

Construction Plan Townes at Carlton Pointe Townhome Subdivision

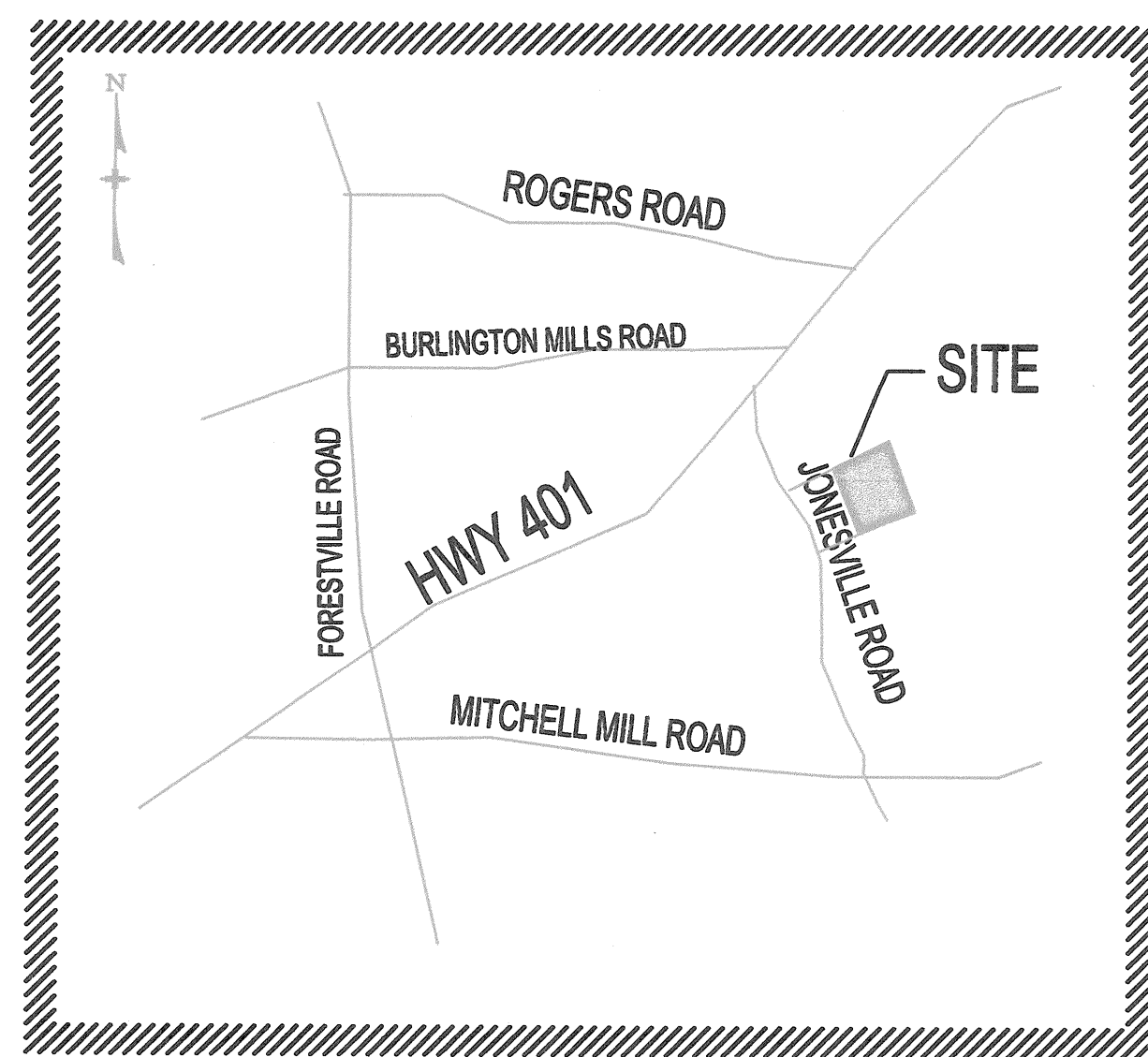
Town of Rolesville
Wake County, North Carolina

The Carlton Group of NC, LLC

5856 Faringdon Place

Suite 200

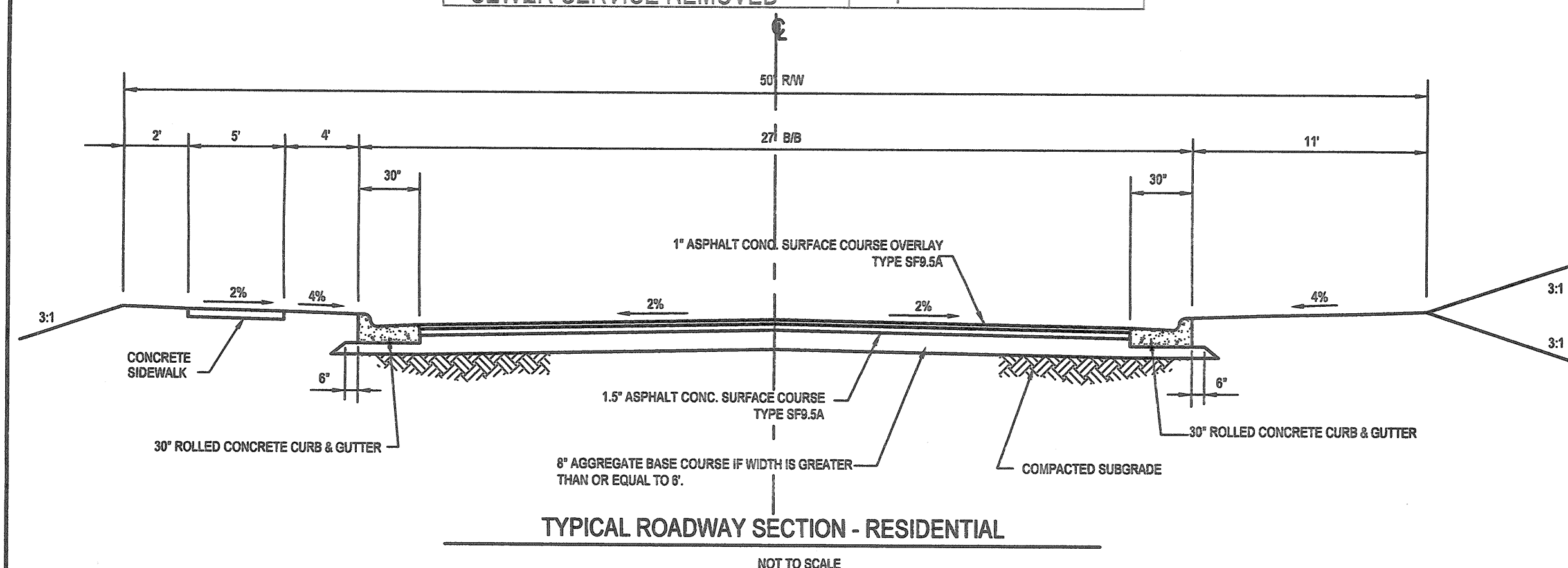
Raleigh, NC 27609



VICINITY MAP
1"=800'

PUBLIC IMPROVEMENT QUANTITIES

PHASE NUMBER(S)	PHASE 1
NUMBER OF LOT (S)	53
LOT NUMBERS BY PHASE	53
NUMBER OF UNITS	53
PUBLIC WATER - 6" DIP (LF)	277
PUBLIC WATER - 8" DIP (LF)	638
PUBLIC SEWER (LF)	567
WATER SERVICE STUBS	53
WATER SERVICE ABANDONED	2
SEWER SERVICE STUBS (NEW)	53
SEWER SERVICE REMOVED	4



TYPICAL ROADWAY SECTION - RESIDENTIAL

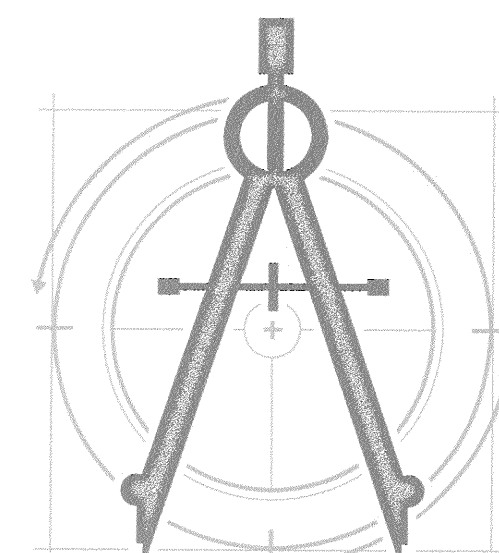
NOT TO SCALE



Know what's below.
Call before you dig.
(Or call: 1-800-632-4949)

LEGEND	
NEW	EXISTING
DRAINAGE STRUCTURE	
SANITARY SEWER MANHOLE	
SANITARY SEWER CLEANOUT	
WATER VALVE	
FIRE HYDRANT	
OVERHEAD UTILITY LINE	
UNDERGROUND ELECTRIC LINE	
UNDERGROUND TELECOM/DATA LINE	
FIBER OPTIC CABLE	
GAS LINE	
STORM DRAINAGE PIPE	
SANITARY SEWER LINE	
WATER LINE	
SURFACE ELEVATION CONTOUR	
SURFACE SPOT ELEVATION	
CLEARING LIMIT/TREE LINE	
LIMIT OF DISTURBANCE	
ELECTRICAL TRANSFORMER PAD	
TREE (LANDSCAPE / SURVEY)	

SHEET	DESCRIPTION
C1	Cover Sheet
C2	Standard Notes
C3	Existing Conditions & Demolition Plan
C4	Site Plan
C5	Utility Plan
C6	Grading Plan
C7	Landscape Plan
C8	Plan and Profile - Marshskip and Jamescroft
C8	Plan and Profile - Excelsor and Vineyard Pine Ln
D-1	Standard Site Details
D-2	Stormwater Details
D-3	Sanitary Sewer Details
D-4	Water Details
EC1	Erosion Control Plan - Phase 1
EC2	Erosion Control Plan - Phase 2
EC3	Erosion Control Plan - Phase 3
EC4	Erosion Control - Phase 4 and NCG01
EC5	Erosion Control Details
EC6	Erosion Control Details
NCG01	Ground Stabilization and Materials Handling
NCG01	Self Inspection, Record Keeping and Reporting



caaENGINEERS, Inc.

McIntyre, Gettle, Crowley

PROFESSIONAL ENGINEERS

1233 Heritage Links Drive, Wake Forest, North Carolina 27587

4932B Windy Hill Drive, Raleigh, North Carolina 27609

(919)625-6755

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PROJECT INFORMATION:	
PROJECT:	TOWNES AT CARLTON POINTE CONSTRUCTION PLAN
OWNER/DEVELOPER:	CARLTON GROUP OF NC LLC 5856 FARINGDON PLACE RALEIGH, NC 27609 (914) 403-7848 MARSHALL SKIP DAVIS SKIPD4@AOL.COM
PHONE:	KEITH GETTLE, PE caaENGINEERS, INC. 4932 B WINDY HILL DRIVE RALEIGH, NC 27609 (919) 210-3934
CONTACT:	KGITTLE@CAAENGINEERS.COM
EMAIL:	
ENGINEER:	
PHONE:	
EMAIL:	
SURVEYOR:	THE WOODCOCK GROUP LLC P O BOX 336, YOUNGSVILLE NC, 27598 (919) 522-7253
PROJECT ADDRESS:	4521, 4522, 4541, AND 4542 VINEYARD PINE LN ROLESVILLE, NC
TOTAL ACRES:	5.8 ACRES
OPEN SPACE:	ACTIVE = .42 ACRES PASSIVE = 2.22 ACRES
PIN:	1758455319, 1758457329, 1758455033, 1758457035
ZONING:	R & PUD
EXIST USE:	VACANT
FLOOD ZONE:	NO FLOOD ZONE PER FEMA FIRM MAP 3720174700J

GENERAL NOTES

1. BOUNDARY AND TOPO INFORMATION TAKEN FROM THEWOODCOCK GROUP, LLC, DATED JANUARY 26, 2019.
2. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES & SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM HIS ACTIVITIES. CALL UTILITY LOCATOR SERVICE AT LEAST 48 HOURS PRIOR TO DIGGING.
3. ALL CONSTRUCTION WILL BE IN STRICT CONFORMANCE TO THE, TOWN OF ROLESVILLE, CITY OF RALEIGH AND WAKE COUNTY'S STANDARDS AND SPECIFICATIONS.
4. NO CHANGES MAY BE MADE TO THE APPROVED DRAWINGS WITHOUT WRITTEN PERMISSION FROM THE ISSUING AUTHORITY.
5. CONSTRUCTION PLANS FOR PUBLIC STREETS AND UTILITIES MUST BE APPROVED BY THE CITY OF RALEIGH PUBLIC WORKS DEPARTMENT AND PUBLIC UTILITIES DEPARTMENT PRIOR TO RECORDING OF ANY PLAT FOR THIS DEVELOPMENT.

NOTES:

1. WATER SUPPLY AND WASTEWATER FOR ALL LOTS IN THIS DEVELOPMENT SHALL BE PROVIDED BY THE CITY OF RALEIGH PER AGREEMENT WITH TOWN OF ROLESVILLE
2. ROAD NAMES SHALL BE SUBMITTED AND APPROVED PRIOR TO APPROVAL OF FINAL PLAT.
3. ALL OPEN SPACE PARCELS SHALL BE OWNED BY A LEGALLY ORGANIZED HOMEOWNERS ASSOCIATION THAT WILL BE RESPONSIBLE FOR MANAGING AND INSURING RESIDENTS ACCESS
4. HANDICAP RAMPS WILL BE INSTALLED AT ALL INTERSECTIONS NECESSARY FOR SIDEWALK CONNECTIVITY

EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT	
APPROVED	
EROSION CONTROL	<input type="checkbox"/> S-
STORMWATER MGMT.	<input type="checkbox"/> S-
FLOOD STUDY	<input type="checkbox"/> S-
DATE	
ENVIRONMENTAL CONSULTANT SIGNATURE	

INITIAL SUBMITTAL DATE 6-19-2019
REVISION 1 DATE 9-13-2019

CONCURRENT REVIEW APPROVAL

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

Public Sewer Collection / Extension System	
The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. This material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.	
City of Raleigh Public Utilities Department Permit #	
Authorization to Construct	
Date	

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

TRANSPORTATION FIELD SERVICES

PUBLIC UTILITIES

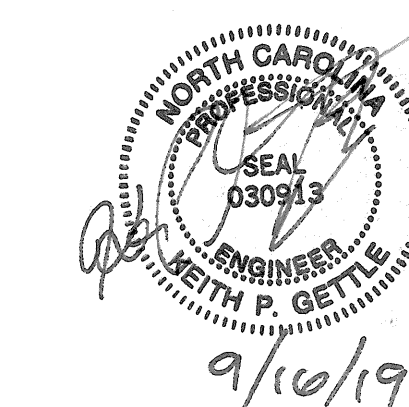
STORMWATER

PLANNING/ZONING

FIRE

URBAN FORESTRY

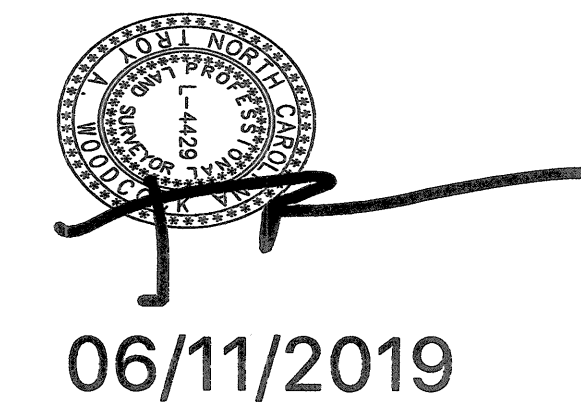
SITE ACCESSIBILITY



Public Water Distribution / Extension System	
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. This material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.	
City of Raleigh Public Utilities Department Permit #	
Authorization to Construct	
Date	

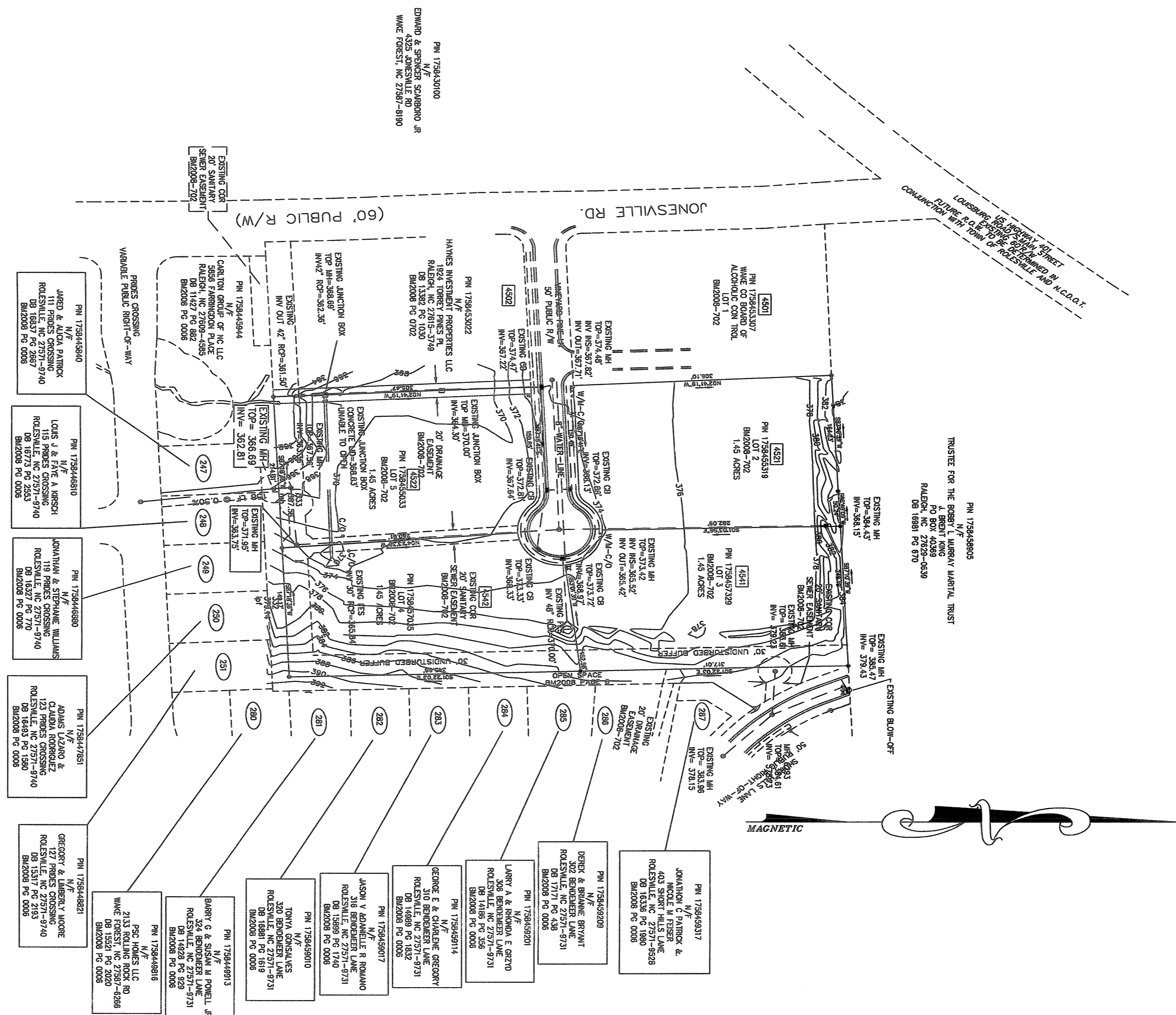
ATTENTION CONTRACTORS	
The Construction Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4540 at least twenty-four hours prior to beginning any of their construction.	
Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require rehabilitation of any water or sewer facilities not inspected as a result of this notification failure.	
Failure to call for inspection, install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.	

NOTE:
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ROLESVILLE, WAKE COUNTY AND CITY OF RALEIGH STANDARDS AND SPECIFICATIONS



THE WOODCOCK GROUP, PLLC
P.O. BOX 336
Youngsville , NC 27596
(919) 522-7253

- [illegible]



UTILITY SPECIFICATIONS

EXISTING CONDITIONS

- INFORMATION ABOUT EXISTING UNDERGROUND FACILITIES AND SUBSURFACE CONDITIONS INDICATED ON THESE DRAWINGS IS NOT BASED ON AN EXHAUSTIVE INVESTIGATION OF SUCH FACILITIES OR CONDITIONS, AND THE ENGINEER MAKES NO WARRANTY TO ANY PARTY REGARDING THEM. EXISTING UTILITY LINE LOCATIONS SHOWN SHOULD BE CONSIDERED APPROXIMATE, AND ACTUAL UTILITIES AND CONDITIONS MAY DIFFER FROM THOSE INDICATED. IF DIFFERING UTILITIES OR CONDITIONS EXIST, THEY MAY BE ENCOUNTERED DURING THE COURSE OF THE PROJECT WORK, AND MAY IMPACT THE PROJECT SCOPE AND TIME REQUIREMENTS.

PROTECTION AND SAFETY

- PRIOR TO BEGINNING WORK, AND AS NEEDED DURING THE COURSE OF PROJECT WORK, CONTRACTOR SHALL NOTIFY ALL APPLICABLE UTILITY LOCATION SERVICES AND UTILITY PROVIDERS TO REASONABLY VERIFY THE LOCATION OF ALL KNOWN OR SUSPECTED UTILITIES, IN ACCORDANCE WITH STATE REGULATIONS. CONTRACTOR IS ADVISED THAT SOME UTILITY PROVIDERS DO NOT SUBSCRIBE TO ONE-CALL SERVICES, AND MUST BE CONTACTED SEPARATELY.
- CONTRACTOR SHALL PROVIDE ADEQUATE MEANS AND METHODS FOR PROTECTION OF ALL EXISTING UTILITIES AND SITE FEATURES WHICH ARE INTENDED TO REMAIN IN SERVICE OR IN PLACE.
- CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL MEASURES DURING THE COURSE OF PROJECT WORK IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, THE N.C. SUPPLEMENT TO THE MUTCD, ANY REGULATORY AGENCY REQUIREMENTS, AND PROJECT-SPECIFIC SAFETY CONSIDERATIONS.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY PROGRAMS AND MEASURES ON THE PROJECT SITE OR OTHERWISE RELATING TO THE PROJECT WORK, AND SHALL COMPLY WITH ALL SAFETY CODES AND REGULATIONS APPLICABLE THERETO, FOR THE PROTECTION OF WORKERS, VISITORS, AND THE GENERAL PUBLIC.

COMPLIANCE

- ALL WATER SYSTEM AND SANITARY SEWER WORK SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
- 1. REQUIREMENTS OF THE CITY OF RALEIGH, INCLUDING THE LATEST EDITION OF CONSTRUCTION STANDARDS AND SPECIFICATIONS, CONSTRUCTION DETAILS, POLICIES AND PROCEDURES, AND FIELD DIRECTIVES BY THE UTILITY INSPECTOR.
- 2. REGULATIONS OF NCDCENR-DIVISION OF WATER QUALITY, INCLUDING NCAC 22 REGULATIONS AND MINIMUM DESIGN CRITERIA FOR THE PERMITTING OF GUYARD SEWERS.
- 3. REGULATIONS OF NCDCENR-PUBLIC WATER SUPPLY, RULES GOVERNING PUBLIC WATER SYSTEMS.
- 4. STREET RIGHT-OF-WAY ENCROACHMENT PERMIT REQUIREMENTS, AS APPLICABLE.
- 5. OSHA REQUIREMENTS RELATED TO SAFETY.
- 6. REQUIREMENTS OF THE N.C. PLUMBING CODE.

NOTIFICATIONS

- NOTIFY THE ENGINEER AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR RESUMING WATERLINE OR SANITARY SEWER WORK. THE ENGINEER MUST OBSERVE CONNECTIONS, INSTALLATION, BACKFILLING, AND TESTING WORK, IN ORDER TO PROVIDE NECESSARY PROJECT CERTIFICATIONS AND CLOSE-OUT DOCUMENTS.
- NOTIFY THE CITY OF RALEIGH AND OR NCDOOT IN ACCORDANCE WITH THEIR REQUIREMENTS PRIOR TO BEGINNING UTILITY WORK.
- NOTIFY THE GEOTECHNICAL ENGINEER AND TESTING SERVICE AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR RESUMING TRENCHING OR BACKFILLING WORK.

TRENCHING AND BACKFILLING

- WHERE ROCK OR OTHER HARD MATERIAL OCCURS AT THE DESIGNED TRENCH BOTTOM, OVEREXCAVATE TRENCH DEPTH 8 INCHES AND REPLACE OVEREXCAVATION MATERIAL WITH #67 STONE BEDDING.
- WHERE THE DESIGNED TRENCH BOTTOM CONSISTS OF UNSUITABLE BEARING SOIL, UNDERCUT TRENCH BOTTOM AND REPLACE UNDERCUT MATERIAL IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
- BACKFILL SOIL SHALL BE SUITABLE MATERIAL, AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
- BACKFILL SOIL SHALL BE PLACED IN LOOSE LIFT OF 8 INCH MAXIMUM THICKNESS AND BE SUCCESSFULLY TESTED OR OTHERWISE APPROVED, AND DETERMINED TO BE READY FOR SUBSEQUENT WORK.
- 90% OF THE SOIL'S MAXIMUM DRY DENSITY, WITHOUT DAMAGING OR DISPLACING PIPE.
- INSTALL MARKING TAPE OR TRACER WIRE OVER UTILITY LINES AS REQUIRED BY THE LOCAL UTILITY AUTHORITY.

STORAGE AND HANDLING

- PIPING, FITTINGS, GASKETS, AND OTHER MATERIALS SHALL BE KEPT CLEAN WHILE BEING STORED AND DURING CONSTRUCTION ACTIVITIES. PIPE BUNDLES SHALL BE STORED ON FLAT SURFACES WITH UNIFORM SUPPORT, AND PROTECTED FROM PROLONGED EXPOSURE TO BUILDUP WITH A COVERING ALLOWING AIR FLOW UNDERNEATH. GASKETS SHALL NOT BE EXPOSED TO OIL, GREASE, OZONE, EXCESSIVE HEAT OR DIRECT SUNLIGHT. FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR STORAGE AND HANDLING OF ALL MATERIALS.

WATER SYSTEM

- PROVIDE ALL WATER SYSTEM MATERIALS IN ACCORDANCE WITH LOCAL WATER AUTHORITY REQUIREMENTS.
- INSTALL WATERLINES TO PROVIDE A MIN OF 36" COVER TO FINISHED GRADE, UNLESS OTHERWISE SHOWN OR APPROVED BY THE ENGINEER AND INSPECTOR.
- ALL WATERLINE BENDS, CROSSES, TEES, AND ENDS SHALL BE RESTRAINED USING CONCRETE BLOCKING OR A MECHANICAL JOINT WEDGE-ACTION RESTRAINT SYSTEM RATED FOR 300 PSI.
- DO NOT OPERATE WATER SYSTEM VALVES WITHOUT PERMISSION OF THE WATER AUTHORITY.
- CONTRACTOR SHALL COORDINATE EXACT FIRE HYDRANT, WATER METER, AND BACKFLOW PREVENTER LOCATIONS WITH WATER AUTHORITY INSPECTOR PRIOR TO INSTALLATION.

BACKFLOW PREVENTION

- BACKFLOW PREVENTER ASSEMBLIES AND ENCLOSURES SHALL CONFORM TO ALL LOCAL WATER AUTHORITY REQUIREMENTS, AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR SHALL PROVIDE INITIAL TESTING AND CERTIFICATIONS AS REQUIRED FOR ACCEPTANCE.

FIRE PROTECTION

- WATER MAINS SHALL BE INSTALLED AND MADE OPERATIONAL AS SOON AS PRACTICAL TO PROVIDE ACTIVE FIRE HYDRANT SERVICE DURING BUILDING CONSTRUCTION.
- COORDINATE TYPE AND LOCATION OF HYDRANTS, FIRE DEPARTMENT CONNECTIONS, AND OTHER FIRE PROTECTION SYSTEM COMPONENTS WITH LOCAL FIRE CODE OFFICIAL PRIOR TO INSTALLATION.

UTILITY SPECIFICATIONS (cont.)

SANITARY SEWER

- SANITARY SEWER MAIN PIPING SHALL BE DUCTILE IRON PIPE PER AWWA C151, PRESSURE CLASS 350, WITH INTERIOR EPOXY LINING AND EXTERIOR BITUMINOUS SEAL. JOINTS SHALL BE PUSH-ON TYPE WITH RUBBER GASKETS PER AWWA C111.
- SANITARY SEWER MAIN PIPING SHALL BE PVC PIPE PER ASTM D3034, SDR 35, JOINTS SHALL BE PUSH-ON TYPE WITH RUBBER GASKETS PER ASTM F407.
- SANITARY SEWER MAINS SHALL BE INSTALLED WITH 36 INCHES MINIMUM COVER TO FINISHED GRADE, EXCEPT AS OTHERWISE SPECIFIED.
- SANITARY SEWER SERVICE LINES AND CLEANOUTS SHALL BE INSTALLED IN ACCORDANCE WITH THE N.C. PLUMBING CODE, AND HAVE 24 INCHES MINIMUM COVER TO FINISHED GRADE. SERVICE LINES SHALL MAINTAIN MAXIMUM SERVICE DEPTH USING A 2.1% SLOPE UNLESS OTHERWISE SPECIFIED.
- SERVICE PIPE AND FITTINGS WITHIN PUBLIC STREET RIGHT-OF-WAY SHALL BE CAST IRON WITH GASKETED JOINTS, AND IN OTHER AREAS SHALL BE SCHEDULE 40 PVC WITH SOLVENT WELDED JOINTS, EXCEPT ALL CLEANOUTS SHALL BE FITTED WITH THREADED BRONZE PLUGS.
- SERVICE LINE CLEANOUTS IN VEHICULAR AREAS SHALL BE TRAFFIC BEARING CLEANOUTS.

CONNECTIONS

- FOR CONNECTIONS TO EXISTING UTILITY AND DRAINAGE LINES, CONTRACTOR SHALL VERIFY EXISTING PIPE SIZE AND MATERIAL, AND PROVIDE APPROPRIATE CONNECTION FITTINGS.
- ANY CONNECTION TO EXISTING UTILITIES, OR ANY UTILITY SERVICE INTERRUPTION, SHALL BE FIRST COORDINATED WITH THE GOVERNING UTILITY AUTHORITY, AND PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THAT AUTHORITY.

