Sanford / Lee County / Broadway
TECHNICAL REVIEW COMMITTEE AGENDA

115 Chatham Street, Sanford, NC 27330 Phone 919-718-4656 zoning@sanfordnc.net

TO: SANFORD / LEE COUNTY / BROADWAY (TRC) MEMBERS

Sanford/Lee Co. Community Development Dept.: Marshall Downey, Director
Sanford/Lee Co. Community Development Dept.: David Montgomery, Long Range-Transportation Planner
Sanford/Lee Co. Zoning & Design Review Dept.: Thomas Mierisch, Planner II
Sanford/Lee Co. Zoning & Design Review Dept.: Amy J. McNeill, Zoning Administrator
Sanford/Lee County Building Inspections Dept.: Chris Riggins, Inspections Administrator
Sanford Public Works Dept. / Engineering Division: Mary DePina, Civil Engineer II
Sanford Public Works Dept. / Engineering Division: Fedd Walker, Public Works Manager
Sanford Fire Dept.: Wayne Barber, Chief & Ken Cotten, Deputy Chief / Fire Marshal
Lee County Office of Emergency Services: Aaron Bullard, Lee County Fire Marshal
Lee County Strategic Services Dept.: Don Kovasckitz, GIS Administrator
Lee County Schools: Reid Cagle, Transportation Director & Dr. Andy Bryan, Lee Co. Schools Superintendent
NCDOT: Janet James, Assistant District Engineer, Division 8, District 2
CC: TRC "CC" Members, Project Managers/Designers

FROM: SANFORD/LEE COUNTY ZONING & DESIGN REVIEW DEPT.
DATE: 07/05/2022

RE: TRC agenda for July 28th, 2022. There will be a **virtual meeting held** among staff and applicants via HD Meeting (Office Suite). Review comments should be provided to me within 30 days of the TRC review. Please send in all comments pertaining to these projects to me by **August 25, 2022** (thomas.mierisch@sanfordnc.net):

TRC-07-45-22—SPRING LANE SELF-STORAGE [Concept Plan Review] 9:00AM

LOCATION: 0 Spring Lane (directly behind McDonalds at 1001 Spring Lane)

LEE CO. PIN NO.: 9643-01-7903-00

ZONING: HC (Highway Commercial)

ACRES: 5.11 +/-

DESCRIPTION: A self-storage facility, plus office space, totaling over 74,000sf of gross floor area.

UTILITIES: Public water available along Spring Lane; Public sewer bisects the site, running parallel to the walking trail.

STREET(s): Spring Lane is an NCDOT-maintained roadway.

JURISDICTION: City of Sanford jurisdiction.

APPLICANT: Paul Saathoff | 910.684.8487 | psaathoff@koontzjones.com

PROJECT MANAGER: Paul Saathoff | 910.684.8487 | psaathoff@koontzjones.com

PLANNER: Tanner O'Quin | 919.718.4656 ext. 5398 | tanner.oquin@sanfordnc.net

IF YOU ARE UNABLE TO ATTEND THE MEETING, PLEASE FORWARD REVEW COMMENTS &/OR QUESTIONS TO THE PROJECT PLANNER. Thank you.

TRC-07-46-22 – SPRING LANE FAST FOOD [Concept Plan Review] 9:25AM

LOCATION: 0 Spring Lane (next to gas station at 1003 Spring Lane, in front of Riverbirch Shopping Center entrance)

LEE CO. PIN NO.: 9643-02-3208-00

ZONING: C-2 (General Commercial)

ACRES: 2.21 +/-

DESCRIPTION: A proposed 2,250sf fast food restaurant drive-thru facilities and stormwater control measures.

UTILITIES: Public water available along Spring Lane; Public sewer bisects the site, running parallel to the walking trail.

STREET(s): Spring Lane is an NCDOT-maintained roadway.

JURISDICTION: City of Sanford jurisdiction.

APPLICANT: Paul Saathoff | 910.684.8487 | psaathoff@koontzjones.com

PROJECT MANAGER: Paul Saathoff | 910.684.8487 | psaathoff@koontzjones.com

PLANNER: Tanner O'Quin | 919.718.4656 ext. 5398 | tanner.oquin@sanfordnc.net

TRC-07-47-22 – ADAMS VILLAGE [Concept Plan Review] 9:50AM

LOCATION: Frontage on Wilson Road, Lee Avenue, and NC 87 Hwy (located behind Wal-Mart on Horner Blvd.)

LEE CO. PIN NO.: 9661-15-1024-00; 9651-94-6640-00; 9651-96-6631-00; 9661-04-7828-00; 9661-04-5206-00

ZONING: R-20, RR, and LI

ACRES: 105.8 +/-

DESCRIPTION: A proposed residential development consisting of single-family detached dwellings, single-family attached dwellings (townhomes) and multi-family dwellings.

UTILITIES: Public water available along Wilson Rd., Lee Ave., and NC 87 Hwy; Public sewer available along Wilson Rd.

STREET(s): Lee Ave., Wilson Rd., and NC 87 Hwy are all NCDOT-maintained roads

JURISDICTION: Sanford ETJ

APPLICANT: Beth Blackmon | 919.866.4509 | beth.blackmon@timmons.com

PROJECT MANAGER: Mark Lyczkowski | 919.842.0334 | mark@fig.llc

PLANNER: Thomas Mierisch | 919.718.4656 ext. 5396 | thomas.mierisch@sanfordnc.net

NOTE: The subject property must be annexed and rezoned to be developed in the manner proposed.

TRC-07-48-22 – NORTHVIEW APARTMENTS [Multi-family Plan Review] 10:15AM

LOCATION: 3041 Beechtree Drive (near intersection of Beechtree Drive & US 15-501 Hwy)

LEE CO. PIN NO.: 9644-36-2998-00; 9644-37-7077-00; 9644-36-8923-00; 9644-47-4054-00; 9644-36-9851-00; 9644-46-0528-00; 9644-46-0251-00; 9644-36-1633-00; 9644-36-1708-00

ZONING: Northview Conditional Zoning District (MF-12-CZ); rezoned in December, 2021

ACRES: 25.1 +/-

DESCRIPTION: Proposed multi-family development consisting of 12 buildings (each with 24 units per building) with a total of 288 apartment units; the Community will include a clubhouse, pool, fitness complex, and mail kiosks.

UTILITIES: Public water exists along US 15-501 Hwy and Beechtree Drive; Public sewer must be extended.

STREET(s): Beechtree Drive and US 15-501 Hwy/Hawkins Ave. are NCDOT-maintained roadways.

JURISDICTION: City of Sanford jurisdiction.

APPLICANT: Timothy Hess | 919.866.4651 | tim.hess@timmons.com

PROJECT MANAGER: Alexandria Rye | 919.601.1217 | alexandria@rileyandwalker.com

PLANNER: Thomas Mierisch | 919.718.4656 ext. 5396 | thomas.mierisch@sanfordnc.net

IF YOU ARE UNABLE TO ATTEND THE MEETING, PLEASE FORWARD REVEW COMMENTS &/OR QUESTIONS TO THE PROJECT PLANNER. Thank you.

TRC-07-49-22 – COPPER RIDGE ESTATES [Major Subdivision Review] 10:40AM

LOCATION: 3284 Farrell Road

LEE CO. PIN NO.: 9666-44-0337-00

ZONING: RA (Residential Agricultural)

ACRES: 30.25 +/-

DESCRIPTION: Proposed major residential subdivision with 19 single-family lots utilizing public water and private septic systems

UTILITIES: Public water available along Farrell Road; proposed private, on-site septic systems.

STREET(s): Farrell Road is NCDOT-maintained

JURISDICTION: Lee County jurisdiction.

APPLICANT: Johnny Byrd | 919.478.0965 | jbyrdconstruction9@gmail.com

PROJECT MANAGER: Ken Bright Associates, PLLC | 919.356.4687 | kwbright@kenbrightengineering.com

PLANNER: Thomas Mierisch | 919.718.4656 ext. 5396 | thomas.mierisch@sanfordnc.net

TRC-07-50-22—ROSSER ROAD INDUSTRIAL PROJECT [Commercial/Industrial Plan Review] 11:05AM

LOCATION: 2401 Rosser Road (intersection of Rosser Rd. and J.R. Industrial Dr.)

LEE CO. PIN NO.: 9652-92-2444-00

ZONING: LI (Light Industrial)

ACRES: 5.19 +/-

DESCRIPTION: Proposed new construction of a 40,000sf warehouse, with outdoor storage (laydown yard).

UTILITIES: Public water and public sewer available along J.R. Industrial Dr.; Public water available along Rosser Rd.

STREET(s): Rosser Rd. is an NCDOT-maintained roadway and J.R. Industrial Dr. is City-maintained

JURISDICTION: City of Sanford jurisdiction.

APPLICANT: Brian Richards | 919.275.5002 | brichards@urbandesignpartners.com

PROJECT MANAGER: Brian Richards | 919.275.5002 | brichards@urbandesignpartners.com

PLANNER: Tanner O'Quin | 919.718.4656 ext. 5398 | tanner.oquin@sanfordnc.net

NOTE: The project must be receive a Special Use Permit to be developed in the manner proposed.

TRC-07-51-22—THE COVE AT STEEL BRIDGE [Concept Plan Review] 11:30AM

LOCATION: 0 Steel Bridge Road (across from intersection of Pocket Church Road and Steel Bridge Road)

LEE CO. PIN NO.: 9622-42-5184-00

ZONING: RR (Restricted Residential)

ACRES: 25.02 +/-

DESCRIPTION: Proposed residential single-family subdivision consisting of 30 lots.

UTILITIES: Public water available along Steel Bridge Road; proposed private septic systems (on-site and community)

STREET(s): Access to Steel Bridge Rd., which is NCDOT-maintained.

JURISDICTION: Lee County jurisdiction.

APPLICANT: Bob Koontz | 910.684.8487 | bkoontz@koontzjones.com

PROJECT MANAGER: Lee Humphrey | 910.684.8486 | lee@doubledeng.com

PLANNER: Thomas Mierisch | 919.718.4656 ext. 5396 | thomas.mierisch@sanfordnc.net

IF YOU ARE UNABLE TO ATTEND THE MEETING, PLEASE FORWARD REVEW COMMENTS &/OR QUESTIONS TO THE PROJECT PLANNER. Thank you.

TRC-07-52-22—GOLDSBORO AVENUE TOWNHOMES [Major Subdivision Review] 11:55AM

LOCATION: 0 Goldsboro Avenue (fronting Goldsboro Ave and Barnes & Cooper Streets)

LEE CO. PIN NO.: 9652-28-9577-00 and 9652-38-0432-00

ZONING: R-12

ACRES: 2.94 +/-

DESCRIPTION: Proposed residential subdivision with twenty-five townhomes fronting public streets and proposed private back alley for driveway access.

UTILITIES: Public water and sewer are available along Goldsboro Ave. and Barnes St.

STREET(s): Goldsboro Ave., Barnes St., and Cooper St. are city-maintained roads.

JURISDICTION: City of Sanford jurisdiction.

APPLICANT: Jeremy Thomas | 919.777.6010 | jthomas@jthomasengineering.com

PROJECT MANAGER: Brandon Harrington | 919.770.5969 | brandon@harringtonpropertiesofnc.com

PLANNER: Thomas Mierisch | 919.718.4656 ext. 5396 | thomas.mierisch@sanfordnc.net

NOTE: The subject property must be rezoned to be developed in the manner proposed.

TRC-07-53-22—LEE AVENUE SELF-STORAGE [Commercial/Industrial Plan Review] 12:20PM

LOCATION: 2206 & 2208 Lee Avenue (just north of Lee Ave. intersection with W. Globe St.)

LEE CO. PIN NO.: 9652-41-0991-00 and 9652-41-1805-00

ZONING: C-2 (General Commercial)

ACRES: 0.71 +/-

DESCRIPTION: Proposed self-storage business consisting of five buildings totaling 6,700sf.

UTILITIES: Public water and sewer available along Lee Avenue

STREET(s): Lee Avenue is an NCDOT-maintained roadway

JURISDICTION: City of Sanford

APPLICANT: Jarrod Hilliard | 919.352.2834

PROJECT MANAGER:

PLANNER: Tanner O'Quin | 919.718.4656 ext. 5398 | tanner.oquin@sanfordnc.net

TRC-07-54-22—THE STATION APARTMENTS [Concept Plan Review] 12:55PM

LOCATION: 1602 Charleston Drive (behind the Food Lion shopping center fronting Hawkins Ave.)

LEE CO. PIN NO.: 9644-53-6465-00; 9644-53-0423-00; 9644-63-1661-00

ZONING: C-2 (General Commercial) and R-20

ACRES: 22.39 +/-

DESCRIPTION: Conceptual proposal for a 456-unit apartment complex with clubhouse and pool.

UTILITIES: Public water is available along Hawkins Ave.; public sewer is available to the south via a utility easement from Hawkins Run subdivision.

STREET(s): Charleston Drive and Hawkins Ave. are NCDOT-maintained roads.

JURISDICTION: City of Sanford

APPLICANT: Joe Faulkner | 919.606.7703 | joe@cegroupinc.com

PROJECT MANAGER: Corey Mabus | 919.775.1497 | corey@carolinacommercialnc.com

PLANNER: Thomas Mierisch | 919.718.4656 ext. 5396 | thomas.mierisch@sanfordnc.net

NOTE: The subject property must be rezoned to be developed in the manner proposed.

IF YOU ARE UNABLE TO ATTEND THE MEETING, PLEASE FORWARD REVEW COMMENTS &/OR QUESTIONS TO THE PROJECT PLANNER. Thank you.

TRC-07-55-22—SANFORD FIRE DEPARTMENT STATION #5 [Commercial Plan Review] 01:20PM

LOCATION: 0 Colon Road (intersection of US 1 Hwy and Colon Rd.)

LEE CO. PIN NO.: 9655-48-4471-00

ZONING: HC (Highway Commercial)

ACRES: 5.05 +/-

DESCRIPTION: Proposed fire station building with two apparatus bays, two dry retention ponds, necessary utility connections to serve the fire station, a parking lot, and associated landscaping.

UTILITIES: Public water available along Colon Road, public sewer available from adjoining property to the south.

STREET(s): Colon Road is an NCDOT-maintained roadway.

JURISDICTION: Lee County jurisdiction

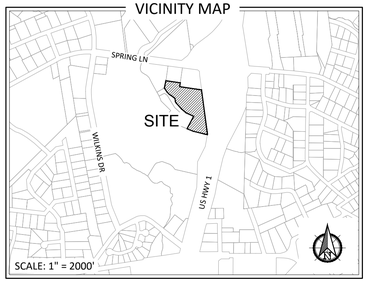
APPLICANT: Y'Hoshua Aal-Anubia | 919.319.6716 | yaalanubia@clhdesignpa.com

PROJECT MANAGER: Paul Weeks | 919.777.1121 | paul.weeks@sanfordnc.net

PLANNER: Tanner O'Quin | 919.718.4656 ext. 5398 | tanner.oquin@sanfordnc.net

IF YOU ARE UNABLE TO ATTEND THE MEETING, PLEASE FORWARD REVEW COMMENTS &/OR QUESTIONS TO THE PROJECT PLANNER. Thank you.

VICINITY MAP



ZONING INFORMATION

ZONING CLASSIFICATION:
HC - HIGHWAY COMMERCIAL

REQUIRED SETBACKS:
FRONT: 10' MIN.
SIDE: 0' MIN
REAR: 0' MIN.

MAX. BUILDING HEIGHT: NO MAX.

PROPERTY INFORMATION

PIN: 9643-01-7903-00
TOTAL ACREAGE: ±5.23 AC

PROPERTY OWNER:
RIVERBIRCH (IDR) LLC
5950 FAIRWAY RD
CHARLOTTE, NC 28210

TOTAL PROPOSED STORAGE SF: ±74,380 SF

CAUTION

THE UTILITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT DEPICTED ON THESE PLANS. THE LANDSCAPE ARCHITECT AND ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE PROJECT LIMITS. ALL DAMAGE MADE TO THE EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY BY THE CONTRACTOR.

NOTE:
ALL EXISTING PROPERTY INFORMATION, INCLUDING CONTOURS, BOUNDARIES, FLOOD PLAIN, AND EXISTING UTILITIES HAVE BEEN OBTAINED FROM THE CITY OF SANFORD GIS. A PROPERTY SURVEY HAS NOT BEEN PERFORMED AT THIS TIME.

EXISTING DENTIST
PARKING AREA
EXISTING GAS STATION
18'
9'
24'
EXISTING RESTAURANT
4,500 SF W/ OFFICE
EXISTING DRIVE (30' ACCESS EASEMENT)
GATE
28'
FLOOD PLAIN
36,600 SF STORAGE BUILDING (W/ LOWER LEVEL)
EXISTING MCDONALD'S
DOUGLAS DR.
RIVERBIRCH SHOPPING CENTER
33,280 SF STORAGE BUILDING
8' TYPE 'A' BUFFER
STREAM
EXISTING TRAIL
15" SEWER MAIN LINE
SPRING LANE
10' FRONT SETBACK
ARCHITECTURAL TOWER ELEMENT W/ SIGNAGE
PROPERTY BOUNDARY
PROPOSED STORMWATER
US 1 RAMP

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

20' 0' 20' 40' 80'
SCALE: 1" = 40'-0"

PRELIMINARY PLANS - NOT RELEASED FOR CONSTRUCTION (FOR REVIEW ONLY)

KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE
150 S PAGE STREET
SOUTHERN PINES, NC 28387
P: (910) 684-8487
W: www.koontzjonesdesign.com

REVISIONS:

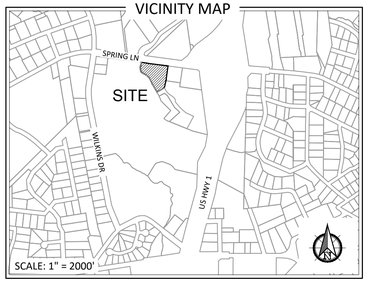
SANFORD STORAGE
SANFORD, NC

PRELIMINARY SKETCH PLAN

DATE: 06-30-2022
DESIGNED BY: REK
DRAWN BY: PJS
CHECKED BY: REK
Q.C. BY: REK
SCALE: 1" = 40'-0"
PROJECT #: KJD22033

SHEET NUMBER#:
L-1.0

VICINITY MAP



ZONING INFORMATION

ZONING CLASSIFICATION:
C-2 - GENERAL COMMERCIAL

REQUIRED SETBACKS:
FRONT: 0' MIN.
SIDE: 0' MIN
REAR: 0' MIN.

MAX. BUILDING HEIGHT: NO MAX.

PROPERTY INFORMATION

PIN: 9643-02-3208-00
TOTAL ACREAGE: ±2.21 AC

PROPERTY OWNER:
RIVERBIRCH (IDR) LLC
5950 FAIRWAY RD
CHARLOTTE, NC 28210

TOTAL PROPOSED RESTAURANT SF: ±2,250 SF

CAUTION

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SPRING LANE
PROPOSED STORMWATER
ONE WAY TRAFFIC W/ DEDICATED DRIVE THRU LANE 24' TOTAL WIDTH
PROPOSED ±2,250 SF RESTAURANT
8' STREETYARD BUFFER
8' TYPE 'A' BUFFER
EXISTING GAS STATION
15' SEWER MAIN LINE
EXISTING TRAIL
PROPOSED TRAIL RELOCATION
ANGLED PARKING 9X18 SPACES (22 TOTAL)
STREAM
DRIVE-THRU CALL BOX
DUMPSTER
FLOOD PLAIN

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

20' 0' 20' 40' 80'
SCALE: 1" = 30'-0"

PRELIMINARY PLANS - NOT RELEASED FOR CONSTRUCTION (FOR REVIEW ONLY)

KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE
150 S PAGE STREET
SOUTHERN PINES, NC 28387
P: (910) 684-8487
W: www.koontzjonesdesign.com

REVISIONS:

SPRING LANE PARCEL
SANFORD, NC

PRELIMINARY SKETCH PLAN

DATE: 06-30-2022
DESIGNED BY: REK
DRAWN BY: PJS
CHECKED BY: REK
Q.C. BY: REK
SCALE: 1" = 40'-0"
PROJECT #: KJD2033

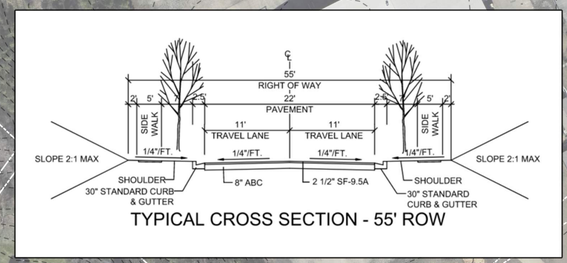
SHEET NUMBER#:
L-1.0

SITE DATA:

TOTAL AREA	105.8 +/- AC
EXISTING PINS W/ ZONING:	
9661-23-2715	R-20
PORTION OF 9661-15-1024	R-20
9661-04-7828	R-20
9651-94-6640	R-20
PORTION OF 9661-04-5206	RR
PORTION OF 9651-96-6631	LI
PORTION OF 9651-96-6501	LI
PORTION OF 9651-96-7004	LI
PROPOSED ZONING	ADAMS VILLAGE CONDITIONAL ZONING DISTRICT
PROPOSED DENSITY	5.53 UNITS/ ACRE

RESIDENTIAL SUMMARY

1	MULTI-FAMILY	288
2	20′ X 100′ TOWNHOMES	82
3	40′ X 120′ SINGLE FAMILY	103
4	50′ X 120′ SINGLE FAMILY	112
	TOTAL UNITS	585
	OPEN SPACE REQUIRED	10.6 +/- AC
	OPEN SPACE PROVIDED	49.9 +/- AC
	STORMWATER MANAGEMENT	4.8 +/- AC



ADAMS VILLAGE - SANFORD, NC

Conceptual Development Plan - July 1, 2022

SCALE 1"=100'
0 100' 200'

TIMMONS GROUP
YOUR VISION ACHIEVED THROUGH OURS.

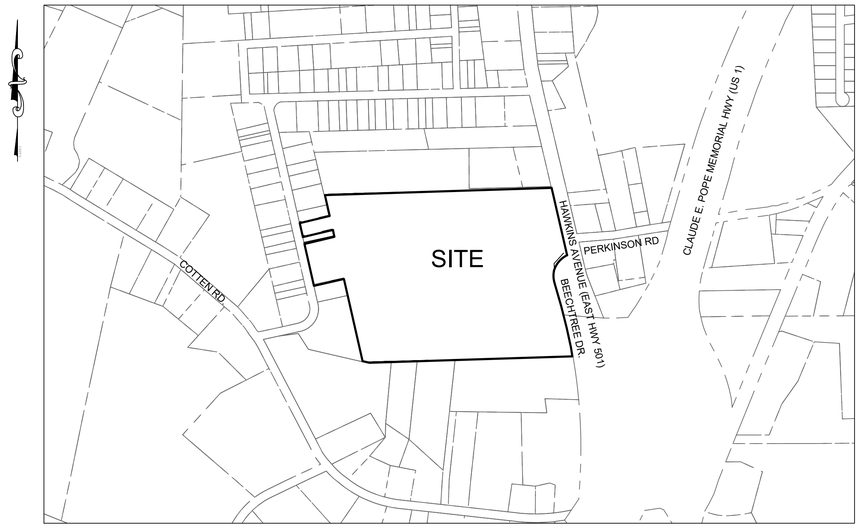
NORTHVIEW APARTMENT

MULTI-FAMILY DEVELOPMENT PLAN

WEST SANFORD, LEE COUNTY, NORTH CAROLINA

SITE DATA

PROJECT:	NORTHVIEW APARTMENTS
ENGINEER:	TIMMONS GROUP 5410 TRINITY ROAD; SUITE 102 RALEIGH, NC 27607 PHONE: 984-255-2367 FAX: 919-859-5663 TIM HESS, RLA EMAIL: TIM.HESS@TIMMONS.COM
DEVELOPER/OWNER:	BRADEN RILEY - RILEY & WALKER developer, LLC PO BOX 3248 PINEHURST, NC 28374
PROPERTY LOCATION:	3041 BEECHTREE DRIVE, SANFORD, NORTH CAROLINA
PINS:	PIN: 9644-36-2998, PIN: 9644-37-7077, PIN: 9644-36-8923, PIN: 9644-47-4054, PIN: 9644-36-9851, PIN: 9644-46-0528, & PIN: 9644-46-0251
ZONING:	CZ
TOWNSHIP:	WEST SANFORD
PROPOSED USE:	RESIDENTIAL - MULTI-FAMILY APARTMENTS
TOTAL TRACT AREA:	25.1± ACRES



VICINITY MAP
1" = 500'

Sheet List Table

Sheet Number	Sheet Title
C0.0	COVER
C1.0	EXISTING CONDITIONS
C2.0	SITE PLAN OVERALL
C2.1	SITE PLAN LAYOUT
C2.2	SITE PLAN LAYOUT
C2.3	SITE PLAN LAYOUT
C2.4	SITE PLAN LAYOUT
C2.5	FIRE ACCESS
C2.6	SITE DETAILS AND NOTES
C2.7	SITE DETAILS AND NOTES
C2.8	SITE DETAILS AND NOTES
C3.0	UTILITY PLAN OVERALL
C3.1	UTILITY PLAN LAYOUT
C3.2	UTILITY PLAN LAYOUT
C3.3	UTILITY PLAN LAYOUT
C3.4	UTILITY PLAN LAYOUT
C3.5	UTILITIES DETAILS AND NOTES
C3.6	UTILITIES DETAILS AND NOTES
C4.0	GRADING OVERALL
C4.1	GRADING LAYOUT
C4.2	GRADING LAYOUT
C4.3	GRADING LAYOUT
C4.4	GRADING LAYOUT
C4.5	GRADING DETAILS AND NOTES
C5.0	EROSION CONTROL PLAN - OVERALL - STAGE 1
C5.1	EROSION CONTROL PLAN LAYOUT - STAGE 1
C5.2	EROSION CONTROL PLAN LAYOUT - STAGE 1
C5.3	EROSION CONTROL PLAN LAYOUT - STAGE 1
C5.4	EROSION CONTROL PLAN LAYOUT - STAGE 1
C5.5	EROSION CONTROL PLAN OVERALL - STAGE 2
C5.6	EROSION CONTROL PLAN LAYOUT - STAGE 2
C5.7	EROSION CONTROL PLAN LAYOUT - STAGE 2
C5.8	EROSION CONTROL PLAN LAYOUT - STAGE 2
C5.9	EROSION CONTROL PLAN LAYOUT - STAGE 2
C5.10	EROSION CONTROL NOTES AND DETAILS
C5.11	EROSION CONTROL NOTES AND DETAILS
C5.12	EROSION CONTROL NOTES AND DETAILS
C5.13	EROSION CONTROL NPDS NOTES AND DETAILS
C10.0	LANDSCAPE PLAN OVERALL
C10.1	LANDSCAPE PLAN LAYOUT
C10.2	LANDSCAPE PLAN LAYOUT
C10.3	LANDSCAPE PLAN LAYOUT
C10.4	LANDSCAPE PLAN LAYOUT
C10.5	LANDSCAPE DETAILS AND NOTES
C11.0	SITE LIGHTING PLAN (NO GRID)
C11.1	SITE LIGHTING PLAN (GRID)

EXISTING CONDITIONS BOUNDARY PLAN TO BE SUBMITTED AT A LATER DATE

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

FOR REVIEW ONLY

THIS DRAWING PREPARED AT THE
RALEIGH OFFICE
5410 Trinity Road, Suite 102 | Raleigh, NC 27607
TEL 919.866.4951 FAX 919.833.8124 www.timmons.com

YOUR VISION ACHIEVED THROUGH OURS.

REVISION DESCRIPTION

DATE

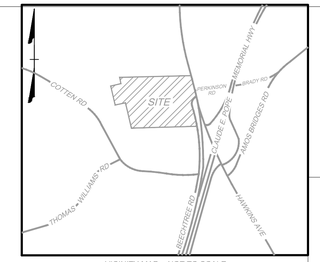
DATE 6/28/2022
DRAWN BY 331
DESIGNED BY 331
CHECKED BY 331
SCALE ----

PROGRESS DRAWINGS - DO NOT USE FOR CONSTRUCTION

TIMMONS GROUP

NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
COVER

JOB NO. 49074
SHEET NO. C0.0



VICINITY MAP - NOT TO SCALE

CURVE TABLE				
NUMBER	DIRECTION	RAD	CHORD
C1	S 45°14'42" W	114.27	161.80
C2	S 02°39'09" E	166.57	87.12

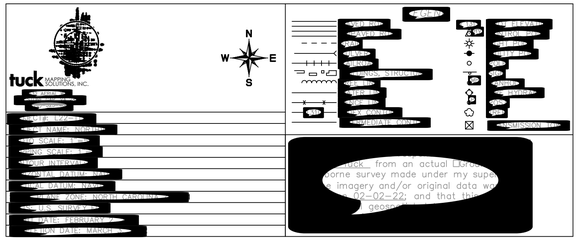
SURVEY NOTES:

1. *PREPARED FOR RILEY & WALKER COMPANIES.*
2. *THIS PROPERTY LIES IN ZONE 'X, NOT A SPECIAL FLOOD HAZARD, PER FIRM 3710964400J, PANEL 9644J, EFFECTIVE DATE OF SEPTEMBER 6, 2006.*
3. *HORIZONTAL CONTROL IS BASED ON NC STATE GRID, NAD'83 (2011) AS DETERMINED BY GPS.*
4. *NOT ALL IMPROVEMENTS TO THIS PROPERTY HAVE BEEN SHOWN.*
5. *THIS SURVEY WAS COMPLETED WITHOUT THE BENEFIT OF A TITLE RESEARCH, ALL ENCUMBRANCES MAY NOT BE SHOWN.*
6. *PROPERTY SHOWN HEREON IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS AND RESTRICTIONS OF RECORD.*
7. *WETLANDS WERE NOT INVESTIGATED NOR NOTED ON THIS SITE.*

TOPOGRAPHIC SURVEY
PREPARED FOR
RILEY & WALKER COMPANIES
PIN: 9644-36-2998, PIN: 9644-37-7077,
PIN: 9644-36-8923, PIN: 9644-47-4054,
PIN: 9644-36-9851, PIN: 9644-46-0528,
& PIN: 9644-46-0251
3041 BEECHTREE DRIVE, SANFORD, NORTH CAROLINA

LEGEND

FENCE	IPF - IRON PIPE FOUND	BOLLARD
EDGE OF PAVEMENT	SIGN	CLEAN OUT
CURB AND GUTTER	WATER VALVE	GUY
STORM LINE	FIRE HYDRANT	WATER METER
SANITARY LINE	POWER POLE	WETLAND FLAG
OVERHEAD POWER LINE	LIGHT POLE	MAILBOX
PAINTED GAS LINE	SANITARY MANHOLE	DRAINAGE MANHOLE
PAINTED POWER LINE	DRAINAGE STRUCTURE	DRAINAGE STRUCTURE
PAINTED TELEPHONE LINE	TELEPHONE PEDESTAL	GAS METER
PAINTED WATER LINE	ELECTRIC BOX	LEFT TURN ARROW
PAINTED FIBER OPTIC LINE	TELEPHONE PEDESTAL	RIGHT TURN ARROW
PAINTED CABLE TV LINE	AIR CONDITIONER UNIT	STRAIGHT ARROW
		SATELLITE DISH



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DESIGNED BY
331
CHECKED BY
331
SCALE
1"= 100'

TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

EXISTING CONDITIONS

JOB NO.
49074
SHEET NO.
C1.0

North Carolina 811 www.nc811.org

SITE DATA TABLE

PROJECT NAME:	NORTHVIEW APARTMENTS
PROPERTY OWNER:	BRADEN RILEY - RILEY & WALKER COMPANIES PO BOX 3248 PINEHURST, NC 28374
DEVELOPER:	BRADEN RILEY - RILEY & WALKER DEVELOPER, LLC PO BOX 3248 PINEHURST, NC 28374
PIN:	PIN: 9644-36-2998, PIN: 9644-37-7077, PIN: 9644-36-8923, PIN: A PORTION OF 9644-47-4054 , PIN: A PORTION OF 9644-36-9851, PIN: A PORTION OF 9644-46-0528, & PIN: A PORTION OF 9644-46-0251 NEW PIN NUMBERS WILL BE PROVIDED AT LATER DATE
PROPERTY ADDRESS:	3041 BEECHTREE DRIVE, SANFORD, NORTH CAROLINA
TOWNSHIP:	WEST SANFORD
PROPERTY ZONING:	CZ MF-12 (CONDITIONAL ZONING -MULTI-FAMILY
CURRENT USE:	LI / RA
PROPOSED USE:	MULTI-FAMILY APARTMENTS (MF-12)
TOTAL PROJECT AREA:	1,093,356 SF (25.1 AC)
RIVER BASIN:	CAPE FEAR
SURFACE WATER CLASSIFICATION:	C - LITTLE BUFFALO CREEK
WATERSHED:	LOCAL - WATERSHED
SETBACKS:	
FRONT (FROM PRIMARY STREET):	BLDG.: 20'
SIDE STREET:	BLDG.: 20'
SIDE:	BLDG.: 20'
REAR:	BLDG.: 20'
IMPERVIOUS SURFACE SUMMARY:	
EXISTING ONSITE IMPERVIOUS AREA:	0 ACRES = 0%
PROPOSED ONSITE IMPERVIOUS:	10.63 ACRES = 42.35%

SITE PLAN LEGEND

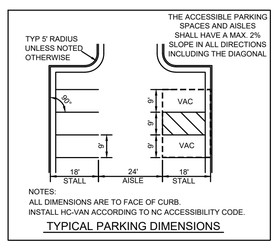
- PROPOSED CURB AND GUTTER
- PROPOSED RETAINING WALL
- PROPOSED STRIPING
- PROPOSED SITE NOTE (A / 1)
- PROPOSED PARKING SPACES (XX)
- PROPOSED ACCESSIBLE RAMP
- PROPOSED STANDARD DUTY CONCRETE PAVMT
- PROPOSED HANDICAP PAVEMENT MARKING
- PROPOSED RADIAL DIMENSION (FACE OF CURB) (R4.0')
- PROPOSED TYPICAL DIMENSION (FACE OF CURB) (40.00')

SITE LAYOUT KEYNOTES

A	ACCESSIBLE PARKING AND SIGNAGE, SEE TRAFFIC CONTROL NOTES THIS SHEET
B	ACCESSIBLE WHEELCHAIR RAMP, SEE DETAIL SHEET
C	DUMPSTER/COMPACTOR ENCLOSURE WITH GATES, SEE ARCHITECTURAL PLANS
D	PROPOSED PROJECT SIGN, REFER TO ARCHITECTURAL PLANS
E	STANDARD METHOD FOR ENDING CURB AND GUTTER
F	FLUSH PAVEMENT, SEE DETAIL SHEET
G	STAIRS
H	AMENITY SPACE, SEE ARCHITECTURAL PLANS
I	SEGMENTAL RETAINING WALL WITH 6' ALUMINUM FENCE MOUNTED ON TOP, REFER TO RETAINING WALL PLANS BY OTHERS, TO BE INSTALLED BY OWNER
J	MAIL KIOSK, SEE DETAIL SHEET
K	STOP SIGNAGE, SEE TRAFFIC CONTROL NOTES THIS SHEET
L	10' X 70' SIGHT DISTANCE TRIANGLE (TYP.)
M	SITE LIGHTING TO BE INSTALLED BY DEVELOPER, SEE LIGHTING PLAN
N	SPEED BUMP, SEE DETAIL
O	EXISTING FENCE TO REMAIN
P	PROPOSED 6' WOODEN FENCE
Q	PROPOSED CROSSWALK
R	PROPOSED 20' PUBLIC WATER EASEMENT
S	GRAVEL ACCESS WAY
T	PROPOSED BUS SHELTER, SEE ARCHITECTURAL PLANS
U	PROPOSED 30' PUBLIC SANITARY SEWER EASEMENT
V	ONE WAY PAVEMENT MARKING AND DO NOT ENTER SIGNAGE, SEE TRAFFIC CONTROL NOTES THIS SHEET

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO CITY OF SANFORD STANDARDS AND SPECIFICATIONS.
2. ROADS AND DRIVEWAYS SHALL COMPLY WITH NCDOT AND CITY OF SANFORD STANDARDS.
3. SIGN PERMITS SHALL BE REQUIRED FOR ANY ENTRANCE SIGNAGE. PERMITS SHALL BE REQUIRED PRIOR TO FABRICATION OR INSTALLATION OF SIGNS. SIGNAGE SHALL BE RESTRICTED TO AN ON-SITE LOCATION.
4. THE WATER AND SEWER SYSTEMS SHALL COMPLY WITH CITY OF SANFORD STANDARDS.
5. ALL DESIGN AND CONSTRUCTION METHODS SHALL COMPLY WITH NCDEQ SEDIMENTATION AND EROSION CONTROL REGULATIONS. AN EROSION CONTROL PLAN SHALL BE APPROVED BY NCDEQ PRIOR TO ANY GRADING.
6. CONSTRUCTION DRAWINGS SHALL BE SUBMITTED AND APPROVED BY THE CITY OF SANFORD PRIOR TO CONSTRUCTION.
7. RESTRICTIVE COVENANTS SHALL BE APPROVED AND RECORDED PRIOR TO RECORDING OF FINAL PLAT.
8. STORMWATER CONTROL MEASURES SHALL BE CONTAINED IN AND ACCESSED VIA OPEN SPACE MAINTAINED AND OWNED BY THE HOMEOWNER'S ASSOCIATION. A MAINTENANCE PLAN MUST BE DEVELOPED TO ADDRESS THE STORMWATER CONTROL MEASURES.
9. PRIVATE STORM DRAINAGE EASEMENTS SHALL BE MAINTAINED BY THE HOA.
10. PERMANENT AND TEMPORARY SIGNAGE REQUIRES AN APPROVED SIGN PERMIT PRIOR TO INSTALLATION. SIGNAGE IS A SEPARATE SUBMITTAL, REVIEW AND APPROVAL PROCESS.
11. PRIOR TO RELEASE OF THE CERTIFICATE OF OCCUPANCY, THE OWNER/BUILDER MUST SUPPLY THE CITY WITH A FINAL LETTER OF CERTIFICATION FROM LIGHTING ENGINEER, LIGHTING MANUFACTURE, OR AUTHORIZED LIGHTING CONTRACTOR VERIFYING THAT ALL SITE LIGHTING IS INSTALLED ACCORDING TO TOWN STANDARDS, THE APPROVED PLANS AND ANY APPLICABLE CONDITIONS.
12. THE DEVELOPER WILL BE RESPONSIBLE FOR PAYMENT OF THE MONTHLY COSTS FOR LIGHTING AND THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL INITIAL FEES CHARGED WITH THE LIGHT INSTALLATION. ALL INSTALLATION FEES ARE REQUIRED TO BE PAID UP FRONT AT THE TIME OF INSTALLATION.
13. CONTACT THE CITY OF SANFORD ENGINEERING DEPARTMENT AT 919-777-1124 TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO OBTAINING BUILDING PERMITS FOR THIS PLAN.
14. DURING THE ENTIRE PERIOD OF CONSTRUCTION ACTIVITY, ALL PROTECTED TREES SHALL BE SURROUNDED AND PROTECTED BY AN ORANGE TENSAR GEOGRID FENCING. TREE PROTECTION FENCING SHALL BE INSTALLED A MINIMUM OF 10' FROM TRUNK OF ANY PROTECTED TREE OR DRIP LINE. ONE SIGN SHALL BE PLACED EVERY 200' ALONG FENCING TO READ "TREE PROTECTION AREA - DO NOT ENTER / PARA PROTECCION DE LOS ARBOLES - PROHIBIDIO ENTRAR".
15. PRIOR TO RELEASE OF THE CERTIFICATE OF OCCUPANCY, THE OWNER/BUILDER MUST SUPPLY THE CITY OF SANFORD WITH A FINAL LETTER OF CERTIFICATION FROM LIGHTING ENGINEER, LIGHTING MANUFACTURE.



TYPICAL PARKING DIMENSIONS

HATCH LEGEND

	CONCRETE SIDEWALK, SEE DETAIL SHEET
	HEAVY-DUTY ASPHALT PAVEMENT, SEE DETAIL SHEET
	LIGHT-DUTY ASPHALT PAVEMENT, SEE DETAIL SHEET
	HEAVY-DUTY CONCRETE,
	NCDOT ASPHALT, SEE DETAIL SHEET

TRAFFIC CONTROL 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"
STOP	R1-1	30"x30"
DO NOT ENTER	R5-1	30"x30"

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 6-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.
NO PARKING - FIRE LANE *		4-IN	YEL.
CROSSWALK	1205.07	4-IN	WHT.
DO NOT ENTER	1205.08	4-IN	WHT.

* NO PARKING - FIRE LANE MARKING SHALL CONSIST OF A 4" SOLID YELLOW STRIPE AND 8" HIGH YELLOW TEXT "NO PARKING - FIRE LANE" AT 40' INTERVALS.
STRIPING SHALL BE PLACED AS INDICATED BY THE FOLLOWING LINETYPE
4. ALL PAVMENT MARKINGS SHALL BE RESIN TYPE PAINT AS REQUIRED BY THE COUNTY.

NORTHVIEW APARTMENTS

UNIT - DENSITY

							DENSITY	
12	BUILDINGS	24	UNITS	288	UNITS	25.1	ACRES	11.5	UNITS/AC

UNIT MIX

BEDs	UNIT MIX/ BLD	UNITS	PERC. MIX	
1	8	96	33%	
2	12	144	50%	
3	4	48	17%	
	24	288		

PARKING REQUIRED PER BLD'G

BEDs	UNITS	PRK REA	PRK TOT
1	8	1.5	12
2	12	1.5	18
3	4	2	8
	24		38

PARKING TOTAL

BEDs	UNIT MIX/BLD	PARK REQ	TOTAL PRK		AREA	BUILDINGS	REQ	PROVIDED	DIFF.
1	96	1.5	144		BLD 1-2	2	76	78	2
2	144	1.5	216		BLD 3-7	5	190	210	20
3	48	2	96		BLD 8-9	2	76	79	3
					BLD 10-12	3	114	105	-9
	288		456		CLUB			14	14
							456	486	30

BUILDING - 11,532.90 SF
BUILDING 3 FLOORS
BUILDING HEIGHT 40' MAX
BUILDING SEPARATION 20' PLUS 1 FOOT FOR EACH FOOT OVER 30'
BUILDING SEPARATION 30'
24 UNITS PER BUILDING
12 BUILDING = 288 UNITS

PARKING SPACES

REQUIRED PARKING = 456 SPACES
PROVIDED PARKING = 486 SPACES

REQUIRED HANDICAP = 9 SPACES
PROVIDED HANDICAP = 28 SPACES

LIMITS OF DISTURBANCE

24.37AC. OF 43.12 AC TOTAL INCLUDES EASEMENT ROADS AND STORMWATER IMPROVEMENTS

19.84 AC OF 25.1± OF SITE SPECIFIC IMPROVEMENTS

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TIMMONS GROUP

NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
SITE PLAN OVERALL

JOB NO. 49074
SHEET NO. C2.0

SITE LAYOUT KEYNOTES

A	ACCESSIBLE PARKING AND SIGNAGE, SEE TRAFFIC CONTROL NOTES THIS SHEET
B	ACCESSIBLE WHEELCHAIR RAMP, SEE DETAIL SHEET
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N	SPEED BUMP, SEE DETAIL
O	EXISTING FENCE TO REMAIN
P	PROPOSED 6' WOODEN FENCE
Q	PROPOSED CROSSWALK
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S	GRAVEL ACCESS WAY
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NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

SITE PLAN LAYOUT

JOB NO. 49074
SHEET NO. C2.1

NOTES:
ALL DIMENSIONS ARE TO FACE OF CURB.
INSTALL HC-VAN ACCORDING TO NC ACCESSIBILITY CODE.

TYPICAL PARKING DIMENSIONS

SITE PLAN LEGEND

- PROPOSED CURB AND GUTTER
- PROPOSED RETAINING WALL
- PROPOSED STRIPING
- A / 1 — PROPOSED SITE NOTE
- XX — PROPOSED PARKING SPACES
- PROPOSED ACCESSIBLE RAMP
- PROPOSED STANDARD DUTY CONCRETE PAVMT
- PROPOSED HANDICAP PAVEMENT MARKING
- R4.0' — PROPOSED RADIAL DIMENSION (FACE OF CURB)
- 40.00' — PROPOSED TYPICAL DIMENSION (FACE OF CURB)

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K	STOP SIGNAGE, SEE TRAFFIC CONTROL NOTES THIS SHEET
L	60' X 70' SIGHT DISTANCE TRIANGLE (TYP.)
M	SITE LIGHTING TO BE INSTALLED BY DEVELOPER, SEE LIGHTING PLAN
N	SPEED BUMP, SEE DETAIL
O	EXISTING FENCE TO REMAIN
P	PROPOSED 6' WOODEN FENCE
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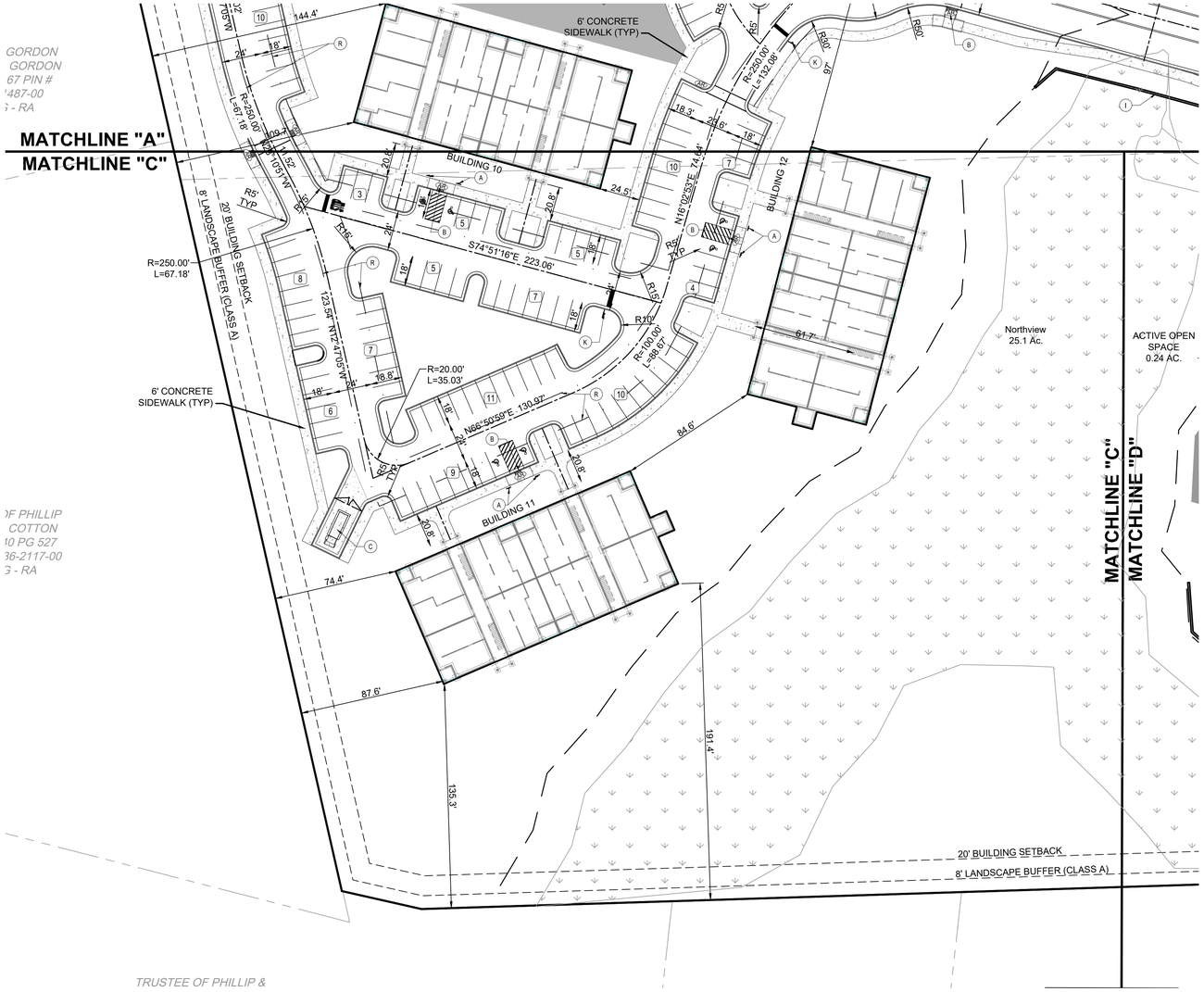
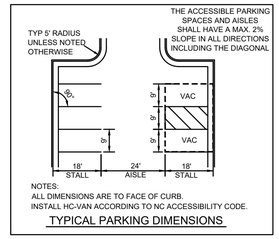
NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

SITE PLAN LAYOUT

JOB NO.	49074
SHEET NO.	C2.2





TYPICAL PARKING DIMENSIONS

SITE PLAN LEGEND

- PROPOSED CURB AND GUTTER
- PROPOSED RETAINING WALL
- PROPOSED STRIPING
- PROPOSED SITE NOTE
- PROPOSED PARKING SPACES
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- PROPOSED TYPICAL DIMENSION (FACE OF CURB)

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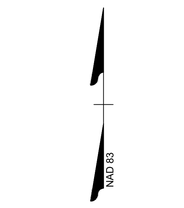

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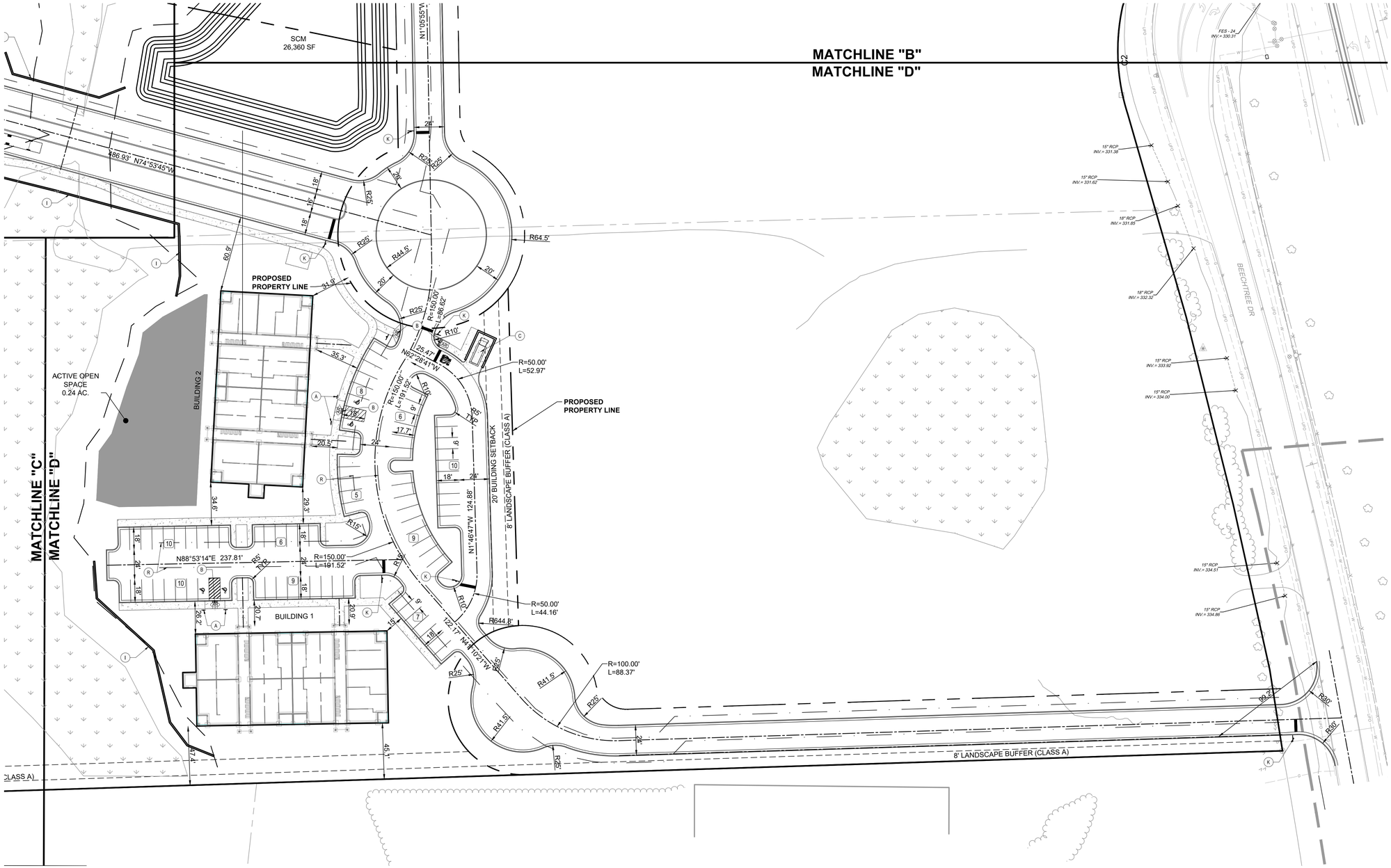
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

SITE PLAN LAYOUT

JOB NO. 49074
SHEET NO. C2.3



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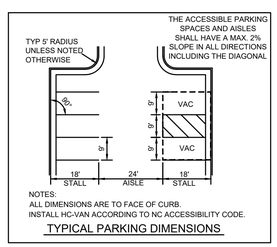

TYPICAL PARKING DIMENSIONS

SITE PLAN LEGEND

- PROPOSED CURB AND GUTTER
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- PROPOSED PARKING SPACES
- PROPOSED ACCESSIBLE RAMP
- PROPOSED STANDARD DUTY CONCRETE PAVMT
- PROPOSED HANDICAP PAVEMENT MARKING
- PROPOSED RADIAL DIMENSION (FACE OF CURB)
- PROPOSED TYPICAL DIMENSION (FACE OF CURB)

NAD 83

SCALE 1"=40'
0 40' 80'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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REVISION DESCRIPTION

DATE

DATE
6/28/2022
DRAWN BY
331
DESIGNED BY
331
CHECKED BY
331
SCALE
1"= 40'

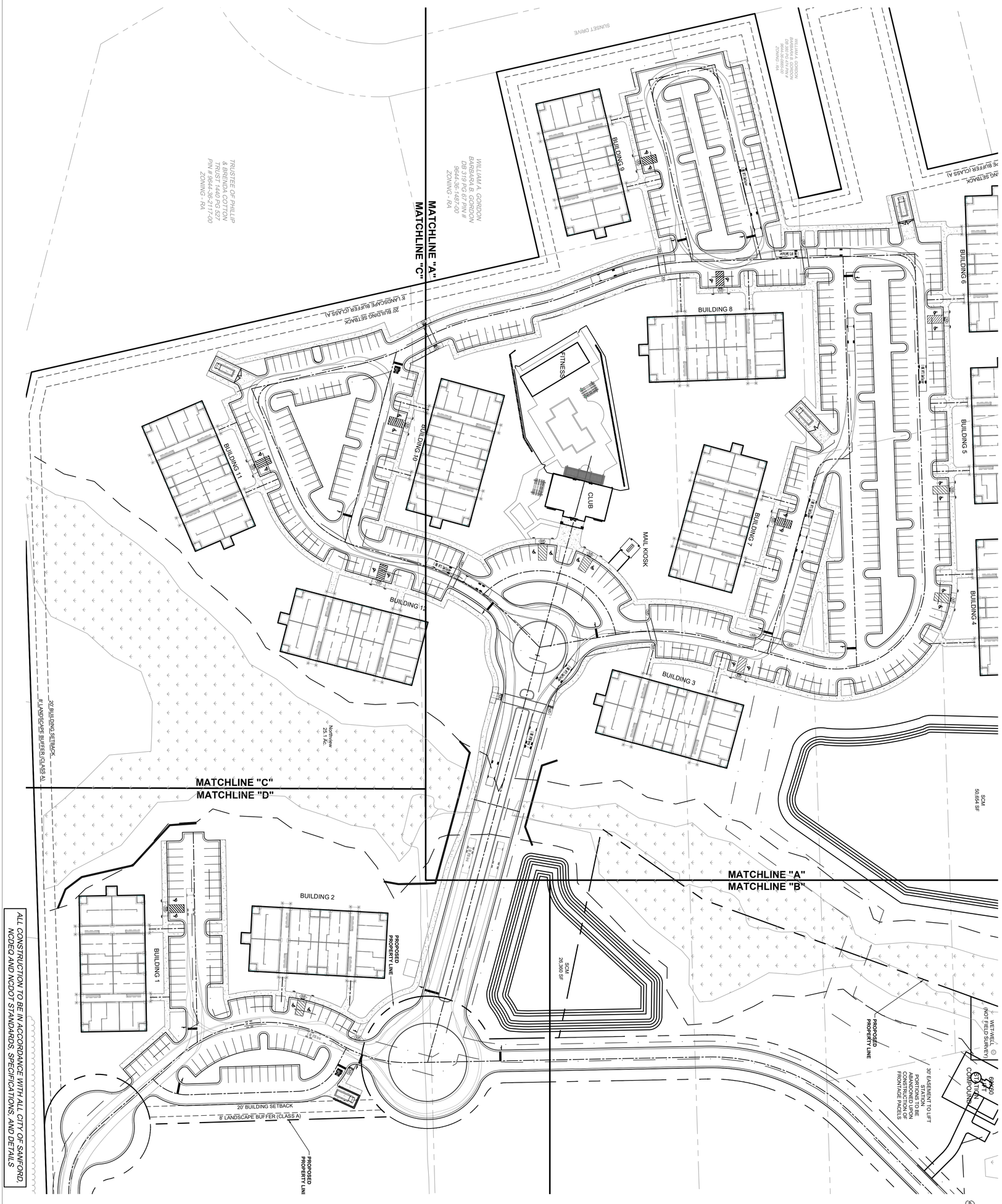
PROGRESS DRAWINGS - DO NOT USE FOR CONSTRUCTION

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

SITE PLAN LAYOUT

JOB NO.
49074
SHEET NO.
C2.4



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NORTHVIEW APARTMENTS

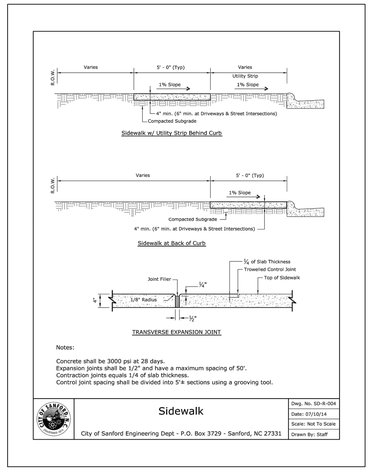
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

FIRE ACCESS

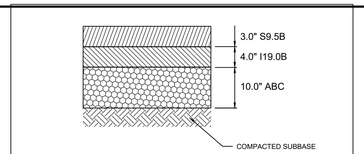
JOB NO.	SHEET NO.	SCALE	CHECKED BY	DESIGNED BY	DRAWN BY	DATE
49074	C2.5	1" = 100'	JJI	JJI	JJI	6/28/2022

DATE	REVISION DESCRIPTION

PROGRESS DRAWINGS - DO NOT USE FOR CONSTRUCTION



1 SIDEWALK
PLAN
NTS

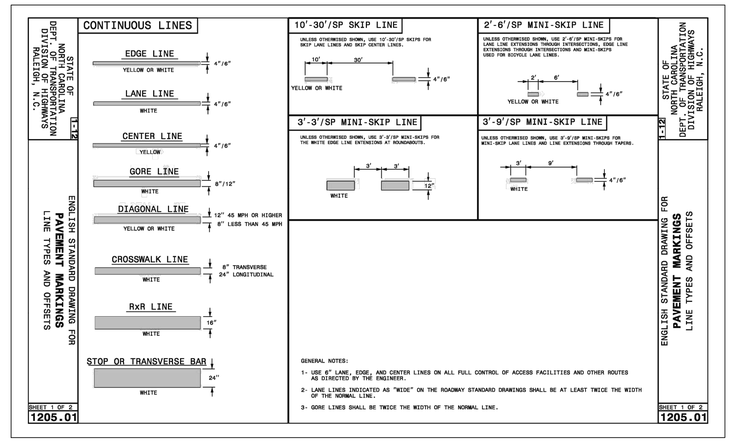


NCDOT ASPHALT
NOT TO SCALE

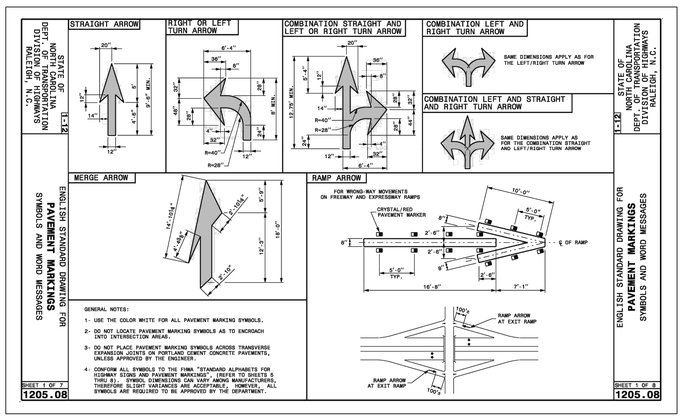
NOTES:
1. PREPARING, GRADING, SHAPING, AND COMPACTION OF SUBGRADE SOILS SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 5, SECTION 501 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006). PREPARING, GRADING, SHAPING, AND COMPACTION OF AGGREGATE BASE COURSE (CABC) STONE SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 5, SECTION 520 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006). PLACEMENT AND COMPACTION OF THE BITUMINOUS CONCRETE SHOULD BE PERFORMED IN ACCORDANCE WITH DIVISION 6, SECTION 600 OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES (2006). PROPER SUBGRADE COMPACTION, ADHERENCE TO THE NCDOT SPECIFICATIONS, AND COMPLIANCE WITH PROJECT PLANS AND SPECIFICATIONS ARE CRITICAL TO THE PERFORMANCE OF THE CONSTRUCTED PAVEMENT.
2. CONTRACTOR MAY CHOOSE TO INSTALL INTERMEDIATE COURSES OF PAVEMENT TO STABILIZE THE SITE DURING CONSTRUCTION AT NO ADDITIONAL COST. CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ADEQUATE THICKNESS REQUIRED FOR INTERMEDIATE PAVING. INCREASES IN THE DESIGN PAVEMENT SECTION TO FACILITATE INTERMEDIATE PAVING SHALL BE PROVIDED AT NO ADDITIONAL COST.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGES TO SUBGRADE, INSTALLED BASE COURSE AND/OR INTERMEDIATE PAVING PRIOR TO PLACING SUBSEQUENT PAVEMENT LIFTS AT NO ADDITIONAL COST.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PAVEMENT DURING ALL PHASES OF WORK. THE FINAL SURFACE OF PAVEMENT SHALL BE FREE OF ALL DEFECTS OR DAMAGE.

PAVEMENT SECTIONS DETAIL

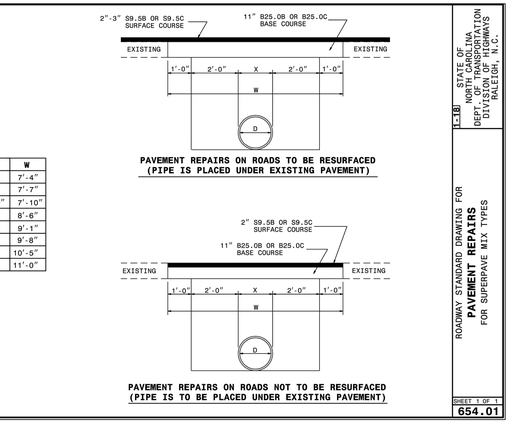
2 PAVEMENT SECTIONS DETAIL
PLAN
NTS



3 PAVEMENT MARKINGS
PLAN
NTS



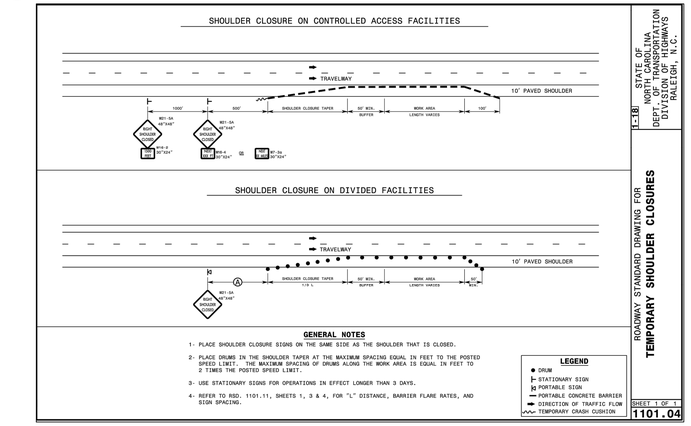
4 PAVEMENT MARKINGS
PLAN
NTS



D	X	W
12"	1'-4"	7'-4"
15"	1'-7"	7'-7"
18"	1'-10"	7'-10"
24"	2'-6"	8'-6"
30"	3'-1"	9'-1"
36"	3'-8"	9'-8"
42"	4'-5"	10'-5"
48"	5'-0"	11'-0"

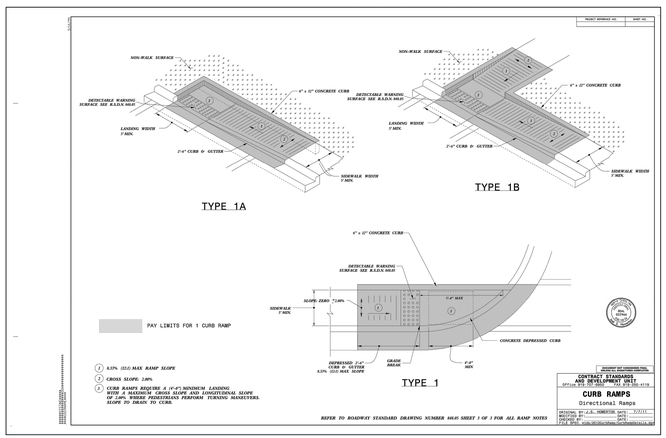
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
1-18
ROADWAY STANDARD DRAWING FOR PAVEMENT REPAIRS FOR SUPERPAVE MIX TYPES
SHEET 1 OF 1
654.01

5 PAVEMENT REPAIRS
PLAN
NTS

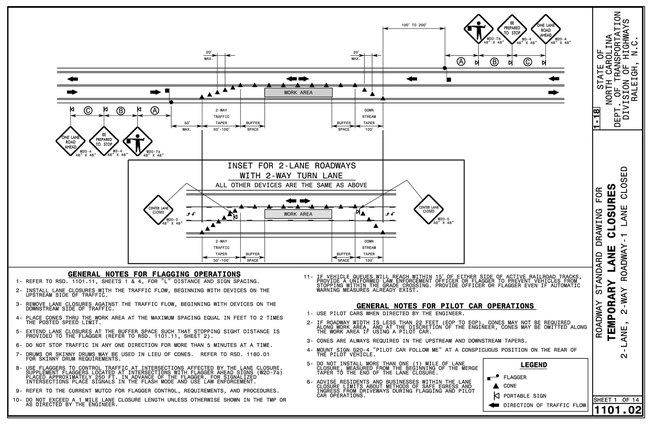


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
1-18
ROADWAY STANDARD DRAWING FOR TEMPORARY SHOULDER CLOSURES
SHEET 1 OF 1
1101.04

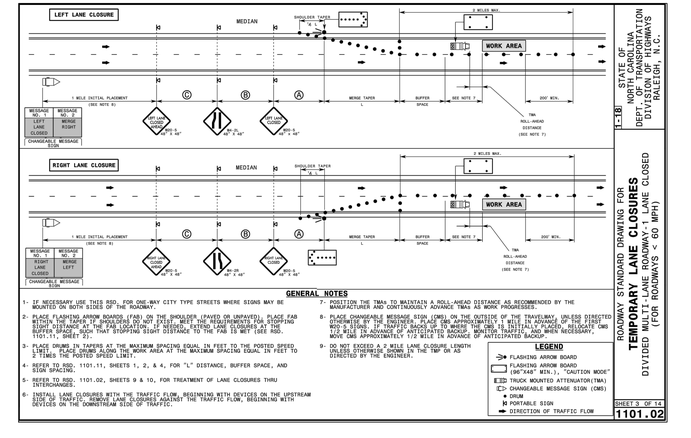
6 TEMPORARY SHOULDER CLOSURES
PLAN
NTS



7 CURB RAMPS
PLAN
NTS



8 TEMPORARY LANE CLOSURES
PLAN
NTS



9 TEMPORARY LANE CLOSURES
PLAN
NTS

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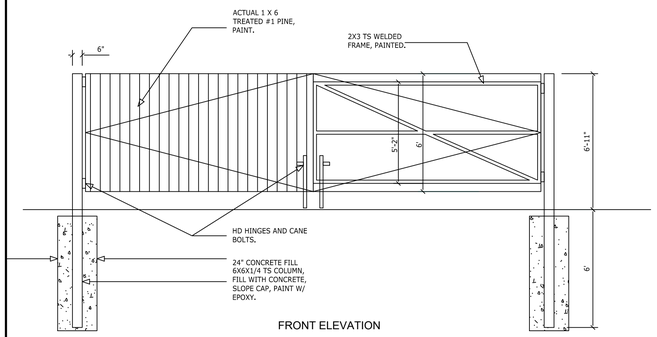
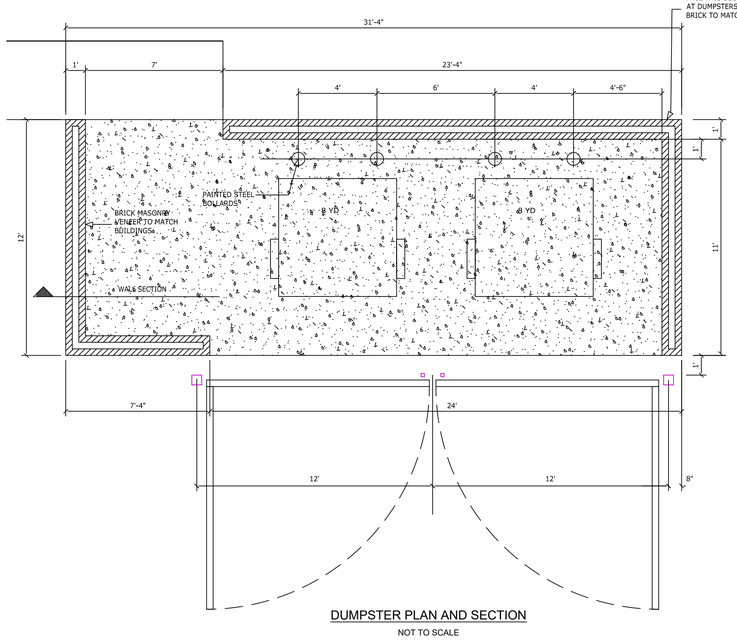
NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
SITE DETAILS AND NOTES

JOB NO. 49074
SHEET NO. C2.6



FRONT ELEVATION

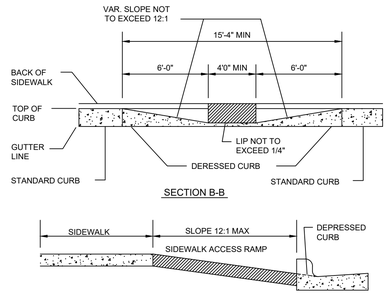


DUMPSTER PLAN AND SECTION

NOT TO SCALE

1 DUMPSTER PLAN AND SECTION — NTS

PLAN



NOTES:

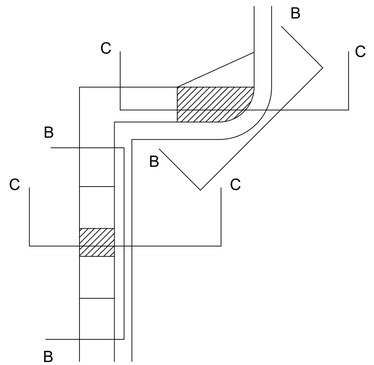
1. WALKING SURFACES SHALL BE SLIP RESISTANT. COLORS FOR THE RAMP SHALL BE DARK CHARCOAL GRAY FOR CONTRAST WITH LIGHT PATHWAY COLORS AND LIGHT CONCRETE GRAY FOR CONTRAST WITH DARK PATHWAY COLORS AND SHALL BE AN INTEGRAL PART OF THE CONSTRUCTION MATERIAL.
2. NO SLOPE ON THE SIDEWALK ACCESS RAMP SHALL EXCEED 1"I1' (12:1) IN RELATIONSHIP TO THE GRADE OF THE STREET.
3. IN NO CASE SHALL THE WIDTH OF THE ACCESS RAMP BE LESS THAN 40" (3'-4") HOWEVER, RAMP WIDTH MAY EXCEED 40".
4. USE CLASS B (2,500-PSI) CONCRETE WITH SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH, NON-SKID TYPE SURFACE.
5. A 1/2" EXPANSION JOINT SHALL BE PLACED WHERE THE ACCESS RAMP JOINS THE CURB. REFER TO TYPICAL SIDEWALK DETAIL FOR JOINT REQUIREMENTS.

TYPICAL ACCESSIBLE CURB RAMP

NOT TO SCALE

2 TYPICAL ACCESSIBLE CURB RAMP — NTS

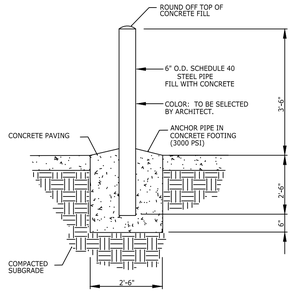
PLAN



PARKING AREA RAMPS

4 PARKING AREA RAMPS — NTS

PLAN

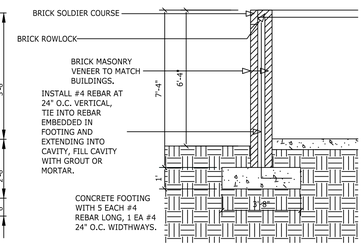


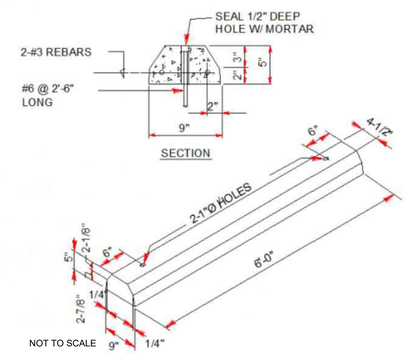
STEEL BOLLARD

NOT TO SCALE

3 STEEL BOLLARD — NTS

PLAN

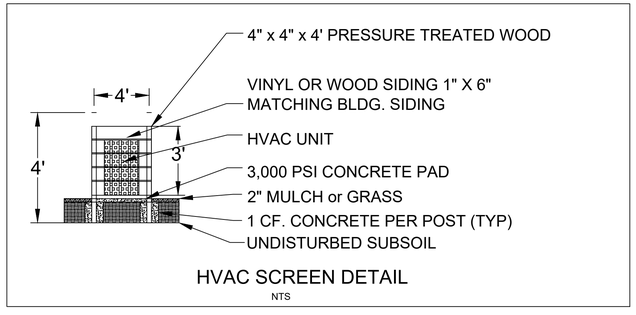




PRECAST CONCRETE WHEEL STOP

5 PRECAST CONCRETE WHEEL STOP — NTS

PLAN

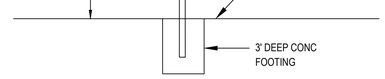


HVAC SCREEN DETAIL

NTS

6 HVAC SCREEN DETAIL — NTS

PLAN



ALL SIGNS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, NCSBC AND ADA SPECIFICATIONS AND REQUIREMENTS.

MAXIMUM PENALTY $250

R7-8D

NOTE: MAXIMUM PENALTY SHALL BE PER LATEST FINE AMOUNT AS SPECIFIED BY LOCAL AUTHORITIES.

RESERVED PARKING

R7-8A

VAN ACCESSIBLE

VAN ACCESSIBLE

HANDICAP PARKING SIGNAGE

NOT TO SCALE

7 HANDICAP PARKING SIGNAGE — NTS

PLAN

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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331
SCALE

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NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

SITE DETAILS AND NOTES

JOB NO.
49074
SHEET NO.
C2.7

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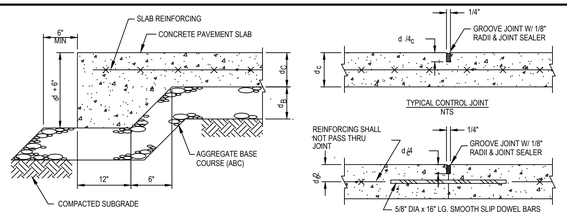


TYPICAL THICKENED EDGE
NTS

TYPICAL CONTROL JOINT
NTS

TYPICAL CONSTRUCTION JOINT
NTS

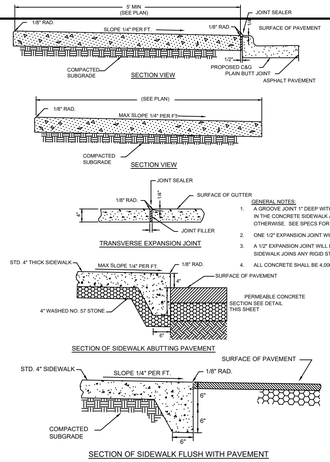
TYPICAL EXPANSION JOINT
NTS

CONCRETE PAVEMENT DIMENSIONS		HEAVY	LIGHT
CONC SLAB THICKNESS, d =	C	6"	4"
ABC THICKNESS, d =	B	6"	4"
REINFORCEMENT =	6x6-W2.9xW2.9		

NOTES:

1. ALL CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI (ASTM C39) WITH ENTRAINED AIR BETWEEN 4% AND 6%.
2. CONTRACTION JOINTS SHALL BE SPACED AT 15 FT O.C.E.W. MAX. OR AS INDICATED ON THE PLAN.
3. EXPANSION JOINTS SHALL BE SPACED AT 50 FT O.C.E.W. MAX. OR AS INDICATED ON TE PLAN AND WHERE CONCRETE PAVEMENT ABUTS ANY RIGID OBJECT.

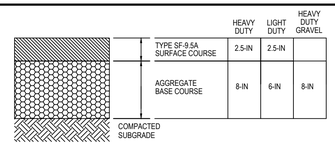
CONCRETE PAVEMENT
NOT TO SCALE



GENERAL NOTES:

1. A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED IN THE CONCRETE SIDEWALK AT 5' INTERVALS UNLESS INDICATED OTHERWISE. SEE SPECS FOR ADDITIONAL JOINT SPACING REQUIREMENTS.
2. ONE 1/2" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS.
3. A 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
4. ALL CONCRETE SHALL BE 4,000 P.S.I.

TYPICAL CONCRETE SIDEWALK
NOT TO SCALE



NOTES:

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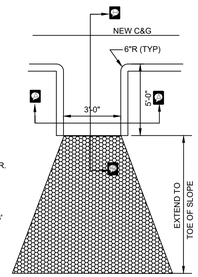
2. THE CONTRACTOR MAY CHOOSE TO INSTALL INTERMEDIATE COURSES OF PAVEMENT TO STABILIZE THE SITE DURING CONSTRUCTION AT NO ADDITIONAL COST. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE ADEQUATE THICKNESS REQUIRED FOR INTERMEDIATE PAVING. INCREASES IN THE DESIGN PAVEMENT SECTION TO FACILITATE INTERMEDIATE PAVING SHALL BE PROVIDED AT NO ADDITIONAL COST.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGES TO SUBGRADE, INSTALLED BASE COURSE AND/OR INTERMEDIATE PAVING PRIOR TO PLACING SUBSEQUENT PAVEMENT LIFTS AT NO ADDITIONAL COST.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING PAVEMENT DURING ALL PHASES OF WORK. THE FINAL SURFACE OF PAVEMENT SHALL BE FREE OF ALL DEFECTS OR DAMAGE.

ASPHALT PAVEMENT SECTION
NOT TO SCALE

1 CONCRETE PAVEMENT — NTS
PLAN

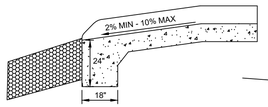
NOTES:

1. ALL CONCRETE SHALL BE 3,000 P.S.I.
2. CONTRACTION JOINTS SHALL BE SPACED AT 10' INTERVALS, SPACING MAY BE INCREASED TO 15' IF MACHINE IS USED.
3. CONTRACTION JOINTS SHALL BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1-1/2" SHALL BE OBTAINED.
4. ALL JOINTS SHALL BE FILLED WITH JOINT FILLER AND SEALER.

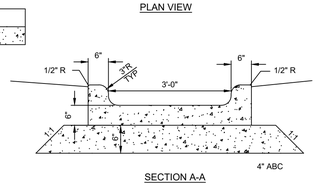


PLACE 22" THICK CLASS 'B' STONE ON FILTER FABRIC AMOCO 2006 OR EQUAL. INSTALL FABRIC PER MANURACTURER'S RECOMMENDATIONS.

PLAN VIEW



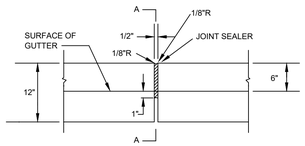
SECTION B-B



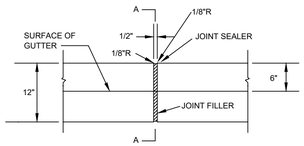
SECTION A-A

CONCRETE FLUME
NOT TO SCALE

2 TYPICAL CONCRETE SIDEWALK — NTS
PLAN



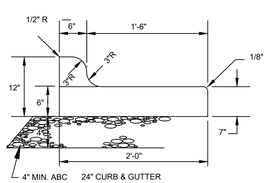
CONTRACTION JOINT



TRANSVERSE EXPANSION JOINT

NOTES:

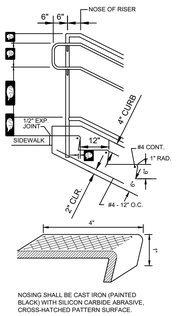
1. ALL CONCRETE SHALL BE 4,000 P.S.I.
2. CONTRACTION JOINTS SHALL BE SPACED AT 10' INTERVALS, SPACING MAY BE INCREASED TO 15' IF MACHINE IS USED.
3. CONTRACTION JOINTS SHALL BE INSTALLED BY THE USE OF TEMPLATES OR FORMED BY OTHER APPROVED METHODS. WHERE SUCH JOINTS ARE NOT FORMED BY TEMPLATES, A MINIMUM DEPTH OF 1-1/2" SHALL BE OBTAINED.
4. EXPANSION JOINTS SHALL BE SPACED AT 90' MAX INTERVALS, AND ADJACENT TO ALL RIGID OBJECTS.
5. ALL JOINTS SHALL BE FILLED WITH JOINT FILLER AND SEALER.



SECTION A-A

STANDARD CONCRETE CURB AND GUTTER
NOT TO SCALE

3 ASPHALT PAVEMENT SECTION — NTS
PLAN



NOSING DETAIL

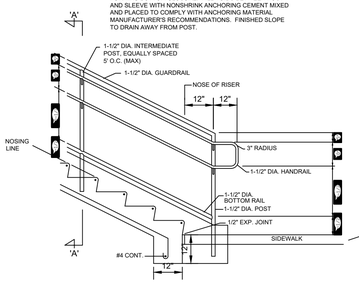
NOTES

CONCRETE SHALL BE 3,000-PSI @ 28 DAYS.

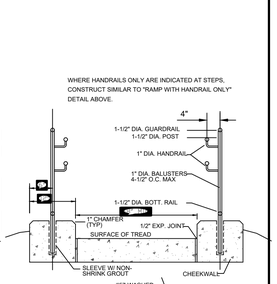
PROVIDE NO-SLIP BROOM FINISH PERPENDICULAR TO DIRECTION OF TRAVEL.

HANDRAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH NC BUILDING CODE VOLUME 1, SECTION 1007.5.

12 IN. SLEEVES SHALL BE HOT-DIP GALVANIZED STEEL PIPE (ASTM A53) NOT LESS THAN 1/2 IN. MORE THAN OUTSIDE DIMENSION OF POST AND FLAT STEEL PLATE FORMING BOTTOM CLOSURE. FILL VOIDS BETWEEN POST AND SLEEVE WITH NONSHRINK ANCHORING CEMENT MIXED AND PLACED TO COMPLY WITH ANCHORING MATERIAL MANUFACTURER'S RECOMMENDATIONS. FINISHED SLOPE TO DRAIN AWAY FROM POST.

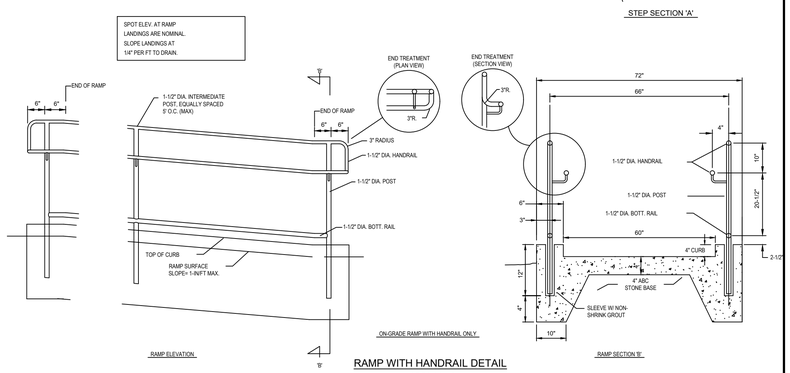


STEP ELEVATION



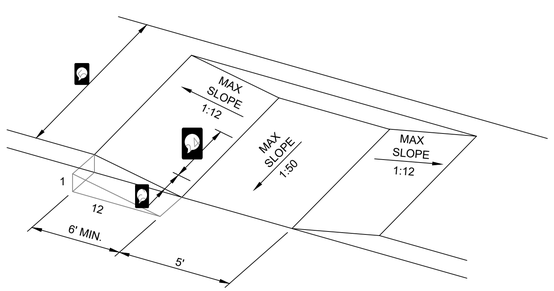
STEP SECTION 'A'

NOSING SHALL BE CAST IRON (PAINTED BLACK) WITH SILICON CARBIDE ABRASIVE, CROSS-HATCHED PATTERN SURFACE.



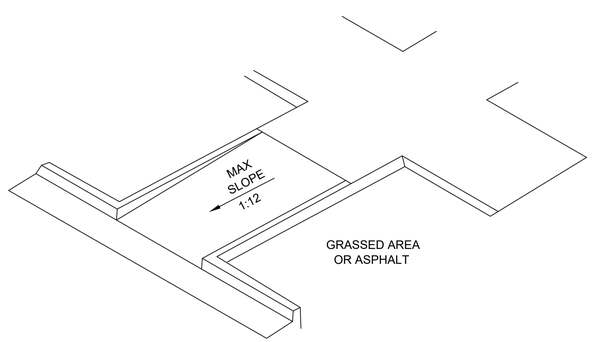
RAMP WITH HANDRAIL DETAIL
NOT TO SCALE

4 CONCRETE FLUME — NTS
PLAN



HANDICAP RAMP DETAIL
NOT TO SCALE

5 STANDARD CONCRETE CURB AND GUTTER — NTS
PLAN



SLOPEDOWN SIDEWALK DETAIL
NOT TO SCALE

7 HANDICAP RAMP DETAIL — NTS
PLAN

8 SLOPEDOWN SIDEWALK DETAIL — NTS
PLAN

8 RAMP WITH HANDRAIL DETAIL — NTS
PLAN

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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PROGRESS DRAWINGS - DO NOT USE FOR CONSTRUCTION

REVISION DESCRIPTION

DATE

DATE: 6/28/2022
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DESIGNED BY: 331
CHECKED BY: 331
SCALE:

NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
SITE DETAILS AND NOTES

JOB NO. 49074
SHEET NO. C2.8

North Carolina 811 www.nc811.org

PRIVATE STORMWATER EASEMENTS ARE SUBJECT TO CHANGE WITH CONSTRUCTION PLAN REVIEW.

GENERAL CONTRACTOR:
PRIOR TO BEGINNING ANY CONSTRUCTION, FIELD SURVEY VERIFY LOCATION, DEPTH, TYPE, MATERIAL AND CONDITION OF ALL EXISTING UTILITIES. IN CASE OF CONFLICT, NOTIFY ENGINEER.

WATER QUANTITY TABLE

8" WATERLINE:	**333 LF**
6" WATERLINE:	**220 LF**
2" WATERLINE:	**270 LF**

LEGEND

- PROPERTY LINE
- EXISTING WETLANDS
- NEUSE RIPARIAN BUFFER
- OPEN SPACE
- CIVIC SPACE

LEGEND

SEWER
- SAN — EXISTING SANITARY SEWER
- SAN — SANITARY SEWER
- FM — FORCE MAIN
- Ⓢ — SANITARY MANHOLE

WATER
- W — EXISTING WATER LINE
- W — PROPOSED WATER LINE
- WATER VALVE
- FIRE HYDRANT
- BLOWOFF ASSEMBLY

MISC.
- LIGHT POLE

NAD 83

SCALE 1"=100'
0 100' 200'

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SCALE 1"= 100'

TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

UTILITY PLAN OVERALL

JOB NO. 49074
SHEET NO. C3.0

LEGEND

SEWER

- SAN — EXISTING SANITARY SEWER
- SAN — SANITARY SEWER
- FM — FORCE MAIN
- (S) — SANITARY MANHOLE

WATER

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- W — PROPOSED WATER LINE
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MISC.

