILITY POLE
	EXISTING TELEPHONE PEDEST
	FENCE LINE

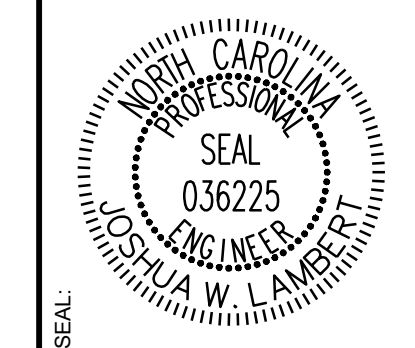
- GRADING NOTES:**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH TOWN OF ZEBULON, CITY OF ZEBULON, NCDOT, AND/OR WAKE COUNTY STANDARDS AS APPLICABLE.
  - CONTRACTOR SHALL COORDINATE ALL GRADING OPERATIONS WITH THE OWNERS GEOTECHNICAL ENGINEER.



1 CURB CUT DETAIL  
 C-5.0 SCALE: NTS



NO.	REVISIONS	DATE	BY



**STRONGROCK**  
 ENGINEERING GROUP  
 STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166  
 6801 FALLS OF NEUSE RD. SUITE 108 RALEIGH, NC 27615 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE AS SHOWN	DESIGNED BY JWL	DRAWN BY SRG	CHECKED BY JWL
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TRUE- ZEBULON-ARENDELL  
 TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
**CONSTRUCTION PLANS**  
**GRADING PLAN**

DRAWING SHEET  
**C-5.0**  
 06 OF 24

JOHNNY W. & SUE J. SASSER  
PIN: 2705-27-7110  
D.B. 2520, PG. 567

WILLIAM LUTHER & JESSICA  
PUSZYNSKI  
PIN: 2705-27-5286  
D.B. 17152, PG. 741

**LEGEND:**

- EXISTING PROPERTY LINE
- ROADWAY CENTER LINE
- PROPOSED PROPERTY LINE
- STANDARD ROLL CURB & GUTTER
- PROPOSED STORM DRAIN LINE
- FENCE LINE

- DRAINAGE NOTES:**
- CONTRACTOR SHALL MAINTAIN POSITIVE SLOPE AND OUTFALL OF ANY FOUNDATION DRAIN SYSTEMS.
  - ALL STORM DRAIN HOODS, MANHOLE COVERS AND GRATES ARE TO BE LABELED "NO DUMPING DRAINS TO STREAM".

**SITE PERMITTING APPROVAL:**

WATER AND SEWER PERMITS (IF APPLICABLE)

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CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT 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 PUBLIC UTILITIES DEPARTMENT PERMIT # N/A

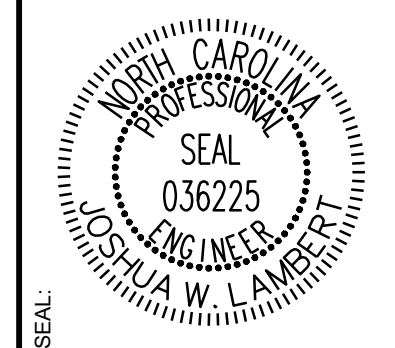
CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT - PLANS AUTHORIZED FOR CONSTRUCTION

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CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT DEVELOPMENT APPROVAL

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT WATER REVIEW OFFICER

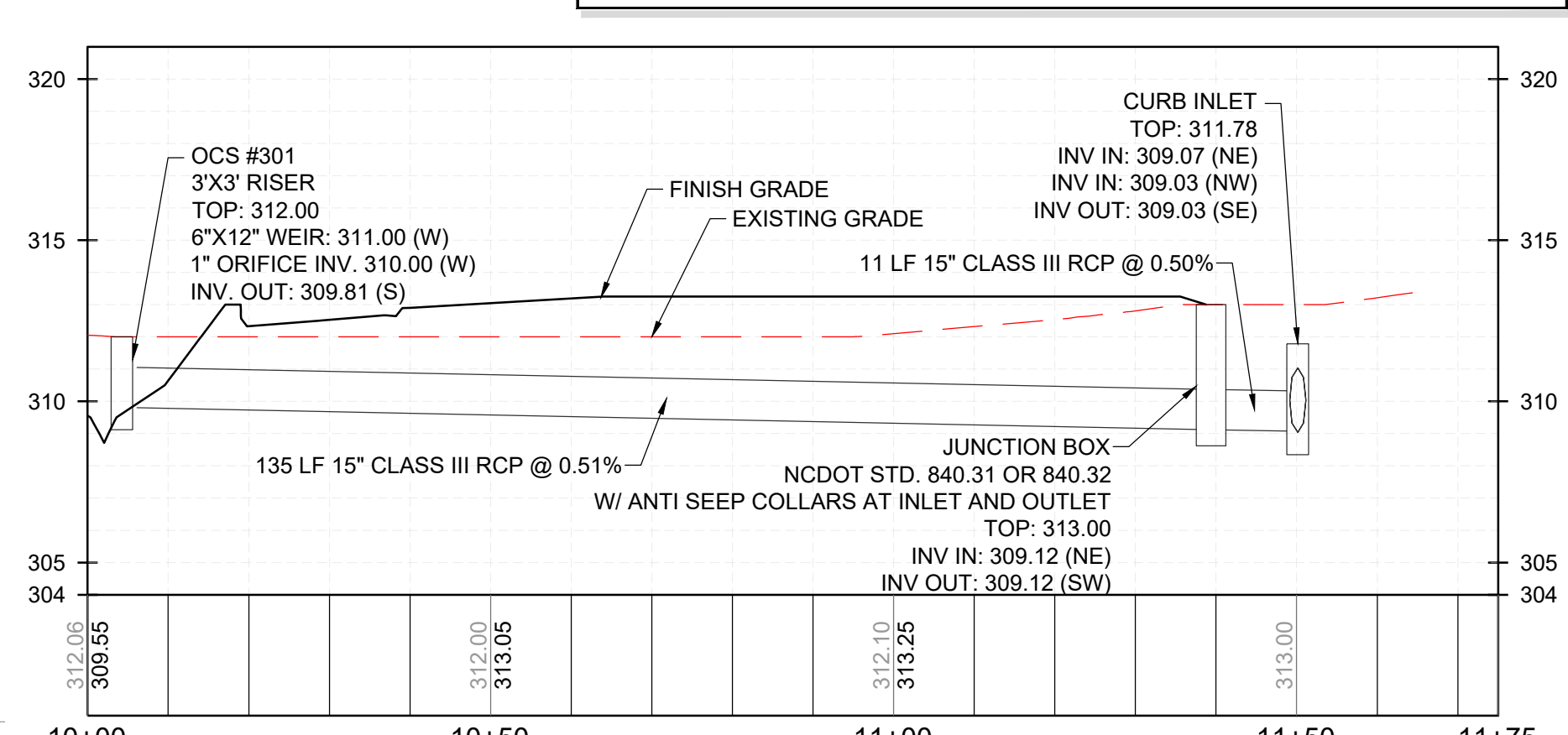
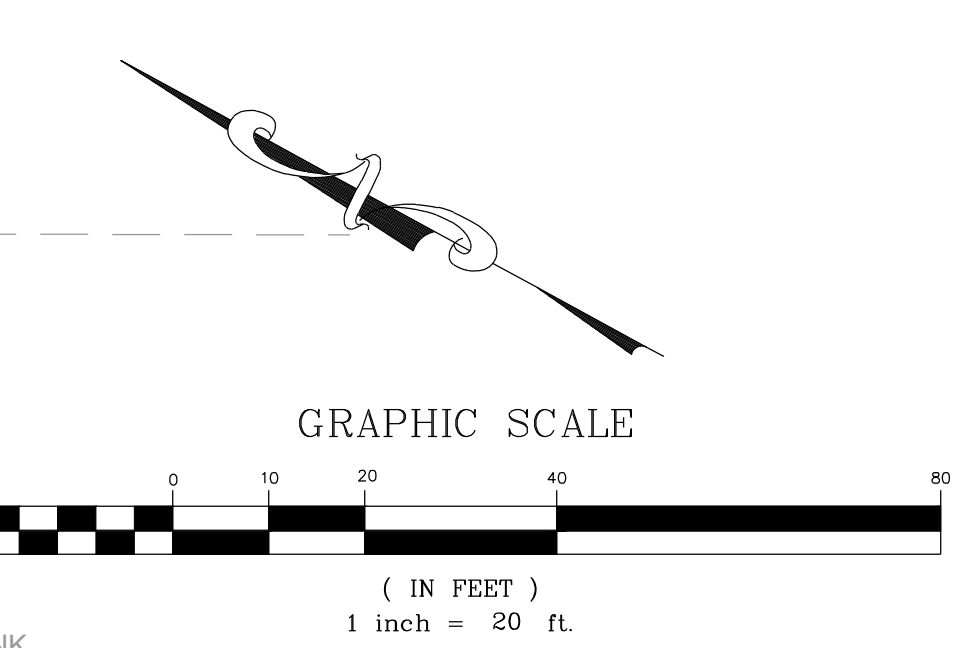
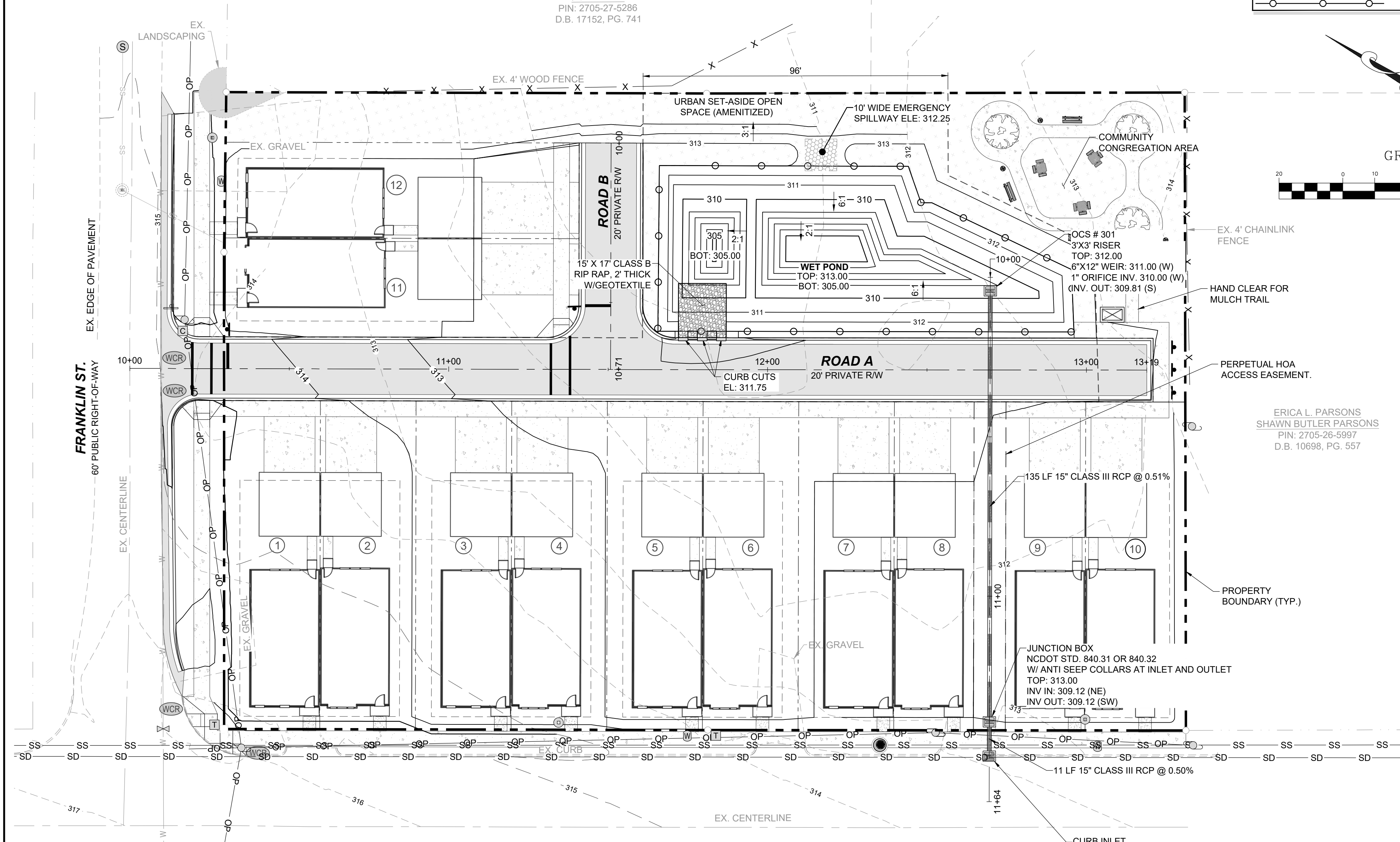
NO.	REVISIONS	DATE	BY



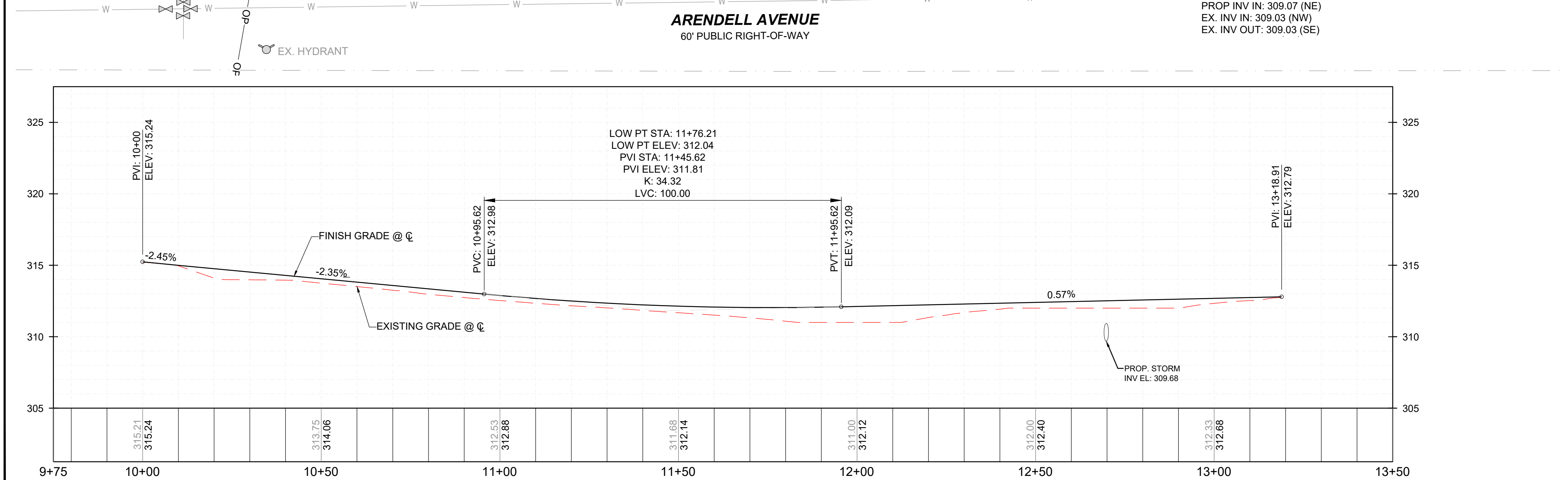
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STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE	AS SHOWN	JWL	SRG	JWL

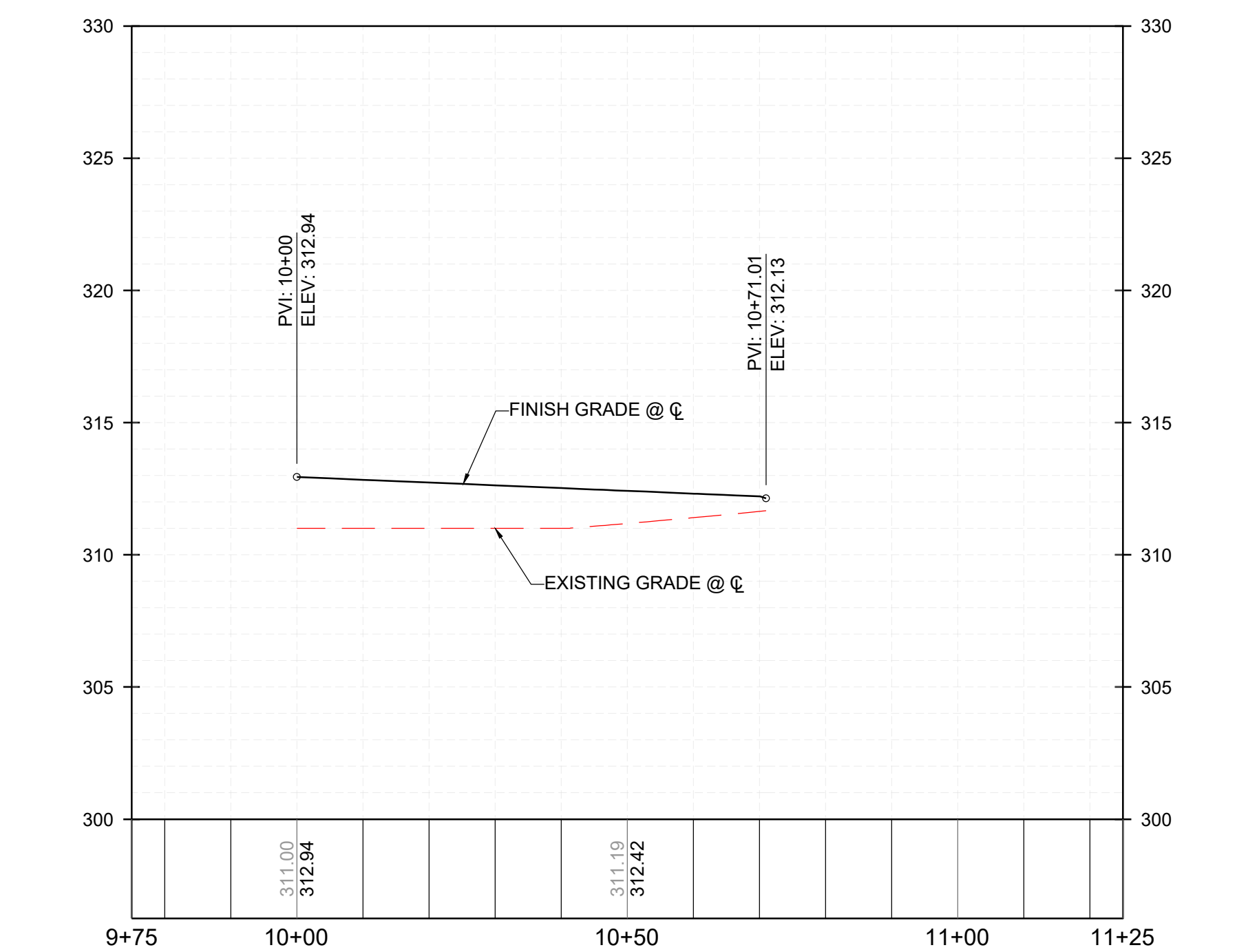
TRUE-ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
STORMWATER PLAN



**PROPOSED STORM DRAINAGE - PROFILE**  
VERTICAL: 1" = 5"  
HORIZONTAL: 1" = 20"



**PROPOSED ROAD A - PROFILE**  
VERTICAL: 1" = 5"  
HORIZONTAL: 1" = 20"



**PROPOSED ROAD B - PROFILE**  
VERTICAL: 1" = 5"  
HORIZONTAL: 1" = 20"

**OFFSITE SPOIL NOTE:**

- IF AN OFFSITE SOIL SPOIL OR BORROW SITE IS UTILIZED, THEN THE DISTURBED AREA FOR THE SPOIL/BORROW SITE MUST BE INCLUDED IN THE LAND-DISTURBANCE PLAN AND PERMIT UNLESS THE SPOIL/BORROW SITE ALREADY HAS A SEPARATE LAND-DISTURBANCE PERMIT.

**STAGE 1 SPECIFIC SEQUENCE:**

- INSTALL CONSTRUCTION ENTRANCE, SILT FENCING, SILT FENCE OUTLETS, DIVERSION DITCHES, AND SKIMMER BASINS AS SHOWN ON APPROVED STAGE 1 EROSION CONTROL PLAN. CLEAR AND GRADE ONLY AREAS NECESSARY TO INSTALL THESE EROSION AND SEDIMENT CONTROL DEVICES. INSTALL SILT FENCE OUTLETS AT LOW POINTS IN THE SILT FENCING AS NEEDED TO PREVENT BLOWOUTS.
- STABILIZE ALL DISTURBED AREAS DOWNSTREAM OF SEDIMENT BASINS AND OTHER CRITICAL EROSION CONTROL AREAS IMMEDIATELY UPON INSTALLATION. ONCE APPROVED, BEGIN CLEARING AND GRADING REMAINDER OF THE SITE. MAINTAIN EROSION CONTROL DEVICES AS NEEDED. INSTALL DIVERSION DITCHES AS SHOWN ON THE STAGE 1 EROSION CONTROL PLANS. MAINTAIN DIVERSION DITCHES AS SITE IS BROUGHT TO FINAL GRADE IN ORDER TO DIVERT AS MUCH RUNOFF INTO SEDIMENT BASINS AS POSSIBLE.
- STABILIZE GRADED AREAS AS THEY ARE CLEARED. TEMPORARILY SEED AND MULCH DENUDED AREAS PER THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE SEC. 12.20.5(2). ONCE FINAL GRADE HAS BEEN ACHIEVED, PAVE OR PERMANENTLY SEED ALL AREAS AND SLOPES PER NC DENR'S EROSION SEDIMENT CONTROL PLANNING AND DESIGN MANUAL VERSION 6/06, SECTION 6.10 AND 6.11.
- MAINTAIN EROSION CONTROL MEASURES WEEKLY AND AFTER EACH RAIN EVENT THROUGHOUT CONSTRUCTION.

**STAGE 2 SPECIFIC SEQUENCE:**

- AFTER CONTRACTOR HAS COMPLETED ROUGH GRADING OPERATIONS:
  - A. CONTRACTOR SHALL STABILIZE HOUSE LOTS WITH TEMPORARY SEEDING; REFER TO SEEDING DETAILS.
  - B. CONTRACTOR SHALL PERMANENTLY STABILIZE ALL SLOPES AND/OR OTHER AREAS THAT ARE AT FINAL GRADE.
  - C. CONTRACTOR MAY CREATE ENTRANCE THROUGH SILT FENCE TO LOTS PERMITTED FOR GRADING AS REQUIRED.
  - D. CONTRACTOR SHALL CREATE STABILIZED ENTRANCE AT DEFINED LOCATIONS TO REDUCE SEDIMENT TRACKING AND LIMIT ACCESS LOCATIONS.
- INSTALL UTILITIES, INCLUDING STORM NETWORK. CONTRACTOR SHALL ONLY EXCAVATE THE AMOUNT OF TRENCH TO ALLOW FOR ONE DAY OF PIPE INSTALLATION.
- CONTRACTOR SHALL USE BERMS, DIVERSIONS, AND PIPE INLET PROTECTION TO PREVENT SEDIMENT RUNOFF FROM ENTERING THE STORM SYSTEM.
- INSTALL INLET PROTECTION ON ALL COMPLETED STORM STRUCTURES
- UPON APPROVAL OF PERMANENT STABILIZATION, REMOVE BALANCE OF EROSION CONTROL MEASURES, GRADE AND STABILIZE REMAINDER OF SITE.
- WITH APPROVAL OF EROSION CONTROL INSPECTOR, REMOVE THE REMAINDER OF THE EROSION CONTROL DEVICES.

**EROSION CONTROL NARRATIVE NOTE:**

THE PURPOSE OF THIS PLAN IS TO ESTABLISH 12 LOTS RESIDENTIAL SUBDIVISION. LAND DISTURBANCE WILL BE KEPT TO THE MINIMUM AMOUNT NEEDED TO INSTALL THE INFRASTRUCTURE AND ASSOCIATED STORM WATER DEVICE SHOWN ON THE PLAN. ACCELERATED EROSION WILL BE CONTROLLED BY MINIMIZING THE AMOUNT OF EXISTING VEGETATIVE COVER TO BE REMOVED, AND PROVIDING TEMPORARY AND PERMANENT STABILIZATION MEASURE ON DISTURBED AREAS AS SOON AS POSSIBLE. IN GENERAL, STRIPPING OF VEGETATION, REGRADING OR OTHER DEVELOPMENT IS TO BE DONE IN SUCH A WAY THAT WILL MINIMIZE EROSION. THE PRIMARY CONTROL FOR CAPTURING SEDIMENT FROM THESE AREAS WILL BE SILT FENCE AND RISER/SKIMMER BASIN. A CONSTRUCTION ENTRANCE WILL BE PROVIDED FOR THE ACCESS. THE AMOUNT OF DISTURBED AREA AND THE DURATION OF EXPOSURE SHALL BE KEPT TO A PRACTICAL MINIMUM AND THE PERMANENT VEGETATION AND STORMWATER CONTROL SYSTEMS WILL BE INSTALLED AS SOON AS POSSIBLE TO PREVENT EROSION AND THEREFORE MINIMIZE THE AMOUNT OF SEDIMENT TO BE CONTROLLED.

**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.
- CONTACT NCDEQ - RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DEWATERING NOTIFICATIONS. AT LEAST 10 DAYS PRIOR TO BEGINNING DEWATERING ACTIVITY, SEND EMAIL TO NCDEQ-DEMRLR CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT MET YOU ONSITE. THE EMAIL SHOULD INCLUDE: E&SC JURISDICTION: WAKE COUNTY, WAKE COUNTY PROJECT: NAME, NUMBER, AND LOCATION (CITY/TOWN), ENVIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING:
  - A. REASON FOR CONVERSION
  - B. BASIN #
  - C. DEWATERING METHOD
  - D. ALL OTHER NECESSARY INFO FROM PART II, SECTION G, ITEM 4 OF THE NCG01. (KEEP EMAIL FOR YOUR NPDES MONITORING DOCUMENTATION)
- AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDEQ - DEMRLR THAT YOU MAY REMOVE THE BASIN OR ON > DAY 11, WHICHEVER IS SOONER, REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
- PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR 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.

**EROSION CONTROL NOTES:**

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST WAKE COUNTY STANDARDS, SPECIFICATIONS AND DETAILS.
- GRADING AND EROSION CONTROL METHODS SHALL ADHERE TO THE WAKE COUNTY SOIL AND EROSION CONTROL STANDARDS AND SPECIFICATIONS.
- GRADING AND EROSION CONTROL METHODS SHALL ADHERE TO THE NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES DIVISION OF WATER QUALITY (DWQ) STANDARDS AND SPECIFICATIONS. WHERE DIFFERENT FROM WAKE COUNTY STANDARDS, THE MORE STRINGENT METHOD SHALL BE APPLIED.
- FAILURE TO FOLLOW THE APPROVED PLAN SEQUENCE AND DETAILS COULD SUBJECT THE FINANCIALLY RESPONSIBLE PARTY TO FINES AND PENALTIES ISSUED BY EITHER THE WAKE COUNTY EROSION CONTROL DEPARTMENT OR THE DWQ.
- CONTRACTOR SHALL SEED AND STABILIZE ALL STEEP SLOPES (GREATER THAN 2H:1V) WITHIN 7 DAYS, 10 DAYS FOR MODERATE SLOPES (3H:1V OR GREATER) AND WITHIN 14 CALENDAR DAYS EVERYWHERE ELSE (STATE LAW 2009-486).
- FOR ANY LAND-DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICAL, BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER COMPLETING THE WORK. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE ON THE PLAN.
- NO DEBRIS SHALL BE TRACKED ONTO PUBLIC RIGHT OF WAY. IF THE SITUATION OCCURS WHERE MUD, ROCK AND DEBRIS IS TRACKED ONTO PAVEMENT, THE CONTRACTOR SHALL CLEAN THE PAVEMENT AND INSTALL ADDITIONAL MEASURES TO PREVENT THE FUTURE OCCURRENCE.
- THE EROSION CONTROL INSPECTOR MAY REQUIRE ADDITIONAL FIELD MEASURES AS NECESSARY TO PROVIDE ADEQUATE PROTECTION FROM RECEIVING WATER COURSES.
- EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY GRADING ON SITE. THE CONTRACTOR SHALL CALL FOR AN INSPECTION BY NCDEQ ONCE INITIAL MEASURES ARE IN PLACE. (SEE CONSTRUCTION SEQUENCES)
- CONTRACTOR SHALL INSPECT ALL SEDIMENT /EROSION CONTROL DEVICES AFTER EACH STORM EVENT. EACH DEVICE IS TO BE MAINTAINED OR REPLACED IF SEDIMENT ACCUMULATION HAS REACHED ONE HALF THE CAPACITY OF THE DEVICE.
- A COPY OF THE APPROVED EROSION CONTROL PLAN MUST BE ON FILE AT THE JOB SITE AT ALL TIMES.
- CONSTRUCTION, MAINTENANCE, AND REMOVAL OF ALL EROSION CONTROL DEVICES ARE THE RESPONSIBILITY OF THE GRADING CONTRACTOR UNLESS OTHERWISE NOTED.
- ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE CITY/COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.
- ADDITIONAL MEASURES TO CONTROL EROSION AND SEDIMENT MAY BE REQUIRED BY A REPRESENTATIVE OF THE CITY/COUNTY ENGINEERING DEPARTMENT AND ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- PROTECTION OF EXISTING VEGETATION: AT THE START OF GRADING INVOLVING THE STRIPPING OF TOPSOIL OR LOWERING OF EXISTING GRADE AROUND A TREE, A CLEAN, SHARP, VERTICAL CUT SHALL BE MADE AT THE EDGE OF THE TREE SAVE AREA AT THE SAME TIME AS OTHER EROSION CONTROL MEASURES ARE INSTALLED. THE TREE PROTECTION FENCING SHALL BE INSTALLED ON THE SIDE OF THE CUT FARTHEST AWAY FROM THE TREE TRUNK AND SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE. NO STORAGE OF MATERIALS, FILL, OR EQUIPMENT AND NO TRESPASSING SHALL BE ALLOWED WITHIN THE BOUNDARY OF THE PROTECTED AREA AND SHALL BE POSTED ON THE PROTECTION FENCE. A PROTECTION FENCE CONSTRUCTED OF MATERIAL RESISTANT TO DEGRADATION BY SUN, WIND, AND MOISTURE FOR THE DURATION OF THE CONSTRUCTION, SHALL BE INSTALLED AT THE SAME TIME AS THE EROSION CONTROL MEASURES AND SHALL BE IN PLACE UNTIL ALL CONSTRUCTION IN THE VICINITY OF THE TREES IS COMPLETE.
- A CONSTRUCTION SEQUENCE HAS BEEN PROVIDED. INSTALLATION OF ALL PROPOSED SEDIMENTATION & EROSION CONTROL MEASURES IN THE SEQUENCE(S) PROVIDED AND MAINTENANCE OF THOSE DEVICES IS REQUIRED. THE CONTRACTOR MAY BE ALLOWED, WITH PRIOR APPROVAL FROM THE OWNER, TO COORDINATE CHANGES TO THE PLAN WITH THE ON-SITE SEDIMENTATION & EROSION CONTROL INSPECTOR AND THE ENGINEER.
- PROVIDE INLET PROTECTION AROUND ALL SITE STORM INLETS. PROTECT OPEN PIPES UNDER CONSTRUCTION WITH EITHER PLYWOOD OR WITH MESH AND GRAVEL WEIRS. RUNOFF SHALL NOT BE ALLOWED IN ANY OPEN TRENCH.
- CONTRACTOR WILL FIELD LOCATE SILT FENCE OUTLETS AT LOW POINTS IN SILT FENCE AS REQUIRED TO PROVIDE RELIEF FROM CONCENTRATED FLOWS AND PONDING.
- TEMPORARY DIVERSIONS SHALL BE MAINTAINED DAILY BY CONTRACTOR SO THAT THEY ARE FUNCTIONAL AT THE END OF EACH WORKDAY AND WHEN STOPPING WORK FOR RAIN.
- ALL DIMENSIONS AND GRADES SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
- DISTURBANCE OUTSIDE OF THE SITE PROPERTY LIMITS OR PUBLIC RIGHT-OF-WAY SHALL ONLY BE AS ALLOWED BY SIGNED GRADING AGREEMENTS AND/OR EASEMENTS BETWEEN THE DEVELOPER AND THE OFFSITE PROPERTY OWNER.
- THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN SAFE OPEN ACCESS TO ALL PROPERTIES ALONG ADJACENT PROPERTIES DURING CONSTRUCTION PERIOD FOR IMPROVEMENTS.
- SLOPES GREATER THAN 3:1 AND/OR GREATER THAN 10' IN VERTICAL DIFFERENCE SHALL BE INSTALLED WITH ROLLED EROSION CONTROL PRODUCT IMMEDIATELY UPON INSTALLATION.

**GENERAL SEQUENCE:**

**ENFORCEMENT NOTE 1.** FAILURE TO FOLLOW THIS CONSTRUCTION SEQUENCE MAY RESULT IN LOCAL ENFORCEMENT ACTIONS, INCLUDING BUT NOT LIMITED TO CIVIL PENALTIES TO \$5000 PER VIOLATION PER DAY, INJUNCTIVE RELIEF, CRIMINAL PENALTIES, AND PERMIT REVOCATION. ADDITIONALLY, OFF-SITE SEDIMENTATION MAY RESULT IN RESTORATION REQUIREMENTS.

**ENFORCEMENT NOTE 2.** IF THE WAKE COUNTY S&E STAFF DETERMINES THAT EXCESSIVE SEDIMENT IS LEAVING THE SITE, A REVISED SEDIMENTATION AND EROSION CONTROL PLAN MAY BE REQUIRED, WITH ASSOCIATED REQUIREMENTS FOR ADDITIONAL S&E MEASURES.

**CONSTRUCTION SEQUENCE**

- SCHEDULE AND HOLD A PRE-CONSTRUCTION CONFERENCE PRIOR TO BEGINNING ANY LAND-DISTURBING ACTIVITIES. THIS CONFERENCE SHOULD BE ATTENDED BY A REPRESENTATIVE OF THE FINANCIALLY RESPONSIBLE PARTY AND/OR THE GENERAL CONTRACTOR, GRADING SUB-CONTRACTOR, EROSION CONTROL SUB-CONTRACTOR AND THE WAKE COUNTY S&E OFFICE.
- OBTAIN LAND DISTURBING PERMIT AND PLACARD, AND POST THE PLACARD ON SITE.
- OBTAIN AN APPROVED (STAMPED) S&E CONTROL PLAN AND KEEP IT ON SITE, EITHER IN THE INSPECTION BOX, CONSTRUCTION OFFICE OR WITH THE CONTRACTOR.
- INSTALL CONSTRUCTION EGRESS/EXITS, SILT FENCING, SEDIMENT TRAPS/BASINS, DIVERSION DITCHES, TEMPORARY PIPES, CLEAR WATER DIVERSIONS, CHECK DAMS, AND OTHER INITIAL EROSION CONTROL MEASURES AS SPECIFIED IN THE PLAN (PHASE 1). REMOVE ONLY TREES AND GROUND COVER NECESSARY TO INSTALL THESE DEVICES.
- IF A STOCKPILE IS NECESSARY DUE TO EXCAVATION OF THE SEDIMENT TRAP/BASIN, PLACE A DOUBLE ROW OF SILT FENCE 10 FEET APART. TREES AND GROUND COVER MAY BE REMOVED ONLY AS NECESSARY FOR THIS STOCKPILE. IF MATERIAL IS GOING TO BE HAULED OFF-SITE, A SEPARATE EROSION CONTROL PERMIT MUST BE OBTAINED FOR THE DESTINATION OF THE MATERIAL.
- PROVIDE TEMPORARY GROUND COVER FOR DIVERSION DITCHES AND SEDIMENT TRAPS/BASINS WITHIN 3 DAYS OF COMPLETION.
- NOTIFY THE WAKE COUNTY S&E SITE INSPECTOR AFTER MEASURES HAVE BEEN INSTALLED AND PROJECT HAS STARTED.
- BEGIN CLEARING, GRUBBING AND GRADING OF SITE IN ACCORDANCE WITH THE APPROVED S&E CONTROL PLAN.
- FOR ANY LAND-DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) DAYS AFTER COMPLETING THE WORK. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON LARGE DENUDED AREAS AND ESPECIALLY WHEN SPECIFICALLY REQUIRED AS PART OF THE CONSTRUCTION SEQUENCE ON THE PLAN.
- REMOVE ALL EROSION CONTROL MEASURES AFTER THE WAKE COUNTY S&E OFFICE APPROVAL OF PERMANENT STABILIZATION.

