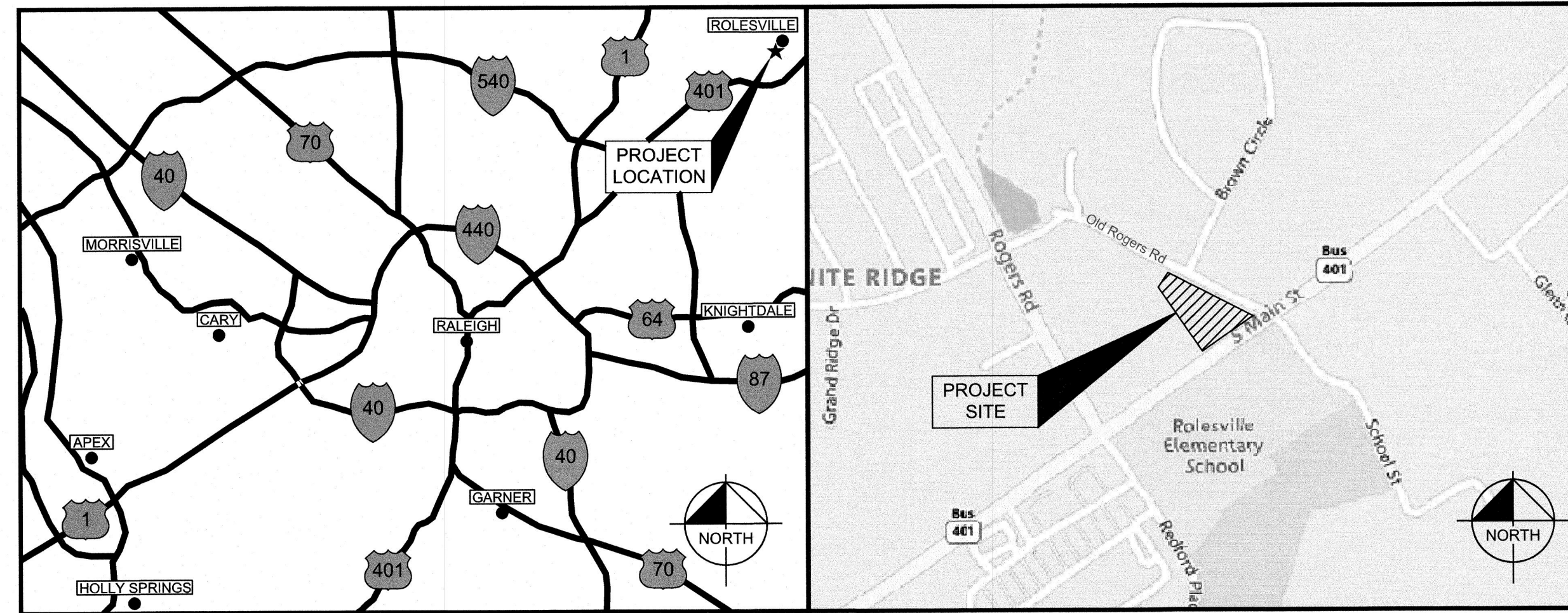


# THE LEARNING CENTER ROLESVILLE

302 SOUTH MAIN STREET  
ROLESVILLE, NC 27571

A DEVELOPMENT BY:  
ROLESVILLE, LLC.

PROJECT NO.: SDP-23-07  
DATE: OCTOBER 02, 2023



PROJECT LOCATION MAP  
SCALE: NOT TO SCALE

VICINITY MAP  
SCALE: 1" = 500'

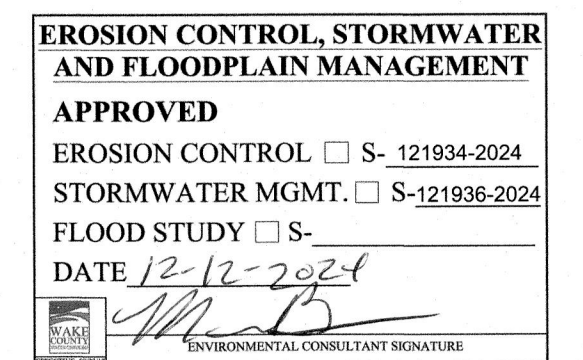
## PROJECT OWNERS & CONSULTANTS

<b>OWNER/DEVELOPER</b> ROLESVILLE, LLC 11016 RUSHMORE DRIVE, SUITE 100 CHARLOTTE, NORTH CAROLINA 28277 CONTACT: MARLAINE KLINTWORTH PHONE: (919) 868-4472 EMAIL: mvkcommercial@gmail.com	<b>LANDSCAPE ARCHITECT</b> KIMLEY-HORN AND ASSOCIATES, INC. 421 FAYETTEVILLE ST., SUITE 600 RALEIGH, NORTH CAROLINA 27601 CONTACT: ADAM FULLERTON, M.L.A., A.S.L.A. PHONE: (919) 653-2937 EMAIL: adam.fullerton@kimley-horn.com
<b>CIVIL ENGINEER</b> KIMLEY-HORN AND ASSOCIATES, INC. 421 FAYETTEVILLE ST., SUITE 600 RALEIGH, NORTH CAROLINA 27601 CONTACT: CHRIS BOSTIC, P.E. PHONE: (919) 653-2927 EMAIL: chris.bostic@kimley-horn.com	<b>SURVEYOR</b> CMP PROFESSIONAL LAND SURVEYORS, PC 333 S. WHITE ST WAKE FOREST, NORTH CAROLINA 27587 CONTACT: MICHAEL A. MOSS, PLS PHONE: (919) 556-3148 EMAIL: mike@cmplc.com

SITE DATA TABLE	
PIN:	1759808293
TOTAL SITE AREA:	1.25 AC
EXISTING ZONING:	GENERAL COMMERCIAL (GC)
BUFFERS:	REQUIRED: 30' STREET BUFFER (S MAIN ST) 10' STREET BUFFER (OLD ROGERS RD) 25' TYPE 3 PERIMETER BUFFER (REAR)  PROVIDED: 0' STREET BUFFER (S MAIN ST)* 10' STREET BUFFER (OLD ROGERS RD) 7' PERIMETER BUFFER (REAR)**
PROPERTY SETBACKS:	REQUIRED: FRONT: 20' SIDE: 15' REAR: 35' CORNER: 25'  PROVIDED: FRONT: 7'* SIDE: 15' REAR: 35' CORNER: 25'
WATERSHED:	SANFORD CREEK
RIVER BASIN:	NEUSE
CURRENT USE:	VACANT
PROPOSED USE:	COMMERCIAL
CURRENT IMPERVIOUS:	8,680 SF
PROPOSED IMPERVIOUS:	34,988 SF
PARKING:	MIN. REQUIRED: (2.5 SPACES/1,000 SF) $\frac{X 10,000 SF}{25 SPACES}$ = 25 SPACES  MAX. ALLOWED: (5 SPACES/1,000 SF) $\frac{X 10,000 SF}{50 SPACES}$ = 50 SPACES  PROVIDED: 33 SPACES
ACCESSIBLE PARKING:	REQUIRED: 2 SPACES PROVIDED: 2 SPACES
BICYCLE PARKING:	MIN. REQUIRED: (1 SPACE/5,000 SF) $\frac{X 10,000 SF}{2 SPACES}$ = 2 SPACES  PROVIDED: 2 SPACES
TREE COVERAGE DATA:	SEE SHEET L1.0
BUILDING HEIGHT:	22'
BUILDING SQUARE FOOTAGE:	10,000 SF
OPEN SPACE: (PER LDO SEC. 6.2.1.D.3)	MIN. REQUIRED: 5% $\frac{X 66,527 SF}{=3,327 SF}$  PROVIDED: 6,150 SF
*PER LDO SEC. 3.2.1.C, THE PROJECT IS PROPOSING A 65% REDUCTION TO THE REQUIRED 20' BUILDING SETBACK ALONG S MAIN ST. THE PROJECT WILL MEET THIS REQUIREMENT BY PROVIDING THE ITEMS LISTED IN LDO 3.2.1.C.1-3, 3.2.1.C.4, AND 3.2.1.C.6. THESE INCLUDE MIN. BUILDING AND ACTIVE SPACE FRONTAGE OF TWO-THIRDS STREET FRONTAGE, MAX. VEHICULAR SURFACE AREA OF ONE-THIRD STREET FRONTAGE, 10' SIDEWALK ENHANCED LANDSCAPING AND AN ART INSTALLATION (THE ART INSTALLATION SHALL BE INSTALLED PRIOR TO CERTIFICATE OF COMPLETION (COC) ISSUANCE. PER COORDINATION WITH THE TOWN OF ROLESVILLE, STREET BUFFERS DESCRIBED IN LDO SECTION 6.2.2.2 DO NOT APPLY WHERE SETBACK REDUCTIONS ARE UTILIZED.	
**VARIANCE APPLICATION VAR-24-01 WAS APPROVED ON 04-09-2024 BY THE TOWN BOARD OF ADJUSTMENT (BOA). THE VARIANCE ALLOWS THE REDUCTION OF THE LDO SECTION 6.2.2.1.G., TYPE 3 PERIMETER BUFFERYARD BETWEEN SUBJECT PROPERTY AND PIN 1759806216, FROM 25' TO 7' (REDUCTION BY 18'). AS PART OF THE REDUCTION, THE PROJECT COMMITS TO INSTALL ALL THE LANDSCAPING OF A 25' DEEP LANDSCAPE BUFFER WITHIN THE 7' DEPTH AREA.	
COMPLIANCE WITH 6.8.4.B.2 IS ACHIEVED WITH PATIO, PEDESTRIAN PLAZA WITH BENCHES, LARGE POTTED PLANT, AND ENHANCED PAVING AREA.	

Sheet List Table	
Sheet Number	Sheet Title
C0.0	COVER SHEET
C0.1	GENERAL NOTES
C1.0	EXISTING CONDITIONS & DEMOLITION PLAN
C2.0	SITE PLAN
C2.1	TRUCK ROUTING EXHIBIT
C2.2	TRUCK ROUTING EXHIBIT
C2.3	BUILD-TO EXHIBIT
C3.0	GRADING PLAN
C4.0	UTILITY PLAN
C4.1	MECHANICAL PLAN
C4.2	SEPTIC TANK DETAILS
C5.0	EROSION CONTROL PLAN - PHASE 1
C5.1	EROSION CONTROL PLAN - PHASE 2
C5.2	EROSION CONTROL PLAN - PHASE 3
C5.3	EROSION CONTROL DETAILS
C5.4	EROSION CONTROL DETAILS
C5.5	EROSION CONTROL DETAILS
C6.0	WET POND DETAILS
C8.0	SITE DETAILS
C8.1	SITE DETAILS
C9.0	STORM DETAILS
C9.1	STORM DETAILS
C10.0	SANITARY SEWER DETAILS
C11.0	WATER DETAILS
C11.1	WATER DETAILS
LT1.0	SITE LIGHTING PLAN
L1.0	LANDSCAPE PLAN
L2.0	LANDSCAPE DETAILS
EX-1	SITE FURNISHINGS PRODUCT EXHIBIT
A-011	PROPOSED FLOOR PLAN
A-051	PROPOSED ELEVATIONS

DISTURBED AREA: 1.24 AC



**SURVEY NOTE:**  
EXISTING TOPOGRAPHICAL INFORMATION IS BASED ON A TOPOGRAPHIC SURVEY OBTAINED ON 02/23/2023 BY CMP PROFESSIONAL LAND SURVEYORS, 333 S. WHITE STREET, WAKE FOREST, NC, 27588. PHONE: (919) 556-3148. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION, DEPICTED OR NOT, PRIOR TO CONSTRUCTION AND REPORT POTENTIAL CONFLICTS TO OWNER AND ENGINEER.



SDP-23-07 / Site Development Plan /  
302 S. Main St. - The Learning Center Rolesville

APPROVED  
Date: August 16, 2024

*Meredith G. Yunker*  
Town of Rolesville Planning Department



Know what's below.  
Call before you dig.

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

SDP-23-07

WAKE COUNTY COMMENTS TOWN COMMENTS WAKE COUNTY COMMENTS TOWN COMMENTS WAKE COUNTY COMMENTS TOWN COMMENTS	11/26/2024	JAA	DATE	BY
	08/16/2024	JAA		
	08/01/2024	JAA		
	07/17/2024	JAA		
	07/08/2024	JAA		
REVISIONS No.	40	A		
	39	A		
	38	A		
	37	A		
	36	A		

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WWW.KIMLEY-HORN.COM PHONE: 919-877-2000 FAX: 919-877-2050  
421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601

KHA PROJECT 013031004  
DATE 09/29/2023  
SCALE AS SHOWN  
DESIGNED BY JAA  
DRAWN BY JAA  
CHECKED BY COB

COVER SHEET

THE LEARNING CENTER ROLESVILLE PREPARED FOR ROLESVILLE, LLC. NORTH CAROLINA

SHEET NUMBER SDP-23-07 C0.0



Plotted By: Alexander, Jamal Sheet Title: THE LEARNING CENTER ROLESVILLE Layout: COUL1 GENERAL NOTES June 15, 2024 12:41:13pm K:\RAL\_LDEV\013031004\_Rolesville\_Learning\_Center\10\_CAD Files\PlanSheets\CO1\_GENERAL NOTES.dwg  
This document, together with the concepts and designs presented herein, is an instrument of service, is intended only for the specific purpose and client for which it was prepared. Release of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

## GENERAL NOTES:

- WORK IN THIS PROJECT SHALL CONFORM TO THESE PLANS, THE LATEST EDITIONS OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION (NCDOT) ROAD AND BRIDGE SPECIFICATIONS, THE NCDOT ROAD AND BRIDGE STANDARDS, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK, THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, THE TOWN OF ROLESVILLE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT, AND GENERAL DESIGN STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY OF THESE STANDARDS, SPECIFICATIONS, OR PLANS, THE MOST STRINGENT SHALL GOVERN. ALL UTILITIES TO BE DEDICATED TO THE CITY OF RALEIGH MUNICIPAL WATER AND/OR SANITARY SEWER SYSTEM SHALL BE CONSTRUCTED AND TESTED TO CONFORM TO STATE OF NORTH CAROLINA/STATE BOARD OF HEALTH WATERWORKS AND/OR SEWAGE REGULATIONS AND THE CITY OF RALEIGH DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS.
- THE TERM "CONTRACTOR" AS REFERENCED HERE-IN SHALL ALSO INCLUDE THE SUBCONTRACTOR OR PRINCIPAL TRADE CONTRACTOR, UNDER CONTRACT TO THE GENERAL CONTRACTOR TO PROVIDE LABOR, MATERIALS, AND/OR SERVICES TO THE PROJECT.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL JOBSITE SAFETY, INCLUDING BUT NOT LIMITED TO TRENCH SAFETY, DURING ALL PHASES OF CONSTRUCTION.
- THE LOCATION AND SIZE OF EXISTING UTILITIES AS SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HORIZONTALLY AND VERTICALLY LOCATING AND PROTECTING ALL PUBLIC OR PRIVATE UTILITIES (SHOWN OR NOT SHOWN) WHICH LIE IN OR ADJACENT TO THE CONSTRUCTION SITE. AT LEAST 48 HOURS PRIOR TO ANY DEMOLITION, GRADING, OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE NORTH CAROLINA 811 UTILITIES LOCATION SERVICE (NC811) AT 1-800-632-4949 FOR PROPER IDENTIFICATION OF EXISTING UTILITIES WITHIN THE SITE.
- THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES. THE CONTRACTOR SHALL REPAIR, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.
- TRAFFIC CONTROL WITHIN ALL VEHICULAR AREAS IS THE RESPONSIBILITY OF THE CONTRACTOR, SHALL BE IN CONFORMANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES," AND AS FURTHER DIRECTED BY CITY AND STATE INSPECTORS.
- ANY DISCREPANCIES FOUND BETWEEN THE DRAWINGS, SPECIFICATIONS, AND SITE CONDITIONS OR ANY INCONSISTENCIES OR AMBIGUITIES IN DRAWINGS OR SPECIFICATIONS SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER, IN WRITING, WHO SHALL PROMPTLY ADDRESS SUCH INCONSISTENCIES OR AMBIGUITIES. WORK DONE BY THE CONTRACTOR AFTER HIS DISCOVERY OF SUCH DISCREPANCIES, INCONSISTENCIES, OR AMBIGUITIES SHALL BE DONE AT THE CONTRACTOR'S RISK.
- CONSTRUCTION STAKEOUT FOR THIS PROJECT SHALL BE PER A DIGITAL (CAD) FILE PROVIDED BY THE ENGINEER. THE CONTRACTOR SHALL NOTIFY THE LEAD ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES FOUND BETWEEN THE DIGITAL FILE AND THE CRITICAL STAKING DIMENSIONS SHOWN ON THIS PLAN. ANY MODIFICATIONS MADE BY OTHERS TO THE DIGITAL FILE PROVIDED BY THE ENGINEER SHALL RENDER IT VOID.
- A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE THE MEETING WITH THE TOWN OF ROLESVILLE ENGINEERING DIVISION, THE OWNER, AND ENVIRONMENTAL CONSULTANT.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING OR OBTAINING ALL REQUIRED PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION.
- THE FRAMES AND COVERS OF ALL EXISTING AND PROPOSED DRAINAGE, SANITARY SEWER, WATER MAIN, GAS, AND WIRE UTILITY STRUCTURES SHALL BE ADJUSTED TO MATCH PROPOSED FINISHED ELEVATIONS AND SLOPES.
- ROADWAYS AND BUILDINGS MUST BE CAPABLE OF SUPPORTING FIRE APPARATUS DURING CONSTRUCTION.
- EXISTING INFORMATION SHOWN TAKEN FROM A TOPOGRAPHIC SURVEY DATED FEBRUARY 23, 2023 AND PROVIDED BY CMP PROFESSIONAL LAND SURVEYORS, 333 S. WHITE STREET, WAKE FOREST, N.C. 27588, PHONE: 919-556-3148.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NC DOT AND TOWN OF ROLESVILLE STANDARDS, SPECIFICATIONS, & DETAILS IF APPLICABLE.

## SANITARY SEWER

- SANITARY SEWER SERVICES SHALL BE SCHEDULE 40 PVC.
- CLEANOUT SYMBOLS SHOWN ON THESE PLANS REPRESENT LOCATION OF SURFACE ACCESS POINT. CONTRACTOR SHALL LOCATE WYE APPROPRIATELY BASED ON PIPE DEPTH.
- SANITARY SEWER CLEAN-OUTS LOCATED IN PAVEMENT AREAS SHALL BE HEAVY-DUTY TRAFFIC BEARING CASTINGS.

## WATER

- WATERLINES, LARGER THAN 2" SHALL BE DUCTILE IRON PIPE MEETING THE REQUIREMENTS OF ANSI-AWWA C151 PRESSURE CLASS 350. WATERLINES 3/4" TO 2" SHALL BE TYPE "K" SOFT COPPER.
- ALL UNDERGROUND UTILITIES AND FIRE HYDRANTS MUST BE FUNCTIONALLY APPROVED PRIOR TO STRUCTURAL CONSTRUCTION.
- NATIONAL STANDARD THREADS SHALL BE INSTALLED ON FIRE HYDRANTS.
- ALL FIRE HYDRANTS AND FDC CONNECTIONS TO HAVE STORZ TYPE CONNECTION PER CITY OF RALEIGH FIRE DEPARTMENT STANDARDS.

## BACKFLOW PREVENTION:

- THERE SHALL BE NO TAPS, PIPING BRANCHES, UNAPPROVED BYPASS PIPING, HYDRANTS, FIRE DEPARTMENT CONNECTION POINTS OR OTHER WATER-USING APPURTENANCES CONNECTED TO THE SUPPLY LINE BETWEEN ANY WATER METER AND ITS REQUIRED BACKFLOW PREVENTER.
- EACH BACKFLOW PREVENTER ASSEMBLY IS REQUIRED TO BE TESTED BY AN APPROVED CERTIFIED TESTER PRIOR TO PLACING THE WATER SYSTEM INTO SERVICE. CONTRACTOR SHALL PERFORM TESTING IN ACCORDANCE WITH THE CITY OF RALEIGH ENGINEERING DEPARTMENT.

## CONSTRUCTION NOTES

- THE CONTRACTOR SHALL CONDUCT THE WORK IN A SAFE MANNER AND WITH A MINIMUM AMOUNT OF INCONVENIENCE TO TRAFFIC.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SHALL ADHERE TO THE PROVISIONS OF THE MUTCD (MOST CURRENT EDITION).
- PRIOR TO CONSTRUCTION BEGINNING, ALL SIGNAGE AND TRAFFIC CONTROL SHALL BE IN PLACE.
- THE CONTRACTOR SHALL HAVE A COMPLETE SET OF CONTRACT DOCUMENTS AS WELL AS ALL APPROVALS AND EASEMENTS ON THE JOB SITE AT ALL TIMES.
- THE CONTRACTOR SHALL REPAIR ALL DRIVEWAYS, DRIVEWAY PIPES, CURB AND GUTTER, SIDEWALKS AND STREET TO EXISTING CONDITION OR BETTER.

## PAVING/CURBING

- WHERE PROPOSED CURB AND GUTTER TIES TO EXISTING CURB OR CURB AND GUTTER, A TRANSITION OF 10' SHALL BE MADE TO CONFORM TO THE EXISTING HEIGHTS AND SHAPES.
- BEFORE ANY EARTHWORK IS DONE, THE CONTRACTOR SHALL STAKE OUT AND MARK THE LIMITS OF PAVEMENT AND OTHER ITEMS ESTABLISHED IN THE PLANS. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
- ALL PAVEMENT SUB GRADES (EVEN WHEN ROCK IS ENCOUNTERED) SHALL BE SCARIFIED TO A DEPTH OF 8 INCHES AND COMPACTED TO A MINIMUM DENSITY OF 98 PERCENT OF ASTM D-698 DENSITY AT OPTIMUM MOISTURE CONTENT UNLESS OTHERWISE SHOWN IN THE CONSTRUCTION DOCUMENTS OR AS DIRECTED BY THE CERTIFIED MATERIALS TESTING AGENT. FILL SHALL BE PLACED AND COMPACTED IN MAXIMUM 8" LIFTS.
- CONTRACTOR SHALL FURNISH AND INSTALL ALL PAVEMENT MARKINGS AND MISCELLANEOUS STRIPING AS SHOWN ON THE PLANS. ALL ROADWAY PAVEMENT MARKINGS SHALL BE THERMOPLASTIC AND ADHERE TO NCDOT STANDARDS.
- THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEER'S SPECIFICATIONS. THE FILL MATERIAL TO BE USED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- ALL CURB JOINTS SHALL EXTEND THROUGH THE CURB. MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS IS 1.5 FEET. ALL JOINTS SHALL BE SEALED WITH JOINT SEALANT.
- TESTING OF MATERIALS REQUIRED FOR THE CONSTRUCTION OF THE PAVING IMPROVEMENTS SHALL BE PERFORMED BY AN APPROVED AGENCY FOR TESTING MATERIALS. THE TESTING LABORATORY AND THE PAYMENT OF SUCH TESTING SERVICES SHALL BE MADE BY THE OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY THAT THE CERTIFIED MATERIAL TESTING AGENCY HAS PERFORMED THE WORK AND THAT THE WORK CONSTRUCTED DOES MEET THE REQUIREMENTS OF THE CITY'S SPECIFICATIONS AND/OR THE PROJECT SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.
- ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES ON PUBLIC STREETS SHALL CONFORM TO MUTCD, NCDOT, AND TOWN OF ROLESVILLE STANDARDS.

## STORM DRAINAGE

- THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN, INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF CURB INLETS AND GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER.
- THE TOWN OF ROLESVILLE INSPECTOR SHALL INSPECT ALL "PUBLIC" CONSTRUCTION. THE CONTRACTOR'S PRICE SHALL INCLUDE ALL INSPECTION FEES.
- ALL RCP STORM SEWER MAINS AND LATERALS SHALL BE MINIMUM CLASS III REINFORCED CONCRETE PIPE.
- ALL PVC PIPE USED IN DRAINAGE SYSTEM SHALL BE MINIMUM SDR-35 OR APPROVED EQUAL.
- ALL PVC TO RCP CONNECTIONS SHALL BE CONSTRUCTED WITH CONCRETE COLLARS.
- THE LOCATIONS OF STORM SEWER STRUCTURES SHOWN ON THESE PLANS (AND PROVIDED IN ASSOCIATED CAD FILES) ARE APPROXIMATE. THE CONTRACTOR SHALL STAKE ALL CURB INLET STRUCTURES SUCH THAT INLET TOPS ALIGN HORIZONTALLY WITH PROPOSED CURB LOCATIONS (PER DETAIL, IF PROVIDED). WHERE PROPOSED STORM SEWERS TIE TO EXISTING STRUCTURES, PIPES, ETC., THE CONTRACTOR SHALL FIELD ADJUST PROPOSED STORM SEWERS TO MATCH THE LOCATIONS OF THESE EXISTING FEATURES.
- RIM ELEVATIONS FOR STORM CATCH BASINS ARE MEASURED TO THE GUTTER FLOW LINE.

## TRAFFIC CONTROL NOTES

- WITHIN THE SIGHT TRIANGLES AND SIGHT EASEMENTS SHOWN ON THESE PLANS, NO OBSTRUCTION SHALL BE LOCATED IN WHOLE OR PART BETWEEN (2) FEET AND (8) FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION OR THE NEAREST TRAVELED WAY, IF NO CURBING EXISTS. OBSTRUCTIONS INCLUDE, BUT ARE NOT LIMITED TO, ANY BERM, FOLIAGE, FENCE, WALL, SIGN, PARKED VEHICLE OR OTHER OBJECT.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF ROLESVILLE AND/OR N.C.D.O.T. STANDARDS AND SPECIFICATIONS.
- REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) FOR DETAILS OF STANDARD TRAFFIC CONTROL SIGNS AND STANDARDS.

## SEEDBED PREPARATION

- CHISEL COMPACTED AREAS AND SPREAD TOPSOIL THREE INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
- RIP THE ENTIRE AREA TO SIX INCHES DEEP.
- REMOVE ALL LOOSE ROCK, ROOTS AND OTHER OBSTRUCTIONS, LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
- APPLY AGRICULTURAL LIME, FERTILIZER AND SUPERPHOSPHATE UNIFORMLY AND MIX WITH SOIL (SEE MIXTURE BELOW).
- CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED FOUR TO SIX INCHES DEEP.
- SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING.
- MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH.
- INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE MORE THAN 60% DAMAGED, RE-ESTABLISH FOLLOWING THE ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
- CONSULT SAEC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
- \*AGRICULTURAL LIMESTONE - 2 TONS/ ACRE (3 TONS/ACRE IN CLAY SOILS) FERTILIZER - 1,000 LBS. / ACRE -10-10-10 SUPERPHOSPHATE- 500 LBS/ ACRE -20% ANALYSIS MULCH -2 TONS / ACRE - SMALL GRAIN STRAW ANOTHER - ASPHALT EMULSION @ 300 GALS./ ACRE

## SEEDING SCHEDULE

DATE	TYPE	PLANTING RATE
<b>SHOULDERS, SIDE DITCHES, SLOPES (MAX 3:1)</b>		
AUG 15 - NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1 - MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE
MAR 1 - APR 15	TALL FESCUE	300 LBS/ACRE
APR 15 - JUN 30	HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUL 1 - AUG 15	TALL FESCUE AND ***BROWNTOP MILLET ***OR SORGHUM-SUDAN HYBRIDS	120 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE
<b>SLOPES (3:1 TO 2:1)</b>		
MAR 1 - JUN 1	SERICA LESPEDEZA (SCARIFIED) AND ADD TALL FESCUE	50 LBS/ACRE 120 LBS/ACRE
(MAR 1 - APR 15)	OR ADD WEEPING LOVEGRASS	10 LBS/ACRE
(MAR 1 - JUN 30)	OR ADD HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUN 1 - SEP 1	***TALL FESCUE AND ***BROWNTOP MILLET ***OR SORGHUM-SUDAN HYBRIDS	120 LBS/ACRE 35 LBS/ACRE 30 LBS/ACRE
SEP 1 - MAR 1	SERICA LESPEDEZA (UNHULLED- UNSCARIFIED) AND TALL FESCUE	70 LBS/ACRE 120 LBS/ACRE
(NOV 1 - MAR 1)	ADD ABRUZZI RYE	25 LBS/ACRE

CONSULT CONSERVATION ENGINEER OR SOIL CONSERVATION SERVICE FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENuded AREAS. THE ABOVE VEGETATION RATES ARE THOSE WHICH DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

\*\*\*TEMPORARY - RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW OVER 12" IN HEIGHT BEFORE MOWING. OTHERWISE FESCUE MAY BE SHADED OUT.

\*NOTE: THIS SEEDING SCHEDULE IS FOR EROSION AND SEDIMENT CONTROL ONLY. SEE LANDSCAPE PLAN FOR FINAL SEEDING.

THE CONTRACTOR SHALL PROVIDE GROUND COVER ON DESIGNATED AREAS AND SLOPES GREATER THAN 3:1 WITHIN 7 DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. CONTRACTOR SHALL PROVIDE GROUND COVER IN 14 DAYS ON ALL OTHER AREAS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. PERMANENT GROUND COVER FOR ALL DISTURBED AREAS SHALL BE PROVIDED WITHIN 15 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION.

NURSE CROP: WHEN SEEDING BERMUDA GRASS SEED CONTRACTOR SHALL ADD 25 LB/AC OF ANNUAL RYE GRASS AS NURSE CROP UNTIL PERMANENT ESTABLISHMENT OF BERMUDA GRASS

## EROSION CONTROL NOTES

- UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK.
- THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY (NCEQ) AND WAKE COUNTY EROSION AND SEDIMENT CONTROL REGULATIONS.
- ALL CONSTRUCTION WORK SHALL BE IN COMPLIANCE WITH REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER GENERAL PERMIT.
- ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE NCDENR EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.
- PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS, STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO THE WAKE COUNTY FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL INSTALL NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.
- EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY, AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NORTH CAROLINA SEDIMENT CONTROL REGULATIONS. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
- CONTRACTOR TO ENSURE THAT SEDIMENT LADEN RUNOFF DOES NOT LEAVE SITE LIMITS OR ENTER PROTECTED AREAS. ANY SEDIMENT DEPOSITED BEYOND DISTURBED AREA WITHIN SITE LIMITS SHALL BE REMOVED.
- ROLLED EROSION CONTROL PRODUCTS (RECP'S) SHOULD BE USED TO AID PERMANENT VEGETATED STABILIZATION OF SLOPES GREATER THAN 10' OR GREATER AND WITH MORE THAN 10' OF VERTICAL RELIEF. RECP'S SHOULD ALSO BE USED WHEN MULCH CANNOT BE ADEQUATELY TACKED AND WHERE IMMEDIATE GROUND COVER IS REQUIRED TO PREVENT EROSION DAMAGE.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 21 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
- WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
- TEMPORARY CONSTRUCTION ENTRANCES SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREAS. TWO TO THREE INCH STONE SHALL BE USED FOR THE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE.
- ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPLSLOPE LAND DISTURBANCE TAKES PLACE.
- ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
- THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER. WAKE COUNTY INSPECTOR'S FINAL APPROVAL IS REQUIRED.
- STABILIZATION MEASURES SHALL BE APPLIED TO STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DEPENDING UPON FIELD CONDITIONS.
- LIMITS OF GRADING SHOWN ON THE PLAN ARE MAXIMUM LIMITS FOR EROSION CONTROL PURPOSES ONLY. SURVEYOR TO DETERMINE ACTUAL LIMIT.
- ANY GRADING BEYOND THE DENUDED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE WAKE COUNTY EROSION CONTROL ORDINANCE, AND IS SUBJECT TO A FINE.
- GRADING MORE THAN 12,000 SF WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE WAKE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

## ABBREVIATIONS

\*NOT ALL ABBREVIATIONS MAY BE USED FOR THIS PROJECT.

CB - CATCH BASIN  
YI - YARD INLET  
CO - CLEAN OUT  
DI - DROP INLET  
EX - EXISTING  
FES - FLARED-END-SECTION  
JB - JUNCTION BOX  
LOD - LIMITS OF DISTURBANCE  
PVC - POLYVINYL CHLORIDE  
RCP - REINFORCED CONCRETE PIPE  
TYP. - TYPICAL

SURVEY NOTE:  
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NO.	REVISIONS	DATE	BY
1	WAKE COUNTY COMMENTS	06/11/2024	JAA
2	TOWN COMMENTS	05/01/2024	JAA
3	TOWN COMMENTS	03/01/2024	JAA
4	TOWN COMMENTS	01/02/2024	JAA

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421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601  
#F-0102 WWW.KIMLEY-HORN.COM PHONE: 919.677.2000 FAX: 919.677.2050



KHA PROJECT	013031004
DATE	09/29/2023
SCALE	AS SHOWN
DESIGNED BY	JAA
DRAWN BY	JAA
CHECKED BY	COB

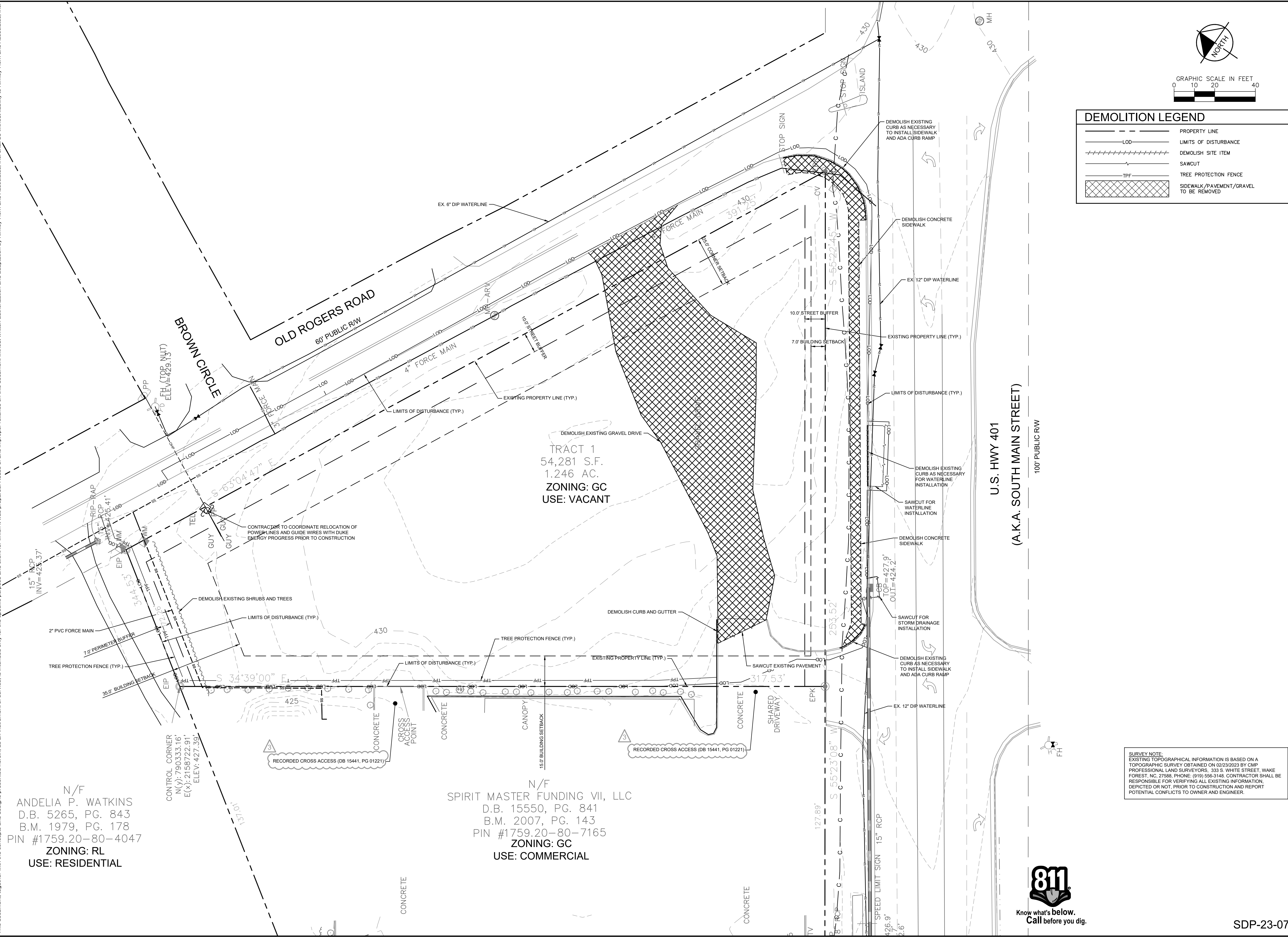
**GENERAL NOTES**  
THE LEARNING CENTER ROLESVILLE  
PREPARED FOR  
**ROLESVILLE, LLC.**  
TOWN OF ROLESVILLE  
NORTH CAROLINA



Know what's below.  
Call before you dig.

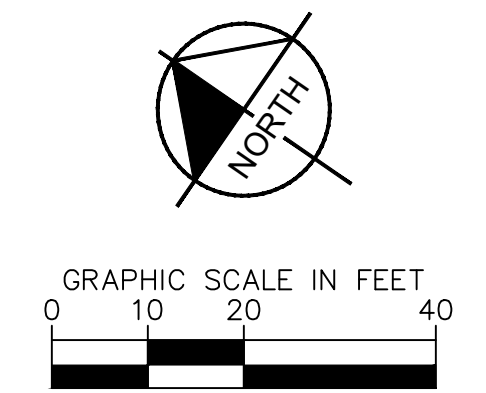


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**DEMOLITION LEGEND**

	PROPERTY LINE
	LIMITS OF DISTURBANCE
	DEMOLISH SITE ITEM
	SAWCUT
	TREE PROTECTION FENCE
	SIDEWALK/PAVEMENT/GRAVEL TO BE REMOVED



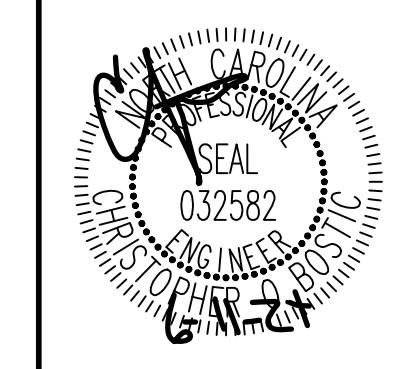
TRACT 1  
 54,281 S.F.  
 1.246 AC.  
 ZONING: GC  
 USE: VACANT

N/F  
 ANDELIA P. WATKINS  
 D.B. 5265, PG. 843  
 B.M. 1979, PG. 178  
 PIN #1759.20-80-4047  
 ZONING: RL  
 USE: RESIDENTIAL

N/F  
 SPIRIT MASTER FUNDING VII, LLC  
 D.B. 15550, PG. 841  
 B.M. 2007, PG. 143  
 PIN #1759.20-80-7165  
 ZONING: GC  
 USE: COMMERCIAL

No.	REVISIONS	DATE	BY
7			
6			
5			
4	WAKE COUNTY COMMENTS	06/11/2024	JAA
3	TOWN COMMENTS	05/01/2024	JAA
2	TOWN COMMENTS	03/01/2024	JAA
1	TOWN COMMENTS	01/02/2024	JAA

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 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601



KHA PROJECT	013031004
DATE	09/29/2023
SCALE	AS SHOWN
DESIGNED BY	JAA
DRAWN BY	JAA
CHECKED BY	COB

**EXISTING CONDITIONS & DEMOLITION PLAN**

**THE LEARNING CENTER ROLESVILLE**  
 PREPARED FOR  
**ROLESVILLE, LLC.**  
 NORTH CAROLINA

**SURVEY NOTE:**  
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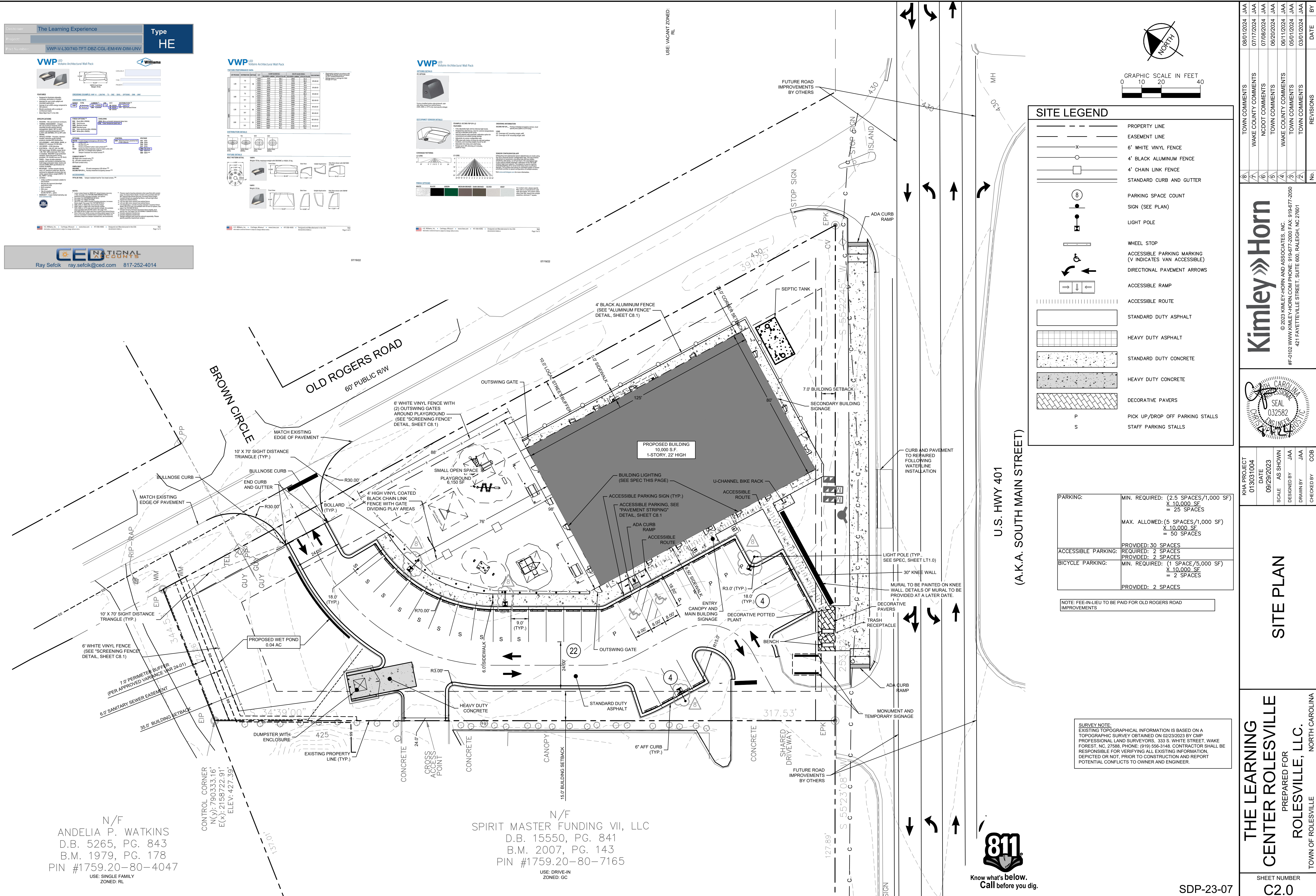
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The Learning Experience  
 Type HE

VWP VWP VWP  
 VWP VWP VWP  
 VWP VWP VWP

Ray Sefcik ray.sefcik@ced.com 817-252-4014

VWP VWP VWP  
 VWP VWP VWP  
 VWP VWP VWP



N/F  
 ANDELIA P. WATKINS  
 D.B. 5265, PG. 843  
 B.M. 1979, PG. 178  
 PIN #1759.20-80-4047  
 USE: SINGLE FAMILY  
 ZONED: RL

N/F  
 SPIRIT MASTER FUNDING VII, LLC  
 D.B. 15550, PG. 841  
 B.M. 2007, PG. 143  
 PIN #1759.20-80-7165  
 USE: DRIVE-IN  
 ZONED: GC



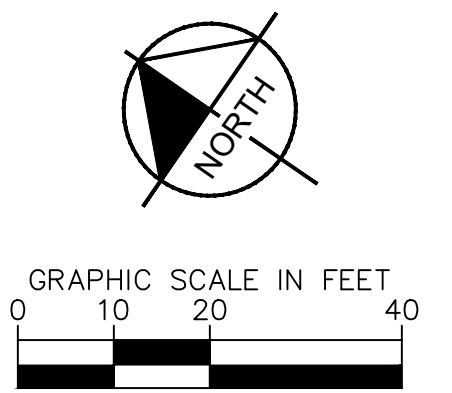
**SITE LEGEND**

- PROPERTY LINE
- EASEMENT LINE
- 6" WHITE VINYL FENCE
- 4" BLACK ALUMINUM FENCE
- 4" CHAIN LINK FENCE
- STANDARD CURB AND GUTTER
- PARKING SPACE COUNT SIGN (SEE PLAN)
- LIGHT POLE
- WHEEL STOP
- ACCESSIBLE PARKING MARKING (V INDICATES VAN ACCESSIBLE)
- DIRECTIONAL PAVEMENT ARROWS
- ACCESSIBLE RAMP
- ACCESSIBLE ROUTE
- STANDARD DUTY ASPHALT
- HEAVY DUTY ASPHALT
- STANDARD DUTY CONCRETE
- HEAVY DUTY CONCRETE
- DECORATIVE PAVERS
- P PICK UP/DROP OFF PARKING STALLS
- S STAFF PARKING STALLS

PARKING:	MIN. REQUIRED: (2.5 SPACES/1,000 SF)	X 10,000 SF = 25 SPACES
	MAX. ALLOWED: (5 SPACES/1,000 SF)	X 10,000 SF = 50 SPACES
ACCESSIBLE PARKING:	PROVIDED: 30 SPACES	REQUIRED: 2 SPACES
BICYCLE PARKING:	MIN. REQUIRED: (1 SPACE/5,000 SF)	X 10,000 SF = 2 SPACES
	PROVIDED: 2 SPACES	

NOTE: FEE-IN-LIEU TO BE PAID FOR OLD ROGERS ROAD IMPROVEMENTS

**SURVEY NOTE:**  
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TOWN COMMENTS	DATE	BY
WAKE COUNTY COMMENTS	08/01/2024	JAA
WAKE COUNTY COMMENTS	07/17/2024	JAA
WAKE COUNTY COMMENTS	07/08/2024	JAA
WAKE COUNTY COMMENTS	06/20/2024	JAA
WAKE COUNTY COMMENTS	06/11/2024	JAA
WAKE COUNTY COMMENTS	05/01/2024	JAA
WAKE COUNTY COMMENTS	03/01/2024	JAA

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RHA PROJECT	013031004
DATE	09/29/2023
SCALE	AS SHOWN
DESIGNED BY	JAA
DRAWN BY	JAA
CHECKED BY	COB

**SITE PLAN**

**THE LEARNING CENTER ROLESVILLE**  
 PREPARED FOR  
**ROLESVILLE, LLC.**  
 TOWN OF ROLESVILLE, NORTH CAROLINA

SHEET NUMBER C2.0

SDP-23-07

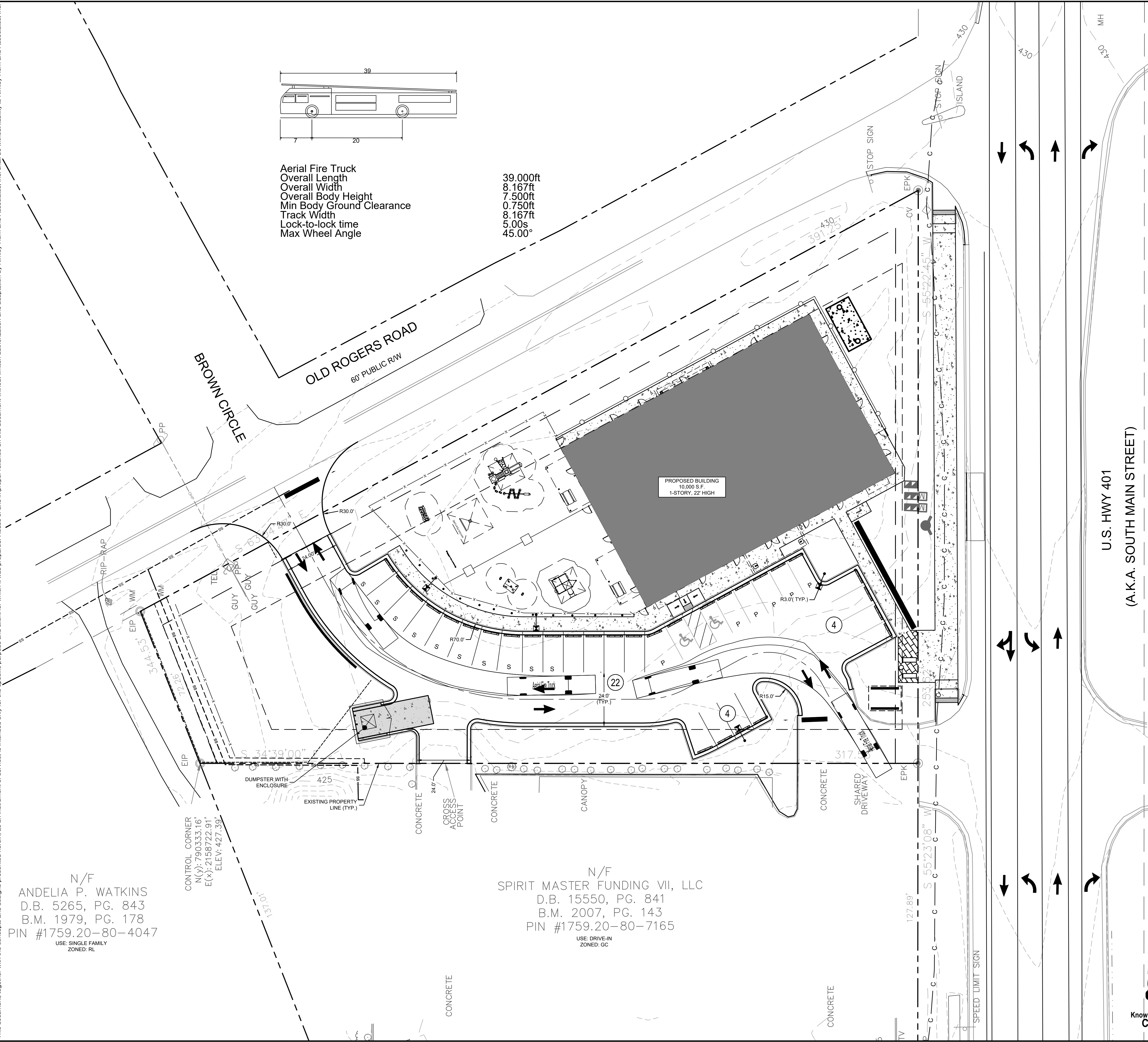
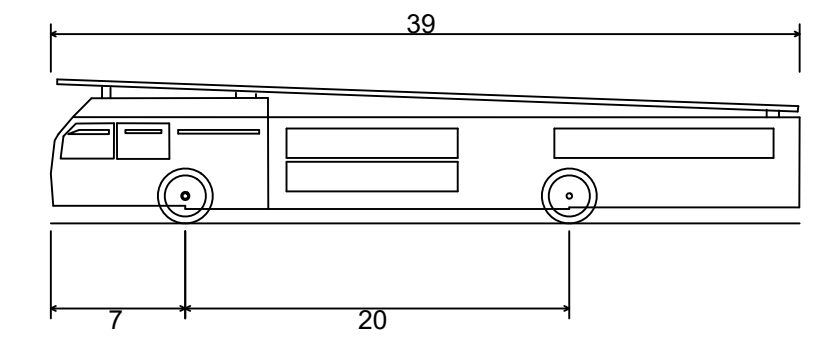


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N/F  
 ANDELIA P. WATKINS  
 D.B. 5265, PG. 843  
 B.M. 1979, PG. 178  
 PIN #1759.20-80-4047  
 USE: SINGLE FAMILY  
 ZONED: RL

N/F  
 SPIRIT MASTER FUNDING VII, LLC  
 D.B. 15550, PG. 841  
 B.M. 2007, PG. 143  
 PIN #1759.20-80-7165  
 USE: DRIVE-IN  
 ZONED: GC

**Aerial Fire Truck**  
 Overall Length 39.000ft  
 Overall Width 8.167ft  
 Overall Body Height 7.500ft  
 Min Body Ground Clearance 0.750ft  
 Track Width 8.167ft  
 Lock-to-lock time 5.00s  
 Max Wheel Angle 45.00°

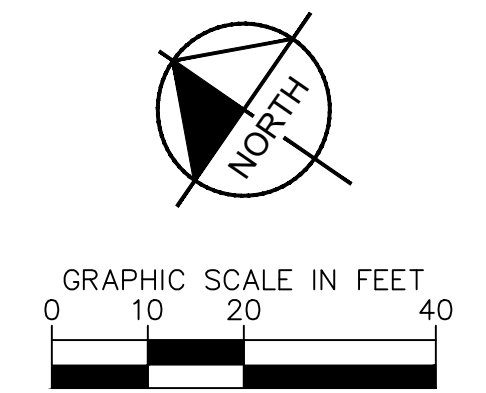


### SITE LEGEND

	PROPERTY LINE
	EASEMENT LINE
	6' WHITE VINYL FENCE
	4' BLACK ALUMINUM FENCE
	4' CHAIN LINK FENCE
	STANDARD CURB AND GUTTER
	PARKING SPACE COUNT
	SIGN (SEE PLAN)
	LIGHT POLE
	WHEEL STOP
	ACCESSIBLE PARKING MARKING (V INDICATES VAN ACCESSIBLE)
	DIRECTIONAL PAVEMENT ARROWS
	ACCESSIBLE RAMP
	ACCESSIBLE ROUTE
	STANDARD DUTY ASPHALT
	HEAVY DUTY ASPHALT
	STANDARD DUTY CONCRETE
	HEAVY DUTY CONCRETE
	DECORATIVE PAVERS
	PICK UP/DROP OFF PARKING STALLS
	STAFF PARKING STALLS

PARKING:	MIN. REQUIRED: (2.5 SPACES/1,000 SF) X 10,000 SF = 25 SPACES
	MAX. ALLOWED: (5 SPACES/1,000 SF) X 10,000 SF = 50 SPACES
ACCESSIBLE PARKING:	REQUIRED: 2 SPACES PROVIDED: 2 SPACES
BICYCLE PARKING:	MIN. REQUIRED: (1 SPACE/5,000 SF) X 10,000 SF = 2 SPACES PROVIDED: 2 SPACES

**SURVEY NOTE:**  
 EXISTING TOPOGRAPHICAL INFORMATION IS BASED ON A TOPOGRAPHIC SURVEY OBTAINED ON 02/23/2023 BY CMP PROFESSIONAL LAND SURVEYORS, 333 S. WHITE STREET, WAKE FOREST, NC, 27588. PHONE: (919) 556-3148. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION, DEPICTED OR NOT, PRIOR TO CONSTRUCTION AND REPORT POTENTIAL CONFLICTS TO OWNER AND ENGINEER.



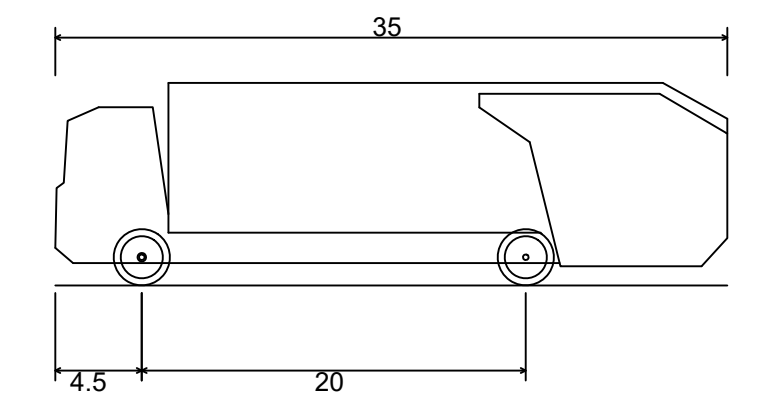
<b>Kimley»Horn</b> <small>© 2023 KIMLEY-HORN AND ASSOCIATES, INC.          #F-0102 WWW.KIMLEY-HORN.COM PHONE: 919.677.2000 FAX: 919.677.2050          421 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601</small>		<table border="1"> <tr><td>KHA PROJECT</td><td>013031004</td></tr> <tr><td>DATE</td><td>09/29/2023</td></tr> <tr><td>SCALE</td><td>AS SHOWN</td></tr> <tr><td>DESIGNED BY</td><td>JAA</td></tr> <tr><td>DRAWN BY</td><td>JAA</td></tr> <tr><td>CHECKED BY</td><td>COB</td></tr> </table>	KHA PROJECT	013031004	DATE	09/29/2023	SCALE	AS SHOWN	DESIGNED BY	JAA	DRAWN BY	JAA	CHECKED BY	COB
KHA PROJECT	013031004													
DATE	09/29/2023													
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<b>THE LEARNING CENTER ROLESVILLE</b> PREPARED FOR <b>ROLESVILLE, LLC.</b> <small>TOWN OF ROLESVILLE NORTH CAROLINA</small>	<b>TRUCK ROUTING EXHIBIT</b>	SHEET NUMBER <b>C2.1</b>												
		SDP-23-07												



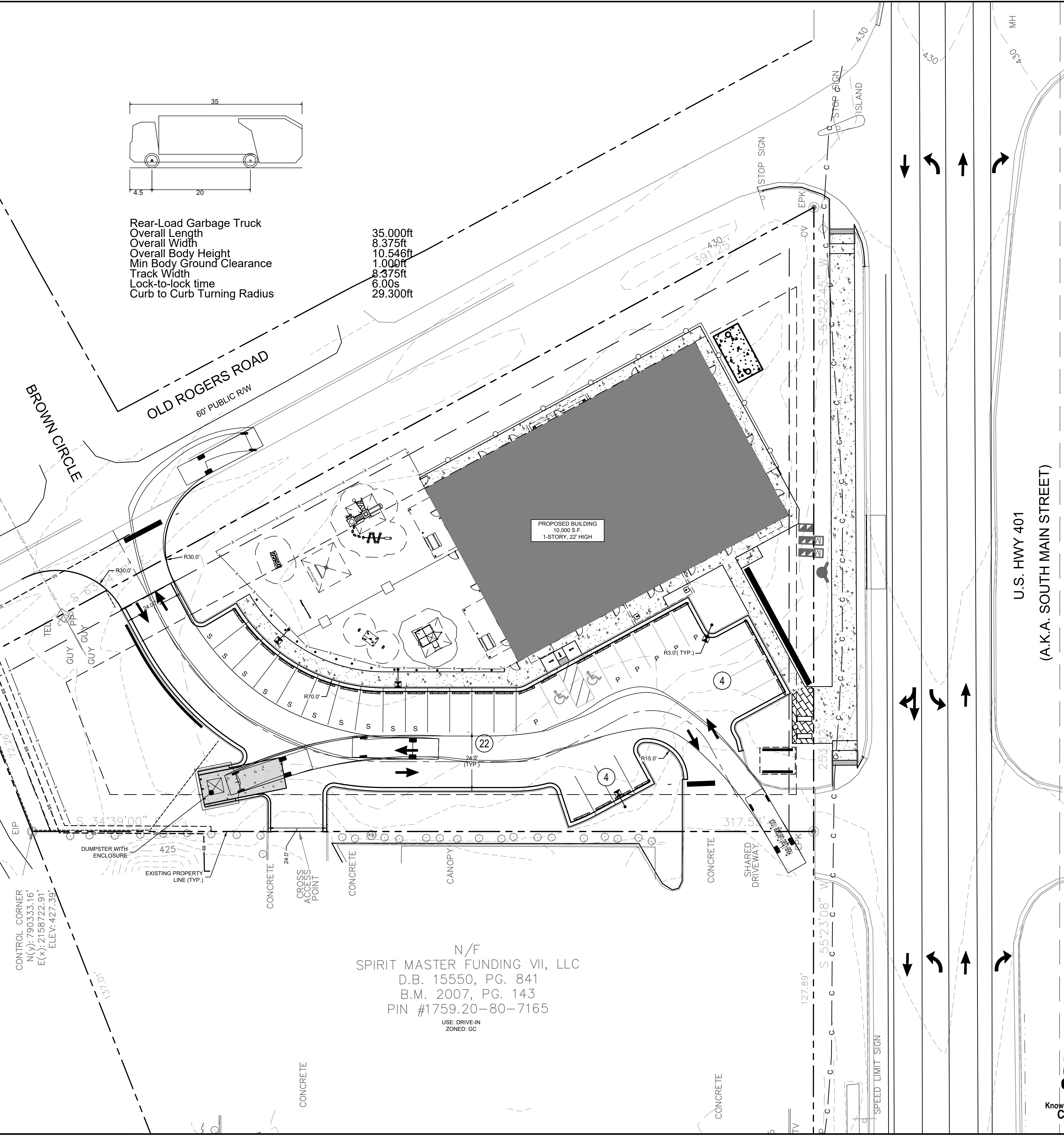
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N/F  
 ANDELIA P. WATKINS  
 D.B. 5265, PG. 843  
 B.M. 1979, PG. 178  
 PIN #1759.20-80-4047  
 USE: SINGLE FAMILY  
 ZONED: RL

N/F  
 SPIRIT MASTER FUNDING VII, LLC  
 D.B. 15550, PG. 841  
 B.M. 2007, PG. 143  
 PIN #1759.20-80-7165  
 USE: DRIVE-IN  
 ZONED: GC



Rear-Load Garbage Truck  
 Overall Length 35.000ft  
 Overall Width 8.375ft  
 Overall Body Height 10.546ft  
 Min Body Ground Clearance 1.000ft  
 Track Width 8.375ft  
 Lock-to-lock time 6.00s  
 Curb to Curb Turning Radius 29.300ft

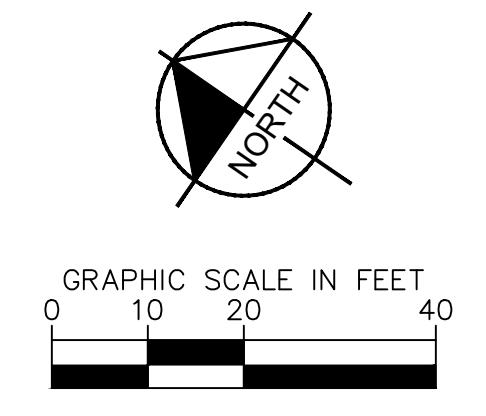


### SITE LEGEND

	PROPERTY LINE
	EASEMENT LINE
	6' WHITE VINYL FENCE
	4' BLACK ALUMINUM FENCE
	4' CHAIN LINK FENCE
	STANDARD CURB AND GUTTER
	PARKING SPACE COUNT
	SIGN (SEE PLAN)
	LIGHT POLE
	WHEEL STOP
	ACCESSIBLE PARKING MARKING (V INDICATES VAN ACCESSIBLE)
	DIRECTIONAL PAVEMENT ARROWS
	ACCESSIBLE RAMP
	ACCESSIBLE ROUTE
	STANDARD DUTY ASPHALT
	HEAVY DUTY ASPHALT
	STANDARD DUTY CONCRETE
	HEAVY DUTY CONCRETE
	DECORATIVE PAVERS
	PICK UP/DROP OFF PARKING STALLS
	STAFF PARKING STALLS

PARKING:	MIN. REQUIRED: (2.5 SPACES/1,000 SF) X 10,000 SF = 25 SPACES
	MAX. ALLOWED: (5 SPACES/1,000 SF) X 10,000 SF = 50 SPACES
ACCESSIBLE PARKING:	PROVIDED: 30 SPACES REQUIRED: 2 SPACES
BICYCLE PARKING:	MIN. REQUIRED: (1 SPACE/5,000 SF) X 10,000 SF = 2 SPACES
	PROVIDED: 2 SPACES

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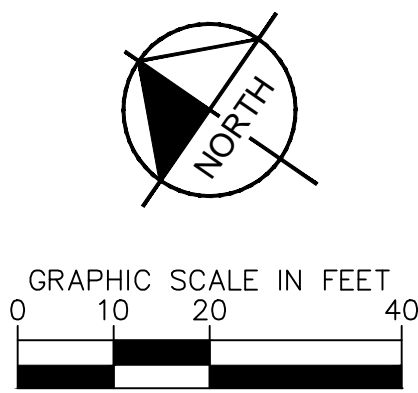
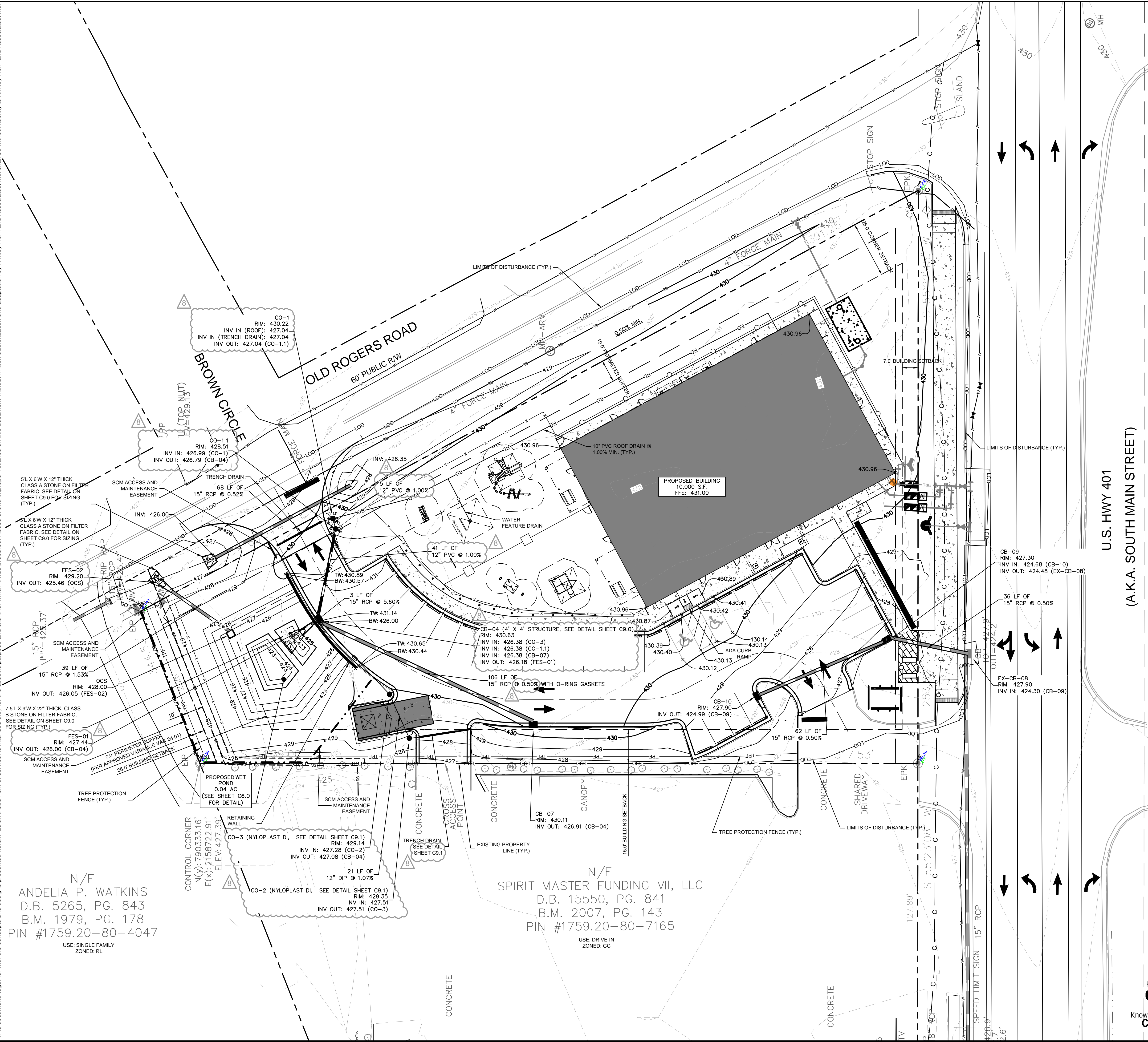
<p> <b>THE LEARNING CENTER ROLESVILLE</b>          PREPARED FOR  <b>ROLESVILLE, LLC.</b>          TOWN OF ROLESVILLE NORTH CAROLINA       </p>	<p> <b>TRUCK ROUTING EXHIBIT</b> </p>																																																		
<p>         SHEET NUMBER  <b>C2.2</b> </p>	<p>         KHA PROJECT          013031004          DATE          09/29/2023          SCALE AS SHOWN          DESIGNED BY JAA          DRAWN BY JAA          CHECKED BY COB       </p>																																																		
<p>         © 2023 KIMLEY-HORN AND ASSOCIATES, INC.          #F-0102 WWW.KIMLEY-HORN.COM PHONE: 919.677.2000 FAX: 919.677.2050          421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601       </p>																																																			
<table border="1" style="width: 100%;"> <tr><th>TOWN COMMENTS</th><th>NO.</th><th>REVISIONS</th><th>DATE</th><th>BY</th></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>	TOWN COMMENTS	NO.	REVISIONS	DATE	BY																																														<p>         SDP-23-07       </p>
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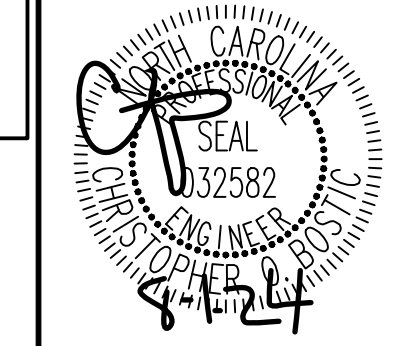
PLOTTED BY: Alexander, Jamal Sheet Set: THE LEARNING CENTER ROLESVILLE Layout: C3.0 GRADING PLAN August 01, 2024 05:28:34pm K:\RAL\_LDEV\013031004\_Rolesville\_Learning\_Center\PI10\_CAD Files\PlanSheets\C3.0 GRADING PLAN.dwg  
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GRADING AND DRAINAGE LEGEND	
	PROPERTY LINE
	STORM DRAIN (≥ 12 INCH)
	STORM DRAIN (< 12 INCH)
	ROOF DRAIN
	CURB AND GUTTER
	LIMITS OF DISTURBANCE
	EXISTING CONTOUR
	PROPOSED CONTOUR
	SCM ACCESS AND MAINTENANCE EASEMENT
	TREE PROTECTION FENCE
	SPOT ELEVATION
	CATCH BASIN (CB)
	MANHOLE (SDMH)
	CLEANOUT (SDCO)
	DROP INLET (DI)
	AREA DRAIN (AD)
	CONTROL STRUCTURE (CS)
	FLARED END SECTION (FES)
	CONCRETE HEADWALL (HW)
	RIP-RAP APRON
	FLOW ARROW
	TOP OF WALL (FINISH GRADE ELEV.)
	BOTTOM OF WALL (FINISH GRADE ELEV.)
	TOP OF PAVEMENT (GRADE ELEV.)
	TOP OF CURB (GRADE ELEV.)
	FLUSH CURB (GRADE ELEV.)

