V4-rcvd 5-1-23

Construction / Site Plan

South Main - Commercial

Town of Rolesville

Wake County, North Carolina

Case # SP22-06

Rezoning Case # MA22-07

VICINITY MAP
SCALE 1"=400'

SITE DATA:

SITE ADDRESS:	503 SOUTH MAIN
PIN:	1758784708
SITE AREA	1.80 AC (78,408 SF)
AREA FROM ADJACENT PARCEL	.23 AC (10,197 SF)
ADJACENT PARCEL PIN:	1758.08-78-5571
TOTAL SITE AREA	2.03 AC (88,427 SF)
IMPERVIOUS PROPOSED	1.19 ACRES (51,836 SF)
IMPERVIOUS PERCENT (%)	58.6%
WATERSHED:	LOWER NEUSE
HUC:	0302020107
LATITUDE:	35.916120
LONGITUDE:	-78.468430
ZONING DISTRICT	GENERAL COMMERCIAL (GC)
FUTURE LAND USE	COMMERCIAL
OPEN SPACE SIZE REQ'D:	4421 SF (5%)
OPEN SPACE SIZE PROVIDED:	4425 SF (5.1%)
SUMMARY:	ACTIVE OPEN AREA 1 = 2525 SF (PLAZA) ACTIVE OPEN AREA 2 = 1900 SF (POCKET PARK) TOTAL = 4425 SF
BUILDING SETBACKS	20' (FRONT) 15' (SIDE) 35' (REAR)
BUILDING COMMERCIAL (SF)	13,500
BUILDING RESIDENTIAL (SF)	9,675
BUILDING HEIGHT (MAX)	35'
BUILDING HEIGHT (PROVIDED)	35'
PARKING SUMMARY:	
RESIDENTIAL UPPER STORY: MIN 1 / UNIT	11/1 = 11 SPACES'
COMMERCIAL: MIN 2.5 SPACE / 1000 SF	13,500 / 1000 * 2.5 = 34 SPACES'
PARKING MIN REQUIRED:	45 SPACES
PARKING PROVIDED:	64 SPACES
BIKE PARKING (REQUIRED)	1 PER BLDG
BIKE PARKING (PROVIDED)	2
TOTAL DENUDED AREA	90,016 SF (2.16 ACRES)

PEDESTRAIN AMENITIES - 4 REQUIRED

PATIO SEATING IN OPEN AREA 1
PUBLIC ART MURAL ON WALL CREEK RD SIDE OF THE BUILDING
PAVERS IN OPEN AREA 1
POCKET PARK - ACTIVE AREA 2

LEGEND

	NEW	EXISTING
DRAINAGE STRUCTURE		
SANITARY SEWER MANHOLE	S	S
SANITARY SEWER CLEANOUT	S C.O.	S C.O.
WATER VALVE		
FIRE HYDRANT		
OVERHEAD UTILITY LINE	OH	XOH
UNDERGROUND ELECTRIC LINE	E	XE
UNDERGROUND TELECOM/DATA LINE	TD	XTD
FIBER OPTIC CABLE	FO	XFO
GAS LINE	G	XG
STORM DRAINAGE PIPE	SD	XSD
SANITARY SEWER LINE	SS	XSS
WATER LINE	W	XW
SURFACE ELEVATION CONTOUR	400	400
SURFACE SPOT ELEVATION	+ 356.44	x 356.44
CLEARING LIMIT/TREE LINE		
LIMIT OF DISTURBANCE		
ELECTRICAL TRANSFORMER PAD	T	T
TOWNHOME PARKING (NUMBER)	71	

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

SHEET	DESCRIPTION
	Cover Sheet
	Existing Conditions Survey
	Recombination Plat
C1	Existing Conditions & Demolition Plan
C2	Demo and Erosion SS Extension
C3	Site Plan
C4	Grading Plan
C5	Utility Plan
C6	Utility Plan and Profile
LS1	Preservation Plan
LS2	Landscape Plan
LS3	Landscape Details
SL1	Site Lighting Plan
SL2	Site Lighting Fixtures
D1	Standard Site Details
D-2	Site and Stormwater Details
D-3	BMP Device Detail
D-4	Water and Sanitary Sewer Details
EC1	Phase 1 - Erosion Control Plan
EC2	Phase 2 - Erosion Control Plan
EC3	Phase 3 - Erosion Control Plan
EC4	Phase 4 - Erosion Control Plan
EC5	Erosion Control Details
EC6	Erosion Control Details
EC7	NCGO1 Requirements
	Architectural Plans and Elevations

PUBLIC IMPROVEMENT QUANTITIES

PHASE NUMBER(S)	PHASE 1
NUMBER OF LOT (S)	1
LOT NUMBERS BY PHASE	1
NUMBER OF COMMERCIAL UNITS	9 MAX
NUMBER OF RESIDENTIAL UNITS	11 UNITS
OPEN SPACE (YES/NO)	YES
NUMBER OF OPEN SPACE LOTS	0
PUBLIC WATER (LF)	0
PUBLIC 8" PVC SEWER	389 LF
WATER SERVICE STUBS	2
WATER SERVICE ABANDONED	2
SEWER SERVICE STUBS (NEW)	1
SEWER SERVICE REMOVED	0

NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE 4/28/23

1	07-26-2022	INITIAL SUBMITTAL
2	10-3-2022	Revised per Town / COR Comment
3	01-10-2023	Revised per Town / COR / Wake Co Comment
3	04-28-2023	Revised per Town / COR / Wake Co Comment

EROSION CONTROL, STORMWATER AND FLOODPLAIN MANAGEMENT

APPROVED

EROSION CONTROL ☐ S-SEC-090046-2022

STORMWATER MGMT. ☐ S-SWF-090049-2022

FLOOD STUDY ☐ S-_____

DATE_____

WAKE COUNTY NORTH CAROLINA EFFECTIVE: 7/19/2022

ENVIRONMENTAL CONSULTANT SIGNATURE

GENERAL NOTES

1. BOUNDARY AND TOPO INFORMATION TAKEN FROM CAWTHORNE, MOSS & PANCIERA, P.C., SURVEYING, TITLED TOPOGRAPHIC SURVEY FOR TOY STORAGE LLC, DATED MARCH 3, 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 ROLESVILLE, 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:

PROJECT:	SOUTH MAIN - COMMERCIAL
OWNER / DEVELOPER:	TOY STORAGE, LLC 2700 GRESHAM LAKE RD. RALEIGH, NC 27615
PHONE:	(919) 604-0505
CONTACT:	ALLEN MASSEY
EMAIL:	STORIT@AOL.COM
ENGINEER:	KEITH P. GETTLE, PE GETTLE ENGINEERING AND DESIGN, PLLC LICENSE: P-2538 3616 WAXWING CT. WAKE FOREST, NC 27587
PHONE:	(919) 210-3934
EMAIL:	KPGETTLE@GMAIL.COM
SURVEYOR:	CAWTHORNE MOSS AND PANCIERA P.C. 333 SOUTH WHITE STREET WAKE FOREST NORTH CAROLINA 27588
PHONE:	(919) 556- 3148
PROJECT ADDRESS:	503 SOUTH MAIN STREET, ROLESVILLE NC
PIN:	1758784708
ZONING:	GC
EXIST USE:	VACANT
OVERLAY:	NONE
FLOOD ZONE:	NO FLOOD HAZARDS AREAS PER FEMA FIRM 3720175800K
IMPERVIOUS:	EXISTING: 4195 SF (.1 ACRES)

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 #** S-S195

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 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

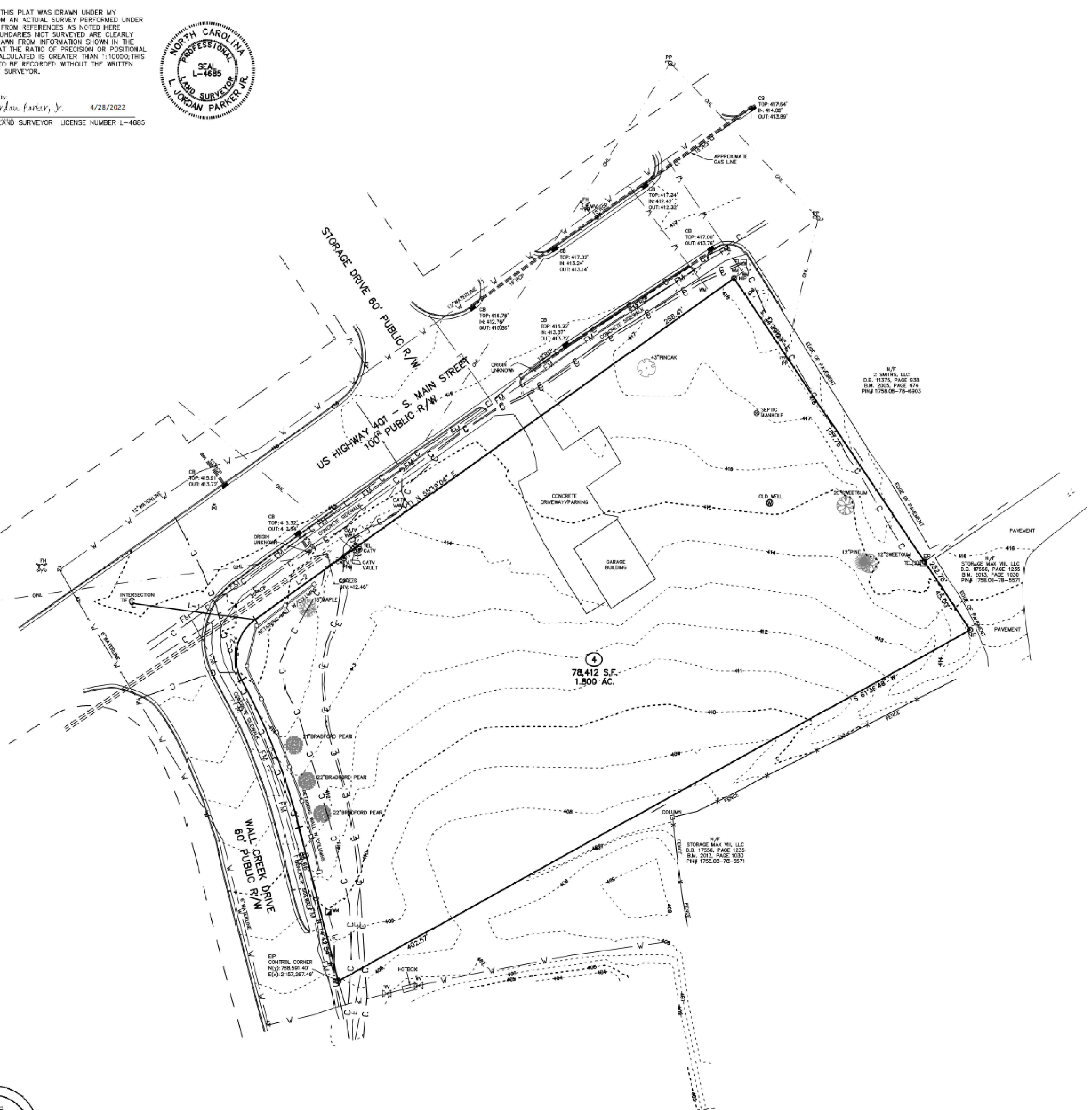
DocuSign Envelope ID: D8C1BA5C-F432-4DB2-A628-1EFB2368FB08

I, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY PERFORMED UNDER MY SUPERVISION FROM REFERENCES AS NOTED HERE ON; 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.

NORTH CAROLINA PROFESSIONAL SEAL L-4685 LAND SURVEYOR L. JORDAN PARKER JR.

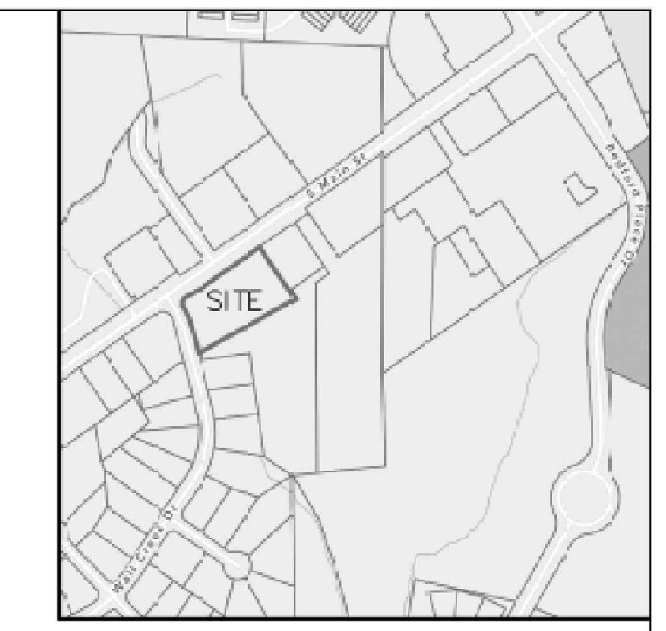
DocuSigned by: Larry Jordan Parker, Jr. 4/28/2022

PROFESSIONAL LAND SURVEYOR LICENSE NUMBER L-4685



LINE TABLE		
LINE	BEARING	DISTANCE
L-1	S 82°46'12" E	69.41'
L-2	N 55°19'04" E	68.15'

CURVE TABLE				
CURVE	ARC LENGTH	RADIUS	CHORD LENGTH	CHORD BEARING
C-1	86.82'	340.00'	86.58'	N 21°57'55" W
C-2	37.12'	25.00'	33.80'	N 13°06'36" E



VICINITY MAP

LEGEND:

EIP – EXISTING IRON PIPE
EIB – EXISTING IRON BAR
BEIP – BENT IRON PIPE
BEIB – BENT IRON BAR
CM – CONCRETE MONUMENT
EPK – EXISTING PK NAIL
SPK – SET PK NAIL
NIP – NEW IRON PIPE SET
R/W – RIGHT OF WAY
CATV – CABLE TV BOX
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OHL – OVERHEAD LINE
LP – LIGHT POLE
WM – WATER METER
WV – WATER VALVE
CO – SEWER CLEAN-OUT
CC – CONCRETE
CB – CATCH BASIN
MH – MANHOLE
FH – FIRE HYDRANT

NOTES:

1. THIS PLAT SUBJECT TO ALL EASEMENTS, AGREEMENTS AND RIGHTS OF WAY OF RECORD PRIOR TO THE DATE OF THIS PLAT.
2. UNDERGROUND UTILITIES HAVE BEEN MARKED OR LOCATED FOR THIS PLAT BY 3C MAPPING, PLLC.
3. ALL BEARINGS AND DISTANCES ARE HORIZONTAL GROUND MEASUREMENTS
4. ALL ELEVATIONS ARE BASED ON NAVD 88
5. ALL CONTOURS ARE AT 1' INTERVALS HIGHLIGHTED EVERY 5'.

LINE TYPE LEGEND

PROPERTY LINE – LINE SURVEYED
RIGHT-OF-WAY
ADJOINING LINE – LINE NOT SURVEYED
OVERHEAD LINE
BUILDING SETBACK
EASEMENT
BUFFER
FLOOD HAZARD SOILS
—E—E—E— ELECTRIC LINE
—FM—FM—FM— FORCE MAIN (SEWER)
—W—W—W— WATER LINE
—C—C—C— COMMUNICATION
—G—G—G— GAS

TOPOGRAPHIC SURVEY FOR

TOY STORAGE, LLC

503 S. MAIN STREET
LOT 4, HESS INC.
OWNER: TOY STORAGE, LLC
REF: D.B. 18244, PAGE 2611
TOWN OF ROLESVILLE
WAKE COUNTY, NORTH CAROLINA

30 15 0 30 60
SCALE 1"=30'

MARCH 3, 2022
REVISED APRIL 22, 2022
ZONED R-I
PIN #1758.07-78-4708

(X: \PROJECTS\NMAIN503-TOYSTORAGE – JC)

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

Gettle Engineering and Design, PLLC

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

NO.	DATE	REVISION DESCRIPTION	BY
1	07-26-2022	INITIAL SUBMITTAL	KPG
2	10-3-2022	Revised per Town / COR Comment	KPG
3	01-10-2023	Revised per Town / COR / Wake Co Comment	KPG
4	04-28-2023	Revised per Town / COR / Wake Co Comment	KPG
5	DATE	COMMENT	BY
6	DATE	COMMENT	BY
7	DATE	COMMENT	BY

NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
[illegible]
4/28/23

Existing Conditions Survey

South Main

503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003

Dwg No.

I, MICHAEL A. MOSS CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY PERFORMED UNDER MY SUPERVISION FROM REFERENCES AS NOTED HEREON; THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION SHOWN IN THE REFERENCES; THAT HORIZONTAL POSITIONAL ACCURACY AS CALCULATED .05'; THAT THE GLOBAL NAVIGATION SATELLITE SYSTEM(GNSS) SURVEY OBSERVATIONS WERE PERFORMED TO THE GEOSPATIAL POSITIONAL ACCURACY STANDARDS, PART 2: STANDARDS FOR GEODETIC NETWORKS AT THE 1-CENTIMETER ACCURACY CLASSIFICATION (95% CONFIDNCE) USING REAL TIME KINEMATIC FIELD PROCEDURES; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGIONAL SIGNATURE, LICENSE NUMBER AND SEAL

THIS_____DAY OF_____A.D. 2023.

CLASS OF SURVEY: AA
POSITIONAL ACCURACY: HORIZONTAL 0.05 US SURVEY FEET
TYPE OF GPS FIELD PROCEDURE: REAL TIME KINEMATICS 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: 1.00007411132077
UNITS: US SURVEY FOOT

I HEREBY CERTIFY THAT I AM THE OWNER OF THE PROPERTY SHOWN AND DESCRIBED HEREON, WHICH IS LOCATED IN THE SUBDIVISION JURISDICTION OF THE TOWN OF ROLESVILLE AND THAT I HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY FREE CONCENT, ESTABLISH MINIMUM BUILDING SETBACK LINES, AND DEDICATE ALL STREETS, ALLEYS, WALKS, PARKS, AND OTHER SITES AND EASEMENTS TO PUBLIC OR PRIVATE USE AS NOTED. FURTHERMORE, I HEREBY DEDICATE ALL SANITARY SEWER, STORM SEWER AND WATER LINES TO THE TOWN OF ROLESVILLE.

OWNER (TOY STORAGE, LLC) DATE

OWNER (STORAGE MAX VIII, LLC) DATE

ROLESVILLE, NORTH CAROLINA

I,_____, REVIEW OFFICER OF THE TOWN OF ROLESVILLE, WAKE COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

DATE REVIEW OFFICER

CERTIFICATE OF APPROVAL FOR RECORDING

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE SUBDIVISION REGULATIONS OF THE TOWN OF ROLESVILLE, NORTH CAROLINA AND THAT THIS PLAT HAS BEEN APPROVED BY THE SUBDIVISION ADMINISTRATOR OF THE TOWN OF ROLESVILLE FOR RECORDING IN THE OFFICE OF THE REGISTER OF DEEDS OF WAKE COUNTY.

DATE SUBDIVISION ADMINISTRATOR, TOWN OF ROLESVILLE
ROLESVILLE, NORTH CAROLINA

THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED, WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER AND SEAL

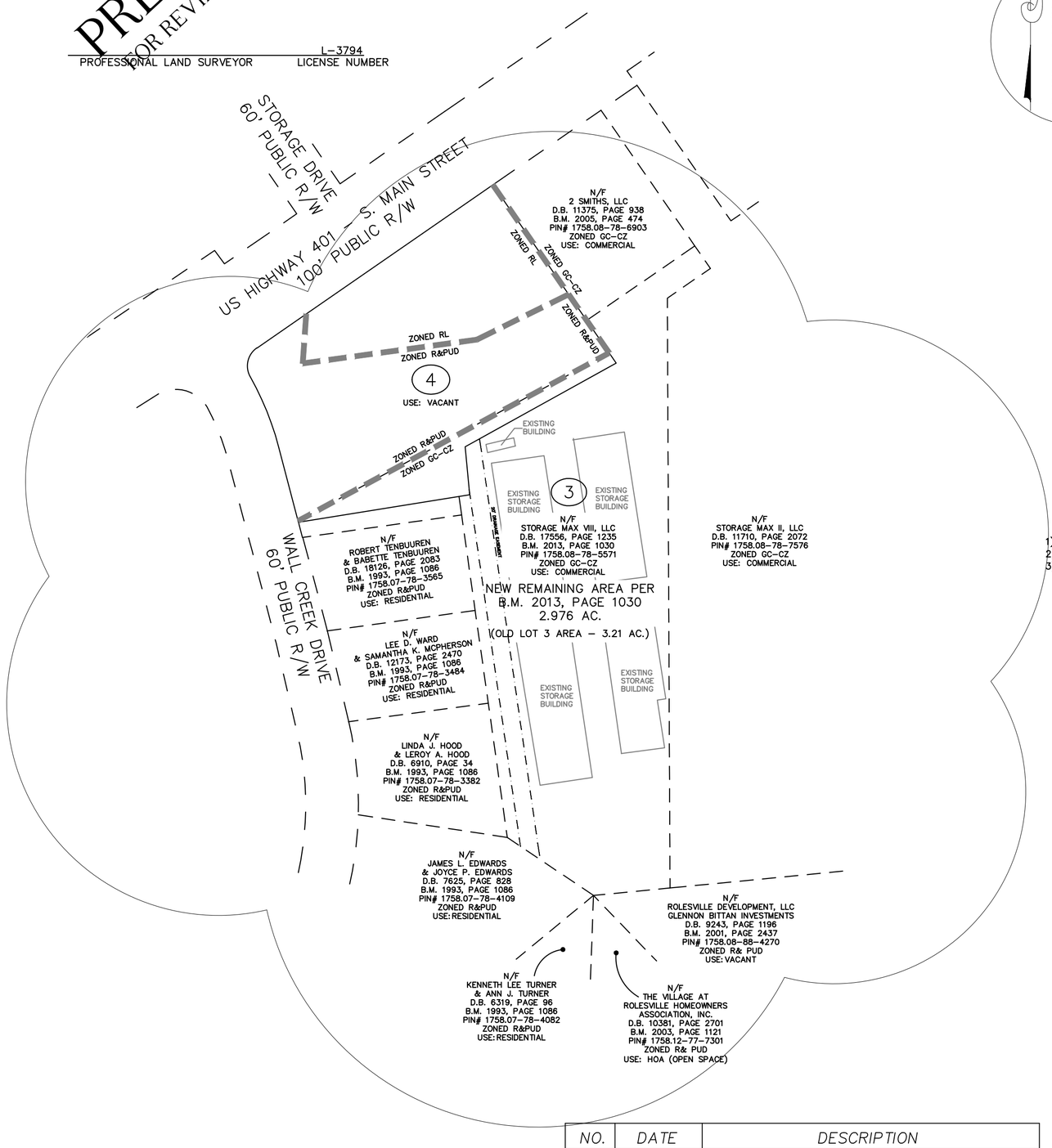
THIS_____DAY OF_____A.D. 2023.

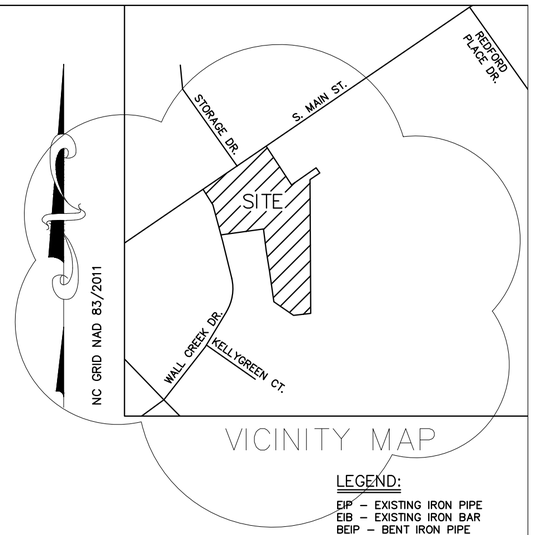
PROFESSIONAL LAND SURVEYOR L-3794 LICENSE NUMBER

THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXEMPTION OR EXCEPTION TO THE DEFINITION OF SUBDIVISION.

PROFESSIONAL LAND SURVEYOR L-3794 LICENSE NUMBER

PRELIMINARY FOR REVIEW PURPOSES ONLY





VICINITY MAP

LEGEND:

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EIB - EXISTING IRON BAR
BEIP - BENT IRON PIPE
BEIB - BENT IRON BAR
CM - CONCRETE MONUMENT
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WM - WATER METER
WV - WATER VALVE
CO - SEWER CLEAN-OUT
CC - CONCRETE
CB - CATCH BASIN
MH - MANHOLE
FH - FIRE HYDRANT

NOTES:

1) AREA COMPUTED BY COORDINATE METHOD.
2) THERE IS NO NCGS MONUMENT WITHIN 2000' OF THIS PROPERTY.
3) NORTH ROTATION WAS OBTAINED VIA NC-VRS.

LINE TYPE LEGEND

PROPERTY LINE - LINE SURVEYED
RIGHT-OF-WAY
ADJOINING LINE - LINE NOT SURVEYED
OVERHEAD LINE
BUILDING SETBACK
EASEMENT
BUFFER
FLOOD HAZARD SOILS
ZONING LINE

NO.	DATE	DESCRIPTION
1	01/13/23	V1 REVIEW COMMENTS

SHEET 1 OF 2

RECOMBINATION PLAT FOR

TOY STORAGE, LLC

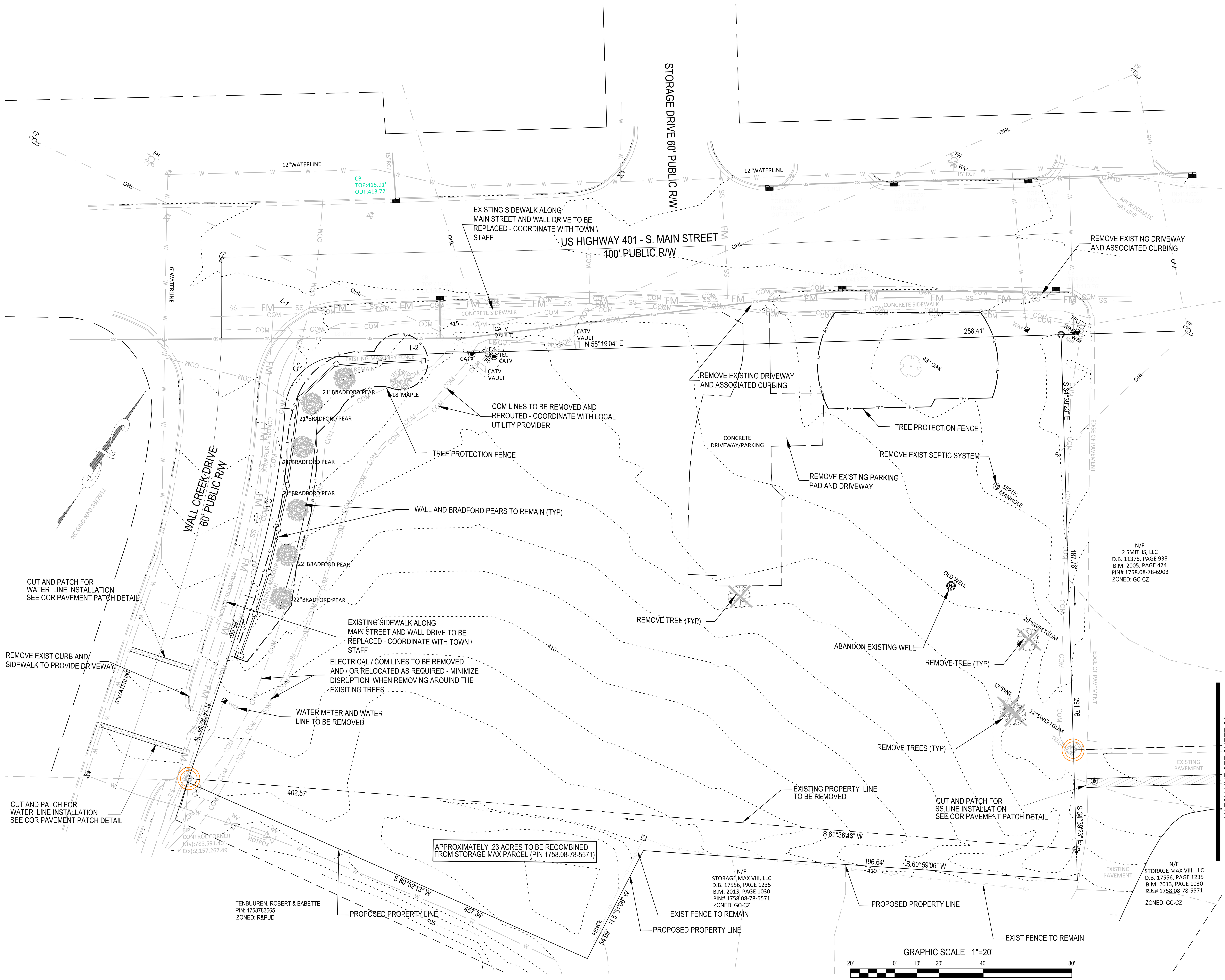
503 S. MAIN STREET
LOT 4, HESS INC.
OWNER: TOY STORAGE, LLC
REF: D.B. 18244, PAGE 2611
REF: B.M. 2013, PAGE 1030
TOWN OF ROLESVILLE
WAKE COUNTY, NORTH CAROLINA

100 50 0 100 200
SCALE 1"=100'

DATE OF SURVEY
AUGUST 4, 2022
ZONED RL/R&PUD/GC-CZ
PIN #1758.07-78-4708
FP22-20

(X:\PROJECTS\MAIN503-TOYSTORAGE - JC)

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



DEMOLITION NOTES

1. 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.
2. SUBSURFACE FEATURES ARE SHOWN IN APPROXIMATE LOCATION. CONTRACTOR IS RESPONSIBLE FOR SUBSURFACE UTILITY EXPLORATION TO DETERMINE UTILITY LOCATIONS AND DEPTHS.
3. VERIFY LOCATIONS AND SIZES OF ALL EXISTING FEATURES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION, AND REPAIR OR REPLACE ANY DAMAGES TO EXISTING UTILITIES RESULTING FROM CONSTRUCTION.

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

NO.	DATE	REVISION DESCRIPTION	BY
1	07-26-2022	INITIAL SUBMITTAL	KPG
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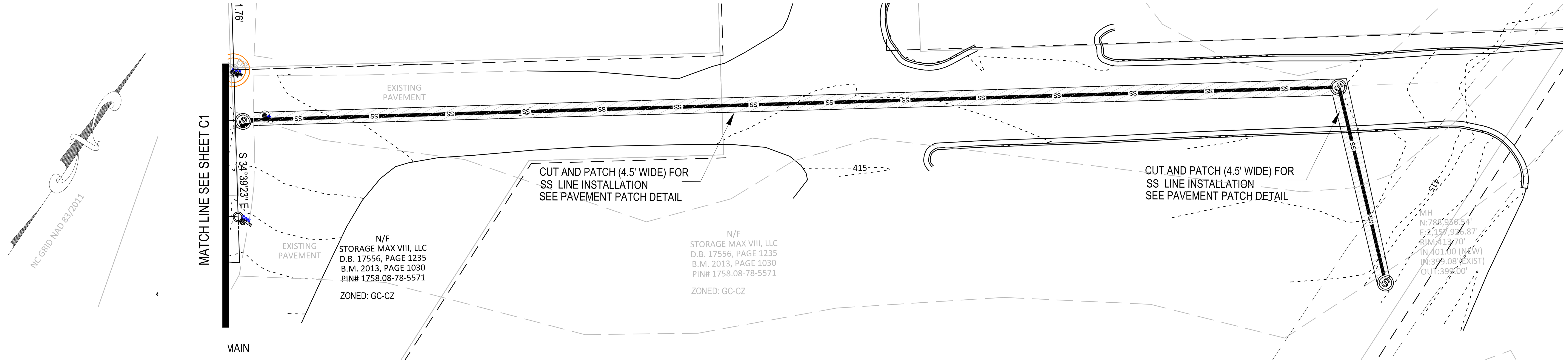
5	DATE	COMMENT	BY
6	DATE	COMMENT	BY
7	DATE	COMMENT	BY

NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
[illegible]
4/28/23

Existing Conditions / Demolition Plan South Main

503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. C1



SS Extension - Exisitng Conditions and Demo

GRAPHIC SCALE 1"=20'

20' 0' 10' 20' 40' 80'

DEMOLITION NOTES

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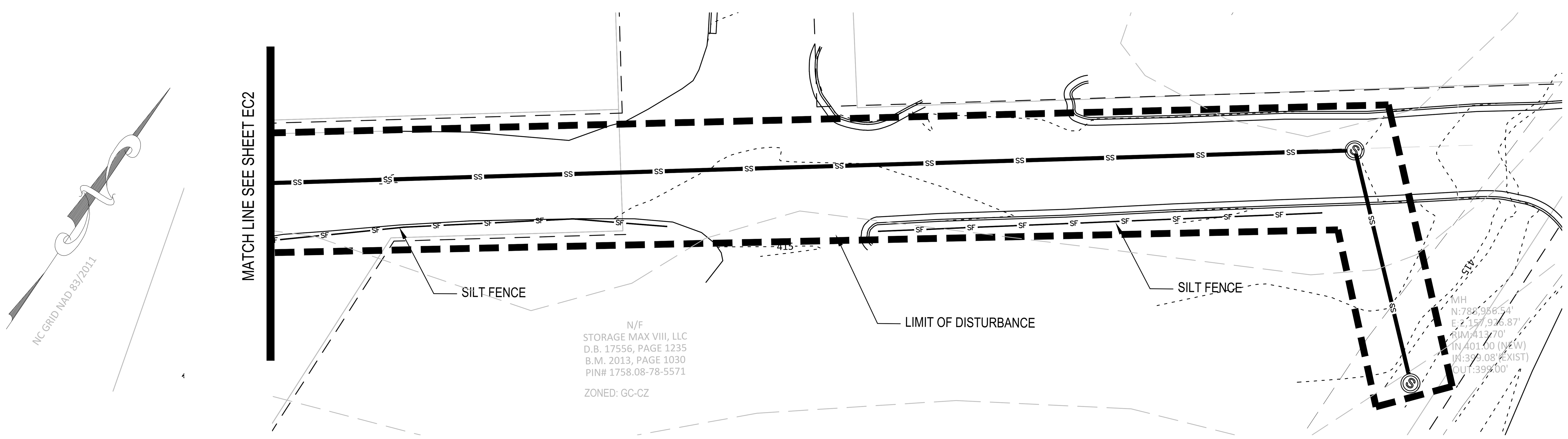

SS Extension - Erosion Control

GRAPHIC SCALE 1"=20'

20' 0' 10' 20' 40' 80'

NOTES

1. SEE SHEET C6 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 #** S-5195

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 #** ______________

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City of Raleigh Public Utilities Department Permit # ______________

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City of Raleigh Development Approval ______________________________

City of Raleigh Review Officer

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

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7	DATE	COMMENT	BY

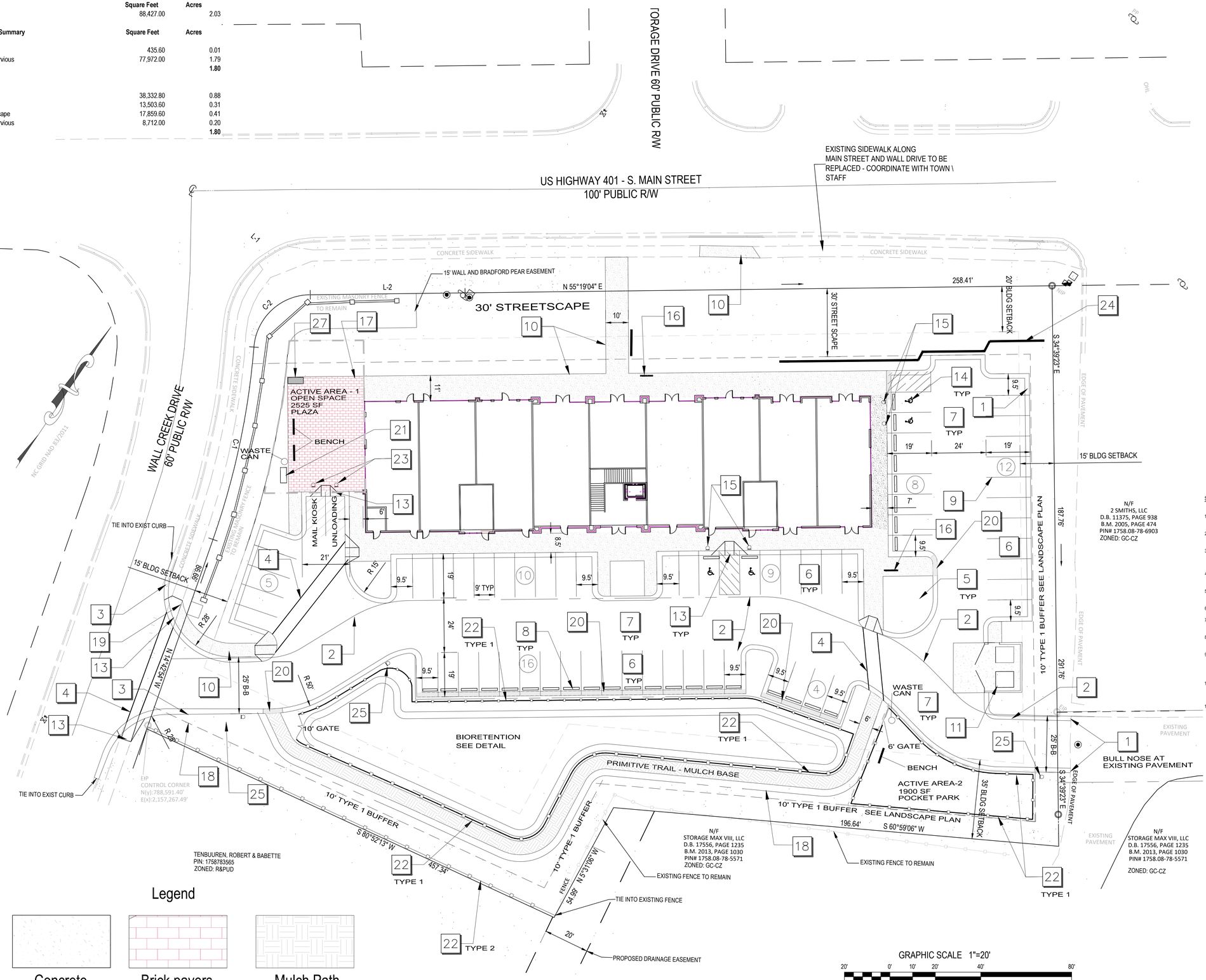
NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
[illegible]
4/28/23

Demo & Erosion SS Extension
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. C2

Stormwater Summary

	Square Feet	Acres
Overal Site	88,427.00	2.03
Impervious Summary	**Square Feet**	**Acres**
Pre		
Parking Lot	435.60	0.01
Managed Pervious	77,972.00	1.79
Total		**1.80**
Post		
Parking Lot	38,332.80	0.88
Roof	13,503.60	0.31
Open Landscape	17,859.60	0.41
Managed Pervious	8,712.00	0.20
Total		**1.80**



KEY — KEYED NOTES - SITE PLAN

1. 24" STANDARD CONCRETE CURB AND GUTTER - ON SITE
2. 25' CROSS ACCESS EASEMENT WITH 24' WIDE DRIVE
3. TRANSITION FROM 30" CURB & GUTTER TO 24" CURB & GUTTER AT CURB TURNOUT. TIE INTO EXISTING CURB
4. PAINTED STRIPING FOR CROSWALK
5. LANDSCAPE ISLAND - SEE LANDSCAPE PLAN
6. STANDARD-DUTY BITUMINOUS PAVING - PRIMARILY IN PARKING AREAS
7. HEAVY-DUTY BITUMINOUS PAVING - PRIMARILY IN DRIVE AISLES - SEE DETAIL
8. WHEEL STOP - SET 24" CLEAR FROM EDGE OF SPACE AT HANDICAP PARKING.
9. PAINTED PARKING SPACE STRIPING USING 4" WIDE WHITE STRIPES.
10. 4" THK. STANDARD CONCRETE WALK, 6' WIDE UNLESS OTHERWISE NOTED.
11. DUMPSTER ENCLOSURE & PAD - SEE DETAIL
12. LIGHT POLE AND FIXTURE - SEE LIGHTING PLAN
13. HANDICAP RAMP, SEE DETAIL. UPDATE EXISTING AS NEEDED
14. PAINTED UNIVERSAL HANDICAPPED SYMBOL AND HANDICAPPED ACCESS AISLE STRIPING.
15. HANDICAP PARKING SIGNAGE - SEE DETAIL TYPICAL AT HANDICAP PARKING SPACES
16. BICYCLE PARKING RACK - SEE DETAIL
17. PAVERS AT OPEN AREA - MATCH ARCHITECTURAL
18. BMP STORMWATER EASEMENT
19. TIE INTO EXISTING SIDEWALK
20. 24" CONCRETE EDGE FLUSH TO PAVEMENT (AREA SHADED)
21. MAIL KIOSK - SEE DETAIL
22. FENCE - SEE DETAILS (SHEET D1)
23. MAIL KIOSK AND UNLOADING PARKING SIGNS
24. SEGMENTAL BLOCK RETAINING WALL SEE DETAIL (SHEET D2)
25. "NO PARKING - FIRE LANE" SIGN
27. BRICK PLANTER - SIZE / DETAIL DESIGN BY OWNER

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 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 LOCAL 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 R7-8 AND R7-8D 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 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.

