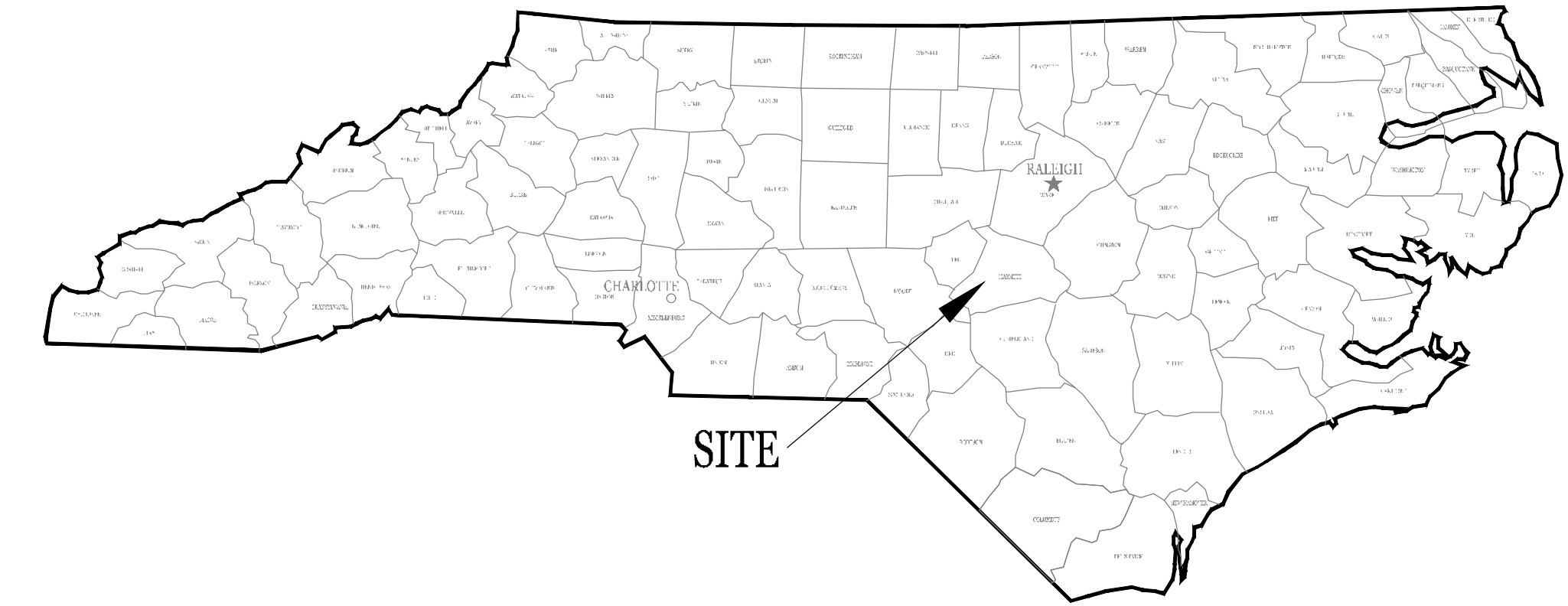


DOLLAR GENERAL®

PROPOSED

Dollar General Store #23680
 US Highway 421 N
 Lillington, NC
 Harnett County



TENANT & DEVELOPER

Dollar General Corporation

Rhetson Companies, Inc.
 Attn. John Parker
 2075 Juniper Lake Road
 West End, NC 27376
 (910) 944-0881
 john@rhetson.com



CIVIL ENGINEER

Bowman North Carolina, Ltd.
 4006 Barrett Drive
 Suite 104
 Raleigh, NC 27609
 (919) 553-6570
 mlowder@bowman.com
 FIRM# F-1445



CURRENT PROPERTY OWNERS

CEBCO CONSTRUCTION, INC
 P.O. BOX 591
 MAMERS, NC 27552

THOMAS B. PHILLIS
 120 DAVIS BROWN LANE
 LILLINGTON, NC 27546

DONALD L. NORDON & PATRICIA G. MCKEE
 852 GRAMETA LANE
 LILLINGTON, NC 27546

DEVELOPMENT DATA

DEVELOPMENT NAME:	DOLLAR GENERAL
STREET ADDRESS:	US HIGHWAY 421 N. LILLINGTON, NC HARNETT COUNTY
PROPERTY IDENTIFICATION # (PIN):	0589-17-3378
PROPERTY ID#:	110589 0009
DEED BOOK/PAGE:	3996/0923
PLAT BOOK/PAGE:	2020/324
EXISTING ZONING:	(COMM) COMMERCIAL/BUSINESS DISTRICT RA-30 RA-20R
PROPOSED ZONING:	(COMM) COMMERCIAL/BUSINESS DISTRICT REZONING CASE#
WATERSHED DISTRICT:	WS-IV-P (CAPE FEAR RIVER - LILLINGTON)
OVERLAY DISTRICT:	
TOTAL SITE ACRES:	67,173 SF (1.54 AC)
INSIDE TOWN LIMITS:	NO
EXISTING USE:	AGRICULTURE
PROPOSED BUILDING USE:	RETAIL SALES
USE GROUP LEVEL:	3
PROPOSED TOTAL BUILDING AREA:	10,640 SF (8,504 SF SALES FLOOR AREA)
MAX. BUILDING HEIGHT:	35 FT
MIN LOT AREA:	30,000 SF
MIN LOT WIDTH:	100 FT
FRONT SETBACK:	35 FT
SIDE SETBACK (STREET):	20 FT
SIDE SETBACK (INTERIOR):	0 FT (20 FT ADJACENT TO RESIDENTIAL)
REAR SETBACK:	25 FT
BUFFER REQUIREMENTS:	
PERIMETER BUFFER:	15 FT TYPE A, D BUFFER - ADJACENT SINGLE FAMILY 10 FT TYPE C BUFFER - ADJACENT COMMERCIAL 15 FT TYPE D BUFFER - ADJACENT RIGHT-OF-WAY
BUILDING FOUNDATION:	5 FT PLANTING STRIP AT BUILDING
PARKING REQUIREMENTS:	
TOTAL REQUIRED:	1 SPACE PER 300 SF GFA 10,640 SF/300 = 36 SPACES 110% MAXIMUM SPACES = 40
TOTAL PROVIDED:	36 (9'x18' MIN)
ACCESSIBLE SPACES PROVIDED:	2
LOADING AREA:	1 PROVIDED (12'x35' MIN)

IMPERVIOUS AREA SUMMARY

ON-SITE AREA = 67,173 SF (1.54 AC)			
BUILDINGS	10,640 SF	0.24 ACRE(S)	15.84 % OF AREA
PAVEMENT	26,733 SF	0.62 ACRE(S)	39.80 % OF AREA
SIDEWALK	2,748 SF	0.06 ACRE(S)	4.09 % OF AREA
TOTAL IMPERVIOUS AREA	40,121 SF	0.92 ACRE(S)	59.73 % OF AREA
GREEN/OPEN SPACE	27,052 SF	0.62 ACRE(S)	40.27 % OF AREA
INCREASE IN IMPERVIOUS AREA: 40,121 SF 0.92 ACRE(S)			



Know what's below.
Call before you dig.

INDEX OF DRAWINGS

C-1	COVER SHEET
C-2	EXISTING CONDITIONS PLAN
C-3	SITE PLAN
C-3A	ROADWAY IMPROVEMENT PLAN
C-3B	ROADWAY IMPROVEMENT PLAN
C-4	GRADING AND DRAINAGE PLAN
C-5	UTILITY PLAN
C-6A	INITIAL PHASE EROSION CONTROL PLAN
C-6B	FINAL PHASE EROSION CONTROL PLAN
C-7	CONSTRUCTION DETAILS
C-8	CONSTRUCTION DETAILS
C-8A	WATER DETAILS
C-9A	NC CONSTRUCTION GENERAL PERMIT (NCGO1) NOTES
C-9B	EROSION CONTROL DETAILS
C-10A	STORMWATER MANAGEMENT DETAILS
C-10B	STORMWATER MANAGEMENT DETAILS
C-11	LANDSCAPE PLAN

Bowman

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 Phone: (919) 553-6570
 bowman.com
 F-1445



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 RHETSON COMPANIES, INC.
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 WEST END, NC 27376
 (910) 944-0881
 john@rhetson.com



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 US Highway 421 N
 Lillington, NC Harnett County

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REV	NO.	DATE	DESC.

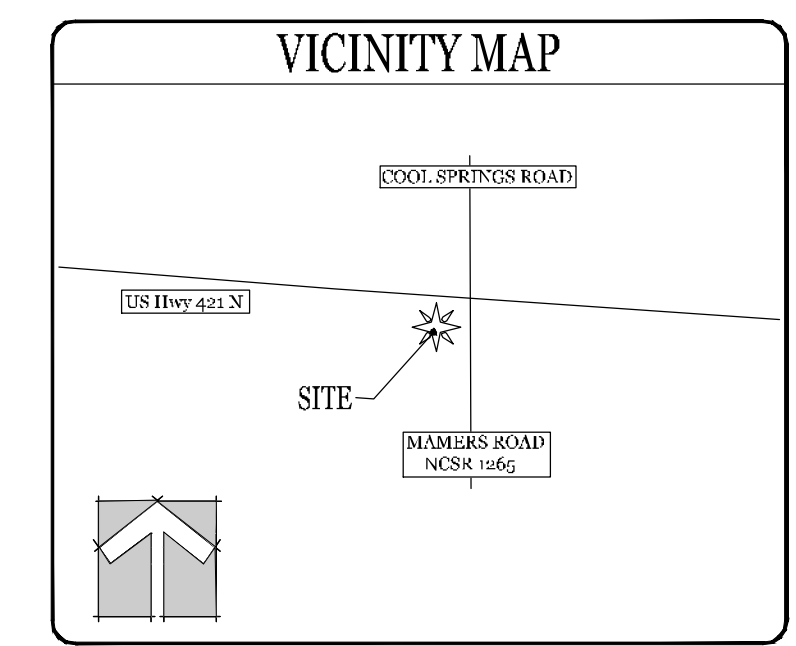
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 Rhetson Project# 21103
 Project No. 058004
 Initial Date February 28, 2022
 Title

COVER SHEET

Sheet No. **C-1**



Know what's below. Call before you dig.

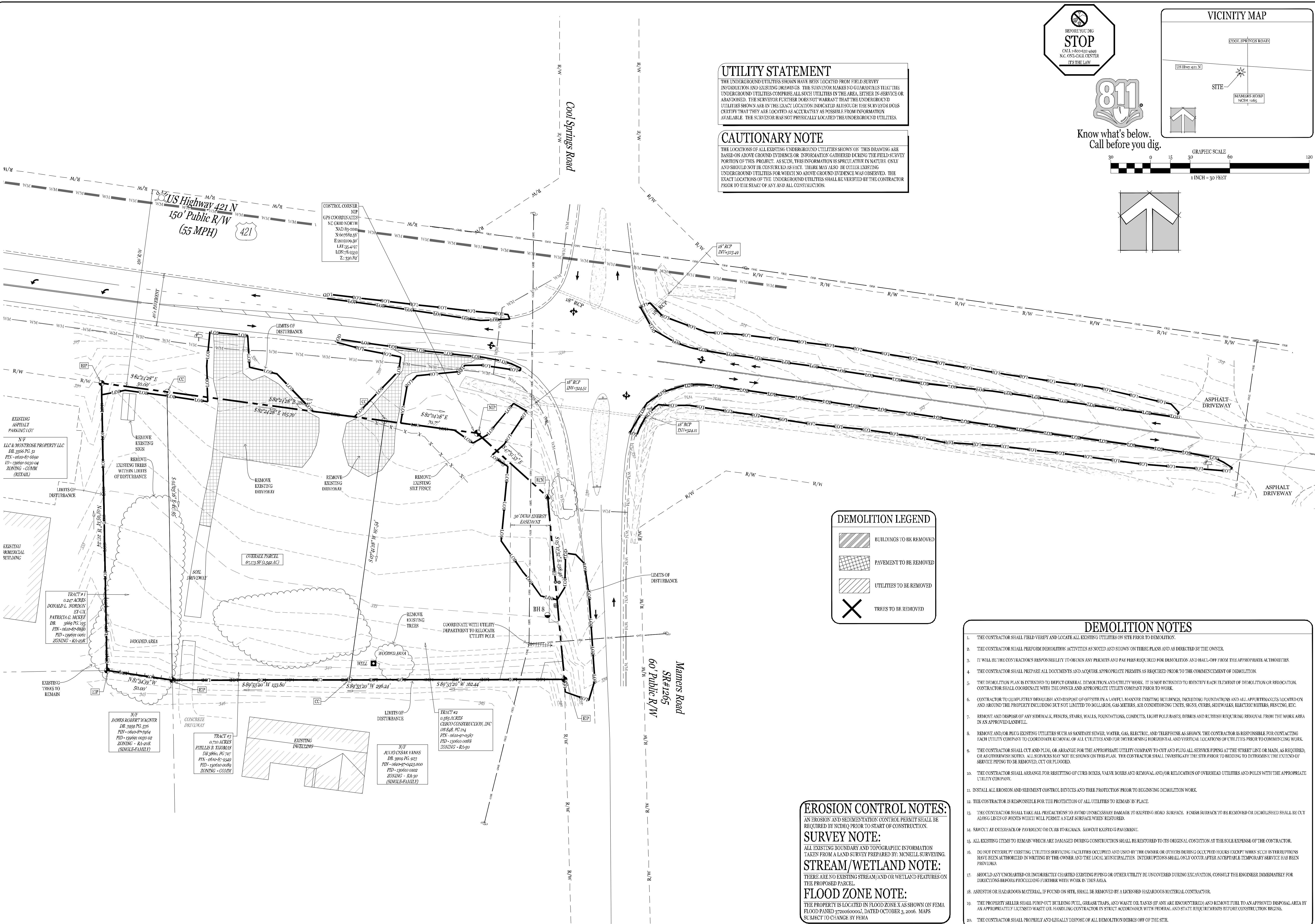


UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

CAUTIONARY NOTE

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE BASED ON ABOVE GROUND EVIDENCE OR INFORMATION GATHERED DURING THE FIELD SURVEY PORTION OF THIS PROJECT. AS SUCH, THIS INFORMATION IS SPECULATIVE IN NATURE, ONLY AND SHOULD NOT BE CONSIDERED AS FACT. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF THE UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF ANY AND ALL CONSTRUCTION.



DEMOLITION LEGEND

- BUILDINGS TO BE REMOVED
- PAVEMENT TO BE REMOVED
- UTILITIES TO BE REMOVED
- TREES TO BE REMOVED

DEMOLITION NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES ON SITE PRIOR TO DEMOLITION.
2. THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS AND AS DIRECTED BY THE OWNER.
3. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY PERMITS AND PAY FEES REQUIRED FOR DEMOLITION AND HULL-OFF FROM THE APPROPRIATE AUTHORITIES.
4. THE CONTRACTOR SHALL PREPARE ALL DOCUMENTS AND ACQUIRE APPROPRIATE PERMITS AS REQUIRED PRIOR TO THE COMMENCEMENT OF DEMOLITION.
5. THE DEMOLITION PLAN IS INTENDED TO IMPACT GENERAL DEMOLITION AND UTILITY WORK. IT IS NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE UTILITY COMPANY PRIOR TO WORK.
6. CONTRACTOR TO COMPLETELY DEMOLISH AND DISPOSE OF OFFSITE IN A LAWFUL MANNER EXISTING BUILDINGS, INCLUDING FOUNDATIONS AND ALL APPURTENANCES LOCATED ON AND AROUND THE PROPERTY INCLUDING BUT NOT LIMITED TO BOLLARDS, GAS METERS, AIR CONDITIONING UNITS, SHES, CURBS, SIDEWALKS, ELECTRIC METERS, FENCING, ETC.
7. REMOVE AND DISPOSE OF ANY SIDEWALK, FENCES, STAIRS, WALLS, FOUNDATIONS, CONDUITS, LIGHT POLE BASES, DEBRIS AND RUBBISH REQUIRING REMOVAL FROM THE WORK AREA IN AN APPROVED LANDFILL.
8. REMOVE AND/OR PLUG EXISTING UTILITIES SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO COORDINATE REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.
9. THE CONTRACTOR SHALL CUT AND PLUG OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR MAIN, AS REQUIRED, OR AS OTHERWISE NOTED. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF SERVICE PIPING TO BE REMOVED, CUT OR PLUGGED.
10. THE CONTRACTOR SHALL ARRANGE FOR RESETTling OF CURB BOXES, VALVE BOXES AND REMOVAL AND/OR RELOCATION OF OVERHEAD UTILITIES AND POLES WITH THE APPROPRIATE UTILITY COMPANY.
11. INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
12. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
13. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACE. FINISH SURFACE TO BE REMOVED OR DEMOLISHED SHALL BE CUT ALONG LINES OF JOINTS WHICH WILL PERMIT A NEAT SURFACE WHEN RESTORED.
14. SAWCUT AT INTERFACE OF PAVEMENT OR CURB TO REMAIN. SAWCUT EXISTING PAVEMENT.
15. ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE SOLE EXPENSE OF THE CONTRACTOR.
16. DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
17. SHOULD ANY UNCHARTERED OR INCORRECTLY CHARTED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
18. ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR.
19. THE PROPERTY SELLER SHALL PUMP OUT BUILDING PUEL, GREASE TRAPS, AND WASTE OIL TANKS (IF ANY ARE ENCOUNTERED) AND REMOVE FUEL TO AN APPROVED DISPOSAL AREA BY AN APPROPRIATELY LICENSED WASTE OIL HANDLING CONTRACTOR IN STRICT ACCORDANCE WITH FEDERAL AND STATE REQUIREMENTS BEFORE CONSTRUCTION BEGINS.
20. THE CONTRACTOR SHALL PROPERLY AND LEGALLY DISPOSE OF ALL DEMOLITION DEBRIS OFF OF THE SITE.

EROSION CONTROL NOTES:

AN EROSION AND SEDIMENTATION CONTROL PERMIT SHALL BE REQUIRED BY NCDEQ PRIOR TO START OF CONSTRUCTION.

SURVEY NOTE:

ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A LAND SURVEY PREPARED BY: MCVELL SURVEYING.

STREAM/WETLAND NOTE:

THERE ARE NO EXISTING STREAM AND/OR WETLAND FEATURES ON THE PROPOSED PARCEL.

FLOOD ZONE NOTE:

THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FEMA FLOOD PANEL 27200600001, DATED OCTOBER 3, 2006. MAPS SUBJECT TO CHANGE BY FEMA

Bowman
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john@rhetsom.com



DOLLAR GENERAL
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REV.	DATE	DESCRIPTION

Drawn: Rhetsom Project# 21103
Checked: Project No. 058004
Initial Date: February 28, 2022
Title: **EXISTING CONDITIONS PLAN**

Sheet No. **C-2**



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Lillington, NC Harnett County

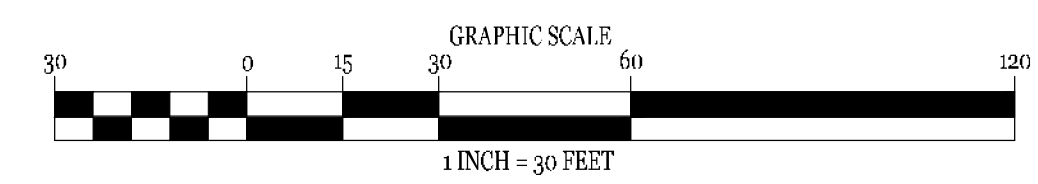
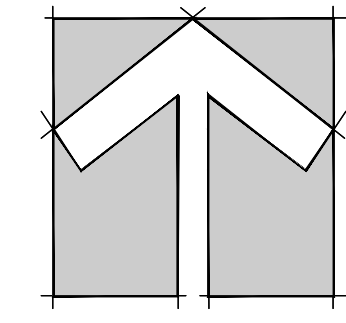
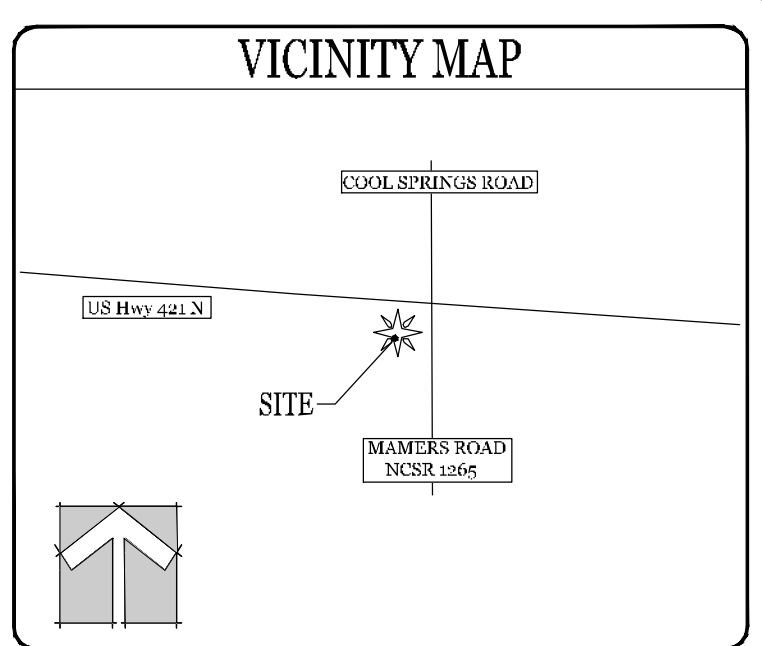
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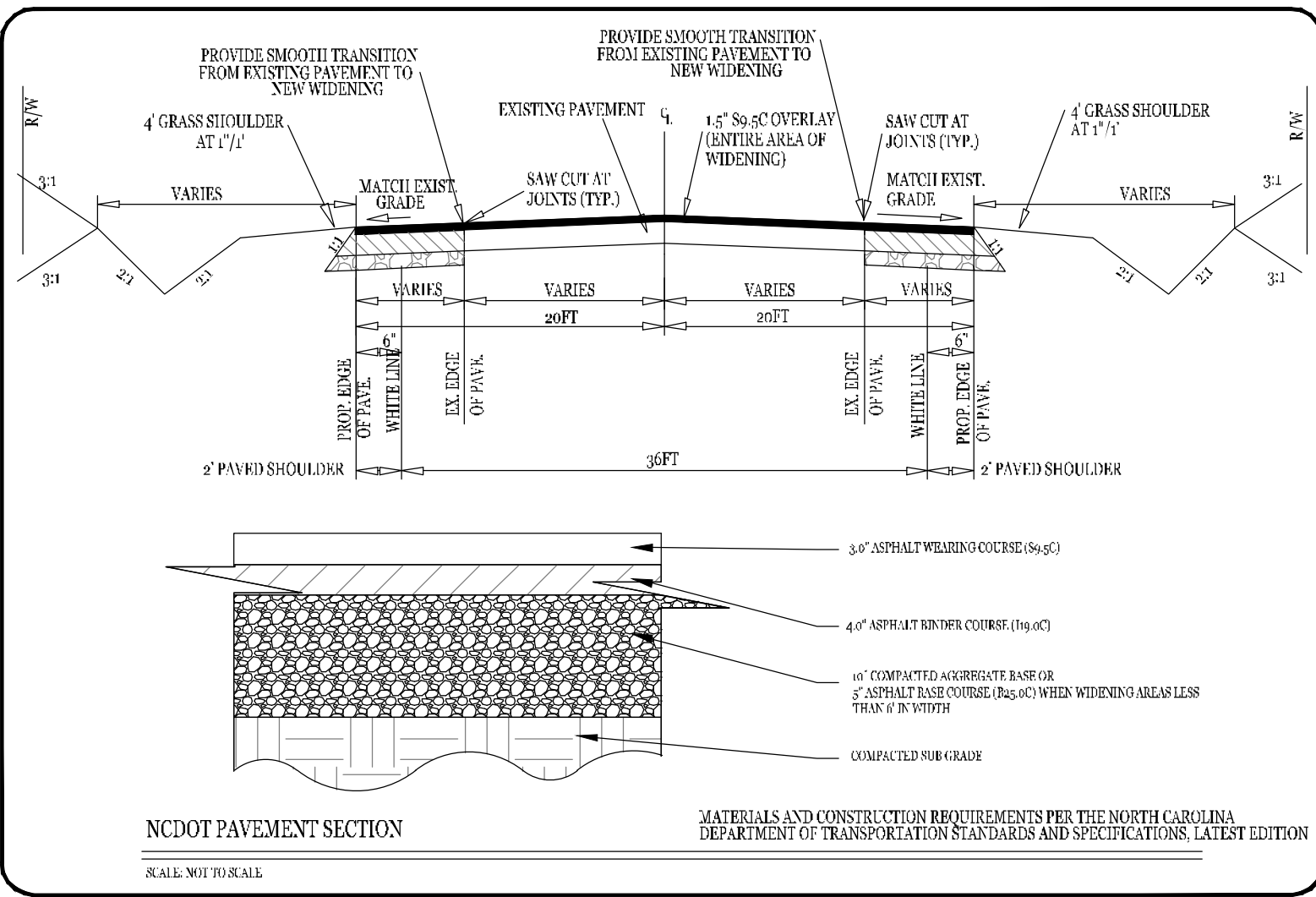
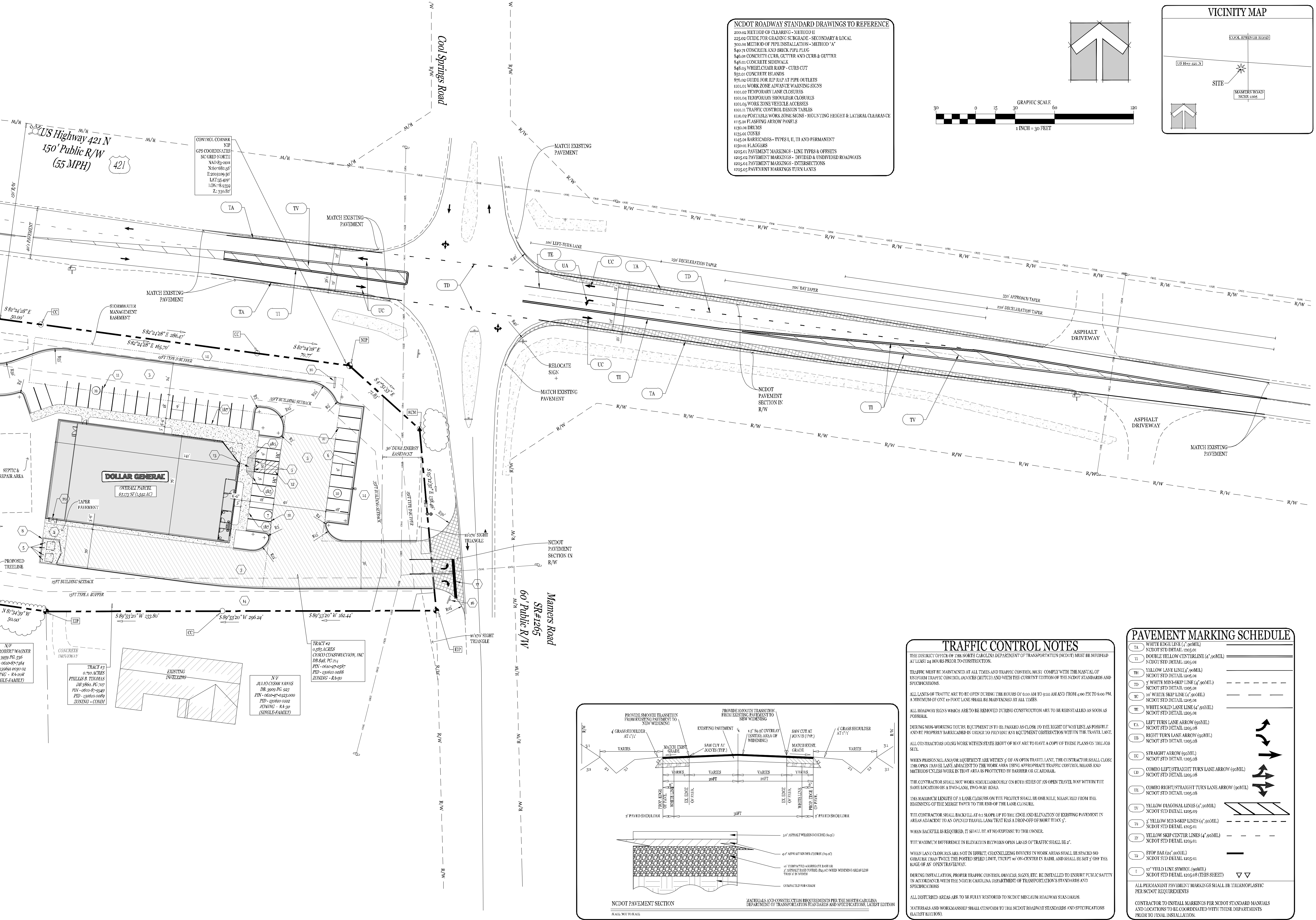
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Project No. 058004
Initial Date February 28, 2022
Title

**ROADWAY
IMPROVEMENT
PLAN**

Sheet No. **C-3A**



- NC DOT ROADWAY STANDARD DRAWINGS TO REFERENCE**
- 200.02 METHOD OF CLEARING - METHOD II
 - 225.02 CURB FOR GRADING SUBGRADE - SECONDARY & LOCAL
 - 300.01 METHOD OF PIPE INSTALLATION - METHOD "A"
 - 840.71 CONCRETE AND BRICK PIPE PLUG
 - 846.01 CONCRETE CURB, GUTTER AND CURB & GUTTER
 - 848.01 CONCRETE SIDEWALK
 - 848.05 WHEEL CHAIR RAMP - CURB CUT
 - 852.01 CONCRETE ISLANDS
 - 875.02 GUIDE FOR RIP RAP AT PIPE OUTLETS
 - 1101.01 WORK ZONE ADVANCE WARNING SIGNS
 - 1101.02 TEMPORARY LANE CLOSURES
 - 1101.04 TEMPORARY SHOULDER CLOSURES
 - 1101.03 WORK ZONE VEHICLE ACCESS
 - 1101.11 TRAFFIC CONTROL DESIGN TABLES
 - 1101.02 PORTABLE WORK ZONE SIGNS - MOUNTING HEIGHT & LATERAL CLEARANCE
 - 1115.01 FLASHING ARROW PANELS
 - 1130.01 BRUSH
 - 1135.01 CONES
 - 1145.01 BARRICADES - TYPES I, II, III AND PERMANENT
 - 1150.01 FLAGGERS
 - 1205.01 PAVEMENT MARKINGS - LINE TYPES & OFFSETS
 - 1205.02 PAVEMENT MARKINGS - DIVIDED & UNDIVIDED ROADWAYS
 - 1205.04 PAVEMENT MARKINGS - INTERSECTIONS
 - 1205.05 PAVEMENT MARKINGS TURN LANTS

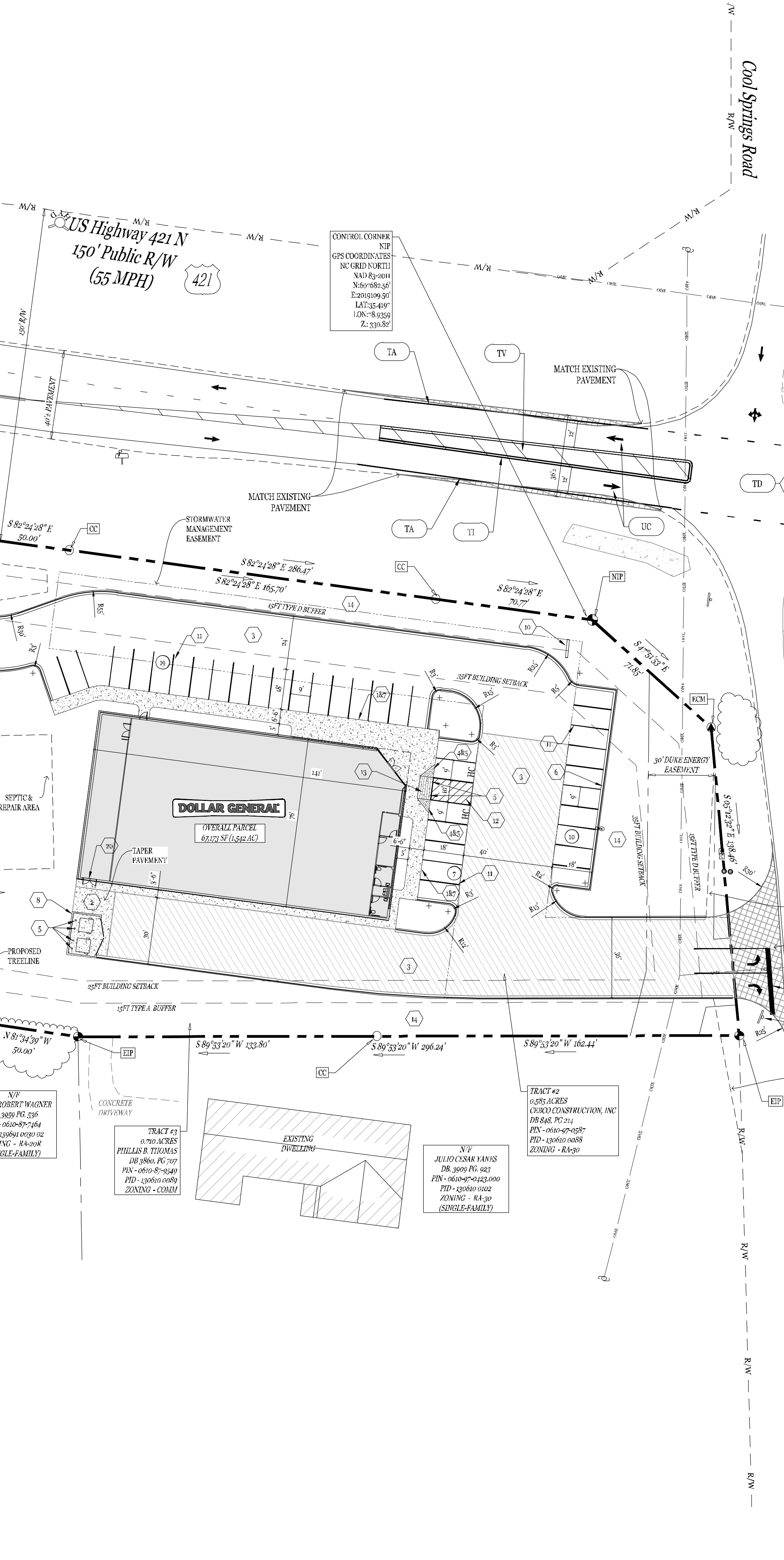


PAVEMENT MARKING SCHEDULE

TA	WHITE EDGE LINE (1" 90MIL)	NCDOT STD DETAIL 1205.01
TL	DOUBLE YELLOW CENTERLINE (4" 90MIL)	NCDOT STD DETAIL 1205.01
TH	YELLOW LANE LINES (4" 90MIL)	NCDOT STD DETAIL 1205.01
TD	WHITE MEDIAN SKIP LINE (4" 90MIL)	NCDOT STD DETAIL 1205.01
TE	WHITE SOLID LANE LINE (4" 90MIL)	NCDOT STD DETAIL 1205.01
TA	LEFT TURN LANE ARROW (90MIL)	NCDOT STD DETAIL 1205.08
UB	RIGHT TURN LANE ARROW (90MIL)	NCDOT STD DETAIL 1205.08
UC	STRAIGHT ARROW (90MIL)	NCDOT STD DETAIL 1205.08
UD	COMBO LEFT/STRAIGHT TURN LANE ARROW (90MIL)	NCDOT STD DETAIL 1205.08
UE	COMBO RIGHT/STRAIGHT TURN LANE ARROW (90MIL)	NCDOT STD DETAIL 1205.08
TV	YELLOW DIAGONAL LINES (4" 90MIL)	NCDOT STD DETAIL 1205.09
TV	YELLOW MEDIAN SKIP LINES (4" 90MIL)	NCDOT STD DETAIL 1205.01
TV	YELLOW SKIP CENTER LINES (4" 90MIL)	NCDOT STD DETAIL 1205.01
TV	STOP BAR (24" 90MIL)	NCDOT STD DETAIL 1205.01
TV	12" YELLOW SYMBOL (90MIL)	NCDOT STD DETAIL 1205.08 (THIS SHEET)

ALL PERMANENT PAVEMENT MARKINGS SHALL BE THERMOPLASTIC PER NCDOT REQUIREMENTS.