TOWN COMMENTS	NO.	REVISIONS	DATE	BY
WAKE COUNTY COMMENTS	1		08/01/2024	JAA
WAKE COUNTY COMMENTS	2		07/17/2024	JAA
WAKE COUNTY COMMENTS	3		07/08/2024	JAA
WAKE COUNTY COMMENTS	4		06/20/2024	JAA
WAKE COUNTY COMMENTS	5		06/20/2024	JAA
WAKE COUNTY COMMENTS	6		06/11/2024	JAA
WAKE COUNTY COMMENTS	7		05/01/2024	JAA
WAKE COUNTY COMMENTS	8		03/01/2024	JAA

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 #F-0102 WWW.KIMLEY-HORN.COM PHONE: 919-677-2000 FAX: 919-677-2050  
 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601



KHA PROJECT	013031004
DATE	08/29/2023
SCALE	AS SHOWN
DESIGNED BY	JAA
DRAWN BY	JAA
CHECKED BY	COB

# GRADING PLAN

**THE LEARNING CENTER ROLESVILLE**  
 PREPARED FOR  
**ROLESVILLE, LLC.**  
 NORTH CAROLINA

SHEET NUMBER  
**C3.0**

N/F  
**ANDELIA P. WATKINS**  
 D.B. 5265, PG. 843  
 B.M. 1979, PG. 178  
 PIN #1759.20-80-4047  
 USE: SINGLE FAMILY ZONED: RL

CONTROL CORNER  
 N(Y): 790333.16'  
 E(X): 2158722.91'  
 ELEV: 427.30'  
 CO-3 (NYLOPLAST DI, SEE DETAIL SHEET C9.1)  
 RIM: 429.14  
 INV IN: 427.28 (CO-2)  
 INV OUT: 427.08 (CB-04)  
 CO-2 (NYLOPLAST DI, SEE DETAIL SHEET C9.1)  
 RIM: 429.35  
 INV IN: 427.51  
 INV OUT: 427.51 (CO-3)

N/F  
**SPIRIT MASTER FUNDING VII, LLC**  
 D.B. 15550, PG. 841  
 B.M. 2007, PG. 143  
 PIN #1759.20-80-7165  
 USE: DRIVE-IN ZONED: GC

**SURVEY NOTE:**  
 EXISTING TOPOGRAPHICAL INFORMATION IS BASED ON A TOPOGRAPHIC SURVEY OBTAINED ON 02/23/2023 BY CMP PROFESSIONAL LAND SURVEYORS, 333 S. WHITE STREET, WAKE FOREST, NC, 27988. PHONE: (919) 556-3148. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION, DEPICTED OR NOT, PRIOR TO CONSTRUCTION AND REPORT POTENTIAL CONFLICTS TO OWNER AND ENGINEER.



SDP-23-07

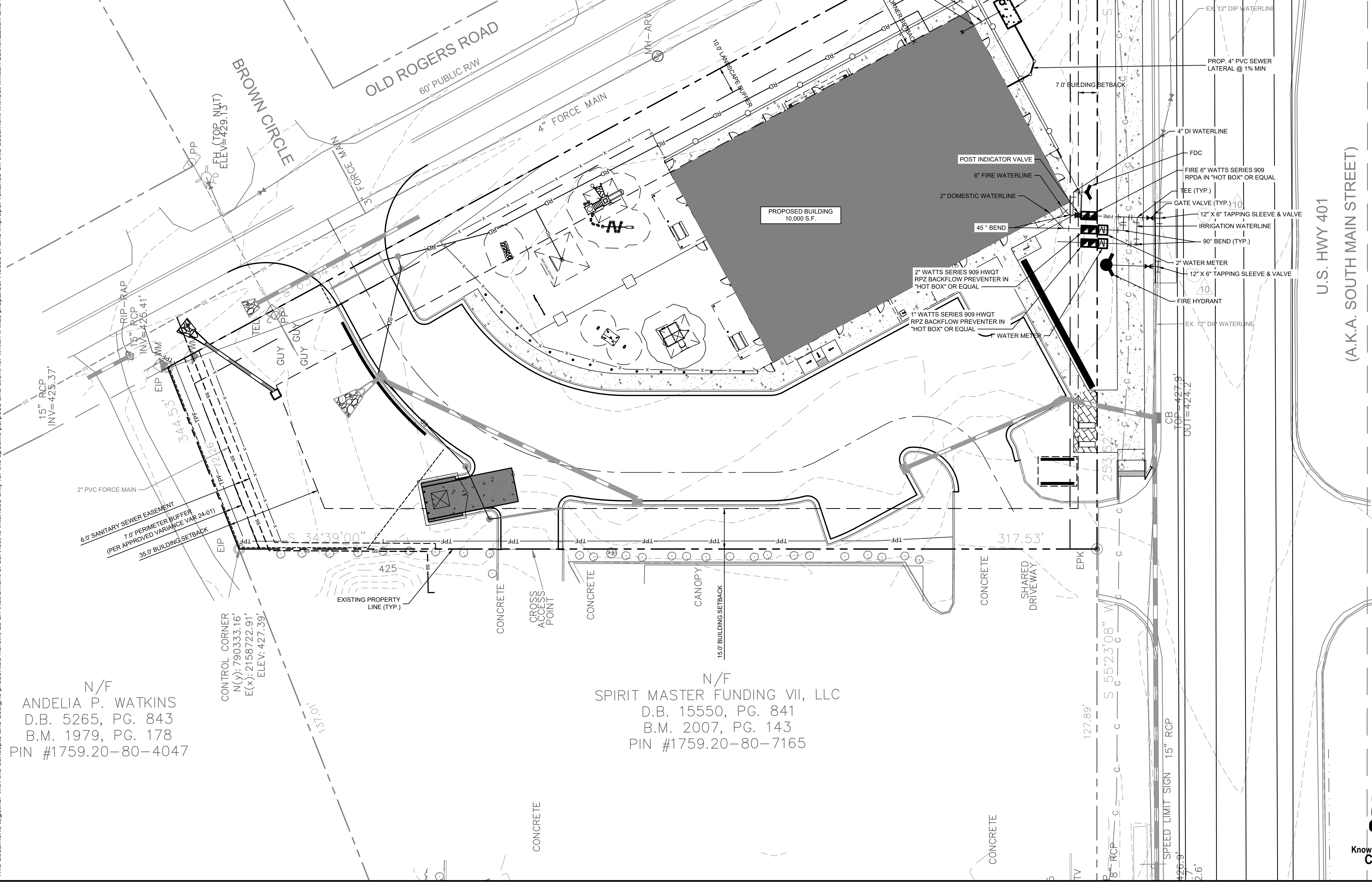


Plotted By: Alexander, Jamal Sheet Set: THE LEARNING CENTER ROLESVILLE, Layout: C4.0 UTILITY PLAN, December 05, 2024, 09:38:32am, K:\RAL\_LDE\013031004\_Rolesville, Learning\_Center\PI0\_CAD Files\PlanSheets\C4.0 UTILITY PLAN.dwg  
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### STANDARD UTILITY NOTES

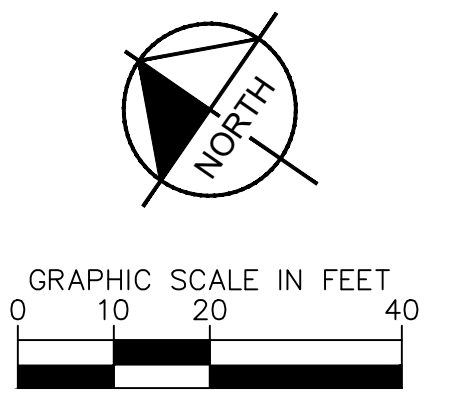
- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS & SPECIFICATIONS
- UTILITY SEPARATION REQUIREMENTS:
  - A DISTANCE OF 10' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
  - WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
  - WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATER MAIN, DIP MATERIALS OR STEEL ENCASUREMENT EXTENDED 10' ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
  - 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
  - MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATER MAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE.
  - ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
- ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
- 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE

- MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT.
- INSTALL 2" WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'x2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE.
- INSTALL 4" PVC SEWER SERVICES @ 2.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
- PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE
- ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
- NCDOT ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE ROW PRIOR TO CONSTRUCTION.
- CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA. THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT.
- THE STATE OF NORTH CAROLINA AND C.O.R. PUBLIC WORKS DEPT. SHALL BE NOTIFIED IN WRITING PRIOR TO UTILITY INSTALLATION AND FOR SCHEDULING INSPECTIONS.



N/F  
 ANDELIA P. WATKINS  
 D.B. 5265, PG. 843  
 B.M. 1979, PG. 178  
 PIN #1759.20-80-4047

N/F  
 SPIRIT MASTER FUNDING VII, LLC  
 D.B. 15550, PG. 841  
 B.M. 2007, PG. 143  
 PIN #1759.20-80-7165



UTILITY LEGEND	
---	PROPERTY LINE
W	WATER LINE
FW	FIRE LINE
SS	SANITARY SEWER LINE
E	ELECTRIC
FO	FIBER OPTIC
G	GAS
P	POWER
T	TELECOMMUNICATION
C	CABLE
LP	LIGHT POLE
WM	WATER METER
GV	GATE VALVE
PC	POINT OF CONNECTION
BAP	BACKFLOW PREVENTOR
PB	PIPE TEE/BENDS
R	REDUCER
FH	FIRE HYDRANT (FH)
FDC	FIRE DEPARTMENT CONNECTION (FDC)
SSCO	SANITARY SEWER CLEANOUT (SSCO)
SSMH	SANITARY SEWER MANHOLE (SSMH)
SSGT	SANITARY SEWER GREASE TRAP

### STANDARD UTILITY NOTES (CONT.)

- TRAFFIC CONTROLS FOR ANY UTILITY WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE IN COMPLIANCE WITH STANDARDS OF THE NORTH CAROLINA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- IN THE EVENT AN ITEM IS NOT COVERED BY THESE PLANS, THEN THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT HANDBOOK COVERING SUCH ITEMS SHALL APPLY.
- IF CITY OF RALEIGH WATER AND SANITARY SEWER PERMITS ARE REQUIRED, CONTRACTOR IS RESPONSIBLE FOR ALL PERMIT FEES.
- LOCATIONS AND SIZES OF EXISTING WATER AND SEWER LINES SHOWN ON THESE PLANS WITHIN THE PROPERTY LIMITS OF THE SITE ARE ASSUMED BASED ON SURVEY OF SURFACE FEATURES (MANHOLES, VALVES, VAULTS, METERS, ETC.) PREPARED BY GSC SURVEYING, INC., 4072 BARRETT DRIVE, RALEIGH, N.C. 27609. IT IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF THE EXISTING UTILITIES PRIOR TO COMMENCING WORK. ANY DEVIATIONS FROM WHAT IS INDICATED ON THESE PLANS SHALL BE REPORTED TO THE DEVELOPER AND ENGINEER, IN WRITING, IMMEDIATELY.
- CONTRACTOR SHALL PROVIDE A MEANS TO KEEP ALL NEW PIPING ISOLATED FROM EXISTING PIPING UNTIL ALL NEW PIPING HAS BEEN TESTED, AND ACCEPTED FOR SERVICE.
- EXISTING UTILITIES SHALL BE PROTECTED DURING ALL CONSTRUCTION.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE UTILITIES. ALL PUBLIC PIPE, STRUCTURES, AND FITTINGS SHALL BE INSPECTED BY THE CITY INSPECTOR PRIOR TO BEING COVERED. THE INSPECTOR MUST ALSO BE PRESENT DURING DISINFECTION AND PRESSURE TESTING OF ALL MAINS. THE CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES.
- UTILITY WORK SHALL BE INSPECTED AND ACCEPTED BY CITY OF RALEIGH PRIOR TO PLACING INTO SERVICE.
- THERE SHALL BE A MINIMUM 3' CLEAR DISTANCE AROUND ALL FIRE HYDRANTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING "AS-BUILT" PLANS, PER CITY OF RALEIGH REQUIREMENTS, TO THE ENGINEER SHOWING THE LOCATION OF WATER AND SEWER SERVICES AND ANY DEVIATIONS FROM PLANS MADE DURING CONSTRUCTION. THE ENGINEER WILL PROVIDE THESE RECORD PLANS TO THE CITY OF RALEIGH.

**SURVEY NOTE:**  
 EXISTING TOPOGRAPHICAL INFORMATION IS BASED ON A TOPOGRAPHIC SURVEY OBTAINED ON 02/23/2023 BY CMP PROFESSIONAL LAND SURVEYORS, 333 S. WHITE STREET, WAKE FOREST, NC 27588. PHONE: (919) 556-3148. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION, DEPICTED OR NOT, PRIOR TO CONSTRUCTION AND REPORT POTENTIAL CONFLICTS TO OWNER AND ENGINEER.



WAKE COUNTY COMMENTS	11/26/2024	JAA	BY
WAKE COUNTY COMMENTS	08/16/2024	JAA	DATE
TOWN COMMENTS	08/01/2024	JAA	
WAKE COUNTY COMMENTS	07/17/2024	JAA	
NCDOT COMMENTS	07/08/2024	JAA	
TOWN COMMENTS	06/20/2024	JAA	
WAKE COUNTY COMMENTS	06/11/2024	JAA	
REVISIONS	No.		

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 421 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601

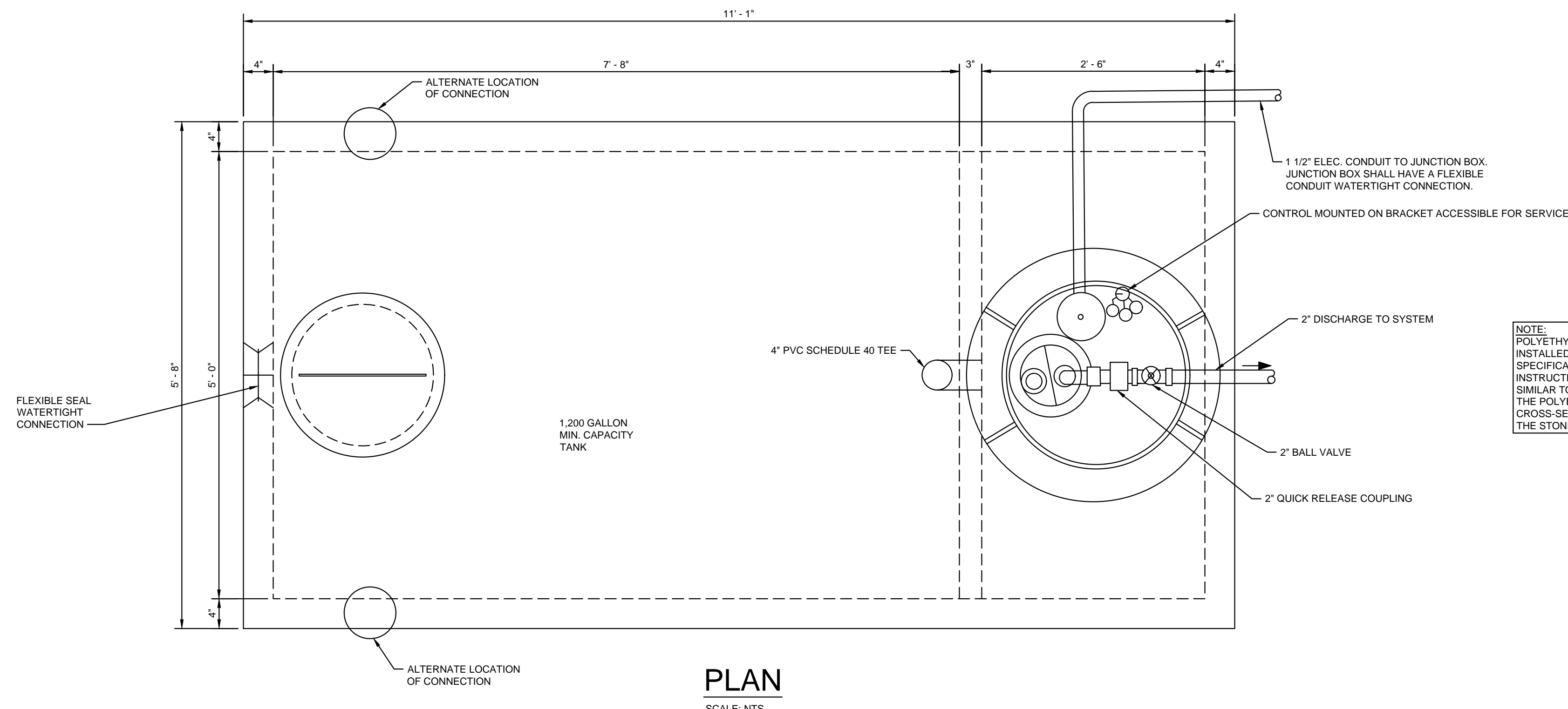
KHA PROJECT	013031004	DATE	09/29/2023	SCALE	AS SHOWN	DESIGNED BY	JAA	DRAWN BY	JAA	CHECKED BY	COB
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## UTILITY PLAN

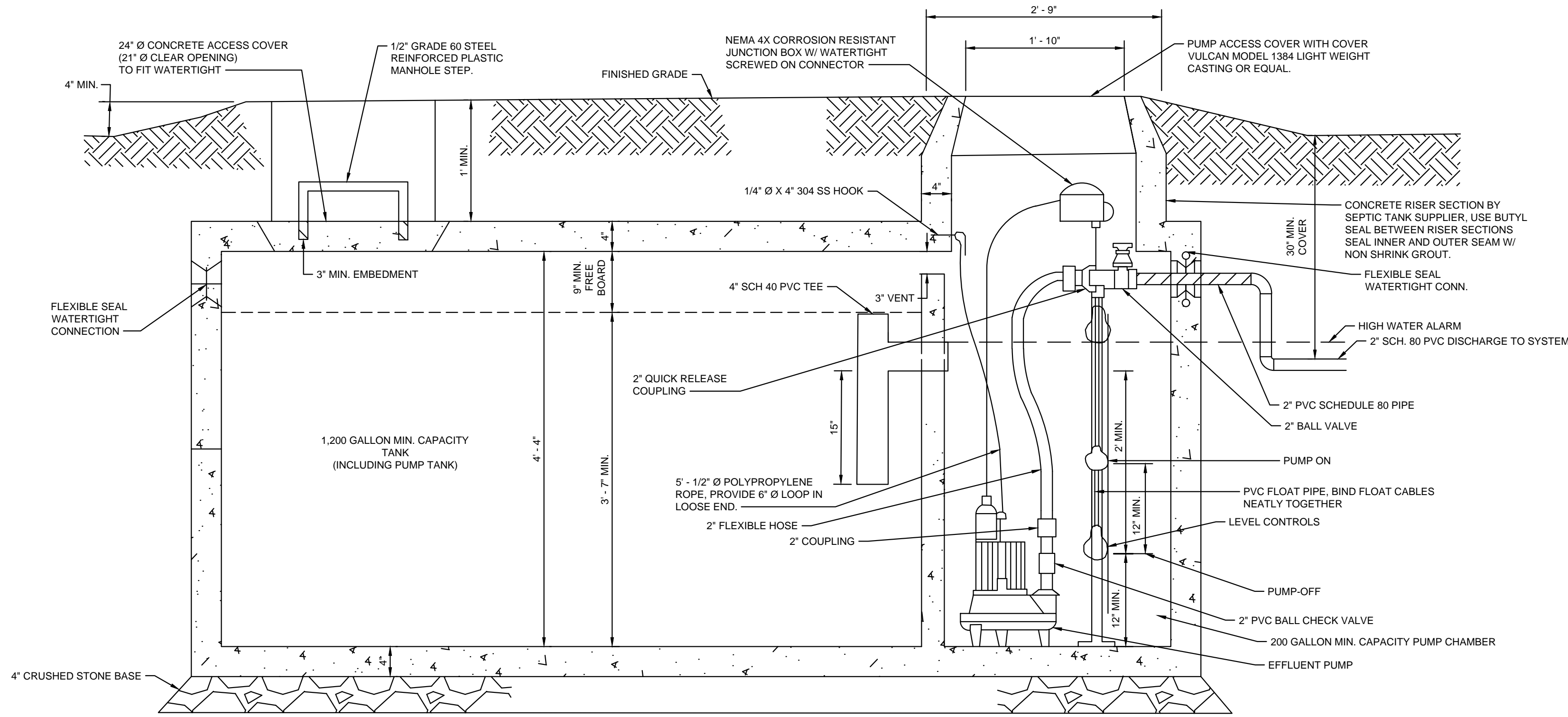
THE LEARNING CENTER ROLESVILLE	SHEET NUMBER
PREPARED FOR ROLESVILLE, LLC.	C4.0
TOWN OF ROLESVILLE	NORTH CAROLINA



Plotted By: Alexander, Jamal Sheet Set: THE LEARNING CENTER ROLESVILLE Layout: C4.1 MECHANICAL PLAN December 05, 2024 09:48:42am K:\S\AL\_L\DE\013031004\_Rolesville Learning\_Center\PI-10\_CAD Files\Pipes\Sheet\C4.1\_MECHANICAL PLAN.dwg  
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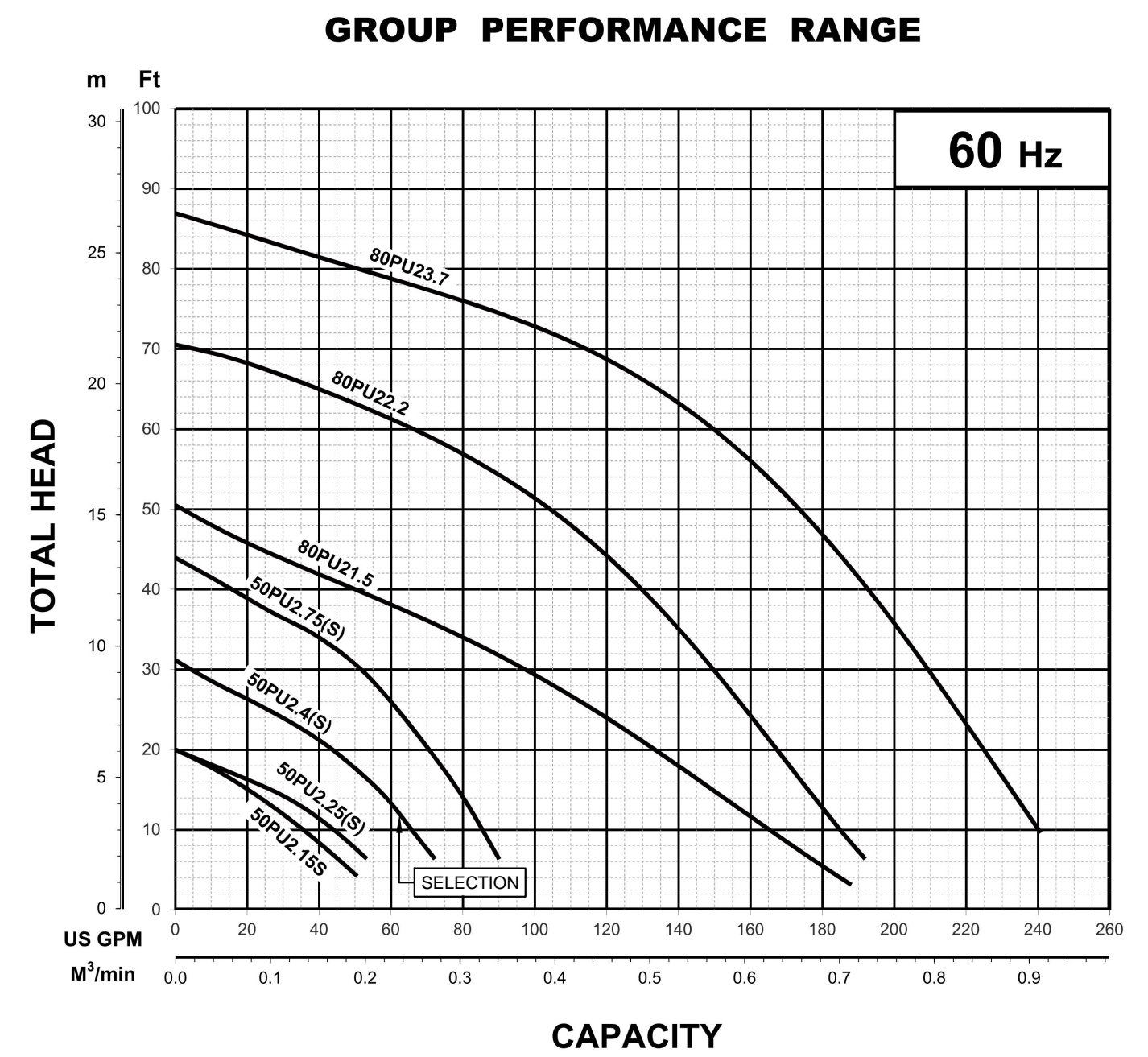


NOTE:  
 POLYETHYLENE SEPTIC TANKS SHALL BE INSTALLED IN ACCORDANCE WITH THE SPECIFICATIONS AND MANUFACTURER'S INSTRUCTIONS. INSTALLATION WILL BE SIMILAR TO CONCRETE TANKS EXCEPT THAT THE POLYETHYLENE TANKS HAVE A ROUND CROSS-SECTION AND REQUIRE HAUNCHING THE STONE BASE AND BACKFILL.



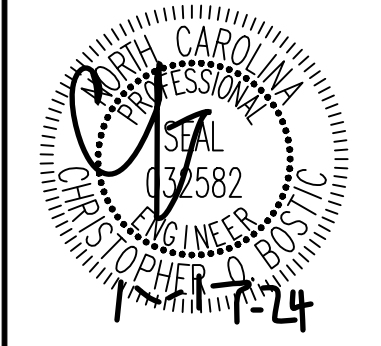
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PUMP STATION GENERAL INFORMATION	
AVERAGE DAILY FLOW	4,400 GPD
DISCHARGE PIPING	2" Ø SCH 80 PVC
HORSEPOWER	1/2 HP (NON-OVERLOADING OVER ENTIRE PUMP CURVE)
VOLTAGE/PHASE/CYCLES	120 V / 1 PHASE / 60 HZ
PUMP	TSURUMI PUMP 50PUW2.4S-63 OR EQUAL
PRIMARY LEVEL SENSING METHOD	FLOATS (3)



WAKE COUNTY COMMENTS	JAA	DATE
WAKE COUNTY COMMENTS	11/26/2024	JAA
TOWN COMMENTS	08/16/2024	JAA
WAKE COUNTY COMMENTS	08/01/2024	JAA
NCDOT COMMENTS	07/17/2024	JAA
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WAKE COUNTY COMMENTS	06/20/2024	JAA
REVISIONS	06/11/2024	JAA

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 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601



KHA PROJECT	013031004
DATE	09/29/2023
SCALE	AS SHOWN
DESIGNED BY	JAA
DRAWN BY	JAA
CHECKED BY	COB

**MECHANICAL PLAN**

**THE LEARNING CENTER ROLESVILLE**  
 PREPARED FOR  
**ROLESVILLE, LLC.**  
 TOWN OF ROLESVILLE NORTH CAROLINA

SHEET NUMBER  
**C4.1**



SDP-23-07



**SELF MONITORING AND INSPECTION NOTIFICATION**

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2008 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS BECAME EFFECTIVE OCTOBER 1, 2010. TO SIMPLIFY DOCUMENTATION OF SELF-INSPECTION REPORTS AND NPDES SELF-MONITORING REPORTS, A COMBINED FORM IS NOW AVAILABLE. THE NEW FORM WAS DEVELOPED TO SATISFY THE REQUIREMENTS OF THE SEDIMENTATION POLLUTION CONTROL ACT AND THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES, NC010006, BEGINNING AUGUST 1, 2013. THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES IS RESPONSIBLE FOR ADMINISTERING BOTH THE SPCA AND THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. NC010006. THE COMBINED FORM SHOULD MAKE IT EASIER TO COMPLY WITH SELF-INSPECTION REQUIREMENTS. THE COMBINED SELF-MONITORING FORM IS AVAILABLE AS A PDF AND WORD DOCUMENT FROM THE LAND QUALITY WEBSITE, <http://portal.ncdenr.org/web/erosion/>. IF YOU HAVE QUESTIONS, PLEASE CONTACT THE LAND QUALITY SECTION AT NCDEQ REGIONAL OFFICE.

**MAINTENANCE NOTES:**

DURING THE DEVELOPMENT OF A SITE, THE DEVELOPER SHALL INSTALL AND MAINTAIN ALL TEMPORARY AND PERMANENT STORMWATER CONTROL MEASURES AS REQUIRED BY THE APPROVED PLAN OR ANY PROVISION OF THIS ARTICLE. THE ACT OR ANY ORDER ADOPTED PURSUANT TO THIS ARTICLE OR THE ACT AFTER SITE DEVELOPMENT, THE DEVELOPER SHALL INSTALL AND/OR MAINTAIN ALL NECESSARY PERMANENT STORMWATER CONTROL MEASURES SPECIFIED IN THE APPROVED PLAN, EXCEPT THOSE MEASURES INSTALLED WITHIN A ROAD OR STREET RIGHT-OF-WAY OR EASEMENT ACCEPTED FOR MAINTENANCE BY A GOVERNMENTAL AGENCY. CONVEYANCE OF THE PROPERTY SHALL NOT TERMINATE THE ORIGINAL DEVELOPER'S OBLIGATIONS UNDER THIS ARTICLE UNTIL SUCH TIME AS A REPLACEMENT PERMIT IS APPROVED BY THE COUNTY ENGINEER, OR DESIGNEE. THE ORIGINAL DEVELOPER SHALL INCLUDE IN THE DEED CONVEYING THE PROPERTY NOTICE OF THE EXISTENCE OF THE STORMWATER CONTROL MEASURES AND THE PURCHASER'S OBLIGATIONS TO MAINTAIN AND INSPECT THEM AND TO OBTAIN A PERMIT AND OTHERWISE COMPLY WITH THE TERMS OF THIS ARTICLE. REFER TO THE EROSION CONTROL DETAILS SHEET FOR ADDITIONAL MAINTENANCE NOTES.

THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

- CONSTRUCTION ENTRANCE:**  
INSPECT CONSTRUCTION ROADS AND PARKING AREAS PERIODICALLY FOR CONDITION OF SURFACE. TOP DRESS WITH NEW GRAVEL AS NEEDED. CHECK ROAD DITCHES AND OTHER SEEDED AREAS FOR EROSION AND SEDIMENTATION AFTER RUNOFF-PRODUCING RAINS. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. SEDIMENT PRODUCING AREAS SHOULD BE TREATED IMMEDIATELY.
- SILT FENCE:**  
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- SILT FENCE GRAVEL OUTLET:**  
INSPECT SEDIMENT FENCE GRAVEL OUTLETS AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. ANY RIP RAP DISPLACED MUST BE REPLACED IMMEDIATELY.
- BLOCK AND GRAVEL INLET PROTECTION:**  
INSPECT THE BARRIER OF AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

**NPDES GROUND COVER REQUIREMENTS**

SITE AREA DESCRIPTION	STABILIZATION	TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES, SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE EXCEPT FOR PERIMETERS AND HQW ZONES.

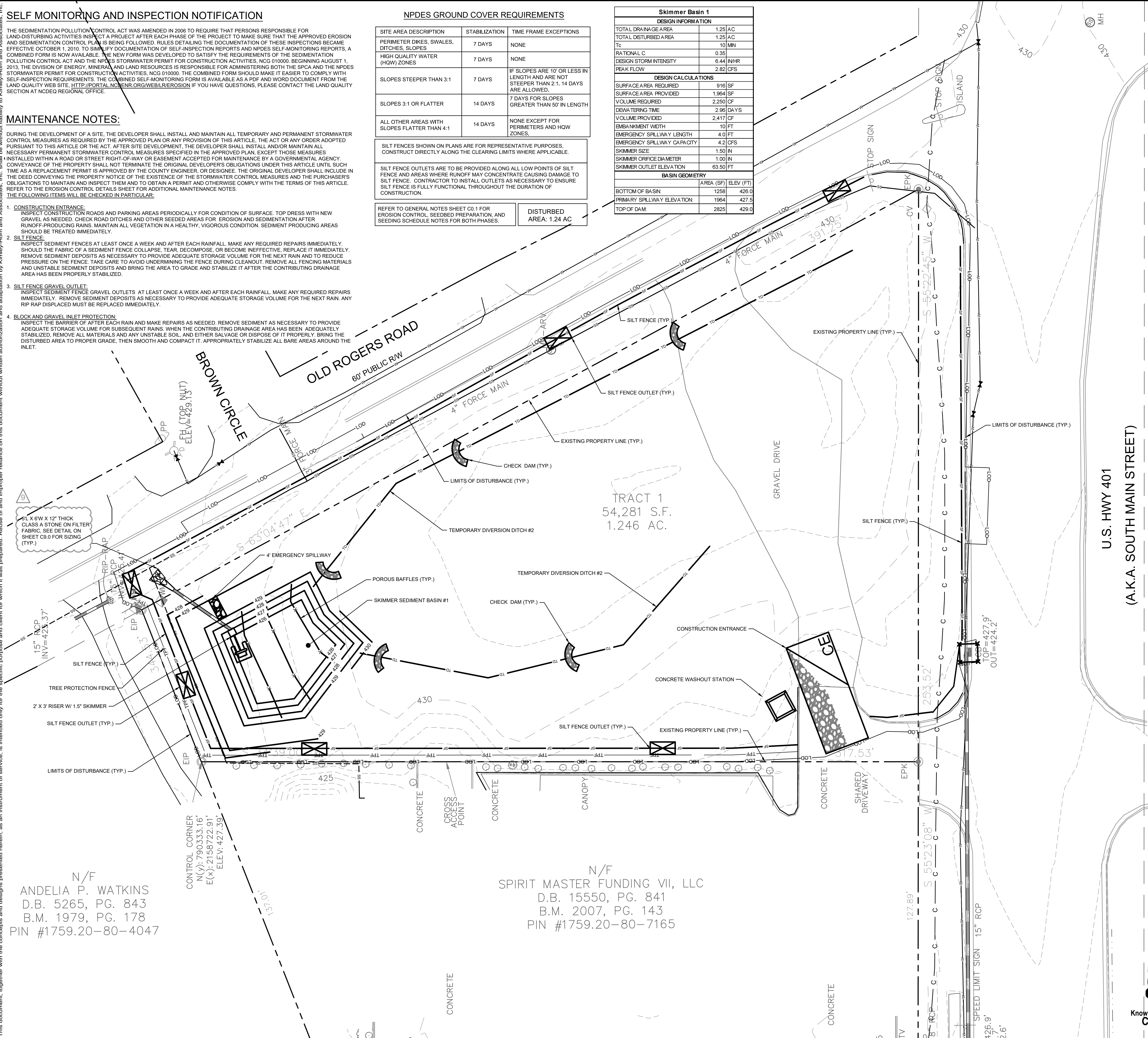
SILT FENCES SHOWN ON PLANS ARE FOR REPRESENTATIVE PURPOSES. CONSTRUCT DIRECTLY ALONG THE CLEARING LIMITS WHERE APPLICABLE.

SILT FENCE OUTLETS ARE TO BE PROVIDED ALONG ALL LOW POINTS OF SILT FENCE AND AREAS WHERE RUNOFF MAY CONCENTRATE CAUSING DAMAGE TO SILT FENCE. CONTRACTOR TO INSTALL OUTLETS AS NECESSARY TO ENSURE SILT FENCE IS FULLY FUNCTIONAL THROUGHOUT THE DURATION OF CONSTRUCTION.

REFER TO GENERAL NOTES SHEET C0.1 FOR EROSION CONTROL, SEEDING PREPARATION, AND SEEDING SCHEDULE NOTES FOR BOTH PHASES.

**DISTURBED AREA: 1.24 AC**

Skimmer Basin #1	
<b>DESIGN INFORMATION</b>	
TOTAL DRAINAGE AREA	1.25 AC
TOTAL DISTURBED AREA	1.25 AC
Tc	10 MIN
RATIONAL C	0.35
DESIGN STORM INTENSITY	8.44 IN/HR
PEAK FLOW	2.82 CFS
<b>DESIGN CALCULATIONS</b>	
SURFACE AREA REQUIRED	918 SF
SURFACE AREA PROVIDED	1,964 SF
VOLUME REQUIRED	2,250 CF
DEWATERING TIME	2.96 DAYS
VOLUME PROVIDED	2,417 CF
EMBANKMENT WIDTH	10 FT
EMERGENCY SPILLWAY LENGTH	4.0 FT
EMERGENCY SPILLWAY CAPACITY	4.2 CFS
SKIMMER SIZE	1.50 IN
SKIMMER ORIFICE DIAMETER	1.00 IN
SKIMMER OUTLET ELEVATION	63.50 FT
<b>Basin Geometry</b>	
AREA (SF)	ELEV (FT)
BOTTOM OF BASIN	1258 426.0
PRIMARY SPILLWAY ELEVATION	1964 427.6
TOP OF DAM	2825 429.0



**EROSION CONTROL LEGEND**

- PROPERTY LINE
- - - TCE TEMPORARY CONSTRUCTION EASEMENT
- - - LOD LIMITS OF DISTURBANCE
- - - SF SILT FENCE
- - - TPF TREE PROTECTION FENCE
- - - SF/TPF COMBINATION TREE PROTECTION/SILT FENCE
- TD TEMPORARY DIVERSION DITCH
- TD(CW) CLEAN WATER DIVERSION DITCH
- X SEDIMENT BASIN POROUS BAFFLES
- PUMP DISCHARGE HOSE
- - - 805 EXISTING CONTOUR
- - - 805 PROPOSED CONTOUR
- - - DRAINAGE AREA BOUNDARY
- CE CONSTRUCTION ENTRANCE
- SO SILT FENCE OUTLET
- CS CONCRETE WASHOUT STATION
- CD CHECK DAM
- IP INLET PROTECTION
- RP ROCK PIPE INLET PROTECTION
- SK SKIMMER
- TD TEMPORARY SLOPE DRAIN
- ROP RIP-RAP OUTLET PROTECTION
- SB SILT BAG
- DA DESIGNATED AREAS TO BE STABILIZED WITHIN 7 DAYS
- TE TEMPORARY EROSION CONTROL MATTING

- PHASE 1 CONSTRUCTION SEQUENCE:**
- THE FOLLOWING PHASE 1 CONSTRUCTION SEQUENCE IS FURNISHED AS A GENERAL GUIDE FOR PREPARATION OF A SEQUENCE OF CONSTRUCTION EVENTS.
  - SCHEDULE AN ON-SITE PRE-CONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT. OBTAIN A LAND-DISTURBING PERMIT.
  - INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS OR OTHER MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
  - CALL ENVIRONMENTAL CONSULTANT FOR AN ON-SITE INSPECTION BY THE ENVIRONMENTAL CONSULTANT TO OBTAIN CERTIFICATE OF COMPLIANCE.
  - INSPECT AND REPAIR EROSION CONTROL MEASURES AFTER EVERY RAINFALL EVENT OF 1/2" OR GREATER OR EVERY SEVEN (7) CALENDAR DAYS.
  - FOR PHASED EROSION CONTROL PLANS, CONTRACTOR SHALL MEET WITH EROSION CONTROL INSPECTOR PRIOR TO COMMENCING EACH PHASE OF EROSION CONTROL MEASURES. SEED AND MULCH DENUDED AREA WITHIN 15 CALENDAR DAYS AFTER ANY PHASE OF GRADING. MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
  - ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NC DENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPARTMENT OF AGRICULTURE, AND WAKE COUNTY EROSION CONTROL ORDINANCE.
  - REFER TO SHEET C0.1 - GENERAL NOTES FOR GENERAL EROSION CONTROL NOTES AND MAINTENANCE.

**SURVEY NOTE:**  
EXISTING TOPOGRAPHICAL INFORMATION IS BASED ON A TOPOGRAPHIC SURVEY OBTAINED ON 02/23/2023 BY CMP PROFESSIONAL LAND SURVEYORS, 333 S. WHITE STREET, WAKE FOREST, NC, 27888. PHONE: (919) 556-3148. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION, DEPICTED OR NOT, PRIOR TO CONSTRUCTION AND REPORT POTENTIAL CONFLICTS TO OWNER AND ENGINEER.

N/F  
ANDELIA P. WATKINS  
D.B. 5265, PG. 843  
B.M. 1979, PG. 178  
PIN #1759.20-80-4047

N/F  
SPIRIT MASTER FUNDING VII, LLC  
D.B. 15550, PG. 841  
B.M. 2007, PG. 143  
PIN #1759.20-80-7165



SDP-23-07

<p><b>THE LEARNING CENTER ROLESVILLE</b> EROSION CONTROL PLAN - PHASE 1</p> <p>PREPARED FOR <b>ROLESVILLE, LLC.</b> TOWN OF ROLESVILLE NORTH CAROLINA</p>	<p>KHA PROJECT 013031004</p>	<p>DATE 09/29/2023</p>	<p>SCALE AS SHOWN</p>	<p>DESIGNED BY JAA</p>	<p>DRAWN BY JAA</p>	<p>CHECKED BY COB</p>	
	<p><b>Kimley»Horn</b> © 2023 KIMLEY-HORN AND ASSOCIATES, INC. #F-0102 WWW.KIMLEY-HORN.COM PHONE: 919.677.2000 FAX: 919.677.2050 421 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601</p>						
	<p>PROFESSIONAL SEAL 032582</p>						
	<p>TOWN COMMENTS WAKE COUNTY COMMENTS NC DOT COMMENTS TOWN COMMENTS WAKE COUNTY COMMENTS TOWN COMMENTS TOWN COMMENTS</p>						
<p>DATE</p>							

SHEET NUMBER  
**C5.0**



**SELF MONITORING AND INSPECTION NOTIFICATION**

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS BECAME EFFECTIVE OCTOBER 1, 2010. TO SIMPLIFY DOCUMENTATION OF SELF-INSPECTION REPORTS AND NPDES SELF-MONITORING REPORTS, A COMBINED FORM IS NOW AVAILABLE. THE NEW FORM WAS DEVELOPED TO SATISFY THE REQUIREMENTS OF THE SEDIMENTATION POLLUTION CONTROL ACT AND THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES, NCG 01000, BEGINNING AUGUST 1, 2013. THE DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES IS RESPONSIBLE FOR ADMINISTERING BOTH THE SPCA AND THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. NCG 01000. THE COMBINED FORM SHOULD MAKE IT EASIER TO COMPLY WITH SELF-INSPECTION REQUIREMENTS. THE COMBINED SELF-MONITORING FORM IS AVAILABLE AS A PDF AND WORD DOCUMENT FROM THE LAND QUALITY WEB SITE, [HTTP://PORTAL.NCDENR.ORG/WEB/1R/EROSION](http://portal.ncdenr.org/web/1R/EROSION) IF YOU HAVE QUESTIONS, PLEASE CONTACT THE LAND QUALITY SECTION AT NCDENR REGIONAL OFFICE.

**MAINTENANCE NOTES:**

DURING THE DEVELOPMENT OF A SITE, THE DEVELOPER SHALL INSTALL AND MAINTAIN ALL TEMPORARY AND PERMANENT STORMWATER CONTROL MEASURES AS REQUIRED BY THE APPROVED PLAN OR ANY PROVISION OF THIS ARTICLE. THE ACT OR ANY ORDER ADOPTED PURSUANT TO THIS ARTICLE OR THE ACT, AFTER SITE DEVELOPMENT, THE DEVELOPER SHALL INSTALL AND/OR MAINTAIN ALL NECESSARY PERMANENT STORMWATER CONTROL MEASURES SPECIFIED IN THE APPROVED PLAN, EXCEPT THOSE MEASURES INSTALLED WITHIN A ROAD OR STREET RIGHT-OF-WAY OR EASEMENT ACCEPTED FOR MAINTENANCE BY A GOVERNMENTAL AGENCY. CONVEYANCE OF THE PROPERTY SHALL NOT TERMINATE THE ORIGINAL DEVELOPER'S OBLIGATIONS UNDER THIS ARTICLE UNTIL SUCH TIME AS A REPLACEMENT PERMIT IS APPROVED BY THE COUNTY ENGINEER, OR DESIGNEE. THE ORIGINAL DEVELOPER SHALL INCLUDE IN THE DEED CONVEYING THE PROPERTY NOTICE OF THE EXISTENCE OF THE STORMWATER CONTROL MEASURES AND THE PURCHASER'S OBLIGATIONS TO MAINTAIN AND INSPECT THEM AND TO OBTAIN A PERMIT AND OTHERWISE COMPLY WITH THE TERMS OF THIS ARTICLE. REFER TO THE EROSION CONTROL DETAILS SHEET FOR ADDITIONAL MAINTENANCE NOTES. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

- CONSTRUCTION ENTRANCE:**  
INSPECT CONSTRUCTION ROADS AND PARKING AREAS PERIODICALLY FOR CONDITION OF SURFACE. TOP DRESS WITH NEW GRAVEL AS NEEDED. CHECK ROAD DITCHES AND OTHER SEEDED AREAS FOR EROSION AND SEDIMENTATION AFTER RAINFALL-PRODUCING RAINS. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. SEDIMENT PRODUCING AREAS SHOULD BE TREATED IMMEDIATELY.
- SILT FENCE:**  
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- SILT FENCE GRAVEL OUTLET:**  
INSPECT SEDIMENT FENCE GRAVEL OUTLETS AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. ANY RIP RAP DISPLACED MUST BE REPLACED IMMEDIATELY.
- BLOCK AND GRAVEL INLET PROTECTION:**  
INSPECT THE BARRIER OF AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

**NPDES GROUND COVER REQUIREMENTS**

SITE AREA DESCRIPTION	STABILIZATION	TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES, SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE EXCEPT FOR PERIMETERS AND HOW ZONES.

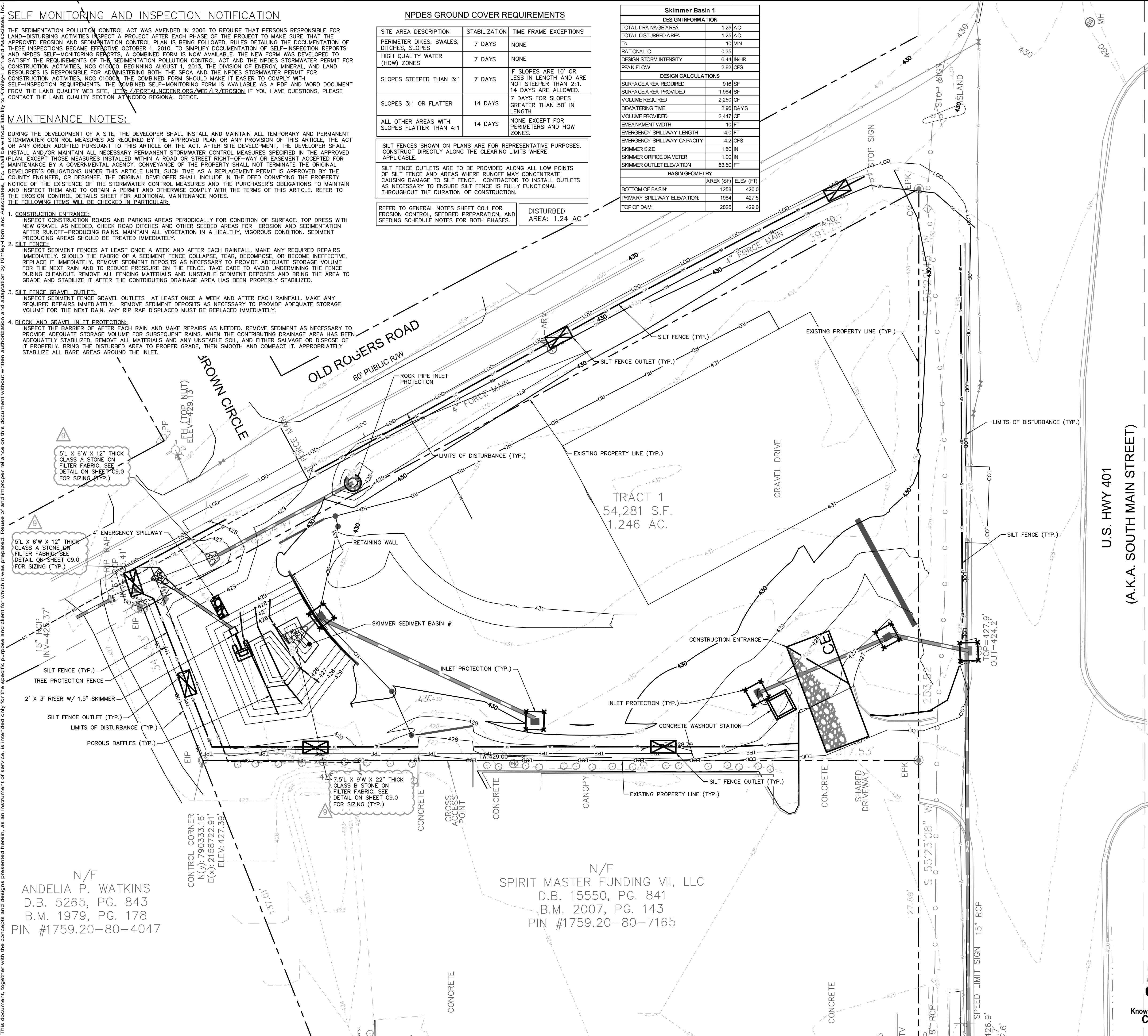
SILT FENCES SHOWN ON PLANS ARE FOR REPRESENTATIVE PURPOSES. CONSTRUCT DIRECTLY ALONG THE CLEARING LIMITS WHERE APPLICABLE.

SILT FENCE OUTLETS ARE TO BE PROVIDED ALONG ALL LOW POINTS OF SILT FENCE AND AREAS WHERE RUNOFF MAY CONCENTRATE CAUSING DAMAGE TO SILT FENCE. CONTRACTOR TO INSTALL OUTLETS AS NECESSARY TO ENSURE SILT FENCE IS FULLY FUNCTIONAL THROUGHOUT THE DURATION OF CONSTRUCTION.

REFER TO GENERAL NOTES SHEET C0.1 FOR EROSION CONTROL, SEEDING PREPARATION, AND SEEDING SCHEDULE NOTES FOR BOTH PHASES.

DISTURBED AREA: 1.24 AC

Skimmer Basin 1	
DESIGN INFORMATION	
TOTAL DRAINAGE AREA	1.25 AC
TOTAL DISTURBED AREA	1.25 AC
Tc	10 MIN
RATIONAL C	0.35
DESIGN STORM INTENSITY	6.44 IN/HR
PEAK FLOW	2.82 CFS
DESIGN CALCULATIONS	
SURFACE AREA REQUIRED	916 SF
SURFACE AREA PROVIDED	1,964 SF
VOLUME REQUIRED	2,250 CF
DEWATERING TIME	2.96 DAYS
VOLUME PROVIDED	2,417 CF
EMBANKMENT WIDTH	10 FT
EMERGENCY SPILLWAY LENGTH	4.0 FT
EMERGENCY SPILLWAY CAPACITY	4.2 CFS
SKIMMER SIZE	1.50 IN
SKIMMER ORIFICE DIAMETER	1.00 IN
SKIMMER OUTLET ELEVATION	83.50 FT
BASIN GEOMETRY	
AREA (SF)	ELEV. (FT)
BOTTOM OF BASIN	1258 426.0
PRIMARY SPILLWAY ELEVATION	1984 427.5
TOP OF DAM	2825 429.0



**EROSION CONTROL LEGEND**

---	PROPERTY LINE
---	TEMPORARY CONSTRUCTION EASEMENT
---	LIMITS OF DISTURBANCE
---	SILT FENCE
---	TREE PROTECTION FENCE
---	COMBINATION TREE PROTECTION / SILT FENCE
---	TEMPORARY DIVERSION DITCH
---	CLEAN WATER DIVERSION DITCH
---	SEDIMENT BASIN POROUS Baffles
---	PUMP DISCHARGE HOSE
---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	DRAINAGE AREA BOUNDARY
---	CONSTRUCTION ENTRANCE
---	SILT FENCE OUTLET
---	CONCRETE WASHOUT STATION
---	CHECK DAM
---	INLET PROTECTION
---	ROCK PIPE INLET PROTECTION
---	SKIMMER
---	TEMPORARY SLOPE DRAIN
---	RIP-RAP OUTLET PROTECTION
---	SILT BAG
---	DESIGNATED AREAS TO BE STABILIZED WITHIN 7 DAYS
---	TEMPORARY EROSION CONTROL MATTING

**PHASE 2 CONSTRUCTION SEQUENCE:**

- THE FOLLOWING PHASE 2 CONSTRUCTION SEQUENCE IS FURNISHED AS A GENERAL GUIDE FOR PREPARATION OF A SEQUENCE OF CONSTRUCTION EVENTS.
- BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE. EROSION CONTROL MEASURES SHALL BE RESTORED TO ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO 50% OF DESIGN DEPTH. WHEN SEDIMENT BASIN DEWATERING IS REQUIRED, DEWATER USING PUMP AND FILTER BAG (SEE "STANDARD FILTER BAG FOR DEWATERING ACTIVITIES" DETAIL ON SHEET C5.4). PLACE PUMP ON BERM AND ATTACH FILTER BAG PER DETAIL CONSTRUCTION SPECIFICATIONS.
- INSTALL STORM SEWER AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS, OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, AND OTHER SITE INFRASTRUCTURE.
- STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDE AREAS PER GROUND STABILIZATION TIME FRAMES.
- PROVIDE GROUND COVER ON SLOPES GREATER THAN 3:1 WITHIN 7 DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING. PROVIDE GROUND COVER TO ALL OTHER AREAS WITHIN 14 DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING OR INACTIVITY.
- GRADING ACTIVITY SHALL BE LIMITED TO WITHIN THE CLEARING LIMITS. MAINTAIN ALL EROSION CONTROL MEASURES AS NECESSARY.
- INSPECT AND REPAIR EROSION CONTROL MEASURES AFTER EVERY RAINFALL EVENT OF 1/2" OR GREATER OR EVERY SEVEN (7) CALENDAR DAYS.
- FOR ALL PHASED EROSION CONTROL PLANS, CONTRACTOR SHALL MEET WITH EROSION CONTROL INSPECTOR PRIOR TO COMMENCING EACH PHASE OF EROSION CONTROL MEASURES. SEED AND MULCH DENUDE AREA WITHIN 15 CALENDAR DAYS AFTER ANY PHASE OF GRADING. MAINTAIN SOIL EROSION CONTROL MEASURES UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
- ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPARTMENT OF AGRICULTURE, AND WAKE COUNTY EROSION CONTROL ORDINANCE.
- REFER TO SHEET C0.1 - GENERAL NOTES FOR GENERAL EROSION CONTROL NOTES AND MAINTENANCE.

**SURVEY NOTE:**  
EXISTING TOPOGRAPHICAL INFORMATION IS BASED ON A TOPOGRAPHIC SURVEY OBTAINED ON 02/23/2023 BY CMP PROFESSIONAL LAND SURVEYORS, 333 S. WHITE STREET, WAKE FOREST, NC 27988. PHONE: (919) 556-3148. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION DEPICTED OR NOT. PRIOR TO CONSTRUCTION AND REPORT POTENTIAL CONFLICTS TO OWNER AND ENGINEER.

N/F  
ANDELIA P. WATKINS  
D.B. 5265, PG. 843  
B.M. 1979, PG. 178  
PIN #1759.20-80-4047

N/F  
SPIRIT MASTER FUNDING VII, LLC  
D.B. 15550, PG. 841  
B.M. 2007, PG. 143  
PIN #1759.20-80-7165



SDP-23-07

08/01/2024	JAA	TOWN COMMENTS	NO.	DATE
07/17/2024	JAA	WAKE COUNTY COMMENTS	6	
07/08/2024	JAA	NC DOT COMMENTS	7	
06/20/2024	JAA	TOWN COMMENTS	5	
06/11/2024	JAA	WAKE COUNTY COMMENTS	4	
05/01/2024	JAA	TOWN COMMENTS	3	
03/01/2024	JAA	TOWN COMMENTS	2	

**Kimley»Horn**  
© 2023 KIMLEY-HORN AND ASSOCIATES, INC.  
#F-0102 WWW.KIMLEY-HORN.COM PHONE: 919-677-2000 FAX: 919-677-2050  
421 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601

**THE LEARNING CENTER ROLESVILLE**  
EROSION CONTROL PLAN - PHASE 2  
PREPARED FOR ROLESVILLE, LLC.  
TOWN OF ROLESVILLE NORTH CAROLINA

SHEET NUMBER **C5.1**



**SELF MONITORING AND INSPECTION NOTIFICATION**

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AT EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS BECAME EFFECTIVE OCTOBER 1, 2010. TO SIMPLIFY DOCUMENTATION OF SELF-INSPECTION REPORTS AND NPDES SELF-MONITORING REPORTS, A COMBINED FORM IS NOW AVAILABLE. THE NEW FORM WAS DEVELOPED TO SATISFY THE REQUIREMENTS OF THE SEDIMENTATION POLLUTION CONTROL ACT AND THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES, NCG 0100.0, BEGINNING AUGUST 1, 2013. THE DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES IS RESPONSIBLE FOR ADMINISTERING BOTH THE SPCA AND THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. NCG 0100.0. THE COMBINED FORM SHOULD MAKE IT EASIER TO COMPLY WITH SELF-INSPECTION REQUIREMENTS. THE COMBINED SELF-MONITORING FORM IS AVAILABLE AS A PDF AND WORD DOCUMENT FROM THE LAND QUALITY WEB SITE, [HTTP://PORTAL.NC DENR.ORG/WEB/LOR/EROSION](http://portal.ncdenr.org/web/lor/erosion) IF YOU HAVE QUESTIONS, PLEASE CONTACT THE LAND QUALITY SECTION AT NCDEQ REGIONAL OFFICE.

**MAINTENANCE NOTES:**

DURING THE DEVELOPMENT OF A SITE, THE DEVELOPER SHALL INSTALL AND MAINTAIN ALL TEMPORARY AND PERMANENT STORMWATER CONTROL MEASURES AS REQUIRED BY THE APPROVED PLAN OR ANY PROVISION OF THIS ARTICLE. THE ACT OR ANY ORDER ADOPTED PURSUANT TO THIS ARTICLE OR THE ACT, AFTER SITE DEVELOPMENT, THE DEVELOPER SHALL INSTALL AND/OR MAINTAIN ALL NECESSARY PERMANENT STORMWATER CONTROL MEASURES SPECIFIED IN THE APPROVED PLAN, EXCEPT THOSE MEASURES INSTALLED WITHIN A ROAD OR STREET RIGHT-OF-WAY OR EASEMENT ACCEPTED FOR MAINTENANCE BY A GOVERNMENTAL AGENCY. CONVEYANCE OF THE PROPERTY SHALL NOT TERMINATE THE ORIGINAL DEVELOPER'S OBLIGATIONS UNDER THIS ARTICLE UNTIL SUCH TIME AS A REPLACEMENT PERMIT IS APPROVED BY THE COUNTY ENGINEER, OR DESIGNEE. THE ORIGINAL DEVELOPER SHALL INCLUDE IN THE DEED CONVEYING THE PROPERTY NOTICE OF THE EXISTENCE OF THE STORMWATER CONTROL MEASURES AND THE PURCHASER'S OBLIGATIONS TO MAINTAIN AND INSPECT THEM AND TO OBTAIN A PERMIT AND OTHERWISE COMPLY WITH THE TERMS OF THIS ARTICLE. REFER TO THE EROSION CONTROL DETAILS SHEET FOR ADDITIONAL MAINTENANCE NOTES. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

- CONSTRUCTION ENTRANCE:**  
INSPECT CONSTRUCTION ROADS AND PARKING AREAS PERIODICALLY FOR CONDITION OF SURFACE. TOP DRESS WITH NEW GRAVEL AS NEEDED. CHECK ROAD DITCHES AND OTHER SEEDED AREAS FOR EROSION AND SEDIMENTATION AFTER RAINFALL-PRODUCING RAINS. MAINTAIN ALL VEGETATION IN A HEALTHY, VIGOROUS CONDITION. SEDIMENT PRODUCING AREAS SHOULD BE TREATED IMMEDIATELY.
- SILT FENCE:**  
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.
- SILT FENCE GRAVEL OUTLET:**  
INSPECT SEDIMENT FENCE GRAVEL OUTLETS AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. ANY RIP RAP DISPLACED MUST BE REPLACED IMMEDIATELY.
- BLOCK AND GRAVEL INLET PROTECTION:**  
INSPECT THE BARRIER OF AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR SUBSEQUENT RAINS. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SOIL, AND EITHER SALVAGE OR DISPOSE OF IT PROPERLY. BRING THE DISTURBED AREA TO PROPER GRADE, THEN SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

**NPDES GROUND COVER REQUIREMENTS**

SITE AREA DESCRIPTION	STABILIZATION	TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES, SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE EXCEPT FOR PERIMETERS AND HQW ZONES.

SILT FENCES SHOWN ON PLANS ARE FOR REPRESENTATIVE PURPOSES. CONSTRUCT DIRECTLY ALONG THE CLEARING LIMITS WHERE APPLICABLE.

SILT FENCE OUTLETS ARE TO BE PROVIDED ALONG ALL LOW POINTS OF SILT FENCE AND AREAS WHERE RUNOFF MAY CONCENTRATE CAUSING DAMAGE TO SILT FENCE. CONTRACTOR TO INSTALL OUTLETS AS NECESSARY TO ENSURE SILT FENCE IS FULLY FUNCTIONAL THROUGHOUT THE DURATION OF CONSTRUCTION.

REFER TO GENERAL NOTES SHEET C0.1 FOR EROSION CONTROL, SEEDING PREPARATION, AND SEEDING SCHEDULE NOTES FOR BOTH PHASES.

DISTURBED AREA: 1.24 AC

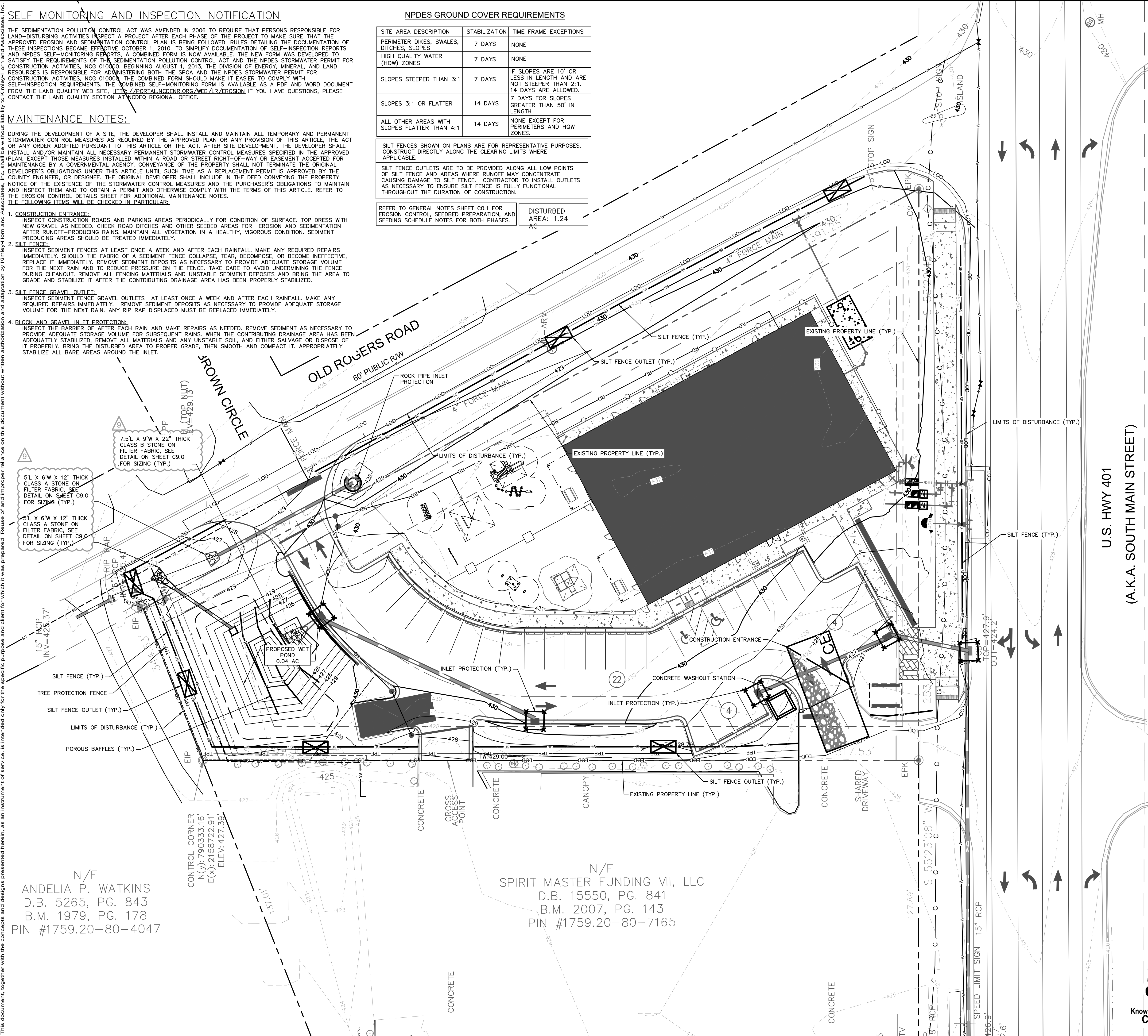
7.5' x 9' x 22" THICK CLASS B STONE ON FILTER FABRIC, SEE DETAIL ON SHEET C9.0 FOR SIZING (TYP.)

5' x 6' x 12" THICK CLASS A STONE ON FILTER FABRIC, SEE DETAIL ON SHEET C9.0 FOR SIZING (TYP.)

5' x 6' x 12" THICK CLASS A STONE ON FILTER FABRIC, SEE DETAIL ON SHEET C9.0 FOR SIZING (TYP.)

