

AC	ACOUSTIC CEILING	F.E.C.	FIRE EXTINGUISHER	P.T. PTD.	PAINTED
ACT	AC		CABINET	P.R.V.	POWER ROOF VENTILATOR
AL	ALUMINUM	F.I.N.F.F.F.	FINISHED FLOOR	P.R.	POOR DRAIN
ALU	ALUMINUM	F.O.S.	FACE OF STUD	REC	RECESSED
AP	ACCESS PANEL	FRP	FIREGLASS	RECEPT.	RECEPTIONIST
A.R.	ARISE RESISTANT		RESISTANT PLASTIC	RECYCLED	RECYCLED
A.F.F.	AWB	F.R.T.	FIRE RETARDANT	REQD.	REQUIRED
	ABOVE FLOOR		FIRE RETARD	R.L.	RAIN LEADER
			FOOTING	R.M.	ROOM
BD.	BOARD	FTG.	FLOORING	R.O.	ROUGH OPENING
BDG.	BUILDING	F.V.	FIRE VERIFIY	RUB.	RUBBER (WALL BASE)
B.M.	BENCH MARK	F.V.	FIRE FLYVE CABINET	S.D.	SOAP DISPENSER
BRG.	BEARING	GA	GRAB BAR	S.E.C.T.	SECTION
CAB.	CABINET	G.B.	GRAB BOARD	S.G.F.	STRUCT GLAZED
C.B.	CHALKBOARD	G.W.B.	GYPSPUM WALL BOARD		FACING T.
C.T.	CERAMIC TILE	GYP. BD.	GYPSPUM BOARD	S.H.	SHOWER HEAD
C.H.	CENTRAL HEIGHT	H.T.	HEIGHT	S.H.	SHEET
C.J.	CONTROL JUNG	H.C.	HANDICAPPED	S.M.	SHIM
C.C.	CENTER LINE	HDW.	HARDWARE	S.M.	SURFACE MOUNTED
C.L.	CLOSING	H.M.	HOLLOW METAL	S.S.	STAINLESS STEEL
CLC.	CLOSET	HR	HOUR	S.P.	SERVICE SINK
CLCR	CLEAR	H.P.	HIGH POINT	S.S.	STONE
C.M.U.	CONCRETE	INSUL.	INSULATION	STR.	STORAGE
COL.	COLUMN	J. JAN.	JANITOR	STRUCT.	STRUCTURAL
CONC.	CONCRETE	JOINT	JOINT	SUSPENDED	SUSPENDED
CONST.	CONSTRUCTION	JOINT	JOINT	SYN.FL.	SYNTHETIC FLOOR
CONT.	CONTINUOUS	LAM.	LAMINATE	T.B.	TACKBOARD
CON	CONTRIDOR	LOW	LOW	TELEPH.	TELEPHONE
CORR.	CORROR	L.P.	LAVATORY SINK	T.G.	TONGUE AND GROOVE
CPT.	CARPET	M	MEN	THRESH.	THRESHOLD
C.R.	COLD ROLLED	M	MEN	THRESH.	THRESHOLD
C.D.A.	CORRIDOR AREA	T.GACHING	T.GACHING	T.O.M.	TOP OF MASONRY PARAPET
DET.	DETAIL	MAINT.	MAINTENANCE	T.O.M.	TOP OF MASONRY PARAPET
D.F.	DRINKING FOUNTAIN	MAS.	MASONRY	T.P.	TOILET PAPER HOLDER
D.B.	DOUBLE	DBT.	DOUBLE	T.S.	TACK STRIP
DIA.	DIAMETER	MAX.	MAXIMUM	T.S.	TEACHING STATION
DM	DIMENSION	MB. M.B.	MARKER BOARD	T.W.	TEACHING WALL
DISPENSER	DISPENSER	M.C.	MEDICAL CABINET	U.	UNIT
DOOR	DOOR	MECH.	MECHANICAL	U.W.	UNDERWRITERS
DRY	DRYWALL	MET. MTL.	METAL	U.S.G.	LABORATORIES
DS	DOWNSPOUT	MET.	METAL	U.S.G.	UNLESS OTHERWISE NOT
DWG.	DRAWING	MIN.	MINIMUM	U.S.G.	U.S. GYPSUM COMPANY
E	EACH	M.O.	MASONRY OPENING	V.A.T.	VINYL ASBESTOS TILE
E.C.	EXPANSION JUNG	M.TD	MOUNTED	V.E.T.	VINYL COMPOSITION TILE
ELE.	ELECTRIC(AL)	M.TD	MOUNTED	V.E.T.	VINYL COMPOSITION TILE
EQ	EPOXY PAINT	NC, NONCOM.	NON COMBUSTIBLE	V.E.T.	VENTILATE
EQ	EQUIPMENT	NO. #	NUMBER	V.E.T.	VINYL REDUCER STRIP
E.W.C.	ELECTRIC WATER	N.T.S.	NOT TO SCALE	V.V.	VENT THROUGH FLOOR
		ON CENTER	ON CENTER	W	WOMEN
		O.D.	OUTSIDE DIAMETER	W	WITIN
EXG.	EXISTING	O.D.	OUTSIDE DIAMETER	WAIN.	WAINSCOT
EXP.	EXPANSION	OFF.	OFFICE	WARD	WARD
EXT.	EXTERTER	OP.	OPERATING HAND	WARD	WATER ROSET
F	FIRE CODE	OPNG.	OPENING	WARD	WOOD
F.C.U.	FAN COIL UNIT	PART.	PARTITION	WARD	WARDROBE
F.D.	FLOOR DRAIN	PL.	PLANT	WAL.	WALL
FON	FOUNDATION	PLAM, P-LAM	PLASTIC LAMINATE	W.M.	WALL-MOUNTED
FIRE	FIRE EXTINGUISHER	PLY, PWD	PLYWOOD	W.W.W.	WELDED WIRE MESH
		PS, P.S.	PROJECTOR SCREEN		

	ALL METALS-SMALL SCALE		GLAZED C.M.U.
	ACOUSTIC C.M.U. SMALL SCALE		PARTICLE BOARD
	ACOUSTIC C.M.U. LARGE SCALE		RIGID INSULATION
	BATT INSULATION		SHINGLES
	BRICK		SOLID CONCRETE MASONRY UNITS
	CAST STONE		STEEL-LARGE SCALE
	CONCRETE		STUD PARTITION
	CONCRETE MASONRY UNITS		WOOD-FINISH
	EARTH		WOOD BLOCKING
	GLASS-LARGE SCALE		

0 STRUCTURAL GRID LINES

1 A101 SECTION

1 A101 ELEVATION

1 A101 DETAILS IN PLAN, SECTION

1 WALL TYPE, SEE A501

101 ROOM NAME AND NUMBER

1 WINDOW TAG

101 DOOR TAG

NEW WALL

EXISTING WALL TO REMAIN

EXISTING WALL TO BE REMOVED

This 3D perspective view shows the exterior of the building. The roof is a large, flat structure with a series of parallel lines indicating its slope and structure. The side walls are also visible, showing the vertical siding and the placement of the doors and windows. The perspective is from a low angle, looking up at the building.

04.23.2020

ARCHITECTS  
STRUCTURAL ENGINEERS  
MECHANICAL, PLUMBING AND  
ELECTRICAL ENGINEERS  
CIVIL ENGINEERS  
CONSTRUCTION MANAGERS

LANDSCAPE	
L-1.0	LANDSCAPE PLAN
L-1.1	LANDSCAPE PLAN
L-1.2	LANDSCAPE PLAN
STRUCTURAL	
S101	GENERAL NOTES
S102	TYPICAL DETAILS
S201	ROTC BUILDING FOUNDATION PLAN
S301	FOUNDATION SECTIONS AND DETAILS
ARCHITECTURAL	
A001	CONSTRUCTION TYPES
A101	ROTC BUILDING PLANS
A201	ROTC EXTERIOR ELEVATIONS
A301	ROTC BUILDING SECTIONS AND WALL SECTIONS
A401	ROTC ENLARGED PLANS AND DETAILS
A501	SCHEDULES AND DETAILS
PLUMBING	
P101	ROTC BUILDING PLUMBING
MECHANICAL	
M001	MECHANICAL ABBREVIATIONS, LEGEND, ENERGY AND MECHANICAL SUMMARIES
M101	ROTC FLOOR PLAN - HVAC
M501	HVAC DETAILS
M502	HVAC DETAILS
M601	MECHANICAL SCHEDULES AND CONTROLS
ELECTRICAL	
E001	ELECTRICAL SYMBOLS AND ABBREVIATIONS
E100	ELECTRICAL SITE PLAN
E101	ROTC FLOOR PLAN - POWER, HVAC POWER AND SYSTEMS
E101	ROTC FLOOR PLAN - LIGHTING
E501	ELECTRICAL DETAILS
E502	ELECTRICAL DETAILS
E601	ELECTRICAL RISER DIAGRAM AND SCHEDULES
E602	ELECTRICAL SYSTEMS RISER DIAGRAMS
FIRE PROTECTION	
F101	ROTC FLOOR PLAN - FIRE ALARM
F601	FIRE ALARM RISER DIAGRAM, LEGEND, NOTES AND DETAILS



**TITLE**

LE

# VER SHEET

04.23.20	ISSUED FOR BIDDING
03.26.20	100% REVIEW SUBMISSION
10.14.19	NCDPI DO SUBMISSION
7.30.19	SD PROGRESS DRAWINGS
7.11.19	NCDPI SD SUBMISSION
Date	Description

ECT NO:	201908
:	04 23

E: 1" =	
OWN BY: LJR	PROJ MGR: E

INSTR	ESTR	PREST
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G001

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# BUILDING CODE SUMMARY - ROTC BUILDING

NAME OF PROJECT: NORTH BRUNSWICK HIGH SCHOOL  
ADDRESS: 114 SCORPION DRIVE NE, LELAND NC 28451  
OWNER OR AUTHORIZED AGENT: CRAIG ECKERT PHONE #: 910-253-1078 E-Mail: CECKERT@BCSWAN.NET  
OWNED BY: ☐ City ☒ County ☐ State ☐ Private  
CODE ENFORCEMENT JURISDICTION: ☒ City ☐ County ☐ State

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	EMAIL ADDRESS
ARCHITECTURAL	Becker Morgan Group, Inc.	Frederick M. Collins	4537	910.341.7600	rcollins@beckermorgan.com
CIVIL	Paramounte Engineering, Inc.	Robert Balland	031591	910.791.6707	rballand@paramounte-eng.com
ELECTRICAL	CBHF ENGINEERS, PLLC	W. Allen Cribb	23311	910.791.4000	acribb@cbhfenrigneers.com
FIRE ALARM	CBHF ENGINEERS, PLLC	David M. Hahn	23551	910.791.4000	dahnm@cbhfenrigneers.com
PLUMBING	CBHF ENGINEERS, PLLC	David M. Hahn	23551	910.791.4000	dahnm@cbhfenrigneers.com
MECHANICAL	CBHF ENGINEERS, PLLC	David M. Hahn	23551	910.791.4000	dahnm@cbhfenrigneers.com
SPRINKLER-STANDPIPE	CBHF ENGINEERS, PLLC	David M. Hahn	23551	910.791.4000	dahnm@cbhfenrigneers.com
STRUCTURAL	Woods Engineering, PA	Don R. Woods	19475	910.343.8007	dorwoods@woodseng.com
RETAINING WALL >5' HIGH					
OTHER					

2018 NC BUILDING CODE:  
☒ New Building ☐ Addition ☐ 1st Time Interior Completion  
☐ Phased Construction - Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements ☐ Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE:  
☐ N/A ☐ Chapter 14 ☐ Alteration Level I ☐ N/A ☐ Alteration Level II ☐ Repair ☐ Change of Use  
☐ Repair ☐ Change of Use ☐ Alteration Level III ☐ Historic Property  
CONSTRUCTED: . . . . . CURRENT OCCUPANCY(S) (Ch. 3) . . . . .  
RENOVATED: . . . . . PROPOSED OCCUPANCY(S) (Ch. 3) . . . . .

OCCUPANCY CATEGORY (Table 1604.5):  
CURRENT ☒ N/A ☐ I ☐ II ☐ III ☐ IV  
PROPOSED ☐ N/A ☐ I ☒ II ☐ III ☐ IV

## BASIC BUILDING DATA:

CONSTRUCTION TYPE: ☐ I-A ☐ I-B ☐ II-A ☒ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B  
SPRINKLERS: ☒ NO ☐ YES ☐ PARTIAL ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D  
STANDPIPES: ☒ NO ☐ YES ☐ CLASS I ☐ CLASS II ☐ CLASS III ☐ WET ☐ DRY  
PRIMARY FIRE DISTRICT: ☒ NO ☐ YES  
FLOOD HAZARD AREA: ☐ NO ☒ YES (ZONE X)  
SPECIAL INSPECTIONS: ☒ NO ☐ YES (Contact the local inspection jurisdiction for additional procedures and requirements)

GROSS BUILDING AREA TABLE: 2 EXIST. BLDGS ON SAME LOT W/ 3rd NEW BUILDING CONSIDERED AS ONE BUILDING			
FLOOR	EXISTING (SQ. FT.)	NEW (SQ. FT.)	SUB-TOTAL
6TH FLOOR			
5TH FLOOR			
4TH FLOOR			
3RD FLOOR			
2ND FLOOR			
1ST FLOOR	4,135*		
1ST FLOOR	1,792*	3,000	8,927
BASEMENT			
TOTAL	5,927*	3,000	8,927

\* 2 EXISTING BUILDINGS PLUS NEW BUILDING CONSIDERED AS ONE BUILDING

## ALLOWABLE AREA:

PRIMARY OCCUPANCY CLASSIFICATION(S): EDUCATION  
ACCESSORY OCCUPANCY CLASSIFICATION(S): . . . . .  
INCIDENTAL USES (Table 509): SEE TABLE - 1 HR. N/A FREE STANDING BUILDING  
SPECIAL USES (Chapter 4 - List Code Sections): . . . . .  
SPECIAL Provisions (Chapter 5 - List Code Sections): . . . . .  
MIXED OCCUPANCY: ☒ NO ☐ YES SEPARATION: . . . . . HR. EXCEPTION: . . . . .  
☐ Non-Separated Use (508.3)  
☐ Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1  
ACTUAL AREA OF OCCUPANCY A + ACTUAL AREA OF OCCUPANCY B ≤ 1  
ALLOWABLE AREA OF OCCUPANCY A ALLOWABLE AREA OF OCCUPANCY B

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2* AREA		(C) AREA FOR FRONTAGE INCREASE <sup>1,2</sup>	(D) ALLOWABLE AREA PER STORY OR UNLIMITED
			UNSPRINKLERED	SPRINKLERED		
1	NEW EDUCATION BLDG	3,000	9,500	N/A	N/A	9,500
1	EXIST. EDU. BLDG	4,135	9,500	N/A	N/A	9,500
1	EXIST. EDU. BLDG	1,792	9,500	N/A	N/A	9,500
	TOTAL	8,927	9,500			9,500

- FRONTAGE AREA INCREASES FROM SECTION 506.2 ARE COMPUTED THUS:  
A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FT MINIMUM WIDTH . . . (F)  
B. TOTAL BUILDING PERIMETER = . . . (P)  
C. RATIO (F/P) = . . . (F/P)  
D. W = MINIMUM WIDTH OF PUBLIC WAY = . . . (W) (do not exceed 30)  
E. PERCENT OF FRONTAGE INCREASE I = 100 (F/P - 0.25) x W/30 = . . . (%)  
2. UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.  
3. MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (MAXIMUM 3 STORIES) (506.2)  
4. THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4. THE MAXIMUM AREA OF AIR TRAFFIC CONTROL TOWERS MUST COMPLY WITH 412.3.1  
5. FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2

## ALLOWABLE HEIGHT:

	ALLOWABLE (TABLES 504.3 & 504.4)	SHOWN ON PLANS	CODE REFERENCE
BUILDING HEIGHT IN FEET	55'	16'	.
BUILDING HEIGHT IN STORIES	2	1	.

Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

## FIRE PROTECTION REQUIREMENTS:

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	RATING PROVIDED* (W/ REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame including columns, girders, trusses	-	0	-	-	-	-	-
Bearing Walls	-	0	-	-	-	-	-
Exterior	-	0	-	-	-	-	-
North	-	0	-	-	-	-	-
East	-	0	-	-	-	-	-
West	-	0	-	-	-	-	-
South	-	0	-	-	-	-	-
Interior	-	0	-	-	-	-	-
Nonbearing Walls and Partitions	N/A	-	-	-	-	-	-
Exterior	N/A	-	-	-	-	-	-
North	N/A	-	-	-	-	-	-
East	N/A	-	-	-	-	-	-
West	N/A	-	-	-	-	-	-
South	N/A	-	-	-	-	-	-
Interior walls and partitions	-	0	-	-	-	-	-
Floor Construction, including supporting beams and joists	N/A	-	-	-	-	-	-
Floor Ceiling Assembly	0	-	-	-	-	-	-
Columns Supporting Floors	N/A	-	-	-	-	-	-
Roof Construction, including supporting beams and joists	0	-	-	-	-	-	-
Roof Ceiling Assembly	0	-	-	-	-	-	-
Columns Supporting Roof	0	-	-	-	-	-	-
Shaft Enclosures - Exit	0	-	-	-	-	-	-
Shaft Enclosures - Other	0	-	-	-	-	-	-
Corridor Separation	0	-	-	-	-	-	-
Occupancy / Fire Barrier Separation	N/A	-	-	-	-	-	-
Party / Fire Wall Separation	N/A	-	-	-	-	-	-
Smoke Barrier Separation	N/A	-	-	-	-	-	-
Tenant / Dwelling Unit / Sleeping Separation	N/A	-	-	-	-	-	-
Incidental Use Separation	1	-	-	-	-	-	-

\* Indicate section number permitting reduction

## PERCENTAGE OF WALL OPENING CALCULATIONS:

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30'	NP, NS	NO LIMIT	N/A
-	-	-	-
-	-	-	-

## LIFE SAFETY SYSTEM REQUIREMENTS:

EMERGENCY LIGHTING: ☐ NO ☒ YES  
EXIT SIGNS: ☐ NO ☒ YES  
FIRE ALARM: ☐ NO ☒ YES  
SMOKE DETECTION SYSTEMS: ☐ NO ☒ YES ☐ PARTIAL  
CARBON MONOXIDE DETECTION: ☒ NO ☐ YES

## LIFE SAFETY PLAN REQUIREMENTS:

LIFE SAFETY PLAN SHEET # G203

- FIRE AND/OR SMOKE RATED WALL LOCATIONS (Chapter 7)
- ASSUMED AND REAL PROPERTY LINE LOCATIONS (if not on the site plan)
- EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8)
- OCCUPANCY TYPES FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2) OCCUPANT LOADS FOR EACH AREA
- EXIT ACCESS TRAVEL DISTANCES (1017)
- COMMON PATH OF TRAVEL DISTANCES (1006.2.1 & 1006.3.2(1))
- DEAD END LENGTHS (1020.4)
- CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
- MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
- ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
- A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATED FLOOR / CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION
- LOCATION OF DOORS WITH PANIC HARDWARE (1008.1.10.)
- LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND THE AMOUNT OF DELAY (1010.1.9.7)
- LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1010.1.9.9)
- LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES
- LOCATION OF EMERGENCY ESCAPE WINDOWS (1030)
- THE SQUARE FOOTAGE OF EACH FIRE AREA (202)
- THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT FOR OCCUPANCY CLASSIFICATION I-2 (407.5)
- NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

## ACCESSIBLE DWELLING UNITS (SECTION 1107) N/A

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED
-	-	-	-	-	-	-	-

## ACCESSIBLE PARKING (SECTION 1106) PER SECTION 66-276, TOWN OF LELAND MUNICIPAL CODE MIN. NO. OF PARKING SPACES N/A MAX. NO. OF PARKING SPACES N/A

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	8' ACCESS AISLE	
-	-	-	-	-	-	-
-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-

## PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1) N/A - NO INCREASE IN CLASSROOM OR TRAINING OCCUPANCY COUNT

USE	WATERCLOSETS			URINALS	LAVATORIES			SHOWERS / TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
EXIST'G	1	1	0	-	1	1	0	-	1	1
NEW	1	1	0	-	1	1	0	-	1	1
REQ'D	1	1	0	-	1	1	0	-	1	1

Special Approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

TOWN OF LELAND, DPI  
.  
.  
.

## ENERGY SUMMARY SEE G300 FOR ComCHECK

### ENERGY REQUIREMENTS:

THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE ENERGY CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: ☐ YES (the remainder of this section is not applicable) ☒ NO

EXEMPT BUILDING: ☐ YES Provide code or statutory reference: . ☒ NO

CLIMATE ZONE: 3A

### METHOD OF COMPLIANCE:

- ☒ PRESCRIPTIVE (ENERGY CODE)  
☐ PERFORMANCE (ENERGY CODE)  
☐ PRESCRIPTIVE (ASHRAE 90.1)  
☐ PERFORMANCE (ASHRAE 90.1)  
☐ PERFORMANCE (OTHER)

If "Other" specify source here: .

### THERMAL ENVELOPE (Prescriptive method only)

ROOF/CEILING ASSEMBLY (each assembly)	METAL BUILDING
DESCRIPTION OF ASSEMBLY	0.1 + 0.05
U-VALUE OF TOTAL ASSEMBLY	MIN. R-10 + R-19
R-VALUE OF INSULATION	N/A
SKYLIGHTS IN EACH ASSEMBLY	N/A
U-VALUE OF SKYLIGHT	N/A
TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY	N/A

EXTERIOR WALLS (each assembly)	METAL BUILDING - CONTINUOUS INSULATED METAL WALL PANELS, R-13.87
DESCRIPTION OF ASSEMBLY	0.1
U-VALUE OF TOTAL ASSEMBLY	MIN. R-0 + R-9.8 CI
R-VALUE OF INSULATION	
OPENINGS (windows or doors with glazing)	HM INSULATED DOORS: 16
U-VALUE OF ASSEMBLY	
SOLAR HEAT GAIN COEFFICIENT	
PROJECTION FACTOR	
DOOR R-VALUES	HM DOORS: R-6.4

WALLS BELOW GRADE (each assembly)	N/A
DESCRIPTION OF ASSEMBLY	
U-VALUE OF TOTAL ASSEMBLY	
R-VALUE OF INSULATION	

FLOORS OVER UNCONDITIONED SPACE (each assembly)	N/A
DESCRIPTION OF ASSEMBLY	
U-VALUE OF TOTAL ASSEMBLY	
R-VALUE OF INSULATION	

FLOORS SLAB ON GRADE (each assembly)	N/A
DESCRIPTION OF ASSEMBLY	
U-VALUE OF TOTAL ASSEMBLY	
R-VALUE OF INSULATION	
HORIZONTAL / VERTICAL REQUIREMENT	
SLAB HEATED	

## STRUCTURAL DESIGN SEE STRUCTURAL DRAWINGS

### DESIGN LOADS:

IMPORTANCE FACTORS: WIND (Iw) .  
SNOW (Is) .  
SEISMIC (Ie) .

LIVE LOADS: ROOF . PSF  
MEZZANINE . PSF  
FLOOR . PSF

GROUND SNOW LOAD: . PSF  
WIND LOAD: BASIC WIND SPEED . MPH (ASCE-7-98)  
EXPOSURE CATEGORY .

SEISMIC DESIGN CATEGORY: .

PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:

OCCUPANCY CATEGORY (TABLE 1604.5) .

SPECTRAL RESPONSE ACCELERATION S<sub>s</sub> . %g S<sub>1</sub> . %g

SITE CLASSIFICATION (ASCE 7) .

DATA SOURCE: .

BASIC STRUCTURAL SYSTEM .

ANALYSIS PROCEDURE: ☐ N/A ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC

ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ☐ YES ☐ NO

LATERAL DESIGN CONTROL: ☐ N/A ☐ EARTHQUAKE ☐ WIND

SOIL BEARING CAPACITIES:

☐ N/A

☐ FIELD TEST (PROVIDE COPY OF TEST REPORT) . PSF

☐ PRESUMPTIVE BEARING CAPACITY . PSF

PILE SIZE, TYPE AND CAPACITY . PSF

## MECHANICAL SUMMARY SEE MECHANICAL DRAWINGS

### MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

#### THERMAL ZONE

WINTER DRY BULB .  
SUMMER DRY BULB .

#### INTERIOR DESIGN CONDITIONS

WINTER DRY BULB .  
SUMMER DRY BULB .  
RELATIVE HUMIDITY .

#### BUILDING HEATING LOAD

#### BUILDING COOLING LOAD

#### MECHANICAL SPACING CONDITIONING SYSTEM

UNITARY  
DESCRIPTION OF UNIT .  
HEATING EFFICIENCY .  
COOLING EFFICIENCY .  
SIZE CATEGORY OF UNIT .

BOILER  
SIZE CATEGORY, IF OVERSIZED, STATE REASON .  
CHILLER  
SIZE CATEGORY, IF OVERSIZED, STATE REASON .

LIST EQUIPMENT EFFICIENCIES: .

## ELECTRICAL SUMMARY SEE ELECTRICAL DRAWINGS

### ELECTRICAL SYSTEM AND EQUIPMENT

#### METHOD OF COMPLIANCE:

ENERGY CODE: ☐ PRESCRIPTIVE ☐ PERFORMANCE  
ASHRAE 90.1: ☐ PRESCRIPTIVE ☐ PERFORMANCE

#### LIGHTING SCHEDULE

- LAMP TYPE REQUIRED IN FIXTURE
- NUMBER OF LAMPS IN FIXTURE
- BALLAST TYPE USED IN THE FIXTURE
- TOTAL WATTAGE PER FIXTURE TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED (whole building or space by space)
- TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED

#### ADDITIONAL PRESCRIPTIVE COMPLIANCE (When using the 2018 NCECC; not required for ASHRAE 90.1)

- C406.2 MORE EFFICIENT HVAC EQUIPMENT PERFORMANCE C406.3 REDUCED LIGHTING POWER DENSITY
- C406.4 ENHANCED DIGITAL LIGHTING CONTROLS
- C406.5 ON-SITE RENEWABLE ENERGY
- C406.6 DEDICATED OUTDOOR AIR SYSTEM
- C406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING



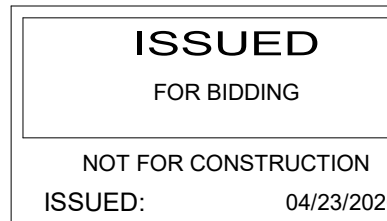
## ARCHITECTURE PLANNING

North Carolina  
3333 Jackie Drive, Suite 120  
Wilmington, NC 28403  
910.341.7600

Maryland  
312 West Main St, Suite 300  
Salisbury, MD 21801  
410.546.9100

Delaware  
309 S Governors Ave  
Dover, DE 19904  
302.734.7950

Rittenhouse Station  
250 South Main Street, Suite 109  
Newark, DE 19711  
302.349.3700  
www.beckermorgan.com



#### PROJECT TITLE

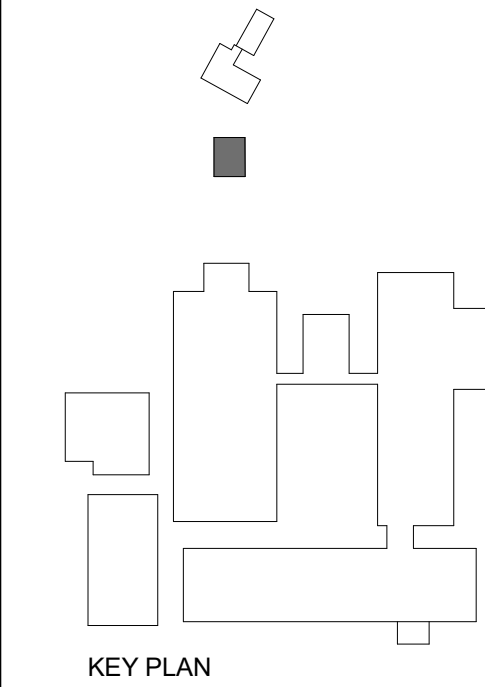
## NORTH BRUNSWICK HIGH SCHOOL ROTC BUILDING

114 SCORPION DRIVE N.E.  
LELAND, NC 28451

DSP #: 100  
DPI SCHOOL #: 1165

#### SHEET TITLE

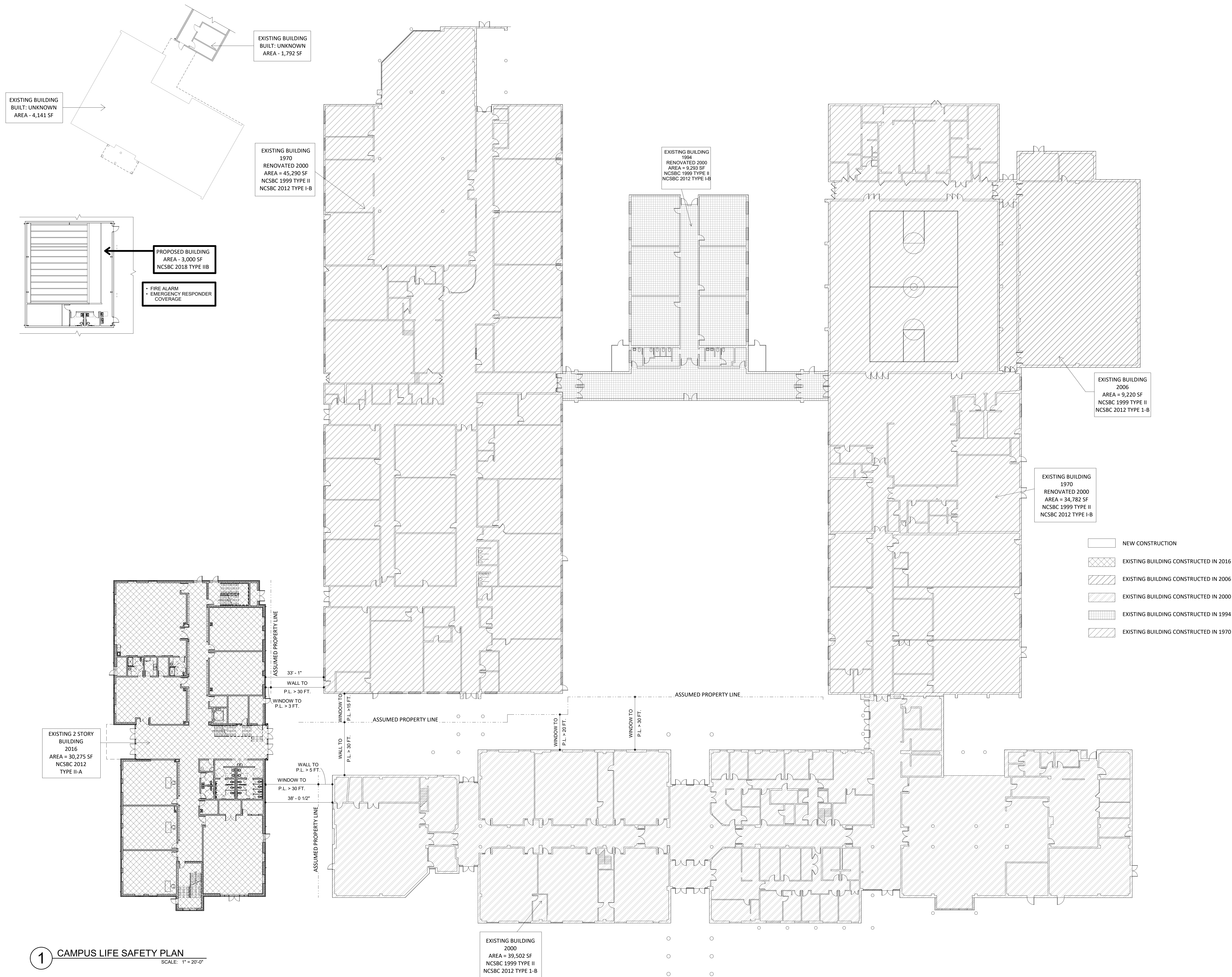
## ROTC BUILDING CODE SUMMARY



#### KEY PLAN

#### ISSUE BLOCK

DATE	DESCRIPTION
04/23/20	ISSUED FOR BIDDING
03/28/20	100% REVIEW SUBMISSION
10/14/19	NC DPI DO SUBMISSION
7/30/19	SD PROGRESS DRAWINGS
7/11/19	NC DPI SD



1 CAMPUS LIFE SAFETY PLAN  
SCALE: 1" = 20'-0"



ARCHITECTURE  
PLANNING

North Carolina  
3333 Jackkle Drive, Suite 120  
Wilmington, NC 28403  
910.341.7600

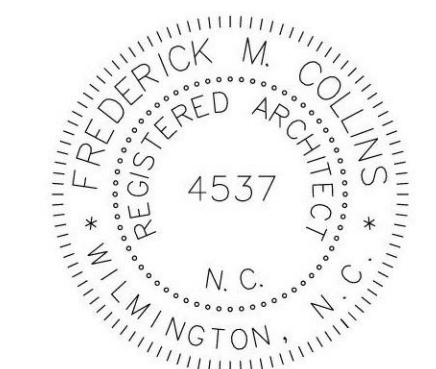
Maryland  
312 West Main St, Suite 300  
Salisbury, MD 21801  
410.546.9100

Delaware  
309 S Governors Ave  
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302.734.7950

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302.369.3700  
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ISSUED: 04/23/2020



PROJECT TITLE

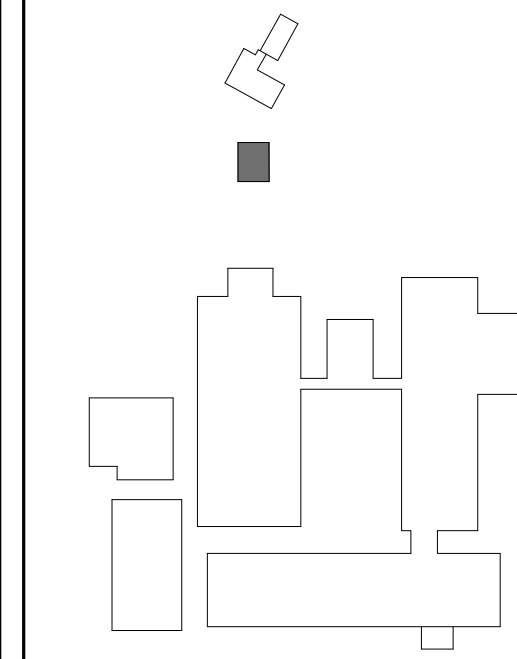
# NORTH BRUNSWICK HIGH SCHOOL ROTC BUILDING

114 SCORPION DRIVE N.E.  
LELAND, NC 28451

DSP # : 100  
DPI SCHOOL # : 1165

SHEET TITLE

## CAMPUS LIFE SAFETY PLAN



ISSUE BLOCK		
Mark	Date	Description
04.23.20	04.23.20	ISSUED FOR BIDDING
03.28.20	03.28.20	100% REVIEW SUBMISSION
10.14.19	10.14.19	NCDPI DO SUBMISSION
7.30.19	7.30.19	SD PROGRESS DRAWINGS
7.11.19	7.11.19	NCDPI SD SUBMISSION

PROJECT NO: 2019082.00  
DATE: 04.23.2020  
SCALE: 1" = 20'-0"  
DRAWN BY: LJR PROJ MGR: RMC

G200  
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**Maryland**  
312 West Main St, Suite 300  
Salisbury, MD 21801  
410.546.9100

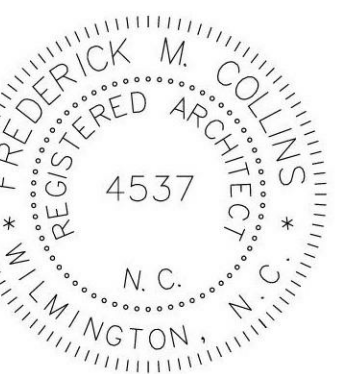
**Delaware**  
309 S Governors Ave  
Dover, DE 19904  
302.734.7950

Rittenhouse Station  
250 South Main Street, Suite 109  
Newark, DE 19711  
302.369.3700  
[www.beckermorgan.com](http://www.beckermorgan.com)

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FOR BIDDING

NOT FOR CONSTRUCTION  
SUED: 04/23/2020



PROJECT TITLE

NORTH  
BRUNSWICK  
HIGH SCHOOL  
ROTC  
BUILDING

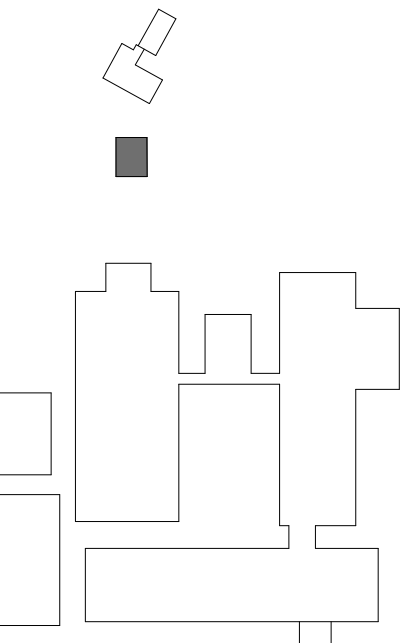
114 SCORPION DRIVE N.E.  
LELAND, NC 28451

DSP # : 100

DPI SCHOOL #: 1165

SHEET TITLE

# ROTC BUILDING LIFE SAFETY PLAN



## KEY PLAN

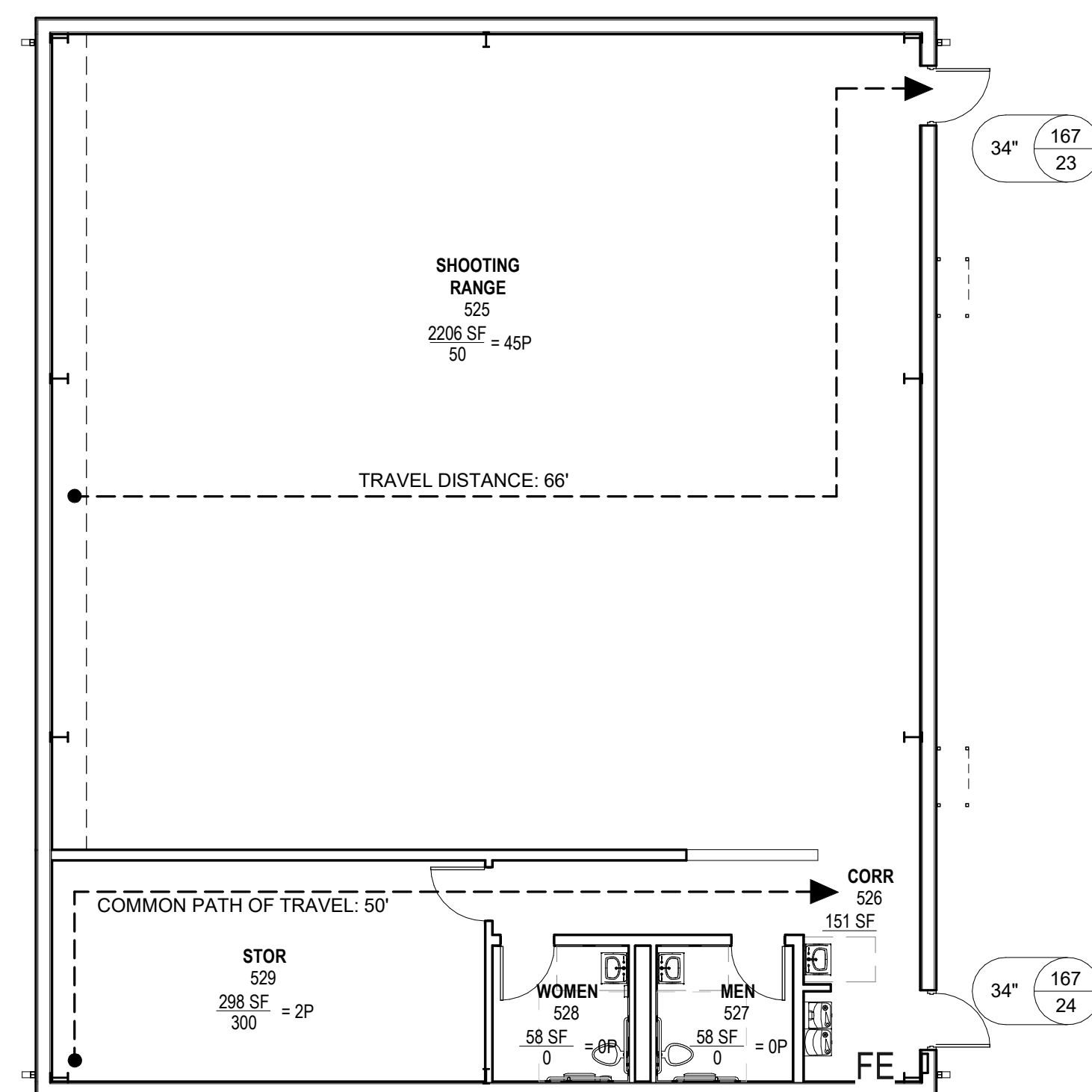
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	10.14.19	NCDCP DD SUBMISSION
	7.30.19	SD PROGRESS DRAWINGS
	7.11.19	NCDCP SD SUBMISSION

PROJECT NO:	201908200
DATE:	04/23/2020

SCALE:		As indicated
DRAWN BY	Author	PROJ MGChecker

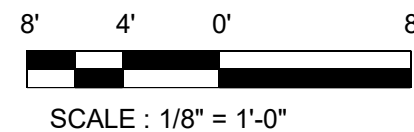
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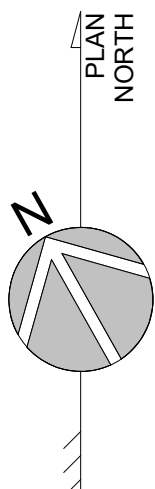


## 1 LIFE SAFETY PLAN ROTC

SCALE: 1/8" = 1'-0"



SCALE : 1/8" = 1'-0"





COMcheck Software Version COMcheckWeb  
Envelope Compliance Certificate

Project Information

Energy Code: 90.1 (2013) Standard  
Project Title: NBHS - ROTC  
Location: Leland, North Carolina  
Climate Zone: 3a  
Project Type: New Construction  
Permit No. TBD  
Performance Sim. Specs: EnergyPlus 8.1.0.009 (EPW: USA\_NC\_Wilmington.Intl.AP.723013\_TMY3.epw)

Construction Site:  
North Brunswick HS  
Leland, North Carolina 26451

Owner/Agent:  
Craig Eckert  
Brunswick County Schools  
Bolivia, North Carolina  
9103983815  
ceckert@bcswan.net

Designer/Contractor:  
Frederick Collins  
Becker Morgan Group  
3333 Jackkle Drive Suite 120  
Wilmington, North Carolina 28403  
910-341-7600  
rcollins@beckermorgan.com

Building Area	Floor Area
1-single (School/University) : Nonresidential	3000

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U- Factor <sub>u</sub>
Roof: Other Metal Building Roof, [Bldg. Use 1 - single] (b)	3060	---	---	0.037	0.041
Floor: Unheated Slab-On-Grade, [Bldg. Use 1 - single] (c)	220	---	---	0.730	0.730
NORTH Ext. Wall: Other Metal Building Wall, [Bldg. Use 1 - single] (b)	623	---	---	0.059	0.084
EAST Ext. Wall: Other Wood Framed Wall, [Bldg. Use 1 - single] (b)	720	---	---	0.059	0.089
SOUTH Ext. Wall: Other Metal Building Wall, [Bldg. Use 1 - single] (b)	623	---	---	0.059	0.084
WEST Ext. Wall: Other Metal Building Wall, [Bldg. Use 1 - single] (b)	720	---	---	0.059	0.084
Door: Other (U-Factor option), Swinging, [Bldg. Use 1 - single]	21	---	---	0.160	0.700
Door: Other (U-Factor option), Swinging, [Bldg. Use 1 - single]	21	---	---	0.160	0.700

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.  
(b) Other components require supporting documentation for proposed U-factors.  
(c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Project Title: NBHS - ROTC  
Data filename:  
Report date: 01/29/20  
Page 1 of 11

Envelope PASSES: Design 1% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 90.1 (2013) Standard requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Frederick Collins, ARCHITECT  
Name - Title  
Signature  
Date 1/29/20



ARCHITECTURE  
P L A N N I N G

North Carolina

3333 Jackkle Drive, Suite 120  
Wilmington, NC 28403  
910.341.7600

Maryland

312 West Main St, Suite 300  
Salisbury, MD 21801  
410.546.9100

Delaware

309 S Governors Ave  
Dover, DE 19904  
302.734.7950

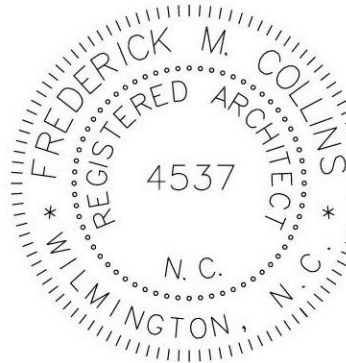
Rittenhouse Station  
250 South Main Street, Suite 109  
Newark, DE 19711  
302.369.3700

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ISSUED  
FOR BIDDING

NOT FOR CONSTRUCTION

ISSUED: 04/23/2020



PROJECT TITLE

NORTH  
BRUNSWICK  
HIGH SCHOOL  
ROTC  
BUILDING

114 SCORPION DRIVE N.E.  
LELAND, NC 28451

DSP # : 100  
DPI SCHOOL # : 1165

SHEET TITLE

ROTC ComCHECK

ISSUE BLOCK

04.23.20	ISSUED FOR BIDDING
03.28.20	100% REVIEW SUBMISSION
10.14.19	NCDP DO SUBMISSION
7.30.19	SD PROGRESS DRAWINGS
7.11.19	NCDP SD SUBMISSION

Mark	Date	Description
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PROJECT NO: 2019002.01

DATE: 04.23.2020

SCALE:

DRAWN BY: Author PROJ MGChecker

G301

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# NORTH BRUNSWICK HIGH SCHOOL IMPROVEMENTS

114 SCORPION DRIVE NE  
LELAND, NORTH CAROLINA 28451

## BID DOCUMENTS

APRIL 2020

**NOTICE REQUIRED**

ALL EXISTING UNDERGROUND UTILITIES SHALL BE PHYSICALLY LOCATED PRIOR TO THE BEGINNING OF ANY CONSTRUCTION IN THE VICINITY OF SAID UTILITIES.

CONTRACTORS SHALL NOTIFY OPERATORS WHO MAINTAIN UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION AT LEAST TWO WORKING DAYS, BUT NOT MORE THAN TEN WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION.

CONTRACTORS SHALL CONTACT OVERHEAD ELECTRIC PROVIDER TO COMPLY WITH FEDERAL OSHA 1910.333 MINIMUM APPROACH DISTANCE TO ENERGIZED POWERLINES AND OSH 29 CFR 1926.1407-1411 MUST BE FOLLOWED.

CONTRACTOR SHALL CONTACT AT&T PRIOR TO ANY DEMOLITION TO ALLOW FOR AT&T TO DISCONNECT COMMUNICATIONS CABLES COMING INTO THE SITE.

**CONTACT THESE UTILITIES**

**TOWN OF LELAND PLANNING & INSPECTIONS DEPARTMENT**  
ATTN: MATTHEW KIRKLAND, SENIOR PLANNER  
PH: 910-332-4816

**PIEDMONT NATURAL GAS**  
ATTN: CATHY PLEASANT  
PH: 910-251-2827

**EMERGENCY DIAL 911  
POLICE - FIRE - RESCUE**  
ATTN: TOWN OF LELAND FIRE/RESCUE DEPARTMENT  
PH: 910-371-2727

**BRUNSWICK COUNTY ENGINEERING**  
ATTN: BRIGIT FLORA (STORMWATER)  
PH: 910-253-2405

**H2GO - BRUNSWICK REGIONAL WATER**  
ATTN: BOB WALKER  
PH: 910-371-9949

**TOWN OF LELAND PUBLIC SERVICES - SEWER**  
ATTN: LYNN VETTER  
PH: 910-332-4652

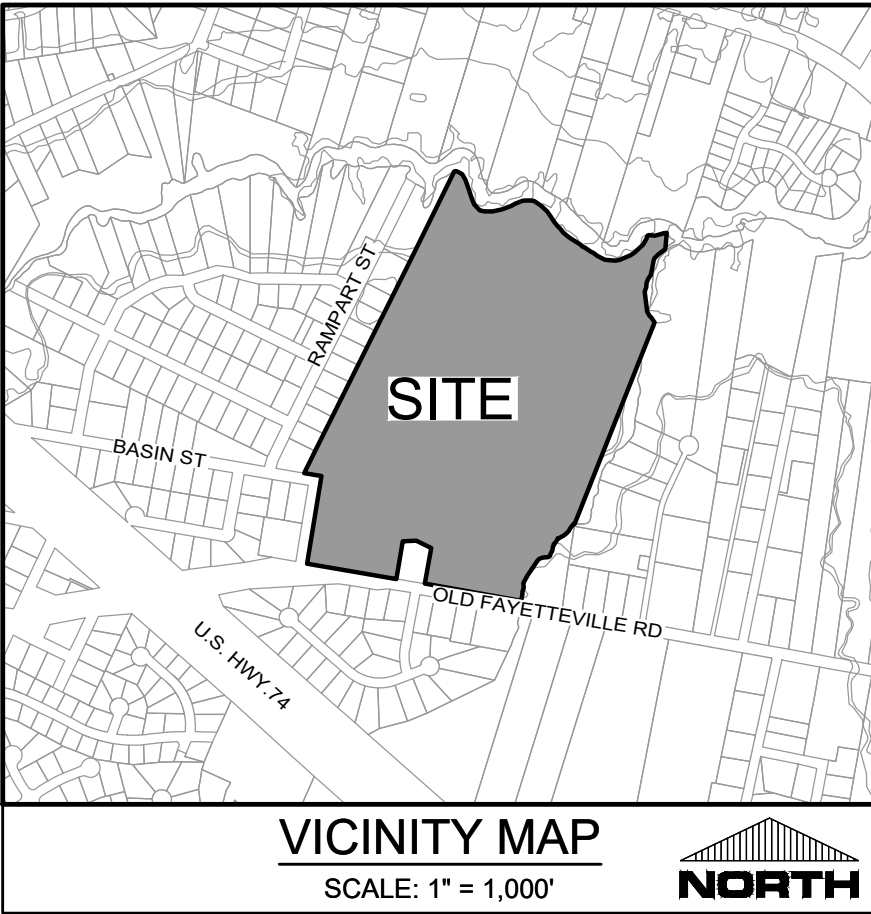
**DUKE ENERGY**  
DISTRIBUTION CONSTRUCTION SERVICE  
ALLISON WALSH  
PH: 910-350-3457

TRANSMISSION AGENT  
BILL WILDER  
PH: 910-772-4903

**AT&T/BELL SOUTH**  
ATTN: STEVE DAYVAULT (BUILDING ENGINEERING)  
PH: 910-341-0741

ATTN: JAMES BATSON, ENGINEERING  
PH: 910-341-1621

**SPECTRUM**  
ATTN: STEVE BARNETTE  
PH: 910-772-5755

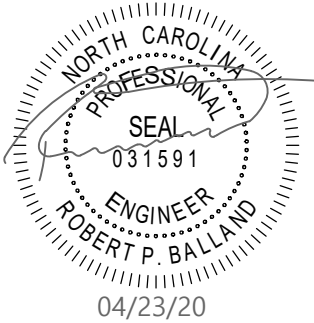


**OWNER/DEVELOPER:**  
BRUNSWICK COUNTY SCHOOLS  
35 REFERENDUM DRIVE NE  
BOLIVIA, NC 28422

**ENGINEER (CIVIL) & LANDSCAPE ARCHITECT:**  
PARAMOUNTE ENGINEERING, INC.  
122 CINEMA DRIVE  
WILMINGTON, NORTH CAROLINA 28403  
ATTN: ROB BALLAND, P.E. (910) 791-6707 - ENGINEER  
ATTN: JIM CIRELLO, LA (910) 791-6707 - LANDSCAPE

**SURVEYING:**  
PARAMOUNTE ENGINEERING, INC.  
122 CINEMA DRIVE  
WILMINGTON, NORTH CAROLINA 28403  
ATTN: CHRIS GAGNE, P.L.S. (910) 791-6707

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C-0.0	COVER SHEET
C-1.0 & C-1.1	GENERAL NOTES
C-2.0 - C-2.3	DEMOLITION PLANS
C-2.4 - C-2.8	SITE PLANS
C-3.0 - C-3.3	GRADING-DRAINAGE-EC PLANS
C-4.0 & C-4.1	UTILITY PLAN
C-5.0 - C-5.3	DETAILS
L-1.0 - L-1.2	LANDSCAPE PLANS



**PREPARED BY:**  
**PARAMOUNTE ENGINEERING, INC.**  
122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846  
PROJECT # 19248.PE

COORDINATION NOTES:

1. THE CONTRACTOR IS REQUIRED TO OBTAIN ANY/ALL PERMITS REQUIRED FOR CONSTRUCTION OF THESE PLANS.
2. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH PERMITS ISSUED AND WITH THE TOWN OF LELAND, BRUNSWICK COUNTY, H260 WATER, AND THE STATE OF NORTH CAROLINA.
3. THE CONTRACTOR IS TO ESTABLISH AND CHECK ALL HORIZONTAL AND VERTICAL CONTROLS TO BE USED WITH THE PROJECT. IN ADDITION, THE CONTRACTOR IS TO COMPUTE THE LAYOUT OF THE ENTIRE SITE PLAN IN ADVANCE OF BEGINNING ANY WORK ASSOCIATED WITH THE SUBJECT PLANS. CONTRACTOR SHALL EMPLOY A PROFESSIONAL SURVEYOR TO PERFORM SITE IMPROVEMENT STAKEOUT(S).
4. ANYTIME WORK IS PERFORMED OFF-SITE OR WITHIN AN EXISTING EASEMENT, THE CONTRACTOR IS TO NOTIFY THE HOLDER OF SAID EASEMENT AS TO THE NATURE OF PROPOSED WORK, AND TO FOLLOW ANY GUIDELINES OR STANDARDS WHICH ARE ASSOCIATED WITH OR REFERENCED IN THE RECORDED EASEMENT.
5. CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS BY OTHERS FOR ALL BUILDING DIMENSIONS AND DETAILS.

GENERAL NOTES:

1. TREE INVENTORY AND TOPOGRAPHIC SURVEY COMPLETED BY PARAMOUNT ENGINEERING, INC. THE SURVEY SHALL BE FIELD VERIFIED BY CONTRACTOR AND ANY DISCREPANCIES REPORTED TO THE OWNER AND ENGINEER.
2. REASONABLE CARE HAS BEEN EXERCISED IN SHOWING THE LOCATION OF EXISTING UTILITIES ON THE PLANS. THE EXACT LOCATION OF ALL EXISTING UTILITIES IS NOT KNOWN IN ALL CASES. THE CONTRACTOR SHALL EXPLORE THE AREA AHEAD OF DITCHING OPERATIONS BY OBSERVATIONS, ELECTRONIC DEVICES, HAND DIGGING, AND BY PERSONAL CONTACT WITH THE UTILITY COMPANIES. IN ORDER TO LOCATE EXISTING UTILITIES IN ADVANCE OF TRENCHING OPERATIONS SO AS TO ELIMINATE OR MINIMIZE DAMAGE TO EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS RESULTING FROM ANY DAMAGE TO THE EXISTING UTILITY LINES INCLUDING LOSS OF UTILITY REVENUES. CONTRACTOR SHALL ARRANGE FOR TEMPORARY SUPPORT OF EXISTING UTILITIES, SUCH AS POLES, CONDUITS, FIBER OPTIC CABLES, TELEPHONE CABLES, WATER LINES, ETC.
3. CONTRACTOR SHALL COMPLY WITH THE LATEST REVISIONS AND INTERPRETATIONS OF THE DEPARTMENT OF LABOR SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION PROMULGATED UNDER THE OCCUPATIONAL SAFETY AND HEALTH ACT.
4. CONTRACTOR SHALL PLAN AND CONSTRUCT WORK SO AS TO CAUSE MINIMUM INCONVENIENCE TO THE OWNER AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN AT ALL TIMES DURING THE PROGRESS OR TEMPORARY SUSPENSION OF WORK, SUITABLE BARRIERS, FENCES, SIGNS OR OTHER ADEQUATE PROTECTION, INCLUDING FLAGMEN AND WATCHMEN AS NECESSARY TO INSURE THE SAFETY OF THE PUBLIC AS WELL AS THOSE ENGAGED IN THE CONSTRUCTION WORK. CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "CONSTRUCTION AND MAINTENANCE OPERATIONS SUPPLEMENT TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" BY THE USDOT.
5. ALL MATERIAL CLEARED OR DEMOLISHED BY THE CONTRACTOR IN ORDER TO CONSTRUCT THE WORK SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF OFF-SITE.
6. ALL WORK BY THE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR AFTER THE OWNER ACCEPTS THE WORK.
7. CONTRACTOR SHALL CALL THE NORTH CAROLINA ONE-CALL CENTER AT 811 AN ALLOW THE CENTER TO LOCATE EXISTING UTILITIES BEFORE DIGGING.
8. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO START OF CONSTRUCTION. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
9. CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
10. ACCESS TO UTILITIES, FIRE HYDRANTS, STREET LIGHTING, ETC., SHALL REMAIN UNDISTURBED, UNLESS COORDINATED WITH THE RESPECTIVE UTILITY.
11. DO NOT SCALE THIS DRAWING AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
12. THE GENERAL CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT AND AT LEAST ONCE A WEEK DURING CONSTRUCTION.
13. THE GENERAL CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
14. ALL STREET SURFACES, DRIVEWAYS, CULVERTS, CURB AND GUTTERS, ROADSIDE DRAINAGE DITCHES AND OTHER STRUCTURES THAT ARE DISTURBED OR DAMAGED IN ANY MANNER AS A RESULT OF CONSTRUCTION SHALL BE REPLACED OR REPAIRED IN ACCORDANCE WITH THE SPECIFICATIONS.
15. CONTRACTOR SHALL MAINTAIN AN "AS-BUILT" SET OF DRAWINGS TO RECORD THE EXACT LOCATION OF ALL PIPING PRIOR TO CONCEALMENT. DRAWINGS SHALL BE GIVEN TO THE OWNER UPON COMPLETION OF THE PROJECT WITH A COPY OF THE TRANSMITTAL LETTER TO THE ENGINEER.
16. IF DEPARTURES FROM THE SPECIFICATIONS OR DRAWINGS ARE DEEMED NECESSARY BY THE CONTRACTOR, DETAILS OF SUCH DEPARTURES AND REASONS THEREOF SHALL BE GIVEN TO THE OWNER FOR REVIEW. NO DEPARTURES FROM THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT THE PERMISSION OF THE OWNER, THE TOWN OF LELAND, BRUNSWICK COUNTY, OR H260 WATER, RESPECTIVELY.
17. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES. THE LOCATION OF ANY EXISTING UTILITIES ARE NOT NECESSARILY SHOWN ON PLANS AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL ON HIS INITIATIVE AND AT NO EXTRA COST HAVE LOCATED ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY. NO CLAIMS FOR DAMAGES OR EXTRA COMPENSATION SHALL ACCRUE TO THE CONTRACTOR FROM THE PRESENCE OF SUCH PIPE OR OTHER OBSTRUCTIONS OR FROM DELAY DUE TO REMOVAL OR REARRANGEMENT OF THE SAME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UNDERGROUND STRUCTURES. CONTACT NORTH CAROLINA ONE CALL\* TOLL FREE 1-800-632-4949 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL NONSUBSCRIBING UTILITIES.
18. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL INSPECTIONS, CERTIFICATIONS, EQUIPMENT, ETC., THAT MAY BE REQUIRED.
19. THE ENGINEER AND/OR OWNER DISCLAIM ANY ROLE IN THE CONSTRUCTION MEANS AND METHODS ASSOCIATED WITH THE PROJECT AS SET FORTH IN THESE PLANS.
20. ALL LOT STRIPING AND DIRECTIONAL ARROWS TO BE REFLECTIVE MARKINGS AND SHALL CONFORM TO MUTCD. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
21. LANDSCAPE PLANTINGS AT ENTRANCE/ EXITS WILL BE INSTALLED AND MAINTAINED SO AS NOT TO INTERFERE WITH SIGHT DISTANCE NEEDS OF DRIVERS IN THE PARKING AREA AND AT ENTRANCE/EXIT LOCATIONS PER LOCAL STANDARDS.
22. ALL DIMENSIONS AND RADI ARE TO OUTSIDE FACE OF BUILDING OR TO FACE OF CURB UNLESS OTHERWISE NOTED.

TRAFFIC NOTES:

1. ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY & FOR DRIVEWAY(S) ARE TO BE THERMOPLASTIC & MEET TOWN OF LELAND AND/OR NCDOT STANDARDS.
2. TRAFFIC CONTROL DEVICES (INCLUDING SIGNS AND PAVEMENT MARKINGS) IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD (MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES) STANDARDS.
3. ALL TRAFFIC CONTROL SIGNS AND MARKINGS NOT WITHIN THE PUBLIC RIGHT-OF-WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
4. ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
5. ANY OPEN CUTTING OF A TOWN STREET REQUIRES A UTILITY CUT PERMIT. CONTACT TOWN OF LELAND PLANNING 910-332-4816 FOR MORE DETAILS. IN CERTAIN CASES, AN ENTIRE RESURFACING OF THE AREA BEING OPEN CUT MAY BE REQUIRED. CONTACT NCDOT, DIVISION 3, DIVISION ENGINEER FOR ANY WORK WITHIN NCDOT RIGHT-OF-WAY AT 910-341-2000.
6. CONTACT TOWN OF LELAND PLANNING AT 910-332-4816 TO ENSURE THAT ALL TRAFFIC SIGNAL FACILITIES AND EQUIPMENT ARE SHOWN ON THE PLAN. CALL TRAFFIC ENGINEERING FORTY- EIGHT (48) HOURS PRIOR TO ANY EXCAVATION IN THE RIGHT OF WAY.
7. ANY BROKEN OR MISSING SIDEWALK PANELS, DRIVEWAY PANELS AND/OR CURBING SHALL BE REPLACED.
8. TACTILE WARNING MATS TO BE INSTALLED AT ALL WHEELCHAIR RAMPS AND CURB CUTS.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. THE EROSION CONTROL PLAN SHALL INCLUDE PROVISIONS FOR GROUND COVER ON ALL EXPOSED PERIMETER DITCHES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 WITHIN 7 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY. GROUND COVER SHALL BE PROVIDED ON ALL OTHER DISTURBED AREAS WITHIN 14 CALENDAR DAYS FROM THE LAST LAND DISTURBING ACTIVITY.
2. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL HANDBOOK (NO SEPARATE PAYMENT).
3. THE CONTRACTOR SHALL NOTIFY PLAN APPROVING AUTHORITY ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO FINAL INSPECTION.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO CLEARING AND/OR LAND DISTURBANCE.
5. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN AND PERMIT SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
6. PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO OFF-SITE BORROW OR WASTE AREAS STAGING OR STORAGE AREAS), THE CONTRACTOR SHALL PREPARE AND SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND TO NEW HANOVER COUNTY FOR APPROVAL. CONTRACTOR SHALL PAY ALL FEES REQUIRED AND SHALL, INSTANT NECESSARY MEASURES AT NO SEPARATE PAYMENT. THE CONTRACTOR SHALL PROVIDE THE OWNER AND THE ENGINEER A COPY OF THE AMENDED PERMIT.
7. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY EITHER THE REVIEWING AGENCY OR THE ENGINEER. (NO SEPARATE PAYMENT).
8. ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
9. ALL AREAS DISTURBED BY CONSTRUCTION UNLESS OTHERWISE IMPROVED SHALL BE SOODED OR SEEDED AS DISTURBED AND STABILIZED.
10. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE PRIOR TO DISCHARGE TO RECEIVING OUTLET.
11. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
12. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED BY CONTRACTOR ONCE STABILIZATION OR A SUFFICIENT GROUND COVER HAS BEEN ESTABLISHED OR AS DIRECTED BY THE ENGINEER. (NO SEPARATE PAYMENT). NCDENR'S FINAL APPROVAL IS REQUIRED.
13. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE SHALL BE REQUIRED AT ALL CONSTRUCTION STAGING AREA ENTRANCES AND ALL CONSTRUCTION ACCESS LOCATIONS INTO NON-PAVED AREA. (NO SEPARATE PAYMENT).
14. WHEN CROSSING CREEK OR DRAINAGE-WAY, THE DIVISION OF WATER QUALITY SHALL BE CONTACTED PRIOR TO DISTURBING A CREEK. THE CONTRACTOR SHALL INSTALL RIP-RAP WITH FABRIC ALONG DISTURBED BANKS AND CHANNEL AND RESTORE SLOPES TO ORIGINAL CONOURS, BUT NOT STEEPER THAN 2:1 MAXIMUM. DISTURBED CREEK AREA SHALL BE STABILIZED IMMEDIATELY.

DEMOLITION NOTES:

1. CONTRACTOR TO COORDINATE WITH THE OWNER TO PROPERLY MAINTAIN OR RELOCATE EXISTING SERVICE CONNECTIONS WHEN NECESSARY.
2. CONTRACTOR IS TO WALK THE SITE AND BECOME FAMILIAR WITH THE SCOPE OF DEMOLITION REQUIRED. ALL DEMOLITION WORK REQUIRED TO CONSTRUCT NEW SITE IMPROVEMENTS WILL BE PERFORMED BY THE CONTRACTOR AND WILL BE CONSIDERED UNCLASSIFIED EXCAVATION.
3. DEMOLITION SHALL INCLUDE BUT IS NOT LIMITED TO THE EXCAVATION, HAULING AND OFFSITE DISPOSAL OF CONCRETE PADS, CONCRETE DITCHES, FOUNDATIONS, SLABS, STEPS, AND STRUCTURES; ABANDONED UTILITIES, BUILDINGS, PAVEMENTS AND ALL MATERIALS CLEARED AND STRIPPED TO THE EXTENT NECESSARY AS DIRECTED BY THE GEOTECHNICAL ENGINEER FOR THE INSTALLATION OF THE NEW IMPROVEMENTS AND WITHIN THE LIMITS OF CLEARING AND GRADING AND AS SHOWN ON THESE PLANS.
4. THE CONTRACTOR SHALL PROTECT ALL ADJACENT PROPERTY, STRUCTURES AND UTILITIES ON THE PROPERTY NOT TO BE DEMOLISHED. DAMAGE TO PROPERTIES OF OTHERS DUE TO THE CONTRACTORS ACTIVITIES SHALL BE REPLACED IN KIND BY THE CONTRACTOR AT NO COST TO OWNER.
5. ELECTRIC, TELEPHONE, SANITARY SEWER, WATER AND STORM SEWER UTILITIES THAT SERVICE OFF-SITE PROPERTIES SHALL BE MAINTAINED DURING THE CONSTRUCTION PROCESS BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL PRODUCE A PHOTOGRAPHIC RECORD (DIGITAL) OF DEVELOPMENT COMMENCING WITH A RECORD OF THE SITE AS IT APPEARS BEFORE DEMOLITION HAS BEGUN. AFTERWARDS, A PHOTOGRAPHIC RECORD SHALL BE MAINTAINED WEEKLY DURING CONSTRUCTION AND ENDING WITH A PHOTOGRAPHIC RECORD OF THE DEVELOPMENT AS IT APPEARS AFTER DEMOLITION. THIS RECORD SHALL BE DELIVERED TO THE OWNER.
7. EXISTING CURB AND GUTTER, LIGHTS, SIDEWALK, AND UTILITIES NOT INTENDED FOR DEMOLITION SHALL BE MAINTAINED, PROTECTED AND UNDISTURBED DURING DEMOLITION.
8. ALL EXISTING IMPROVEMENTS INDICATED OR REQUIRED TO BE DEMOLISHED SHALL INCLUDE REMOVAL FROM THE PROPERTY AND PROPER DISPOSAL.
9. CONTRACTOR SHALL COORDINATE RELOCATION OF ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES INCLUDING CABLE, GAS, TELEPHONE AND ELECTRIC AND ANY OTHER UTILITIES THROUGH THE SITE WITH THE RESPECTIVE COMPANIES.
10. CONTRACTOR SHALL MAINTAIN REQUIRED DISTANCES FROM HIGH VOLTAGE OVERHEAD LINES AND REMOVE TREES SO THEY DO NOT FALL TOWARDS OVERHEAD ELECTRICITY.
11. PROVIDE SMOOTH SAW CUT OF EXISTING PAVEMENTS, CURBS AND GUTTERS AND SIDEWALKS TO BE DEMOLISHED.
12. ALL DEMOLITION WORK SHALL BE DONE IN STRICT ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS AS WELL AS OSHA REGULATIONS.
13. EXISTING FIRE HYDRANTS ON OR NEAR THE SITE ARE TO REMAIN IN SERVICE.
14. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS.

NPDES BUILDING WASTES HANDLING:

1. NO PAINT OR LIQUID WASTES IN STREAM OR STORM DRAINS.
2. DEDICATED AREAS FOR DEMOLITION CONSTRUCTION AND OTHER WASTES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
3. EARTHEN-MATERIALS STOCKPILES MUST BE LOCATED 50' FROM STORM DRAINS AND STREAMS UNLESS NO REASONABLE ALTERNATIVES AVAILABLE.
4. CONCRETE MATERIALS MUST BE CONTROLLED TO AVOID CONTACT WITH SURFACE WATERS, WETLANDS, OR BUFFERS.

NPDES INSPECTIONS:

1. SAME WEEKLY INSPECTION REQUIREMENTS.
2. SAME RAIN GAUGE & INSPECTIONS AFTER 0.5" RAIN EVENT.
3. INSPECTIONS ARE ONLY REQUIRED DURING "NORMAL BUSINESS HOURS".
4. INSPECTION REPORTS MUST BE AVAILABLE ON-SITE DURING BUSINESS HOURS UNLESS A SITE-SPECIFIC EXEMPTION IS APPROVED.
5. RECORDS MUST BE KEPT FOR 3 YEARS AND AVAILABLE UPON REQUEST.
6. ELECTRONICALLY AVAILABLE RECORDS MAY BE SUBSTITUTED UNDER CERTAIN CONDITIONS.

NPDES SEDIMENT BASINS:

1. OUTLET STRUCTURES MUST WITHDRAW FROM BASIN SURFACE UNLESS DRAINAGE AREA IS LESS THAN 1 ACRE.
2. USE ONLY DWO-APPROVED FLOCULANTS.

NPDES - SPECIFIC PLAN SHEETS NOTES:

1. THIS PAGE IS SUBMITTED TO COMPLY WITH NPDES GENERAL STORMWATER PERMIT NCG010000.
2. THIS PAGE CAN BE APPROVED BY THE COUNTY PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000 ONLY.
3. THIS PAGE OF THE APPROVED PLANS IS ENFORCEABLE EXCEPT PURSUANT TO NPDES GENERAL STORMWATER PERMIT NCG010000.
4. THE COUNTY IS NOT AUTHORIZED TO ENFORCE THE NPDES PORTION OF THIS PAGE OF THE PLANS AND THEY ARE NOT A PART OF THE APPROVED PLANS FOR THE PURPOSES OF ENFORCEMENT ACTION UNDER THE COUNTY CODE.

EROSION CONTROL AND SEQUENCE OF CONSTRUCTION NOTES:

NOTE: THESE EROSION CONTROL AND SEQUENCE OF CONSTRUCTION NOTES ARE INTENDED FOR EACH PHASE OF CONSTRUCTION. THE ORDER AND STEPS TAKEN MUST BE IMPLEMENTED AS EACH PART OF THE PROJECT IS DEVELOPED, WHETHER AS A WHOLE OR IN PHASES. ANY EROSION CONTROL DEVICES/MEASURES MUST REMAIN IN PLACE UNTIL THE ENTIRE DISTURBANCE IS STABILIZED AND ALL IMPROVEMENTS WITHIN THE DISTURBANCE LIMITS ARE COMPLETE.

1. CONSTRUCT TEMPORARY GRAVEL CONSTRUCTION ENTRANCE(S), ESTABLISH THE LIMITS OF DISTURBANCE, TREE PROTECTION FENCING, AND TEMPORARY SILT FENCE.
2. CLEAR AND REMOVE FROM SITE TREES AS DESIGNATED, ROOTS, ROOT MAT, ETC. FROM THE AREA WITHIN THE DESIGNATED CLEARING LIMITS.
3. CONSTRUCT TEMPORARY SEDIMENT BASIN(S) AND ASSOCIATED SKIMMER, OUTLET PIPE, SPILLWAY, ETC.
4. INSTALL REMAINING EROSION CONTROL MEASURES AS SHOWN ON THE PLANS WITHIN THE AREA DISTURBED. ALL EROSION CONTROL MEASURES MUST BE INSTALLED BEFORE COMMENCING CONSTRUCTION.
5. PLANT GRASS OVER ALL GRADED AREAS WITHIN 14 WORKING DAYS OF CEASE OF ANY GRADING ACTIVITY.
6. IMMEDIATELY UPON THE INSTALLATION OF ANY STORM DRAINAGE CATCH BASIN, DROP INLET, ETC., THE CONTRACTOR SHALL INSTALL INLET PROTECTION TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING AND RESTORING TO PRE-CONSTRUCTION CONDITIONS ANY AREAS OUTSIDE THE PROJECT LIMITS THAT MAY INADVERTENTLY BE DAMAGED DUE TO THE FAILURE OF THE EROSION CONTROL MEASURES.
8. DURING GRADING AND AFTER GRADING HAS BEEN COMPLETE, THE CONTRACTOR SHALL CONTINUE TO MAINTAIN PERMANENT AND TEMPORARY EROSION CONTROL MEASURES UNTIL FINAL APPROVAL BY ENGINEER OR EROSION CONTROL INSPECTOR.
9. UPON RECEIVING FINAL APPROVAL, THE CONTRACTOR CAN REMOVE TEMPORARY EROSION CONTROL MEASURES.
10. THE CONTRACTOR SHALL CONTINUE TO WATER, FERTILIZE, MOW AND MAINTAIN GRASS & PLANTED AREAS UNTIL ALL CONSTRUCTION IS COMPLETE.

EROSION CONTROL MAINTENANCE PLAN:

1. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY 12-INCH OR GREATER RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
2. ALL CONSTRUCTION ENTRANCES WILL BE PERIODICALLY TOP DRESSED WITH AN ADDITIONAL 2 INCHES OF #4 STONE TO MAINTAIN PROPER DEPTH. ANY SEDIMENT THAT IS TRACKED INTO THE STREET WILL BE IMMEDIATELY REMOVED.
3. SEDIMENT FENCE / SEDIMENT FENCE OUTLETS - SEDIMENT WILL BE REMOVED BEHIND THE SEDIMENT FENCE WHEN IT BECOMES HALF-FILLED. THE SEDIMENT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER. STAKES MUST BE STEEL, AND SPACED 6 FEET WITH EXTRA STRENGTH FABRIC AND NO WIRE BACKING. STAKE SPACING CAN BE 6 FEET WHEN STANDARD STRENGTH FABRIC AND WIRE BACKING ARE USED. IF ROCK FILTERS (OR EXCELSIOR WATTLES) ARE DESIGNED AT LOW POINTS IN THE SEDIMENT FENCE THE ROCK OR WATTLE WILL BE REPAIRED OR REPLACED IF IT BECOMES HALF FULL OF SEDIMENT. NO LONGER DRAINS, OR DAMAGED.
4. INLET PROTECTION - SEDIMENT SHALL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL, BLOCK AND GRAVEL, OR ROCK-PIPE INLETS, WHEN IT REACHES HALF-FILLED. ROCK WILL BE CLEANED OR REPLACED WHEN NO LONGER DRAINS. SILT SACKS, BEAVER DAMS, SANDY SACKS, AND SOCKS NEED CHECKING EVERY WEEK AND AFTER RAIN.
5. ALL SEEDED AREAS WILL BE FERTILIZED, RESEDED AS NECESSARY, AND MULCHED ACCORDING TO SPECIFICATIONS ON THESE PLANS AND CONTRACT SPECIFICATIONS TO MAINTAIN A VIGOROUS, DENSE VEGETATIVE COVER.

PERMANENT SEEDING

GRASS TYPE	LBS/ ACRE	TIME OF SEEDING	FERTILIZER LIMESTONE
BERMUDA, HULLED BERMUDA, UNHULLED	10-20 35	MARCH - AUGUST SEPT. - FEB.	BY SOIL TEST
CENTPEDE	10	MARCH - AUGUST	BY SOIL TEST (NO HIGH PH)
TALL FESCUE (COASTAL CULTIVAR RECOMMENDED)	50	MARCH - AUGUST	300 LB/AC 10-20-20 OR BY SOIL TEST
SLOPES >= 2:1 CENTPEDE SERICEA LESPEDEZA	5 20	JAN - DEC	BY SOIL TEST

TEMPORARY SEEDING

GRASS TYPE	LBS/ ACRE	TIME OF SEEDING	FERTILIZER LIMESTONE
RYE GRAIN	50	OCT. - APR.	400 LBS/AC. 10-20-20
SWEET SUDAN GRASS	50	JUNE - AUGUST	400 LBS/AC. 10-20-20
GERMAN OR BROWNTOP MILLET	50	JUNE - AUGUST	400 LBS/AC. 10-20-20
STRAW MULCH AS NEEDED	4,000		

STABILIZATION TIME FRAME:

"IN THE EVENT THAT THE GOVERNING AGENCIES TIMEFRAME FOR STABILIZATION VARY, CONTRACTOR SHALL MEET THE MORE STRINGENT REQUIREMENT

NC ACCESSIBILITY NOTES:

GENERAL NOTES:

1. SPECIAL ATTENTION SHALL BE GIVEN TO COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NORTH CAROLINA BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS.
2. IT IS ESSENTIAL THAT CONTRACTORS ARE AWARE OF THE SITE ACCESSIBILITY REQUIREMENTS. PARAMOUNT ENGINEERING HAS DEVELOPED THESE NOTES AND DETAILS TO ASSURE THAT CONTRACTORS ARE AWARE OF THE REQUIREMENTS AT THE POINT IN TIME WHEN THEY ARE BIDDING THE PROJECT. IN ADDITION, PARAMOUNT ENGINEERING HAS MADE A POINT IN THESE NOTES AND DETAILS, AS WELL AS IN OUR DRAWINGS, TO PROVIDE SLOPES / GRADES AND DIMENSIONS THAT COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NORTH CAROLINA BUILDING CODE/ANSI A117.1 AND APPLICABLE LOCAL LAWS & REGULATIONS. IF THESE SLOPES / GRADES OR DIMENSIONS ARE NOT ACHIEVABLE, THE CONTRACTOR IS REQUIRED TO CONTACT THE OWNER IMMEDIATELY AND BEFORE MOVING FORWARD WITH THE WORK.
3. THE CONTRACTOR SHALL NOTIFY PARAMOUNT ENGINEERING IMMEDIATELY OF ANY CONFLICT BETWEEN THESE NOTES AND DETAILS AND OTHER PROJECT DRAWINGS, WHETHER BY PARAMOUNT ENGINEERING OR OTHERS. THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK FOR WHICH THE ALLEGED CONFLICT HAS BEEN DISCOVERED UNTIL SUCH ALLEGED CONFLICT HAS BEEN RESOLVED. NO CLAIM SHALL BE MADE BY THE CONTRACTOR FOR DELAY OR DAMAGES AS A RESULT OF RESOLUTION OF ANY SUCH CONFLICT(S).
4. THESE ACCESSIBILITY NOTES AND DETAILS ARE INTENDED TO DEPICT SLOPE AND DIMENSIONAL REQUIREMENTS ONLY. REFER TO SIDEWALK, CURBING, AND PAVEMENT DETAILS FOR ADDITIONAL INFORMATION.