Legend

Concrete | Brick pavers | Mulch Path

GRAPHIC SCALE 1"=20'

20' 0' 10' 20' 40' 80'

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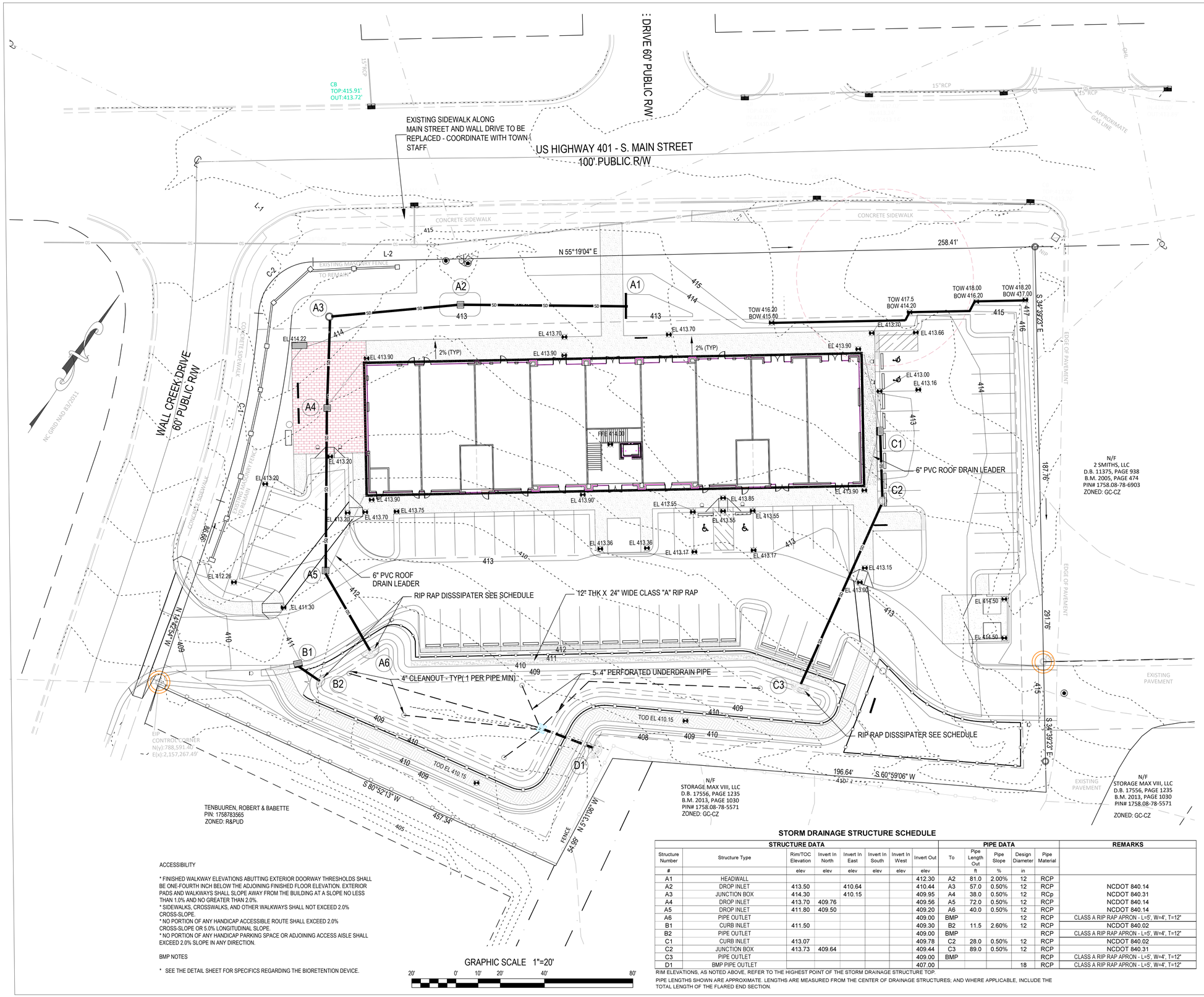
NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
4/23/23

Site Plan
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. C3



STORM DRAINAGE STRUCTURE SCHEDULE

STRUCTURE DATA								PIPE DATA					REMARKS
Structure Number	Structure Type	Rim/TOC Elevation	Invert In North	Invert In East	Invert In South	Invert In West	Invert Out	To	Pipe Length Out	Pipe Slope	Design Diameter	Pipe Material	
#		elev	elev	elev	elev	elev	elev		ft	%	in		
A1	HEADWALL						412.30	A2	81.0	2.00%	12	RCP	
A2	DROP INLET	413.50		410.64			410.44	A3	57.0	0.50%	12	RCP	NCDOT 840.14
A3	JUNCTION BOX	414.30		410.15			409.95	A4	38.0	0.50%	12	RCp	NCDOT 840.31
A4	DROP INLET	413.70	409.76				409.56	A5	72.0	0.50%	12	RCP	NCDOT 840.14
A5	DROP INLET	411.80	409.50				409.20	A6	40.0	0.50%	12	RCP	NCDOT 840.14
A6	PIPE OUTLET						409.00	BMP			12	RCP	CLASS A RIP RAP APRON - L=5', W=4', T=12"
B1	CURB INLET	411.50					409.30	B2	11.5	2.60%	12	RCP	NCDOT 840.02
B2	PIPE OUTLET						409.00	BMP				RCP	CLASS A RIP RAP APRON - L=5', W=4', T=12"
C1	CURB INLET	413.07					409.78	C2	28.0	0.50%	12	RCP	NCDOT 840.02
C2	JUNCTION BOX	413.73	409.64				409.44	C3	89.0	0.50%	12	RCP	NCDOT 840.31
C3	PIPE OUTLET						409.00	BMP				RCP	CLASS A RIP RAP APRON - L=5', W=4', T=12"
D1	BMP PIPE OUTLET						407.00				18	RCP	CLASS A RIP RAP APRON - L=5', W=4', T=12"

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.

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.

BMP NOTES

* SEE THE DETAIL SHEET FOR SPECIFICS REGARDING THE BIORETENTION DEVICE.

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, TOWN OF ROLESVILLE, WAKE COUNTY 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, BACKFILLING, 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 MANPOWER 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 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% MDD.
* 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 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 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

* 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 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.

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2	10-3-2022	Revised per Town / COR Comment	KPG
3	01-10-2023	Revised per Town / COR / Wake Co. Comment	KPG
4	04-28-2023	Revised per Town / COR / Wake Co. Comment	KPG
5	DATE	COMMENT	BY
6	DATE	COMMENT	BY
7	DATE	COMMENT	BY

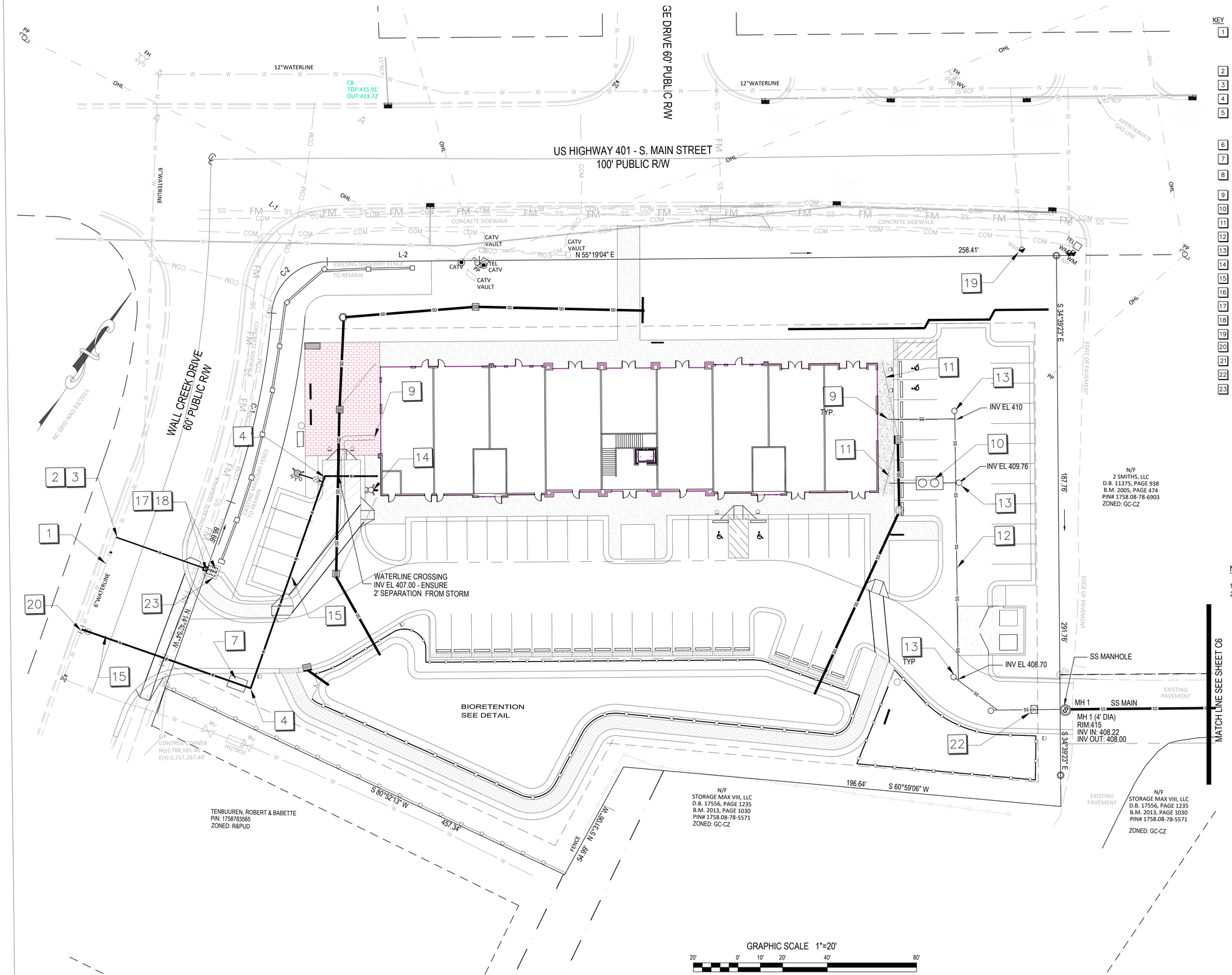
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030913 KEITH P. GETTLE
4/28/23

Grading \ Storm Drainage South Main

503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003

Dwg No. C4



KEY

KEYED NOTES UTILITY PLAN

1. 6" 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. 2" CORPORATION STOP.
3. 2" COPPER SERVICE LINE
4. 90 DEGREE, OR 45 DEGREE, OR 22.5 DEGREE MJ BEND AND RESTRAINT.
5. CONTRACTOR SHALL MAKE APPLICATION FOR ELECTRIC SERVICE, COORDINATE INSTALLATION, AND PROVIDE ALL MATERIALS AND WORK NOT PROVIDED BY THE ELECTRIC COMPANY. VERIFY ROUTE AND LOCATIONS WITH ARCHITECT AND SERVICE PROVIDER.
6. ELECTRIC METER LOCATION ON BUILDING - VERIFY EXACT LOCATION WITH ARCHITECT AND SERVICE PROVIDER.
7. 6" BACKFLOW PREVENTER DEVICE (RPDA), RALEIGH APPROVED, LOCATED IN AN "ABOVE GROUND" HEATED ENCLOSURE.
8. INSTALL SITE LIGHTING CIRCUIT IN BUILDING ELECTRICAL PANEL AND ROUTE TO SITE LIGHTING FIXTURES. PROVIDE AND INSTALL CONDUIT AS NEEDED. VERIFY DETAILS WITH OWNER AND ARCHITECT, AND SERVICE PROVIDER
9. EXTEND SITE UTILITIES TO A POINT WITHIN 5 FEET OF THE BUILDING WALL(S). BUILDING PLUMBER SHALL MAKE ALL UTILITY CONNECTIONS.
10. 1500 GALLON GREASE INTERCEPTOR w/ TRAFFIC RATED ACCESS LIDS
11. PVC DOWNSPOUT PIPE HEADER. TIE INTO STORM DRAIN STRUCTURE. FIELD VERIFY LOCATION / ELEVATION
12. 6" PVC, SDR-35, PRIVATE SANITARY SEWER LATERIAL WITH CLEANOUTS AT ALL BENDS AND A MAX SPACING OF 75 FEET-MIN 1% SLOPE.
13. SANITARY SEWER CLEANOUT (SEE DETAIL AND NOTES). USE TRAFFIC BEARING CLEANOUT IN PAVEMENT AREAS.
14. FIRE DEPARTMENT CONNECTION TYPE SHALL BE 5 INCH STORZ, WITH MJ FITTINGS AS NEEDED.
15. 6" DUCTILE IRON PIPE WATER LINE, 36" BELOW FINISH GRADE
16. FIRE HYDRANT ASSEMBLY WITH 6" VALVE AND BOX. SEE COR DETAIL W4.
17. 2" GANG METER ASSEMBLY - SEE COR DETAIL W26 (WITHIN COR EASEMENT)
18. 2" RP BACKFLOW ASSEMBLIES BY WATTS OR APPROVED EQUAL (WITHIN COR EASEMENT)
19. EXISTING WATER METER TO BE REMOVED / ABANDONED
20. 6"x6" TAPPING SLEEVE AND 6" GATE VALVE
21. 20' PRIVATE SANITARY SEWER EASEMENT
22. SANITARY SEWER BACKWATER VALVE - SEE COR DETAIL S-38
23. CITY OF RALEIGH WATER LINE EASEMENT - EXTEND 1' BEYOND METER VAULTS

NOTES

1. SEE SHEET C4 FOR STORM DRAIN SCHEDULE.
2. SEE SHEET C6 FOR SANITARY SEWER PLAN AND PROFILE.

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 #** SC-0195

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 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

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

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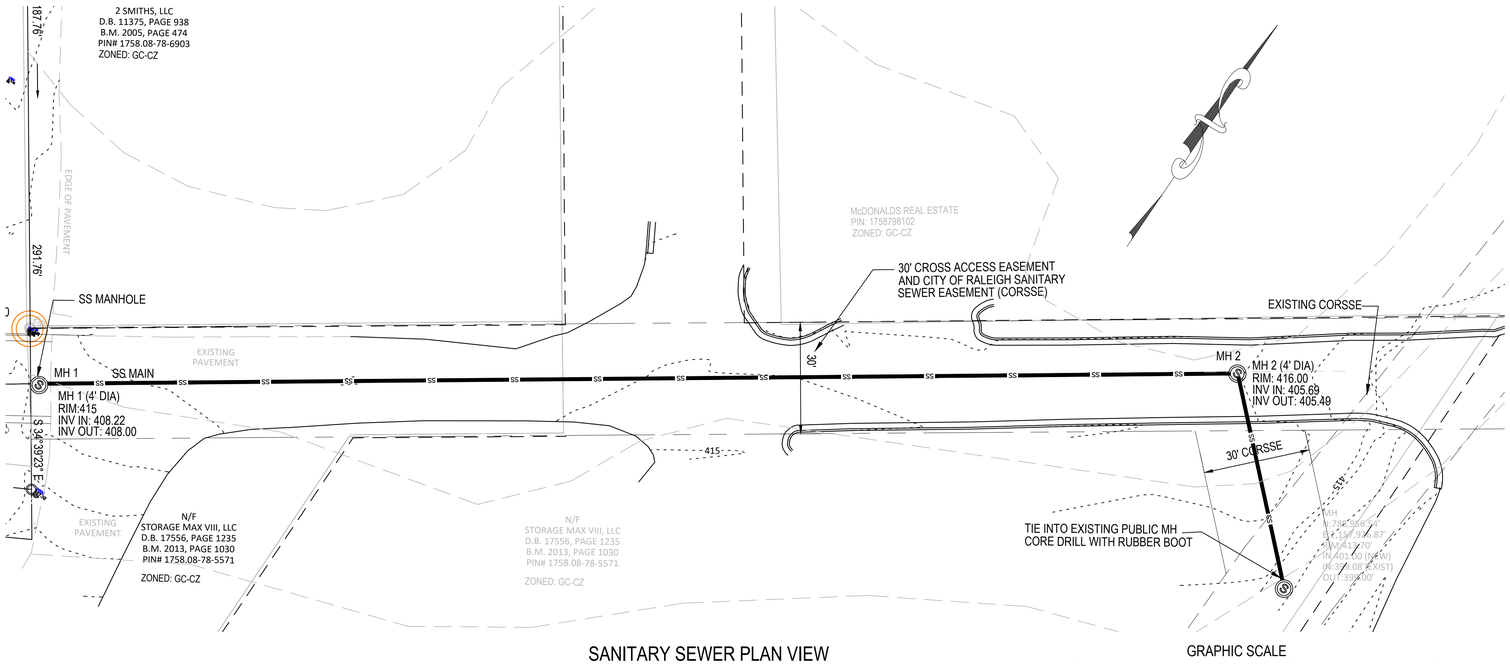
NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
4/23/23

Utility Plan
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003

Dwg No. C5

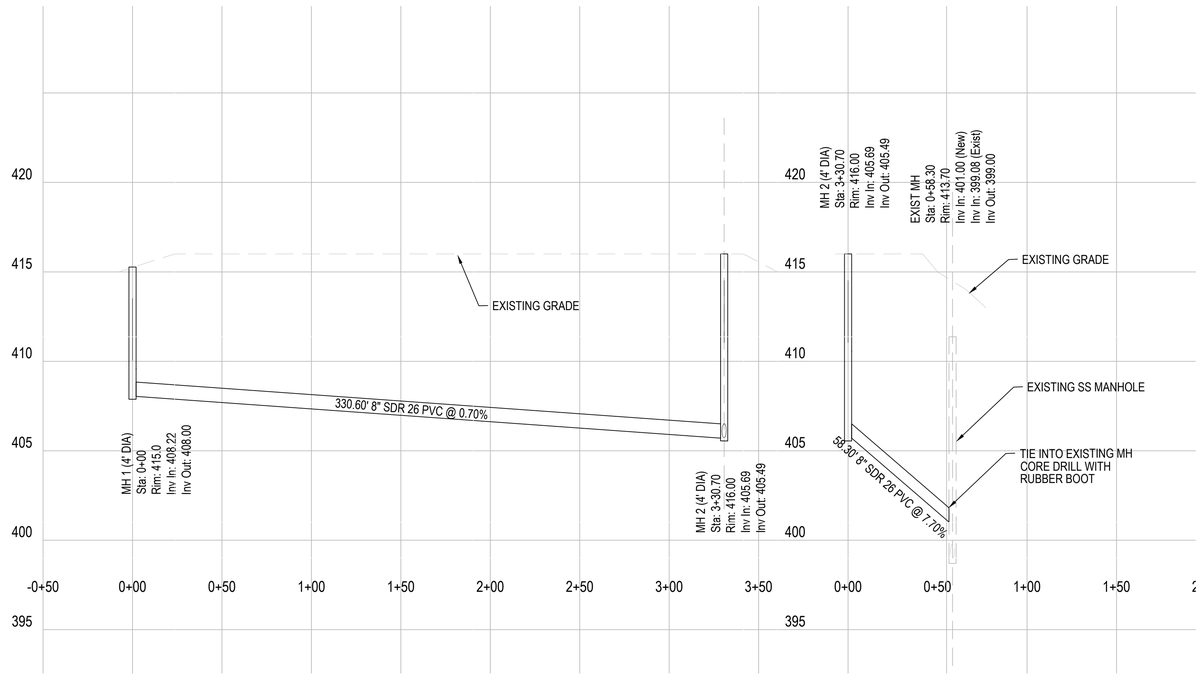


SANITARY SEWER PLAN VIEW

1" = 20'

GRAPHIC SCALE

20' 0' 10' 20' 40' 80'



SANITARY SEWER PROFILE

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

GRAPHIC SCALE

40' 0' 20' 40' 80' 160'

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 NCDENR-DIVISION OF WATER QUALITY, INCLUDING NCAC 2T REGULATIONS AND MINIMUM DESIGN CRITERIA FOR THE PERMITTING OF GRAVITY SEWERS.
3 ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS. WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A
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 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.

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 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.

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 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.

WATER SYSTEM

* 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 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 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.

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 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.

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 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.
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.

CITY OF RALEIGH UTILITY NOTES:

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 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
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 W-41 & S-49)
f) ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER 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
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 1" 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 MAXIMUM.
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 CONSTRUCTION.
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
*

NOTES

1. SEE SHEET C5 FOR UTILITY PLAN.

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 Works Department*** at ***(919) 996-2409***, and 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 reinstallation 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***.

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 #** S-5135

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 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

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

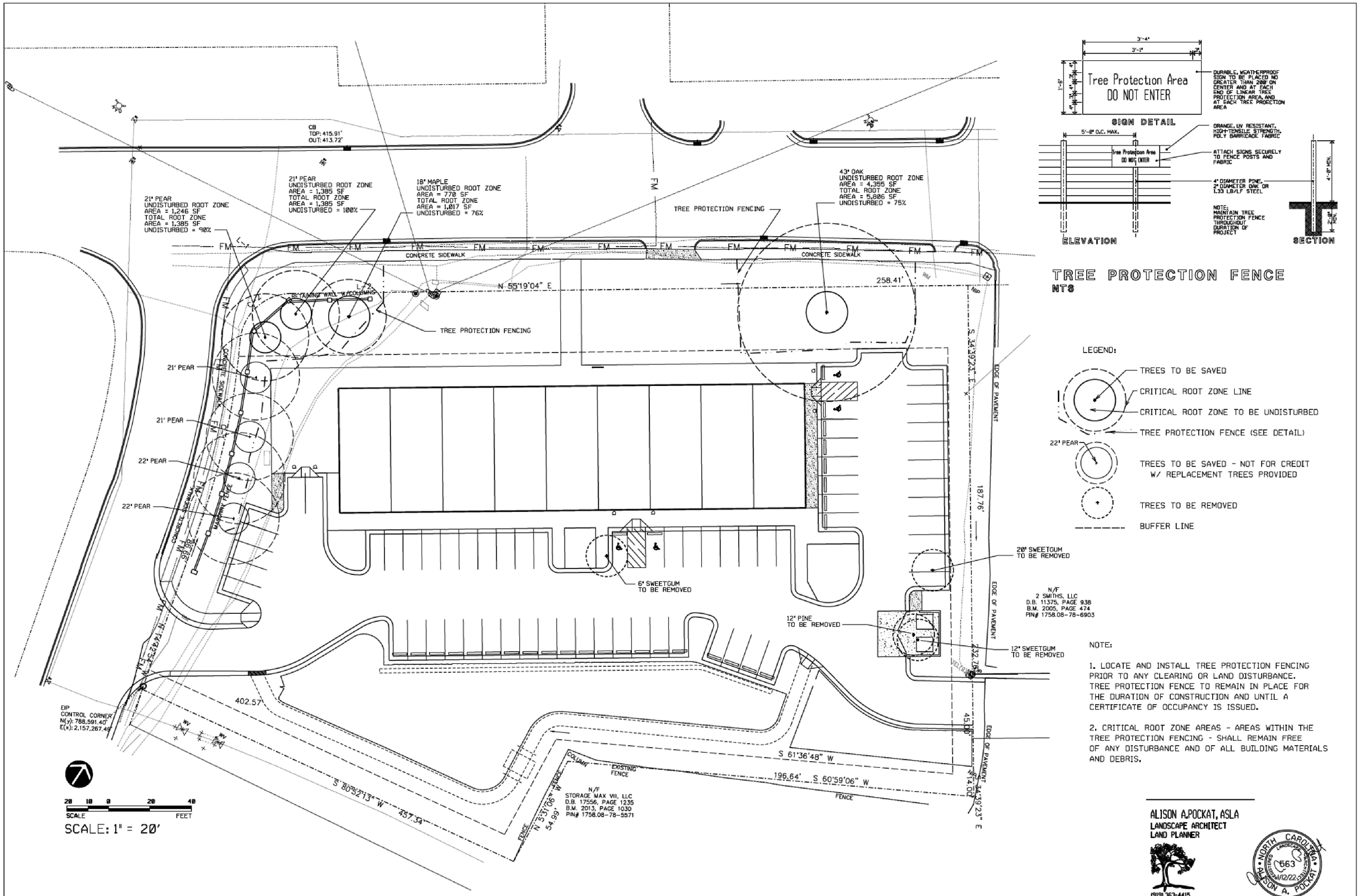
NO	DATE	REVISION DESCRIPTION	BY
1	07-26-2022	INITIAL SUBMITTAL	#PG
2	01-13-2023	Revised per Town / COR Comment	#PG
3	04-26-2023	Revised per Town / COR / Wake Co Comment	#PG
4		COMMENT	BY
5		DATE	
6		COMMENT	BY
7		DATE	
		COMMENT	BY
		DATE	

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030913 KEITH P. GETTLE
4/28/23

Plan and Profile - Sanitary Sewer
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003

Dwg No. C6



TREE PROTECTION FENCE
NTS

LEGEND:

- TREES TO BE SAVED
- CRITICAL ROOT ZONE LINE
- CRITICAL ROOT ZONE TO BE UNDISTURBED
- TREE PROTECTION FENCE (SEE DETAIL)
- TREES TO BE SAVED - NOT FOR CREDIT W/ REPLACEMENT TREES PROVIDED
- TREES TO BE REMOVED
- BUFFER LINE

NOTE:

1. LOCATE AND INSTALL TREE PROTECTION FENCING PRIOR TO ANY CLEARING OR LAND DISTURBANCE. TREE PROTECTION FENCE TO REMAIN IN PLACE FOR THE DURATION OF CONSTRUCTION AND UNTIL A CERTIFICATE OF OCCUPANCY IS ISSUED.

2. CRITICAL ROOT ZONE AREAS - AREAS WITHIN THE TREE PROTECTION FENCING - SHALL REMAIN FREE OF ANY DISTURBANCE AND OF ALL BUILDING MATERIALS AND DEBRIS.

ALISON A.POCKAT, ASLA
LANDSCAPE ARCHITECT
LAND PLANNER
(919) 363-4415
105 STEEPBANK DRIVE
CARY, NC 27518

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 663 ALISON A. POCKAT 11/22/13

NO.	DATE	REVISION DESCRIPTION	BY
1	07.26.2022	INITIAL SUBMITTAL	KPG
2	10.13.2022	Revised per Town / CORI / Wake Co Comment	KPG
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Gettle Engineering and Design, PLLC
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Wake Forest, North Carolina 27587
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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 030913 ENGINEER KEITH P. GETTLE 4/23/13

Preservation Plan
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. LS1

265 LF FOUNDATION AREA
2 PLANTING BEDS REQ.
4 PLANTING BEDS PROVIDED

CRZ - 1017 SF
UNDISTURBED CRZ - 770 SF
76% OF TOTAL

30' STREETSCAPE - 351 LF
REQ. - 9 CANOPY TREES
PROVIDED - 8 CANOPY, 3 UNDERSTORY

CRZ - 5806 SF
UNDISTURBED CRZ - 4355 SF
75% OF TOTAL

CB
TOP: 415.91'
OUT: 413.72'

CONCRETE SIDEWALK

RETAINING WALL W/COLUMNS

30' STREETSCAPE

N 55°19'04" E

258.41'

EDGE OF PAVEMENT

CONCRETE SIDEWALK

PAVED PATIO

BED AREA = 305 SF

BED AREA = 300 SF

BED AREA = 623 SF

2 LB - PANICUM RIGIDULUM

1 LB - ERNMX 306

EIP
CONTROL CORNER
N(y): 788,591.40'
E(x): 2,157,267.49'

N/F
STORAGE MAX VIII, LLC
D.B. 17556, PAGE 1236
B.M. 2013, PAGE 1030
PIN# 1758.08-78-5571

N/F
2 SMITHS, LLC
D.B. 11375, PAGE 938
B.M. 2005, PAGE 474
PIN# 1758.08-76-6903

LEGEND:

PROPOSED PLANT MATERIAL
PLANT KEY
COUNT WITHIN CLUSTER

SEEDED AREA - SEE PLANT NOTES

EXISTING PLANT MATERIAL TO REMAIN

TREE PROTECTION FENCE LOCATION

SCALE: 1" = 20'

PLANT NOTES

1. THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE DETERMINED AND VERIFIED IN THE FIELD BY THE LANDSCAPE CONTRACTOR. PLANTINGS SHALL BE ADJUSTED TO AVOID CONFLICT WITH SAID UTILITIES.

2. SUBSOIL CONDITIONS AND SUBSURFACE DRAINAGE REQUIREMENTS OF ALL PLANT MATERIALS SHALL BE DETERMINED IN THE FIELD BY THE LANDSCAPE CONTRACTOR.

3. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATIONSHIP TO THE NEW GRADE THAT THEY BORE TO THE PREVIOUS GRADE.

4. THE LANDSCAPE CONTRACTOR SHALL STAKE THE LOCATION OF ALL TREES AND SHRUBS AND CHECK FOR CORRECT SPACING PRIOR TO PLANTING.

5. ALL PLANT MATERIALS ARE AS STATED. NO SUBSTITUTIONS INCLUDING PLANT VARIETY WITHOUT THE CONSENT OF THE LANDSCAPE ARCHITECT.

6. ALL NYLON OR POLYESTER TREATED BURLAP AND SYNTHETIC ROPING SHALL BE REMOVED ENTIRELY PRIOR TO PLANTING. ALL WIRES, ROPES AND HOSES USED TO STAKE THE TREES SHALL BE REMOVED NO LATER THAN 18 MONTHS AFTER PLANTING.

7. THE OPTIMUM PLANTING SEASON IS APRIL 15 - MAY 15 AND SEPT. 15 - OCT. 15. ALL PLANTS ARE TO MEET OR EXCEED THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS FOR THE SIZES SPECIFIED. BEDS SHALL BE TILLED TO A DEPTH OF 6" AND AMENDED WITH A 2" LAYER OF CERTIFIED ORGANIC COMPOST MATERIAL ALONG WITH 0-8-8 FERTILIZER (AT A RATE OF 25 LBS PER 5,000 SQ.FT.) AND DOLOMITIC LIME (AT A RATE OF 10 LBS PER 5,000 SQ.FT.). THESE RATES ARE TO BE ADJUSTED AS PER SOIL TESTING RESULTS AS NEEDED. ALL BEDS SHALL BE MULCHED WITH A 2" THICK LAYER OF SHREDDED HARDWOOD MULCH. PLANTS SHALL BE WATERED THOROUGHLY IMMEDIATELY UPON INSTALLATION.

8. THE CONTRACTOR SHALL PROVIDE AN 18 MONTH GUARANTEE ON ALL PLANT MATERIAL AND WORK.

9. ALL SOIL SURFACES ARE TO BE COVERED WITH PLANTS, MULCH, BUILDING OR PAVING. LEAVE NO SOIL BARE. ALL PLANTINGS SHALL BE BEDDED AND MULCHED .

10. SEEDED AREAS ARE TO BE AMENDED AND SEEDED AS PER THE AMOUNTS LISTED. MOW SEEDED AREAS ANNUALLY TO KEEP DOWN WEED TREES.

11. SEED ALL OPEN LAWN AREAS WITH HYBRID BERMUDA GRASS AT A RATE OF 1 LB / 1000 SF.

ALISON A.POCKAT, ASLA
LANDSCAPE ARCHITECT
LAND PLANNER
(919) 363-4415
186 STEEPBANK DRIVE
CARY, NC 27518

NORTH CAROLINA LANDSCAPE ARCHITECTS 563 11/22/23 ALISON A. POCKAT

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NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE 4/25/23

Landscape Plan

South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. LS2

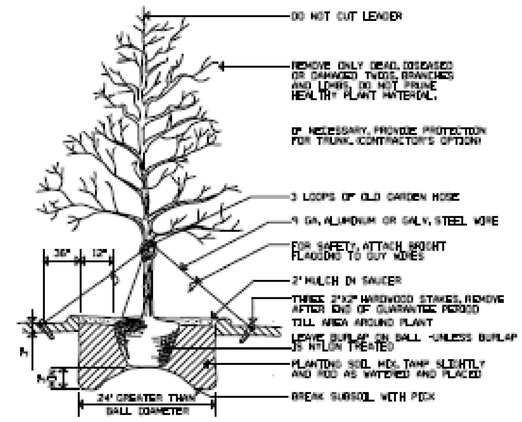
PLANT LIST

KEY	COUNT	PLANT NAME	SIZE	ON / CENTER SPACING	PLANTING REQUIREMENT 6.2.2.2.B STREET 8SH /3UND	BUFFER NONE REQ.	6.2.4.4.C PARKING 225LF-75	6.2.4.5.B.3 MITIGATION 1-20"=4REQ
SHADE TREES								
LS	13	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA', FRUITLESS SWEETGUM	2.5"CAL, 8-10'HT	28'	3			4
NS	12	NYSSA SYLVATICA, BLACK GUM	2.5"CAL, 8-10'HT	28'	1			
QC	10	QUERCUS COCCINEA, SCARLET OAK	2.5"CAL, 8-10'HT	28'	2			
					EXIST.-2			
UNDERSTORY TREES								
CC	4	CERCIS CANADENSIS, EASTERN REDBUD	#10, 8'HT	15'				
CV	4	CHIONANTHUS VIRGINICUS, FRINGE TREE	#10, 8'HT	15'	1			
IO	3	ILEX OPACA 'TINGA', TINGA AMERICAN HOLLY	8'HT, B&B	15'				
JV	3	JUNIPERUS VIRGINIANA, EASTERN RED CEDAR	8'HT, B&B	15'				
					EXIST.-2			
SHRUBS								
HF	64	HYPERICUM FRONDOSUM 'SUNBURST', ST JOHN'S WORT	#23, 15-18'HT	3'			17	
IF	44	ILLICIUM FLORIDANUM 'MISS SCARLET', ANISE	#23, 18-24"HT	3'			13	
IG	89	ILEX GLABRA 'SHAMROCK', SHAMROCK INKBERRY	#23, 24-30"HT	4'			28	
IV	19	ITEA VIRGINICA 'LITTLE HENRY', SWEETSPIRE	#23, 15-18'HT	3'				
LP	43	LEUCOTHOE POPULIFOLIA, FLORIDA LEUCOTHOE	#23, 24-30"HT	5'				
MC	58	MYRICA CERIFERA, WAX MYRTLE	#23, 24-30"HT	5'				
RG	32	RHUS X 'GRO LOW', GRO LOW SUMAC	#23, 15-18'HT	3'				
VO	78	VIBURNUM OBOVATUM 'MRS SCHILLER'S DELIGHT', VIBURNUM	#23, 18-24"HT	4'			28	
GRASSES								
MU	28	MUHLENBERGIA CAPILLARIS, PINK MUHLY GRASS	#23	3'				
					PROVIDED: 8SH /3UND		78	4

SEEDED AREAS

ERNMX 386 - NC PIEDMONT UPL MEADOW MIX - 1 LB
PANICUM RIGIDULUM - REDTOP PANIC GRASS - 2 LB

NOTES:
1. SEED LISTED ON THE PLAN CAN BE OBTAINED THROUGH ERNST SOUTHERN NATIVE SEEDS - www.ernstseed.com - PHONE NUMBER 1-800-873-3321 .



NOTE : CURVING IS REQUIRED ONLY ON TREES OVER 10' HIGH.
SET TREE AT IT'S ORIGINAL GRADE, COLLAR LINE MUST MATCH THE NEW SOIL LINE.

TREE PLANTING DETAIL
NTS

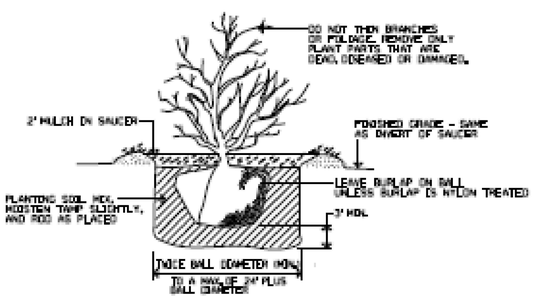
NOTES FOR THE ENHANCED PROTECTION OF THE 42" OAK

1. PLACE TREE PROTECTION FENCING AS SHOWN ON PLAN.
2. MULCH THE AREA WITHIN THE TREE PROTECTION FENCING WITH 1 - 3" OF WOOD OR BARK CHIPS. SELECTION TO BE MADE BASED ON THE MATERIAL BEING LIGHT WEIGHT BUT ABLE TO ACT AS A MOISTURE BARRIER.
3. PROVIDE SUPPLEMENTAL IRRIGATION AS NEEDED DURING THE DURATION OF CONSTRUCTION DURING DRY PERIODS. ENSURE THAT IRRIGATION IS NOT EXCESSIVE TO THE POINT OF CREATING EXCESSIVE WET AREAS AROUND THE TREE. A GOOD OPTION FOR THIS WATERING IS THE USE OF 'LEAKY PIPE'.
4. OBTAIN A SOIL TEST FROM A SOIL SAMPLE TAKEN FROM THE AREA WITHIN THE TREE PROTECTION FENCING. FERTILIZE IN THE SPRING PRIOR TO LEAF OUT AND IN THE FALL AS PER THE RECOMMENDATIONS FROM THE SOIL TEST FOR NUTRIENT AND PH REQUIREMENTS.
5. ENSURE THAT NO FOOT OR VEHICLE TRAFFIC IS ALLOWED WITHIN THE TREE PROTECTION FENCING AREA AND THE NOTHING IS DUMPED IN THIS AREA.
6. PRUNE AND LIMBS THAT GET DAMAGED DURING THE CONSTRUCTION. USE A CERTIFIED ARBORIST TO PROVIDE THIS PRUNING.