N/F  
ANDELIA P. WATKINS  
D.B. 5265, PG. 843  
B.M. 1979, PG. 178  
PIN #1759.20-80-4047

N/F  
SPIRIT MASTER FUNDING VII, LLC  
D.B. 15550, PG. 841  
B.M. 2007, PG. 143  
PIN #1759.20-80-7165



**EROSION CONTROL LEGEND**

- PROPERTY LINE
- - - TCE TEMPORARY CONSTRUCTION EASEMENT
- - - LOD LIMITS OF DISTURBANCE
- - - SF SILT FENCE
- - - TPF TREE PROTECTION FENCE
- - - SF/TPF COMBINATION TREE PROTECTION/SILT FENCE
- - - TD TEMPORARY DIVERSION DITCH
- - - TD(CW) CLEAN WATER DIVERSION DITCH
- - - X SEDIMENT BASIN POROUS BAFFLES
- - - PUMP DISCHARGE HOSE
- - - 805 EXISTING CONTOUR
- - - 805 PROPOSED CONTOUR
- - - DRAINAGE AREA BOUNDARY
- [Symbol] CONSTRUCTION ENTRANCE
- [Symbol] SILT FENCE OUTLET
- [Symbol] CONCRETE WASHOUT STATION
- [Symbol] CHECK DAM
- [Symbol] INLET PROTECTION
- [Symbol] ROCK PIPE INLET PROTECTION
- [Symbol] SKIMMER
- [Symbol] TEMPORARY SLOPE DRAIN
- [Symbol] RIP-RAP OUTLET PROTECTION
- [Symbol] SILT BAG
- [Symbol] DESIGNATED AREAS TO BE STABILIZED WITHIN 7 DAYS
- [Symbol] TEMPORARY EROSION CONTROL MATTING

- PHASE 3 CONSTRUCTION SEQUENCE:**
- THE FOLLOWING PHASE 3 CONSTRUCTION SEQUENCE IS FURNISHED AS A GENERAL GUIDE FOR PREPARATION OF A SEQUENCE OF CONSTRUCTION EVENTS.
  - STABILIZE SITE AS AREAS ARE BROUGHT UP TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
  - WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL ENVIRONMENTAL CONSULTANT FOR AN INSPECTION.
  - IF SITE IS APPROVED, REMOVE TEMPORARY DIVERSIONS, SILT FENCE, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES SHOULD NOW BE INSTALLED.
  - WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL INSPECTION BY WAKE COUNTY ENVIRONMENTAL CONSULTANT. OBTAIN A CERTIFICATE OF COMPLETION.
  - CONTACT ENVIRONMENTAL CONSULTANT FOR APPROVAL TO CONVERT SEDIMENT BASIN TO A WET POND.
  - CONVERT SEDIMENT BASIN TO WET POND, SHOWN ON C6.0.
  - INSPECT AND REPAIR EROSION CONTROL MEASURES AFTER EVERY RAINFALL EVENT OF 1/2" OR GREATER OR EVERY SEVEN (7) CALENDAR DAYS.
  - ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MODERN EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL, U.S. DEPARTMENT OF AGRICULTURE, AND WAKE COUNTY EROSION CONTROL ORDINANCE.
  - REFER TO SHEET C0.1 - GENERAL NOTES FOR GENERAL EROSION CONTROL NOTES AND MAINTENANCE.

**SURVEY NOTE:**  
EXISTING TOPOGRAPHICAL INFORMATION IS BASED ON A TOPOGRAPHIC SURVEY OBTAINED ON 02/23/2023 BY CMP PROFESSIONAL LAND SURVEYORS, 333 S. WHITE STREET, WAKE FOREST, NC, 27888. PHONE: (919) 556-3148. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION DEPICTED OR NOT, PRIOR TO CONSTRUCTION AND REPORT POTENTIAL CONFLICTS TO OWNER AND ENGINEER.



SDP-23-07

**THE LEARNING CENTER ROLESVILLE**  
EROSION CONTROL PLAN - PHASE 3  
PREPARED FOR ROLESVILLE, LLC.  
TOWN OF ROLESVILLE NORTH CAROLINA

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#F-0102 WWW.KIMLEY-HORN.COM PHONE: 919.677.2000 FAX: 919.677.2050  
421 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601

**SEAL**  
032582

KHA PROJECT	013031004	DATE	09/29/2023	SCALE	AS SHOWN	DESIGNED BY	JAA	DRAWN BY	JAA	CHECKED BY	COE
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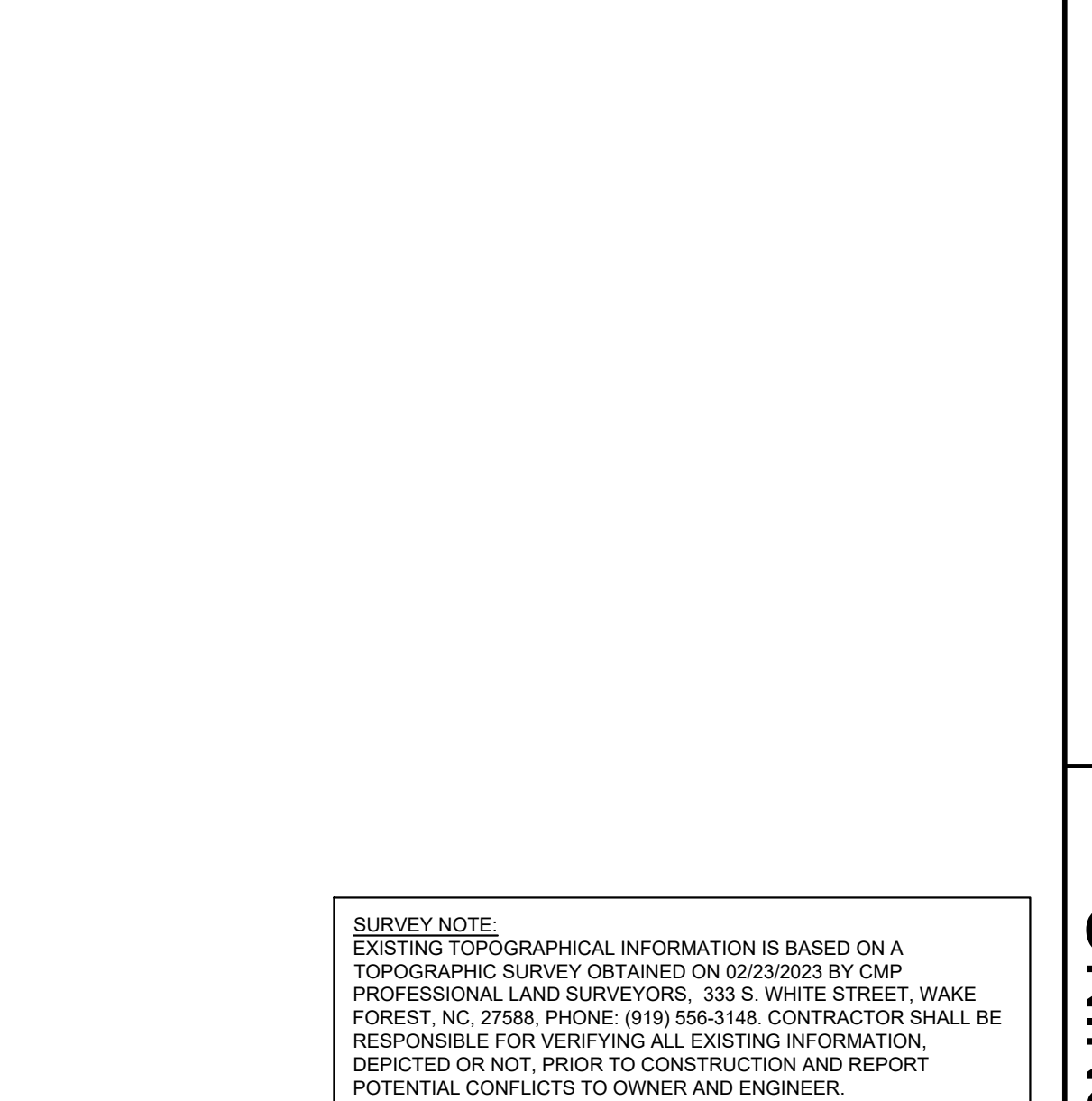
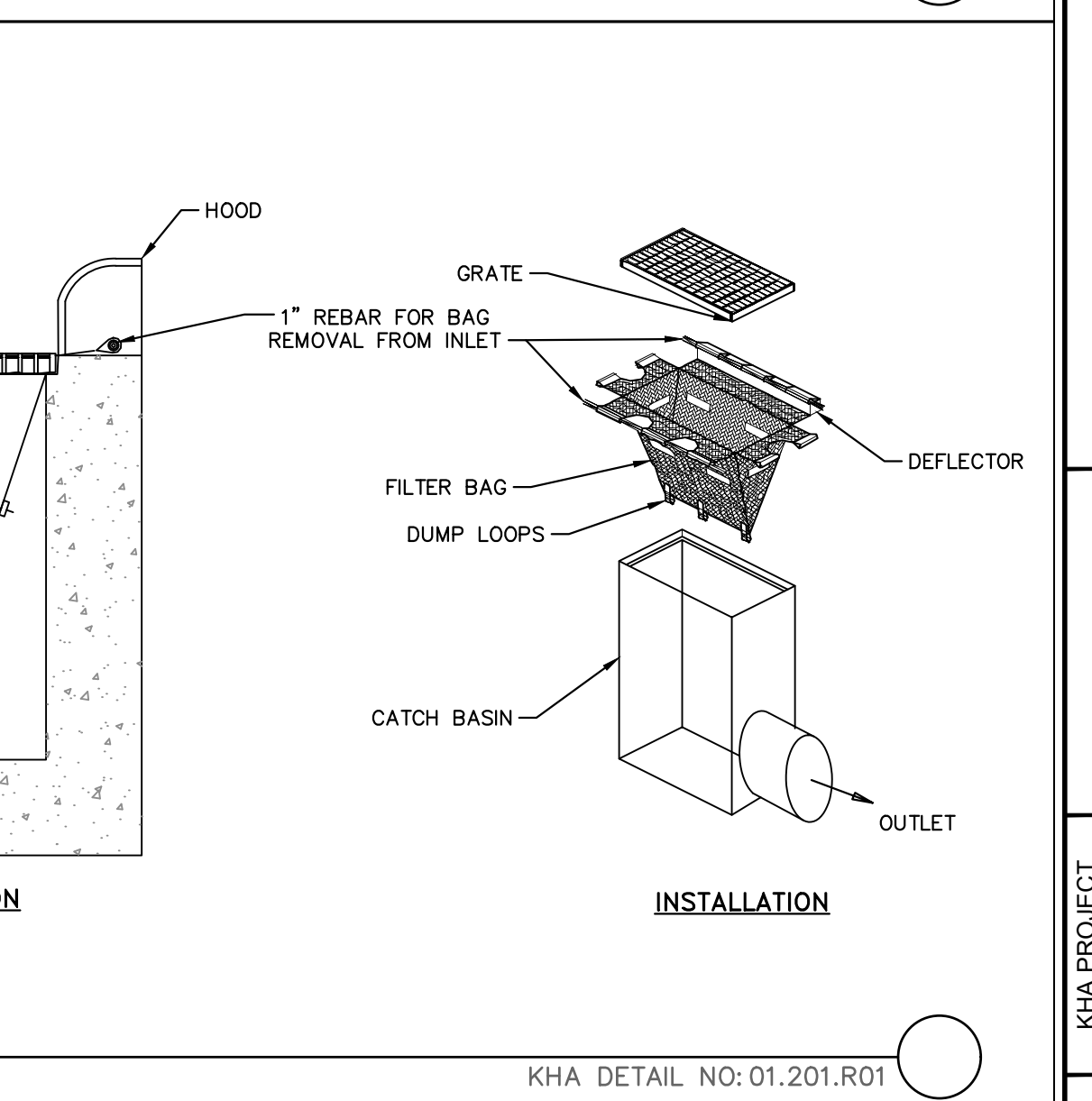
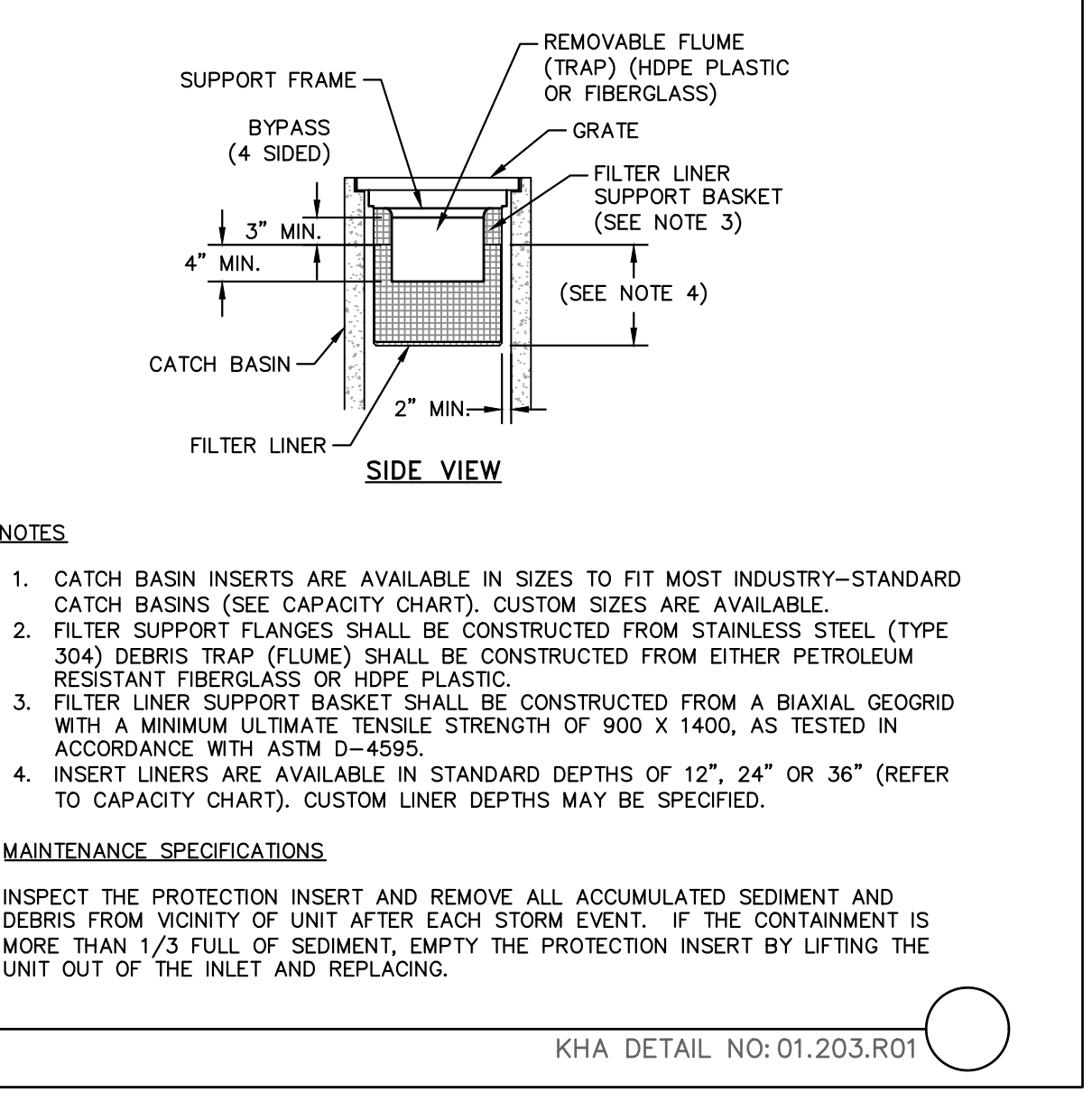
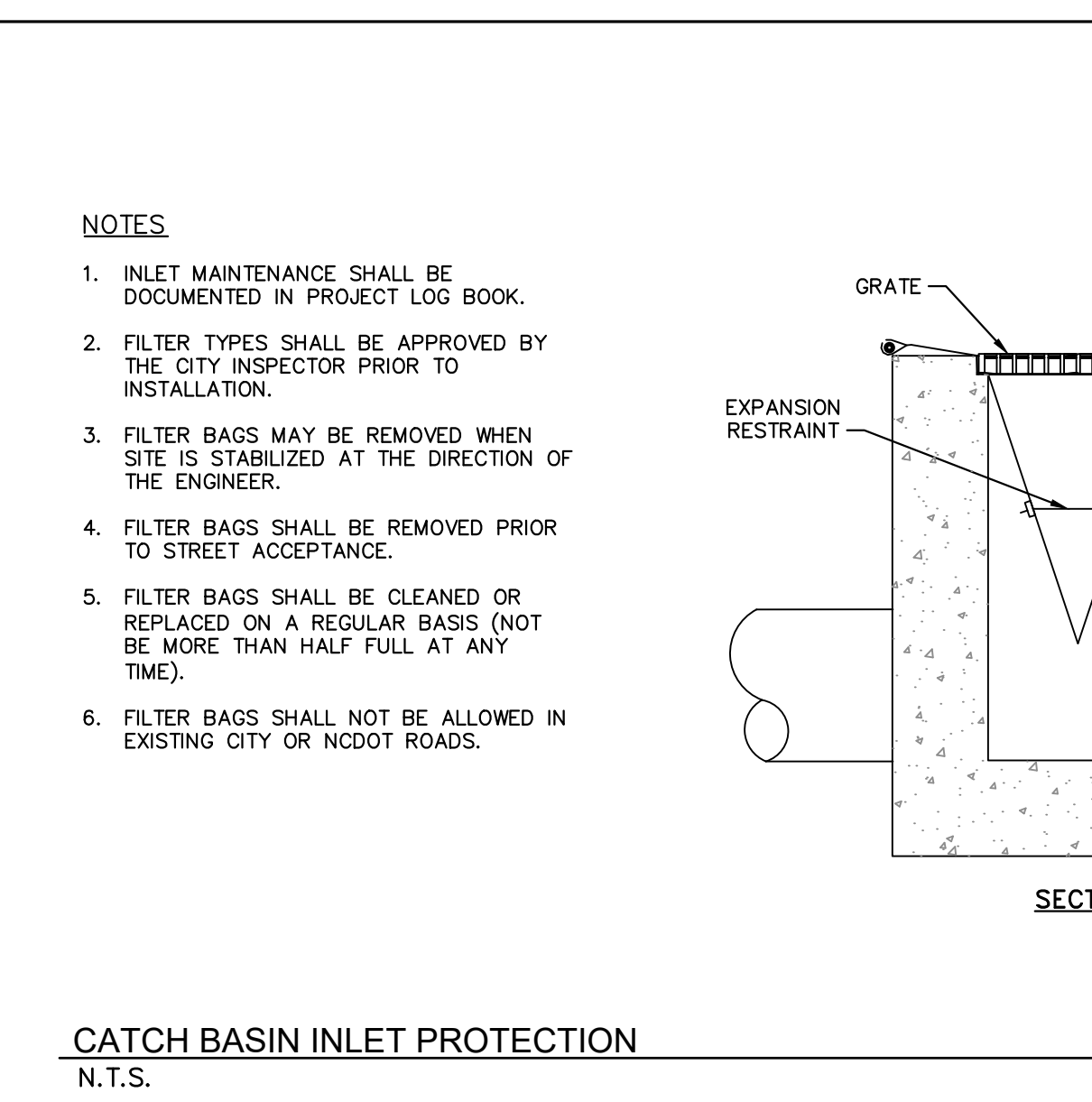
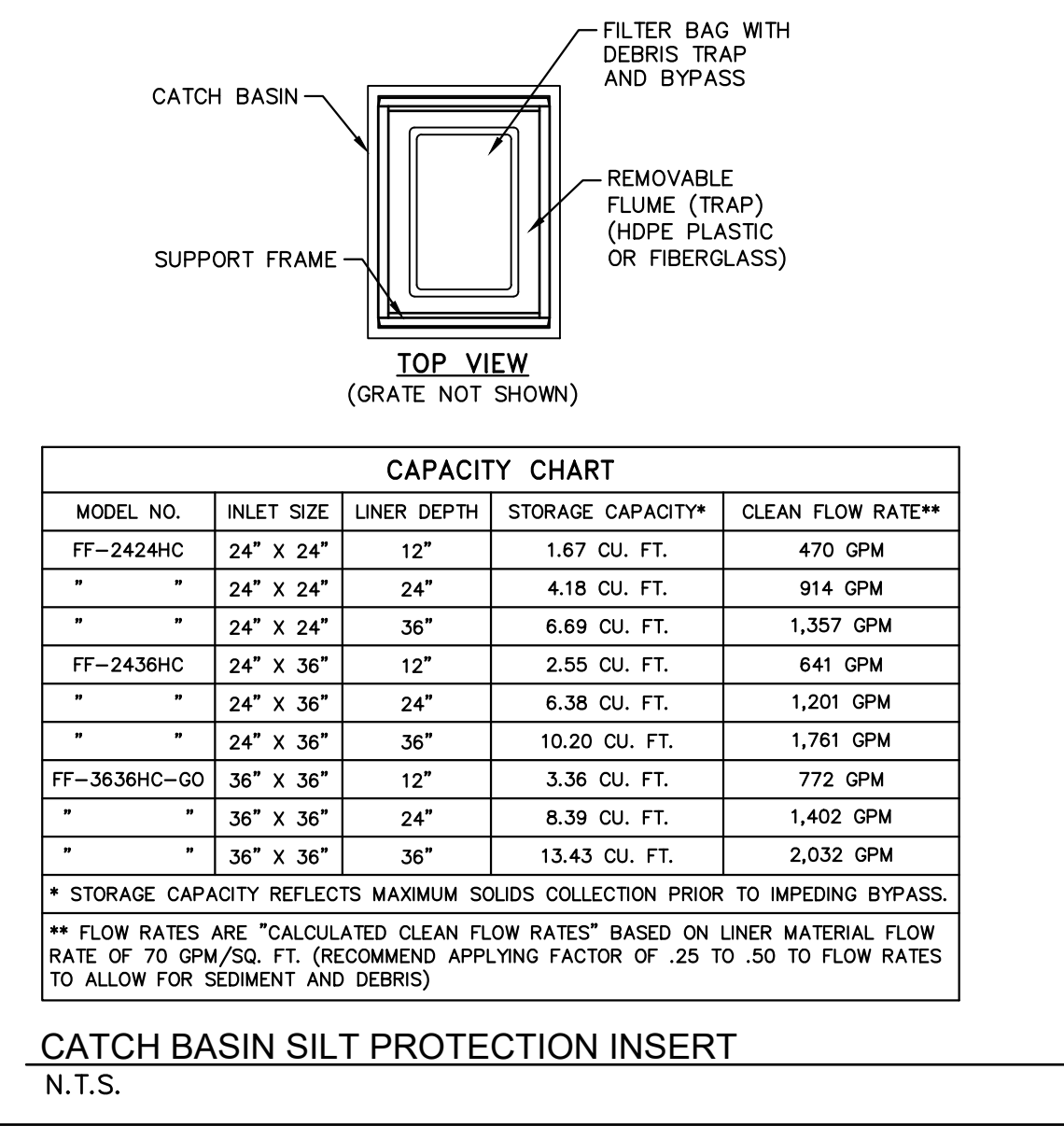
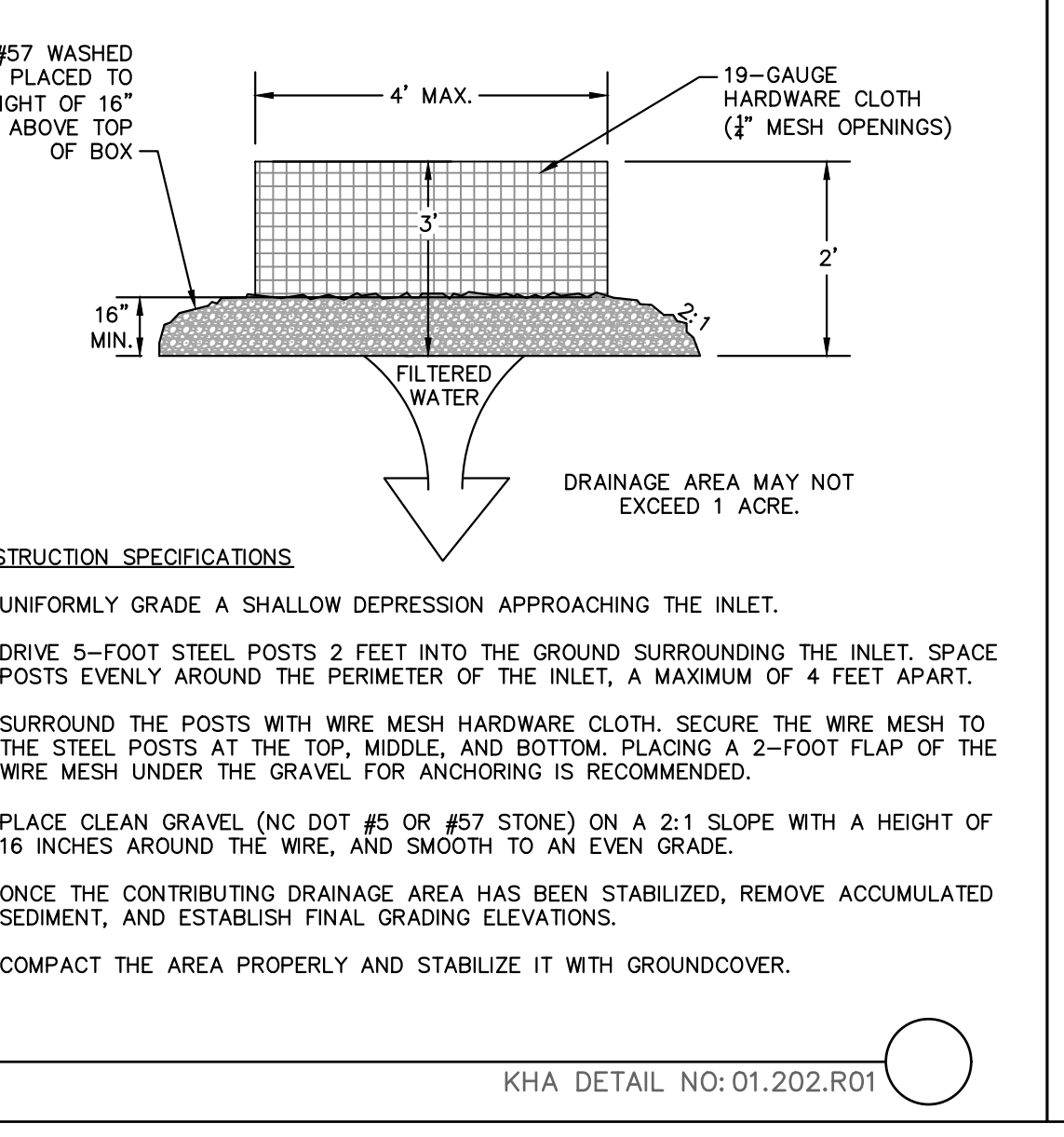
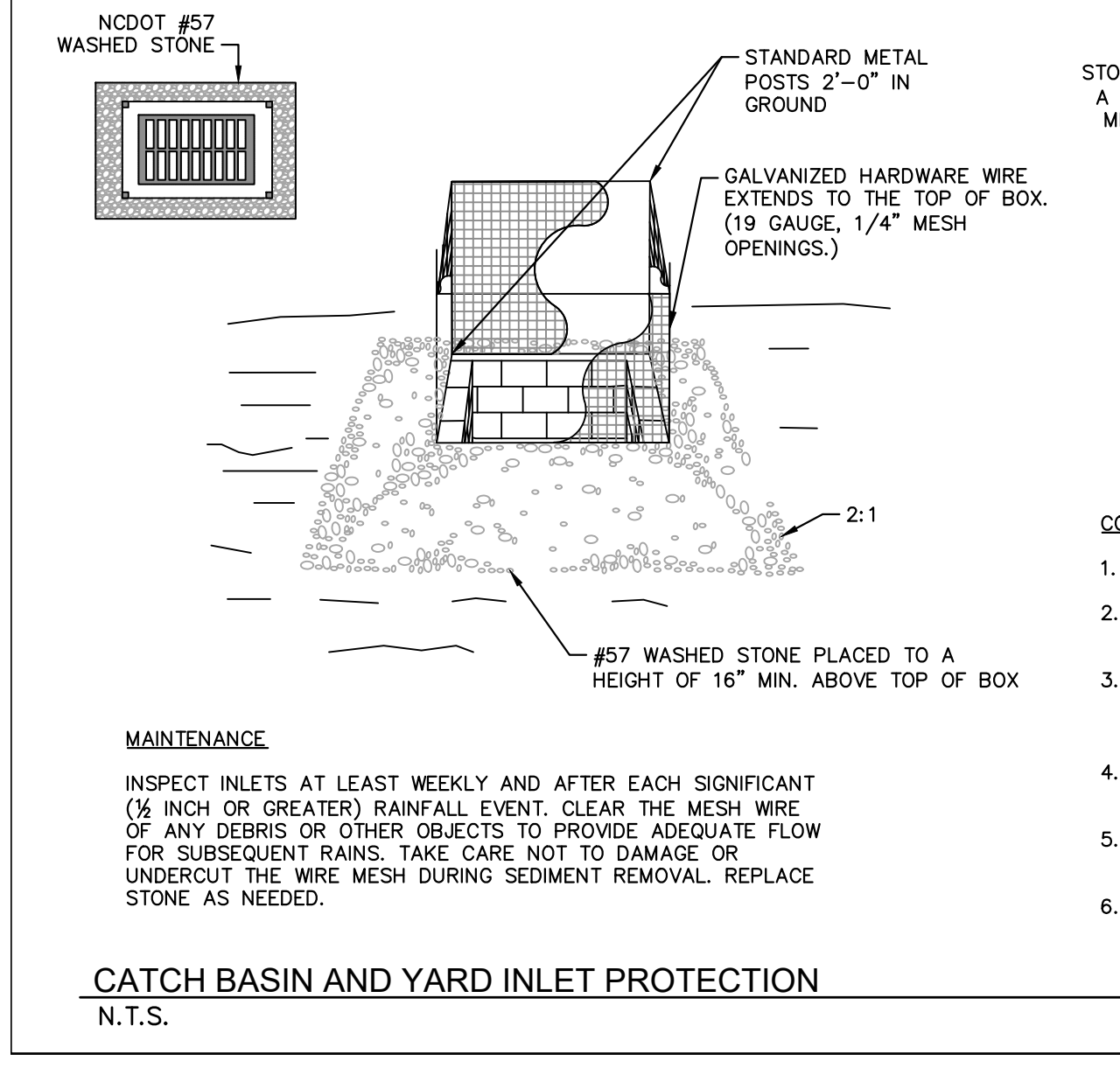
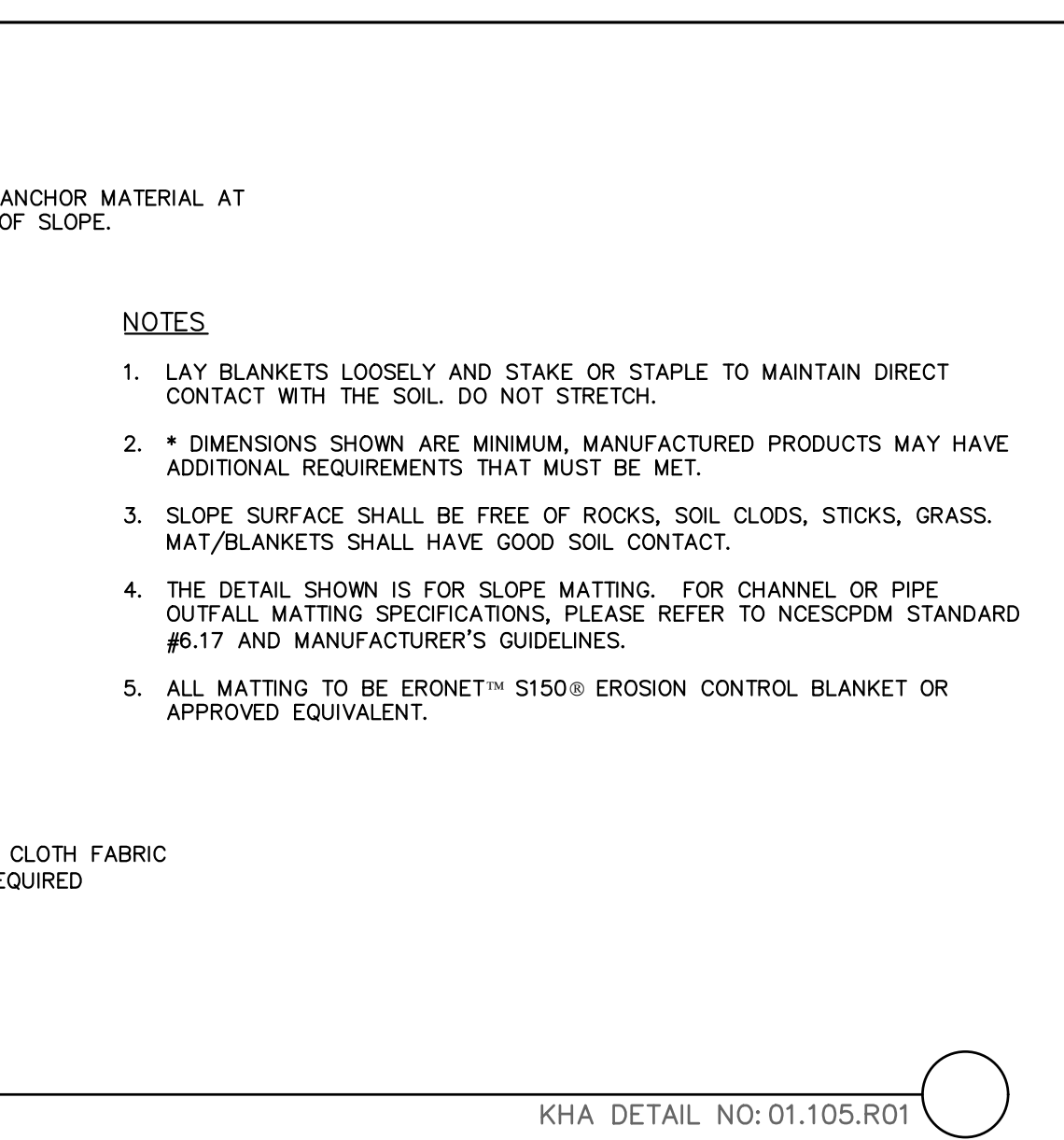
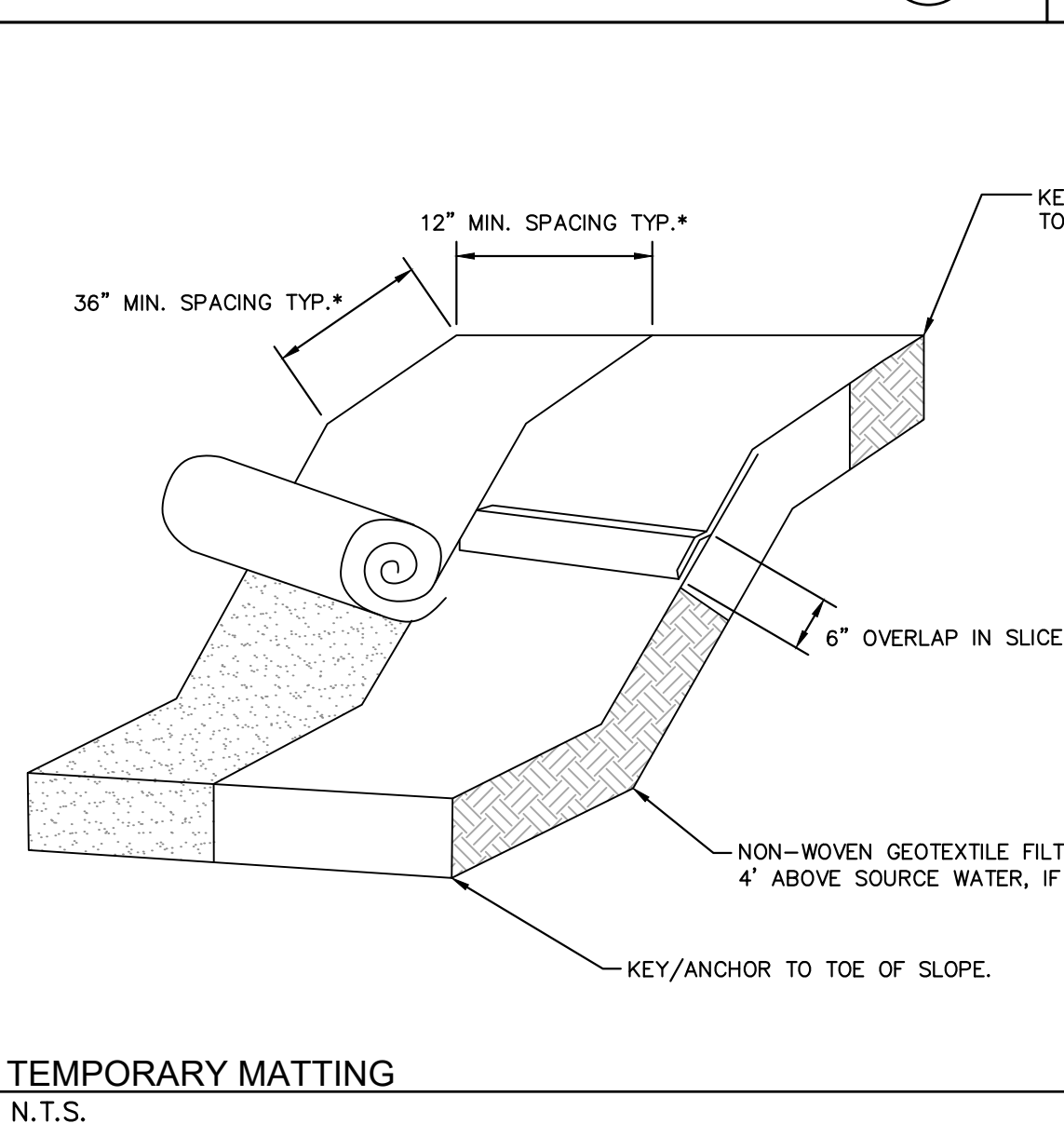
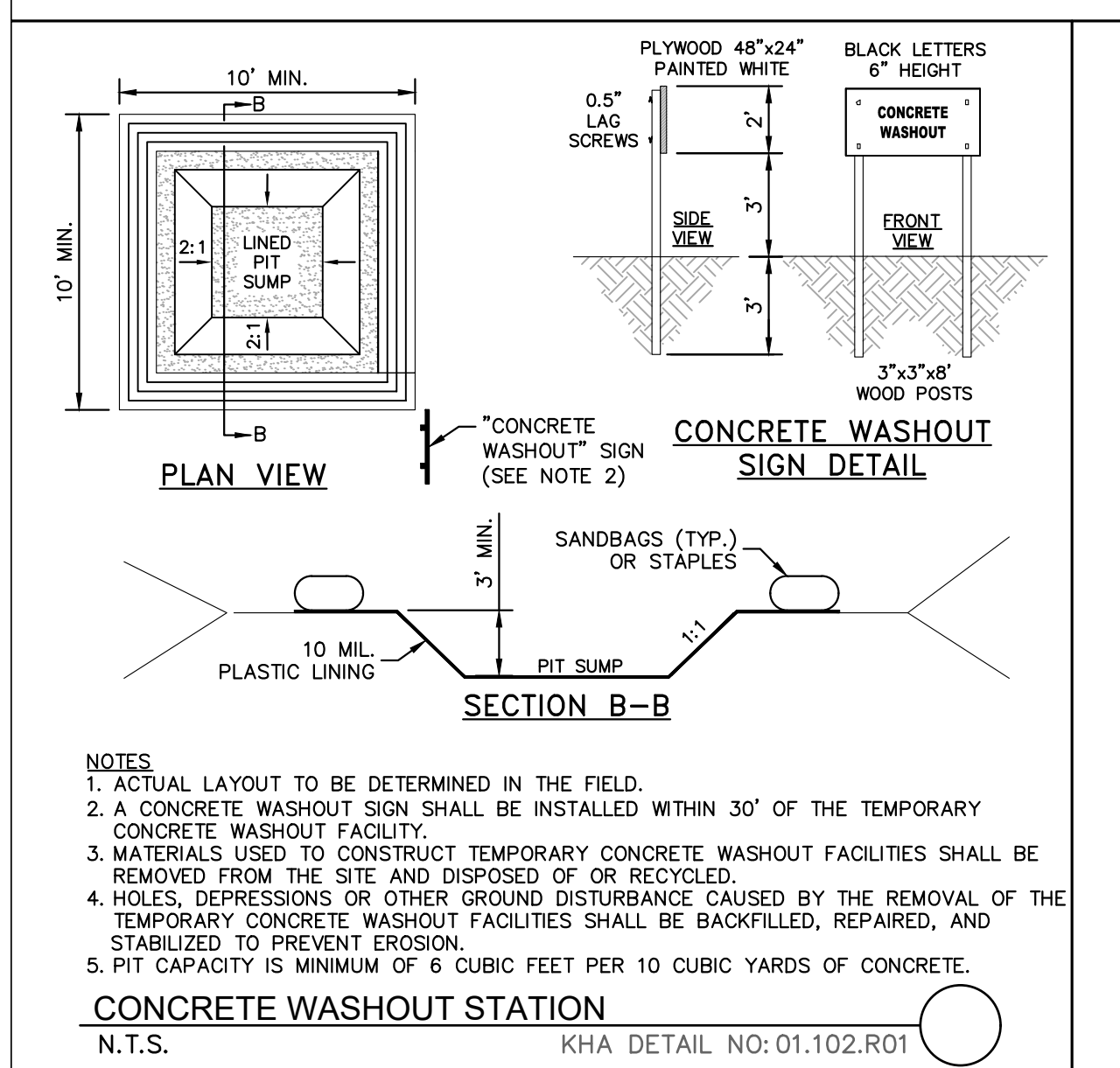
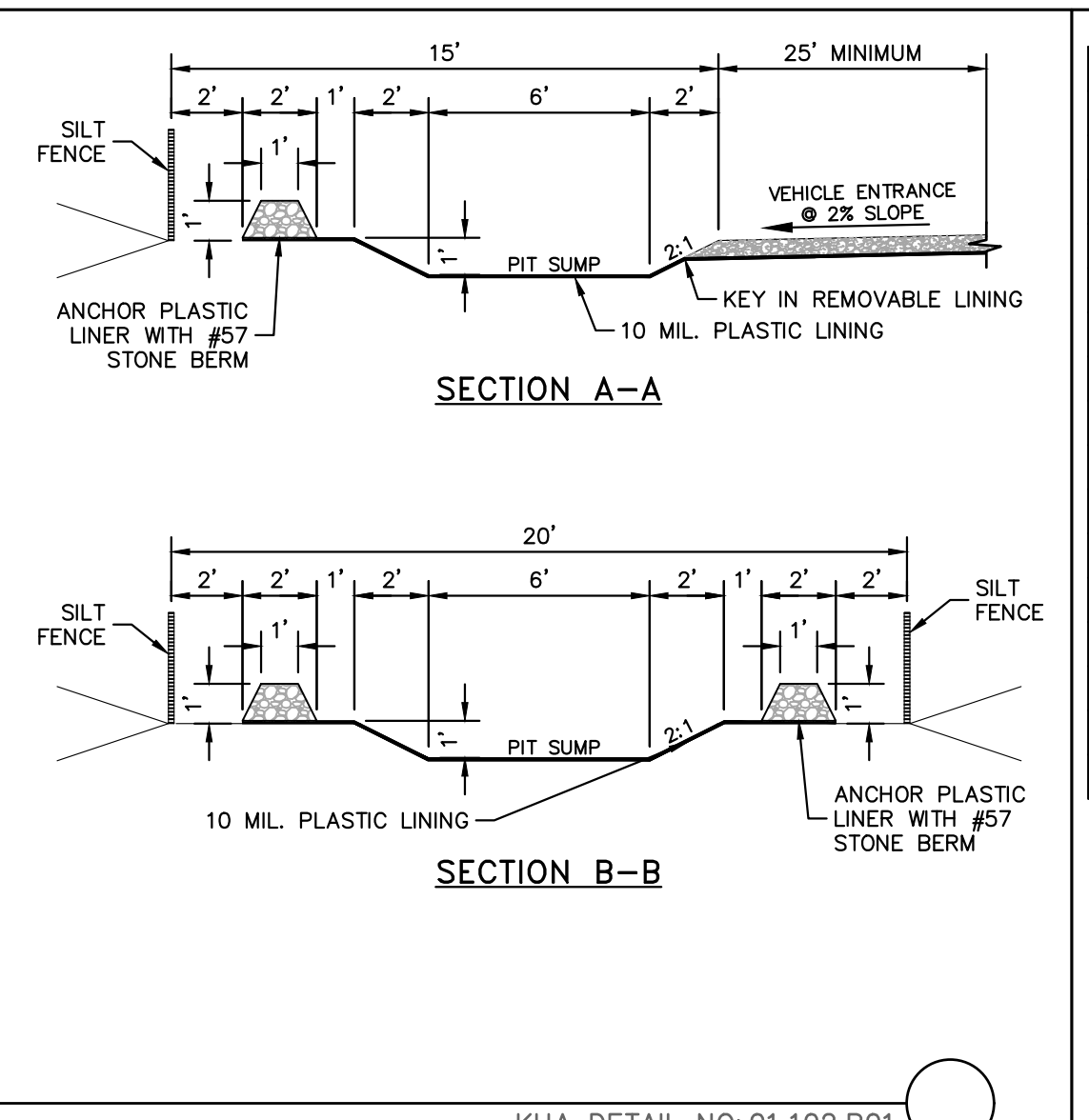
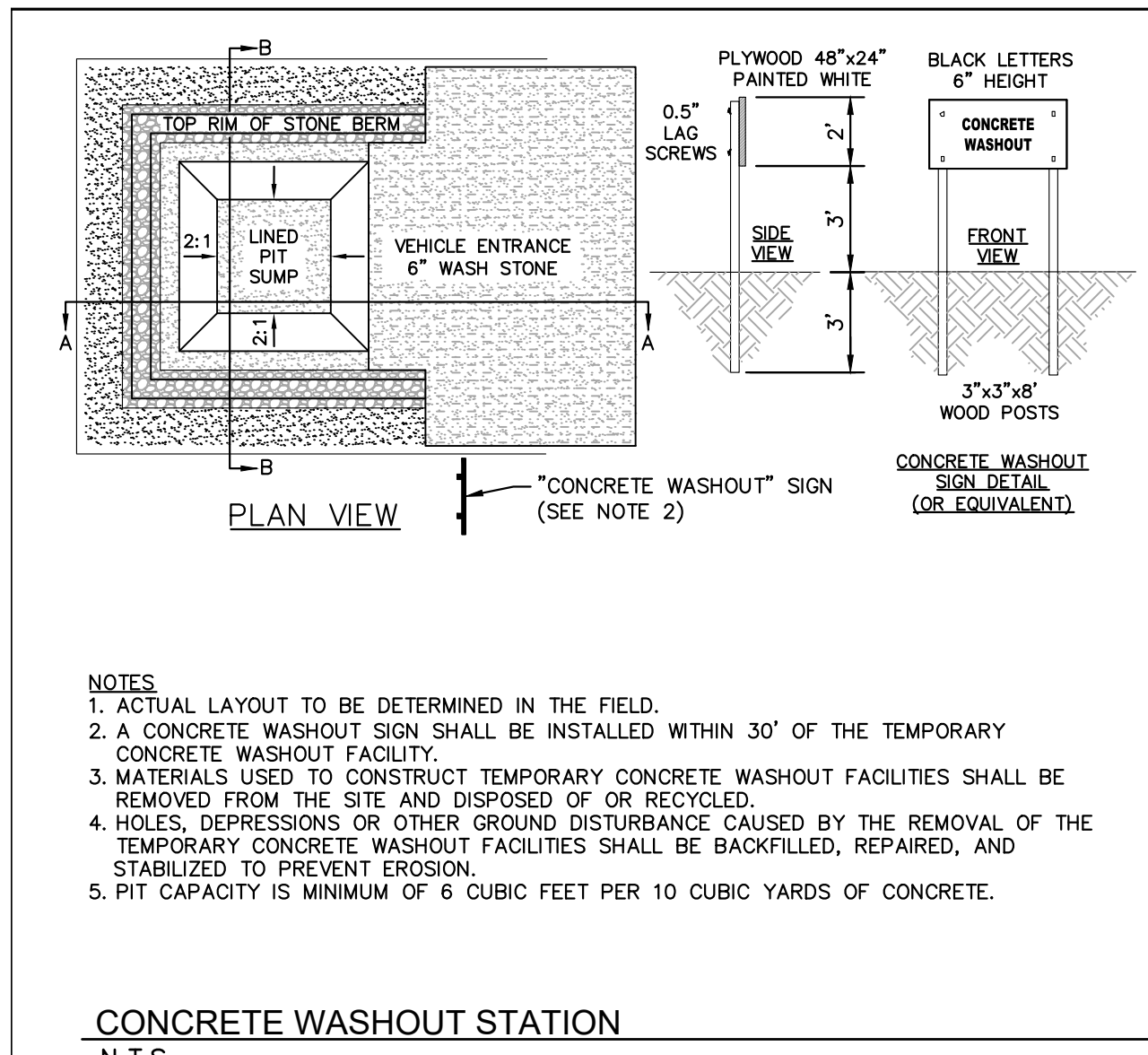
DATE

08/01/2024	JAA	TOWN COMMENTS	NO.
07/17/2024	JAA	WAKE COUNTY COMMENTS	7
07/08/2024	JAA	NC DOT COMMENTS	6
06/20/2024	JAA	TOWN COMMENTS	5
06/11/2024	JAA	WAKE COUNTY COMMENTS	4
05/01/2024	JAA	TOWN COMMENTS	3
03/01/2024	JAA	TOWN COMMENTS	2

SHEET NUMBER  
**C5.2**



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DATE	REVISIONS	BY
08/01/2024		JAA
07/17/2024		JAA
07/08/2024		JAA
06/20/2024		JAA
06/11/2024		JAA
05/01/2024		JAA
03/01/2024		JAA

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KHA PROJECT	013031004
DATE	09/29/2023
SCALE	AS SHOWN
DESIGNED BY	JAA
DRAWN BY	JAA
CHECKED BY	COB

**THE LEARNING CENTER ROLESVILLE EROSION CONTROL DETAILS**

**THE LEARNING CENTER ROLESVILLE**  
PREPARED FOR  
**ROLESVILLE, LLC.**  
TOWN OF ROLESVILLE  
NORTH CAROLINA

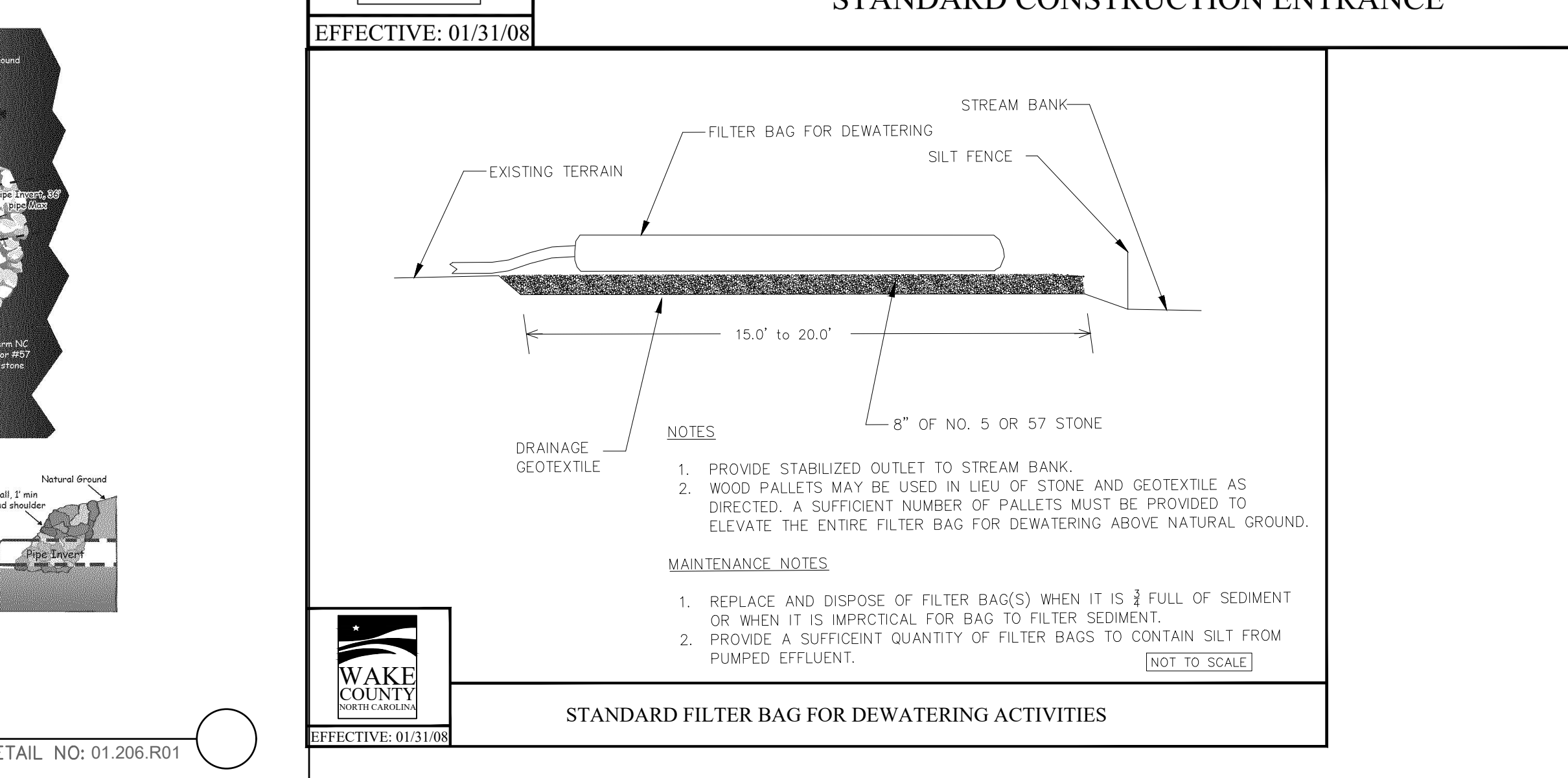
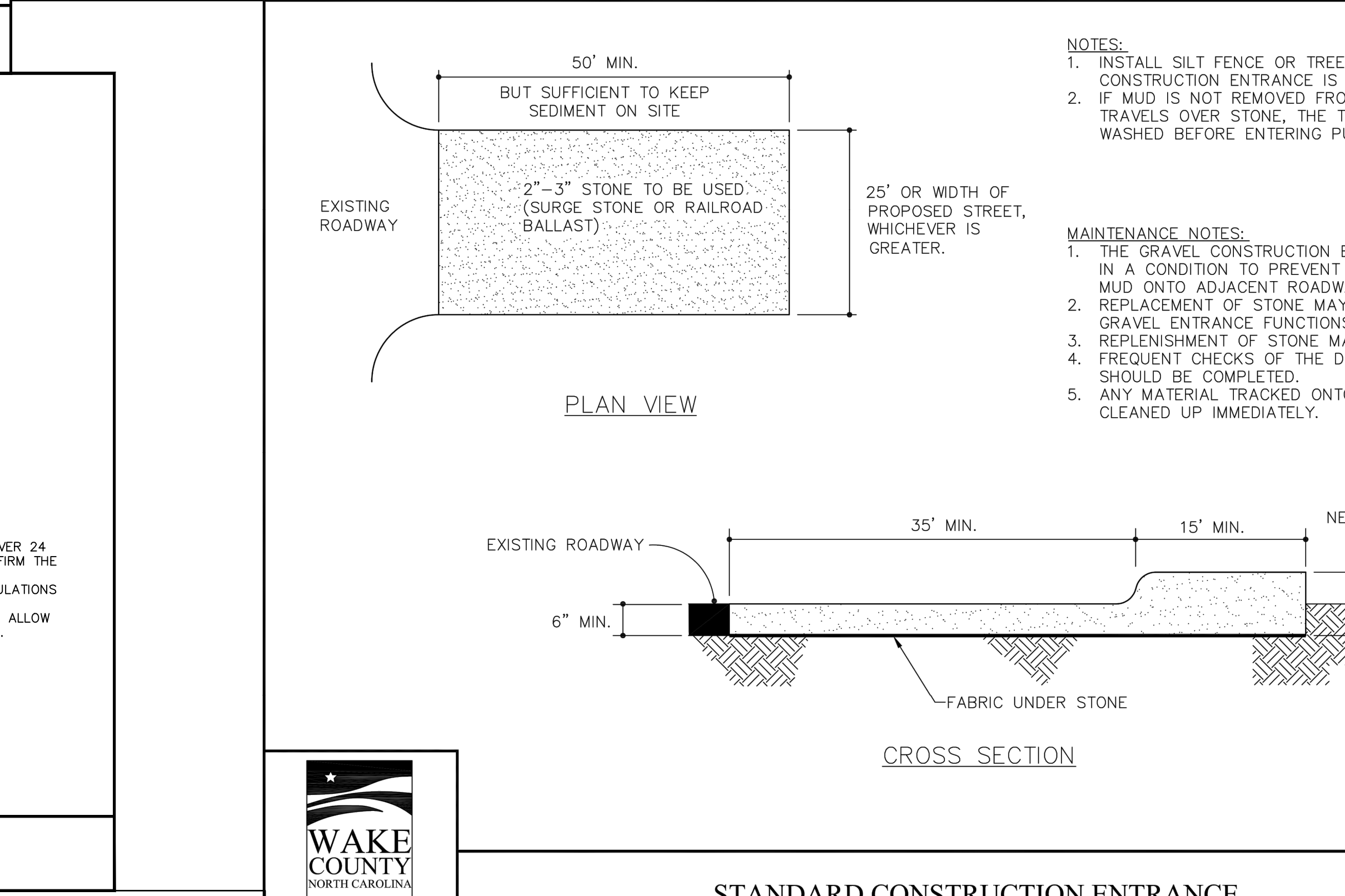
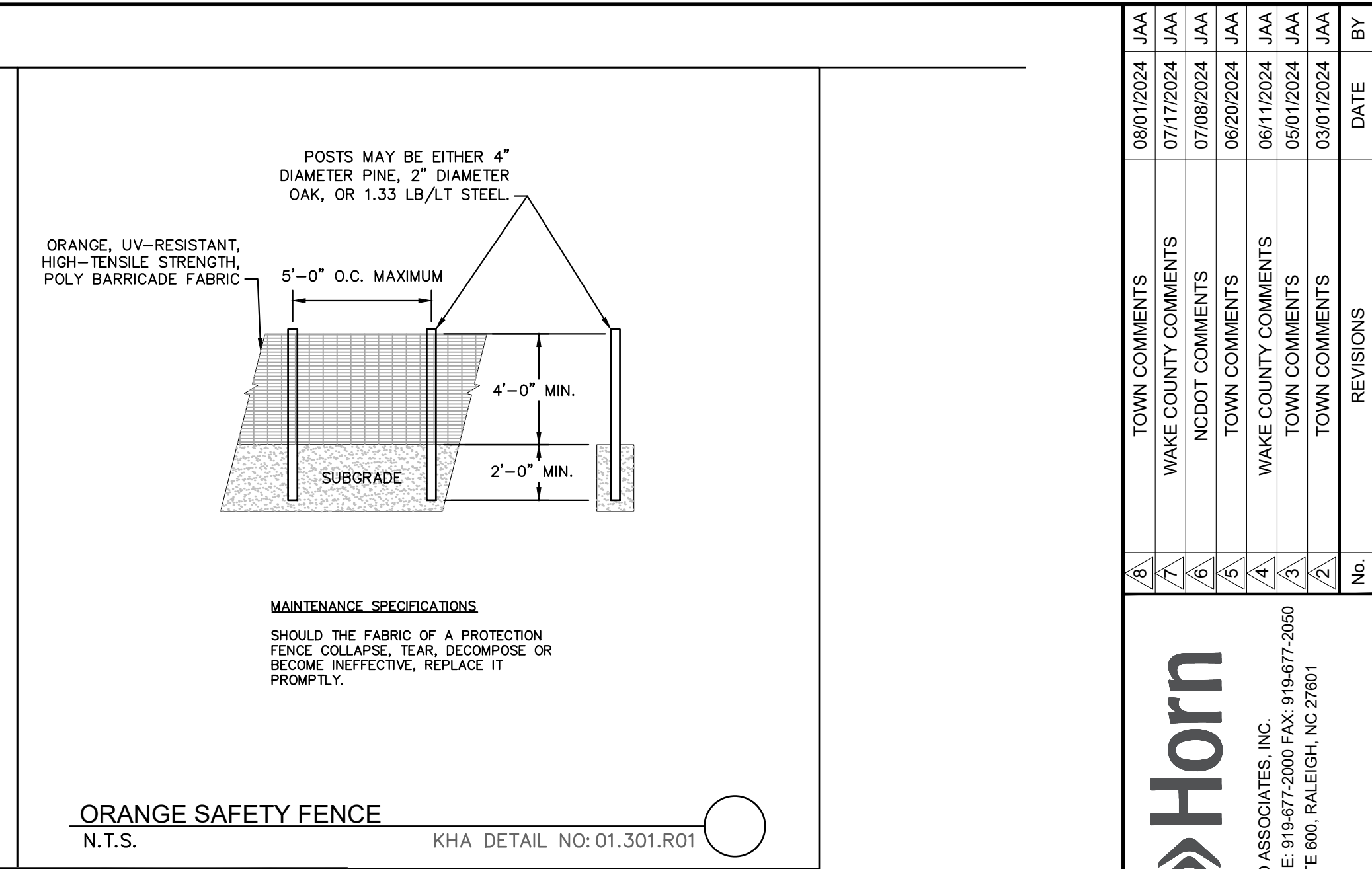
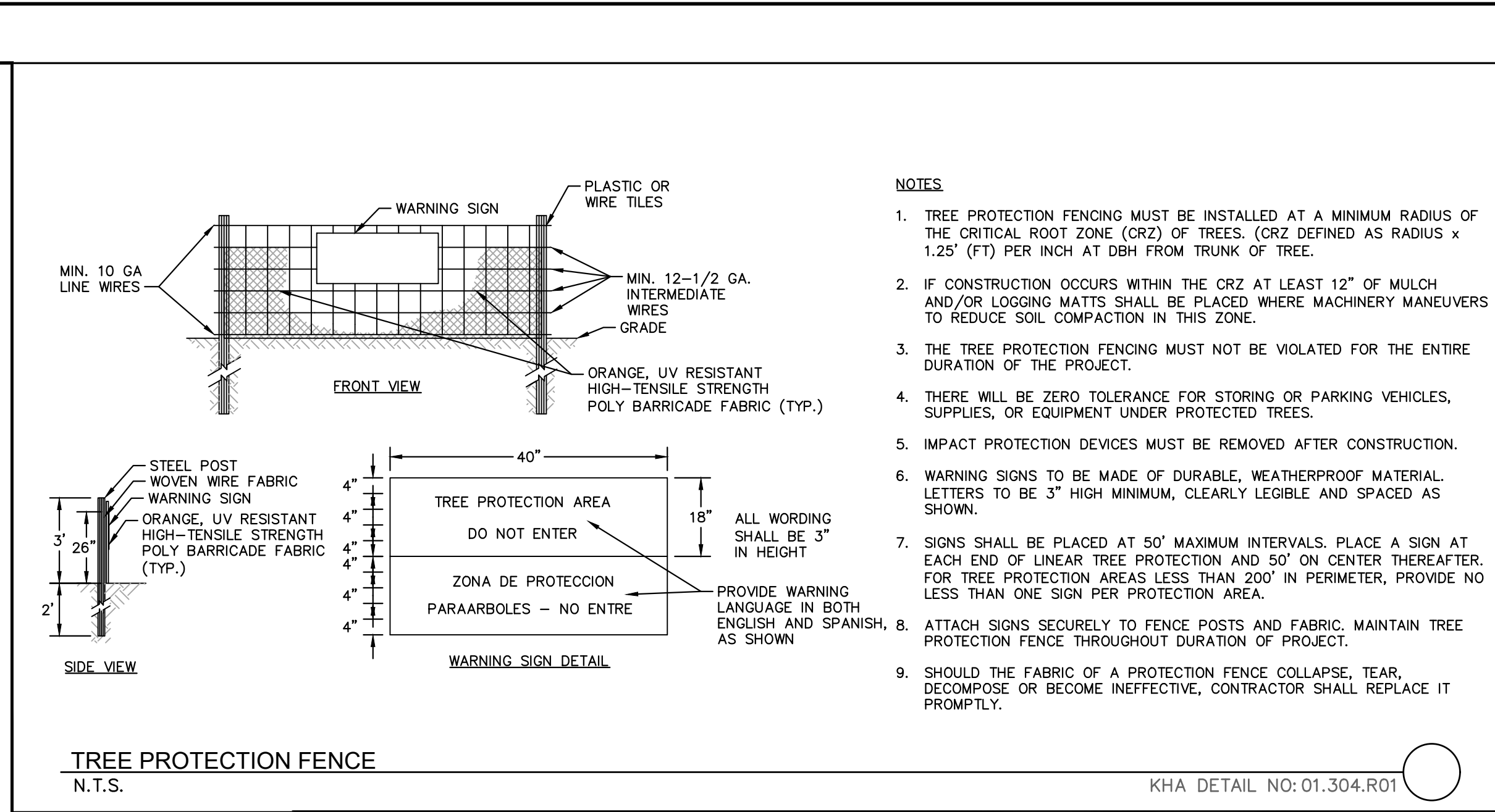
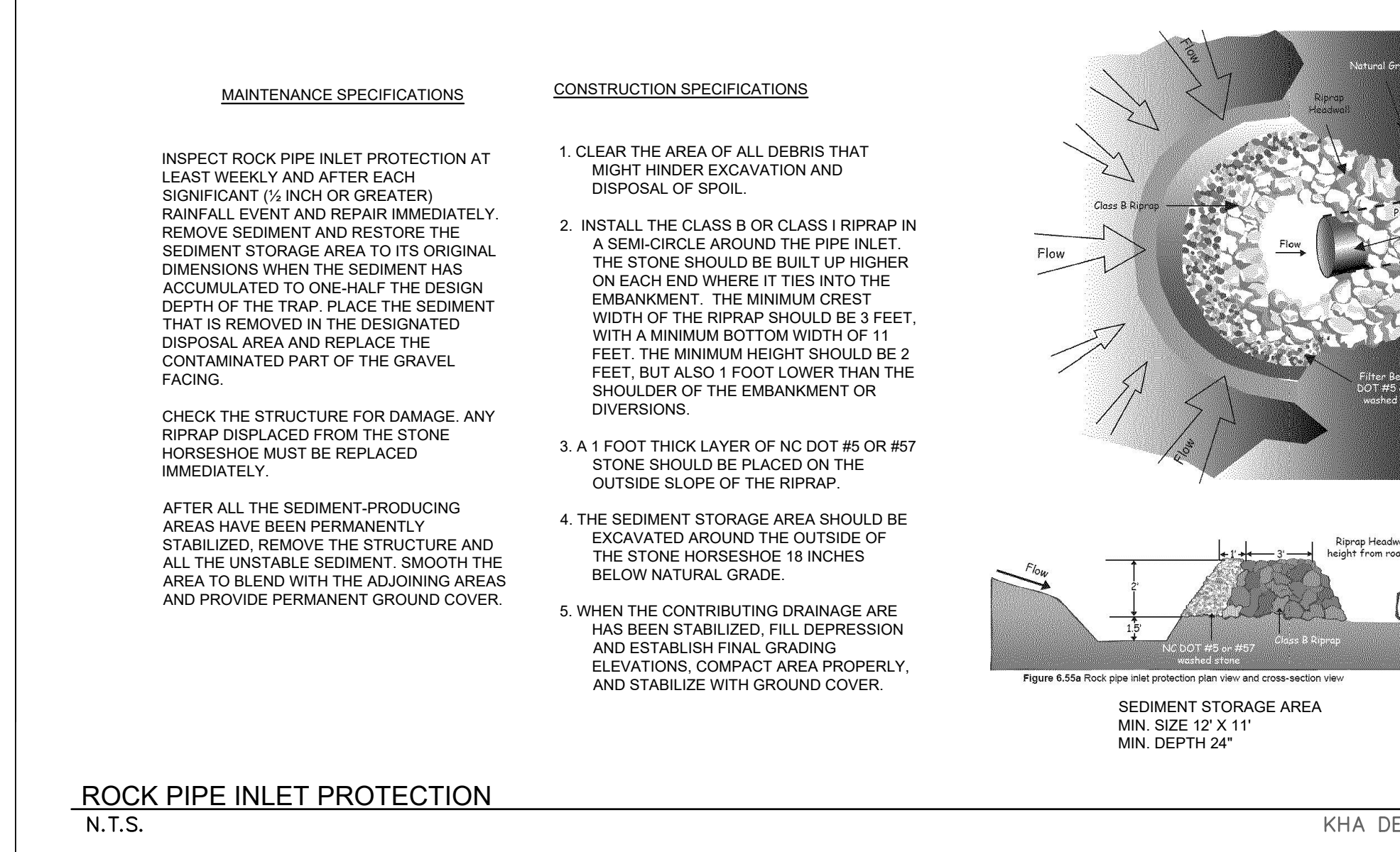
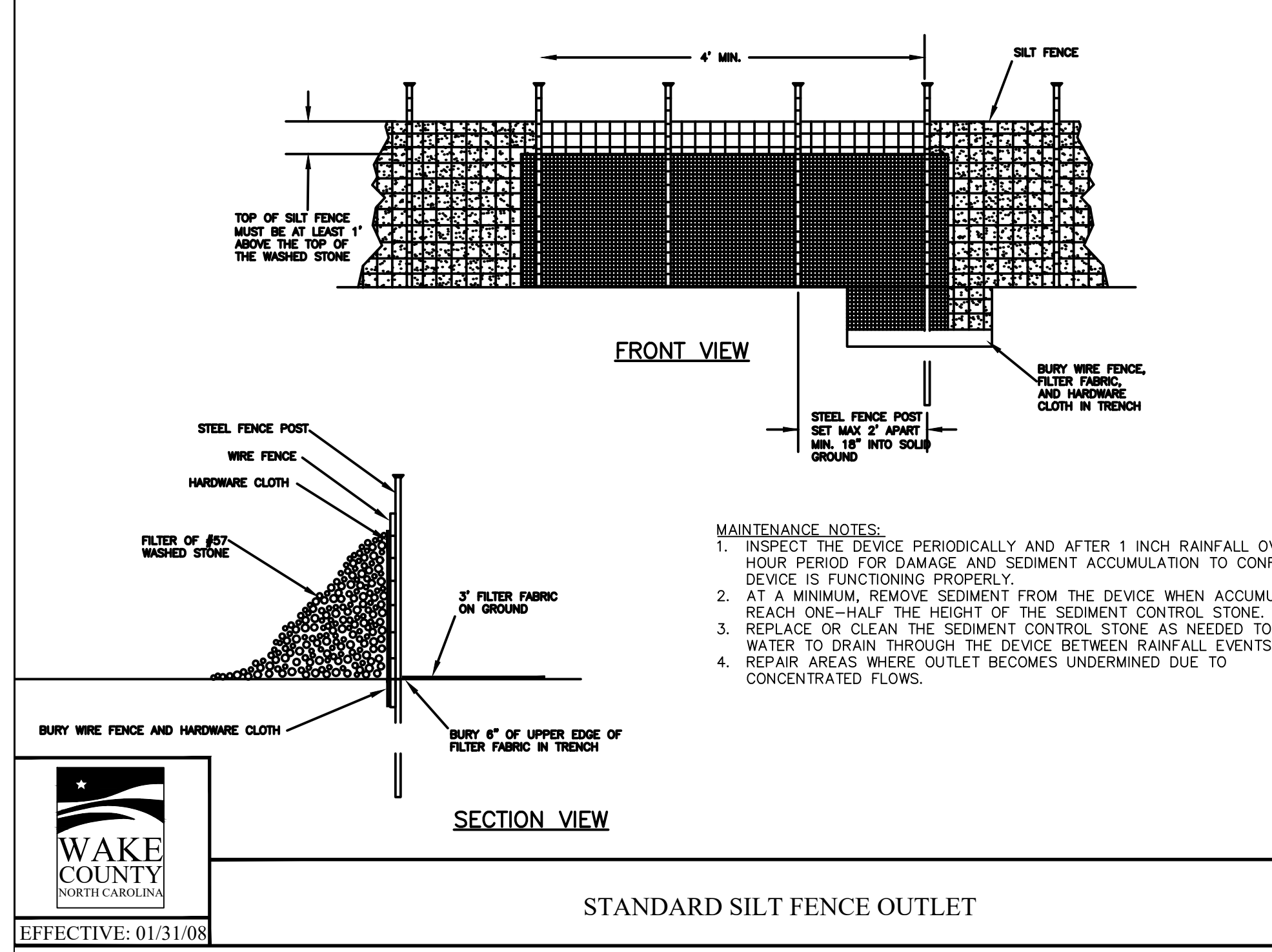
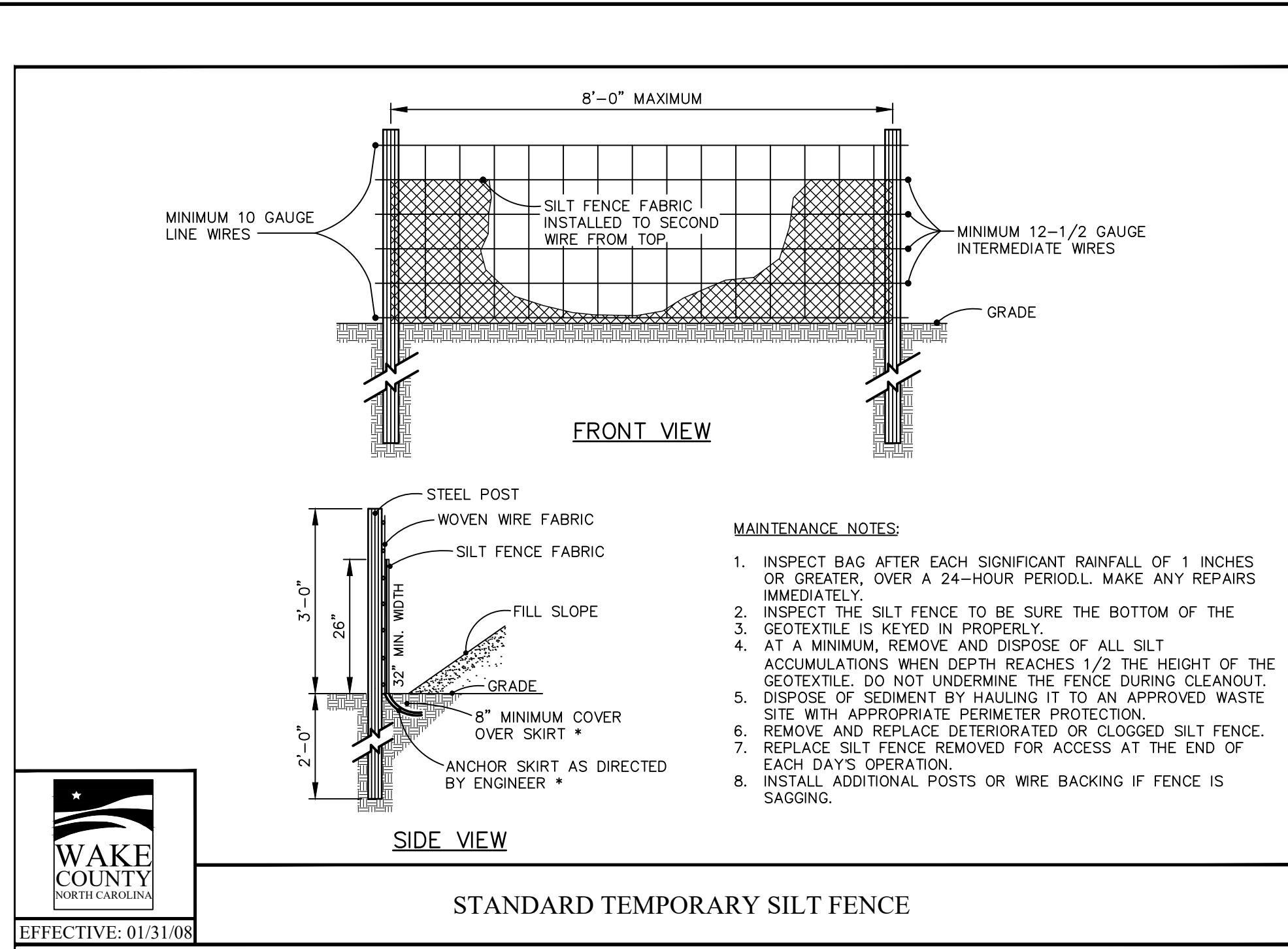
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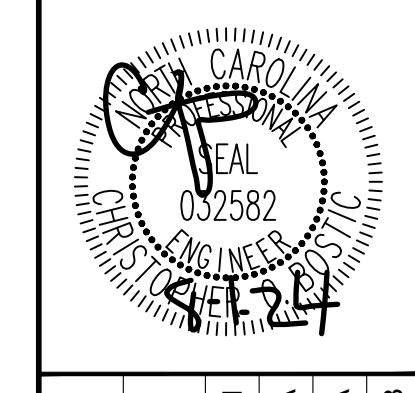
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NO.	REVISIONS	DATE
1	ISSUE FOR PERMIT	08/01/2024
2	WAKE COUNTY COMMENTS	07/17/2024
3	NC DOT COMMENTS	07/08/2024
4	TOWN COMMENTS	06/20/2024
5	WAKE COUNTY COMMENTS	06/11/2024
6	TOWN COMMENTS	05/01/2024
7	TOWN COMMENTS	03/01/2024