TESTING AND ACCEPTANCE

- THE GEOTECHNICAL ENGINEER SHALL PROVIDE MATERIAL AND DENSITY TESTING DURING THE COURSE OF THE WORK. PRIOR TO PLACEMENT OF ANY BASE OR PAVEMENT, CONTRACTOR SHALL PROVIDE PROOF-ROLLING OF ALL TRENCH AREAS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER.
- PRIOR TO ANY SANITARY SEWER OR WATER SYSTEM IMPROVEMENTS BEING PLACED INTO SERVICE:
- 1. CONTRACTOR SHALL SUCCESSFULLY TEST ALL WATER MAINS FOR WATER LEAKAGE AND WATER QUALITY IN ACCORDANCE WITH CITY OF RALEIGH AND NCDCENR REQUIREMENTS.
- 2. CONTRACTOR SHALL SUCCESSFULLY TEST ALL SANITARY SEWER MAINS FOR DEFLECTION AND LEAKAGE, AND TEST ALL SANITARY MANHOLES FOR LEAKAGE, IN ACCORDANCE WITH CITY OF RALEIGH AND NCDCENR REQUIREMENTS.
- 3. CONTRACTOR SHALL PERFORM VIDEO INSPECTION OF INSTALLED SANITARY SEWER MAINS AND PROVIDE DOCUMENTATION PER LOCAL REQUIREMENTS.
- 4. CONTRACTOR SHALL PROVIDE TO ENGINEER A SET OF MARKED UP DRAWINGS SHOWING UTILITY CHANGES, DIMENSIONAL ADJUSTMENTS, DISCOVERED SUBSURFACE UTILITIES, AND OTHER AS-BUILT INFORMATION.
- 5. CONTRACTOR SHALL PROVIDE DOCUMENTATION OF ALL TESTING RESULTS TO ENGINEER.
- 6. ALL IMPROVEMENTS SHALL PASS FINAL INSPECTION BY ENGINEER AND THE UTILITY AUTHORITY.
- 7. ENGINEER SHALL SUBMIT ALL CERTIFICATIONS AND OTHER CLOSE-OUT DOCUMENTS TO APPLICABLE LOCAL AND STATE AUTHORITIES.

OTHER

- CONTRACTOR SHALL PROVIDE PRIMARY COORDINATION WITH UTILITY SERVICE PROVIDERS FOR BUILDING UTILITY SERVICES. THIS WORK SHALL INCLUDE MAKING APPLICATIONS FOR SERVICE, COORDINATING AND SCHEDULING WORK BY OTHERS, VERIFYING ROUTINGS AND EQUIPMENT LOCATIONS, FURNISHING AND INSTALLING CONDUIT AND PADS, AND RELATED WORK AS NEEDED.
- CONTRACTOR SHALL PROVIDE PROPER RESTORATION AND CLEAN-UP OF ALL AREAS DISTURBED BY UTILITY CONSTRUCTION.

GENERAL GRADING AND STORM DRAINAGE SPECIFICATIONS

EXISTING CONDITIONS

- INFORMATION ABOUT EXISTING UNDERGROUND FACILITIES AND SUBSURFACE CONDITIONS INDICATED ON THESE DRAWINGS IS NOT BASED ON AN EXHAUSTIVE INVESTIGATION OF SUCH FACILITIES OR CONDITIONS, AND THE ENGINEER MAKES NO WARRANTY TO ANY PARTY REGARDING THEM. EXISTING UTILITY LINE LOCATIONS SHOWN SHOULD BE CONSIDERED APPROXIMATE, AND ACTUAL UTILITIES AND CONDITIONS MAY DIFFER FROM THOSE INDICATED. IF DIFFERING UTILITIES OR CONDITIONS EXIST, THEY MAY BE ENCOUNTERED DURING THE COURSE OF THE PROJECT WORK, AND MAY IMPACT THE PROJECT SCOPE AND TIME REQUIREMENTS.

PROTECTION AND SAFETY

- PRIOR TO BEGINNING WORK, AND AS NEEDED DURING THE COURSE OF PROJECT WORK, CONTRACTOR SHALL NOTIFY ALL APPLICABLE UTILITY LOCATION SERVICES AND UTILITY PROVIDERS TO REASONABLY VERIFY THE LOCATION OF ALL KNOWN OR SUSPECTED UTILITIES, IN ACCORDANCE WITH STATE REGULATIONS. CONTRACTOR IS ADVISED THAT SOME UTILITY PROVIDERS DO NOT SUBSCRIBE TO ONE-CALL SERVICES, AND MUST BE CONTACTED SEPARATELY.
- CONTRACTOR SHALL PROVIDE ADEQUATE MEANS AND METHODS FOR PROTECTION OF ALL EXISTING UTILITIES AND SITE FEATURES WHICH ARE INTENDED TO REMAIN IN SERVICE OR IN PLACE.
- CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL MEASURES DURING THE COURSE OF PROJECT WORK IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, THE N.C. SUPPLEMENT TO THE MUTCD, ANY REGULATORY AGENCY REQUIREMENTS, AND PROJECT-SPECIFIC SAFETY CONSIDERATIONS.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY PROGRAMS AND MEASURES ON THE PROJECT SITE OR OTHERWISE RELATING TO THE PROJECT WORK, AND SHALL COMPLY WITH ALL SAFETY CODES AND REGULATIONS APPLICABLE THERETO, FOR THE PROTECTION OF WORKERS, VISITORS, AND THE GENERAL PUBLIC.

COMPLIANCE

- ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE STANDARDS AND REQUIREMENTS OF THE CITY OF RALEIGH, RALEIGH SEDIMENTATION AND EROSION CONTROL OFFICE, AND THE N.C. STATE BUILDING CODES.

NOTIFICATIONS

- NOTIFY THE ENGINEER AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR RESUMING ANY STORM DRAINAGE OR STORMWATER IMPOUNDMENT BASIN WORK.
- NOTIFY THE APPLICABLE LOCAL GOVERNMENT AUTHORITIES IN ACCORDANCE WITH THEIR REQUIREMENTS PRIOR TO BEGINNING ANY WORK.
- NOTIFY THE GEOTECHNICAL ENGINEER AND TESTING SERVICE AT LEAST TWO BUSINESS DAYS PRIOR TO BEGINNING OR RESUMING ANY GRADING OR STORMWATER IMPOUNDMENT BASIN WORK.

QUALITY CONTROL

- ALL EARTHWORK OPERATIONS, INCLUDING TOPSOIL STRIPPING, STOCKPILING, EXCAVATION, FILLING, COMPACTING, TRENCHING, BACKFILL, RETAINING WALLS, AND FINE-GRADING, SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A GEOTECHNICAL ENGINEER, WHO SHALL VERIFY THE SUITABILITY OF SOIL MATERIALS, MONITOR EARTHWORK ACTIVITIES, DIRECT AND OBSERVE PROOFROLLING, AND PROVIDE COMPACTION AND STABILITY TESTING DURING THE PROGRESS OF THE WORK.
- NO SOIL SHALL BE PLACED IN A PERMANENT LOCATION UNLESS IT HAS BEEN APPROVED BY THE GEOTECHNICAL ENGINEER FOR THE INTENDED USE AND LOCATION.
- PRIOR TO PLACEMENT OF ANY FILL, THE SUBGRADE OR PREVIOUS LIFT OF FILL SHALL BE SUCCESSFULLY TESTED OR OTHERWISE APPROVED, AND DETERMINED TO BE READY FOR SUBSEQUENT WORK.
- PRIOR TO PLACEMENT OF ANY AGGREGATE, PAVING, SLABS, STRUCTURES, FOOTINGS, PIPING, OR OTHER WORK, SUBGRADES AND OTHER BEARING SURFACES SHALL BE SUCCESSFULLY TESTED OR OTHERWISE APPROVED, AND DETERMINED TO BE READY FOR SUBSEQUENT WORK.
- CONTRACTOR SHALL ALLOW AND PARTICIPATE IN SOIL TESTING ACTIVITIES, INCLUDING ACTIVE COORDINATION WITH THE GEOTECHNICAL ENGINEER AND FURNISHING PROOFROLLING EQUIPMENT, MATERIALS, AND MAINPOWER AS NEEDED.

CLEARING & GRUBBING

- ALL VEGETATIVE MATERIAL DISLOCATED BY CLEARING AND GRUBBING ACTIVITIES SHALL BE COMPLETELY REMOVED FROM THE PROJECT SITE AND LEGALLY DISPOSED. NO ONSITE BURNING OF CLEARING WASTE SHALL OCCUR.
- ALL PAVEMENT, CURB, PIPE, STRUCTURES AND OTHER PHYSICAL SITE FEATURES THAT ARE INDICATED OR REQUIRED TO BE REMOVED SHALL BE LEGALLY DISPOSED IN AN OFFSITE LOCATION.

GRADING

- STRUCTURAL FILL IS DEFINED AS SOIL CLASSIFIED AS SM, SC, ML, AND CL, FREE OF VEGETATIVE MATTER, DEBRIS OR OTHER UNSUITABLE MATTER, FREE OF ROCKS LARGER THAN 3 INCHES IN ANY DIMENSION, CAPABLE OF BEING COMPACTED TO THE REQUIRED DENSITY, AND WHICH HAS BEEN APPROVED FOR USE BY THE GEOTECHNICAL ENGINEER.
- OTHER SOIL NOT MEETING THE DEFINITION FOR STRUCTURAL FILL MAY BE APPROVED BY THE GEOTECHNICAL ENGINEER FOR USE UNDER LIMITED CONDITIONS OR IN LIMITED AREAS.
- STRUCTURAL FILL SHALL GENERALLY BE PLACED AND COMPACTED WHEN THE SOIL'S MOISTURE CONTENT IS WITHIN 4 PERCENTAGE POINTS OF THE SOIL'S OPTIMUM MOISTURE CONTENT, IN LIFTS NOT TO EXCEED 8 INCHES LOOSE THICKNESS. THE IN-PLACE COMPACTED DENSITY SHALL BE AT LEAST 90 PCF. TIGHTER SPECIFICATIONS MAY BE REQUIRED FOR CERTAIN AREAS, SOIL TYPES, OR COMPACTION METHODS.
- STRUCTURAL ZONES SHALL INCLUDE ALL AREAS SUBJECT TO DIRECT BEARING PRESSURE PLUS 10 FEET HORIZONTAL PLUS A 1:1 DOWNWARD SLOPE IN ANY AREAS OF FILL.
- ALL SOIL UNDER PAVEMENTS, BUILDINGS, AND WALKWAYS, OR IN STRUCTURAL ZONES ASSOCIATED WITH THESE AREAS SHALL BE APPROVED IN-SITU SOIL OR STRUCTURAL FILL, COMPACTED TO AT LEAST 85% OF THE SOIL'S MAXIMUM DRY DENSITY (MDD) PER ASTM D-698. TIGHTER REQUIREMENTS MAY APPLY FOR CERTAIN AREAS.
- IN THE BUILDING AREA, THE REQUIRED DENSITY OF FILL SHALL BE 100% MDD, EXCEPT THE TOP 12 INCHES OF FILL SHALL BE AT LEAST 98% MDD. WHERE THE BUILDING WILL BE PLACED ON IN-SITU SOIL, THE SOIL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER AND COMPACTED TO AT LEAST 89% MDD.
- ALL EXCESS OR UNSUITABLE SOIL SHALL BE LEGALLY DISPOSED IN AN OFFSITE OR APPROVED ONSITE LOCATION.
- WHERE LANDSCAPED OR YARD AREAS ADJUT EXTERIOR BUILDING WALLS, FINISHED GROUND ELEVATIONS ADJACENT TO THE WALL SHALL BE AT LEAST 3 INCHES BELOW THE FINISHED FLOOR ELEVATION, AND SHALL SLOPE AWAY FROM THE BUILDING WITH POSITIVE DRAINAGE.

TRENCHING AND BACKFILLING

- WHERE ROCK OR OTHER HARD MATERIAL OCCURS AT THE DESIGNED TRENCH BOTTOM, OVEREXCAVATE TRENCH DEPTH 8 INCHES AND REPLACE OVEREXCAVATION MATERIAL WITH #67 STONE BEDDING.
- WHERE THE DESIGNED TRENCH BOTTOM CONSISTS OF UNSTABLE BEARING SOIL, UNDERCUT TRENCH BOTTOM AND REPLACE UNDERCUT MATERIAL IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
- BACKFILL SOIL SHALL BE STRUCTURAL FILL, PLACED AND COMPACTED IN ACCORDANCE WITH REQUIREMENTS FOR THE SPECIFIC AREA OF WORK, WITHOUT DAMAGING OR DISPLACING PIPE OR STRUCTURES.

STORM DRAINAGE SYSTEM

- STORM DRAINAGE STRUCTURES SHALL CONFORM TO CITY OF RALEIGH AND NCDOOT STANDARDS, AND MAY BE CONSTRUCTED OF EITHER SOLID MASONRY OR PRE-CAST CONCRETE. "KNOCK-OUT" TYPE PRE-CAST STRUCTURES SHALL NOT BE USED WHERE THE DESIGNED PIPE CONFIGURATION WOULD REQUIRE REMOVAL OF STRUCTURAL CORNERS OR ALTERATION OF DESIGNED PIPE ENTRY ANGLES.
- STORM DRAINAGE PIPE LENGTHS SHOWN ARE APPROXIMATE, AS MEASURED FROM THE CENTER OF DRAINAGE STRUCTURES, AND TO THE END OF ANY FLARED END SECTION (FES), AS APPLICABLE.
- CONTRACTOR SHALL VERIFY AND COORDINATE EXACT POSITIONING OF STORM DRAINAGE PIPING AND STRUCTURES, AND SHALL MAKE ADJUSTMENTS AS NEEDED TO PROVIDE PROPER CONNECTIONS, STRUCTURE LOCATIONS, ORIENTATIONS, DIMENSIONS, ELEVATIONS, FRAME PLACEMENT, AND SURFACE DRAINAGE. REFER TO STORM DRAINAGE STRUCTURE DETAILS FOR DIMENSIONS, OFFSETS, CLEARANCES, SETBACKS FROM CURB, AND OTHER REQUIREMENTS. MODIFY STRUCTURES AS NEEDED TO ACCOMMODATE LARGE-DIAMETER PIPING, MULTIPLE PIPE PENETRATIONS, AND PIPE CONNECTION ANGLES.
- STORM DRAINAGE PIPING SHALL BE REINFORCED CONCRETE PIPE (RCP), CLASS III, CONFORMING TO ASTM C78, UNLESS OTHERWISE SPECIFIED. ALL JOINTS SHALL BE FULLY SEALED USING PREFORMED FLEXIBLE BUTYL RUBBER SEALING COMPOUND.

SURFACE DRAINAGE

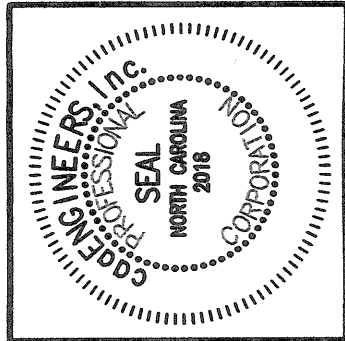
- ALL SPOT ELEVATIONS SHOWN ARE FINISHED SURFACE ELEVATIONS. SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER ELEVATION CONTOURS. ALL ELEVATIONS SHOWN ON CURB AND GUTTER REFER TO TOP OF CURB, UNLESS OTHERWISE INDICATED.
- ALL FINISHED PAVEMENT AND YARD SURFACES SHALL BE FINE-GRADED AND FINISHED TO HAVE POSITIVE SURFACE DRAINAGE TO A FREE-FLOWING DRAINAGE OUTLET, WITH NO IRREGULARITIES OR DEPRESSIONS THAT WOULD CAUSE UNWANTED WATER PONDING.
- USE REVERSE-PITCH CURB AND GUTTER WHERE ADJACENT PAVEMENT SLOPES AWAY FROM CURB, AND STANDARD-PITCH CURB AND GUTTER ELSEWHERE, UNLESS OTHERWISE NOTED. PROVIDE POSITIVE DRAINAGE ALONG AND FROM ALL GUTTERS.
- TIE-INS TO EXISTING PAVEMENT, CURBS, WALKS, ETC. SHALL BE MADE WITH NEAT EDGES AND SMOOTH, GRADUAL TRANSITIONS THAT ARE SAFE, FUNCTIONAL, DURABLE, AND VISUALLY ACCEPTABLE TO THE OWNER AND REVIEW AUTHORITIES.

ACCESSIBILITY

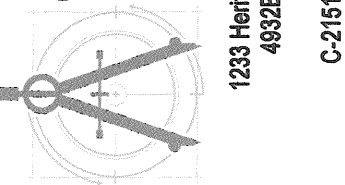
- FINISHED WALKWAY ELEVATIONS ABUTTING EXTERIOR DOORWAY THRESHOLDS SHALL BE ONE-FOURTH INCH BELOW THE ADJOINING FINISHED FLOOR ELEVATION. EXTERIOR PADS AND WALKWAYS SHALL SLOPE AWAY FROM THE BUILDING AT A SLOPE NO LESS THAN 1.0% AND NO GREATER THAN 2.0%.
- SIDEWALKS, CROSSWALKS, AND OTHER WALKWAYS SHALL NOT EXCEED 2.0% CROSS-SLOPE.
- NO PORTION OF ANY HANDICAP ACCESSIBLE ROUTE SHALL EXCEED 2.0% CROSS-SLOPE OR 5.0% LONGITUDINAL SLOPE.
- NO PORTION OF ANY HANDICAP PARKING SPACE OR ADJOINING ACCESS AISLE SHALL EXCEED 2.0% SLOPE IN ANY DIRECTION.

SITE NOTES

1. WHERE NEW CURB AND GUTTER IS INSTALLED IN A PUBLIC STREET RIGHT-OF-WAY, USE 30" CURB AND GUTTER. IN OTHER LOCATIONS, USE 24" CURB AND GUTTER.
 2. ALL CURB DIMENSIONS ARE MEASURED TO BACK OF CURB, AND ALL CURB RADI ARE 3 FEET, UNLESS INDICATED OTHERWISE.
 3. USE REVERSE-PITCH CURB AND GUTTER WHERE ADJACENT PAVEMENT SLOPES AWAY FROM CURB, AND STANDARD-PITCH CURB AND GUTTER ELSEWHERE, UNLESS OTHERWISE NOTED. PROVIDE POSITIVE DRAINAGE ALONG AND FROM ALL GUTTERS.
 4. ALL SITE CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI, UNLESS OTHERWISE INDICATED.
 5. ALL BASE AND PAVING WORK SHALL COMPLY WITH CITY OF RALEIGH STANDARDS. INDICATED PAVEMENT THICKNESSES REFER TO COMPACTED THICKNESS.
 6. INSTALL ALL PAVEMENT WITH POSITIVE SURFACE DRAINAGE.
 7. ALL HANDICAPPED PARKING SPACES, AISLES, RAMPS, SIGNAGE, PAVEMENT MARKINGS, CROSSWALKS, AND ACCESSIBLE ROUTES SHALL MEET APPLICABLE REQUIREMENTS OF THE NORTH CAROLINA ACCESSIBILITY CODE.
 8. ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL HAVE AN R7-4 AND R7-40 SIGN. ALL SIGNS FOR VAN ACCESSIBLE SPACES SHALL ALSO INCLUDE A "VAN ACCESSIBLE" SIGN.
 9. CONTRACTOR SHALL PROVIDE ADEQUATE TRAFFIC CONTROL MEASURES DURING THE COURSE OF PROJECT WORK IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS, THE N.C. SUPPLEMENT TO THE MUTCD, ANY REGULATORY AGENCY REQUIREMENTS, AND PROJECT-SPECIFIC SAFETY CONSIDERATIONS.
 10. TIE-INS TO EXISTING PAVEMENT, CURBS, WALKS, ETC. SHALL BE MADE WITH NEAT EDGES AND SMOOTH, GRADUAL TRANSITIONS THAT ARE SAFE, FUNCTIONAL, DURABLE, AND VISUALLY ACCEPTABLE TO THE OWNER AND REVIEW AUTHORITIES.
 11. BUILDING SIZE, CONFIGURATION, ARCHITECTURAL ELEMENTS, UTILITY STUBS, AND OTHER BUILDING FEATURES SHOWN ON THESE DRAWINGS ARE TAKEN FROM INFORMATION PROVIDED BY OTHERS. BUILDING LINES SHOWN GENERALLY REPRESENT THE EXTERIOR FACE OF THE BUILDING, BUT SHOULD NOT BE USED FOR BUILDING STAGING OR CONSTRUCTION. REFER TO BUILDING PLANS FOR ACTUAL BUILDING DIMENSIONS, DOOR LOCATIONS, COLUMN AND FOOTING LOCATIONS, WALL THICKNESSES, OVERHANGS, ROOF LINES, AND OTHER FEATURES. CONTRACTOR SHALL COORDINATE UTILITY AND DRAINAGE LOCATIONS, ELEVATIONS, MATERIALS, AND SIZES WITH INFORMATION SHOWN ON THE BUILDING DRAWINGS, AND SHALL VERIFY THAT BUILDING ELEMENTS WILL NOT ENCRUMCH INTO REQUIRED SETBACKS.
- GENERAL EROSION AND SEDIMENT CONTROL NOTES:**
1. ALL CONSTRUCTION SHALL COMPLY WITH CITY OF RALEIGH, TOWN OF ROLESVILLE AND WAKE COUNTY STANDARDS AND SPECIFICATIONS.
 2. A COPY OF THE APPROVED EROSION CONTROL PLAN MUST BE ON FILE AT THE JOB SITE AT ALL TIMES.
 3. FAILURE TO FOLLOW THE APPROVED PLAN SEQUENCE AND DETAILS COULD SUBJECT THE CONTRACTOR TO FINES AND PENALTIES ISSUED BY NCDEQ.
 4. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND GRADES ON THESE PLANS PRIOR TO CONSTRUCTION. FAILURE TO NOTIFY THE OWNER OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH PLAN OR GRADE CHANGES, MAY RESULT IN NO EXTRA COMPENSATION PAID TO THE CONTRACTOR FOR ANY WORK DONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY.
 5. EXCAVATION AND EARTH MOVING OPERATIONS SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER.
 6. VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. EXISTING UTILITIES SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND FROM A SURVEY OF ABOVE GROUND FEATURES. NO WARRANTY IS GIVEN OR IMPLIED AS TO THE ACCURACY OF THE INFORMATION. ALL EXISTING UTILITIES SHOULD BE CONSIDERED APPROXIMATE IN LOCATION AND VERIFIED PRIOR TO COMMENCING ACTIVITY ON SITE.
 7. ALL ADJACENT ROADS TO THE SITE ARE TO BE SWEEPED AND WASHED AT THE END OF EACH WORK DAY TO ENSURE NO SEDIMENT COLLECTS ON THE ROADWAYS.
 8. INSPECT AND PROPERLY MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES WEEKLY AND AFTER EVERY RAINFALL EVENT.
 9. INSTALL ANY ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO PREVENT SEDIMENT RUNOFF.
 10. THE NPDES CONSTRUCTION PERMIT REQUIRES EROSION CONTROL DEVICES AND STORM WATER OUTFALLS BE INSPECTED WEEKLY (EVERY 7 CALENDAR DAYS) AND WITHIN 24 HRS OF A .5 INCH RAIN EVENT. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONDUCT THESE INSPECTIONS AND MAINTAIN RECORDS UNTIL THE AREA HAS STABILIZED, EVIDENT BY 95% VEGETATIVE GROWTH FOR AREAS PROVIDED SEEDING. TO FACILITATE RAINFALL MONITORING A RAIN GAUGE IS REQUIRED TO BE ON SITE. ADDITIONALLY THE CONTRACTOR IS RESPONSIBLE FOR CONDUCTING "SELF INSPECTIONS" INDICATING THE DATE THE BASINS ARE INSTALLED AND STABILIZATION MEASURES (SEEDING/MULCHING OR SOD) ARE INITIATED. THE "SELF INSPECTION" REPORTS WILL BE MAINTAINED ALONG WITH THE "NPDES" INSPECTION REPORTS. ONCE STABILIZATION HAS BEEN ACCOMPLISHED INSPECTION RECORDS ARE TO BE FORWARDED TO STORMWATER INSPECTOR AND ALL TEMPORARY EROSION / SEDIMENTATION CONTROL DEVICES REMOVED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING COMPLIANCE WITH ALL PERMITS AND PLANS. ANY CHANGES WILL BE APPROVED BY THE STATE PRIOR TO EXECUTION. A COPY OF THE EROSION AND SEDIMENTATION CONTROL PLAN, LETTER OF APPROVAL, AND NPDES CONSTRUCTION PERMIT WILL BE MAINTAINED BY THE CONTRACTOR AT THE ONSITE OFFICE. IF SOIL IS REMOVED FROM OR BROUGHT ONSITE, THE APPLICABLE SOLID WASTE MANAGEMENT PERMIT NUMBER, EROSION SEDIMENTATION PERMIT NUMBER OR MINE PERMIT NUMBER WILL BE DISCLOSED.
 11. 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.



caaENGINEERS, Inc.
McIntyre, Gettle, Crowley
PROFESSIONAL ENGINEERS
1233 Hedding Links Drive, Wake Forest, North Carolina 27587
46528 Hwy 97 Hill Dr, Raleigh, North Carolina 27608
(919) 252-5775
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NO.	DATE	REVISION DESCRIPTION			
		BY	BY	BY	BY
1	9-13-2018	Revised per Raleigh, NCOR, Wake Co. Review	IPC		
2	Date	Comment	By	By	By
3	Date	Comment	By	By	By
4	Date	Comment	By	By	By
5	Date	Comment	By	By	By
6	Date	Comment	By	By	By
7	Date	Comment	By	By	By
8	Date	Comment	By	By	By
NO.	DATE				



9/10/19

Standard Notes
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina



NO.	DATE	REVISION DESCRIPTION	BY
1	9/12/2018	revision per customer, COOK, Wanda G2, resident	BY
2		Comment	
3		Comment	
4		Comment	
5		Comment	
6		Comment	
7		Comment	
8		Comment	



Existing Conditions and Demo Plan
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina
9/10/19

Dwg No. C2

DEMOLITION PLAN NOTES:

1. REMOVE / DEMOLISH/ ABANDON AFTER EROSION CONTROL MEASURES ARE IN PLACE AND APPROVAL OF TOWN INSPECTOR. REFER TO EROSION CONTROL PLANS. DEMOLITION PERMIT REQUIRED PRIOR TO THE REMOVAL OF ANY EXISTING STRUCTURE ON SITE.
2. DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED BY THE OWNER OR OTHERS EXCEPT WHEN PERMITTED UNDER THE FOLLOWING CONDITIONS AND THEN ONLY AFTER ARRANGING TO PROVIDE ACCEPTABLE TEMPORARY UTILITY SERVICES. (1) NOTIFY OWNER NOT LESS THAN ONE WEEK IN ADVANCE OF PROPOSED UTILITY INTERRUPTIONS. (2) DO NOT PROCEED WITH UTILITY INTERRUPTIONS WITHOUT RECEIVING OWNER WRITTEN PERMISSION. (3) COORDINATE ALL UTILITY RELOCATION WITH APPROPRIATE UTILITY PROVIDER.
3. SUBSURFACE FEATURES ARE SHOWN IN APPROXIMATE LOCATION. CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY EXPLORATION TO DETERMINE UTILITY LOCATIONS AND DEPTHS.
4. VERIFY LOCATIONS AND SIZES OF ALL EXISTING FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
5. LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION, AND REPAIR OR REPLACE ANY DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION.



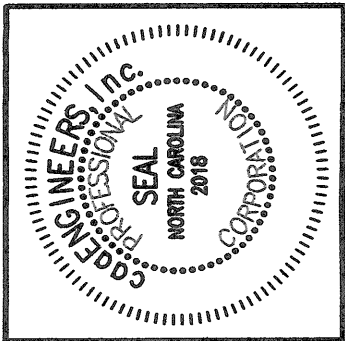
Know what's below.
Call before you dig.
(Or call: 1-800-632-4949)

NOTES

- SEE SHEET C1 FOR STANDARD NOTES.