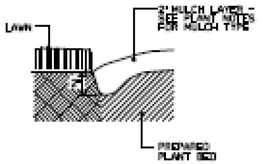
MAINTENANCE NOTES:

1. PROVIDE A HALF INCH ANNUAL APPLICATION OF YARD WASTE COMPOST TO ALL LAWN AND BEDDED AREAS IN THE EARLY SPRING. RAKE OUT EVENLY BUT DO NOT TILL IN. FERTILIZE GRASS IN EARLY FALL WITH A RATIO OF 4-3-1 OR MULTIPLES THEREOF.
2. REFURBISH MULCH TWICE PER YEAR - SPRING AND FALL. DO NOT EXCEED 2" OF MULCH AND COMPOST COMBINED AT ANY ONE TIME.
3. HAND WEED UNLESS WEED NUMBERS BECOME EXCESSIVE. TREAT EXCESSIVE BROADLEAF WEEDS WITH AN APPLICATION OF 2,4-D AS DIRECTED ON PACKAGE. TREAT EXCESSIVE WEED GRASS PROBLEMS WITH ROUNDUP.
4. MINOR PEST INFESTATIONS CAN GO UNTREATED. EXCESSIVE INSECT AND GRUB INFESTATIONS NEED TO BE TREATED AS DIAGNOSED WITH AN APPROPRIATE PESTICIDE. EXCESSIVE FUNGAL INFESTATIONS NEED TO BE TREATED IN TWO TO THREE SUCESSIVE TREATMENTS OVER A PERIOD OF TWO TO THREE WEEKS WITH AN APPROPRIATE FUNGICIDE.
5. PRUNING / TRIMMING OF SHRUBS SHOULD BE DONE IN EARLY SPRING JUST PRIOR TO LEAFING OUT. HEAD LIMBS WITH EXCESSIVE HEIGHT - REMOVE LIMB BACK TO THE CROTCH IN THE MAIN STEM. DO NOT HEDGE.
6. MOWING OF LAWN GRASS SHOULD BE DONE AS NEEDED TO KEEP NEAT AND PASSABLE. MOW TO A HEIGHT OF 2.5 - 3".
7. MOW ORNAMENTAL GRASSES AND SEEDING AREAS - MUHLY GRASS, PANIC GRASS, ERNMX 386 - ANNUALLY IN LATE FALL OR EARLY SPRING TO A HEIGHT OF 6" TO KEEP DOWN WEED TREES.

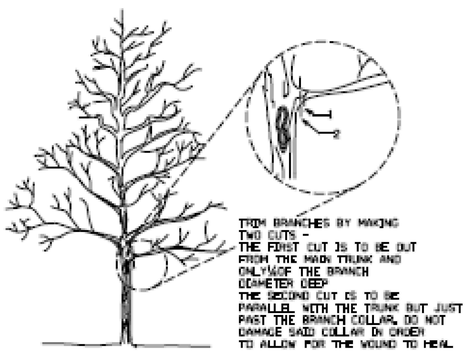
REVISED: 4.17.23 - REG. PLANTING LISTING



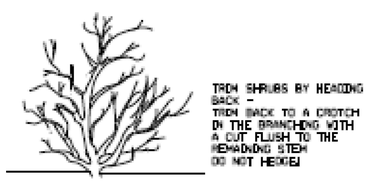
SHRUB PLANTING DETAIL
NTS



LAWN/BED EDGING
NTS



TREE PRUNING
NTS



SHRUB PRUNING
NTS

ALISON A. POCKAT, ASLA
LANDSCAPE ARCHITECT
LAND PLANNER
(919) 362-4415
185 STEEPBANK DRIVE
CARY, NC 27519

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

NO.	DATE	REVISION DESCRIPTION	BY
1	01.25.2022	INITIAL SUBMITTAL	KPG
2	10.3.2022	Revised per Town / CORE Comment	KPG
3	04.28.2023	Revised per Town / CORE / Wake Co Comment	KPG
4	04.28.2023	Revised per Town / CORE / Wake Co Comment	KPG
5	DATE	COMMENT	BY
6	DATE	COMMENT	BY
7	DATE	COMMENT	BY

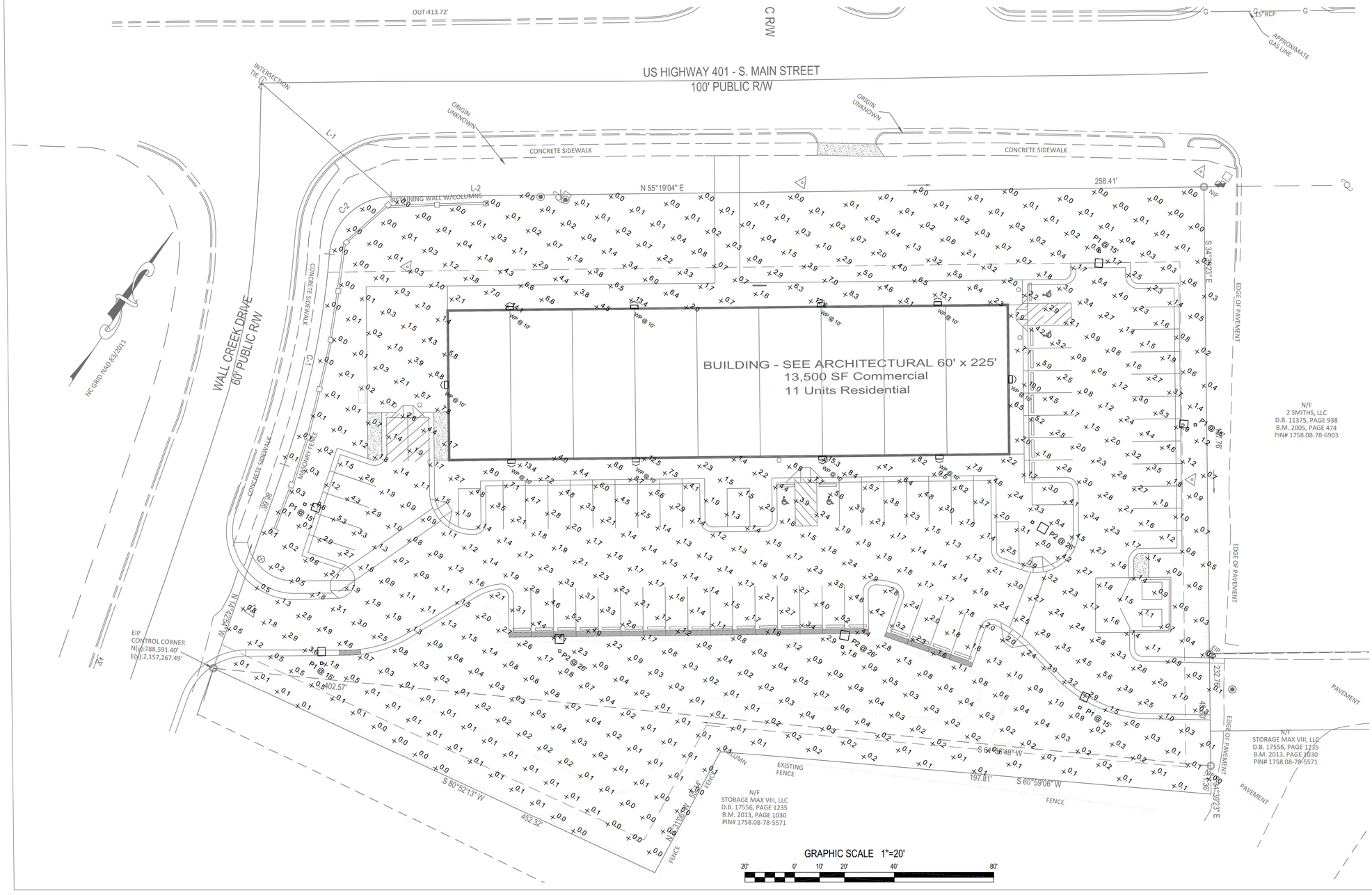
NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE 4/23/23

Landscape Details
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. LS3

Schedule											
Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Notes
	WP		10	Lithonia Lighting	WDGE3 LED P1 70CRI R3 40K	WDGE3 LED WITH P1 - PERFORMANCE PACKAGE, 4000K, 70CRI, TYPE 3 OPTIC	1	7523	1	51.1717	MOUNTING HEIGHT AS NOTED ON PLAN.
	P1		5	Lithonia Lighting	RSX1 LED P1 40K R4 HS	RSX LED Area Luminaire Size 1 P1 Lumen Package 4000K CCT Type R4 Distribution with HS shield	1	4725	1	51.34	MOUNTING HEIGHT/POLE HEIGHT AS NOTED ON PLAN.
	P2		3	Lithonia Lighting	RSX2 LED P2 40K R4	RSX Area Fixture Size 2 P2 Lumen Package 4000K CCT Type R4 Distribution	1	17427	1	114.07	MOUNTING HEIGHT/POLE HEIGHT AS NOTED ON PLAN.

Statistics					
Description	Symbol	Avg	Max	Min	Avg/Min
PARKING LOT	+	2.5 fc	7.0 fc	0.6 fc	4.2:1
PROPERTY LINE	+	0.1 fc	0.7 fc	0.0 fc	N/A



GRAPHIC SCALE 1"=20'

20' 0' 10' 20' 40' 80'

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

NO.	DATE	REVISION DESCRIPTION	BY
1	09-28-2022	INITIAL SUBMITTAL	KPG
2	04-14-2023	TOWN OF ROLESVILLE COMMENTS	KPG

NORTH CAROLINA PROFESSIONAL SEAL 13719 ENGINEER ANGUS CLARK
4/14/2023

Site Lighting Plan
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

ANGUS CLARK ENGINEERING PC
P.O. Box 1507
CARY NORTH CAROLINA 27512
C-2726
919.859.2674

Project No. XXXXX
Dwg No. SL1

FIXTURE TYPE "P1"

RSX1 LED
Area Luminaire

NIGHTTIME FRIENDLY · C US · DLC LISTED PREMIUM · DLC LISTED · ida · BAA

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

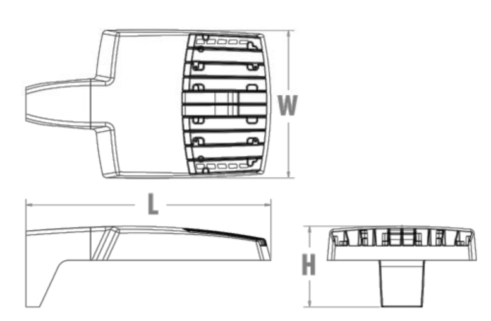
Introduction

The new RSX LED Area family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSX1 delivers 7,000 to 17,000 lumens allowing it to replace 70W to 400W HID luminaires.

The RSX features an integral universal mounting mechanism that allows the luminaire to be mounted on most existing drill hole patterns. This "no-drill" solution provides significant labor savings. An easy-access door on the bottom of mounting arm allows for wiring without opening the electrical compartment. A mast arm adaptor, adjustable integral slipfitter and other mounting configurations are available.

Specifications

EPA (ft²@0°):	0.57 ft² (0.05 m²)
Length:	21.8" (55.4 cm) (SPA mount)
Width:	13.3" (33.8 cm)
Height:	3.0" (7.6 cm) Main Body 7.2" (18.4 cm) Arm
Weight: (SPA mount):	22.0 lbs (10.0 kg)



Ordering Information

EXAMPLE: RSX1 LED P4 40K R3 MVOLT SPA DDBXD

RSX1 LED

Series	Performance Package	Color Temperature	Distribution	Voltage	Mounting
RSX1 LED	P1 P2 P3 P4	30K 3000K 40K 4000K 50K 5000K	R2 Type 2 Wide R3 Type 3 Wide R3S Type 3 Short R4 Type 4 Wide R4S Type 4 Short R5 Type 5 Wide [1] R5S Type 5 Short [1] AFR Automotive Front Row AFRR90 Automotive Front Row Right Rotated AFRL90 Automotive Front Row Left Rotated	MVOLT (120V-277V) [2] HVOLT (347V-480V) [3] XVOLT (277V-480V) [4] (use specific voltage for options as noted) 120 [3] 277 [5] 208 [3] 347 [5] 240 [3] 480 [5]	SPA Square pole mounting (3.0" min. SQ pole for 1 at 90°, 3.5" min. SQ pole for 2, 3, 4 at 90°) RPA Round pole mounting (3.2" min. dia. RND pole for 2, 3, 4 at 90°, 3.0" min. dia. RND pole for 1 at 90°, 2 at 180°, 3 at 120°) MA Mast arm adaptor (fits 2-3/8" OD horizontal tenon) IS Adjustable slipfitter (fits 2-3/8" OD tenon) [6] WBA Wall bracket [1] WBASC Wall bracket with surface conduit box AASP Adjustable tilt arm square pole mounting [6] AARP Adjustable tilt arm round pole mounting [6] AAWB Adjustable tilt arm with wall bracket [6] AAWSC Adjustable tilt arm wall bracket and surface conduit box [6]

Options

Shipped Installed
- HS House-side shield [7]
- PE Photocontrol, button style [8,9]
- PER7 Seven-wire twist-lock receptacle only (no controls) [9,10,11]
- SF Single fuse (120, 277, 347) [5]
- DF Double fuse (208, 240, 480) [5]
- SPD20KV 20KV Surge pack (10KV standard)
- FAO Field adjustable output [9]
- DMG 0-10V dimming extend out back of housing for external control (control ordered separate) [9]

Shipped Installed
***Standalone and Networked Sensors/Controls (factory default settings, see table page 9)**
- NLTAIR2 PIRHN nLight AIR generation 2, with Networked, Bi-Level motion/ambient sensor [9,12,13,14]
- BAA Buy America(n) Act Compliant
- CCE Coastal Construction [15]

***Note: NLTAIR2 PIRHN with nLight Air can be used as a standalone or networked solution. Sensor coverage pattern is affected when luminaire is tilted.**

Shipped Separately (requires some field assembly)
- EGS External glare shield [7]
- EGFV External glare full visor (360° around light aperture) [7]
- BS Bird spikes [16]

Finish
- DDBXD Dark Bronze
- DBLXD Black
- DNAXD Natural Aluminum
- DWHXD White
- DDBTXD Textured Dark Bronze
- DBLBXD Textured Black
- DNATXD Textured Natural Aluminum
- DWHGXD Textured White

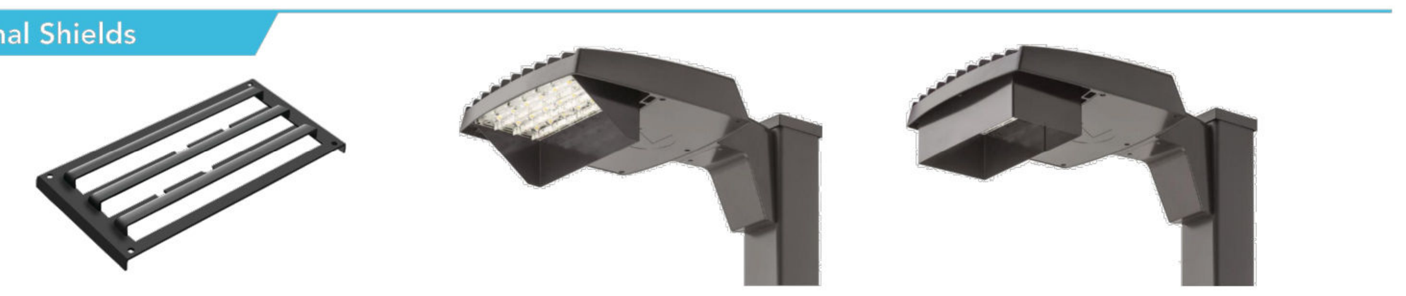
Ordering Information

Accessories
Ordered and shipped separately.

RSX1HS	RSX1 House side shield (includes 1 shield)
RSX1HSAFRR U	RSX1 House side shield for AFR rotated optics (includes 1 shield)
RSX1EGS (FINISH) U	External glares hield (specify finish)
RSX1EGFV (FINISH) U	External glare full visor (specify finish)
RSXRPA (FINISH) U	RSX Universal round pole adaptor plate (specify finish)
RSXWBA (FINISH) U	RSX WBA wall bracket (specify finish) [1]
RSXSCB (FINISH) U	RSX Surface conduit box (specify finish, for use with WBA, WBA not included)
DLL127F 1.5 JU	Photocell -SSL twist-lock (120-277V) [17]
DLL347F 1.5 CUL JU	Photocell -SSL twist-lock (347V) [17]
DLL480F 1.5 CUL JU	Photocell -SSL twist-lock (480V) [17]
DSHORT SBK U	Shorting cap [18]

NOTES
1. Any Type 5 distribution, is not available with WBA.
2. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
3. HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
4. XVOLT driver not available with P1 or P2. XVOLT driver operates on any line voltage from 277V-480V (50/60 Hz). XVOLT not available with fusing (SF or DF) and not available with PE.
5. Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
6. Maximum tilt is 90° above horizontal.
7. It may be ordered as an accessory.
8. Requires MVOLT or 347V.
9. Two or more of the following options cannot be combined including PE, DMG, PER7, FAO and NLTAIR2 PIRHN. (Exception: PE and FAO can be combined; also PE and DMG can be combined.)
10. Compatible with standard twist-lock photocells for dusk to dawn operation or advanced control nodes that provide 0-10V dimming signals. Wire 4/Wire 5 wired to dimming leads on driver. Wire6/Wire7 capped inside luminaire. Twistlock photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
11. For units with option PER7, the mounting must be restricted to +/- 45° from horizontal aim per ANSI C136.10-2010.
12. Must be ordered with PIRHN.
13. Requires MVOLT or HVOLT.
14. Must be ordered with NLTAIR2. For additional information on PIRHN visit here.
15. CCE option not available with WBA, WBASC, AASP, AARP, AAWB, AAWBSC, EGS, EGFV and BS.
16. Must be ordered with fixture for factory pre-drilling.
17. Requires luminaire to be specified with PER7 option. Ordered and shipped as a separate line item from Acuity Brands Controls.

External Shields

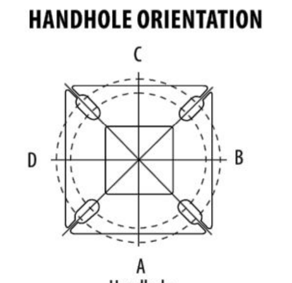


House Side Shield · External Glare Shield · External 360 Full Visor

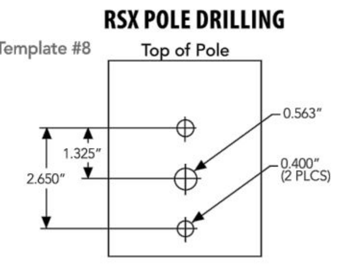
Pole/Mounting Informatiion

Accessories including bullhorns, cross arms and other adpaters are available under the accessories tab at Lithonia's Outdoor Poles and Arms product page. Click here to visit Accessories.

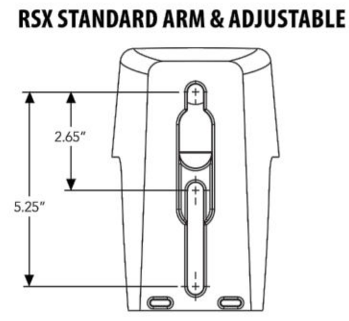
HANDHOLE ORIENTATION



RSX POLE DRILLING



RSX STANDARD ARM & ADJUSTABLE ARM



Round Tenon Mount - Pole Top Slipfitters

Tenon O.D.	RSX Mounting	Single	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2 - 3/8"	RPA, AARP	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 320	AS3-5 390	AS3-5 490
2 - 7/8"	RPA, AARP	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	RPA, AARP	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Drill/Side Location by Configuration Type

Drilling Template	Mounting Option	Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
	Head Location	Side B	Side B & D	Side B & C	Round Pole Only	Side B, C & D	Side A, B, C & D
#8	Drill Nomenclature	DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS

RSX1 - Luminaire EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Mounting Type	Tilt	Single	2 @ 90	2 @ 180	3 @ 90	3 @ 120	4 @ 90	2 Side by Side	3 Side by Side	4 Side by Side
SPA - Square Pole Adaptor	0°	0.57	1.03	1.05	1.52	1.36	2.03	1.31	1.7	2.26
RPA - Round Pole Adaptor		0.62	1.08	1.15	1.62	1.46	2.13	1.36	1.8	2.36
MA - Mast Arm Adaptor		0.49	0.95	0.89	1.36	1.2	1.87	1.23	1.54	2.1
IS - Integral Slipfitter AASP/AARP - Adjustable Arm Square/Round Pole	0°	0.57	1.03	1.05	1.52	1.36	2.03	1.31	1.7	2.26
	10°	0.68	1.34	1.33	2	1.74	2.64	1.35	2.03	2.71
	20°	0.87	1.71	1.73	2.56	2.26	3.42	1.75	2.62	3.49
	30°	1.24	2.19	2.3	3.21	2.87	4.36	2.49	3.73	4.97
	40°	1.81	2.68	2.98	3.85	3.68	5.30	3.62	5.43	7.24
	45°	2.11	2.92	3.44	4.2	4.08	5.77	4.22	6.33	8.44
	50°	2.31	3.17	3.72	4.52	4.44	6.26	4.62	6.94	9.25
	60°	2.71	3.66	4.38	5.21	5.15	7.24	5.43	8.14	10.86
	70°	2.78	3.98	4.54	5.67	5.47	7.91	5.52	8.27	11.03
	80°	2.76	4.18	4.62	5.97	5.76	8.31	5.51	8.27	11.03
	90°	2.73	4.25	4.64	6.11	5.91	8.47	5.45	8.18	10.97

FIXTURE TYPE "P2"

RSX2 LED
Area Luminaire

NIGHTTIME FRIENDLY · C US · DLC LISTED PREMIUM · DLC LISTED · ida · Buy American

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

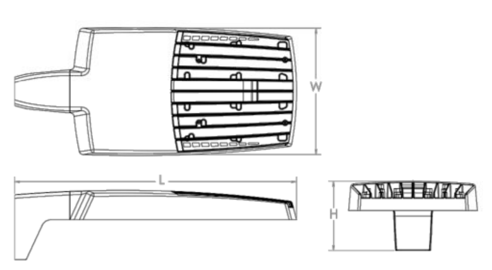
Introduction

The new RSX LED Area family delivers maximum value by providing significant energy savings, long life and outstanding photometric performance at an affordable price. The RSX2 delivers 11,000 to 31,000 lumens allowing it to replace 250W to 1000W HID luminaires.

The RSX features an integral universal mounting mechanism that allows the luminaire to be mounted on most existing drill hole patterns. This "no-drill" solution provides significant labor savings. An easy-access door on the bottom of mounting arm allows for wiring without opening the electrical compartment. A mast arm adaptor, adjustable integral slipfitter and other mounting configurations are available.

Specifications

EPA (ft²@0°):	0.69 ft² (0.06 m²)
Length:	29.3" (74.4 cm) (SPA mount)
Width:	13.4" (34.0 cm)
Height:	3.0" (7.6 cm) Main Body 7.2" (18.3 cm) Arm
Weight: (SPA mount)	30.0 lbs (13.6 kg)



Ordering Information

EXAMPLE: RSX2 LED P6 40K R3 MVOLT SPA DDBXD

RSX2 LED

Series	Performance Package	Color Temperature	Distribution	Voltage	Mounting
RSX2 LED	P1 P2 P3 P4 P5 P6	30K 3000K 40K 4000K 50K 5000K	R2 Type 2 Wide R3 Type 3 Wide R3S Type 3 Short R4 Type 4 Wide R4S Type 4 Short R5 Type 5 Wide [1] R5S Type 5 Short [1] AFR Automotive Front Row AFRR90 Automotive Front Row Right Rotated AFRL90 Automotive Front Row Left Rotated	MVOLT (120V-277V) [2] HVOLT (347V-480V) [3] XVOLT (277V-480V) [4] (use specific voltage for options as noted) 120 [3] 277 [5] 208 [3] 347 [5] 240 [3] 480 [5]	SPA Square pole mounting (3.0" min. SQ pole for 1 at 90°, 3.5" min. SQ pole for 2, 3, 4 at 90°) RPA Round pole mounting (3.2" min. dia. RND pole for 2, 3, 4 at 90°, 3.0" min. dia. RND pole for 1 at 90°, 2 at 180°, 3 at 120°) MA Mast arm adaptor (fits 2-3/8" OD horizontal tenon) IS Adjustable slipfitter (fits 2-3/8" OD tenon) [6] WBA Wall bracket [1] WBASC Wall bracket with surface conduit box AASP Adjustable tilt arm square pole mounting [6] AARP Adjustable tilt arm round pole mounting [6] AAWB Adjustable tilt arm with wall bracket [6] AAWSC Adjustable tilt arm wall bracket and surface conduit box [6]

Options

Shipped Installed
- HS House-side shield [7]
- PE Photocontrol, button style [8,9]
- PEX Photocontrol external threaded, adjustable [9,10]
- PER7 Seven-wire twist-lock receptacle only (no controls) [9,11,12,13]
- CE34 Conduit entry 3/4" NPT (Qty 2)
- SF Single fuse (120, 277, 347) [5]
- DF Double fuse (208, 240, 480) [5]
- SPD20KV 20KV Surge pack (10KV standard)
- FAO Field adjustable output [9,13]
- DMG 0-10V dimming extend out back of housing for external control (control ordered separate) [9,13]
- DS Dual switching [9,14]

Shipped Installed
***Standalone and Networked Sensors/Controls (factory default settings, see table page 9)**
- NLTAIR2 nLight AIR generation 2 [13,15,16]
- PIRHN Networked, Bi-Level motion/ambient sensor (for use with NLTAIR2) [13,16,17]
- BAA Buy America(n) Act Compliant

***Note: PIRHN with nLight Air can be used as a standalone dimming sensor with out-of-box settings or as a wireless networked solution. See factory default settings table. Sensor coverage pattern is affected when luminaire is tilted.**

Shipped Separately (requires some field assembly)
- EGS External glare shield [6]
- EGFV External glare full visor (360° around light aperture) [7]
- BS Bird spikes [18]

Finish
- DDBXD Dark Bronze
- DBLXD Black
- DNAXD Natural Aluminum
- DWHXD White
- DDBTXD Textured Dark Bronze
- DBLBXD Textured Black
- DNATXD Textured Natural Aluminum
- DWHGXD Textured White

Ordering Information

Accessories
Ordered and shipped separately.

RSX2HS	RSX2 House side shield (includes 2 shields)
RSX2EGS (FINISH) U	External glare shield (specify finish)
RSX2HSAFRR (FINISH) U	RSX2 House side shields for AFR rotated optics (includes 2 shields)
RSX2EGFV (FINISH) U	External glare full visor (specify finish)
RSXRPA (FINISH) U	RSX Universal round pole adaptor plate (specify finish)
RSXWBA (FINISH) U	RSX WBA wall bracket (specify finish) [1]
RSXSCB (FINISH) U	RSX Surface conduit box (specify finish, for use with WBA, WBA not included)
DLL127F 1.5 JU	Photocell -SSL twist-lock (120-277V) [19]
DLL347F 1.5 CUL JU	Photocell -SSL twist-lock (347V) [19]
DLL480F 1.5 CUL JU	Photocell -SSL twist-lock (480V) [19]
DSHORT SBK U	Shorting cap [19]

NOTES
1. Any Type 5 distribution, is not available with WBA.
2. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
3. HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
4. XVOLT driver not available with P1. XVOLT driver operates on any line voltage from 277V-480V (50/60 Hz). XVOLT not available with fusing (SF or DF) and not available with PE or PEX.
5. Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
6. Maximum tilt is 90° above horizontal.
7. It may be ordered as an accessory.
8. Requires MVOLT or 347V.
9. Not available in combination with other light sensing control options (following options cannot be combined: PE, PEX, PER7, FAO, DMG, DS, PIRHN). Exception: PE or PEX and FAO can be combined.
10. Requires 120V, 208V, 240V, or 277V.
11. Twistlock photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included. Dimming leads capped for future use.
12. For units with option PER7, the mounting must be restricted to +/- 45° from horizontal aim per ANSI C136.10-2010.
13. Two or more of the following options cannot be combined including DMG, DS, PER7, FAO and PIRHN.
14. DS only available on performance package P5 and P6.
15. Must be ordered with PIRHN.
16. Requires MVOLT or HVOLT.
17. Must be ordered with NLTAIR2. For additional information on PIRHN visit here.
18. Must be ordered with fixture for factory pre-drilling.
19. Requires luminaire to be specified with PER7 option. Ordered and shipped as a separate line item from Acuity Brands Controls.

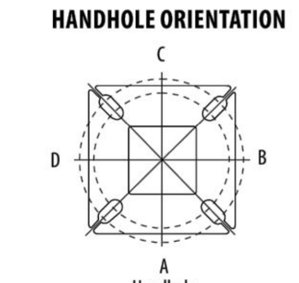
External Shields

House Side Shield · External Glare Shield · External 360 Full Visor

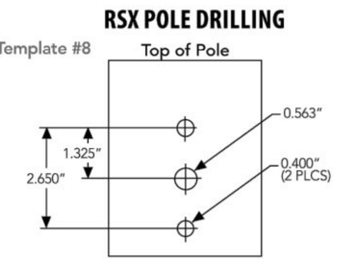
Pole/Mounting Informatiion

Accessories including bullhorns, cross arms and other adpaters are available under the accessories tab at Lithonia's Outdoor Poles and Arms product page. Click here to visit Accessories.

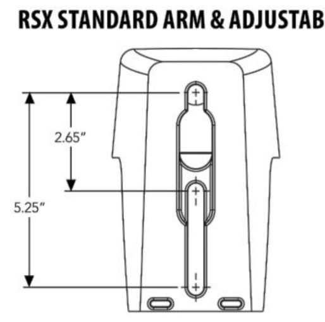
HANDHOLE ORIENTATION



RSX POLE DRILLING



RSX STANDARD ARM & ADJUSTABLE ARM



Round Tenon Mount - Pole Top Slipfitters

Tenon O.D.	RSX Mounting	Single	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2 - 3/8"	RPA, AARP	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 320	AS3-5 390	AS3-5 490
2 - 7/8"	RPA, AARP	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	RPA, AARP	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Drill/Side Location by Configuration Type

Drilling Template	Mounting Option	Single	2 @ 180	2 @ 90	3 @ 120	3 @ 90	4 @ 90
	Head Location	Side B	Side B & D	Side B & C	Round Pole Only	Side B, C & D	Side A, B, C & D
#8	Drill Nomenclature	DM19AS	DM28AS	DM29AS	DM32AS	DM39AS	DM49AS

RSX2 - Luminaire EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Mounting Type	Tilt	Single	2 @ 90	2 @ 180	3 @ 90	3 @ 120	4 @ 90	2 Side by Side	3 Side by Side	4 Side by Side
SPA - Square Pole Adaptor	0°	0.69	1.22	1.27	1.8	1.61	2.39	1.37	2.06	2.74
RPA - Round Pole Adaptor		0.74	1.27	1.37	1.9	1.71	2.49	1.42	2.16	2.84
MA - Mast Arm Adaptor		0.61	1.14	1.11	1.64	1.45	2.23	1.29	1.9	2.58
IS - Integral Slipfitter AASP/AARP - Adjustable Arm Square/Round Pole	0°	0.69	1.22	1.27	1.8	1.61	2.39	1.37	2.06	2.74
	10°	0.53	1.06	1.05	1.58	1.37	2.08	1.06	1.59	2.12
	20°	0.52	1.02	1.03	1.52	1.33	2.02	1.03	1.55	2.07
	30°	0.64	1.11	1.18	1.63	1.45	2.21	1.27	1.91	2.54
	40°	0.81	1.21	1.35	1.74	1.65	2.39	1.62	2.43	3.23
	45°	0.91	1.25	1.5	1.81	1.75	2.48	1.82	2.73	3.64
	50°	1.34	1.83	2.17	2.61	2.56	3.62	2.68	4.02	5.36
	60°	2.2	2.97	3.57	4.24	4.17	5.89	4.41	6.61	8.82
	70°	2.86	4.13	4.7	5.89	5.71	8.21	5.71	8.57	11.42
	80°	3.4	5.13	5.67	7.34	7.09	10.21	6.79	10.19	13.59
	90°	3.85	5.96	6.55	8.58	8.31	11.88	7.70	11.56	15.41

FIXTURE TYPE "WP"

WDGE3 LED
Architectural Wall Sconce

DLC PREMIUM · DLC LISTED · ida · Buy American · CERTIFIED IN TITLE 20

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

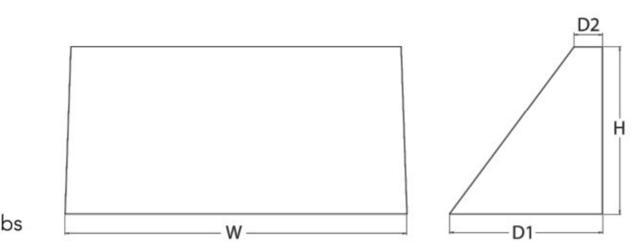
Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE3 has been designed to deliver up to 12,000 lumens through a precision refractive lens with wide distribution, perfect for augmenting the lighting from pole mounted luminaires.

Specifications

Depth (D1):	8"
Depth (D2):	1.5"
Height:	9"
Width:	18"
Weight: (without options)	19.5 lbs



WDGE LED Family Overview

Luminaire	Standard EM, 0°C	Cold EM, -20°C	Sensor	Lumens (4000K) P1	P2	P3	P4	P5	P6
WDGE1 LED	4W	--	--	1,200	2,000	--	--	--	--
WDGE2 LED	10W	18W	Standalone / nLight	1,200	2,000	3,000	4,500	6,000	--
WDGE3 LED	15W	18W	Standalone / nLight	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	--	--	Standalone / nLight	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE3 LED P3 40K 70CRI R3 MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE3 LED	P1 P2 P3 P4	30K 3000K 40K 4000K 50K 5000K	70CRI 80CRI	R2 Type 2 R3 Type 3 R4 Type 4 RFT Forward Throw	MVOLT 347 [1] 480 [1]	**Shipped included** SRM Surface mounting bracket ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only) [4] **Shipped separately** AWS 3/8inch Architectural wall spacer PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available.

Options
- E15WH Emergency battery backup, Certified in CA Title 20 MAEDBS (15W, 5°C min)
- E20WC Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C min)
- PE [2] Photocell, Button Type
- DMG [3] 0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
- BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points.
- SPD10KV 10kV Surge pack
- BAA Buy America(n) Act Compliant

Standalone Sensors/Controls
- PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching.
- PIRH Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching
- PIR1FC3V Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.
- PIRH1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation.

Networked Sensors/Controls
- NLTAIR2 PIR nLightAIR Wireless enabled bi-level motion/ambient sensor for 8-15' mounting heights.
- NLTAIR2 PIRH nLightAIR Wireless enabled bi-level motion/ambient sensor for 15-30' mounting heights.

See page 4 for out of box functionality

Finish
- DDBXD Dark bronze
- DBLXD Black
- DNAXD Natural aluminum
- DWHXD White
- DSSXD Sandstone
- DDBTXD Textured dark bronze
- DBLBXD Textured black
- DNATXD Textured natural aluminum
- DWHGXD Textured white
- DSSTXD Textured sandstone

Accessories
Ordered and shipped separately.

