

DRAINAGE STRUCTURE

WATER VALVE

FIRE HYDRANT

OVERHEAD UTILITY LINE

FIBER OPTIC CABLE

STORM DRAINAGE PIPE

SANITARY SEWER LINE

SURFACE ELEVATION CONTOUR

SURFACE SPOT ELEVATION

CLEARING LIMIT/TREE LINE

ELECTRICAL TRANSFORMER PAD

TOWNHOME PARKING (NUMBER)

LIMIT OF DISTURBANCE

GAS LINE

WATER LINE

UNDERGROUND ELECTRIC LINE

UNDERGROUND TELECOM/DATA LINE

SANITARY SEWER MANHOLE

SANITARY SEWER CLEANOUT

# Administrative Site Plan StorageMax

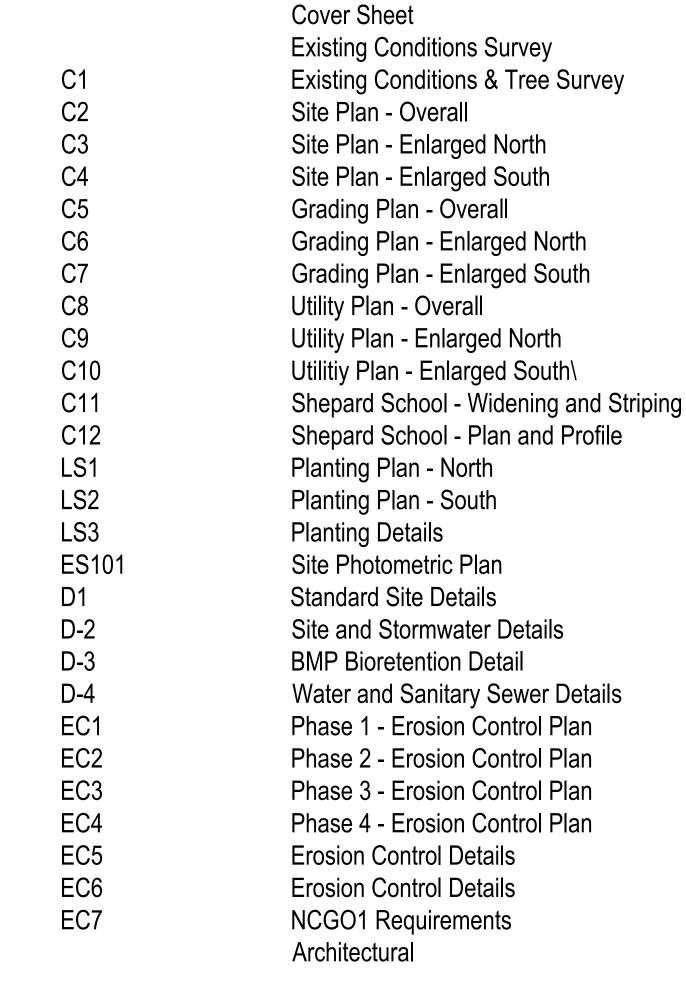
Town of Zebulon Wake County, North Carolina Case # SUP - 2023 -02

**DESCRIPTION** 

SHEET

SITE DATA:			
SITE ADDRESS:	901 PROCTOR STREET, ZEBULON NC		
PIN: CURRENT USE:	2706217463 VACANT		
PROPOSED USE:	SELF STORAGE FACILITY	OPEN SPACE (PASSIVE) SUMMARY	
SITE AREA (GROSS):	6.50 ac (283,140 sf)	DEOLUDED: 20/ V.6.5.A.C = 10A.C	
ROW DED. SHEPARD SCHOOL:	0.29 ac (12,756 sf)	REQUIRED: 3% X 6.5 AC = .19AC PROVIDED: BIORETENTION AREA WITH F	PENESTRAIN
ROW DED. PROCTOR:	0.06 ac (2,569 sf)	ACCESS .72 AC / 6.6 AC = 11%	EDESTIVATIV
SITE AREA (NET):	6.15 ac (267,894 sf)	OPEN AREA AT THE BMP TO COMPLY WIT	`H
ZONING DISTRICT: FUTURE LAND USE:	HC (HEAVY COMMERCIAL) SUBURBAN COMMERCIAL	UDO 5.7.5	
PROPOSED BUILDING SIZE:	92,000 sf		
BUILDING HEIGHT (MAX):	50'		
MAX LOT COVERAĞE (ALLOWED) - HC:	80% (5.20 ac)	PUBLIC IMPROVEMENT	T QUANTITIES
MAX LOT COVERAGE (PROVIDED) - HC:	55% (3.60 ac)	PHASE NUMBER(S)	PHASE 1
BUILDING SETBACKS:	30' (STREET ROW) 0', 5' (SIDE)	NUMBER OF LOT (S)	1
	25' (REAR)	LOT NUMBERS BY PHASE	1
PARKING (REQUIRED: 1 SPACE / 5000 sf):	106,000/ 5000 = 21 SPACES	NUMBER OF UNITS	1
PARKING (PROVIDED) :	24 SPACES'	LIVABLE OF UNITS	0
LATITUDE:	35.840297	OPEN SPACE (YES/NO)	YES
LONGITUDE:	-78.315683	NUMBER OF OPEN SPACE LOTS	0
BIKE PARKING (REQUIRED) BIKE PARKING (PROVIDED)	1 per Bldg	PUBLIC WATER (LF) PUBLIC 8" PVC SEWER	0
WATERSHED:	BUCKHORN	WATER SERVICE STUBS	1
RIVER BASIN:	NEUSE	WATER SERVICE ABANDONED	<u></u>
HUC:	03020203	SEWER SERVICE STUBS (NEW)	Ö
DENUDED AREA ON SITE :	258,310.80 SF (5.93 AC)	SEWER SERVICE REMOVED	0
DENUDED AREA ROW: DENUDED AREA TOTAL :	27,878.40 SF (.64 AC) 286,076 SF (6.57 AC)		

	4	
11111		G
ROLINIA		
ONT		
ROLINATION ROLLING		
1 MM IS 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		





# Gettle Engineering and Design, PLLC

3616 Waxwing Court, Wake Forest, North Carolina 27587 Firm License P-2538 (919) 210-3934



# **GENERAL NOTES**

1. BOUNDARY AND TOPO INFORMATION TAKEN FROM CAWTHORNE, MOSS & PANCIERA, P.C., SURVEYING, TITLED TOPOGRAPHIC SURVEY FOR STORAGE MAX LLC, DATED DECEMBER 22, 2022.

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 ZEBULON, CITY OF RALEIGH, WAKE COUNTY AND NCDOT STANDARDS AND SPECIFICATIONS.

4. NO CHANGES MAY BE MADE TO THE APPROVED DRAWINGS WITHOUT WRITTEN PERMISSION FROM THE ISSUING AUTHORITY.

# PROJECT INFORMATION:

PHONE:

EMAIL:

PHONE:

EMAIL:

PHONE:

SURVEYOR:

**ENGINEER:** 

PROJECT: STORAGE MAX COMMERCIAL

OWNER / DEVELOPER: ROBERET HIGH DEVELOPMENT, LLC

324 GREENVILLE AVE. WILMINGTON, NC 28403

(O) 910-790-9490

STORIT@AOL.COM

**ALLEN MASSEY** CONTACT:

(919) 604-0505

GETTLE ENGINEERING AND DESIGN, PLLC

LICENSE: P-2538 3616 WAXWING CT.

KEITH P. GETTLE, PE

WAKE FOREST, NC 27587 (919) 210-3934

KPGETTLE@GMAIL.COM

CAWTHORNE MOSS AND PANCIERA P.C. 333 SOUTH WHITE STREET

WAKE FOREST NORTH CAROLINA 27588 (919) 556- 3148

PROJECT ADDRESS: 901 PROCTOR STREET, ZEBULON, NC 1758784708

ZONING: **EXIST USE: VACANT** NONE

OVERLAY: NO FLOOD HAZARDS AREAS PER FEMA FIRM 372020600J FLOOD ZONE:

# SITE PERMITTING APPROVAL

# Water and Sewer Permits (If applicable)

City of Raleigh Public Utilities Department Permit #

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

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The  $material \ and \ Construction \ methods \ used \ for \ this \ project \ shall \ conform \ to \ the \ standards \ and \ specifications \ of \ the \ City's \ Public$ 

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

# CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

development and construction. The property owner, design consultants, and contractors are each responsible for compliance with all applicable City. State and Federal laws. This specific authorization below is not a permit, nor shall it be construed to permit any violation of City, State or Federal Law. All Construction must be in accordance with all Local, State, and Federal Rules and Regulations.

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

City of Raleigh Review Officer

I, L. JORDAN PARKER, JR. CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL GLOBAL POSITIONING SYSTEM (GPS) SURVEY MADE UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE GPS/GNSS SURVEY; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION SHOWN IN THE REFERENCES, THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY AS CALCULATED IS GREATER THAN 1:10000; THIS SURVEY IS NOT TO BE RECORDED WITHOUT THE WRITTEN CONSENT OF

THE SURVEYOR. CLASS OF SURVEY: <u>AA.</u>
POSITIONAL ACCURACY: <u>HORIZONTAL 0.05 US SURVEY FEET</u>
TYPE OF GPS FIELD PROCEDURE: <u>REAL TIME KINEMATICS</u>

NETWORK (VRS) DATES OF SURVEY: DATUM/EPOCH; NAD 83(2011) 2010 00
PUBLISHED/FIXED CONTROL USE: RALEIGH DOT CORS ARP
LAT: 35'45'49.50795' LONG: 78'34'44.39448"

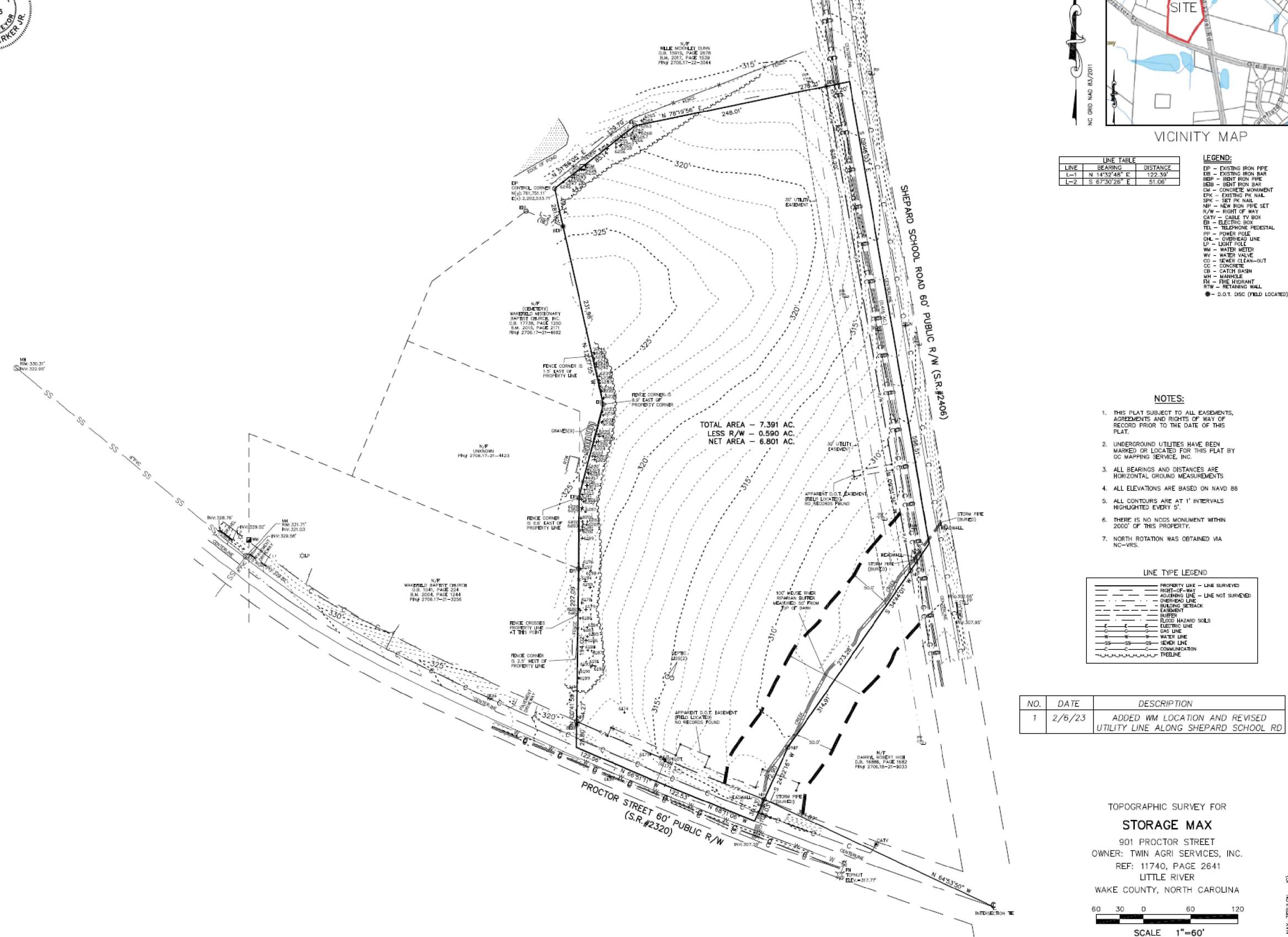
GEIOD MODEL: GEOID12B COMBINED GRID FACTORS: 1.00008415682041 UNITS: US SURVEY FOOT

THIS <u>6TH</u>DAY OF <u>FEBRUARY</u> A.D. 2023.