ACCESSIBLE ROUTE NOTES:

1. AT LEAST ONE ACCESSIBLE ROUTE SHALL BE PROVIDED WITHIN THE SITE FROM ACCESSIBLE PARKING SPACES AND ACCESSIBLE PASSENGER LOADING ZONES; PUBLIC STREETS OR SIDEWALKS; AND PUBLIC TRANSPORTATION STOPS TO THE ACCESSIBLE BUILDING OR FACILITY ENTRANCE THEY SERVE.
2. AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDINGS, ACCESSIBLE FACILITIES, ACCESSIBLE ELEMENTS, AND ACCESSIBLE SPACES THAT ARE ON THE SAME SITE.
3. WALKING SURFACES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL HAVE A MAXIMUM RUNNING SLOPE OF 5.0% AND A MAXIMUM CROSS SLOPE OF 2.0%.
4. ANY WALKING SURFACE THAT IS PART OF AN ACCESSIBLE ROUTE WITH A RUNNING SLOPE GREATER THAN 5.0% IS A RAMP AND SHALL COMPLY WITH THE GUIDELINES FOR RAMPS OR CURB RAMPS.
5. TRANSITIONS BETWEEN RAMPS, WALKS, LANDINGS, GUTTERS OR STREETS SHALL BE FLUSHAND FREE OF ABRUPT VERTICAL CHANGES (1/4 INCH MAXIMUM VERTICAL CHANGE IN LEVEL PERMITTED).
6. FLOOR SURFACES SHALL BE STABLE, FIRM AND SLIP RESISTANT.
7. THE MINIMUM CLEAR WIDTH OF EXTERIOR ACCESSIBLE ROUTES SHALL BE FORTY- EIGHT (48) INCHES MINIMUM MEASURED BETWEEN HANDRAILS WHERE HANDRAILS ARE PROVIDED (NC BUILDING CODE 1104.1 & 1104.2).
8. WHERE AN ACCESSIBLE ROUTE MAKES A 180 DEGREE TURN AROUND AN OBJECT THAT IS LESS THAN 48 INCHES IN WIDTH, CLEAR WIDTH SHALL BE FORTY TWO (42) INCHES MINIMUM APPROACHING THE TURN, FORTY EIGHT (48) INCHES MINIMUM DURING THE TURN, AND FORTY-TWO (42) INCHES MINIMUM LEAVING THE TURN. THE CLEAR WIDTH APPROACHING AND LEAVING THE TURN MAY BE THIRTY-SIX (36) INCHES MINIMUM WHEN THE CLEAR WIDTH AT THE TURN IS SIXTY (60) INCHES MINIMUM. \* SEE NOTE 7 ABOVE FOR NC CLEAR WIDTH OF EXTERIOR ACCESSIBLE ROUTES"
9. AN ACCESSIBLE ROUTE WITH A CLEAR WIDTH LESS THAN SIXTY (60) INCHES SHALL PROVIDE PASSING WITH A CLEAR WIDTH INTERVAL OF TWO HUNDRED (200) FEET MINIMUM. PASSING SPACES SHALL BE EITHER A SIXTY (60) INCH MINIMUM BY SIXTY (60) INCH MINIMUM SPACE, OR AN INTERSECTION OF TWO (2) WALKING SURFACES THAT PROVIDE A COMPLIANT T-SHAPED TURNING SPACE, PROVIDED THE BASE AND ARMS OF THE T-SHAPED SPACE EXTEND FORTY-EIGHT (48) INCHES MINIMUM BEYOND THE INTERSECTION.
10. DOORS, DOORWAYS AND GATES THAT ARE PART OF AN ACCESSIBLE ROUTE SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NORTH CAROLINA BUILDING CODE/ ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS.
11. DIRECTIONAL SIGNAGE INDICATING THE ROUTE TO THE NEAREST ACCESSIBLE BUILDING ENTRANCE SHALL BE PROVIDED AT INACCESSIBLE BUILDING ENTRANCES.
12. WHERE POSSIBLE, DRAINAGE INLETS SHALL NOT BE LOCATED ON AN ACCESSIBLE ROUTE. IN THE EVENT THAT A DRAINAGE INLET IS LOCATED ON AN ACCESSIBLE ROUTE, THE GRATE SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), A117.1, THE NC BUILDING CODE, AND APPLICABLE LOCAL LAWS & REGULATIONS.

RAMP NOTES:

1. ANY PART OF AN ACCESSIBLE ROUTE WITH A RUNNING SLOPE GREATER THAN 5% SHALL BE CONSIDERED A RAMP.
2. THE MAXIMUM RUNNING SLOPE FOR A RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.
3. THE CLEAR WIDTH OF AN EXTERIOR RAMP RUN SHALL BE FORTY EIGHT INCHES (NC BUILDING CODE 1104.1). WHERE HANDRAILS ARE PROVIDED ON THE RAMP RUN, THE CLEAR WIDTH SHALL BE MEASURED BETWEEN THE HANDRAILS.
4. THE RISE FOR ANY RAMP RUN SHALL BE THIRTY (30) INCHES MAXIMUM.
5. LANDINGS SHALL BE PROVIDED AT THE TOP AND BOTTOM OF RAMPS. LANDINGS SHALL HAVE A SLOPE NOT STEEPER THAN 2.0% IN ANY DIRECTION. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE WIDEST RAMP RUN LEADING TO THE LANDING. THE LANDING CLEAR LENGTH SHALL BE SIXTY (60) INCHES LONG MINIMUM. RAMPS THAT CHANGE DIRECTION BETWEEN RUNS AT LANDINGS SHALL HAVE A CLEAR LANDING OF SIXTY (60) INCHES BY SIXTY (60) INCHES MINIMUM.
6. RAMP RUNS WITH A RISE GREATER THAN SIX (6) INCHES SHALL HAVE HANDRAILS ON BOTH SIDES COMPLYING WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS.
7. FLOOR SURFACES OF RAMPS AND LANDINGS SHALL BE STABLE, FIRM AND SLIP RESISTANT.
8. EDGE PROTECTION COMPLYING WITH AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1, AND APPLICABLE LOCAL LAWS & REGULATIONS SHALL BE PROVIDED ON EACH SIDE OF RAMP RUNS AND ON EACH SIDE OF RAMP LANDINGS.
9. WHERE DOORWAYS ARE LOCATED ADJACENT TO A RAMP LANDING, MANEUVERING CLEARANCES REQUIRED BY THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS), THE NC BUILDING CODE/ANSI A117.1 SHALL BE PERMITTED TO OVERLAP THE REQUIRED LANDING AREA. WHERE DOORS THAT ARE SUBJECT TO LOOKING ARE ADJACENT TO A RAMP LANDING, LANDINGS SHALL BE SIZED TO PROVIDE A COMPLIANT TURNING SPACE.

CURB RAMP NOTES:

1. THE MAXIMUM RUNNING SLOPE OF A CURB RAMP SHALL BE 8.33% AND THE MAXIMUM CROSS SLOPE SHALL BE 2.0%.
2. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 5%. THE ADJACENT SURFACES AT TRANSITIONS AT CURB RAMPS TO WALKS, GUTTERS AND STREETS SHALL BE AT THE SAME LEVEL.
3. THE CLEAR WIDTH OF A CURB RAMP SHALL BE 36 INCHES (36) MINIMUM, EXCLUSIVE OF FLARED SIDES, IF PROVIDED. \*NOTE NO BUILDING CODE REQUIREX EXTERIOR ACCESSIBLE ROUTES TO BE 48 INCHES MINIMUM WIDE (1104.1 & 1104.2)."
4. LANDINGS SHALL BE PROVIDED AT THE TOP OF CURB RAMPS. THE CLEAR LENGTH OF THE LANDING SHALL BE THIRTY-SIX (36) INCHES MINIMUM. THE CLEAR WIDTH OF THE LANDING SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARED SIDES, LEADING TO THE LANDING. LANDINGS SHALL HAVE A SLOPE NOT STEEPER THAN 2% IN ANY DIRECTION.
5. IF A CURB RAMP IS LOCATED WHERE PEDESTRIANS MUST WALK ACROSS THE RAMP, OR WHERE IT IS NOT PROTECTED BY HANDRAILS OR GUARDRAILS, IT SHALL HAVE FLARED SIDES.
6. WHERE PROVIDED, CURB RAMP FLARES SHALL NOT EXCEED 10%.
7. CURB RAMPS AND THE FLARED SIDES OF CURB RAMPS SHALL BE LOCATED SO THAT THEY DO NOT PROJECT INTO THE VEHICLE TRAVEL LANE. CURB RAMPS SHALL BE LOCATED SO THAT THEY DO NOT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
8. CURB RAMPS SHALL BE LOCATED OR PROTECTED TO PREVENT THEIR OBSTRUCTION BY PARKED VEHICLES.
9. IT IS RECOMMENDED TO PROVIDE CURB RAMPS WITH A TWENTY-FOUR (24) INCH DEEP DETECTABLE WARNING COMPLYING WITH 406.12 A117.1, EXTENDING THE FULL WIDTH OF THE RAMP. REFERTO DETECTABLE WARNING DETAILS AND NOTES FOR PLACEMENT, ORIENTATION AND NOTES. THE NC BUILDING CODE DOES NOT CURRENTLY REQUIRE DETECTABLE WARNINGS AT CURB RAMPS, NOR DO THE 2010 ADA STANDARDS - HOWEVER US DOT ADA REGULATIONS DO REQUIRE THESE.
10. FLOOR SURFACES OF CURB RAMPS SHALL BE DEEP GROOVED, 1/2 INCH WIDE BY 1/2 INCH DEEP, ONE (1) INCH CENTERS TRANSVERSE TO THE RAMP.
11. WHERE PROVIDED, STOP LINES SHALL BE LOCATED IN ADVANCE OF CURB RAMP.
12. WHERE PROVIDED, PEDESTRIAN ACTIVATED SIGNALS SHALL BE LOCATED ADJACENT TO THE SIDEWALK AND NOT ON THE SIDEWALK.
13. WHERE PROVIDED, DRAINAGE INLETS SHALL BE LOCATED UPSTREAM OF CURB RAMPS AND NOT IN THE RAMP AREA.
14. CURB RAMP TYPE AND LOCATION ARE PER PLAN.

NC ACCESSIBILITY NOTES CONTD.

PARKING SPACE NOTES:

1. ACCESSIBLE PARKING SPACES SHALL BE LOCATED ON THE SHORTEST ACCESSIBLE ROUTES OF TRAVEL FROM ADJACENT PARKING TO AN ACCESSIBLE BUILDING ENTRANCE.
2. ACCESSIBLE PARKING SPACES SHALL BE AT LEAST NINETY-SIX (96) INCHES WIDE. ACCESS AISLES SHALL BE 60 INCHES WIDE. ONE OF SIX ACCESSIBLE SPACES SHOULD PROVIDE A VAN ACCESSIBLE AISLE. THE AISLE SHOULD BE 96 INCHES WIDE (OR ACCESSIBLE SPACE IS 11 FEET AND ACCESS AISLE IS FIVE FEET), WHERE PARKING SPACES AND ACCESS AISLES ARE MARKED WITH LINES, THE WIDTH MEASUREMENTS SHALL BE MADE FROM CENTERLINE OF THE MARKINGS. WHERE PARKING SPACES OR ACCESS AISLES ARE NOT ADJACENT TO ANOTHER PARKING SPACE OR ACCESS AISLES, MEASUREMENTS SHALL BE PERMITTED TO INCLUDE THE FULL WIDTH OF THE LINE DEFINING THE PARKING SPACE OR ACCESS AISLE.
3. PARKING ACCESS AISLES SHALL BE PART OF AN ACCESSIBLE ROUTE TO THE BUILDING OR FACILITY ENTRANCE AND SHALL COMPLY WITH PROVISIONS FOR ACCESSIBLE ROUTES. MARKED CROSSINGS SHALL BE PROVIDED WHERE THE ACCESSIBLE ROUTE MUST CROSS VEHICULAR TRAFFIC LANES. WHERE POSSIBLE, IT IS PREFERABLE THAT THE ACCESSIBLE ROUTE NOT PASS BEHIND PARKED VEHICLES.
4. TWO (2) ACCESSIBLE PARKING SPACES MAY SHARE A COMMON ACCESS AISLE.
5. ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACE THEY SERVE.
6. ACCESS AISLES SHALL BE MARKED SO AS TO DISCOURAGE PARKING IN THEM.
7. ACCESS AISLES SHALL NOT OVERLAP THE VEHICULAR WAY. ACCESS AISLES SHALL BE PERMITTED TO BE PLACED ON EITHER SIDE OF THE PARKING SPACE EXCEPT FOR ANGLED VAN PARKING SPACES WHICH SHALL HAVE ACCESS AISLES LOCATED ON THE PASSENGER SIDE OF THE PARKING SPACES.
8. FLOOR SURFACES OF PARKING SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE PARKING SPACES THEY SERVE. CHANGES IN LEVEL ARE NOT PERMITTED.
9. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ALL DIRECTIONS.
10. PARKED VEHICLE OVERHANGS SHALL NOT REDUCE THE REQUIRED CLEAR WIDTH OF AN ACCESSIBLE ROUTE.
11. PARKING SPACES FOR VANS AND ACCESS AISLES AND VEHICULAR ROUTES SERVING THEM SHALL PROVIDE A VERTICAL CLEARANCE OF NINETY-EIGHT (98) INCHES MINIMUM. SIGNS SHALL BE PROVIDED AT ENTRANCES TO PARKING FACILITIES INFORMING DRIVERS OF CLEARANCES AND THE LOCATION OF VAN ACCESSIBLE PARKING SPACES.
12. EACH ACCESSIBLE PARKING SPACE SHALL BE PROVIDED WITH SIGNAGE DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. SIGNS SHALL BE INSTALLED AT A MINIMUM CLEAR HEIGHT OF SIXTY (60) INCHES ABOVE GRADE AND SHALL NOT INTERFERE WITH AN ACCESSIBLE ROUTE FROM AN ACCESS AISLE. SIGNS LOCATED WHERE THEY MAY BE HIT BY VEHICLES BEING PARKED SHALL BE INSTALLED WITH BOLLARD PROTECTION.
13. SIGNAGE AT ACCESSIBLE PARKING SPACES REQUIRED BY THE NC BUILDING CODE SECTION 1106.15 SHALL COMPLY WITH THE REQUIREMENTS OF NORTH CAROLINA GENERAL STATUTE 20-37.6 AND 136-30 AND THE NCDOT UNIFORM MANUAL ON TRAFFIC CONTROL DEVICES. A SEPARATE SIGN IS REQUIRED FOR EACH SPACE. SIGNS TO INDICATE THE MAXIMUM PENALTY MUST BE PROVIDED AT EACH ACCESSIBLE SPACE.
14. ACCESSIBLE PARKING SPACE, ACCESS AISLE STRIPING, AND INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE PAINTED BLUE (OR ANOTHER COLOR THAT CAN BE DISTINGUISHED FROM PAVEMENT).

PASSENGER LOADING ZONE NOTES:

1. PASSENGER LOADING ZONES SHALL PROVIDE VEHICULAR PULL-UP SPACE NINETY-SIX (96) INCHES WIDE MINIMUM AND TWENTY (20) FEET LONG MINIMUM.
2. PASSENGER LOADING ZONES SHALL PROVIDE A CLEARLY MARKED ACCESS AISLE THAT IS SIXTY (60) INCHES WIDE MINIMUM AND EXTENDS THE FULL LENGTH OF THE VEHICLE PULL-UP SPACE THEY SERVE.
3. ACCESS AISLE SHALL ADJOIN AN ACCESSIBLE ROUTE AND NOT OVERLAP THE VEHICULAR WAY.
4. VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 2.0% IN ANY DIRECTION. ACCESS AISLES SHALL BE AT THE SAME LEVEL AS THE VEHICLE PULL-UP SPACE THEY SERVE. CHANGES IN LEVEL ARE NOT PERMITTED.
5. FLOOR SURFACES OF VEHICLE PULL-UP SPACES AND ACCESS AISLES SERVING THEM SHALL BE STABLE, FIRM AND SLIP RESISTANT.
6. VEHICLE PULL-UP SPACES, ACCESS AISLES SERVING THEM AND A VEHICULAR ROUTE FROM AN ENTRANCE TO THE PASSENGER LOADING ZONE AND FROM THE PASSENGER LOADING ZONE TO A VEHICULAR EXIT SERVING THEM, SHALL PROVIDE A VERTICAL CLEARANCE OF ONE HUNDRED FOURTEEN (114) INCHES MINIMUM.

ACCESSIBLE ENTRANCE NOTES:

1. ACCESSIBLE ENTRANCES SHALL BE PROVIDED AS REQUIRED BY THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) AND THE NORTH CAROLINA BUILDING CODE, AND APPLICABLE LOCAL LAWS & REGULATIONS.
2. ENTRANCE DOORS, DOORWAYS AND GATES SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT (2010 ADA STANDARDS) THE NC BUILDING CODE/ANSI A117.1 AND SHALL BE ON AN ACCESSIBLE ROUTE.

GENERAL STORM SEWER NOTES

1. ALL STORM SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH TOWN OF LELAND REQUIREMENTS AS SPECIFIED ON THE DRAWINGS AND IN THE PROJECT SPECIFICATIONS.
2. BEDDING FOR ALL STORM SEWER PIPE SHALL BE AS SPECIFIED ON THE DRAWINGS AND IN THE PROJECT SPECIFICATIONS.
3. ALL STORM SEWER PIPES SHOWN AS RCP ON THE PLANS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-76, UNLESS INDICATED OTHERWISE ON PLANS.

ROOF DRAIN NOTE:

1. PROPOSED BUILDING SHALL DIVERT ROOF DRAINAGE TO STORMWATER COLLECTION SYSTEM OR AS SHOWN ON THE PLANS.

EXISTING UTILITY NOTES:

1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO VERIFY THE ACTUAL LOCATION AND AVAILABILITY OF ALL EXISTING AND PROPOSED UTILITIES IN THE FIELD PRIOR TO GROUND BREAKING.
2. EX

**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.

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

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

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

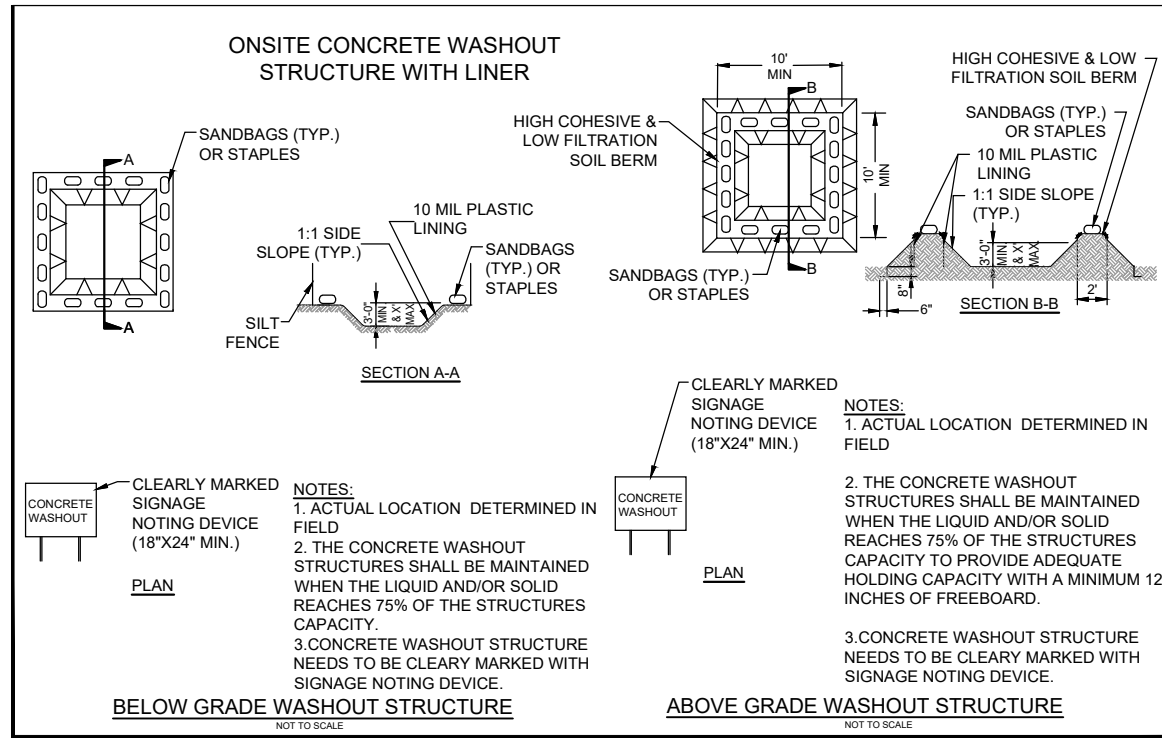
- LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**
- Never bury or burn waste. Place litter and debris in approved waste containers.
  - Provide a sufficient number and size of waste containers (e.g. dumpster, trash receptacle) on site to contain construction and domestic wastes.
  - Locate waste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

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

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

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

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



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

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

## 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 hour. Any time when inspections were delayed shall be noted in the Inspection Record.		
Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event $\geq$ 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 $\geq$ 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 $\geq$ 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 $\geq$ 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 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. <b>E&amp;SC Plan Documentation</b> The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be documented in the manner described:	
Item to Document	Documentation Requirements
(a) Each E&SC Measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC Plan.	Initial and date each E&SC Measure on a copy of the approved E&SC Plan or complete, date and sign an inspection report that lists each E&SC Measure shown on the approved E&SC Plan. This documentation is required upon the initial installation of the E&SC Measures or if the E&SC Measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC Plan.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC Measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC Measures.	Initial and date a copy of the approved E&SC Plan or complete, date and sign an inspection report to indicate the completion of the corrective action.
2. <b>Additional Documentation</b> In addition to the E&SC Plan documents above, the following items shall be kept on the site and available for agency inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:	
(a) This general permit as well as the certificate of coverage, after it is received.	
(b) Records of inspections made during the previous 30 days. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.	
(c) All data used to complete the Notice of Intent and older inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]	

PART III SELF-INSPECTION, RECORDKEEPING AND REPORTING	
SECTION C: REPORTING	
1. <b>Occurrences that must be reported</b> Permittees shall report the following occurrences: (a) Visible sediment deposition in a stream or wetland. (b) Oil spills if: <ul style="list-style-type: none"><li>They are 25 gallons or more,</li><li>They are less than 25 gallons but cannot be cleaned up within 24 hours,</li><li>They cause sheen on surface waters (regardless of volume), or</li><li>They are within 100 feet of surface waters (regardless of volume).</li></ul> (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. <b>Reporting Timeframes and Other Requirements</b> After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 658-0368 or (919) 733-3300.	
Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"><li><b>Within 24 hours</b>, an oral or electronic notification.</li><li><b>Within 7 calendar days</b>, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li><li>If the stream is named on the <a href="https://www.nc.gov/nc-3303a-100">NC 3303a-100</a> as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired waters conditions.</li></ul>
(b) Oil spills and release of hazardous substances per Item 1(b)-(d) above	<ul style="list-style-type: none"><li><b>Within 24 hours</b>, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li></ul>
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"><li><b>A report at least ten days before the date of the bypass, if possible.</b> The report shall include an evaluation of the anticipated quality and effect of the bypass.</li></ul>
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"><li><b>Within 24 hours</b>, an oral or electronic notification.</li><li><b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li></ul>
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(i)(7)]	<ul style="list-style-type: none"><li><b>Within 24 hours</b>, an oral or electronic notification.</li><li><b>Within 7 calendar days</b>, 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(i)(6)].</li><li>Division staff may waive the requirement for a written report on a case-by-case basis.</li></ul>

## NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING

EFFECTIVE: 04/01/19

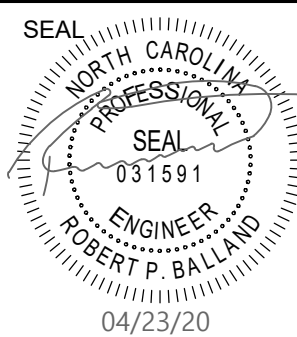
REVISIONS:

CLIENT INFORMATION:

**PARAMOUNT ENGINEERING, INC.**  
122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846

**GENERAL NOTES**  
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS  
114 SCORPION DRIVE, LELAND  
BRUNSWICK COUNTY, NC

PROJECT STATUS  
PRELIMINARY LAYOUT:  
FINAL DESIGN:  
RELEASED FOR CONSTRUCTION:



C-1.1  
PEI JOB#: 19248.PE

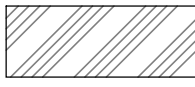
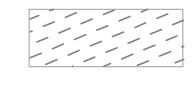
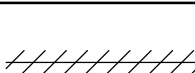
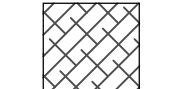
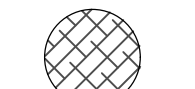
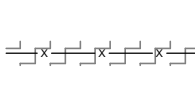
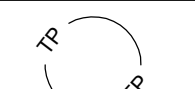




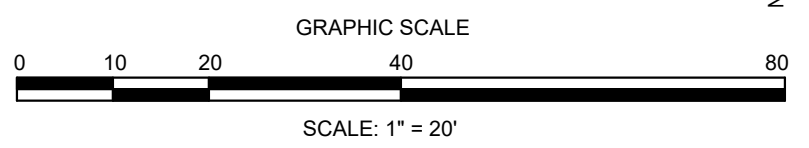
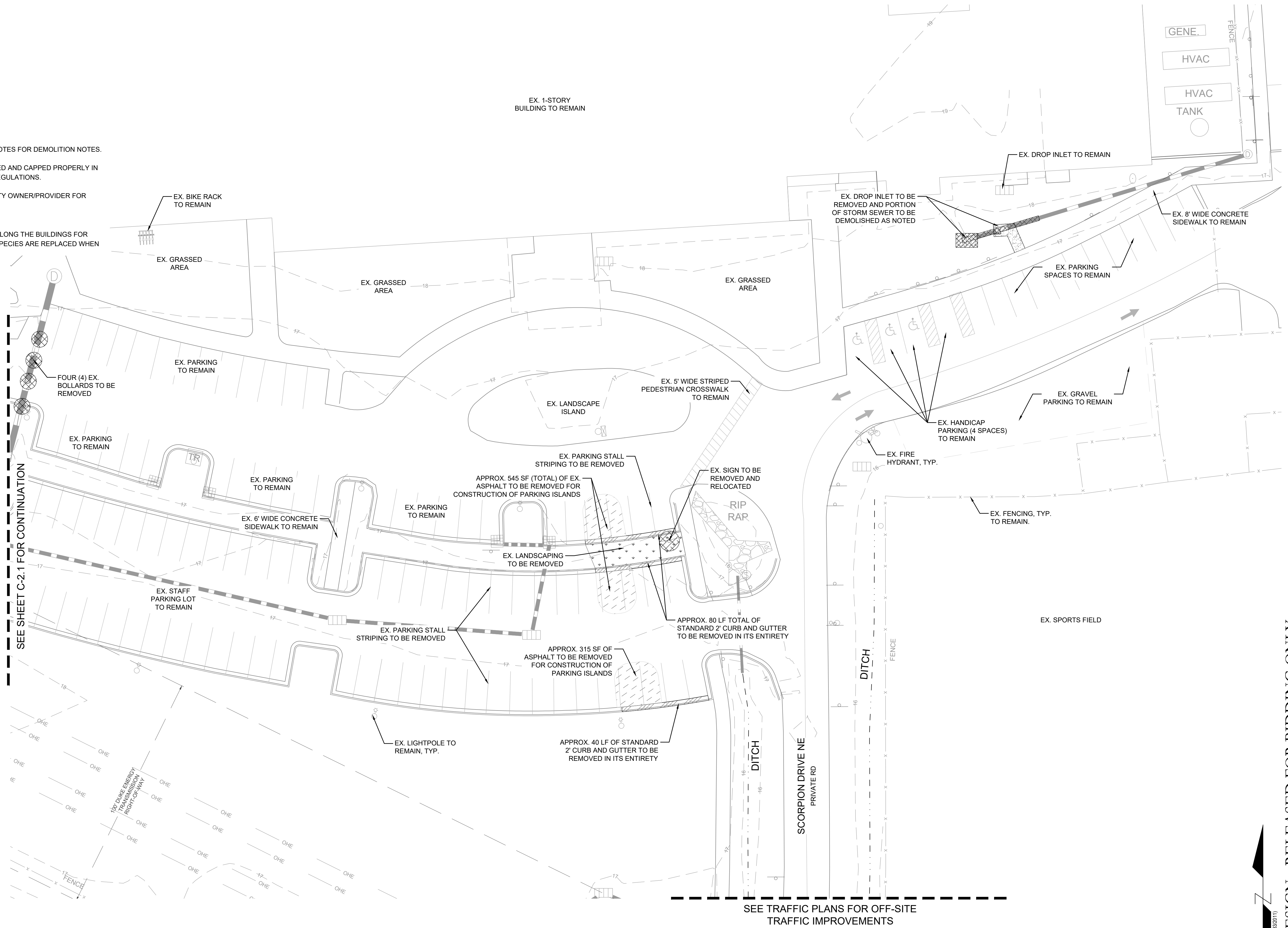
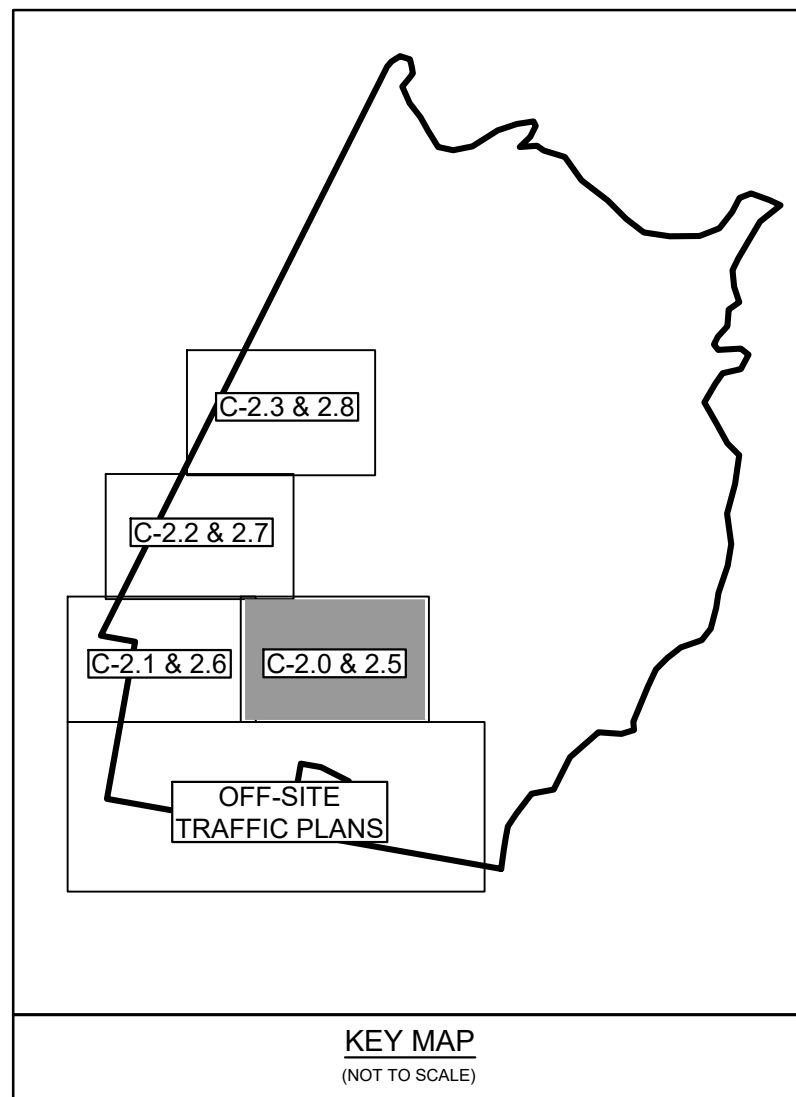
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1. CONTRACTOR SHALL REFER TO SHEET C-1.0 GENERAL NOTES FOR DEMOLITION NOTES
2. ALL UTILITIES SHALL BE ABANDONED AND/OR DEMOLISHED AND CAPPED PROPERLY IN ACCORDANCE WITH THE UTILITY OWNERS RULES AND REGULATIONS.
3. CONTRACTOR SHALL COORDINATE WITH ELECTRIC UTILITY OWNER/PROVIDER FOR DEMOLITION.

1. CONTRACTOR SHALL REMOVE SHRUBS AS NECESSARY ALONG THE BUILDINGS FOR CONSTRUCTION AS LONG AS THE SAME QUANTITY AND SPECIES ARE REPLACED WHEN CONSTRUCTION IS COMPLETE.

SYMBOLS LEGEND	
	EXISTING CONCRETE TO BE REMOVED
	EXISTING ASPHALT TO BE REMOVED
	EXISTING UTILITY LINE TO BE REMOVED
	EXISTING STORM STRUCTURE TO BE REMOVED
	EXISTING SIGNAL/LIGHT/UTILITY POLE TO BE REMOVED
	EXISTING FENCE TO BE REMOVED
	TREE PROTECTION FENCING
	EXISTING TREE/SHRUBS TO BE REMOVED
	EXISTING BUILDING/STRUCTURE TO BE REMOVED



FINAL DESIGN - RELEASED FOR BIDDING ONLY

REVISIONS:


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# PARAMOUNT

122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846

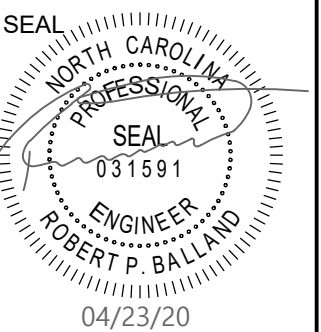
# DEMOLITION PLAN

N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS  
114 SCORPION DRIVE, LELAND  
BRUNSWICK COUNTY, NC

PROJECT STATUS:	DATE:	04/23/20
CONCEPTUAL LAYOUT:	SCALE:	1" = 20'
PRELIMINARY LAYOUT:	DESIGNED:	AEC
FINAL DESIGN:	DRAWN:	AEC
RELEASED FOR CONST:	CHECKED:	RPB

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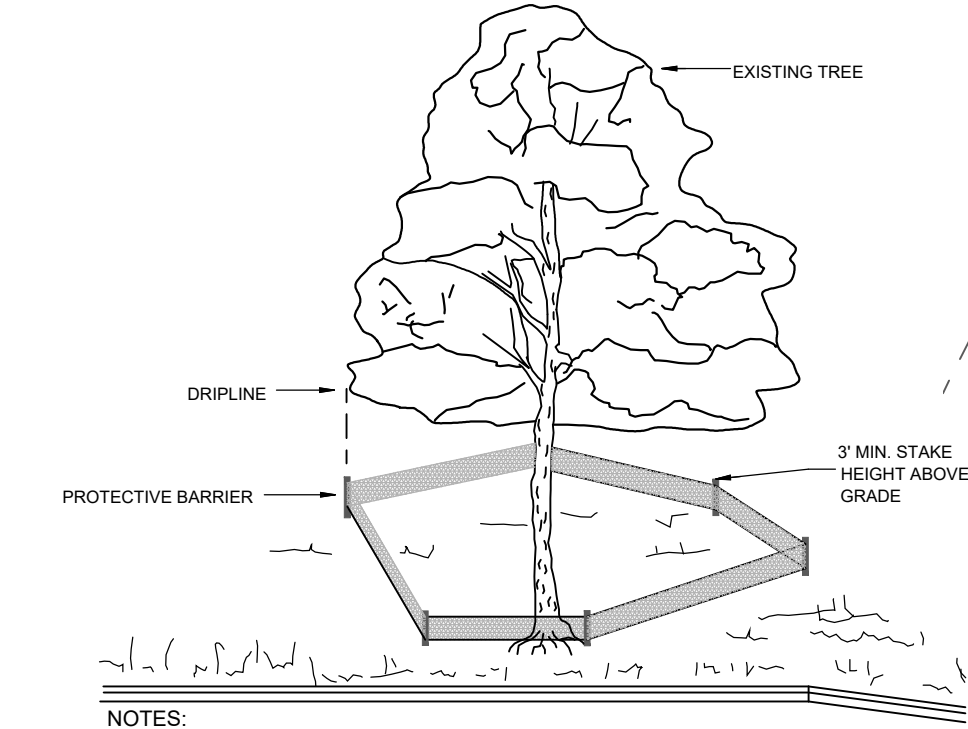
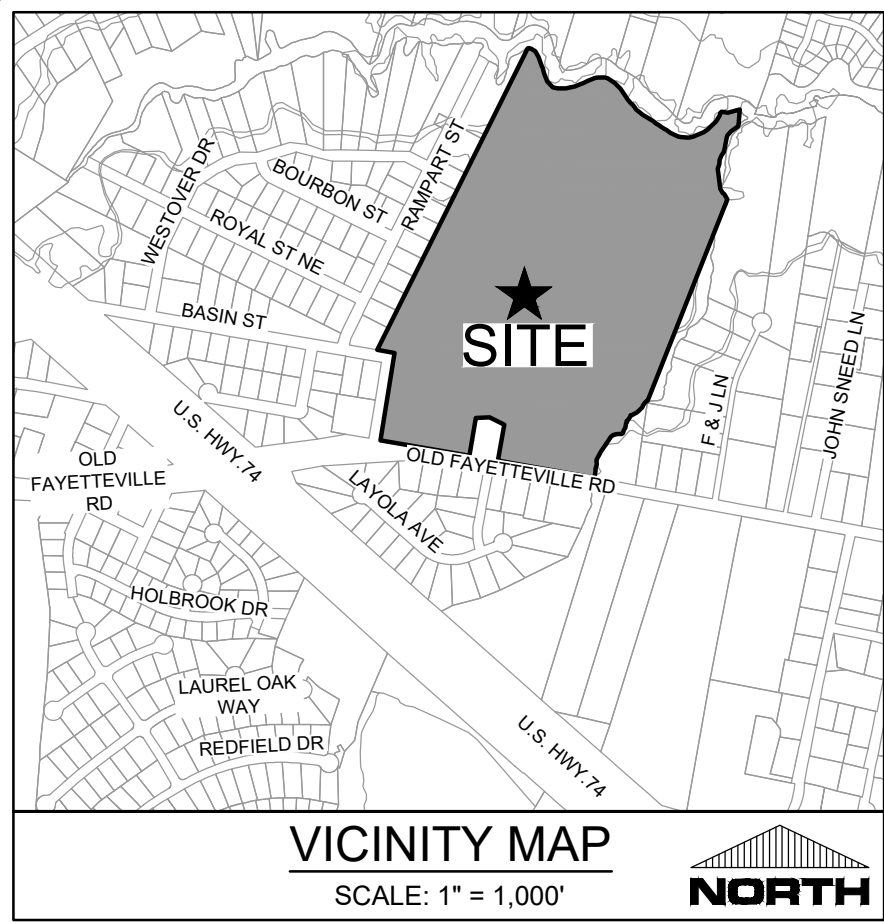
### DRAWING INFORMATION



C-2.0

PEI JOB#: 19248.PE

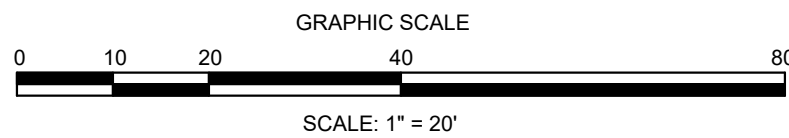
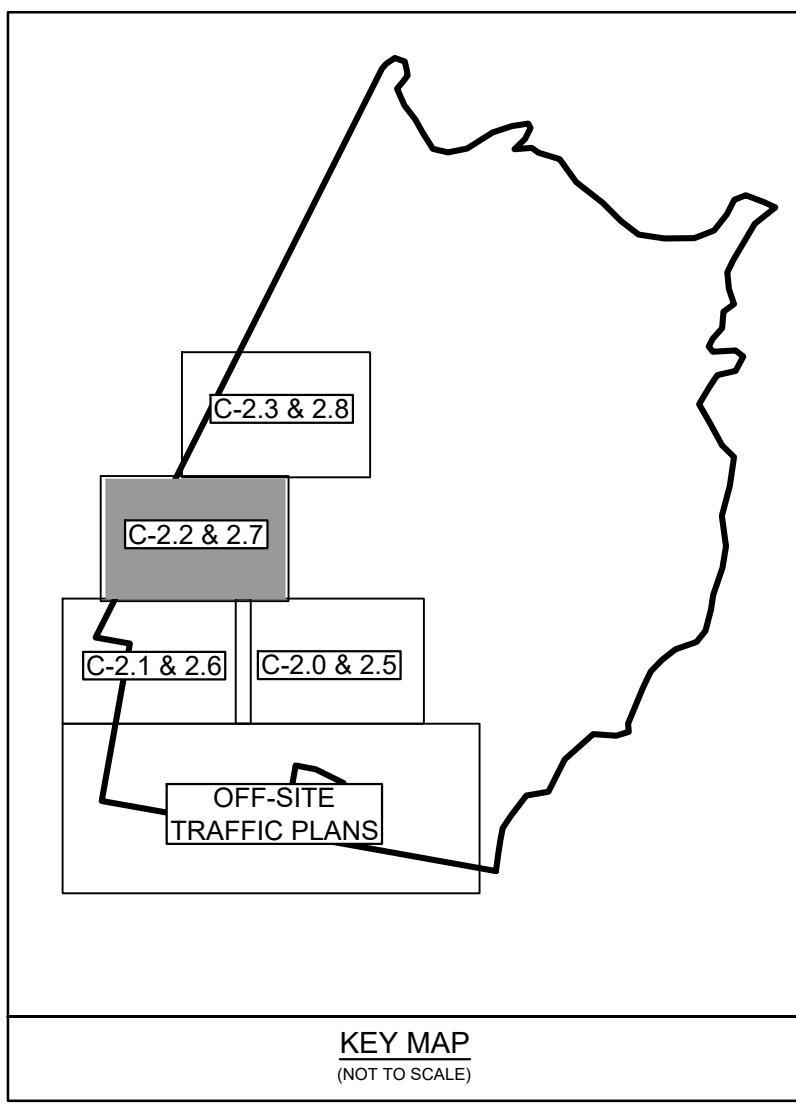
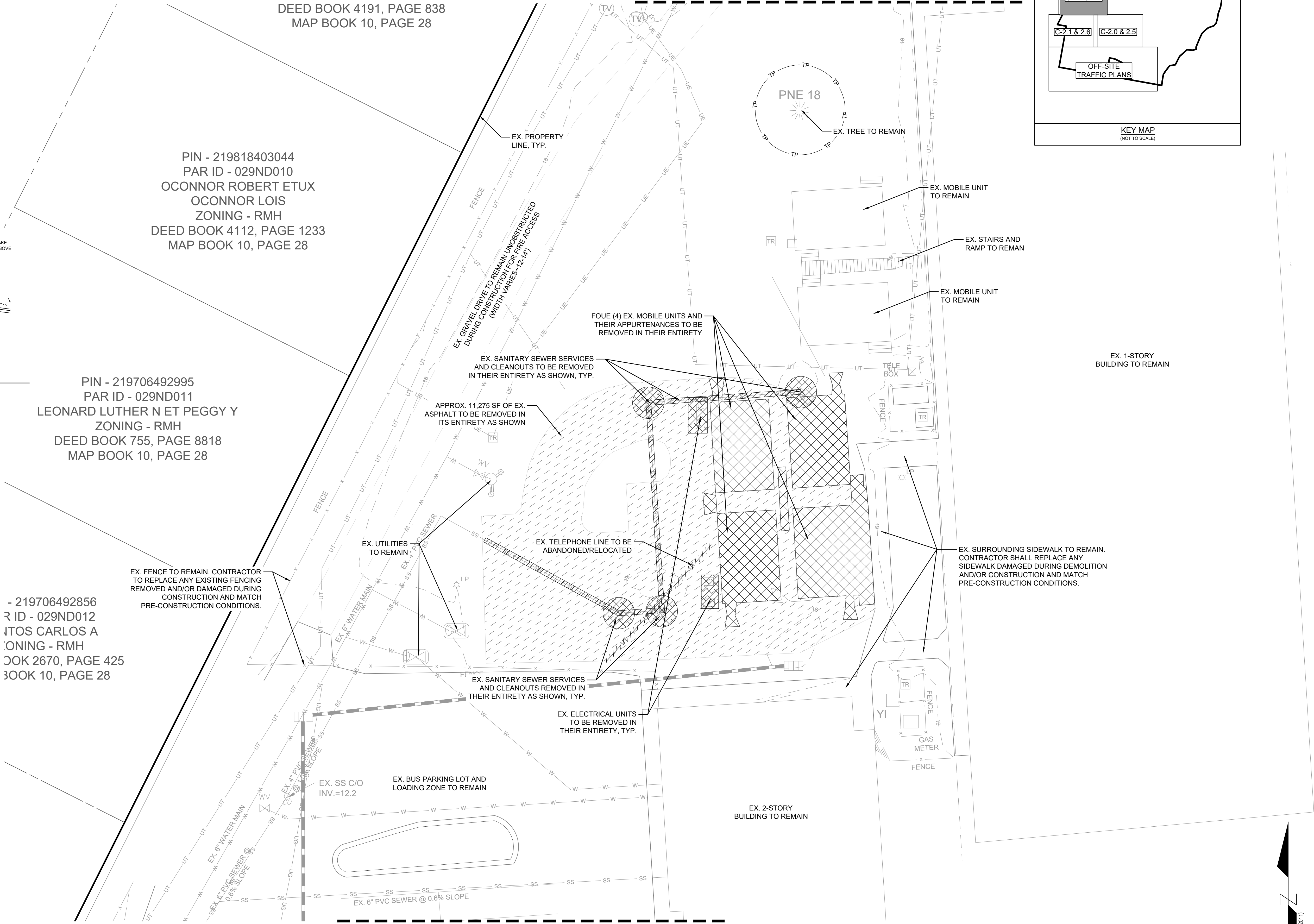
<div>PROJECT STATUS</div> <div>CONCEPTUAL LAYOUT:</div> <div>PRELIMINARY LAYOUT:</div> <div>RELEASED FOR CONSTRUCTION:</div>	<div>SEAL</div> <div></div> <div>04/23/20</div>	<div>DRAWING INFORMATION</div> <div>DATE: 04/23/20</div> <div>DESIGNED: 1" AEC</div> <div>DRAWN: 1" AEC</div> <div>CHECKED: 1" AEC</div>	<div>DEMOLITION PLAN</div> <div>N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS</div> <div>114 SCORPION DRIVE, LELAND</div> <div>BRUNSWICK COUNTY, NC</div>	<div></div>	<div>CLIENT INFORMATION</div> <div>BECKER MORGAN GROUP</div> <div>3333 JAECKLE DRIVE, SUITE 120</div> <div>WILMINGTON, NC 28403</div>	REVISIONS:



METHOD OF TREE PROTECTION DURING CONSTRUCTION  
NTS

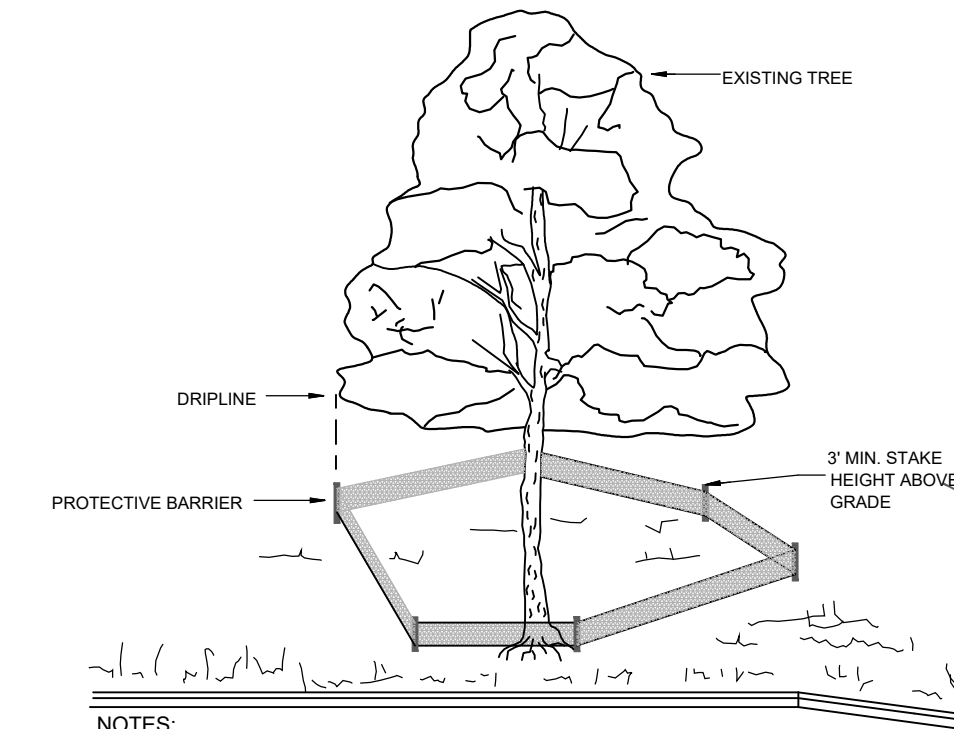
SYMBOLS LEGEND	
	EXISTING CONCRETE TO BE REMOVED
	EXISTING ASPHALT TO BE REMOVED
	EXISTING UTILITY LINE TO BE REMOVED
	EXISTING STORM STRUCTURE TO BE REMOVED
	EXISTING SIGNAL/LIGHT/UTILITY POLE TO BE REMOVED
	EXISTING FENCE TO BE REMOVED
	TREE PROTECTION FENCING
	EXISTING TREE/SHRUBS TO BE REMOVED
	EXISTING BUILDING/STRUCTURE TO BE REMOVED

- DEMOLITION NOTES:**
- CONTRACTOR SHALL REFER TO SHEET C-1.0 GENERAL NOTES FOR DEMOLITION NOTES.
  - ALL UTILITIES SHALL BE ABANDONED AND/OR DEMOLISHED AND CAPPED PROPERLY IN ACCORDANCE WITH THE UTILITY OWNERS RULES AND REGULATIONS.
  - CONTRACTOR SHALL COORDINATE WITH ELECTRIC UTILITY OWNER/PROVIDER FOR DEMOLITION.
- EX. VEGETATION NOTES:**
- CONTRACTOR SHALL REMOVE SHRUBS AS NECESSARY ALONG THE BUILDINGS FOR CONSTRUCTION AS LONG AS THE SAME QUANTITY AND SPECIES ARE REPLACED WHEN CONSTRUCTION IS COMPLETE.



FINAL DESIGN - RELEASED FOR BIDDING ONLY

REVISIONS:	
CLIENT INFORMATION:	
BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
PARAMOUNT ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License # C-2846	
DEMOLITION PLAN N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 1.14 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS: DESIGNED BY: [Signature] PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR CONSTRUCTION: DATE: 04/23/20 SCALE: 1" = 20'	DRAWING INFORMATION: DRAWN BY: [Signature] CHECKED BY: [Signature] DATE: 04/23/20 SCALE: 1" = 20'
SEAL NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT P. BALLARD 031591 04/23/20	
C-2.2 PEI JOB#: 19248.PE	

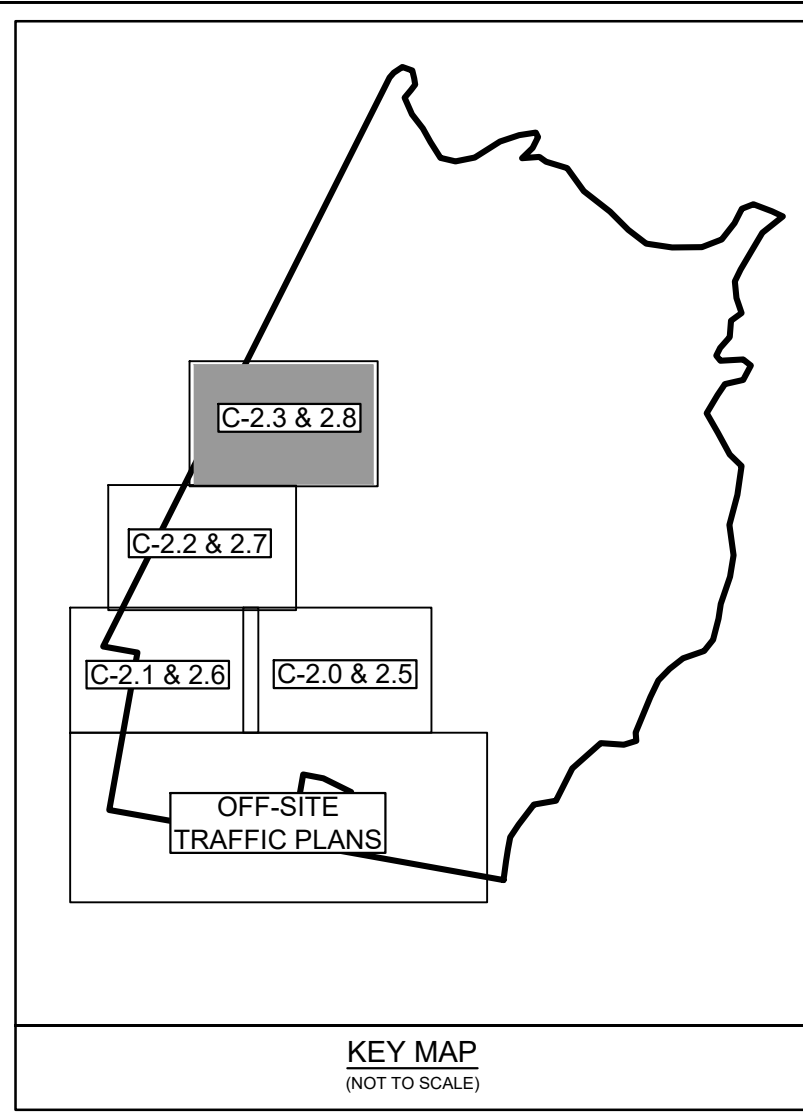
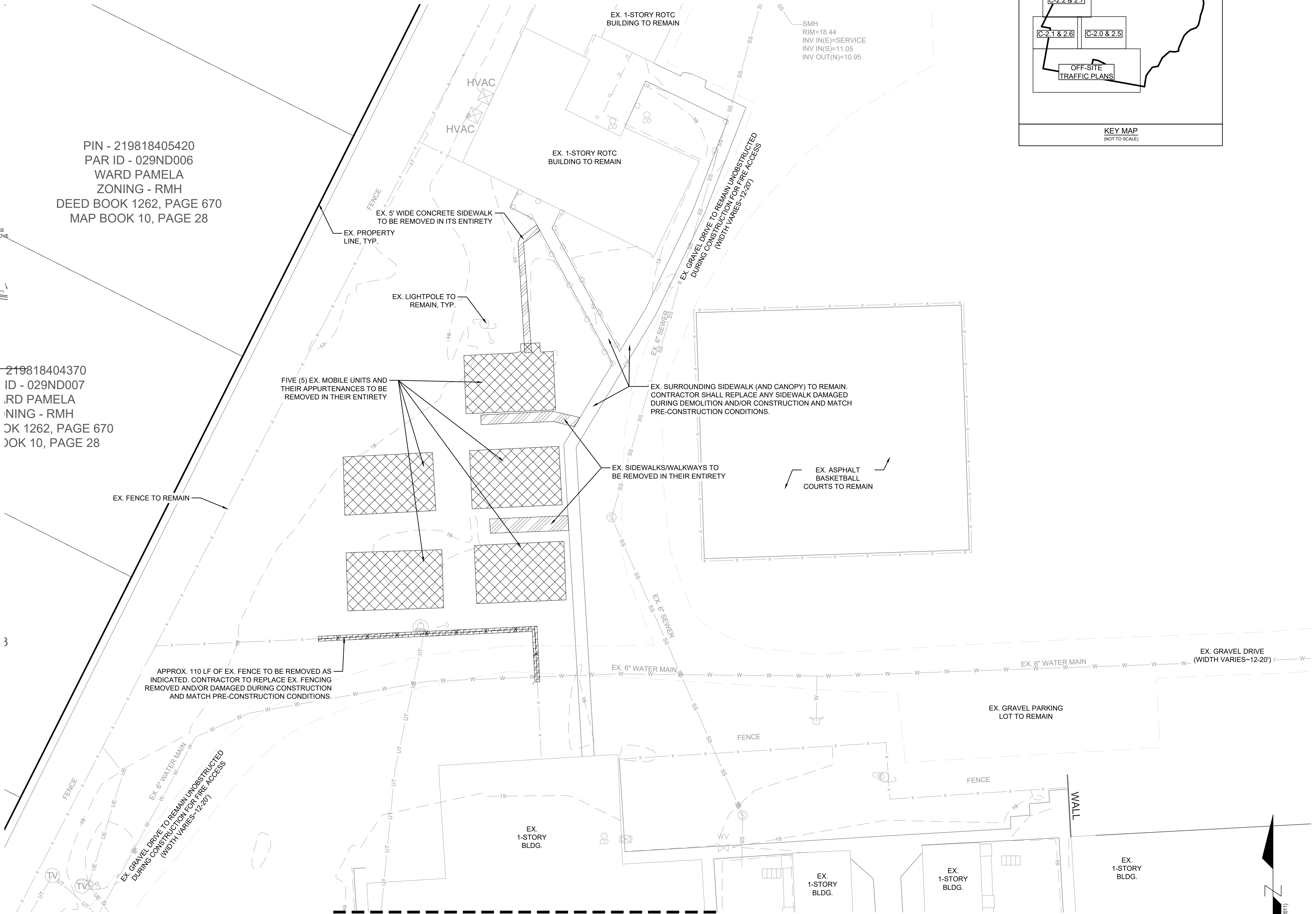



**NOTES:**

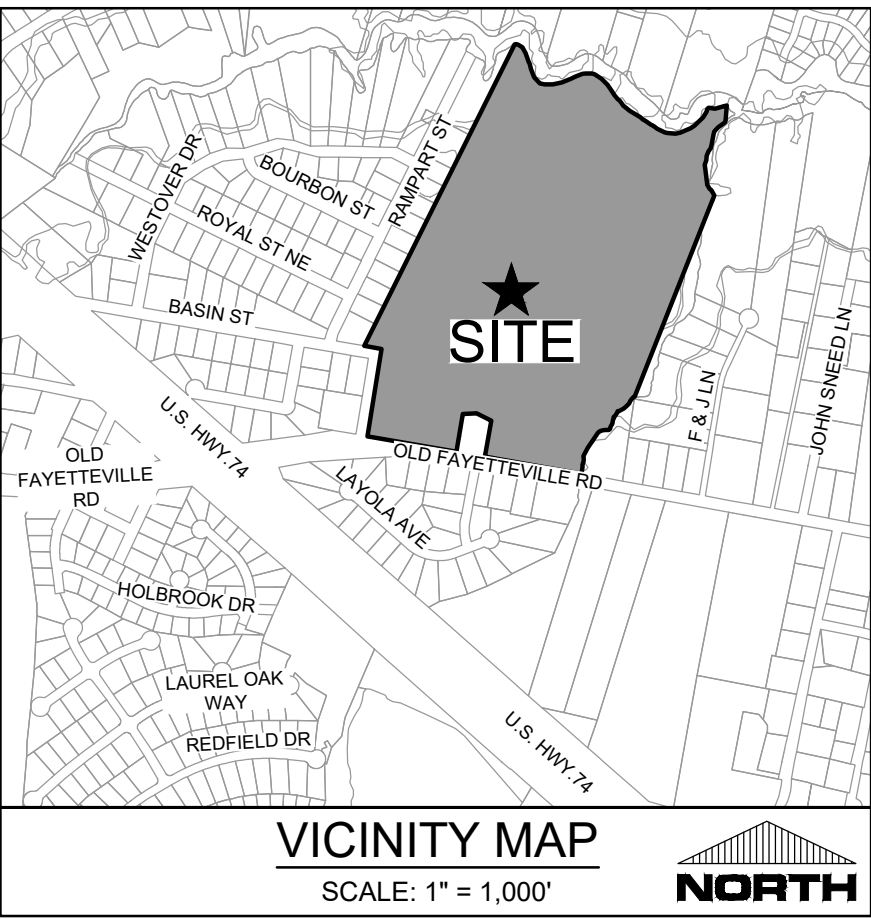
- TREES TO BE SAVED WILL BE CLEARLY MARKED PRIOR TO CONSTRUCTION
- INSTALLATION OF PROTECTION FENCING IS REQUIRED PRIOR TO LAND DISTURBING ACTIVITY AND IS TO BE MAINTAINED UNTIL AFTER FINAL SITE INSPECTION
- FENCING SHALL BE INSTALLED AT THE DRIPLINE OR AT THE BOUNDARY OF THE CRITICAL ROOT ZONE, WHICHEVER IS GREATER
  - DRIP LINE - THE AREA OF SOIL DIRECTLY BENEATH THE TREE EXTENDING OUT TO THE TIPS OF THE OUTERMOST BRANCHES.
  - CRITICAL ROOT ZONE - 1' RADIUS FROM THE TREE TRUNK PER 1" CALIPER

## A METHOD OF TREE PROTECTION DURING CONSTRUCTION

219818404370  
ID - 029ND007  
RD PAMELA  
NING - RMH  
OK 1262, PAGE 670  
OK 10, PAGE 28



PROJECT STATUS CONCEPTUAL LAYOUT PRELIMINARY LAYOUT FINAL DESIGN RELEASED FOR CONSTRUCTION	SEAL  04/23/20	DEMOLITION PLAN  N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	<b>PARAMOUNT</b> ENGINEERING, INC.  122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License # C-2846	CLIENT INFORMATION:  BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	REVISIONS:
PEI JOB#: 19248.PE	C-2.3				



**SITE INFORMATION**  
OWNER INFORMATION: BRUNSWICK COUNTY SCHOOLS  
35 REFERENDUM DRIVE NE  
BOLIVIA, NC 28422  
NORTH BRUNSWICK HIGH SCHOOL  
114 SCORPION DRIVE N.E.  
LELAND, NC 28451  
037DA005  
219819500074  
BOOK 234, PAGE 812  
O&I  
HIGH SCHOOL  
HIGH SCHOOL  
61.89 AC  
THIS PARCEL LIES WITHIN AN AREA OF  
MINIMAL FLOOD HAZARD (ZONE X) AS  
INDICATED BY FEMA FLOOD ZONE MAP  
NUMBER 3720219700K BEARING AN  
EFFECTIVE DATE OF 08/28/2018.  
N/A

**PROJECT NAME:**  
**PROJECT ADDRESS:**  
**PARCEL ID:**  
**PARCEL PIN:**  
**RECORDED DEED BOOK:**  
**CURRENT ZONING:**  
**EXISTING USE:**  
**PROPOSED USE:**  
**TOTAL SITE AREA:**  
**FLOOD INFORMATION:**

**SPECIAL HIGHWAY DISTRICT:**

**PARKING INFORMATION**  
EX. STUDENT POPULATION (2019) = 1,140  
EXPECTED ADDITIONAL STUDENTS (NOW TO YEAR 2020) = 408  
PROPOSED MAX. STUDENT POPULATION (2020) = 1,548

**PER SECTION 66-276 OF LELAND MUNICIPAL CODE**  
**USE TYPE:** SCHOOL (CIVIC / INSITUATIONAL)  
**MIN. # OF PARKING SPACES REQ'D:** N/A  
**MAX. # OF PARKING SPACES REQ'D:** N/A

**IMPERVIOUS INFORMATION**

**EXISTING IMPERVIOUS**  
EX. IMPERVIOUS TOTAL 871,380 SF (20.00 AC)  
EX. IMPERVIOUS TO BE REMOVED 20,580 SF (0.47 AC)

PROPOSED IMPERVIOUS FOR THIS PROJECT	DA #1 & #2	DA #3
ON-SITE ASPHALT	1,210 SF	25,410 SF
SIDEWALKS	220 SF	550 SF
BUILDINGS	4,850 SF	10,790 SF
FUTURE	170,809 SF	15,000 SF
NEW IMPERVIOUS FOR THIS PROJECT	6,280 SF	51,750 SF
NET IMPERVIOUS	1,670 SF	25,780 SF

TOTAL IMPERVIOUS (ENTIRE SITE) = 897,160 SF (20.25 AC)  
PERCENT IMPERVIOUS (ENTIRE SITE) = 897,160 / 2,039,755 = 44.0%

SEE EXHIBIT DA-MAP FOR BREAKDOWN OF STORMWATER DRAINAGE AREAS

BUILDING SETBACKS*	REQUIRED	PROVIDED
FRONT	25'	SEE PLAN
SIDE	50'	SEE PLAN
REAR	50'	SEE PLAN

\*SETBACKS LISTED ARE FOR O&I AND PUBLIC & PRIVATE SCHOOLS

**BUILDING COVERAGE**

COVERAGE CALCULATED HERE IS FOR ALL BUILDINGS  
(EX. & PROPOSED) ON ENTIRE SITE  
ALLOWABLE 80%  
PROVIDED 200,454 SF / 2,695,928 SF = 7.44%

BUILDING INFORMATION FOR PROPOSED ADDITIONS*			
BUILDING AREAS	CLASSROOM ADDITION	CAFETERIA ADDITION	ROTC ADDITION
EXISTING	1ST FLOOR - 14,974 SF 2ND FLOOR - 15,301 SF	7,618 SF	5,919 SF
PROPOSED	1ST FLOOR - 9,995 SF 2ND FLOOR - 10,800 SF	1,506 SF	3,000 SF
TOTAL GFA	51,070 SF	9,124 SF	8,919 SF
HEIGHTS / STORIES			
ALLOWABLE	75' / 3	55' / 2	55' / 2
PROPOSED	32' / 2	20' / 1	16' / 1
CONSTRUCTION TYPE	II-B	I-B	II-B
SPRINKLER SYSTEM?	YES	NO	NO

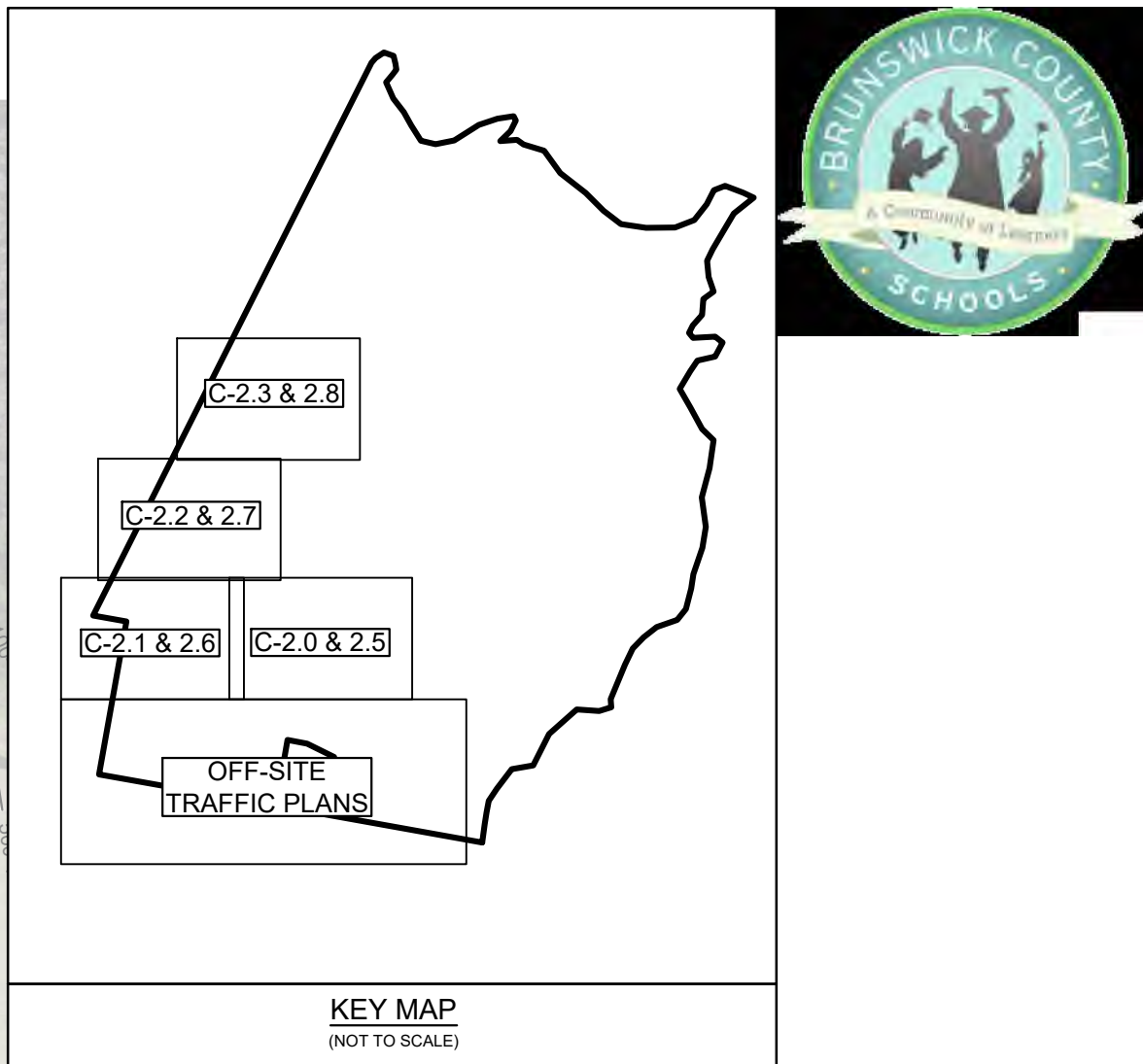
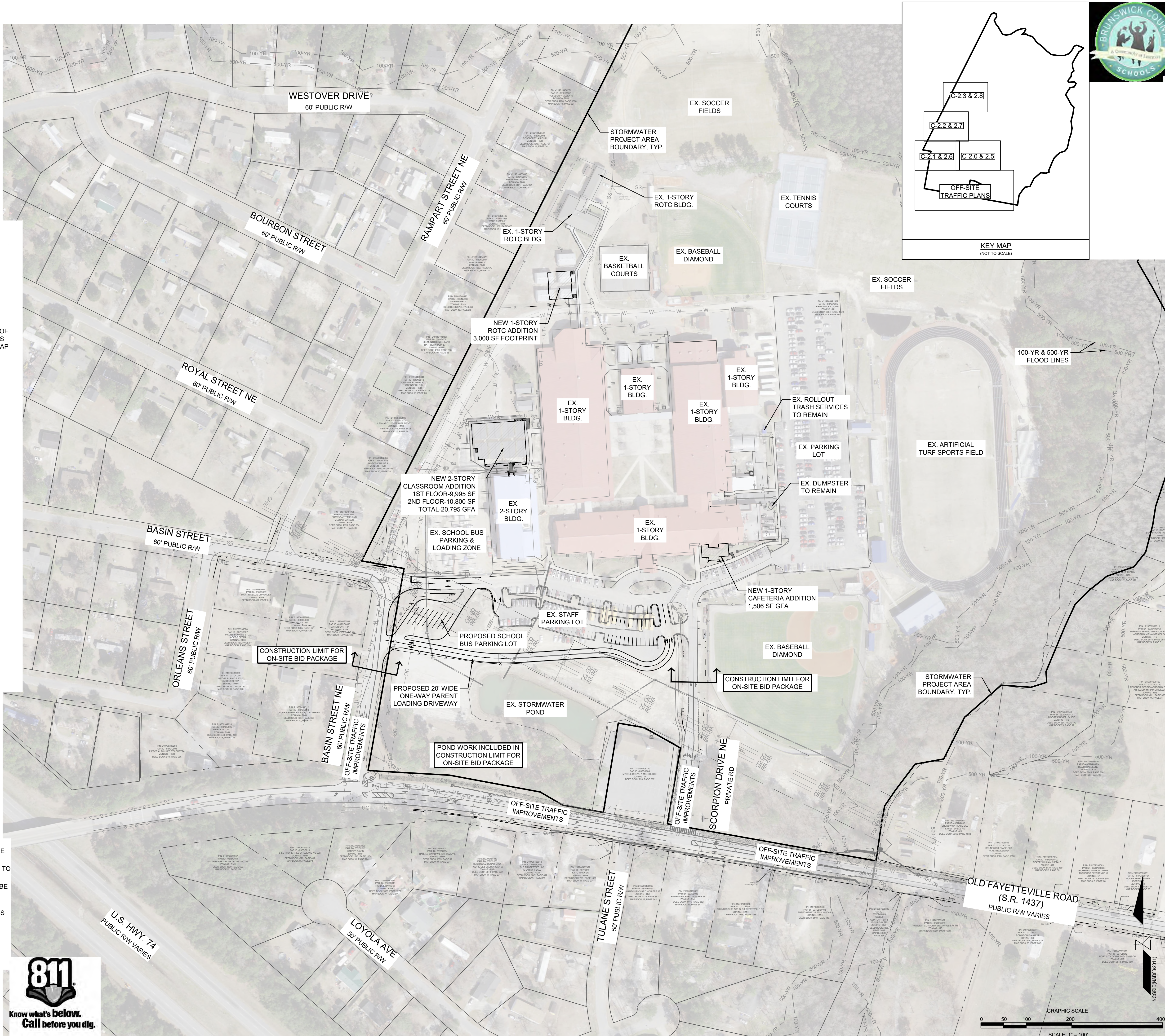
\*SEE ARCHITECTURAL PLANS FOR INFORMATION OF ALL OTHER EXISTING BUILDINGS

**GENERAL NOTES**

- ALL PAVEMENT MARKINGS IN PUBLIC RIGHTS-OF-WAY AND FOR DRIVEWAYS ARE TO BE THERMOPLASTIC AND MEET TOWN AND/OR NCDOT STANDARDS.
- ALL SIGNS AND PAVEMENT MARKINGS IN AREAS OPEN TO PUBLIC TRAFFIC ARE TO MEET MUTCD STANDARDS.
- ALL TRAFFIC CONTROL SIGNS AND MARKINGS OFF THE RIGHT OF WAY ARE TO BE MAINTAINED BY THE PROPERTY OWNER IN ACCORDANCE WITH MUTCD STANDARDS.
- ALL PARKING STALL MARKINGS AND LANE ARROWS WITHIN THE PARKING AREAS SHALL BE WHITE.
- SEE LANDSCAPE PLAN FOR PLANTING INFORMATION.

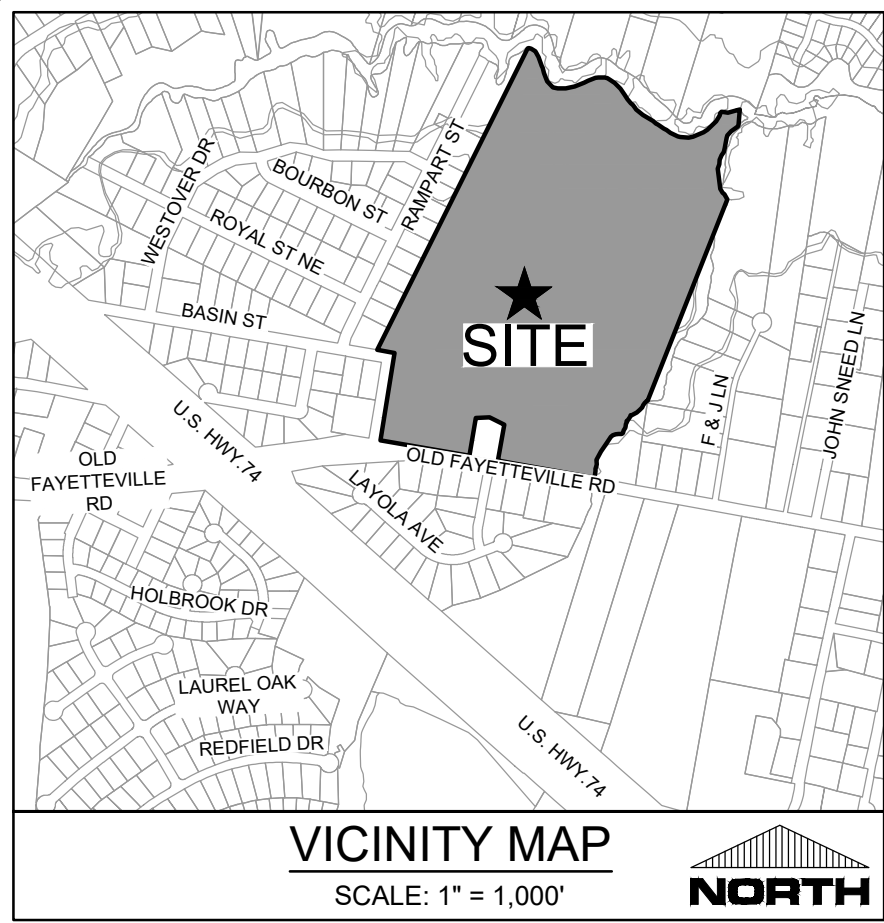
**GARBAGE REMOVAL**

EXISTING DUMPSTERS AND ROLLOUT SERVICES TO REMAIN AND BE USED.  
SEE PLAN FOR LOCATION.