- LIGHT POLE

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UTILITY KEYNOTES	
A	FIRE HYDRANT ASSEMBLY
B	CONNECT 8" WATER MAIN TO EXISTING 6" WATER MAIN
C	POST INDICATOR VALVE, SEE DETAIL SHEET
D	EXTEND SERVICE TO WITHIN 5'-0" OF BUILDING WALL. REFER TO PLUMBING PLANS FOR EXACT LOCATION AND INVERT ELEVATION
E	EXTEND WATER MAIN TO 12-IN ABOVE FINISH FLOOR FOR FIRE PROTECTION CONNECTION, COORDINATE WITH FIRE PROTECTION PLANS FOR EXACT LOCATION. ALL BACK FLOW DEVICES ARE TO BE LOCATED WITHIN THE RISER ROOMS, REFER TO FIRE PROTECTION PLANS FOR LOCATION AND MODEL NUMBERS.
F	4" DOMESTIC WATER METER. SEE DETAIL S
G	4" REDUCED PRESSURE ASSEMBLY IN HEATED ENCLOSURE, SEE DETAIL SHEET. ALL ASSEMBLIES MUST BE APPROVED BY THE CITY OF SANFORD AND MUST BY USC OR ASSE APPROVED.
H	CLEANOUT (SHALL BE TRAFFIC BEARING IF LOCATED WITHIN ASPHALT), SEE DETAIL SHEET.
I	4" TYPE-K COPPER DOMESTIC WATER SERVICE
J	4" RESTRAINED JOINT DIP FIRE PROTECTION SERVICE
K	2" DOMESTIC WATER METER. SEE DETAIL S
L	6" X 6" TEE
M	8" X 6" TEE
N	8" X 2" TEE
O	8" X 6" REDUCER
P	2" TYPE-K COPPER DOMESTIC WATER SERVICE
Q	6" X 4" TEE
R	4" DIAMETER SANITARY SEWER MANHOLE, SEE DETAILS SHEET
S	REMOTE FIRE DEPARTMENT CONNECTION (FDC) WITH 2-1/2" NATIONAL STANDARD, SEE DETAIL SHEET. REFER TO FIRE PROTECTION PLANS FOR EXACT BUILDING ENTRY LOCATION.
T	5' DIAMETER SANITARY SEWER MANHOLE, SEE DETAILS SHEET
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HH	PROPOSED LIGHT POLE
II	BORE & JACK W/ 18" DIA. STEEL ENCASEMENT PIPE (0.25" WALL THICKNESS). 8" RESTRAINED JOINT DIP CARRIER PIPE W/ SPIDERS; REFER TO DETAIL FIGURE A106.
JJ	20' PUBLIC WATERMAIN EASEMENT
KK	PRIVATE SANITARY SEWER

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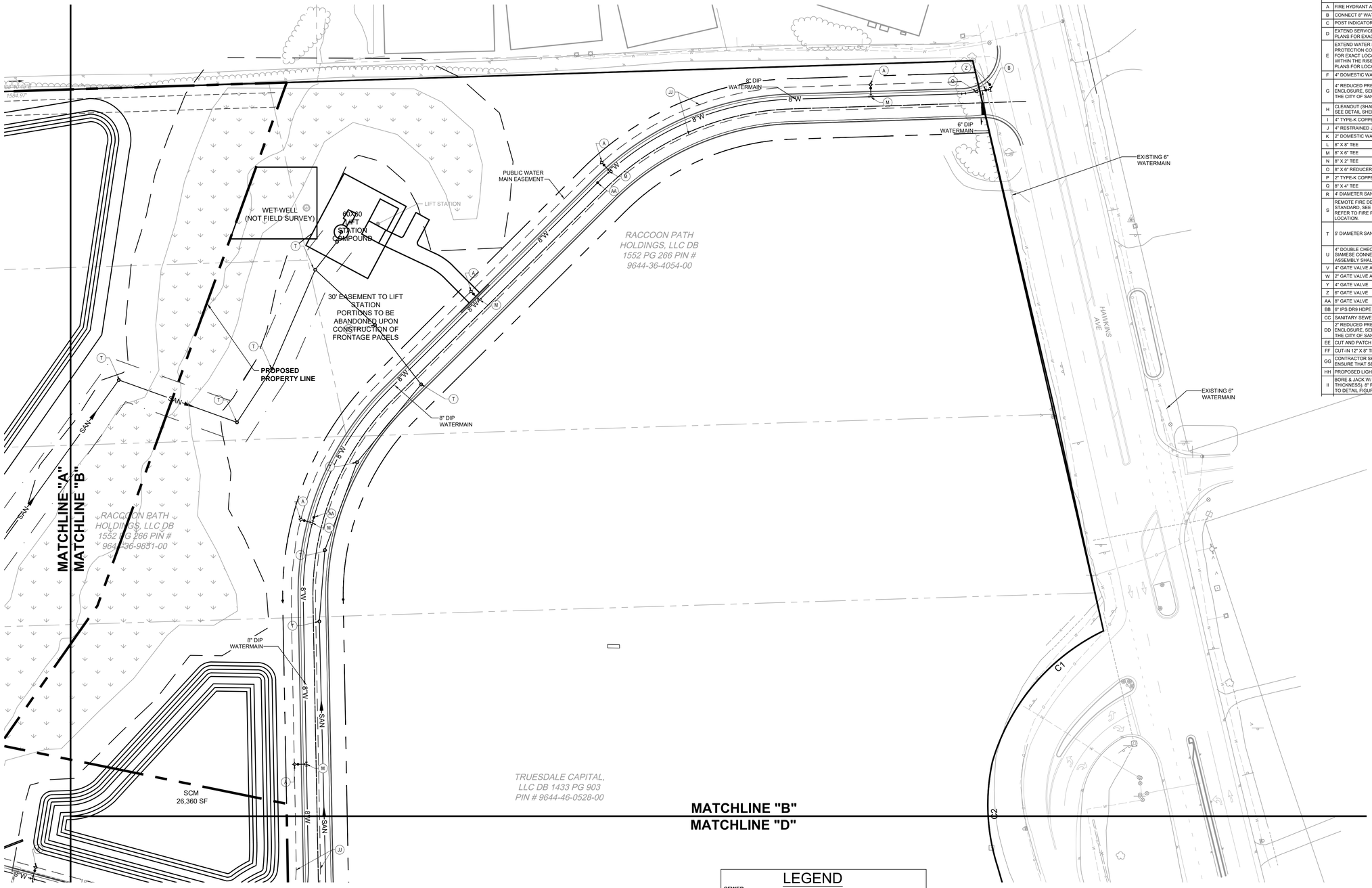
TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

UTILITY PLAN LAYOUT

JOB NO.	49074
SHEET NO.	C3.1



UTILITY KEYNOTES

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DESIGNED BY
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SCALE
1"= 40'

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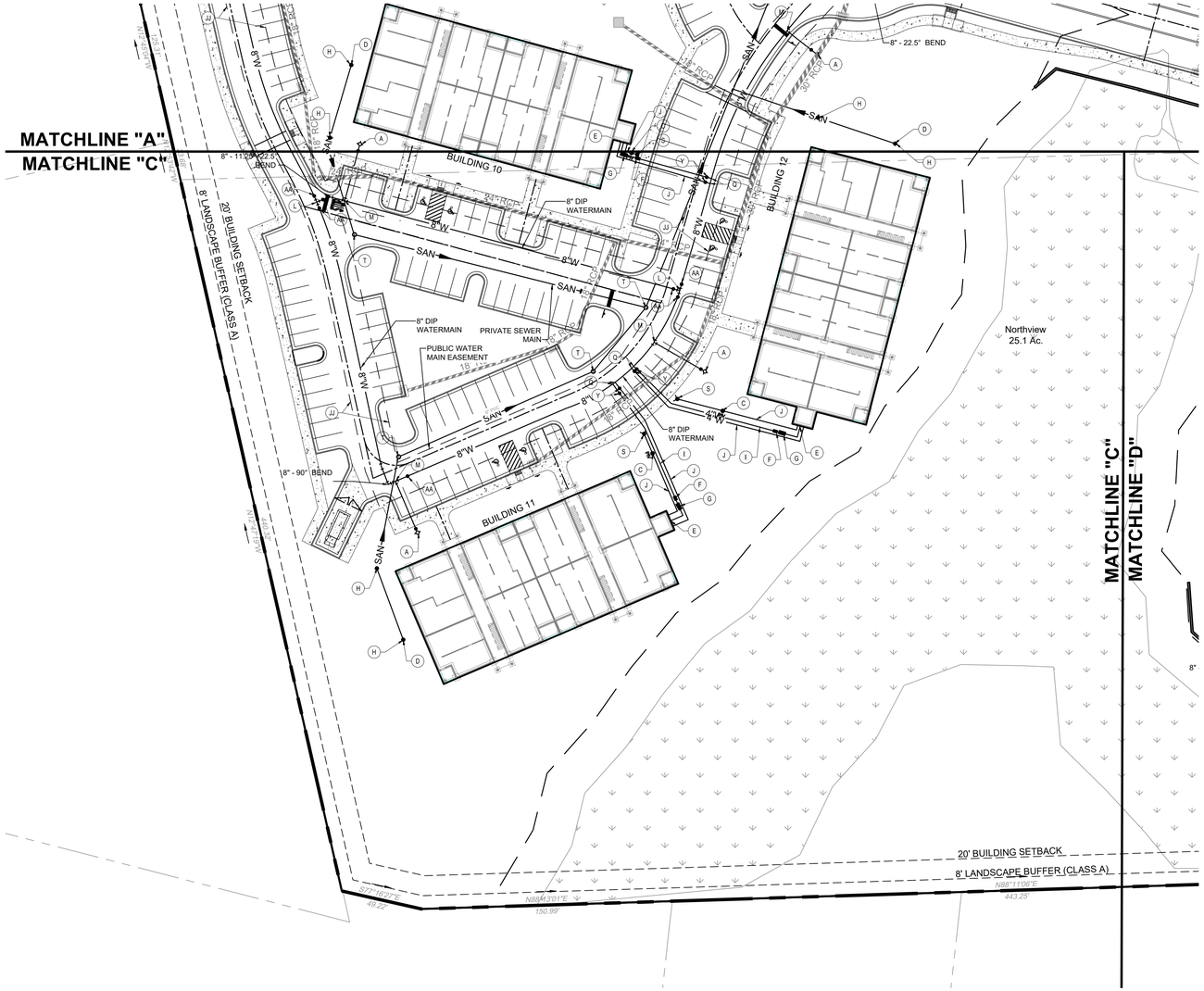
NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

UTILITY PLAN LAYOUT

JOB NO.
49074
SHEET NO.
C3.2



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NAD 83

SCALE 1"=40'

0 40' 80'

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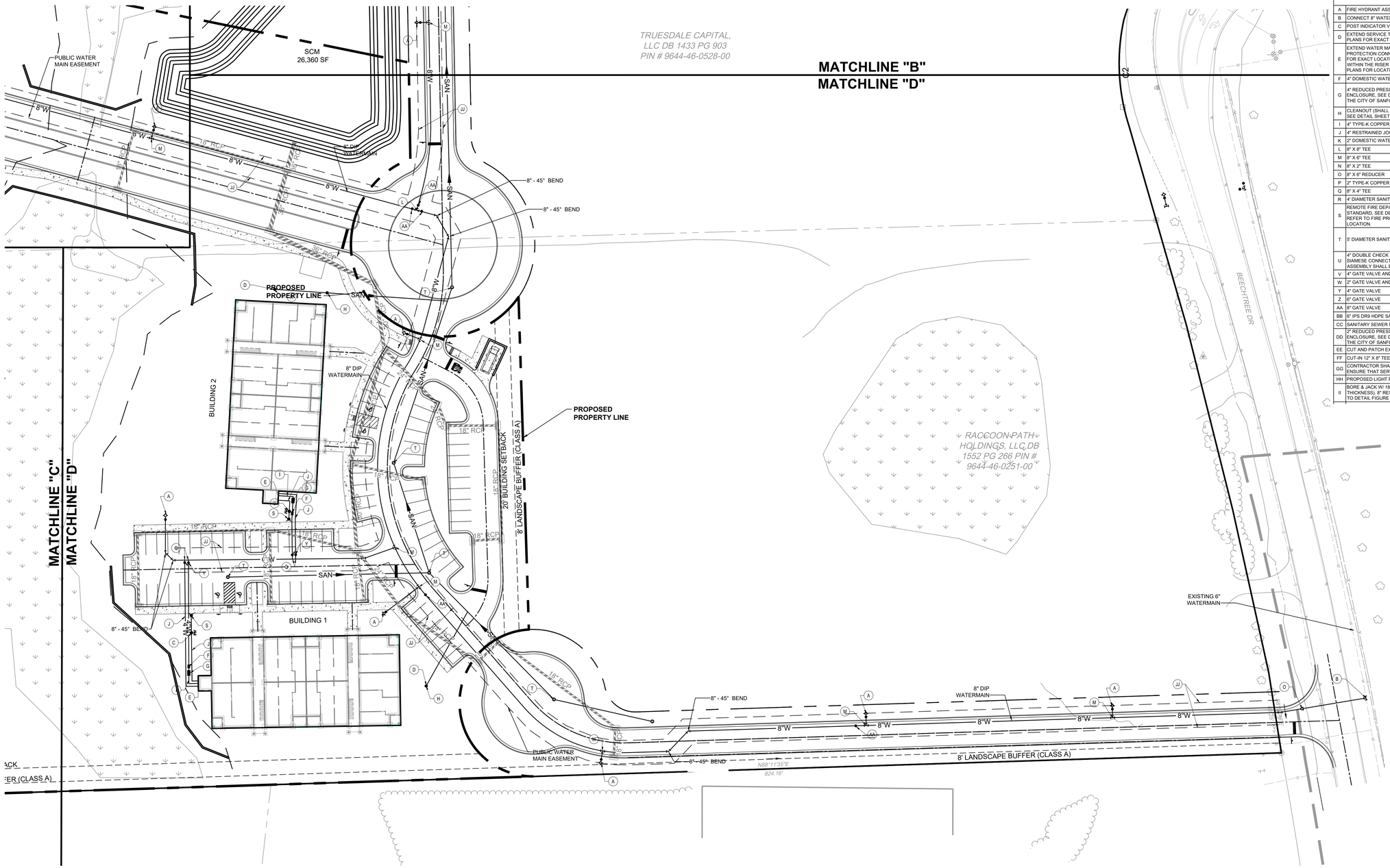
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

UTILITY PLAN LAYOUT

JOB NO. 49074

SHEET NO. C3.3



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LEGEND

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- OPEN SPACE
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NAD 83

SCALE 1"=40'

0 40' 80'

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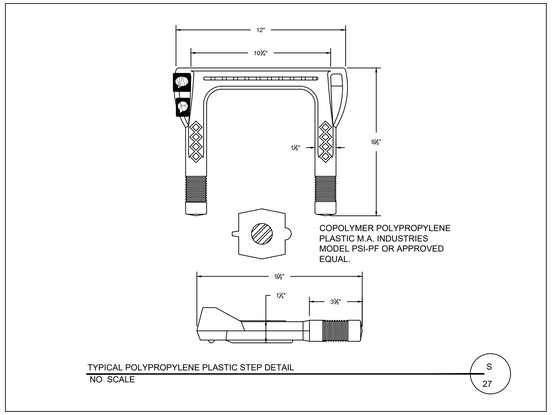
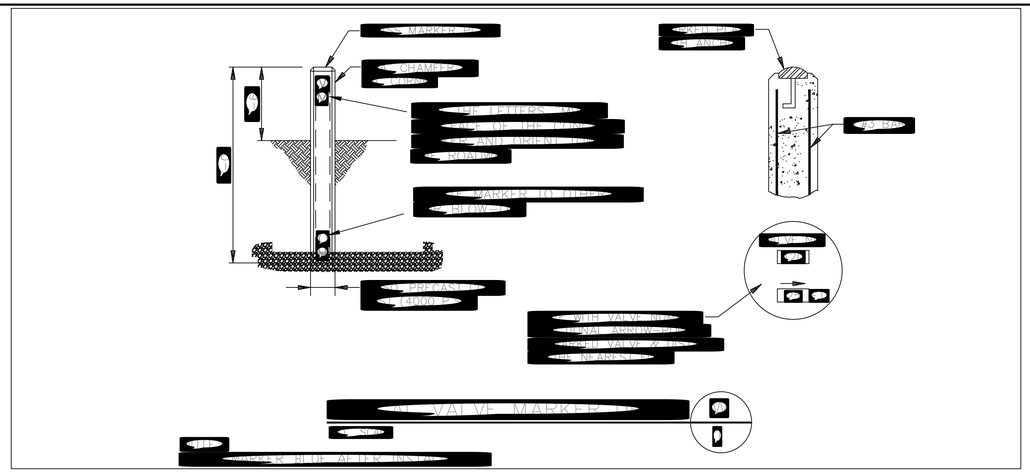
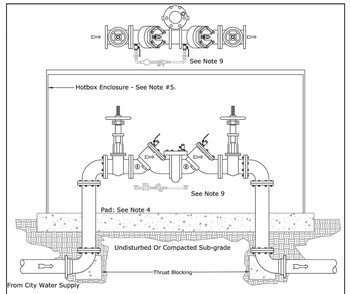


1 TYPICAL POLYPROPYLENE PLASTIC DETAIL NTS

PLAN


MARKER
CHAMBER
BOLTS
BOLTS
BOLTS



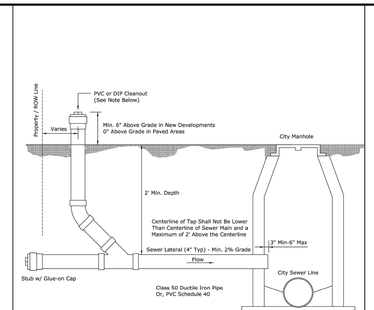
Notes:

1. All RPZs shall have positive gravity drainage.
2. All assemblies shall be installed in compliance with all applicable City of Sanford ordinances and State of NC codes.
3. Contact the City of Sanford Utilities Connections Coordinator for additional information.
4. Reduced Pressure Zone Backflow Prevention Assembly shall comply with ASSE 1013 and AWWA C511.
5. Pad shall be minimum 4" thick concrete - 3000 psi @ 28 days or approved pre-fab equivalent.
6. Hotbox enclosures shall comply with ASSE 1060.
7. If provided, electrical outlets shall be GFCI.
8. Property owner shall be responsible for freeze protection, operation, maintenance, testing and reporting.
9. Pipe supports shall be installed at valves.
10. Detector Assembly shall be included with un-metered assemblies.
11. Reduced pressure zone backflow preventers shall be constructed with positive gravity drainage.

Reduced Pressure Zone Backflow Prevention Assembly > 2"	Dwg. No. SD-W-006
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Date: 02/11/2020
	Scale: Not To Scale
	Drawn By: Staff

1 3/4" ~ 2" BACKFLOW PREVENTION ASSEMBLY — NTS

PLAN



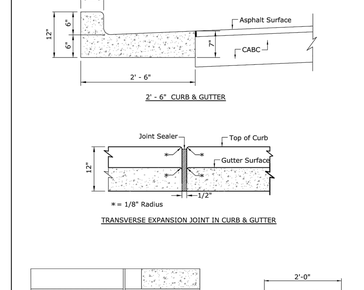
Notes:

1. Please contact the City of Sanford @ 919-777-1122 for specifications for commercial applications or laterals over 6" Ø.
2. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
3. All work within the street ROW shall be performed by a licensed utility contractor.
4. All sewer cleanout structures installed in asphalt or concrete shall be constructed with DIP risers and fittings, a traffic-rated cast iron assembly, and corrosion resistant bronze cap. Cleanout assemblies installed in non-paved surfaces shall be either DIP (as specified above, non-traffic-rated) or PVC.

Sewer Tap Into Manhole	Dwg. No. SD-S-002
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Date: 10/16/2020
	Scale: Not To Scale
	Drawn By: Staff

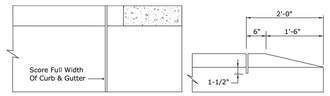
2 SEWER TAP INTO MANHOLE — NTS

PLAN



2' - 6" CURB & GUTTER

TRANSVERSE EXPANSION JOINT IN CURB & GUTTER



STANDARD METHOD OF ENDING CURB & GUTTER

Concrete Curb and Gutter	Dwg. No. SD-R-001
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Date: 07/10/14
	Scale: Not To Scale
	Drawn By: Staff

3 CONCRETE CURB AND GUTTER — NTS

PLAN

Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. Entire hydrant leg shall have minimum of 3'-0" cover. Ductile Iron Cl 50 shall otherwise be used.
3. Within the city limits of Sanford or within the Northview Fire District, the 2½" nozzles shall have City of Sanford threads (3.112" x 8 threads per inch). All other locations shall be National Standard Thread.
4. Restrained joints required throughout fire hydrant assembly except where otherwise noted.
5. Hydrant weep hole shall be a minimum of 2" above the concrete thrust block.

Fire Hydrant Assembly	Dwg. No. SD-W-009
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Date: 02/11/2020
	Scale: Not To Scale
	Drawn By: Staff

4 FIRE HYDRANT ASSEMBLY — NTS

PLAN

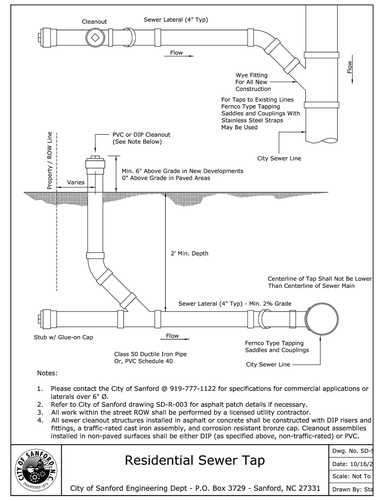
Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. Blow-Off assembly shall not be located in street pavement.
3. A saddle will be allowed in lieu of tapping a mechanical joint plug.

Two Inch Blow-Off Assembly	Dwg. No. SD-W-008
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Date: 02/11/2020
	Scale: Not To Scale
	Drawn By: Staff

5 TWO INCH BLOW-OFF ASSEMBLY — NTS

PLAN



Notes:

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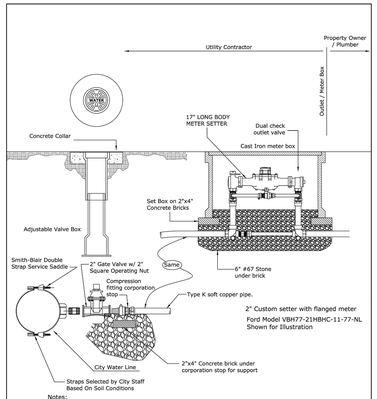
3. All work within the street ROW shall be performed by a licensed utility contractor.
4. All sewer cleanout structures installed in asphalt or concrete shall be constructed with DIP risers and fittings, a traffic-rated cast iron assembly, and corrosion resistant bronze cap. Cleanout assemblies installed in non-paved surfaces shall be either DIP (as specified above, non-traffic-rated) or PVC.

Residential Sewer Tap	Dwg. No. SD-S
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Date: 10/16/2
	Scale: Not To
	Drawn By: Sta

6 RESIDENTIAL SEWER TAP — NTS

PLAN



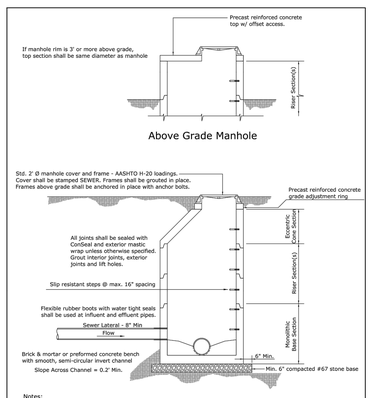
Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. Use high bypass models only.
3. Meters furnished by City.
4. Place washed stone under and around pipe to protect corporation stop.
5. Mueller or Ford brass valves, yoke fittings, and stops shall be provided.

Tap & Meter w/ Custom Setter	Dwg. No. SD-W-002
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Date: 06/30/2020
	Scale: Not To Scale
	Drawn By: Staff

7 TAP & METER W/ CUSTOM SETTER — NTS

PLAN



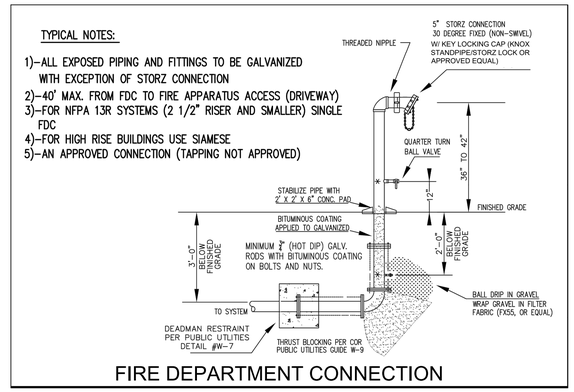
Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. In paved or traffic areas manhole frame and cover shall be at grade. In other non-traffic areas frame and cover shall be a min. of 1" above grade.

Sanitary Sewer Manhole	Dwg. No. SD-S-003
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Date: 10/16/2020
	Scale: Not To Scale
	Drawn By: Staff

8 SANITARY SEWER MANHOLE — NTS

PLAN



9 FIRE DEPARTMENT CONNECTION — NTS

PLAN

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
UTILITIES DETAILS AND NOTES

REVISION DESCRIPTION	DATE

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SCALE

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JOB NO.
49074
SHEET NO.
C3.6

Documents\Utility Sheet (v2).dgn

GENERAL NOTES

1. ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, VALVE BOXES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISHED GRADES.
2. ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNER'S INDEPENDENT TESTING LABORATORY.
3. ALL SPOT ELEVATIONS INDICATED ARE AT BACK OF CURB, UNLESS OTHERWISE INDICATED.
4. SITE IS NOT WITHIN 100 YEAR FLOOD PLAIN.
5. ALL ELEVATIONS ARE BASED ON NC GRID NORTH (NAD 83).
6. A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING AND INSTALLATION OF EROSION CONTROL.
7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
8. ALL HANDICAP PARKING SPACES AND STRIPED ACCESSIBILITY AISLES ARE TO HAVE NO MORE THAN A 1:50 SLOPE IN ALL DIRECTIONS.
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NAD 83

SCALE 1"=100'

0 100' 200'

PRIVATE STORMWATER EASEMENTS ARE SUBJECT TO CHANGE WITH CONSTRUCTION PLAN REVIEW

GENERAL CONTRACTOR:
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ALL ROOF DRAINS TO BE DISCHARGED TO NEARBY STORM STRUCTURES

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NORTHVIEW APARTMENTS

SANFORD DISTRICT - - LEE COUNTY - NORTH CAROLINA

GRADING OVERALL

JOB NO.
49074
SHEET NO.
C4.0

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NAD 83

SCALE 1"=40'

0 40' 80'

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NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

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SHEET NO. C4.1

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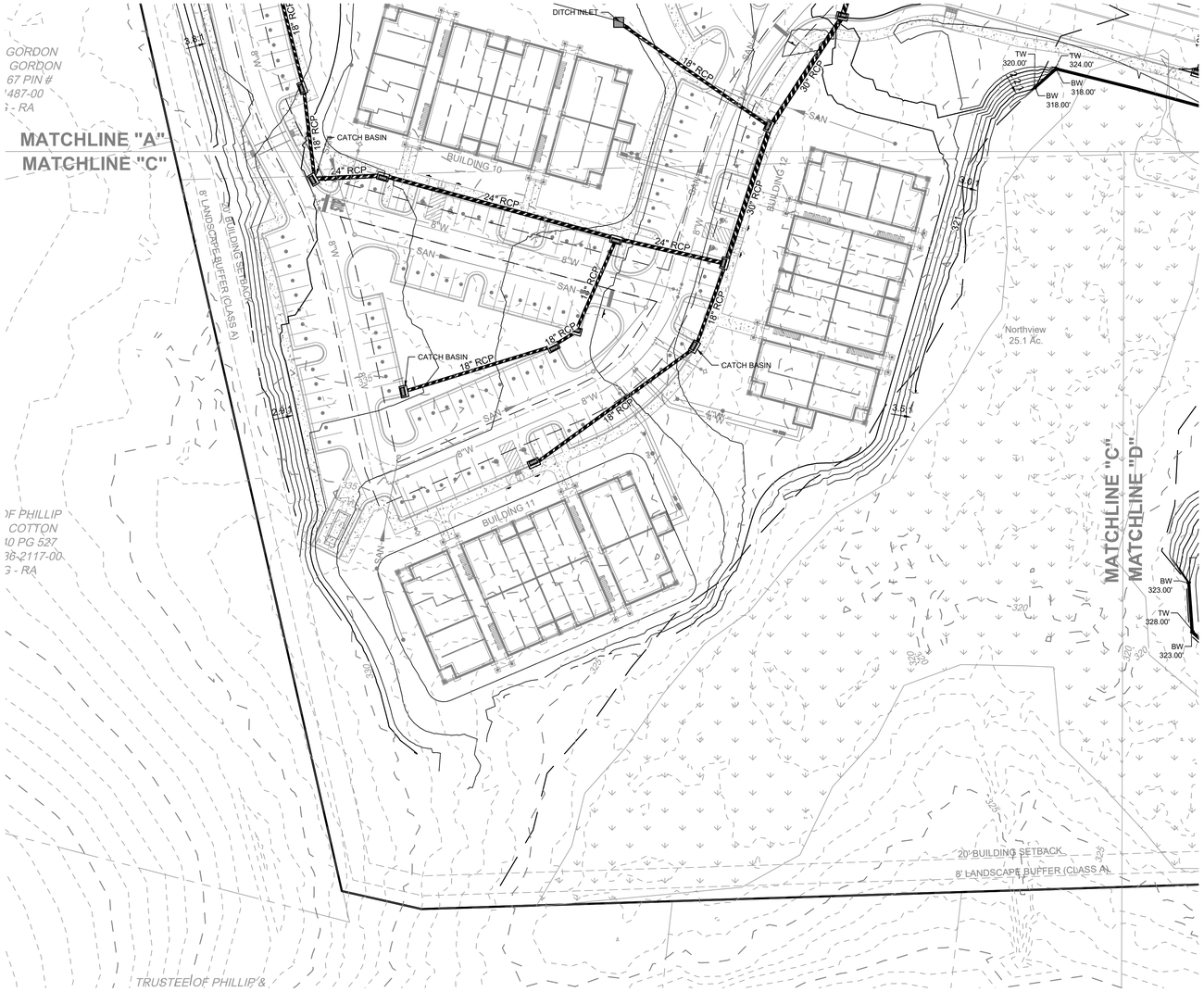

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SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

GRADING LAYOUT

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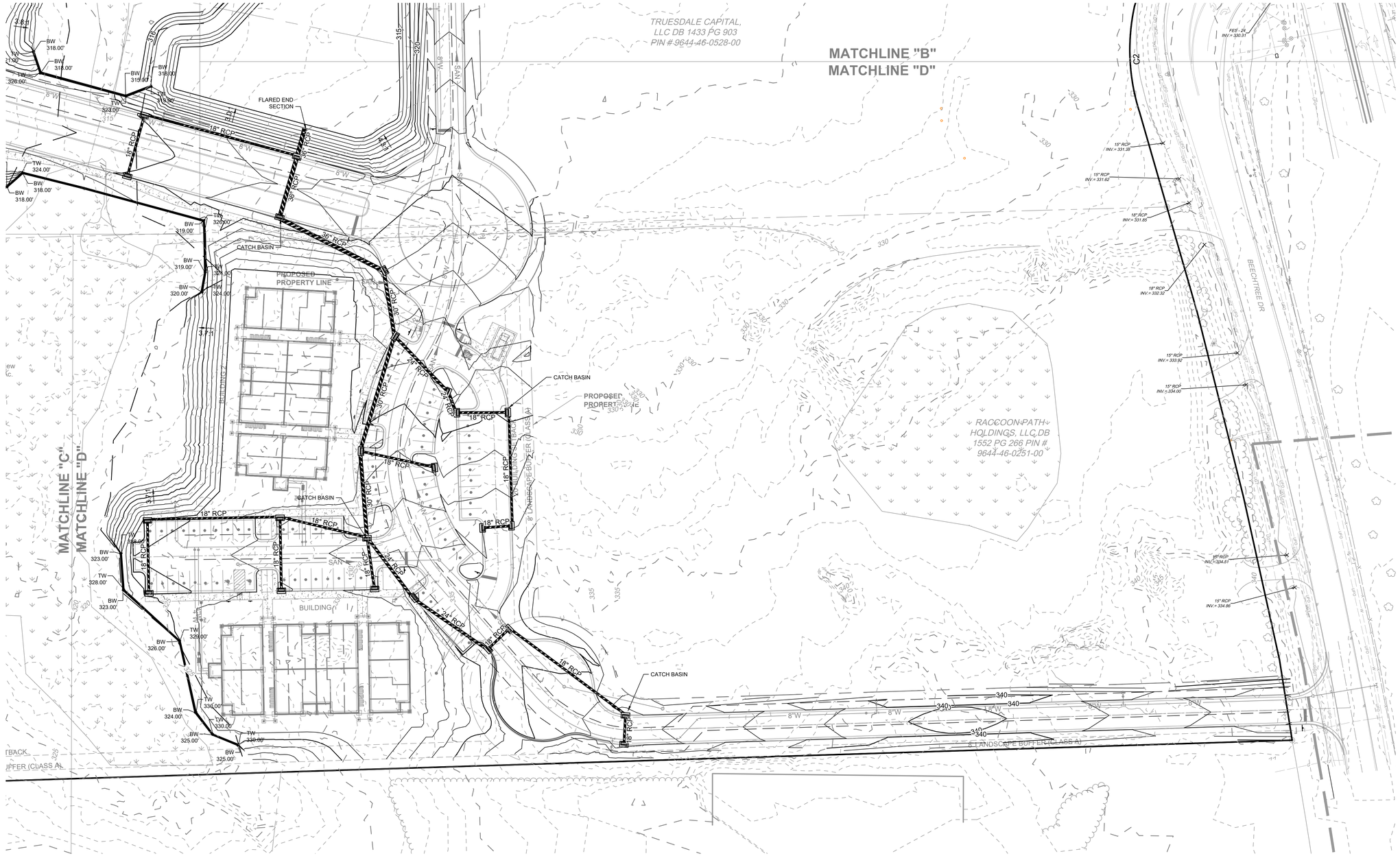
SHEET NO. C4.3



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DATE 6/28/2022
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DESIGNED BY 331
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NORTHVIEW APARTMENTS

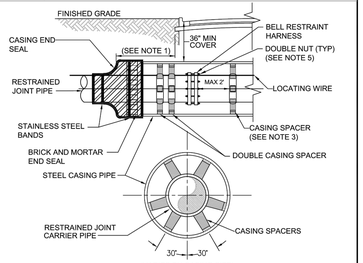
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

GRADING LAYOUT

JOB NO. 49074

SHEET NO. C4.4

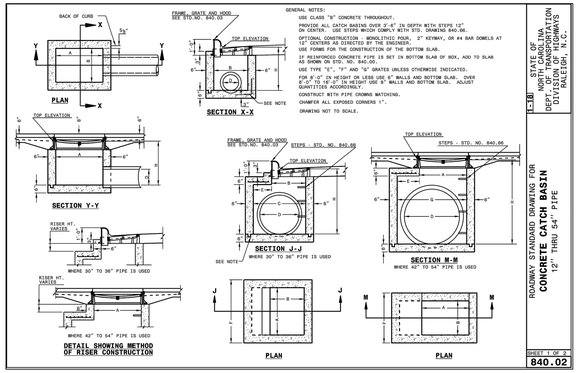
DATE: February 11, 2011 | **BORE AND JACK** | **FIGURE A106**



(VARIES BY CASING SIZE)

CARRIER PIPE NOMINAL DIAMETER	4	6	8	10	12	16	20	24	30	36	42
MINIMUM CASING OUTSIDE DIAMETER (INCHES)	16	16	18	20	24	30	36	42	48	54	60
MINIMUM CASING WALL THICKNESS (INCHES)	.250"	.250"	.250"	.250"	.250"	.312"	.375"	.500"	.500"	.500"	.500"

NOTES:
1. CASING SHALL EXTEND A MINIMUM OF TEN FEET BEYOND THE EDGE OF PAVEMENT OR MEET FDOT REQUIREMENTS, WHICHEVER IS GREATER.
2. REQUIREMENTS OF OTHER JURISDICTIONS SHALL BE MET. WHEN CONSTRUCTION IS WITHIN FDOT JURISDICTION, ADDITIONAL REQUIREMENTS OF THE "FDOT UTILITY ACCOMMODATION GUIDE" SHALL BE MET.
3. DISTANCE BETWEEN SPACERS TO BE PER MANUFACTURER'S SPECIFICATIONS, OR MAX OF 6.5', WHICHEVER IS MORE STRINGENT.
4. USE OF FLOWABLE FILL IN THE ANNULAR SPACE BETWEEN THE CASING AND CARRIER PIPE IS PROHIBITED.
5. PIPE IN CASING SHALL HAVE A MECHANICAL BELL RESTRAINT HARNESS WHERE RODS ARE DOUBLE NUTTED TO PRECLUDE OVERBELLING THE JOINT DURING PUSHING CARRIER PIPE CASING.



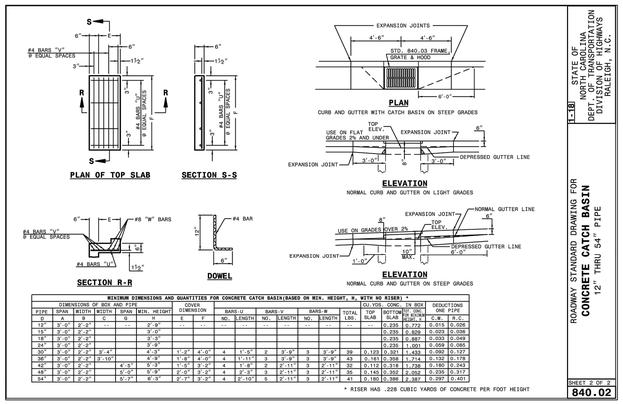
GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" OPTIONAL CONSTRUCTION JOINT AT TOP OF BOX PER STD. DRAWING 840.66.
ADDITIONAL CONTRIBUTORY HORIZONTAL REBAR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS 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.

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

1-18

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

SHEET 1 OF 2
840.02



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

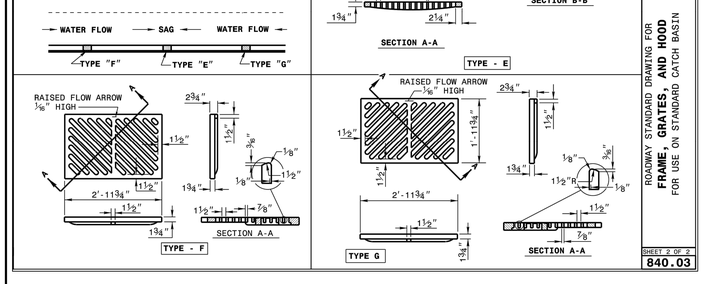
DIMENSIONS OF BOX AND PIPE						COVER DIMENSION		BARS-U		BARS-V		BARS-W		TOTAL LBS.	TOP SLAB	BOTTOM SLAB	CONC. IN BOX (CU. YDS.)	DEDUCTIONS ONE PIPE	
PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT			NO.	S.SMITH	NO.	S.SMITH	NO.	S.SMITH					C.B.	R.C.
D	A	B	C	G	H	E	F												
12"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	0.235	0.172	0.015	0.026	
15"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	0.235	0.828	0.023	0.026	
18"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	0.235	0.887	0.033	0.049	
24"	3'-0"	2'-2"	--	--	2'-9"	--	--	--	--	--	--	--	--	--	0.235	1.001	0.050	0.087	
30"	3'-0"	2'-2"	3'-4"	--	4'-3"	1'-2"	4'-0"	4	1'-8"	2	3'-8"	3	3'-8"	39	0.183	1.268	0.089	0.127	
36"	3'-0"	2'-2"	3'-10"	--	4'-9"	1'-8"	4'-0"	4	1'-11"	3	3'-8"	3	3'-8"	43	0.183	2.308	1.414	0.132	0.178
42"	3'-0"	2'-2"	--	4'-5"	5'-3"	1'-11"	3'-2"	4	1'-8"	3	2'-11"	3	2'-11"	32	0.112	0.318	1.728	0.180	0.243
48"	3'-0"	2'-2"	--	5'-0"	5'-9"	2'-0"	3'-2"	4	2'-3"	3	2'-11"	35	0.145	0.352	2.050	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	0.396	1.367	0.297	0.401

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

1 BORE AND JACK
PLAN — NTS

2 CONCRETE CATCH BASIN
PLAN — NTS

3 CONCRETE CATCH BASIN
PLAN — NTS

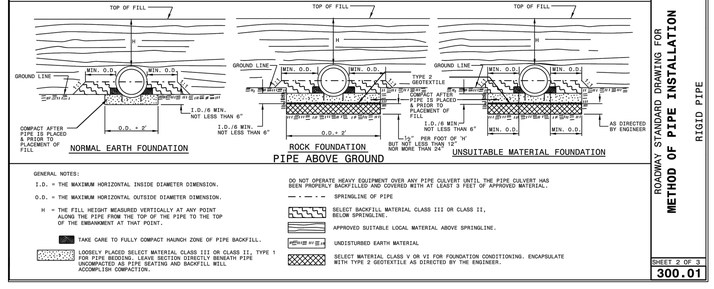


STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

1-18

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

SHEET 2 OF 2
840.03



GENERAL NOTES:
I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.
TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

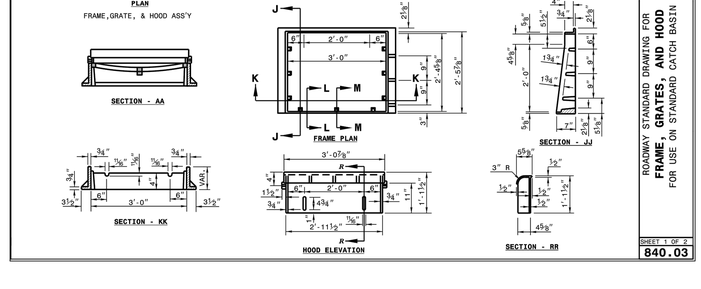
DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.
SPRINGLINE OF PIPE
SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.
APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.
UNDISTURBED EARTH MATERIAL
SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE 2 GEOTEXTILE AS DIRECTED BY THE ENGINEER.

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

1-18

ROADWAY STANDARD DRAWING FOR
METHOD OF PIPE INSTALLATION
RIGID PIPE

SHEET 2 OF 3
300.01



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

1-18

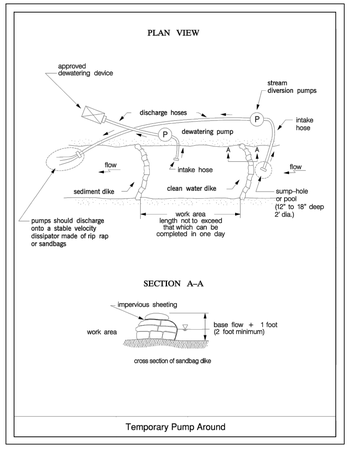
ROADWAY STANDARD DRAWING FOR
FRAME, GRATES, AND HOOD
FOR USE ON STANDARD CATCH BASIN

SHEET 1 OF 2
840.03

4 FRAME, GRATES, AND HOOD
PLAN — NTS

5 METHOD OF PIPE INSTALLATION
PLAN — NTS

6 FRAME, GRATES, AND HOOD
PLAN — NTS



Temporary Pump Around

7 TEMPORARY PUMP AROUND
PLAN — NTS

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
GRADING DETAILS AND NOTES

JOB NO. 49074
SHEET NO. C4.5

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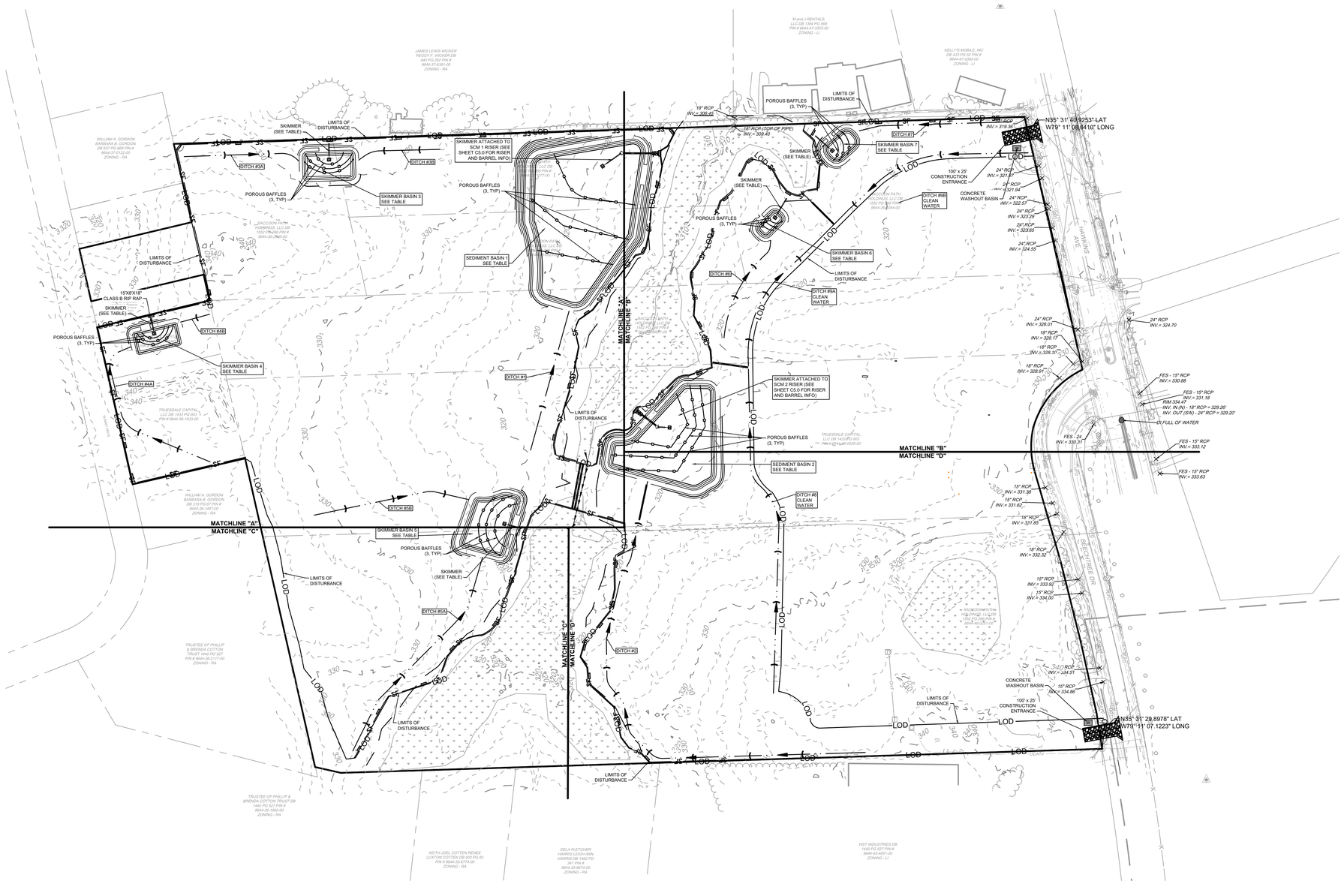

GENERAL NOTES

1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING HIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
5. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
6. A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
8. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC ARES.
11. ALL CUT AND FILL SLOPES ARE TO BE AT A 2.5:1 MAXIMUM.
12. PROVIDE CITY OF SANFORD AND NCDOT APPROVALS PRIOR TO PRE-CONSTRUCTION MEETING.

EROSION CONTROL LEGEND

- LOD — LIMITS OF DISTURBANCE
- STOCKPILE AREA
- SF SF SF — SILT FENCE
- POROUS BAFFLE
- TEMPORARY DIVERSION DITCH
- CLEAN WATER DIVERSION DITCH
- SILT FENCE STONE OUTLET
- EMERGENCY SPILLWAY / RIP RAP APRON
- CHECK DAM
- CONSTRUCTION ENTRANCE
- TEMPORARY INLET PROTECTION
- CONCRETE WASHOUT
- HORSESHOE INLET PROTECTION
- SKIMMER

NCDENR SELF-INSPECTION PROGRAM

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED.

RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS A PDF FROM THE NCDEQ WEB SITE: HTTPS://DEQ.NC.GOV/ABOUT/DIVISIONS/ENERGY-MINERAL-LAND-RESOURCES/EROSION-SEDIMENT-CONTROL/FORMS

TEMPORARY STOCKPILE NOTES

1. 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.
2. 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.
3. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
4. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).
5. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
6. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.

STREAM CROSSING CONSTRUCTION SEQUENCE

1. SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT AT NCDEQ PRIOR TO BEGINNING CONSTRUCTION. OBTAIN A LAND DISTURBING PERMIT.
2. CONTRACTOR WILL ATTEMPT TO COORDINATE CONSTRUCTION DURING A TWO WEEK TIMEFRAME OF DRY WEATHER.
3. SANDBAG DIKE WILL BE CONSTRUCTED ON THE UPSTREAM END WITH A PUMP AROUND USED AS NECESSARY.
4. DE-WATER WORK AREA UTILIZING A FILTER BAG.
5. WHEN PUMP AROUND IS IN USE, THE HOSE WILL BE CONTAINED IN THE CULVERT TO AVOID CROSSING THE ROAD. AT THE END OF EACH WORKING DAY, SITE WILL BE CLEARED OF MEASURES TO ALLOW STREAM WATER TO FLOW NATURALLY.
6. BEGIN CLEARING AND GRUBBING. KEEP CLEARING AND EXCAVATION OF THE STREAM BANKS, BED, AND APPROACH TO A MINIMUM.
7. INSTALL CULVERTS/HEADWALL AND BACKFILL PROPERLY.
8. INSTALL DISSIPATER PADS AT PIPE OUTLETS.
9. STABILIZE ALL DISTURBED AREAS BEFORE REMOVING SANDBAG DIKE UPSTREAM. WHEN CULVERT EXTENSIONS ARE COMPLETE AND AREAS ARE STABILIZED COMPLETELY, CALL NCDEQ FOR AN INSPECTION BY THE ENVIRONMENTAL CONSULTANT.

MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6-INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

LIMITS OF DISTURBANCE

24.37AC. OF 43.12 AC TOTAL INCLUDES EASEMENT ROADS AND STORMWATER IMPROVEMENTS

19.84 AC OF 25.1± OF SITE SPECIFIC IMPROVEMENTS

SEDIMENT TRAPS AND BARRIERS

(Chapter 6-VII of the NCDEQ E&SC Planning and Design Manual)

BASIN ID	BASIN TYPE	DRAINAGE AREA PRE (AC)	DRAINAGE AREA POST (AC)	DISTURBED AREA (AC)	i(10)	C	Q10 (DISTURBED) (CFS)	REQUIRED VOLUME (CF)	PROVIDED VOLUME (CF)	BASIN LENGTH (FT)	BASIN WIDTH (FT)	BASIN DEPTH (FT)	SURFACE AREA REQ' (SF)	SURFACE AREA PROV'D (SF)	BOTTOM ELEV (FT)	WEIR ELEV (FT)	WEIR LENGTH (FT)	Q10 TOTAL DA (CFS)	FLOW DEPTH (FT)	DEWATER DEVICE	SKIMMER SIZE (IN)	SKIMMER ORIFICE DIA (IN)	DEWATER TIME (DAYS)
DEVICE 1	SEDIMENT BASIN	8.03		8.03	7.64	0.50	30.67	14,454	96,047	290	140	2.0	13,343	45422	315.00	317.00	30	30.67	0.49	SKIMMER	2.5	2	3.43
DEVICE 2	SEDIMENT BASIN	5.24		5.24	7.64	0.50	20.02	9,432	44,996	198	135	2.0	8,707	24394	315.00	317.00	35	20.02	0.33	SKIMMER	2.0	1.5	4.44
DEVICE 3	SKIMMER BASIN	1.93		1.93	7.64	0.50	7.37	3,474	7,668	100	58	2.0	2,396	4613	326.00	328.00	10	7.37	0.39	SKIMMER	1.5	1.25	2.72
DEVICE 4	SKIMMER BASIN	1.28		1.28	7.64	0.50	4.89	2,304	4,848	100	60	2.0	1,589	3083	333.00	335.00	10	4.89	0.30	SKIMMER	1.5	1	2.82
DEVICE 5	SKIMMER BASIN	3.82		3.82	7.64	0.50	14.59	6,876	14,524	120	84	2.0	4,743	8333	319.00	321.00	30	14.59	0.30	SKIMMER	1.5	1.5	3.74
DEVICE 6	SKIMMER BASIN	0.51		0.51	7.64	0.50	1.95	918	2,046	60	25	2.0	633	1417	314.00	316.00	5	1.95	0.25	SKIMMER	1.5	0.5	4.50
DEVICE 7	SKIMMER BASIN	0.88		0.88	7.64	0.50	3.36	1,584	3,792	72	46	2.0	1,093	2403	314.00	316.00	5	3.36	0.37	SKIMMER	1.5	0.75	3.45

TEMPORARY CHANNEL AND DIVERSION SCHEDULE

(Chapter 8.05 of the NCDEQ E&SC Planning and Design Manual)

NAME	LENGTH (FT)	DA (AC)	ACCUM. DA (AC)	C	I_{10} (IN/HR)	Q_{10} (CFS)	SLOPE (FT/FT)	N VALUE	V (FT/S)	SHEAR (PSF)	FLOW DEPTH (FT)	FLOW AREA (FT^2)	Wp (FT)	R (FT)	SWALE DEPTH (IN)	SIDE SLOPE (H:V)	TEMPORARY LINING
DITCH #1	266	3.95		0.50	7.64	15.09	0.005	0.020	3.59	0.37	1.19	4	7.50	0.56	24	3:1	NAG C125
DITCH #2	950	3.17		0.50	7.64	12.11	0.020	0.021	5.50	1.07	0.86	2	5.44	0.41	24	3:1	NAG C125
DITCH #3A	204	0.93		0.50	7.64	3.55	0.016	0.022	3.57	0.57	0.58	1	3.67	0.27	24	3:1	NAG C125
DITCH #3B	130	0.56		0.50	7.64	2.22	0.026	0.022	4.11	0.79	0.49	1	3.10	0.23	24	3:1	NAG C125
DITCH #4A	346	0.56		0.50	7.64	2.14	0.006	0.022	2.22	0.22	0.58	1	3.67	0.27	24	3:1	NAG C125
DITCH #4B	56	0.17		0.50	7.64	0.63	0.003	0.022	0.94	0.05	0.27	0	1.71	0.13	24	3:1	NAG C125
DITCH #5A	444	1.33		0.50	7.64	5.08	0.014	0.022	3.77	0.60	0.67	1	4.24	0.32	24	3:1	NAG C125
DITCH #5B	290	1.28		0.50	7.64	4.89	0.025	0.022	4.66	0.95	0.60	1	3.79	0.28	24	3:1	NAG C125
DITCH #6	206	0.51		0.50	7.64	1.96	0.016	0.022	3.08	0.46	0.47	1	2.97	0.22	24	3:1	NAG C125
DITCH #7	284	0.87		0.50	7.64	3.31	0.018	0.022	3.71	0.62	0.55	1	3.48	0.26	24	3:1	NAG C125
DITCH #8	619	8.46		0.50	7.64	32.32	0.028	0.022	7.99	2.20	1.24	5	7.84	0.59	24	3:1	NAG C125
DITCH #8A	321	3.20		0.50	7.64	12.21	0.006	0.022	3.58	0.45	1.15	4	7.27	0.55	24	3:1	NAG C125
DITCH #8B	403	0.89		0.50	7.64	3.42	0.022	0.022	4.15	0.77	0.57	1	3.60	0.27	24	3:1	NAG C125

PERMISSIBLE VELOCITY/SHEAR

CHANNEL LINING		PERMISSIBLE SHEAR (PSF)	PERMISSIBLE VELOCITY (FT/S)
TEMP.	STRAW W/ TACK	1.45	2.0
	NAG C125	2.25	10.0
PERM.	GRASS	2.00	5.0
	NAG C350	3.20	10.5

NAD 83

SCALE 1"=100'

0 100' 200'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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SCALE

1"= 100'

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49074

SHEET NO.

C5.0

PROGRESS DRAWINGS - DO NOT USE FOR CONSTRUCTION

TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

EROSION CONTROL PLAN - OVERALL - STAGE 1

EROSION CONTROL LEGEND

- LOD — LIMITS OF DISTURBANCE
- STOCKPILE AREA
- SF SF SF — SILT FENCE
- POROUS BAFFLE
- TEMPORARY DIVERSION DITCH
- CLEAN WATER DIVERSION DITCH
- SILT FENCE STONE OUTLET
- EMERGENCY SPILLWAY / RIP RAP APRON
- CHECK DAM
- CONSTRUCTION ENTRANCE
- TEMPORARY INLET PROTECTION
- W — CONCRETE WASHOUT
- HORSESHOE INLET PROTECTION
- S — SKIMMER

SKIMMER (SEE TABLE)

LIMITS OF DISTURBANCE

DITCH #3A

DITCH #3B

SKIMMER ATTACHED TO SCM 1 RISER (SEE SHEET C5.0 FOR RISER AND BARREL INFO)

POROUS BAFFLES (3, TYP)

SKIMMER BASIN 3 SEE TABLE

RACCOON PATH HOLDINGS, LLC DB 1552 PG 266 PIN # 9644-37-7077-00

RACCOON PATH HOLDINGS, LLC DB 1552 PG 266 PIN # 9644-36-2998-00

POROUS BAFFLES (3, TYP)

SEDIMENT BASIN 1 SEE TABLE

RACCOON PATH HOLDINGS, LLC DB 1552 PG 266 PIN # 9644-36-8923-00

LIMITS OF DISTURBANCE

15'X8'X18" CLASS B RIP RAP

SKIMMER (SEE TABLE)

DITCH #4B

POROUS BAFFLES (3, TYP)

SKIMMER BASIN 4 SEE TABLE

DITCH #4A

TRUESDALE CAPITAL, LLC DB 1433 PG 903 PIN # 9644-36-1633-00

DITCH #1

LIMITS OF DISTURBANCE

WILLIAM A. GORDON BARBARA B. GORDON DB 319 PG 67 PIN # 9644-36-1487-00 ZONING - RA

MATCHLINE "A"
MATCHLINE "C"

DITCH #5B

SKIMMER BASIN 5 SEE TABLE

POROUS BAFFLES (3, TYP)

MATCHLINE "A"
MATCHLINE "B"

RACCOON PATH HOLDINGS, LLC DB 1552 PG 266 PIN # 9644-36-

NAD 83

SCALE 1"=40'
0 40' 80'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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REVISION DESCRIPTION

DATE

PROGRESS DRAWINGS - DO NOT USE FOR CONSTRUCTION

DATE 6/28/2022
DRAWN BY 331
DESIGNED BY 331
CHECKED BY 331
SCALE 1"= 40'

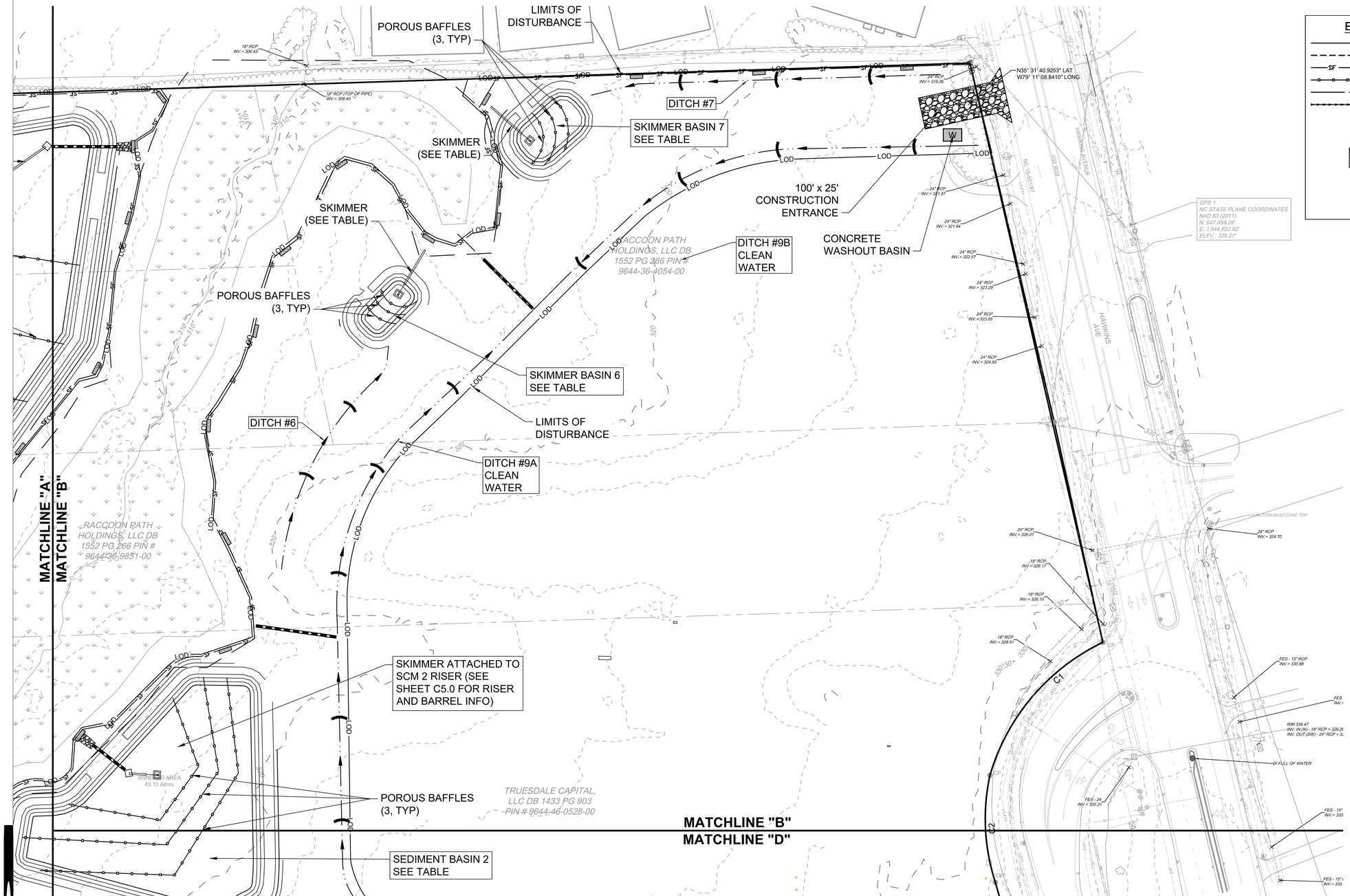
TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

EROSION CONTROL PLAN LAYOUT - STAGE 1

JOB NO. 49074
SHEET NO. C5.1



EROSION CONTROL LEGEND

- LOD — LIMITS OF DISTURBANCE
- STOCKPILE AREA
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- CHECK DAM
- CONSTRUCTION ENTRANCE
- TEMPORARY INLET PROTECTION
- W — CONCRETE WASHOUT
- HORSESHOE INLET PROTECTION
- SKIMMER

SCALE 1"=40'
0 40' 80'

NAD 83

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DATE	6/28/2022
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SCALE	1"= 40'

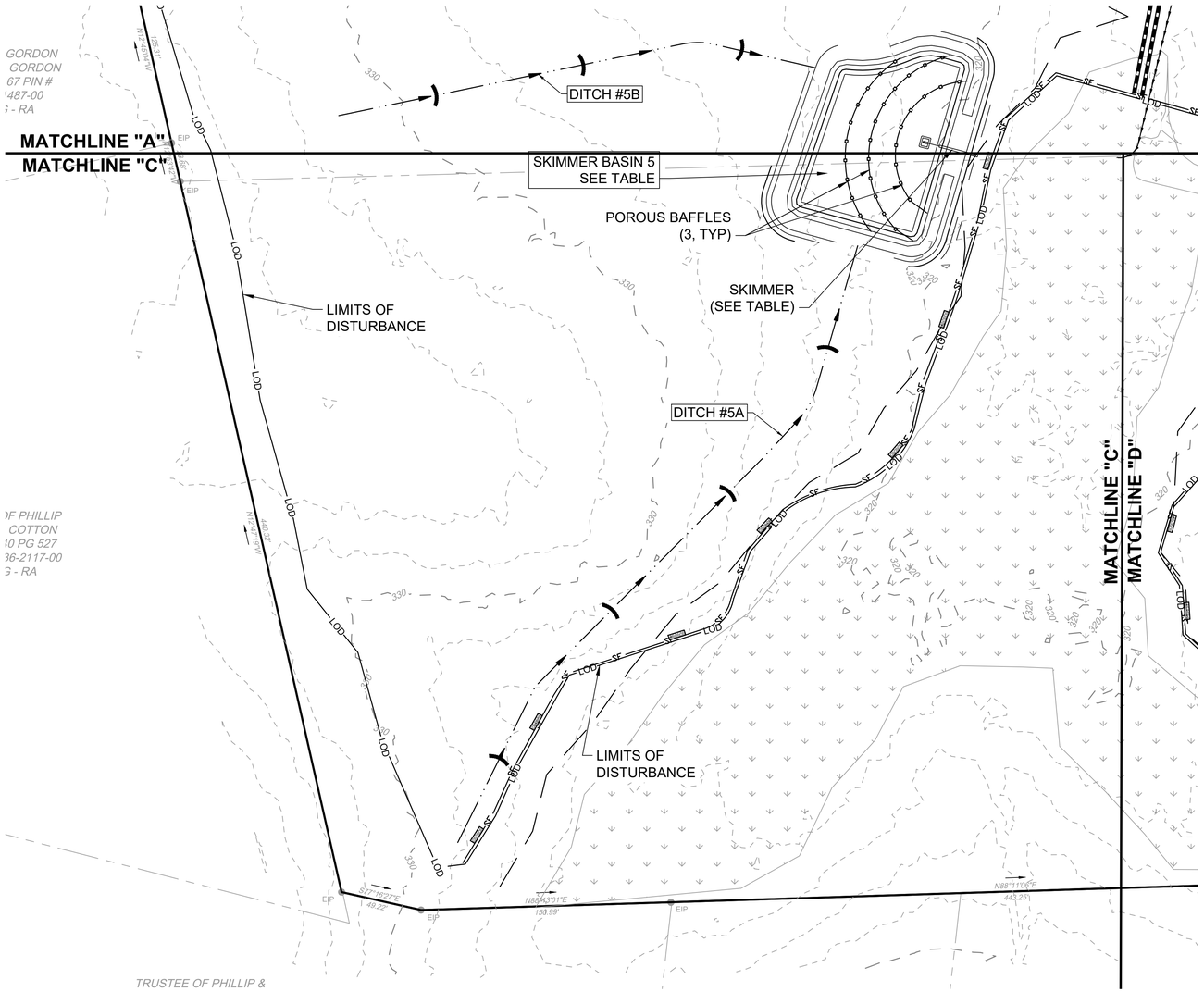
TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

EROSION CONTROL PLAN LAYOUT - STAGE 1

JOB NO.	49074
SHEET NO.	C5.2



GENERAL NOTES

1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING HIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
5. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
6. A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
8. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC ARES.
11. ALL CUT AND FILL SLOPES ARE TO BE AT A 2.5:1 MAXIMUM.
12. PROVIDE CITY OF SANFORD AND NCDOT APPROVALS PRIOR TO PRE-CONSTRUCTION MEETING.

EROSION CONTROL LEGEND

- LOD — LIMITS OF DISTURBANCE
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NCDENR SELF-INSPECTION PROGRAM

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED.

RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS A PDF FROM THE NCDEQ WEB SITE: HTTPS://DEQ.NC.GOV/ABOUT/DIVISIONS/ENERGY-MINERAL-LAND-RESOURCES/EROSION-SEDIMENT-CONTROL/FORMS

TEMPORARY STOCKPILE NOTES

1. 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.
2. 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.
3. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
4. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).
5. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
6. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.

STREAM CROSSING CONSTRUCTION SEQUENCE

1. SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT AT NCDEQ PRIOR TO BEGINNING CONSTRUCTION. OBTAIN A LAND DISTURBING PERMIT.
2. CONTRACTOR WILL ATTEMPT TO COORDINATE CONSTRUCTION DURING A TWO WEEK TIMEFRAME OF DRY WEATHER.
3. SANDBAG DIKE WILL BE CONSTRUCTED ON THE UPSTREAM END WITH A PUMP AROUND USED AS NECESSARY.
4. DE-WATER WORK AREA UTILIZING A FILTER BAG.
5. WHEN PUMP AROUND IS IN USE, THE HOSE WILL BE CONTAINED IN THE CULVERT TO AVOID CROSSING THE ROAD. AT THE END OF EACH WORKING DAY, SITE WILL BE CLEARED OF MEASURES TO ALLOW STREAM WATER TO FLOW NATURALLY.
6. BEGIN CLEARING AND GRUBBING, KEEP CLEARING AND EXCAVATION OF THE STREAM BANKS, BED, AND APPROACH TO A MINIMUM.
7. INSTALL CULVERTS/HEADWALL AND BACKFILL PROPERLY.
8. INSTALL DISSIPATER PADS AT PIPE OUTLETS.
9. STABILIZE ALL DISTURBED AREAS BEFORE REMOVING SANDBAG DIKE UPSTREAM. WHEN CULVERT EXTENSIONS ARE COMPLETE AND AREAS ARE STABILIZED COMPLETELY, CALL NCDEQ FOR AN INSPECTION BY THE ENVIRONMENTAL CONSULTANT.

MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6-INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

DWQ CONSTRUCTION GENERAL PERMIT STABILIZATION REQUIREMENTS

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

NAD 83

SCALE 1"=40'

0 40' 80'

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TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

EROSION CONTROL PLAN LAYOUT - STAGE 1

JOB NO. 49074

SHEET NO. C5.3

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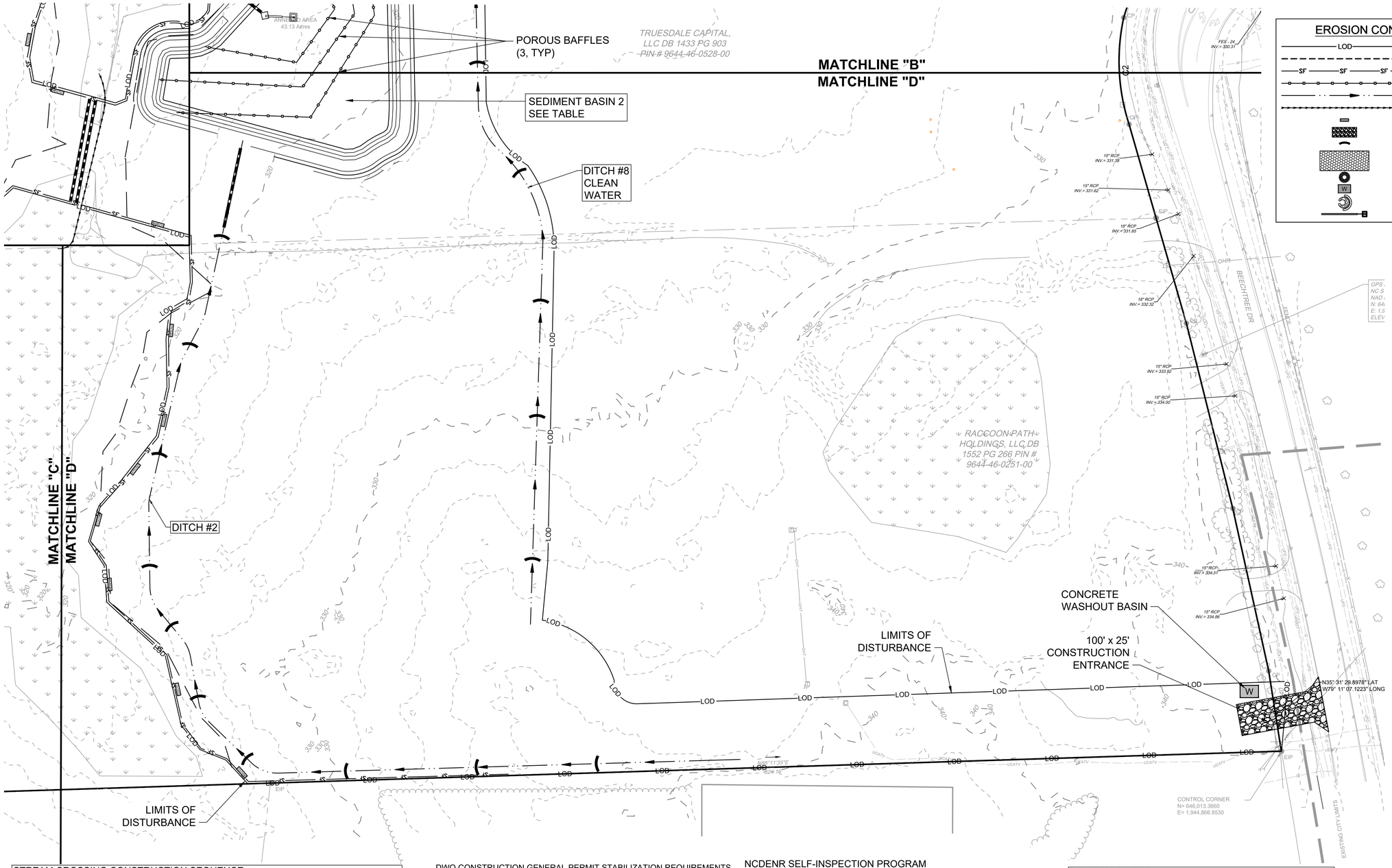

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2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
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9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC ARES.
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EROSION CONTROL PLAN LAYOUT - STAGE 1

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EROSION CONTROL LEGEND

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- W — CONCRETE WASHOUT
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- SKIMMER

CONSTRUCTION SEQUENCE

1. EROSION AND SEDIMENT CONTROL (E&SC) PERMIT AND CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES OCCUR. A COPY OF THE E&SC PERMIT, THE COC, AND A HARD COPY OF THE PLAN MUST BE KEPT ON SITE, PREFERABLY IN A PERMIT BOX AND ACCESSIBLE DURING INSPECTION. THE COC IS OBTAINED BY FILLING OUT THE ELECTRONIC NOI FORM AND UPLOADING THEM AT DEQ NC.GOV/NCG01 ONCE THE PLANS HAVE BEEN APPROVED.
2. SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH CITY OF SANFORD AND NCDEQ INSPECTOR.
3. INSTALL THE GRAVEL CONSTRUCTION ENTRANCES, SKIMMER BASINS, TEMPORARY DIVERSION DITCHES AND REQUIRED DITCH LINERS AND PERIMETER SILT FENCES. CLEAR ONLY AS REQUIRED TO INSTALL THESE DEVICES.
4. CALL CITY OF SANFORD AND NCDEQ INSPECTOR FOR AN ONSITE INSPECTION TO OBTAIN A CERTIFICATE OF COMPLIANCE. THE CONTRACTOR SHALL CONTACT THE DEMLR RALEIGH REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO COMMENCING THE LAND-DISTURBING ACTIVITY. THE CONTACT NUMBER IS 919-791-4200.
5. BEGIN CLEARING AND GRUBBING ACTIVITIES.
6. SEE STREAM CROSSING CONSTRUCTION SEQUENCE NOTES ON THIS SHEET.
7. BEGIN ROUGH GRADING OF THE SITE. SEED AND STABILIZE SLOPES AS THEY ARE ESTABLISHED AND AS REQUIRED PER THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
8. CONTRACTOR SHALL MAINTAIN AND VERTICALLY ADJUST ALL TEMPORARY DIVERSION DITCHES AND SILT FENCE THROUGHOUT PROJECT ACTIVITIES TO MAINTAIN DRAINAGE PATTERNS TO TEMPORARY SKIMMER SEDIMENT BASIN.
7. INSTALL STORM SEWER, IF SHOWN, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION, BUILDING, ETC.
8. INSPECT ALL MEASURES AND DEVICES WEEKLY AND AFTER ALL RAINFALL EVENTS. MAKE PROMPT REPAIRS AS NEEDED. THE CONTRACTOR SHALL CONDUCT SELF-INSPECTIONS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES AND COMPLETE THE FOLLOWING COMBINED SELF-INSPECTION FORM FOUND ONT HE DEMLR WEBSITE: https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Stormwater/NCG010000_Final_Permit_2019_04_01.pdf. TWELVE MONTHS OF COMPLETE INSPECTION FORMS SHALL BE KEPT ON-SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS RECOMMENDED A COPY BE KEPT IN A PERMIT BOX.
9. SELF-INSPECTIONS FOR EROSION AND SEDIMENTATION CONTROL MEASURES ARE TO BE PERFORMED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF EVERY RAIN EVENT OF GREATER THAN 1 INCH. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN MEASURES AS DESIGNED. ALL ESC MEASURES SHALL BE MAINTAINED AS SPECIFIED IN THE CONSTRUCTION DETAILS ON THIS PLAN. A RAIN GAUGE SHALL BE INSTALLED AT THE PROJECT SITE FOR MONITORING. SEE ATTACHED DETAIL SHEET FOR SELF-INSPECTION RECORD KEEPING AND REPORTING INFORMATION.
10. THE CONTRACTOR SHALL MAINTAIN SOIL EROSION CONTROL MEASURES DILIGENTLY AND CONTINUOUSLY UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
11. PERMANENT GROUNDCOVER SHALL BE ESTABLISHED IN 90 CALENDAR DAYS. HOWEVER, NPDES GROUNDCOVER REQUIREMENTS TAKE PRECEDENCE."
12. REQUEST FINAL APPROVAL BY EROSION CONTROL OFFICER.
13. AFTER THE SITE IS PERMANENTLY STABILIZED AND FINAL APPROVAL HAS BEEN PROVIDED BY EROSION CONTROL OFFICER, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE. SEDIMENT BASIN MAY NOT BE REMOVED UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED.
- 13.1. CONVERT THE SEDIMENT BASIN TO A DRY POND AS FOLLOWS:
  - CONSULT WITH THE EROSION AND SEDIMENT CONTROL INSPECTOR PRIOR TO BEGINNING THE CONVERSION FROM SEDIMENT BASIN TO DRY POND.
  - PUMP DOWN BASIN - USE APPROVED DEWATERING MEASURES. EFFLUENT MUST BE FILTERED.
  - REMOVE ACCUMULATED SEDIMENT (AS NEEDED) TO ESTABLISH THE FINAL GRADE OF THE POND. SEDIMENT MUST BE DISPOSED OF IN AN APPROVED AREA.
  - REMOVE TEMPORARY SKIMMER AND BAFFLES.
  - REMOVE TEMPORARY ORIFICE PLUGS FROM RISER.
  - ACCURATELY FINE GRADE BASIN TO DESIGN CONTOURS. CONTRACTOR TO SURVEY TO VERIFY ALL GRADES.
  - INSTALL FOREBAY BERMS AND RIPRAP.
  - INSTALL SEED AND/OR SOD AS SHOWN ON APPROVED PLAN.
14. WHEN THE PROJECT IS COMPLETE, THE PERMITTEES SHALL CONTACT DEMLR TO CLOSE OUT THE E&SC PLAN. AFTER DEMLR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT DEQ.NC.GOV/NCG01 TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION.

MAINTENANCE PLAN

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS SHALL BE MADE IMMEDIATELY TO MAINTAIN ALL MEASURES AS DESIGNED.
2. REMOVE SEDIMENT FROM BEHIND SILT FENCE WHEN DEPTH REACHES 6-INCHES AT THE FENCE. REPAIR SILT FENCE AS NECESSARY TO MAINTAIN A BARRIER.
3. ALL SEEDED AREAS SHALL BE FERTILIZED, RE-SEEDED AS NECESSARY, AND MULCHED ACCORDING TO PROJECT SPECS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE GROWTH.
4. TOP DRESS CONSTRUCTION ENTRANCES WITH CLEAN STONE AS NECESSARY TO MAINTAIN PROPER FUNCTIONING.
5. REFER TO SPECIFIC DEVICE DETAILS FOR ADDITIONAL MAINTENANCE REQUIREMENTS.

TEMPORARY STOCKPILE NOTES

1. 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.
2. 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.
3. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
4. ESTABLISH AND MAINTAIN A VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).
5. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET.
6. STOCKPILE SLOPES SHALL BE 2:1 OR FLATTER.

NCDENR SELF-INSPECTION PROGRAM

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED.

RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

THE SELF-INSPECTION REPORT FORM IS AVAILABLE AS A PDF FROM THE NCDEQ WEB SITE:
HTTPS://DEQ.NC.GOV/ABOUT/DIVISIONS/ENERGY-MINERAL-LAND-RESOURCES/EROSION-SEDIMENT-CONTROL/FORMS

GENERAL NOTES

1. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
2. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR THE ARCHITECT.
3. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING HIS PHASE OF WORK AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY TRACKED SOIL FROM ALL ADJACENT ROADWAYS THAT ARE IMPACTED BY CONSTRUCTION TRAFFIC. THE OWNER RESERVES THE RIGHT TO REQUIRE THAT A WASH STATION BE INSTALLED AT NO ADDITIONAL COST IF PAVEMENT AREAS ARE NOT KEPT CLEAN.
5. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS OF THE GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT NO. NCG010000.
6. A PRE-CONSTRUCTION MEETING MUST BE SCHEDULED PRIOR TO WORK, GRADING PERMIT AND INSTALLATION OF EROSION CONTROL.
7. UTILITY LOCATIONS ARE TO BE FOUND BY CALLING NC ONE CALL.
8. ALL TEMPORARY MEASURES SHALL BE REMOVED AT THE END OF THE CONSTRUCTION OF THE PROJECT.
9. CUT AND FILL SLOPES SHALL BE STABILIZED AS REQUIRED BY THE GENERAL PERMIT STABILIZATION REQUIREMENTS FOUND ON THIS SHEET.
10. SILT FENCING SHALL BE INSTALLED AROUND THE PERIMETER SEPARATING EXISTING PEDESTRIAN TRAFFIC ARES.
11. ALL CUT AND FILL SLOPES ARE TO BE AT A 2.5:1 MAXIMUM.
12. PROVIDE CITY OF SANFORD AND NCDOT APPROVALS PRIOR TO PRE-CONSTRUCTION MEETING.

STREAM CROSSING CONSTRUCTION SEQUENCE

1. SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT AT NCDEQ PRIOR TO BEGINNING CONSTRUCTION. OBTAIN A LAND DISTURBING PERMIT.
2. CONTRACTOR WILL ATTEMPT TO COORDINATE CONSTRUCTION DURING A TWO WEEK TIMEFRAME OF DRY WEATHER.
3. SANDBAG DIKE WILL BE CONSTRUCTED ON THE UPSTREAM END WITH A PUMP AROUND USED AS NECESSARY.
4. DE-WATER WORK AREA UTILIZING A FILTER BAG.
5. WHEN PUMP AROUND IS IN USE, THE HOSE WILL BE CONTAINED IN THE CULVERT TO AVOID CROSSING THE ROAD. AT THE END OF EACH WORKING DAY, SITE WILL BE CLEARED OF MEASURES TO ALLOW STREAM WATER TO FLOW NATURALLY.
6. BEGIN CLEARING AND GRUBBING, KEEP CLEARING AND EXCAVATION OF THE STREAM BANKS, BED, AND APPROACH TO A MINIMUM.
7. INSTALL CULVERTS/HEADWALL AND BACKFILL PROPERLY.
8. INSTALL DISSIPATER PADS AT PIPE OUTLETS.
9. STABILIZE ALL DISTURBED AREAS BEFORE REMOVING SANDBAG DIKE UPSTREAM. WHEN CULVERT EXTENSIONS ARE COMPLETE AND AREAS ARE STABILIZED COMPLETELY, CALL NCDEQ FOR AN INSPECTION BY THE ENVIRONMENTAL CONSULTANT.

NAD 83

SCALE 1"=100'
0 100' 200'

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

EROSION CONTROL PLAN OVERALL - STAGE 2

JOB NO.	49074
SHEET NO.	C5.5

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EROSION CONTROL LEGEND

- LOD — LIMITS OF DISTURBANCE
- STOCKPILE AREA
- SF — SF — SF — SILT FENCE
- POROUS BAFFLE
- TEMPORARY DIVERSION DITCH
- CLEAN WATER DIVERSION DITCH
- SILT FENCE STONE OUTLET
- EMERGENCY SPILLWAY / RIP RAP APRON
- CHECK DAM
- CONSTRUCTION ENTRANCE
- TEMPORARY INLET PROTECTION
- CONCRETE WASHOUT
- HORSESHOE INLET PROTECTION
- SKIMMER

SKIMMER BASIN 3 TO REMAIN AND BE MAINTAINED FROM STAGE 1

LINE SLOPES WITH STRAW BLANKET MATTING AS NEEDED (NAG S150)

LANDSCAPE BUFFER (CLASS A)

20' BUILDING SETBACK

SKIMMER BASIN 1 TO REMAIN AND BE MAINTAINED FROM STAGE 1

INLET PROTECTION (TYP)

SKIMMER BASIN 4 TO REMAIN AND BE MAINTAINED FROM STAGE 1

SKIMMER BASIN 2 TO REMAIN AND BE MAINTAINED FROM STAGE 1

SKIMMER BASIN 5 TO REMAIN AND

MATCHLINE "A"
MATCHLINE "B"
MATCHLINE "A"
MATCHLINE "C"

RACCOON PATH HOLDINGS, LLC DB 1552 PG 266 PIN # 9644-86-2998-00

RACCOON PATH HOLDINGS, LLC DB 1552 PG 266 PIN # 9644-87-7077-00

RACCOON PATH HOLDINGS, LLC DB 1552 PG 266 PIN # 9644-86-8923-00

WILLIAM A. GORDON
BARBARA B. GORDON
DB 319 PG 67 PIN #
9644-36-1487-00
ZONING - RA

WILLIAM A. GORDON
BARBARA B. GORDON
DB 380 PG 474 PIN #
9644-36-0585-00
ZONING - RA

TUESDALE CAPITAL LLC DB 4933 PG 903 PIN # 9644-36-1633-00

SUNSET DRIVE

UNIMPROVED 40' R/W

8' LANDSCAPE BUFFER (CLASS A)

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

NAD 83

SCALE 1"=100'
0 100' 200'

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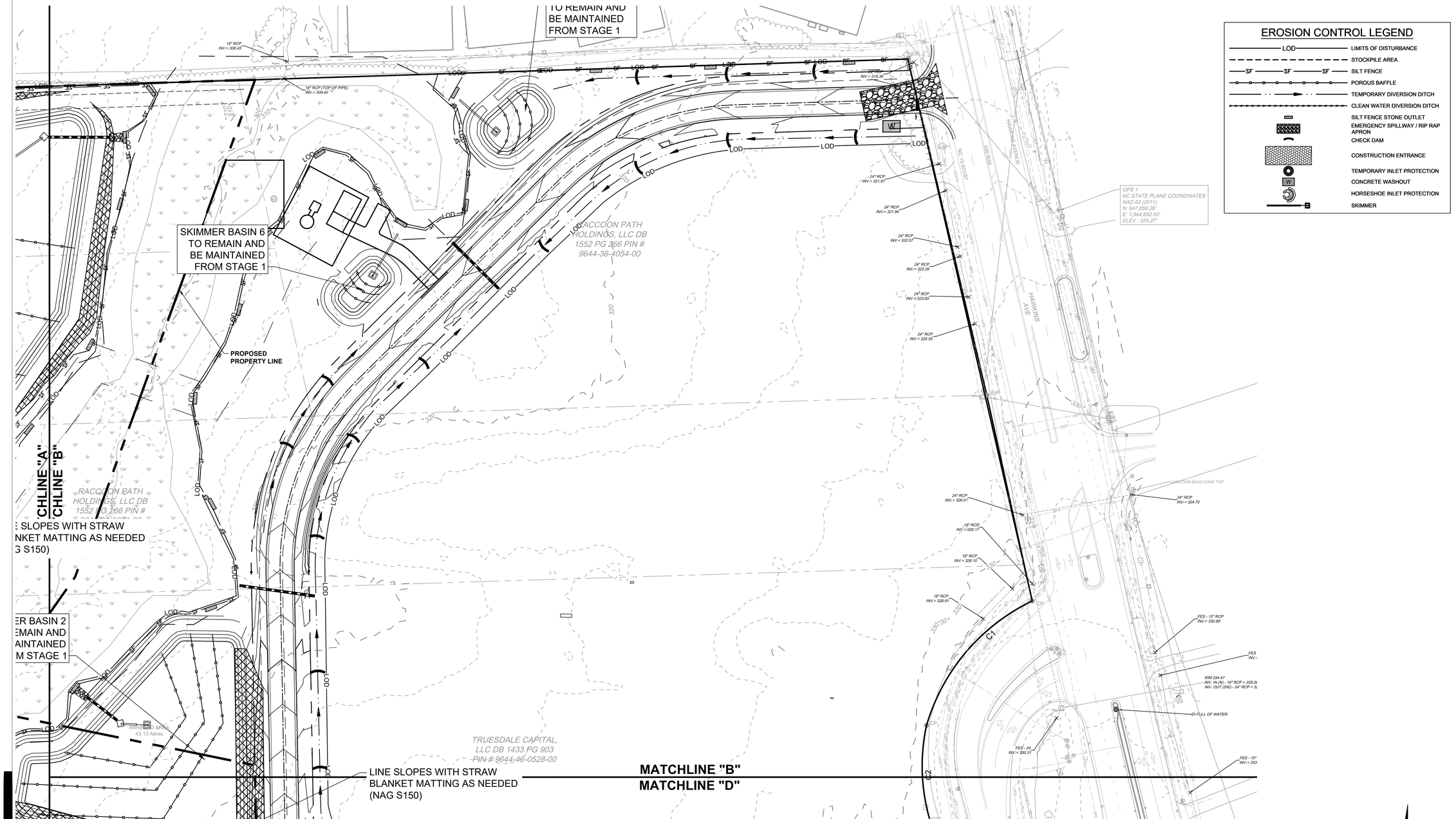
NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

EROSION CONTROL PLAN LAYOUT - STAGE 2

JOB NO. 49074
SHEET NO. C5.6



EROSION CONTROL LEGEND

- LOD — LIMITS OF DISTURBANCE
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- SF — SILT FENCE
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- CHECK DAM
- CONSTRUCTION ENTRANCE
- TEMPORARY INLET PROTECTION
- CONCRETE WASHOUT
- HORSESHOE INLET PROTECTION
- SKIMMER

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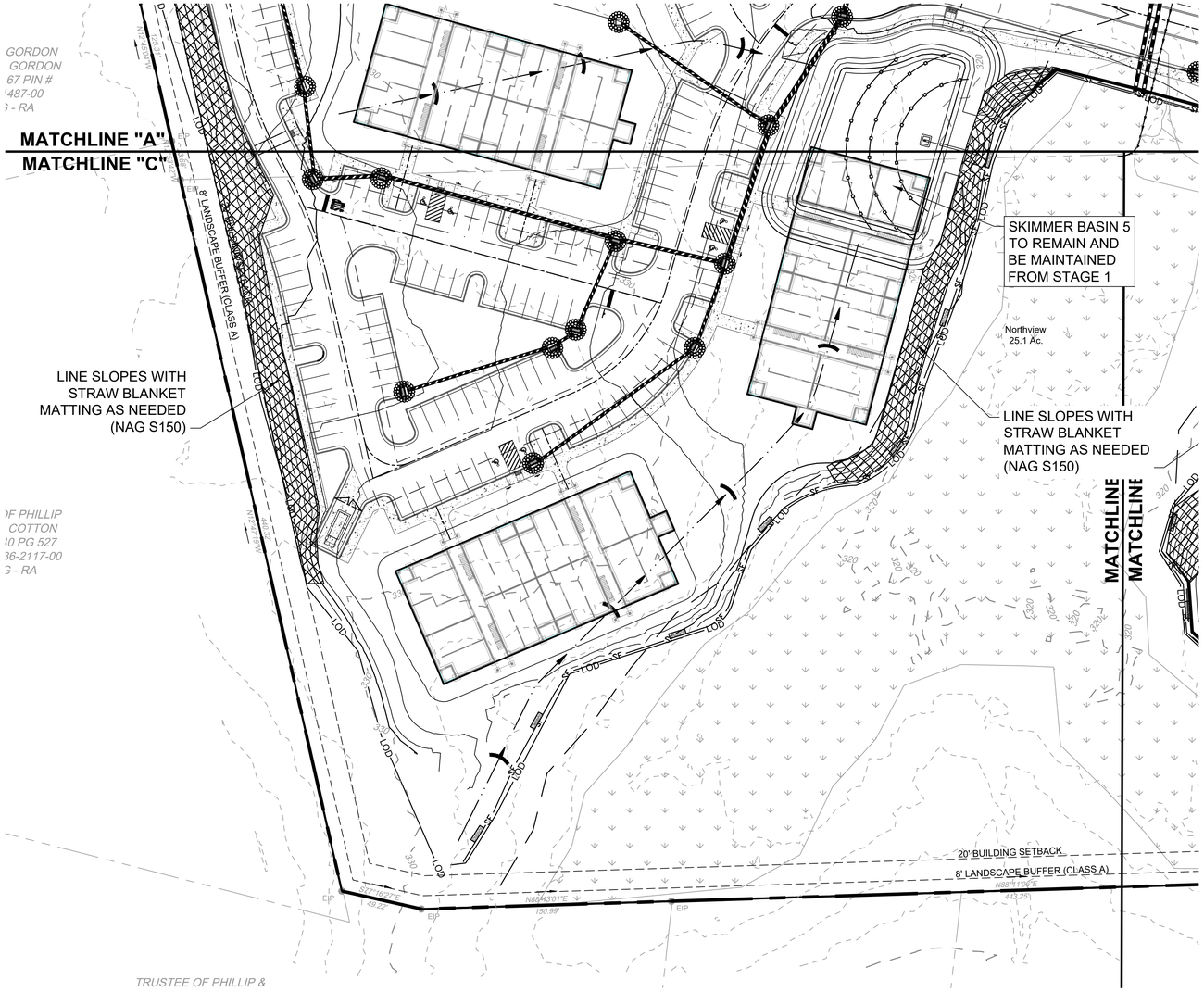
EROSION CONTROL PLAN LAYOUT - STAGE 2

JOB NO.	49074
SHEET NO.	C5.7



EROSION CONTROL LEGEND

- LOD — LIMITS OF DISTURBANCE
- STOCKPILE AREA
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- POROUS BAFFLE
- TEMPORARY DIVERSION DITCH
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- SKIMMER

NAD 83

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0 100' 200'

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EROSION CONTROL PLAN LAYOUT - STAGE 2

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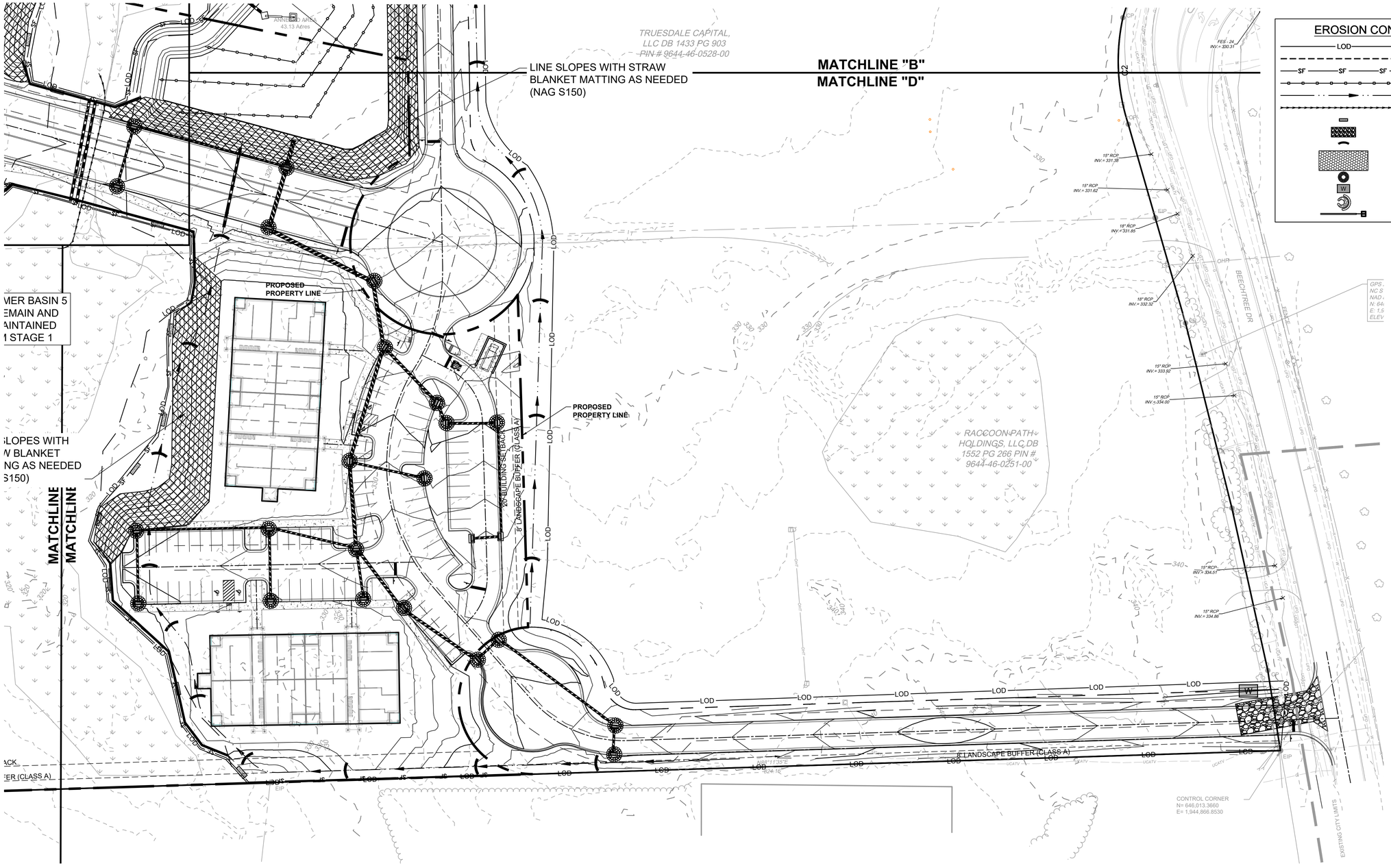
49074

SHEET NO.
C5.8



EROSION CONTROL LEGEND

- LOD — LIMITS OF DISTURBANCE
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SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

EROSION CONTROL PLAN LAYOUT - STAGE 2

JOB NO. 49074
SHEET NO. C5.9

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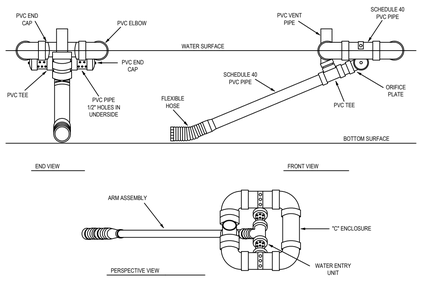


SKIMMER DETAIL

NOT TO SCALE

SKIMMER BASIN CONSTRUCTION SPECIFICATIONS

1. CLEAR, GRUB, AND STRIP THE AREA UNDER THE EMBANKMENT OF ALL VEGETATION AND ROOT MAT. REMOVE ALL SURFACE SOIL CONTAINING HIGH AMOUNTS OF ORGANIC MATTER AND STOCKPILE OR DISPOSE OF IT PROPERLY. HAUL ALL OBJECTIONABLE MATERIAL TO THE DESIGNATED DISPOSAL AREA. PLACE TEMPORARY SEDIMENT CONTROL MEASURE BELOW BASIN AS NEEDED.
2. ENSURE THAT FILL MATERIAL FOR THE EMBANKMENT IS FREE OF ROOTS, WOODY VEGETATION, ORGANIC MATTER AND OTHER OBJECTIONABLE MATERIAL. PLACE THE FILL IN LIFTS NOT TO EXCEED 9 INCHES, AND MACHINE COMPACT IT. OVER FILL THE EMBANKMENT 6 INCHES TO ALLOW FOR SETTLEMENT.
3. SHAPE THE BASIN TO THE SPECIFIED DIMENSIONS. PREVENT THE SKIMMING DEVICE FROM SETTLING INTO THE MUD BY EXCAVATING A SHALLOW PIT UNDER THE SKIMMER OR PROVIDING A LOW SUPPORT UNDER THE SKIMMER OF STONE OR TIMBER.
4. PLACE THE BARREL (TYPICALLY 4-INCH SCHEDULE 40 PVC PIPE) ON A SMOOTH, FIRM FOUNDATION OF IMPERVIOUS SOIL. DO NOT USE PERVIOUS MATERIAL SUCH AS SAND, GRAVEL, OR CRUSHED STONE AS A BACKFILL AROUND THE PIPE. PLACE THE FILL MATERIAL AROUND THE PIPE SPILLWAY IN 4-INCH LAYERS AND COMPACT IT UNDER AND AROUND THE PIPE TO AT LEAST THE SAME DENSITY OF THE ADJACENT EMBANKMENT. CARE MUST BE TAKEN NOT TO RAISE THE PIPE FROM THE FIRM CONTACT WITH ITS FOUNDATION WHEN COMPACTING UNDER THE PIPE HAUNCHES.
5. ASSEMBLE THE SKIMMER FOLLOWING THE MANUFACTURER'S INSTRUCTIONS, OR AS DESIGNED.
6. LAY THE ASSEMBLED SKIMMER ON THE BOTTOM OF THE BASIN WITH THE FLEXIBLE JOINT AT THE INLET OF THE BARREL PIPE. ATTACH THE FLEXIBLE JOINT TO THE BARREL PIPE AND POSITION THE SKIMMER OVER THE EXCAVATED PIT OR SUMPORT. BE SURE TO ATTACH A ROPE TO THE SKIMMER AND ANCHOR IT TO THE SIDE OF THE BASIN. THIS WILL BE USED TO PULL THE SKIMMER TO THE SIDE FOR MAINTENANCE.
7. EARTHEN SPILLWAYS - INSTALL THE SPILLWAY IN UNDISTURBED SOIL TO THE GREATEST EXTENT POSSIBLE. THE ACHIEVEMENT OF PLANNED ELEVATIONS, GRADE, DESIGN WIDTH, AND ENTRANCE AND EXIT CHANNEL SLOPES ARE CRITICAL TO THE SUCCESSFUL OPERATION OF THE SPILLWAY. THE SPILLWAY SHOULD BE LINED WITH LAMINATED PLASTIC OR IMPERMEABLE GEOTEXTILE FABRIC. THE FABRIC MUST BE WIDE AND LONG ENOUGH TO COVER THE BOTTOM AND SIDES AND EXTEND ONTO THE TOP OF THE DAM FOR ANCHORING IN A TRENCH. THE EDGES MAY BE SECURED WITH 8-INCH STAPLES OR PINS. THE FABRIC MUST BE LONG ENOUGH TO EXTEND DOWN THE SLOPE AND EXIT ONTO STABLE GROUND. THE WIDTH OF THE FABRIC MUST BE ONE PIECE, NOT JOINED OR SPLICED; OTHERWISE WATER CAN GET UNDER THE FABRIC. IF THE LENGTH OF THE FABRIC IS INSUFFICIENT FOR THE ENTIRE LENGTH OF THE SPILLWAY, MULTIPLE SECTIONS, SPANNING THE COMPLETE WIDTH, MAY BE USED. THE UPPER SECTION(S) SHOULD OVERLAP THE LOWER SECTION(S) SO THAT WATER CANNOT FLOW UNDER THE FABRIC. SECURE THE UPPER EDGE AND SIDES OF THE FABRIC IN A TRENCH WITH STAPLES OR PINS. (ADAPTED FROM "A MANUAL FOR DESIGNING, INSTALLING AND MAINTAINING SKIMMER SEDIMENT BASINS," FEBRUARY, 1999. J.W. FAIRCLOTH AND SON.)
8. INLETS- DISCHARGE WATER INTO THE BASIN IN A MANNER TO PREVENT EROSION. USE TEMPORARY SLOPE DRAINS OR DIVERSIONS WITH OUTLET PROTECTION TO DIVERT SEDIMENT LADEN WATER TO THE UPPER END OF THE POOL AREA TO IMPROVE BASIN TRAP EFFICIENCY. (REFERENCES: *RUNOFF CONTROL MEASURES AND OUTLET PROTECTION*)
9. EROSION CONTROL- CONSTRUCT THE STRUCTURE SO THAT THE DISTURBED AREA IS MINIMIZED. DIVERT SURFACE WATER AWAY FROM BARE AREAS. COMPLETE THE EMBANKMENT BEFORE THE AREA IS CLEARED. STABILIZE THE EMERGENCY SPILLWAY EMBANKMENT AND ALL OTHER DISTURBED AREAS ABOVE THE CREST OF THE PRINCIPAL SPILLWAY IMMEDIATELY AFTER CONSTRUCTION. (REFERENCES: *SURFACE STABILIZATION*)
10. INSTALL POROUS BAFFLES AS SPECIFIED IN PRACTICE 6.65, *POROUS BAFFLES*.
11. AFTER ALL THE SEDIMENT-PRODUCING AREAS HAVE BEEN PERMANENTLY STABILIZED, REMOVE THE STRUCTURE AND ALL THE UNSTABLE SEDIMENT. SMOOTH THE AREA TO BLEND WITH THE ADJOINING AREAS AND STABILIZE PROPERLY. (REFERENCES: *SURFACE STABILIZATION*)

SKIMMER BASIN MAINTENANCE

1. INSPECT SKIMMER SEDIMENT BASINS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (ONE INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. REMOVE SEDIMENT AND RESTORE THE BASIN TO ITS ORIGINAL DIMENSIONS WHEN SEDIMENT ACCUMULATES TO ONE HALF THE HEIGHT OF THE FIRST BAFFLE. PULL THE SKIMMER TO ONE SIDE SO THAT THE SEDIMENT UNDERNEATH CAN BE EXCAVATED. EXCAVATE THE SEDIMENT FROM THE ENTIRE BASIN, NOT JUST AROUND THE SKIMMER OR THE FIRST CELL. MAKE SURE VEGETATION GROWING IN THE BOTTOM OF THE BASIN DOES NOT HOLD DOWN THE SKIMMER.
2. REPAIR THE BAFFLES IF THEY ARE DAMAGED. RE-ANCHOR THE BAFFLES IF WATER IS FLOWING UNDERNEATH OR AROUND THEM.
3. IF THE SKIMMER IS CLOGGED WITH TRASH AND THERE IS WATER IN THE BASIN, USUALLY JERKING ON THE ROPE WILL MAKE THE SKIMMER BOB UP AND DOWN AND DISLODGE THE DEBRIS AND RESTORE FLOW. IF THIS DOES NOT WORK, PULL THE SKIMMER OVER TO THE SIDE OF THE BASIN AND REMOVE THE DEBRIS. ALSO CHECK THE ORIFICE INSIDE THE SKIMMER TO SEE IF IT IS CLOGGED; IF SO REMOVE THE DEBRIS.
4. IF THE SKIMMER ARM OR ORIFICE PIPE IS CLOGGED, THE ORIFICE CAN BE REMOVED AND THE OBSTRUCTION CLEARED WITH A PLUMBERS SNAKE OR BY FLUSHING WITH WATER. BE SURE AND REPLACE THE ORIFICE BEFORE REPOSITIONING THE SKIMMER.
5. CHECK THE FABRIC LINED SPILLWAY FOR DAMAGE AND MAKE ANY REQUIRED REPAIRS WITH FABRIC THAT SPANS THE FULL WIDTH OF THE SPILLWAY. CHECK THE EMBANKMENT, SPILLWAYS, AND OUTLET FOR EROSION DAMAGE, AND INSPECT THE EMBANKMENT FOR PIPING AND SETTLEMENT. MAKE ALL NECESSARY REPAIRS IMMEDIATELY. REMOVE ALL TRASH AND DEBRIS FROM THE SKIMMER AND POOL AREAS.
6. FREEZING WEATHER CAN RESULT IN ICE FORMING IN THE BASIN. SOME SPECIAL PRECAUTIONS SHOULD BE TAKEN IN THE WINTER TO PREVENT THE SKIMMER FROM PLUGGING WITH ICE.