LIMITS OF DISTURBANCE = 61,002 SF (1.4 AC)

**CONSTRUCTION SEQUENCE:**

- SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT. OBTAIN A LANDDISTURBING PERMIT.
  - INSTALL GRAVEL CONSTRUCTION PAD, SILT FENCE, SEDIMENT BASIN OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES.
  - CALL ENVIRONMENTAL CONSULTANT FOR AN ONSITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN A CERTIFICATE OF COMPLIANCE.
  - BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
  - INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
  - STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
  - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL ENVIRONMENTAL CONSULTANT FOR AN INSPECTION.
  - IF SITE IS APPROVED, REMOVE SILT FENCE, SEDIMENT BASIN, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES SHOULD NOW BE INSTALLED.
  - WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.
- KARYN PAGEAU AT 919-796-8769 AS ENVIRONMENTAL CONSULTANT.
- WAKE COUNTY MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK


SEAL:

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STRONG ROCK PROJECT	
NOT FOR CONSTRUCTION	
SCALE AS SHOWN	
DESIGNED BY JWL	SRG
DRAWN BY JWL	
CHECKED BY JWL	

**TRUE- ZEBULON-ARENDELL**  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
**CONSTRUCTION PLANS**  
**EROSION CONTROL NOTE**

DRAWING SHEET

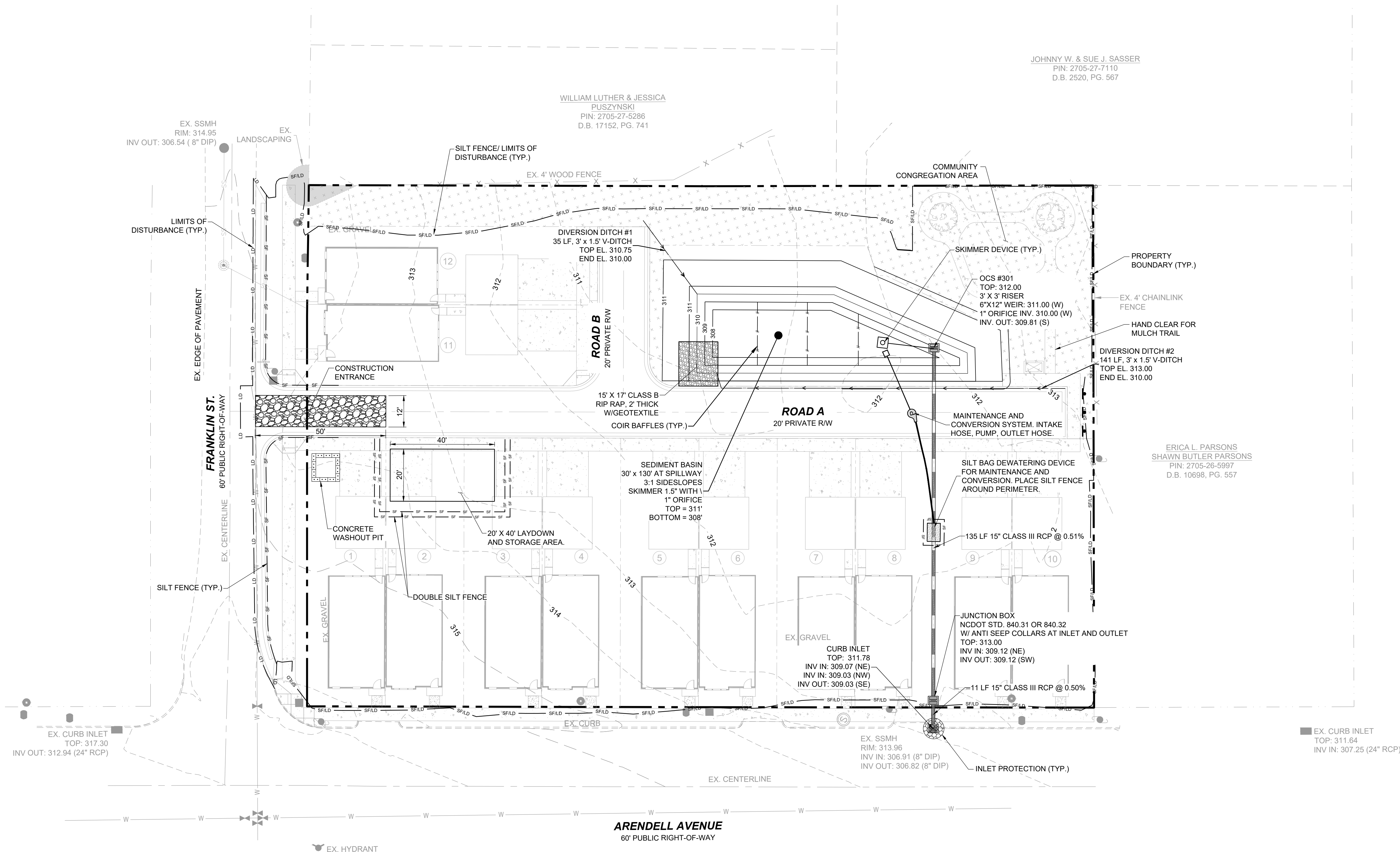
**C-7.0**



JOHNNY W. & SUE J. SASSER  
PIN: 2705-27-7110  
D.B. 2520, PG. 567

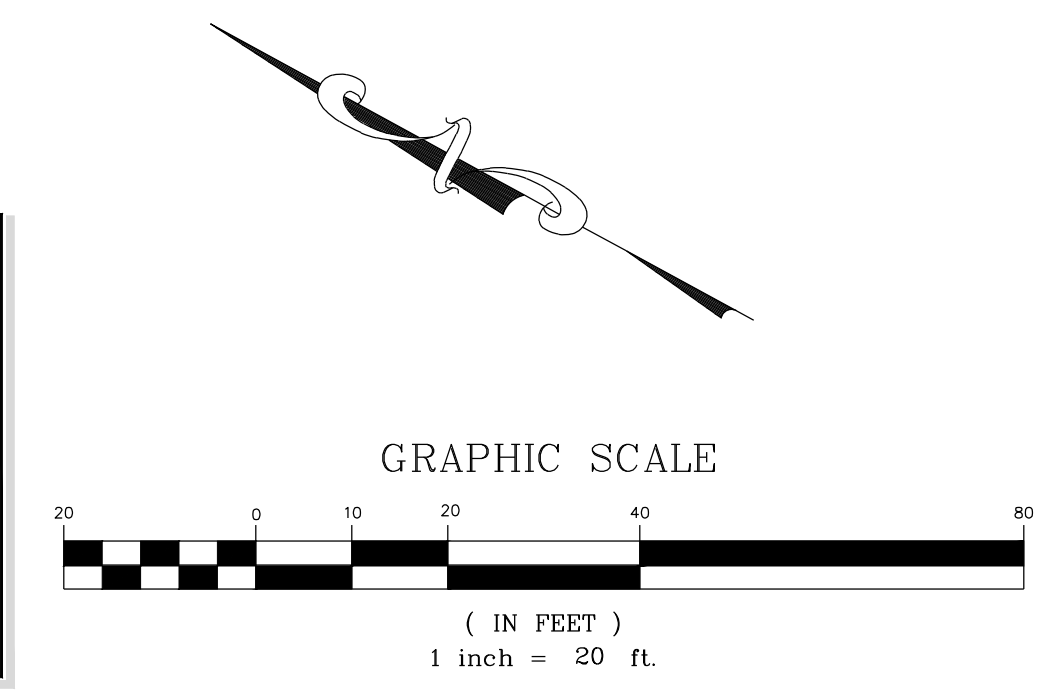
WILLIAM LUTHER & JESSICA  
PUSZYNSKI  
PIN: 2705-27-5286  
D.B. 17152, PG. 741

ERICA L. PARSONS  
SHAWN BUTLER PARSONS  
PIN: 2705-26-5997  
D.B. 10698, PG. 557

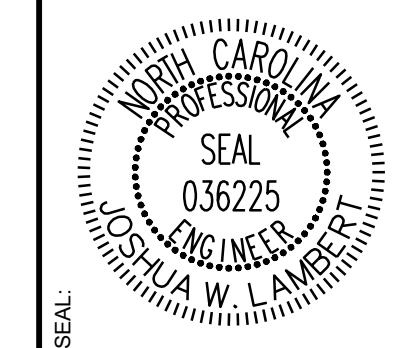


**LEGEND:**

	EXISTING PROPERTY LINE
	SILT FENCE / LIMITS OF DISTURBANCE
	LIMITS OF DISTURBANCE
	SILT FENCE
	CONSTRUCTION ENTRANCE
	PROPOSED STORM DRAIN LINE
	INLET PROTECTION



NO.	REVISIONS	DATE	BY



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STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE AS SHOWN	DESIGNED BY	DRAWN BY	CHECKED BY

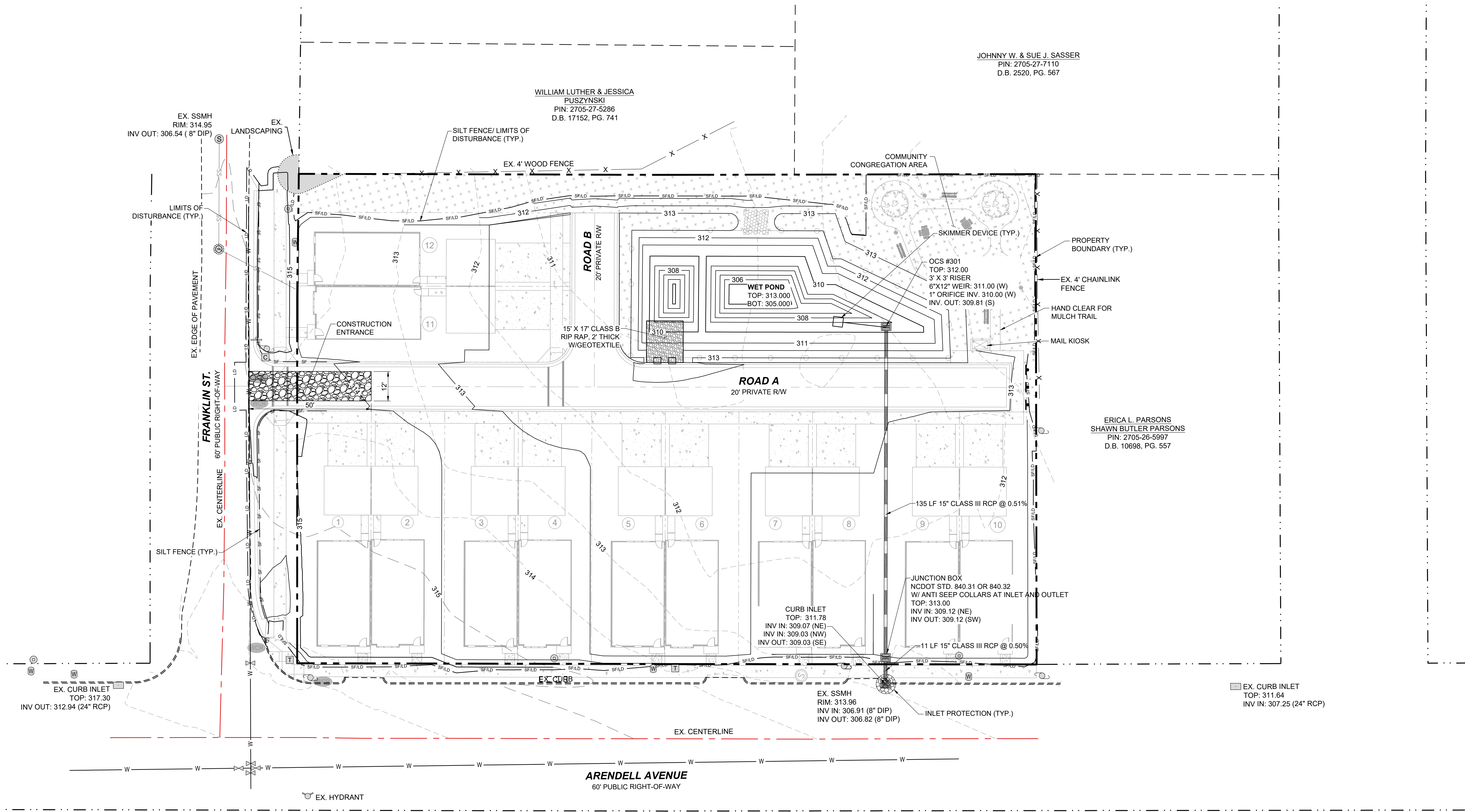
TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
**EROSION CONTROL PLAN - STAGE 1**

DRAWING SHEET  
**C-7.1**

JOHNNY W. & SUE J. SASSER  
PIN: 2705-27-7110  
D.B. 2520, PG. 567

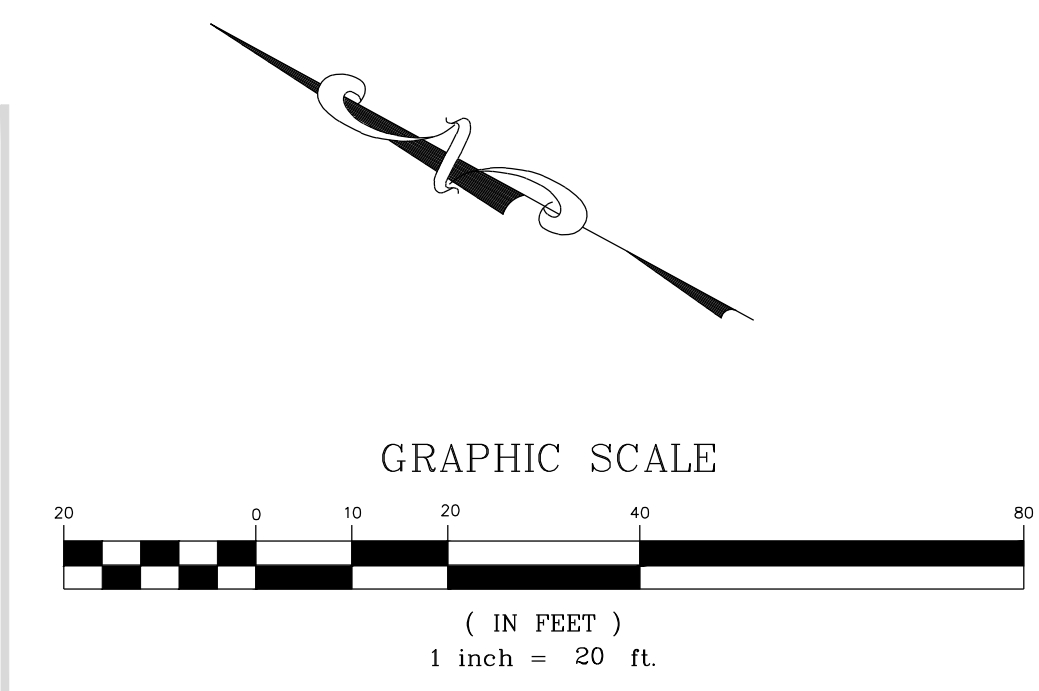
WILLIAM LUTHER & JESSICA  
PUSZYNSKI  
PIN: 2705-27-5286  
D.B. 17152, PG. 741

ERICA L. PARSONS  
SHAWN BUTLER PARSONS  
PIN: 2705-26-5997  
D.B. 10698, PG. 557



**LEGEND:**

	EXISTING PROPERTY LINE
	SILT FENCE / LIMITS OF DISTURBANCE (TYP.)
	LIMITS OF DISTURBANCE
	SILT FENCE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	CONSTRUCTION ENTRANCE
	PROPOSED STORM DRAIN LINE
	INLET PROTECTION
	FENCE LINE



NO.	REVISIONS	DATE	BY



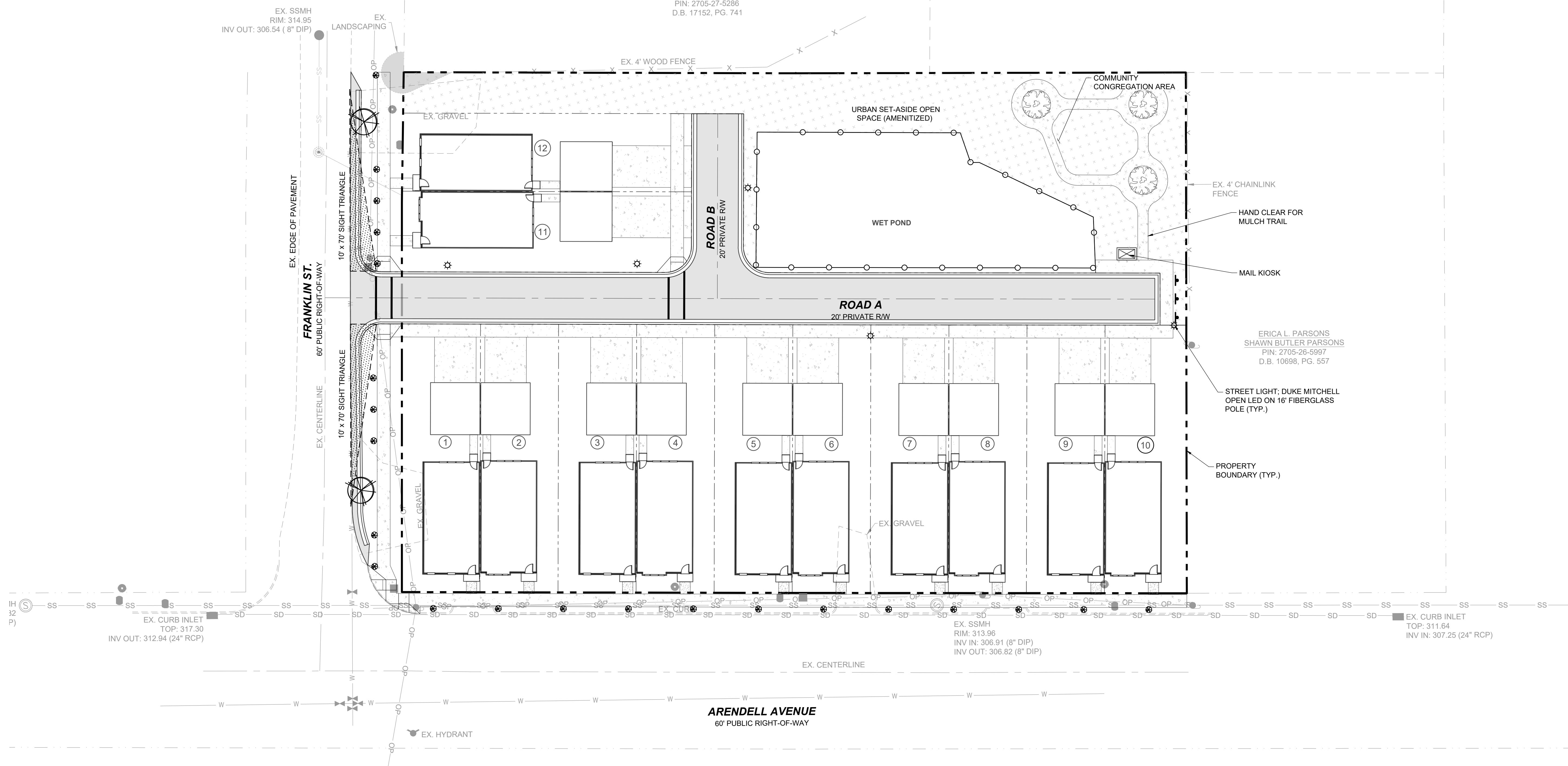
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NOT FOR CONSTRUCTION	DRAWN BY	JWL	JWL
SCALE AS SHOWN	CHECKED BY	JWL	JWL

TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
**EROSION CONTROL PLAN - STAGE 2**

DRAWING SHEET  
**C-7.2**

WILLIAM LUTHER & JESSICA  
 PUSZYNSKI  
 PIN: 2705-27-5286  
 D.B. 17152, PG. 741



**LEGEND:**

	RED BUD
	CHINESE PISTACIA

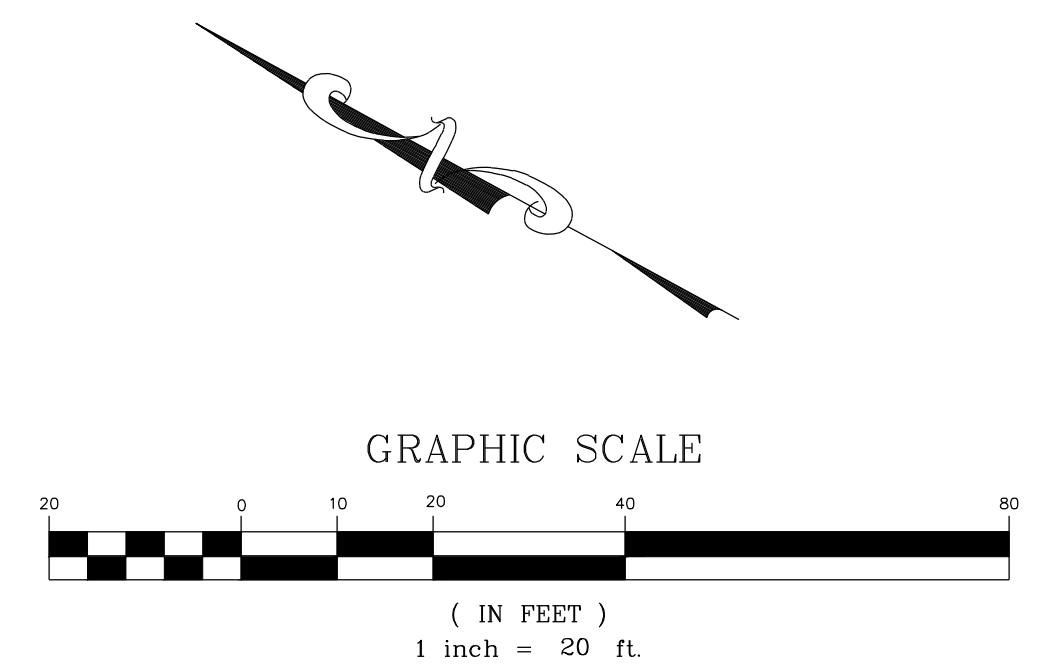
**PLANTING SCHEDULE:**

KEY	QTY	BOTANICAL NAME	COMMON NAME	CONTAINER	SIZE	HEIGHT
PERIMETER BUFFERS						
CP	2	CHINESE PISTACIA	BOTANICAL	B&B	1" CAL	6'
CJ	22	RED BUD	CERCIS CANADENSIS	GAL.	1" CAL	6'

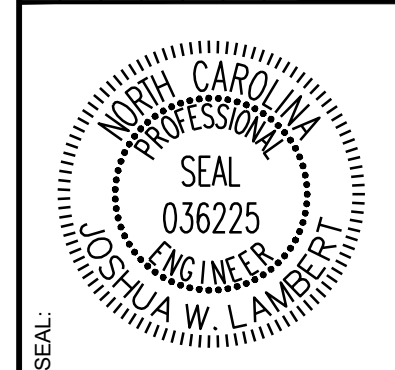
- GENERAL PLANTING NOTES:**
- STREET TREES SHALL BE INSTALLED SUCH THAT ONE TREE IS REQUIRED ALONG THE RESIDENTIAL STREET AS SHOWN, SPACED EVERY 40 FEET.
  - DO NOT PLACE STREET TREES WITHIN A PUBLIC STORM OR UTILITY EASEMENT.
  - ALL CANOPY TREES SHALL BE MIN. 8' TALL AND 2" CALIPER AT TIME OF PLANTING.
  - ALL UNDERSTORY TREES SHALL BE MIN. 6' TALL AND 1" CALIPER AT TIME OF PLANTING.
  - LANDSCAPING IN AREAS OUTSIDE OF RIGHT OF WAY ARE TO BE PROVIDED BY THE DEVELOPER. ANY LANDSCAPING INSTALLED WITHIN THESE AREAS ARE TO BE MAINTAINED BY THE DEVELOPER UNTIL HOME OWNERS ASSOCIATION (HOA) IS ESTABLISHED. HOA WILL BE RESPONSIBLE FOR CONTINUED MAINTENANCE OF LANDSCAPING AND ANY IMPROVEMENTS OUTSIDE THE RIGHT OF WAY.
  - ADDITIONAL LANDSCAPING ON SITE MAYBE PROVIDED BY DEVELOPER.

**LEGEND:**

	EXISTING PROPERTY LINE
	ROADWAY CENTER LINE
	PROPOSED PROPERTY LINE
	STANDARD CURB & GUTTER
	ASPHALT PAVEMENT
	OPEN SPACE
	STREET LIGHT
	FENCE LINE



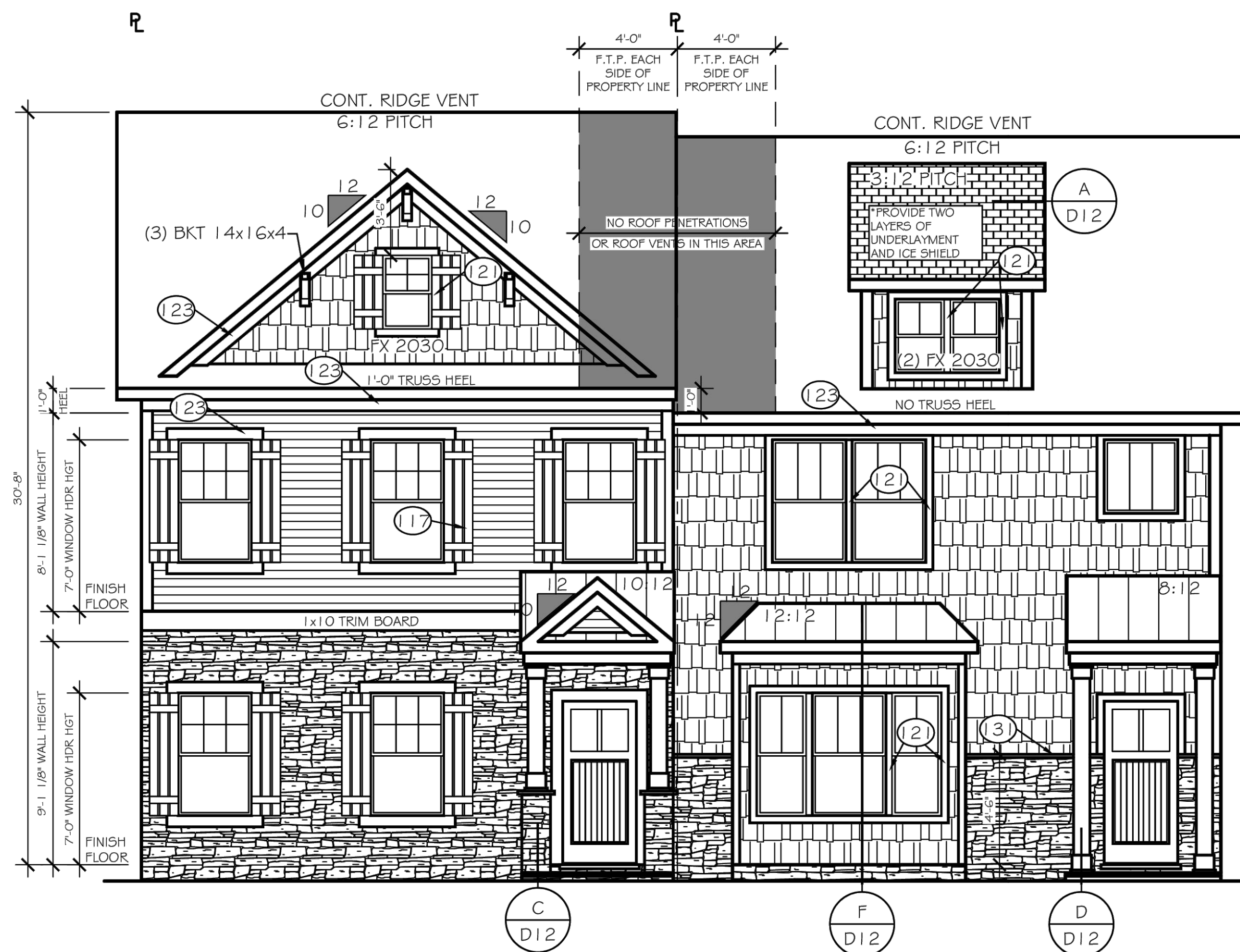
NO.	REVISIONS	DATE	BY



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STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE AS SHOWN	DESIGNED BY JWL	SRG	DRAWN BY JWL	CHECKED BY JWL
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TRUE- ZEBULON-ARENDELL  
 TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
 CONSTRUCTION PLANS  
**LANDSCAPING PLAN**



FRONT ELEVATION - A3F  
SCALE: 1/4" = 1'-0"

LOT - 1

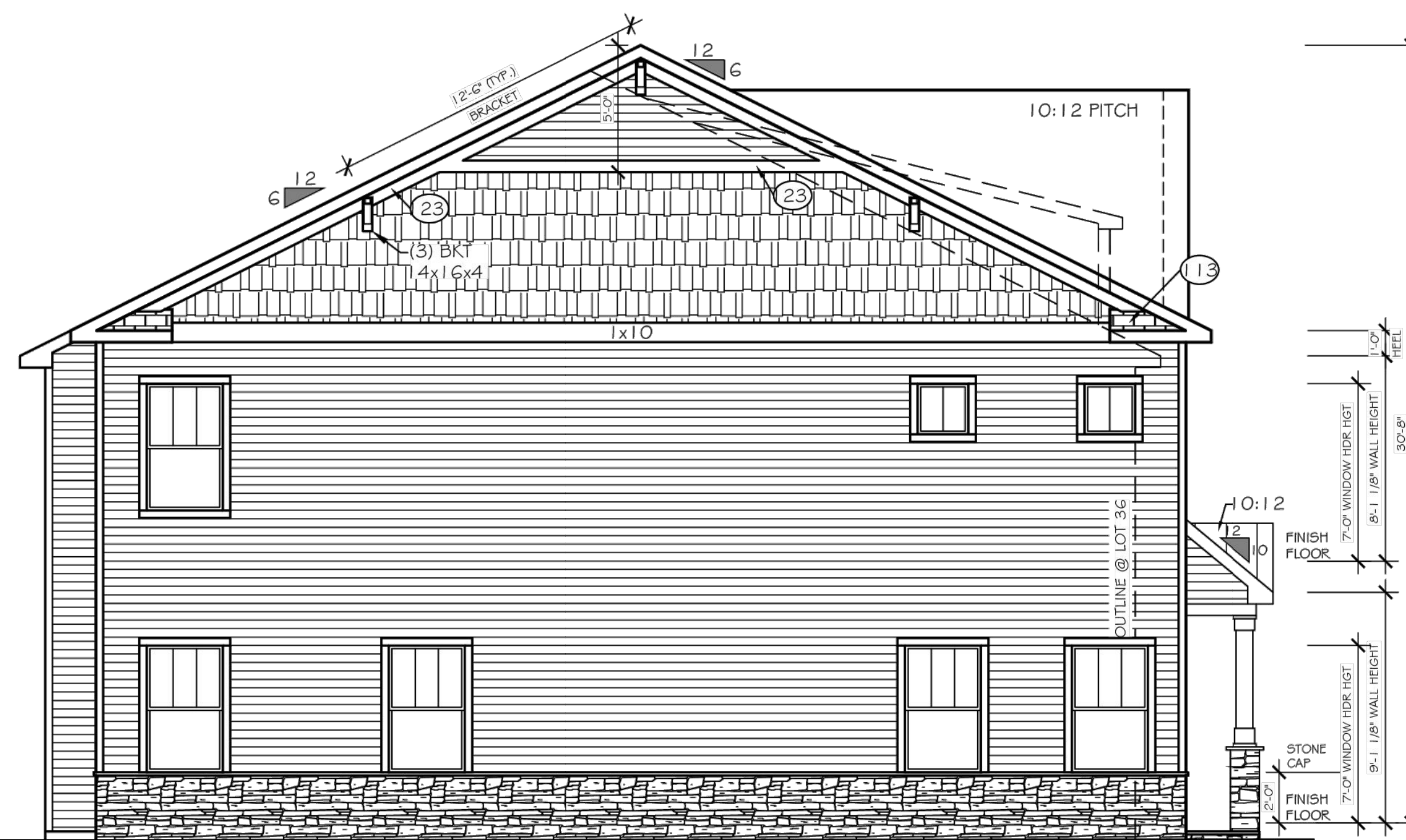
FRONT ELEVATION - C3B  
SCALE: 1/4" = 1'-0"

LOT - 2

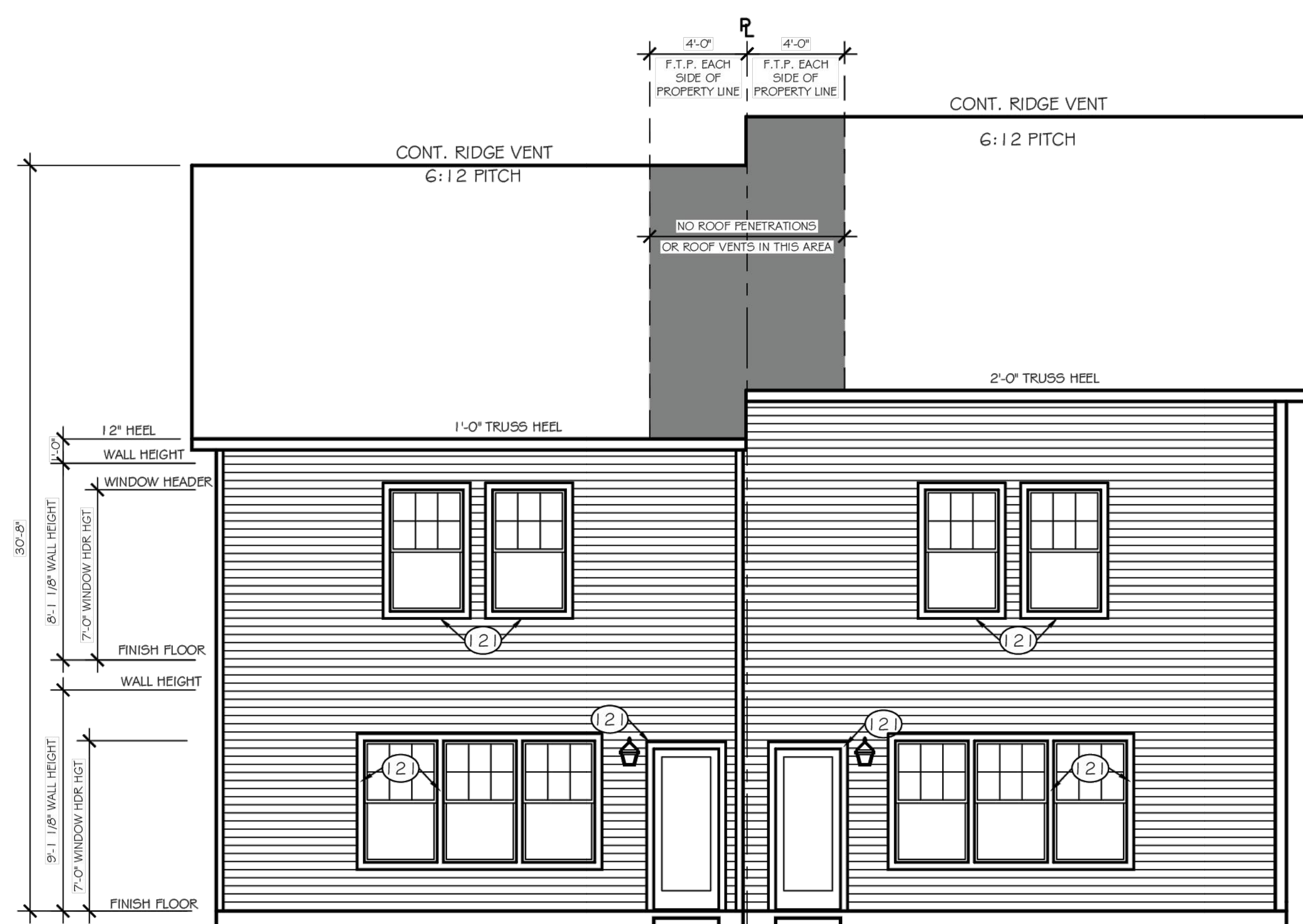
PE  
(WGS.)