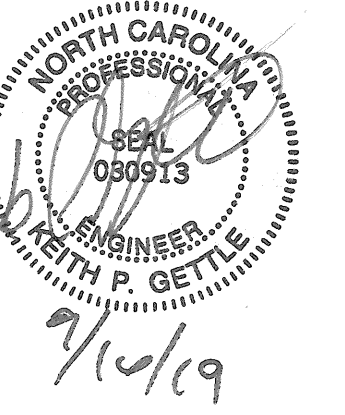
GRAPHIC SCALE





caaENGINEERS, Inc.
McIntyre, Gellie, Crowley
PROFESSIONAL ENGINEERS
1233 Rolling Rock Rd., Wake Forest, North Carolina 27787
4020B Wiley Hill Dr., Raleigh, North Carolina 27605
(919) 623-8755
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NO.	DATE	REVISION DESCRIPTION	BY
1	9-13-2019	Revised per Rolesville, COR, Wake Co. Review	WFG
2		Comment	By
3		Comment	By
4		Comment	By
5		Comment	By
6		Comment	By
7		Comment	By
8		Comment	By
NO.			BY



Site Plan
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina

Job No. 5501
Dwg No. C3

SITE DATA

PROJECT AREA = 5.8 ACRES
OPEN SPACE REQUIRED = 5.8 AC x 15% = .87 ACRES
ACTIVE OPEN SPACE REQUIRED = .87 AC x 35% = .30 ACRES
ACTIVE OPEN SPACE PROVIDED = .42 ACRES
LANDSCAPE BUFFERS = .68 AC
COMMON AREA LOT (OPEN SPACE) = 2.64 AC
PASSIVE OPEN SPACE 2.64 AC - .42 AC - .68 AC = 1.54

RIGHT OF WAY AREA = 1.04 AC
TOWNHOME LOTS AREA 2.12 AC

REQUIRED PARKING:

TOTAL OF 53 UNITS @ 3 BEDROOMS / UNIT = 159 BEDROOMS
53 UNITS X 2.5 SPACES / UNIT = 133 SPACES
VISITOR PARKING REQUIRED - 53 UNITS X 1 SPACE / 4 UNITS = 14 SPACES
PARKING FOR MAIL - 3 SPACES + 1 HANDICAP SPACE
TOTAL REQUIRED PARKING --- 133 + 14 + 3 = 150 SPACES

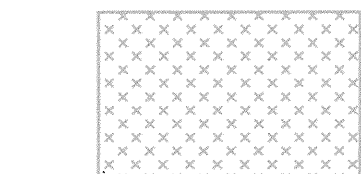
PROVIDED PARKING:

PARKING PROVIDED IN DRIVEWAYS AND GARAGE - 108 SPACES
OFF STREET PARKING SPACES PROVIDED - 45 SPACES
TOTAL PROVIDED PARKING - 108 + 45 = 151 SPACES

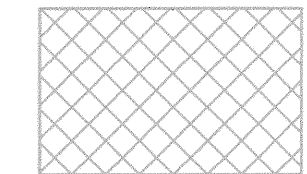
BUILDING SETBACKS - TOWNHOMES

FRONT YARD - BUILDING TO R/W -- 15' MINIMUM
REAR YARD -- 15' MINIMUM
SIDE YARD -- 5' MINIMUM
DISTANCE BETWEEN BUILDINGS -- 30' MINIMUM

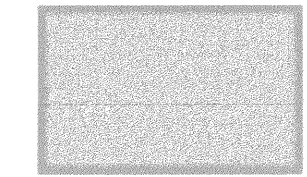
LEGEND



LANDSCAPE BUFFER



OPEN SPACE (ACTIVE)



SIDEWALK



HANDICAP RAMP

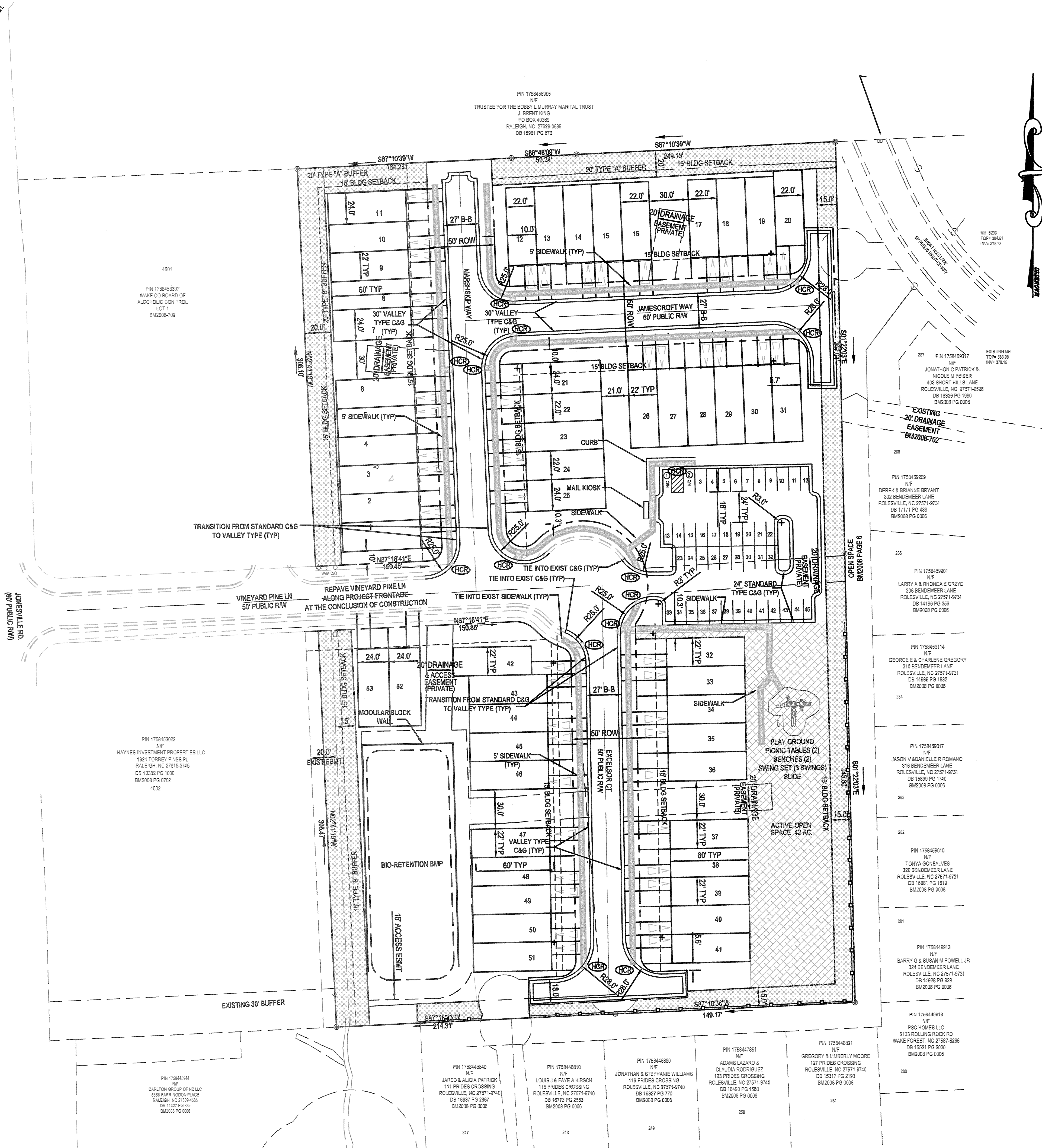


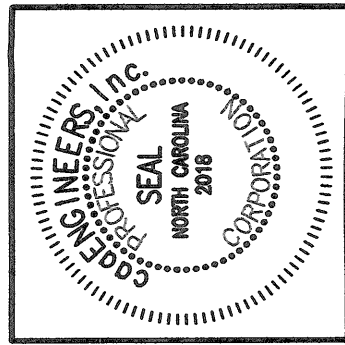
CAR SYMBOL

NOTES

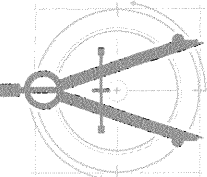
- SEE SHEET C1 FOR STANDARD NOTES.

GRAPHIC SCALE





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NOTES

- SEE SHEET C1 FOR STANDARD NOTES AND GRADING NOTES.

STORM DRAINAGE STRUCTURE SCHEDULE

STRUCTURE DATA								PIPE DATA					REMARKS	
Structure Number	Structure Type	Rim/OC Elevation	Invert In North	Invert In East	Invert In South	Invert In West	Invert Out	To	Pipe Length	Pipe Slope	Design Diameter	Pipe Material		
#		elev	elev	elev	elev	elev	elev		ft	%	in			
A1	NC DOT 840.14	377.50					374.55	A2	58.0	1.00%	18	RCP		
A2	NC DOT 840.02	380.50	374.20				374.00	A3	22.0	1.00%	18	RCP		
A3	NC DOT 840.02	380.50	373.77				371.80	A5	105.0	1.00%	18	RCP		
A4	NC DOT 840.02	378.10					373.00	A5	22.0	1.05%	15	RCP		
A5	NC DOT 840.02	378.10	372.77	370.74			370.54	A8	38.0	1.03%	24	RCP		
A6	NC DOT 840.14	375.50					372.98	A7	54.0	0.50%	18	RCP		
A7	NC DOT 840.02	377.20				372.72	372.52	A12	132.0	4.18%	18	RCP		
A8	NC DOT 840.02	377.10	370.14				368.94	A11	115.0	4.30%	24	RCP		
A9	NC DOT 840.02	375.50					369.55	A10	35.0	1.00%	15	RCP		
A10	NC DOT 840.14	375.00		369.50			369.00	A11	164.0	2.38%	18	RCP		
A11	NC DOT 840.02	375.20	365.00	366.00			369.20	A12	24.0	0.50%	24	RCP		
A12	NC DOT 840.02	375.10	367.00	364.11			363.91	A13	60.0	0.50%	24	RCP		
A13	NC DOT 840.31	373.00	363.61				363.41	A14	76.0	0.50%	24	RCP		
A14	NC DOT 840.14	369.80	363.03				362.83	A15	26.0	0.50%	24	RCP		
A15	FES						362.70	B1P			24	RCP	CLASS 1Rip Rcp Apron L=12', W= 6' - 14', T=2.25'	
B1	YARD INLET	373.81					368.13	B2	37.0	1.00%	15	RCP		
B2	NC DOT 840.02	372.86		368.56			368.36	B4	118.0	1.14%	18	RCP		
B3	NC DOT 840.14	373.50					368.86	B4	104.0	1.78%	15	RCP		
B4	NC DOT 840.02	370.30	367.00	367.00			366.80	B5	23.0	1.00%	18	RCP		
B5	NC DOT 840.02	370.30		365.57	365.57		366.37	B6	68.0	3.14%	24	RCP		
B6	NC DOT 840.14	369.50		364.20			364.00	B7	38.0	6.44%	24	RCP		
B7	FES						363.00	B1P		2.50%	24	RCP	CLASS 1Rip Rcp Apron L=12', W= 6' - 14', T=2.25'	
B8	NC DOT 840.02	371.80		368.38			368.18	B5	68.0	1.80%	15	RCP		
B9	NC DOT 840.02	371.75					368.60	B8	22.0	1.00%	15	RCP		
C1	NC DOT 840.14	377.80			370.80		370.60	**	60.0	1.00%	42	RCP	**Tie into existing 42" pipe	
C2	NC DOT 840.14	377.80					372.10		130.0	1.00%	24	RCP		
D1	RISER	384.50					391.00	D2	61.0	0.50%	18	RCP		
D2	FES						380.00						CLASS 1Rip Rcp Apron L=12', W= 4.5' - 13.5', T=2.25'	
EX1	EXISTING CURB INLET	373.72					368.97	EX2						
EX2	EXISTING CURB INLET	373.33					368.33	EX3						
EX3	EXISTING CURB INLET	372.81					367.64	EX4					Adjust rim as needed per proposed grading	
EX4	EXISTING CURB INLET	372.88					367.22	EX5					Adjust rim as needed per proposed grading	
EX5	EXISTING CURB INLET	374.47					364.30	EX6						
EX6	EXISTING JUNCTION BOX	368.69					362.38	OUTFALL			42"	RCP		

NOTE:

MODIFY STRUCTURES AS NEEDED TO ACCOMMODATE LARGE-DIAMETER PIPING, ALTERNATE FRAMES & GRATES, MULTIPLE PENETRATIONS, AND PIPE CONNECTION ANGLES.

RIM ELEVATIONS, AS NOTED ABOVE, REFER TO THE HIGHEST POINT OF THE STORM DRAINAGE STRUCTURE TOP.

PIPE LENGTHS SHOWN ARE APPROXIMATE. LENGTHS ARE MEASURED FROM THE CENTER OF DRAINAGE STRUCTURES, AND WHERE APPLICABLE, INCLUDE THE TOTAL LENGTH OF THE FLARED END SECTION.

PERMANENT DRAINAGE SWALE SCHEDULE

Swale Number	Approx. Length (ft)	Cross-Section				Bottom Slope (%)	Drainage Area (ac.)	Runoff C-Value	2-Year Rainfall				10-Year Rainfall				Swale Liner		
		Left Side (X:1)	Bottom (ft)	Right Side (X:1)	Min. Depth (ft)				Q _s (cfs)	Flow Depth (ft)	Flow Velocity (fps)	Shear Stress (psf)	Q ₁₀ (cfs)	Flow Depth (ft)	Flow Velocity (fps)	Shear Stress (psf)	Specification*	Service Duration	Installed Width* (ft)
1	64	2	--	2	2.0	1.00	0.12	0.60	0.25	1.44	6.82	1.80	0.36	1.82	5.46	2.27	EroNet P300	Permanent	15.3
2	146	2	--	2	1.0	1.00	0.05	0.60	0.10	0.36	2.71	0.45	0.15	0.46	2.17	0.57	BioNet S75BN	Temporary	6.7
2	58	2	--	2	1.0	1.00	0.05	0.60	0.09	0.36	2.71	0.45	0.14	0.46	2.17	0.57	BioNet S75BN	Temporary	6.7
3	72	2	--	2	1.0	1.00	0.40	0.60	0.83	0.36	2.71	0.45	1.21	0.46	2.17	0.57	BioNet S75BN	Temporary	6.7
4	72	2	--	2	1.0	1.50	0.09	0.60	0.19	0.36	2.71	0.45	0.27	0.46	2.17	0.57	BioNet S75BN	Temporary	6.7
5	200	2	--	2	1.0	1.00	0.16	0.60	0.33	0.36	2.71	0.45	0.49	0.46	2.17	0.57	BioNet S75BN	Temporary	6.7
6	118	2	--	2	1.0	1.00	0.24	0.60	0.50	0.36	2.71	0.45	0.73	0.46	2.17	0.57	BioNet S75BN	Temporary	6.7
7	91	2	--	2	1.0	3.20	0.25	0.60	0.52	0.36	2.71	0.45	0.76	0.46	2.17	0.57	BioNet S75BN	Temporary	6.7

GRAPHIC SCALE

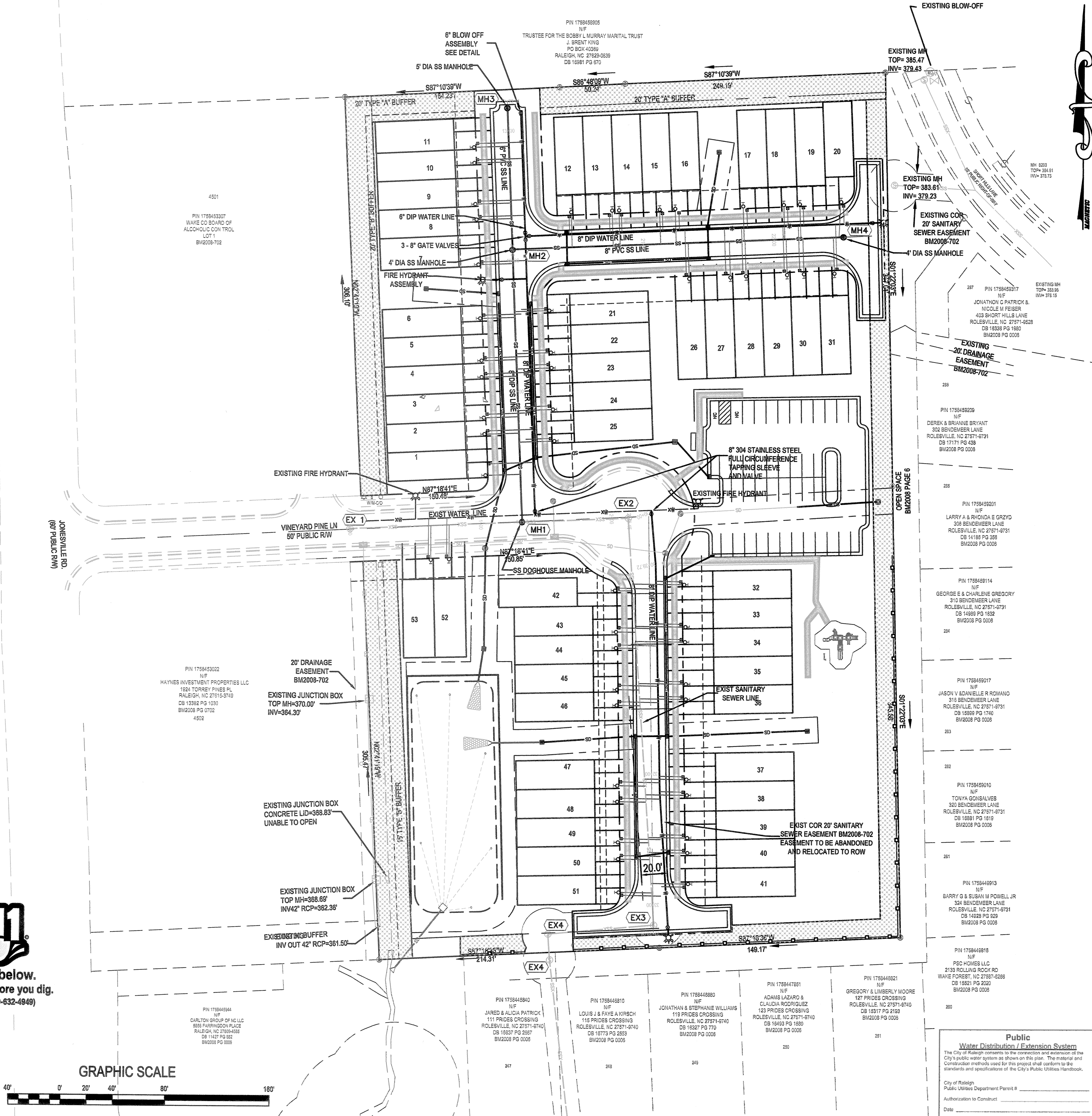


Job No. 5501

Dwg No.

C4

Grading \ Storm Drainage
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina



CITY OF RALEIGH UTILITY NOTES:

- ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORP U/D HANDBOOK, CURRENT EDITION)
2. UTILITY SEPARATION REQUIREMENTS:
- a) 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.
- b) WHEN INSTALLING WATER & RCP 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
- c) WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASEMENT EXTENDED 10" ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS
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- e) MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS, MAINTAIN 24" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 6" MIN. CLEARANCE PER CORP/CDP DETAILS W-41 & S-49
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NOTES

- SEE SHEET C1 FOR STANDARD NOTES

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PUBLIC UTILITIES _____

STORMWATER _____

PLANNING/ZONING _____

FIRE _____

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SITE ACCESSIBILITY _____

<p align="center">Public <u>Sewer Collection / Extension System</u></p> <p>The City of Raleigh consents to the connection and extension of the City's public sewer system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p>	
<p>City of Raleigh Public Utilities Department Permit # _____</p>	<p>_____</p>
<p>Authorization to Construct _____</p>	<p>_____</p>
<p>Date _____</p>	<p>_____</p>

ATTENTION CONTRACTORS

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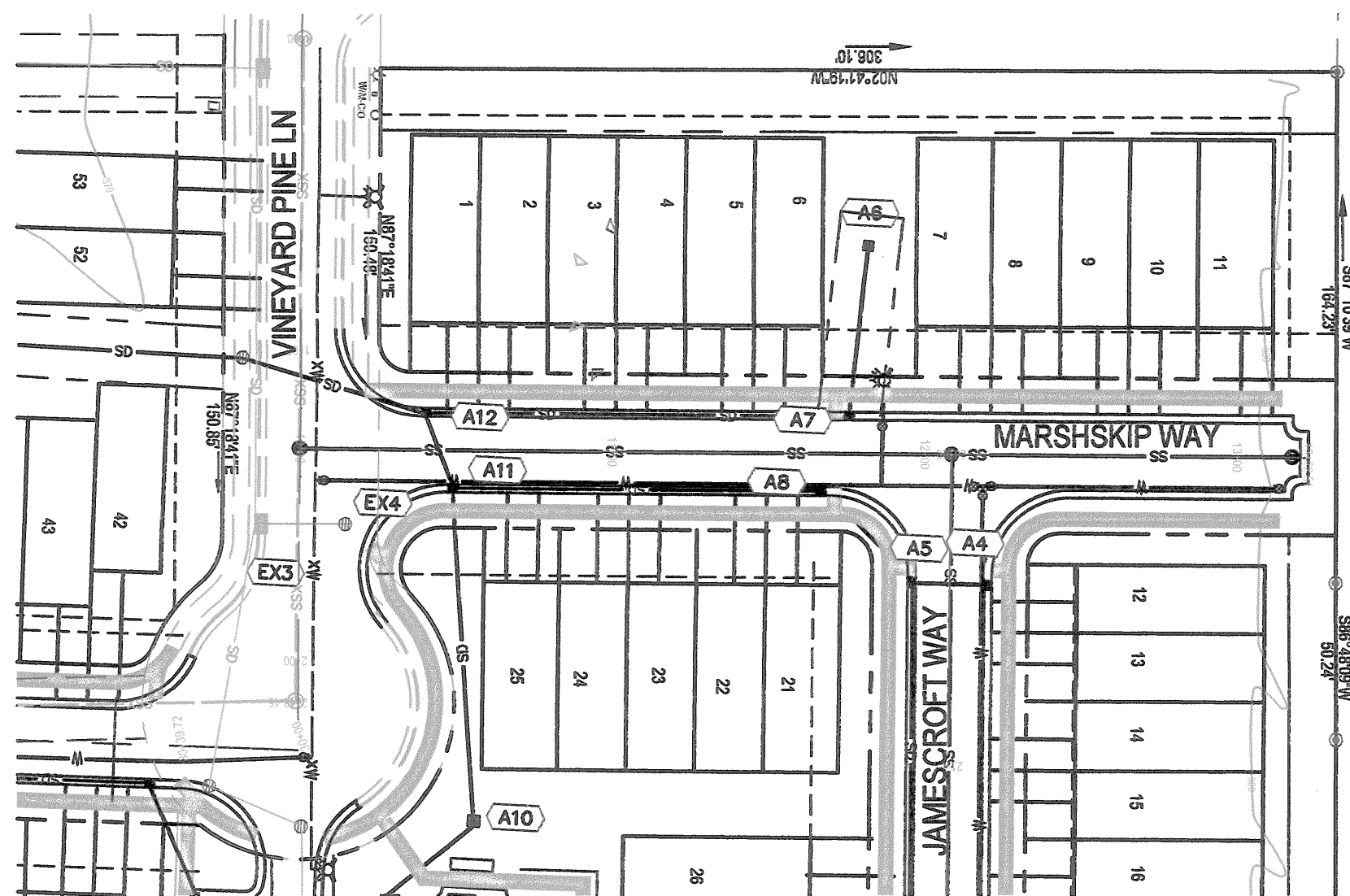
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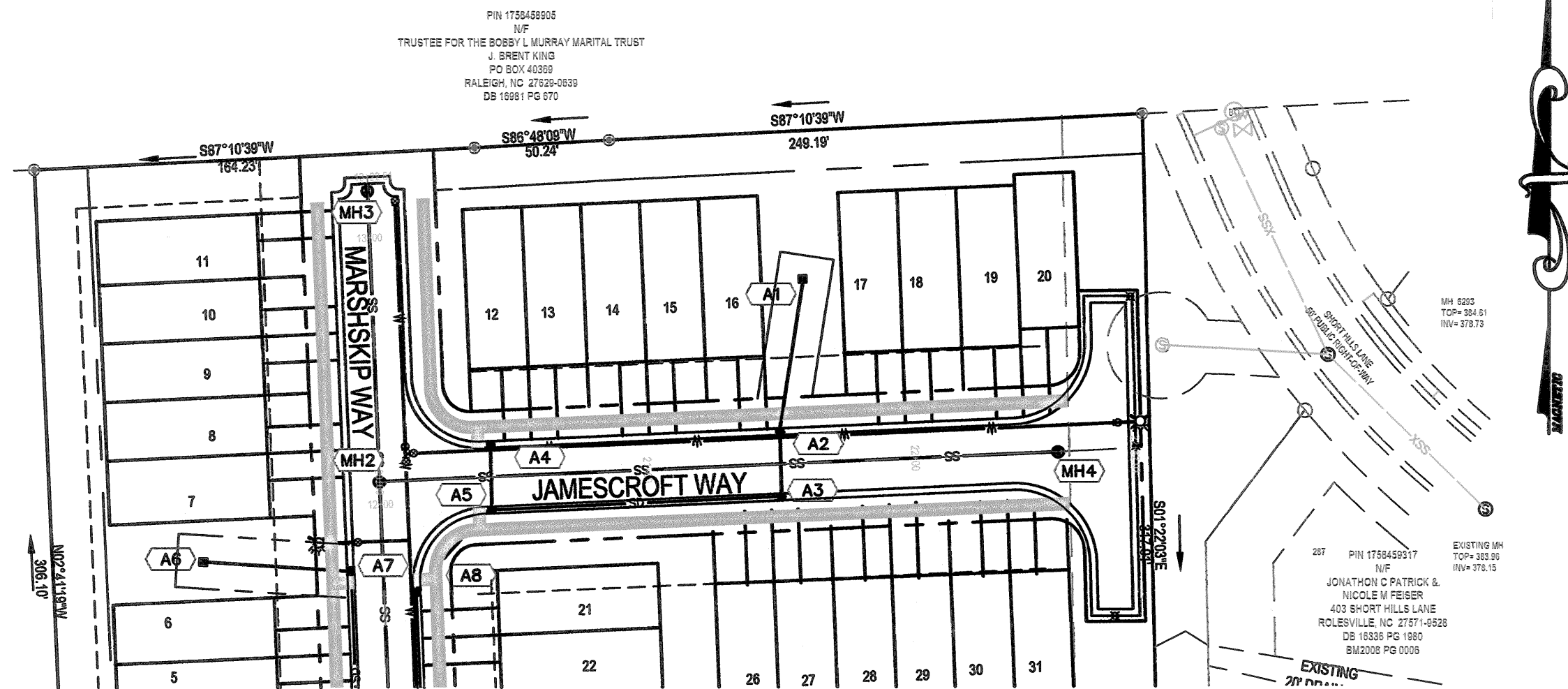


Know what's below.
Call before you dig.
(Or call: 1-800-632-4949)

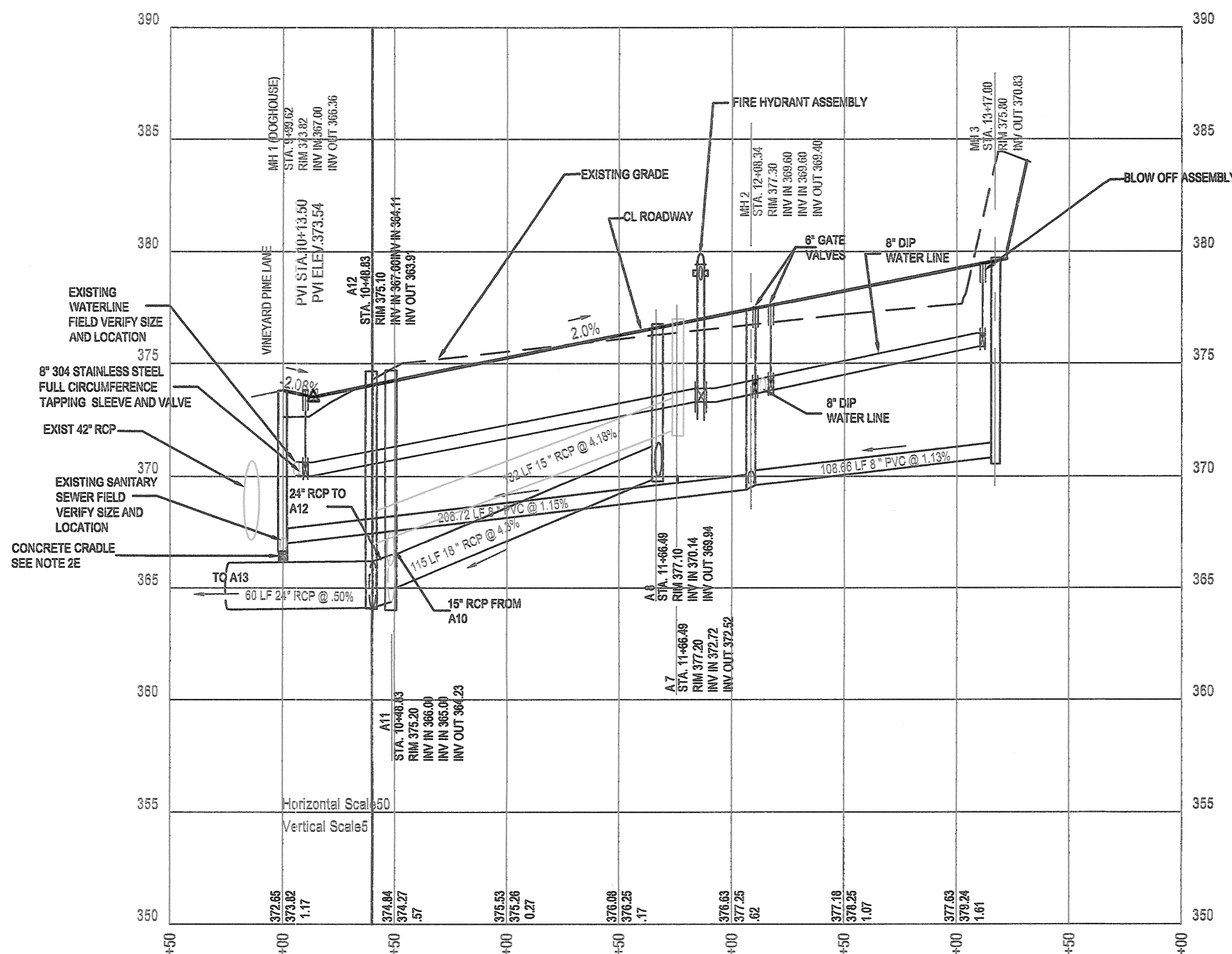




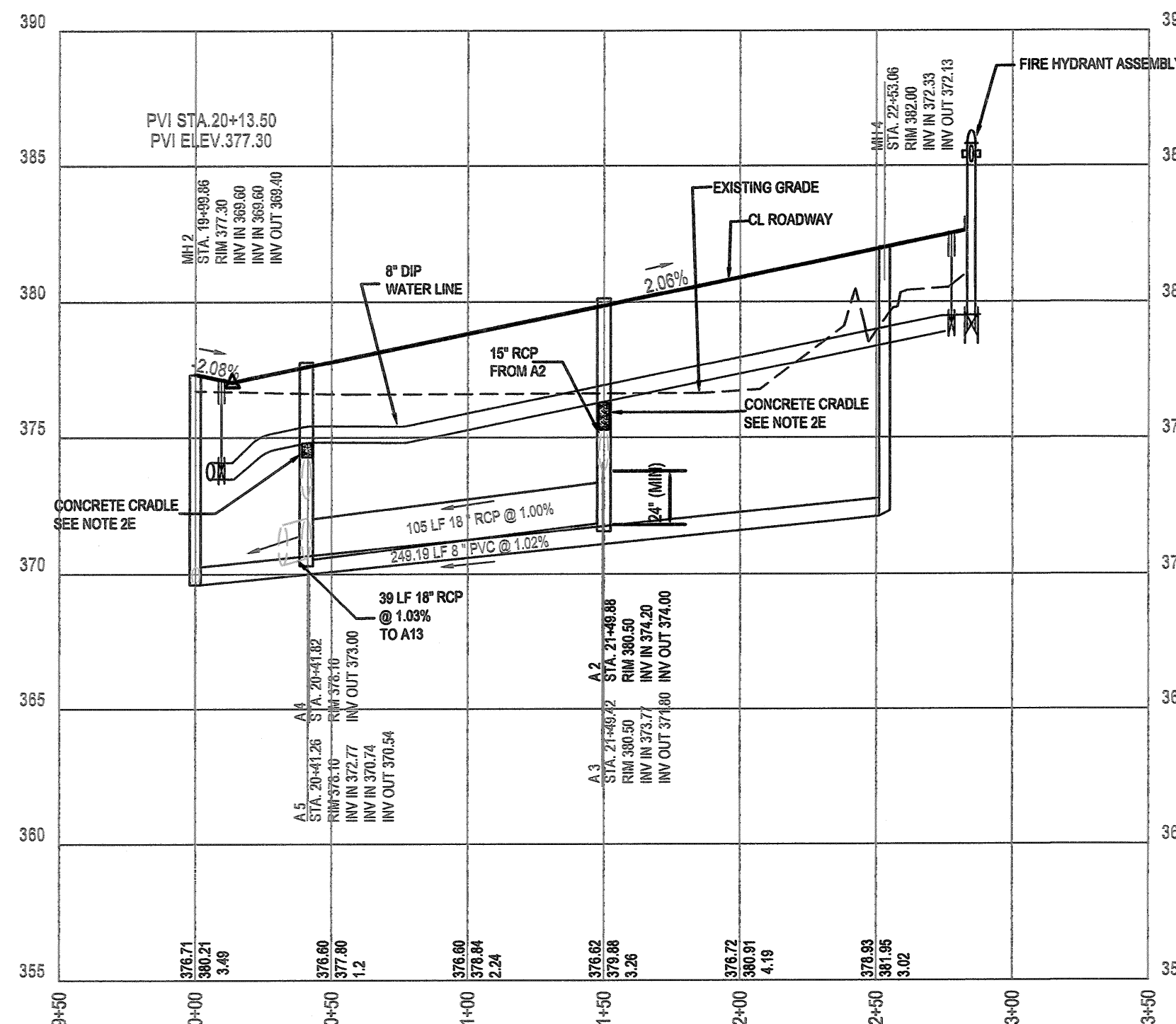
PLAN VIEW - MARSHSKIP WAY



PLAN VIEW - JAMESCROFT WAY



PROFILE - MARSHSKIP WAY



PROFILE - JAMESCROFT WAY

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Know what's below.
Call before you dig.
(Or call: 1-800-632-4949)