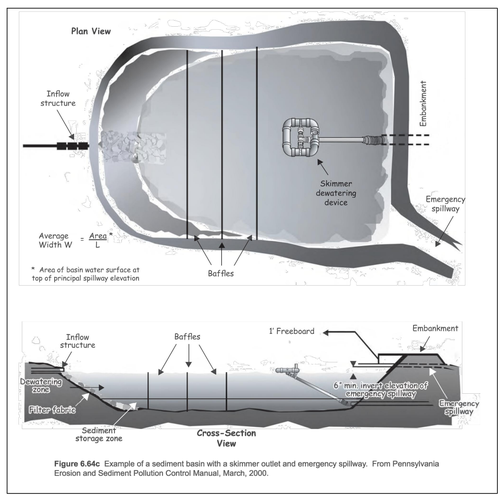


Figure 6.64c Example of a sediment basin with a skimmer outlet and emergency spillway. From Pennsylvania Erosion and Sediment Pollution Control Manual, March, 2000.

TEMPORARY SKIMMER BASIN DETAIL

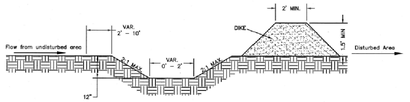
NOT TO SCALE

MAINTENANCE

1. INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

TEMPORARY INLET PROTECTION

NOT TO SCALE



CROSS SECTIONAL VIEW

NOTES:

1. DIVERSION TO BE USED UPSLOPE OF A CONSTRUCTION SITE TO PREVENT STORM RUNOFF FROM ENTERING THE DISTURBED AREA.
2. IMMEDIATELY LINE AND STABILIZE BEFORE ANY DOWNSLOPE GRADING BEGINS (STABILIZATION MUST OCCUR BEFORE ISSUANCE OF A CERTIFICATE OF COMPLIANCE). STABILIZATION METHOD IS BASED ON VELOCITY OF OFFSITE DRAINAGE.
3. DIVERSIONS SHOULD ONLY BE USED FOR DRAINAGES 5 ACRES OR LESS.
4. ANY SEDIMENT LADEN WATER PRIOR TO STABILIZATION OF THE DIVERSION MUST BE DIVERTED INTO AN APPROVED EROSION AND SEDIMENT CONTROL BMP. CLEAN WATER SHOULD EMPTY INTO AN APPROVED OUTLET DEVICE.

MAINTENANCE

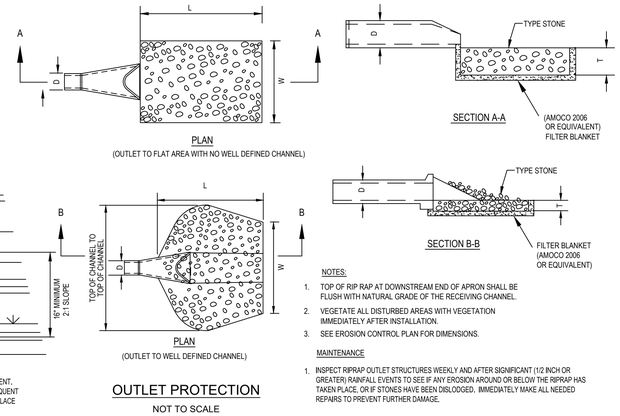
1. INSPECT INLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1 INCH OR GREATER) RAINFALL EVENT. IMMEDIATELY REMOVE SEDIMENT FORM THE FLOW AREA AND REPAIR THE DIVERSION DITCH.
2. CHECK INLETS AND OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED TO AVOID GULLY FORMATION. WHEN THE AREA ABOVE THE TEMPORARY DIVERSION DITCH IS PERMANENTLY STABILIZED, REMOVE THE DITCH, AND FILL AND STABILIZE THE CHANNEL TO BLEND WITH THE NATURAL SURFACE.

CONSTRUCTION SPECIFICATIONS

1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. FILL AND COMPACT, TO NATURAL GROUND LEVEL OR ABOVE, ALL DITCHES AND GULLIES THAT WILL BE CROSSED BY MACHINERY.
2. LEVEL THE BASE OF THE DITCH BEFORE PLACING FILL.
3. ENSURE THAT THE CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS.
4. COMPACT THE DITCH BY TRACKING WITH CONSTRUCTION EQUIPMENT.
5. ENSURE THAT THE TOP OF THE DITCH IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT AFTER IT HAS BEEN COMPACTED.
6. LEAVE SUFFICIENT AREA ALONG THE DITCH TO PERMIT MACHINE RE-GRADING AND CLEANOUT.
7. IMMEDIATELY SEED AND MULCH THE DITCH AFTER CONSTRUCTION, AND STABILIZE THE FLOW PORTION IN ACCORDANCE WITH DESIGN REQUIREMENTS. LINE/ MAT DITCH IF REQUIRED PER THE DESIGN REQUIREMENTS.

CLEANWATER DIVERSION DITCH

NOT TO SCALE



OUTLET PROTECTION

NOT TO SCALE

NOTES:

1. TOP OF RIP RAP AT DOWNSTREAM END OF APRON SHALL BE FLUSH WITH NATURAL GRADE OF THE RECEIVING CHANNEL.
2. VEGETATE ALL DISTURBED AREAS WITH VEGETATION IMMEDIATELY AFTER INSTALLATION.
3. SEE EROSION CONTROL PLAN FOR DIMENSIONS.

MAINTENANCE

1. INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

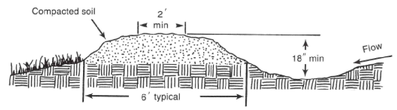


Figure 6.20a Temporary earthen diversion dike.

Construction Specifications

1. Remove and properly dispose of all trees, brush, stumps, and other objectionable material.

2. Ensure that the minimum constructed cross section meets all design requirements.

3. Ensure that the top of the dike is not lower at any point than the design elevation plus the specified settlement.

4. Provide sufficient room around diversions to permit machine regrading and cleanout.

5. Vegetate the ridge immediately after construction, unless it will remain in place less than 30 working days.

Maintenance Inspect temporary diversions once a week and after every rainfall. Immediately remove sediment from the flow area and repair the diversion ridge. Carefully check outlets and make timely repairs as needed. When the area protected is permanently stabilized, remove the ridge and the channel to blend with the natural ground level and appropriately stabilize it.

TEMPORARY DIVERSIONS

2 INLET/OUTLET PROTECTION

PLAN

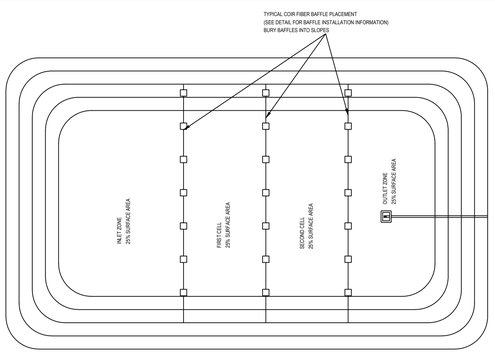
NTS

COIR MESH BAFFLES CONSTRUCTION SPECIFICATIONS

1. GRADE THE BASIN SO THAT THE BOTTOM IS LEVEL FRONT TO BACK AND SIDE TO SIDE.
2. INSTALL THE COIR FIBER BAFFLES IMMEDIATELY UPON EXCAVATION OF THE BASINS.
3. INSTALL POSTS ACROSS THE WIDTH OF THE SEDIMENT TRAP/BASIN.
4. STEEL POSTS SHOULD BE DRIVEN TO A DEPTH OF 24 INCHES, SPACED A MAXIMUM OF 4 FEET APART, AND INSTALLED UP THE SIDES OF THE BASIN AS WELL. THE TOP OF THE FABRIC SHOULD BE 8 INCHES HIGHER THAN THE INVERT OF THE SPILLWAY. TOPS OF BAFFLES SHOULD BE 2 INCHES LOWER THAN THE TOP OF THE EARTHEN EMBANKMENT.
5. INSTALL AT LEAST THREE ROWS OF BAFFLES BETWEEN THE INLET AND OUTLET DISCHARGE POINT. BASINS LESS THAN 20 FEET IN LENGTH MAY USE 2 BAFFLES.
6.
7. ATTACH A 9 GAUGE HIGH TENSION WIRE STRAND TO THE STEEL POST AT A HEIGHT OF 8 INCHES ABOVE THE SPILLWAY ELEVATION WITH PLASTIC TIES OR WIRE FASTENERS TO PREVENT SAGGING. IF THE TEMPORARY SEDIMENT BASIN WILL BE CONVERTED TO A PERMANENT STORMWATER BASIN OF A GREATER DEPTH, THE BAFFLE HEIGHTS SHOULD BE BASED ON THE POOL DEPTH DURING USE AS A TEMPORARY SEDIMENT BASIN.
8. EXTEND 9 GAUGE MINIMUM HIGH TENSION WIRE STRAND TO SIDE OF BASIN OR INSTALL STEEL T-POSTS TO ANCHOR BAFFLE TO SIDE OF BASIN AND SECURE TO VERTICAL END POSTS AS SHOWN.
9. DRAPE THE COIR FIBER MAT OVER THE WIRE STRAND MOUNTED AT A HEIGHT OF 8 INCHES ABOVE THE SPILLWAY ELEVATIONS. SECURE THE COIR FIBER MAT TO THE WIRE STRAND WITH PLASTIC TIES OR WIRE FASTENERS. ANCHOR THE MATTING TO THE SIDES AND FLOOR OF THE BASIN WITH 12 INCH WIRE STAPLES, APPROXIMATELY 1 FT APART, ALONG THE BOTTOM AND SIDE SLOPES OF THE BASIN..
10. DO NOT SPLICE THE FABRIC, BUT USE A CONTINUOUS PIECE ACROSS THE TRAP/BASIN.
11. ADJUSTMENTS MAY BE REQUIRED IN THE STAPLING REQUIREMENTS TO FIT INDIVIDUAL SITE CONDITIONS.

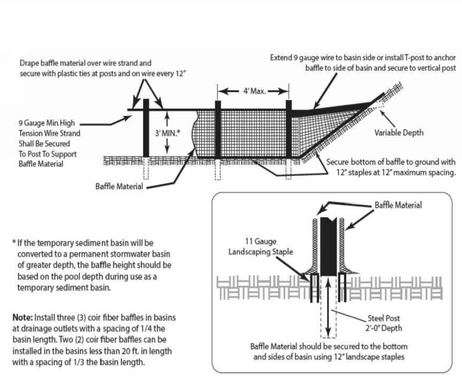
COIR MESH BAFFLES MAINTENANCE

1. INSPECT THE BAFFLES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. BE SURE TO MAINTAIN ACCESS TO THE BAFFLES. SHOULD THE FABRIC OF A BAFFLE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS WHEN IT REACHES 1/3 FULL TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE BAFFLES. TAKE CARE TO AVOID DAMAGING THE BAFFLES DURING CLEANOUTS. SEDIMENT DEPTH SHOULD NEVER EXCEED HALF THE DESIGNED STORAGE DEPTH.
4. AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, REMOVE ALL BAFFLE MATERIALS AND UNSTABLE SEDIMENT DEPOSITS. REGRADE TO DEVELOP PERMANENT STORMWATER CONTROL MEASURES/BMPS AS SHOWN ON SHEET C5.01 AND STABILIZE.



STANDARD COIR BAFFLES DETAIL

NOT TO SCALE



* If the temporary sediment basin will be converted to a permanent stormwater basin of greater depth, the baffle height should be based on the pool depth during use as a temporary sediment basin.

Note: Install three (3) coir fiber baffles in basins at drainage outlets with a spacing of 1/4 the basin length. Two (2) coir fiber baffles can be installed in the basins less than 20 ft. in length with a spacing of 1/3 the basin length.

1 SKIMMER AND BASIN DETAIL

PLAN

3/8" = 1'-0"

3 STANDARD COIR BAFFLES DETAIL

PLAN

NTS

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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DESIGNED BY 331
CHECKED BY 331
SCALE

TIMMONS GROUP

NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
EROSION CONTROL NOTES AND DETAILS

JOB NO. 49074
SHEET NO. C5.10

Temporary Seeding Recommendations for Late Winter and Early Spring

Seeding mixture

Species	Rate (lb/acre)
Rye (grain)	120
Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains)	50

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

Seeding dates
Mountains—Above 2500 feet: Feb. 15 - May 15
Below 2500 feet: Feb. 1- May 1
Piedmont—Jan. 1 - May 1
Coastal Plain—Dec. 1 - Apr. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Temporary Seeding Recommendations for Summer

Seeding mixture

Species	Rate (lb/acre)
German millet	40

In the Piedmont and Mountains, a small-stemmed Sudangrass may be substituted at a rate of 50 lb/acre.

Seeding dates
Mountains—May 15 - Aug. 15
Piedmont—May 1 - Aug. 15
Coastal Plain—Apr. 15 - Aug. 15

Soil amendments
Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

Temporary Seeding Recommendations for Fall

Seeding mixture

Species	Rate (lb/acre)
Rye (grain)	120

Seeding dates
Mountains—Aug. 15 - Dec. 15
Coastal Plain and Piedmont—Aug. 15 - Dec. 30

Soil amendments
Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer.

Mulch
Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

Maintenance
Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extent temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

PLAN

Specifications

Complete grading before preparing seedbeds, and install all necessary erosion control practices such as, dikes, waterways, and basins. Minimize steep slopes because they make seedbed preparation difficult and increase the erosion hazard. If soils become compacted during grading, loosen them to a depth of 6-8 inches using a ripper, harrow, or chisel plow.

SEEDBED PREPARATION
Good seedbed preparation is essential to successful plant establishment. A good seedbed is well-pulverized, loose, and uniform. Where hydroseeding methods are used, the surface may be left with a more irregular surface of large clods and stones.

Liming—Apply lime according to soil test recommendations. If the pH (acidity) of the soil is not known, an application of ground agricultural limestone at the rate of 1 to 1 1/2 tons/acre on coarse-textured soils and 2-3 tons/acre on fine-textured soils is usually sufficient. Apply limestone uniformly and incorporate into the top 4-6 inches of soil. Soils with a pH of 6 or higher need not be limed.

Fertilizer—Base application rates on soil tests. When these are not possible, apply a 10-10-10 grade fertilizer at 700-1,000 lb/acre. Both fertilizer and lime should be incorporated into the top 4-6 inches of soil. If a hydraulic seeder is used, do not mix seed and fertilizer more than 30 minutes before application.

Surface roughening—If recent tillage operations have resulted in a loose surface, additional roughening may not be required, except to break up large clods. If rainfall causes the surface to become sealed or crusted, loosen it just prior to seeding by disking, raking, harrowing, or other suitable methods. Groove or furrow slopes steeper than 3:1 on the contour before seeding (Practice 6.03, *Surface Roughening*).

PLANT SELECTION
Select an appropriate species or species mixture from Table 6.10a for seeding in late winter and early spring, Table 6.10b for summer, and Table 6.10c for fall.

In the Mountains, December and January seedings have poor chances of success. When it is necessary to plant at these times, use recommendations for fall and a securely tacked mulch.

SEEDING
Evenly apply seed using a cyclone seeder (broadcast), drill, cultipacker seeder, or hydroseeder. Use seeding rates given in Tables 6.10a-6.10c. Broadcast seeding and hydroseeding are appropriate for steep slopes where equipment cannot be driven. Hand broadcasting is not recommended because of the difficulty in achieving a uniform distribution.

Small grains should be planted no more than 1 inch deep, and grasses and legumes no more than 1/2 inch. Broadcast seed must be covered by raking or chain dragging, and then lightly firmed with a roller or cultipacker. Hydroseeded mixtures should include a wood fiber (cellulose) mulch.

MULCHING
The use of an appropriate mulch will help ensure establishment under normal conditions, and is essential to seeding success under harsh site conditions (Practice 6.14, *Mulching*). Harsh site conditions include:

- seeding in fall for winter cover (wood fiber mulches are not considered adequate for this use),
- slopes steeper than 3:1,
- excessively hot or dry weather,
- adverse soils (shallow, rocky, or high in clay or sand), and
- areas receiving concentrated flow.

If the area to be mulched is subject to concentrated waterflow, as in channels, anchor mulch with netting (Practice 6.14, *Mulching*).

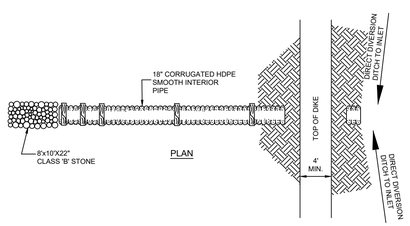
Maintenance

Reseed and mulch areas where seedling emergence is poor, or where erosion occurs, as soon as possible. Do not mow. Protect from traffic as much as possible.

* TEMPORARY SEEDING SCHEDULE FROM NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
SEE MANUAL FOR ADDITIONAL INFORMATION.

TEMPORARY SEEDING SCHEDULE

1 TEMPORARY SEEDING SCHEDULE NTS
PLAN



Maximum Drainage Area per Pipe (acres)	Pipe Diameter (inches)
0.50	12
0.75	15
1.00	18
>1.00*	as designed

*Inlet design becomes more complex beyond this size.

TEMPORARY SLOPE DRAIN SIZING CHART

6 TEMPORARY SLOPE DRAIN SIZING CHART ⅜" = 1'-0"
PLAN

Well-Drained Sandy Loams to Dry Sands, Coastal Plain and Eastern Edge of Piedmont; Low- to Medium-Care Lawns

Seeding mixture Species[1]	Rate
Centipedegrass	10-20 lb/acre (seed) or 33 bu/acre (sprigs)

Seeding dates
Mar. - June

(Sprigging can be done through July where water is available for irrigation.)

Soil amendments
Apply lime and fertilizer according to soil tests, or apply 3 TONS/ACRE 10-10-10 fertilizer.
PROVIDE AN ASPHALT EMULSION AT A RATE OF 400 GALLONS PER ACRE.

Sprigging
Plant sprigs in furrows with a tractor-drawn transplanter, or broadcast by hand.

Furrows should be 4-6 inches deep and 2 feet apart. Place sprigs about 2 feet apart in the row with one end at or above ground level (Figure 6.11d).

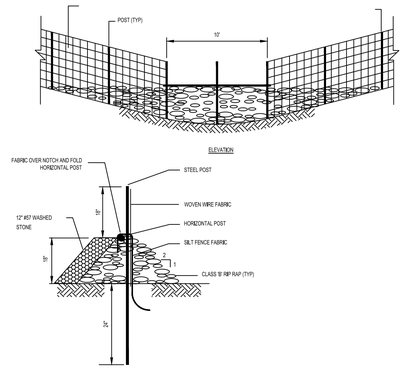
Broadcast at rates shown above, and press sprigs into the top 1/2-2 inches of soil with a disk set straight so that sprigs are not brought back toward the surface.

Mulch
Do not mulch.

Maintenance
Fertilize very sparingly—20 lb/acre nitrogen in spring with **no phosphorus**. Centipedegrass cannot tolerate high pH or excess fertilizer.

[1]Refer to *Appendix 8.02* for botanical names.

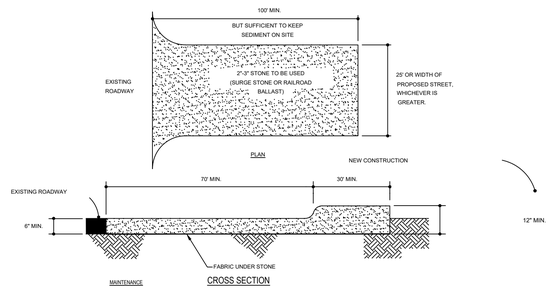
2 PERMANENT SEEDING PLAN NTS
PLAN



MAINTENANCE
INSPECT OUTLETS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT. CLEAR THE MESH WIRE OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAINS. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE WIRE MESH DURING SEDIMENT REMOVAL. REPLACE STONE AS NEEDED.

REINFORCED SILT FENCE OUTLET
NOT TO SCALE

4 REINFORCED SILT FENCE OUTLET NTS
PLAN

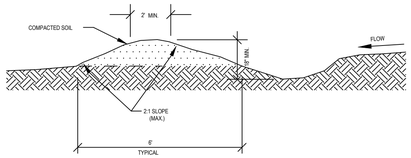


MAINTENANCE
MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOPDRESSING WITH 1-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

NOTES:
1. ENTRANCE(S) SHALL BE LOCATED TO PROVIDE MAXIMUM UTILITY BY ALL CONSTRUCTION VEHICLES.
2. TURNING RADIUS SUFFICIENT TO ACCOMMODATE LARGE TRUCKS IS TO BE PROVIDED.
3. MUST BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR DIRECT FLOW OF MUD ONTO STREETS. PERIODIC TOPDRESSING WITH STONE WILL BE NECESSARY. CONTRACTOR SHALL MAINTAIN AS NECESSARY.
4. ANY MATERIAL WHICH STILL MAKES IT ONTO THE ROAD MUST BE CLEANED UP IMMEDIATELY.
5. FREQUENT CHECKS OF THE ENTRANCE(S) AND TIMELY MAINTENANCE SHALL BE PROVIDED.
6. NOTES ARE APPLICABLE AT ALL POINTS OF INGRESS AND EGRESS UNTIL SITE IS STABILIZED.
7. SEE SECTION 6.09 OF "NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL" FOR ADDITIONAL INFORMATION REGARDING MATERIALS, CONSTRUCTION AND SPECIFICATIONS.

TEMPORARY CONSTRUCTION ENTRANCE
NOT TO SCALE

7 TEMPORARY CONSTRUCTION ENTRANCE NTS
PLAN



MAINTENANCE

INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AND AFTER EACH RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND LEVEL AND APPROPRIATELY STABILIZE IT.

CONSTRUCTION SPECIFICATIONS

1. REMOVE AND PROPERLY DISPOSE OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIALS.
2. ENSURE THAT THE MINIMUM CONSTRUCTED CROSS SECTION MEETS ALL DESIGN REQUIREMENTS.
3. ENSURE THAT THE TOP OF THE DIKE IS NOT LOWER AT ANY POINT THAN THE DESIGN ELEVATION PLUS THE SPECIFIED SETTLEMENT.
4. PROVIDE SUFFICIENT ROOM AROUND DIVERSIONS TO PERMIT MACHINE REGRADING AND CLEANOUT.
5. VEGETATE THE RIDGE IMMEDIATELY AFTER CONSTRUCTION, UNLESS IT WILL REMAIN IN PLACE LESS THAN 30 WORKING DAYS.

TEMPORARY DIVERSION BERM/DITCH
NOT TO SCALE

3 TEMPORARY DIVERSION BERM/DITCH NTS
PLAN

* PERMANENT SEEDING SCHEDULE FROM NCDENR EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
SEE MANUAL FOR ADDITIONAL INFORMATION.

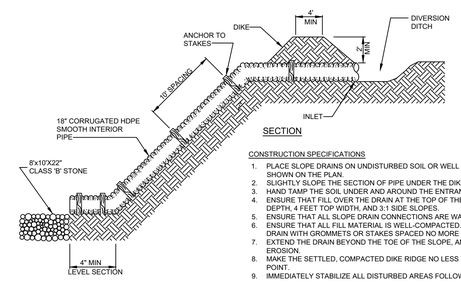
SEEDBED PREPARATION

1. CHISEL COMPACTED AREAS AND SPREAD TOPSOIL 3 INCHES DEEP OVER ADVERSE SOIL CONDITIONS, IF AVAILABLE.
2. RIP THE ENTIRE AREA TO 6 INCHES DEPTH.
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 BELOW*).
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 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 IF SPECIFIED.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. CONSULT S&EC ENVIRONMENTAL ENGINEERS ON MAINTENANCE TREATMENT AND FERTILIZATION AFTER PERMANENT COVER IS ESTABLISHED.
10. SEE SECTION 6.11 OF "NCDENR EROSION CONTROL PLANNING AND DESIGN MANUAL" FOR ADDITIONAL INFORMATION REGARDING MATERIALS, CONSTRUCTION AND SPECIFICATIONS.

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

PERMANENT SEEDING SCHEDULE

5 PERMANENT SEEDING SCHEDULE NTS
PLAN



CONSTRUCTION SPECIFICATIONS
1. PLACE SLOPE DRAINS ON UNDISTURBED SOIL OR WELL COMPACTED FILL AT LOCATIONS AND ELEVATIONS SHOWN ON THE PLAN.
2. SLIGHTLY SLOPE THE SECTION OF PIPE UNDER THE DIKE TOWARD ITS OUTLET.
3. HAND TAMP THE SOIL UNDER AND AROUND THE ENTRANCE SECTION IN LIFTS NOT TO EXCEED 6 INCHES.
4. ENSURE THAT FILL OVER THE DRAIN AT THE TOP OF THE SLOPE HAS MINIMUM DIMENSIONS OF 1.5 FEET DEPTH, 4 FEET TOP WIDTH, AND 3:1 SIDE SLOPES.
5. ENSURE THAT ALL SLOPE DRAIN CONNECTIONS ARE WATERTIGHT.
6. ENSURE THAT ALL FILL MATERIAL IS WELL-COMPACTED. SECURELY FASTEN THE EXPOSED SECTION OF THE DRAIN WITH GROMMETS OR STAKES SPACED NO MORE THAT 10 FEET APART.
7. EXTEND THE DRAIN BEYOND THE TOE OF THE SLOPE, AND ADEQUATELY PROTECT THE OUTLET FROM EROSION.
8. MAKE THE SETTLED, COMPACTED DIKE RIDGE NO LESS THAT 1 FEET ABOVE THE TOP OF THE PIPE AT EVERY POINT.
9. IMMEDIATELY STABILIZE ALL DISTURBED AREAS FOLLOWING CONSTRUCTION.

MAINTENANCE

INSPECT THE SLOPE DRAIN AND SUPPORTING DIVERSION AFTER EVERY RAINFALL, AND PROMPTLY MAKE NECESSARY REPAIRS. WHEN THE PROTECTED AREA HAS BEEN PERMANENTLY STABILIZED, TEMPORARY MEASURES MAY BE REMOVED. MATERIALS DISPOSED OF PROPERLY, AND ALL DISTURBED AREAS STABILIZED APPROPRIATELY.

TEMPORARY SLOPE DRAIN
NOT TO SCALE

8 TEMPORARY SLOPE DRAIN NTS
PLAN

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
EROSION CONTROL NOTES AND DETAILS

REVISION DESCRIPTION

DATE
6/28/2022
DRAWN BY
331
DESIGNED BY
331
CHECKED BY
331
SCALE

JOB NO.
49074
SHEET NO.
C5.11

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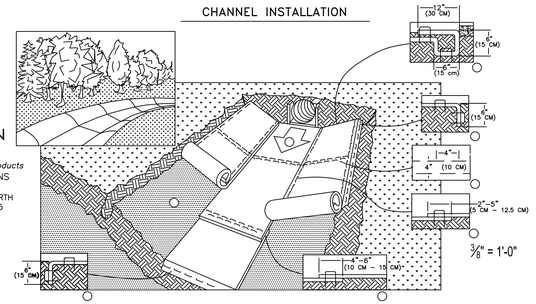
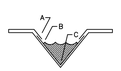
CHANNEL INSTALLATION



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 COMAPCT 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.

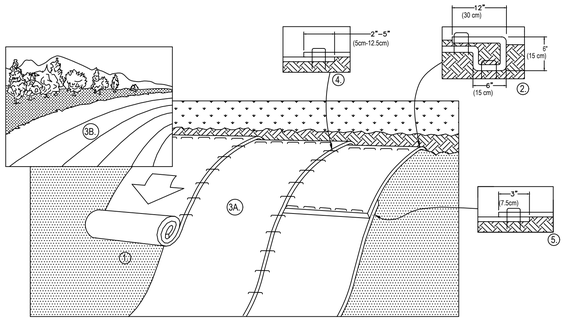


CRITICAL POINTS
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

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.

1 CHANNEL INSTALLATION NTS
PLAN



MAINTENANCE

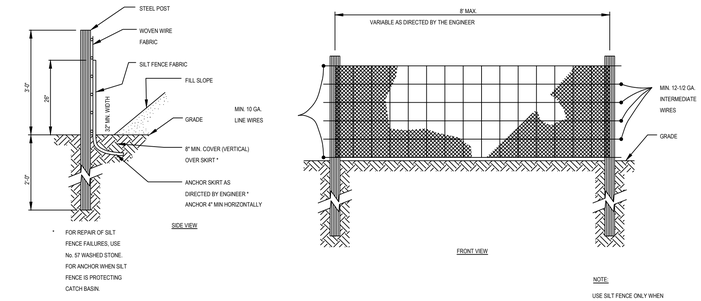
INSPECT MATTING ONCE A WEEK AND AFTER EACH RAINFALL. IF WASHOUT, BREAKAGE OR EROSION OCCURS, REPAIR SURFACE, RESEED, REMULCH AND INSTALL NEW NETTING AND ANCHORS AS REQUIRED. CONTINUE INSPECTIONS UNTIL VEGETATION IS FIRMLY ESTABLISHED.

SLOPE INSTALLATION AND STABILIZATION

NOT TO SCALE

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. WHEN INSTALLING RECP WITH HYDRAMATRIX MULCH, APPLY MULCH PER MULCH DIRECTIONS PRIOR TO RECP INSTALLATION.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) 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) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. 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. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE RECP's WIDTH. NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

2 SLOPE INSTALLATION AND STABILIZATION NTS
PLAN



* FOR REPAIR OF SILT FENCE FAILURES, USE No. 57 WASHED STONE. FOR ANCHOR WHEN SILT FENCE IS PROTECTING CATCH BASIN.

MAINTENANCE

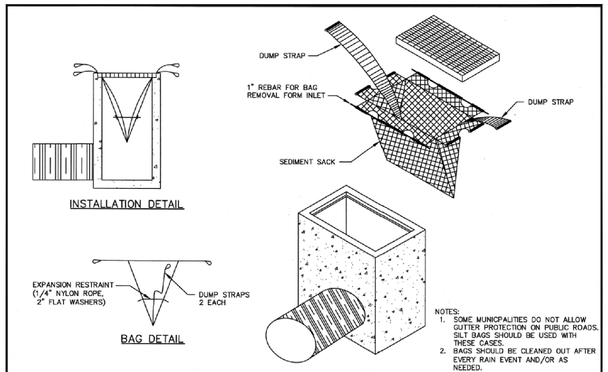
INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

NOTE:
USE SILT FENCE ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND NEVER IN AREAS OF CONCENTRATED FLOW.

STANDARD TEMPORARY SILT FENCE

NOT TO SCALE

3 STANDARD TEMPORARY SILT FENCE NTS
PLAN



STANDARD SILT BAG - INLET SEDIMENT CONTROL DEVICE

4 STANDARD SILT BAG NTS
PLAN

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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	6/28/2022

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DESIGNED BY 331
CHECKED BY 331
SCALE

TIMMONS GROUP

NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
EROSION CONTROL NOTES AND DETAILS

JOB NO. 49074
SHEET NO. C5.12

Electronically signed, sealed and dated using digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION A: SELF-INSPECTION

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

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

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 kept on site and available for inspection at all times during normal business hours.

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

2. Additional Documentation to be Kept on Site

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

(a) This General Permit as well as the Certificate of Coverage, after it is received.

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

3. Documentation to be Retained for Three Years

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

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

Occurrence	Reporting Timeframes [After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***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

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,

(b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,

(c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,

(d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,

(e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and

(f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

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

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

SECTION E: GROUND STABILIZATION

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

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

GROUND STABILIZATION SPECIFICATION

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

Temporary Stabilization	Permanent Stabilization
• 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 • Rolled erosion control products with grass seed

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 fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to construction and domestic wastes.
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 or provide secondary containment. 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. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

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.

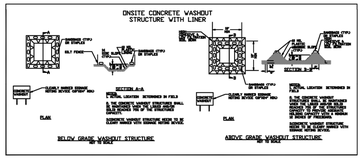
PORTABLE TOILETS

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.

NORTH CAROLINA Environmental Quality



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.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

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REVISION DESCRIPTION

DATE

6/28/2022

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DRAWN BY 331

DESIGNED BY 331

CHECKED BY 331

SCALE

TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

EROSION CONTROL NPDS NOTES AND DETAILS

JOB NO. 49074

SHEET NO. C5.13

Plotted: 6/28/2022 10:49 AM By: Jeffrey Brown
G:\Projects\49074\Design\Civil\CAD\Sheets\49074 - Erosion Control NPDS Notes and Details.dwg, 6/28/2022 10:49:07 AM, Jeffrey Brown

PERIMETER BUFFER
NORTH BUFFER

ADJOINING PROPERTY
ZONED:- RA
CONDITION - PINE FOREST

TYPE A - BUFFER REQUIRED
8' WIDTH
1 CANOPY TREES PER 100'
2 POINTS PER LINEAR FEET

TYPE A BUFFER PROVIDED
- TOTAL LENGTH OF BUFFER - 931' FROM PROPERTY LINE TO WETLANDS
- WETLANDS TO REMAIN UNDISTURBED

POINTS REQUIRED
CALCULATIONS - 931' x 2 = 186 POINTS TOTAL REQUIRED

POINTS PROVIDED 194 POINTS PROVIDED
CANOPY TREES = 10 TREES PROVIDED
1 X 12 POINTS = 12 POINTS PROVIDED
SHRUBS PROVIDED = 22 SHRUBS PROVIDED
97 SHRUBS X 2 POINTS = 74 POINTS

NOTES
- TOTAL DISTANCE BETWEEN BUILDINGS AND PROPERTY LINE IS 25' - TREES WILL BE PLACED WITHIN THAT 25' TO PROVIDE A MORE NATURALIZED APPEARANCE.
- SHRUBS HAVE BEEN GROUPED TO CREATE PLANTING BEDS.
- DUE TO ADJOINING PROPERTY BEING PINE FOREST SHRUBS ARE BEING GROUPED TO CREATE INTEREST INSTEAD OF A CONSTANT LINE OF SHRUBS WITH EXCESSIVE SPACING
- SHRUB PLANTING CONCENTRATED BEHIND BUILDINGS FOR VISUAL IMPACT AND NOT PLACED ON BACK SIDE OF STORM-WATER BASIN.

PLANT SCHEDULE NORTH BOUNDARY BUFFER						
TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	TYPE
ACE SUG	5	ACER SACCHARUM	SUGAR MAPLE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
QUE ALB	5	QUERCUS ALBA	WHITE OAK	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
LOR INN	14	LOROPETALUM CHINENSE 'RED CHOCOLATE'	RED CHOCOLATE FRINGE FLOWER	24" HT./SPRD.	CONTAINER	FULL AND DENSE
SPI TH3	23	SPIRAEA THUNBERGII	THUNBERG SPIREA	18"-24" HT./SPRD.	CONTAINER	FULL AND DENSE

PERIMETER BUFFER
WEST BUFFER

ADJOINING PROPERTY
ZONED:- RA
CONDITION - PINE FOREST

TYPE A - BUFFER REQUIRED
8' WIDTH
1 CANOPY TREES PER 100'
2 POINTS PER LINEAR FEET

TYPE A BUFFER PROVIDED
- TOTAL LENGTH OF BUFFER - 2025' TOTAL LENGTH OF BOUNDARY.
- ALL BUT 288' REMAINS UNDISTURBED IN PINE FOREST

POINTS REQUIRED
CALCULATIONS - 288' x 2 = 58 POINTS TOTAL REQUIRED

POINTS PROVIDED 72 POINTS PROVIDED
CANOPY TREES = 6 TREES PROVIDED
6 X 12 POINTS = 72 POINTS PROVIDED
SHRUBS PROVIDED = 0 SHRUBS PROVIDED

NOTES
- TOTAL DISTANCE BETWEEN IMPROVEMENTS AND ANY PROPERTY LINE IS EQUAL TO OR IN EXCESS OF 25' - TREES WILL BE PLACED WITHIN THAT 25' TO HELP STABILIZE THE SLOPES
- DUE TO ADJOINING PROPERTY BEING PINE FOREST SHRUBS ARE NOT INSTALLED

PLANT SCHEDULE WEST BOUNDARY BUFFER						
TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	TYPE
ACE SUG	6	ACER SACCHARUM	SUGAR MAPLE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE

PARKING LOT PLANTING

PARKING LOT PLANTING REQUIREMENTS
1 CANOPY TREE OR 2 UNDERSTORY TREES PER 20 SPACES
8 SHRUBS PER 20 SPACES

PARKING LOT PLANTING REQUIRED
- 486 SPACES PROVIDED
- 486 / 20 = 25 CANOPY TREE REQUIRED
- 489 / 20 x 8 = 197 SHRUBS REQUIRED

POINTS PROVIDED 70 POINTS PROVIDED
- CANOPY TREES = 89 TREES PROVIDED
- SHRUBS = 245 SHRUBS PROVIDED

NOTES
- PARKING LOT TREES AND SHRUBS EXCEED THE REQUIRED

PLANT SCHEDULE PARKING LOT PLANTING						
TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	TYPE
ACE SUG	21	ACER SACCHARUM	SUGAR MAPLE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
NYS SYL	8	NYSSA SYLVATICA	TUPELO	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
PLA OR2	32	PLATANUS ORIENTALIS	ORIENTAL PLANE TREE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
QUE ALB	28	QUERCUS ALBA	WHITE OAK	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
ABE COM	65	ABELIA X GRANDIFLORA 'COMPACTA'	COMPACT GLOSSY ABELIA	24" HT./SPRD.	CONTAINER	FULL AND DENSE
LOR INN	79	LOROPETALUM CHINENSE 'RED CHOCOLATE'	RED CHOCOLATE FRINGE FLOWER	24" HT./SPRD.	CONTAINER	FULL AND DENSE
RHO EN2	49	RHODODENDRON CATAWBIENSE 'ENGLISH ROSEUM'	ENGLISH ROSEUM RHODODENDRON	24" HT./SPRD.	CONTAINER	FULL AND DENSE
SPI TH3	52	SPIRAEA THUNBERGII	THUNBERG SPIREA	18"-24" HT./SPRD.	CONTAINER	FULL AND DENSE

PLANT SCHEDULE EAST BOUNDARY BUFFER					
TREES	QTY	COMMON / BOTANICAL NAME	MIN. INSTALLED SIZE	ROOT	TYPE
QUE ALB	4	WHITE OAK / QUERCUS ALBA	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
SHRUBS	QTY	COMMON / BOTANICAL NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
LOR INN	13	RED CHOCOLATE FRINGE FLOWER / LOROPETALUM CHINENSE 'RED CHOCOLATE'	24" HT./SPRD.	CONTAINER	FULL AND DENSE

ZONED C2-
CONDITION - OPEN SPACE

TYPE A - BUFFER REQUIRED
8' WIDTH
1 CANOPY TREES PER 100'
2 POINTS PER LINEAR FEET

TYPE A BUFFER PROVIDED
- PROPERTY LINE NORTH OF THE CAUSEWAY IS LOCATED IN DENSE WETLAND VEGETATION AND THEREFORE NO PLANTING IS PROVIDED
- AREA SOUTH OF THE TRAFFIC CIRCLE IS CLEARED AND IS TO BE BUFFERED

POINTS REQUIRED
CALCULATIONS - 265' x 2 = 53 POINTS TOTAL REQUIRED

POINTS PROVIDED 74 POINTS PROVIDED
CANOPY TREES = 4 TREES PROVIDED
4 X 12 POINTS = 48 POINTS PROVIDED
SHRUBS PROVIDED = 13 SHRUBS PROVIDED
13 X 2 POINTS = 26 POINTS

NOTES
- TOTAL DISTANCE BETWEEN BACK OF CURB AND PROPERTY LINE IS 12.5' - TREES WILL BE PLACED WITHIN THAT 12.5 TO CREATE A STREET TREE AVENUE
- SHRUBS HAVE BEEN CONCENTRATED NEAR THE ADJOINING BUILDING TO PROVIDE SCREENING
- ONE GENIUS USED TO PROVIDE CONSISTENCY IN SCREENING

PLANT SCHEDULE SOUTH BOUNDARY BUFFER						
TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	TYPE
ACE SUG	2	ACER SACCHARUM	SUGAR MAPLE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
QUE ALB	5	QUERCUS ALBA	WHITE OAK	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
LOR INN	25	LOROPETALUM CHINENSE 'RED CHOCOLATE'	RED CHOCOLATE FRINGE FLOWER	24" HT./SPRD.	CONTAINER	FULL AND DENSE

PERIMETER BUFFER
SOUTH BUFFER

ADJOINING PROPERTY
ZONED LI AND C2-
CONDITION - LI AND C2

TYPE A - BUFFER REQUIRED
8' WIDTH
1 CANOPY TREES PER 100'
2 POINTS PER LINEAR FEET

TYPE A BUFFER PROVIDED
TOTAL LENGTH OF BUFFER - 2025' TOTAL LENGTH OF BOUNDARY
ALL BUT 633' REMAINS UNDISTURBED IN PINE FOREST AND WETLAND VEGETATION

POINTS REQUIRED
CALCULATIONS - 633' x 2 = 127 POINTS TOTAL REQUIRED

POINTS PROVIDED 134 POINTS PROVIDED
CANOPY TREES = 7 TREES PROVIDED
7 X 12 POINTS = 84 POINTS PROVIDED
SHRUBS PROVIDED = 25 SHRUBS PROVIDED
25 X 2 POINTS = 50 POINTS

NOTES
- TOTAL DISTANCE BETWEEN BACK OF CURB AND PROPERTY LINE IS 12.5' - TREES WILL BE PLACED WITHIN THAT 12.5 TO CREATE A STREET TREE AVENUE
- SHRUBS HAVE BEEN CONCENTRATED NEAR THE ADJOINING BUILDING TO PROVIDE SCREENING
- ONE GENIUS USED TO PROVIDE CONSISTENCY IN SCREENING

SCALE 1"=100'
0 100' 200'

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DESIGNED BY
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CHECKED BY
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SCALE
1"= 100'

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TIMMONS GROUP

NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
LANDSCAPE PLAN OVERALL

JOB NO.
49074
SHEET NO.
C10.0

PLANT SCHEDULE NORTH BOUNDARY BUFFER						
TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	TYPE
ACE SUG	5	ACER SACCHARUM	SUGAR MAPLE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
QUE ALB	5	QUERCUS ALBA	WHITE OAK	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
LOR INN	14	LOROPETALUM CHINENSE 'RED CHOCOLATE'	RED CHOCOLATE FRINGE FLOWER	24" HT./SPRD.	CONTAINER	FULL AND DENSE
SPI TH3	23	SPIRAEA THUNBERGII	THUNBERG SPIREA	18"-24" HT./SPRD.	CONTAINER	FULL AND DENSE

TYPE A - BUFFER REQUIRED
8' WIDTH
1 CANOPY TREES PER 100'
2 POINTS PER LINEAR FEET

TYPE A BUFFER PROVIDED
- TOTAL LENGTH OF BUFFER - 931' FROM PROPERTY LINE TO WETLANDS
- WETLANDS TO REMAIN UNDISTURBED

POINTS REQUIRED
CALCULATIONS - 931' x .2 = 186 POINTS TOTAL REQUIRED

POINTS PROVIDED 194 POINTS PROVIDED
CANOPY TREES = 10 TREES PROVIDED
10 X 12 POINTS = 120 POINTS PROVIDED
SHRUBS PROVIDED = 22 SHRUBS PROVIDED
37 SHRUBS X 2 POINTS = 74 POINTS

NOTES
- TOTAL DISTANCE BETWEEN BUILDINGS AND PROPERTY LINE IS 25' - TREES WILL BE PLACED WITHIN THAT 25' TO PROVIDE A MORE NATURALIZED APPEARANCE
- SHRUBS HAVE BEEN GROUPED TO CREATE PLANTING BEDS.
- DUE TO ADJOINING PROPERTY BEING PINE FOREST SHRUBS ARE BEING GROUPED TO CREATE INTEREST INSTEAD OF A CONSTANT LINE OF SHRUBS WITH EXCESSIVE SPACING
- SHRUB PLANTING CONCENTRATED BEHIND BUILDINGS FOR VISUAL IMPACT AND NOT PLACED ON BACK SIDE OF STORM-WATER BASIN.

PLANT SCHEDULE WEST BOUNDARY BUFFER						
TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	TYPE
ACE SUG	6	ACER SACCHARUM	SUGAR MAPLE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE

PERIMETER BUFFER
WEST BUFFER

ADJOINING PROPERTY
ZONED- RA
CONDITION - PINE FOREST

TYPE A - BUFFER REQUIRED
8' WIDTH
1 CANOPY TREES PER 100'
2 POINTS PER LINEAR FEET

TYPE A BUFFER PROVIDED
- TOTAL LENGTH OF BUFFER - 2025' TOTAL LENGTH OF BOUNDARY
- ALL BUT 288' REMAINS UNDISTURBED IN PINE FOREST

POINTS REQUIRED
CALCULATIONS - 288' x .2 = 58 POINTS TOTAL REQUIRED

POINTS PROVIDED 72 POINTS PROVIDED
CANOPY TREES = 6 TREES PROVIDED
6 X 12 POINTS = 72 POINTS PROVIDED
SHRUBS PROVIDED = 0 SHRUBS PROVIDED

NOTES
- TOTAL DISTANCE BETWEEN IMPROVEMENTS AND AND PROPERTY LINE IS EQUAL TO OR IN EXCESS OF 25' - TREES WILL BE PLACED WITHIN THAT 25' TO HELP STABILIZE THE SLOPES
- DUE TO ADJOINING PROPERTY BEING PINE FOREST SHRUBS ARE NOT INSTALLED

PARKING LOT PLANTING

PARKING LOT PLANTING REQUIREMENTS
1 CANOPY TREE OR 2 UNDERSTORY TREES PER 20 SPACES
8 SHRUBS PER 20 SPACES

PARKING LOT PLANTING REQUIRED
- 486 SPACES PROVIDED
- 486 / 20 = 25 CANOPY TREE REQUIRED
- 489 / 20 x 8 = 197 SHRUBS REQUIRED

POINTS PROVIDED 70 POINTS PROVIDED
- CANOPY TREES = 89 TREES PROVIDED
- SHRUBS = 245 SHRUBS PROVIDED

NOTES
- PARKING LOT TREES AND SHRUBS EXCEED THE REQUIRED

LEGEND

PROPERTY LINE
EXISTING WETLANDS
NEUSE RIPARIAN BUFFER
OPEN SPACE
CIVIC SPACE

PLANT SCHEDULE PARKING LOT PLANTING						
TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	TYPE
ACE SUG	21	ACER SACCHARUM	SUGAR MAPLE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
NYS SYL	8	NYSSA SYLVATICA	TUPELO	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
PLA OR2	32	PLATANUS ORIENTALIS	ORIENTAL PLANE TREE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
QUE ALB	28	QUERCUS ALBA	WHITE OAK	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
ABE COM	65	ABELIA X GRANDIFLORA 'COMPACTA'	COMPACT GLOSSY ABELIA	24" HT./SPRD.	CONTAINER	FULL AND DENSE
LOR INN	79	LOROPETALUM CHINENSE 'RED CHOCOLATE'	RED CHOCOLATE FRINGE FLOWER	24" HT./SPRD.	CONTAINER	FULL AND DENSE
RHO EN2	49	RHODODENDRON CATAWBIENSE 'ENGLISH ROSEUM'	ENGLISH ROSEUM RHOODENDRON	24" HT./SPRD.	CONTAINER	FULL AND DENSE
SPI TH3	52	SPIRAEA THUNBERGII	THUNBERG SPIREA	18"-24" HT./SPRD.	CONTAINER	FULL AND DENSE

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DATE 6/28/2022
DRAWN BY 331
DESIGNED BY 331
CHECKED BY 331
SCALE 1"= 40'
JOB NO. 49074
SHEET NO. C10.1

TIMMONS GROUP

NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
LANDSCAPE PLAN LAYOUT

SCALE 1"=40'
0 40' 80'
NAD 83

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MATCHLINE "A"
MATCHLINE "B"

WETWELL
(NOT FIELD SURVEY)

60X60
LIFT
STATION
COMPOUND

30' EASEMENT TO LIFT STATION
PORTIONS TO BE ABANDONED UPON CONSTRUCTION OF FRONTAGE PACELS

PROPOSED PROPERTY LINE

ANNEXED AREA
43.13 Acres

SCM
26,360 SF

MATCHLINE "B"
MATCHLINE "D"

HAWKINS AVENUE

NC 15-501 BY-PASS

GPS 1
NC STATE PLANE COORDINATES
NAD 83 (2011)
N: 647,059.28'
E: 1,944,852.93'
ELEV.: 329.27'

JUNCTION BOX2 CONC TOP

DI FULL OF WATER

LEGEND

- PROPERTY LINE
- EXISTING WETLANDS
- NEUSE RIPARIAN BUFFER
- OPEN SPACE
- CIVIC SPACE

NAD 83

SCALE 1"=40'
0 40' 80'

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NORTHVIEW APARTMENTS
SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA
LANDSCAPE PLAN LAYOUT

JOB NO. 49074
SHEET NO. C10.2

LEGEND

- PROPERTY LINE
- EXISTING WETLANDS
- NEUSE RIPARIAN BUFFER
- OPEN SPACE
- CIVIC SPACE

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SCALE
1"= 40'

NAD 83

SCALE 1"=40'
0 40' 80'

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TIMMONS GROUP

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

LANDSCAPE PLAN LAYOUT

JOB NO.
49074

SHEET NO.
C10.3

PLANT SCHEDULE EAST BOUNDARY BUFFER				
TREES	QTY	COMMON / BOTANICAL NAME	MIN. INSTALLED SIZE	ROOT	TYPE
QUE ALB	4	WHITE OAK / QUERCUS ALBA	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
SHRUBS	QTY	COMMON / BOTANICAL NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
LOR INN	13	RED CHOCOLATE FRINGE FLOWER / LOROPETALUM CHINENSE 'RED CHOCOLATE'	24" HT./SPRD.	CONTAINER	FULL AND DENSE

PERIMETER BUFFER
EASTERN BUFFER

ADJOINING PROPERTY
ZONED C2,
CONDITION - OPEN SPACE

TYPE A - BUFFER REQUIRED
8' WIDTH
1 CANOPY TREES PER 100'
2 POINTS PER LINEAR FEET

TYPE A BUFFER PROVIDED
- PROPERTY LINE NORTH OF THE CAUSEWAY IS LOCATED IN DENSE WETLAND VEGETATION AN THEREFORE NO PLANTING IS PROVIDED
- AREA SOUTH OF THE TRAFFIC CIRCLE IS CLEARED AND IS TO BE BUFFERED

POINTS REQUIRED
CALCULATIONS - 265' x 2 = 53 POINTS TOTAL REQUIRED

POINTS PROVIDED 74 POINTS PROVIDED
CANOPY TREES = 4 TREES PROVIDED
4 X 12 POINTS = 48 POINTS PROVIDED
SHRUBS PROVIDED = 13 SHRUBS PROVIDED
13 X 2 POINTS = 26 POINTS

NOTES
- TOTAL DISTANCE BETWEEN BACK OF CURB ANI PROPERTY LINE IS 12.5' - TREES WILL BE PLACE WITHIN THAT 12.5 TO CREATE A STREET TREE AVENUE.
- SHRUBS HAVE BEEN CONCENTRATED NEAR TH ADJOINING BUILDING TO PROVIDE SCREENING
- ONE GENIUS USED TO PROVIDE CONSISTENCY IN SCREENING

PLANT SCHEDULE SOUTH BOUNDARY BUFFER						
TREES	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	TYPE
ACE SUG	2	ACER SACCHARUM	SUGAR MAPLE	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
QUE ALB	5	QUERCUS ALBA	WHITE OAK	2" CAL., 12' HT. MIN.	B&B	CANOPY TREE
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	MIN. INSTALLED SIZE	ROOT	REMARKS
LOR INN	25	LOROPETALUM CHINENSE 'RED CHOCOLATE'	RED CHOCOLATE FRINGE FLOWER	24" HT./SPRD.	CONTAINER	FULL AND DENSE

PERIMETER BUFFER
SOUTH BUFFER

ADJOINING PROPERTY
ZONED LI AND C2
CONDITION - LI AND C2

TYPE A - BUFFER REQUIRED
8' WIDTH
1 CANOPY TREES PER 100'
2 POINTS PER LINEAR FEET

TYPE A BUFFER PROVIDED
TOTAL LENGTH OF BUFFER - 2025' TOTAL LENGTH OF BOUNDARY
ALL BUT 633' REMAINS UNDISTURBED IN PINE FOREST AND WETLAND VEGETATION

POINTS REQUIRED
CALCULATIONS - 633' x .2 = 127 POINTS TOTAL REQUIRED

POINTS PROVIDED 134 POINTS PROVIDED
CANOPY TREES = 7 TREES PROVIDED
7 X 12 POINTS = 84 POINTS PROVIDED
SHRUBS PROVIDED = 25 SHRUBS PROVIDED
25 X 2 POINTS = 50 POINTS

NOTES
- TOTAL DISTANCE BETWEEN BACK OF CURB AND PROPERTY LINE IS 12.5' - TREES WILL BE PLACED WITHIN THAT 12.5 TO CREATE A STREET TREE AVENUE.
- SHRUBS HAVE BEEN CONCENTRATED NEAR THE ADJOINING BUILDING TO PROVIDE SCREENING
- ONE GENIUS USED TO PROVIDE CONSISTENCY IN SCREENING

LEGEND

- PROPERTY LINE
- EXISTING WETLANDS
- NEUSE RIPARIAN BUFFER
- OPEN SPACE
- CIVIC SPACE

NAD 83

SCALE 1"=40'
0 40' 80'

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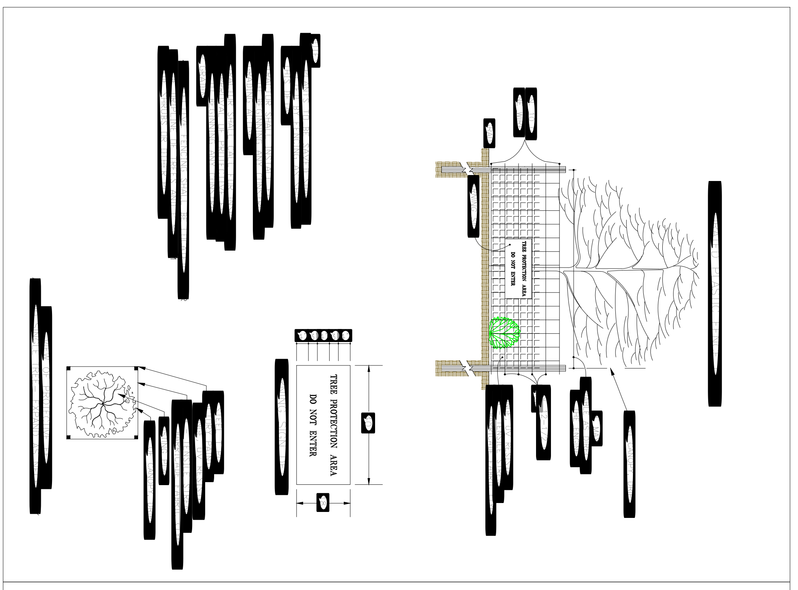
DATE	REVISION DESCRIPTION

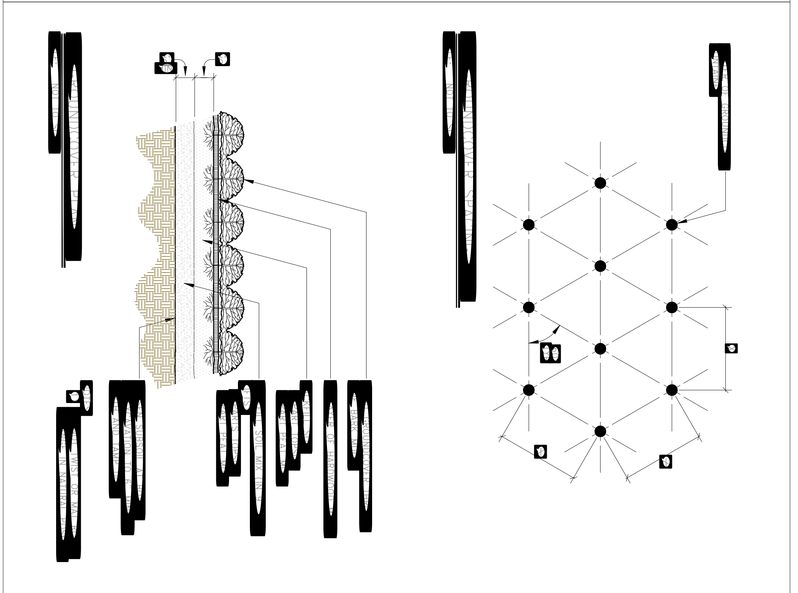
PROGRESS DRAWINGS - DO NOT USE FOR CONSTRUCTION

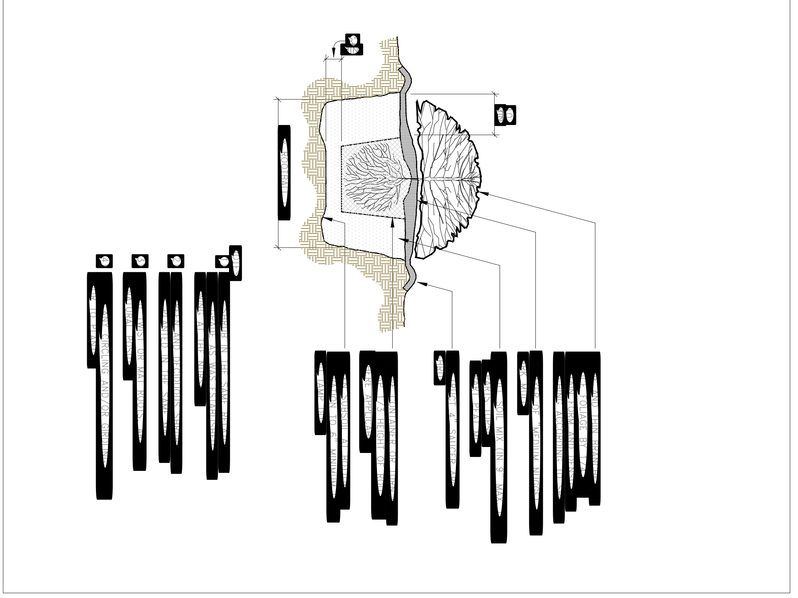
TIMMONS GROUP

NORTHVIEW APARTMENTS
SANFORD DISTRICT - - LEE COUNTY - NORTH CAROLINA
LANDSCAPE PLAN LAYOUT

DATE	6/28/2022
DRAWN BY	331
DESIGNED BY	331
CHECKED BY	331
SCALE	1"= 40'
JOB NO.	49074
SHEET NO.	C10.4







ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD, NCDEQ AND NCDOT STANDARDS, SPECIFICATIONS, AND DETAILS

North Carolina 811 www.nc811.org

TIMMONS GROUP

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THIS DRAWING PREPARED AT THE
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FOR REVIEW ONLY

NORTHVIEW APARTMENTS

SANFORD DISTRICT - LEE COUNTY - NORTH CAROLINA

LANDSCAPE DETAILS AND NOTES

JOB NO.	SCALE	CHECKED BY	DESIGNED BY	DRAWN BY	DATE
49074	1" = 40'	JJI	JJI	JJI	6/28/2022

SHEET NO. C10.5

DATE	REVISION DESCRIPTION

PROGRESS DRAWINGS - DO NOT USE FOR CONSTRUCTION

DUKE ENERGY. PROGRESS

Outdoor Lighting

Roadway LED

The Roadway LED is a green solution and great fit for streets, roads, long, narrow areas and parking lots. This energy-efficient luminaire delivers the light where it is needed while increasing visibility and reducing spill light to adjoining properties. Choose low to medium light output on wood or fiberglass poles (or mount on an existing pole). Available with one to four fixtures per pole, depending on the fixture/pole combination selected.

LED *(Light Emitting Diode)*	50 | 75 | 105 | 150 | 215 | 280 watts
Mounting heights	25, 30, 35'
Color	Gray, Black
Poles	Fiberglass Metal *(special conditions)* Wood

For additional information, visit us at
duke-energy.com/OutdoorLighting
or call us toll free at **866.769.6417**.

DUKE ENERGY. PROGRESS

Outdoor Lighting

Roadway LED

light distribution pattern

Light source: LED *(white)*
Lumens: 4,807 – 25,050 *(fixture dependent)*

Wattage	Light Pattern	IESNA Backlight-Uplight – Glare (BUG) Rating
LED 50	IESNA Type III *(medium oval)*	B1-U0-G1
LED 75	IESNA Type II *(long oval)*	B1-U0-G2
LED 105	IESNA Type II *(long oval)*	B2-U0-G3
LED 150	IESNA Type III *(medium oval)*	B2-U0-G2
LED 215	IESNA Type III *(medium oval)*	B3-U0-G3
LED 280	IESNA Type III *(medium oval)*	B3-U0-G4

Color temperature: 4,000K
Warm-up and restrike time: Instant *on (no warm-up or restrike time)*

Poles available:

Name	*Mounting height*	*Color*
Fiberglass	25', 30', 35'	Grey
Fiberglass	25', 30', 35'	Black *(additional cost)*
Wood	25', 30', 35'	Standard
Metal *(special conditions)**	25', 30', 35'	Gray

Features	Benefits
Little or no installation cost	Frees up capital for other projects
Design services by lighting professionals included	Meets industry standards and lighting ordinances
Maintenance included	Eliminates high and unexpected repair bills
Electricity included	Less expensive than metered service
Warranty included	Worry-free
One low monthly cost on your electric bill	Convenience and savings for you
Turnkey operation	Provides hassle-free installation and service
Backed by over 40 years of experience	A name you can trust today ... and tomorrow

**3' raised foundation available when required.*

©2015 Duke Energy Corporation 161307 3/15

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	✳	1.7 fc	6.0 fc	0.5 fc	12.0:1	3.4:1

Schedule

Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
	A	26	LED 150w Roadway - Type IV - 3000K	1	20049	0.85
	B	7	LED 150w Roadway - Type IV - 3000K	1	20049	0.85
	C	11	LED 150w Roadway - Type III - 3000K	1	18854	0.85

Rev A	06/28/22	LED Roadway		NJ
REV#	DATE	REVISION		BY

Customer approval_____
Date_____

LIGHTING DESIGN TOLERANCE

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

DUKE ENERGY® PROGRESS

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NORTHVIEW APARTMENTS

Sanford, NC

SITE LIGHTING PLAN

Designed by DEP LIGHTING SOLUTIONS
Reviewed by N. Johnson Scale 1" = 70'
Date 06/28/2022 Size 'Arch D'
Description LED Roadway
Drawing No. 22-0262A Sht. 1 OF 1

DUKE ENERGY. PROGRESS

Outdoor Lighting

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Mounting heights	25, 30, 35'
Color	Gray, Black
Poles	Fiberglass Metal *(special conditions)* Wood

For additional information, visit us at
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DUKE ENERGY. PROGRESS

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Roadway LED

light distribution pattern

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Lumens: 4,807 – 25,050 *(fixture dependent)*

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Color temperature: 4,000K
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**2' raised foundation available when required.*

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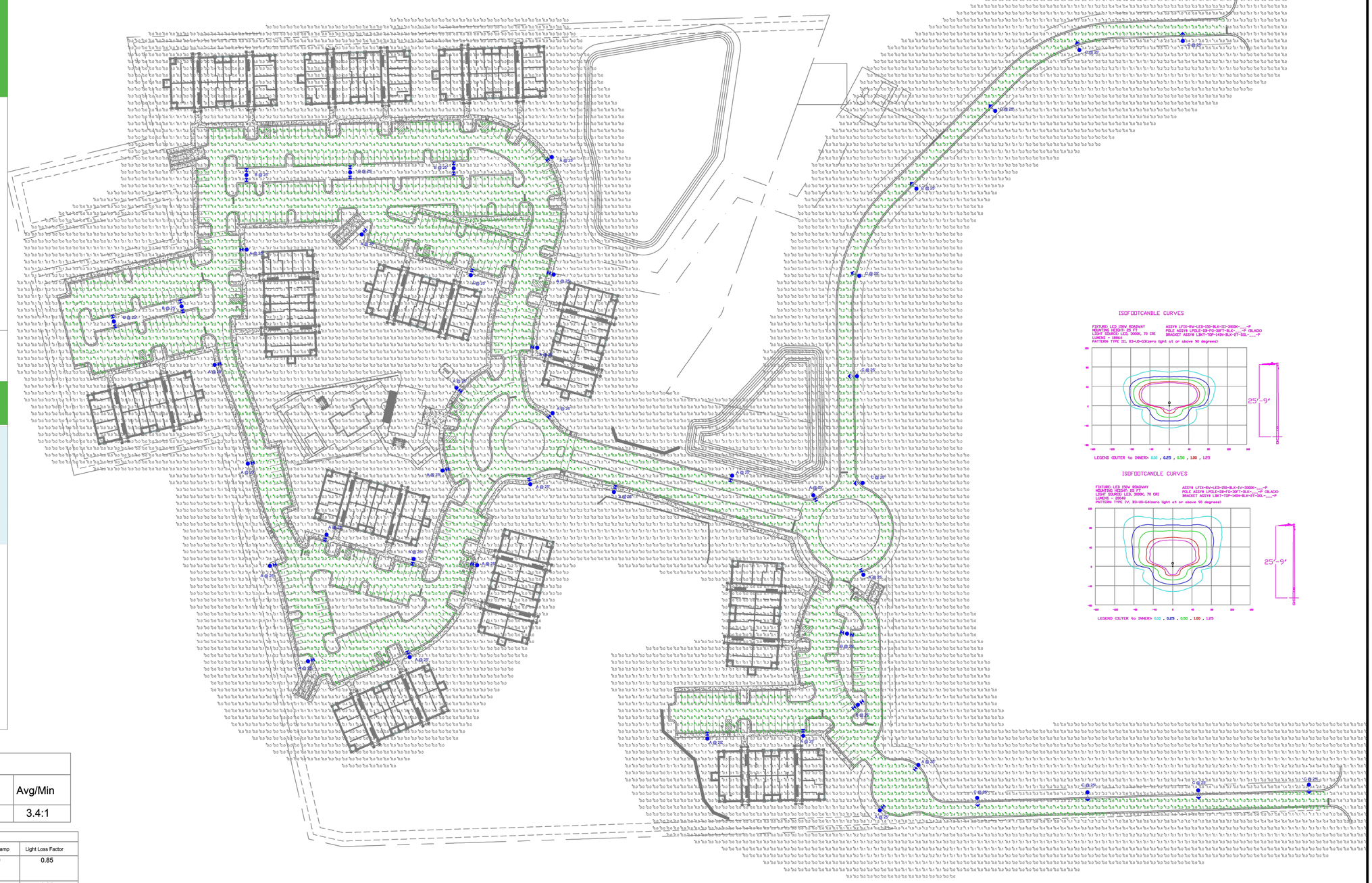

ISOFOOTCANDLE CURVES

FIXTURE: LED 150W ROADWAY
MOUNTING HEIGHT: 25 FT
LIGHT SOURCE: LED, 3000K, 70 CRI
LUMENS = 19864
PATTERN: TYPE III, B3-U0-G2(zero light at or above 90 degrees)

ASSY# LF1V-RV-LED-150-BLK-IV-3000K-___-F
POLE: ASSY# LP15LF-RW-FS-30FT-BLK-___-F (BLACK)
BRACKET: ASSY# LBKT-TOP-140W-BLK-DT-SGL-___-F

LEGEND (OUTER to INNER): 0.10 , 0.25 , 0.50 , 1.00 , 1.25

ISOFOOTCANDLE CURVES

FIXTURE: LED 150W ROADWAY
MOUNTING HEIGHT: 25 FT
LIGHT SOURCE: LED, 3000K, 70 CRI
LUMENS = 20049
PATTERN: TYPE IV, B3-U0-G4(zero light at or above 90 degrees)

ASSY# LF1V-RV-LED-150-BLK-IV-3000K-___-F
POLE: ASSY# LP15LF-RW-FS-30FT-BLK-___-F (BLACK)
BRACKET: ASSY# LBKT-TOP-140W-BLK-DT-SGL-___-F

LEGEND (OUTER to INNER): 0.10 , 0.25 , 0.50 , 1.00 , 1.25

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
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	C	11	LED 150w Roadway - Type III - 3000K	1	18854	0.85

REV#	DATE	REVISION	BY
Rev A	06/28/22	LED Roadway	NJ

Customer approval_____
Date_____

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Sanford, NC

SITE LIGHTING PLAN

Designed by DEP LIGHTING SOLUTIONS
Reviewed by N. Johnson Scale 1" = 70'
Date 06/28/2022 Size "Arch D"
Description LED Roadway
Drawing No. 22-0262A Sht. 1 OF 1

[redacted]

3284 FARRELL RD., SANFORD, NC 27330

[redacted]

[redacted]

[redacted]

NUMBER	DIRECTION	DISTANCE
L1	N 09°26'13" E	50.17'
L2	S 12°09'56" W	47.54'
L3	N 15°33'39" E	49.56'
L4	S 19°04'25" W	49.21'
L5	N 22°41'21" E	49.31'
L6	N 25°56'20" E	50.12'
L7	S 28°53'36" W	50.75'
L8	N 31°52'00" E	48.85'
L9	S 35°14'23" W	49.47'
L10	S 39°06'02" W	48.80'
L11	N 42°11'55" E	47.03'
L12	N 45°03'34" E	49.32'
L13	S 48°36'37" W	50.19'
L14	S 50°32'18" W	22.29'
L15	N 53°55'03" E	49.53'
L16	S 57°13'20" W	49.13'
L17	N 59°01'16" E	49.08'
L18	S 60°12'48" W	47.94'
L19	N 60°48'57" E	50.31'
L20	S 61°37'29" W	188.02'
L21	N 00°19'48" W	33.91'

CONTAINS 30.25 ACRES TOTAL
BY COORDINATE METHOD
DEED BOOK 89, PAGE 556
PIN 9666-44-0337-00
P.C. 2018, SL. 96
P.C. 2018, SL. 107

TIMOTHY G. PILSON &
TERESA L. PILSON
DEED BOOK 427, PAGE 365
PIN 9666-54-6675-00

AMMONS FARMLAND LLC
DEED BOOK 1211, PAGE 239
PIN 9666-52-2894-00

LOT 19
COPPER RIDGE DEVELOPMENT
LLC P.C. 2017, SL. 81
PIN 9666-45-2383-00

COPPER RIDGE DEVELOPMENT
LLC P.C. 2017, SL. 81
PIN 9666-45-4398-00

TODD A. JOHNSON &
VICKIE C. JOHNSON
D.B. 280, PG. 520
PIN 9666-45-3102

TODDY JOHNSON &
JEAN A. JOHNSON
D.B. 101, PG. 523
PIN 9666-45-1129-00

WAYNE C. RENFRO
DEED BOOK 988, PAGE 503
PLAT CABINET 6, SLIDE 137
PIN 9666-33-1125-00

AMMONS FARMLAND LLC
DEED BOOK 1199, PAGE 784
PIN 9666-31-7056-00

EXISTING SEPTIC EASEMENT
PC 2018 SLIDE 06

S 01°33'04" E 775.00'
N 01°33'04" W 1382.36'
N 02°09'53" E
S 02°10'20" W 210.40'
S 88°44'22" W 162.77'
N 84°34'13" E 392.28'
S 84°34'13" W 414.62'
N 78°49'55" E 1337.00'
S 00°19'48" E 607.02'

1/2" IRON PIPE FOUND 0.3' ABOVE GROUND NAIL SET AT BASE
5/8" IRON PIPE FOUND 0.2' ABOVE GROUND
1/2" IRON PIPE FOUND 0.3' ABOVE GROUND
1/2" IRON PIPE FOUND NAIL SET AT BASE
5/8" REBAR SET FLUSH
SERVICE FOUND 0.5' BELOW PVMT.
CALCULATED POINT
N 31°58'09" W 178.58'
N 77°59'55" W 178.58'
"CAP" 4.75'

N.C. GRID COORDINATES
(NAD 83/2011)
NORTHING= 664,948.46
EASTING = 1,964,046.76

0 100 200 300

OVERHEAD ELECTRIC (APPROX.)
STRUCTURES TO BE DEMOLISHED
STRUCTURE TO BE DEMOLISHED
6" PVC WAS
WAS - APPROXIMATE LOCATION
APPROXIMATE LOCATION

PRELIMINARY FOR TRC REVIEW 6-27-2022

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ENGINEERING
PLANNING
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SANFORD, NC 27331
PHONE: (919) 776-3444
www.hamiltoncivil.com

ESTATES SUB

CONTAINS 30.25 ACRES TOTAL
BY COORDINATE METHOD

TIMOTHY G. PILSON &
TERESA L. PILSON
DEED BOOK 427, PAGE 365
PIN 9666-54-6675-00

DEED BOOK 89, PAGE 556
PIN 9666-44-0337-00
P.C. 2018, SL. 96
P.C. 2018, SL. 107

AMMONS FARMLAND LLC
DEED BOOK 1211, PAGE 239
PIN 9666-52-2894-00

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L12	N 45°03'34" E	49.32'
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VICKIE C. JOHNSON
D.B. 280, PG. 520
PIN 9666-45-3102

TODDY JOHNSON &
JEAN A. JOHNSON
D.B. 101, PG. 523
PIN 9666-45-1129-00

COPPER RIDGE DEVELOPMENT
LLC P.C. 207, SL. 81
PIN 9666-45-4286-00

LOT 19
COPPER RIDGE DEVELOPMENT
LLC P.C. 207, SL. 81
PIN 9666-45-2383-00

EXISTING SEPTIC EASEMENT
PC 2018 SLIDE 06

CALCULATED POINT

1/2" IRON PIPE FOUND 0.3' ABOVE GROUND

1/2" IRON PIPE FOUND 0.2' ABOVE GROUND

1/2" IRON PIPE FOUND 0.3' ABOVE GROUND

1/2" IRON PIPE FOUND 0.8' ABOVE GROUND

5/8" REBAR SET FLUSH

1/2" IRON PIPE FOUND 0.3' ABOVE GROUND

1/2" IRON PIPE FOUND 0.2' ABOVE GROUND

1/2" REBAR FOUND 0.3' ABOVE GROUND

1/2" IRON PIPE FOUND 0.3' ABOVE GROUND

1/2" REBAR SET AT BASE

1/2" IRON PIPE FOUND 0.3' ABOVE GROUND

1/2" REBAR SET AT BASE

1/2" IRON PIPE FOUND 0.3' ABOVE GROUND

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N 01°33'04" W 1382.36'

S 88°44'22" W 162.77'

S 02°10'20" W 210.40'

N 84°34'13" E 414.62'

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S 50°32'18" W 22.29'

R/W

TO US HWY 1

CENTERLINE

NC GRID NORTH
(NAD 83/2011)

0 100 200 300

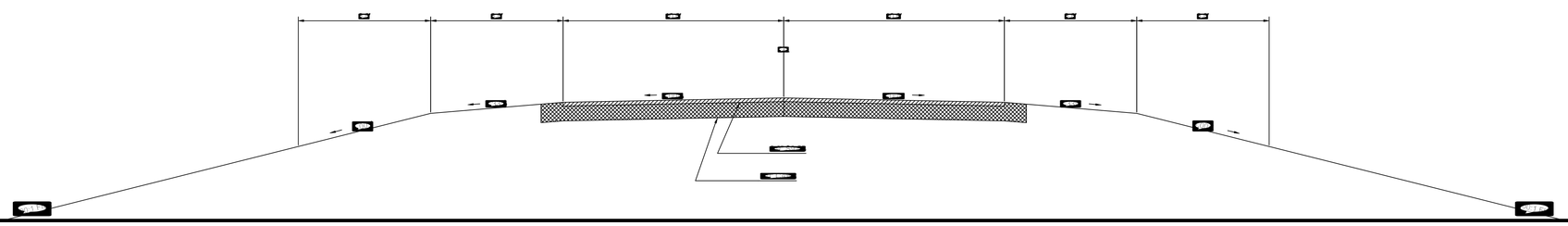
OVERHEAD ELECTRIC (APPROX.)