LEFT ELEVATION  
SCALE: 1/4" = 1'-0"

LOT - 1



NO PENETRATIONS ALLOWED (THIS WALL ONLY)

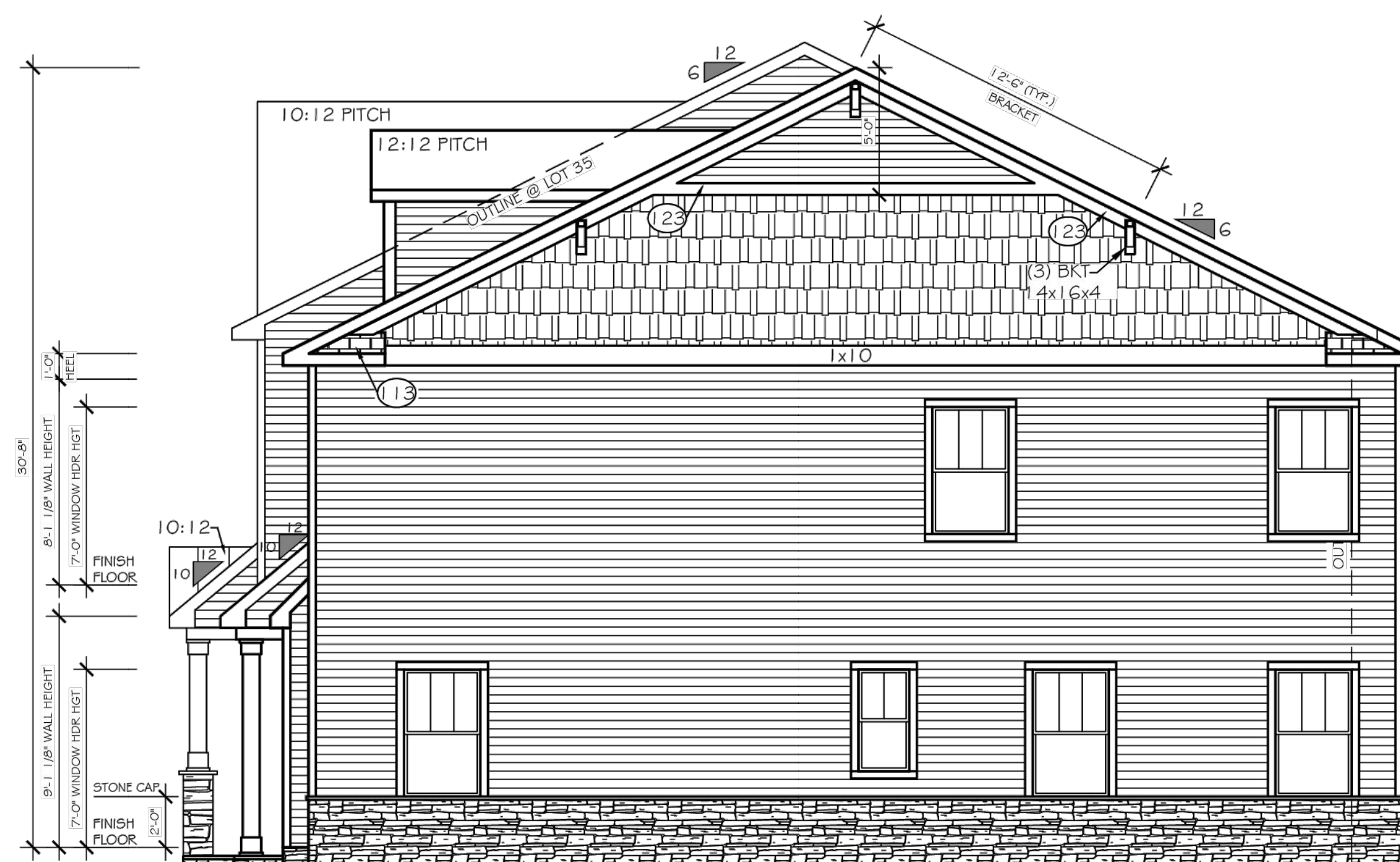


REAR ELEVATION  
SCALE: 1/4" = 1'-0"

LOT - 51

REAR ELEVATION  
SCALE: 1/4" = 1'-0"

LOT - 52



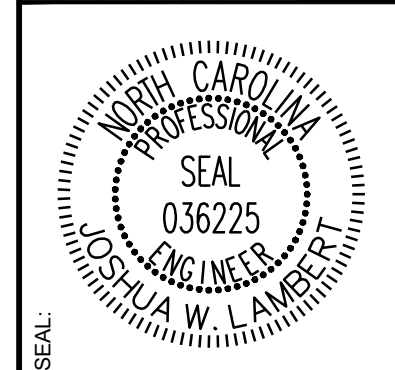
NO PENETRATIONS ALLOWED (THIS WALL ONLY)

RIGHT ELEVATION  
SCALE: 1/4" = 1'-0"

LOT - 2

GRADE  
(REF. C)

NO.	REVISIONS	DATE	BY

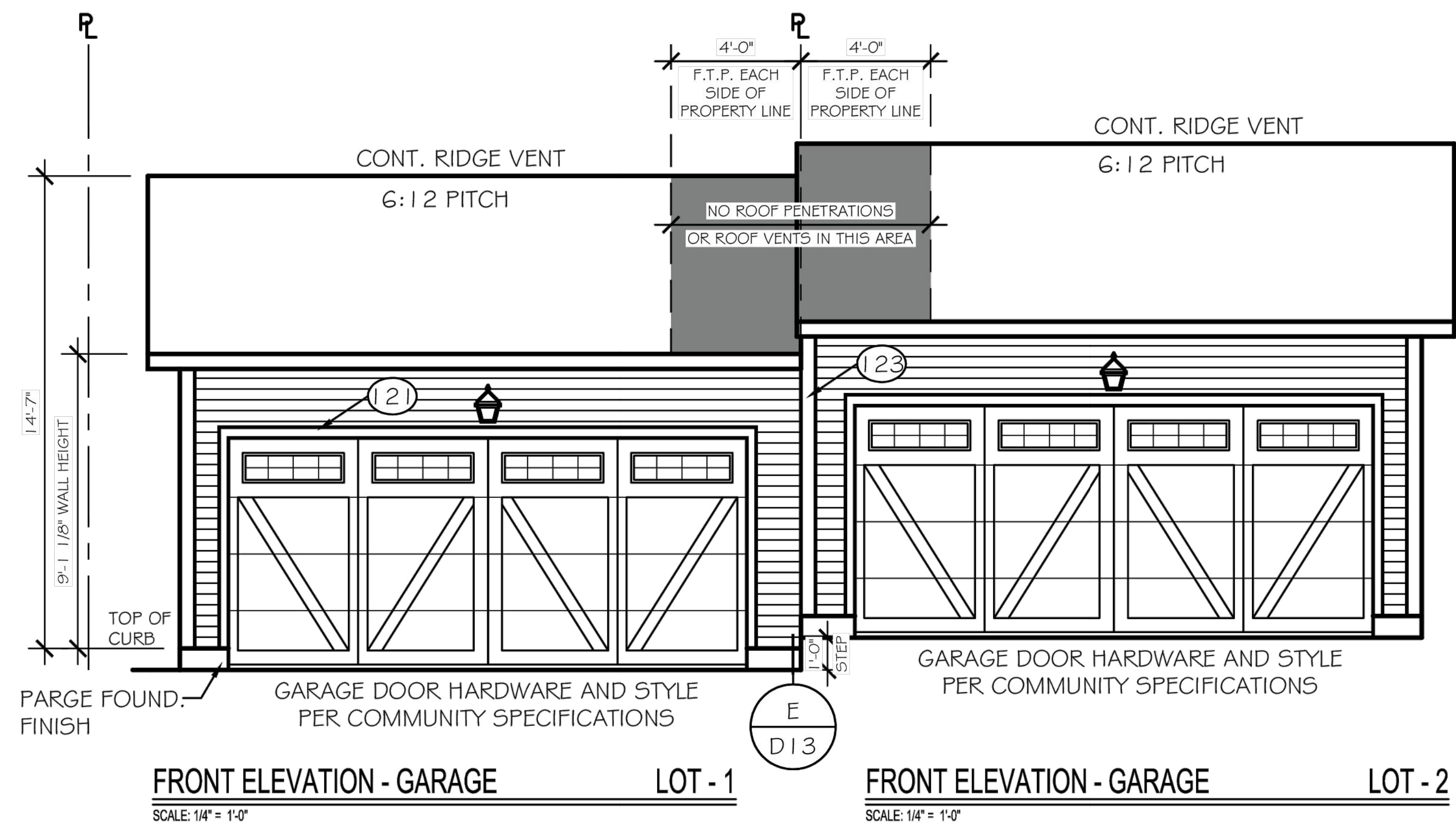


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			JWL	SRG	JWL

TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
BUILDING ELEVATIONS

DRAWING SHEET  
D-1.0



**FRONT ELEVATION - GARAGE LOT - 1**  
SCALE: 1/4" = 1'-0"

**FRONT ELEVATION - GARAGE LOT - 2**  
SCALE: 1/4" = 1'-0"



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			JWL	SRG	JWL

TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
BUILDING ELEVATIONS

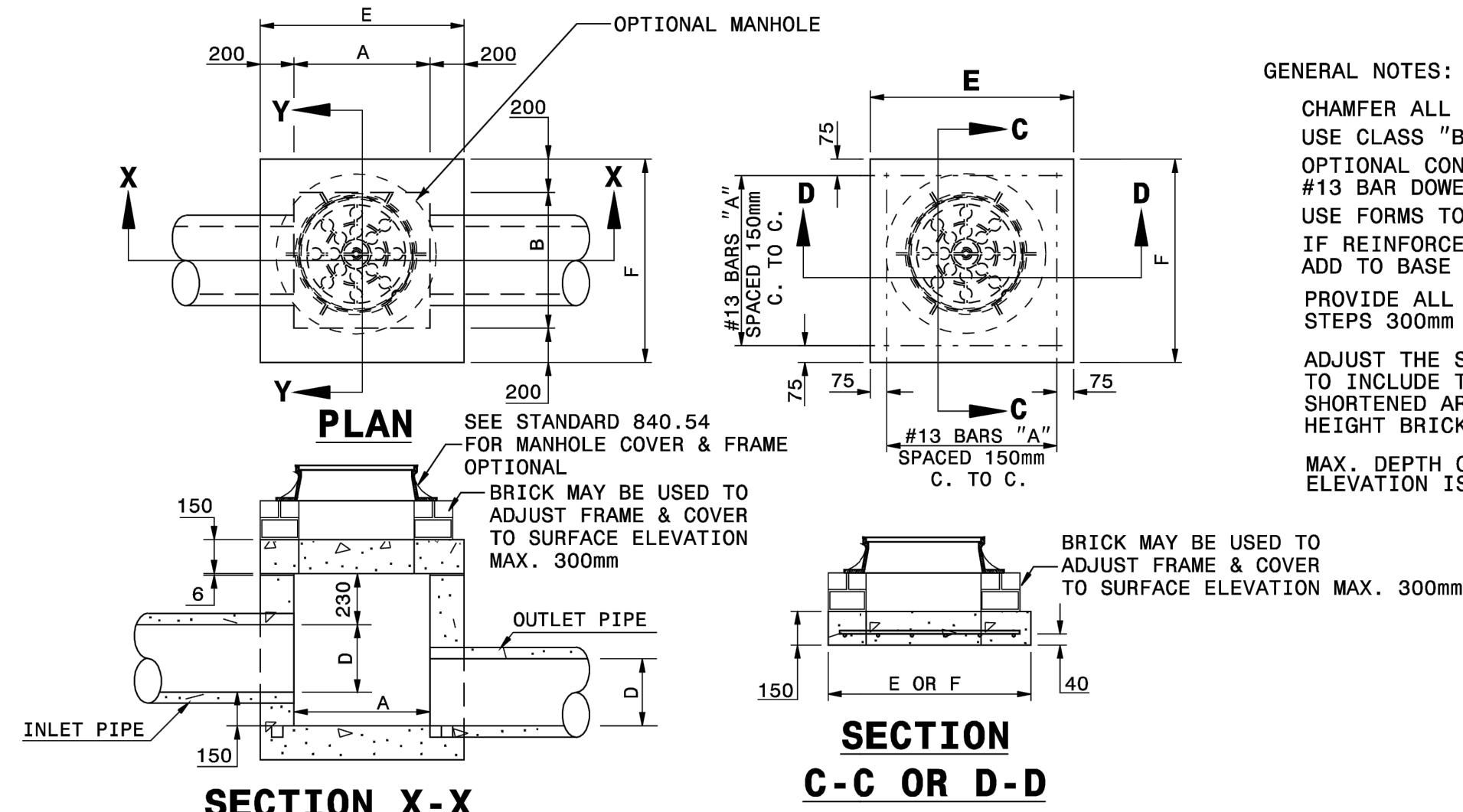
DRAWING SHEET  
**D-1.1**

No.	REVISIONS	DATE	BY

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

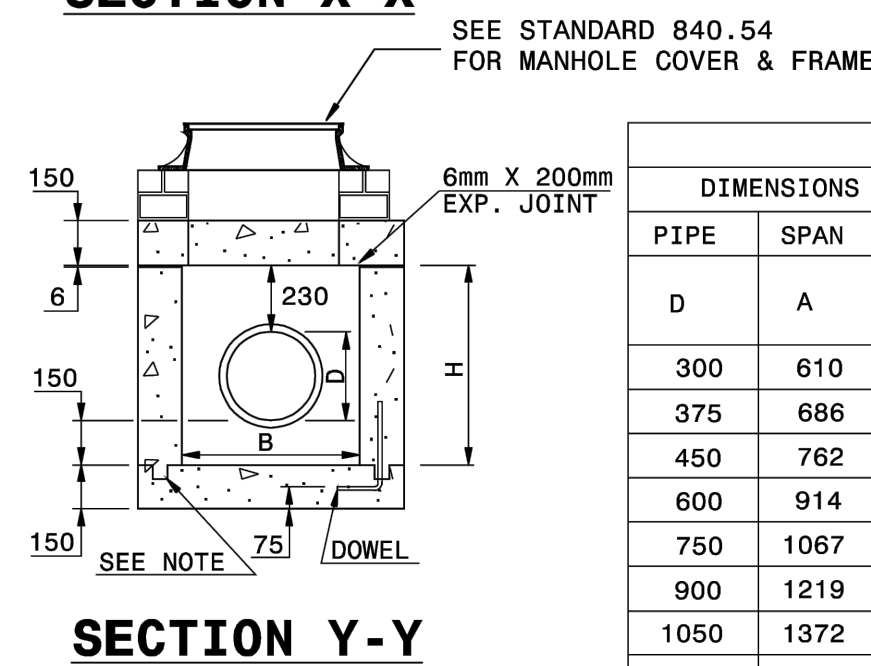
METRIC STANDARD DRAWING FOR  
**CONCRETE JUNCTION BOX**  
(WITH OPTIONAL MANHOLE)  
300mm THRU 1650mm PIPE

SHEET 1 OF 1  
**840.31**



**GENERAL NOTES:**

- CHAMFER ALL EXPOSED CORNERS 25mm.
- USE CLASS "B" CONCRETE THROUGHOUT.
- OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 50mm KEYWAY, OR #13 BAR DOWELS AT 300mm CENTERS AS DIRECTED BY THE ENGINEER.
- USE FORMS TO CONSTRUCT THE BASE SLAB.
- IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STD. DWG. 840.00.
- PROVIDE ALL JUNCTION BOXES OVER 1.0m IN DEPTH WITH STEPS 300mm ON CENTERS IN ACCORDANCE WITH STD. DWG. 840.66.
- ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)
- MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 3.6 METERS.



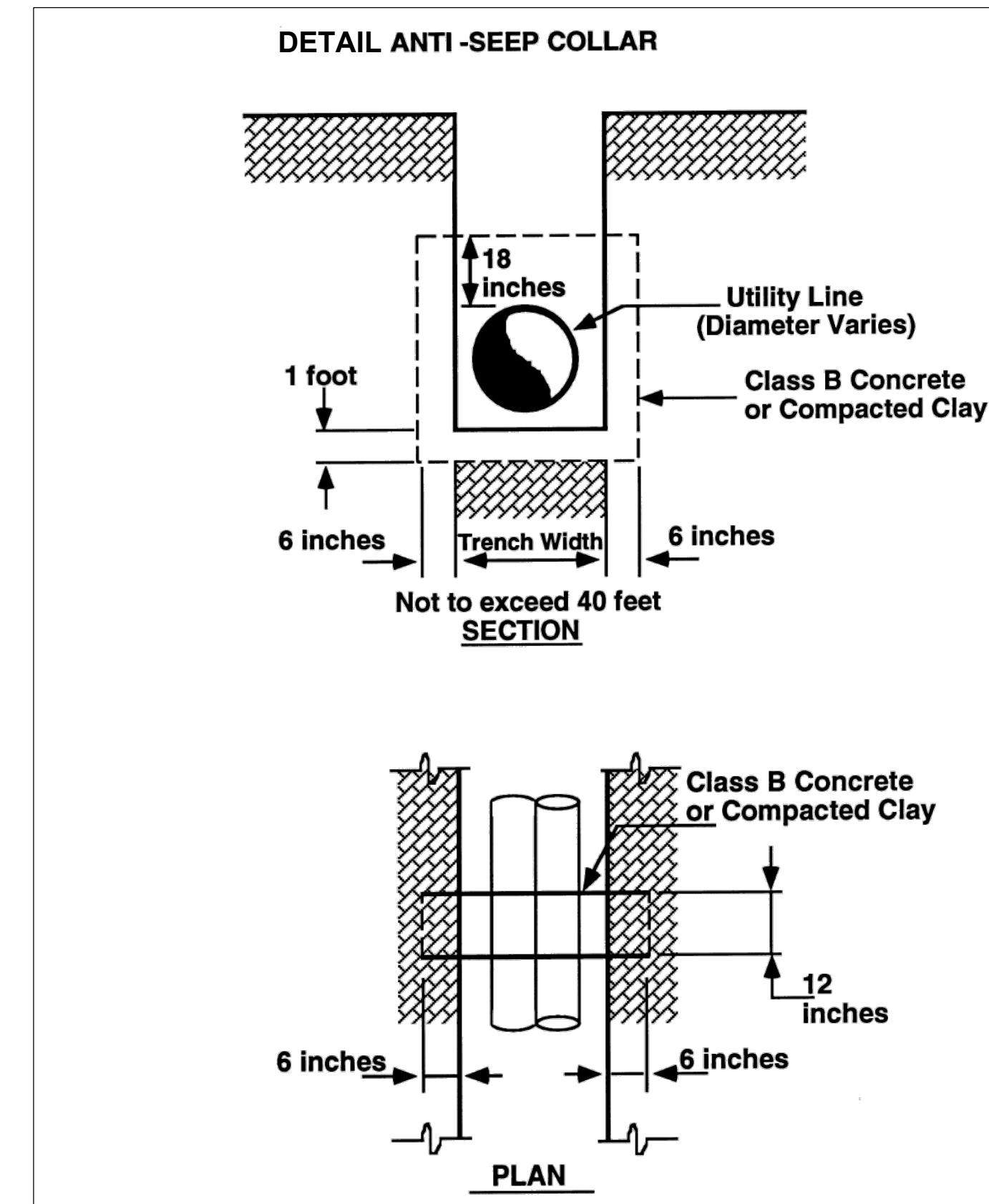
DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES														
DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS "A"		COVER DIMENSIONS		CUBIC METERS IN BOX			TOTAL QUANTITIES BOX AND COVER		DEDUCTIONS FOR ONE PIPE m. <sup>3</sup>	
PIPE	SPAN	WIDTH	HEIGHT	NO.	LENGTH	E	F	COVER	FLOOR	WALL/ m. OF H.	kg. REINF.	m <sup>3</sup> MIN. "H"	C.S.	R.C.
300	610	610	686	12	838	914	914	0.127	0.127	0.464	10	0.573	0.011	0.018
375	686	686	762	12	914	991	991	0.149	0.149	0.512	11	0.689	0.017	0.027
450	762	762	838	14	991	1067	1067	0.173	0.173	0.557	14	0.814	0.025	0.037
600	914	914	991	16	1143	1219	1219	0.226	0.226	0.650	18	1.096	0.045	0.065
750	1067	1067	1143	18	1295	1372	1372	0.286	0.286	0.742	23	1.422	0.070	0.097
900	1219	1219	1295	20	1448	1524	1524	0.354	0.354	0.835	29	1.789	0.100	0.136
1050	1372	1372	1448	22	1600	1676	1676	0.428	0.428	0.928	35	2.200	0.137	0.185
1200	1624	1624	1600	26	1853	1929	1929	0.558	0.558	1.021	48	2.653	0.179	0.242
1350	1776	1776	1753	28	2005	2081	2081	0.650	0.650	1.114	56	3.147	0.227	0.306
1500	1929	1929	1905	30	2207	2284	2284	0.782	0.782	1.207	66	3.685	0.280	0.378
1650	2081	2081	2057	32	2388	2464	2464	0.911	0.911	1.299	78	4.267	0.339	0.450

Note:  
This drawing is dimensioned in millimeters unless otherwise depicted within the drawing.

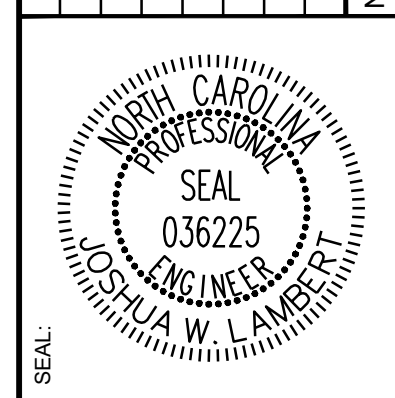
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N. C.

METRIC STANDARD DRAWING FOR  
**CONCRETE JUNCTION BOX**  
(WITH OPTIONAL MANHOLE)  
300mm THRU 1650mm PIPE

SHEET 1 OF 1  
**840.31**



NO.	REVISIONS	DATE	BY

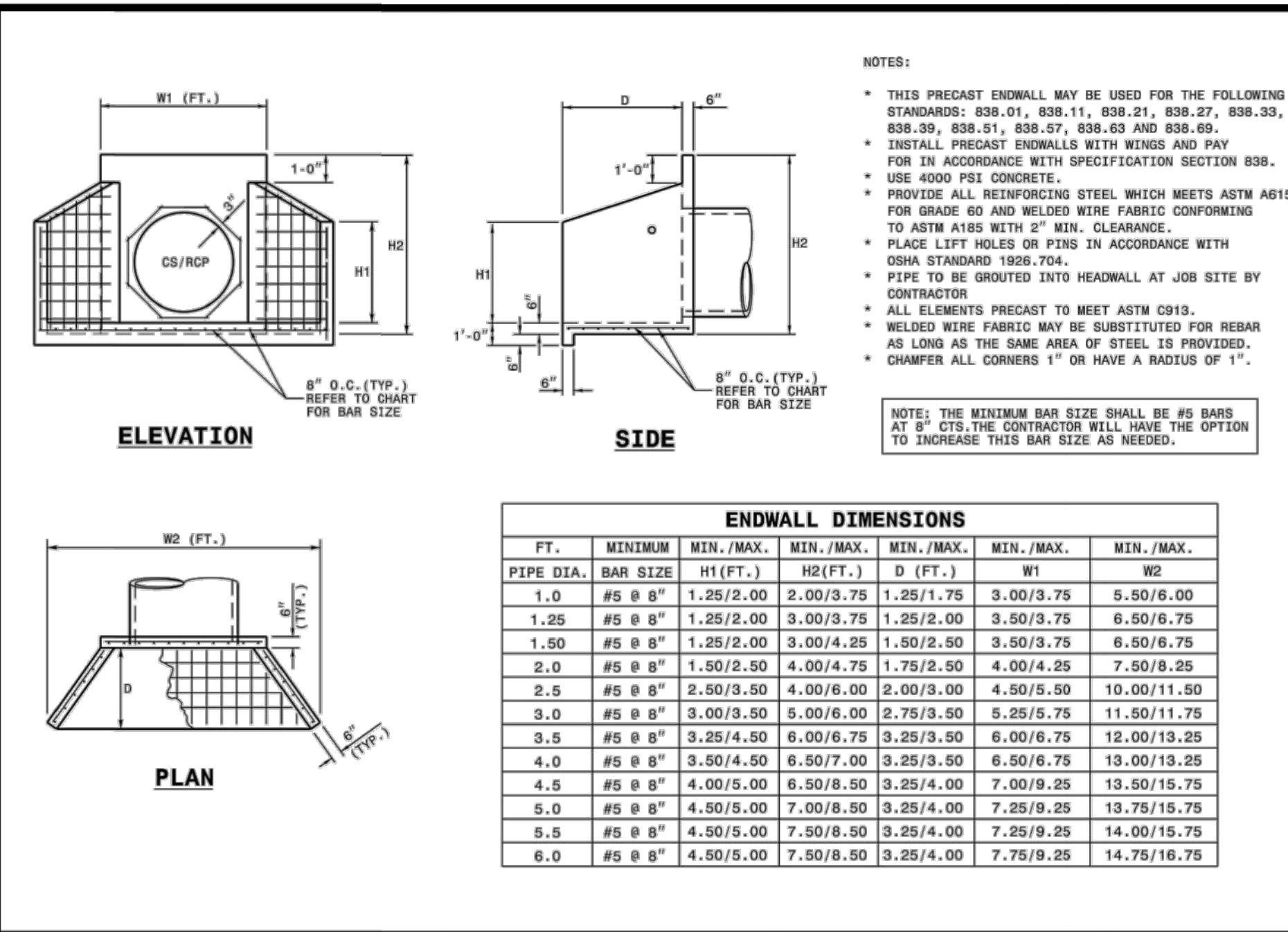


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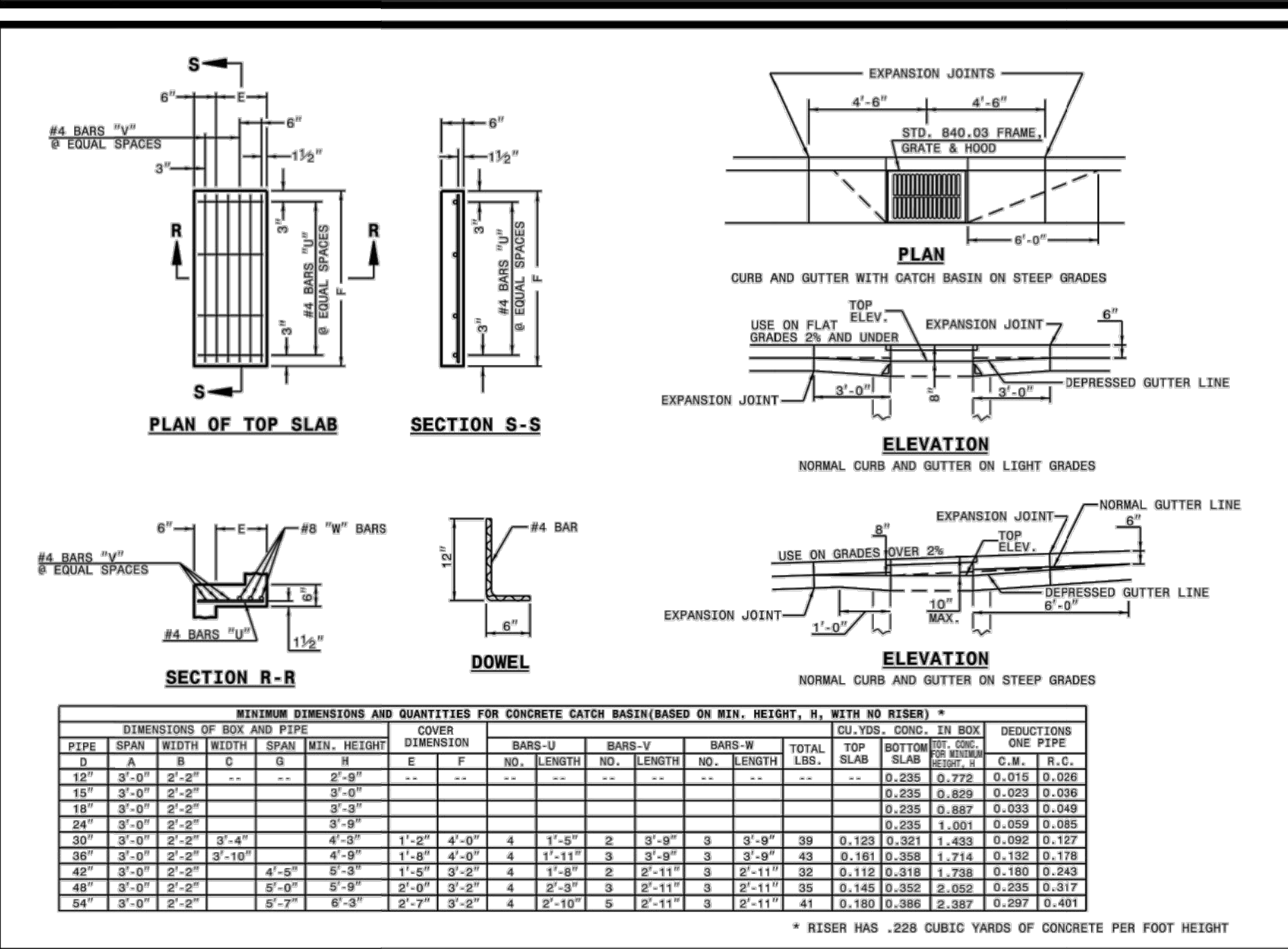
TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
**STORM DRAINAGE DETAILS**

DRAWING SHEET  
**D-2.0**



NOTES:  
 \* THIS PRECAST ENDWALL MAY BE USED FOR THE FOLLOWING STANDARDS: 838.01, 838.11, 838.21, 838.27, 838.33, 838.39, 838.51, 838.57, 838.63 AND 838.69.  
 \* INSTALL PRECAST ENDWALLS WITH REINFORCING STEEL IN ACCORDANCE WITH SPECIFICATION SECTION 838.  
 \* USE 4000 PSI CONCRETE.  
 \* PROVIDE ALL REINFORCING STEEL WHICH MEETS ASTM A615 FOR GRADE 60 AND WELDED WIRE FABRIC CONFORMING TO ASTM A185 WITH 2" MIN. CLEARANCE.  
 \* PLACE LEFT HOLES OR PINS IN ACCORDANCE WITH OSHA STANDARD 1926.704.  
 \* PIPE TO BE GROUTED INTO HEADWALL AT JOB SITE BY CONTRACTOR.  
 \* ALL ELEMENTS PRECAST TO MEET ASTM C913.  
 \* WELDED WIRE FABRIC MAY BE SUBSTITUTED FOR REBAR #5 LONG AS THE SAME AREA OF STEEL IS PROVIDED.  
 \* CHAMFER ALL CORNERS 1" OR HAVE A RADIUS OF 1".