FINAL DESIGN - RELEASED FOR BIDDING ONLY

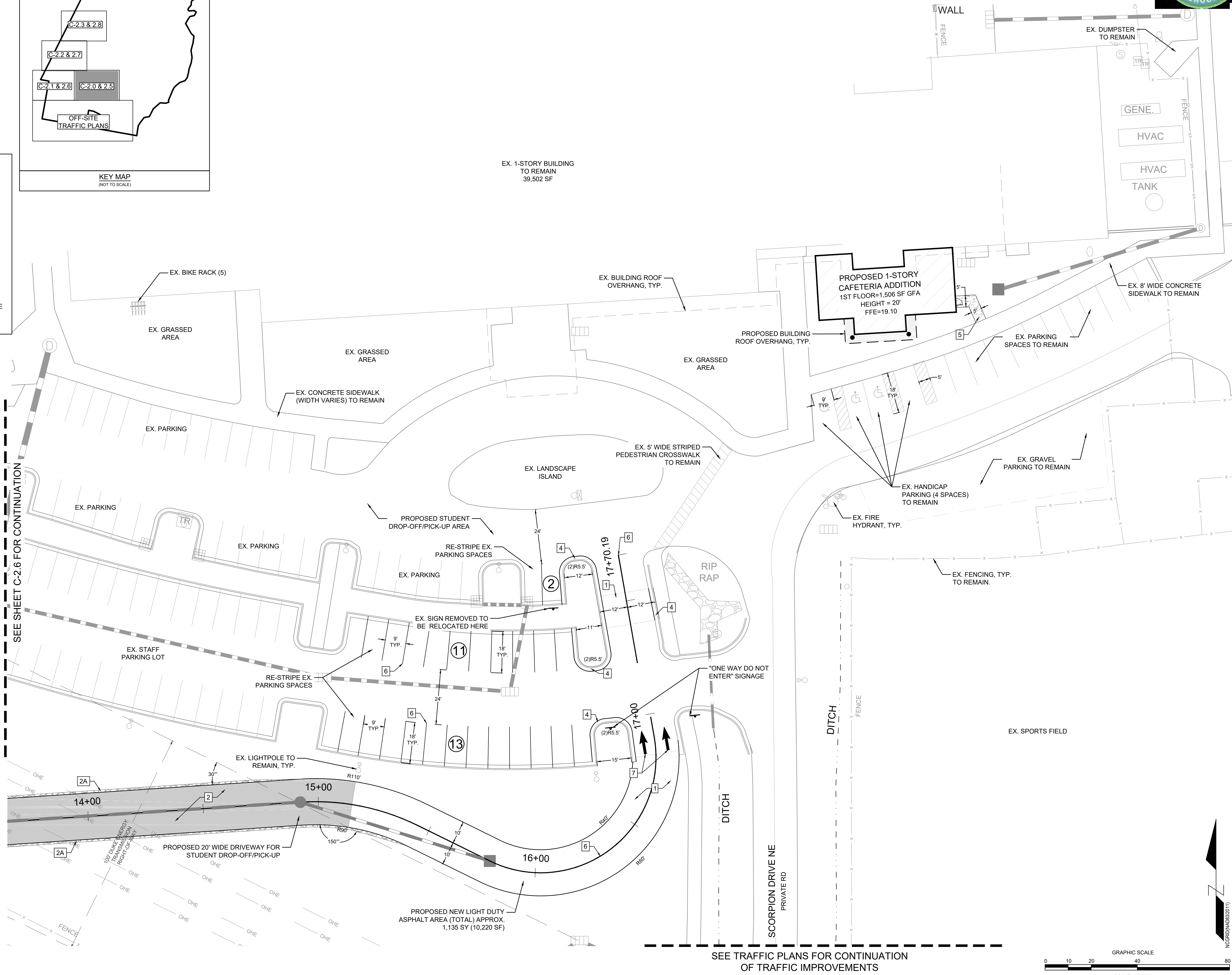
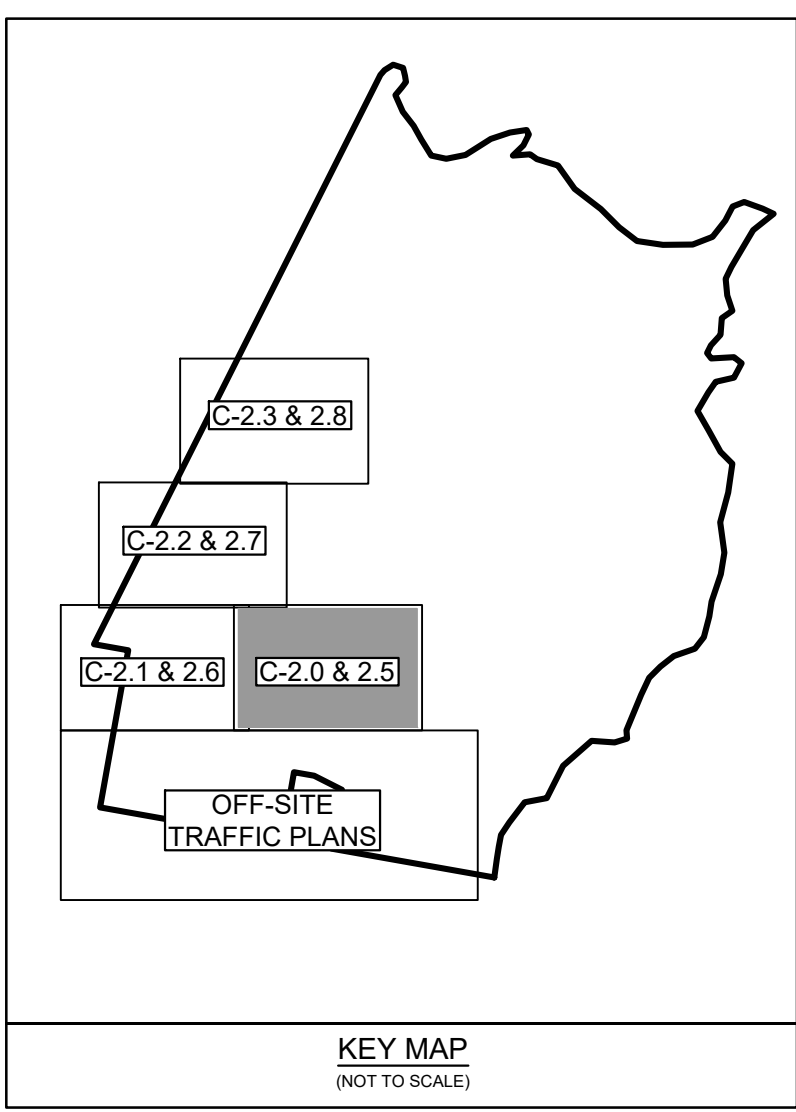
REVISIONS:	
CLIENT INFORMATION:	
BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
PARAMOUNT ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License # C-2846	
OVERALL SITE PLAN N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS PRELIMINARY LAYOUT FINAL DESIGN RELEASED FOR BIDDING	DRAWING INFORMATION DATE: 04/23/20 SCALE: 1" = 100' AEC DRAWN: RPE CHECKED:
SEAL NORTH CAROLINA PROFESSIONAL SEAL 031591 ENGINEER ROBERT P. BALLARD 04/23/20	
C-2.4 PEI JOB#: 19248.PE	



**LEGEND:**

[Pattern]	PROPOSED ASPHALT OVERLAY
[Pattern]	PROPOSED LIGHT DUTY ASPHALT
[Pattern]	PROPOSED HEAVY DUTY ASPHALT
[Pattern]	PROPOSED BUILDING
[Pattern]	PROPOSED ROOF OVERHANG
[Pattern]	PROPOSED CONCRETE
[Pattern]	EXISTING CONCRETE
[Pattern]	PROPOSED FENCE
[Pattern]	PROPOSED TREE PROTECTION FENCE
[Pattern]	EXISTING CONTOURS

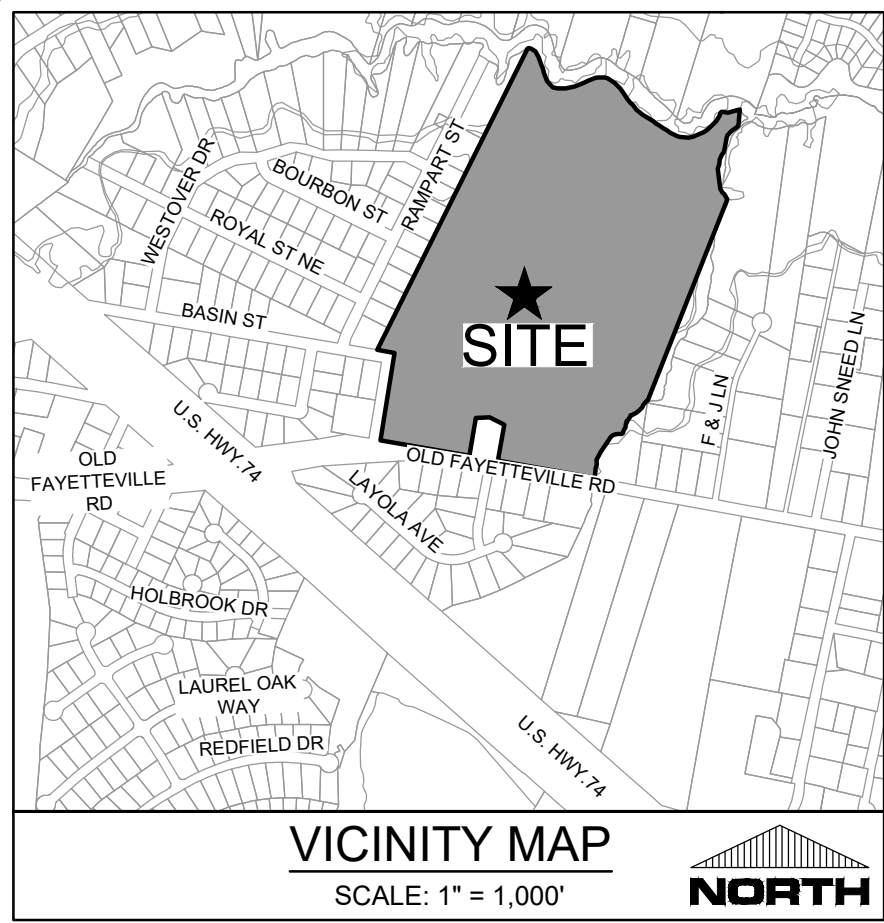
- KEY NOTES:**
- 1 LIGHT DUTY ASPHALT PAVING:  
REFER TO DETAILS
  - 2 HEAVY DUTY ASPHALT PAVING:  
REFER TO DETAILS
  - 2A ABC EXTENSION WITHIN DUKE ROW:  
IN PARKING & DRIVE AREAS WITHOUT CURB  
& GUTTER EDGE TREATMENT & WITHIN DUKE  
ENERGY ROW, EXTEND ABC 1FT MIN. PAST  
ASPHALT SURFACE. REFER TO DETAILS
  - 3 ASPHALT OVERLAY AREA:  
WHERE REQUIRED. REFER TO DETAILS.
  - 4 STANDARD 24" CURB & GUTTER:  
SEE DETAILS
  - 5 CONCRETE SIDEWALK:  
REFER TO DETAILS
  - 6 STRIPING:  
PROVIDE 4" WIDE PARKING LOT  
STRIPING AS SHOWN. USE HIGHWAY  
MARKING PAINT - WHITE (2 COATS).
  - 7 STRAIGHT ARROW:  
SEE DETAILS
  - 8 FENCING:  
6-FT HIGH CHAIN LINK FENCING



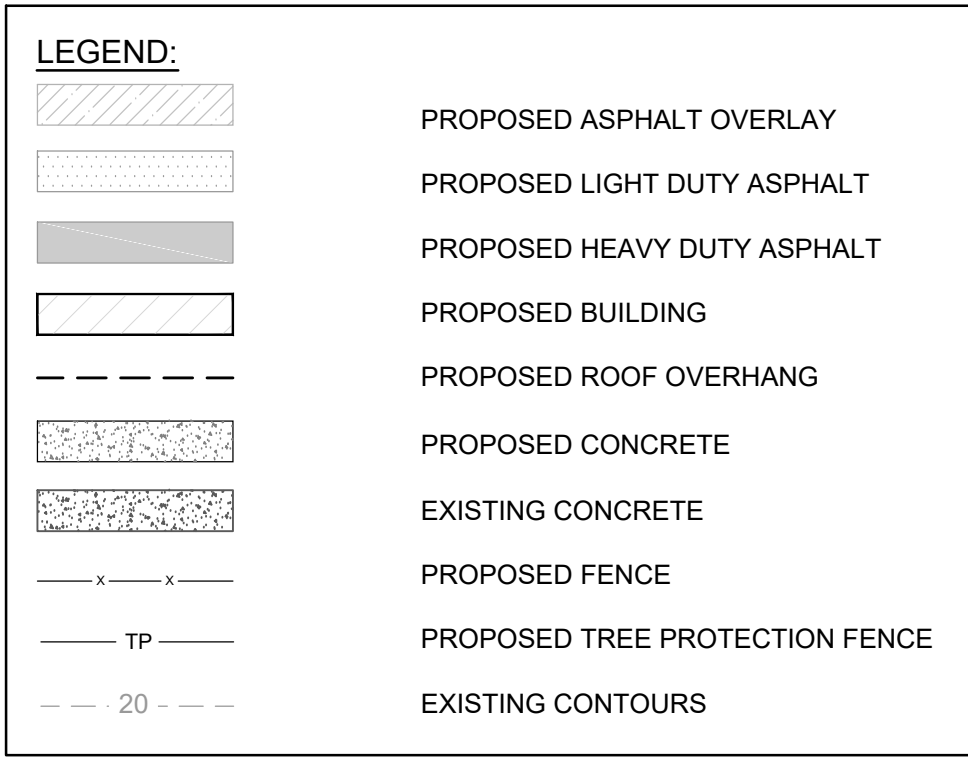
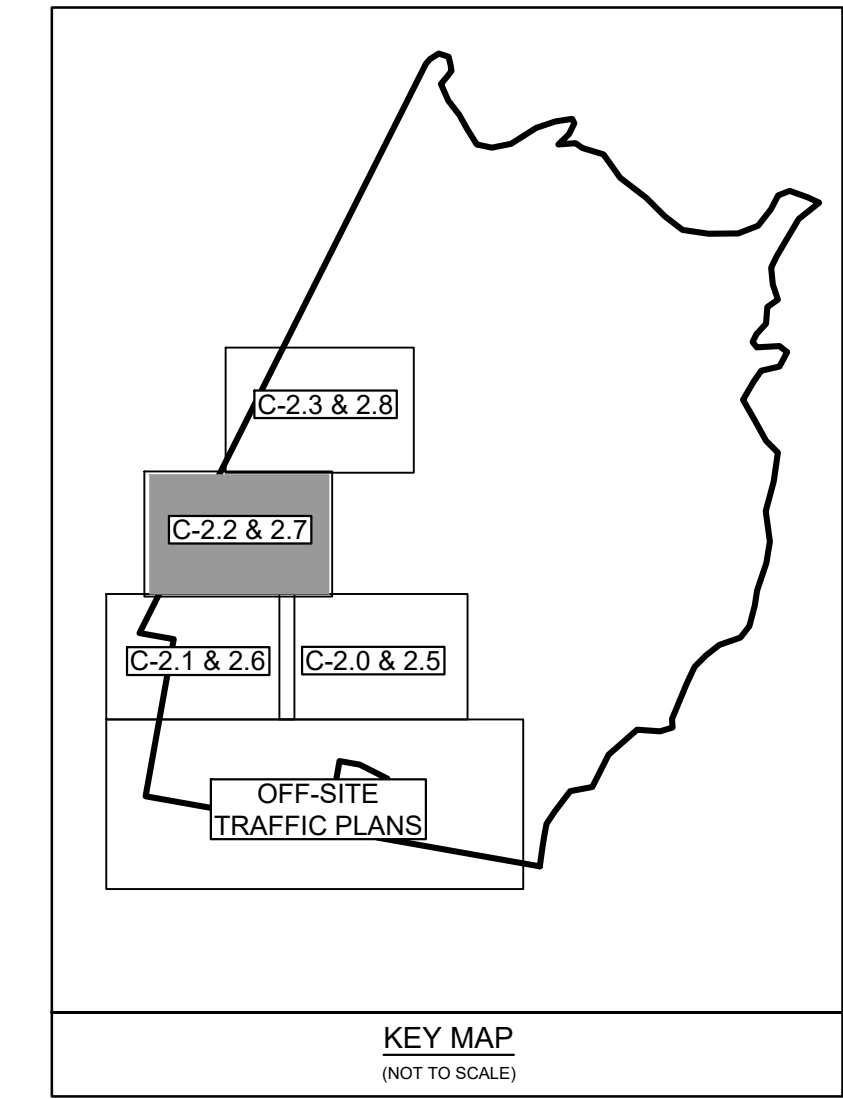
FINAL DESIGN - RELEASED FOR BIDDING ONLY

REVISIONS:	
CLIENT INFORMATION:	
BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
PARAMOUNT ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6700 (F) NC License # C-2846	
SITE PLAN	
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 1.14 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS: DESIGN: PRELIMINARY LAYOUT FINAL DESIGN RELEASED FOR BIDDING	DRAWING INFORMATION: DATE: 04/23/20 SCALE: 1" = 20' DRAWN: AEC CHECKED: RBE
SEAL NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT P. BALLARD 031591 04/23/20	
C-2.5	
PEI JOB#: 19248.PE	





- KEY NOTES:**
- 1 LIGHT DUTY ASPHALT PAVING:  
REFER TO DETAILS
  - 2 HEAVY DUTY ASPHALT PAVING:  
REFER TO DETAILS
  - 2A ABC EXTENSION WITHIN DUKE ROW:  
IN PARKING & DRIVE AREAS WITHOUT CURB  
& GUTTER EDGE TREATMENT & WITHIN DUKE  
ENERGY ROW, EXTEND ABC 1FT MIN. PAST  
ASPHALT SURFACE. REFER TO DETAILS
  - 3 ASPHALT OVERLAY AREA:  
WHERE REQUIRED. REFER TO DETAILS.
  - 4 STANDARD 24" CURB & GUTTER:  
SEE DETAILS
  - 5 CONCRETE SIDEWALK:  
REFER TO DETAILS
  - 6 STRIPING:  
PROVIDE 4" WIDE PARKING LOT  
STRIPING AS SHOWN. USE HIGHWAY  
MARKING PAINT - WHITE (2 COATS).
  - 7 STRAIGHT ARROW:  
SEE DETAILS
  - 8 FENCING:  
6-FT HIGH CHAIN LINK FENCING

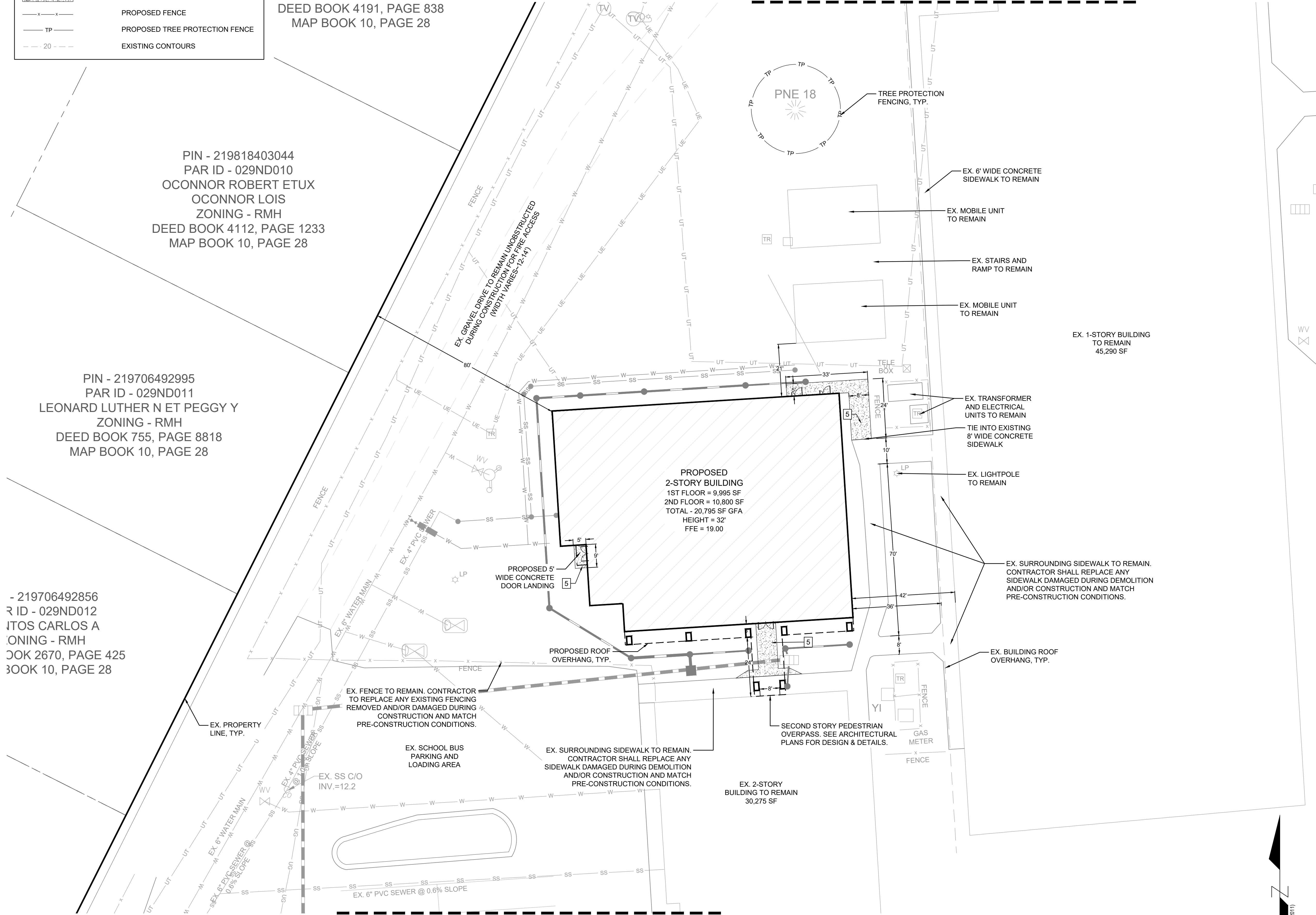


DEED BOOK 4191, PAGE 838  
MAP BOOK 10, PAGE 28

PIN - 219818403044  
PAR ID - 029ND010  
OCONNOR ROBERT ETUX  
OCONNOR LOIS  
ZONING - RMH  
DEED BOOK 4112, PAGE 1233  
MAP BOOK 10, PAGE 28

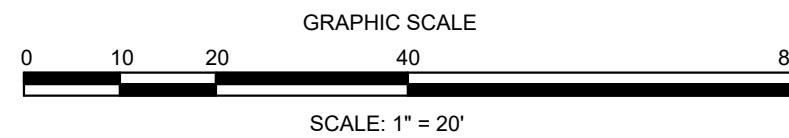
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PAR ID - 029ND011  
LEONARD LUTHER N ET PEGGY Y  
ZONING - RMH  
DEED BOOK 755, PAGE 8818  
MAP BOOK 10, PAGE 28

- 219706492856  
R ID - 029ND012  
ITOS CARLOS A  
ONING - RMH  
OOK 2670, PAGE 425  
BOOK 10, PAGE 28



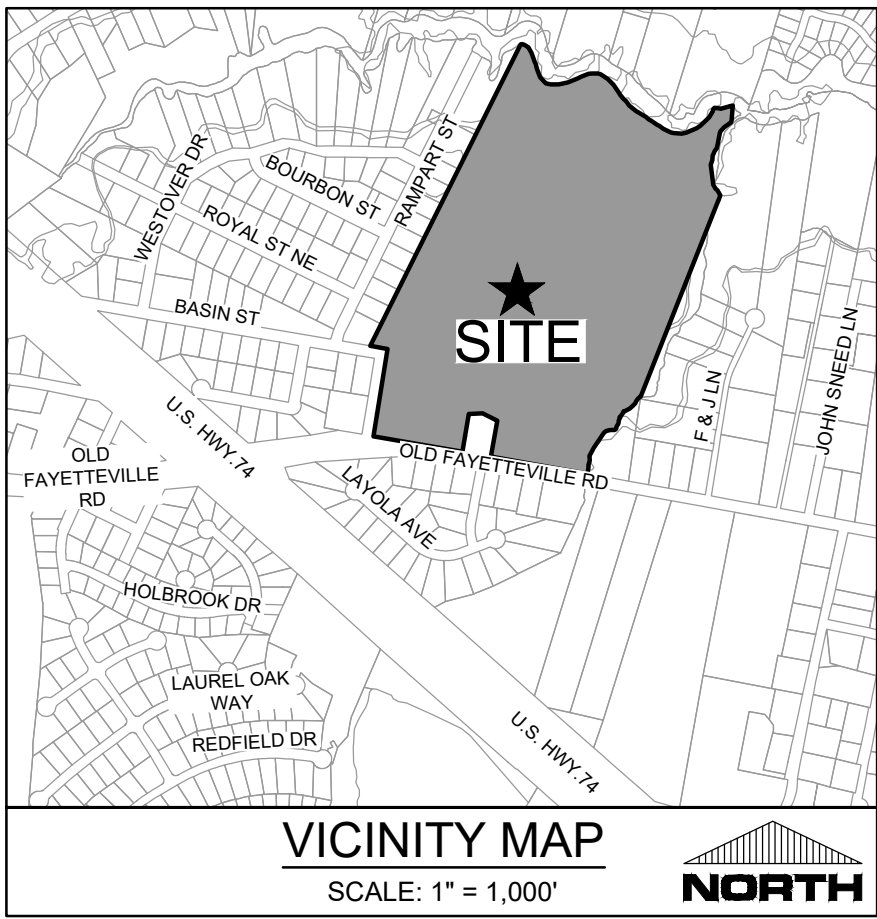
SEE SHEET C-2.6 FOR CONTINUATION

SEE SHEET C-2.8 FOR CONTINUATION



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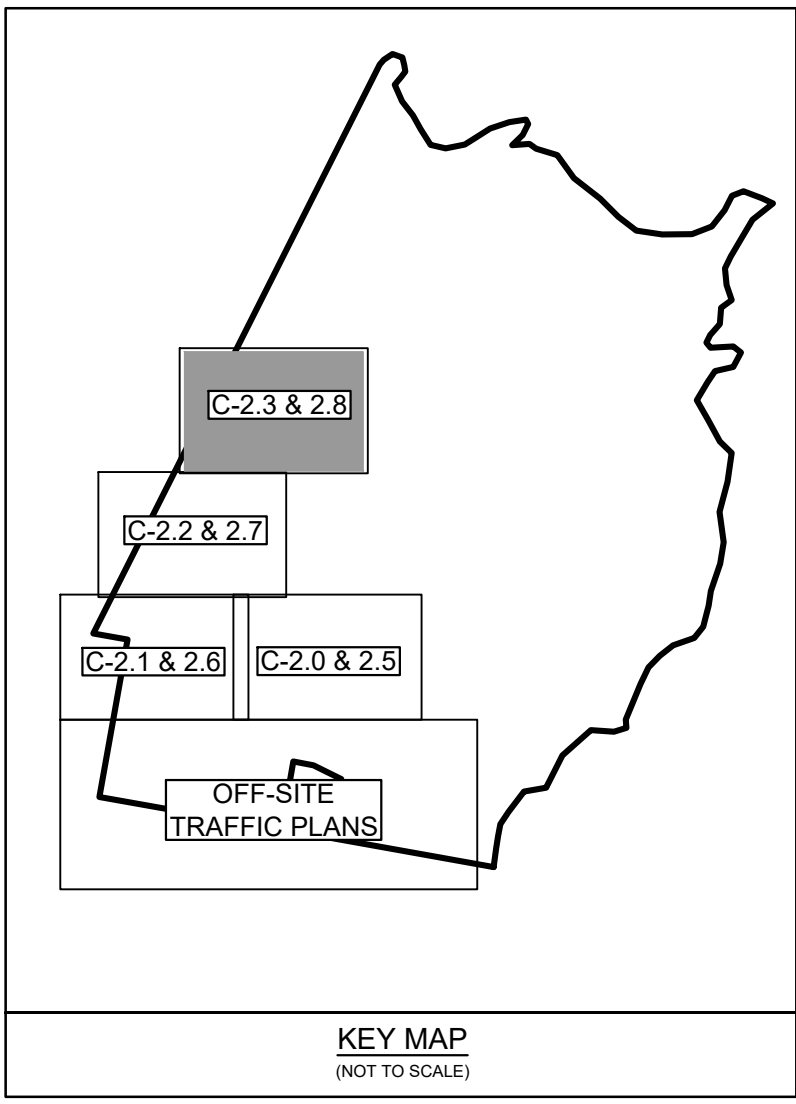
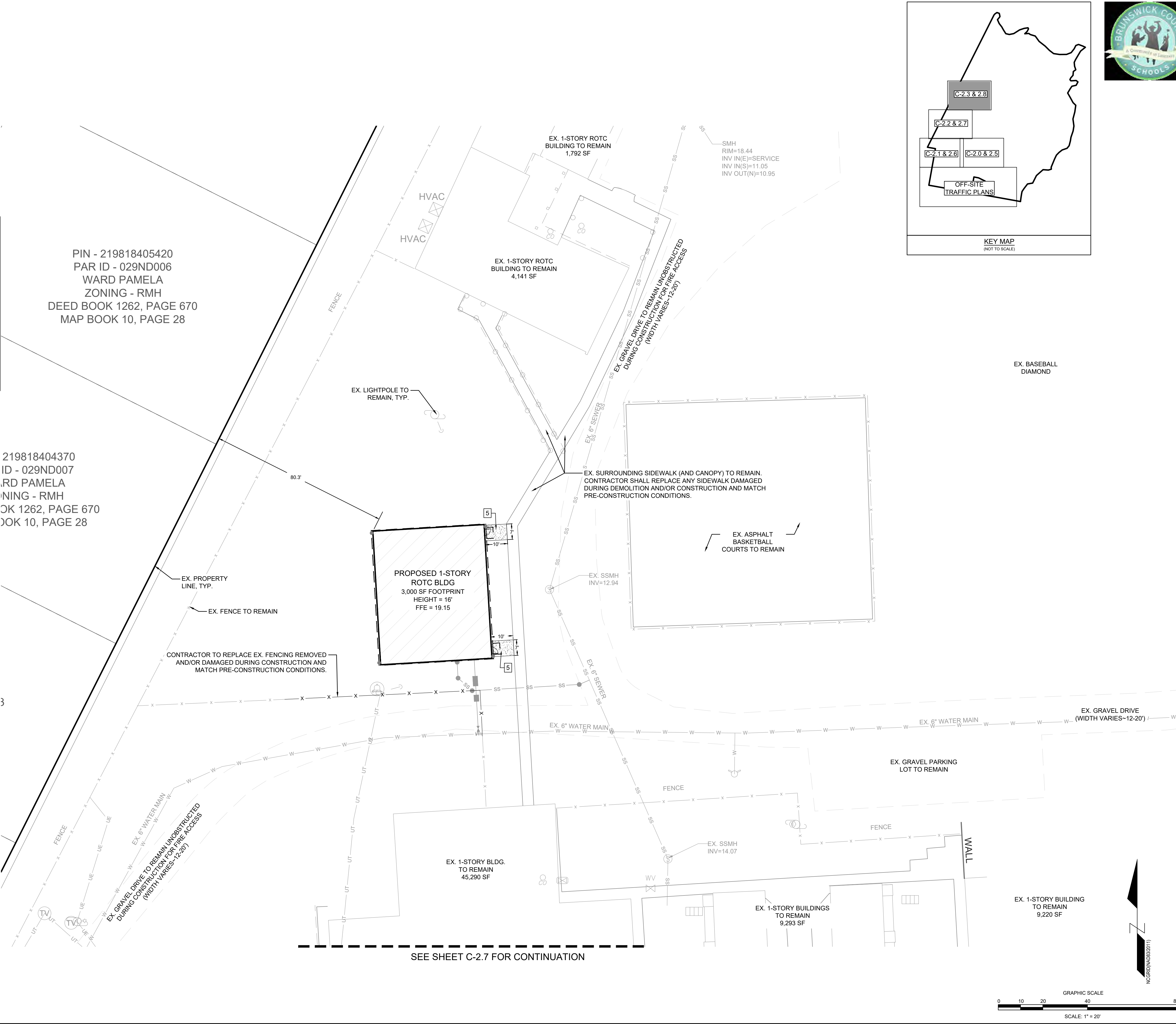
REVISIONS:	
CLIENT INFORMATION: <b>BECKER MORGAN GROUP</b> 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
<b>PARAMOUNT ENGINEERING, INC.</b> 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6700 (F) NC License # C-2846	
<b>SITE PLAN</b> N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS: DESIGNED FOR CONSTRUCTION PRELIMINARY LAYOUT FINAL DESIGN RELEASED FOR BIDDING	DRAWING INFORMATION: DATE: 04/23/20 SCALE: 1" = 20' DRAWN: RFB CHECKED: RFB
<b>C-2.7</b> PEI JOB#: 19248.PE	



**LEGEND:**

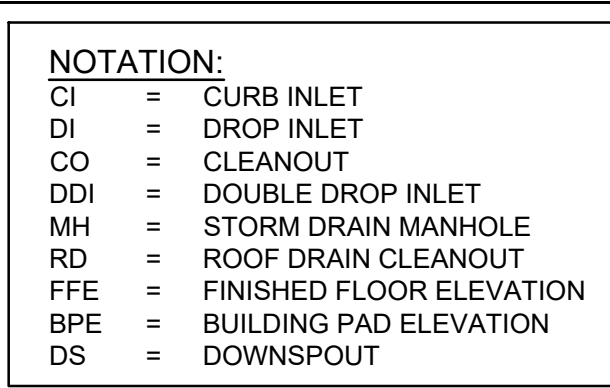
[Pattern]	PROPOSED ASPHALT OVERLAY
[Pattern]	PROPOSED LIGHT DUTY ASPHALT
[Pattern]	PROPOSED HEAVY DUTY ASPHALT
[Pattern]	PROPOSED BUILDING
[Pattern]	PROPOSED ROOF OVERHANG
[Pattern]	PROPOSED CONCRETE
[Pattern]	EXISTING CONCRETE
[Pattern]	PROPOSED FENCE
[Pattern]	PROPOSED TREE PROTECTION FENCE
[Pattern]	EXISTING CONTOURS

- KEY NOTES:**
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IN PARKING & DRIVE AREAS WITHOUT CURB  
& GUTTER EDGE TREATMENT & WITHIN DUKE  
ENERGY ROW, EXTEND ABC 1FT MIN. PAST  
ASPHALT SURFACE. REFER TO DETAILS
  - 3 ASPHALT OVERLAY AREA:  
WHERE REQUIRED. REFER TO DETAILS.
  - 4 STANDARD 24" CURB & GUTTER:  
SEE DETAILS
  - 5 CONCRETE SIDEWALK:  
REFER TO DETAILS
  - 6 STRIPING:  
PROVIDE 4" WIDE PARKING LOT  
STRIPING AS SHOWN. USE HIGHWAY  
MARKING PAINT - WHITE (2 COATS).
  - 7 STRAIGHT ARROW:  
SEE DETAILS
  - 8 FENCING:  
6-FT HIGH CHAIN LINK FENCING



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REVISIONS:	
CLIENT INFORMATION:	
BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
PARAMOUNT ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6700 (F) NC License #: C-2846	
SITE PLAN	
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 1.14 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING:	DRAWING INFORMATION: DATE: 04/23/20 SCALE: 1" = 20' DRAWN: AEC CHECKED: RPE
SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT P. BALLARD 031591 04/23/20	
C-2.8	
PEI JOB#: 19248.PE	



1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL STATE OF NC, TOWN OF LELAND, AND BRUNSWICK COUNTY STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL PLACE INLET PROTECTION AROUND ALL STORM DRAIN INLETS TO PROTECT THE SYSTEM FROM COLLECTING SEDIMENTATION DURING CONSTRUCTION. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE ROADS ARE PAVED.
3. CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY, NEW ASPHALT AREAS, AND SIDEWALKS TO MATCH PROPOSED GRADES.
4. ALL PROPOSED SPOT ELEVATIONS SHOWN ARE PROPOSED EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
5. CONNECT ROOF DRAINS AS SHOWN. IF THERE ARE ANY DRAINAGE QUESTIONS, PLEASE NOTIFY OWNER AND ENGINEER PRIOR TO MAKING CONNECTIONS.
6. ALL SIDEWALK CROSS SLOPES HAVE BEEN GRADED TO MEET ADA REGULATIONS. CONTRACTOR SHALL CONFIRM GRADES BEFORE PLACING PAVEMENT OR SIDEWALKS AND REPORT ANY DISCREPANCIES TO OWNER AND/OR ENGINEER.
7. CONTRACTOR SHALL COORDINATE WITH OWNER TO DETERMINE IF A GEOTECHNICAL ENGINEERING REPORT WAS COMPLETED FOR THE SITE.
8. CONTRACTOR SHALL STAKE SILT FENCE ALONG LIMITS OF DISTURBANCE LINE. THE SILT FENCE LINETYPE IS OFFSET ON THE DRAWING FOR CLARITY.

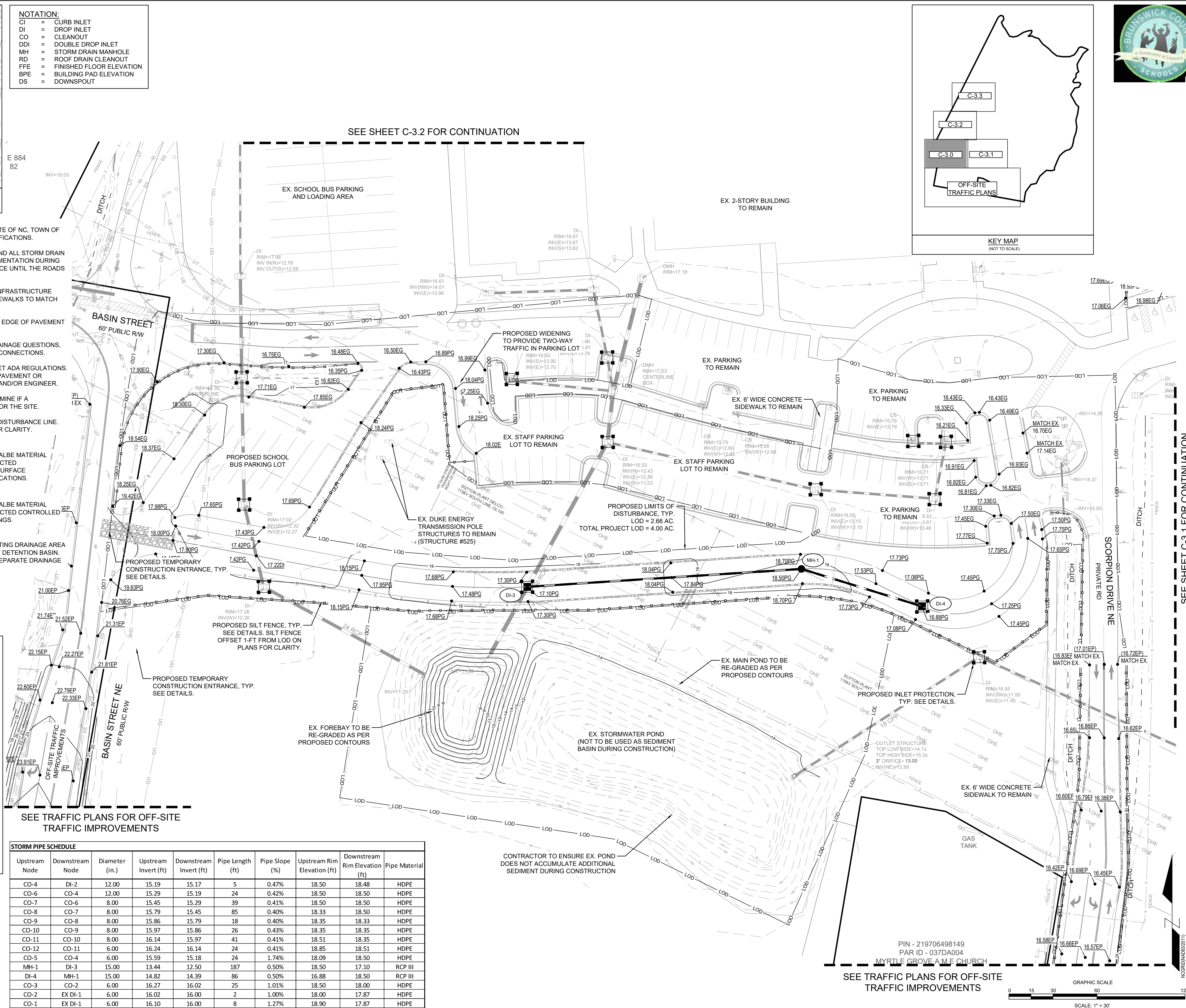
1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED SUBGRADE, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND/OR TECHNICAL SPECIFICATIONS.

1. SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROL BUILDING PAD, IN ACCORDANCE WITH STRUCTURAL DRAWINGS.

1. THE PROPOSED CLASSROOM ADDITION IS WITHIN THE EXISTING DRAINAGE AREA THAT DRAINS TO THE EXISTING ON-SITE STORMWATER WET DETENTION BASIN. THE PROPOSED ROTC AND CAFETERIA ADDITIONS ARE IN SEPARATE DRAINAGE AREAS WHICH IS A LOW DENSITY AREA.



STORM PIPE SCHEDULE									
Upstream Node	Downstream Node	Diameter (in.)	Upstream Invert (ft)	Downstream Invert (ft)	Pipe Length (ft)	Pipe Slope (%)	Upstream Rim Elevation (ft)	Downstream Rim Elevation (ft)	Pipe Material
CO-4	DI-2	12.00	15.19	15.17	5	0.47%	18.50	18.48	HDPE
CO-6	CO-4	12.00	15.29	15.19	24	0.42%	18.50	18.50	HDPE
CO-7	CO-6	8.00	15.45	15.29	39	0.41%	18.50	18.50	HDPE
CO-8	CO-7	8.00	15.79	15.45	85	0.40%	18.33	18.50	HDPE
CO-9	CO-8	8.00	15.86	15.79	18	0.40%	18.35	18.33	HDPE
CO-10	CO-9	8.00	15.97	15.86	26	0.43%	18.35	18.35	HDPE
CO-11	CO-10	8.00	16.14	15.97	41	0.41%	18.51	18.35	HDPE
CO-12	CO-11	6.00	16.24	16.14	24	0.41%	18.85	18.51	HDPE
CO-5	CO-4	6.00	15.59	15.18	24	1.74%	18.09	18.50	HDPE
MH-1	DI-3	15.00	13.44	12.50	187	0.50%	18.50	17.10	RCP III
DI-4	MH-1	15.00	14.82	14.39	86	0.50%	16.88	18.50	RCP III
CO-3	CO-2	6.00	16.27	16.02	25	1.01%	18.50	18.00	HDPE
CO-2	EX DI-1	6.00	16.02	16.00	2	1.00%	18.00	17.87	HDPE
CO-1	EX DI-1	6.00	16.10	16.00	8	1.27%	18.90	17.87	HDPE

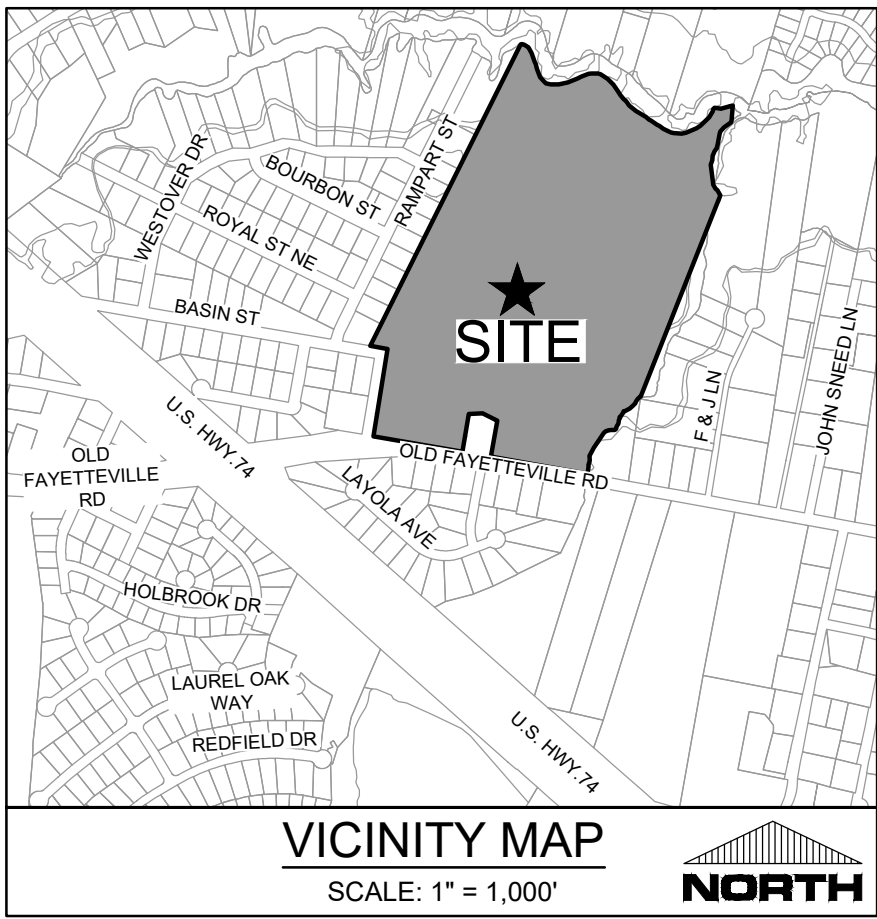


<p>PROJECT STATUS:</p> <p>CONCEPTUAL LAYOUT: _____</p> <p>FINAL DESIGN: _____</p> <p>RELEASED FOR CONSTRUCTION: _____</p>		<p>04/23/20</p> <p>DATE: _____</p> <p>DESIGNED: _____</p> <p>CHECKED: _____</p> <p>BY: _____</p>	
<p>SEAL</p> 		<p>04/23/20</p>	

# C-3.0

PEI 10748 PF 10748 PF





LEGEND:

- 16 --- EXISTING CONTOUR  
--- 16 --- PROPOSED CONTOUR  
25.05EP --- EXISTING SPOT ELEVATION  
25.05EP --- PROPOSED EDGE OF PAVEMENT  
25.05SW --- PROPOSED SIDEWALK ELEVATION  
25.05PG --- PROPOSED GRADE  
25.05TW --- PROPOSED TOP OF WALL  
17.15TC --- EXISTING TOP OF CONCRETE  
--- INLET PROTECTION  
--- LOD --- LIMITS OF DISTURBANCE  
--- SILT FENCE  
--- TP --- TREE PROTECTION FENCING  
--- DRAINAGE FLOW PATH  
--- CO-1 --- DRAINAGE INLET LABEL

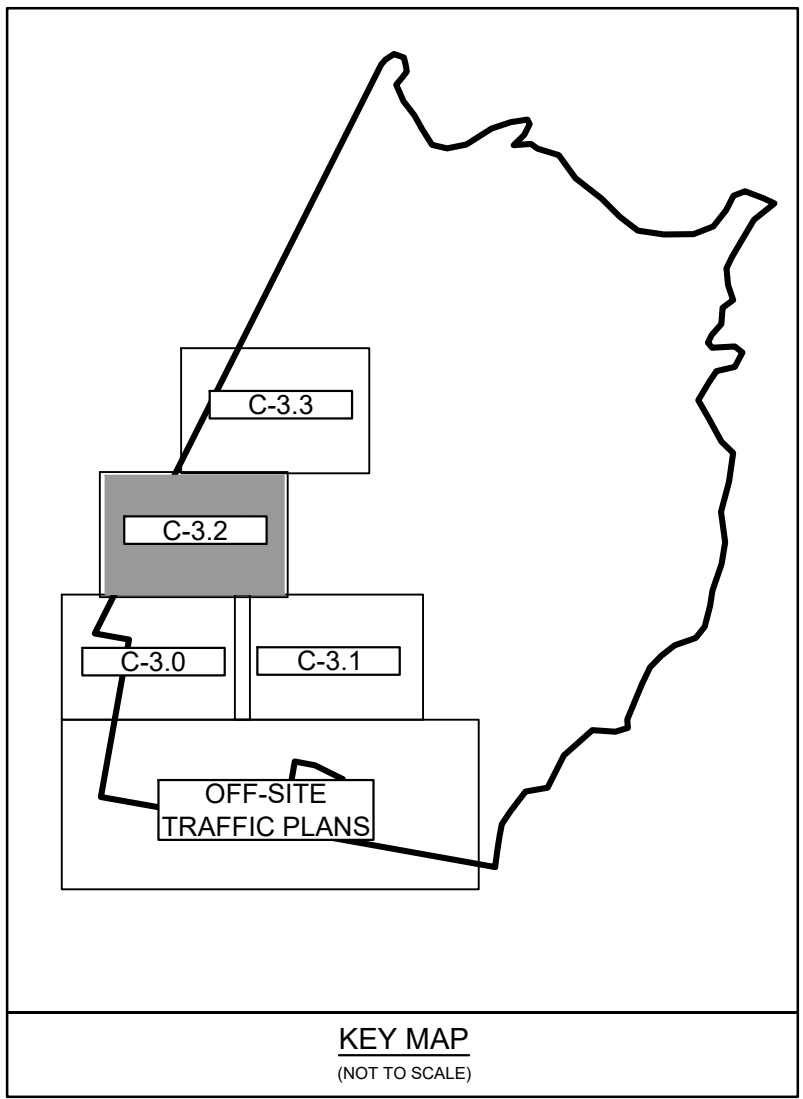
NOTATION:

- CI = CURB INLET  
DI = DROP INLET  
CO = CLEANOUT  
DDI = DOUBLE DROP INLET  
MH = STORM DRAIN MANHOLE  
RD = ROOF DRAIN CLEANOUT  
FFE = FINISHED FLOOR ELEVATION  
BPE = BUILDING PAD ELEVATION  
DS = DOWNSPOUT

STORM PIPE SCHEDULE

Upstream Node	Downstream Node	Diameter (in.)	Upstream Invert (ft)	Downstream Invert (ft)	Pipe Length (ft)	Pipe Slope (%)	Upstream Rim Elevation (ft)	Downstream Rim Elevation (ft)	Pipe Material
CO-4	DI-2	12.00	15.19	15.17	5	0.47%	18.50	18.48	HDPE
CO-6	CO-4	12.00	15.29	15.19	24	0.42%	18.50	18.50	HDPE
CO-7	CO-6	8.00	15.45	15.29	39	0.41%	18.50	18.50	HDPE
CO-8	CO-7	8.00	15.79	15.45	85	0.40%	18.33	18.50	HDPE
CO-9	CO-8	8.00	15.86	15.79	18	0.40%	18.35	18.33	HDPE
CO-10	CO-9	8.00	15.97	15.86	26	0.43%	18.35	18.35	HDPE
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MH-1	DI-3	15.00	13.44	12.50	187	0.50%	18.50	17.10	RCP III
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CO-2	EX DI-1	6.00	16.02	16.00	2	1.00%	18.00	17.87	HDPE
CO-1	EX DI-1	6.00	16.10	16.00	8	1.27%	18.90	17.87	HDPE

SEE SHEET C-3.3 FOR CONTINUATION



GENERAL NOTES:

- ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL STATE OF NC, TOWN OF LELAND, AND BRUNSWICK COUNTY STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL PLACE INLET PROTECTION AROUND ALL STORM DRAIN INLETS TO PROTECT THE SYSTEM FROM COLLECTING SEDIMENTATION DURING CONSTRUCTION. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE ROADS ARE PAVED.
- CONTRACTOR SHALL ADJUST ALL FRAMES OF EX. UTILITY INFRASTRUCTURE WITHIN ASPHALT OVERLAY, NEW ASPHALT AREAS, AND SIDEWALKS TO MATCH PROPOSED GRADES.
- ALL PROPOSED SPOT ELEVATIONS SHOWN ARE PROPOSED EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
- CONNECT ROOF DRAINS AS SHOWN. IF THERE ARE ANY DRAINAGE QUESTIONS, PLEASE NOTIFY OWNER AND ENGINEER PRIOR TO MAKING CONNECTIONS.
- ALL SIDEWALK CROSS SLOPES HAVE BEEN GRADED TO MEET ADA REGULATIONS. CONTRACTOR SHALL CONFIRM GRADES BEFORE PLACING PAVEMENT OR SIDEWALKS AND REPORT ANY DISCREPANCIES TO OWNER AND/OR ENGINEER.
- CONTRACTOR SHALL COORDINATE WITH OWNER TO DETERMINE IF A GEOTECHNICAL ENGINEERING REPORT WAS COMPLETED FOR THE SITE.
- CONTRACTOR SHALL STAKE SILT FENCE ALONG LIMITS OF DISTURBANCE LINE. THE SILT FENCE LINETYPE IS OFFSET ON THE DRAWING FOR CLARITY.

ASPHALT AREA NOTE:

- SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED SUBGRADE, IN ACCORDANCE WITH THE SUBSURFACE GEOTECHNICAL EXPLORATION AND/OR TECHNICAL SPECIFICATIONS.

BUILDING PAD NOTE:

- SITE CONTRACTOR SHALL STRIP TOPSOIL AND ANY UNSUITABLE MATERIAL AND PROVIDE CUT/FILL OPERATIONS TO PROVIDE A COMPACTED CONTROLLED BUILDING PAD, IN ACCORDANCE WITH STRUCTURAL DRAWINGS.

STORMWATER NOTES:

- THE PROPOSED CLASSROOM ADDITION IS WITHIN THE EXISTING DRAINAGE AREA THAT DRAINS TO THE EXISTING ON-SITE STORMWATER WET DETENTION BASIN. THE PROPOSED ROTC AND CAFETERIA ADDITIONS ARE IN SEPARATE DRAINAGE AREAS WHICH IS A LOW DENSITY AREA.

PIN - 219818403044  
PAR ID - 029ND010  
OCONNOR ROBERT ETUX  
OCONNOR LOIS  
ZONING - RMH  
DEED BOOK 4112, PAGE 1233  
MAP BOOK 10, PAGE 28

PIN - 219706492995  
PAR ID - 029ND011  
D LUTHER N ET PEGGY Y  
ZONING - RMH  
BOOK 755, PAGE 8818  
P BOOK 10, PAGE 28

PIN - 219706492856  
PAR ID - 029ND012  
SANTOS CARLOS A  
ZONING - RMH  
DEED BOOK 2670, PAGE 425  
MAP BOOK 10, PAGE 28

PROPOSED LIMITS OF DISTURBANCE, TYP.  
LOD = 0.84 AC.  
TOTAL PROJECT LOD = 4.00 AC.

PROPOSED SILT FENCE, TYP.  
SEE DETAILS. SILT FENCE  
OFFSET 1-FT FROM LOD ON  
PLANS FOR CLARITY.

PROPOSED INLET PROTECTION, TYP.  
SEE DETAILS.

EX. SCHOOL BUS PARKING AND LOADING AREA

EX. SS C/O INV.=12.2

EX. 6" PVC SEWER @ 0.8% SLOPE

EX. 4" PVC SEWER @ 0.8% SLOPE

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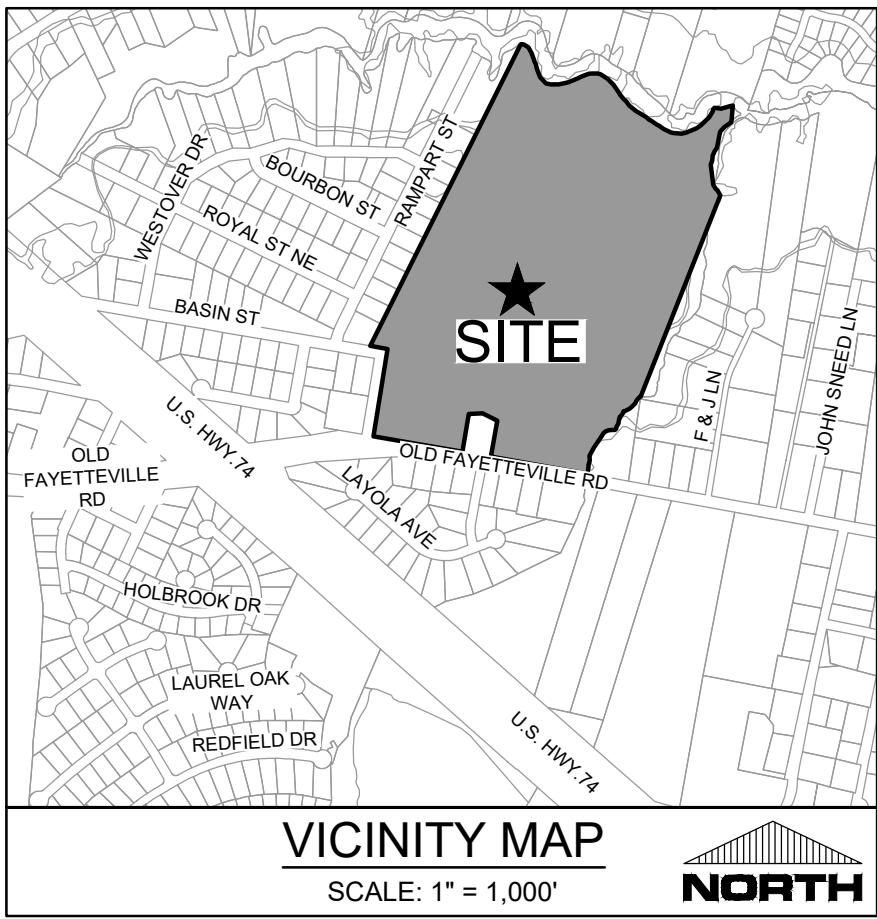
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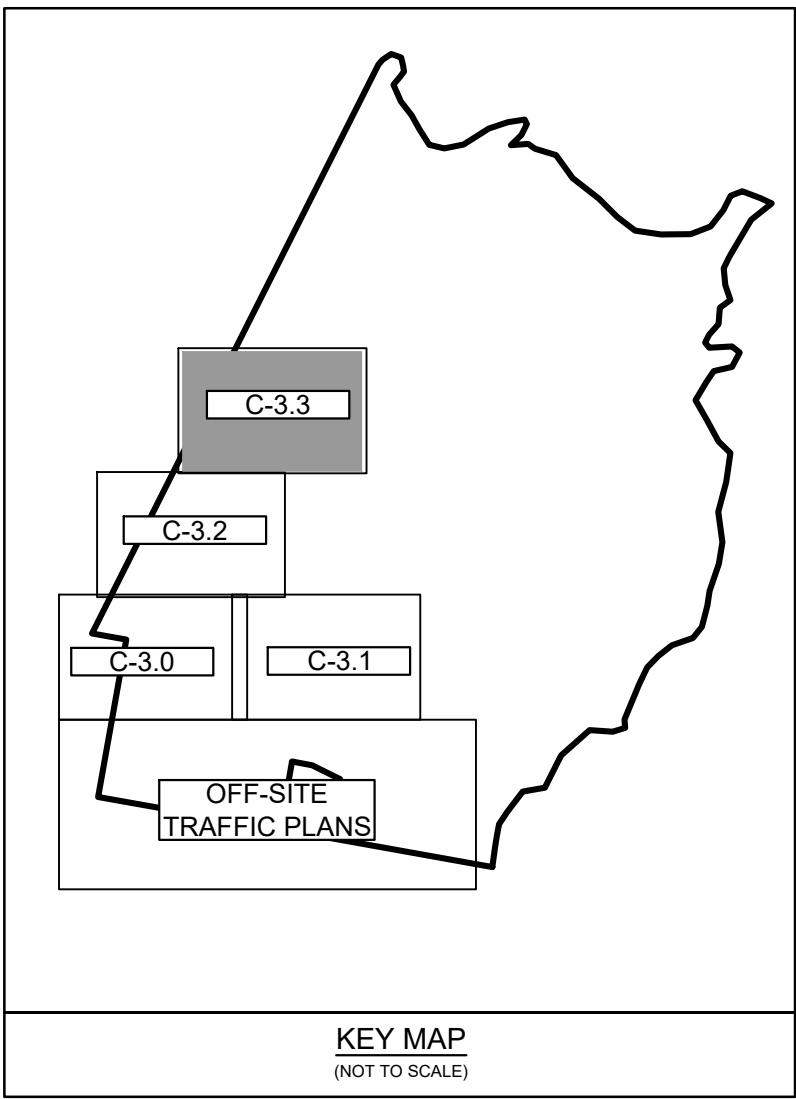


NOTATION:

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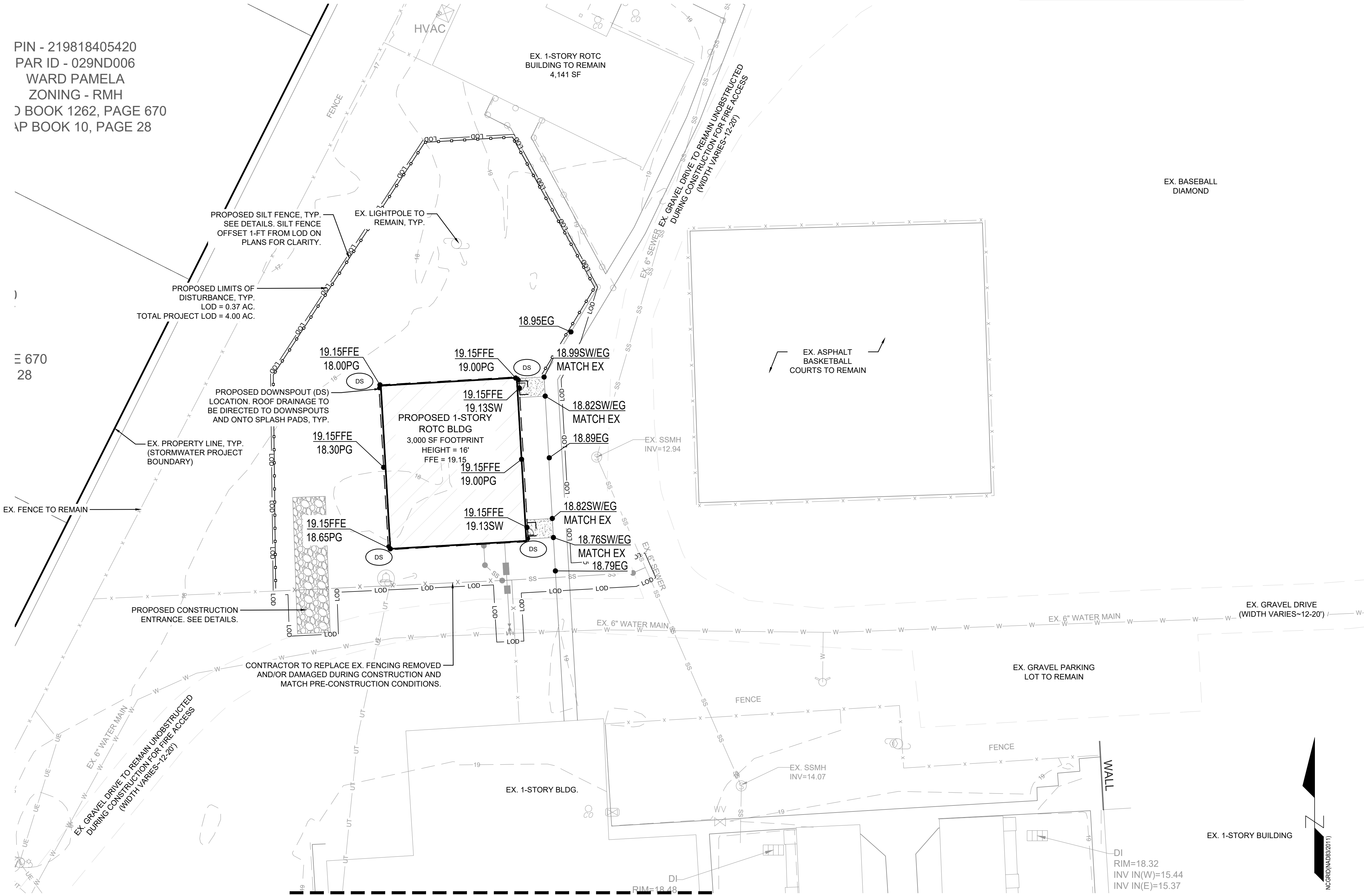
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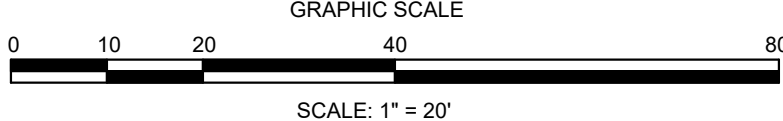
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PIN - 219818405420  
PAR ID - 029ND006  
WARD PAMELA  
ZONING - RMH  
BOOK 1262, PAGE 670  
BOOK 10, PAGE 28

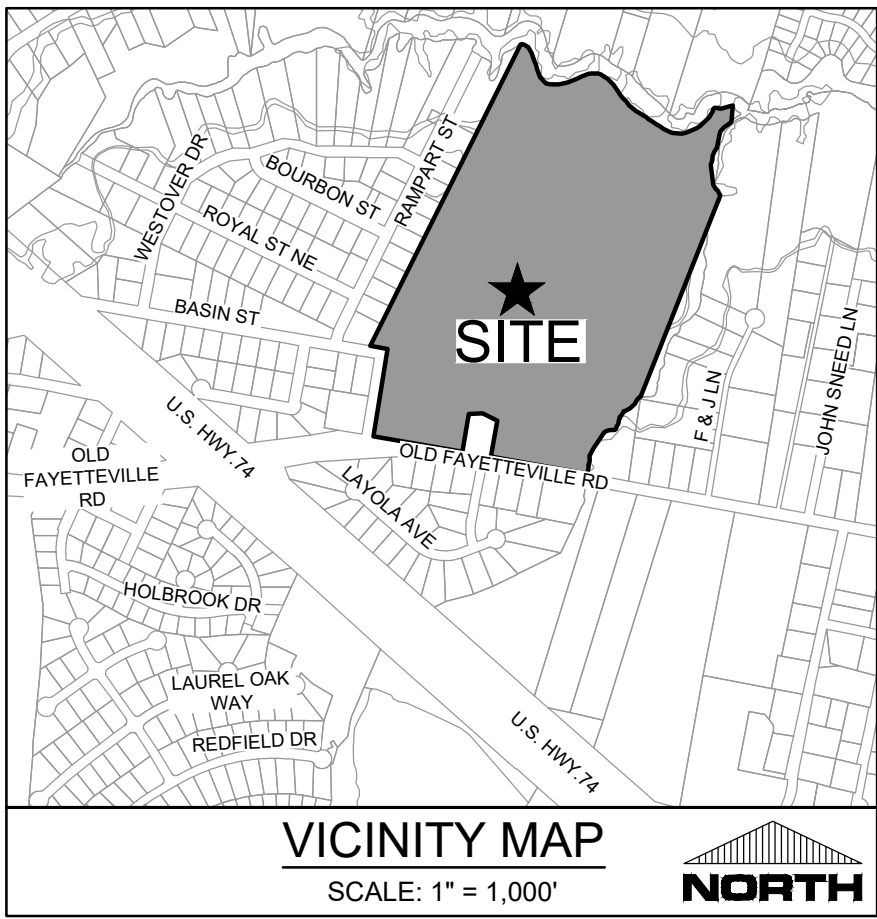


SEE SHEET C-3.2 FOR CONTINUATION



FINAL DESIGN - RELEASED FOR BIDDING ONLY

REVISIONS:	
CLIENT INFORMATION:	
BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
PARAMOUNT ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6700 (F) NC License # C-2846	
GRADING-DRAINAGE-EC PLAN	
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS: DESIGNED BY: [Signature] CHECKED BY: [Signature] FINAL DESIGN: RELEASED FOR BIDDING:	DRAWING INFORMATION: DATE: 04/23/20 SCALE: 1" = 20' DRAWN: [Signature] CHECKED: [Signature]
SEAL NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT P. BALLARD 031591 04/23/20	
C-3.3	
PEI JOB#: 19248.PE	



**SITE INFORMATION**  
OWNER INFORMATION: BRUNSWICK COUNTY SCHOOLS  
35 REFERENDUM DRIVE NE  
BOLIVIA, NC 28422  
NORTH BRUNSWICK HIGH SCHOOL  
114 SCORPION DRIVE N.E.  
LELAND, NC 28451  
037DA005  
219819500074  
BOOK 3631, PAGE 1079  
O&I  
HIGH SCHOOL  
HIGH SCHOOL  
59.74 AC (2,602,274 SF)  
THIS PARCEL LIES WITHIN AN AREA OF  
MINIMAL FLOOD HAZARD (ZONE X) AS  
INDICATED BY FEMA FLOOD ZONE MAP  
NUMBER 3720219700K BEARING AN  
EFFECTIVE DATE OF 08/28/2018.

**PROJECT NAME:**  
**PROJECT ADDRESS:**

**PARCEL ID:**  
**PARCEL PIN:**  
**RECORDED DEED BOOK:**  
**CURRENT ZONING:**  
**EXISTING USE:**  
**PROPOSED USE:**  
**TOTAL SITE AREA:**  
**FLOOD INFORMATION:**

**UTILITY INFORMATION**  
CONTRACTOR SHALL INSTALL WATER AND SEWER SERVICES IN ACCORDANCE WITH H2GO AND TOWN OF LELAND RESPECTIVELY STANDARD DETAILS AND SPECIFICATIONS.

**SANITARY SEWER**  
THIS PROJECT IS PROPOSING A 4" SANITARY SEWER SERVICE FOR BOTH THE ROTC AND CLASSROOM ADDITIONS. THESE SERVICES WILL BE CONNECTING TO THE EXISTING MAINS AND/OR SERVICES AS SHOWN. THERE ARE NO PROPOSED SANITARY SEWER MAINS WITH THIS PROJECT. THERE ARE NO PROPOSED SANITARY SERVICES FOR THE CAFETERIA ADDITION. ALL SANITARY SEWER ALLOCATION PROVIDED BY TOWN OF LELAND.

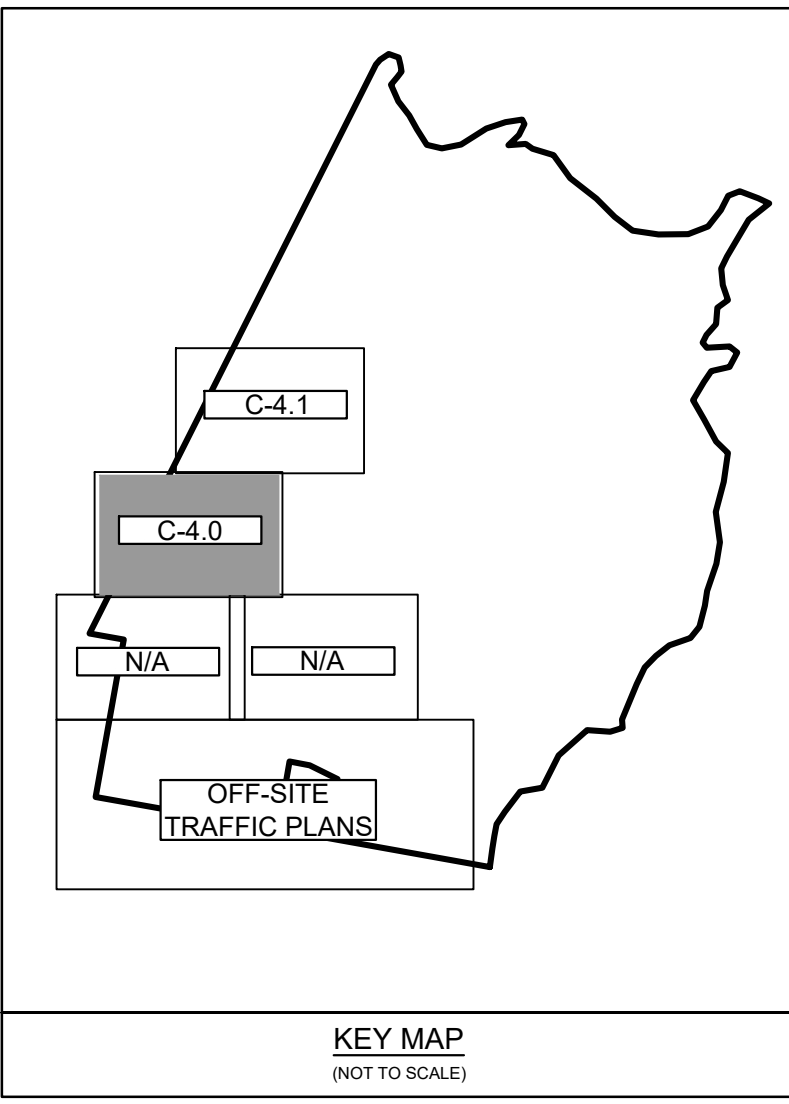
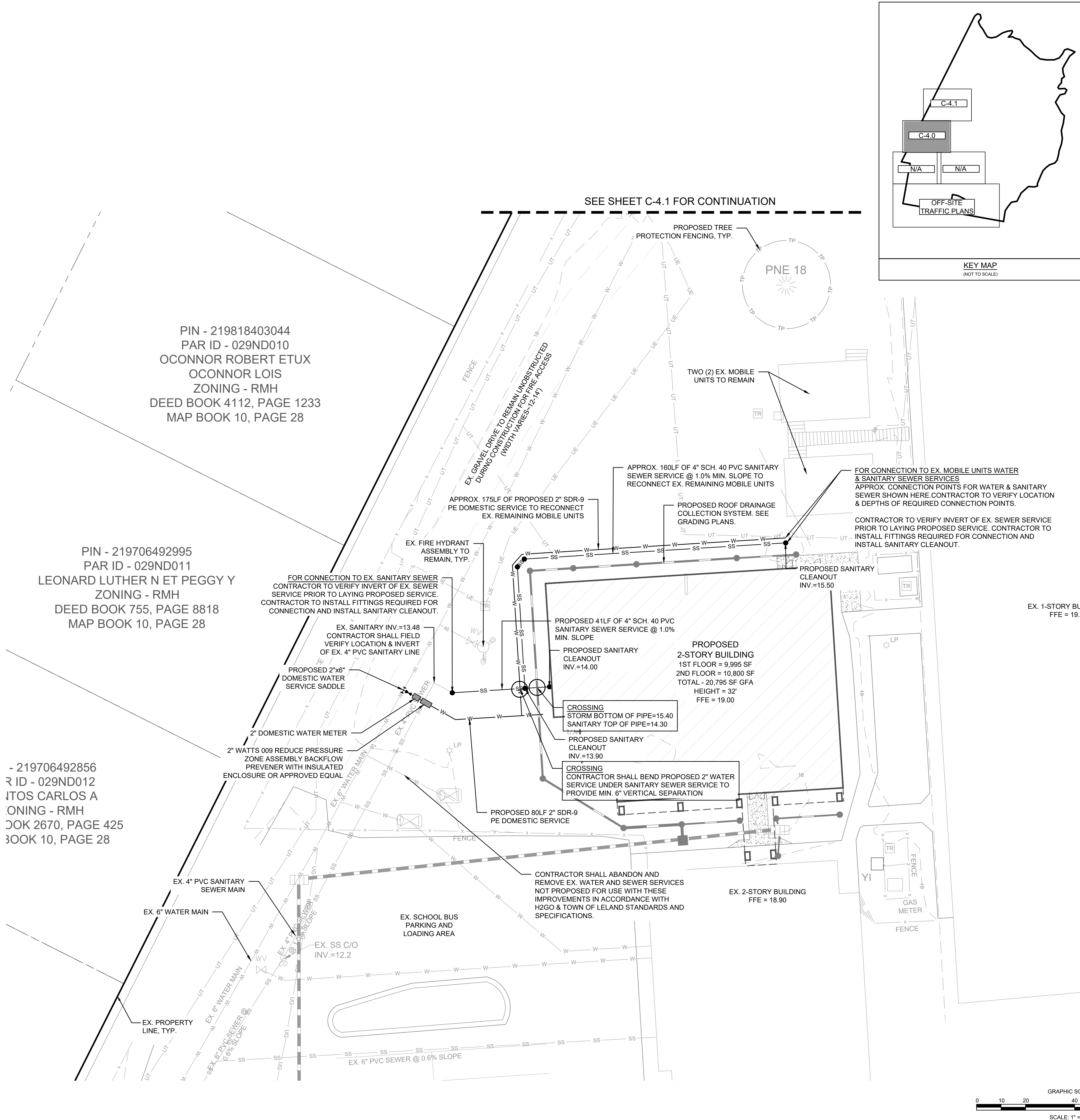
CONTRACTOR TO COORDINATE SANITARY TIE-IN TO EXISTING FACILITIES WITH TOWN OF LELAND AND BRUNSWICK COUNTY SCHOOLS. TOWN OF LELAND INSPECTOR TO BE ON-SITE DURING TAPPING OF EX. SEWER FACILITIES. SANITARY IN-LINE PLUGS ARE REQUIRED AT ALL CONNECTION POINTS TO EX. SEWER FACILITIES AND MUST REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE TOWN OF LELAND INSPECTIONS DEPARTMENT HAS COMPLETED INSPECTIONS.

**WATER**  
THIS PROJECT IS PROPOSING A 2" DOMESTIC SERVICE FOR THE ROTC BUILDING ADDITION AND A 2" DOMESTIC SERVICE FOR THE CLASSROOM ADDITION. THESE SERVICES WILL BE CONNECTING TO EXISTING WATER MAINS AND/OR SERVICES AS SHOWN. THERE ARE NO PROPOSED WATER MAINS WITH THIS PROJECT. THERE ARE NO PROPOSED WATER SERVICES FOR THE CAFETERIA ADDITION. ALL DOMESTIC WATER ALLOCATION PROVIDED BY H2GO.

CONTRACTOR TO COORDINATE WATER TIE-IN TO EXISTING FACILITIES WITH H2GO AND BRUNSWICK COUNTY SCHOOLS. H2GO INSPECTORS ARE REQUIRED TO BE ON-SITE DURING TAPPING OF THE EX. FACILITIES.

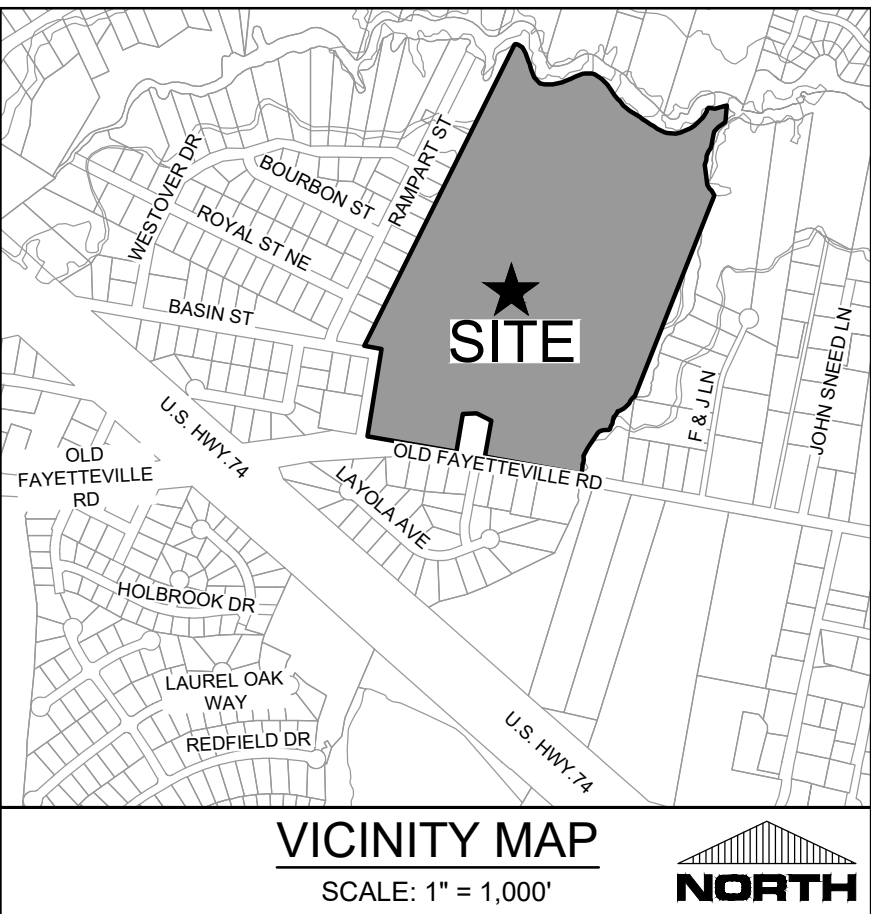
- UTILITY NOTES: (NCAC 15A.02T.0305 / T15A.18C.0906)**
1. WATER MAINS SHALL BE LAID SO AS TO PROVIDE A MINIMUM HORIZONTAL SEPARATION OF 10 FEET FROM SEWERS. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, THE WATER MAIN CAN BE INSTALLED AT LEAST 18 INCHES ABOVE THE TOP OF THE SEWER, EITHER IN A SEPARATE TRENCH, OR IN THE SAME TRENCH ON A BENCH OF UNDISTURBED EARTH.
  2. WHEN CROSSING A WATER MAIN OVER A SEWER, THE WATER MAIN SHALL BE LAID AT LEAST 18 INCHES ABOVE THE SEWER. IF CONDITIONS EXIST SUCH THAT THIS SEPARATION CANNOT BE ACHIEVED, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH JOINTS THAT MEET WATER MAIN STANDARDS. THE DUCTILE IRON PIPE SHALL EXTEND 10 FEET ON EACH SIDE OF THE CROSSING WITH A SECTION OF WATER MAIN PIPE CENTERED ON THE CROSSING.
  3. CROSSING A WATER MAIN UNDER A SEWER, WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
  4. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.
  5. WHERE VERTICAL CLEARANCE IS LESS THAN 18" BETWEEN WATER MAIN AND STORM DRAIN, WATER MAIN SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.

- FIRE & LIFE SAFETY NOTES:**
1. NEW HYDRANTS MUST BE AVAILABLE FOR USE PRIOR TO CONSTRUCTION OF THE BUILDINGS WITHIN ANY DEVELOPMENT.
  2. HYDRANTS MUST BE LOCATED WITHIN 8' OF THE CURB.
  3. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
  4. A MINIMUM OF 4' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
  5. LANDSCAPING OR PARKING CANNOT BLOCK OR IMPEDE THE FDC OR FIRE HYDRANTS OR ACCESS TO THESE APPARATUSES. A 3-FOOT (3') CLEAR SPACE SHALL BE MAINTAINED AROUND THE CIRCUMFERENCE OF HYDRANTS AND FDC.
  6. HYDRANTS SHOULD BE 18 INCHES FROM THE CENTERLINE OF THE STEAMER CONNECTION TO FINISH GRADE, THIS INCLUDES LANDSCAPING. STEAMER CONNECTIONS SHALL FACE THE STREET.
  7. FIRE HYDRANTS SHOULD NOT BE BLOCKED BY PARKING SPACES OR UTILITIES.
  8. A KNOX BOX IS REQUIRED FOR ALL NEW BUILDINGS.



FINAL DESIGN - RELEASED FOR BIDDING ONLY

REVISIONS:		CLIENT INFORMATION:	
		BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
		PARAMOUNT ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6700 (F) NC License # C-2846	
UTILITY PLAN		N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS DESIGNED BY: [Signature] CHECKED BY: [Signature] DATE: 04/23/20	DRAWING INFORMATION DATE: 04/23/20 SCALE: 1" = 20' DRAWN: [Signature] CHECKED: [Signature]	SEAL NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ROBERT P. BALLARD 04/23/20	
		C-4.0 PEI JOB#: 19248.PE	



**SITE INFORMATION**  
OWNER INFORMATION: BRUNSWICK COUNTY SCHOOLS  
35 REFERENDUM DRIVE NE  
BOLIVIA, NC 28422  
PROJECT NAME: NORTH BRUNSWICK HIGH SCHOOL  
PROJECT ADDRESS: 114 SCORPION DRIVE N.E.  
LELAND, NC 28451  
PARCEL ID: 037DA005  
PARCEL PIN: 21981840074  
RECORDED DEED BOOK: BOOK 3631, PAGE 1079  
CURRENT ZONING: O&I  
EXISTING USE: HIGH SCHOOL  
PROPOSED USE: HIGH SCHOOL  
TOTAL SITE AREA: 59.74 AC (2,602,274 SF)  
FLOOD INFORMATION: THIS PARCEL LIES WITHIN AN AREA OF MINIMAL FLOOD HAZARD (ZONE X) AS INDICATED BY FEMA FLOOD ZONE MAP NUMBER 3720219700K BEARING AN EFFECTIVE DATE OF 08/28/2018.

**UTILITY INFORMATION**  
CONTRACTOR SHALL INSTALL WATER AND SEWER SERVICES IN ACCORDANCE WITH H2GO AND TOWN OF LELAND RESPECTIVELY STANDARD DETAILS AND SPECIFICATIONS.

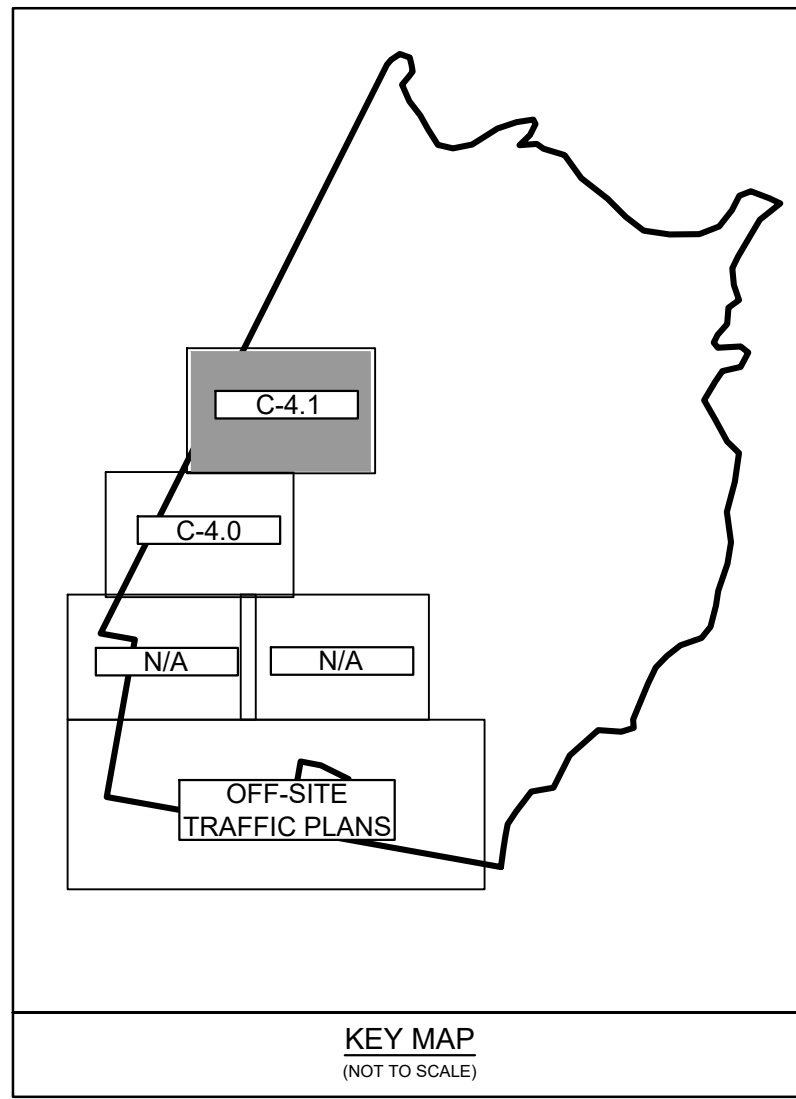
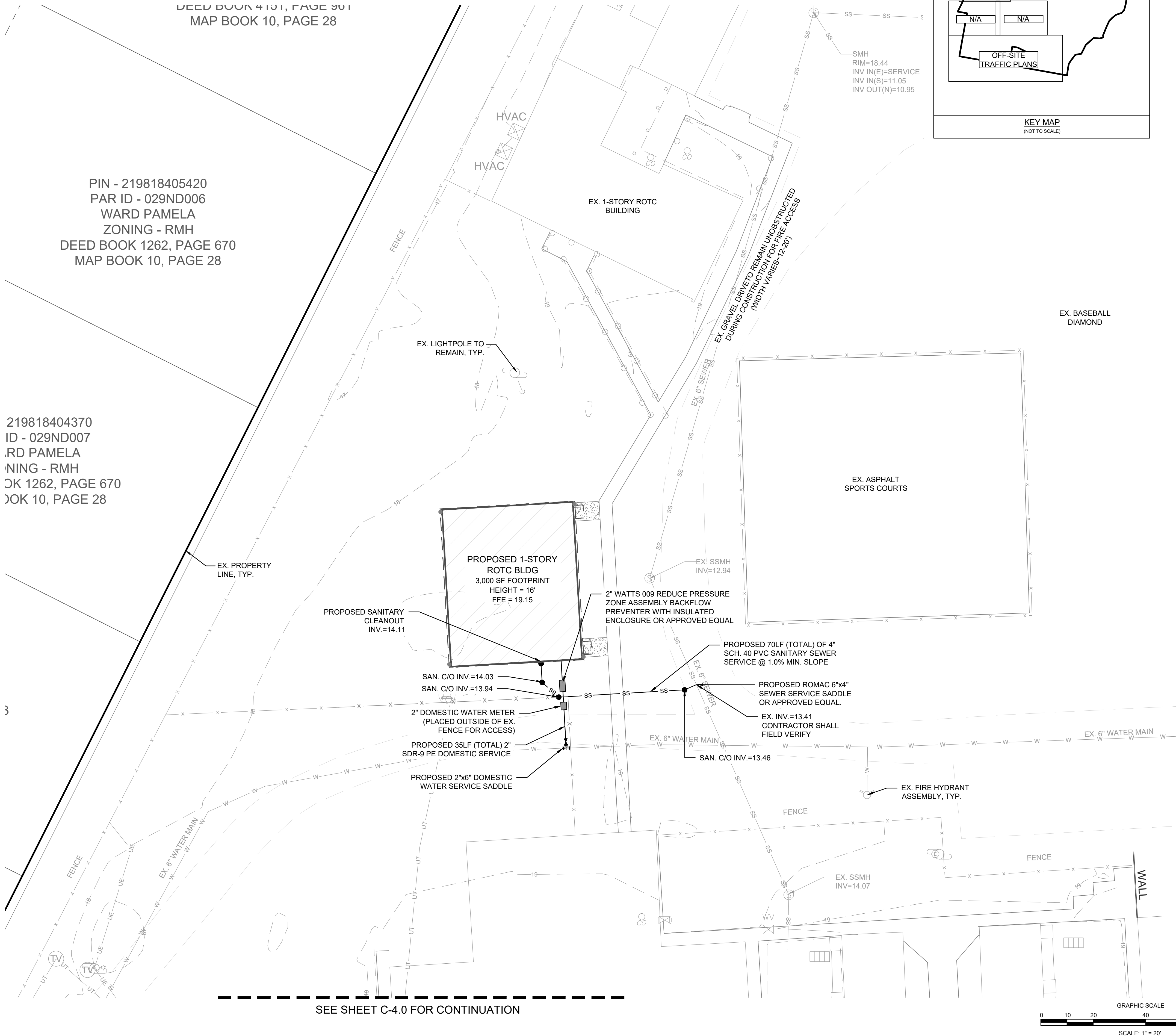
**SANITARY SEWER**  
THIS PROJECT IS PROPOSING A 4" SANITARY SEWER SERVICE FOR BOTH THE ROTC AND CLASSROOM ADDITIONS. THESE SERVICES WILL BE CONNECTING TO THE EXISTING MAINS AND/OR SERVICES AS SHOWN. THERE ARE NO PROPOSED SANITARY SEWER MAINS WITH THIS PROJECT. THERE ARE NO PROPOSED SANITARY SERVICES FOR THE CAFETERIA ADDITION. ALL SANITARY SEWER ALLOCATION PROVIDED BY TOWN OF LELAND.

CONTRACTOR TO COORDINATE SANITARY TIE-IN TO EXISTING FACILITIES WITH TOWN OF LELAND AND BRUNSWICK COUNTY SCHOOLS. TOWN OF LELAND INSPECTOR TO BE ON-SITE DURING TAPPING OF EX. SEWER FACILITIES. SANITARY IN-LINE PLUGS ARE REQUIRED AT ALL CONNECTION POINTS TO EX. SEWER FACILITIES AND MUST REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND THE TOWN OF LELAND INSPECTIONS DEPARTMENT HAS COMPLETED INSPECTIONS.

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THIS PROJECT IS PROPOSING A 2" DOMESTIC SERVICE FOR THE ROTC BUILDING ADDITION AND A 2" DOMESTIC SERVICE FOR THE CLASSROOM ADDITION. THESE SERVICES WILL BE CONNECTING TO EXISTING WATER MAINS AND/OR SERVICES AS SHOWN. THERE ARE NO PROPOSED WATER MAINS WITH THIS PROJECT. THERE ARE NO PROPOSED WATER SERVICES FOR THE CAFETERIA ADDITION. ALL DOMESTIC WATER ALLOCATION PROVIDED BY H2GO.

CONTRACTOR TO COORDINATE WATER TIE-IN TO EXISTING FACILITIES WITH H2GO AND BRUNSWICK COUNTY SCHOOLS. H2GO INSPECTORS ARE REQUIRED TO BE ON-SITE DURING TAPPING OF THE EX. FACILITIES.

- UTILITY NOTES: (NCAC 15A.02T.0305 / T15A.18C.0906)**
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  3. CROSSING A WATER MAIN UNDER A SEWER. WHENEVER IT IS NECESSARY FOR A WATER MAIN TO CROSS UNDER A SEWER, BOTH THE WATER MAIN AND THE SEWER SHALL BE CONSTRUCTED OF FERROUS MATERIALS AND WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE POINT OF CROSSING. A SECTION OF WATER MAIN PIPE SHALL BE CENTERED AT THE POINT OF CROSSING.
  4. WHERE VERTICAL CLEARANCE IS LESS THAN 24" BETWEEN SANITARY SEWER AND STORM DRAIN, SANITARY SEWER SHALL BE DUCTILE IRON PIPE FOR A MINIMUM OF 10' EITHER SIDE OF CROSSING AND STORM DRAIN SHALL BE RC PIPE.
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  3. CONTRACTOR SHALL MAINTAIN AN ALL WEATHER ACCESS FOR EMERGENCY VEHICLES AT ALL TIMES DURING CONSTRUCTION.
  4. A MINIMUM OF 4' SHALL SEPARATE UNDERGROUND FIRE LINES OR PRIVATE WATER MAINS FROM OTHER UNDERGROUND UTILITIES.
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  7. FIRE HYDRANTS SHOULD NOT BE BLOCKED BY PARKING SPACES OR UTILITIES.
  8. A KNOX BOX IS REQUIRED FOR ALL NEW BUILDINGS.



FINAL DESIGN - RELEASED FOR BIDDING ONLY

REVISIONS:	
CLIENT INFORMATION:	
PROJECT INFORMATION:	
UTILITY PLAN	
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC	
PROJECT STATUS: DESIGN: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING:	DRAWING INFORMATION: DATE: 04/23/20 SCALE: 1" = 20' DRAWN: RPB CHECKED: RPB
SEAL NORTH CAROLINA PROFESSIONAL ENGINEER 031591 ROBERT P. BALLARD 04/23/20	
C-4.1	
PEI JOB#: 19248.PE	



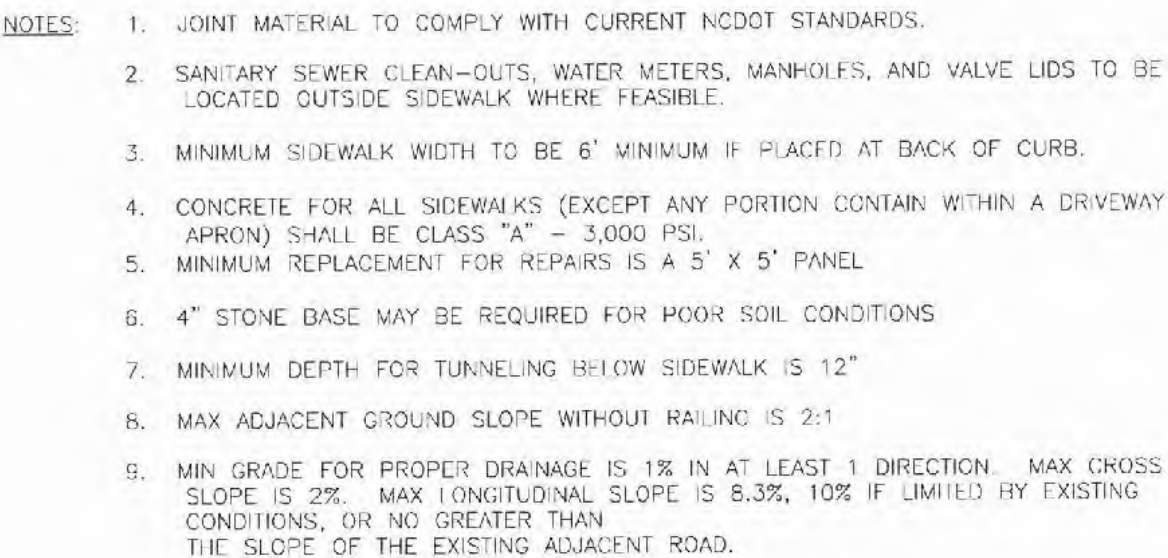
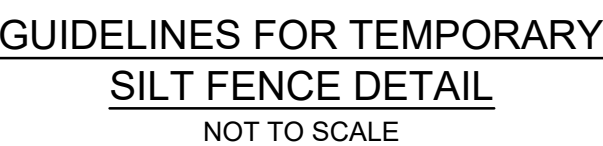
**NOTE:**  
REFER TO THE "GEOTECHNICAL EXPLORATION REPORT FOR NBHS  
BUILDING ADDITIONS" PREPARED BY SM&E DATED AUGUST 21, 2019  
FOR FURTHER DETAILED PAVEMENT SECTION INFORMATION



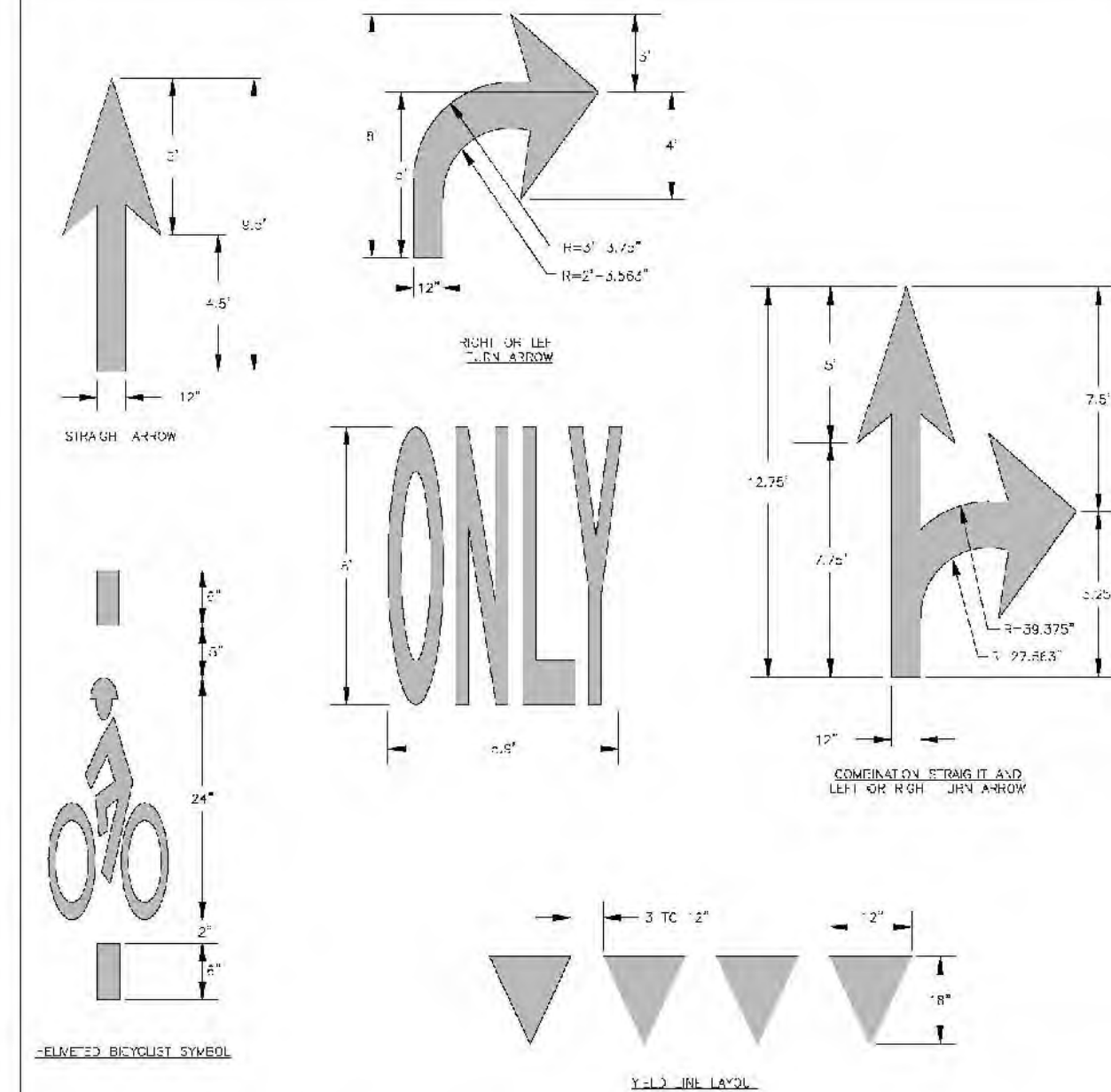
**NOTE:**  
REFER TO THE "GEOTECHNICAL EXPLORATION REPORT FOR NBHS  
BUILDING ADDITIONS" PREPARED BY SM&E DATED AUGUST 21, 2019 FOR  
FURTHER DETAILED PAVEMENT SECTION INFORMATION



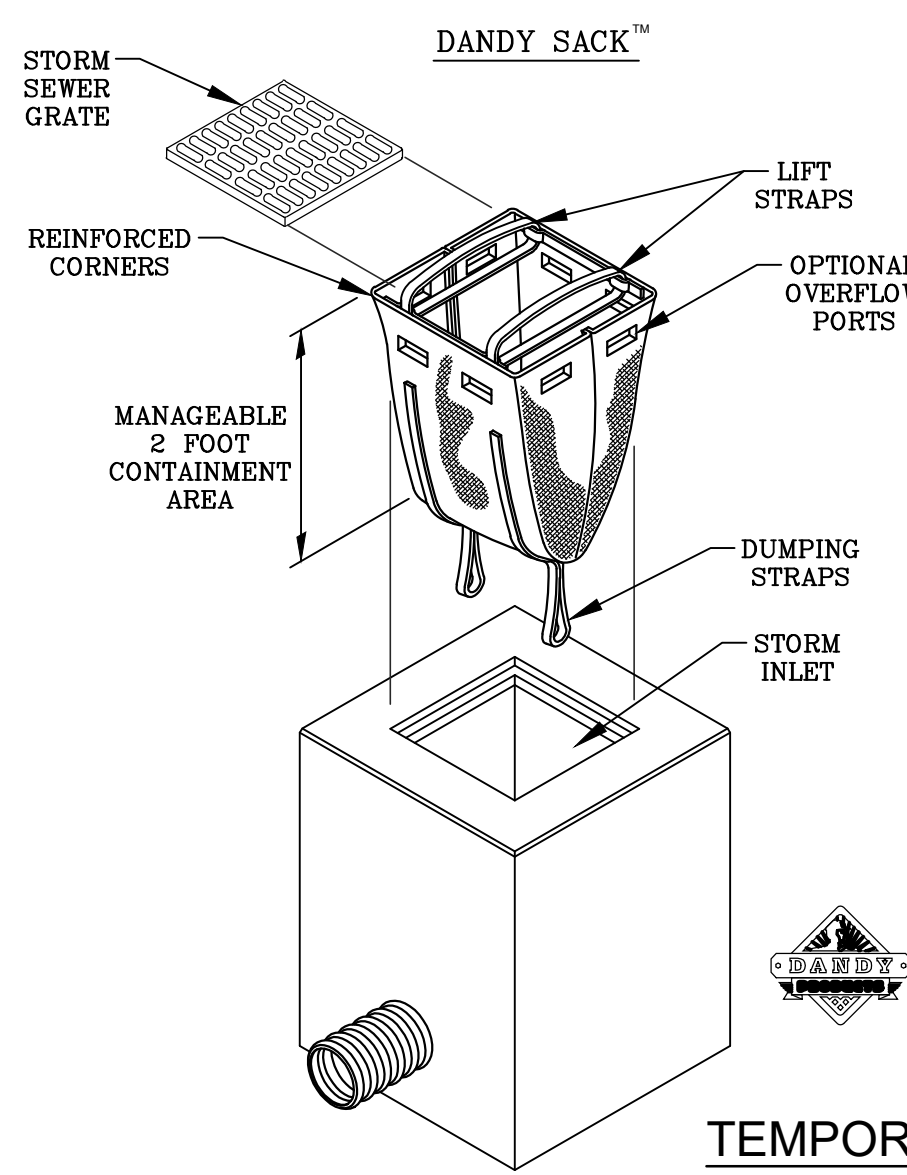
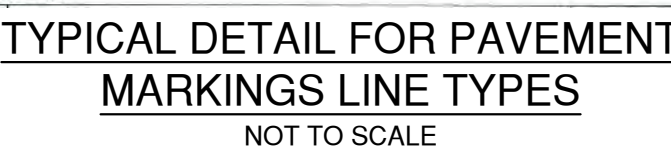
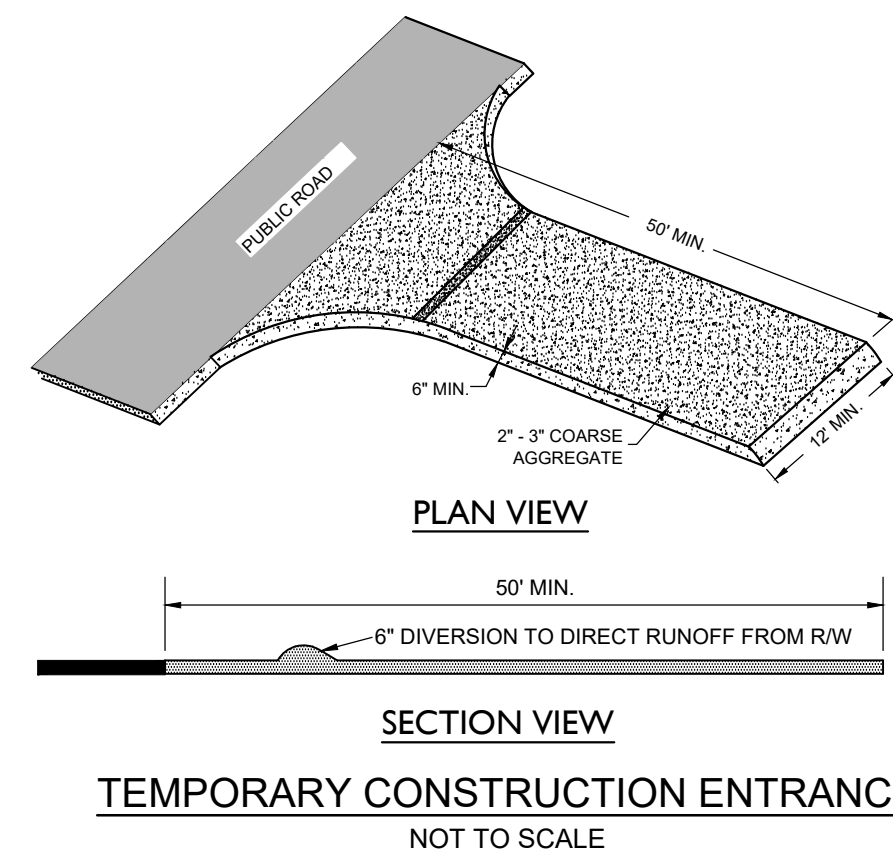
NOTE:  
FOR PARKING & DRIVE AREAS WITHIN DUKE ENERGY R.O.W., THAT DO NOT HAVE CURB & GUTTER PROPOSED AS EDGE TREATMENT, EXTEND ABC & SUBGRADE MIN. 1FT PAST ACP SURFACE



**TYPICAL SIDEWALK DETAIL**  
NOT TO SCALE

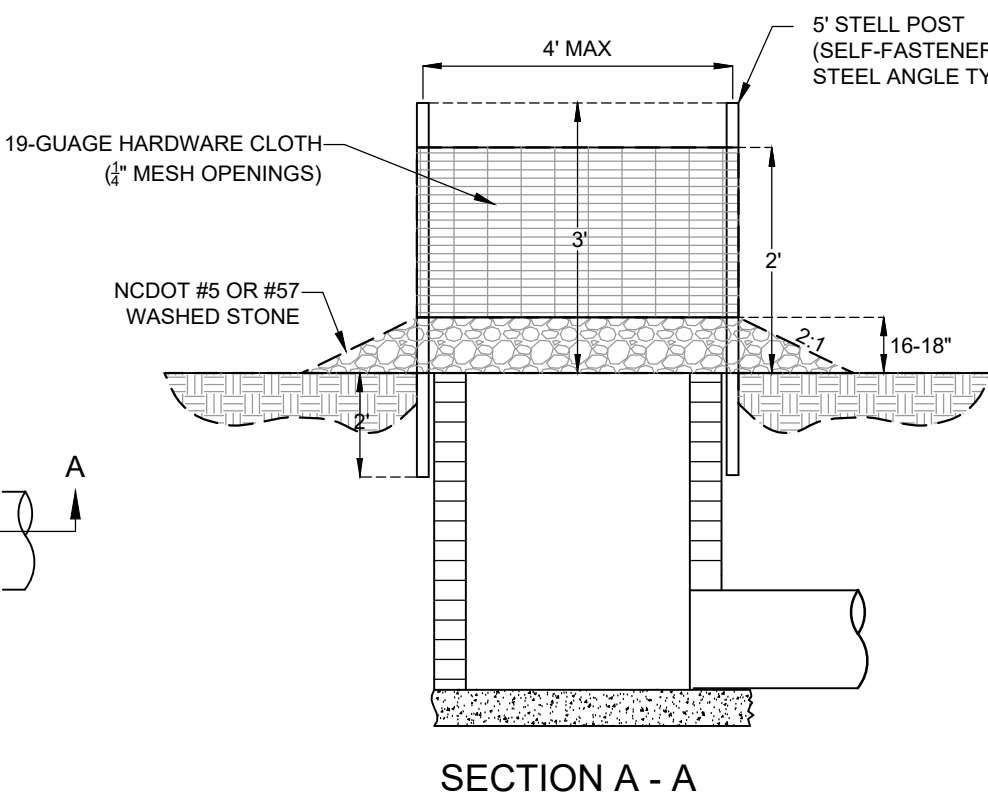


TYPICAL DETAIL FOR PAVEMENT  
MARKINGS & SYMBOLS  
NOT TO SCALE



## TEMPORARY DANDY SACK® INLET PROTECTION

NOTE  
CONTRACTOR SHALL PROPERLY DISPOSE OF SEDIMENT IN A DESIGNATED DISPOSAL AREA AND NOT WITHIN LIMITS OF DISTURBANCE. SEDIMENT SHALL BE REMOVED FROM HARDWARE CLOTH AND GRAVEL, BLOCK AND GRAVEL, OR ROCK-PIPE INLETS, WHEN IT REACHES HALF-FILLED. ROCK WILL BE CLEANED OR REPLACED WHEN NO LONGER DRAINS. SILT SACKS, BEAVER DAMS, SANDY SACKS, AND SOCKS NEED CHECKING EVERY WEEK AND AFTER RAIN.



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

REVISIONS:

CLIENT INFORMATION:

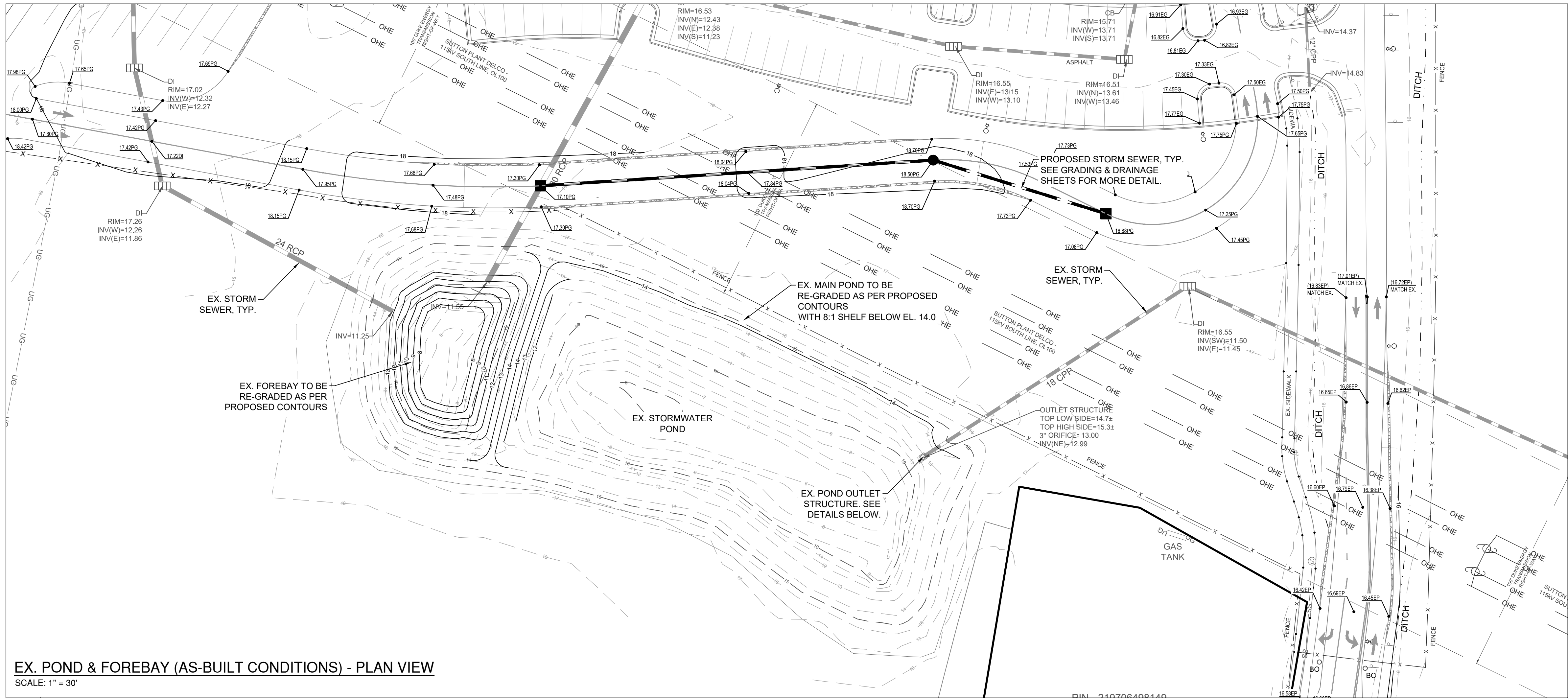
BECKER MORGAN GROUP  
3333 JAECKLE DRIVE, SUITE 120  
WILMINGTON, NC 28403

**PARAMOUNT®**  
122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846

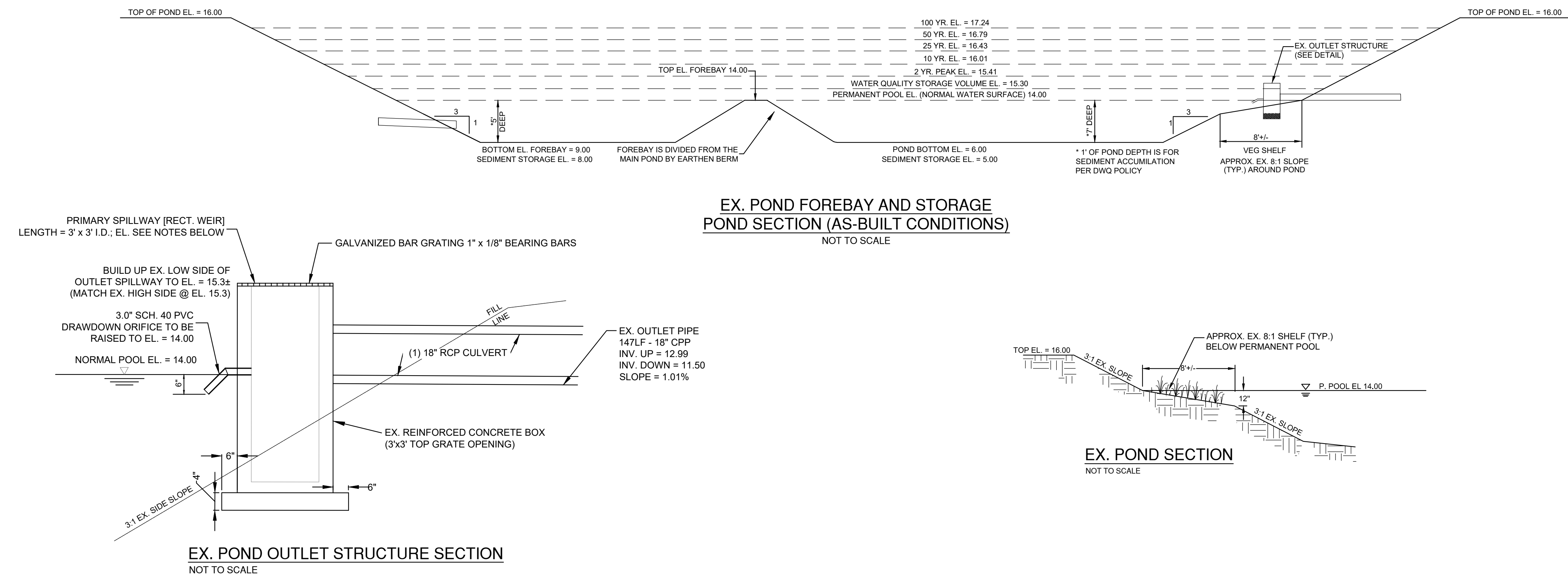
**DETAILS**  
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS  
114 SCORPION DRIVE, IELAND  
BRUNSWICK COUNTY, NC

<b>PROJECT STATUS:</b> CONCEPTUAL LAYOUT: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR CONST.	<b>DRAWING INFORMATION:</b> DATE: SCALE: DESIGNED: CHECKED:
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PEI JOB#:	19248.PE

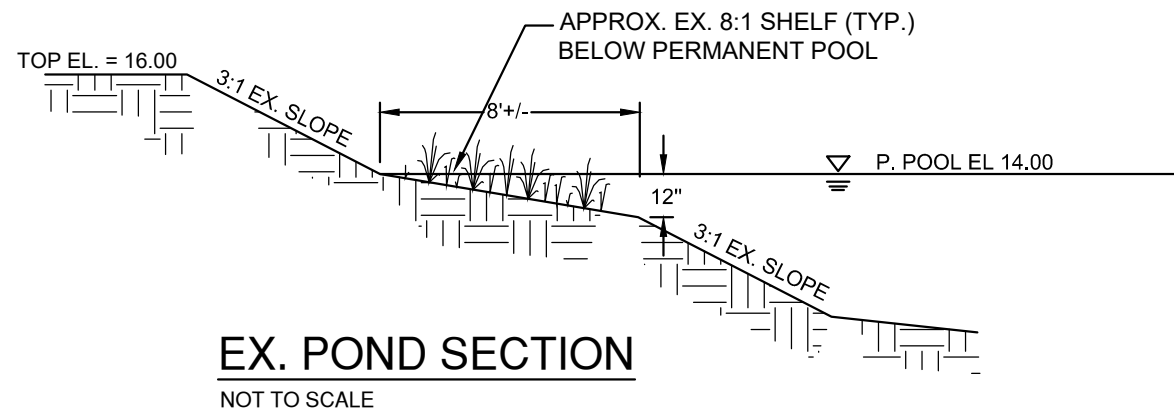
FINAL DESIGN - RELEASED FOR BIDDING ONLY



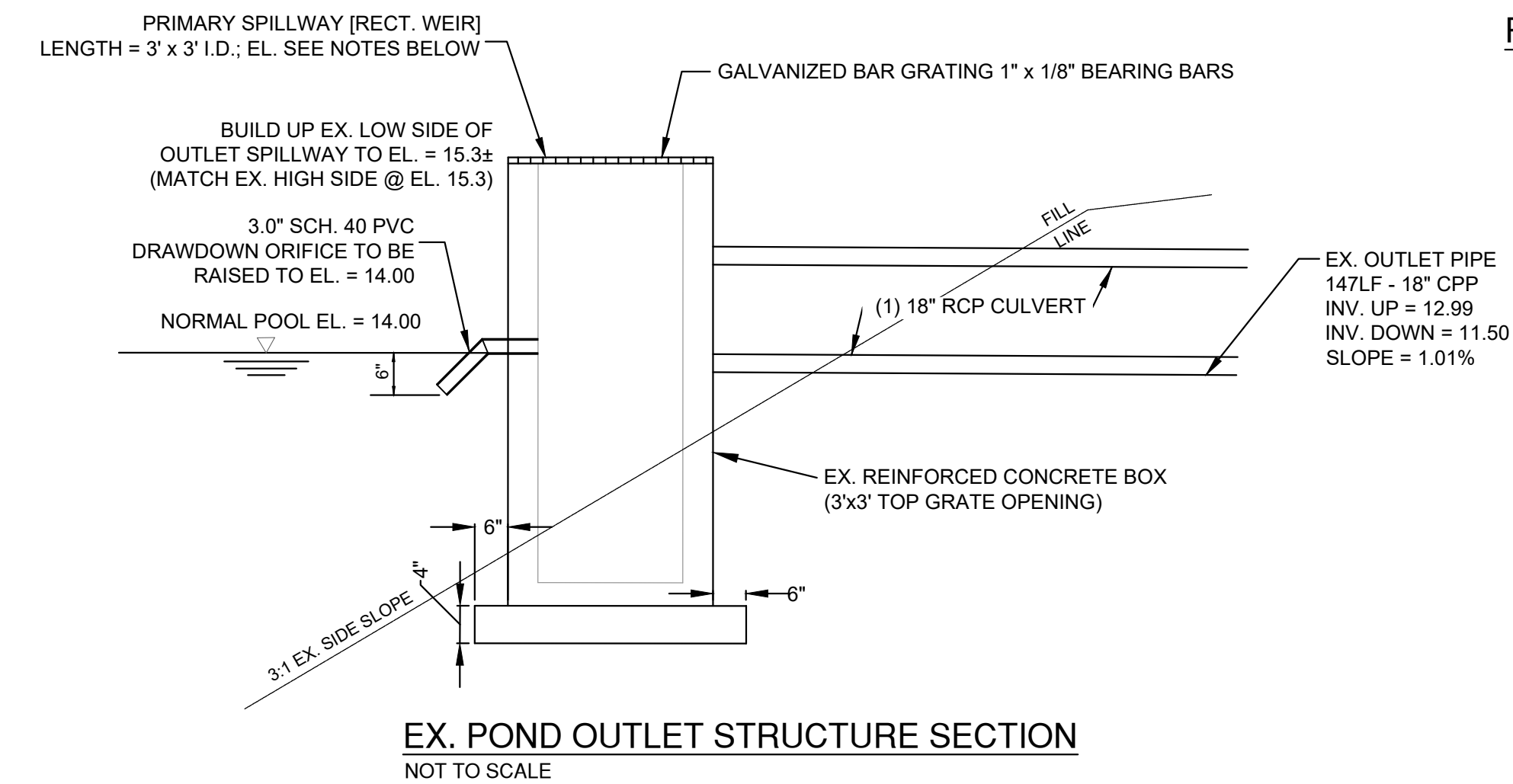
EX. POND & FOREBAY (AS-BUILT CONDITIONS) - PLAN VIEW  
SCALE: 1" = 30'



EX. POND FOREBAY AND STORAGE  
POND SECTION (AS-BUILT CONDITIONS)  
NOT TO SCALE



EX. POND SECTION  
NOT TO SCALE

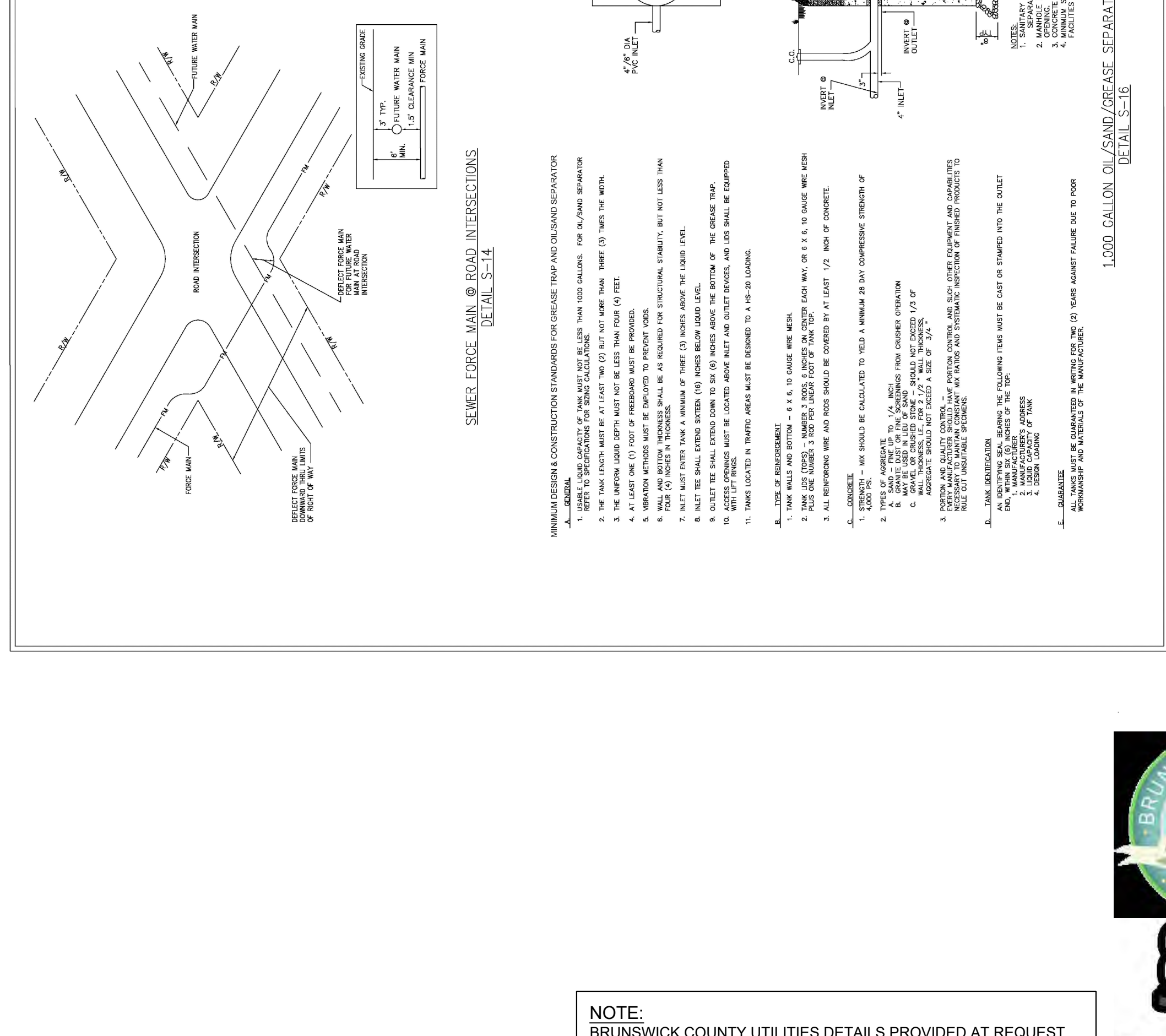
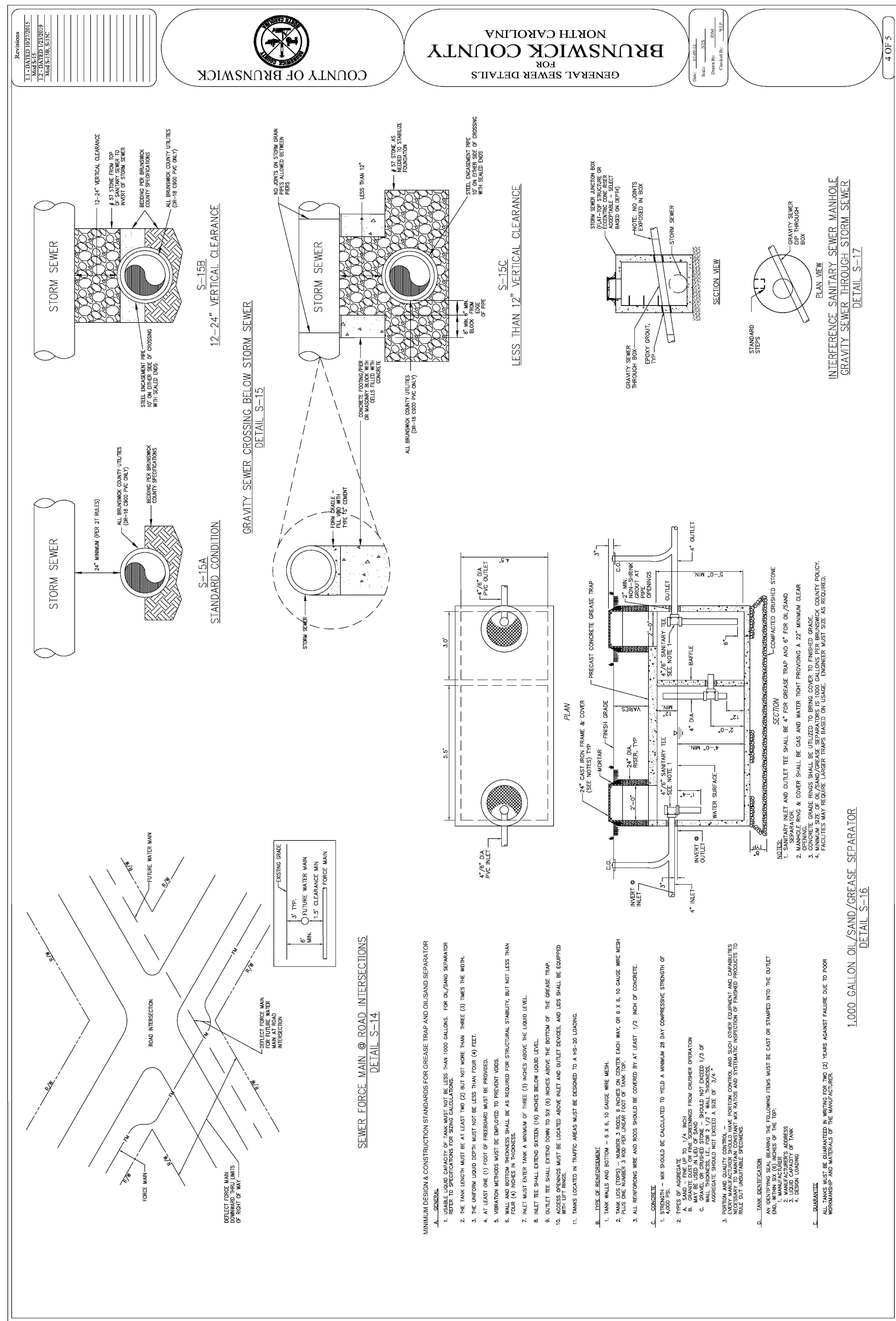


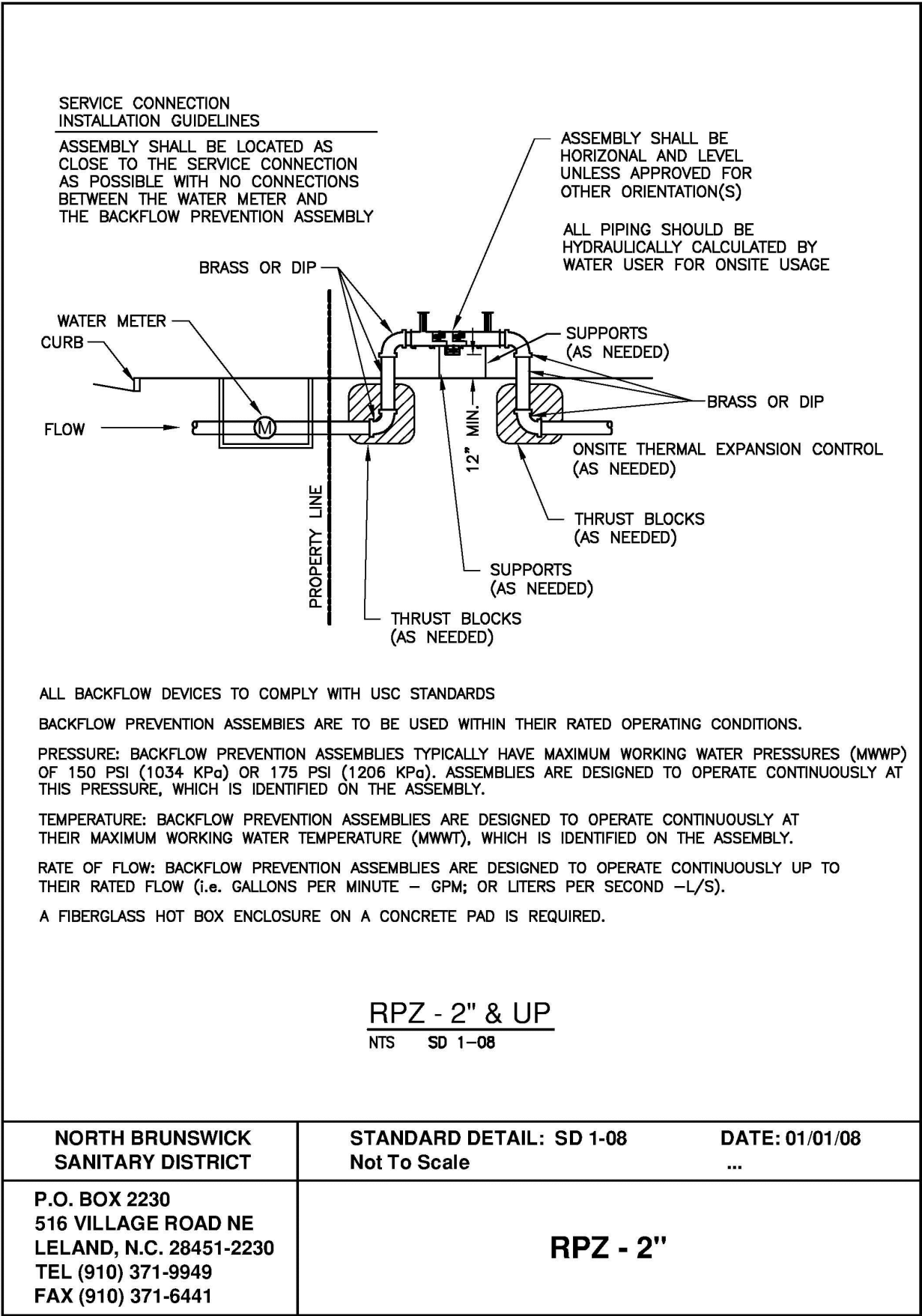
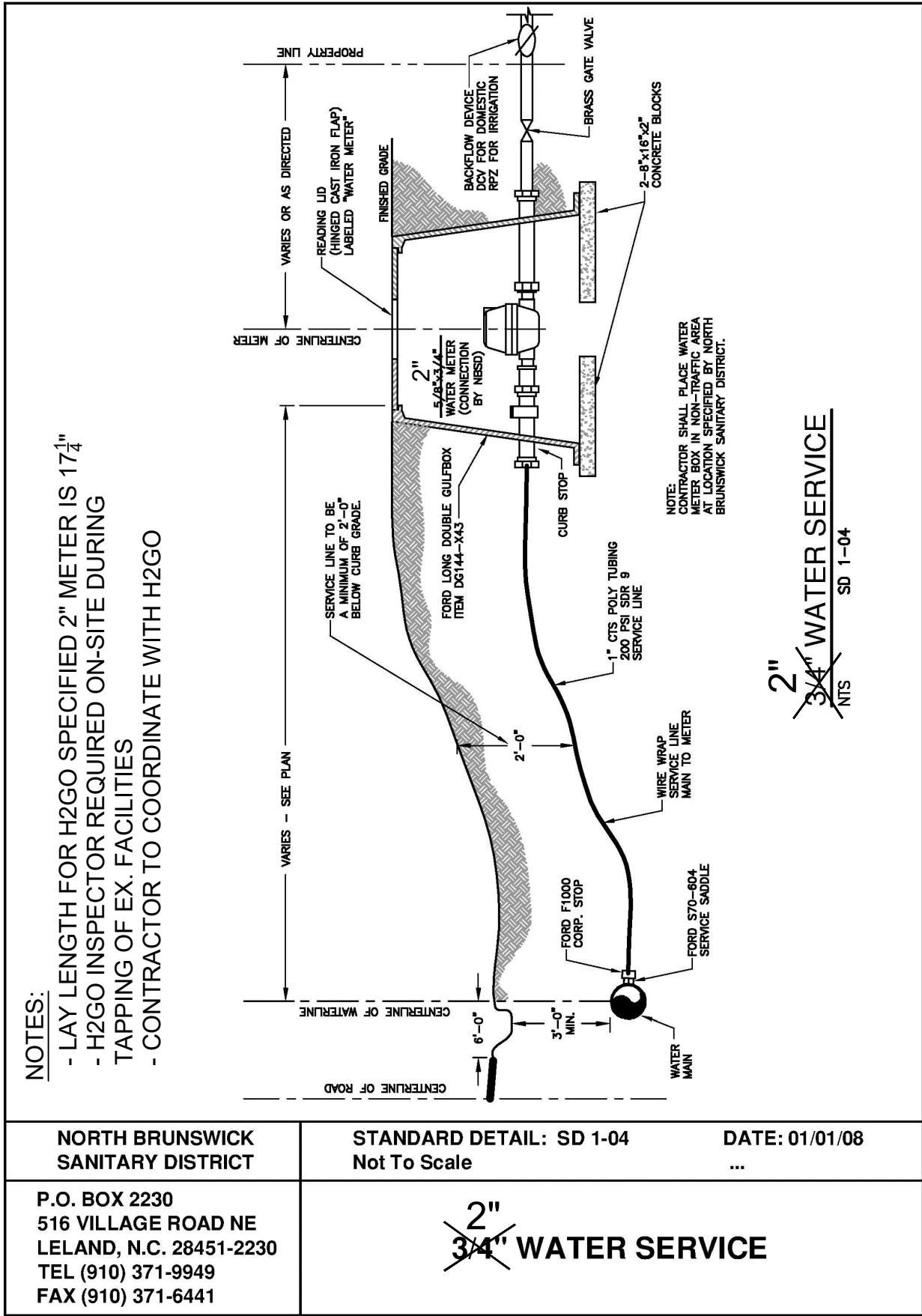
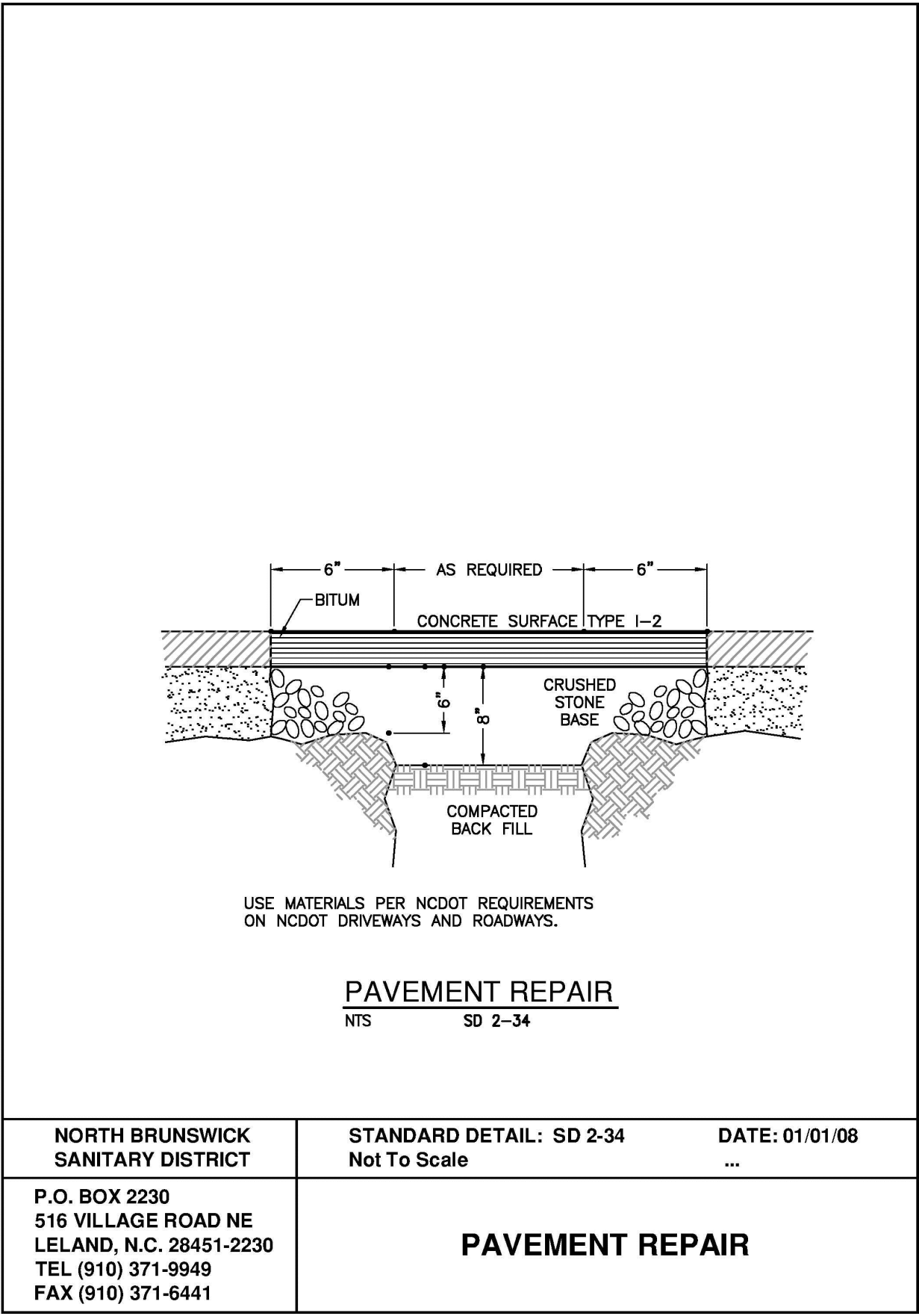
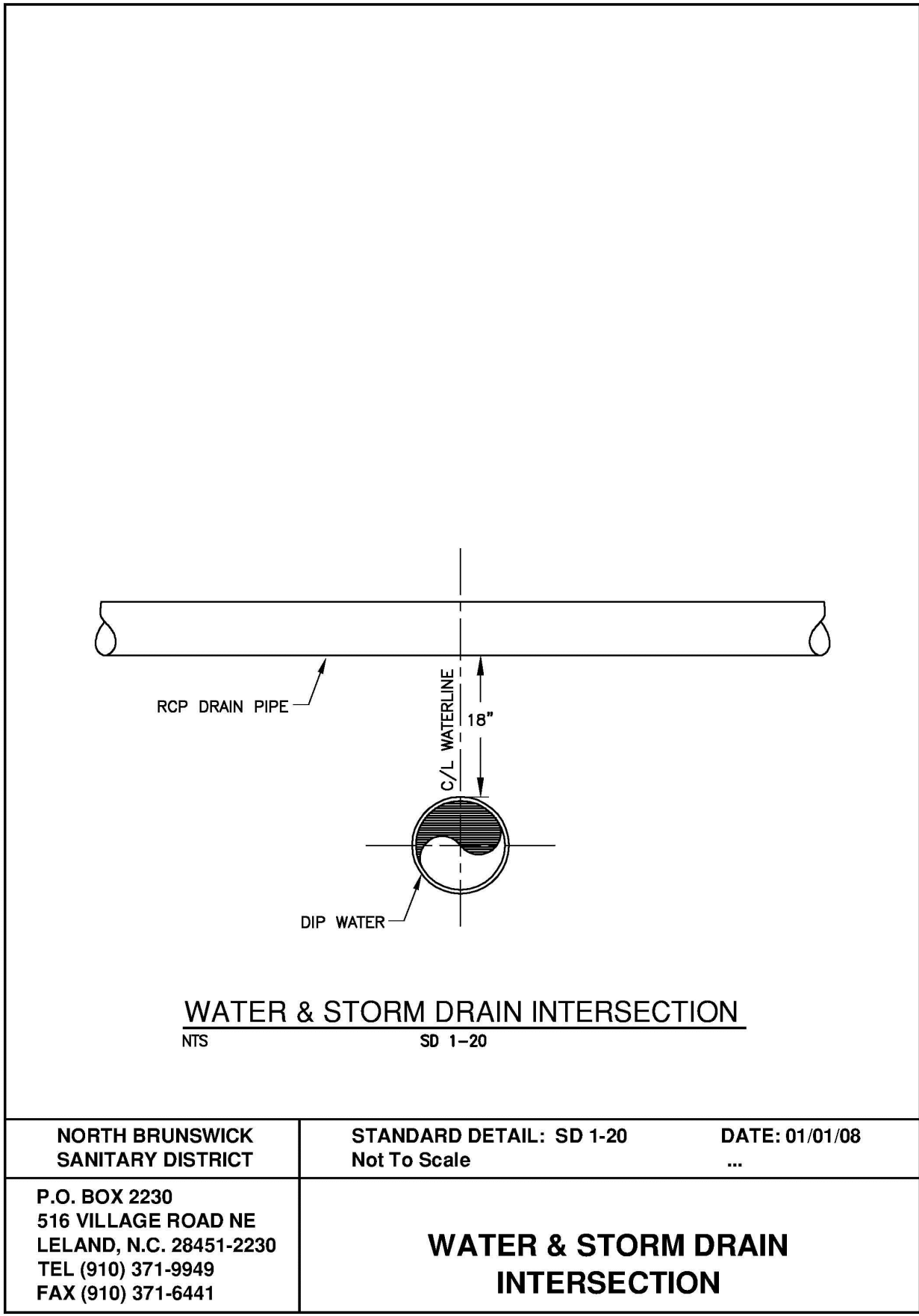
EX. POND OUTLET STRUCTURE SECTION  
NOT TO SCALE

FINAL DESIGN - RELEASED FOR BIDDING ONLY



PROJECT STATUS		DRAWING INFORMATION	
DESIGNED BY: PEI	DATE: 04/23/20	DESIGNED BY: PEI	DATE: 04/23/20
PRELIMINARY LAYOUT: PEI	SCALE: AS NOTED	PRELIMINARY LAYOUT: PEI	SCALE: AS NOTED
RELEASED FOR CONSTRUCTION: PEI	CHECKED: PEI	RELEASED FOR CONSTRUCTION: PEI	CHECKED: PEI
SEAL		SEAL	
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031591		NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 031591	
ENGINEER ROBERT P. BALLARD		ENGINEER ROBERT P. BALLARD	
04/23/20		04/23/20	
C-5.1		C-5.1	
PEI JOB#: 19248.PE		PEI JOB#: 19248.PE	
CLIENT INFORMATION:		CLIENT INFORMATION:	
BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403		BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403	
REVISIONS:		REVISIONS:	
PARAMOUNTE ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License # C-2846		PARAMOUNTE ENGINEERING, INC. 122 Cinema Drive Wilmington, North Carolina 28403 (910) 791-6707 (O) (910) 791-6760 (F) NC License # C-2846	



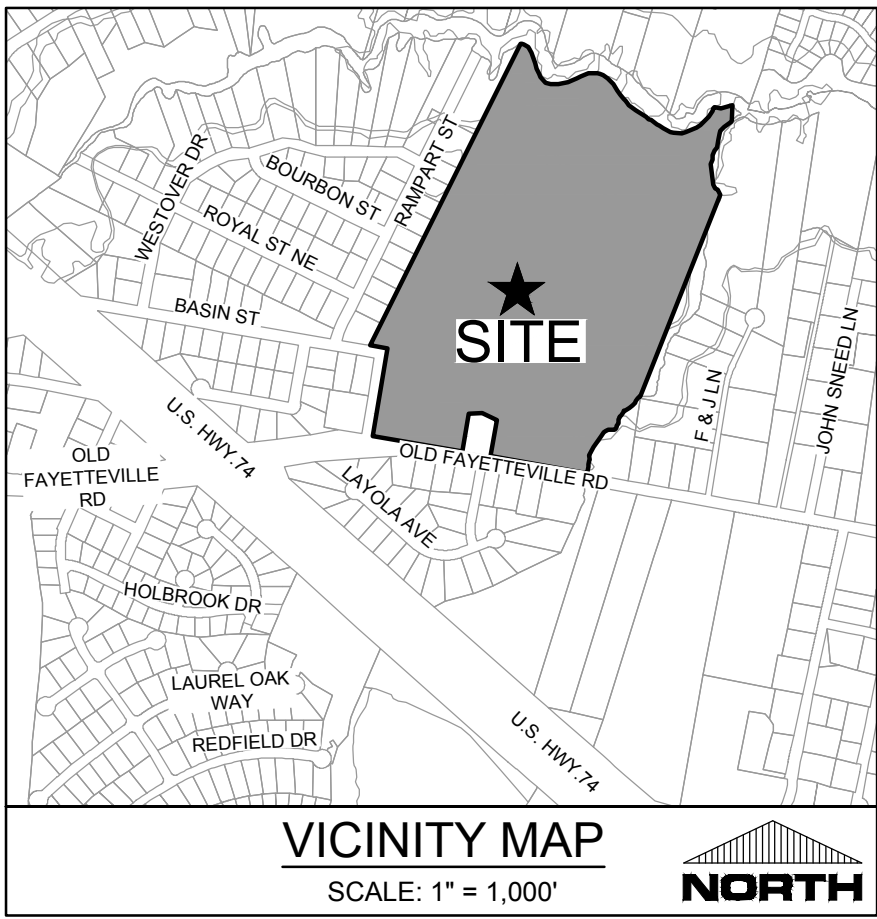


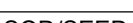
NOTE:  
DETAILS PROVIDED SHOW "NORTH BRUNSWICK SANITARY DISTRICT" WHICH IS H2GO. H2GO IS THE WATER PROVIDER FOR NORTH BRUNSWICK HIGH SCHOOL

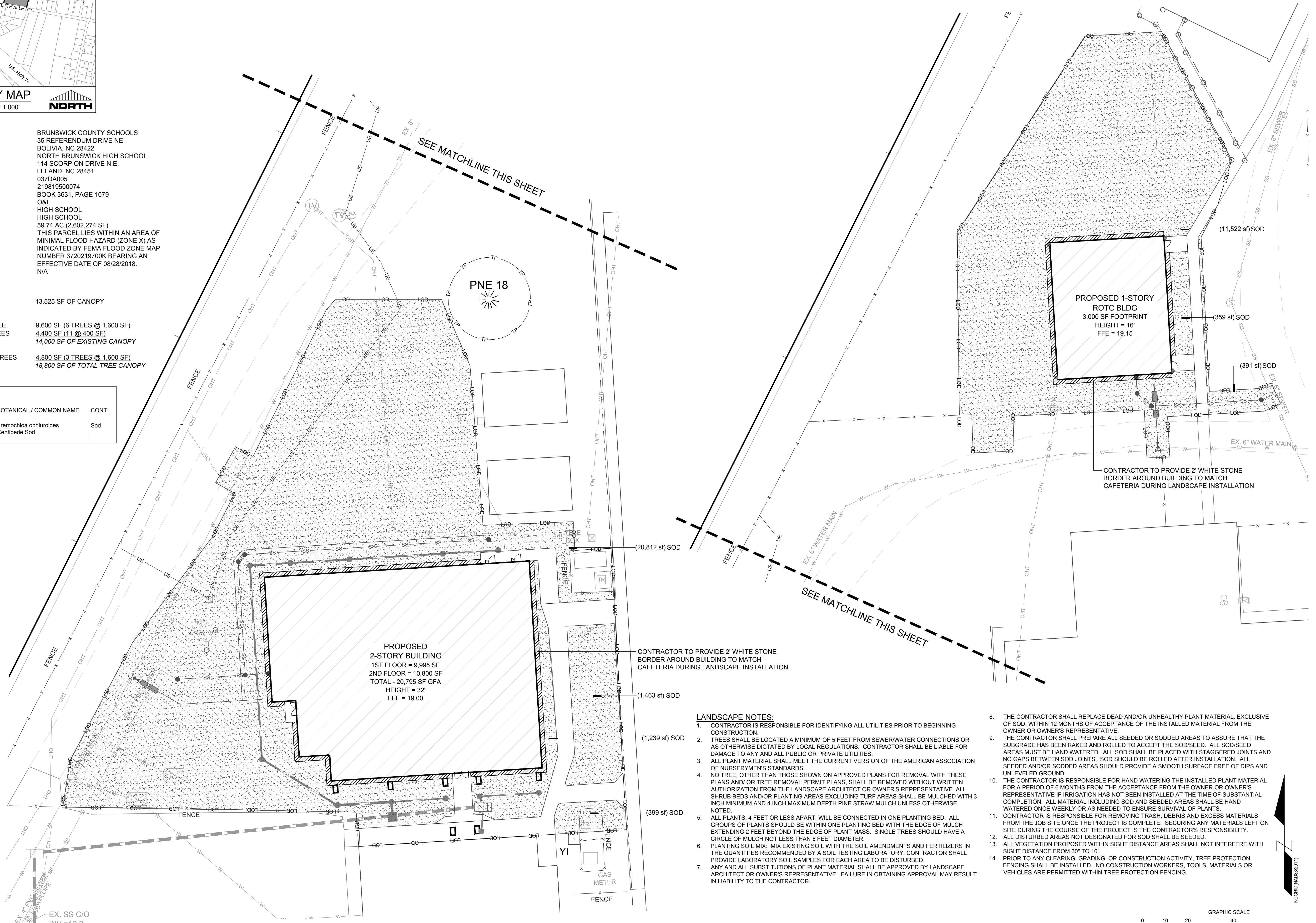


FINAL DESIGN - RELEASED FOR BIDDING ONLY

PROJECT STATUS: DESIGN DEVELOPMENT: PRELIMINARY LAYOUT: FINAL DESIGN: RELEASED FOR BIDDING: DATE: 04/23/20 SCALE: N.T.S. DRAWN: RFE CHECKED: RFE		PROJECT INFORMATION: NORTH BRUNSWICK SANITARY DISTRICT 031591 ENGINEER ROBERT F. SALLAND 04/23/20		DETAILS N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS 114 SCORPION DRIVE, LELAND BRUNSWICK COUNTY, NC		CLIENT INFORMATION: BECKER MORGAN GROUP 3333 JAECKLE DRIVE, SUITE 120 WILMINGTON, NC 28403		REVISIONS:	
PEI JOB#: 19248.PE		C-5.3							

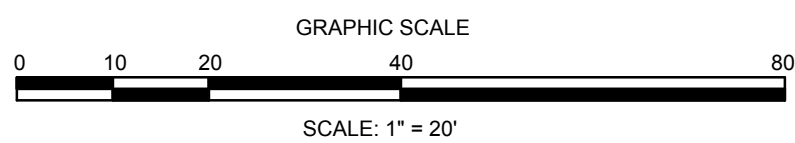


SOD/SEED	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	SOD	35,385 sf	Eremochloa ophiuroides Centipede Sod	Sod



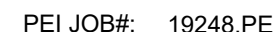
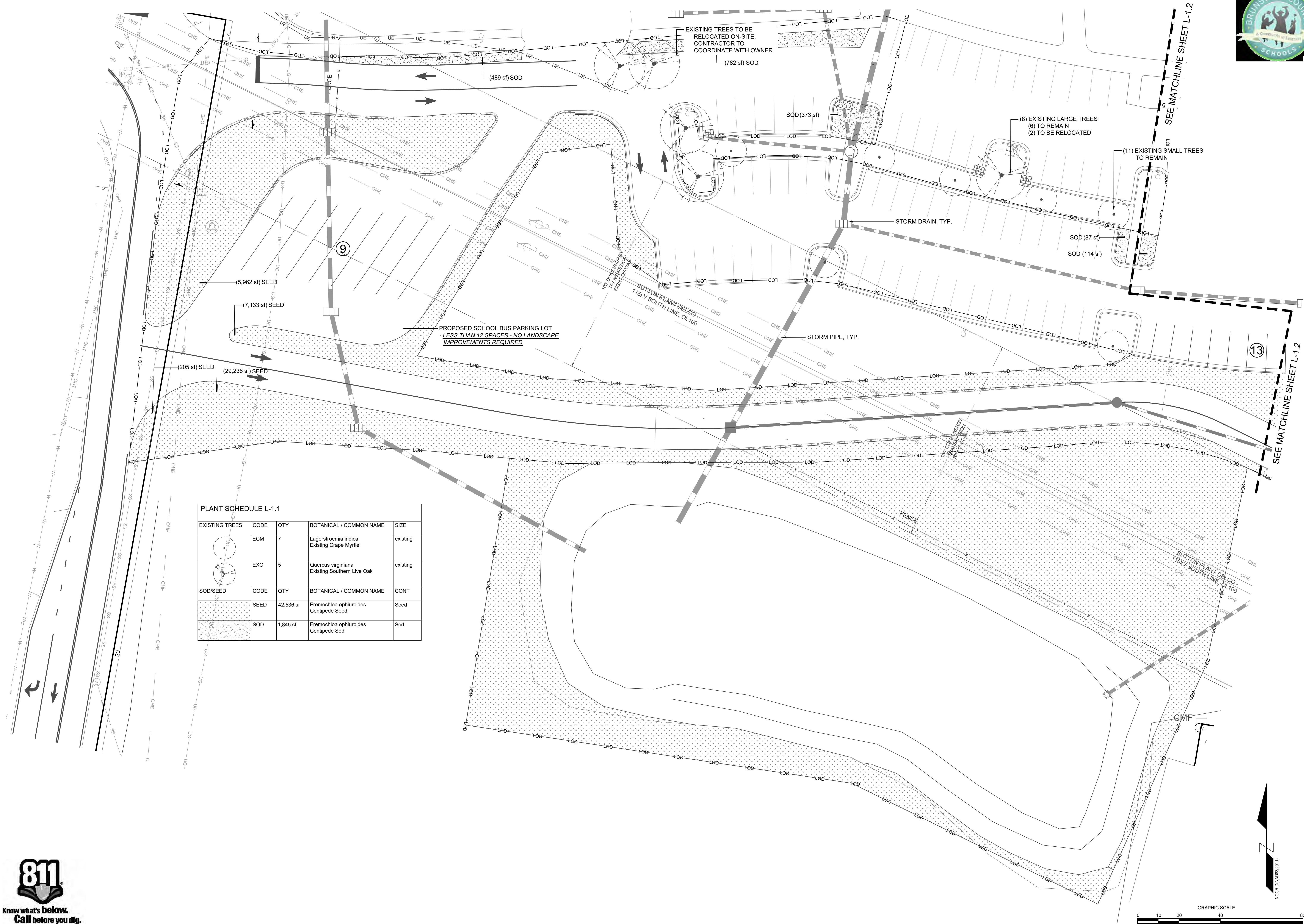
1. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
2. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS OR OTHERWISE DESIGNATED BY LOCAL REGULATIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.
3. ALL PLANT MATERIAL SHALL MEET THE CURRENT VERSION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.
4. NO TREE, OTHER THAN THOSE SHOWN ON APPROVED PLANS FOR REMOVAL WITH THESE PLANS AND/OR TREE REMOVAL PERMIT PLANS, SHALL BE REMOVED WITHOUT WRITTEN AUTHORIZATION FROM THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. ALL SHRUB BEDS AND/OR PLANTING AREAS EXCLUDING TURF AREAS SHALL BE MULCHED WITH 3 INCH MINIMUM AND 4 INCH MAXIMUM DEPTH PINE STRAW MULCH UNLESS OTHERWISE NOTED.
5. ALL PLANTS, 4 FEET OR LESS APART, WILL BE CONNECTED IN ONE PLANTING BED. ALL GROUPS OF PLANTS SHOULD BE WITHIN ONE PLANTING BED WITH THE EDGE OF MULCH EXTENDING 2 FEET BEYOND THE EDGE OF PLANT MASS. SINGLE TREES SHOULD HAVE A CIRCLE OF MULCH NOT LESS THAN 5 FEET DIAMETER.
6. PLANTING SOIL MIX: MIX EXISTING SOIL WITH THE SOIL AMENDMENTS AND FERTILIZERS IN THE UTILITIES SECTION. SOIL TESTING BY A SOIL TESTING LABORATORY. CONTRACTOR SHALL PROVIDE LABORATORY SOIL SAMPLES FOR EACH AREA TO BE DISTURBED.
7. ANY AND ALL SUBSTITUTIONS OF PLANT MATERIAL SHALL BE APPROVED BY LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. FAILURE IN OBTAINING APPROVAL MAY RESULT IN LIABILITY TO THE CONTRACTOR.

8. THE CONTRACTOR SHALL REPLACE DEAD AND/OR UNHEALTHY PLANT MATERIAL, EXCLUSIVE OF SOD, WITHIN 12 MONTHS OF ACCEPTANCE OF THE INSTALLED MATERIAL FROM THE OWNER OR OWNER'S REPRESENTATIVE.
9. THE CONTRACTOR SHALL PREPARE ALL SEEDED OR SODDED AREAS TO ASSURE THAT THE SUBGRADE HAS BEEN PROPERLY PREPARED TO ACCEPT THE SOD/SEED. ALL SOD/SEED AREAS MUST BE HAND WATERED. ALL SOD SHALL BE PLACED WITH STAGGERED JOINTS AND NO GAPS BETWEEN SOD JOINTS. SOD SHOULD BE ROLLED AFTER INSTALLATION. ALL SEEDED AND/OR SODDED AREAS SHOULD PROVIDE A SMOOTH SURFACE FREE OF DIPS AND UNLEVELLED GROUND.
10. THE CONTRACTOR IS RESPONSIBLE FOR HAND WATERING THE INSTALLED PLANT MATERIAL FOR A PERIOD OF 6 MONTHS FROM THE ACCEPTANCE FROM THE OWNER OR OWNER'S REPRESENTATIVE. IRRIGATION HAS NOT BEEN PROVIDED AT THE TIME OF SUBSTANTIAL COMPLETION. ALL MATERIAL INCLUDING SODS AND SEEDED AREAS SHALL BE HAND WATERED ONCE WEEKLY OR AS NEEDED TO ENSURE SURVIVAL OF PLANTS.
11. CONTRACTOR IS RESPONSIBLE FOR REMOVING TRASH, DEBRIS AND EXCESS MATERIALS FROM THE JOB SITE ONCE THE PROJECT IS COMPLETE. SECURING ANY MATERIALS LEFT ON SITE DURING THE COURSE OF THE PROJECT IS THE CONTRACTOR'S RESPONSIBILITY.
12. ALL DISTURBED AREAS NOT DESIGNATED FOR SOD SHALL BE SEEDDED.
13. ALL VEGETATION PROPOSED WITHIN SIGHT DISTANCE AREAS SHALL NOT INTERFERE WITH SIGHT DISTANCE FROM THE R/W.
14. PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION ACTIVITY, TREE PROTECTION FENCING SHALL BE INSTALLED. NO CONSTRUCTION WORKERS, TOOLS, MATERIALS OR VEHICLES ARE PERMITTED WITHIN TREE PROTECTION FENCING.



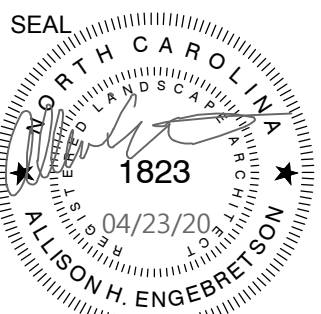
**Know what's below.  
Call before you dig.**

PEI JOB#: 19248.PE

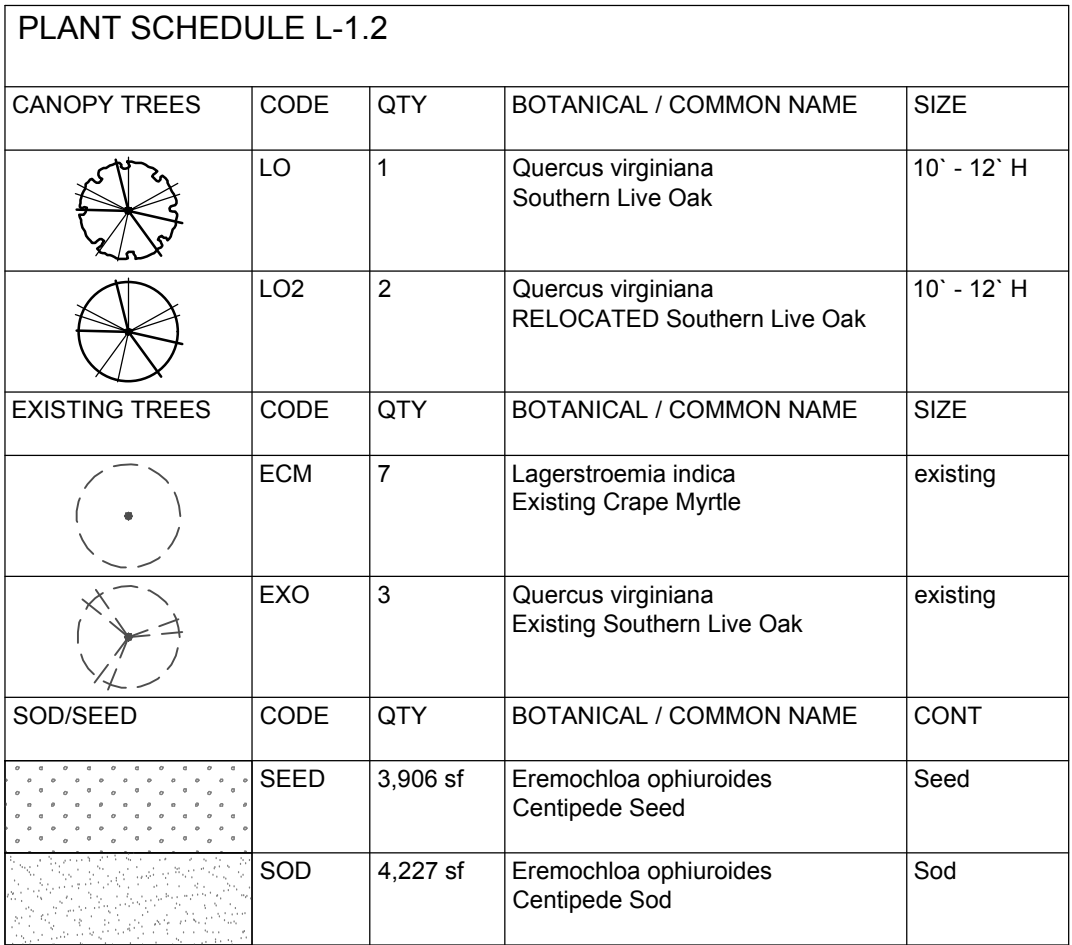


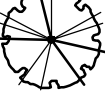



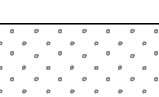



NCGRID(NAD83/2011)



PEI JOB#: 19248.PE



PLANT SCHEDULE L-1.2				
CANOPY TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
	LO	1	Quercus virginiana Southern Live Oak	10' - 12' H
	LO2	2	Quercus virginiana RELOCATED Southern Live Oak	10' - 12' H
EXISTING TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
	ECM	7	Lagerstroemia indica Existing Crape Myrtle	existing
	EXO	3	Quercus virginiana Existing Southern Live Oak	existing
SOD/SEED	CODE	QTY	BOTANICAL / COMMON NAME	CONT
	SEED	3,906 sf	Eremochloa ophiuroides Centipede Seed	Seed
	SOD	4,227 sf	Eremochloa ophiuroides Centipede Sod	Sod

REVISIONS:

## CLIENT INFORMATION.

**PARAMOUNT**  
ENGINEERING, INC.

122 Cinema Drive  
Wilmington, North Carolina 28403  
(910) 791-6707 (O) (910) 791-6760 (F)  
NC License #: C-2846

LANDSCAPE PLAN  
N. BRUNSWICK HIGH SCHOOL IMPROVEMENTS  
114 SCORPION DRIVE, LELAND  
BRUNSWICK COUNTY, NC

**PROJECT STATUS**  
CONCEPTUAL LAYOUT:  
PRELIMINARY LAYOUT:  
FINAL DESIGN:  
RELEASED FOR CONST:

DATE: 04/23/20  
SCALE: 1" = 20'  
DESIGNED: JRC  
DRAWN: JRC  
CHECKED: AE

A circular professional seal for Allison H. Engebretson, a North Carolina Landscape Architect. The seal features the text "NORTH CAROLINA" at the top, "LANDSCAPE ARCHITECT" at the bottom, and "1823" in the center. The name "ALLISON H. ENGBRETSON" is written around the bottom edge. The number "12345" is on the left, and the date "04/23/2020" is on the right. The word "SEAL" is at the top left. The seal is signed with a stylized signature across the center.



254 North Front Street Phone: 910.343.8007  
Suite 201 Fax: 910.343.8088  
Wilmington, N.C. 28401 www.woodseng.com



ARCHITECTURE  
P L A N N I N G

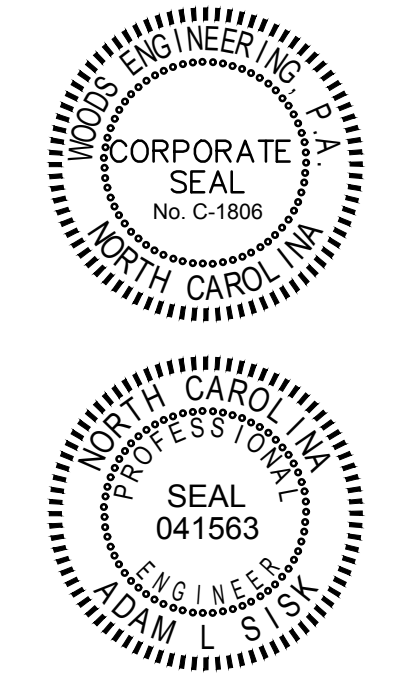
North Carolina  
3333 Jaeckle Drive, Suite 120  
Wilmington, NC 28403  
910.341.7600

Maryland  
312 West Main St, Suite 300  
Salisbury, MD 21801  
410.546.9100

Delaware  
309 S Governors Ave  
Dover, DE 19904  
302.734.7950

Rittenhouse Station  
250 South Main Street, Suite 109  
Newark, DE 19711  
302.369.3700  
www.beckermorgan.com

ISSUED  
FOR BIDDING  
NOT FOR CONSTRUCTION  
ISSUED: 04.23.2020



PROJECT TITLE

NORTH  
BRUNSWICK  
ROTC  
BUILDING

114 SCORPION DRIVE N.E.  
LELAND, NC 28451

DSP # : 100  
DPI SCHOOL # : 1165

SHEET TITLE

GENERAL NOTES

ISSUE BLOCK

DATE	DESCRIPTION
04.23.20	ISSUED FOR BIDDING
05.22.20	100% REVIEW SUBMISSION
10.14.19	NCPII RD SUBMISSION
07.30.19	SD PROGRESS DRAWINGS
07.11.19	NCPII SD SUBMISSION

PROJECT NO: 19-2952  
DATE: 04.23.20  
SCALE: AS INDICATED  
DRAWN BY: MBK PROJ MGR: ALS

S101  
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1.0 CODES AND STANDARDS:

- "2018 North Carolina State Building Code" and "International Building Code", 2015.
- "Minimum Design Loads for Buildings and other Structures" SEI/ASCE 7-10.
- "Building Code Requirements for Structural Concrete (ACI 318-14)" American Concrete Institute 2014.
- "Manual of Standard Practice", Concrete Reinforcing Steel Institute, latest edition.
- "Specification for Structural Steel Buildings (AISC 360-10)" American Institute of Steel Construction, 2011 - 14th Edition
- "Structural Welding Code - Steel (AWS D1.1)" and "Structural Welding Code - Reinforcing Steel (AWS D1.4)", American Welding Society.
- "Building Code Requirements for Masonry Structures", ACI 530-13, ASCE 5-13, TMS 402-13.
- "Design Manual For Floor Decks and Roof Decks", Steel Deck Institute, latest edition.

2.0 DESIGN LOADS:

Project Located in: City of Leland, County of Brunswick, State of North Carolina.

2.1 Gravity Loads: (Reduced where allowed)

GRAVITY LOADS		
Location	Uniform (psf)	Concentrated (lbs) (Over 2.5'x2.5')
Roof Loads:		
Dead Load		20
Live Load	20	300
Floor Loads:		
Dead Loads:	67	
Floor Live Loads:		
First Floor	100	2,000
Classrooms	40	1000
Second Floor Corridor	80	1000
Stairs	100	
Light Storage	125	

2.2 Drifting Snow Loads per N.C. Building Code.

Pg = 10 psf  
I = 1.1  
Ce = 0.9  
Ct = 1.0

2.3 Risk Category = III

2.4 Wind Loads per N.C. State Building Codes, 2018 edition (IBC 2015) & ASCE 7-10 (3-second gust)

Main Wind Force Resisting System:  
V= 154 mph  
Exposure Category "B"

Building is enclosed & Internal Pressure coefficient (GCp) = +0.18 & -0.18  
Topographic Factor Kzt = 1.0  
Wind Directionality Factor, Kd = 0.85

Calculated Wind Base Shear (For WMFRS)  
Vx = by PEBS Vy = by PEBS

Components and Cladding:  
V 154 mph  
Exposure Category "B"

Components and Cladding Wind Pressure (psf)										
Walls	Area < 10ft <sup>2</sup>	< 20ft <sup>2</sup>		Area < 50ft <sup>2</sup>		Area < 100ft <sup>2</sup>		Area < 500ft <sup>2</sup>		
Zone 4	42.8	-46.3	40.8	-44.4	38.2	-41.9	36.3	-39.9	31.9	-35.5
Zone 5	42.8	-57.2	40.8	-53.3	38.2	-48.2	36.3	-44.4	31.9	-35.5
Roof	Area < 10ft <sup>2</sup>	Area < 20ft <sup>2</sup>		Area < 50ft <sup>2</sup>		Area < 100ft <sup>2</sup>		Area < 500ft <sup>2</sup>		
Zone 1	17.4	-42.8	16.2	-41.6	14.9	-40.2	13.8	-39.1	13.8	-39.1
Zone 2	17.4	-71.7	16.2	-64.1	14.9	-53.9	13.8	-46.3	13.8	-46.3
Zone 3	17.4	-107.8	16.2	-89.4	14.9	-64.9	13.8	-46.3	13.8	-46.3

Notes:

- Areas noted are effective wind areas as per ASCE 7-10, 26.2 definitions.
- See figures below for Zone locations.
- Plus and minus signs signify pressures acting toward and away from surfaces, respectively.
- Design pressures shown in table are strength design wind pressures. Allowable stress design wind pressures may be calculated by factoring the pressures by 0.6.
- Design pressures for effective wind areas between those noted in schedule may be interpolated.
- Tributary area = greater of LxW or LxL/3.
- Deflections may be calculated based on 42% of these loads.

2.5 Seismic Loads per 2018 North Carolina State Building Code (IBC 2015) & ASCE 7-10

Risk Category = III  
Site class = "D" (Per Geotechnical Report)  
Spectral Response Coefficients:  
SDS = 0.244g  
SD1 = 0.151g

Cs = 0.102

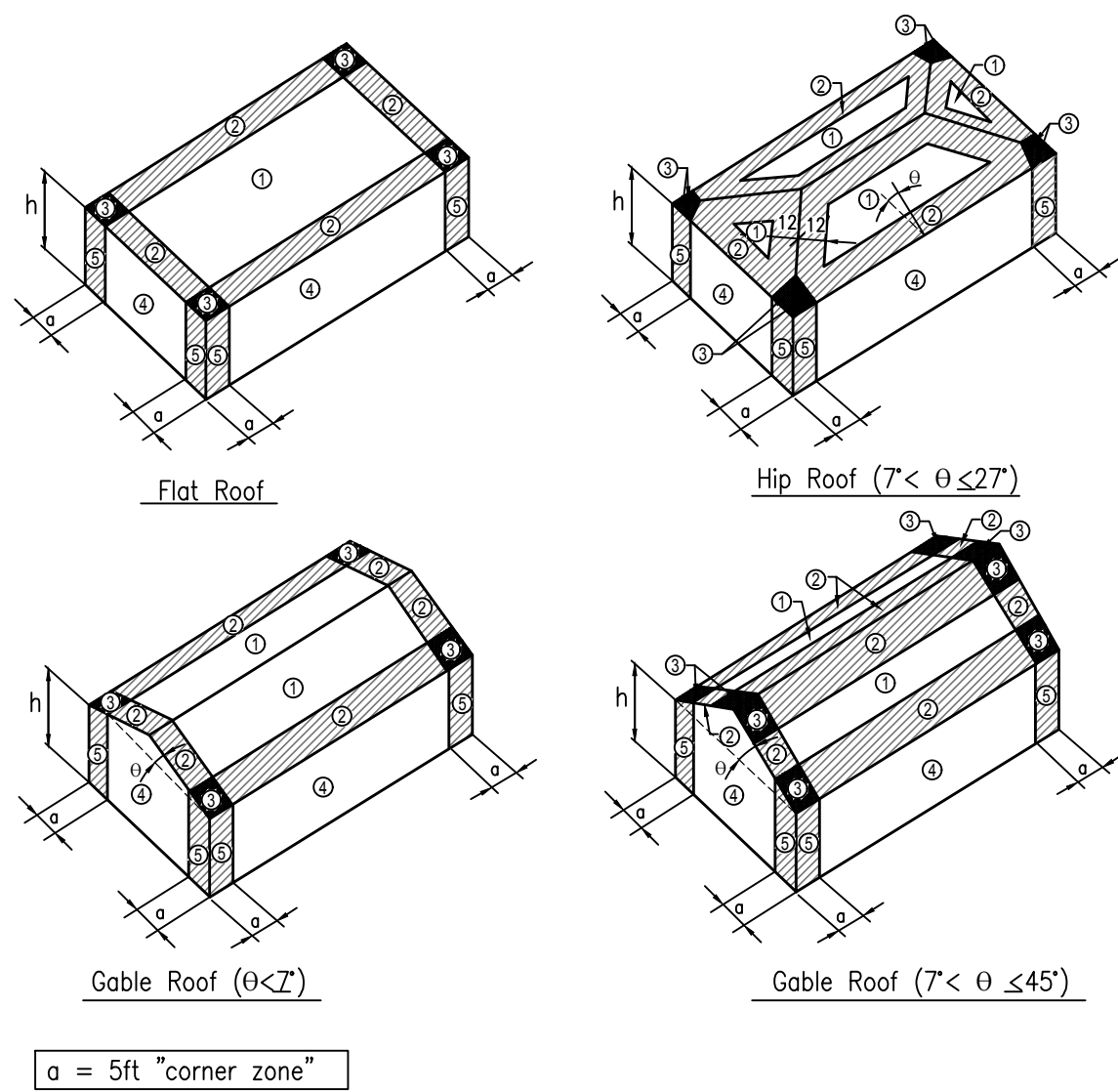
Seismic Design Category = C  
Basic Seismic Force = 1.25  
Basic Seismic Force = Restraint System  
RX=RY=3.0, QY=3.0, CDY=3.0  
Design Base Shear Vx = Vy = by PEBS  
Building Height Limit = NL  
Analysis Procedure = 12.8.1 ASCE 7-10  
Equivalent Lateral Force Procedure

2.6 Guardrail designed per North Carolina State Building Code, Section 1607.8

Guardrail:  
Uniform load = 50 plf, any direction - per 1607.8.1  
Concentrated load = 200 lbs, any direction - per 1607.8.1.1  
Intermediate Rail: (all those expect handrail) per 1607.8.1.2

2.7 Flood Loads:

Project is not located in a flood zone.



3.0 FOUNDATIONS:

- Foundation design is based on geotechnical report #1306-19-015 by SM&E Inc, Wilmington, NC dated August 21, 2019. This report is available in the project specifications book. The recommendations contained in this report are herein made part of the requirements of these contract documents.
- New footings shall bear on strata capable of sustaining a minimum bearing pressure of 2,500 psf. The bearing capacity shall be verified by a qualified Geotechnical Engineer.
- Top of footing (T/FTG) elevations are shown on the drawings or are to be determined by the Contractor in the field in accordance with the guidelines set forth in the drawings.
- Bottom of exterior footings, grade beams and walls shall bear at a minimum depth of 1'-6" below final grade for frost protection.
- Testing and Inspection:
  - All areas to have slabs on grade shall be proof rolled in accordance with and under observation for the Geotechnical Engineer and approved prior to preparation for concrete placement.
  - All foundation bearing strata shall be inspected and approved by the Geotechnical Engineer prior to any concrete placement.
  - Geotechnical Engineer shall be the sole judge as to suitability of all foundation and/or slab bearing strata.
  - Footing bearing elevations shall be adjusted in the field as required to meet the design bearing pressures by additional excavation or compaction and/or backfilling or by other means acceptable to the Geotechnical Engineer.

3.6 Undercutting to remove existing fill beneath footings and slab shall be performed at the direction of the Geotechnical Engineer.

3.7 Engineered Fill: All fill material shall be selected in accordance with the Geotechnical Report. Material shall be clean, low plastic soil with a plasticity index less than 30 (less than 15 is preferred), liquid limit less than 50, and unit weight of 120 pcf (+ 5 pcf)

3.8 Compaction: All fill shall be placed in loose lifts not exceeding 8 inches in thickness and compacted to a minimum of 96 percent Standard Proctor (ASTM D-698) except that the top 12 inches shall be compacted to a minimum of 98 percent Standard Proctor. Moisture shall be controlled to within 3 percent above or below optimum content.

3.9 Remove all topsoil and organic materials. The stripping should extend at least 10' beyond the proposed construction limits.

3.10 Subsurface Water: Due to the relatively shallow groundwater encountered, (2'-3' noted during boring) temporary construction dewatering may be necessary to facilitate efficient below-grade construction. Dewatering operations for the majority of the site can be handled by the use of conventional submersible pumps directly in the excavation or temporary trenches or French drains.

3.11 Protection of Foundation Excavations: Exposure to the environment may weaken the soils at the footing bearing level if the foundation excavations remain open for too long a time. Therefore, foundation concrete should be placed the same day that excavations are made. If the bearing soils are softened by the surface water intrusion or exposure, the softened soils must be removed from the foundation excavation bottom immediately prior to placement of concrete. If the excavation must remain open overnight, or if rainfall becomes imminent while the bearing soils are exposed, a 2 to 3-inch "mud mat" of "lean" concrete should be placed on the bearing soils before the placement of reinforcing steel.

4.0 CONCRETE:

4.1 Concrete Strength:  
All concrete shall be in accordance with the American Concrete Institute (ACI) 301 and 318.

4.2 Concrete shall have a 28 day compressive strength and density as follows:

- Footings.....3,000psi, Density = ±145pcf
- Interior Slab on Grade.....3,000psi, Density = ±145pcf
- Exterior Slab on Grade.....4,000psi, Density = ±145pcf

- Concrete Mix Designs:
  - Submittals: Submit written reports of each proposed concrete mix not less than 15 days prior to the start of work.
  - Mix designs, including water, cement ratios and slumps, shall be prepared in accordance with ACI 301-05, Section 4. Cement shall conform to ASTM C 150 Type I or at contractor's option, ASTM C 595 Type IP where fly ash is permitted. Normal weight aggregate shall conform to ASTM C 33 and light weight aggregate shall conform to ASTM C 330. No admixtures containing calcium chloride shall be permitted in any concrete.
  - Aggregate size shall be #67 stone for supported slabs or other formed concrete elements; #57 stone for slabs on grade and footings or other concrete elements formed from and poured against earth; #89 stone for masonry grout.
  - Water-reducing admixture shall be used in all concrete.
  - Air-entraining admixture in accordance with ACI 301 shall be used in all concrete exposed freezing and thawing during construction or service conditions.
  - Concrete subjected to freezing/thawing shall have a maximum water/cement ratio of 0.45 and shall contain the amount of air-entraining agent specified in ACI 301-05 Section 4.

4.4 Curing:  
See specifications for curing method options and apply within two (2) hours after completion of finishing to all concrete flatwork and walls, U.N.O., other than footings and grade beams.

4.5 Use a non-corrosive, non-chloride accelerating admixture in concrete exposed to temperatures below 40 degrees. Uniformly heat the water and aggregates to a temperature of not less than 50 degrees. Place and cure concrete in accordance with ACI 306.

4.6 When hot weather conditions exist, place and cure concrete in accordance with ACI 301. Cool ingredients before mixing to maintain concrete temp. at time of placement below 90 degrees.

4.7 Reinforcing in all abutting concrete, including footings shall be continuous through or around all corners or intersections. Dowels or splices shall be equal in size and spacing to the reinforcing in the abutting members.

4.8 Refer to architectural drawings for door and window openings, drips, reglets, washes, masonry anchors, brick ledge elevations, slab depressions and miscellaneous embedded plates, bolts, anchors, angles, etc.

4.9 Refer to plumbing, mechanical and electrical drawings for underfloor, perimeter and other drains and for sleeves, outlet boxes, conduits, anchors, etc. The various trades are responsible for their items.

4.10 Base plates, anchor rods, support angles and other steel exposed to earth or granular fill shall be covered with a minimum of 3" of concrete.

- Finish surfaces to the following tolerances, according to ASTM E 1155, for a randomly trafficked floor surface:
  - Specified overall values of flatness, F(F) 25; and of levelness, F(L) 20; with minimum local values equal to ½ of the overall flatness and levelness values.
  - The composite F(F) and F(L) numbers shall be measured and reported within 72 hours after completion of slab concrete finishing operations and before removal of any supporting shores.

4.12 Non-shrink grout shall be pre-mixed, non-corrosive, non-metallic, non-staining containing silica sands, Portland cement, shrinkage compensating and water-reducing agents. Product shall only require the addition of water. Minimum compressive strength shall be 2500 psi after one day and 7000 psi after 28 days. Grout shall be free of gas producing or air-releasing and oxidizing agents and contain no corrosive iron, aluminum or gypsum.

4.13 Provide concrete grout - not mortar - for reinforced masonry lintel and bond beams where indicated on drawing or as scheduled.

4.14 Tolerance for anchor rods and other embedded items shall be per the AISC Code of Standard Practice Section 7.5.

4.15 Unless otherwise shown in the architectural drawings, provide 3/4-inch chamfers at all column, wall, slab or beam edges that are exposed to view in the finished structure.

- Concrete cover for cast-in-place concrete reinforcement:  
Concrete cast against & permanently exposed to earth.....3 Inches  
Concrete exposed to earth or weather:  
No. 6 through No. 18 Bars.....2 Inches  
No. 5 Bar and smaller.....½" Inches  
Concrete not exposed to weather or in contact with ground:  
Slabs:  
No. 11 Bar and smaller.....¾" Inches

5.0 REINFORCING STEEL:

5.1 Reinforcing shall be domestic new billet steel conforming to ASTM A615, Grade 60 or 60S including stirrups and ties, except that reinforcing which is required to be welded shall conform to ASTM A706.

5.2 Field bending of concrete reinforcing steel is not permitted.

5.3 Welded wire mat and fabric shall conform to ASTM A184 and A185 respectively and shall be provided in flat sheets. Welded wire mat/fabric shall be lapped 0'-6" at all splices.

Bar Size	F'c = 3,000psi		F'c = 4,000psi		F'c = 5,000psi	
	Ld (in)	Class "B" Lap Splice (in)	Ld (in)	Class "B" Lap Splice (in)	Ld (in)	Class "B" Lap Splice (in)
#3	17	22	15	19	17	23
#4	22	29	19	25	17	23
#5	28	36	24	31	22	28
#6	33	43	29	37	26	34
#7	48	63	42	54	38	49
#8	55	72	48	62	43	56

- Values are based on normal weight concrete.
- Ld = minimum embed of rebar.
- Class "B" lap splice refers to minimum distance bars must be lapped for a full tension splice.

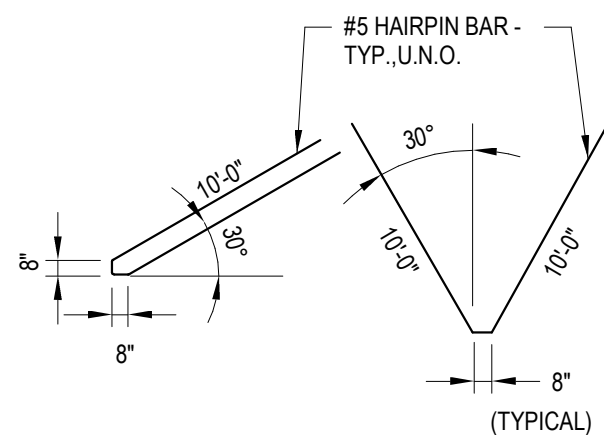
ABBREVIATIONS

@	AT	HT	HIP TRUSS
&	AND	IFM	INSIDE FACE OF MASONRY
AB	ANCHOR BOLTS	INT	INTERIOR
ACI	AMERICAN CONCRETE INSTITUTE	JBE	JOIST BEARING ELEVATION
ADD	ADDITIONAL	JOINT	JOINT
AFF	ABOVE FINISHED FLOOR	K	KIP-S
AISC	AMERICAN INSTITUTE OF STEEL	KB	KICKER BRACE
ASTM	AMERICAN IRON AND STEEL	KSI	KIPS PER SQUARE INCH
INSTITUTE	INSTITUTE	(L)	LONG SIDE REINFORCEMENT
ALT	ALTERNATE	LB	LONG BAR
ARCH	ARCHITECTS - ARCHITECTURAL	LBS	POUNDS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	LLH	LONG LEG HORIZONTAL
AWS	AMERICAN WELDING SOCIETY	LLV	LONG LEG VERTICAL
B, BOT	BOTTOM	LO	LOW
BCX	BOTTOM CHORD EXTENSION	LOC	LOCATION
BFF	BELOW FINISHED FLOOR	LWC	LIGHT WEIGHT CONCRETE
BLDG	BUILDING	MAX	MAXIMUM
BM	BEAM	MC	MOMENT CONNECTION
BOS	BOTTOM OF STEEL	MECH	MECHANICAL
BRG	BEARING	MFR	MANUFACTURER
BTWN	BETWEEN	MID	MIDDLE
CFS	COLD FORMED STEEL	MIN	MINIMUM
CJ	CONTRACTION JOINT	MISC	MISCELLANEOUS
CL	CENTERLINE	MOW	MIDDLE OF WALL
CLR	CLEAR	MP	MASONRY PLASTER
CMU	CONCRETE MASONRY UNITS	d	INCHES - PENNY
COL	COLUMN	No	NUMBER
CONC	CONCRETE	NS	NEAR SIDE
CONN	CONNECTION	NTS	NOT TO SCALE
CONST JT	CONSTRUCTION JOINT	NWC	NORMAL WEIGHT CONCRETE
CONT	CONTINUOUS	OC	ON CENTER
CONTR	CONTRACTOR	OFB	OUTSIDE FACE OF BRICK
CSJ	COMPOSITE STEEL JOIST	OFM	OUTSIDE FACE OF MASONRY
CTRD	CENTERED	OFS	OUTSIDE FACE OF STUD
DBA	DEFORMED BAR ANCHOR	OPNG	OPENING
DD	DELEGATED DESIGN	OPP	OPPOSITE HAND
DEFL	DEFLECTION	PEBS	PRE-ENGINEERED BUILDING
DEPR	DEPRESSION - DEPRESSED	PED	PEDISTAL
DET	DETAIL	PL	PLATE
DAG	DIAGONAL	PSF	POUNDS PER SQUARE FOOT
Ø	DIAMETER	PSI	POUNDS PER SQUARE INCH
DIM	DIMENSION	PSL	PARALLEL STRAND LUMBER
DIST	DISTANCE	PLF	POUNDS PER LINEAL FOOT
DWG(S)	DRAWING(S)	PT	PRESSURE TREATED
DWL(S)	DOWEL(S)	REF	REFERENCE
EA	EACH	REIN	REINFORCING
ELEV	ELEVATION	REQD	REQUIRED
EMBED	EMBEDDED - EMBEDMENT	(S)	SHORT SIDE REINFORCEMENT
ENG	ENGINEER	SB	SHORT BAR
EOR	ENGINEER OF RECORD	SCHD	SCHEDULE
EQUIP	EQUIPMENT	SF	STEP FOOTING
EF	EACH FACE	SM	SIMILAR
EJ	EXPANSION JOINT	SOG	SLAB ON GRADE
EDD	EDGE OF DECK	SPEC(S)	SPECIFICATION(S)
EOM	EDGE OF MASONRY	SPF	SPRUCE PINE FUR
EOS	EDGE OF SLAB	SQ	SQUARE
EW	EDGE OF WALL	STD	STANDARD
EW	EACH WAY	STF	STIFFENER
EXIST	EXISTING	STIRR	STIRRUP
EXP	EXPANSION	STR	STEEL
EXT	EXTERIOR	SW	SHEAR WALL
FDN	FOUNDATION	SYP	SOUTHERN YELLOW PINE
FFE	FINISHED FLOOR ELEVATION	T	TOP
FS	FAR SIDE	TCX	TOP CHORD EXTENSION
GA	GAUGE	TOC	TOP OF CONCRETE
FTG	FOOTING	TOS	TOP OF STEEL
GALV	GALVANIZED	TOW	TOP OF WALL
GT	GIRDER TRUSS	TYP	TYPICAL
HD	HEAD	UNO	UNLESS NOTED OTHERWISE
HI	HIGH	VB	VEHICLE BARRIER
HORIZ	HORIZONTAL	VERT	VERTICAL
HSS	HOLLOW STRUCTURAL SECTION	VIF	VERIFY IN FIELD
		W	WITH
		WWF	WELDED WIRE FABRIC



**LEGEND - FOUNDATION**

- FX SPREAD FOOTING DESIGNATION SEE  
SCHEDULE THIS SHEET
- SF-X STRIP FOOTING DESIGNATION SEE  
SCHEDULE THIS SHEET
- CJ INDICATES CONCRETE SLAB  
CONTRACTION JOINTS, SEE S1.02 FOR  
TYPICAL DETAILS.
- PRE-ENGINEERED METAL BUILDING  
STEEL COLUMN - SEE PEMB BASE PLATE  
INFO AND S301 FOR ANCHOR BOLT INFO

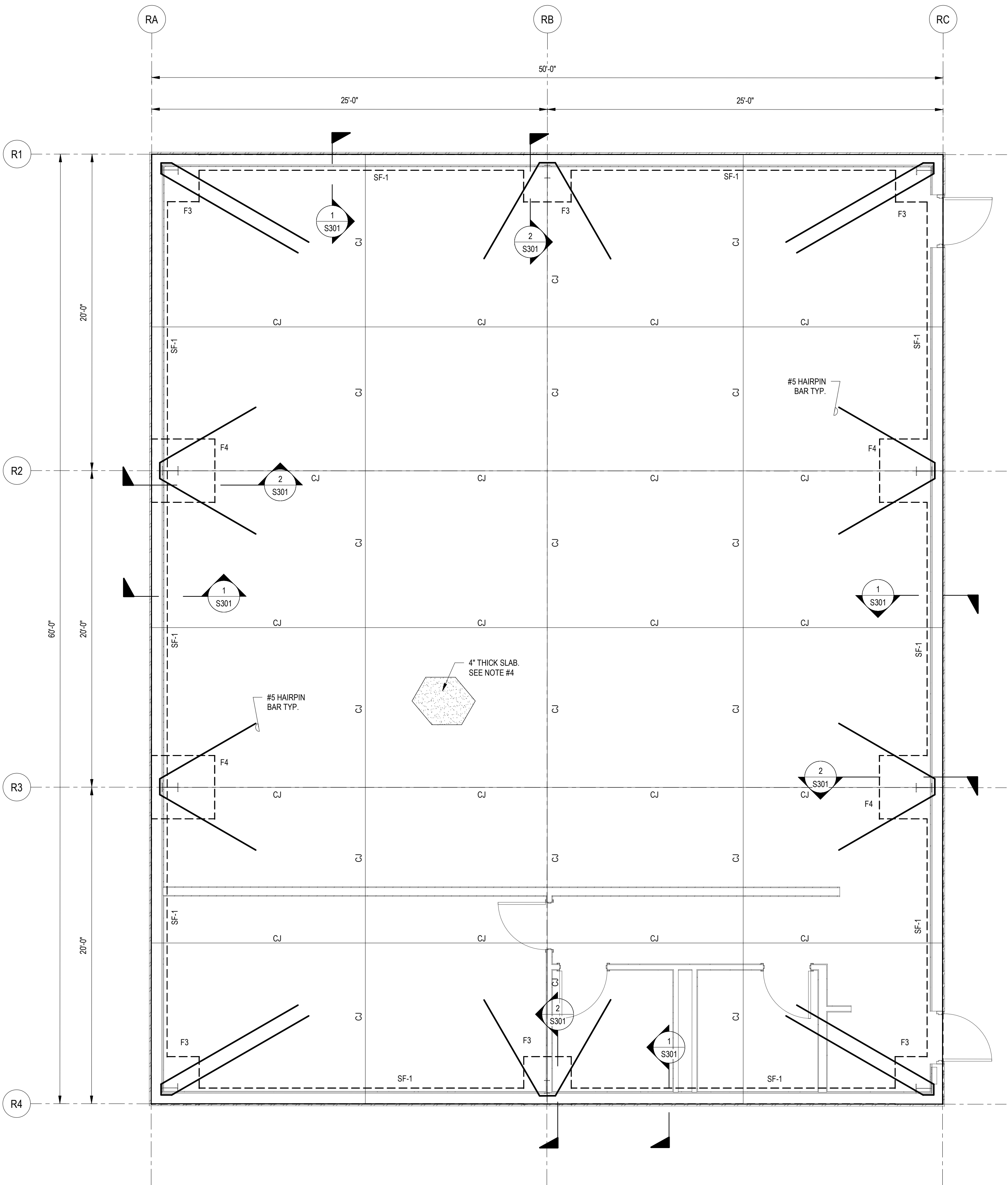


**NOTES - FOUNDATION PLAN**

- SEE SHEET S1.01 FOR ADDITIONAL GENERAL NOTES, FOUNDATION NOTES, CONCRETE NOTES, AND REINFORCING STEEL NOTES. ALSO, SEE SHEET S1.03 & S1.04 FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
- DATUM ELEVATION = TOP OF SLAB ELEVATION  
= ASSUMED 0'-0". OTHER ELEVATIONS ARE NOTED AS (+ OR -) FROM DATUM ELEVATION.
- RELOCATE ANY UTILITY LINES THAT CONFLICT WITH THE FOUNDATIONS OR DROP THE FOUNDATIONS TO AN ELEVATION BELOW THE PROPOSED UTILITIES. RELOCATE ANY GRAVITY FLOW LINES THAT CONFLICT WITH SPREAD FOOTINGS AS SHOWN ON STRUCTURAL FOUNDATION PLANS. IF A GRAVITY FLOW LINE TRAVELS UNDER A CONTINUOUS STRIP FOOTING EITHER:  
a. DROP THE FOOTING ELEVATION BELOW THE PROPOSED LINE.  
b. ENCASE THE LINE IN A STEEL PIPE 2" LARGER IN DIAMETER THAN THE LINE AND EXTEND THE PIPE 1'-0" PAST EACH SIDE OF THE CONCRETE FOOTING. BACKFILL THE TRENCH WITH #57 STONE. THE BEARING CAPACITY OF THIS AREA MUST MEET OR EXCEED THE ALLOWABLE SOIL BEARING CAPACITY.
- SLAB-ON-GRADE SHALL BE 4" THICK (SEE PLAN) 3000 psi CONCRETE WITH WWM 6x6xW2.0 ON SUPPORT CHAIRS ON 15 mi VAPOR BARRIER, ON 6" COMPACTED SELECT GRANULAR MATERIAL ON WELL COMPACTED SUB GRADE. SEE S1.01 FOUNDATION NOTES FOR COMPACTION REQUIREMENTS. VERIFY COMPACTION W/QUALIFIED GEOTECHNICAL ENGINEER.
- REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER DISCIPLINE DRAWINGS FOR OPENINGS AND DEPRESSIONS NOT SHOWN ON THESE DRAWINGS.
- G.C. TO COORDINATE STEPS IN FOUNDATION FOR PLUMBING, ELECTRICAL, AND MECHANICAL.
- PROVIDE STEEL SLEEVE FOR PLUMBING LINES UNDER FOUNDATIONS. SLEEVE SHALL BE 2" LARGER IN DIAMETER THAN PLUMBING LINE AT THAT LOCATION.
- DIMENSIONS ARE FROM EDGE OF SLAB (E.O.S.) AND OUTSIDE FACE OF STUD (O.F.S.) / CURTAINWALL (O.F.C.W.) TO COLUMN CENTERLINE UNLESS NOTED OTHERWISE.

SPREAD FOOTING (FX) SCHEDULE				
MARK	WIDTH x LENGTH x THICKNESS	REINFORCEMENT		COMMENTS
		TOP BARS EACH WAY (U.N.O.)	BOTTOM BARS EACH WAY (U.N.O.)	
F3	3'-0" x 3'-0" x 2'-0"	(4) #5	(4) #5	MONOLITHIC W/ SLAB
F4	4'-0" x 4'-0" x 2'-0"	(4) #5	(4) #5	MONOLITHIC W/ SLAB

STRIP FOOTING (SF-X) SCHEDULE			
MARK	WIDTH x THICKNESS x LENGTH	REINFORCEMENT	COMMENTS
SF-1	1'-0" x 2'-0" x CONT.	(2) #5 CONT.	



**ROTC BUILDING FOUNDATION PLAN**

SCALE: 1/4" = 1'-0"

PROJECT TITLE

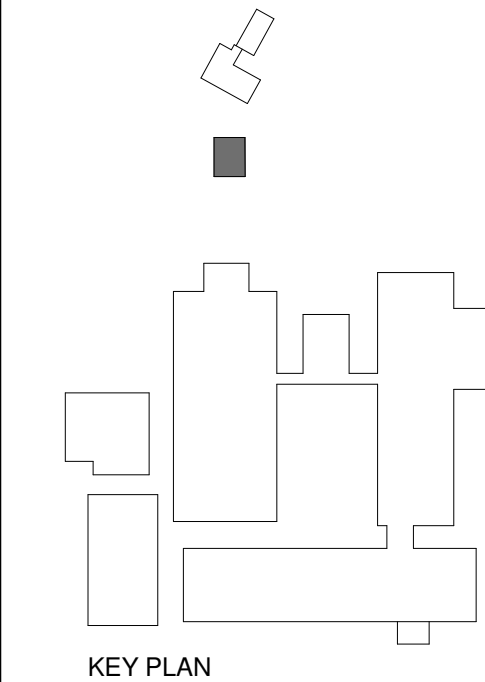
**NORTH  
BRUNSWICK  
HIGH SCHOOL  
ROTC  
BUILDING**

114 SCORPION DRIVE N.E.  
LELAND, NC 28451

DSP # : 100  
DPI SCHOOL # : 1165

SHEET TITLE

**ROTC BUILDING  
FOUNDATION PLAN**

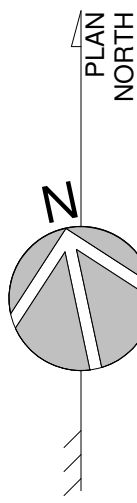


ISSUE BLOCK	
Mark	Date
04.23.20	ISSUED FOR BIDDING
09.29.20	100% REVIEW SUBMISSION
10.14.19	NCDDP DD SUBMISSION
07.30.19	SD PROGRESS DRAWINGS
07.11.19	NCDDP SD SUBMISSION

PROJECT NO: 19-2952  
DATE: 04.23.2020  
SCALE: As indicated  
DRAWN BY: MBK PROJ MGR: ALS

**S201**  
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8' 4' 0' 8'  
SCALE: 1/8" = 1'-0"



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Newark, DE 19711  
302.369.3700  
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ISSUED: 04.23.2020

PROJECT TITLE

NORTH  
BRUNSWICK  
ROTC  
BUILDING

114 SCORPION DRIVE N.E.  
LELAND, NC 28451

DSP # : 100  
DPI SCHOOL # : 1165

SHEET TITLE

FOUNDATION  
SECTIONS AND  
DETAILS

ISSUE BLOCK

04.23.20	ISSUED FOR BIDDING	
04.23.20	100% REVIEW SUBMISSION	
10.14.19	NCORI DD SUBMISSION	
07.30.19	SD PROGRESS DRAWINGS	
07.11.19	NCORI SD SUBMISSION	

Rev: \_\_\_\_\_ Date: \_\_\_\_\_ Description: \_\_\_\_\_

PROJECT NO: 19-2952  
DATE: 04.23.20  
SCALE: AS INDICATED  
DRAWN BY: MBK PROJ MGR: ALS

S301

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**SECTION 1-1**  
SCALE: 3/4" = 1'-0"

**SECTION 2-2**  
SCALE: 3/4" = 1'-0"

PRE-ENGINEERED METAL BUILDING ANCHOR BOLT SCHEDULE


MARK	BOLT DIAM. D	HOLE DIAMETER	A	B	TOP WASHER O.D. x t	LEVELING NUT	REMARKS
AB-1	3/4"	PER PEMBS	12"	PER PEMBS	PER PEMBS	NO	



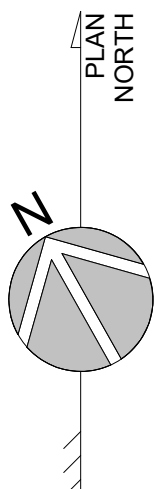
KEY PLAN

A101

8' 4' 0' 8'



SCALE : 1/8" = 1'-0"





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Salisbury, MD 21801

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ISSUED: 04/23/202



PROJECT TITLE

NORTH  
BRUNSWICK  
HIGH SCHOOL  
ROTC  
BUILDING

114 SCORPION DRIVE N.E.  
LELAND, NC 28451

DSP # : 100  
DPI SCHOOL # : 116

SHEET TITLE

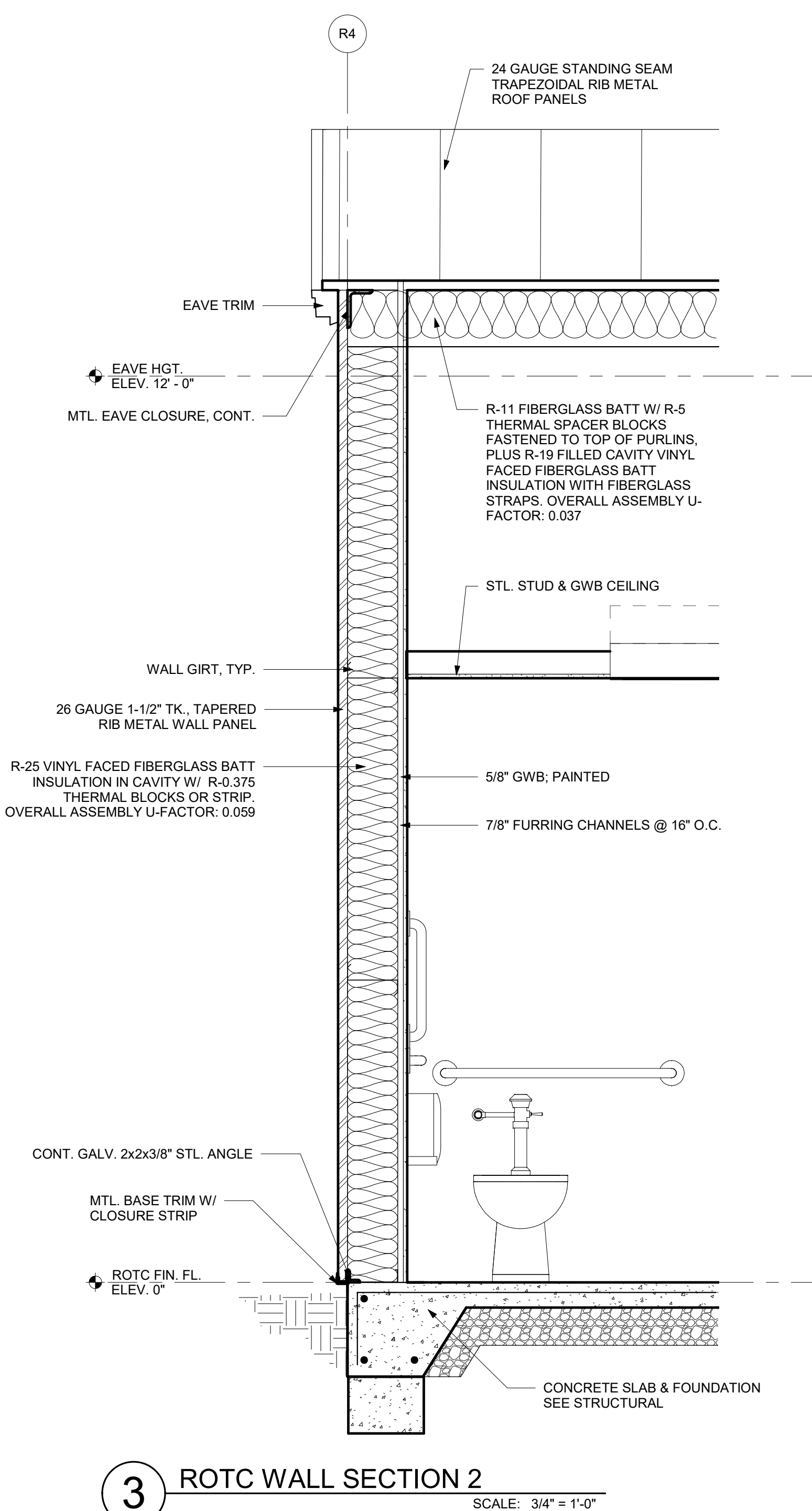
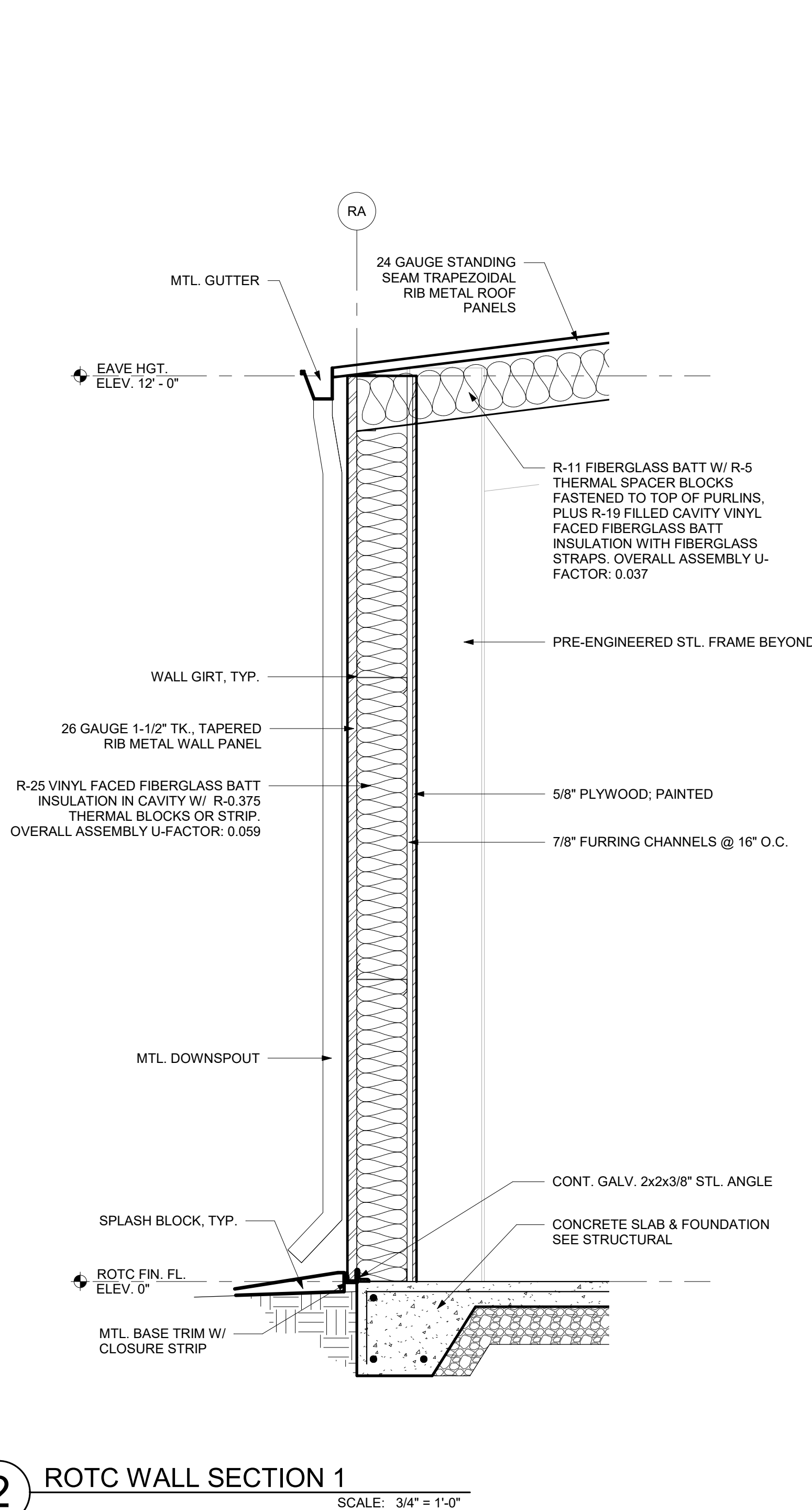
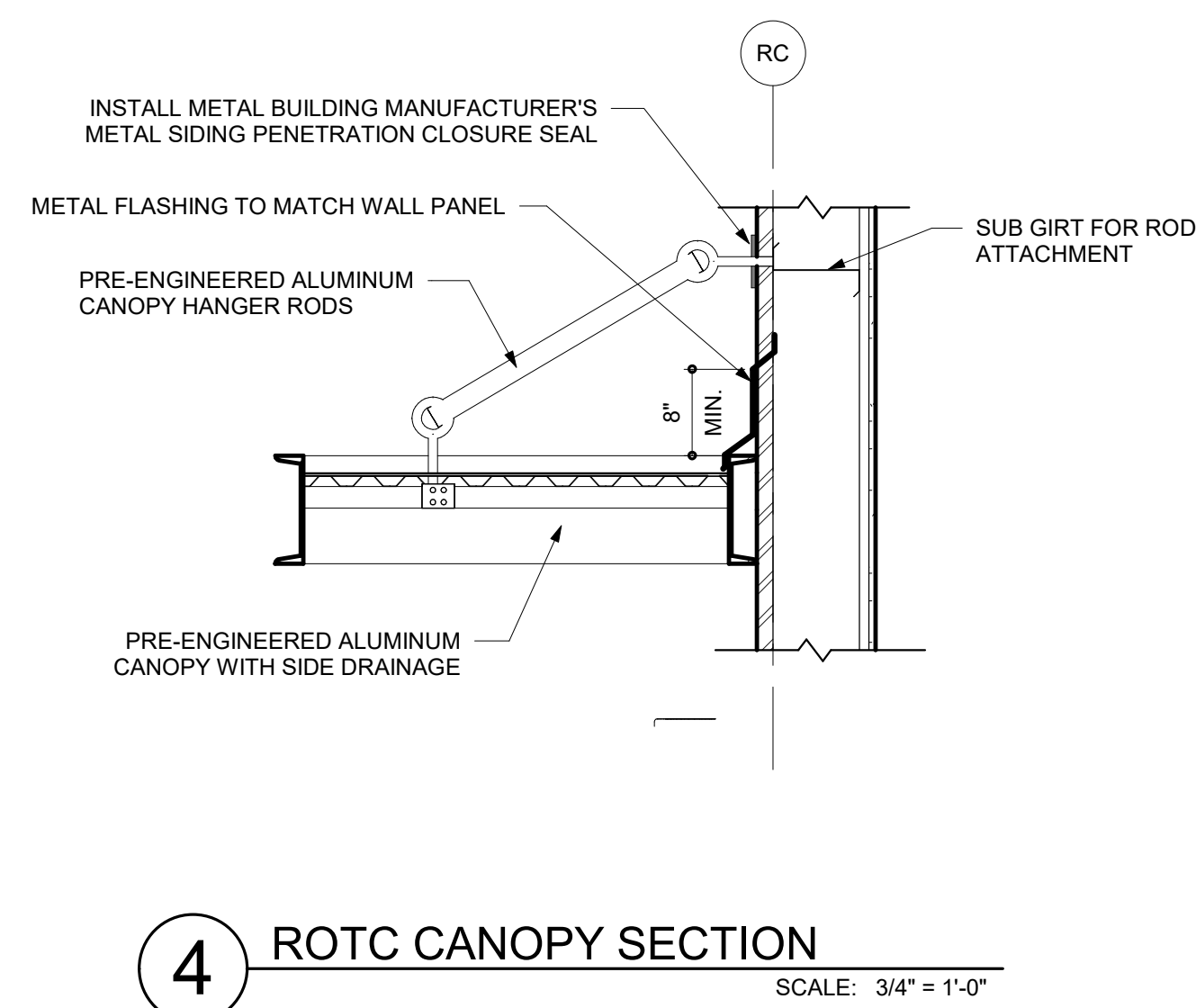
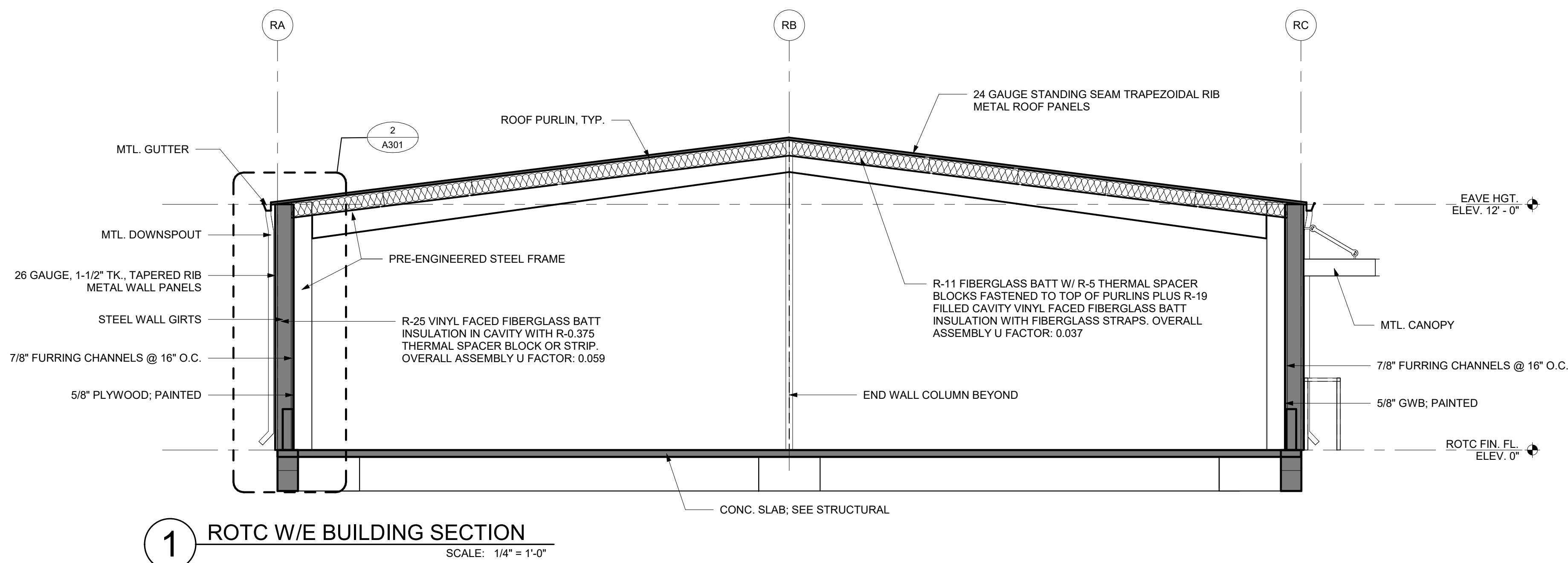
## ROTC EXTERIOR ELEVATIONS

SUE-BLOCK		
	04.23.20	ISSUED FOR BIDDING
	03.26.20	100% REVIEW SUBMISSION
	10.14.19	NCDDP DD SUBMISSION
	7.30.19	SD PROGRESS DRAWINGS
	7.11.19	NCDDP SD SUBMISSION
Mark	Date	Description

PROJECT NO:	2019082
DATE:	04.23.2
SCALE:	3/16" = 1
DRAWN BY	Author
PROJ MG	Check

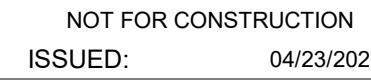
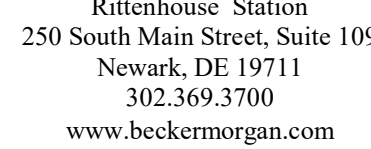
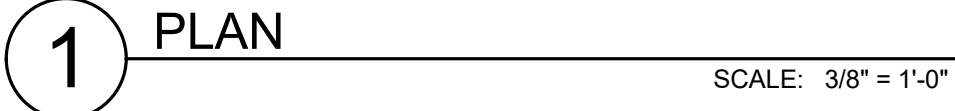
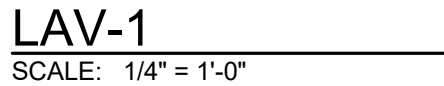
A201





Mark	Date	Description
04.23.20	ISSUED FOR BIDDING	
03.28.20	100% REVIEW SUBMISSION	
10.14.19	NCPI DO SUBMISSION	
7.30.19	SD PROGRESS DRAWINGS	
7.11.19	NCPI SD SUBMISSION	

A	36" GRAB BAR - HORIZONTAL	
B	18" GRAB BAR - VERTICAL	
C	42" GRAB BAR - VERTICAL	
D	TOILET PAPER DISPENSER	PROVIDED BY OWNER, INSTALLED BY CONTRACTOR
E	SANITARY NAPKIN DISPOSAL	
F	SOAP DISPENSER	PROVIDED BY OWNER, INSTALLED BY CONTRACTOR
G	NOT USED	
H	UNDER LAVATORY SHIELD	
I	18"x36" FRAMED MIRROR	
J	ELECTRIC HAND DRYER	



NORTH  
BRUNSWICK  
HIGH SCHOOL  
ROTC  
BUILDING

DSP #: 100  
DPI SCHOOL #: 1165

SHEET TITLE

ROTC ENLARGED  
PLANS AND DETAILS

ISSUE BLOCK		
Mark	Date	Description
	04.23.20	ISSUED FOR BIDDING
	03.26.20	100% REVIEW SUBMISSION
	10.14.19	NCDP1 DD SUBMISSION
	7.30.19	SD PROGRESS DRAWINGS
	7.11.19	NCDP1 SD SUBMISSION

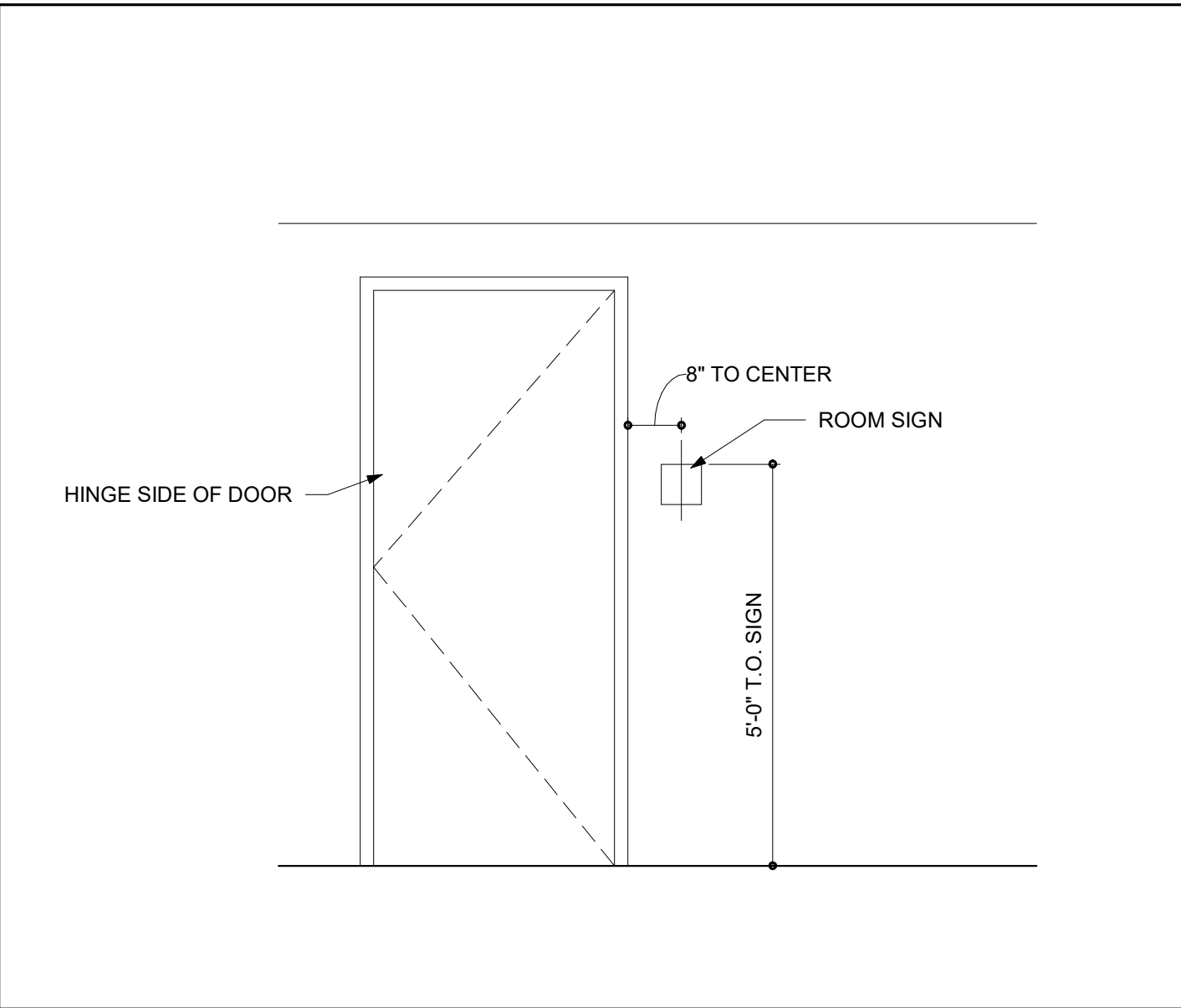
PROJECT NO: **2019082.0**

DATE: 04.23.2020

SCALE: As indicated

DRAWN BY: Author PROJ MG: Check

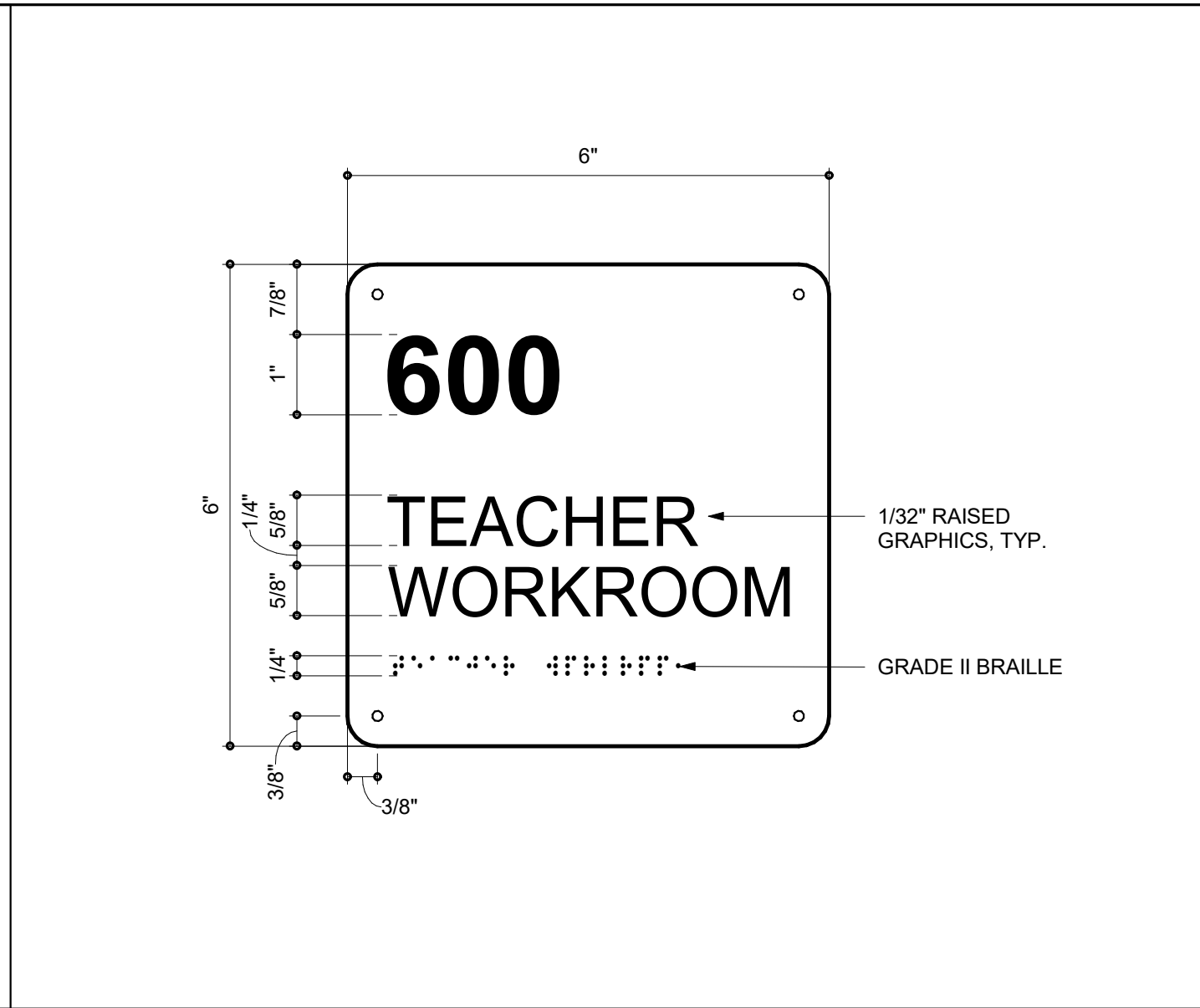
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1

TYPICAL SIGN MOUNTING HEIGHT

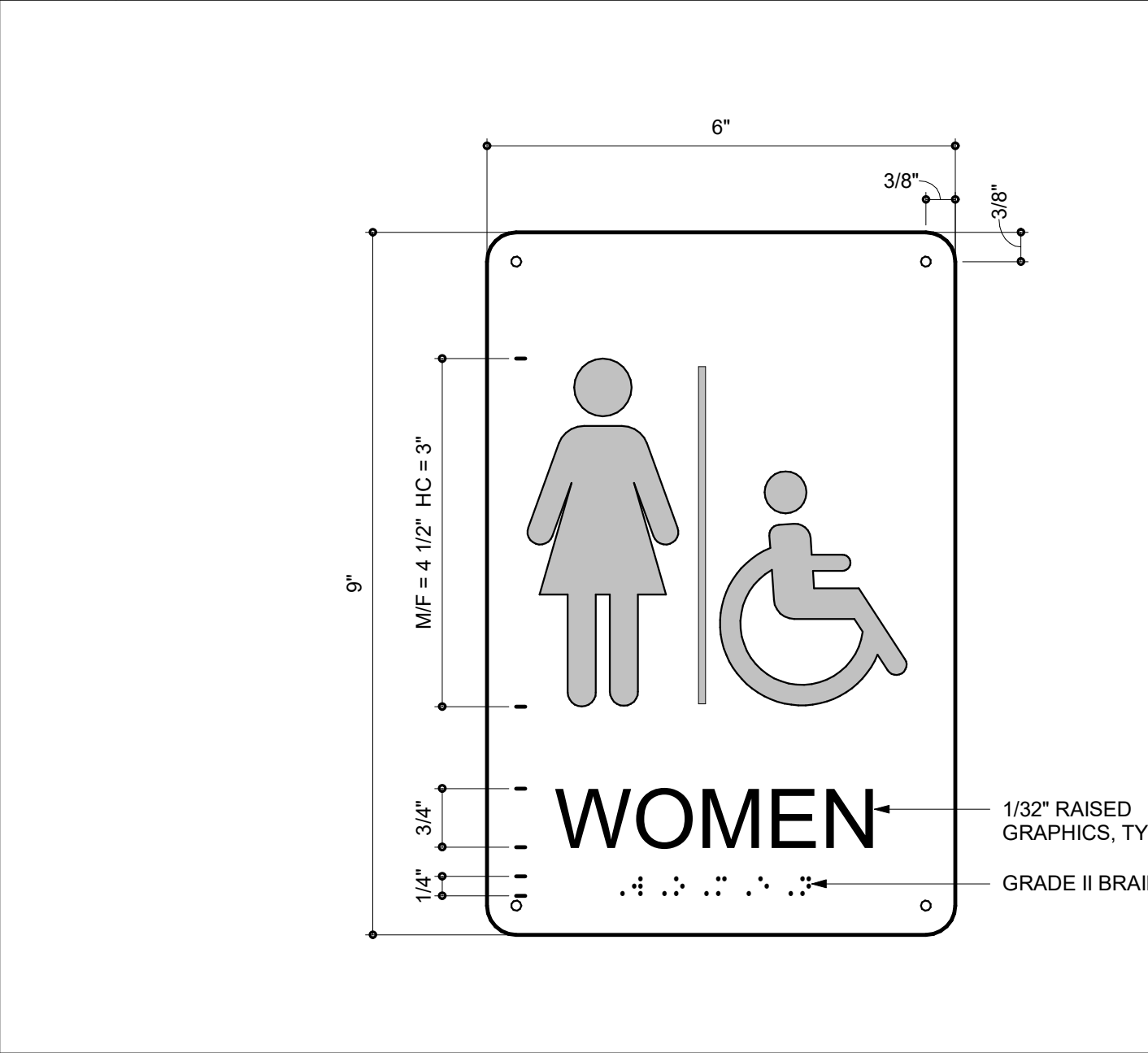
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2