CONTRACTOR TO INSTALL MARKINGS PER NCDOT STANDARD MANUALS AND LOCATIONS TO BE COORDINATED WITH THESE DEPARTMENTS PRIOR TO FINAL INSTALLATION.





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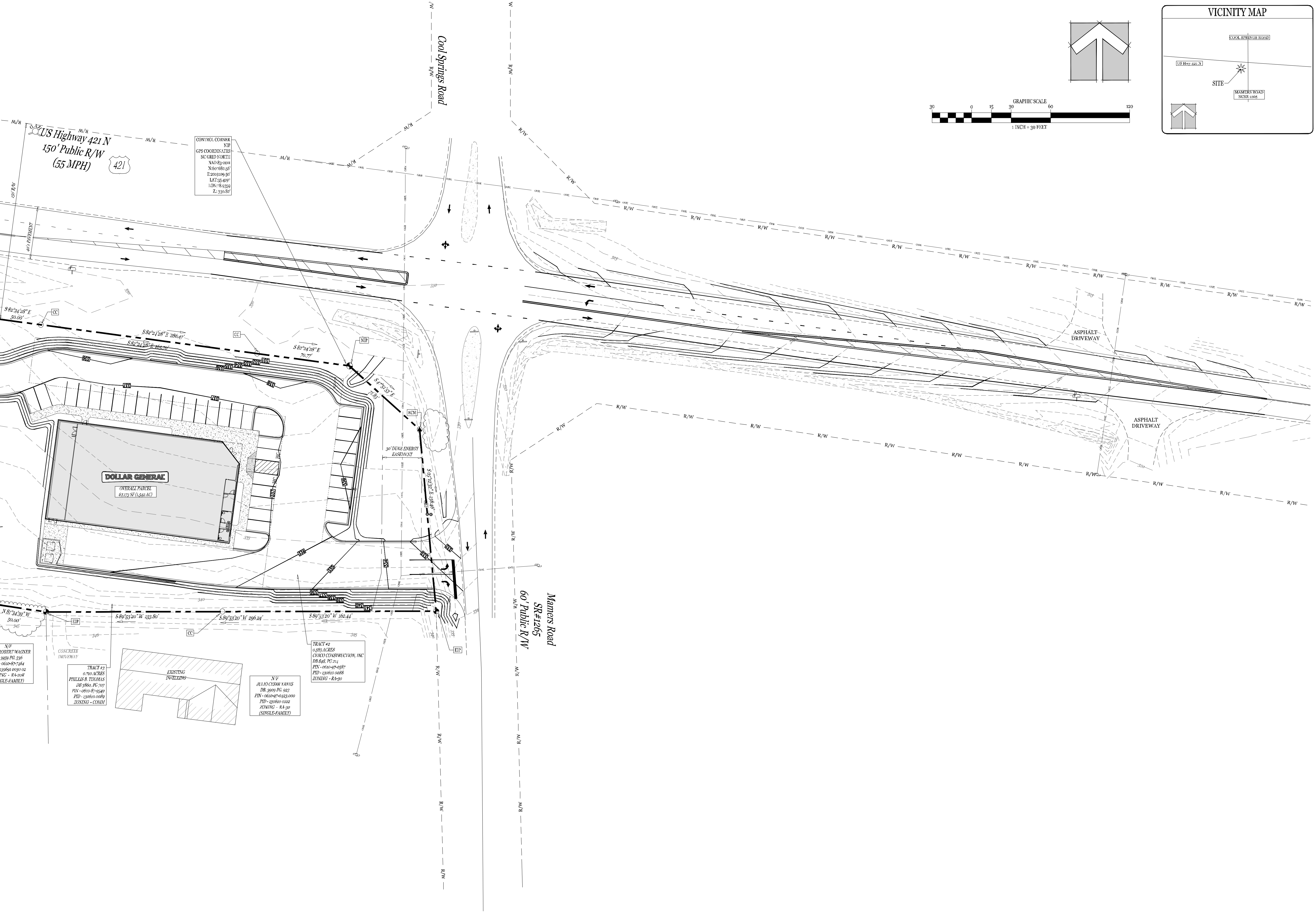
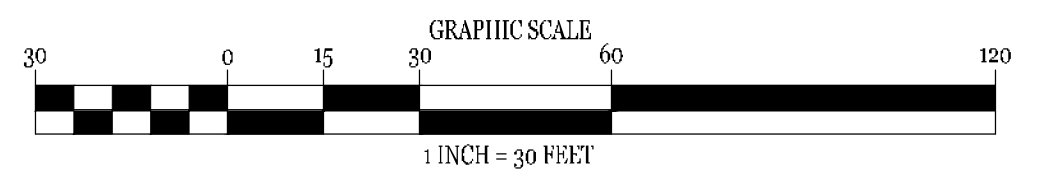
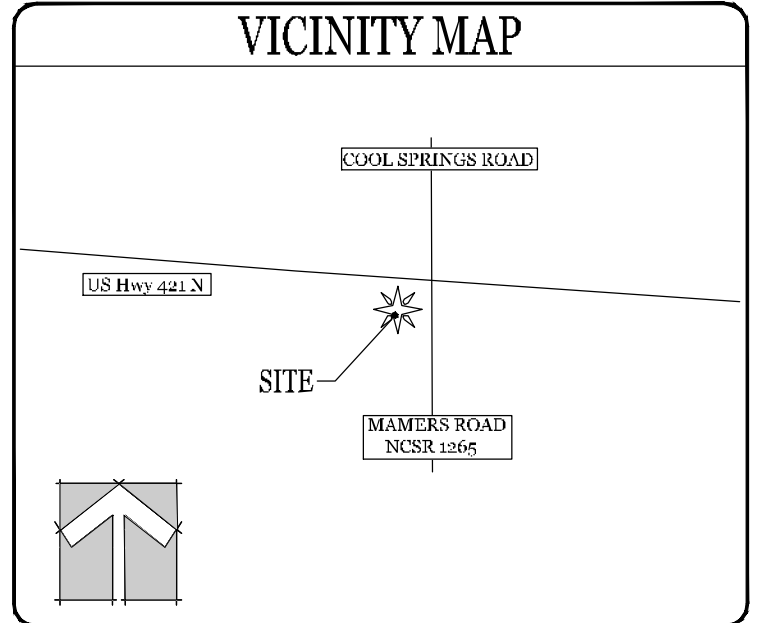
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REV	DATE	DESCRIPTION

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 Checked
 Rhetsom Project# 21103
 Project No. 058004
 Initial Date February 28, 2022

**ROADWAY
 IMPROVEMENT
 PLAN**

Sheet No. **C-3B**



CONTROL CORNER
 NIP
 GPS COORDINATES
 NAD 83 UTM
 NAD 83-50M
 N:50°08'56"
 E:209109.90'
 LAT:34.19'
 LONG:-81.559'
 Z:330.82'

US Highway 421 N
 150' Public R/W
 (55 MPH)

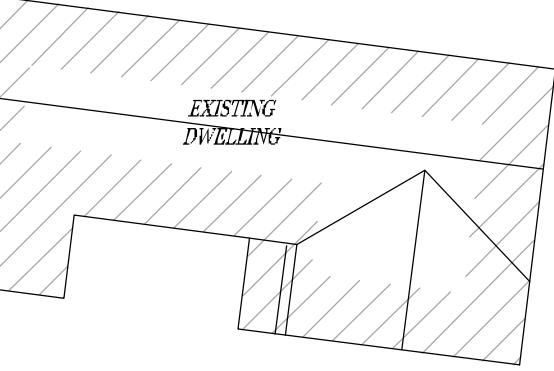
Cool Springs Road

Manners Road
 SR#1265
 60' Public R/W

DOLLAR GENERAL
 OVERALL PARCEL
 67,172 SF (1.542 AC)

NIP
 ROBERT WAGNER
 869 PG. 596
 0610-87-7464
 239691 0930 02
 TWC - RA-308
 (SLE-FAMILY)

TRACT #1
 0.70 ACRES
 PHILLIS B. THOMAS
 DR 3860 PG 707
 PA - 0610-87-5649
 PID - 130610 0089
 ZONING - COMM



NIP
 JULIO CESAR FAVES
 DR 3009 PG 623
 PIN - 0610-97-0123,000
 PID - 130610 0102
 ZONING - RA-30
 (SINGLE-FAMILY)

TRACT #2
 0.85 ACRES
 OCEANO CONSTRUCTION, INC
 DR 848 PG 712
 PID - 0610-97-0458
 PID - 130610 0088
 ZONING - RA-30

30' DUKE ENERGY
 EASEMENT

ASPHALT
 DRIVEWAY

ASPHALT
 DRIVEWAY

NOTE TO CONTRACTOR:

THE HARNETT COUNTY STORMWATER MANAGEMENT PERMIT REQUIRES THE DESIGN PROFESSIONAL TO PERIODICALLY OBSERVE THE CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM AND TO PREPARE A DESIGNER'S CONSTRUCTION CERTIFICATION FOR SUBMITTAL TO HARNETT COUNTY PRIOR TO THE CERTIFICATE OF OCCUPANCY BEING ISSUED FOR THE PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE DESIGN CONSULTANT FOR THE CONSTRUCTION OBSERVATION AND PREPARATION OF THE CONSTRUCTION CERTIFICATION BY CONTACTING:
 MATT LOWDER, PE - TRIANGLE SHE DESIGN, PLLC
 919-553-6570
 mlowder@triangleshe.com

EROSION CONTROL NOTES:

AN EROSION AND SEDIMENTATION CONTROL PERMIT SHALL BE REQUIRED BY NCDEQ PRIOR TO START OF CONSTRUCTION.

SURVEY NOTE:

ALL EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION TAKEN FROM A LAND SURVEY PREPARED BY MCWELL SURVEYING.

STREAM/WETLAND NOTE:

THERE ARE NO EXISTING STREAM/AND/OR WETLAND FEATURES ON THE PROPOSED PARCEL.

FLOOD ZONE NOTE:

THE PROPERTY IS LOCATED IN FLOOD ZONE X AS SHOWN ON FEMA FLOOD PANEL 372600001D, DATED OCTOBER 3, 2016. MAPS SUBJECT TO CHANGE BY FEMA

GRADING NOTES

- REFER TO THE SITE PLAN FOR RELATED NOTES.
- ALL CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
- ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK, AND THIS MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUND BREAKING.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BLENDED NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- LIMITS OF CLEARING SHOWN ON GRADING PLAN ARE BASED UPON THE APPROXIMATE CUT AND FILL SLOPE LIMITS, OR OTHER GRADING REQUIREMENTS.
- THE PROPOSED CONTOURS SHOWN IN DRIVAYS AND PARKING LOTS AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING ASPHALT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SURFACE OR AGGREGATE BASE COURSE ELEVATIONS TO BE COMPLETED UNDER THIS CONTRACT.
- THE CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO NEW OR EXISTING DRAINAGE INLETS OR SHEET OVERLAND.
- ANY GRADING, BEYOND THE LIMITS OF CONSTRUCTION AS SHOWN ON THE GRADING PLAN, IS SUBJECT TO A FINE.
- GRADING WITHOUT AN APPROVED EROSION CONTROL PLAN IS SUBJECT TO A FINE.
- STABILIZATION IS THE BEST FORM OF EROSION CONTROL. TEMPORARY SEEDING IS NECESSARY TO ACHIEVE EROSION CONTROL ON DENuded AREAS AND ESPECIALLY WHEN THE CONSTRUCTION SEQUENCE REQUIRES IT.
- ALL GRADED SLOPES ARE TO BE SEED OR LANDSCAPED WITHIN 15 DAYS OF COMPLETION OF GRADING. ALL REMAINING AREAS ARE TO BE SEED WITHIN 90 DAYS.
- EXISTING GRADES, CONTOURS, UTILITIES AND OTHER EXISTING FEATURES FROM FIELD RUN SURVEY.
- THE CONTRACTOR SHALL INCLUDE IN THE CONTRACT PRICE ANY Dewatering NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET OSHA, FEDERAL, STATE, AND LOCAL REGULATIONS PERTAINING TO THE INSTALLATION OF THE WORK INDICATED ON THESE DRAWINGS. THE DESIGN ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE DESIGN(S) TO INSTALL SAID ITEMS.
- THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATION, ELEVATION, AND DIMENSIONS OF EXIT DOORS, RAMPS, BUILDING DIMENSIONS, AND EXACT BUILDING UTILITY IN-RANER LOCATIONS.
- ALL FILL MATERIALS, EXISTING BUILDING FOUNDATIONS, PAVEMENT AND UTILITY STRUCTURES, TOSPOIL, AND ANY OTHER DELETERIOUS MATERIALS SHALL BE COMPLETELY REMOVED FROM WITHIN THE BEARING ZONE BELOW THE STRUCTURE.
- ALL FOUNDATION EXCAVATION SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL REPRESENTATIVE TO DETERMINE WHETHER UNSUITABLE MATERIAL MUST BE REMOVED. ALL UNSUITABLE MATERIAL SHALL BE REMOVED, BACKFILLED AND COMPACTED AS REQUIRED BY THE GEOTECHNICAL REPRESENTATIVE.
- ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED OR DEPICTED.
- THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.S PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- CONTRACTOR SHALL ADJUST ANY/COR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUE GRADE.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 1 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 5:1 OR STEEPER.
- CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.

DRAINAGE NOTES

- A MINIMUM GRADE OF 0.20% SHALL BE MAINTAINED ON ALL PIPES, UNLESS OTHERWISE NOTED.
- PIPE LENGTHS AND SLOPES INDICATED ON THE PLANS ARE APPROXIMATE ONLY.
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
 - NO MORE THAN 500 LF OF TRENCH MAY BE OPENED AT ONE TIME.
 - EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
 - EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
 - MATERIAL USED FOR BACK-FILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
 - RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL REGULATIONS.
 - APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- CATCH BASINS, MANHOLES, FRAMES, GRATES, ETC. SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS. REFERENCE THE FOLLOWING STANDARD DETAILS:

840-02 - CONCRETE CATCH BASIN	840-09 - FRAME, GRATES AND HOOD FOR CATCH BASINS
840-14 - CONCRETE DROP INLET	840-04 - CONCRETE OPEN THROAT CATCH BASIN
840-16 - CONCRETE JUNCTION BOX	840-16 - THROP INLET FRAME AND GRATES
840-24 - PRECAST MANHOLE	840-26 - TRAFFIC BEARING GRATED DROP INLET
840-28 - PRECAST CONCRETE ENDWALL	840-45 - PRECAST DRAINAGE STRUCTURE
- ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADIES USING A PIPE LASER OR OTHER ACCURATE METHOD.
- STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
 - RCP, CLASS III PER ASTM C-76 WITH FLEXIBLE PLASTIC RING GASKETS AT JOINTS.
 - HIGH DENSITY POLYETHYLENE PIPE (HDPE) - ASSTO DESIGNATION M292 TYPE S, M294 TYPE S AND M297 TYPE S SMOOTH INTERIOR/ANNUAL EXTERIOR. ONLY PERMITTED WHEN SPECIFICALLY INDICATED ON THE CONSTRUCTION DRAWINGS. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURER'S INSTALLATION GUIDELINES. PIPE JOINTS AND FITTINGS SHALL BE WATER TIGHT.
- ALL STORM DRAINAGE WITHIN THE PUBLIC ROADS SHALL BE CLASS III REINFORCED CONCRETE PIPE UNLESS OTHERWISE NOTED.
- EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE SILT AND DEBRIS.
- IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.
- PRECAST STRUCTURES MAYBE USED AT CONTRACTOR'S OPTION.
- ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING KING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
- STRUCTURE TOP ELEVATIONS SHOWN HERE ARE APPROXIMATE. CONTRACTOR SHALL ADJUST AS NECESSARY.
- RIM ELEVATIONS AS NOTED ARE TO THE GUTTER FLOW LINE.

STORMWATER MANAGEMENT NOTES:

- THE DEVELOPER OR HIS AGENT SHALL CONTACT THE ENGINEER WHEN THE BEST MANAGEMENT PRACTICES ARE CONSIDERED AND AGREE TO RECORD OPERATIONAL SO A FINAL INSPECTION CAN BE PERFORMED TO DETERMINE COMPLIANCE WITH THE APPROVED PLAN CAN BE PERFORMED.
- PRIOR TO CONSTRUCTION, A SOIL TEST OF THE PROPOSED FILLER MEDIA SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD WITH A COPY SENT TO THE ENGINEER. THE TEST SHALL CONSIST OF BOTH THE STANDARD AND TEST FOR PHOSPHORUS, MAGNESIUM, AND POTASSIUM AND ADDITIONAL TESTS OF ORGANIC MATTER AND SOLUBLE SALTS. ALL TESTING RESULTS SHALL COME FROM THE SAME TESTING FACILITY. THE NC DEPARTMENT OF AGRICULTURE (NCDAS) IS THE REFERRED TESTING FACILITY. SHOULD THE PH FALL OUT OF THE ACCEPTABLE RANGE, IT MAY BE REQUIRED TO BE TESTED WITHIN 14 DAYS OF THE ACCEPTABLE RANGE. IT MAY BE REQUIRED TO BE TESTED WITHIN 14 DAYS OF THE ACCEPTABLE RANGE. IT MAY BE REQUIRED TO BE TESTED WITHIN 14 DAYS OF THE ACCEPTABLE RANGE.
- PRIOR TO CONSTRUCTION, A COMPOSITION TEST OF THE PROPOSED FILLER MEDIA SHALL BE REVIEWED AND APPROVED BY THE ENGINEER OF RECORD WITH A COPY SENT TO THE ENGINEER. THE TEST SHALL CONSIST OF BOTH THE STANDARD AND TEST FOR PHOSPHORUS, MAGNESIUM, AND POTASSIUM AND ADDITIONAL TESTS OF ORGANIC MATTER AND SOLUBLE SALTS. ALL TESTING RESULTS SHALL COME FROM THE SAME TESTING FACILITY. THE NC DEPARTMENT OF AGRICULTURE (NCDAS) IS THE REFERRED TESTING FACILITY. SHOULD THE PH FALL OUT OF THE ACCEPTABLE RANGE, IT MAY BE REQUIRED TO BE TESTED WITHIN 14 DAYS OF THE ACCEPTABLE RANGE. IT MAY BE REQUIRED TO BE TESTED WITHIN 14 DAYS OF THE ACCEPTABLE RANGE.
- PERIODIC DOUBLE RING INFILTRATION TESTS (MINIMUM OF 3 TESTS ON 1 LITER 200 SF OF THE MEDIA) SHALL BE CONDUCTED AT THE COMPLETION OF THE INFILTRATION TEST. INFILTRATION RATES OF THE CONSTRUCTION INFILTRATION MEDIA SHALL BE BETWEEN 4.0 IN. HR. PROVIDE A COPY OF THE RESULTS TO THE ENGINEER.
- THE OWNER IS RESPONSIBLE FOR MAINTAINING THE STORMWATER BAP. A FINAL MAINTENANCE INSPECTION AND REPORT REQUIRED. THE OWNER OF A PERMITTED STRUCTURAL STORMWATER BMP/CONTROL SHALL ANNUALLY SUBMIT A MAINTENANCE AND INSPECTION REPORT FOR EACH BMP TO THE STRUCTURAL ADMINISTRATIVE ANNUAL INSPECTIONS SHALL BE REQUIRED WITHIN ONE YEAR OF THE REGISTRATION OF ANY DEEDS SHOWING STORMWATER BMP/CONTROL STRUCTURES.
- UPON COMPLETION OF THE PROJECT, AND BEFORE A CERTIFICATE OF OCCUPANCY SHALL BE GRANTED, THE ENGINEER OF RECORD SHALL CERTIFY THAT THE COMPLETED PROJECT IS IN ACCORDANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS AND DESIGN.
- A FINAL INSPECTION OF THE SITE AND STORMWATER MANAGEMENT IMPROVEMENTS TO BE SCHEDULED WITH AND COMPLETED BY THE ENGINEER'S INSPECTION.
- THE "AS-BUILT" PLANS SHALL SHOW THE FINAL DESIGN SPECIFICATIONS FOR ALL STORMWATER MANAGEMENT FACILITIES AND PRACTICES AND THE FIELD LOCATION, SIZE, DEPTH, AND LATERAL POSITION OF ALL STRUCTURES, CONTROL STRUCTURES, AS INSTALLED. THE "AS-BUILT" PLANS SHALL ALSO INCLUDE STORMWATER MANAGEMENT PLANS AND PRACTICES FOR THE STORMWATER MANAGEMENT MEASURES FOR ALL PLANS SHALL BE COPY. ENSURE THAT THE AS-BUILT STORMWATER MANAGEMENT CONTROLS AND DETAILS ARE IN COMPLIANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS AND DESIGN AND WITH THE REQUIREMENTS OF THE MUNICIPALITY.
- THE ENGINEER'S CERTIFICATION OF COMPLETION WILL BE REQUIRED PRIOR TO THE FINAL PLAN OR CERTIFICATE OF OCCUPANCY. THE STORMWATER CONTROL IS TO BE INSPECTED TO ENSURE IT IS PROVIDING AS DESIGNED AND HAS FULL DESIGN VALUE PRIOR TO SIGNATURE OF THE FINAL CERTIFICATE OF OCCUPANCY.

DOWNSPOUT DETAIL

N.T.S.

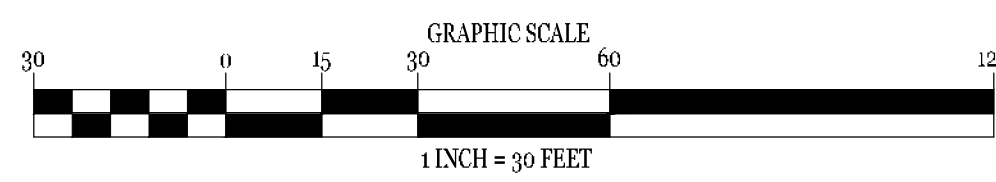


LEGEND

- TS.....TOP OF SIDEWALK
- TC.....TOP OF CURB
- GL.....GUTTER FLOW LINE
- TP.....TOP OF PAVEMENT
- TW.....TOP OF WALL
- BW.....BOTTOM OF WALL
- CB.....CATCH BASIN
- GI.....GRATE INLET
- FES.....FLARED END SECTION
- YL.....YARD INLET
- GR.....GROUND
- FD.....FLOW DIRECTION ARROW



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**PRELIMINARY
DO NOT USE FOR
CONSTRUCTION**

OWNER/DEVELOPER:
 RHETSON COMPANIES, INC.
 ATTN: JOHN PARKER
 2075 JUNIPER LAKE ROAD
 WEST END, NC 27376
 (910) 944-0881
 john@rhetsom.com



DOLLAR GENERAL
 US Highway 421 N
 Lillington, NC Harnett County

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and/or modification on this document without written authorization and adaptation by Bowman North Carolina, Ltd. shall be without liability to Bowman North Carolina, Ltd.

REV.	DATE	DESCRIPTION

Drawn: Rhetsom Project# 21103
 Checked: No. 058004
 Initial Date: February 28, 2022
GRADING & DRAINAGE PLAN
 Sheet No. **C-4**

UTILITY SERVICE NOTES

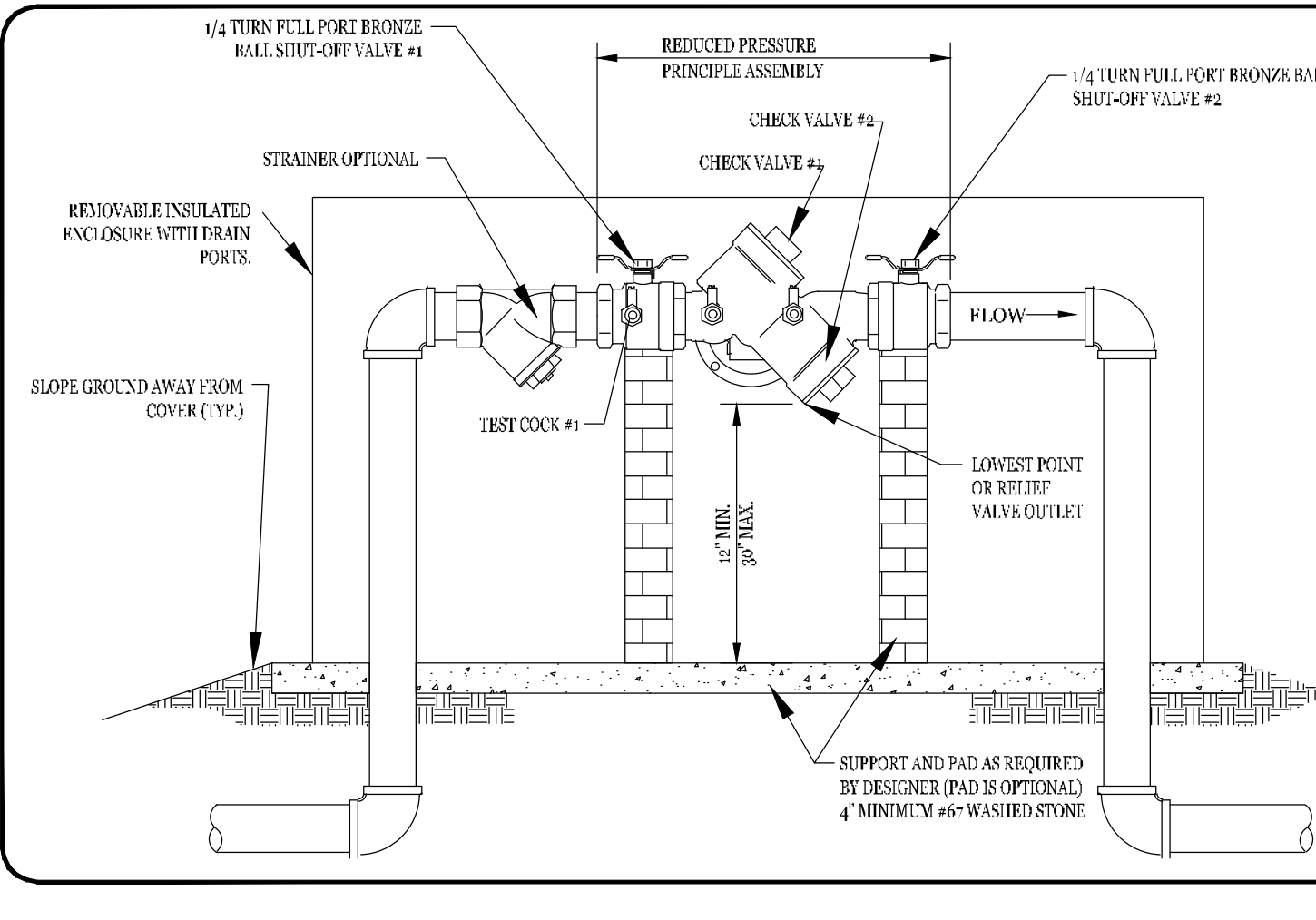
WATER SERVICE
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" WATER SERVICE LINE FROM EXISTING WATER MAIN TO BUILDING PER MECHANICAL REQUIREMENTS.
CONTACT: HARNETT COUNTY PUBLIC UTILITIES
TELEPHONE: 910-899-7575

ELECTRIC SERVICE
"POWER CO." TO PROVIDE UNDERGROUND 120/208V 3 PHASE SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL TWO 4" DIA. CONDUIT W/ FULL WIRE TO UTILITY COMPANY POINT OF CONNECTION.
CONTACT: HARNETT COUNTY PUBLIC UTILITIES
TELEPHONE: 910-899-7575

TELEPHONE SERVICE
"TELEPHONE CO." TO PROVIDE NEW UNDERGROUND SERVICE. GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 4" DIA. CONDUIT W/ FULL WIRE FROM PHONE PANEL BOARD TO UTILITY COMPANY POINT OF CONNECTION.
CONTACT: HARNETT COUNTY PUBLIC UTILITIES
TELEPHONE: 910-899-7575

SANITARY SEWER
GENERAL CONTRACTOR TO PROVIDE AND INSTALL A 6" SCHEDULE 40 PVC FROM PROPOSED SEPTIC SYSTEM TO LAST CLEAN OUT OUTSIDE OF BUILDING. (MIN. 1% SLOPE). PROVIDE CLEAN OUTS EVERY 75' (TYPICAL).
CONTACT: HARNETT COUNTY HEALTH DEPARTMENT
TELEPHONE: 910-899-7530

NATURAL GAS
GENERAL CONTRACTOR TO COORDINATE WITH NATURAL GAS UTILITY FOR SERVICE LINE TO PROPOSED BUILDING.
CONTACT: HARNETT COUNTY PUBLIC UTILITIES
TELEPHONE: 910-899-7575



APPROVED RPZ ASSEMBLIES

CONTRACTOR	MODEL
PHISCO	40-004-02
HERSEY	FRP II
RAINBIRD	RW-07-075
WATTS	999 OT, 099 MT, 099 Me OT
WILKINS	975XL

BACKFLOW PREVENTION NOTES:

- UTILITIES SHALL NOT TAKE PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPARTMENT CONNECTION POINTS OR OTHER WATER-USING APPOINTMENTS CONNECTED TO THE SERVICE LINE BETWEEN ANY WATER METER AND ITS UTILITY DEPARTMENT REQUIRED BACKFLOW PREVENTER.
- EACH UTILITY DEPARTMENT REQUIRED BACKFLOW PREVENTER ASSEMBLY IS REQUIRED TO BE TESTED BY AN APPROVED CERTIFIED LESLIE PRIOR TO PLACING THE WATER SYSTEM INTO SERVICE.