WDGEAWS DDBXD	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE3PBBW DDBXD U	WDGE3 surface-mounted back box (specify finish)

NOTES
1. 347V and 480V not available with E15WH and E20WC.
2. PE not available in 480V and with sensors/controls.
3. DMG option not available with sensors/controls.
4. Not qualified for DLC. Not available with emergency battery backup or sensors/controls

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	30K (3000K, 70 CRI) Lumens	LPW	B	U	G	40K (4000K, 70 CRI) Lumens	LPW	B	U	G	50K (5000K, 70 CRI) Lumens	LPW	B	U	G
P1	52W	R2	7,037	136	1	0	1	7,649	148	2	0	1	7,649	148	2	0	1
		R3	6,922	134	1	0	2	7,524	145	1	0	2	7,524	145	1	0	2
		R4	7,133	138	1	0	2	7,753	150	1	0	2	7,753	150	1	0	2
		RFT	6,985	135	1	0	2	7,592	147	1	0	2	7,592	147	1	0	2
P2	59W	R2	7,968	135	2	0	1	8,661	147	2	0	1	8,661	147	2	0	1
		R3	7,838	133	1	0	2	8,519	144	1	0	2	8,519	144	1	0	2
		R4	8,077	137	1	0	2	8,779	149	1	0	2	8,779	149	1	0	2
		RFT	7,909	134	1	0	2	8,597	146	2	0	2	8,597	146	2	0	2
P3	71W	R2	9,404	132	2	0	1	10,221	143	2	0	1	10,221	143	2	0	1
		R3	9,250	130	2	0	2	10,054	141	2	0	2	10,054	141	2	0	2
		R4	9,532	134	2	0	2	10,361	145	2	0	2	10,361	145	2	0	2
		RFT	9,334	131	2	0	2	10,146	142	2	0	2	10,146	142	2	0	2
P4	88W	R2	11,380	129	2	0	1	12,369	140	2	0	1	12,369	140	2	0	1
		R3	11,194	127	2	0	2	12,167	138	2	0	2	12,167	138	2	0	2
		R4	11,535	131	2	0	2	12,538	142	2	0	2	12,538	142	2	0	2
		RFT	11,295	128	2	0	2	12,277	139	2	0	2	12,277	139	2	0	2

Electrical Load

Performance Package	System Watts	Current (A) 120V	208V	240V	277V	347V	480V
P1	52W	0.437	0.246	0.213	0.186	0.150	0.110
P2	59W	0.498	0.287	0.251	0.220	0.175	0.126
P3	71W	0.598	0.344	0.300	0.262	0.210	0.152
P4	88W	0.727	0.424	0.373	0.333	0.260	0.190

Lumen Output in Emergency Mode (4000K, 70 CRI)

Option	Dist. Type	Lumens
E15WH	R2	3,185
	R3	3,133
	R4	3,229
	RFT	3,162
E20WC	R2	3,669
	R3	3,609
	R4	3,719
	RFT	3,642

Lumen Multiplier for 80CRI

CCT	Multiplier
30K	0.891
40K	0.906
50K	0.906

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.05
10°C	50°F	1.03
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.98	>0.97	>0.92

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

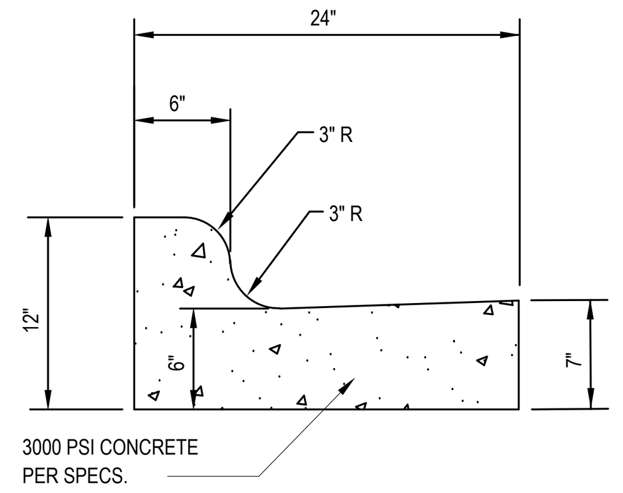
NO.	DATE	REVISION DESCRIPTION	BY
1	09-28-2022	INITIAL SUBMITTAL	KPG
2	04-14-2023	TOWN OF ROLESVILLE COMMENTS	KPG

NORTH CAROLINA PROFESSIONAL SEAL 13719 ENGINEER ANGUS M. CLARK 4/14/2023

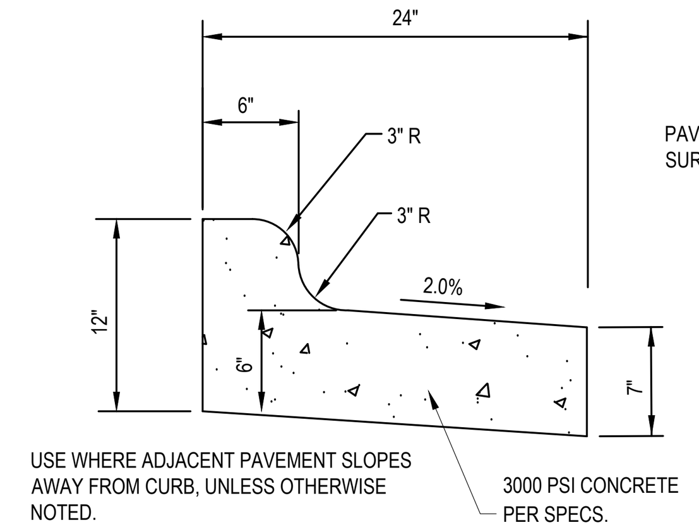
Site Lighting Fixtures
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

ANGUS CLARK ENGINEERING PC
P.O. Box 1507
CARY NORTH CAROLINA 27512
C-2726
919.859.2674

Project No. XXXXX
Dwg No. SL2



STANDARD 24"
CURB & GUTTER SECTION
NTS

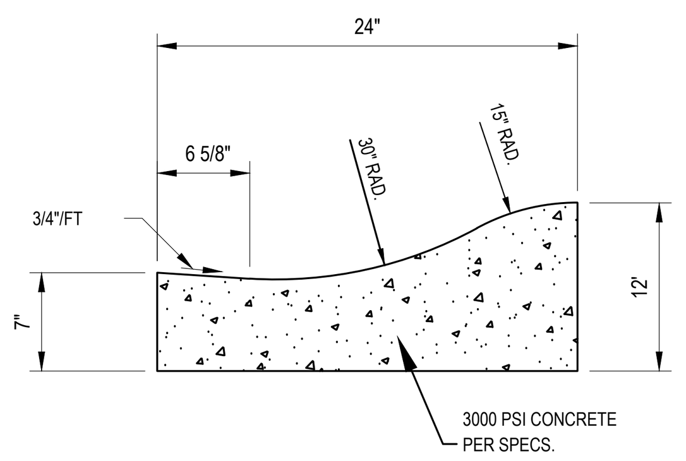


24" REVERSE PITCH
CURB & GUTTER SECTION
NTS

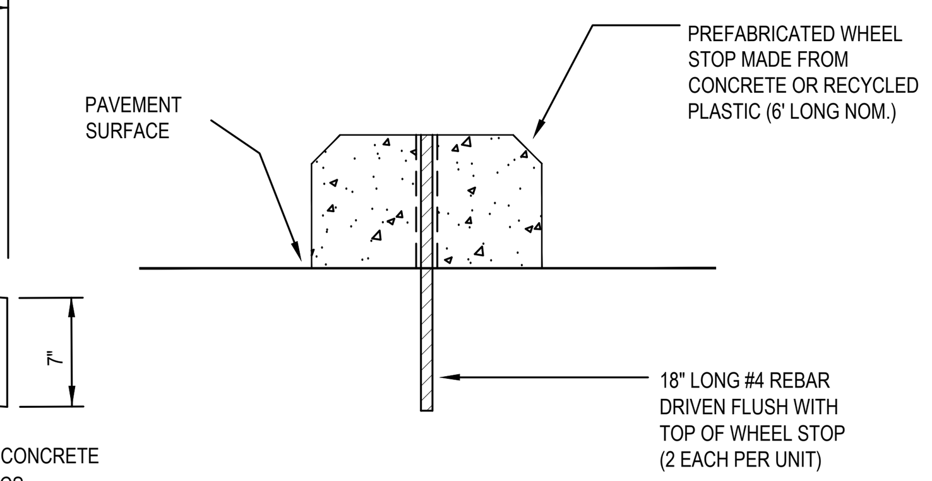
CURB AND GUTTER

NOTES:

1. *10' MAXIMUM BETWEEN CONSTRUCTION JOINTS. 15' MAXIMUM BETWEEN CONSTRUCTION JOINTS ON MACHINE POURS.* NOT TO SCALE
2. *1/2" EXPANSION JOINT EVERY 90'.*
3. *3000 PSI CONCRETE MINIMUM, 4" SLUMP MAXIMUM.*
4. *LIQUID MEMBRANE CURING COMPOUND SHALL MEET THE REQUIREMENTS OF SECTION 1026-2 OF NCDOT STANDARDS & SPECIFICATIONS FOR ROADS AND STRUCTURES.*
5. *ALL CONSTRUCTION JOINTS SHALL BE FILLED WITH JOINT FILLER AND SEALER IN ACCORDANCE WITH NCDOT ROADWAY STANDARD DETAIL 846.01. THE JOINT MATERIAL SHALL CONFORM TO SECTION 1028-2 OF NCDOT'S STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.*
6. *ABC STONE REQUIRED UNDER ALL CURB & GUTTER.*

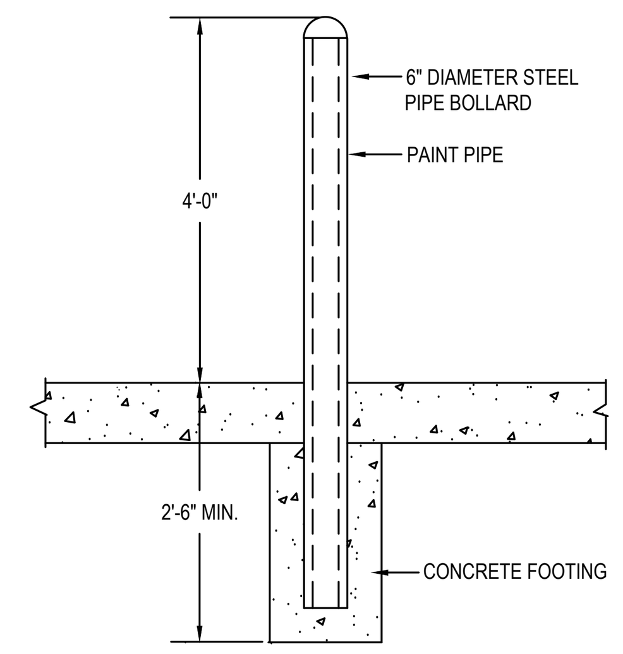


24" ROLLED
CURB SECTION
NTS



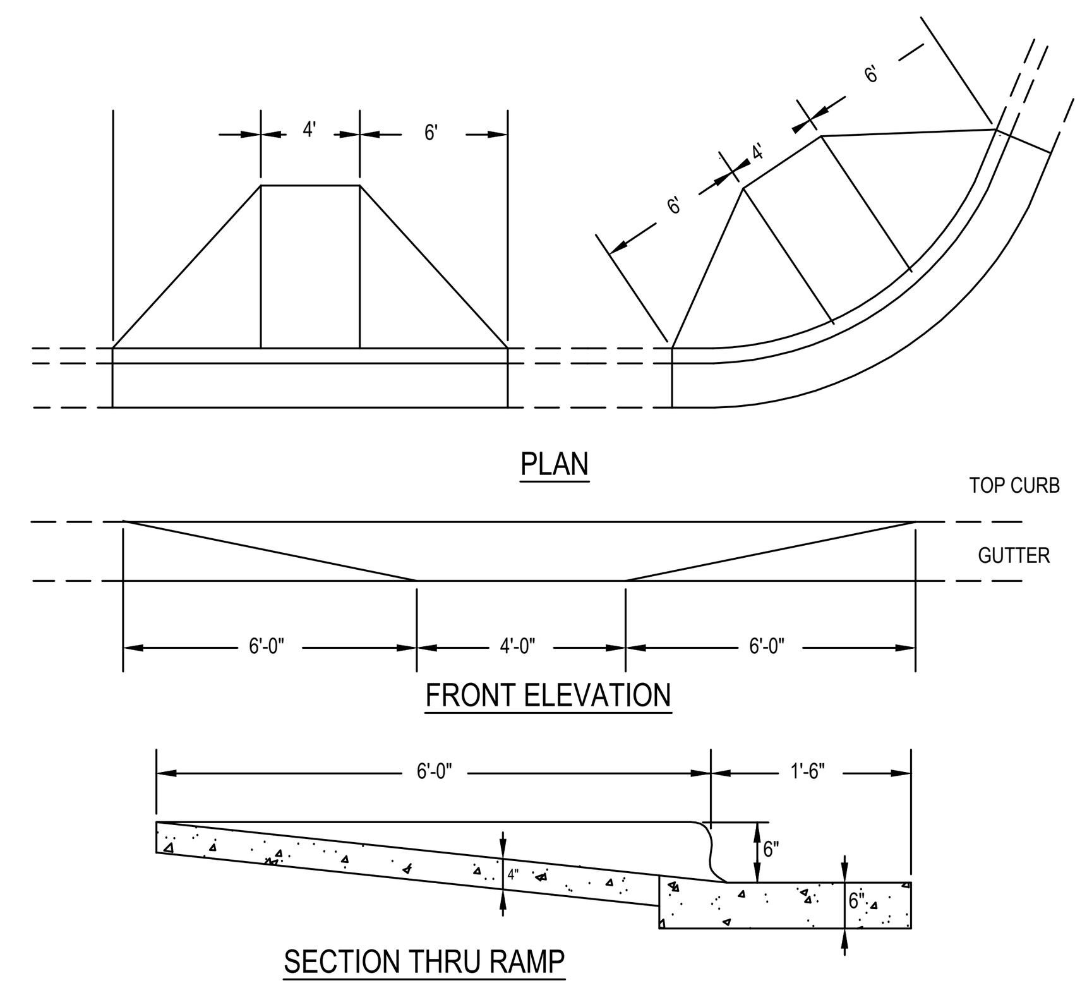
WHEEL STOP

NTS



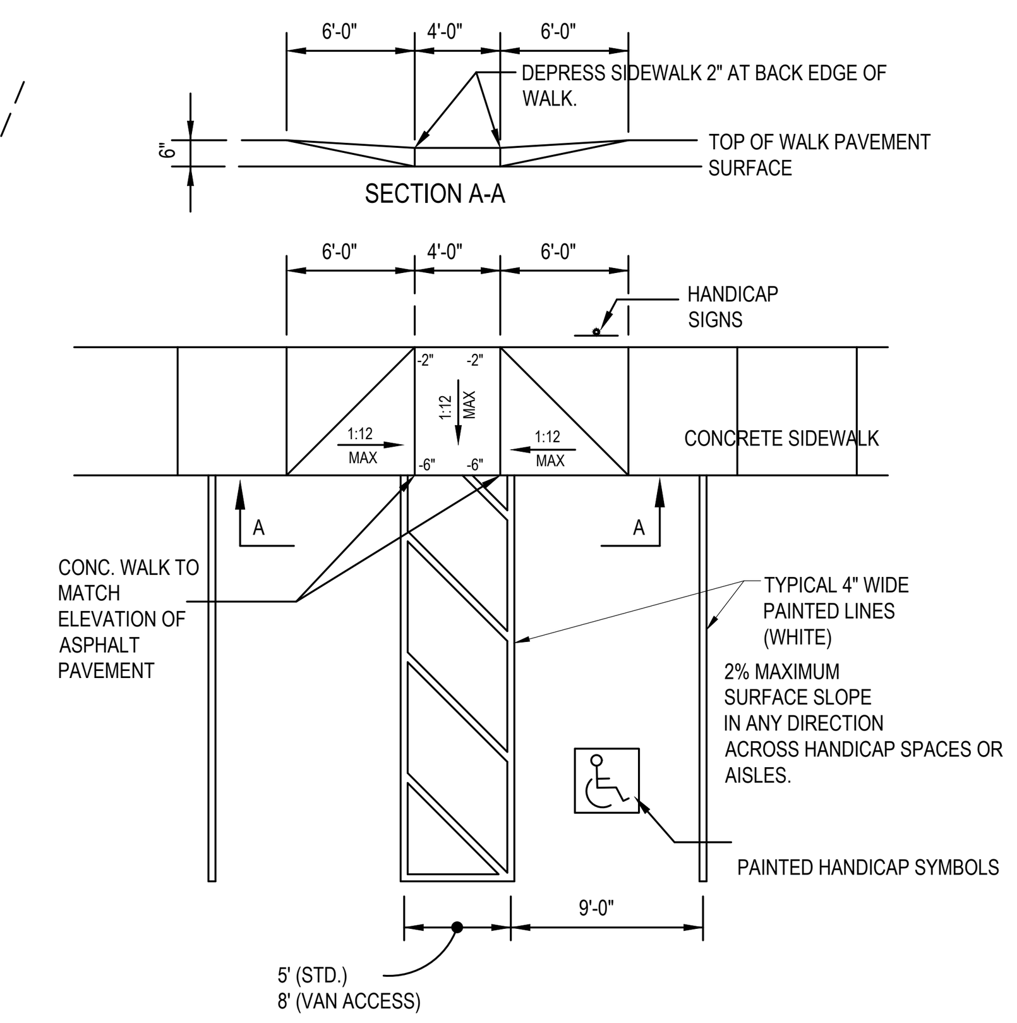
STEEL PIPE BOLLARD (TYPICAL)
(TO BE CONCRETE FILLED)

NTS



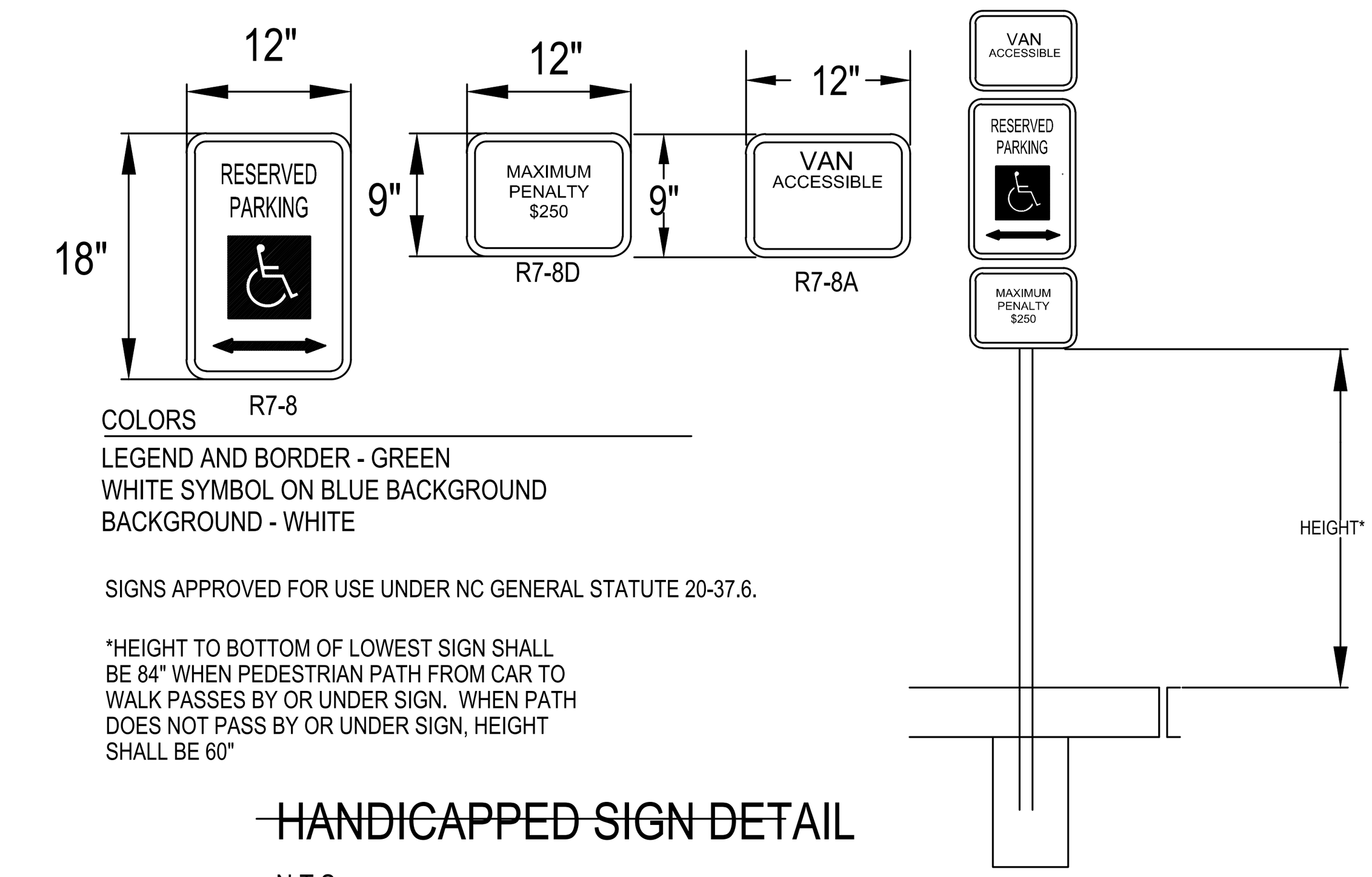
HANDICAP RAMP CURB CUT

NTS



HANDICAP PARKING AND RAMP

NTS



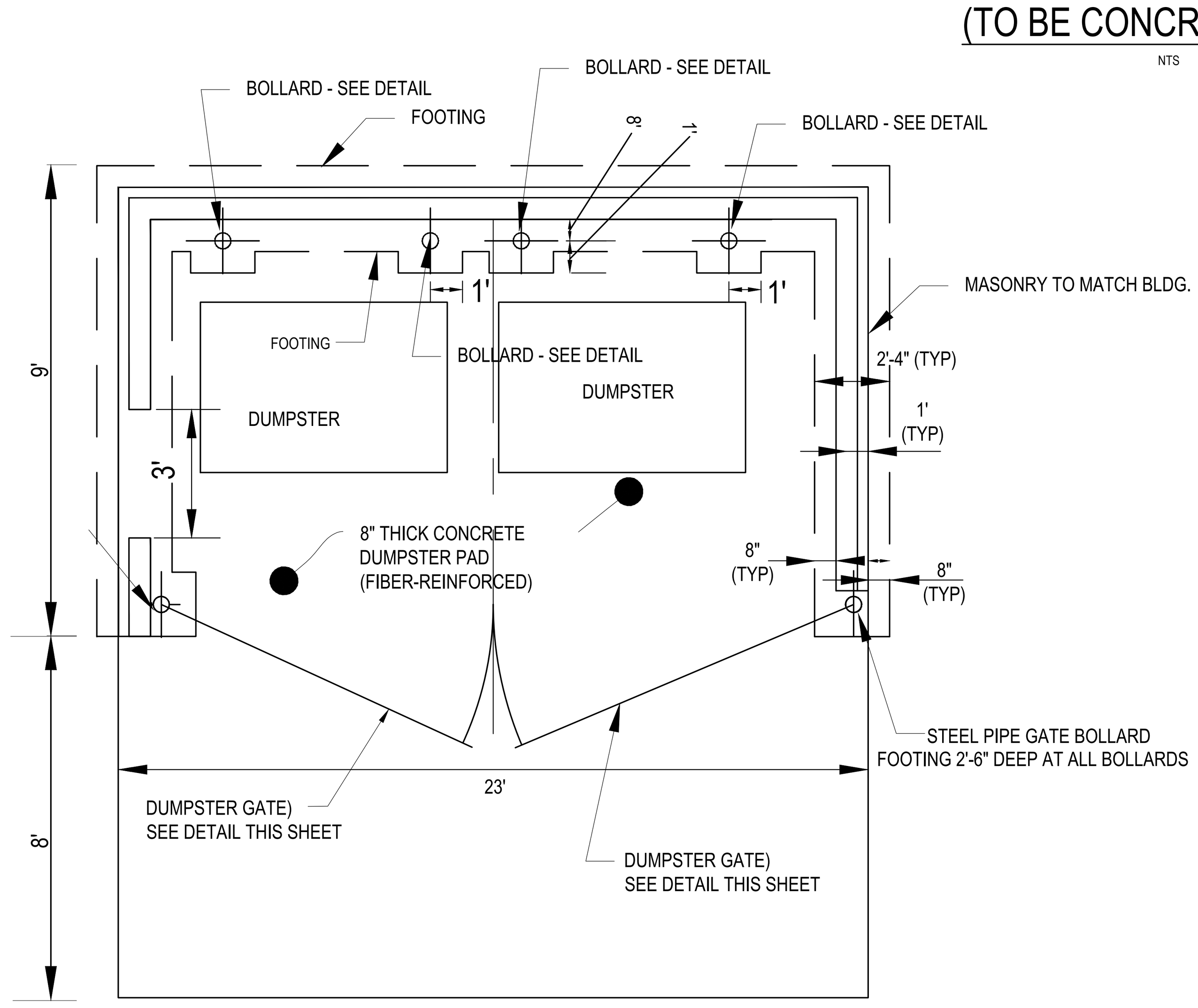
COLORS
LEGEND AND BORDER - GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND - WHITE

SIGNS APPROVED FOR USE UNDER NC GENERAL STATUTE 20-37.6.

*HEIGHT TO BOTTOM OF LOWEST SIGN SHALL BE 84" WHEN PEDESTRIAN PATH FROM CAR TO WALK PASSES BY OR UNDER SIGN. WHEN PATH DOES NOT PASS BY OR UNDER SIGN, HEIGHT SHALL BE 60"

~~HANDICAPPED SIGN DETAIL~~

N.T.S.



PLAN VIEW - DUMPSTER ENCLOSURE & PAD

NTS

SPECIFICATIONS FOR ALL CAST-IN-PLACE PORTLAND CEMENT CONCRETE

1. NOTIFY THE ENGINEER AND ANY AGENCY HAVING JURISDICTION OVER THE CONCRETE AT LEAST TWO BUSINESS DAYS PRIOR TO PLACEMENT OF ANY CONCRETE.
2. ENSURE THAT SUBGRADES COMPLY WITH PROJECT REQUIREMENTS FOR ELEVATION, SLOPE, SOIL CHARACTERISTICS, AND DENSITY PRIOR TO PLACING ANY FORMS, BASE MATERIAL, OR CONCRETE.
3. VERIFY THAT CURRENT AND FORECASTED WEATHER CONDITIONS ARE APPROPRIATE FOR CONCRETE PLACEMENT.
4. CONCRETE MATERIALS AND WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS, AS APPLICABLE:

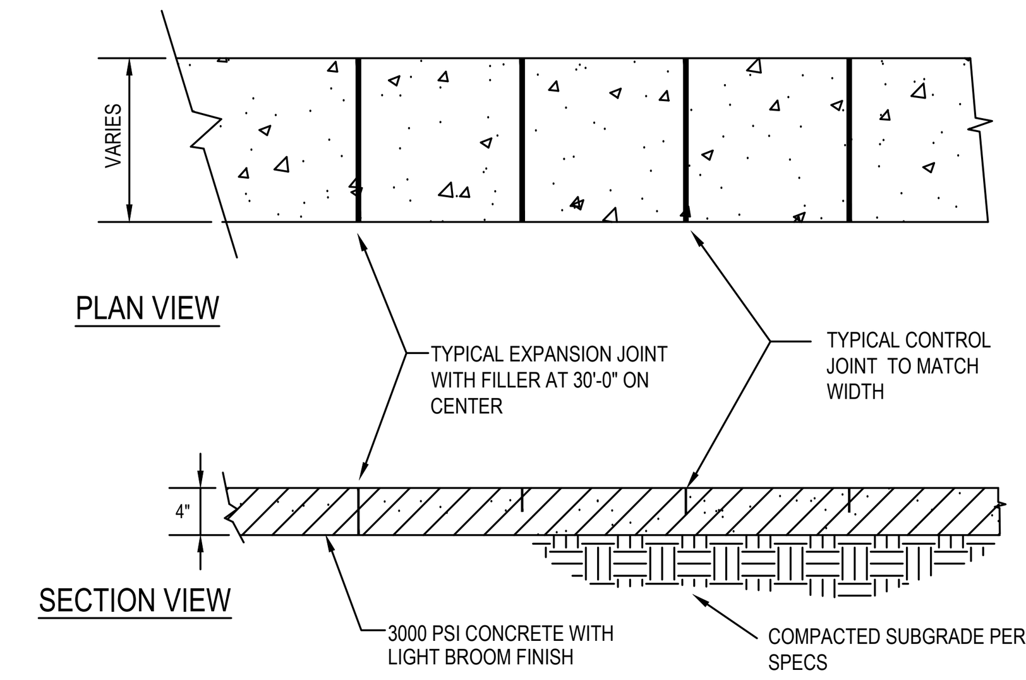
DESCRIPTION	STANDARD	COMMENT
READY-MIX CONCRETE	ASTM C94	
PORTLAND CEMENT	ASTM C150	TYPE I OR IA ONLY
COARSE AND FINE AGGREGATE	ASTM C33	
MIXING WATER	ASTM C1602	
REINFORCING WIRE AND STEEL	ASTM A82/A185/A615	GRADE 60
REINFORCING STEEL PLACEMENT	ACI 318	
AIR-ENTRAINING ADMIXTURES	ASTM C260	
CHEMICAL ADMIXTURES	ASTM C494	
CURING COMPOUND	ASTM C309	TYPE 1 ONLY
SHEET COVERINGS / CURING	ASTM C171 / ACI 308	
EXPANSION JOINT FILLER	ASTM D994	
FIBER-REINFORCED CONCRETE	ASTM C1116	
PROPORTIONING OF MIXES	ACI 211.1	NORMAL-WEIGHT
MIXING, TRANSPORT, & PLACEMENT	ACI 304	
SLUMP TESTING	ASTM C143	
SAMPLING / TEST SPECIMENS	ASTM C 172 / C31	
HOT WEATHER / COLD WEATHER	ACI 305 / 306	

5. PROVIDE ALL CONCRETE MATERIALS AND WORK IN COMPLIANCE WITH MANUFACTURER'S RECOMMENDATIONS AND GOVERNING AUTHORITY REQUIREMENTS, AS APPLICABLE. IN CASE OF CONFLICTING REQUIREMENTS, THE MORE STRINGENT SHALL APPLY.
6. FOR CONCRETE WORK IN EXISTING OR ANTICIPATED FUTURE NCDOT RIGHTS OF WAY, COMPLY WITH REQUIREMENTS OF THE LATEST EDITION OF NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES, AND AASHTO STANDARDS SPECIFIED THEREIN.
7. UNLESS OTHERWISE SPECIFIED OR REQUIRED, PROVIDE NORMAL–WEIGHT CONCRETE HAVING A 28–DAY MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI, WITH A MAXIMUM WATER/CEMENT RATIO OF 0.58, AND A SLUMP RANGE BETWEEN 1.5 AND 3.0 INCHES.
8. WHERE EXTERIOR CONCRETE WILL BE FULLY OR PARTIALLY ABOVE THE FROST LINE, PROVIDE AIR–ENTRAINED CONCRETE WITH AN AIR CONTENT OF 5% BY VOLUME, PLUS OR MINUS 1.5%.
9. UNLESS OTHERWISE SPECIFIED, SYNTHETIC FIBER REINFORCEMENT SHALL BE FIBERMESH 300 BY PROPEX, AT A MINIMUM RATE OF 1.5 LBS. PER CUBIC YARD OF CONCRETE, OR APPROVED EQUAL.
10. UNLESS OTHERWISE SHOWN OR NOTED, PROVIDE CONTROL JOINTS AND EXPANSION JOINTS WITH MAXIMUM SPACING AND PHYSICAL CHARACTERISTICS AS FOLLOWS:

JOINT TYPE	WALKS	PADS, BY THICKNESS			CURB & GUTTER	SPECIFICATION
		4"	6"	8"		
CONTROL	5'	6'	10'	12'	10'	SAW-CUT OR TOOLED TO A MINIMUM DEPTH OF 1/3 OF THE CONCRETE THICKNESS
EXPANSION	30'	24'	24'	24'	50'	1/2 INCH WIDE X FULL DEPTH, FILLED WITH PRE-MOULDED BITUMINOUS-IMPREGNATED COMPRESSIBLE FIBER BOARD

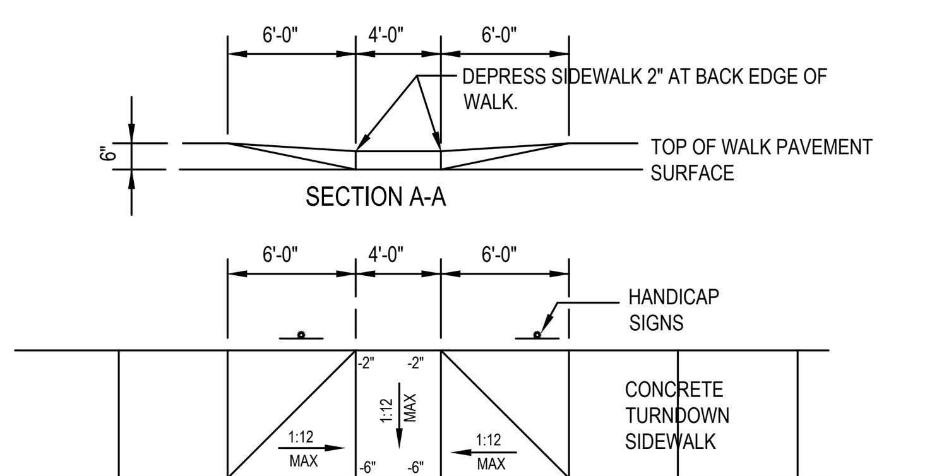
11. PROVIDE EXPANSION JOINTS AGAINST ALL METAL FRAMES, CASTINGS, BOLLARDS, STRUCTURES, FOOTINGS, SLABS, APRONS, OR OTHER FIXED OBJECTS.
12. INSTALL CONSTRUCTION JOINTS, CONFORMING TO EXPANSION JOINT REQUIREMENTS, AT ANY EDGE WHERE PLACEMENT OPERATIONS ARE DISCONTINUOUS FOR LONGER THAN 30 MINUTES.
13. COMPLY WITH MATERIAL SAMPLING AND TESTING REQUIREMENTS AS SPECIFIED FOR THE PROJECT.
14. PROVIDE ADEQUATE CONCRETE FINISHING, PROTECTION, AND CURING MEASURES. UNLESS OTHERWISE NOTED, PROVIDE A LIGHT–BROOM FINISH ON ALL SURFACES THAT WILL EXPERIENCE FOOT TRAFFIC.
15. EXPOSED CONCRETE SURFACES SHALL HAVE A UNIFORM APPEARANCE WITHOUT UNINTENDED CRACKS, AND WITH PROPER DIMENSIONS, ELEVATIONS, AND SLOPES. JOINTS SHALL BE STRAIGHT, NEAT, AND PROPERLY SPACED, WITH LEVEL SURFACE CONDITIONS ACROSS THE WIDTH OF EACH JOINT.
16. WASH OUT CONCRETE TRUCKS AND DRUMS IN APPROVED LOCATIONS ONLY.

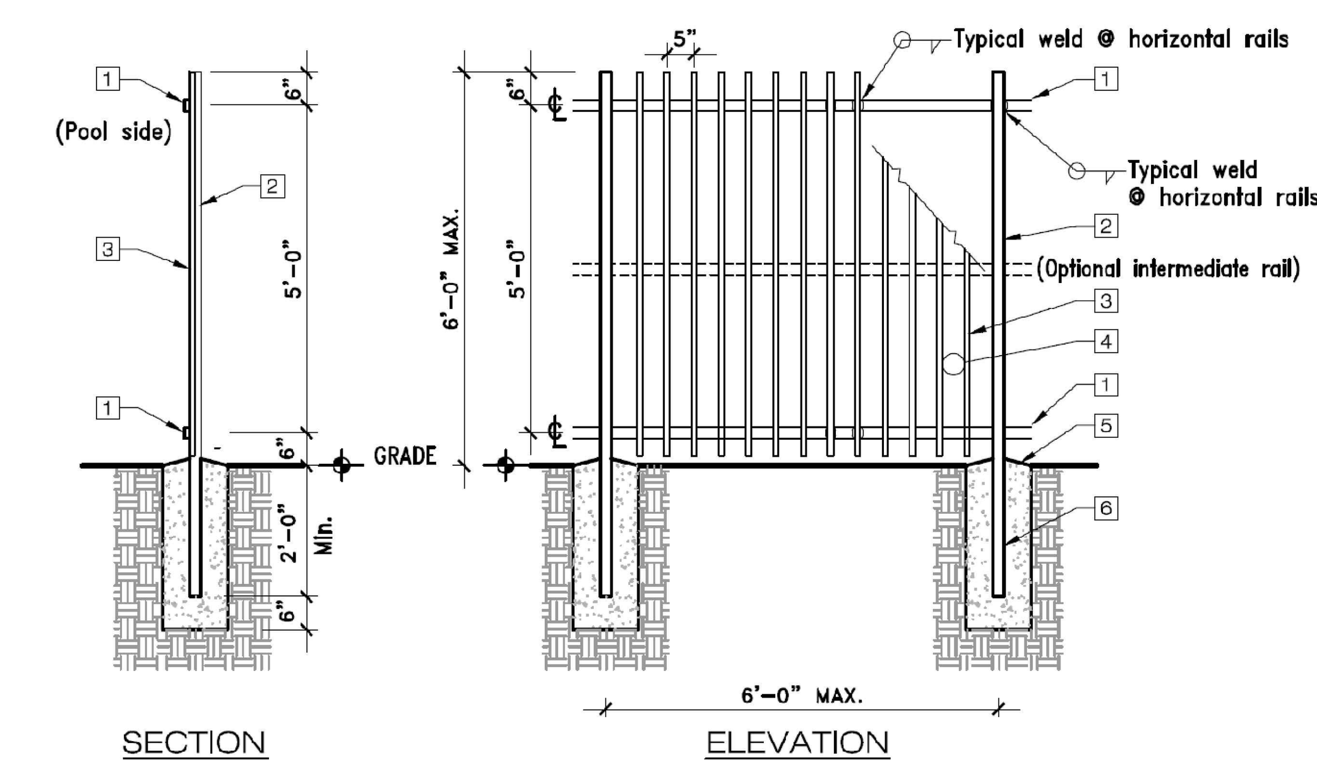
SPECIFICATION FOR CAST IN PLACE CEMENT



CONCRETE WALK

NTS





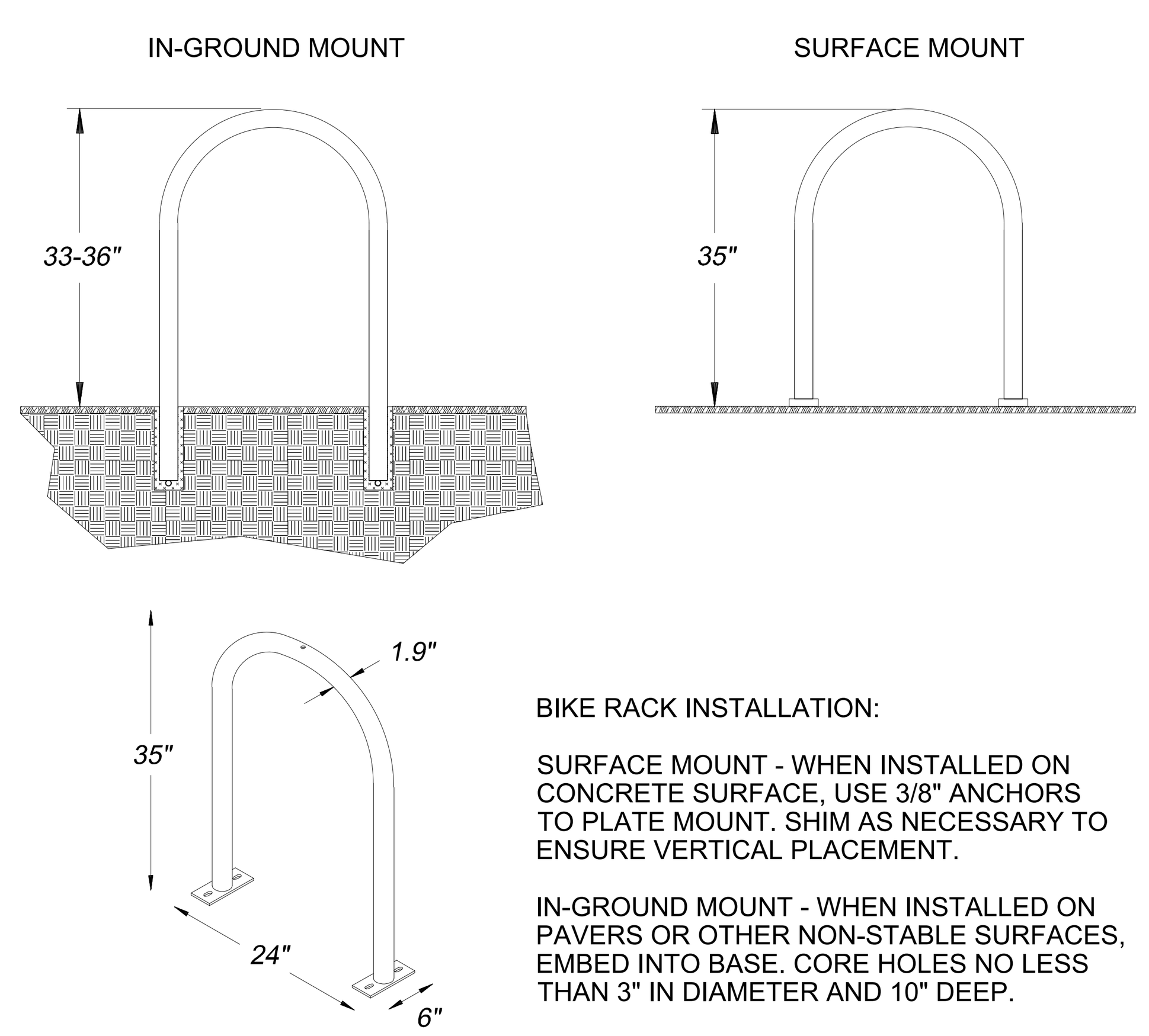
Materials allowed:
ALUMINUM--- alloy 6063-T6 OR alloy 6061-T6.
STEEL--- square tubes: ASTM A500 OR A501.

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.

[redacted]

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.

BLACK METAL FENCE DETAIL TYPE 1



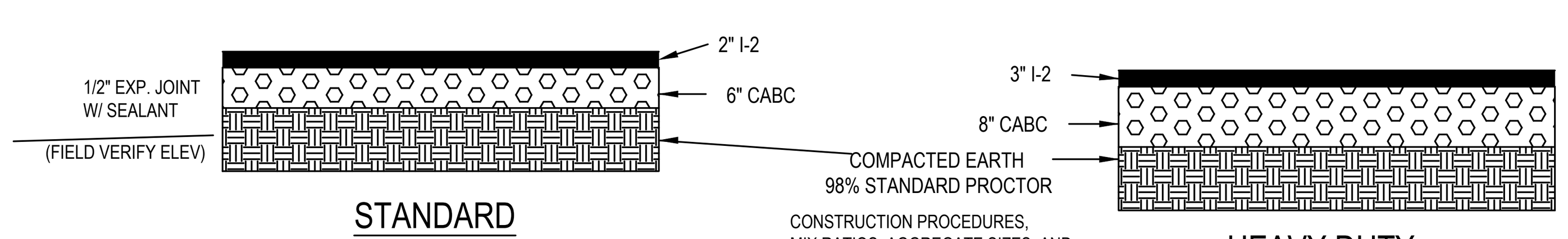
BIKE RACK INSTALLATION:

SURFACE MOUNT - WHEN INSTALLED ON CONCRETE SURFACE, USE 3/8" ANCHORS TO PLATE MOUNT. SHIM AS NECESSARY TO ENSURE VERTICAL PLACEMENT.

IN-GROUND MOUNT - WHEN INSTALLED ON PAVERS OR OTHER NON-STABLE SURFACES, EMBED INTO BASE. CORE HOLES NO LESS THAN 3" IN DIAMETER AND 10" DEEP.