SEPTIC AREA

SEPTIC AREA - APPROXIMATE LOCATION

WAYNE C. RENFRO
DEED BOOK 988, PAGE 503
PLAT CABINET 6, SLIDE 137
PIN 9666-33-1125-00

AMMONS FARMLAND LLC
DEED BOOK 1189, PAGE 784
PIN 9666-31-7056-00



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CONSULTING ENGINEERS
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SANFORD, NC 27331
PHONE: (919) 776-3444
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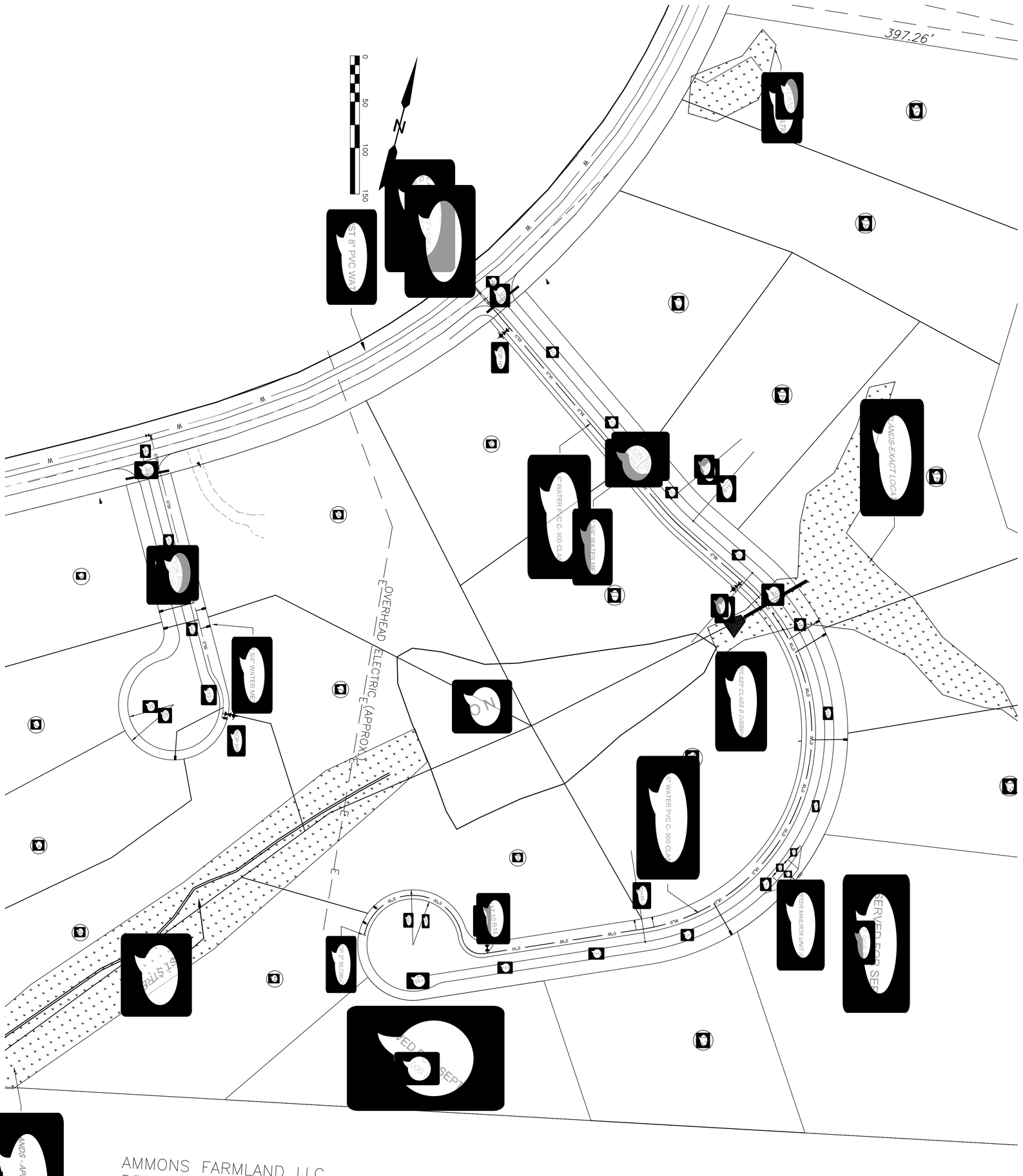
SUBDIVISION PLAT



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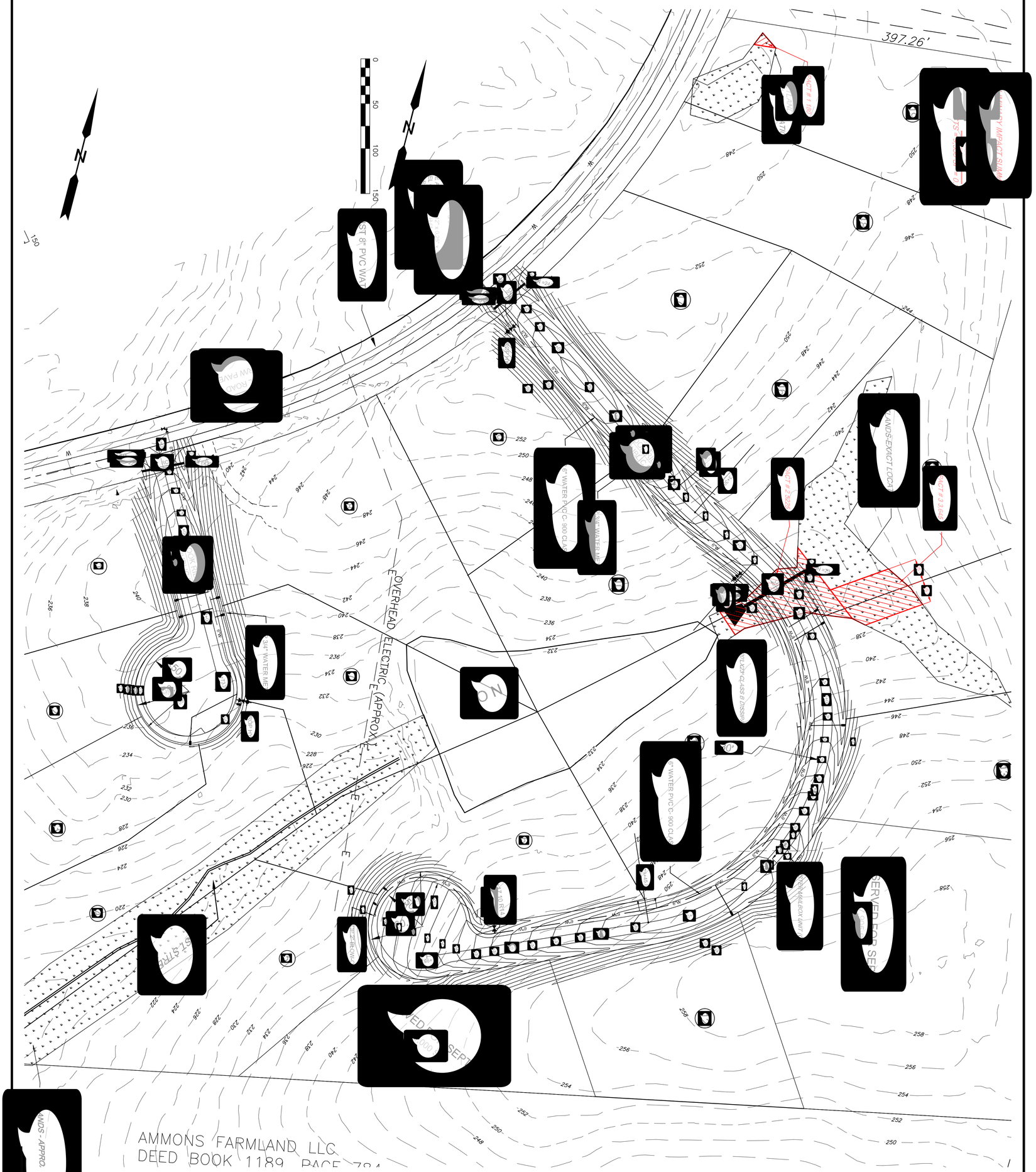
ASSOCIATES
CONSULTING ENGINEERS
2553 2305 CARTHAGE ST.
SANFORD, NC 27331
PHONE: (919) 776-3444



FOR TRC REVIEW 6-27-2022

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SANFORD, NC 27331
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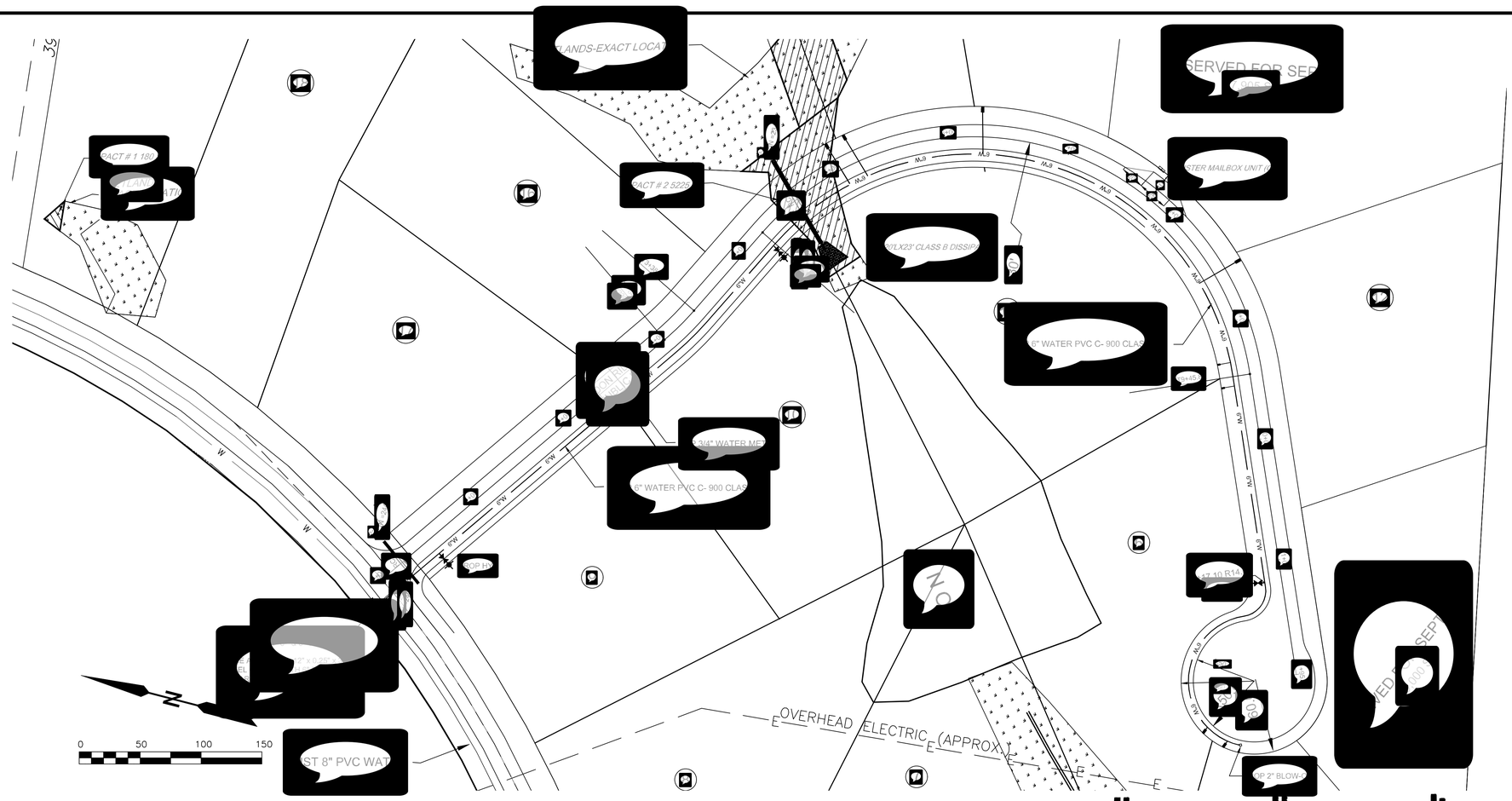

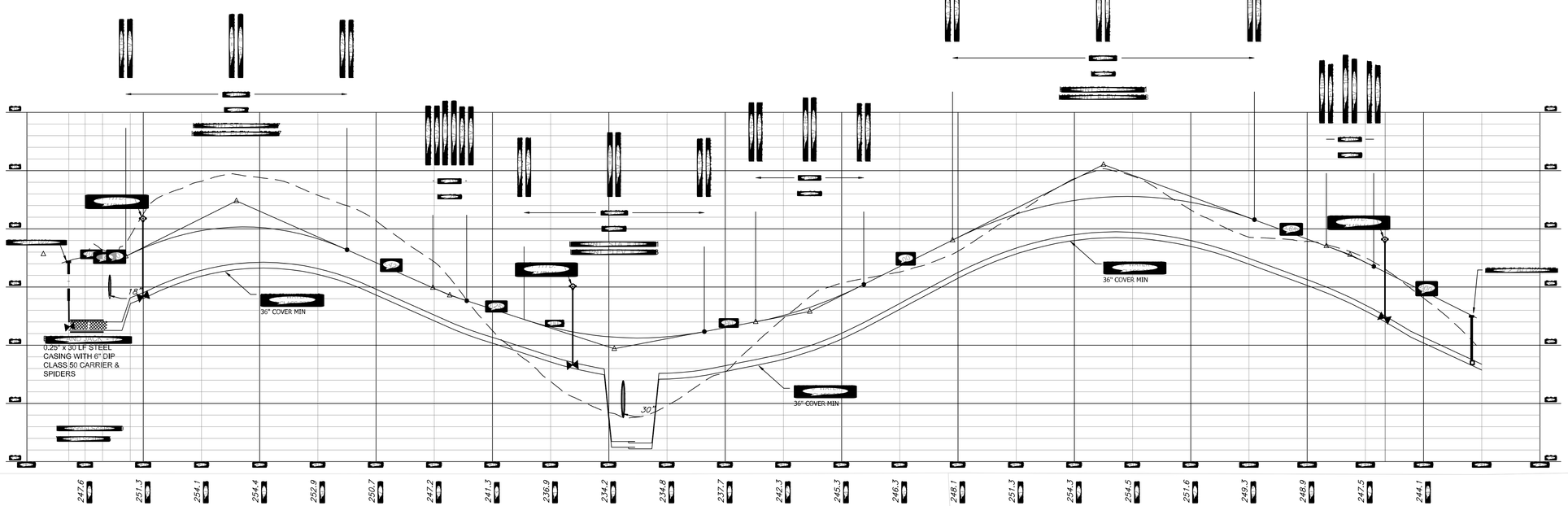

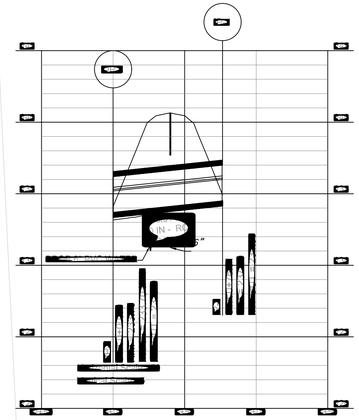

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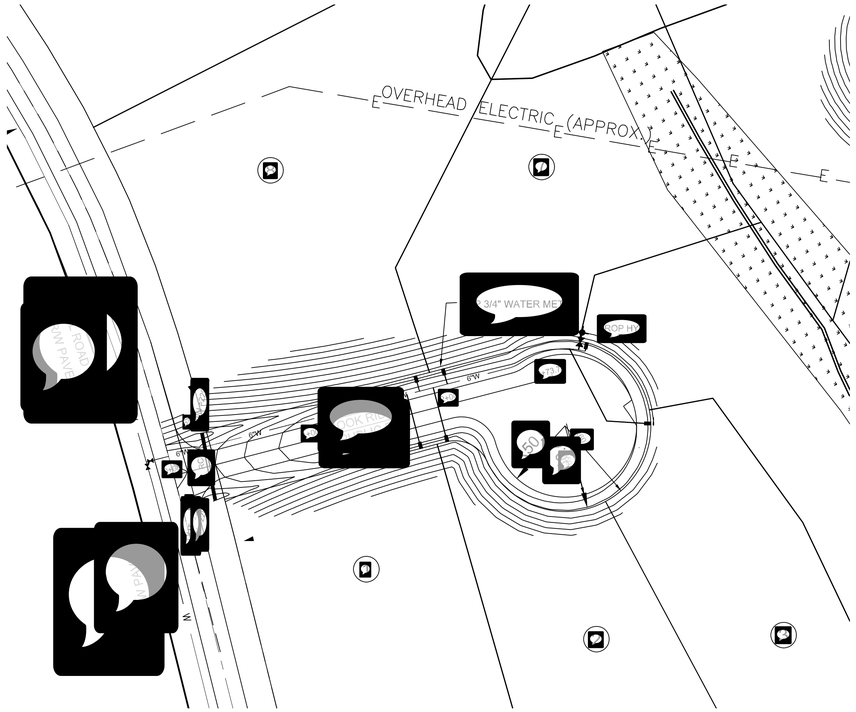
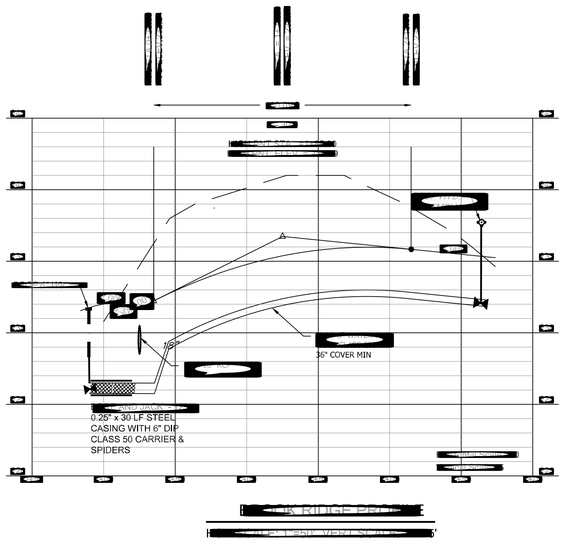
THE ESTATES SUB

PRELIMINARY FOR TRC REVIEW 6-27-2022





PRELIMINARY FOR TRC REVIEW 6-27-2022

THE ESTATES SUB

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

1-12

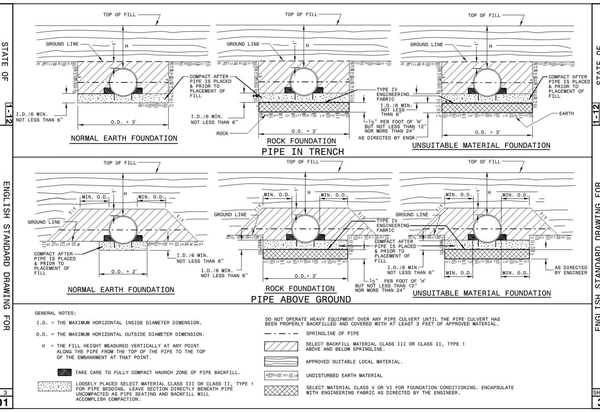
ENGLISH STANDARD DRAWING FOR

METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

SHEET 1 OF 3

300.01



GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

APPROVED SUITABLE LOCAL MATERIAL.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

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

1-12

ENGLISH STANDARD DRAWING FOR

METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

SHEET 1 OF 3

300.01

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

1-12

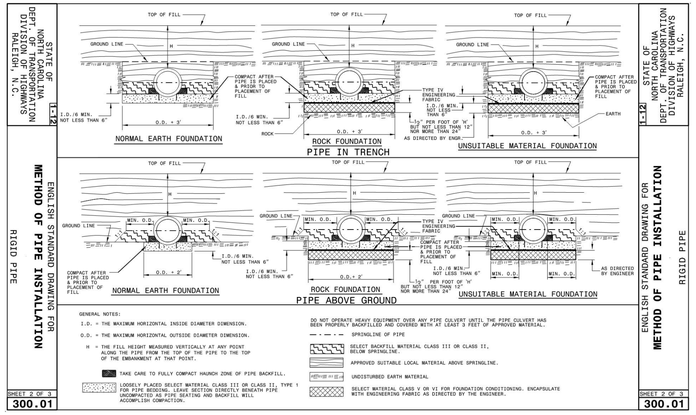
ENGLISH STANDARD DRAWING FOR

METHOD OF PIPE INSTALLATION

RIGID PIPE

SHEET 2 OF 3

300.01



GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

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

1-12

ENGLISH STANDARD DRAWING FOR

METHOD OF PIPE INSTALLATION

FILL HEIGHT TABLES

SHEET 3 OF 3

300.01

FLEXIBLE PIPE

Round Corrugated Steel Pipe
2 2/3 x ½ corrugation **

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

Round Corrugated Aluminum Pipe
2 2/3 x ½ corrugation **

Diameter (inches)	Minimum cover (inches)	Maximum Height of Cover (feet) (Ga) 16	14	12	10	8
12	12	123	155	218	281	344
15	12	98	123	174	224	275
18	12	81	102	144	187	228
21	12	69	87	123	160	195
24	12	60	76	108	139	171
27	12		67	95	123	151
30	12		60	85	111	136
36	12		50	71	92	113
42	12			60	78	96
48	12			52	68	84
54	12			46	50	74
60	12				50	62
66	12					51
72	12					41

** FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.

HDPE - * (Minimum fill) 3' for pipe diameters ≥ 12" and ≤ 60"
* (Maximum fill) 20' for pipe diameters ≤ 24"
17' for pipe diameters ≥ 30" and ≤ 60"

PVC - * (Minimum fill) 3' for pipe diameters ≥ 12" and ≤ 36"
* (Maximum fill) 30' for pipe diameters ≥ 12" and ≤ 36"

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

CSP - AASHTO M36
CAAP - AASHTO M196
HDPE - AASHTO M294
PVC - ASTM F949 or AASHTO M304

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

RIGID PIPE

RCP - * (Minimum fill) 1' for Class IV & CLASS V
2' for Class III & Class II

* (Maximum fill) 10' - Class II pipe
20' - Class III pipe
30' - Class IV pipe
40' - Class V pipe

(For fills > 40' & < 80' use LRFD Direct Design Method)

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

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

1-12

ENGLISH STANDARD DRAWING FOR

METHOD OF PIPE INSTALLATION

FILL HEIGHT TABLES

SHEET 3 OF 3

300.01

SEE FIGURE 1 PAGE 39, "NCDOT SUBDIVISION ROADS MINIMUM CONSTRUCTION STANDARDS JANUARY 2010" FOR LOCAL AND COLLECTOR ROAD DIMENSIONS.

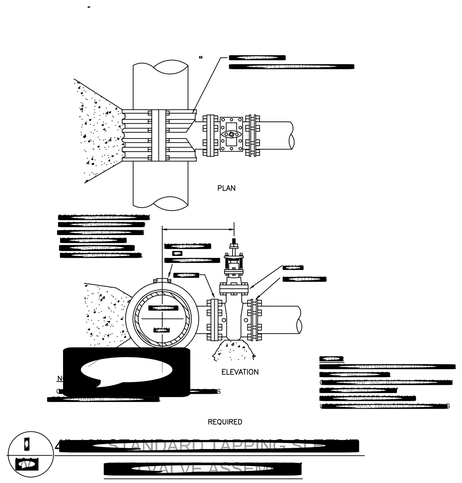
NOTE: MAINTAIN R/W OFFSET AROUND CBU TURNOUT

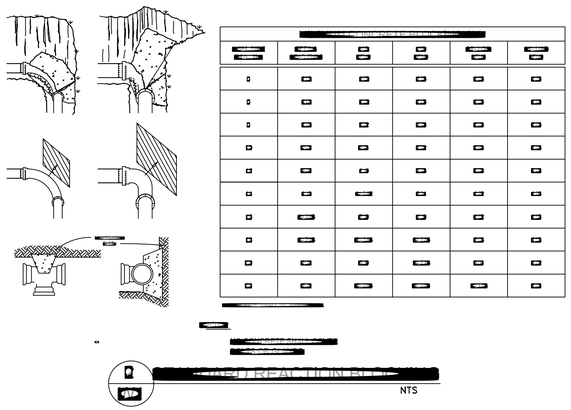
FIGURE 1

CBU PLACEMENT FOR SHOULDER SECTION RESIDENTIAL LOCAL AND COLLECTOR SUBDIVISION STREETS

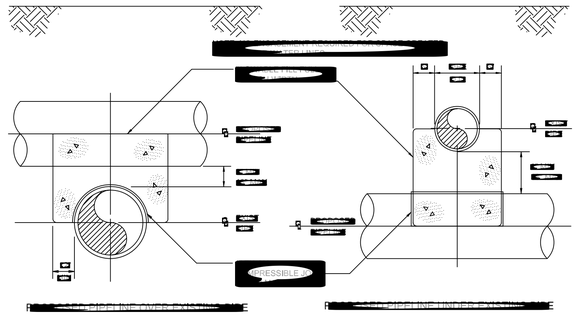
ASSOCIATES
CONSULTING ENGINEERS
553 2305 CARTHAGE ST.
SANFORD, NC 27331
PHONE: (919) 776-3444

PRELIMINARY FOR TRC REVIEW 6-27-2022

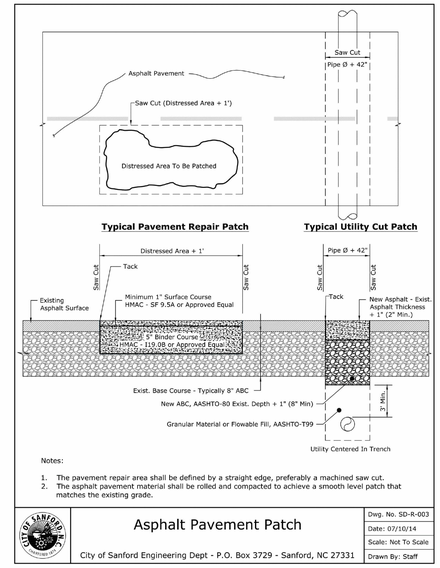




NTS



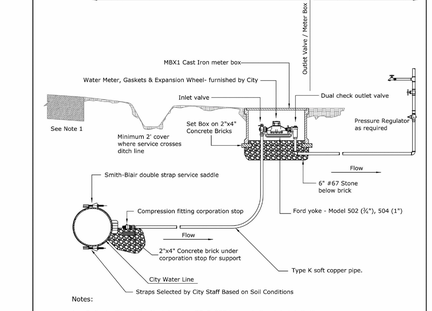
CONCRETE CRADLE PROTECTION FOR WATER LINE CROSSINGS



Notes:

1. The pavement repair area shall be defined by a straight edge, preferably a machined saw cut.
2. The asphalt pavement material shall be rolled and compacted to achieve a smooth level patch that matches the existing grade.

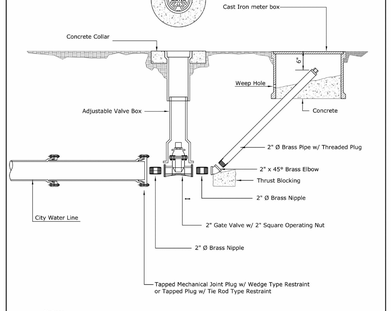
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Asphalt Pavement Patch	Dwg. No. SD-R-003
		Date: 07/10/14
		Scale: Not To Scale
		Drawn By: Staff



Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. Residential meters may be ¾" or 1".
3. Piping shall be type 'K' copper with appropriate sized fittings.
4. Place washed stone under and around pipe to protect corporation stop.
5. Mueller or Ford brass valves, yoke fittings, and stops shall be provided.

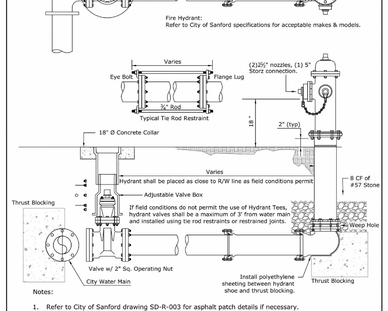
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Residential Water Tap & Meter	Dwg. No. SD-W-001
		Date: 02/11/20
		Scale: Not To Scale
		Drawn By: Staff



Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. Blow-Off assembly shall not be located in street pavement.
3. A saddle will be allowed in lieu of tapping a mechanical joint plug.

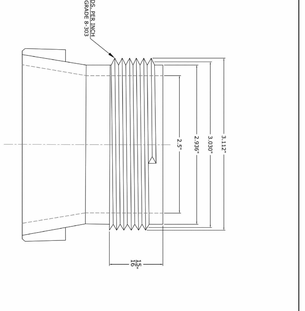
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Two Inch Blow-Off Assembly	Dwg. No. SD-W-008
		Date: 02/11/2020
		Scale: Not To Scale
		Drawn By: Staff



Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. Entire hydrant leg shall have minimum of 3'-0" cover. Ductile Iron CI 50 shall otherwise be used.
3. Within the city limits of Sanford or within the Northview Fire District, the 2½" nozzles shall have City of Sanford threads (3.112" x 8 threads per inch). All other locations shall be National Standard Thread.
4. Restrained joints required throughout fire hydrant assembly except where otherwise noted.
5. Hydrant weep hole shall be a minimum of 2" above the concrete thrust block.

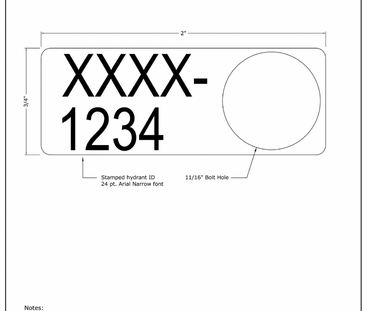
City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Fire Hydrant Assembly	Dwg. No. SD-W-009
		Date: 02/11/2020
		Scale: Not To Scale
		Drawn By: Staff



Notes:

1. Within the city limits of Sanford or within the Northview Fire District, the 2½" nozzles shall have City of Sanford threads, as shown above (3.112" x 8 threads per inch). All other locations shall be National Standard Thread.

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	2.5" Hydrant Nozzle Threads	Dwg. No. SD-W-010
		Date: 02/11/2020
		Scale: Not To Scale
		Drawn By: Staff



Notes:

1. Hydrant tag shall be corrosion resistant solid brass; Pollard Water sku PP69242 or approved equal.
2. The City of Sanford Engineering Dept. shall assign the unique hydrant identifier. Format shall be XXXX-1234, where XXXX is a street name abbreviation, up to four alpha characters, and 1234 is a four-digit numerical identifier.

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Hydrant Tag	Dwg. No. SD-W-011
		Date: 04/02/2020
		Scale: Not To Scale
		Drawn By: Staff

PRELIMINARY FOR TRC REVIEW 6-27-2022

Rosser Rd Industrial

2401 Rosser Rd., Sanford, NC 27332
Construction Documents
First Submittal: 06/29/2022

APPLICANT: The person responsible for submitting the TRC package.

Name: Brian Richards Title: PLA
Business Name: Urban Design Partners
Business Address: 555 Fayetteville St. 3rd Floor Raleigh, NC 27601
Business Phone: 919-275-5002 Mobile Phone:
Email: brichards@urbandesignpartners.com

PROPERTY OWNER(S): The legal property owner(s) as of the date of TRC submittal.

Name: Charles M. Oldham III Title:
Business Name:
Business Address: 4105 North Course Drive, Charlotte NC 28277
Business Phone: Mobile Phone: 704-572-3372
Email:

PROJECT MANAGER: The one person responsible for coordinating the entire project from beginning to end. This person should be knowledgeable of construction methods and scheduling and will be the "go to" person for staff when there a question or problem regarding the project.

Name: Brian Richards Title: PLA
Business Name: Urban Design Partners
Business Address: 555 Fayetteville St. 3rd Floor Raleigh, NC 27601
Business Phone: 919-275-5002 Mobile Phone:
Email: brichards@urbandesignpartners.com

SITE INFORMATION:

Jurisdiction: ☐ Lee County ☑ City of Sanford ☐ Town of Broadway
Lee County Tax Parcel(s) Identification Number (PIN): 9652-92-2444-00
Address / Project Location: 2401 Rosser Road Sanford NC 27332
Current Zoning District: LI
Total Site Acreage: ± 5.15 ac
Current Use: Vacant
Is any portion of the site located in the floodplain or floodway? N/A
Is any portion of the site located in a watershed? N/A

PROJECT INFORMATION:

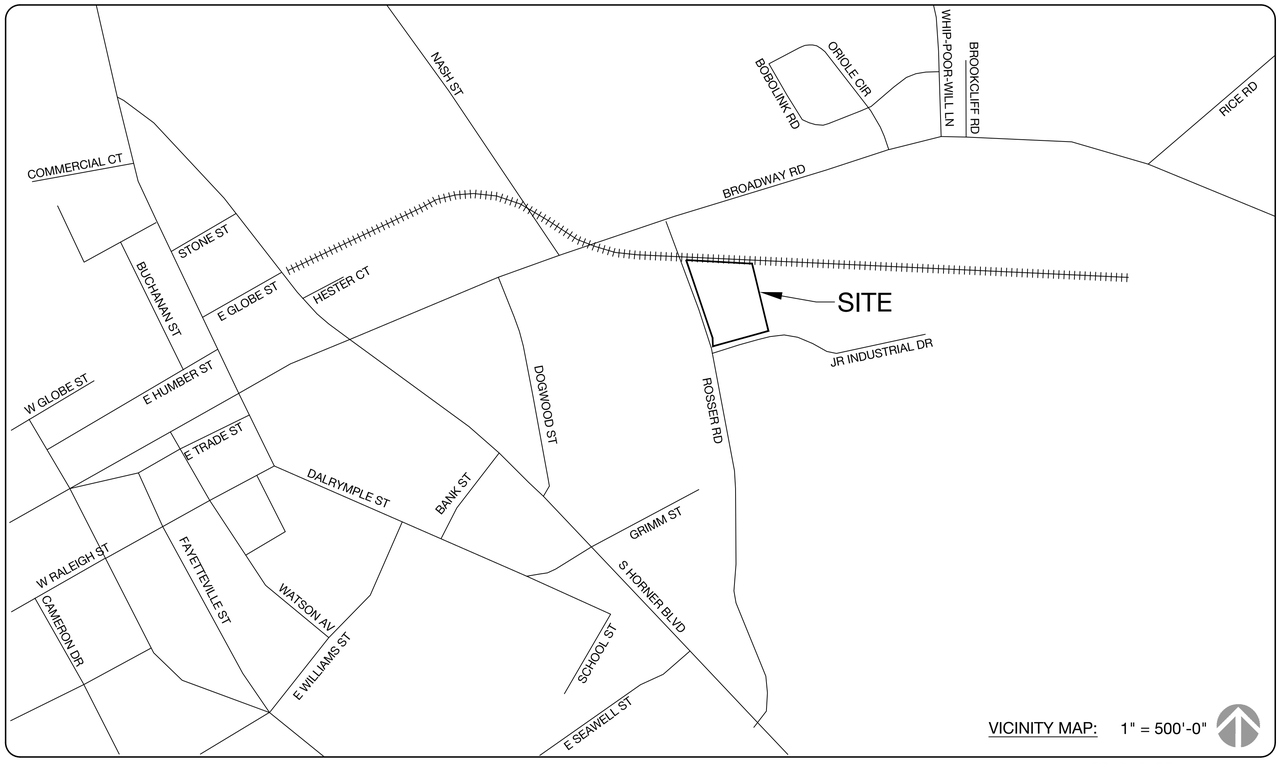
Business or Development / Subdivision Name: Rosser Rd Industrial
Project Description: 40,000 sf Warehouse w/ lay down storage yard connected to JR industrial Drive Industrial complex.
Number of Lots or Units/Tenants: 1
Proposed Zoning District (if rezoning): LI (SUP)
Site Size (in acres): ±5.15 AC
Average Lot Size: ±5.15 AC
Disturbed Acreage: ±5.24 AC
Existing Impervious Surface Ratio (pre-construction): 0 sf / %
Proposed Impervious Surface Ratio (post-construction): 174,240 sf / 77 %

Utilities:	☑	Existing	☑	Proposed
Water:	☑	Public	☐	Private
Sewer:	☑	Public	☐	Private
Streets:	☑	Existing	☐	Proposed
Streets:	☑	Public (City)	☑	Public (NCDOT)

Brian Richards 6/29/2022
Applicant's Signature (Sign & Print) Date

STAFF USE ONLY

FEE AMOUNT:
FORM OF PAYMENT: CHECK #: PAID VIA CARD CASH
DATE RECEIVED: ☐ COMPLETE ☐ INCOMPLETE
TRC MEETING DATE: PLAN REVIEWER:
TRC AGENDA #: ENERGOV CASE #:
STAFF NOTES:



VICINITY MAP: 1" = 500'-0"

GRAPHIC SCALE
0 250 500 1000 2000
(IN FEET)
1 inch = 500 ft.

GENERAL NOTES:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH CITY OF SANFORD AND NCDOT STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL OBTAIN A RIGHT-OF-WAY PERMIT FOR ANY WORK WHICH REQUIRES THE CLOSURE OF A TRAVEL LANE(S), PARKING SPACE, OR SIDEWALK FROM RIGHT-OF-WAY SERVICES AT LEAST 48 HOURS IN ADVANCE.
3. NO WORK WILL BE ALLOWED WITHIN NCDOT ROW UNTIL ALL ENCROACHMENT AGREEMENTS ARE APPROVED BY NCDOT.
4. IF CONSTRUCTION PLANS FOR PUBLIC AND PRIVATE STREETS OR UTILITIES SHOWN ON THIS PLAN ARE REQUIRED, THEY MUST BE APPROVED BY THE PUBLIC WORKS DEPARTMENT AND PUBLIC UTILITIES DEPARTMENT PRIOR TO ISSUANCE OF PERMITS OR RECORDING OF ANY PLAT FOR THIS DEVELOPMENT.
5. FIELD ADJUSTMENTS TO THIS PLAN MAY BE REQUIRED BY CITY OF RALEIGH INSPECTOR AS NEEDED DURING CONSTRUCTION.
6. ALL PROPOSED CURB AND GUTTER WITHIN PUBLIC RIGHT OF WAY SHOWN ON PLANS TO BE 30" CITY OF RALEIGH STANDARD CONCRETE CURB AND GUTTER, AND ALL OTHER PROPOSED CURB AND GUTTER TO BE 24" CONCRETE CURB AND GUTTER UNLESS OTHERWISE STATED ON PLANS.
7. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, UNLESS OTHERWISE STATED ON PLANS.
8. WITHIN THE SIGHT TRIANGLES SHOWN ON THIS PLAN, NO OBSTRUCTION BETWEEN 2 FEET AND 8 FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION SHALL BE LOCATED IN WHOLE OR PART. OBSTRUCTIONS INCLUDE BUT ARE NOT LIMITED TO ANY BERM, FOLIAGE, FENCE, WALL, SIGN, OR PARKED VEHICLE.
9. UNLESS NOTED, ACCESS ROUTE FOR EMERGENCY VEHICLES SHALL PROVIDE AN INSIDE TURNING RADIUS OF 28' MINIMUM.
10. TRASH AND CARDBOARD DUMPSTER(S) ENCLOSURE SHALL COMPATIBLE WITH MATERIAL AND/OR COLOR OF THE PRINCIPAL BUILDING.
11. ALL HVAC UNITS SHALL BE SCREENED FROM VIEW OF THE PUBLIC RIGHT OF WAY.
12. CONTRACTOR TO FIELD LOCATE AND VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO ANY CONSTRUCTION ACTIVITIES. CONTACT NC ONE AT 811 FOR FIELD LOCATION OF UNDERGROUND UTILITIES.
13. HANDICAP PARKING SPACE(S) AND HC ACCESS AISLE(S) SHALL BE NO GREATER THAN TWO PERCENT (2%) PITCH IN ANY DIRECTION(S) AS PER ADA STANDARDS.
14. PROVIDE SIGNAGE AND STRIPING OF HANDICAP SPACES AS PER ADA STANDARDS.
15. ALL RETAINING WALLS GREATER THAN 30" IN HEIGHT TO INCLUDE SAFETY RAIL OR FENCE. NO RETAINING WALLS ARE PERMITTED IN THE RIGHT-OF-WAY UNLESS APPROVED BY ENCROACHMENT.
16. THE MINIMUM CORNER CLEARANCE FROM THE CURB LINE OF INTERSECTING STREETS SHALL BE AT LEAST 20 FEET FROM THE POINT OF TANGENCY OF THE CURB FOR RESIDENTIAL DRIVEWAY. NO DRIVEWAYS SHALL ENCROACH ON THIS MINIMUM CORNER CLEARANCE.
17. WC ACCESS RAMPS WILL BE PROVIDED IN ACCORDANCE WITH CITY OF SANFORD PUBLIC WORKS DEPARTMENT STANDARDS, PROWAG STANDARDS AND ADAAG SPECIFICATIONS
18. ALL RAMPS AND HANDRAILS SHALL BE CONFORM TO ANSI STANDARDS.
19. ALL ABOVE GROUND UTILITY DEVICES (TO INCLUDE BUT NOT LIMITED TO TELEPHONE AND CABLE PEDESTALS, ELECTRICAL TRANSFORMERS, BACKFLOW DEVICE HOTBOX, ETC) SHALL BE SCREENED FROM OFF-SITE VIEW BY EVERGREEN SHRUBS, FENCE, OR WALL.
20. ALL SIDEWALKS MUST BE ACCESSIBLE TO PERSONS WHO ARE BLIND, HAVE LOW VISION AND PEOPLE WITH MOBILITY DISABILITIES. PEDESTRIAN EXISTING ROUTES AND ALTERNATE PEDESTRIAN ROUTES DURING CONSTRUCTION WILL BE REQUIRED TO BE COMPLIANT WITH THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG), 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
21. IF UNFORESEEN CONDITIONS DEVELOP DURING CONSTRUCTION, REFER TO "CITY OF RALEIGH STREET DESIGN MANUAL" AND CONTACT PUBLIC WORKS DEPARTMENT FOR FURTHER GUIDANCE.
22. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE CITY OF RALEIGH PUBLIC WORKS DEPARTMENT / TRANSPORTATION FIELD SERVICES STAFF TO REVIEW THE SPECIFIC COMPONENTS OF THE PLAN AND OPERATION OF THESE FACILITIES DURING CONSTRUCTION. CONTACT ENGINEERING INSPECTIONS AT 919.996.2409 TO SET UP THE MEETING.
23. THE CONTRACTOR SHALL CONDUCT THE WORK IN A SAFE MANNER AND WITH A MINIMUM AMOUNT OF INCONVENIENCE TO TRAFFIC.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SHALL ADHERE TO THE PROVISIONS OF THE MUTCD (MOST CURRENT EDITION).
25. PRIOR TO CONSTRUCTION BEGINNING, ALL SIGNAGE AND TRAFFIC CONTROL SHALL BE IN PLACE
26. ANY FUTURE COMMENTS FROM NCDOT WILL BE INCORPORATED INTO THE CONCURRENT REVIEW FOR THE SITE PLAN (SR-47-17).

CONTACT INFORMATION

OWNER:
WILLIAMS REALTY & BUILDING COMPANY, INC.
CONTACT: ALEX DILLON
ADDRESS: 3111 GLENWOOD AVE.
RALEIGH, NC 27612
PHONE: 919.881.1453

CIVIL ENGINEER & LANDSCAPE ARCHITECT:
URBAN DESIGN PARTNERS PLLC
CONTACT: BRIAN A. RICHARDS, PLA
ADDRESS: 555 FAYETTEVILLE ST. 3RD FLOOR
RALEIGH, NC 27601
PHONE: 919-275-5002 FAX: 704-334-3305

SHEET INDEX

Sheet Number	Sheet Title
C-1.0	Cover Sheet
--	Site Survey
C-2.1	Demolition Plan
C-3.0	Site Plan
C-3.1	Pavement Plan
C-4.0	Grading and Storm Drainage Plan
C-6.0	Utility Plan
C-7.0	Erosion Control - Phase 1
C-7.1	Erosion Control - Phase 2
C-8.0	Site Specifications & Details
C-8.1	Site Specifications & Details
C-8.2	Site Specifications & Details
C-8.3	Erosion Control Details
C-8.4	Erosion Control Details
C-8.5	Erosion Control Details
LS-1.0	Landscape Plan
LS-2.0	Landscape Details

SITE DATA

SITE ADDRESS:	2401 ROSSER RD SANFORD, NC 27332
TAX PARCEL ID #:	9652-92-2444-00
COUNTY:	LEE
TOTAL SITE AREA:	± 5.2 AC (226,512 SF)
EXISTING ZONING:	LI
PROPOSED ZONING:	LI * (SUP)
SETBACKS:	
FRONT:	30'
SIDE:	0'
REAR:	0'

URBAN DESIGN PARTNERS
555 fayetteville st. 3rd floor
raleigh, nc 27601
p 919.275.5002
urbandesignpartners.com
nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028116 SALMAN MOAZZAM

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave. Raleigh, NC 27612

NO. DATE: BY: REVISIONS:

Project No: 22-RDU-026
Date: 06.29.2022
Designed By: UDP
Checked By: BAR
Sheet No:

C-1.0

Rosser Rd Industrial
Construction Documents
Cover Sheet
2401 Rosser Rd, Sanford, NC 27332

ALL LINEAR DIMENSIONS HEREON ARE SHOWN IN FEET AND DECIMALS OF A FOOT.

ALL AREAS CALCULATED BY COORDINATE COMPUTATION.

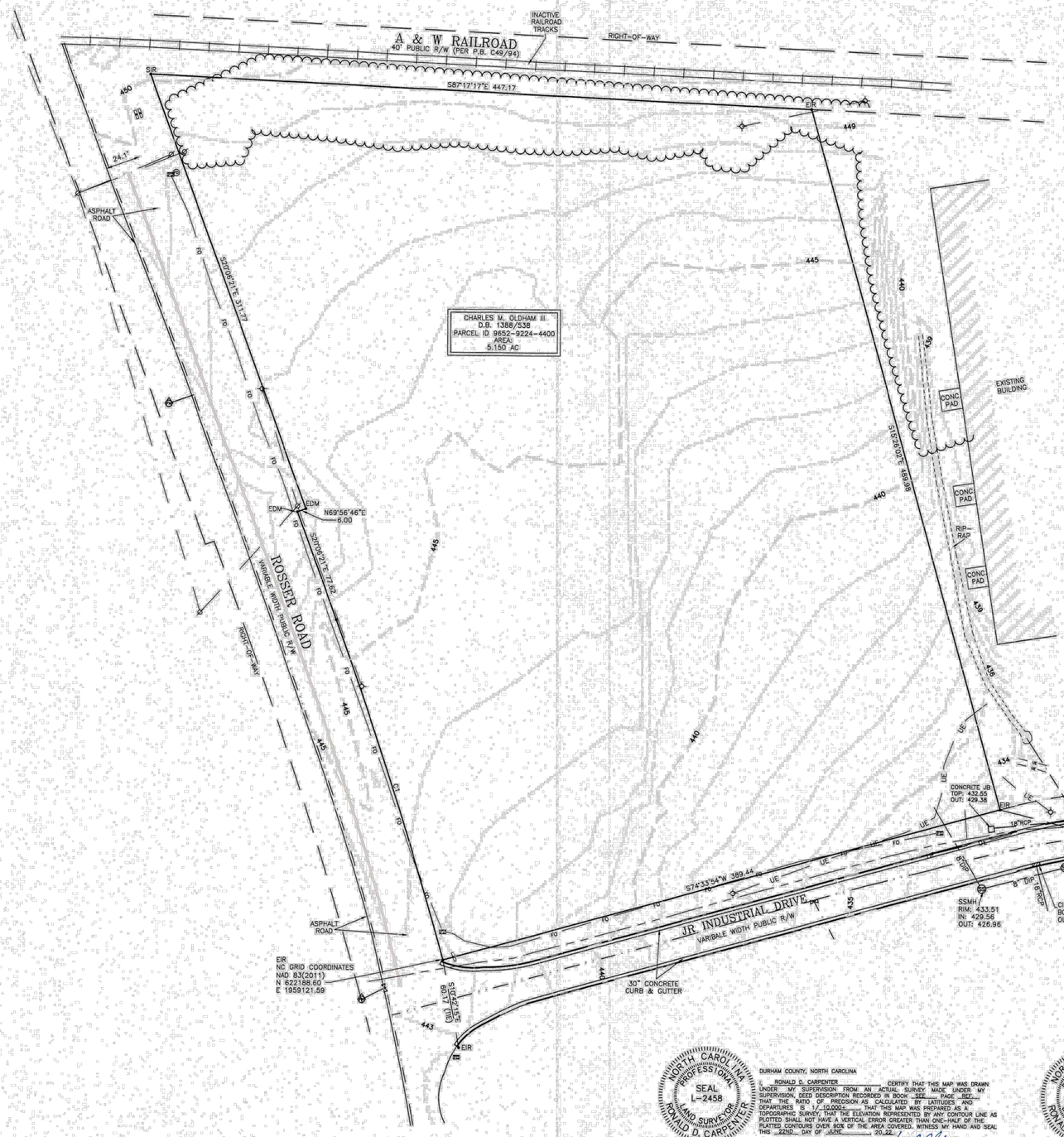
NO N.C. GRID MONUMENT RECOVERED WITHIN 2000'.

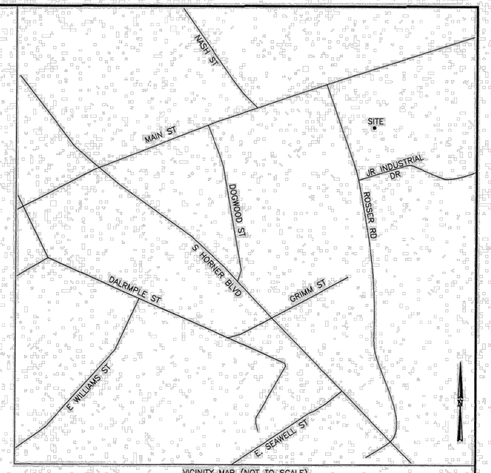
NC GRID HORIZONTAL AND VERTICAL LOCATION BASED ON VRS SURVEY USING THE PHYSICAL REFERENCE GPS BASE STATION "BASE", HORIZONTAL DATUM NAD 83 (2011), VERTICAL DATUM NAVD 88.

SUBJECT PROPERTY IS ZONED: LI

THIS SITE IS NOT IN ANY SPECIAL FLOOD HAZARD AREAS OR FUTURE CONDITIONS FLOOD HAZARD AREAS, AS SHOWN ON: FIRM PANEL(S): 3710965200J
EFFECTIVE DATE(S): 09/06/2006

CURVE TABLE						
CURVE	DELTA	RADIUS	LENGTH	TANGENT	CHORD BRG	CHORD
C1	4°42'04"	2936.55	240.95	120.54	N17°45'19"W	240.88





VICINITY MAP (NOT TO SCALE)

LEGEND

EDM	EXISTING DISC MONUMENT
SIR	SET IRON ROD
EIR	EXISTING IRON ROD
EIP	EXISTING IRON ROD
RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE
	FIRE HYDRANT
	WATER VALVE
	CURB INLET
CI	CURB INLET
SSMH	SANITARY SEWER MANHOLE
	SANITARY SEWER MANHOLE
	FIBOR OPTIC BOX
	POWER POLE
	LIGHT POLE
	STREET SIGN
	OVERHEAD ELECTRIC
	UNDERGROUND STORMWATER
	UNDERGROUND SANITARY SEWER
UE	UNDERGROUND ELECTRIC
	UNDERGROUND GAS LINE
FO	UNDERGROUND FIBOR OPTICS
	UNDERGROUND WATER LINE
	TREE LINE

GRAPHIC SCALE
0 20 40 80'
SCALE: 1"=40'

NORTH CAROLINA PROFESSIONAL SEAL L-2458 LAND SURVEYOR RONALD D. CARPENTER

DURHAM COUNTY, NORTH CAROLINA

I RONALD D. CARPENTER CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DEED DESCRIPTION RECORDED IN BOOK SEE PAGE REF.; THAT THE RATIO OF PRECISION AS CALCULATED BY LATITUDES AND DEPARTURES IS 1/ 10,000+ ; THAT THIS MAP WAS PREPARED AS A TOPOGRAPHIC SURVEY; THAT THE ELEVATION REPRESENTED BY ANY CONTOUR LINE AS PLOTTED SHALL NOT HAVE A VERTICAL ERROR GREATER THAN ONE-HALF OF THE PLOTTED CONTOURS OVER 80% OF THE AREA COVERED. WITNESS MY HAND AND SEAL THIS 22ND DAY OF JUNE, 20 22.

PROFESSIONAL LAND SURVEYOR

NORTH CAROLINA PROFESSIONAL SEAL L-2458 LAND SURVEYOR RONALD D. CARPENTER

DURHAM COUNTY, NORTH CAROLINA

I RONALD D. CARPENTER CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DEED DESCRIPTION RECORDED IN BOOK SEE PAGE REF. ETC. (OTHER); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN BOOK SEE PAGE REF.; THAT THE RATIO OF PRECISION AS CALCULATED BY LATITUDES AND DEPARTURES IS 1/ 10,000+ ; THAT THIS MAP WAS PREPARED IN ACCORDANCE WITH GS 47-30 AS AMENDED. WITNESS MY HAND AND SEAL THIS 22ND DAY OF JUNE, 20 22.

PROFESSIONAL LAND SURVEYOR
LICENSE NUMBER L-2458

BOUNDARY & TOPOGRAPHIC SURVEY FOR

2401 ROSSER ROAD

JONESBORO TOWNSHIP, LEE COUNTY, NORTH CAROLINA

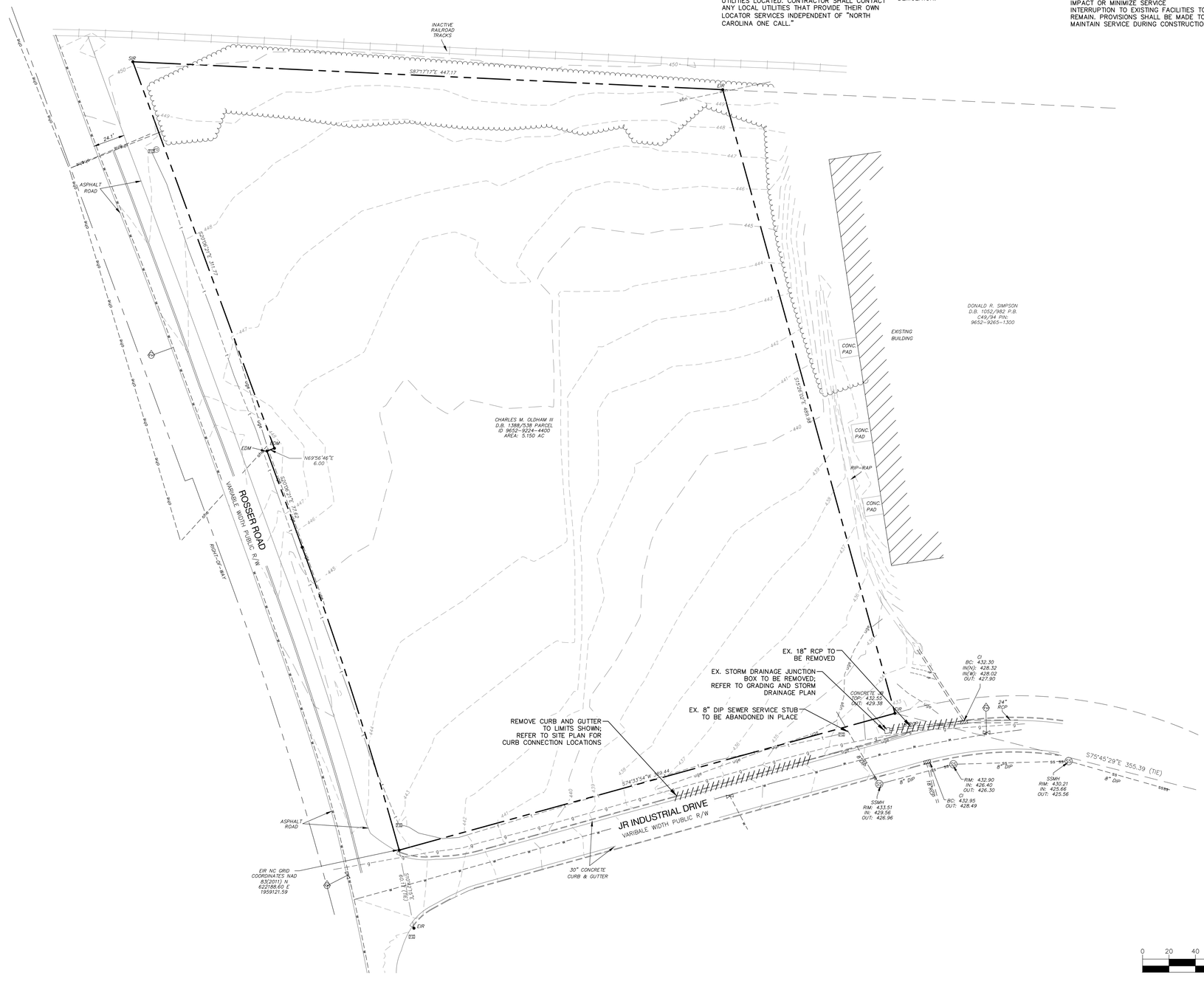
Triangle Surveyors
3715 University Drive
Durham, NC 27707-2646
(919) 490-2929
FAX (919) 490-6165
NC LICENSE C-0536

Date: 06/22/2022
Scale: 1"=40'
Job No: 22072.00
Revisions:

K:\DWG\2022\22072\22072.dwg, 1:40, RKW

DEMOLITION NOTES:

1. EXISTING INFORMATION ON THIS PLAN WAS TAKEN FROM A SURVEY PREPARED BY:
   TRIANGLE SURVEYORS
   3715 UNIVERSITY DRIVE
   DURHAM, NC 27707
   (919)490-6165
2. CONTRACTOR TO VERIFY ALL EXISTING UTILITIES AND SITE CONDITIONS PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION AND SEQUENCING OF DEMOLITION OR RELOCATION OF UTILITIES WITH APPLICABLE UTILITY COMPANY.
5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL UTILITIES PRIOR TO BEGINNING DEMOLITION OPERATIONS. NOTIFY "NORTH CAROLINA ONE CALL" (TEL: 1-800-632-4949) AT LEAST 48 HOURS PRIOR TO START OF DEMOLITION TO HAVE EXISTING UTILITIES LOCATED. CONTRACTOR SHALL CONTACT ANY LOCAL UTILITIES THAT PROVIDE THEIR OWN LOCATOR SERVICES INDEPENDENT OF "NORTH CAROLINA ONE CALL."
6. CLEAN SOILS SHALL BE UTILIZED FOR BACKFILL. COMPACTION OF THESE SOILS SHALL BE PERFORMED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
7. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE REMOVED COMPLETELY, INCLUDING ALL SUBGRADE MATERIALS DIRECTLY ASSOCIATED WITH ITEMS TO BE REMOVED.
8. ALL ITEMS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF LEGALLY OFF-SITE UNLESS OTHERWISE NOTED ON THIS PLAN.
9. ALL DEMOLITION SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL JURISDICTIONAL CODES OR REQUIREMENTS.
10. TREE PROTECTION FENCING SHALL BE IN PLACE PRIOR TO START OF DEMOLITION.
11. EROSION CONTROL PERMIT SHALL BE OBTAINED AND ONSITE PRIOR TO START OF DEMOLITION.
12. IF ANY ITEMS ARE DESIGNATED TO BE SALVAGED AND/OR RE-USED, THEY SHALL BE REMOVED BY THE CONTRACTOR AND PROVIDED TO THE OWNER. COORDINATE STORAGE LOCATION WITH OWNER'S REPRESENTATIVE.
13. WHERE UTILITIES "TO BE REMOVED" IMPACT THE FOOTPRINT OF THE NEW BUILDING, THE CONTRACTOR SHALL EXECUTE AND REMOVE AN ADDITIONAL 2 FEET OF SOILS TO EITHER SIDE OF THE PIPE AND 1 FOOT BELOW. CLEAN SUITABLE SOIL SHALL BE UTILIZED FOR BACKFILL AND COMPACTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
14. DEMOLITION AND SUBSEQUENT CONSTRUCTION OF UTILITIES (WATER, SEWER, ETC.) SHALL BE PERFORMED IN SUCH A MANNER THAT THE OLD PIPE AND STRUCTURES REMOVED DO NOT IMPACT OR MINIMIZE SERVICE INTERRUPTION TO EXISTING FACILITIES TO REMAIN. PROVISIONS SHALL BE MADE TO MAINTAIN SERVICE DURING CONSTRUCTION.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL DAMAGES TO THE EXISTING DRIVEWAY, SIDEWALK, AND CURB AND GUTTER TO REMAIN AS A RESULT OF CONSTRUCTION ACTIVITY AND TRAFFIC. CONTRACTOR SHALL MAINTAIN PRE-CONSTRUCTION PHOTO DOCUMENTATION TO SHOW THAT NO DAMAGES OCCURRED.
16. ALL MATERIALS, UTILITIES, AND PAVEMENT THAT ARE NOT SCHEDULED TO BE DEMOLISHED AND ARE DAMAGED BY THE CONTRACTOR AS A RESULT OF THE DEMOLITION OR CONSTRUCTION OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
17. WHERE UTILITIES ARE SHOWN "TO BE REMOVED," CONTRACTOR SHALL INCLUDE NECESSARY PLUG OR VALVES TO ENSURE UTILITY LINES TO REMAIN WILL CONTINUE TO BE IN SERVICE. COORDINATE NECESSARY SHUT DOWN AND REMOVAL WITH THE LOCAL JURISDICTION OR UTILITY OWNER.
18. CONTRACTOR TO HAVE ALL PHASE 1 EROSION CONTROL IN PLACE BEFORE SITE DEMOLITION OCCURS.



BEFORE YOU DIG!
CALL 811 OR 1-800-632-4949
N.C. ONE-CALL CENTER
IT'S THE LAW!

GRAPHIC SCALE
0 20 40 80 160
(IN FEET)
1 inch = 40 ft.

URBAN DESIGN PARTNERS
555 fayetteville st. 3rd floor
raleigh, nc 27601
p 919.275.5002
urbandesignpartners.com
nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA PROFESSIONAL SEAL 028116 ENGINEER SALMAN MORZAM

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave.
Raleigh, NC 27612

Rosser Rd Industrial
Construction Documents
Demolition Plan
2401 Rosser Rd, Sanford, NC 27332

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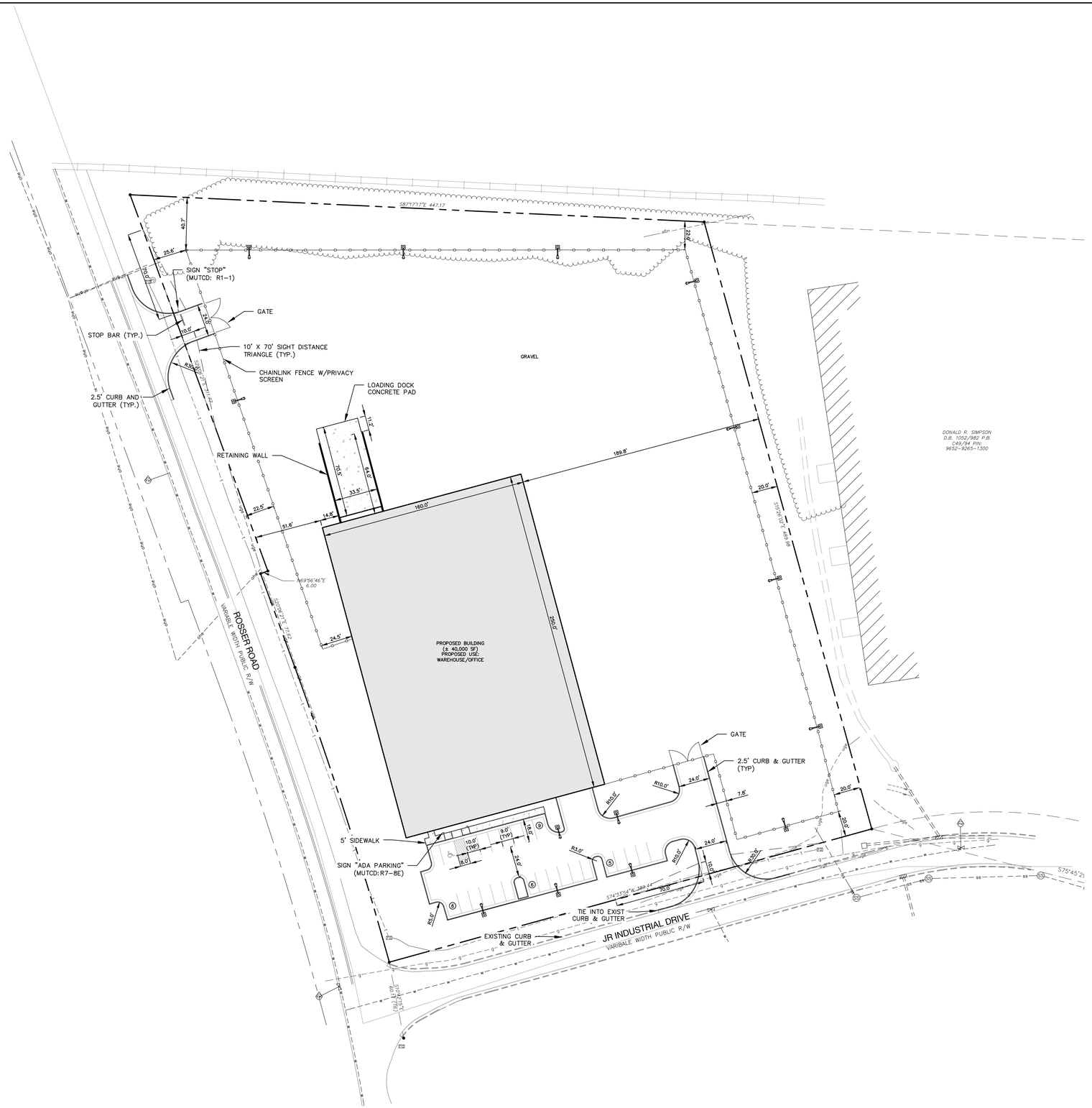

DEVELOPMENT SUMMARY

TAX PARCEL ID #:	9652-92-2444-00
TOTAL SITE AREA:	± 5.15 AC
EXISTING ZONING:	LI
PROPOSED ZONING:	LI * (SUP)
SETBACKS:	
FRONT:	30'
SIDE:	0'
REAR:	0'
BUFFERS:	
OUTDOOR STORAGE:	20' (TYPE C)
MAX. BUILDING HEIGHT:	N/A
PROPOSED BUILDING HEIGHT:	
EXISTING USE:	VACANT
PROPOSED USE:	WAREHOUSE
BUILDING GFA:	40,000 SF
IMPERVIOUS AREA:	±176,382 SF (4.05 AC) ±78.64%
VEHICULAR PARKING:	
REQUIRED:	10 SPACES (2 PER 3 EMPLOYEES)
PROPOSED:	26 SPACES

NOTES:

1. BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY:
   TRIANGLE SURVEY COMPANY
   3715 UNIVERSITY DR.
   DURHAM, NC 27707
   (919) 490–2929

   ADDITIONAL EXISTING CONDITIONS INFORMATION TAKEN FROM LEE COUNTY GIS
2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY OF SANFORD, LEE COUNTY, AND NCDOT STANDARDS AND SPECIFICATIONS IF APPLICABLE.
3. THE CONTRACTOR SHALL OBTAIN A RIGHT–OF–WAY PERMIT FOR ANY WORK WHICH REQUIRES THE CLOSURE OF A TRAVEL LANE(S), PARKING SPACE, OR SIDEWALK FROM RIGHT–OF–WAY SERVICES AT LEAST 48 HOURS IN ADVANCE.
4. NO WORK WILL BE ALLOWED WITHIN NCDOT ROW UNTIL ALL ENCROACHMENT AGREEMENTS ARE APPROVED BY NCDOT.
5. IF CONSTRUCTION PLANS FOR PUBLIC AND PRIVATE STREETS OR UTILITIES SHOWN ON THIS PLAN ARE REQUIRED, THEY MUST BE APPROVED BY THE PUBLIC WORKS DEPARTMENT AND PUBLIC UTILITIES DEPARTMENT PRIOR TO ISSUANCE OF PERMITS OR RECORDING OF ANY PLAT FOR THIS DEVELOPMENT.
6. FIELD ADJUSTMENTS TO THIS PLAN MAY BE REQUIRED BY CITY OF SANFORD INSPECTOR AS NEEDED DURING CONSTRUCTION.
7. ALL PROPOSED CURB AND GUTTER WITHIN PUBLIC RIGHT OF WAY SHOWN ON PLANS TO BE 24" CITY OF SANFORD STANDARD CONCRETE CURB AND GUTTER, AND ALL OTHER PROPOSED CURB AND GUTTER TO BE 24" CONCRETE CURB AND GUTTER UNLESS OTHERWISE STATED ON PLANS.
8. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, UNLESS OTHERWISE STATED ON PLANS.
9. WITHIN THE SIGHT TRIANGLES SHOWN ON THIS PLAN, NO OBSTRUCTION BETWEEN 2 FEET AND 8 FEET IN HEIGHT ABOVE THE CURB LINE ELEVATION SHALL BE LOCATED IN WHOLE OR PART. OBSTRUCTIONS INCLUDE BUT ARE NOT LIMITED TO ANY BERM, FOLIAGE, FENCE, WALL, SIGN, OR PARKED VEHICLE.
10. UNLESS NOTED, ACCESS ROUTE FOR EMERGENCY VEHICLES SHALL PROVIDE AN INSIDE TURNING RADIUS OF 28' MINIMUM.
11. ALL HVAC UNITS SHALL BE SCREENED FROM VIEW OF THE PUBLIC RIGHT OF WAY.
12. CONTRACTOR TO FIELD LOCATE AND VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND REPORT ANY DISCREPANCIES TO LANDSCAPE ARCHITECT PRIOR TO ANY CONSTRUCTION ACTIVITIES. CONTACT NC ONE AT 811 FOR FIELD LOCATION OF UNDERGROUND UTILITIES.
13. HANDICAP PARKING SPACE(S) AND HC ACCESS AISLE(S) SHALL BE NO GREATER THAN TWO PERCENT (2%) PITCH IN ANY DIRECTION(S) AS PER ADA STANDARDS.
14. PROVIDE SIGNAGE AND STRIPING OF HANDICAP SPACES AS PER ADA STANDARDS.
15. ALL RETAINING WALLS GREATER THAN 30" IN HEIGHT TO INCLUDE SAFETY RAIL OR FENCE. NO RETAINING WALLS ARE PERMITTED IN THE RIGHT–OF–WAY UNLESS APPROVED BY ENCROACHMENT.
16. THE MINIMUM CORNER CLEARANCE FROM THE CURB LINE OF INTERSECTING STREETS SHALL BE AT LEAST 20 FEET FROM THE POINT OF TANGENCY OF THE CURB FOR RESIDENTIAL DRIVEWAY. NO DRIVEWAYS SHALL ENCROACH ON THIS MINIMUM CORNER CLEARANCE.
17. WC ACCESS RAMPS WILL BE PROVIDED IN ACCORDANCE WITH TOWN OF FUQUAY–VARINA PUBLIC WORKS DEPARTMENT STANDARDS, PROWAG STANDARDS AND ADAAG SPECIFICATIONS
18. ALL RAMPS AND HANDRAILS SHALL BE CONFORM TO ANSI STANDARDS.
19. ALL ABOVE GROUND UTILITY DEVICES (TO INCLUDE BUT NOT LIMITED TO TELEPHONE AND CABLE PEDESTALS, ELECTRICAL TRANSFORMERS, BACKFLOW DEVICE HOTBOX, ETC) SHALL BE SCREENED FROM OFF–SITE VIEW BY EVERGREEN SHRUBS, FENCE, OR WALL.
20. ALL SIDEWALKS MUST BE ACCESSIBLE TO PERSONS WHO ARE BLIND, HAVE LOW VISION AND PEOPLE WITH MOBILITY DISABILITIES. PEDESTRIAN EXISTING ROUTES AND ALTERNATE PEDESTRIAN ROUTES DURING CONSTRUCTION WILL BE REQUIRED TO BE COMPLIANT WITH THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINES (PROWAG), 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
21. IF UNFORESEEN CONDITIONS DEVELOP DURING CONSTRUCTION CONTACT PUBLIC WORKS DEPARTMENT FOR FURTHER GUIDANCE.
22. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A PRE–CONSTRUCTION MEETING WITH THE CITY OF SANFORD PUBLIC WORKS DEPARTMENT TO REVIEW THE SPECIFIC COMPONENTS OF THE PLAN AND OPERATION OF THESE FACILITIES DURING CONSTRUCTION. CONTACT PUBLIC WORKS AT 919–753–1027 TO SET UP THE MEETING.
23. THE CONTRACTOR SHALL CONDUCT THE WORK IN A SAFE MANNER AND WITH A MINIMUM AMOUNT OF INCONVENIENCE TO TRAFFIC.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL AND SHALL ADHERE TO THE PROVISIONS OF THE MUTCD (MOST CURRENT EDITION).
25. PRIOR TO CONSTRUCTION BEGINNING, ALL SIGNAGE AND TRAFFIC CONTROL SHALL BE IN PLACE.

GRAPHIC SCALE

0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

URBAN DESIGN PARTNERS
555 fayetteville st. 3rd floor
raleigh, nc 27601
p 919.275.5002
urbandesignpartners.com
nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028116 SALMAN MOAZZAM

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave.
Raleigh, NC 27612

Rosser Rd Industrial
Construction Documents

Site Plan
2401 Rosser Rd, Sanford, NC 27332

NO. DATE: BY: REVISIONS:

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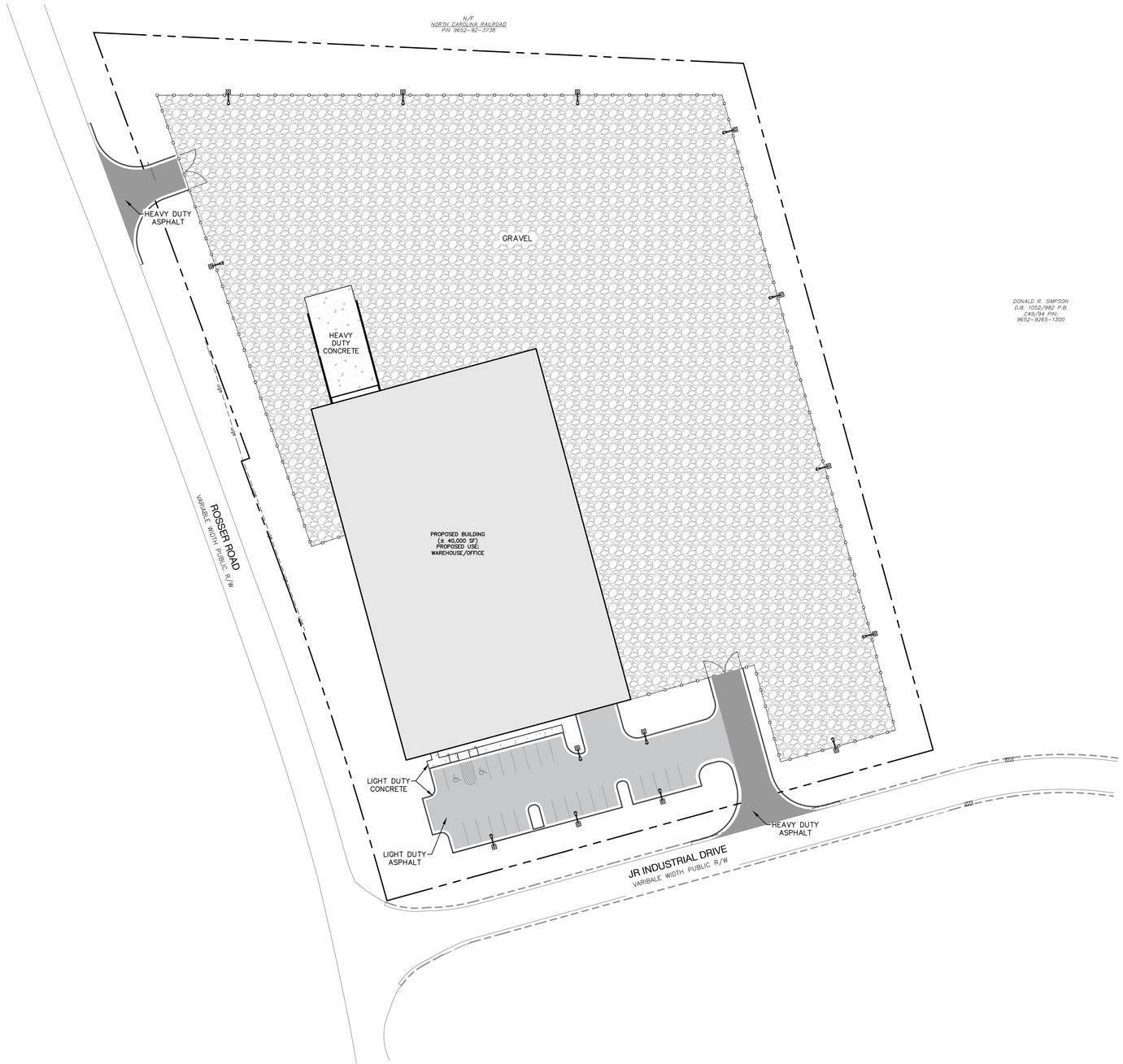

DONALD R. SIMPSON
D.B. 1052/982 P.B.
149/94 PIN:
9652-9265-1300

NOTE:
1. FIRE DEPARTMENT ACCESS ROAD SHALL BE CAPABLE OF SUPPORTING 80,000 LBS

LEGEND

- PROPOSED CURB AND GUTTER
- PROPERTY BOUNDARY LINE TYPE
- FENCE LINE TYPE
- HEAVY DUTY ASPHALT WITH ABILITY TO SUPPORT 80,000 LBS
- HEAVY DUTY CONCRETE WITH ABILITY TO SUPPORT 80,000 LBS
- LIGHT DUTY ASPHALT
- PROPOSED BUILDING HATCH
- LIGHT DUTY CONCRETE / CONCRETE SIDEWALK
- GRAVEL

NOTE:
SEE SHEET C-8.0 FOR CROSS SECTIONS

GRAPHIC SCALE
40 0 20 40 80
1 INCH = 40 FEET

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06/29/2022

Williams Realty & Building Company, Inc.
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Raleigh, NC 27612

Rosser Rd Industrial
Construction Documents

Pavement Plan
2401 Rosser Rd, Sanford, NC 27332

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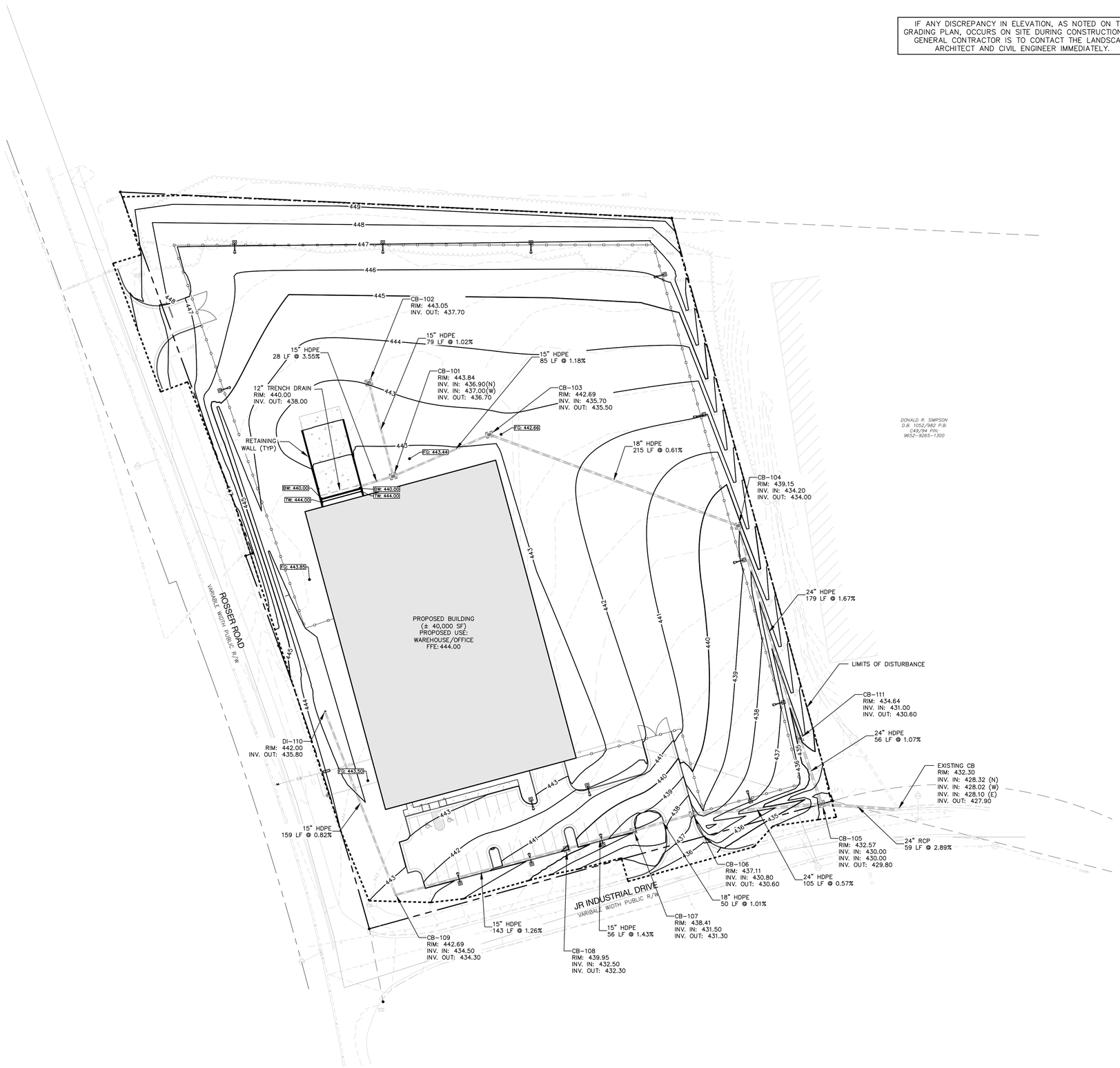
IF ANY DISCREPANCY IN ELEVATION, AS NOTED ON THE GRADING PLAN, OCCURS ON SITE DURING CONSTRUCTION THE GENERAL CONTRACTOR IS TO CONTACT THE LANDSCAPE ARCHITECT AND CIVIL ENGINEER IMMEDIATELY.



DONALD R. SIMPSON
D.B. 1052/982 P.B.
C49/94 PIN:
9652-9265-1300

IMPERVIOUS DATA:

GROSS SITE AREA:	± 226,512 SF (5.20 AC)
DISTURBED AREA:	± 228,186 SF (5.24 AC)
EXISTING IMPERVIOUS:	± 0 SF (0.0 AC)
PROPOSED IMPERVIOUS:	± 176,382 SF (4.0 AC)

SITE GRADING NOTES:

1. CONTRACTOR SHALL REPORT ANY GRADE DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
2. THE MAXIMUM SLOPE ALONG ANY HANDICAP ACCESSIBLE PATHWAY SHALL NOT EXCEED 5.0% AND SHALL NOT EXCEED A 2.0% CROSS SLOPE. HANDICAP RAMPS INDICATED ON PLANS SHALL BE A MAXIMUM OF 1/12 SLOPES WITH A MAXIMUM RISE OF 30"BETWEEN LANDINGS . NON-CURB CUT RAMPS SHALL HAVE HANDRAILS AND GUARDS PER DETAILS WITH 5'LANDINGS AT THE BOTTOM OF TOP OF RAMP.
3. ALL PROPOSED ELEVATIONS SHOWN ARE EDGE OF PAVEMENT ELEVATIONS UNLESS OTHERWISE SPECIFIED.
4. INTERIM GRADING SHALL BE PROVIDED THAT ENSURES THE PROTECTION OF STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, AND WASHOUT.
5. INTERIM GRADING SHALL BE PROVIDED TO DIRECT WATER AWAY FROM BUILDINGS AND PREVENT PONDING.
6. MAXIMUM SLOPE ACROSS ANY HANDICAPPED PARKING SPACE AND AISLE SHALL NOT EXCEED 2% IN ANY DIRECTION.
7. PROPOSED CONTOURS ARE APPROXIMATE. SPOT ELEVATIONS AND ROADWAY PROFILES SHALL BE USED IN CASE OF DISCREPANCY.
8. PLACE BACKFILL AND FILL MATERIALS IN LAYER NOT MORE THAN 8 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4 INCHES IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
9. PLACE BACKFILL AND FILL MATERIALS EVENLY ON ALL SIDES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE. COMPACT SOIL TO NOT LESS THAN 95 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 FOR EACH LAYER OF BACKFILL OR FILL MATERIAL UP TO TWO FEET OF FINISHED GRADE. COMPACT SOIL TO NOT LESS THAN 98 PERCENT OF MAXIMUM DRY UNIT WEIGHT ACCORDING TO ASTM D 698 FOR EACH LAYER OF BACKFILL OR FILL MATERIAL FOR THE FINAL TWO FEET.
10. CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF EXISTING MANHOLES, METERS VALVES, ETC. AS REQUIRED TO MEET NEW FINISHED GRADES.
11. CONTRACTOR SHALL SLOPE GRADES TO ASSURE POSITIVE STORMWATER FLOW TO KEEP WATER FROM POOLING ALONG CURBS AND WALLS.

GRADING LEGEND:

FINISHED FLOOR ELEVATION	FFE
FINISHED GRADE	FG
TOP OF WALL	TW
BOTTOM OF WALL	BW

811

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1 inch = 40 ft.

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06/29/2022

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Raleigh, NC 27612

Rosser Rd Industrial
Construction Documents
Grading and Storm Drainage Plan
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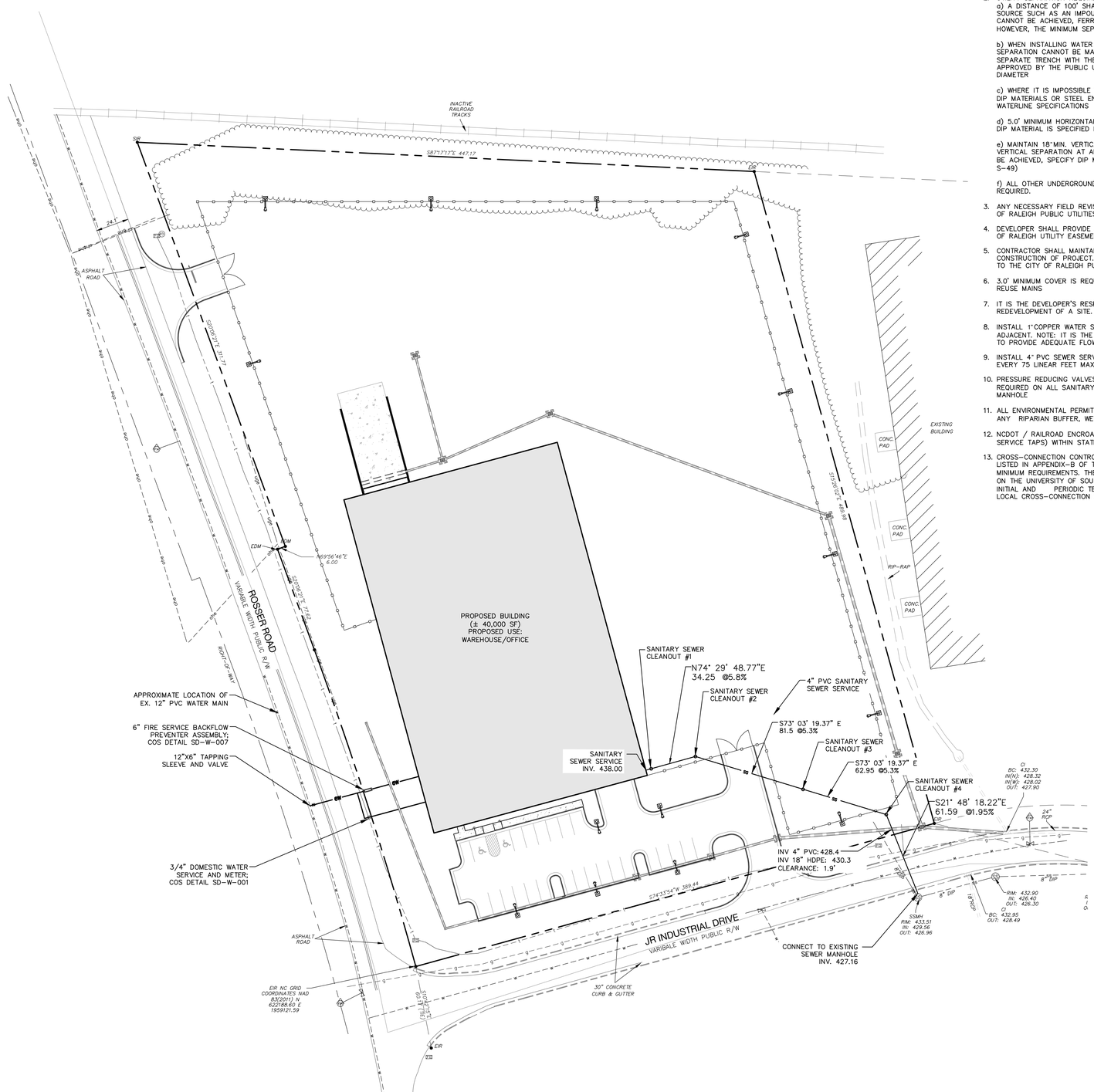

STANDARD UTILITY NOTES (AS APPLICABLE):

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF SANFORD DESIGN STANDARDS, DETAILS & SPECIFICATIONS
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 AND 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 18"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. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITH AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
5. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24 HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT
6. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCEMAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REUSE MAINS
7. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT.
8. 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 & PRESSURE
9. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM
10. 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
11. 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.
12. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION
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.

FIRE HYDRANT TEST (PERFORMED AND PROVIDED BY THE CITY OF SANFORD)

HYDRANT LOCATION: 905 JR INDUSTRIAL DRIVE

TEST RESULTS:

DATE PERFORMED:	5/12/2022
STATIC PRESSURE:	76 psi
RESIDUAL PRESSURE:	68 psi
FLOW PSI:	60 PSI
FLOW GPM:	1300 gpm

SEWER FLOW DEMAND (FLOW FROM NCDEQ TITLE 15 A SUBCHAPTER 2T RULES)

AVERAGE FLOW RATE (GPM):	0.12
PEAK FLOW RATE (GPM):	0.30
AVERAGE DAILY FLOW (GPD):	15 EMPLOYEES x 25 GAL = 375 GPD
PEAK DISCHARGE:	2.5 x 375= 937.5 GPD

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GRAPHIC SCALE

0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

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p 919.275.5002
urbandesignpartners.com
nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028116 SALMAN NOAZAM

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave.
Raleigh, NC 27612

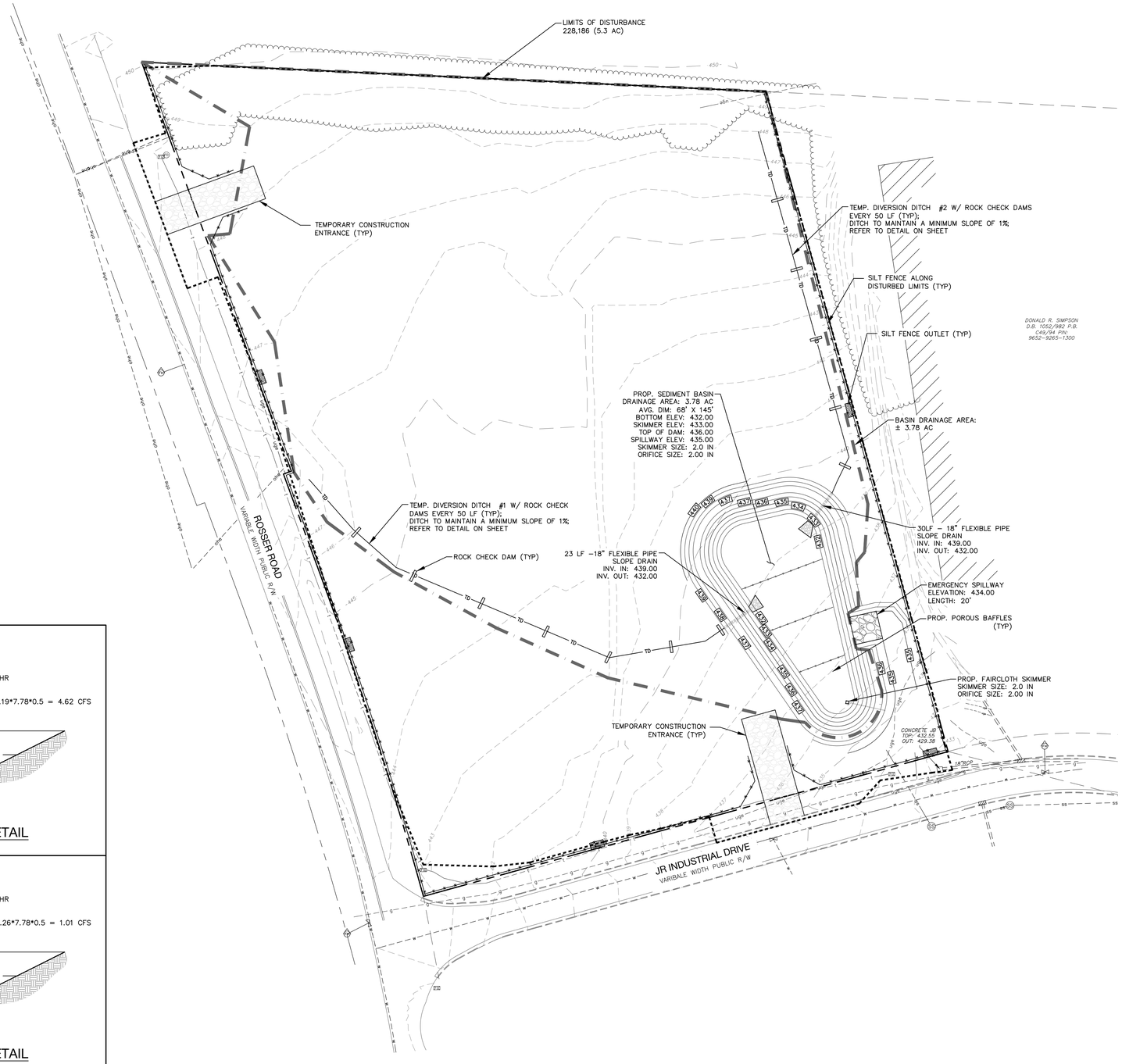
Rosser Rd Industrial
Construction Documents

Utility Plan
2401 Rosser Rd, Sanford, NC 27332

NO.	DATE:	BY:	REVISIONS:

Project No: 22-RDU-026
Date: 06.29.2022
Designed By: UDP
Checked By: BAR
Sheet No:

C-6.0



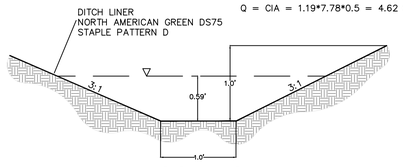
NOTE:

DITCH LINER SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

CALCS:

A: 1.19 AC
I10: 7.78 IN/HR
C: 0.5

Q = CIA = 1.19*7.78*0.5 = 4.62 CFS



TEMP. DIVERSION DITCH #1 DETAIL

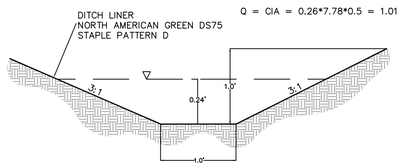
NOTE:

DITCH LINER SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

CALCS:

A: 0.26 AC
I10: 7.78 IN/HR
C: 0.5

Q = CIA = 0.26*7.78*0.5 = 1.01 CFS



TEMP. DIVERSION DITCH #2 DETAIL

GENERAL NOTES:

1. INSTALL ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES AND/ OR INCREASE MAINTENANCE FREQUENCY WHERE APPROVED MEASURES FAIL TO PREVENT ACCELERATED EROSION, OFF SITE SEDIMENTATION, OR REPETITIVE NON-COMPLIANCE ISSUES.
2. MODIFICATIONS TO THE APPROVED AND PERMITTED PLANS SHALL BE APPROVED BY STORMWATER INSPECTIONS PRIOR TO REMOVAL OR INSTALLATION. CONTACT THE STORMWATER INSPECTIONS REGIONAL COORDINATOR AT (919) 278-6459 TO REQUEST AN INSPECTION AND OBTAIN A STORMWATER INSPECTOR'S SIGN-OFF ON THE PLANS OR APPROVED FIELD REVISION.
3. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES IN GOOD WORKING ORDER. SILT FENCE, INLET PROTECTION AND OTHER SIMILAR MEASURES MUST BE CLEANED OUT BEFORE THEY ARE HALF FULL. CLOGGED STONE FILTERS MUST BE REFRESHED/ REPLACED. SILT FENCE CANNOT HAVE HOLES OR TEARS.
4. ONCE GRADING IS COMPLETE AND THE SITE IS STABILIZED, CALL THE STORMWATER INSPECTIONS REGIONAL COORDINATOR AT (919) 279-6459 TO REQUEST AN INSPECTION AND OBTAIN APPROVAL TO REMOVE TEMPORARY MEASURES. DO NOT REMOVE TEMPORARY MEASURES WITHOUT PRIOR STORMWATER INSPECTOR APPROVAL.
5. ONCE GRADING IS COMPLETE, TEMPORARY MEASURES ARE REMOVED, THE SITE IS STABILIZED, AND ALL PERMANENT STORMWATER BMPS HAVE BEEN CERTIFIED AND APPROVED, CALL THE RAPID RESPONSE NUMBER (919) 857-4412 TO SCHEDULE A STORMWATER FINAL INSPECTION.
6. ONCE THE STORMWATER FINAL INSPECTION IS APPROVED, CLOSE THE GRADING PERMIT AND OBTAIN A CERTIFICATE OF COMPLETION FROM THE STORMWATER INSPECTOR.
7. INSPECTOR REFERS TO CITY OF RALEIGH LAND QUALITY INSPECTOR OR HIS REPRESENTATIVE. FIELD INSPECTIONS MAY REQUIRE ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES AS DEEMED NECESSARY BY THE INSPECTOR.
8. CONSTRUCTION AND MAINTENANCE OF ALL EROSION CONTROL DEVICES SHALL CONFORM TO THE STANDARDS SET FORTH IN THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT, HEALTH AND NATURAL RESOURCES LAND QUALITY SECTION EROSION AND SEDIMENT CONTROL PLANNING LAND DESIGN MANUAL.
9. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF EROSION CONTROL METHODS DURING CONSTRUCTION, AND THE OWNER IS RESPONSIBLE FOR MAINTENANCE OF ALL PERMANENT EROSION CONTROL METHODS AFTER CONSTRUCTION IS COMPLETE, IF ANY PERMANENT METHODS ARE REQUIRED.
10. THE NEW NCG01 PERMIT REQUIREMENTS WILL NEED TO BE FOLLOWED WHEN SUBMITTING FOR EROSION CONTROL APPROVAL
11. THE NG01 PERMIT ILL NEED TO BE APPLIED FOR THROUGH THE NEW PORTAL.
12. THE CERTIFICATE OF COVERAGE WILL NEED TO BE ACQUIRED PRIOR TO WAKE COUNTY SETTING UP THE PRE-CONSTRUCTION MEETING AND ISSUING THE GRADING PERMIT.
13. WAKE COUNTY MUST GRANT PERMISSION TO CONVERT SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.
14. STOCKPILE HEIGHT SHALL NOT EXCEED 35 FEET AND SLOPES SHALL BE 2:1 OR FLATTER.
16. OFF-SITE SPOIL OR BORROW AREA 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. CONTRACTOR SHALL NOTIFY WAKE COUNTY OF ANY OFFSITE DISPOSAL OF SOIL, PRIOR TO DISPOSAL. FILL OF FEMA FLOODWAYS AND NON-ENCROACHMENT AREAS ARE PROHIBITED EXCEPT AS SPECIFIED IN SECTION 14-19-2 IN THE WAKE COUNTY UDO.
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18. IF A STOCKPILE IS TO REMAIN FOR FUTURE USE AFTER THE PROJECT IS COMPLETE, THE FINACIAL RESPONSIBLE PARTY MUST NOTIFY WAKE COUNTY OF A NEW RESPONSIBLE PARTY OF THAT STOCKPILE.
19. THE APPROVED PLAN SHALL PROVIDE FOR THE USE OF STAGED SEEDING AND MULCHING ON A CONTINUAL BASIS WHILE THE STOCKPILE IS IN USE.
20. ESTABLISH AND MAINTAIN VEGETATIVE BUFFER AT THE TOE OF THE SLOPE (WHERE PRACTICAL).