3 RPZ BACKFLOW PREVENTER
NOT TO SCALE

FIRE PROTECTION NOTE

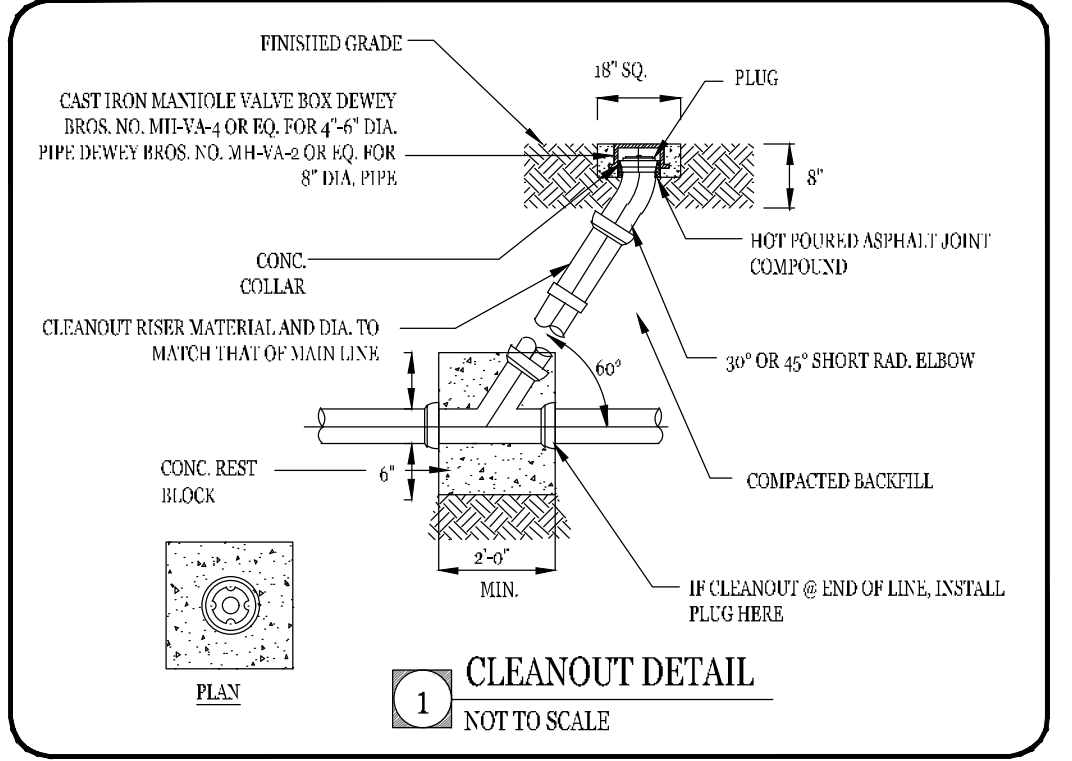
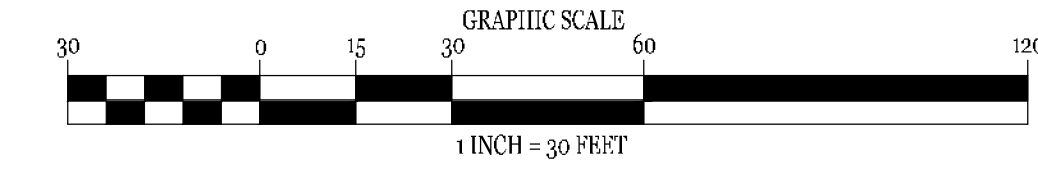
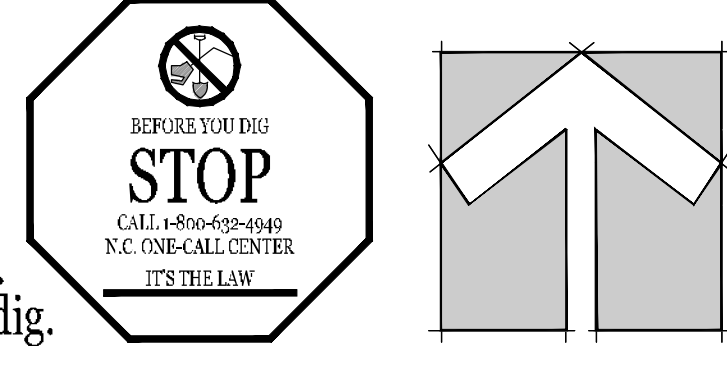
THE PROPOSED BUILDING WILL NOT HAVE A FIRE SPRINKLER SYSTEM

UTILITY NOTE

THE ESTIMATED WATER USAGE FOR THIS SITE IS 200 GPD BASED ON NCSD APPROVED FLOW AMOUNT FOR DOLLAR GENERAL DEVELOPMENTS

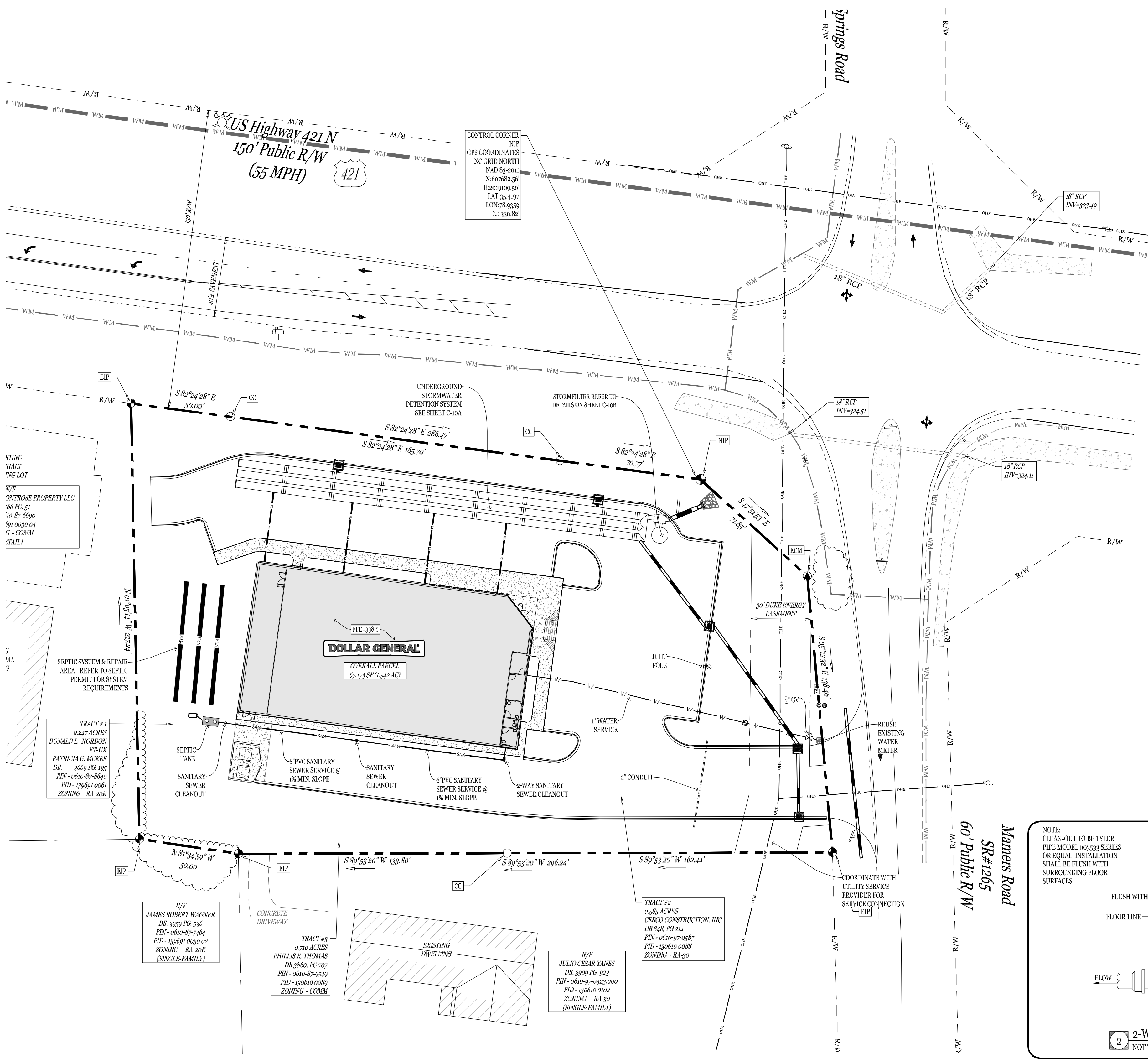


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UTILITY NOTES

- THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING APPROPRIATE PARTS AND ASSURING THAT EXISTING UTILITIES ARE LOCATED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTACT THE LOCAL MUNICIPALITY PUBLIC WORKS DEPARTMENT 48 HOURS PRIOR TO COMMENCEMENT OF WORK FOR UTILITY LOCATING SERVICES. ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS ONLY AND HAVE BEEN COMPILED FROM THE LATEST AVAILABLE MAPPING. THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.
- CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE HARNETT COUNTY UTILITY & HEALTH DEPARTMENTS.
- CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE HARNETT COUNTY UTILITY & HEALTH DEPARTMENTS WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SANITARY SERVICE LINES.
- CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS. A PRE-CONSTRUCTION MEETING WITH THE VARIOUS UTILITY COMPANIES IS REQUIRED PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.
- CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTOR 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
- THE CONTRACTOR SHALL COORDINATE ANY INTERRUPTION OF UTILITY SERVICE WITH THE OWNER AND THE UTILITY COMPANY. ANY PLANNED INTERRUPTION OF UTILITY SERVICE SHALL BE GIVEN A 48 HOUR NOTICE TO THE UTILITY COMPANY AND THE OWNER.
- SHOULD ANY UNCHARGED OR INCORRECTLY CHARGED UTILITIES BE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER IMMEDIATELY FOR DIRECTIONS.
- PRESSURE REDUCING VALVES WILL BE REQUIRED ON THE DOMESTIC WATER MAINS FOR EACH BUILDING IF THE STATIC PRESSURE IN THE WATER MAIN EXCEEDS 80 PSI. SEE MECHANICAL/PLUMBING PLANS.
- ROUTES SHOWN FOR WATER SERVICES, ELECTRIC, SANITARY SEWER BUILDING LATERALS AND ROOF DRAIN PIPING ARE SUBJECT TO CHANGE.
- THE CONTRACTOR SHALL SAW CUT, REMOVE AND REPLACE ASPHALT PAVEMENT AS NECESSARY TO INSTALL UNDERGROUND ELECTRIC, TELEPHONE, SEWER, AND WATER.
- THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE AT ALL LOCATIONS WHERE SEWERS CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT OWNER IN THE EVENT OF ANY UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
- THE CONTRACTOR SHALL INSURE THAT ALL UTILITY COMPANIES AND HARNETT COUNTY UTILITY & HEALTH DEPARTMENTS STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY COMPANIES AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, ADJUSTMENTS, INSPECTIONS, AND DEMOLITION.
- THIS PLAN DETAILS PIPES UP TO 4" FROM THE BUILDING FACE. REFER TO THE BUILDING DRAWINGS FOR BUILDING CONNECTIONS, SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY.
- ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT AND REPLACED IN ACCORDANCE WITH THE PAVEMENT REPAIR REQUIREMENTS OF THE HARNETT COUNTY UTILITY & HEALTH DEPARTMENTS AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION.
- MAINTAIN MINIMUM 10'-0" HORIZONTAL SEPARATION BETWEEN ON-SITE SANITARY SEWER AND DOMESTIC OR IRRIGATION WATER PIPING WHENEVER POSSIBLE. WHERE WATER PIPING MUST CROSS OVER SANITARY SEWER PIPING, MAINTAIN A MINIMUM 18" VERTICAL SEPARATION. WHERE SANITARY SEWER PIPING MUST CROSS OVER WATER PIPING, MAINTAIN A MINIMUM 4" VERTICAL SEPARATION AND PROVIDE MIN. 4" TIE-UP CONC. BETWEEN 4" CONDUIT'S CAST IRON PIPE SLEEVE ON WATER PIPING FOR A MINIMUM OF 10'-0" EACH SIDE OF THE SAN. SEWER CROSSING, WHERE PERMITTED BY LOCAL CODE. DOMESTIC WATER AND SANITARY SEWER SERVICE PIPING MAY BE INSTALLED IN A COMMON TRENCH. TRENCH AND PIPING PLACEMENT SHALL COMPLY WITH ALL GOVERNING CODES AND REGULATIONS.



HARNETT REGIONAL WATER NOTES

- The Fire Marshal's Office shall approve all hydrant types and locations in new subdivisions. However, Harnett Regional Water (HRW) prefers the contractor to install one of the following fire hydrants:
 - Muller - Super Centurion 350 A-423 model with a 5 1/2" main valve opening three way (two hose nozzles and one pump nozzle).
 - American Darling - Mark B-84-B model with a 5 1/2" main valve opening three way (two hose nozzles and one pump nozzle).
 - Malden - Pacer B-47-250 model with a 5 1/2" main valve opening three way (two hose nozzles and one pump nozzle) or approved equal for standardization.
 - Fire hydrants are installed at certain elevations. Any grade change near any fire hydrant, which impedes its operation, shall become the responsibility of the Utility Contractor for correction. Corrections will be monitored by the HRW Utility Construction Inspector and the Harnett County Fire Marshal.
 - The Professional Engineer (PE) shall obtain and provide the NCDOT Authorization to Construct permit to the Utility Contractor. The Registered Land Surveyor (RLS) shall stake and set all corners and the grade stakes for the proposed finish grade for each street before the Utility Contractor begins construction of the water line(s). The grade stakes should be set with a consistent offset from the street centerline so as not to interfere with the street grading construction process of the proposed water lines that will serve this project.
 - The Utility Contractor shall notify Harnett Regional Water (HRW) and the Professional Engineer (PE) at least two days prior to construction commencing. The Utility Contractor must schedule a pre-construction conference with Mr. Alan Mason, HRW Utility Construction Inspector at least two (2) days before construction will begin and the Utility Contractor must coordinate with HRW for regular inspection visitations and acceptance of the water system(s). Construction work shall be performed only during the normal working hours of HRW which is 8:00 am - 5:00 pm Monday through Friday. Holiday and weekend work is not permitted by HRW.
 - The Professional Engineer (PE) shall provide HRW and the Utility Contractor with a set of NCDOT approved plans marked "Released for Construction" at least two days prior to construction commencing. The Registered Land Surveyor (RLS) should stake and set all corners and the grade stakes for the proposed finish grade for each street before the Utility Contractor begins construction of the water line(s). The grade stakes should be set with a consistent offset from the street centerline so as not to interfere with the street grading construction process of the proposed water lines that will serve this project.
 - The Utility Contractor shall provide the HRW Utility Construction Inspector with material submittals and shop drawings for all project materials prior to the construction of water line extension(s) and associated water services in Harnett County. The materials to be used on the project must meet the established specifications of HRW and be approved by the Engineer of Record prior to construction. All substandard materials or materials not approved for use in Harnett County found on the project site must be removed immediately when notified by the HRW Utility Construction Inspector.
 - The water main(s), fire hydrants, service lines, meter setters and all associated appurtenances shall be constructed in strict accordance with the standard specifications of the Harnett Regional Water (HRW). The Utility Contractor shall be responsible to locate the newly installed water main(s) well in advance of construction and all associated meter setters and meter boxes for other utility companies and their contractors until the new water main(s) have been approved by the North Carolina Department of Environmental Quality, Division of Environmental Health, Public Water Supply Section (NDEH, HRW, PE) and accepted by HRW.
 - Prior to acceptance, all services will be inspected to insure that they are installed at the proper depth. All meter boxes must be flush with the ground level at finish grade and the meter setters must be a minimum of 8" below the meter box lid. Meter setters shall be centered in the meter box and supported by brick block or stone.
 - The Utility Contractor shall provide the Professional Engineer (PE) and HRW Utility Construction Inspector with a set of red line drawings identifying the water system installed on each water main. The red line drawings should identify the materials, pipe sizes and approximate depths of the water lines as well as the pole valves, fire hydrant meter boxes and all associated appurtenances for all water line(s) constructed in Harnett County. The red line drawings should clearly identify any deviations from the NCDOT approved plans. All change orders must be approved by HRW and the Professional Engineer (PE) in writing and properly documented in the red line drawings.
 - Potable water main crossing other utilities and non-potable water lines (sanitary sewer, storm sewer, RCP, etc.) shall be installed with a minimum vertical clearance of ten (10) feet between the water main and the other utility. The potable water main shall be installed with the newly four (4) inch diameter vertical separation and with ductile iron pipe. The ductile iron pipe shall be placed under the water line such as sanitary sewer or storm sewer lines. If these separations cannot be maintained then the water main shall be installed with ductile iron pipe. Both the potable water main and the non-potable water line must be cast iron or ductile iron pipe (DIP) if the state minimum separations cannot be maintained. The ductile iron pipe must be at least 10' feet from the point where the potable water main crosses the non-potable water line.
 - Potable water mains installed parallel to non-potable water lines (sanitary sewer, storm sewer, RCP, etc.) shall be installed with a minimum vertical clearance of ten (10) feet between the potable water main and sanitary sewer mains, sewer laterals and sanitary ducts. The horizontal separation between the potable water main and any other utility or storm sewer shall not be less than five (5) feet. The potable water main must be ductile iron pipe with plastic 180 and cast iron dip covers in the center of the line. Meter boxes for 2" services shall be 20" wide x 32" long ABS plastic boxes at least 20" in height with cast iron dip covers in the center of the line. Meter boxes for 4" services shall be 20" wide x 32" long ABS plastic boxes at least 20" in height with plastic lids and cast iron dip covers in the center of the lids.
 - Water meters must be installed in concrete vaults sized for the meter assembly and associated appurtenances as set to provide at least eighteen (18") inches of clearance between the bottom of the concrete vault and the bottom of the meter set. The meter meter must be provided test ports for the meter in not equipped with test ports from the manufacturer in accordance with the HRW established standard specifications and details. Ductile iron pipe must be used for the meter meter wall pipe and valve vault piping. The Utility Contractor must provide shop drawings for the meter vaults to HRW prior to ordering the concrete vaults.
 - The Utility Contractor will install polyethylene 509-9 water service lines that cross under the pavement inside a schedule 40 PVC conduit to allow for removal and replacement in the future. Two (2)
- independent 1/2" water service lines may be installed inside one (1) - two (2) inch schedule 40 PVC conduit or two (2) independent 1/2" water service lines may be installed inside one (1) - three (3) inch schedule 40 PVC conduit, but each water service shall be lapped directly to the water main. Split services are not allowed by HRW. If sidevents are proposed, the conduit must extend past the sidewalk.
- The water main(s), fire hydrants, gate valves, service lines, meter setters and associated appurtenances must be rated for 200 psi and hydraulically pressure tested to 200 psi. The hydraulic pressure test(s) must be witnessed by the HRW Utility Construction Inspector. The Utility Contractor must notify HRW when they are ready to begin filling in lines and coordinate with Harnett Regional Water to witness all pressure testing.
- The Utility Contractor shall conduct a pneumatic pressure test using compressed air or other inert gas on the shanks and tapping sleeves prior to making the tap on the existing water main. This pneumatic pressure test must be witnessed by the HRW Utility Construction Inspector. The Utility Contractor shall use Romac brand stainless steel tapping sleeves or approved equal for all taps made in Harnett County. All new water line extensions must be installed with a resilient gate valve sized equal to the diameter of the new water line extension in order to provide a means of isolation between Harnett Regional Water's existing water mains and the new water line extension under construction.
- All water mains will be constructed with SDR-21 PVC Pipe or Class 50 Ductile Iron Pipe rated for at least 200 psi or greater. All pipe must be protected during loading, transport, unloading, staging, and installation. PVC pipe must be protected from extended exposure to sunlight prior to installation.
- All water mains will be flushed and disinfected in strict accordance with the standard specifications of the Harnett Regional Water. All water samples collected for bacteriological testing will be collected by the HRW Utility Construction Inspector and tested in the HRW Laboratory.
- All fittings larger than two (2) inches diameter shall be ductile iron. HRW requires that mechanical joints be assembled with grip rings as Megalug fittings are not approved by Harnett Regional Water. Pipe size smaller than twelve inches (12") diameter, PVC pipe used for water mains shall be connected by slip joint or mechanical joints with grip rings. Glued pipe joints are not allowed on PVC pipe used for water mains in Harnett County.
- HRW requires that the Utility Contractor install tracer wire in the trench with all water lines. The tracer wire shall be 1/2" diameter, solid copper conductor and it shall be terminated at the top of the valve boxes or manholes. No spliced wire underground shall be made underground on a tracer wire installed in Harnett County. The tracer wire may be secured with duct tape to the top of the pipe before backfilling.
- The Utility Contractor will provide Professional Engineer (PE) and the HRW Utility Construction Inspector with a set of red line field drawings to identify the installed location(s) of the water line(s) and all associated services. All change orders must be pre-approved by HRW and the Professional Engineer (PE) in writing and properly documented in the red line field drawings.
- The Utility Contractor shall spot dig to expose each utility pipe or line which may conflict with the proposed water line extension(s) well in advance of proposed water line construction. The Utility Contractor shall provide both horizontal and vertical clearances to the Professional Engineer (PE) to allow the PE to inform the water line design in order to avoid conflicts with existing underground utilities. The Utility Contractor shall coordinate with the utility owner and be responsible for temporary relocation and/or securing existing utility poles, pipes, wires, cables, signs and/or utilities including services in accordance with the utility owner requirements during water line installation, grading and street construction.
- Prior to the commencement of any work within established utility easements or NCDOT right-of-ways the Utility Contractor is required to have a signed NCDOT environmental agreement posted on site and notify all concerned utility companies in accordance with G.S. 87-102. The Utility Contractor must call the NC One Call Center at 811 or (800) 632-4949 to verify the location of existing utilities prior to the beginning of construction. Existing utilities shown in these plans were taken from maps furnished by various utility companies and have not been physically located or verified by the HRW Utility Construction Inspector. In addition, the Utility Contractor shall install a 4" x 4" concrete valve marker at the edge of the right-of-way to identify the location of each gate valve installed in the water line. The exception of the fire hydrant isolation valves. The contractor shall measure the distance from the center of the concrete marker to the center of the valve box. This distance (in linear feet) shall be stamped on the base plate located on the top of the concrete valve marker. In lieu of installing the concrete valve markers, the Utility Contractor may provide at least two measurements from two independent permanent above ground structures to the Professional Engineer (PE) in the red line drawings to identify the valve location. The Professional Engineer (PE) must include these measurements in the As-Built Record Drawings submitted to HRW.
- The Utility Contractor will be responsible for any and all repairs due to leakage damage from poor workmanship during the one (1) year warranty period once the water system improvements have been accepted by Harnett Regional Water. Harnett Regional Water will provide maintenance and repairs when requested and bill the Developer and/or Utility Contractor if necessary due to lack of response within 48 hours of notification of warranty work. The Utility Contractor will be responsible for any and all repairs due to damage resulting from failure to locate the water line and associated appurtenances for other utilities and their contractors until the water lines have been approved by NCDOT and accepted by HRW. The final inspection with HRW shall be witnessed by HRW and the Professional Engineer (PE) have been paved, the rights-of-way and utility easements have been seeded and stabilized with an adequate stand of grass in place to prevent erosion issues on site.
- The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineering practices and approved plans and specifications. No field changes to the approved plans shall be made without prior written approval by HRW. A copy of each engineer's field report is to be submitted to HRW as each such inspection is made on system improvements or testing in accordance with the HRW established standard specifications and details. The Developer's Engineer of Record and the HRW Utility Construction Inspector shall prepare a written punch list of any defects or omissions noted during the final inspection, should any exist. Upon completion of the punch list, the Developer's Engineer of Record and the HRW Utility Construction Inspector shall agree on the number of inspections performed by the HRW exceeds two, additional fees may be assessed to the Developer.

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RHETSON
PRELIMINARY
DO NOT USE FOR
CONSTRUCTION
OWNER/DEVELOPER:
RHETSON COMPANIES, INC.
ATTN: JOHN PARKER
2075 JUNIPER LAKE ROAD
WEST END, NC 27376
(910) 944-0881
john@rhetson.com

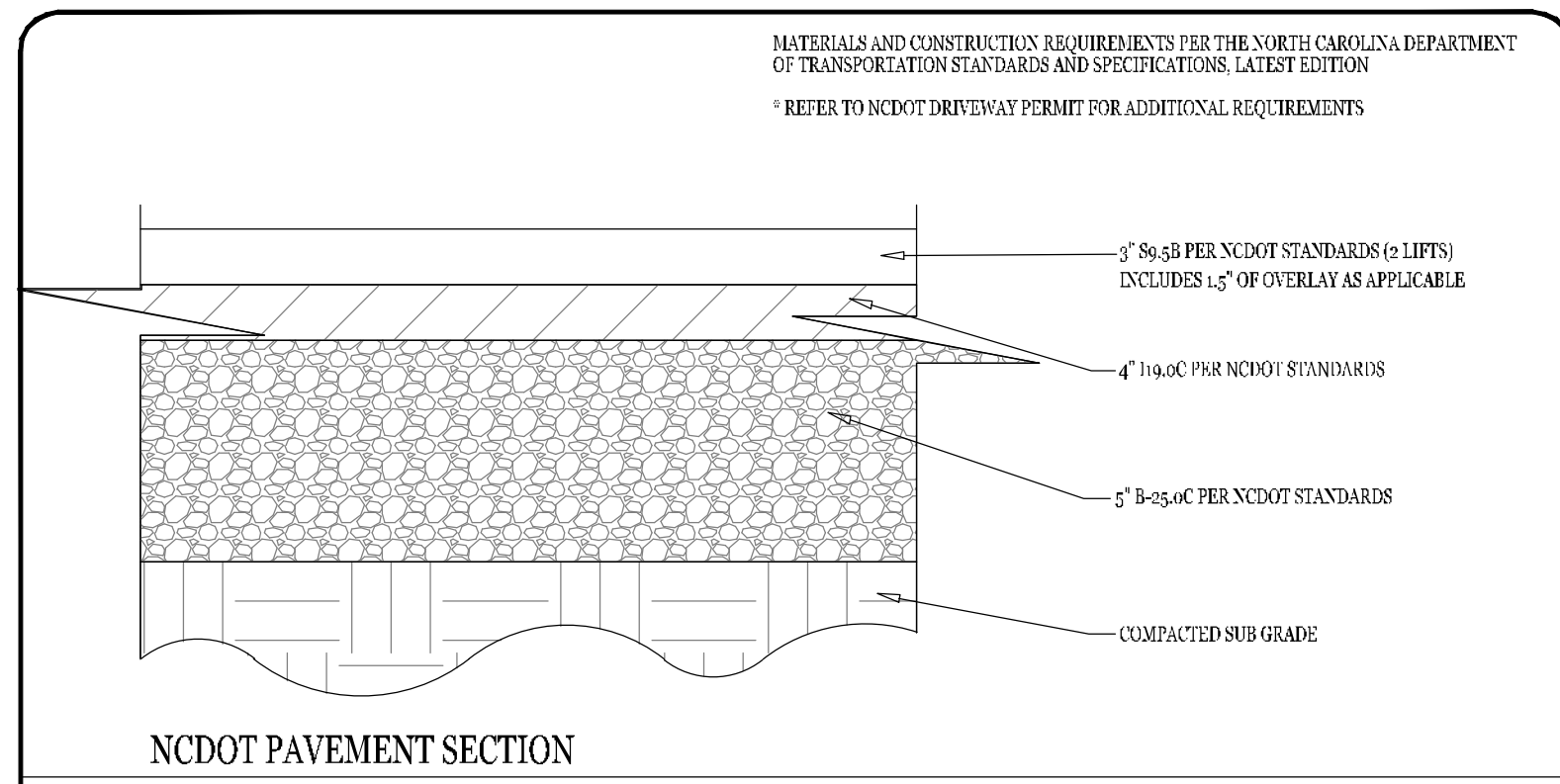
DOLLAR GENERAL
US Highway 421 N
Lillington, NC Harnett County

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Drawn: []
Checked: []
Rhetson Project #: 2103
Project No.: 058004
Initial Date: February 28, 2022
Title: []

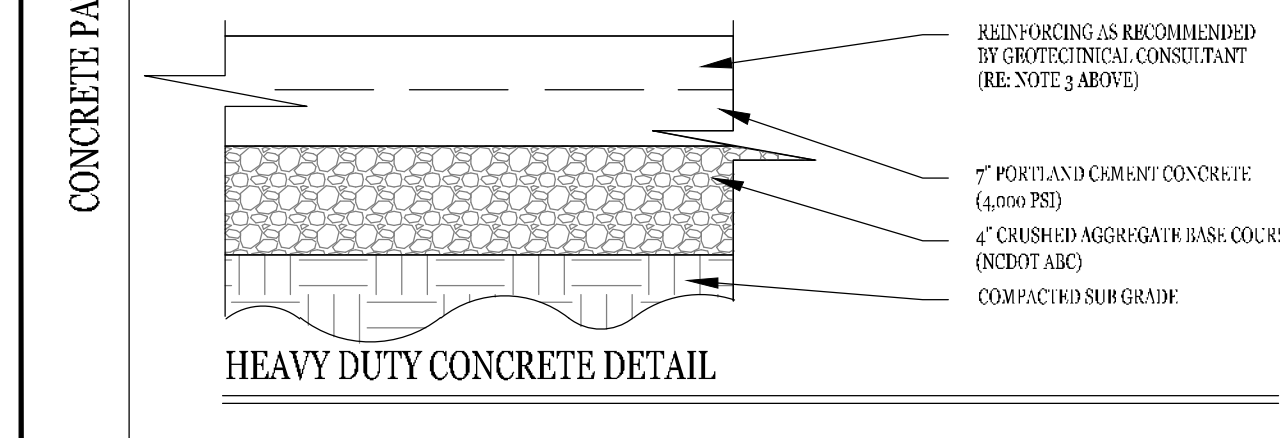
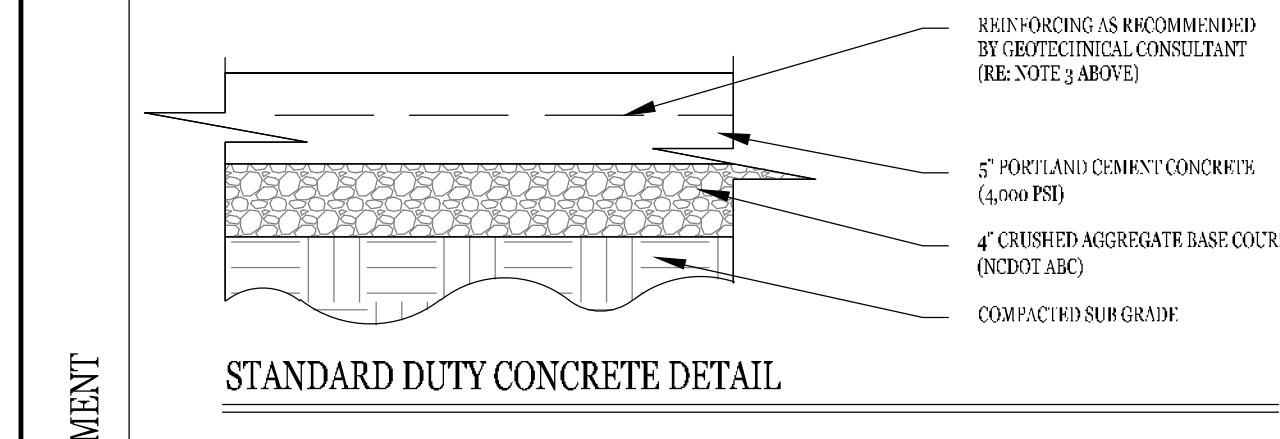
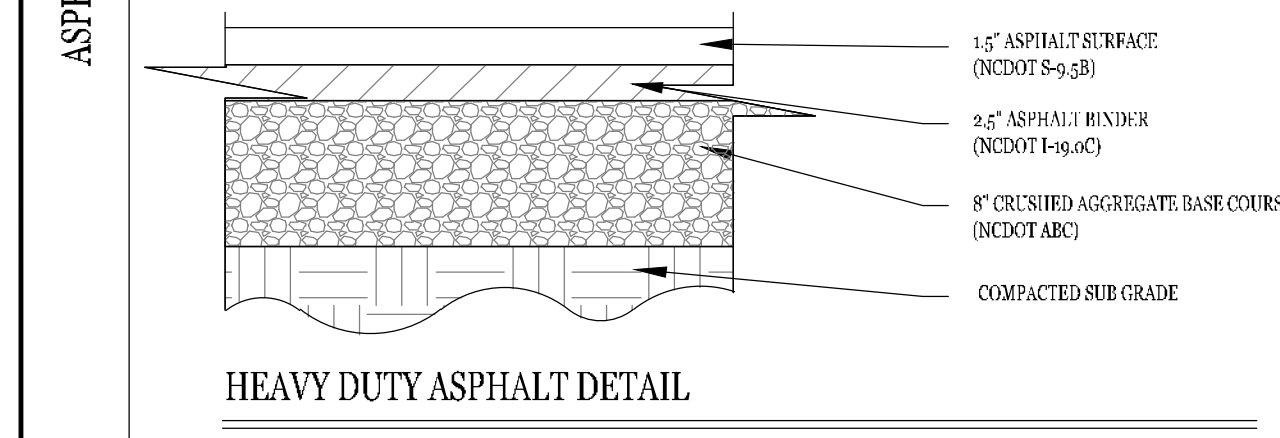
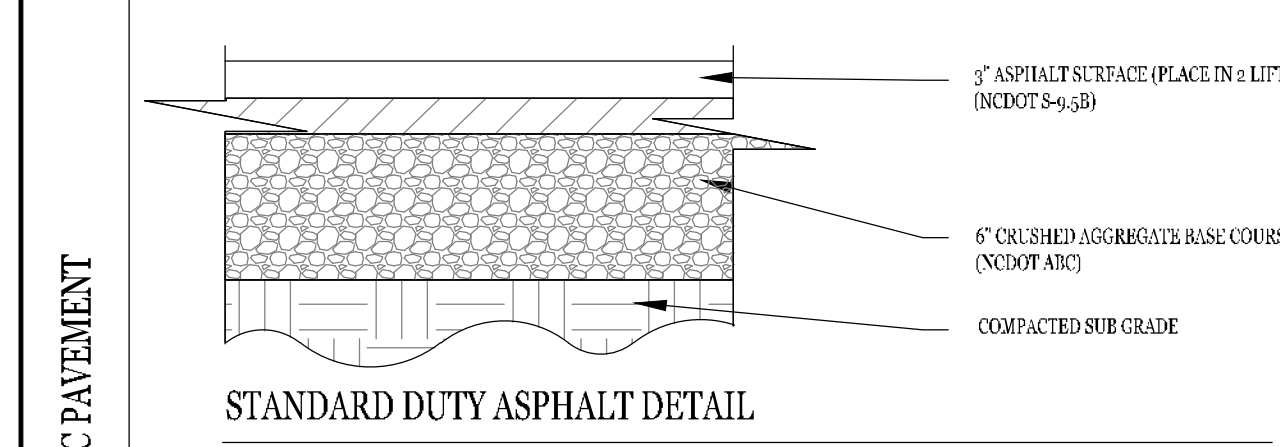
UTILITY PLAN
Sheet No. **C-5**

9422680-US 421 N. Harnett County



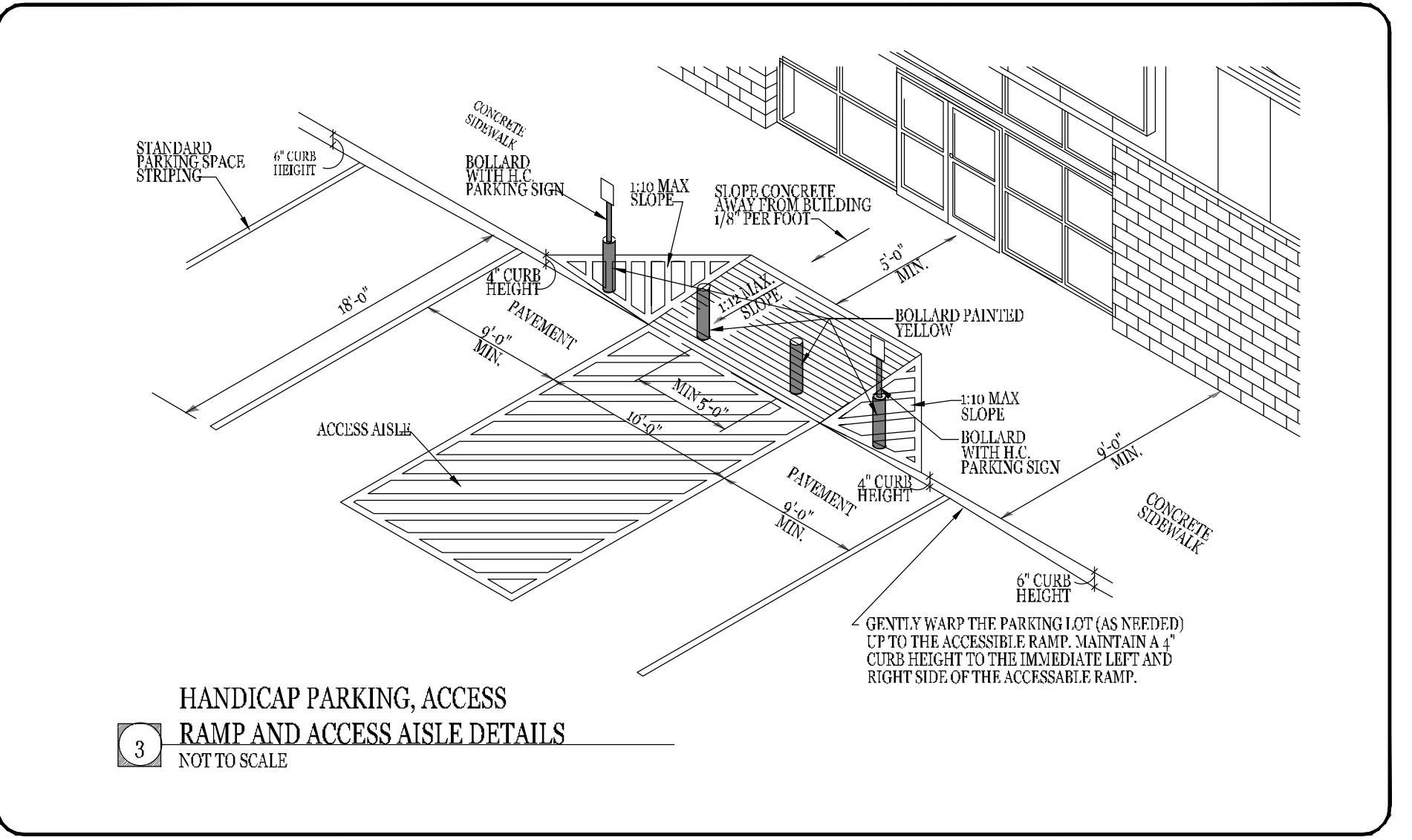
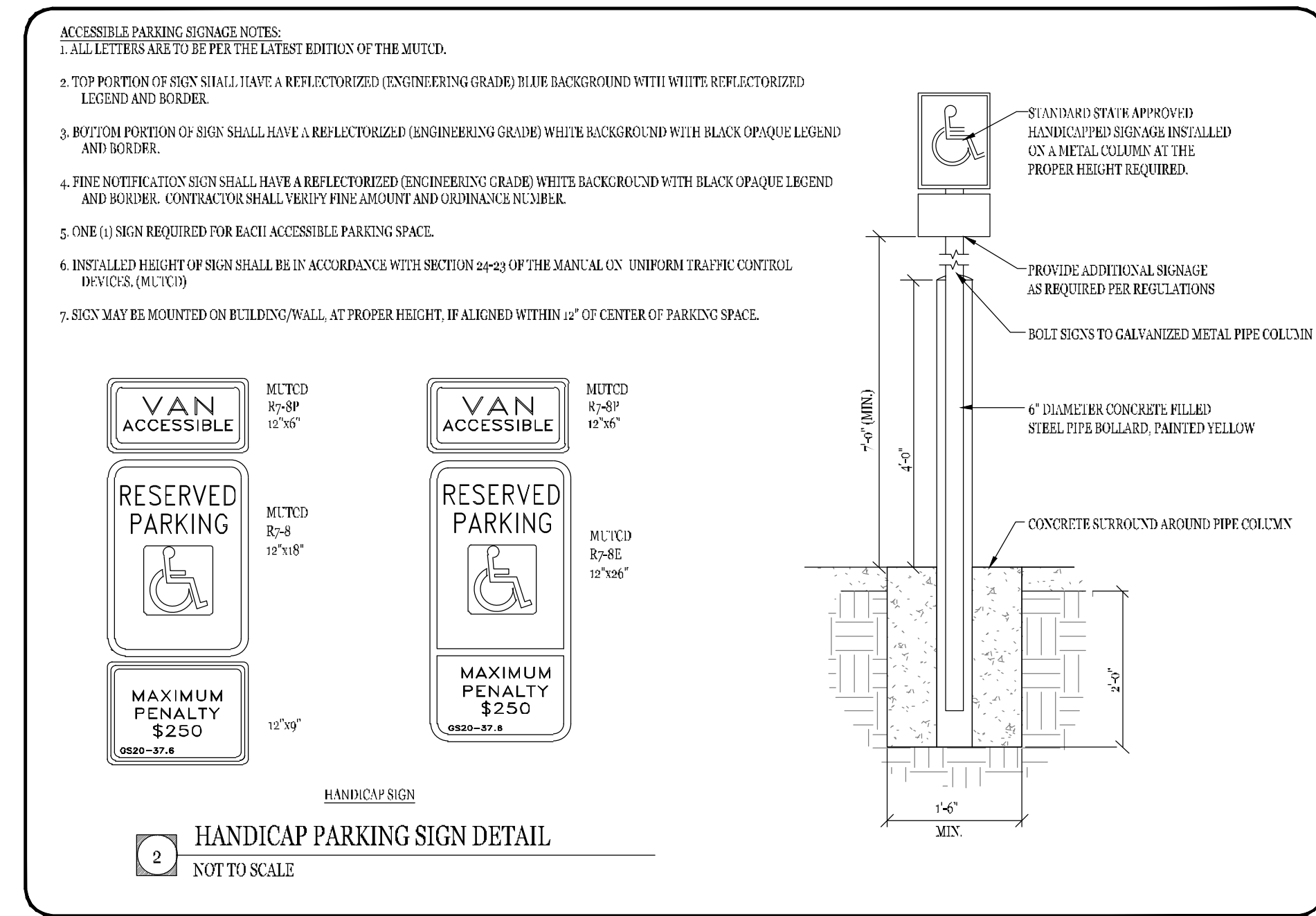
PAVEMENT GENERAL NOTES:

- DETAILS ARE DOLLAR GENERAL MINIMUM REQUIREMENTS AND MAY INCREASE WITH VARIOUS SOIL CONDITIONS. A GEOTECHNICAL INVESTIGATION WITH PAVEMENT DESIGN RECOMMENDATIONS SHALL BE COMPLETED FOR EACH DEVELOPMENT. THE FOLLOWING DETAILS ARE MINIMUM DOLLAR GENERAL PAVEMENT REQUIREMENTS. INCREASED RECOMMENDATIONS ARE TO BE USED.
- THE SUBGRADE MATERIALS SHALL BE PROOF ROLLED AND/OR SCARIFIED AND COMPACTED PRIOR TO PLACEMENT OF BASE MATERIAL. WHERE EXISTING SUBGRADE MATERIALS ARE UNSUITABLE, THEY SHALL BE REMOVED AND REPLACED WITH COMPACTED SELECT MATERIAL IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS.
- HEAVY DUTY CONCRETE PAVEMENT AND STANDARD DUTY CONCRETE PAVEMENT (AS RECOMMENDED BY THE GEOTECHNICAL REPORT OR DOLLAR GENERAL MINIMUMS) SHALL BE STEEL REINFORCED. REINFORCEMENT TYPE SHALL BE PRIOR APPROVED BY DOLLAR GENERAL.
- CONCRETE PAVEMENT PLAN SHALL BE PROVIDED TO DOLLAR GENERAL FOR PRIOR APPROVAL. ALL JOINTS MUST BE SEALED WITH AN APPROVED SEALANT. STEEL REINFORCING SHALL BE USED AT JOINTS. REFER TO ACT 2506 (GUIDE FOR DESIGN AND CONSTRUCTION OF CONCRETE PARKING LOTS) FOR JOINT DESIGN AND LAYOUT.



1 PAVEMENT DETAILS
NOT TO SCALE

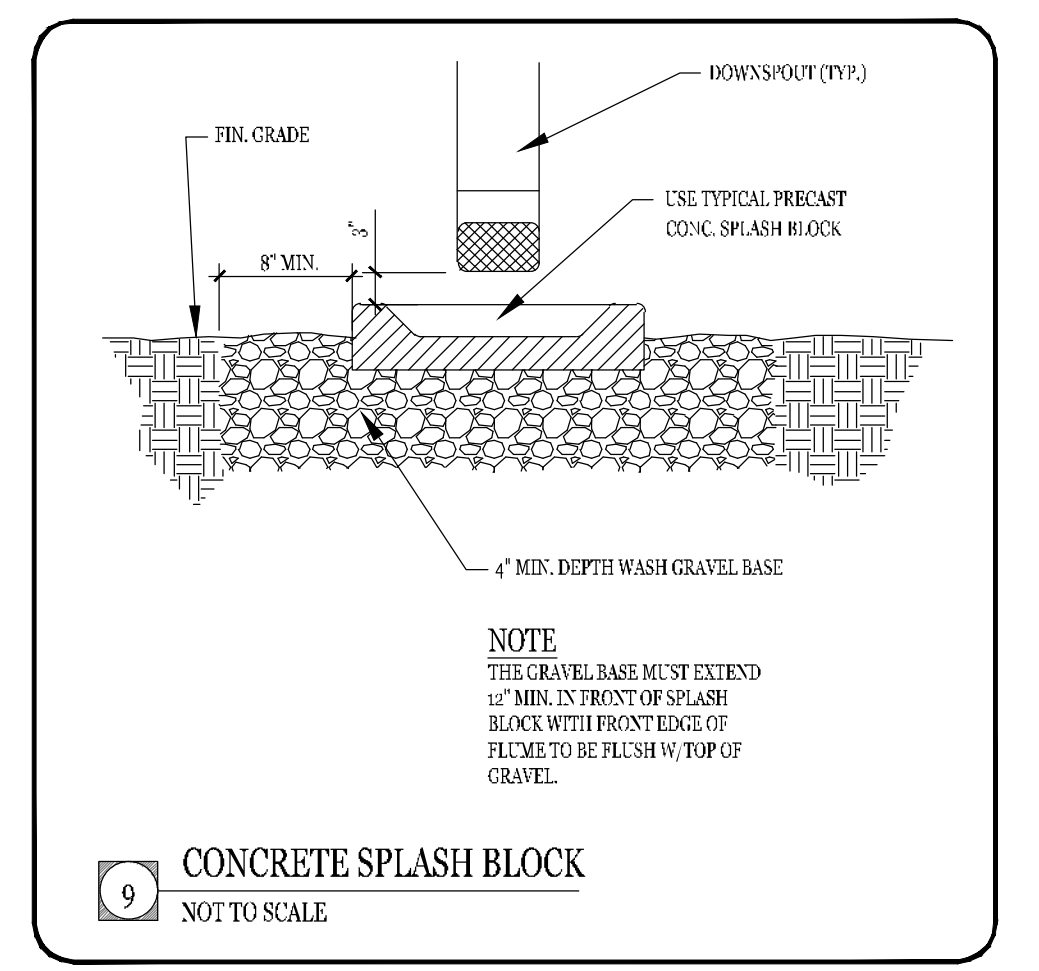
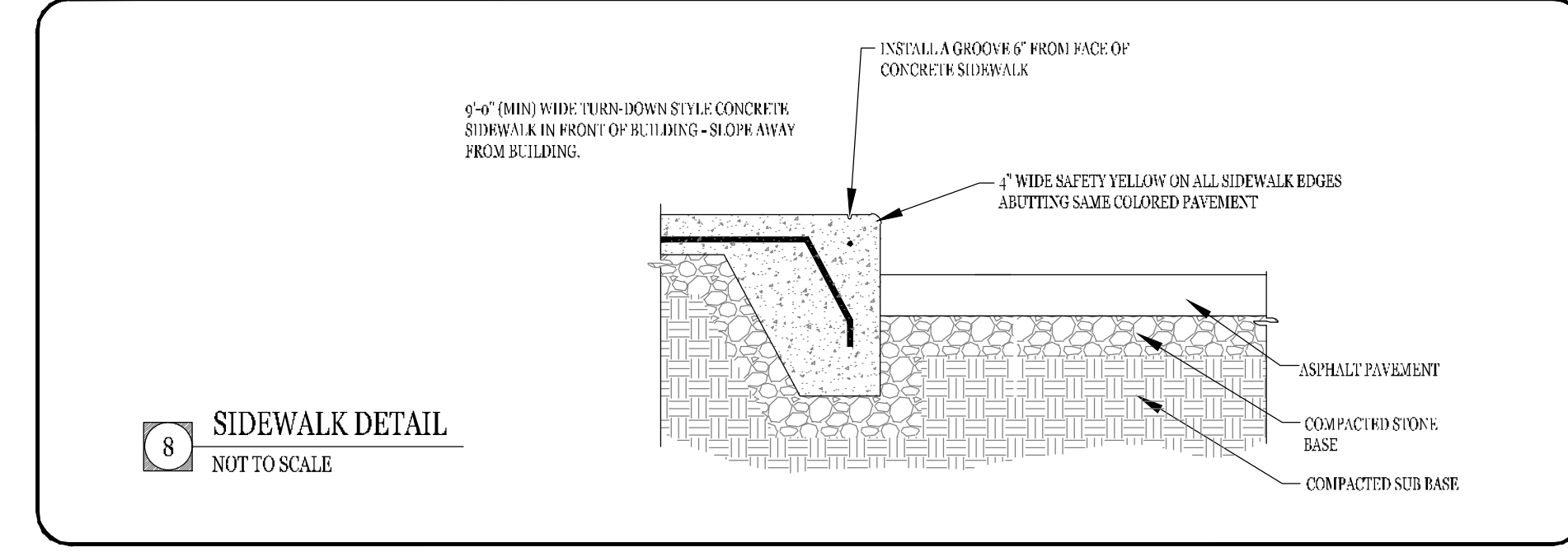
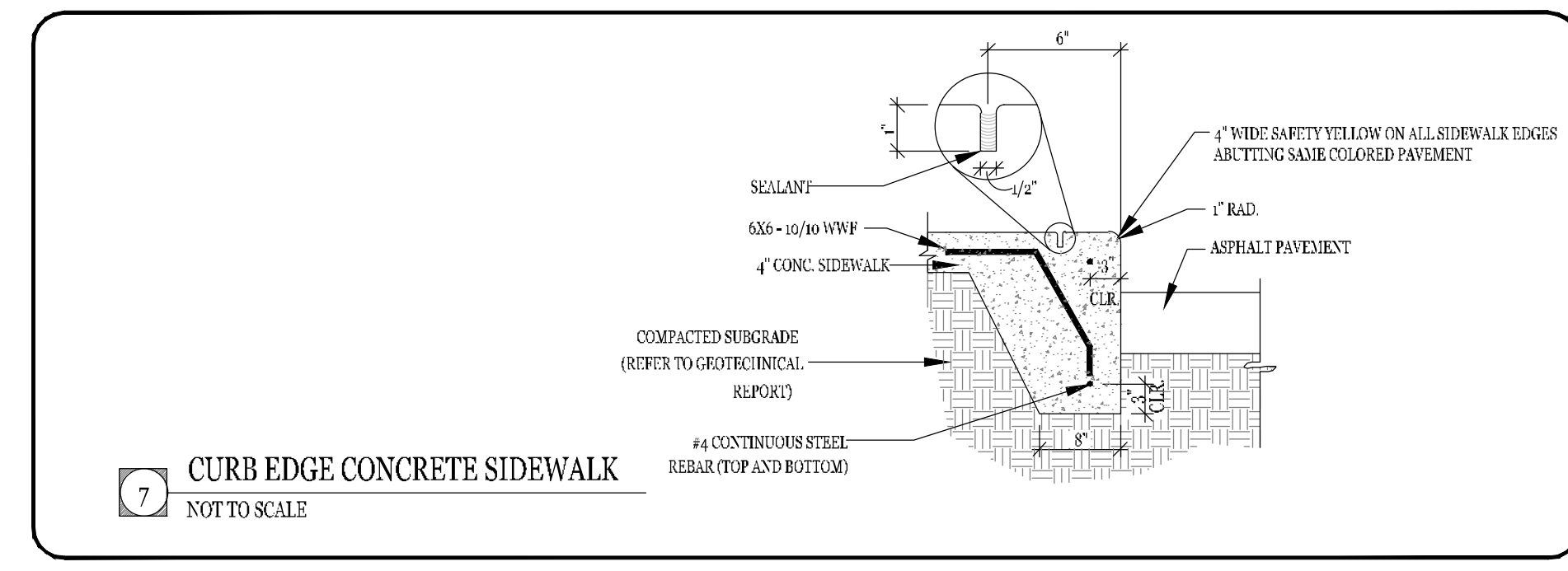
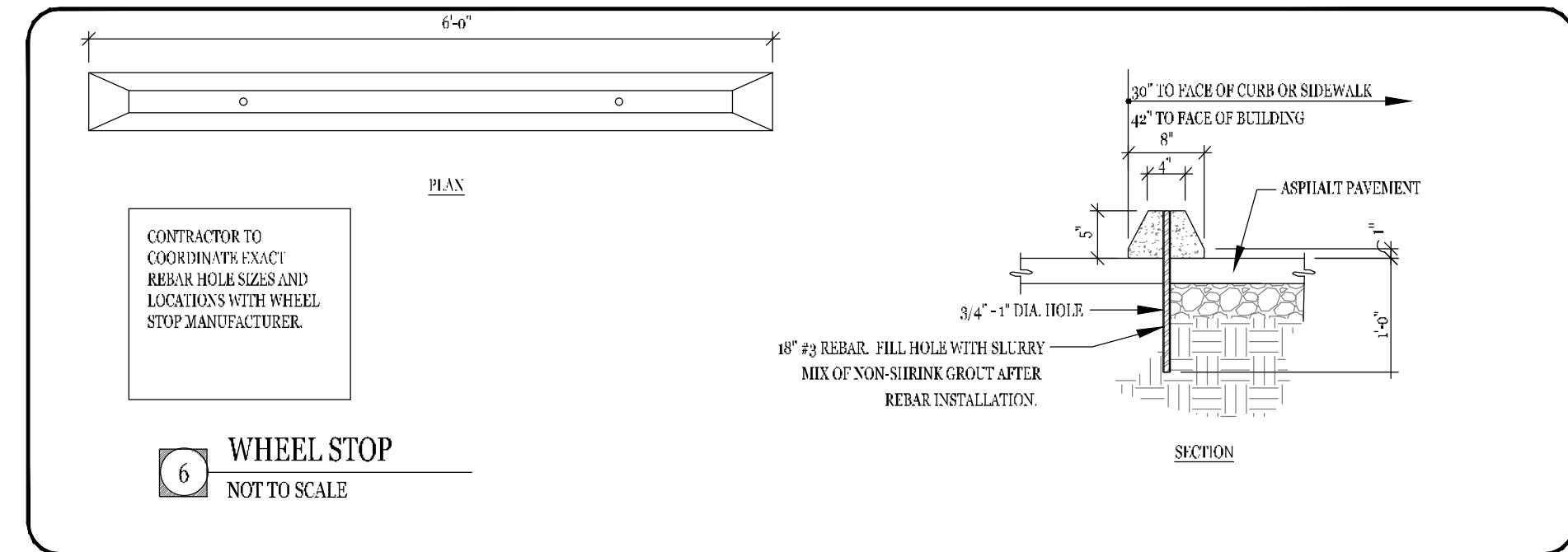
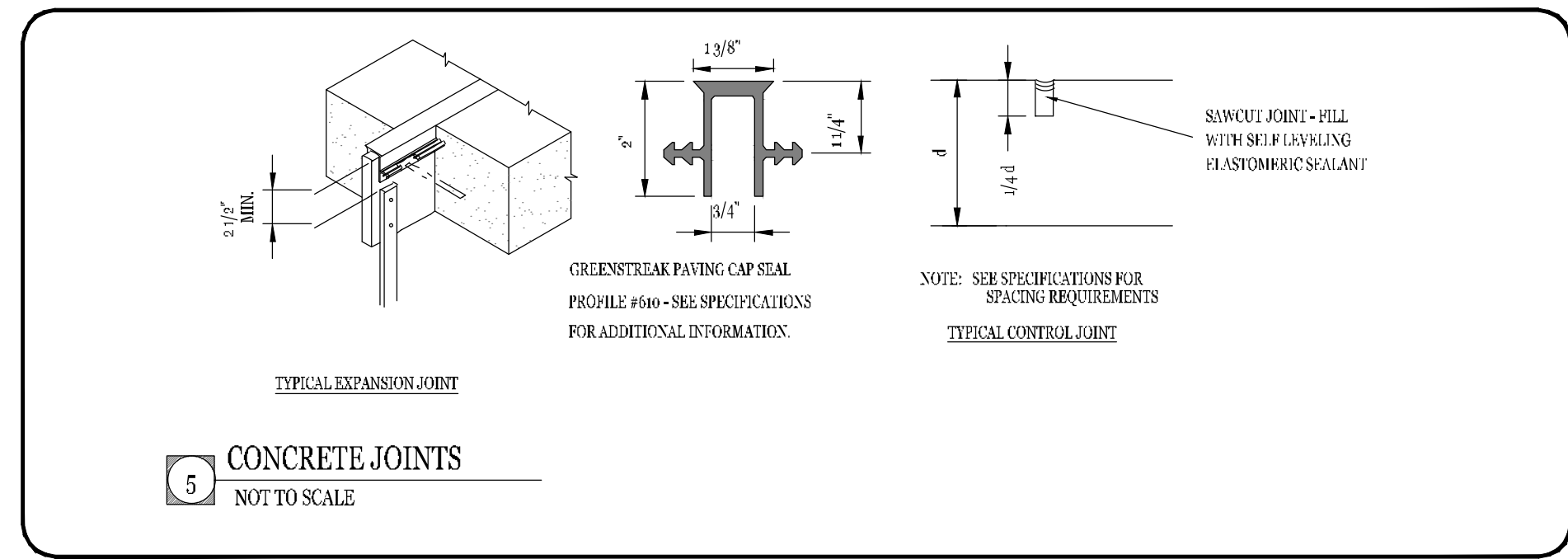
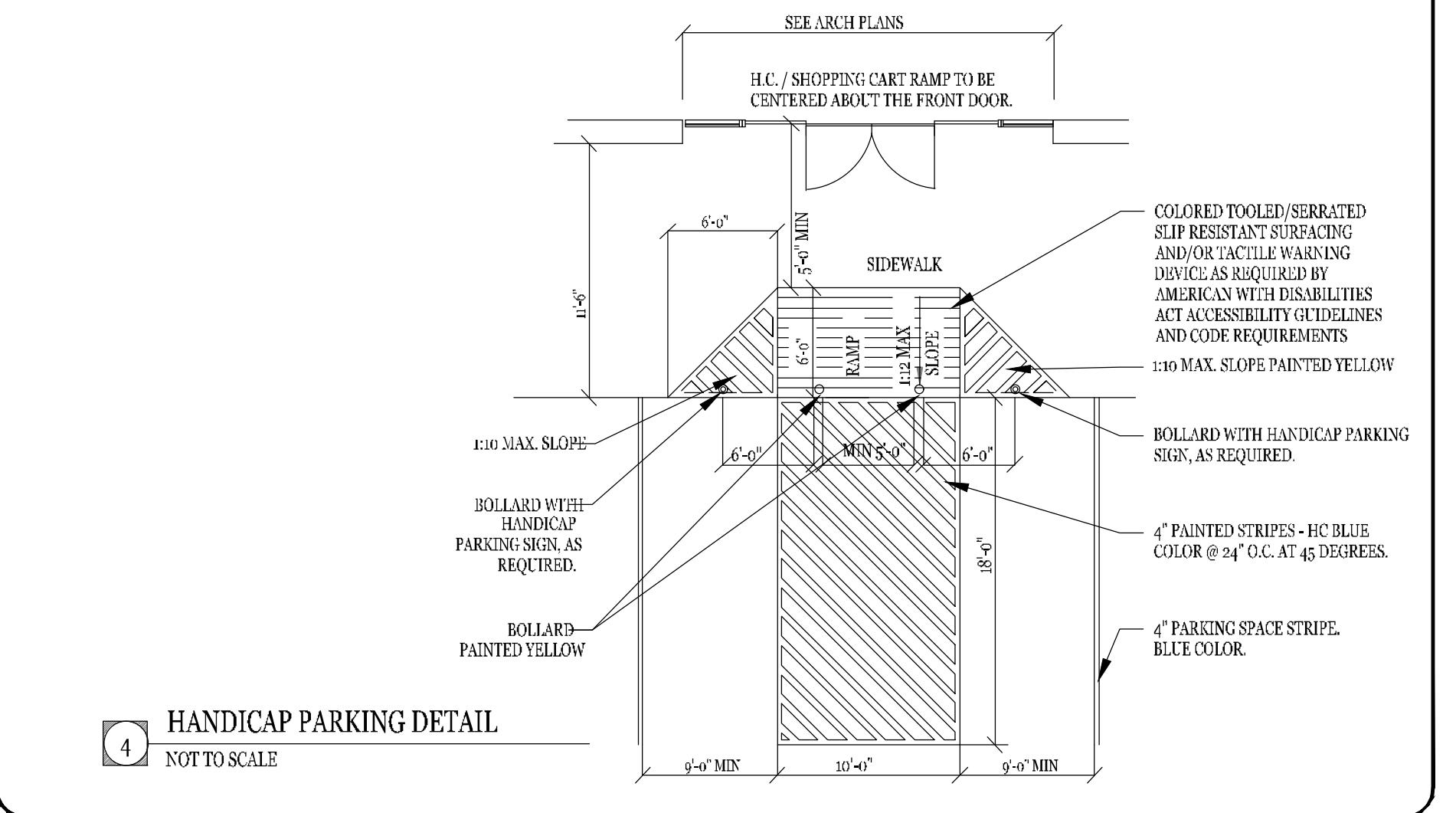
MATERIALS AND CONSTRUCTION REQUIREMENTS FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS, LATEST EDITION
* REFER TO NCDOT DRIVEWAY PERMIT FOR ADDITIONAL REQUIREMENTS
* REFER TO PROJECT GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS



SITE ACCESSIBILITY DETAIL NOTES:

- REFER TO SITE PLAN FOR EXACT LOCATION OF HANDICAP PARKING, WALKWAYS AND RAMPS.
- ALL WALKWAYS, RAMPS, AND HANDICAP PARKING SIGNAGE, ETC. SHALL MEET APPROVED AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS AND LOCAL ACCESSIBILITY CODE.
- ONE OUT OF EVERY SIX (6) ACCESSIBLE PARKING SPACES, BUT NOT LESS THAN ONE, IS REQUIRED TO BE VAN ACCESSIBLE.
- ALL CONCRETE ACCESSIBLE RAMPS (5000 PSI) SURFACES SHALL HAVE COLORED TOOLED/SERRATED SLIP RESISTANT SURFACING AND/OR TACTILE WARNING DEVICE PER ADA STANDARDS AND LOCAL ACCESSIBILITY CODE.
- ALL CONCRETE ACCESSIBLE RAMPS SHALL BE COLOR IMPREGNATED TO PROVIDE VISUAL CONTRAST (DARK TO LIGHT) WITH ADJOINING CONCRETE SURFACES (MINIMUM 70% COLOR CONTRAST).
- THE MATERIAL USED TO PROVIDE COLOR CONTRAST IN CONCRETE ACCESSIBLE RAMPS SHALL BE AN INTEGRAL (PERMANENT) PART OF THE CONCRETE AND SHALL NOT BE PAINTED ON OR CAPABLE OF FADING OR WEARING OFF.
- FINISHED GRADES OF PAVEMENT IN HC PARKING AND ACCESSIBILITY AISLE SHALL NOT EXCEED 1:30 SLOPE IN ANY DIRECTION.

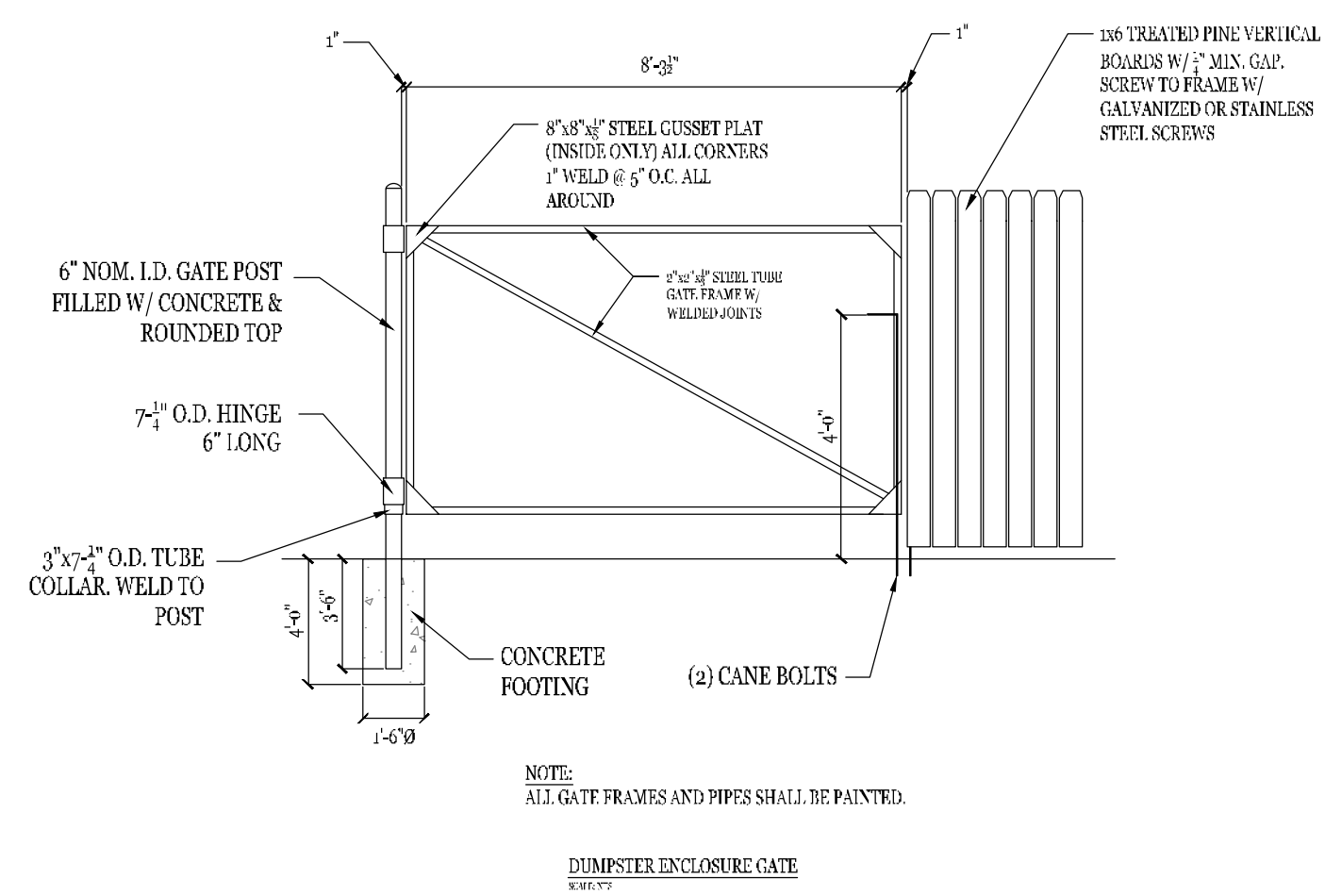
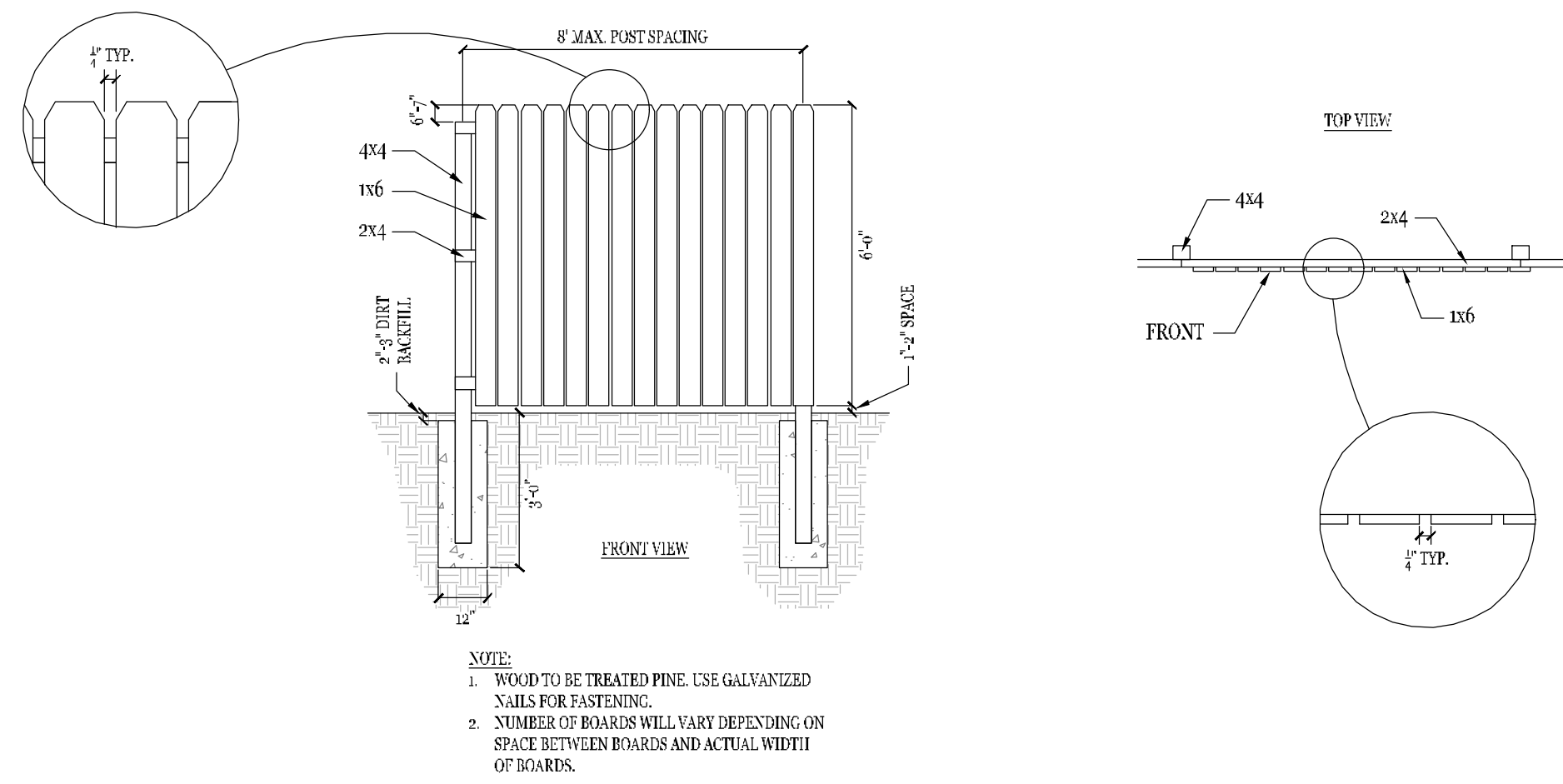
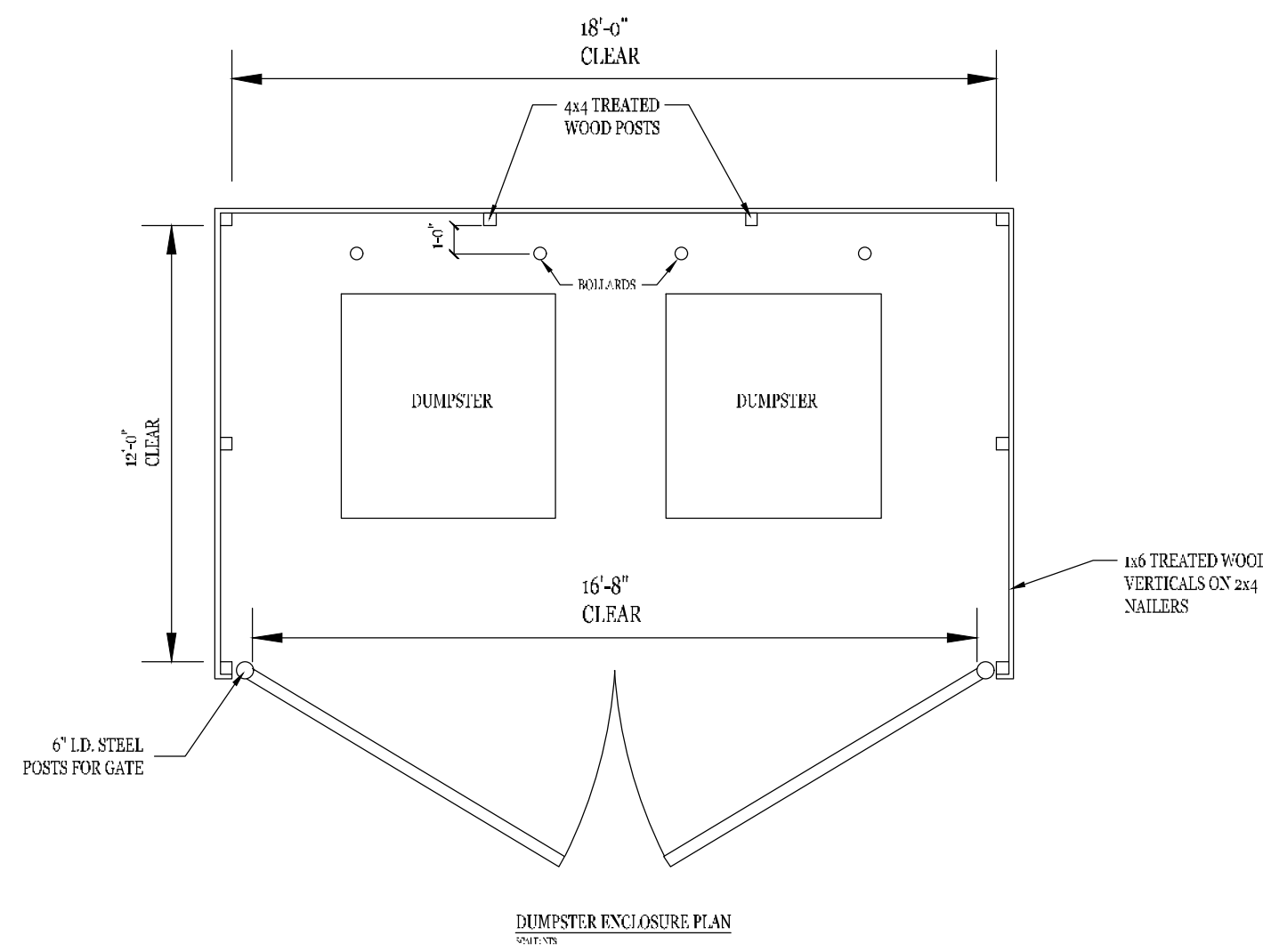
NOTE: ALL HANDICAPPED RAMP AND ACCESS AISLES SHALL MEET ALL CODES AND ADA REGULATIONS.



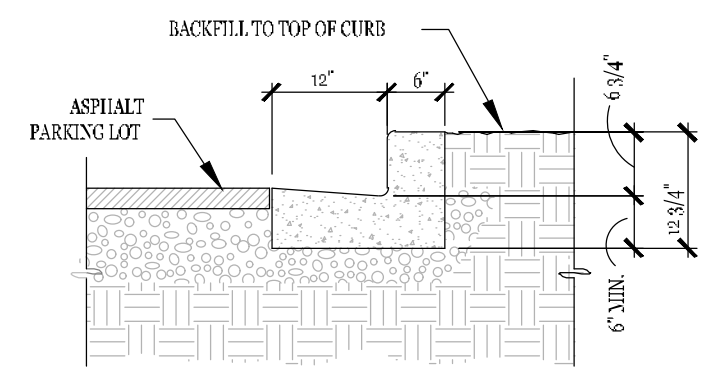
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REV	NO.	DATE	DESC.

Drawn: _____
Checked: _____
Rhetson Project# 21103
Project No. 058004
Initial Date February 28, 2022
Title _____

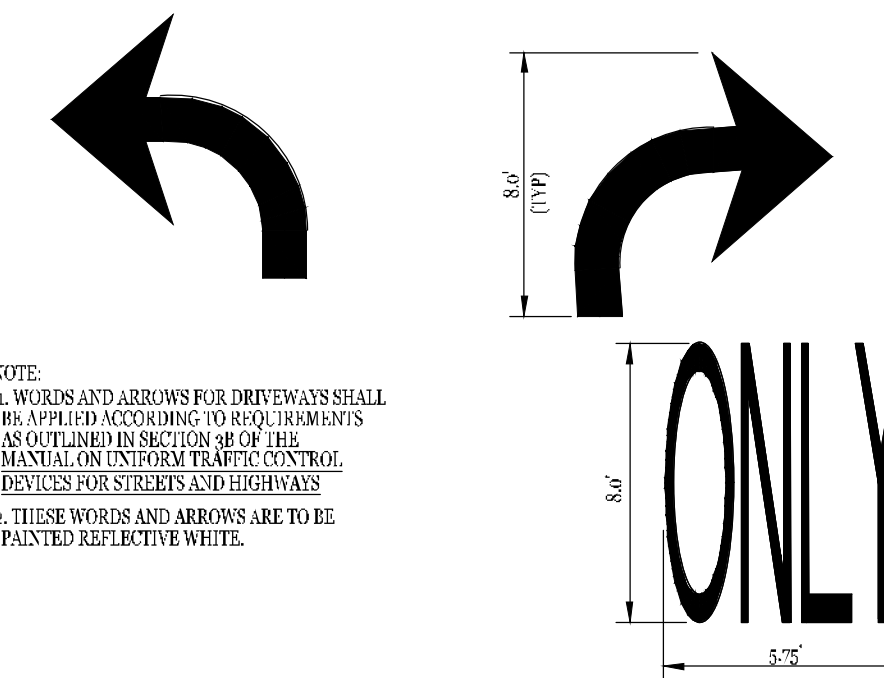


1 PRIVACY FENCE / DUMPSTER SCREEN DETAIL
NOT TO SCALE



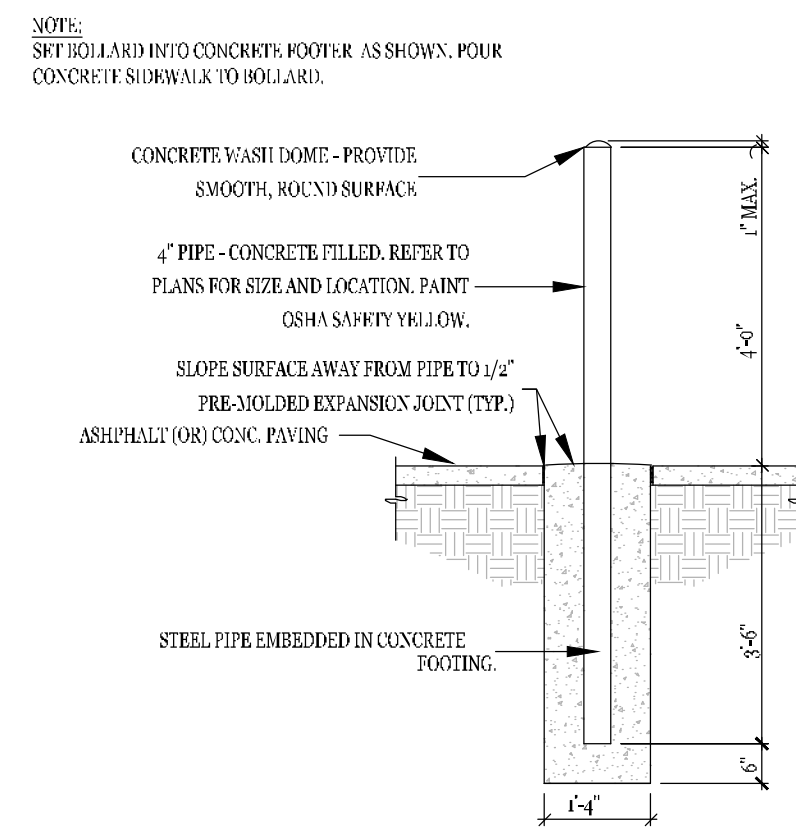
CONCRETE COMPRESSIVE STRENGTH SHALL BE 3600 PSI IN 28. CONFIRM WITH GEOGRAPHICAL LOCATION OF THIS PARTICULAR PROJECT.

2 CURB/GUTTER DETAIL
NOT TO SCALE

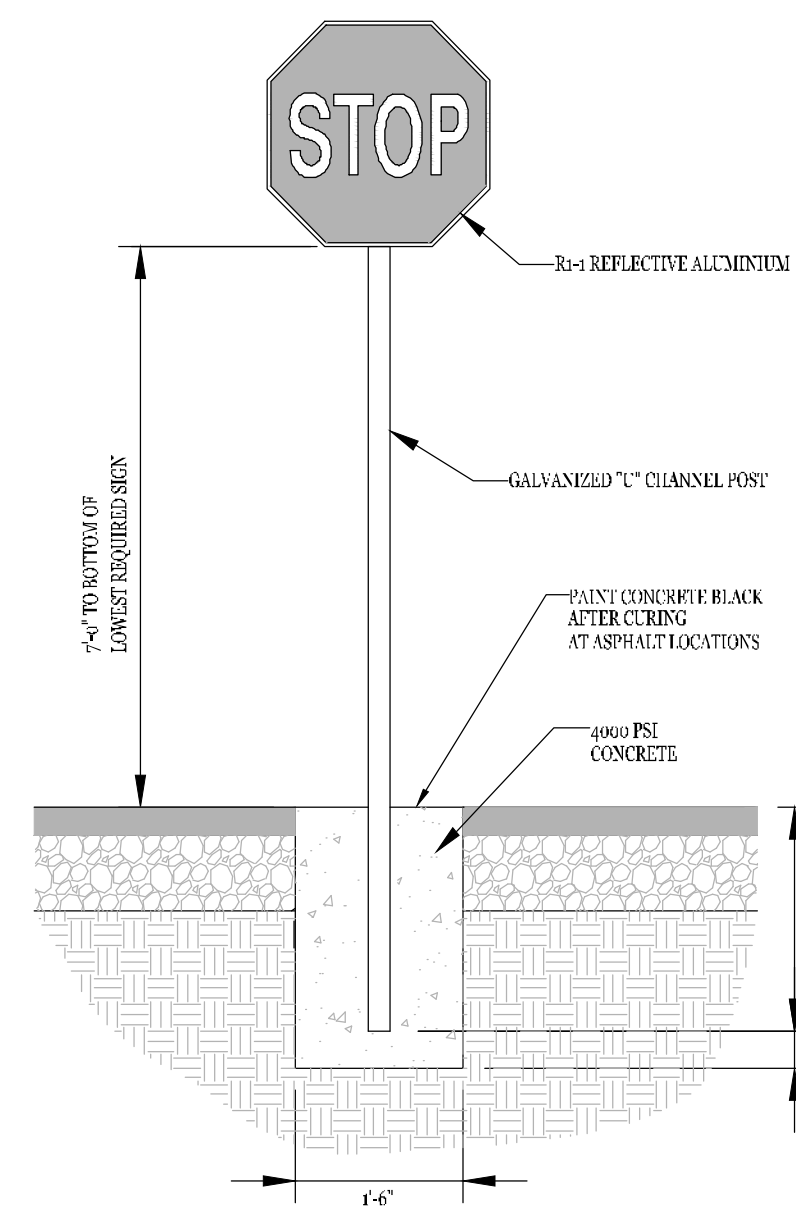


NOTE:
1. WORDS AND ARROWS FOR DRIVERS SHALL BE APPLIED ACCORDING TO REQUIREMENTS AS OUTLINED IN SECTION 807 OF THE MANUAL ON UNIFORM PRACTICE CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. THESE WORDS AND ARROWS ARE TO BE PAINTED REFLECTIVE WHITE.

5 PAVEMENT MARKINGS
NOT TO SCALE



3 TYPICAL BOLLARD DETAIL
NOT TO SCALE



4 STOP SIGN DETAIL
NOT TO SCALE



PRELIMINARY
DO NOT USE FOR
CONSTRUCTION

OWNER/DEVELOPER:
RHETSON COMPANIES, INC.
ATTN: JOHN PARKER
2075 JUNIPER LAKE ROAD
WEST END, NC 27376
(910) 944-0881
john@rhetsom.com



DOLLAR GENERAL
US Highway 421 N
Lillington, NC Harnett County

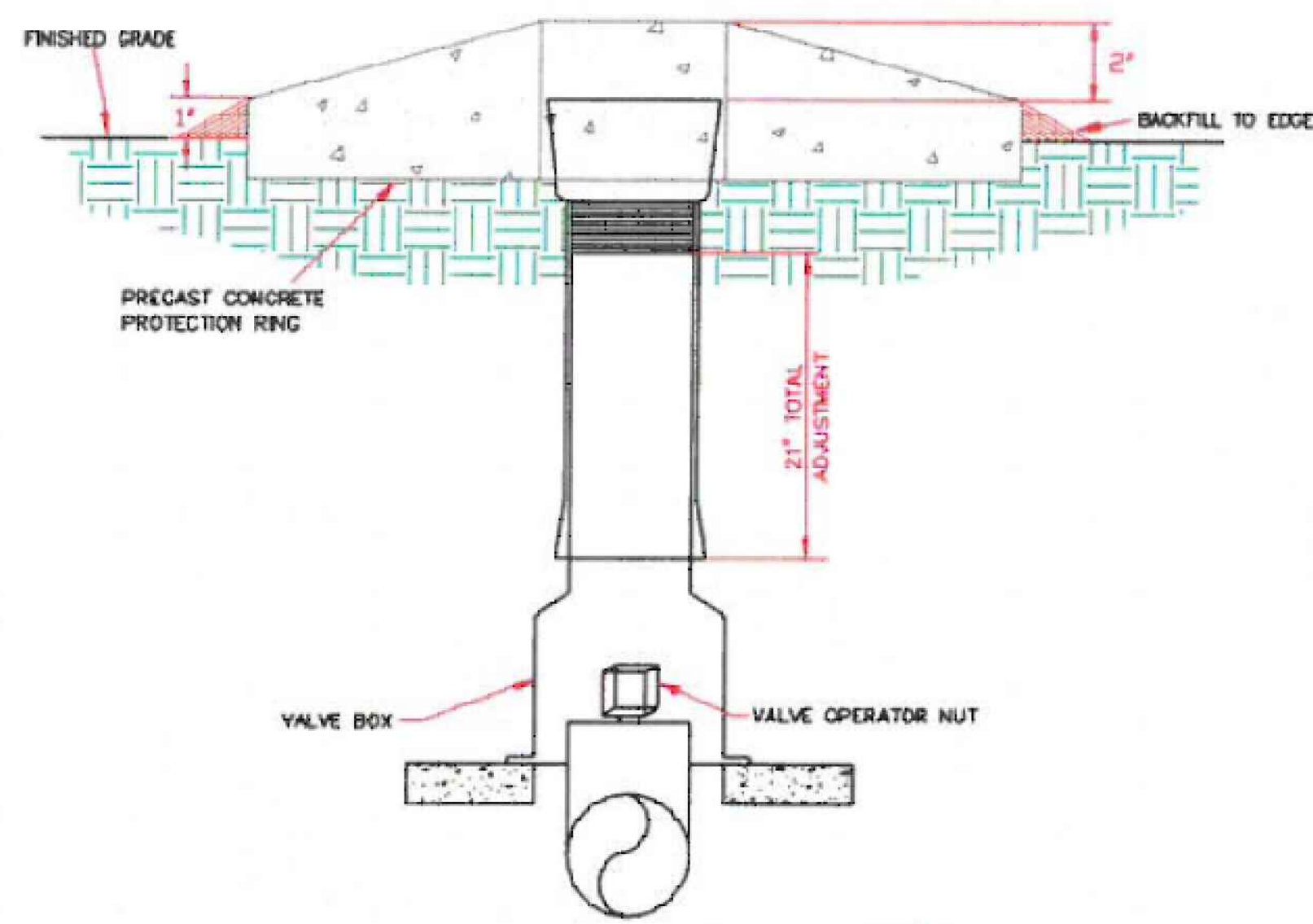
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REVISED	DATE	DESC.

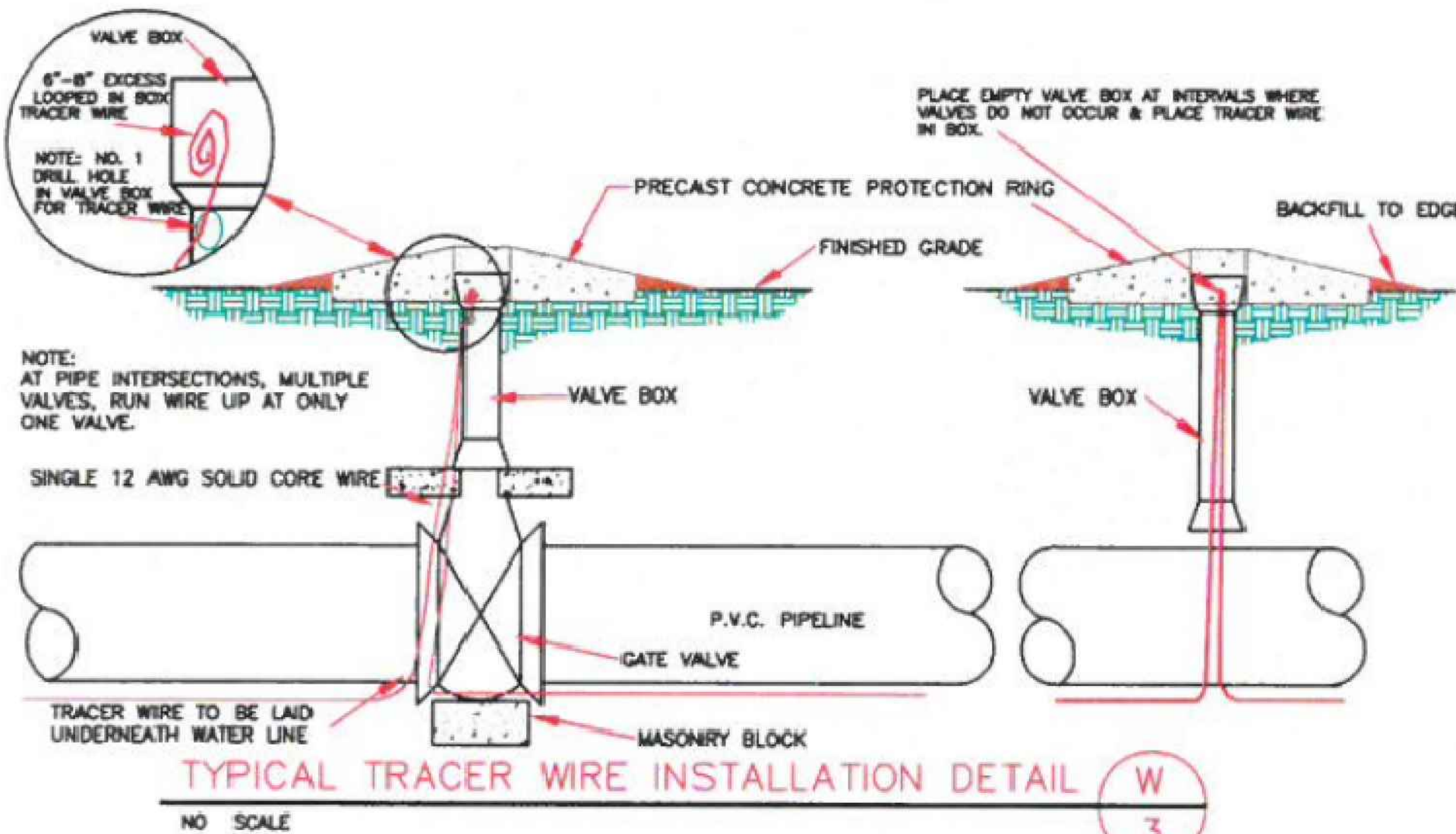
Drawn
Checked
Rhetsom Project# 21103
Project No. 058004
Initial Date February 28, 2022
Title