GRAPHIC SCALE
1" = 50' (H)
1" = 5' (V)



Public Water Distribution / Extension System

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City of Raleigh
Public Utilities Department Permit # _____
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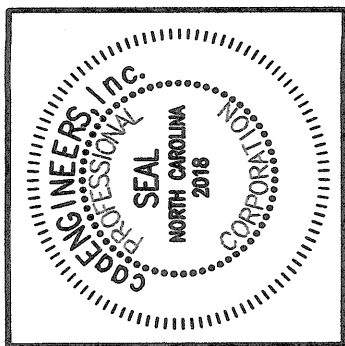
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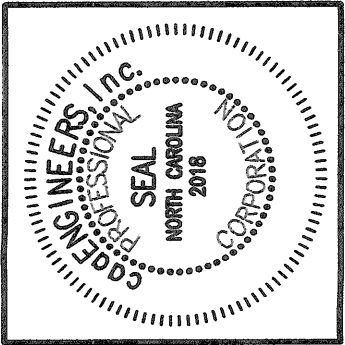
caaENGINEERS, Inc.
McIntyre, Gottle, Crowley
PROFESSIONAL ENGINEERS
123 Hargett Lane Drive, Wake Forest, North Carolina 27687
48523 Hargett Lane, Wake Forest, North Carolina 27687
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NO.	DATE	REVISION DESCRIPTION	BY
1	9-13-2018	Revised per Raleigh, COR (Water Co. Review)	KFG
2	Date	Comment	By
3	Date	Comment	By
4	Date	Comment	By
5	Date	Comment	By
6	Date	Comment	By
7	Date	Comment	By
8	Date	Comment	By



Plan and Profile - Marshskip and Jamescroft
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina

Job No. 5501
Dwg No. C7



caaENGINEERS, Inc.
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1233 Heritage Lane Drive, Wake Forest, North Carolina 27787
4852B Wilby Hill Drive, Durham, North Carolina 27609
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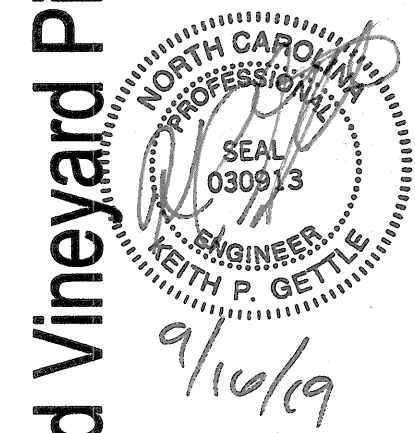
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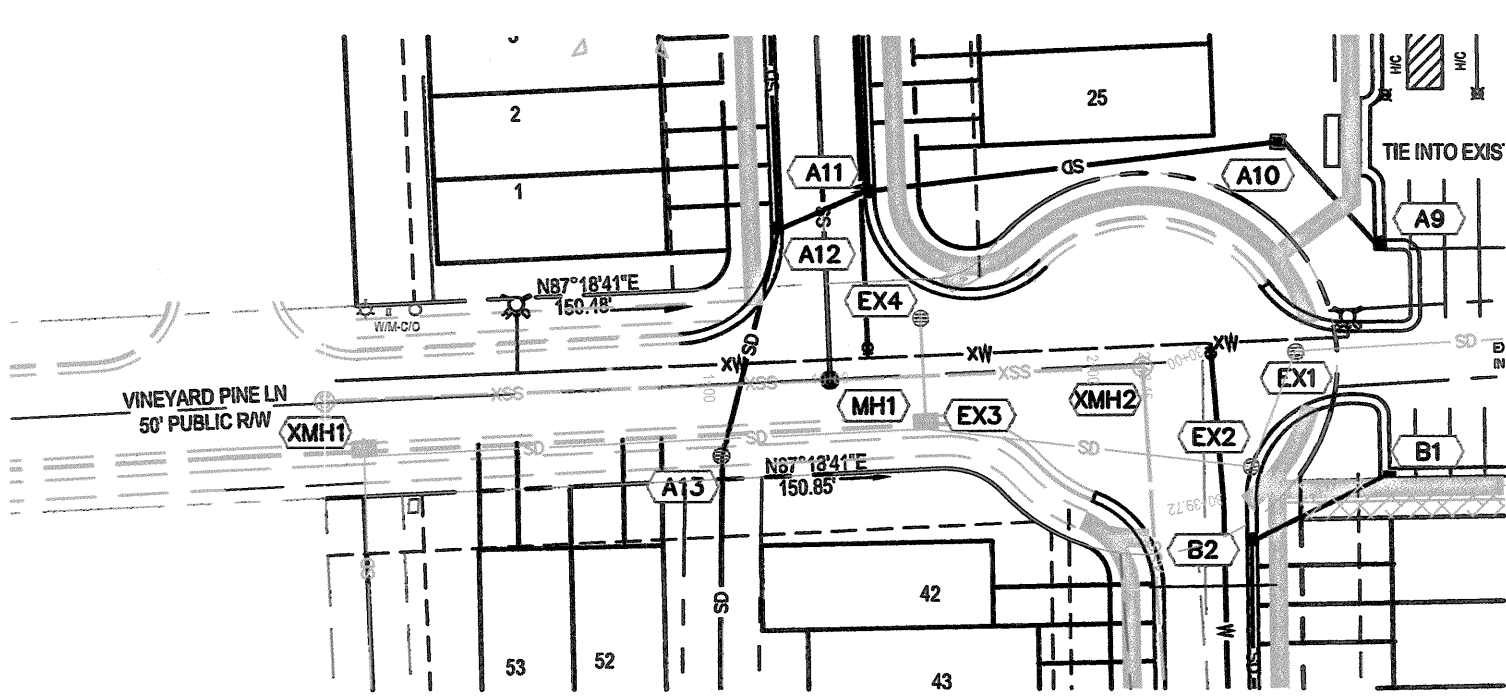
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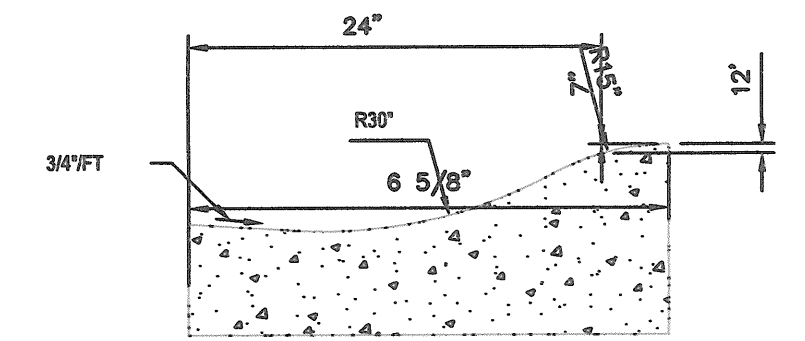
SITE ACCESSIBILITY _____

Plan and Profile - Excelsor and Vineyard Pine
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina



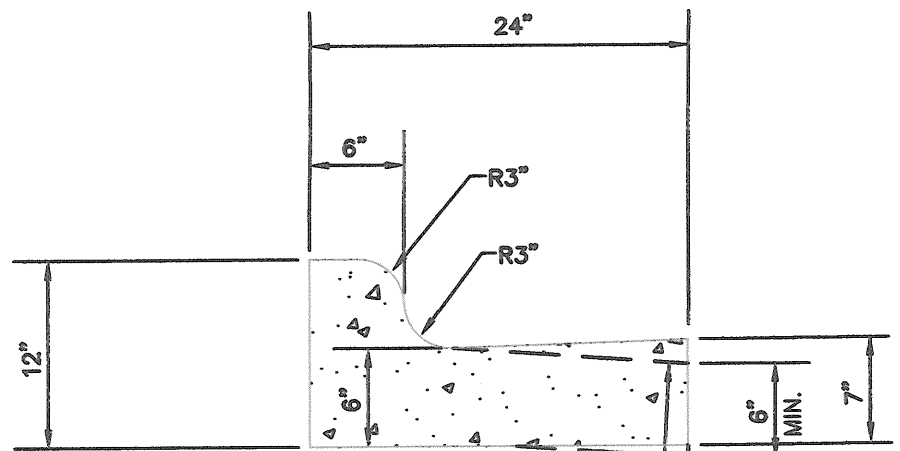
Job No. 5501
Dwg No. C 8





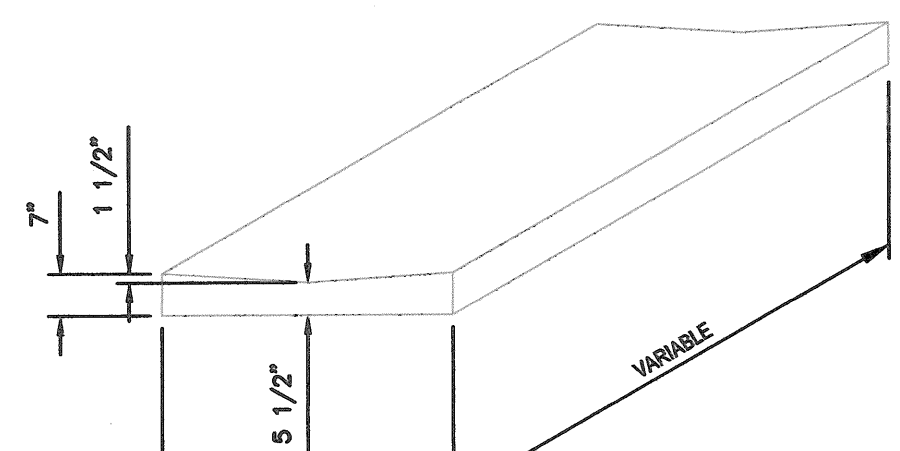
24" ROLLED CURB & GUTTER DETAIL

NTS



STANDARD 24" CURB SECTION

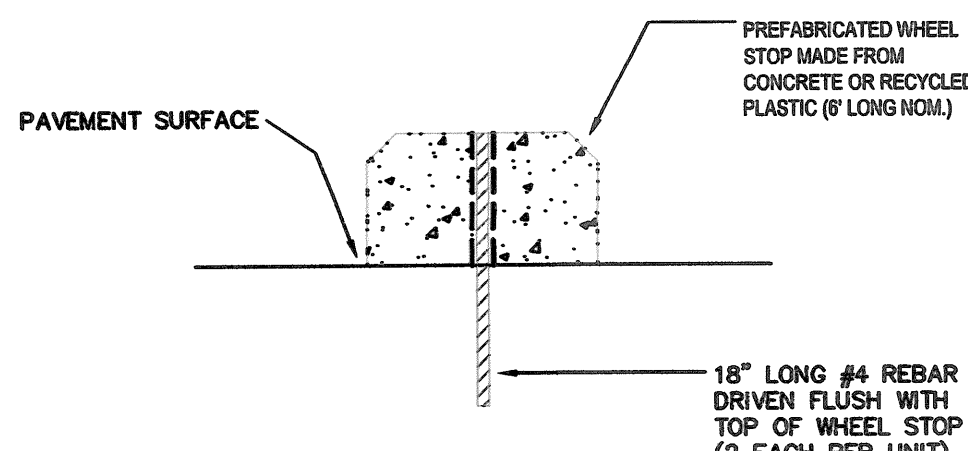
NTS



NOTES:
1. MINIMUM STRENGTH 3000 LBS. CONC. NON-REINFORCED, AIR ENTRAINED.
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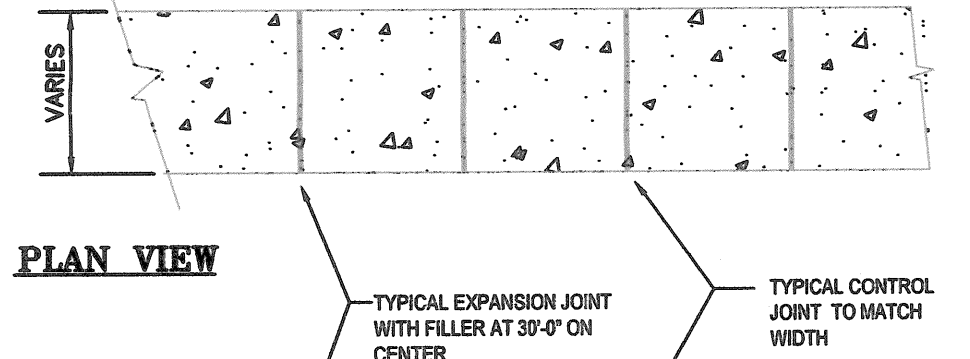
CONCRETE VALLEY GUTTER

NTS



WHEEL STOP

NTS

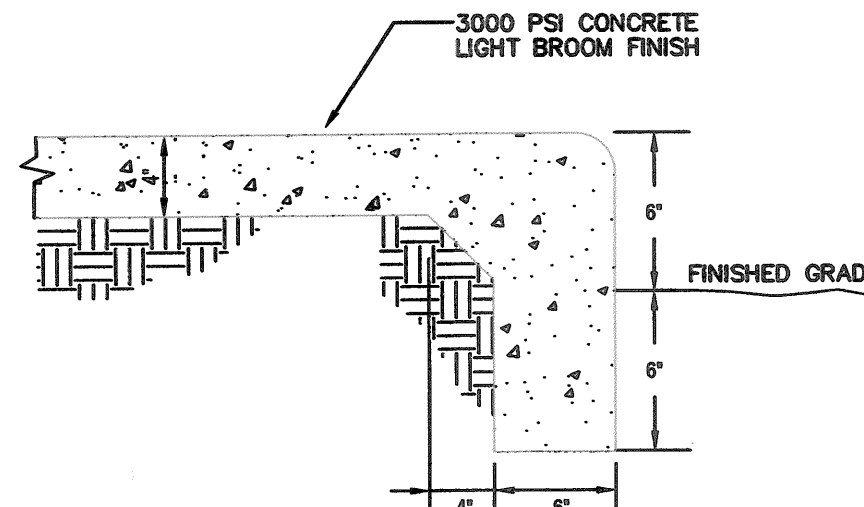


PLAN VIEW

SECTION VIEW

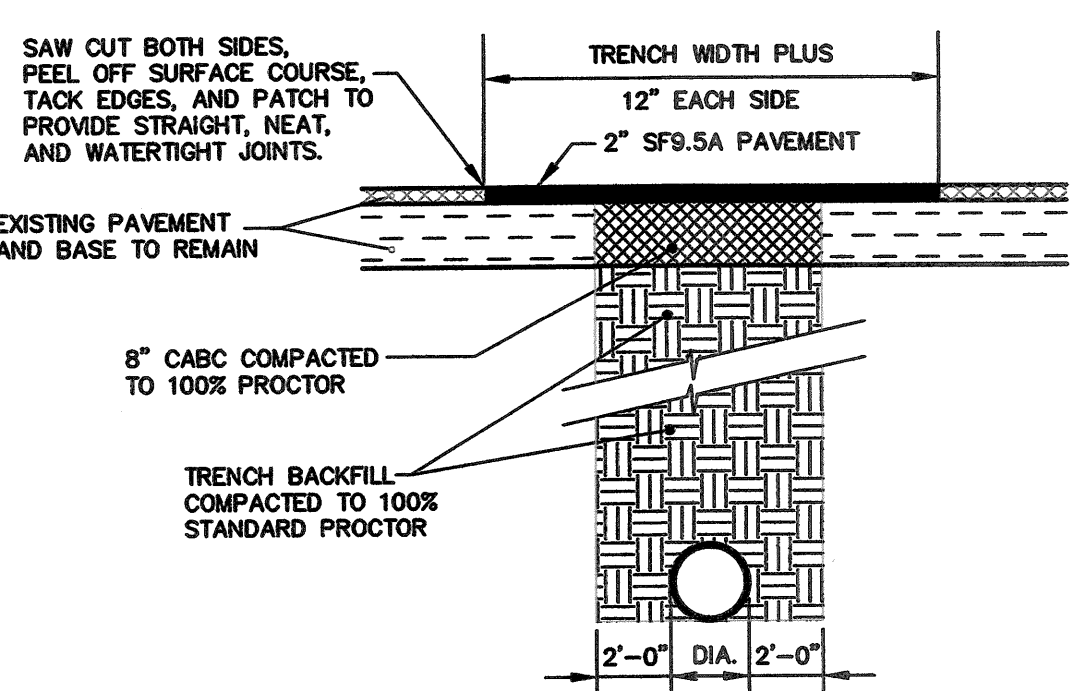
CONCRETE WALK

NTS



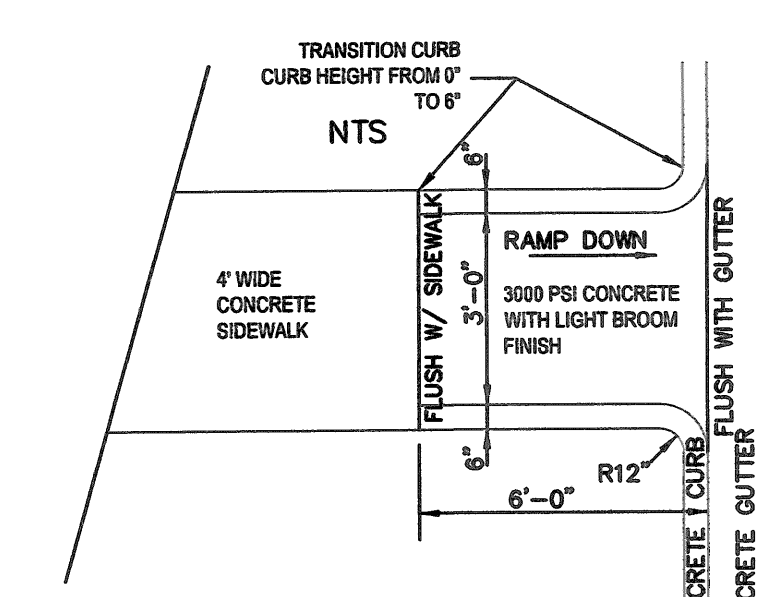
TURNDOWN SIDEWALK

NTS



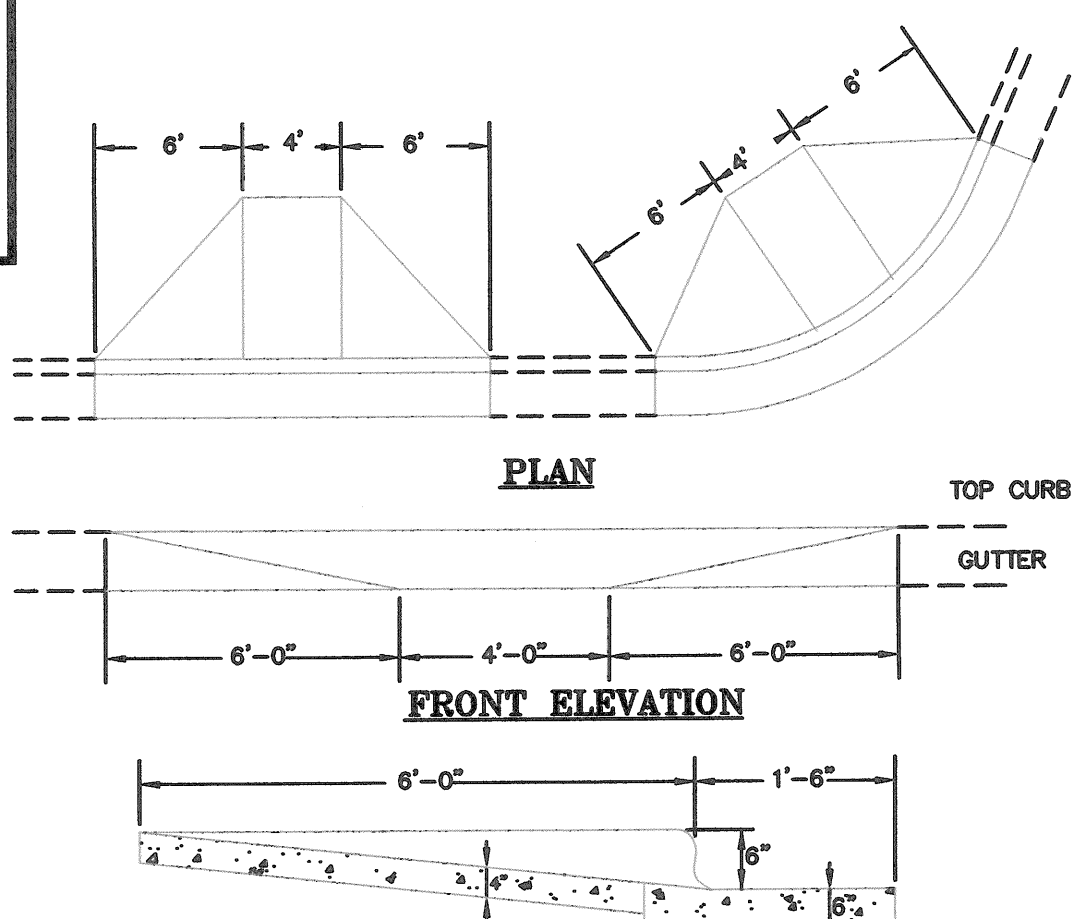
PAVEMENT CUT/TRENCH DETAIL

NTS



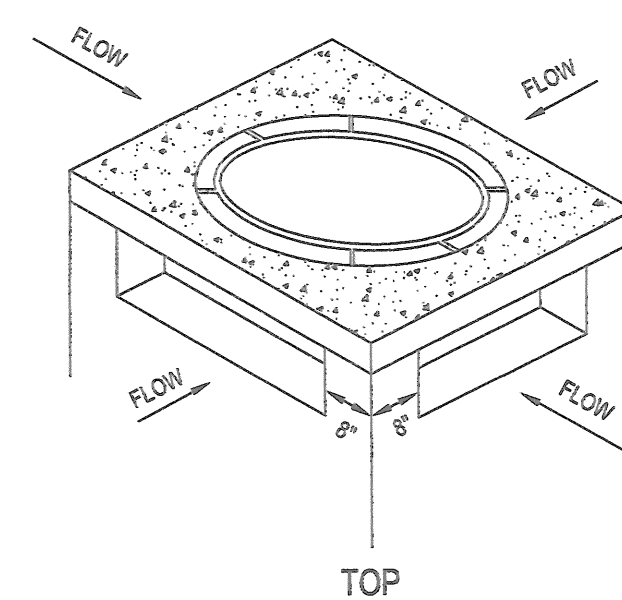
TYPE II A HANDICAP RAMP

NTS



HANDICAP RAMP CURB CUT (TYPE I)

NTS

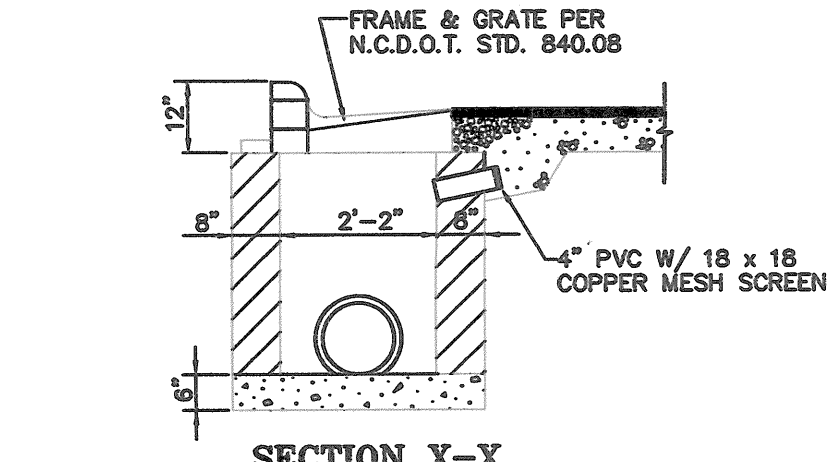


YARD INLET DETAIL

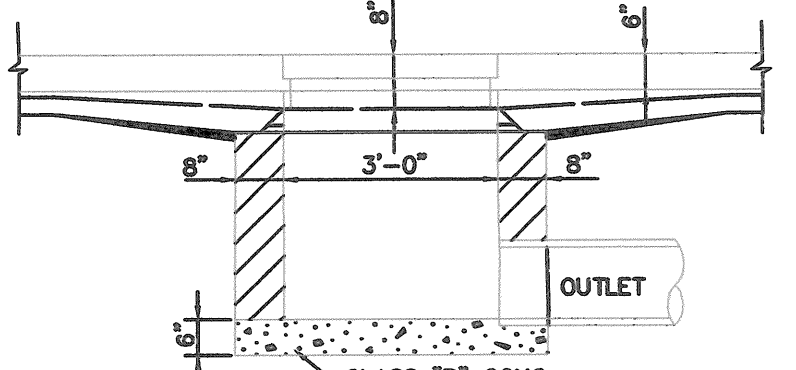
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NOTES

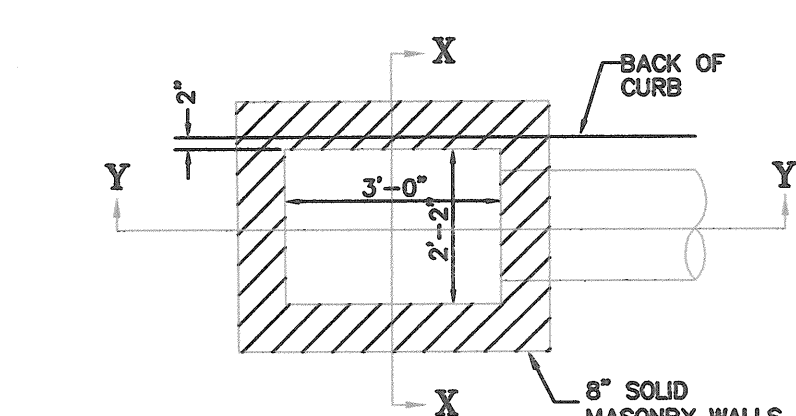
1. SEE SHEET C1 FOR STANDARD NOTES.