CONSTRUCTION SEQUENCE:

1. SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE ENVIRONMENTAL CONSULTANT. OBTAIN A LAND DISTURBING PERMIT.
2. INSTALL GRAVEL CONSTRUCTION PAD, TEMPORARY DITCH DIVERSIONS, SILT FENCE, SILT FENCE OUTLETS, SEDIMENT BASINS, ETC. AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY NECESSARY TO INSTALL DEVICES. SEED TEMPORARY DIVERSION DITCHES AND BASINS IMMEDIATELY AFTER CONSTRUCTION.NO SITE DEMOLITION IS TO OCCUR PRIOR TO INSTALL OF EROSION CONTROL MEASURES.
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8. CONTACT NCDEQ-DEMLR CONTACT PERSON AT (919) 791-4200 AT LEAST 10 DAYS PRIOR TO DEWATERING ACTIVITY.
9. AFTER RECEIVING POSITIVE CONFIRMATION FROM NCDEQ-DEMLR. YOU MAY REMOVE BASIN AND TEMPORARY DIVERSION DITCHES. FINE GRADE IN PREPARATION FOR SEEDING.
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MAINTENANCE PLAN:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING MORE THAN 0.5" RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAPS AND INLET PROTECTION DEVICES WHEN STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS PROPERLY.
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(IN FEET)
1 inch = 40 ft.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028116 SALMAN MOAZZAM

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave.
Raleigh, NC 27612

Rosser Rd Industrial
Construction Documents
Erosion Control - Phase 1
2401 Rosser Rd, Sanford, NC 27332

NO. DATE: BY: REVISIONS:

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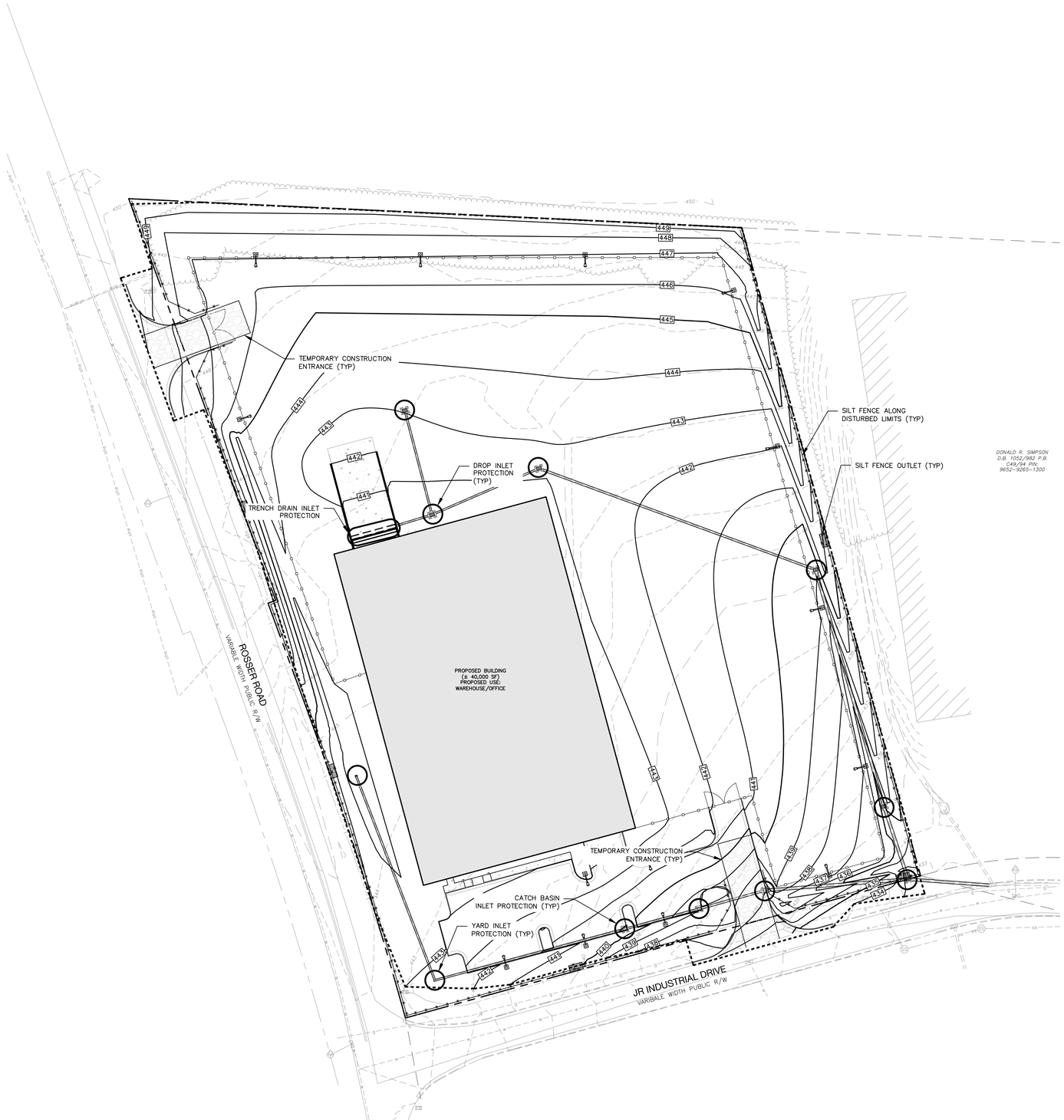

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(IN FEET)
1 inch = 40 ft.

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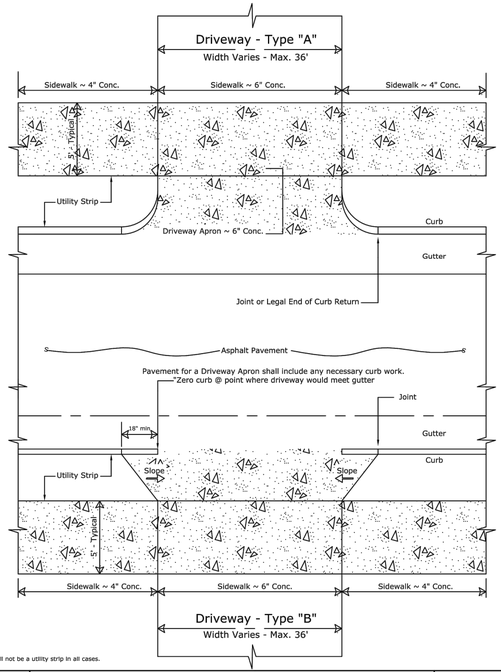
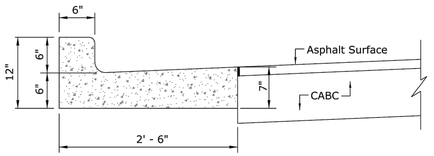


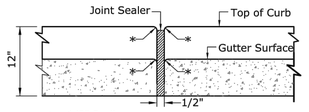
Typical Curb & Gutter Driveway

City of Sanford
Engineering Department - P.O. Box 3729 - Sanford, NC 27331

Date:	05/17/17
Drawn By:	Staff
Not To Scale	

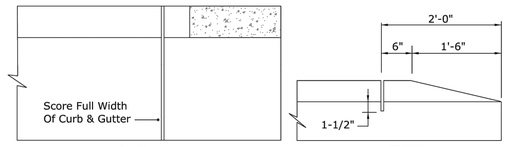


2' - 6" CURB & GUTTER



* = 1/8" Radius

TRANSVERSE EXPANSION JOINT IN CURB & GUTTER

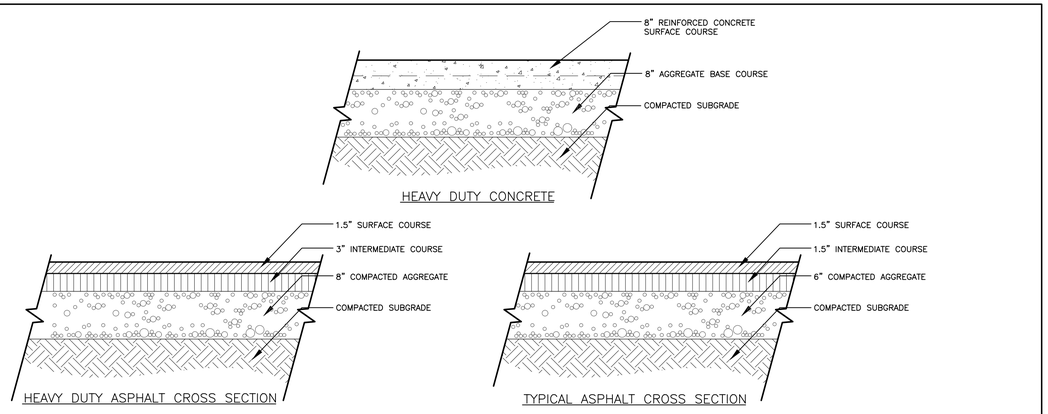


STANDARD METHOD OF ENDING CURB & GUTTER

Concrete Curb and Gutter

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

Dwg. No.	SD-R-001
Date:	07/10/14
Scale:	Not To Scale
Drawn By:	Staff

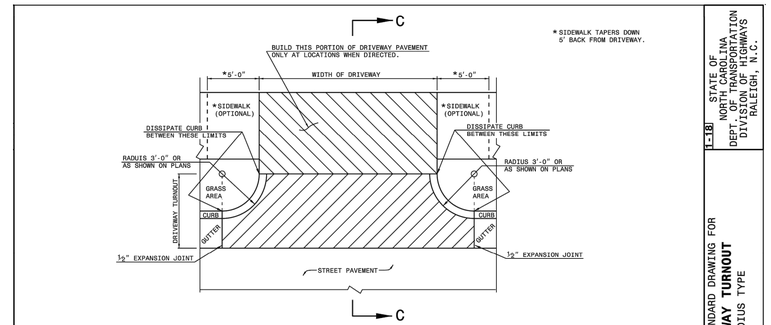


NOTES:
1. GEOTECHNICAL ENGINEER SHALL REVIEW AND APPROVE ASPHALT PAVEMENT AND CONCRETE DESIGN PER ACTUAL SOIL CONDITIONS AND OWNERS LOADING REQUIREMENTS PRIOR TO START OF CONSTRUCTION.

2. HEAVY DUTY ASPHALT PAVEMENT SHALL BE PROVIDED FOR ALL FIRE APPARATUS ACCESS ROADS AND DESIGNED TO SUPPORT AN 80,000LB LOAD.

PAVING CROSS SECTIONS

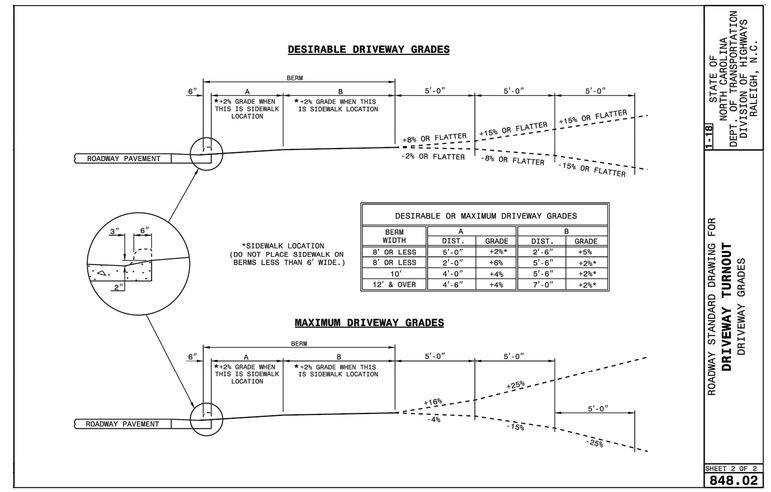
SCALE: NTS



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

ROADWAY STANDARD DRAWING FOR
DRIVEWAY TURNOUT
RADIUS TYPE

SHEET 1 OF 2
848.02



DESIRABLE OR MAXIMUM DRIVEWAY GRADES				
BERM WIDTH	A		B	
	DIST.	GRADE	DIST.	GRADE
8' OR LESS	5'-0"	+2%*	2'-6"	+5%
8' OR LESS	2'-0"	+6%	5'-6"	+2%*
10'	4'-0"	+4%	5'-6"	+2%*
12' & OVER	4'-6"	+4%	7'-0"	+2%*

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
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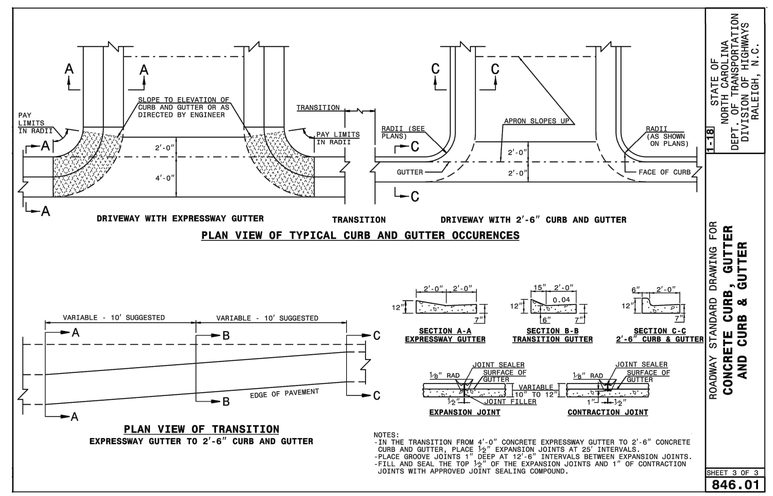
ROADWAY STANDARD DRAWING FOR
DRIVEWAY TURNOUT
DRIVEWAY GRADES

SHEET 2 OF 2
848.02



NOTES:
-IN THE TRANSITION FROM 4'-0" CONCRETE EXPRESSWAY GUTTER TO 2'-6" CONCRETE CURB AND GUTTER, PLACE ½" EXPANSION JOINTS AT 25' INTERVALS.
-PLACE GROOVE JOINTS 1" DEEP AT 12'-6" INTERVALS BETWEEN EXPANSION JOINTS.
-FILL AND SEAL THE TOP ½" OF THE EXPANSION JOINTS AND 1" OF CONTRACTION JOINTS WITH APPROVED JOINT SEALING COMPOUND.

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
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1-18

ROADWAY STANDARD DRAWING FOR
CONCRETE CURB, GUTTER AND CURB & GUTTER

SHEET 3 OF 3
846.01

URBAN DESIGN PARTNERS
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p 919.275.5002
urbandesignpartners.com
nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL SALMAN MOAZZAM SEAL 028116

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave.
Raleigh, NC 27612

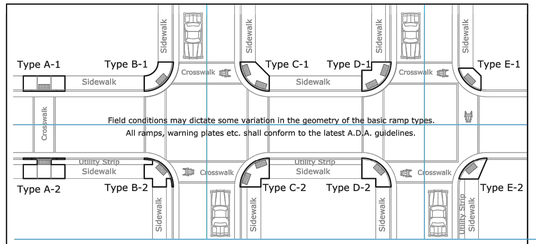
Rosser Rd Industrial
Construction Documents
Site Specifications & Details

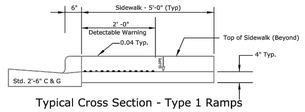
2401 Rosser Rd, Sanford, NC 27332

NO.	DATE:	BY:	REVISIONS:

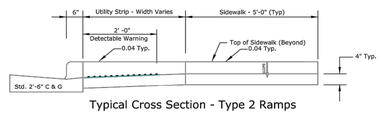
Project No: 22-RDU-026
Date: 06.29.2022
Designed By: UDP
Checked By: BAR
Sheet No:

C-8.0

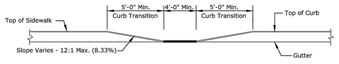




Typical Cross Section - Type 1 Ramps



Typical Cross Section - Type 2 Ramps

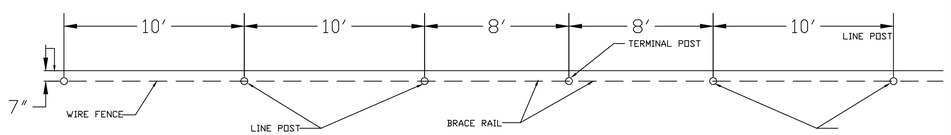


Typical Sidewalk Geometry - All Ramps

GENERAL NOTES

1. All work shall be in accordance with all applicable local, state and/or federal statutes, or regulations.
2. Place wheelchair ramps at locations designated on the drawings or as directed by the Engineer.
3. Plates with detectable warning surface shall be a minimum of 2' x 3'.
4. Ramp grades shall not exceed 12:1 (8.33%) in relation to the grade of the street.
5. Type B, C, D & E ramps shall be a minimum of 6" thick concrete.

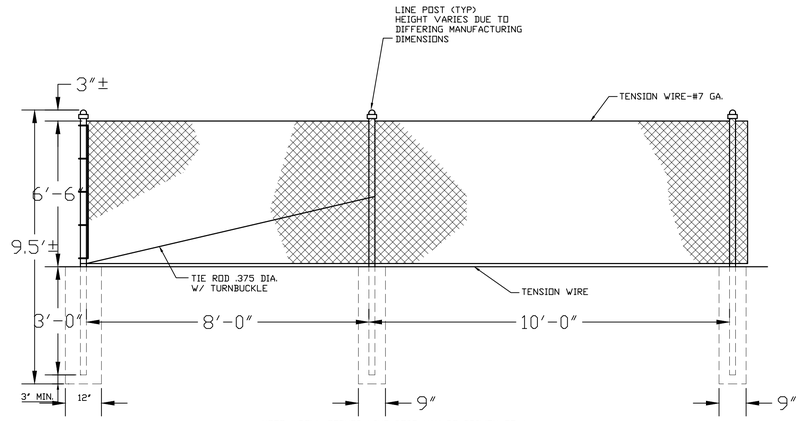
CITY OF SANFORD	Typical Wheelchair Ramps	Dwg. No. SD-R-005
		Date: 07/10/14
	City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Scale: Not To Scale
		Drawn By: Staff



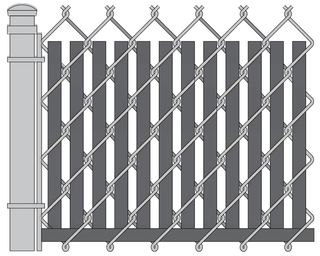
PLAN

(LINE POST TERMINAL POST SEQUENCE)

6.5' CHAIN LINK FENCE - ELEVATION



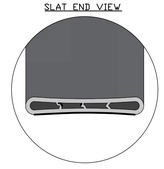
NOTE: ROLL FORMED LINE POST MAY BE DRIVEN TO A MINIMUM OF 3'-0" IN LIEU OF CONCRETE ANCHOR UNLESS OTHERWISE DIRECTED BY THE ENGINEER.



DIRECTIONS:INSERT SLATS VERTICALLY WITH THE BEVELED/NOTCHED END DOWNWARD UNTIL SLAT ENGAGES AND INTERLOCKS WITH THE BOTTOM CHANNEL

NOTE: THE BOTTOM LOCKING CHANNEL IS NOT INCLUDED WITH THE SLATS. IT MUST BE PURCHASED SEPARATELY. THE SLATS MAY ALSO BE SECURED BY MANUALLY STAPLING OR HOG-RINGING THEM IN PLACE.

SLAT END VIEW



VINYL SLATS SPECIFICATIONS

SLAT NAME	SLAT WIDTH	MESH SIZE	WIRE GAUGE	COVERAGE AREA
VINYL SLATS	2 3/8"	3 1/2" X 5" ONLY	9 OR 10 GAUGE ONLY	25 LINEAR FEET

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 22-026 C-8.0 (Details).

1 CHAIN LINK FENCE WITH VINYL SLATS — DETAIL

Scale: NTS

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nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028116 SALMAN MOAZZAM

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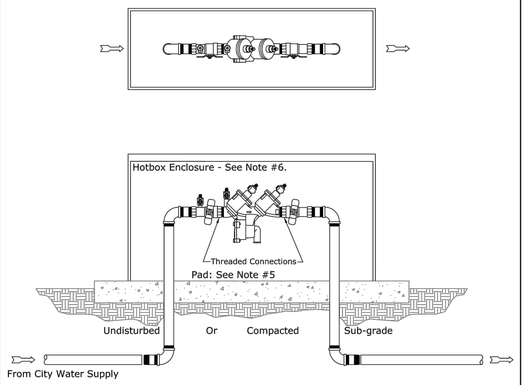
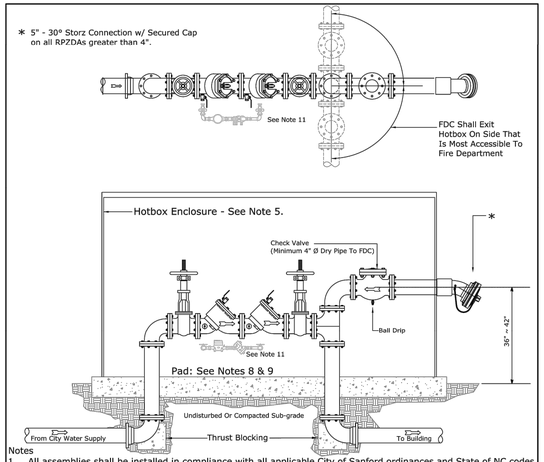


Notes:

1. All RPZs shall have positive gravity drainage.
2. Irrigation assemblies shall be installed within 3 feet of the irrigation meter.
3. All assemblies shall be installed in compliance with all applicable City of Sanford ordinances and State of NC codes.
4. Contact the City of Sanford Utilities Connections Coordinator for additional information.
5. Reduced Pressure Zone Backflow Prevention Assembly shall comply with ASSE 1013 and AWWA C511.
6. Pad is required for all non-residential assemblies. Pad shall be minimum 4" thick concrete - 3000 psi @ 28 days or approved pre-fab equivalent.
7. Hotbox enclosures shall comply with ASSE 1060.
8. If provided, electrical outlets shall be GFCI.
9. Property owner shall be responsible for freeze protection, operation, maintenance, testing and reporting

	Reduced Pressure Zone ¾ " ~ 2 " Backflow Prevention Assembly City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Dwg. No. SD-W-005 Date: 02/11/2020 Scale: Not To Scale Drawn By: Staff



Notes

1. All assemblies shall be installed in compliance with all applicable City of Sanford ordinances and State of NC codes.
2. Contact the City of Sanford Utilities Connections Coordinator for additional information.
3. Reduced Pressure Zone Backflow Prevention Assembly shall comply with ASSE 1013 and AWWA C511.
4. Double Check Valve Backflow Prevention Assembly shall comply with ASSE 1015 and AWWA C510.
5. Hotbox enclosures shall comply with ASSE 1060.
6. If provided, electrical outlets shall be GFCI.
7. Property owner shall be responsible for freeze protection, operation, maintenance, testing and reporting.
8. Detector Assembly shall be included with un-metered assemblies.

3" or Smaller RPZDAs For Fire Protection

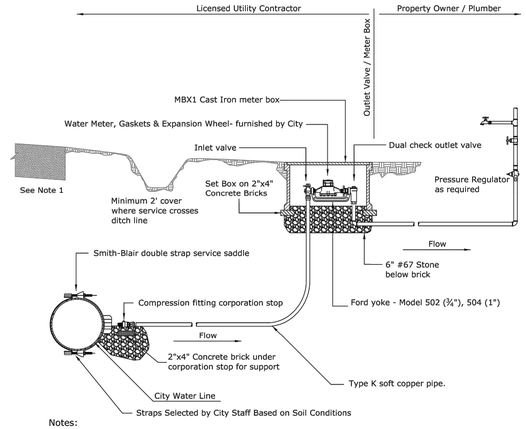
9. Pad shall be minimum 4" thick concrete - 3000 psi @ 28 days or approved pre-fab equivalent.

4" or Larger RPZDAs For Fire Protection

10. Pad shall be minimum 6" thick concrete - 3000 psi @ 28 days or approved pre-fab equivalent.
11. Pipe supports shall be installed at valves.

	Fire Suppression Backflow Assembly With FDC At Hot-Box City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Dwg. No. SD-W-007 Date: 02/11/2020 Scale: Not To Scale Drawn By: Staff

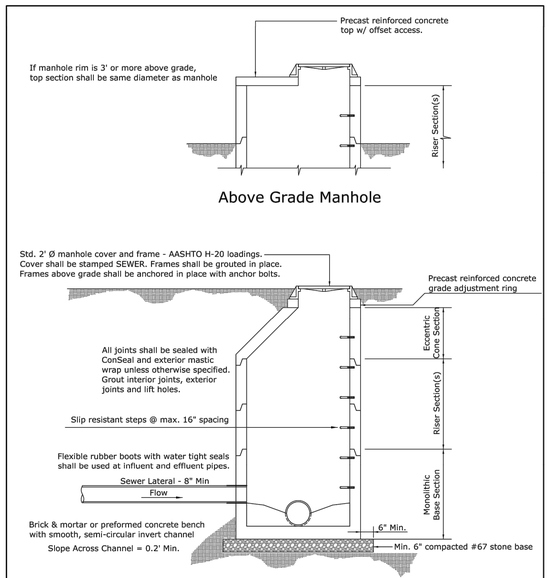
Vertical valves are shown for illustration.
Field conditions will determine the use of angled, vertical, horizontal or any combination to complete the installation.



Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. Residential meters may be ¾" or 1".
3. Piping shall be type 'K' copper with appropriate sized fittings.
4. Place washed stone under and around pipe to protect corporation stop.
5. Mueller or Ford brass valves, yoke fittings, and stops shall be provided.

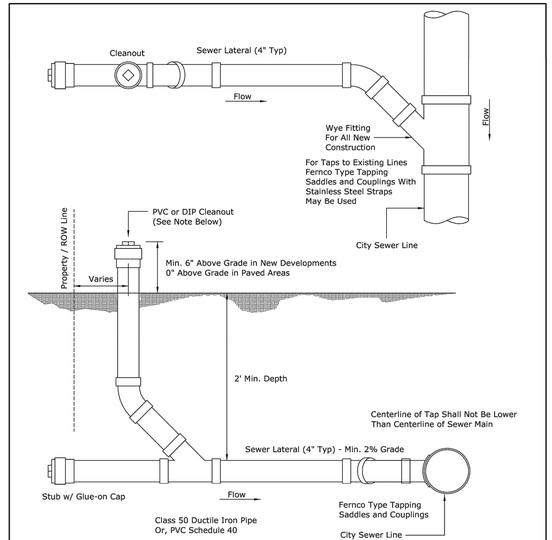
	Residential Water Tap & Meter City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Dwg. No. SD-W-001 Date: 02/11/20 Scale: Not To Scale Drawn By: Staff



Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. In paved or traffic areas manhole frame and cover shall be at grade. In other non-traffic areas frame and cover shall be a min. of 1" above grade.

	Sanitary Sewer Manhole City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Dwg. No. SD-S-003 Date: 10/16/2020 Scale: Not To Scale Drawn By: Staff



Notes:

1. Please contact the City of Sanford @ 919-777-1122 for specifications for commercial applications or laterals over 6" Ø.
2. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
3. All work within the street ROW shall be performed by a licensed utility contractor.
4. All sewer cleanout structures installed in asphalt or concrete shall be constructed with DIP risers and fittings, a traffic-rated cast iron assembly, and corrosion resistant bronze cap. Cleanout assemblies installed in non-paved surfaces shall be either DIP (as specified above, non-traffic-rated) or PVC.

	Residential Sewer Tap City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Dwg. No. SD-S-001 Date: 10/16/2020 Scale: Not To Scale Drawn By: Staff

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Checked By: BAR
Sheet No:

C-8.2

ROLLMAX™
ROLLED EROSION CONTROL

Specification Sheet
EroNet™ SC150® Erosion Control Blanket

DESCRIPTION

The extended-term double net erosion control blanket shall be a machine-produced mat of 70% agricultural straw and 30% coconut fiber with a functional longevity of up to 24 months. (NOTE: functional longevity may vary depending upon climatic conditions, soil, geographical location, and elevation). The blanket shall be of consistent thickness with the straw and coconut evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a heavyweight photodegradable polypropylene netting having ultraviolet additives to delay breakdown and an approximate 0.63 x 0.63 in (1.59 x 1.59 cm) mesh, and on the bottom side with a lightweight photodegradable polypropylene netting with an approximate 0.50 x 0.50 (1.27 x 1.27 cm) mesh. The blanket shall be sewn together on 1.50 inch (3.81 cm) centers with degradable thread. The blanket shall be manufactured with a colored thread stitched along both outer edges (approximately 2-5 inches [5-12.5 cm] from the edge) as an overlap guide for adjacent mats.

The SC150 shall meet Type 3.B specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.17

Material Content		
Matrix	70% Straw Fiber 30% Coconut Fiber	0.35 lbs/sq yd (0.19 kg/sm) 0.15 lbs/sq yd (0.08 kg/sm)
Netting	Top: Heavyweight photodegradable with UV additives	3 lbs/1000 sq ft (1.47 kg/100 sm)
	Bottom: lighweight photodegradable	1.5 lb/1000 sq ft (0.73 kg/100 sm)
Thread	Degradable	

Standard Roll Sizes			
Width	6.67 ft (2.03 m)	8 ft (2.4 m)	16.0 ft (4.87 m)
Length	108 ft (32.92 m)	112 ft (34.14 m)	108 ft (32.92 m)
Weight ± 10%	44 lbs (19.95 kg)	55 lbs (24.95 kg)	105.6 lbs (47.9 kg)
Area	80 sq yd (66.9 sm)	100 sq yd (83.61 sm)	192 sq yd (165.6 sm)

Index Property	Test Method	Typical
Thickness	ASTM D6525	0.35 in. (8.89 mm)
Resiliency	ECTC Guidelines	75%
Water Absorbency	ASTM D1117	342%
Mass/Unit Area	ASTM D6475	7.87 oz/sy (267.6 g/sm)
Swell	ECTC Guidelines	30%
Smolder Resistance	ECTC Guidelines	Yes
Stiffness	ASTM D1388	1.11 oz-in
Light Penetration	ASTM D6567	6.2%
Tensile Strength - MD	ASTM D6818	362.4 lbs/ft (5.37 kN/m)
Elongation - MD	ASTM D6818	29.4%
Tensile Strength - TD	ASTM D6818	136.8 lbs/ft (2.03 kN/m)
Elongation - TD	ASTM D6818	27.6%
Biomass Improvement	ASTM D7322	481%

Design Permissible Shear Stress	
Unvegetated Shear Stress	2.00 psf (96 Pa)
Unvegetated Velocity	8.0 fps (2.44 m/s)

Slope Design Data: C Factors			
	Slope Gradients (S)		
Slope Length (L)	≤ 3:1	3:1 – 2:1	≥ 2:1
≤ 20 ft (6 m)	0.001	0.048	0.100
20-50 ft	0.051	0.079	0.145
≥ 50 ft (15.2 m)	0.10	0.110	0.190

NTPEP Large-Scale Slope
ASTM D6459 - C-factor = 0.031

Roughness Coefficients – Unveg.	
Flow Depth	Manning's n
≤ 0.50 ft (0.15 m)	0.050
0.50 – 2.0 ft	0.050-0.018
≥ 2.0 ft (0.60 m)	0.018

NORTH AMERICAN GREEN

Western Green
4609 E. Boonville-New Harmony Rd.
Evansville, IN 47725

nagreen.com
800-772-2040

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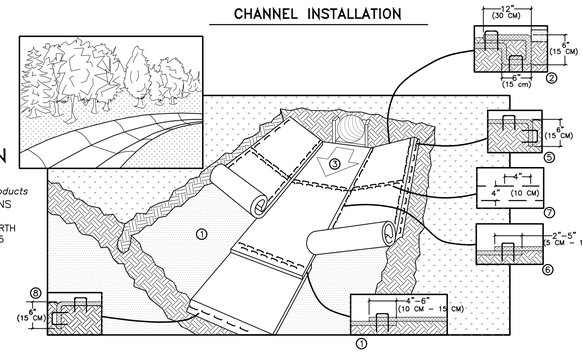
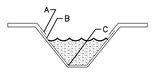


1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED. NOTE: WHEN USING CELL–O–SEED DO NOT SEED PREPARED AREA. CELL–O–SEE MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE 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 AND 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 APPROXIMATELY1 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 30–40 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 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 PROPERTY 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.

CHANNEL INSTALLATION

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

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

SECTION E: GROUND STABILIZATION

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

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

GROUND STABILIZATION SPECIFICATION

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

Temporary Stabilization	Permanent Stabilization
• 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 • Rolled erosion control products with grass seed

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 fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
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 or provide secondary containment. 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. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

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.

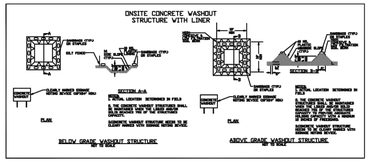
PORTABLE TOILETS

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.

NORTH CAROLINA Environmental Quality



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.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

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 equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

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

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 kept on site and available for inspection at all times during normal business hours.

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

2. Additional Documentation to be Kept on Site

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

(a) This General Permit as well as the Certificate of Coverage, after it is received.

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

3. Documentation to be Retained for Three Years

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

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

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	• ***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.

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

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

NORTH CAROLINA Environmental Quality

NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

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nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 028116 SALMAN MOAZZAM

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave.
Raleigh, NC 27612

Rosser Rd Industrial Construction Documents

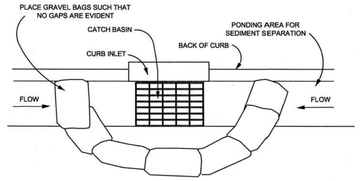
Erosion Control Details

2401 Rosser Rd, Sanford, NC 27332

NO.	DATE:	BY:	REVISIONS:

Project No: 22-RDU-026
Date: 06.29.2022
Designed By: UDP
Checked By: BAR
Sheet No:

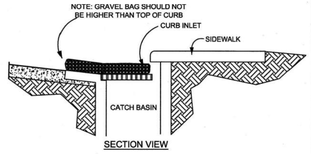
C-8.3



PLAN VIEW

NOTES:

1. PLACE GRAVEL BAG BARRIER ON GENTLY SLOPING STREET, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNNOFF.
2. USE SAND BAGS OF WOVEN GEOTEXTILE FABRIC (NOT BURLAP) AND FILL WITH $\frac{3}{4}$ INCH (OR SMALLER) GRAVEL. BAGS MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.
4. WHEN INSTALLING CURB INLET PROTECTION DEVICES, **NEVER** BLOCK THE CURB INLET.

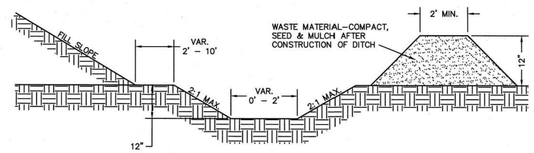


SECTION VIEW

GRAVEL BAG CURB INLET PROTECTION

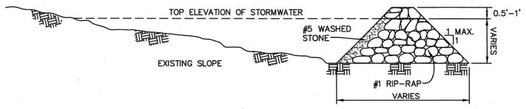
NOTES:

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.

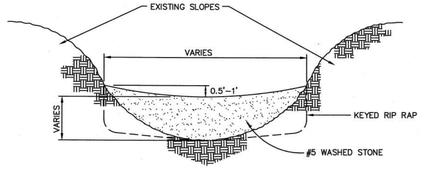


CROSS SECTIONAL VIEW

TEMPORARY DIVERSION DITCH



SIDE VIEW



FRONT VIEW

CONSTRUCTION NOTES:

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

KEY RIP RAP INTO THE DAM FOR STABILIZATION.

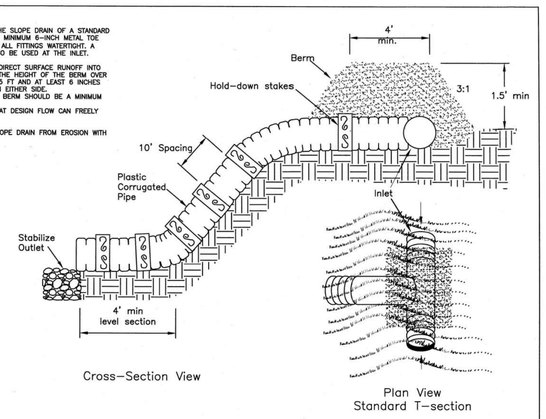
STEP SEQUENCE

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

CHECK DAM

NOTES:

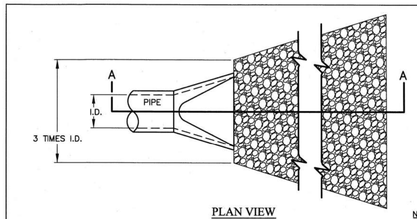
1. CONSTRUCT THE ENTRANCE TO THE SLOPE DRAIN OF A STANDARD FLARED-END SECTION OF PIPE WITH A MINIMUM 6-INCH METAL TOE PLATE (CROSS-SECTION VIEW). MAKE ALL FITTINGS WATERTIGHT. A STANDARD T-SECTION FITTING MAY ALSO BE USED AT THE INLET.
2. USE AN EARTHEN DIVERSION TO DIRECT SURFACE RUNOFF INTO THE TEMPORARY SLOPE DRAIN. MAKE THE HEIGHT OF THE BERM OVER THE DRAIN CONDUIT A MINIMUM OF 1.5 FT AND AT LEAST 6 INCHES HIGHER THAN THE ADJOINING BERM ON EITHER SIDE. THE LOWEST POINT OF THE DIVERSION BERM SHOULD BE A MINIMUM OF 1 FT ABOVE THE TOP OF THE DRAIN SO THAT DESIGN FLOW CAN FREELY ENTER THE PIPE.
3. PROTECT THE OUTLET OF THE SLOPE DRAIN FROM EROSION WITH RIPRAP DISSIPATOR.



Cross-Section View

Plan View
Standard T-section

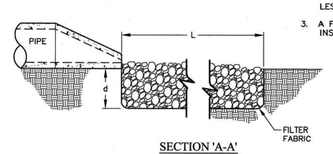
TEMPORARY SLOPE DRAIN



PLAN VIEW

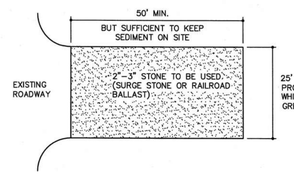
NOTES:

1. L = THE LENGTH OF THE RIPRAP APRON.
2. d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.



SECTION 'A-A'

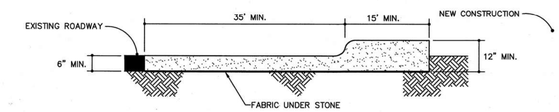
PIPE OUTLET TO FLAT AREA
NO WELL-DEFINED CHANNEL



PLAN VIEW

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.



CROSS SECTION

CONSTRUCTION ENTRANCE

URBAN DESIGN PARTNERS
555 fayetteville st. 3rd floor
raleigh, nc 27601
p 919.275.5002
urbandesignpartners.com
nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA PROFESSIONAL SEAL 028116 ENGINEER SALMAN MOAZZAM

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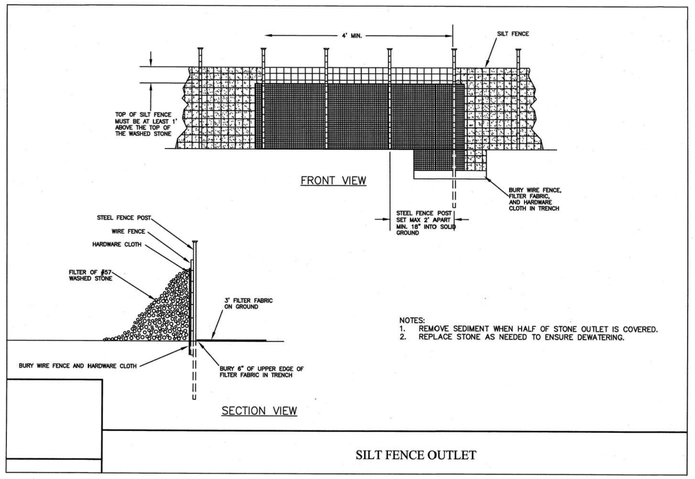
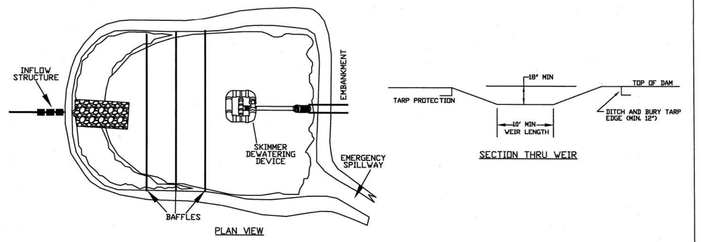
Sheet No:

C-8.4



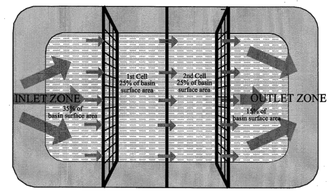
NOTES:
1. REMOVE SEDIMENT WHEN HALF OF STONE OUTLET IS COVERED.
2. REPLACE STONE AS NEEDED TO ENSURE DEWATERING.

SILT FENCE OUTLET

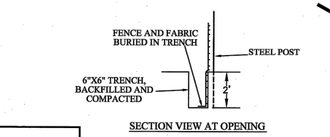


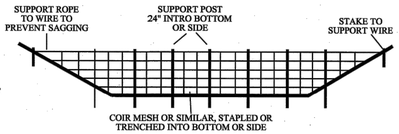
NOTES:
1) BASIN SHOULD BE CLEANED OUT WHEN CAPACITY REACHES AN ELEVATION REPRESENTING THAT THE BASIN IS HALF-FULL.
2) THE TARP USED TO PROTECT THE WEIR SHALL BE THE WIDTH SPECIFIED. THE LENGTH OF THE TARP SHALL BE ACCORDING TO AVAILABLE SUPPLY. IF MULTIPLE TARPS ARE TO BE USED, THEN TARPS SHALL BE OVERLAPPED 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.

SKIMMER BASIN



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



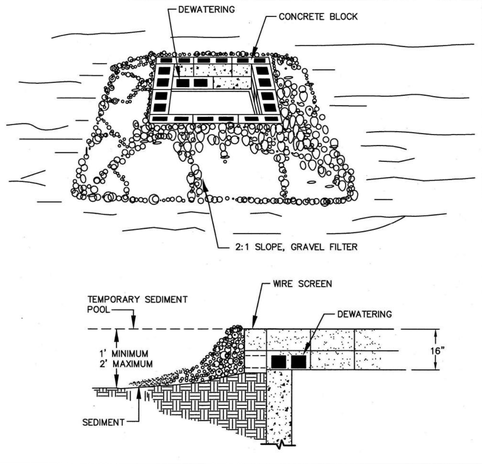


BAFFLES DETAIL

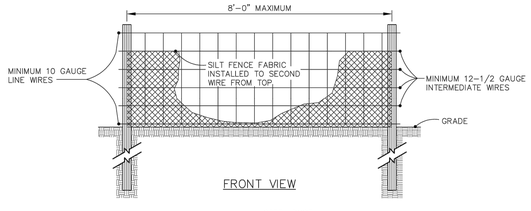
CONSTRUCTION SPECIFICATIONS

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.

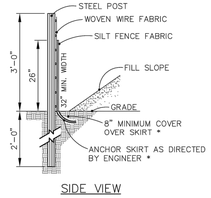
MAINTENANCE: INSPECT INLET PROTECTION AND REMOVE SEDIMENT AFTER EACH RAIN EVENT. GRAVEL SHOULD BE REPLACED AND REPAIRS MADE AS NEEDED.



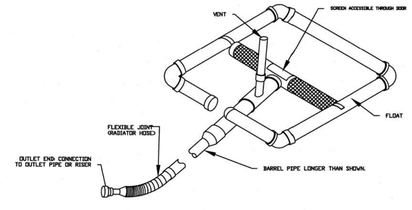
BLOCK & GRAVEL DROP INLET PROTECTION



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.



TEMPORARY SILT FENCE



SKIMMER DETAIL

URBAN DESIGN PARTNERS
555 fayetteville st. 3rd floor
raleigh, nc 27601
p 919.275.5002
urbandesignpartners.com
nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA PROFESSIONAL SEAL 028116 ENGINEER SALMAN MOAZZAM

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave.
Raleigh, NC 27612

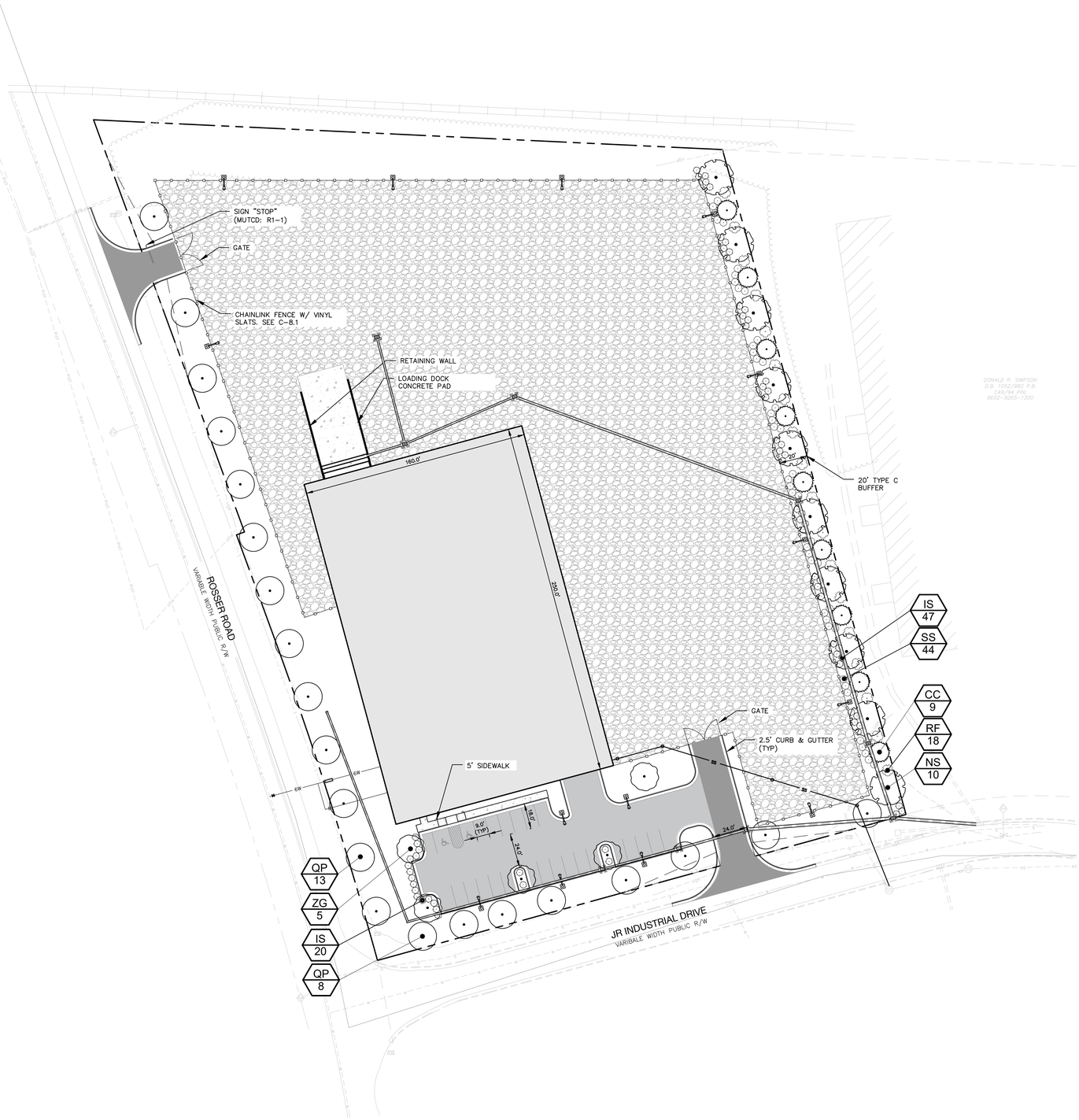
Rosser Rd Industrial
Construction Documents

Erosion Control Details
2401 Rosser Rd, Sanford, NC 27332

NO. DATE: BY: REVISIONS:

Project No: 22-RDU-026
Date: 06.29.2022
Designed By: UDP
Checked By: BAR
Sheet No:

C-8.5



PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
	CC	9	CUPRESSUS ARIZONICA 'CAROLINA SAPPHIRE' / CAROLINA SAPPHIRE CYPRESS	B & B	2"CAL	8` MIN
	NS	10	NYSSA SYLVATICA / TUPELO	B & B	2"CAL	8`-10` HT
	QP	21	QUERCUS PHELLOS / WILLOW OAK	B & B	2"CAL	8` HT
	ZG	5	ZELKOVA SERRATA 'GREEN VASE' / GREEN VASE SAWLEAF ZELKOVA	B & B	2"CAL	8` HT

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	MIN HEIGHT	MIN WIDTH
	IS	67	ILEX GLABRA 'SHAMROCK' / SHAMROCK INKBERRY HOLLY	5 GAL	24"	
	RF	18	RHODODENDRON INDICUM 'FORMOSA' / FORMOSA INDICA AZALEA	5 GAL	3`	
	SS	44	SPIRAEA JAPONICA 'LITTLE PRINCESS' / LITTLE PRINCESS JAPANESE SPIREA	5 GAL	24"	

XXX — PLANT CODE
XX — PLANT QUANTITY

NOTES:

1. IF GRAPHIC REPRESENTATION OF PLANTINGS ON PLANS DO NOT MATCH QUANTITIES IN PLANT SCHEDULE, GRAPHIC REPRESENTATION OF PLANTINGS WILL GOVERN.
2. TREES NOT IN A LANDSCAPE BED SHALL RECEIVE A 4` DIAMETER MULCH RING.
3. LIMITS OF IRRIGATION INCLUDE DENOTED LANDSCAPE BEDS, ALL SOD/SEED AREAS, AND TREES NOT LOCATED IN A LANDSCAPE BED.
4. FULL LANDSCAPE SCHEDULE ON SHEET LS-2.0
5. CITY TREE PLANTING AND PRESERVATION NOTES ON SHEET LS-2.0

LANDSCAPE REQUIREMENTS:

BUFFERS AND SCREENING:

1. ALL PARKING SPACES, DUMPSTERS, AND RECYCLING CONTAINERS MUST BE SCREENED FROM PUBLIC RIGHTS OF WAY AND ADJACENT PROPERTIES.
2. ALL METER BANKS, BACKFLOW PREVENTERS, AND HVAC RELATED MECHANICAL EQUIPMENT WILL BE SCREENED FROM ROSSER ROAD AND ADJACENT PROPERTIES. if applicable

20' TYPE C BUFFER (CITY OF SANFORD UDO SEC. 7.4)

WIDTH:	20'
REQ'D LARGE TREES:	1 TREES/50 LF
REQ'D SMALL TREES:	1 TREES/75 LF
REQUIRED POINTS:	1.0/LF
(485 LF/ 50 LF)(1) =	10 LARGE TREES REQ'D
(485 LF/ 75 LF)(1) =	7 SMALL TREES REQ'D
PROVIDED TREES:	10 LARGE TREES 9 SMALL TREES

*EXISTING VEGETATION SHALL COUNT TOWARDS BUFFER AND SCREENING REQUIREMENTS AND WILL BE SUPPLEMENTED AS SHOWN ON PLANS AS REQUIRED.

PARKING LOT PLANTINGS (CITY OF SANFORD UDO SEC. 7.6)

1. LANDSCAPED PLANTING AREAS AND ISLANDS FOR PARKING LOT YARDS SHALL HAVE ONE (1) LARGE TREE OR TWO (2) SMALL TREES, AND EIGHT (8) SMALL SHRUBS PER EACH TWENTY (20) PARKING SPACES.

(26 SPACES / 20 SP.)(1) = 2 LARGE TREES REQ'D
5 LARGE TREES PROVIDED

(26 SPACES / 20 SP.)(8) = 11 SMALL SHRUBS REQ'D
20 SMALL SHRUBS PROVIDED

STREET YARD (CITY OF SANFORD UDO SEC. 7.7)

1. STREET YARD SHALL BE REQUIRED ON A SITE ALONG ALL FRONTAGES WHERE A PROJECT OR DEVELOPMENT ABUTS A PUBLIC RIGHT OF WAY.

WIDTH:	8'
REQ'D LARGE TREES:	1 TREES/50 LF
ALONG ROSSER RD. (630 LF/ 50 LF)(1) =	13 LARGE TREES REQ'D
PROVIDED TREES:	13 LARGE TREES
ALONG J R INDUSTRIAL DR. (380 LF/ 50 LF)(1) =	8 LARGE TREES REQ'D
PROVIDED TREES:	8 LARGE TREES

811
BEFORE YOU DIG!
CALL 811 OR 1-800-632-4949
N.C. ONE-CALL CENTER
IT'S THE LAW!

GRAPHIC SCALE
40 0 20 40 80
1 INCH = 40 FEET

URBAN DESIGN PARTNERS
555 fayetteville st. 3rd floor
raleigh, nc 27601
p 919.275.5002
urbandesignpartners.com
nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1963 BRIAN A. RICHARDS

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave.
Raleigh, NC 27612

Rosser Rd Industrial
Construction Documents
Landscape Plan
2401 Rosser Rd, Sanford, NC 27332

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LS-1.0

TREE PLANTING & PRESERVATION REQUIREMENTS:

PLANT MATERIAL

1. MINIMUM TREE SIZE AT PLANTING IS 2" CALIPER AND 8' TALL FOR SINGLE-STEM TREES. ALL MULTI-STEM PLANTS MUST BE TREE FORM. ALL MULTI-STEM PLANTS MUST BE TREE FORM, MAXIMUM 3 TO 5 TRUNKS, AND MINIMUM 10' TALL. WHERE 3" SINGLE-STEM CALIPER TREES ARE SPECIFIED/REQUIRED THE MINIMUM HEIGHT SHALL BE 10' TALL.

2. ALL NEW TREES MUST HAVE STRAIGHT TRUNKS WITH STRONG CENTRAL LEADERS INTACT TO THE TOP OF THE CROWN UNLESS MULTI-STEM TREES ARE SPECIFIED. ALL REQUIRED TREES SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, HAVE WELL-DEVELOPED BRANCHES, BE VIGOROUS AND HAVE FIBROUS ROOT SYSTEMS. TREES WITH MAJOR GIRDLING ROOTS WILL NOT BE ACCEPTED. TREES WITH CO-DOMINANT BRANCHING WILL NOT BE ACCEPTED. TREES THAT HAVE BEEN SHEARED, TOPPED OR CUT BACK TO MULTIPLY THE BRANCHING STRUCTURE WILL NOT BE ACCEPTED. TREES SHALL BE FREE OF ABRASIONS, DAMAGE, DISEASE, PESTS AND CRACKS. ALL PRUNING CUTS GREATER THAN ½ INCH DIAMETER SHALL HAVE CALLUS TISSUE FORMED PRIOR TO PLANTING. NO PRUNING CUT ON THE TRUNK SHALL BE MORE THAN ONE-HALF THE DIAMETER OF THE CENTRAL LEADER AT THE HEIGHT WHERE THE CUT WAS MADE. ROOT FLARES SHALL BE LOCATED AT GRADE. TREES WITH MORE THAN 2" OF SOIL COVERING THE ROOT BALL/FLARE FROM WILL NOT BE ACCEPTED.

3. SIZE OF REQUIRED PLANTS, SPREAD OF ROOTS AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH ANSI Z60.1 (LATEST EDITION) AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION, EXCEPT WHERE SPECIFIED/AUTHORIZED BY URBAN FORESTRY.

4. ALL REQUIRED TREES OF A PARTICULAR SPECIES AND VARIETY SHALL BE UNIFORM IN SIZE AND CONFIGURATION.

5. A MINIMUM OF 50% OF NEW TREES MUST BE NATIVE SPECIES, AND SITES WITH MORE THAN 20 TREES REQUIRED WILL HAVE TO INSTALL MULTIPLE (3 OR MORE) SPECIES PURSUANT TO THE TREE ORDINANCE GUIDELINES.

6. 75% OF REQUIRED TREES MUST BE LARGE MATURE SPECIES EXCEPT IN SITUATIONS WITH OVERHEAD POWER LINE CONFLICTS.

7. ALL STRAPPING, AND TOP 1/3 OF WIRE BASKET AND BURLAP MUST BE CUT AWAY AND REMOVED FROM ROOT BALL WHEN PLANTING.

8. FOR NEW PLANTING AREAS, REMOVE ALL PAVEMENT, GRAVEL SUB-BASE AND CONSTRUCTION DEBRIS; REMOVE COMPACTED SOIL AND ADD 18" NEW TOPSOIL, OR TILL AND AMEND THE TOP 18" OF EXISTING SOIL TO MEET TOPSOIL/PLANTING MIX STANDARDS FOR TREES (WITHIN ENTIRE MINIMUM AREA OF 274 SQUARE FEET).

9. TREES PLANTED ON PUBLIC PROPERTY WILL NEED APPROVAL FROM THE CITY ARBORIST AND/OR NCDOT.

UTILITY ISSUES

10. IF ANY UTILITY IS BEING INSTALLED IN OR NEAR ANY REQUIRED TREE(S) OR TREE SAVE AREA(S), CALL URBAN FORESTRY SPECIALIST TO RESOLVE PRIOR TO UTILITY INSTALLATION.

11. IF TREES CONFLICT WITH ANY UTILITIES OR SIGNS; CALL URBAN FORESTER TO RESOLVE BEFORE PLANTING.

12. ADJUST TREE PLANTING LOCATIONS TO AVOID EXISTING UNDERGROUND UTILITIES. PLANT 10' FROM ALL UNDERGROUND UTILITIES.

13. NO LIGHT POLES, UTILITIES OR TRANSFORMERS CAN BE INSTALLED IN TREE ISLANDS.

14. TREES MUST MAINTAIN A MINIMUM DISTANCE OF 20' FROM LIGHT POLES WITHIN THE RIGHT-OF-WAY. SHOW SITE LIGHTING ON LANDSCAPE PLAN.

TREE SAVE AND PRESERVATION

15. TREE PROTECTION MUST BE INSTALLED AND VERIFIED BY URBAN FORESTRY PRIOR TO STARTING ANY CONSTRUCTION ACTIVITY.

16. SHOW TREE PROTECTION AND TREES SAVE AREAS ON EROSION CONTROL, GRADING AND LANDSCAPE PLAN SHEETS.

17. COMMERCIAL TREE SAVE AREAS MUST BE RECORDED ON A FINAL PLAT.

18. TREE SAVE AREAS SHALL BE FREE OF INVASIVE PLANT SPECIES. IF AN AREA PROPOSED FOR TREE SAVE CONTAINS INVASIVE PLANT SPECIES AT TIME OF PROPOSAL, SUCH INVASIVE PLANT SPECIES SHALL BE REMOVED PRIOR TO FINAL CO.

19. THE AREA OF ANY EASEMENTS (WATER, SEWER, UTILITY, ETC.) CAN NOT BE COUNTED TOWARD THE TREE SAVE REQUIREMENT.

20. ANY ALTERATIONS TO TREE SAVE AREAS MUST BE ACCOMPLISHED WITHOUT MECHANIZED EQUIPMENT.

21. NO STRUCTURE WILL BE ALLOWED WITHIN 10' OF TREE SAVE AREAS UNLESS APPROVED BY URBAN FORESTRY.

22. CONTACT URBAN FORESTRY SPECIALIST PRIOR TO ANY CRANE SET-UP, MACHINERY OPERATION OR TEMPORARY BUILDING ERECTION THAT MAY IMPACT PROTECTED TREES OR TREE SAVE AREAS, INCLUDING TREES LOCATED IN STREET RIGHT OF WAY. IMPACTS MAY INCLUDE BUT ARE NOT LIMITED TO: ENCROACHING WITHIN TREE DRIP-LINES, EXCAVATION, SOIL COMPACTION, TREE TRIMMING, ERECTING AND DISMANTLING OF CONSTRUCTION CRANES.

TOPSOIL/PLANTING MIX – MINIMUM REQUIREMENTS:

23. WHERE PAVEMENT CUTOUTS ON RENOVATED SITES ARE REQUIRED AND/OR WHERE NEW PLANTING STRIPS OR ISLANDS ARE REQUIRED, ALL PAVEMENT, CONSTRUCTION DEBRIS AND GRAVEL SUB-BASE MUST BE REMOVED BEFORE PREPARING SOIL AND PLANTING TREES. EXISTING COMPACTED SOIL MUST BE REMOVED AND REPLACED WITH 24" OF TOPSOIL/PLANTING MIX –OR– EXISTING SOIL MAY BE UNCOMPACTED TO A DEPTH OF 24" AND AMENDED TO MEET TOPSOIL STANDARDS FOR THE ENTIRE PLANTING AREA.

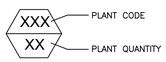
24. SOIL IN ALL PLANTING STRIPS OR ISLANDS, WHETHER EXISTING OR NEW(ON NEW OR RENOVATED SITES), MUST MEET THE MINIMUM TOPSOIL/PLANTING MIX SPECIFICATIONS. SOIL AMENDMENTS OR FRESH TOPSOIL/PLANTING MIX ARE OFTEN NEEDED FOR PLANTING AREAS AT SITES WHERE ORIGINAL TOPSOIL IS OF POOR QUALITY, HEAVILY COMPACTED OR WHERE TOPSOIL HAS BEEN COMPLETELY REMOVED DURING GRADING.

25. TOPSOIL/PLANTING MIX SHOULD BE NATURAL, FERTILE, AGRICULTURAL SOIL CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. IT SHOULD BE UNIFORM COMPOSITION THROUGHOUT, WITH ADMIXTURE OF SUBSOIL. IT SHOULD BE FREE OF STONES, LUMPS, LIVE PLANTS AND THEIR ROOTS, STICKS AND OTHER EXTRANEOUS MATTER. TOPSOIL SHOULD NOT BE USED WHILE IN A FROZEN OR MUDDY CONDITION.

26. TOPSOIL/PLANTING MIX SHALL HAVE AN ACIDITY RANGE OF PH 5.5-7.0 AND THE FOLLOWING COMPOSITION:
    CLAY (RED CLAY, WELL PULVERIZED) MINIMUM 10%; MAXIMUM 35%
    COMPOST*/ORGANIC MINIMUM 5%; MAXIMUM 10%
    SILT MINIMUM 30%; MAXIMUM 50%
    COARSE SAND (FREE OF ROCKS, 0.5 TO 1.0 MM F) MINIMUM 30%; MAXIMUM 45%

    *ORGANIC MATERIAL SUCH AS SAWDUST OR LEAF MOLD THAT HAS COMPLETED THE DECOMPOSITION PROCESS.

27. ALL PLANTING AREAS SHOULD BE TESTED FOR PROPER DRAINAGE. DRAINAGE SHOULD BE CORRECTED AS NECESSARY TO INSURE PROPER TREE GROWTH AND SURVIVAL. THE FOLLOWING LEVEL OF NUTRIENT ELEMENTS IS RECOMMENDED FOR PROPER GROWTH:
    CALCIUM 55 – 80%
    MAGNESIUM 10 – 30%
    POTASSIUM 5 – 8%



GENERAL PLANTING NOTES:

1. QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT ASSUMES NO LIABILITY FOR ERRORS OR OMISSIONS. HIS ESTIMATES ARE ONLY AN AID FOR CLARIFICATION OF UNITS AND A CHECK FOR THE CONTRACTOR TO COMPARE WITH HIS OWN ESTIMATES. DIFFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. NO EXTRA COMPENSATION SHALL BE ALLOWED FOR EXTRA QUANTITIES NECESSARY TO COMPLETE THE WORK.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PLANT MATERIALS ACCORDING TO THE DRAWINGS AND PLANT SCHEDULE. CONTRACTOR SHALL PROVIDE SPECIFIC CULTIVARS AND/OR VARIETIES AS INDICATED ON THE PLANT SCHEDULE. ANY SUBSTITUTIONS INSTALLED WITHOUT PRIOR APPROVAL OF LANDSCAPE ARCHITECT WILL BE REJECTED AND SHALL BE REPLACED BY THE CONTRACTOR AT NO EXTRA COST TO THE OWNER.

3. PLANTING PLANS INDICATE DIAGRAMMATIC LOCATIONS ONLY. SITE ADJUSTMENTS OF PLANTING DESIGN AND RELOCATION OF PLANT MATERIALS DUE TO ON SITE CONDITIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. PLANTS INSTALLED PRIOR TO LANDSCAPE ARCHITECT'S APPROVAL ARE SUBJECT TO RELOCATION BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

4. PLANTS SHALL BE SPECIMEN QUALITY AND SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL-BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. PLANT MATERIAL SHALL BE FIRST QUALITY STOCK AND SHALL CONFORM TO THE CODE OF STANDARDS SET FORTH IN THE CURRENT EDITION OF THE AMERICAN STANDARDS FOR NURSERY STOCK SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC.

5. HEIGHT AND SPREAD DIMENSION SPECIFIED REFER TO THE MAIN BODY OF THE PLANT AND NOT FROM BRANCH TIP TO TIP. IF A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND NOT LESS THAN 50% OF THE PLANTS SHALL BE AS LARGE AS THE MAXIMUM SIZE SPECIFIED.

6. SHADE TREES SHALL HAVE A STRONG CENTRAL LEADER UNLESS OTHERWISE SPECIFIED.

7. LEAVES MUST BE OF MEDIUM FOLIAGE, ALL GOOD LEAVES, MAXIMUM OF 10% CHLOROSIS ALLOWED, WITH NO EXTREME SUCCULENCE PLACE PLANTS UPRIGHT AND TURNED SO THAT THE MOST ATTRACTIVE SIDE IS VIEWED.

8. ROOTS MUST BE STURDILY ESTABLISHED IN BALL THAT HAS BEEN TIGHTLY WRAPPED AND SECURELY TIED WITH TWINE OR WIRE, OR PINNED.

9. PLACE PLANTS UPRIGHT AND TURNED SO THAT THE MOST ATTRACTIVE SIDE IS VIEWED.

10. PROVIDE 4" THICKNESS MULCH AT ALL PLANTS AND PLANTING BEDS. MULCH SHALL BE SINGLE HAMMERED HARDWOOD MULCH (UNLESS NOTED OTHERWISE). IT SHALL BE CLEAN, FRESH, AND FREE OF STICKS, BRANCHES, SOIL OR OTHER FOREIGN MATERIAL.

11. BACKFILL PLANTING MIXTURE SHALL BE ONE PART APPROVED PLANTING SOIL MIXED WITH ONE PART NATIVE SOIL FROM THE TREE PIT OR SHRUB BED AREA. LANDSCAPE CONTRACTOR SHALL SUBMIT SAMPLES OF PLANTING SOIL TO BE USED TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO PLANTING.

12. PLANTS SHALL BE SUBJECT TO REVIEW BY LANDSCAPE ARCHITECT AT NURSERY OR ON SITE PRIOR TO PLANTING. LANDSCAPE ARCHITECT WILL BE THE SOLE JUDGE OF THE QUALITY AND ACCEPTABILITY OF MATERIALS AND PLACEMENT. CONTRACTOR SHALL SUBMIT PHOTOS OF ALL TREES WITH BID SUBMITTAL IF REQUESTED BY LANDSCAPE ARCHITECT OR OWNER.

13. THE LANDSCAPE CONTRACTOR SHALL TAKE SOIL SAMPLES FROM ALL PARTS OF THE SITE AND SHALL HAVE THEM TESTED BY THE LOCAL COUNTY AGENT. THE CONTRACTOR SHALL PROVIDE ONE COPY OF THE TEST RESULTS TO THE LANDSCAPE ARCHITECT PRIOR TO ORDERING PLANT MATERIALS OR MAKING ANY AMENDMENTS TO THE ON SITE SOIL. ANY SOIL AMENDMENTS REQUIRED AS INDICATED BY THE SOIL TEST SHALL BE PROVIDED BY THE LANDSCAPE CONTRACTOR. THE LANDSCAPE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OF AMENDMENTS AND OBTAIN A WRITTEN APPROVAL FOR PROPOSED AMENDMENTS.

14. FERTILIZER SHALL BE A COMPLETE FERTILIZER; 50% OF NITROGEN OF WHICH IS DERIVED FROM NATURAL ORGANIC SOURCES OR UREAFORM. FERTILIZER SHALL BE DELIVERED TO THE SITE IN STANDARD SIZE UNOPENED CONTAINERS WHICH SHOW THE WEIGHT, CHEMICAL ANALYSIS, AND MANUFACTURER. IT SHALL BE STORED IN A DRY LOCATION UNTIL ITS USE. FERTILIZER FOR TREES, SHRUBS, AND GROUNDCOVER AREAS SHALL BE A SLOW RELEASE TYPE AND SHALL BE APPLIED AS FOLLOWS:

TREES AND SHRUBS		TREES:	1 LB / INCH OF CALIPER
MARCH–MAY	10–10–10	SHRUBS:	½ LB / INCH HEIGHT
JUNE–OCTOBER	6–10–10		
NOVEMBER–FEBRUARY	6–12–12		

15. LANDSCAPE CONTRACTOR SHALL PERFORM PERCOLATION TESTS IN ALL TREE PITS. IF PITS DO NOT DRAIN WITHIN 30 MINUTES, CONTACT LANDSCAPE ARCHITECT AND DO NOT PLANT THE TREE WITHOUT ON SITE INSPECTION OF DRAINAGE. LANDSCAPE ARCHITECT MAY REQUIRE ADDITIONAL SUBSURFACE DRAIN LINES FROM THE TREE PITS.

16. IF SURFACE DRAINAGE IS NOT SUFFICIENT (STANDING WATER) NOTIFY LANDSCAPE ARCHITECT IN WRITING BEFORE INSTALLING THE PLANTS, OTHERWISE CONTRACTOR SHALL BE TOTALLY REPONSIBLE FOR THE GUARANTEE AND LIVABILITY OF THE PLANTS.

17. ALL UNDERGROUND UTILITIES SHALL BE LOCATED BEFORE DIGGING. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGE OF UNDERGROUND OR OVERHEAD UTILITY LINES.

18. CERTIFICATE OF INSPECTION AS MAY BE REQUIRED BY LAW FOR TRANSPORTATION OF PLANT MATERIALS SHALL ACCOMPANY EACH INVOICE FOR EACH SHIPMENT OF PLANTS. CERTIFICATES SHALL BE FILED WITH LANDSCAPE ARCHITECT PRIOR TO ACCEPTANCE OF MATERIAL. INSPECTION BY STATE OR FEDERAL AUTHORITIES AT THE PLACE OF GROWTH DOES NOT PRECLUDE REJECTION OF THE MATERIAL BY THE LANDSCAPE ARCHITECT.

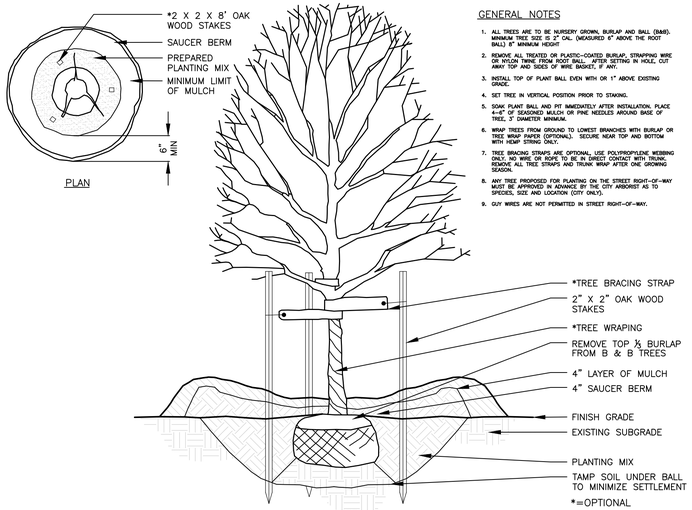
19. ALL PLANT MATERIALS AND INSTALLED LANDSCAPE SUPPLIES SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THIS PROJECT.

20. CONTRACTOR'S PRICES SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY TO COMPLETE THE WORK (i.e. MULCH, PLANTING, SOIL MIX, WOOD AND WIRE STAKING MATERIAL, ETC.).

21. THE COMPLETION OF THE CONTRACT WILL BE ACCEPTED AND NOTICE OF COMPLETION RECORDED ONLY WHEN THE ENTIRE CONTRACT IS COMPLETED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT, OWNER, AND THE OWNER'S CONSTRUCTION REPRESENTATIVE. WITHIN TEN DAYS NOTICE BY THE CONTRACTOR OF SUBSTANTIAL COMPLETION THE LANDSCAPE ARCHITECT WILL INSPECT THE PROPERTY. HE WILL EITHER APPROVE THE WORK FOR THE OWNER'S ACCEPTANCE OR WILL ISSUE A "PUNCH LIST" OF ITEMS TO BE COMPLETED OR CORRECTED. IF A PUNCH LIST IS ISSUED, FINAL ACCEPTANCE WILL BE DONE AS SOON AS THE CONTRACTOR COMPLETES ALL PUNCH LIST ITEMS.

22. AMENDED SOIL MEDIA REQUIREMENTS: A PLANTING MIX MAY BE DEVELOPED THAT WILL BE AN ACCEPTABLE PLANTING MEDIA BY AMENDING THE EXISTING SOIL OR BY REMOVING THE EXISTING SOIL AND REPLACING IT WITH NEW PLANTING MIX. THE PLANTING MIX SHALL HAVE UNIFORM COMPOSITION THROUGHOUT, WITH A MIXTURE OF SUBSOIL. IT SHALL BE FREE OF STONES, LUMPS, LIVE PLANTS AND THEIR ROOTS, STICKS, AND OTHER EXTRANEOUS MATTER. IT SHALL CONTAIN NO MAN MADE MATERIALS UNLESS OTHERWISE SPECIFIED. PLANTING MIX SHALL NOT BE USED WHILE IN A FROZEN OR MUDDY CONDITION.

*NOTE: CONTRACTOR TO PROVIDE TEST SAMPLES OF AMENDED SOIL WITH TESTING DATA FOR ALL BED AREAS AMENDED ON SITE. TEST SAMPLES SHALL FALL WITHIN TOLERANCES SHOWN ABOVE. PLANTING SHALL NOT BEGIN UNTIL SOIL HAS BEEN AMENDED AND SOIL TEST SAMPLES HAVE BEEN REVIEWED AND APPROVED BY OWNER AND LANDSCAPE ARCHITECT.

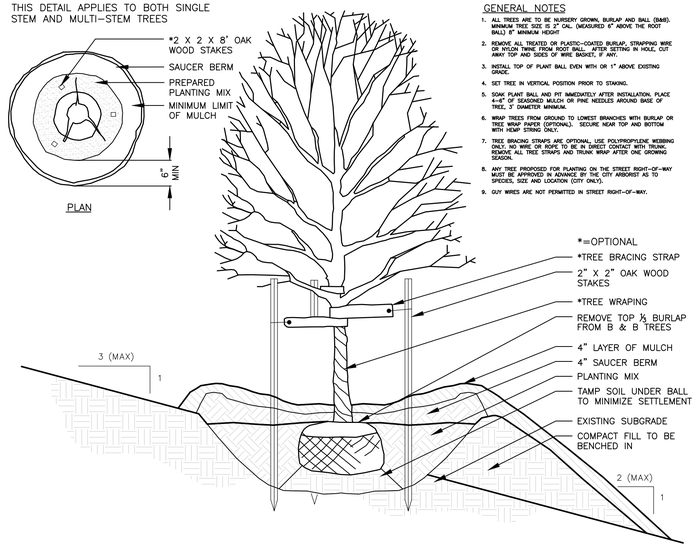


GENERAL NOTES

1. ALL TREES ARE TO BE NURSERY GROWN, BURLAP AND BALL (B&B). MINIMUM TREE SIZE IS 2" CAL. (MEASURED 6" ABOVE THE ROOT BALL) 8' MINIMUM HEIGHT
2. REMOVE ALL TREATED OR PLASTIC-COATED BURLAP, STRAPPING WIRE OR NYLON TWINE FROM ROOT BALL. AFTER SETTING IN HOLE, CUT AWAY TOP AND SIDES OF WIRE BASKET, IF ANY.
3. INSTALL TOP OF PLANT BALL EVEN WITH OR 1" ABOVE EXISTING GRADE.
4. SET TREE IN VERTICAL POSITION PRIOR TO STAKING.
5. SOAK PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION. PLACE 4-6" OF SEASONED MULCH OR PINE NEEDLES AROUND BASE OF TREE, 3' DIAMETER MINIMUM.
6. WRAP TREES FROM GROUND TO LOWEST BRANCHES WITH BURLAP OR TREE WRAP PAPER (OPTIONAL). SECURE NEAR TOP AND BOTTOM WITH HEMP STRING ONLY.
7. TREE BRACING STRAPS ARE OPTIONAL. USE POLYPROPYLENE WEBBING ONLY. NO WIRE OR ROPE TO BE IN DIRECT CONTACT WITH TRUNK. REMOVE ALL TREE STRAPS AND TRUNK WRAP AFTER ONE GROWING SEASON.
8. ANY TREE PROPOSED FOR PLANTING ON THE STREET RIGHT-OF-WAY MUST BE APPROVED IN ADVANCE BY THE CITY ARBORIST AS TO SPECIES, SIZE AND LOCATION (CITY ONLY).
9. GUY WIRES ARE NOT PERMITTED IN STREET RIGHT-OF-WAY.

1 SINGLE STEM TREE — SECTION
SCALE: NTS — DR_SINGLE STEM TREE STAKING

THIS DETAIL APPLIES TO BOTH SINGLE STEM AND MULTI-STEM TREES



GENERAL NOTES

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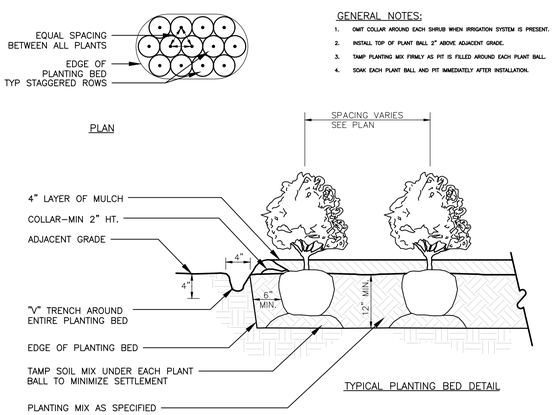
9. GUY WIRES ARE NOT PERMITTED IN STREET RIGHT-OF-WAY.

2 SINGLE STEM TREE ON A SLOPE — SECTION
Scale: NTS — DT_SINGLE STEM TREE ON SLOPE STAKING



GENERAL NOTES:

1. OMIT COLLAR AROUND EACH SHRUB WHEN IRRIGATION SYSTEM IS PRESENT.
2. INSTALL TOP OF PLANT BALL 2" ABOVE ADJACENT GRADE.
3. TAMP PLANTING MIX FIRMLY AS PIT IS FILLED AROUND EACH PLANT BALL.
4. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER INSTALLATION.

TYPICAL PLANTING BED DETAIL

3 SHRUB PLANTING — SECTION
Scale: NTS — DT_SHRUB PLANTING

URBAN DESIGN PARTNERS
555 fayetteville st. 3rd floor
raleigh, nc 27601
p 919.275.5002
urbandesignpartners.com
nc firm no: P-0418 sc coa no: C-03044

NORTH CAROLINA REGISTERED LANDSCAPE ARCHITECT 1963 BRIAN A. RICHARDS SEAL

06/29/2022

Williams Realty & Building Company, Inc.
3111 Glenwood Ave.
Raleigh, NC 27612

Rosser Rd Industrial
Construction Documents

Landscape Details

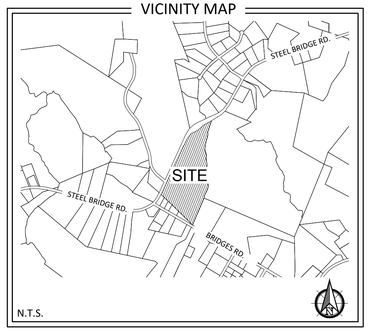
2401 Rosser Rd, Sanford, NC 27332

NO. DATE: BY: REVISIONS:

Project No: 22-RDU-026
Date: 06.29.2022
Designed By: UDP
Checked By: BAR
Sheet No:

LS-2.0

VICINITY MAP



FLOODPLAIN DATA

THIS PROPERTY IS LOCATED IN FLOOD ZONE 'X'
(AREAS OF MINIMAL FLOODING)

THE LOCATION OF THE 100-YEAR FLOODPLAIN PER
NFIP FIRM COMMUNITY
PANEL(S) NO: 37105C
MAP(S): 3710962200J
DATE: OCTOBER 17, 2006

LEGEND

= PROPERTY BOUNDARY
= EXISTING PARCELS
= EXISTING MINOR CONTOUR
= EXISTING MAJOR CONTOUR
= SEPTIC SUITABLE SOILS

ZONING INFORMATION

EXISTING ZONING CLASSIFICATION:
RR - RESTRICTED RESIDENTIAL

SETBACKS
FRONT: 30' MIN.
SIDE: 15' MIN.
CORNER: 30' MIN.
REAR: 30' MIN.

LOT SIZE: 30,000 SF MIN.
LOT WIDTH: 100' MIN.
LOT DEPTH: 125' MIN.

PROPERTY INFORMATION

PROPERTY OWNER(S):
ID: 00031445, PIN: 9622-42-5184-00
DB: 1634 PG: 141

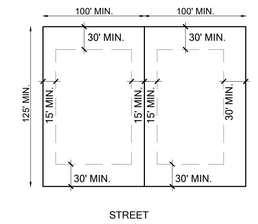
APPLICANT(S):
MOORE HL PROPERTIES
PO BOX 667
220 SPRINGWOOD WAY
SOUTHERN PINES, NC 28388

TOTAL ACREAGE : 24.5 AC

TOTAL SINGLE FAMILY LOTS: 30

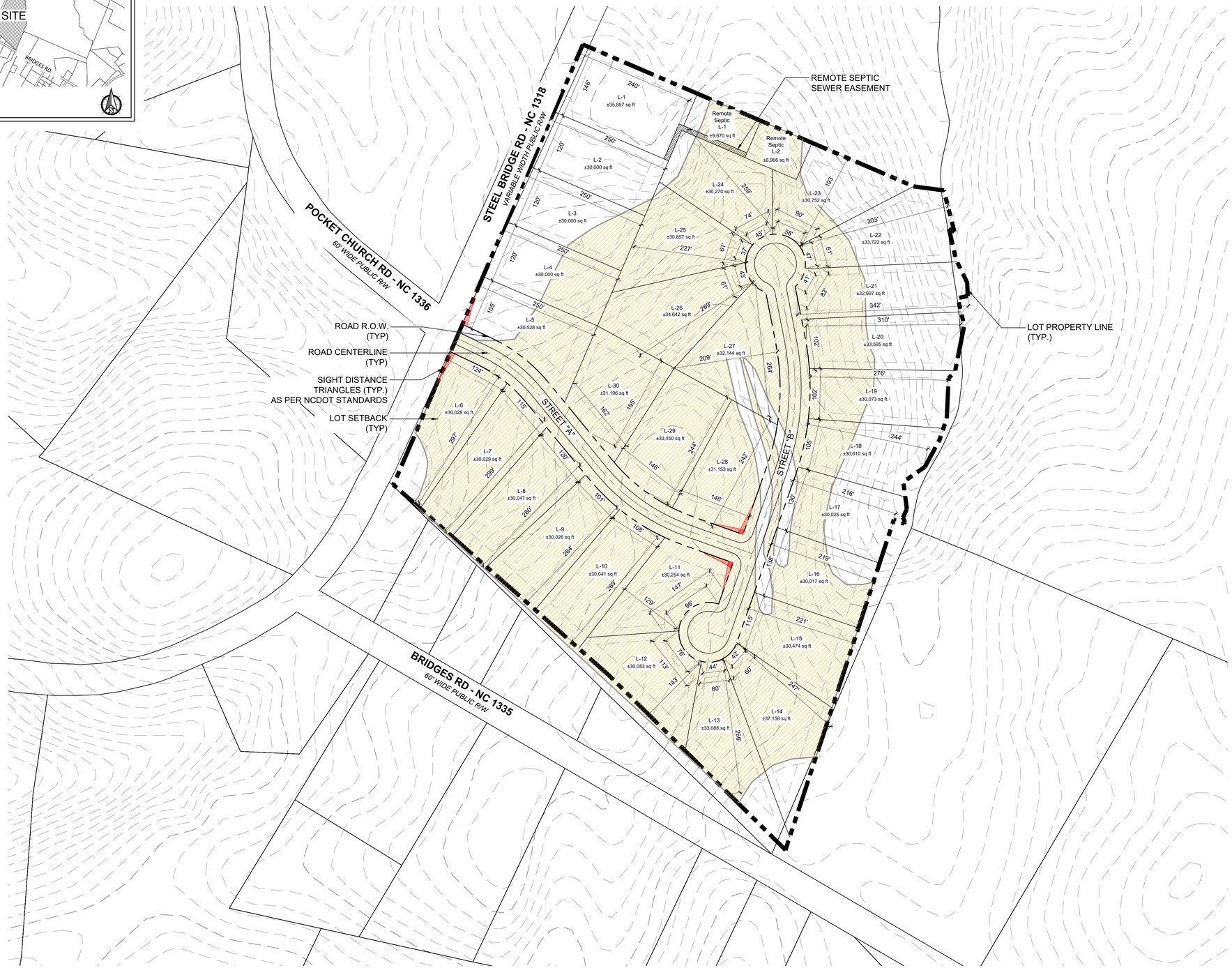
SINGLE-FAMILY LOT TYPICAL

(MIN. LOT SIZE ± 30,000 SQ.FT.)



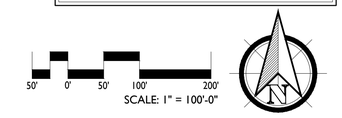
STREET DISTANCE TABLE

	INTERSECTION	DISTANCE (LF)
STREET "A"	Steel Bridge Rd to Intersection A/B	750
	Total	**750**
STREET "B"	Intersection A/B to North cul-de-sac	597
	Intersection A/B to South cul-de-sac	207
	Total	**804**



CAUTION

THE UTILITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT DEPICTED ON THESE PLANS. THE LANDSCAPE ARCHITECT AND ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE PROJECT LIMITS. ALL DAMAGE MADE TO THE EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY BY THE CONTRACTOR.



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

PRELIMINARY PLANS - NOT RELEASED FOR CONSTRUCTION (FOR REVIEW ONLY)

KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE
150 S PAGE STREET
SOUTHERN PINES, NC 28387
P: (910) 684-8487
W: www.koontzjonesdesign.com

REVISIONS:

THE COVE AT STEEL BRIDGE RD.

SANFORD, NORTH CAROLINA

CONCEPTUAL SITE PLAN

DATE: 07/01/2022
DESIGNED BY: TWH
DRAWN BY: DVM
CHECKED BY: TWH
Q.C. BY: TWH
SCALE: 1"=100'
PROJECT #: KDZ1086

SHEET NUMBER#:
L-1.1

SITE DATA

PROPERTY OWNER OF RECORD:

PARCEL 1
WILLIAM BROOKS POMERANZ
560 LEGACY LAKES WAY
ABERDEEN, NC 28315

PARCEL 2
BLODGETT PROPERTIES LLC
696 REYNWOOD VISTA
SANFORD, NC 27330

DEVELOPER:

HARRINGTON PROPERTIES OF NC
2659 SAN LEE DRIVE
SANFORD, NC 27330
CONTACT: BRANDON HARRINGTON
(919) 770-5969
BRANDON@HARRINGTONPROPERTIESOFNC.COM

PROPERTY ID:

LEE COUNTY, NORTH CAROLINA
EAST SANFORD TOWNSHIP

PARCEL 1
LEE COUNTY PIN # 9652-28-9577
DEED REFERENCE: D.B. 1382 PG. 252
ZONED R-12
2.41 AC +/-
0 GOLDSBORO AVE

PARCEL 2
LEE COUNTY PIN # 9652-38-0432
DEED REFERENCE: D.B. 1336 PG. 762
ZONED R-12
0.52 AC +/-
1411 GOLDSBORO AVE

SITE INFO:

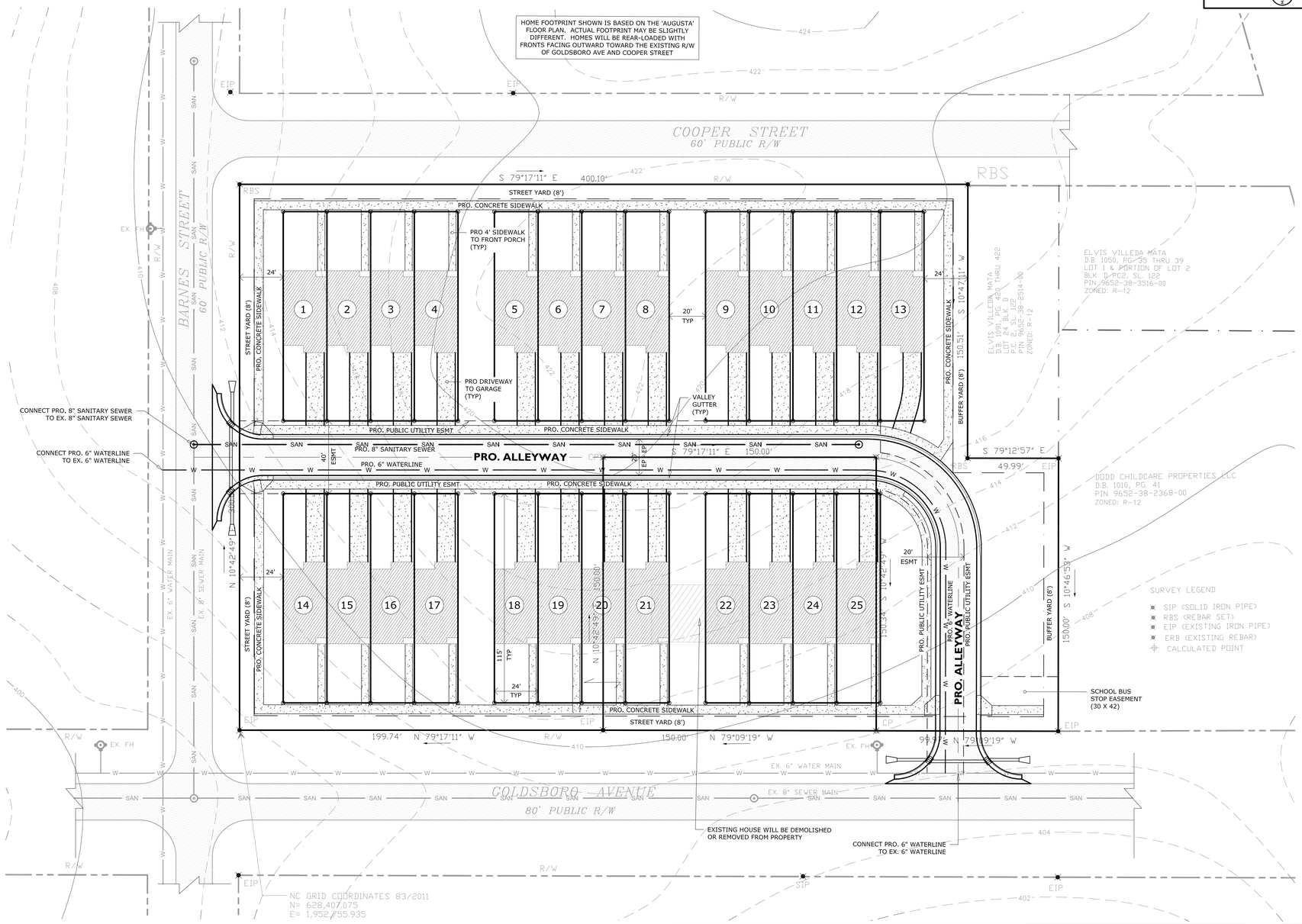
JURISDICTION:	CITY OF SANFORD
ZONING CLASSIFICATION (EXISTING):	R-12
ZONING CLASSIFICATION (PROPOSED):	CONDITIONAL
TRACT PROPERTY AREACAGE:	2.93 AC +/- (2 PARCELS COMBINED)
PROPOSED NUMBER OF SINGLE FAMILY LOTS:	25 LOTS (8.5 DU/AC)
LOT SIZE, PROPOSED:	2,760 SF (24 X 115 TOWNHOME)
LOT WIDTH, PROPOSED:	24 FT
LOT DEPTH, PROPOSED:	115 FT
COMMON AREA, PROPOSED:	1.34 AC +/-
BUILDING HEIGHT, MAX. PROPOSED:	40 FT
FRONT SETBACK, MINIMUM PROPOSED:	0 FT
REAR SETBACK, MINIMUM PROPOSED:	0 FT
SIDE SETBACK, MINIMUM PROPOSED:	0 FT
ROADWAY OWNERSHIP PROPOSED:	PUBLIC
ROADWAY R/W WIDTH, PROPOSED NEW:	N/A (PRIVATE ALLEYWAY)
ROADWAY LENGTH, PROPOSED NEW:	0 LF (EXISTING)
SIDEWALK LENGTH, PROPOSED NEW (PERIMETER):	1,310 LF +/-
ROADWAY R/W AREA, PROPOSED NEW:	0 AC
WATERLINE OWNERSHIP PROPOSED:	PUBLIC (CITY OF SANFORD)
NEW WATERLINE LENGTH, PROPOSED NEW:	600 LF +/-
SANITARY SEWER OWNERSHIP PROPOSED:	PUBLIC (CITY OF SANFORD)
SANITARY SEWER LENGTH, PROPOSED NEW:	360 LF +/-

NOTES

1. REVIEW AND APPROVAL OF THE PLANS DOES NOT RELIEVE THE OWNER, CONTRACTOR, OR DEVELOPER FROM MEETING ALL THE REQUIREMENTS OF THE CITY OF SANFORD UNIFIED DEVELOPMENT ORDINANCE, AND ANY OTHER LOCAL, STATE, AND FEDERAL REGULATIONS AND APPROVALS.
2. ALL IMPROVEMENTS OR EXTENSIONS OF PUBLIC INFRASTRUCTURE UNDER THE JURISDICTION OF THE CITY OF SANFORD SHALL BE IN STRICT ACCORDANCE WITH THE ORDINANCES, REGULATIONS, POLICIES, REQUIREMENTS, AND SPECIFICATIONS OF THE CITY OF SANFORD. IF IT IS DETERMINED, THROUGH FURTHER FIELD UTILITY LOCATES, THAT ANY OF THE LOTS DO NOT HAVE ACCESS TO PUBLIC WATER AND SEWER, EXTENSIONS WILL BE MADE WITHIN THE PUBLIC R/W AND/OR PROPOSED PUBLIC EASEMENTS AS SHOWN.
3. ALL AREA WITHIN THE PROPERTY AND OUTSIDE OF THE PROPOSED TOWNHOME LOTS IS DESIGNATED AS COMMON AREA TO BE MAINTAINED BY THE PROPERTY OWNER'S ASSOCIATION.
4. THE PROPOSED SITE AREA IS NOT LOCATED WITHIN THE 100 YEAR FLOOD HAZARD BOUNDARY AREAS AS DELINEATED ON THE LEE COUNTY FLOOD INSURANCE MAP (FIRM) MAP NUMBER: 37109652OOJ DATED SEPTEMBER 6, 2006.
5. THE PROPERTY BOUNDARY INFORMATION IS TAKEN FROM THE MAP PREPARED BY THE OWNER'S SURVEYOR, COLE LAND SURVEYS PA.
6. THE EXISTING ROADWAY, AND UTILITY FEATURES ARE TAKEN FROM THE CITY OF SANFORD GIS.
7. THE OWNER IS RESPONSIBLE FOR IDENTIFYING ANY STREAMS OR WETLANDS THAT MAY EXIST ON THE PROPERTY THAT MAY BE JURISDICTIONAL TO THE US ACE. BASED ON A SITE VISIT, THERE APPEARS TO BE NO JURISDICTIONAL WATERS OR WETLANDS PRESENT ON THE PROPERTY.
8. THE PROPOSED SITE AREA IS NOT LOCATED IN A DESIGNATED WATER SUPPLY WATERSHED.
9. THIS PROJECT, AS SHOWN, MUST RECEIVE CONDITIONAL ZONING APPROVAL FROM THE CITY COUNCIL PRIOR TO APPROVAL OF THE PRELIMINARY PLAT BY THE SANFORD PLANNING BOARD / CITY COUNCIL.
10. OWNER RESPONSIBLE FOR OBTAINING PROPERTY AND A TEMPORARY CONSTRUCTION EASEMENT (IF NECESSARY) FROM ADJACENT PROPERTY OWNER(S) FOR ANY WORK THAT MAY BE REQUIRED ON PRIVATE / PUBLIC PROPERTY(S). OFF-SITE EASEMENTS WILL BE SECURED FOR THE SANITARY SEWER SYSTEM CONNECTION AND DRAINAGE IMPROVEMENTS.