	Larry Jordan Parker, Jr.								
	L-4083								
PROFESSION	PROFÉSSIONAL": L'AND' SURVEYOR LICENSE NUMBER								
	TREE SPECIES								
Point	Northing	Easting	Description						
6174 6175	761085.096 761031.969	2202622.318 2202655.727	SWEET GUM-26 SWEET GUM-22						
6178	761224.598	2202555.727	OAK-8						
6179	761215.566	2202573.439	BRADFORD PEAR-5						
6180	761204.663	2202566.320	0AK-13						
6181	761214.357	2202566.790	CHERRY-9						
6182 6183	761216.192 761191.087	2202564.746 2202568.571	CEDAR-8 CEDAR-8						
6184	761193,251	2202574.966	CEDAR-10						
6185	761181.372	2202575.734	PRIVET-4X3						
6186	761176.699	2202573.424	PRIVET-4						
6187	761163.074	2202581.026	SWEET GUM-7						
6188 6189	761164.004 761128.633	2202575.940 2202563.736	SWEET GUM-9 CHINABERRY-6						
6190	761136.190	2202564.997	SWEET GUM-8X2						
6191	761145.027	2202581.485	BRADFORD PEAR-7						
6192	761143.632	2202585.004	CHINABERRY-8						
6193	761143.133	2202580.059	CHINABERRY-4						
6194	761252.133	2202572.561	CHERRY-4						
6195 6196	761243.993 761272.803	2202578.908 2202570.394	CHINABERRY-4X2 ELM-4						
6197	761267.266	2202567.289	OAK-7						
6198	761265.382	2202579.248	CHINABERRY-6						
6199	761306.967	2202569,211	0AK-21						
6200	761317.252	2202569.247	SWEET GUM-8X2						
6201 6202	761320.654 761327.774	2202569.341 2202569.191	OAK-7 CHERRY-6						
6203	761324.010	2202570.176	CHERRY-5						
6204	761327.806	2202575.451	BRADFORD PEAR-10						
6205	761323.600	2202574.394	PINE-4						
6206	761332.163	2202567.391	OAK-4						
6207	761340.449	2202572,910	OAK-11						
6208 6209	761345.444 761343.307	2202569.132 2202568.635	OAK-11 CEDAR-4						
6210	761353.158	2202570.671	CEDAR-4						
6211	761355.945	2202568.262	SWEET GUM-9						
6212	761355.480	2202573.304	OAK-8						
6213	761361.833	2202569.043	CEDAR-5						
6214	761367.997	2202572.061 2202575.169	OAK-11 OAK-5						
6215 6216	761373.555 761373.510	2202573.169	BRADFORD PEAR-8						
5217	761383.379	2202574.540	CEDAR-8						
6218	761388.348	2202577.079	CHERRY-7						
6219	761390.696	2202575.970	CEDAR-8						
6220	761393.644	2202576.358	CEDAR-9 SWEET GUM-13X3						
6221 6222	761405.925 761410.462	2202584.009 2202581,325	CHERRY-10						
6223	761409.734	2202584,910	CEDAR-7						
6224	761423.846	2202584.696	CHERRY-4						
6225	761438.719	2202589.790	CHERRY-8						
6226	761435.986	2202590.244	SWEET CUM-8						
6227 6228	761429.364 761428.331	2202589.024 2202586.395	SWEET GUM-11 SWEET GUM-8						
6229	761428.331	2202595.321	BRADFORD PEAR-4						
6230	761453.836	2202593.164	OAK-8						
6231	761454.539	2202594.369	OAK-27						
6232	761462.670	2202595.652	0AK-18						
6233	761467.122	2202594.529	OAK-7						
6234 6235	761485.052 761492.602	2202596.549 2202593.089	SWEET GUM-8 SWEET GUM-6						
6236	761494.097	2202593.009	CEDAR-5						
10 mile for for	1 2 2 2 2 1 2 2 2 2	AND RESERVED AND ADDRESS OF THE PARTY OF THE	10 - 10 1 TO 10 TO						



PROFESSIONAL LAND SURVEYORS, C-1525, 333 S. WHITE STREET, P.O. BOX 1253, WAKE FOREST N.C., 27588, (919) 556-3148



Survey Existing

Project No. 23001 Dwg No.

Conditions

PLL

Design,

ettle

Ö

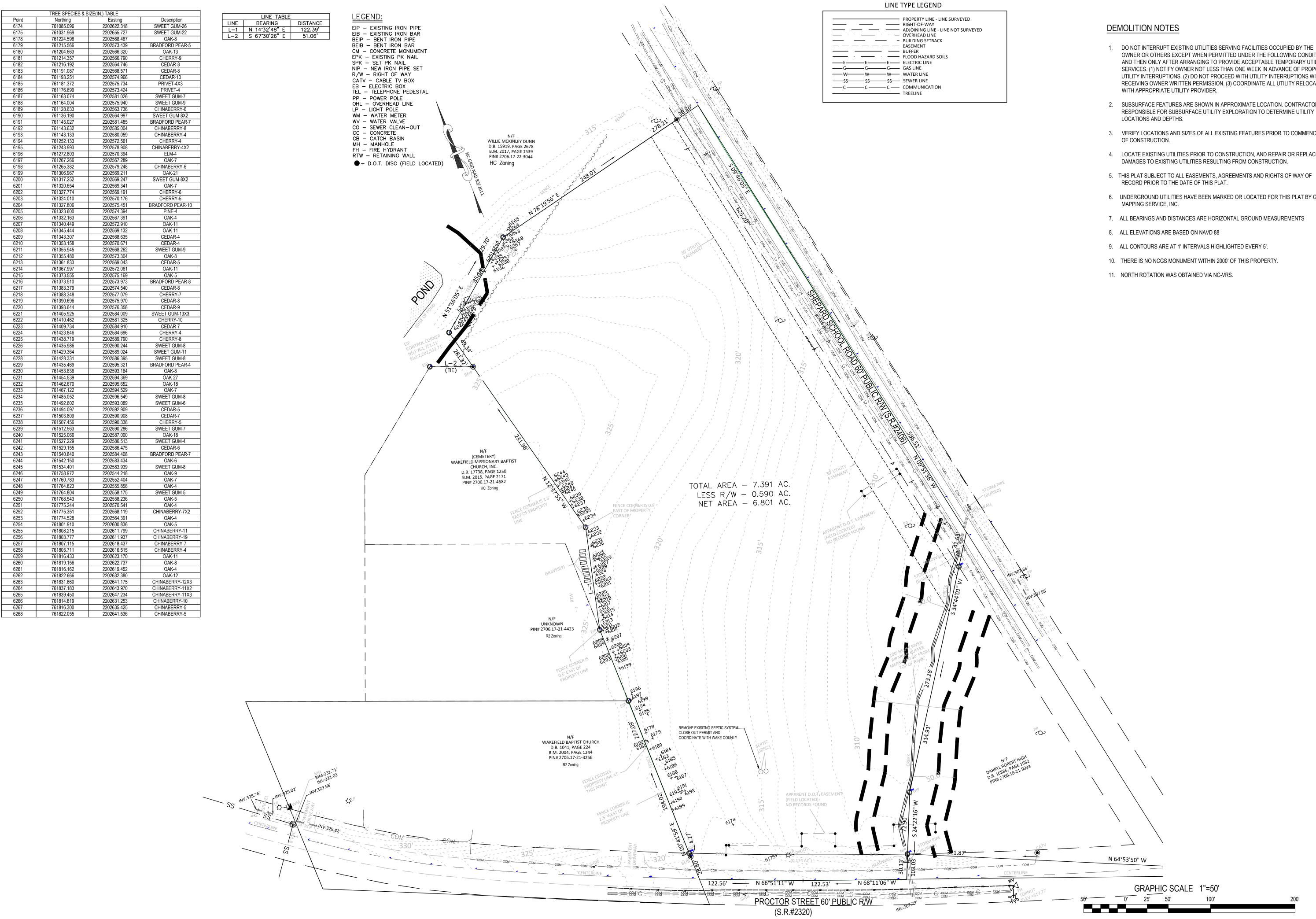
27587 se P-28

Engineering and Safe Waxwing Court, ake Forest, North Carolina 210-3934 Firm Licens

DATE
DATE
DATE
DATE
DATE
DATE
DATE
DATE

1 2 8 8 9 9 NO.

DECEMBER 21, 2022 ZONED HC PIN #2706.18-21-7463



- 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
- 2. SUBSURFACE FEATURES ARE SHOWN IN APPROXIMATE LOCATION. CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY EXPLORATION TO DETERMINE UTILITY
- 3. VERIFY LOCATIONS AND SIZES OF ALL EXISTING FEATURES PRIOR TO COMMENCEMENT
- 4. LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION, AND REPAIR OR REPLACE ANY
- 5. THIS PLAT SUBJECT TO ALL EASEMENTS, AGREEMENTS AND RIGHTS OF WAY OF
- 6. UNDERGROUND UTILITIES HAVE BEEN MARKED OR LOCATED FOR THIS PLAT BY GC

 Design, and Court, Engineering as 3616 Waxwing (ake Forest, North Ca 210-3934 Firm

Gettle DATE
DATE
DATE
DATE
DATE
DATE
DATE
DATE



Survey Conditions Existing

# 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 RADII 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
- 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 LOCAL STANDARDS. INDICATED PAVEMENT THICKNESSES REFER TO COMPACTED THICKNESS.
- 6. INSTALL ALL PAVEMENT WITH POSITIVE SURFACE DRAINAGE.

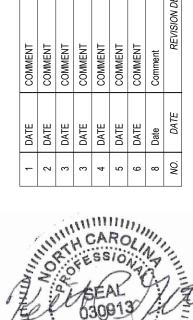
DRAINAGE ALONG AND FROM ALL GUTTERS.

- 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 R7-8 AND R7-8D SIGN. ALL SIGNS FOR VAN ACCESSIBLE SPACES SHALL ALSO INCLUDE A "VAN ACCESSIBLE" SIGN.
- 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 STAKING 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 ENCROACH INTO REQUIRED SETBACKS.
- 12. PAVEMENT TO BE STNADARD DUTY IN PARKING AREAS AND HEAVY DUTY IN DRIVE AISLES (SEE DETAIL).
- 13. CURB AND GUTTER TO BE 24" STANDARD ON SITE AND 30" STANDARD IN RIGHT OF WAY UNLESS OTHERWISE NOTED (SEE DETAIL).

GRAPHIC SCALE 1"=30'

Design, and Engineering 3616 W Forest, -3934 ettle 9

Ы



# **Enlarged North** Plan

Project No. 23001

Site

- \* ALL SPOT ELEVATIONS SHOWN ARE FINISHED SURFACE ELEVATIONS. SPOT ELEVATIONS SHALL TAKE PRECEDENCE OVER ELEVATION CONTOURS. ALL ELEVATIONS SHOWN ON CURB
- HAVE POSITIVE SURFACE DRAINAGE TO A FREE-FLOWING DRAINAGE OUTLET, WITH NO IRREGULARITIES OR DEPRESSIONS THAT WOULD CAUSE UNINTENDED 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.

- 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

SEE THE DETAIL SHEET FOR SPECIFICS REGARDING THE BIORETENTION DEVICE.

# <u>NOTES</u>

North Enlarged Grading

Д

<u>g</u>

S

D

7

 $\boldsymbol{\sigma}$ 

eering

Ш

ettle

Ú

ngine 3616 V Forest, -3934

- 2 E E 4 C 9 8 <u>8</u>

Project No. 23001

- 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
- 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 95% 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 98%
- ALL EXCESS OR UNSUITABLE SOIL SHALL BE LEGALLY DISPOSED IN AN OFFSITE OR APPROVED ONSITE LOCATION.
- WHERE LANDSCAPED OR YARD AREAS ABUT 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 6 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
- 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 ROLESVILLE AND NCDOT 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 C76, UNLESS OTHERWISE SPECIFIED. ALL JOINTS SHALL BE FULLY SEALED USING PREFORMED FLEXIBLE BUTYL RUBBER SEALING COMPOUND.

# SURFACE DRAINAGE

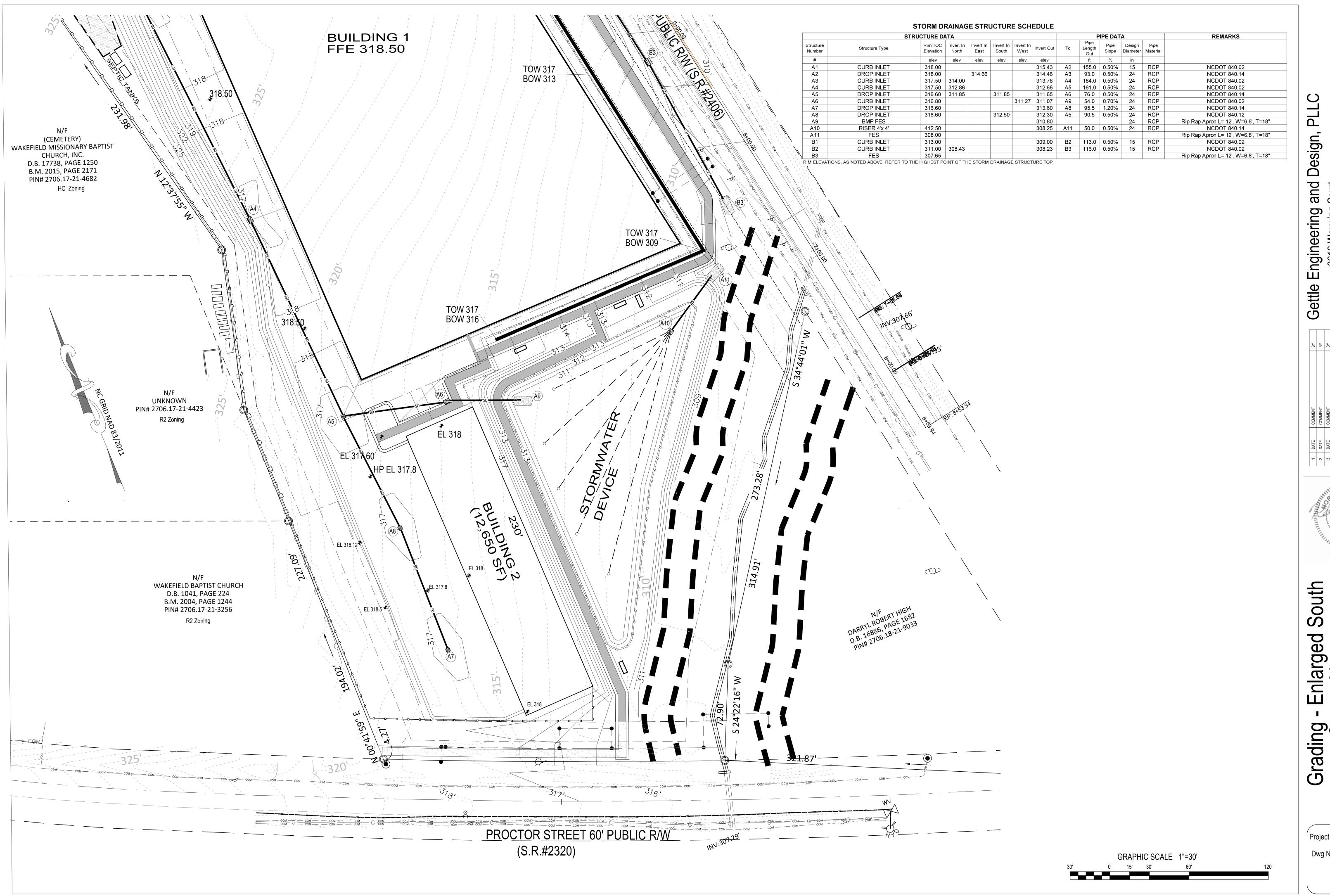
- AND GUTTER REFER TO TOP OF CURB, UNLESS OTHERWISE INDICATED.
- ALL FINISHED PAVEMENT AND YARD SURFACES SHALL BE FINE-GRADED AND FINISHED TO

# ACCESSIBILITY

EXCEED 2.0% SLOPE IN ANY DIRECTION.

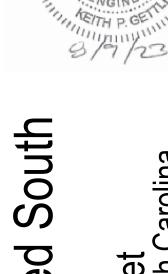
# **BMP NOTES**

1. SEE SHEET C7 FOR STORM DRAIN SCHEDULE.

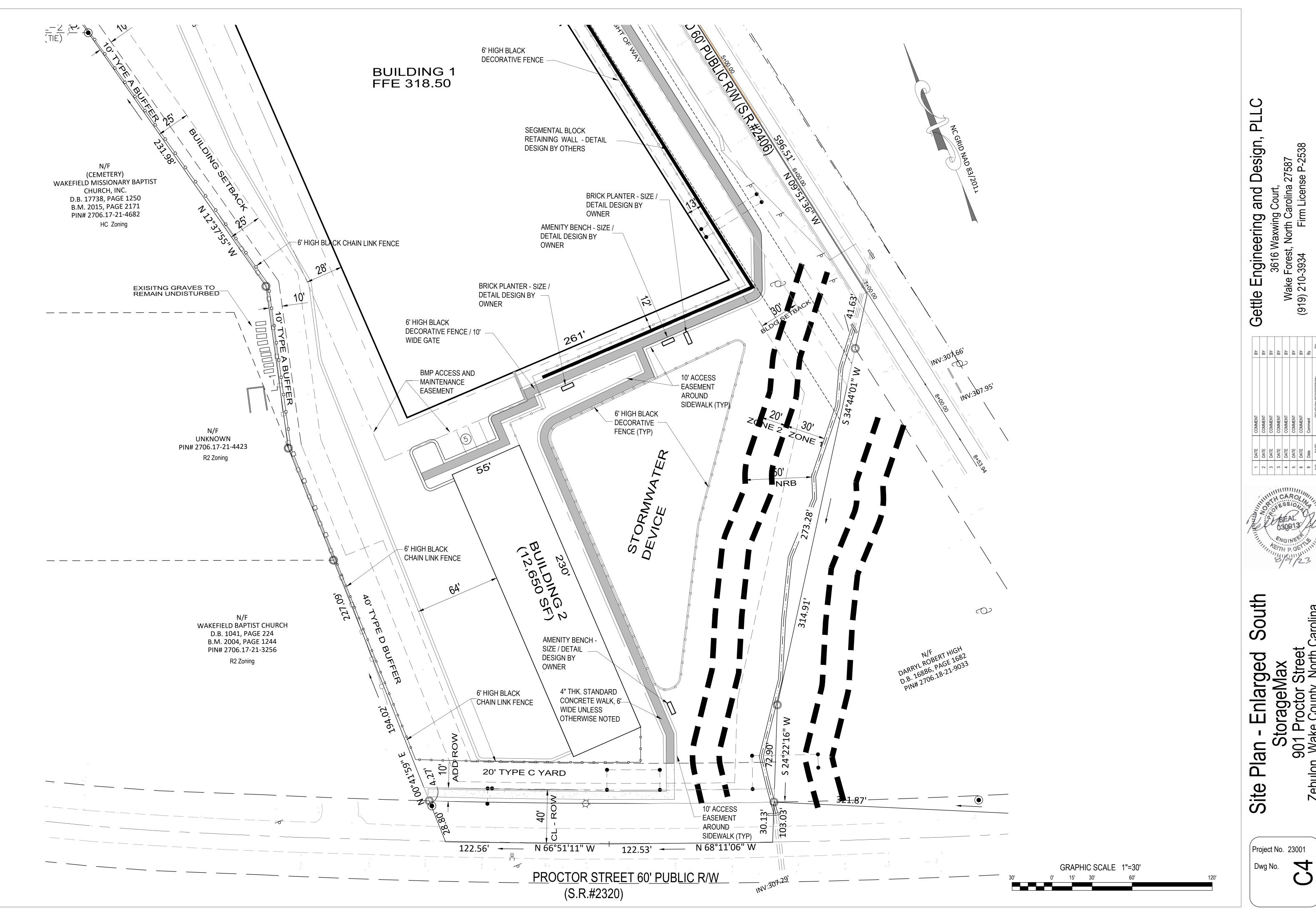


Gettle Engineering and Design, P 3616 Waxwing Court, Wake Forest, North Carolina 27587 (919) 210-3934 Firm License P-2538

DATE
DATE
DATE
DATE
DATE
DATE
DATE
DATE 
 2
 8
 8
 8
 0

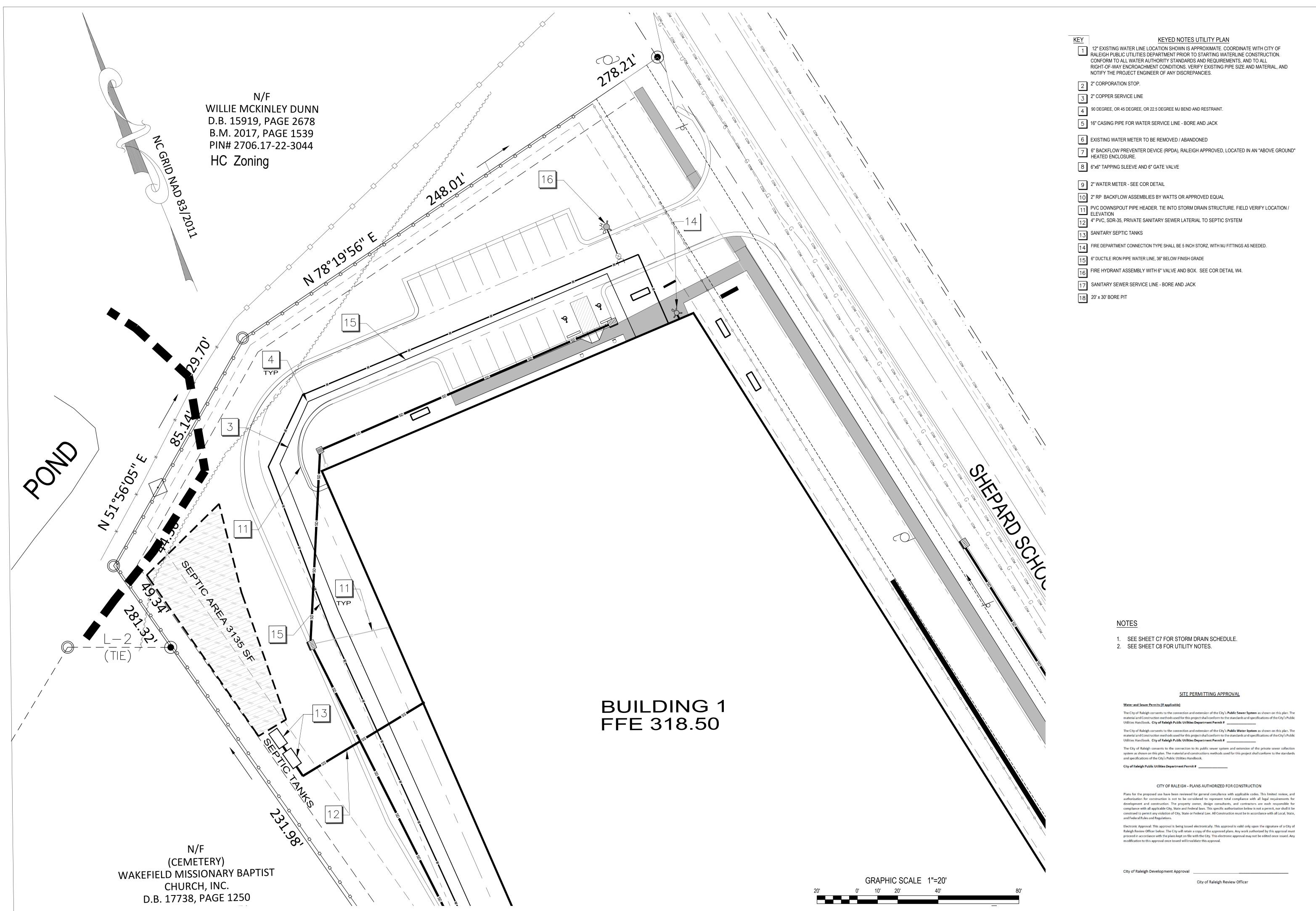


Grading - Enlary StorageMax



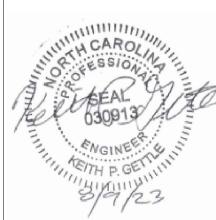
South

Enlarged Plan



PLLC

Design,



Utility Plan-Enlarged North StorageMax 901 Proctor Street Zebulon, Wake County, North Carolina

Project No. 23001

65

KEYED NOTES UTILITY PLAN

12" EXISTING WATER LINE LOCATION SHOWN IS APPROXIMATE. COORDINATE WITH CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO STARTING WATERLINE CONSTRUCTION. CONFORM TO ALL WATER AUTHORITY STANDARDS AND REQUIREMENTS, AND TO ALL RIGHT-OF-WAY ENCROACHMENT CONDITIONS. VERIFY EXISTING PIPE SIZE AND MATERIAL, AND NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES.

2" CORPORATION STOP.

3 2" COPPER SERVICE LINE

90 DEGREE, OR 45 DEGREE, OR 22.5 DEGREE MJ BEND AND RESTRAINT.

5 16" CASING PIPE FOR WATER SERVICE LINE - BORE AND JACK

6" BACKFLOW PREVENTER DEVICE (RPDA), RALEIGH APPROVED, LOCATED IN AN "ABOVE GROUND" HEATED ENCLOSURE.