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 421 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601



KHA PROJECT	013031004
DATE	09/29/2023
SCALE	AS SHOWN
DESIGNED BY	JAA
DRAWN BY	JAA
CHECKED BY	COB

**THE LEARNING CENTER ROLESVILLE EROSION CONTROL DETAILS**

**PREPARED FOR**  
**ROLESVILLE, LLC.**  
 TOWN OF ROLESVILLE  
 NORTH CAROLINA

SHEET NUMBER  
**C5.4**



SDP-23-07



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

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

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

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

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

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

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

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

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

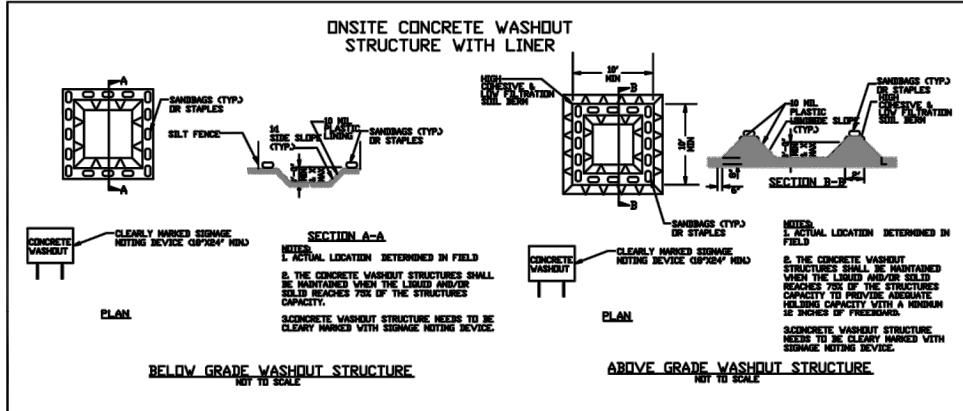
- PORTABLE TOILETS**
- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and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

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



## NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

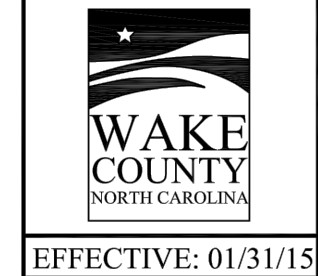
EFFECTIVE: 04/01/19



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

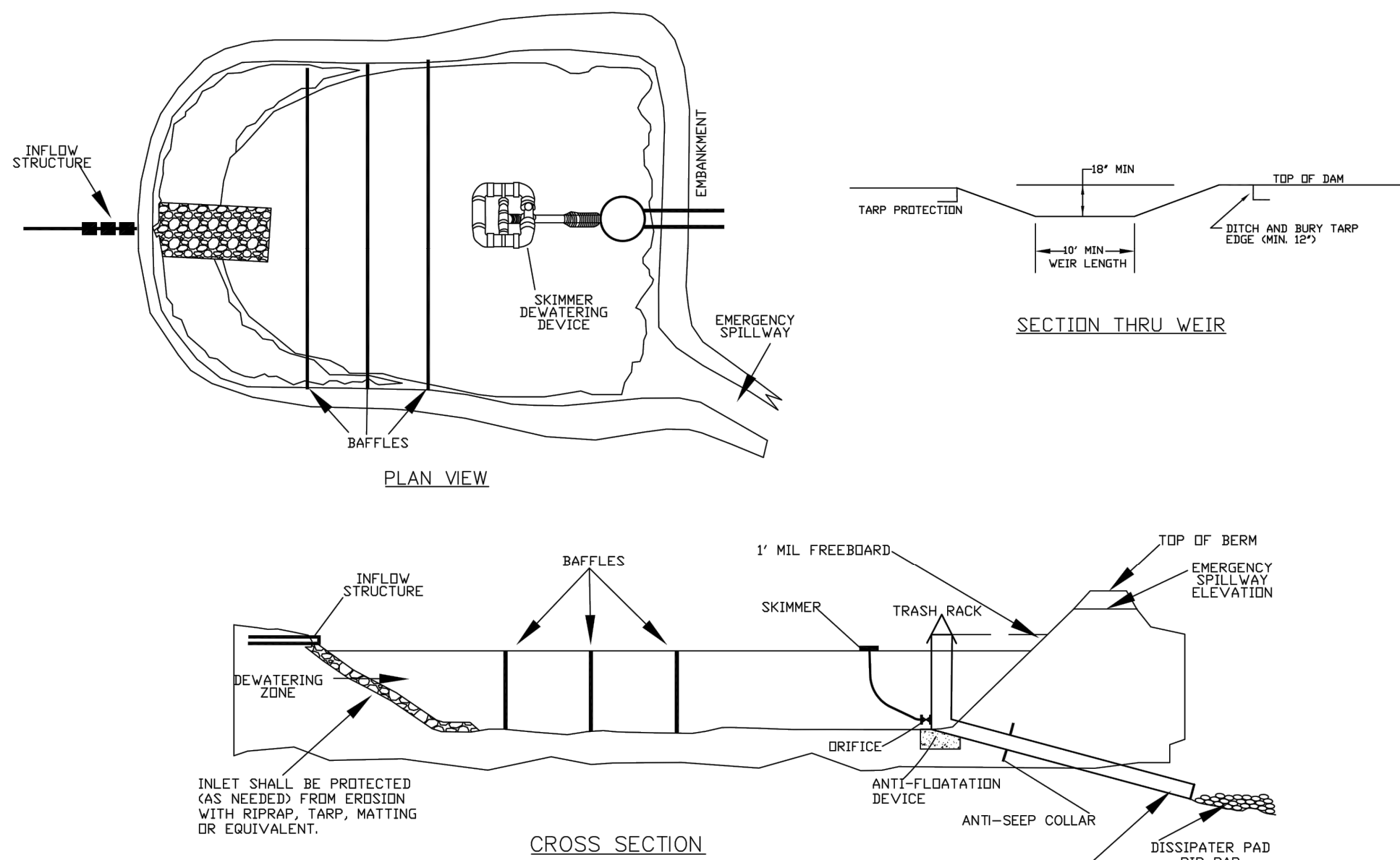
- HERBICIDES, PESTICIDES AND RODENTICIDES**
- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
  - Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in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

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



EFFECTIVE: 01/31/15

## STANDARD SKIMMER ATTACHED TO PERMANENT RISER



- NOTES:**
- THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARP/AULOUS OR EQUIVALENT FOR U.V. RESISTANCE.
  - PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
  - BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
  - DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
  - POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

- MAINTENANCE NOTES:**
- INSPECT THE BASIN AND RISER ON A REGULAR BASIS AND AFTER EVERY SIGNIFICANT RAINFALL EVENT (1 INCH OR GREATER).
  - BASIN SHOULD BE CLEANED UP WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
  - MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.

**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

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

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

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

- PART II, SECTION G, ITEM (4) DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT**
- Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:
- The E&S plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&S plan authority has approved these items,
  - The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
  - Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sized, designed and maintained dewatering tanks, weir tanks, and filtration systems,
  - Vegetated upland areas of the sites or a properly designed stone pad is used to the extent feasible as the outlet of the dewatering treatment devices described in Item (c) above,
  - Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
  - Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

## NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

**PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION B: RECORDKEEPING**

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

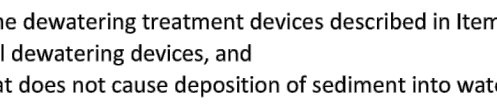
Item to Document	Documentation Requirements
(a) Each E&S measure has been installed and does not significantly deviate from the location, dimensions and relative elevations shown on the approved E&S plan.	Initial and date each E&S measure on a copy of the approved E&S plan or complete, date and sign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

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

- This General Permit as well as the Certificate of Coverage, after it is received.
- Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

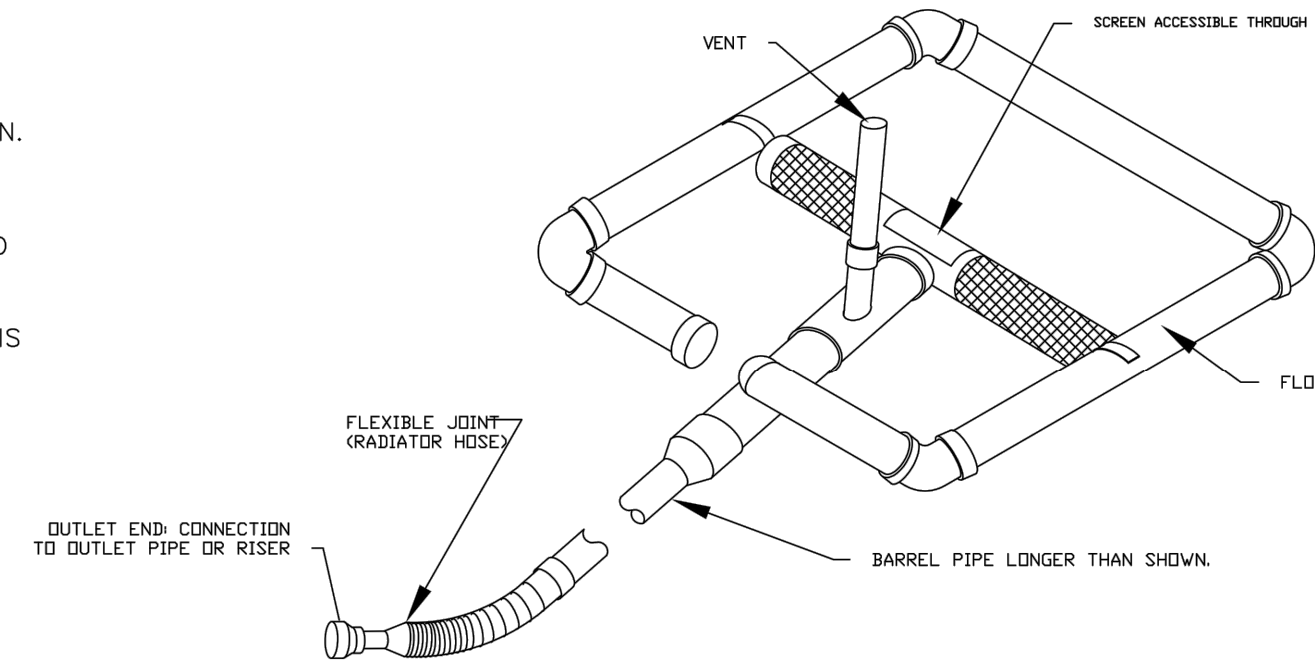
**3. Documentation to be Retained for Three Years**  
All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

- PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING**
- SECTION C: REPORTING**
- 1. Occurrences that Must be Reported**  
Permittees shall report the following occurrences:
- Visible sediment deposition in a stream or wetland.
  - Oil spills if:
    - They are 25 gallons or more,
    - They are less than 25 gallons but cannot be cleaned up within 24 hours,
    - They cause sheen on surface waters (regardless of volume), or
    - They are within 100 feet of surface waters (regardless of volume).
  - Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
  - Anticipated bypasses and unanticipated bypasses.
  - Noncompliance with the conditions of this permit that may endanger health or the environment.
- 2. Reporting Timeframes and Other Requirements**  
After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.
- | Occurrence   | Reporting Timeframes (After Discovery) and Other Requirements  |
|--|--|
| (a) Visible sediment deposition in a stream or wetland   | <ul style="list-style-type: none"><li>Within 24 hours, an oral or electronic notification.</li><li>Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li><li>If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.</li></ul> |
| (b) Oil spills and release of hazardous substances per Item 1(b)(1) above  | <ul style="list-style-type: none"><li>Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li></ul>   |
| (c) Anticipated bypasses [40 CFR 122.41(m)(1)]   | <ul style="list-style-type: none"><li>A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.</li></ul>   |
| (d) Unanticipated bypasses [40 CFR 122.41(m)(2)]   | <ul style="list-style-type: none"><li>Within 24 hours, an oral or electronic notification.</li><li>Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.</li></ul>   |
| (e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)] | <ul style="list-style-type: none"><li>Within 24 hours, an oral or electronic notification.</li><li>Within 7 calendar days, a report that contains a description of the noncompliance, and its cause; the period of noncompliance, including exact dates and times; and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [40 CFR 122.41(l)(8)].</li><li>Division staff may waive the requirement for a written report on a case-by-case basis.</li></ul>  |



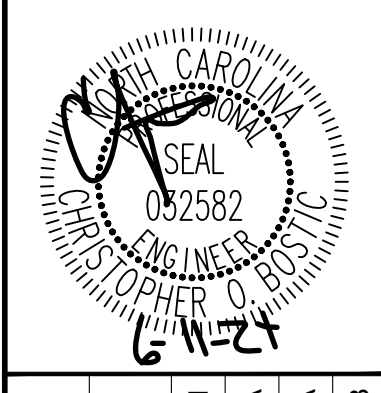
EFFECTIVE: 01/31/08

## STANDARD SKIMMER DETAIL



**SURVEY NOTE:**  
EXISTING TOPOGRAPHICAL INFORMATION IS BASED ON A TOPOGRAPHIC SURVEY OBTAINED ON 02/23/2003 BY CMP PROFESSIONAL LAND SURVEYORS, 333 S. WHITE STREET, WAKE FOREST, NC, 27888. PHONE: (919) 556-3148. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL EXISTING INFORMATION DEPICTED OR NOT, PRIOR TO CONSTRUCTION AND REPORT POTENTIAL CONFLICTS TO OWNER AND ENGINEER.

DATE	BY	REVISIONS
06/11/2024	JAA	WAKE COUNTY COMMENTS
05/01/2024	JAA	TOWN COMMENTS
03/01/2024	JAA	TOWN COMMENTS
01/02/2024	JAA	TOWN COMMENTS



KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
013031004	09/29/2023	AS SHOWN	JAA	JAA	COE

**THE LEARNING CENTER ROLESVILLE EROSION CONTROL DETAILS**

PREPARED FOR  
**ROLESVILLE, LLC.**  
TOWN OF ROLESVILLE  
NORTH CAROLINA

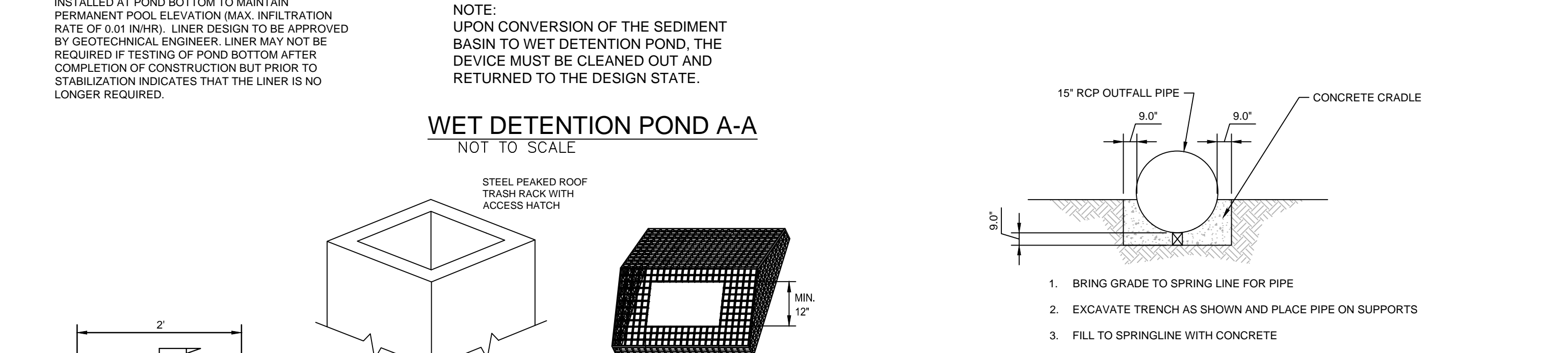
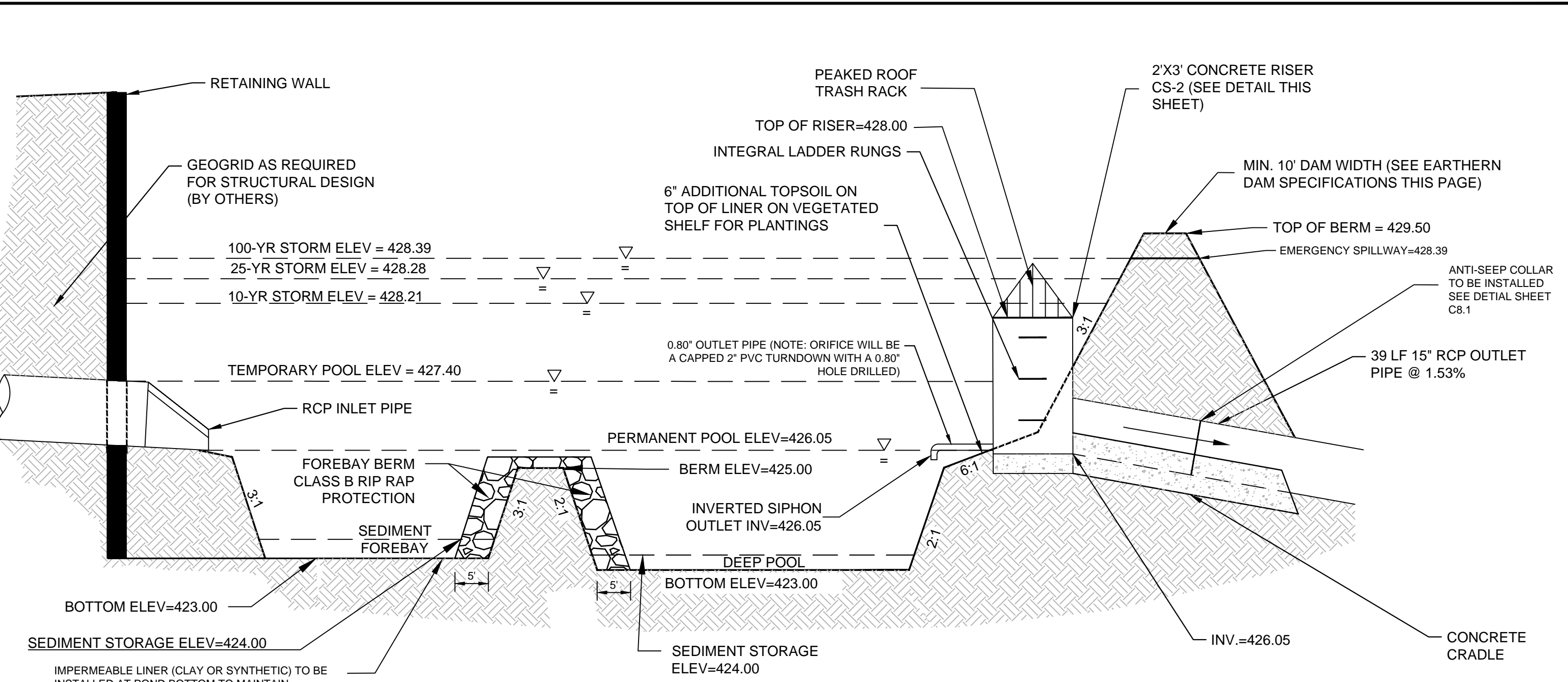
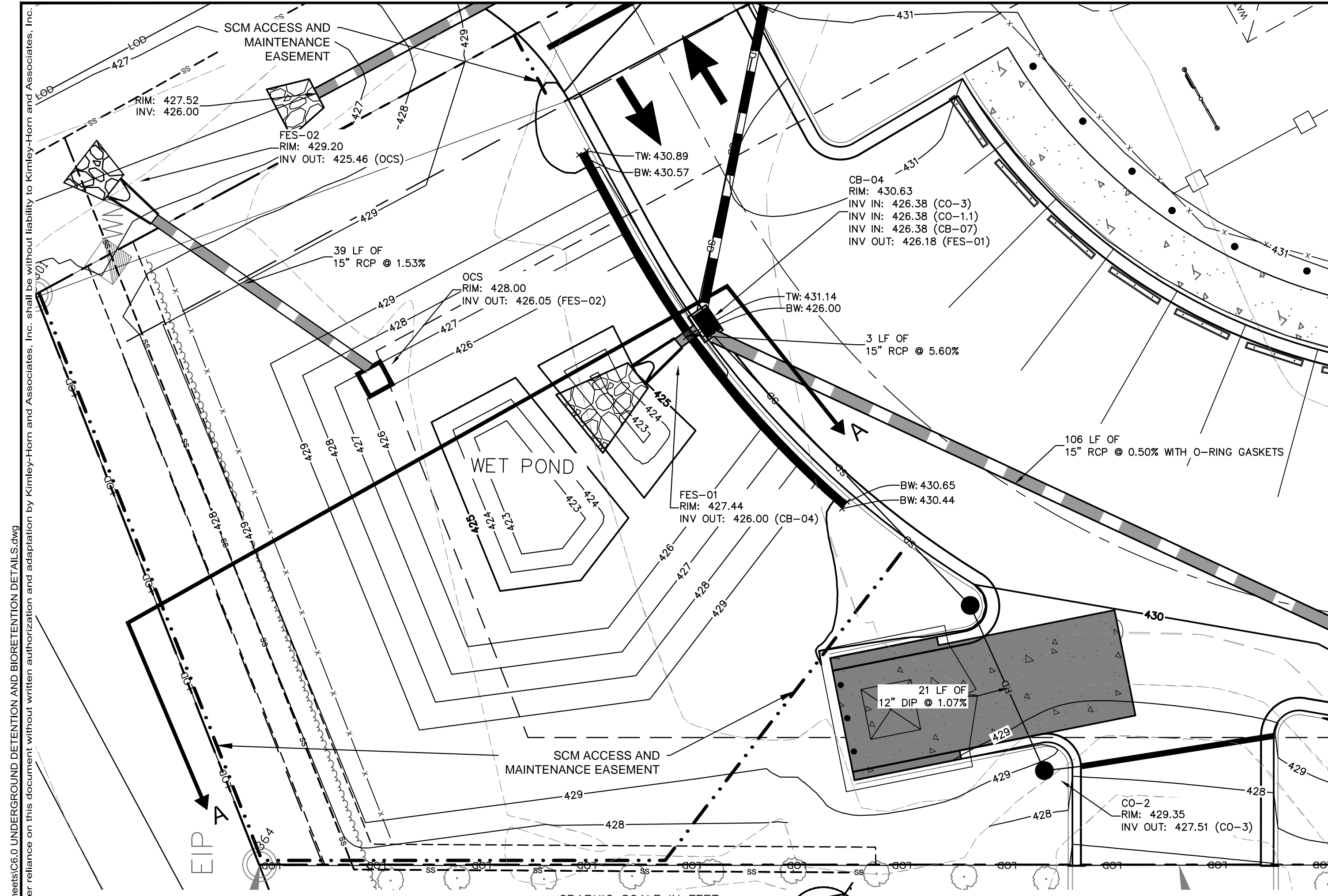
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Know what's below.  
Call before you dig.

SDP-23-07

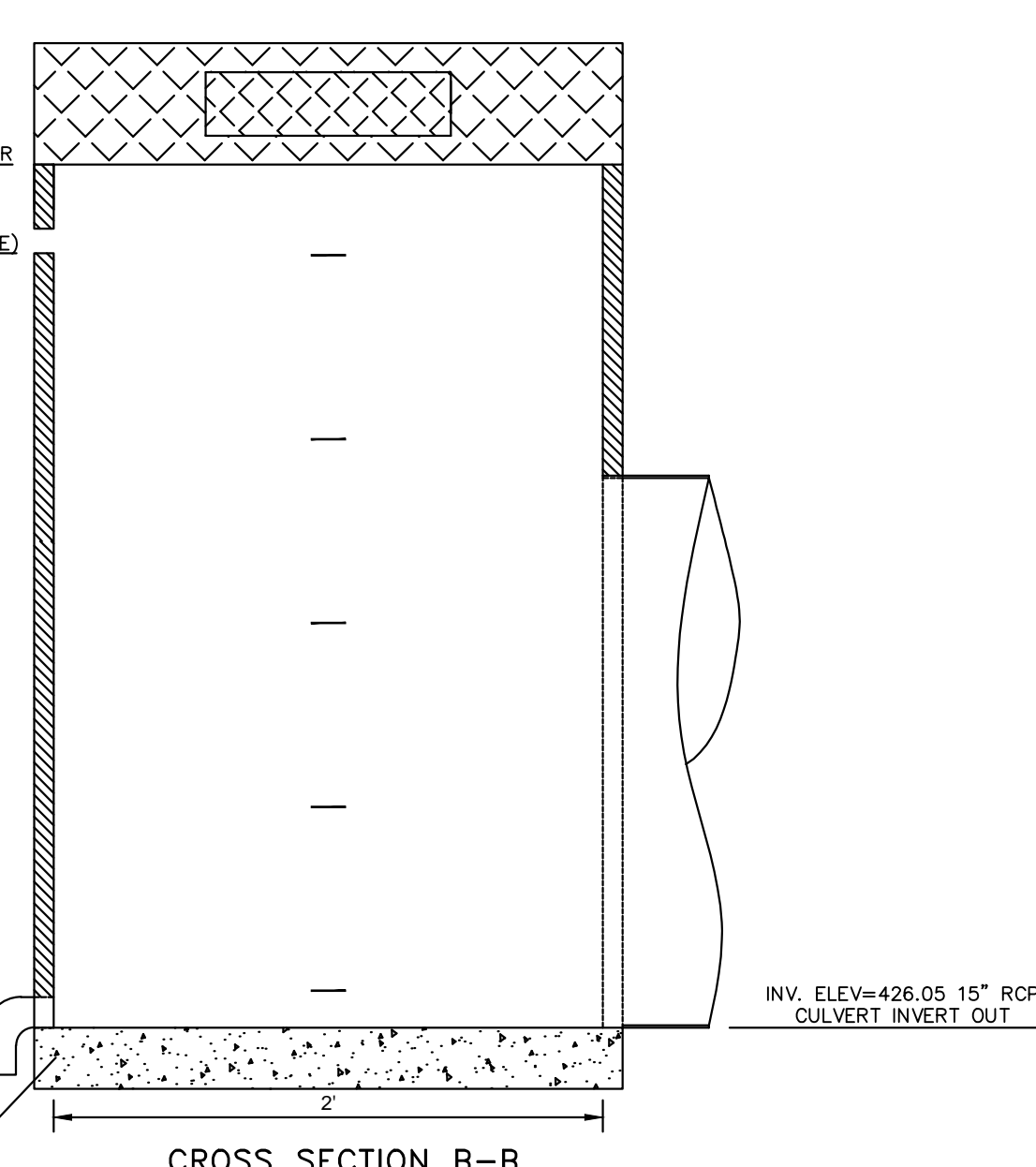
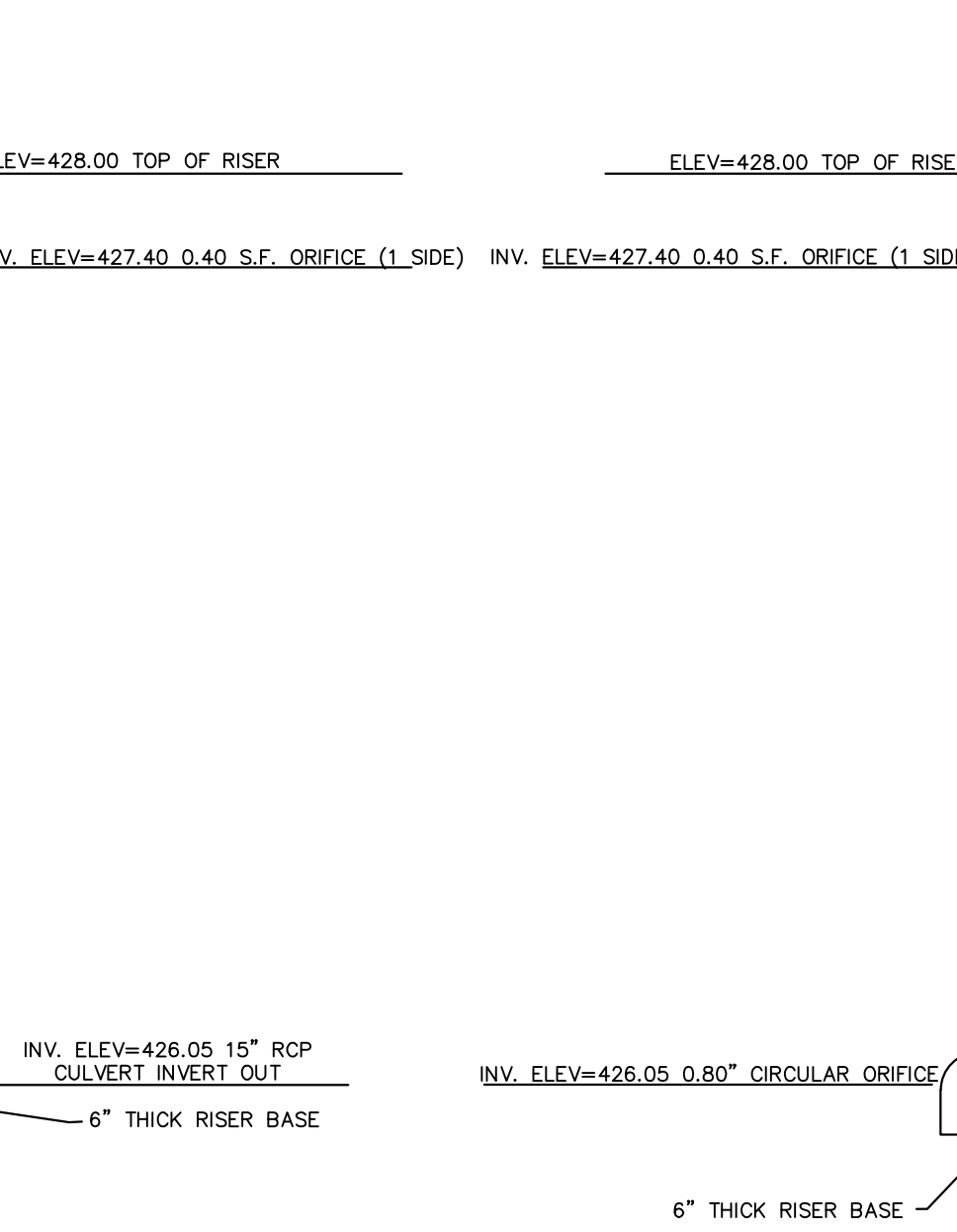
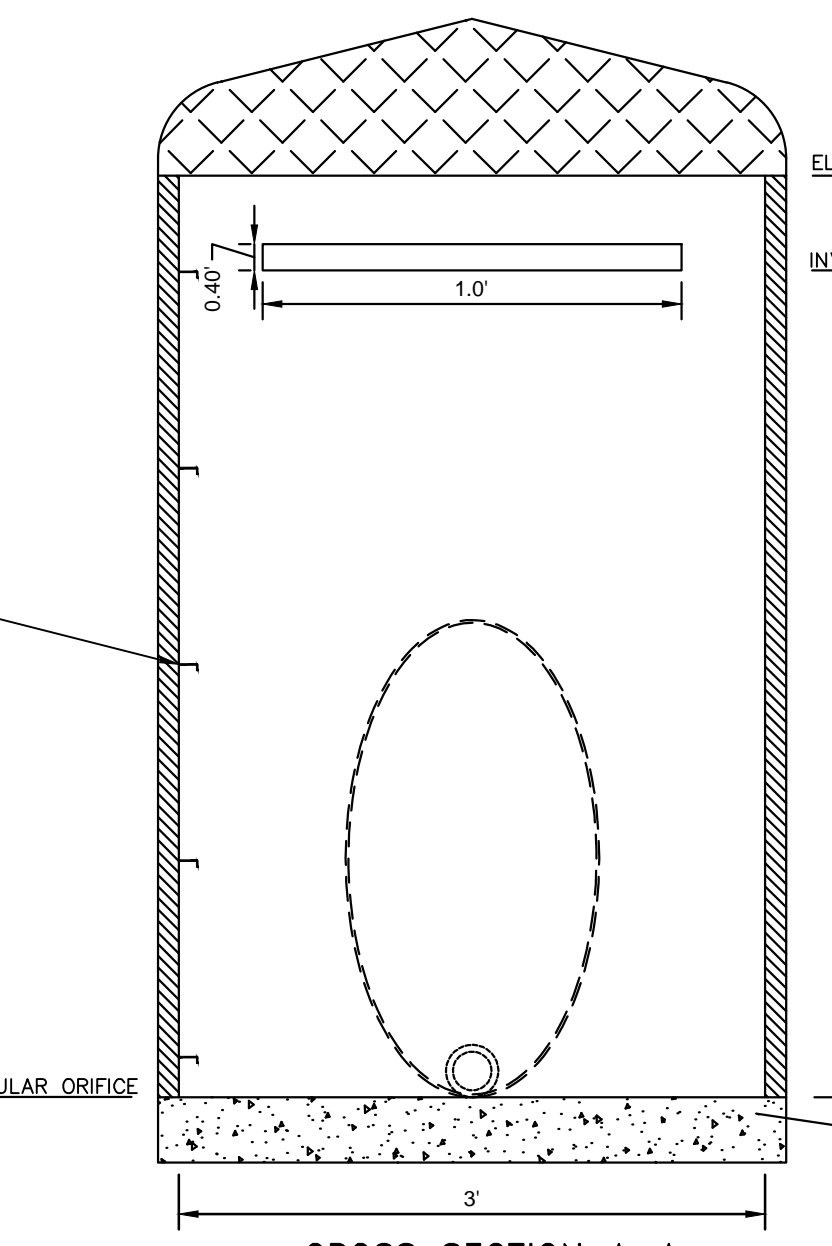
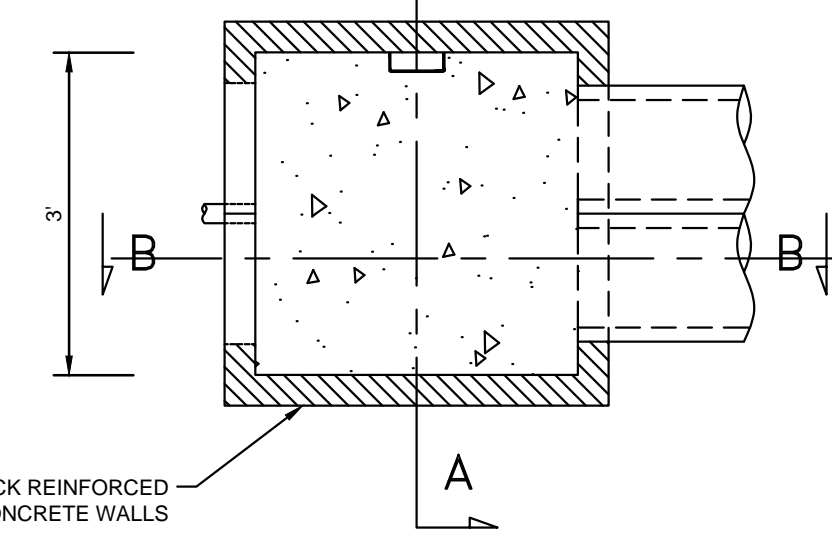
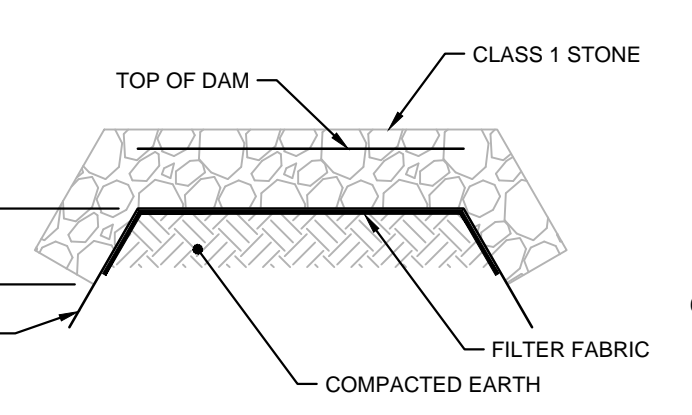




**EARTHEN DAM SPECIFICATIONS**

- OTHERWISE PROVIDED, THE WIDTH OF A BUFFER ZONE IS MEASURED HORIZONTALLY FROM THE EDGE OF THE WATER TO THE NEAREST EDGE OF THE DISTURBED AREA, WITH THE 25 PERCENT OF THE STRIP NEARER THE LAND-DISTURBING ACTIVITY CONTAINING NATURAL OR ARTIFICIAL MEANS OF CONFINING VISIBLE SILTATION.
- THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. THE ANGLE FOR GRADED SLOPES AND FILLS MUST BE DEMONSTRATED TO BE STABLE. STABLE IS THE CONDITION WHERE THE SOIL REMAINS IN ITS ORIGINAL CONFIGURATION, WITH OR WITHOUT MECHANICAL CONSTRAINTS.
- UNLESS A PERMIT FROM THE DEPARTMENT'S DIVISION OF WASTE MANAGEMENT TO OPERATE A LANDFILL IS ON FILE FOR THE OFFICIAL SITE, ACCEPTABLE FILL MATERIAL SHALL BE FREE OF ORGANIC OR OTHER DEGRADABLE MATERIALS, MASONRY, CONCRETE AND BRICK IN SIZES EXCEEDING 12 INCHES, AND ANY MATERIALS WHICH WOULD CAUSE THE SITE TO BE REGULATED AS A LANDFILL BY THE STATE OF NORTH CAROLINA.
- WHENEVER LAND-DISTURBING ACTIVITY THAT WILL DISTURB MORE THAN ONE ACRE IS UNDERTAKEN ON A TRACT, THE PERSON CONDUCTING THE LAND-DISTURBING ACTIVITY SHALL INSTALL EROSION AND SEDIMENTATION CONTROL DEVICES AND PRACTICES THAT ARE SUFFICIENT TO RETAIN THE SEDIMENT GENERATED BY THE LAND DISTURBING ACTIVITY WITHIN THE BOUNDARIES OF THE TRACT DURING CONSTRUCTION UPON AND DEVELOPMENT OF SAID TRACT, AND SHALL PLANT OR OTHERWISE PROVIDE A PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION AFTER COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
- ALL SUBGRADE TO RECEIVE FILL SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING NEW FILL. METHODS FOR EVALUATION SHALL INCLUDE PROOF ROLLING USING TANDEM AXLE DUMP TRUCK OR SIMILAR PNEUMATIC TIRE EQUIPMENT, OR OTHER METHODS AS SPECIFIED BY THE ON-SITE GEOTECHNICAL ENGINEER. ALL SOIL THAT RUTS, PUMPS, OR DEFLECTS EXCESSIVELY AS DETERMINED BY THE GEOTECHNICAL ENGINEER SHALL BE CORRECTED AS SPECIFIED BY THE ON-SITE GEOTECHNICAL ENGINEER.
- UNLESS OTHERWISE PROVIDED, THE WIDTH OF A BUFFER ZONE IS MEASURED HORIZONTALLY FROM THE EDGE OF THE WATER TO THE NEAREST EDGE OF THE DISTURBED AREA, WITH THE 25 PERCENT OF THE STRIP NEARER THE LAND DISTURBING ACTIVITY CONTAINING NATURAL OR ARTIFICIAL MEANS OF CONFINING VISIBLE SILTATION.
- THE SURFACE OF THE GROUND AND MOISTURE CONTENT OF THE LOOSENED MATERIAL SHALL BE SUCH THAT IT WILL READILY BOND WITH THE FIRST LAYER OF FILL MATERIAL.
- CONTROLLED FILL, AS SPECIFIED BY THE GEOTECHNICAL ENGINEER, IN THE DAM EMBANKMENT SHALL BE PLACED IN 6-INCH LOOSE LAYERS (3-INCH LOOSE LAYERS WITHIN 3- FEET OF EITHER SIDE OF THE PRINCIPAL SPILLWAY PIPE TO A DEPTH OF 2- FEET OVER THE PIPE) AND SHALL BE COMPACTED TO A DENSITY OF NO LESS THAN 95% OF THE STANDARD PROCTOR MAXIMUM DENSITY AT A MOISTURE CONTENT OF + OR - TWO PERCENTAGE POINTS OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698.
- ANY FILL LAYER THAT IS SMOOTH DRUM ROLLED TO REDUCE MOISTURE PENETRATION DURING A STORM EVENT SHALL BE PROPERLY SCARIFIED PRIOR TO THE PLACEMENT OF THE NEXT SOIL LIFT.
- FILL ADJACENT TO THE RISER AND PRINCIPAL SPILLWAY PIPE SHALL BE PLACED SO THAT LIFTS ARE AT THE SAME LEVEL ON BOTH SIDES OF THE STRUCTURES.
- EARTHWORK COMPACTION WITHIN 3- FEET OF ANY STRUCTURES SHALL BE ACCOMPLISHED BY MEANS OF HAND TAMPERS, MANUALLY DIRECTED POWER TAMPERS OR PLATE COMPACTORS OR MINIATURE SELF-PROPELLED ROLLERS.
- SURFACE WATER AND STREAM FLOW SHALL BE CONTINUOUSLY CONTROLLED THROUGHOUT CONSTRUCTION AND THE PLACEMENT OF CONTROLLED FILL.
- AT THE END OF EACH DAY'S ACTIVITIES, CONTRACTOR SHALL SEAL SURFACE OF NEW FILL BY USE OF A SMOOTH WHEEL ROLLER AND PROVIDE POSITIVE DRAINAGE OFF OF NEW FILL SURFACE.
- THE GEOTECHNICAL ENGINEER MUST INSPECT AND APPROVE ALL SUBGRADES AND FILL LAYERS BEFORE FURTHER CONSTRUCTION WORK IS PERFORMED THEREON.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRYING SOILS TOO WET TO ACHIEVE COMPACTION OR STABILITY. SOILS SHALL NOT BE CONSIDERED UNSUITABLE SOLELY DUE TO MOISTURE CONTENT.
- COMPACTION BY MEANS OF DROP WEIGHTS FROM A CRANE OR HOST SHALL NOT BE PERMITTED.
- HEAVY EQUIPMENT SHALL NOT BE ALLOWED TO PASS OVER CAST-IN-PLACE STRUCTURES UNTIL ADEQUATE CURING TIME HAS ELAPSED.
- TESTS OF THE DEGREE (%) OF COMPACTION OF THE PLACED FILL IN THE DAM SHALL BE PERFORMED AS A PART OF THE CONTRACTOR'S NORMAL QUALITY CONTROL PROGRAM FOR THE CONSTRUCTION OF THE DAM. TESTS SHALL BE CONDUCTED CONCURRENT WITH THE INSTALLATION OF THE COMPACTED FILL, AND THE CONTRACTOR SHALL COORDINATE THE CONSTRUCTION OF THE DAM SO THAT THE TESTING CAN BE COMPLETED. SHOULD THE RESULTS OF THE TESTS INDICATE THAT THE SPECIFIED DEGREE OF COMPACTION HAS NOT BEEN OBTAINED, THE PORTIONS OF THE DAM REPRESENTED BY SUCH TESTS SHALL BE REWORKED OR REBUILT. ALL PORTIONS OF THE DAM SHALL ACHIEVE THE SPECIFIED MINIMUM DEGREE OF COMPACTION.

**SECTION A-A SPILLWAY**  
NOT TO SCALE



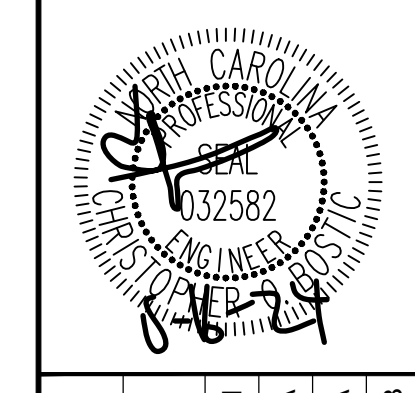
NOTE: AT THE CONCLUSION OF THE PROJECT ALL SCMS INSTALLED ON-SITE MUST BE CERTIFIED BY A DESIGN PROFESSIONAL AND WAKE COUNTY MUST RECEIVE ALL AS-BUILT DRAWINGS PRIOR TO RECEIVING THE CERTIFICATE OF OCCUPANCY.

NOTE: CONTRACTOR TO ENSURE ACCESS EASEMENTS AND ASSOCIATED STREETS ARE FULLY MAINTAINED FOR REASONABLE ACCESS BY MAINTENANCE PERSONNEL.

WAKE COUNTY COMMENTS	TOWN COMMENTS	DATE	BY
		08/16/2024	JAA
		08/01/2024	JAA
		07/17/2024	JAA
		07/08/2024	JAA
		06/20/2024	JAA
		06/11/2024	JAA
		05/01/2024	JAA

**Kimley»Horn**

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#F-0102 WWW.KIMLEY-HORN.COM PHONE: 919-677-2000 FAX: 919-677-2050  
421 FAYETTEVILLE STREET, SUITE 400, RALEIGH, NC 27601



KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
013031004	09/29/2023	AS SHOWN	JAA	JAA	COB