SECTION X-X

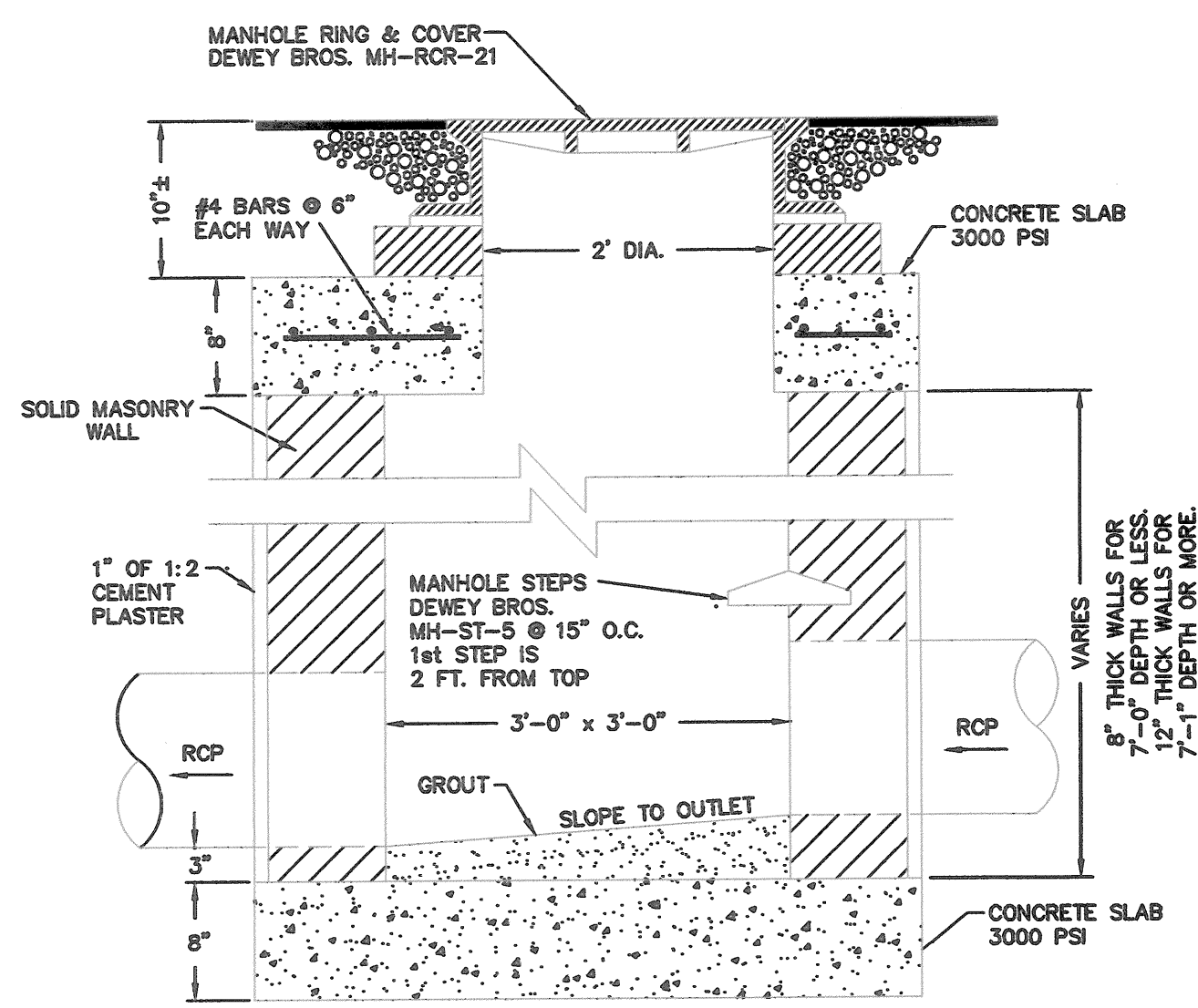


SECTION Y-Y



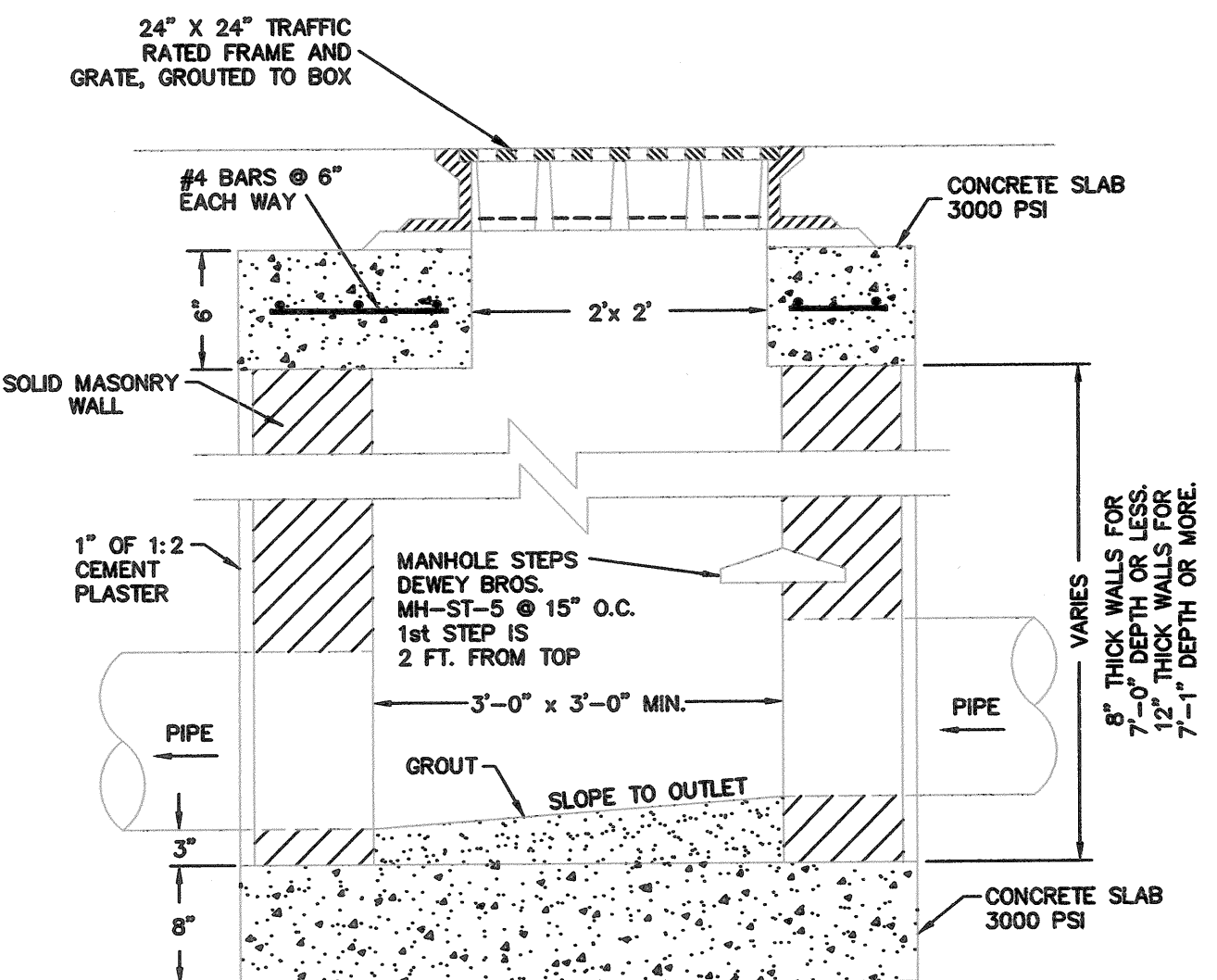
N.C.D.O.T. CURB INLET

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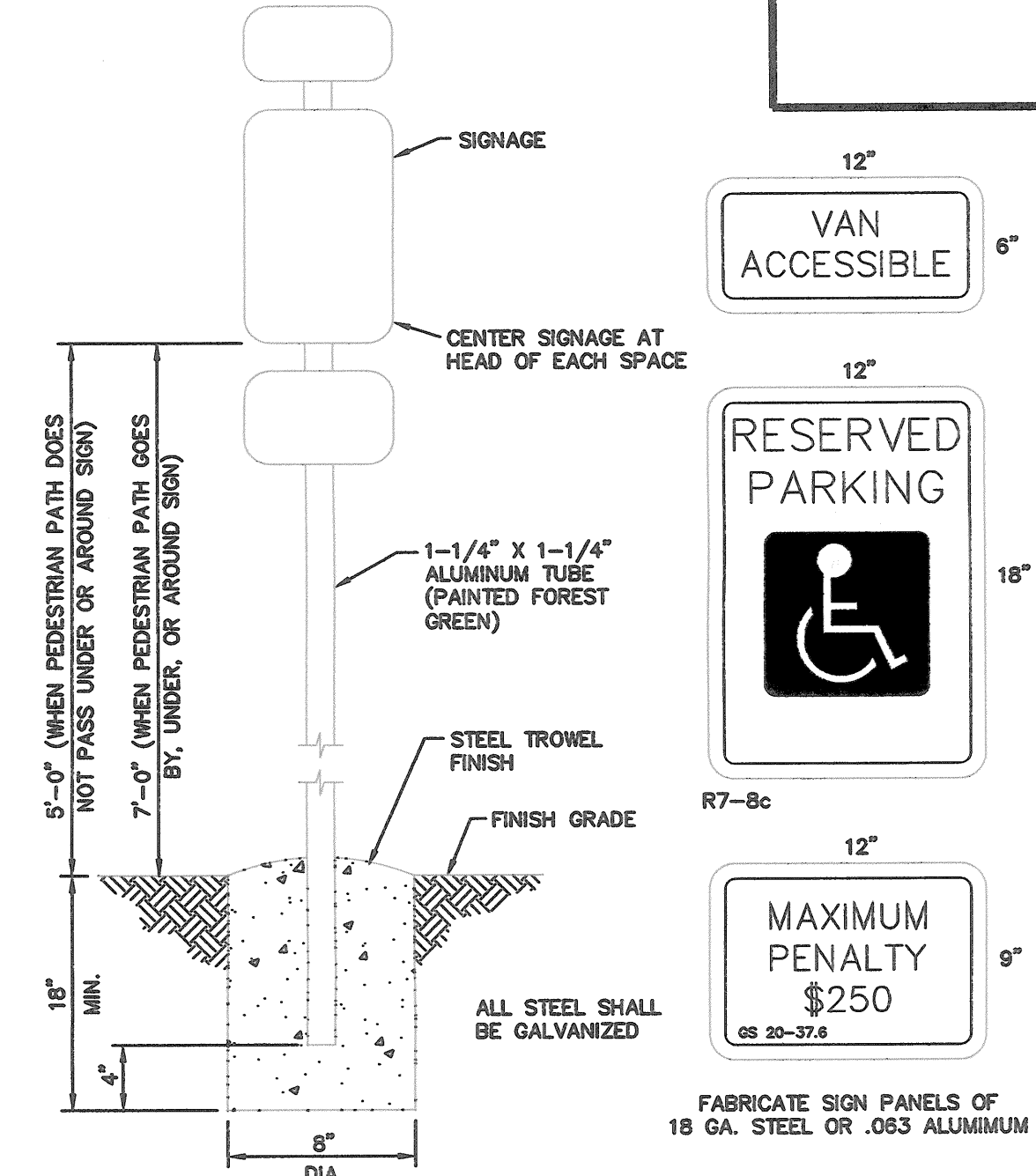
JUNCTION BOX DETAIL

NTS



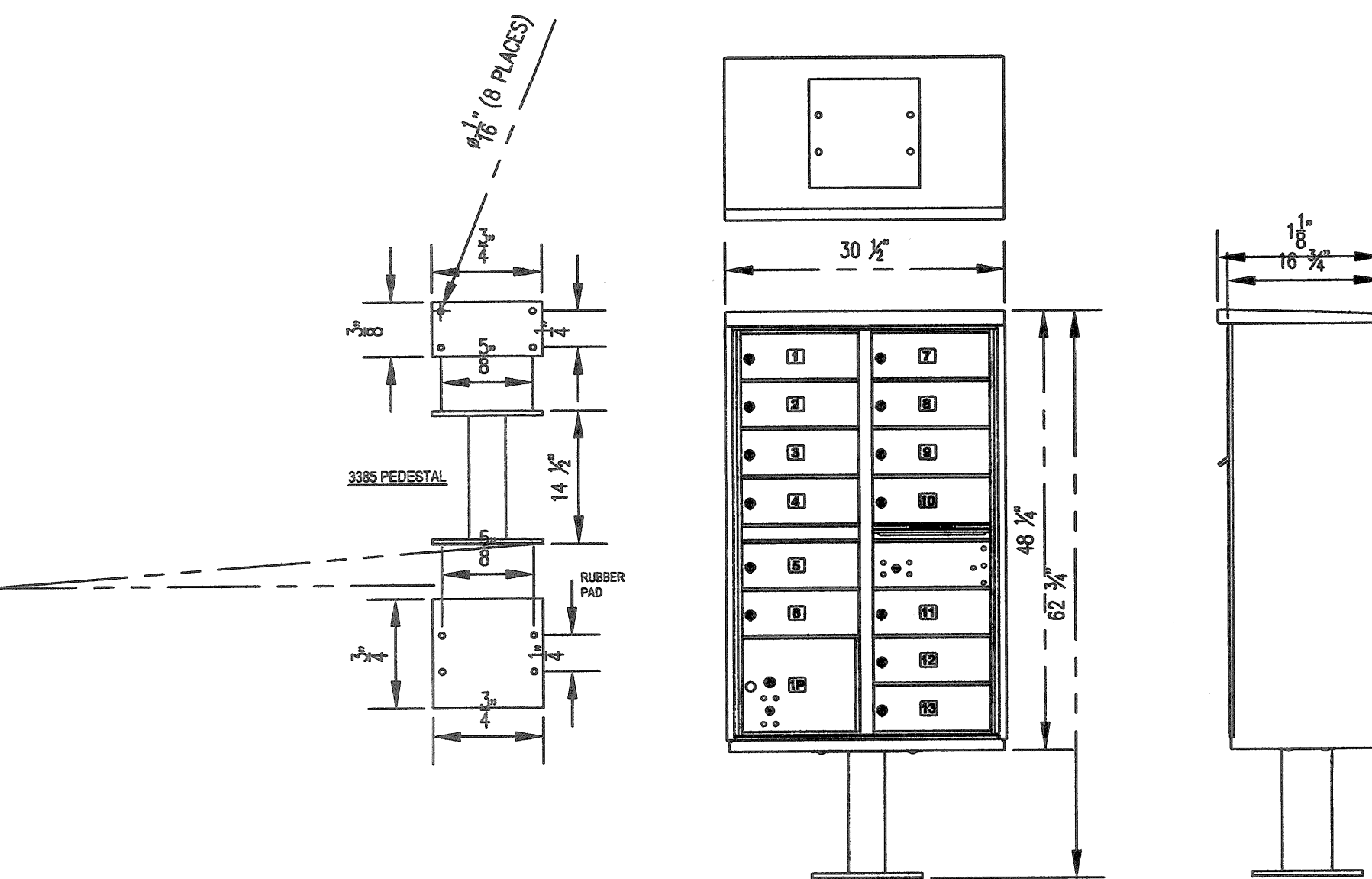
CATCH BASIN

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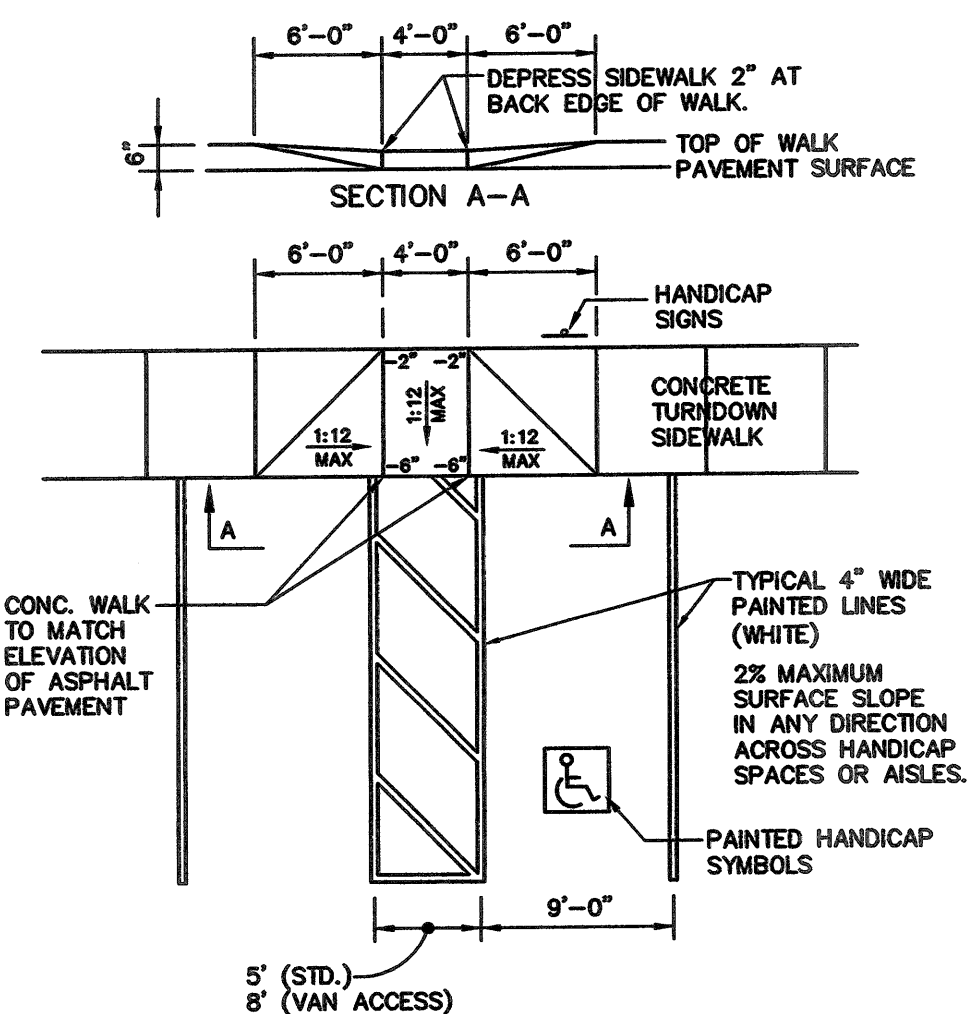
DETAIL HANDICAP SIGNAGE

NTS



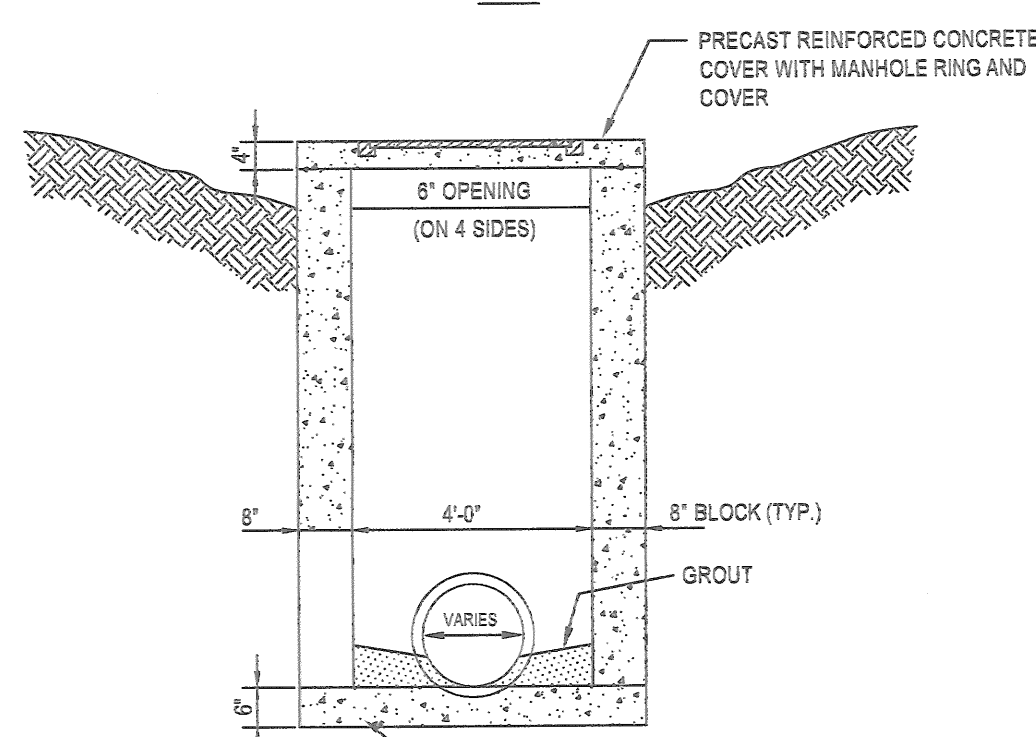
MAIL BOX KIOSK

NTS



HANDICAP PARKING AND RAMP

NTS

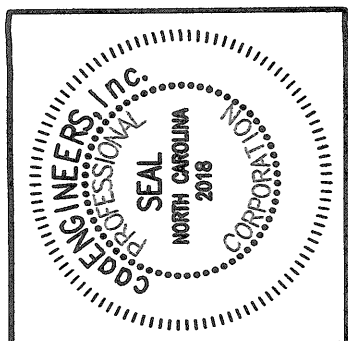


YARD INLET DETAIL

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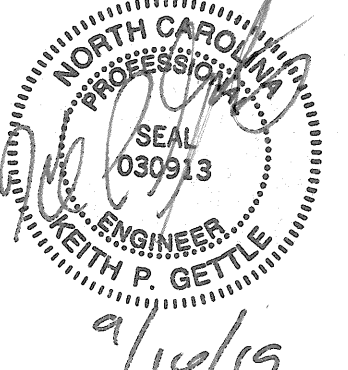
NOTES

1. SEE SHEET C1 FOR STANDARD NOTES.



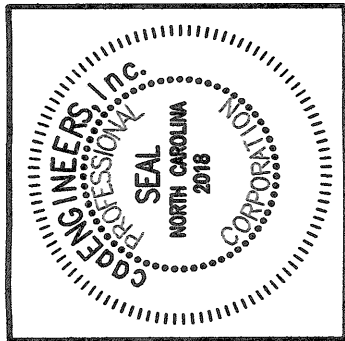
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McIntyre, Gettle, Crowley
PROFESSIONAL ENGINEERS
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4023 Windy Hill Drive, Raleigh, North Carolina 27605
(919) 825-5755
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NO.	DATE	REVISION DESCRIPTION	BY
1	8-13-2019	Revised per Raleigh, CCR, Wake Co. Review	PGC
2	Date	Comment	By
3	Date	Comment	By
4	Date	Comment	By
5	Date	Comment	By
6	Date	Comment	By
7	Date	Comment	By
8	Date	Comment	By

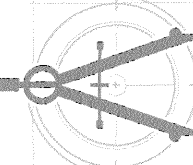


Site and Stormwater Details
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina

Job No. 5501
Dwg No. D1



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Stormwater Details
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina

Job No. 5501
Dwg No. D2

BIORETENTION GENERAL NOTES:

OUTLET STRUCTURE AND PIPING

- THE RISER STRUCTURE SHALL CONSIST OF PRECAST CONCRETE BASE AND RISER SECTIONS OF THE TYPE AND DIMENSIONS SHOWN. SQUARE OR RECTANGULAR SECTIONS SHALL BE SOLID-WALL CATCH BASIN TYPE STRUCTURES, AND APPROVED FOR USE BY NCDOT. ALL RISER JOINTS SHALL BE SEALED WATERTIGHT USING FLEXIBLE BUTYL RUBBER JOINT MATERIAL, RUBBER GASKETS, OR OTHER SUITABLE MATERIAL. ALL PIPE CONNECTIONS TO THE RISER SHALL BE MADE WITH A WATER TIGHT FLEXIBLE CONNECTOR BOOT PER ASTM C923.

CONCRETE

- CONCRETE WORK SHALL CONFORM TO PROJECT CONCRETE SPECIFICATIONS.

FLOWABLE FILL

- FLOWABLE FILL SHALL CONSIST OF A MIXTURE OF PORTLAND CEMENT, AGGREGATE NOT GREATER THAN 3/8" INCH DIAMETER, WATER, AND OTHER APPROVED COMPONENTS, WITH A MINIMUM PH OF 4.0, AND A 28-DAY COMPRESSIVE STRENGTH OF AT LEAST 150 PSI. THE MIXTURE SHALL BE SUFFICIENTLY FLOWABLE TO BE SELF-LEVELING, FILLING ALL VOIDS UNDER THE PIPE AND PIPE HAUNCHES WITHOUT REQUIRING VIBRATION.

FINAL SURFACE STABILIZATION

- STABILIZE ALL SURFACES OF THE EMBANKMENT, SPILLWAY, SLOPES, SPOIL AND BORROW AREAS THAT ARE NOT COVERED BY OTHER SPECIFIED MATERIALS WITH GRASS IN ACCORDANCE WITH PROJECT SPECIFICATIONS.

BIORETENTION NOTES:

- ALL DRAINAGE AREAS TO A BIORETENTION FACILITY ARE TO BE STABILIZED PRIOR TO INSTALLATION OF AMENDED SOILS, MULCH OR PLANTINGS.

BIORETENTION PLANTING SOIL MEDIA SPECIFICATIONS:

- THE PLANTING SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN ONE-HALF INCH IN DIAMETER. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, JOHNSON GRASS, QUACK GRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADA THISTLE, OR OTHER NOXIOUS WEEDS.
- PLANTING MIX FOR BIORETENTION CELL - UNIFORM SOIL MIXTURE FREE OF STUMPS, STONES, OR LARGE ROOTS, CONTAINING THE FOLLOWING TYPES AND RATIOS (BY WEIGHT) OF COMPONENTS:
 - 85-88% SAND (ASTM C-33)
 - 8%-10% FINE SOIL MATERIAL (INCLUDES BOTH SILT OR CLAY)
 - 3%-5% ORGANICS / PINE BARK MULCH
- SOIL SHALL HAVE A HYDRAULIC CONDUCTIVITY OF BETWEEN 1 IN/HR AND 6 IN/HR, WITH A 2 IN/HR RATE BEING OPTIMAL.

- PHOSPHOROUS INDEX SHALL BE BETWEEN 10 AND 30
- GRADING - CLEARING, STRIPPING, EXCAVATION, FILLING, TRENCHING, BACKFILLING, COMPACTION AND FINE-GRADING WORK SHALL BE IN ACCORDANCE WITH APPLICABLE SECTIONS OF PROJECT SPECIFICATIONS.

- UNDERDRAIN GRAVEL - CLEAN, HARD, ANGULAR GRAVEL CONFORMING TO NCDOT DESIGNATION # 57 OR # 8 AS APPROPRIATE.

- GEOFILTER FABRIC - NON-WOVEN, NEEDLE-PUNCHED GEOTEXTILE WITH 135 LBS. PUNCTURE STRENGTH (ASTM D-4833); 220 LBS. TENSILE STRENGTH (ASTM D-4832); AND APPARENT OPENING SIZE OF U.S. STD. #80 SIEVE (ASTM D-4751).

- UNDERDRAIN PIPING - NOMINAL 4" DIAMETER SCHEDULE 40 PVC, WITH 3/8" DIAMETER PERFORATIONS SPACED EQUALLY AROUND THE FULL PIPE PERIMETER. CLEANOUT PIPE AND FITTINGS SHALL BE SOLVENT-WELDED SCHEDULE 40 PVC PER THE DETAIL SHOWN AND EXTEND AT LEAST 8" ABOVE THE MULCH LAYER. MINIMUM 1 CLEANOUT PER 1000 SQUARE FEET OF SURFACE AREA OF THE DEVICE.

NOTES

- SEE SHEET C1 FOR STANDARD NOTES.

CONSTRUCTION SPECIFICATIONS
STORMWATER MANAGEMENT IMPOUNDMENT

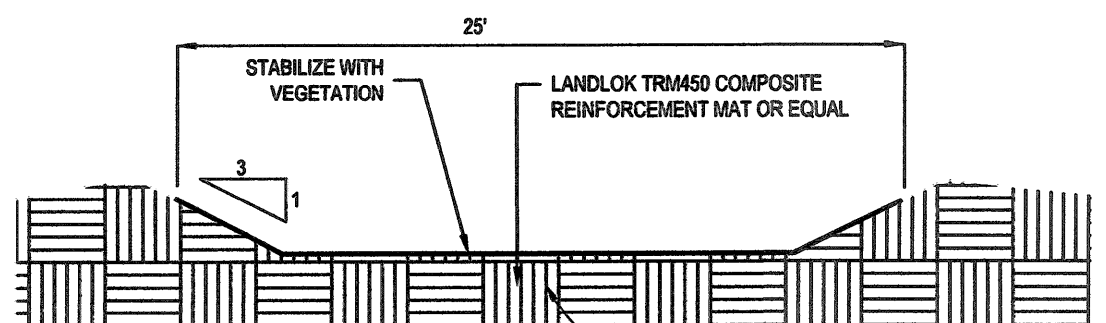
APPLICABILITY
THIS SECTION OF SPECIFICATIONS APPLIES TO ALL WORK FOR THE STORMWATER MANAGEMENT IMPOUNDMENT (BIORETENTION CELLS) AND ASSOCIATED FEATURES, UNLESS MORE SPECIFIC REQUIREMENTS ARE SHOWN FOR CERTAIN ELEMENTS, IN WHICH CASE THE MORE SPECIFIC REQUIREMENTS SHALL APPLY.

PRE-CONSTRUCTION COORDINATION
MEETINGS, SCHEDULE AND HOLD A PRE-CONSTRUCTION MEETING WITH THE ENGINEER AND OTHERS, SPECIFICALLY FOR THE STORMWATER IMPOUNDMENT WORK, PRIOR TO BEGINNING ANY WORK IN THE IMPOUNDMENT AREA.

SUBMITTALS: SUBMIT THE FOLLOWING TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION:
1. PROPOSED CONSTRUCTION PLAN (SEE SEQUENCING REQUIREMENTS)
2. SPECS AND LITERATURE FOR ALL MANUFACTURED PRODUCTS
3. GRADATION ANALYSIS FOR MEDIA MIXTURE IN BIORETENTION CELLS
4. CONCRETE AND FLOWABLE FILL MIX ANALYSIS
5. NAME AND QUALIFICATIONS FOR DETENTION PIPE INSTALLER

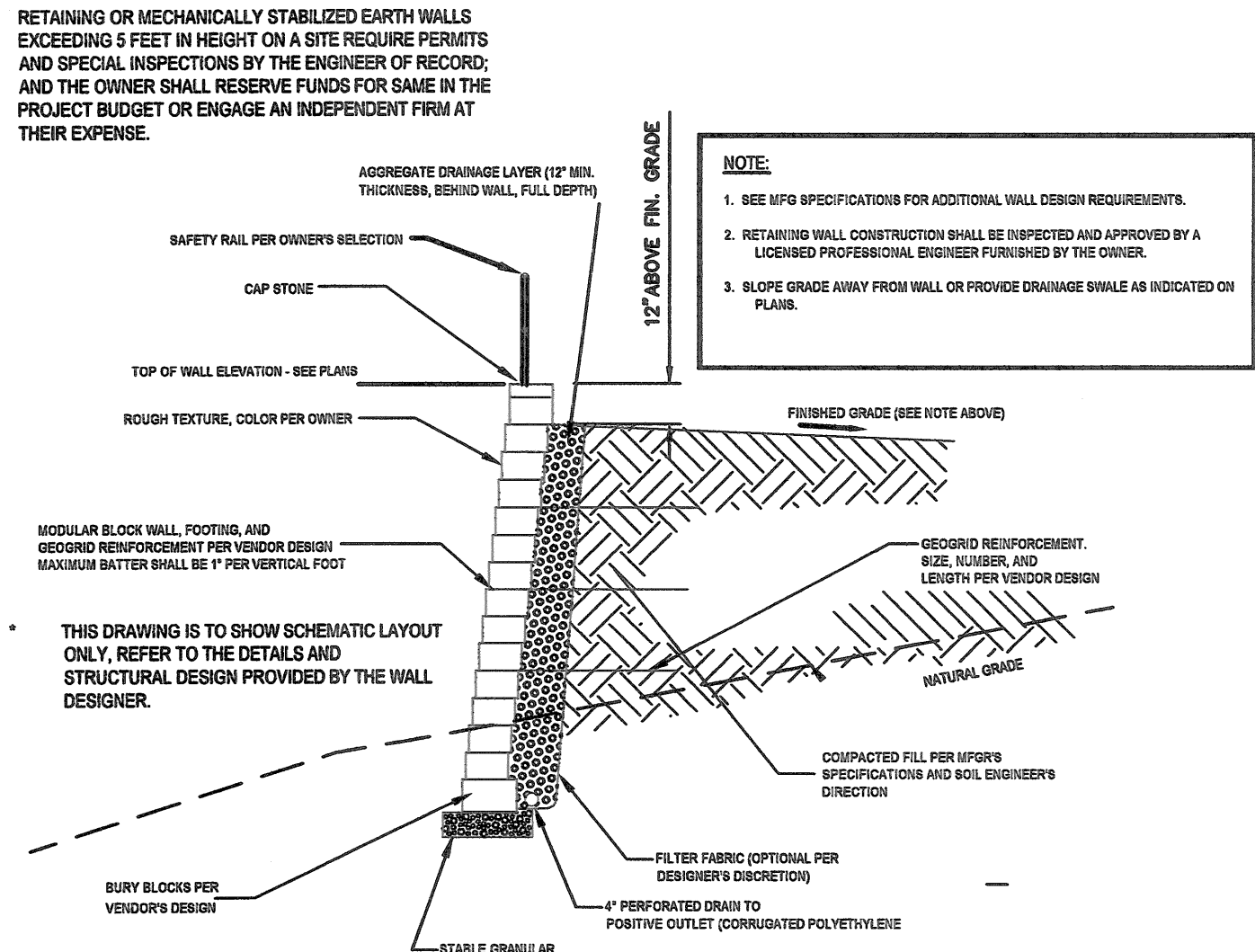
APPROVAL OF SEQUENCE: SUBMIT A PROPOSED PLAN OF CONSTRUCTION TO THE ENGINEER FOR APPROVAL PRIOR TO THE PRE-CONSTRUCTION MEETING, OUTLINING THE SEQUENCE AND METHODS OF INSTALLATION, TEMPORARY SUPPORT, FORMING, PLACEMENT, COMPACTING, ETC. FOR THE VARIOUS IMPOUNDMENT ELEMENTS. IDENTIFY ANY PROPOSED VARIATIONS FROM THE GENERAL SEQUENCE.

CONSTRUCTION SEQUENCING THE DRAINAGE AREA TO THE CELL SHOULD BE STABILIZED BEFORE CELL CONSTRUCTION BEGINS IN ORDER TO PREVENT CLOGGING. FOR ROADWAYS DRAINING TO THE CELL, THE SUBBASE COURSE (CRUSHER RUN) AND THE BASE COURSE LAYER OF ASPHALT NEED TO BE IN PLACE PRIOR TO CELL CONSTRUCTION. IF FINES GET WASHED INTO THE EXCAVATED CELL, THEY MUST BE REMOVED BEFORE BUILDING THE CELL IN ORDER TO RESTORE THE IN-SITU SOILS PERMEABILITY. IT IS RECOMMENDED THE CELL MEDIA BE COVERED WITH IMPERMEABLE PLASTIC DURING CONSTRUCTION.