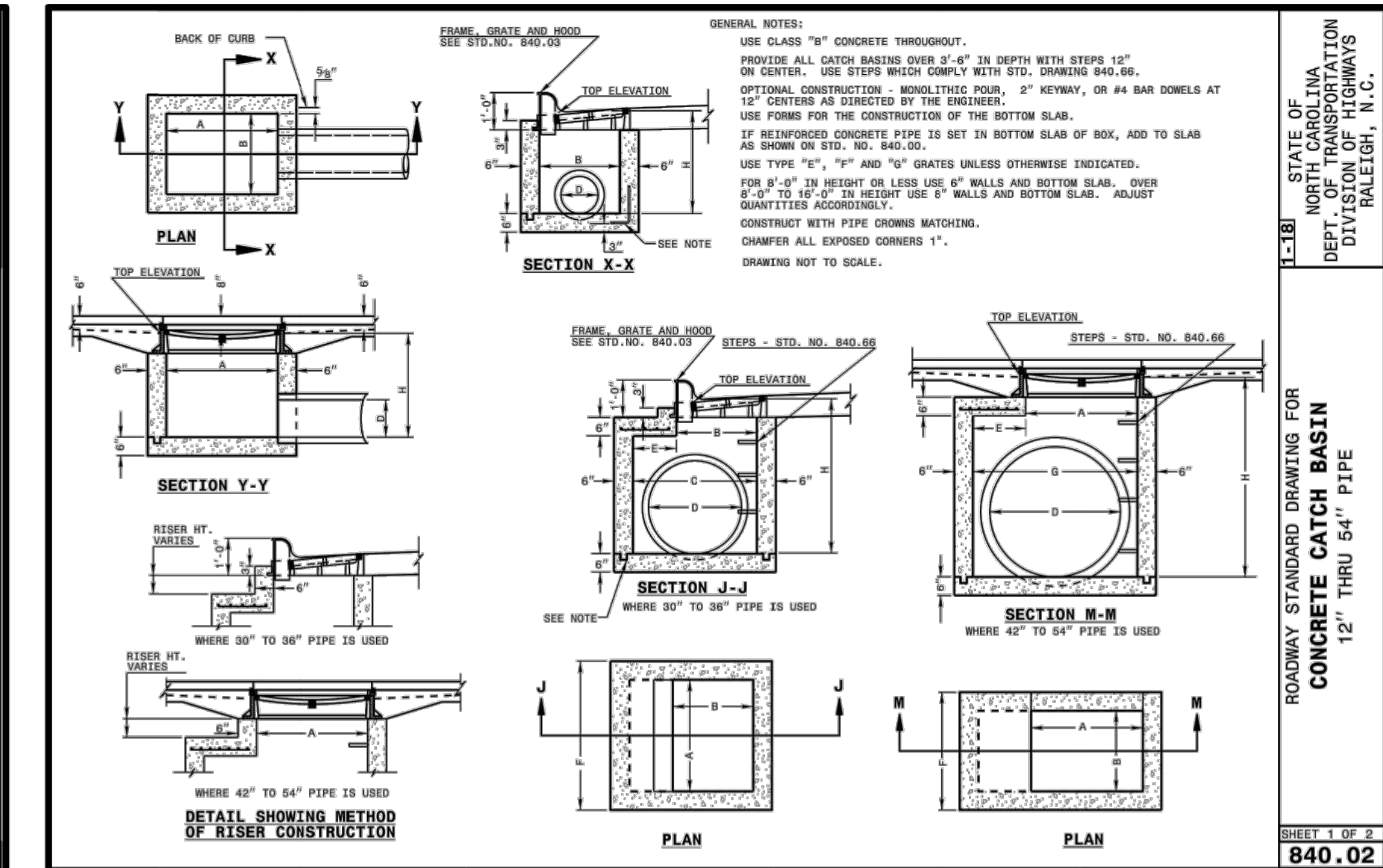
NOTE: THE MINIMUM BAR SIZE SHALL BE #5 BARS AT 9" CTS. THE CONTRACTOR WILL HAVE THE OPTION TO INCREASE THIS BAR SIZE AS NEEDED.



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

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

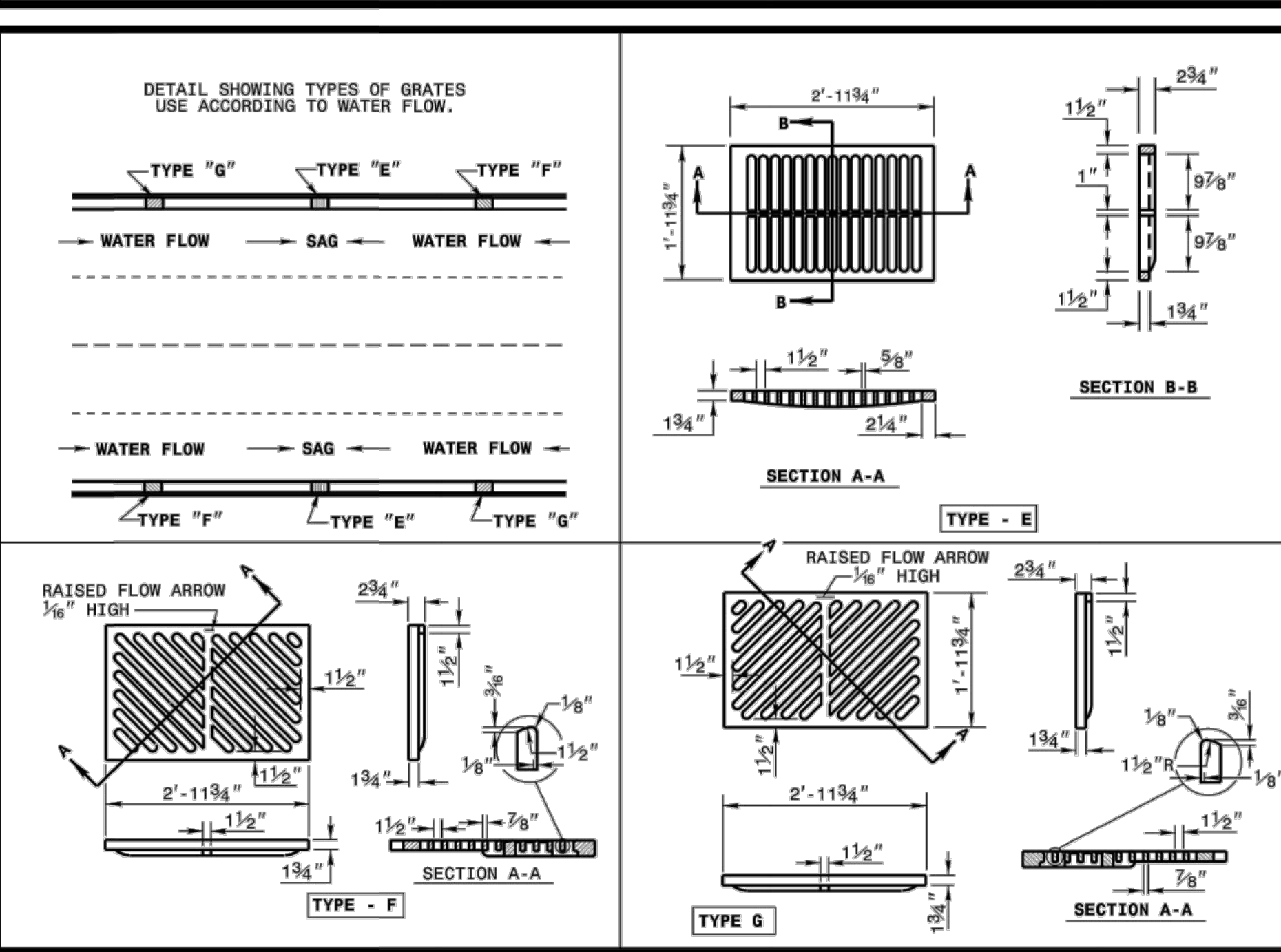
838.80



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

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

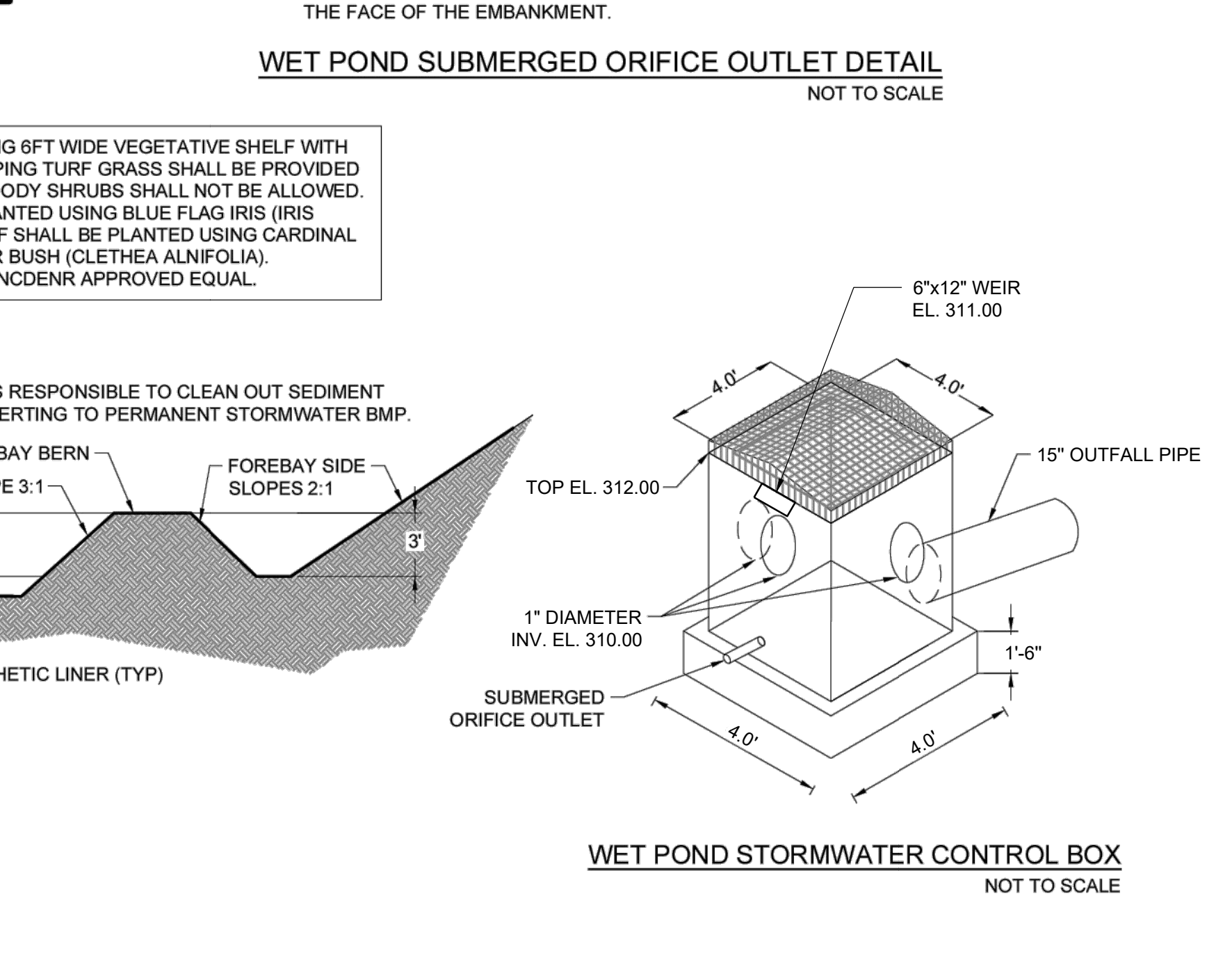
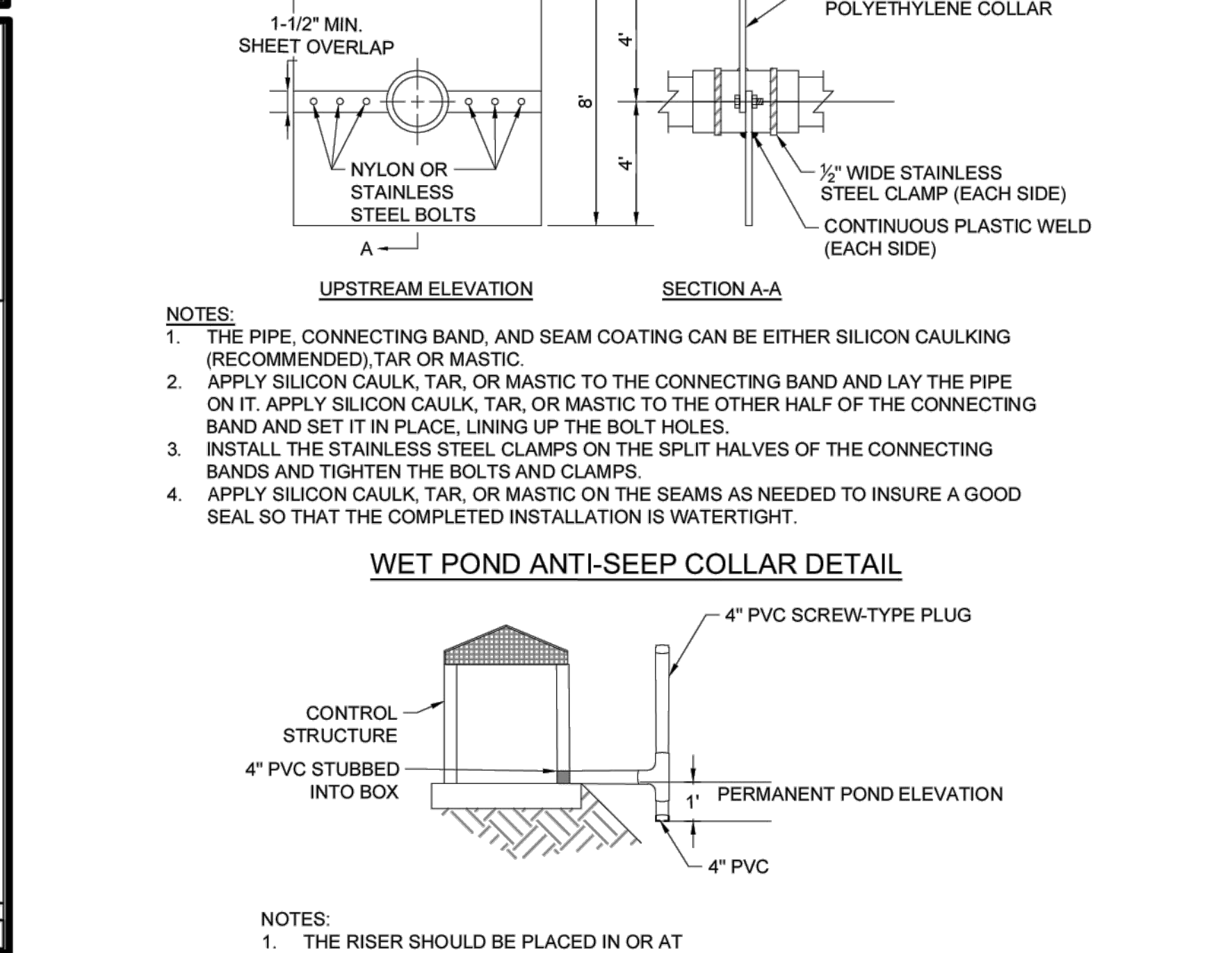
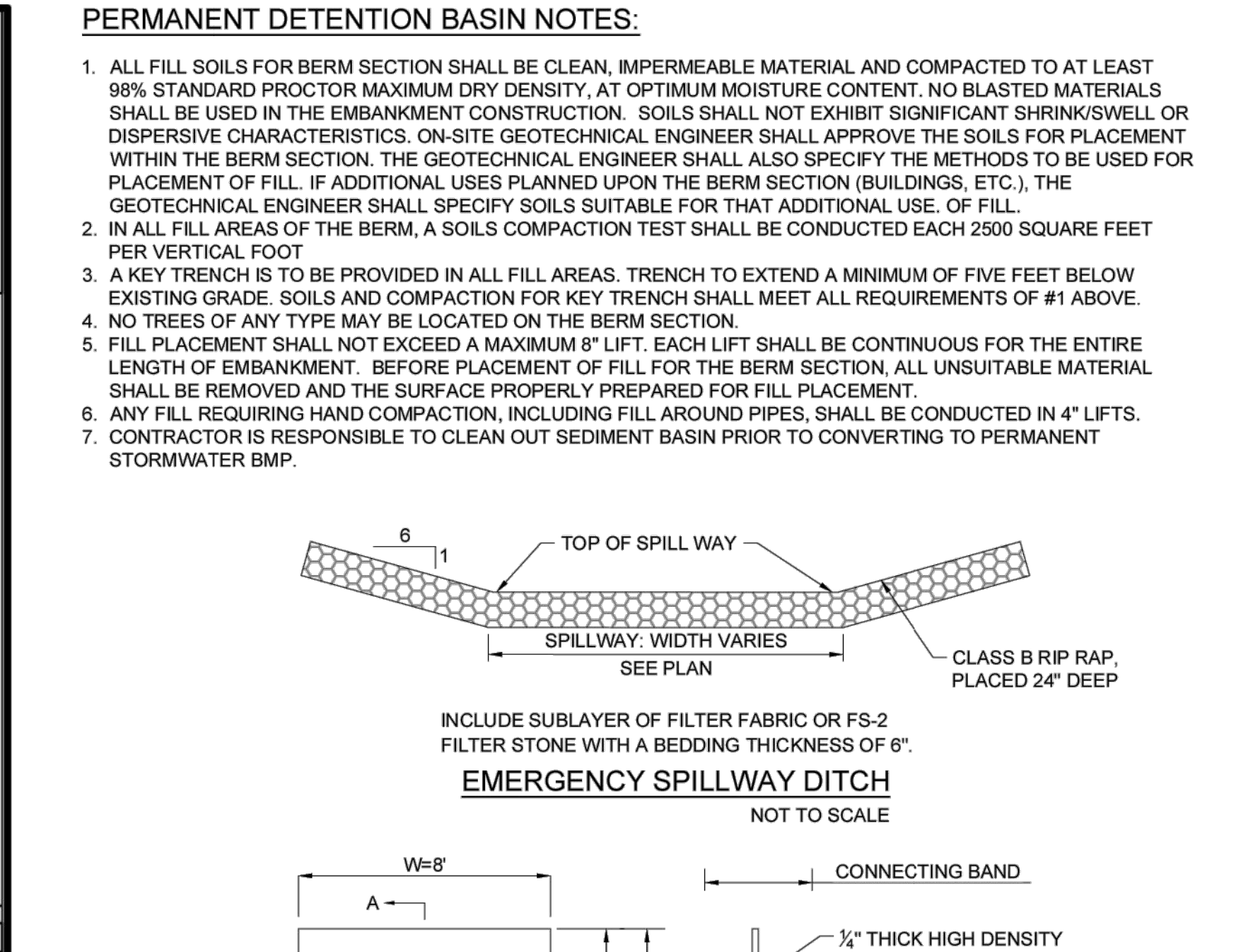
840.02



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

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

840.03



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

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

840.03

PRELIMINARY CONSTRUCTION DRAWINGS; THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION UNTIL APPROVED BY ALL AUTHORITIES HAVING JURISDICTION AND RELEASED BY THE ENGINEER OF RECORD.

STRONG ROCK ENGINEERING GROUP

6801 FALLS OF NEUSE RD. SUITE 108 RALEIGH, NC 27615 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT NOT FOR CONSTRUCTION SCALE AS SHOWN DESIGNED BY JWL DRAWN BY SRG CHECKED BY JWL

TRUE-ZEBULON-ARENDELL TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA CONSTRUCTION PLANS

STORM DRAINAGE DETAILS

DRAWING SHEET

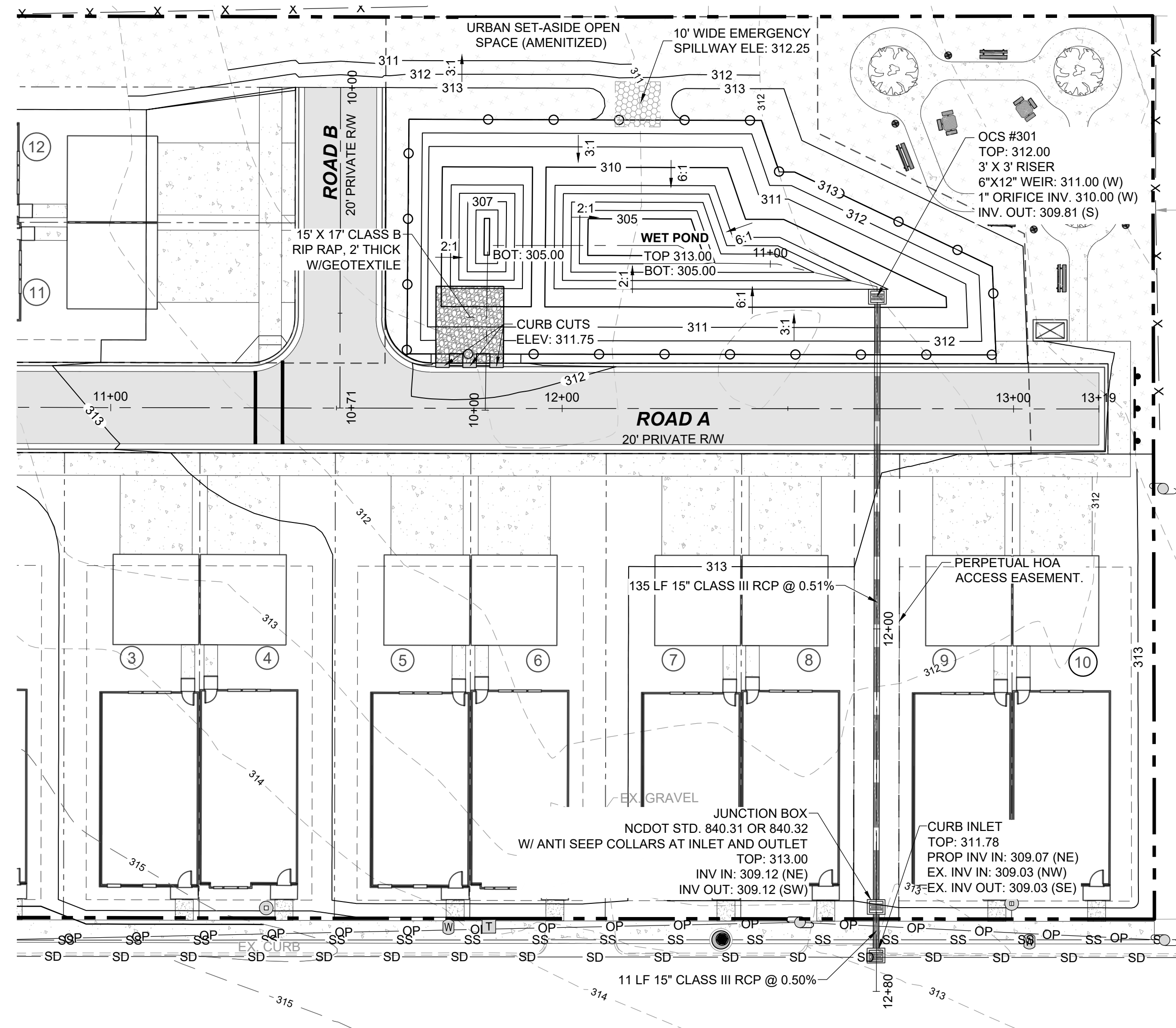
D-2.1

15 OF 24

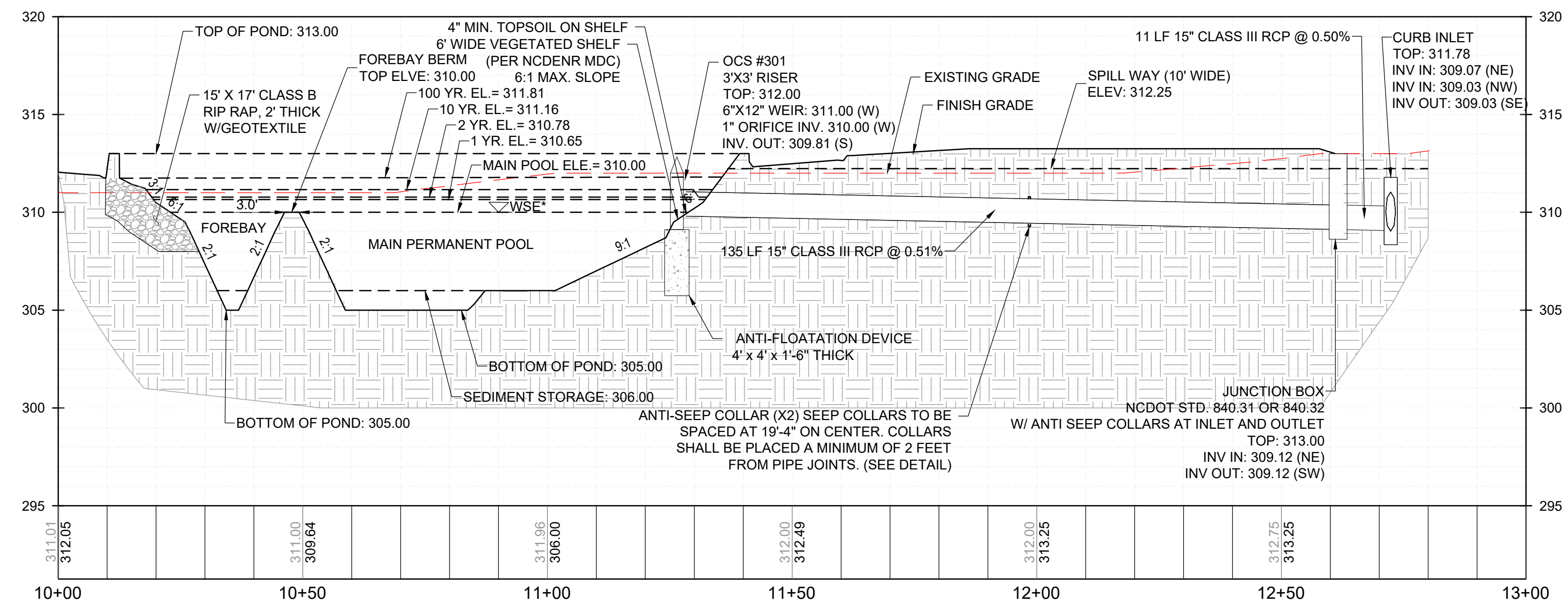
REVISIONS

DATE

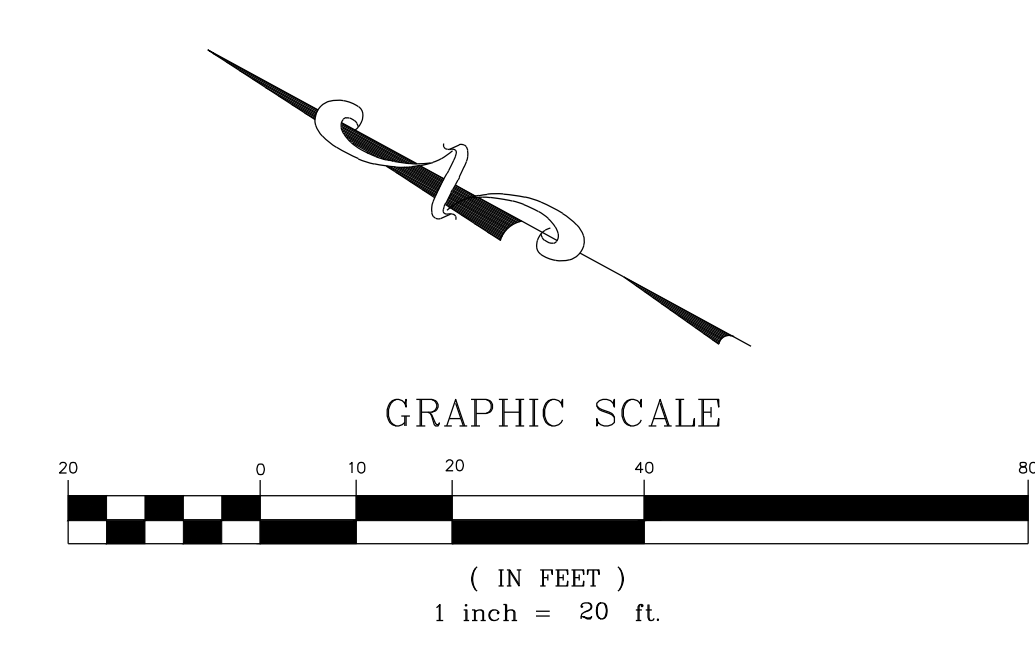
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**WET POND - PLAN**  
HORIZONTAL: 1" = 20'



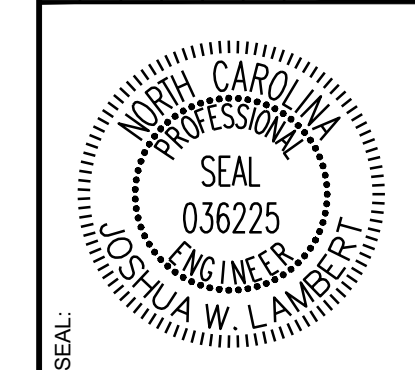
**WET POND - PROFILE**  
VERTICAL: 1" = 5'



**LEGEND:**

- EXISTING PROPERTY LINE
- ROADWAY CENTER LINE
- PROPOSED PROPERTY LINE
- STANDARD ROLL CURB & GUTTER
- PROPOSED STORM DRAIN LINE