**THE LEARNING CENTER ROLESVILLE**  
PREPARED FOR  
**ROLESVILLE, LLC.**  
TOWN OF ROLESVILLE  
NORTH CAROLINA

**WET POND DETAILS**

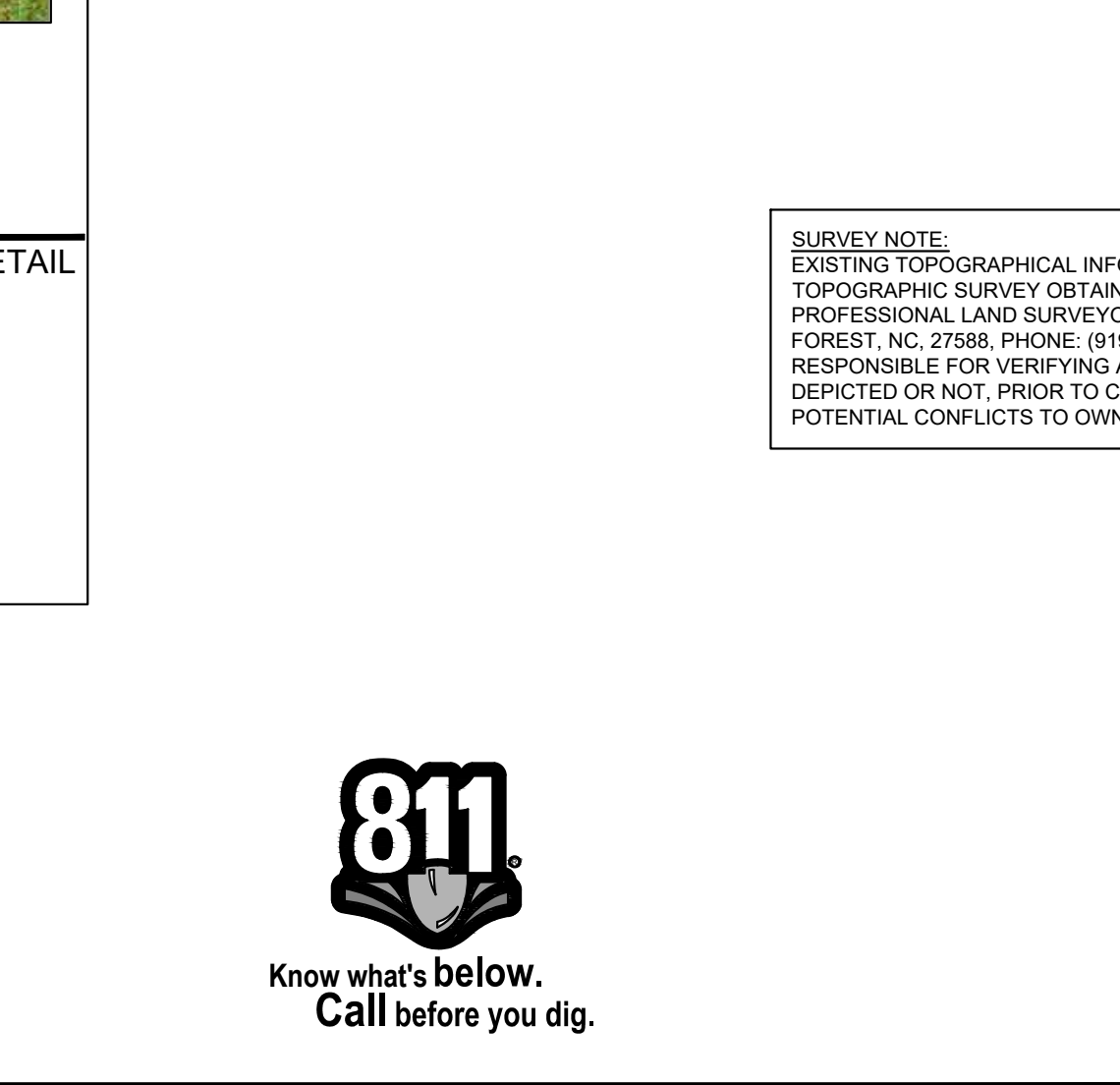
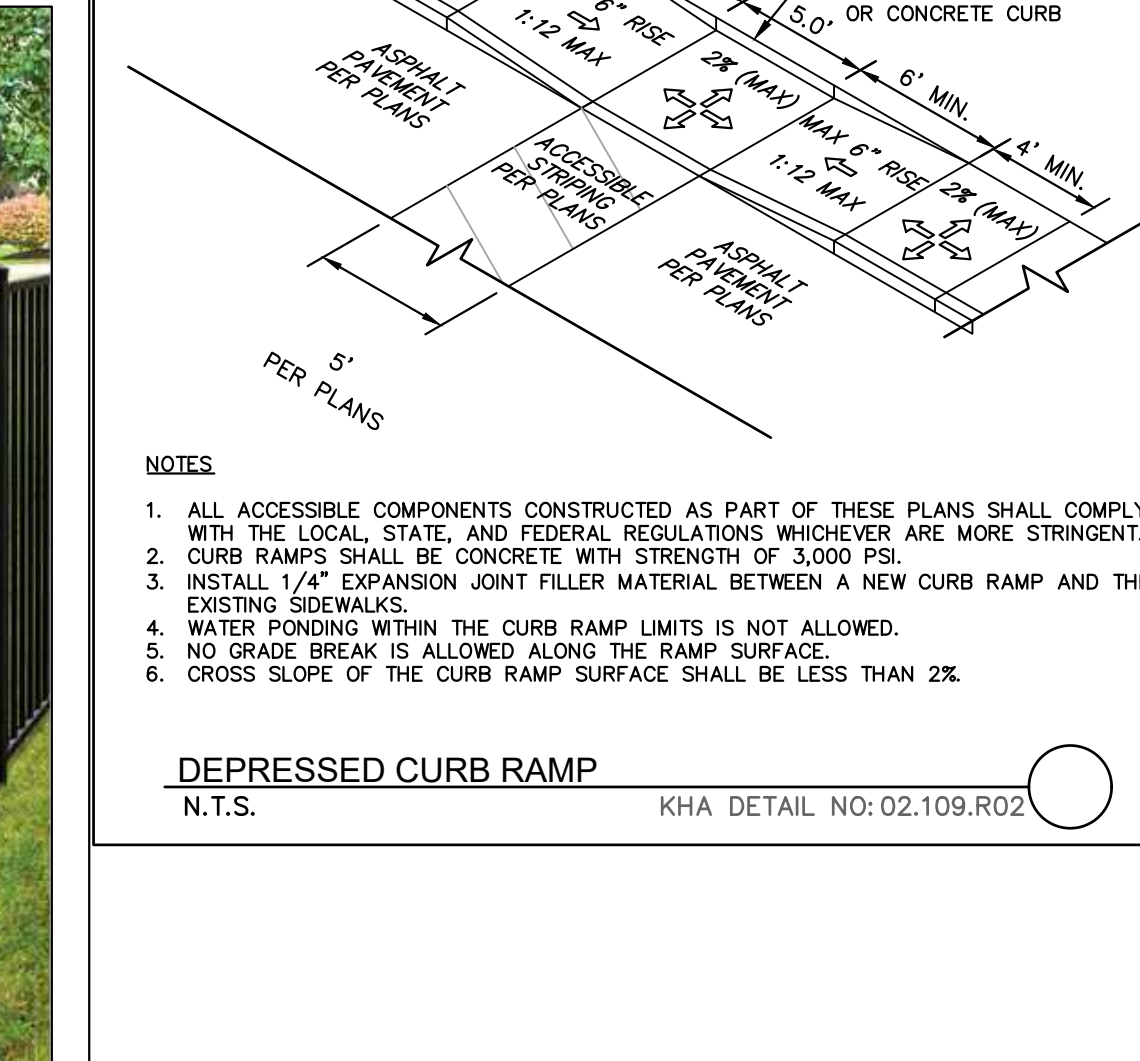
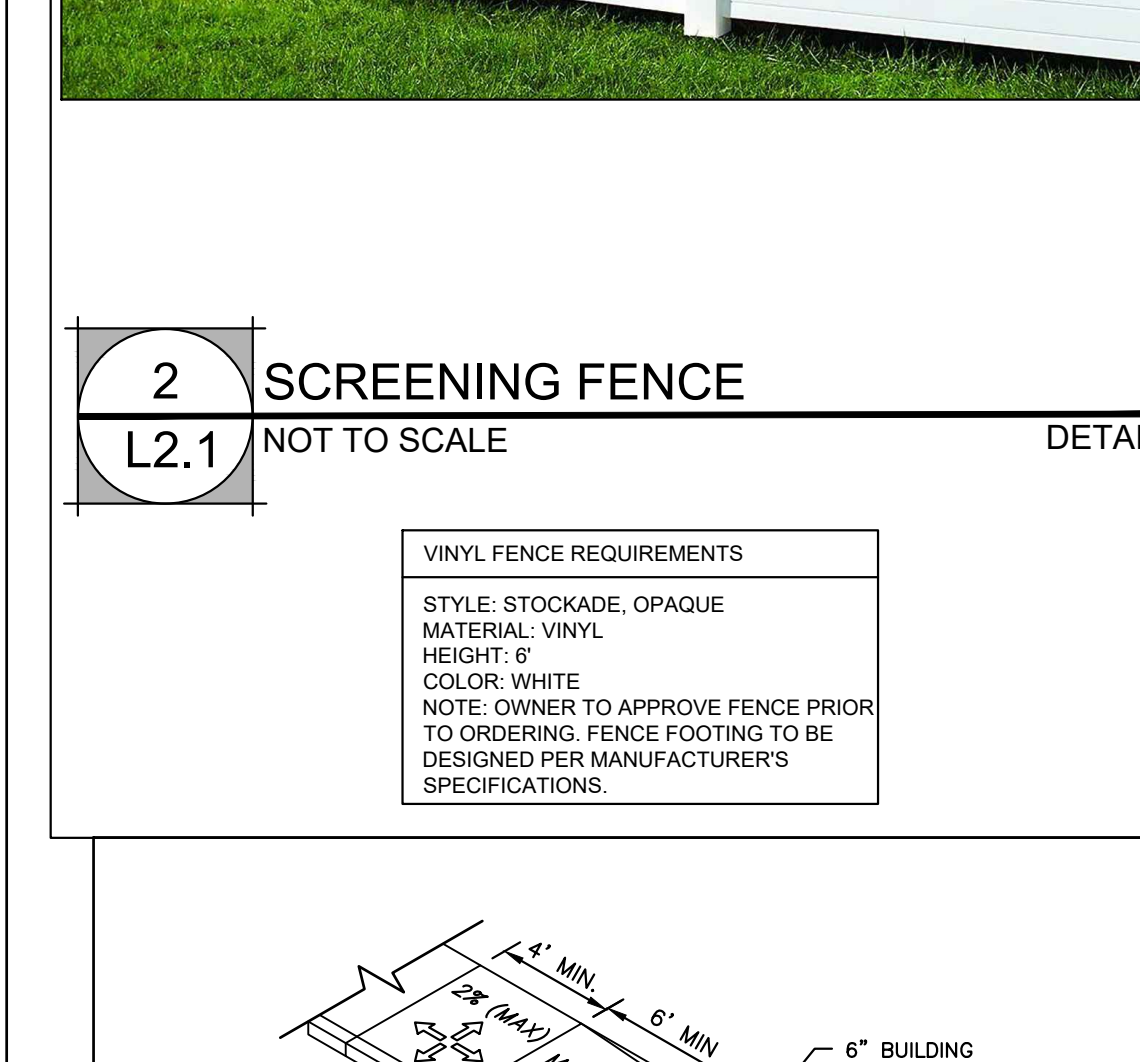
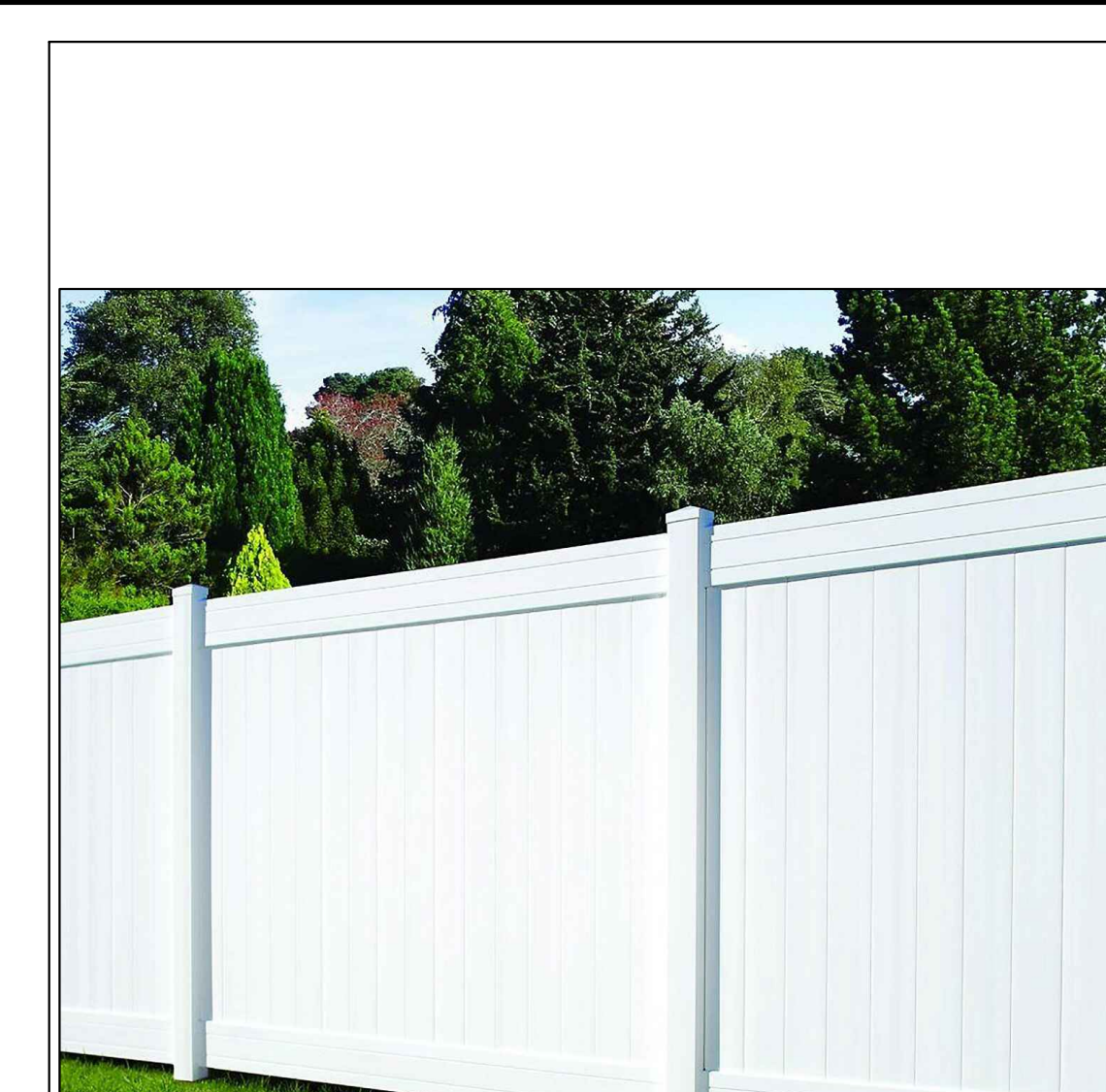
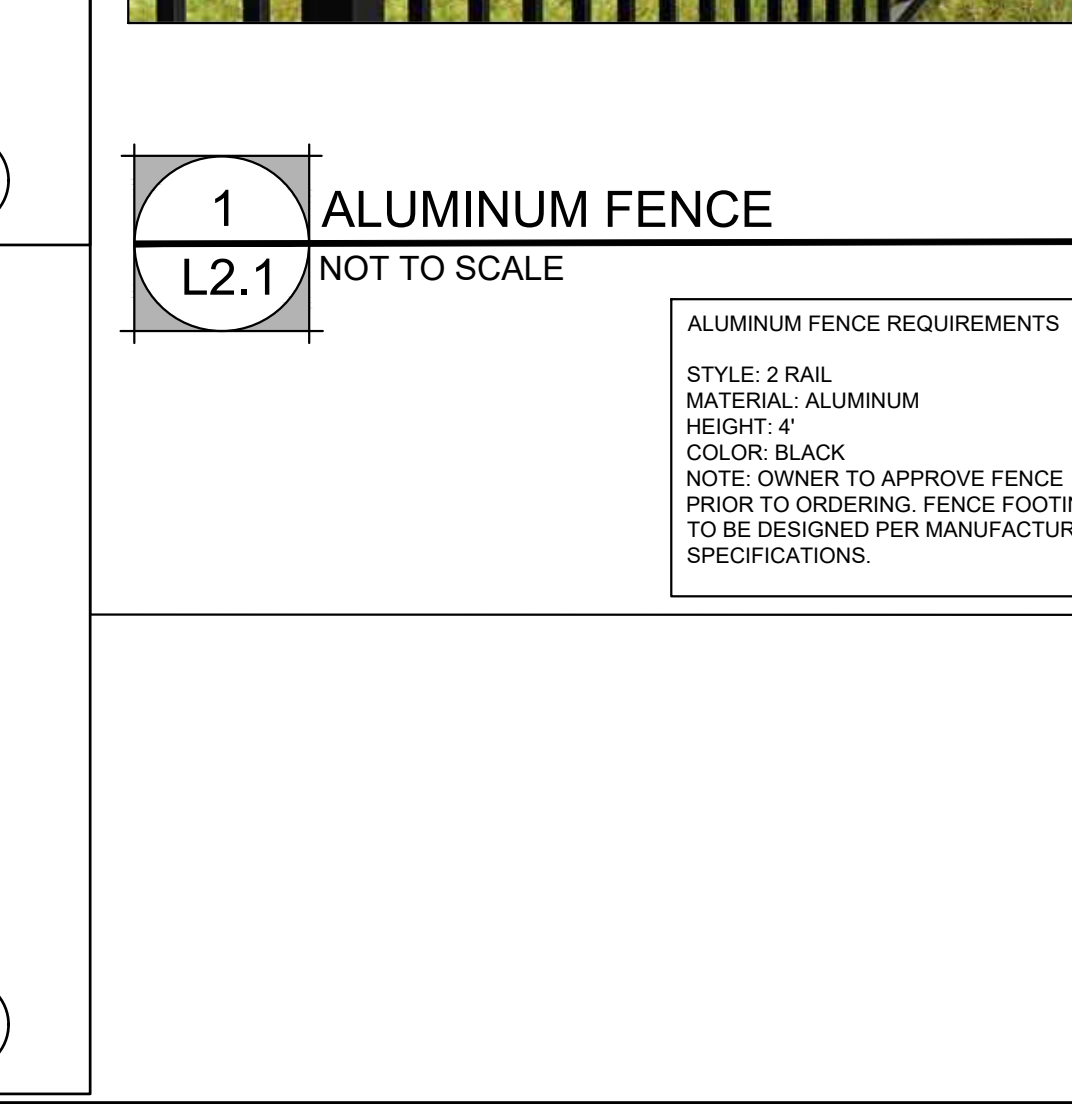
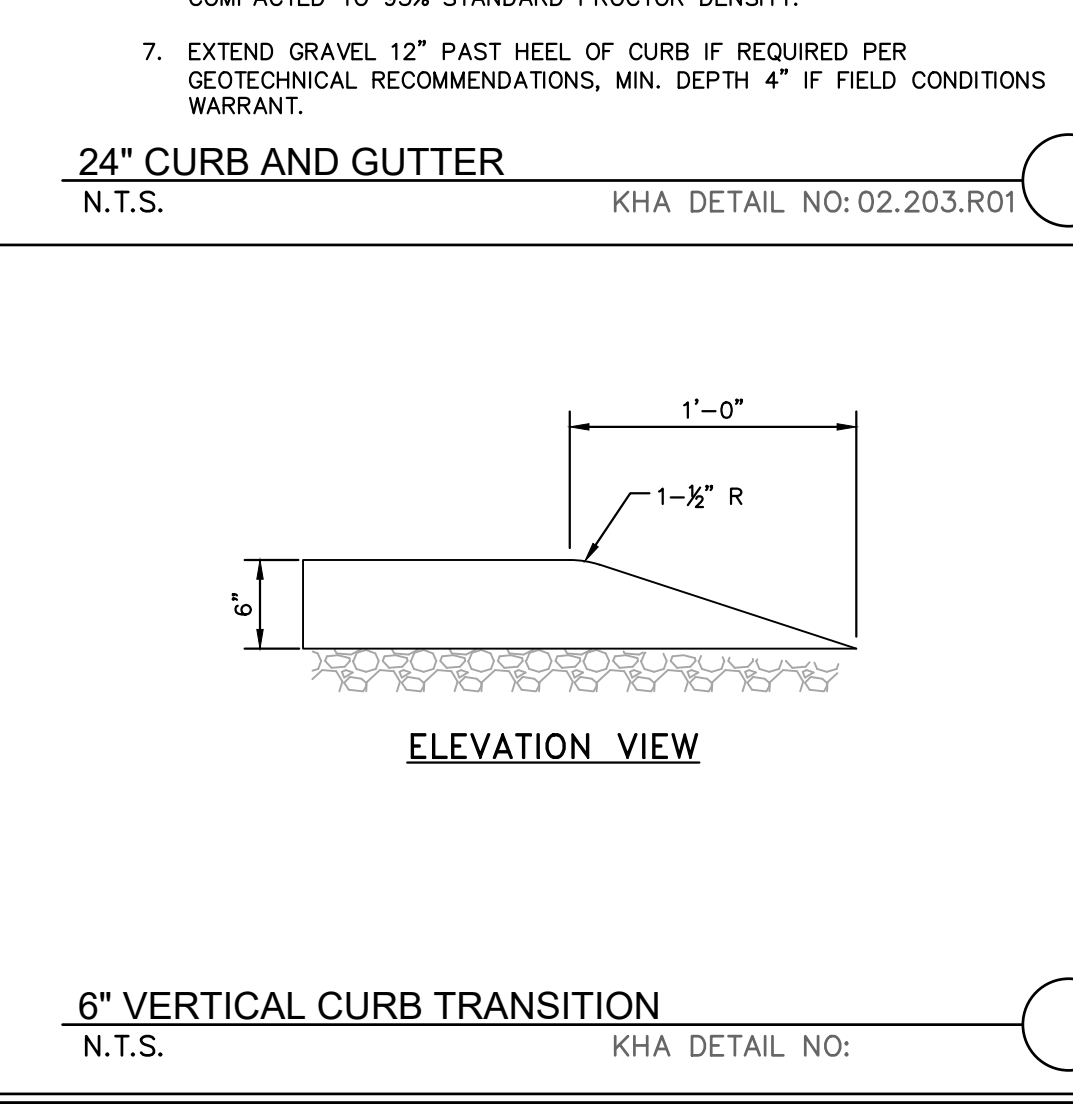
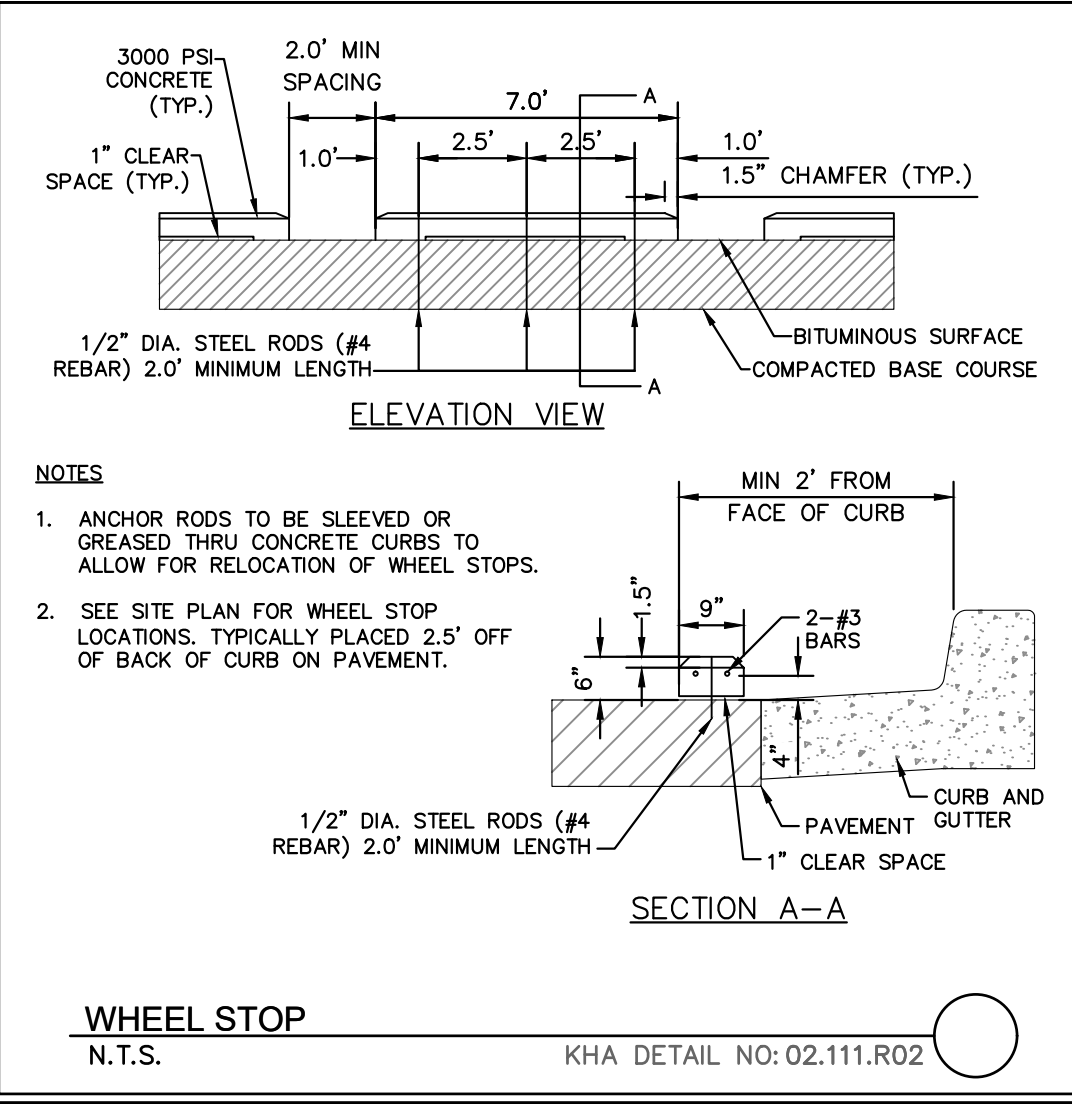
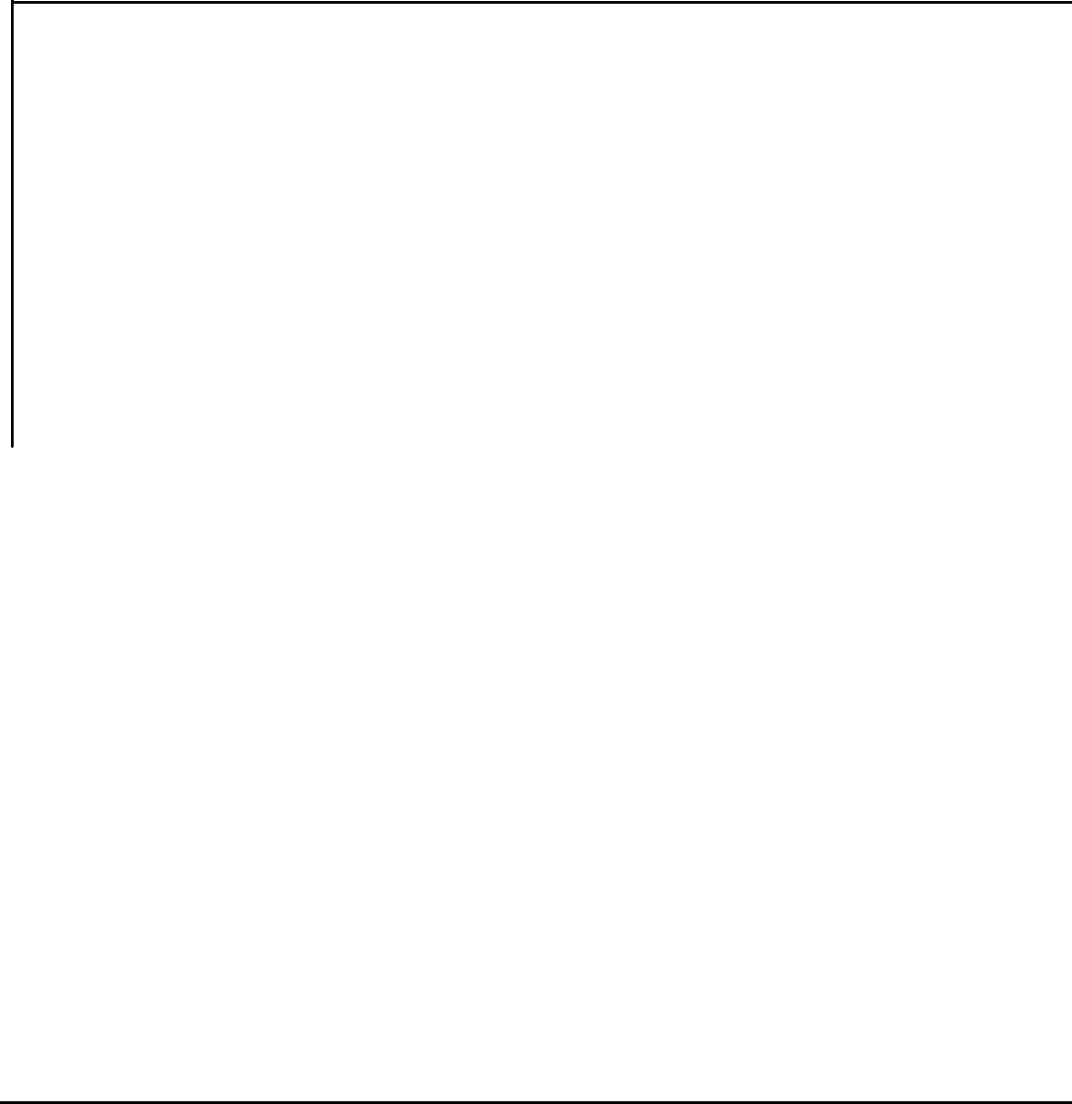
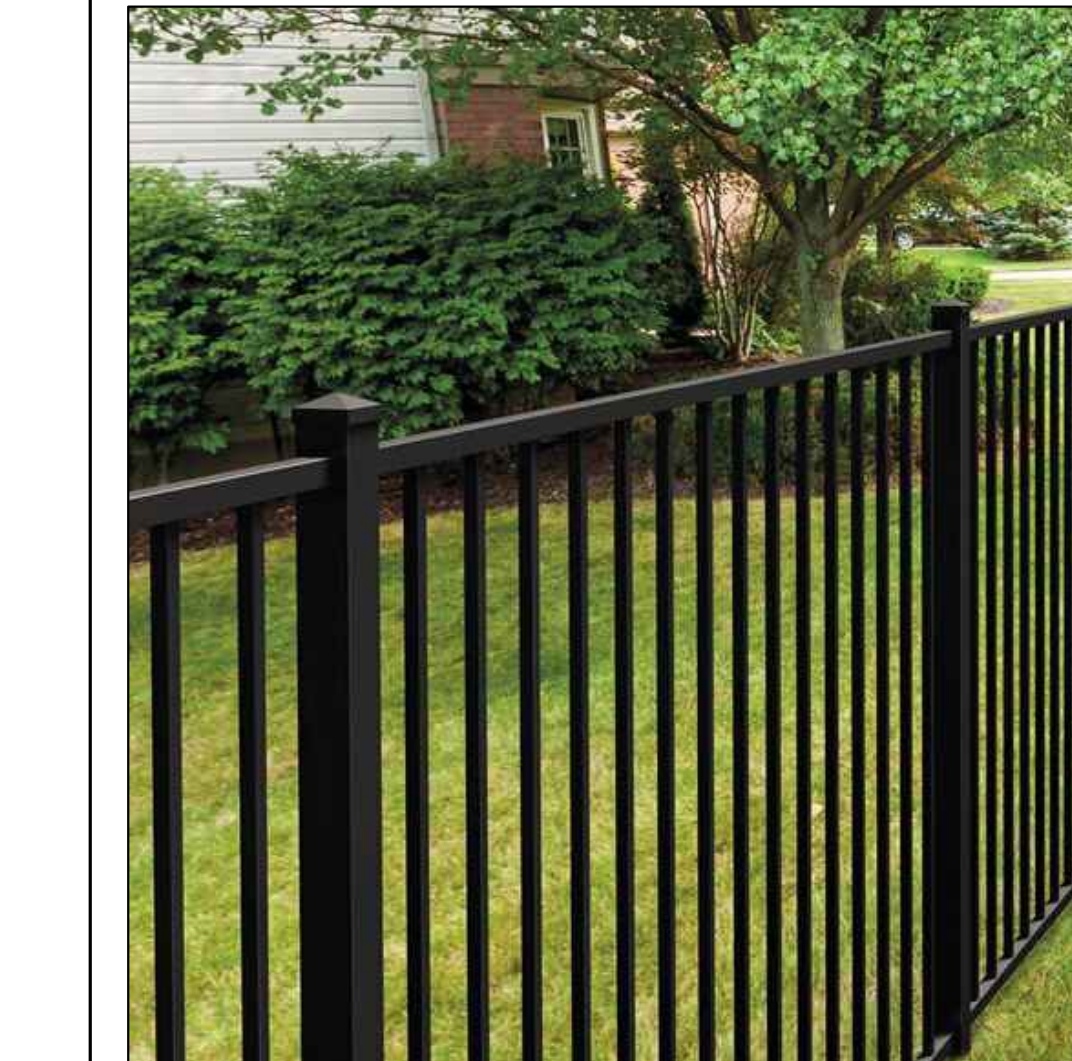
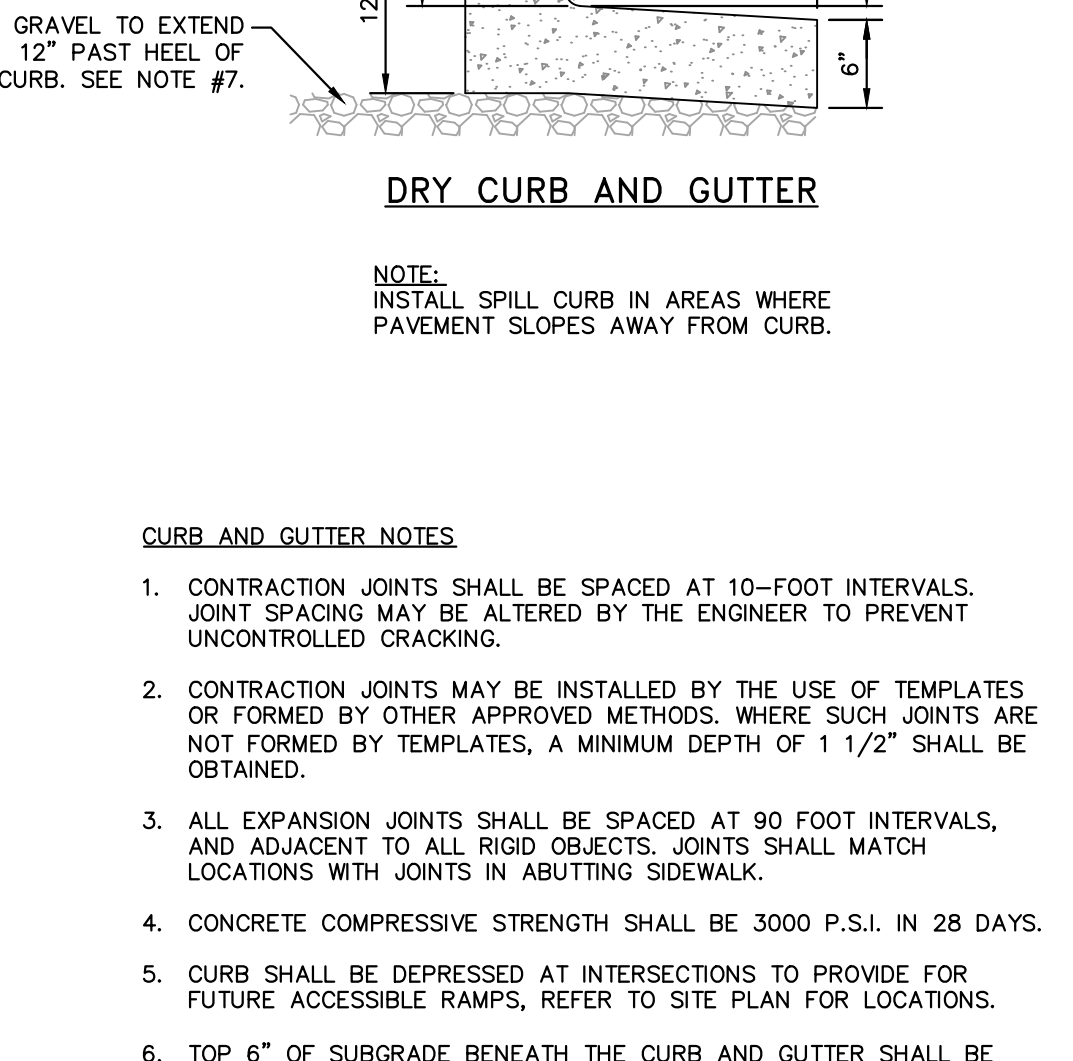
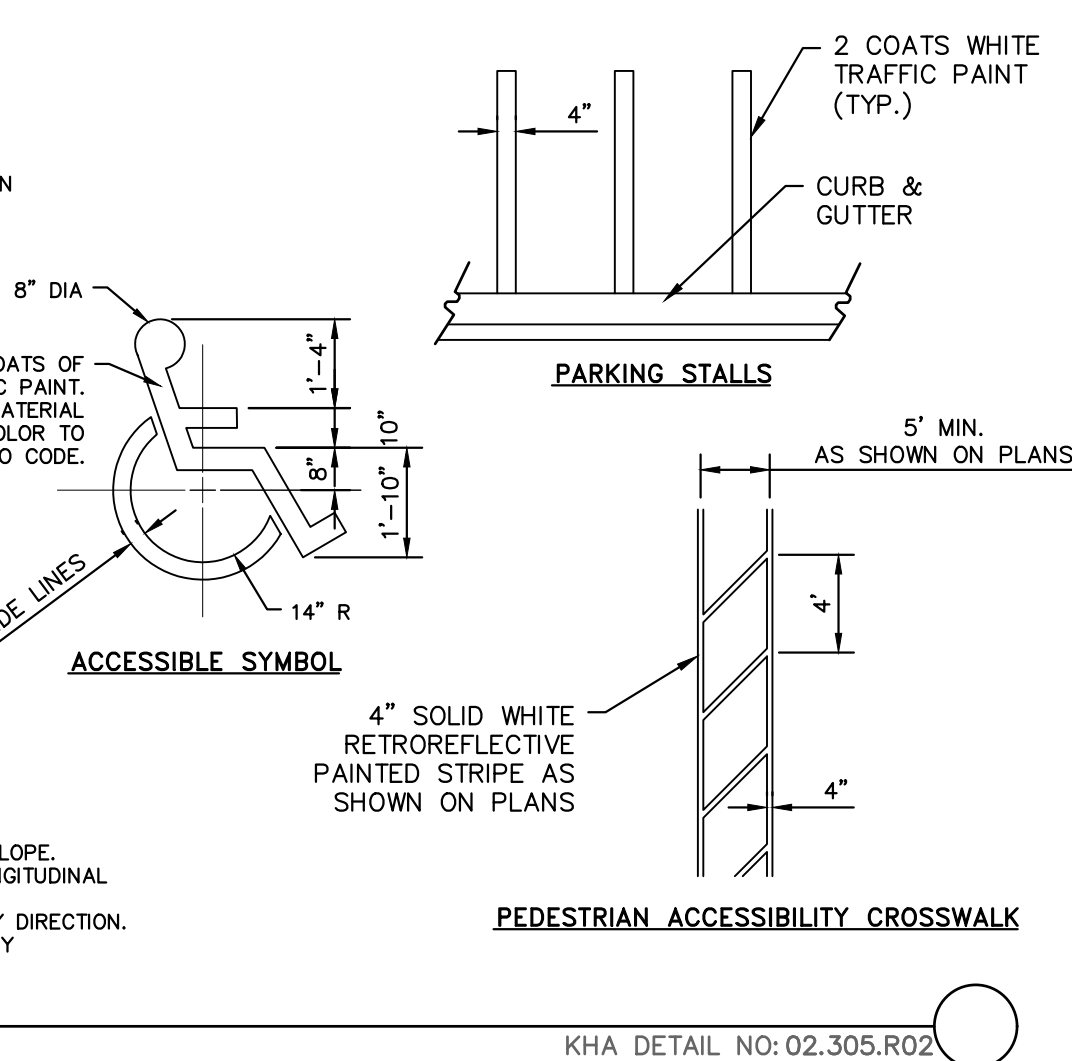
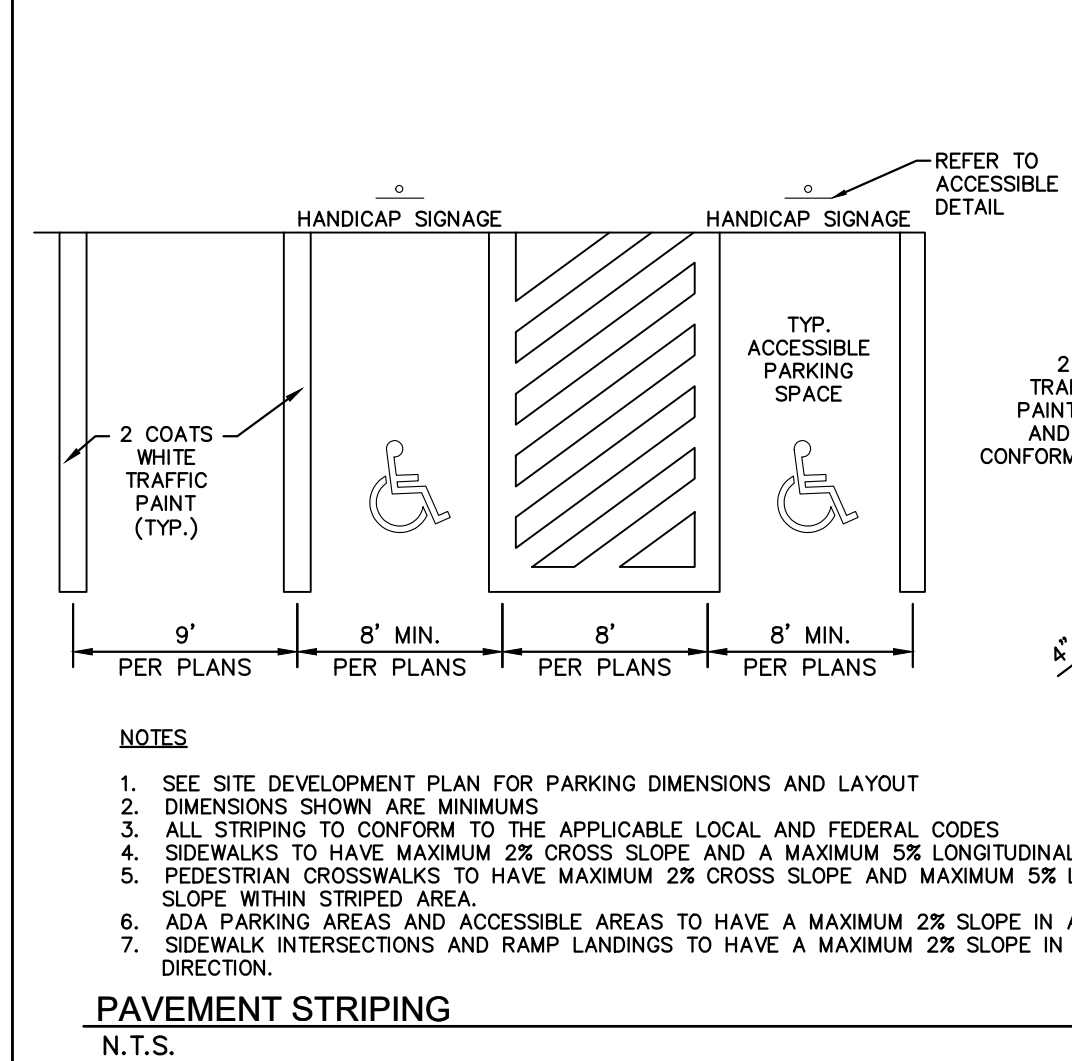
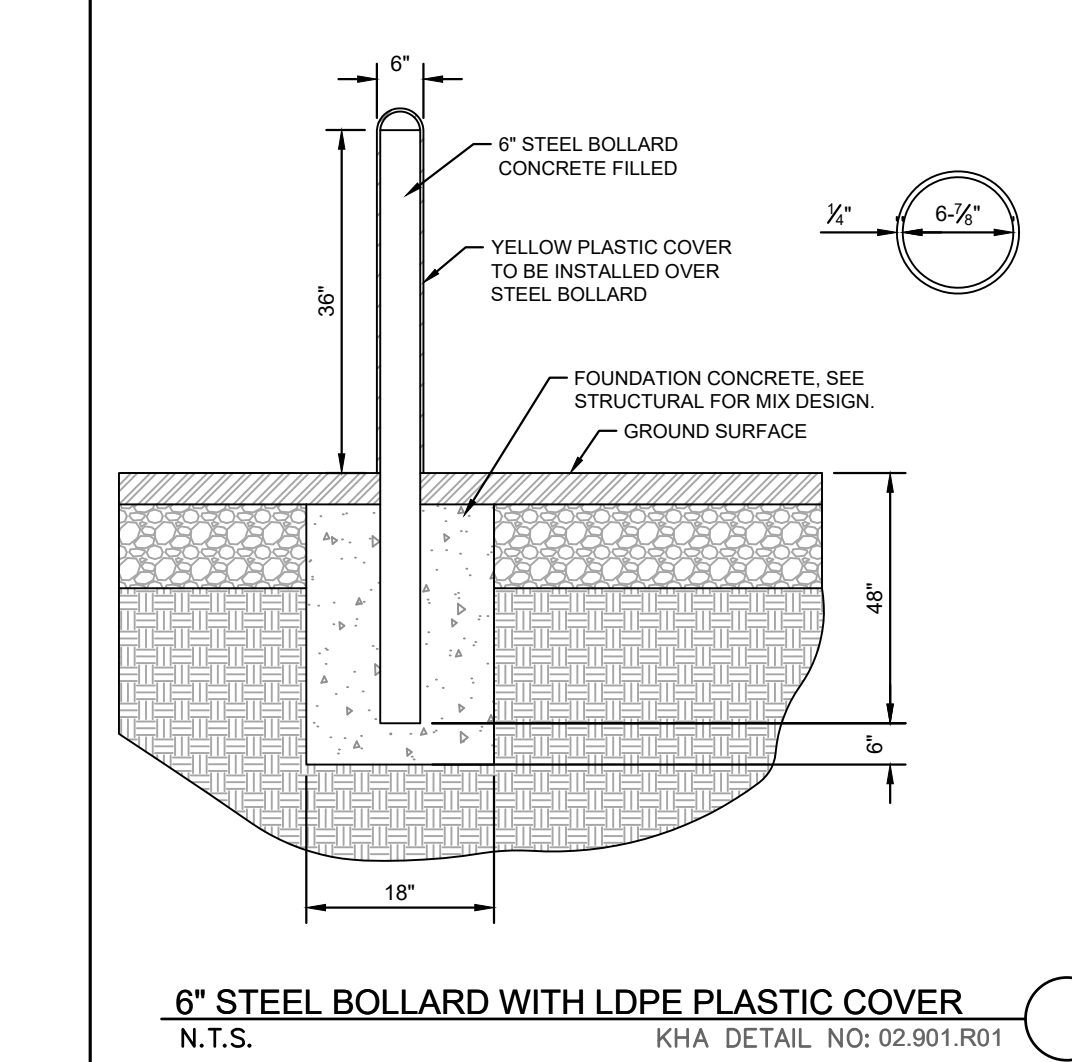
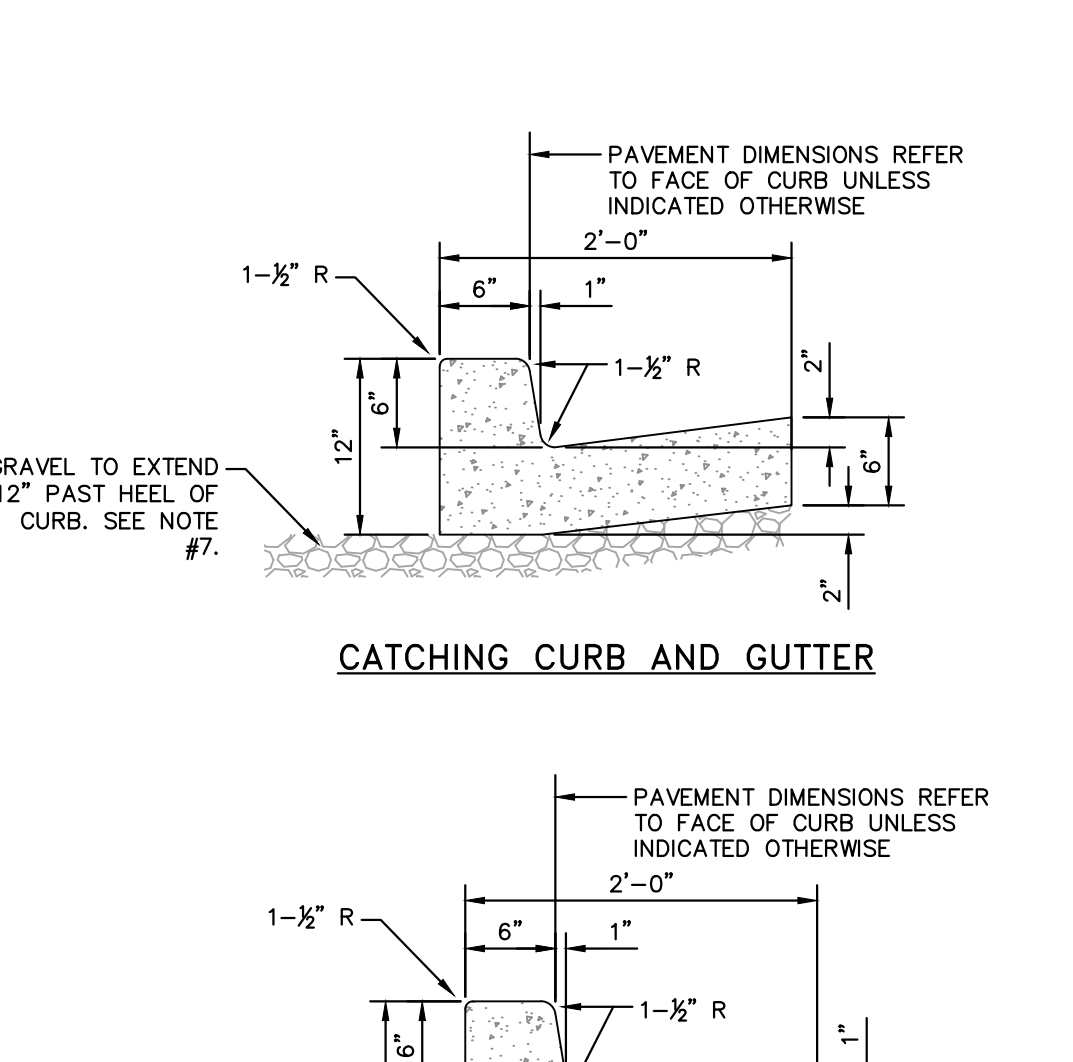
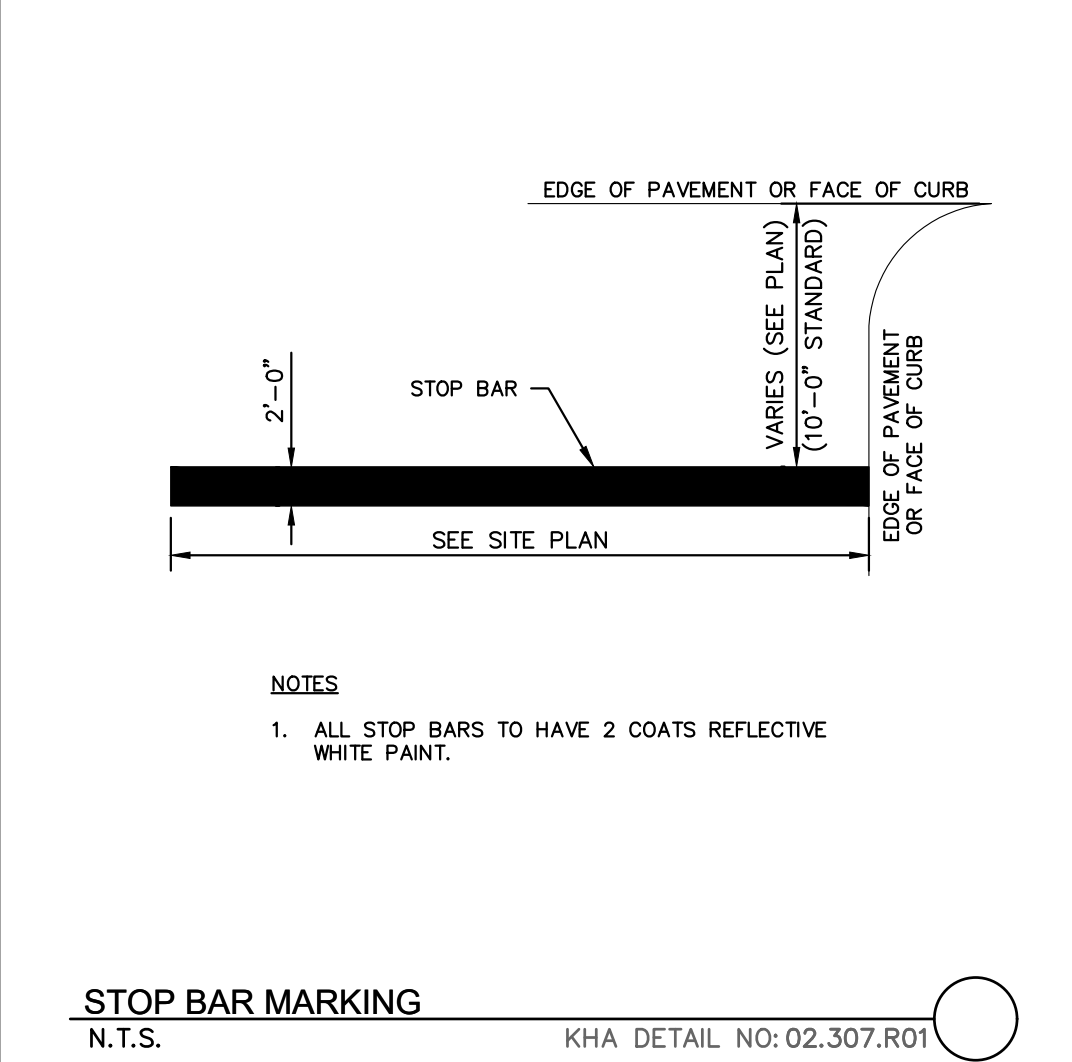
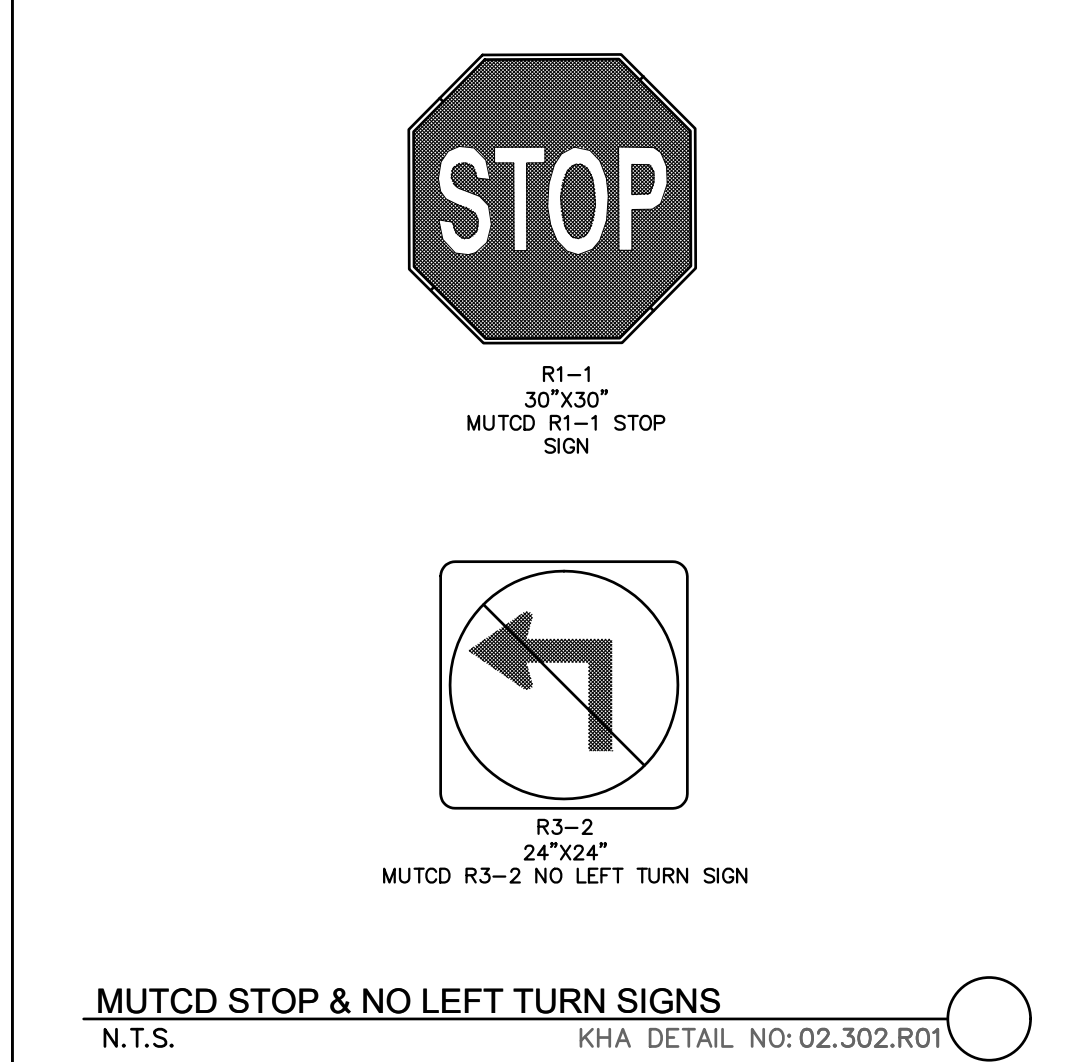
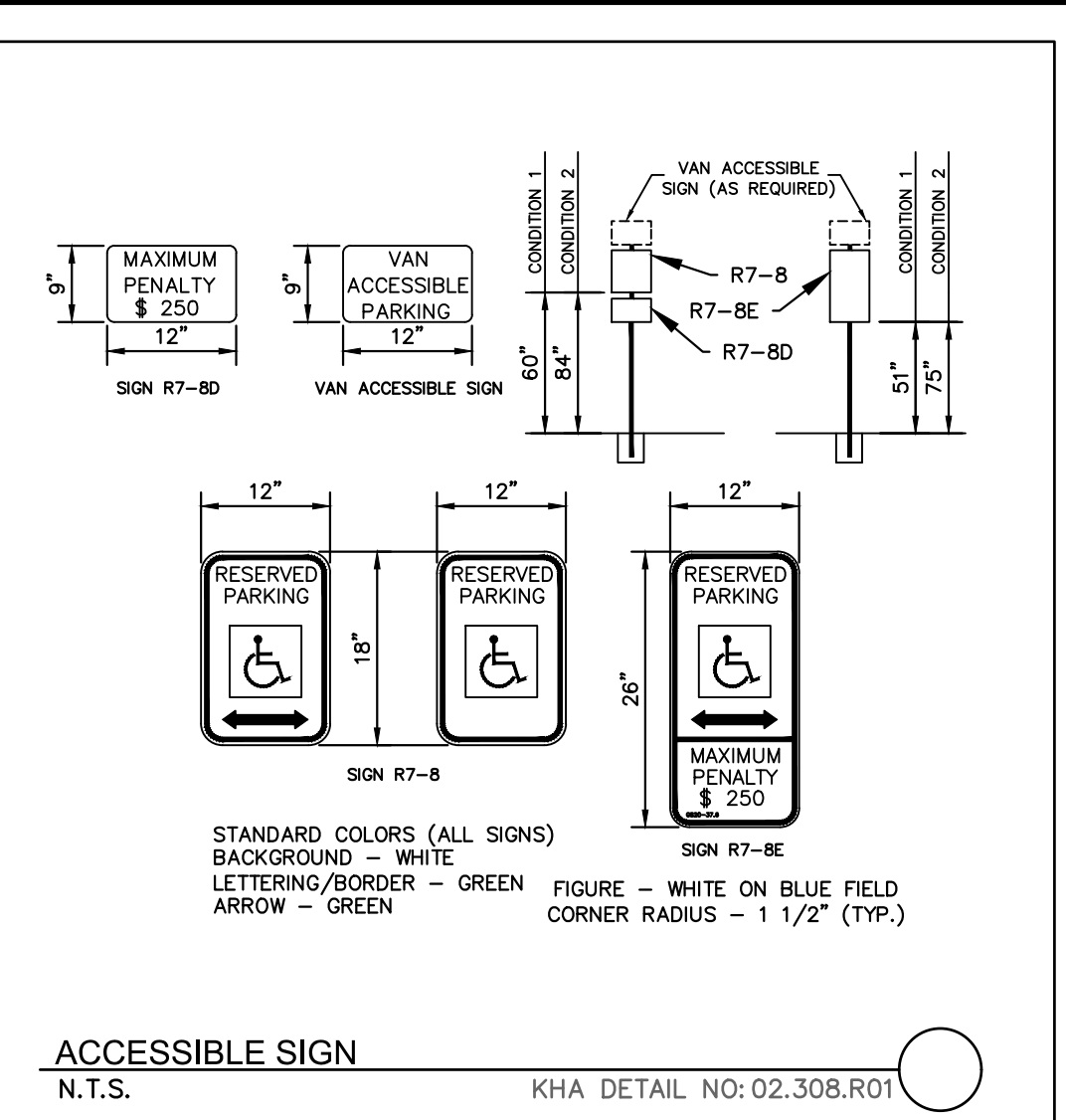
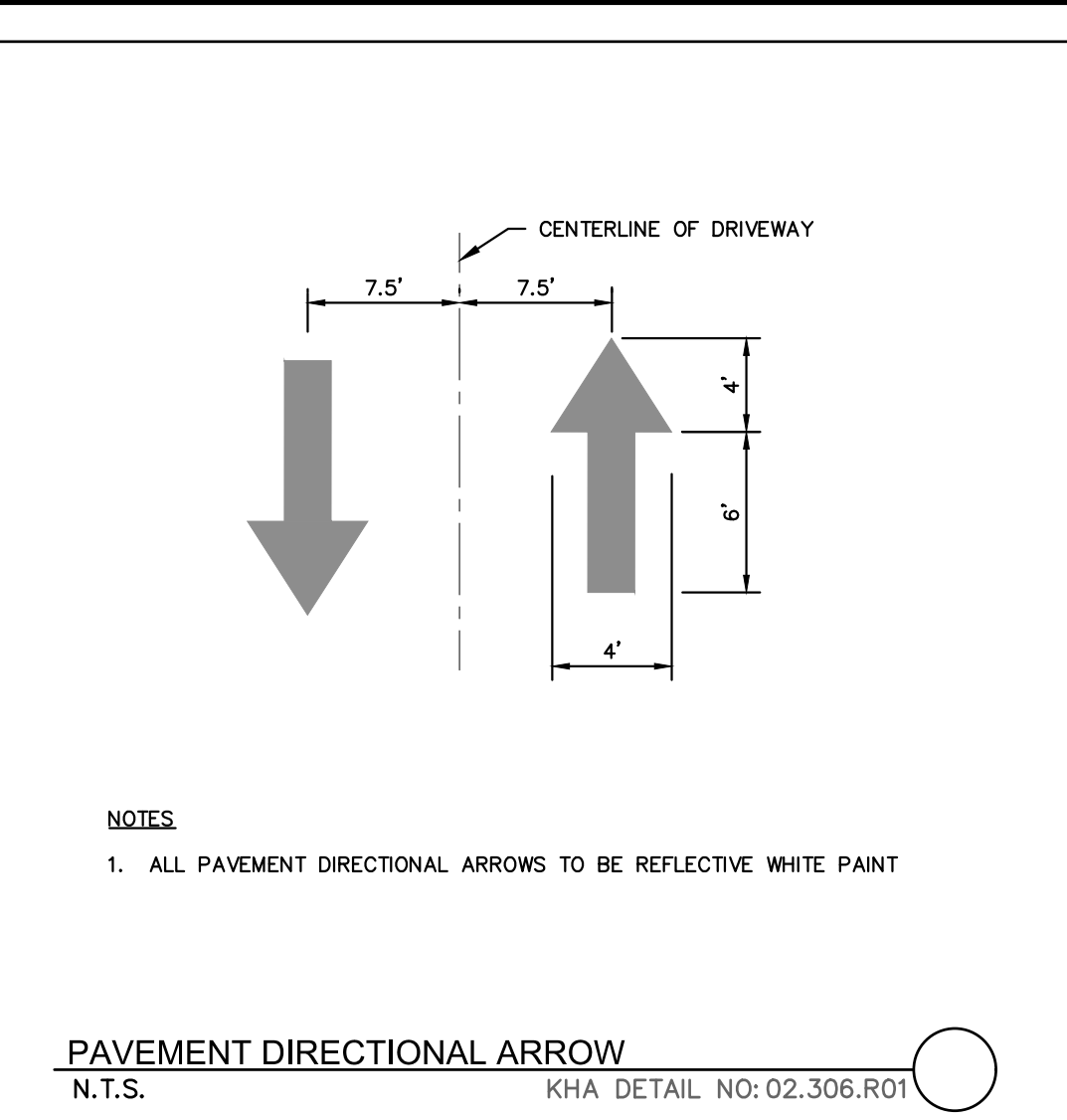
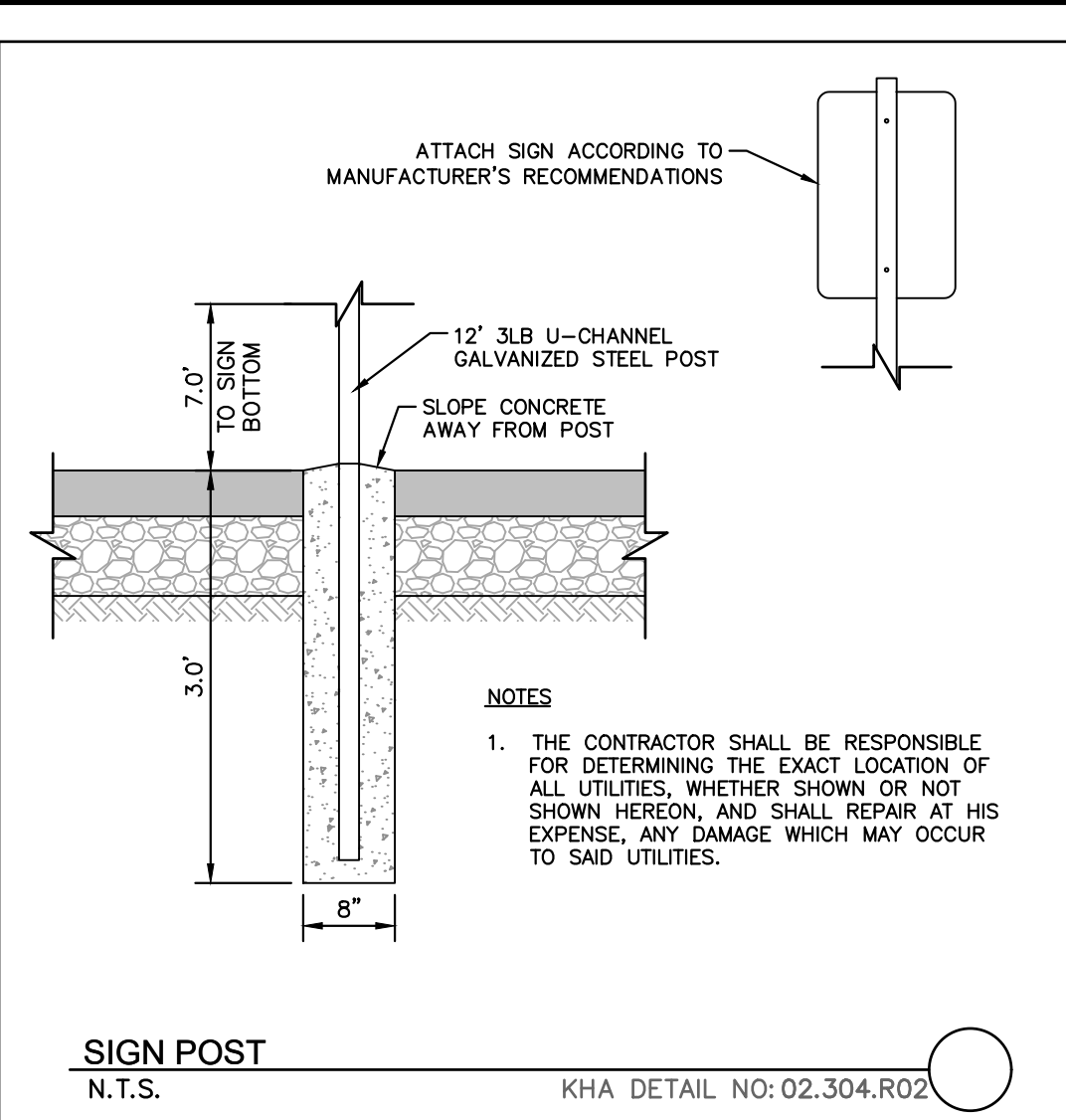
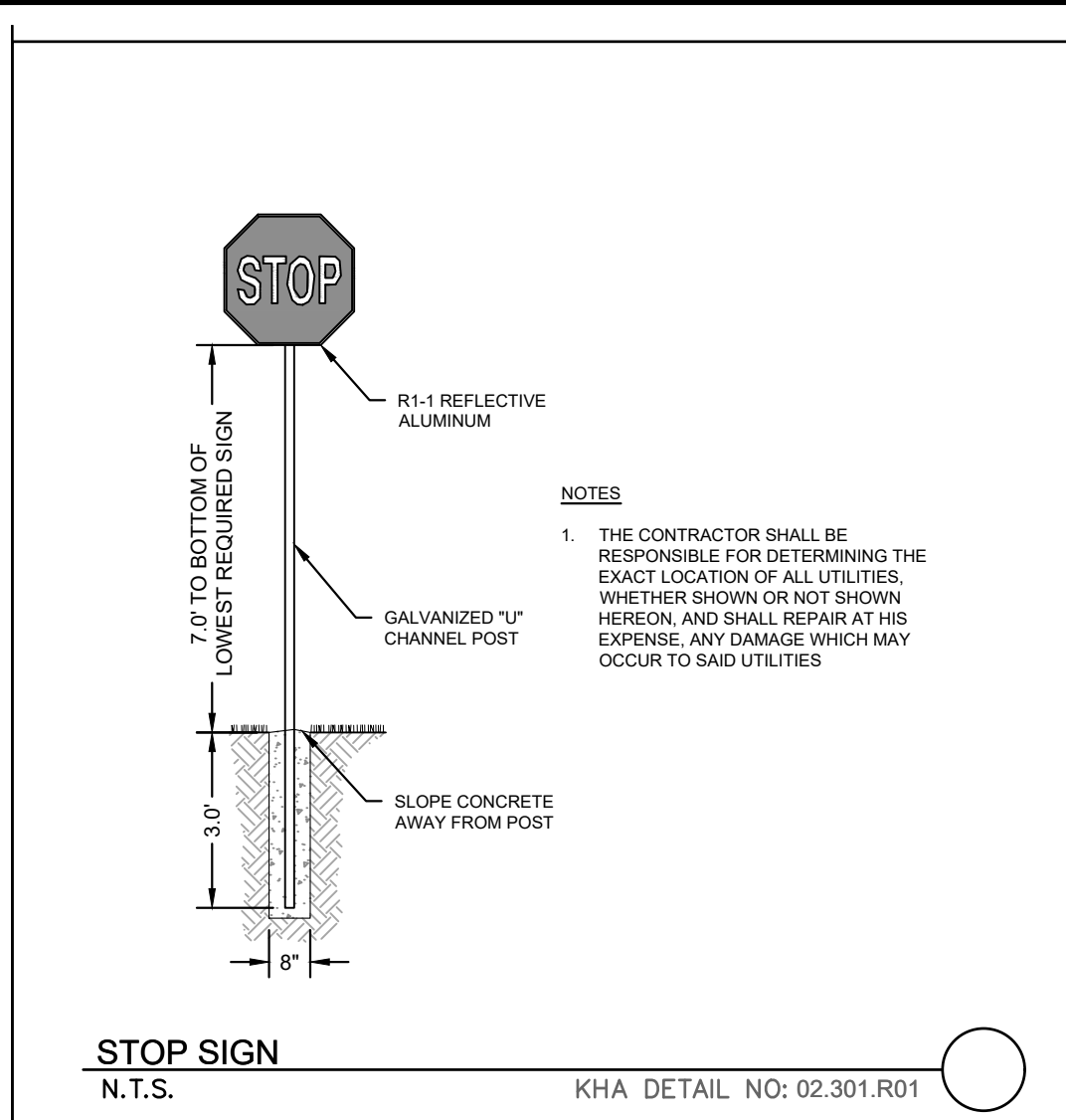






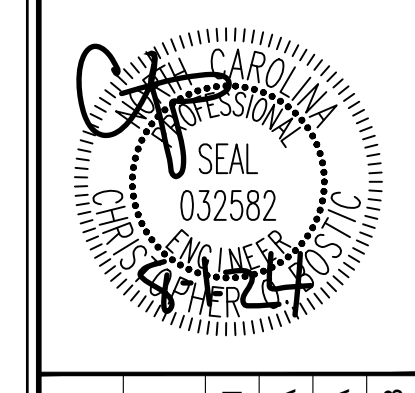


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 This document, together with the concepts and designs presented herein, is an instrument of service, as an instrument of service, as intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



TOWN COMMENTS	DATE	BY
08/01/2024 JAA		
07/17/2024 JAA		
07/08/2024 JAA		
06/20/2024 JAA		
06/11/2024 JAA		
05/01/2024 JAA		
03/01/2024 JAA		

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 421 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601



KHA PROJECT	013031004
DATE	09/29/2023
SCALE	AS SHOWN
DESIGNED BY	JAA
DRAWN BY	JAA
CHECKED BY	COB

**SITE DETAILS**

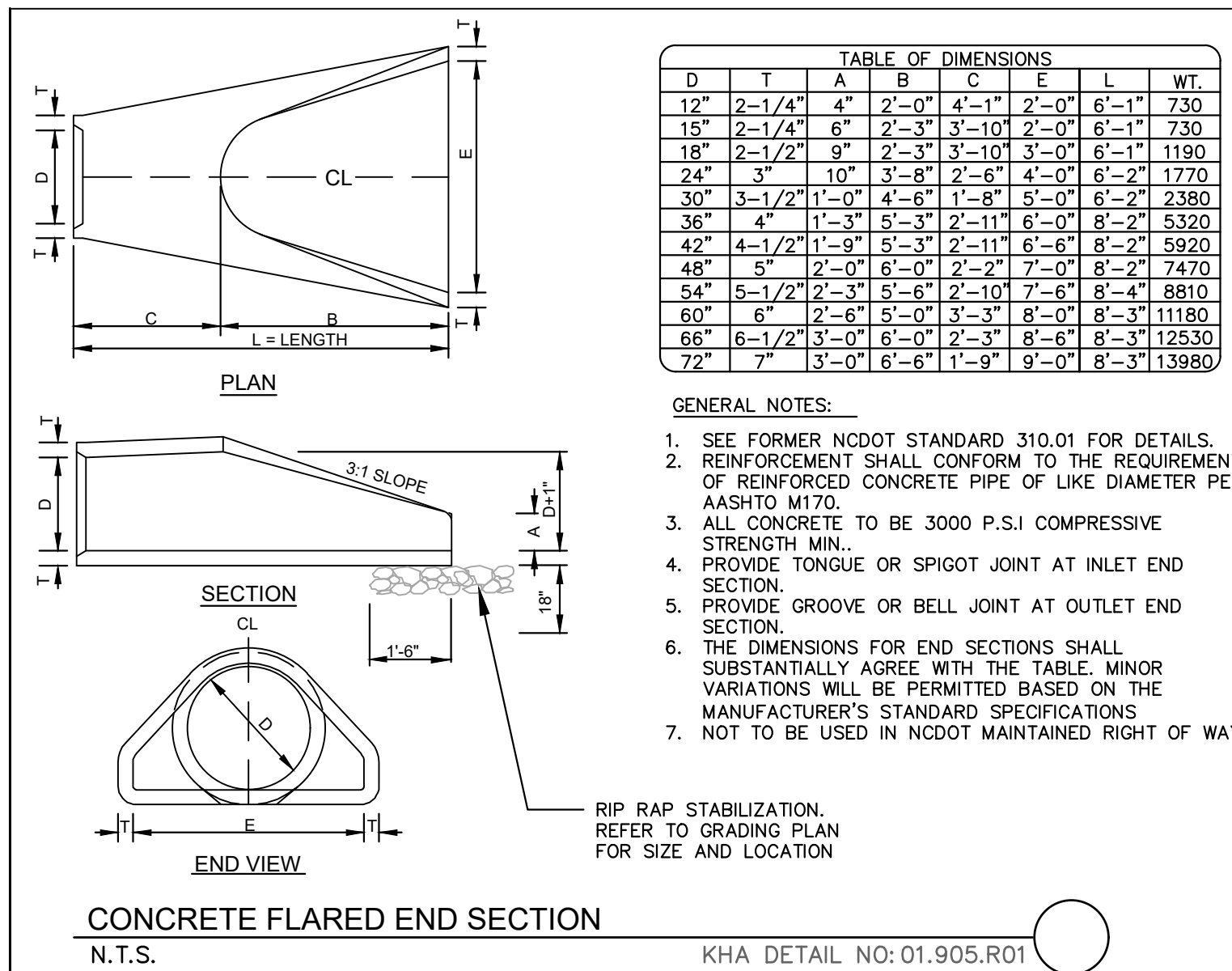
**THE LEARNING CENTER ROLESVILLE**  
 PREPARED FOR  
**ROLESVILLE, LLC.**  
 TOWN OF ROLESVILLE, NORTH CAROLINA

SHEET NUMBER  
**C8.1**





PLOTTED BY: JAMAL SHEET TITLE: THE LEARNING CENTER ROLESVILLE Layout: C9.03 STORM DETAILS November 25, 2024 04:19:53pm K:\B\AL\_LDE\013031004\_Rolesville\_Layout\_C9.03 STORM DETAILS.dwg  
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**TABLE OF DIMENSIONS**

D	T	A	B	C	E	L	WT.
12"	2'-1/4"	4"	2'-0"	4'-1"	2'-0"	6'-1"	730
15"	2'-1/4"	6"	2'-3"	3'-10"	2'-0"	6'-1"	730
18"	2'-1/2"	9"	2'-3"	3'-10"	3'-0"	6'-1"	1190
24"	3"	10"	3'-8"	2'-7"	4'-0"	6'-2"	1770
30"	3'-1/2"	11'-0"	4'-6"	1'-8"	5'-0"	6'-2"	2380
36"	4"	1'-3"	5'-3"	2'-11"	6'-0"	8'-2"	5320
42"	4'-1/2"	1'-9"	5'-3"	2'-11"	6'-6"	8'-2"	5920
48"	5"	2'-0"	6'-0"	2'-2"	7'-0"	8'-2"	7470
54"	5'-1/2"	2'-3"	5'-6"	2'-10"	7'-6"	8'-4"	8810
60"	6"	2'-8"	5'-0"	3'-1"	8'-0"	8'-4"	11180
66"	6'-1/2"	3'-0"	6'-0"	2'-3"	8'-6"	8'-3"	12530
72"	7"	3'-0"	6'-6"	1'-9"	9'-0"	8'-3"	13980

- GENERAL NOTES:**
- SEE FORMER NCDOT STANDARD 310.01 FOR DETAILS.
  - REINFORCEMENT SHALL CONFORM TO THE REQUIREMENTS OF REINFORCED CONCRETE PIPE OF LIKE DIAMETER PER AASHTO M170.
  - ALL CONCRETE TO BE 3000 P.S.I COMPRESSIVE STRENGTH MIN.
  - PROVIDE TONGUE OR SPIGOT JOINT AT INLET END SECTION.
  - PROVIDE GROOVE OR BELL JOINT AT OUTLET END SECTION.
  - THE DIMENSIONS FOR END SECTIONS SHALL SUBSTANTIALLY AGREE WITH THE TABLE. MINOR VARIATIONS WILL BE PERMITTED BASED ON THE MANUFACTURER'S STANDARD SPECIFICATIONS.
  - NOT TO BE USED IN NCDOT MAINTAINED RIGHT OF WAY.

RIP RAP STABILIZATION REFER TO GRADING PLAN FOR SIZE AND LOCATION

KHA DETAIL NO: 01.905.R01

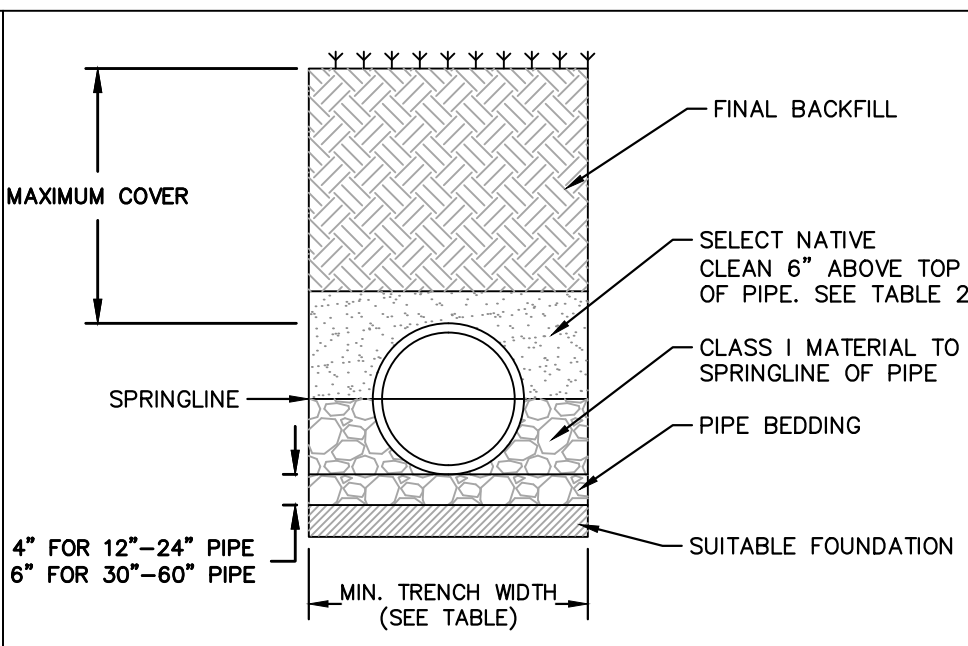


TABLE 2, MAXIMUM COVER FOR ADS HP STORM PIPE ALTERNATE INSTALLATION,  $\gamma = 120$

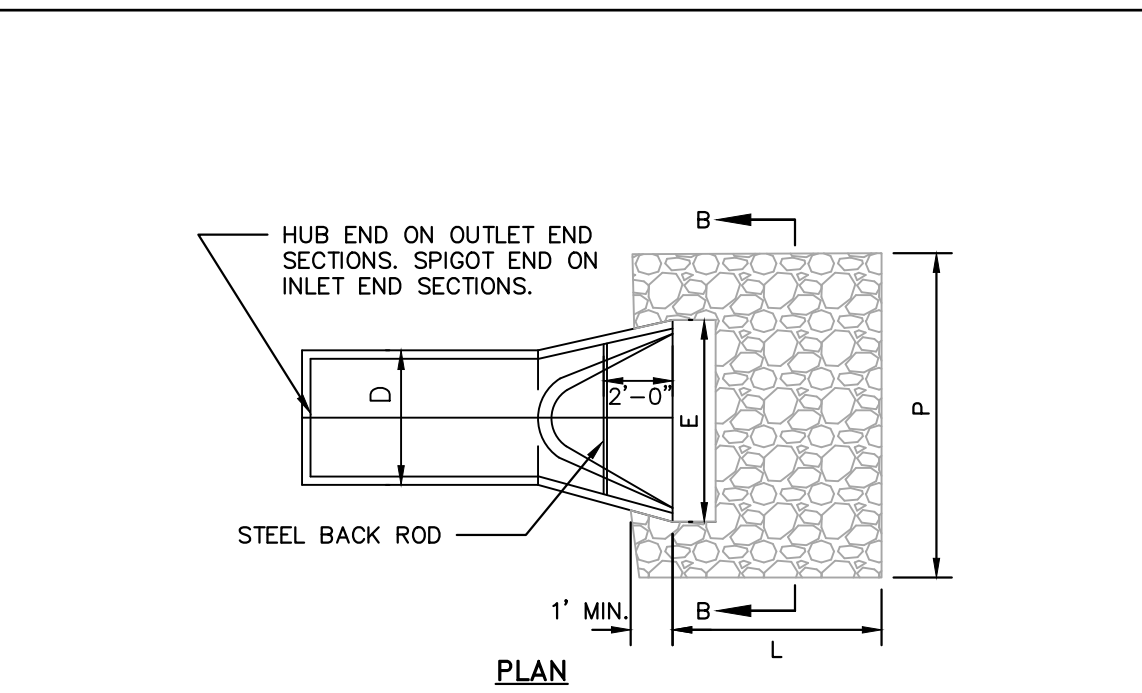
**TABLE 1, RECOMMENDED MINIMUM TRENCH WIDTHS**

PIPE DIAM.	TRENCH WIDTH
12"	17"
15"	17"
18"	17"
24"	18"
30"	19"
36"	20"
42"	21"
48"	22"
54"	23"
60"	24"
66"	25"
72"	26"

FILL HEIGHT TABLE GENERATED ASSUMING DRY CONDITIONS, OUTSIDE OF WATER TABLE. FOR INSTALLATION WITHIN THE WATER TABLE, CONTACT APPLICATIONS ENGINEERING.