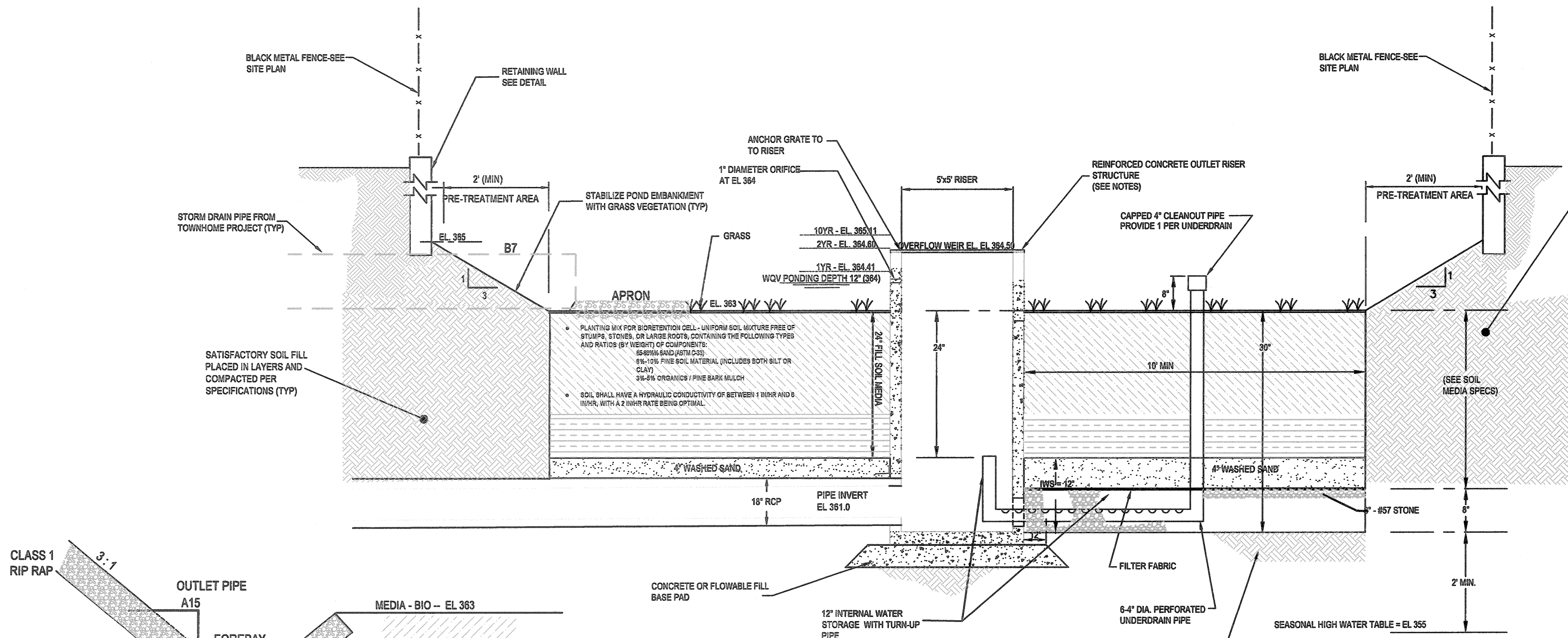


EMERGENCY SPILLWAY
CROSS SECTION

(NOT TO SCALE)

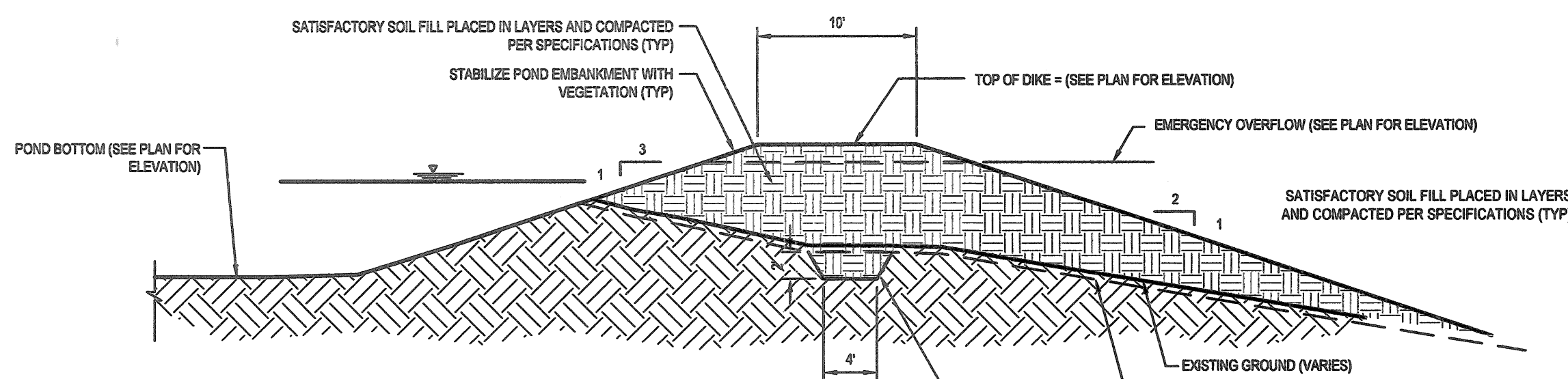


MODULAR BLOCK RETAINING WALL - SCHEMATIC



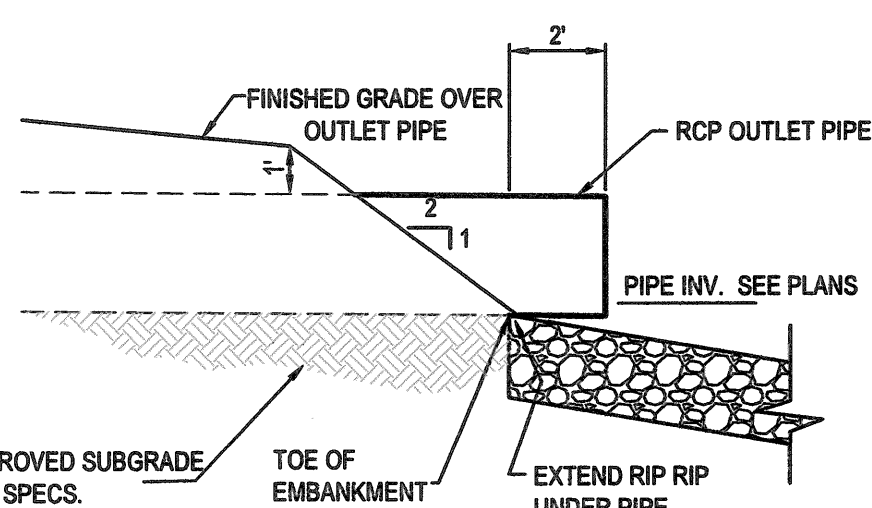
BIORETENTION FACILITY - CROSS-SECTION

NO SCALE



SECTION AT BMP EMBANKMENT

SECTION VIEW
N.T.S.



OUTLET PIPE DETAIL

(NOT TO SCALE)

Underdrain Notes:

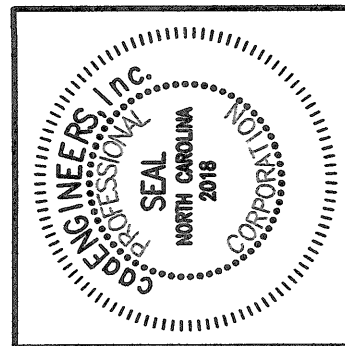
Place class "C" geotextile fabric and a 2" layer of #57 washed stone beneath underdrains. Underdrains should be F 758, TYPE PS 23, or AASHTO M-278 with 3/8" perforations at 6" on center, 4 holes per row, and a minimum of 3" of gravel over underdrain pipes. Cleanouts to be provided at changes in pipe direction, at 50' intervals or as shown on plan.

Bioretention Facility Operation and Maintenance:

- Watering: Watering should not be required after grass is established. However, watering may be required during prolonged dry periods.
- Erosion Control: Inspect flow entrances, ponding area, and surface overflow areas periodically. Replace material where erosion has occurred. If sediment is deposited, determine the source, remove excess deposits, and correct the problem.
- Vegetation: Routine maintenance will be necessary to ensure that the grass is healthy and to remove any weeds.
- Nutrients and pesticides: Nutrients and pesticides should not be required. If necessary, use sparingly.
- Soil Media: The soil media should not need replacing. If problems occur in the soil media, consult a soil specialist.

Bioretention Facility Notes:

- A 2.5-foot deep, homogeneous soil mixture of 85 to 88 percent construction sand, 8 to 12 percent fines (silt and clay), and 3 to 5 percent organic matter shall be used. Soil media should be sent to the NCDA lab to be analyzed. P-index for these soil media should range between 10 and 30. The infiltration rate of the soil shall be between 3.85 and 6 in/hr. Soil characteristics shall be verified by a geotechnical engineer.
- The Bioretention facility shall be planted with grass. Grass shall be sodded and shall not be grown in an impermeable layer such as clay. Hybrid Bermuda, centipede, or fescue/bluegrass are recommended.
- All construction, monitoring, and maintenance guidelines in the NCDIWQ storm water bmp manual shall be followed.