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STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE AS SHOWN	DESIGNED BY JWL	DRAWN BY SRG	CHECKED BY JWL
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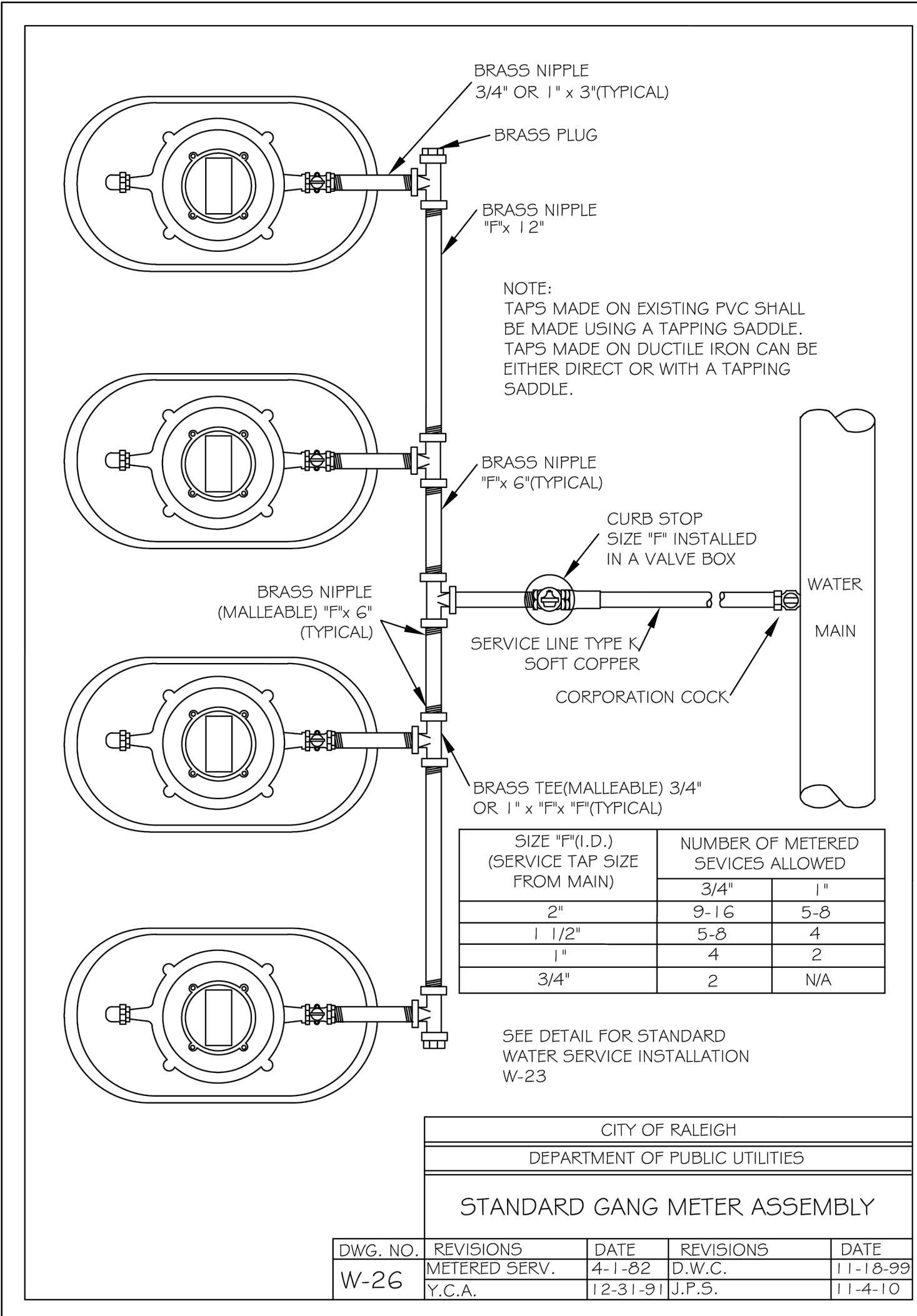
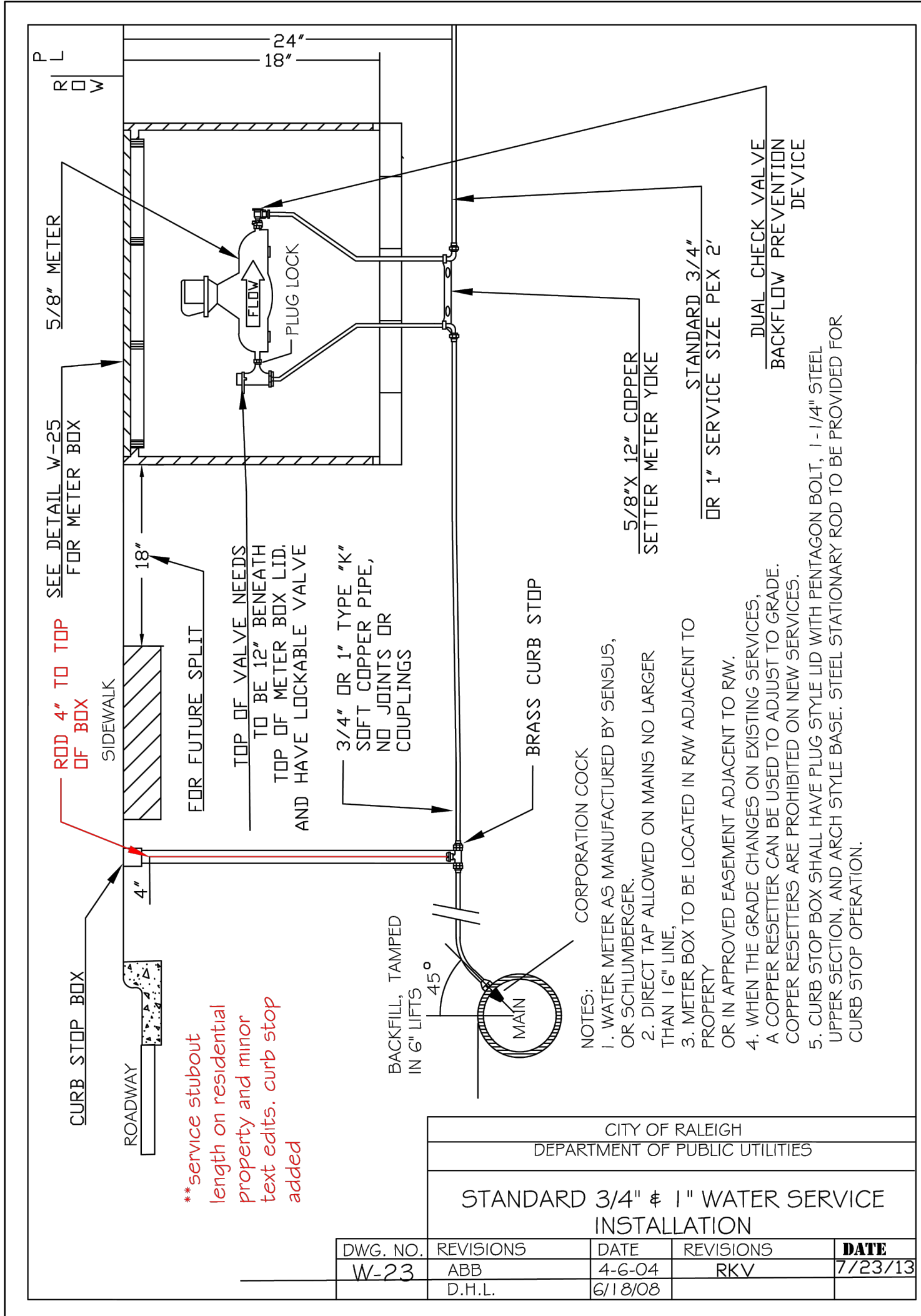
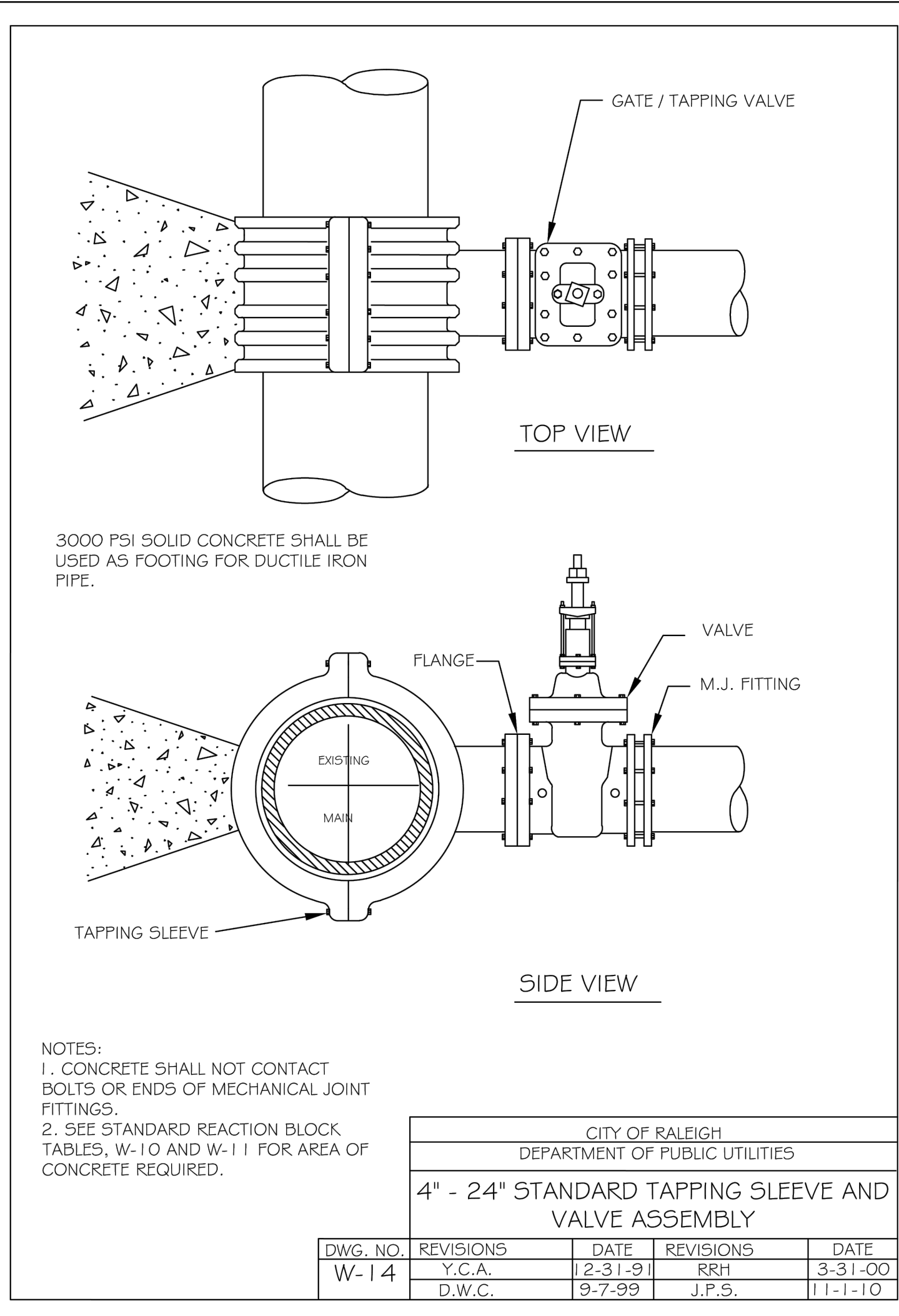
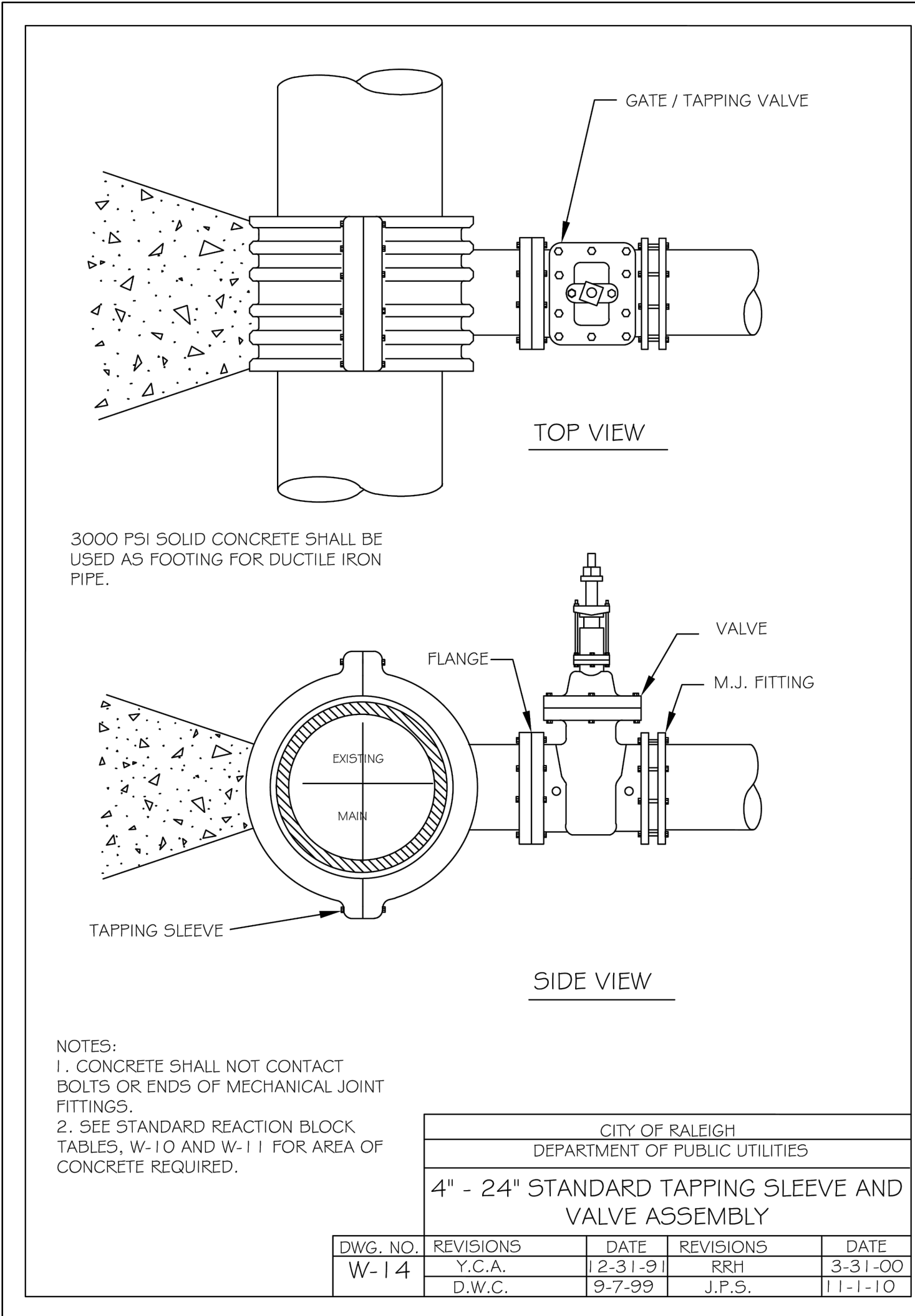
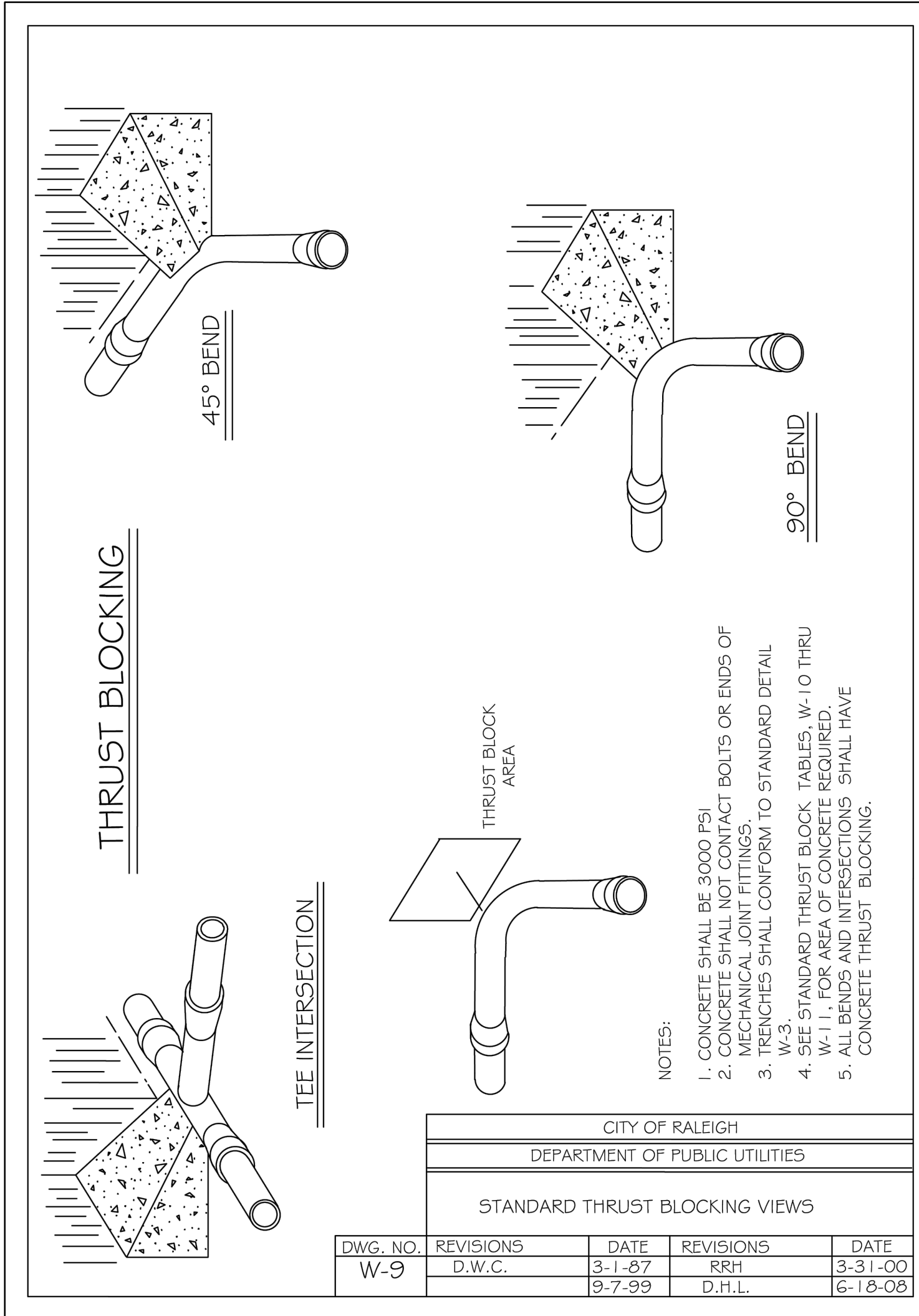
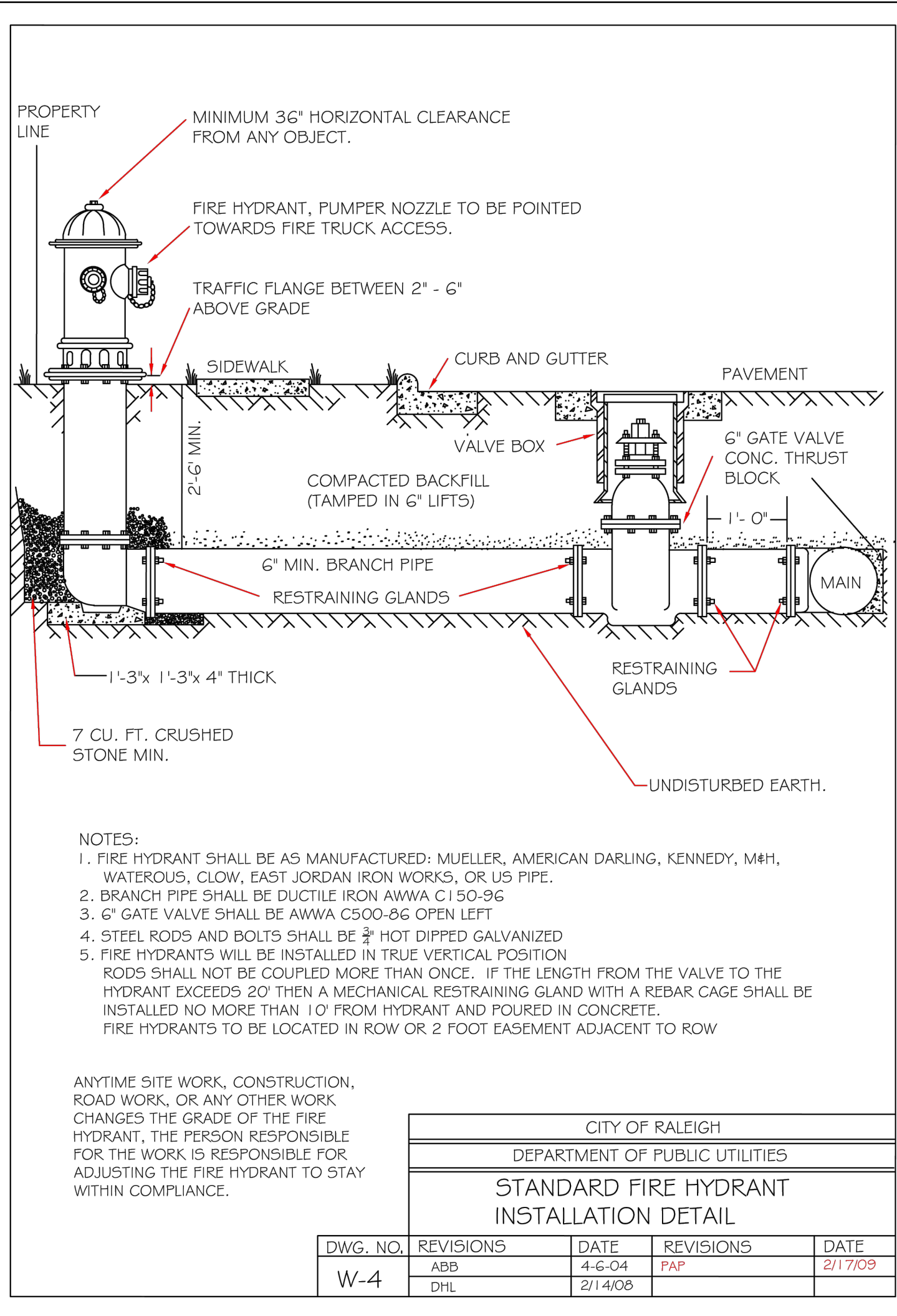
TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS

**STORM DRAINAGE DETAILS**

DRAWING SHEET  
**D-2.2**

16 OF 24





**SITE PERMITTING APPROVAL:**

**WATER AND SEWER PERMITS (IF APPLICABLE)**

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT 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 PUBLIC UTILITIES DEPARTMENT PERMIT # S-3936

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT 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 PUBLIC UTILITIES DEPARTMENT PERMIT # N/A

**CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT - PLANS AUTHORIZED FOR CONSTRUCTION**

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CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT DEVELOPMENT APPROVAL

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT WATER REVIEW OFFICER

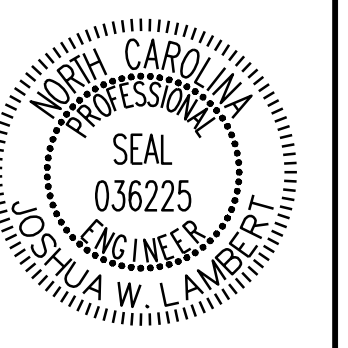
**CITY OF ZEBULON - PLANS AUTHORIZED FOR CONSTRUCTION:**

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CITY OF ZEBULON DEVELOPMENT APPROVAL

ZEBULON WATER REVIEW OFFICER

NO.	REVISIONS	DATE



**STRONGROCK**

ENGINEERING GROUP

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801 FALLS OF NEUSE RD. SUITE 108 RALEIGH, NC 27615 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
			JWL	SRG	JWL

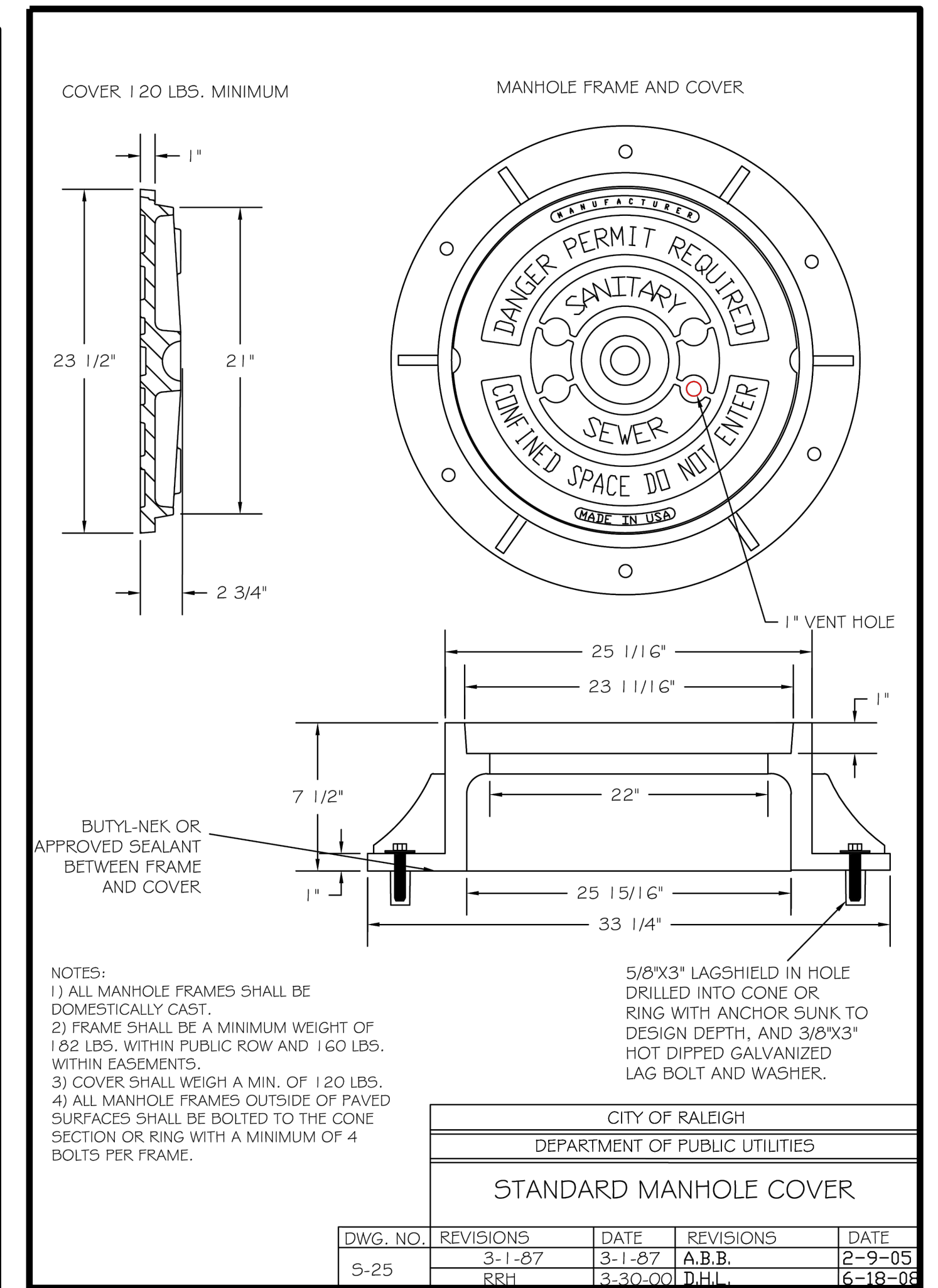
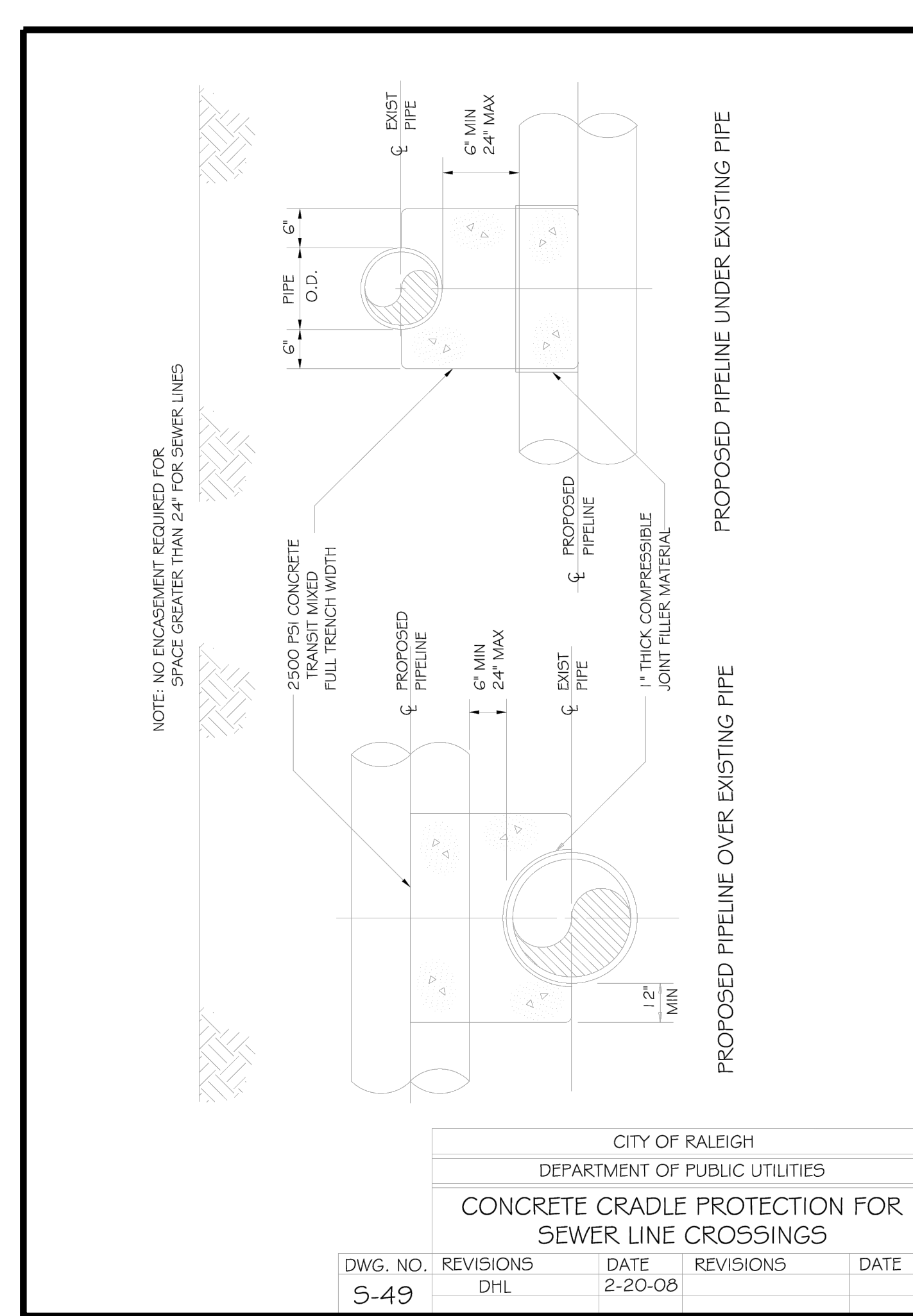
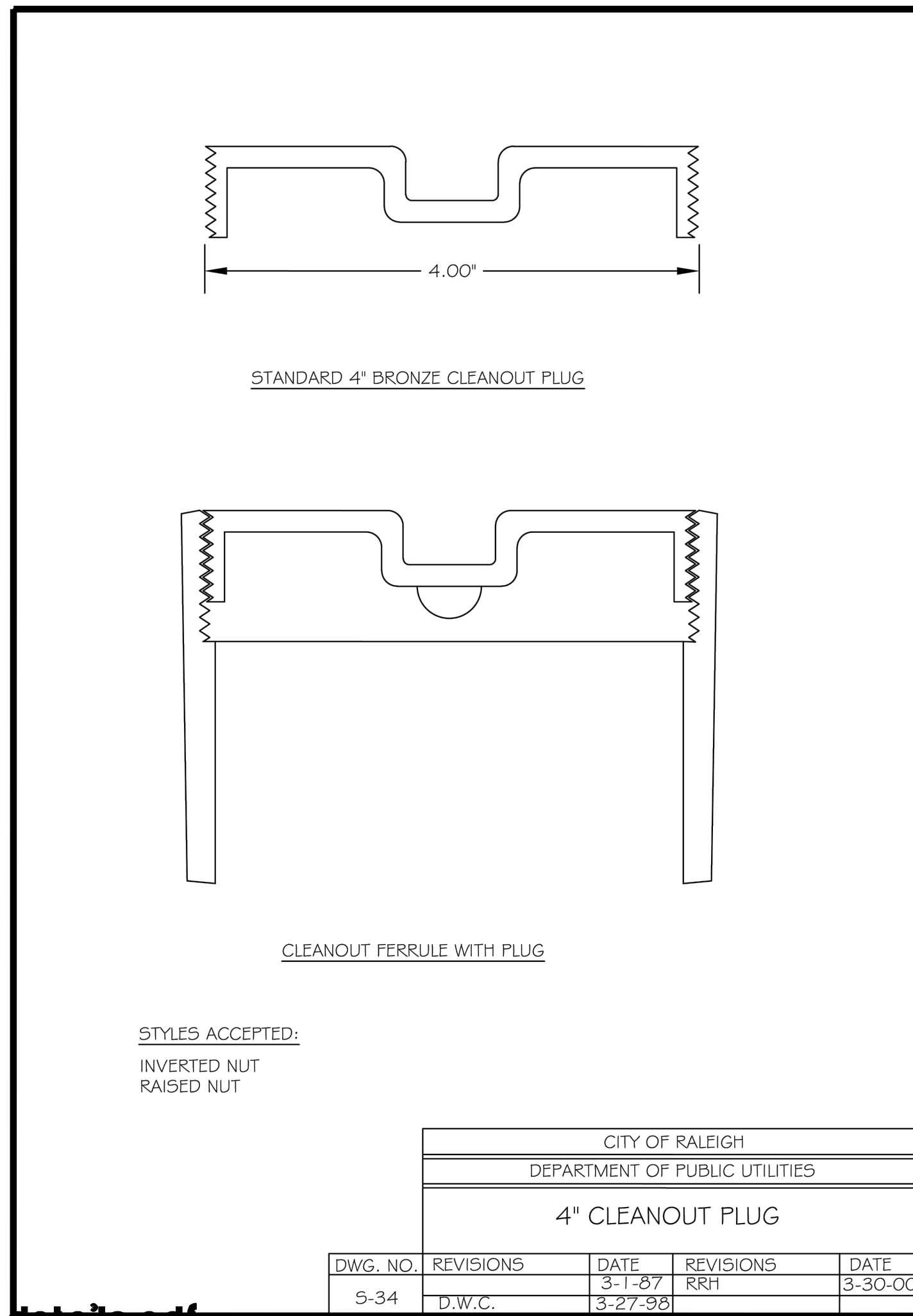
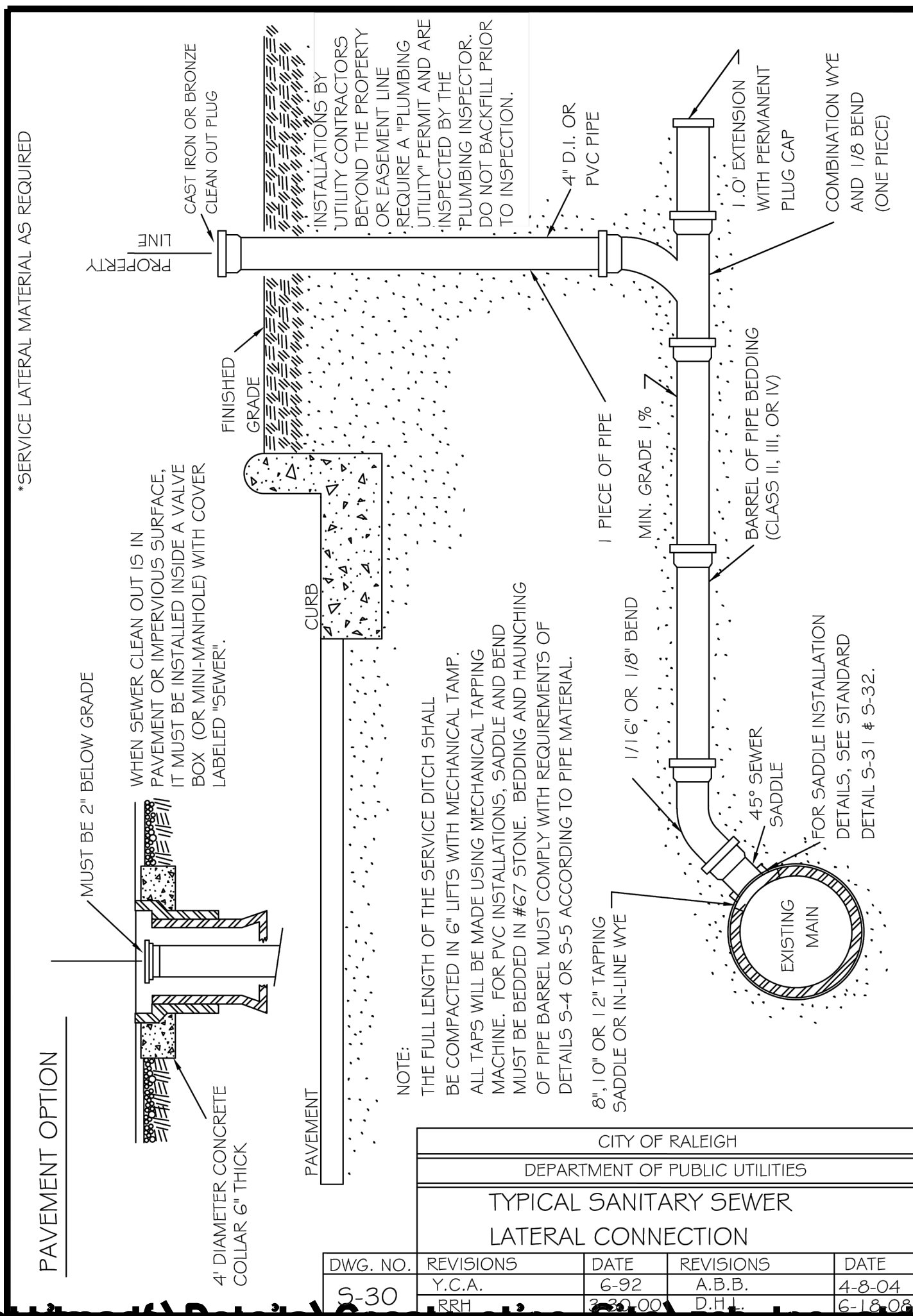
**TRUE-ZEBULON-ARENDELL**

TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA

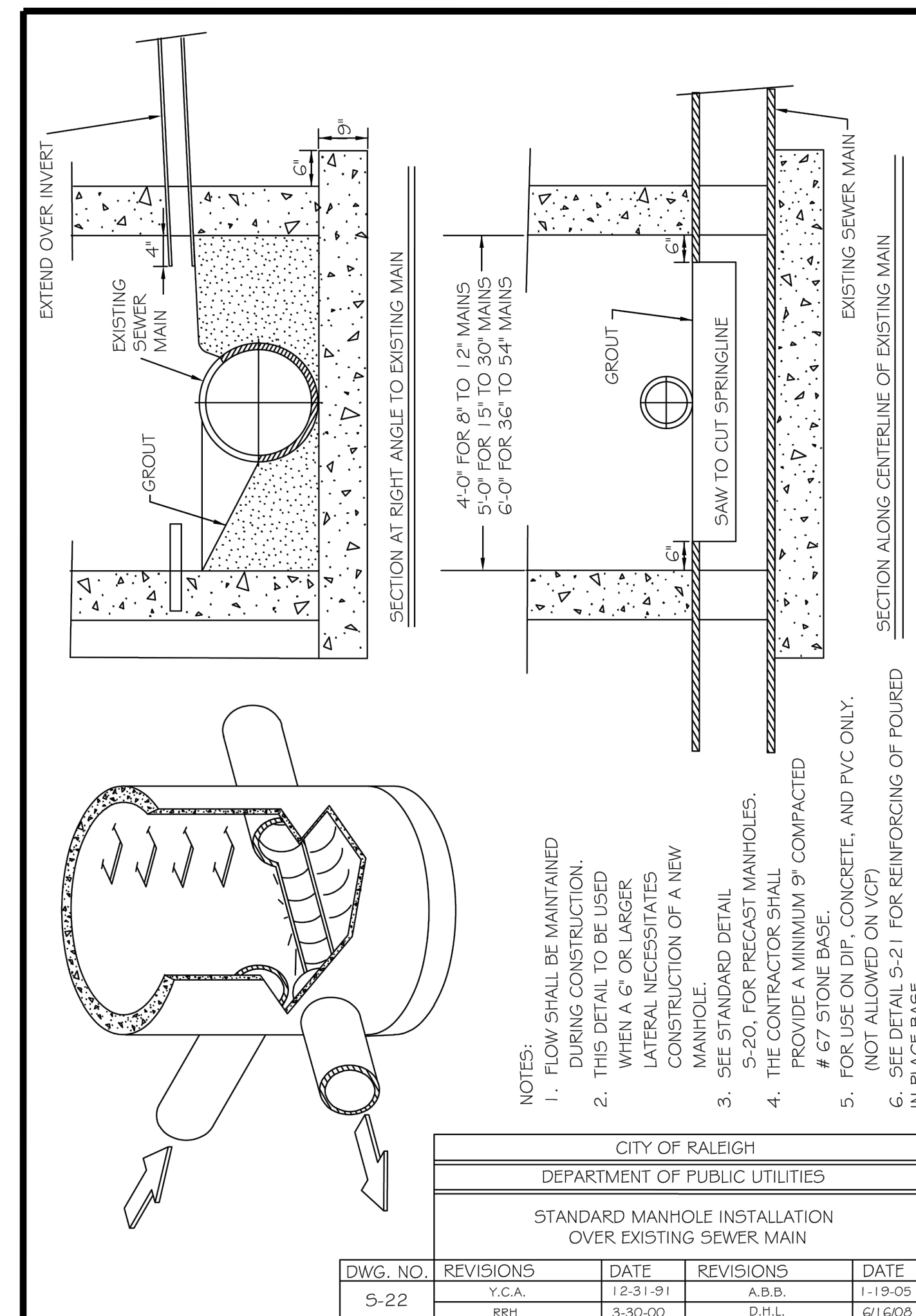
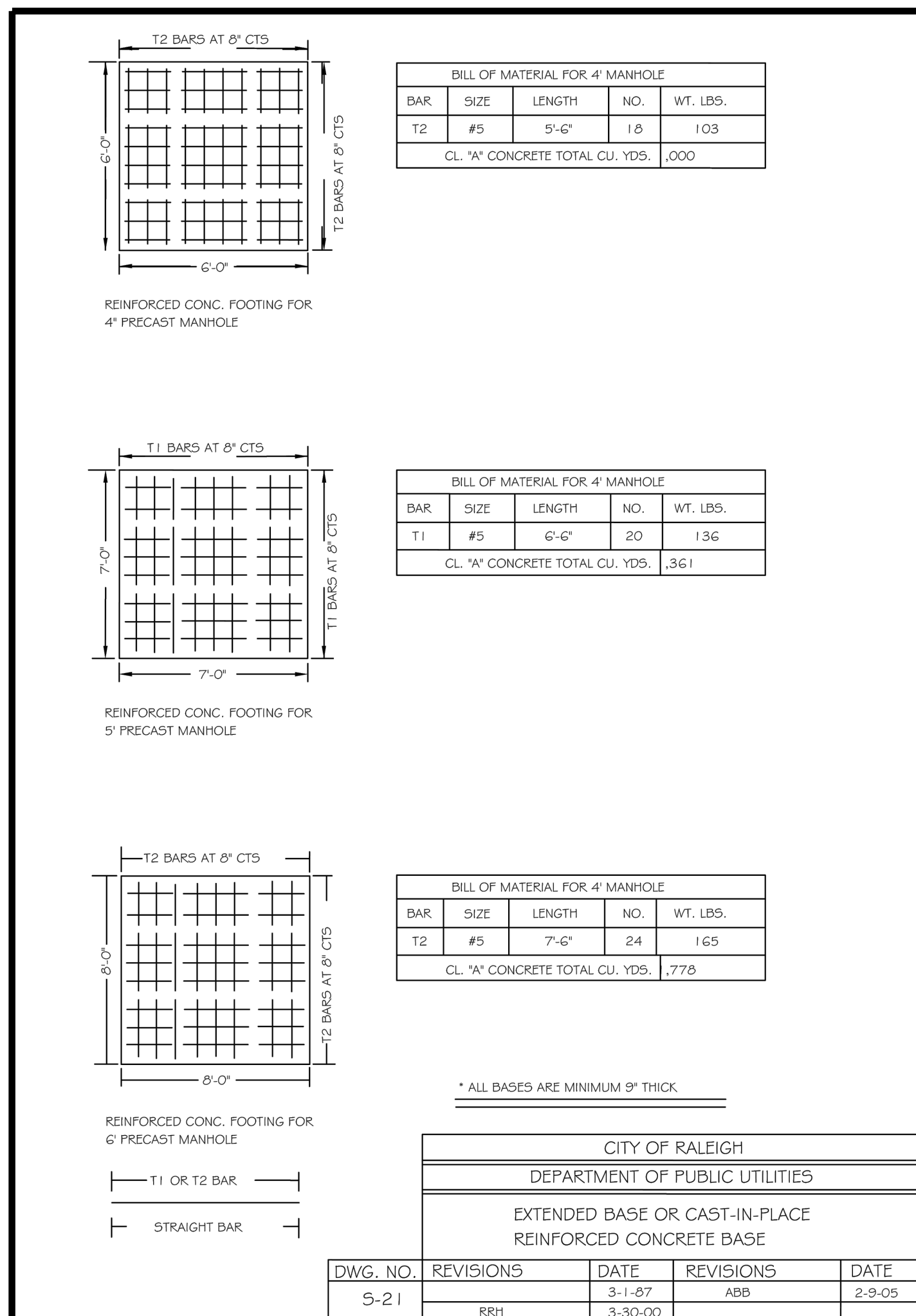
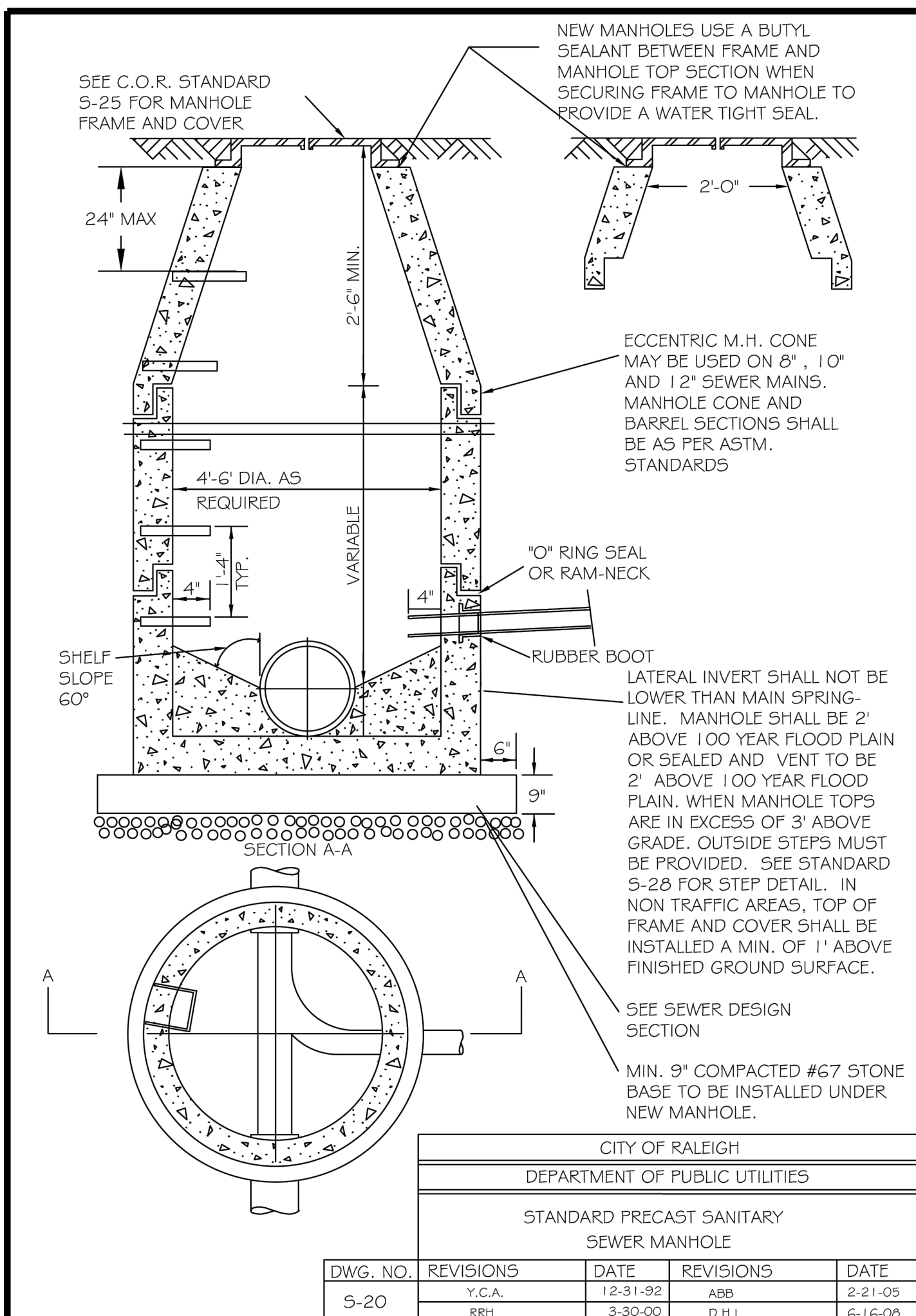
**CONSTRUCTION PLANS**

**WATER DETAILS**

DRAWING SHEET
<b>D-2.3</b>
<b>17 OF 24</b>



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**SITE PERMITTING APPROVAL:**

WATER AND SEWER PERMITS (IF APPLICABLE)

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT 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 PUBLIC UTILITIES DEPARTMENT PERMIT # S-3938. CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT 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 PUBLIC UTILITIES DEPARTMENT PERMIT # N/A.

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CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT DEVELOPMENT APPROVAL

CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT WATER REVIEW OFFICER

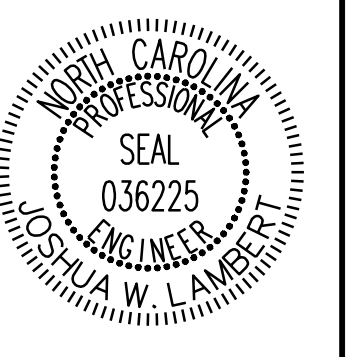
**CITY OF ZEBULON - PLANS AUTHORIZED FOR CONSTRUCTION:**

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CITY OF ZEBULON DEVELOPMENT APPROVAL

ZEBULON WATER REVIEW OFFICER

NO.	REVISIONS	DATE	BY

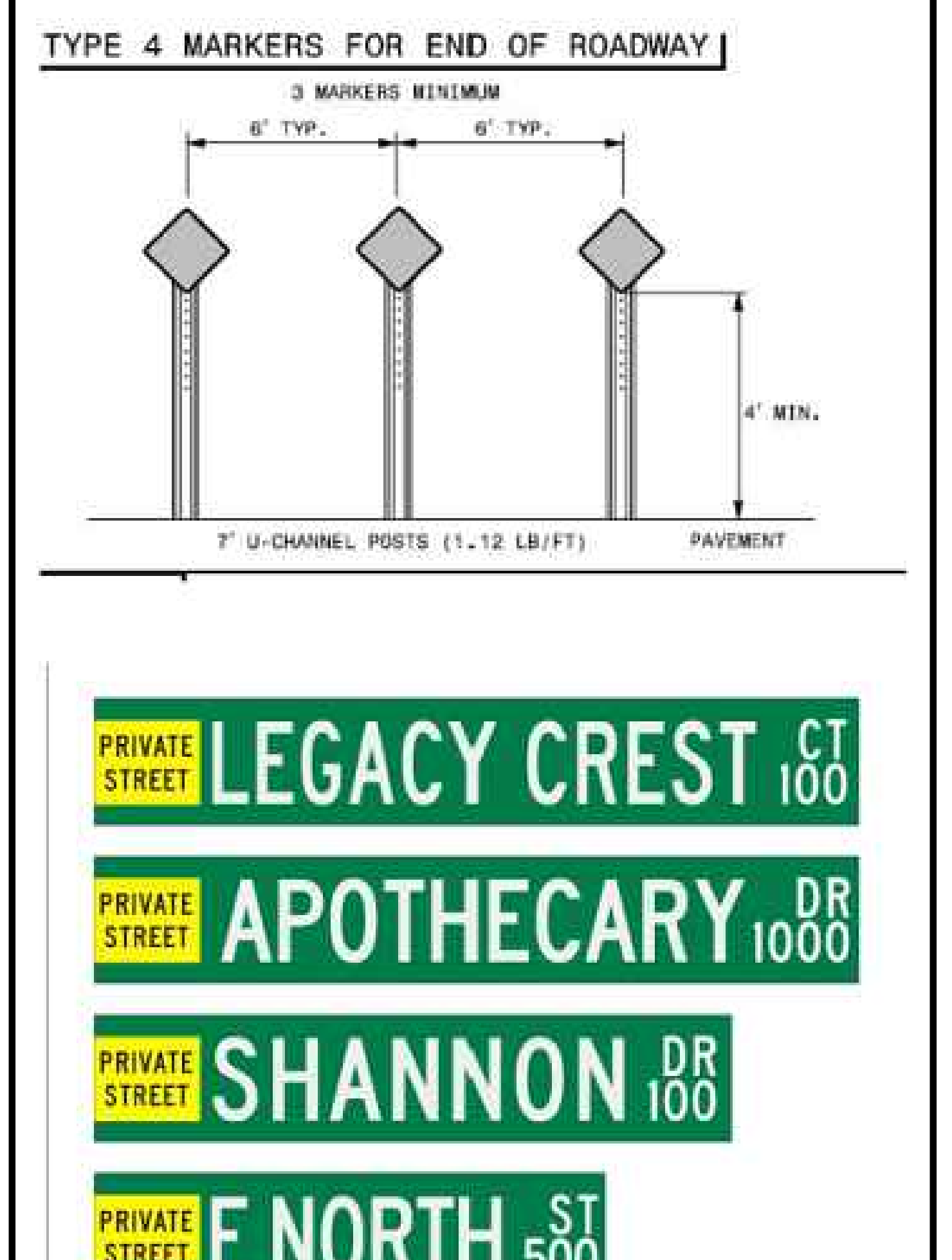
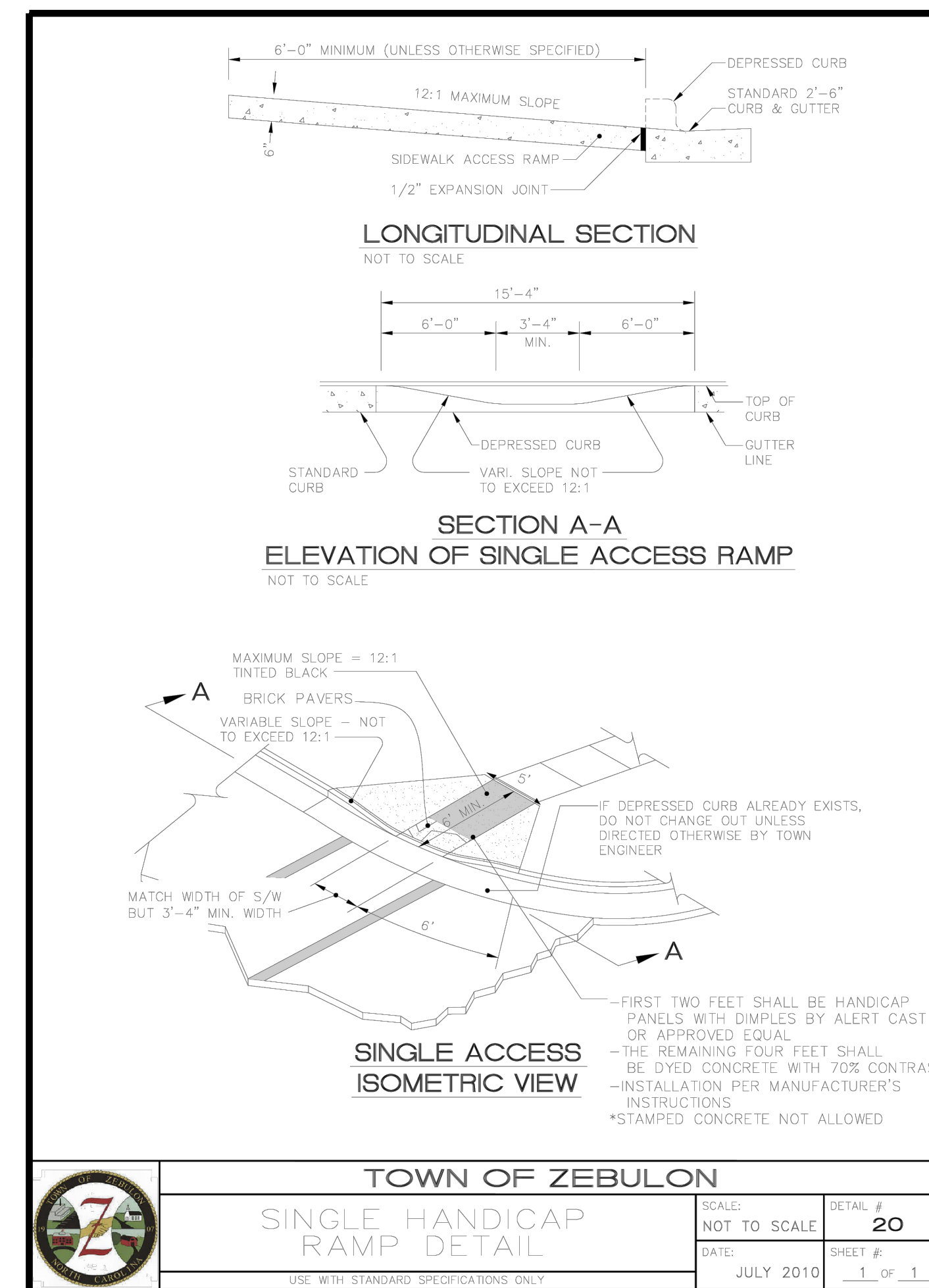
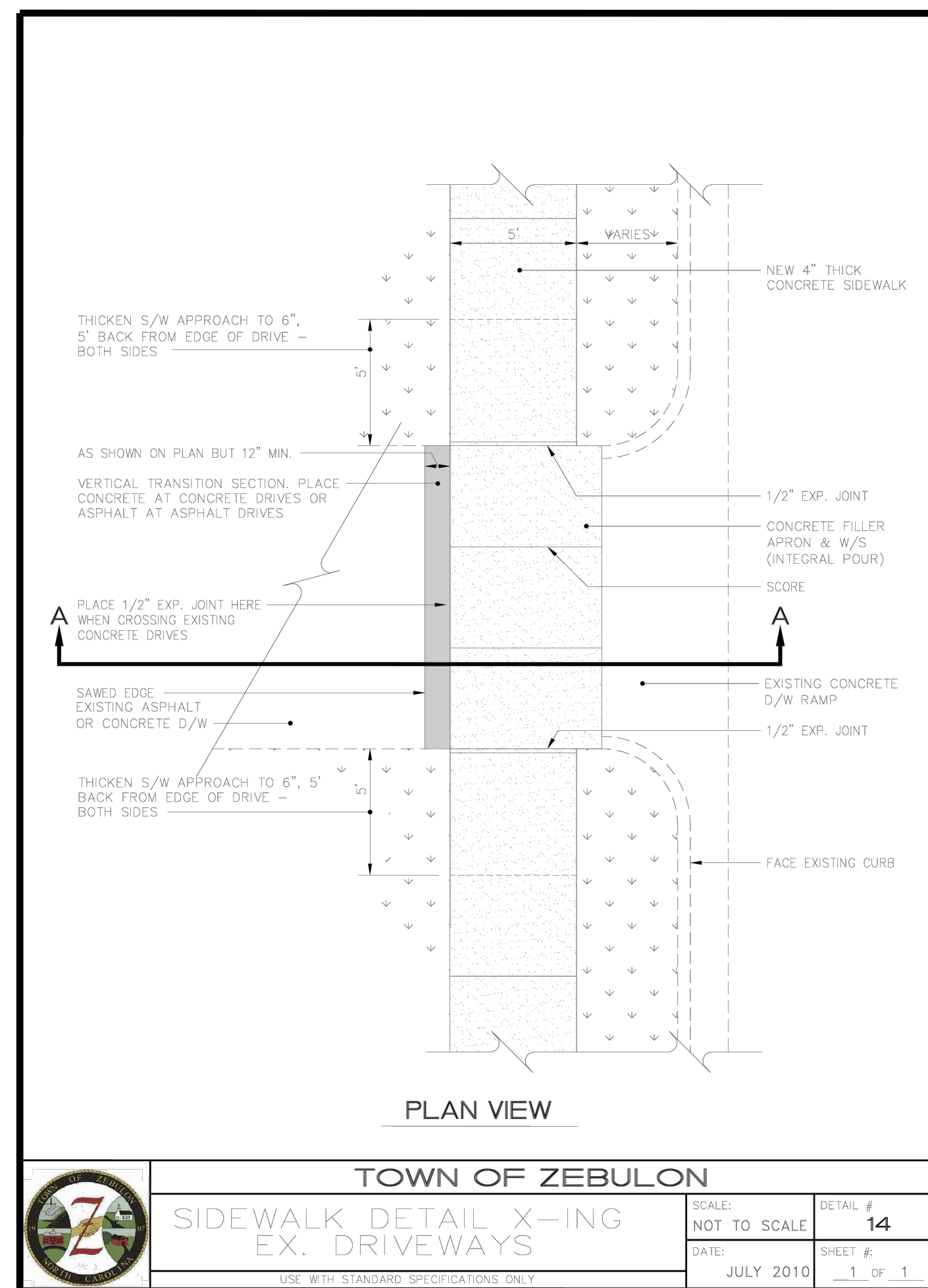
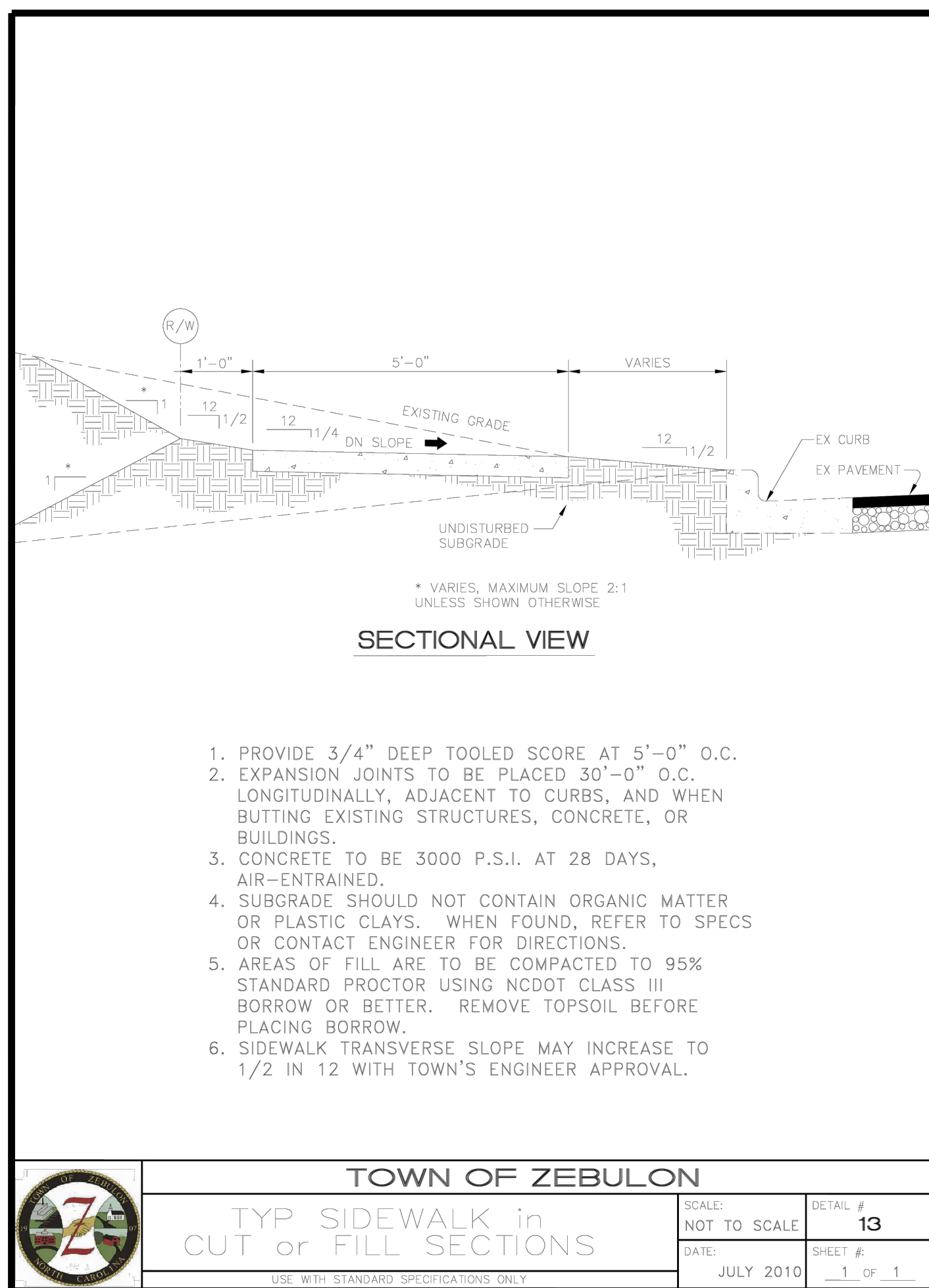
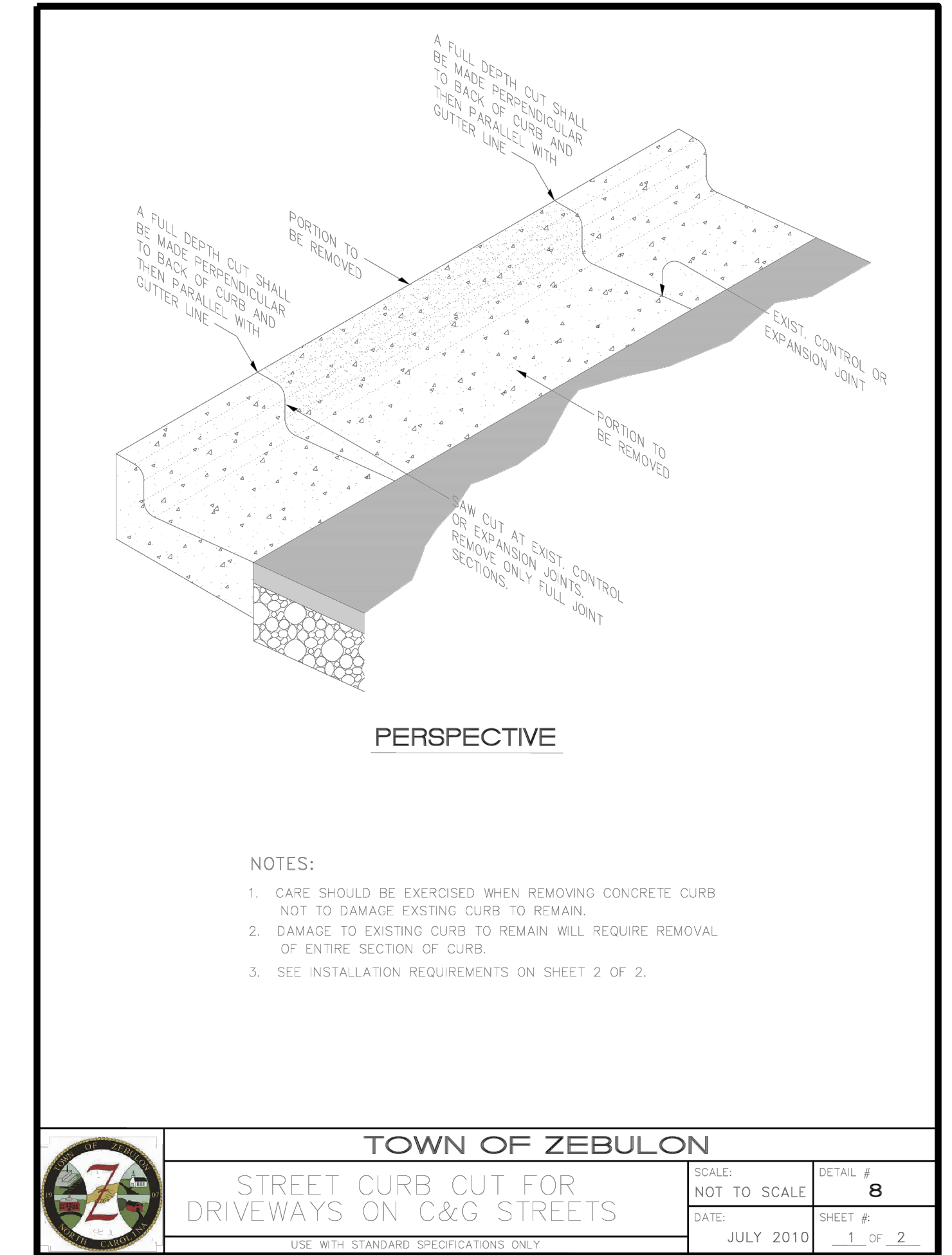
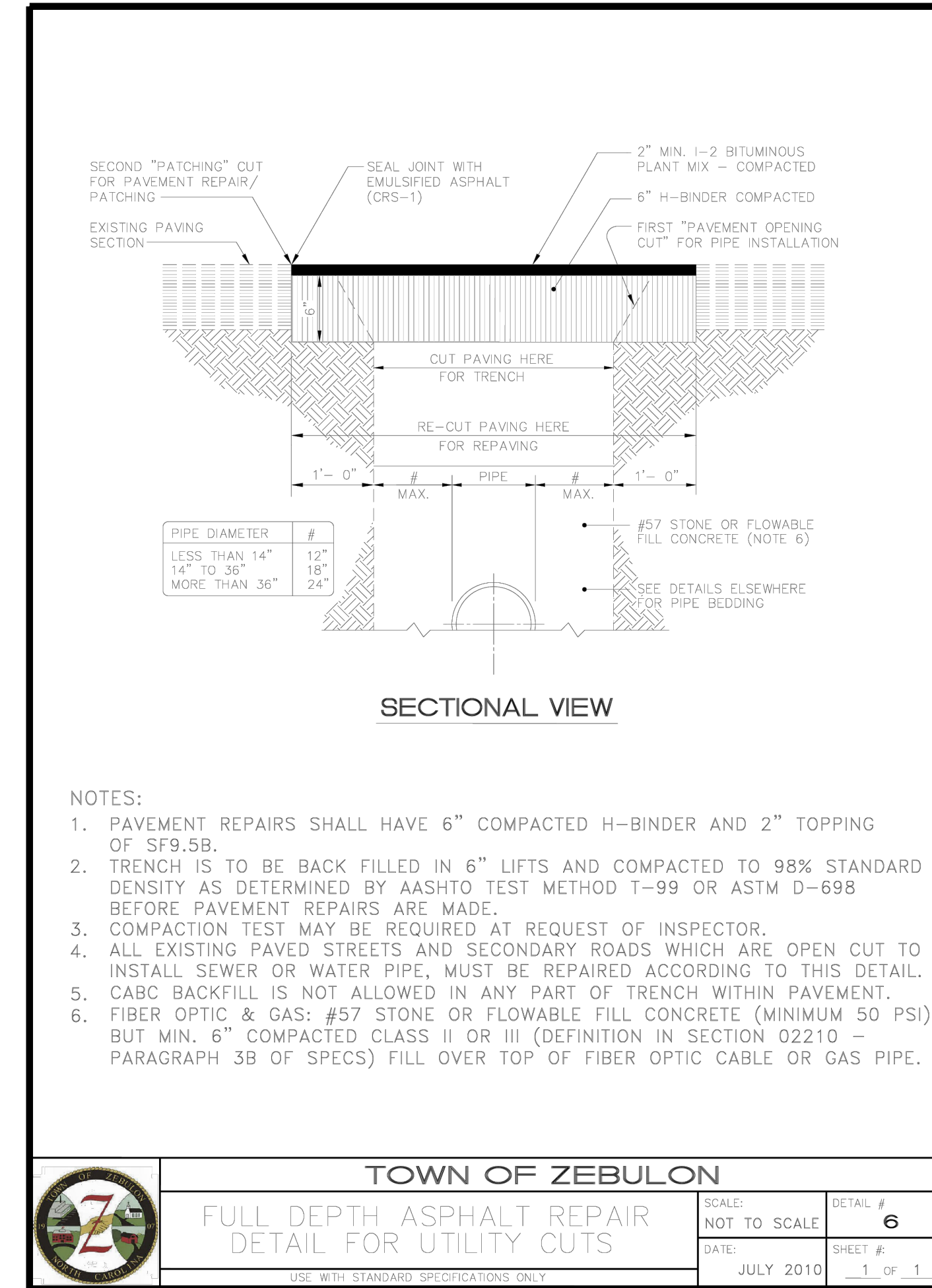
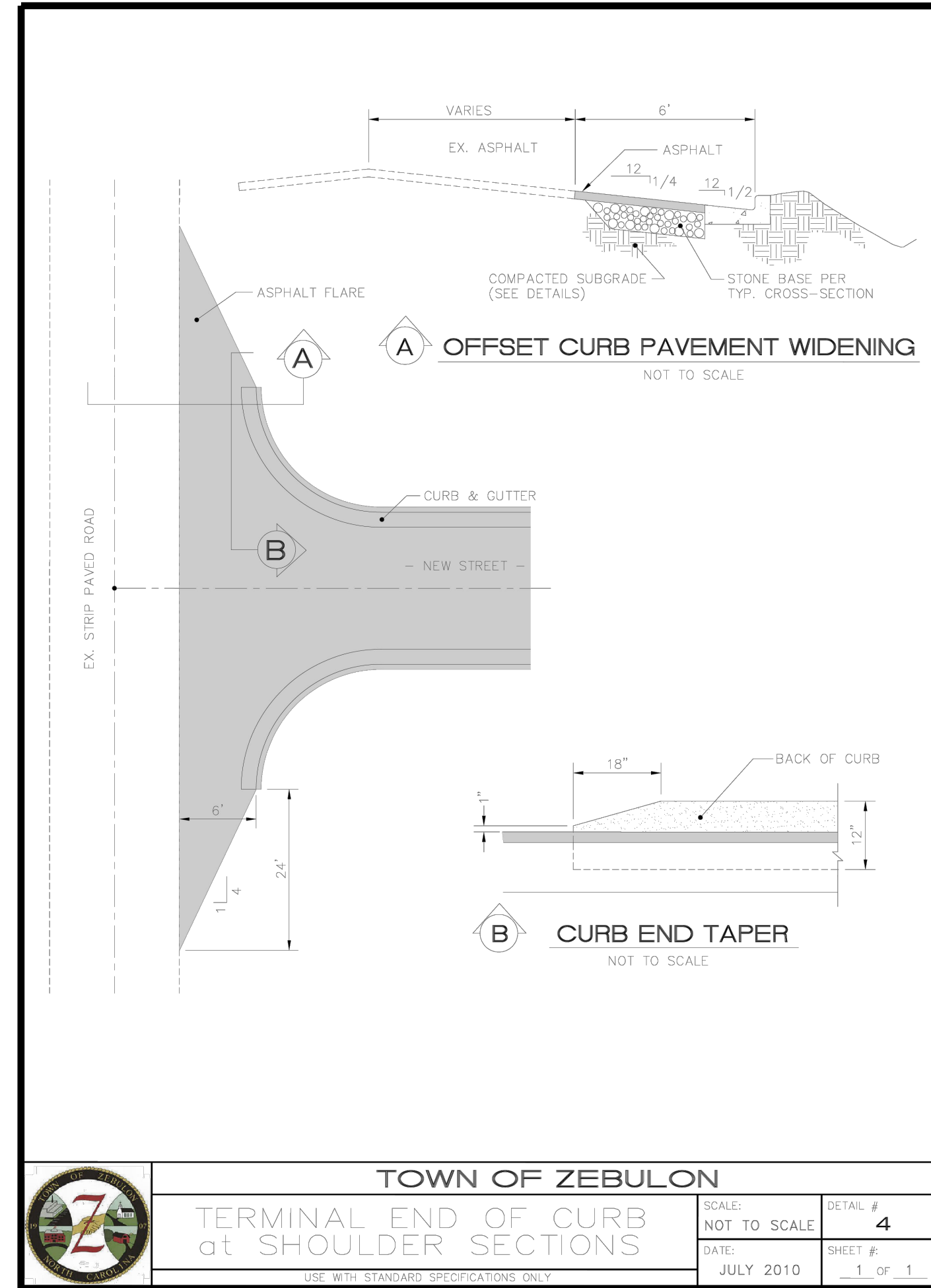
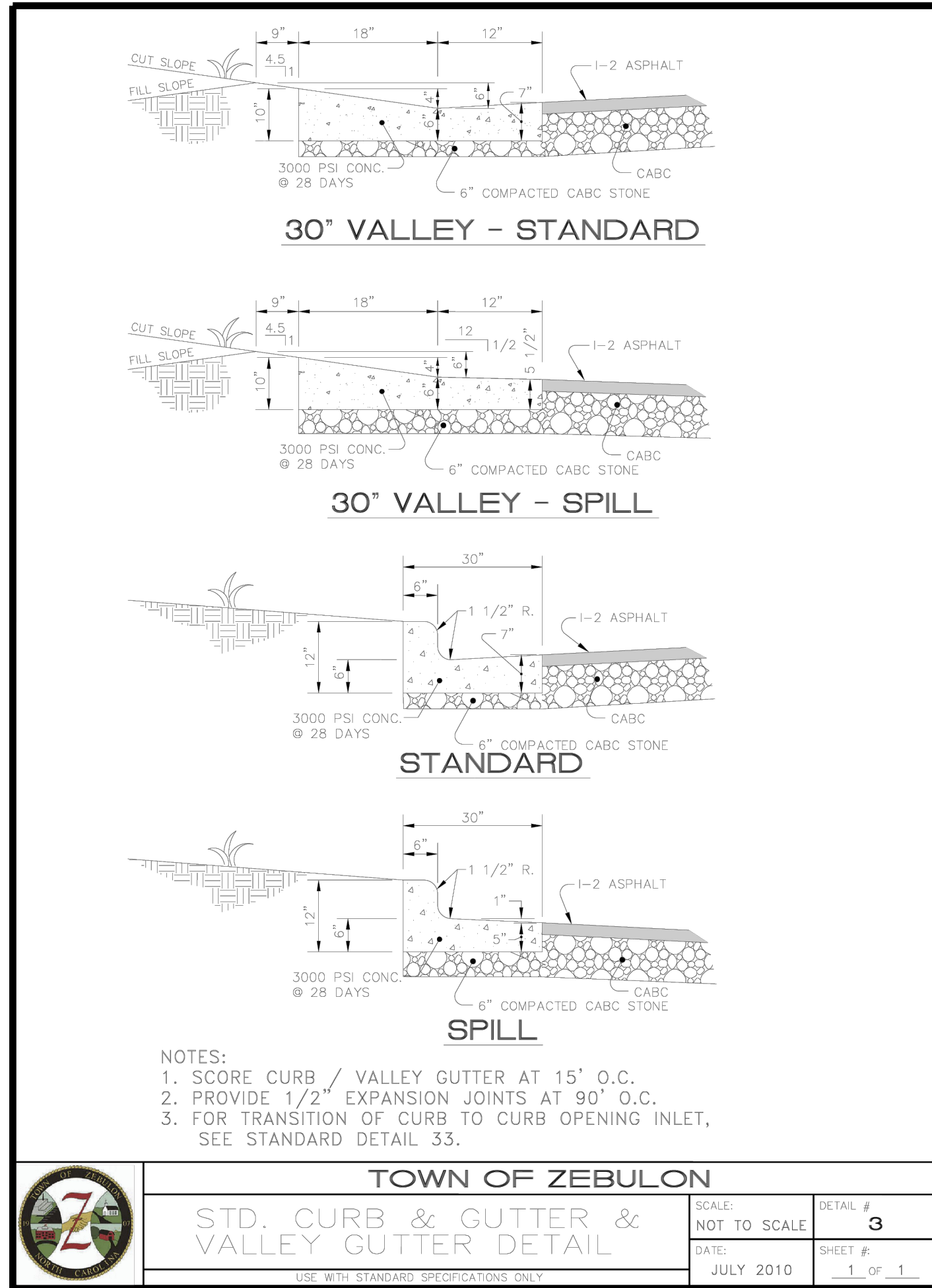