**CONSTRUCTION
DETAILS**

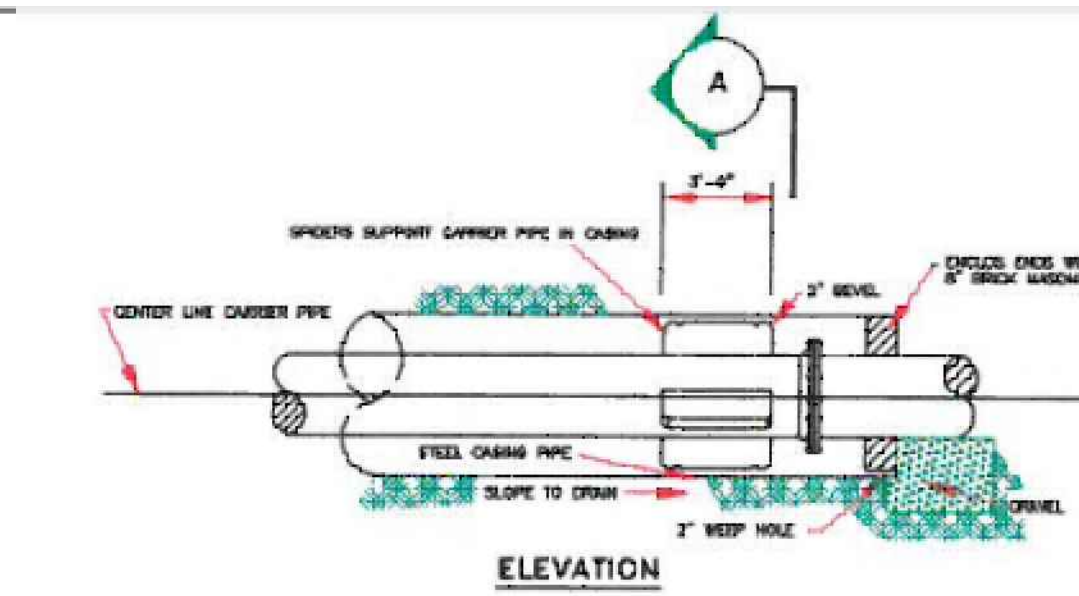
Sheet No. **C-8**



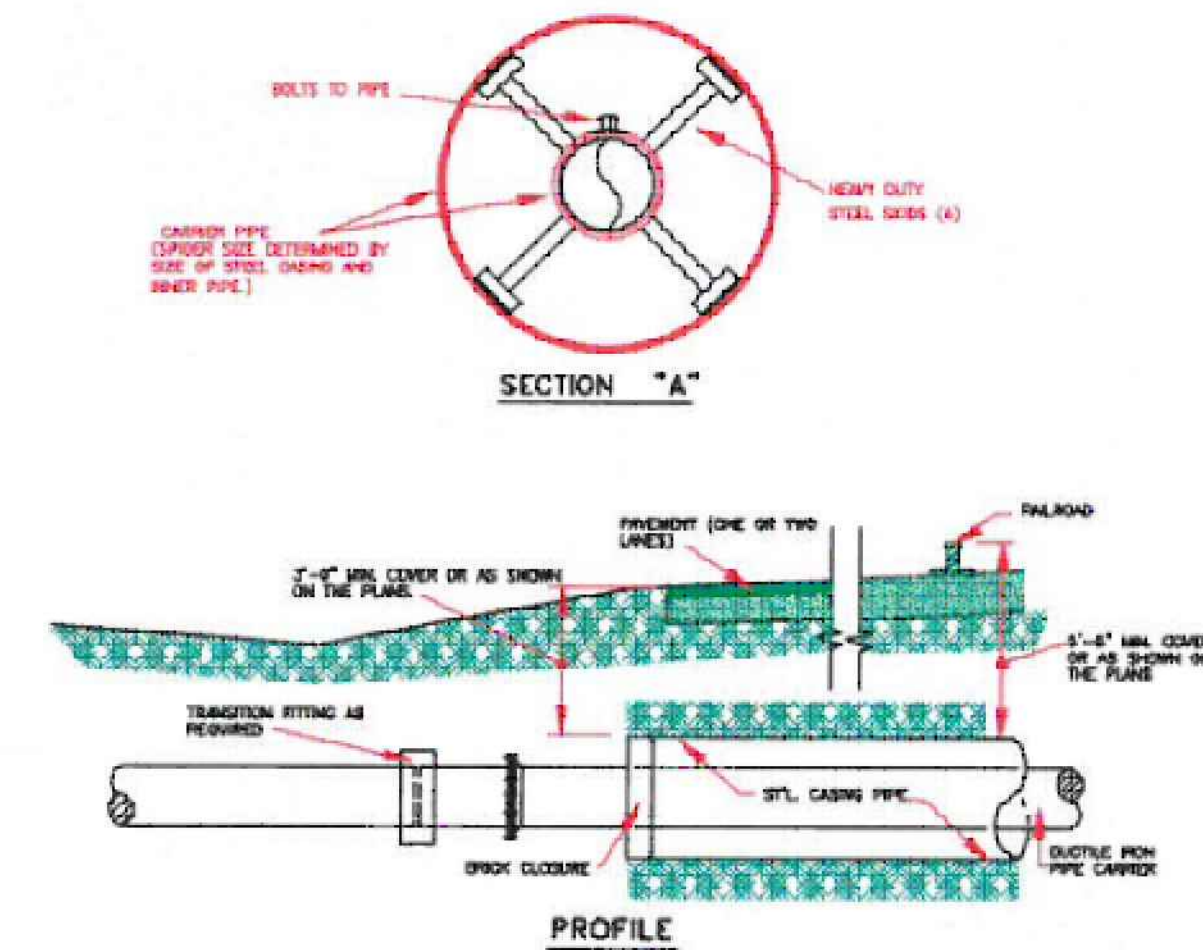
TYPICAL VALVE BOX DETAIL W 2
NO SCALE



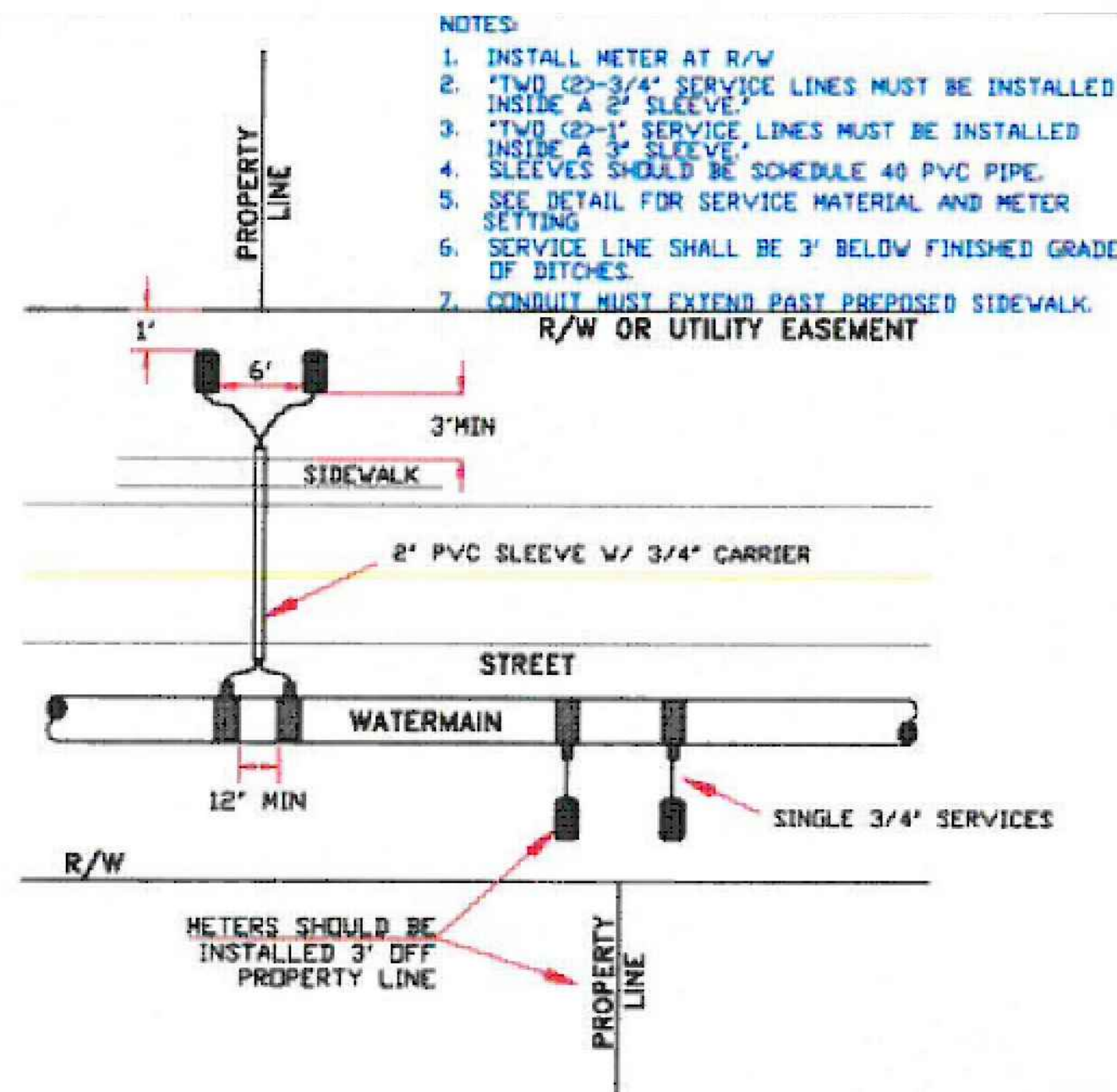
TYPICAL TRACER WIRE INSTALLATION DETAIL W 3
NO SCALE



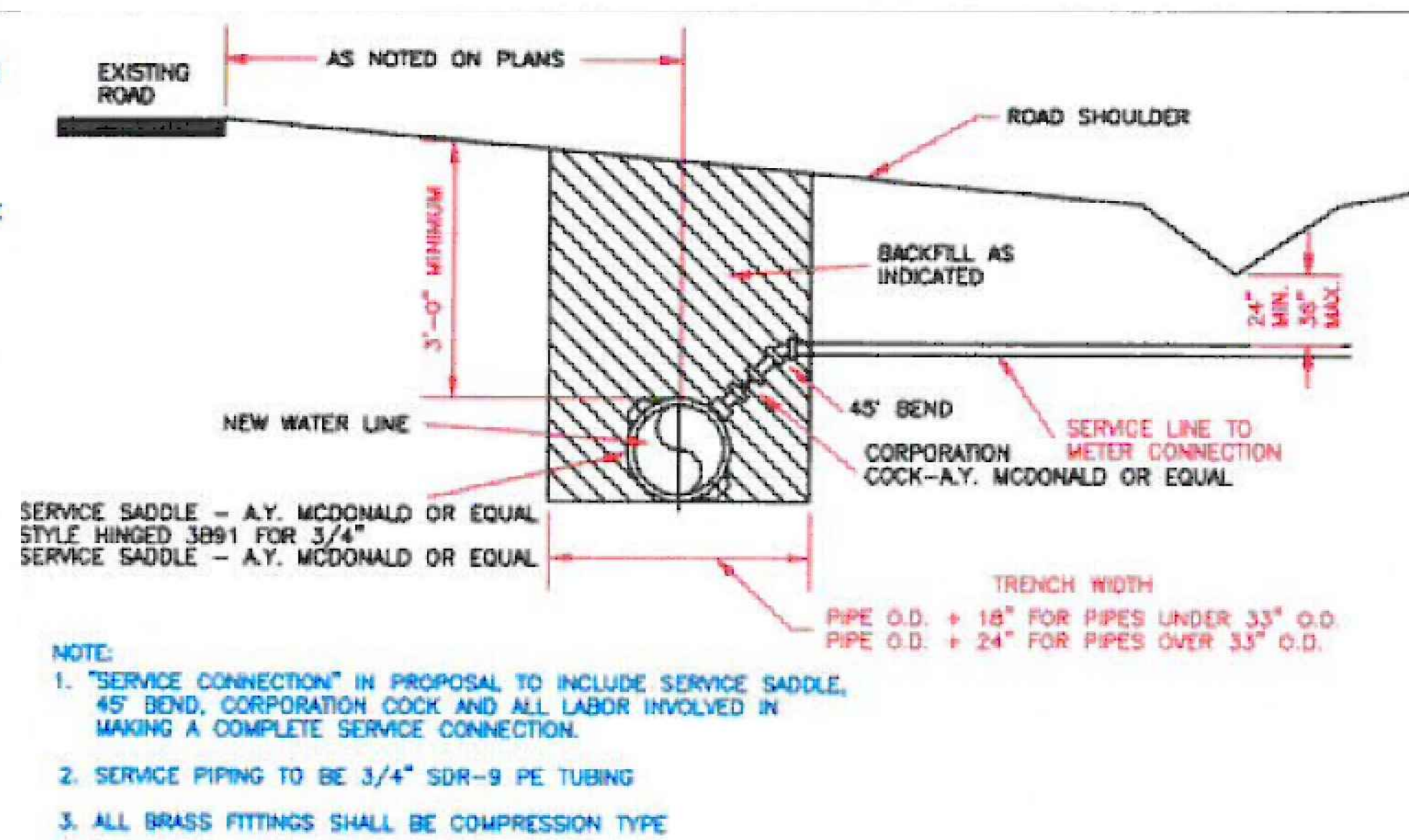
TYPICAL BORING & JACKING DETAIL W 8
NO SCALE



TYPICAL METER BOX DETAIL FOR 3/4" SERVICE W 15
NO SCALE



TYPICAL DOMESTIC WATER SERVICE INSTALLATION DETAIL W 12
NO SCALE



TYPICAL WATER SERVICE CONNECTION USING TAPPING SADDLE DETAIL W 13
NO SCALE

HARNETT COUNTY SEWER NOTES

- The Professional Engineer (PE) shall obtain and supply a copy of the sewer permit for the construction and operation of the wastewater collection system to the Utility Contractor before the construction of the sanitary sewer line, sewer lift station and associated force main shall begin. The Utility Contractor must post a copy of the sewer permit issued by the North Carolina Department of Environment and Natural Quality (NCEM) on site prior to the start of construction. The permit must be maintained on site during the construction of the sewer line improvements.
- The Utility Contractor shall notify Harnett Regional Water (HRW) and the Professional Engineer (PE) at least 10 days prior to construction commencing. The Utility Contractor must schedule a pre-construction conference with Mr. Alan Moss, HRW Utility Construction Inspector at least two (2) days before construction will begin and the Utility Contractor must coordinate with HRW for regular inspection visitation and acceptance of the wastewater system. Construction work shall be performed only during the normal working hours of HRW which is 8:00 am - 5:00 pm Monday through Friday. Holidays and weekend work is not permitted by HRW.
- The Professional Engineer (PE) shall provide HRW with a set of NCEM approved plans marked "Released for Construction" at least two days prior to construction commencing. HRW will stamp the approved plans as "Released for Construction" and provide copies to the Utility Contractor. The Registered Land Surveyor (RLS) shall provide one set of all covers and establish grade stakes for the proposed final grade for each sewer and water line before the Utility Contractor begins construction or installation of the manholes, sanitary sewer pipe, force main, sewer lift station and/or sanitary sewer force main(s). The grade stakes should be set with a consistent offset from the street easement as to not interfere with the street grading or utility construction.
- The Utility Contractor shall provide the HRW Utility Construction Inspector with material submittals and shop drawings for all project materials prior to the construction of any gravity sewer line(s), manhole(s), sewer lift station(s) and associated force main(s) in Harnett County. The materials to be used on the project must meet the established specifications of HRW and be approved by the Engineer of Record prior to construction. All submittal materials or materials not approved for use in Harnett County located on the project site must be removed immediately when notified by the HRW Utility Construction Inspector.
- The sanitary sewer lift station construction shall be installed per (perpetual) to the sanitary sewer force main with schedule 40 PVC pipe. HRW requires the Utility Contractor to provide the Professional Engineer (PE) with accurate measurements for locating sanitary sewer force main lateral and associated cover manhole. These measurements should be taken from the utility service manhole and from another measurement from the fire hydrant or existing utility manhole. A 4' long pump consideration may be fitting at the bottom of the sewer force main. These final measurements must be provided to the Professional Engineer (PE) in the red line drawings that the Utility Contractor for proper construction in the As-Built Record Drawings submitted to HRW.
- The Utility Contractor shall be responsible to locate the newly installed sanitary sewer gravity line(s), manhole(s), sanitary sewer force main(s) and all associated sewer force main(s) in the proposed utility sewer system for other utility companies and their contractors until the new sanitary sewer line(s) and associated appurtenances have been approved by the North Carolina Department of Environment and Natural Quality (NCEM) and accepted by HRW. All new sanitary sewer lines must have at least three (3) feet of cover and extend under all existing water main(s) and storm water lines with a least 12" vertical clearance below the bottom of the existing water main and storm water lines. All double line sewer piping must be 40' epoxy coated or approved equal.
- The sanitary sewer gravity line(s), manhole(s), sanitary sewer service laterals and associated cover manhole(s) shall be constructed in strict accordance with the Harnett Regional Water. The sanitary sewer gravity line(s) must generally be pressure tested with compressed air at 100 psi and the sanitary sewer force main must be pressure tested with water or air at 200 psi. Sanitary sewer manholes must be constructed to a minimum depth to a minimum of 4 feet for 48" diameter manholes, 72" for 60" diameter manholes. The test must be in accordance with the following standards: For ductile iron pipe joints test in accordance with the applicable requirements of ASTM D2219. For PVC pipe joints test in accordance with ASTM D2219 and for 18" diameter vacuum testing shall be performed in accordance with ASTM D2219. The HRW Utility Construction Inspector and Engineer must witness all tests mentioned above.
- Prior to acceptance, all sewer service laterals will be inspected to insure that they are installed at the proper depth. All sewer force main(s) must be installed on the 4" x 4" long sweep combination eye to be at least three (3) feet but no more than four (4) feet below the finish grade unless otherwise approved in writing by HRW. The sewer channels shall have a 4" x 4" x 4" hole in the PVC pipe installed 18" from both ends of the 4" x 4" long sweep combination eye to be at least two (2) feet above the finish grade and each end with a four (4) inch temporary cap to keep out dirt, sand, rocks, water and construction debris. The vertical stack on each cover must be provided with a concrete dome for protection.
- Once the sanitary sewer gravity line(s) have been installed, permanently pressure tested and in place for at least 30 days, the Utility Contractor must contact the HRW Utility Construction Inspector to witness the manhole test on each PVC sanitary sewer gravity line. The Utility Contractor will notify HRW to schedule the manhole testing. The manhole and pumping ring must be supplied by the Utility Contractor. Closed circuit video camera inspection (at the Utility Contractor's expense) may be required by the HRW Utility Construction Inspector if the manhole and/or sewer tapping, testing cannot be completed with satisfactory results. The sanitary sewer lines should be flushed clean using a sewer ball of the proper diameter before any manhole testing can be performed. The Utility Contractor is responsible to remove all dirt, sand, rocks, mud and debris from the newly constructed sewer lines. The Harnett Regional Water's existing sanitary sewer system (sanitary sewer force main(s)) shall be pressure tested to 200 psi and at least 18" from the water table.
- The Utility Contractor shall be responsible to locate the newly installed sanitary sewer system(s) for other utility companies and their contractors until the new sanitary sewer system(s) have been approved by the North Carolina Department of Environment and Natural Quality (NCEM) and accepted by HRW.
- HRW requires that the Utility Contractor install tracer wire in the trench with all sanitary sewer force mains. The tracer wire shall be 1/2" insulated, solid copper conductor and shall be terminated at the top of the valve boxes or manholes. No spliced wire connections shall be made underground on trace wire installed in Harnett County. The tracer wire may be secured with tape to the top of the pipe before backfilling. The tracer wire is not required for the gravity sewer line(s) between manholes.
- The Utility Contractor shall provide the Professional Engineer (PE) and HRW Utility Construction Inspector with a set of final drawings identifying the complete sewer system installed for each project. The red line drawings should identify the manhole, pipe size and appurtenances. A copy of the sewer line as well as the installed locations of the manhole(s), sanitary sewer gravity line(s), sanitary sewer service laterals, cleanouts, sewer lift station(s) and associated force main(s). The red line drawings should clearly identify any deviations from the NCEM approved plans. All change orders must be approved by HRW and the Professional Engineer (PE) in writing and properly documented in the red line AS-Built drawings.
- Prior to the commencement of any work which establishes utility easements, or a ROW right-of-way the Utility Contractor is required to notify all concerned utility companies in accordance with GAS 89-20. The Utility Contractor must call the NC One Call Center at 811 or (800) 422-9999 to verify the location of existing utilities prior to the beginning of construction. Utilities shown on the plans are taken from maps furnished by utility companies and have not been physically located by the P.E. (i.e. TELEPHONE, CABLE, WATER, ELECTRIC, SEWER, GAS, FIBER OPTIC, NATURAL GAS, ETC.).
- The Utility Contractor shall stop to inspect each existing utility pipe or line which may conflict with construction of proposed sanitary sewer line extensions and to advise in writing locations of the existing utilities. The Utility Contractor shall provide both horizontal and vertical clearances to the Professional Engineer (PE) to allow the PE to adjust the sanitary sewer line design in order to avoid conflict with existing underground utilities. The Utility Contractor shall coordinate with the utility owner and be responsible for temporary relocation of existing utilities and/or securing existing

- utility pipes, wires, cables, signs and/or utilities including services in accordance with the utility owner's requirements during sanitary sewer line installation, grading and street construction.
- When making a tap on an existing sewer force main, the Utility Contractor must have a permit from the North Carolina Department of Environment and Natural Quality (NCEM) prior to begin the tap work. The Utility Contractor shall conduct a pneumatic pressure test using compressed air or other test gas on the manhole and tapping device and gas valve prior to making the tap on an existing sanitary sewer force main. This pneumatic pressure test must be witnessed by the HRW Utility Construction Inspector. The Utility Contractor shall use bronze brand 3/4" CPVC sewer saddles with stainless steel bands or approved equal for all taps made on existing sanitary sewer gravity lines in Harnett County.
- The Utility Contractor shall provide a grass trap for each sanitary sewer service lateral that will be connected to a restaurant, food processing facility and any other commercial or industrial facility as required by the Harnett County Fire, Oil & Gas Ordinance. The grass trap must be rated for a minimum capacity of at least 1,000 gallons unless otherwise approved in writing by the HRW Pre-Construction Coordinator. Garbage disposals should not be installed in homes and businesses that discharge wastewater to the Harnett Regional Water's Sanitary Sewer System as they are not approved by HRW.
- Each sewer lift station must be provided with three phase power (at least 600 volts) and connected to meet the minimum requirements of the latest version of the National Electrical Code (NEC) and Harnett Regional Water standards specifications and details. If three phase power is not available from the power company, other arrangements must be approved by HRW Engineering prior to the start of construction.
- Where a sanitary sewer force main is connected to an existing manhole in the Harnett Regional Water sewer collection system, the Utility Contractor must provide a protective coupling (cap) for the interior surfaces of the manhole to protect it against corrosion, erosion and deterioration from the release of sewer gases such as methane and hydrogen sulfide.
- The sewer lift station design and associated equipment must meet or exceed the MDDM (MIDLAND) REGULATIONS FOR HARNETT COUNTY SEWERLIFT STATIONS. Each sanitary sewer lift station must be constructed with an all-weather access road that is at least 10 feet wide. The lift station must be covered with steel blocking material and at least a (6) inches of ABC concrete (curb and wall).
- Once a sewer lift station has been installed, the Utility Contractor is responsible to schedule a draw down test with HRW Engineering and Collections staff, the Professional Engineer (PE), the Electrician, the original equipment manufacturer's (OEM) representatives (for both the Pumps and the Generator). This draw down test must be completed with power supplied from the electrical utility company, and with power supplied by the emergency generator with satisfactory results before final inspection are conducted by the HRW Utility Construction Inspector.
- Once the Utility Contractor completes the installation of a sewer lift station, the Professional Engineer (PE) must submit the sewer permit certification and As-Built Record Drawings to the North Carolina Department of Environment and Natural Quality (NCEM) and HRW for final approval. The Utility Contractor must supply HRW Engineering staff with original Operation & Maintenance (O&M) Manuals along with the associated pump cover and electrical schematics for the associated station equipment including all warranty information and documentation.
- Once the Utility Contractor completes the installation of a sewer lift station, the Developer must pay HRW the established System Control and Data Acquisition (SCADA) fee before the SCADA system will be installed. The SCADA system must be installed and operational before the lift station may be accepted by HRW and placed in operation.
- HRW requires that the Utility Contractor to provide all necessary equipment and devices for the testing and inspection of the sanitary sewer system. The equipment and devices may include but not limited to: manhole, standstill, sewer balls, plugs, air compressor and associated compressed air line. If the HRW Utility Construction Inspector deems that a standstill or other camera inspection at the newly constructed sewer system is necessary, then all costs for the standstill camera inspection will be the responsibility of the Utility Contractor. All closed circuit video camera inspections must be recorded on VHS tape that will be retained by HRW for record keeping, review and audit at the sewer system.
- Any use of sewer plugs to temporarily block Harnett Regional Water's existing sanitary sewer lines must be coordinated with the HRW Collections Supervisor at least two (2) days in advance of installing the plug. The sewer plug must be removed as soon as possible after the sanitary sewer line has been inspected, pressure tested, manhole tested, approved by the North Carolina Department of Environment and Natural Quality (NCEM) and accepted by HRW to allow the sewer to flow as designed in Harnett Regional Water's existing sanitary sewer lines or when so ordered by the HRW Collections Supervisor to limit interruption to the normal flow of the sanitary sewer collection system(s). The Utility Contractor must provide the pump cover and electrical schematics for a temporary pump around setup (required by the HRW Collections Supervisor. Mr. Randolph Clegg, HRW Collections Supervisor must be contacted between 8:00 am and 5:00 pm Monday through Friday at (919) 955-6670.
- The Utility Contractor will be responsible for any and all repairs due to loading or damage resulting from poor workmanship during the one (1) year warranty period once the sewer system improvements have been approved by the North Carolina Department of Environment and Natural Quality (NCEM) and accepted by HRW. The Utility Contractor will be responsible for any and all repairs due to damage resulting from failure to locate the sanitary sewer force main and associated appurtenances for other utilities and their contractors until the sanitary sewer force main has been approved by NCEM and accepted by HRW. HRW will provide maintenance and repairs for any and all repairs due to back of response within a 24 hour notification of warranty work. HRW will invoice the Developer and/or Utility Contractor for materials and labor in such cases.
- In developments and projects that require utility easements to be established for Harnett Regional Water, the Registered Land Surveyor (RLS) must provide the HRW Right-of-Way Agreement with an official copy of the recorded plat and legal description of the said easement as recorded with the Harnett County Register of Deeds. The recorded documents must be provided to the HRW Right-of-Way Agent before the utility improvements within the said easement can be placed into operation. Any and all easements that must be obtained from adjoining property owners must be provided to HRW by the Developer at no cost to Harnett County. The final inspection of all sanitary sewer system improvements shall be scheduled with HRW and the developer has been made the right-of-way and utility easements have been recorded and established with an adequate state of grace in place to prevent erosion issues on site.
- The Engineer of Record is responsible to insure that construction is, at all times, in compliance with accepted sanitary engineering practices and approved plans and specifications. No field changes to the approved plans are allowed without prior written approval by HRW. A copy of each engineer's field report is to be submitted to HRW on each utility construction or testing is performed by the contractor. Water and sewer inflow status must pass all tests required by HRW specifications and those of all applicable regulatory agencies. These tests include, but are not limited to: tie test, camera test, standstill test, visual test, pressure test, back-siphonage test, etc. HRW requires that the presence during testing and all test results shall be submitted to HRW. All tests must be satisfied before the final inspection will be conducted with the HRW Inspector. The Engineer of Record must request in writing to schedule the final inspection once all construction is complete. The Developer's Engineer of Record and the HRW Utility Construction Inspector shall prepare a witness punch list of any defects or deficiencies noted during the final inspection, should any exist. Upon completion of the punch list, the Developer's Engineer of Record shall schedule another inspection. In the event the number of inspections performed by the HRW exceeds two, additional fees may be assessed to the Developer.

This document, together with the concepts and designs presented herein, as an instrument of services, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Bowman North Carolina, Ltd. shall be without liability to Bowman North Carolina, Ltd.

REVISED	Disc.	
NO.	DATE	

Drawn
Checked
Rhetson Project# 21103
Project No. 058004
Initial Date February 28, 2022
Title

GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCGO 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 NCGO Construction General Permit (Sections 4 and 7, 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.

Site Area Description	Stabilize within this many calendar days after ceasing land disturbances	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	
(d) Slopes 2:1 to 4:1	14	<ul style="list-style-type: none"> 7 days for slopes greater than 2:1 in length and with slopes steeper than 4:1 7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones 10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones

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

GROUND STABILIZATION SPECIFICATIONS

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

Temporary Grass Stabilization	Permanent Grass Stabilization
<ul style="list-style-type: none"> Temporary grass seed covered with straw or other mulches and tackifiers Hydroseeding Use erosion control products with or without temporary grass seed Appropriately applied straw or other mulch Paucal seeding 	<ul style="list-style-type: none"> Permanent grass seed covered with straw or other mulches and tackifiers Geotextile fabrics such as permanent soil reinforcement matting Hydroseeding Straws or other permanent plantings covered with mulch Uniform and evenly distributed ground cover sufficient to restrain erosion Structural methods such as concrete, asphalt or other materials Roll-on erosion control products with grass seed

FOUR-WAY LIDS (PAMS) AND BIOCCULANTS

- Select biooculants that are appropriate for the soils being exposed during construction, selecting from the NC DWR List of Approved PAMS Biooculants.
- Apply biooculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply biooculants at the concentrations specified in the NC DWR List of Approved PAMS Biooculants and in accordance with the manufacturer's instructions.
- Provide pumping area for containment of treated stormwater before discharging off-site.
- Store biooculants in leak-proof containers that are kept under stormwater cover or surrounded by secondary containment structures.

EQUIPMENT AND VEHICLE MAINTENANCE

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

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

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

PAINT AND OTHER LIQUID WASTE

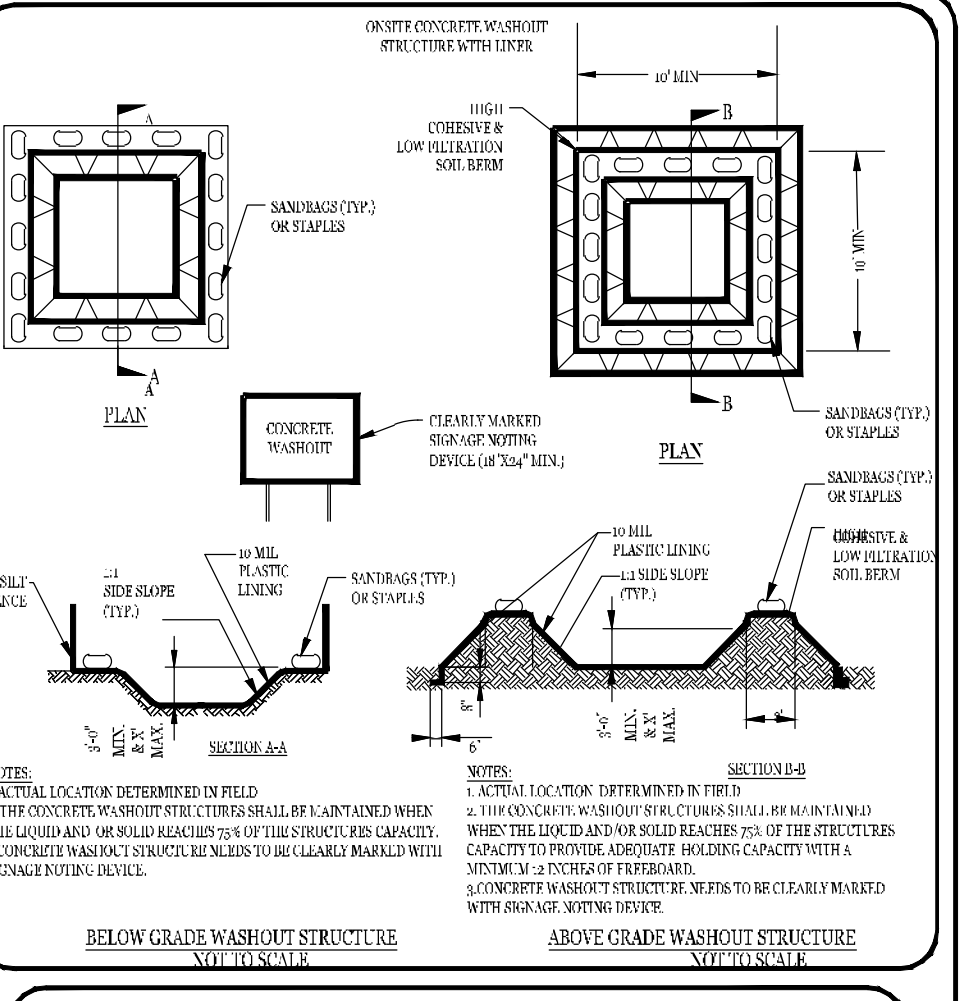
- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint warehouses at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled,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

PORTABLE TOILETS

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

STABLE STOCKPILE MANAGEMENT

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



- CONCRETE WASHOUTS**
- Do not discharge concrete or cement slurry from the site.
 - Dispose of, or recycle, settled, hardened concrete residue in accordance with local and state solid waste regulations and an approved facility.
 - Storage washout from motor vehicles in accordance with the above item and in addition place the rubber and associated materials in impervious barrier and within lot perimeter after use.
 - Install temporary concrete washout per local requirements, where applicable. If an alternate method or product is to be used, contact your local authority for review and approval. If local standards are not available, use one of the two types of temporary concrete washouts provided on this sheet.
 - Do not use concrete washouts for dewatering or storing defective mix or subpar concrete. 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 and removed from project.
 - Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. A minimum, installed position of storm drain inlet is closest to the washout which could receive spills or overflow.
 - Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
 - Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout used to identify this facility.
 - Remove haulings from the washout when it approximately 75% capacity is reached. Refresh the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
 - All the completion of the concrete work, remove remaining fixings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

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

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

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION
Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than a 1-inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Day times when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no continuous rainfall information is available, record the cumulative rain requirement for those unobserved days. Indicate the date of the inspection if a record is needed. Days on which no rainfall occurred shall be recorded as "0.0". The operator may use another rain-measuring device approved by the owner.
(2) EESC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the measures are operating properly. 5. Description of violations noted for the measure. Describe location, evidence, and date of corrective action taken.
(3) Stormwater discharge outfalls (each)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected. 2. Name of the person performing the inspection. 3. Date and time of the inspection. 4. Indication of whether the outfall is free of blockage, floating or suspended solids or discoloration. 5. Indication of whether sediment is leaving the site. 6. Description, evidence, and date of corrective action taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Erosion or sedimentation found outside site limits, then record the following information: a. Date, location, evidence, and date of corrective action taken, and b. An explanation as to the actions taken to control future erosion. 2. If the erosion or sedimentation found outside site limits is not controlled, record the following information: a. Date, location, evidence, and date of corrective action taken, and b. An explanation as to the actions taken to control future erosion.
(5) Erosion or sediment on or off-site (each)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the erosion or sedimentation on or off-site. 2. Date and time of the inspection. 3. Name of the person performing the inspection. 4. Indication of whether the erosion or sedimentation is controlled. 5. Description of violations noted for the measure. Describe location, evidence, and date of corrective action taken.
(6) Ground stabilization measures	After each phase of paving	1. The phase of paving (installation of permeable EESC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land disturbing activity, completion of erosion control/permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection meets the required calendar day inspection requirement.