STANDARD BIKE RACK

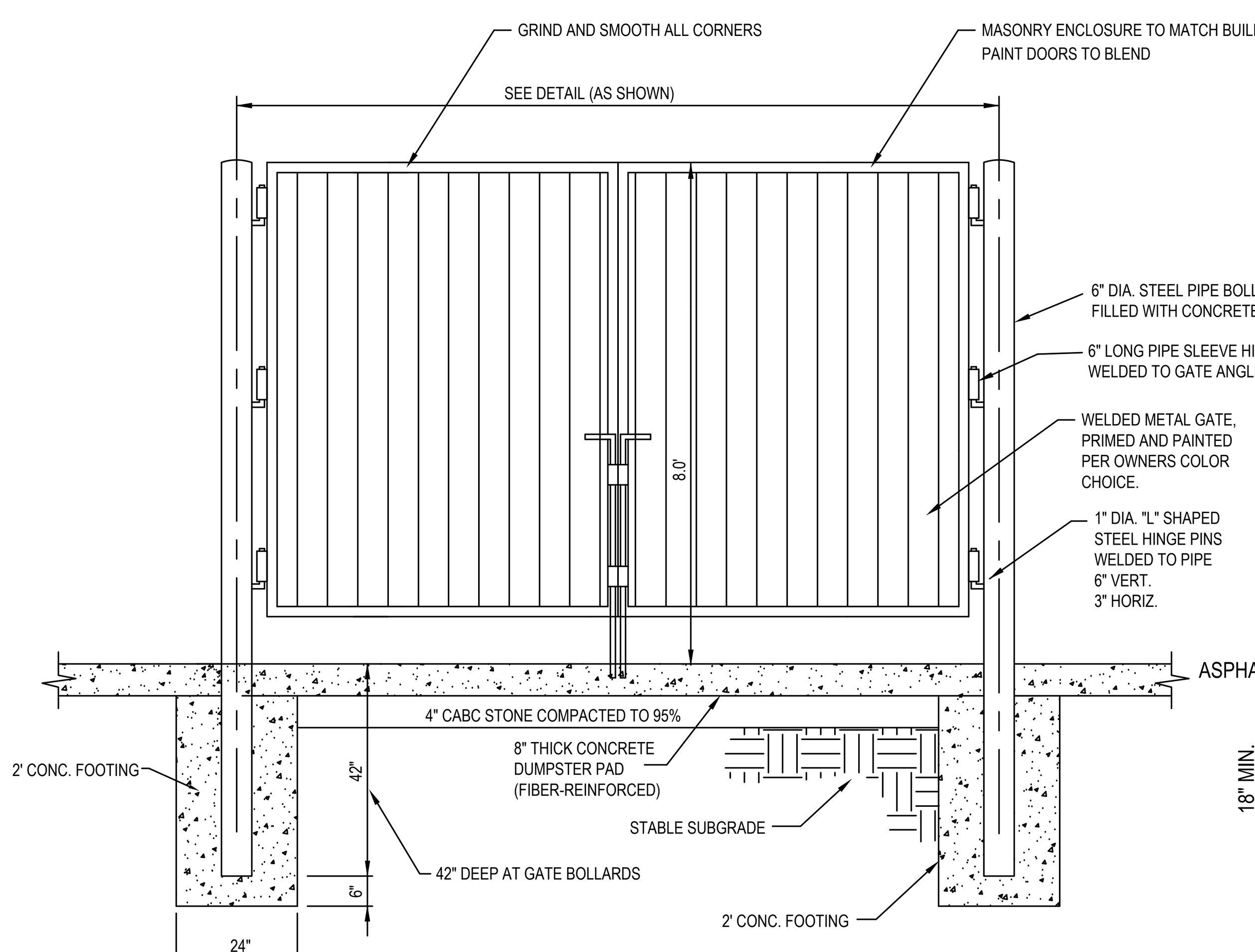
NTS



CONSTRUCTION PROCEDURES, MIX RATIOS, AGGREGATE SIZES, AND COMPACTED DENSITIES SHALL BE IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES 1995 EDITION.

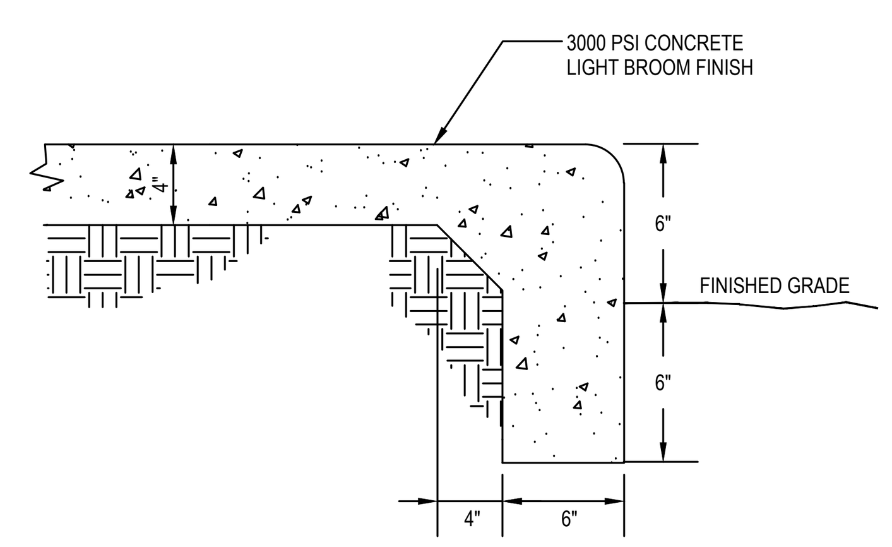
PAVEMENT DETAIL

NTS



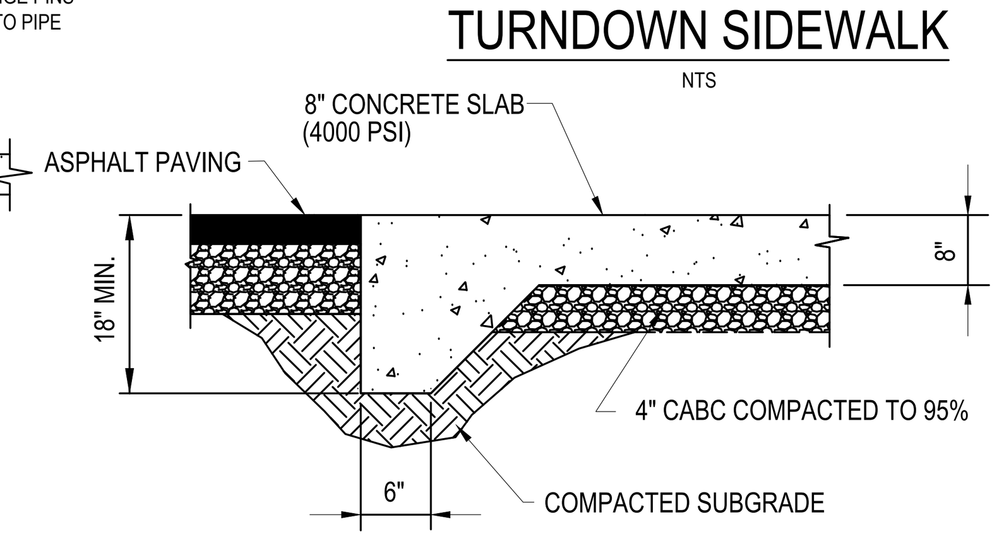
DUMPSTER GATE

NTS



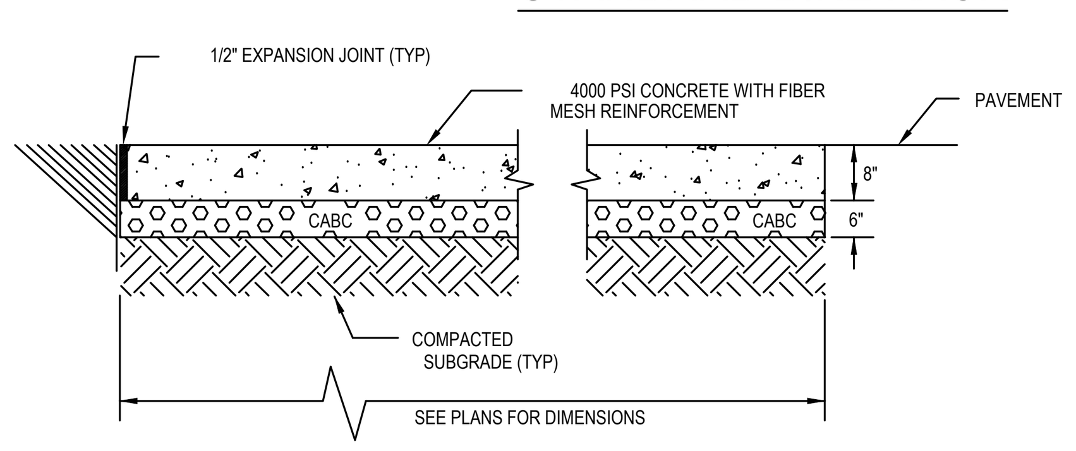
TURNDOWN SIDEWALK

NTS



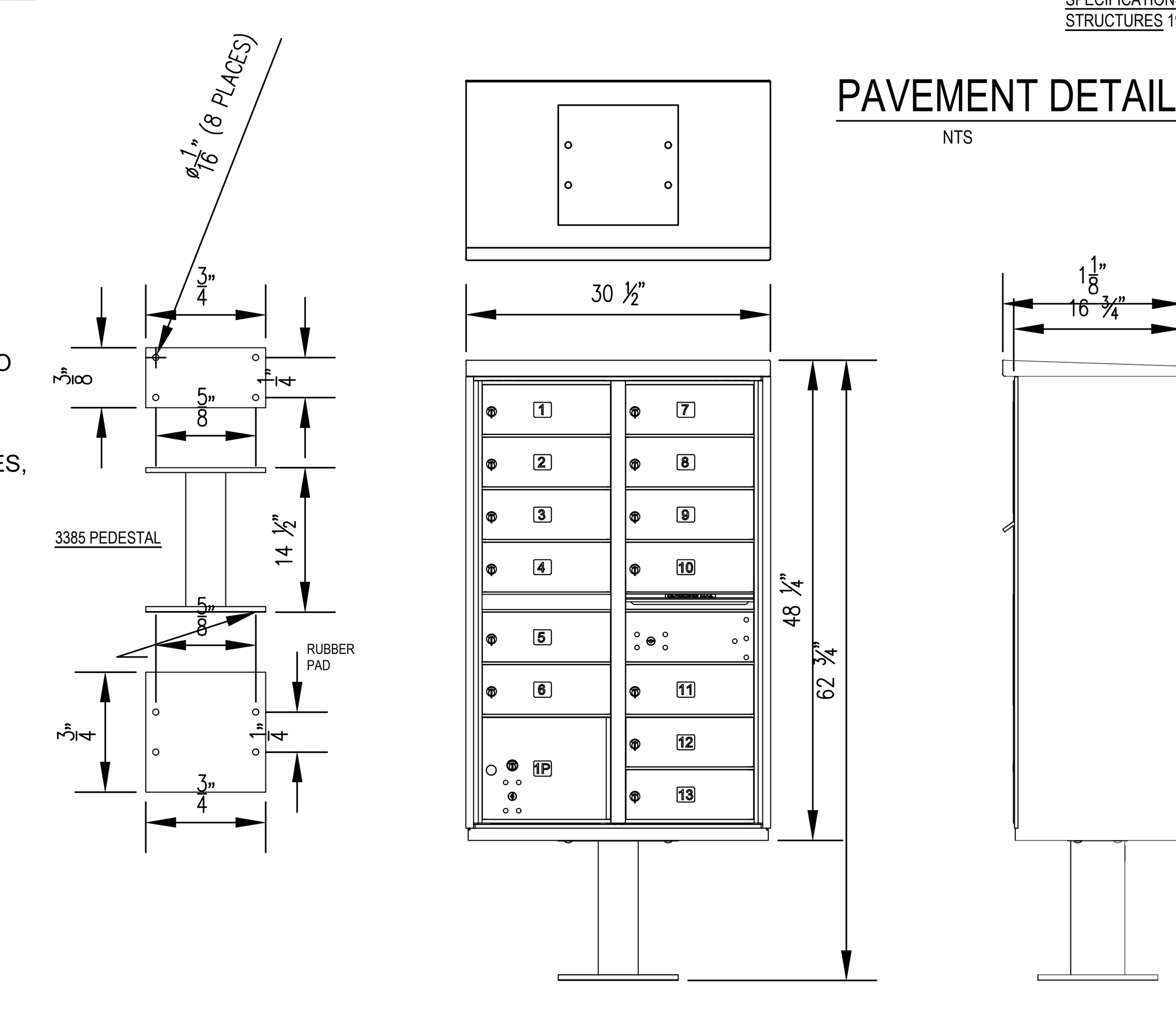
TURNDOWN AT DUMPSTER PAD

NTS



CONCRETE PAVING DETAIL

NTS



MAIL BOX KIOSK

NTS

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

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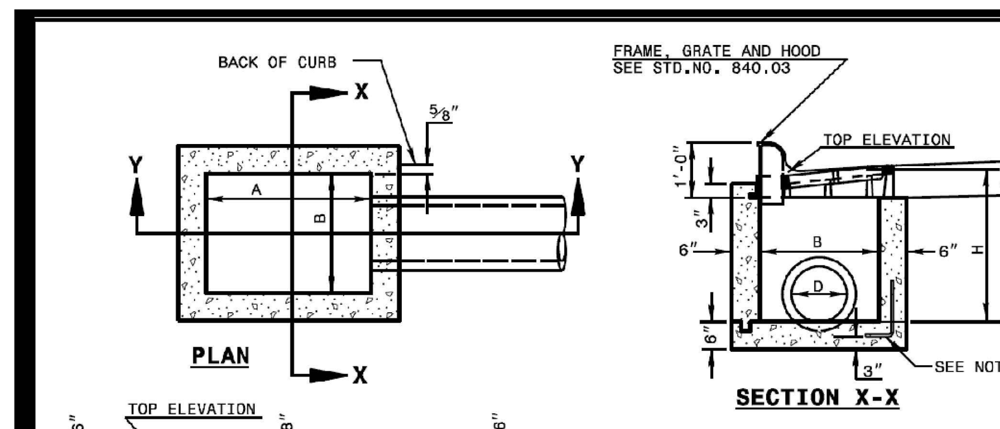
5	DATE	COMMENT	BY
6	DATE	COMMENT	BY
7	DATE	COMMENT	BY

NORTH CAROLINA
PROFESSIONAL
SEAL
030913
ENGINEER
KEITH P. GETTLE
[illegible]
4/28/23

Standard Site Details
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. D1



GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

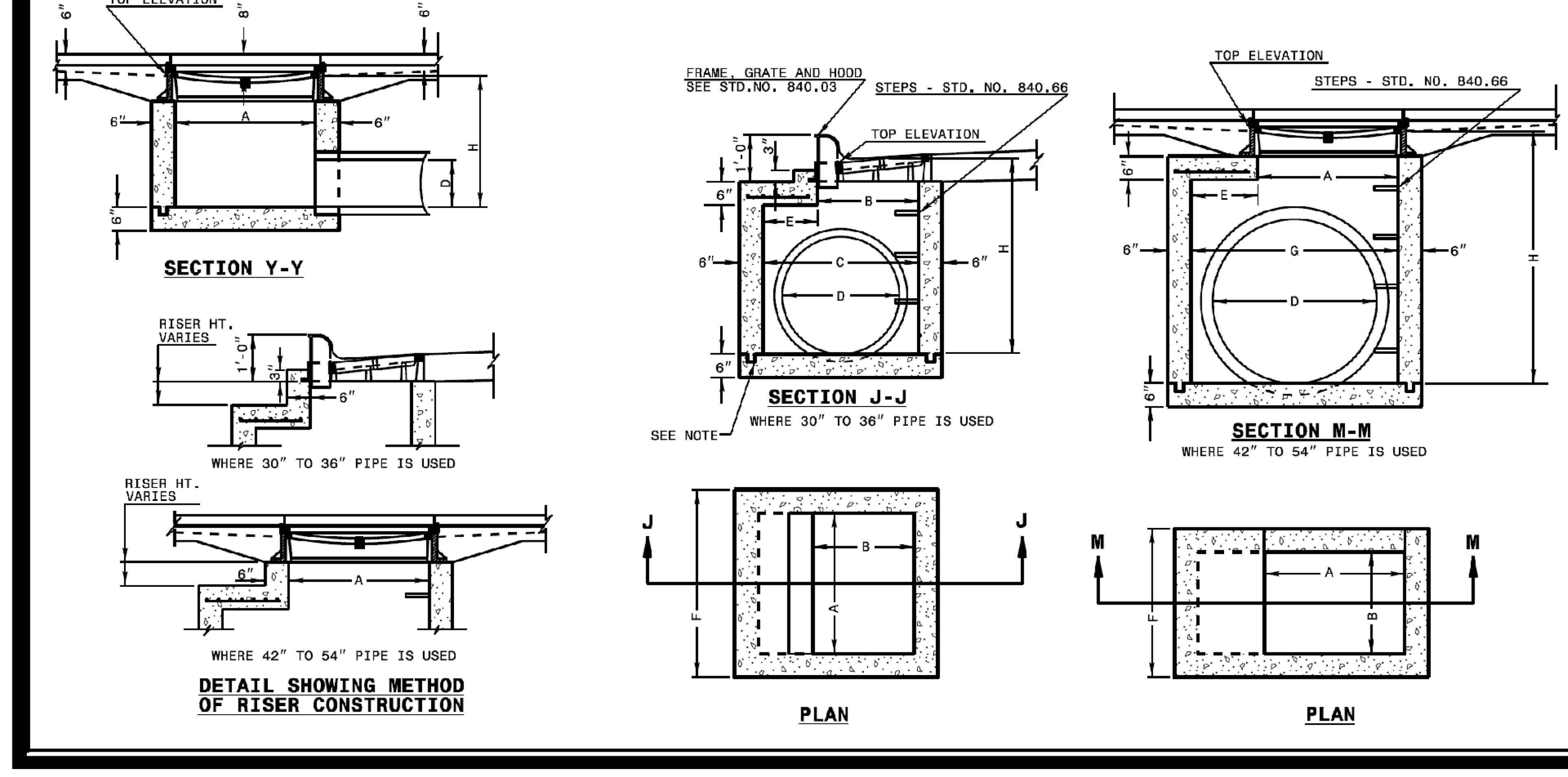
USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.

FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.

CONSTRUCT WITH PIPE CROWNS MATCHING.

CHAMFER ALL EXPOSED CORNERS 1".

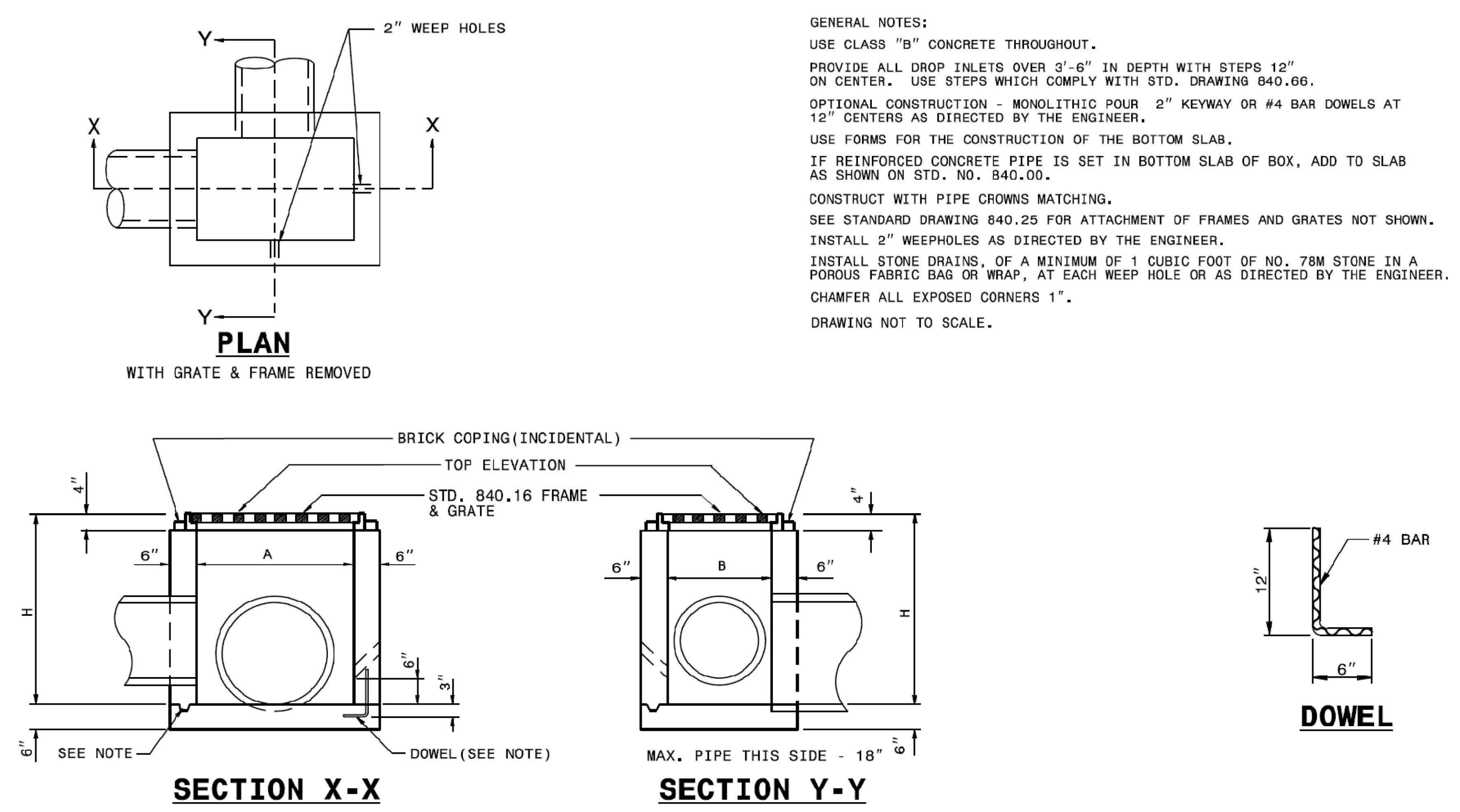
DRAWING NOT TO SCALE.



1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

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

SHEET 1 OF 2
840.02



GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE ALL DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR 2" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.

CONSTRUCT WITH PIPE CROWNS MATCHING.

SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.

INSTALL 2" WEEPHOLES AS DIRECTED BY THE ENGINEER.

INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.

CHAMFER ALL EXPOSED CORNERS 1".

DRAWING NOT TO SCALE.

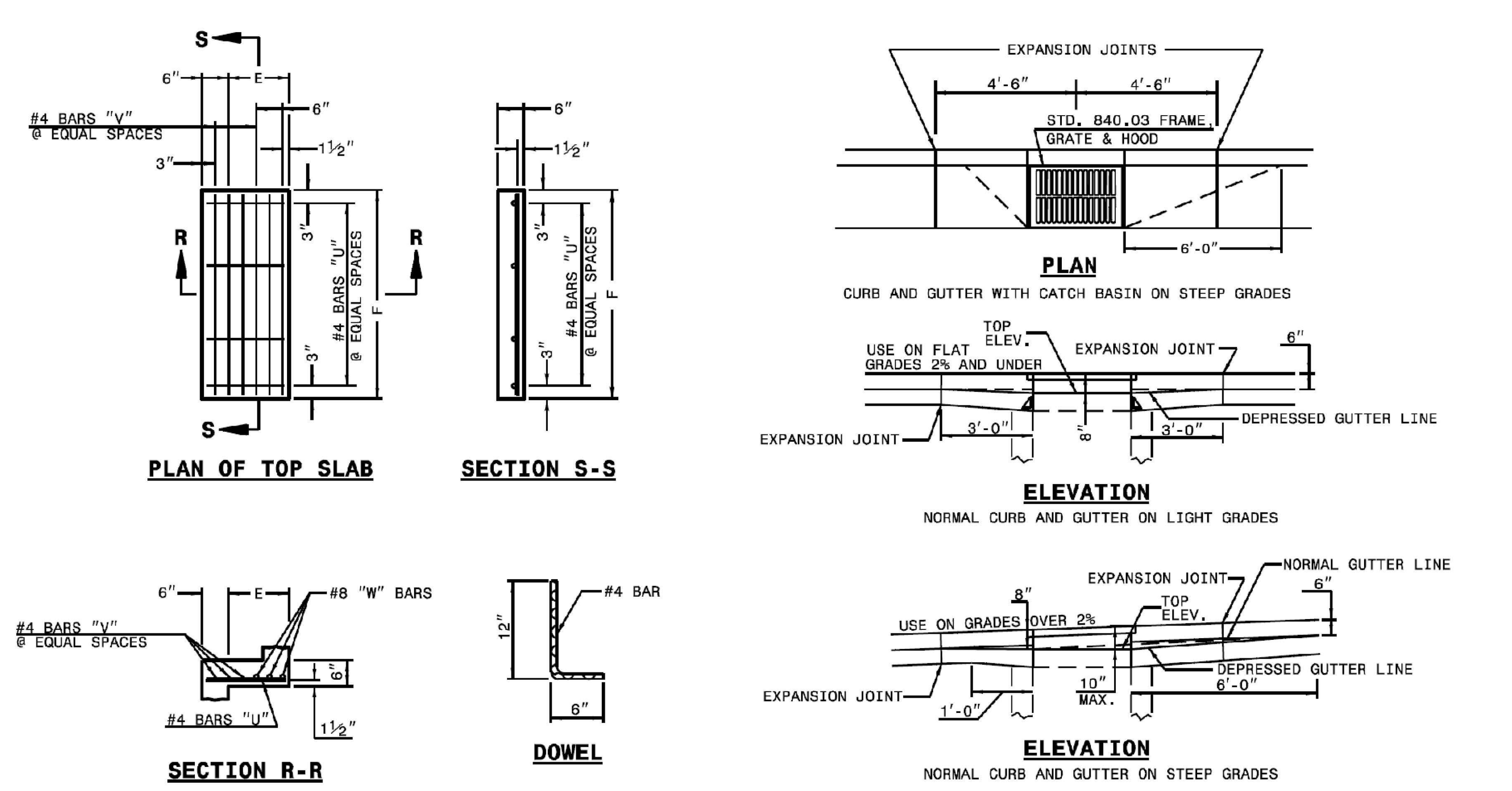
DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)

DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	MIN. HEIGHT					
D	A	B	H	BOTTOM SLAB	WALL PER FT. HT.	TOTAL CONCRETE FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026
15"			2'-3"			0.648	0.023	0.036
18"			2'-6"			0.703	0.033	0.049
24"			3'-0"			0.814	0.059	0.085
30"	3'-0"	2'-0"	3'-6"	0.222	0.222	0.925	0.092	0.127

1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

SHEET 1 OF 1
840.14



MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN(BASED ON MIN. HEIGHT, H, WITH NO RISER) *

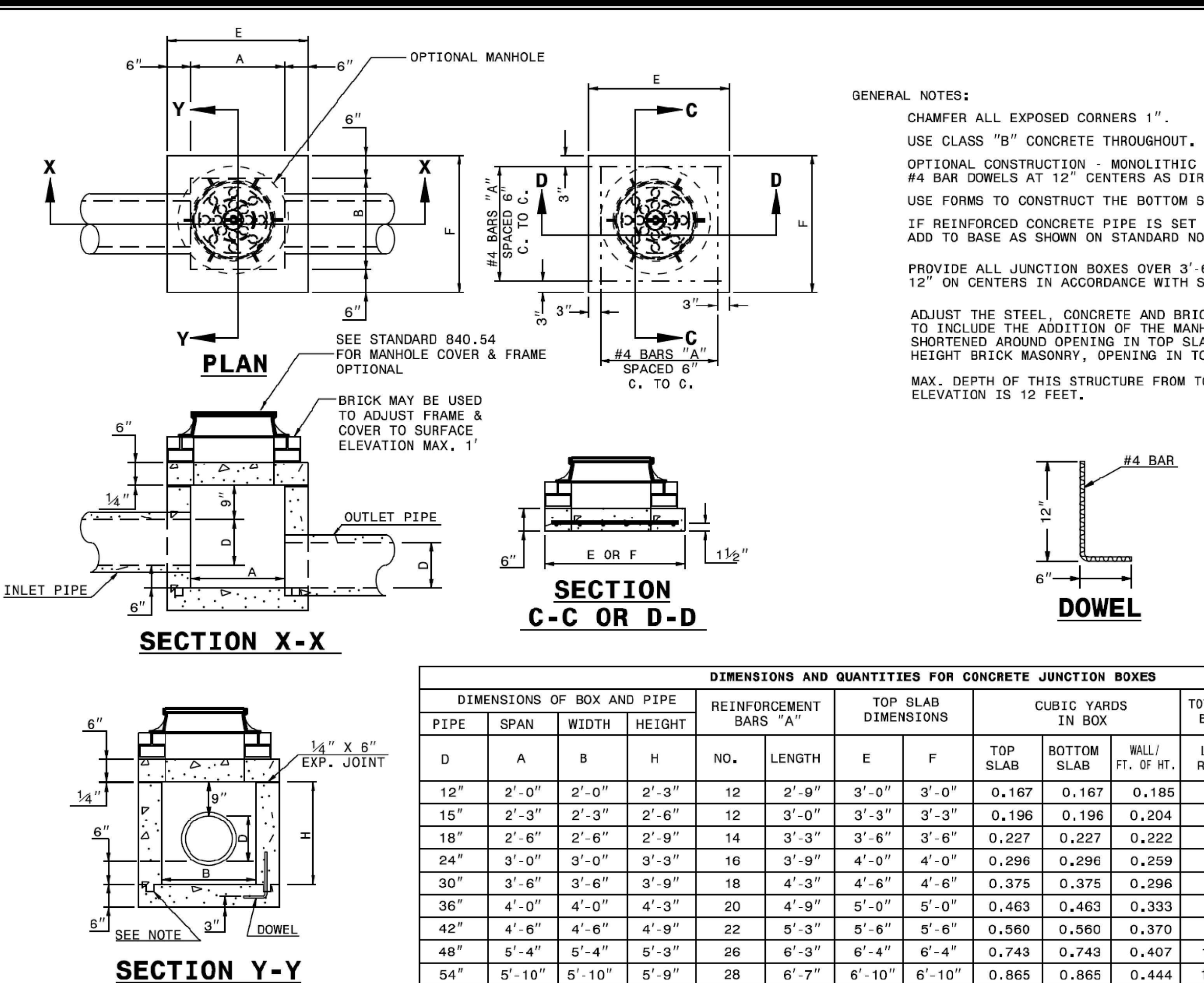
DIMENSIONS OF BOX AND PIPE						COVER DIMENSION		BARS-U		BARS-V		BARS-W		TOTAL LBS.	CU.YDS. CONC. IN BOX			DEDUCTIONS ONE PIPE	
PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT										TOP SLAB	BOTTOM SLAB	TOT. CONC. FOR MINIMUM HEIGHT, H		
D	A	B	C	G	H	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH					C.M.	R.C.
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	--	0.235	0.772	0.015	0.026
15"	3'-0"	2'-2"			3'-0"											0.235	0.829	0.023	0.036
18"	3'-0"	2'-2"			3'-3"											0.235	0.887	0.033	0.049
24"	3'-0"	2'-2"			3'-9"											0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-4"		4'-3"	1'-2"	4'-0"	4	1'-5"	2	3'-9"	3	3'-9"	39	0.123	0.321	1.433	0.092	0.127
36"	3'-0"	2'-2"	3'-10"		4'-9"	1'-8"	4'-0"	4	1'-11"	3	3'-9"	3	3'-9"	43	0.161	0.358	1.714	0.132	0.178
42"	3'-0"	2'-2"		4'-5"	5'-3"	1'-5"	3'-2"	4	1'-8"	2	2'-11"	3	2'-11"	32	0.112	0.318	1.738	0.180	0.243
48"	3'-0"	2'-2"		5'-0"	5'-9"	2'-0"	3'-2"	4	2'-3"	3	2'-11"	3	2'-11"	35	0.145	0.352	2.052	0.235	0.317
54"	3'-0"	2'-2"		5'-7"	6'-3"	2'-7"	3'-2"	4	2'-10"	5	2'-11"	3	2'-11"	41	0.180	0.386	2.387	0.297	0.401

* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

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

SHEET 2 OF 2
840.02



GENERAL NOTES:

CHAMFER ALL EXPOSED CORNERS 1".

USE CLASS "B" CONCRETE THROUGHOUT.

OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.

USE FORMS TO CONSTRUCT THE BOTTOM SLAB.

IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STANDARD NO. 840.00.

PROVIDE ALL JUNCTION BOXES OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTERS IN ACCORDANCE WITH STD. NO. 840.66.

ADJUST THE STEEL, CONCRETE AND BRICK MASONRY QUANTITIES TO INCLUDE THE ADDITION OF THE MANHOLE (I.E. DIAGONAL BARS SHORTENED AROUND OPENING IN TOP SLAB, ADDITIONAL VARIABLE HEIGHT BRICK MASONRY, OPENING IN TOP SLAB.)

MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.

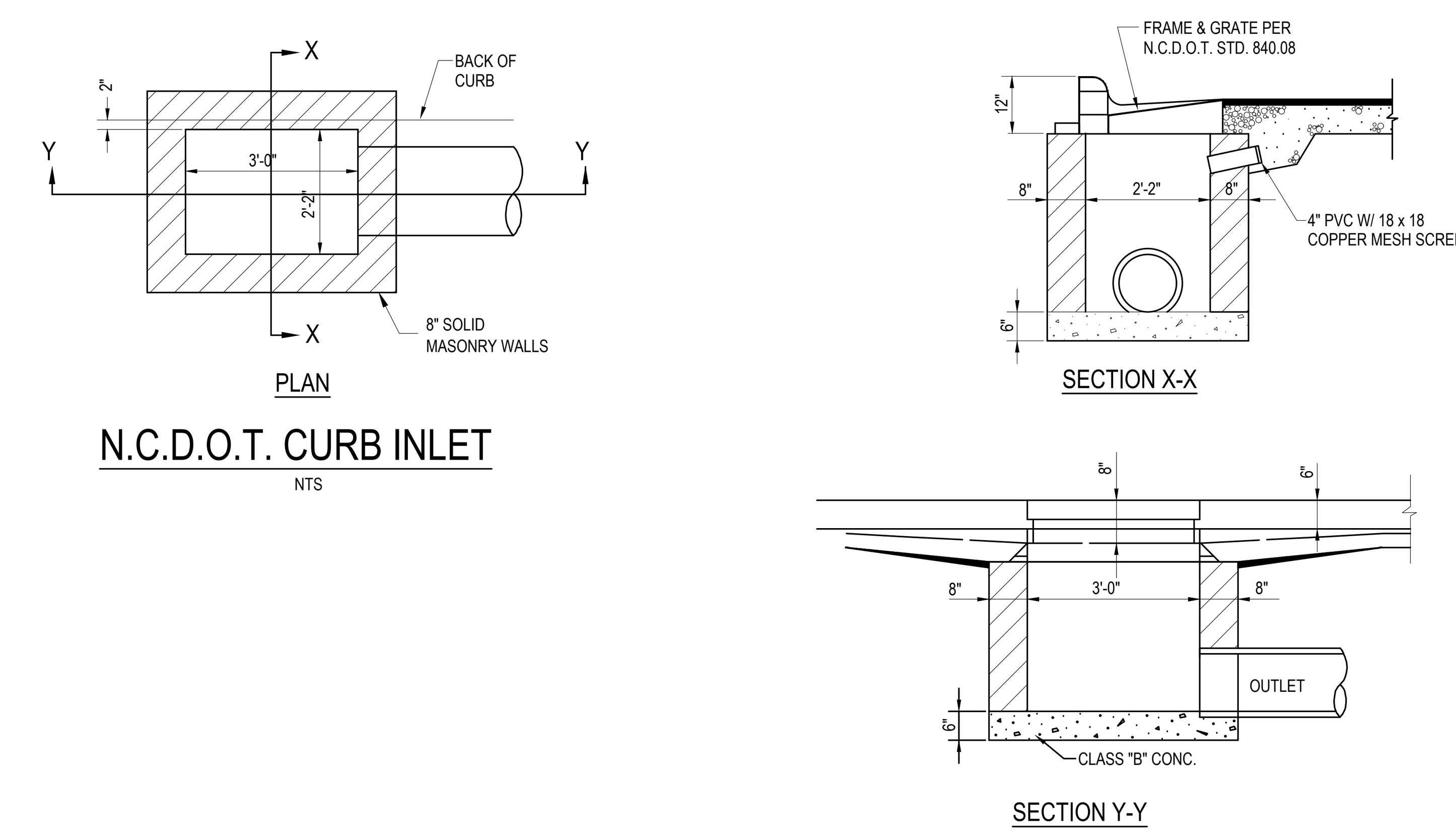
DIMENSIONS AND QUANTITIES FOR CONCRETE JUNCTION BOXES

DIMENSIONS OF BOX AND PIPE				REINFORCEMENT BARS "A"		TOP SLAB DIMENSIONS		CUBIC YARDS IN BOX			TOTAL QUANTITIES BOX AND SLABS		DEDUCTIONS FOR ONE PIPE CU.YDS.	
PIPE	SPAN	WIDTH	HEIGHT											
D	A	B	H	NO.	LENGTH	E	F	TOP SLAB	BOTTOM SLAB	WALL/ FT. OF HT.	LBS. REINF	CU. YDS. MIN. "H"	C.S.	R.C.
12"	2'-0"	2'-0"	2'-3"	12	2'-9"	3'-0"	3'-0"	0.167	0.167	0.185	22	0.750	0.015	0.024
15"	2'-3"	2'-3"	2'-6"	12	3'-0"	3'-3"	3'-3"	0.196	0.196	0.204	24	0.902	0.023	0.036
18"	2'-6"	2'-6"	2'-9"	14	3'-3"	3'-6"	3'-6"	0.227	0.227	0.222	30	1.065	0.033	0.049
24"	3'-0"	3'-0"	3'-3"	16	3'-9"	4'-0"	4'-0"	0.296	0.296	0.259	40	1.434	0.059	0.085
30"	3'-6"	3'-6"	3'-9"	18	4'-3"	4'-6"	4'-6"	0.375	0.375	0.296	51	1.860	0.092	0.127
36"	4'-0"	4'-0"	4'-3"	20	4'-9"	5'-0"	5'-0"	0.463	0.463	0.333	64	2.341	0.132	0.178
42"	4'-6"	4'-6"	4'-9"	22	5'-3"	5'-6"	5'-6"	0.560	0.560	0.370	77	2.878	0.180	0.243
48"	5'-4"	5'-4"	5'-3"	26	6'-3"	6'-4"	6'-4"	0.743	0.743	0.407	111	3.623	0.235	0.317
54"	5'-10"	5'-10"	5'-9"	28	6'-7"	6'-10"	6'-10"	0.865	0.865	0.444	126	4.283	0.297	0.401
60"	6'-6"	6'-6"	6'-3"	30	7'-3"	7'-6"	7'-6"	1.042	1.042	0.481	145	5.090	0.367	0.495
66"	7'-1"	7'-1"	6'-9"	32	7'-10"	8'-1"	8'-1"	1.210	1.210	0.518	169	5.917	0.444	0.589

1-18 STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY STANDARD DRAWING FOR
CONCRETE JUNCTION BOX
(WITH OPTIONAL MANHOLE)
12" THRU 66" PIPE

SHEET 1 OF 1
840.31



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

NTS

SIGN AND PAVEMENT MARKING NOTES

1. ALL SITE SIGNAGE SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.

SIGN	MUTCD STD.	SIZE
ACCESSIBLE PARKING	R7-1	12"x18"

2. ALL SIGNS SHALL BE MOUNTED WITH 5-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 2-LB. GALV. STEEL U-CHANNEL POST SET IN 18-IN DEEP x 8-IN DIA. CONCRETE FOOTING. SIGNS MOUNTED ADJACENT TO SIDEWALKS MUST BE MOUNTED WITH 7-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF SIGN.