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6801 FALLS OF NEUSE RD. SUITE 108 RALEIGH, NC 27615 | INFORMATION@STRONGROCKGROUP.COM

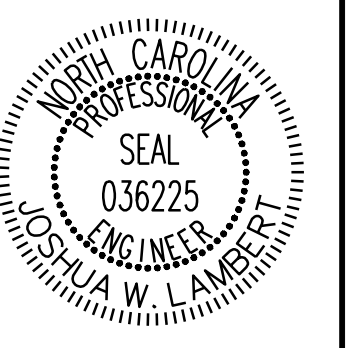
STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE	AS SHOWN	DESIGNED BY	JWL	SRG	CHECKED BY	JWL
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TRUE- ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
SEWER DETAILS

DRAWING SHEET  
D-2.4



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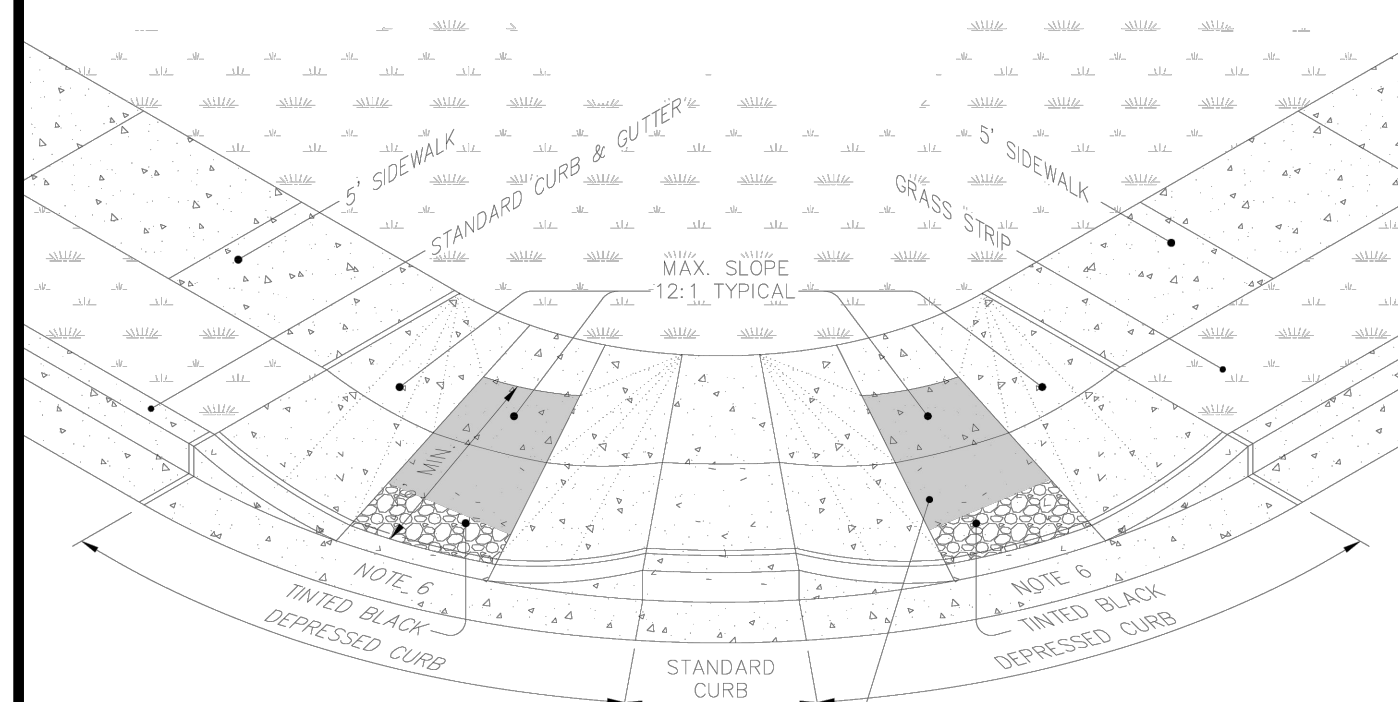
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TRUE- ZEBULON-ARENDELL  
 TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
 CONSTRUCTION PLANS  
**SITE DETAILS**

DRAWING SHEET	D-2.5
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NOTES:

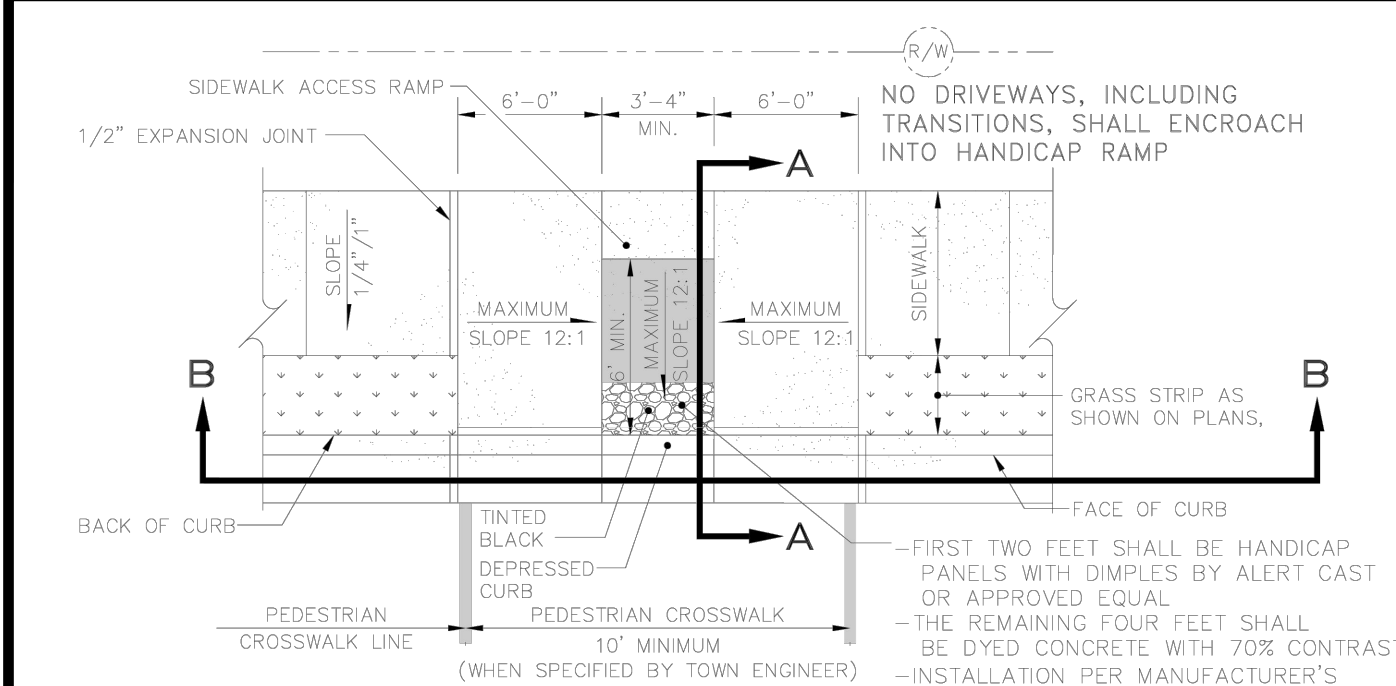
1. WHEELCHAIR RAMPS SHALL BE PROVIDED AT LOCATIONS AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER. WHEELCHAIR RAMPS SHALL BE LOCATED AS INDICATED IN THESE DETAILS; HOWEVER, THE LOCATION MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT. AT THESE LOCATIONS, NOT LESS THAN 2 FEET OF FULL HEIGHT CURB SHALL BE PLACED BETWEEN ADJACENT RAMPS.
2. NO SLOPE ON THE WHEELCHAIR RAMP SHALL EXCEED 1 1/2" (12:1) IN RELATIONSHIP TO THE GRADE OF THE STREET.
3. IN NO CASE SHALL THE WIDTH OF THE WHEELCHAIR RAMP BE LESS THAN 40" (3'-4") HOWEVER, WIDTH MAY EXCEED 40".
4. USE AIR ENTRAINED 3000 PSI CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.
5. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STANDARD DRAWINGS.
6. CURB DEPRESSION MUST GO IN WHETHER OR NOT SIDEWALK IS PLACED.



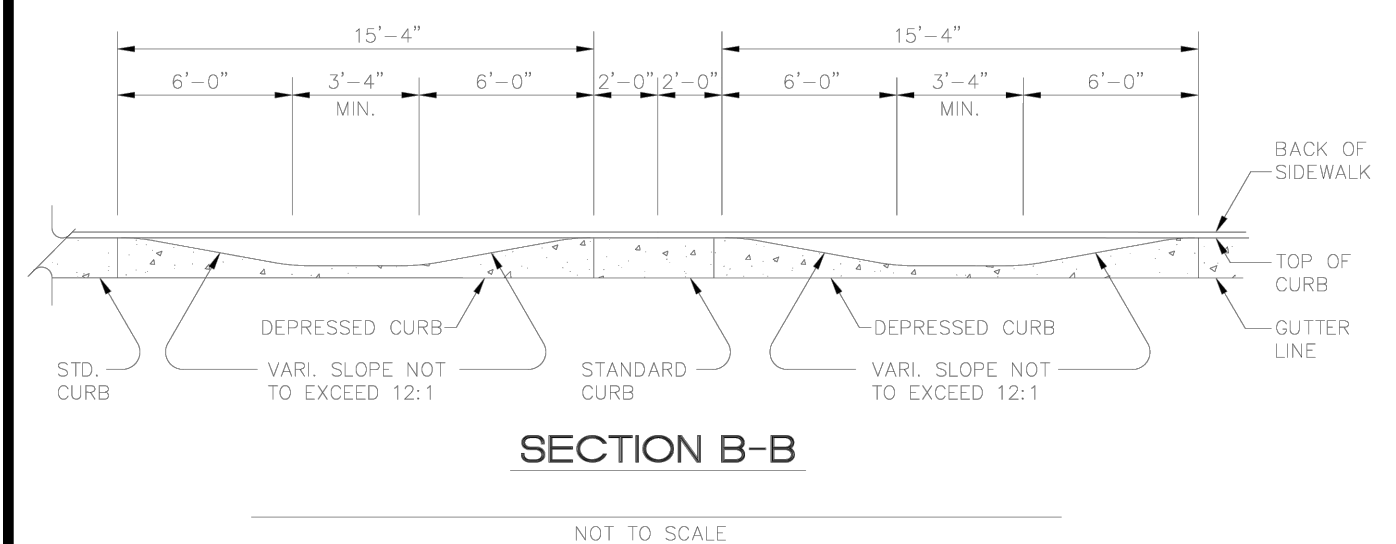
STANDARD ADA WHEELCHAIR  
SIDEWALK ACCESS AT CURB RETURNS

PERSPECTIVE

	TOWN OF ZEBULON	
	<b>DOUBLE HANDICAP RAMP DETAIL</b>	
SCALE: NOT TO SCALE	DETAIL # 21	
DATE: JULY 2010	SHEET # 1 OF 2	
USE WITH STANDARD SPECIFICATIONS ONLY		



**SECTION A-A  
PUBLIC STREET TIE-IN**  
NOT TO SCALE



**SECTION B-B**  
NOT TO SCALE

	TOWN OF ZEBULON	
	<b>DOUBLE HANDICAP RAMP DETAIL</b>	
SCALE: NOT TO SCALE	DETAIL # 21	
DATE: JULY 2010	SHEET # 2 OF 2	
USE WITH STANDARD SPECIFICATIONS ONLY		

Missing or invalid reference

File: P:\STRONGROCK PROJECTS\True - Zebulon - File Path: \\BONDROCK\B061016\1\Details\Construction Site\zebulon\_std\_details.pdf Sheet: 24

Missing or invalid reference

File Path: \\BONDROCK\B061016\1\Details\Construction Site\zebulon\_std\_details.pdf Sheet: 25

	TOWN OF ZEBULON	
	<b>TYPICAL CURB &amp; GUTTER STREET STANDARDS</b>	
SCALE: NOT TO SCALE	DETAIL # 1	
DATE: JULY 2010	SHEET # 1 OF 1	
USE WITH STANDARD SPECIFICATIONS ONLY		

CLASSIFICATION	SECTION A		SECTION B		SECTION C	
	MIN. TO MAX. (FT)	SPR. S.	MIN. TO MAX. (FT)	SPR. S.	MIN. TO MAX. (FT)	SPR. S.
DL-05-SAC	26"	N/A	3"	8"	8"	10"
LOCAL STREET	26"	1" FROM 1/4"	3"	8"	8"	10"
RESIDENTIAL COLLECTOR	35"	1" FROM 1/4"	4"	8"	8"	10"
THOROUGHFARE	SEE THOROUGHFARE PLAN	VARIES	SEE NODOT STANDARDS	SEE NODOT STANDARDS	SEE NODOT STANDARDS	SEE NODOT STANDARDS

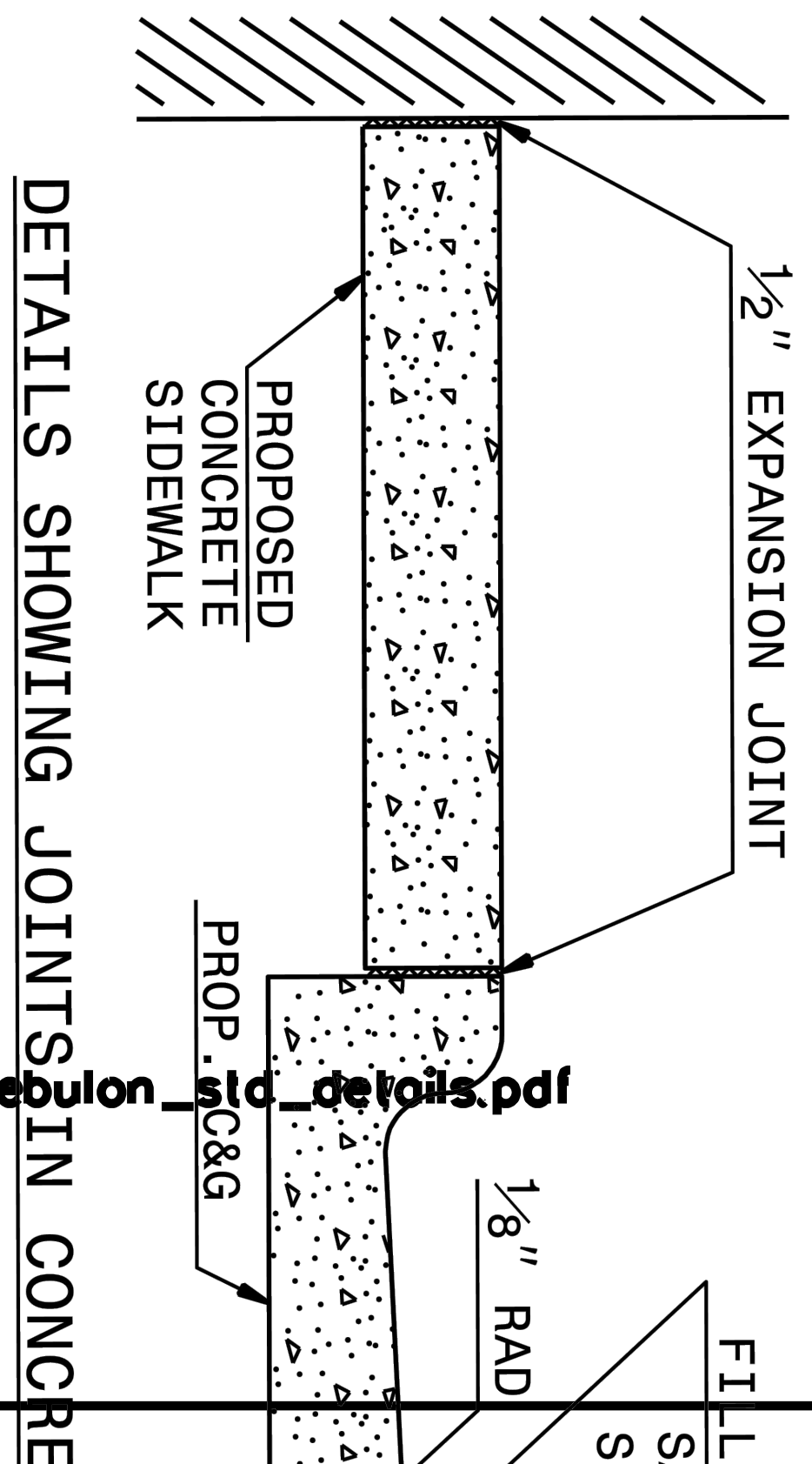
	TOWN OF ZEBULON	
	<b>TYPICAL ASYMMETRIC SECTION WITH SIDEWALK (ON CUT) (S.O.F.)</b>	
SCALE: NOT TO SCALE	DETAIL # 2	
DATE: JULY 2010	SHEET # 1 OF 1	
USE WITH STANDARD SPECIFICATIONS ONLY		

Missing or invalid reference

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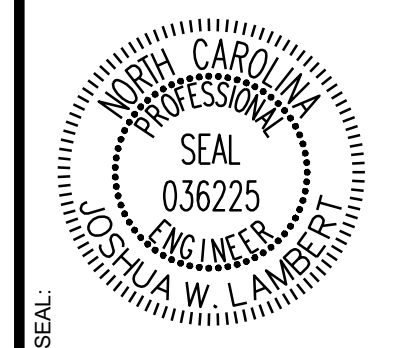
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DETAILS SHOWING JOINTS IN CONCRETE