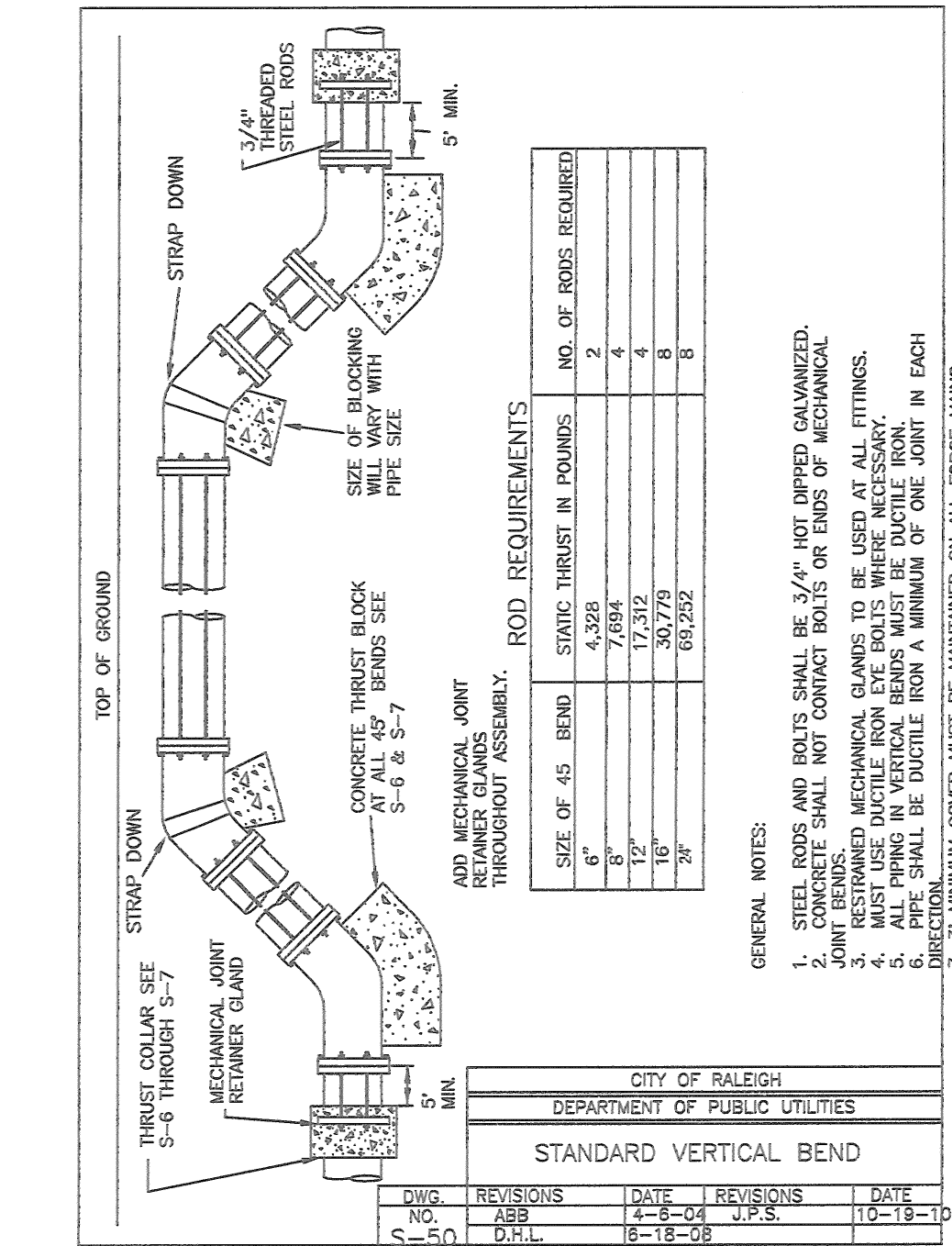
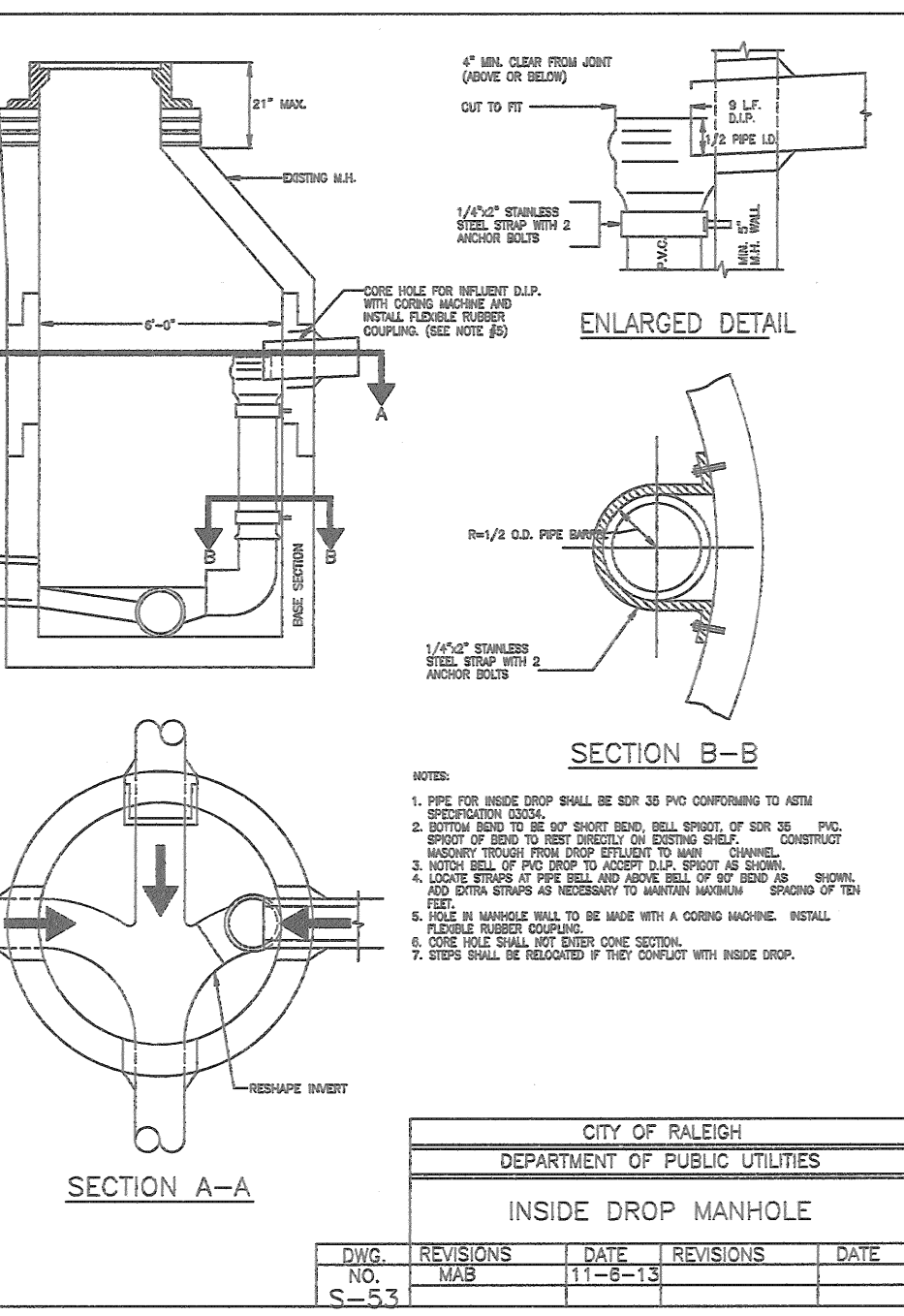
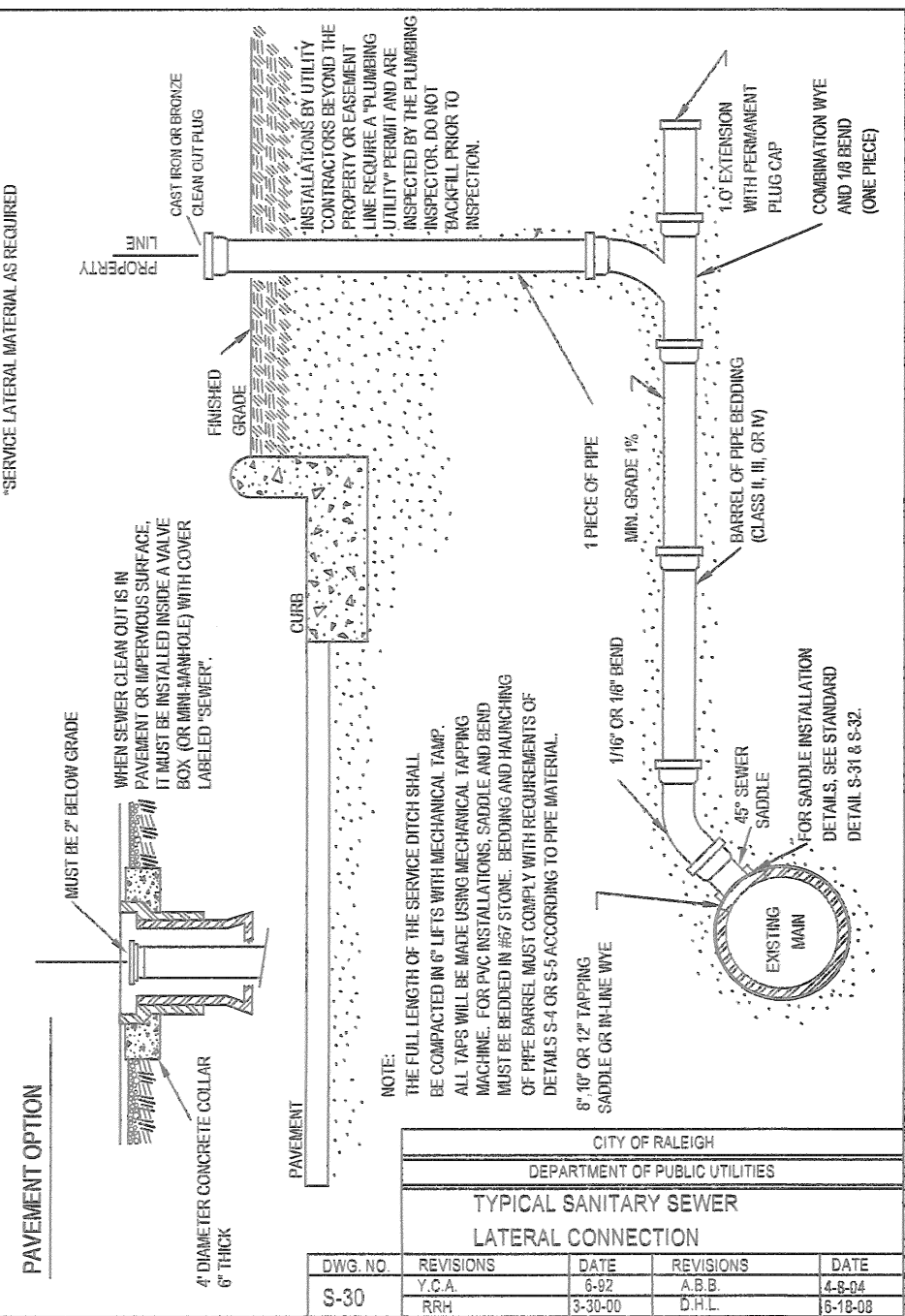
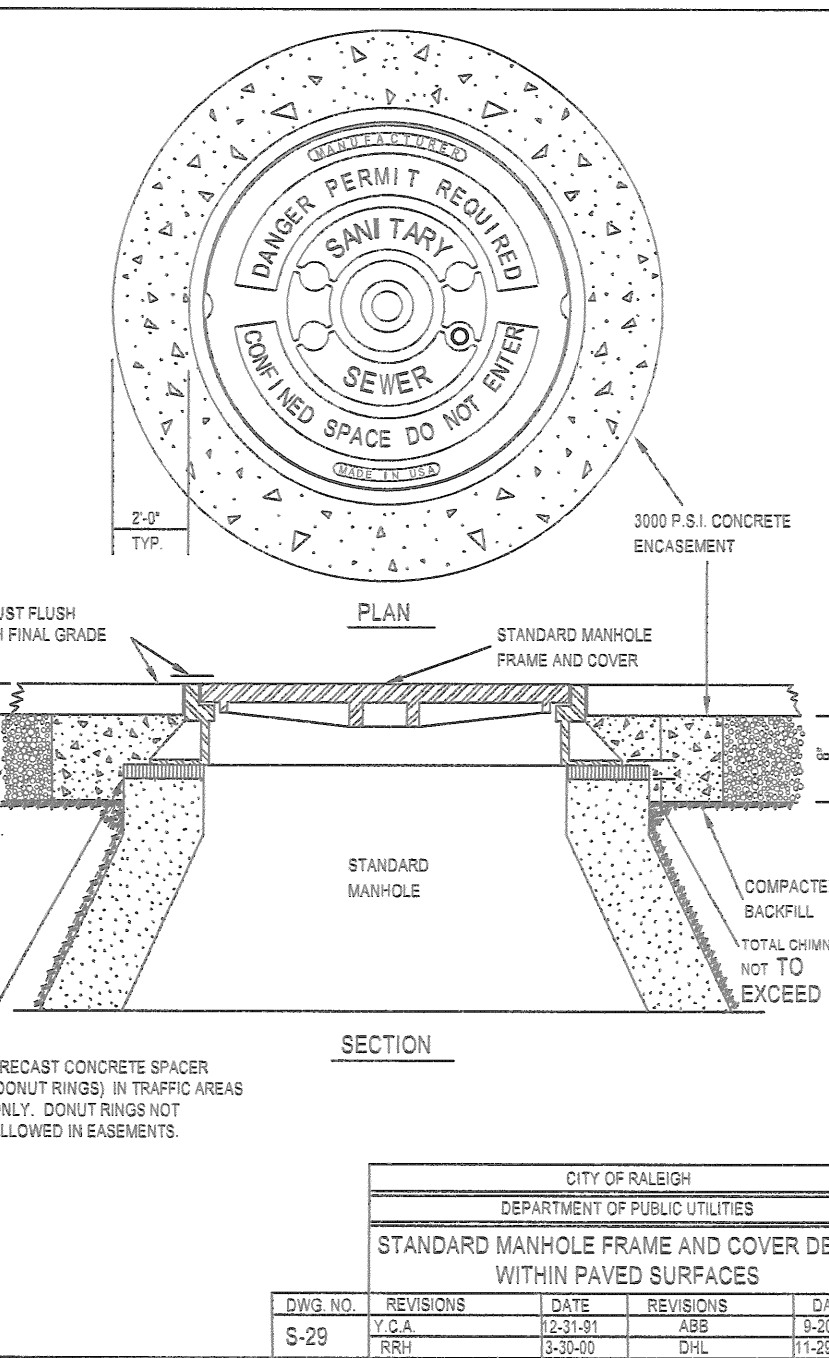
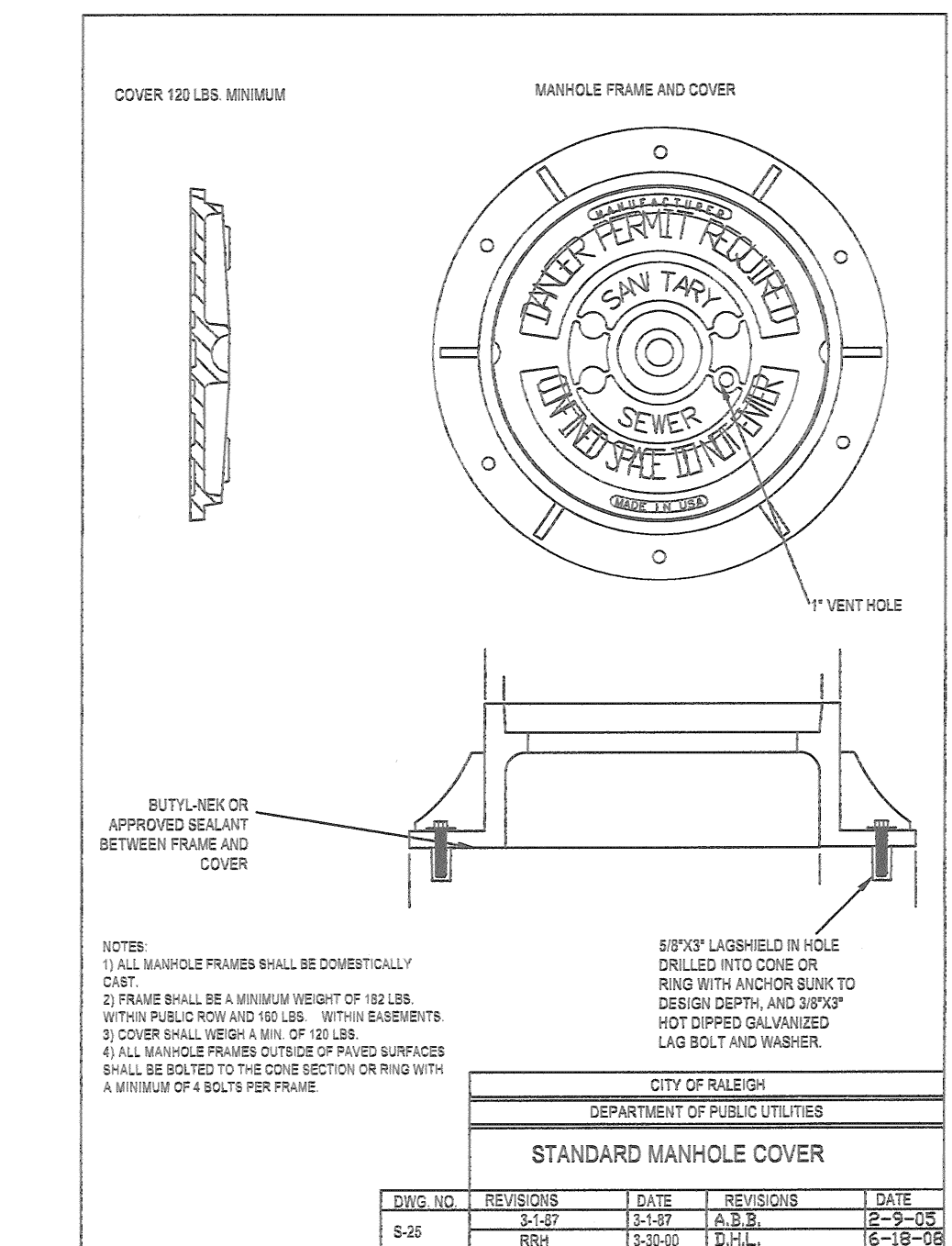
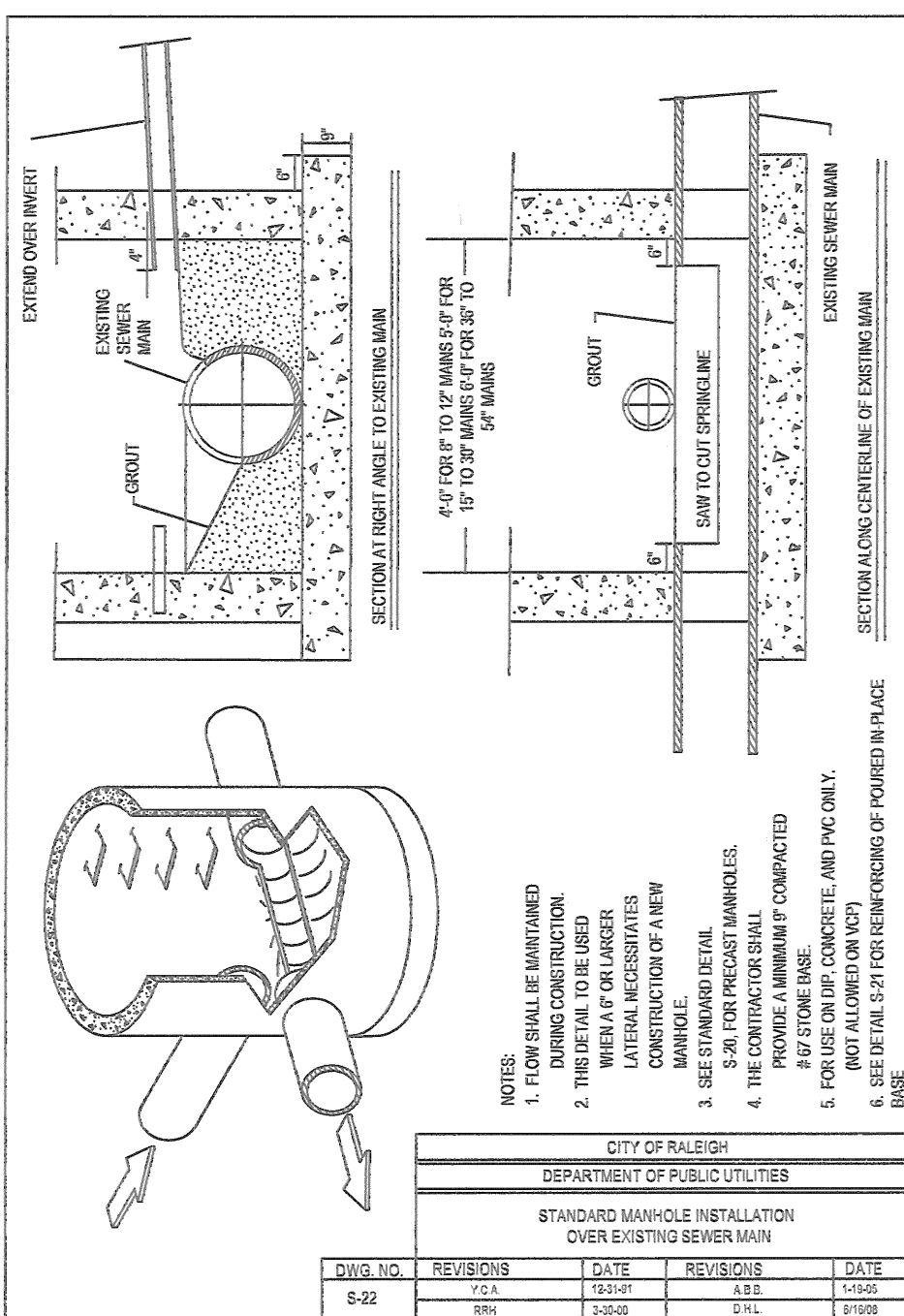
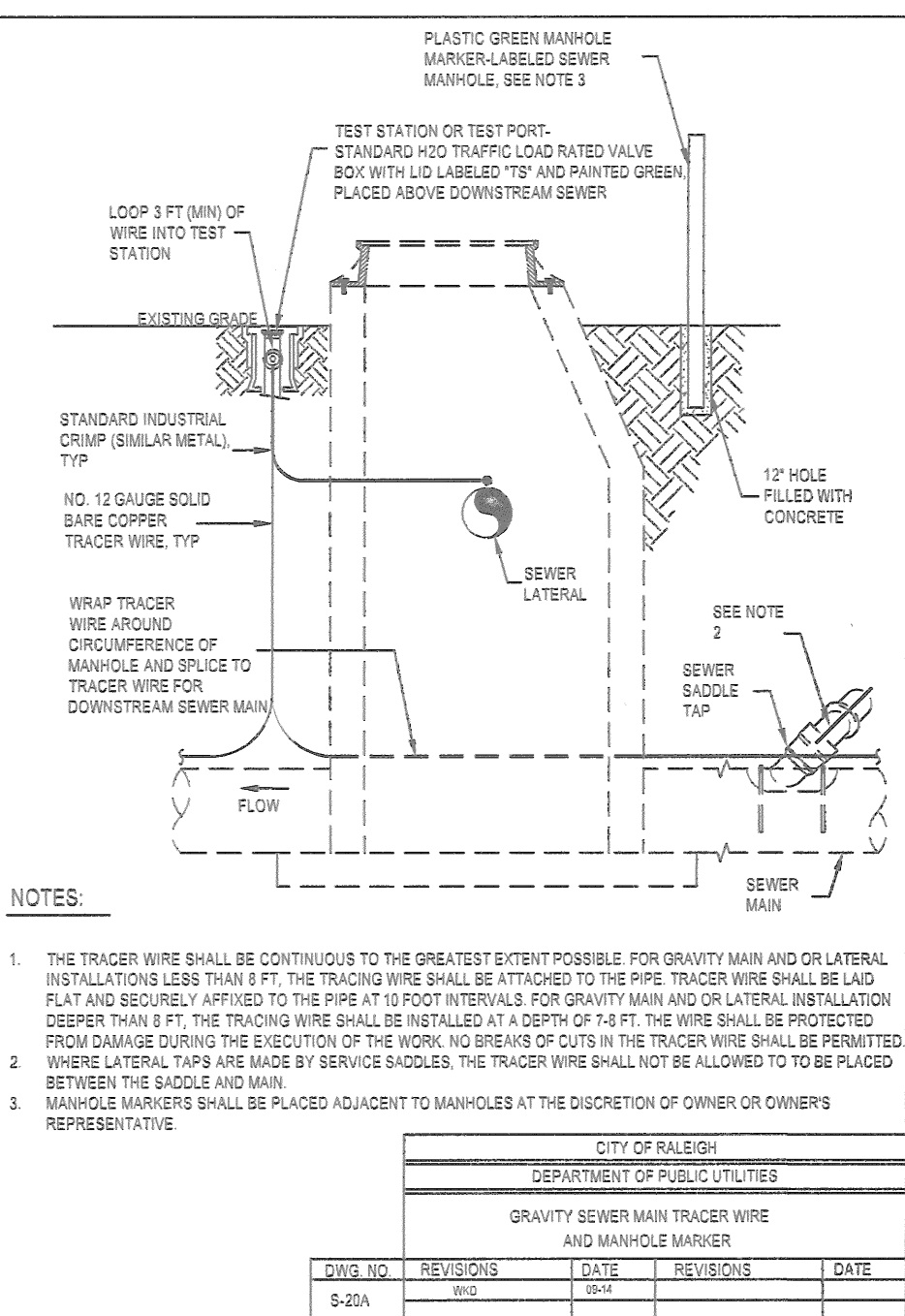
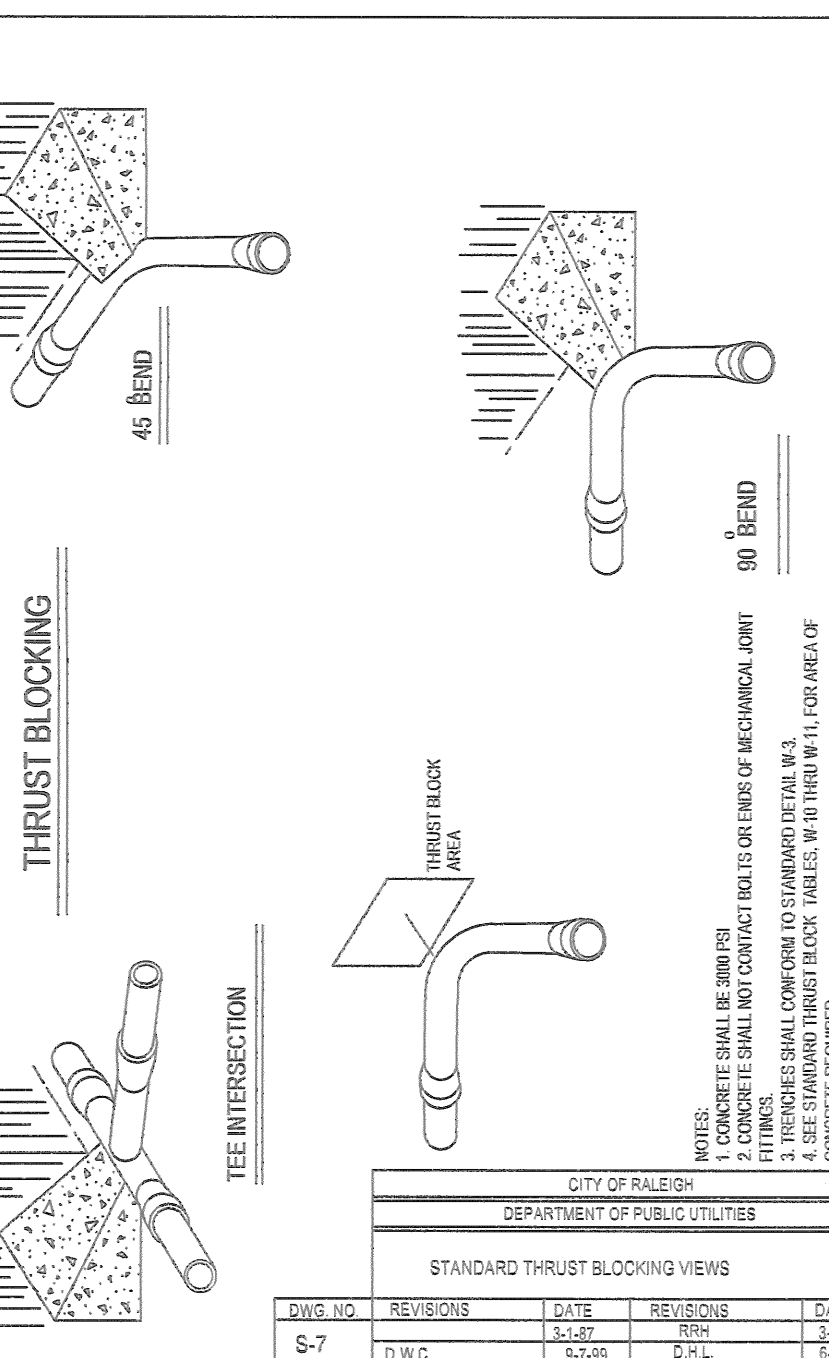
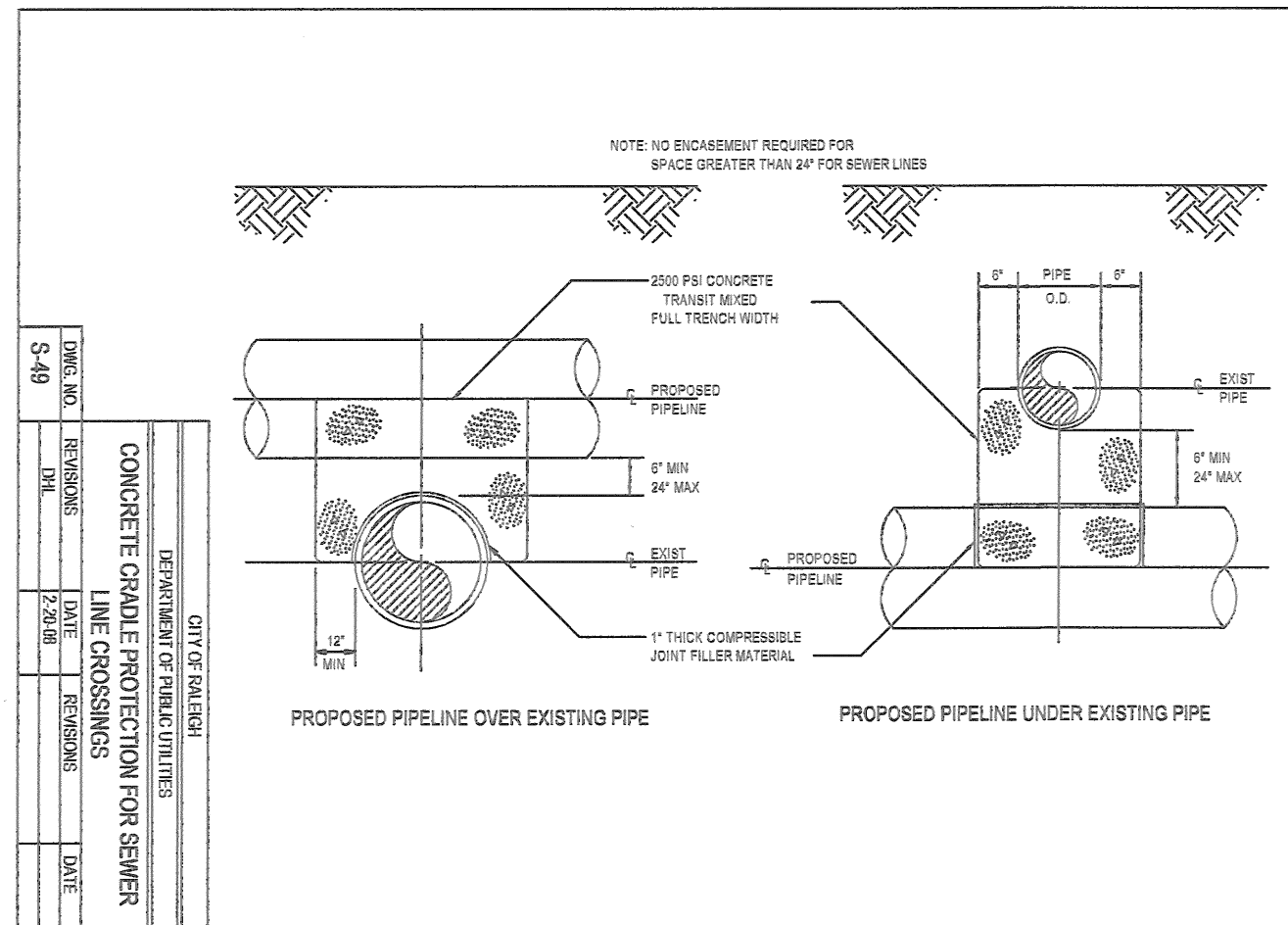
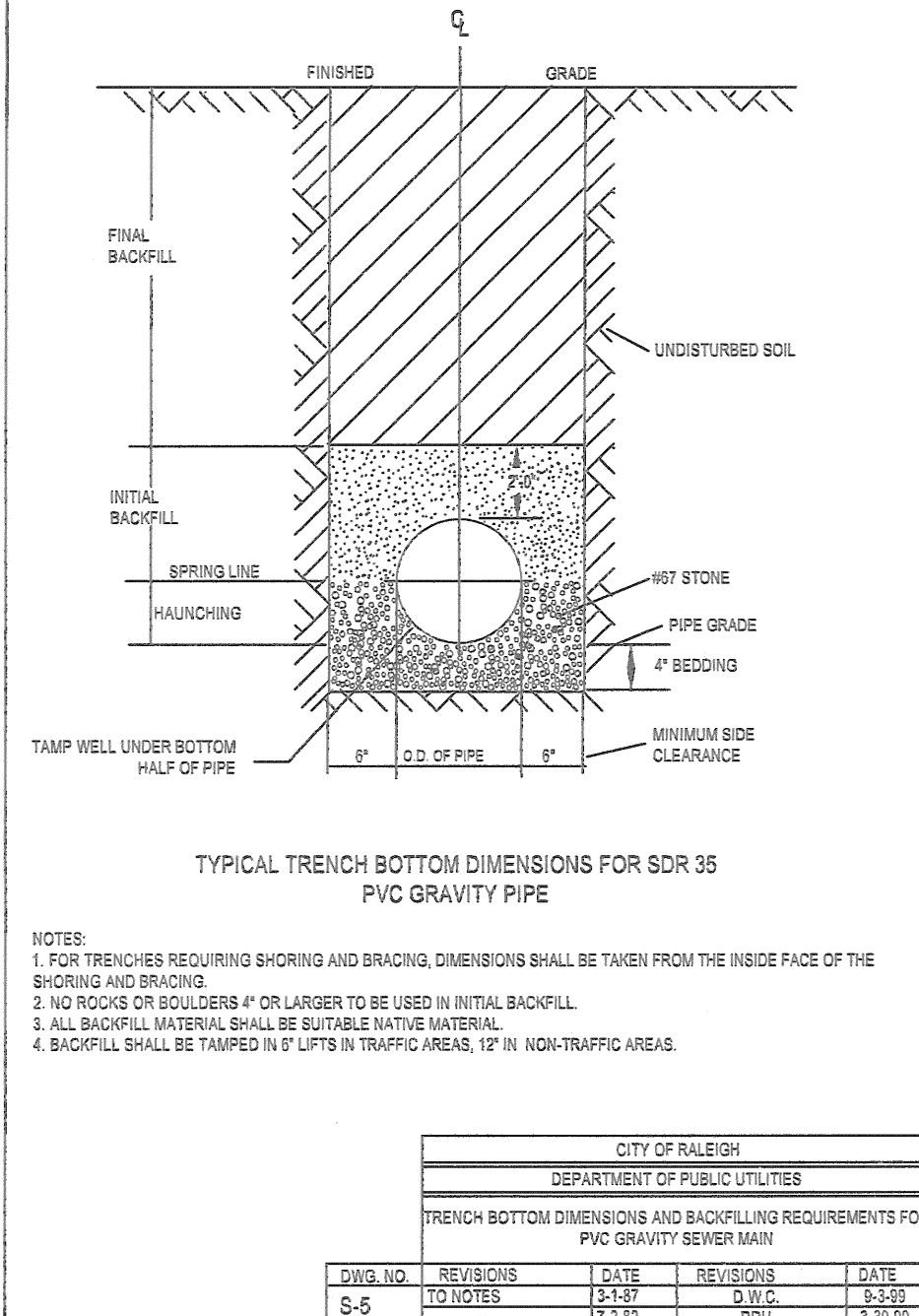
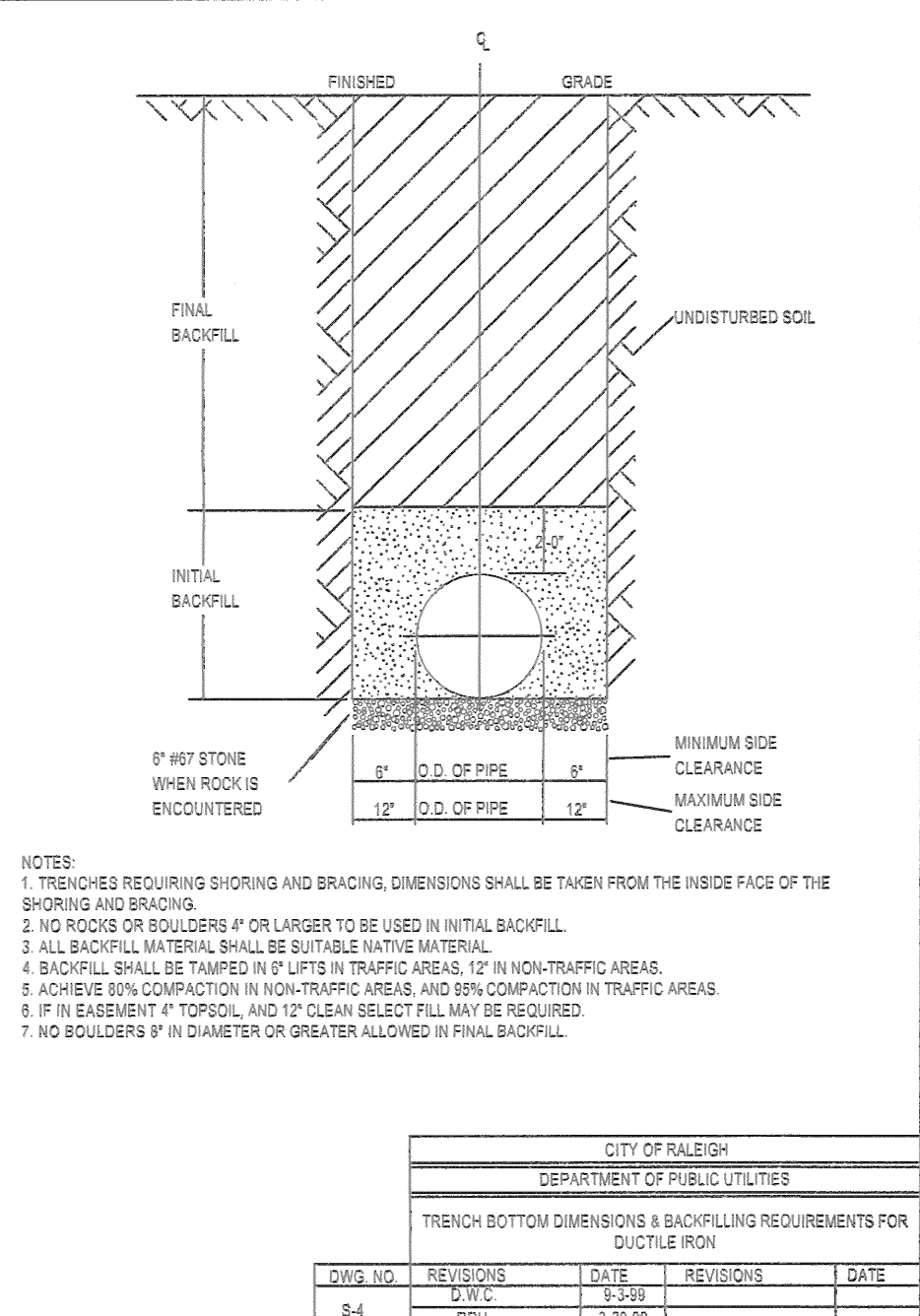
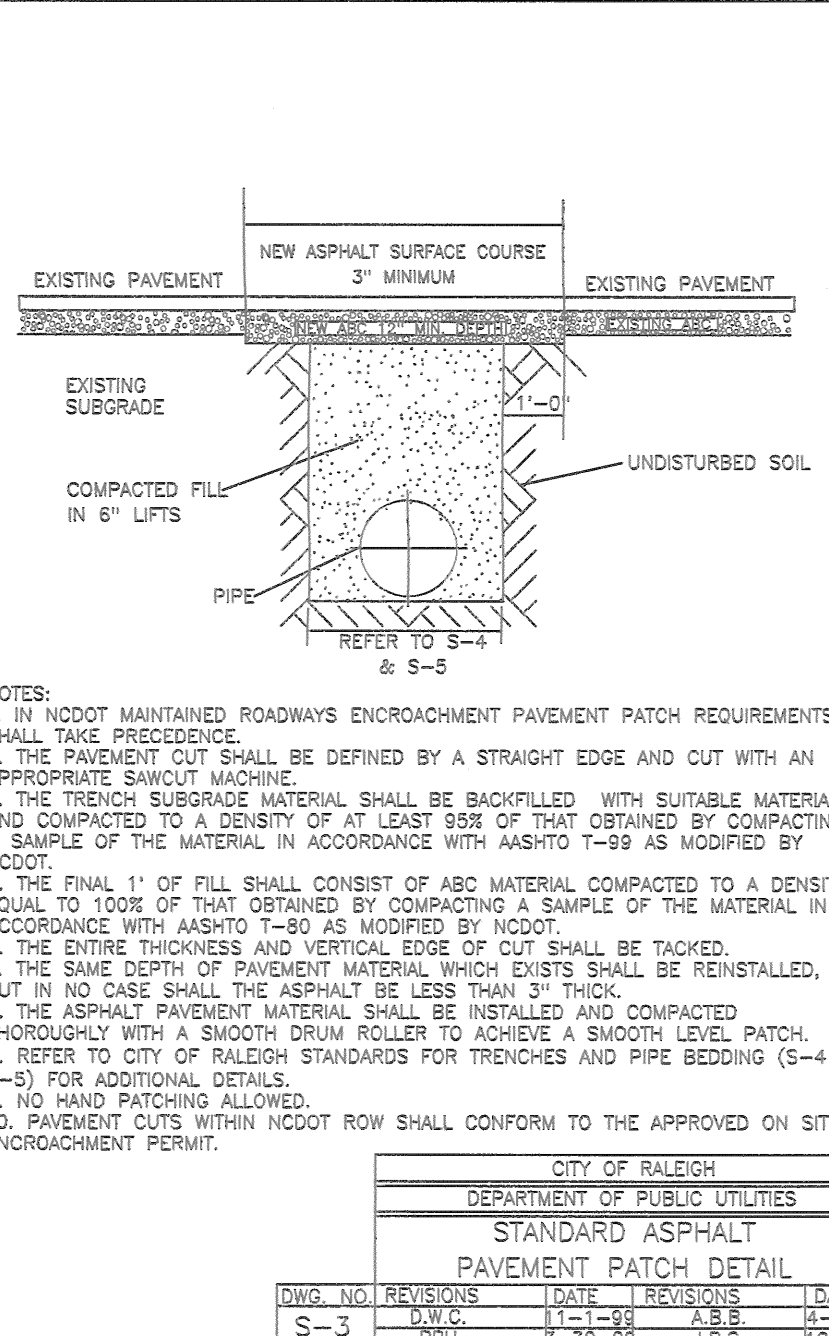
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PROFESSIONAL ENGINEERS
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48329 Windy Hill Drive, Raleigh, North Carolina 27609
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NO.	DATE	REVISION	BY
1	8-13-2018	Revised per Raleigh, CDR, Wake Co. Review	SPG
2			
3			
4			
5			
6			
7			
8			
NO.	DATE	REVISION/DESCRIPTION	BY



Sanitary Sewer Details
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina

Job No. 5501
Dwg No. D3



Public
Sewer Collection / Extension System
The City of Raleigh consents to the correction and extension of the City's public sewer system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

Public
Water Distribution / Extension System
The City of Raleigh consents to the correction and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

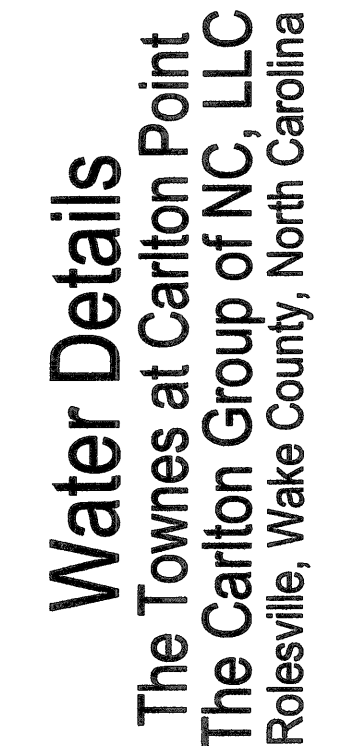
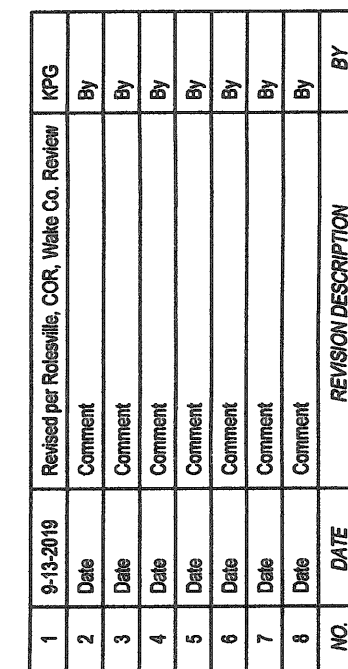
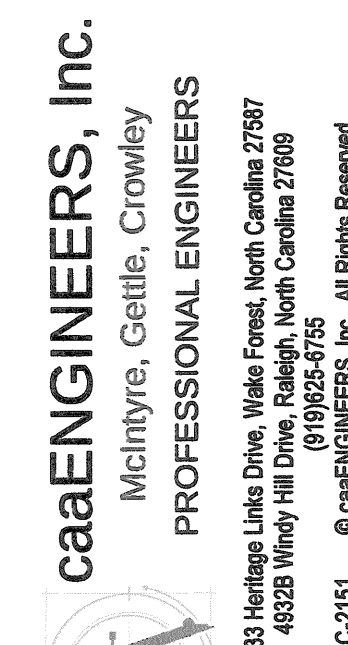
ATTENTION CONTRACTORS
The Construction Contractor responsible for the extension of water, sewer, and/or gas, as approved in these plans, is responsible for contacting the Public Utilities Department at (919) 996-4340 at least twenty four hours prior to beginning any of their construction.
Failure to notify both City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require resubmission of any water or sewer facilities not inspected as a result of this notification failure.
Failure to call for Inspection, Install a Downstream Plug, have Permitted Plans on the Jobsite, or any other Violation of City of Raleigh Standards will result in a Fine and Possible Exclusion from future work in the City of Raleigh.

NOTES
1. SEE SHEET C1 FOR STANDARD NOTES.