- NOTES:**
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL WHEN REQUIRED.
  - SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IVB MATERIALS (MH, CH) AS DEFINED IN PREVIOUS VERSIONS OF ASTM D2321 ARE NOT APPROPRIATE BACKFILL MATERIALS.
  - FOUNDATION WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
  - BEDDING SUITABLE MATERIAL SHALL BE CLASS I. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).
  - BACKFILL FOR PIPES OUTSIDE OF PAVEMENT CLASS I MATERIAL TO BE USED FOR BACKFILL UP TO THE SPRINGLINE OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, CLASS I MATERIAL MUST BE COMPACTED IN 6" (200mm) LIFTS.
  - MINIMUM COVER MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS IS 12" (300mm) FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION.
  - SELECT NATIVE CLEAN BACKFILL SHALL BE WELL PLACED, MODERATELY COMPACTED (85% SPD) CLASS IV OR BETTER PER ASTM D2321 WITH NO FOREIGN DEBRIS INCLUDING ROCKS, LARGE CLUMPS ORGANIC MATERIAL, OR FROZEN MATERIAL.
  - HP STORM ALTERNATE TRENCH DETAIL ONLY APPLIES TO BACKFILL INSTALLATIONS IN NON-TRAFFIC APPLICATIONS PER TM 2.04A. ALTERNATE TRENCH USE MUST BE APPROVED BY DESIGN ENGINEER. DETAIL DOES NOT SUPERSEDE ADS STANDARD DETAIL STD-108.

HP STORM TRENCH INSTALLATION DETAIL N.T.S. KHA DETAIL NO: 03.101.R01



RIP-RAP APRON AT FLARED END SECTION N.T.S. KHA DETAIL NO: 03.205.R02

**SIZING CHART**

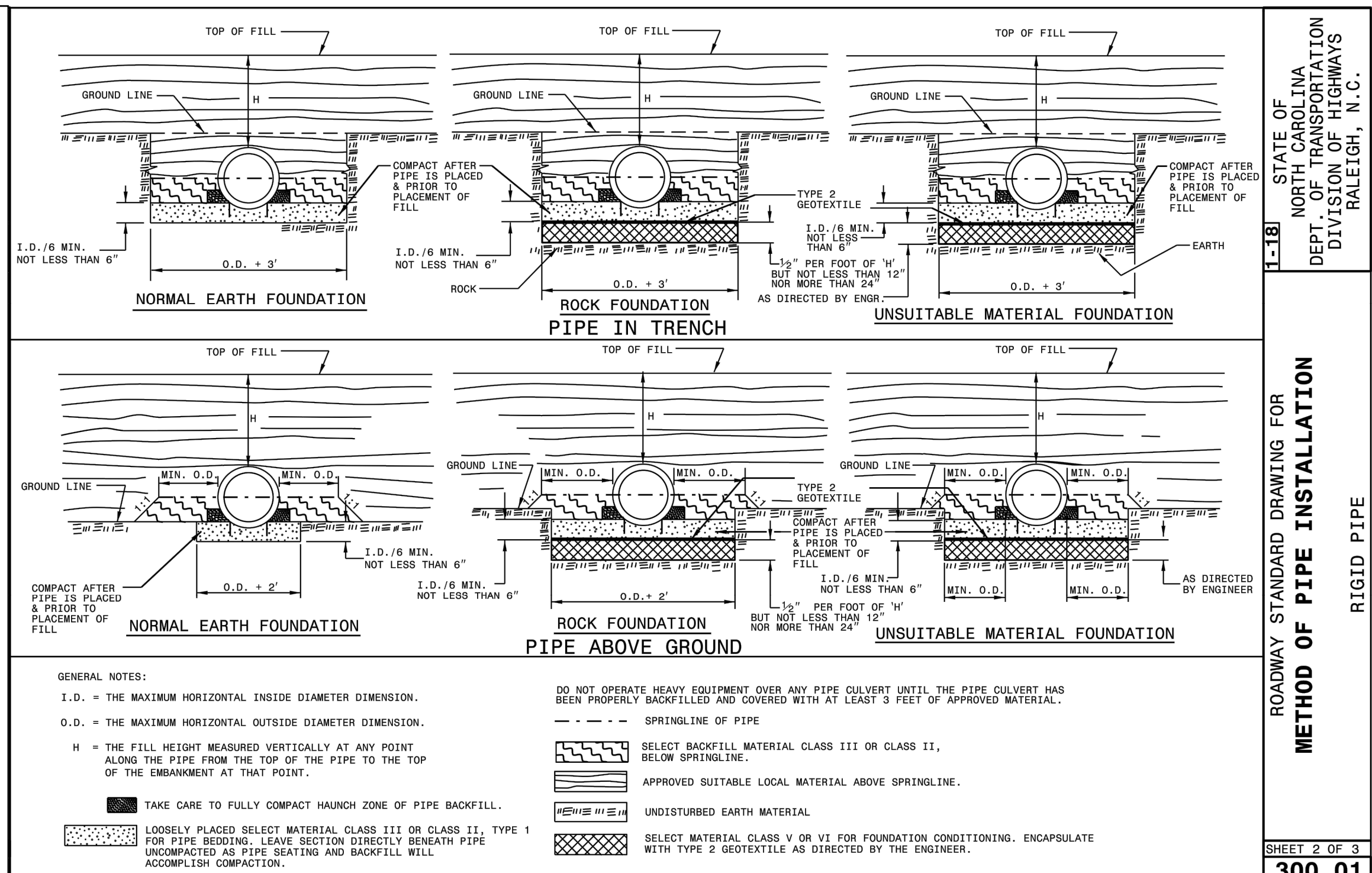
STRUCTURE	O-FULL (CFS)	(F)	(L)	(P)	D (N)	STONE THICKNESS (N)	STONE DIAMETER (N)	STONE CLASS	VELOCITY (FPS)
DRIVEWAY CULVERT	4.67	3.80	5	6.30	15	12	3	A	3.81
FES-1	15.33	3.80	7.50	8.80	15	22	6	B	12.49
FES-2	8.01	3.80	5	6.30	15	12	3	A	6.53

- NOTES:**
- END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
  - THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIP-RAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
  - THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL.
  - MAXIMUM TAPER TO RECEIVING CHANNEL 5:1.
  - ALL SUBGRADE BELOW THE STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
  - THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
  - NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.

**MAINTENANCE NOTES:**  
 IN GENERAL, ONCE A RIPRAP INSTALLATION HAS BEEN PROPERLY DESIGNED AND INSTALLED IT REQUIRES VERY LITTLE MAINTENANCE. RIPRAP SHOULD BE INSPECTED PERIODICALLY FOR SCOUR OR DISLODGED STONES. CONTROL OF WEED AND BRUSH GROWTH MAY BE NEEDED IN SOME LOCATIONS.

- CONSTRUCTION SPECIFICATIONS:**
- ENSURE THAT THE SUBGRADE FOR THE FILTER AND RIPRAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS.
  - THE RIPRAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS.
  - FILTER CLOTH, WHEN USED, MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIPRAP AND PLACING ANOTHER PIECE OF FILTER CLOTH OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP SO THE TOP LAYER IS ABOVE THE DOWNSTREAM LAYER A MINIMUM OF 1 FOOT. IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER CLOTH.
  - RIPRAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE FILTER.
  - THE MINIMUM THICKNESS OF THE RIPRAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.
  - RIPRAP MAY BE FIELD STONE OR ROUGH QUARRY STONE. IT SHOULD BE HARD, ANGULAR, HIGHLY WEATHER-RESISTANT AND WELL GRADED.
  - CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFILL AT THE END. MAKE THE TOP OF THE RIPRAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.
  - ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.
  - IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION.

RIP-RAP APRON AT FLARED END SECTION N.T.S. KHA DETAIL NO: 03.205.R02

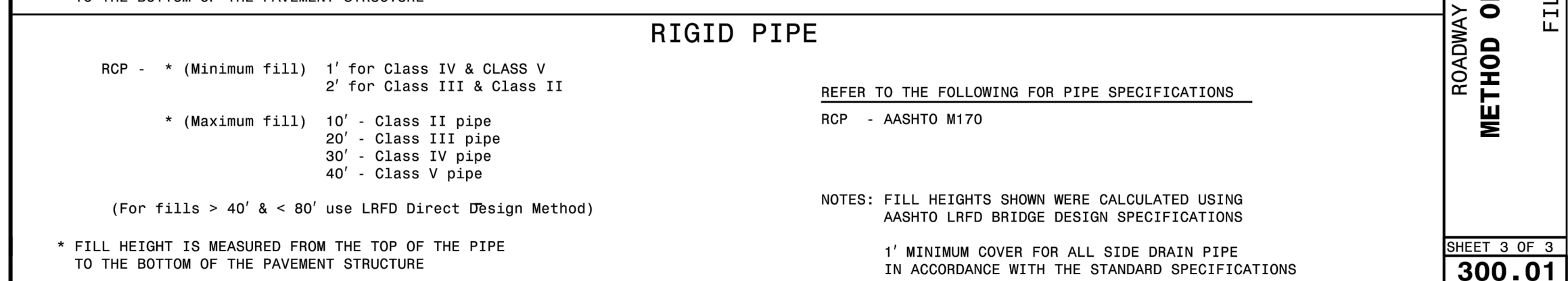


FLEXIBLE PIPE

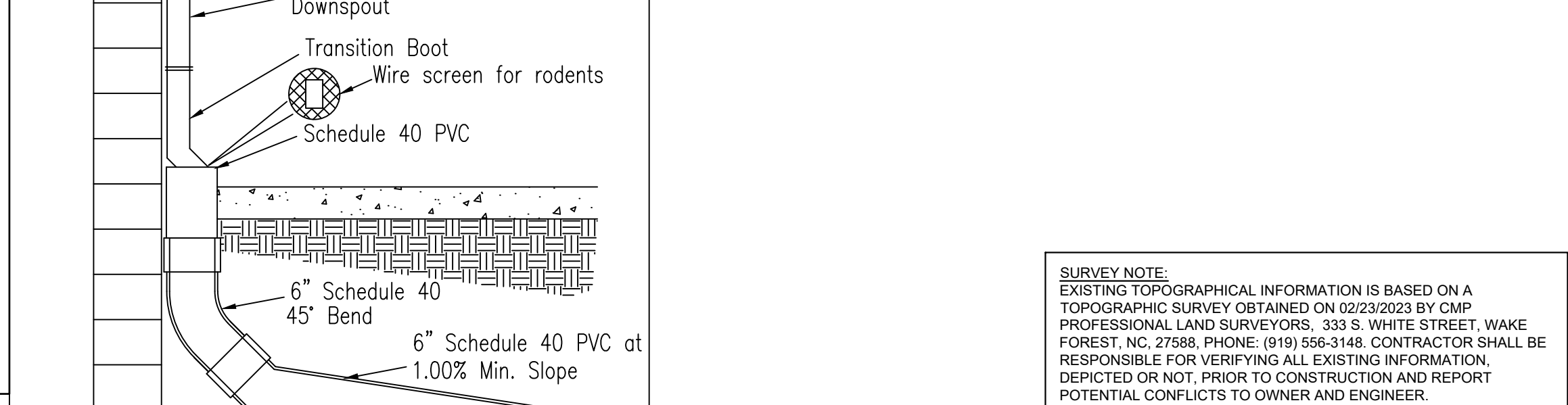
**Round Corrugated Steel Pipe**  
2 2/3 x 1/8 corrugation \*\*

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet)				
		16	14	12	10	8
12	12	204	256			
15	12	162	204			
18	12	135	169	239		
21	12	115	145	204		
24	12	100	126	178		
30	12	79	100	142		
36	12	65	83	117	152	
42	12	55	70	100	130	160
48	12	48	61	87	113	139
54	12	42	54	77	100	123
60	12	37	47	69	90	111
66	12	32	40	61	81	100
72	12	27	34	54	74	91
78	12	23	30	47	64	81
84	12	19	26	40	56	69

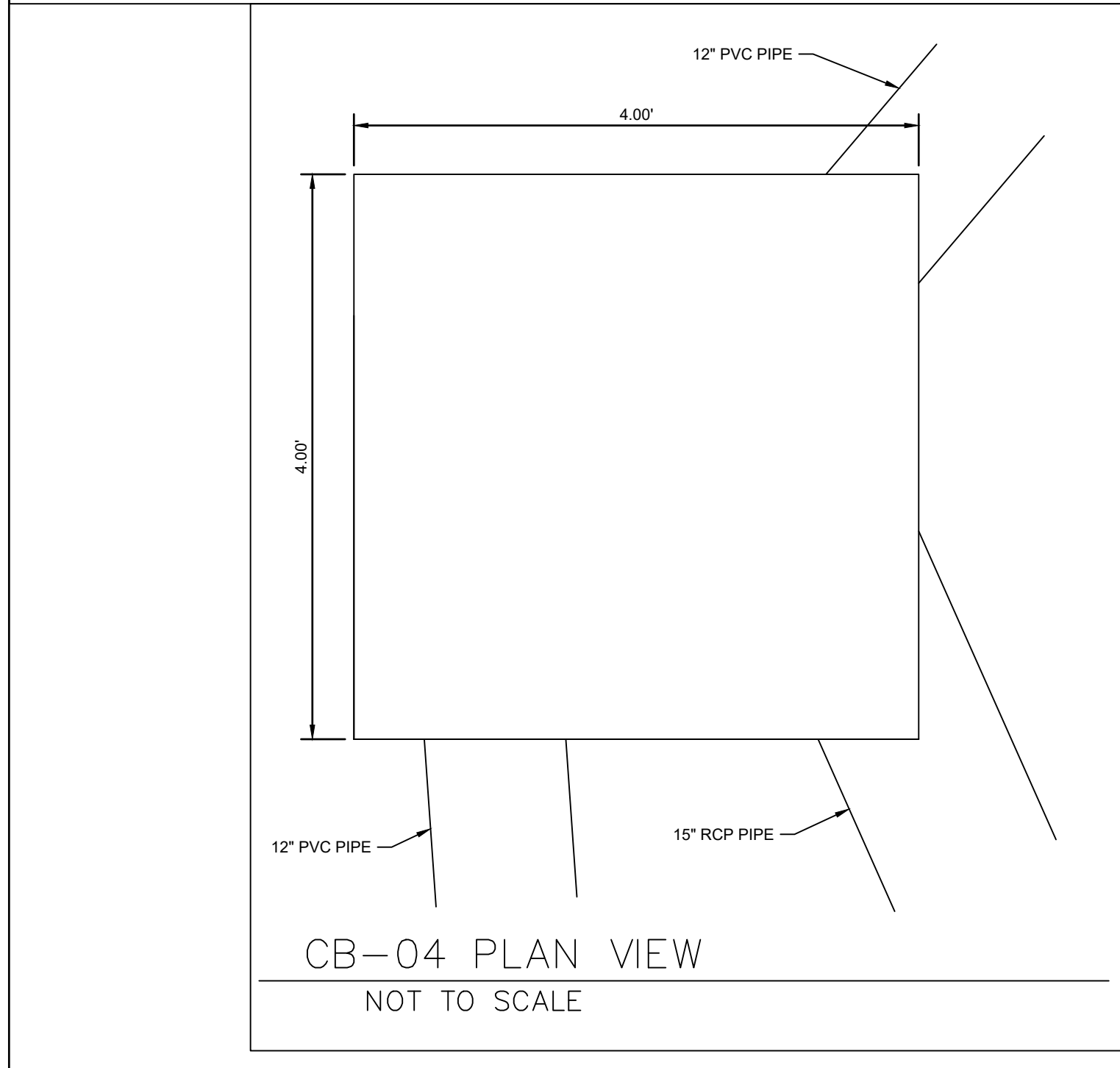
- NOTES:**
- THE LENGTHS OF THE RIP-RAP APRONS WERE DETERMINED BY USING THE NEW YORK DOT DISAPPROPRIATE METHOD, AS OUTLINED IN SECTION 8.06 OF THE ACCIDENT EROSION CONTROL MANUAL.
  - RIP-RAP APRONS DESIGNED FOR FULL FLOW CAPACITY.



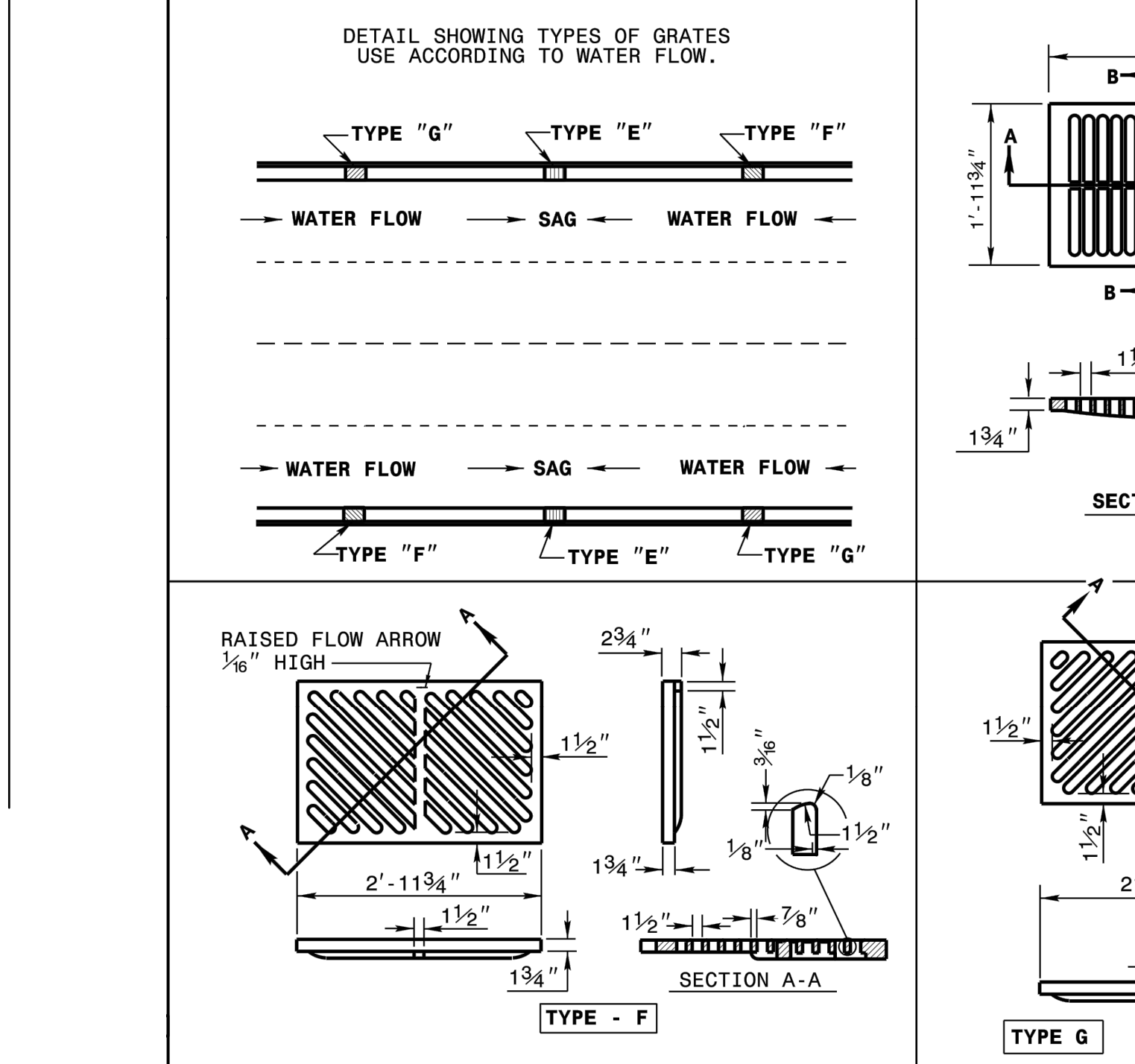
RIGID PIPE



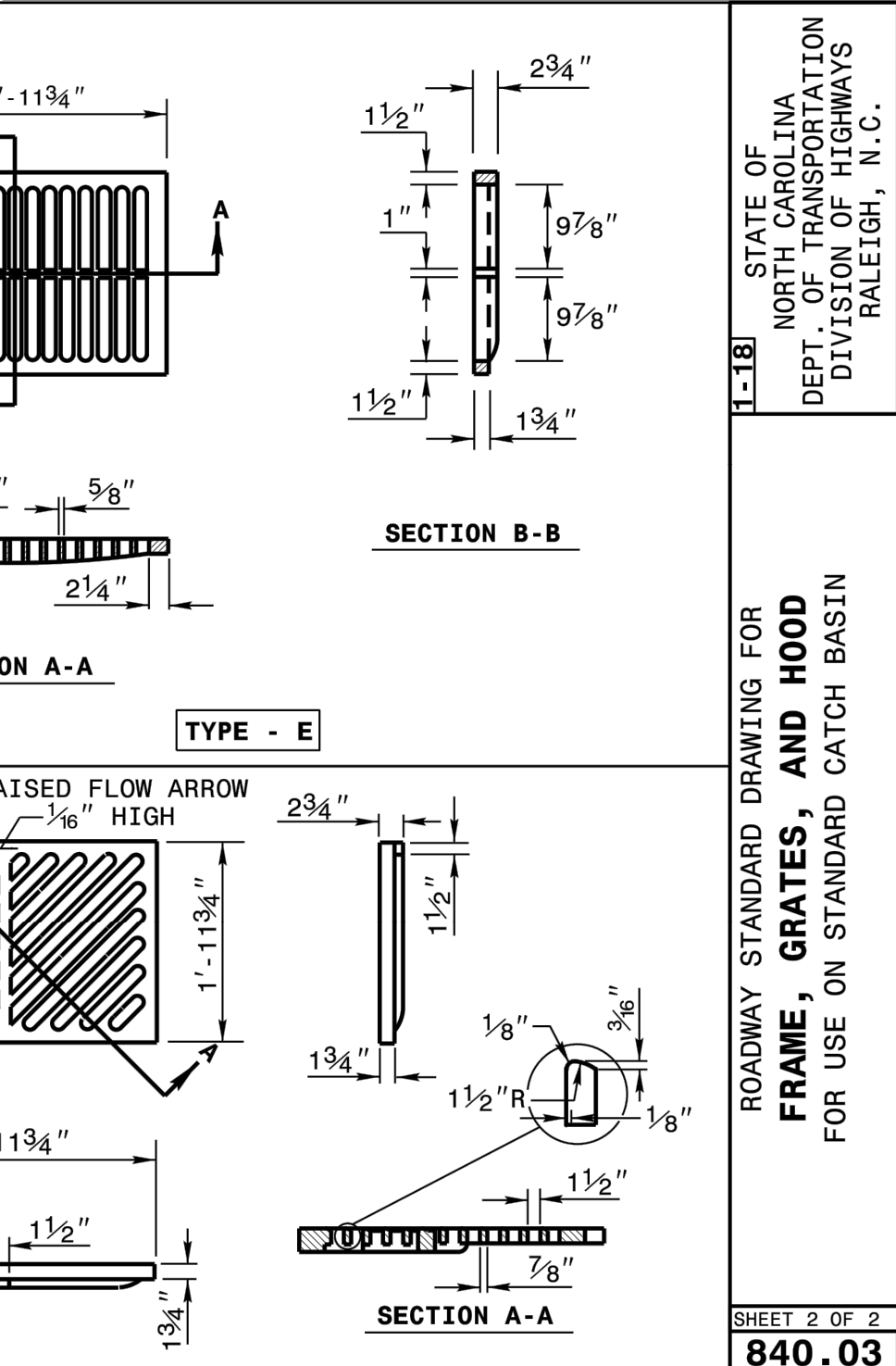
TYPICAL ROOF DRAIN CONNECTION NOT TO SCALE



CB-04 PLAN VIEW NOT TO SCALE



DETAIL SHOWING TYPES OF GRATES USE ACCORDING TO WATER FLOW.



FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN SHEET 2 OF 2 840.03

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

ROADWAY STANDARD DRAWING FOR METHOD OF PIPE INSTALLATION RIGID PIPE

SHEET 2 OF 3 300.01

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

ROADWAY STANDARD DRAWING FOR METHOD OF PIPE INSTALLATION FILL HEIGHT TABLES

SHEET 3 OF 3 300.01

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

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

SHEET 2 OF 2 840.03

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

ROADWAY STANDARD DRAWING FOR METHOD OF PIPE INSTALLATION RIGID PIPE

SHEET 2 OF 3 300.01

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

ROADWAY STANDARD DRAWING FOR METHOD OF PIPE INSTALLATION RIGID PIPE

SHEET 2 OF 3 300.01

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

ROADWAY STANDARD DRAWING FOR METHOD OF PIPE INSTALLATION RIGID PIPE

SHEET 2 OF 3 300.01

**Kimley-Horn**

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**THE LEARNING CENTER ROLESVILLE**  
 PREPARED FOR ROLESVILLE, LLC. TOWN OF ROLESVILLE NORTH CAROLINA

**811**  
 Know what's below. Call before you dig.

SDP-23-07

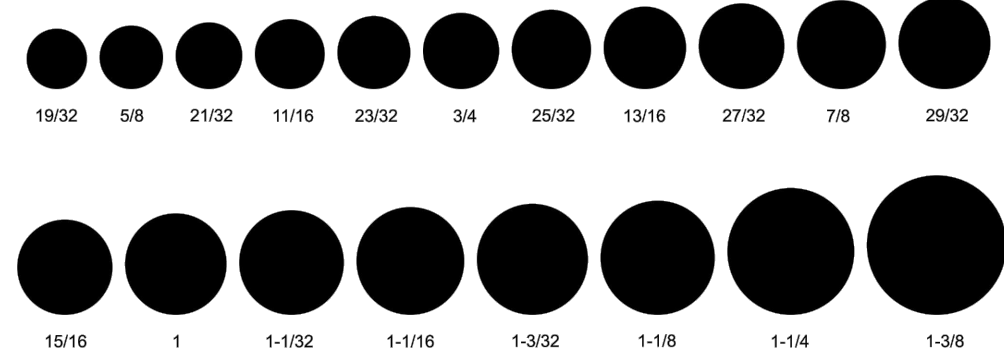


PLOTTED BY: Alexander, Jamal Sheet Size: THE LEARNING CENTER ROLESVILLE layout: C9.1 STORM DETAILS November 25, 2024 04:19:55pm K:\BID\LE071031004\_Rolesville Learning Center\PI0\_CAD Files\PlanSheets\C9.1 STORM DETAILS.dwg  
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## O-RING GASKET SELECTION GUIDE

FOR O-RING CONCRETE PIPE AND MANHOLE JOINTS

Available for Concrete Pipe, Manholes and Box Culverts.

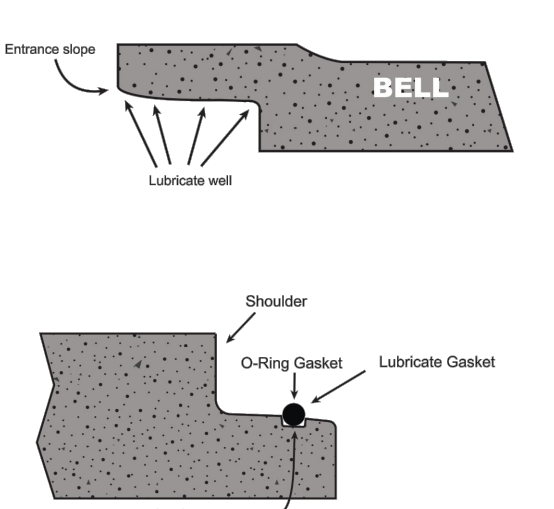


Physical Requirements for Elastomeric Seals for Concrete Pipe Meeting ASTM C1619 CLASS A, ASTM C361 and ASTM C443		
Tests	Limits	Units
Tensile Strength, minimum	1200	psi
Elongation, minimum	350	%
Hardness, Type A durometer	30 to 70	durometer
Low-Temperature Hardness, max. increase	15	durometer
Compression Set, maximum	25	%
Ozone Resistance	no cracks	
Accelerated Aging:		
Tensile Strength, max. decrease	15	%
Elongation, max. decrease	20	%
Hardness, max. decrease	8	durometer
After Water Immersion:		
Volume, max. increase	5	%

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Phone: 800-348-7325    **PRESS-SEAL CORPORATION**    Email: sales@press-seal.com  
 Fax: (260) 436-1908    Protecting Our Planet's Clean Water Supply    Web: www.press-seal.com

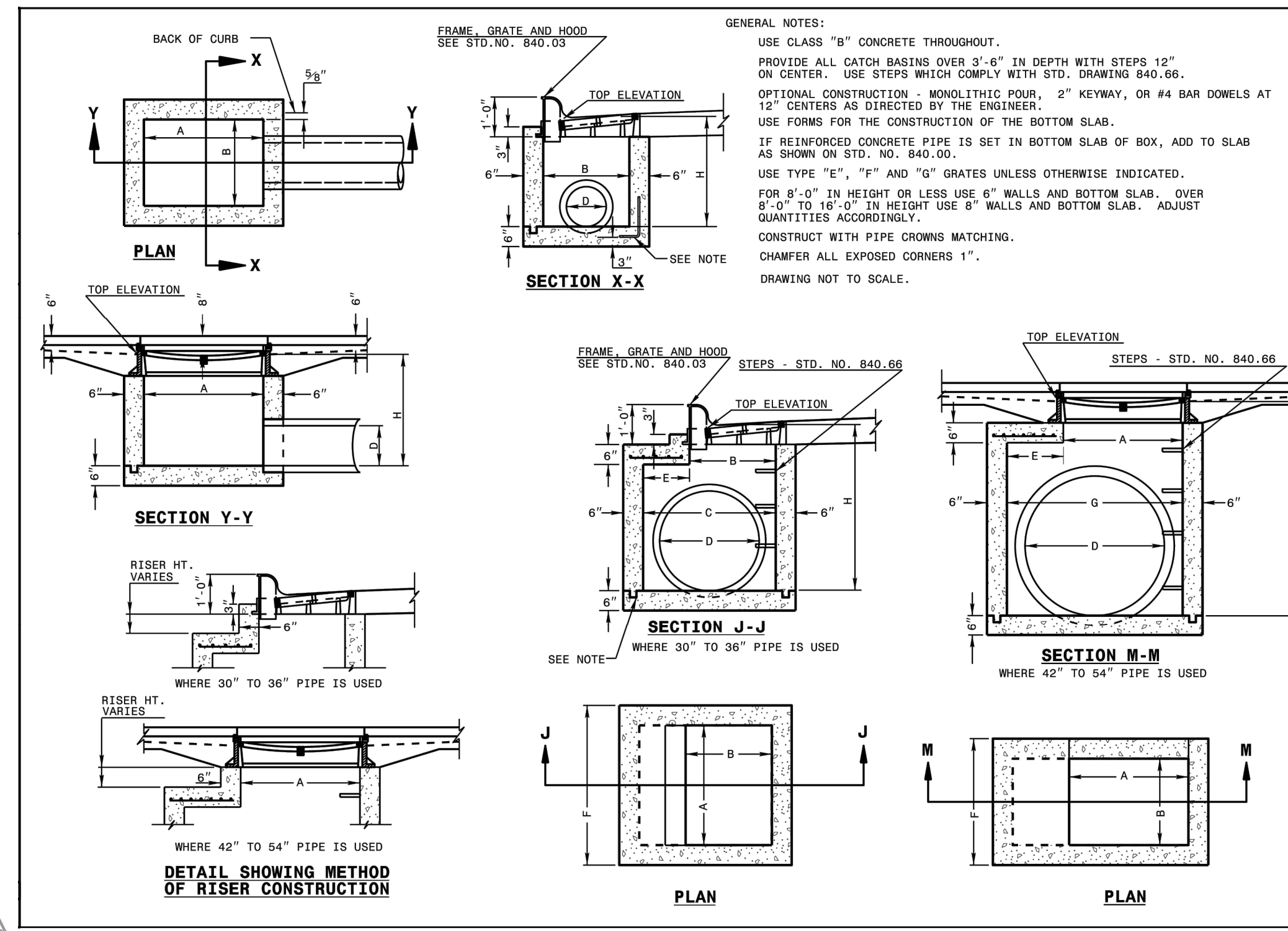
## O-RING GASKET INSTALLATION INSTRUCTIONS



- The pipe should be handled with extreme caution to avoid chipping of the spigots or bell grooves.
- Carefully clean all dirt and foreign objects from the jointing surface of the bell or groove end of pipe.
- Carefully clean spigot or tongue end of pipe, including the gasket recess.
- Improperly prepared bell and spigot surfaces may prevent homing of the pipe or keep the gasket from sealing.
- Lubricate bell joint surface liberally, cover entire inside surface, including the entrance spire using Press-Seal pipe gasket lubricant.
- A bell and gasket not lubricated or improperly lubricated may cause the gasket to roll and leak or possibly damage the bell.
- Lubricate the gasket thoroughly before it is placed into the groove on the spigot.
- Excessive force will be needed to push the pipe home if the gasket is not well lubricated.
- Install the gasket carefully in the o-ring groove. Equalize the rubber gasket stretch by running a smooth, round object (inserted between gasket and spigot) around the entire circumference 3 times.
- Unequal stretch could create bunching of the gasket and may cause leaks in the joint or crack the bell.
- Align the bell and spigot to be joined. Before homing the joint, check that the gasket is in contact with the bell end entrance taper around the entire circumference.
- Improper alignment can dislodge gasket causing leaks or possibly breaking the bell.

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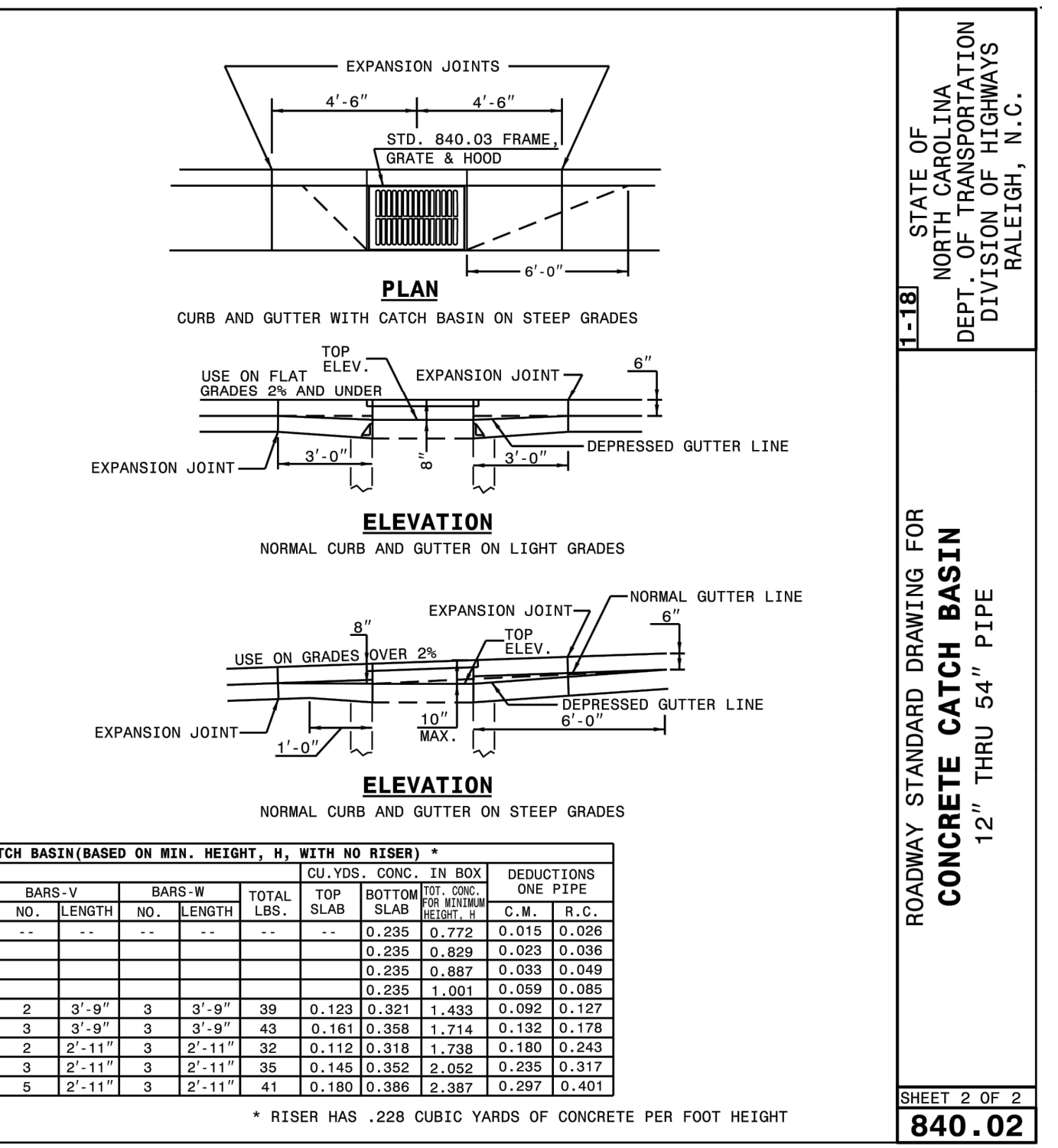
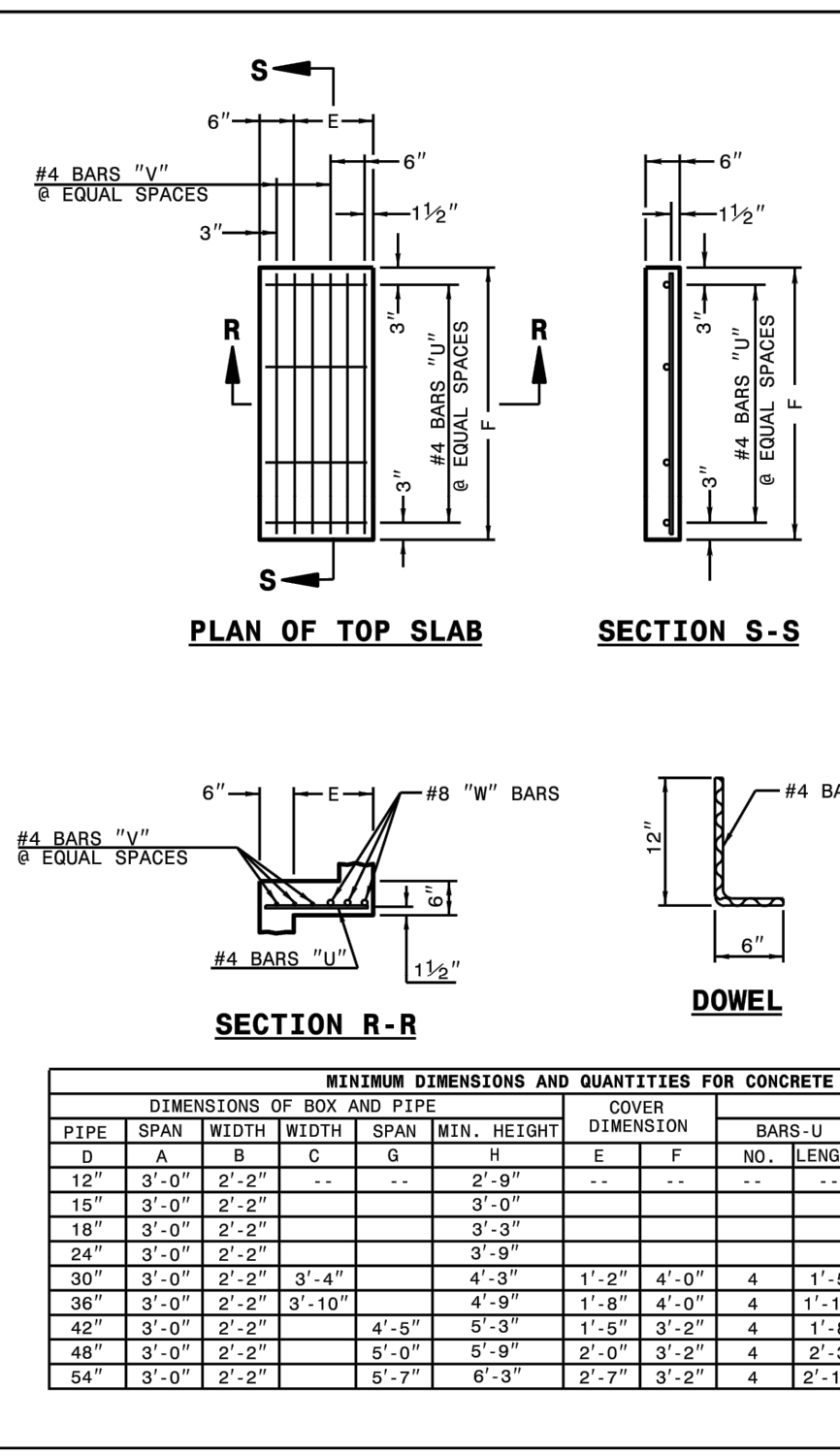
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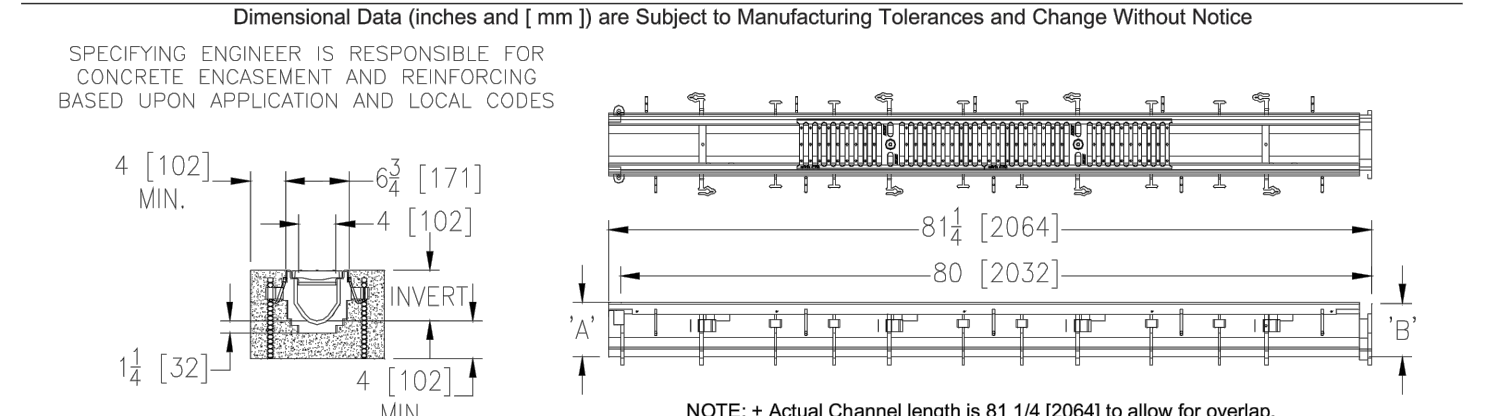
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

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

SHEET 1 OF 2  
840.02



## ZURN Z886-HD 6-3/4 [171] WIDE REVEAL TRENCH DRAIN SYSTEM WITH HEAVY-DUTY FRAME ASSEMBLY



**ENGINEERING SPECIFICATION:** Zurn Z886-HD Channels are 80 [2032] long, 6-3/4 [171] wide reveal and have a 4 [102] throat. Modular channel sections are made of 0% water absorbent High Density Polyethylene (HDPE). Channels have a positive mechanical connection between channel sections that will not separate during the installation and mechanically lock into the concrete surround every 10 [254]. Channels weigh less than 2.31 lbs [1.05kg] per linear foot, have a smooth, 1-1/2 [38] radiused seal cleaning bottom with a Manning's coefficient of .009 and .75% or neutral 0% built in slope. Channels have rebar clips standard to secure trench in its final location. Channels provided with standard DGO grates that lock down to frames. Zurn 5-375 [137] wide reveal Ductile Iron Slotted Grate conforming to ASTM specification A536-84, Grade 80-55-06. Ductile iron grate is rated class C per the DIN EN1433 top load classifications. Supplied in 20 [508] nominal lengths with 1/2 [13] wide slots, and 3/4 [19] bearing depth. Grate has an open area of 28.1 sq. in per ft. [59.463 sq. mm per meter]. The 1/2 [13] thick Heavy-Duty Carbon Steel Frame Assembly conforms to ASTM specification 336 with 10 x 4 [102] long concrete anchors per 80 [2032]. Grate lockdown bars are to be integral to the frame. Frame supplied with powder coated finish. All welds must be performed by a certified welder per ASTM standard AWS D1.1. Frames produced in the U.S.A.

**PREFIX OPTIONS (Check/specify appropriate options)**

**Z** Six-foot, Eight-inch High Density Polyethylene (HDPE)

**SUFFIX OPTIONS (Check/specify appropriate options)**

**Outlet Adapters Add/Each**

E1	Coated End Cap	---UJ2	2 [51] No-Hub Bottom Outlet
E2	2 [51] No-Hub End Outlet	---UJ3	3 [76] No-Hub Bottom Outlet
E3	3 [76] No-Hub End Outlet	---UJ4	4 [102] No-Hub Bottom Outlet
E4	4 [102] No-Hub End Outlet	---UJ5	6 [152] No-Hub Bottom Outlet

**Frame Options (Load Classifications are per DIN EN1433)**

---CBF	Black Acid Resistant Coated Top Frame
---LD	Light Duty Grades on Heavy Duty Frame
---SW	Sidewall Extension - 9 [229] High
---SWZ	Sidewall Extension - 18 [457] High

**Grate Options (Load Classifications are per DIN EN1433)**

---S0C	Black Acid Resistant Epoxy Coated Ductile Grate - Class C
---S0E	Black Acid Resistant Epoxy Coated Ductile Grate - Class E
---B0	Galvanized Ductile Iron Bar Grate - Class C
---D0G	Ductile Iron Cast Bar Grate - Class C
---DC	Ductile Iron Solid Cover - Class C
---DGC	Ductile Iron Slotted Grate - Class C
---DGE	Ductile Iron Slotted Grate - Class E
---G0C	Galvanized Ductile Iron Slotted Grate - Class C
---G0E	Galvanized Ductile Iron Slotted Grate - Class E
---G0P	Galvanized Heel-Proof Ductile Grate - Class B
---G0PE	Galvanized Heel-Proof Ductile Grate - Class E
---H0D	Heel-Proof Ductile Slotted Grate - Class B
---H0DE	Heel-Proof Ductile Slotted Grate - Class E
---R0FG	Reinforced Slotted Galvanized Grate - Class C
---R0FC	Reinforced Slotted Stainless Steel Grate - Class C
---R0PG	Reinforced Perforated Galvanized Grate - Class C
---R0PC	Reinforced Perforated Stainless Steel Grate - Class C
---R0GRC	Reinforced Perforated Galvanized Reverse Punch Grate - Class C
---R0SRC	Reinforced Perforated Stainless Steel Reverse Punch Grate - Class C

**Miscellaneous Options**

---VP	Vandal-Proof Lockdown
---JC	Joint Contractor

**Decorative Grate Options (Load Classifications are per DIN EN1433)**

---SBG	Stainless Steel Bar Grate - Class E
--------	-------------------------------------

**MADE IN THE USA**

---D0C-USA	Black Acid Resistant Epoxy Coated Ductile Grate - Class E
---D0E-USA	Ductile Iron Slotted Grate - Class E
---S0C-USA	Galvanized Ductile Slotted Grate - Class C
---S0E-USA	Galvanized Ductile Slotted Grate - Class E
---C0PDE-USA	Galvanized Heel-Proof Ductile Grate - Class E
---HPDE-USA	Heel-Proof Ductile Slotted Grate - Class E
---PPC	Plastic Perforated Grate - Class

**Miscellaneous Options**

---DB	Bottom Dome Strainer
-------	----------------------

REGULARLY FURNISHED UNLESS OTHERWISE SPECIFIED

**REV. D DATE: 01/31/13 C.N. NO. 124330**

**PROJ./DWG. NO. Z886-HD**

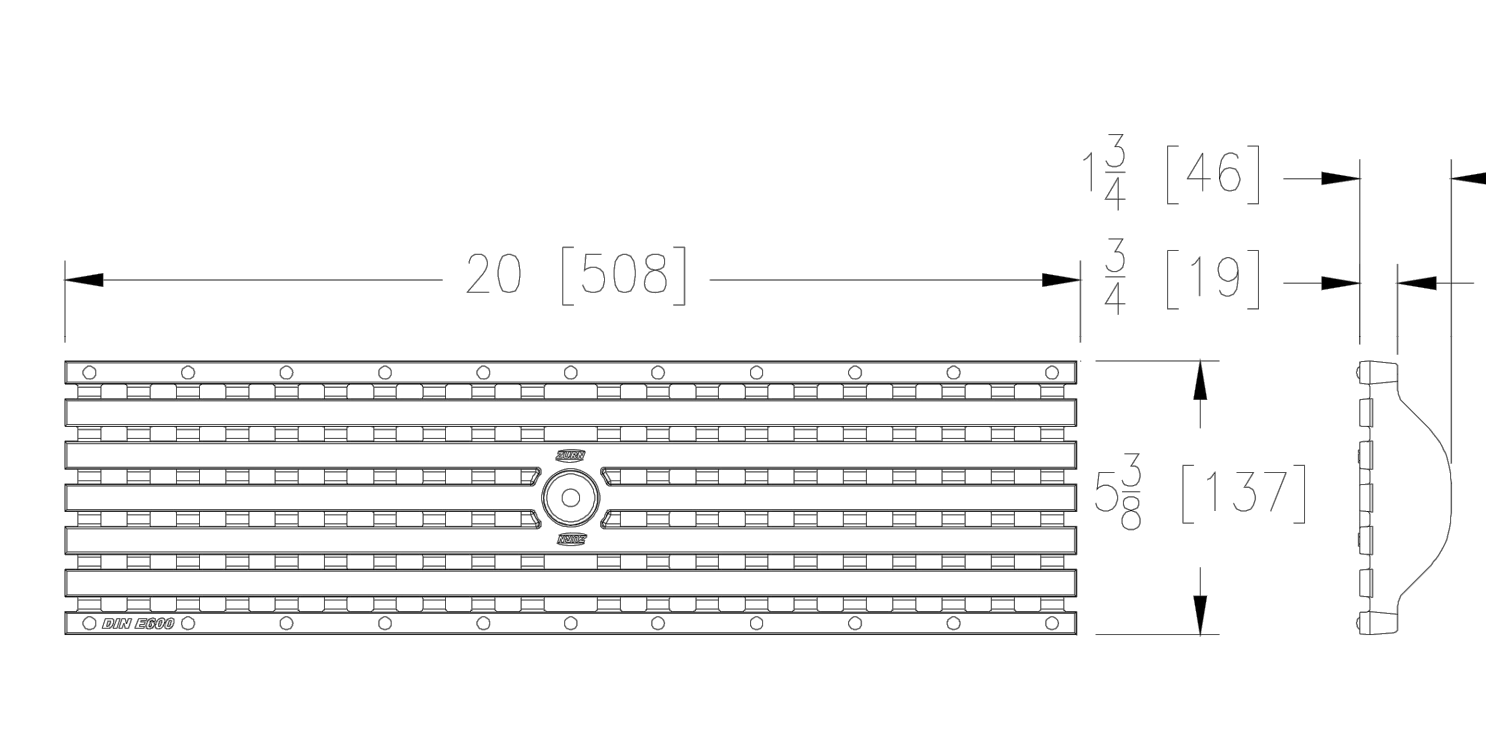
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 Phone: 814-455-0621 • Fax: 814-454-7923 • World Wide Web: www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED • 3544 Neasius Drive • Mississauga, Ontario L4V 1L2 • Phone: 905-405-8272 Fax: 905-405-1292

## ZURN P6-HPDE 6 [152] Wide Grate

Dimensional Data (Imperial and [Metric]) are subject to manufacturing tolerances and change without notice. Linear (in/[mm]), Area (in<sup>2</sup>/[mm<sup>2</sup>]), & Weight (lb/[kg]).

Please Check	Item No.	Part Number	Item I.D.
✓	34	94454	P6-HPDE



**HPDE GRATE ENGINEERING SPECIFICATION:** ZURN P6-HPDE 20" [508mm] X 5-3/8" [137mm] Ductile Iron heel-proof slotted grate weighing 9.5 lbs per linear foot [14.1kg/m]. The grate has an open area of 10.9 in<sup>2</sup> per linear foot [235cm<sup>2</sup>/m]. Grate conforms to DIN rating of E, ANSI rating of Special-Duty, ADA compliant, H-20 and FAA load rated, and ASTM A536 Grade 80-55-06.

**HPDE - Heel-Proof Slotted**

Material: Ductile Iron

DIN Rating: Class E

Weight: 9.5 lbs/ft. [14.1kg/m]

Open Area: 10.9 in<sup>2</sup>/ft. [235cm<sup>2</sup>/m]

ANSI Rating: Special-Duty

Application: Heel-Proof, Forklifts, Commercial Aircraft

Slot Width/Hole Size: 5/16" [8mm]

ADA: Yes

H-20: Yes

FAA: Yes

Zurn Industries, LLC | Specification Drainage Operation  
 1801 Pittsburgh Avenue, Erie, PA U.S.A. 16502 • Ph: 855-663-9876, Fax 814-454-7929

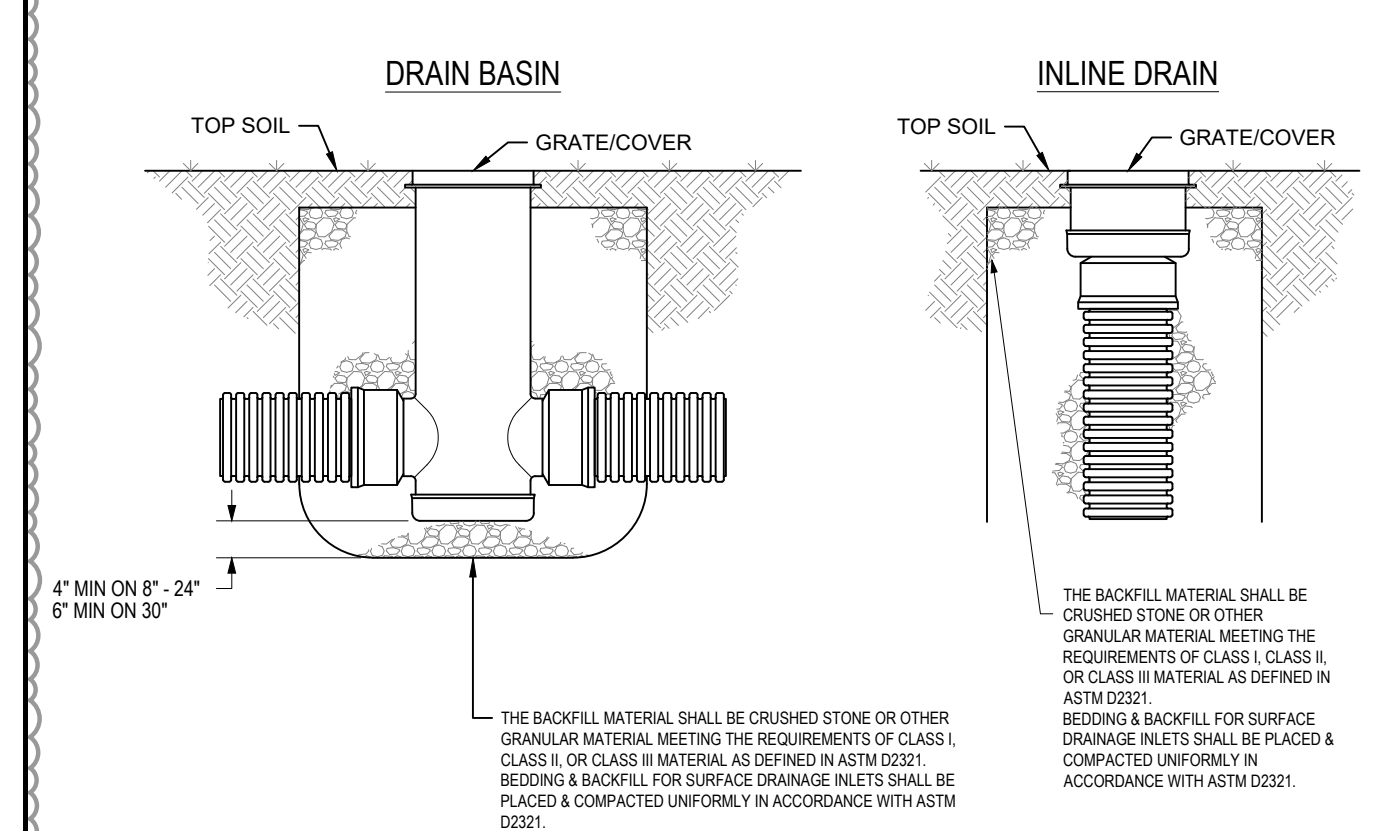
In Canada | Zurn Industries Limited  
 3544 Neasius Drive, Mississauga, Ontario L4V 1L2 • Ph: 905-405-8272, Fax 905-405-1292

www.zurn.com

Rev. AL  
 Date: 04/16/15  
 C.N. No. 132548  
 Form Number: FT641

Page 34 of 70

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DATE: 05-11-16  
 DRAWN BY: JAA  
 CHECKED BY: COE

NO.	DATE	BY	REVISION
1	11/26/2024	JAA	WAKE COUNTY COMMENTS
2	08/16/2024	JAA	WAKE COUNTY COMMENTS
3	08/01/2024	JAA	TOWN COMMENTS
4	07/17/2024	JAA	WAKE COUNTY COMMENTS
5	07/08/2024	JAA	NCDOT COMMENTS
6	06/20/2024	JAA	TOWN COMMENTS
7	06/20/2024	JAA	WAKE COUNTY COMMENTS
8	06/11/2024	JAA	REVISIONS

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Know what's below.  
 Call before you dig.

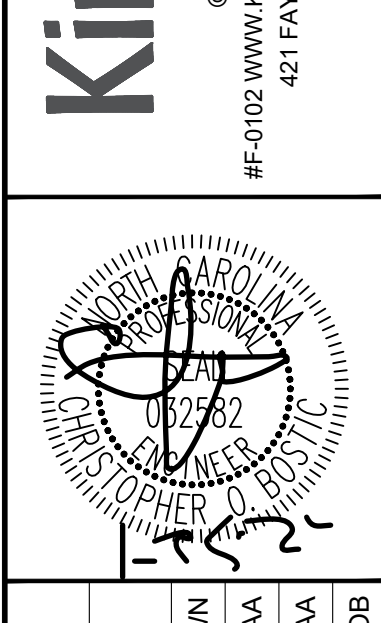
**Kimley»Horn**

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 #F-0102 WWW.KIMLEY-HORN.COM PHONE: 919-677-2000 FAX: 919-677-2050  
 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601

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

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

SHEET 2 OF 2  
840.02



NO.	DATE	BY	REVISION
1	09/29/2023	JAA	SCALE AS SHOWN
2	08/29/2023	JAA	DESIGNED BY
3	08/29/2023	JAA	DRAWN BY
4	08/29/2023	JAA	CHECKED BY

**THE LEARNING CENTER ROLESVILLE**

PREPARED FOR  
**ROLESVILLE, LLC.**

TOWN OF ROLESVILLE  
 NORTH CAROLINA

**THE LEARNING CENTER ROLESVILLE**

PREPARED FOR  
**ROLESVILLE, LLC.**

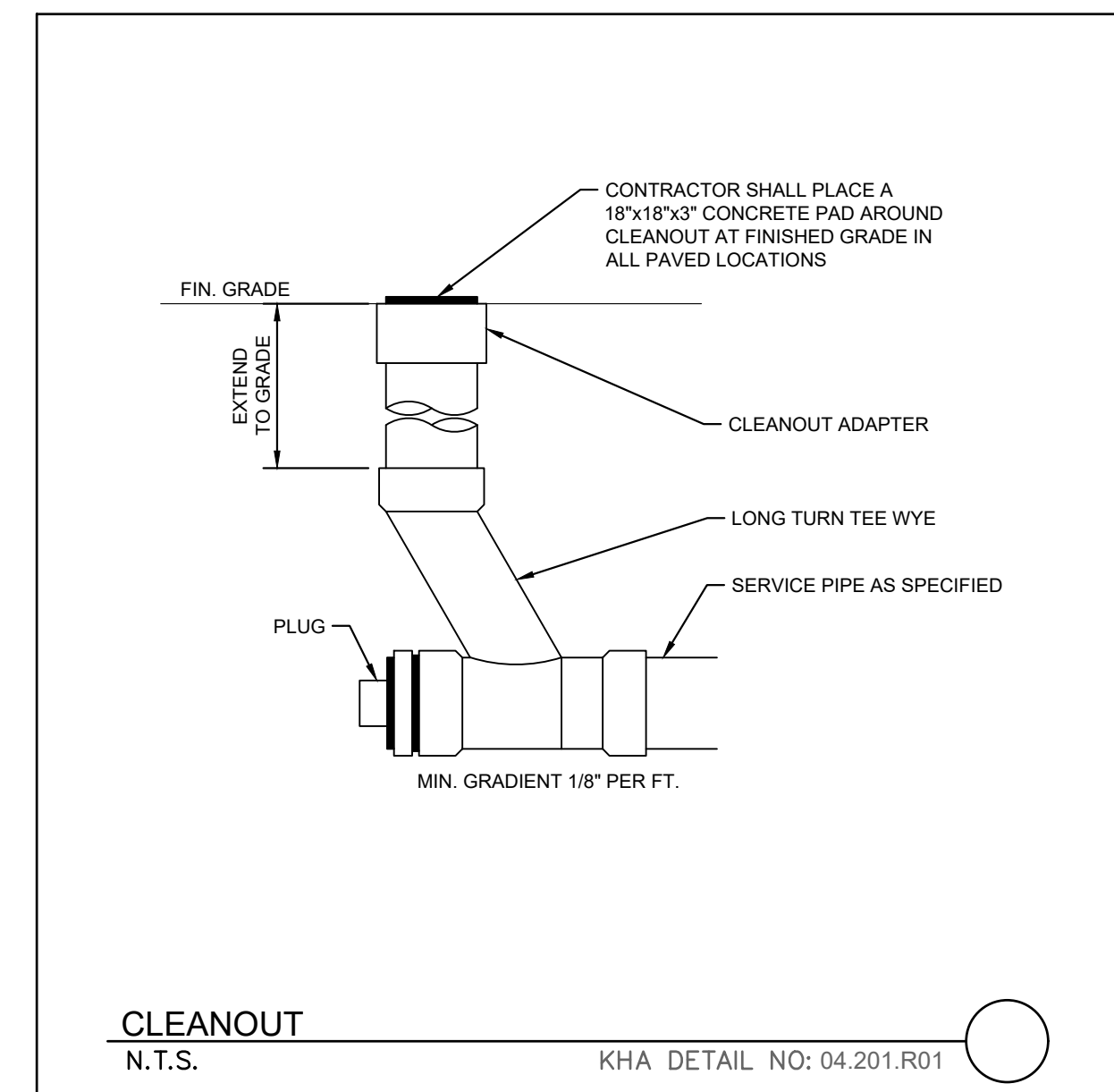
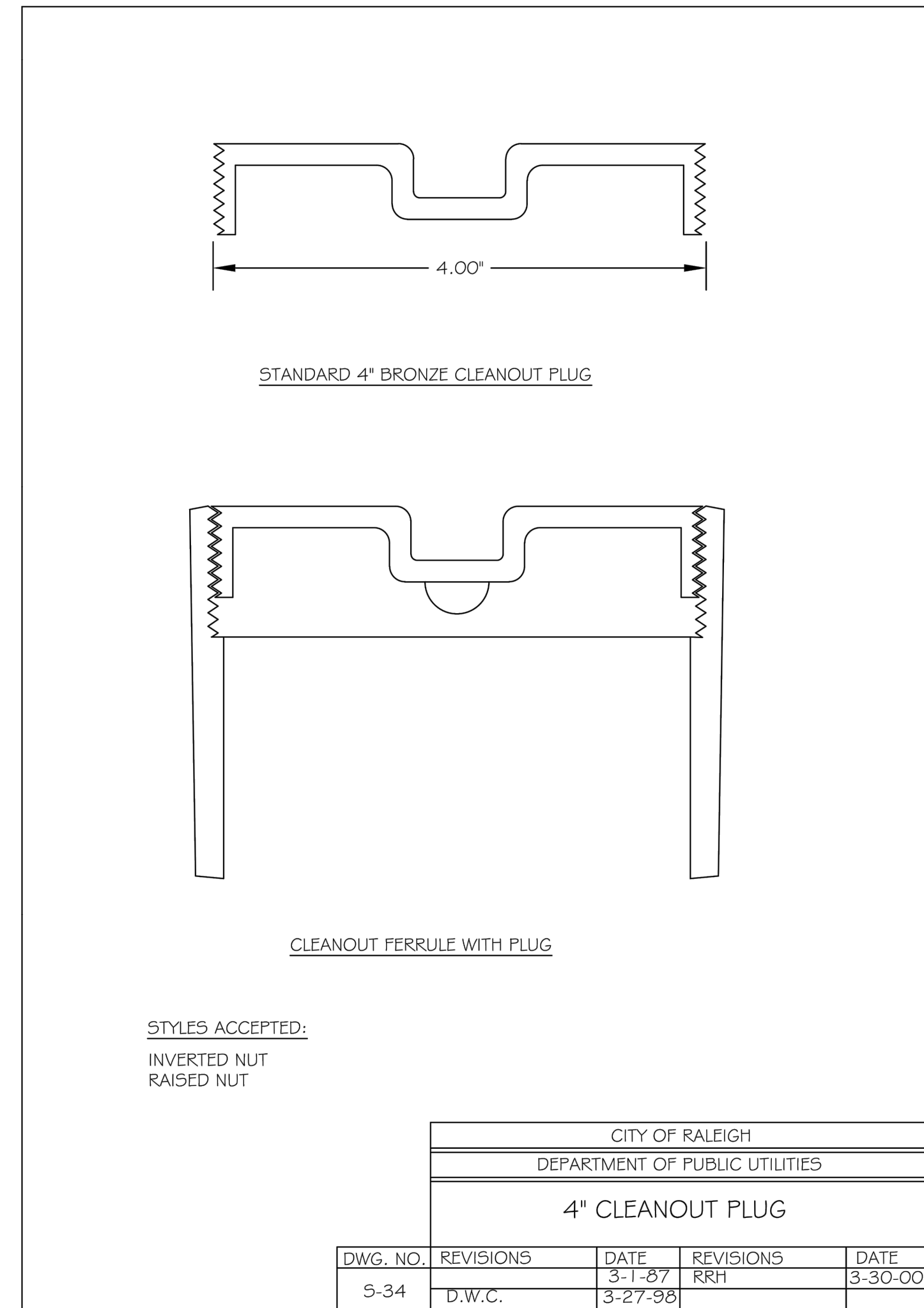
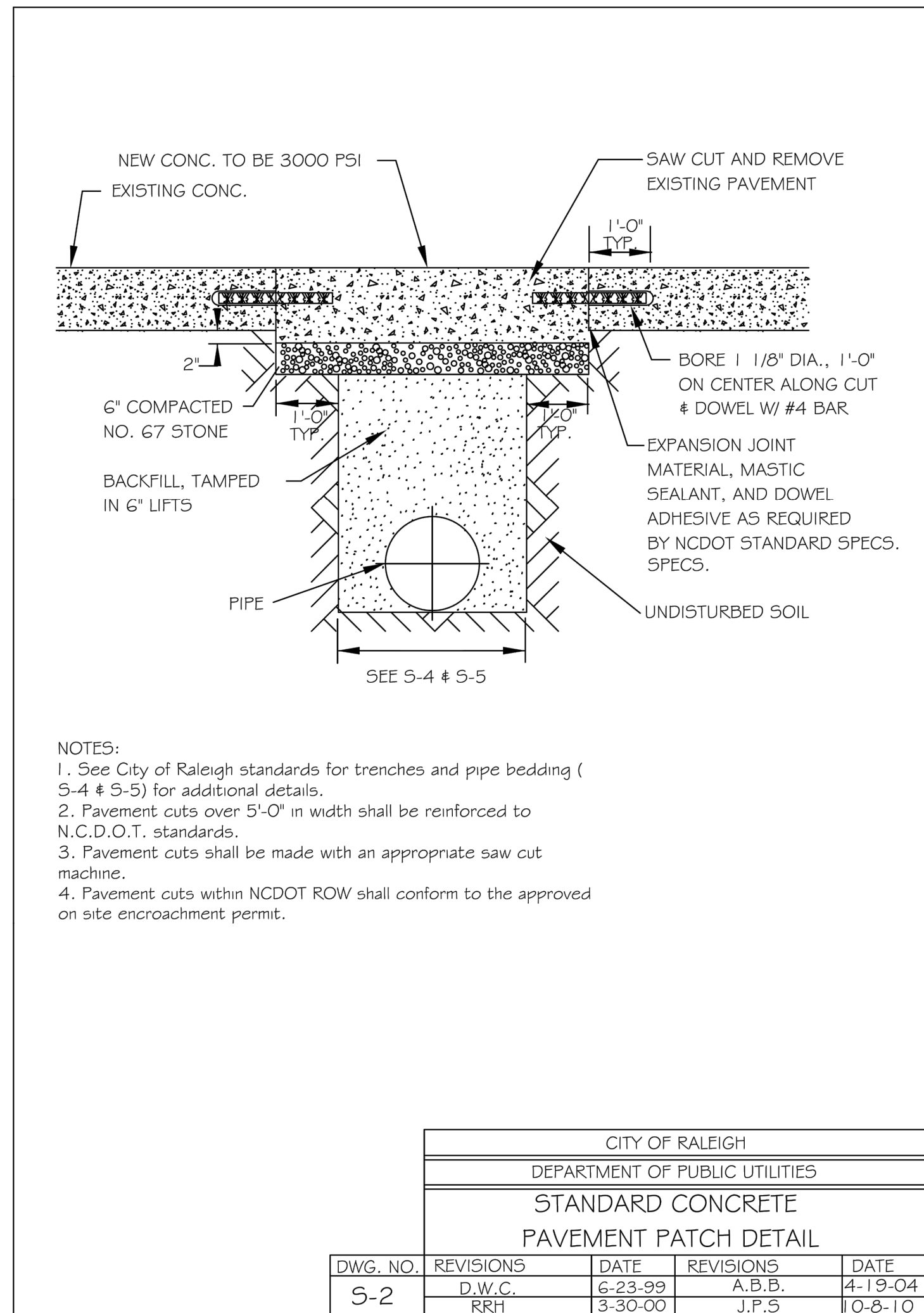
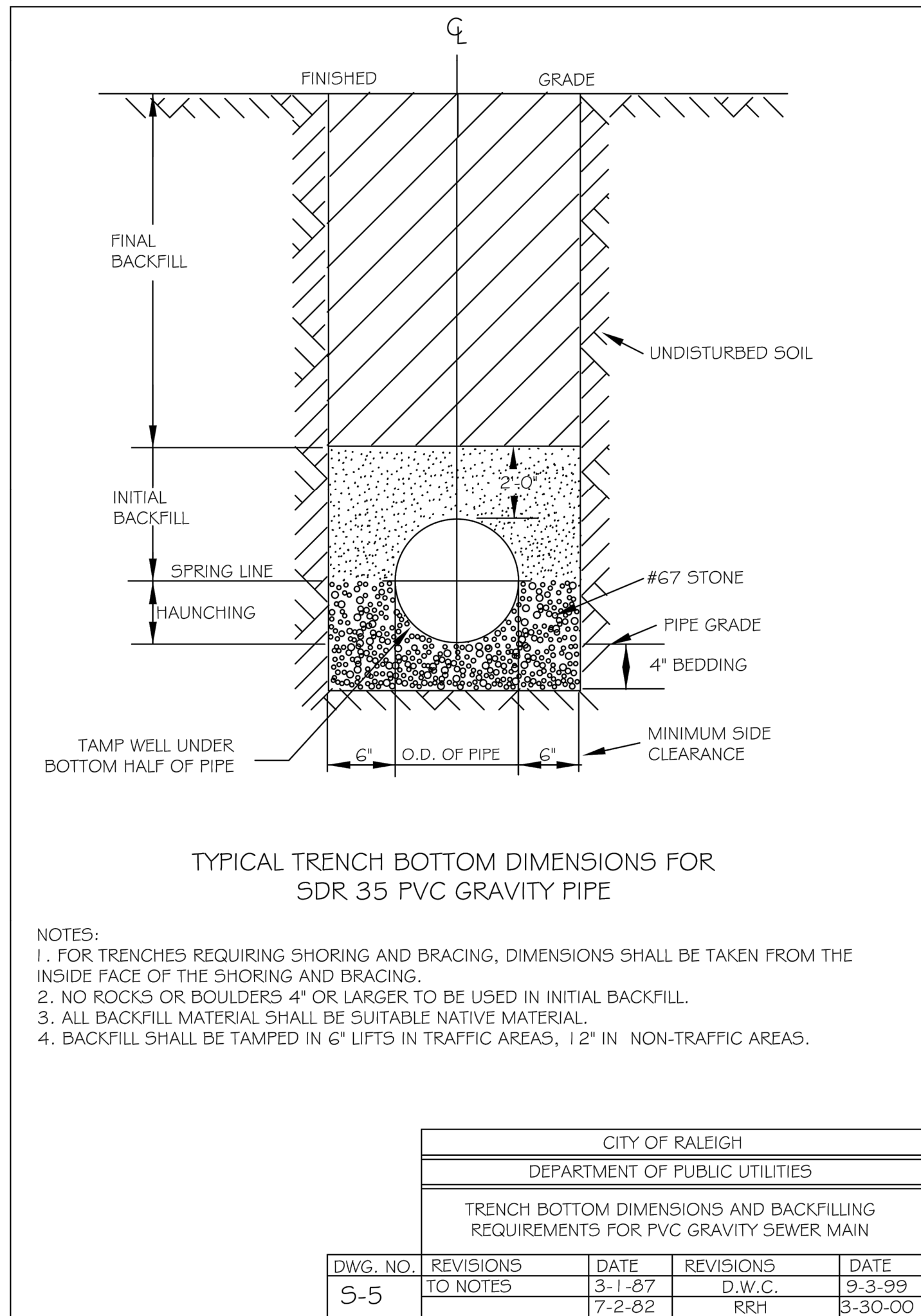
TOWN OF ROLESVILLE  
 NORTH CAROLINA

SHEET NUMBER  
**C9.1**

SDP-23-07



Plotted By: Alexander, Jamal Sheet Set: THE LEARNING CENTER ROLESVILLE Layout: C10.0 SANITARY SEWER DETAILS August 01, 2024 12:50:04pm K:\BIDAL\_LDEV\013031004\_Rolesville Learning\_Center\PIG\_CAD Files\PipeSheets\C10.1 SANITARY SEWER DETAILS.dwg  
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08/01/2024	JAA	TOWN COMMENTS	BY	DATE
07/17/2024	JAA	WAKE COUNTY COMMENTS		
07/08/2024	JAA	NCDOT COMMENTS		
06/20/2024	JAA	TOWN COMMENTS		
06/11/2024	JAA	WAKE COUNTY COMMENTS		
05/01/2024	JAA	TOWN COMMENTS		
03/01/2024	JAA	TOWN COMMENTS		
		REVISIONS		
		No.		