SIGN TYPE A

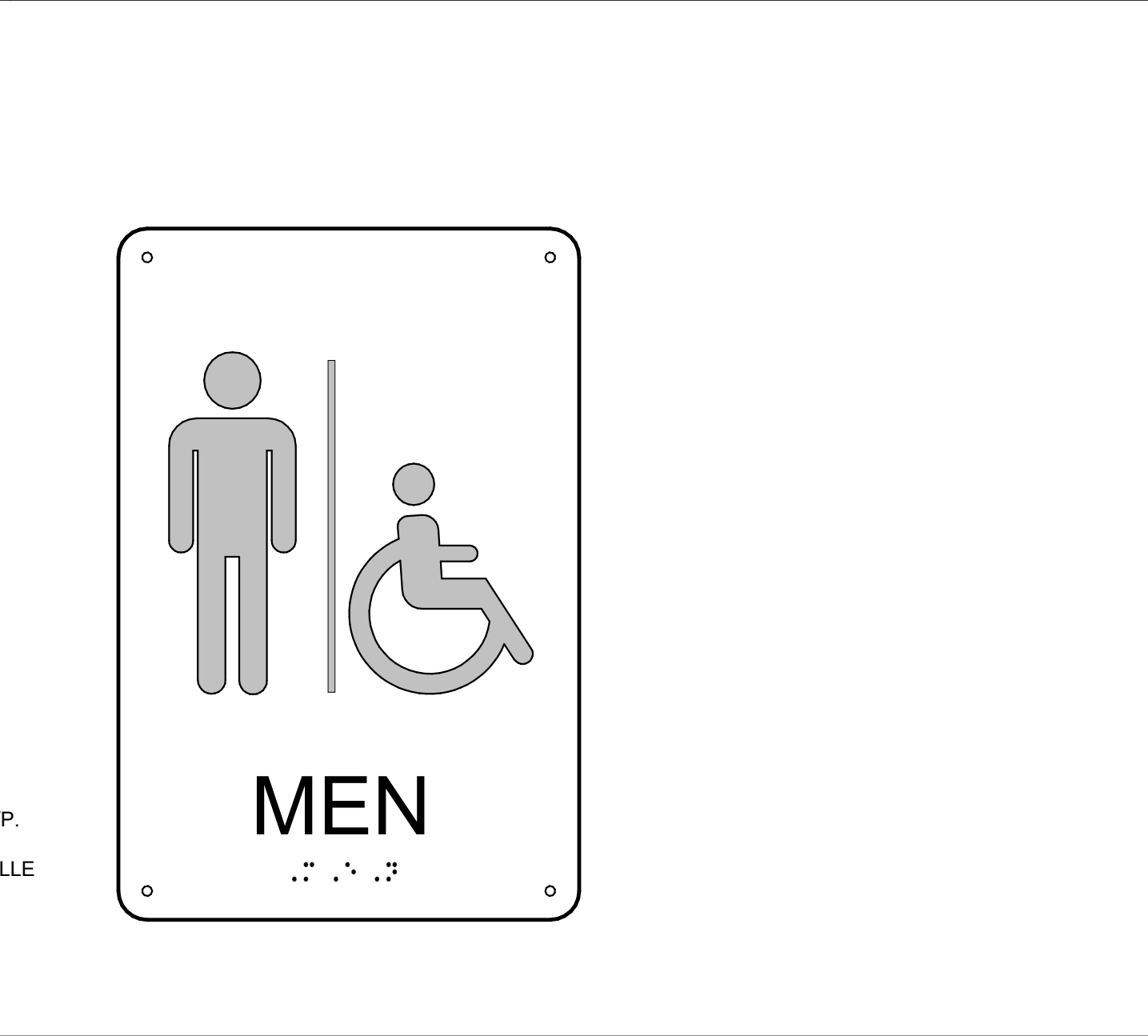
SCALE : 6" = 1' 0"



3

SIGN TYPE B

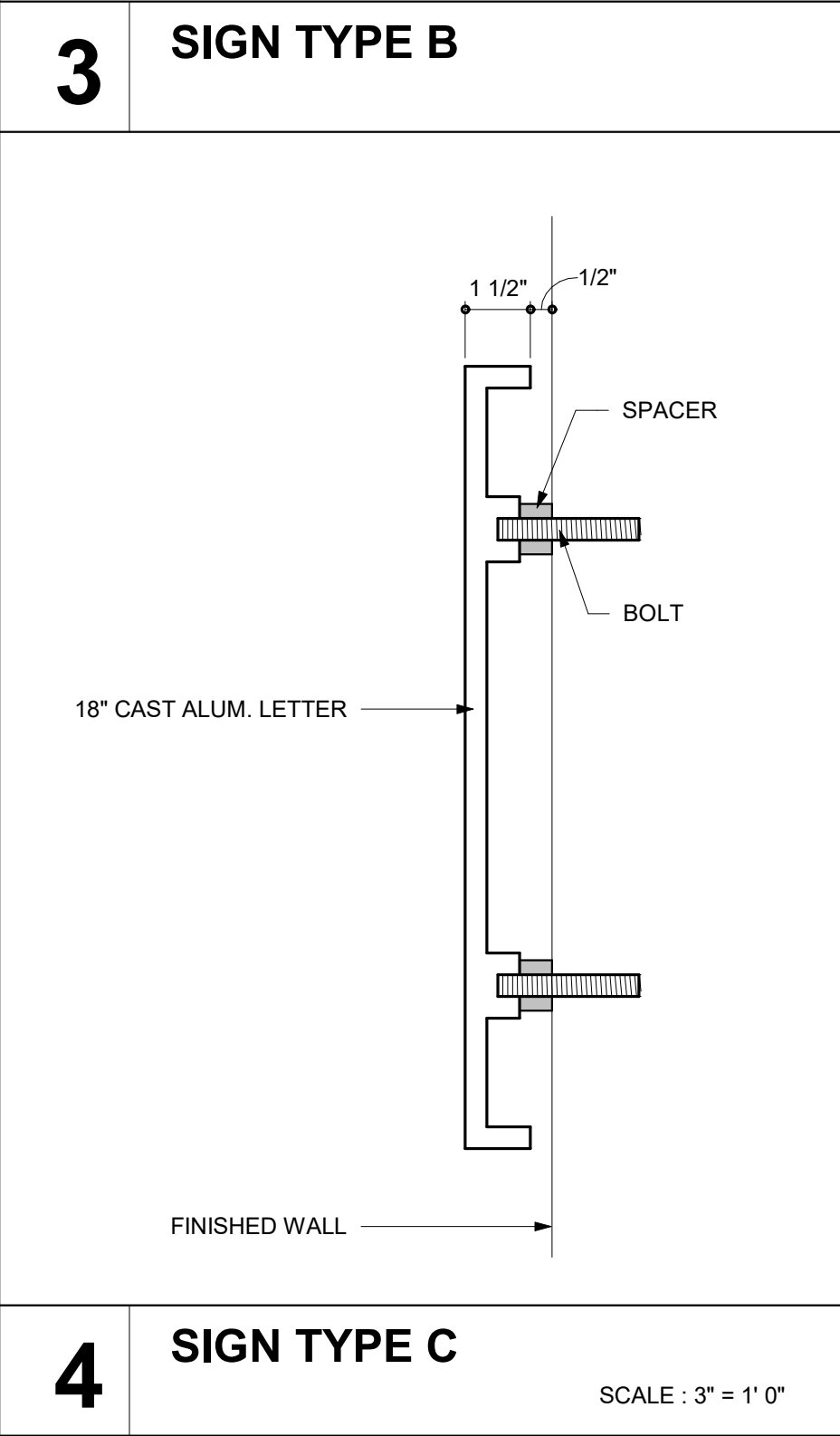
SCALE : 6" = 1' 0"



4

SIGN TYPE C

SCALE : 6" = 1' 0"



4

SIGN TYPE C

SCALE : 3" = 1' 0"

SIGNAGE SCHEDULE				
ROOM NUMBER	ROOM NAME	DOOR NUMBER	SIGN TYPE	COPY ON SIGN
527	MEN	527/1	B	MEN
528	WOMEN	528/1	B	WOMEN
529	STORAGE	529/1	A	529 STORAGE
NONE	NONE	NONE	C	ROTC

5

SIGNAGE SCHEDULE

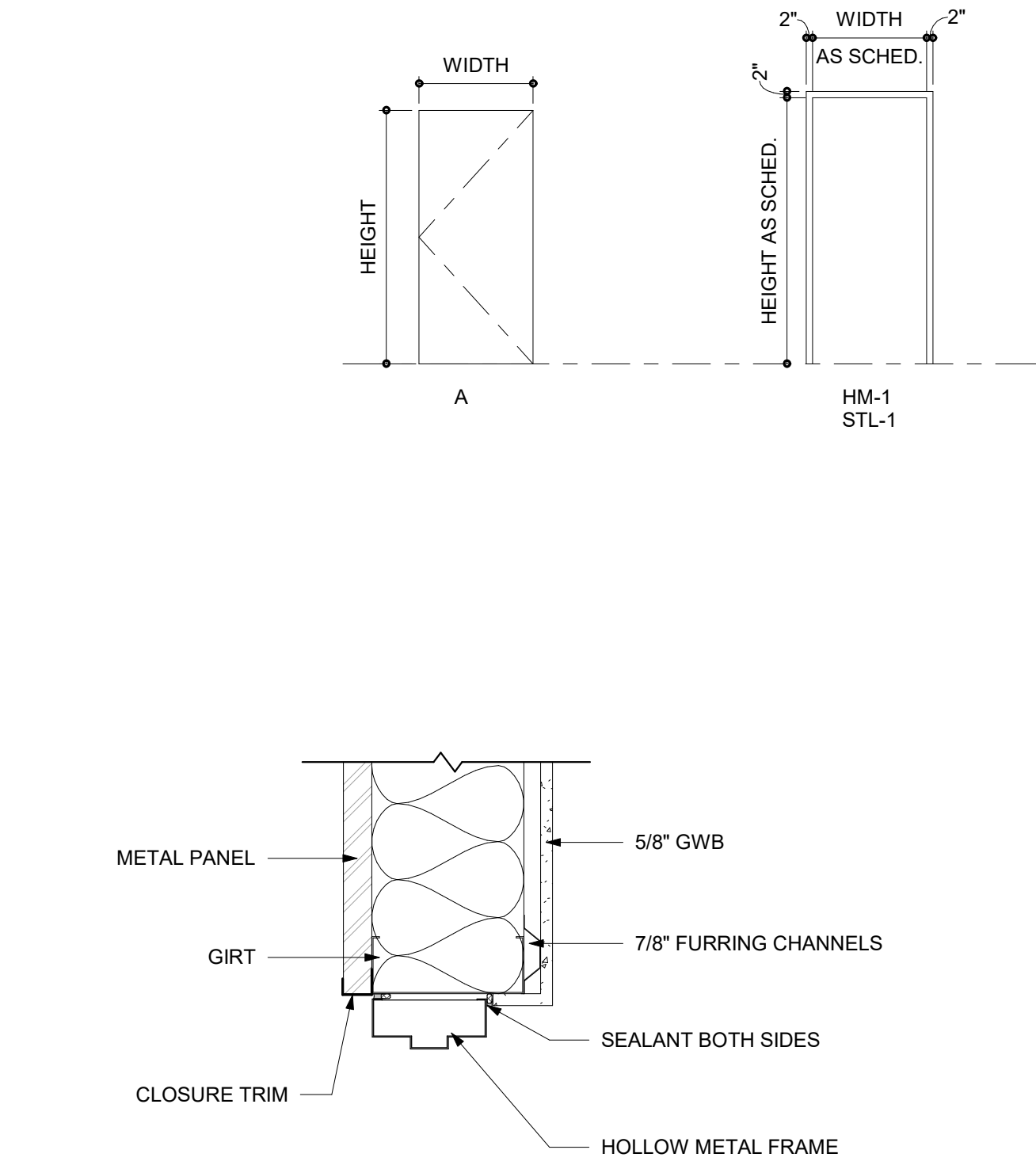
SCALE : 3" = 1' 0"

FINISH SCHEDULE																
#	ROOM NAME	FLOOR		BASE MAT	WALL								CEILING		COMMENTS	
		MAT	PAT		NORTH		EAST		SOUTH		WEST		MAT	FIN		
					MAT	FIN	MAT	FIN	MAT	FIN	MAT	FIN				
ROTC BUILDING																
FIRST FLOOR																
525	SHOOTING RANGE	CONC	PAINT LINES	R	PLY	PT	PLY	-	PLY	PT	PLY	PT	EXPO	-		
526	CORR	S. CONC		R	PLY	PT	PLY	PT	H. GWB	PT	H. GWB	PT	EXPO	-		
527	MEN	S. CONC		R	GWB	EPT	GWB	EPT	GWB	EPT	GWB	EPT	GWB	PT		
528	WOMEN	S. CONC		R	GWB	EPT	GWB	EPT	GWB	EPT	GWB	EPT	GWB	PT		
529	STOR	CONC	PANT LINES	R	GWB	PT	GWB	PT	GWB	PT	GWB	PT	EXPO	-		

FINISH SCHEDULE LEGEND															
KEY NAME	DESCRIPTION														
FLOOR	NOT APPLICABLE / EXISTING TO REMAIN														
CONC	CONCRETE, NOT SEALED, EPOXY PAINTED														
S. CONC	CONCRETE WITH SEALER/HARDENER														
VCVT	VINYL COMPOSITION TILE														
BASE	NOT APPLICABLE / EXISTING TO REMAIN														
-	RESILIENT WALL BASE														
WALL	NOT APPLICABLE / EXISTING TO REMAIN														
EPT	EPOXY PAINT														
EXPO	EXPOSED STRUCTURE														
GWB	GYPSUM WALL BOARD														
H. GWB	HIGH IMPACT GYPSUM WALL BOARD														
PLY	PLYWOOD														
PT	PAINT														
CEILING	NOT APPLICABLE / EXISTING TO REMAIN														
EXPO	EXPOSED STRUCTURE, FIRE PROTECTOIN, PLUMBING, MECHANICAL, ELECTRICAL, TECHNOLOGY														
GWB	GYPSUM BOARD CEILING														
PT	PAINT														
ORIENTATION	ON PLANS NORTH WALL IS UP, EAST IS RIGHT, SOUTH IS DOWN, WEST IS LEFT														
GENERAL NOTES	1. WALLS AND CEILINGS MAY CONTAIN MORE THAN ONE MATERIAL OR FINISH AS INDICATED. COORDINATE WITH CONSTRUCTION TYPE AND FINISH SIMILAR TO ADJACENT MATERIALS														
2	SEE REFLECTED CEILING PLANS & CEILING NOTES FOR CEILING HEIGHTS, MATERIAL EXTENTS, LOCATIONS AND HEIGHTS OF BULKHEADS, SOFFITS, ETC.														
3	PLAN WALL TYPES TAKE PRECEDENCE OVER SCHEDULED WALL FINISH. PROVIDE APPROPRIATE WALL FINISH TO CORRESPOND TO WALL TYPES.														
4	MOLD AND MOISTURE RESISTANT GYPSUM BOARD SHALL BE USED AT ALL KITCHEN AREAS, TOILET ROOMS AND CUSTODIAN SERVICE CLOSETS SCHEDULED TO HAVE GYPSUM BOARD FINISHES														
5	WALL AND CEILING FINISHES SHALL INCLUDE ALL PROJECTIONS, BEAM ENCLOSURES, RECESSES, BULKHEADS, MATERIAL CHANGES, OR OTHER ENCLOSURES. REFER TO REFLECTED CEILING PLANS														
6	PROVIDE SEALANT/CAULK AT INTERSECTIONS OF DISSIMILAR MATERIALS AND AS RECOMMENDED BY MANUFACTURERS' GUIDELINES														
7	ALL NEW PARTITIONS AND WALLS SHALL BE PAINTED. PROVIDE PRICING TO REPAINT EXISTING WALLS														

DOOR SCHEDULE																		
Level	MARK	WIDTH	SIZE			DOOR				FRAME				FIRE RATING	HDWE SET	COMMENTS		
			HT	THICK		MATL	TYPE	FIN	GLAZ	UNDER CUT	MATL	TYPE	FIN				HEAD	DETAIL JAMB
ROTC BUILDING																		
FIRST FLOOR																		
FIRST FLOOR	525/1	3' - 0"	7' - 0"	1 3/4"	HM	A	PT	-	0"	HM	HM-1	PT	1/A501	2/A501	5/A501	-	06	
FIRST FLOOR	526/1	3' - 0"	7' - 0"	1 3/4"	HM	A	PT	-	0"	HM	HM-1	PT	1/A501	2/A501	5/A501	-	13	
FIRST FLOOR	527/1	3' - 0"	7' - 0"	1 3/4"	SCWD	A	PT	-	0"	HM	HM-1	PT	3/A501	4/A501	-	-	08	
FIRST FLOOR	528/1	3' - 0"	7' - 0"	1 3/4"	SCWD	A	PT	-	0"	HM	HM-1	PT	3/A501	4/A501	-	-	08	
FIRST FLOOR	529/1	3' - 0"	7' - 0"	1 3/4"	STL	A	PT	-	0"	HM	HM-1	PT	3/A501	4/A501	-	-	07	

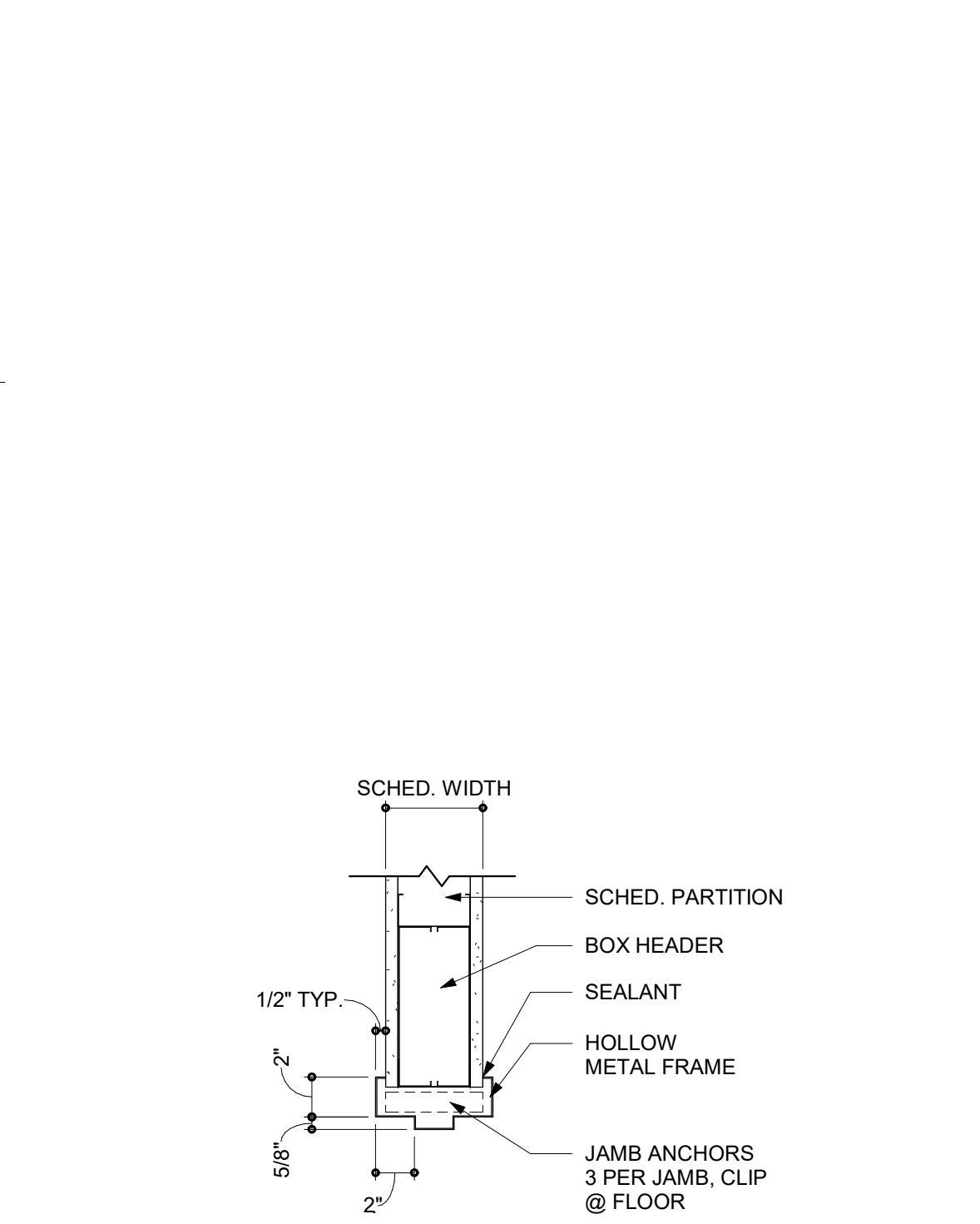
DOOR SCHEDULE LEGEND															
-	NONE (IE., NOT APPLICABLE OR FACTORY FINISHED)														
ALUM, AL	ALUMINUM														
CD	COILING DOOR														
CS	COUNTER SHUTTER														
CW	CURTAIN WALL														
EX	EXISTING														
FPGL	FIRE-PROTECTION RATED GLAZING														
FRGL	FIRE-RESISTANCE RATED GLAZING														
HM	HOLLOW METAL														
IG	INSULATED GLAZING														
LAM	LAMINATED GLAZING														
PT	PAINTED														
SCWD	SOLID CORE WOOD DOOR														
SF	STOREFRONT														
SST	STAINLESS STEEL														
ST	STAINED														
STL	STEEL														
TEMP	TEMPERED GLAZING														



1

EXTERIOR DOOR HEAD

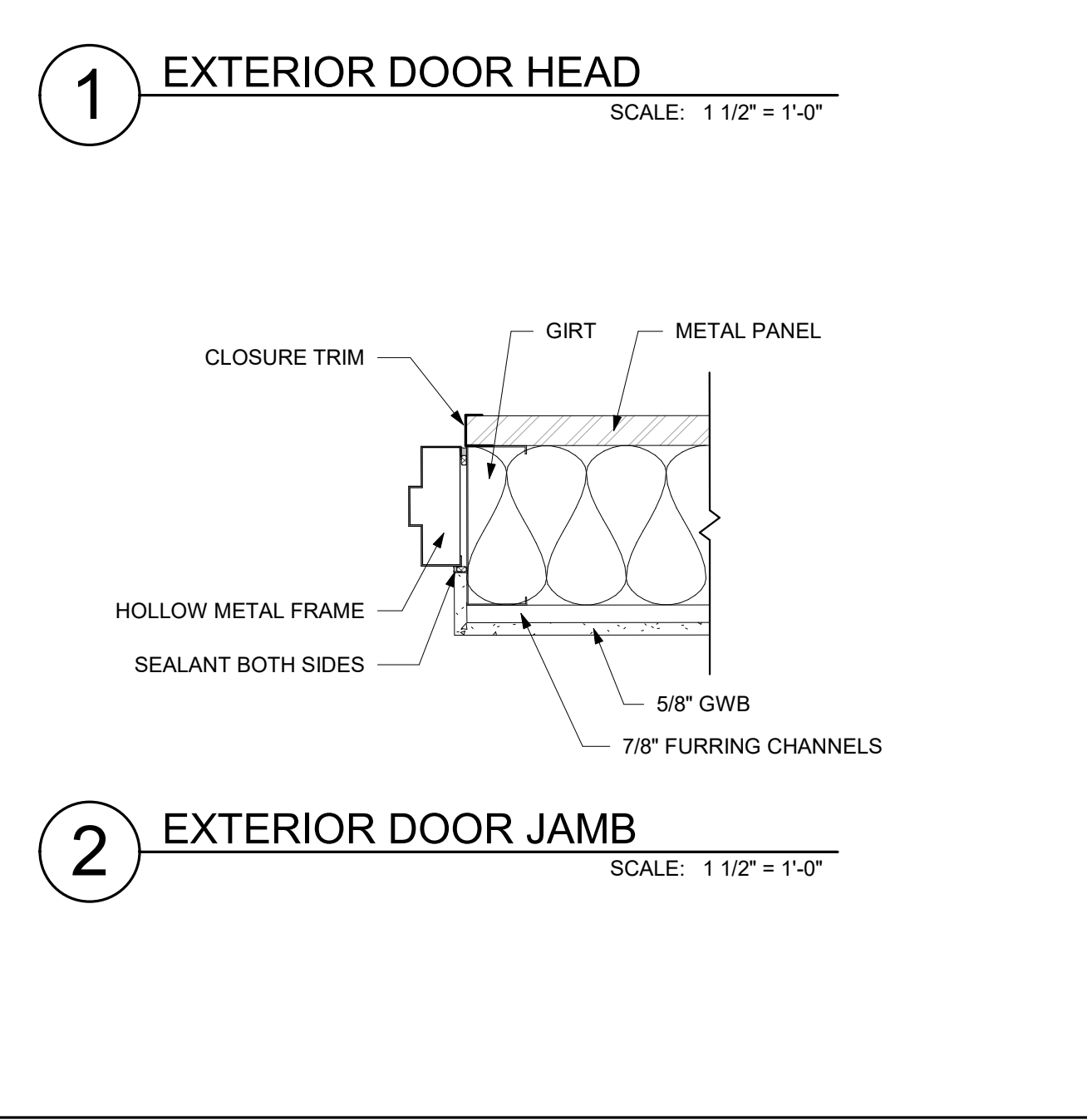
SCALE : 1 1/2" = 1'-0"



3

INTERIOR DOOR HEAD

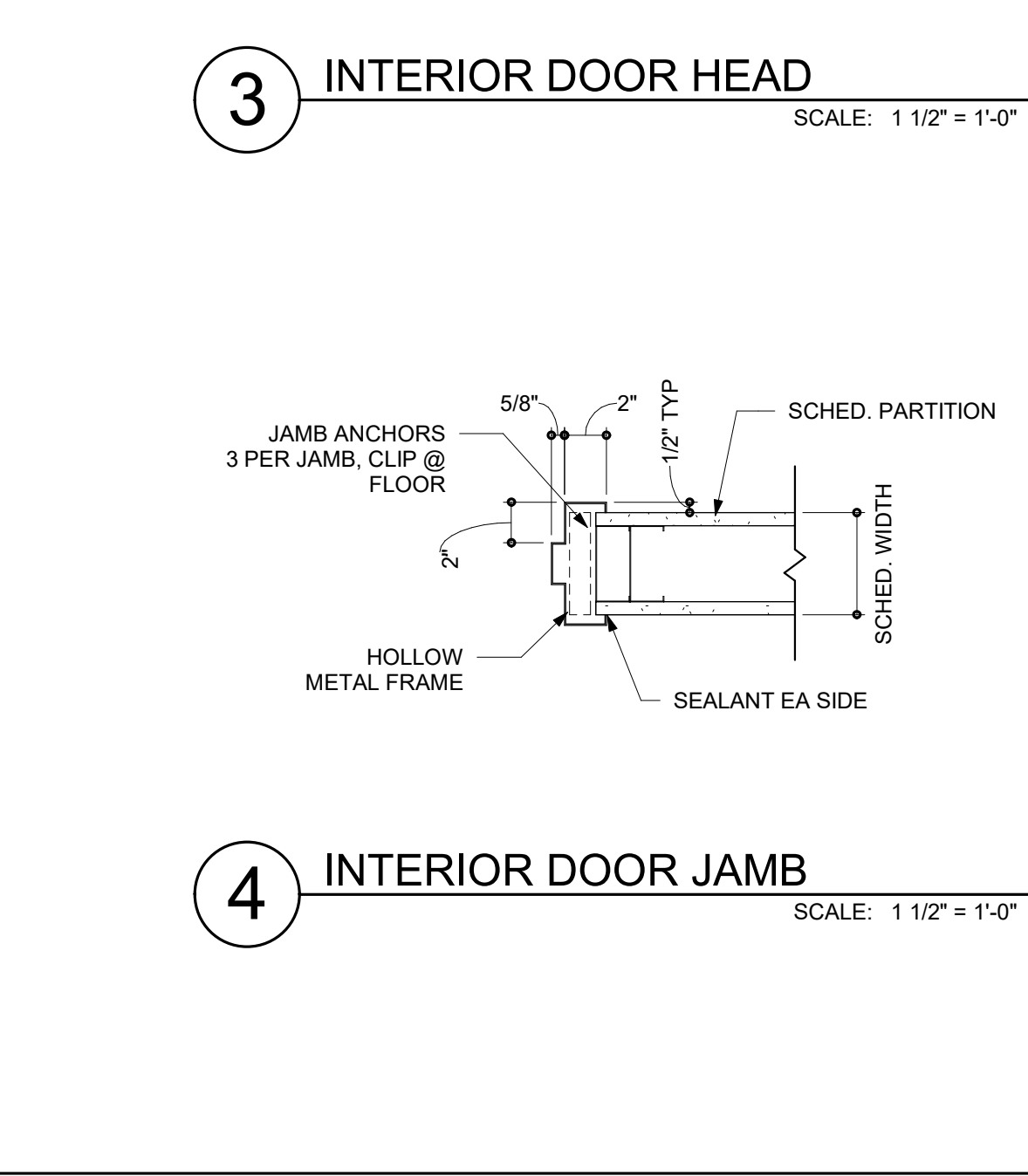
SCALE : 1 1/2" = 1'-0"



2

EXTERIOR DOOR JAMB

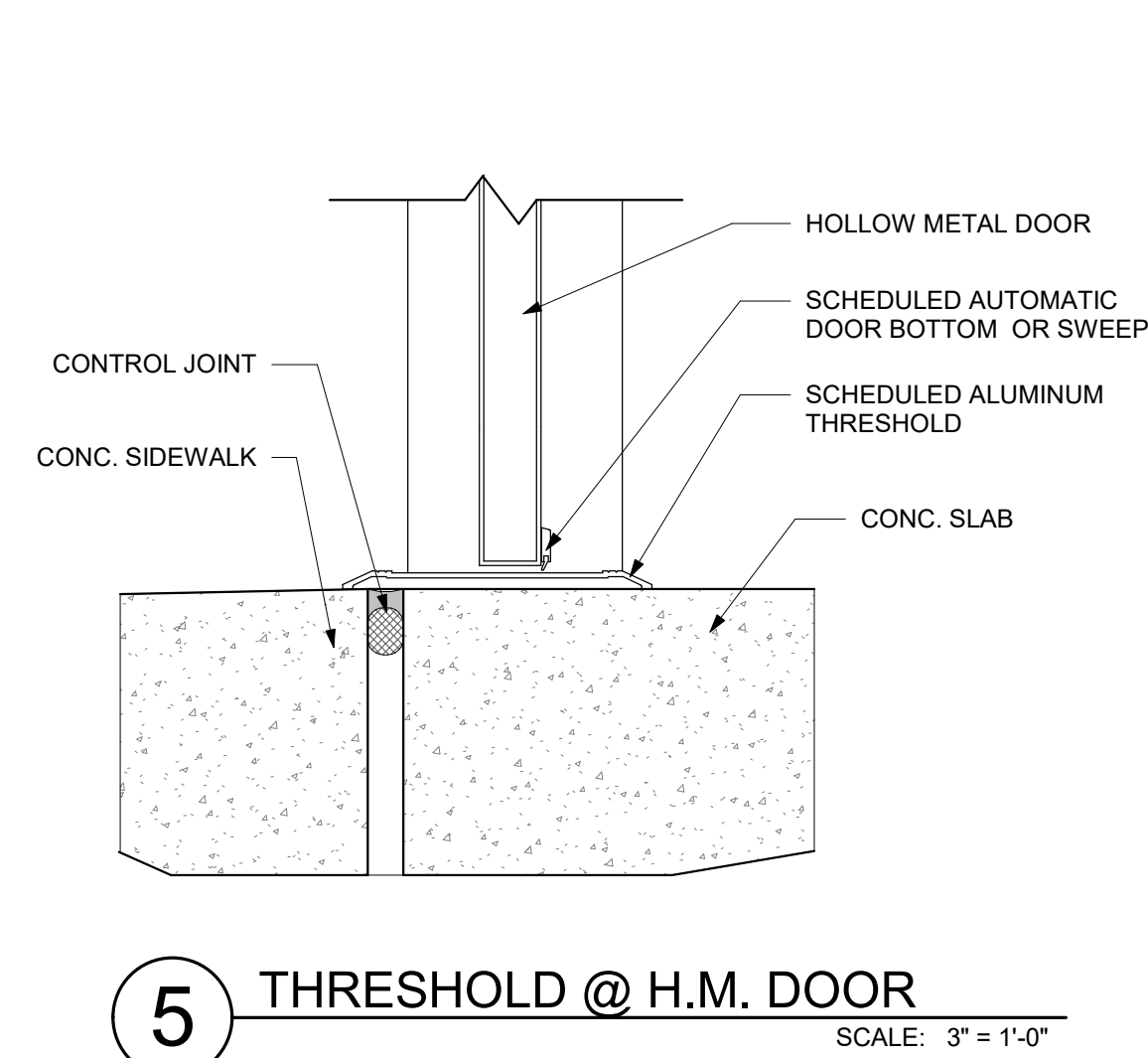
SCALE : 1 1/2" = 1'-0"



4

INTERIOR DOOR JAMB


SCALE : 1 1/2" = 1'-0"



5

THRESHOLD @ H.M. DOOR

SCALE : 3" = 1'-0"



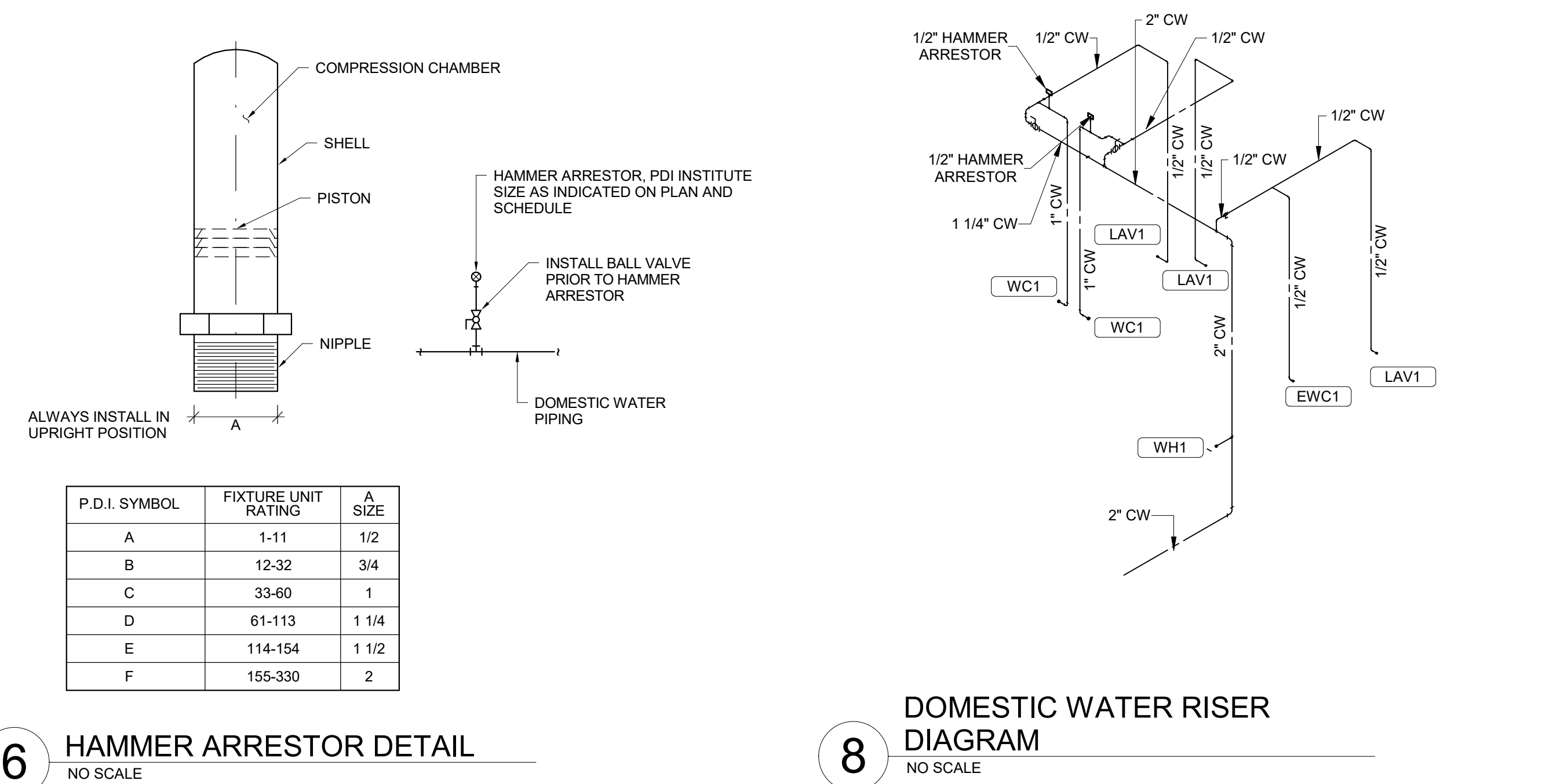
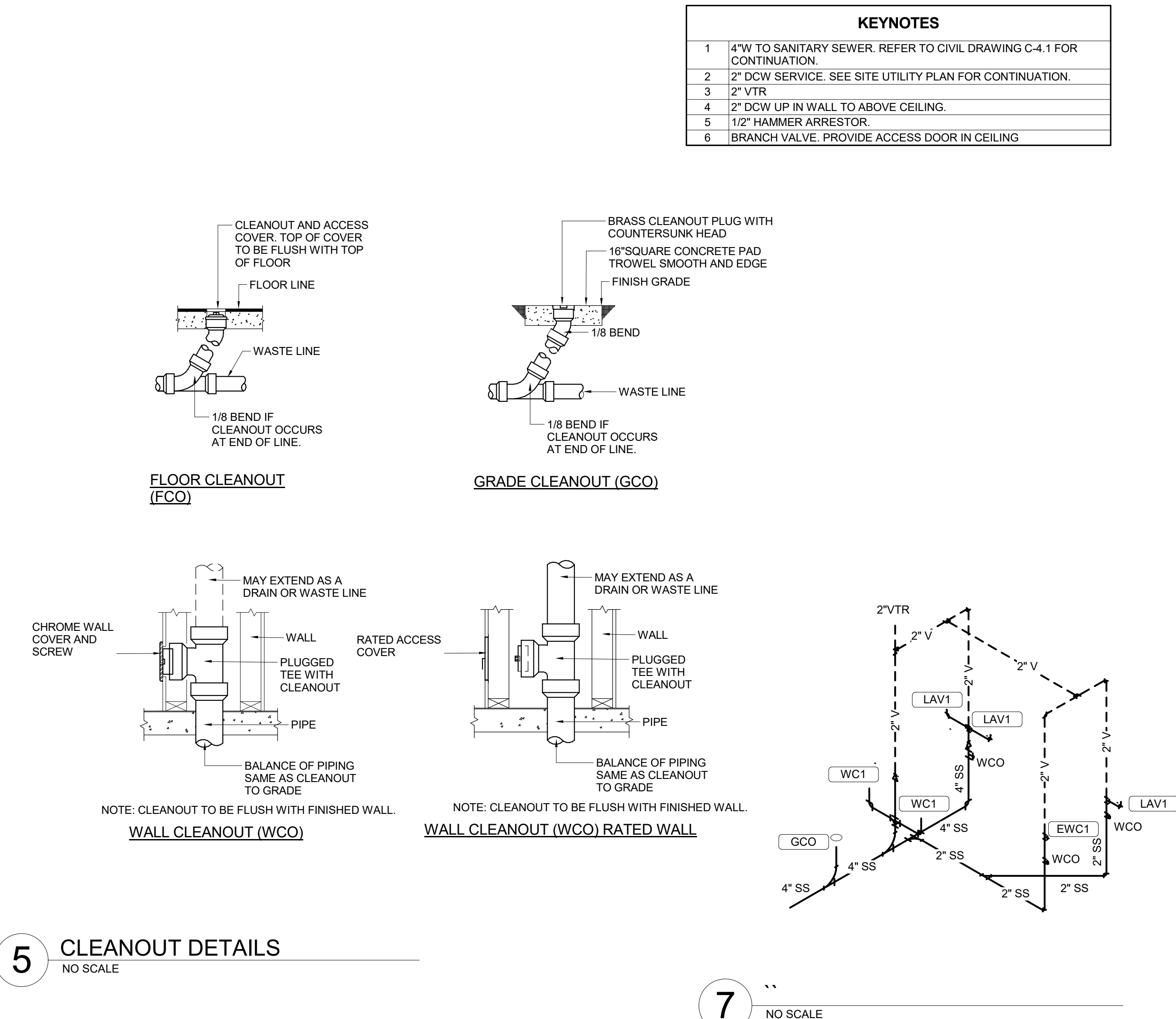
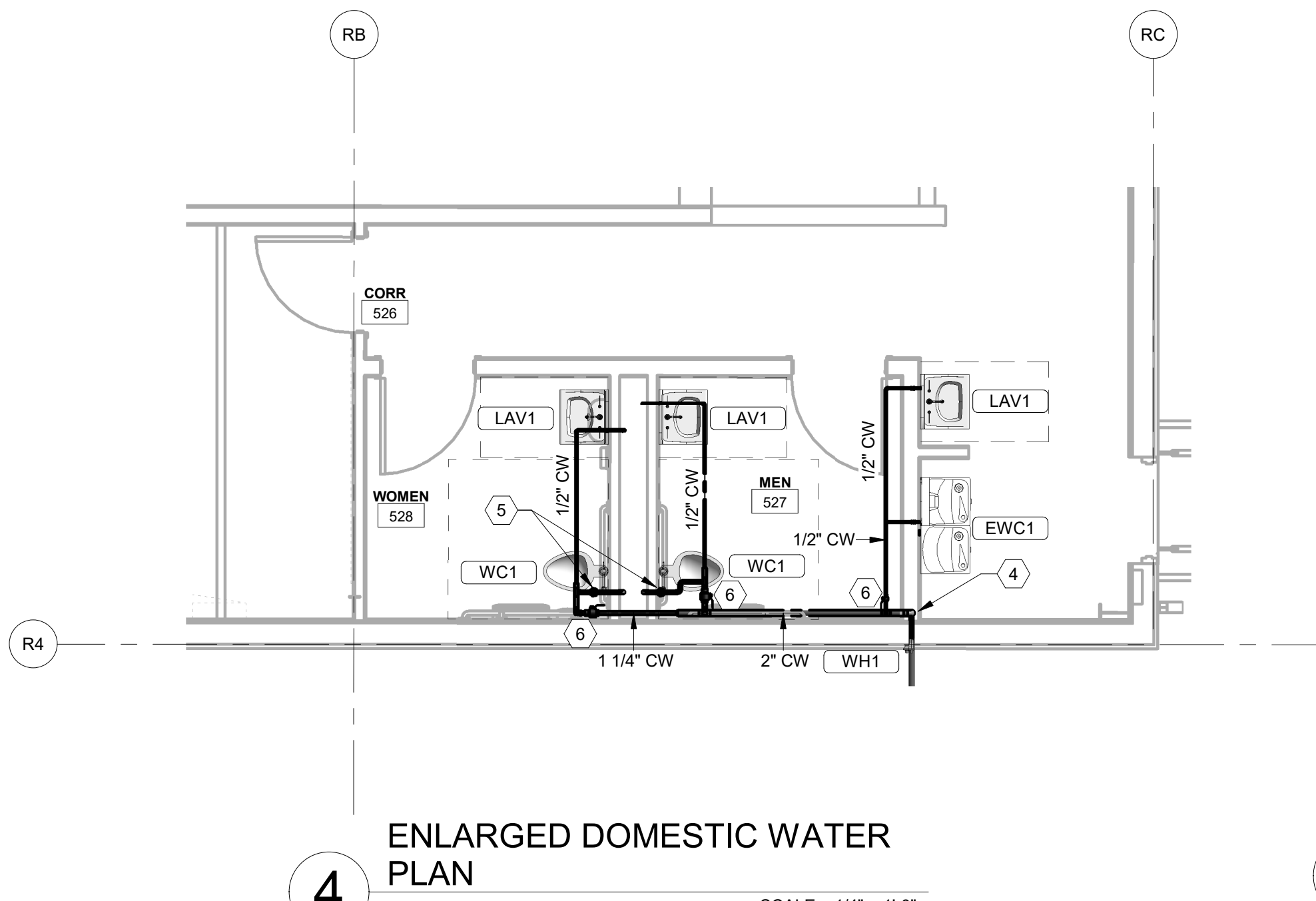
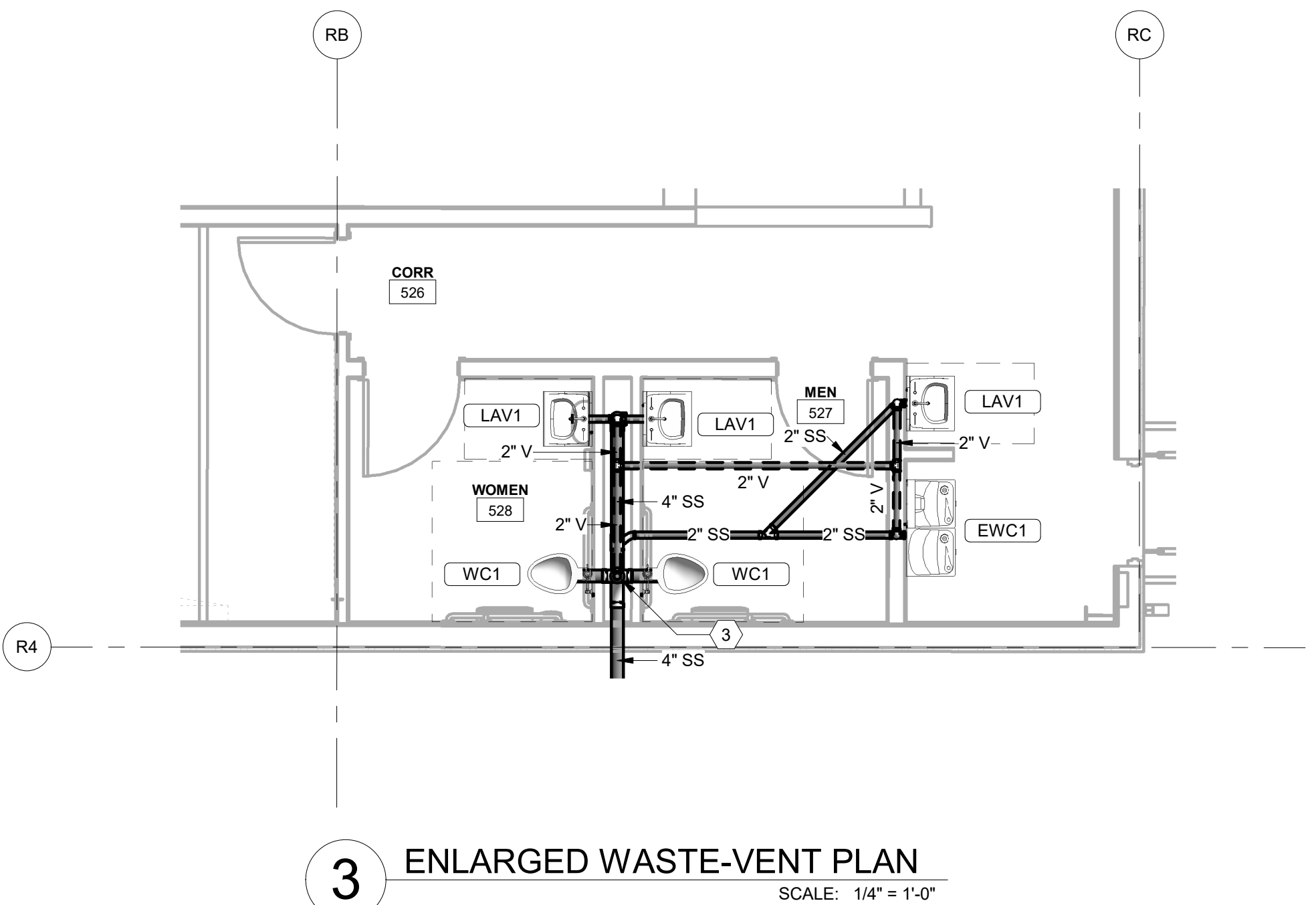
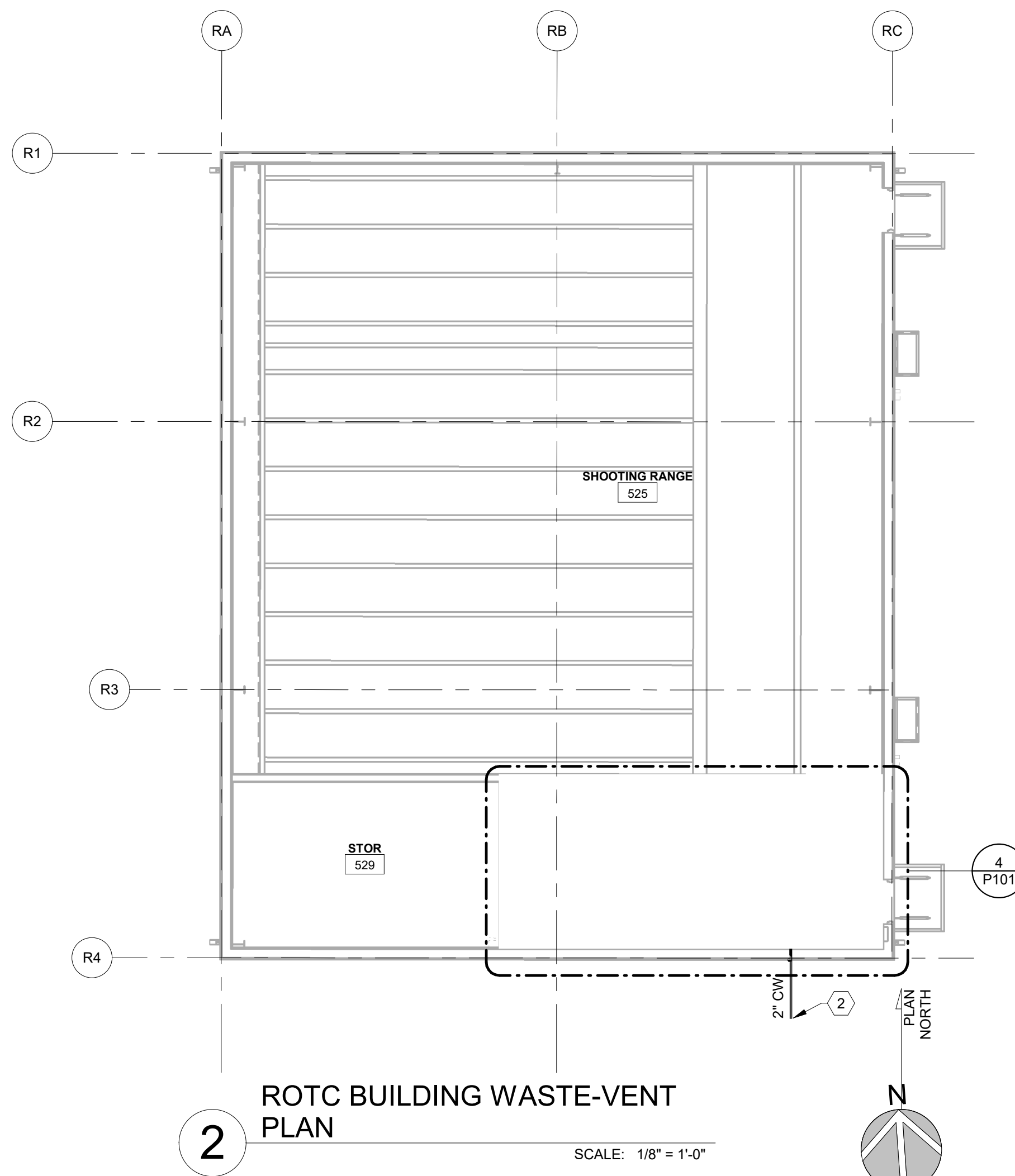
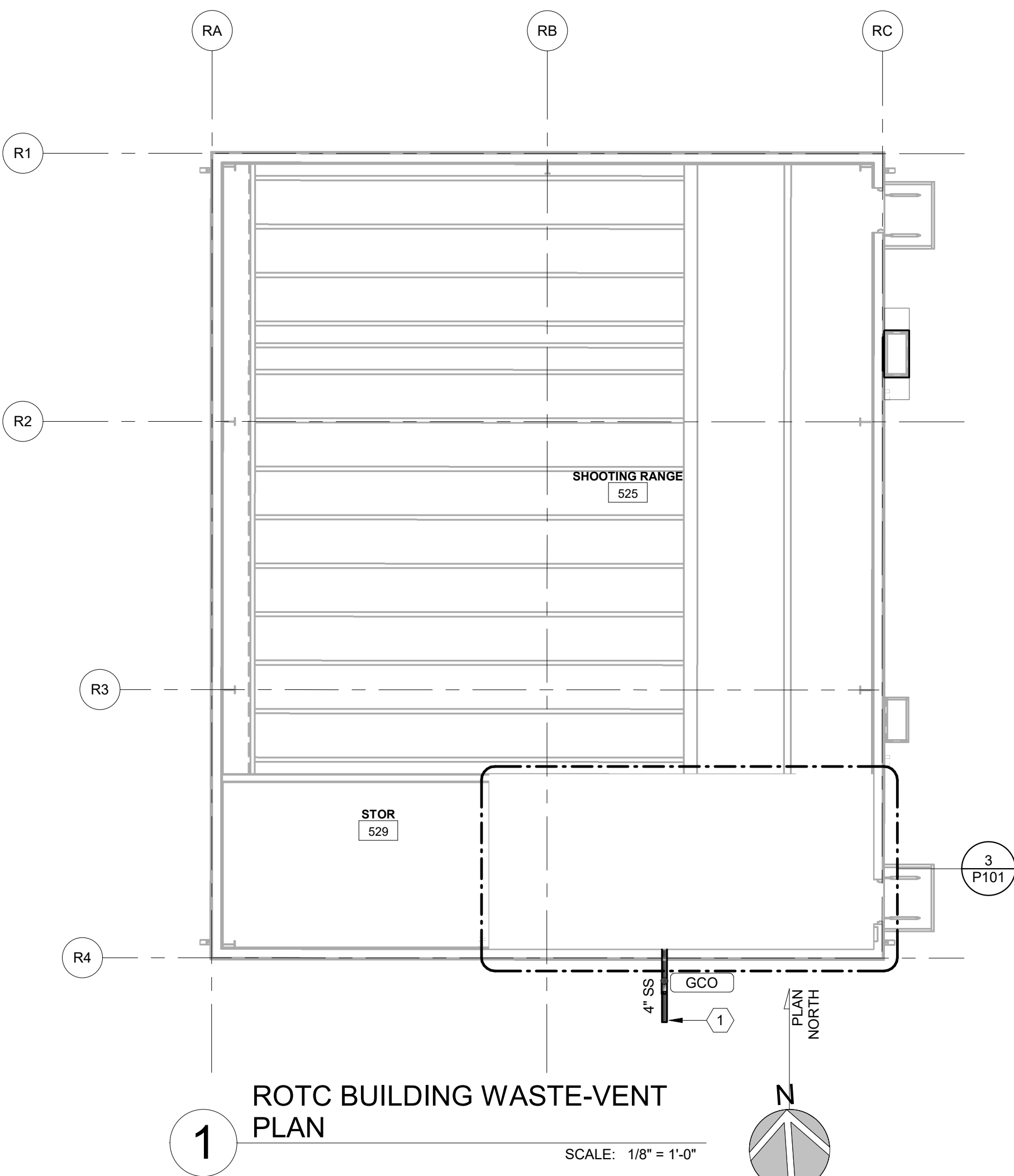
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Dover, DE 19904  
302.734.7950

Rittenhouse Station  
250 South Main Street, Suite 109  
Newark, DE 19711  
302.349.



KEYNOTES	
1	4"W TO SANITARY SEWER. REFER TO CIVIL DRAWING C-4.1 FOR CONTINUATION.
2	2" CW SERVICE. SEE SITE UTILITY PLAN FOR CONTINUATION.
3	2" VTR
4	2" CW UP IN WALL TO ABOVE CEILING.
5	1/2" HAMMER ARRESTOR.
6	BRANCH VALVE. PROVIDE ACCESS DOOR IN CEILING

PLUMBING FIXTURE SCHEDULE																
ID	DESCRIPTION	MANUFACTURER	MODEL	QTY	ALTERNATE MANUFACTURERS	MATERIAL DESCRIPTION	FINISH	TRIM MANUFACTURER	TRIM TYPE	Trim Model	Trim has Motion Sensing Control	PIPE CONNECTIONS				SPECIFICATION
												WASTE PIPE SIZE	VENT PIPE SIZE	COLD WATER ROUGH-IN PIPE SIZE	HOT WATER ROUGH-IN PIPE SIZE	
EW1C	ELECTRIC WATER COOLER, DUAL HEIGHT, BOTTLE FILLER, NON-FILTERED, ADA	ELKAY	EZSTL8WSLK	1	HALSEY-TAYLOR, OASIS	GALVANIZED STEEL	LIGHT GRAY GRANITE	ELKAY	FLOOR MOUNTED CARRIER	MLP200	Yes	2"	2"	1/2"	TWO LEVEL WALL HUNG WATER COOLER WITH BOTTLE FILLING STATION ON LOW SIDE. THE UNIT SHALL BE COMPLETE WITH CABINET, MOUNTING FRAME, SELF CLOSING EASY TOUCH SIDE AND FRONT PUSHBAR CONTROLS, FLEXIGUARD SAFETY BUBBLER, REFRIGERATING SYSTEM, AIR COOLED, 120 VOLT, 60 CYCLE, SINGLE PHASE POWER CONNECTION, FULLY AUTOMATIC, COMPLETE AND READY TO OPERATE.	
LAV1	STUDENT WALL HUNG LAVATORY, METERING, CW ONLY, WALL HUNG, ADA	KOHLER	K-2812	3	-	CAST IRON	ENAMELED	T&S BRASS	MANUAL METERING SINGLE TEMPERATURE	B-0712	No	2"	2"	1/2"	WALL HUNG LAVATORY WITH BACKSPASH, SINGLE HOLE DRILL, DECK-MOUNTED METERING FAUCET, COLD WATER ONLY, GRID DRAIN, LOOSE KEY ANGLE STOPS AND SUPPLIES. INSULATE WATER AND WASTE WITH INSULATION KIT. MOUNT AT ADA COMPLIANT HEIGHT. INSULATE WATER AND WASTE TO	
WC1	ELONGATED, DUAL FLUSH, VITREOUS CHINA, TOP SPUD, FLOOR MOUNTED WATER CLOSET, ADA	AMERICAN STANDARD	3043.001	2	SLOAN, KOHLER	WHITE VITREOUS CHINA	CHROME	SLOAN	MANUAL DUAL FLUSH FLUSHOMETER	WES-111-1.6/1/1	No	4"	2"	1"	ELONGATED FLOOR MOUNTED, 1-1/2" TOP SPUD, MANUAL DUAL FLUSH FLUSHOMETER, 11-1/2" ROUGH-IN, OPEN FRONT SEAT WITH SELF SUSTAINING, STAINLESS STEEL CHECK HINGES	
WH1	EXTERIOR WALL HYDRANT	WOODFORD	67	1	PRIER, MIFAB	BRASS, COPPER, STAINLESS STEM	CHROME				No			3/4"	NON-FREEZE TYPE WALL HYDRANT, WITH DOUBLE CHECK BACKFLOW PREVENTER, VALVE ON THE INSIDE OF THE WALL, SPOUT WITH BACKFLOW PREVENTER, AND LOOSE KEY SOCKET ON THE OUTSIDE OF THE WALL. MAKE ARRANGEMENTS WITH THE GENERAL CONTRACTOR TO PROVIDE THE NECESSARY RECESS IN THE WALL. WHERE A RISER TO A WALL HYDRANT OCCURS IN AN OUTSIDE WALL THE CONTRACTOR SHALL INSULATE THE CHASE WITH 2" STYROFOAM INSULATION ON ALL SIDES OF THE CHASE, EXCEPT THE INSIDE WALL OF THE CHASE. PROVIDE SHUTOFF VALVE IN ACCESSIBLE LOCATION.	
Grand total: 7																

FIXTURE UNIT SUMMARY												
FIXTURE SYMBOL	FIXTURE DESCRIPTION	COUNT	LOCATION		PIPE SIZE					FIXTURE UNITS		
			NAME	NO.	WASTE	VENT	CW	HW	WFO	CWFO	HWFO	
EW1	ELECTRIC WATER COOLER, DUAL HEIGHT, BOTTLE FILLER, NON-FILTERED, ADA	1			2"			1/2"		0.5	0.25	0
GCO	Base w/Plug / Coring Sleeve / Head / Cover - 4" No-Hub	1								0	0	0
LAV1	STUDENT WALL HUNG LAVATORY, METERING, CW ONLY, WALL HUNG, ADA	3			2"			1/2"		6	3	0
WC1	ELONGATED, DUAL FLUSH, VITREOUS CHINA, TOP SPUD, FLOOR MOUNTED WATER CLOSET, ADA	2			4"			1"		8	20	0
WH1	EXTERIOR WALL HYDRANT	1						3/4"		0	3	0
Grand total: 8										14.5 26.25 0		

BECKER  
MORGAN  
GROUP

ARCHITECTURE  
PLANNING  
North Carolina  
3333 Jackle Drive, Suite 120  
Wilmington, NC 28403  
910.341.7600  
Maryland  
312 West Main St, Suite 300  
Salisbury, MD 21801  
410.544.9100  
Delaware  
309 S Governors Ave  
Dover, DE 19904  
302.734.7950  
Rittenhouse Station  
250 South Main Street, Suite 109  
Newark, DE 19711  
302.369.3700  
www.beckermorgan.com

ISSUED  
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ISSUED: 04.23.20

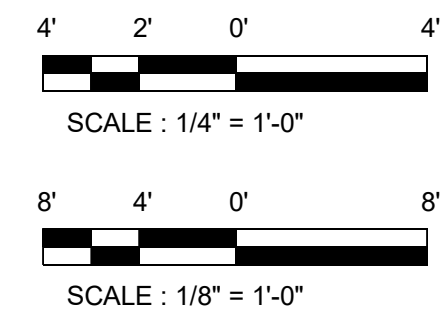
**CBHF**  
Engineers, PLLC  
2246 Yaupon Drive  
Wilmington, NC 28401  
Phone: 910.791.4000  
Fax: 910.791.5266  
www.cbhfind.com  
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FINAL DRAWING  
DO NOT USE FOR  
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PROJECT TITLE  
**NORTH  
BRUNSWICK  
HIGH SCHOOL  
NEW ROTC  
BUILDING**  
114 SCORPION DRIVE N.E.  
LELAND, NC 28451  
DSP #: 100  
DPI SCHOOL #: 1165

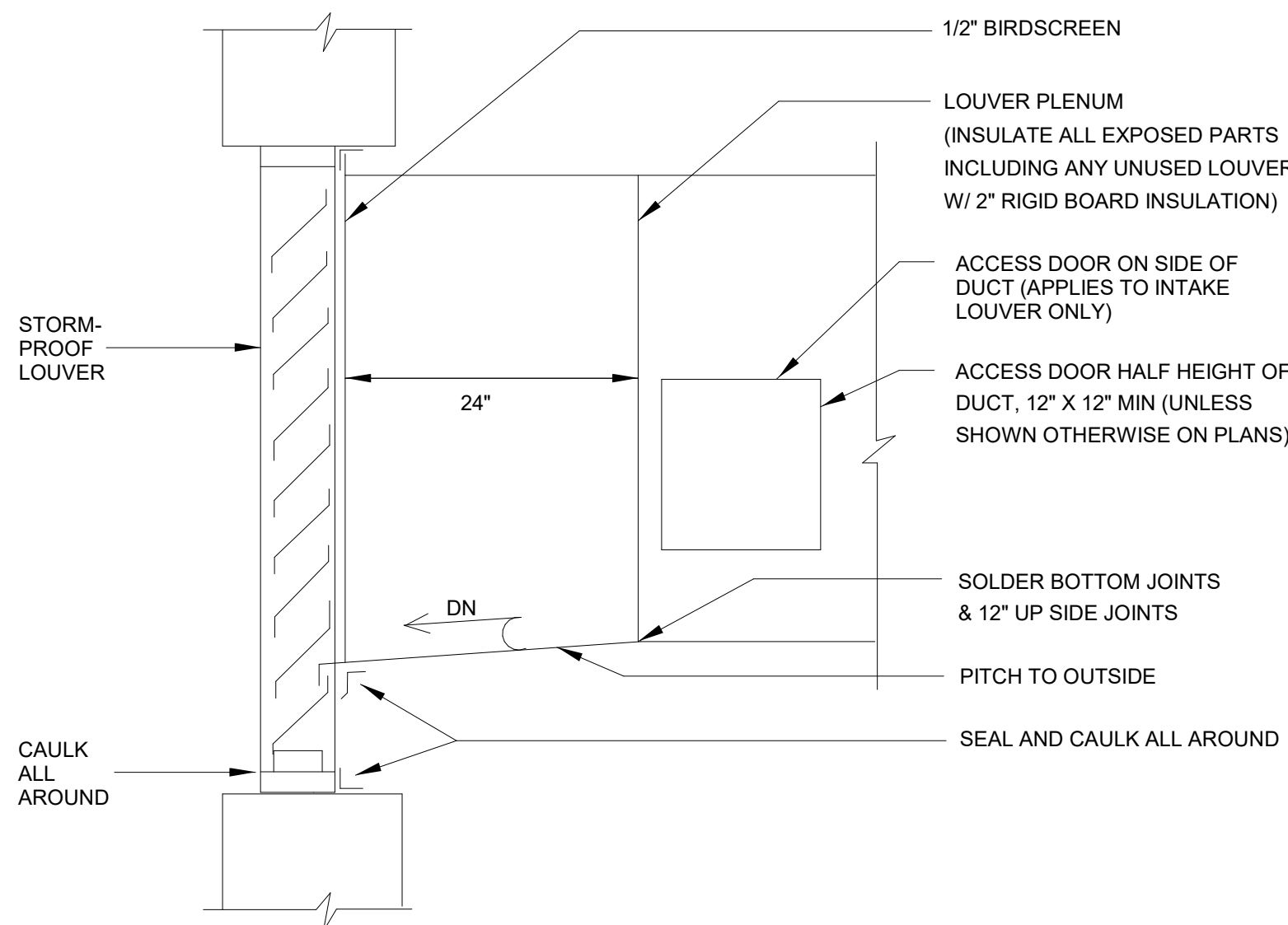
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PLUMBING**

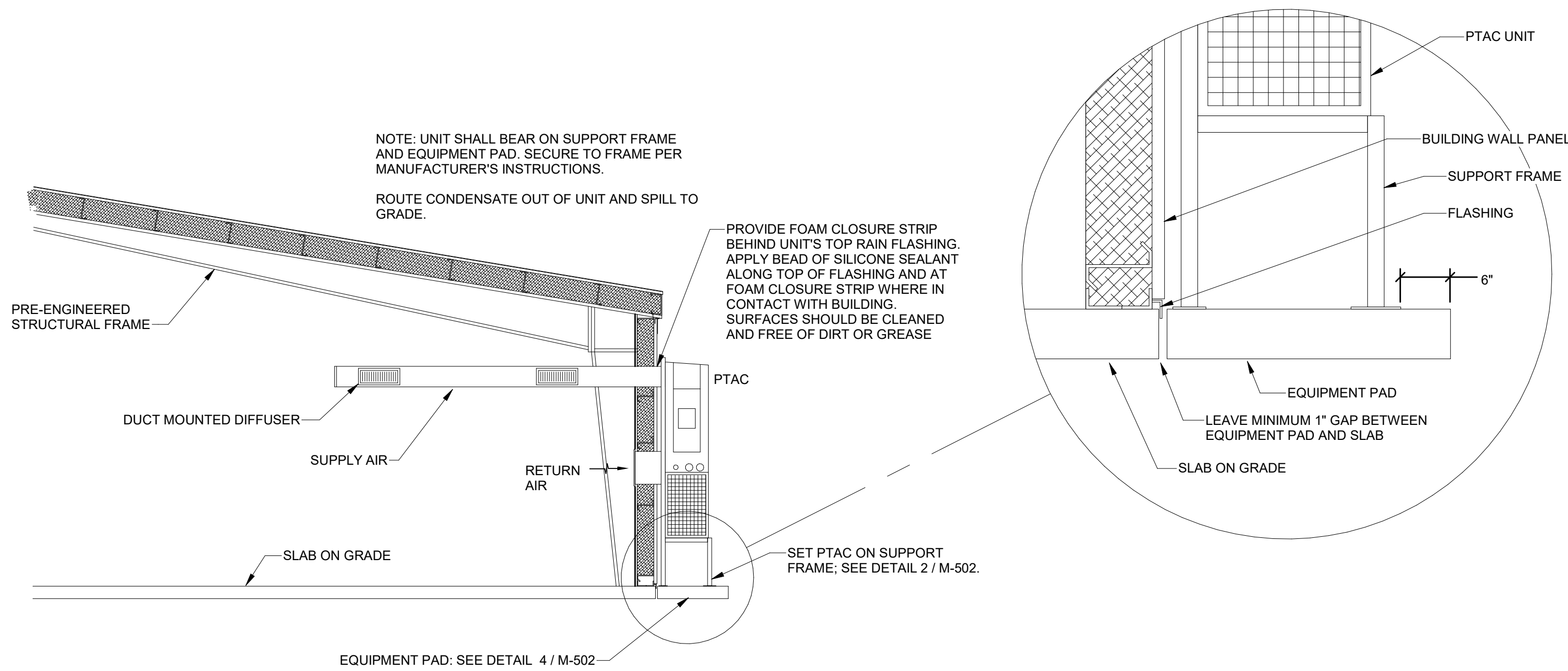
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04.23.20 ISSUED FOR BIDDING  
05.26.20 100% REVIEW SUBMISSION  
01.22.21 80% CD PROGRESS DRAWINGS  
10.14.19 NCDDP SUBMISSION  
07.30.19 SD PROGRESS DRAWINGS  
07.11.19 NCDDP SD SUBMISSION  
Mark Date Description  
PROJECT NO: 2019082.00  
DATE: 10.14.2019  
SCALE: As indicated  
DRAWN BY: JBS PROJ MGR: DMH  
**P101**  
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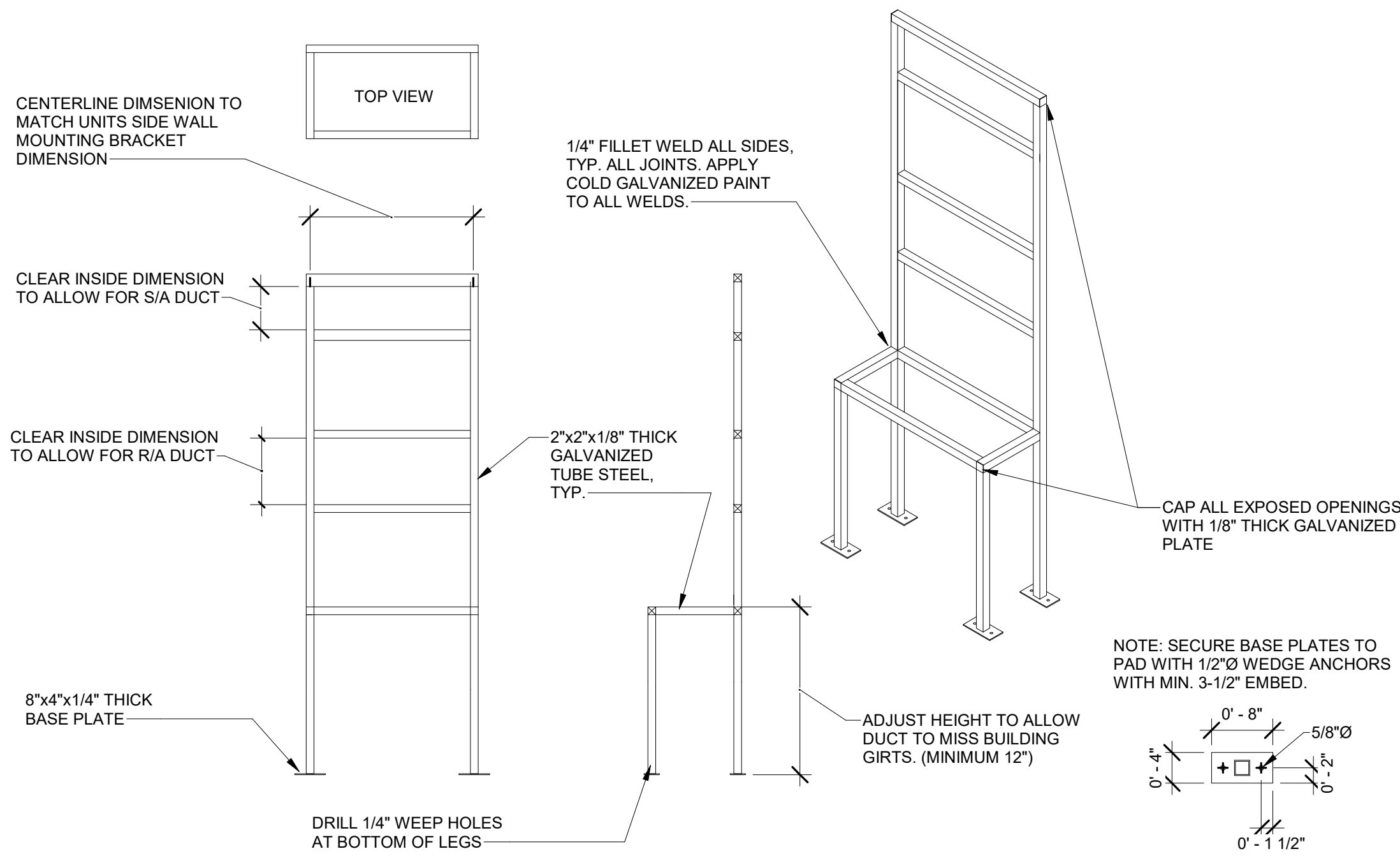




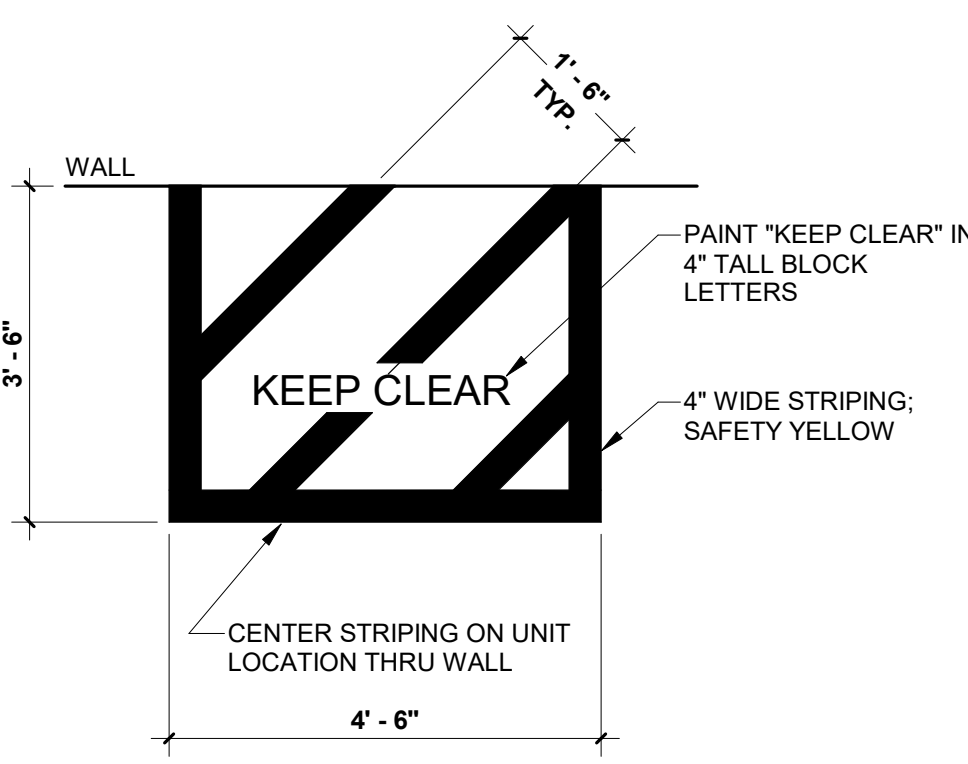




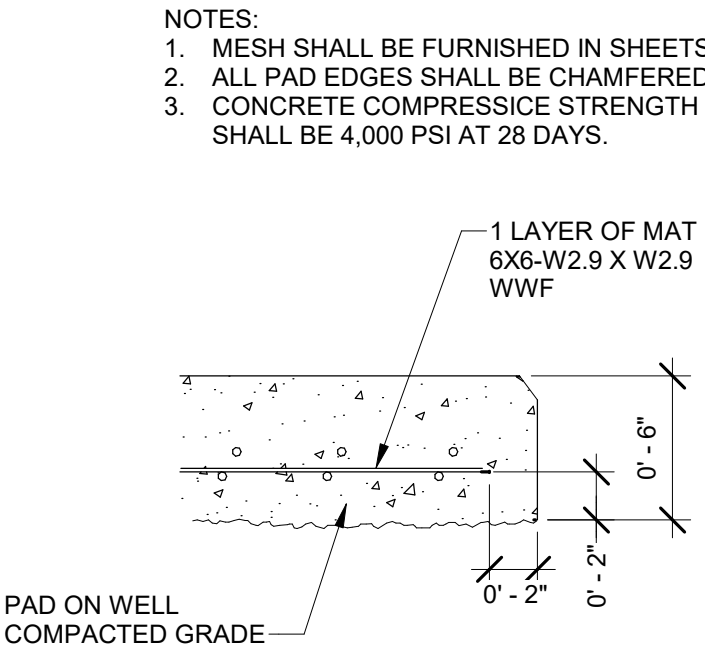
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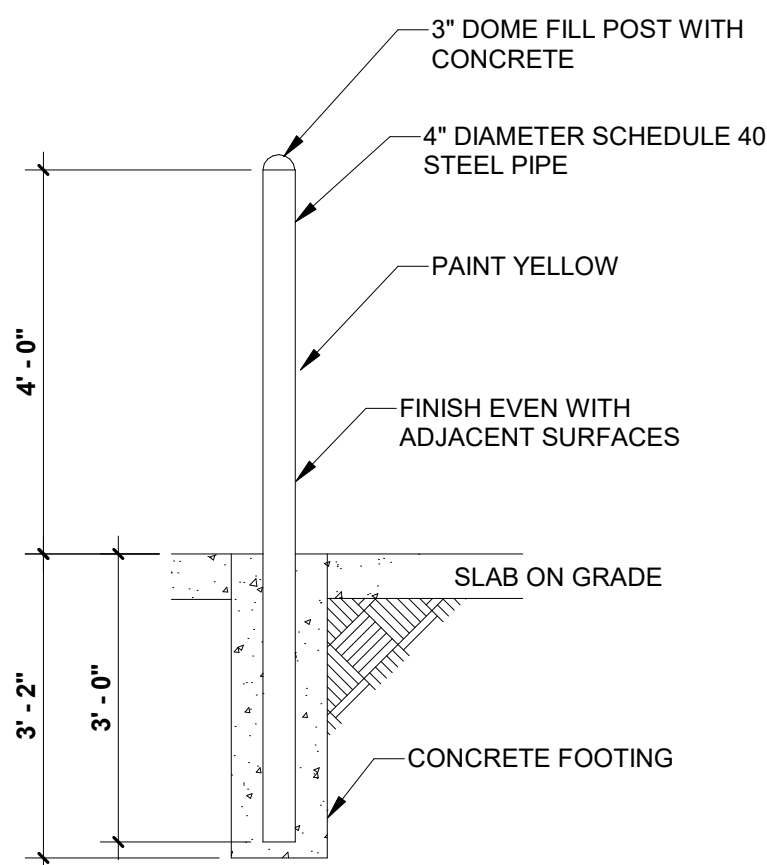
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3 PTAC STRIPING DETAIL  
NO SCALE



4 EQUIPMENT PAD DETAIL  
NO SCALE



5 BOLLARD DETAIL  
NO SCALE

## SELF-CONTAINED AIR CONDITIONER SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	ALTERNATE APPROVED MANUFACTURERS	BASIS OF DESIGN MODEL	SYSTEM TYPE	MOUNTING	SUPPLY AIR FAN				FULL LOAD COOLING CAPACITY (95-80/67)				PART LOAD COOLING CAPACITY (80-80/67)				IPLV	FULL LOAD HEAT PUMP CAPACITY (47/43-70)			HOT GAS REHEAT COIL LATENT CAPACITY (LBS H2O)		ELECTRICAL HEAT CAPACITY (KW)	ELECTRICAL POWER SUPPLY (V/PH/Hz)	MCA	MOCP	WEIGHT	NOTES	ACCESSORIES
						TOTAL AIRFLOW	OUTSIDE AIRFLOW	ESP	MOTOR	NET TOTAL	NET SENSIBLE	EER	AIRFLOW	NET TOTAL	NET SENSIBLE	EER	AIRFLOW		NET TOTAL	COP	AIRFLOW									
PTAC01	BARD	MARVAIR, EUBANKS	T42S1-A	HEAT PUMP	EXTERIOR WALL	1250 CFM	250 CFM	0.15 in-wg	0.75 hp	39500 Btu/h	29700 Btu/h	11	1250 CFM	26800 Btu/h	21700 Btu/h	15	900 CFM	14.6	37300 Btu/h	3.3	1250 CFM	11055 Btu/h	10.43	5.0	240/60/1	57.0 A	60.0 A	500 lb	1	A THRU I
PTAC02	BARD	MARVAIR, EUBANKS	T42S1-A	HEAT PUMP	EXTERIOR WALL	1250 CFM	250 CFM	0.15 in-wg	0.75 hp	39500 Btu/h	29700 Btu/h	11	1250 CFM	26800 Btu/h	21700 Btu/h	15	900 CFM	14.6	37300 Btu/h	3.3	1250 CFM	11055 Btu/h	10.43	5.0	240/60/1	57.0 A	60.0 A	500 lb	1	A THRU I

**NOTES:**  
1. REFER TO DIVISION SPECIFICATION SECTION 238119.13 - WALL MOUNTED SELF-CONTAINED AIR-CONDITIONERS FOR ADDITIONAL INFORMATION.