LOCATION MAP SCALE: 1" = 500'

HOME FOOTPRINT SHOWN IS BASED ON THE 'AUGUSTA' FLOOR PLAN. ACTUAL FOOTPRINT MAY BE SLIGHTLY DIFFERENT. HOMES WILL BE REAR-LOADED WITH FRONTS FACING OUTWARD TOWARD THE EXISTING R/W OF GOLDSBORO AVE AND COOPER STREET



NORTH

30 0 15 30 60
SCALE: 1" = 30'

J THOMAS ENGINEERING, INC.
CIVIL ENGINEERING & PLANNING
143 Charlotte Avenue, Suite 104
Sanford, North Carolina 27330
(919) 777-6010 phone
www.jthomasengineering.com
license no. C-3389

PROFESSIONAL ENGINEER'S SEAL

HARRINGTON RESIDENTIAL DEVELOPMENT

GOLDSBORO AVE / BARNES STREET
SANFORD, NORTH CAROLINA

PRELIMINARY PLAT

REVISIONS

PRELIMINARY PLAT
NOT FOR RECORDATION, CONVEYANCES, OR SALES

Scale: SEE SCALE BAR	Drawn by: JRT
Sheet: 1 of 1	Designed by: JRT
	Reviewed by: JRT
Project Number: 22-005	Date: 30 JUN 2022

File: C:\PROJECTS\22-005 HARRINGTON RESIDENTIAL AT GOLDSBORO AVE\DRAWINGS\PREL PLAT - HARRINGTON RESIDENTIAL AT GOLDSBORO AVE.dwg Print Date: 6/30/2022

ELEVATION A

ELEVATION A (V)

ELEVATION B

ELEVATION C

ELEVATION D

ELEVATION E

ELEVATION F

AUGUSTA

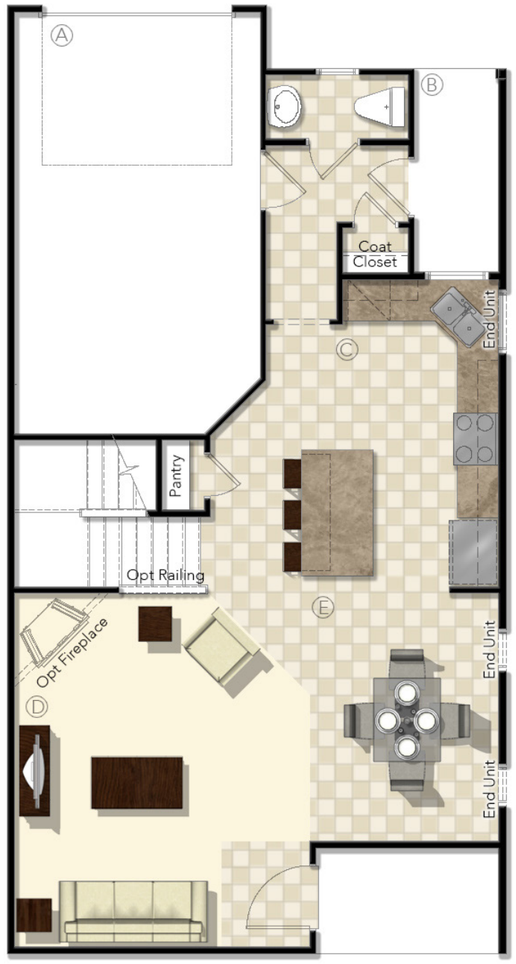
3 Bedrooms
2.5 Bathrooms
Plan 1634

HHHUNT HOMES
Because it's how you live that matters®

*Disclaimer: All plans, details, square footages, dimensions, and renderings are approximate and subject to change at any time without notice. Renderings are for illustrative purposes only and may not represent finished details.
H1-WM 07-03-20

AUGUSTA

First Floor



9′ Ceiling

A. Garage
11′-8″ x 20′-0″

B. Covered Porch
4′-4″ x 9′-8″

C. Kitchen
7′-5″ x 14′-7″

D. Family Room
14′-0″ x 16′-10″

E. Dining
9′-0″ x 11′-10″

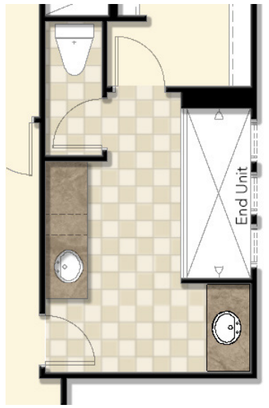
Second Floor

8′ Ceiling

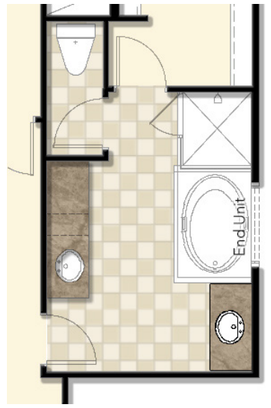
A. Bedroom 2
11′-8″ x 11′-6″

B. Bedroom 3
11′-0″ x 12′-0″

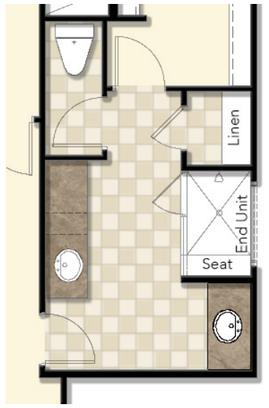
C. Owners Suite
13′-0″ x 16′-10″



Opt 8′ Ceramic Tile Shower
in lieu of Fiberglass Tub/Shower and Linen Closet



Opt Soaking Tub and Ceramic Tile Shower
in lieu of Fiberglass Tub/Shower and Linen Closet



Opt Ceramic Tile Shower
in lieu of Fiberglass Tub/Shower

ELEVATION A

ELEVATION A (V)

ELEVATION B

ELEVATION C

ELEVATION D

ELEVATION E

ELEVATION F

*Disclaimer: All plans, details, square footages, dimensions, and renderings are approximate and subject to change at any time without notice.
Renderings are for illustrative purposes only and may not represent finished details.
H1-WM 08-03-20

DENVILLE

3 Bedrooms
2.5 Bathrooms
Plan 1801

HHHUNT HOMES
Because it's how you live that matters®

DENVILLE

First Floor

9′ Ceiling

A. Garage
12′-0″ x 20′-0″

B. Covered Porch
11′-0″ x 4′-0″

C. Dining
10′-8″ x 12′-11″

D. Kitchen
10′-8″ x 12′-10″

E. Family Room
17′-0″ x 14′-0″

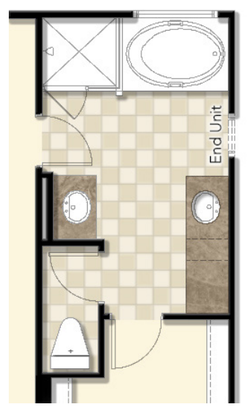
Second Floor

8′ Ceiling

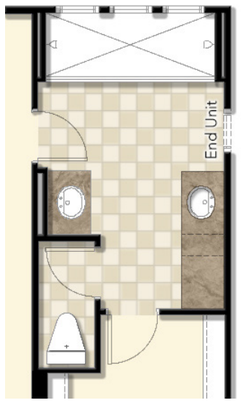
A. Owners Suite
13′-1″ x 18′-8″

B. Bedroom 2
12′-0″ x 11′-0″

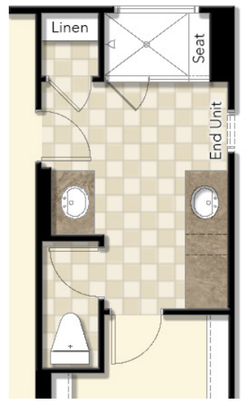
C. Bedroom 3
10′-8″ x 12′-1″



Opt Soaking Tub and Ceramic Tile Shower
in lieu of Fiberglass Tub/Shower and Linen Closet



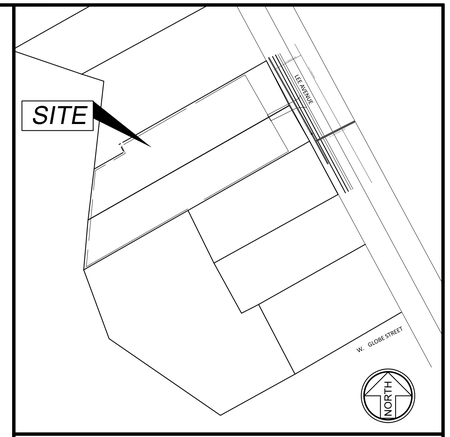
Opt 8′ Ceramic Tile Shower
in lieu of Fiberglass Tub/Shower and Linen Closet



Opt Ceramic Tile Shower
in lieu of Fiberglass Tub/Shower

Lee Avenue Storage

Sanford, NC



LOCATION MAP

GENERAL NOTES:

1. ALL WORK SHALL COMPLY WITH THE CITY OF SANFORD AND NCDOT STANDARDS AND SPECIFICATIONS.
2. THIS PROJECT IS SERVED BY PUBLIC WATER AND SEWER SYSTEMS OWNED, MAINTAINED AND OPERATED BY THE CITY OF SANFORD.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING UTILITIES AND REPAIRING ANY DAMAGE TO SAME. UTILITY LOCATIONS AS SHOWN ON PLANS ARE APPROXIMATE AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL HAVE NORTH CAROLINA ONE CALL (1-800-632-4949) LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION.
4. PROVISIONS SHALL BE MADE TO ENSURE POSITIVE DRAINAGE ON THE SITE AT ALL TIMES. NATURAL DRAINAGE FEATURES DISTURBED BY CONSTRUCTION MUST BE RE-ESTABLISHED. NO PONDING DUE TO SPOILS STOCKPILING OR OTHER ACTIVITIES SHALL BE PERMITTED.
5. WORK IN PUBLIC RIGHT-OF-WAYS OR PRIVATE EASEMENTS SHALL BE ACCOMPLISHED BY THE CONTRACTOR ACCORDING TO THE REQUIREMENTS OR CONDITIONS OF THE ENCROACHMENT PERMIT OR OTHER LEGAL DOCUMENTS AS THOUGH DOCUMENTS WERE ISSUED IN THE CONTRACTOR NAME. THE CONTRACTOR SHALL MAINTAIN COPIES OF THESE DOCUMENTS ON THE SITES AT ALL TIMES.
6. WHEN THE CONTRACTOR IS UNABLE TO COMPLETE HIS WORK AS SHOWN ON THE PLANS BECAUSE OF AN EXISTING UTILITY, CONTRACTOR SHALL STAKE THE LOCATION OF THE UTILITY PRIOR TO PROCEEDING AND CONTACT THE ENGINEER.
7. THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AGENCIES, THE OWNER, THE ENGINEER AND ALL OTHER CONCERNED PARTIES WHEN CONSTRUCTION IS TO COMMENCE. PRIOR TO ANY CONSTRUCTION A PRECONSTRUCTION MEETING SHALL BE HELD WITH THE MUNICIPALITY / AUTHORITY, THE CONTRACTOR, THE ENGINEER AND ANY OTHER INTERESTED PARTY.
8. DATA REQUIRED FOR PREPARATION OF RECORD DRAWINGS SHALL BE OBTAINED BY THE CONTRACTOR AT THE TIME FOR INSTALLATION. DATA SHALL BE ACCUMULATED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD AND PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT
9. INSPECTIONS SHALL BE CONDUCTED IN ACCORDANCE WITH THE CITY OF SANFORD STANDARDS. A MINIMUM OF TWO WORKING DAYS NOTICE SHALL BE GIVEN FOR ANY REQUESTED INSPECTION.
10. ALL EXCAVATED EXCESS OR WASTE SOILS AND MATERIAL SHALL BE REMOVED FROM THE SITE BY CONTRACTOR EXCEPT AS SPECIFICALLY APPROVED IN WRITING BY BOTH THE ENGINEER AND OWNER.
11. WHEN CONCRETE SIDEWALKS, CURB AND GUTTER SECTIONS OR ASPHALT PAVEMENT ARE DAMAGED DUE TO CONSTRUCTION ACTIVITIES, THEY SHALL BE REPLACED IN A TIMELY MANNER BY THE CONTRACTOR TO ASSURE THE CONTINUED USE OF THESE FACILITIES BY ALL CONCERNED.
12. CONTRACTOR IS TO COMPLY WITH ALL PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES WHEN WORKING ADJACENT TO AN EXISTING PUBLIC HIGHWAY RIGHT OF WAY.
13. THE CONTRACTOR WILL MAINTAIN ALL EXISTING ROADS IN A NEAT AND CLEAN CONDITION THROUGHOUT THE COURSE OF THE PROJECT CONSTRUCTION.

OVERALL PLAN

SCALE IN FEET
0 15 30 60

SHEET SCHEDULE

SHEET TITLE	SHEET NO:	ORIGINAL DATE	LATEST REVISION DATE
COVER SHEET	1	June 1, 2022	-
EXISTING CONDITION	1		
SITE IMPROVMENT PLAN	1		
XX	1		
XX	1		
XX	1		
XX	1		
XX	1		
XX	1		
XX	1		
XX	1		

REVISION OCCURRENCE LIST

REVISION NO.	DATE	REVISION DESCRIPTION	BY

THIS SET IS CURRENT THROUGH SHEET DATED: June 1, 2022

OWNER

Steven Grant Page

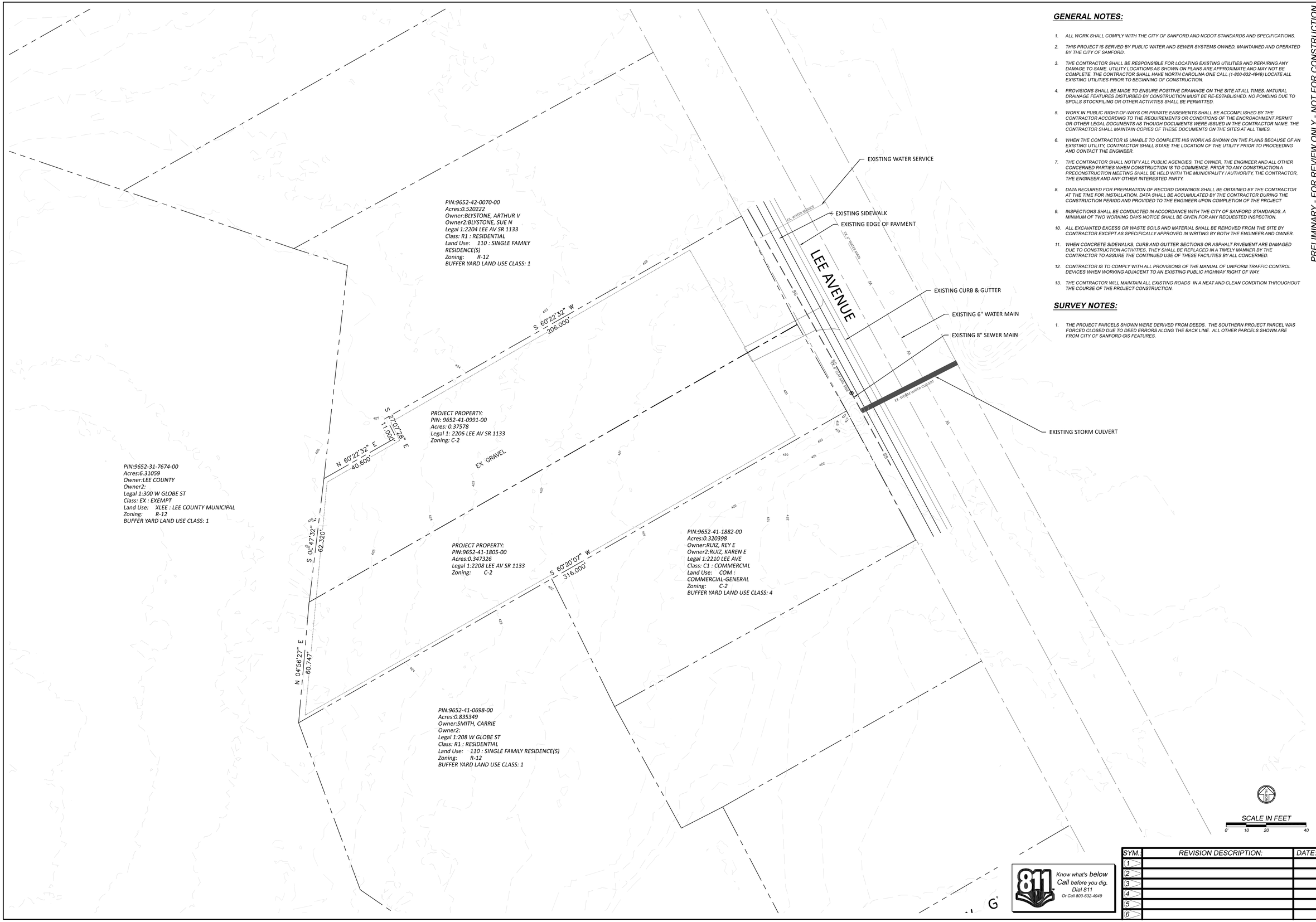
9208 Holly Springs Road

Apex, NC 27539

FINAL
- FOR REVIEW ONLY -
NOT FOR CONSTRUCTION

HILLIARD ENGINEERING, PLLC

3417 Winterwind Circle, Sanford, NC 27330
PO Box 249, Sanford, NC 27331
Phone: (919) 352-2834
e-mail: jhilliard@hilliardengineering.com
NC License #: P-0836



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SURVEY NOTES:

1. THE PROJECT PARCELS SHOWN WERE DERIVED FROM DEEDS. THE SOUTHERN PROJECT PARCEL WAS FORCED CLOSED DUE TO DEED ERRORS ALONG THE BACK LINE. ALL OTHER PARCELS SHOWN ARE FROM CITY OF SANFORD GIS FEATURES.

Know what's below Call before you dig. Dial 811 Or Call 800-632-4949

PRELIMINARY - FOR REVIEW ONLY - NOT FOR CONSTRUCTION

3417 Winterwind Circle, Sanford, NC 27330
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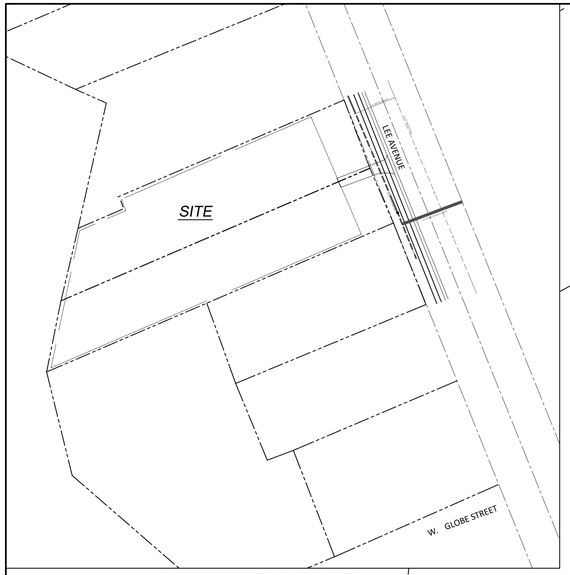
Phone: (919) 352-2834
e-mail: jhilliard@hilliardengineering.com
NC License #: P-0836
HILLIARD ENGINEERING, PLLC

EXISTING CONDITIONS

LEE AVENUE STORAGE
CITY OF SANFORD, NORTH CAROLINA

SYM.	REVISION DESCRIPTION:	DATE:
1		
2		
3		
4		
5		
6		

DESIGNED BY:	JEH
DRAWN BY:	JEH
APPROVED BY:	JEH
SHEET:	C1.0
	CIVIL



VICINITY MAP
N.T.S.

PIN:9652-42-0070-00
Acres:0.520222
Owner:BLYSTONE, ARTHUR V
Owner2:BLYSTONE, SUE N
Legal 1:2204 LEE AV SR 1133
Class: R1 : RESIDENTIAL
Land Use: 110 : SINGLE FAMILY RESIDENCE(S)
Zoning: R-12
BUFFER YARD LAND USE CLASS: 1

PIN:9652-31-7674-00
Acres:6.31059
Owner:LEE COUNTY
Owner2:
Legal 1:300 W GLOBE ST
Class: EX : EXEMPT
Land Use: XLEE : LEE COUNTY MUNICIPAL
Zoning: R-12
BUFFER YARD LAND USE CLASS: 1

PIN:9652-41-1882-00
Acres:0.320398
Owner:RUIZ, REY E
Owner2:RUIZ, KAREN E
Legal 1:2210 LEE AVE
Class: C1 : COMMERCIAL
Land Use: COM : COMMERCIAL-GENERAL
Zoning: C-2
BUFFER YARD LAND USE CLASS: 4

PIN:9652-41-0698-00
Acres:0.835349
Owner:SMITH, CARRIE
Owner2:
Legal 1:208 W GLOBE ST
Class: R1 : RESIDENTIAL
Land Use: 110 : SINGLE FAMILY RESIDENCE(S)
Zoning: R-12
BUFFER YARD LAND USE CLASS: 1

PROJECT PROPERTY:
PIN: 9652-41-0991-00
Acres: 0.37578
Legal 1: 2206 LEE AV SR 1133
Class: R1: RESIDENTIAL
Land Use: 101 : RESIDENTIAL
Zoning: C-2
BUFFER YARD LAND USE CLASS: 4

PROJECT PROPERTY:
PIN: 9652-41-1805-00
Acres: 0.347326
Legal 1: 2208 LEE AV SR 1133
Class: C1 : COMMERCIAL
Land Use: UNDEVELOPED VACANT LAND
Zoning: C-2
BUFFER YARD LAND USE CLASS: 4

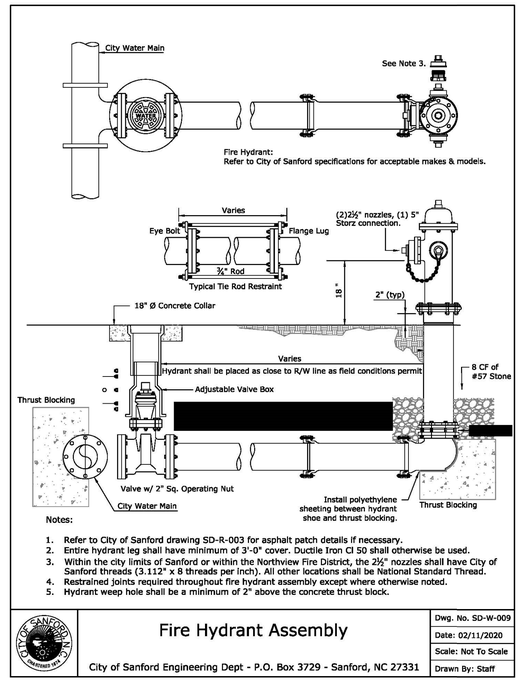
Warehouse structures, generally (permitted use)
Table 4.7-1 establishes a maximum impervious surface ratio for each of the non-residential zoning districts.
General Commercial (C-2) :
Impervious Surface Ratio: 0.8
Min. Lot Width: 50'
Min. Front Setback: 10'
Min. Side Setback: 0'
Min. Rear Setback: 0'

5.22 MINI-WAREHOUSE
This section applies to buildings that are composed of contiguous individual rooms that are rented to the public for the storage of personal property and which have independent access and locks under the control of the tenant.
5.22.2 STANDARDS
5.22.2.1 The total area covered by buildings shall not exceed fifty percent (50%) of the site.
5.22.2.2 The maximum height of building (s) shall be twenty (20) feet and shall not exceed one (1) story.
5.22.2.3 No outside storage shall be permitted, however the storage of RV's, campers, boats, and vehicles shall be allowed in areas designated on the site plan.
5.22.2.4 The storage of hazardous, toxic, or explosive substances, including but not limited to ; but excluding the storage of hazardous waste, industrial solid waste, medical waste, municipal solid waste, septage, or used oil as defined in NCGS § 130A-290, is prohibited.
5.22.2.5 No business activity shall be conducted in the individual storage units.
5.22.2.6 One (1) dwelling unit shall be allowed on the same lot for use as a caretaker dwelling.

10.1.3 OUTDOOR STORAGE IN NON-RESIDENTIAL ZONING DISTRICTS.
10.1.3.2 Outdoor storage areas shall be screened by a Type C bufferyard in accordance with § 7.5 of this Ordinance.
10.1.3.5 Fences of chain link, sheet metal and barbed and razor wire, with or without slats of wood or metal inserted, shall not be considered as sufficient materials to screen outdoor storage areas or operations.

ZONING & DESIGN REVIEW NOTES:

1. *No parking is proposed for this project*
2. *See landscape plan for point breakdown, species legend, quantities, etc.*
3. *See this sheet for impervious calculations including total area covered by buildings.*
4. *Maximum height of buildings shall be 10'*
5. *No outdoor storage is proposed for this project.*



Notes:
1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. Entire hydrant leg shall have minimum of 3'-0" cover. Ductile Iron CI 50 shall otherwise be used.
3. Within the city limits of Sanford or within the Northview Fire District, the 2½" nozzles shall have City of Sanford threads (3.132" x 8 threads per inch). All other locations shall be National Standard Thread.
4. Restrained joints required throughout fire hydrant assembly except where otherwise noted.
5. Hydrant weep hole shall be a minimum of 2" above the concrete thrust block.

CITY OF SANFORD	Fire Hydrant Assembly	Dwg. No. SD-W-009
		Date: 02/11/2020
		Scale: Not To Scale
	City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331	Drawn By: Staff

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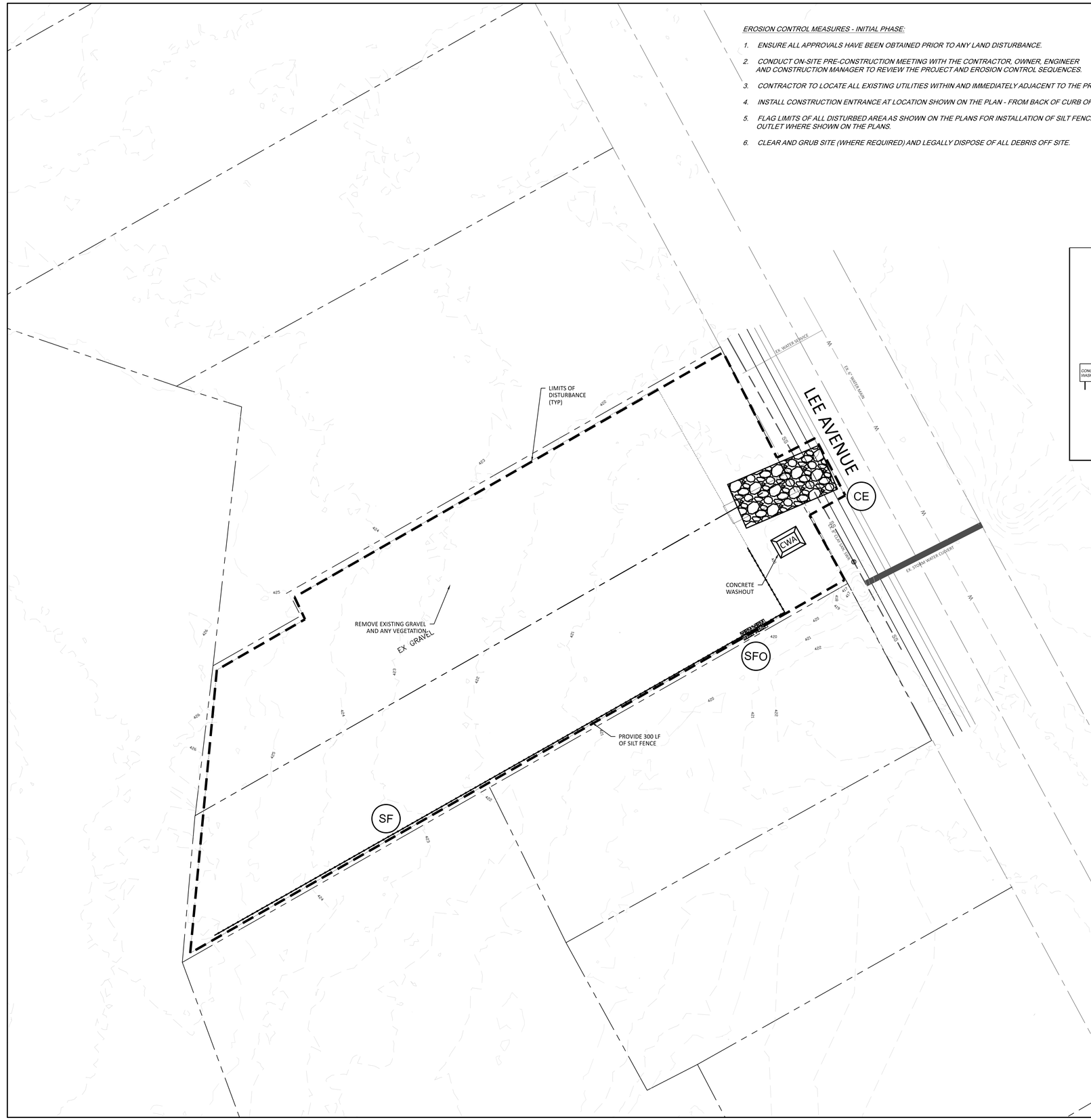
PRELIMINARY SITE PLAN

LEE AVENUE STORAGE
CITY OF SANFORD, NORTH CAROLINA

DESIGNED BY:	JEH
DRAWN BY:	JEH
APPROVED BY:	JEH
SHEET:	C2.0
	CIVIL



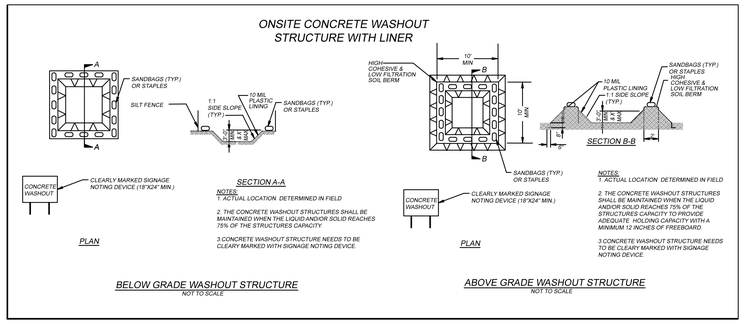
EROSION CONTROL MEASURES - INITIAL PHASE:

1. *ENSURE ALL APPROVALS HAVE BEEN OBTAINED PRIOR TO ANY LAND DISTURBANCE.*
2. *CONDUCT ON-SITE PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR, OWNER, ENGINEER AND CONSTRUCTION MANAGER TO REVIEW THE PROJECT AND EROSION CONTROL SEQUENCES.*
3. *CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WITHIN AND IMMEDIATELY ADJACENT TO THE PROJECT AREA.*
4. *INSTALL CONSTRUCTION ENTRANCE AT LOCATION SHOWN ON THE PLAN - FROM BACK OF CURB OFF OF LEE AVENUE.*
5. *FLAG LIMITS OF ALL DISTURBED AREA AS SHOWN ON THE PLANS FOR INSTALLATION OF SILT FENCE AND SILT FENCE OUTLET WHERE SHOWN ON THE PLANS.*
6. *CLEAR AND GRUB SITE (WHERE REQUIRED) AND LEGALLY DISPOSE OF ALL DEBRIS OFF SITE.*

SYMBOL	PRACTICE	DESCRIPTION
CE	CONSTRUCTION ENTRANCE	A STONE STABILIZED PAD LOCATED AT ANY POINT THAT TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE TO A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING PLOT WHICH WILL REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE CONSTRUCTION SITE.
SF	SILT FENCE	A TEMPORARY STRUCTURE USED TO SLOW THE VELOCITY OF RUN-OFF. CAUSE SEDIMENT DEPOSITION AT THE STRUCTURE, AND FILTER SEDIMENT FROM RUN-OFF.
SFO	SILT FENCE OUTLET PROTECTION	A TEMPORARY STRUCTURE AS A REINFORCED OUTLET AT LOW POINTS OF THE SILT FENCE. INSTALL #57 WASHED STONE AT UPSTREAM FLOW WITH HARDWARE CLOTH. (SEE DETAIL)
CL	CONSTRUCTION LIMITS	A DEFINED AREA THAT ALL LAND DISTURBANCE WILL OCCUR DURING CONSTRUCTION.
CWA	CONCRETE WASHOUT AREA	TEMPORARY FACILITY PROVIDED ONSITE FOR CONCRETE TRUCKS TO WASHOUT PRIOR TO LEAVING CONSTRUCTION SITE. CONTRACTOR MAY RELOCATE ONSITE AS DEEMED NECESSARY THROUGH-OUT CONSTRUCTION

DISTURBED AREA: 0.67 ACRES

ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



GENERAL NOTES:

PURSUANT TO G.S. 133-A57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION-CONTROL DEVICES OR STRUCTURES.
IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 7 OR 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PERMANENT GROUNDCOVER WILL BE PROVIDED FOR ALL DISTURBED AREAS WITHIN 15 WORKING DAYS OR NO MORE THAN 90 CALENDER DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION.

PURSUANT TO G.S. 113A-57(3), PROVISIONS FOR PERMANENT GROUNDCOVER SUFFICIENT TO RESTRAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS WITHIN 15 CALENDAR DAYS OR 60 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.

ANY BORROW MATERIAL BROUGHT ONTO THIS SITE MUST BE FROM A LEGALLY PERMITTED MINE SITE OR OTHER APPROVED SOURCE. A SINGLE-USE BORROW OR WASTE AREA SITE IS ONLY PERMISSIBLE IF IT IS OPERATED UNDER CONTROL OF THE FINANCIALLY RESPONSIBLE PERSON OR FIRM THAT IS DEVELOPING THIS SITE. AN APPROVED EROSION AND SEDIMENT CONTROL PLAN IS REQUIRED FOR ALL SINGLE USE BORROW AND WASTE SITES.

EROSION CONTROL DESIGN, DETAILS AND MAINTENANCE SPECIFICATIONS SHALL COMPLY WITH CURRENT NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

NORTH

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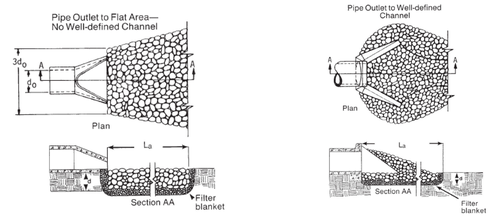
EROSION & SEDIMENTATION CONTROL PLAN
INITIAL PHASE

LEE AVENUE STORAGE
CITY OF SANFORD, NORTH CAROLINA

DESIGNED BY:	JEH
DRAWN BY:	JEH
APPROVED BY:	JEH
SHEET:	C3.0
	CIVIL

GROUND STABILIZATION REQUIREMENTS

CONTRACTOR SHALL BE REQUIRED TO ESTABLISH GROUND STABILIZATION AS PER FOLLOWING CHART.			
SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS	APPLICABLE THIS PROJECT
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE	YES
HIGH QUALITY WATER (HQW) ZONES FLATTER THAN 4:1	7 DAYS	NONE	NO
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	NO
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH	YES
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETER AND HQW ZONES)	YES
TYPICAL GROUND COVER STABILIZATION TYPES - GRASS AND OR SOD, WHEAT STRAW, MULCH, BIODEGRADABLE STRAW MATTING, SYNTHETIC MATTING, ETC.			



Notes

1. L_a is the length of the riprap apron.
2. d = 1.5 times the maximum stone diameter but not less than 6".
3. In a well-defined channel extend the apron up the channel banks to an elevation of 6" 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.

CONSTRUCTION SPECIFICATIONS

1. ENSURE THAT THE SUBGRADE FOR THE FILTER AND RIPRAP FOLLOWS THE REQUIRED LINES AND GRADES SHOWN IN THE PLAN. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO THE DENSITY OF THE SURROUNDING UNDISTURBED MATERIAL. LOW AREAS IN THE SUBGRADE ON UNDISTURBED SOIL MAY ALSO BE FILLED BY INCREASING THE RIPRAP THICKNESS.

2. THE RIPRAP AND GRAVEL FILTER MUST CONFORM TO THE SPECIFIED GRADING LIMITS SHOWN ON THE PLANS.

3. FILTER CLOTH, WHEN USED, MUST MEET DESIGN REQUIREMENTS AND BE PROPERLY PROTECTED FROM PUNCHING OR TEARING DURING INSTALLATION. REPAIR ANY DAMAGE BY REMOVING THE RIPRAP AND PLACING ANOTHER PIECE OF FILTER CLOTH OVER THE DAMAGED AREA. ALL CONNECTING JOINTS SHOULD OVERLAP SO THE TOP LAYER IS ABOVE THE DOWNSTREAM LAYER A MINIMUM OF 1 FOOT. IF THE DAMAGE IS EXTENSIVE, REPLACE THE ENTIRE FILTER CLOTH.

4. RIPRAP MAY BE PLACED BY EQUIPMENT, BUT TAKE CARE TO AVOID DAMAGING THE FILTER.

5. THE MINIMUM THICKNESS OF THE RIPRAP SHOULD BE 1.5 TIMES THE MAXIMUM STONE DIAMETER.

6. RIPRAP MAY BE FIELD STONE OR ROUGH QUARRY STONE. IT SHOULD BE HARD, ANGULAR, HIGHLY WEATHER-RESISTANT AND WELL GRADED.

7. CONSTRUCT THE APRON ON ZERO GRADE WITH NO OVERFILL AT THE END. MAKE THE TOP OF THE RIPRAP AT THE DOWNSTREAM END LEVEL WITH THE RECEIVING AREA OR SLIGHTLY BELOW IT.

8. ENSURE THAT THE APRON IS PROPERLY ALIGNED WITH THE RECEIVING STREAM AND PREFERABLY STRAIGHT THROUGHOUT ITS LENGTH. IF A CURVE IS NEEDED TO FIT SITE CONDITIONS, PLACE IT IN THE UPPER SECTION OF THE APRON.

9. IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION (PRACTICES 6.10, TEMPORARY SEEDING, AND 6.11, PERMANENT SEEDING).

MAINTENANCE

INSPECT RIPRAP OUTLET STRUCTURES WEEKLY AND AFTER SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENTS TO SEE IF ANY EROSION AROUND OR BELOW THE RIPRAP HAS TAKEN PLACE, OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

OP — RIP RAP OUTLET PROTECTION

NOT TO SCALE

SYMBOL	PRACTICE	DESCRIPTION
CE	CONSTRUCTION ENTRANCE	A STONE STABILIZED PAD LOCATED AT ANY POINT THAT TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE TO A PUBLIC RIGHT-OF-WAY, STREET, ALLEY, SIDEWALK, OR PARKING PLOT WHICH WILL REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE CONSTRUCTION SITE.
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IP	INLET PROTECTION	A TEMPORARY SEDIMENT BARRIER LAID AROUND A STORM DRAIN INLET TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.

GROUND STABILIZATION REQUIREMENTS

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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	NO
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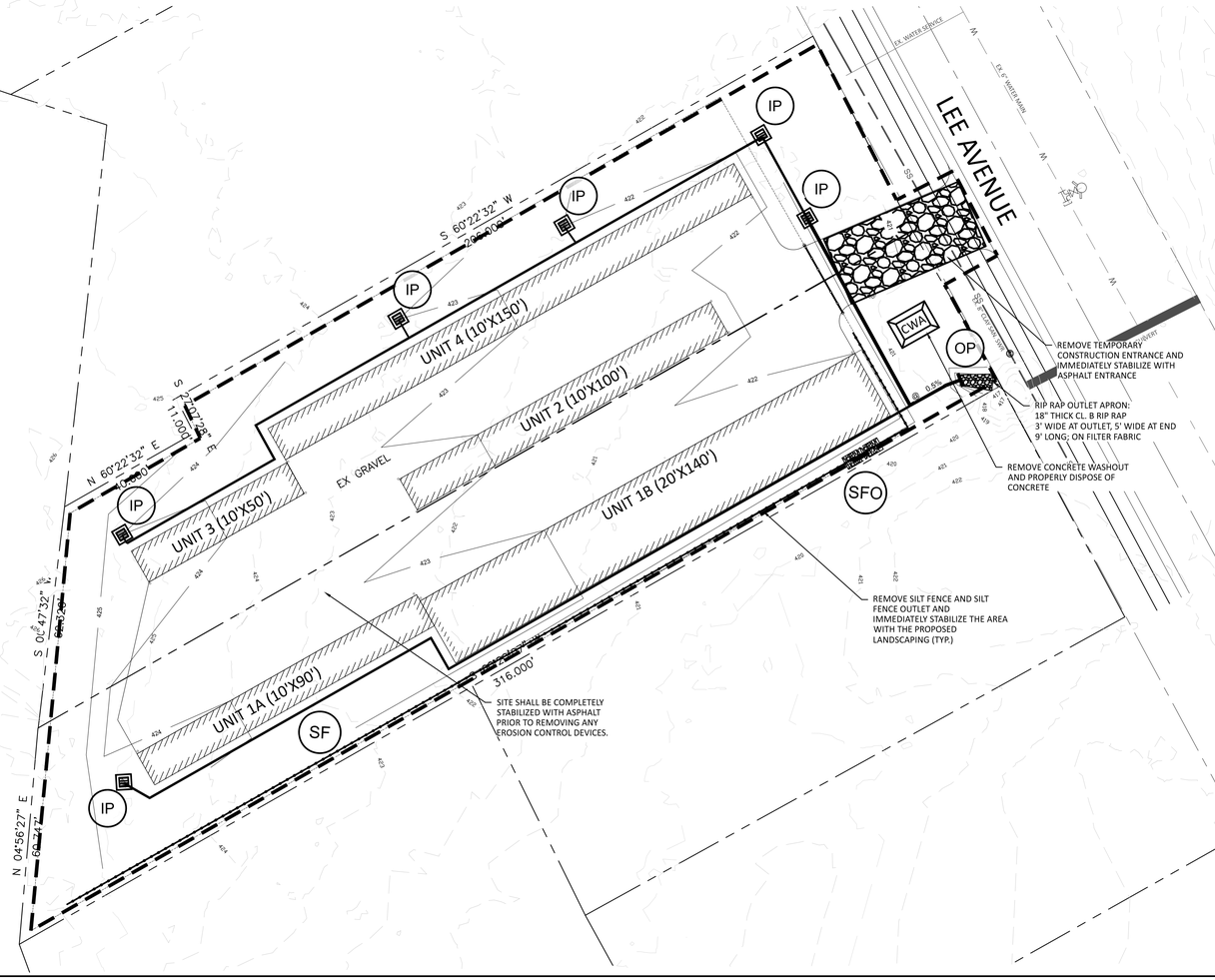
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETER AND HQW ZONES)	YES
TYPICAL GROUND COVER STABILIZATION TYPES - GRASS AND OR SOD, WHEAT STRAW, MULCH, BIODEGRADABLE STRAW MATTING, SYNTHETIC MATTING, ETC.			

SEED BED PREPARATION

1. RIP THE ENTIRE AREA TO 6" DEPTH.
2. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM.
3. APPLY AGRICULTURAL LIME, FERTILIZER, AND SUPERPHOSPHATE IN ACCORDANCE WITH "SEEDING SCHEDULE" AND MIX WITH SOIL.
4. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED 4 TO 6 INCHES DEEP.
5. SEED ON A FRESHLY PREPARED SEEDBED AND COVER SEED LIGHTLY WITH SEEDING EQUIPMENT OR CULTIPACK AFTER SEEDING. SEED ACCORDING TO "SEEDING SCHEDULE."
6. MULCH IN ACCORDANCE WITH "SEEDING SCHEDULE" IMMEDIATELY AFTER SEEDING.
7. INSPECT ALL SEEDING FOR COMPLIANCE WITH THE REQUIREMENTS OF THE "SEEDING SCHEDULE". MAKE NECESSARY REPAIRS AND RESEED WITHIN THE PLANTING SEASON, IF POSSIBLE, OR THE DAMAGED AREA SHALL BE REESTABLISHED FOLLOWING THE ORIGINAL LIME, FERTILIZER, AND SEEDING REQUIREMENTS.



CONSTRUCTION SEQUENCE & EROSION CONTROL MEASURES - FINAL CONSTRUCTION PHASE:

1. UPON COMPLETING ALL SITE IMPROVEMENTS AND FINAL GRADING, STABILIZE ALL DISTURBED AREAS PER LANDSCAPE PLAN. WATER AND MAINTAIN ALL LANDSCAPED AREAS TO ENSURE PROPER GROUND COVERAGE PRIOR TO FINAL APPROVAL

2. SILT FENCE AND SILT FENCE OUTLET MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE STABILIZED WITH PERMANENT VEGETATION OR ASPHALT.

3. AFTER SITE IS PERMANENTLY STABILIZED,REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING OR LANDSCAPING AS APPLICABLE.

SCALE IN FEET
0' 10 20 40

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HILLIARD ENGINEERING, PLLC

EROSION & SEDIMENTATION CONTROL PLAN
FINAL CONSTRUCTION PHASE

LEE AVENUE STORAGE
CITY OF SANFORD, NORTH CAROLINA

DESIGNED BY:	JEH
DRAWN BY:	JEH
APPROVED BY:	JEH
SHEET:	C3.1
	CIVIL

EROSION CONTROL MAINTENANCE SCHEDULE

LAND GRADING: PERIODICALLY CHECK ALL GRADED AREAS AND THE SUPPORTING EROSION AND SEDIMENTATION CONTROL PRACTICES, ESPECIALLY AFTER HEAVY RAINFALLS. PROMPTLY REMOVE ALL SEDIMENT FROM DIVERSIONS AND OTHER WATER-DISPOSAL PRACTICES. IF WASHOUT OR BREAKS OCCUR, REPAIR THEM IMMEDIATELY. PROMPT MAINTENANCE OF SMALL ERODED AREAS BEFORE THEY BECOME SIGNIFICANT GULLIES IS AN ESSENTIAL PART OF AN EFFECTIVE EROSION AND SEDIMENTATION CONTROL PLAN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT: MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

OUTLET STABILIZATION STRUCTURE: INSPECT RIP RAP OUTLET STRUCTURES AFTER HEAVY RAINS TO SEE IF ANY EROSION AROUND OR BELOW THE RIP RAP HAS TAKEN PLACE OR IF STONES HAVE BEEN DISLODGED. IMMEDIATELY MAKE ALL NEEDED REPAIRS TO PREVENT FURTHER DAMAGE.

DROP INLET PROTECTION (TEMPORARY): INSPECT THE FABRIC BARRIER AFTER EACH RAIN AND MAKE REPAIRS AS NEEDED. REMOVE SEDIMENT FROM THE POOL AREA AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. TAKE CARE NOT TO DAMAGE OR UNDERCUT THE FABRIC DURING SEDIMENT REMOVAL. WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN ADEQUATELY STABILIZED, REMOVE ALL MATERIALS AND ANY UNSTABLE SEDIMENT AND DISPOSE OF THEM PROPERLY. BRING THE DISTURBED AREA TO THE GRADE OF THE DROP INLET AND SMOOTH AND COMPACT IT. APPROPRIATELY STABILIZE ALL BARE AREAS AROUND THE INLET.

SEDIMENT FENCE (SILT FENCE): INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUT. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

DUST CONTROL: MAINTAIN DUST CONTROL MEASURES THROUGH DRY WEATHER PERIODS UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.

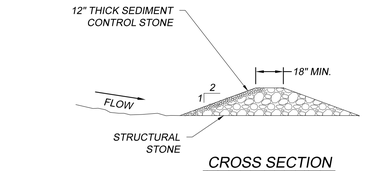
TREE PRESERVATION AND PROTECTION: REPAIR ANY DAMAGE TO PROTECTED TREE AS FOLLOW SHOULD DAMAGE TO CROWN, TRUNK, OR ROOT SYSTEM OCCUR.

(REFERENCE NCDENR MANUAL, PAGE 6.05.3 AND 6.05.4)

REPAIR ROOTS BY CUTTING OFF THE DAMAGED AREAS AND PAINTING THEM WITH TREE PAINT. SPREAD PEAT MOSS OR MOIST TOPSOIL OVER EXPOSED ROOTS.

REPAIR DAMAGE TO BARK BY TRIMMING AROUND THE DAMAGED AREAS AS SHOWN IN FIGURE 6.05b, TAPER THE CUT TO PROVIDE DRAINAGE, AND PAINT WITH TREE PAINT.

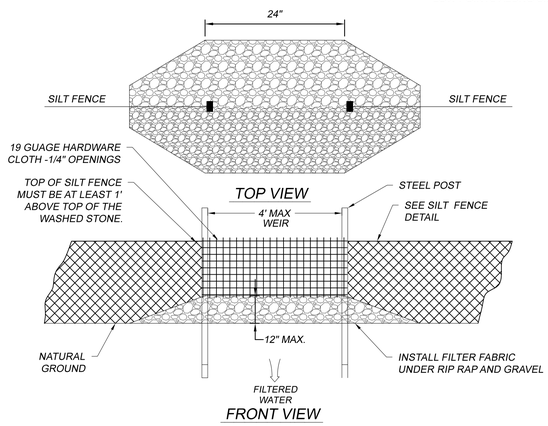
CUT OFF ALL DAMAGED TREE LIMBS ABOVE THE TREE COLLAR AT THE TRUNK OR MAIN BRANCH. USE THREE SEPARATED CUTS AS SHOWN IN FIGURE 6.05c TO AVOID PEELING BARK FROM HEALTHY AREAS OF THE TREE.



CROSS SECTION

NOTES:

1. STRUCTURAL STONE SHALL BE CLASS "B" STONE FOR EROSION CONTROL PURPOSES. SEDIMENT CONTROL STONE SHALL BE #5 OR #57 STONE.
2. OUTLETS TO BE PLACED AT LOW POINTS ALONG SILT FENCE.



TOP VIEW

FRONT VIEW

CONSTRUCTION SPECIFICATIONS

1. PLACE STONE TO THE LINES AND DIMENSIONS SHOWN IN THE PLAN ON A FILTER FABRIC FOUNDATION.

2. KEEP THE CENTER STONE SECTION AT LEAST 9 INCHES BELOW NATURAL GROUND LEVEL WHERE THE DAM ABUTS THE CHANNEL BANKS.

3. EXTEND STONE AT LEAST 1.5 FEET BEYOND THE DITCH BANK TO KEEP WATER FROM CUTTING AROUND THE ENDS OF THE CHECK DAM.

4. PROTECT THE CHANNEL AFTER THE DAM FROM HEAVY FLOW THAT COULD CAUSE EROSION.

6. MAKE SURE THAT THE CHANNEL REACH ABOVE THE MOST UPSTREAM DAM IS STABLE.

7. ENSURE THAT OTHER AREAS OF THE CHANNEL, SUCH AS CULVERT ENTRANCES BELOW THE DAM, ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONES.

8. SEE SILT FENCE DETAIL FOR CONSTRUCTION SPECIFICATIONS.

MAINTENANCE

INSPECT DAM AND CHANNELS AT LEAST WEEKLY AND AFTER EACH SIGNIFICANT (1/2 INCH OR GREATER) RAINFALL EVENT AND REPAIR IMMEDIATELY. CLEAN OUT SEDIMENT, STRAW, LIMBS, OR OTHER DEBRIS THAT COULD CLOG THE CHANNEL WHEN NEEDED.

ANTICIPATE SUBMERGENCE AND DEPOSITION ABOVE THE DAM AND EROSION FROM HIGH FLOWS AROUND THE EDGES OF THE DAM. CORRECT ALL DAMAGE IMMEDIATELY. IF SIGNIFICANT EROSION OCCURS AROUND DAM, ADDITIONAL MEASURES CAN BE TAKEN SUCH AS, INSTALLING A PROTECTIVE RIPRAP LINER IN THAT PORTION OF THE CHANNEL (PRACTICE 6.31, RIPRAP-LINE AND PAVED CHANNELS).

REMOVE SEDIMENT ACCUMULATED BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION, ALLOW THE CHANNEL TO DRAIN THROUGH THE DAM, AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM.

ADD STONES TO DAM AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.

SEEDING SCHEDULE

NOTE

TEMPORARY SEED MIX SHALL BE USED FOR ALL AREAS EXPOSED GREATER THAN 21 CALENDAR DAYS AND SUBJECT TO FURTHER DISTURBANCE. PERMANENT SEED MIX SHALL BE CHECKED FOR ADEQUACY ON JULY 15. AN ADEQUATE COVER SHALL HAVE 50 SPRIGS OF BERMUDA OR SERICEA LESPEDEZA PER ONE SQUARE FOOT.

TEMPORARY SUMMER SEED MIX (TO BE FOLLOWED BY PERMANENT FALL SEED MIX)

	SPECIES	RATE (LB./ACRE)
MARCH 1 - SEPT. 1	GERMAN MILLET	120

TEMPORARY WINTER SEED MIX (TO BE FOLLOWED BY PERMANENT SPRING SEED MIX)

	SPECIES	RATE (LB./ACRE)
SEPT. 1 - MARCH 1	WINTER RYE (GRAIN)	200
	KOBE LESPEDEZA	120

PERMANENT SPRING SEED MIX

	SPECIES	RATE (LB./ACRE)
MARCH 1 - JULY 1	PENSICOLA BAHIAGRASS	60
	COMMON BERMUDA	25
	SERICEA LESPEDEZA	30

PERMANENT FALL SEED MIX

	SPECIES	RATE (LB./ACRE)
SEPT. 1 - NOV. 1	COMMON BERMUDA	30
	SERICEA LESPEDEZA (UNSCARIFIED)	30
	KOBE LESPEDEZA	10

SOIL AMENDMENTS

TO BE INCORPORATED INTO THE TOP 3 INCHES OF SOIL IN AREAS WITH SLOPES 2:1 OR FLATTER
APPLY FERTILIZER (10-10-10) AT A RATE OF 1000 LB/ACRE
APPLY LIME (GROUND AGRICULTURAL LIMESTONE) AT A RATE OF 4000 LB/ACRE
APPLY SUPERPHOSPHATE (0-49-0) AT A RATE OF 200 LB/ACRE

* REQUIRED FOR PERMANENT SEED MIX ONLY

MULCH

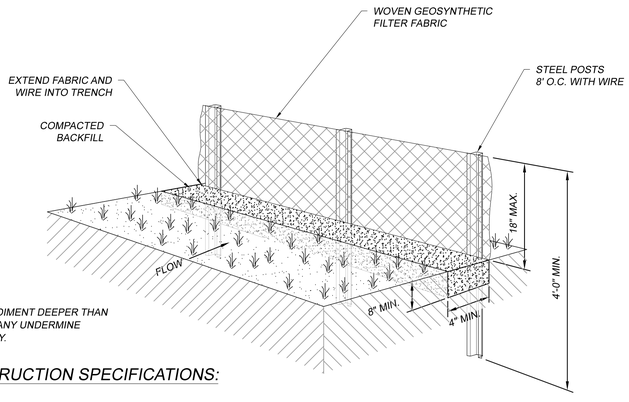
APPLY 4,000 LB/ACRE GRAIN STRAW OR EQUIVALENT COVER.
ANCHOR MULCH WITH ROVING, NETTING OR BY TACKING WITH ASPHALT EMULSION AT A RATE OF 400 GAL./ACRE

MAINTENANCE

MINIMUM OF 1" OF RAINFALL A WEEK (IF NOT SUPPLIED NATURALLY, CONTRACTOR SHALL SUPPLY THE REMAINING AMOUNT UNTIL GROUND COVER HAS BEEN ESTABLISHED).

WATER

REFERTILIZE IN THE SECOND YEAR UNLESS THE GROWTH IS FULLY ADEQUATE.
MOW WHEN THE AVERAGE PLANT HEIGHT EXCEEDS 6 INCHES.
RESEED, FERTILIZE AND MULCH DAMAGED AREAS IMMEDIATELY.



NOTE:

REMOVE SEDIMENT DEEPER THAN 12", REPAIR ANY UNDERMINE IMMEDIATELY.

CONSTRUCTION SPECIFICATIONS:

CONSTRUCTION:

1. CONSTRUCT THE SEDIMENT BARRIER OF STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS.

2. ENSURE THAT THE HEIGHT OF THE SEDIMENT FENCE DOES NOT EXCEED 24 INCHES ABOVE GROUND SURFACE.

3. CONSTRUCT THE FILTER FABRIC FROM A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID JOINTS. WHEN JOINTS ARE NECESSARY, SECURELY FASTEN THE FILTER CLOTH ONLY AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST.

4. SUPPORT STANDARD STRENGTH FILTER FABRIC BY WIRE MESH FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS. EXTEND THE WIRE MESH SUPPORT TO THE BOTTOM OF THE TRENCH. FASTEN THE WIRE REINFORCEMENT, THEN FABRIC ON THE UPSLOPE SIDE OF THE FENCE POST. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.

5. WHEN A WIRE MESH SUPPORT FENCE IS USED, SPACE POSTS A MAXIMUM OF 8 FEET APART. SUPPORT POSTS SHOULD BE DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 24 INCHES.

6. EXTRA STRENGTH FILTER FABRIC WITH 6 FEET POST SPACING DOES NOT REQUIRE WIRE MESH SUPPORT FENCE. SECURELY FASTEN THE FILTER FABRIC DIRECTLY TO THE POSTS. WIRE OR PLASTIC ZIP TIES SHOULD HAVE MINIMUM 50 POUND TENSILE STRENGTH.

7. EXCAVATE A TRENCH APPROXIMATELY 4 INCHES WIDE AND 8 INCHES DEEP ALONG THE PROPOSED LINE OF POSTS AND UPSLOPE FROM THE BARRIER.

8. PLACE 12 INCHES OF THE FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.

9. BACKFILL THE TRENCH WITH SOIL PLACED OVER THE FILTER FABRIC AND COMPACT. THOROUGH COMPACTION OF THE BACKFILL IS CRITICAL TO SILT FENCE PERFORMANCE.

10. DO NOT ATTACH FILTER FABRIC TO EXISTING TREES.

SF SILT FENCE DETAIL

NOT TO SCALE

SFO SILT FENCE OUTLET DETAIL

NOT TO SCALE

MATERIAL:

1. USE SYNTHETIC FILTER FABRIC OF AT LEAST 95% BY WEIGHT OF POLYOLEFIN OR POLYESTER, WHICH IS CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS IN ASTM D 6461.

2. ENSURE THAT POSTS FOR SEDIMENT FENCES ARE 1.33 LB/LINEAR FT STEEL WITH A MINIMUM LENGTH OF 4 FEET. MAKE SURE THAT STEEL POSTS HAVE PROJECTIONS TO FACILITATE FASTENING THE FABRIC.

3. FOR REINFORCEMENT OF STANDARD STRENGTH FILTER FABRIC, USE WIRE FENCE WITH A MINIMUM 14 GAUGE AND A MAXIMUM MESH SPACING OF 6 INCHES.

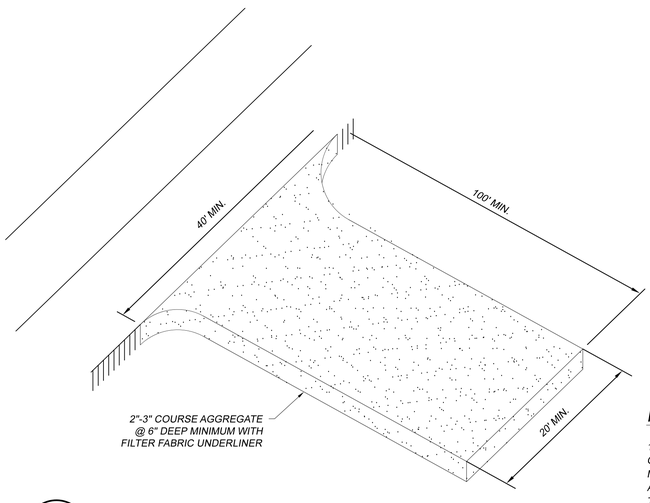
MAINTENANCE:

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.

2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.

3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. TAKE CARE TO AVOID UNDERMINING THE FENCE DURING CLEANOUTS

4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.



CE TEMPORARY GRAVEL CONSTRUCTION ENTRANCE DETAIL

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS:

1. CLEAR THE ENTRANCE AND EXIT AREA OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL AND PROPERLY GRADE IT.

2. PLACE THE GRAVEL TO THE SPECIFIC GRADE AND DIMENSIONS SHOWN ON THE PLANS, AND SMOOTH IT.

3. PROVIDE DRAINAGE TO CARRY WATER TO A SEDIMENT TRAP OR OTHER SUITABLE OUTLET.

4. USE GEOTEXTILE FABRICS BECAUSE THEY IMPROVE STABILITY OF THE FOUNDATION IN LOCATIONS SUBJECT TO SEEPAGE OR HIGH WATER TABLE.

MAINTENANCE:

1. MAINTAIN THE GRAVEL PAD IN A CONDITION TO PREVENT MUD OR SEDIMENT FROM LEAVING THE CONSTRUCTION SITE. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE. AFTER EACH RAINFALL, INSPECT ANY STRUCTURE USED TO TRAP SEDIMENT AND CLEAN IT OUT AS NECESSARY. IMMEDIATELY REMOVE ALL OBJECTIONABLE MATERIALS SPILLED, WASHED, OR TRACKED ONTO PUBLIC ROADWAYS.

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e-mail: jhilliard@hilliardengineering.com
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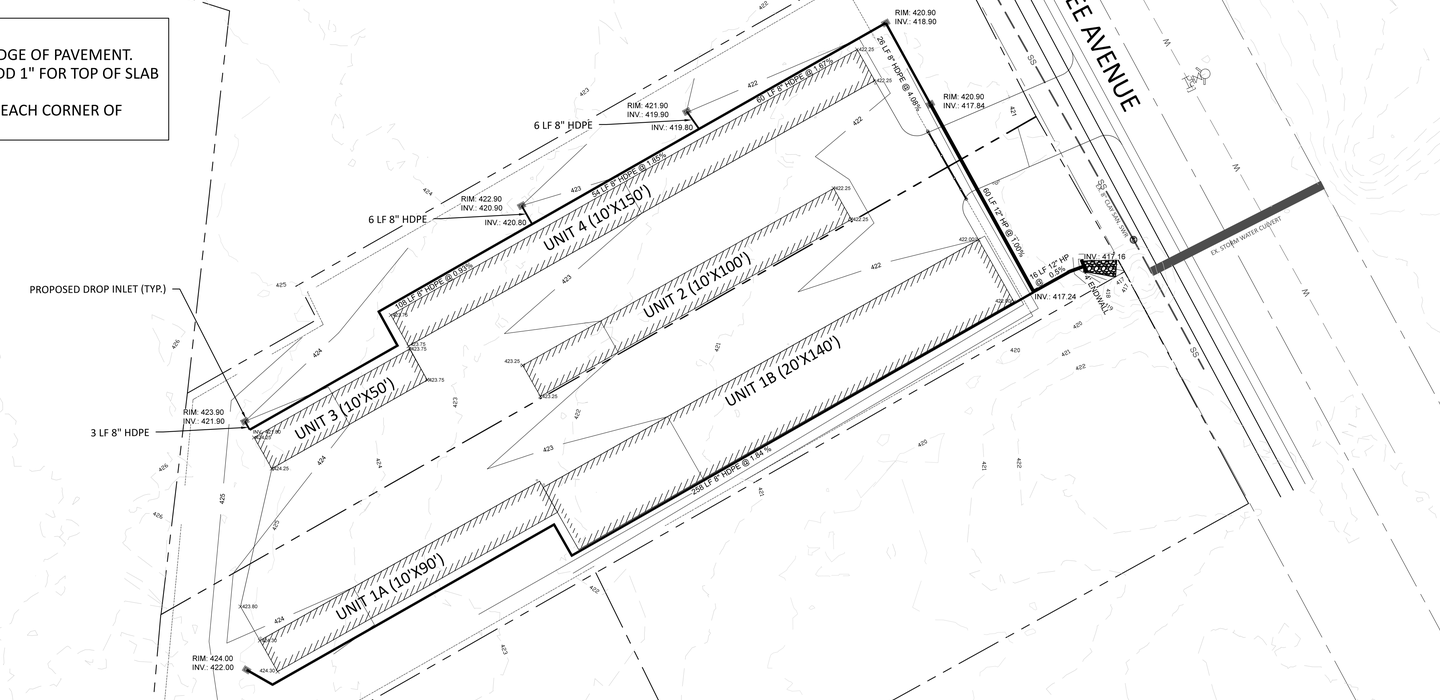
HILLIARD ENGINEERING, PLLC

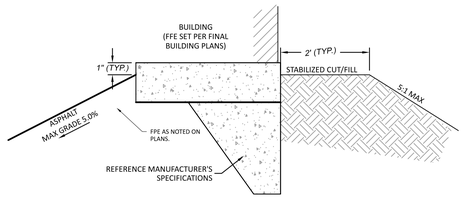
EROSION & SEDIMENTATION CONTROL PLAN DETAILS

LEE AVENUE STORAGE
CITY OF SANFORD, NORTH CAROLINA

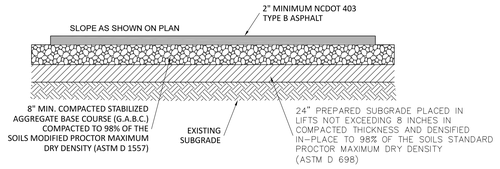
DESIGNED BY:	JEH
DRAWN BY:	JEH
APPROVED BY:	JEH
SHEET:	C3.2
	CIVIL

NOTE:
1) SPOT GRADES ARE EDGE OF PAVEMENT. CONTRACTOR SHALL ADD 1" FOR TOP OF SLAB GRADE.
2) PLACE BOLLARDS AT EACH CORNER OF EACH BUILDING.





TYPICAL BUILDING AREA GRADING DETAIL
SCALE: N.T.S.



TYPICAL PAVEMENT SECTION
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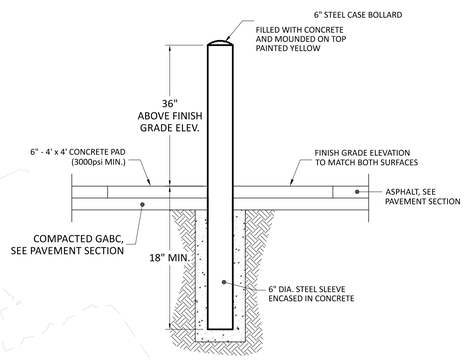

CONCRETE BOLLARD
SCALE: N.T.S.

RUNOFF CALCULATIONS:

DA: 0.69 AC
I10: 7.79 IN.HR
cpre: 0.89 (87% @ 0.95 (ex. gravel) + 13% @ 0.5 (business neighborhood areas))
cpost: 0.78 ((62% roofs and asphalt @ 0.95 + 38% @ 0.5 (business neighborhood areas))
Q10 pre: 4.78 cfs
Q10 post: 4.19 cfs

SCALE IN FEET
0' 15 30 60

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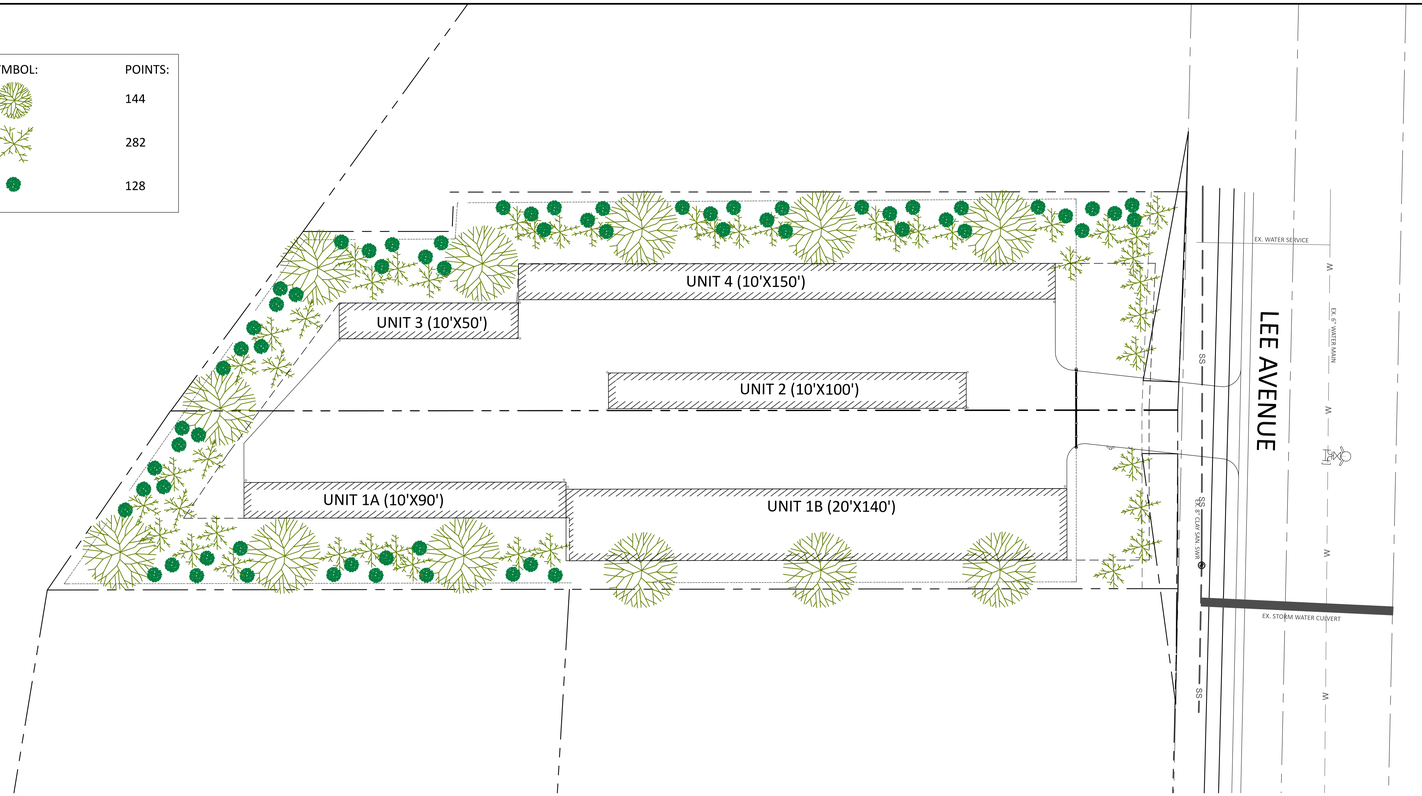
GRADING AND DRAINAGE PLAN

LEE AVENUE STORAGE
CITY OF SANFORD, NORTH CAROLINA

DESIGNED BY:	JEH
DRAWN BY:	JEH
APPROVED BY:	JEH

SHEET:
C4.0
CIVIL

TREE/SHRUB PLANT LIST:	BOTANICAL NAME:	SIZE:	COUNT:	SYMBOL:	POINTS:
RED MAPLE	ACER RUBRUM	2" CAL., 6' HT.	12		144
REDBUD 'RISING SUN'	CERCIS CANADENISIS	2" CAL., 6' HT.	47		282
JAPENSESE BARBERRY 'CRIMSON PYGMY'	BERBERIS THUNBERGII	3 GAL.	64		128



NOTE:

1. CONTRACTOR TO REGRADE, SOD OR HYDROSEED, AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF HIS/HER WORK.

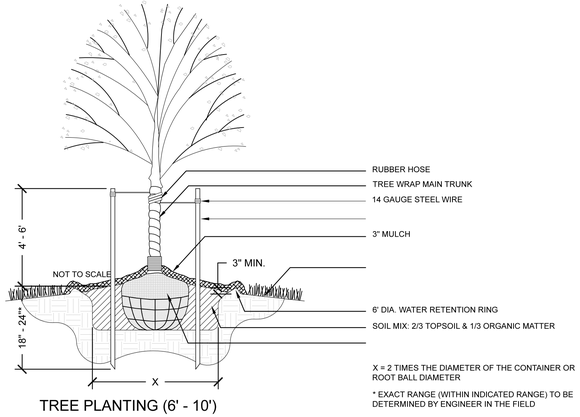
2. UPRIGHT STAKES TO BE USED ON TREES UP TO 12' IN HEIGHT. LARGER TREES MUST BE GUYED.

3. 1/8 OF ROOT BALL TO BE ABOVE FINISHED GRADE.

4. DO NOT COVER CROWN OF ROOT BALL EVERGREEN TREES WHICH ARE TIGHTLY SPACED SHALL BE TIED TOGETHER IN ONE CONTINUOUS BED. (CONTRACTOR TO INCLUDE THIS MULCHING IN HIS/HER BID)

5. TREES WHICH ARE LOCATED WITHIN 4 FEET OF AN ADJACENT SHRUB BED SHALL HAVE THEIR MULCHED AREA CONNECTED WITH THE MULCHED BED OF THE SHRUBS.

6. PRUNE AND REMOVE BROKEN OR DEAD LIMBS/BRANCHES FROM TREES AND SHRUBS AFTER PLANTING. RETAIN NATURAL SHAPE OF PLANT.



TREE PLANTING (6' - 10')

X = 2 TIMES THE DIAMETER OF THE CONTAINER OR ROOT BALL DIAMETER

* EXACT RANGE (WITHIN INDICATED RANGE) TO BE DETERMINED BY ENGINEER IN THE FIELD

NOTE:

1. BEDS TO HAVE SMOOTHLY CONTOURED AND CLEANLY DEFINED EDGES. BEDS SHALL CURVILINEAR EXCEPT AS NOTED ON PLAN.

2. PROPOSED BEDS MUST BE LAID OUT ON SITE AND APPROVED BY OWNER, IF REQUESTED BY OWNER.

3. REMOVE TOP 1/3 OF ALL BURLAP FABRIC AROUND ROOT BALL.

4. COMPLETELY REMOVE ALL STRINGS, RIBBONS, AND TABS FROM THE PLANT.

5. SCARIFY ROOTS ON POT BOUND PLANTS.

6. PLANT SPACING VARIES - (SEE PLAN)

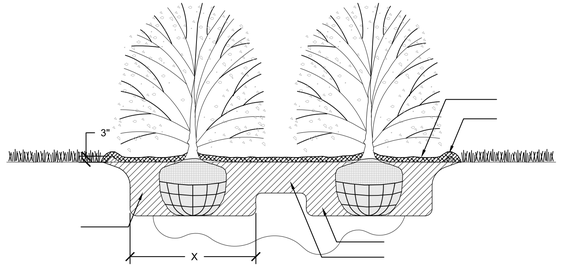
7. ALL SHRUBS TO BE PLANTED IN MULCHED BEDS.

8. PRUNE ALL BROKEN, DISEASED, AND WEAK BRANCHES.

9. ALL SHRUB BEDS TO BE COMPLETELY EXCAVATED OF ALL EXISTING SOIL TO REQUIRED DEPTH AND BACKFILLED WITH REQUIRED SOIL MIX.

10. SOIL MIX: 2/3 TOPSOIL & 1/3 ORGANIC MATTER.

11. TOP DRESS BED WITH 10-6-4 FERTILIZER AT THE RATE OF 5 LBS. PER 100 S.F. OF BED AREA.



SHRUB PLANTING BED

NOT TO SCALE

GENERAL NOTES:

1.1 THIS PLAN IS FOR LANDSCAPE PURPOSES ONLY. LANDSCAPE PLAN PROVIDED IS FOR MINIMUM COMPLIANCE WITH CITY OF SANFORD UDO AND SHOULD NOT BE CONSIDERED AN ENHANCED LANDSCAPE PLAN. CONSULT WITH A REGISTERED LANDSCAPE ARCHITECT FOR SPECIFIC PLANTING RECOMMENDATIONS.

1.2 UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER, LANDSCAPE ARCHITECT, OR THEIR REPRESENTATIVES. PLEASE CALL BEFORE YOU DIG.

1.3 THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AND AGREES TO BE RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT RESULT FROM THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY UNDERGROUND UTILITIES TO REMAIN.

1.4 THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS TO ENSURE THAT THE NEW WORK SHALL FIT INTO THE EXISTING SITE IN THE MANNER INTENDED AND AS SHOWN ON THE DRAWINGS. SHOULD ANY CONDITIONS EXIST THAT ARE CONTRARY TO THOSE ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE PRIOR TO PERFORMING ANY WORK IN THE AREA INVOLVING DISCREPANCIES. NOTIFICATION SHALL BE MADE IN THE FORM OF A DRAWING OR SKETCH INDICATING FIELD MEASUREMENTS AND NOTES RELATING TO THE AREA.

1.5 ALL WORK SHALL MEET OR EXCEED THE REQUIREMENTS OF ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES AND REQUIREMENTS.

1.6 IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PERFORM ALL WORK IN A MANNER THAT PROTECTS COMPLETED WORK BY OTHERS, SUCH AS CURBS, UTILITIES, STORM DRAINAGE, FENCES, DRIVEWAY APRONS, DRIVES, VEGETATION, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF SATISFACTORY REPAIR OF ALL DAMAGES IN KIND RESULTING FROM HIS/HER FAILURE TO COMPLY.

1.7 THE CONTRACTOR IS TO VERIFY ALL QUANTITIES SHOWN ON THE PLAN AND IN THE PLANT SCHEDULE. IF DISCREPANCIES OCCUR, THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT IMMEDIATELY. QUANTITIES OF PLANTS SHOWN BY LANDSCAPE SYMBOLS SHALL GOVERN OVER THE QUANTITIES SHOWN IN THE PLANT SCHEDULE.

1.8 ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE LANDSCAPE ARCHITECT. THE OWNER SHALL RECEIVE TAGS FROM EACH PLANT SPECIES AND A LIST OF PLANT SUPPLIERS. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL MEET THE NORMAL REQUIREMENTS FOR THE VARIETY OR CULTIVAR PER THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN). PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY UPON THE APPROVAL OF THE LANDSCAPE ARCHITECT.

1.9 NO SUBSTITUTIONS OF PRODUCTS, PLANT TYPES OR SIZES SHALL BE MADE WITHOUT WRITTEN APPROVAL OF THE OWNER, LANDSCAPE ARCHITECT, AND MUNICIPAL REVIEW AGENCY. REQUESTS FOR SUBSTITUTION SHALL BE IN WRITING, AND SHALL STATE THE REASONS FOR THE SUBSTITUTION REQUEST, THE SUGGESTED ALTERNATIVE, AND THE CHANGES IN COST. REQUESTS FOR SUBSTITUTION IN PLANT MATERIAL SHALL STATE THE NAMES OF NURSERIES WHO HAVE BEEN UNABLE TO SUPPLY THE ORIGINALLY SPECIFIED MATERIAL.

1.10 PLANTING SHALL ONLY OCCUR DURING SPECIFIED PLANTING SEASONS. SPRING SEASON SHALL BE FROM MARCH 1 TO JUNE 15. FALL PLANTING SEASON SHALL BE FRO SEPTEMBER 15 TO NOVEMBER 15.

1.11 THE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE IMPROVEMENTS, INCLUDING SEEDING, FOR ONE FULL YEAR AS REQUIRED BY THE SPECIFICATIONS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL PLANT MAINTENANCE DURING THE GUARANTEE PERIOD.

1.12 INSTALLED UNIT PRICES FOR ALL PLANT MATERIAL SHALL BE SUPPLIED TO THE OWNER AND LANDSCAPE ARCHITECT AT THE TIME OF BIDDING.

1.13 THE LANDSCAPE CONTRACTOR IS TO PERFORM A THOROUGH CLEANUP AND QUALITY CONTROL INSPECTION WITHIN 12 HOURS PRIOR TO THE OPENING OF THE POOL.

1.14 THE LANDSCAPE CONTRACTOR IS SUBJECT TO RANDOM INSPECTIONS BY THE OWNER AND/OR THE OWNER'S REPRESENTATIVE AT ANY TIME DURING THE INSTALLATION PROCESS.

SCALE IN FEET

0 10 20 40

811 Know what's below Call before you dig. Dial 811 Or Call 800-632-4949

SYM.	REVISION DESCRIPTION:	DATE:
1		
2		
3		
4		
5		
6		

PRELIMINARY - FOR REVIEW ONLY - NOT FOR CONSTRUCTION

3417 Winterwind Circle, Sanford, NC 27330
PO Box 249, Sanford, NC 27331
Phone: (919) 352-2834
e-mail: jhilliard@hilliardengineering.com
NC License #: P-0836

HILLIARD ENGINEERING, PLLC

LANDSCAPING PLAN

LEE AVENUE STORAGE
CITY OF SANFORD, NORTH CAROLINA

DESIGNED BY:	JEH
DRAWN BY:	JEH
APPROVED BY:	JEH
SHEET:	C5.0
	CIVIL

SANFORD / LEE COUNTY / BROADWAY TECHNICAL REVIEW COMMITTEE (TRC)

PROJECT REVIEW APPLICATION

Staff Contact: Thomas Mierisch | 919.718.4656, ext. 5396 | thomas.mierisch@sanfordnc.net

PLEASE INCLUDE THE COMPLETED TRC APPLICATION AND THE FOLLOWING CHECKLIST WITH YOUR SUBMITTAL.

GENERAL RULE: Most non-residential new construction and expansion projects, as well as all major subdivisions, must be reviewed by the TRC. Applications for variances and special use permits must also be reviewed by the TRC prior to placement on the appropriate jurisdiction's Board(s).

SUBMITTAL DEADLINE: The 1st day of each month at 12:00PM (noon)

MEETING DATE: The TRC meeting is typically held on the last Thursday of each month, beginning at 9:00AM.

SUBMITTAL INFORAMTION: Please submit the following information to be reviewed by TRC to the Department of Community Development office at 115 Chatham Street, Sanford, NC 27330:

- [x] TRC Application (completed and signed)
- [ ] TRC Fee (payment by check made out to City of Sanford is preferable; card or cash payment is possible, but must be made in-person at time of submittal).
- [x] Four (4) full-size paper copies (to scale)
- [x] One (1) digital version (PDF format) of the proposed site plan or drawing package; you may email the digital copy or downloadable link to thomas.mierisch@sanfordnc.net, or include a CD or USB drive

REVIEW TYPES

Please note that the review fee covers the 1st and 2nd plan review submittal. The 3rd submittal and all subsequent submittals thereafter for the same project shall incur a review fee of half the original fee, with the fee to be paid for each submittal.

- [x] **CONCEPT PLAN**: One conceptual sketch will be reviewed free of charge. However, this does not negate a project from an actual technical review at a later date, once the design is finalized.

- [ ] **COMMERCIAL / INDUSTRIAL PLAN REVIEW**:
  Review Fee: $500.00, plus $2.00 per 1,000 square feet of gross floor area.
  Building SF / 1,000 = _____ x 2 = _____

- [ ] **MULTI-FAMILY PROJECT PLAN REVIEW:**
  Review Fee: $500.00, plus $2.00 per dwelling unit.
  Dwelling units x2 = _____ + $500.00 = _____

- [ ] **SITE IMPROVEMENTS ONLY:** No building proposed for construction on the site (example, solar farm).
  Review Fee: $500.00

- [ ] **MAJOR SUBDIVISION:**
  Review Fee: $200.00, plus $10.00 per lot.
  _____ lots x 10 = _____ + $200.00 = _____

APPLICANT: The person responsible for submitting the TRC packet.

Name: Joe Faulkner, RLA Title: _____

Business Name: CE Group, Inc.

Business Address: 301 Glenwood Avenue Suite 220

Business Phone: 919-606-7703 Mobile Phone: same

Email: Joe@CEGroupInc.Com

PROPERTY OWNER(S): The legal property owner(s) as of the date of the TRC submittal.

Name: Carter Keller Title: _____

Business Name: Keller Investment, LLC

Business Address: 1600 Colon Road Sanford, NC 27330

Business Phone: 919-776-4641 Mobile Phone: _____

Email: Carter.Keller@CarolinaCommercialnc.com

PROJECT MANAGER: The one person responsible for coordinating the entire project from beginning to end. This person should be knowledgeable on construction methods and schedule and will be the "go to" person for staff when there is a question or problem regarding the project.

Name: Corey Mabus Title: _____

Business Name: Carolina Commercial

Business Address: 1600 Colon Road Sanford, NC 27330

Business Phone: 919-775-1497 Mobile Phone: _____

Email: Corey@CarolinaCommercialNC.com

SITE INFORMATION:

Jurisdiction: ☐ Lee County ■ City of Sanford ☐ Town of Broadway

Lee County Tax Parcel(s) Identification Number (PIN): 9644-53-0423, 9644-53-6465, 9644-63-1661

Address / Project Location: 1602 Charleston Drive

Current Zoning District: C-2, and partial R-20 Total Site Acreage: 22.39 acres

Current Use: residential and vacant

Is any portion of the site located in the floodplain or floodway? No

Is any portion of the site located in a watershed? No

PROJECT INFORMATION:

Business or Development / Subdivision Name: _____

Project Description: Concept plan for Conditional use rezoning for 456 unit apartment complex with clubhouse and pool.

Proposed Zoning District (if rezoning): Conditional Use Type 1

Number of Lots / Units / Tenants: 1

Site Size (in acres): 22.39 acres

Average Lot Size (if subdividing): _____ Disturbed Acreage: _____

Existing Impervious Surface Ratio (Pre-construction): _____sf / _____%

Proposed Impervious Surface Ratio (Post-construction: _____sf / _____%

UTILITIES	☐ Existing	■ Proposed		
WATER	■ Public	☐ Private		
SEWER	■ Public	☐ Private		
STREETS	☐ Existing	☐ Proposed	■ Public (City)	■ Public (NCDOT)

_____ 6/30/22

Applicant's Signature (sign & print) Date

STAFF USE ONLY

DATE RECEIVED: _____ FEE AMOUNT: _____

FORM OF PAYMENT: ☐ Check #_____ ☐ Paid via Card ☐ Cash

TRC MEETING DATE: _____ PLAN REVIEWER: _____

TRC AGENDA #: _____ ENERGOV CASE #: _____

STAFF NOTES: _____

SYMBOL LEGEND

△	COMPUTED POINT
●	PROPERTY CORNER FOUND
○	PROPERTY CORNER SET
■	CONCRETE MONUMENT FOUND

US HWY 1 / 15-501
CHARLESTON DRIVE (SR 1445)
VARIABLE PUBLIC R/W
DB 867, PG. 551; DB 871, PG. 641; DB 6603, PG. 552; DB 24, PG. 641; DB
NCDOT PROJECT 6.540001

R/W

N/F
NORTHVIEW CROSSING
DB 725, PG. 608
DB 717, PG. 824
DB 717, PG. 720
DB 714, PG. 395
PC 10, PG. 36F
PIN: 9644-54-3186
USE: SHOPPING CENTER
ZONED: C-2

310.40'
N84°27'53"W

20' FORCE MAIN EASEMENT PC 10, PG. 36F
729.93'
S69°32'01"W

R/W

HAWKINS AVE
100' PUBLIC R/W

R/W

CE GROUP POINT #1
60D NAIL SET
NC GRID (NAD83/2011)
N: 643,470.91'
E: 1,944,868.34'

N62°37'42"E
94.23'

CM=999997125

53.71'
N34°10'57"W

S24°37'20"W
12.92'

S11°43'58"W
148.47'

38.18'
S04°21'19"W

S04°21'19"W
38.24'

37.97'
S18°39'41"W

S18°39'39"E
295.36'

FUTURE
LOT 1
AREA TO BE REZONED:
22.390 ACRES
975,311 SQ FT
EXISTING ZONING: C-2
PROPOSED ZONING:
CONDITIONAL ZONING
DISTRICT TYPE 1

FUTURE
LOT 1
2.335 ACRES
101,714 SQ FT
USE: VACANT
ZONED: C-2

N26°39'47"W
495.58'

207.41'
S17°56'29"E

N26°39'47"W
80.19'

N52°14'01"E
83.00'

N67°58'06"E
109.34'

N63°02'11"E
94.50'

N63°03'17"E
203.98'

S26°18'39"W
38.87'

N74°00'21"E
894.44' (TOTAL)

N34°00'01"E
45.19'

N/F
DAVID YOUNG
DB 1442, PG. 404
PC 5, PG. 36
PIN: 9644-42-8615

N/F
STUART SCOTT
DB 610, PG. 183
PC 5, PG. 36
PIN: 9644-42-8790

N/F
ELIZABETH SMART
DB 819, PG. 456
PC 5, PG. 36
PIN: 9644-42-9763

N/F
JAMELL BERRYMAN
DB 1074, PG. 856
PC 5, PG. 36
PIN: 9644-52-0756

N/F
STEPHANIE PEMBERTON
DB 976, PG. 950
PC 5, PG. 36
PIN: 9644-52-1827

N/F
MARY JEAN POPE
DB 1610, PG. 523
PC 5, PG. 36
PIN: 9644-52-2729

N/F
HOLLY BAKER
DB 680, PG. 877
PC 5, PG. 36
PIN: 9644-52-3847

N/F
CAMERON MILLER
DB 1475, PG. 732
PC 5, PG. 36
PIN: 9644-52-4926

N/F
PAYTON SHARPE
DB 1572, PG. 418
PC 5, PG. 36
PIN: 9644-52-5969

N/F
LAUREN MCCORMACK
DB 605, PG. 519
PC 4, PG. 223
PIN: 9644-53-7055

N/F
THO DAI VO
DB 492, PG. 935
PC 4, PG. 223
PIN: 9644-63-8057

N/F
WILLIAM BRITT
DB 560, PG.833
PC 4, PG. 223
PIN: 9644-53-9130

N/F
JOHN SWARTOUT
DB 560, PG.833
PC 4, PG. 223
PIN: 9644-53-9130

N/F
DEBORAH WILKIE
DB 1583, PG. 422
PC 4, PG. 223
PIN: 9644-63-1136

CHARLESTON PLACE SUBDIVISION
ZONED R-12

N26°39'47"W
295.18'

FUTURE
LOT 2
1.033 ACRES
44,984 SQ FT
USE: VACANT
ZONED: R-20

N26°39'47"W
296.43'

N13°40'01"W
80.18'

N78°04'32"E
306.99'

N/F
BUTLER DEVELOPMENT GROUP
DB 1294, PG. 697
PC 10, PG. 24F
PIN: 9644-63-1465
USE: VACANT
ZONED: C-2

N05°41'09"E
286.83'

N/F
PGP DOLLAR I LLC
DB 1593, PG. 632
PC 10, PG. 24F
PIN: 9644-63-2374
USE: RETAIL
ZONED: C-2

2.5'

NORTH

60' 0 60' 120'
SCALE: 1" = 60'

CALL OR CLICK 811 BEFORE YOU DIG
811 IS A DIGGING PARTNER

PRELIMINARY DESIGN
NOT RELEASED
FOR CONSTRUCTION

NO.	REVISIONS	DATE

CE GROUP
301 GLENWOOD AVE. 220
RALEIGH, NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032
www.cegroupinc.com
License # C-1739

Preliminary
NORTH CAROLINA
0886
Not Released For Construction
JOSEPH PAULINER

THE STATION APARTMENTS

REZONING EXHIBIT
SANFORD, NORTH CAROLINA

Date:	6/30/2022
Scale:	1" = 60'
Drawn:	JPD
Checked:	AJF
Project No.	128-11
Computer Dwg. Name	128-01 1 rezoning exhibit

Sheet No: 1 Of 1

THE STATION APARTMENTS
CONDITIONAL USE REZONING
SANFORD, NORTH CAROLINA

JUNE 30, 2022

OWNER / DEVELOPER
CAROLINA COMMERCIAL CONTRACTORS,LLC
1600 COLON ROAD
SANFORD, NC 27330
CONTACT: COREY MABUS, PROJECT MANAGER
TEL: 919 775-1497
corey@carolinacommercialnc.com

GENERAL NOTES

1. BOUNDARY AND TOPOGRAPHIC ARE RESULTS OF ON-THE-GROUND SURVEYS CARRIED OUT BY CE GROUP, INC ON AND BETWEEN 1/24/2019 AND 2/13/2019.
2. EXISTING UNDERGROUND STRUCTURES AND UTILITIES SHOWN ARE BASED ON FIELD SURVEYS AND BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO STARTING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. THE CONTRACTOR SHALL CONTACT NC811 AND THE CITY OF SANFORD FOR ASSISTANCE IN LOCATING EXISTING UTILITIES AT LEAST 48 HOURS PRIOR TO ANY DIGGING.
4. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD SPECIFICATIONS AND STANDARD DETAILS.
5. ALL UTILITIES CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF SANFORD SPECIFICATIONS AND STANDARD DETAILS.
6. SUBJECT PROPERTY DOES NOT LOCATE IN A FLOOD HAZARD AREA PER FEMA FIRM NUMBER 3710966000J EFFECTIVE 09/06/2006.