8 6"x6" TAPPING SLEEVE AND 6" GATE VALVE

9 2" WATER METER - SEE COR DETAIL

10 2" RP BACKFLOW ASSEMBLIES BY WATTS OR APPROVED EQUAL

PVC DOWNSPOUT PIPE HEADER. TIE INTO STORM DRAIN STRUCTURE. FIELD VERIFY LOCATION / ELEVATION

4" PVC, SDR-35, PRIVATE SANITARY SEWER LATERIAL TO SEPTIC SYSTEM

13 SANITARY SEPTIC TANKS

FIRE DEPARTMENT CONNECTION TYPE SHALL BE 5 INCH STORZ, WITH MJ FITTINGS AS NEEDED.

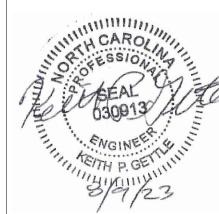
6" DUCTILE IRON PIPE WATER LINE, 36" BELOW FINISH GRADE

16 FIRE HYDRANT ASSEMBLY WITH 6" VALVE AND BOX. SEE COR DETAIL W4.

17 SANITARY SEWER SERVICE LINE - BORE AND JACK

18 20' x 30' BORE PIT

PLLC Gettle Engineering and Design,



- 1. SEE SHEET C7 FOR STORM DRAIN SCHEDULE.
- 2. SEE SHEET C8 FOR UTILITY NOTES.

# SITE PERMITTING APPROVAL

# Water and Sewer Permits (If applicable)

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

 $material \ and \ Construction \ methods \ used for this \ project \ shall \ conform \ to \ the \ standards \ and \ specifications \ of \ the \ City's \ Public$ Utilities Handbook. City of Raleigh Public Utilities Department Permit #

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and constructions 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 #

# 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 and Federal Rules and Regulations.

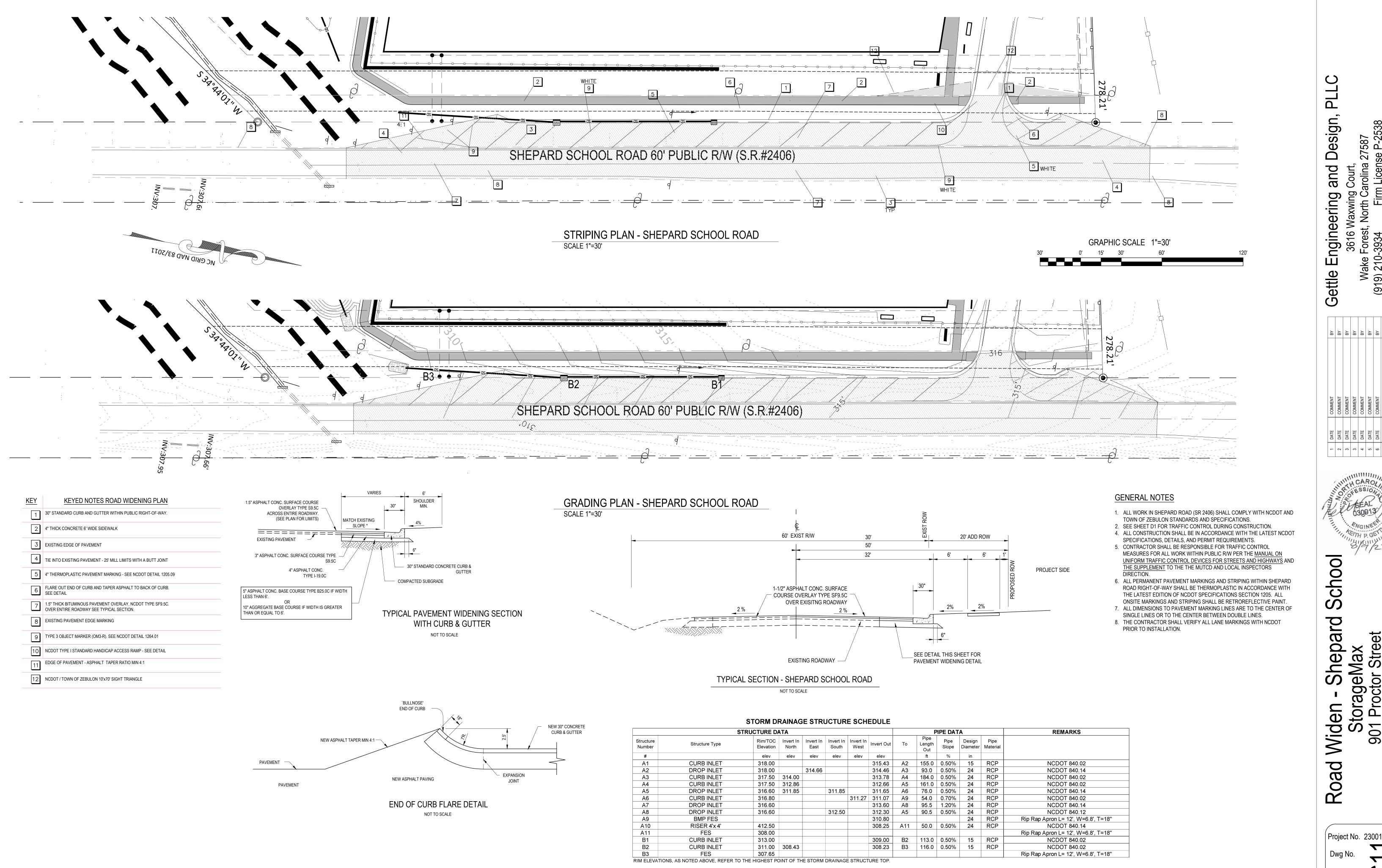
Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with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

City of Raleigh Development Approval

City of Raleigh Review Officer

Enlarged Utility

Project No. 23001



Gettle Engineering and Design,



School

eM

D

# SHEPARD SCHOOL PLAN VIEW

1" = 40'

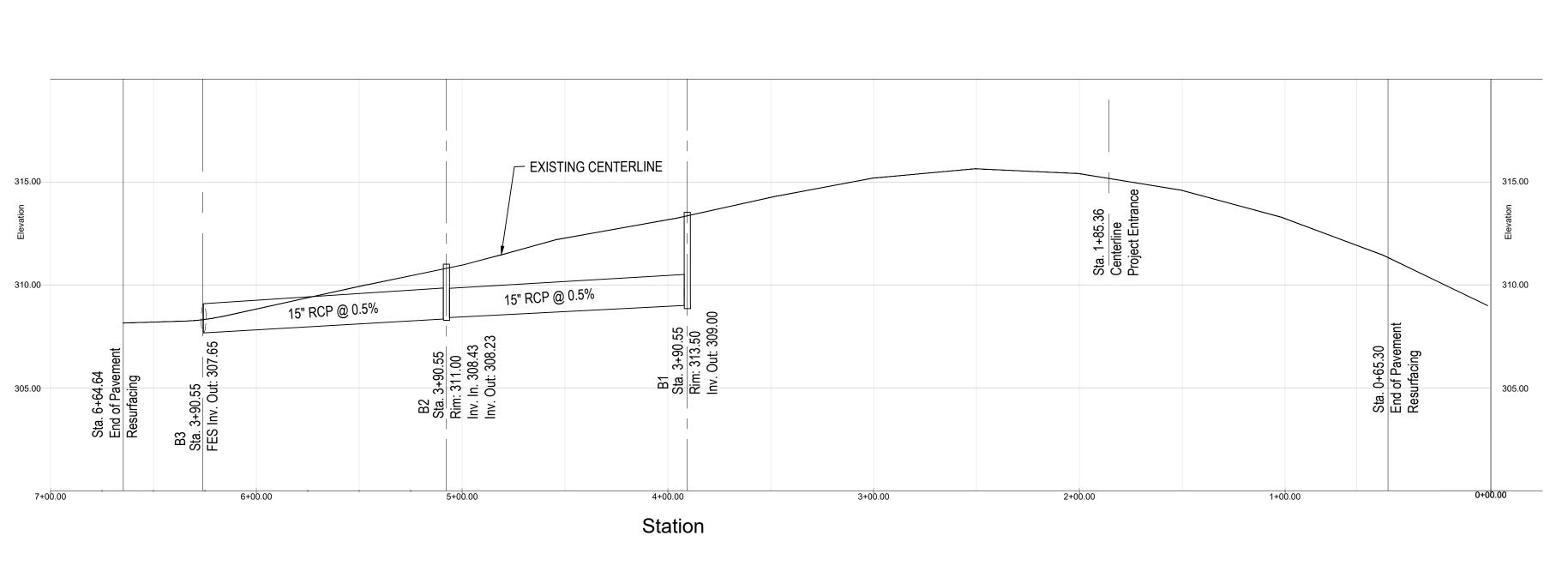
# STORM DRAINAGE STRUCTURE SCHEDULE

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

STRUCTURE DATA							F	PIPE DAT	Ά		REMARKS		
Structure Number	Structure Type	Rim/TOC Elevation	Invert In North	Invert In East	Invert In South	Invert In West	Invert Out	То	Pipe Length Out	Pipe Slope	Design Diameter	Pipe Material	
#		elev	elev	elev	elev	elev	elev		ft	%	in		
A1	CURB INLET	318.00					315.43	A2	155.0	0.50%	15	RCP	NCDOT 840.02
A2	DROP INLET	318.00		314.66			314.46	А3	93.0	0.50%	24	RCP	NCDOT 840.14
А3	CURB INLET	317.50	314.00				313.78	A4	184.0	0.50%	24	RCP	NCDOT 840.02
A4	CURB INLET	317.50	312.86				312.66	A5	161.0	0.50%	24	RCP	NCDOT 840.02
A5	DROP INLET	316.60	311.85		311.85		311.65	A6	76.0	0.50%	24	RCP	NCDOT 840.14
A6	CURB INLET	316.80				311.27	311.07	Α9	54.0	0.70%	24	RCP	NCDOT 840.02
A7	DROP INLET	316.60					313.60	A8	95.5	1.20%	24	RCP	NCDOT 840.14
A8	DROP INLET	316.60			312.50		312.30	A5	90.5	0.50%	24	RCP	NCDOT 840.12
A9	BMP FES						310.80				24	RCP	Rip Rap Apron L= 12', W=6.8', T=18"
A10	RISER 4'x 4'	412.50					308.25	A11	50.0	0.50%	24	RCP	NCDOT 840.14
A11	FES	308.00											Rip Rap Apron L= 12', W=6.8', T=18"
B1	CURB INLET	313.00					309.00	B2	113.0	0.50%	15	RCP	NCDOT 840.02
B2	CURB INLET	311.00	308.43				308.23	В3	116.0	0.50%	15	RCP	NCDOT 840.02
В3	FES	307.65											Rip Rap Apron L= 12', W=6.8', T=18"

# **GENERAL NOTES**

- 1. ALL WORK IN SHEPARD ROAD (SR 2406) SHALL COMPLY WITH NCDOT AND TOWN OF ZEBULON STANDARDS AND SPECIFICATIONS.
- 2. SEE SHEET D1 FOR TRAFFIC CONTROL DURING CONSTRUCTION.
- 4. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST NCDOT SPECIFICATIONS, DETAILS, AND PERMIT REQUIREMENTS. 5. CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL
- MEASURES FOR ALL WORK WITHIN PUBLIC R/W PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND THE SUPPLEMENT TO THE THE MUTCD AND LOCAL INSPECTORS DIRECTION. 6. ALL PERMANENT PAVEMENT MARKINGS AND STRIPING WITHIN SHEPARD
- ROAD RIGHT-OF-WAY SHALL BE THERMOPLASTIC IN ACCORDANCE WITH THE LATEST EDITION OF NCDOT SPECIFICATIONS SECTION 1205. ALL ONSITE MARKINGS AND STRIPING SHALL BE RETROREFLECTIVE PAINT.
- 7. ALL DIMENSIONS TO PAVEMENT MARKING LINES ARE TO THE CENTER OF SINGLE LINES OR TO THE CENTER BETWEEN DOUBLE LINES.
- 8. THE CONTRACTOR SHALL VERIFY ALL LANE MARKINGS WITH NCDOT PRIOR TO INSTALLATION.



# SHEPARD SCHOOL ROAD PROFILE

GRAPHIC SCALE 1" = 40' (H) 1" = 4' (V)

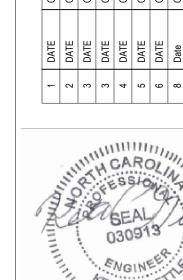


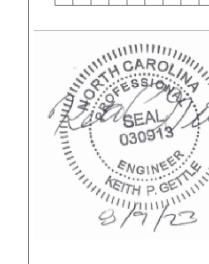
and Profile School Shepard

Project No. 23001

PLLC

Gettle Engineering and Design, P 3616 Waxwing Court, Wake Forest, North Carolina 27587 (919) 210-3934 Firm License P-2538





# **UTILITY SPECIFICATIONS**

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.