SECTION B: RECORDKEEPING
1. EESC Plan Documentation
The approved EESC plan as well as any approved deviation shall be kept on the site. The approved EESC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the EESC plan shall be kept on-site and available for inspection at all times during normal business hours:
(a) Each EESC Measure has been installed and does not significantly deviate from the location, dimensions and relative elevations shown on the approved EESC Plan.
(b) A phase of grading has been completed.
(c) Ground cover is increased and installed in accordance with the approved EESC Plan.
(d) The maintenance and repair requirements for all EESC Measures have been performed.
(e) Corrective actions have been taken to EESC Measures.

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

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING
1. Occurrences that Must be Reported
Permittees shall report the following occurrences:
(a) Visible sediment deposition in a stream or wetland.
(b) Oil spills/E
• They are 25 gallons or more.
• They are less than 25 gallons but cannot be cleaned up within 24 hours.
• They cause sheen on surface waters (regardless of volume), or
• They are within 100 feet of surface waters (regardless of volume).
(c) Release of hazardous substances in excess of reportable quantities under Section 304 of the Clean Water Act (Ref: 40 CFR 112.10 and 40 CFR 117.3) or Section 302 of CERCLA (Ref: 40 CFR 302.4) or 40 CFR 302.61.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

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

2. Reporting Timeframes and Other Requirements
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (919) 857-6268.

Occurrence

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• Within 24 hours, an oral or electronic notification. • Within 24 hours, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is impaired on the HQW, 303(d), list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices as staff determine that additional requirements are needed to assure compliance with the federal water quality protection conditions.
(b) Oil spills and release of hazardous substances per item 3(b)-(c) above	• Within 24 hours, an oral or electronic notification. • Within 24 hours, a report that includes an evaluation of the toxicity and effect of the bypass. • A report or form may be required to be filed with the Division, if possible. The report must include an evaluation of the anticipated quantity and effect of the bypass.
(c) Leak or spill of hazardous substances per item 3(b)-(c) above	• Within 24 hours, an oral or electronic notification. • Within 24 hours, a report that contains a description of the non-compliance, and its cause, the period of non-compliance, including exact dates or times, and if the non-compliance has not been corrected, the anticipated non-compliance is expected to continue, an area where or period of release, mitigation, and prevention recurrence of the non-compliance. (See CFR 122.41(f)). • Division staff may waive the requirement for a written report on a case-by-case basis.

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING

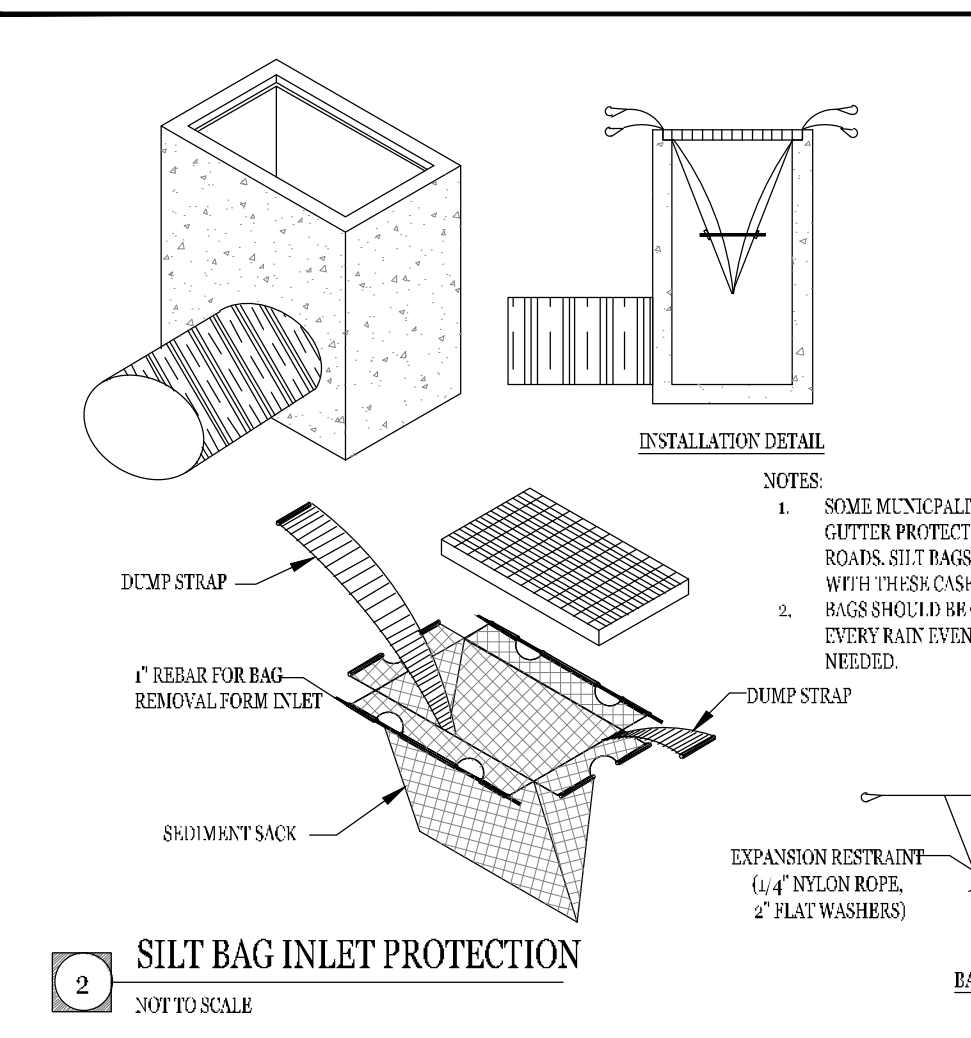
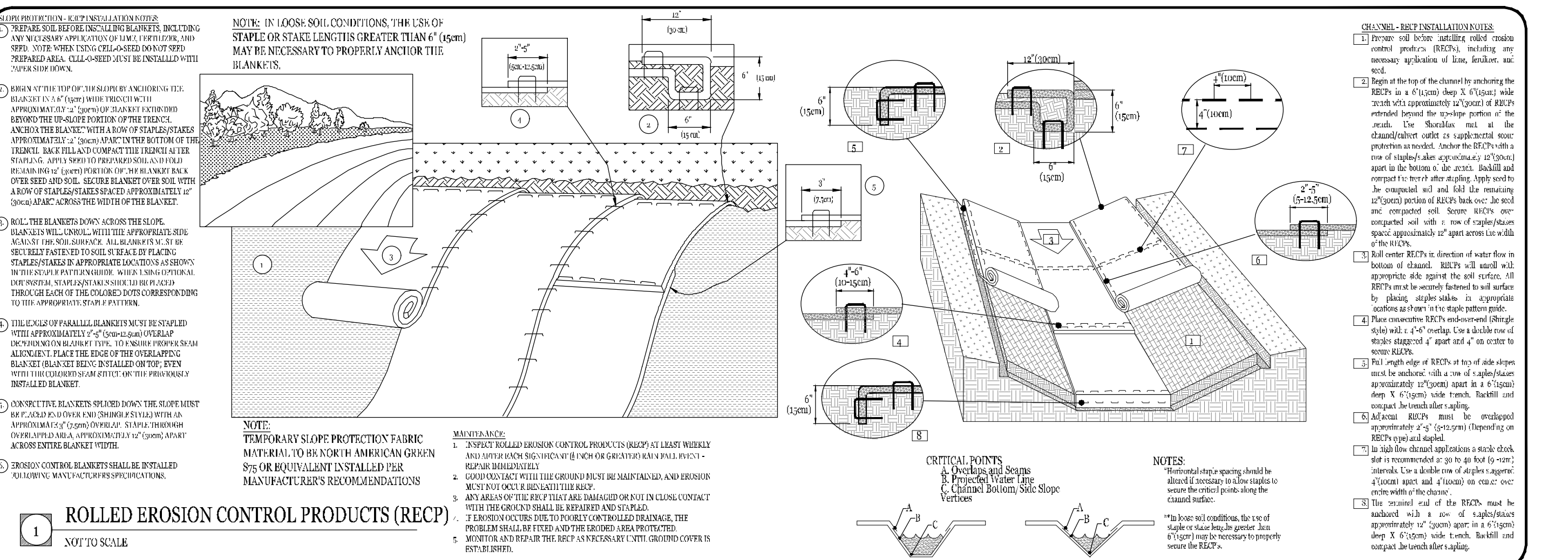
SECTION C: REPORTING
1. Occurrences that Must be Reported
Permittees shall report the following occurrences:
(a) Visible sediment deposition in a stream or wetland.
(b) Oil spills/E
• They are 25 gallons or more.
• They are less than 25 gallons but cannot be cleaned up within 24 hours.
• They cause sheen on surface waters (regardless of volume), or
• They are within 100 feet of surface waters (regardless of volume).
(c) Release of hazardous substances in excess of reportable quantities under Section 304 of the Clean Water Act (Ref: 40 CFR 112.10 and 40 CFR 117.3) or Section 302 of CERCLA (Ref: 40 CFR 302.4) or 40 CFR 302.61.
(d) Anticipated bypasses and unanticipated bypasses.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

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

2. Reporting Timeframes and Other Requirements
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Occurrence

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Bowman
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RALEIGH, NC 27608
Phone: (919) 955-6670
bowman.com
F-1445

DOLLAR GENERAL
US Highway 421 N
Lillington, NC Harnett County

RHETSON
OWNER/DEVELOPER:
RHETSON COMPANIES, INC.
ATTN: JOHN PARKER
2075 JUMPER LAKE ROAD
WEST END, NC 27376
(910) 944-0881
john@rhetson.com

PRELIMINARY
DO NOT USE FOR CONSTRUCTION

Drawn
Checked
Project No. 058004
Initial Date February 28, 2022
Title
NC CONSTRUCTION GENERAL PERMIT NCGO1 NOTES
Sheet No. C-9A
1922680-US 421 N. Harnett County

PROJECT SUMMARY

INSTALLATION DETAILS

- LANDING: 48" x 48" x 12"
- APPROX. LANDING FOOTING: 36" x 36"

STORAGE CAPACITY

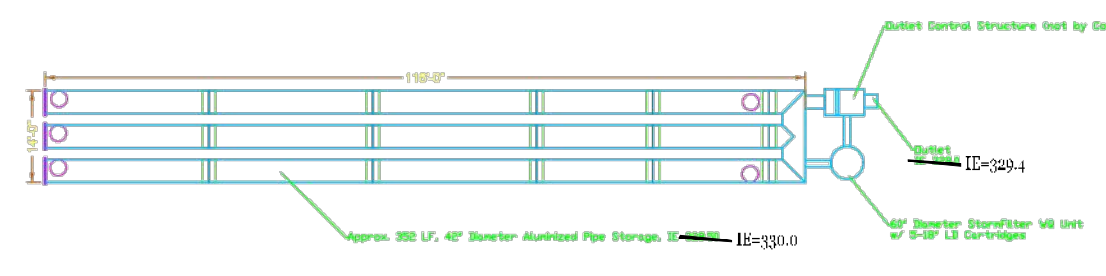
- STORAGE VOLUME (DESIGNED): 4,398 CU YD
- STORAGE VOLUME (AS-BUILT): 4,398 CU YD
- TOTAL STORAGE PROVIDED: 4,398 CU YD

PIPE DETAILS

- DIAMETER: 48" IN
- WALL THICKNESS: 1/2" IN
- WEIGHT: 110 LB/FT
- JOINT TYPE: GASKETED
- JOINT SPACING: 10' IN

ASSEMBLY DETAILS

- WEIGHT AT 48" IN: 110 LB/FT
- WEIGHT AT 60" IN: 150 LB/FT
- WEIGHT AT 72" IN: 210 LB/FT
- WEIGHT AT 84" IN: 280 LB/FT
- WEIGHT AT 96" IN: 360 LB/FT



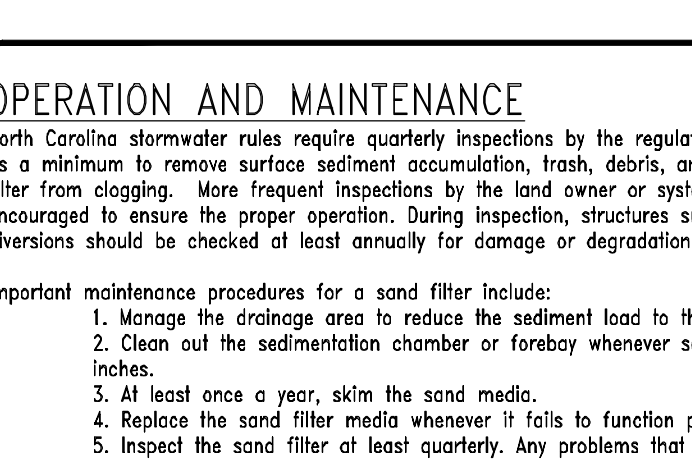
CONTECH
INGENIOUS SOLUTIONS LLC
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CONTECH
CMP DETENTION SYSTEMS
DYO03 SYSTEM

DYO10816 Dollar General - Lillington
3988 CF Storage
Lillington, NC
DETENTION SYSTEM

DATE	DESCRIPTION	BY	CHECKED
01/15/2024	ISSUED FOR PERMIT	JD	JD
01/15/2024	ISSUED FOR CONSTRUCTION	JD	JD

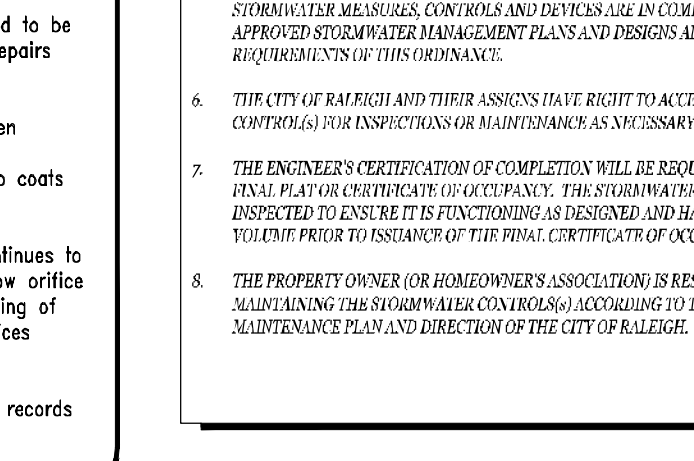
CONSTRUCTION LOADING DIAGRAM
SCALE: N.T.S.



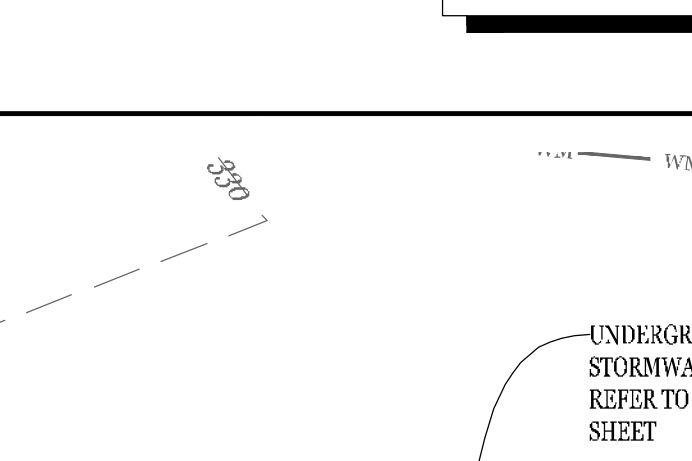
REINFORCING TABLE

Riser	A	B	REINFORCING	BEARING PRESSURE (PSF)
36"	36"	36"	#4 @ 12" O.C. TOP #4 @ 12" O.C. BOT	2,500
48"	48"	48"	#4 @ 12" O.C. TOP #4 @ 12" O.C. BOT	2,500
60"	60"	60"	#4 @ 12" O.C. TOP #4 @ 12" O.C. BOT	2,500
72"	72"	72"	#4 @ 12" O.C. TOP #4 @ 12" O.C. BOT	2,500
84"	84"	84"	#4 @ 12" O.C. TOP #4 @ 12" O.C. BOT	2,500
96"	96"	96"	#4 @ 12" O.C. TOP #4 @ 12" O.C. BOT	2,500

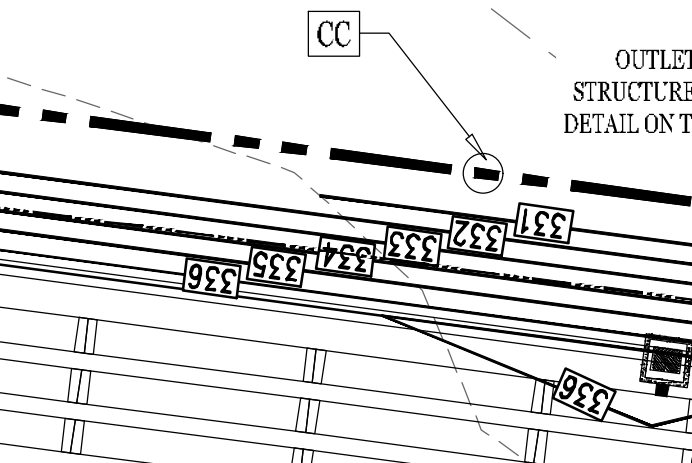
SECTION VIEW



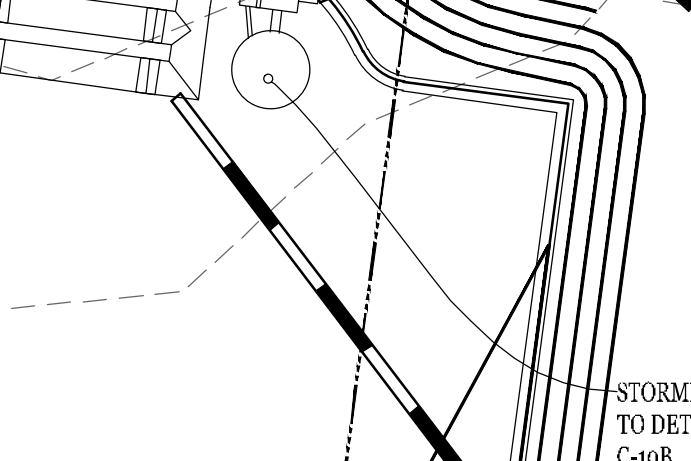
ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW



MANHOLE CAP DETAIL
SCALE: N.T.S.



CONSTRUCTION LOADING DIAGRAM
SCALE: N.T.S.

OPERATION AND MAINTENANCE

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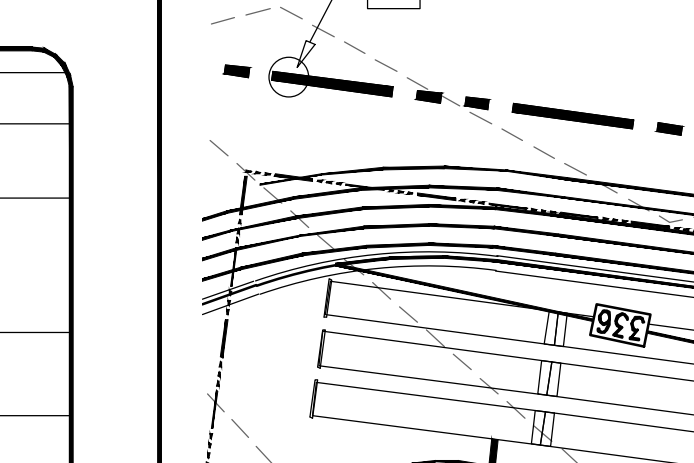
DATE	DESCRIPTION	BY	CHECKED
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01/15/2024	ISSUED FOR CONSTRUCTION	JD	JD

CONSTRUCTION LOADING DIAGRAM
SCALE: N.T.S.

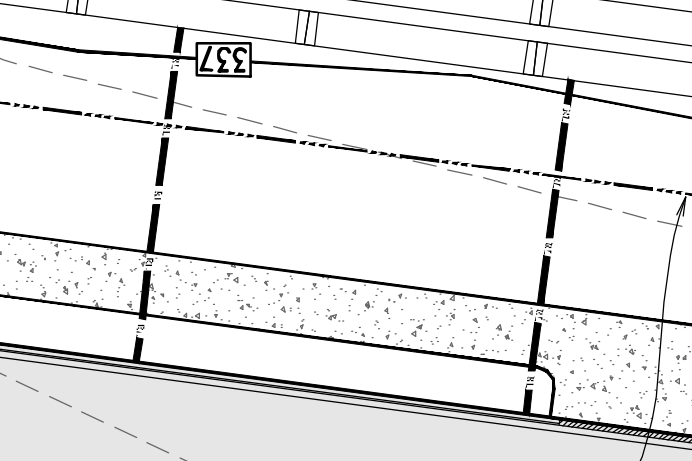
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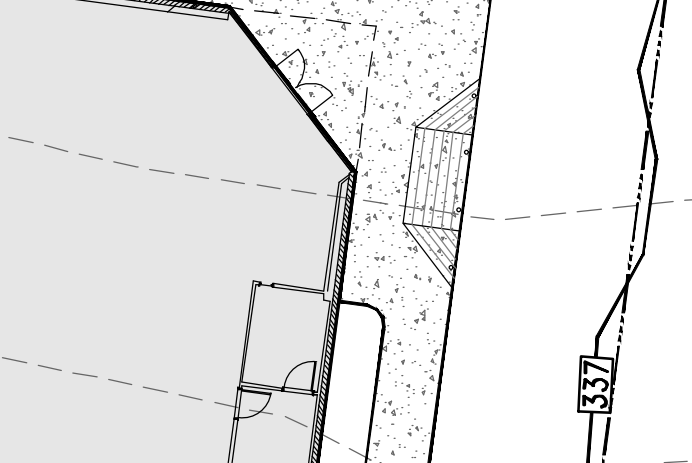
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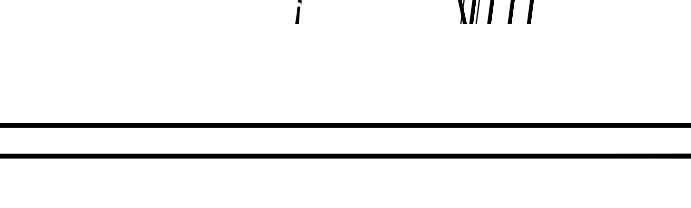
ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW



MANHOLE CAP DETAIL
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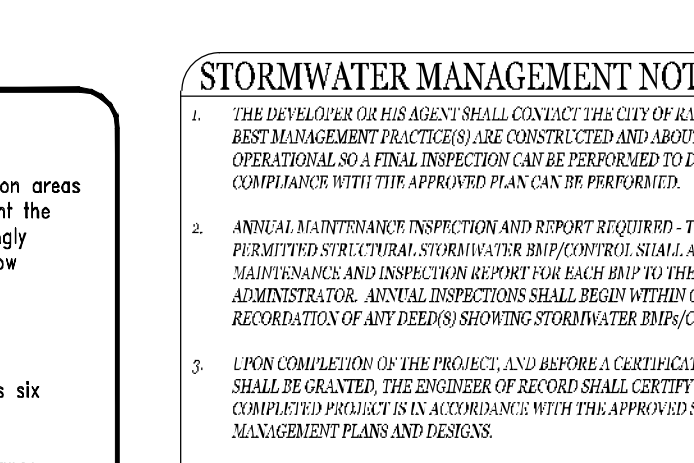
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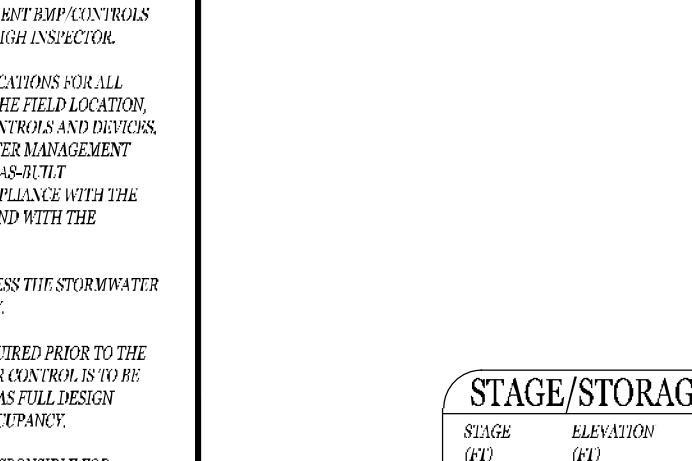
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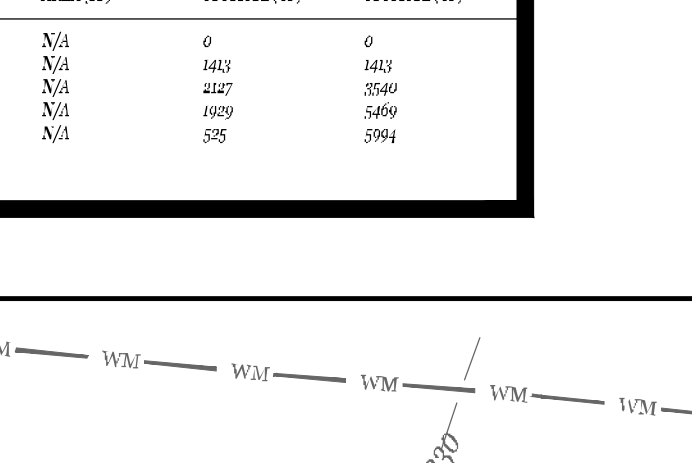
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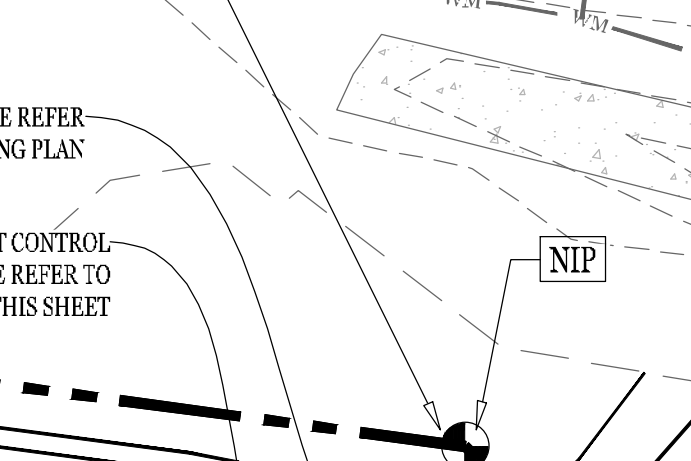
ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW



MANHOLE CAP DETAIL
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STORMWATER MANAGEMENT NOTES:

1. THE DEVELOPER OR HIS AGENT SHALL CONDUCT THE CITY OF KALIEGH WHEN THE BEST MANAGEMENT PRACTICES ARE CONSTRUCTED AND AGENT TO BECOME OPERATIONAL AS A FINAL INSPECTION AND REPORT TO THE CITY OF KALIEGH.
2. ANNUAL MAINTENANCE INSPECTION AND REPORT REQUIRED: THE OWNER OF A PERMITTED STORMWATER STORAGE FACILITY SHALL ANNUALLY SUBMIT A MAINTENANCE INSPECTION REPORT TO THE CITY OF KALIEGH. THE MAINTENANCE INSPECTION REPORT SHALL BE REVIEWED BY THE CITY OF KALIEGH. THE MAINTENANCE INSPECTION REPORT SHALL BE REVIEWED BY THE CITY OF KALIEGH.
3. UPON COMPLETION OF THE PROJECT, AND BEFORE CERTIFICATE OF OCCUPANCY SHALL BE GRANTED, THE ENGINEER OF RECORD SHALL CERTIFY THAT THE PROJECT IS IN FULL COMPLIANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS AND FIGURES.
4. A FINAL INSPECTION OF THE SITE AND STORMWATER MANAGEMENT BMP CENTRAIS TO BE SCHEDULED WITH AND COMPLETED BY THE CITY OF KALIEGH INSPECTOR.
5. THE "AS-BUILT" PLANS SHALL SHOW THE FINAL DESIGN SPECIFICATIONS FOR ALL STORMWATER MANAGEMENT FACILITIES AND PRACTICES AND THE FINAL LOCATION, SIZE, CAPACITY AND PLANTING SPECIFICATIONS FOR ALL PLANTS AND TREES AND PRACTICES AS INSTALLED. THE ENGINEER OF RECORD FOR THE STORMWATER MANAGEMENT FACILITIES AND AN AS-BUILT CERTIFICATE UNDER SEAL THAT THE AS-BUILT STORMWATER FACILITIES, CONTROLS AND DEVICES ARE IN COMPLIANCE WITH THE APPROVED STORMWATER MANAGEMENT PLANS AND DESIGNS AND WITH THE REQUIREMENTS OF THIS ORDINANCE.
6. THE CITY OF KALIEGH AND THEIR AGENTS MAY VISIT TO ACCESS THE STORMWATER CONTROL FACILITIES AND FACILITIES AS NECESSARY.
7. THE ENGINEER'S VERIFICATION OF COMPLETION WILL BE REQUIRED PRIOR TO THE FINAL PLAT CERTIFICATE OF OCCUPANCY. THE STORMWATER CONTROL IS TO BE INSPECTED TO ENSURE IT IS FUNCTIONING AS DESIGNED AND HAS FULL DESIGN VOLUMES PRIOR TO OBTAINING THE FINAL CERTIFICATE OF OCCUPANCY.
8. THE PROPERTY OWNER OR HOMEOWNER'S ASSOCIATION IS RESPONSIBLE FOR MAINTAINING THE STORMWATER CONTROL FACILITIES ACCORDING TO THE APPROVED MAINTENANCE PLAN AND DIRECTION OF THE CITY OF KALIEGH.