VICINITY MAP
NTS

SITE DATA

0 CHARLESTON DRIVE
SANFORD, NC
PIN: 9644-53-6465-00, 9644-53-0423, 9644-63-1661
PROPERTY OWNER KELLER INVESTMENT LLC
1600 COLON ROAD
SANFORD, NC 27330

MAIN TRACT AREA:	22.39 A.C
FUTURE LOT 1:	2.34 A.C
FUTURE LO2 2:	1.03 A.C
	TOTAL: 25.76 A.C

PROPOSED UNITS = 456 UNITS

PARKING REQUIRED
168 (1 BED) X 1.5 SPACES = 252 SPACES
240 (2 BED) X 1.5 SPACES = 360 SPACES
48 (3 BED) X 2 SPACES = 96 SPACES
TOTAL REQUIRED = 708 SPACES

PARKING PROVIDED = 766 SPACES
(WITH GARAGES)
PARKING PROVIDED = 720 SPACES
(WITHOUT GARAGES)
NUMBER OF HANDICAPPED SPACES = 17

TABLE OF CONTENTS

COVER SHEET	1
EXISTING CONDITIONS - DEMO PLAN	2
PRELIMINARY SITE PLAN	3
PRELIMINARY GRADING PLAN	4
PRELIMINARY UTILITY PLAN	5
PRELIMINARY LANDSCAPE PLAN	6

NO.	REVISIONS	DATE

CE GROUP
301 GLENWOOD AVE. 220
RALEIGH,NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032
www.cegroupinc.com
License # C-1739

Preliminary Not Released For Construction
NORTH CAROLINA 10886 REGISTERED LANDSCAPE ARCHITECT JOSEPH FAULKNER

THE STATION APARTMENTS
CONDITIONAL USE REZONING
COVER
SANFORD, NORTH CAROLINA

Date:	6/30/2022
Scale:	N/A
Drawn:	AJF
Checked:	AJF
Project No.	128-11
Computer Dwg. Name	128-011 cover

CALL OR CLICK 811 BEFORE YOU DIG 811 SAFE DIGGING PARTNER

PRELIMINARY DESIGN
NOT RELEASED
FOR CONSTRUCTION

Sheet No:
1
Of 5

LEGEND

- SANITARY SEWER MAIN
- WATER MAIN
- GAS MAIN
- FIBER OPTIC
- OVERHEAD ELECTRIC
- UNDERGROUND ELECTRIC
- POWER POLE
- POWER POLE W/ LIGHT
- EXISTING IRON PIPE
- FIRE HYDRANT
- GATE VALVE
- EXISTING WATER METER

LINE LEGEND

	EXISTING 5' CONTOUR
	EXISTING 1' CONTOURS
	BUFFER LINE
	EASEMENT LINE
	EASEMENT LINE TO BE REMOVED
	PROPOSED PROPERTY LINE
	PROPERTY LINE NOT SURVEYED
	PROPERTY LINE TO BE REMOVED
	RIGHT OF WAY

SYMBOL LEGEND

△	COMPUTED POINT
●	PROPERTY CORNER FOUND
○	PROPERTY CORNER SET

US HWY 1 / I-15-501
CHARLESTON DRIVE (SR 1445)
DB 857, PG. 1602, DB 1442, PG. 621, 424, DB 663, PG. 502, DB 241, PG. 651
NCDOT PROJECT 6340607

CE GROUP POINT #1
60D NAIL SET
NC GRID (NAD83/2011)
N: 643,470.91'
E: 1,944,868.34'

CHARLESTON DRIVE
PAVED ROAD

OVERHEAD UTILITIES

EXISTING HYDRANT

BUILDINGS REMOVED

S88°19'52"E 193.13'

193.2'
30M WIDE'E

S79°01'08"W 246.30'

S04°11'08"W 28.76'

S04°11'08"W 38.84'

INV: 357.87

INV: 356.32

INV: 355.85

INV: 355.75

INV: 349.05

INV: 340.12

S16°48'58"W 445.07'

INV: 338.84
RIM: 337.96
INV: 338.12
RIM: 337.85
INV: 338.10

N67°39'06"E 109.34'

N25°14'0"E 45.00'

N64°39'06"W 43.19'

N25°14'0"E 90.18'

N63°02'17"E 298.92'

N74°00'21"E 39.82'

6' WOOD FENCE

N74°00'21"E 894.44'

310.40'
N84°27'57"W

20' FORCE MAIN EASEMENT PC 10, PG. 36F

729.93'
S69°32'0"W

WETLANDS

WETLANDS

SHED

SHED

TOP: 330.54

FES

INV: 325.68

INV: 323.76

HAWKINS AVE
100' PUBLIC R/W

DIRT ROAD

N61°15'40"E 176.11'

MHO

MHO

MHO

N61°15'40"W 49.49'

BUILDINGS TO BE REMOVED

SHED

N14°35'0"W 78.06'

SHED

N28°18'0"W 43.67'

BLOCK BUILDING (RUINS)

BUILDINGS TO BE REMOVED

CONC

CONC

306.99'
S78°04'32"W

N00°41'0"E 288.83'

CONCRETE DRIVEWAY ENCROACHES (SEE NOTE)

BUTLER DEVELOPMENT GROUP
DB 1294, PG. 697
PC 10, PG. 24F
PIN: 9644-63-1465

PGP DOLLAR I LLC
DB 1593, PG. 632
PC 10, PG. 24F
PIN: 9644-63-2374

20' SS ESMT
PC 8, PG 67C

FES

20' DR, SEWER
PC 4, PG

DEBORAH WI
DB 1
P
PIN:

HOLLY BAKER
DB 680, PG. 877
PC 5, PG. 36
PIN: 9644-52-3847

CAMERON MILLER
DB 1475, PG. 732
PC 5, PG. 36
PIN: 9644-52-4926

PAYTON SHARPE
DB 1573, PG. 418
PC 5, PG. 36
PIN: 9644-52-5969

LAUREN MCCORMACK
DB 605, PG. 519
PC 4, PG. 223
PIN: 9644-53-7055

THO DAI VO
DB 492, PG. 935
PC 4, PG. 223
PIN: 9644-63-8057

WILLIAM BRITT
DB 560, PG 833
PC 4, PG. 223
PIN: 9644-53-9130

JOHN SWARTOUT
DB 560, PG 833
PC 4, PG. 223
PIN: 9644-53-9130

WOOD FENCE

STEPHANIE PEMBERTON
DB 1560, PG. 360
PC 5, PG. 36
PIN: 9644-52-1827

MARY JEAN POPE
DB 1610, PG. 323
PC 5, PG. 36
PIN: 9644-52-2729

JAMEEL BERRYMAN
DB 1074, PG. 866
PC 5, PG. 36
PIN: 9644-52-0756

ELIZABETH SMART
DB 819, PG. 486
PC 5, PG. 36
PIN: 9644-42-9763

STUART SCOTT
DB 1563, PG. 163
PC 5, PG. 36
PIN: 9644-42-8790

DAVID YOUN
DB 1442, PG.
PC 5, PG. 36
PIN: 9644-42-38

CE

IRF
NO. 30846

IRS
NO. 30846

N

NORTH

60' 0 60' 120'

SCALE: 1" = 60'

CALL OR CLICK 811 BEFORE YOU DIG
811 IS A DIGGING PARTNER

PRELIMINARY DESIGN
NOT RELEASED
FOR CONSTRUCTION

NO.	REVISIONS	DATE

CE GROUP

301 GLENWOOD AVE. 220
RALEIGH, NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032

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License # C-1739

NORTH CAROLINA
0886
REGISTERED
PROFESSIONAL ENGINEER
JOSEPH PALMER

Preliminary Not Released For Construction

THE STATION APARTMENTS
CONDITIONAL USE REZONING

EXISTING CONDITIONS / DEMO PLAN
SANFORD, NORTH CAROLINA

Date:	6/30/2022
Scale:	1" = 60'
Drawn:	AJF
Checked:	AJF
Project No.	128-11
Computer Dwg. Name	128-011 existing cond-demo plan

Sheet No: 2 Of 5

SITE DATA

0 CHARLESTON DRIVE
SANFORD, NC
PIN: 9644-53-6465-00, 9644-53-0423, 9644-63-1661
PROPERTY OWNER KELLER INVESTMENT LLC
1600 COLON ROAD
SANFORD, NC 27330

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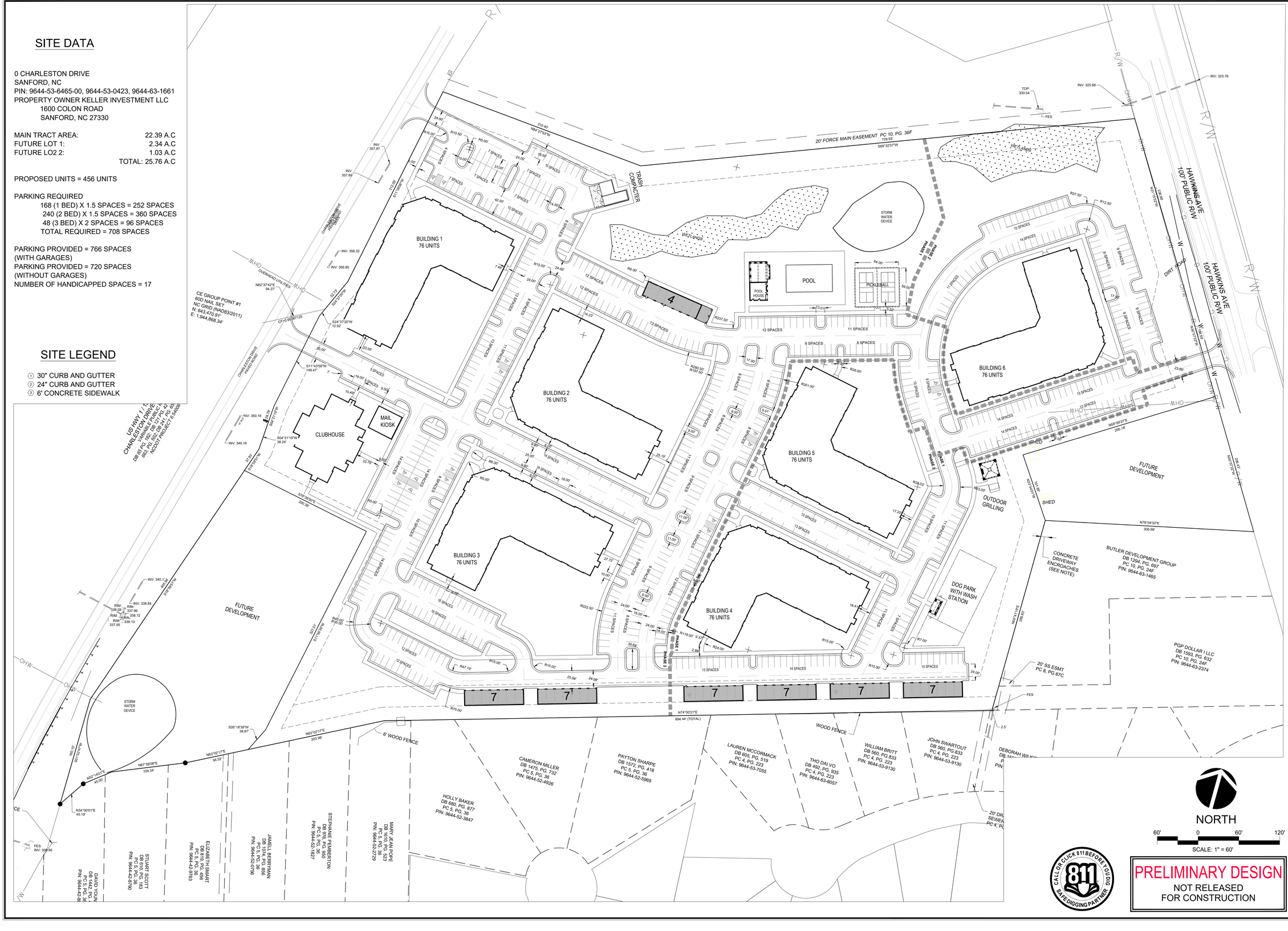
TOTAL REQUIRED = 708 SPACES

PARKING PROVIDED = 766 SPACES
(WITH GARAGES)
PARKING PROVIDED = 720 SPACES
(WITHOUT GARAGES)
NUMBER OF HANDICAPPED SPACES = 17

SITE LEGEND

① 30" CURB AND GUTTER
② 24" CURB AND GUTTER
③ 6' CONCRETE SIDEWALK



NO.	REVISIONS	DATE

CE GROUP

301 GLENWOOD AVE. 220
RALEIGH, NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032

www.cegroupinc.com

License # C-1739

Preliminary Not Released For Construction
NORTH CAROLINA 0886 REGISTERED LANDSCAPE ARCHITECT JOSEPH FAULNER

THE STATION APARTMENTS
CONCEPT PLAN #3

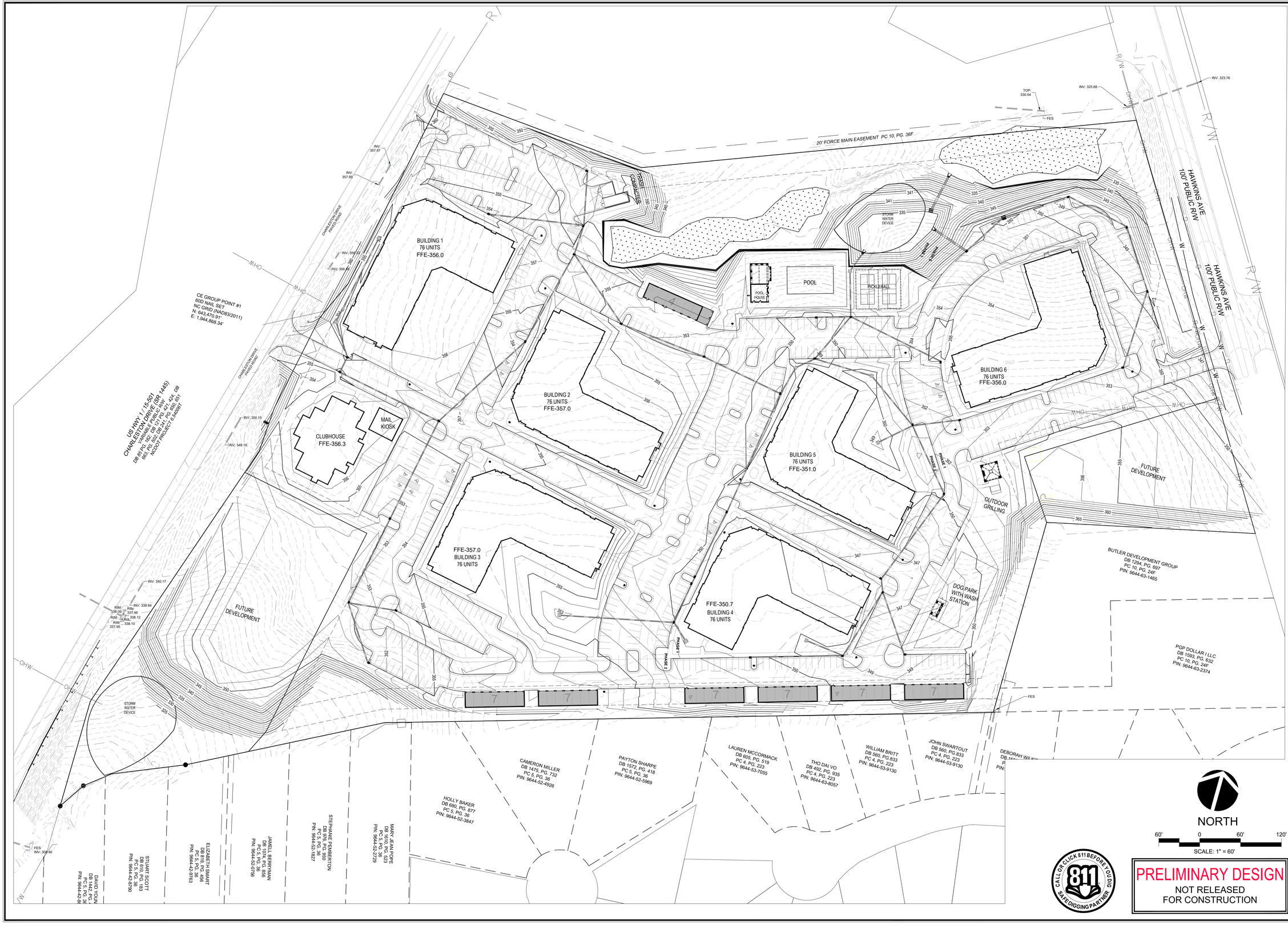
SANFORD, NORTH CAROLINA

Date:	6/30/2022
Scale:	1" = 60'
Drawn:	
Checked:	
Project No.	128-11
Computer Dwg. Name	128-011 site plan

Sheet No: 3 Of 6

CALL OR CLICK 811 BEFORE YOU DIG
811 SAFE DIGGING PARTNER

PRELIMINARY DESIGN
NOT RELEASED
FOR CONSTRUCTION



CE GROUP

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RALEIGH, NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032

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License # C-1739

Preliminary Plat Review For Construction
NORTH CAROLINA
0886
PROFESSIONAL ENGINEER
JOSEPH FAULNER

THE STATION APARTMENTS
CONDITIONAL USE REZONING

GRADING PLAN
SANFORD, NORTH CAROLINA

NO.	REVISIONS	DATE

Date: 6/30/2022
Scale: 1" = 60'
Drawn: AJF
Checked: AJF
Project No.: 128-11
Computer Dwg. Name: 128-011 grading plan

Sheet No: 3 Of 5

CALL OR CLICK 811 BEFORE YOU DIG — 811 SAFE DIGGING PARTNER

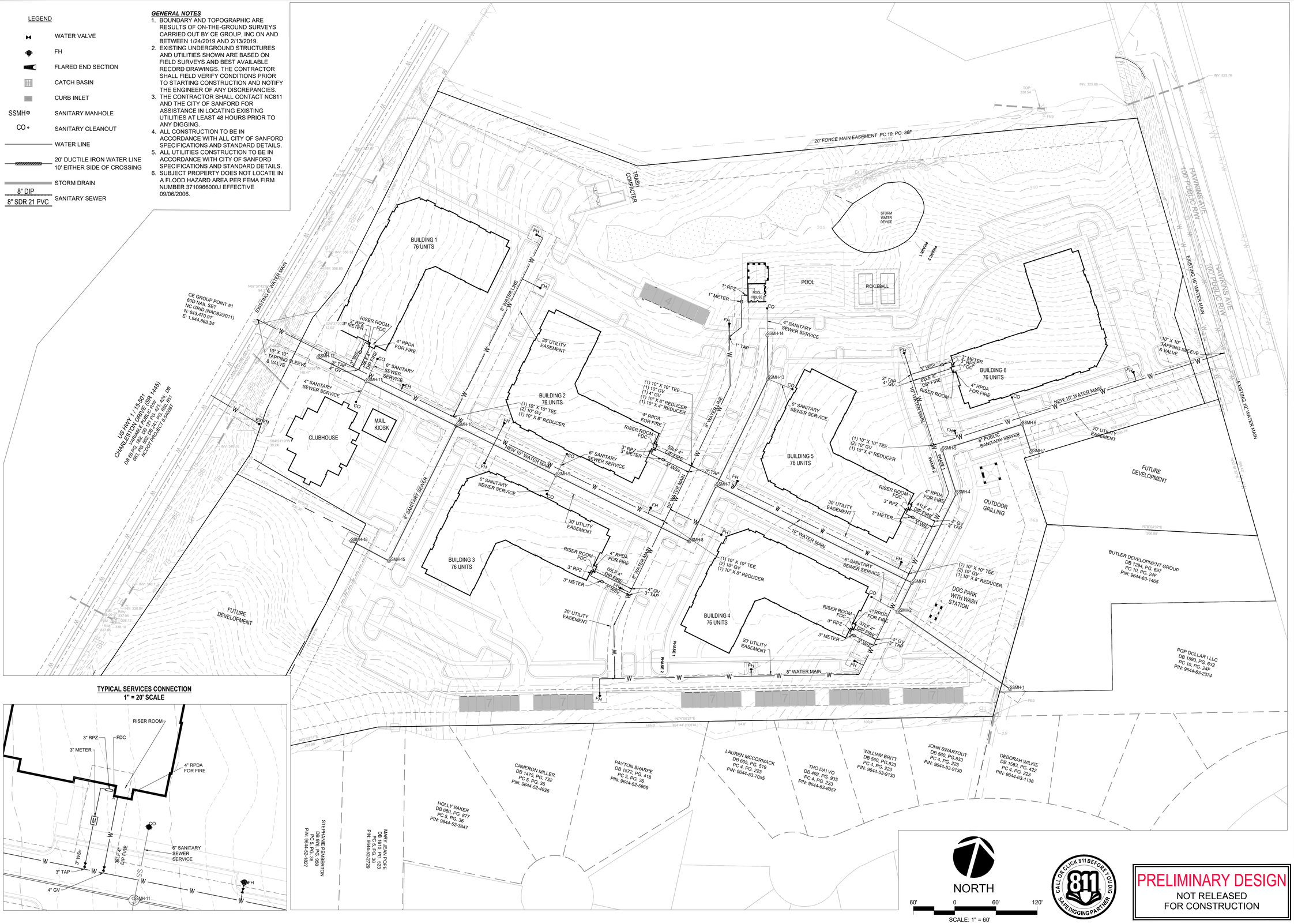
PRELIMINARY DESIGN
NOT RELEASED FOR CONSTRUCTION

LEGEND

- WATER VALVE
- FH
- FLARED END SECTION
- CATCH BASIN
- CURB INLET
- SSMH — SANITARY MANHOLE
- CO — SANITARY CLEANOUT
- WATER LINE
- 20' DUCTILE IRON WATER LINE 10' EITHER SIDE OF CROSSING
- STORM DRAIN
- 8" DIP
- 8" SDR 21 PVC — SANITARY SEWER

GENERAL NOTES

1. BOUNDARY AND TOPOGRAPHIC ARE RESULTS OF ON-THE-GROUND SURVEYS CARRIED OUT BY CE GROUP, INC ON AND BETWEEN 1/24/2019 AND 2/13/2019.
2. EXISTING UNDERGROUND STRUCTURES AND UTILITIES SHOWN ARE BASED ON FIELD SURVEYS AND BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO STARTING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. THE CONTRACTOR SHALL CONTACT NC811 AND THE CITY OF SANFORD FOR ASSISTANCE IN LOCATING EXISTING UTILITIES AT LEAST 48 HOURS PRIOR TO ANY DIGGING.
4. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD SPECIFICATIONS AND STANDARD DETAILS.
5. ALL UTILITIES CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF SANFORD SPECIFICATIONS AND STANDARD DETAILS.
6. SUBJECT PROPERTY DOES NOT LOCATE IN A FLOOD HAZARD AREA PER FEMA FIRM NUMBER 3710966000J EFFECTIVE 09/06/2006.



TYPICAL SERVICES CONNECTION
1" = 20' SCALE

NORTH

60' 0 60' 120'

SCALE: 1" = 60'

CALL OR CLICK 811 BEFORE YOU DIG
SAFE DIGGING PARTNER

PRELIMINARY DESIGN
NOT RELEASED FOR CONSTRUCTION

NO.	REVISIONS	DATE

CE GROUP

301 GLENWOOD AVE. 220
RALEIGH,NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032

www.cegroupinc.com

License # C-1739

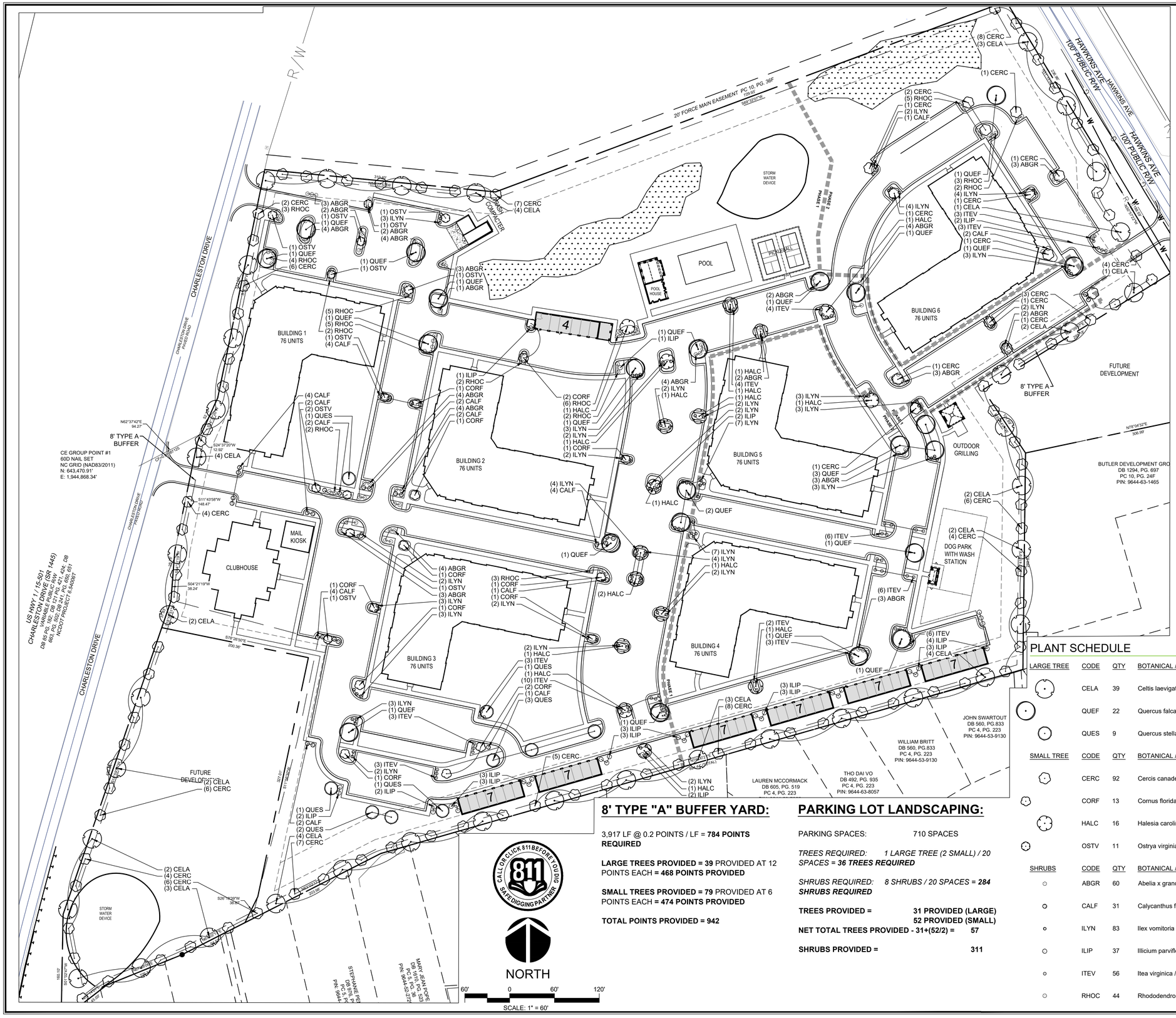
NORTH CAROLINA SEAL P-0894 PARK P ASHNESS — Preliminary Not for Construction

THE STATION APARTMENTS
UTILITIES PLAN

SANFORD, NORTH CAROLINA

Date: 6/28/2022
Scale: 1" = 60'
Drawn:
Checked:
Project No. 128-11
Computer Dwg. Name 128-011 utilities plan

Sheet No: 5 Of 6



8' TYPE "A" BUFFER YARD:

3,917 LF @ 0.2 POINTS / LF = **784 POINTS REQUIRED**

LARGE TREES PROVIDED = 39 PROVIDED AT 12 POINTS EACH **= 468 POINTS PROVIDED**

SMALL TREES PROVIDED = 79 PROVIDED AT 6 POINTS EACH **= 474 POINTS PROVIDED**

TOTAL POINTS PROVIDED = 942

PARKING LOT LANDSCAPING:

PARKING SPACES: 710 SPACES

*TREES REQUIRED: 1 LARGE TREE (2 SMALL) / 20 SPACES = **36 TREES REQUIRED***

*SHRUBS REQUIRED: 8 SHRUBS / 20 SPACES = **284 SHRUBS REQUIRED***

TREES PROVIDED = 31 PROVIDED (LARGE)
52 PROVIDED (SMALL)
NET TOTAL TREES PROVIDED - 31+(52/2) = 57

SHRUBS PROVIDED = 311

GENERAL NOTES

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2. EXISTING UNDERGROUND STRUCTURES AND UTILITIES SHOWN ARE BASED ON FIELD SURVEYS AND BEST AVAILABLE RECORD DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY CONDITIONS PRIOR TO STARTING CONSTRUCTION AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
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5. ALL UTILITIES CONSTRUCTION TO BE IN ACCORDANCE WITH CITY OF SANFORD SPECIFICATIONS AND STANDARD DETAILS.
6. SUBJECT PROPERTY DOES NOT LOCATE IN A FLOOD HAZARD AREA PER FEMA FIRM NUMBER 3710966000J EFFECTIVE 09/06/2006.

SITE DATA

0 CHARLESTON DRIVE
SANFORD, NC
PIN: 9644-53-6465-00
PROPERTY OWNER KELLER INVESTMENT LLC
1600 COLON ROAD
SANFORD, NC 27330

MAIN TRACT AREA:	22.0 A.C
TRACT 2 AREA:	2.4 A.C
TRACT 3 AREA:	1.0 A.C
TRACT 4 AREA:	1.5 A.C
TOTAL:	26.9 A.C
MAIN TRACT IMPERVIOUS AREA:	12.1 A.C
TRACT 2 IMPERVIOUS AREA:	1.0 A.C
TRACT 3 IMPERVIOUS AREA:	0.1 A.C
TRACT 4 IMPERVIOUS AREA:	0.0 A.C
TOTAL: 13.2 A.C	
	49.1%

PROPOSED UNITS = 456 UNITS

PARKING REQUIRED
168 (1 BED) X 1.5 SPACES = 252 SPACES
240 (2 BED) X 1.5 SPACES = 360 SPACES
48 (3 BED) X 2 SPACES = 96 SPACES
TOTAL REQUIRED = 708 SPACES

PARKING PROVIDED = 766 SPACES
(WITH GARAGES)
PARKING PROVIDED = 720 SPACES
(WITHOUT GARAGES)
NUMBER OF HANDICAPPED SPACES = 17

PLANT SCHEDULE

LARGE TREE	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	REMARKS
	CELA	39	Celtis laevigata / Sugar Hackberry	2.5" MIN	B&B ROOT, FULL
	QUEF	22	Quercus falcata / Southern Red Oak	2.5" MIN	B&B ROOT, FULL
	QUES	9	Quercus stellata / Post Oak	2.5" MIN	B&B ROOT, FULL
SMALL TREE	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**	**REMARKS**
	CERC	92	Cercis canadensis / Eastern Redbud	8`-10` Ht.	B&B ROOT, FULL
	CORF	13	Cornus florida / Flowering Dogwood	8`-10` Ht.	B&B ROOT, FULL
	HALC	16	Halesia carolina / Silverbell	8`-10` Ht.	B&B ROOT, FULL
	OSTV	11	Ostrya virginiana / American Hophornbeam	8`-10` Ht.	B&B ROOT, FULL
SHRUBS	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**	**REMARKS**
○	ABGR	60	Abelia x grandiflora / Glossy Abelia	12"-18"	CONT. ROOTS, FULL
○	CALF	31	Calycanthus floridus / Sweetshrub	18"-24"	CONT. ROOTS, FULL
○	ILYN	83	Ilex vomitoria 'Nana' / Dwarf Yaupon Holly	18"-24"	CONT. ROOTS, FULL
○	ILIP	37	Illicium parviflorum / Anise Tree	18"-24"	CONT. ROOTS, FULL
○	ITEV	56	Itea virginica / Virginia Sweetspire	18"-24"	CONT. ROOTS, FULL
○	RHOC	44	Rhododendron catawbiense / Catawba Rhododendron	18"-24"	CONT. ROOTS, FULL

NO.	REVISIONS	DATE

CE GROUP
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RALEIGH,NC 27603
PHONE: 919-367-8790
FAX: 919-322-0032
www.cegroupinc.com
License # C-1739

NORTH CAROLINA
PROFESSIONAL ENGINEER
0856
SEAL
AJF
Preliminary Not For Construction
SEPP 1

THE STATION APARTMENTS
CONDITIONAL USE REZONING

LANDSCAPE PLAN
SANFORD, NORTH CAROLINA

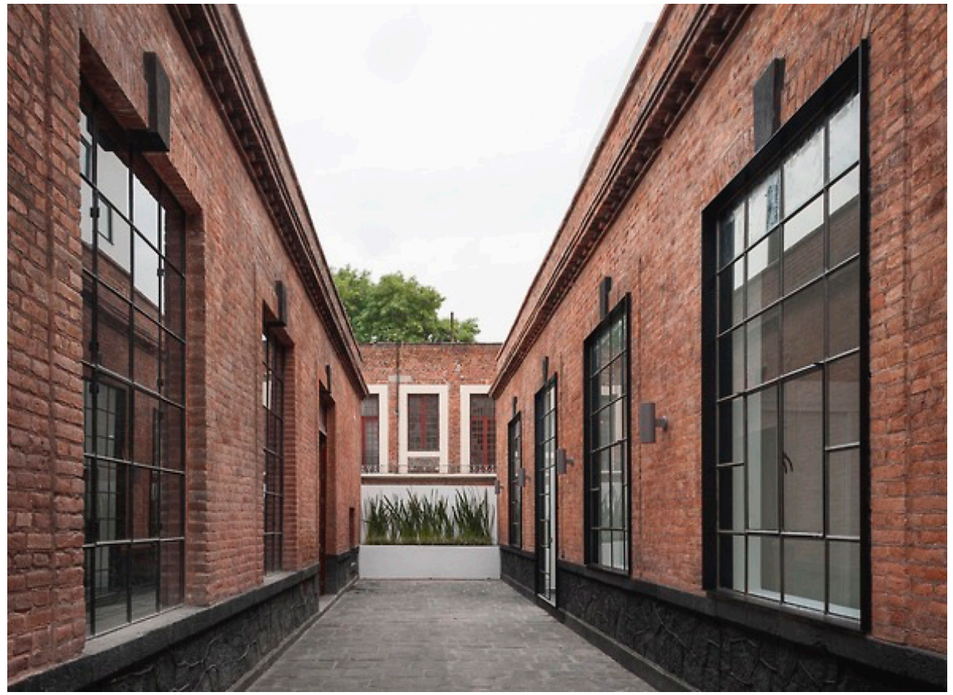
Date:	6/30/2022
Scale:	1" = 60'
Drawn:	AJF
Checked:	AJF
Project No.	128-11
Computer Dwg. Name	128-011 landscape plan

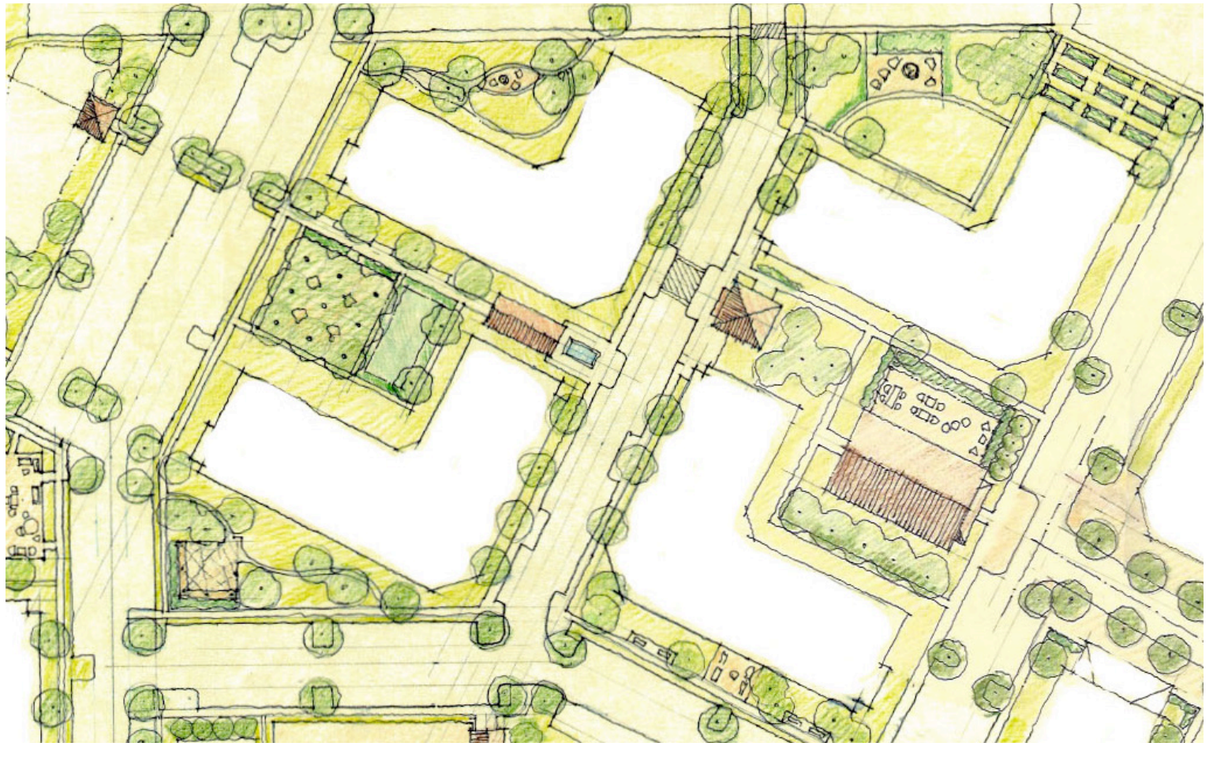
Sheet No:
6
Of 5

The Station

Sanford, North Carolina

Precedents, Imagery, and Vision Boards





The Station

Sanford, North Carolina

The Station

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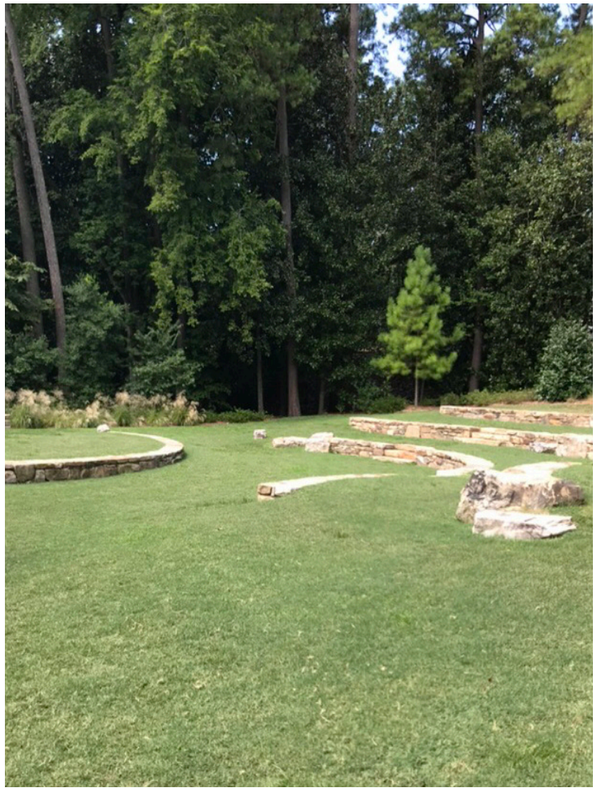
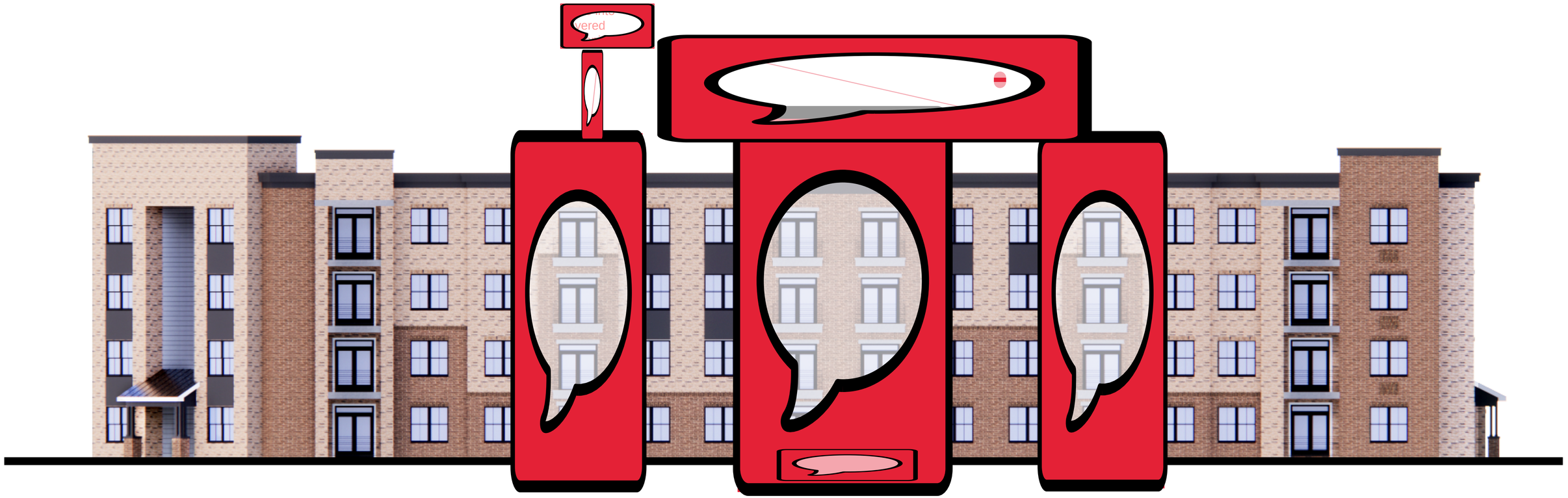
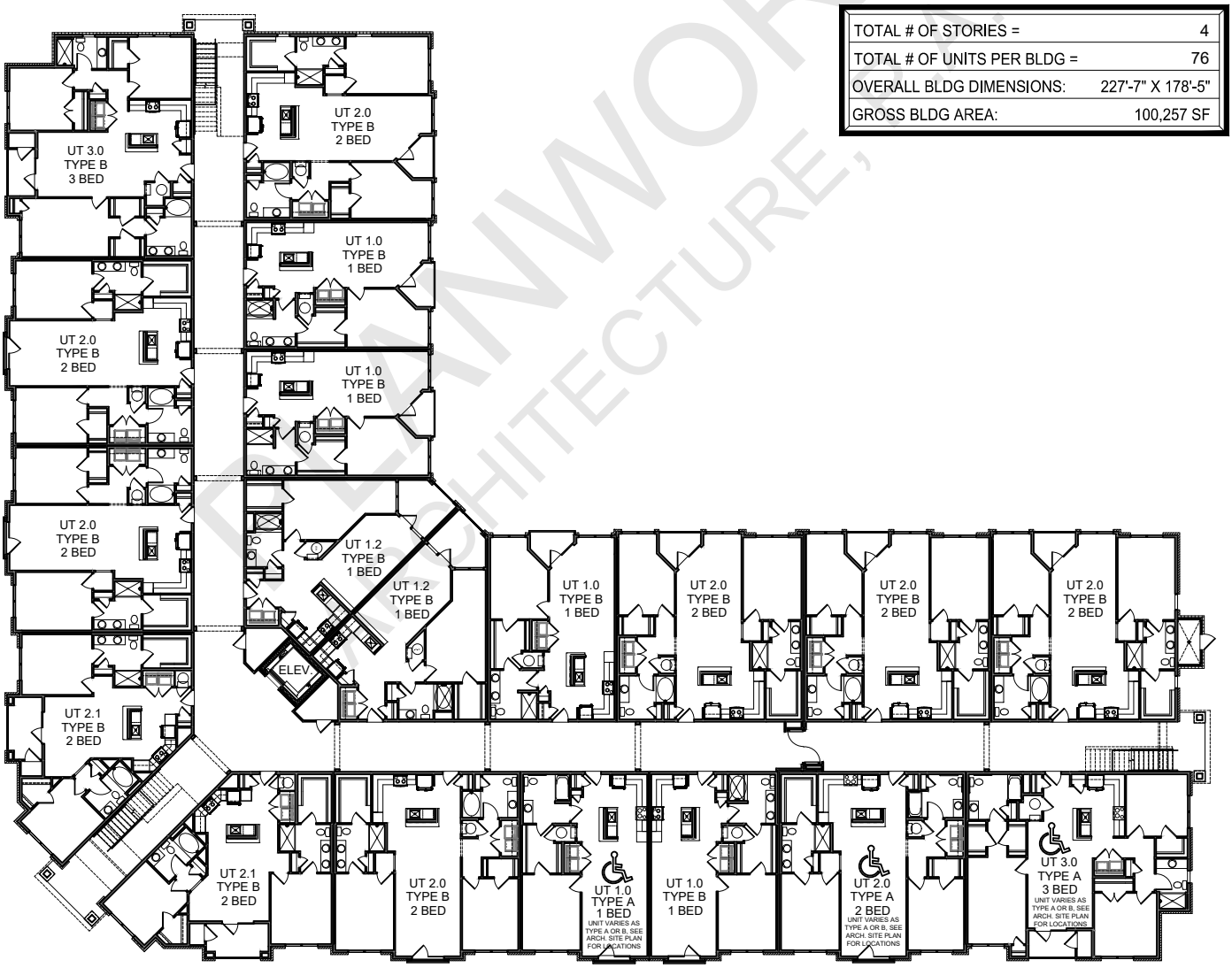
Sanford, North Carolina





PLANWORX
ARCHITECTURE



TOTAL # OF STORIES =	4
TOTAL # OF UNITS PER BLDG =	76
OVERALL BLDG DIMENSIONS:	227'-7" X 178'-5"
GROSS BLDG AREA:	100,257 SF

Plan# 010018 BT1

Dimensions are for illustrative purposes only. Actual dimensions and square footage will be determined by construction documents. Screened Porches/Decks may not be included in the overall dimensions.

PLANWORX ARCHITECTURE, P.A.

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1ST TRC SUBMITTAL

SANFORD FIRE STATION NO. 5

COLON ROAD
SANFORD, NC
CITY OF SANFORD

SITE DATA

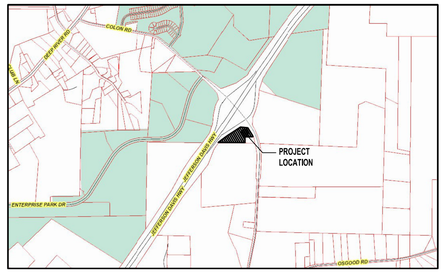
PROJECT:	SANFORD FIRE STATION NO.5
OWNER:	CITY OF SANFORD
OWNER CONTACT:	PAUL M. WEEKS, JR., P.E. UTILITIES & ENGINEERING DIRECTOR 225 E. WEATHERSPOON STREET SANFORD, NC 27331 PHONE: 919-777-1119 EMAIL: PAUL.WEEKS@SANFORDNC.NET
DESIGNER:	CLH DESIGN, PA
DESIGNER CONTACT:	ZAK PIERCE – LANDSCAPE ARCHITECT REGENCY PARK 400 REGENCY FOREST DR., SUITE 120 CARY, NC 27518 PHONE: 919-319-6716 EMAIL: ZPIERCE@CLHDESIGNPA.COM
PROJECT ADDRESS:	0 COLON RD (ADDRESS TBD, SW OF US-1/COLON RD INT.) SANFORD, NC 27331
PIN:	9655-48-4471-00
LAT/LONG:	35.559099,-79.151886
ZONING:	HC
EXISTING USE:	VACANT
PROPOSED USE:	GOVERNMENT SERVICE
TRACT AREA:	5.05 ACRES
WATERSHED:	WS-IV WATERSHED
MAX BUILDING HEIGHT:	NO MAX
FRONT SETBACK:	10 FEET MINIMUM
REAR SETBACK:	0 FEET
SIDE SETBACK:	0 FEET
PROPOSED BUILDING GFA:	GOVERNMENT SERVICES: 8,842 SF
APPARATUS BAY GFA:	GOVERNMENT SERVICES: 3,532 SF
TOTAL BUILDING GFA:	GOVERNMENT SERVICES: 12,374 SF
PARKING REQUIREMENTS:	
GOVERNMENT SERVICES 1 PER 600 SF OF GFA – GOV FACILITIES	
REQUIRED:	15 SPACES (8,824 SF GFA EXCLUDING APPARATUS BAYS)
PROVIDED:	21 SPACES
IMPERVIOUS DATA	
AREA:	42,396.42 SF
RATIO:	19.27%
DISTURBED ACREAGE:	2.70 ACRES

PROJECT TEAM

ARCHITECTURAL
ADW ARCHITECTS
2815 COLLSEUM CENTRE DRIVE, SUITE 500
CHARLOTTE, NC 28217

CIVIL ENGINEERING AND
LANDSCAPE ARCHITECTURE
CLH DESIGN, PA
400 REGENCY FOREST DR., STE. 120
CARY, NC 27518

VICINITY MAP



SHEET INDEX

SITE/CIVIL
C000 COVER SHEET
C100 OVERALL SITE PLAN
C101 SITE STAKING PLAN
C201 SITE DEMO PLAN
C301 SITE GRADING PLAN
C401 EROSION CONTROL PLAN
C501 SITE UTILITY PLAN
C601 SITE LANDSCAPE PLAN
C701 EROSION CONTROL DETAILS
C702 LANDSCAPE DETAILS
C801 UTILITY/STORM DETAILS
C802 UTILITY/STORM DETAILS
C901 SITE DETAILS

DUKE ENERGY
SITE LIGHTING PLAN

ARCHITECTURAL
A200 ELEVATIONS

CLH DESIGN, P.A.
400 Regency Forest Drive
Suite 120
Cary, North Carolina 27518
Phone: (919)319-6716
Fax: (919)319-7516
LA: C-106, PE: C-1595

adwarchitects
environmentsforlife
architecture planning interiors
2815 COLISUEM CENTRE DRIVE
SUITE 500
CHARLOTTE, NORTH CAROLINA 28217
P 704 379 1919
F 704 379 1920
www.adwarchitects.com

SANFORD FIRE STATION NO. 5

SANFORD, NC

COVER

DATE 07-01-2022
PROJECT NO 21017

REVISIONS
NO DATE DESCRIPTION:

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PRELIMINARY PLANS
FOR REVIEW ONLY
DO NOT USE FOR CONSTRUCTION

SHEET NUMBER
C000

SITE DATA

PROJECT:	SANFORD FIRE STATION NO.5
OWNER:	CITY OF SANFORD
OWNER CONTACT:	PAUL M. WEEKS, JR., P.E. UTILITIES & ENGINEERING DIRECTOR 225 E. WEATHERSPOON STREET SANFORD, NC 27331 PHONE: 919-777-1119 EMAIL: PAUL.WEEKS@SANFORDNC.NET
DESIGNER:	CLH DESIGN, PA
DESIGNER CONTACT:	ZAK PIERCE - LANDSCAPE ARCHITECT REGENCY PARK 400 REGENCY FOREST DR., SUITE 120 CARY, NC 27518 PHONE: 919-319-6716 EMAIL: ZPIERCE@CLHDESIGNPA.COM
PROJECT ADDRESS:	0 COLON RD (ADDRESS TBD, SW OF US-1/COLON RD INT.) SANFORD, NC 27331
PIN:	9655-48-4471-00
LAT/LONG:	35.559099,-79.151886
ZONING:	HC
EXISTING USE:	VACANT
PROPOSED USE:	GOVERNMENT SERVICE
TRACT AREA:	5.05 ACRES
WATERSHED:	WS-14 WATERSHED
MAX BUILDING HEIGHT:	NO MAX
FRONT SETBACK:	10 FEET MINIMUM
REAR SETBACK:	0 FEET
SIDE SETBACK:	0 FEET
PROPOSED BUILDING GFA:	GOVERNMENT SERVICES: 8,842 SF
APPARATUS BAY GFA:	GOVERNMENT SERVICES: 3,532 SF
TOTAL BUILDING GFA:	GOVERNMENT SERVICES: 12,374 SF
PARKING REQUIREMENTS:	
GOVERNMENT SERVICES 1 PER 600 SF OF GFA - GOV FACILITIES	
REQUIRED: PROVIDED:	15 SPACES (8,824 SF GFA EXCLUDING APPARATUS BAYS) 21 SPACES
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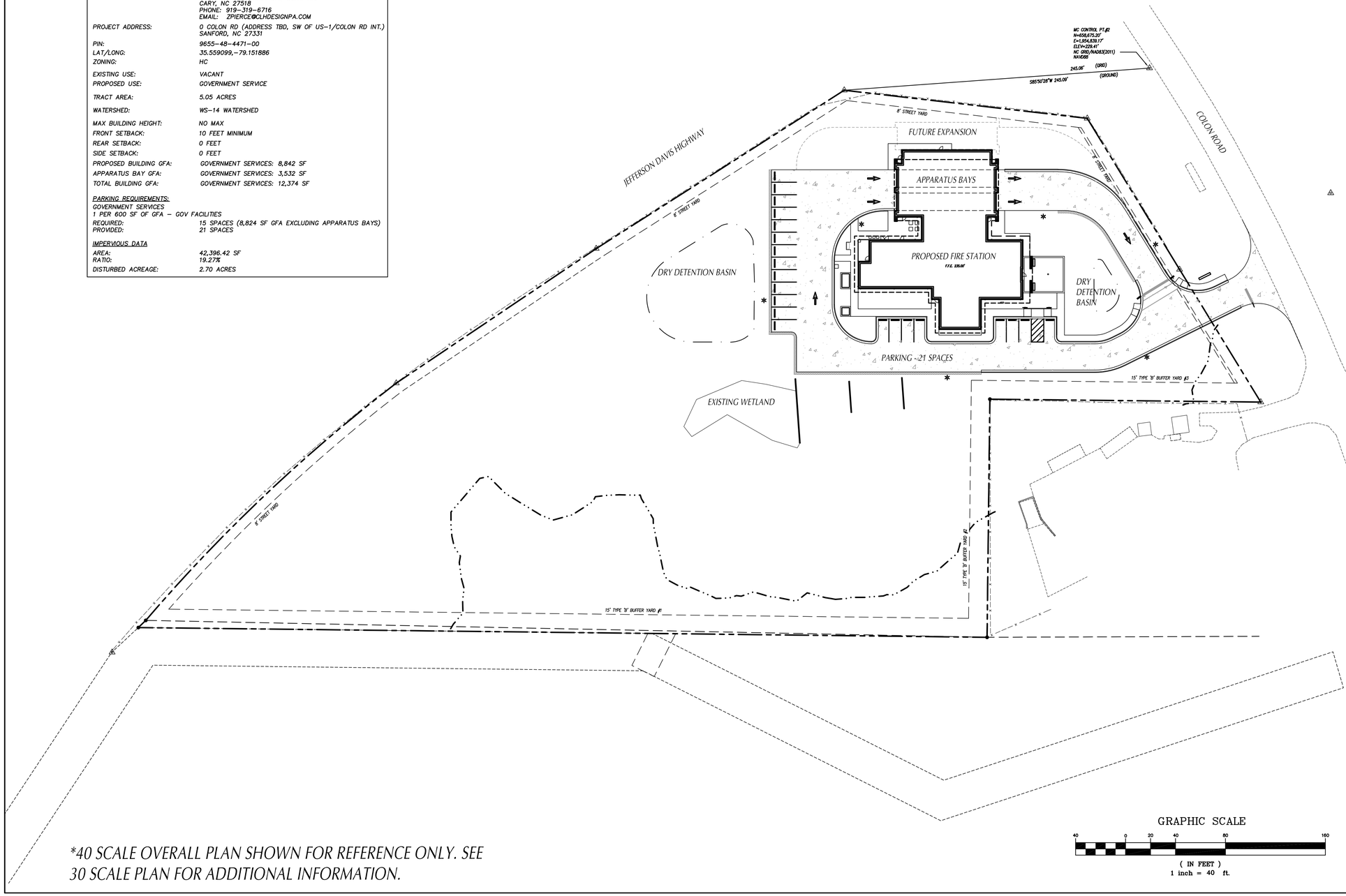
DISTURBED ACREAGE:	2.70 ACRES



*40 SCALE OVERALL PLAN SHOWN FOR REFERENCE ONLY. SEE 30 SCALE PLAN FOR ADDITIONAL INFORMATION.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

CLH DESIGN, P.A.
400 Regency Forest Drive
Suite 120
Cary, North Carolina 27518
Phone: (919)319-6716
Fax: (919)319-7516
LA: C-106, PE: C-1595

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environmentsforlife
architecture planning interiors
2815 COLISUEM CENTRE DRIVE
SUITE 500
CHARLOTTE, NORTH CAROLINA 28217
P 704 379 1919
F 704 379 1920
www.adwarchitects.com

SANFORD FIRE STATION NO. 5

SANFORD, NC

OVERALL SITE PLAN

DATE 07-01-2022
PROJECT NO 21017

REVISIONS
NO DATE DESCRIPTION:

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PRELIMINARY PLANS
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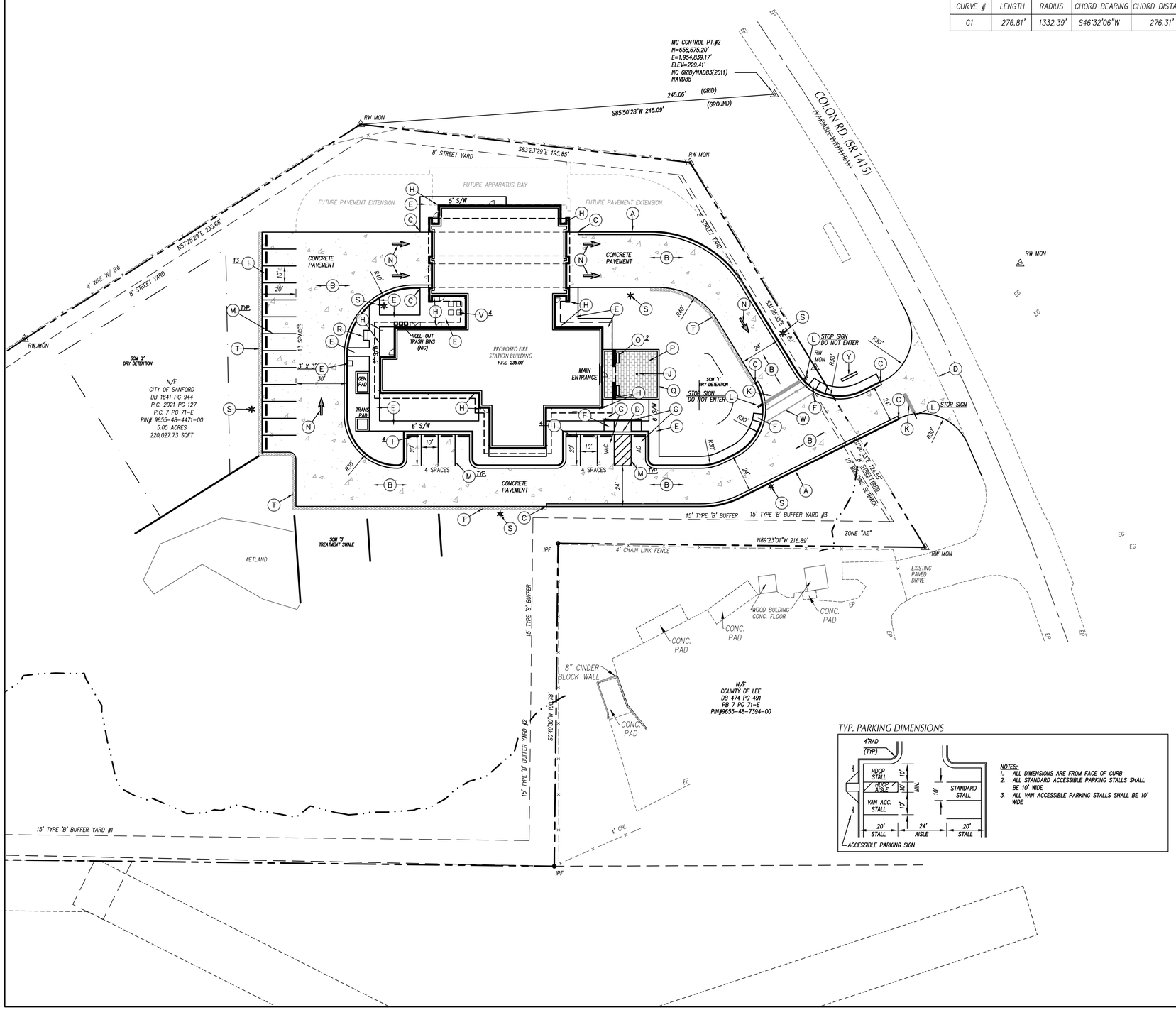
SHEET NUMBER
C100

CURVE TABLE				
CURVE #	LENGTH	RADIUS	CHORD BEARING	CHORD DISTANCE
C1	276.81'	1332.39'	S46°32'06"W	276.31'



TYP. PARKING DIMENSIONS

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CITY OF SANFORD AND NCDOT STANDARDS AND SPECIFICATIONS.
2. ALL DIMENSIONS SHOWN ARE TO FACE OF CURB AND FACE OF BUILDING WALL, UNLESS OTHERWISE SHOWN.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL DIMENSIONS SHOWN AND CONTACT THE ARCHITECT IF ANY DISCREPANCIES OCCUR.
4. CONSTRUCTION STAKE OUT IS THE RESPONSIBILITY OF THE CONTRACTOR.
5. ALL PAVEMENT MARKINGS AND SIGNAGE SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
6. ALL FACE OF RADII ARE 4 FT UNLESS OTHERWISE SHOWN.
7. ALL PARKING SPACES SHALL BE 10' WIDE X 20 FT DEEP MIN.
8. (AC) DENOTES ACCESSIBLE PARKING SPACE.
9. (VAC) DENOTES VAN ACCESSIBLE PARKING SPACE.
10. ANY AND ALL LANDSCAPING, EXISTING TREES OR SHRUBS TO REMAIN WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR UTILIZING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
11. CONTRACTOR SHALL SUBMIT SCALED PLANS OF ALL SCORING/JOINTS FOR APPROVAL BY ARCHITECT 30 DAYS MINIMUM PRIOR TO INSTALLATION.
12. THE CROSS-SLOPE ON ALL SIDEWALKS SHALL BE A MAXIMUM OF 2.0%.
13. NO WORK SHALL BE PERFORMED ON RIGHT-OF-WAYS OR ADJACENT PROPERTIES UNTIL THE OWNER NOTIFIES CONTRACTOR IN WRITING OF PROCUREMENT OF APPROPRIATE PERMITS, EASEMENTS, AGREEMENTS, OR RIGHTS-OF-WAY.

TRAFFIC CONTROL 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
STOP	R1-1	30"x30"
ONE WAY	R6-2	24"x30"
DO NOT ENTER (DNE)	R5-1	30"x30"
YEILD	R2-1 WITH R1-2aP	30"x30"
NO PARKING ANY TIME FIRE LANE	–	12"x18"
LEFT TURN ONLY	R3-5L	30"x36"

2. ALL SIGNS SHALL BE MOUNTED WITH 7-FT MIN. VERTICAL CLEARANCE TO THE BOTTOM OF THE SIGN ON 3-LB. GALV. STEEL U-CHANNEL POST SET IN 3-FT DEEP x 12-IN DIA. CONCRETE FOOTING.
3. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MUTCD AND NCDOT STANDARDS AND THE PROJECT SPECIFICATIONS.

MARKING	NCDOT STD.	SIZE	COLOR
PARKING SPACES	–	4-IN	WHT.
CROSSWALK	1205.07(HI-VIS)	24-IN	WHT.
CROSSWALK	1205.07(STANDARD)	8-IN	WHT.
DIRECTIONAL ARROWS	1205.08	STD.	WHT.
NO PARKING – FIRE LANE *	–	4-IN	YEL.
SKIP	1205.01	4-IN	WHT.
MINI-SKIP (3'-9' TYPE)	1205.01	4-IN	WHT.
SOLID	1205.01	4-IN	WHT.
DIAGONAL	1205.09	8-IN	YEL.
STOP BAR	–	24-IN	WHT.
DOUBLE YELLOW	1205.01	4-IN	YEL.

* NO PARKING – FIRE LANE MARKING SHALL BE THERMOPLASTIC AND CONFORM TO TOWN OF CARY STANDARD SPECIFICATION 03050.D FIRE LANE STRIPING AND CONSIST OF A 4" SOLID YELLOW STRIPE AND 8" HIGH YELLOW TEXT "NO PARKING – FIRE LANE" AT 40' INTERVALS.

4. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC TYPE EXCEPT FOR PARKING SPACE LINES WHICH SHALL BE ALKYD-RESIN TYPE PAINT.
5. ALL SIGNAGE SHALL BE FIELD STAKED AND THE LOCATIONS APPROVED BY CLH DESIGN PRIOR TO SIGN INSTALLATION.
6. CENTER ALL DIRECTIONAL ARROWS WITHIN TRAVEL LANE.
7. COORDINATE FIRE LANE MARKINGS WITH CITY OF SANFORD FIRE MARSHAL.
8. ALL SIGNS SHALL USE PRISMATIC SHEETING THAT MEETS MINIMUM REFLECTIVITY STANDARDS FOUND IN THE LATEST EDITION OF THE MUTCD.

KEY NOTES

(A) 24" CURB & GUTTER, SEE DETAIL SHEET C901.
(B) CONCRETE PAVEMENT, SEE DETAIL SHEET C901.
(C) STANDARD CURB & GUTTER TERMINUS, SEE DETAIL SHEET C901.
(D) CONCRETE FLUSH WITH PAVEMENT.
(E) CONCRETE SIDEWALK, SEE DETAIL SHEET C901.
(F) ACCESSIBLE CURB RAMP, SEE DETAIL SHEET C901.
(G) ACCESSIBLE PARKING, SEE SIGNAGE AND STRIPING PLAN
(H) SEE ARCHITECTURAL PLANS FOR CANOPY, SCREEN AND STRUCTURAL WALLS, BUILDING COLUMNS, LOADING DOCK, RAMPS, STAIRS, HANDRAILS, GUARDRAILS, BOLLARDS AND MECHANICAL SERVICE YARD.
(I) PRECAST CONCRETE WHEELSTOP, SEE DETAIL SHEET C901.
(J) FLAGPOLE, SEE DETAIL SHEET C901.
(K) STOP BAR, SEE TRAFFIC CONTROL NOTES THIS SHEET.
(L) TRAFFIC CONTROL SIGN, SEE TRAFFIC CONTROL NOTES THIS SHEET.
(M) PARKING SPACE STRIPING, SEE TRAFFIC CONTROL NOTES THIS SHEET.
(N) DIRECTIONAL ARROW, SEE TRAFFIC CONTROL NOTES THIS SHEET.
(O) BENCH, SEE SPECIFICATIONS.
(P) PAVERS, SEE DETAIL SHEET C901 AND SPECS.
(Q) CONCRETE BAND, SEE DETAIL SHEET C901.
(R) GAS GRILL (NIC) TO BE PROVIDED BY OWNER.
(S) LIGHT POLE, SEE DUKE ENERGY LIGHTING PLANS.
(T) 2' GRAVEL STRIP, SEE DETAIL SHEET C901.
(U) COVERED CONCRETE FLUME, SEE DETAIL SHEET C901.
(V) MECHANICAL UNITS, SEE MEP/ARCH PLANS.
(W) STANDARD CROSSWALK, SEE TRAFFIC CONTROL NOTES THIS SHEET.
(X) ACCESSIBLE PARKING PARALLEL CURB RAMP, SEE DETAIL SHEET C901.
(Y) MONUMENT SIGN (PERMITTED SEPARATELY), SEE ARCHITECTURAL PLANS.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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SANFORD NORTH CAROLINA

SANFORD FIRE DEPARTMENT

SANFORD FIRE STATION NO. 5

SANFORD, NC

STAKING PLAN

DATE 07-01-2022
PROJECT NO 21017

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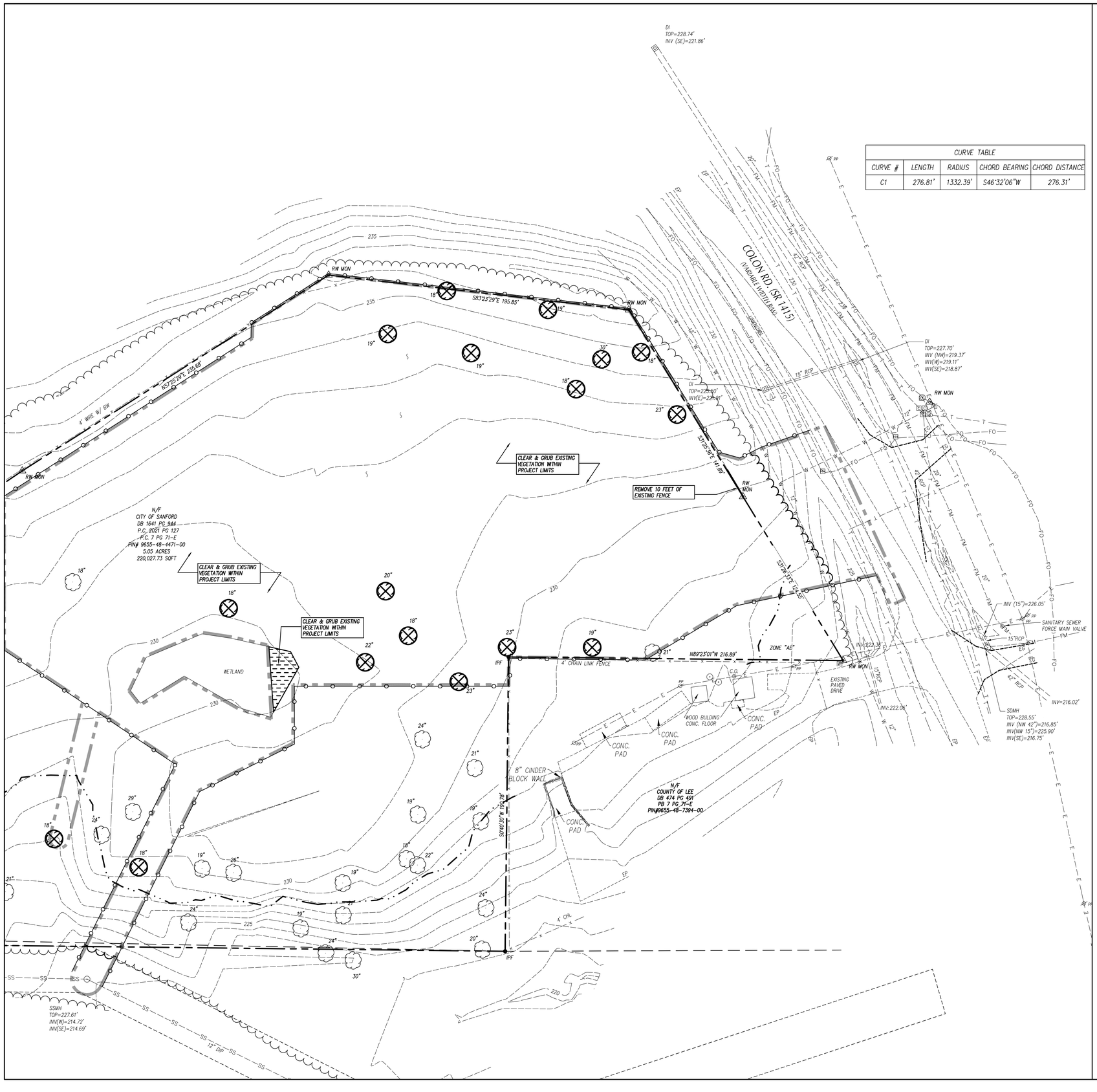
SHEET NUMBER
C101



LEGEND

STRUCTURES/UTILITIES TO BE REMOVED		STRUCTURES/UTILITIES TO REMAIN	
OVERHEAD ELECTRICAL	------- E -------	OVERHEAD ELECTRICAL	------- E -------
UNDERGROUND ELECTRICAL	-------UE-------	UNDERGROUND ELECTRICAL	-------UE-------
FIRE PROTECTION	-------FP-------	FIRE PROTECTION	-------FP-------
GAS	------- G -------	GAS	------- G -------
SANITARY SEWER	-------SS-------	SANITARY SEWER	-------SS-------
TELEPHONE	------- T -------	TELEPHONE	------- T -------
UNDERGROUND TELEPHONE	-------UT-------	UNDERGROUND TELEPHONE	-------UT-------
FIBER OPTIC	-------FO-------	FIBER OPTIC	-------FO-------
WATER	------- W -------	WATER	------- W -------
FORCE MAIN	-------FM-------	FORCE MAIN	-------FM-------
STORM DRAIN	═══════	STORM DRAIN	═══════
INDIVIDUAL TREE TO BE REMOVED.	⊗	INDIVIDUAL TREE TO REMAIN.	○
LIGHT POLE	LP	LIGHT POLE	LP
UTILITY POLE	PP	UTILITY POLE	PP
MANHOLE	MH	MANHOLE	MH
CLEAN OUT	CO	CLEAN OUT	CO
DROP INLET,CATCH BASIN	DI, CB	DROP INLET,CATCH BASIN	DI, CB
FIRE HYDRANT	FH	FIRE HYDRANT	FH
WATER VALVE	WV	WATER VALVE	WV
CONSTR./CLEARING LIMITS	- - - -	PAVEMENT, S/W, C&G TO BE REMOVED.	▨
TREE PROTECTION FENCE	——o——	BUILDING/STRUCTURE TO BE REMOVED. SEE ARCHITECTURAL PLANS.	▩

GENERAL NOTES

1. ALL EXISTING STRUCTURES AND UTILITIES SHALL BE REMOVED AS NEEDED TO ALLOW NEW CONSTRUCTION. IN GENERAL, FEATURES INDICATED IN BOLD ON THIS PLAN SHALL BE REMOVED.
2. ALL PAVEMENT OF CONCRETE TO BE REMOVED SHALL BE SAW CUT TO PROVIDE A STRAIGHT AND UNIFORM JOINT FOR NEW PAVEMENT, SIDEWALK, OR CURB AND GUTTER, ETC. ANY EXISTING PAVEMENT, SIDEWALK, CURB AND GUTTER, ETC. THAT MUST BE REMOVED TO ALLOW NEW CONSTRUCTION SHALL BE REMOVED AND REPAIRED PER THE SPECIFICATIONS AND DETAILS OR TO MATCH PRE-CONSTRUCTION CONDITIONS (WHETHER OR NOT SHOWN ON THE DRAWINGS TO BE REMOVED).
3. ALL UTILITIES OR STRUCTURES NOT INDICATED FOR REMOVAL OR MODIFICATION ARE TO REMAIN AND BE PROTECTED FROM DAMAGE.
4. ALL WASTE MATERIAL GENERATED FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL APPLICABLE RULES AND REGULATIONS.
5. EXISTING SITE BOUNDARY AND TOPOGRAPHIC SURVEY INFORMATION WAS TAKEN FROM SURVEY BY MCKIM & CREED AND ASSOCIATES, PERFORMED 03-22-2021. THESE PLANS DO NOT ASSUME ANY LIABILITY FOR ANY EXISTING INFORMATION BOTH SHOWN AND NOT SHOWN ON THE SURVEY AND ANY CHANGES TO THE EXISTING CONDITIONS THAT MAY HAVE OCCURRED AFTER THE SURVEY WAS ISSUED. CONTRACTOR SHALL VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
6. INSTALL TREE PROTECTION FENCING PRIOR TO BEGINNING CLEARING OPERATIONS. CLEAR AND GRUB ALL AREAS AS SHOWN AND REQUIRED TO PERMIT INSTALLATION OF NEW CONSTRUCTION PER SPECIFICATIONS AND DRAWINGS. EXISTING TREES, SHRUBS OR OTHER LANDSCAPE MATERIAL WHICH WILL CONFLICT WITH NEW CONSTRUCTION SHALL BE REMOVED (WHETHER OR NOT SHOWN ON THE DRAWINGS). ALL CONTRACTORS SHALL VISIT THE SITE AND OBSERVE EXISTING CONDITIONS PRIOR TO BIDDING.
7. TO MINIMIZE DAMAGE TO EXISTING TREES NEAR THE INTERIOR EDGE OF CLEARING LIMITS, THE CONTRACTOR SHALL CUT 2-FT DEEP TRENCHES ALONG THE LIMITS OF DISTURBANCE, SO AS TO CUT, RATHER THAN TEAR ROOTS.
8. PRIOR TO DEMOLISHING EXISTING STRUCTURES, MAKE AN INSPECTION FOR ANY HAZARDOUS MATERIALS. CONTACT ARCHITECT IMMEDIATELY IF ANY HAZARDOUS MATERIALS ARE DISCOVERED. CAP AND REMOVE UTILITY SERVICES, FUEL TANKS AND SEPTIC SYSTEMS. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
9. VERIFY ALL ILLUSTRATED UNDERGROUND ELEMENTS/UTILITIES. EXERCISE REASONABLE EFFORTS TO PROTECT ANY UNKNOWN UNDERGROUND ELEMENTS/UTILITIES. NOTIFY THE ARCHITECT IMMEDIATELY IF UNKNOWN ELEMENTS/UTILITIES ARE DISCOVERED THAT WOULD NECESSITATE MODIFICATION TO THE PROPOSED DESIGN.
10. CONTACT UTILITY LOCATING SERVICE AT LEAST 48-HRS PRIOR TO EXCAVATION.
11. PROTECT ALL ADJACENT PROPERTIES, THE GENERAL PUBLIC AND ALL OF THE OWNER'S FACILITIES. SHOULD DAMAGES OCCUR, REPAIR IMMEDIATELY AS DIRECTED BY THE ARCHITECT. AREAS TO BE PROTECTED, REPAIRED AND CLEANED SHALL ALSO INCLUDE ANY STAGING AREAS, ACCESS ROUTES AND OTHER EXISTING IMPROVEMENTS WITHIN THE CONSTRUCTION LIMITS THAT ARE TO REMAIN.
12. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL CITY OF SANFORD AND/OR NCDOT STANDARDS AND SPECIFICATIONS.
13. ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, CLEANOUTS, ETC. SHALL BE ADJUSTED AS NEEDED TO MATCH FINISH GRADE.
14. DEMOLITION AND PATCHING OF PAVEMENT, SIDEWALK, CURB AND GUTTER AND OTHER EXISTING PAVED SURFACES IN ADDITION TO THAT INDICATED ON THIS PLAN SHALL BE PERFORMED AS REQUIRED TO CONSTRUCT AND INSTALL NEW UTILITIES. ALL SUCH DEMOLITION AND PATCHING SHALL BE INCLUDED IN THE BASE BID SCOPE OF WORK. SEE SHEET C802 FOR PAVEMENT REPAIR DETAILS.
15. THIS SITE IS/IS NOT LOCATED WITHIN SPECIAL FLOOD HAZARD AREAS AS DETERMINED BY FEMA AND DEPICTED ON F.I.R.M. MAP 3710965500, DATED SEPTEMBER 6, 2006 AS BEING WITHIN ZONE "X-OTHER AREA".
16. NO WORK SHALL BE PERFORMED ON RIGHT-OF-WAYS OR ADJACENT PROPERTIES UNTIL THE OWNER NOTIFIES CONTRACTOR IN WRITING OF PROCUREMENT OF APPROPRIATE PERMITS, EASEMENTS, AGREEMENTS, OR RIGHTS-OF-WAY.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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SANFORD FIRE DEPARTMENT

SANFORD FIRE STATION NO. 5

SANFORD, NC

EX. COND. & DEMO PLAN

DATE 07-01-2022
PROJECT NO 21017

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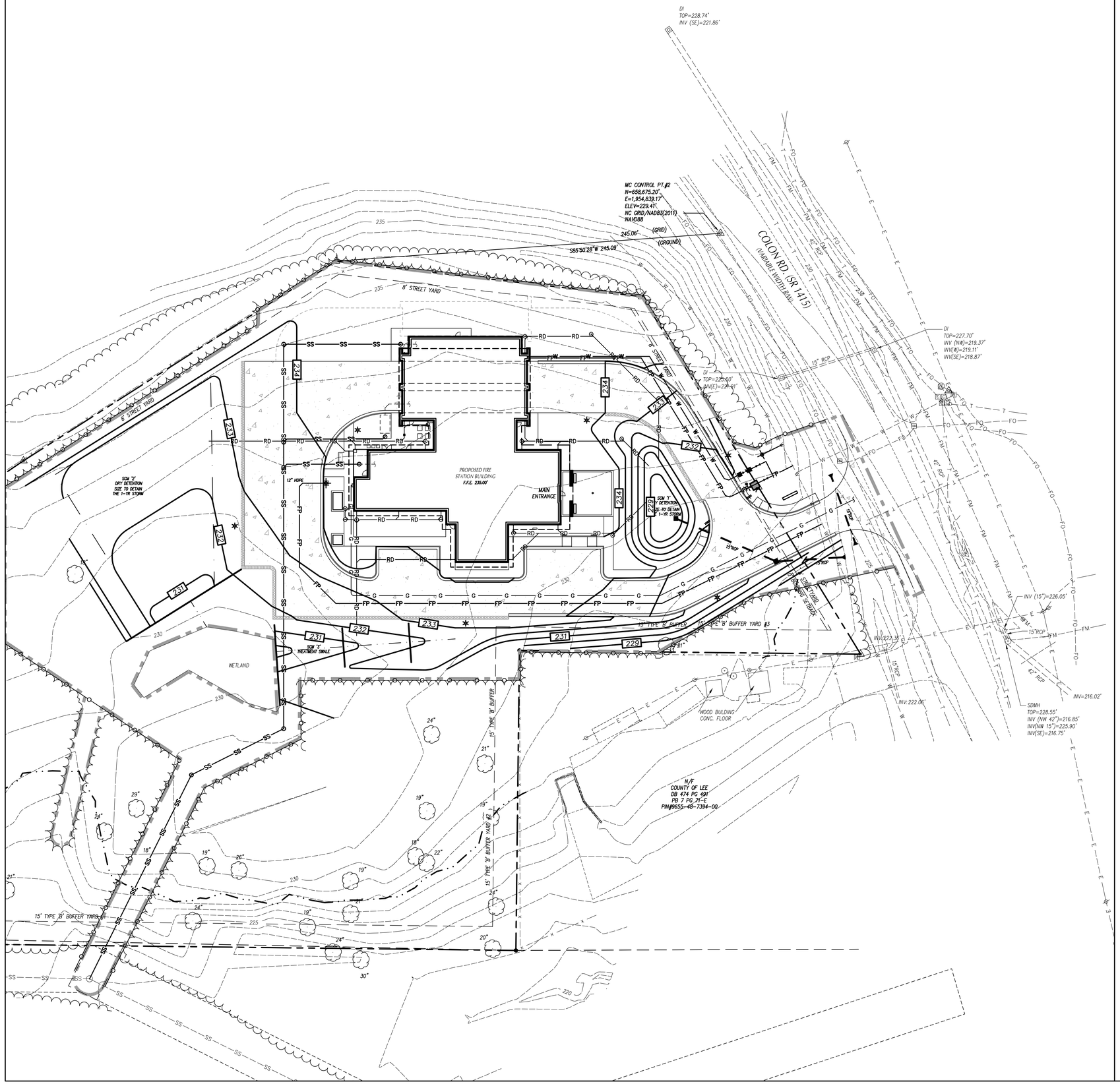
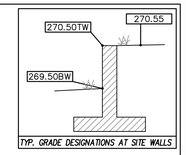


GRADING LEGEND

	EXISTING CONTOURS
	FINAL CONTOURS
270.4' +	EXISTING SURVEY SPOT ELEVATION
270.50T	PROPOSED TOP OF CURB SPOT ELEVATION
270.50	PROPOSED GROUND/PAVEMENT ELEVATION
270.50TW	PROPOSED FINISHED GRADE AT TOP OF WALL ELEVATION
270.50BW	PROPOSED FINISHED GRADE AT BOTTOM OF WALL ELEVATION
A4	STORM STRUCTURE NUMBER
	EXISTING STORM DRAIN PIPE
	PROPOSED STORM DRAIN PIPE
FD	PROPOSED FOUNDATION DRAIN DISCHARGE LINE. SEE ARCH. PLANS FOR DRAIN PIPE LOCATIONS ALONG BUILDING WALLS.
RD	PROPOSED ROOF DRAIN
	TREE PROTECTION FENCE



TYP. GRADE DESIGNATIONS AT SITE WALLS

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CITY OF SANFORD AND NCDOT STANDARDS AND SPECIFICATIONS.
2. ALL SPOT ELEVATIONS INDICATED AT CURB AND GUTTER AND ARE DENOTED TO TOP OF CURB, UNLESS OTHERWISE SHOWN.
3. TOTAL DENUDED AREA = 2.70-AC
4. CONTRACTOR SHALL ADJUST ALL EXISTING VAULTS, MANHOLES, STORM DRAIN STRUCTURES, CLEANOUTS, ETC. AS NEEDED TO MATCH FINISH GRADE.
5. ALL BACKFILL, COMPACTION, SOILS TESTING, ETC. SHALL BE PERFORMED BY THE OWNERS INDEPENDENT TESTING LABORATORY. (SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION)
6. ALL STORM DRAIN PIPES SHALL BE PROTECTED WITH STONE FILTER PROTECTION AFTER STOPPAGE OF WORK EACH DAY. SEE DETAIL ON SHEET C___
7. EXISTING VEGETATION WITHIN TREE PROTECTION AREAS SHALL REMAIN UNDISTURBED. UNLESS NOTED OTHERWISE.
8. ANY AND ALL LANDSCAPING AND EXISTING TREES & SHRUBS TO REMAIN WHICH ARE DAMAGED DURING DEMOLITION OR CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR UTILIZING A LICENSED LANDSCAPE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
9. THE GRADING CONTRACTOR SHALL COMPLY WITH ALL STATE CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF-SITE.
10. THE GRADING CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY STATE AUTHORITIES OR THE ARCHITECT.
11. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR OFF-SITE DISPOSAL OF ALL CLEARING AND GRADING WASTE MATERIALS GENERATED DURING CONSTRUCTION AND FOR OBTAINING ALL APPLICABLE PERMITS FOR OFF-SITE STOCKPILES AND/OR WASTE AREAS.
12. THE CROSS-SLOPE ON ALL SIDEWALKS SHALL BE A MAXIMUM OF 2.0%
13. CONTRACTOR SHALL VERIFY ALL EXISTING ELEVATIONS WHERE NEW CONSTRUCTION JOIN OR CONNECT TO EXISTING PAVEMENT, CURB AND OTHER RIGID STRUCTURES. NOTIFY ARCHITECT IF DISCREPANCIES OCCUR.
14. ALL STORM DRAIN FRAMES, GRATES AND HOOD SHALL BE STAMPED WITH "DRAINS TO RIVER" IN ACCORDANCE WITH TOWN OF CARY STANDARDS.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
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SANFORD FIRE STATION NO. 5

SANFORD, NC

SITE GRADING PLAN

DATE 07-01-2022
PROJECT NO 21017

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NO DATE DESCRIPTION:

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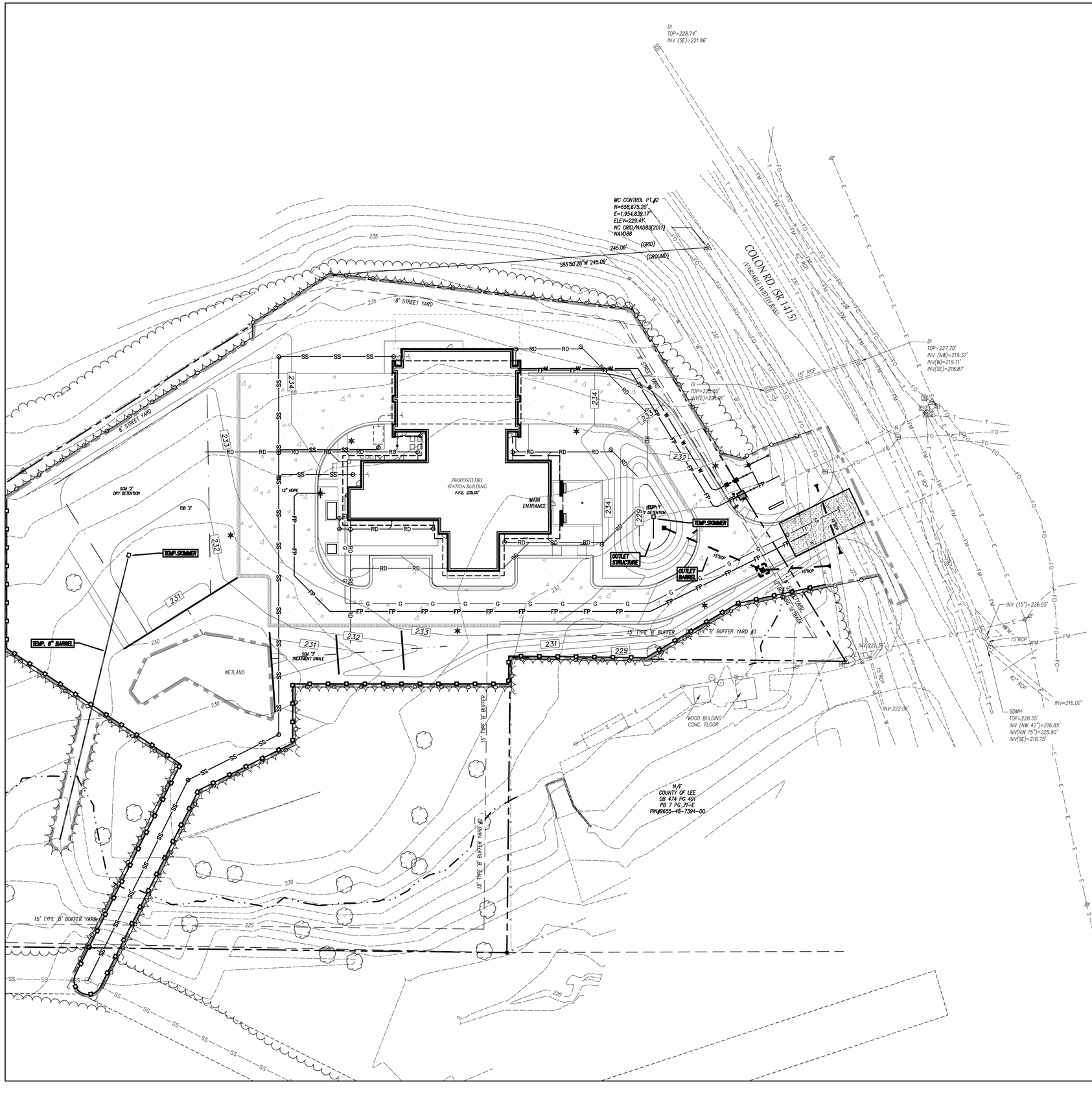

LEGEND

- TEMP. GRAVEL CONSTR. ENTRANCE SEE DETAIL SHEET __
- TEMP. INLET PROTECTION DEVICE SEE DETAIL SHEET __
- TEMP. DIVERSION DITCH / BERM SEE DETAIL SHEET __
- TEMP. SILT FENCE SEE DETAIL SHEET __
- TEMP. REINFORCED SILT FENCE OUTLET, SEE DETAIL SHEET __
- PERMANENT OUTLET PROTECTION SEE DETAIL SHEET __
- TCW — TEMP. CONCRETE WASHOUT AREA SEE DETAIL SHEET __
- TEMP. PLASTIC LINING, SEE TEMP. BASIN BAFFLES ON DETAIL SHEET __
- JHP — TEMP. J-HOOK PROTECTION SEE DETAIL SHEET __
- TSSB — TEMP. SKIMMER SEDIMENT BASIN SEE DETAIL SHEET __
- EXISTING CONTOUR
- FINISHED CONTOUR
- TEMP. CONTOUR (TEMP. GRADES DURING CONSTR.)
- CHANNEL LINING SEE DETAIL SHEET __
- TEMP. DEWATERING SILT BAG SEE DETAIL SHEET __
- TEMP. TREE PROTECTION FENCE SEE DETAIL SHEET __
- TCS — TEMP. COMPOST SOCK SEE DETAIL SHEET __
- TCS — TEMP. COMPOST SOCK IN CHANNEL SEE DETAIL SHEET __
- TSD — TEMP. SLOPE DRAIN SEE DETAIL SHEET __
- PROPOSED STORM SEWER PIPES
- EXISTING STORM SEWER PIPES
- CONSTRUCTION LIMITS UNLESS OTHERWISE NOTED.