- 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.

- 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 NCDENR-DIVISION OF WATER QUALITY, INCLUDING NCAC 2T REGULATIONS AND MINIMUM DESIGN CRITERIA FOR THE PERMITTING OF GRAVITY SEWERS.
- 3 REGULATIONS OF NCDENR-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.

- 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 APPLICABLE UTILITY AND ROADWAY AUTHORITIES 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.

- WHERE ROCK OR OTHER HARD MATERIAL OCCURS AT THE DESIGNED TRENCH BOTTOM, OVEREXCAVATE TRENCH DEPTH 6 INCHES AND REPLACE OVEREXCAVATION MATERIAL WITH #67 STONE
- 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 LIFTS OF 8 INCH MAXIMUM THICKNESS AND COMPACTED TO
- 98% 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.

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 SUNLIGHT 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.

- PROVIDE ALL WATER SYSTEM MATERIALS IN ACCORDANCE WITH LOCAL WATER AUTHORITY REQUIREMENTS.
- INSTALL WATERLINES TO PROVIDE 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 350 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 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.

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 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 F477.
- 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 RIGHTS-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.

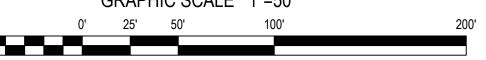
- FOR CONNECTIONS TO EXISTING UTILITY AND DRAINAGE LINES, CONTRACTOR SHALL VERIFY EXISTING PIPE SIZE AND MATERIAL, AND PROVIDE APPROPRIATE CONNECTION FITTINGS.
- ANY CONNECTION TO EXISTING UTILITES, OR ANY UTILITY SERVICE INTERRUPTION, SHALL BE FIRST COORDINATED WITH THE GOVERNING UTILITY AUTHORITY,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

# 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 RALIEGH AND NCDENR 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 NCDENR 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. ALL IMPROVEMENTS SHALL PASS FINAL INSPECTION BY ENGINEER AND THE UTILITY AUTHORITY.
- ENGINEER SHALL SUBMIT ALL CERTIFICATIONS AND OTHER CLOSE-OUT DOCUMENTS TO APPLICABLE LOCAL AND STATE AUTHORITIES.

# 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.



# CITY OF RALEIGH UTILITY NOTES:

W-41 & S-49)

1.ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: COR PUD HANDBOOK, CURRENT EDITION)

2.UTILITY SEPARATION REQUIREMENTS: a) A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS

THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL b) WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE

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

d) 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER

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 CORPUD DETAILS

FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED 3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION 4. ONTRACTOR SHALL MAINTAIN CONTINUOUS WATER TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT

f) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER

5. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS. 4' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS. 6. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISITNG WATER AND SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE 7. INSTALL <sup>3</sup>" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2'x2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. (NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW AND PRESSURE). 8. INSTALL 4" PVC SEWER SERVICES AT 1.0% MINIMUM GRADE WITH CLEANOUTS

LOCATED AT ROW OR EASEMENT LINE AND SPACED EVERY 75 LINEAR FEET

9. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI; BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE. 10. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO

11. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS AND SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.

12. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS AND INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE CORPUD FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT. CONTACT TIM BEASLEY AT (919)996-2334 OR TIMOTHY.BEASLEY@RALEIGHNC.GOV FOR MORE INFORMATION. 13. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX-B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA THESE GUIDELINES ARE THE MINIMUM REQUIREMENTS. THE DEVICES SHALL MEET AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE) STANDARDS OR BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST.~THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS-CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT JOANIE HARTLEY AT (919) 212-5923 OR JOANIE.HARTLEY@RALEIGHNC.GOV FOR MORE INFORMATION

esign

and

(D

16 res

# 1. SEE SHEET C7 FOR STORM DRAIN SCHEDULE.

# SITE PERMITTING APPROVAL

Water and Sewer Permits (If applicable)

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

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

material and Construction methods used for this project shall conform to the standards and specifications of the City's Public

and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit #

# CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

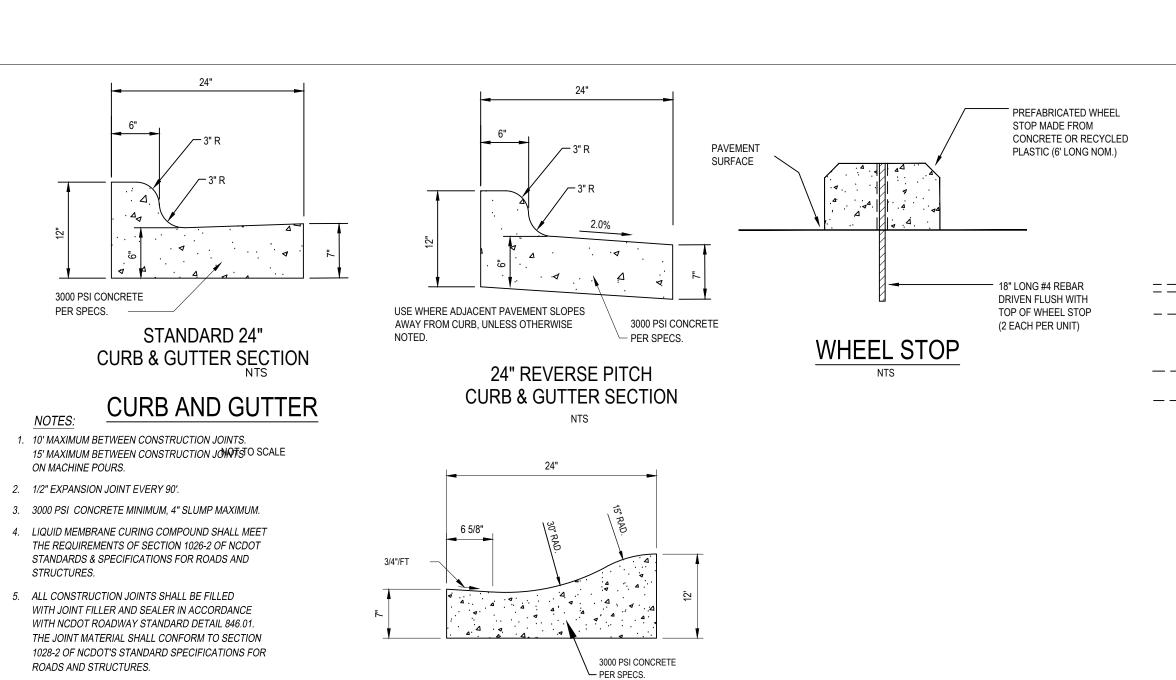
Plans for the proposed use have been reviewed for general compliance with applicable codes. This limited review, and authorization for construction is not to be considered to represent total compliance with all legal requirements for development and construction. The property owner, design consultants,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

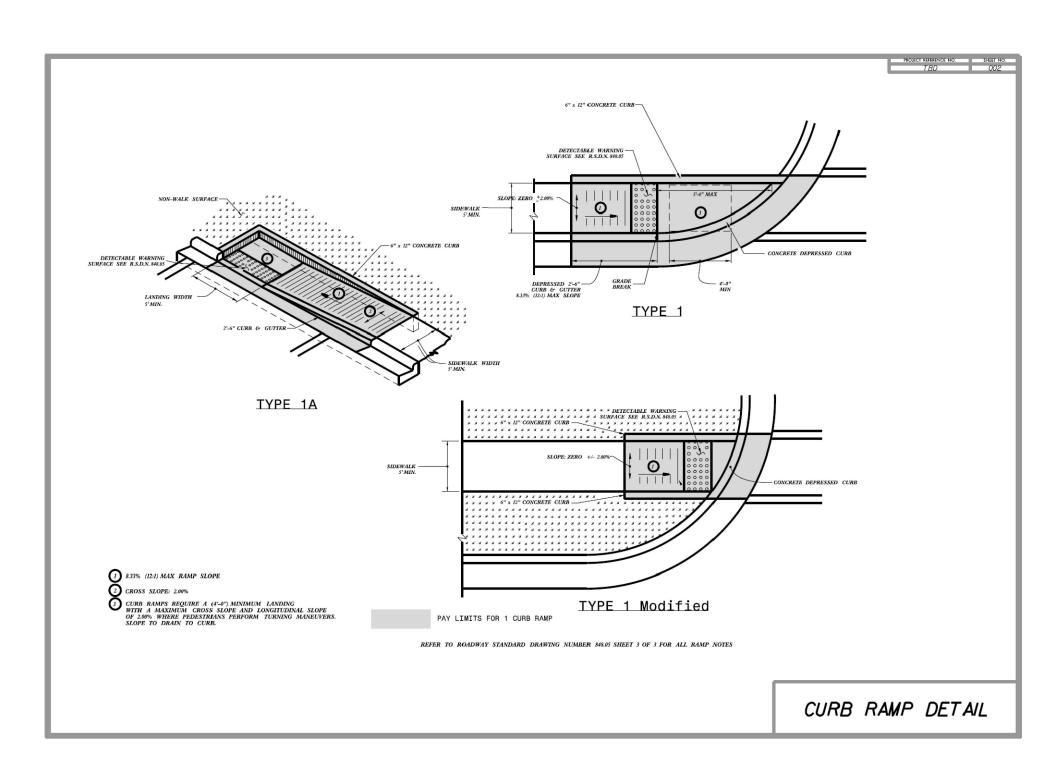
Electronic Approval: This approval is being issued electronically. This approval is valid only upon the signature of a City of Raleigh Review Officer below. The City will retain a copy of the approved plans. Any work authorized by this approval must proceed in accordance with the plans kept on file with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