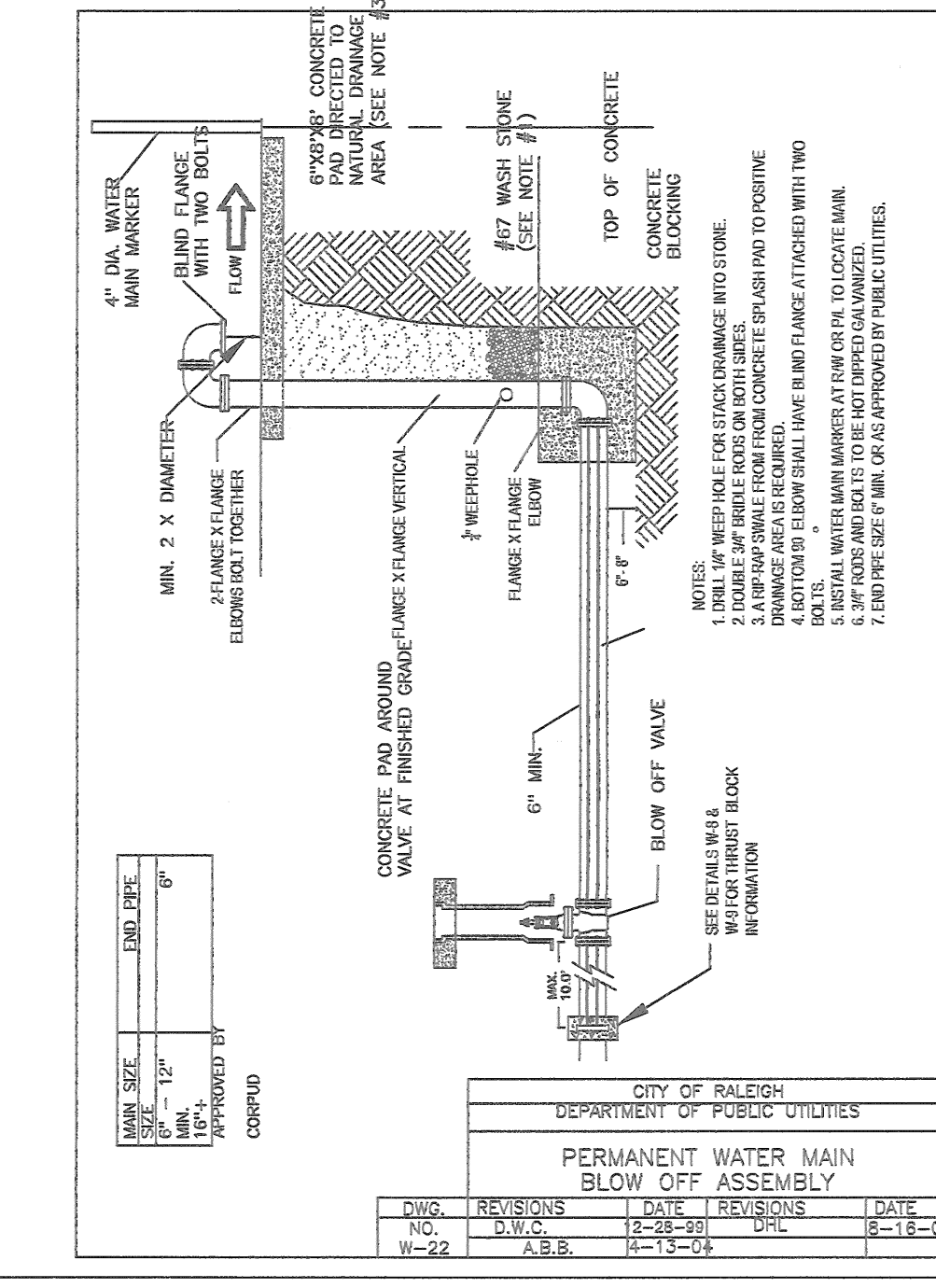
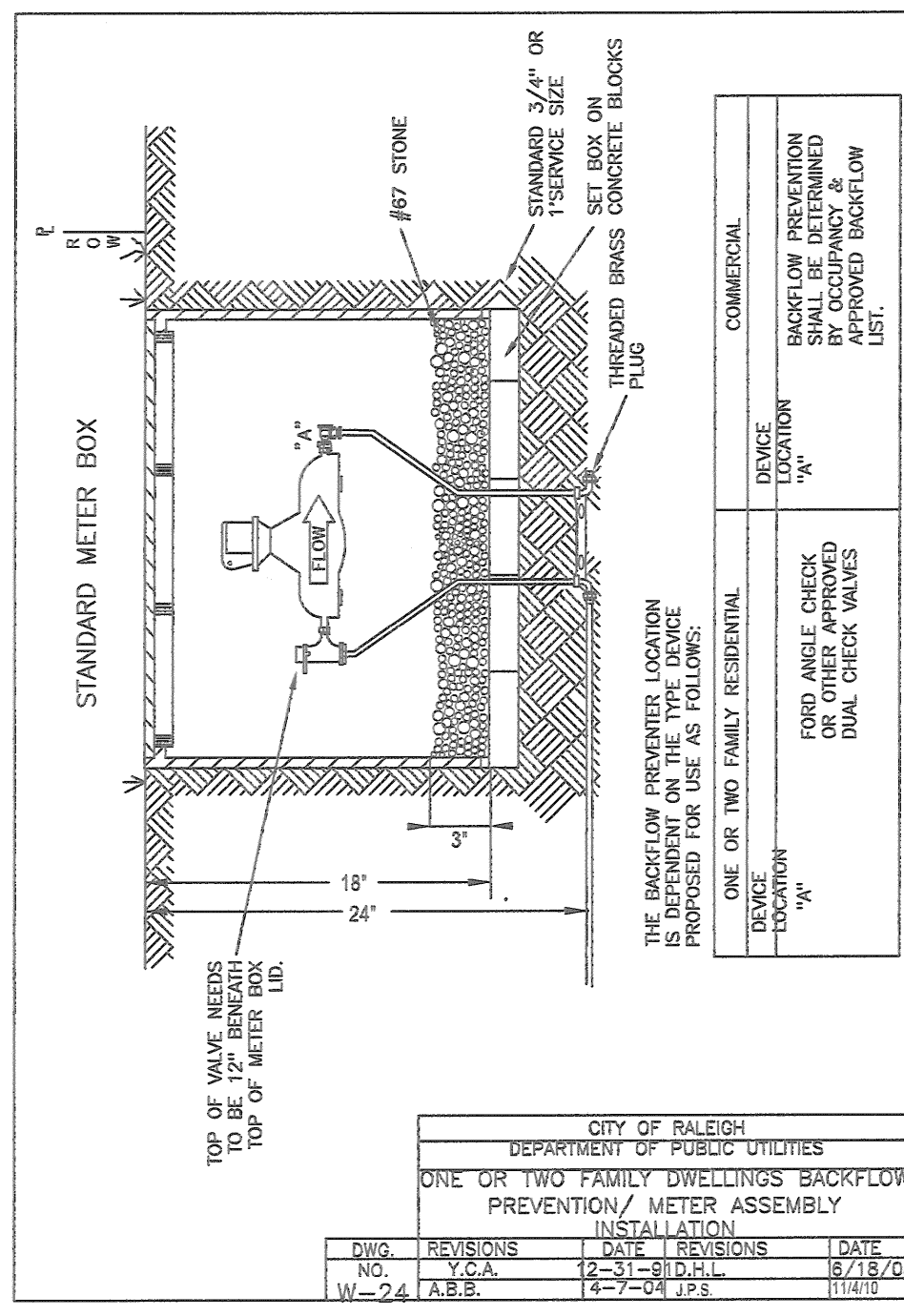
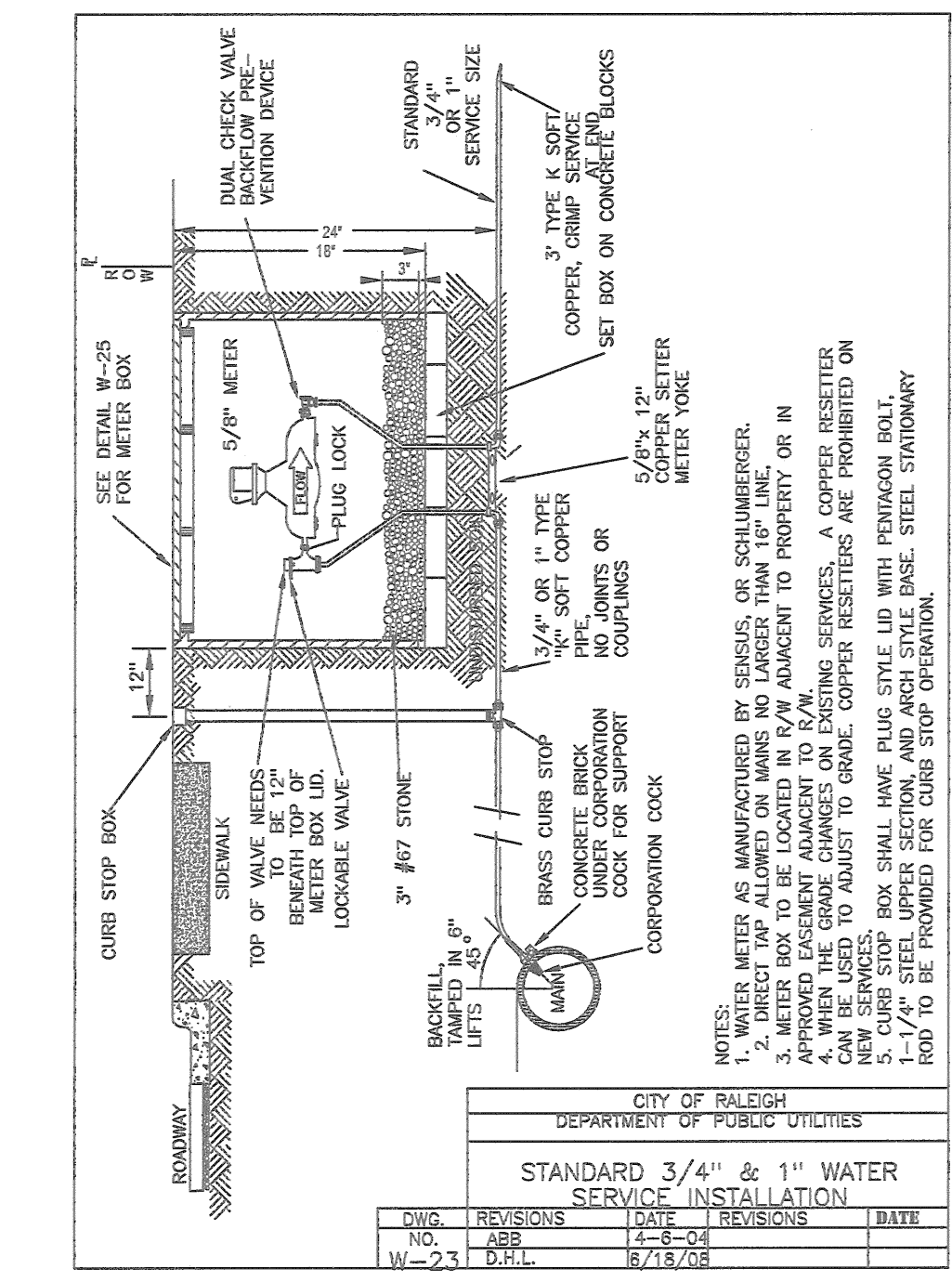
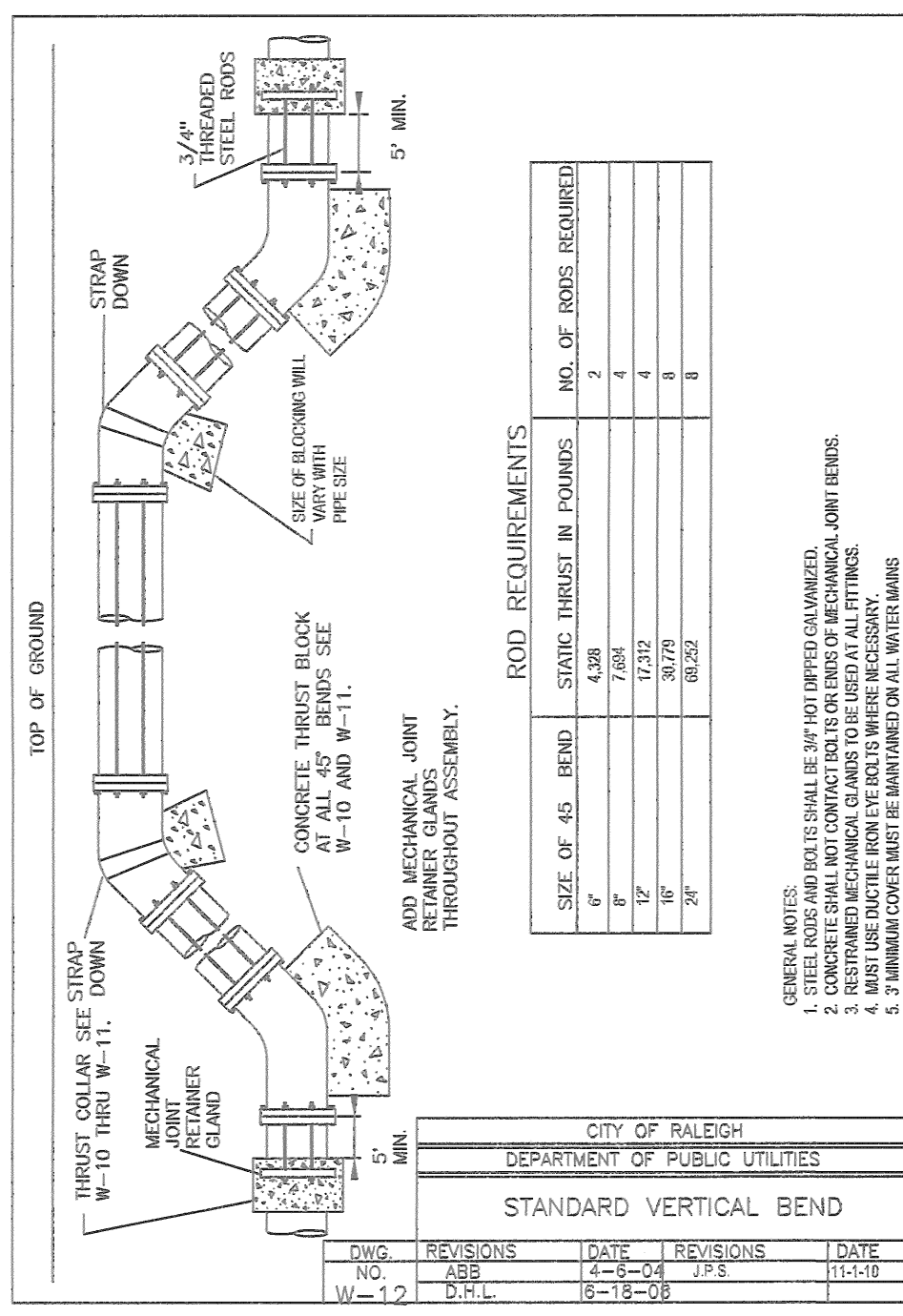
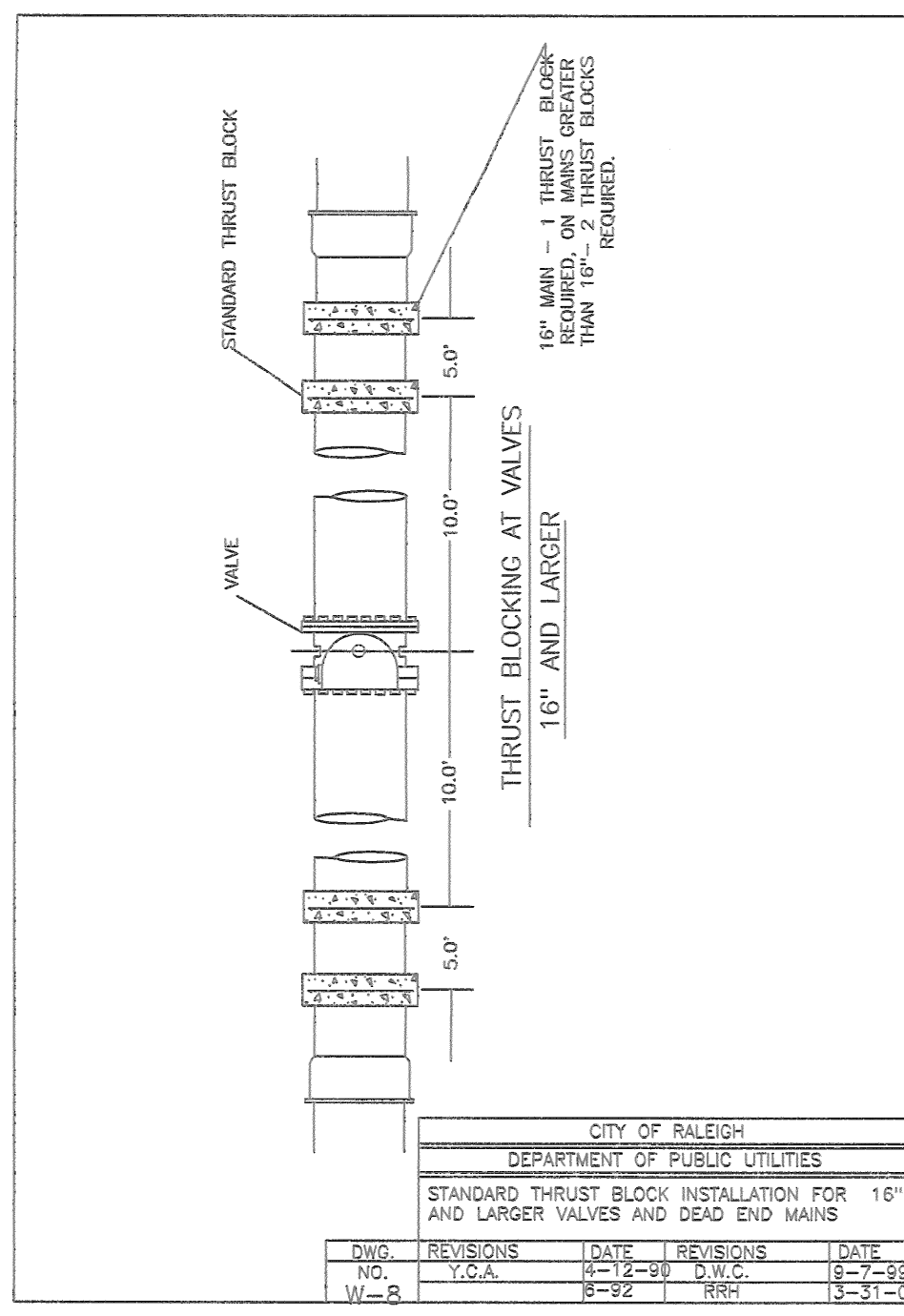
CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION
CONCURRENT REVIEW APPROVAL

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

TRANSPORTATION FIELD SERVICES
PUBLIC UTILITIES
STORMWATER
PLANNING/ZONING
FIRE
URBAN FORESTRY
SITE ACCESSIBILITY



Job No. 5501
Dwg No. D4



CONCURRENT REVIEW APPROVAL

CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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

TRANSPORTATION FIELD SERVICES _____

PUBLIC UTILITIES _____

STORMWATER _____

PLANNING/ZONING _____

FIRE _____

URBAN FORESTRY _____

SITE ACCESSIBILITY _____

Public
Sewer Collection / Extension System

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

City of Raleigh
 Public Utilities Department Permit # _____

Authorization to Construct _____

Date _____

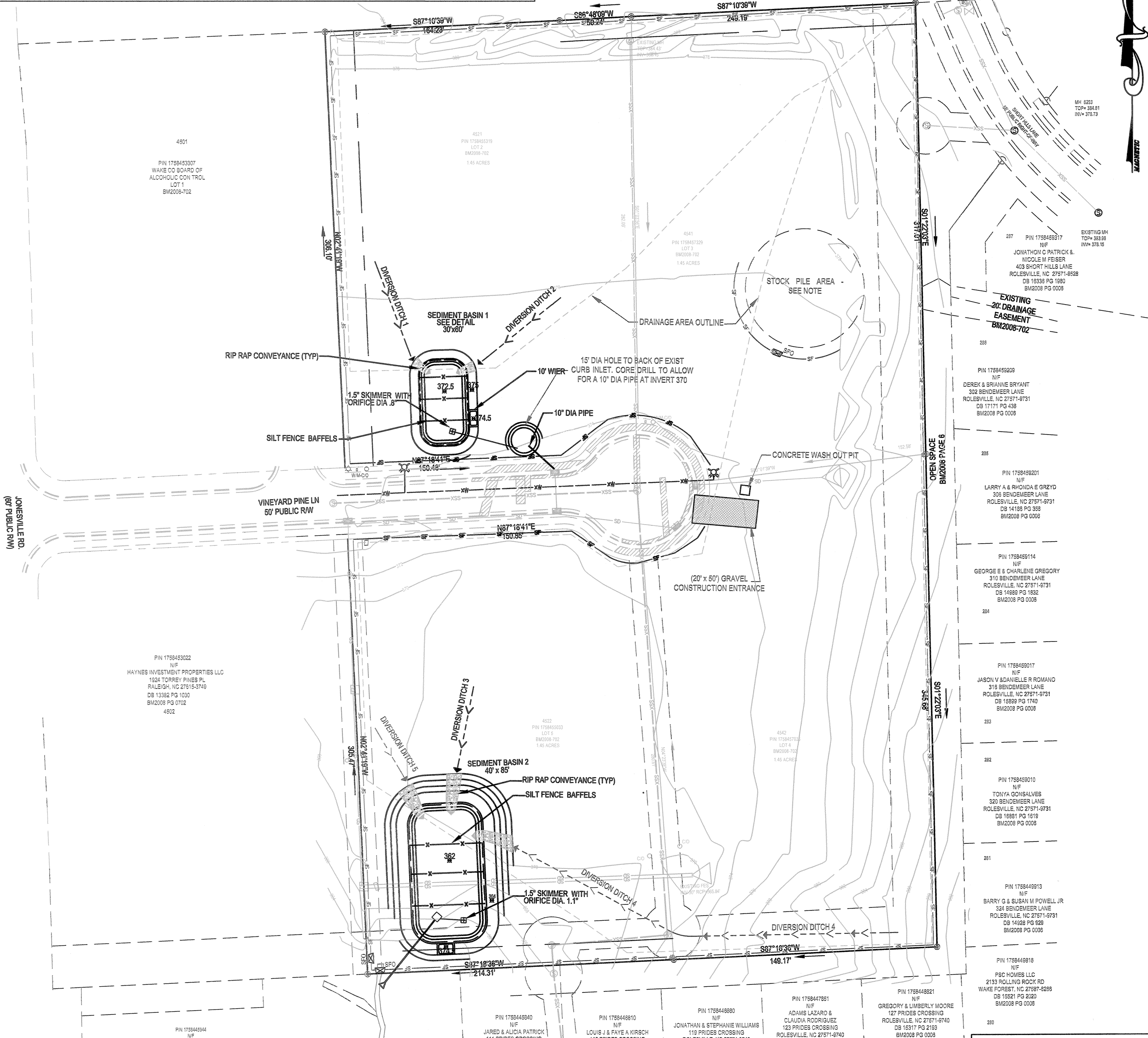
<p style="text-align: center;">Public <u>Water Distribution / Extension System</u></p> <p>The City of Raleigh converts to the connection and extension of the City's public water system as shown on this plan. The material and construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.</p> <p>City of Raleigh Public Utilities Department Permit # _____</p> <p>Authorization to Construct _____</p> <p>Date _____</p>
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DIVERSION DITCH SCHEDULE																			
Number	Approx. Length (ft)	Cross-Section			Bottom Slope (%)	Drainage Area (ac.)	Runoff C-Value	2-Year Rainfall				10-Year Rainfall				Swale Liner			Number
		Left Side (X:1)	Bottom Width (ft)	Right Side (X:1)				Q ₂ (cfs)	Flow Depth (ft)	Flow Velocity (fps)	Shear Stress (psf)	Q ₁₀ (cfs)	Flow Depth (ft)	Flow Velocity (fps)	Shear Stress (psf)	Specification*	Service Duration	Installed Width* (ft)	
1	71	2	--	2	2.0	2.80	0.52	0.90	1.44	6.82	1.80	1.32	1.82	5.46	2.27	EroNet P300	Permanent	15.3	1
2	70	2	--	2	1.0	2.80	0.84	0.50	1.45	0.36	2.71	0.45	2.13	0.46	2.17	BioNet S75BN	Temporary	6.7	2
3	58	2	--	2	1.0	1.00	0.05	0.50	0.08	0.36	2.71	0.45	0.11	0.46	2.17	BioNet S75BN	Temporary	6.7	3
4	283	2	--	2	1.0	6.40	1.24	0.50	2.15	0.36	2.71	0.45	3.14	0.46	2.17	BioNet S75BN	Temporary	6.7	4
5	40	2	--	2	1.0	2.00	0.32	0.50	0.55	0.36	2.71	0.45	0.81	0.46	2.17	BioNet S75BN	Temporary	6.7	5

*Notes:

1. Liner products specified above are manufactured by Tensar North American Green. Similar products may be substituted with Engineer's approval.

2. Install all products per manufacturer's recommendations. Where a permanent liner is specified, install liner prior to initial seeding.



Basin Number	Drain Area (Acres)	Distb. Area (Acres)	Peak Flow (CFS)	Basin Surface Area (SF)	Required Surface Area (SF)	Basin Volume (CF)	Required Basin Volume (CF)	Spillway Length (FT)	Skimmer Orifice Diameter (In.)	Top of Berm Elev.	Emergency Spillway Elev.	Bottom of Basin
1	1.34	1.34	3.4	1800	1479	3485	2520	10	1	375	374.5	372.5
2	3.18	3.18	8.04	4750	3497	10,145	5724	10	1	364.5	364	362

TOTAL DENUDED AREA 252,648 SF (5.8 AC)

EROSION CONTROL CONSTRUCTION SEQUENCE

- SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL ENGINEER, JEEVAN NEUPANE, PE (819) 819-8807. OBTAIN A LAND DISTURBING PERMIT.
- INSTALL EROSION CONTROL MEASURES INCLUDING GRAVEL CONSTRUCTION ENTRANCE (EXT), SEDIMENT TRAPPING MEASURES, STABILIZATION AT PIPE OUTLETS, AND 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.
- BEGIN CLEARING AND GRUBBING. PERFORM ROUGH GRADING, INSTALLING AND MAINTAINING TEMPORARY DIVERSIONS AS NECESSARY. SEED AND MULCH PERIMETER SLOPES AS SOON AS POSSIBLE.
- STABILIZE DISTURBED AREAS WITHIN 14 WORKING DAYS AFTER COMPLETION OF ANY PHASE OF GRADING. STABILIZATION CONSISTS OF EITHER TEMPORARY MULCHING OR PERMANENT VEGETATION ON AREAS THAT ARE NOT PAVED.
- REGULARLY INSPECT AND MAINTAIN THE EROSION CONTROL DEVICES SO THEY CONTINUE TO FUNCTION PROPERLY.
- KEEP MUD AND DEBRIS OFF THE PUBLIC STREETS AT ALL TIMES. IF MUD OR DEBRIS IS TRACKED FROM THE SITE, USE A SHOVEL AND BROOM TO REMOVE IT IMMEDIATELY. IF MUD AND DEBRIS ARE NOT KEPT OFF THE STREET, ENFORCEMENT ACTION (REVOKING THE GRADING PERMIT AND/OR STOP WORK ORDER) MAY BE TAKEN.
- IF IT IS DETERMINED DURING THE COURSE OF CONSTRUCTION THAT SIGNIFICANT SEDIMENT IS LEAVING THE SITE DESPITE PROPER IMPLEMENTATION AND MAINTENANCE OF THE APPROVED EROSION CONTROL PLAN, THE PERSON RESPONSIBLE FOR THE LAND-DISTURBING ACTIVITY IS OBLIGATED TO TAKE ADDITIONAL PROTECTIVE ACTION.
- CONTINUE TO PHASE 2 EROSION CONTROL ACTIVITIES.

STOCKPILE DESIGN CRITERIA

- STOCKPILING MATERIALS ADJACENT TO A DITCH, DRAINAGEWAY, WATERCOURSE, WETLAND, STREAM BUFFER, OR OTHER BODY OF WATER SHALL BE AVOIDED UNLESS AN ALTERNATIVE LOCATION IS DEMONSTRATED TO BE UNAVAILABLE.
- ANY CONCENTRATED FLOW LIKELY TO AFFECT THE STOCKPILE SHALL BE DIVERTED TO AN APPROVED BMP.
- OFF-SITE SOIL OR BORROW AREAS MUST BE IN COMPLIANCE WITH WAKE COUNTY LDO AND STATE REGULATIONS. ALL SOIL AREAS OVER AN ACRE ARE REQUIRED TO HAVE AN APPROVED SEDIMENT CONTROL PLAN. DEVELOPER/CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFFSITE DISPOSAL OF SOIL PRIOR TO DISPOSAL. FILL OF FEMA FLOODWAYS AND ON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS OTHERWISE PROVIDED BY SUBSECTION 14-18-2 OF THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE (CERTIFICATIONS AND PERMITS REQUIRED).
- SEEDING OR COVERING STOCKPILES WITH TARPS OR MULCH IS REQUIRED AND WILL REDUCE EROSION PROBLEMS. TARPS SHOULD BE KEYED IN AT THE TOP OF THE SLOPE TO KEEP WATER FROM RUNNING UNDERNEATH THE PLASTIC.
- IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE (BUILDERS, ETC.), THE FINANCIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY FOR THAT STOCKPILE.
- THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
- ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

Basin Removal Sequence

- SCHEDULE A SITE MEETING WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE IF A BASIN CAN BE REMOVED. INSTALL SILT FENCING OR OTHER TEMPORARY EROSION CONTROL MEASURES AS NEEDED PRIOR TO REMOVAL OF THE BASIN.
- DEWATER THE SEDIMENT BASIN FROM THE SURFACE UTILIZING A SILT BAG. OBTAIN APPROVAL FROM WAKE COUNTY PRIOR TO INSTALLING THE UNDERGROUND SAND FILTER.
- REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF CULVERT PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.
- PERFORM SEEDBED PREPARATION, SEED, MULCH AND ASPHALT TACK ANY RESULTING BARE AREAS IMMEDIATELY.
- INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.
- WHEN SITE IS FULLY STABILIZED, CALL ENVIRONMENTAL ENGINEER/CONSULTANT FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVICE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION. NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL ENGINEER/CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE.

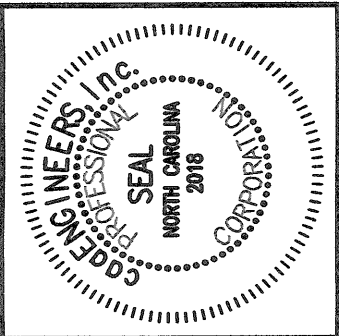
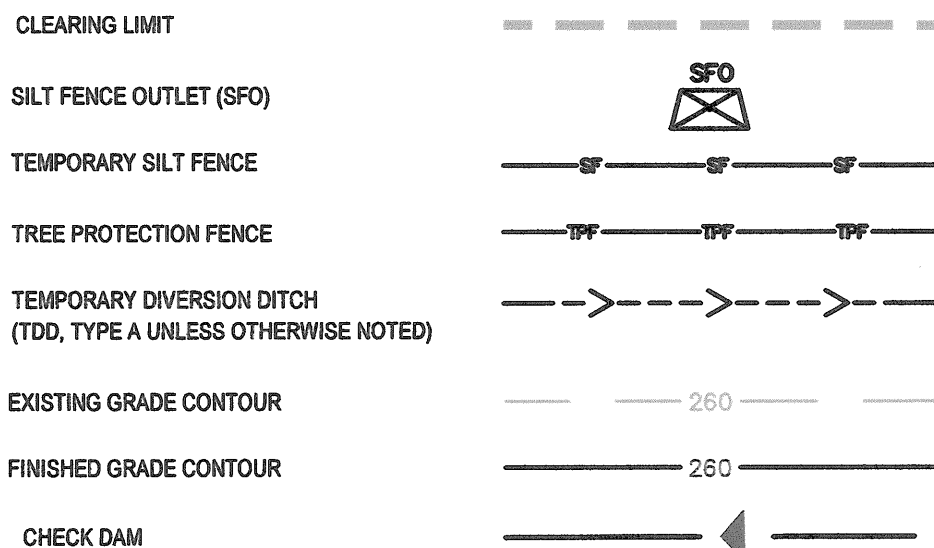
GENERAL NOTES

- INSTALL POLYACRYLAMIDE IMPREGNATED STRAW WATTLES (i.e. TERRA TUBES) DIRECTLY BELOW STORM WATER OUTFALL. PLACE EROSION CONTROL LINER UNDERNEATH A SERIES OF WATTLES (SEE DETAIL).
- SURROUND THE SKIMMER WITH A BAFFLE AND 'KEY' BOTH ENDS INTO THE SIDE OF THE BASIN. INSTALL A TARP UNDERNEATH THE SKIMMER, COVERING THE ENTIRE AREA AROUND THE SKIMMER. PROVIDE A 6'-8" BLOCK TO PLACED UNDER THE SKIMMER ALLOWING THE DEVICE TO REST ON AFTER DEWATERING.
- INSTALL STANDARD GRAVEL YARD INLET PROTECTION UNTIL CURB IS INSTALLED. INSTALL STANDARD GRAVEL BAG CURB INLET PROTECTION AT ALL CURB INLETS.

NOTES

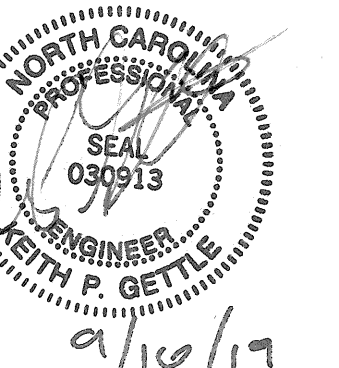
- SEE SHEET C1 FOR STANDARD NOTES.

EROSION CONTROL LEGEND



caaENGINEERS, Inc.
McIntyre, Gettle, Crowley
PROFESSIONAL ENGINEERS
1233 Heritage Lakes Drive, Wake Forest, North Carolina 27587
43228 Windy Hill Drive, Raleigh, North Carolina 27609
(919) 623-8795
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NO.	DATE	REVISION/DESCRIPTION	BY
1	9-13-2018	Revised per Raleigh, COE, Wake Co. Review	By
2	Date	Comment	By
3	Date	Comment	By
4	Date	Comment	By
5	Date	Comment	By
6	Date	Comment	By
7	Date	Comment	By
8	Date	Comment	By
NO.	DATE	REVISION/DESCRIPTION	BY



Erosion Control Plan-Phase 1
The Townes at Carlton Point
The Carlton Group of NC, LLC
Rolesville, Wake County, North Carolina

Job No. 5501
Dwg No. EC1

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 at 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-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDGs)	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)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION B: RECORDKEEPING

1. E&SC Plan Documentation

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

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

2. Additional Documentation to be Kept on Site

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

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

3. Documentation to be Retained for Three Years

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
- (b) Oil spills if:
 - They are 25 gallons or more,
 - They are less than 25 gallons but cannot be cleaned up within 24 hours,
 - They cause sheen on surface waters (regardless of volume), or
 - They are within 100 feet of surface waters (regardless of volume).
- (c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- (d) Anticipated bypasses and unanticipated bypasses.
- (e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> • Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis. • If the stream is named on the NC 303(d) list as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> • Within 24 hours, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> • A report at least ten days before the date of the bypass, if possible. The report shall include an evaluation of the anticipated quality and effect of the bypass.
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> • Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that includes an evaluation of the quality and effect of the bypass.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment[40 CFR 122.41(l)(7)]	<ul style="list-style-type: none"> • Within 24 hours, an oral or electronic notification. • Within 7 calendar days, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(5). • Division staff may waive the requirement for a written report on a case-by-case basis.

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:

- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
- (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
- (d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
- (e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- (f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