**ACCESSORIES:**  
A. NON-CORROSIVE DRAIN PAN CONSTRUCTION TO NOT ALLOW STANDING WATER.  
B. TWO STAGE SCROLL COMPRESSORS (BOTH HEATING AND COOLING) WITH DISCHARGE MUFFLER, DOUBLE FLOATING ISOLATION MOUNTING SYSTEM, AND SOUND MUFFLING COVER.  
C. EVAPORATOR COILS CONSTRUCTED WITH HYDROPHILIC FIN STOCK.  
D. ECM INDOOR AND OUTDOOR MOTORS.  
E. MODULATING OUTDOOR FAN MOTOR AND LOW AMBIENT CONTROL.  
F. MODULATING INDOOR FAN MOTOR FOR CONSTANT AIRFLOW.  
G. PLEATED TWO-INCH MERV 8 MEDIA FILTERS.  
H. HOT-GAS REHEAT COIL FOR DEHUMIDIFICATION.  
I. RETURN AIR GRILLE AND SLOPED EXTERIOR TOP.

## LOUVER SCHEDULE

DRAWING CODE	MANUFACTURER	MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	FRAME	DESCRIPTION	MATERIAL	LOUVER DEPTH (IN)	SIZE (W x H)	SERVICE TYPE	Air Flow	PERFORMANCE RATINGS FREE AREA (SF)	S.P. LOSS (IN.H2O)	WATER PENETRATION (OZ/SF)	NOTES	ACCESSORIES
L01	RUSKIN	ELF6375DXH	VENT PRODUCTS, POTTORF	FIXED	EXTERIOR FLANGE	HORIZONTAL, DRAINABLE-BLADE	ALUMINUM	6	16"x16"	E/A, General Exhaust Air	140 CFM	7.7	0.01	-	1.2	A,B

**NOTES:**  
1. REFER TO DIVISION 23 SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.  
2. FINISH AS SELECTED BY ARCHITECT FROM MANUFACTURERS FULL RANGE OF COLOR AND GLOSS.

**ACCESSORIES:**  
A. BIRD SCREENING (MATERIAL TO MATCH LOUVER MATERIAL).  
B. TAMCO DAMPER OR APPROVED EQUAL WITH 24V ACTUATOR. INTERLOCK WITH RESPECTIVE POWER VENTILATOR (SEE PLANS).

## POWER VENTILATOR SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL NO.	ALTERNATE APPROVED MANUFACTURERS	FAN TYPE	SERVICE	CAPACITIES AIRFLOW	Fan ESP	DRIVE TYPE	FAN RPM	ELECTRICAL MOTOR TYPE (ECM)	MOTOR SIZE (HP)(W)	VOLT	PH	FREQUENCY	FLA	MOCP	SONES	WEIGHT	NOTES	ACCESSORIES
PV01	GREENHECK	SP-A50-90-VG	TWIN CITY, PENNBARRY	CEILING MOUNTED VENTILATORS	EXHAUST	70 CFM	0.25 in-wg	DIRECT	1366	Yes	0.008 hp	115 V	1	60 Hz	0.3 A	15.0 A	0.9	15 lb	1	A,B,C
PV02	GREENHECK	SP-A50-90-VG	TWIN CITY, PENNBARRY	CEILING MOUNTED VENTILATORS	EXHAUST	70 CFM	0.25 in-wg	DIRECT	838	Yes	0.008 hp	115 V	1	60 Hz	0.3 A	15.0 A	0.9	15 lb	1	A,B,C

**NOTES:**  
1. REFER TO DIVISION 23 SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

**ACCESSORIES:**  
A. GRAVITY DAMPER.  
B. 120V TO 277V TRANSFORMER PROVIDED BY MECHANICAL CONTRACTOR, INSTALLED BY ELECTRICAL CONTRACTOR.  
C. FAN CONTROLLED BY OCCUPANCY SENSOR PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.

## DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN MODEL	ALTERNATE APPROVED MANUFACTURERS	TYPE	SERVICE	NECK SIZE	MODULE SIZE	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	TITUS	300FS	PRICE, METAL AIRE	LOUVERED DOUBLE DEFLECTION GRILLE	SUPPLY	12 x 6	-	ALUMINUM	WHITE ENAMEL	DUCT / CEILING SURFACE	1,2,3	A

**NOTES:**  
1. REFER TO DIVISION 23 SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.  
2. DUCT BRANCH CONNECTION SIZE TO BE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS NOTED OTHERWISE ON PLANS.  
3. COORDINATE FINAL COLOR AND FINISH WITH ARCHITECT.

**ACCESSORIES:**  
A. OPPOSED BLADE DAMPER.

### SELF-CONTAINED AIR CONDITIONING

DESCRIPTION: SINGLE PACKAGED VERTICAL DIRECT EXPANSION (DX) HEAT PUMP SYSTEM CONSISTING OF VARIABLE SPEED AIR VOLUME, TWO STAGES OF COOLING CAPACITY, TWO STAGES OF HEATING CAPACITY (COMPRESSOR AND AUXILIARY ELECTRIC), DEMAND CONTROL VENTILATION, UNDER CONTROL OF DDC CONTROL SYSTEM.

UNIT START/STOP CONTROL: START/STOP UNIT FAN BASED ON (1) USER-DEFINED "ON/OFF" SCHEDULE, OR (2) OPERATOR COMMAND.

SPACE TEMPERATURE SETPOINTS SHALL BE AS FOLLOWS UNLESS MODIFIED BY USER:

"ON" PERIOD: TEMPERATURE: 68-78°F COMFORT ZONE  
HUMIDITY: 60% RH HIGH LIMIT

"OFF" PERIOD: TEMPERATURE: 85°F HIGH LIMIT  
HUMIDITY: 70% RH HIGH LIMIT

SPACE TEMPERATURE SETPOINTS SHALL BE ADJUSTABLE BY SPACE OCCUPANTS.

DURING "ON" PERIODS, COMMAND UNIT FAN "ON".

DURING "OFF" PERIODS, COMMAND UNIT FAN "OFF" UNLESS THERE IS A CALL FOR COOLING INDICATED BY SPACE TEMPERATURE.

VENTILATION AIR CONTROL: THE OUTDOOR AIR DAMPER SHALL OPEN AND CLOSE BASED ON USER-DEFINED "OCCUPIED/ UNOCCUPIED SCHEDULE".

DURING "OCCUPIED" PERIODS, THE SUPPLY FAN SHALL RUN CONTINUOUSLY AND THE OUTDOOR AIR DAMPER SHALL OPEN TO MAINTAIN VENTILATION AIRFLOW AS SCHEDULED. THE DX COOLING AND HEATING SHALL STAGE TO MAINTAIN THE OCCUPIED SPACE TEMPERATURE SETPOINT.

DURING "UNOCCUPIED" PERIODS, THE OUTDOOR AIR DAMPER SHALL BE CLOSED.

"ON" PERIOD SPACE TEMPERATURE: DURING "ON" PERIODS, THE UNIT FAN IS ENERGIZED, CONTROL SPACE TEMPERATURE AS FOLLOWS:

ON A RISE IN SPACE TEMPERATURE ABOVE THE MAXIMUM COMFORT ZONE TEMPERATURE, PROVIDE COOLING AS FOLLOWS:

COOLING AIR FLOW SHALL BE MINIMUM UNIT AIRFLOW. INITIATE STAGE 1 COOLING TO MAINTAIN SPACE TEMPERATURE AT MAXIMUM COMFORT ZONE TEMPERATURE SETPOINT.

ON A CONTINUED RISE IN SPACE TEMPERATURE, INCREASE FAN SPEED FROM MINIMUM SPEED TO MAXIMUM SPEED. INITIATE STAGE 2 COOLING TO MAINTAIN SPACE TEMPERATURE AT MAXIMUM COMFORT ZONE TEMPERATURE SETPOINT.

ON A FALL IN SPACE TEMPERATURE BELOW THE MINIMUM COMFORT ZONE TEMPERATURE, PROVIDE HEATING AS FOLLOWS:

HEATING AIR FLOW SHALL BE MAXIMUM UNIT AIRFLOW. INITIATE STAGE 1 HEATING (COMPRESSOR) TO MAINTAIN SPACE TEMPERATURE AT MINIMUM COMFORT ZONE TEMPERATURE SETPOINT.

IF SPACE TEMPERATURE CONTINUES TO FALL, ENERGIZE ELECTRIC COIL TO MAINTAIN SPACE TEMPERATURE AT MINIMUM COMFORT ZONE TEMPERATURE SETPOINT.

WHEN THE SPACE TEMPERATURE IS WITHIN THE LIMITS OF THE MINIMUM AND MAXIMUM ZONE TEMPERATURE SETPOINT, UNIT FAN SHALL OPERATE AT MINIMUM SPEED AND NO COOLING OR HEATING SHALL BE INITIATED.

"OFF" PERIOD HIGH LIMIT TEMPERATURE: DURING "OFF" PERIODS, THE UNIT SHALL BE COMMANDED "OFF" UNLESS SPACE TEMPERATURE LIMITS DICTATES THE FOLLOWING:

ON A RISE IN SPACE TEMPERATURE ABOVE THE HIGH LIMIT TEMPERATURE SETPOINT, PROVIDE COOLING AS FOLLOWS:  
COOLING AIR FLOW SHALL BE MINIMUM UNIT AIRFLOW. INITIATE STAGE 1 COOLING TO MAINTAIN SPACE TEMPERATURE AT MAXIMUM COMFORT ZONE TEMPERATURE SETPOINT.

ON A CONTINUED RISE IN SPACE TEMPERATURE, INCREASE FAN SPEED FROM MINIMUM SPEED TO MAXIMUM SPEED. INITIATE STAGE 2 COOLING TO MAINTAIN SPACE TEMPERATURE AT MAXIMUM COMFORT ZONE TEMPERATURE SETPOINT.

ON A FALL IN SPACE TEMPERATURE BELOW THE LOW LIMIT TEMPERATURE SETPOINT, PROVIDE HEATING AS FOLLOWS:

HEATING AIR FLOW SHALL BE MAXIMUM UNIT AIRFLOW. INITIATE STAGE 1 HEATING (COMPRESSORS) TO MAINTAIN SPACE TEMPERATURE AT LOW LIMIT TEMPERATURE SETPOINT.

IF SPACE TEMPERATURE CONTINUES TO FALL, ENERGIZE ELECTRIC COIL TO MAINTAIN SPACE TEMPERATURE AT MINIMUM COMFORT ZONE TEMPERATURE SETPOINT.

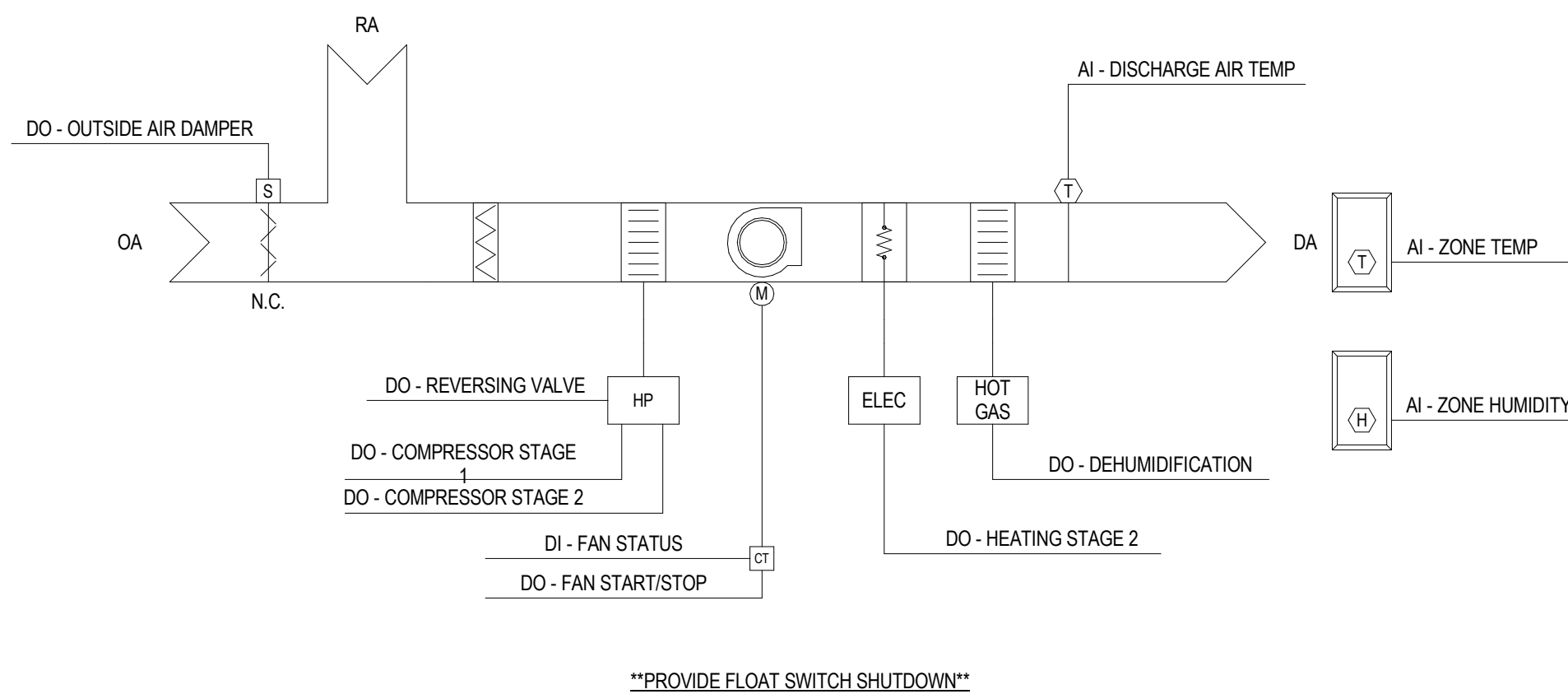
ONCE SPACE CONDITIONS RETURN TO WITHIN LIMIT CONDITIONS, DE-ENERGIZE UNIT.

DEHUMIDIFICATION: ON A RISE IN ANY SPACE HUMIDITY TO ABOVE THE HIGH LIMIT HUMIDITY SETPOINT, PROVIDE DEHUMIDIFICATION AS FOLLOWS:

IF UNIT IS COOLING, DO NOTHING. IF UNIT IS NOT IN COOLING, COMMAND UNIT FAN "ON" AND INITIATE THE COOLING. MODULATE REHEAT VALVE AS NEEDED TO MAINTAIN SPACE TEMPERATURE.

## SELF-CONTAINED AIR CONDITIONER POINTS

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS				SHOW ON GRAPHIC
	AI	AO	DI	DO	SCHED	TREND	ALARM		
SPACE TEMP	x							x	
DISCHARGE TEMP	x						x		x
SPACE HUMIDITY	x						x		x
FAN STATUS			x				x		x
FAN START STOP				x		x			x
REVERSING VALVE (HEATING STAGE 1)				x		x			x
COMPRESSOR STAGE 1			x		x				x
OUTSIDE AIR DAMPER			x		x				x
HEATING STAGE 2			x		x				x
OCCUPIED SCHEDULE					x				x
DAMPER SCHEDULE					x				
SPACE HEATING SETPOINT	x					x			x
SPACE COOLING SETPOINT	x					x			x
SPACE HUMIDITY SETPOINT	x					x			x
HIGH ZONE TEMP							x		
LOW ZONE TEMP							x		
COMPRESSOR RUNTIME EXCEEDED							x		
HIGH DISCHARGE AIR TEMP							x		
LOW DISCHARGE AIR TEMP							x		
HIGH ZONE HUMIDITY							x		
LOW ZONE HUMIDITY							x		
FLOAT SWITCH							x		



## SELF-CONTAINED AIR CONDITIONER CONTROL DETAIL

1

NO SCALE

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL BE IN FULL COMPLIANCE WITH NFPA, THE NORTH CAROLINA STATE BUILDING CODE, ALL LOCAL CODES AND ORDINANCES AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.

2. ALL EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY-RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, FOR THE CONDITIONS OF INSTALLATION. ALL MATERIAL, EQUIPMENT AND DEVICES SHALL BE NEW CURRENT PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS. EQUIPMENT SHALL BE SUITABLE FOR ITS APPLICATION (E.G. WHEN INSTALLED OUTDOORS, IT SHALL BE WEATHERPROOF, ETC.)

3. THE CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR ELECTRICAL EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.

4. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.

5. UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ADDITIONAL CIRCUITS SHALL BE INSTALLED WHEREVER NEEDED TO CONFORM TO THE SPECIFIC REQUIREMENTS OF EQUIPMENT.

6. TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ALL TEMPORARY EQUIPMENT WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. THE CONTRACTOR SHALL PROVIDE DETAILS, METHODS, MATERIALS, ETC. FOR REVIEW PRIOR TO MAKING TEMPORARY CONNECTIONS. FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS INCLUDING CONTROL EQUIPMENT, MOTOR STARTERS, BRANCH AND FEEDER CIRCUIT BREAKERS, PANELBOARDS, TRANSFORMERS, ETC. FOR TEMPORARY POWER. COORDINATE WITH THE ELECTRICAL UTILITY COMPANY AS REQUIRED.

7. THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.

8. ALL ELECTRICAL EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. ELECTRICAL EQUIPMENT SHALL NOT BE STORED OUT OF DOORS, BUT SHALL BE STORED IN DRY PERMANENT SHELTERS. IF AN APPARATUS HAS BEEN DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH DAMAGE SHALL BE REPLACED AT NO ADDITIONAL COST.

9. DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.

10. CIRCUIT LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS. THE EXACT ROUTING OF THE ELECTRICAL EQUIPMENT, FEEDER AND BRANCH CIRCUIT RACEWAYS AND CABLES IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION.

11. UNLESS DIMENSIONED, DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADJUST EXACT LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES WITH OTHER TRADES. EXACT DEVICE LOCATIONS SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS OR AS DIMENSIONED. IF NOT SHOWN ON THE ARCHITECTURAL DRAWINGS OR DIMENSIONED ON THE ELECTRICAL DRAWINGS, VERIFY EXACT LOCATION WITH THE ARCHITECT/ENGINEER PRIOR TO ROUGH-IN.

12. CONDUIT TERMINATING IN PRESSED STEEL BOXES SHALL HAVE DOUBLE LOCKNUTS AND INSULATED BUSHINGS. CONDUITS TERMINATING IN GASKETED ENCLOSURES SHALL BE TERMINATED WITH GROUNDING TYPE CONDUIT HUBS.

13. DEVICE BOXES SHOWN BACK-TO-BACK SHALL BE OFFSET A MINIMUM OF TWELVE (12) INCHES TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS.

14. BRANCH CIRCUIT HOMERUNS SHOWN ON DRAWINGS INDICATE PHASE CONDUCTORS, NEUTRAL, EQUIPMENT GROUND CONDUCTORS AS REQUIRED. ADDITIONAL CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.

15. SEAL ALL CONDUIT OPENINGS THROUGH EXTERIOR BUILDING WALLS WATERTIGHT.

16. IN WET LOCATIONS AND EXTERIOR, ALL WIRING DEVICES SHALL BE WEATHER-RESISTANT LISTED WITH WEATHERPROOF WHILE IN USE COVER. LIGHTING FIXTURES SHALL BE APPROPRIATELY RATED AND LISTED FOR THE ENVIRONMENT INCLUDING 0 DEGREE BALLASTS FOR FLUORESCENT.

17. RACEWAYS PENETRATING FLOORS, CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKE/TIGHT.

18. RACEWAYS PENETRATING RATED FLOOR, CEILING OR WALL ASSEMBLIES SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE CORRESPONDING UNDERWRITERS LABORATORIES (OR OTHER APPROVED THIRD PARTY TESTING AGENCY) APPROVED AND LISTED FIRESTOPPING MATERIALS AND MANUFACTURER APPROVED INSTALLATION TECHNIQUES COMPLYING WITH ALL APPLICABLE CODES. SEE ARCHITECTURAL DRAWINGS FOR IDENTIFICATION OF RATED WALLS AND CEILINGS.

19. ALL RACEWAYS SHALL BE CONCEALED WHERE POSSIBLE.

20. INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.

21. PROVIDE AND PLACE ALL SLEEVES FOR CONDUITS PENETRATING WALLS, FLOORS, PARTITIONS, ETC. LOCATE ALL NECESSARY SLOTS FOR ELECTRICAL WORK AND FORM BEFORE CONCRETE IS POURED.

22. PATCHING OF WATERPROOFED SURFACES SHALL RENDER THE AREA OF THE PATCHING COMPLETELY WATERPROOF.

23. ALL MOTORS, DRY TYPE TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE CONNECTED TO THE CONDUIT SYSTEM BY MEANS OF A SHORT SECTION (10 INCH MINIMUM) OF FLEXIBLE CONDUIT UNLESS OTHERWISE INDICATED. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED INSIDE THE FLEXIBLE CONDUIT AND TERMINATE AT THE LOAD END WITH AN APPROVED GROUNDING CLAMP OR LUG.

24. SURFACE MOUNTED PANELBOARDS, JUNCTION, OUTLET AND PULL BOXES, RACEWAYS, ETC., INSTALLED ON EXTERIOR SURFACES OR INSIDE ON EXTERIOR WALLS SHALL BE SUPPORTED BY SPACERS TO PROVIDE A 1/4" MINIMUM CLEARANCE BETWEEN THE WALL AND EQUIPMENT.

25. CEILING MOUNTED DEVICES INSTALLED IN ACOUSTICAL TILE CEILING AREAS SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE WITH RODS OF SUFFICIENT SIZE TO PREVENT VERTICAL MOVEMENT OF THE OUTLET BOX. BRIDGES ALONE ARE NOT ADEQUATE UNLESS SPECIFICALLY APPROVED. CEILING MOUNTED EXIT LIGHT FIXTURES SHALL BE INSTALLED LEVEL. DO NOT SUPPORT DEVICES FROM ACOUSTICAL CEILING TILE.

26. EXCAVATION AND TRENCHING REQUIRED FOR THE INSTALLATION OF ELECTRICAL POWER AND TELECOMMUNICATIONS RACEWAYS SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF DIVISION 26 OF THE PROJECT SPECIFICATIONS.

27. PRIOR TO TRENCHING IN ANY AREA, THE CONTRACTOR SHALL CONTACT ELECTRICAL, COMMUNICATIONS/DATA/FIBER, CABLE TELEVISION, GAS AND WATER UTILITY PROVIDERS AND HAVE ALL UTILITIES IN THE AREA IDENTIFIED. DAMAGE TO ANY UNDERGROUND UTILITIES OR STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE PROJECT.

28. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED BY UNDERGROUND LINE MARKING TAPE LOCATED DIRECTLY ABOVE THE RACEWAY AT 6 TO 8 INCHES BELOW FINISHED GRADE. SEE SPECIFICATIONS SECTION 305053.

29. PROVIDE ADHESIVE BACKED RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER.

30. FINAL TYPED PANELBOARD DIRECTORYIES INSTALLED IN THE PANELBOARD DOOR POCKET SHALL INCLUDE FINAL ACTUAL ROOM NAMES AND NUMBERS IN ADDITION TO THE GENERAL DESCRIPTION SHOWN ON THE PANEL SCHEDULES ON THE DRAWINGS.

31. CONDUCTOR SIZING IS BASED ON 75 DEGREE C, COPPER NEC RATINGS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL PROVIDE PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THE ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY FOR EVALUATION/CORRECTION.

32. DO NOT PULL CONDUCTORS UNTIL THE CONDUIT SYSTEM IS COMPLETE IN EVERY DETAIL. IN THE CASE OF CONCEALED WORK, "COMPLETE" MEANS UNTIL ALL ROUGH PLASTERING OR MASONRY HAS BEEN COMPLETED.

33. WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, BRANCH CIRCUITS SHALL CONSIST OF #12 OR #10 AWG MINIMUM PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS IN 1/2" MINIMUM RACEWAY.

34. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS WITH A TOTAL INSTALLED LENGTH GREATER THAN 75 FEET AND/OR BRANCH CIRCUIT HOMERUNS LONGER THAN 50 FEET, I.E., #12 AWG INCREASED TO #10 AWG. USE #10 AWG CONDUCTORS FOR 20 AMPERE, 277 VOLT BRANCH CIRCUITS WITH TOTAL INSTALLED LENGTH GREATER THAN 400 FEET AND/OR BRANCH CIRCUIT HOMERUNS LONGER THAN 125 FEET, I.E., #12 AWG INCREASED TO #10 AWG FOR RECEPTACLE BRANCH CIRCUITS OVER 75 FEET TOTAL LENGTH (INCLUDING THE HOMERUN SEGMENT) AND HOMERUNS OVER 50 FEET.

35. COMMON NEUTRAL MULTIWIRE RECEPTACLE BRANCH CIRCUITS ARE NOT PERMITTED. PROVIDE SEPARATE, INDIVIDUAL NEUTRAL CONDUCTORS FOR MULTIWIRE BRANCH CIRCUITS.

36. KEEP CONDUCTOR SPLICES TO A MINIMUM. INSTALL SPLICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH CONDUCTOR MATERIAL. INSTALL CONDUCTORS AT EACH OUTLET WITH AT LEAST 6 INCHES OF SLACK. CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY THE MANUFACTURER.

37. DO NOT SPLICE BRANCH CIRCUIT HOMERUNS WITHOUT THE PERMISSION OF THE ARCHITECT/ENGINEER. HOMERUNS SHALL BE CONTINUOUS FROM THE LAST OUTLET BOX TO THE SERVING PANELBOARD.

38. DO NOT COMBINE BRANCH CIRCUIT HOMERUNS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.

39. DO NOT CHANGE CIRCUITING SHOWN WITHOUT PERMISSION OF THE ARCHITECT/ENGINEER.

40. TROUGH TAPS SHALL BE AT SWITCH AMPACITY, UNLESS NOTED OTHERWISE.

41. INSTALL WIRING DEVICES AT HEIGHTS AS SHOWN ON THE DRAWINGS. ALSO COORDINATE MOUNTING HEIGHTS WITH THE ARCHITECTURAL DRAWINGS AND CASEWORK DETAILS. IF CONFLICTING, ARCHITECTURAL DRAWINGS AND DETAILS SHALL GOVERN.

42. PROVIDE GROUND FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL IN ACCORDANCE WITH THE NEC INCLUDING ALL ELECTRIC WATER COOLERS, EXTERIOR RECEPTACLES AND RECEPTACLES IN AREAS SUBJECT TO POSSIBLE WET CONDITIONS. ALL RECEPTACLES INSTALLED WITHIN 6 FEET OF A SINK SHALL BE GFI PROTECTED. ALL RECEPTACLES IN NON-RESIDENTIAL KITCHENS SHALL BE GFI PROTECTED.

43. CONNECT BATTERY PACK TYPE EMERGENCY AND EXIT LIGHTING FIXTURES TO THE UNSWITCHED LIGHTING CIRCUIT SERVING THE SPACE LIGHTED BY THE EMERGENCY AND EXIT FIXTURES. THESE CONNECTIONS ARE INTENTIONALLY NOT SHOWN TO MAINTAIN DRAWINGS FOR CLARITY.

44. COORDINATE LIGHTING FIXTURE LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN. IF CONFLICTS ARE NOTED, REQUEST CLARIFICATION FROM THE ARCHITECT/ENGINEER BEFORE PROCEEDING.

45. ADJACENT SWITCHES SHALL BE GANGED. INSTALL BARRIERS BETWEEN UNLIKE VOLTAGE SECTIONS.

46. SEPARATE NEUTRALS ARE REQUIRED FOR ALL DIMMED LIGHTING CIRCUITS.

47. WHERE THE DRAWINGS INDICATE A LIGHTING FIXTURE IS TO BE PROVIDED WITH SPECIAL FEATURES/SWITCHING (DIMMING, EMERGENCY BATTERY, MULTI-LEVEL, ETC), THE CONTRACTOR SHALL PROVIDE THESE FIXTURES WITH THE APPROPRIATE BALLASTING TO ACCOMMODATE THE SPECIAL FEATURE. THE CONTRACTOR SHALL PROVIDE THE FIXTURES AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE WITH MODIFICATIONS AS REQUIRED BY DRAWING NOTES.

48. COORDINATE LOCATIONS OF PLUMBING, MECHANICAL, ELEVATOR, DATA AND TELEPHONE AND AUDIOVISUAL EQUIPMENT AND OF OWNER-PROVIDED EQUIPMENT WITH THE RESPECTIVE CONTRACTORS AND VENDORS AND THE OWNER BEFORE ROUGH-IN. ADJUST LIGHTING FIXTURES, RECEPTACLES AND ELECTRICAL EQUIPMENT TO ACCOMMODATE THIS EQUIPMENT. ADVISE THE ARCHITECT/ENGINEER OF CONFLICTS BEFORE ROUGH-IN.

49. BEFORE COMMENCING WORK OR ORDERING MATERIALS, THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND VERIFY THE NAMEPLATE RATINGS OF ALL EQUIPMENT (MOTORS, HEATERS, COMPRESSORS, ETC.) AND ADJUST THE RATINGS OF THE ELECTRICAL EQUIPMENT (SWITCHES, FUSES, CIRCUIT BREAKERS, FEEDERS, ETC.) AS APPROPRIATE TO SERVE THIS EQUIPMENT.

50. ENERGIZE EQUIPMENT ONLY AFTER OBTAINING PERMISSION FROM THE CONTRACTOR PROVIDING THE EQUIPMENT.

51. UNLESS SPECIFICALLY NOTED OTHERWISE, THE ELECTRICAL CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL UTILIZATION EQUIPMENT SHOWN ON THE DRAWINGS. VERIFY THE TYPE OF FINAL CONNECTION AND PROVIDE APPROPRIATE WIRING METHOD. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL, PLUMBING AND GENERAL CONTRACTORS PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT. TO VERIFY MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS ARE PROVIDED IN THE ELECTRICAL DESIGN, THE CONTRACTOR WILL NOT BE COMPENSATED FOR COSTS ASSOCIATED WITH CHANGING THE ELECTRICAL SYSTEMS TO MATCH UTILIZATION EQUIPMENT, EVEN IF THE ELECTRICAL WORK IS INSTALLED PER THE ELECTRICAL DRAWINGS.

52. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL FURNISH ALL STARTERS AND CONTROLS FOR THEIR EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL MOUNT STARTERS FURNISHED BY THE MECHANICAL AND PLUMBING CONTRACTORS, THE ELECTRICAL CONTRACTOR PROVIDE ALL SAFETY SWITCHES, WIRING AND CONNECTIONS TO LINE SIDE AND LOAD SIDE OF STARTERS AND SAFETY SWITCHES COMPLETE TO MECHANICAL EQUIPMENT. FOR RESISTANCE TYPE LOADS WHERE STARTERS OR CONTROLS ARE NOT REQUIRED, THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL POWER WIRING AND CONNECTIONS COMPLETE TO EQUIPMENT. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL PROVIDE ALL CONTROL WIRING AND CONNECTIONS AND DEVICES FOR THEIR EQUIPMENT.

53. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL EQUIPMENT TERMINATIONS, PLUGS AND CORDSETS WITH VENDOR EQUIPMENT AND VERIFY ALL DEVICE LOCATIONS FOR SPECIALTY EQUIPMENT WITH CASEWORK PRIOR TO ROUGH-IN.

54. THE LAYOUT AND PLACEMENT OF ELECTRICAL DISTRIBUTION EQUIPMENT IN ELECTRICAL AND MECHANICAL ROOMS IS BASED ON PUBLISHED EQUIPMENT SIZES AND SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE. DEVIATIONS FROM CONFIGURATIONS SHOWN IS THE RESPONSIBILITY OF THE CONTRACTOR. PROVIDE NATIONAL ELECTRIC CODE REQUIREMENTS TO ALL ELECTRICAL EQUIPMENT, PANELBOARDS, TRANSFORMERS, TRANSFORMERS, SAFETY SWITCHES, SWITCHBOARDS, ETC. COORDINATE RESOLUTION OF CONFLICTS WITH OTHER TRADES. ADVISE THE ARCHITECT/ENGINEER OF CONFLICTS BEFORE ROUGH-IN.

55. COORDINATION WITH THE UTILITY COMPANY FOR PLACEMENT OF THE UTILITY'S FACILITIES AND THE CONTRACTOR'S SERVICE ENTRANCE RACEWAYS AND CONNECTIONS TO THE CONTRACTOR'S SERVICE ENTRANCE CONDUCTORS IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

56. TELECOMMUNICATIONS AND DATA CABLES WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.

57. PROVIDE TELEPHONE, FIBER AND DATA SERVICE ENTRANCE CONDUIT IN SIZES AND LOCATIONS FOR MOBILE UNITS AS SHOWN ON THE DRAWINGS AND AS REQUIRED BY THE OWNER AND THE SERVICE UTILITIES. UTILITY SERVICE ENTRANCE CABLES WILL BE PROVIDED AND INSTALLED BY THE OWNERS SERVICE UTILITIES. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.

58. EXACT SPACING OF SMOKE AND HEAT DETECTORS AND ANY DEVICES SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE WITH POSITIONS SHOWN ON THE DRAWINGS. DETECTOR SPACING IS BASED UPON NFPA 72 INCLUDING APPENDIX A. SLIGHT ADJUSTMENTS MAY BE MADE IN SPACING IF REQUIRED BY FIELD CONDITIONS, BUT SPACING SHALL NOT EXCEED ADA, NFPA AND EQUIPMENT MANUFACTURERS SPACING CRITERIA. DO NOT INSTALL SMOKE DETECTORS WITHIN 3 FEET OF SUPPLY AIR DIFFUSERS OR RETURN GRILLES. PROVIDE FLEX CONDUIT CONNECTION TO SMOKE AND HEAT DETECTORS OF ADEQUATE LENGTH TO ALLOW HORIZONTAL ADJUSTMENT OF FOUR FEET FROM POSITION INDICATED ON DRAWINGS.

59. INSTALLATION INFORMATION PACKED WITH LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHALL BE RETAINED FOR INCLUSION IN THE OPERATIONS AND MAINTENANCE MANUALS.

60. SAFETY: COMPLY WITH OSHA AND NEC ARC FLASH PROTECTION REQUIREMENTS.

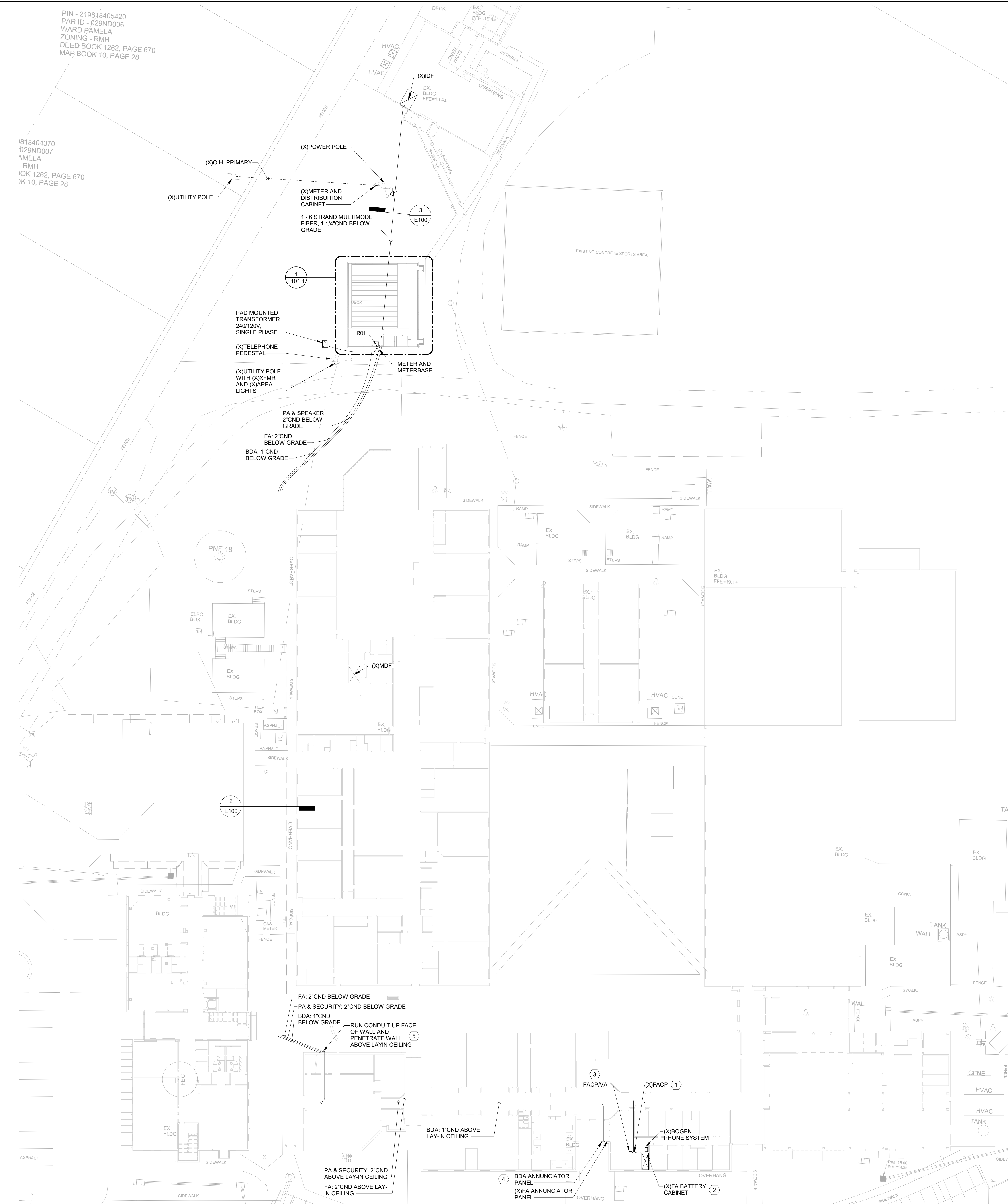
61. ALL SWITCHES, RECEPTACLE AND LIGHTS SHALL COMPLY WITH ANSI 117.2 FOR ADA REQUIREMENTS.

62. THE ELECTRICAL CONTRACTOR AND ALL SUB CONTRACTORS WORKING FOR THE ELECTRICAL CONTRACTOR ARE RESPONSIBLE FOR COMMISSIONING EACH SYSTEM INDICATED IN THESE DRAWINGS. THE ELECTRICAL CONTRACTOR AND ALL SUB CONTRACTORS WORKING FOR THE ELECTRICAL CONTRACTOR ARE RESPONSIBLE FOR PROVIDING A COMPLETE OPERATIONAL SYSTEM TO OWNER. THE SYSTEMS WILL NOT BE CONSIDERED OPERATIONAL UNTIL THE OWNER HAS APPROVED EACH SYSTEM.

63. INSTALL COLOR CODED CEILING TACKS IN ACOUSTICAL TILE CEILINGS OR COLOR CODED TAPE ON CEILING GRID TO IDENTIFY LOCATION OF ELECTRICAL EQUIPMENT, DISCONNECTS, LIGHTING CONTROLLERS AND POWER PACKS ETC., THAT REQUIRE REGULAR MAINTENANCE OR ARE PART OF A LIFE SAFETY SYSTEM. DOTS SHALL BE PLACED ON CEILING GRID.

64. MC CABLE WITH INSULATED GROUND CONDUCTOR MAY BE USED FOR BRANCH CIRCUITS. DO NOT USE WHERE SUBJECT TO PHYSICAL DAMAGE OR WHERE EXPOSED TO CORROSIVE CONDITIONS.
- ELECTRICAL SYMBOL LEGEND
- | SYMBOL | DESCRIPTION  | SYMBOL | DESCRIPTION   |
|--------|--|--------|---|
|        | WALL MOUNTED AREA LIGHT FIXTURE LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)   |        | JUNCTION BOX  |
|        | 2x4 LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)  |        | PANELBOARD, SURFACE OR RECESSED MOUNTED AS SHOWN. SIZE, RATINGS, AND MOUNTING AS INDICATED ON PANEL SCHEDULE. CONTRACTOR IS RESPONSIBLE FOR REQUIRED CLEARANCE IN FRONT OF ELECTRICAL PANEL. SEE NEC TABLE 110.26 WORKING SPACES FOR ADDITIONAL CLEARANCE CONDITIONS. |
|        | 4FT OR 8FT CHANNEL LIGHT FIXTURE, SUSPENDED OR SURFACE MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)  |        | DISCONNECT SWITCH, FUSED, HEAVY DUTY, SIZE AS INDICATED ON DRAWINGS. #N = DISCONNECT SIZE (# = NUMBER OF POLES # = NEMA RATING. #F = FUSE SIZE  |
|        | EMERGENCY LIGHTING UNIT, 2-HEAD WITH BATTERY BACK-UP, WALL MOUNTED, "NOT SWITCHED" INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)   |        | FLOOR BOX, 8 GANG EXTRA DEEP  |
|        | EXIT SIGN EMERGENCY LIGHTING UNIT, WALL/END MOUNTED, "NOT SWITCHED" INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)  |        | WALL TELEPHONE W/ INTERCOM OUTLET   |
|        | SINGLE POLE SW., 120/277 VAC, 20A, MOUNTED AT 48" AFF UNLESS NOTED OTHERWISE   |        | DATA INFORMATION OUTLET (TYPE DENOTED)  |
|        | 3-WAY DIMMER SW., 120/277 VAC, 20A, 0-10V TO 1%, MOUNTED AT 48" AFF UNLESS NOTED OTHERWISE   |        | WIRELESS ACCESS POINT, DATA CABLE MUST BE TERMINATED IN A JACK IN THE CEILING. W/ PATCH CABLE MUST BE PROVIDED AND DROPPED BELOW THE CEILING  |
|        | HEAVY DUTY 1-10V DIMMER, 1500W @ 120VAC, 4000W @ 277VAC MOUNTED AT 48" AFF UNLESS NOTED OTHERWISE  |        | INTERCOM SPEAKER (WALL OR CEILING MT.)  |
|        | WALL MOUNTED OCCUPANCY SENSOR, SINGLE BUTTON ON/OFF CONTROL, 180° COVERAGE, MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED.   |        | ANTENNA   |
|        | WALL MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, DUAL BUTTON ON/OFF CONTROL, 180° COVERAGE, ADDITIONAL POWER SUPPLY FOR ON OPERATION, MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED.   |        | DOOR CONTACTS - TO INTRUSION DETECTION SYSTEM   |
|        | CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR, 360° COVERAGE, NEMA 4X, 180° COVERAGE, ADDITIONAL POWER SUPPLY FOR ON OPERATION, MOUNTED AT 48" AFF UNLESS OTHERWISE NOTED.  |        | CARD READER   |
|        | RECEPTACLE DUPLEX, 120VAC, 20A MOUNTED 18" AFF UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAILS) WP - LISTED WEATHER-RESISTANT TYPE DEVICE WITH WEATHERPROOF, EXTRA DUTY, WHILE IN USE COVER. GP - GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A MOUNTED 18" AFF. LOCATE GFI TEST SWITCH IN A READILY ACCESSIBLE LOCATION. T - TAMPER RESISTANT. R - RECEPTACLE SHALL BE RED IN COLOR PER NEC 70.517.3(16) |        | POWER AND SWITCH LEG  |
|        | RECEPTACLE DUPLEX, 120VAC, 20A MOUNTED 6" AFF, ABOVE CEILING TOP.  |        | UNSWITCHED LEG  |
|        | EGR INDICATES ELECTRICAL GROUND BAR  |        |   |
- ELECTRICAL ABBREVIATIONS LIST
- |                                     |  |  |  |                                     |
|-------------------------------------|--|--|--|-------------------------------------|
| 1P 1 POLE (P, 3P, 4P, ETC.)         | DCP DOMESTIC WATER CIRCULATING PUMP        | HT HEIGHT                                      | NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION | SWBD SWITCHBOARD                    |
| A AMPERE                            | DEPT DEPARTMENT                            | HTG HEATING                                    | NFOS NON-FUSED SAFETY DISCONNECT SWITCH            | SYM SYMMETRICAL                     |
| AC ABOVE COUNTER OR AIR CONDITIONER | DET DETAIL                                 | HTR HEATER                                     | NIC NOT IN CONTACT                                 | SYB SYSTEM                          |
| ACLG ABOVE CEILING                  | DISC DISCONNECT                            | HV HIGH VOLTAGE                                | NLO NORMALLY OPEN                                  | TEL TELEPHONE                       |
| ADO AUTOMATIC DOOR OPENER           | DIST DISTRIBUTION                          | HVAC HEATING, VENTILATING AND AIR CONDITIONING | NPS NOT TO SCALE                                   | TEL/ATA TELEPHONE/ATA               |
| AF AMP FRAME                        | DOWN DOWN                                  | HWP HYDROIC WATER PUMP                         | OH OVERHEAD  | TERM TERMINAL                       |
| AFF ABOVE FINISHED FLOOR            | DPR DAMPER                                 | IC INTERRUPTING CAPACITY                       | OL OVERLOAD  | T-STAT THERMOSTAT                   |
| AFD ABOVE FINISHED GRADE            | DS SAFETY DISCONNECT SWITCH                | IG ISOLATED GROUND                             | PA PULL BOX OR PUSHBUTTON                          | TR TAMPER RESISTANT                 |
| AFI ARC FAULT CIRCUIT INTERRUPTER   | DT DOUBLE THROW                            | INC INCANDESCENT                               | PE PEDESTAL  | TY TELEPHONE TERMINAL               |
| AHJ AIR HANDLING UNIT               | DWG DRAWING                                | IR INFRARED                                    | PV POWER VALVE                                     | TYC TELEPHONE TERMINAL              |
| AL ALUMINUM                         | EC ELECTRICAL CONTRACTOR                   | IW INTERLOCK WITH                              | PNL PANEL  | TYP TYPICAL                         |
| ALT ALTERNATE                       | ELEC ELECTRIC, ELECTRICAL                  | J-BOX JUNCTION BOX                             | PP POWER POLE                                      | U UNDER COUNTER                     |
| AMP AMPERE                          | ELEV ELEVATOR                              | KV KILOVOLT                                    | PR PRIMARY   | UC UNDERGROUND ELECTRICAL           |
| AMPF AMPLIFIER                      | EMS EMERGENCY MANAGEMENT SYSTEM            | KVA KILOVOLT-AMPERE                            | PROJ PROJECTION                                    | UG UNDERGROUND                      |
| APPROX APPROXIMATELY                | ENT ELECTRICAL METALLIC TUBING             | KWH KILOWATT HOUR                              | PRV POWER ROOF VENTILATOR                          | UH UNTH-HEATER                      |
| ARQ/STAT ARQ/STAT                   | EP ELECTRIC PNEUMATIC                      | KW KILOWATT                                    | PT POTENTIAL TRANSFORMER                           | UL UNDERGROUND TELEPHONE            |
| ARCH ARCHITECT, ARCHITECTURAL       | EQU EQUIPMENT                              | KWH KILOWATT HOUR                              | PVC POLYVINYL CHLORIDE                             | UTL UTILITY                         |
| AS AIR SWITCH                       | ENC ENCLOSURE                              | LOC LOCATE OR LOCATION                         | PWR POWER  | UNT UNIT VENTILATOR OR ULTRA-VIOLET |
| AT AMP TRIP                         | EXIST EXISTING                             | LT LIGHT                                       | QUAN QUANTITY                                      | W WATT                              |
| ATS AUTOMATIC TRANSFER SWITCH       | EXH EXHAUST                                | LTV LIGHTING                                   | RECT RECEPTACLE                                    | WG WIRE GUARD                       |
| AUX AUXILIARY                       | EXP EXPLOSION PROOF                        | LTV LOW VOLTAGE                                | REQ REQUIRED                                       | WH WATER HEATER                     |
| AV AUDIO VISUAL                     | FA FIRE ALARM                              | LX LIGHTING                                    | RM ROOM  | WIO WITHOUT                         |
| AWG AMERICAN WIRE GAUGE             | FABP FIRE ALARM BOOSTER POWER SUPPLY PANEL | LX LOW VOLTAGE                                 | RSC RIGID STEEL CONDUIT                            | WF WEATHERPROOF                     |
| BATT BATTERY                        | FACP FIRE ALARM CONTROL PANEL              | MAX MAXIMUM                                    | RTU ROOF TOP UNIT                                  | XYMR TRANSFER                       |
| BD BOARD                            | FCU FAULT CURE UNIT                        | MAG MAGNETIC STARTER                           |  |                                     |
| BLDG BUILDING                       | FIX FIXTURE                                | MC MECHANICAL CONTRACTOR                       |  |                                     |
| BMS BUILDING MANAGEMENT SYSTEM      | FLR FLOOR                                  | MCA MAIN CIRCUIT BREAKER                       |  |                                     |
|                                     | FLUO FLUORESCENT                           | MCC MOTOR CONTROL CENTER                       |  |                                     |
|                                     | FLOS FUSED SAFETY DISCONNECT SWITCH        | MCD MAIN DISTRIBUTION CENTER                   |  |                                     |
| C CONDUIT                           | GA GAUGE                                   | MFS MAIN FUSED DISCONNECT SWITCH               |  |                                     |
| CAB CABINET                         | GALV GALVANIZED                            | MH MANHOLE                                     |  |                                     |
| CAT CATALOG                         | GEN GENERATOR                              | MIN MINIMUM                                    |  |                                     |
| CCTV CLOSED CIRCUIT TELEVISION      | GP GROUND FAULT CIRCUIT INTERRUPTER        | MIS MISCELLANEOUS                              |  |                                     |
| CKT CIRCUIT                         | GRD GROUND FAULT PROTECTOR GROUND          | MLO MAIN LOSS ONLY                             |  |                                     |
| COMB COMBINATION                    | GYSR GYPSUM BOARD                          | MAN MANUFACTURER                               |  |                                     |
| CONN CONNECTION                     | HOA HANDS-OFF-AUTOMATIC                    | MNT MOTOR                                      |  |                                     |
| CONT CONTINUOUS                     | HORIZ HORIZONTAL                           | MTR MOTOR, MOTORIZED                           |  |                                     |
| CONTR CONTRACTOR                    | HP HORSEPOWER                              | N.C. NORMALLY CLOSED                           |  |                                     |
| COW CONECTOR                        | HPP HIGH POWER FACTOR                      | N.E. NATIONAL ELECTRICAL CODE                  |  |                                     |
| CP CIRCULATING PUMP                 |  |  |  |                                     |
| CRT CATHODE RAY TUBE                |  |  |  |                                     |
| CT CURRENT TRANSFORMER              |  |  |  |                                     |
| CTR CIRCUIT                         |  |  |  |                                     |
| CU COPPER                           |  |  |  |                                     |
- 
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- FINAL DRAWING
- DO NOT USE FOR CONSTRUCTION
- PROJECT TITLE
- NORTH BRUNSWICK HIGH SCHOOL NEW ROTC BUILDING
- 114 SCORPION DRIVE N.E. LELAND, NC 28451
- DSP # : 100
- DPI SCHOOL # : 1165
- SHEET TITLE
- ELECTRICAL SYMBOLS AND ABBREVIATIONS
- ISSUE BLOCK
- 04.23.20 ISSUED FOR BIDDING
- 05.26.20 100% REVIEW SUBMISSION
- 01.22.20 80% CD PROGRESS DRAWINGS
- 10.14.19 NCDDP DD SUBMISSION
- 07.30.19 SD PROGRESS DRAWINGS
- 07.11.19 NCDDP SD SUBMISSION
- Mark Date Description
- PROJECT NO: 2019082.00
- DATE: 10.14.2019
- SCALE: As indicated
- DRAWN BY: HGH PROJ MGR: WAC
- E001
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- RMH  
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OK 10, PAGE 28



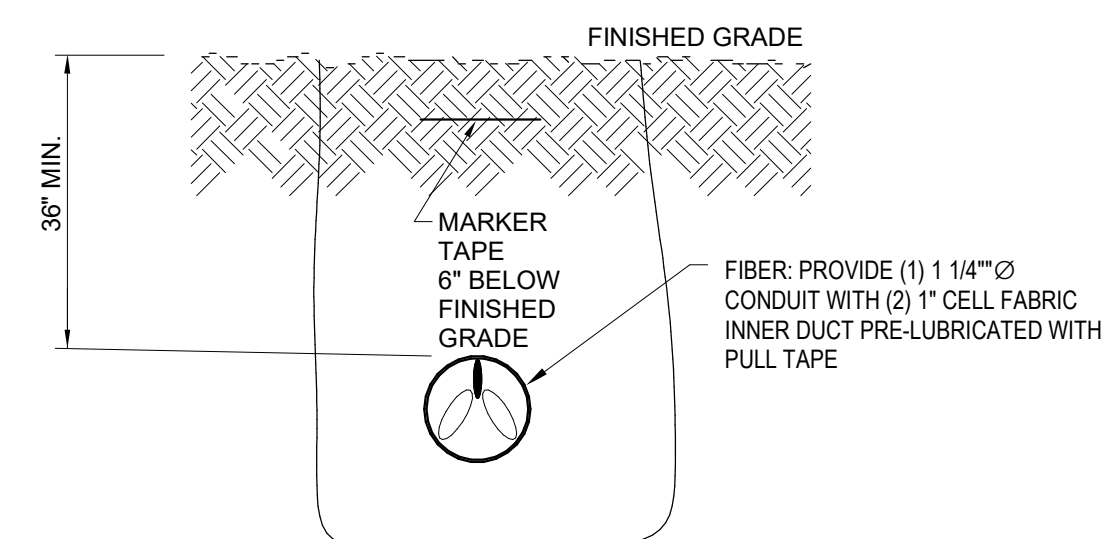
**1 ELECTRICAL SITE PLAN** SCALE: 1" = 30'-0"

Diagram illustrating the layout of conduits and cables in a trench. The trench is shown with a cross-section and a plan view. The cross-section shows the trench depth and the placement of conduits. The plan view shows the layout of the conduits and cables, including the placement of a marker tape and the spacing between the conduits.

Labels and dimensions:

- 36" MIN. (Trench depth)
- FINISHED GRADE
- MARKER TAPE 6" BELOW FINISHED GRADE
- PA & SECURITY: PROVIDE (1) 2" Ø CONDUIT WITH (3) 1" CELL FABRIC INNER DUCT PRE-LUBRICATED WITH PULL TAPE
- BDA: PROVIDE (1) 1" Ø CONDUIT WITH (2) 1" CELL FABRIC INNER DUCT PRE-LUBRICATED WITH PULL TAPE
- FIRE ALARM: PROVIDE (1) 2" Ø CONDUIT WITH (3) 1" CELL FABRIC INNER DUCT PRE-LUBRICATED WITH PULL TAPE
- 6" MIN. (Spacing between conduits)

2 DUCTBANK SECTION - FIRE  
ALARM/PA & SECURITY / BDA  
NO SCALE



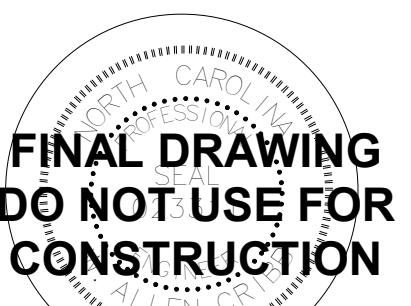
**3 DUCTBANK SECTION - FIBER**  
NO SCALE

ARCHITECTURE  
P L A N N I N G

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TITLE

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EW ROTC  
UILDING

SCORPION DRIVE N.E.  
AND, NC 28451

SP #: 100  
PI SCHOOL #: 116

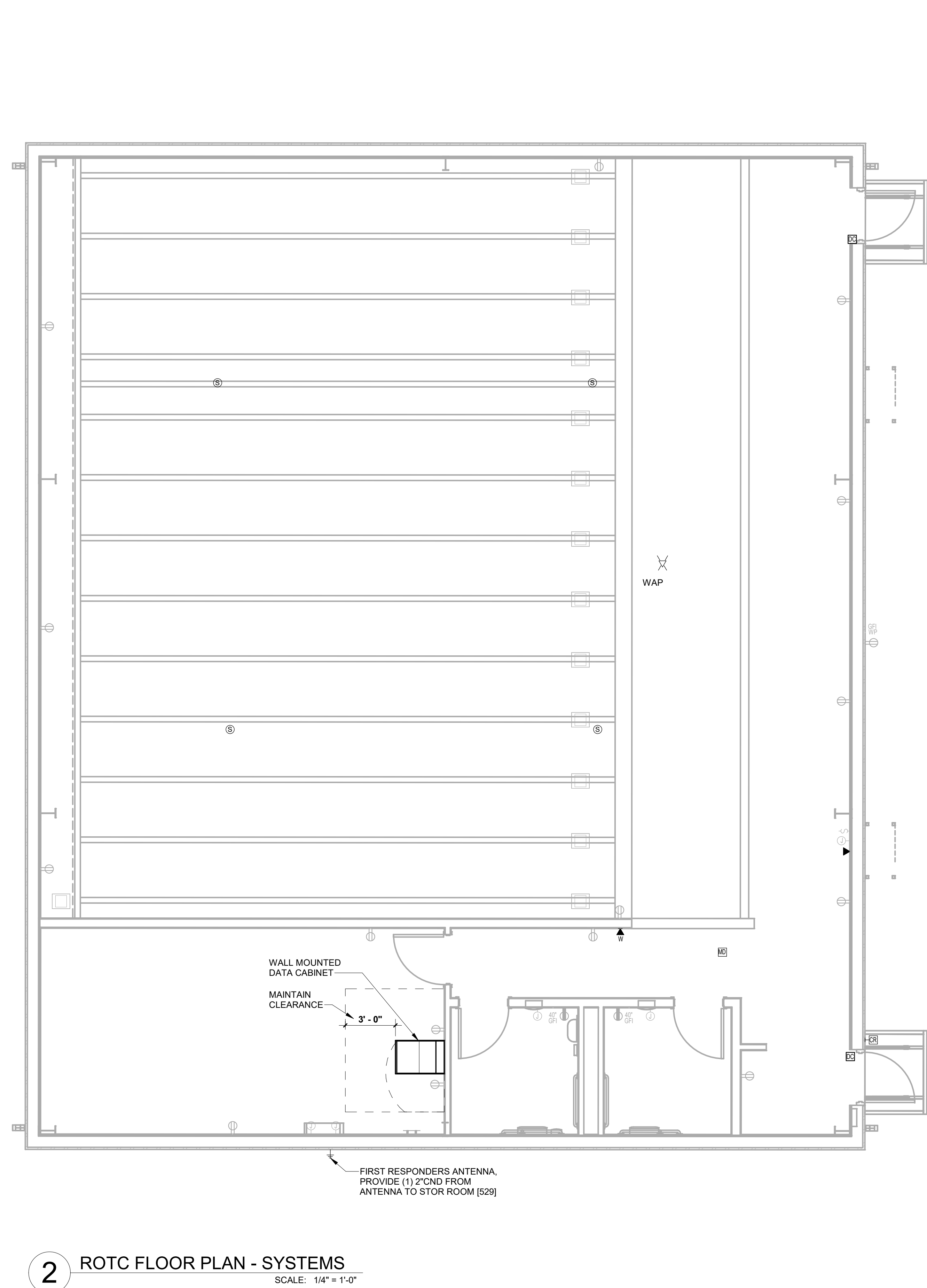
# ELECTRICAL SITE PLAN

Date	Description
04.23.20	ISSUED FOR BIDDING
03.26.20	100% REVIEW SUBMISSION
01.20.20	60% CD PROGRESS DRAW
10.14.19	NCDPI DD SUBMISSION
07.30.19	SD PROGRESS DRAWINGS
07.11.19	NCDPI SD SUBMISSION

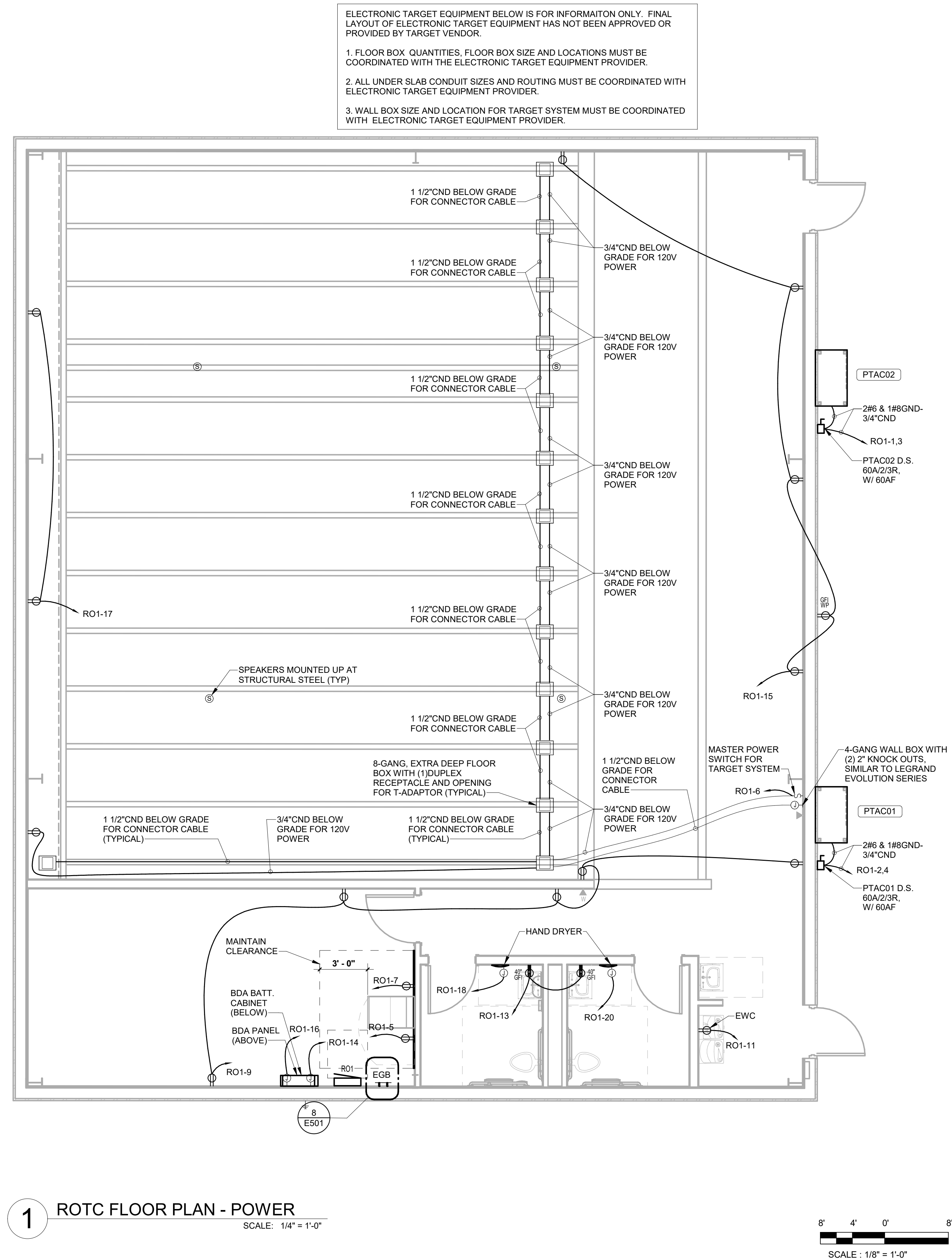
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**2 ROTC FLOOR PLAN - SYSTEMS**  
SCALE: 1/4" = 1'-0"



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

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**FINAL DRAWING  
DO NOT USE FOR  
CONSTRUCTION**

ORTH  
RUNSWICK  
GH SCHOOL  
EW ROTC  
UILDING

SCORPION DRIVE N.E.  
AND, NC 28451

SP # : 100  
PI SCHOOL # : 116

## TC FLOOR PLAN LIGHTING

Date	Description
04.23.20	ISSUED FOR BIDDING
03.26.20	100% REVIEW SUBMISSION
01.20.20	60% CD PROGRESS DRAWING
10.14.19	NCDPID SUBMISSION
07.30.19	SD PROGRESS DRAWINGS
07.11.19	NCDPID SUBMISSION

ECT NO:	201908
:	10.14.2
E:	As indic
WN BY: GHG	PROJ MGR: W

E201

MARK	DESCRIPTION	MANUFACTURER/SERIES	NOM. SIZE	TEMP(°K)	LAMPS	VOLTS	DELIVERED LUMENS	WATTS	LENS	COLOR	MOUNTING HEIGHT	BALLAST/ DRIVER	REMARKS
A	2X4 LAY-IN LED TROFFER	LITHONIA: GTL SERIES COLUMBIA: LJT24 SERIES DAY-BRITE	2'x4'	3500	LED	MVOLT	5400	47	A19 ACRYLIC	WHITE	RECESSED GYPOBOARD	LED DRIVER	5
B	ADJUSTABLE LINEAR LED WITH 45 DEGREE BEAM ANGLE	ECOSENSE TROV L50-I48-10-90-MULTI LUMEN/PIECE COLOR KINETICS	4'	4000	LED	MVOLT	4800	40		WHITE	WALL MOUNTED SIDE OF JOIST OPPOSITE SHOOT LINE	LED DRIVER	1, 5
C	LED UTILITY LIGHT	LITHONIA: CSS COLUMBIA: CSL4 SERIES DAY-BRITE	4'	3500	LED	MVOLT	3000	31	ACRYLIC	WHITE	SURFACE / SUSPENDED	LED DRIVER	4
D	EXTERIOR LED AREA LIGHT TYPE 3 DISTRIBUTION	LITHONIA: WSR-LED COLUMBIA DAY-BRITE	18"Wx7"Hx9"D	4000	LED	MVOLT	3433	44		DARK BRONZE AFF	WALL MOUNTED B.O.F. 8'-0"	LED DRIVER	3, 5, 6, 9
E1	2-HEAD EMERGENCY LIGHT	EELP: EMZLF SERIES ISOLITE: SERIES EMERGI-LITE PREMIER SERIES	12"Wx5.5"Hx8"D		LED	MVOLT		12		WHITE	WALL MOUNTED 7'-6" AFF		8
X1	EXIT SIGN, SINGLE FACE	LITHONIA EXR LED EL M6 ISOLITE ELT-EM-R-1W-84-SC-UC EMERGI-LITE LSX42NWRUA	12"Wx8"Hx2"D		LED	MVOLT		2	RED	WHITE	SURFACE CEILING / 7'-6" AFF WHEN WALL MOUNTED		8
X2	COMBINATION EXIT SIGN 2-HEAD LED LIGHTS	LITHONIA EXR LED EL M6 ISOLITE ELT-EM-R-1W-84-SC-UC EMERGI-LITE LSX42NWRUA	12"Wx8"Hx2"D		LED	MVOLT		30	RED	WHITE	SURFACE CEILING / 7'-6" AFF WHEN WALL MOUNTED		8

REMARKS:		
1. 0-10V DIMMING 1%	4. 50% DIMMING	7. FINAL COLOR SELECTION BY ARCHITECT
2. DAMP LOCATION	5. LED REQUIRED SURGE PROTECTION	8. 90 MIN BATTERY BACK-UP.
3. WET LOCATION	6. VERIFY FINAL MOUNTING HEIGHT WITH ARCHITECT	9. INTEGRAL PHOTOCELL

GENERAL NOTES:

A. THE CONTRACTOR SHALL VERIFY THE LEAD TIME OF ALL PRODUCTS SPECIFIED IN THIS SCHEDULE AT THE TIME OF PACKAGE QUOTE.

B. DURING THE BID PROCESS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY DELIVERY/SCHEDULING ISSUES.

C. NO SUBSTITUTIONS WILL BE ALLOWED DUE TO THE LACK OF COORDINATION OF DELIVERY DATES AND CONSTRUCTION SCHEDULE AFTER BID.

D. ALL EXPEDITED DELIVERIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

E. FIXTURES TO BE INSTALLED IN CEILINGS, INDICATE ON THE ARCHITECTURAL PLANS AS HAVING INSULATION IN CONTACT WITH THE CEILING SURFACE, SHALL BE IC RATED BY MANUFACTURER.

F. LIGHTING FIXTURES SHALL MEET THE AESTHETICS, DESCRIPTION AND SPECIFICATIONS, SUBSTITUTIONS SHALL INCLUDE PT. BY PT. CALCULATIONS.

G. LIGHTING FIXTURES, AS SPECIFIED, HAVE BEEN SO SELECTED TO ACHIEVE REQUIRED/DESIRED FOOTCANDLE LEVELS IN THEIR RESPECTIVE AREA. HENCE SPECIFIC FIXTURE CHARACTERISTICS WHICH MAY CREATE PARTICULAR ILLUMINATION RESULTS ARE ESSENTIAL. ANY DEVIATIONS FROM SPECIFIED FIXTURES SHALL DEEM THE SUBMITTING AGENT AND CONTRACTORS RESPONSIBLE IN PROVIDING SUCH DEVIATION FOR THE ARCHITECT/ENGINEER AND OWNER TO MAKE AN INFORMED DECISION.

H. SUBSTITUTIONS OF ANY TYPE, INCLUDING BUT NOT LIMITED TO, SHALL BE ACCEPTABLE AS LONG AS THEY ARE EQUAL TO THE FIXTURE SPECIFIED, UNLESS OTHERWISE NOTED. THIS INCLUDES LENS, COLORES, REFLECTORS, PHOTOMETRICS, HOUSING MATERIAL, FINISHES, ETC. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER WITH CUT SHEETS FOR APPROVAL. LISTED, LATEREDLY SO TO THE ARCHITECT, ENGINEER AND OWNER CAN MAKE AN INFORMED DECISION. SUBSTITUTE FIXTURES SHALL BE PRICED WITH THE SPECIFIED FIXTURE AND ALL 4' LED LAMPS SHALL BE 3500 K, OTHER LAMPS SHALL BE AS SCHEDULED.

J. ANY FIXTURE WITH THE TEXT "N/A ADJACENT TO IT SHALL INDICATE THAT THAT FIXTURE IS A NIGHT LIGHT (24HR LIGHT). THE FIXTURE SHALL BE CONNECTED TO THE UNSWITCHED HOT LEG OF THE INDICATED CIRCUIT.

K. ACRYLIC PRISMATIC LENSES SHALL BE 0.156" NOMINAL MINIMUM THICKNESS.

L. ALL EXIST AND EMERGENCY FIXTURES SHALL COMPLY WITH NSC82 STANDARDS AND HAVE AUTOMATIC TESTING DEVICES.

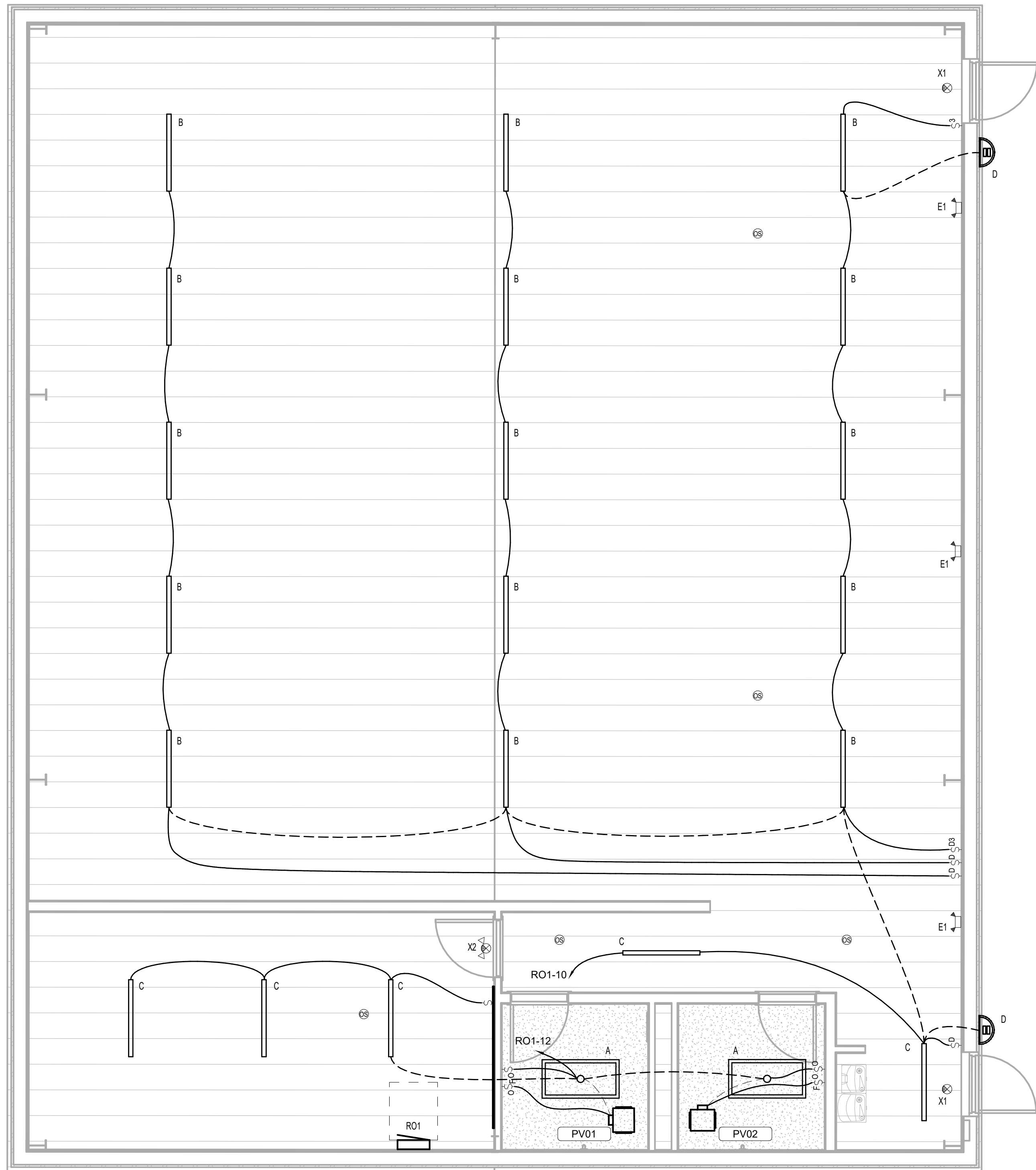
M. LED EMERGENCY BATTERY SHALL PROVIDE 1400 MINIMUM LUMENS OUTPUT FROM 1 LAMP FOR 90 MINUTES MINIMUM.

N. LED MODULES SHALL BE REPLACEABLE.

O. PROVIDE MANUFACTURER INSTALLED NEC 2014 ARTICLE 410.130 (3) COMPLIANT DISCONNECTING MEANS FOR ALL APPLICABLE FIXTURES.

P. SEE SPECIFICATIONS SECTIONS 285100 AND 285200 FOR ADDITIONAL REQUIREMENTS.

Q. ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FOR ALL LIGHTING FIXTURES FROM ARCHITECT/OWNER PRIOR TO PURCHASE AND ROUGH-IN.