City of Raleigh Development Approval

City of Raleigh Review Officer

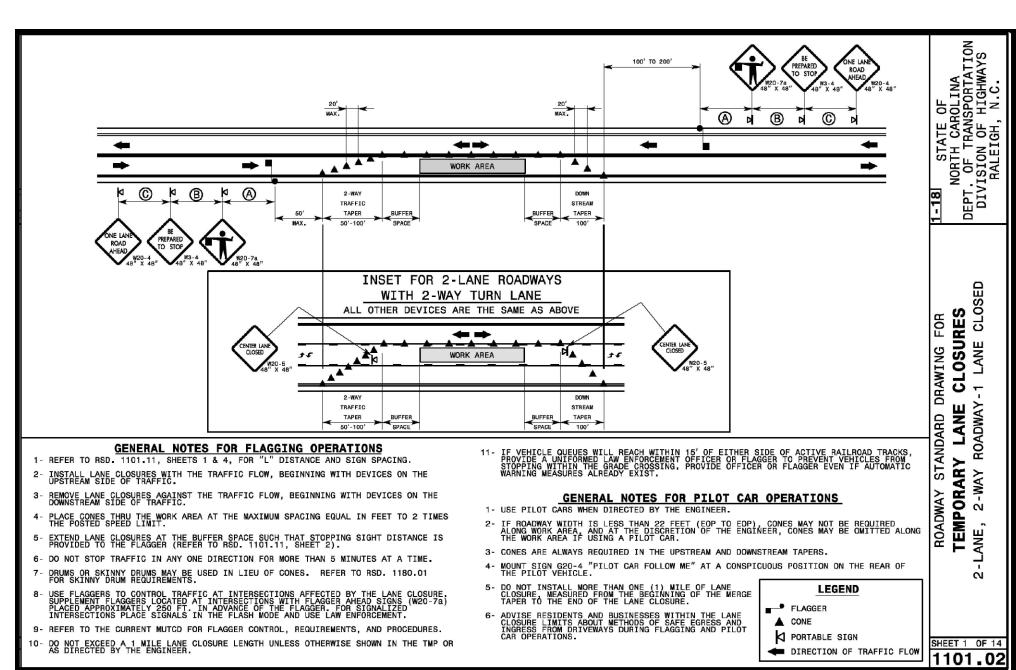
Utillity

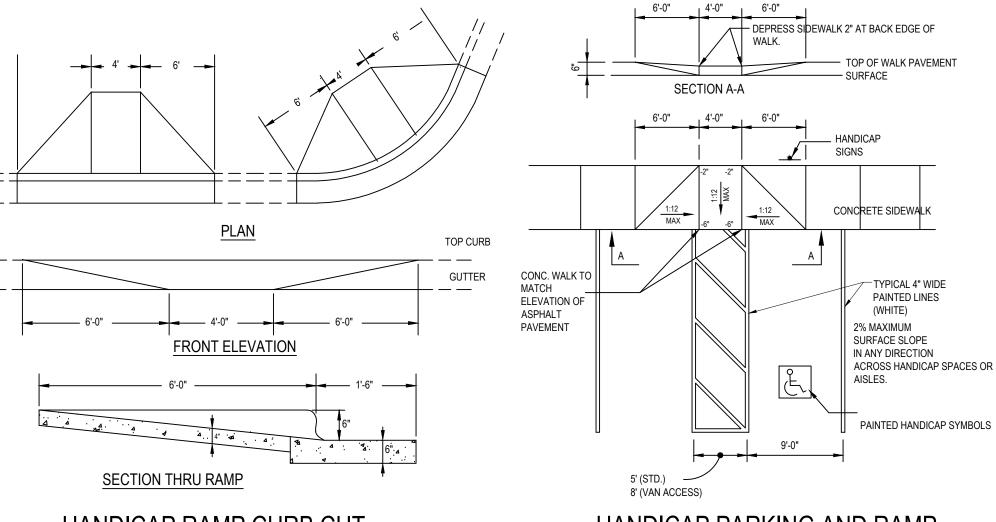


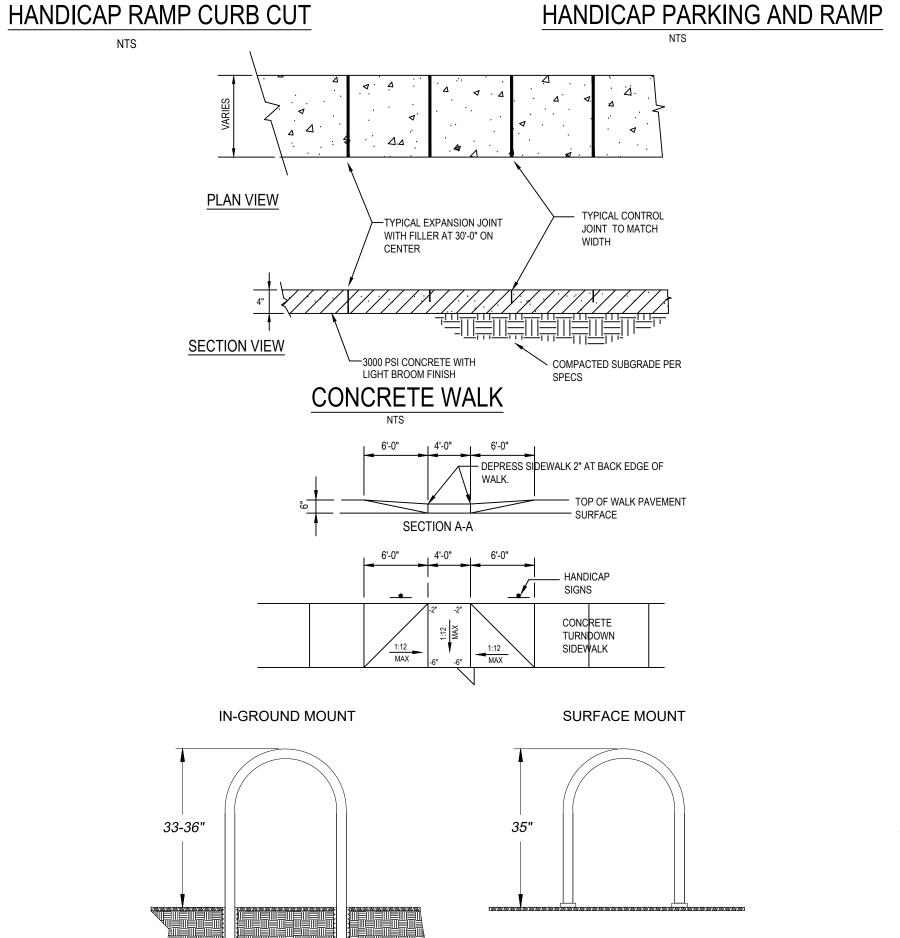


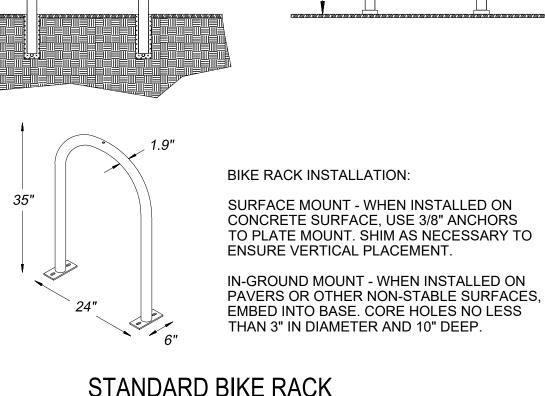
24" ROLLED **CURB SECTION** 

6. ABC STONE REQUIRED UNDER ALL CURB & GUTTER.

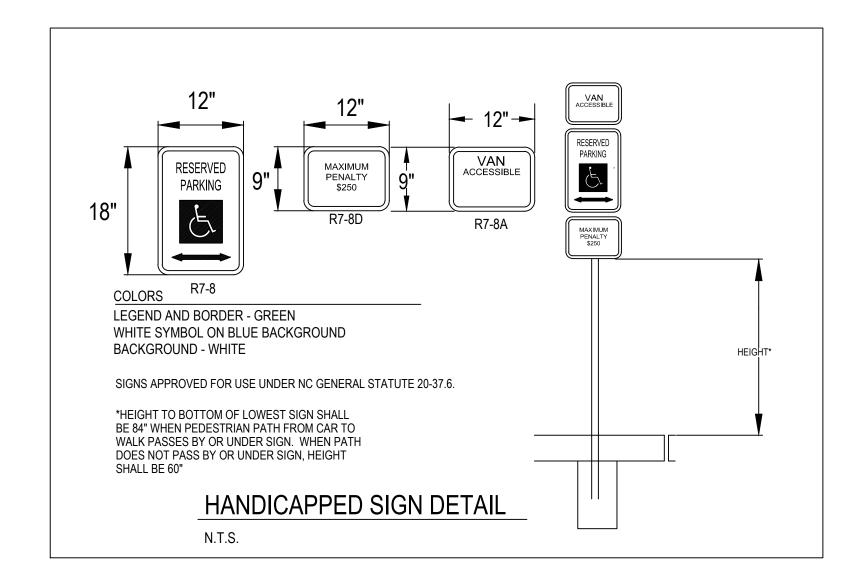


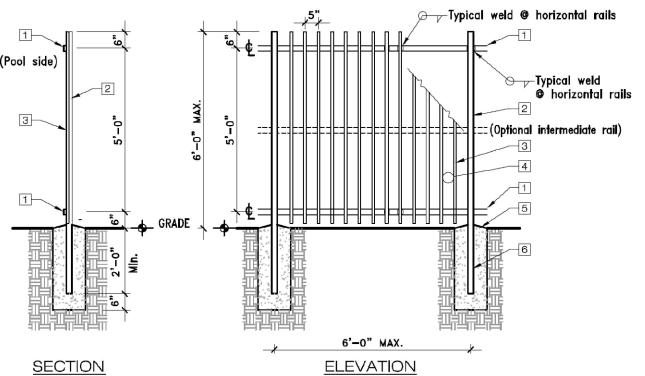






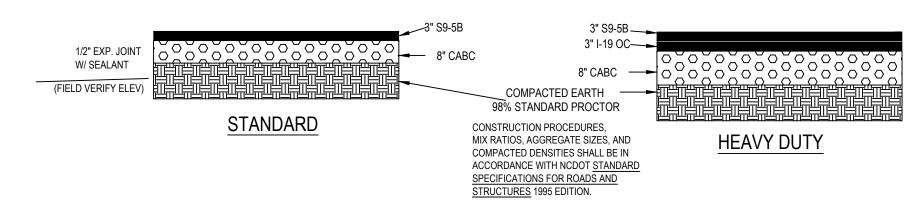
STANDARD BIKE RACK





- 1. Horizontal rails: Minimum 2"x1"x14 ga., welded to posts at all 4 sides --OR-- pipe 1-1/2" diameter.
- 2. Posts: Minimum 2"x2"x14 ga., embedded in concrete footing --OR-- pipe 2-1/4" diameter.
- 3. Pickets: Minimum 1"x1"x 0.065" wall thickness, welded to rails at all 4 sides --OR-- pipe 2-1/4" diameter.
- 5. Concrete footing at each post—— minimum diameter of 10", with a minimum depth of 30" from finish grade. Top surface of footing shall be sloped 1" to shed water. Minimum post embedment shall be 24 inches. Concrete strength shall be not less than 2500 psi at 28 days.
- 6. Protect aluminum embedded in concrete with a coat of bituminous paint.

# FENCE DETAIL TYPE 1



PAVEMENT DETAIL

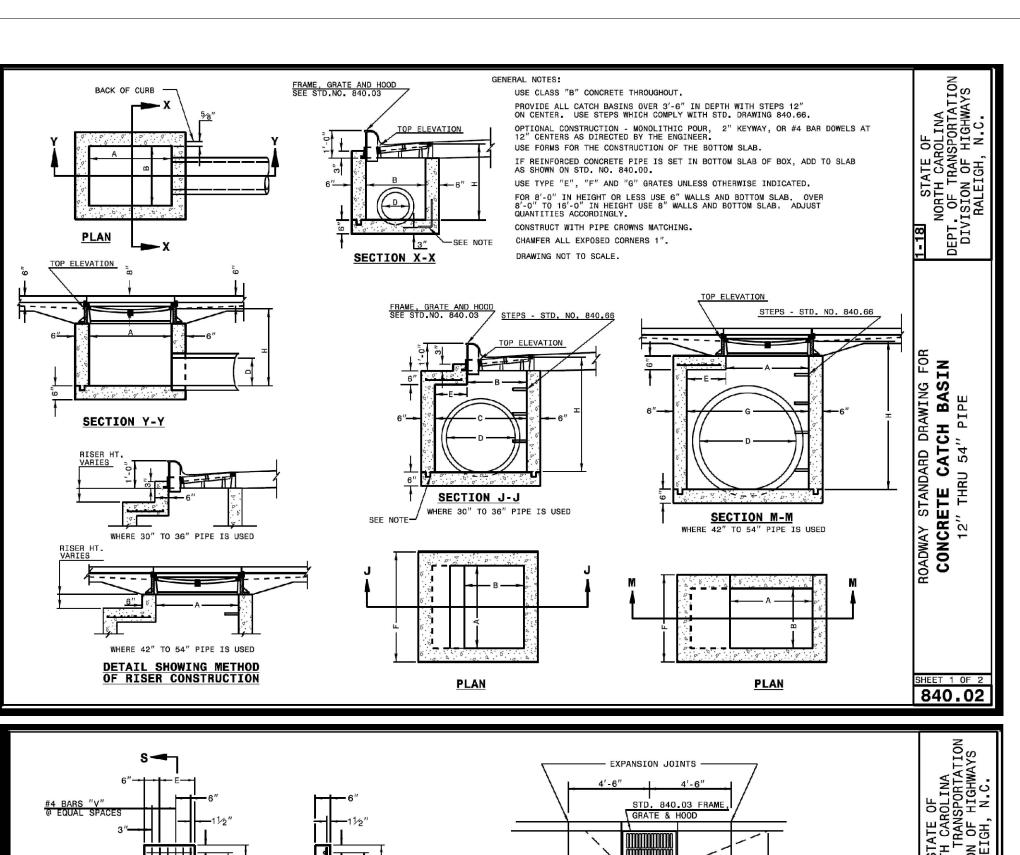
# Engineering and 3616 Waxwin Forest, North ( -3934 Fir Gettle

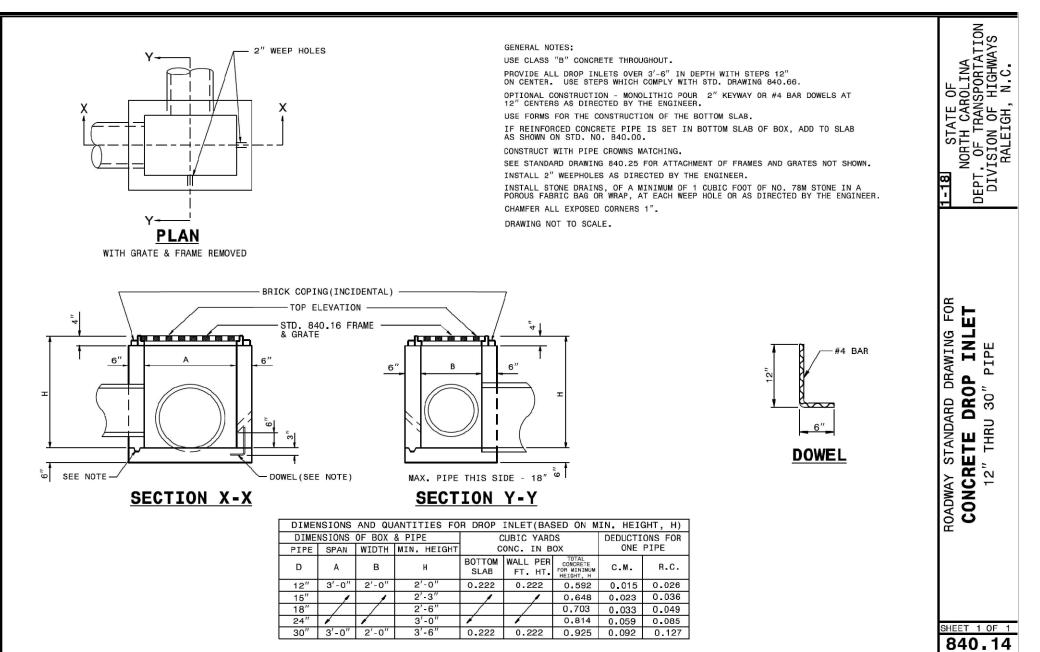
PLL

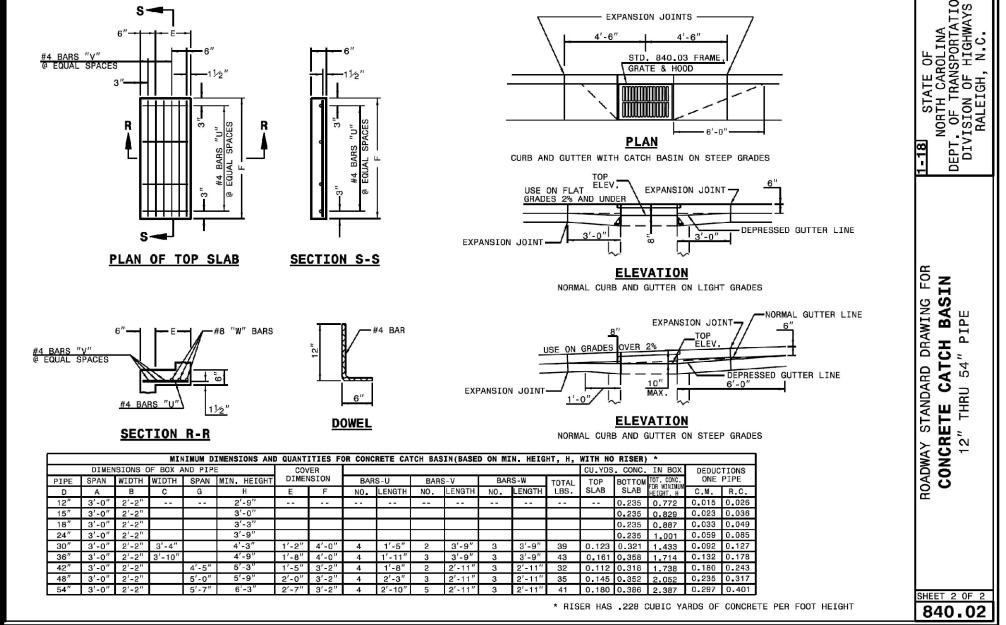
Design,

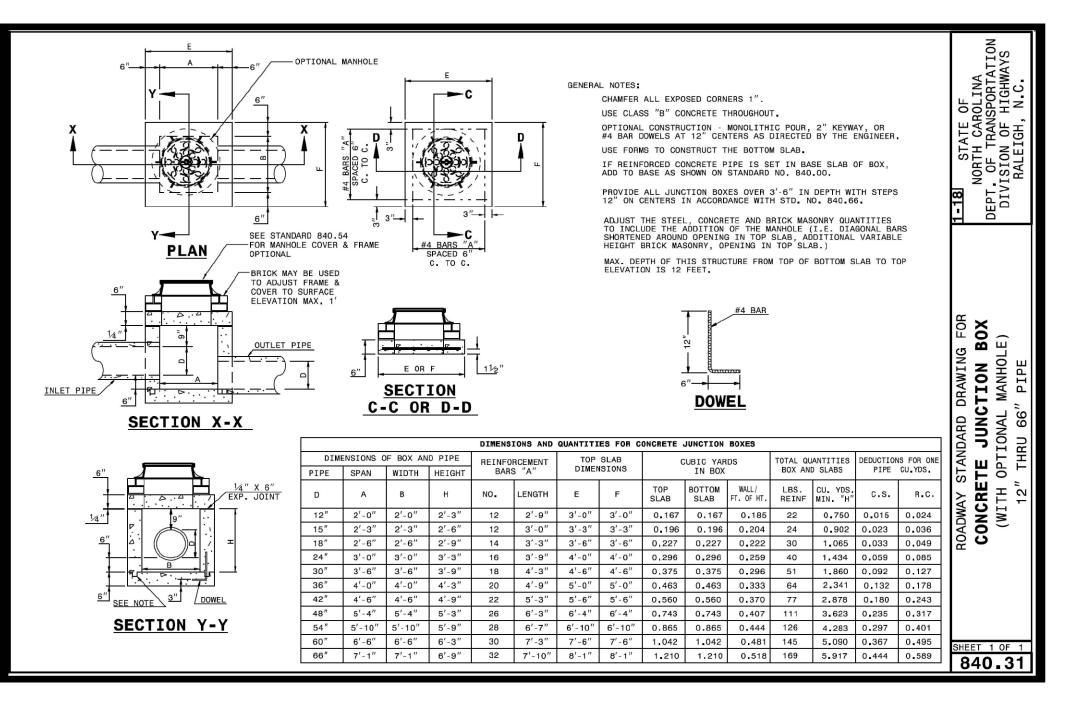
DATE
DATE
DATE
DATE
DATE
DATE
DATE
DATE

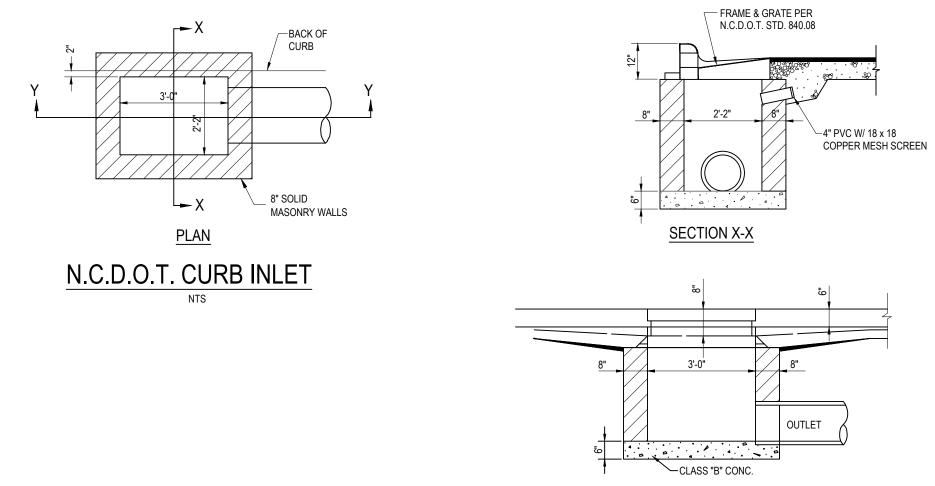
Standard Site Details
StorageMax
901 Proctor Street



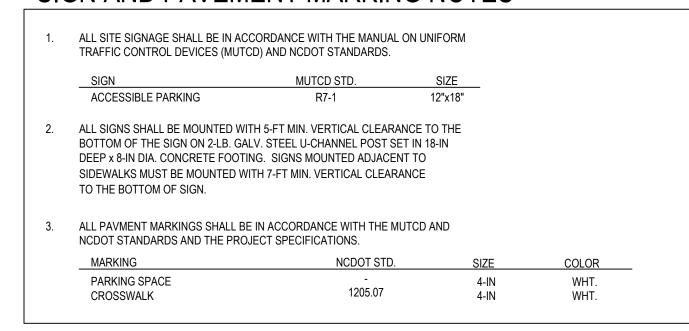




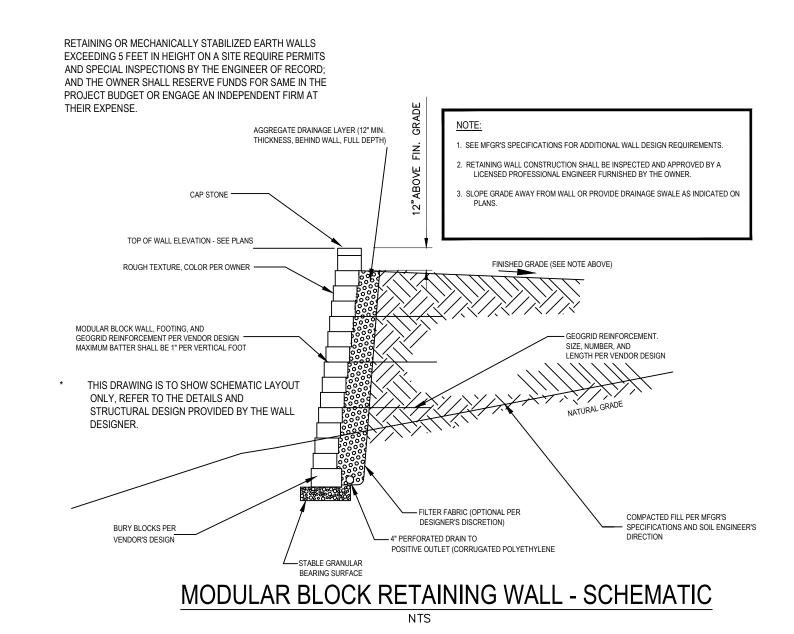


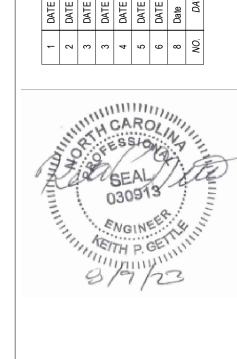


# SIGN AND PAVEMENT MARKING NOTES



SECTION Y-Y





귑

Design,

and

Engineering

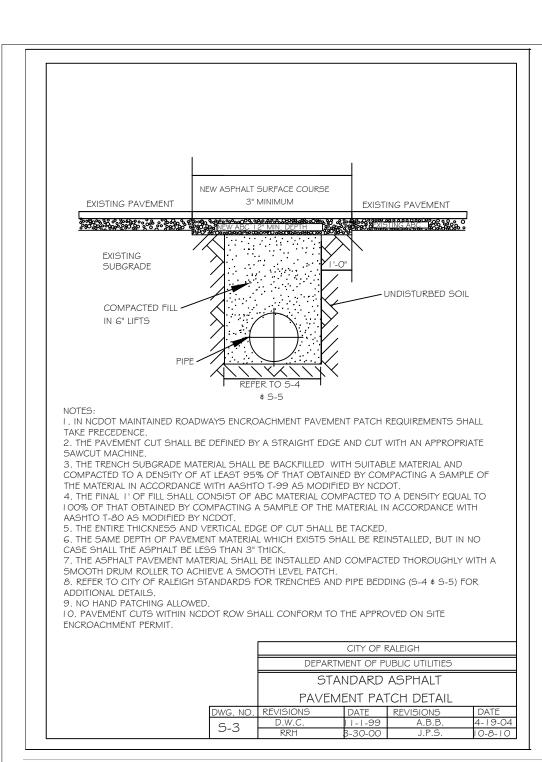
ettle

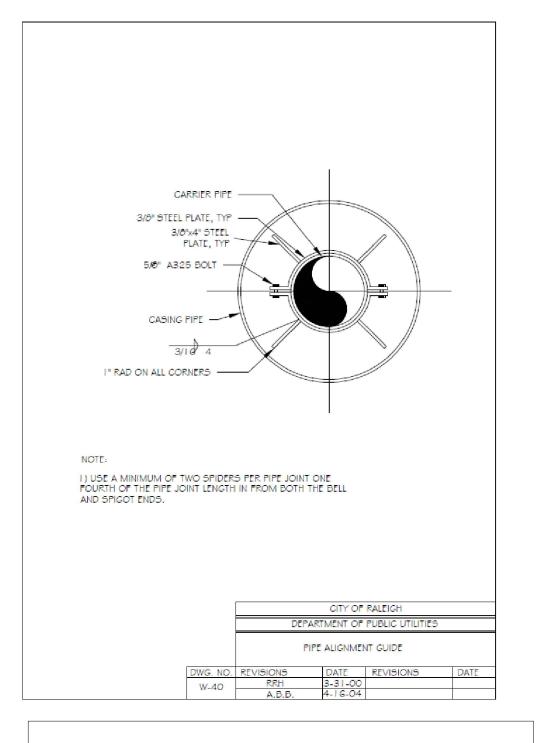
Ū

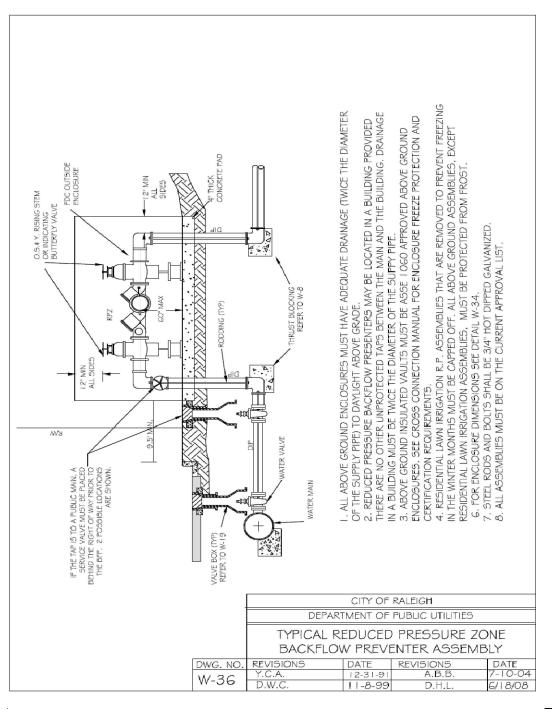
3616 W Forest, -3934

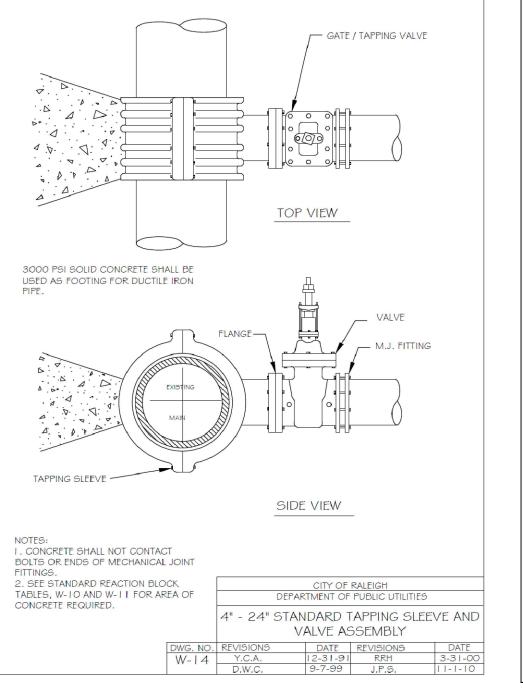
nd Stormwater Details
StorageMax
901 Proctor Street
n, Wake County, North Carolina and Site