NO.	REVISIONS	DATE	BY

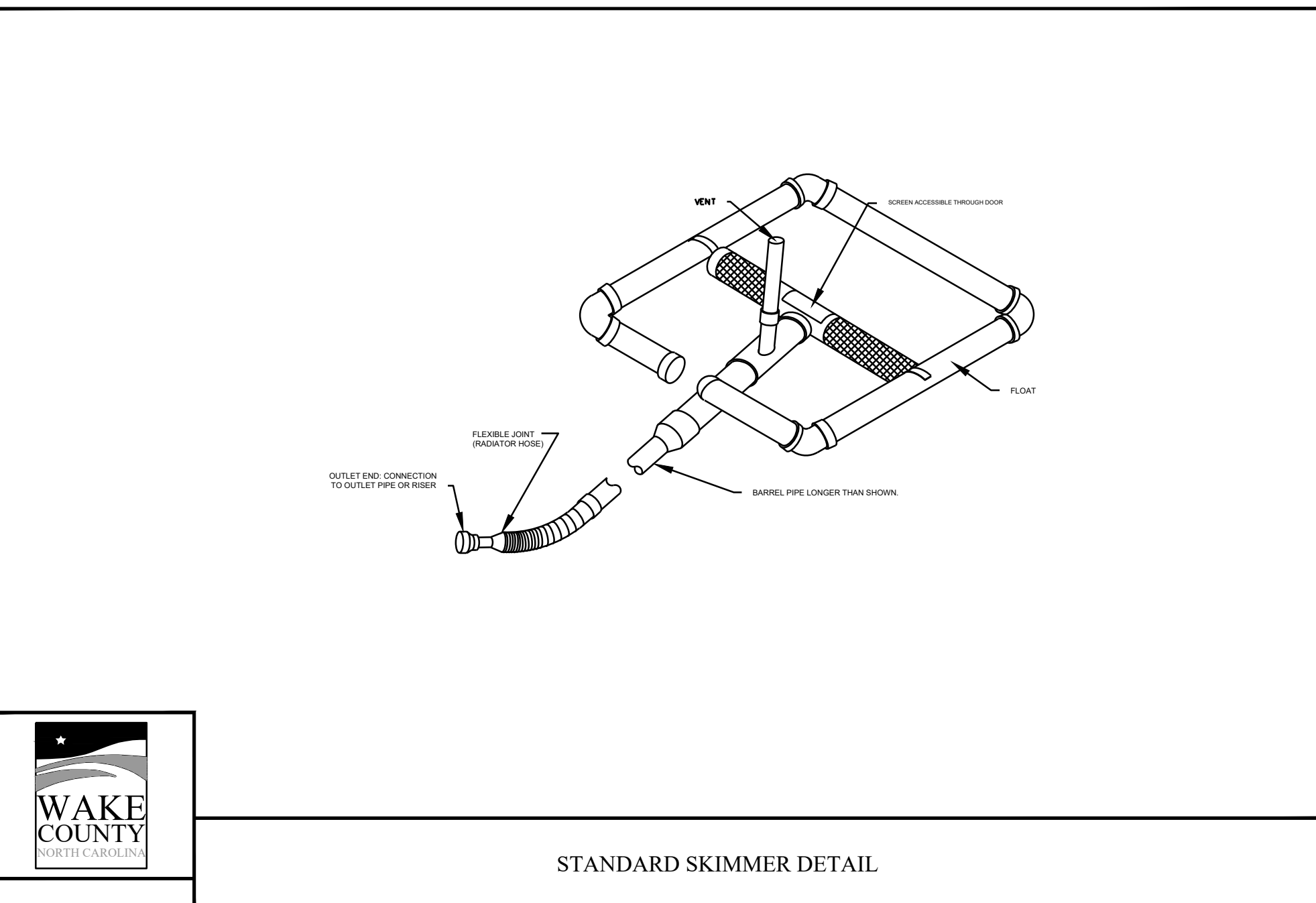
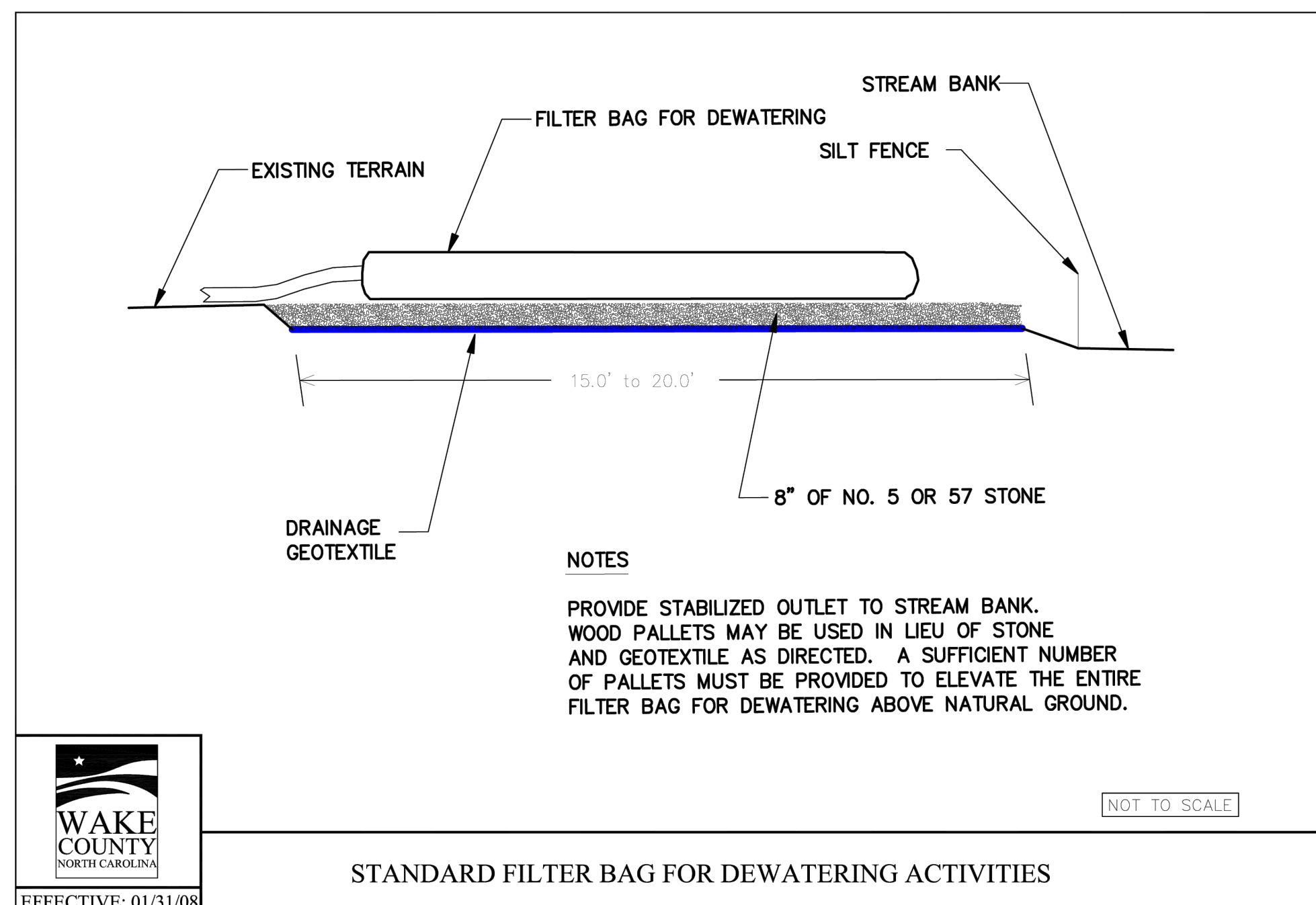
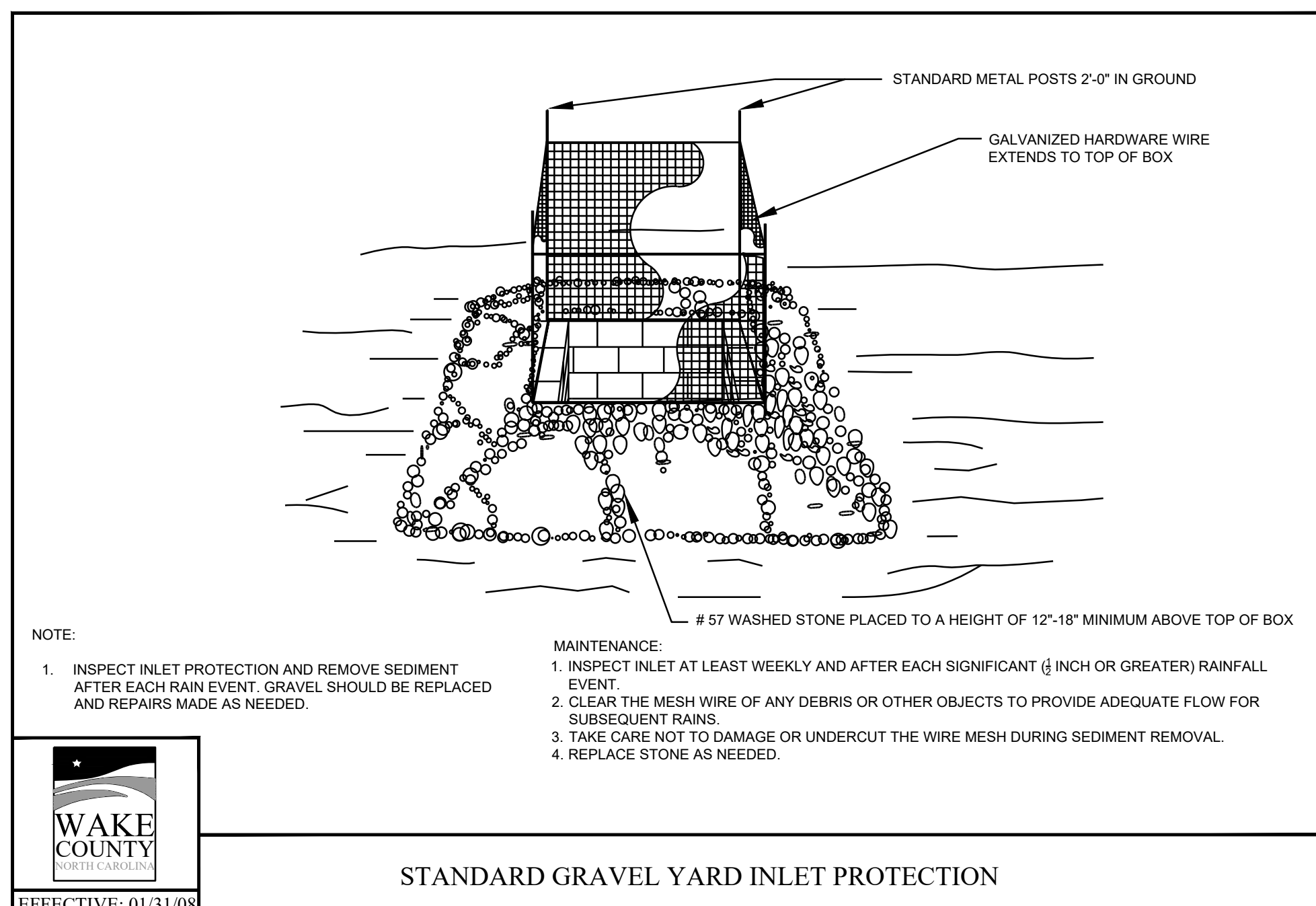
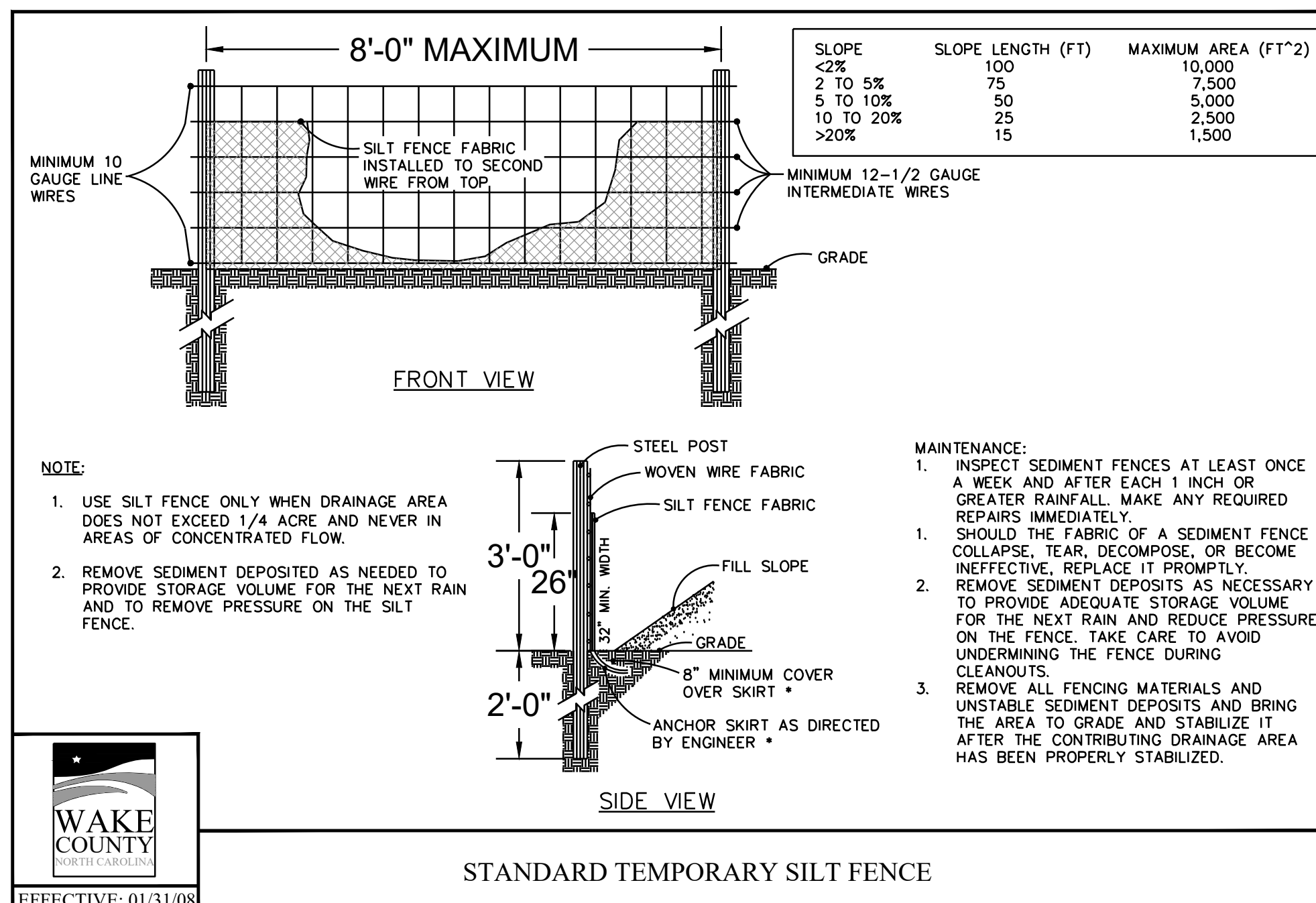
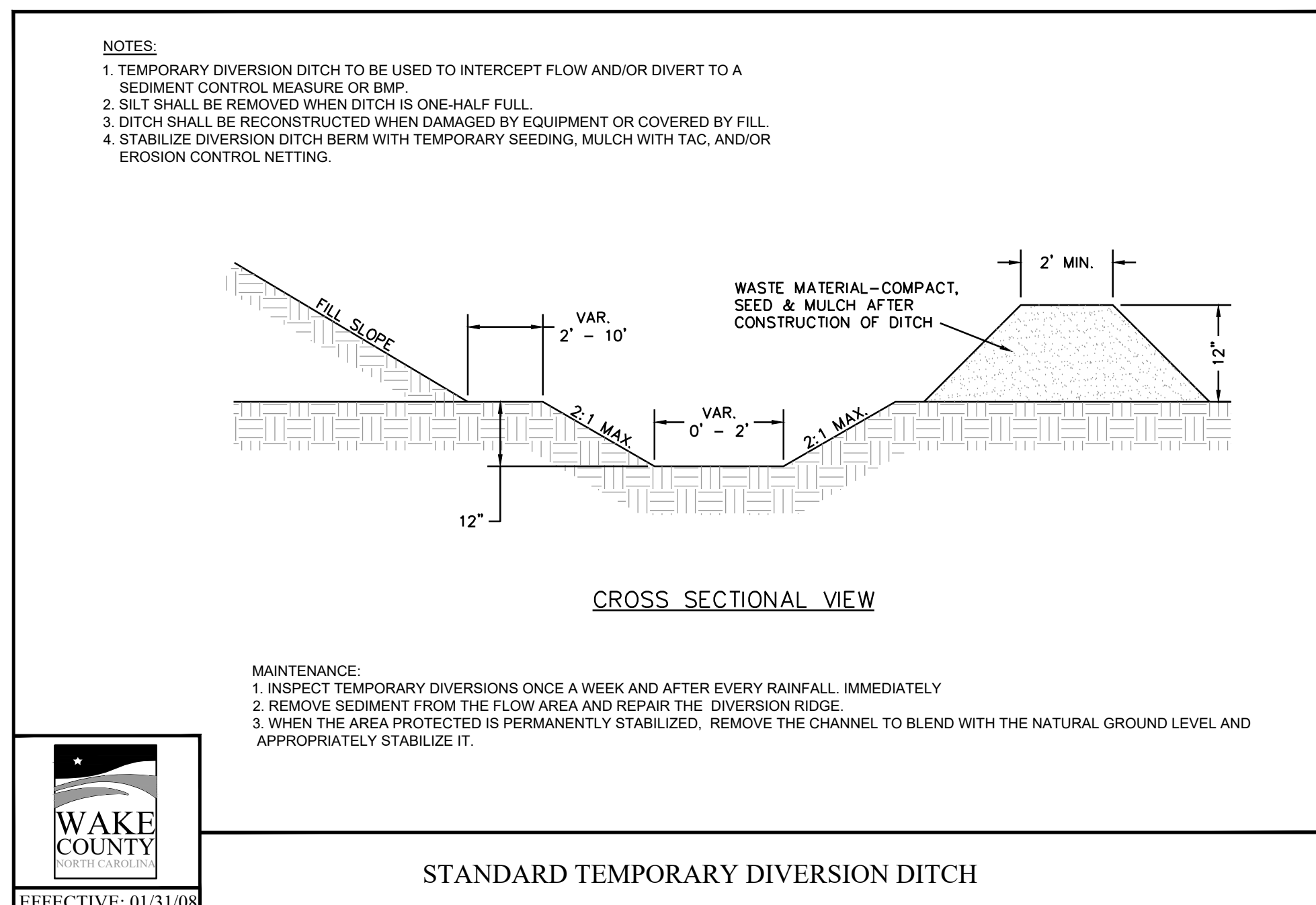
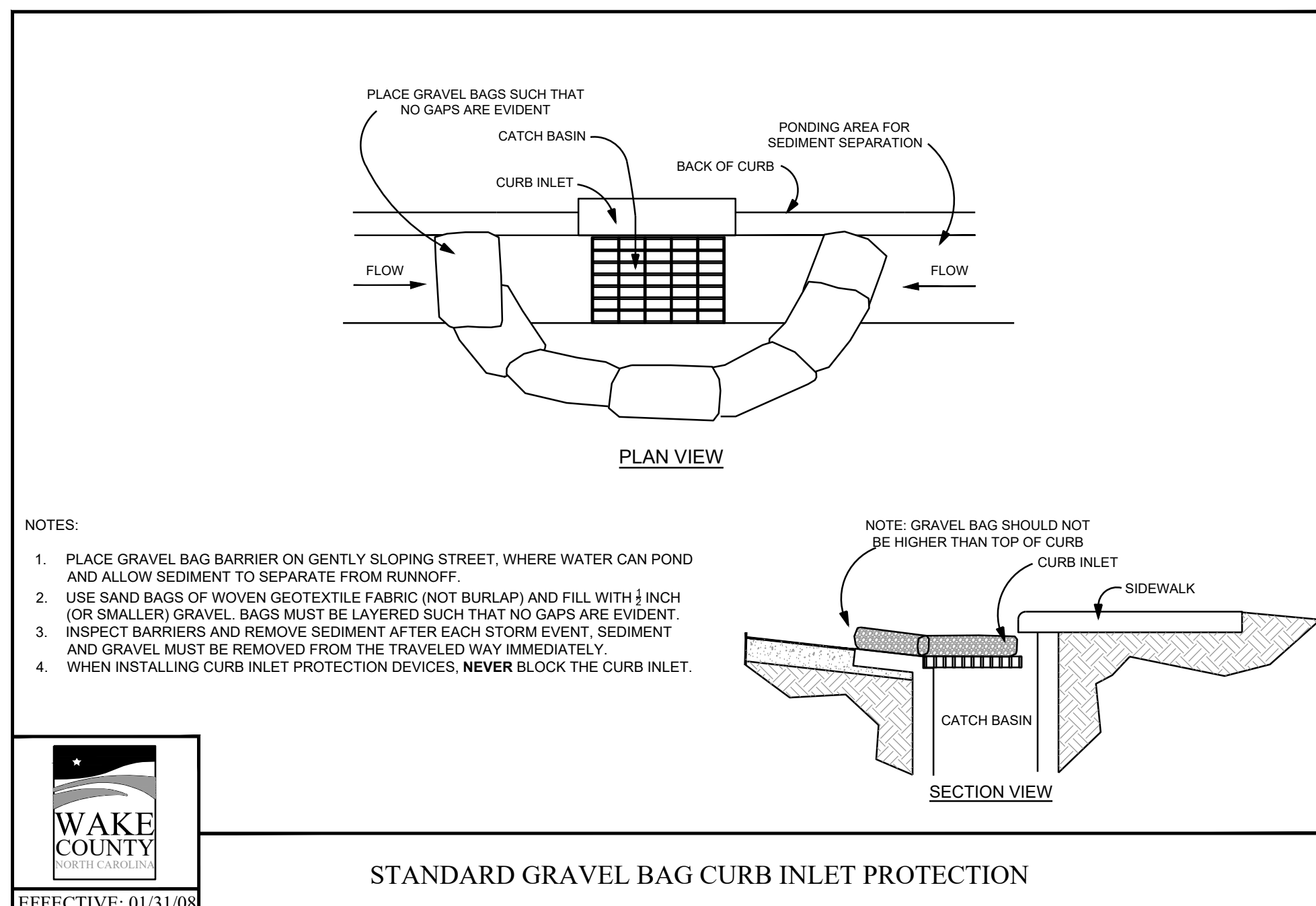
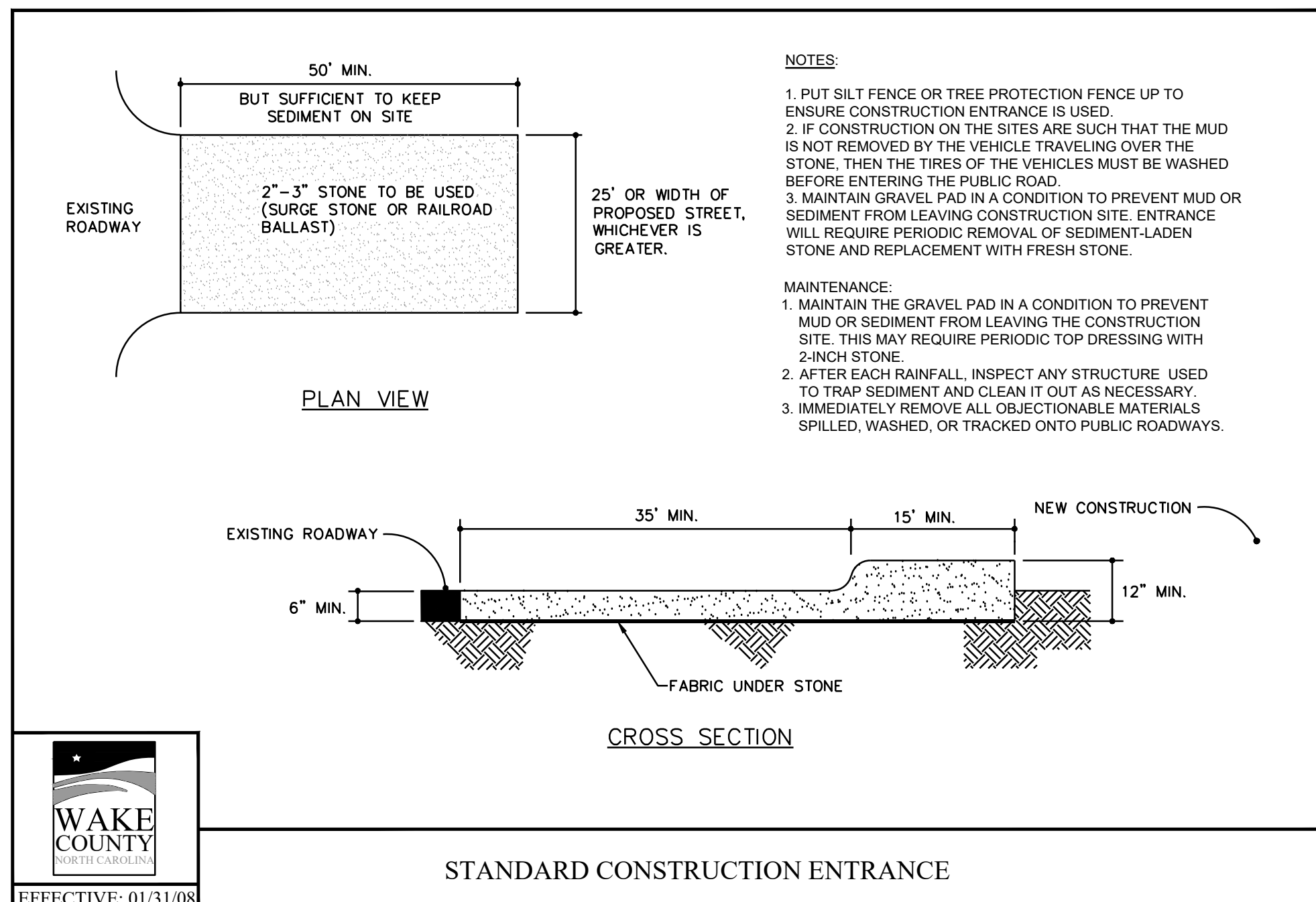
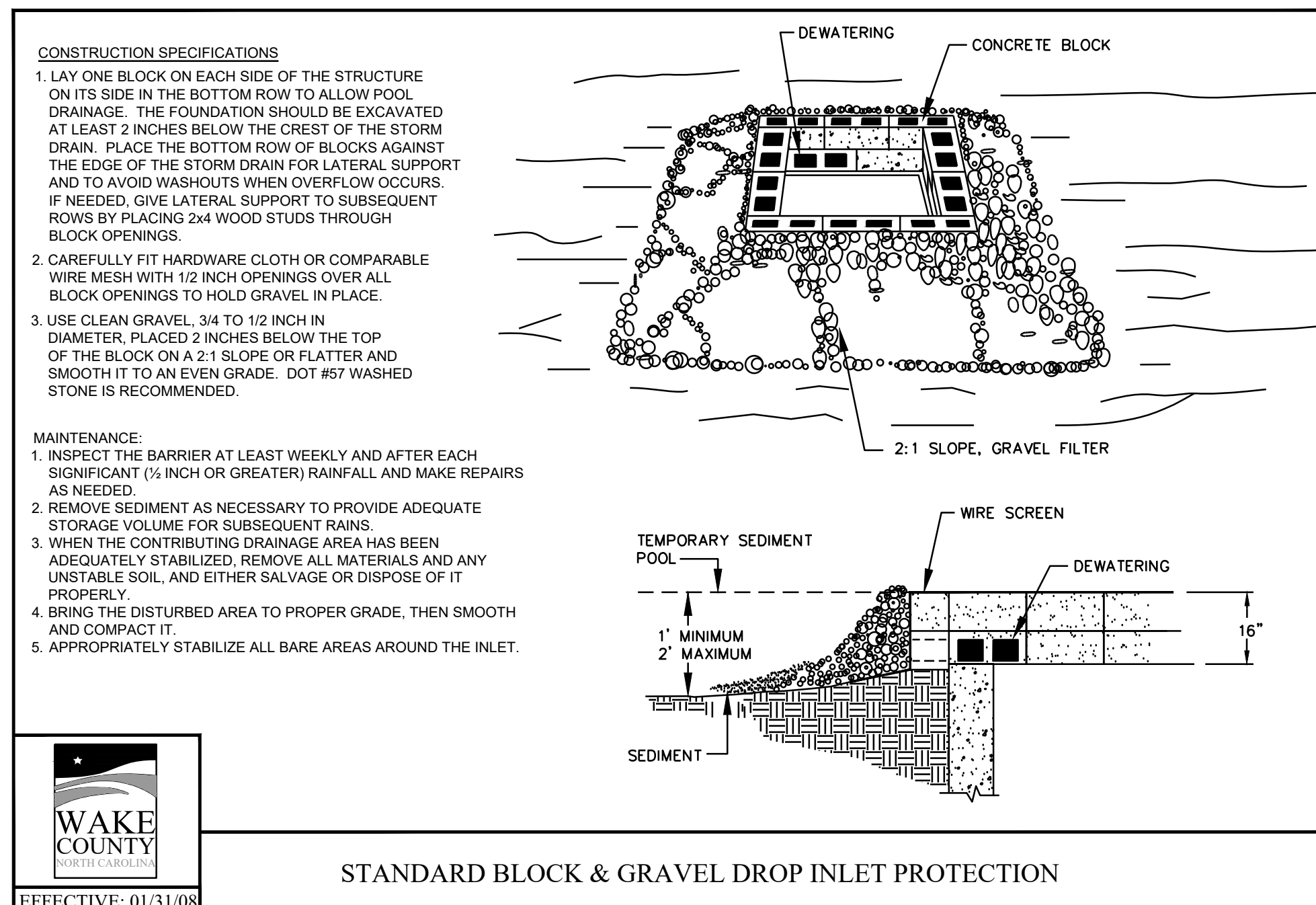
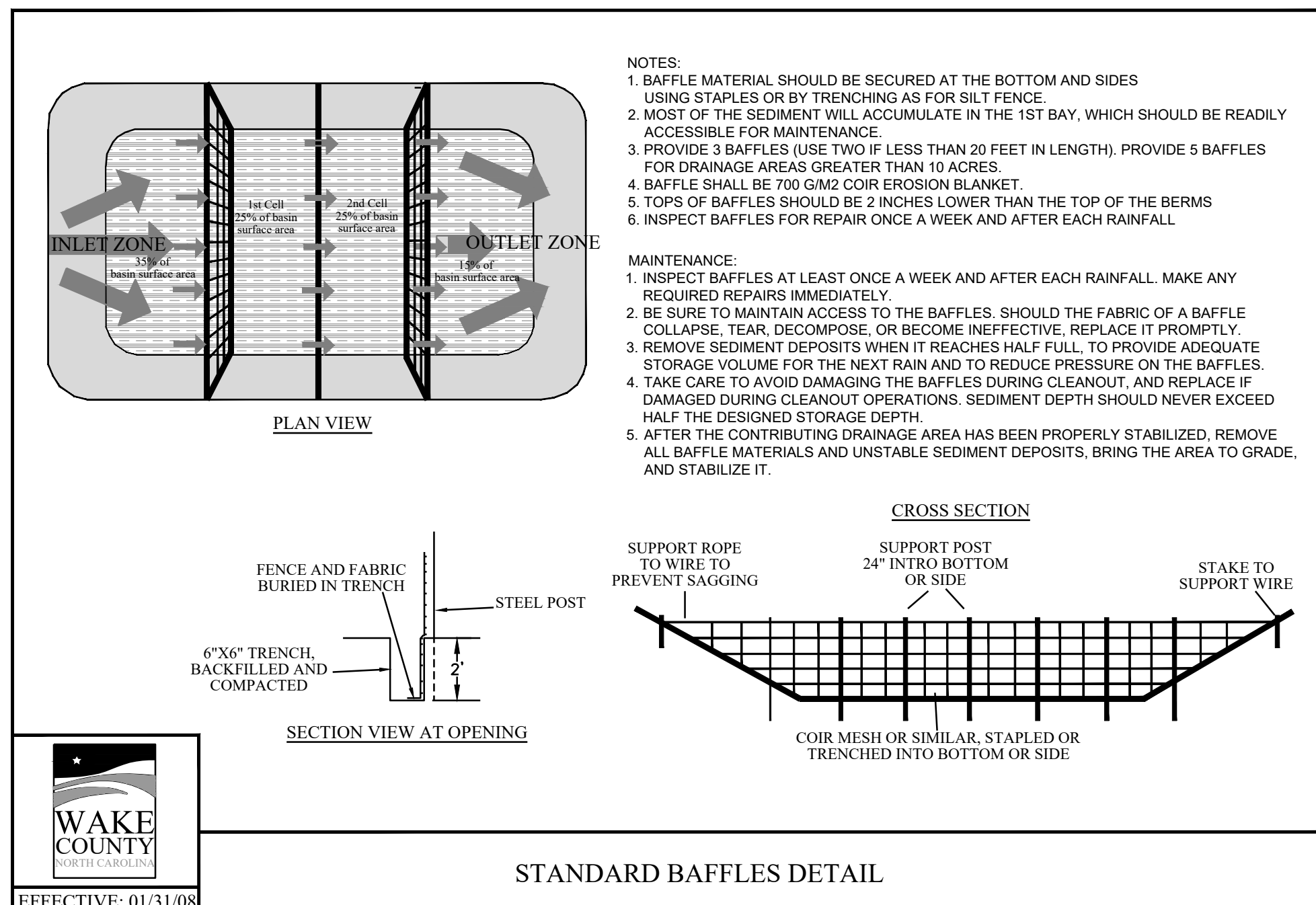


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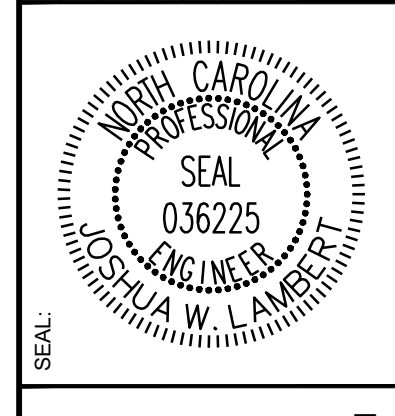
STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE AS SHOWN	DESIGNED BY JWL	DRAWN BY SRG	CHECKED BY JWL
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TRUE-ZEBULON-ARENDELL  
TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
CONSTRUCTION PLANS  
SITE DETAILS

DRAWING SHEET  
**D-2.6**  
20 OF 24



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STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE	AS SHOWN	JWL	SRG	JWL

TRUE-ZEBULON-ARENDELL TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA

**CONSTRUCTION PLANS**

**EROSION CONTROL DETAILS**

DRAWING SHEET

**D-2.7**

21 OF 24



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

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

SECTION E: GROUND STABILIZATION

Table with 3 columns: Site Area Description, Stabilize within this many calendar days after ceasing land disturbance, and Timeframe variations. Rows include Perimeter dikes, High Quality Water (HQW) Zones, Slopes steeper than 3:1, Slopes 3:1 to 4:1, and Areas with slopes flatter than 4:1.

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

GROUND STABILIZATION SPECIFICATION

Table with 2 columns: Temporary Stabilization and Permanent Stabilization. Lists various materials and methods for erosion control on different site areas.

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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

EQUIPMENT AND VEHICLE MAINTENANCE

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

LITTER, BUILDING MATERIAL AND LAND CLEANING WASTE

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

PAINT AND OTHER LIQUID WASTE

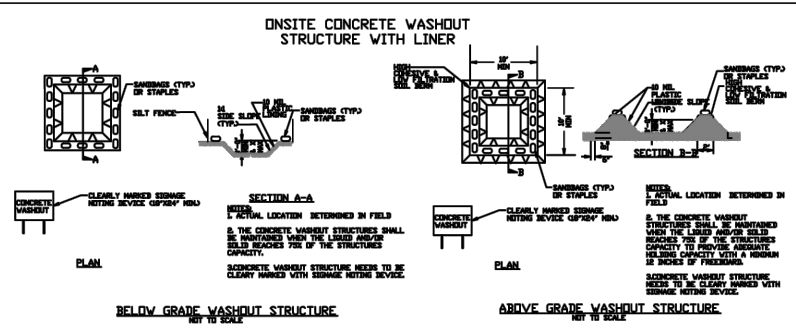
- 1. Do not dump paint and other liquid waste into storm drains, streams or wetlands.
2. Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be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

PORTABLE TOILETS

- 1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available.
2. Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
3. Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

EARTHEN STOCKPILE MANAGEMENT

- 1. Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown other alternatives are reasonably available.
2. Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
3. Provide stable stone access point when feasible.
4. Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional specifications. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.



CONCRETE WASHOUTS

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

HERBICIDES, PESTICIDES AND RODENTICIDES

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

HAZARDOUS AND TOXIC WASTE

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

SEEDING SPECIFICATIONS:

SEEDBED PREPARATION:

- 1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSES/OIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO SIX INCHES DEEP.
3. REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
4. APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL. (SEE MIXTURE BELOW).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
6. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN 60% DAMAGED, REESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT WAKE COUNTY SOIL & WATER OR NC STATE COOPERATIVE EXTENSION ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.

MIXTURE:

Table listing mixtures for Agriculatural Limestone, Fertilizer, Superphosphate, and Mulch with their respective rates.

SEEDING SCHEDULE:

FOR SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1):

Table with columns: DATE, TYPE, and PLANTING RATE. Lists seeding schedules for various dates and plant types like TALL FESCUE and HULLED COMMON BERMUDAGRASS.

FOR SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1 TO 2:1):

Table with columns: DATE, TYPE, and PLANTING RATE. Lists seeding schedules for various dates and plant types like SERICEA LESPEDEZA and ADD TALL FESCUE.

CONSULT WAKE COUNTY SOIL & WATER CONSERVATION DISTRICT OR NC STATE COOPERATIVE EXTENSION FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.
\*\*\* TEMPORARY: RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW MORE THAN 12" IN HEIGHT BEFORE MOWING; OTHERWISE, FESCUE MAY BE SHADED OUT.

WAKE COUNTY Environmental Services logo and contact information: 919.856.7400, fax 919.743.4772, Sedimentation & Erosion Control, 336 Fayetteville St., P.O. Box 550 • Raleigh, NC 27602

Effective September 1, 2008
Soil stockpiles shall be located on the approved plan and shall adhere to the following requirements:

- Design Criteria
a. A 25-foot temporary maintenance and access easement shall be shown around all proposed stockpiles (erosion control measures surrounding the stockpile shall be shown at the outer limit of this easement).
b. Stockpile footprints shall be setback a minimum of 25' from adjacent property lines.
c. A note shall be provided on the approved plan that stockpile height shall not exceed 35 feet.
d. Stockpile slopes shall be 2:1 or flatter.
e. Approved BMPs shall be shown on a plan to control any potential sediment loss from a stockpile.
f. Stockpiling materials adjacent to a ditch, drainageway, watercourse, wetland, stream buffer, or other body of water shall be avoided unless an alternative location is demonstrated to be unavailable.
g. Any concentrated flow likely to affect the stockpile shall be diverted to an approved BMP.
h. Off-site spoil or borrow areas must be in compliance with Wake County UDO and State Regulations. All spoil areas over an acre are required to have an approved sediment control plan. Developer/Contractor shall notify Wake County of any offsite disposal of soil, prior to disposal. Fill of FEMA Floodways and Non-encroachment Areas are prohibited except as otherwise provided by subsection 14-19-2 of the Wake County Unified Development Ordinance (certifications and permits required).
Maintenance Requirements to be Noted on the Plan
i. 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.
j. 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.
k. The approved plan shall provide for the use of staged seeding and mulching on a continual basis while the stockpile is in use.
1. Establish and maintain a vegetative buffer at the toe of the slope (where practical).

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Table with 3 columns: Inspect, Frequency (during normal business hours), and Inspection records must include. Rows include Erosion control measures, E&S plan, Stormwater discharge outlets, Perimeter of site, and Ground stabilization measures.

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

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

Table with 3 columns: Inspect, Frequency, and Inspection records must include. Rows include E&S plan, Stormwater discharge outlets, Perimeter of site, and Ground stabilization measures.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

Table with 3 columns: Occurrence, Reporting Timeframes (After Discovery) and Other Requirements. Rows include Erosion control measures, E&S plan, Stormwater discharge outlets, Perimeter of site, and Ground stabilization measures.

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

- (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.
(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin.
(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in item (c) above.
(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment devices described in item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

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SECTION A: SELF-INSPECTION

SECTION B: RECORDKEEPING

SECTION C: REPORTING

- 1. Inspect erosion control measures, E&S plan, stormwater discharge outlets, perimeter of site, and ground stabilization measures.
2. Record inspection results and maintain records for a period of three years after project completion.
3. Report occurrences as specified in the reporting requirements section.

SECTION A: SELF-INSPECTION

SECTION B: RECORDKEEPING

SECTION C: REPORTING

- 1. Inspect erosion control measures, E&S plan, stormwater discharge outlets, perimeter of site, and ground stabilization measures.
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SECTION A: SELF-INSPECTION

SECTION B: RECORDKEEPING

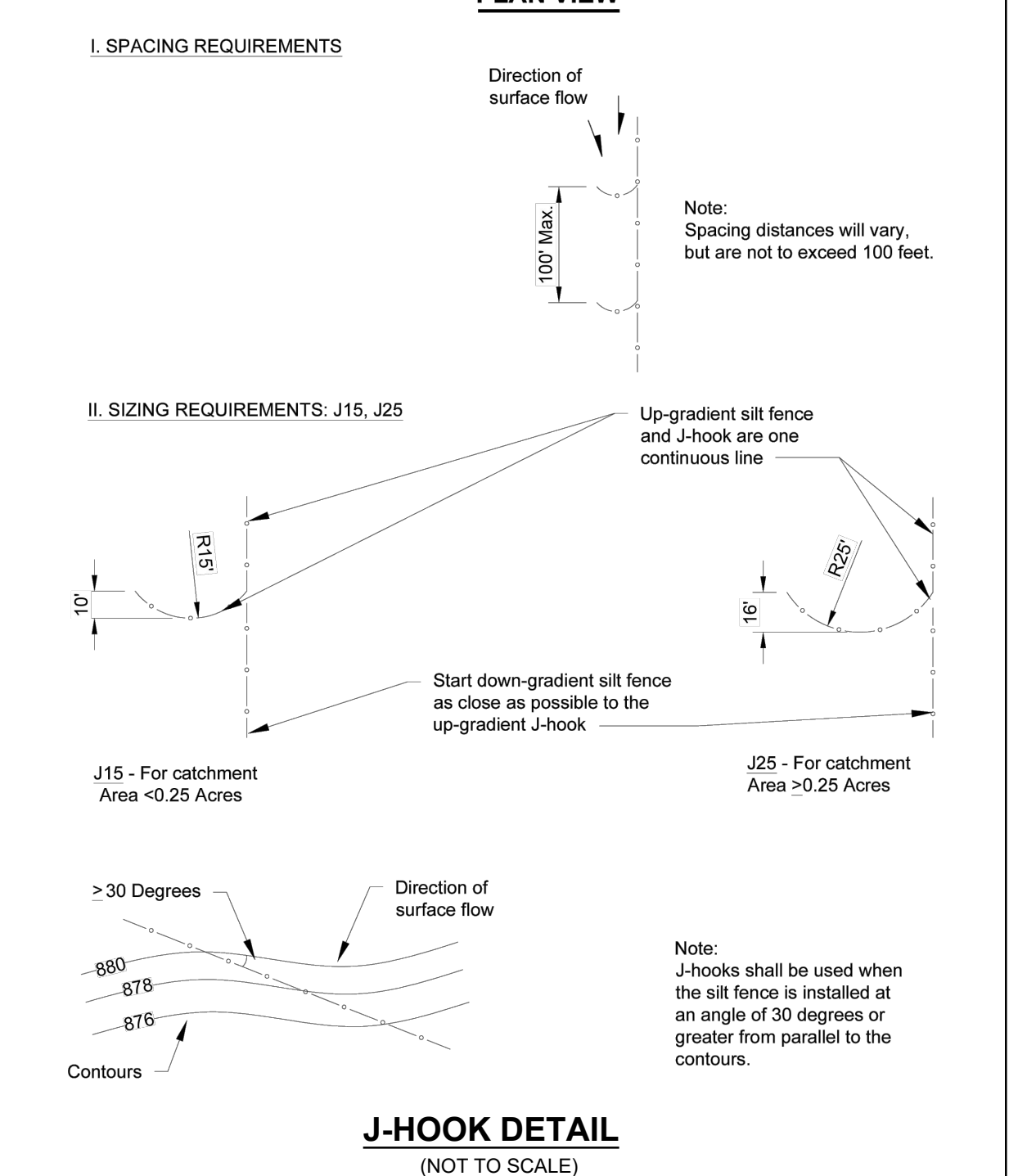
SECTION C: REPORTING

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2. Record inspection results and maintain records for a period of three years after project completion.
3. Report occurrences as specified in the reporting requirements section.

J-HOOK MAINTENANCE:

- 1. INSPECT J-HOOK INSTALLATION AT REGULAR INTERVALS PER NPDES MONITORING REQUIREMENTS.
2. REPLACE TORN SILT FENCE FABRIC WITH NEW FENCE MATERIAL.
3. BENT OR BROKEN WIRES AND T-POLES SHALL BE REPLACED IMMEDIATELY.
4. SEDIMENT ACCUMULATION HIGHER THAN 1/3 OF INSTALLED HEIGHT OF FABRIC SHALL BE PROMPTLY REMOVED.

PLAN VIEW



Vertical sidebar containing project information: STRONGROCK ENGINEERING GROUP, PROJECT: TRUE-ZEBULON-ARENDELL CONSTRUCTION PLANS, DRAWING SHEET: EROSION CONTROL DETAILS, and a revision table.

### Outdoor Lighting Mitchell LED Series

*Mitchell LED*  
*Mitchell Top Hat LED*  
*Mitchell LED with ribs, bands and medallions*  
*Mitchell Open LED*  
*Mitchell Top Hat LED with ribs, bands and medallions*

The energy-efficient fixtures in the Mitchell LED Series enhance the character and prestige of streetscapes and parking lots, as well as pedestrian areas and greenways. These fixtures provide safety and security in commercial settings and complement any neighborhood with their classic, elegant design.

LED <i>(Light Emitting Diode)</i>	<b>50 watts</b> , 75 watts ( <i>Mitchell Open</i> )
Mounting heights	12', 13', <b>16'</b>
Color	<b>Black</b>
Poles	<b>Fiberglass</b> Smooth round concrete Style V Style VI Style VII

For additional information, visit us at [duke-energy.com/OutdoorLighting](http://duke-energy.com/OutdoorLighting) or call us toll free at 866.769.6417.

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### Outdoor Lighting Mitchell LED Series

Light source: LED (white)  
 Lumens: 4,332 – 5,678 (fixture dependent)  
 Color temperature: 4,000K

light distribution pattern

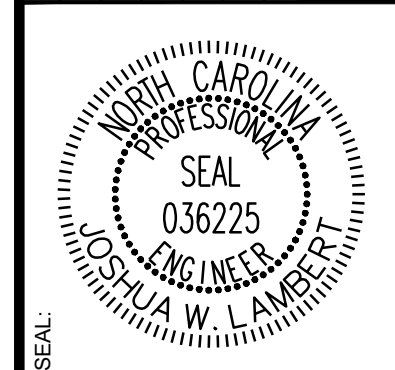
	Wattage	Light Pattern	IESNA Backlight – Uplight – Glare (BUG) Rating
Mitchell LED	50	IESNA Type V	B3-U4-G3
Mitchell Top Hat LED	50	IESNA Type V	B3-U3-G3
Mitchell Open LED	75	IESNA Type III	B1-U0-G1
Mitchell LED with Ribs, Bands and Medallions	50	IESNA Type V	B3-U4-G3
Mitchell Top Hat LED with Ribs, Bands and Medallions	50	IESNA Type V	B3-G3-U3

Poles available:

Name	Mounting height	Color
Smooth concrete	12', 16'	Black
Fiberglass	16'	Black
Style V	12', 16'	Black
Style VI	12'	Black
Style VII	13'	Black

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No.	REVISIONS	DATE	BY



STRONGROCK

ENGINEERING GROUP

STRONG ROCK ENGINEERING GROUP, PLLC | COMPANY LICENSE # P-2166  
6801 FALLS OF NEUSE RD. SUITE 108 RALEIGH, NC 27615 | INFORMATION@STRONGROCKGROUP.COM

STRONG ROCK PROJECT	NOT FOR CONSTRUCTION	SCALE AS SHOWN	DESIGNED BY JWL	DRAWN BY SRG	CHECKED BY JWL
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TRUE- ZEBULON-ARENDELL  
 TOWN OF ZEBULON, WAKE COUNTY, NORTH CAROLINA  
 CONSTRUCTION PLANS  
 LIGHTING DETAILS