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL CITY OF __, NCDEQ, AND NCDOT STANDARDS, SPECIFICATIONS AND DETAILS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL CODES IN OBSERVING EROSION CONTROL MEASURES BOTH ON AND OFF SITE. ALL OFF-SITE SOIL BORROW AND WASTE SITES SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITIES. CONTRACTOR SHALL PROVIDE WRITTEN DOCUMENTATION OF SEDIMENT & EROSION CONTROL PERMIT FOR ANY OFF-SITE SITES TO OWNER PRIOR TO RELOCATING ANY STOCKPILE MATERIALS.
3. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL DEVICES AFTER EACH RAINFALL EVENT OR AS DIRECTED BY LOCAL AUTHORITIES OR ARCHITECT.
4. TOTAL DISTURBED AREA: AC.
5. ALL OPEN STORM PIPES SHALL BE PROTECTED WITH STONE FILTER PROTECTION AFTER WORK STOPPAGE EACH DAY. SEE DETAIL SHEET
6. ALL STORM DRAINAGE PIPES SHALL BE THOROUGHLY FLUSHED OF ALL SEDIMENT FOLLOWING SITE STABILIZATION. INTERIOR FLUSHING OF SYSTEM SHALL BE PERFORMED AS NEEDED TO MAINTAIN PROPER FUNCTIONING OF THE DRAINAGE SYSTEM. CLEANING SHALL BE PERFORMED IN A MANNER WHICH PREVENTS SEDIMENT FROM BEING FLUSHED THROUGH PIPES TO THE EXISTING DRAINAGE SYSTEM.
7. THE INDICATED STAGING AREA IS INTENDED FOR VEHICLES AND NON-ERODIBLE MATERIALS ONLY. NO SOIL, SAND OR OTHER ERODIBLE, FINE GRAINED MATERIAL SHALL BE STORED OUTSIDE OF THE LIMITS OF THE SITE PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES.
8. SOIL AND OTHER MATERIALS SHALL ONLY BE TEMPORARILY STOCKPILED WITHIN THE CONSTRUCTION LIMITS PROTECTED BY SEDIMENT AND EROSION CONTROL DEVICES AND MEASURES. STOCKPILES SHALL BE STABILIZED AS REQUIRED AS INDICATED IN THE SLOPE & SURFACE STABILIZATION NOTES ON THIS PLAN.
9. THE TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION IS SCHEDULED PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY (CO). THE FENCING SHALL BE REMOVED IMMEDIATELY PRIOR TO THE FINAL SITE INSPECTION FOR THE SITE.
10. TREE PROTECTION FENCING SHALL NOT BE MOVED AND THERE SHALL BE NO ENCROACHMENT INTO SUCH PROTECTED AREA(S) WITHOUT WRITTEN AUTHORIZATION OF THE COUNTY ZONING COMPLIANCE STAFF. ANY ACTIVITY (LANDSCAPING, FENCING, OR UTILITY INSTALLATION) SHOWN ON THE APPROVED PLANS IN A TREE PROTECTION AREA, SHALL ALSO NOT OCCUR WITHOUT WRITTEN AUTHORIZATION FROM THE COUNTY ZONING COMPLIANCE STAFF. ANY UNAUTHORIZED ENCROACHMENT OR DISTURBANCE WITHIN THE BOUNDARIES OF A TREE PROTECTION AREA SHALL AUTOMATICALLY RESULT IN FINES AND THE REPLACEMENT OF ANY DAMAGED VEGETATION IN ACCORDANCE WITH THE LAND DEVELOPMENT ORDINANCE.
11. ROADSIDE DITCHES AND CHANNELS SHALL BE STABILIZED DAILY UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
12. INSTALL TEMPORARY MATTING TO TOP OF ALL SIDE SLOPES ON CHANNELS, DIVERSION DITCHES AND TEMPORARY SEDIMENT BASINS. SEE DETAIL SHEET C702 (PERMANENT CHANNEL) AND C702 (TEMPORARY DIVERSION DITCH) FOR TYPE OF MATTING TO USE.
13. ANY DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE, REMOVAL OR CONVERSION PURPOSES IS TO BE DONE THROUGH A SILT BAG.
14. ANY DEWATERING OF STORM/UTILITY TRENCHES IS TO BE DONE THROUGH A SILT BAG.
15. GROUND COVER IS TO BE APPLIED PER CONDITIONS OF THE NPDES PERMIT OR AT THE END OF THE DAY IN CRITICAL AREAS.
16. CONTRACTOR SHALL USE TIRE WASH STATION TO PREVENT SEDIMENT FROM TRACKING ONTO THE ROAD IF CONSTRUCTION ENTRANCE IS FOUND INSUFFICIENT AT NO ADDITIONAL COST TO OWNER.
17. CONTRACTOR SHALL UTILIZE PAM FLOCCULANTS TO REDUCE RUN-OFF TURBIDITY. SEE SPECS.

MAINTENANCE PLAN

1. DURING ALL PHASES OF CONSTRUCTION, GROUNDCOVER ON EXPOSED SLOPES SHALL BE PROVIDED ACCORDING TO GROUND STABILIZATION TABLE (SHEET CXXX) FOLLOWING COMPLETION OF ANY PHASE OF GRADING.
2. FINAL PERMANENT GROUNDCOVER FOR ALL DISTURBED AREAS SHALL BE PROVIDED ON ALL DISTURBED AREAS ACCORDING TO GROUND STABILIZATION TABLE (SHEET CXXX) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
3. THE ABOVE REQUIREMENTS ARE THE MINIMUM NECESSARY TO MEET EROSION AND SEDIMENT CONTROL REGULATIONS. THE CONTRACT DOCUMENTS INCLUDE ADDITIONAL SEEDING AND STABILIZATION REQUIREMENTS AND SCHEDULES WHICH MAY EXCEED THOSE ABOVE.
4. SLOPE EROSION CONTROL MATTING SHALL BE INSTALLED FOR TEMPORARY STABILIZATION DURING THE ESTABLISHMENT OF VEGETATIVE COVER ON ALL STEEP SLOPES (6:1 OR STEEPER). REFER TO MATERIAL SPECIFICATIONS. INSTALL MATTING PER MANUFACTURER'S INSTRUCTIONS.
5. ALL OTHER SEEDED AREAS SHALL BE MULCHED WITH STRAW AND TACKED WITH ASPHALT.

SELF-INSPECTION RULES

SEE SHEET C706 FOR SELF-INSPECTION REQUIREMENTS.

THE FINANCIALLY RESPONSIBLE PERSON AND/OR HIS AGENT WILL BE PERFORM SELF INSPECTIONS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES USING NCDEMLR'S SELF INSPECTION REPORT (WORKSHEET) AND THIS WILL BE KEPT ONSITE.

SLOPE & SURFACE STABILIZATION

GROUND STABILIZATION SHALL BE PROVIDED ON ALL DISTURBED AREAS ACCORDING TO GROUND STABILIZATION NOTES. SEE SHEET C705.

EXTENSIONS OF TIME MAY BE APPROVED BY THE PERMITTING AUTHORITY BASED ON WEATHER OR OTHER SITE-SPECIFIC CONDITIONS THAT MAKE COMPLIANCE IMPRACTICABLE (SECTION II.B(2) (b))

THE REQUIREMENTS ON SHEET C705 ARE THE MINIMUM NECESSARY TO MEET EROSION AND SEDIMENT CONTROL REGULATIONS. THE CONTRACT DOCUMENTS INCLUDE ADDITIONAL SEEDING AND STABILIZATION REQUIREMENTS AND SCHEDULES WHICH MAY EXCEED MINIMUM REQUIREMENTS.

INSTALL TEMPORARY EXCELSIOR MATTING FOR STABILIZATION DURING THE ESTABLISHMENT OF VEGETATIVE COVER ON ALL STEEP SLOPES (6:1 OR STEEPER) AND AREAS OF CONCENTRATED FLOW (CHANNELS, DITCHES, SWALES, ETC.). UTILIZE TEMPORARY COCONUT MAT IN AREAS IDENTIFIED ON PLAN. REFER TO SPECIFICATION SECTION 312500 FOR MATERIAL SPECIFICATIONS. INSTALL MATTING PER MANUFACTURER'S INSTRUCTIONS.

SEE SHEET C04.00 EROSION CONTROL CONSTRUCTION SEQUENCE.

SEE SHEET C04.10 EROSION CONTROL GROUND COVER PLAN FOR MORE INFORMATION

GRAPHIC SCALE

30 0 15 30 60 120

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SANFORD, NC

EROSION CONTROL PLAN

DATE 07-01-2022
PROJECT NO 21017

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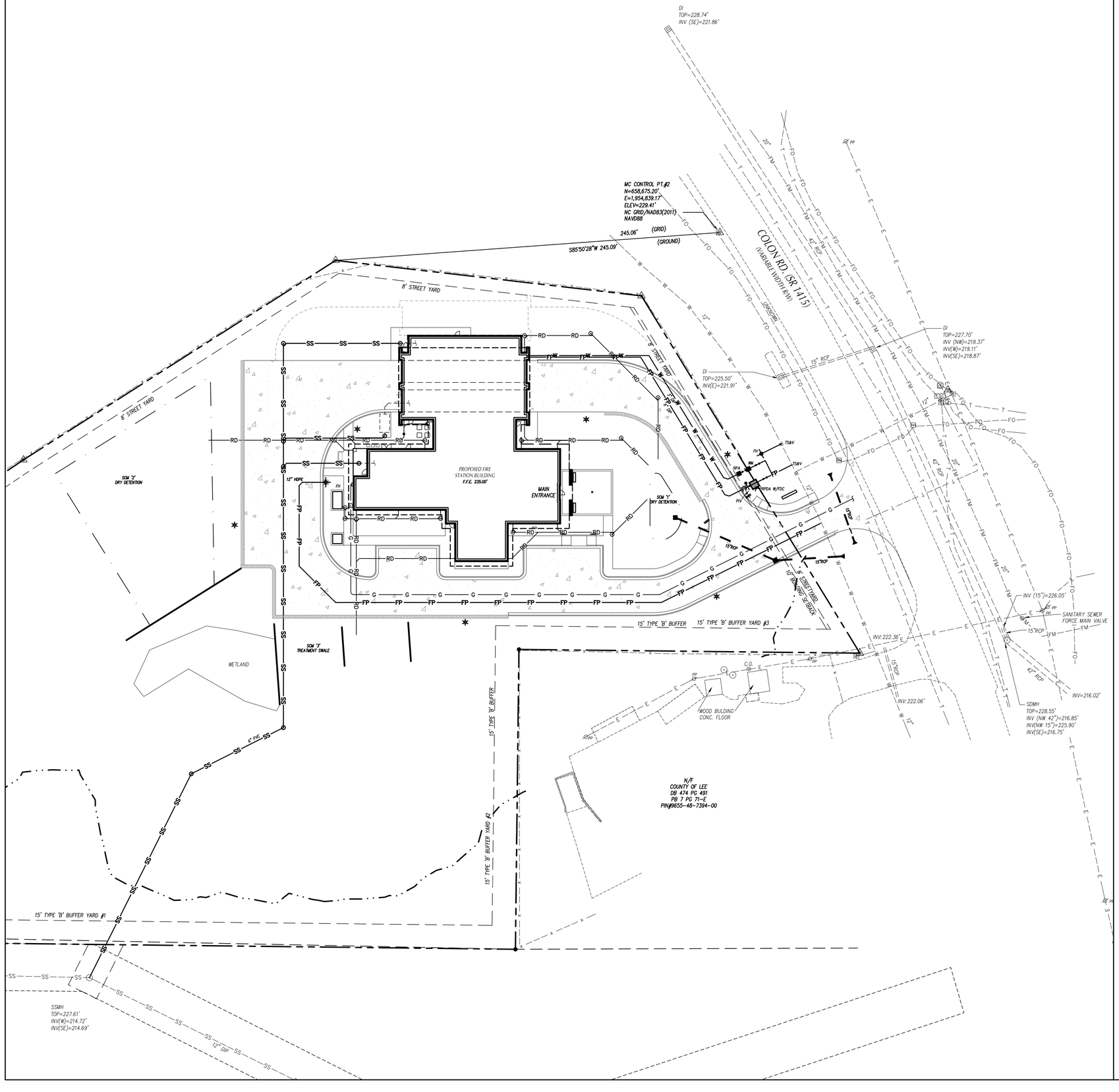

UTILITY LEGEND

	EXISTING	PROPOSED
CHILLED WATER	-------CW------	CW
ELECTRICAL (OVERHEAD)	------- E -------	E
ELECTRICAL (UNDERGROUND)	-------UE-------	UE
FOUNDATION DRAIN	-------FD-------	FD
GAS	------- G -------	G
SANITARY SEWER	-------SS-------	SS
TELEPHONE (OVERHEAD)	------- T -------	T
TELEPHONE (UNDERGROUND)	-------UT-------	UT
WATER	------- W -------	W
ROOF DRAIN	-------RD-------	RD
FIRE PROTECTION	-------FP-------	FP
STORM DRAIN	═══════	═══════
TREE PROTECTION FENCING, SEE EROSION CONTROL PLANS		
LIGHT POLE	LP	
UTILITY POLE	PP	
MANHOLE	MH	
CLEAN OUT	CO	
DROP INLET,CATCH BASIN	DI, CB	
FIRE HYDRANT	FH	
WATER VALVE	WV	
POST INDICATOR VALVE (PIV)		
FIRE DEPARTMENT CONNECTION (FDC)		
THRUST BLOCKING		
SANITARY SEWER STRUCTURE IDENTIFICATION		1

GENERAL NOTES-UTILITY

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH ALL TOWN OF CARY AND NCDOT STANDARDS, SPECIFICATIONS AND DETAILS.
2. INSTALL WATERMAINS WITH A COVER OF NO LESS THAN 3-FT.
3. INSTALL SEWER MAINS WITH A COVER OF NO LESS THAN 3-FT TO FINISH GRADE IN NON-TRAFFIC AREAS, 4-FT TO FINISH GRADE IN TRAFFIC AREAS..
4. INSTALL ALL UTILITIES TO PROVIDE REQUIRED CLEARANCES AS INDICATED IN THE SPECIFICATIONS.
5. WATERLINES AND SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM HORIZONTAL CLEARANCE OF 10-FT.
6. SEWER MAINS SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEARANCE OF 24-IN TO STORM DRAINAGE PIPES.
7. COORDINATE AND SCHEDULE INSTALLATION OF ALL UTILITIES WITH OTHER PRIME CONTRACTORS, UTILITY COMPANIES AND OTHER TRADES INCLUDING BUT NOT LIMITED TO: NATURAL GAS, ELECTRICITY, TELEPHONE AND CATV.
8. VERIFY EXISTING CONDITIONS AND CONNECTIONS TO EXISTING UTILITIES PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT IF ANY DISCREPANCIES ARE DISCOVERED.
9. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES DURING CONSTRUCTION AND SHALL MAKE REPAIRS AT NO EXPENSE TO THE OWNER.
10. ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE NCSBC AND OSHA REQUIREMENTS.
11. THE CONTRACTOR SHALL PROVIDE AN AS-BUILT SURVEY OF ALL UTILITY AND STORM DRAINAGE IMPROVEMENTS FOLLOWING CONSTRUCTION.
12. CONTRACTOR SHALL PHASE DEMOLITION AND NEW CONSTRUCTION TO ENSURE UNINTERRUPTED ACCESS AND UTILITY SERVICE TO ADJACENT FACILITIES. COORDINATE SHORT-TERM, OFF-HOUR, TEMPORARY SHUT- DOWNS WITH THE OWNER.
13. SEE GENERAL NOTES ON EXISTING CONDITIONS AND DEMOLITION PLAN FOR REQUIREMENTS FOR REMOVAL AND PATCHING OF PAVEMENT FOR UTILITY INSTALLATION.
14. ALL ROOF DRAINS SHALL BE 6" PVC (SCH 40) @ 1.04% MIN. SLOPE UNLESS INDICATED OTHERWISE. USE DUCTILE IRON WHEN COVER IS LESS THAN 24-IN.
15. ALL SANITARY SEWER SERVICES SHALL BE 4" PVC (SCH 40) @1.04% MIN. SLOPE UNLESS INDICATED OTHERWISE. USE DUCTILE IRON WHEN COVER IS LESS THAN 24-IN.
16. ALL CONDENSATE LINES SHALL BE CONNECTED TO STORM DRAINAGE SYSTEM.
17. NO WORK SHALL BE PERFORMED ON RIGHT-OF-WAYS OR ADJACENT PROPERTIES UNTIL THE OWNER NOTIFIES CONTRACTOR IN WRITING OF PROCUREMENT OF APPROPRIATE PERMITS, EASEMENTS, AGREEMENTS, OR RIGHTS-OF-WAY.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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SANFORD
NORTH CAROLINA

SANFORD FIRE DEPARTMENT NC FIRE

SANFORD FIRE STATION NO. 5

SANFORD, NC

SITE UTILITY PLAN

DATE 07-01-2022
PROJECT NO 21017

REVISIONS
NO DATE DESCRIPTION:

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PRELIMINARY PLANS
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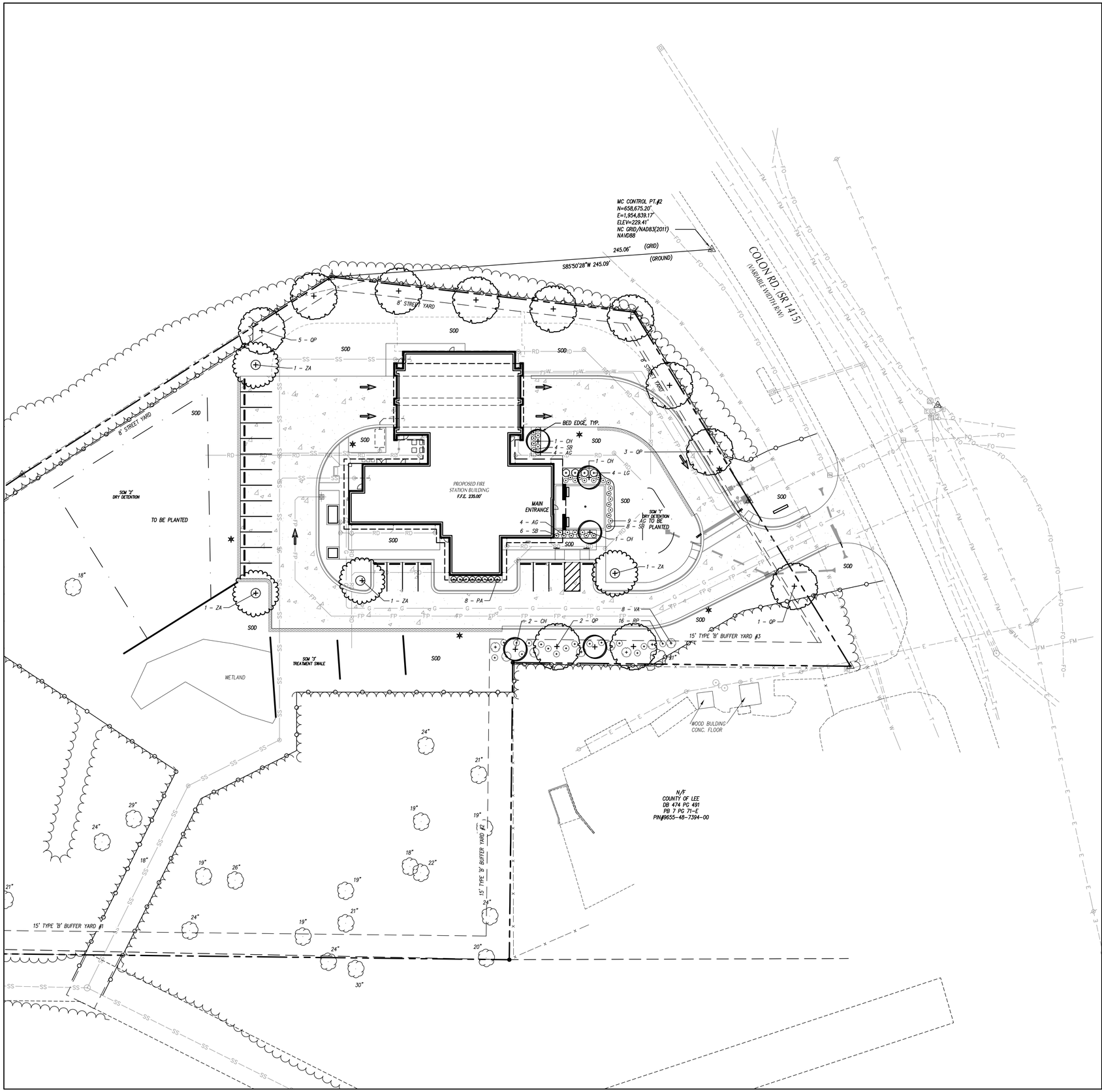
SHEET NUMBER
C501



GENERAL NOTES-LANDSCAPING

1. LOCATE ALL EXISTING UTILITIES PRIOR TO INSTALLATION OF PLANT MATERIAL. NOTIFY OWNER OF ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THOSE SHOWN ON THE PLAN.
2. VERIFICATION OF TOTAL QUANTITIES AS SHOWN ON THE PLANT LIST SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND THE TOTAL QUANTITIES SHALL BE AS SHOWN ON THE PLAN.
3. ALL PLANT MATERIAL SHALL CONFORM WITH THE STANDARDS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND THE WRITTEN SPECIFICATIONS.
4. ALL PLANT MATERIAL (SHRUBS/TREES) SHALL BE A MINIMUM DISTANCE OF 4 1/2 FEET FROM BACK OF CURB, EXCEPT ALONG ANY NEW WALLS ADJACENT TO PARKING WHERE CURB STOPS WILL BE USED. ALL PLANTING BEDS TO BE MULCHED WITH A MINIMUM OF 3" OF MULCH.
5. ALL PLANT GROUPINGS SHALL BE MULCHED AS ONE BED, 3" OF DYED BROWN DOUBLE SHREDDED HARDWOOD MULCH SHALL BE USED AROUND ALL PLANTINGS WITH THE EXCEPTION OF BUFFER PLANTINGS.
6. APPLY PRE-EMERGENT HERBICIDE TO ALL NEW PLANTING BEDS AT MANUFACTURER'S RECOMMENDED RATE PRIOR TO INSTALLATION OF MULCH.
7. ESTABLISH POSITIVE DRAINAGE IN ALL PLANTING BEDS AND AWAY FROM BUILDINGS.
8. DO NOT INSTALL PLANT MATERIAL IN IMPERVIOUS SOILS, (i.e. HOLES WHICH , WHEN FILLED WITH WATER, DO NOT COMPLETELY DRAIN WITHIN TWO HOURS.) SEE SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.
9. LAWN AREAS SHALL BE SEEDED WITH RIVIERA OR SUNSTAR BERMUDA GRASS 95% COVERAGE (BASED ON A PER SQUARE YARD SAMPLE) SHALL BE ATTAINED PRIOR TO FINAL INSPECTION. SEE DETAIL SHEET FOR RATES AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
10. CONTACT THE LANDSCAPE ARCHITECT FOR INSPECTION 48 HOURS IN ADVANCE OF THE SCHEDULED SITE VISIT AND AT THE FOLLOWING INTERVALS:
    - 10.1. REVIEW OF GRADING PRIOR TO PLANT AND LAWN INSTALLATION
    - 10.2. REVIEW OF PLANT MATERIAL PRIOR TO INSTALLATION.
    - 10.3. ONE SUBSTANTIAL COMPLETION MEETING FOR PLANT INSTALLATION.
    - 10.4. ONE FINAL INSPECTION FOR ALL SEEDING/PLANTING OPERATIONS.
11. THE TREE PROTECTION FENCE SHALL BE MAINTAINED ON THE SITE UNTIL ALL SITE WORK IS COMPLETED AND THE FINAL SITE INSPECTION PRIOR TO THE CERTIFICATE OF OCCUPANCY (CO) IS SCHEDULED. THE FENCING SHALL BE REMOVED PRIOR TO FINAL SITE INSPECTION FOR THE CO.
12. LANDSCAPE SUB-CONTRACTOR (UNDER GC CONTRACT) SHALL BE RESPONSIBLE FOR WATERING ALL PLANTS AND LAWN AREAS AT HIS COST FROM HIS OWN WATER SOURCE INCLUDING DURING PERIODS OF DROUGHT UNTIL THE PLANTS AND LAWN MEET FINAL COMPLETION. PLANT MATERIALS OR AREAS OF GRASS WHICH PERISH SHALL BE RE-ESTABLISHED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
13. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL EQUIPMENT & SUBCONTRACTORS AWAY FROM SEEDED AREAS. IF DAMAGE OCCURS, THROUGH NO FAULT OF THE OWNER, AREAS SHALL BE REGRADED AND RESEEDED IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL WATER AND MAINTAIN THOSE AREAS UNTIL THEY ARE AT 95% COVERAGE AT FINAL COMPLETION.
14. SUBSTITUTIONS OF PLANT MATERIAL SHALL ONLY BE ACCEPTED 60 DAYS PRIOR TO COMMENCEMENT OF PLANTING OPERATIONS. SUBSTITUTION REQUESTS MUST BE IN WRITING AND WILL ONLY BE ACCEPTED FOR LACK OF AVAILABILITY REASONS WHICH CAN BE SUBSTANTIATED OR FOR SUPERIOR STOCK SUBSTITUTIONS.
15. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT TO REVIEW GRADING ONE WEEK PRIOR TO SEEDING, IF THE LANDSCAPE CONTRACTOR AND LANDSCAPE ARCHITECT FIND GRADING UNACCEPTABLE FOR FINAL SEEDING, LANDSCAPE CONTRACTOR SHALL BRING IT TO THE ATTENTION OF THE GENERAL CONTRACTOR. LANDSCAPE CONTRACTOR SHALL NOT PROCEED WITHOUT APPROVAL BY LANDSCAPE ARCHITECT.
16. IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.
17. GENERAL LAWN AREAS SHALL BE SEEDED WITH RIVIERA OR SUNSTAR BERMUDA. PLAYING FIELDS SHALL BE SODDED WITH TIFWAY-419 BERMUDA. SEE PLANTING PLAN FOR LIMITS.
18. ALL 3:1 SLOPES SHALL BE STABILIZED WITH 'NO-MOW' NATURALIZED SEED MIX AND EROSION CONTROL MATTING.
19. ALL FOUNDATION SHRUBS AND TREES TO BE PLANTED A MINIMUM OF 5-FT FROM BUILDING WALL. NOTIFY LANDSCAPE ARCHITECT FOR ANY DISCREPANCIES.
20. INSTALL PERMANENT SEEDING ALONG ALL ROADSIDE DITCHES AND CHANNELS WITHIN CONSTRUCTION LIMITS OF PROJECT. SEE EROSION CONTROL PLANS FOR ADDITIONAL INFORMATION.

PLANT SCHEDULE

TREES	QTY	BOTANICAL / COMMON NAME	CONT	CAL	SIZE
CH	5	*Cercis canadensis 'Hearts of Gold'* *Hearts of Gold Eastern Redbud*	CONT./B&B	1.5" MIN.	8' HT MIN.
QP	11	*Quercus phellos* *Willow Oak*	CONT./B&B	2.5" MIN.	14' HT MIN.
ZA	4	*Zelkova serrata 'Autumn Glow'* *Autumn Glow Japanese Zelkova*	CONT./B&B	2.5" MIN.	14' HT MIN.

SHRUBS	QTY	BOTANICAL / COMMON NAME	CONT	-	SIZE
AG	17	*Abelia x grandiflora* *Glossy Abelia*	CONT.		12"-15" HT
LG	4	*Loropetalum chinense* *Chinese Fringe Flower*	CONT.		18-24" HT.
PA	8	*Pennisetum alopecuroides* *Fountain Grass*	CONT.		12"-15" HT
RP	16	*Rhododendron prunifolium* *Plum Leaf Azalea*	CONT.		18-24" HT.
SB	18	*Spiraea betulifolia* *Birchleaf Spirea*	CONT.		12"-15" HT
VA	8	*Viburnum awabuki* *Evergreen Sweet Viburnum*	CONT.		18-24" HT.

BUFFER YARD REQUIREMENTS

(ADJACENT TO PARCEL ZONED 'RA') / TYPE 'B' BUFFER YARD #1
- 15' WIDE, 680 LF EXISTING VEGETATION

(ADJACENT TO PARCEL ZONED 'RA') / TYPE 'B' BUFFER YARD #2
- 15' WIDE, 190 LF EXISTING VEGETATION

(ADJACENT TO PARCEL ZONED 'RA') / TYPE 'B' BUFFER YARD #3
- 15' WIDE, 217 LF EXISTING VEGETATION
- 113 LF CLEARING / 104 LF EXISTING VEGETATION
- 2 LG. TREES REQUIRED / 2 LG. TREES PROVIDED
- 1 SM. TREES REQUIRED / 2 SM. TREES PROVIDED
- 8 LG. SHRUBS PROVIDED
- 16 MED. SHRUBS PROVIDED
- 79 POINTS REQUIRED / 92 PROVIDED

STREET YARD REQUIREMENTS

COLON RD.
- 267 LF STREET YARD
- 8' WIDE
- 213.14 LF STREET FRONTAGE (EXCLUDING 53.86 LF EXISTING VEGETATION)
- (213.14/50) 4.26 LG. TREES REQUIRED / 5 PROVIDED (1 EXISTING)

U.S. HIGHWAY 1
- 901.35 LF STREET YARD
- 8' WIDE
- 254.24 LF CLEARING (EXCLUDING 647.11 LF EXISTING VEGETATION)
- (254.24/50) 5 LG. TREES REQUIRED / 5 PROVIDED

PARKING LOT YARDS
- 21 PARKING SPACES
- 1 LG. TREE OR 2 SM. TREES REQUIRED / 1+ LG. TREES PROVIDED
- 8 SM. SHRUBS REQUIRED / 8+ SM. SHRUBS PROVIDED

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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SANFORD
NORTH CAROLINA

SANFORD FIRE DEPARTMENT NC FIRE

SANFORD FIRE STATION NO. 5

SANFORD, NC

SITE LANDSCAPE PLAN

DATE 07-01-2022
PROJECT NO 21017

REVISIONS
NO DATE DESCRIPTION:

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SHEET NUMBER
C601

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

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

SECTION E: GROUND STABILIZATION

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

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

GROUND STABILIZATION SPECIFICATION

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

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 fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE

1. Never bury or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
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 or provide secondary containment. 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. Clean up immediately if containers overflow.
8. Dispose waste off-site at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

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.

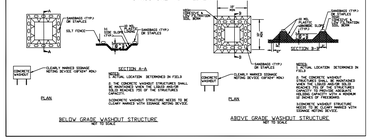
PORTABLE TOILETS

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.

NCG01 GROUND STABILIZATION AND MATERIALS HANDLING

EFFECTIVE: 04/01/19

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 equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

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 kept on site and available for inspection at all times during normal business hours.

2. Additional Documentation to be Kept on Site

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

(a) This General Permit as well as the Certificate of Coverage, after it is received.

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

3. Documentation to be Retained for Three Years

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

PART III
SELF-INSPECTION, RECORDKEEPING AND REPORTING

SECTION C: REPORTING

1. Occurrences that Must be Reported

Permittees shall report the following occurrences:

(a) Visible sediment deposition in a stream or wetland.

(b) Oil spills if:
- They are 25 gallons or more,
- They are less than 25 gallons but cannot be cleaned up within 24 hours,
- They cause sheen on surface waters (regardless of volume), or
- They are within 100 feet of surface waters (regardless of volume).

(c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.

(d) Anticipated bypasses and unanticipated bypasses.

(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

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

PART II, SECTION G, ITEM (4)
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT

Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

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

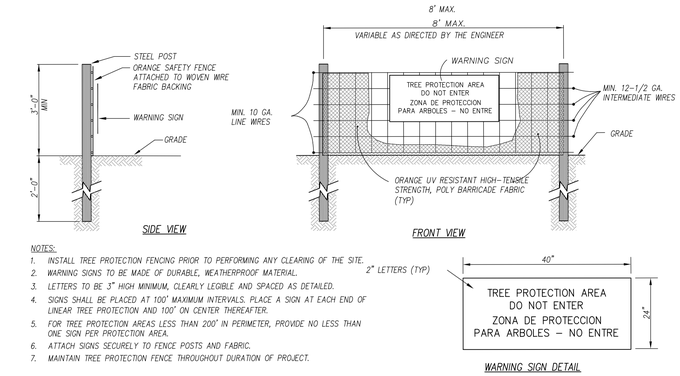
NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

STANDARD NCDEQ DETAILS N.T.S.

TEMPORARY TREE PROTECTION FENCE

N.T.S.



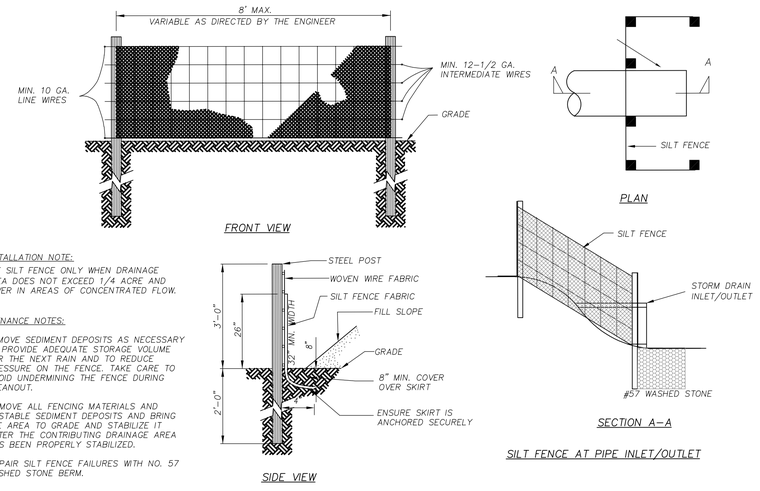
NOTES:

1. INSTALL TREE PROTECTION FENCING PRIOR TO PERFORMING ANY CLEARING OF THE SITE.
2. WARNING SIGNS TO BE MADE OF DURABLE, WEATHERPROOF MATERIAL.
3. LETTERS TO BE 3" HIGH MINIMUM, CLEARLY LEGIBLE AND SPACED AS DETAILED.
4. SIGNS SHALL BE PLACED AT 100' MAXIMUM INTERVALS. PLACE A SIGN AT EACH END OF LINEAR TREE PROTECTION AND 100' ON CENTER THEREAFTER.
5. FOR TREE PROTECTION AREAS LESS THAN 200' IN PERIMETER, PROVIDE NO LESS THAN ONE SIGN PER PROTECTION AREA.
6. ATTACH SIGNS SECURELY TO FENCE POSTS AND FABRIC.
7. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT.

WARNING SIGN DETAIL

STANDARD TEMPORARY SILT FENCE

N.T.S.



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SANFORD NORTH CAROLINA

SANFORD FIRE DEPARTMENT NC

SANFORD FIRE STATION NO. 5

SANFORD, NC

EROSION DETAILS

DATE 07-01-2022
PROJECT NO 21017

REVISIONS
NO DATE DESCRIPTION:

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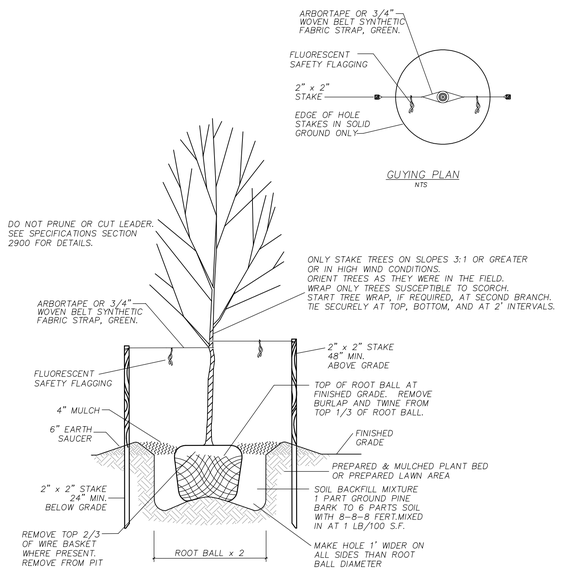

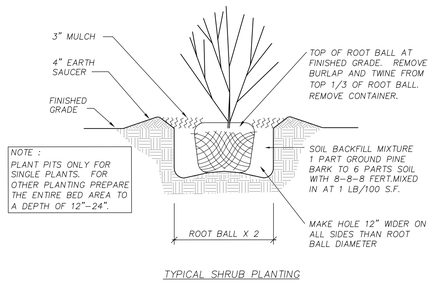

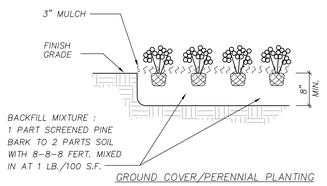

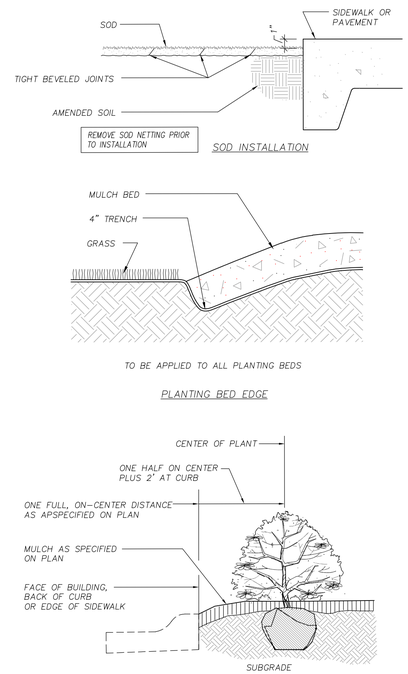

PLANTING DETAILS N.T.S.

SEEDBED PREPARATION

1. CHISEL ALL CUT GRADED OR COMPACTED AREAS TO A MINIMUM DEPTH OF 8"
2. DISC ALL AREAS TO RECEIVE GRASS TO A MINIMUM OF 8 INCHES, MIX AND AMEND WITH 3 INCHES OF IMPORTED TOPSOIL. REFER TO SPECIFICATIONS FOR TOPSOIL REQUIREMENTS.
3. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER OBSTRUCTIONS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM. CONSTRUCTION EQUIPMENT & TRAFFIC SHALL BE REMOVED PRIOR TO SEEDING.
4. APPLY AGRICULTURAL LIME, FERTILIZER, AND PHOSPHATE UNIFORMLY AS PER SPECIFICATIONS AND MIX WELL WITH SOIL.
5. CONTINUE TILLAGE UNTIL A WELL-PULVERIZED, FIRM, REASONABLY UNIFORM SEEDBED IS PREPARED TO A 6 INCHES DEPTH.
6. SEED AT RATE SPECIFIED. ACHIEVE AND MAINTAIN MINIMUM 95% COVERAGE PRIOR TO FINAL ACCEPTANCE, AS DETERMINED ON A PER SQUARE YARD SAMPLE BASIS.
7. MULCH IMMEDIATELY AFTER SEEDING AND ANCHOR MULCH. BEGIN THOROUGH WATERING OF GRASSED AREAS IMMEDIATELY UPON INSTALLATION. DO NOT ALLOW GRASSED AREAS TO BECOME EXCESSIVELY DRY.
8. INSPECT ALL SEEDED AREAS AND MAKE NECESSARY REPAIRS OR RESEEDINGS WITHIN THE PLANTING SEASON, IF POSSIBLE. IF STAND SHOULD BE OVER 60% DAMAGED, REESTABLISH FOLLOWING ORIGINAL LIME, FERTILIZER AND SEEDING RATES.
9. REFER TO WRITTEN SPECIFICATIONS FOR WARRANTY AND MAINTENANCE OF LAWNS PRIOR TO OWNER'S FINAL ACCEPTANCE.
10. IF CONFLICTS OCCUR BETWEEN WRITTEN SPECIFICATIONS AND THE DRAWINGS, THE WRITTEN SPECIFICATIONS SHALL PREVAIL.

LIME & FERTILIZATION SCHEDULE

APPLY LIME AND FERTILIZER ACCORDING TO SOIL TESTS, OR APPLY A MINIMUM 3 TONS/ACRE GROUND AGRICULTURAL LIMESTONE AND A MINIMUM 500 LB/ACRE 10-10-10 FERTILIZER, AS NEEDED TO ESTABLISH 95% COVERAGE (AS DETERMINED ON A PER SQUARE YARD BASIS) PRIOR TO SUBSTANTIAL COMPLETION. CONTRACTOR TO SUBMIT A COPY OF ALL SOIL REPORTS TO OWNER UPON RECEIPT.

SURFACE STABILIZATION REQUIREMENTS

PERMANENT OR TEMPORARY GROUND COVER SHALL BE PROVIDED OVER ALL DISTURBED AREAS OF THE SITE PER NPDES PERMIT.

GROUND STABILIZATION WILL BE APPLIED WITHIN 14 DAYS FROM LAST LAND DISTURBING ACTIVITY. FOR STEEP SLOPES, THAT AREA MUST BE STABILIZED WITHIN 7 DAYS

PERMANENT GROUNDCOVER SHALL BE ESTABLISHED IN 15 WORKING DAYS OR 90 CALENDAR DAYS, WHICHEVER IS SHORTER. HOWEVER, NPDES GROUNDCOVER REQUIREMENTS TAKE PRECEDENCE

USE EXCELSIOR MATTING OR OTHER APPROVED CHANNEL LINING MATERIAL TO COVER THE BOTTOM OF CHANNELS.

APPLY 4000 LB/ACRE GRAIN STRAW AND ANCHOR STRAW WITH ASPHALT TACKING AT A RATE OF 400 GALLONS/ACRE.

MULCH AND ANCHORING MATERIALS MUST NOT BE ALLOWED TO WASH DOWN SLOPES AND CLOG DRAINAGE DEVICES.

TEMPORARY SEEDING SCHEDULE

DATE	TYPE	PLANTING RATE
AUG 15 – APR 15	3-WAY TALL FESCUE BLEND AND WINTER RYE (GRAIN)	240 LBS/ACRE 40 LBS/ACRE
APR 15 – AUG 15	3-WAY TALL FESCUE BLEND AND GERMAN MILLET *** (SMALL-STEMMED VAR.) ***	240 LBS/ACRE 10 LBS/ACRE

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

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

PERMANENT SEEDING SCHEDULE – LAWN AREAS

LAWN AREAS AND ALL DISTURBED AREAS

DATE	TYPE	PLANTING RATE
APR 15– JULY 15**	HULLED SUNSTAR BERMUDA	85 LBS/ACRE*
JULY 15– AUG 15	SUNSTAR BERMUDA SPRIGS (WATERING AT CONTRACTORS EXPENSE)	
AUG 15 – APR 15	TEMPORARY SEEDING APPLIES**	5 BUSHELS/1,000 SF

* OR AS REQUIRED TO ACHIEVE 95% COVERAGE AS DETERMINED ON A PER SQUARE YARD BASIS PRIOR TO SUBSTANTIAL COMPLETION.

** WHEN SEEDING MUST TAKE PLACE OUT-OF-SEASON FOR PERMANENT GRASS, APPROPRIATE TEMPORARY SEEDING SHALL BE DONE AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERMANENT SEEDING AS SPECIFIED IN SEASON AT NO ADDITIONAL COST TO OWNER.

LAWN MAINTENANCE:

CONTRACTOR SHALL BE RESPONSIBLE FOR LAWN MAINTENANCE UNTIL FINAL COMPLETION.

SEE SPEC SECTION 329000 FOR LAWN MAINTENANCE REQUIREMENTS.

LAWN MUST BE AT 95% COVERAGE AT SUBSTANTIAL COMPLETION REVIEW TO BE ACCEPTED.

IF NOT AT 95%, SUBSTANTIAL COMPLETION WILL BE DELAYED UNTIL THE FOLLOWING GROWING SEASON.

NURSE GRASS:

ADD ANNUAL RYE (LOLIUM MULTIFLORUM) TO MIXTURE ABOVE AT A RATE 5-8 LBS. PER ACRE.

PERMANENT SEEDING SCHEDULE – NATURALIZED SEED 'NO-MOW' MIX

NC PIEDMONT UPLAND MIX NATURALIZED SEED MIX (NOT TO BE MOWED)

DATE	TYPE	PLANTING RATE
MAR 1–JUNE 1 (OR AS RECOMMENDED BY MANUFACTURER)	NC PIEDMONT UPLAND MIX – ERNMX-306	15-20 LBS/ACRE OR PER MANUFACTURER'S REQUIREMENTS FOR 90% COVERAGE

40%	SCHIZACHYRIUM SCOPARIUM 'CAMPER'	'CAMPER' LITTLE BLUESTEM
10%	COREOPSIS LANCEOLATA, NC ECOTYPE	LANCE LEAVED COREOPSIS
10%	SORGHASTRUM NUTANS 'SUTHER' NC ECOTYPE	'SUTHER' INDIANGRASS
10%	TRIDENS FLAVUS 'SUTHER', NC ECOTYPE	'SUTHER' PURPLE TOP
5%	HELIANTHUS ANGUSTIFOLIUS, NC ECOTYPE	SWAMP (NARROW LEAVED) SUNFLOWER
5%	MONARDA PUNCTATA, SC ECOTYPE	SPOTTED BEE BALM
5%	PANICUM VIRGATUM 'CARTHAGE'	'CARTHAGE' SWITCHGRASS
5%	PARTHENIUM INTEGRIFOLIUM, VA ECOTYPE	WILD QUININE
5%	PENSTEMON LAEVIGATUS, SC ECOTYPE	APPALACHIAN BEARD TONGUE
5%	RUDBECKIA HIRTA, NC ECOTYPE	BLACK EYED SUSAN

JUNE 1–FEB 28 SEE TEMPORARY SEEDING SCHEDULE

SOURCE: ERNST CONSERVATION SEEDS, INC. (1-800-873-3321) OR EQUAL

DETAIL N.T.S.

SEEDING NOTES AND RATES

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SANFORD NORTH CAROLINA

SANFORD FIRE STATION NO. 5

SANFORD, NC

EROSION DETAILS

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SHEET NUMBER
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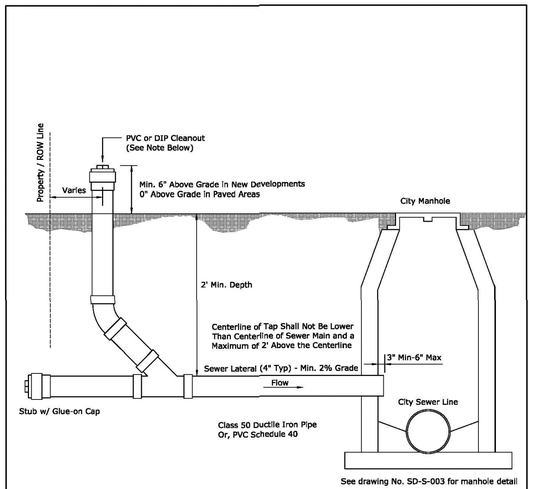


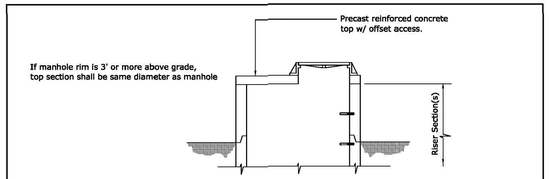
Notes:

1. Please contact the City of Sanford @ 919-777-1122 for specifications for commercial applications or laterals over 6" Ø.
2. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
3. All work within the street ROW shall be performed by a licensed utility contractor.
4. All sewer cleanout structures installed in asphalt or concrete shall be constructed with DIP risers and fittings, a traffic-rated cast iron assembly, and corrosion resistant bronze cap. Cleanout assemblies installed in non-paved surfaces shall be either DIP (as specified above, non-traffic-rated) or PVC.

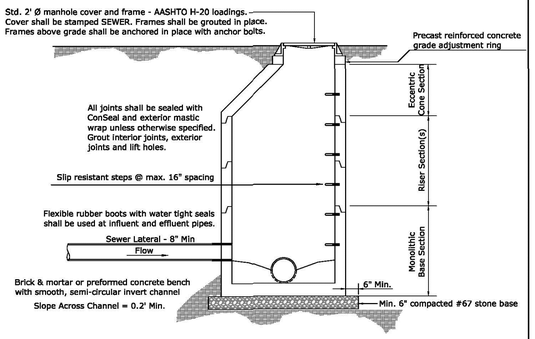
Sewer Tap Into Manhole

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

Dwg. No.	SD-S-002
Date:	10/16/2020
Scale:	Not To Scale
Drawn By:	Staff



Above Grade Manhole



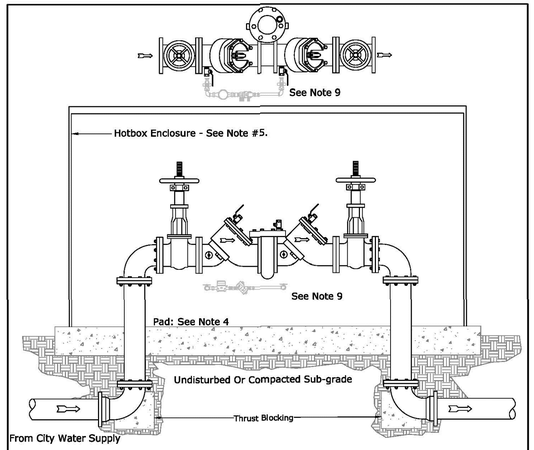
Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. In paved or traffic areas manhole frame and cover shall be at grade. In other non-traffic areas frame and cover shall be a min. of 1" above grade.

Sanitary Sewer Manhole

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

Dwg. No.	SD-S-003
Date:	10/16/2020
Scale:	Not To Scale
Drawn By:	Staff



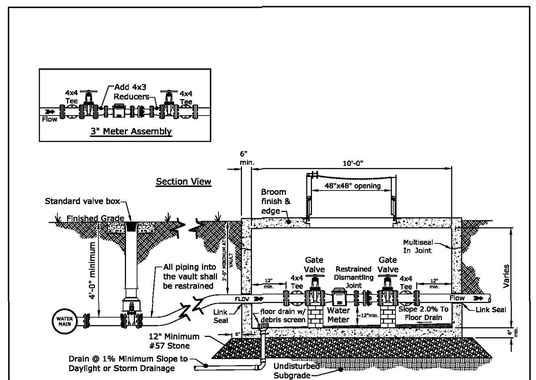
Notes:

1. All RPZs shall have positive gravity drainage.
2. All assemblies shall be installed in compliance with all applicable City of Sanford ordinances and State of NC codes
3. Contact the City of Sanford Utilities Connections Coordinator for additional information.
4. Reduced Pressure Zone Backflow Prevention Assembly shall comply with ASSE 1013 and AWWA C511.
5. Pad shall be minimum 4" thick concrete - 3000 psi @ 28 days or approved pre-fab equivalent.
6. Hotbox enclosures shall comply with ASSE 1060.
7. If provided, electrical outlets shall be GFCI.
8. Property owner shall be responsible for freeze protection, operation, maintenance, testing and reporting.
9. Pipe supports shall be installed at valves.
10. Detector Assembly shall be included with un-metered assemblies.
11. Reduced pressure zone backflow preventers shall be constructed with positive gravity drainage.

Reduced Pressure Zone Backflow Prevention Assembly > 2"

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

Dwg. No.	SD-W-006
Date:	02/11/2020
Scale:	Not To Scale
Drawn By:	Staff



Standard 3" or 4" Meter Installation & Vault

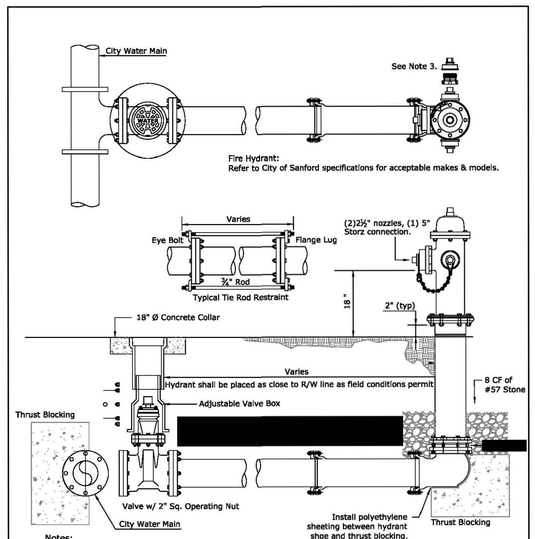
Notes:

1. Meter and bypass assembly piping to be ductile iron flanged pipe inside the vault.
2. Meter face to be a maximum of 3 feet below finished grade.
3. Access door shall be H-20 rated aluminum double door with a minimum opening of 48" x 48".
4. Valves shall be iron body type, resilient wedge gate valves with non-rising stem, handwheel operators and flange connections.
5. All valves shall be supported and the bypass line shall have a total of two supports. Supports shall be either solid brick, solid block, or stainless steel.
6. To ensure positive drainage, the vault shall be tied into the existing storm drainage system.
7. All commercial or other non-residential applications require an above ground backflow preventer.
8. Double doors shall be lockable with owner-supplied padlock.
9. Separate strainer may be required if proposed meter does not have an integral strainer.

3" or 4" Water Meter Vault

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

Dwg. No.	SD-W-013
Date:	09/09/2020
Scale:	Not To Scale
Drawn By:	Staff



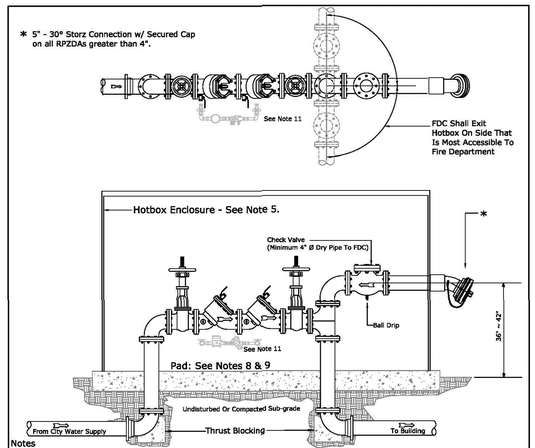
Notes:

1. Refer to City of Sanford drawing SD-R-003 for asphalt patch details if necessary.
2. Entire hydrant leg shall have minimum of 3'-0" cover. Ductile Iron Cl 50 shall otherwise be used.
3. Within the city limits of Sanford or within the Northview Fire District, the 2½" nozzles shall have City of Sanford threads (3.112" x 8 threads per inch). All other locations shall be National Standard Thread.
4. Restrained joints required throughout fire hydrant assembly except where otherwise noted.
5. Hydrant weep hole shall be a minimum of 2" above the concrete thrust block.

Fire Hydrant Assembly

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

Dwg. No.	SD-W-009
Date:	02/11/2020
Scale:	Not To Scale
Drawn By:	Staff



Notes

1. All assemblies shall be installed in compliance with all applicable City of Sanford ordinances and State of NC codes.
2. Contact the City of Sanford Utilities Connections Coordinator for additional information.
3. Reduced Pressure Zone Backflow Prevention Assembly shall comply with ASSE 1013 and AWWA C511.
4. Double Check Valve Backflow Prevention Assembly shall comply with ASSE 1015 and AWWA C510.
5. Hotbox enclosures shall comply with ASSE 1060.
6. If provided, electrical outlets shall be GFCI.
7. Property owner shall be responsible for freeze protection, operation, maintenance, testing and reporting.
8. Detector Assembly shall be included with un-metered assemblies.

3" or Smaller RPZDAs For Fire Protection

9. Pad shall be minimum 4" thick concrete - 3000 psi @ 28 days or approved pre-fab equivalent.

4" or Larger RPZDAs For Fire Protection

10. Pad shall be minimum 6" thick concrete - 3000 psi @ 28 days or approved pre-fab equivalent.
11. Pipe supports shall be installed at valves.

Fire Suppression Backflow Assembly With FDC At Hot-Box

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

Dwg. No.	SD-W-007
Date:	02/11/2020
Scale:	Not To Scale
Drawn By:	Staff

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CLH DESIGN, P.A.
Charlotte, North Carolina

SHEET NUMBER
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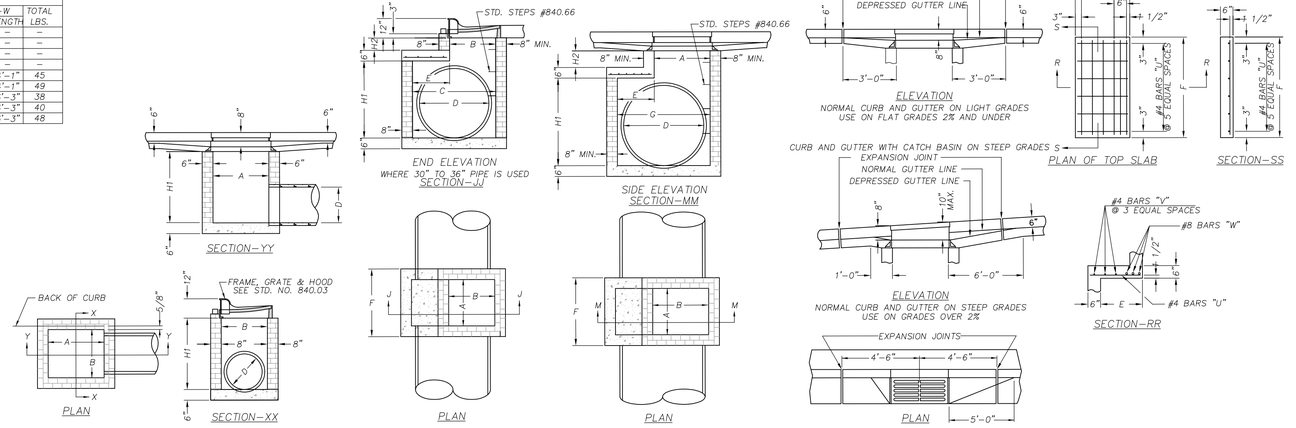
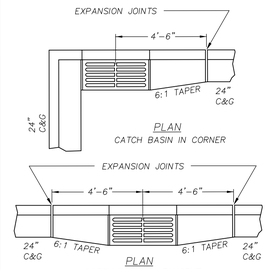
MINIMUM DIMENSIONS AND QUANTITIES FOR BRICK CATCH BASIN

DIMENSIONS OF BOX AND PIPE							COVER DIMENSION		BARS–U		BARS–V		BARS–W		TOTAL
PIPE D	SPAN A	WIDTH B	WIDTH C	SPAN G	HEIGHT MIN H1	HEIGHT H2	E	F	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	LBS.
12"	3'–0"	2'–2"	–	–	2'–3"	–	–	–	–	–	–	–	–	–	–
15"	3'–0"	2'–2"	–	–	2'–6"	–	–	–	–	–	–	–	–	–	–
18"			–	–	2'–10"	–	–	–	–	–	–	–	–	–	–
24"			–	–	3'–2"	–	–	–	–	–	–	–	–	–	–
30"		3'–4"	–	3'–4"	VAR.		1'–10"	4'–4"	4	1'–6"	3	4'–1"	3	4'–1"	45
36"		3'–10"	–	3'–8"			2'–4"	4'–4"	4	2'–0"	4	4'–1"	3	4'–1"	49
42"			–	4'–5"	4'–4"		2'–1"	3'–6"	4	1'–9"	3	3'–3"	3	3'–3"	38
48"			–	5'–0"	4'–10"		2'–8"	3'–6"	4	2'–6"	4	3'–3"	3	3'–3"	40
54"	3'–0"	2'–2"	–	5'–7"	5'–4"		3'–3"	3'–6"	4	3'–0"	6	3'–3"	3	3'–3"	48

GENERAL NOTES:

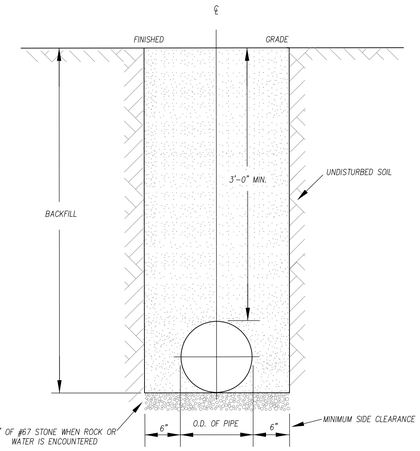
1. MORTOR JOINTS 1/2" TO 1/8" THICK.
2. CLASS "B" CONCRETE TO BE USED THROUGHOUT.
3. THE POURING OF FLOOR SLAB TO BE ACCOMPLISHED BY FORMING.
4. DEDUCT FOR PIPE'S) FROM TOTAL CU. YARDS OF BRICK MASONRY.
5. ALL CATCH BASINS OVER 3'–6" IN DEPTH TO BE PROVIDED WITH STEPS 1'–2" ON CENTER. STEPS SHALL BE IN ACCORDANCE WITH STD. NO. 840.66.
6. USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
7. JUMBO BRICK WILL BE PERMITTED. CONCRETE BRICK OR 4" SOLID CONCRETE BLOCKS MAY BE USED IN LIEU OF CLAY BRICK.
8. IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OR BOX, ADD TO BASE AS SHOWN ON NCDOT STD. NO. 840.00.
9. FOR 8'–0" IN HEIGHT OR LESS, USE 8" WALLS. OVER 8'–0" IN HIGHT, USE 12" WALL TO 6'–0" FROM TOP OF WALL AND 8" WALL FOR THE REMAINING 6'–0". QUALITIES TO BE ADJUSTED ACCORDINGLY.
10. PRECAST CONCRETE CONSTRUCTION MAY BE USED IN LIEU OF BRICK AND BLOCK CONSTRUCTION.





CATCH BASIN N.T.S.

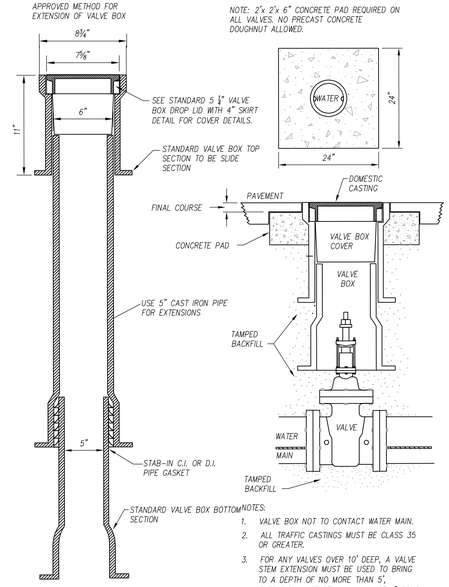
24" CURB & GUTTER AT CATCH BASINS N.T.S.



NOTES:

1. 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 BACKFILL.
3. ALL BACKFILL MATERIAL SHALL BE SUITABLE NATIVE MATERIAL.
4. BACKFILL SHALL BE TAMPED IN 6" LIFTS.
5. ACHIEVE 95% COMPACTION IN BACKFILL.

TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON PIPE NTS



NOTES:

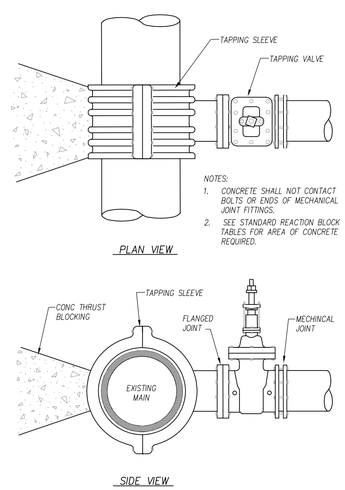
1. VALVE BOX NOT TO CONTACT WATER MAIN.
2. ALL TRAFFIC CASTINGS MUST BE CLASS 35 OR GREATER.
3. FOR ANY VALVES OVER 10' DEEP, A VALVE STEM EXTENSION MUST BE USED TO BRING TO A DEPTH OF NO MORE THAN 5', EXTENSION MUST BE A MINIMUM OF 1" SOLID STOCK.
4. TOTAL VALVE BOX WEIGHT: MINIMUM OF 85 LBS.

NOTES:

1. "WATER" LETTERING MUST BE 1" RAISED (RECESSED FLUSH)
2. VALVE COVER SHALL BE DOMESTICALLY CAST.
3. COVER MUST HAVE A MINIMUM WEIGHT OF 25 POUNDS.
4. COVER MUST BE CLASS 35 OR GREATER.
5. COVER MUST MEET OR EXCEED AASHTO H–20 LOAD REQUIREMENTS.

VALVE BOX LID

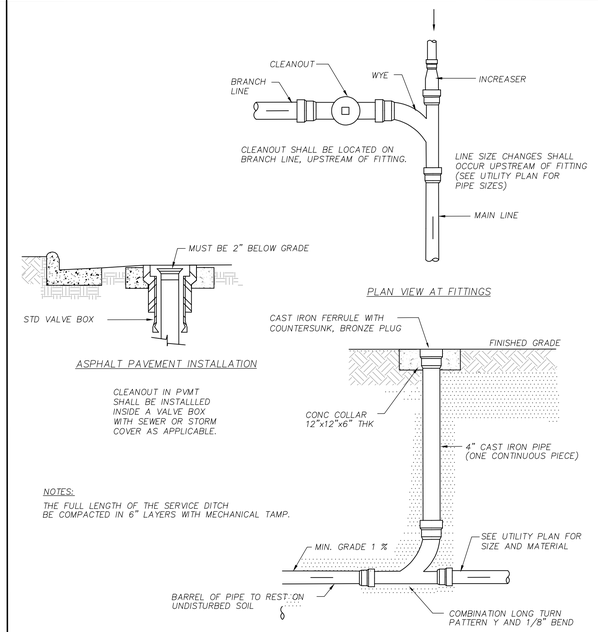
VALVE BOX N.T.S.



NOTES:

1. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT FITTINGS.
2. SEE STANDARD REACTION BLOCK TABLES FOR AREA OF CONCRETE REQUIRED.

TAPPING SLEEVE & VALVE ASSEMBLY N.T.S.

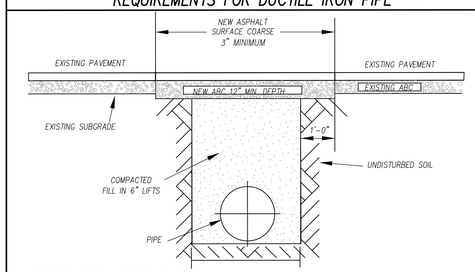


CLEANOUT IN PVMT SHALL BE INSTALLLED INSIDE A VALVE BOX WITH SEWER OR STORM COVER AS APPLICABLE.

NOTES:

THE FULL LENGTH OF THE SERVICE DITCH BE COMPACTED IN 6" LAYERS WITH MECHANICAL TAMP.

STANDARD CLEANOUT N.T.S.

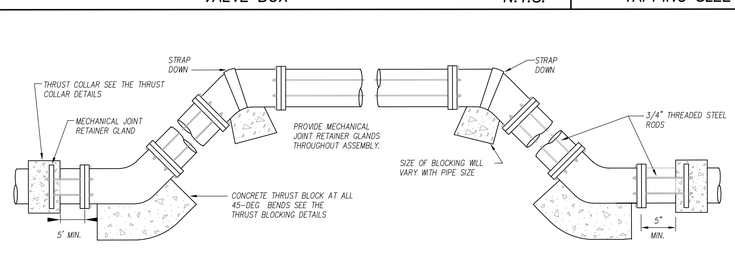


REFER TO TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON PIPE

NOTES:

1. THE PAVEMENT CUT SHALL BE DEFINED BY A STRAIGHT EDGE AND CUT WITH AN APPROPRIATE SAW CUT MACHINE.
2. 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.
3. 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.
4. THE ENTIRE THICKNESS/VERTICAL EDGE OF CUT SHALL BE TACKED.
5. THE SAME DEPTH OF PAVEMENT MATERIAL WHICH EXISTS SHALL BE REINSTALLED, BUT IN NO CASE SHALL THE ASPHALT BE LESS THAN 3" THICK.
6. THE ASPHALT PAVEMENT MATERIAL SHALL BE INSTALLED AND COMPACTED THOROUGHLY WITH A SMOOTH DRUM ROLLER TO ACHIEVE A SMOOTH LEVEL PATCH.
7. REFER TO CITY OF RALEIGH STANDARDS FOR TRENCHES AND PIPE BEDDING, AND THE TRENCH BOTTOM DIMENSIONS & BACKFILLING REQUIREMENTS FOR DUCTILE IRON PIPE FOR ADDITIONAL DETAILS.
8. NO HAND PATCHING ALLOWED.
9. PAVEMENT CUTS WITHIN NCDOT ROW SHALL CONFORM TO THE APPROVED ON SITE ENCROACHMENT PERMIT

STANDARD ASPHALT PAVEMENT PATCH NTS



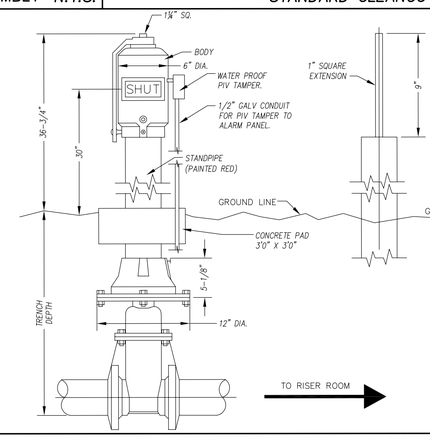
ROD REQUIREMENTS

SIZE OF 45–DEG BEND	STATIC THRUST IN POUNDS	NO. OF RODS REQUIRED
6"	4,328	2
8"	7,694	4

NOTES:

1. STEEL RODS AND BOLTS SHALL BE 3/4" HOT DIPPED GALVANIZED.
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.
3. RESTRAINED MECHANICAL GLANDS TO BE USED AT ALL FITTINGS.
4. MUST USE DUCTILE IRON EYE BOLTS WHERE NECESSARY.
5. 3' MINIMUM COVER MUST BE MAINTAINED ON ALL WATER MAINS

STANDARD VERTICAL BEND N.T.S.



FIELD ADJUSTMENT INSTRUCTIONS

1. REMOVE THE BODY FROM THE TOP OF THE INDICATOR POST ASSEMBLY.
2. CUT THE REQUIRED LENGTH OFF THE BOTTOM OF THE STANDPIPE FOR THE GROUND LINE TO MATCH UP WITH STANDPIPE GROUND LINE MARK.
3. CUT THE 1" SQ. EXTENSION AT A DISTANCE OF 9" ABOVE THE TOP OF THE STANDPIPE.
4. SET THE "OPEN" AND "SHUT" TARGETS FOR THE APPROPRIATE VALVE SIZE.
5. RE–ATTACH THE BODY TO THE TOP OF THE INDICATOR POST ASSEMBLY.
6. ALL PIV(s) SHALL BE INSTALLED WITH AN ELECTRONICALLY CONTROLLED TAMPER SWITCH.

NOTE:

POST INDICATOR VALVE SHALL BE LOCATED AT A MINIMUM 40–ft FROM BUILDING

STANDARD TAPPING SLEEVE & POST INDICATOR VALVE N.T.S.

CLH DESIGN, P.A.
400 Regency Forest Drive
Suite 120
Cary, North Carolina 27518
Phone: (919)319–8716
Fax: (919)319–7516
LA: C–106, PE: C–1595

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www.adwarchitects.com

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SANFORD FIRE STATION NO. 5

SANFORD, NC

UTILITY DETAILS

DATE 07-01-2022
PROJECT NO 21017

REVISIONS
NO DATE DESCRIPTION:

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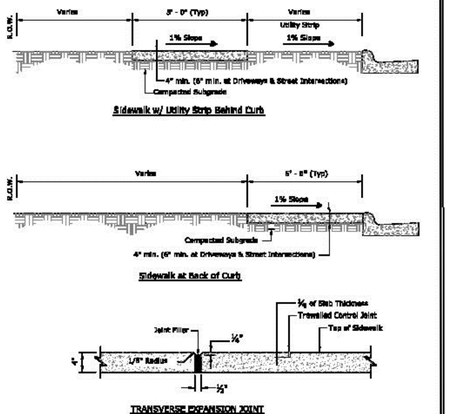
DO NOT USE FOR CONSTRUCTION

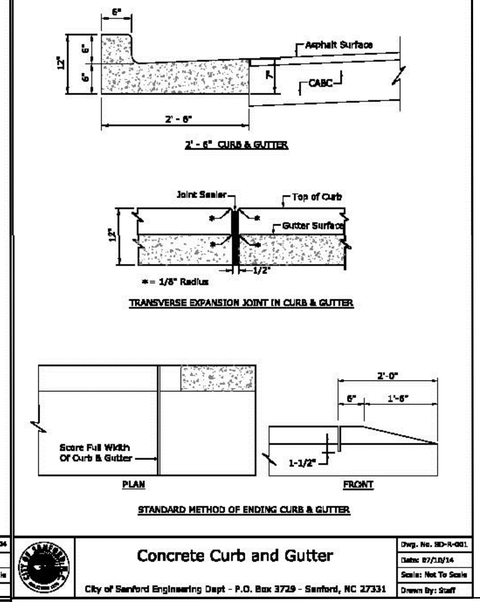
SHEET NUMBER
C802



Sidewalk

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

Dwg. No.	SD-R-004
Date:	07/10/14
Scale:	Not To Scale
Drawn By:	Staff



Concrete Curb and Gutter

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

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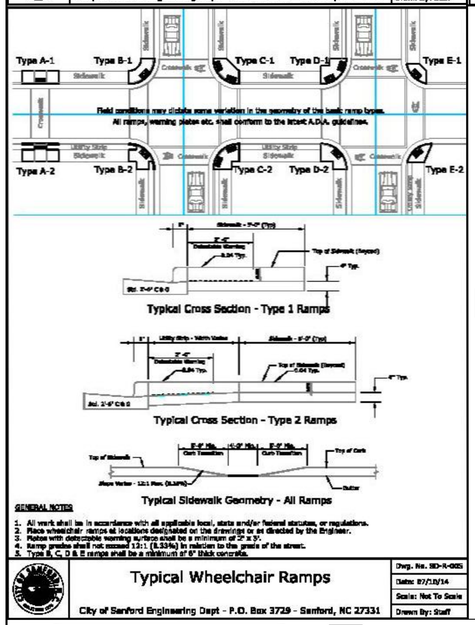
Drawn By:	Staff



Typical Wheelchair Ramps

City of Sanford Engineering Dept - P.O. Box 3729 - Sanford, NC 27331

Dwg. No.	SD-R-005
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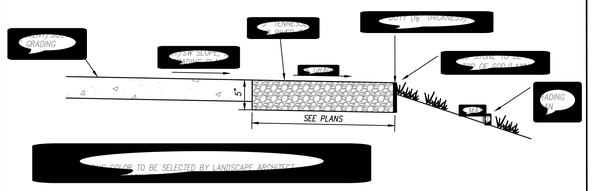
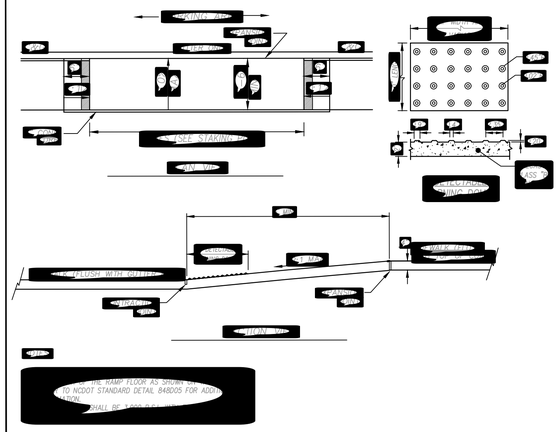
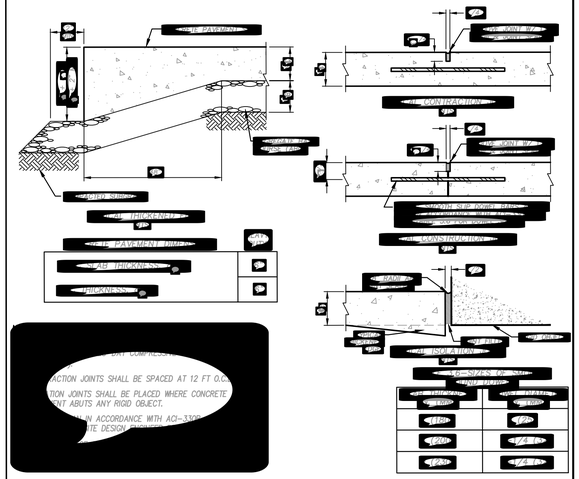
Drawn By:	Staff






SEE PAVEMENT
SEE PAVEMENT
SEE PAVEMENT

Outdoor Lighting

Shoebox LED

The energy-efficient Shoebox LED combines a decorative, contemporary style with versatility and ample lighting effect that is perfect for streets, parking lots, commercial buildings and residential communities. The Shoebox LED provides excellent color rendition along with a controlled light pattern that reduces glare and keeps the light directed only where you want it. Available in black, dark bronze, gray or white with one to four fixtures per pole.

LED *(Light Emitting Diode)*	150, 220, 420, 530 watts
Mounting heights	25', 30', 35'
Colors	Black Bronze Gray White
Poles	Fiberglass *(1 or 2 fixtures per pole)* Decorative tapered metal Decorative square metal

Note: 35' pole available in black or bronze only.

For additional information, visit us at **duke-energy.com/OutdoorLighting** or call us toll free at **866.769.6417**.

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Outdoor Lighting

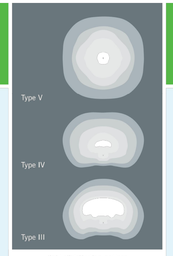
Shoebox LED

Light source: LED *(white)*

Replacement for:* LED Wattage 150 – 250-watt HPS and metal halide;
LED Wattage 205 – up to 400-watt metal halide;
LED Wattage 530 – 1,000-watt metal halide

Warm-up and restrike time: Instant on *(no warm-up or restrike time)*

Wattage	BUG Rating	Light Pattern	Lumens	Color Temp
LED 150	B5-U0-G3	IESNA Type V (circular)	19580	4,000K
LED 150	B3-U0-G4	IESNA Type IV (forward throw)	18459	
LED 150	B2-U0-G3	IESNA Type III (oval)	19006	
LED 220	B5-U0-G3	IESNA Type V *(circular)*	25870	
LED 220	B3-U0-G4	IESNA Type IV *(forward throw)*	24390	
LED 220	B2-U0-G4	IESNA Type III *(oval)*	25114	
LED 420	B5-U0-G5	IESNA Type V *(circular)*	48514	
LED 420	B3-U0-G5	IESNA Type IV *(forward throw)*	43765	
LED 530	B5-U0-G5	IESNA Type V *(circular)*	60296	
LED 530	B3-U0-G5	IESNA Type IV *(forward throw)*	54395	



light distribution pattern

** These are approximate replacement suggestions; actual conditions could be different.*

Poles available:

Name	*Mounting height*	*Color*
Round tapered decorative metal*	35'	Black Bronze
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Fiberglass	30'	Black *(1 or 2 fixtures per pole)* Gray *(1 or 2 fixtures per pole)*

Features	Benefits
Little or no installation cost	Frees up capital for other projects
Design services by lighting professionals included	Meets industry standards and lighting ordinances
Maintenance included	Eliminates high and unexpected repair bills
Electricity included	Less expensive than metered service
Warranty included	Worry-free
One low monthly cost on your electric bill	Convenience and savings for you
Turnkey operation	Provides hassle-free installation and service
Backed by over 40 years of experience	A name you can trust today … and tomorrow

**2' raised foundation available when required on metal poles only.*

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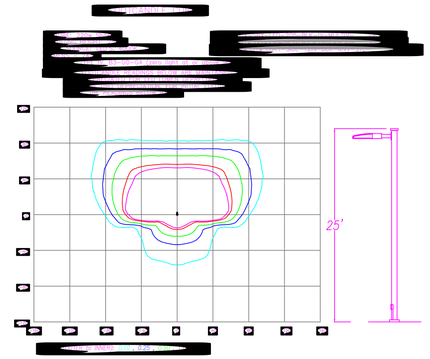
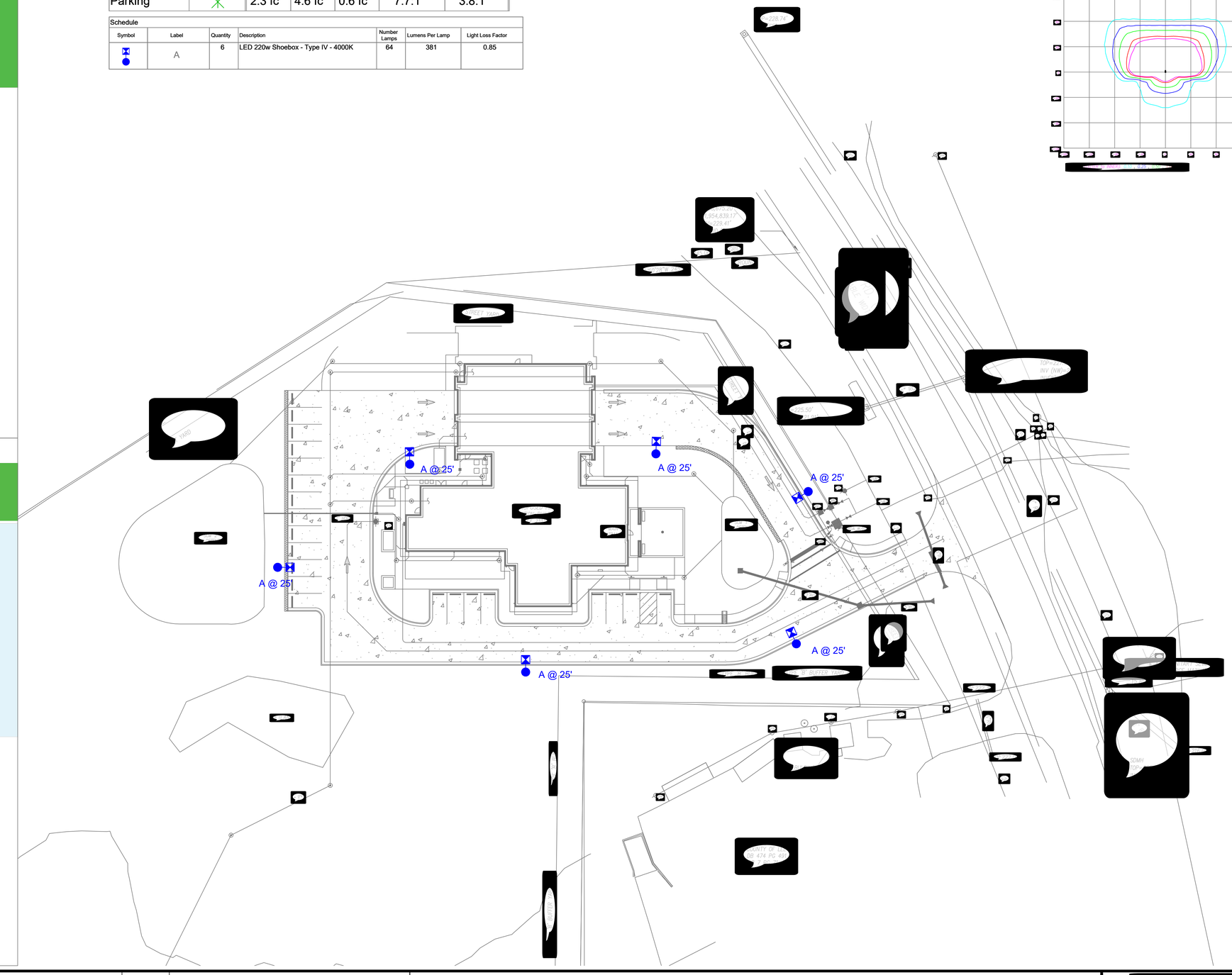
Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Parking	+	2.3 fc	4.6 fc	0.6 fc	7.7:1	3.8:1

Schedule

Symbol	Label	Quantity	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor
●	A	6	LED 220w Shoebox - Type IV - 4000K	64	381	0.85





REV#	DATE	REVISION	BY
Rev B	06/21/22	Updated Site Plan / Costumer Requested Changes	NJ
Rev A	06/01/22	LED Shoebox	NJ

Customer approval _____
Date _____

LIGHTING DESIGN TOLERANCE

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

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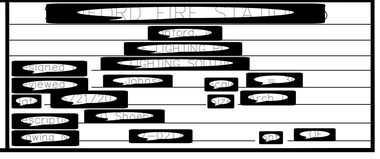
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Shoebox LED

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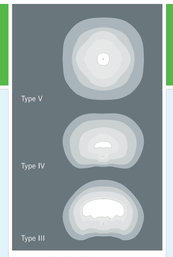

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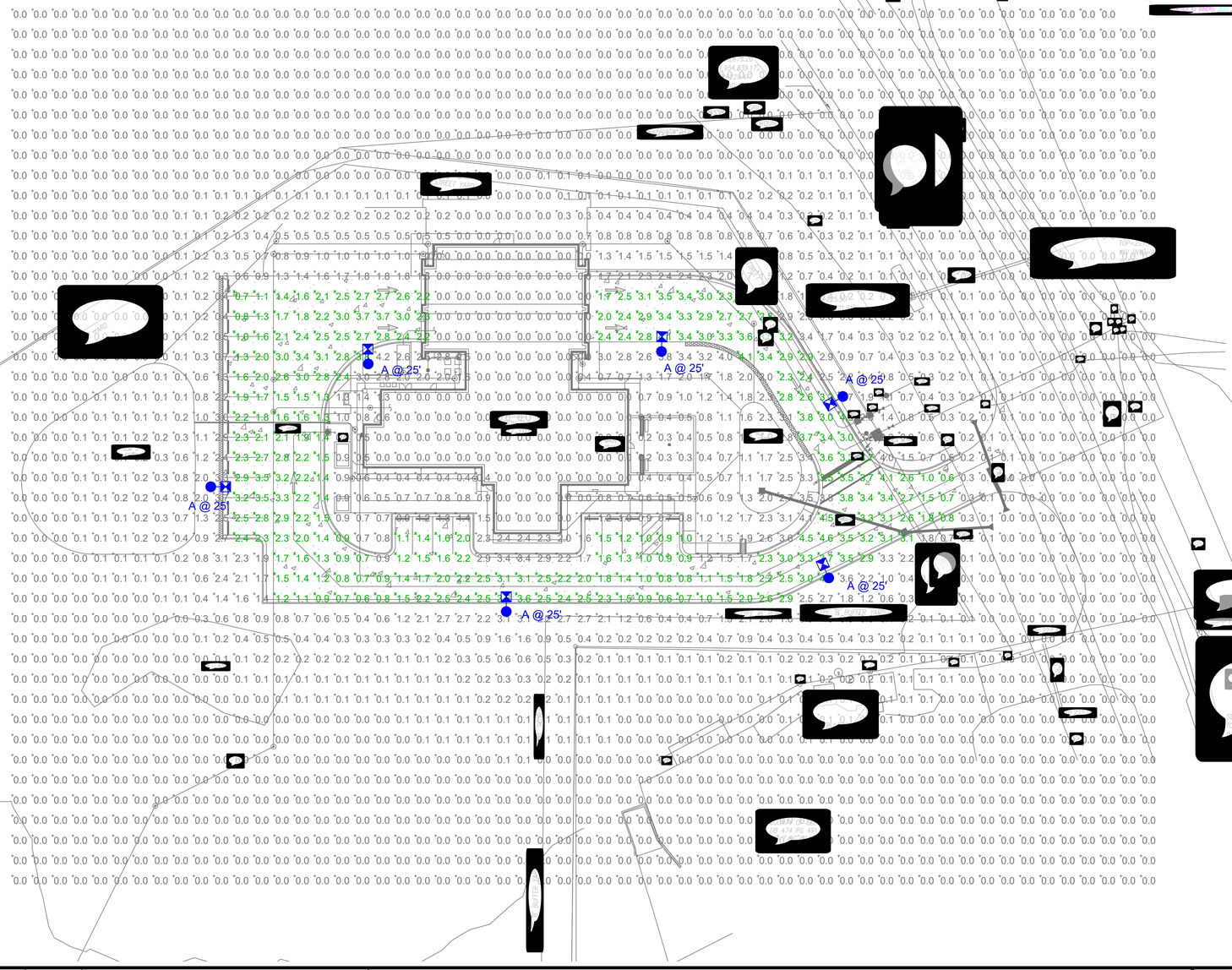

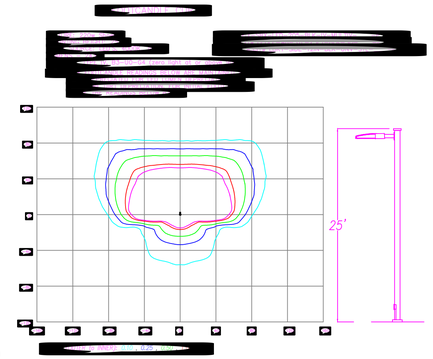

REV#	DATE	REVISION	BY
Rev B	06/21/22	Updated Site Plan / Costumer Requested Changes	NJ
Rev A	06/01/22	LED Shoebox	NJ

Customer approval _____

Date _____

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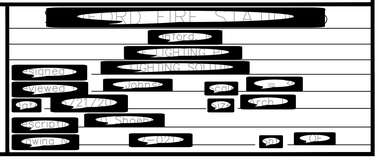
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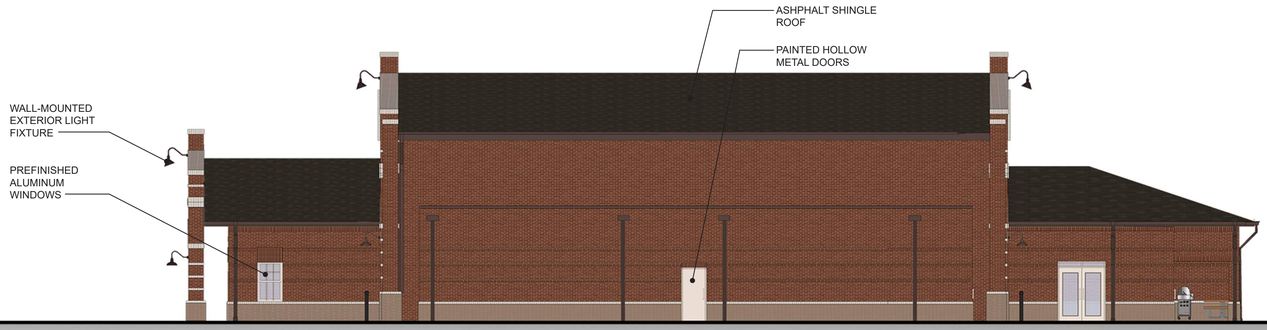
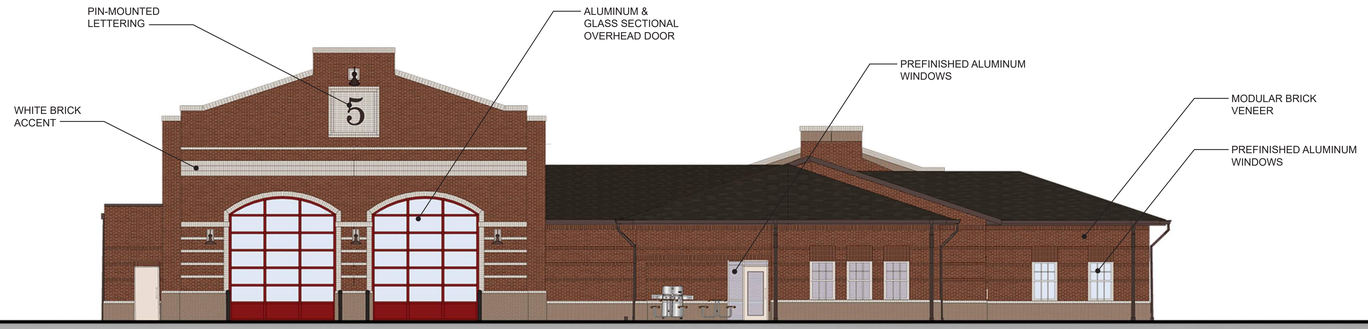
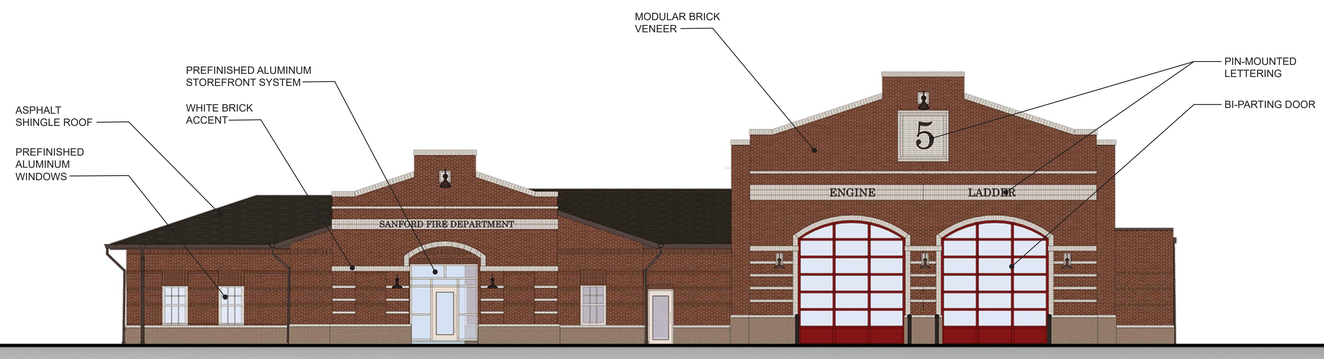


NORTH ELEVATION | SCALE: 1/8" = 1'-0" | 4



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

SOUTH ELEVATION | SCALE: 1/8" = 1'-0" | 2



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

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SANFORD, NC

EXTERIOR ELEVATIONS

DATE 01.03.2022
PROJECT NO 21017

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