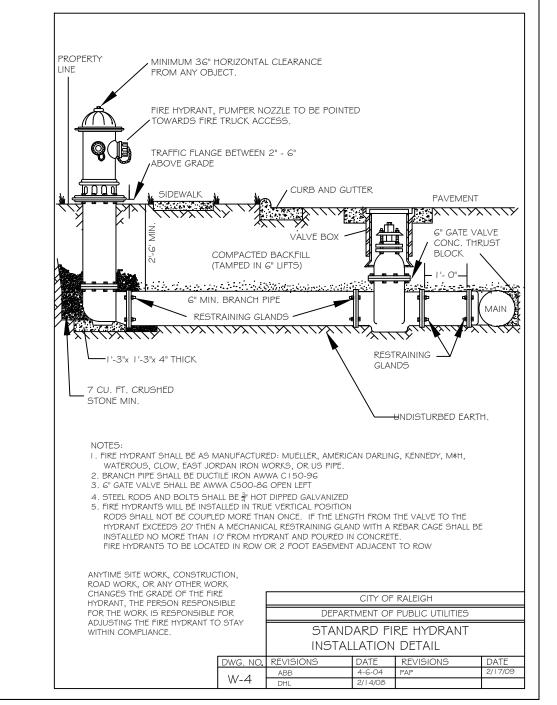
Project No. 23001

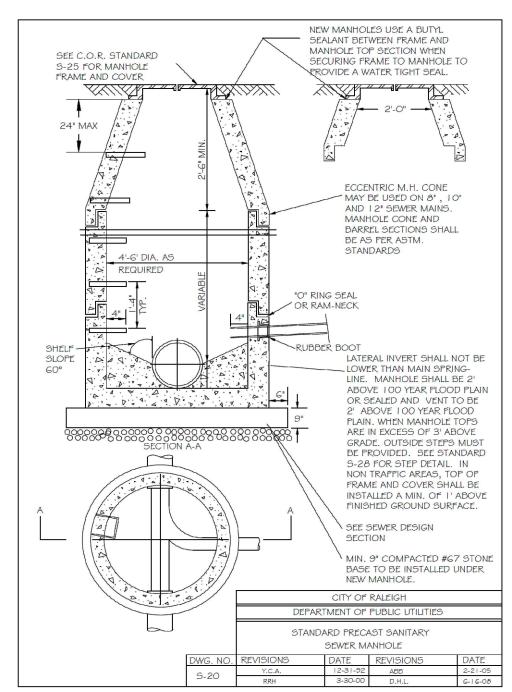


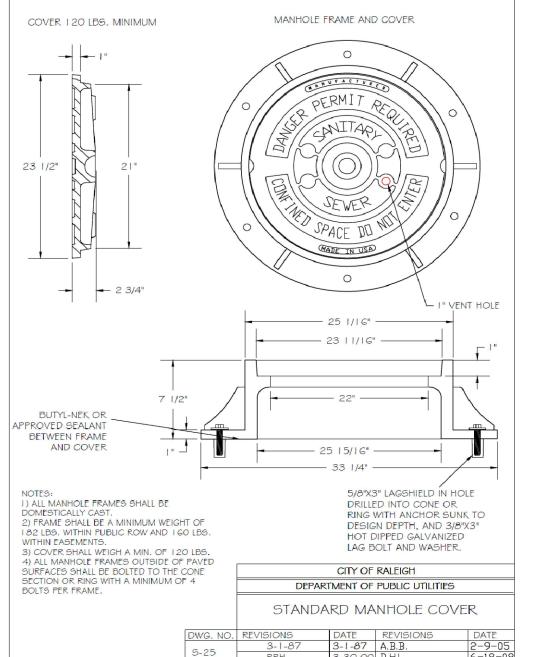


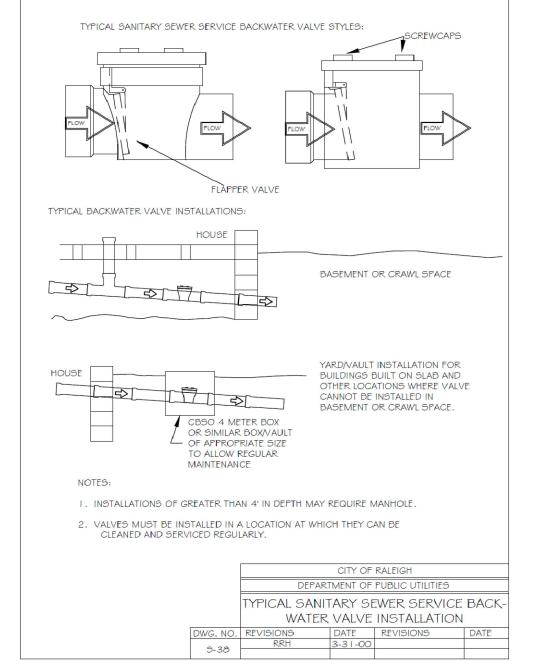


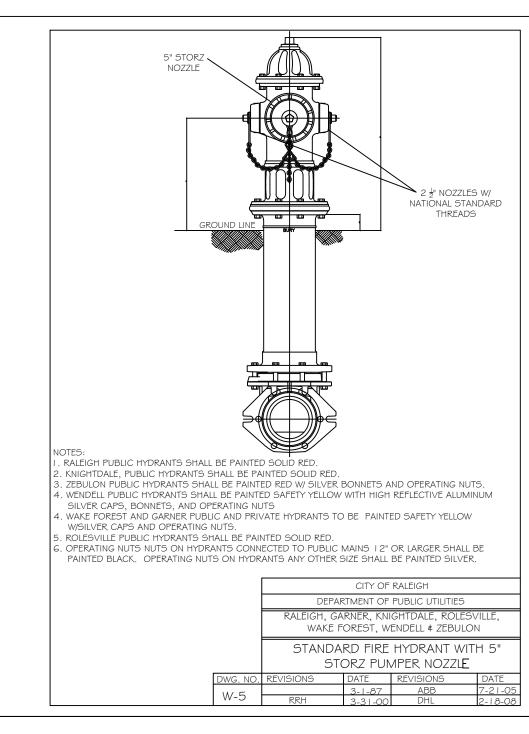


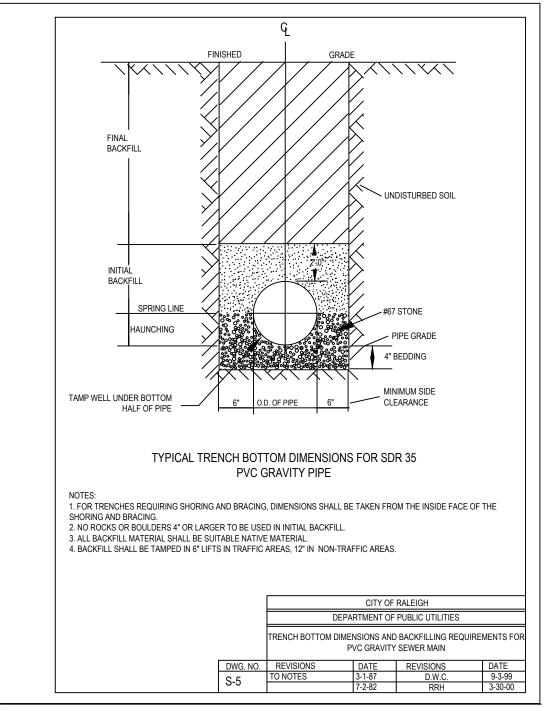












# SITE PERMITTING APPROVAL

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The

Water and Sewer Permits (If applicable) The City of Raleigh consents to the connection and extension of the City's Public Sewer System as shown on this plan. The  $material \, and \, Construction \, methods \, used \, for \, this \, project \, shall \, conform \, to \, the \, standards \, and \, specifications \, of \, the \, City's \, Public \, conform \, to \, the \, standards \, and \, specifications \, of \, the \, City's \, Public \, conform \, to \, the \, standards \, and \, specifications \, of \, the \, City's \, Public \, conform \, to \, the \, standards \, and \, specifications \, of \, the \, City's \, Public \, conform \, to \, the \, standards \, and \, specifications \, of \, the \, City's \, Public \, conform \, to \, the \, standards \, and \, specifications \, of \, the \, City's \, Public \, conform \, to \, the \, standards \, and \, specifications \, of \, the \, City's \, Public \, conform \, to \, the \, standards \, conform \, to \, the \, conform \, the$ Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit #

The City of Raleigh consents to the connection to its public sewer system and extension of the private sewer collection system as shown on this plan. The material and constructions 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 #

# CITY OF RALEIGH - PLANS AUTHORIZED FOR CONSTRUCTION

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

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

City of Raleigh Development Approval

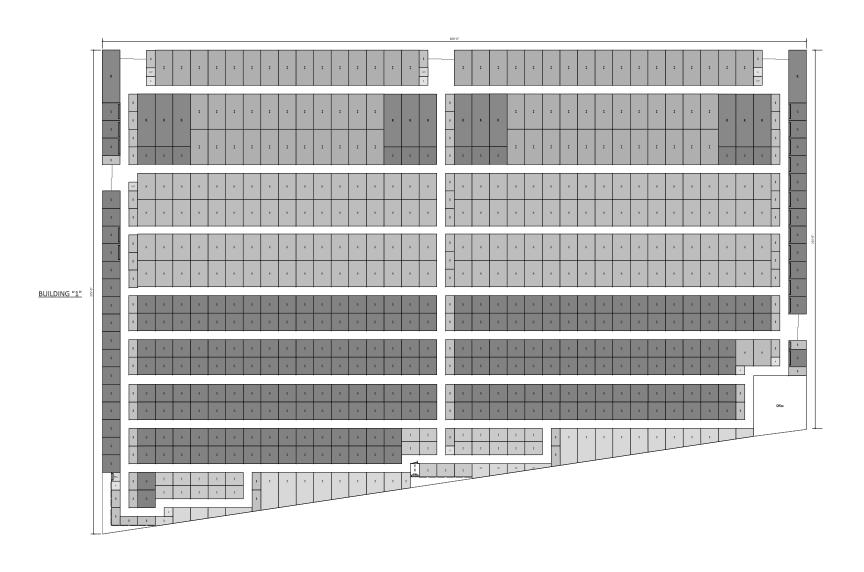
City of Raleigh Review Officer

Design, Engineering and 3616 W Forest, -3934 ettle (D) 

PLL

ewer Details orageMax Proctor Street County, North C S and Stor 901 Pr Water

Project No. 23001



	UNIT MIX SCHEDULE								
UNIT TAG	DESCRIPTION	UNIT COUNT		UNIT TAG	DESCRIPTION	мт социт			
Α	5' x 5'	0		1	10' x 20'	0			
В	5' x 10'	0		J	10' x 25'	0			
С	5' x 15'	0		к	10' x 30'	0			
D	5' x 20'	0		L	5x10 Cart	0			
E	7.5' x 10'	0		м	15' x 20'	0			
F	8' x 10'	0		N	15' x 25'	0			
G	10' x 10'	0		0	15' x 30'	0			
н	10' x 15'	0		P	15'x50'	0			
		l				ı			

	T
	6/19/23 REVISION
	DRAWN BY: Kevin Neal
	SCALE:

STORAGE	

PROJECT NAME:	Storage Max	
PROJECT ADDRESS:	Zebulon	
OWNER:	RHD/ Massey	PROJECT NO.: 1
SHEET TITLE:	Bld 1	DRAWING NUMBER:
		<b>1</b> OF <b>1</b>