STAGE/STORAGE TABLE

STAGE (FT)	ELEVATION (FT)	CUMULATIVE STORAGE (CU YD)	INCREMENTAL STORAGE (CU YD)	TOTAL STORAGE (CU YD)
6.0	220.0	N/A	0	0
6.0	220.0	N/A	461	461
2.0	224.0	N/A	247	708
2.0	228.0	N/A	259	967
2.0	232.0	N/A	259	1226

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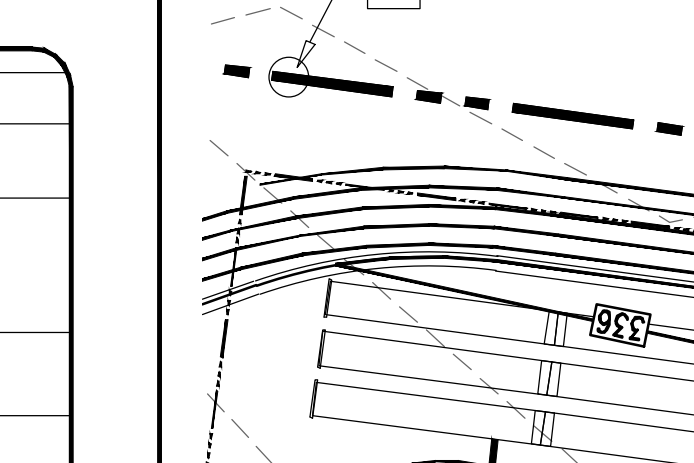
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CONSTRUCTION LOADING DIAGRAM
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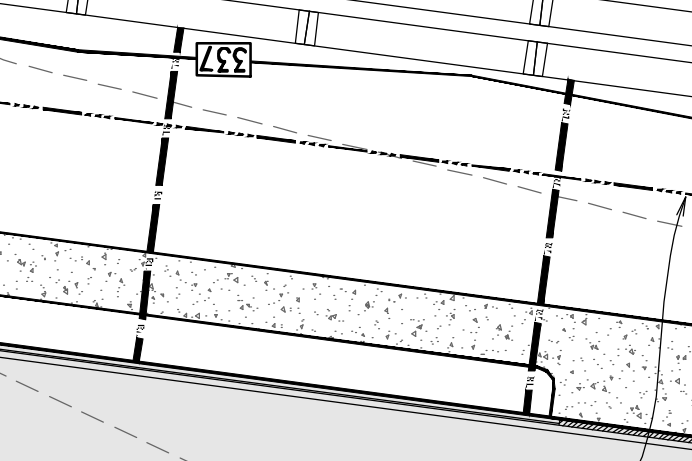
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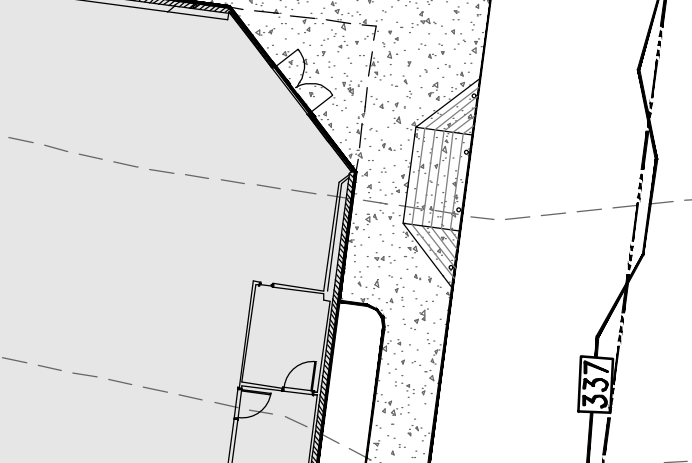
SECTION VIEW



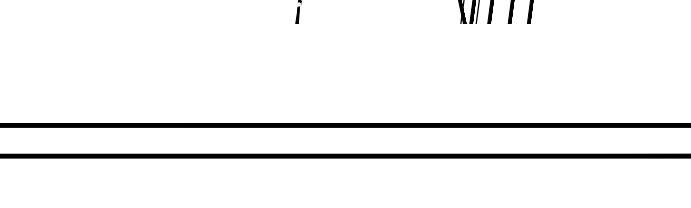
ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW



MANHOLE CAP DETAIL
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STORMWATER MANAGEMENT ALLOCATION UNDERGROUND DETENTION / STORMFILTER SYSTEM

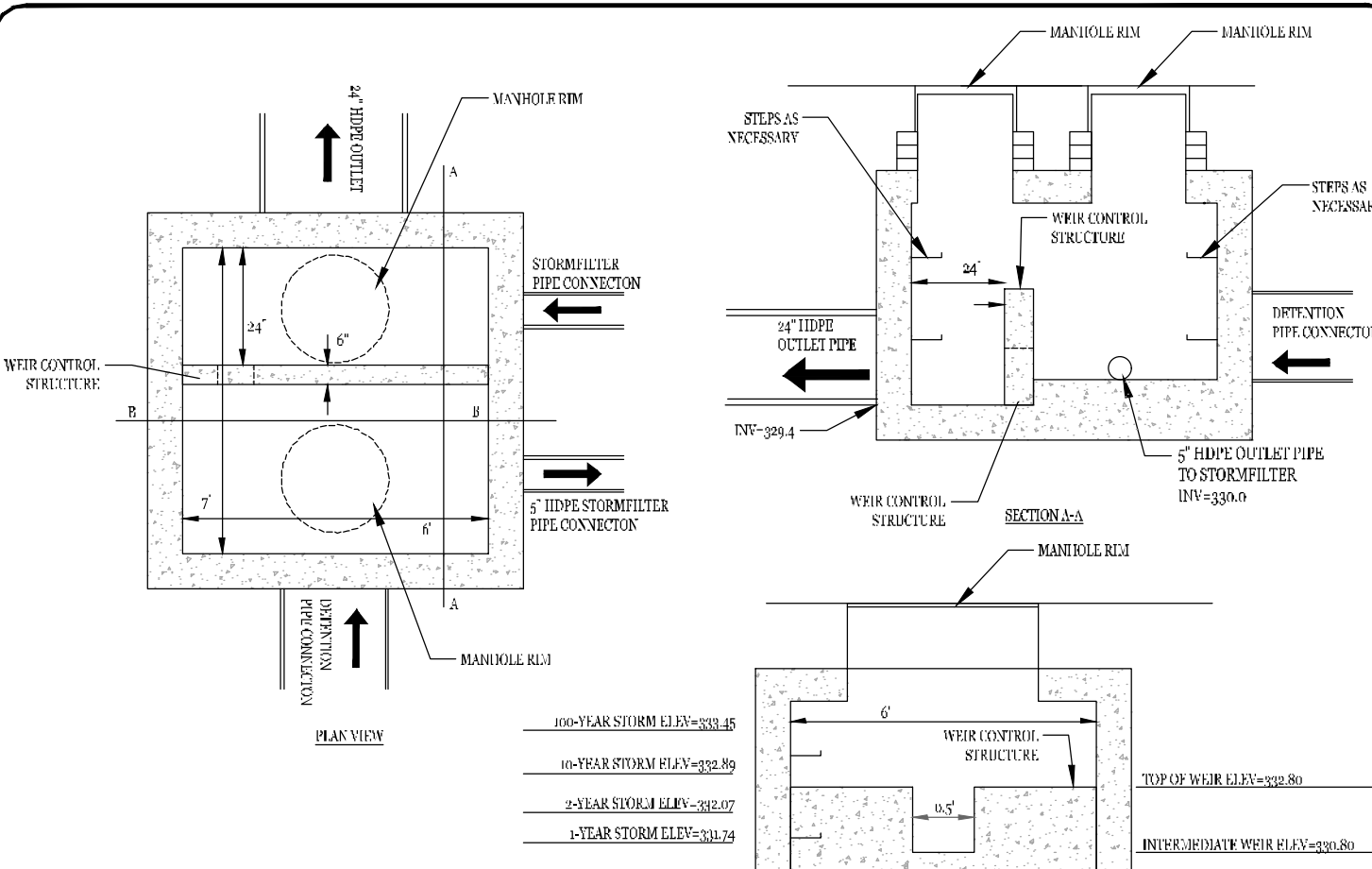
WATER MAIN: 48" IN
 DETENTION STREAM: 48" IN
 STREAM NUMBER: 18-10-1
 STREAM CLASS: 18-1-1
 BEC: 010000000
 PROJECT COORDINATES: 35.49937°N, -78.51286°W

POUD DESIGN SUMMARY

DESIGN AREA TO FLOOD: 1.41 ACRES
 SITE IMPROVEMENTS AREA TO FLOOD: 0.60 ACRES
 OFF-SITE IMPROVEMENTS AREA TO FLOOD: 0.81 ACRES
 TOTAL IMPROVEMENTS AREA TO FLOOD: 2.82 ACRES

	DEVELOPED	POST-DEVELOPED	POST-DEVELOPED	TOTAL
		TRUCK CAMP	IMPAS	
DESIGN AREA:	1.41 AC	1.41 AC	0.00 AC	2.82 AC
TIME OF CONCENTRATION:	7.83	9.65	7.0	

1" STORM EVENT: 2.22 CFS, 4.76 CFS, 0.48 CFS, 0.20 CFS, 2.52 CFS
2" STORM EVENT: 3.49 CFS, 6.98 CFS, 0.72 CFS, 0.31 CFS, 3.93 CFS
3" STORM EVENT: 4.76 CFS, 9.52 CFS, 0.96 CFS, 0.41 CFS, 5.20 CFS
4" STORM EVENT: 6.03 CFS, 12.06 CFS, 1.20 CFS, 0.52 CFS, 6.47 CFS
6" STORM EVENT: 9.52 CFS, 18.09 CFS, 1.80 CFS, 0.78 CFS, 9.70 CFS



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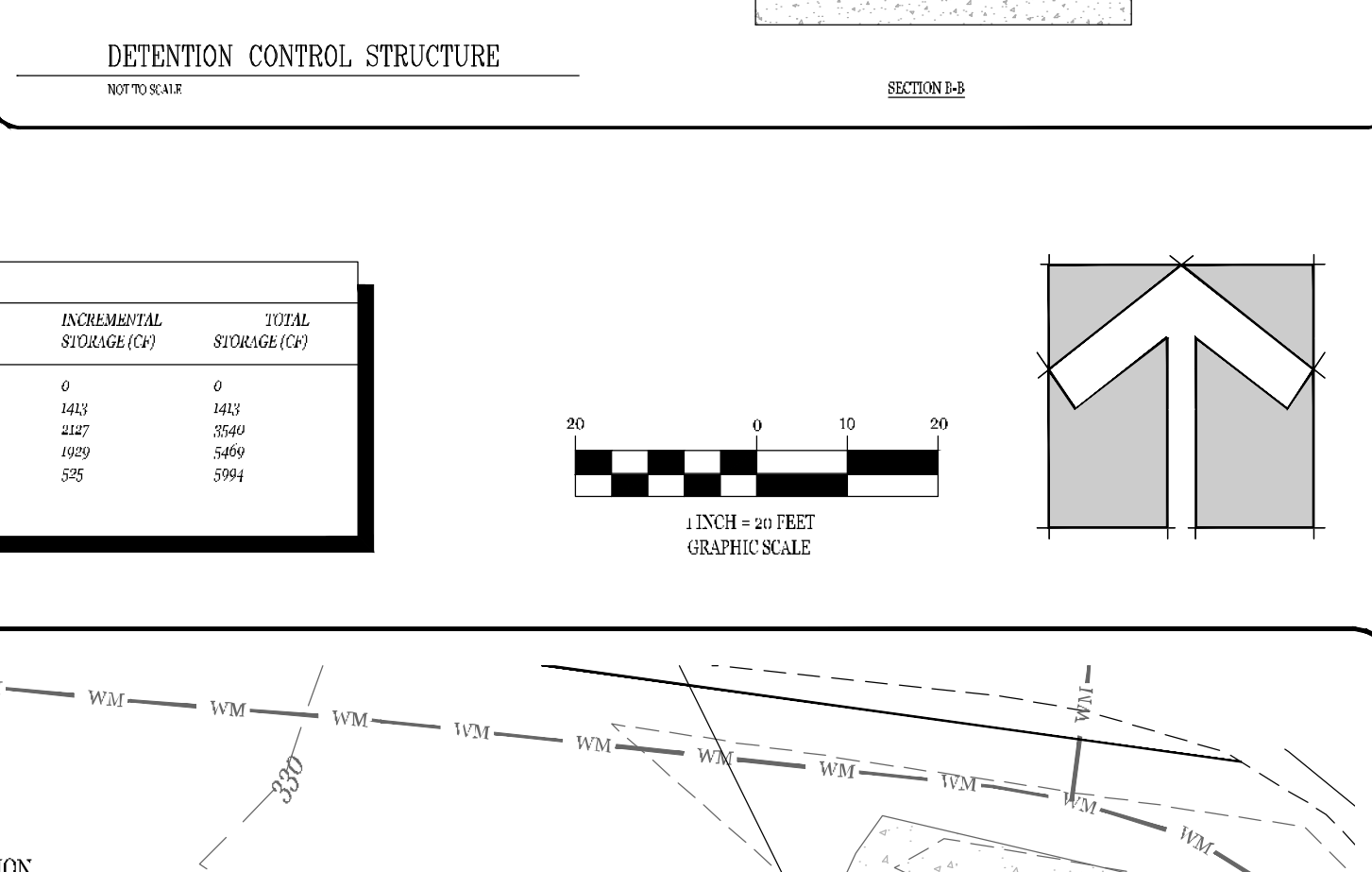
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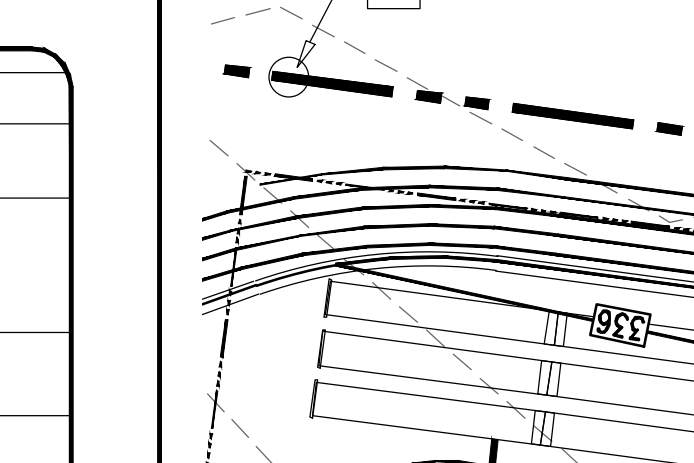
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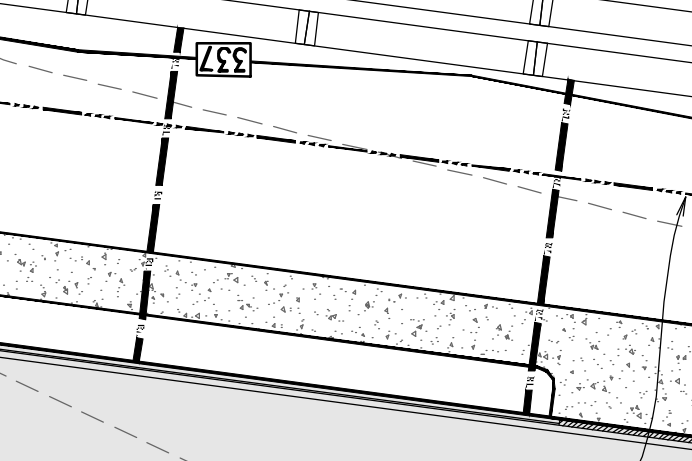
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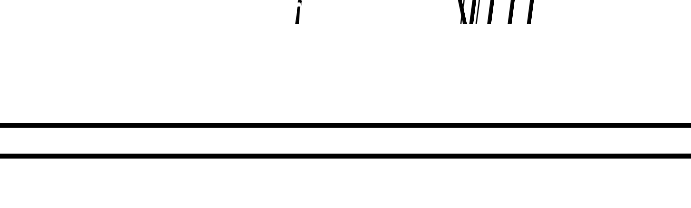
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Maintain operation and maintenance records in a known set location. Operation and maintenance records will be available upon request.

CONTECH
INGENIOUS SOLUTIONS LLC
www.contech.com

CONTECH
CMP DETENTION SYSTEMS
DYO03 SYSTEM

DYO10816 Dollar General - Lillington
3988 CF Storage
Lillington, NC
DETENTION SYSTEM

DATE	DESCRIPTION	BY	CHECKED
01/15/2024	ISSUED FOR PERMIT	JD	JD
01/15/2024	ISSUED FOR CONSTRUCTION	JD	JD

Bowman
Bowman North Carolina, Ltd.
4008 BARRETT DR
Suite 104
RALEIGH, NC 27609
Phone: (919) 955-6870
www.bowman.com
F-1445

PRELIMINARY DO NOT USE FOR CONSTRUCTION

OWNER/DEVELOPER:
RHETSON COMPANIES, INC.
ATTN: JOHN PARKER
2075 JUNIPER LAKE ROAD
WEST END, NC 27376
(910) 944-0881
john@rhetsco.com

DOLLAR GENERAL
US Highway 421 N
Lillington, NC Harnett County

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Drawn: [Name]
Checked: [Name]
Rhetson Project#: 21103
Project No.: 058004
Initial Date: February 28, 2022

TITLE
STORMWATER MANAGEMENT DETAILS

Sheet No. **C-10A**

242560-US-421 N. Harnett County

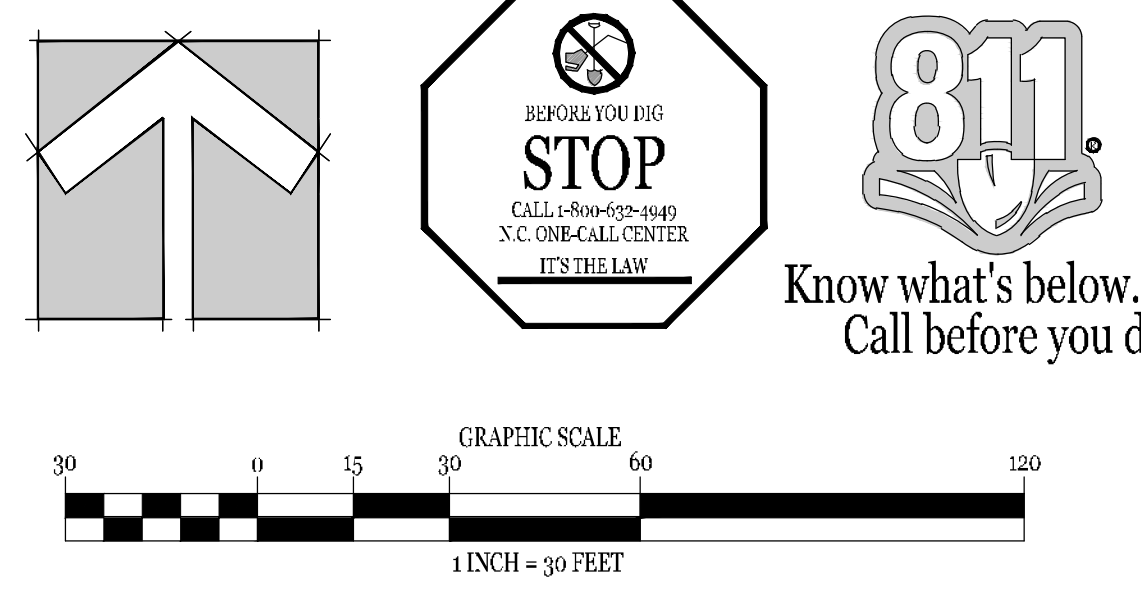
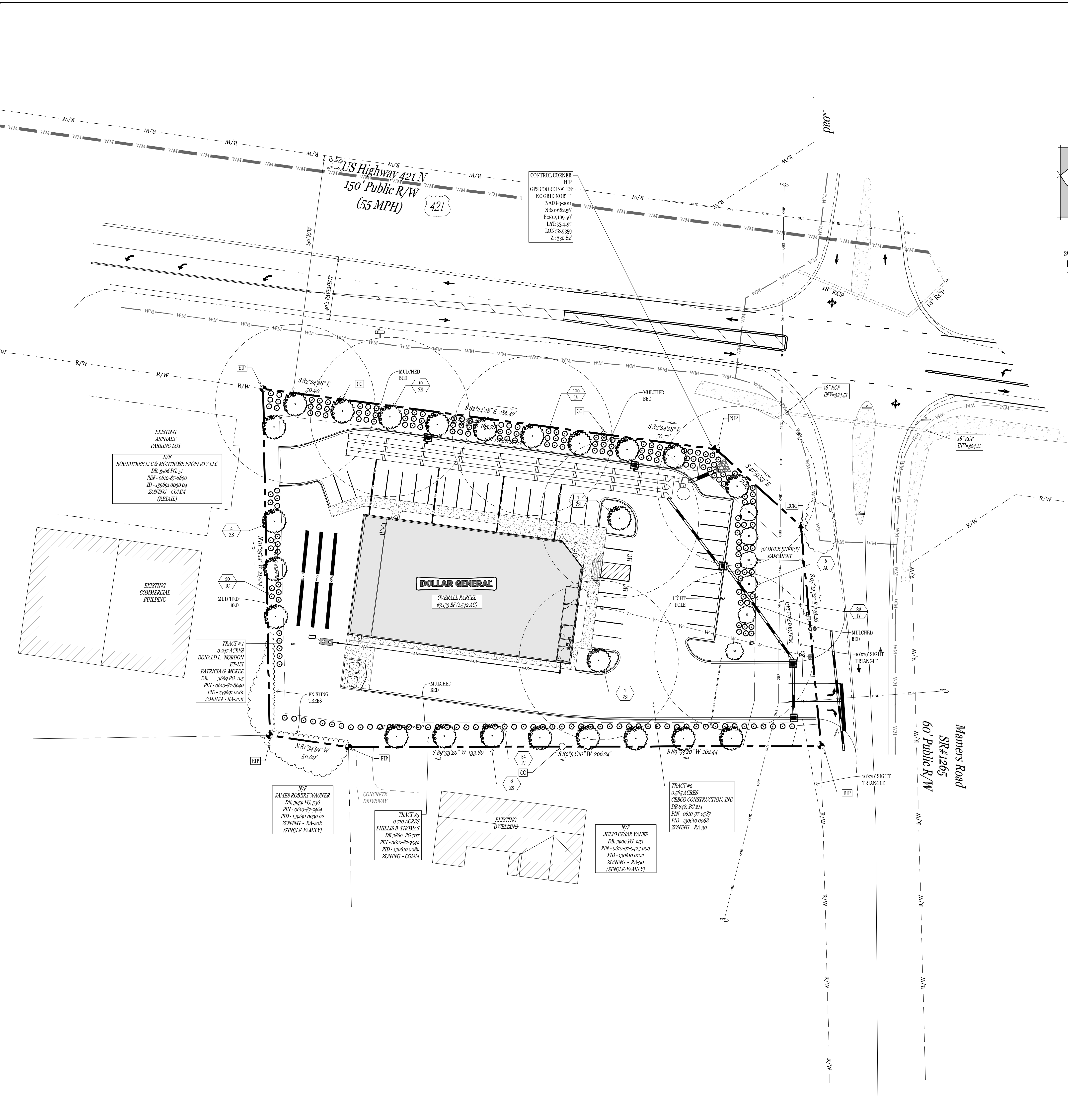
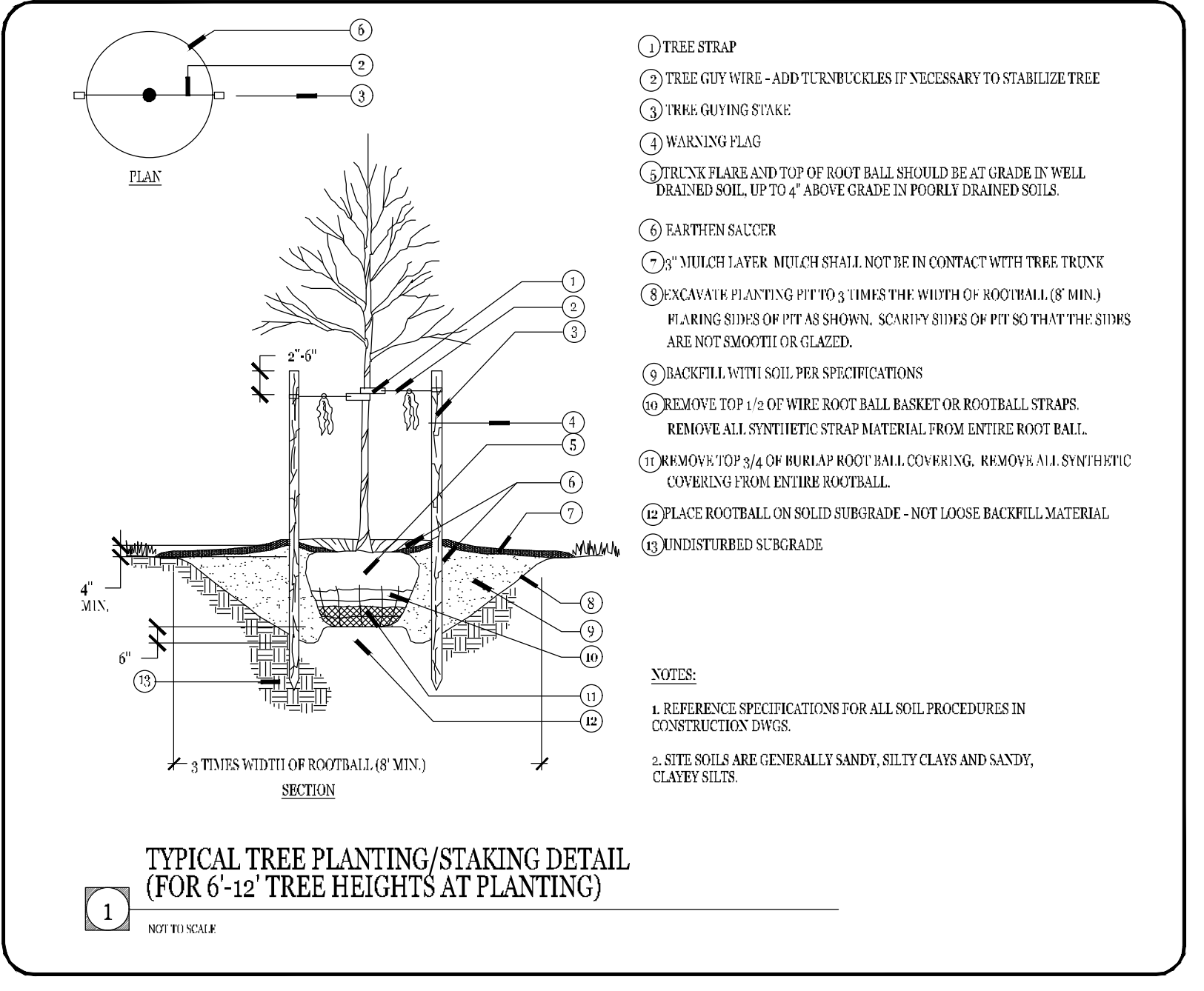
MASTER PLANT LIST									
TYPE	SYM./KEY	BOTANICAL NAME	COMMON NAME	SPECIFICATION					
				CALIPER	HEIGHT	ROOT	SPACING	OTHER	
TREES	ZS	Zelkova serotina 'Village Green'	Japanese Zelkova	2"	6' MIN	B&R	AS SHOWN		
	AC	Acer campestre	Hedge maple	1.5"	6' MIN	B&R	AS SHOWN		
SHRUBS	IV	Ilex verticillata	Yanpon Holly	-	48"	5 GAL	AS SHOWN		
	IC	Ilex crenata 'Soft Touch'	Soft Touch Holly	-	24"	5 GAL	AS SHOWN		

LANDSCAPING NOTES

- CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING ALL REQUIRED LANDSCAPING FOR THE ENTIRE SITE, TO INCLUDE BUT NOT LIMITED TO: SEEDING, SEEDING AREAS, SHRUB BEDS, PARKING LOT ISLANDS, ROADSIDE SWH BASE(S) AND MONUMENT PLANTERS.
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES REGARDING LANDSCAPING.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A HEALTHY STAND OF GRASS ON ALL SEEDING AREAS.
- IN THE EVENT THAT PLANTING BEDS AND MULCH ARE REQUIRED, THE CONTRACTOR SHALL INSTALL BLACK FABRIC WEED BLOCK LANDSCAPE MESH UNDER THE MULCH TO PREVENT WEED GROWTH.
- CONTRACTOR SHALL PROVIDE NATURAL TOPSOIL THAT IS FERTILE, FRIABLE, WITHOUT MIXTURES OF STONKS, MATERIALS, AND OBTAINED FROM A WELL DRAINED, AVAILABLE SITE. IT SHALL NOT CONTAIN SUBSTANCES WHICH MAY BE HARMFUL TO PLANT GROWTH. TOPSOIL SHALL BE SCREENED AND FREE FROM CLAY, LUMPS, STONES, ROOTS, PLANTS, OR SIMILAR SUBSTANCES 1" OR MORE IN DIAMETER, DEBRIS, OR OTHER OBJECTS WHICH MIGHT BE A HINDERANCE TO PLANTING OPERATIONS. TOPSOIL SHALL CONTAIN AT LEAST 4-6% ORGANIC MATTER BY WEIGHT AND HAVE A PH RANGE OF 5.5 TO 7.0.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE WATERING AND THE MAINTENANCE OF ALL LANDSCAPED AREAS UNTIL THE LATER OF: (a) THIRTY (30) DAYS FOLLOWING THE PLANTING OF THE GRASS AND SHRUBS, OR (b) THE DATE THAT DOLLAR GENERAL OPENS FOR BUSINESS TO THE PUBLIC.
- GENERAL CONTRACTOR IS TO CLEAN ENTIRE SITE OF ALL CONSTRUCTION DEBRIS AND RAKE ALL GRASS AREAS.
- PROVIDE LANDSCAPE PLANS TO DOLLAR GENERAL AND AS REQUIRED BY LOCAL JURISDICTION TO THE BLDG. DEPT. FOR REVIEW AND APPROVAL PRIOR TO START OF WORK.
- ALL LANDSCAPING, TREES, SHRUBS, ETC. SHALL NOT INTERFERE WITH THE VISIBILITY OF DOLLAR GENERAL SIGNAGE.
- CONTRACTOR TO VERIFY QUANTITIES PRIOR TO COMMENCING WORK.
- OPEN AREAS WITHIN PLANTING BEDS SHALL BE MULCHED.

GENERAL LANDSCAPE NOTES

- ANY DISTURBED AREAS NOT SCHEDULED FOR LANDSCAPE, PLANTINGS, OR MULCH SHALL BE SEEDING LAWN.
- NO PLANT SUBSTITUTIONS ARE PERMITTED WITHOUT WRITTEN APPROVAL OF THE OWNERS REPRESENTATIVE.
- ALL PLANT AND BED LINE LOCATIONS SHALL BE STAKED IN THE FIELD AND APPROVED BY THE OWNERS REPRESENTATIVE PRIOR TO INSTALLATION.
- ALL PLANTINGS SHALL BE INSTALLED WITH THE SPECIFIED LAYER OF MULCH. REFERENCE DETAILS AND SPECIFICATIONS FOR DEPTH AND TYPE OF MULCH. ALL TREES AND SHRUBS SHALL BE PLANTED IN MULCH BEDS AND SHALL BE SEPARATED FROM TURF GRASS AREAS.
- GRASS COVERAGE TO EXTEND FROM PROPERTY LINES TO BACK OF CITY SIDEWALKS AND/OR CURBS.
- MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER (FOR SINGLE STEM TREES). ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS, AND MINIMUM 8 FEET TALL.
- ALL STRAPPING AND TOP 2/3 OF WIRE BASKET MUST BE CUT AWAY AND REMOVED FROM ROOT BALL PRIOR TO BACKFILLING PLANTING PIT. REMOVE TOP 1/3 OF THE BURLAP FROM ROOT BALL.
- FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL, SUB-BASE AND CONSTRUCTION DEBRIS. REMOVE COMPACTED SOIL AND ADD 18" NEW TOPSOIL, OR TILL AND AMEND THE 18" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES.
- LARGE MATURING TREES MAY NOT BE PLANTED WHERE THERE ARE OVERHEAD DISTRIBUTION OR TRANSMISSION LINES. IF TREES CONFLICT WITH POWER LINES OR SIGNS, CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING.
- ADJUST TREE PLANTING LOCATIONS TO AVOID UNDERGROUND UTILITIES. PLANT 15' FROM ALL UNDERGROUND UTILITIES (SEWER AND STORM DRAINAGE, GAS, WATER, PHONE, AND ELECTRICAL LINES).
- ATTENTION LANDSCAPER: NOTIFY OWNER OF ANY SIGN, POWER LINE, OR OTHER CONFLICTS BEFORE PLANTING NEW TREES.



CONTROL CORNER
NIP
GPS COORDINATES
NAD 83 NORTH
X: 20089.6014
Y: 4507682.45
E: 2009109.39
LAT: 35.409°
LON: -78.329°
Z: 339.82'

EXISTING ASPHALT PARKING LOT
NIP
BOUNDRIES: J.C. & MONTROSS PROPERTY LLC
DB: 3366 PG. 51
PIN: 0610-87-6630
ID: 136691 0030 04
ZONING - COMM (RETAIL)

TRACT #1
0.44 ACRES
DONALD L. NORDON
ET ALX
PATRICIA G. MCKEE
DB: 3669 PG. 08
PIN: 0610-87-8840
PID: 136691 0016
ZONING - RA-20R

NIP
JAMES ROBERT WAGNER
DB: 3929 PG. 336
PIN: 0610-87-7464
PID: 136691 0030 02
ZONING - RA-20R
(SINGLE-FAMILY)

TRACT #2
0.70 ACRES
PHILLIS B. THOMAS
DB: 3860 PG. 707
PIN: 0610-87-3549
PID: 136691 0089
ZONING - COMM

NIP
JULIO CESAR FANES
DB: 3909 PG. 462
DB SR# PG. 211
PIN: 0610-87-0587
PID: 130610 0088
ZONING - RA-20