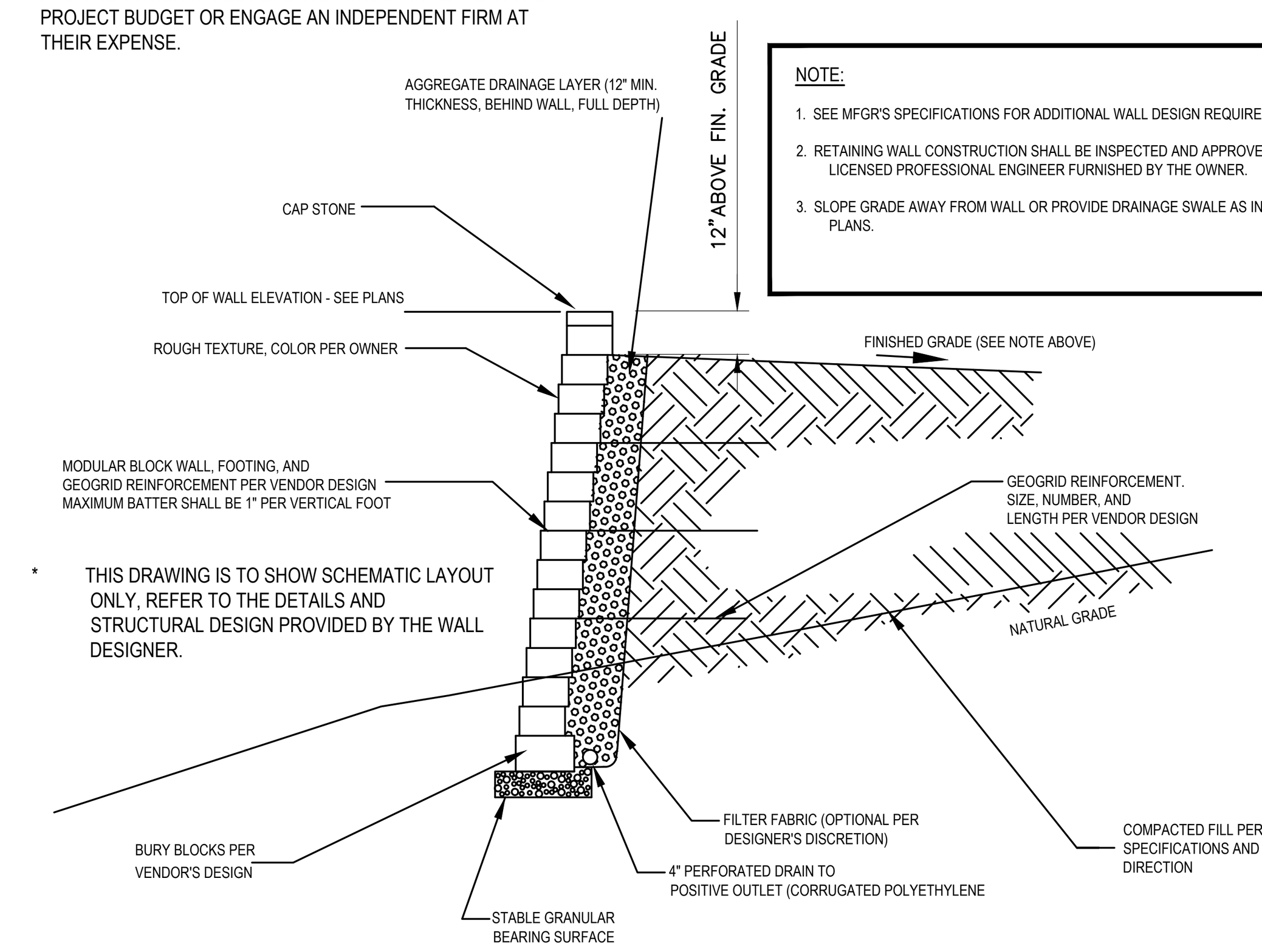
3. ALL PAVMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.

MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACE	-	4-IN	WHT.
CROSSWALK	1205.07	4-IN	WHT.

RETAINING OR MECHANICALLY STABILIZED EARTH WALLS EXCEEDING 5 FEET IN HEIGHT ON A SITE REQUIRE PERMITS AND SPECIAL INSPECTIONS BY THE ENGINEER OF RECORD; AND THE OWNER SHALL RESERVE FUNDS FOR SAME IN THE PROJECT BUDGET OR ENGAGE AN INDEPENDENT FIRM AT THEIR EXPENSE.

NOTE:

1. SEE MFGR'S SPECIFICATIONS FOR ADDITIONAL WALL DESIGN REQUIREMENTS.
2. RETAINING WALL CONSTRUCTION SHALL BE INSPECTED AND APPROVED BY A LICENSED PROFESSIONAL ENGINEER FURNISHED BY THE OWNER.
3. SLOPE GRADE AWAY FROM WALL OR PROVIDE DRAINAGE SWALE AS INDICATED ON PLANS.



* THIS DRAWING IS TO SHOW SCHEMATIC LAYOUT ONLY, REFER TO THE DETAILS AND STRUCTURAL DESIGN PROVIDED BY THE WALL DESIGNER.

MODULAR BLOCK RETAINING WALL - SCHEMATIC

NTS

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

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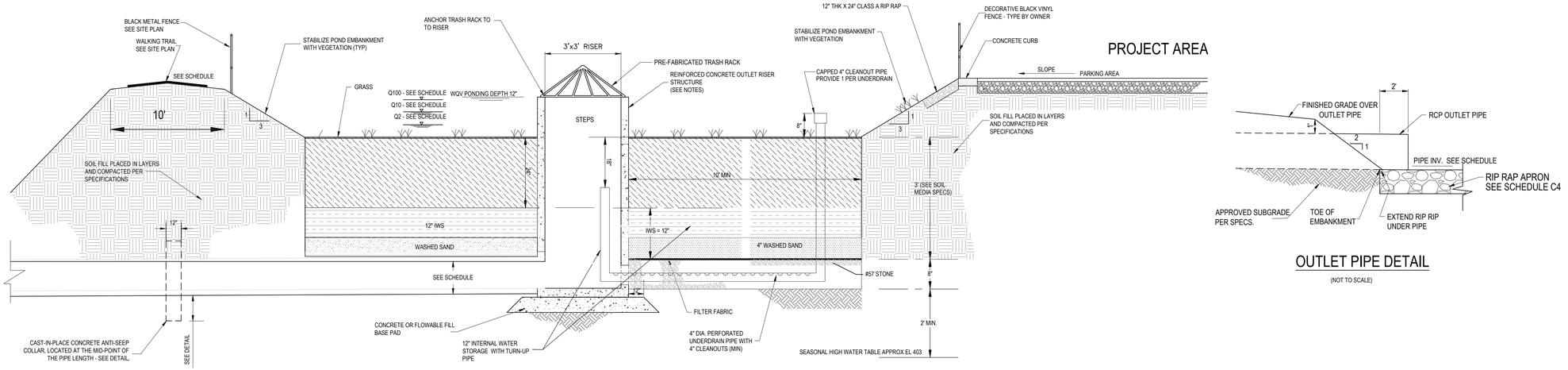
7	DATE	COMMENT	BY

Site and Stormwater Details
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. D2



BIORETENTION SECTION

NTS

OUTLET PIPE DETAIL

(NOT TO SCALE)

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, HOMOGENOUS 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 LABS 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 NCDWQ STORM WATER BMP MANUAL SHALL BE FOLLOWED.

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.

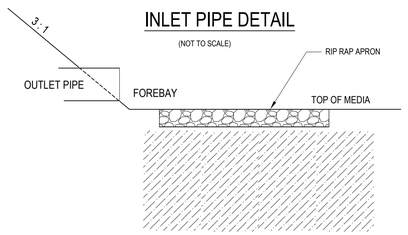
BIORETENTION NOTES (CONT):

- 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:

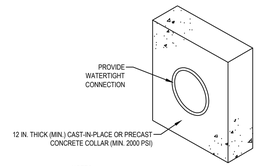
- THE PLANTING SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN ONE-HALF INCH IN DIAMETER. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE BIORETENTION AREA THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDRANCE TO THE PLANTING OR 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-4632); AND APPARENT OPENING SIZE OF U.S. STD. #80 SIEVE (ASTM D-4751).
- UNDERDRAIN PIPING - NOMINAL 6" 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.



INLET PIPE DETAIL

(NOT TO SCALE)



NOTES:

1. ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.
2. COLLAR SIZE AND SPACING SHALL BE AS INDICATED.

CONCRETE ANTI- SEEP COLLAR DETAIL

(NOT TO SCALE)

BMP Schedule	
BMP (Elevations)	**Bio**
Top of Dam	410.15
Spillway	n/a
Top of Riser	410.00
Bottom Riser (invert)	407.20
Drawdown Orifice	n/a
Orifice Invert	n/a
Perm Pool or Media Surface	409.00
Forebay Bottom	n/a
Main Pond Bottom	n/a
Discharge Pipe (Dia)	18"
8" Drain Pipe	n/a
Discharge Pipe Length (feet)	25.00
Discharge Pipe Invert Out	407.00
Q2 Elevation	409.54
Q10 Elevation	409.68
Q100 Elevation	409.91

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

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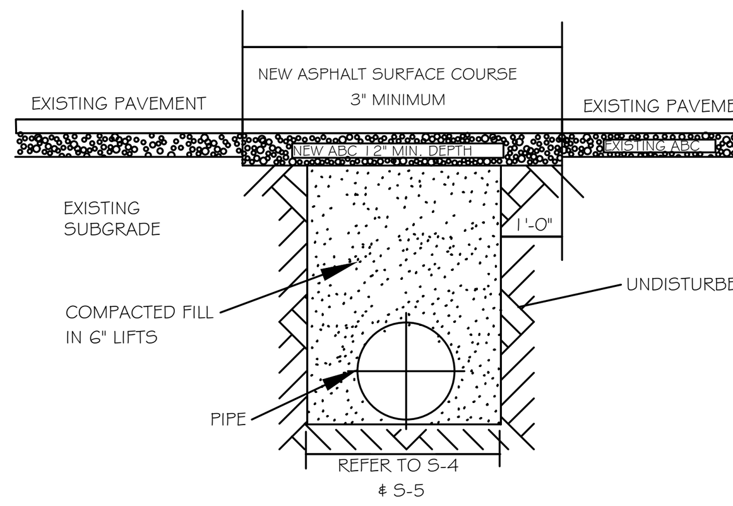
2	10-3-2022	Revised per Town / COR Comment	KPG
3	01-10-2023	Revised per Town / COR / Wake Co.Comment	KPG
4	04-26-2023	Revised per Town / COR / Wake Co.Comment	KPG
5	DATE	COMMENT	BY
6	DATE	COMMENT	BY
7	DATE	COMMENT	BY

NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
4/25/23

BMP Device Detail
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

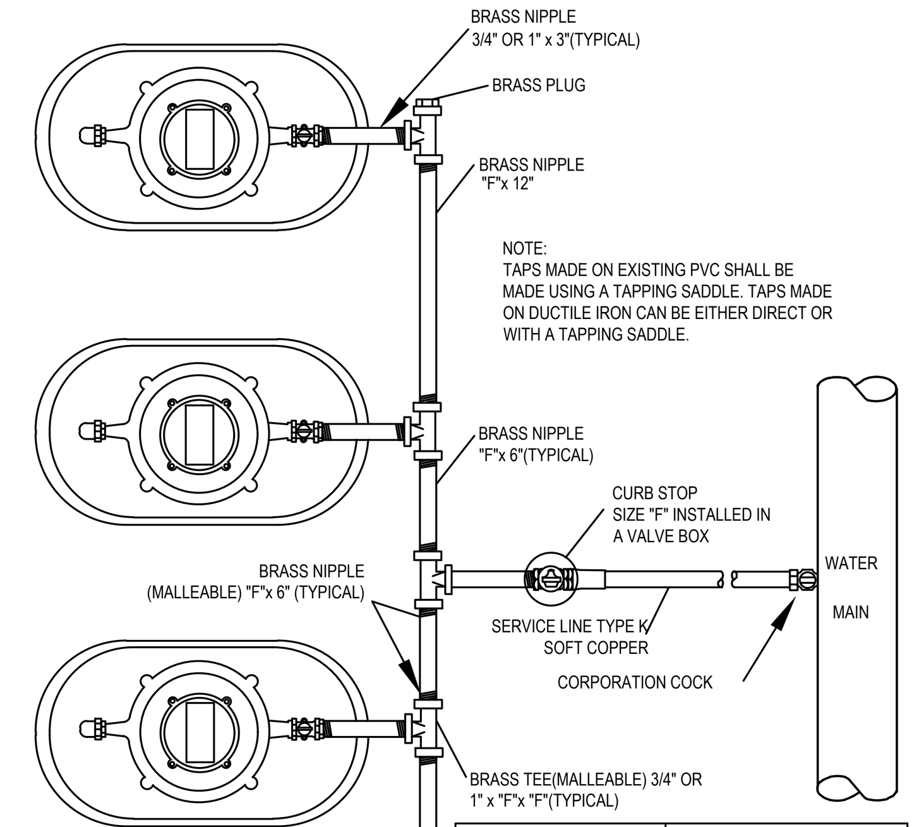
Project No. 22003
Dwg No. D3



NOTES:
1. IN NCDOT MAINTAINED ROADWAYS ENCROACHMENT PAVEMENT PATCH REQUIREMENTS SHALL TAKE PRECEDENCE.
2. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAWCUT MACHINE.
3. THE TRENCH SUBGRADE MATERIAL SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND COMPACTED TO A DENSITY OF AT LEAST 95% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY NCDOT.
4. THE FINAL 1' OF FILL SHALL CONSIST OF ABC MATERIAL COMPACTED TO A DENSITY EQUAL TO 100% OF THAT OBTAINED BY COMPACTING A SAMPLE OF THE MATERIAL IN ACCORDANCE WITH AASHTO T-80 AS MODIFIED BY NCDOT.
5. THE ENTIRE THICKNESS AND VERTICAL EDGE OF CUT SHALL BE TACKED.
6. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
7. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
8. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING (S-4 & S-5) FOR ADDITIONAL DETAILS.
9. NO HAND PATCHING ALLOWED.
10. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD ASPHALT PAVEMENT PATCH DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-3	D.W.C.	11-1-99	A.B.B.	4-19-04
	RRH	3-30-00	J.P.S.	10-8-10



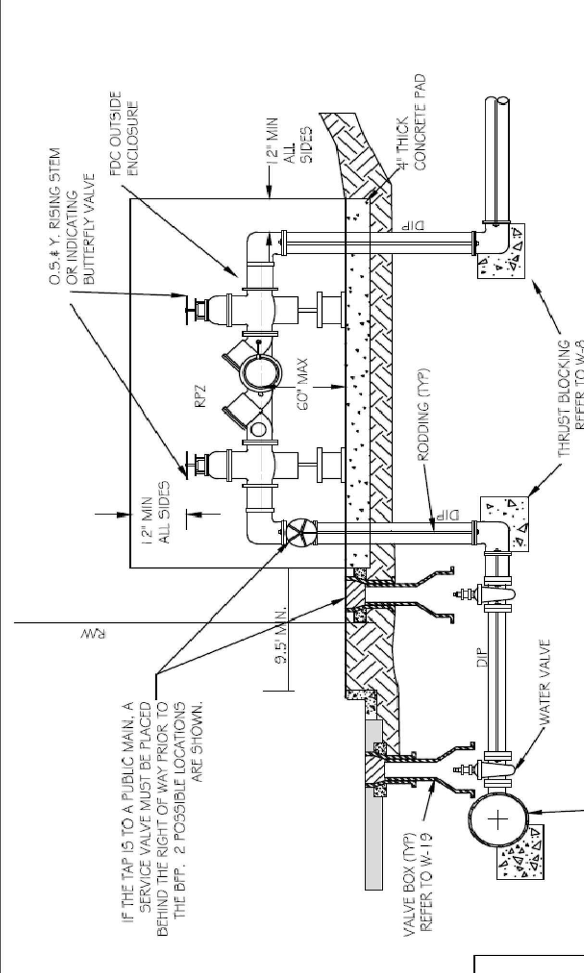
NOTE:
TAPS MADE ON EXISTING PVC SHALL BE MADE USING A TAPPING SADDLE. TAPS MADE ON DUCTILE IRON CAN BE EITHER DIRECT OR WITH A TAPPING SADDLE.

SIZE "F"(I.D.) (SERVICE TAP SIZE FROM MAIN)	NUMBER OF METERED SEVICES ALLOWED	
	3/4"	1"
2"	9-16	5-8
1 1/2"	5-8	4
1"	4	2
3/4"	2	N/A

SEE DETAIL FOR STANDARD WATER SERVICE INSTALLATION W-23

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD GANG METER ASSEMBLY

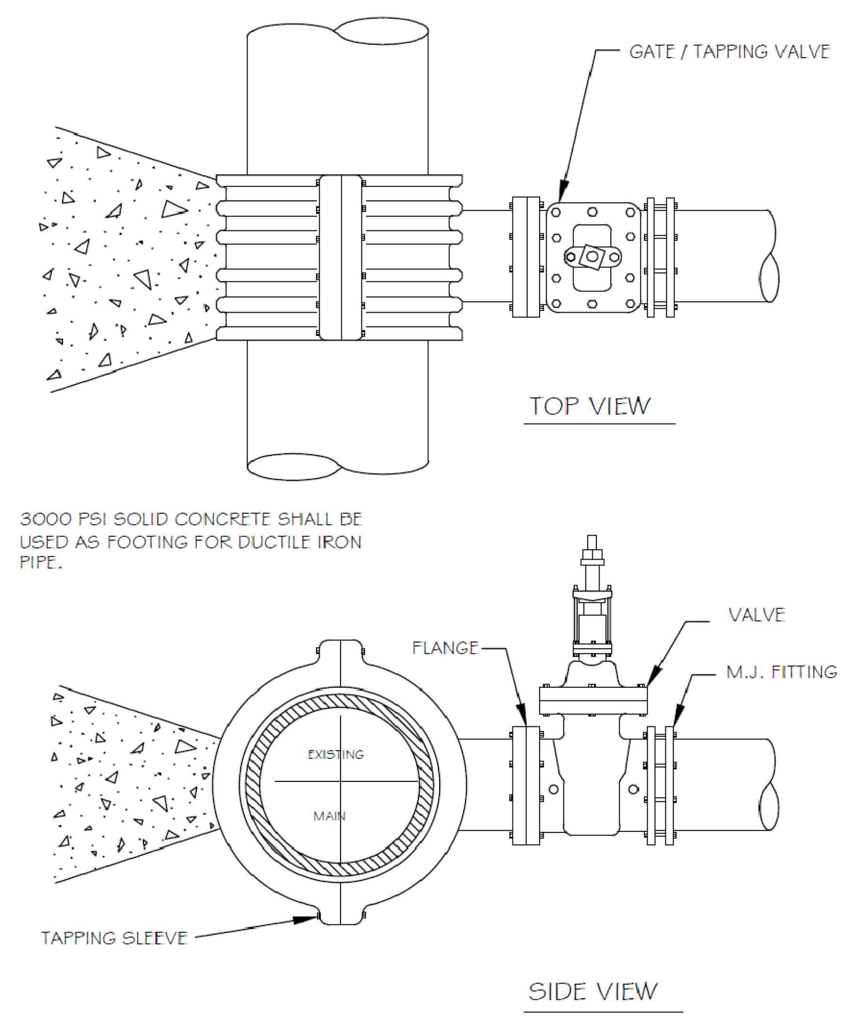
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-26	METERED SERV.	4-1-82	D.W.C.	11-18-99
	Y.C.A.	12-31-91	J.P.S.	11-4-10



1. ALL ABOVE GROUND ENCLOSURES MUST HAVE ADEQUATE DRAINAGE (TWICE THE DIAMETER OF THE SUPPLY PIPE) TO DAYLIGHT ABOVE GRADE.
2. REDUCED PRESSURE BACKFLOW PRESENTERS MAY BE LOCATED IN A BUILDING PROVIDED THERE ARE NO OTHER UNPROTECTED TAPS BETWEEN THE MAIN AND THE BUILDING. DRAINAGE IN A BUILDING MUST BE TWICE THE DIAMETER OF THE SUPPY PIPE.
3. ABOVE GROUND INSULATED VAULTS MUST BE ASSE 1060 APPROVED ABOVE GROUND ENCLOSURES, SEE CROSS CONNECTION MANUAL FOR ENCLOSURE FREEZE PROTECTION AND CERTIFICATION REQUIREMENTS.
4. RESIDENTIAL LAWN IRRIGATION R.P. ASSEMBLIES THAT ARE REMOVED TO PREVENT FREEZING IN THE WINTER MONTHS MUST BE CAPPED OFF. ALL ABOVE GROUND ASSEMBLIES, EXCEPT RESIDENTIAL LAWN IRRIGATION ASSEMBLIES, MUST BE PROTECTED FROM FROST.
5. FOR ENCLOSURE DIMENSIONS SEE DETAIL W-34.
6. FOR ENCLOSURE DIMENSIONS SEE DETAIL W-34.
7. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
8. ALL ASSEMBLIES MUST BE ON THE CURRENT APPROVAL LIST.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL REDUCED PRESSURE ZONE BACKFLOW PREVENTER ASSEMBLY

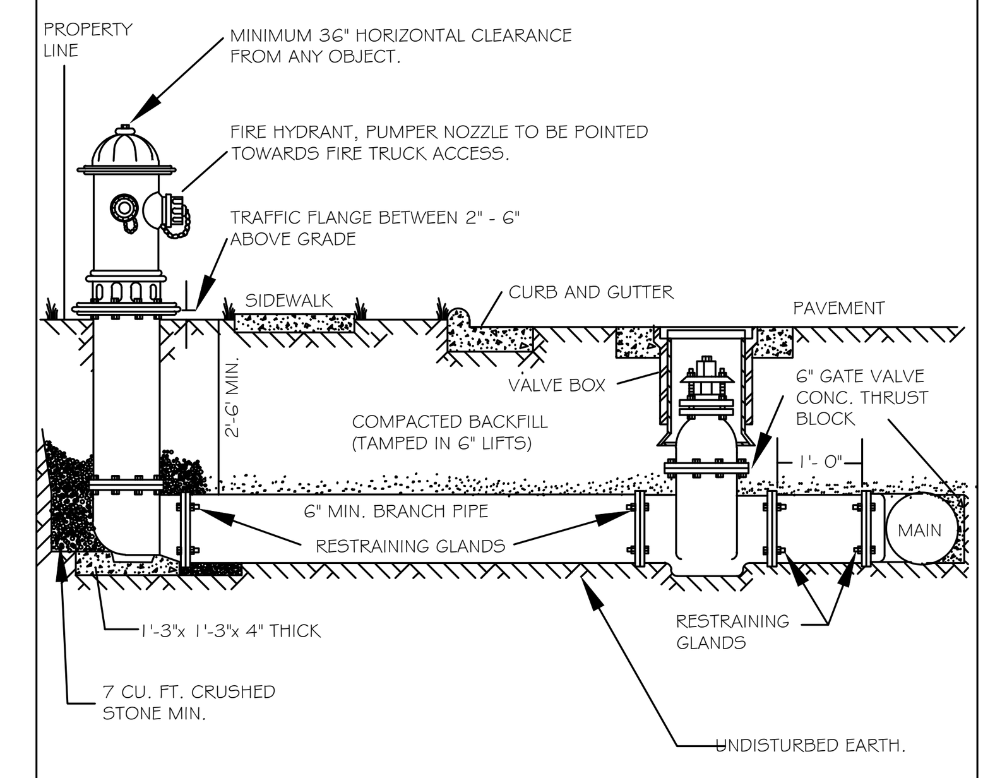
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-36	Y.C.A.	12-31-91	A.B.B.	7-10-04
	D.W.C.	11-8-99	D.H.L.	6/18/08



NOTES:
1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
2. SEE STANDARD REACTION BLOCK TABLES, W-10 AND W-11 FOR AREA OF CONCRETE REQUIRED.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
4" - 24" STANDARD TAPPING SLEEVE AND VALVE ASSEMBLY

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-14	Y.C.A.	12-31-91	RRH	3-31-00
	D.W.C.	9-7-99	J.P.S.	11-1-10

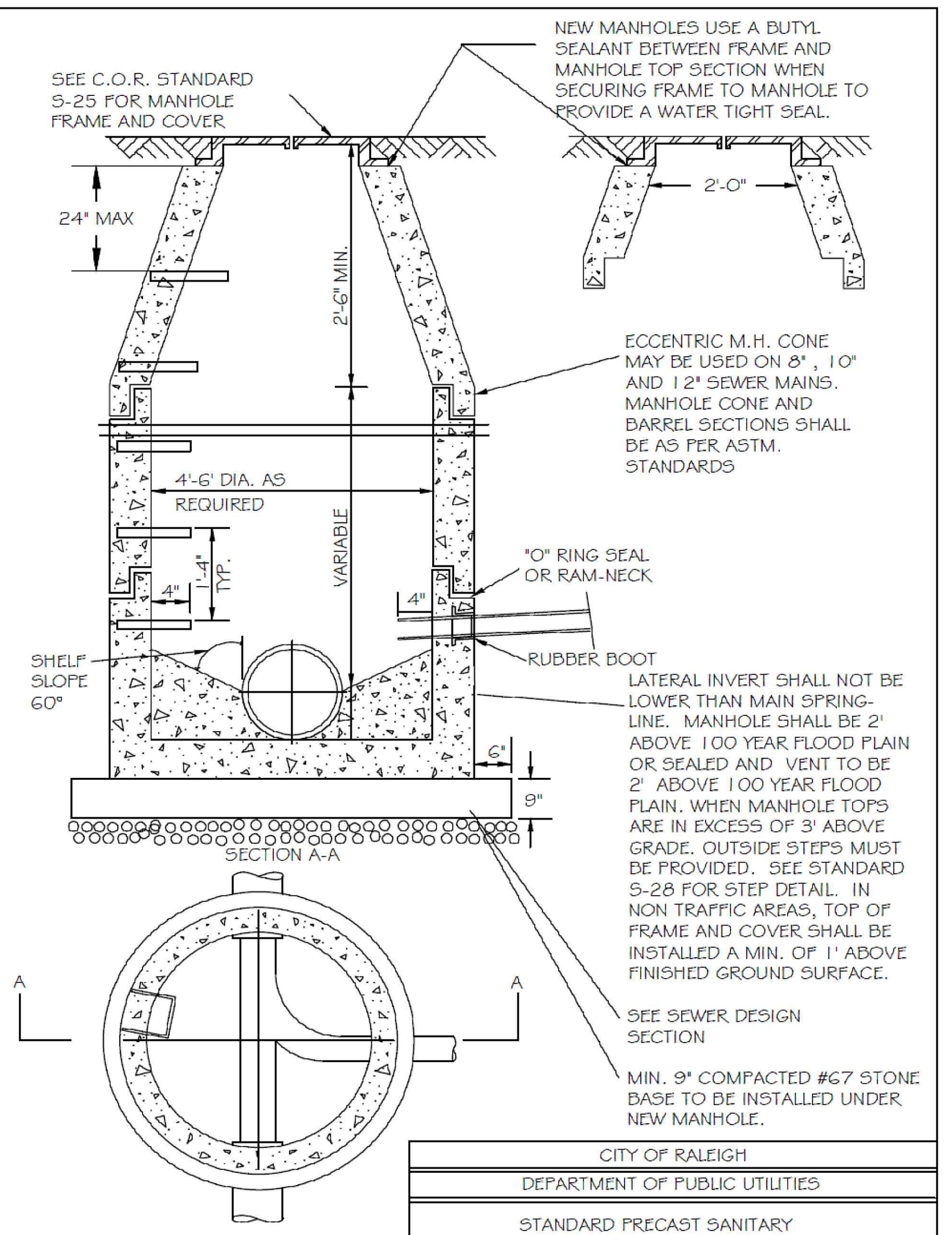


NOTES:
1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M&H, WATEROUS, CLOW, EAST JORDAN IRON WORKS, OR US PIPE.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150-96
3. 6" GATE VALVE SHALL BE AWWA C500-86 OPEN LEFT
4. STEEL RODS AND BOLTS SHALL BE $\frac{3}{4}$" HOT DIPPED GALVANIZED
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITION
RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 20' THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 10' FROM HYDRANT AND POURED IN CONCRETE.
FIRE HYDRANTS TO BE LOCATED IN ROW OR 2 FOOT EASEMENT ADJACENT TO ROW

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

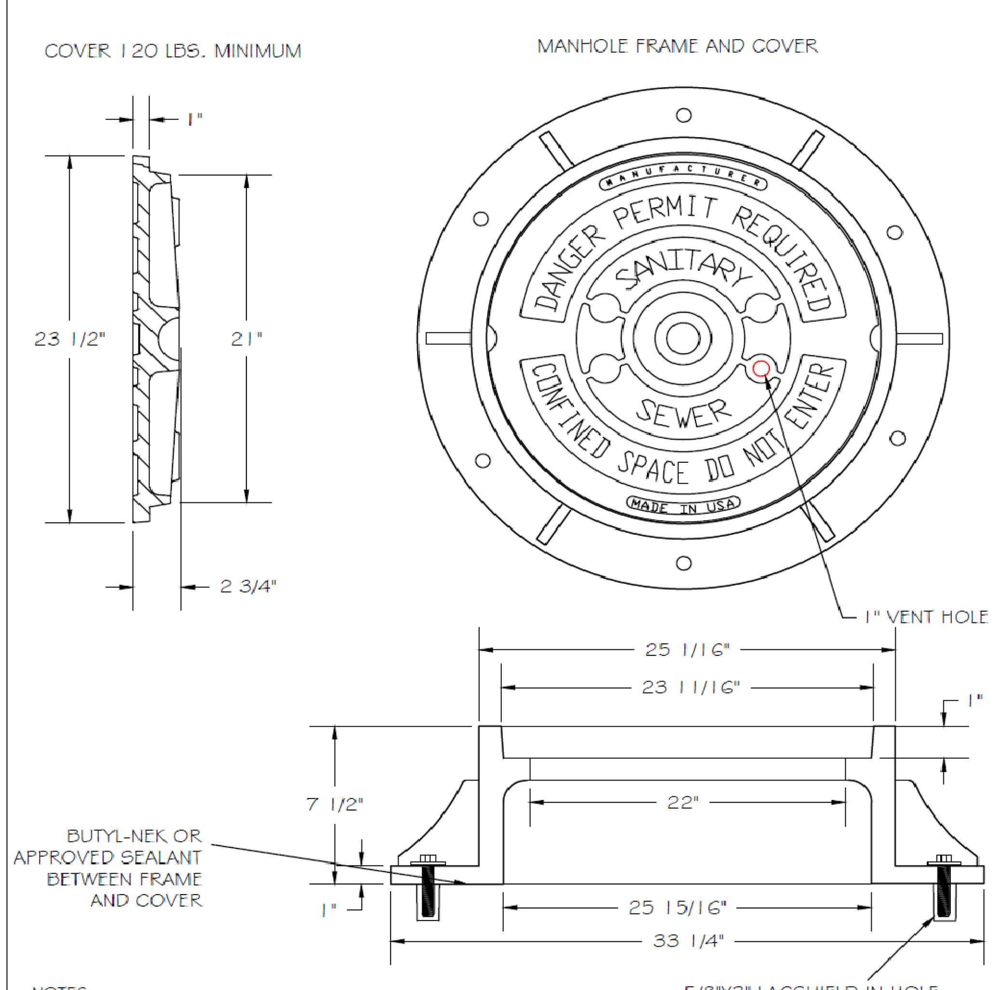
CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD FIRE HYDRANT INSTALLATION DETAIL

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-4	ABB	4-6-04	PAP	2/17/09
	DHL	2/14/08		



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD PRECAST SANITARY SEWER MANHOLE

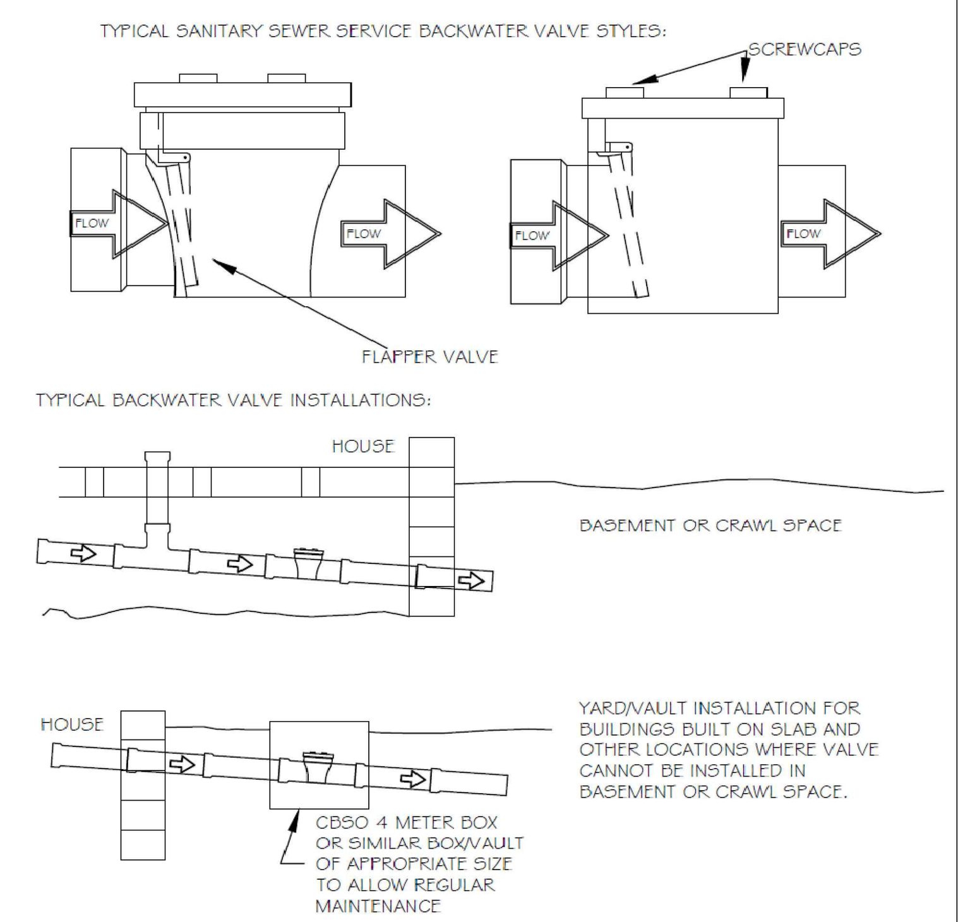
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-20	Y.C.A.	12-31-92	ABB	2-21-05
	RRH	3-30-00	D.H.L.	6-16-08



NOTES:
1) ALL MANHOLE FRAMES SHALL BE DOMESTICALLY CAST.
2) FRAME SHALL BE A MINIMUM WEIGHT OF 182 LBS. WITHIN PUBLIC ROW AND 160 LBS. WITHIN EASEMENTS.
3) COVER SHALL WEIGH A MIN. OF 120 LBS.
4) ALL MANHOLE FRAMES OUTSIDE OF PAVED SURFACES SHALL BE BOLTED TO THE CONE SECTION OR RING WITH A MINIMUM OF 4 BOLTS PER FRAME.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD MANHOLE COVER

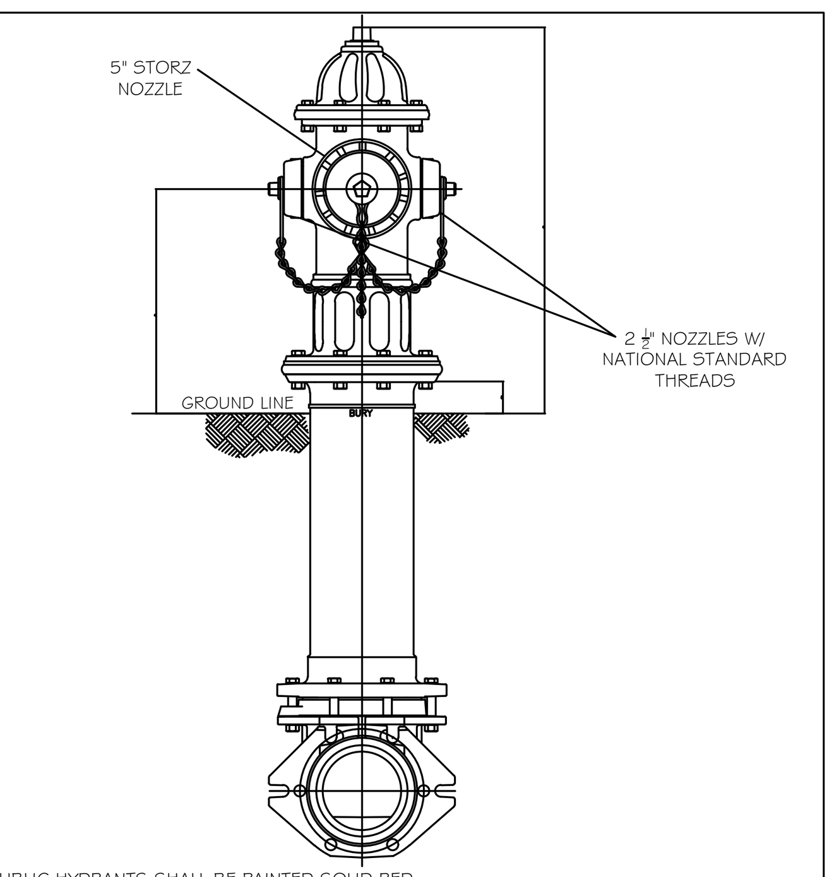
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-25	3-1-87	3-1-87	A.B.B.	2-9-05
	RRH	3-30-00	D.H.L.	6-18-08



NOTES:
1. INSTALLATIONS OF GREATER THAN 4' IN DEPTH MAY REQUIRE MANHOLE.
2. VALVES MUST BE INSTALLED IN A LOCATION AT WHICH THEY CAN BE CLEANED AND SERVICED REGULARLY.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TYPICAL SANITARY SEWER SERVICE BACK-WATER VALVE INSTALLATION

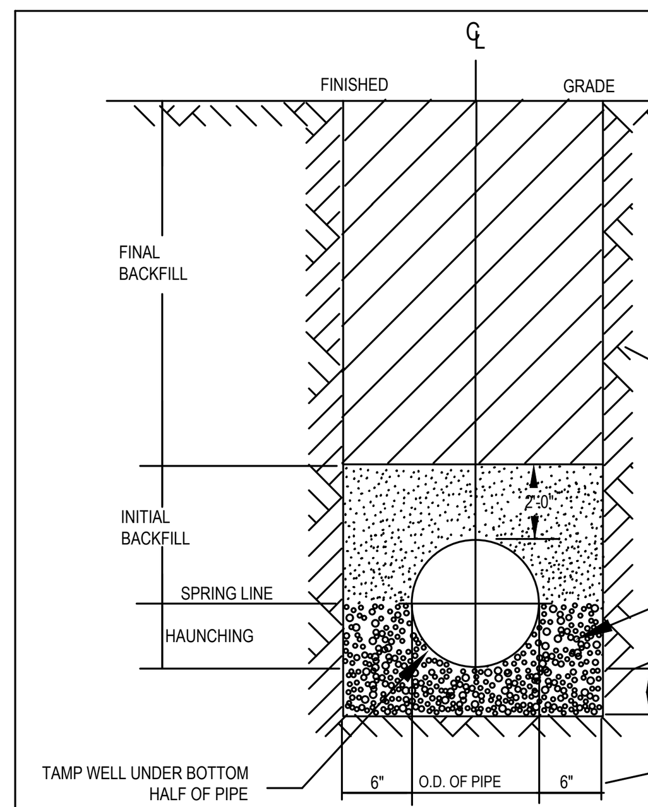
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-38	RRH	3-31-00		



NOTES:
1. RALEIGH PUBLIC HYDRANTS SHALL BE PAINTED SOLID RED.
2. KNIGHTDALE, PUBLIC HYDRANTS SHALL BE PAINTED SOLID RED.
3. ZEBULON PUBLIC HYDRANTS SHALL BE PAINTED RED W/ SILVER BONNETS AND OPERATING NUTS.
4. WENDELL PUBLIC HYDRANTS SHALL BE PAINTED SAFETY YELLOW WITH HIGH REFLECTIVE ALUMINUM SILVER CAPS, BONNETS, AND OPERATING NUTS
4. WAKE FOREST AND GARNER PUBLIC AND PRIVATE HYDRANTS TO BE PAINTED SAFETY YELLOW W/SILVER CAPS AND OPERATING NUTS.
5. ROLESVILLE PUBLIC HYDRANTS SHALL BE PAINTED SOLID RED.
6. OPERATING NUTS NUTS ON HYDRANTS CONNECTED TO PUBLIC MAINS 12" OR LARGER SHALL BE PAINTED BLACK. OPERATING NUTS ON HYDRANTS ANY OTHER SIZE SHALL BE PAINTED SILVER.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
RALEIGH, GARNER, KNIGHTDALE, ROLESVILLE, WAKE FOREST, WENDELL & ZEBULON
STANDARD FIRE HYDRANT WITH 5" STORZ PUMPER NOZZLE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-5		3-1-87	ABB	7-21-05
	RRH	3-31-00	DHL	2-18-08