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 421 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601

KHA PROJECT	013031004	DATE	09/29/2023	SCALE	AS SHOWN	DESIGNED BY	JAA	DRAWN BY	JAA	CHECKED BY	COE
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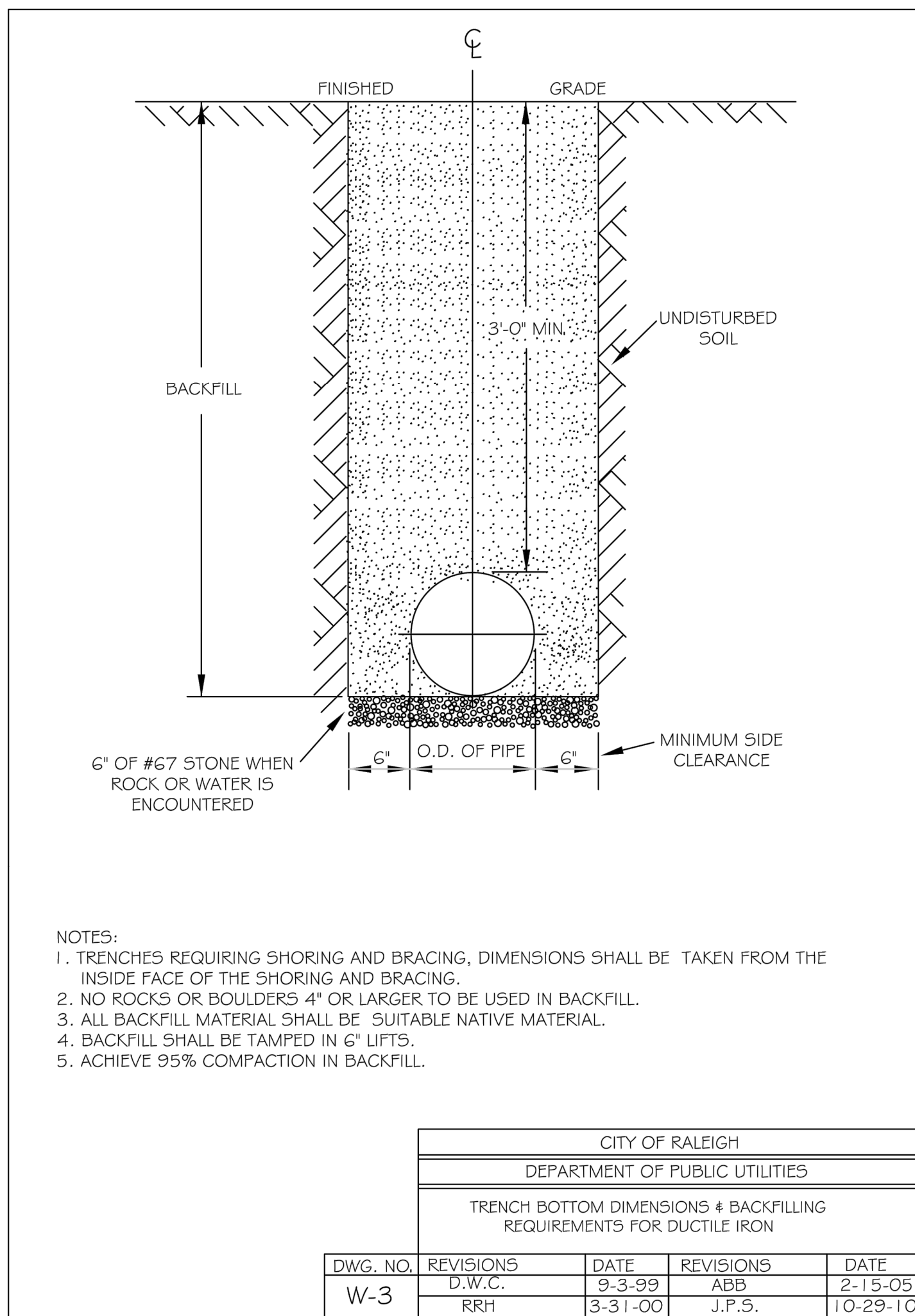
**SANITARY SEWER DETAILS**

THE LEARNING CENTER ROLESVILLE	PREPARED FOR	ROLESVILLE, LLC.	NORTH CAROLINA
SHEET NUMBER	C10.0		



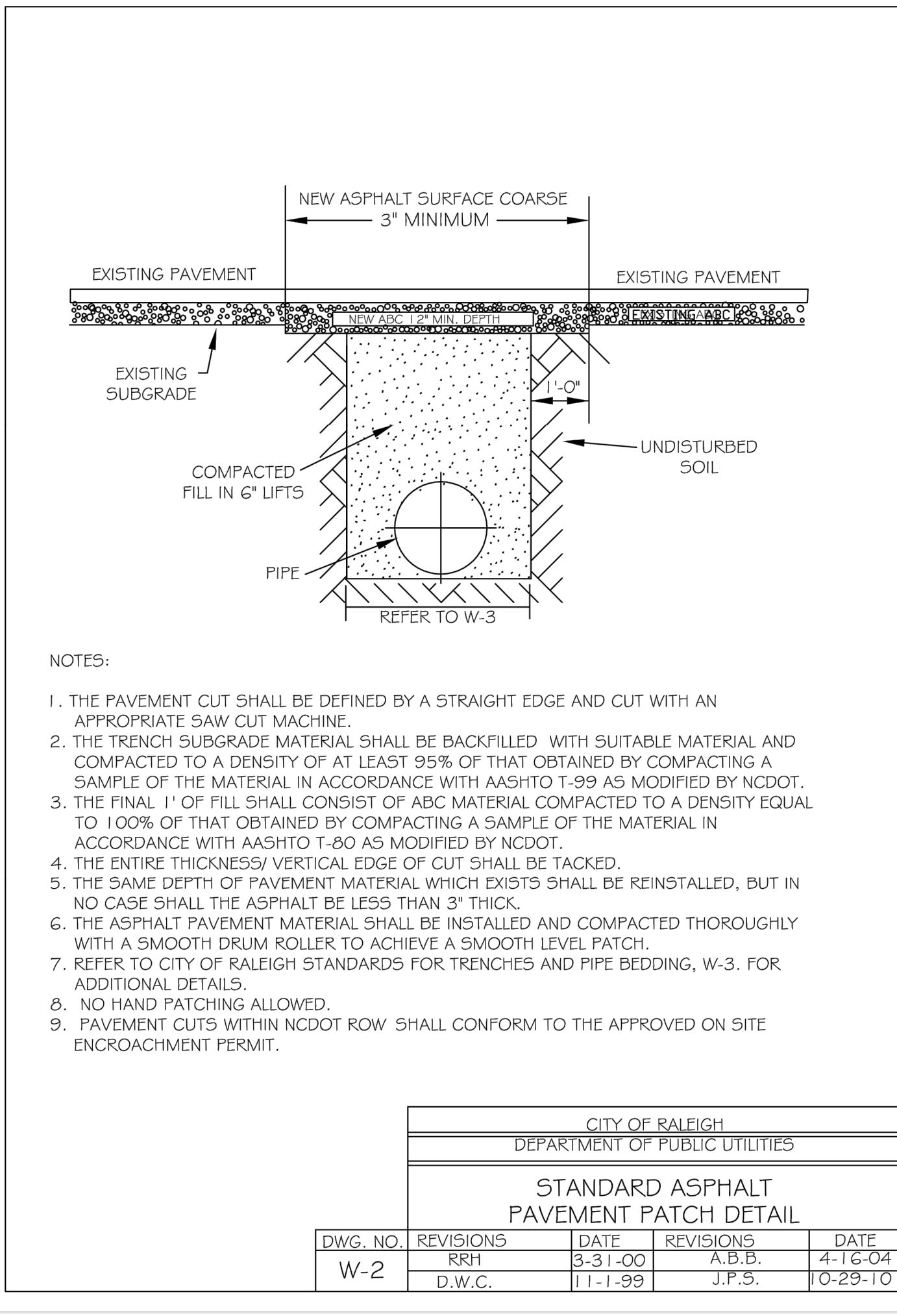


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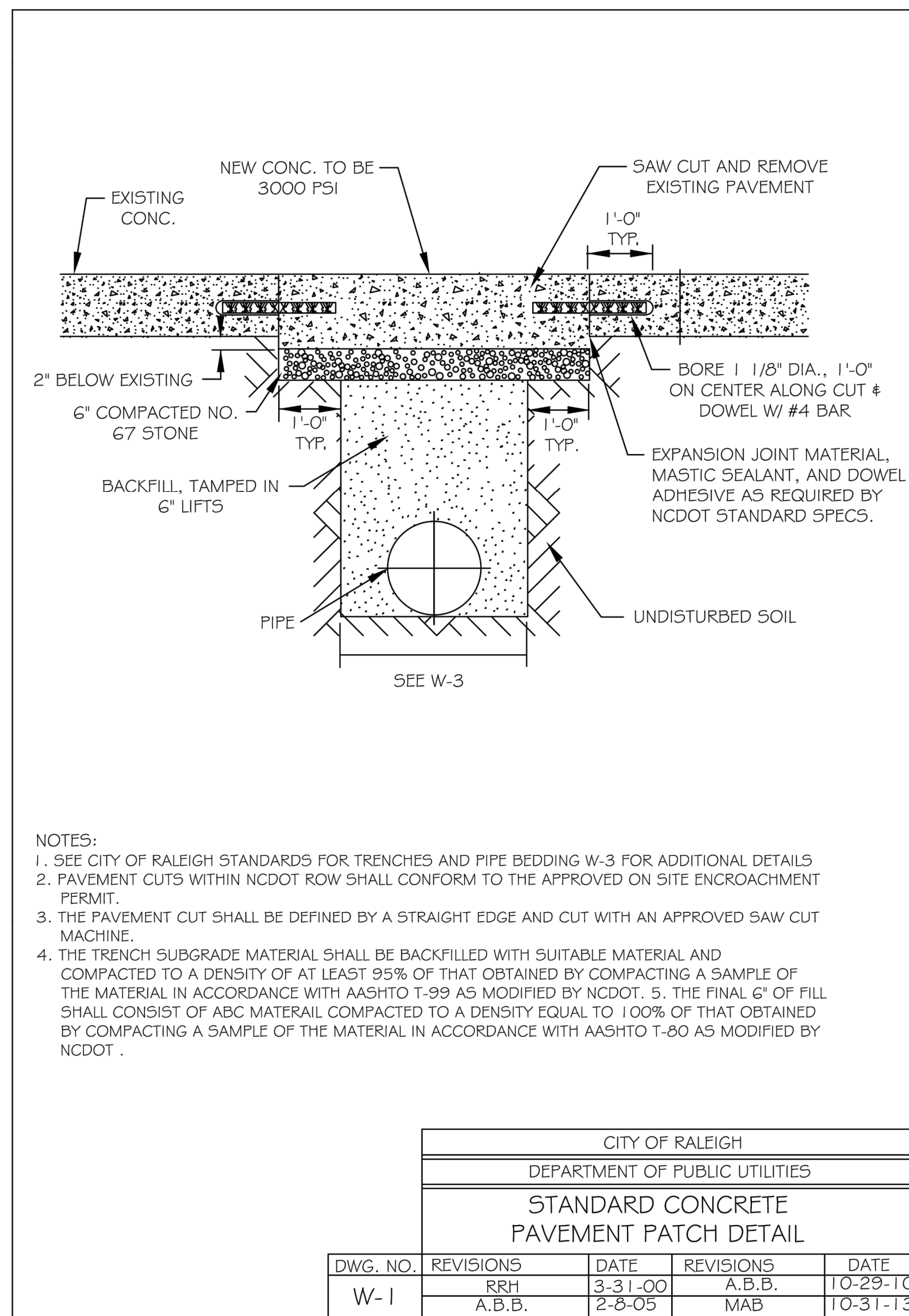
- NOTES:
- TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
  - NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN BACKFILL.
  - ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
  - BACKFILL SHALL BE TAMPED IN 6" LIFTS.
  - ACHIEVE 95% COMPACTION IN BACKFILL.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-3	D.W.C.	9-3-99	ABB	2-15-05
	RRH	3-31-00	J.P.S.	10-29-10



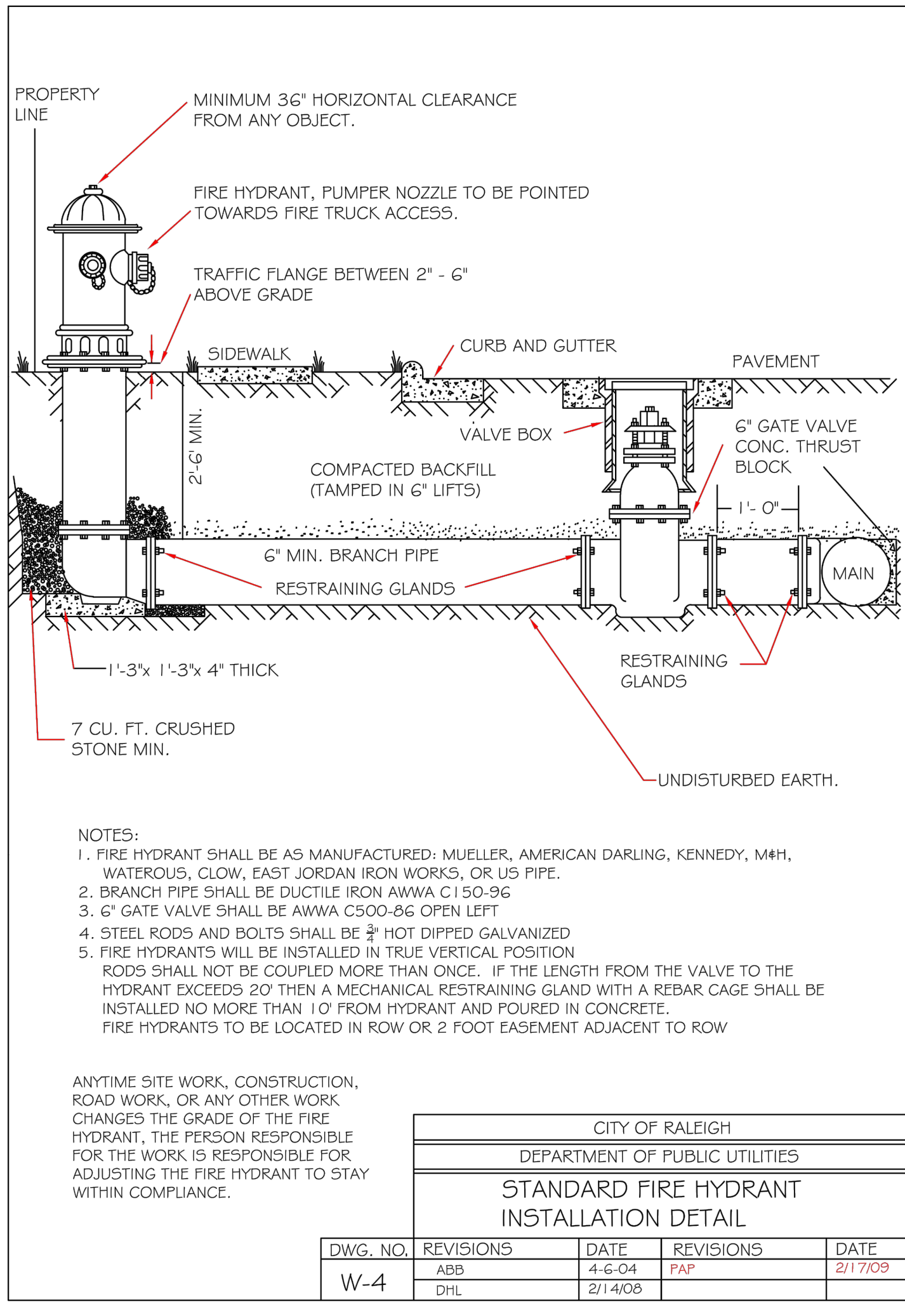
- NOTES:
- THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAW CUT MACHINE.
  - THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
  - THE FINAL 1" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
  - THE ENTIRE THICKNESS/ VERTICAL EDGE OF CUT SHALL BE TACKED.
  - THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE THINER THAN 3" THICK.
  - THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
  - REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING, W-3, FOR ADDITIONAL DETAILS.
  - NO HAND PATCHING ALLOWED.
  - PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD ASPHALT PAVEMENT PATCH DETAIL				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-2	RRH	3-31-00	A.B.B.	4-16-04
	D.W.C.	11-1-99	J.P.S.	10-29-10



- NOTES:
- SEE CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING W-3 FOR ADDITIONAL DETAILS.
  - PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.
  - THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROVED SAW CUT MACHINE.
  - THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT. 5. THE FINAL 6" OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.

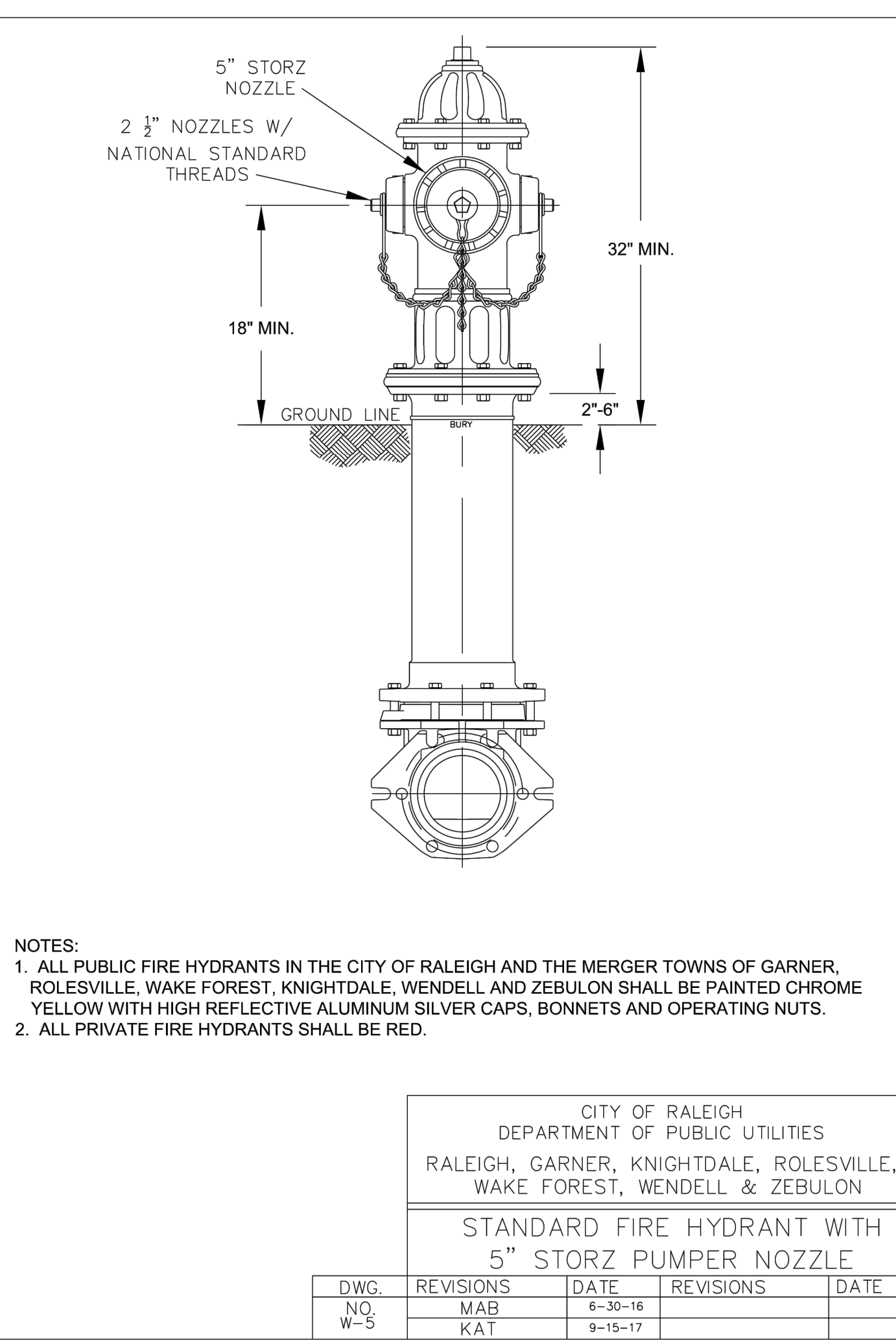
CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD CONCRETE PAVEMENT PATCH DETAIL				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-1	RRH	3-31-00	A.B.B.	10-29-10
	A.B.B.	2-8-05	MAB	10-31-13



- NOTES:
- FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M4H, WATEROUS, CLOW, EAST JORDAN IRON WORKS, OR US PIPE.
  - BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150-96
  - 6" GATE VALVE SHALL BE AWWA C500-96 OPEN LEFT
  - STEEL RODS AND BOLTS SHALL BE 1/2" HOT DIPPED GALVANIZED
  - FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION
- RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 1' FROM HYDRANT AND POURED IN CONCRETE.
- FIRE HYDRANTS TO BE LOCATED IN ROW OR 2 FOOT EASEMENT ADJACENT TO ROW

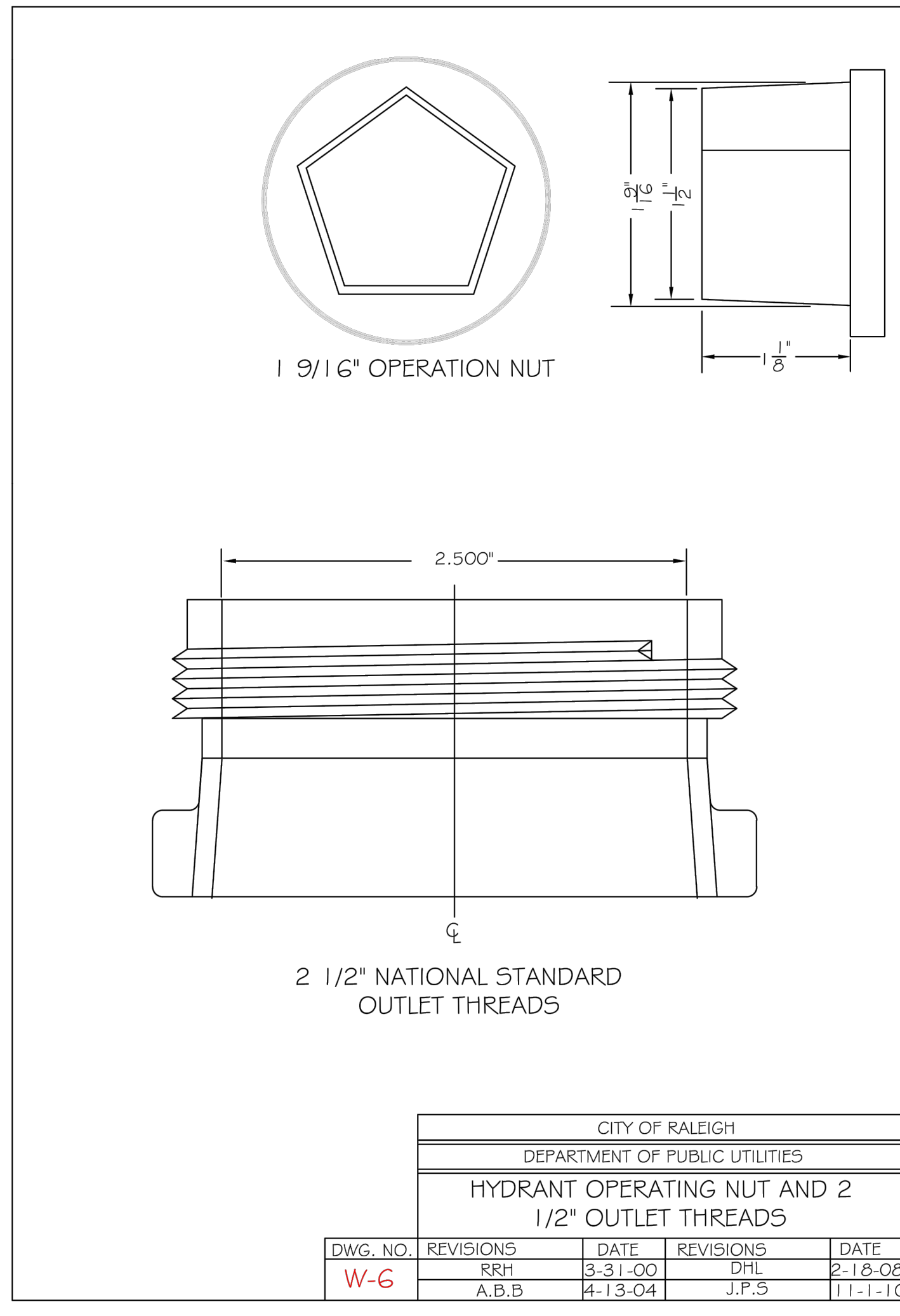
ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD FIRE HYDRANT INSTALLATION DETAIL				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-4	ABB	4-6-04	PAF	2/17/09
	DHL	2/14/06		

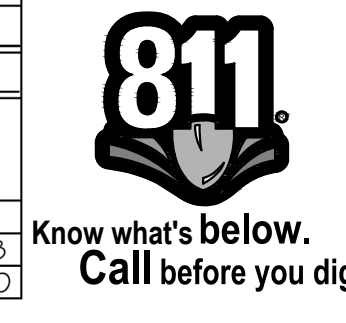


- NOTES:
- ALL PUBLIC FIRE HYDRANTS IN THE CITY OF RALEIGH AND THE MERGER TOWNS OF GARNER, ROLESVILLE, WAKE FOREST, KNIGHTDALE, WENDELL AND ZEBULON SHALL BE PAINTED CHROME YELLOW WITH HIGH REFLECTIVE ALUMINUM SILVER CAPS, BONNETS AND OPERATING NUTS.
  - ALL PRIVATE FIRE HYDRANTS SHALL BE RED.

CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
STANDARD FIRE HYDRANT WITH 5" STORZ PUMPER NOZZLE				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-5	MAB	6-30-16		
	KAT	9-16-17		



CITY OF RALEIGH DEPARTMENT OF PUBLIC UTILITIES				
HYDRANT OPERATING NUT AND 2 1/2\"/>				
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-6	RRH	3-31-00	DPL	2-18-08
	A.B.B.	4-13-04	J.P.S.	11-1-10



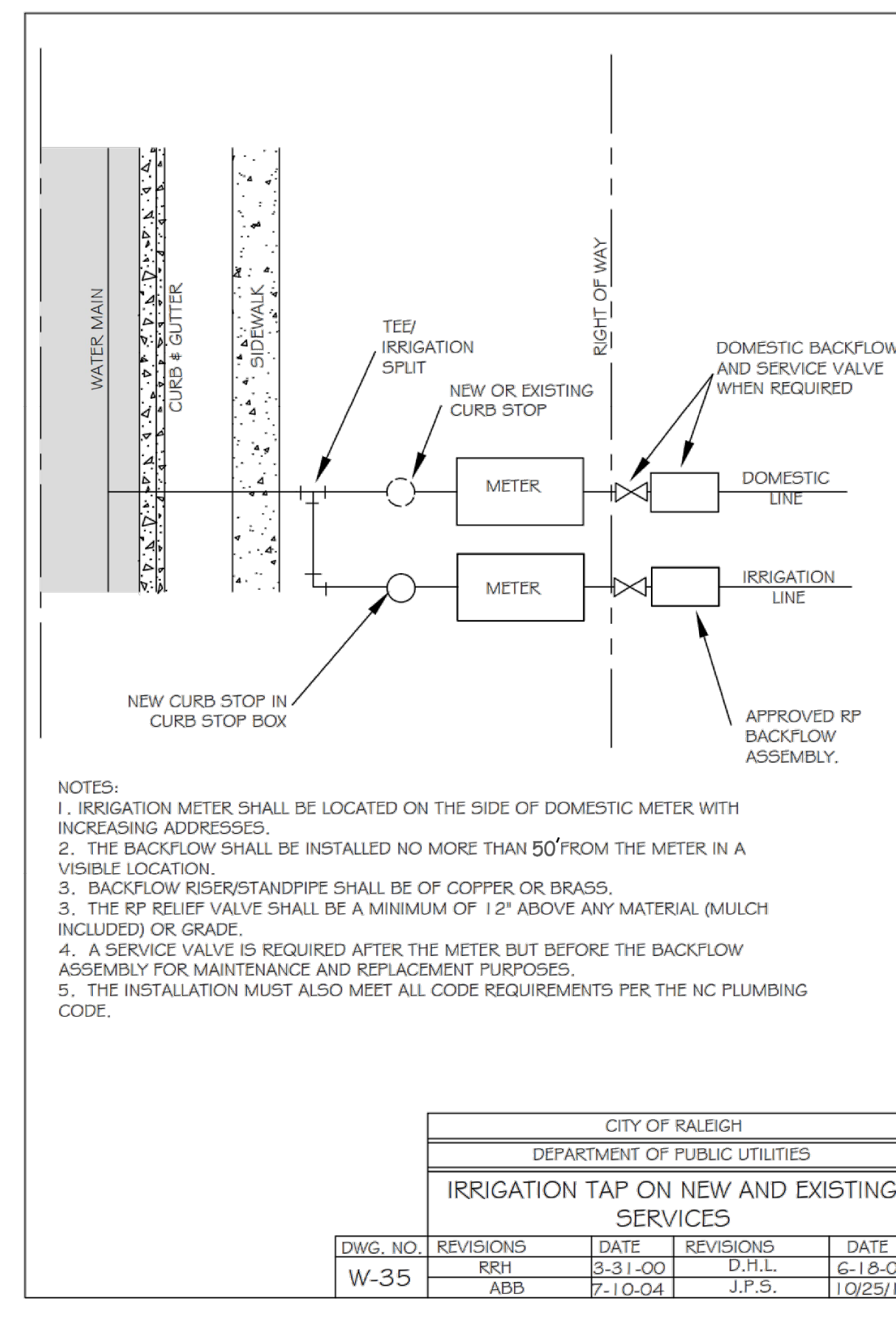
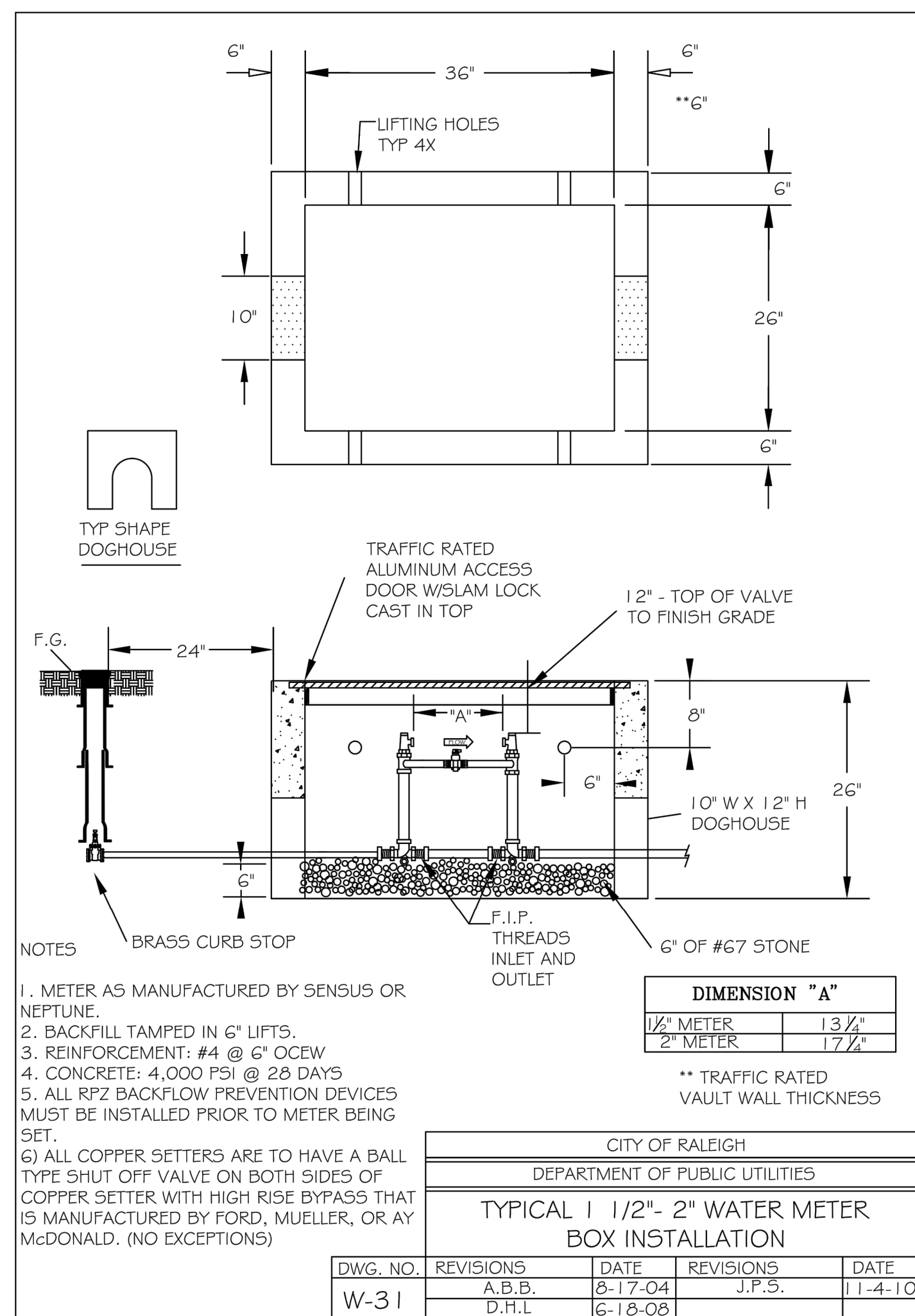
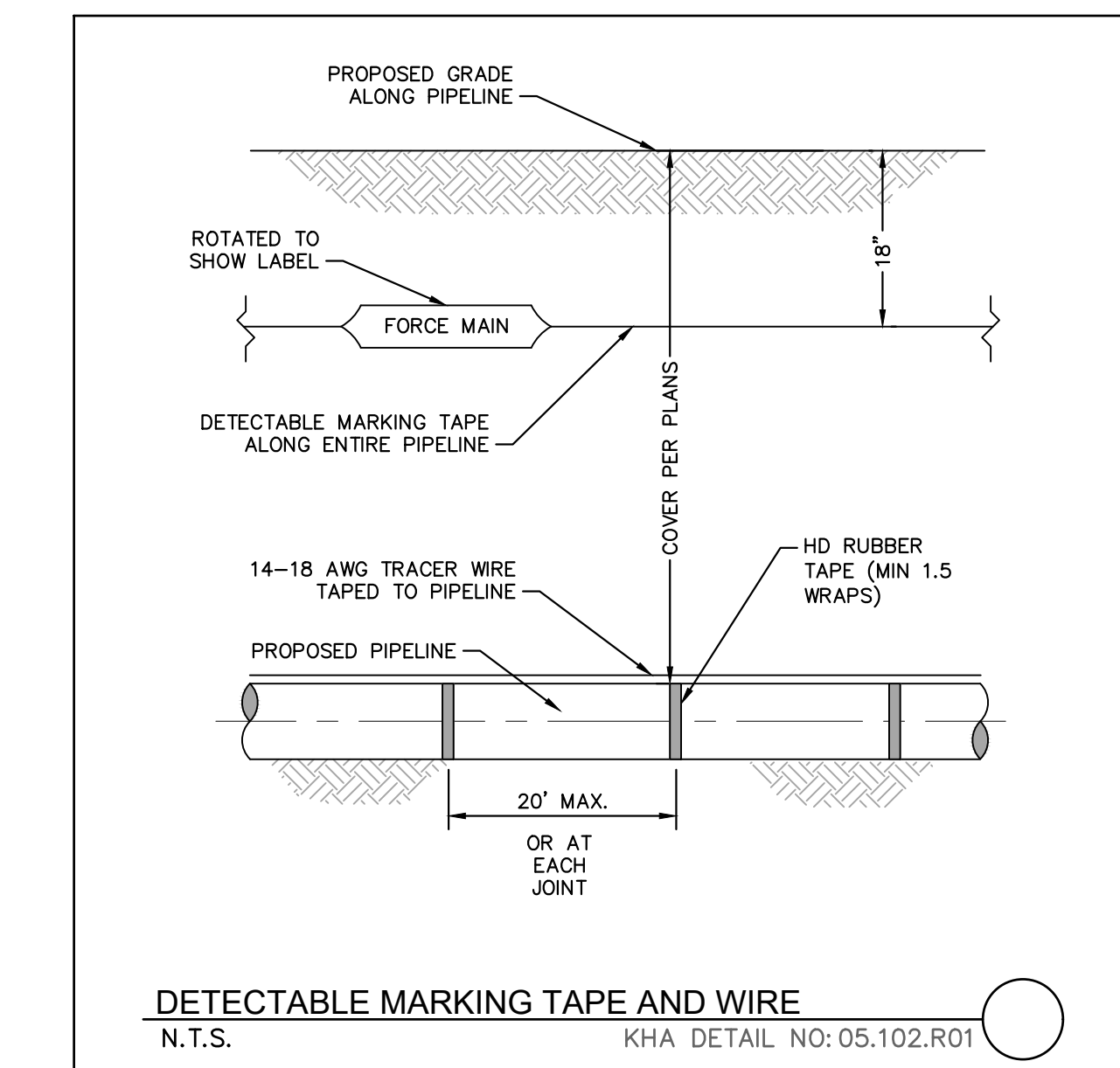
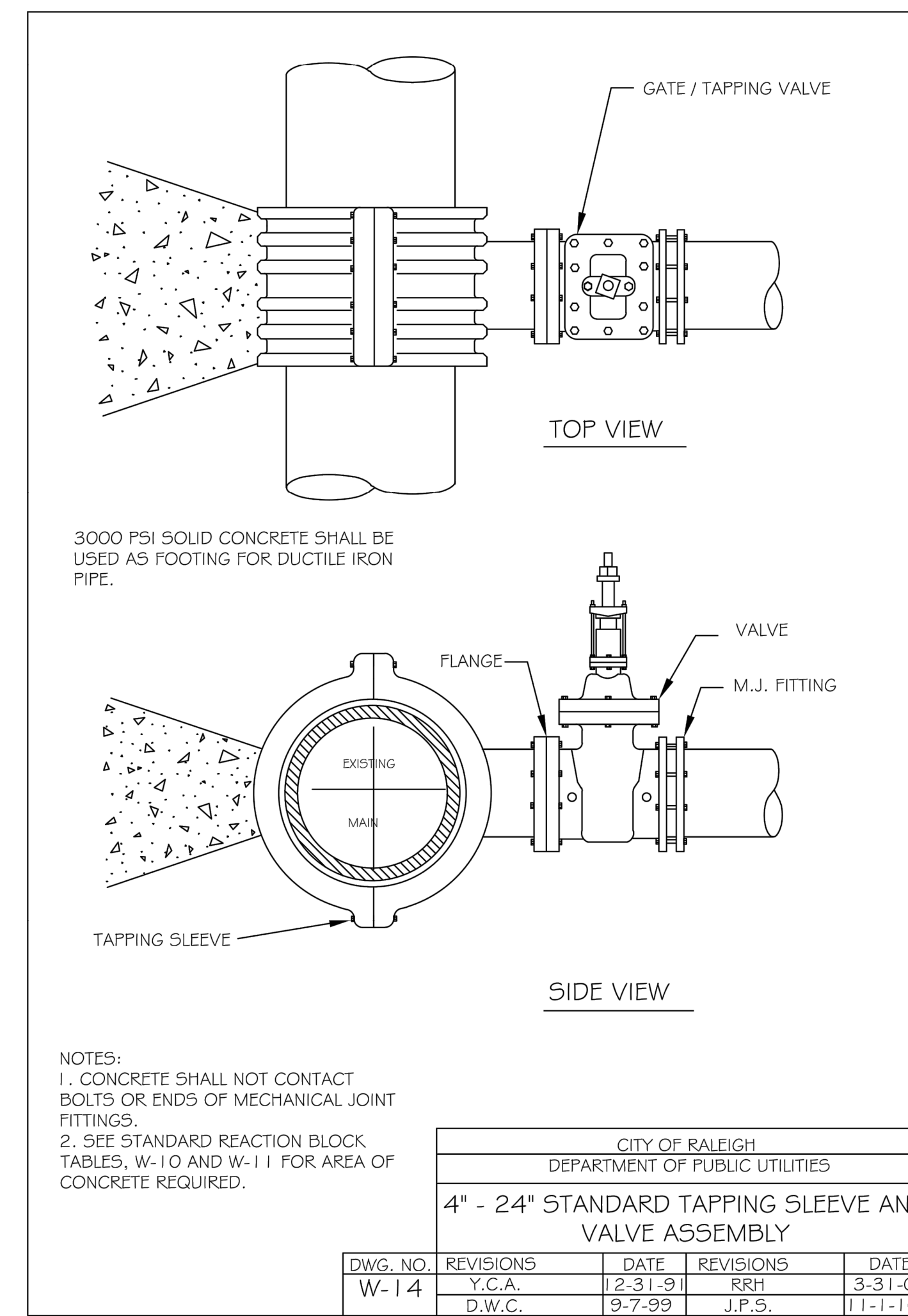
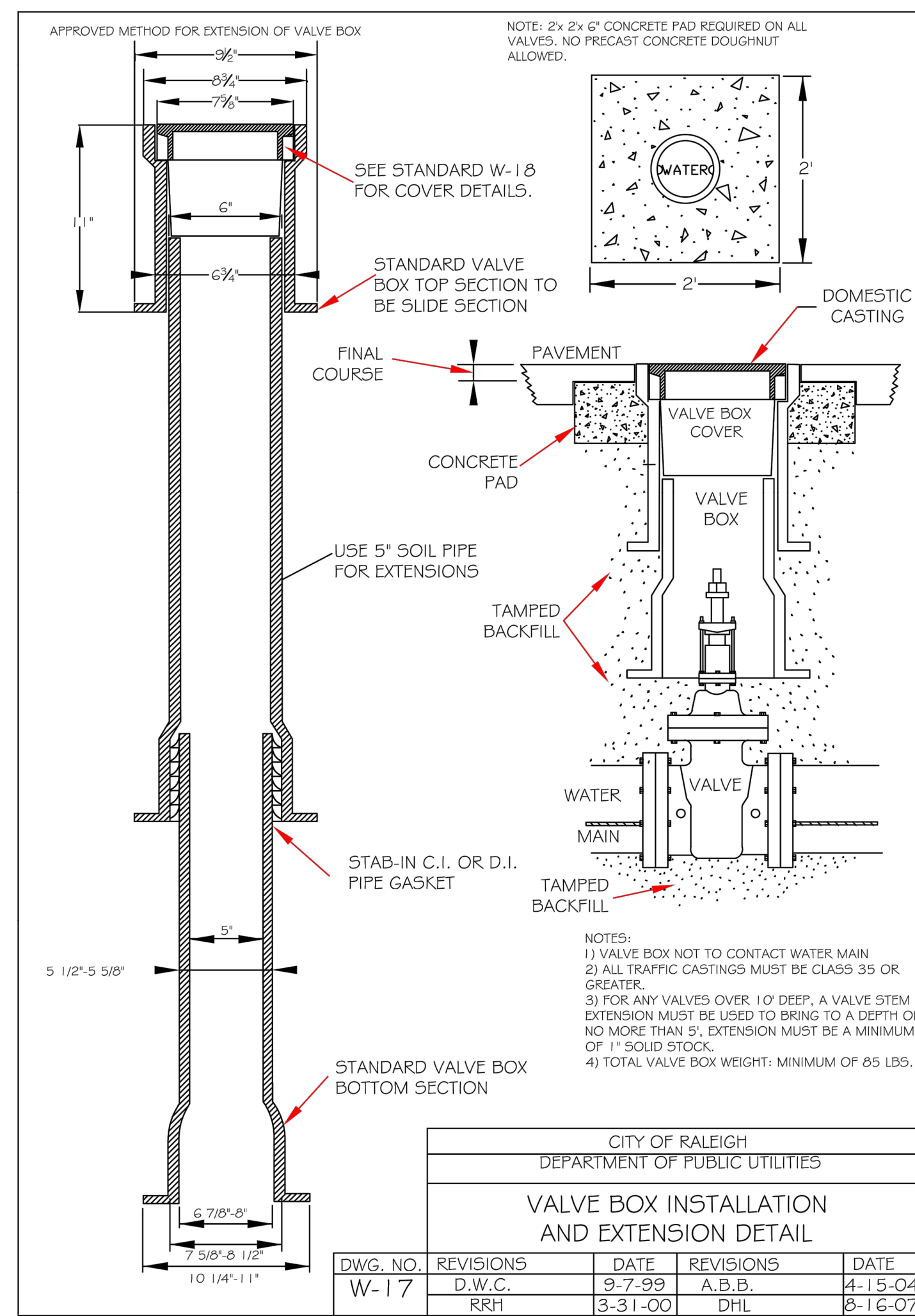
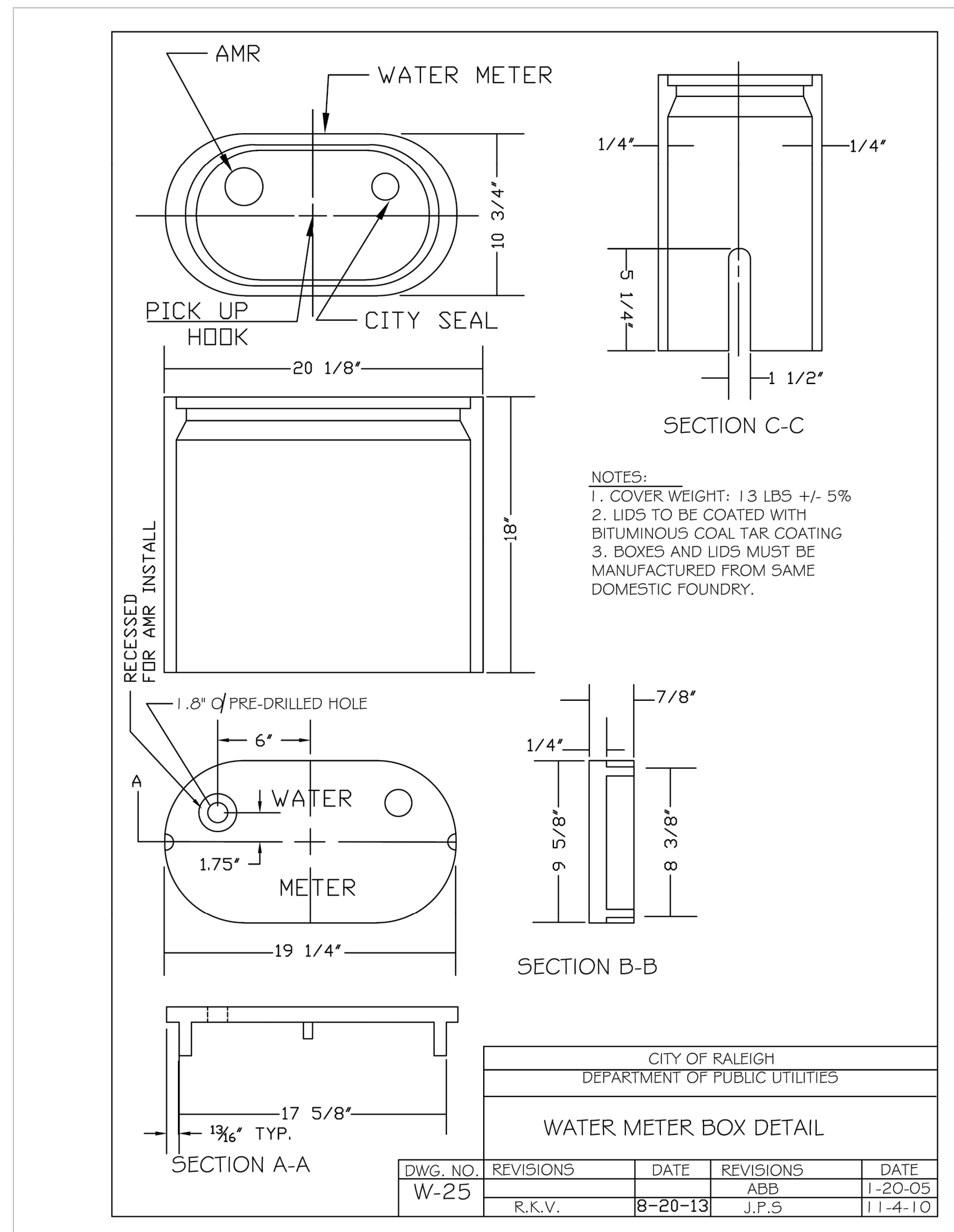
**SURVEY NOTE:**  
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SDP-23-07

	WAKE COUNTY COMMENTS	06/11/2024	JAA	BY
	TOWN COMMENTS	05/01/2024	JAA	
	TOWN COMMENTS	03/01/2024	JAA	
	TOWN COMMENTS	01/02/2024	JAA	DATE
<b>WATER DETAILS</b>				
<b>THE LEARNING CENTER ROLESVILLE</b>				
PREPARED FOR <b>ROLESVILLE, LLC.</b>				
TOWN OF ROLESVILLE NORTH CAROLINA				
SHEET NUMBER <b>C11.0</b>				



Plotted By: Alexander, Jamal Sheet Set: THE LEARNING CENTER ROLESVILLE Layout: C11.1 WATER DETAILS August 01, 2024 12:59:25pm K:\RAL\_LDEV\013031004\_Rolesville\_Learning\_Center\10\_CAD Files\Plan\Sheet\C11.1 WATER DETAILS.dwg  
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**SURVEY NOTE:**  
 1. IRRIGATION METER SHALL BE LOCATED ON THE SIDE OF DOMESTIC METER WITH INCREASING ADDRESSES.  
 2. THE BACKFLOW SHALL BE INSTALLED NO MORE THAN 50' FROM THE METER IN A VISIBLE LOCATION.  
 3. BACKFLOW RISER/STANDPIPE SHALL BE OF COPPER OR BRASS.  
 4. THE RP RELIEF VALVE SHALL BE A MINIMUM OF 12" ABOVE ANY MATERIAL (MULCH INCLUDED) OR GRADE.  
 5. A SERVICE VALVE IS REQUIRED AFTER THE METER BUT BEFORE THE BACKFLOW ASSEMBLY FOR MAINTENANCE AND REPLACEMENT PURPOSES.  
 6. THE INSTALLATION MUST ALSO MEET ALL CODE REQUIREMENTS PER THE NC PLUMBING CODE.



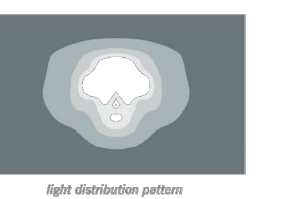
<b>THE LEARNING CENTER ROLESVILLE</b> PREPARED FOR <b>ROLESVILLE, LLC.</b> TOWN OF ROLESVILLE NORTH CAROLINA	<b>WATER DETAILS</b>	SHEET NUMBER <b>C11.1</b>	KHA PROJECT 013031004 DATE 09/29/2023 SCALE AS SHOWN DESIGNED BY JAA DRAWN BY JAA CHECKED BY COB		<p>© 2023 KIMLEY-HORN AND ASSOCIATES, INC.          #F-0102 WWW.KIMLEY-HORN.COM PHONE: 919.677.2000 FAX: 919.677.2050          421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>TOWN COMMENTS</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>08/01/2024 JAA</td> <td></td> </tr> <tr> <td>07/17/2024 JAA</td> <td></td> </tr> <tr> <td>07/08/2024 JAA</td> <td></td> </tr> <tr> <td>06/20/2024 JAA</td> <td></td> </tr> <tr> <td>06/11/2024 JAA</td> <td></td> </tr> <tr> <td>05/01/2024 JAA</td> <td></td> </tr> <tr> <td>03/01/2024 JAA</td> <td></td> </tr> </tbody> </table>	TOWN COMMENTS	DATE	08/01/2024 JAA		07/17/2024 JAA		07/08/2024 JAA		06/20/2024 JAA		06/11/2024 JAA		05/01/2024 JAA		03/01/2024 JAA	
TOWN COMMENTS	DATE																					
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07/08/2024 JAA																						
06/20/2024 JAA																						
06/11/2024 JAA																						
05/01/2024 JAA																						
03/01/2024 JAA																						





LED (Light emitting diode)	50 watts
Mounting height	12' - 17'
Color	Black
Pole	Aluminum Fiberglass Concrete Decorative aluminum
Applications	Neighborhoods Parks Shopping centers

**PEDESTRIAN SHOEBOX LED**  
(Meets Dark Sky Criteria)

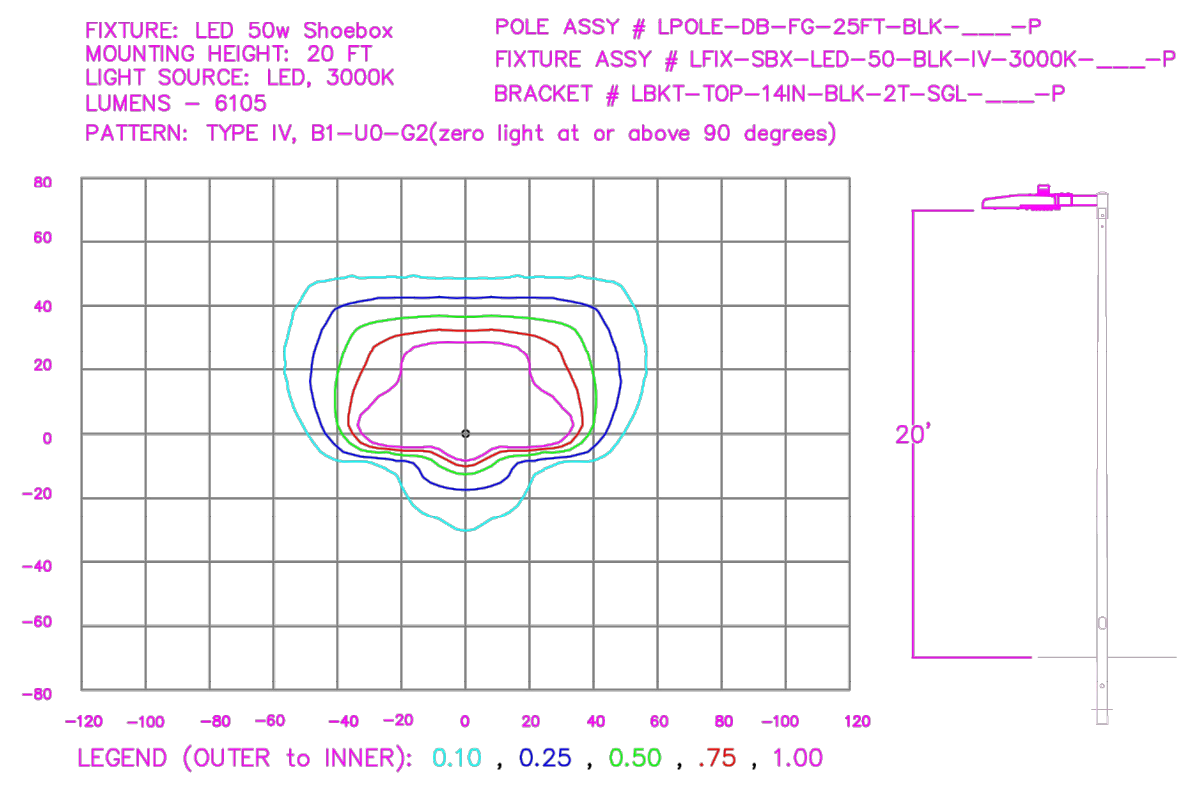


POLE AVAILABLE	MOUNTING HEIGHT	COLOR
Aluminum	12', 15', 17'	Black
Fiberglass	16'	Black
Fluted Concrete	13'	Black
Decorative Aluminum	12', 16'	Black

FEATURES	BENEFITS
Turnkey operation	Provides hassle-free installation and service
Little or no installation cost	Freest up capital for other projects
Design services by lighting professionals included	Meets industry standards and lighting ordinances
Maintenance, electricity & warranty included	Eliminates high and unexpected repair bills
One low monthly cost on your electric bill	Convenience and savings for you

For additional information, contact us at [DUKELighting@duke-energy.com](mailto:DUKELighting@duke-energy.com)  
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ISOFOOTCANDLE CURVES



ANDELIA P. N/F WATKINS  
D.B. 5295, PG. 843  
B.M. 1979, PG. 178  
PIN #1759.20-80-4047

CONTROL CORNER  
N(Y): 7905334.6  
E(X): 2158722.91  
ELEV: 487.39

SPIRIT MASTER FUNDING VII, LLC  
D.B. 15550, PG. 841  
B.M. 2007, PG. 143  
PIN #1759.20-80-7165

TRACT  
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0.701 AC.