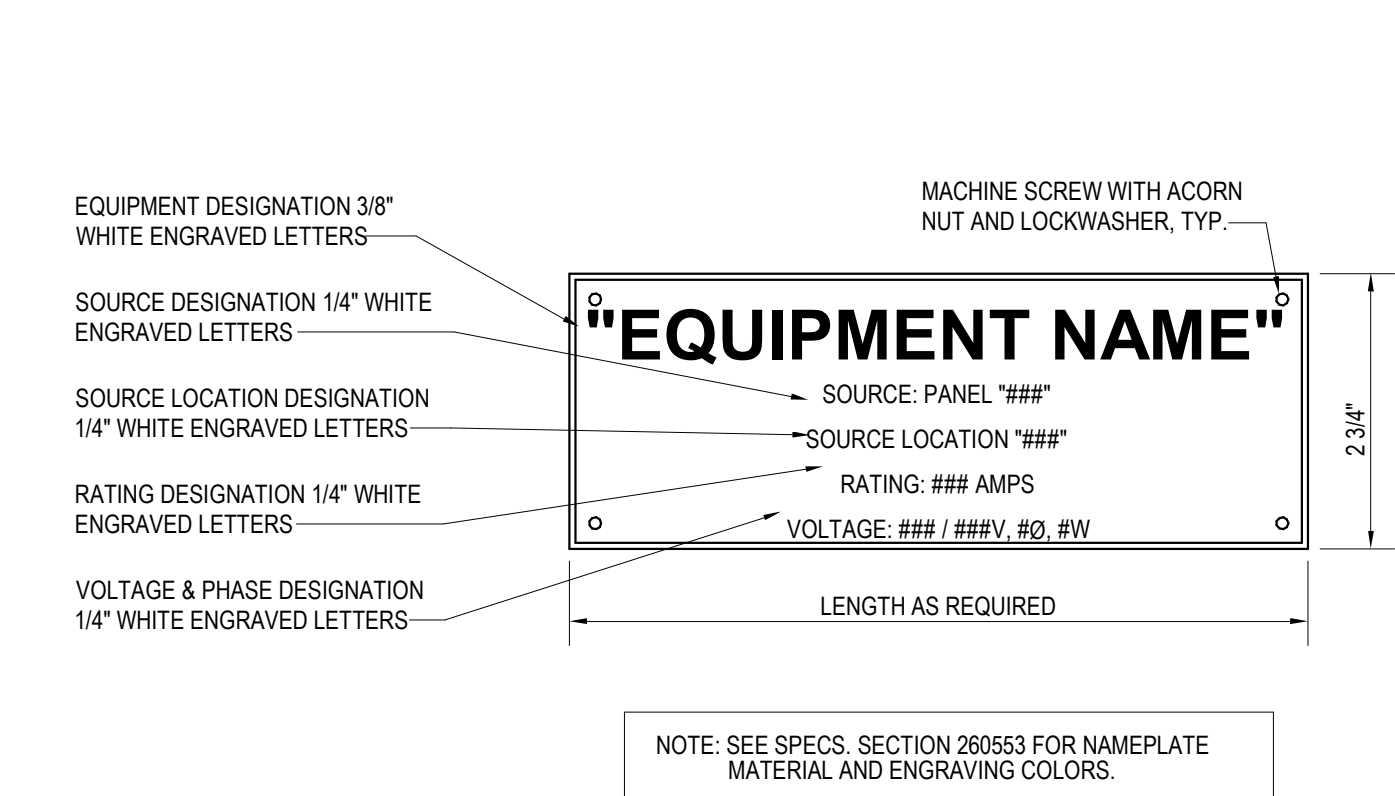


## 1 ROTC PLAN - LIGHTING

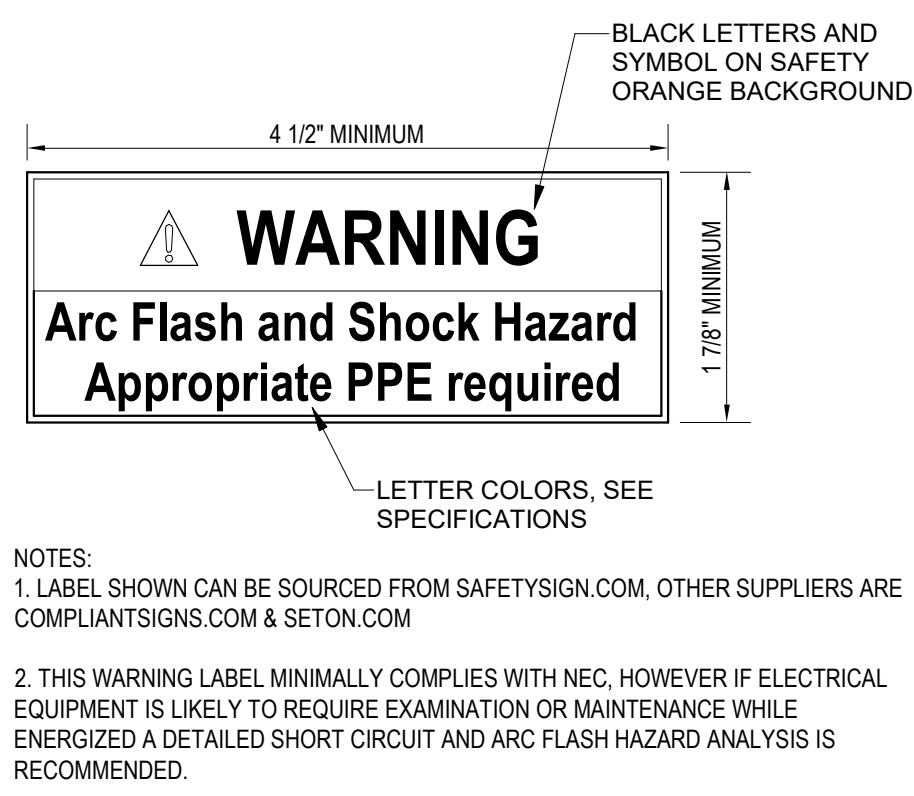
SCALE: 1/4" = 1'-0"

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03.26.20	100% REVIEW SUBMISSION	
01.22.20	80% CD PROGRESS DRAWINGS	
10.14.19	NC DPI CD SUBMISSION	
07.30.19	SD PROGRESS DRAWINGS	
07.11.19	NC DPI SD SUBMISSION	

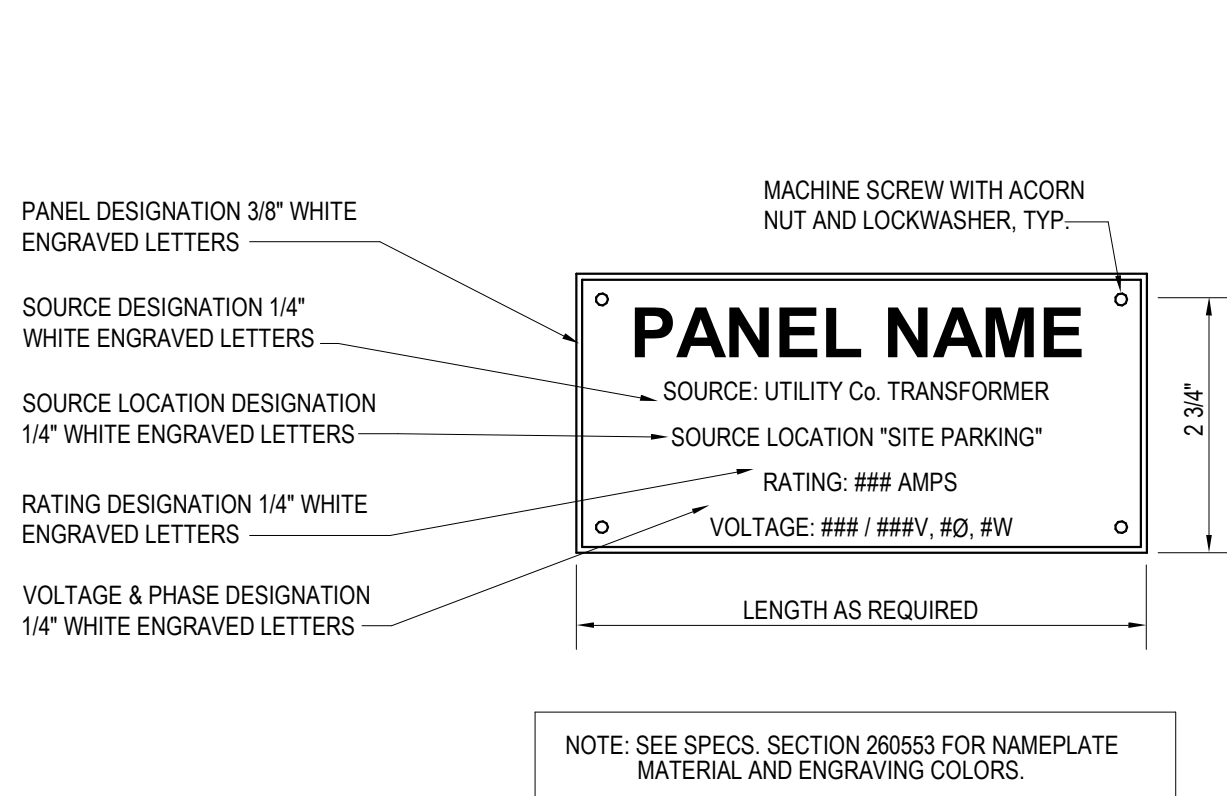
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DATE: 10.14.2019  
SCALE: 12" = 1'-0"  
DRAWN BY: HGH PROJ MGR: WAC



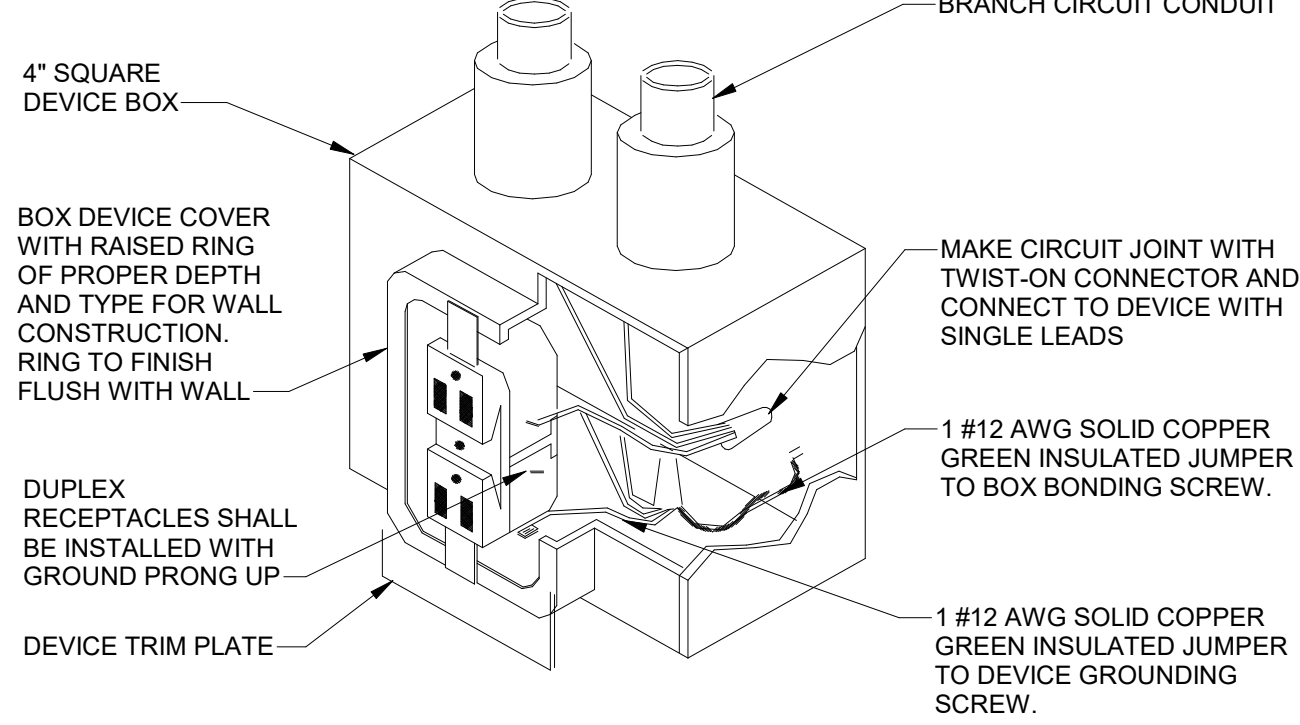
1 NAME PLATE - EQUIPMENT  
NO SCALE



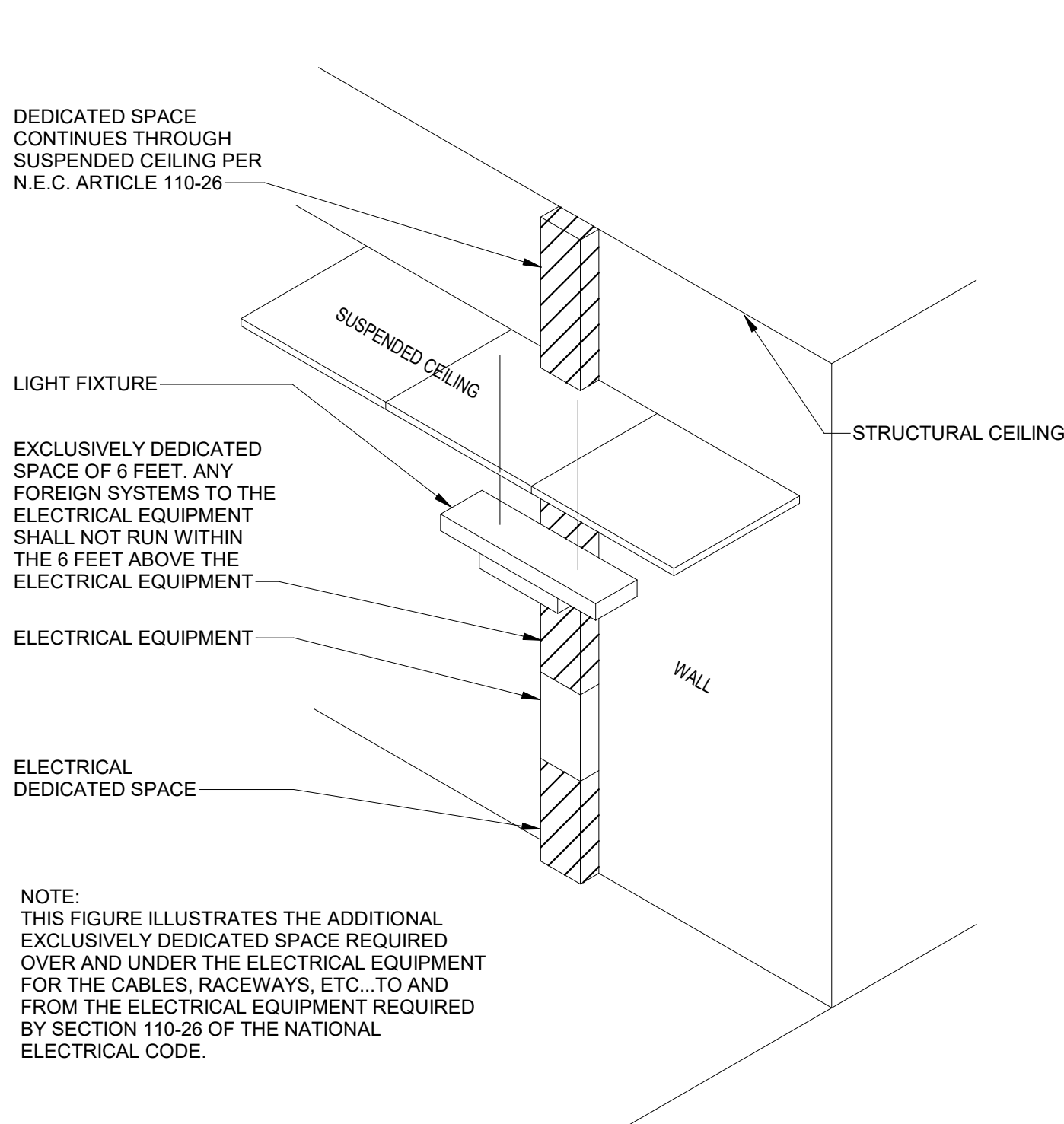
2 NAME PLATE - WARNING  
NO SCALE



3 NAME PLATE - PANELBOARD  
NO SCALE



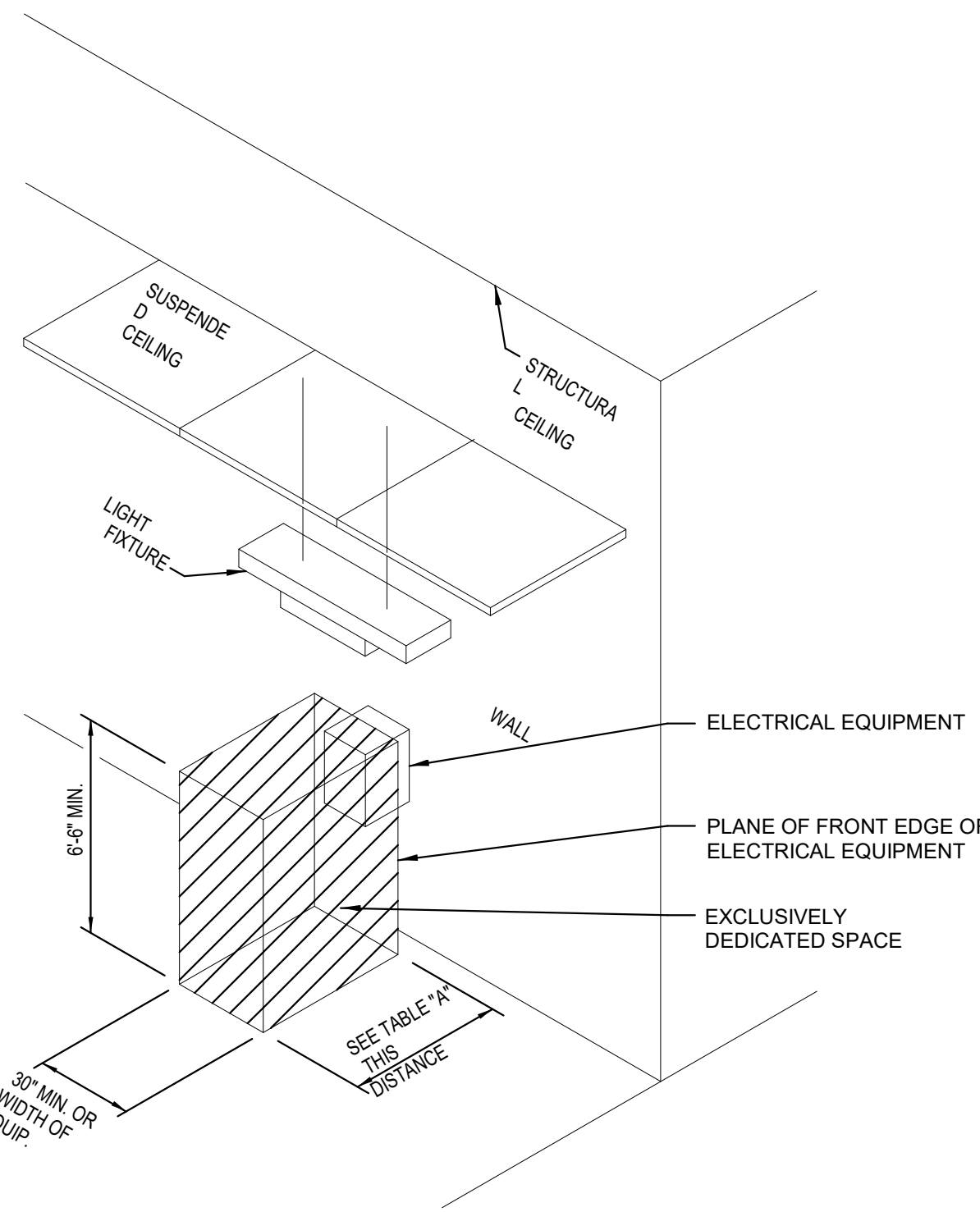
4 RECEPTACLE GROUNDING  
DETAIL  
NO SCALE



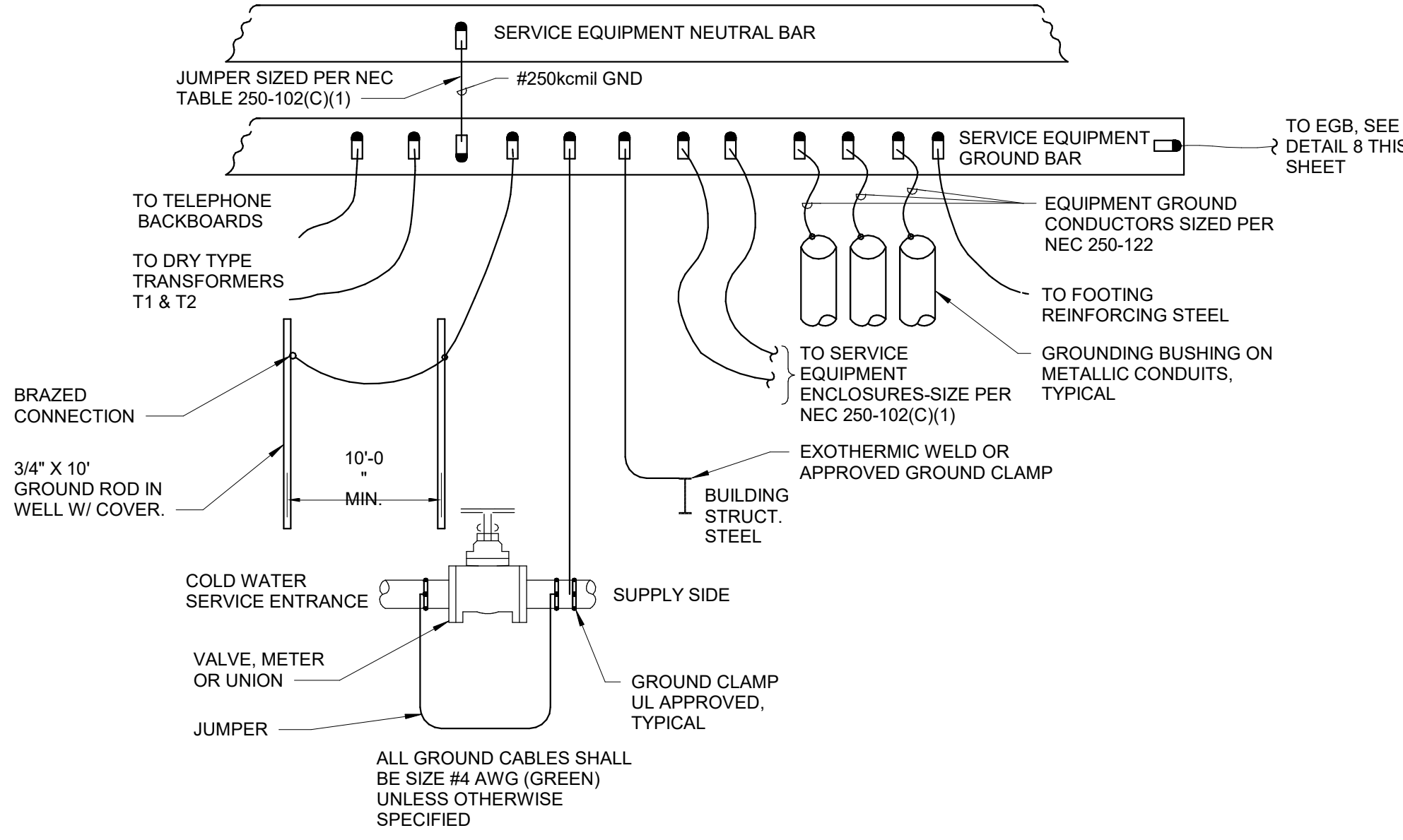
5 DEDICATED SPACE FOR  
ELECTRICAL EQUIPMENT N.E.C.  
ARTICAL 110-26  
NO SCALE

NOMINAL VOLTAGE TO GROUND	MINIMUM CLEAR DISTANCE		
	CONDITION 1	CONDITION 2	CONDITION 3
0 - 150	900 mm (3 ft)	900 mm (3 ft)	900 mm (3 ft)
151 - 600	900 mm (3 ft)	1.0 m (3 ft 6 in.)	1.2 m (4 ft)
601 - 1000	900 mm (3 ft)	1.2 m (4 ft)	1.5 m (5 ft)

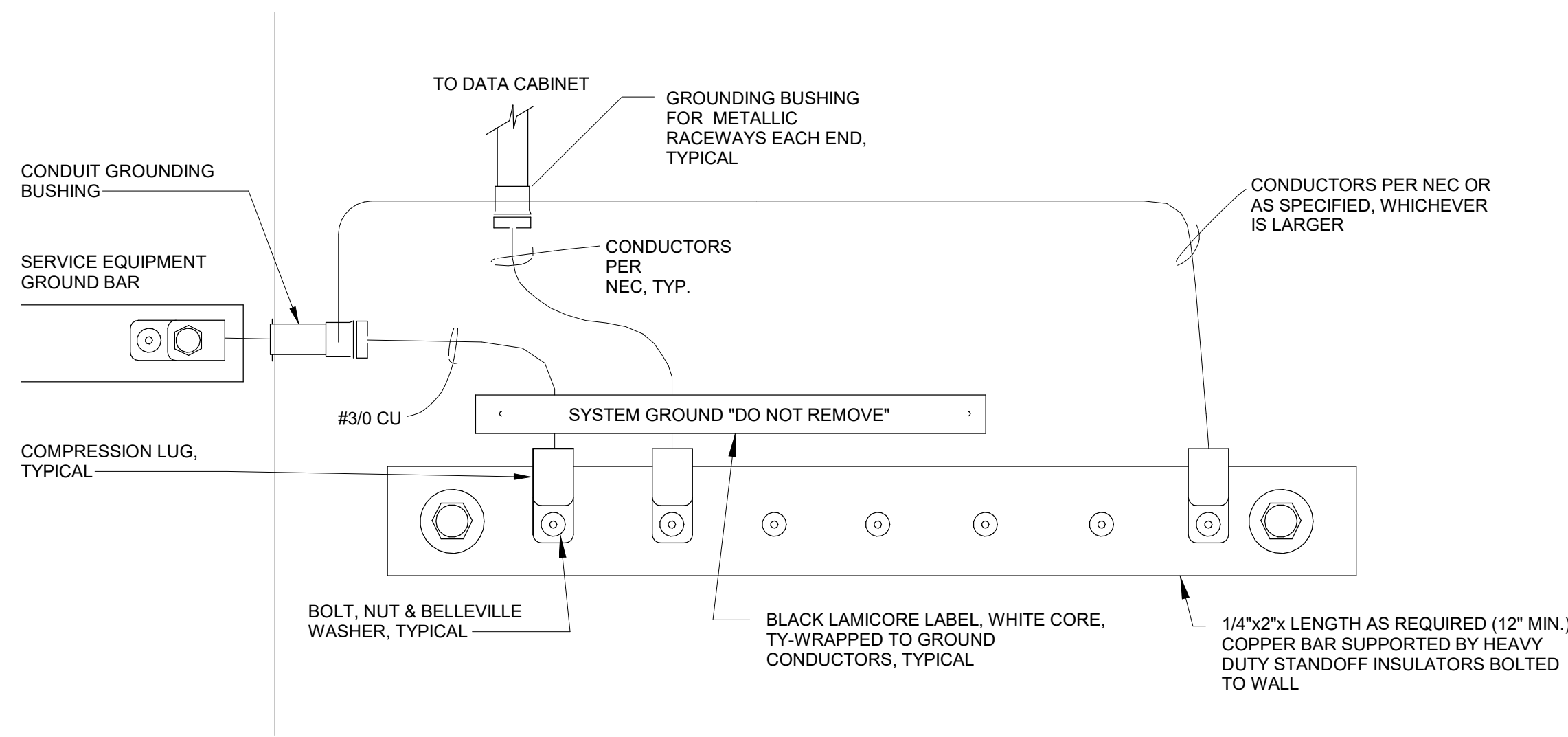
NOTE: WHERE THE CONDITIONS ARE AS FOLLOWS:  
**CONDITION 1** - EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE. OR EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE THAT ARE EFFECTIVELY GUARDED BY INSULATING MATERIALS.  
**CONDITION 2** - EXPOSED LIVE PARTS ON ONE SIDE IF THE WORKING SPACE AND GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, CONCRETE, BRICK, OR TILE WALL SHALL BE CONSIDERED AS GROUNDED.  
**CONDITION 3** - EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE.



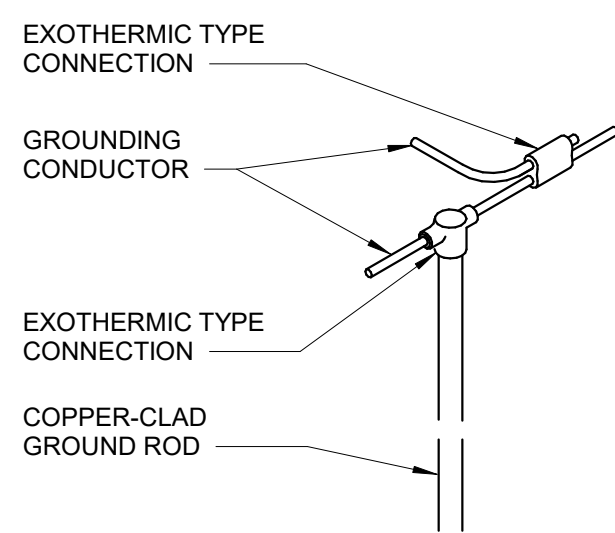
6 WORKING CLEARANCE FOR  
ELECTRICAL EQUIPMENT  
NO SCALE



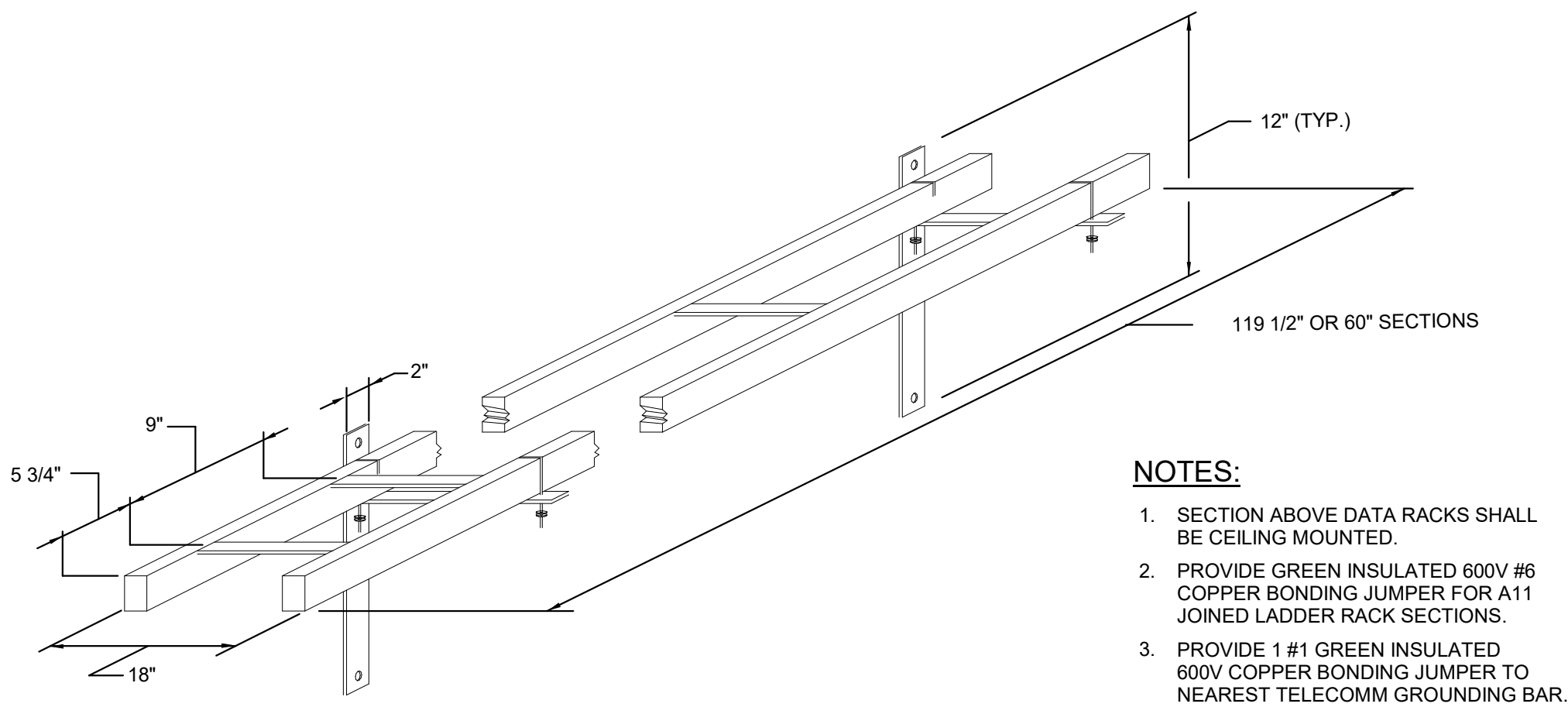
7 GROUNDING DETAIL - SERVICE  
NO SCALE



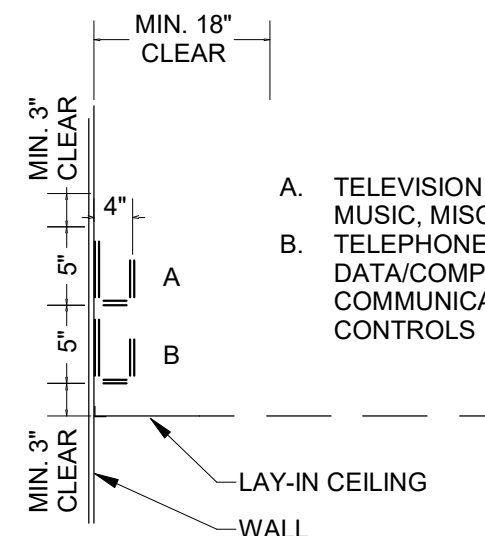
8 EQUIPMENT GROUND BAR  
DETAIL (EGB)  
NO SCALE



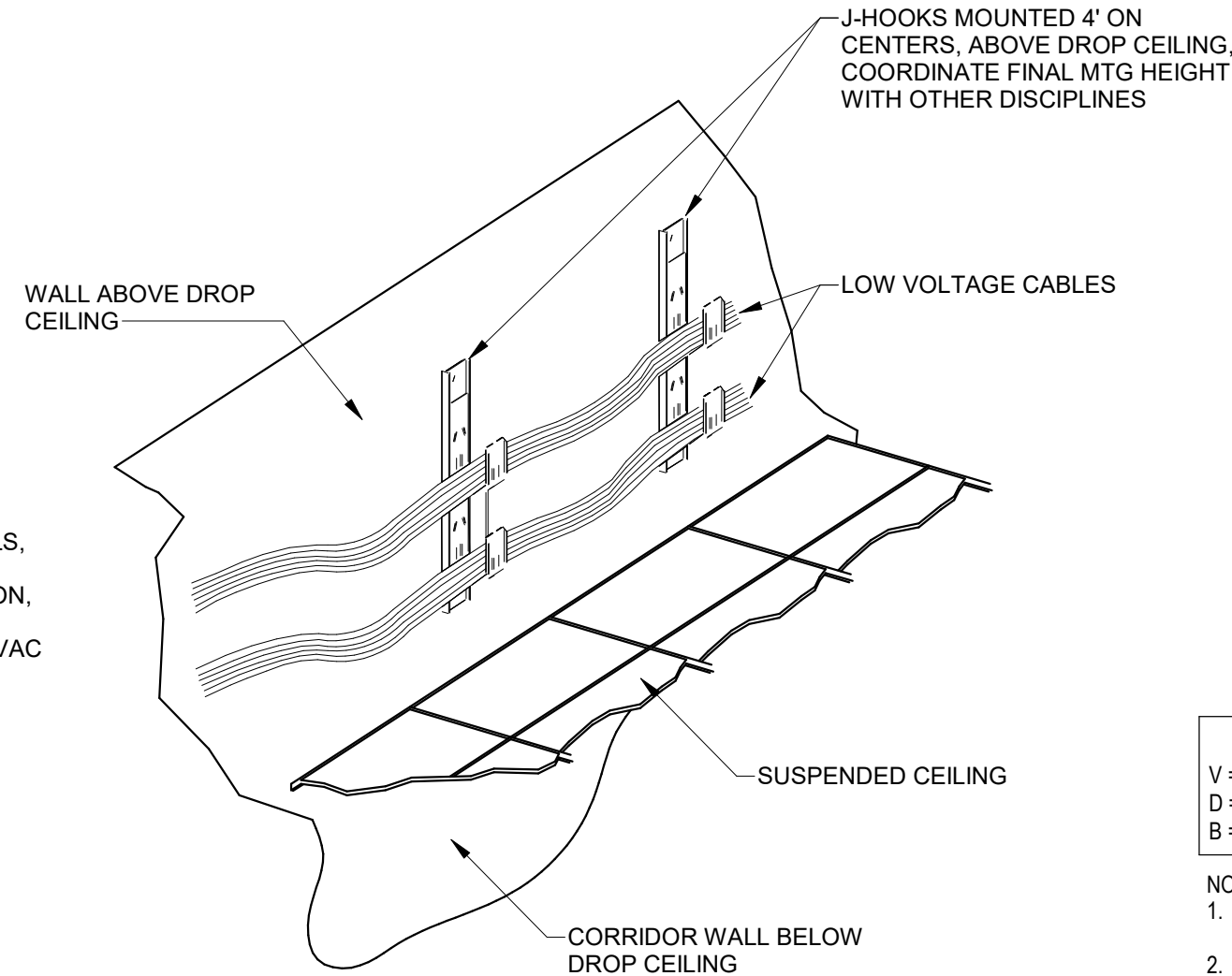
9 GROUND ROD DETAIL  
NO SCALE



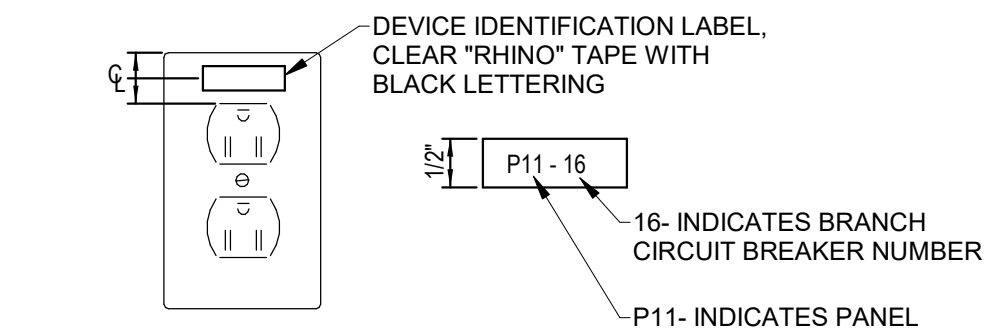
1 WALL MOUNTED TELECOM LADDER RACK DETAIL  
NO SCALE



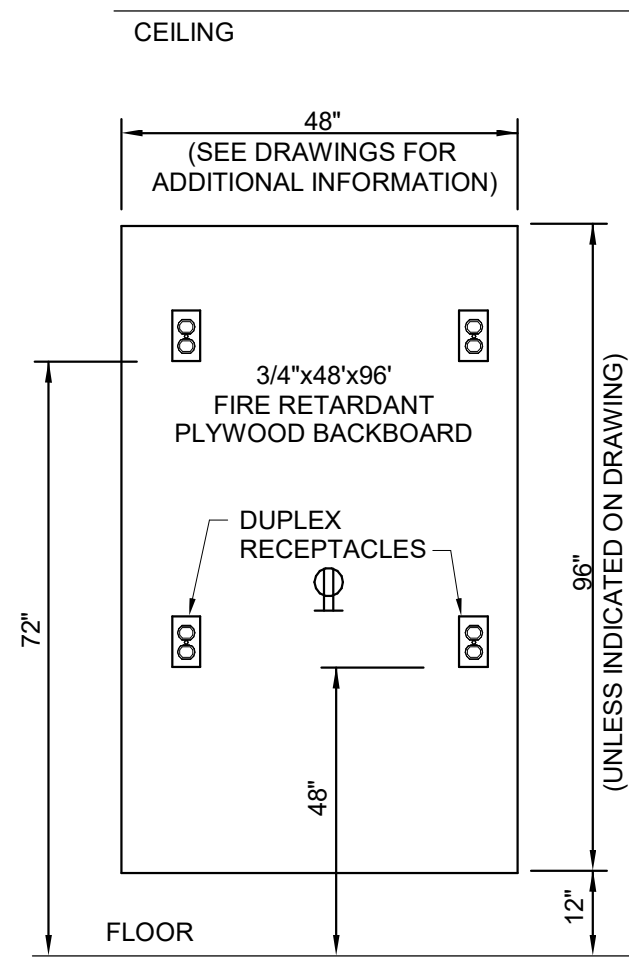
2 J-HOOK DETAIL  
NO SCALE



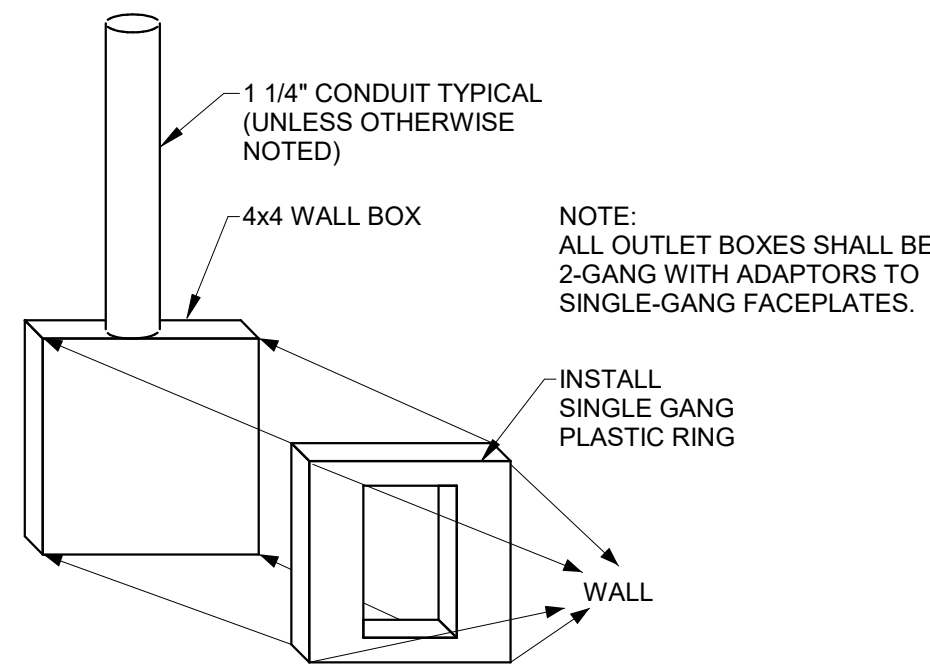
3 DATA FACE PLATE DETAIL  
NO SCALE



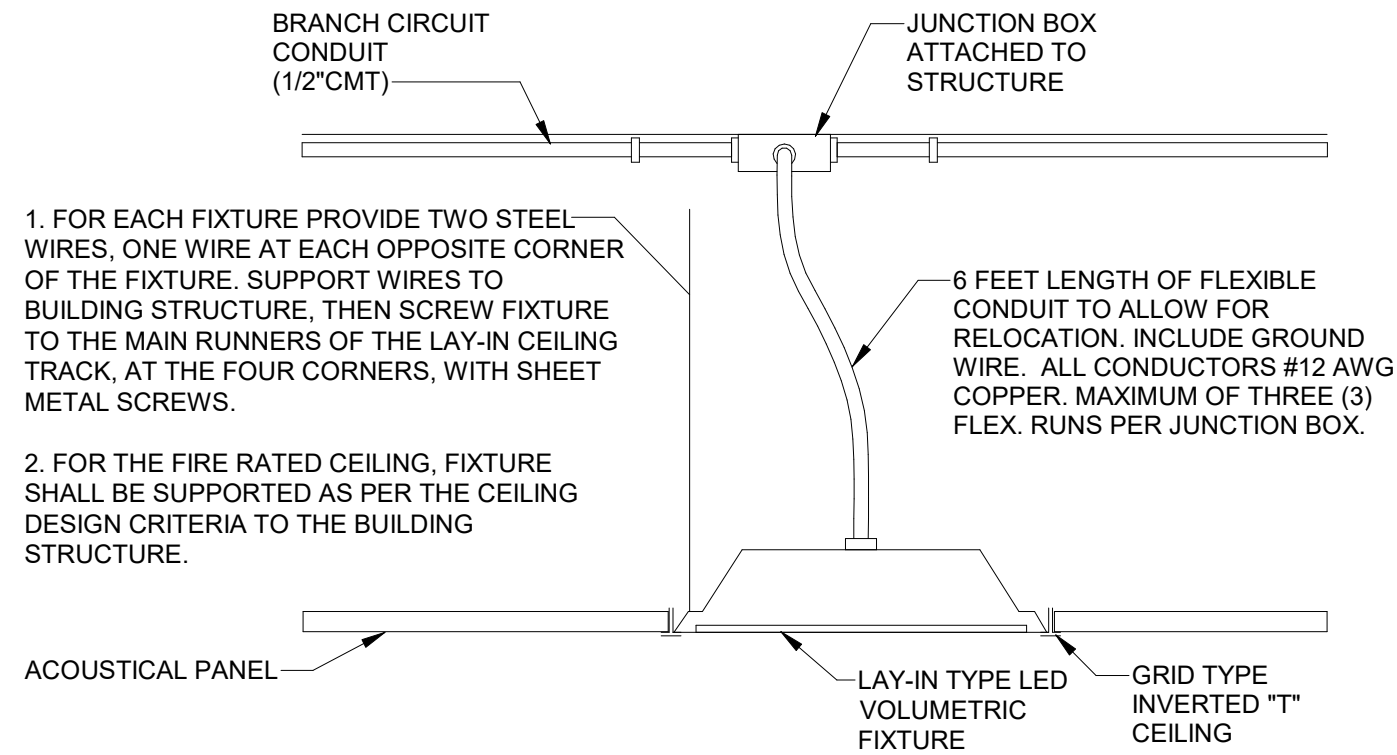
4 LABELING DETAIL  
NO SCALE



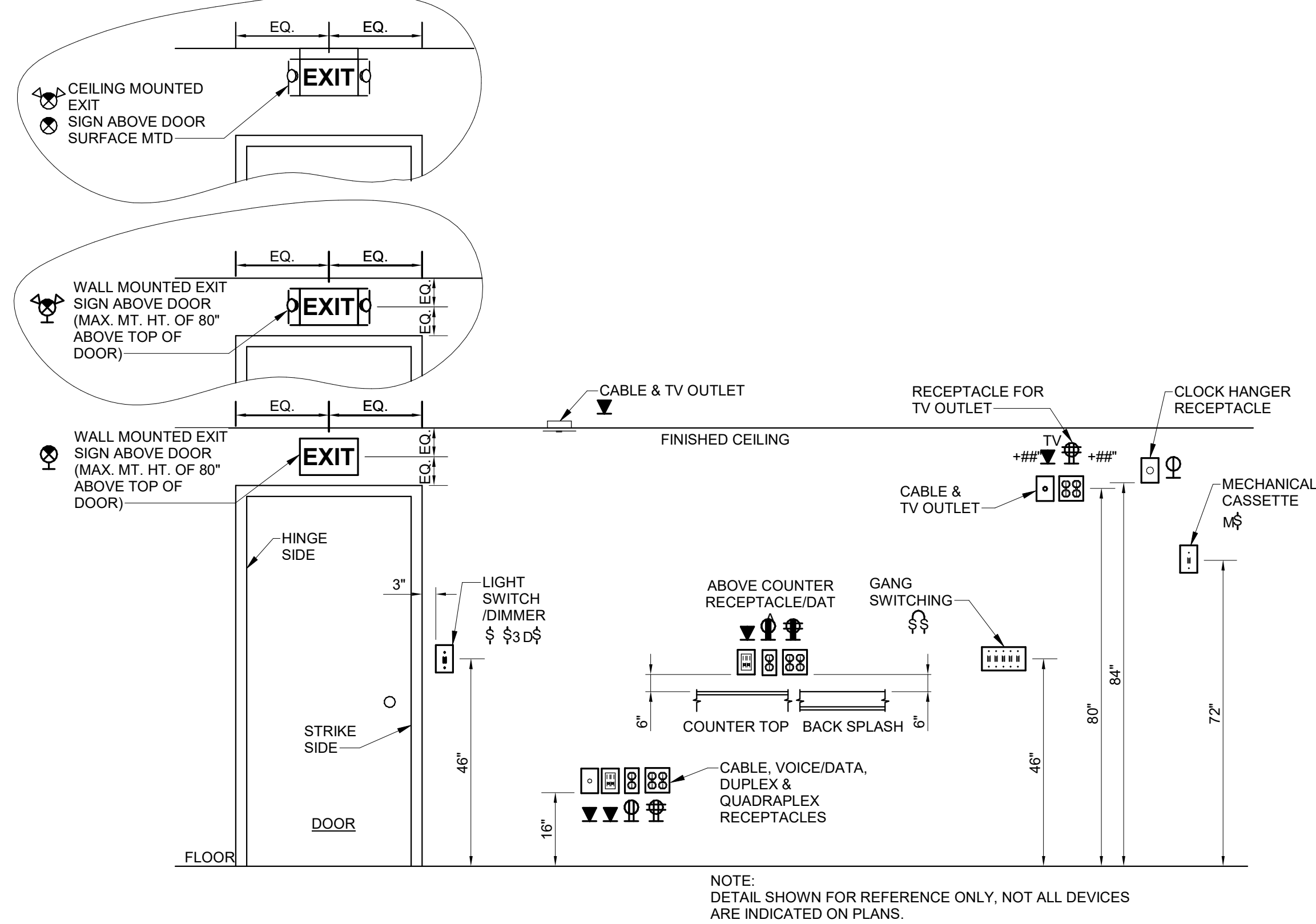
5 PLWOOD BACKBOARD MOUNTING DETAIL  
NO SCALE



6 OUTLET PATHWAY DETAIL  
NO SCALE



7 LIGHTING FIXTURE MOUNTING DETAIL  
NO SCALE



8 ELECTRICAL DEVICES MOUNTING DETAIL  
NO SCALE

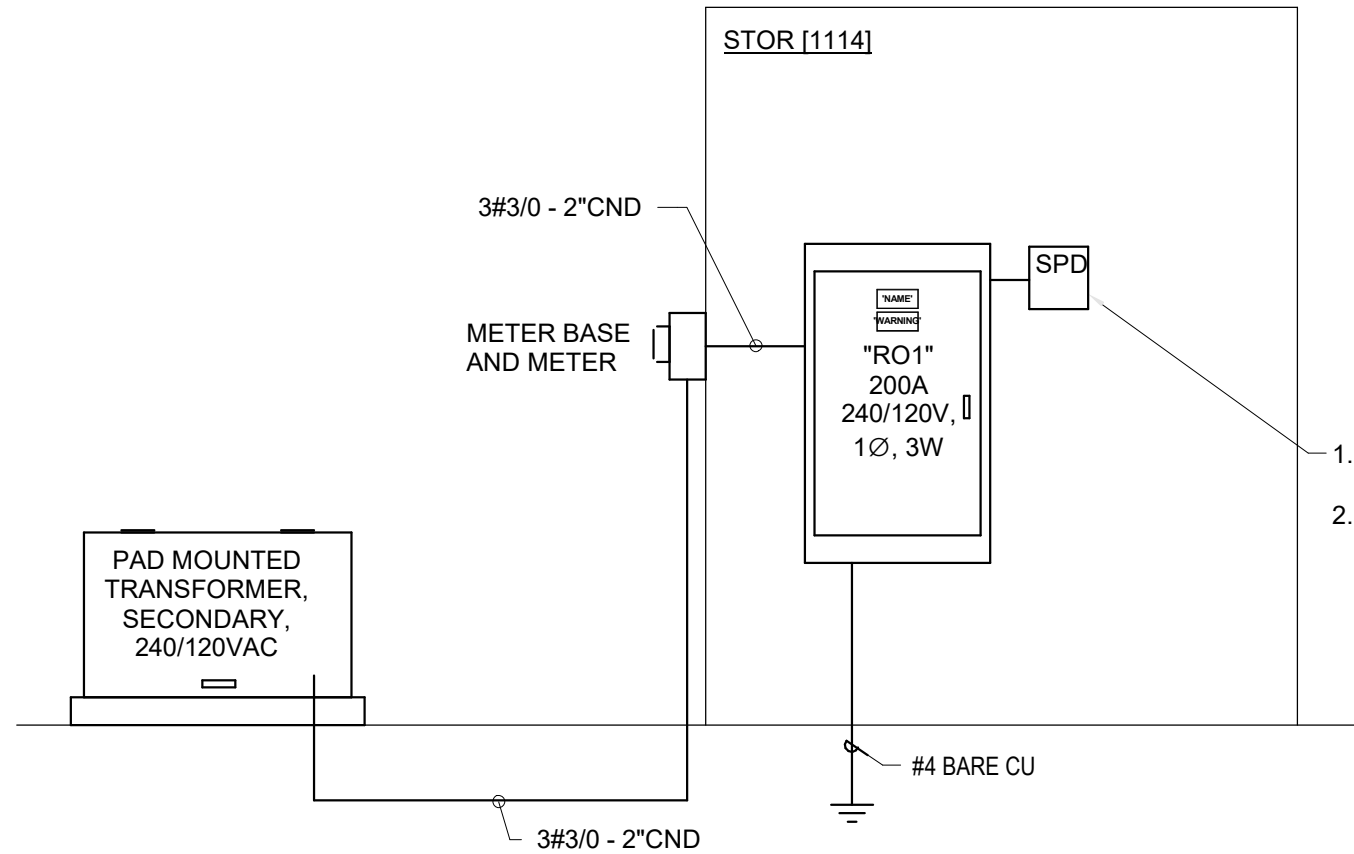
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04.23.20	ISSUED FOR BIDDING	
03.26.20	100% REVIEW SUBMISSION	
01.22.20	60% CD PROGRESS DRAWINGS	
10.14.19	NC DPI CD SUBMISSION	
07.30.19	SD PROGRESS DRAWINGS	
07.11.19	NC DPI SD SUBMISSION	

AVAILABLE FAULT CURRENT

AT PNL RO1: 11,823 AMPS

NOTE:

1. SHORT CIRCUIT CALCULATION COMPLETED ON 04/21/2020. BASED ON A 50KVA PAD MOUNTED TRANSFORMER @ 1.5% IMPEDANCE, AND 1.83 X/R. VERIFY ACTUAL PARAMETERS WITH UTILITY COMPANY AND EQUIPMENT CHARACTERISTICS PRIOR TO INSTALLATION
  2. SERVICE EQUIPMENT SHALL BE LEGIBLY MARKED WITH MAX. AVAILABLE FAULT CURRENT, INCLUDING THE DATE THE FAULT CURRENT CALCULATIONS WERE PERFORMED, PER NEC 110.24
1. SURGE PROTECTION DEVICE (SPD) SHALL BE MOUNTED TO KEEP LEADS AS SHORT AS POSSIBLE.
2. SPD IS SHOWN WITH A 30A, 2 POLE BREAKER IN PANELBOARD BEING PROTECTED. MAKE CONNECTION WITH 3/6AWG CONDUCTORS, IF SPD MANUFACTURER RECOMMENDS LARGER BREAKER OR LEADS, PROVIDE AT NO ADDITIONAL COST TO OWNER.



1 RISER DIAGRAM - ROTC  
NO SCALE

LOAD SUMMARY

VOLTAGE	PHASE
240	1
LARGEST MOTOR APPROX. AMPS	14 AMPS
LARGEST MOTOR APPROX. AMPS x .25	4 AMPS
<b>HVAC</b>	
PTAC (QTY 2)	21,888 VA
PVOS (QTY 2)	72 VA
SUB-TOTAL HVAC DEMAND	21,960 VA
SUB-TOTAL HVAC DEMAND	92 AMPS
<b>EQUIPMENT</b>	
FA	400 VA
HAND DRYERS	2,760 VA
SECURITY	400 VA
DATA RACK	1,100 VA
SUB-TOTAL EQUIPMENT DEMAND	4,660 VA
SUB-TOTAL EQUIPMENT DEMAND	19 AMPS
ADD FOR LARGEST MOTOR	4 AMPS
TOTAL EQUIPMENT DEMAND	23 AMPS
<b>LIGHTING</b>	
LIGHTS (INTERIOR, BASED ON NEC 220.12)	6,000 VA
LIGHTS (EXTERIOR)	600 VA
SIGN	1,200 VA
TOTAL LIGHTING LOAD	7,800 VA
LIGHTING LOAD x 1.25	9,750 VA
TOTAL DEMAND FOR LIGHTING	41 AMPS
<b>RECEPTACLES</b>	
RECEPTACLES	4,680 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	4,680 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	20 AMPS
TOTAL DEMAND BUILDING AMPS	175 AMPS
TOTAL DEMAND BUILDING AMPS	41,896 VA
TOTAL BUILDING CONNECTED LOAD	39,100 VA

2018 APPENDIX B BUILDING CODE SUMMARY

ELECTRICAL SUMMARY  
ELECTRICAL SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE: ☒ PRESCRIPTIVE ☐ PERFORMANCE  
ASHRAE 90.1: ☐ PRESCRIPTIVE ☐ PERFORMANCE

LIGHTING SCHEDULE (EACH FIXTURE TYPE)

LAMP TYPE REQUIRED IN FIXTURE: SEE FIXTURE SCHEDULE  
NUMBER OF LAMPS IN FIXTURE: SEE FIXTURE SCHEDULE  
BALLAST TYPE USED IN THE FIXTURE: SEE FIXTURE SCHEDULE  
NUMBER OF BALLASTS IN FIXTURE: SEE FIXTURE SCHEDULE  
TOTAL WATTAGE PER FIXTURE: SEE FIXTURE SCHEDULE

TOTAL INTERIOR WATTAGE: (WHOLE BUILDING OR SPACE BY SPACE)

ALLOWED = 2,940 WATTS  
ADDITIONAL 10% = 2,646 WATTS  
SPECIFIED = 1,036 WATTS

EXTERIOR ALLOWANCE:  
(TRADEABLE SURFACES)

ALLOWED = N/A WATTS  
SPECIFIED = N/A WATTS

(NON-TRADEABLE SURFACES):

ALLOWED = N/A WATTS  
SPECIFIED = N/A WATTS

ADDITIONAL PRESCRIPTIVE COMPLIANCE

- ☐ 506.2.1 MORE EFFICIENT MECHANICAL EQUIPMENT
- ☒ 506.2.2 REDUCED LIGHTING POWER DENSITY
- ☐ 506.2.3 ENERGY RECOVERY VENTILATION SYSTEMS
- ☐ 506.2.4 HIGHER EFFICIENCY SERVICE WATER HEATING
- ☐ 506.2.5 ON-SITE SUPPLY OF RENEWABLE ENERGY
- ☐ 506.2.6 AUTOMATIC DAYLIGHTING CONTROL SYSTEMS

Branch Panel: RO1

Location: STOR 529  
Supply From:  
Mounting: RECESSED  
Enclosure: NEMA 1

Volts: 120/240  
Phases: 1  
Wires: 3

A.I.C. Rating: 14,000 AMPS SYMMETRICAL  
Mains Type: MAIN CB  
Mains Rating: 200.0 A  
MCB Rating: 200.0 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	Poles	Trip	Circuit Description	CKT
1	PTAC02 D.S.	60.0 A	2	5472 VA 5472 VA	5472 VA 5472 VA	2	60.0 A	PTAC01 D.S.	2
3									4
5		RCPT: DATA RACK IN STOR	20.0 A	1	180 VA 540 VA		1	20.0 A	TARGET SYSTEM FLR BOXES
7	RCPT: DATA RACK IN STOR	20.0 A	1		180 VA 1200 VA	1	20.0 A	FIRST RESPONDERS SYSTEM	8
9	RCPTS: STOR, CORR, SHOOTING RANGE	20.0 A	1	900 VA 668 VA		1	20.0 A	LTS: CORR, SHOOTING RANGE	10
11	RCPT: EWC (NOTE 2)	20.0 A	1		430 VA 132 VA	1	20.0 A	LTS: TLTS, STOR	12
13	RCPTS: TLTS	20.0 A	1	360 VA 180 VA		1	20.0 A	EMERGENCY COMMUNICATION SYSTEM	14
15	RCPTS: SHOOTING RANGE, EXTERIOR	20.0 A	1		900 VA 180 VA	1	20.0 A	EMERGENCY COMMUNICATION SYSTEM	16
17	RCPTS: SHOOTING RANGE	20.0 A	1	360 VA 1380 VA		1	20.0 A	HAND DRYER	18
19	SPARE	20.0 A	2		0 VA 1380 VA	1	20.0 A	HAND DRYER	20
21	SPARE			0 VA 0 VA	1	20.0 A	SPARE	22	
23	SPARE	20.0 A	1		0 VA 0 VA	1	20.0 A	SPARE	24
25	SPARE	20.0 A	1	0 VA 0 VA		1	20.0 A	SPARE	26
27	SPARE	20.0 A	1		0 VA 0 VA	1	20.0 A	SPARE	28
29	SPARE	20.0 A	1	0 VA 0 VA		1	20.0 A	SPARE	30
Total Load:				14837 VA			15171 VA		
Total Amps:				123.6 A			126.4 A		
Legend:									
Load Classification		Connected Load	Demand Factor	Estimated Demand	Panel Totals				
HVAC		21888 VA	100.00%	21888 VA					
Power		3448 VA	100.00%	3448 VA	Total Conn. Load: 30002 VA				
Spare		1200 VA	100.00%	1200 VA	Total Est. Demand: 30026 VA				
RCPT		3480 VA	100.00%	3480 VA	Total Conn.: 125.0 A				
Lighting		760 VA	100.00%	760 VA	Total Est. Demand: 125.1 A				
LTS		94 VA	125.00%	118 VA					
Notes:									
1. HVAC EQUIPMENT MUST USE TYPE HACR BREAKERS.									
2. PROVIDE GFI BREAKER.									
3. PROVIDE BREAKER HANDEL LOCKING DEVICE.									

1. ALL WIRING SHALL BE IN ACCORDANCE WITH LOCAL AND NATIONAL CODES, INCLUDING NFPA 72 (2013 EDITION) AND NEC.
2. A BDA SYSTEM IS AN EMERGENCY RESPONDER RADIO ENHANCED SYSTEM IN COMPLIANCE WITH THE NC FIRE CODE, SECTION 510.
3. WHERE REQUIRED, WIRING SHALL BE RUN IN MINIMUM 3/4" CONDUIT. SURFACE METAL RACEWAY IS ACCEPTABLE.
4. PLENUM RATED COAXIAL CABLE WITHOUT CONDUIT, MAY BE ACCEPTABLE FOR HORIZONTAL RUNS IN AREAS OTHER THAN WHERE WATERPROOF DEVICES ARE REQUIRED. HOWEVER, CONDUIT SHALL BE USED TO PENETRATIONS IN RATED WALLS SHALL BE MADE IN CONDUIT PER APPROPRIATE U.I. SYSTEM.
5. MANUFACTURER'S 1/2" COAXIAL CABLE SHALL BE USED FOR THE BDA SYSTEM, DUE TO ITS LOW OHM LOSS PROPERTIES.
6. THE DIRECTIONAL DONOR ANTENNA ON THE ROOF SHALL BE TIED INTO THE BUILDING GROUNDING SYSTEM.
7. ALL CABLES USED FOR BDA SHALL BE GROUNDED TO THE BUILDING GROUNDING SYSTEM.
8. THE CABLE BETWEEN THE DONOR ANTENNA AND THE AMPLIFIER MAY BE RUN TO THE ROOF, BUT IT MUST BE IN CONDUIT.
9. THE LIGHTING ARRESTOR SHALL BE INSTALLED AS SHOWN ON THE TYPICAL ANTENNA INSTALLATION DETAIL. THE ARRESTOR PART IS THE "COAXIAL SURGE PROTECTOR," BDA-LA-P8AX-6G.
10. THE CABLE FROM THE DONOR ANTENNA TO THE AMPLIFIER SHALL BE SEPARATED FROM THE RISER CABLE FROM THE BDA TO THE INDOOR ANTENNA, THIS REQUIREMENT APPLIES TO THE FOLLOWING:
  - IF BOTH CABLES ARE NOT IN CONDUIT, THE MINIMUM SEPARATION SHALL BE SIX (6) FEET.
  - IF AT LEAST ONE CABLE IS IN CONDUIT, THE MINIMUM SEPARATION SHALL BE THREE (3) FEET.
11. THESE CABLES ARE ALLOWED TO CROSS A MAXIMUM OF ONE TIME.
12. THE BDA AMPLIFIER ENCLOSURE SHALL BE INSTALLED ON METAL STRUT CHANNEL (TO ALLOW AIRFLOW). SEE INSTALLATION DIAGRAM.
13. THE BDA AMPLIFIER AND BATTERY ENCLOSURES SHALL BE GROUNDED TO THE BUILDING GROUNDING SYSTEM UTILIZING A SHORT, DIRECT PATH WITH THE MINIMUM NUMBER OF BENDS (GROUNDING CABLES SHALL NOT REVERSE DIRECTION WHEN CONNECTING TO TERMINATION POINTS.)
14. A.C. WIRES SHALL BE RUN IN SEPARATE CONDUIT FROM D.C. WIRING, SUCH THAT A SYSTEM ALARM DOES NOT DE-ENERGIZE THE CONTROL PANEL. MINIMUM SIZE WIRE TO BE AWG 12 THIN. PROTECTION AGAINST VOLTAGE TRANSIENTS AND SURGES SHALL BE INSTALLED AT THE ELECTRICAL PANELBOARD AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
15. PRIMARY AC POWER TO THE BDA AMPLIFIER SHALL BE DEDICATED CIRCUIT.
16. REDUNDANT AC POWER TO THE BDA AMPLIFIER SHALL BE ANY 120VAC CIRCUIT. (PROVIDING A SECOND (REDUNDANT) POWER CIRCUIT IS PER THE MANUFACTURERS RECOMMENDED PRACTICE.)
17. CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED BY THE SYSTEM TYPE: i.e. "EMERGENCY COMMUNICATION SYSTEM" (ECS)
18. CONDUIT FOR THE DONOR (ROOF) ANTENNA AND FOR THE RISER COAXIAL CABLE SHALL BE PARALLEL TO THE DBA ENCLOSURE. THOSE CONDUIT SHALL TERMINATE WITH A BUSHING WITHIN TWO (2) FEET OF THE BOTTOM OF THE ENCLOSURE. TECHNICIANS SHALL MAKE THE CONNECTION PROVIDED, PREWIRED 1/4" FLEX CABLE FROM THE BDA.
19. INSTALLATION REQUIREMENTS TO COMPLY WITH NFPA 72, SECTION 24.3.6.8:
  - THE RISER CABLE SHALL BE INSTALLED IN A 2 HOUR RATED ENCLOSURE OR SHATT, (2 HOUR RATED COAXIAL CABLE IS NOT AVAILABLE AT THE CORRECT LOW OHM LOSS RATING.)
  - THE SPLITTER CONNECTIONS BETWEEN THE RISER CABLE AND THE HORIZONTAL FEEDER CABLE SHALL ALSO BE MADE WITH A 2 HOUR RATED ENCLOSURE. THE FEEDER CABLE PASSAGE THROUGH THAT 2 HOUR ENCLOSURE SHALL BE FIRE STOPPED WITH THE APPROPRIATE U.I. SYSTEM.
  - ALL FEEDER CABLES SHALL BE PLENUM RATED AT A MINIMUM. (FEEDER CABLES ARE THE HORIZONTAL RUNS TO THE DAS.)
20. WHEN SPLITTER CONNECTIONS ARE IN CONDUIT, PROVIDE A MINIMUM 12 INCH x 12 INCH JUNCTION BOX TO MAKE THE CONNECTION.
21. THE BDA ANNUNCIATOR SHALL BE INSTALLED NEAR THE FIRE ALARM CONTROL PANELPER THE INSTALLATION NOTES ON THIS SHEET.
22. ALL FIELD WIRING SHALL BE CHECKED FOR SHORTS, OPENS, AND GROUNDS BEFORE MACKING CONNECTIONS.
23. SEE MANUFACTURERS SHEETS FOR MOUNTING DETAILS.
24. ALL JUNCTION BOX COVERS SHALL BE RED IN COLOR. THOSE IN FINISHED AREAS ARE PERMITTED TO MATCH THE FINISH COLOR.
25. ALL PENETRATIONS THROUGH RATED WALLS SHALL BE SEALED USING APPROPRIATE U.I. SYSTEM.



1. A PRELIMINARY SITE SURVEY IS NEEDED TO DETERMINE THE EXISTING dbm SIGNAL STRENGTH.
2. A MORE DETAILED SURVEY WILL MAP THE BUILDING ONCE THE BUILDING IS SUBSTANTIALLY COMPLETED.
3. THE NEXT SIGNAL STRENGTH SURVEY WILL COMPLY WITH THE 2018 NFCF, 510.5.3 AND NFPA 72, 24.5.2.1 (2013 EDITION)
  - EACH FLOOR SHALL BE DIVIDED INTO 20 (APPROXIMATELY) EQUAL TEST AREAS. THE WORST CASE SIGNAL STRENGTH READING SHALL BE RECORDED. PROVIDE 90 PERCENT FLOOR AREA RADIO COVERAGE.
  - CRITICAL AREAS, IF PRESENT, SHALL BE SURVEYED SEPARATE FROM THE EQUAL TEST AREAS:
    - EXIT STAIRS
    - EXIT PASSAGEWAYS
    - ELEVATOR LOBBIES
    - AT STANDPIPE CABINETS
    - SPRINKLER SECTIONAL VALVE LOCATIONS
    - AHJ MAY REQUIRE ADDITIONAL LOCATIONS.
  - CRITICAL AREAS SHALL BE PROVIDED WITH 99 PERCENT RADIO COVERAGE.
4. THE MINIMUM SIGNAL STRENGTH OF -95 dbm IS REQUIRED.

EMERGENCY RESPONDERS RADIO AMPLIFICATION SYSTEM:

- a. IN BASE CONTRACT, CONTRACTOR SHOULD INCLUDE INITIAL TESTING/SURVEY OF SIGNAL STRENGTH AND COVERAGE OF ALL EMERGENCY RESPONDERS PRIOR TO SUBSTANTIAL COMPLETION OF BUILDING AND ALL REQUIRED SHOP DRAWINGS AND DOCUMENTATION TO SUBMIT TO CONTRACT BUILDING DEPARTMENT FOR REVIEW AND APPROVAL. TESTING SURVEYS SHOULD COMPLY 2810 NCFR, 510.53 AND NFPA 72.224.5.2.
- b. IN BASE CONTRACT, CONTRACTOR SHOULD INCLUDE ALL CONDUIT/TRACEWAYS (INCLUDING CONDUIT FROM BDA SYSTEM) AND ALL WIRING TO BE INSTALLED IN ALL JUNCTION BOXES, ETC. SHOWN ON CONTRACT DOCUMENTS FOR THE POTENTIAL BDA SYSTEM. SHOWN BDA SYSTEM NOT REQUIRED, ALL RACEWAYS AND BOXES SHALL BE LABELED, AND LEFT OPEN FOR FUTURE INSTALLATION.
- c. CM@RISK WILL CARRY ALLOWANCE FOR BDA SYSTEM(S) SHOULD TESTING INDICATE THE NEED FOR EMERGENCY RESPONDER COMMUNICATION AMPLIFIER. SHOULD BDA SYSTEM BE REQUIRED, ELECTRICAL CONTRACTOR SHALL SUBMIT PROPOSAL FOR INSTALLATION OF COMPLETE BDA SYSTEM (AS SHOWN ON PLANS AND NOTES).





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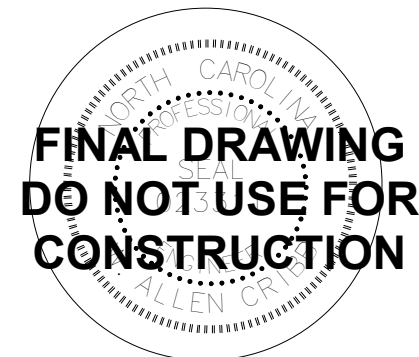
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PROJECT TITLE

NORTH  
BRUNSWICK  
HIGH SCHOOL  
NEW ROTC  
BUILDING

114 SCORPION DRIVE N.E.  
LELAND, NC 28451

DSP # : 100  
DPI SCHOOL # : 1165

SHEET TITLE

ROTC FLOOR PLAN -  
FIRE ALARM

ISSUE BLOCK

04.23.20	ISSUED FOR BIDDING
03.26.20	100% REVIEW SUBMISSION
01.22.20	60% CD PROGRESS DRAWINGS
10.14.19	NC DPI DD SUBMISSION
07.30.19	SD PROGRESS DRAWINGS
07.11.19	NC DPI SD SUBMISSION

Mark	Date	Description
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PROJECT NO: 2019082.00  
DATE: 10.14.2019  
SCALE: 1/4" = 1'-0"  
DRAWN BY: HGH PROJ MGR: WAC

F101

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ROTC FLOOR PLAN - FIRE  
ALARM

SCALE: 1/4" = 1'-0"

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1. AS A MINIMUM THE FIRE ALARM SYSTEM SHALL INCLUDE DETECTORS, PULL STATIONS, HORN/STROBES AND STROBES WITH FIRE RATED CABLE. THE FIRE ALARM SYSTEM SHALL MEET NFPA REQUIREMENTS, THE NATIONAL ELECTRICAL CODE, THE STATE CODES, AND THE LOCAL BUILDING CODES.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CABLE, MATERIALS AND EQUIPMENT AS SHOWN ON THE DRAWINGS/OR HEREIN SPECIFIED. ALL SYSTEM COMPONENTS SPECIFIED HEREIN, AS WELL AS THEIR INSTALLATION, SHALL COMPLY WITH APPLICABLE STANDARDS OF THE NATIONAL ELECTRICAL CODE, NATIONAL FIRE PROTECTION ASSOCIATION, AND LOCAL CODES HAVING AUTHORITY. ALL EQUIPMENT SHALL BE LISTED FOR FIRE ALARM SYSTEM USE.
3. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE INSTALLED AND CONNECTED UNDER THE DIRECTION AND SUPERVISION OF A MANUFACTURER'S REPRESENTATIVE. UPON COMPLETION OF INSTALLATION, THE MANUFACTURER'S REPRESENTATIVE SHALL PERFORM ALL OPERATIONAL TESTS AND ADJUSTMENTS AND CERTIFY IN WRITING THAT THE SYSTEM IS PROPERLY INSTALLED AND FUNCTIONS AS SPECIFIED.
4. ALL WIRING SHALL BE SYSTEM OR UL LISTED FIRE RATED CABLE AND COLOR CODED TO ALLOW EASE OF IDENTIFICATION OF THE DIFFERENT CIRCUITRY REQUIRED FOR THE SYSTEM. NO CIRCUIT SHALL CHANGE COLOR AT ANY POINT END TO END.
5. THE MANUFACTURER'S AUTHORIZED REPRESENTATIVE SHALL PROVIDE SUPERVISION OF FINAL SYSTEM PANEL CONNECTIONS, PERFORM A COMPLETE FUNCTIONAL TEST OF THE SYSTEM, AND A WRITTEN REPORT TO THE CONTRACTOR ATTESTING THE PROPER OPERATION OF THE COMPLETED SYSTEM.
6. ALL DEVICES SHALL BE COMPATIBLE WITH THE EXISTING FIRE ALARM SYSTEM.
7. ALL WIRING SHALL BE INSTALLED IN COMPLIANCE WITH N.E.C., NFPA 72, ALL STATE AND LOCAL REQUIREMENTS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8. SLEEVE AND SEAL ALL PENETRATIONS THROUGH FIRE WALLS.
9. WIRING SHALL BE A MINIMUM OF NO. 14 AWG UNLESS OTHERWISE NOTED.
10. THE SMOKE DETECT DETECTOR SHALL BE FURNISHED AND TERMINATED BY THE FIRE ALARM CONTRACTOR, INSTALLED BY THE MECHANICAL CONTRACTOR.
11. SHOP DRAWINGS MUST BE SUBMITTED BY THE FIRE ALARM CONTRACTOR COMPLYING WITH THE FIRE ALARM PLAN REVIEW REQUIREMENTS POLICY. THESE DRAWINGS DO NOT CONSTITUTE APPROVAL AND MAY CHANGE AFTER A FULL REVIEW BY THE FIRE DEPT. HAVING JURISDICTION. A SEPARATE PERMIT MUST BE OBTAINED PRIOR TO INSTALLATION.
12. IN CORRIDORS WHERE MORE THAN TWO VISIBLE NOTIFICATION APPLIANCES ARE IN ANY FIELD OF VIEW, THEY SHALL FLASH IN SYNCHRONIZATION.
13. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR MODULES TO SHUTDOWN HVAC EQUIPMENT DURING ALARM CONDITION.
14. ALL FIRE ALARM WORK AND DEVICES SHALL BE INSTALLED AND TERMINATED BY A NICET LEVEL 2 FIRE ALARM TECHNICIAN.
15. IN THE EVENT OF AN ALARM THERE SHALL BE A "GLOBAL" SHUT DOWN OF ALL AIR HANDLING EQUIPMENT.



1. ONLY AFTER LOSS OF POWER FOR > 8 HOURS.
2. REFER TO FIRE PROTECTION DRAWINGS FOR SPRINKLER DEVICE LOCATIONS.
3. REFER TO MECHANICAL DRAWINGS FOR DUCT MOUNTED SMOKE DETECTOR LOCATIONS.
4. TYPICAL, QUANTITIES OF DEVICES ARE NOT SHOWN. SEE FIRE PROTECTION DRAWINGS FOR QUANTITIES AND LOCATIONS.

ISSUE BLOCK	
Mark	Description
04.23.20	ISSUED FOR BIDDING
03.26.20	100% REVIEW SUBMISSION
01.20.20	60% CD PROGRESS DRAWINGS
10.14.19	NCDDP SD SUBMISSION
07.30.19	SD PROGRESS DRAWINGS
07.11.19	NCDDP SD SUBMISSION

**PROJECT NO:** 2019082.00

**DATE:** 10.14.2019

**SCALE:** 12" = 1'-0"

**DRAWN BY:** HGH    **PROJ MGR:** WAC

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