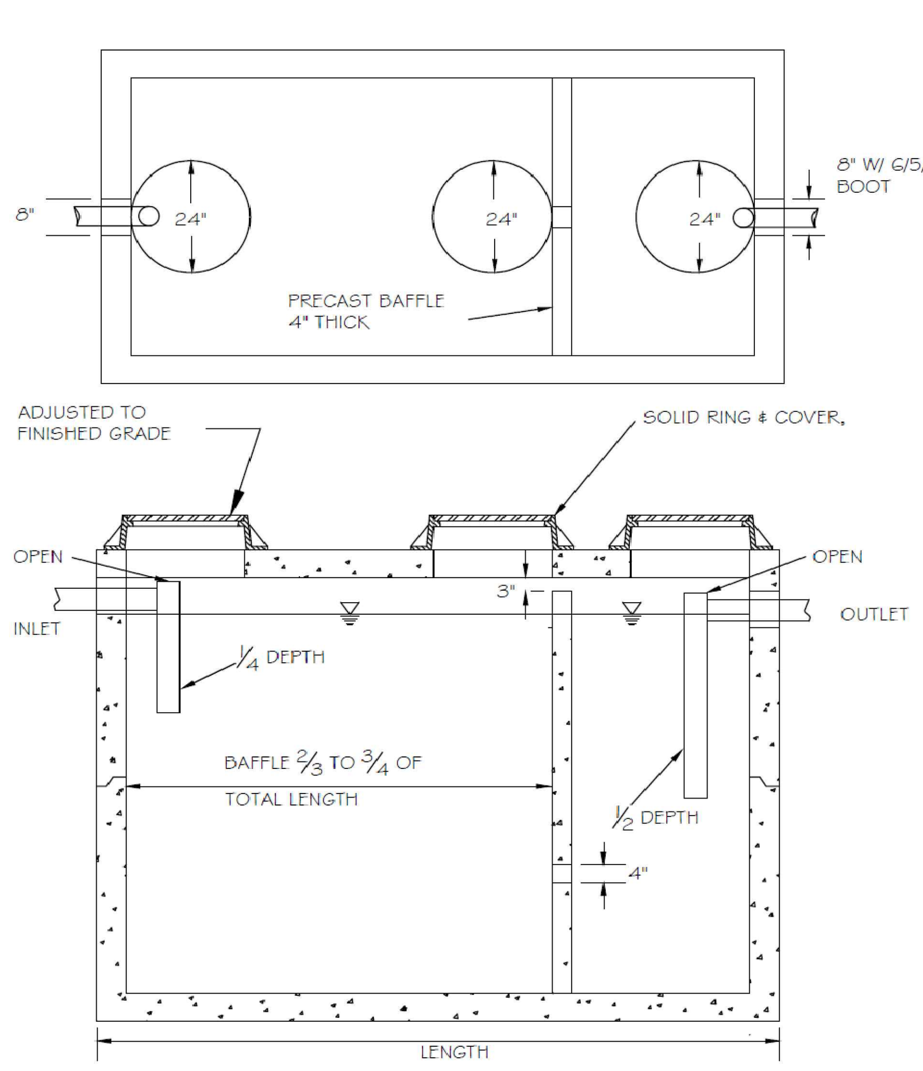


TYPICAL TRENCH BOTTOM DIMENSIONS FOR SDR 35 PVC GRAVITY PIPE

NOTES:
1. FOR TRENCHES REQUIRING SHORING AND BRACING, DIMENSIONS SHALL BE TAKEN FROM THE INSIDE FACE OF THE SHORING AND BRACING.
2. NO ROCKS OR BOULDERS 4" OR LARGER TO BE USED IN INITIAL BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS IN TRAFFIC AREAS, 12" IN NON-TRAFFIC AREAS.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
TRENCH BOTTOM DIMENSIONS AND BACKFILLING REQUIREMENTS FOR PVC GRAVITY SEWER MAIN

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-5	TO NOTES	3-1-87	D.W.C.	9-3-99
		7-2-82	RRH	3-30-00



NOTES:
1. REINFORCEMENT: H-20 BRIDGE LOADING (TRAFFIC RATED)
2. CONCRETE: 4000 PSI @28 DAYS
3. EARTHCOVER: 0' TO 5' MAX.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
1000 GALLON GREASE INTERCEPTOR

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-40	RRH 3/9/00		D.H.L.	6/18/08
	ABB	3/19/04		

LOCALLY AVAILABLE SIZES

INTERCEPTORS CAPACITY (GAL.)	SEPARATORS CAPACITY (GAL.)
300	1000
550	1200
750	1600
1000	
1200	
1500	
2000	
2500	
3000	
4000	
5000	
6000	
8000	

NOTES:
1. BAFFLE WALL LOCATED AT A DISTANCE FROM INLET WALL ⅔ TO ¾ OF THE TOTAL LENGTH OF THE INTERCEPTOR OR SEPARATOR AS SHOWN ON DETAIL S-40.
BAFFLE WALLS LOCATED AT A DISTANCE APPROXIMATELY OF ⅓ OF THE TOTAL LENGTH OF THE SEPARATOR AS SHOWN ON DETAIL S-40.01.
2. EACH INTERCEPTOR OR SEPARATOR SHALL HAVE INLET AND OUTLET TEES. THE OUTLET TEE SHALL EXTEND 50% INTO THE LIQUID DEPTH. THE INLET TEE SHALL EXTEND 25% INTO THE LIQUID DEPTH. INLET AND OUTLET TEES MUST BE OPEN TO ALLOW THE COLLECTION OF F.O.G. SAMPLE.
3. ACESS OPENINGS OVER EACH COMPARTMENT WITHIN THE INTERCEPTOR OR SEPARATOR SHALL BE 24 INCHES IN DIAMETER AND CONTAIN PICK HOLES. ALL COVERS SHALL BE CONSTRUCTED OF CAST IRON OR EQUIVALENT TRAFFIC BEARING MATERIAL. MANHOLE COVERS MUST EXTEND TO FINISH GRADE AND BE INSTALLED TO EXCLUDE THE ENTRANCE OF STORMWATER INTO THE INTERCEPTOR OR SEPARATOR.
4. FULL SIZE DUAL SWEEP CLEANOUTS SHALL BE INSTALLED ON THE INLET AND OUTLET SIDES OF THE INTERCEPTOR OR SEPARATOR.
5. INTERCEPTORS AND SEPARATORS MUST BE VENTED IN ACCORDANCE WITH THE NC STATE PLUMBING CODE.
6. CONCRETE: 4000 PSI @ 28 DAYS.
7. DESIGN: ACI 318 BUILDING CODE
ASTM C1613-06 FOR GREASE INTERCEPTORS
ASTM C913-02 FOR WATER AND WASTEWATER STRUCTURES
ASTM C890-06 FOR MINIMAL STRUCTURAL DESIGN LOADING
8. INTERCEPTORS AND SEPARATORS SHALL BE DESIGNED TO WITHSTAND AN H-20 WHEEL LOAD.
9. INTERCEPTORS OR SEPARATORS MADE OF POLYETHYLENE OR FIBERGLASS SHALL INCLUDE A MINIMUM 12,000 PSI TENSILE STRENGTH, 19,000 PSI FLEXURAL STRENGTH, AND 800,000 PSI FEXURAL MODULUS.
10. ALL INTERCEPTORS AND SEPARATORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
DIMENSIONS: GREASE INTERCEPTORS OIL-WATER-SAND SEPARATORS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
S-41	RRH 3/9/00		D.H.L.	6/18/08
	ABB	3/19/04		

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 #** S-5195

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 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

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

NO.	DATE	REVISION DESCRIPTION	BY
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4	04-28-2023	Revised per Town / COR / Wake Co Comment	KPG
5	DATE	COMMENT	BY
6	DATE	COMMENT	BY
7	DATE	COMMENT	BY

NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
[illegible]
4/28/23

Water and Sewer Details
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

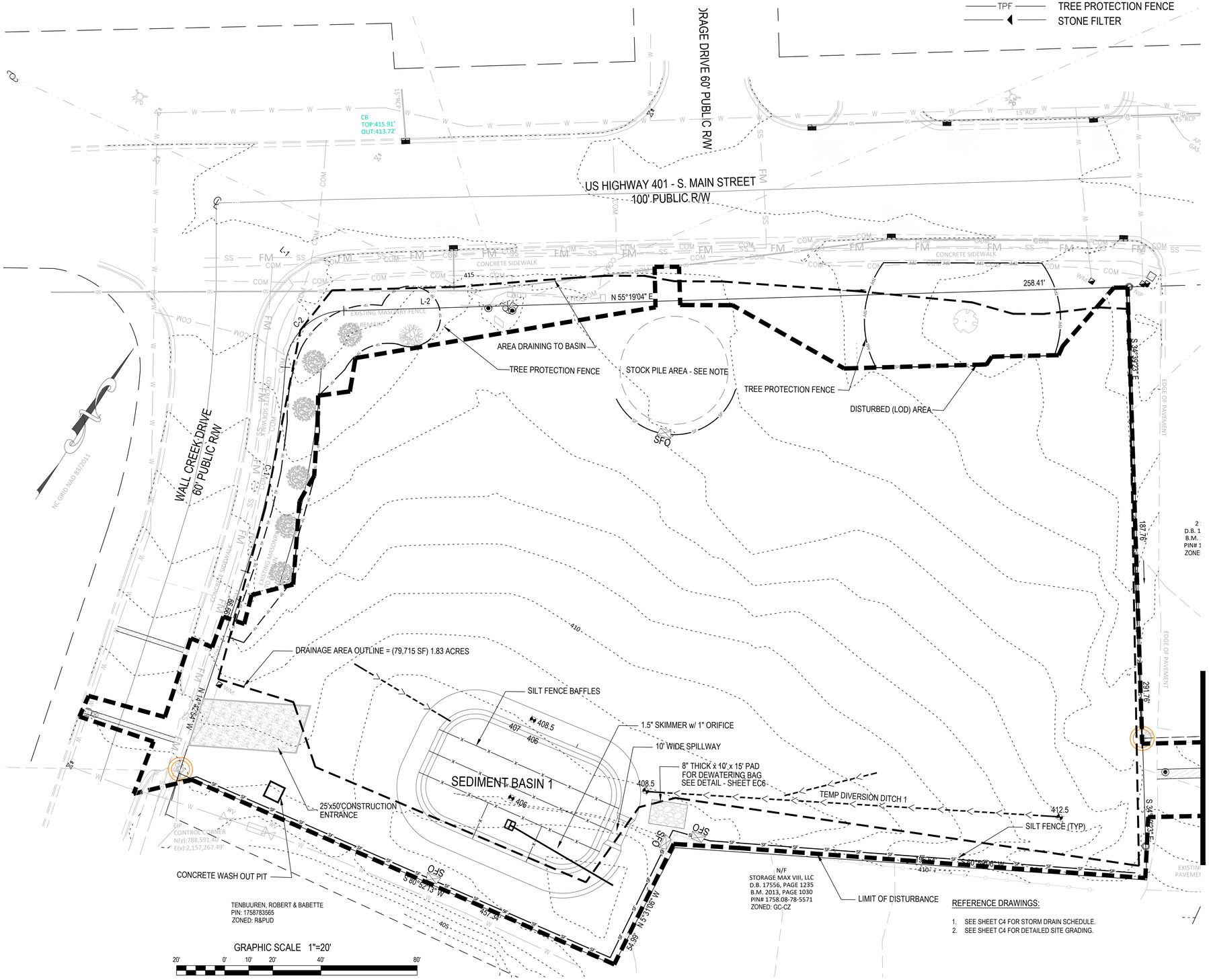
Project No. 22003
Dwg No. D4

BASIN NUMBER	DRAIN AREA(ACRES)	BASIN SIZE	Q10 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	1.83	44' x 74'	5.06	4264	2201	7499	3294	10	1.5 / 1	408.5	408	406

SEE SHEET EC6 FOR DESIGN CALCULATIONS

LINE AND SYMBOL LEGEND

- SFO — SILT FENCE OUTLET
- LIMITS OF DISTURBANCE
- SF — SILT FENCE
- TEMPORARY DIVERSION
- TPF — TREE PROTECTION FENCE
- STONE FILTER



EROSION CONTROL CONSTRUCTION SEQUENCE - PAHSE 1

1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL WATERSHED MANAGER. OBTAIN A LAND DISTURBING PERMIT.
2. INSTALL TREE PRETECTION FENCE.
3. INSTALL EROSION CONTROL MEASURES INCLUDING GRAVEL CONSTRUCTION ENTRANCE /EXIT, 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.
4. CONTACT THE WAKE COUNTY ENVIRONMENTAL CONSULTANT, JEEEVAN NEUPANE (919) 819-8907, FOR AN ONSITE INSPECTION TO OBTAIN A CERTIFICATE OF COMPLIANCE.
5. BEGIN CLEARING AND GRUBBING. PERFORM ROUGH GRADING, INSTALLING AND MAINTAINING TEMPORARY DIVERSIONS AS NECESSARY. SEED AND MULCH PERIMETER SLOPES AS SOON AS POSSIBLE.
6. 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.
7. REGULARLY INSPECT AND MAINTAIN THE EROSION CONTROL DEVICES SO THEY CONTINUE TO FUNCTION PROPERLY.
8. 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.
9. 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.
10. CONTINUE TO PHASE 2 EROSION CONTROL ACTIVITIES.

STOCKPILE DESIGN CRITERIA

1. 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.
2. A 25-FOOT TEMPORARY MAINTENANCE AND ACCESS EASEMENT SHALL BE SHOWN AROUND ALL PROPOSED STOCKPILES (EROSION CONTROL MEASURES SURROUNDING THE STOCKPILE SHALL BE SHOWN AT THE OUTER LIMIT OF THIS EASEMENT).
3. STOCKPILE FOOTPRINTS SHALL BE SETBACK A MINIMUM OF 25' FROM ADJACENT PROPERTY LINES.
4. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
5. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.
6. 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.
7. ANY CONCENTRATED FLOW LIKELY TO AFFECT THE STOCKPILE SHALL BE DIVERTED TO AN APPROVED BMP.
8. OFF-SITE SPOIL OR BORROW AREAS MUST BE IN COMPLIANCE WITH WAKE COUNTY UDO AND STATE REGULATIONS. ALL SPOIL AREAS OVER AN ACRE ARE REQUIRED TO HAVE AN APPROVED SEDIMENT CONTROL PLAN. DEVELOPER/CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFFSITE DISPOSAL OF SOIL, PRIOR TO DISPOSAL. FILL OF FEMA FLOODWAYS AND ON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS OTHERWISE PROVIDED BY SUBSECTION 14-19-2 OF THE WAKE COUNTY UNIFIED DEVELOPMENT ORDINANCE (CERTIFICATIONS AND PERMITS REQUIRED).
9. 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.
10. 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.
11. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
12. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

GENERAL NOTES:

1. INSTALL POLYACRYLAMIDE IMPREGNATED STRAW WATTLES (ie: TERRA TUBES) DIRECTLY BELOW STORM WATER OUTFALL. PLACE EROSION CONTROL LINER UNDERNEATH A SERIES OF WATTLES (SEE DETAIL)
2. 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.
3. INSTALL STANDARD GRAVEL YARD INLET PROTECTION UNTIL CURB IS INSTALLED. INSTALL STANDARD GRAVEL BAG CURB INLET PROTECTION AT ALL CURB INLETS.

REFERENCE DRAWINGS:

1. SEE SHEET C4 FOR STORM DRAIN SCHEDULE.
2. SEE SHEET C4 FOR DETAILED SITE GRADING.

DRAINAGE AREA TO BASIN = 79,558 SF (1.83 AC)

TOTAL DENUDED AREA 94,016 SF (2.16 AC)

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NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
4/23/23

Phase 1 - Erosion Control Plan
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. EC1

EROSION CONTROL CONSTRUCTION SEQUENCE - PHASE 2

1. INSTALL THE STORM DRAINAGE SYSTEM AND INLET PROTECTION, PROTECTING PIPE OPENINGS AND UNCOVERED STRUCTURES AS SHOWN.

2. INSTALL SANITARY SEWER SYSTEM AND WATER LINE PIPING PER UTILITY PLAN. ENSURE EXISTING UTILITES ARE PROTECTED DURING CONSTRUCTION ACTIVITIES.

3. 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.

4. REGULARLY INSPECT AND MAINTAIN THE EROSION CONTROL DEVICES SO THEY CONTINUE TO FUNCTION PROPERLY.

5. 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.

6. 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.

7. CONTINUE TO PHASE 3 ACITIVITES.

LINE AND SYMBOL LEGEND

- SFO — SILT FENCE OUTLET
- LIMITS OF DISTURBANCE
- SF — SILT FENCE
- TEMPORARY DIVERSION
- TPF — TREE PROTECTION FENCE
- STONE FILTER

REFERENCE DRAWINGS:

1. SEE SHEET C4 FOR STORM DRAIN SCHEDULE.
2. SEE SHEETS C4 FOR DETAILED SITE GRADING.

Channel	Drain Area, ac	Channel Length, ft	Channel Drop, ft	C	Q2 I, in/hr	Flow cfs	Channel Slope, ft/ft	n	Side Slope:1	Bottom Width, ft	Depth of Flow, ft	Velocity fps	Liner
TD1	0.78	171	4	0.55	5.76	2.5	0.0234	0.024	3.00	2.0	0.27	3.28	Jute Mesh

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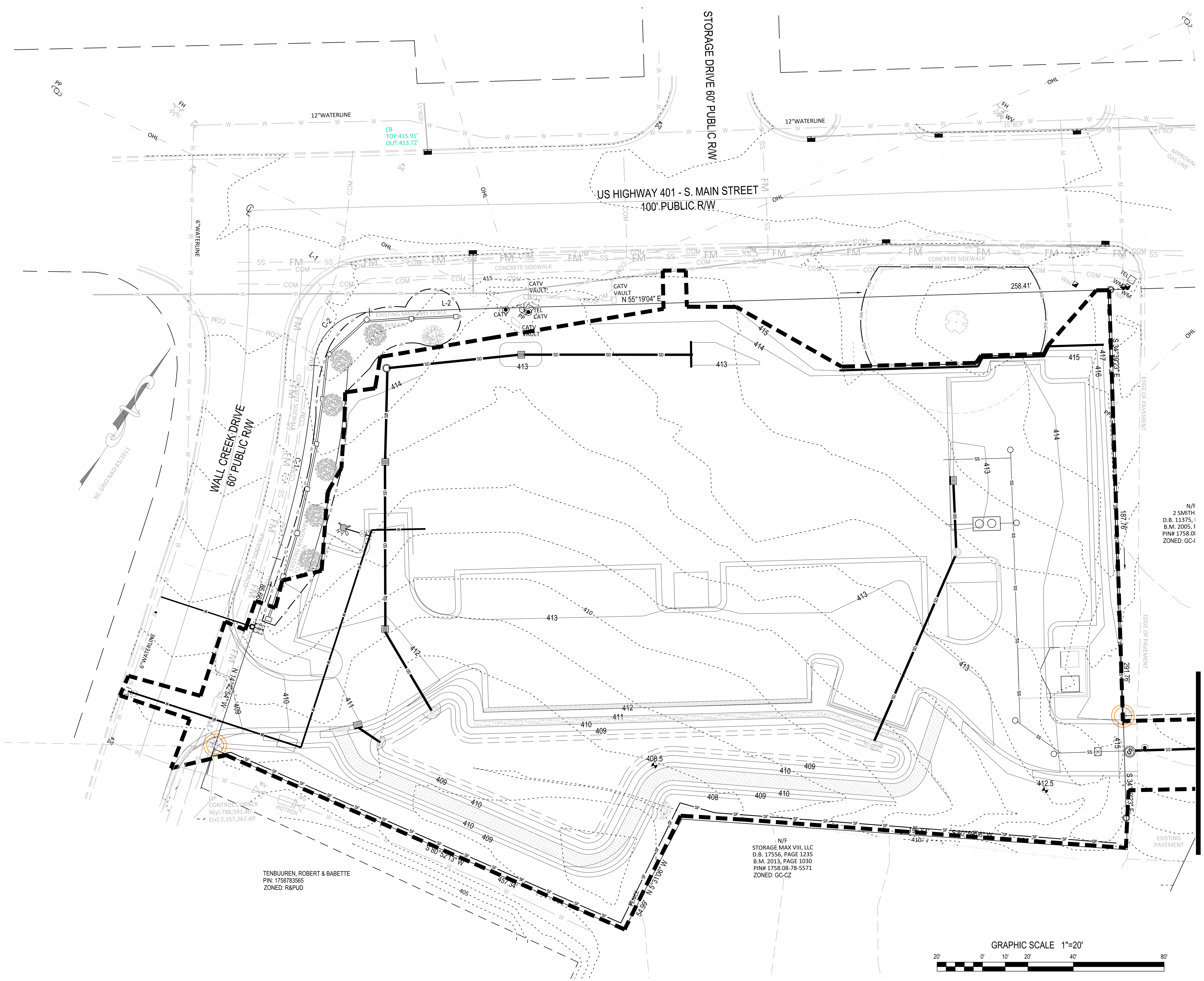
NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
4/28/23

Phase 2 - Erosion Control Plan
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. EC2



CONSTRUCTION SEQUENCE - PHASE 3

1. CONSTRUCT CONCRETE CURB IN ROADWAYS AND PARKING LOT. PLACE AND COMPACT STONE IN THE ROADWAYS AND PARKING LOT. REMOVE THE GRAVEL ENTRACE.

2. COMPLETE FINE GRADING AND STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.

3. ONCE THE SITE IS STABILIZED AND APPROVAL FROM STORMWATER INSPECTIONS TO SCHEDULE THE REMOVAL OF THE SEDIMENT BASIN (SEE NOTES BELOW). DEWATER SEDIMENT BASIN USING A SILT BAG AND MUCK OUT REMAINING SEDIMENT.

2. BEGIN INSTALLATION OF THE BMP AND ASSOCIATED STRUCTURES. CONTACT PROJECT ENGINEER TO INSPECT DURING INSTALLATION PROCESS. SURVEY INVERT ELEVATIONS FOR AS-BUILT INFORMATION REQUIRED BY THE TOWN OF ROLESVILLE AND WAKE COUNTY.

3. GRADE ANY REMAINING AREAS TO FINAL GRADE. UPON COMPLETION THE GROUND COVER SHALL BE PROVIDED AS FOLLOWS:
A. STABILIZE BASINS WITH GROUND COVER IMMEDIATELY AFTER INSTALLATION.
B. STABILIZE DIVERSION DITCHES INTENDED TO BE IN SERVICE FOR 30 DAYS OR MORE WITH TEMPORARY SEEDING AND EROSION CONTROL NETTING.
C. FOR ALL AREAS OF MODERATE AND/OR STEEP SLOPES, PROVIDE TEMPORARY GROUND COVER IF THE SLOPE HAS NOT BEEN DISTURBED FOR A PERIOD OF FOURTEEN (14) DAYS.
D. PROVIDE GROUND COVER SUFFICIENT TO RESTRAIN EROSION ON ANY PORTION OF THE SITE UPON WHICH FURTHER LAND-DISTURBING ACTIVITY IS NOT BEING UNDERTAKEN WITHIN FOURTEEN (14) CALENDAR DAYS OF TEMPORARILY OR PERMANENTLY SUSPENDING LAND DISTURBING ACTIVITY
E. ESTABLISH PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION WITHIN FOURTEEN (14) CALENDAR DAYS FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT AND/OR PRIOR TO FINAL INSPECTION.

4. ONCE THE BMP INSTALLATION IS COMPLETE, TEMPORARY MEASURES ARE REMOVED, THE SITE IS STABILIZED, CONTACT THE WAKE COUNTY ENVIRONMENTAL CONSULTANT, JEEVAN NEUPANE AT (919) 819-8907, TO SCHEDULE A STORMWATER INSPECTION.

REQUIRED WAKE COUNTY BASIN REMOVAL SEQUENCE

1. SCHEDULE A SITE MEETING WITH THE WAKE COUNTY ENVIRONMENTAL, JEEVAN NEUPANE AT (919) 819-8907, 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.

2. CONTACT NCDEQ – RALEIGH REGIONAL OFFICE (919) 791-4200 TO DETERMINE THE DIVISION OF ENERGY, MINERAL AND LAND RESOURCES CONTACT PERSON TO RECEIVE DEWATERING NOTIFICATIONS. AT LEAST 10 DAYS PRIOR TO BEGINNING DEWATERING ACTIVITY, SEND EMAIL TO NCDEQ-DEMLR CONTACT PERSON AND COPY ENVIRONMENTAL CONSULTANT THAT MET YOU ONSITE. THE EMAIL SHOULD INCLUDE: E&SC JURISDICTION: WAKE COUNTY, WAKE COUNTY PROJECT: NAME, NUMBER, AND LOCATION (CITY/TOWN), ENVIRONMENTAL CONSULTANT NAME, AND ADDRESS THE FOLLOWING: A)REASON FOR CONVERSION, B)BASIN #, C)DEWATERING METHOD, AND D) ALL OTHER NECESSARY INFO FROM PART II, SECTION G, ITEM 4 OF THE NCG01.(KEEP EMAIL FOR YOUR NPDES MONITORING DOCUMENTATION)

3. AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDEQ-DEMLR THAT YOU MAY REMOVE THE BASIN OR ON > DAY 11, WHICHEVER IS SOONER. REMOVE BASIN(S) AND ASSOCIATED TEMPORARY DIVERSION DITCHES. IF PIPES NEED TO BE EXTENDED, PERFORM THIS OPERATION AT THIS TIME. FINE GRADE AREA IN PREPARATION FOR SEEDING.

4. PERFORM SEEDBED PREPARATION, SEED, MULCH AND ANCHOR ANY RESULTING BARE AREAS IMMEDIATELY.

5. INSTALL VELOCITY DISSIPATORS AND/OR LEVEL SPREADERS AS REQUIRED ON THE EROSION CONTROL PLAN.

6. WHEN SITE IS FULLY STABILIZED, CALL WAKE COUNTY ENVIRONMENTAL CONSULTANT, JEEVAN NEUPANE AT (919) 819-8907, FOR APPROVAL OF REMOVING REMAINING TEMPORARY EROSION CONTROL MEASURES AND ADVICE ON WHEN SITE CAN BE ISSUED A CERTIFICATE OF COMPLETION. NOTE: A MEETING SHOULD ALSO BE SCHEDULED WITH THE ENVIRONMENTAL CONSULTANT TO DETERMINE WHEN A BASIN MAY BE CONVERTED FOR STORMWATER USE.

LINE AND SYMBOL LEGEND

SFO	SILT FENCE OUTLET
▬ ▬ ▬	LIMITS OF DISTURBANCE
—SF—	SILT FENCE
— — > — —	TEMPORARY DIVERSION
—TPF—	TREE PROTECTION FENCE
—◀—	STONE FILTER

REFERENCE DRAWINGS:

1. SEE SHEET C4 FOR STORM DRAIN SCHEDULE.
2. SEE SHEETS C4 FOR DETAILED SITE GRADING.

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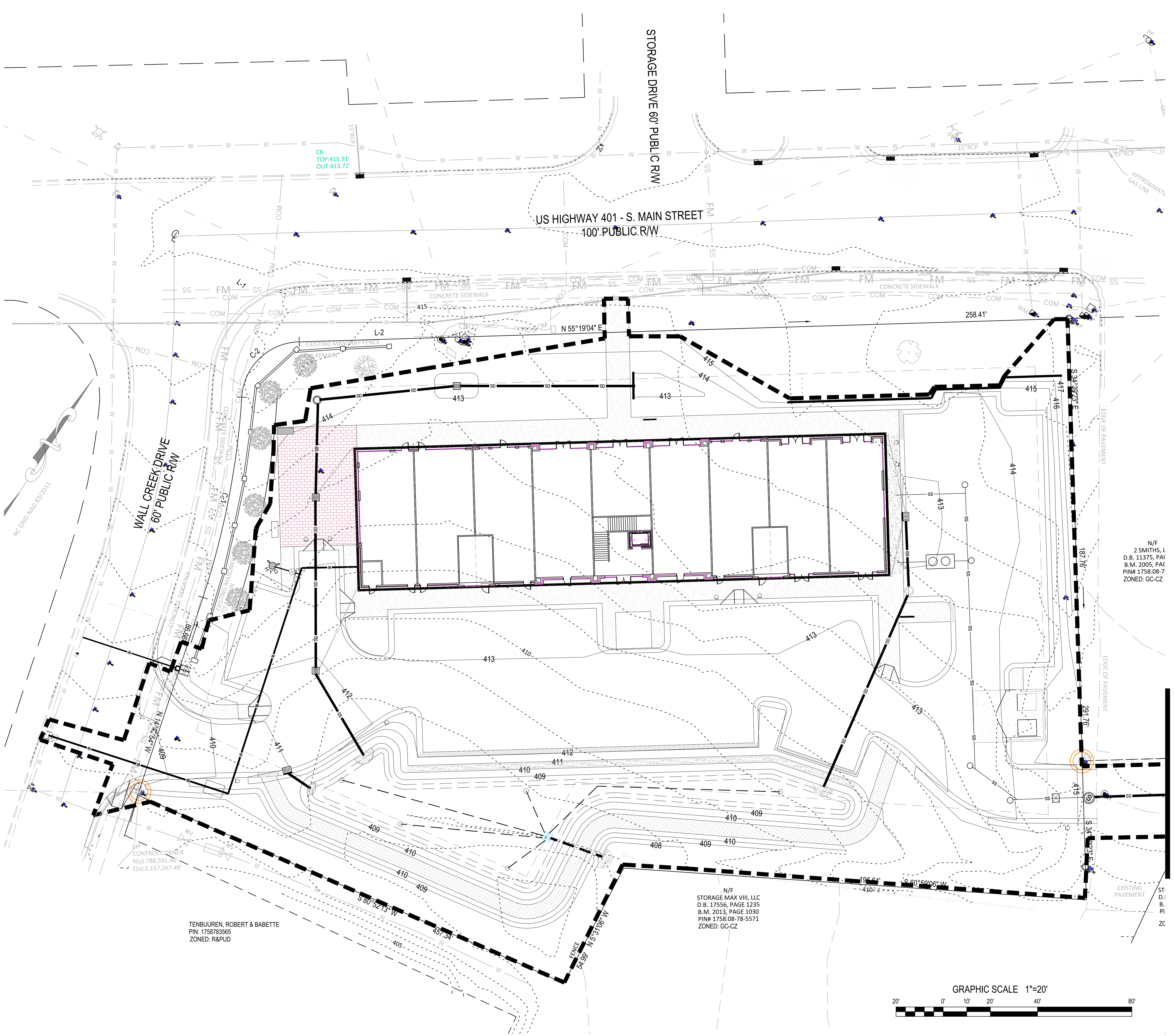
4/28/23

Phase 3 - Erosion Control Plan
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. EC3



CONSTRUCTION SEQUENCE - PHASE 4

1. ENSURE THE SITE IS COMPLIANT WITH THE NCG01 SELF INSPECTION AND GROUND STABILIZATION AND MATERIAL HANDLING.

2. FOR ALL AREAS OF MODERATE AND / OR STEEP SLOPES, PROVIDE TEMPORARY GROUND COVER IF THE SLOPE HAS NOT BEEN DISTURBED FOR A PERIOD OF FOURTEEN (14) DAYS.

3. PROVIDE GROUND COVER SUFFICIENT TO RESTRAIN EROSION ON ANY PORTION OF THE SITE UPON WHICH FURTHER LAND-DISTURBING ACTIVITY IS NOT BEING UNDERTAKEN WITHIN FOURTEEN (14) CALENDAR DAYS OF TEMPORARILY OR PERMANENTLY SUSPENDING LAND DISTURBING ACTIVITY.

4. REMOVE SILT FENCE AND TREE PROTECTION FENCING WHEN GRADING ACTIVITIES ARE COMPLETE AND THE PROJECT SITE IS STABLIIZED.

5. ONCE THE BMP INSTALLATION IS COMPLETE, TEMPORARY MEASURES ARE REMOVED, THE SITE IS STABILIZED, CONTACT THE WAKE COUNTY ENVIRONMENTAL CONSULTANT JEEVAN NEUPANE AT (919) 819-8907 TO SCHEDULE A STORMWATER FINAL INSPECTION. BMP CERTIFICATIONS AND AS-BUILT PLANS MUST BE PROVIDED TO WAKE COUNTY / TOWN OF ROLESVILLE PRIOR TO FINAL PLATTING.

6. ONCE THE STORMWATER FINAL INSPECTION IS APPROVED, CLOSE THE GRADING PERMIT AND OBTAIN A CERTIFICATE OF COMPLETION.

NPDES NOTES

1. THIS PAGE IS SUBMITTED TO COMPLY WITH NPDES GENERAL STORMWATER PERMIT NCG010000.

2. THIS PAGE CAN BE APPROVED BY THE CITY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000 ONLY.

3. THIS PAGE OF THE APPROVED PLANS IS ENFORCEABLE EXCLUSIVELY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000.

4. THE CITY / COUNTY IS NOT AUTHORIZED TO ENFORCE THIS PAGE OF THE PLANS AND IT IS NOT A PART OF THE APPROVED PLANS FOR PURPOSES OF ENFORCEMENT ACTION UNDER THE CITY / COUNTY CODE.

5. DOCUMENTATION REQUIRED UNDER THE SITE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY SHALL BE SUBMITTED TO WAKE COUNTY.

NPDES GROUND STABILIZATION SCHEDULE

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

LINE AND SYMBOL LEGEND

SFO	SILT FENCE OUTLET
— — — —	LIMITS OF DISTURBANCE
—— SF ——	SILT FENCE
—— —>— ——	TEMPORARY DIVERSION
—— TPF ——	TREE PROTECTION FENCE
—— ◀ ——	STONE FILTER

REFERENCE DRAWINGS:

1. SEE SHEET C4 FOR STORM DRAIN SCHEDULE.
2. SEE SHEET C4 FOR DETAILED SITE GRADING.

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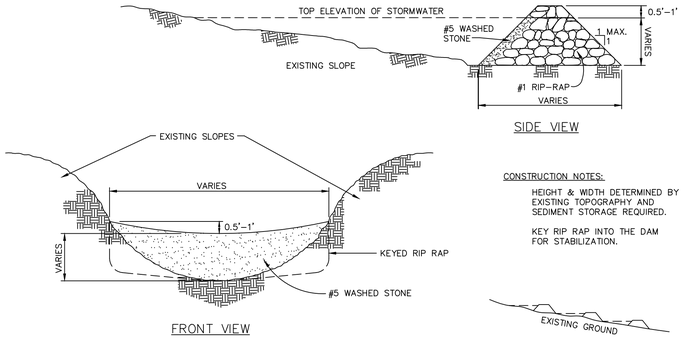
4/28/23

Phase 4 - Erosion Control Plan
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. EC4



CONSTRUCTION NOTES:

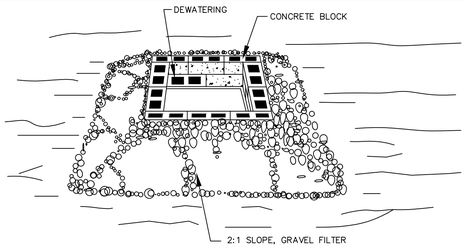
HEIGHT & WIDTH DETERMINED BY EXISTING TOPOGRAPHY AND SEDIMENT STORAGE REQUIRED.

KEY RIP RAP INTO THE DAM FOR STABILIZATION.

NOTE: REMOVE SEDIMENT ACCUMULATION FROM BEHIND CHECK DAMS TO PREVENT DAMAGE TO CHANNEL VEGETATION. FLOW SHOULD BE MAINTAINED THROUGH THE DAM.

EFFECTIVE: 01/31/08

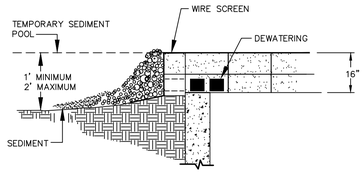
STANDARD CHECK DAM



CONSTRUCTION SPECIFICATIONS

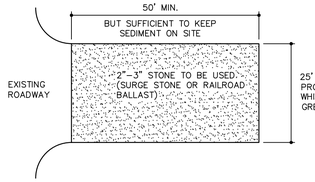
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW POOL DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, GIVE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2x4 WOOD STUDS THROUGH BLOCK OPENINGS.
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2 INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
3. USE CLEAN GRAVEL, 3/4 TO 1/2 INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. DOT #57 WASHED STONE IS RECOMMENDED.

MAINTENANCE: INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.



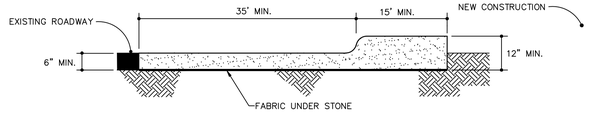
EFFECTIVE: 01/31/08

STANDARD BLOCK & GRAVEL DROP INLET PROTECTION



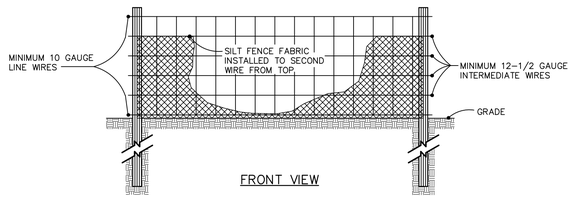
NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. MAINTAIN GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING CONSTRUCTION SITE. ENTRANCE WILL REQUIRE PERIODIC REMOVAL OF SEDIMENT-LADEN STONE AND REPLACEMENT WITH FRESH STONE.



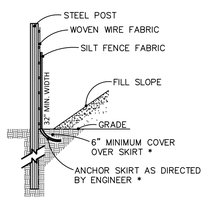
EFFECTIVE: 01/31/08

STANDARD CONSTRUCTION ENTRANCE



NOTE:

1. USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.
2. REMOVE SEDIMENT DEPOSITED AS NEEDED TO PROVIDE STORAGE VOLUME FOR THE NEXT RAIN AND TO REMOVE PRESSURE ON THE SILT FENCE.

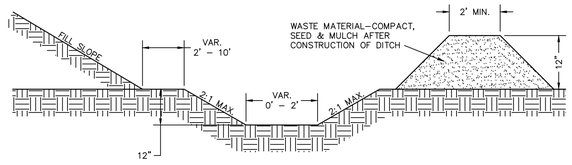


EFFECTIVE: 01/31/08

STANDARD TEMPORARY SILT FENCE

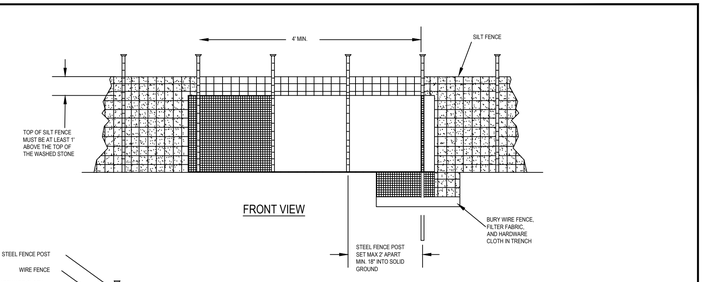
NOTES:

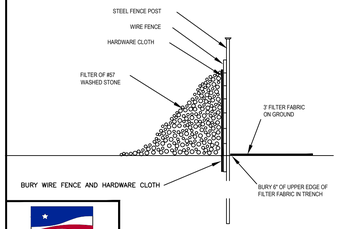
1. TEMPORARY DIVERSION DITCH TO BE USED TO INTERCEPT FLOW AND/OR DIVERT TO A SEDIMENT CONTROL MEASURE OR BMP.
2. SILT SHALL BE REMOVED WHEN DITCH IS ONE-HALF FULL.
3. DITCH SHALL BE RECONSTRUCTED WHEN DAMAGED BY EQUIPMENT OR COVERED BY FILL.
4. STABILIZE DIVERSION DITCH BERM WITH TEMPORARY SEEDING, MULCH WITH TAC, AND/OR EROSION CONTROL NETTING.