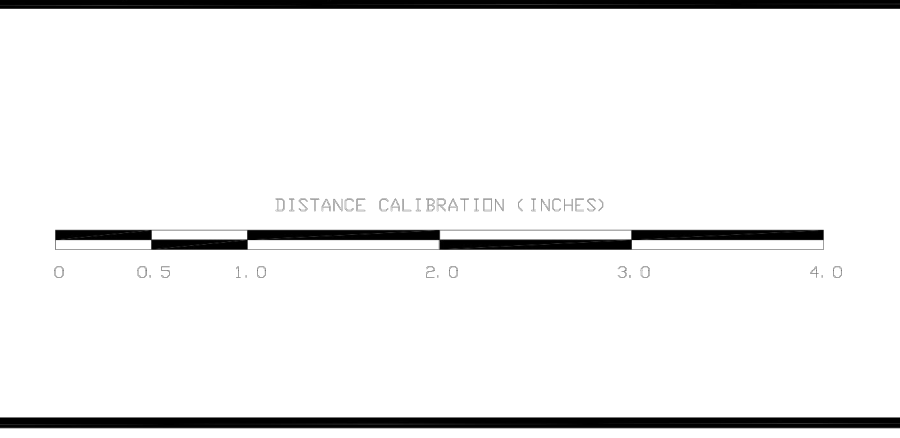
LT1.0

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	✕	1.0 fc	2.0 fc	0.3 fc	6.7:1	3.3:1

Schedule						
Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
⬢	A	4	LED 50w Shoebox - Type IV - 3000K	16	382	0.85

NO.	DATE	REVISION	BY
REV C	07/29/24	UPDATED SITE PLAN	NJ
Rev B	01/05/24	Updated Site Plan	NJ



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



**PROPRIETARY & CONFIDENTIAL**  
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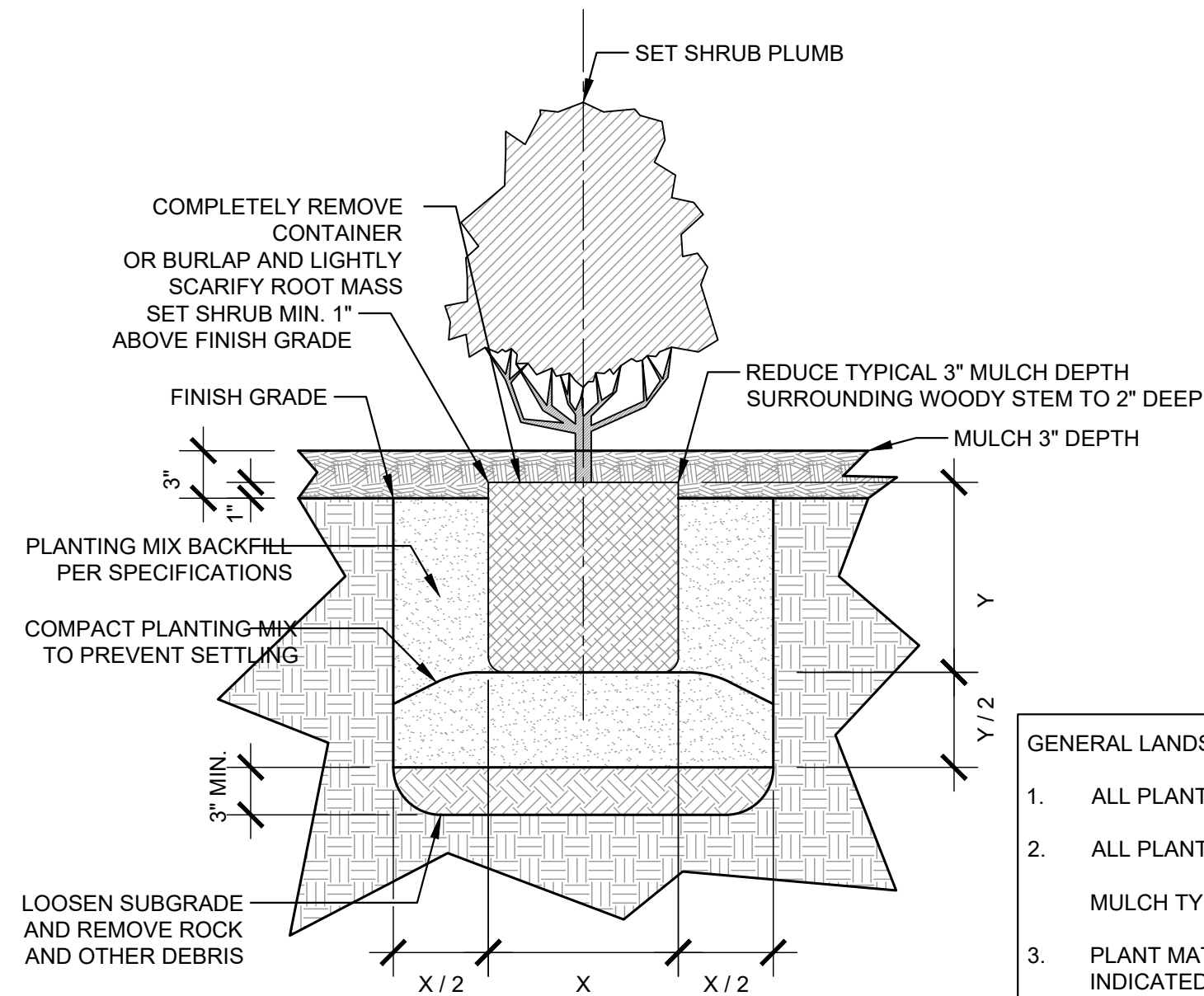
ROLESVILLE LEARNING CENTER	
Rolesville, NC	
SITE LIGHTING ARRANGEMENT	
Designed by	DUKE ENERGY PROGRESS LIGHTING SOLUTIONS
Reviewed by	N. Johnson Scale 1" = 20'
Date	07/29/2024 Size Drawing size "D"
Description	LED Pedestrian Shoebox
Drawing No.	23-0400C Sht. 1 OF 1





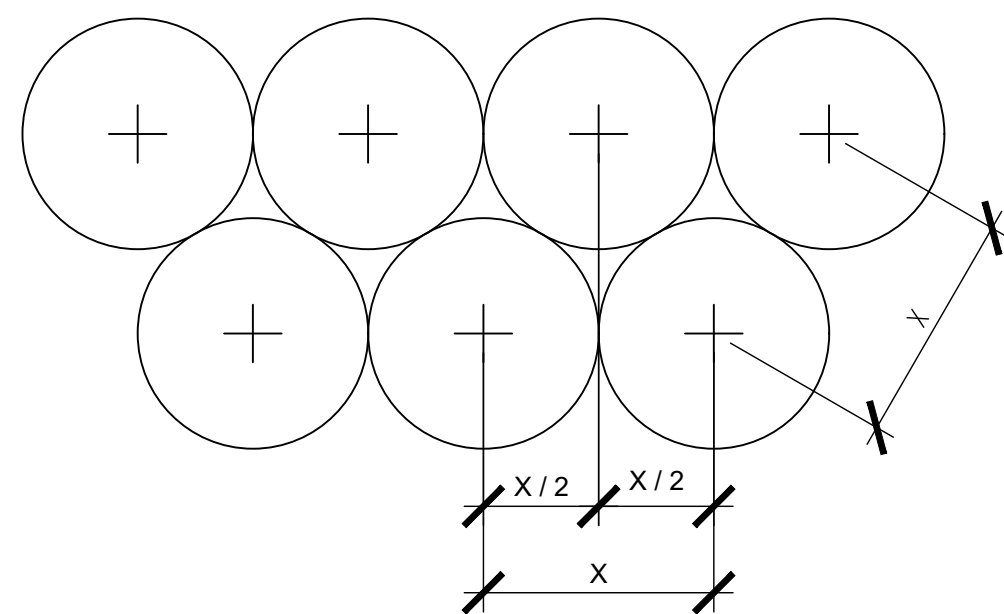


Plotted By: Alexander, Jamal Sheet Set: THE LEARNING CENTER ROLESVILLE Layout: L2.0 LANDSCAPE DETAILS June 15, 2024, 12:44:40pm K:\BIBAL\_LDE\013031004\_Rolesville Learning\_Center\PI10\_CAD Files\Sheets\L2.0 LANDSCAPE DETAILS.dwg  
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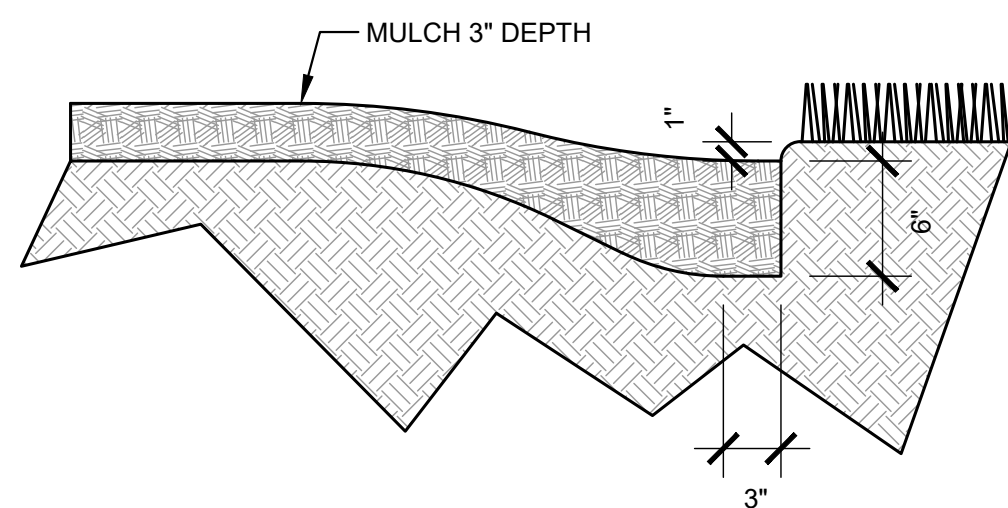
**1**  
 TYPICAL SHRUB PLANTING  
 SECTION  
 SCALE: 1"=1'-0"

- GENERAL LANDSCAPE NOTES:**
- ALL PLANT MATERIAL PRICING SHALL INCLUDE MULCH, BED PREPARATION, AND STAKING.
  - ALL PLANTING BEDS SHALL RECEIVE 3" (THREE INCHES) OF MULCH.  
MULCH TYPE FOR PROJECT: DOUBLE SHREDDED HARDWOOD
  - PLANT MATERIAL SPACING SHOWN ON LANDSCAPE PLANS SHALL OVERRIDE TYPICAL PLANT SPACING INDICATED ON PLANT SCHEDULE. LANDSCAPE CONTRACTOR RESPONSIBLE FOR VERIFYING ALL PLANT SPACING AND MAKING MINOR FIELD ADJUSTMENTS DUE TO UTILITY CONFLICTS.



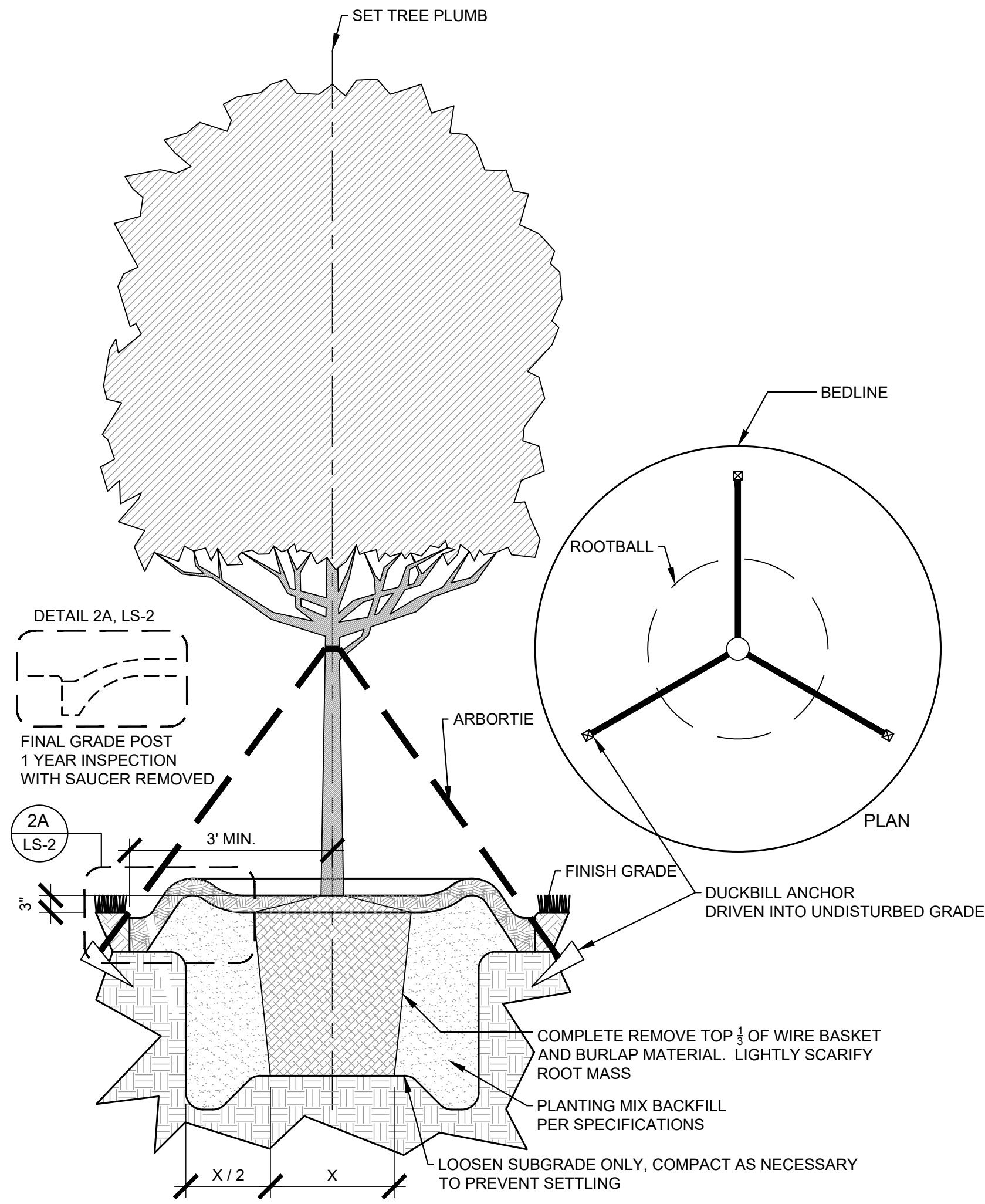
- PLANT SPACING NOTES:**
- SEE PLANTING PLAN FOR SHRUB AND GROUND COVER AREAS.
  - PLANT MATERIAL SHALL BE INSTALLED IN STRAIGHT AND PARALLEL ROWS UNLESS OTHERWISE SHOWN ON DRAWINGS.
  - SEE PLANTING PLAN AND / OR PLANT SCHEDULE FOR ACTUAL PLANT SPACING.

**2**  
 TYPICAL STAGGERED ROW PLANT SPACING  
 PLAN  
 SCALE: 1/2"=1'-0"



- PLANTING BED TRENCH EDGING NOTE:**
- TRENCH EDGE SHALL BE LOCATED BETWEEN PLANTING BED AND ALL TURF OR NATIVE GRASS AREAS.
  - TRENCH EDGE SHALL BE CONSTRUCTED ALONG ALL HARDSCAPE AREAS FOR SIMILAR CONDITION.
  - MAINTAIN POSITIVE DRAINAGE IN ALL PLANTING BEDS.

**3**  
 PLANTING BED TRENCH EDGING  
 SECTION  
 SCALE: 1"=1'-0"



- TREE PLANTING NOTES:**
- 4"-6" DIAMETER RIVER ROCK (INSIDE THE BUILDING PAD) OR 3" MINIMUM OF HARDWOOD BARK MULCH OR AS SPECIFIED (IN OUTLYING PLANT BEDS) (MULCH TYPE FOR PROJECT: SHREDDED CYPRESS MULCH)
  - TOP OF ROOTBALL MIN. 1" ABOVE FINISHED GRADE
  - ROOTBALLS GREATER THEN 24" DIAMETER SHALL BE PLACED ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLLING. ROOTBALLS SMALLER THEN 24" IN DIAMETER MAY SIT ON COMPACTED EARTH.

**4**  
 TYPICAL TREE PLANTING & GUYING  
 PLAN & SECTION  
 SCALE: 1/2"=1'-0"

**GENERAL LANDSCAPE NOTES:**

- ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
- ALL PLANTS MUST BE CONTAINER GROWN OR BALLED AND BURLAPPED AS INDICATED IN THE PLANT LIST.
- ALL TREES MUST HAVE A STRAIGHT TRUNK AND FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
- ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
- ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
- ALL SHADE TREES LOCATED WITHIN VEHICLE SIGHT TRIANGLES SHALL BE BRANCHED MIN. 8' (MEASURED FROM ADJACENT PROJECTED CURB LINE ELEVATION) PER ANSI Z60.1 STANDARDS FOR HEIGHT OF BRANCHING - STREET TREES.
- ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK. ANY DISCREPANCIES BETWEEN QUANTITIES ON PLAN AND PLANT LIST SHALL BE BROUGHT TO THE ATTENTION OF WAKE COUNTY INSPECTOR AND ANY FIELD ADJUSTMENTS MUST BE AUTHORIZED PRIOR TO PLANTING.
- THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) OF THE PLANTING AREAS AND LAWN UNTIL SUBSTANTIAL COMPLETION.
- CONTRACTOR SHALL INSTALL AND MAINTAIN TWO (2) GATORBAGS PER LARGE CANOPY TREE
- THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWO (2) YEAR BEGINNING ON THE DATE OF SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD.
- LANDSCAPE ARCHITECT SHALL APPROVE ALL BED LAYOUT STAKING PRIOR TO INSTALLATION OF PLANT MATERIAL.
- THE LANDSCAPE ARCHITECT SHALL APPROVE THE STAKING LOCATION OF ALL TREES PRIOR TO INSTALLATION.
- AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
- ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES (PRIOR TO SUBSTANTIAL COMPLETION OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE MEETING ALL PLANT SCHEDULE SPECIFICATIONS.
- STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
- ALL SHRUB, GROUND COVER AND SEASONAL COLOR ANNUAL PLANTING BEDS ARE TO BE COMPLETELY COVERED WITH DOUBLE SHREDDED HARDWOOD OR CURRENT CITY STANDARD TO A DEPTH OF THREE (3) INCHES.
- LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD.
- SAFE, CLEARLY MARKED PEDESTRIAN AND VEHICULAR ACCESS TO ALL ADJACENT PROPERTIES MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
- ALL PLANT MATERIAL QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING SHOWN.
- THE TOP OF ALL ROOT BALLS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE, AS BORN TO PREVIOUS GRADE AND GROWING CONDITIONS.
- ALL ROOT BALLS REMOVED FROM CONTAINERS SHALL BE SCARIFIED PRIOR TO BACKFILLING.
- 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 24" NEW TOPSOIL OR UNCOMPACT AND AMEND THE TOP 24" OF EXISTING SOIL TO MEET TOPSOIL PLANTING MIX STANDARDS FOR TREES. SEE DETAILS THIS SHEET.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING TREES AND SHRUBS THAT WILL MEET BOTH MINIMUM SIZE AND SPACING FOR TREE AND ZONING ORDINANCE COMPLIANCE. FAILURE TO INSTALL PLANT MATERIAL PER THIS PLAN WILL JEOPARDIZE ISSUANCE OF FINAL CERTIFICATE OF OCCUPANCY. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING INSPECTIONS OF PLANT MATERIAL.
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES & ORDINANCES REGARDING LANDSCAPING. GENERAL CONTRACTOR IS TO CLEAN THE ENTIRE SITE OF ALL CONSTRUCTION DEBRIS AND TO RAKE ENTIRE SITE.
- THE CONTRACTOR SHALL INSTALL BLACK FABRIC MESH UNDER PLANTING BED MULCH TO PREVENT WEED GROWTH.
- EACH LARGE CANOPY TREE AT THE TIME OF PLANTING SHALL BE A MINIMUM OF TWO (2) INCHES IN CALIPER AND EIGHT (8) - TEN (10) FEET IN HEIGHT. WHEN MATURE, A LARGE CANOPY TREE SHOULD BE AT LEAST FORTY (40) FEET HIGH AND HAVE A MINIMUM CROWN WIDTH OF THIRTY (30) FEET. LARGE CANOPY TREES MAY BE SUBSTITUTED WITH TWO (2) UNDERSTORY TREES. HOWEVER, NO MORE THAN FIFTY (50) PERCENT OF THE REQUIRED LARGE CANOPY TREES MAY BE SUBSTITUTED. EACH UNDERSTORY TREE AT THE TIME OF PLANTING SHALL BE A MINIMUM OF ONE (1) INCH IN CALIPER AND EIGHT (8) FEET IN HEIGHT. WHEN MATURE, AN UNDERSTORY TREE SHOULD BE BETWEEN FIFTEEN (15) AND FORTY (40) FEET HEIGHT. EVERY TWO (2) UNDERSTORY TREES MAY BE SUBSTITUTED WITH ONE (1) LARGE CANOPY TREE. HOWEVER, NO MORE THAN FIFTY (50) PERCENT OF THE REQUIRED UNDERSTORY TREES MAY BE SUBSTITUTED. EACH SHRUB AT THE TIME OF PLANTING SHALL BE 3 GALLON SIZE OR LARGER. SUBSTITUTIONS SHOULD BE CONFIRMED WITH THE PLANNING DIVISION.

**NOTE:**  
 Each large canopy tree at the time of planting shall be a minimum of two (2) inches in caliper and eight (8) - ten (10) feet in height. When mature, a large canopy tree should be at least forty (40) feet high and have a minimum crown width of thirty (30) feet. Large canopy trees may be substituted with two (2) understory trees. However, no more than fifty (50) percent of the required large canopy trees may be substituted. Each understory tree at the time of planting shall be a minimum of one (1) inch in caliper and eight (8) feet in height. When mature, an understory tree should be between fifteen (15) and forty (40) feet height. Every two (2) understory trees may be substituted with one (1) large canopy tree. However, no more than fifty (50) percent of the required understory trees may be substituted. Each shrub at the time of planting shall be 3 gallon size or larger. Substitutions should be confirmed with the Planning Division.

WAKE COUNTY COMMENTS	JAA	06/11/2024	JAA	BY
TOWN COMMENTS	JAA	05/01/2024	JAA	DATE
TOWN COMMENTS	JAA	03/01/2024	JAA	
TOWN COMMENTS	JAA	01/02/2024	JAA	
REVISIONS	No.			

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 #F-0102 WWW.KIMLEY-HORN.COM PHONE: 919.677.2000 FAX: 919.677.2050  
 421 FAYETTEVILLE STREET, SUITE 800, RALEIGH, NC 27601

KHA PROJECT	013031004
DATE	09/29/2023
SCALE	AS SHOWN
DESIGNED BY	JAA
DRAWN BY	JAA
CHECKED BY	COB

**LANDSCAPE DETAILS**

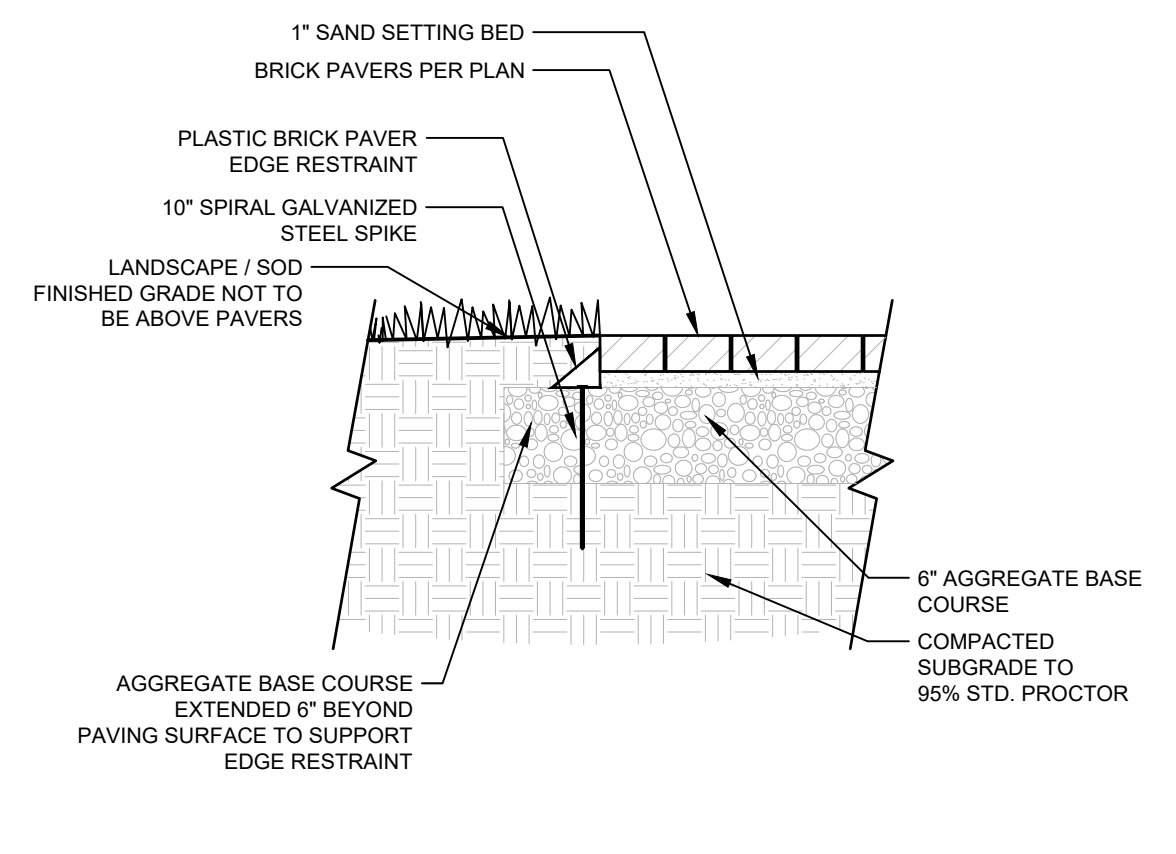
**THE LEARNING CENTER ROLESVILLE**  
 PREPARED FOR  
**ROLESVILLE, LLC.**  
 TOWN OF ROLESVILLE NORTH CAROLINA

SHEET NUMBER  
**L2.0**



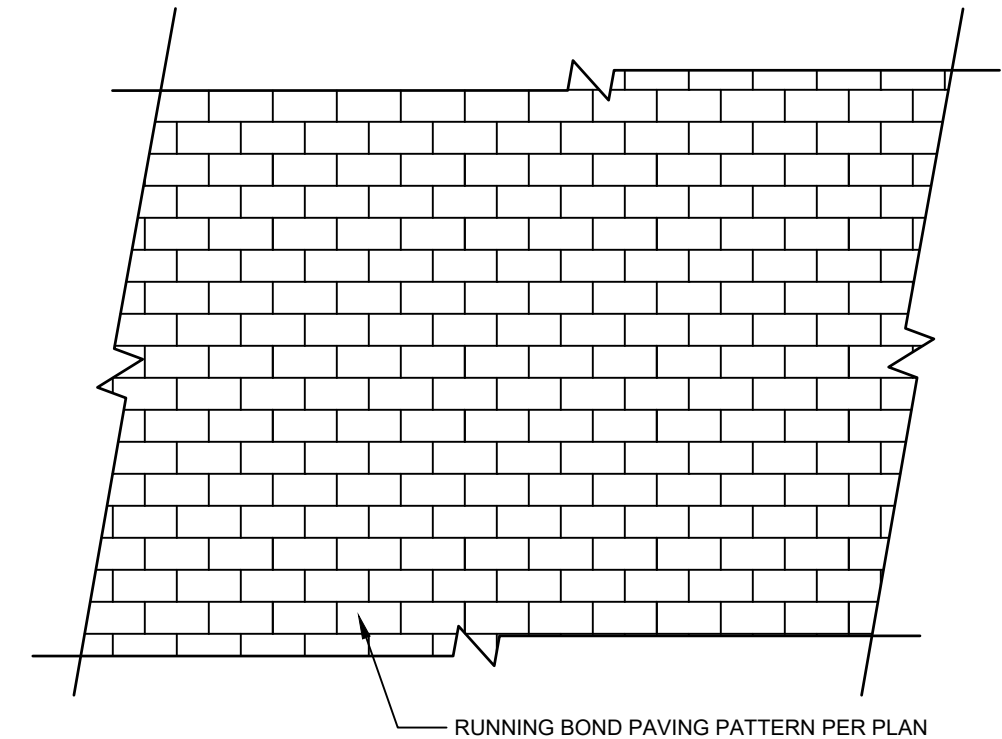


Plotted By: Alexander, Jamal Sheet Set: THE LEARNING CENTER ROLESVILLE, Layout: SITE FURNISHINGS PRODUCT EXHIBIT, November 25, 2024, 04:20:08pm, K:\RAL\_LDEV\013031004\_Rolesville\_Learning\_Center\10\_CAD Files\Exhibits\2024-10-29\_Site Furnishings Exhibit\PRODUCT EXHIBIT.dwg  
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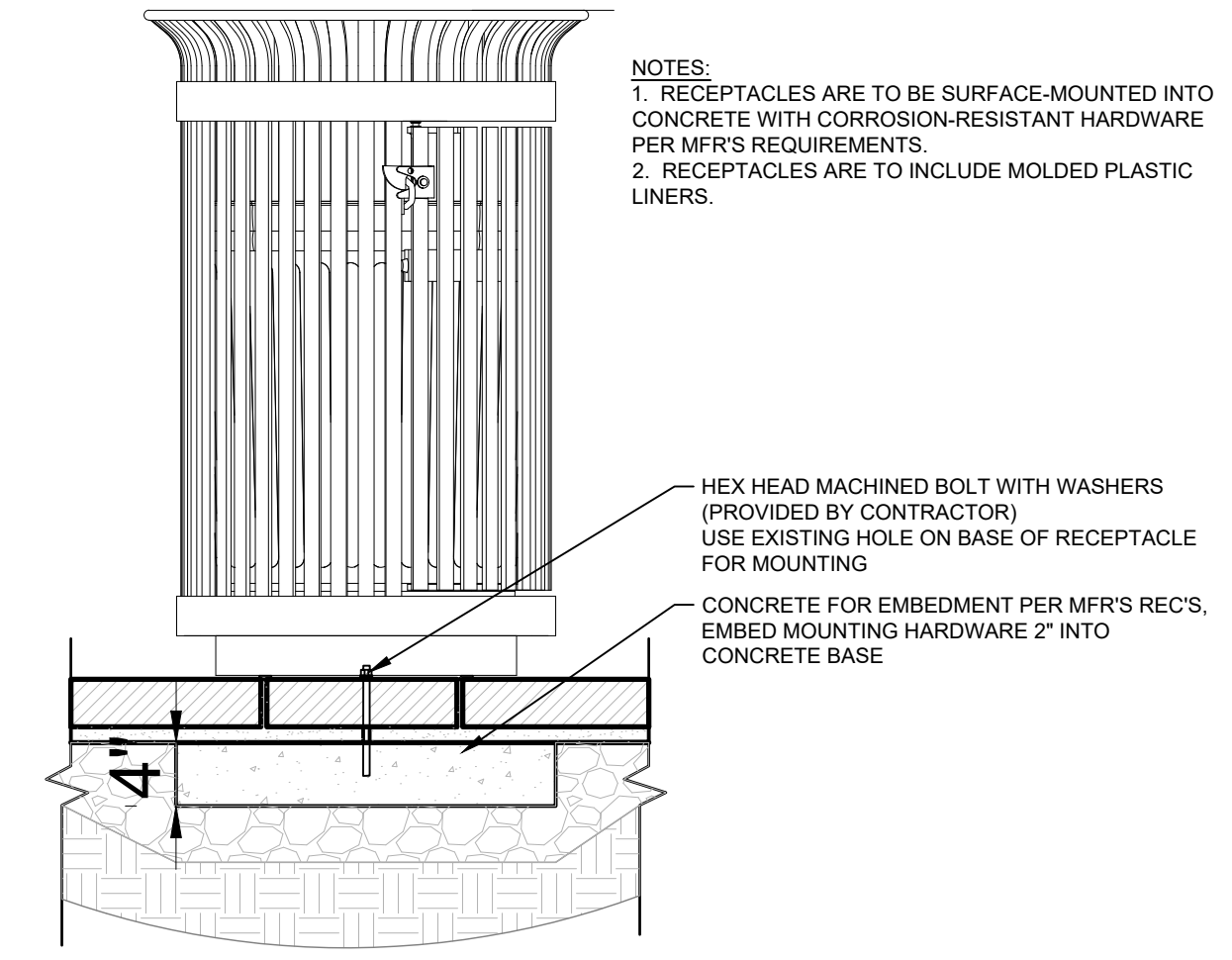
**1 PAVERS & PAVER EDGE RESTRAINT**  
 SECTION  
 1" = 1'-0"

- TYPICAL FIELD BRICK PAVING NOTES:**
- FOR BRICK PAVER INFORMATION, SEE DETAIL 6 / EX-1.
  - METAL EDGING TO BE USED AT PLANTER EDGES AS PAVER RESTRAINT.
  - PAVERS TO BE ROLLED OR COMPACTED TO ACHIEVE FULL BOND WITH THE SETTING BED. REDUCE LIPAGE, AND IMPROVE THE OVERALL FLATNESS OF THE SURFACE. PROTECT PAVERS BY USING A RUBBER ROLLER OR A 4-5000 LBF FLUTE TAMPER WITH A PROTECTIVE MAT ATTACHED.
  - BRICKS ARE TO BE SET FLUSH WITH ADJACENT GRADES AND SLOPED TOWARDS CURB AND GUTTER OR DRAINS PER GRADING PLAN. POLYMERIC JONTING SAND COLOR TO BE SELECTED FROM MANUFACTURER'S FULL RANGE BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE.
  - BRICKS TO BE LAID IN RUNNING BOND PATTERN IN DIRECTION OF TRAVEL OR PER PLAN.



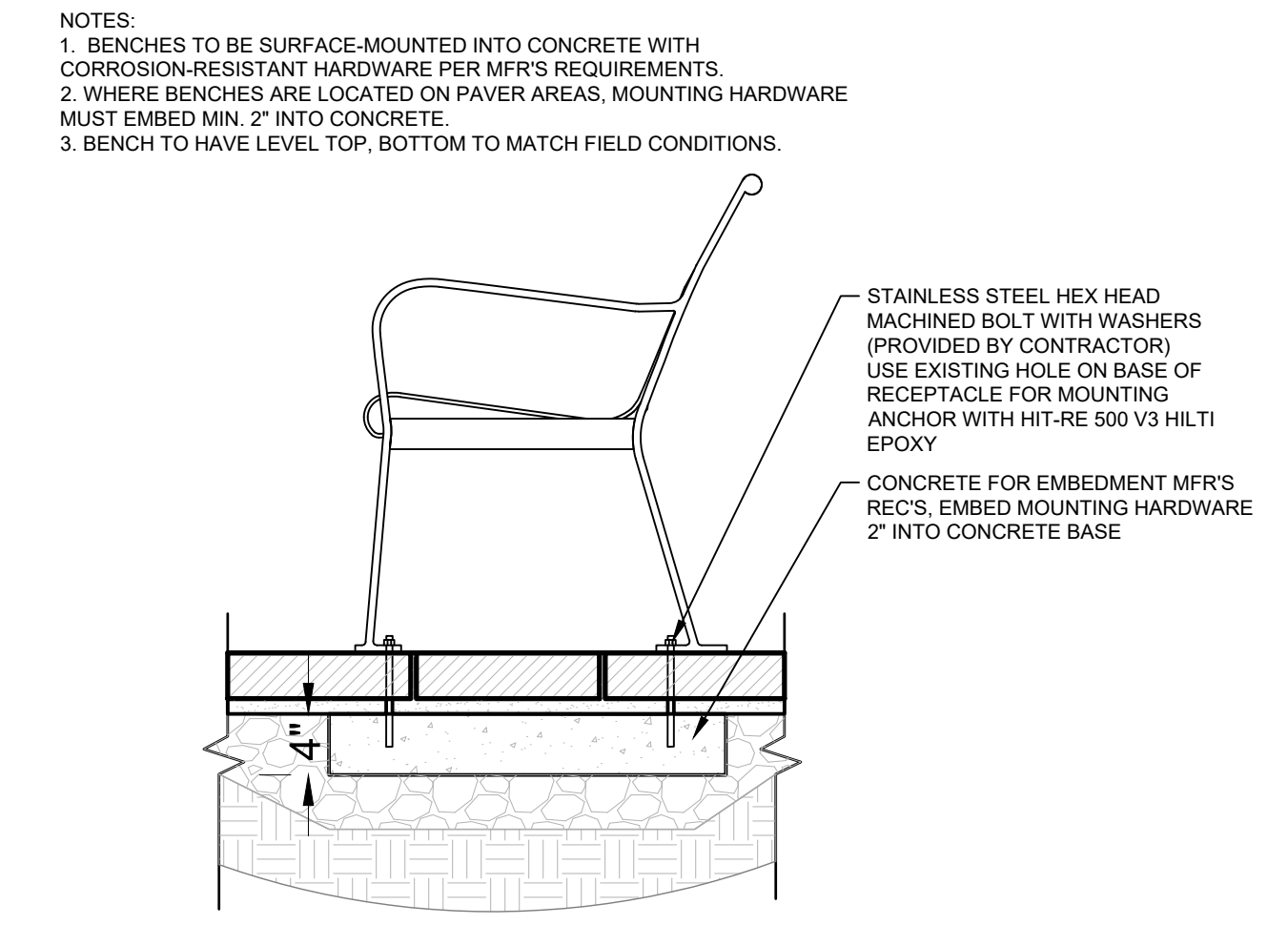
**2 TYPICAL FIELD BRICK PAVING**  
 SECTION  
 1/2" = 1'-0" RAL-P-ROL-17

TRASH RECEPTACLE PRODUCT INFORMATION	
MANUFACTURER:	VICTOR STANLEY
MODEL:	S-42 : IRONSITES COLLECTION
FINISH:	POWDER COAT
COLOR:	BLACK



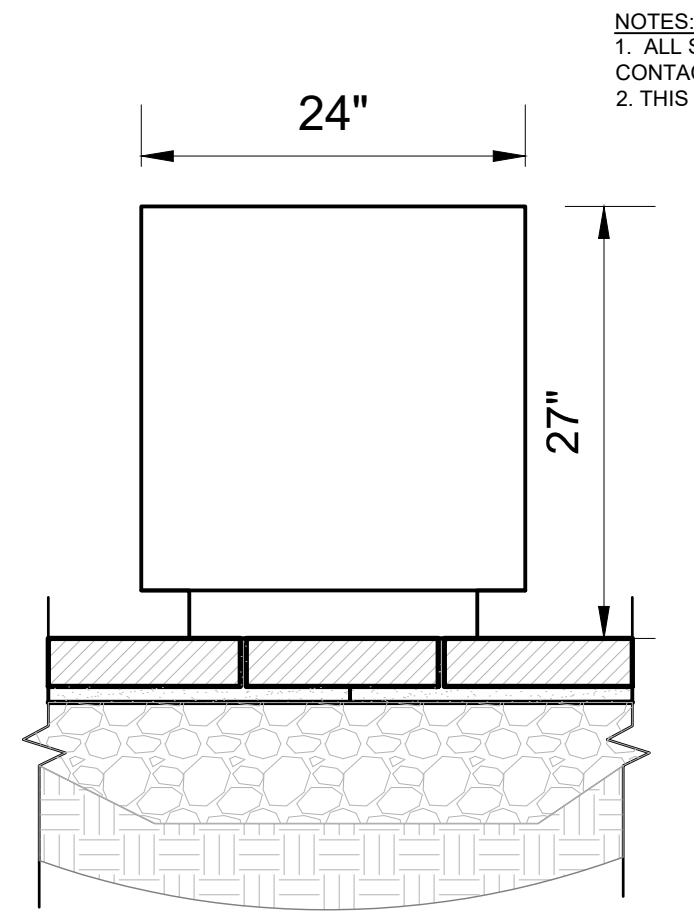
**3 TRASH RECEPTACLE**  
 SECTION  
 1" = 1'-0"

BENCH PRODUCT INFORMATION	
MANUFACTURER:	VICTOR STANLEY
MODEL:	RB-28 : STEELITES RB COLLECTION
FINISH:	POWDER COAT
COLOR:	BLACK
LENGTH:	6 FEET



**4 BENCH PRODUCT**  
 SECTION  
 1" = 1'-0"

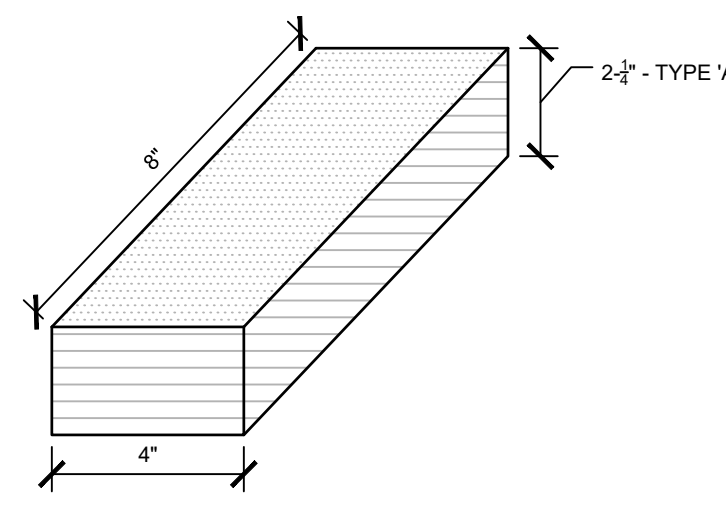
PLANTER PRODUCT INFORMATION	
MANUFACTURER:	VICTOR STANLEY
MODEL:	URBAN ROUND : FIBERGLASS COLLECTION
FINISH:	FIBERGLASS TEXTURED FINISH
COLOR:	BLACK GRAIN



**5 PLANTER PRODUCT**  
 SECTION  
 1" = 1'-0"

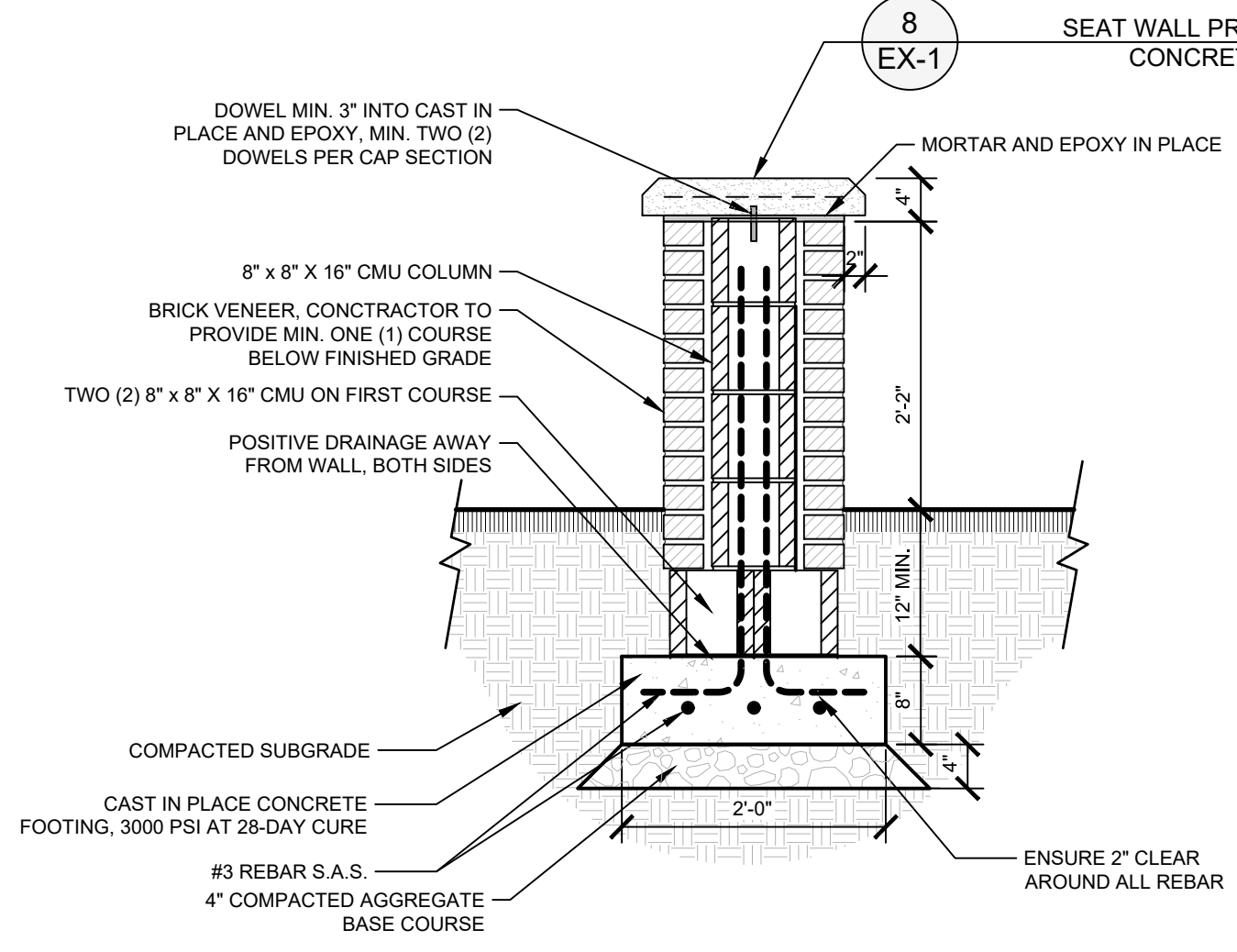
TYPE 'A' BRICK PAVER PRODUCT DATA:	
MANUFACTURER:	PINE HALL BRICK
MODEL:	SQUARE EDGE
COLOR:	PATHWAY RED
SIZE:	8" x 4" x 2-1/2"

- BRICK PAVER NOTES:**
- CONTRACTOR TO SUBMIT PRODUCT AND COLOR SAMPLES PRIOR TO ORDERING AND INSTALLATION TO THE PROJECT LANDSCAPE ARCHITECT FOR APPROVAL.



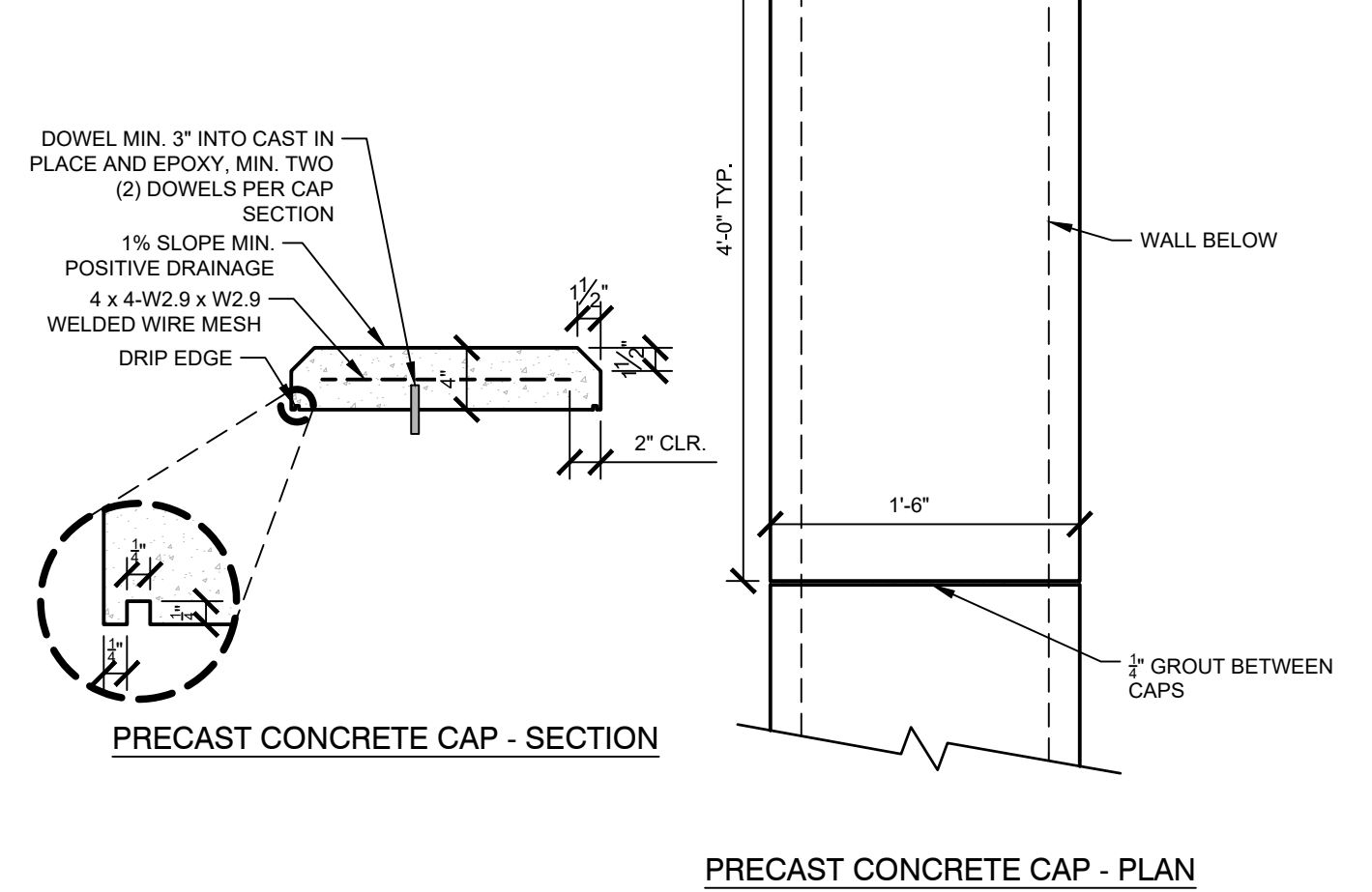
**6 BRICK PAVERS**  
 AXION  
 3" = 1'-0"

- SEAT WALL SECTION NOTES:**
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ILLUSTRATING THE LAYOUT OF ALL PROPOSED MASONRY WALLS FOR OWNERS APPROVAL PRIOR TO FABRICATION AND INSTALLATION.
  - CONTRACTOR TO SUBMIT PHYSICAL SAMPLES FOR OWNER APPROVAL PRIOR TO ORDERING.
  - PROVIDE MIN. 2" OVERHANG BOTH SIDES OF CAP.
  - WALL BRICK VENEER TO MATCH BUILDING FACADE.



**7 SEAT WALL SECTION**  
 SECTION  
 3/4" = 1'-0"

- PRECAST CONCRETE CAP NOTES:**
- PRECAST CONCRETE CAP TO HAVE REGLET/D RIP EDGING.
  - PROVIDE ONE 3" EXPANSION JOINT AND EPOXY BETWEEN CAPS AT MIDPOINT OF SEATWALL CAP.
  - ALL PRECAST CONCRETE COMPONENTS AND COLORS TO BE APPROVED BY OWNERS REPRESENTATIVE OR DESIGNER PRIOR TO FABRICATION.
  - CONTRACTOR TO SUBMIT SHOP DRAWINGS AND LAYOUT PLAN FOR APPROVAL PRIOR TO INSTALLATION.
  - CONCRETE SHALL BE MINIMUM 2,500 PSI STRENGTH AT 28 DAYS.



**8 SEAT WALL PRECAST CONCRETE CAP**  
 SECTION  
 1" = 1'-0"

DATE	BY	REVISIONS
06/11/2024	JAA	4
06/20/2024	JAA	5
07/08/2024	JAA	6
07/17/2024	JAA	7
08/01/2024	JAA	8
08/16/2024	JAA	9
11/26/2024	JAA	10

**Kimley»Horn**

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 421 FAYETTEVILLE STREET, SUITE 600, RALEIGH, NC 27601

KHA PROJECT	013031004
DATE	10/29/2024
SCALE	AS SHOWN
DESIGNED BY	CMH
DRAWN BY	CMH
CHECKED BY	AVWF

**SITE FURNISHINGS  
 PRODUCT EXHIBIT**

**THE LEARNING  
 CENTER ROLESVILLE**  
 PREPARED FOR  
**ROLESVILLE, LLC.**  
 NORTH CAROLINA

SHEET NUMBER  
**EX-1**



SDP-23-07



H:\DRAWINGS\TILE - THE LEARNING EXPERIENCE\TILE - NORTH CAROLINA\TILENC23-228 - TILE ROLESVILLE US HWY 401 S MAIN ST\SPACE PLANS\TILENC23-228-SA-1.DWG CSCHWEIKER PLOTTED: 12/21/2023

LICENSING CALCULATIONS								
Learning Experience, Roseville, North Carolina								
ROOM NAME	STATE REQUIRED AREA	NET AREA	ACTUAL AREA	RATIO	# OF CHILDREN	#OF TEACHERS	TEACHER RATIO	AGE GROUP
INFANTS A	440	493	552	55	8	2	1/4	6W-12MO
INFANTS B	440	482	541	55	8	2	1/4	6MO-18MO
TODDLERS A	350	358	417	35	10	2	1/5	18-24 MO
TODDLERS B	350	362	421	35	10	2	1/5	18-24MO
TWADDLERS	560	570	629	35	16	2	1/8	24-30 MO
PREPPERS	560	575	623	35	16	2	1/8	30-36 MO
PRE-SCHOOL 1	630	644	656	35	18	2	1/9	3-5 Y
PRE-SCHOOL 2	840	847	859	35	24	2	1/12	4-5Y
PRE-SCHOOL 3	630	637	649	35	18	2	1/9	3-5Y
PRE K-K	490	502	522	35	14	1	1/14	5-6Y
MBB/PRE-SCHOOL	735	740	752	35	21	2	VARIES	VARIES
TOTALS		6210			163	21		
					2	ADMIN STAFF		
					TOTAL	186		

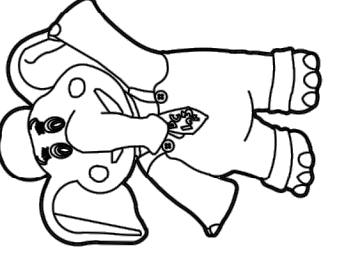
1. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE CONTRACTOR'S BEST SKILL AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE, AND JOB SITE SAFETY.
2. GC MUST PROVIDE & INSTALL ALL PRODUCTS PER PLANS. ONLY SUBSTITUTED PRODUCTS NEED TO BE SUBMITTED TO THE ARCHITECT FOR APPROVAL. UNAPPROVED SUBSTITUTIONS WILL BE REPLACED AT THE EXPENSE OF THE GC.
3. VERBAL REPRESENTATION HAS NO VALUE AND ALL REQUESTS TO CHANGE ANY PRODUCTS OR SPECIFICATIONS PER PLANS, MUST BE SUBMITTED IN WRITING TO THE ARCHITECT & TLE FOR APPROVAL.



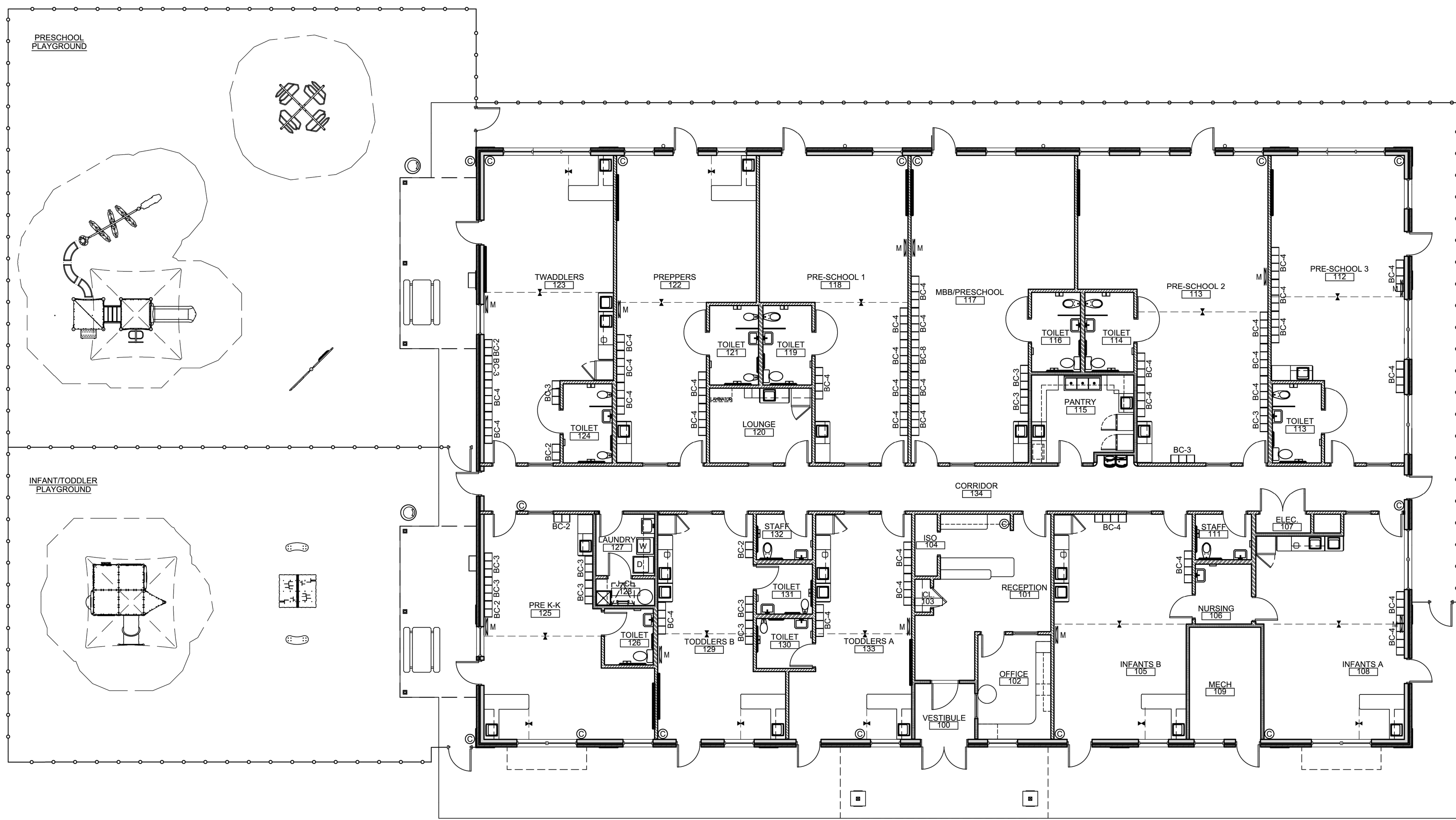
**Jarmel Kizel**  
 ARCHITECTS AND ENGINEERS INC.  
 42 OKNER PARKWAY  
 LIVINGSTON, NEW JERSEY 07039  
 TEL: 973-994-9669  
 FAX: 973-994-4069  
 www.jarmelkizel.com

Architecture  
 Engineering  
 Interior Design  
 Implementation Services

THE LEARNING EXPERIENCE  
 ACADEMY OF EARLY EDUCATION



US Hwy 401 S Main St  
 ROLESVILLE NORTH CAROLINA



**1 FLOOR PLAN**  
 SCALE: 1/8"=1'-0"

ISSUE			
NO.	DATE	DESCRIPTION	INT.

REVISION			
NO.	DATE	DESCRIPTION	INT.

PROFESSIONAL CERTIFICATION  
 NAME OF LICENSEE:  
 MATTHEW B. JARME  
 LICENSE NUMBER: 10120

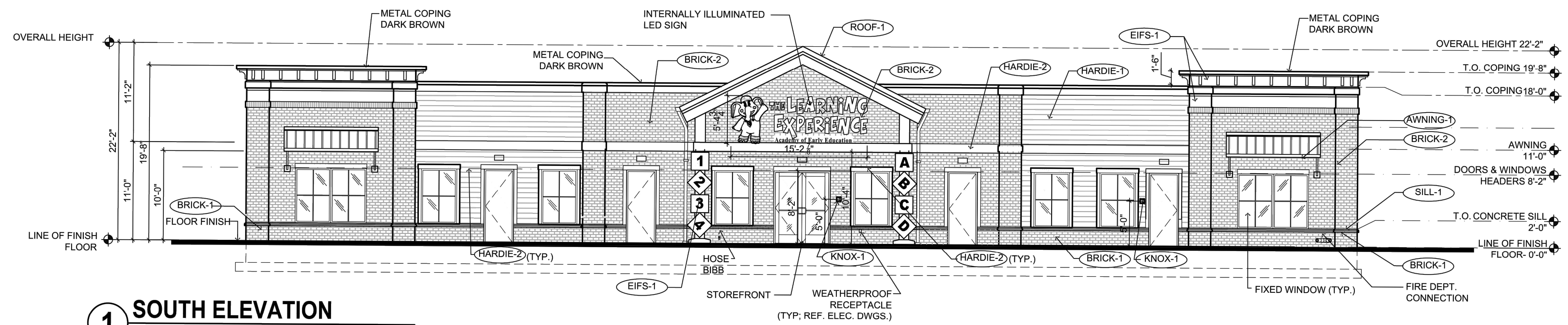
Project Number: TLENC23-228	Scale: AS NOTED
Drawn By: BB	Approved By: ---

Drawing Name:  
**PROPOSED FLOOR PLAN**

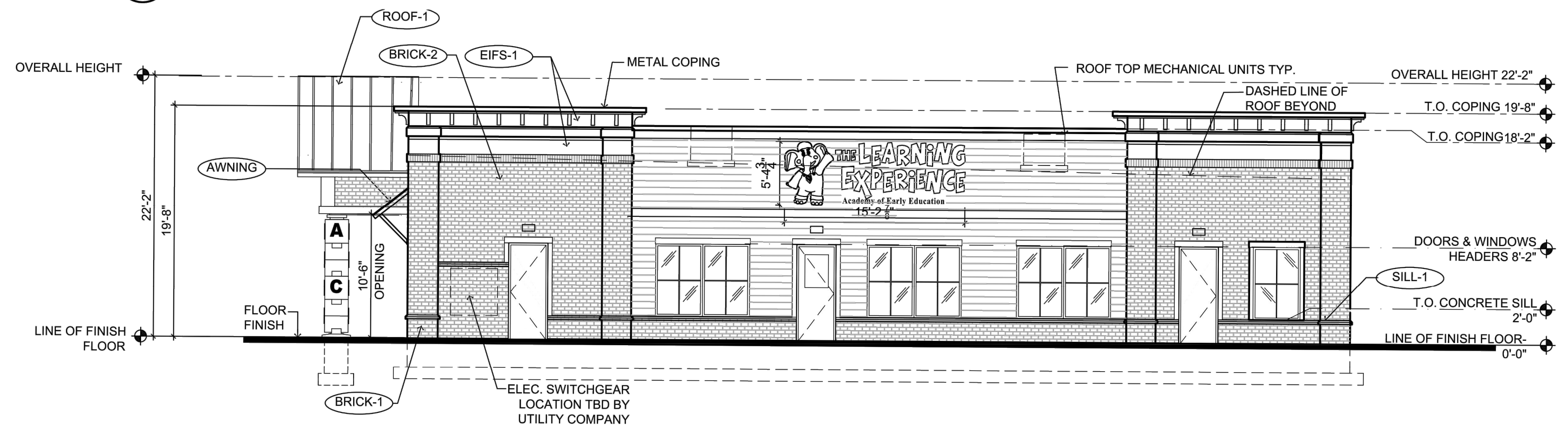
Drawing Number:  
**SA-1.1**



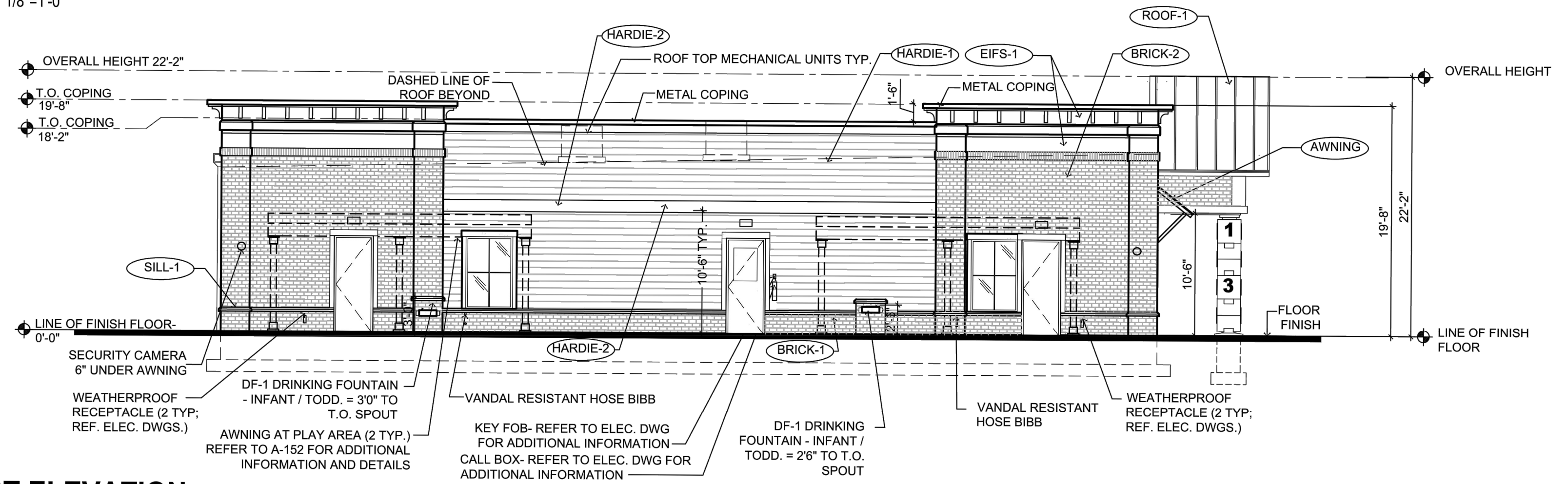
H-DRAWINGS: TITLE - THE LEARNING EXPERIENCE - NORTH CAROLINA; TLENC23-228 - TLE ROLESVILLE US HWY 401 S MAIN ST; SPACE PLAN; TITLE; TLENC23-228-SA-1.DWG CSCHWEIKER PLOTTED: 02/29/2024



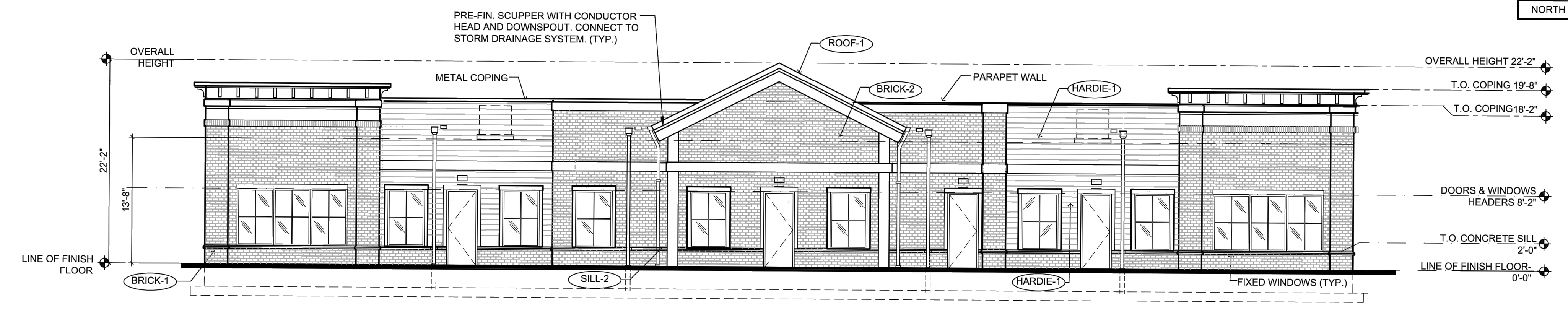
**1 SOUTH ELEVATION**  
SCALE: 1/8"=1'-0"



**2 EAST ELEVATION**  
SCALE: 1/8"=1'-0"



**3 WEST ELEVATION**  
SCALE: 1/8"=1'-0"



**4 NORTH ELEVATION**  
SCALE: 1/8"=1'-0"

1. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING THE CONTRACTOR'S BEST SKILL AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE, AND JOB SITE SAFETY.  
2. GC MUST PROVIDE & INSTALL ALL PRODUCTS PER PLANS. ONLY SUBSTITUTED PRODUCTS NEED TO BE SUBMITTED TO THE ARCHITECT FOR APPROVAL. UNAPPROVED SUBSTITUTIONS WILL BE REPLACED AT THE EXPENSE OF THE GC.  
3. VERBAL REPRESENTATION HAS NO VALUE AND ALL REQUESTS TO CHANGE ANY PRODUCTS OR SPECIFICATIONS PER PLANS, MUST BE SUBMITTED IN WRITING TO THE ARCHITECT & TLE FOR APPROVAL.

**Jarmel Kizel**  
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Architecture  
Engineering  
Interior Design  
Implementation Services

EXTERIOR MATERIAL SCHEDULE			
LABEL	MANUFACTURER	SIZE / TYPE	FINISH / COLOR
STOREFRONT	KAWNEER	TRIFAB 451T / 350 PER DOOR SCHEDULE	DARK BRONZE
DOOR	-	PER DOOR SCHEDULE	FACTORY PRIMED
FIXED WINDOW	PLY GEM	SILVER LINE V1 SERIES PER WINDOW SCHEDULE	DARK BRONZE
SILL-1	ROCKCAST	CAST STONE SILL	BUFFSTONE
SILL-2	ROCKCAST	CUSTOM SILL 3 3/4"Hx4"W W/ 2" FLAT REF. DTL. 6/A-032	BUFFSTONE
BRICK-1	GENERAL SHALE	MODULAR BRICK VENEER	DUTCH CHOCOLATE
BRICK-2	GENERAL SHALE	MODULAR BRICK VENEER	MILLBROOK
HARDIE-1	JAMES HARDIE	HARDIEPLANK LAP SIDING	COBBLESTONE
HARDIE-2	JAMES HARDIE	HARDIEPLANK TRIM	WHITE
EIFS-1	DRYVIT	SMOOTH FINISH	SW 7044 AMAZING GRAY
ROOF-1	BERRIDGE	STANDING SEAM METAL	DARK BRONZE
AWNING-1	BERRIDGE	STANDING SEAM AWNING W/ FRAME	DARK BRONZE
AWNING-2	-	FABRIC AWNING OVER FRAME REFER TO NOTE #4	MIDNIGHT BLUE
KNOX-1	KNOX BOX	3200 SERIES W/ RECESSED MOUNT FLANGE, HINGE DOOR, & TAMPER SWITCH	DARK BRONZE (REF. NOTE 2 BELOW)
KNOX-2	KNOX BOX	1650 SERIES W/ RECESSED MOUNT FLANGE, HINGE DOOR, & TAMPER SWITCH	DARK BRONZE (REF. NOTE 2 BELOW)

**FINISH SCHEDULE NOTES:**  
1. G.C. SHALL VERIFY KNOX BOX MODEL(S) AND LOCATION(S) WITH AUTHORITY HAVING JURISDICTION PRIOR TO ORDERING AND INSTALLATION.  
2. G.C. SHALL ENSURE ALL EXTERIOR FINISHES ARE INSTALLED AND FINISHED IN COMPLIANCE WITH MANUFACTURERS' WARRANTY REQUIREMENTS.  
3. IF BLOCKS ARE NOT PERMITTED, COLUMNS MUST MATCH EXTERIOR FINISH OF THE BUILDING.  
4. PER 2015 IBC SECTION 3105, AWNING FRAMES SHALL BE OF NONCOMBUSTIBLE MATERIALS AND DESIGNED TO RESIST APPLICABLE WIND LOADS. THE COVERING FABRIC SHALL HAVE A FLAME SPREAD RATING NOT GREATER THAN 25.

TRANSPARENCY CALCULATIONS				
	WALL	TRANSPARENCY	REQUIRED	PROVIDED
SOUTH	1,313 SQ. FT.	408 SQ. FT.	30.0%	31.07%
EAST	840 SQ. FT.	256 SQ. FT.	30.0%	30.48%
WEST	N/A	N/A	N/A	N/A
NORTH	1,313 SQ. FT.	431 SQ. FT.	30.0%	32.83%

**THE LEARNING EXPERIENCE**  
ACADEMY OF EARLY EDUCATION  
US Hwy 401 S Main St  
ROLESVILLE NORTH CAROLINA

ISSUE			
NO.	DATE	DESCRIPTION	INT.

REVISION			
NO.	DATE	DESCRIPTION	INT.

**PROFESSIONAL CERTIFICATION**  
NAME OF LICENSEE:  
MATTHEW B. JARME  
LICENSE NUMBER: 10120

Project Number: TLENC23-228  
Scale: AS NOTED  
Drawn By: BB  
Approved By: —

Drawing Name:

**PROPOSED ELEVATIONS**

Drawing Number:

SA-1.2