EFFECTIVE: 01/31/08

STANDARD TEMPORARY DIVERSION DITCH



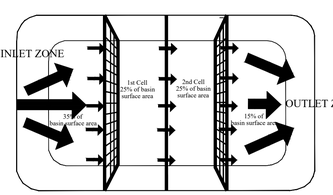


NOTES:

1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

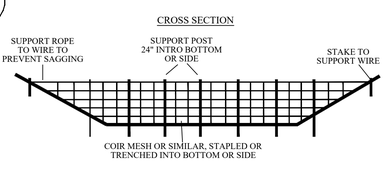
EFFECTIVE: 01/31/08

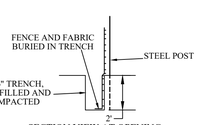
STANDARD SILT FENCE OUTLET



NOTES:

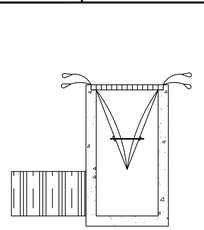
1. BAFFLE MATERIAL SHOULD BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR SILT FENCE.
2. MOST OF THE SEDIMENT WILL ACCUMULATE IN THE 1ST BAY, WHICH SHOULD BE READILY ACCESSIBLE FOR MAINTENANCE.
3. PROVIDE 3 BAFFLES (USE TWO IF LESS THAN 20 FEET IN LENGTH). PROVIDE 5 BAFFLES FOR DRAINAGE AREAS GREATER THAN 10 ACRES.
4. BAFFLE SHALL BE 700 G/M2 COIR EROSION BLANKET.
5. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE BERMS
6. INSPECT BAFFLES FOR REPAIR ONCE A WEEK AND AFTER EACH RAINFALL

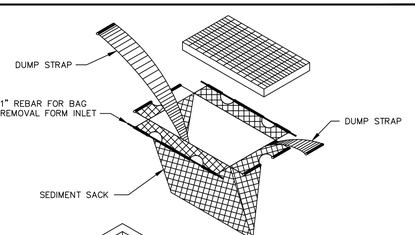


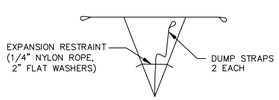


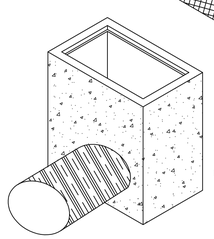
EFFECTIVE: 01/31/08

STANDARD BAFFLES DETAIL







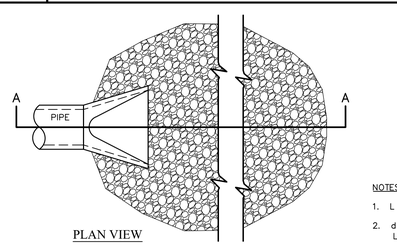


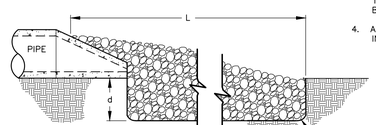
NOTES:

1. SOME MUNICPALITIES DO NOT ALLOW GUTTER PROTECTION ON PUBLIC ROADS. SILT BAGS SHOULD BE USED WITH THESE CASES.
2. BAGS SHOULD BE CLEANED OUT AFTER EVERY RAIN EVENT AND/OR AS NEEDED.

EFFECTIVE: 01/31/08

STANDARD SILT BAG - INLET SEDIMENT CONTROL DEVICE





NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. IN A WELL-DEFINED CHANNEL EXTEND THE APRON UP THE CHANNEL BANKS TO AN ELEVATION OF 6" (INCHES) ABOVE THE MAXIMUM TAILWATER DEPTH OR TO THE TOP OF THE BANK, WHICHEVER IS LESS.
4. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.

EFFECTIVE: 01/31/08

STANDARD PIPE OUTLET TO WELL-DEFINED CHANNEL

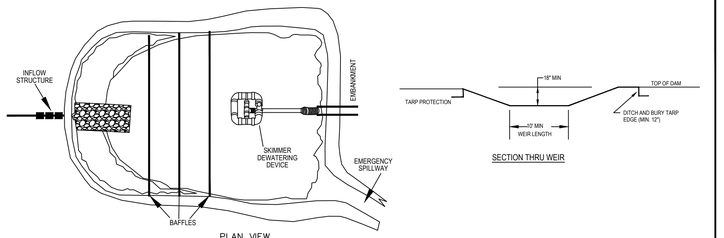
Gettle Engineering and Design, PLLC
3616 Waxwing Court,
Wake Forest, North Carolina 27587
(919) 210-3934 Firm License P-2538

NO.	DATE	REVISION DESCRIPTION	BY
1	07-26-2022	INITIAL SUBMITTAL	KPG
2	10-3-2022	Revised per Town / CORI Comment	KPG
3	01-10-2023	Revised per Town / CORI / Wake Co. Comment	KPG
4	04-28-2023	Revised per Town / CORI / Wake Co. Comment	BY
5	DATE	COMMENT	BY
6	DATE	COMMENT	BY
7	DATE	COMMENT	BY

NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P GETTLE
4/28/23

Erosion Control Details
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. EC5



NOTES:
1) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
2) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED AT LEAST 12". THE UPSTREAM 12" TARP SHALL OVERLAP THE DOWNSTREAM TARP. THE TARP SHALL BE 50 MIL. HEAVY DUTY SILVER TARPAULINS OR EQUIVALENT FOR U.V. RESISTANCE.
3) PROVIDE A MINIMUM OF THREE POROUS BAFFLES TO EVENLY DISTRIBUTE FLOW ACROSS THE BASIN, REDUCING TURBULENCE.
4) BAFFLE MATERIAL MUST BE SECURED AT THE BOTTOM AND SIDES USING STAPLES OR BY TRENCHING AS FOR A SILT FENCE.
5) MOST OF THE SEDIMENT WILL ACCUMULATE IN THE FIRST BAY, SO THIS SHOULD BE READILY AVAILABLE FOR MAINTENANCE.
6) DURING THE CONSTRUCTION PHASE OF THE PROJECT, PERMANENT STORMWATER RISER SHALL ONLY DEWATER FROM THE TOP OF PIPE.
7) POND SHALL NOT BE CONVERTED FOR STORMWATER USE UNTIL APPROVED BY ENVIRONMENTAL ENGINEER.

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD SKIMMER BASIN

Skimmer Basin

Okay

1.83 Drainage Area (Acres)
5.06 Peak Flow from 10-year Storm (cfs)

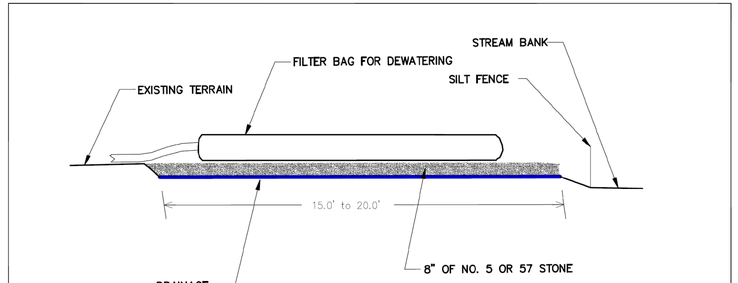
3294 Required Volume (ft^3)
2201 Required Surface Area (ft^2)
33.2 Suggested Width (ft)
66.3 Suggested Length (ft)

52 Trial Top Width at Spillway Invert (ft)
82 Trial Top Length at Spillway Invert (ft)
2 Trial Side Slope Ratio Z:1
2 Trial Depth (ft) (2 to 3.5 feet above grade)
44 Bottom Width (ft)
74 Bottom Length (ft)
3256 Bottom Area (ft^2)
7499 Actual Volume (ft^3) **Okay**
4264 Actual Surface Area (ft^2) **Okay**

10 Trial Weir Length (ft)
0.5 Suggested Trial Depth of Flow (ft)
10.6 Spillway Capacity (cfs) **Okay**

1.5 Skimmer Size (inches)
0.125 Head on Skimmer (feet)
1 Orifice Size (1/4 inch increments)
4.03 Dewatering Time (days)
Required 3 to 5 days for Wake County

Skimmer Size (Inches)
1.5
2
2.5
3
4
5
6
8



NOTES

PROVIDE STABILIZED OUTLET TO STREAM BANK. WOOD PALLETS MAY BE USED IN LIEU OF STONE AND GEOTEXTILE AS DIRECTED. A SUFFICIENT NUMBER OF PALLETS MUST BE PROVIDED TO ELEVATE THE ENTIRE FILTER BAG FOR DEWATERING ABOVE NATURAL GROUND.

NOT TO SCALE

WAKE COUNTY NORTH CAROLINA

EFFECTIVE: 01/31/08

STANDARD FILTER BAG FOR DEWATERING ACTIVITIES

SEEDING

SEEDBED PREPARATION:

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

MIXTURE:

AGRICULTURAL LIMESTONE: 2 TONS/ACRE (3 TONS/ACRE IN CLAY SOILS)
FERTILIZER: 1,000 LBS/ACRE - 10-10-10
SUPERPHOSPHATE: 500 LBS/ACRE - 20% ANALYSIS
MULCH: 2 TONS/ACRE - SMALL GRAIN STRAW
ANCHOR: ASPHALT EMULSION AT 300 GALS/ACRE

SEEDING SCHEDULE

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

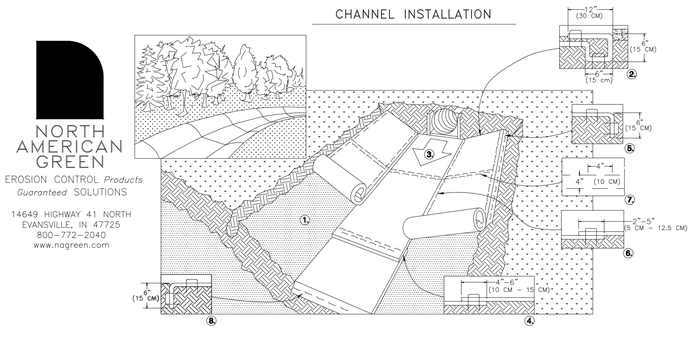
DATE	TYPE	PLANTING RATE
AUG 15 - NOV 1	TALL FESCUE	300 LBS/ACRE
NOV 1 - MAR 1	TALL FESCUE & ABRUZZI RYE	300 LBS/ACRE
MAR 1 - APR 15	TALL FESCUE	300 LBS/ACRE
APR 15-JUN 30	HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUL 1- AUG 15	TALL FESCUE AND BROWNTOP MILLET OR SORGHUM-SUDAN HYBRIDS***	125 LBS/ACRE (TALL FESCUE); 35 LBS/ACRE (BROWNTOP MILLET); 30 LBS/ACRE (SORGHUM-SUDAN HYBRIDS)

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

DATE	TYPE	PLANTING RATE
MAR 1 - JUN 1	SERICEA LESPEDEZA (SCARIFIED) AND USE THE FOLLOWING COMBINATIONS:	50 LBS/ACRE (SERICEA LESPEDEZA);
MAR 1 - APR 15	ADD TALL FESCUE	120 LBS/ACRE
MAR 1 - JUN 30	OR ADD WEEPING LOVE GRASS	10 LBS/ACRE
MAR 1 - JUN 30	OR ADD HULLED COMMON BERMUDAGRASS	25 LBS/ACRE
JUN 1 - SEPT 1	TALL FESCUE AND BROWNTOP MULLET OR SORGHUM-SUDAN HYBRIDS***	120 LBS/ACRE (TALL FESCUE); 35 LBS/ACRE (BROWNTOP MULLET); 30 LBS/ACRE (SORGHUM-SUDAN HYBRIDS)
SEPT 1 - MAR 1	SERICEA LESPEDEZA (UNHULLED - 70 LBS/ACRE (SERICEA LESPEDEZA); UNSCARIFIED) AND TALL FESCUE	120 LBS/ACRE (TALL FESCUE)
NOV 1 - MAR 1	AND ABRUZZI RYE	25 LBS/ACRE

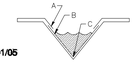
CONSULT ENGINEER OR LANDSCAPE ARCHITECT FOR ADDITIONAL INFORMATION CONCERNING OTHER ALTERNATIVES FOR VEGETATION OF DENUDED AREAS. THE ABOVE VEGETATION RATES ARE THOSE THAT DO WELL UNDER LOCAL CONDITIONS; OTHER SEEDING RATE COMBINATIONS ARE POSSIBLE.

*** TEMPORARY: RESEED ACCORDING TO OPTIMUM SEASON FOR DESIRED PERMANENT VEGETATION. DO NOT ALLOW TEMPORARY COVER TO GROW MORE THAN 12" IN HEIGHT BEFORE MOWING; OTHERWISE, FESCUE MAY BE SHADED OUT.



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) ACROSS THE WIDTH OF THE RECP's.
3. ROLL CENTER RECP's IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM®, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. PLACE CONSECUTIVE RECP's END OVER END (SHINGLE STYLE) WITH A 4" – 6" (10 CM –15 CM) OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER TO SECURE RECP's.
5. FULL LENGTH EDGE OF RECP's AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECP's MUST BE OVERLAPPED APPROXIMATELY 2" – 5" (5 CM –12.5 CM) (DEPENDING ON RECP's TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT (9 M – 12 M) INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" (10 CM) APART AND 4" (10 CM) ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE RECP's MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

NOTE:
* IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.



CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

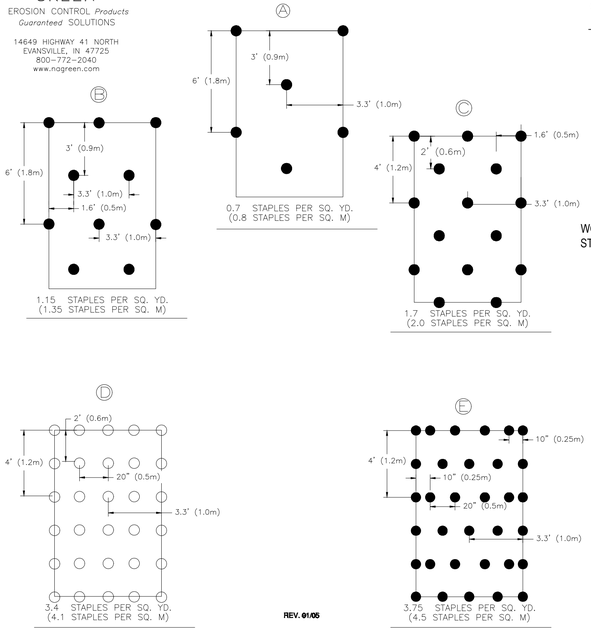
NOTE:
* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

REV. 01/05

NORTH AMERICAN GREEN
EROSION CONTROL Products Guaranteed SOLUTIONS
14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-772-2040
www.nagreen.com

STAPLE PATTERN GUIDE
6.67' (2.03 M) WIDE ROLLS



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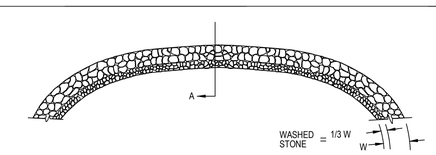
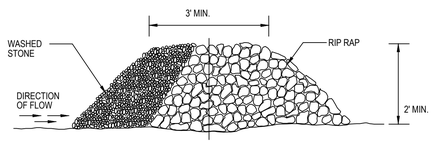
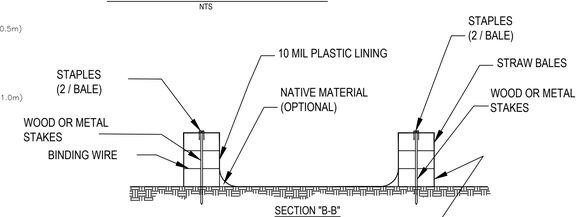




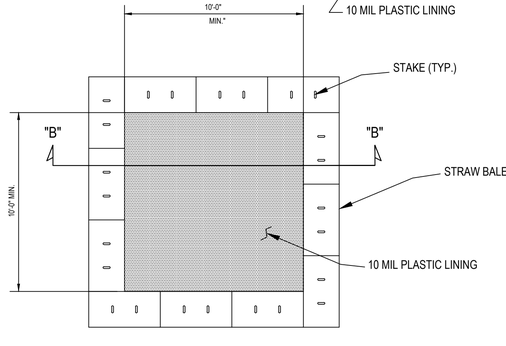
CROSS SECTION A-A

STONE FILTER CHECK DAM

NTS



SECTION "B-B"
NTS



ABOVE GRADE
NTS

CONCRETE WASH OUT AREA NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD - SEE EC1 PLAN FOR LOCATION.
2. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30 FEET OF THE FACILITY.
3. LOCATE THE WASHOUT AREA AT LEAST 50-FEET FROM SENSITIVE AREAS SUCH AS STORM DRAINS, OPEN DITCHES OR WATER BODIES, INCLUDING WETLANDS.
4. THE PLASTIC LINING MATERIAL SHOULD BE A MIN OF 10 MIL. POLYETHLENE MATERIAL AND FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT MAY COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.
5. WHEN THE FACILITY IS NO LONGER REQUIRED THE HARDENED CONCRETE, SLURRIES AND LIQUIDS SHALL BE PROPERLY DISPOSED OF OFF-SITE. MATERIAL USED TO CONSTRUCT THE FACILITY SHALL BE PROPERLY DISPOSED OF OFF-SITE. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSED BY THE REMOVAL OF THE TEMPORARY FACILITY SHALL BE BACKFILLED, REPAIRED, AND STABILIZED TO PREVENT EROSION.

SIGN- (SEE NOTE 2)
NTS

TEMPORARY CONCRETE WASHOUT AREA

NTS

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

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NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P GETTLE
4/28/23

Erosion Control Details
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. EC6

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

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

Temporary and Permanent Groundcover*

STABILIZATION TIMEFRAMES
(Effective Aug. 3, 2011)

Site Area Description	Stabilization	Timeframe Exceptions
Perimeter dikes, swales, ditches, slopes	7 days	None
High Quality Water (HQW) Zones	7 days	None
Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

*-For Falls Lake watershed, in disturbed areas where grading activities are incomplete, provide temporary groundcover no later than seven (7) days for slopes steeper than 3:1; ten (10) days for slopes equal to or flatter than 3:1; fourteen (14) days for areas with no slope.

GROUND STABILIZATION SPECIFICATION

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

Temporary Stabilization	Permanent Stabilization
• Temporary grass seed covered with straw or other mulches and tackifiers • Hydroseeding • Rolled erosion control products with or without temporary grass seed • Appropriately applied straw or other mulch • Plastic sheeting	• Permanent grass seed covered with straw or other mulches and tackifiers • Geotextile fabrics such as permanent soil reinforcement matting • Hydroseeding • Shrubs or other permanent plantings covered with mulch • Uniform and evenly distributed ground cover sufficient to restrain erosion • Structural methods such as concrete, asphalt or retaining walls

POLYACRYLAMIDES (PAMS) AND FLOCCULANTS

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

EQUIPMENT AND VEHICLE MAINTENANCE

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

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number of waste containers on site to manage the quantity of waste produced.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
4. Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events. Repair or replace damaged waste containers.
6. Anchor all lightweight items in waste containers during times of high winds.
7. Empty waste containers as needed to prevent overflow.
8. Dispose waste off-site at an approved disposal facility.

PAINT AND OTHER LIQUID WASTE

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

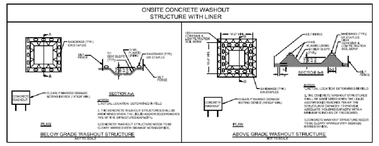
PORTABLE TOILETS

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

EARTHEN STOCKPILE MANAGEMENT

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

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



CONCRETE WASHOUTS

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

HERBICIDES, PESTICIDES AND RODENTICIDES

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

HAZARDOUS AND TOXIC WASTE

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

NORTH CAROLINA Environmental Quality

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 03/01/19

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of 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 [40 CFR 122.41]:
(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 un-attended 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. Corrective actions taken, and 7. Date of actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event > 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Actions taken to correct/prevent sedimentation, and 7. Date of 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. Date of 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. Evidence and actions taken to reduce sediment contributions, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit of this permit.

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

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 documented in the manner described:

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

In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency 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 30 days. 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.

(c) All data used to complete the Notice of Intent and older 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).

(a) 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.

(b) Anticipated bypasses and unanticipated bypasses.

(c) 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 Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***Within 24 hours***, an oral or electronic notification. • ***Within 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	• ***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)]	• ***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)]	• ***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)]	• ***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)(6). • Division staff may waive the requirement for a written report on a case-by-case basis.

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 03/01/19

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

NO.	DATE	REVISION DESCRIPTION	BY
1	07-06-2022	INITIAL SUBMITTAL	WPG
2	01-10-2023	Revised per Town / CORI / Wake Co Comment	WPG
3	03-03-2023	Revised per Town / CORI / Wake Co Comment	WPG
4	04-26-2023	Revised per Town / CORI / Wake Co Comment	WPG
5	DATE	COMMENT	BY
6	DATE	COMMENT	BY
7	DATE	COMMENT	BY

NORTH CAROLINA PROFESSIONAL SEAL 030913 ENGINEER KEITH P. GETTLE
4/23/23

NCG01 REQUIREMENTS
South Main
503 South Main Street
Rolesville, Wake County, North Carolina

Project No. 22003
Dwg No. EC7

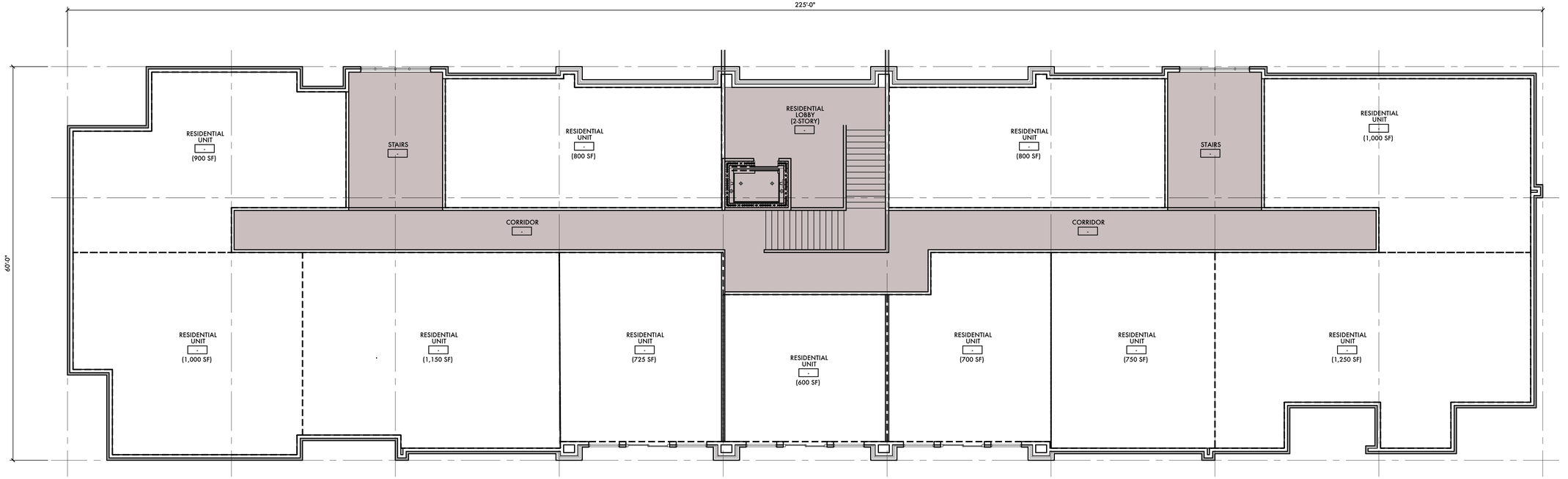
COLUMN - 1 | COLUMN - 2 | COLUMN - 3 | COLUMN - 4

"A" - BLOCK

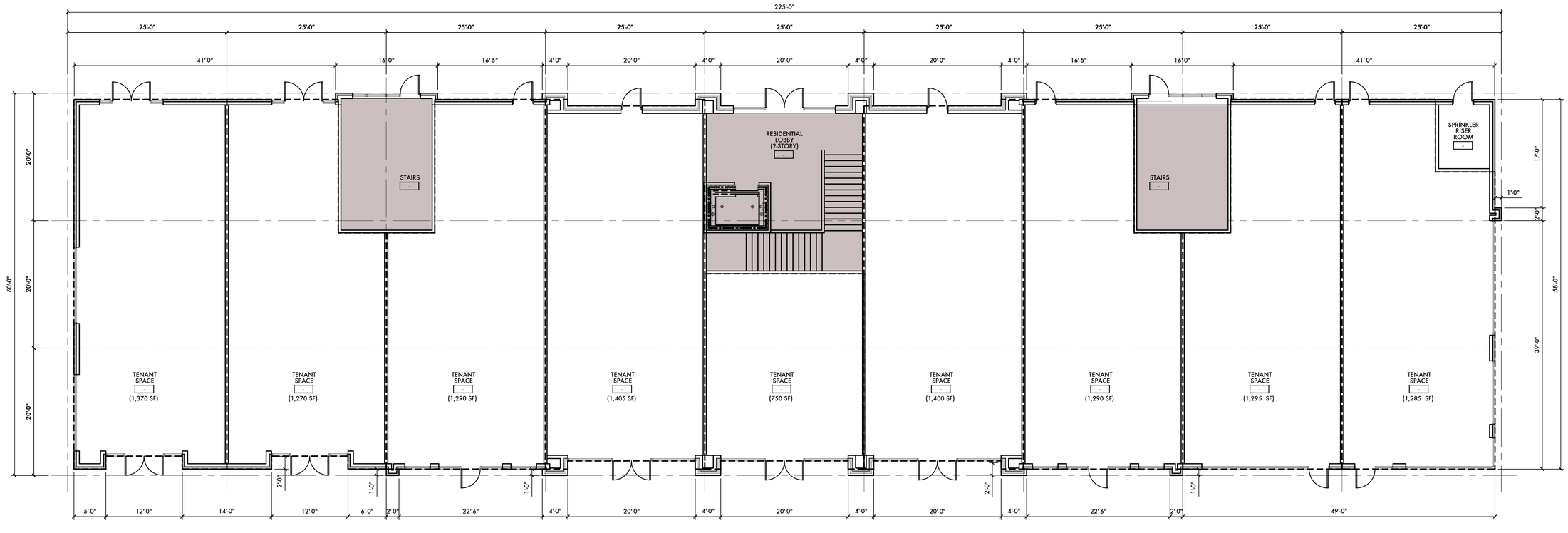
"B" - BLOCK

"C" - BLOCK

"D" - BLOCK



B1 SECOND FLOOR PLAN
A-1.01 SCALE: 1/8"=1'-0"



D1 FIRST FLOOR PLAN
A-1.01 SCALE: 1/8"=1'-0"

File Location:

COLUMN - 1 | COLUMN - 2 | COLUMN - 3 | COLUMN - 4

ARMISTEAD ARCHITECTURAL DESIGN, PC

Address:
3206 Heritage Trade Drive, Suite 108
Wake Forest, North Carolina 27587
Phone: (919) 554-1505

SEALS:

ARMISTEAD ARCHITECTURAL DESIGN, PC
REGISTERED ARCHITECTURAL CORPORATION
51438
NORTH CAROLINA
WAKE FOREST N.C.

JOE ARMISTEAD
REGISTERED ARCHITECT
9197
NORTH CAROLINA
WAKE FOREST N.C.

PRELIMINARY - DO NOT USE FOR CONSTRUCTION

Consultants:

No.	Revision	Date
C	Site Plan Approval Submittal	05/01/2023
B	Site Plan Approval Submittal	01/15/2023
A	Administrative Site Plan Review	10/03/2022
No.	Issued	Date

xxxxx.dwg — J. Armistead
File Name: — Drawn By

Client/ Project:

Masssey
SOUTH MAIN MIXED USE DEVELOPEMENT
Rolesville, North Carolina

Sheet Title:
FLOOR PLAN

Project No.: 22034 — Revision: C

Sheet No.: A-1.01

"A" - BLOCK

"B" - BLOCK

B1 A-3.01 NORTHWEST EXTERIOR ELEVATION (SOUTH MAIN ST)
SCALE: 1/8"=1'-0"

MATERIAL SAMPLES:

CMU VENEER:
COLOR: LIGHT GREY
CONDITION: SPLIT-FACED

HARDI-PLANK:
COLOR: TAN (PAINTED)

FLUSH METAL PANEL:
COLOR: BRONZE

FLUSH METAL PANEL:
COLOR: DARK GREY

ALUMINUM STOREFRONT SYSTEM:
COLOR: DARK BRONZE

GLAZING:
COLOR: BLUE/ GREY

BRICK VENEER: (FIELD)
COLOR: BROWN

HARDI-PANEL:
COLOR: DARK GREY (PAINTED)
CONDITION: BOARD & BATTEN

SYNTHETIC STUCCO:
COLOR: LIGHT GREY

FLUSH METAL PANEL:
COLOR: LIGHT GREY

ALUMINUM STOREFRONT SYSTEM:
COLOR: CLEAR ANODIZED

"C" - BLOCK

"D" - BLOCK

D1 A-3.01 SOUTHEAST EXTERIOR ELEVATION (WALL CREEK SUB.)
SCALE: 1/8"=1'-0"

File Location:

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Address:
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A.	Administrative Site Plan Review	10/03/2022

No.	Issued	Date

xxxxx.dwg — J. Armistead
File Name: — Drawn By

Client/ Project:
Massey/
SOUTH MAIN MIXED USE DEVELOPEMENT
Rolesville, North Carolina

Sheet Title:
EXTERIOR ELEVATIONS

Project No.: 22034
Revision: C

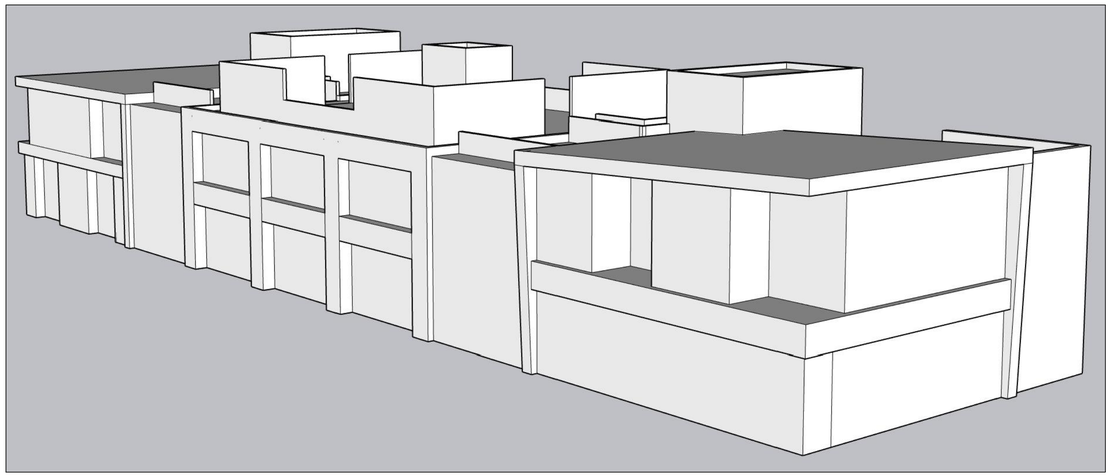
Sheet No.: A-3.01

"A" - BLOCK

"B" - BLOCK

"C" - BLOCK

"D" - BLOCK



B1 A-3.02 3D MASSING DIAGRAM (FRONT BIRD'S EYE VIEW)
SCALE: NOT TO SCALE

B3 A-3.02 NORTHEAST EXTERIOR ELEVATION (PETE SMITH)
SCALE: 1/8"=1'-0"

MATERIAL SAMPLES:

CMU VENEER:
COLOR: LIGHT GREY
CONDITION: SPLIT-FACED

HARDI-PLANK:
COLOR: TAN (PAINTED)

FLUSH METAL PANEL:
COLOR: BRONZE

FLUSH METAL PANEL:
COLOR: DARK GREY

ALUMINUM STOREFRONT SYSTEM:
COLOR: DARK BRONZE

GLAZING:
COLOR: BLUE/ GREY

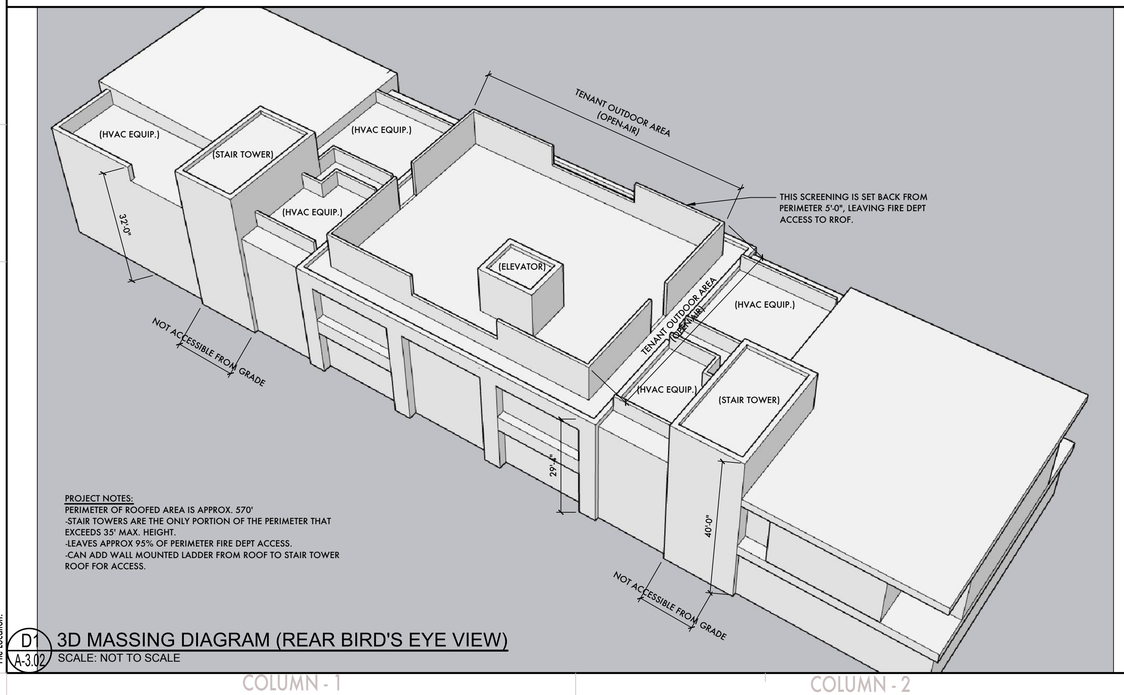
BRICK VENEER: (FIELD)
COLOR: BROWN

HARDI-PANEL:
COLOR: DARK GREY (PAINTED)
CONDITION: BOARD & BATTEN

SYNTHETIC STUCCO:
COLOR: LIGHT GREY

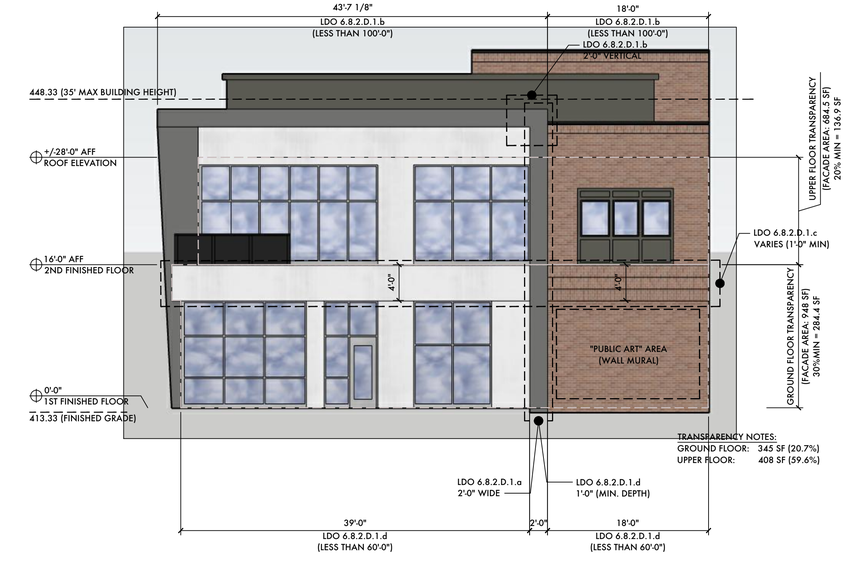
FLUSH METAL PANEL:
COLOR: LIGHT GREY

ALUMINUM STOREFRONT SYSTEM:
COLOR: CLEAR ANODIZED



PROJECT NOTES:
PERIMETER OF ROOFED AREA IS APPROX. 570'
-STAIR TOWERS ARE THE ONLY PORTION OF THE PERIMETER THAT EXCEEDS 35' MAX. HEIGHT.
-LEAVES APPROX 95% OF PERIMETER FIRE DEPT ACCESS.
-CAN ADD WALL MOUNTED LADDER FROM ROOF TO STAIR TOWER ROOF FOR ACCESS.

D1 A-3.02 3D MASSING DIAGRAM (REAR BIRD'S EYE VIEW)
SCALE: NOT TO SCALE



TRANSPARENCY NOTES:
GROUND FLOOR: 345 SF (20.7%)
UPPER FLOOR: 408 SF (59.6%)

D3 A-3.02 SOUTHWEST EXTERIOR ELEVATION (WALL CREEK DRIVE)
SCALE: 1/8"=1'-0"

File Location:

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JOE ARMISTEAD
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WAKE FOREST, N.C.

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A.	Administrative Site Plan Review	10/03/2022
No.	Issued	Date

xxxxx.dwg — J. Armistead
File Name: — Drawn By

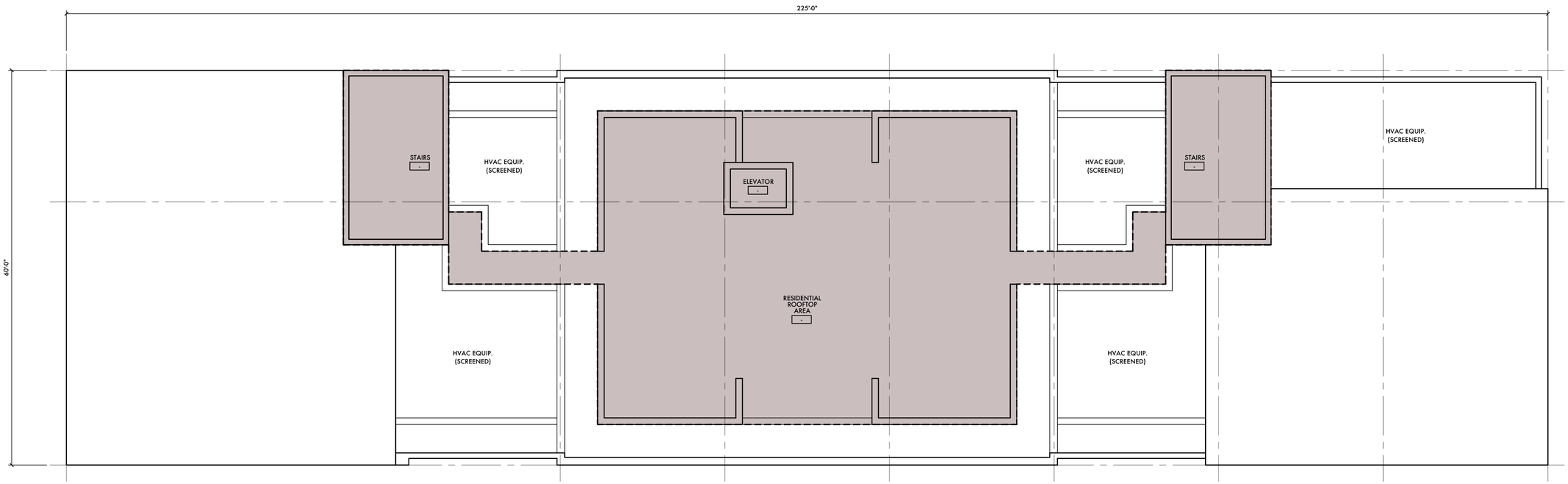
Client/ Project:

Massey/
SOUTH MAIN
MIXED USE
DEVELOPEMENT
Rolesville, North Carolina

Sheet Title:
EXTERIOR
ELEVATIONS

Project No.: 22034
Revision: C

Sheet No.: A-3.02



B1 / A-4.01 ROOF PLAN
SCALE: 1/8"=1'-0"

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xxxxx.dwg — File Name:
J. Armistead — Drawn By

Client/ Project:
Massey/
SOUTH MAIN
MIXED USE
DEVELOPEMENT
Rolesville, North Carolina

Sheet Title:
ROOF PLAN

Project No.: 22034
Revision: C

Sheet No.: A-4.01

File Location: