

CHERRY BRANCH FERRY FACILITY

BID SET - AUGUST 14, 2015

SCO ID #: 11-09079-01A

2300 FERRY ROAD, HAVELOCK, NORTH CAROLINA 28532
CRAVEN COUNTY, NORTH CAROLINA
NC DEPARTMENT OF TRANSPORTATION
FERRY DIVISION

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ABBREVIATIONS AND SYMBOLS

	EARTH		FINISH WOOD
	OTHER SOIL, MULCH		ROUGH WOOD CONTINUOUS
	POROUS FILL, GRAVEL		ROUGH WOOD BLOCKING
	BRICK, OTHER MATL		PLYWOOD, OSB
	CMU		STEEL, METAL
	CONCRETE		GYPSUM BOARD, OTHER MATERIAL
	BATT INSULATION		GLASS, GLAZING
	RIGID INSULATION		ACOUSTICAL TILE
	FIBER CEMENT BOARD		

	WALL TYPE		BREAK LINE
	DETAIL NUMBER SHEET NUMBER		PROPERTY LINE
	KEYED NOTE		EXISTING CONTOUR
	ROOM NUMBER		NEW CONTOUR
	DOOR MARK		FENCE
	WINDOW MARK		SILT FENCE
	CENTER LINE, DATUM LINE		SPOT ELEVATION OR DATUM
	HIDDEN LINE		SOIL BORING NO. 1
	KEYPAD		

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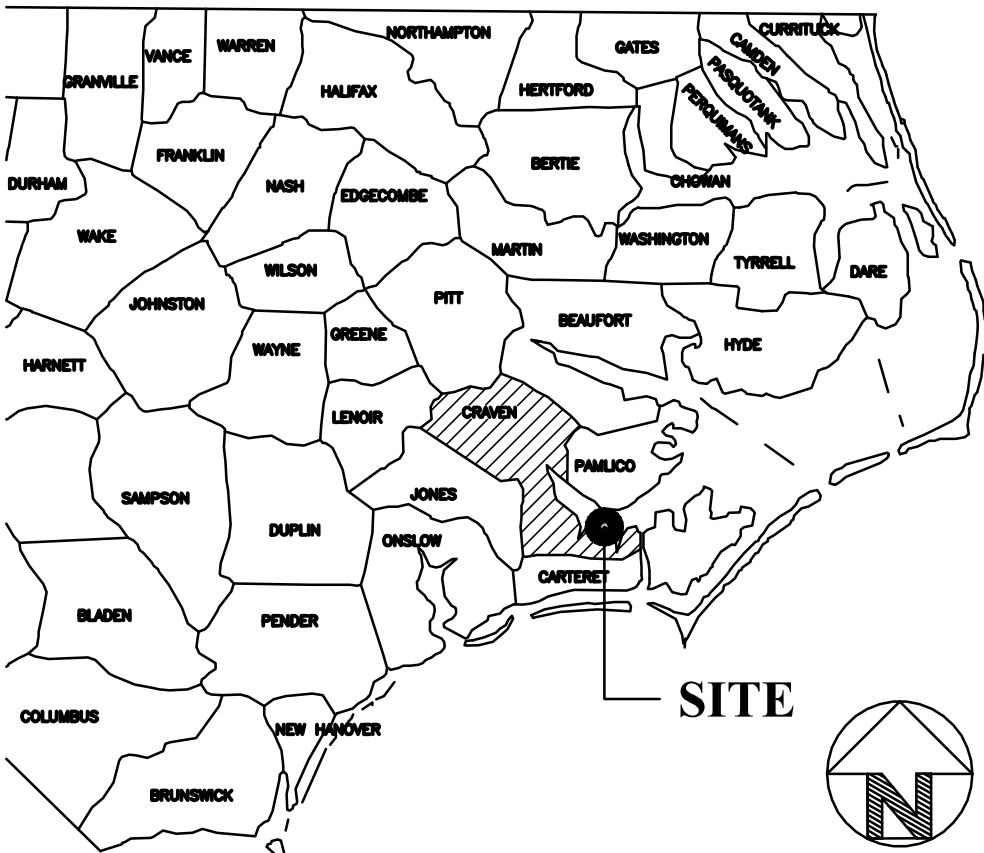
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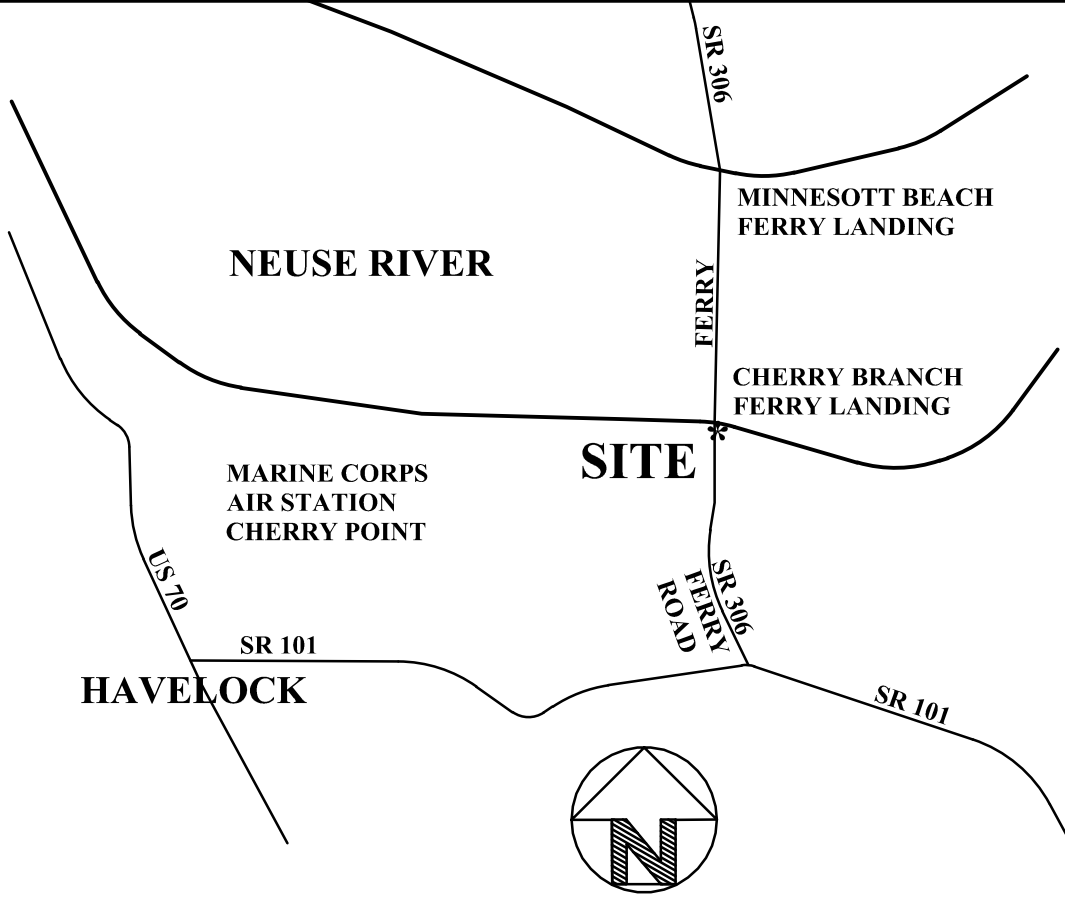
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LOCATION MAP



VICINITY MAP

ANGLE, LENGTH
AL ALUMINUM
AB ANCHOR BOLT
AFF ABOVE FINISH FLOOR
DIA DIAMETER
ALT ALTERNATE
APRX APPROXIMATE
ARCH ARCHITECTURAL
AVG AVERAGE
BB BACK TO BACK
BSMT BASEMENT
BRG BEARING
BM BENCHMARK
BLKG BLOCKING
BD BOARD
BLDG BUILDING
CAB CABINET
CANTL CANTILEVER
CB CATCH BASIN
C&G CURB AND GUTTER
CIP CAST IRON PIPE
CJ CONTROL JT, CEILING JST
CL CENTERLINE
CLR CLEAR
CLG ANODIZED
CLG CEILING
CLKG CAULKING
CMU CONCRETE MASONRY UNIT
COL COLUMN
CONC CONCRETE
CONT CONTINUOUS
CRS COURSES

D DBL DOUBLE
DET DETAIL
DIA DIAMETER
DIAG DIAGONAL
DIM DIMENSION
DN DOWN
DS DOWNSPOUT
EA EACH
EW EACH WAY
ELEC ELECTRICAL
EL ELEVATION
ELEV ELEVATOR
EXIST EXISTING
EJ EXPANSION JOINT
EXT EXTERIOR
EWC ELECTRIC WATER COOLER
FE FIRE EXTINGUISHER
FEC FIRE EXTINGUISHER CABINET
FD FLOOR DRAIN
FF FACTORY FINISH
FF FINISH FLOOR ELEVATION
FIN FINISH FLOOR
FTG FOOTING
FV FIELD VERIFY
FO FRAME OPENING
FOF FACE OF FINISH
FOM FACE OF MASONRY
FOS FACE OF STUD
FRWR FIRE-RESISTANT & WATER-RESISTANT

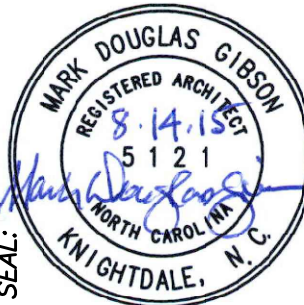
GALV GALVANIZED
GA GAUGE
GL GLASS, GLAZING
GWB GYPSUM WALL BOARD
GYP GYPSUM
HB HOSE BIB
HM HOLLOW METAL
HORIZ HORIZONTAL
H HIGH, HEIGHT
INSUL INSULATION
INT INTERIOR
INV INVERT
JC JANITOR'S CLOSET
JST JOIST
KF KERFED FRAME
KP KEYPAD LOCKSET
KS KNEE SPACE
LAV LAVATORY
LB, # POUND
L LONG
LLV LONG LEG VERTICAL
LLH LONG LEG HORIZONTAL
MB MARKER BOARD
MFR MANUFACTURER
MH MANHOLE
MO MASONRY OPENING
MATL MATERIAL
MAX MAXIMUM
MIN MINIMUM
MNTD MOUNTED
MLD MOULDING

NIC NOT IN CONTRACT
NTS NOT TO SCALE
NO. NUMBER
OC ON CENTER
OPNG OPENING
OPP H OPPOSITE HAND
OSB ORIENTED STRAND BOARD
PNL PANEL
PL LAM PLASTIC LAMINATE
PL PLATE
PLMB PLUMBING
PLWD PREFABRICATED
PSF POUNDS PER SQ FOOT
PSI POUNDS PER SQ INCH
R RISER, ROD
RD ROOF DRAIN
REF REFRIGERATOR
REQD REQUIRED
REV REVERSED, REVISION

SAC SUSPENDED ACOUSTICAL TILE
SCT SUSPENDED CEILING TILE
SAN SANITARY
SECT SECTION
SFGL SAFETY GLASS
SH SHELF, SHELVES
SHT SHEET
SHTG SHEATHING
SIM SIMILAR
SPEC SPECIFICATION
SQ SQUARE
SS STAINLESS STEEL, SANITARY SEWER
STD STANDARD
STL STEEL
STO STORAGE
T TREAD
TB TACK BOARD
T&G TONGUE AND GROOVE
TLT TOILET
TOJ TOP OF JOIST
TOJ TOP OF JOIST
TOM TOP OF MASONRY
TOS TOP OF STEEL
TOW TOP OF WALL
TRTD TREATED
TYP TYPICAL

UNFIN UNFINISHED
UON UNLESS OTHERWISE NOTED
VERT VERTICAL
WIDE WIDE, WIDTH
W/ WITH
WWF WOVEN WIRE FABRIC
WD WOOD

BID DOCUMENTS



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CONSULTANT:

DRAWING TITLE / DESCRIPTION:

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION
ID.# 11-09079-01A
ASSET NUMBER:
CO.# SITE.# BLDG.#
48 - - -
REVISIONS
NO. DATE
DATE ISSUED: 8-14-15
DRAWN BY: DB
CHECKED BY: MDG
SHEET NO.

TITLE SHEET

BID DOCUMENTS

G1

2012 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: NCDOT Cherry Branch Ferry Facility
Address: 2300 Ferry Road, Havelock, North Carolina Zip Code: 28532
Proposed Use: Ferry Operation Office
Owner/Authorized Agent: NCDOT Phone #: (919) 707-4550 E-Mail: mdgibson1@ncdot.gov
Owned By: ☐ City/County ☐ Private ☒ State
Code Enforcement Jurisdiction: ☐ City ☐ County ☒ State

LEAD DESIGN PROFESSIONAL: Mark Gibson

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
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Fire Alarm	Elm Engineering	Bill Aldridge	27919	(704) 335-0396	kimr@elmengr.com
Plumbing	Elm Engineering	Bill Aldridge	27919	(704) 335-0396	kimr@elmengr.com
Mechanical	Elm Engineering	Bill Aldridge	27919	(704) 335-0396	kimr@elmengr.com
Sprinkler-Standpipe	Elm Engineering	Bill Aldridge	27919	(704) 335-0396	kimr@elmengr.com
Structural	NCDOT	Michael Mountcastle	17326	(919) 707-4547	mdmountcastle@ncdot.gov
Retaining Walls >5' High					
Other					

2012 EDITION OF NC CODE FOR: ☒ New Construction ☐ Addition ☐ Upfit
EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair ☐ Renovation

CONSTRUCTED: (date) ORIGINAL USE(S) (Ch. 3):
RENOVATED: (date) CURRENT USE(S) (Ch. 3):
PROPOSED USE(S) (Ch. 3):

BASIC BUILDING DATA

Construction Type: ☐ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
☐ I-B ☐ II-B ☐ III-B ☒ V-B

Sprinklers: ☒ No ☐ Partial ☐ Yes NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes: ☒ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry

Fire District: ☒ No ☐ Yes (Primary) Flood Hazard Area: ☒ No ☐ Yes

Building Height: (feet) 31'-0"

Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	RENO/ALTER (SQ FT)	SUB-TOTAL
6 th Floor				
5 th Floor				
4 th Floor				
3 rd Floor				
2 nd Floor				
Mezzanine				
1 st Floor		8,906		
Basement				
TOTAL		8,906		

ALLOWABLE AREA

Occupancy:

Assembly ☐ A-1 ☐ A-2 ☒ A-3 ☐ A-4 ☐ A-5
Business ☐
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
1-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Accessory Occupancies:

Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
Business ☒
Educational ☐
Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
1-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
Mercantile ☐
Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage
Utility and Miscellaneous ☐

Incidental Uses (Table 508.2.5):

☐ Furnace room where any piece of equipment is over 400,000 Btu per hour input
☐ Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower
☐ Refrigerant machine room
☐ Hydrogen cutoff rooms, not classified as Group H
☐ Incinerator rooms
☐ Paint shops, not classified as Group H, located in occupancies other than Group F
☐ Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy
☐ Laundry rooms over 100 square feet
☐ Group I-3 cells equipped with padded surfaces
☐ Group I-2 waste and linen collection rooms
☐ Waste and linen collection rooms over 100 square feet
☐ Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies
☐ Rooms containing fire pumps
☐ Group I-2 storage rooms over 100 square feet
☐ Group I-2 commercial kitchens
☐ Group I-2 laundries equal to or less than 100 square feet
☐ Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412
☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421 ☐ 422 ☐ 423 ☐ 424
☐ 425 ☐ 426 ☐ 427

Special Provisions: ☐ 509.2 ☐ 509.3 ☐ 509.4 ☐ 509.5 ☐ 509.6 ☐ 509.7 ☐ 509.8 ☐ 509.9

Mixed Occupancy: ☐ No ☒ Yes Separation: 0 Hrs. Exception: _____
☐ Incidental Use Separation (508.2.5)

This separation is not exempt as a Non-Separated Use (see exceptions).

☒ Non-Separated Use (508.3)

The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☐ 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.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$
$$+ \dots = \dots \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 ⁵ AREA	(C) AREA FOR FRONTAGE INCREASE ⁶	(D) AREA FOR SPRINKLER INCREASE ⁷	(E) ALLOWABLE AREA OR UNLIMITED ⁸	(F) MAXIMUM BUILDING AREA ⁹
1	A3	8,906	6,000	4,500	N/A	10,500	10,500

¹ Frontage area increases from Section 506.2 are computed thus:

a. Perimeter which fronts a public way or open space having 20 feet minimum width = 482' (F)
b. Total Building Perimeter = 482' (P)
c. Ratio (F/P) = 1.0 (F/P)
d. W = Minimum width of public way = >30' (W)
e. Percent of frontage increase $I_F = 100 [F/P - 0.25] \times W/30 = 75$ (%)

² The sprinkler increase per Section 506.3 is as follows:

a. Multi-story building $I_s = 200$ percent
b. Single story building $I_s = 300$ percent

³ Unlimited area applicable under conditions of Section 507.

⁴ Maximum Building Area = total number of stories in the building x E (506.4).

⁵ The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

ALLOWABLE HEIGHT

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type V - B	Type V - B		602.5
Building Height in Feet	40	Feet = H + 20' = N/A	31'-0"	503
Building Height in Stories	2	Stories + 1 = N/A	1	503

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING 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	>30'	0					
Bearing Walls							
Exterior	>30'	0					
North							
East							
West							
South							
Interior	0						
Nonbearing Walls and Partitions							
Exterior walls	>30'	0					
North							
East							
West							
South							
Interior walls and partitions	>30'	0					
Floor Construction							
Including supporting beams and joists	>30'	0					
Roof Construction							
Including supporting beams and joists	>30'	0					
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							
Occupancy Separation							
Party/Fire Wall Separation	0						
Smoke Barrier Separation							
Tenant Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ☒ Yes
Exit Signs: ☐ No ☒ Yes
Fire Alarm: ☐ No ☒ Yes
Smoke Detection Systems: ☐ No ☒ Yes ☐ Partial
Panic Hardware: ☐ No ☒ Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: G3

☐ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations

- ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☒ Existing structures within 30' of the proposed building
☒ Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
☒ Occupant loads for each area
☒ Exit access travel distances (1016) 250 ft.
☒ Common path of travel distances (1014.3 & 1028.8) 30 ft.
☒ Dead end lengths (1018.4) 20 ft.
☒ Clear exit widths for each exit door
☒ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
☒ Actual occupant load for each exit door
☐ A separate reduced scaled plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation and supporting construction for a fire barrier/fire partition/smoke barrier. (707.5.1, 709.4 & 710.4).
☒ Location of doors with panic hardware (1008.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
☐ Location of doors with electromagnetic egress locks (1008.1.9.8)
☐ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1029)
☐ The square footage of each fire area (902)
☐ The square footage of each smoke compartment (407.4). Smoke barricades <22,500 sf. Max.
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

Section/Table/Note	Title

ACCESSIBLE DWELLING UNITS
(SECTION 1107)

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)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESSIBLE	VAN SPACES WITH 132" ACCESSIBLE	5' ACCESSIBLE	
STAFF LOT	10	17	0	0	2	2
EXISTING LOT	0	10	0	0	0	0
OVERFLOW LOT	0	25	0	0	1	1
TOTAL	10	52	0	0	3	3

STRUCTURAL DESIGN

DESIGN LOADS:

Importance Factors: Wind (Iw) 1.0

Snow (Is) 1.0

Seismic (Is) 1.0

Live Loads: Roof 20 psf

Mezzanine 100 psf

Floor 100 psf

Ground Snow Load: 10 psf

Wind Load: Basic Wind Speed 130 mph (ASCE-7)
Exposure Category C
Wind Base Shears (for MWFRS) $V_x =$ $V_y =$

SEISMIC DESIGN CATEGORY:

☐ A ☒ B ☐ C ☐ D

Provide the following Seismic Design Parameters:

Occupancy Category (Table 1604.5) ☐ I ☒ II ☐ III ☐ IV

Spectral Response Acceleration S_s 15.4 %g S_1 6.3 %g

Site Classification (Table 1613.5.2) ☐ A ☐ B ☐ C ☒ D ☐ E ☐ F

Data Source: ☐ Field Test ☒ Presumptive ☐ Historical Data

Basic structural system (check one):

☒ Bearing Wall ☐ Dual w/Special Moment Frame

☐ Building Frame ☐ Dual w/Intermediate R/C or Special Steel

☐ Moment Frame ☐ Inverted Pendulum

Seismic base shear: $V_x =$ $V_y =$

Analysis Procedure: ☐ Simplified ☒ Equivalent Lateral Force ☐ Dynamic

Architectural, Mechanical, Components anchored: ☐ Yes ☐ No

LATERAL DESIGN CONTROL: Earthquake ☐ Wind ☒

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) 2,000 psf

Presumptive Bearing capacity

Pile size, type, and capacity

SPECIAL INSPECTIONS REQUIRED: ☒ Yes ☐ No

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE	WATERCLOSETS		URINALS	LAVATORIES		SHOWERS/TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE		MALE	FEMALE		REGULAR	ACCESSIBLE
Space A3	EXISTING							
	NEW	3	4	1	3	3	1	1
REQUIRED	1	1		1	1	0	1	1

SPECIAL APPROVALS

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

ENERGY SUMMARY

ENERGY REQUIREMENTS:

The following data shall be considered minimum and any special attribute required to meet the North Carolina Energy Conservation 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.

Climate Zone: ☒ 3 ☐ 4 ☐ 5

Method of Compliance:

☐ Prescriptive (Energy Code)

☒ Performance (Energy Code)

☐ Prescriptive (ASHRAE 90.1)

☐ Performance (ASHRAE 90.1)

THERMAL ENVELOPE

Roof/Ceiling Assembly (each assembly)

Description of assembly: Metal roof over rigid insulation on plywood deck.

U-Value of total assembly: 0.025

R-Value of insulation: 39

Skylights in each assembly: NONE

U-Value of skylight:

total square footage of skylights in each assembly:

Exterior Walls (each assembly) - Type I

Description of assembly: Masonry veneer, 2" air space, 1" rigid insulation, R-19 in 2x6 stud wall.

U-Value of total assembly: 0.036

R-Value of insulation: 24

Openings (windows or doors with glazing)

U-Value of assembly: 0.45

Solar heat gain coefficient: 0.33

projection factor: 0.30

Door R-Values: 7.5

Exterior Walls (each assembly) - Type II

Description of assembly: Fiber Cement Siding over 1" rigid insulation, on 1/2" plywood, R-19

batts in 2x6 stud wall.

U-Value of total assembly: 0.036

R-Value of insulation: 24

Openings (windows or doors with glazing)

U-Value of assembly: 0.45

Solar heat gain coefficient: 0.33

projection factor: 0.30

Door R-Values: 7.5

Walls below grade - NONE

Floors over unconditioned space - NONE

Floors slab on grade

Description of assembly: Poured-in-place concrete over vapor barrier on rigid insulation.

U-Value of total assembly: 0.72

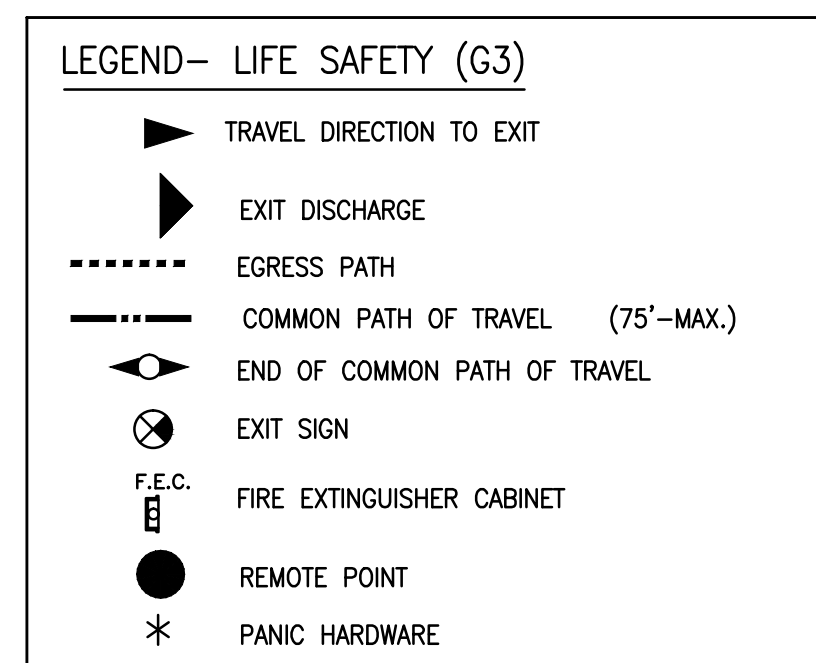
R-Value of insulation: R-10

Horizontal/vertical requirement: 16"

slab heated: NO

Section 502.4.3 Sealing of Building Envelope [Indicate where details are in the set]

- ☐ Joint around fenestration and door frames
☐ Junction between walls and foundations, walls at building corners, walls and structural floors or roofs, walls and roof or wall panels.
☐ Openings at penetrations of utility services through roofs, walls, and floors including but not limited to electrical, plumbing, mechanical, security and communications.
☐ Site-built fenestration and doors.<

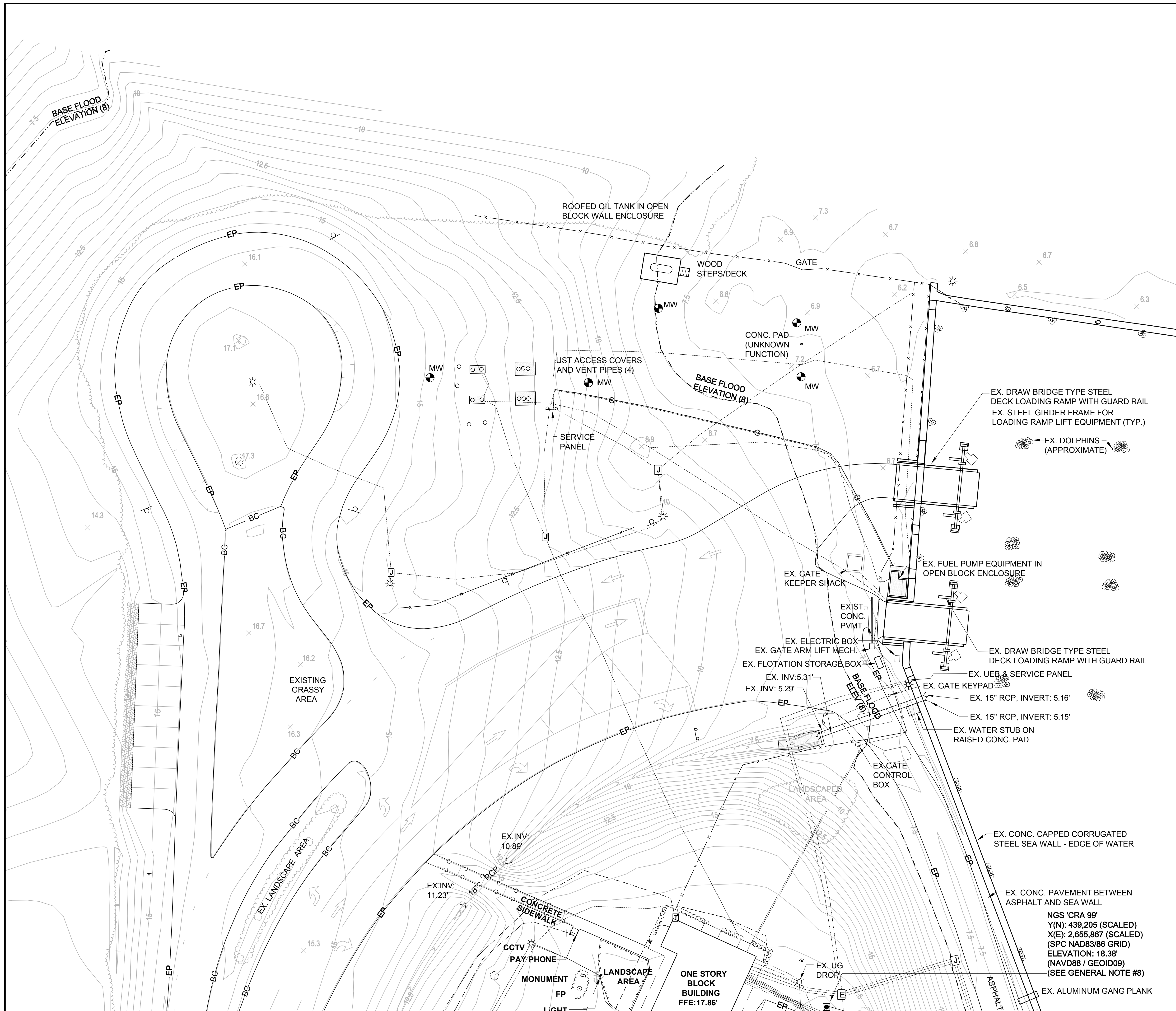


MEANS OF EGRESS TABLE																	
EXIT WIDTH												NUMBER AND ARRANGEMENT OF EXITS					
USE GROUP OR SPACE DESCRIPTION	OCCUPANCY TYPE (SEE NOTE 1)	(A)	(B)	CALCULATED OCCUPANT LOAD	TOTAL OCCUP. LOAD PER AREA	(C)		EXIT WIDTH (in)				MINIMUM NUMBER OF EXITS		TRAVEL DISTANCE		ARRANGEMENT OF MEANS OF EGRESS (SECTION 1015.2)	
		AREA SQ. FT.	AREA PER OCCUPANT (TABLE 1004.1.1)			EGRESS WIDTH PER OCCUPANT (1005.1)		REQUIRED WIDTH (SECTION 1005.1) (a+b)xc		ACTUAL WIDTH SHOWN ON PLANS		REQUIRED	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQ'D MIN. DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
						STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL						
AREA 1	BUSINESS	645	100	7	47	.3"	.2"	N/A	9.4"	N/A	72"	1	1	200	50'-0"	-	-
	A3 (UNCONC.)	590	15	40													
AREA 2	A3 (UNCONC.)	664	15	45	46	.3"	.2"	N/A	9.2"	N/A	36"	1	2	200	47'-0"	18'-6"	31'-0"
	ACCESS./ STOR.	38	100	1													
AREA 3	BUSINESS	1561	100	16	19	.3"	.2"	N/A	3.8"	N/A	36"	1	2	200	80'-0"	36'-6"	58'-0"
	KITCHEN	301	200	2													
	STORAGE	40	300	1													
AREA 4	BUSINESS	1733	100	18	19	.3"	.2"	N/A	3.8"	N/A	36"	1	2	200	82'-0"	35'-6"	56'-0"
	MECH. / STOR.	238	300	1													

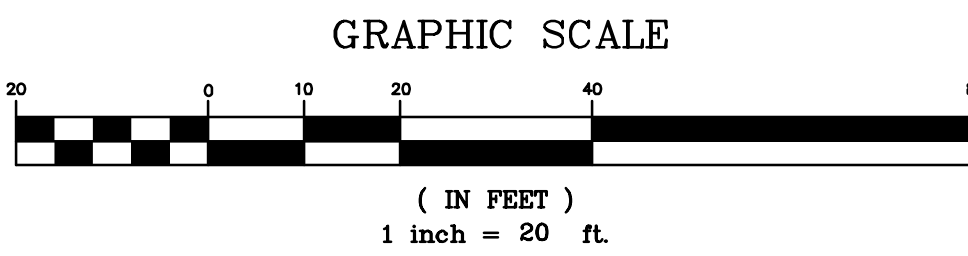
NOTES:

1. ALL ASSEMBLY SPACES ARE CLASSIFIED AS ACCESSORY TO GROUP B (BUSINESS) OCCUPANCY (SECTION 303.1); (LESS THAN AN OCCUPANCY OF 49)

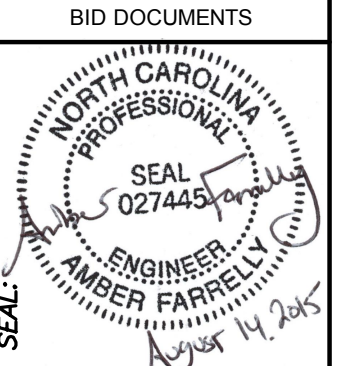
ALL MECHANICAL / STORAGE SPACES ARE CLASSIFIED AS ACCESSORY OCCUPANCY TO GROUP B (BUSINESS) OCCUPANCY (SECTION 508.2)



STANDARD NOTES
1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL NCDOT/NCDENR/DWQ APPLICABLE STANDARDS AND SPECIFICATIONS.
2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.



LEGEND	
— ELEVATION 8	APPROXIMATE FLOODPLAIN BOUNDARY (SEE GENERAL NOTE #5)
— BC	BACK OF CURB
— EP	BUSH
— ED	CABLE / FIBER OPTIC PEDESTAL
— EP	CONCRETE
— ED	DECIDUOUS TREE
— EP	EDGE OF PAVEMENT
— ED	EDGE OF UNPAVED PARKING / DRIVES
— EP	ELECTRIC LINE (PAINT MARKS)
— ED	END OF INFORMATION (SIGNAL STOPS)
— EP	ESTIMATED CONTOURS (SEE GENERAL NOTE)
— ED	ESTIMATED SPOT ELEVATION
— EP	FENCE LINE (CHAIN LINK)
— ED	FIBER OPTIC LINE
— EP	FH □ FIRE HYDRANT
— ED	FP • FLAG POLE
— EP	GAS LINE
— ED	GATE SENSOR LINE
— EP	NGS "NAME" ■ GEODEIC SURVEY MARKER
— ED	GUY WIRE
— EP	LIGHT POLE
— ED	MANHOLE / ACCESS COVER
— EP	MAILBOX
— ED	MARSH / SWAMP
— EP	METAL HANDRAIL
— ED	MONITOR WELL
— EP	OVERHEAD UTILITY LINES
— ED	POST / BOLLARD
— EP	PROPERTY LINE (SEE GENERAL NOTE #6)
— ED	RIGHT-OF-WAY (SEE GENERAL NOTE #6)
— EP	RIP RAP
— ED	ROPE OR WIRE / POST BARRIER
— EP	CO • SANITARY SEWER CLEANOUT
— ED	SS — SANITARY SEWER LINE (PAINT MARKS)
— EP	SHRUB LINE
— ED	4 SIGN (ONE POST)
— EP	1 SIGN (TWO POST)
— ED	SPOT ELEVATION
— EP	STORAGE AREA
— ED	STORM SEWER LINE
— EP	TELECOMMUNICATION LINE (PAINT MARKS)
— ED	TELEPHONE PEDESTAL
— EP	TREE (SEE TREE TABLE)
— ED	TREE LINE / LANDSCAPED LIMIT
— EP	UEB □ UNDERGROUND ELECTRIC BOX
— ED	UNKNOWN UTILITY JUNCTION BOX
— EP	UTILITY POLE
— ED	WATER PIPE
— EP	WATER LINE (PAINT MARKS)
— ED	WV • WATER VALVE
— EP	WOOD PRIVACY FENCE



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DRAWING TITLE / DESCRIPTION:
EXISTING CONDITIONS
NORTH AREA

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION
ID # 11-09079-01A

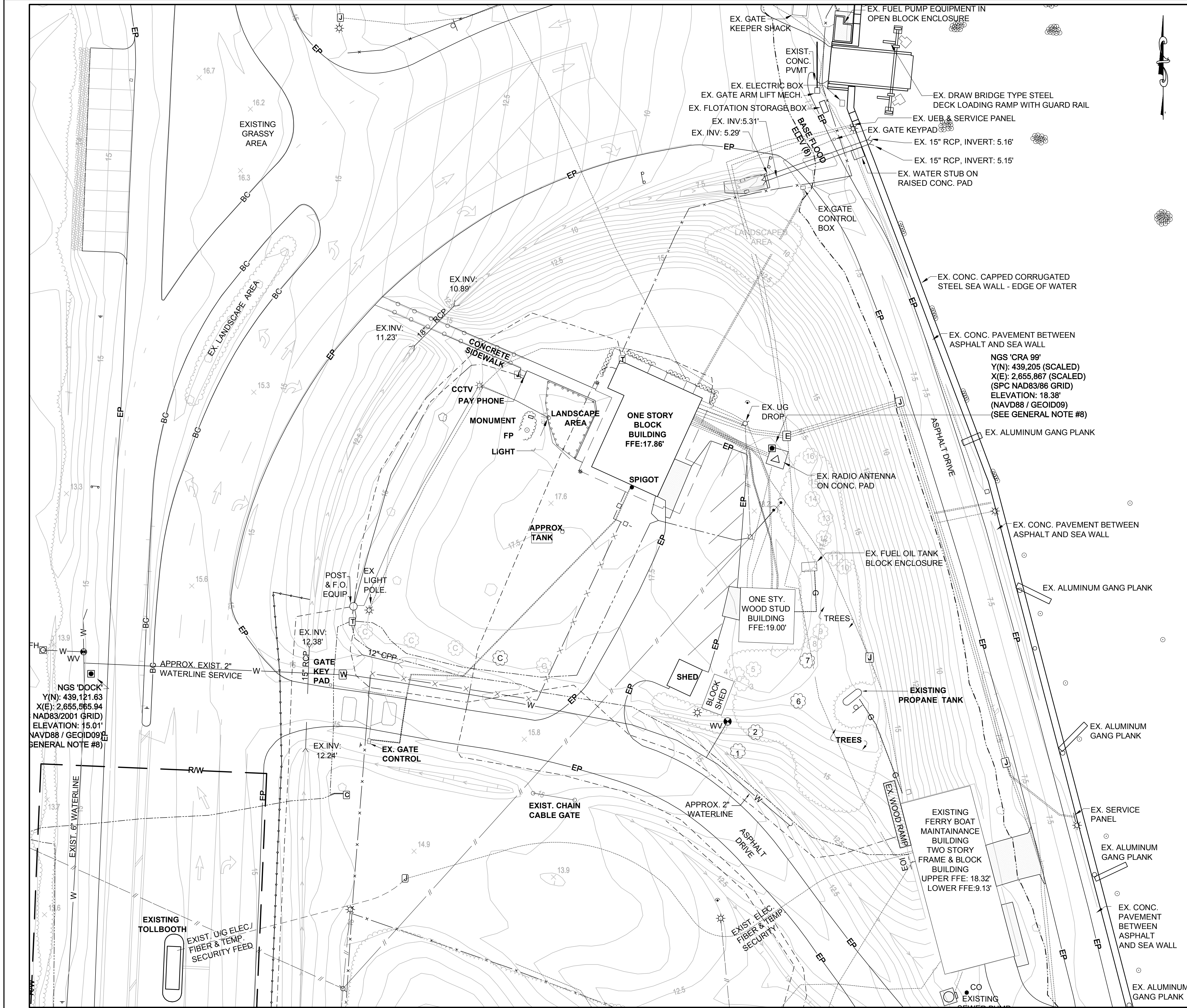
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C0.1 SHEET 48 OF 48

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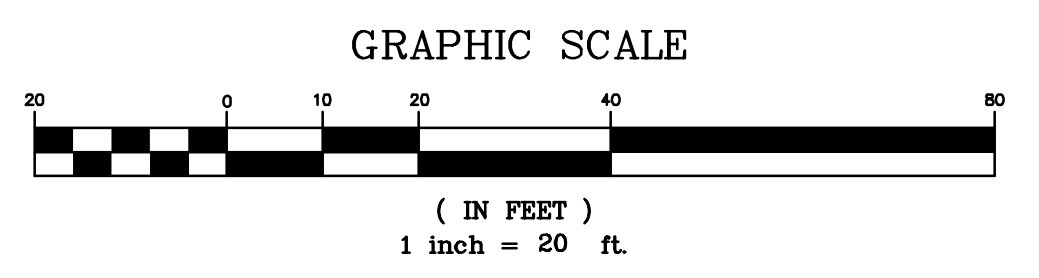
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STANDARD NOTES
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2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.



LEGEND	
— ELEVATION 8	APPROXIMATE FLOODPLAIN BOUNDARY (SEE GENERAL NOTE #5)
— BC	BACK OF CURB
— EP	EDGE OF PAVEMENT
— ED	EDGE OF UNPAVED PARKING / DRIVES
— EL	ELECTRIC LINE (PAINT MARKS)
— ES	END OF INFORMATION (SIGNAL STOPS)
— 12.5	ESTIMATED SPOT ELEVATION
— 24.2 (66)	FENCE LINE (CHAIN LINK)
— x x	FIBER OPTIC LINE
— FH	FIRE HYDRANT
— FP	FLAG POLE
— G	GAS LINE
— GS	GATE SENSOR LINE
— NGS "NAME"	GEODETIC SURVEY MARKER
— GUY	GUY WIRE
— L	LARGE CREPE MYRTLE
— LPP	LIGHT POLE w/ CCTV
— M	MANHOLE / ACCESS COVER
— MB	MAILBOX
— MS	MARSH / SWAMP
— MH	METAL HANDRAIL
— MW	MONITOR WELL
— OW	OVERHEAD UTILITY LINES
— P	POST / BOLLARD
— PL	PROPERTY LINE (SEE GENERAL NOTE #6)
— RW	RIGHT-OF-WAY (SEE GENERAL NOTE #6)
— R/R	RIP RAP
— R/W	ROPE OR WIRE / POST BARRIER
— CO	SANITARY SEWER CLEANOUT
— SS	SANITARY SEWER LINE (PAINT MARKS)
— S	SHRUB LINE
— 4	SIGN (ONE POST)
— 1	SIGN (TWO POST)
— 13.9	SPOT ELEVATION
— XX" RCP	STORM SEWER LINE
— T	TELECOMMUNICATION LINE (PAINT MARKS)
— T	TELEPHONE PEDESTAL
— T	TREE (SEE TREE TABLE)
— UEB	UNDERGROUND ELECTRIC BOX
— UJ	UNDERGROUND JUNCTION BOX
— U	UNKNOWN UTILITY LINE (PAINT MARKS)
— U	UTILITY POLE
— W	WATER LINE (PAINT MARKS)
— WM	WATER METER
— WV	WATER VALVE
— WPF	WOOD PRIVACY FENCE

BID DOCUMENTS

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DRAWING TITLE / DESCRIPTION:

EXISTING CONDITIONS
CENTRAL AREA

PROJECT TITLE:

CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION
ID # 11-09079-01A

ASSET NUMBER:
C0.1 SITE # 91067

48

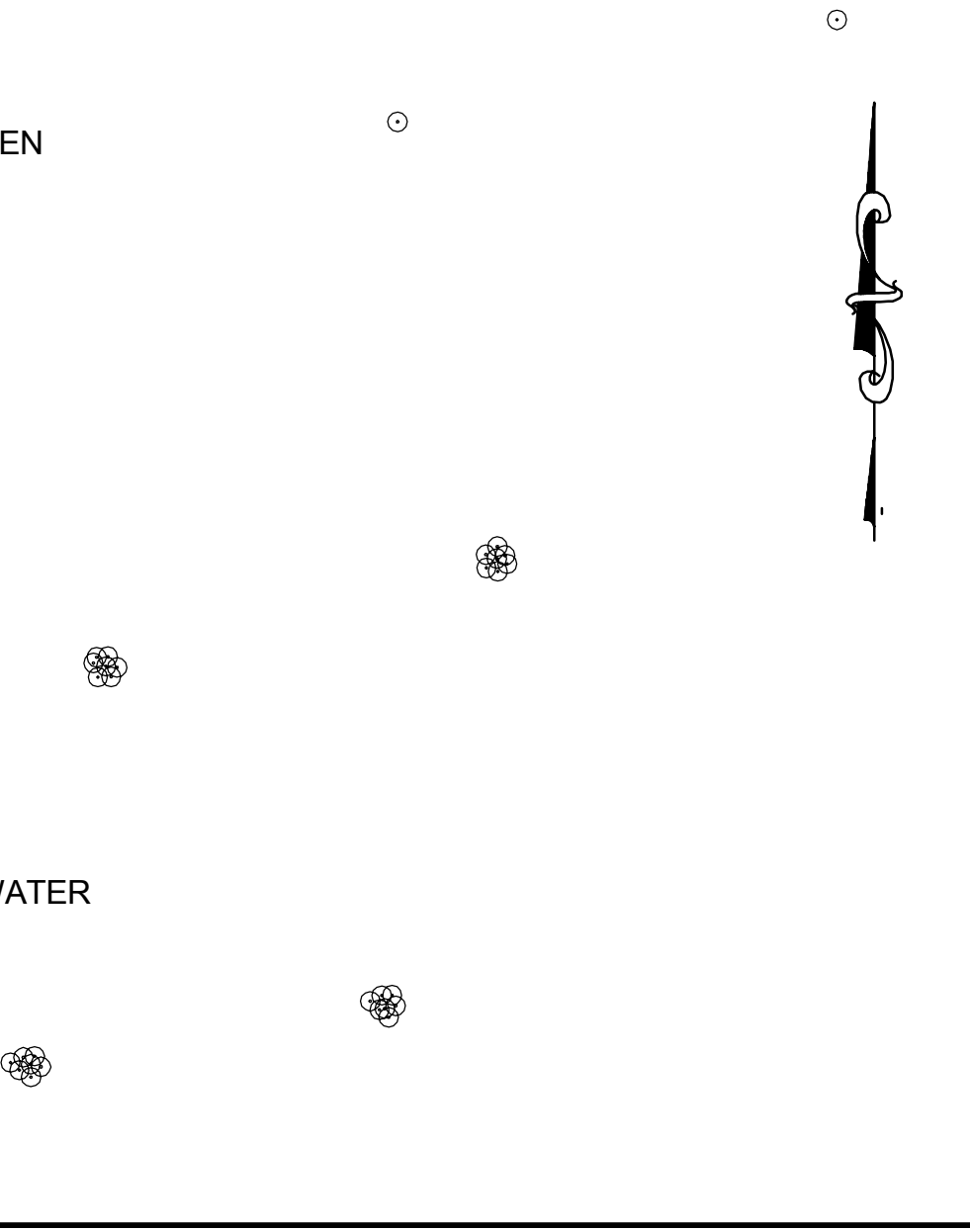
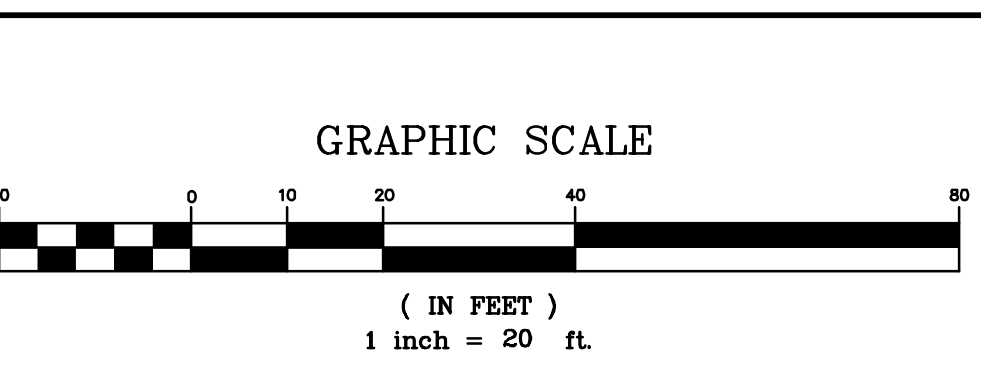
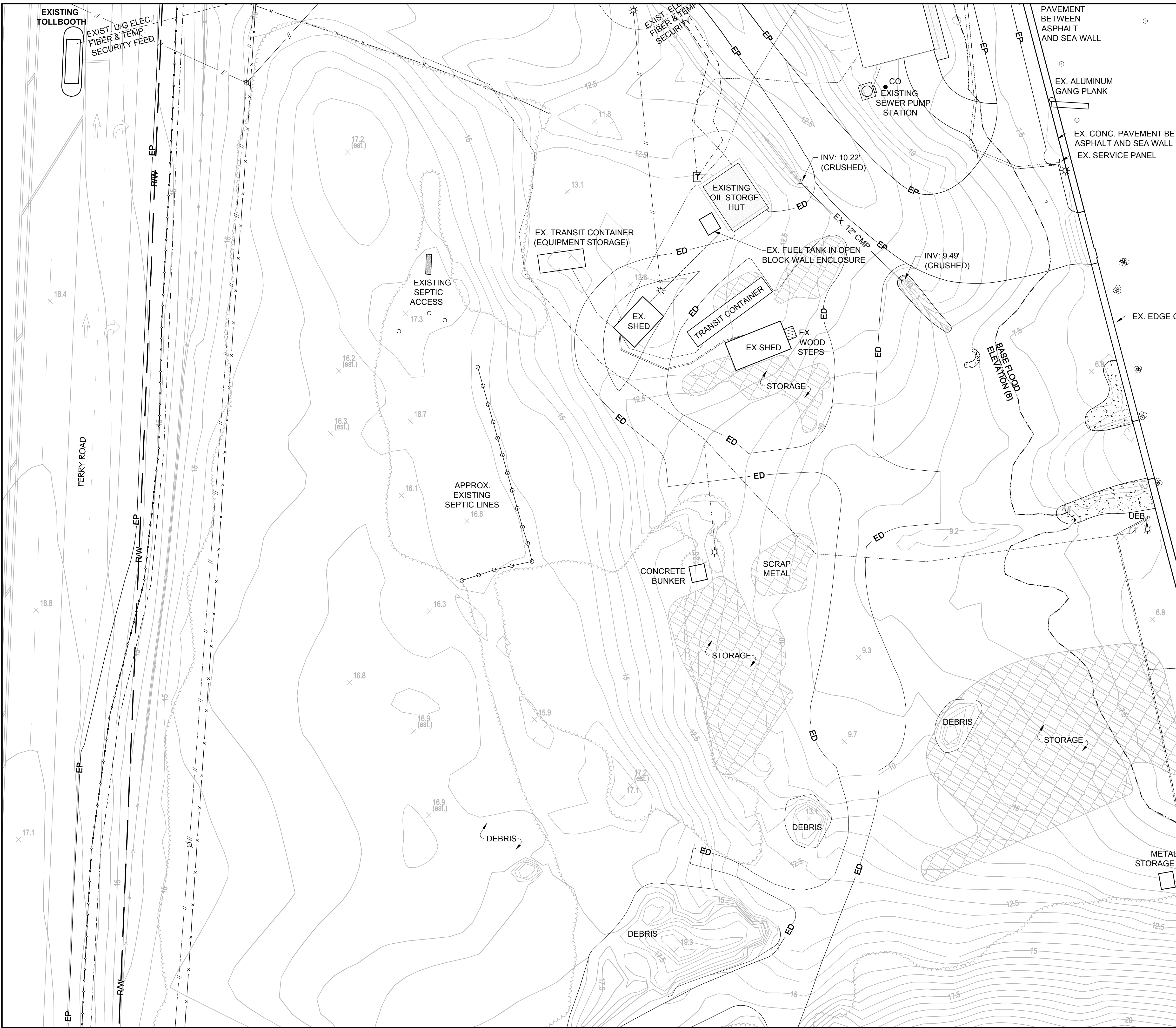
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2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

LEGEND	
	ELEVATION 8
	BC
	BUSH
	CABLE / FIBER OPTIC PEDESTAL
	CONCRETE
	CONFIROUS TREE
	DECIDUOUS TREE
	EDGE OF PAVEMENT
	EDGE OF UNPAVED PARKING / DRIVES
	ELECTRIC LINE (PAINT MARKS)
	END OF INFORMATION (SIGNAL STOPS)
	ESTIMATED CONTOURS (SEE GENERAL NOTE)
	ESTIMATED SPOT ELEVATION
	FENCE LINE (CHAIN LINK)
	FIBER OPTIC LINE
	FH
	FP
	GAS LINE
	GATE SENSOR LINE
	NGS "NAME"
	GUY WIRE
	LARGE CREPE MYRTLE
	LIGHT POLE w/ CCTV
	MANHOLE / ACCESS COVER
	MAILBOX
	MARSH / SWAMP
	METAL HANDRAIL
	MONITOR WELL
	OVERHEAD UTILITY LINES
	POST / BOLLARD
	PROPERTY LINE (SEE GENERAL NOTE #6)
	RIGHT-OF-WAY (SEE GENERAL NOTE #6)
	RIP RAP
	ROPE OR WIRE / POST BARRIER
	CO
	SANITARY SEWER LINE (PAINT MARKS)
	SHRUB LINE
	4 SIGN (ONE POST)
	1 SIGN (TWO POST)
	13.9
	STORAGE AREA
	STORM SEWER LINE
	TELECOMMUNICATION LINE (PAINT MARKS)
	TELEPHONE PEDESTAL
	TREE (SEE TREE TABLE)
	TREE LINE / LANDSCAPED LIMIT
	UEB
	J
	UNKNOWN UTILITY LINE (PAINT MARKS)
	UTILITY POLE
	V
	W
	WV
	WV
	WOOD PRIVACY FENCE

BID DOCUMENTS

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DRAWING TITLE / DESCRIPTION:

EXISTING CONDITIONS
SOUTH AREA

PROJECT TITLE:

CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION

ID # 11-09079-01A

ASSET NUMBER:

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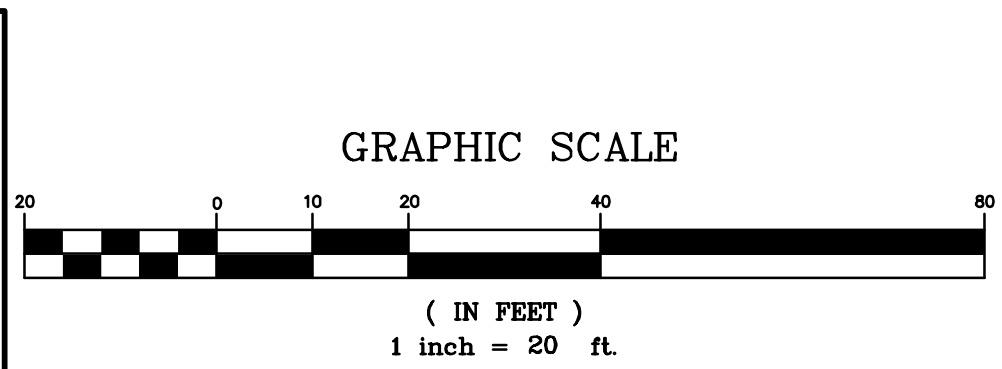
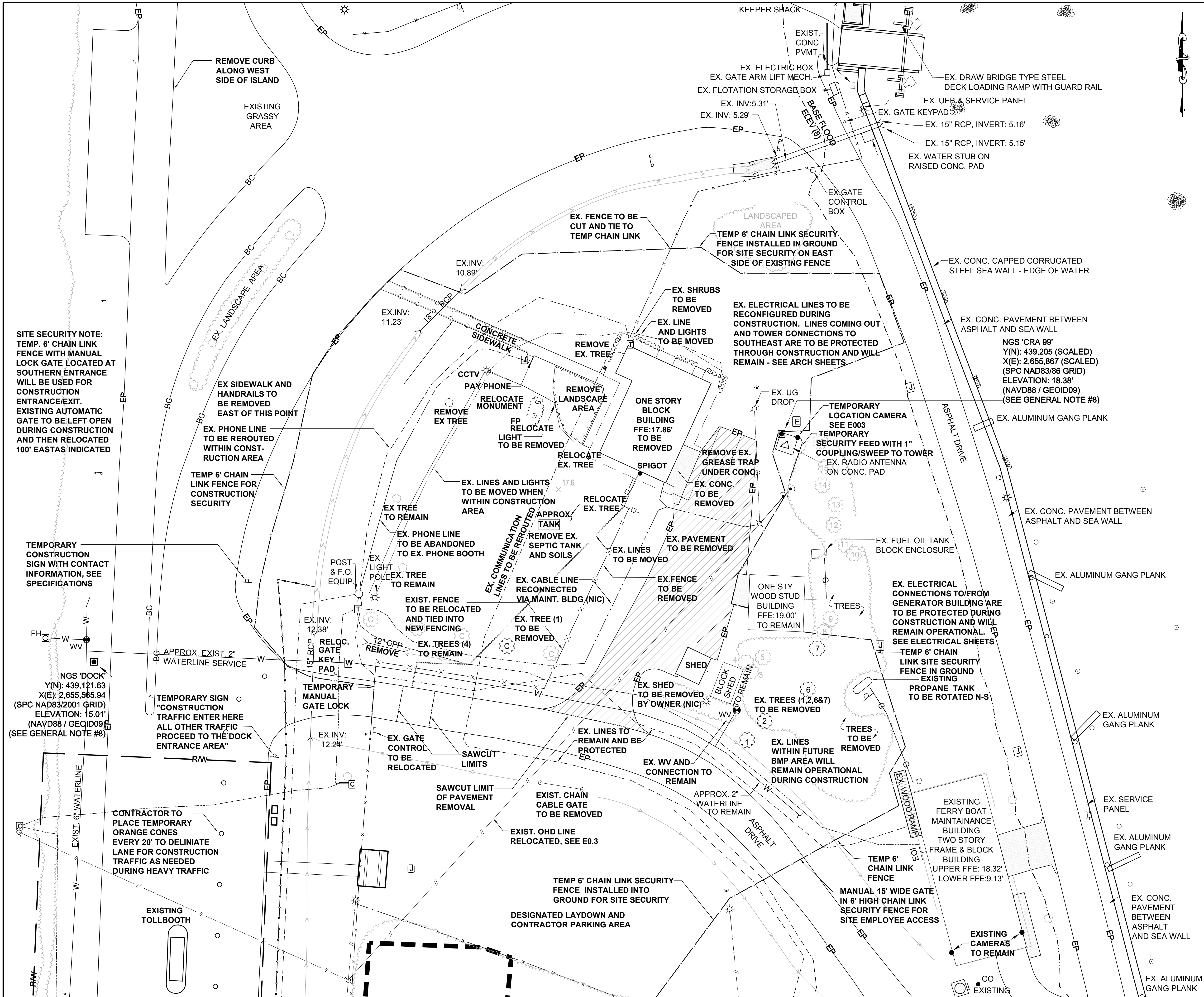
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STANDARD NOTES
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2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

LEGEND	
— ELEVATION 8	APPROXIMATE FLOODPLAIN BOUNDARY (SEE GENERAL NOTE #5)
BC	BACK OF CURB
—	BUSH
—	CABLE / FIBER OPTIC PEDESTAL
—	CONCRETE
—	CONIFEROUS TREE
—	DECIDUOUS TREE
EP	EDGE OF PAVEMENT
ED	EDGE OF UNPAVED PARKING / DRIVES
—	ELECTRIC LINE (PAINT MARKS)
—	END OF INFORMATION (SIGNAL STOPS)
—	ESTIMATED CONTOURS (SEE GENERAL NOTE)
—	ESTIMATED SPOT ELEVATION
—	FENCE LINE (CHAIN LINK)
—	FIBER OPTIC LINE
FH	FIRE HYDRANT
FP	FLAG POLE
—	GAS LINE
—	GATE SENSOR LINE
—	GEODETIC SURVEY MARKER
—	GUY WIRE
—	LARGE CREPE MYRTLE
—	LIGHT POLE
—	LIGHT POLE w/ CCTV
—	MANHOLE / ACCESS COVER
—	MAILBOX
—	MARSH / SWAMP
—	METAL HANDRAIL
MW	MONITOR WELL
—	OVERHEAD UTILITY LINES
—	POST / BOLLARD
—	PROPERTY LINE (SEE GENERAL NOTE #6)
—	RIGHT-OF-WAY (SEE GENERAL NOTE #6)
—	RIP RAP
—	ROPE OR WIRE / POST BARRIER
—	SANITARY SEWER CLEANOUT
—	SANITARY SEWER LINE (PAINT MARKS)
—	SHRUB LINE
—	SIGN (ONE POST)
—	SIGN (TWO POST)
—	SPOT ELEVATION
—	STORM SEWER LINE
—	TELECOMMUNICATION LINE (PAINT MARKS)
—	TELEPHONE PEDESTAL
—	TREE (SEE TREE TABLE)
—	TREE LINE / LANDSCAPED LIMIT
—	UNDERGROUND ELECTRIC BOX
—	UNDERGROUND JUNCTION BOX
—	UNKNOWN UTILITY LINE (PAINT MARKS)
—	UTILITY POLE
—	VENT PIPE
—	WATER LINE (PAINT MARKS)
—	WATER METER
—	WATER VALVE
—	WOOD PRIVACY FENCE

SITE SECURITY NOTE:
TEMP. 6' CHAIN LINK FENCE WITH MANUAL LOCK GATE LOCATED AT SOUTHERN ENTRANCE WILL BE USED FOR CONSTRUCTION ENTRANCE/EXIT. EXISTING AUTOMATIC GATE TO BE LEFT OPEN DURING CONSTRUCTION AND THEN RELOCATED 100' EAST AS INDICATED

TEMPORARY CONSTRUCTION SIGN WITH CONTACT INFORMATION, SEE SPECIFICATIONS

NGS 'DOCK'
Y(N): 439,121.63
X(E): 2,655,565.94
(SPC NAD83/2001 GRID)
ELEVATION: 15.01'
(NAVD88 / GEOID09)
(SEE GENERAL NOTE #8)

CONTRACTOR TO PLACE TEMPORARY ORANGE CONES EVERY 20' TO DELINEATE LANE FOR CONSTRUCTION TRAFFIC AS NEEDED DURING HEAVY TRAFFIC

EXISTING TOLLBOOTH

BID DOCUMENTS

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PROJECT TITLE:

CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION

ID # 11-09079-01A

ASSET NUMBER:

C0.1 SHEET 48 OF 48

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C2.2

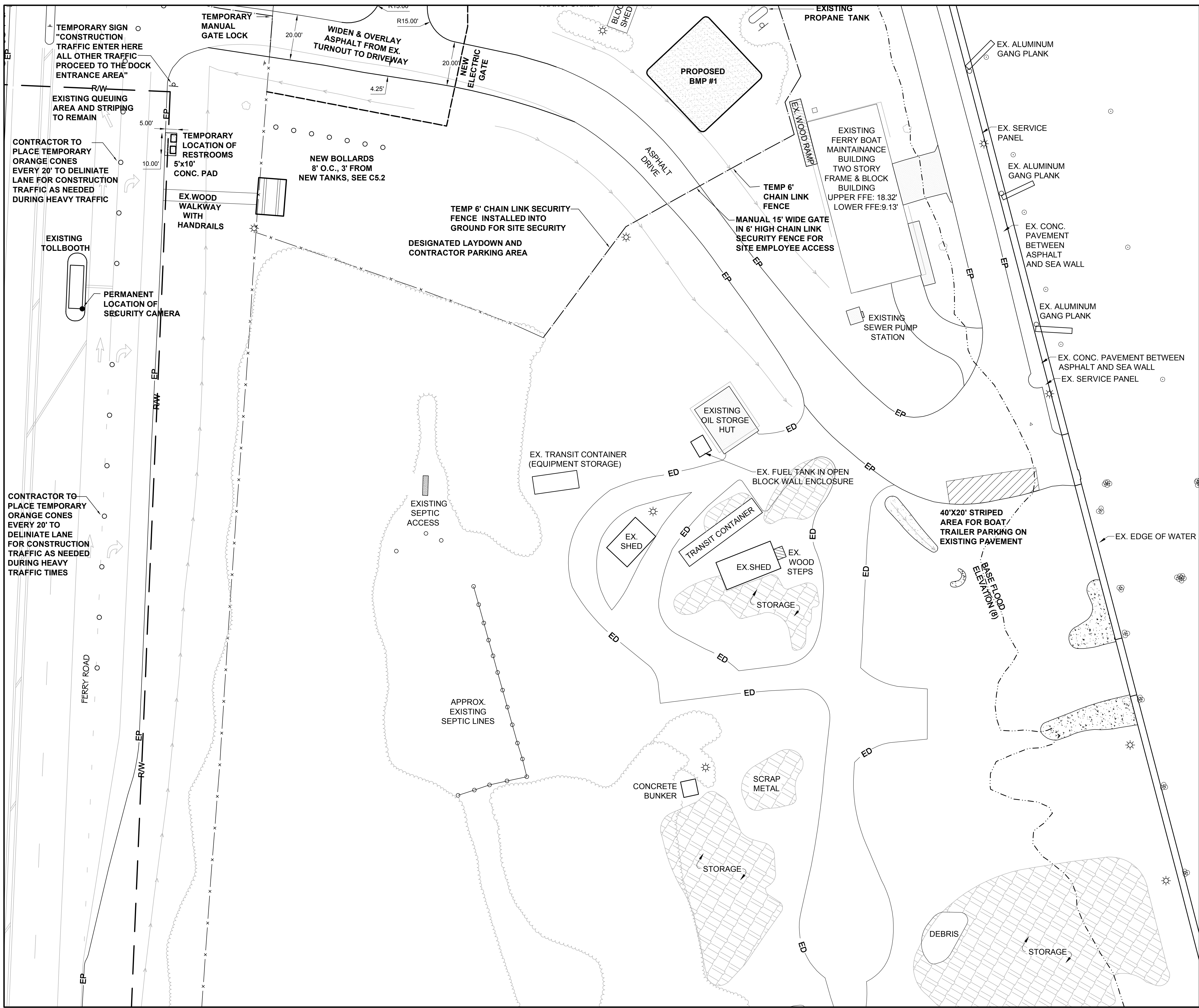
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DEMOLITION PLAN

CENTRAL AREA

2300 FERRY ROAD, HAVELOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

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GRAPHIC SCALE

(IN FEET)

1 inch = 20 ft.

STANDARD NOTES

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL NCDOT/NCDENR/DWQ APPLICABLE STANDARDS AND SPECIFICATIONS.

2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

LEGEND

ELEVATION 8

BC

BUSH

CABLE / FIBER OPTIC PEDESTAL

CONCRETE

DECIDUOUS TREE

EDGE OF PAVEMENT

EDGE OF UNPAVED PARKING / DRIVES

ELECTRIC LINE (PAINT MARKS)

END OF INFORMATION (SIGNAL STOPS)

ESTIMATED SPOT ELEVATION

ESTIMATED CONTOURS (SEE GENERAL NOTE)

FENCE LINE (CHAIN LINK)

FIBER OPTIC LINE

FIRE HYDRANT

FLAG POLE

GAS LINE

GATE SENSOR LINE

GEODETIC SURVEY MARKER

GUY WIRE

LARGE CREPE MYRTLE

LIGHT POLE

LIGHT POLE w/ CCTV

MANHOLE / ACCESS COVER

MAILBOX

MARSH / SWAMP

METAL HANDRAIL

MONITOR WELL

OVERHEAD UTILITY LINES

POST / BOLLARD

PROPERTY LINE (SEE GENERAL NOTE #6)

RIGHT-OF-WAY (SEE GENERAL NOTE #6)

RIP RAP

ROPE OR WIRE / POST BARRIER

SANITARY SEWER CLEANOUT

SANITARY SEWER LINE (PAINT MARKS)

SHRUB LINE

SIGN (ONE POST)

SIGN (TWO POST)

SPOT ELEVATION

STORAGE AREA

STORM SEWER LINE

TELECOMMUNICATION LINE (PAINT MARKS)

TREE (SEE TREE TABLE)

TREE LINE / LANDSCAPED LIMIT

UNDERGROUND ELECTRIC BOX

UNDERGROUND JUNCTION BOX

UNKNOWN UTILITY LINE (PAINT MARKS)

UTILITY POLE

VENT PIPE

WATER LINE (PAINT MARKS)

WATER METER

WATER VALVE

WOOD PRIVACY FENCE

BID DOCUMENTS

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DRAWING TITLE / DESCRIPTION: SITE PLAN SOUTH AREA

PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT

2300 FERRY ROAD, HAVELOCK, NC 28532 CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION ID.# 11-09079-01A

ASSET NUMBER: C0.1 SITE # 5106

48

REVISIONS

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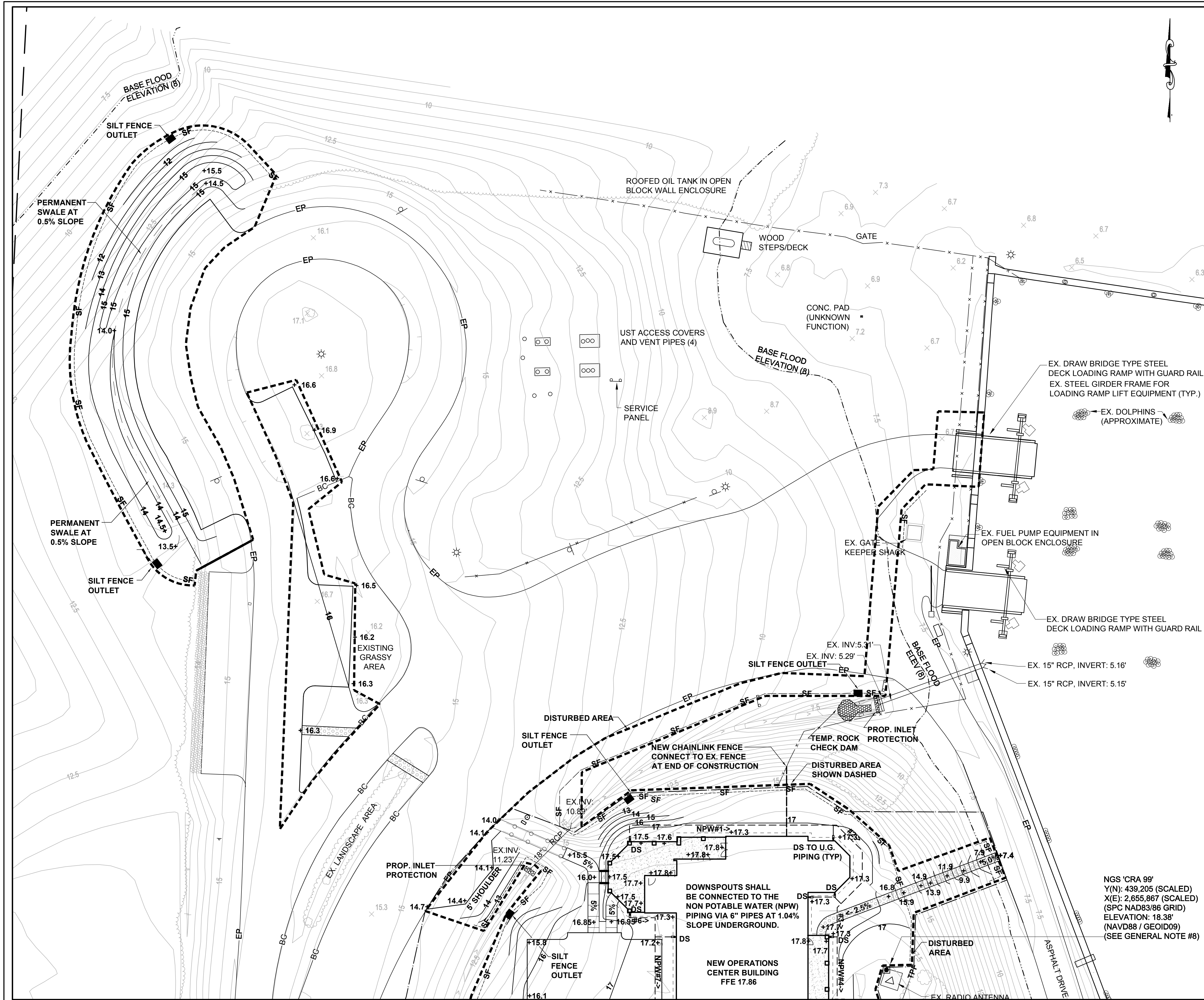
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SHEET NO.

C3.3



GRAPHIC SCALE

(IN FEET)

1 inch = 20 ft.

STANDARD NOTES

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL NCDOT/NCDENR/DWQ APPLICABLE STANDARDS AND SPECIFICATIONS.

2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

EROSION CONTROL LEGEND

- SILT FENCE (C7.2, #1)
- TREE PROTECTION FENCE (C7.2, #6)
- SILT FENCE OUTLET (C7.2, #4)
- INLET PROTECTION (C7.2, #2)
- RIPRAP PAD (C7.2, #5 & 8)
- TEMPORARY ROCK SILT CHECK TYPE A (C7.2, #11)
- DISTURBED AREA (TOTAL: 2.0 ACRES, 86,492 SF)
- TEMP CHAIN LINK FENCE
- TEMPORARY SWALE (C7.2, #12) CONVERTED TO PERMANENT GRASS-LINED SWALE (C7.2, #13)
- TEMPORARY CONSTRUCTION ENTRANCE (C7.2, #3)

LEGEND

- ELEVATION 8
- BC BACK OF CURB
- BUSH
- CABLE / FIBER OPTIC PEDESTAL
- CONCRETE
- CONFEROUS TREE
- DECIDUOUS TREE
- EDGE OF PAVEMENT
- EDGE OF UNPAVED PARKING / DRIVES
- ELECTRIC LINE (PAINT MARKS)
- END OF INFORMATION (SIGNAL STOPS)
- ESTIMATED CONTOURS (SEE GENERAL NOTE)
- ESTIMATED SPOT ELEVATION
- FENCE LINE (CHAIN LINK)
- FIBER OPTIC LINE
- FH FIRE HYDRANT
- FP FLAG POLE
- GAS LINE
- GATE SENSOR LINE
- GEODETIC SURVEY MARKER
- GUY WIRE
- LARGE CREPE MYRTLE
- LIGHT POLE w CCTV
- MANHOLE / ACCESS COVER
- MAILBOX
- MARSH / SWAMP
- METAL HANDRAIL
- MONITOR WELL
- OVERHEAD UTILITY LINES
- POST / BOLLARD
- PROPERTY LINE (SEE GENERAL NOTE #6)
- RIGHT-OF-WAY (SEE GENERAL NOTE #6)
- RIP RAP
- ROPE OR WIRE / POST BARRIER
- CO SANITARY SEWER CLEANOUT
- SS SANITARY SEWER LINE (PAINT MARKS)
- SHRUB LINE
- 4 SIGN (ONE POST)
- 1 SIGN (TWO POST)
- SPOT ELEVATION
- STORAGE AREA
- STORM SEWER LINE
- TELECOMMUNICATION LINE (PAINT MARKS)
- TELEPHONE PEDESTAL
- TREE (SEE TREE TABLE)
- TREE LINE / LANDSCAPED LIMIT
- UEB UNDERGROUND ELECTRIC BOX
- UNDERGROUND JUNCTION BOX
- UNKNOWN UTILITY LINE (PAINT MARKS)
- UTILITY POLE
- VENT PIPE
- W WATER LINE (PAINT MARKS)
- WM WATER METER
- WV WATER VALVE
- WOOD PRIVACY FENCE

NGS 'CRA 99'

Y(N): 439,205 (SCALED)

X(E): 2,655,867 (SCALED)

(SPC NAD83/86 GRID)

ELEVATION: 18.38'

(NAVD88 / GEOID09)

(SEE GENERAL NOTE #8)

BID DOCUMENTS

DESIGNED BY: FACILITIES DESIGN ARCHITECTS & ENGINEERS

CONSULTANT: B&F CONSULTING

DRAWING TITLE / DESCRIPTION: GRADING AND EROSION PLAN NORTH AREA

PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT

STATE CONSTRUCTION ID # 11-09079-01A

ASSET NUMBER: 48

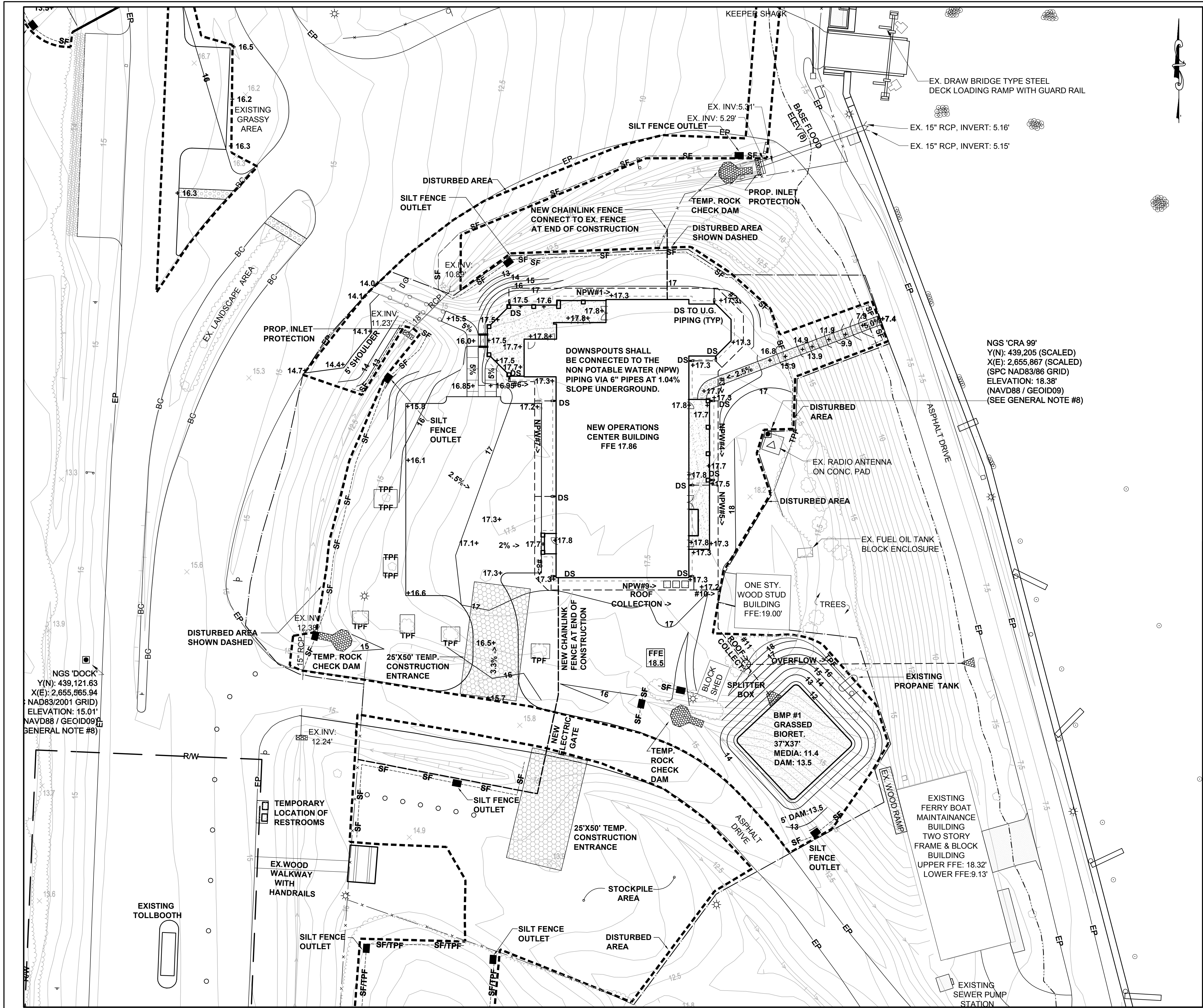
REVISIONS

DATE ISSUED: 8-14-15

DRAWN BY: AF

CHECKED BY: RJB

SHEET NO. C4.1



GRAPHIC SCALE

(IN FEET)

1 inch = 20 ft.

STANDARD NOTES

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL NCDOT/NCDENR/DWQ APPLICABLE STANDARDS AND SPECIFICATIONS.

2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

EROSION CONTROL LEGEND

- SILT FENCE (C7.2, #1)
- TREE PROTECTION FENCE (C7.2, #6)
- SILT FENCE OUTLET (C7.2, #4)
- INLET PROTECTION (C7.2, #2)
- RIPRAP PAD (C7.2, # 5 & 8)
- TEMPORARY ROCK SILT CHECK TYPE A (C7.2, #11)
- DISTURBED AREA (TOTAL: 2.0 ACRES, 86,492 SF)
- TEMP CHAIN LINK FENCE
- TEMPORARY SWALE (C7.2, #12) CONVERTED TO PERMANENT GRASS-LINED SWALE (C7.2, #13)
- TEMPORARY CONSTRUCTION ENTRANCE (C7.2, #3)

LEGEND

- APPROXIMATE FLOODPLAIN BOUNDARY (SEE GENERAL NOTE #5)
- BACK OF CURB
- BUSH
- CABLE / FIBER OPTIC PEDESTAL
- CONCRETE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EDGE OF PAVEMENT
- EDGE OF UNPAVED PARKING / DRIVES
- ELECTRIC LINE (PAINT MARKS)
- END OF INFORMATION (SIGNAL STOPS)
- ESTIMATED CONTOURS (SEE GENERAL NOTE)
- ESTIMATED SPOT ELEVATION
- FENCE LINE (CHAIN LINK)
- FIBER OPTIC LINE
- FIRE HYDRANT
- FLAG POLE
- GAS LINE
- GATE SENSOR LINE
- GEODETIC SURVEY MARKER
- GUY WIRE
- LARGE CREPE MYRTLE
- LIGHT POLE
- LIGHT POLE w/ CCTV
- MANHOLE / ACCESS COVER
- MAILBOX
- MARSH / SWAMP
- METAL HANDRAIL
- MONITOR WELL
- OVERHEAD UTILITY LINES
- POST / BOLLARD
- PROPERTY LINE (SEE GENERAL NOTE #6)
- RIGHT-OF-WAY (SEE GENERAL NOTE #6)
- RIP RAP
- ROPE OR WIRE / POST BARRIER
- SANITARY SEWER CLEANOUT
- SANITARY SEWER LINE (PAINT MARKS)
- SHRUB LINE
- SIGN (ONE POST)
- SIGN (TWO POST)
- SPOT ELEVATION
- STORM SEWER LINE
- TELECOMMUNICATION LINE (PAINT MARKS)
- TELEPHONE PEDESTAL
- TREE (SEE TREE TABLE)
- TREE LINE / LANDSCAPED LIMIT
- UNDERGROUND ELECTRIC BOX
- UNDERGROUND JUNCTION BOX
- UNKNOWN UTILITY LINE (PAINT MARKS)
- UTILITY POLE
- VENT PIPE
- WATER LINE (PAINT MARKS)
- WATER METER
- WATER VALVE
- WOOD PRIVACY FENCE

BID DOCUMENTS

DESIGNED BY: FACILITIES DESIGN ARCHITECTS & ENGINEERS

CONSULTANT: B&F CONSULTING

DRAWING TITLE / DESCRIPTION: GRADING AND EROSION PLAN CENTRAL AREA

PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT

STATE CONSTRUCTION ID # 11-09079-01A

ASSET NUMBER: 48

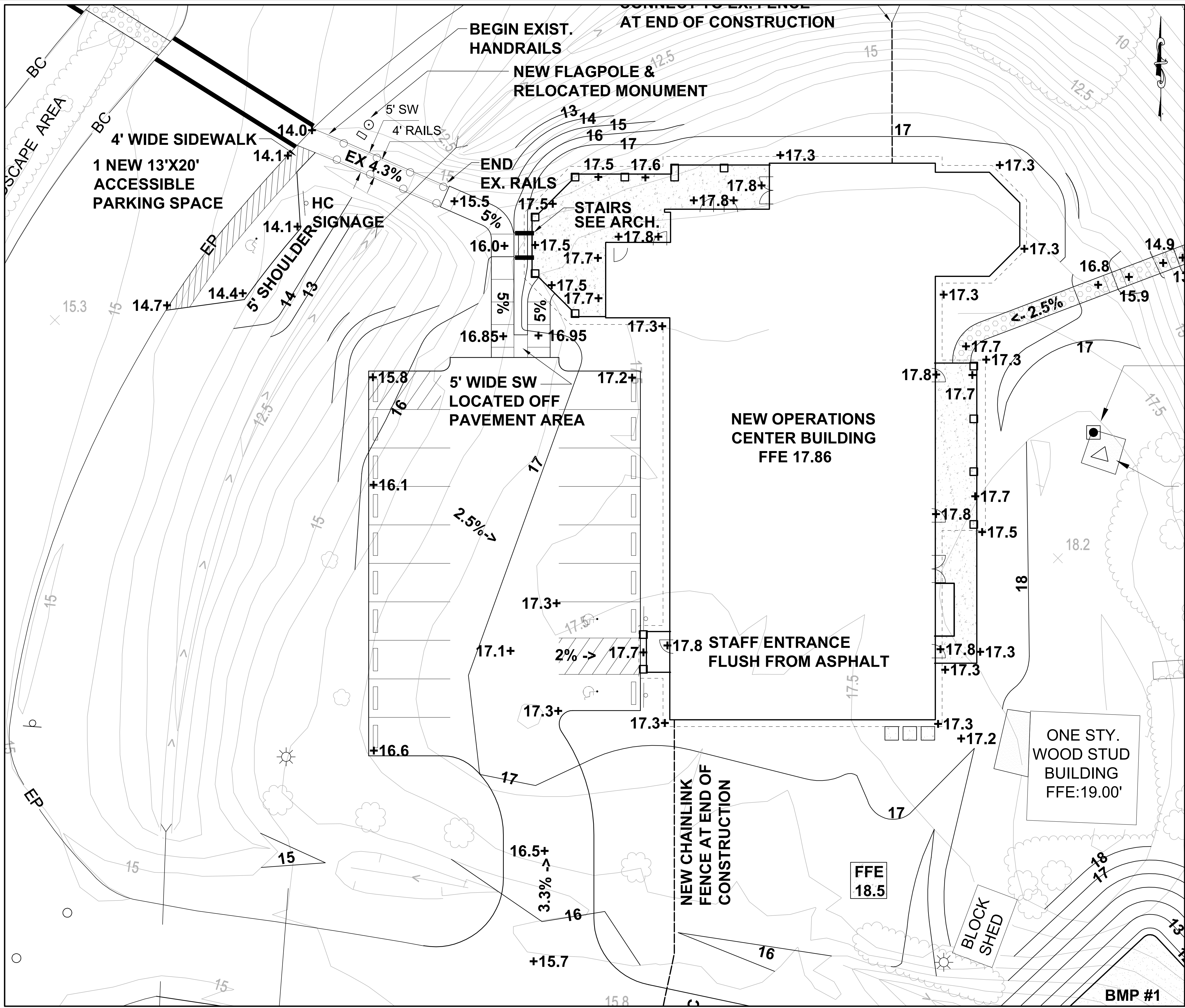
REVISIONS

DATE ISSUED: 8-14-15

DRAWN BY: AF

CHECKED BY: RJB

SHEET NO. C4.2



GRAPHIC SCALE

(IN FEET)

1 inch = 10 ft.

STANDARD NOTES

1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL NCDOT/NCDENR/DWQ APPLICABLE STANDARDS AND SPECIFICATIONS

2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

LEGEND

ELEVATION 8	APPROXIMATE FLOODPLAIN BOUNDARY (SEE GENERAL NOTE #5)
BC	BACK OF CURB
○	BUSH
□	CABLE / FIBER OPTIC PEDESTAL
■	CONCRETE
*	CONIFEROUS TREE
○	DECIDUOUS TREE
EP	EDGE OF PAVEMENT
ED	EDGE OF UNPAVED PARKING / DRIVES
—	ELECTRIC LINE (PAINT MARKS)
—	END OF INFORMATION (SIGNAL STOPS)
—	ESTIMATED CONTOURS (SEE GENERAL NOTE)
—	ESTIMATED SPOT ELEVATION
—	FENCE LINE (CHAIN LINK)
—	FIBER OPTIC LINE
FH	FIRE HYDRANT
FP	FLAG POLE
G	GAS LINE
—	GATE SENSOR LINE
NGS 'NAME'	GEODETIC SURVEY MARKER
G	GUY WIRE
○	LARGE CREPE MYRTLE
○	LIGHT POLE
○	LIGHT POLE w/ CCTV
○	MANHOLE / ACCESS COVER
▲	MAILBOX
SW	MARSH / SWAMP
—	METAL HANDRAIL
MW	MONITOR WELL
—	OVERHEAD UTILITY LINES
—	POST / BOLLARD
—	PROPERTY LINE (SEE GENERAL NOTE #6)
—	RIGHT-OF-WAY (SEE GENERAL NOTE #6)
—	RIP RAP
—	ROPE OR WIRE / POST BARRIER
CO	SANITARY SEWER CLEANOUT
SS	SANITARY SEWER LINE (PAINT MARKS)
—	SHRUB LINE
4	SIGN (ONE POST)
1	SIGN (TWO POST)
—	SPOT ELEVATION
XX' RCP	STORAGE AREA
—	STORM SEWER LINE
—	TELECOMMUNICATION LINE (PAINT MARKS)
T	TELEPHONE PEDESTAL
—	TREE (SEE TREE TABLE)
—	TREE LINE / LANDSCAPED LIMIT
UEB	UNDERGROUND ELECTRIC BOX
—	UNDERGROUND JUNCTION BOX
—	UNKNOWN UTILITY LINE (PAINT MARKS)
—	UTILITY POLE
—	VENT PIPE
—	WATER LINE (PAINT MARKS)
W	WATER METER
WV	WATER VALVE
—	WOOD PRIVACY FENCE

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION
ID # 11-09079-01A

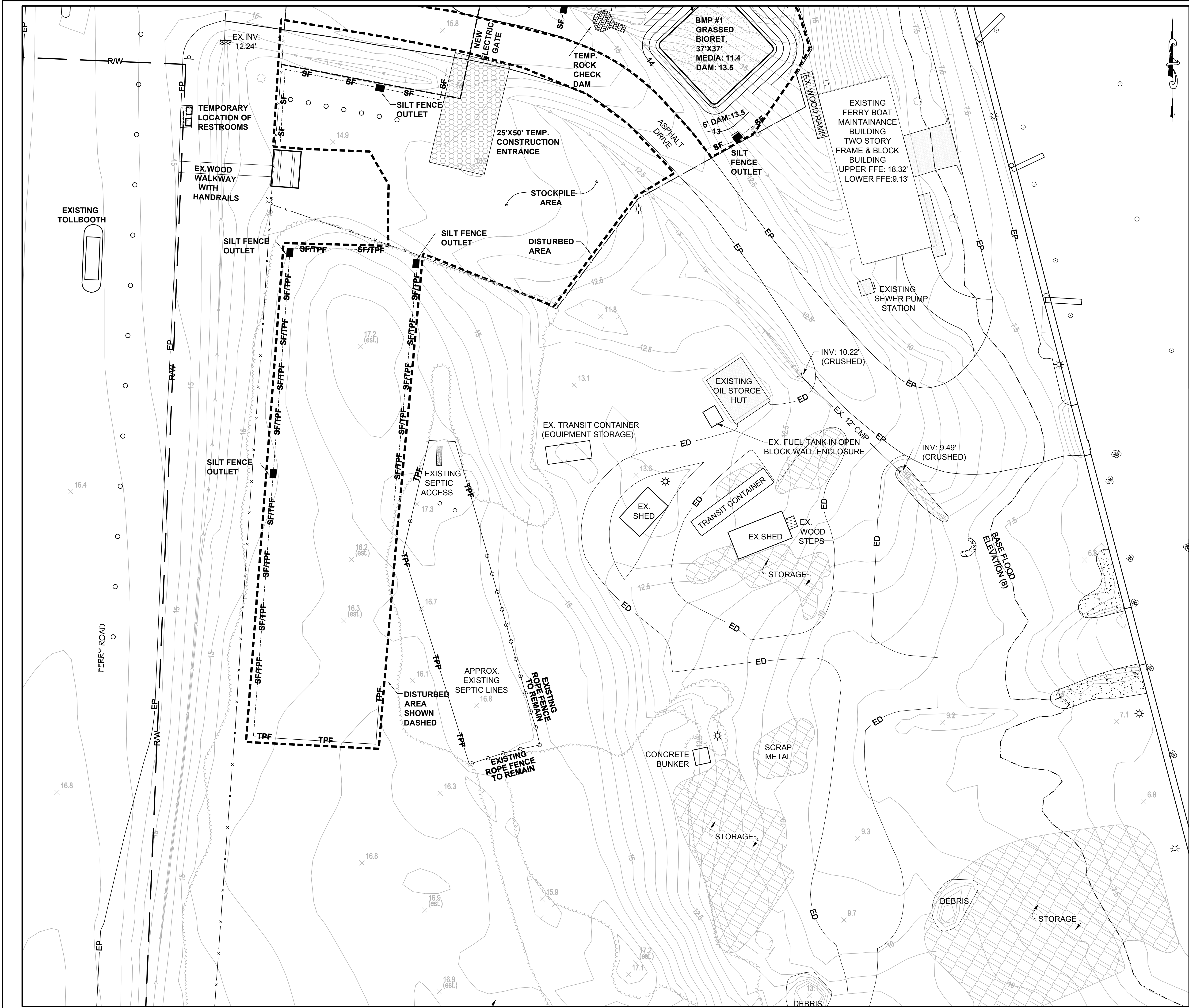
ASSET NUMBER:
C0.1 SITE # 51067

REVISIONS

NO.	DATE

DATE ISSUED: 8-14-15
DRAWN BY: AF
CHECKED BY: RJB
SHEET NO.

C4.2A



BID DOCUMENTS

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

STANDARD NOTES
1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL NCDOT/NC DENR/DWQ APPLICABLE STANDARDS AND SPECIFICATIONS.
2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

EROSION CONTROL LEGEND

- SILT FENCE (C7.2, #1)
- TREE PROTECTION FENCE (C7.2, #6)
- SILT FENCE OUTLET (C7.2, #4)
- INLET PROTECTION (C7.2, #2)
- RIPRAP PAD (C7.2, #5 & 8)
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- TEMP CHAIN LINK FENCE
- TEMPORARY SWALE (C7.2, #12) CONVERTED TO PERMANENT GRASS-LINED SWALE (C7.2, #13)
- TEMPORARY CONSTRUCTION ENTRANCE (C7.2, #3)

LEGEND

- APPROXIMATE FLOODPLAIN BOUNDARY (SEE GENERAL NOTE #5)
- BACK OF CURB
- BUSH
- CABLE / FIBER OPTIC PEDESTAL
- CONCRETE
- CONIFEROUS TREE
- DECIDUOUS TREE
- EDGE OF PAVEMENT
- EDGE OF UNPAVED PARKING / DRIVES
- ELECTRIC LINE (PAINT MARKS)
- END OF INFORMATION (SIGNAL STOPS)
- ESTIMATED CONTOURS (SEE GENERAL NOTE)
- ESTIMATED SPOT ELEVATION
- FENCE LINE (CHAIN LINK)
- FIBER OPTIC LINE
- FIRE HYDRANT
- FLAG POLE
- GAS LINE
- GATE SENSOR LINE
- GEODETIC SURVEY MARKER
- GUY WIRE
- LARGE CREPE MYRTLE
- LIGHT POLE
- LIGHT POLE w/ CCTV
- MANHOLE / ACCESS COVER
- MAILBOX
- MARSH / SWAMP
- METAL HANDRAIL
- MONITOR WELL
- OVERHEAD UTILITY LINES
- POST / BOLLARD
- PROPERTY LINE (SEE GENERAL NOTE #6)
- RIGHT-OF-WAY (SEE GENERAL NOTE #6)
- RIP RAP
- ROPE OR WIRE / POST BARRIER
- SANITARY SEWER CLEANOUT
- SANITARY SEWER LINE (PAINT MARKS)
- SHRUB LINE
- SIGN (ONE POST)
- SIGN (TWO POST)
- SPOT ELEVATION
- STORAGE AREA
- STORM SEWER LINE
- TELECOMMUNICATION LINE (PAINT MARKS)
- TELEPHONE PEDESTAL
- TREE (SEE TREE TABLE)
- TREE LINE / LANDSCAPED LIMIT
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- UTILITY POLE
- VENT PIPE
- WATER LINE (PAINT MARKS)
- WATER METER
- WATER VALVE
- WOOD PRIVACY FENCE

DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION NCDOT
1 SOUTH WILKINSON STREET
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PHONE: 919/707-4540 FAX 919/715-0399

CONSULTANT:
B&F
CONSULTING
2805 FOREMONT LANE
RALEIGH, NORTH CAROLINA 27606
PHONE: 919/889-8102
NC LICENSE C2148

DRAWING TITLE / DESCRIPTION:
**CHERRY BRANCH FERRY FACILITY
GRADING AND EROSION PLAN
SOUTH AREA**

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**

STATE CONSTRUCTION
ID.# 11-09079-01A

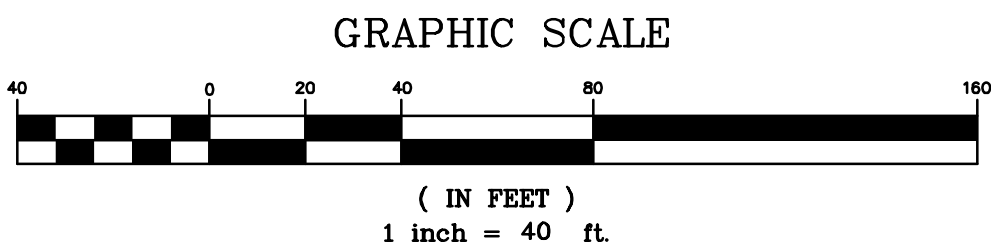
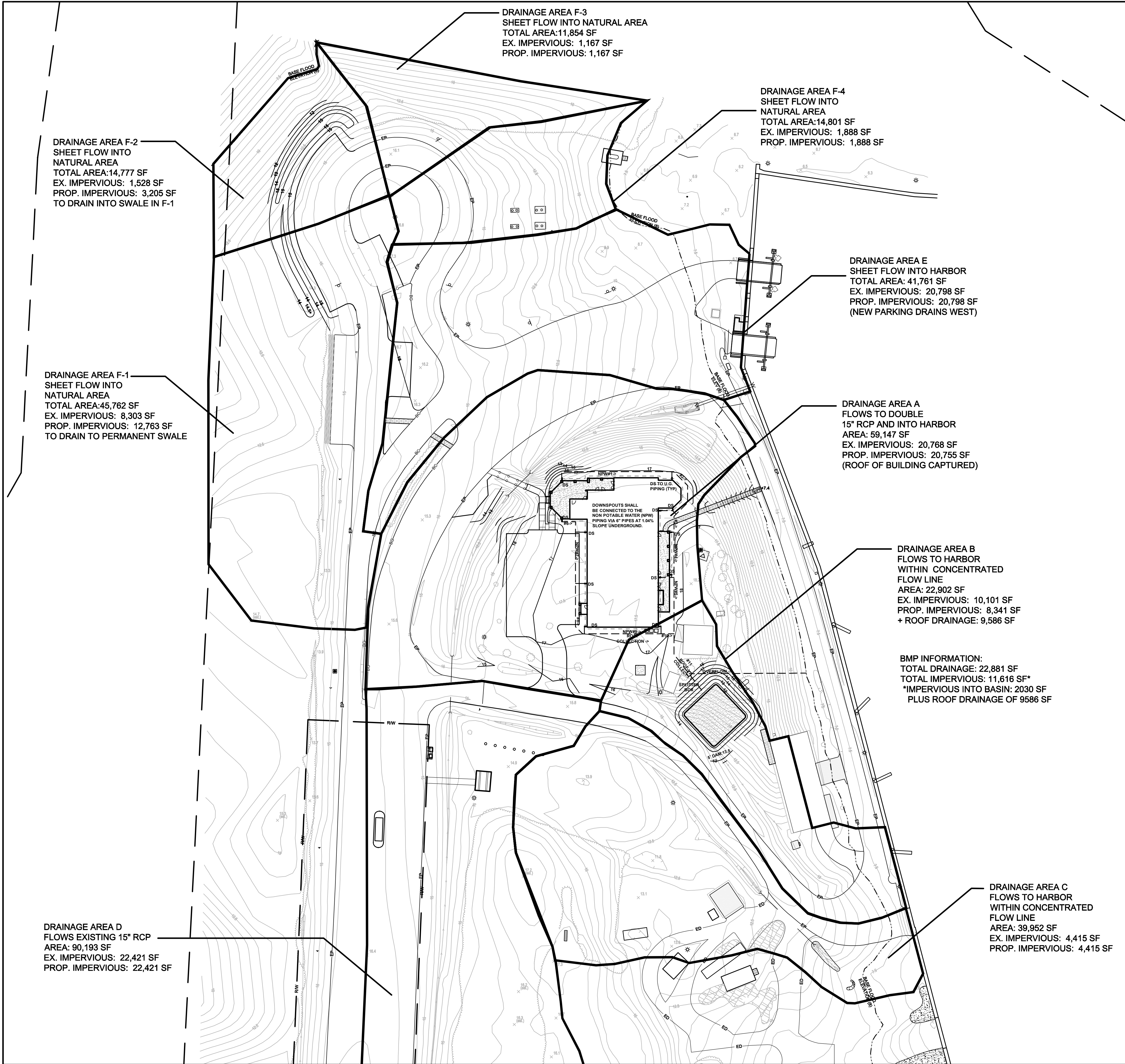
ASSET NUMBER:
C0.2 SITE BLDG. 48

REVISIONS
NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: AF
CHECKED BY: RJB
SHEET NO.

C4.3

BID DOCUMENTS



STANDARD NOTES
1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL NCDOT/NCDENR/DWQ APPLICABLE STANDARDS AND SPECIFICATIONS.
2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

IMPERVIOUS SUB-BASINS CALCULATIONS							
BASIN	DRAINAGE AREA (SF)	EXISTING BUA (SF)	EXISTING BUA (%)	PROP. BUA (SF)	PROP. TREATED BUA (SF)	PROP. UNTREATED BUA (SF)	PROP. UNTREATED BUA (%)
A	59,147	20,768	35.1%	30,341	9,586	20,755	35.0%
B	22,902	10,101	44.1%	8,341	2,030	6,311	28.6%
C	39,952	4,415	11.1%	4,415	0	4,415	11.1%
D	90,193	22,421	24.9%	22,421	0	22,421	24.9%
E	41,761	20,798	49.8%	20,798	0	20,798	49.8%
F-1	45,762	8,303	18.1%	12,763	9,167	3,596	7.9%
F-2	14,777	1,528	10.3%	3,205	3,205	0	0%
F-3	11,854	1,167	9.8%	1,167	0	1,167	9.8%
F-4	14,801	1,888	12.8%	1,888	0	1,888	12.8%
TOTAL	341,149	91,389	26.8%	105,339	23,988	81,351	23.9%

BID DOCUMENTS

SEAL

NOTARY PUBLIC

SEAL

027443

PROFESSIONAL

ENGINEER

AMBER FARRELLY

August 14, 2015

DESIGNED BY:

FACILITIES DESIGN

ARCHITECTS & ENGINEERS

FACILITIES MANAGEMENT DIVISION NCDOT

1 SOUTH WILKINSON STREET

RALEIGH, NORTH CAROLINA 27601

PHONE: 919/707-6540 FAX 919/715-0399

CONSULTANT:

B&F

CONSULTING

2805 FOREBROOK LANE

RALEIGH, NORTH CAROLINA 27606

PHONE: 919/889-8102

NC LICENSE C2148

DRAWING TITLE / DESCRIPTION:

DRAINAGE PATTERNS

OVERALL PROJECT AREA

PROJECT TITLE:

CHERRY BRANCH FERRY FACILITY

NORTH CAROLINA DOT

2300 FERRY ROAD, HAVELOCK, NC 28532

CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION

ID # 11-09079-01A

ASSET NUMBER:

C0.1 SITE PLAN

REVISIONS

NO. DATE

DATE ISSUED: 8-14-15

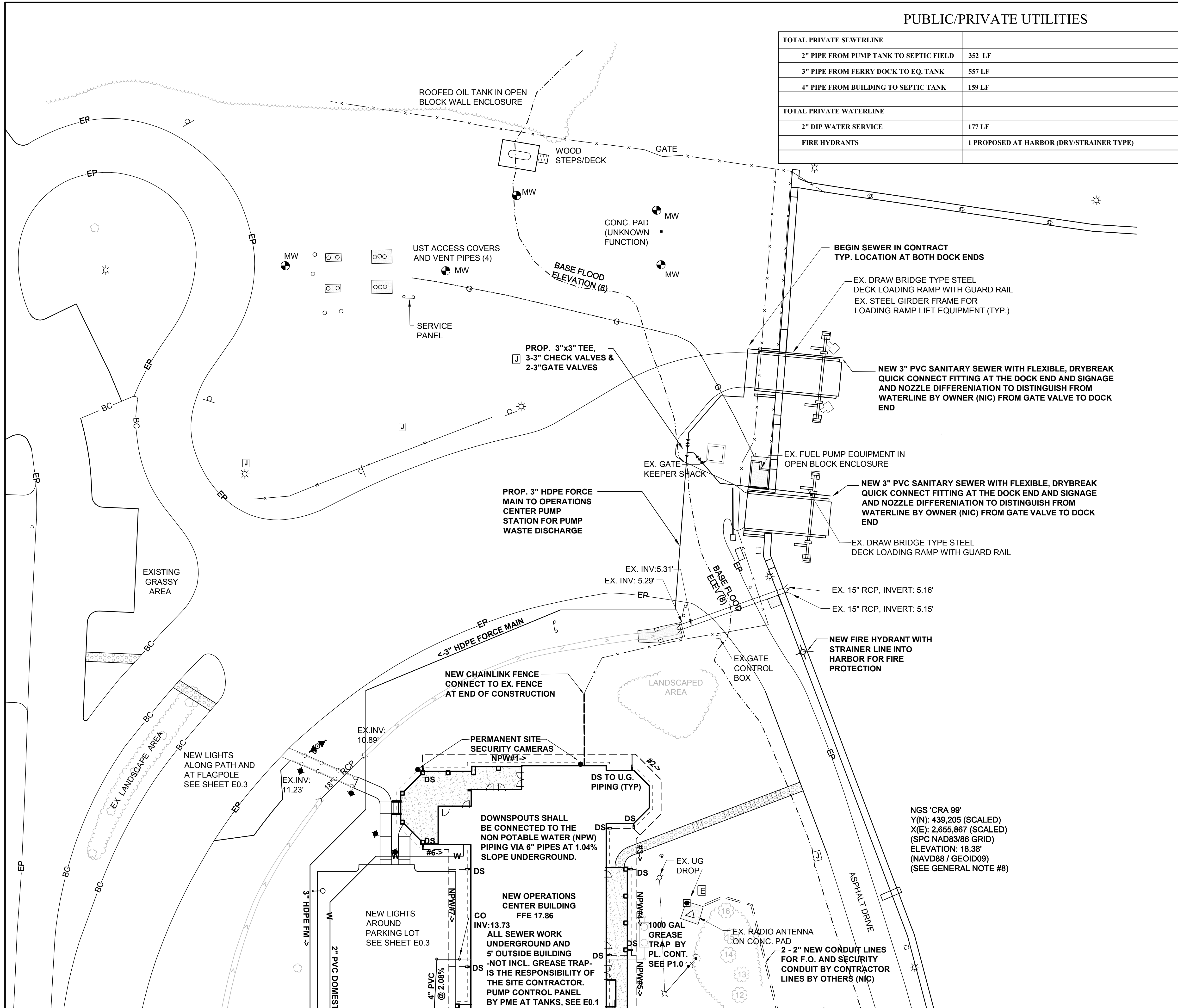
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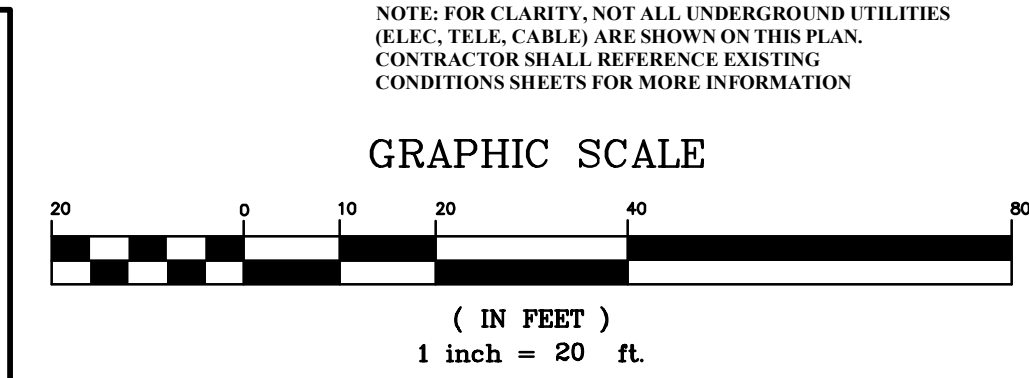
SHEET NO.

C4.4

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PUBLIC/PRIVATE UTILITIES	
TOTAL PRIVATE SEWERLINE	
2" PIPE FROM PUMP TANK TO SEPTIC FIELD	352 LF
3" PIPE FROM FERRY DOCK TO EQ. TANK	557 LF
4" PIPE FROM BUILDING TO SEPTIC TANK	159 LF
TOTAL PRIVATE WATERLINE	
2" DIP WATER SERVICE	177 LF
FIRE HYDRANTS	1 PROPOSED AT HARBOR (DRY/STRAINER TYPE)

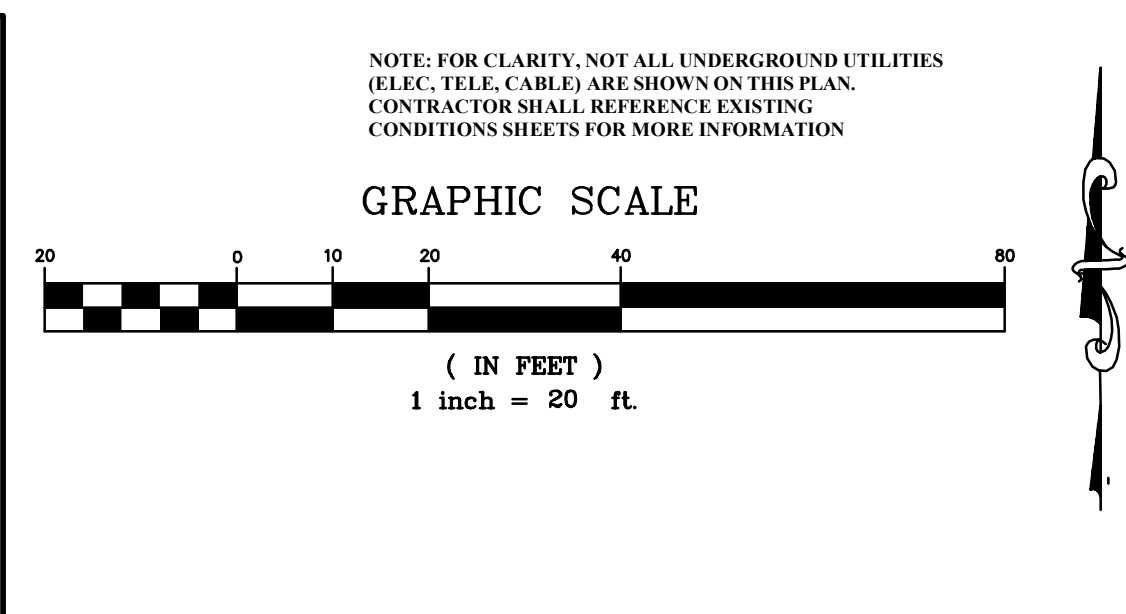
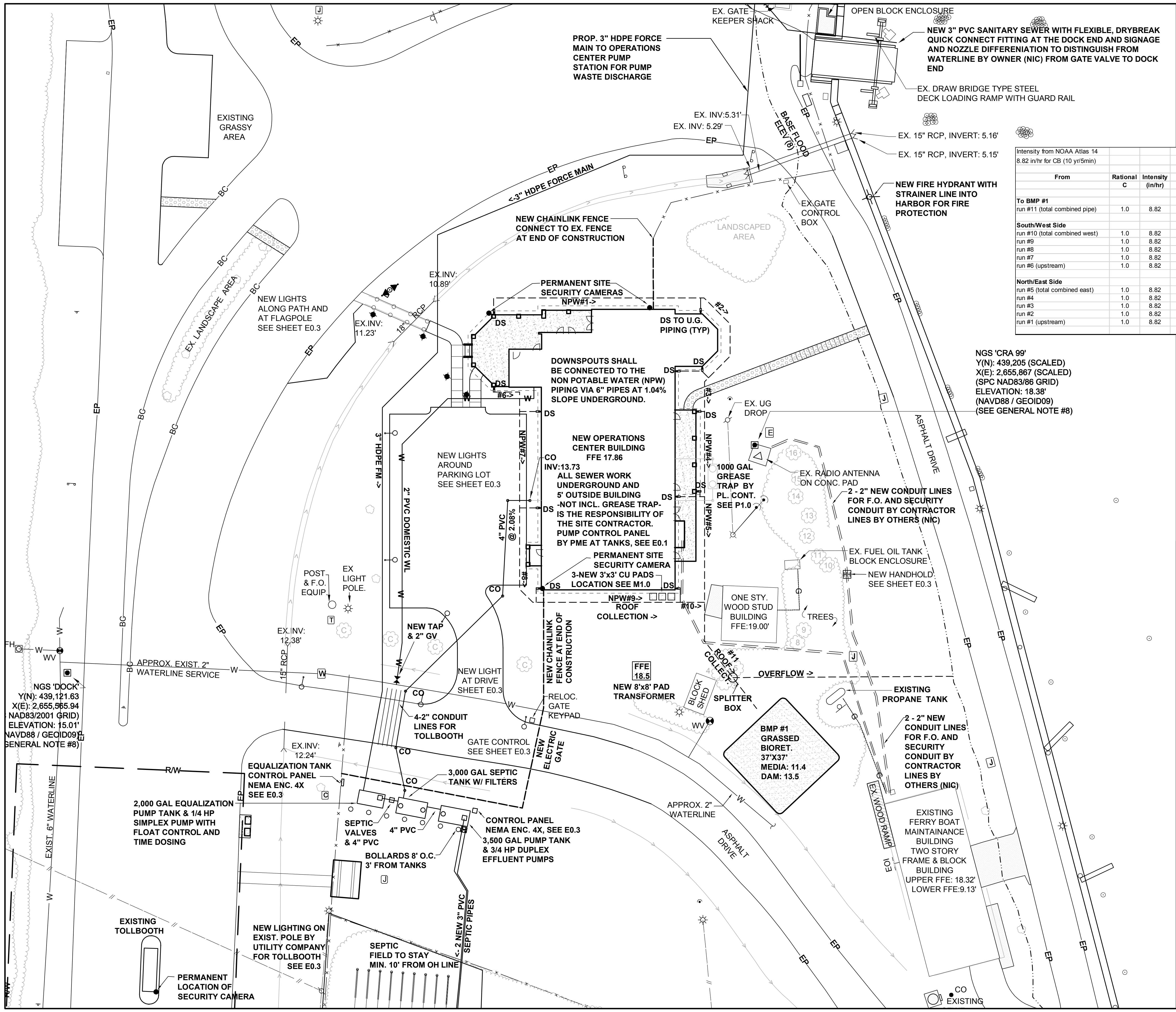


STANDARD NOTES
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2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

LEGEND

— ELEVATION 8 —	APPROXIMATE FLOODPLAIN BOUNDARY (SEE GENERAL NOTE #5)
BC	BACK OF CURB
○	BUSH
□	CABLE / FIBER OPTIC PEDESTAL
■	CONCRETE
*	CONIFEROUS TREE
○	DECIDUOUS TREE
— EP —	EDGE OF PAVEMENT
— ED —	EDGE OF UNPAVED PARKING / DRIVES
— EL —	ELECTRIC LINE (PAINT MARKS)
— ES —	END OF INFORMATION (SIGNAL STOPS)
— ELEV —	ESTIMATED CONTOURS (SEE GENERAL NOTE)
— FENCE —	FENCE LINE (CHAIN LINK)
— FO —	FIBER OPTIC LINE
FH	FIRE HYDRANT
FP	FLAG POLE
G	GAS LINE
— GS —	GATE SENSOR LINE
NGS "NAME"	GEODETIC SURVEY MARKER
G	GUY WIRE
*	LARGE CREPE MYRTLE
○	LIGHT POLE
— LPP —	LIGHT POLE w/ CCTV
— M —	MANHOLE / ACCESS COVER
▲	MAILBOX
SW	MARSH / SWAMP
— MH —	METAL HANDRAIL
MW	MONITOR WELL
— OL —	OVERHEAD UTILITY LINES
— P —	POST / BOLLARD
— PL —	PROPERTY LINE (SEE GENERAL NOTE #6)
— RW —	RIGHT-OF-WAY (SEE GENERAL NOTE #6)
— RIP —	RIP RAP
— RO —	ROPE OR WIRE / POST BARRIER
CO	SANITARY SEWER CLEANOUT
SS	SANITARY SEWER LINE (PAINT MARKS)
— S —	SHRUB LINE
4	SIGN (ONE POST)
1	SIGN (TWO POST)
— SE —	SPOT ELEVATION
— STA —	STORAGE AREA
— STL —	STORM SEWER LINE
— TEL —	TELECOMMUNICATION LINE (PAINT MARKS)
— T —	TELEPHONE PEDESTAL
— T —	TREE (SEE TREE TABLE)
— TL —	TREE LINE / LANDSCAPED LIMIT
UEB	UNDERGROUND ELECTRIC BOX
— UJ —	UNDERGROUND JUNCTION BOX
— UL —	UNKNOWN UTILITY LINE (PAINT MARKS)
— UP —	UTILITY POLE
— V —	VENT PIPE
— WL —	WATER LINE (PAINT MARKS)
— WM —	WATER METER
— WV —	WATER VALVE
— WPF —	WOOD PRIVACY FENCE

BID DOCUMENTS	
DESIGNED BY:	FACILITIES DESIGN ARCHITECTS & ENGINEERS FACILITIES MANAGEMENT DIVISION NCDOT 1 SOUTH WILKINSON STREET RALEIGH, NORTH CAROLINA 27601 PHONE: 919.707.4540 FAX 919.7715-0399
CONSULTANT:	B&F CONSULTING 2805 TORENOFF LANE RALEIGH, NORTH CAROLINA 27606 PHONE: 919.889.8102 FAX: 919.889.8102 NC LICENSE C2148
DRAWING TITLE / DESCRIPTION: UTILITIES PLAN NORTH AREA	
PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT	
2300 FERRY ROAD, HAVELOCK, NC 28532 CRAVEN COUNTY, NORTH CAROLINA	
STATE CONSTRUCTION ID.# 11-09079-01A	
ASSET NUMBER: C0.1 SITE # 51067	
REVISIONS NO. DATE	
DATE ISSUED: 8-14-15	
DRAWN BY: AF	
CHECKED BY: RJB	
SHEET NO.	
C5.1	



Roof Stormwater Routing - Cherry Branch Operations Center											
Summary of Pipes - 2/16/2015											
From	Rational C	Intensity (in/hr)	Area (sf)	Q ₁₀ (cfs)	Length (ft)	Diameter (inches)	calculated DIA. (inches)	Slope (%)	Invert (From)	Invert (To)	
To BMP #1											
run #11 (total combined pipe)	1.0	8.82	9,694	2.0	52	10	PVC 10.0	0.80%	12.43	12.84	
South/West Side											
run #10 (total combined west)	1.0	8.82	4,495	0.9	11	6	PVC 5.8	3.00%	12.86	13.19	
run #9	1.0	8.82	3,825	0.8	63	6	PVC 6.0	1.90%	13.19	14.39	
run #8	1.0	8.82	3,285	0.7	45	6	PVC 6.0	1.40%	14.39	15.02	
run #7	1.0	8.82	2,135	0.4	42	6	PVC 5.4	1.04%	15.02	15.45	
run #6 (upstream)	1.0	8.82	1,022	0.2	20	6	PVC 4.1	1.04%	15.45	15.66	
North/East Side											
run #5 (total combined east)	1.0	8.82	5,199	1.1	47	8	PVC 7.6	1.00%	12.84	13.31	
run #4	1.0	8.82	3,769	0.8	37	6	PVC 6.0	1.80%	13.31	13.98	
run #3	1.0	8.82	3,009	0.6	16	6	PVC 6.0	1.20%	13.98	14.17	
run #2	1.0	8.82	1,818	0.4	45	6	PVC 5.1	1.04%	14.17	14.64	
run #1 (upstream)	1.0	8.82	1,090	0.2	98	6	PVC 4.2	1.04%	14.64	15.66	

STANDARD NOTES
1. ALL CONSTRUCTION TO BE IN ACCORDANCE WITH ALL NCDOT/NC DENR/DWQ APPLICABLE STANDARDS AND SPECIFICATIONS.
2. REFERENCE SHEET C0.1 FOR ALL APPLICABLE NOTES AND LEGEND INFORMATION.

LEGEND	
BC	APPROXIMATE FLOODPLAIN BOUNDARY (SEE GENERAL NOTE #5)
EP	BACK OF CURB
ED	BUSH
EP	CABLE / FIBER OPTIC PEDESTAL
ED	CONCRETE
EP	CONFIDENTIAL TREE
ED	DECIDUOUS TREE
EP	EDGE OF PAVEMENT
ED	EDGE OF UNPAVED PARKING / DRIVES
EP	ELECTRIC LINE (PAINT MARKS)
ED	END OF INFORMATION (SIGNAL STOPS)
EP	ESTIMATED CONTOURS (SEE GENERAL NOTE)
ED	ESTIMATED SPOT ELEVATION
EP	FENCE LINE (CHAIN LINK)
ED	FIBER OPTIC LINE
EP	FIRE HYDRANT
ED	FLAG POLE
EP	GAS LINE
ED	GATE SENSOR LINE
EP	GEODETIC SURVEY MARKER
ED	GUY WIRE
EP	LARGE CREPE MYRTLE
ED	LIGHT POLE
EP	LIGHT POLE w/ CCTV
ED	MANHOLE / ACCESS COVER
EP	MAILBOX
ED	MARSH / SWAMP
EP	METAL HANDRAIL
ED	MONITOR WELL
EP	OVERHEAD UTILITY LINES
ED	POST / BOLLARD
EP	PROPERTY LINE (SEE GENERAL NOTE #6)
ED	RIGHT-OF-WAY (SEE GENERAL NOTE #6)
EP	RIP RAP
ED	ROPE OR WIRE / POST BARRIER
EP	SANITARY SEWER CLEANOUT
ED	SANITARY SEWER LINE (PAINT MARKS)
EP	SHRUB LINE
ED	SIGN (ONE POST)
EP	SIGN (TWO POST)
ED	SPOT ELEVATION
EP	STORM SEWER LINE
ED	TELECOMMUNICATION LINE (PAINT MARKS)
EP	TELEPHONE PEDESTAL
ED	TREE (SEE TREE TABLE)
EP	TREE LINE / LANDSCAPED LIMIT
ED	UNDERGROUND ELECTRIC BOX
EP	UNDERGROUND JUNCTION BOX
ED	UNKNOWN UTILITY LINE (PAINT MARKS)
EP	UTILITY POLE
ED	VENT PIPE
EP	WATER LINE (PAINT MARKS)
ED	WATER METER
EP	WATER VALVE
ED	WOOD PRIVACY FENCE

BID DOCUMENTS

DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, NCDOT
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CONSULTANT:
B&F
CONSULTING
2805 FOREBROOK LANE
RALEIGH, NORTH CAROLINA 27606
PHONE: 919/889-8102
NC LICENSE C2148

DRAWING TITLE / DESCRIPTION:
**UTILITIES PLAN
CENTRAL AREA**

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**

STATE CONSTRUCTION
ID # 11-09079-01A

ASSET NUMBER:
C0.1 SITE # 91067

REVISIONS
NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: AF
CHECKED BY: RJB
SHEET NO.

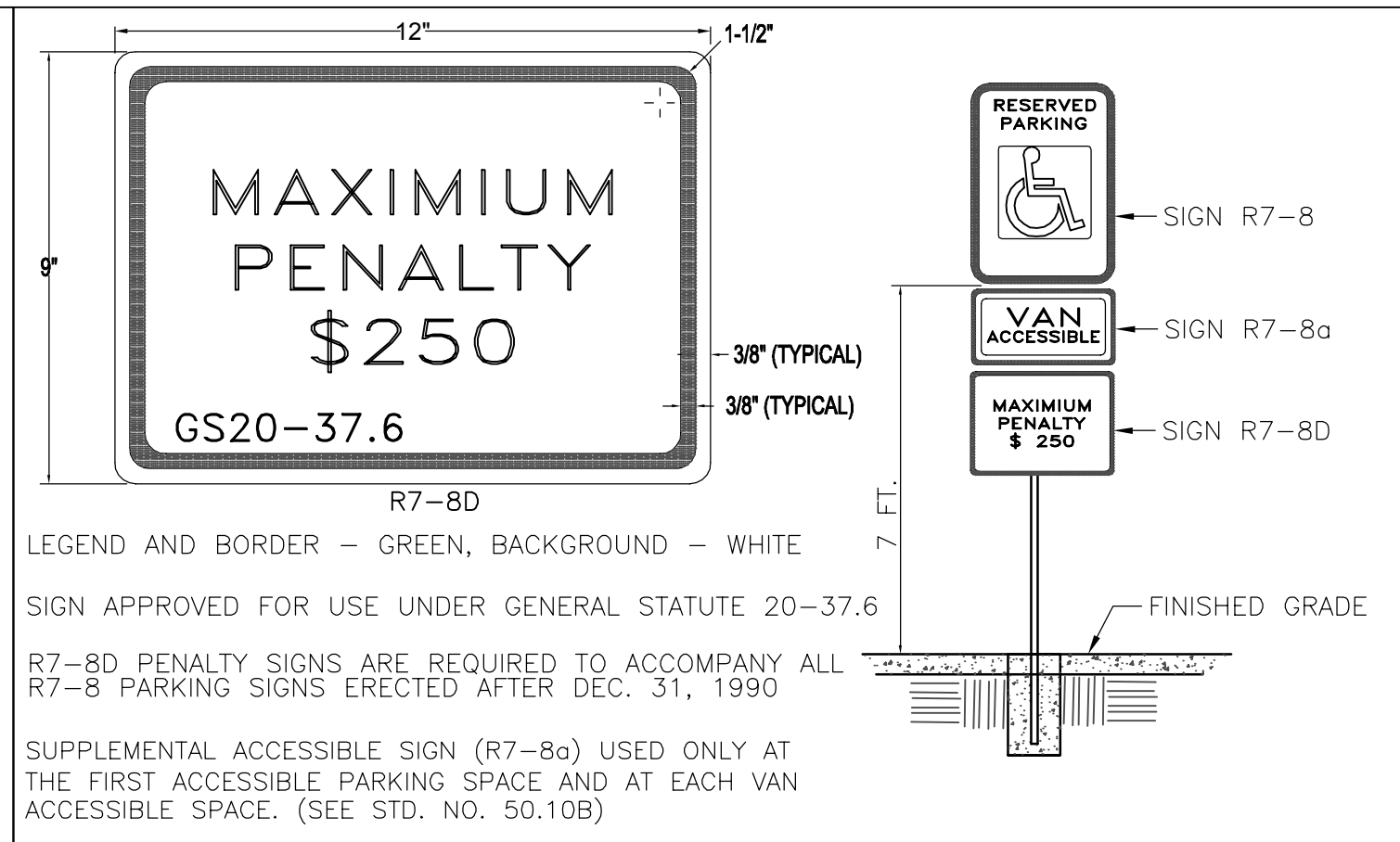
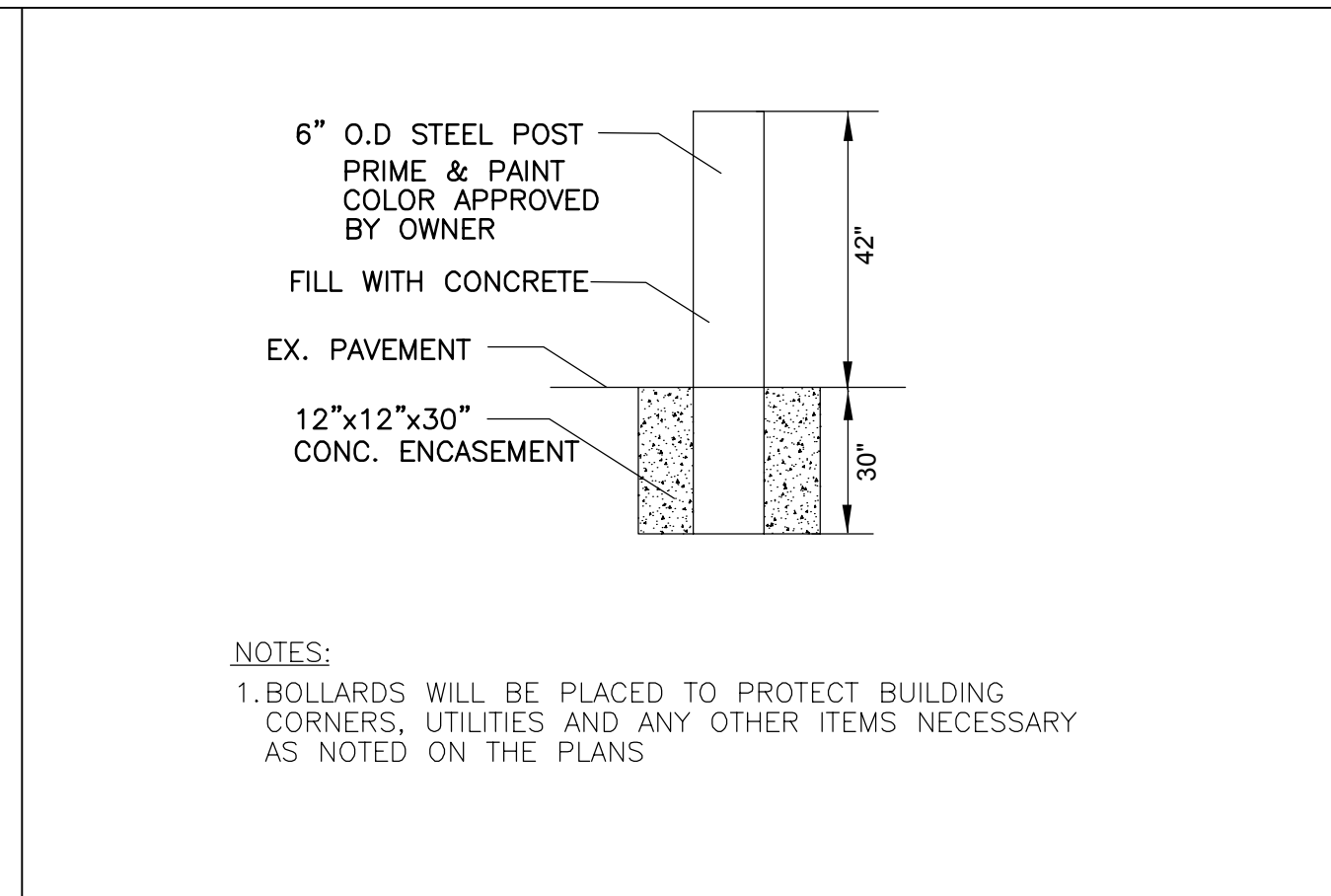
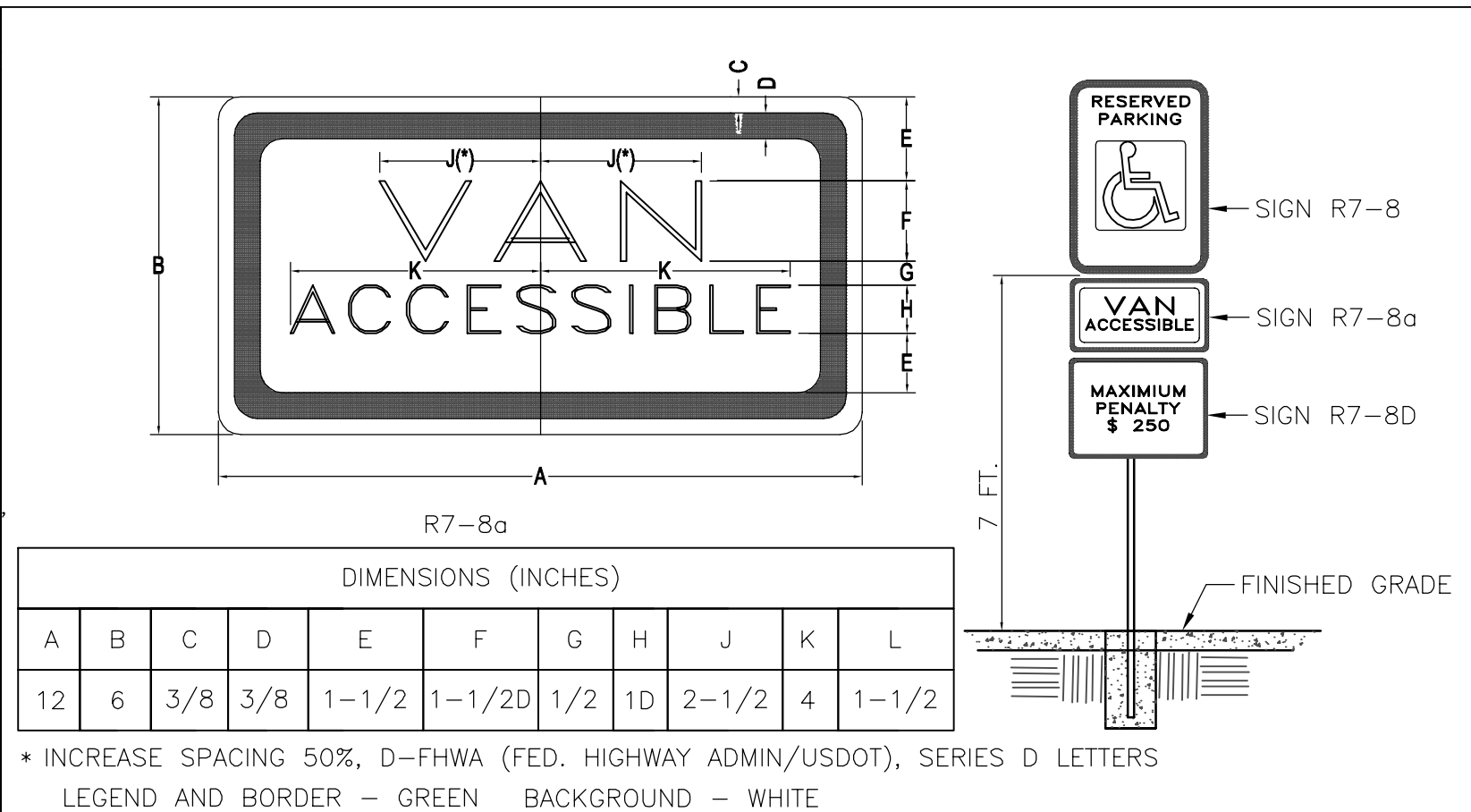
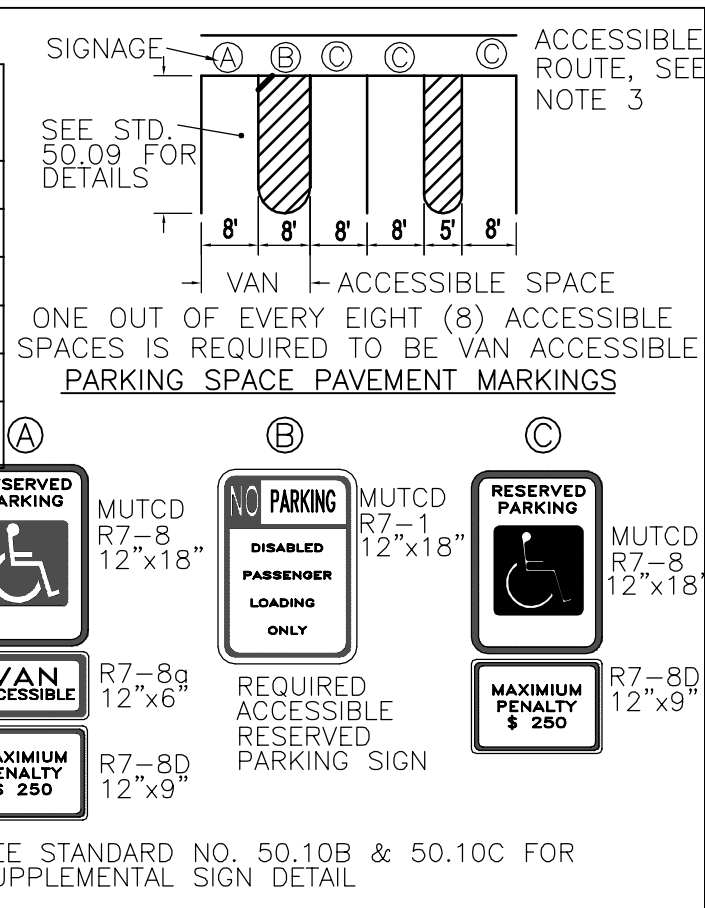
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ACCESSIBLE PARKING REQUIREMENTS

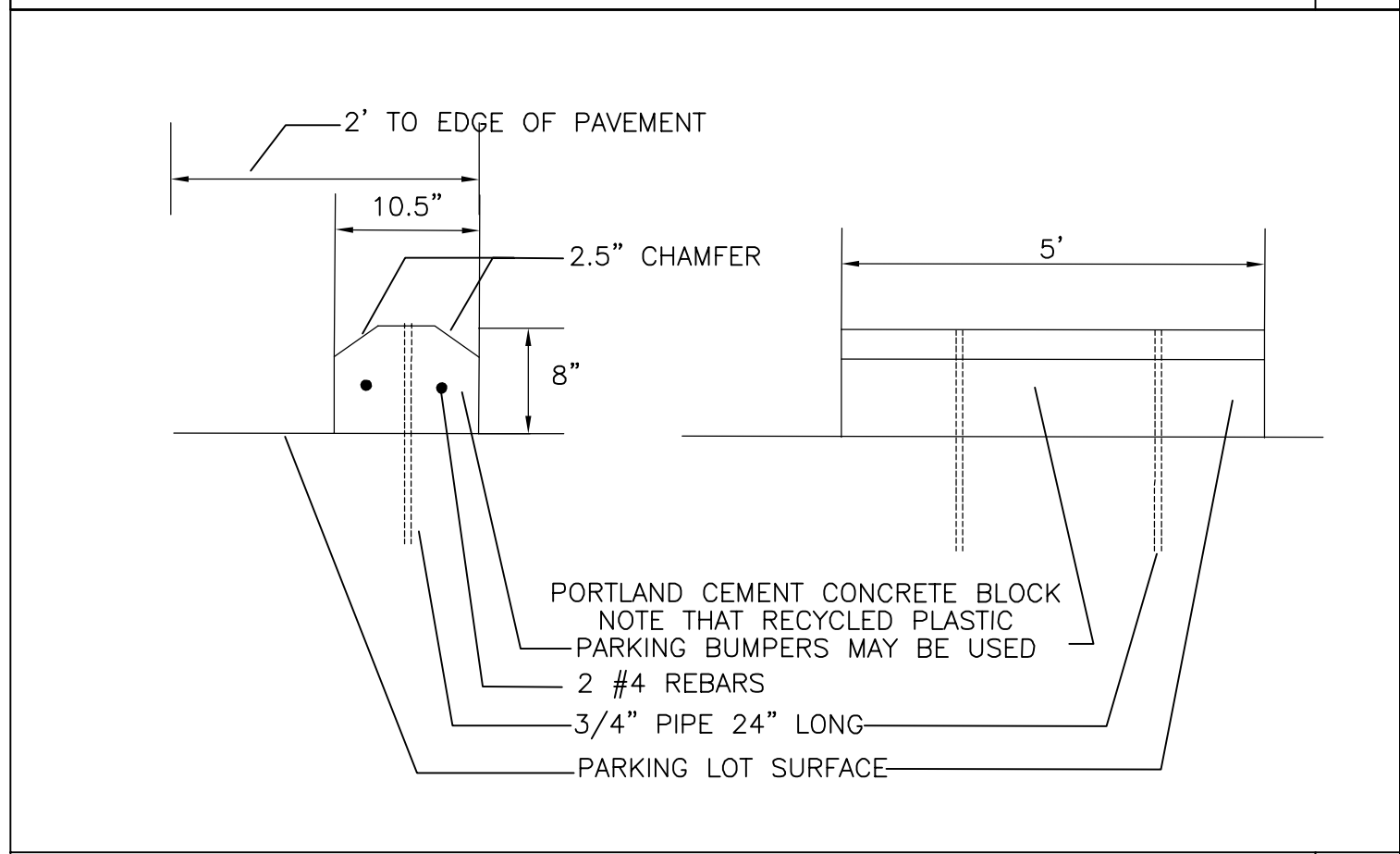
TOTAL PARKING SPACES PROVIDED	MIN. # OF ACCESSIBLE SPACES REQ'D	MIN. # OF ACCESSIBLE SPACES REQ'D TO BE VAN ACCESSIBLE
1 TO 25	1	1
26 TO 50	2	1
51 TO 75	3	1
76 TO 100	4	1
101 TO 150	5	1

SECTION 4.1.2 (5) OF THE AMERICANS WITH DISABILITIES ACT - SEE 4.1.2.(5) (d) FOR MEDICAL CARE FACILITIES

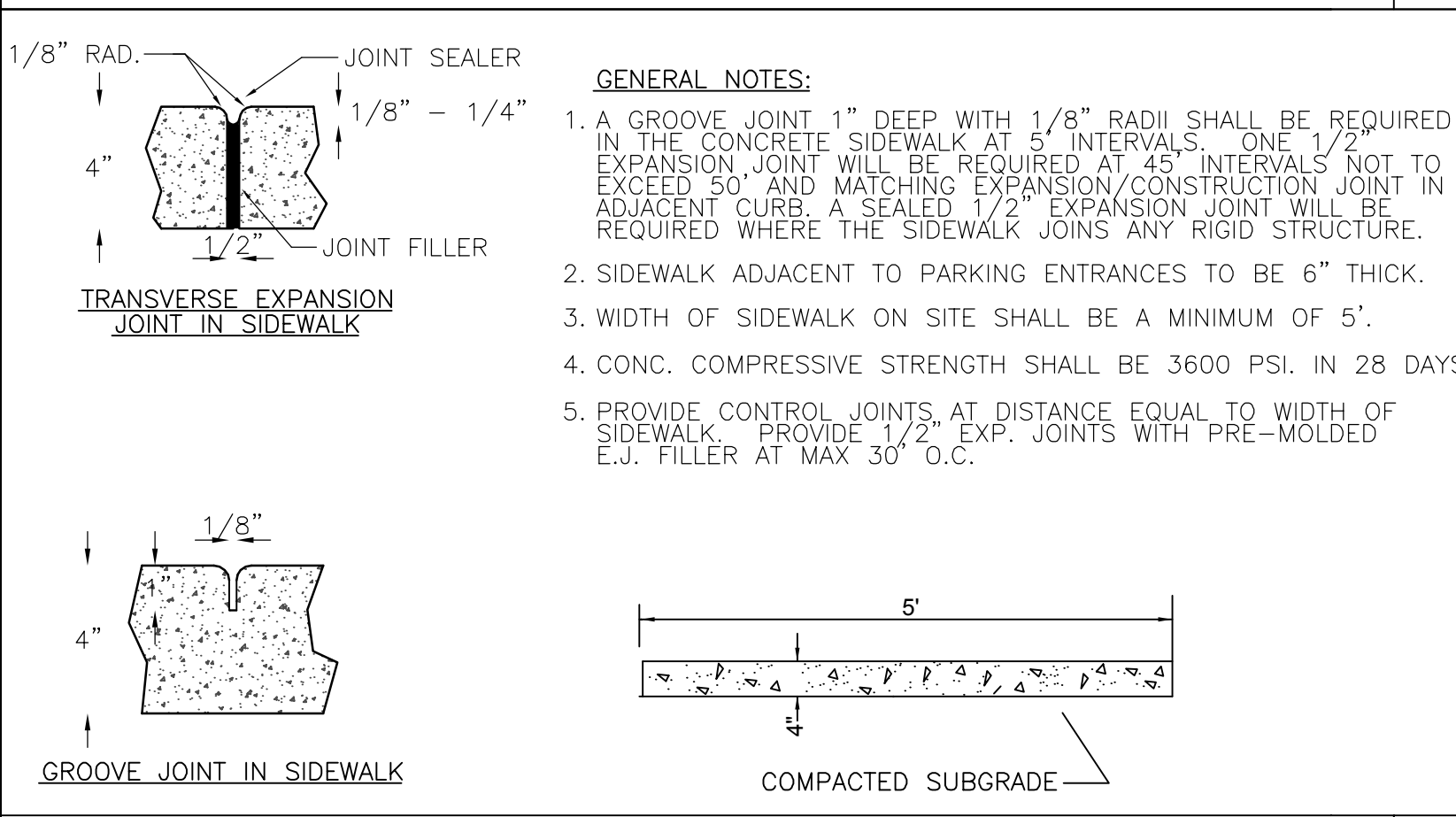
- NOTES:
- ALL 12"x18" ACCESSIBLE SIGNS (R7-8&R7-1) SHALL BE MOUNTED AT 7 FEET FROM GRADE TO BOTTOM EDGE OF SIGN FACE (MUTCD).
 - REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD), U.S. DEPARTMENT OF TRANSPORTATION AND NORTH CAROLINA DEPARTMENT OF TRANSPORTATION SUPPLEMENT.
 - IF ACCESSIBLE ROUTE IS A RAISED SIDEWALK AREA, THEN RAMPS ARE REQUIRED AT LOADING ZONE AREA.



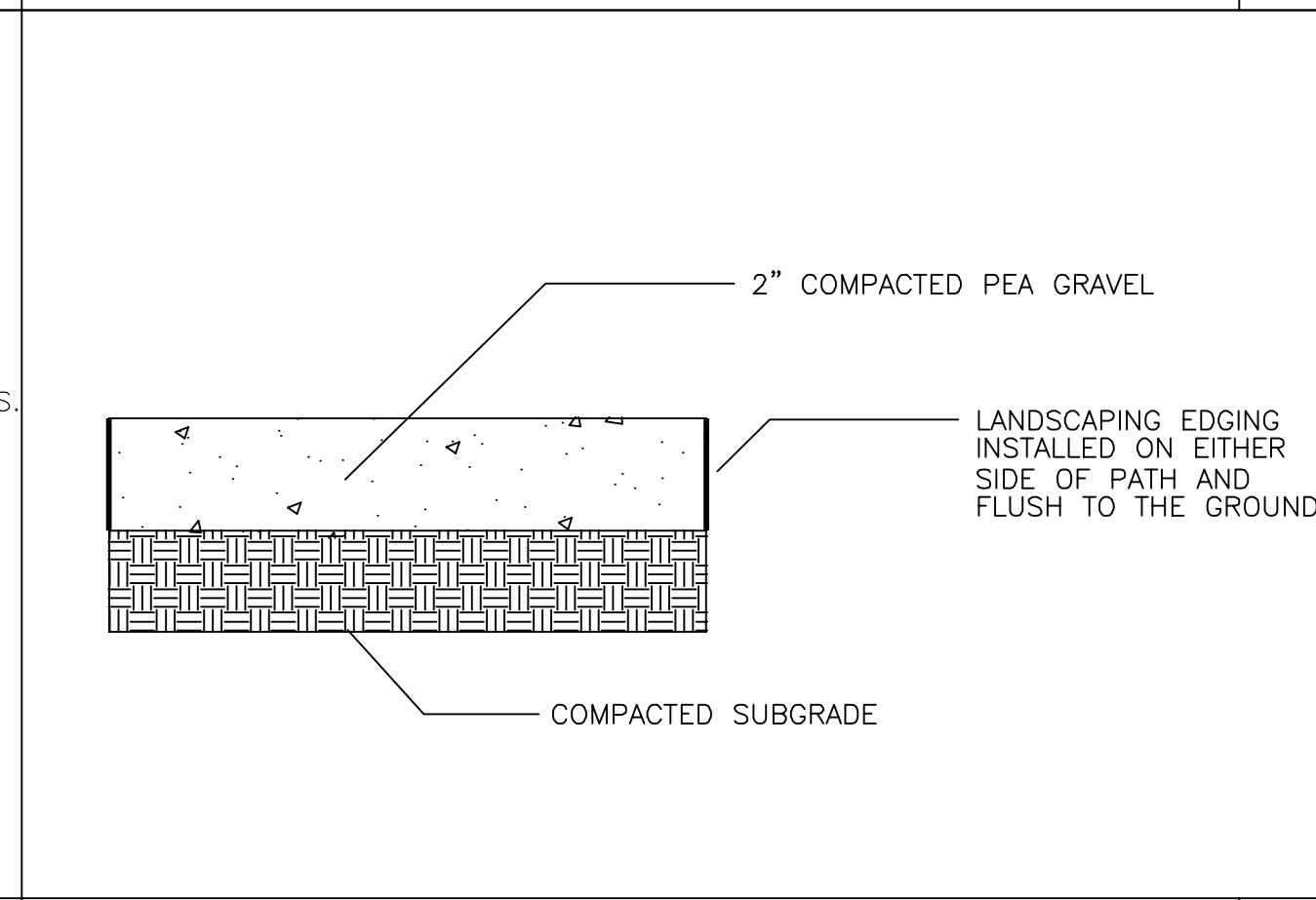
HANDICAP SIGNAGE



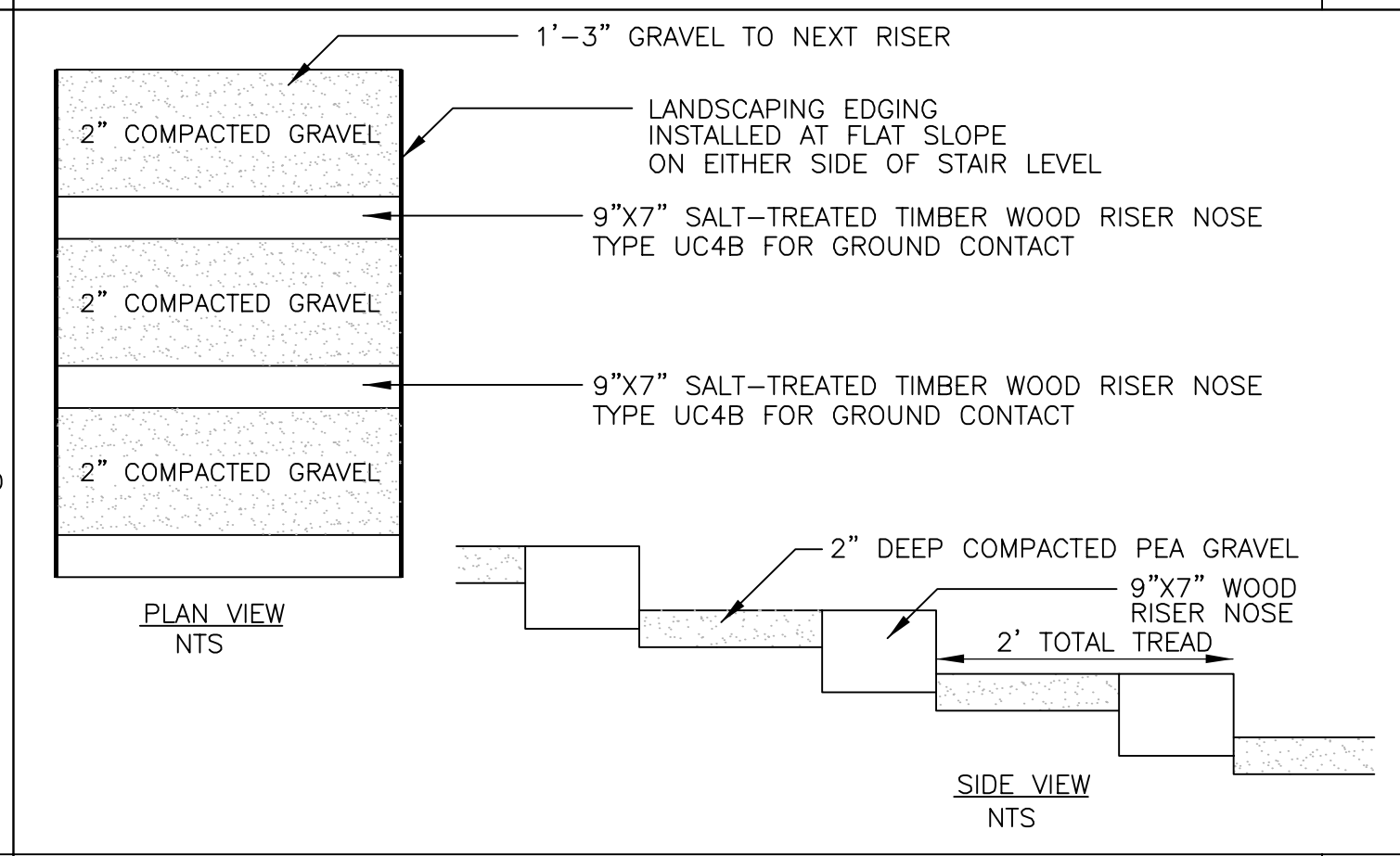
VAN ACCESSIBLE SIGNAGE



CONCRETE FILLED STEEL BOLLARD



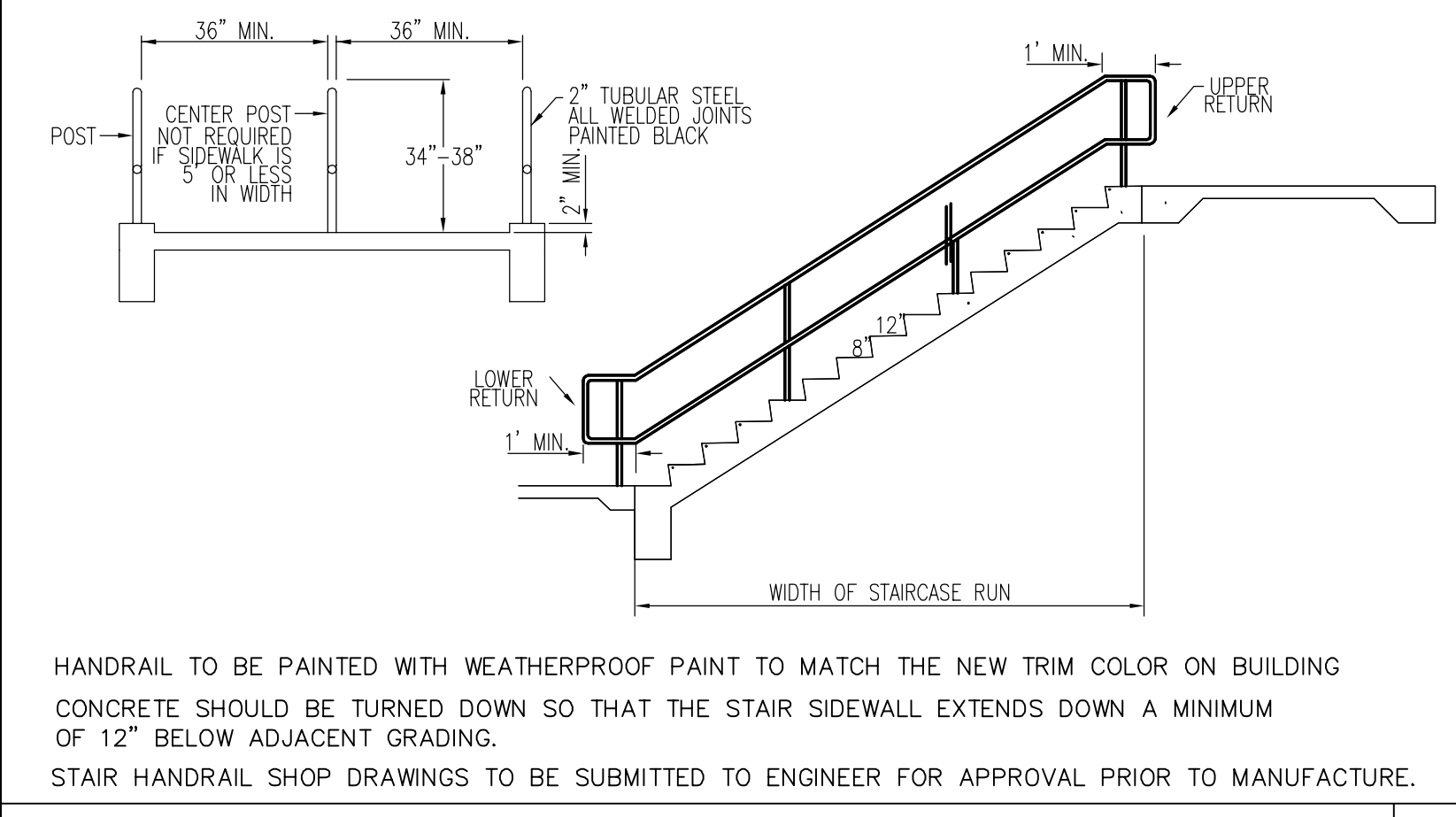
SUPPLEMENTAL ACCESSIBLE SIGN (R7-8D)



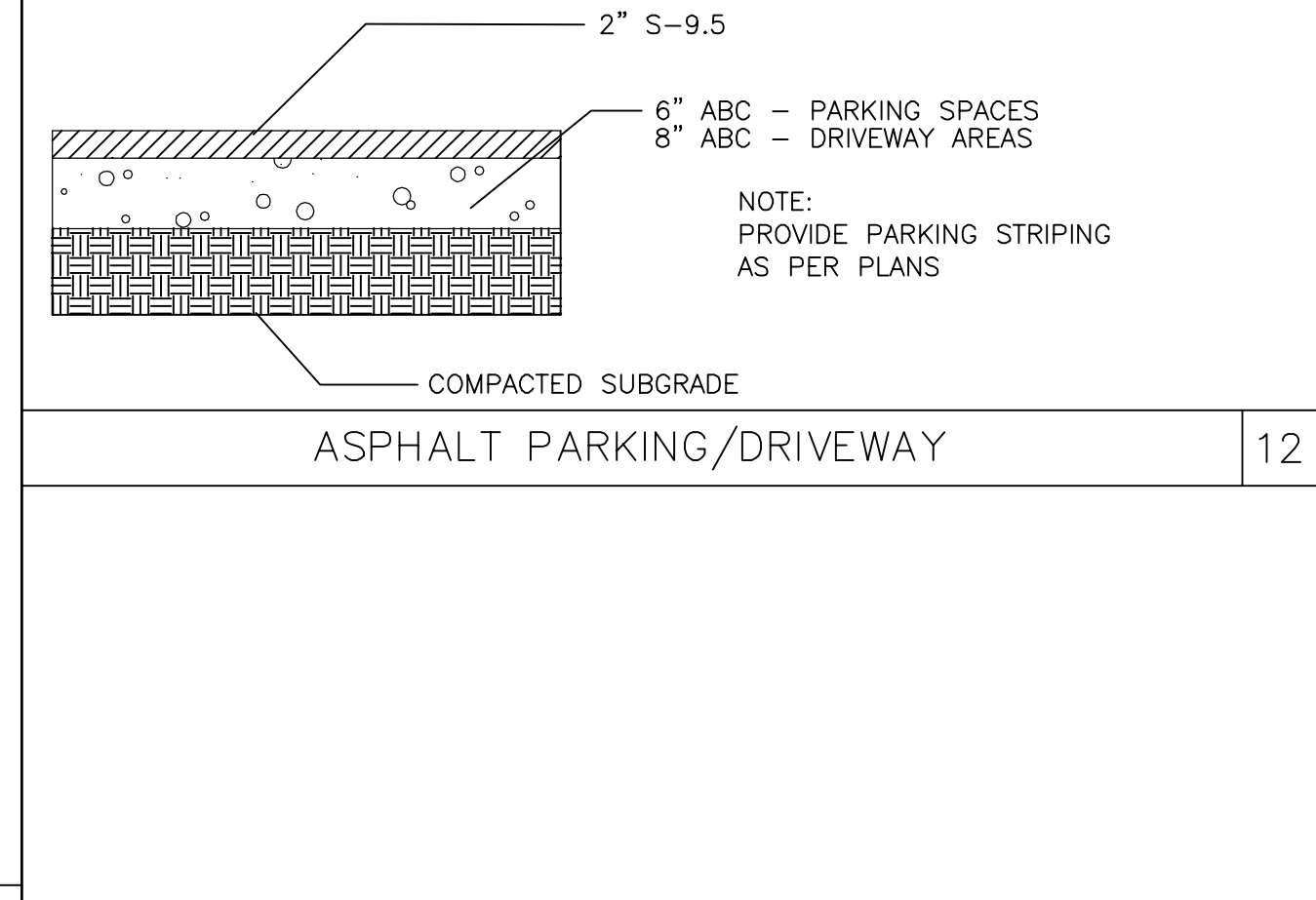
PARKING BUMPER



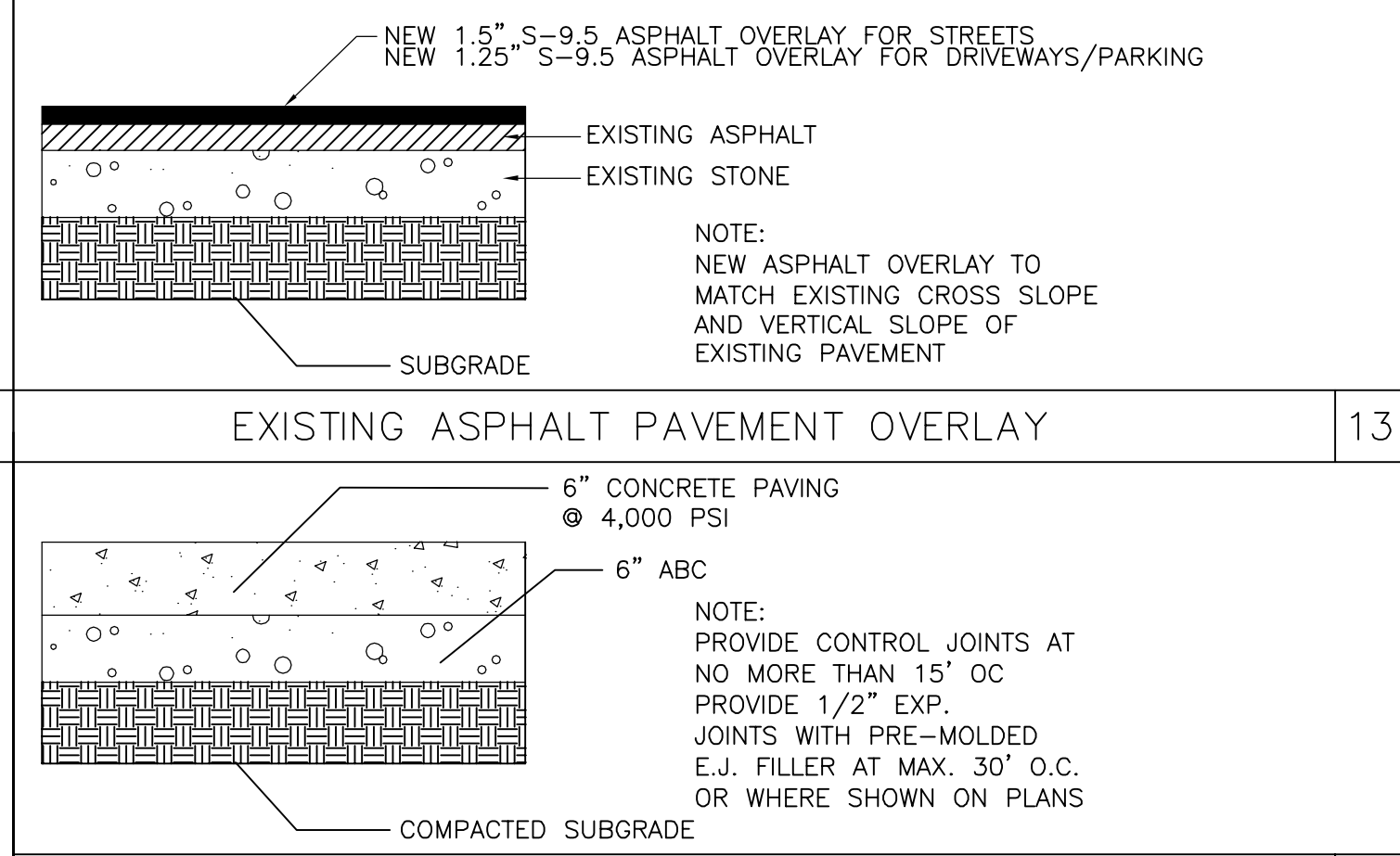
CONCRETE SIDEWALK SECTION TYPICAL



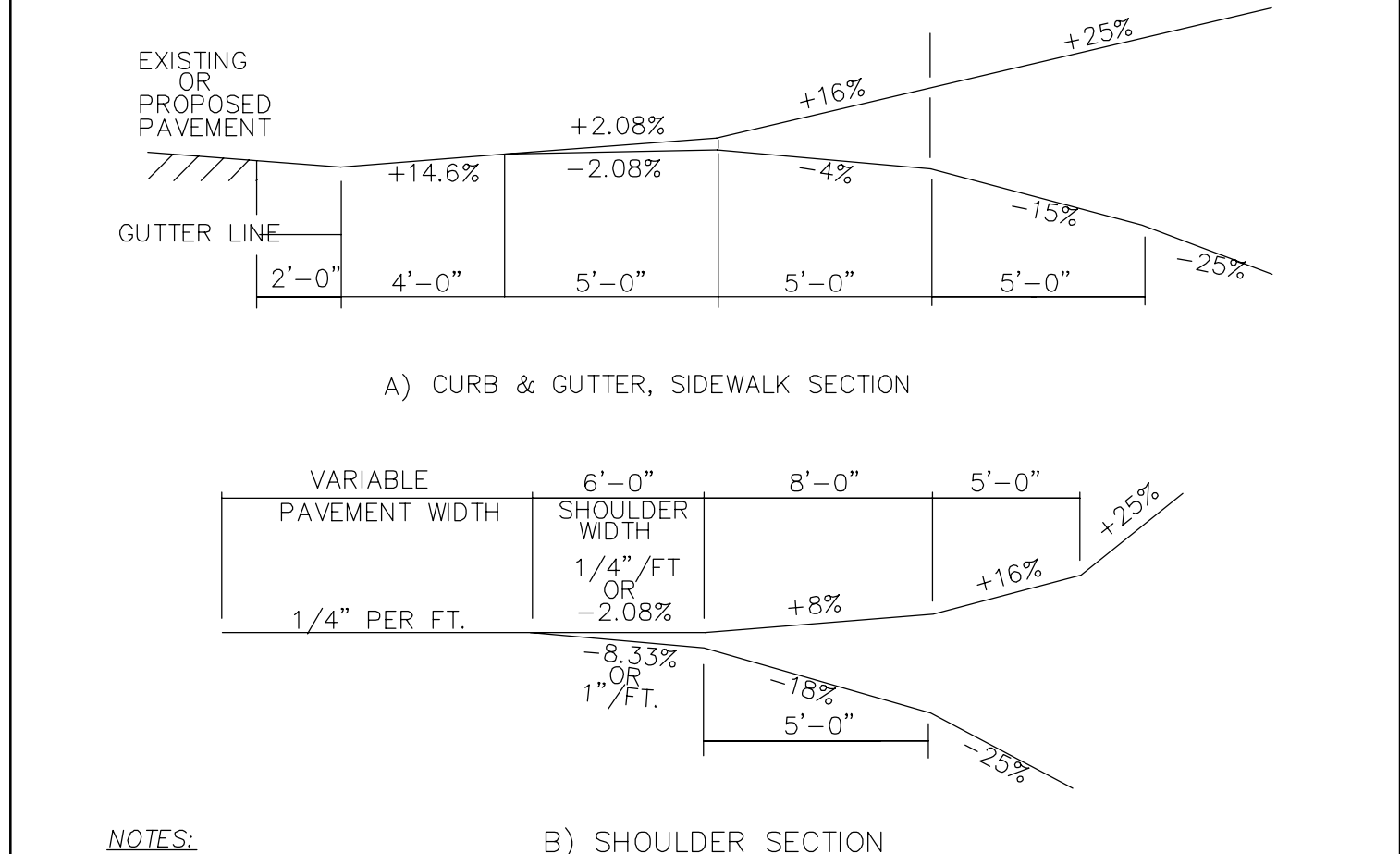
PEA GRAVEL PATH SECTION TYPICAL



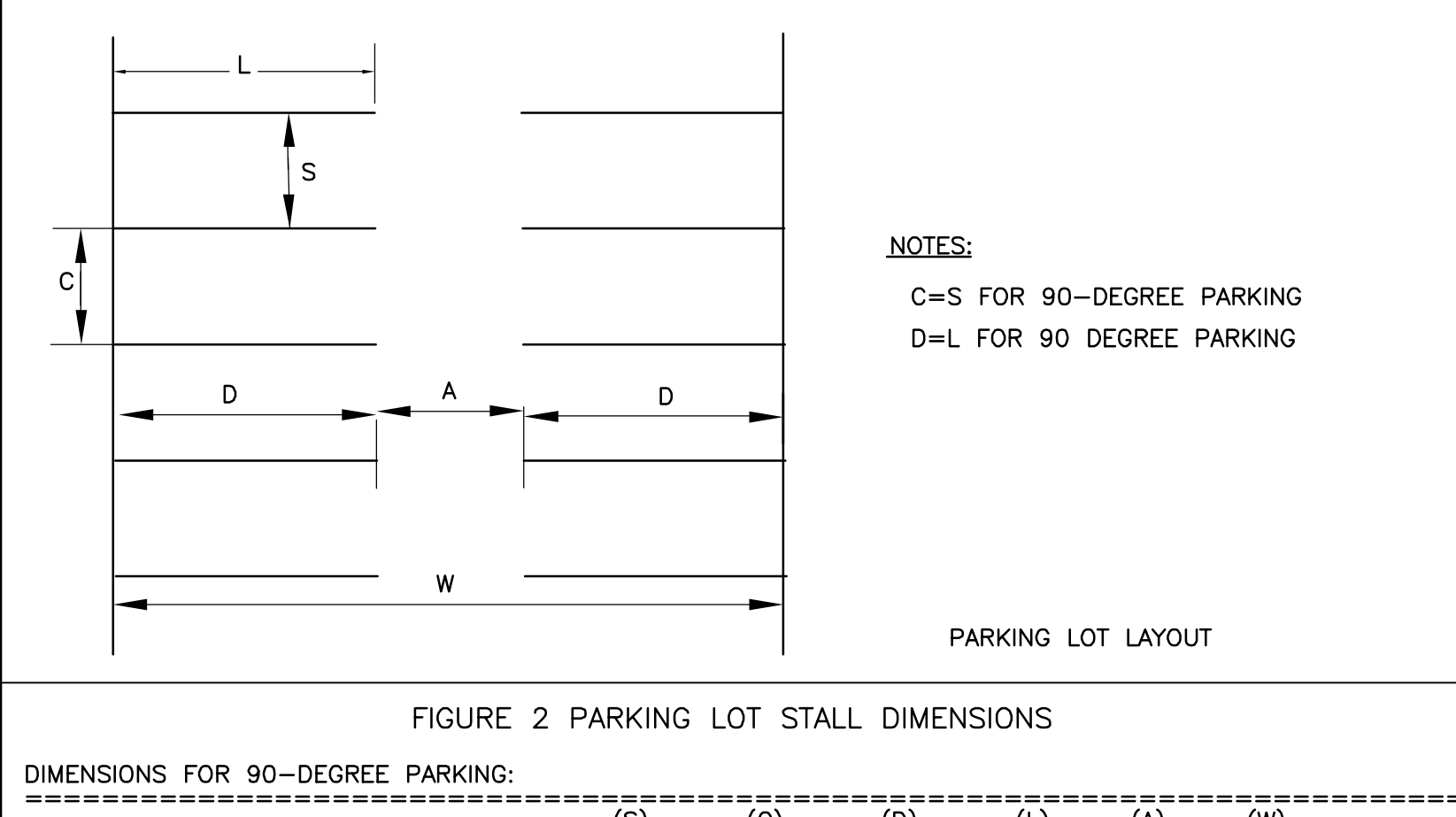
TREATED TIMBER STAIRWAY TYPICAL



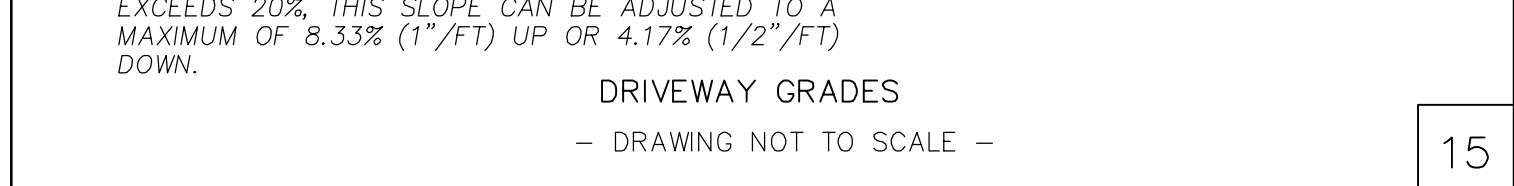
EXISTING ASPHALT PAVEMENT OVERLAY



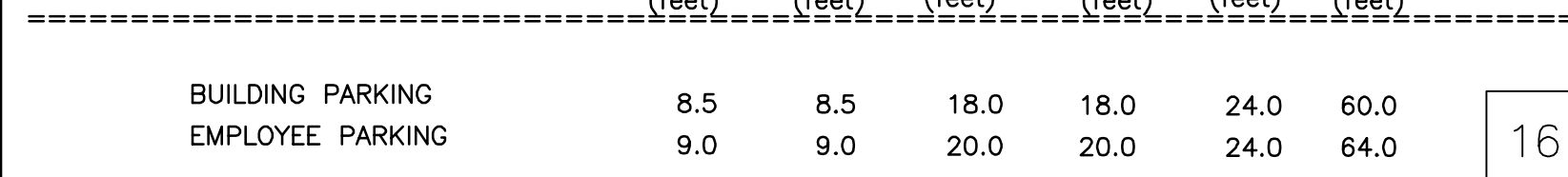
CONCRETE PAVEMENT TYP. - MECH. EQUIP.



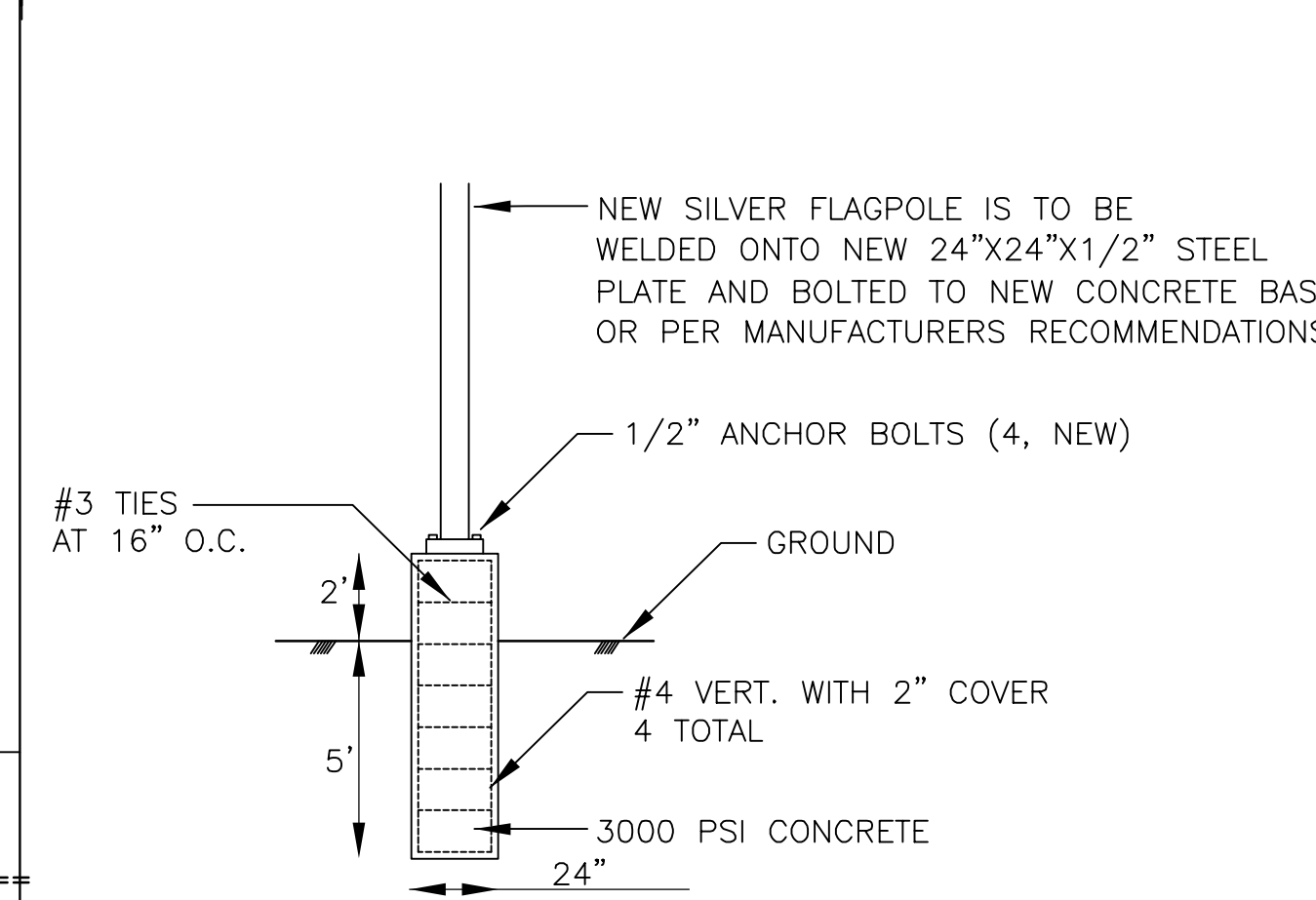
CONCRETE SIDEWALK SECTION TYPICAL



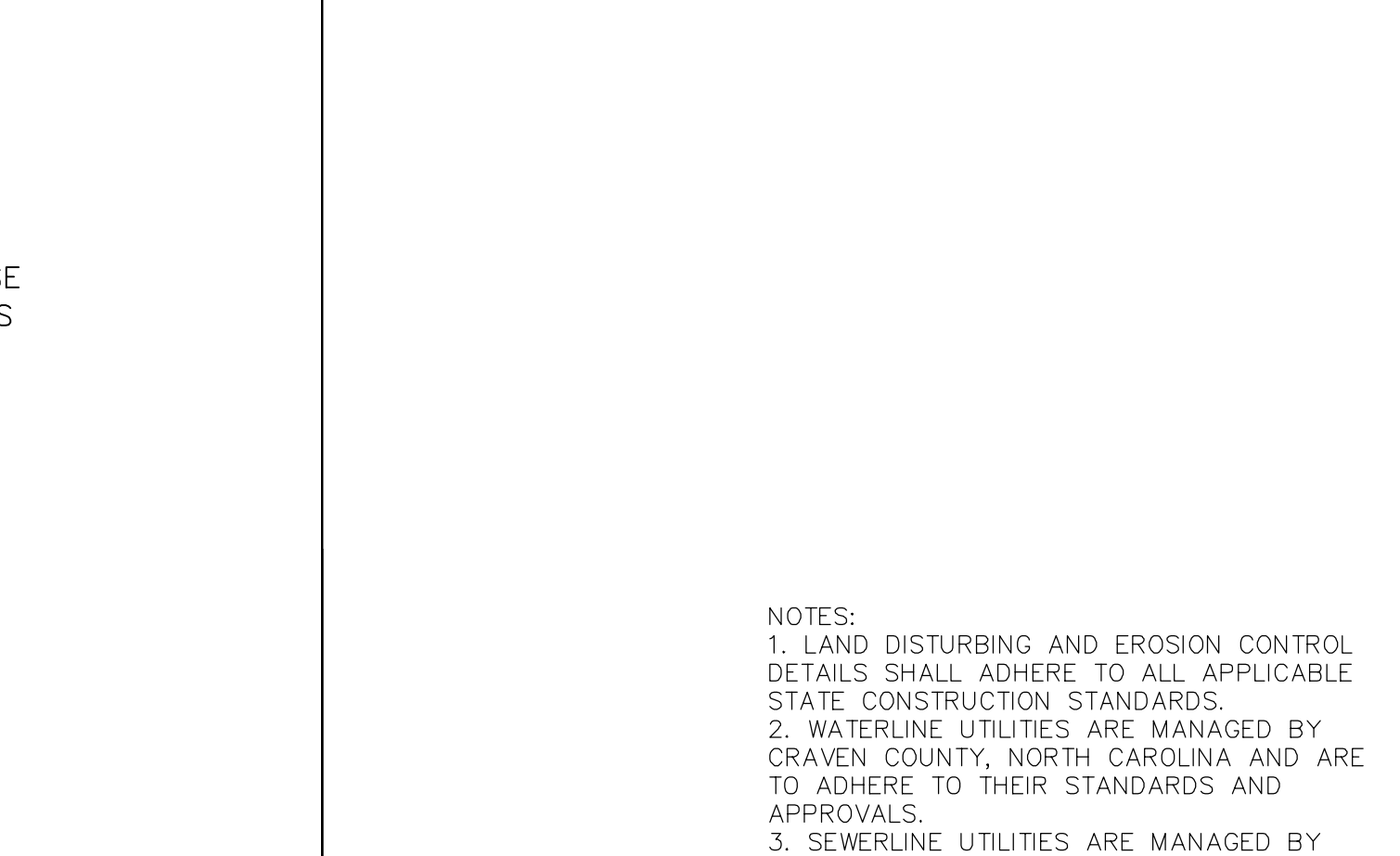
PEA GRAVEL PATH SECTION TYPICAL



EXISTING ASPHALT PAVEMENT OVERLAY



CONCRETE PAVEMENT TYP. - MECH. EQUIP.



CONCRETE SIDEWALK SECTION TYPICAL



PEA GRAVEL PATH SECTION TYPICAL



EXISTING ASPHALT PAVEMENT OVERLAY



CONCRETE PAVEMENT TYP. - MECH. EQUIP.



BID DOCUMENTS

NOTED CAROLINA PROFESSIONAL SEAL 027445

DESIGNED BY: FACILITIES DESIGN ARCHITECTS & ENGINEERS FACILITIES MANAGEMENT DIVISION NCDOT

1 SOUTH WILKINSON STREET RALEIGH, NORTH CAROLINA 27606 PHONE: 919.989.9102 FAX: 919.771.5099

CONSULTANT: B&F CONSULTING 2806 TORENOBY LANE RALEIGH, NORTH CAROLINA 27606 PHONE: 919.989.9102 NC LICENSE C2148

DRAWING TITLE / DESCRIPTION: DETAILS

PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT

2300 FERRY ROAD, HAVELOCK, NC 28532 CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION ID # 11-09079-01A

ASSET NUMBER: C0.7 SITE 5106

48

REVISIONS

NO. DATE

DATE ISSUED: 8-14-15

DRAWN BY: AF

CHECKED BY: RJB

SHEET NO.

C7.1

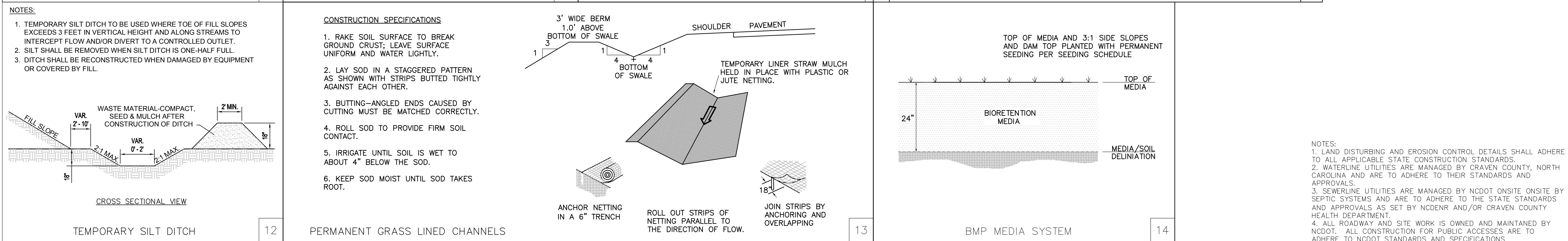
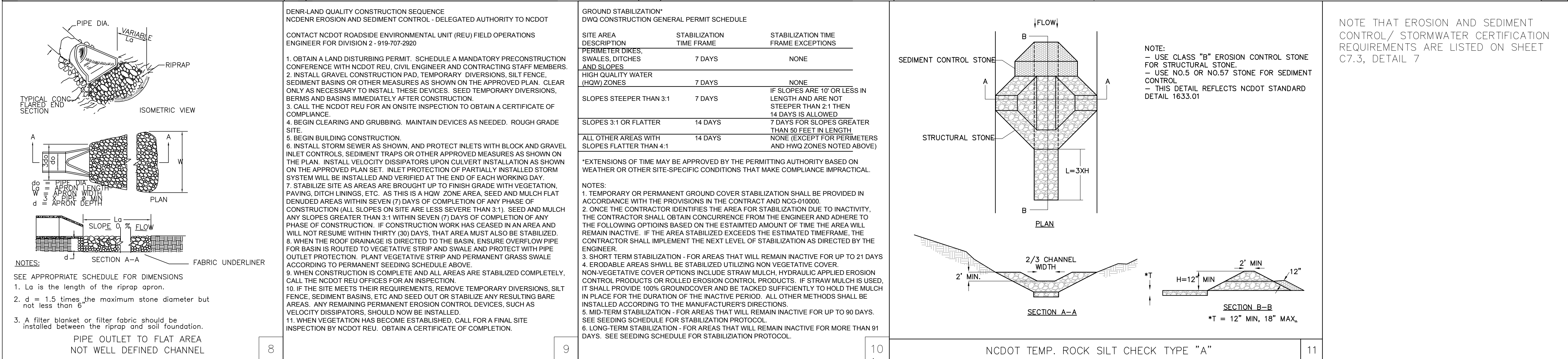
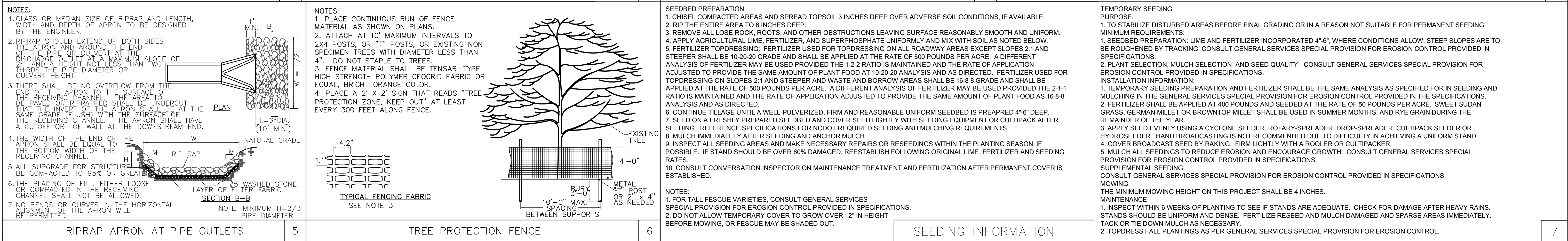
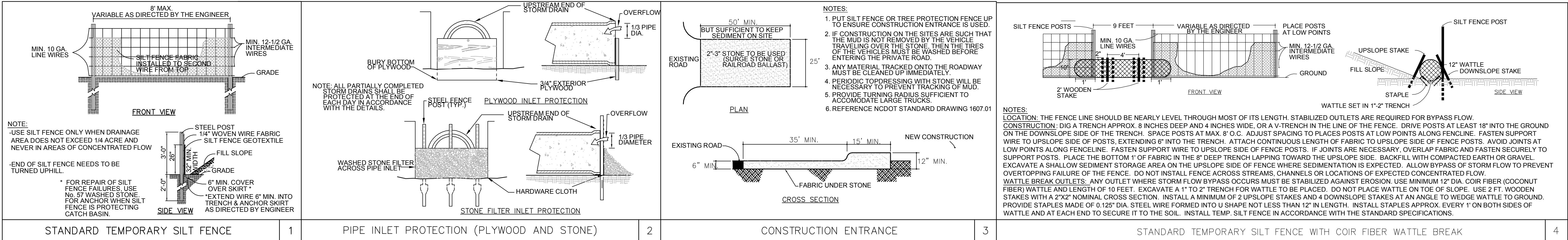
NOTES:

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2. WATERLINE UTILITIES ARE MANAGED BY CRAVEN COUNTY, NORTH CAROLINA AND ARE TO ADHERE TO THEIR STANDARDS AND APPROVALS.

3. SEWERLINE UTILITIES ARE MANAGED BY NCDENR AND/OR APPROVALS AS SET BY NCDENR AND/OR CRAVEN COUNTY HEALTH DEPARTMENT.

4. ALL ROADWAY AND SITE WORK IS OWNED AND MAINTAINED BY NCDOT. ALL CONSTRUCTION FOR PUBLIC ACCESSSES ARE TO ADHERE TO NCDOT STANDARDS AND SPECIFICATIONS



BID DOCUMENTS

DESIGNED BY: **FACILITIES DESIGN ARCHITECTS & ENGINEERS** FACILITIES MANAGEMENT INCDOT

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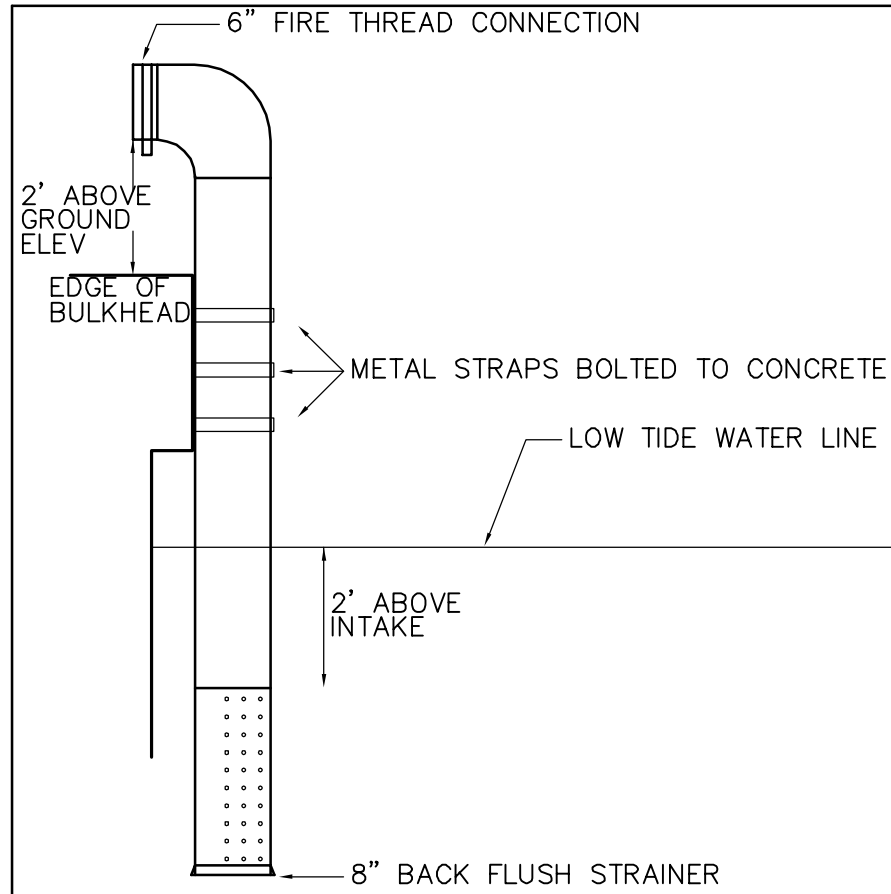
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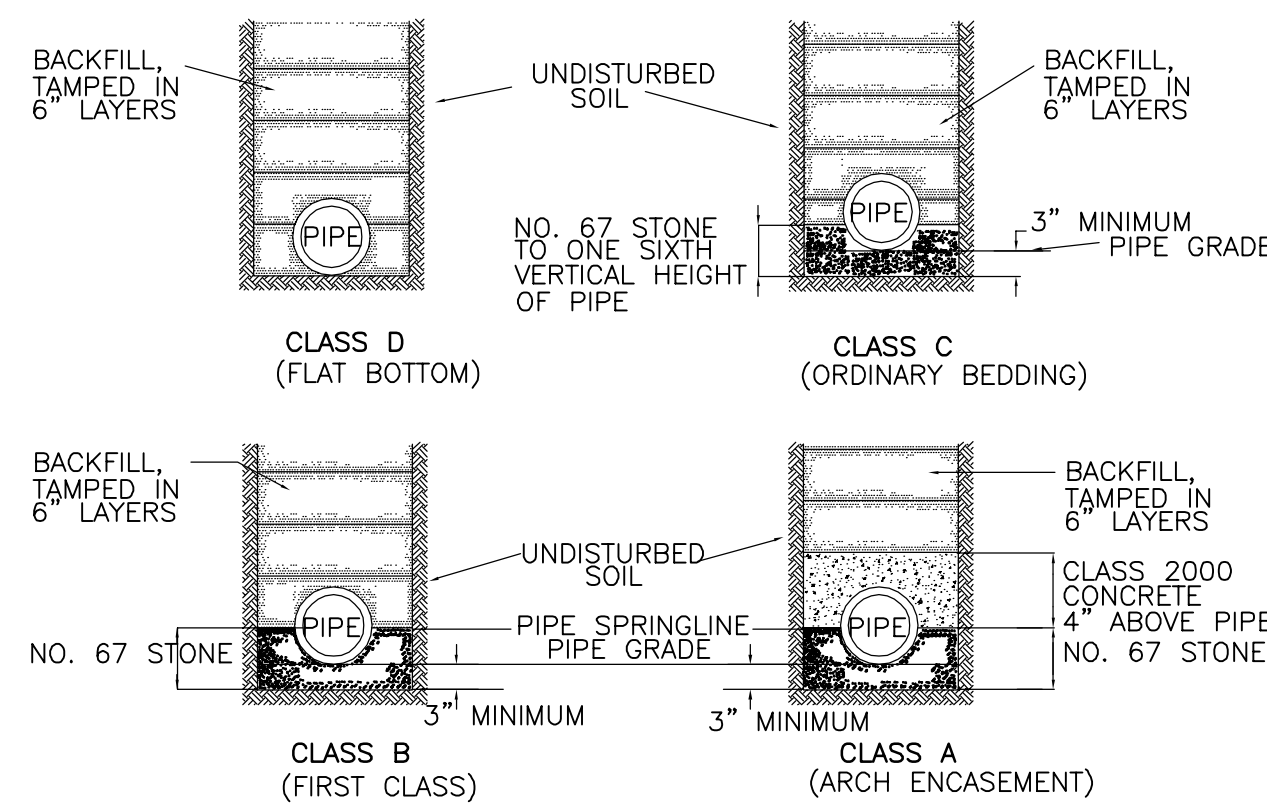
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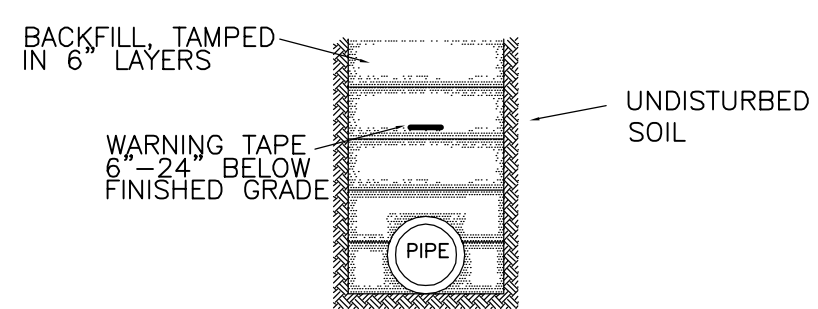
NOTES:
FIRE HYDRANT - SHALL BE DIP
ANY CONCRETE - SHALL BE 3000 PSI MINIMUM AND TRANSIT MIXED FOR PVC PIPE BEDDING
FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSITIONS AS DETECTED BY THE "NAKED" EYE.

STRAINER/DRY FIRE HYDRANT INSTALLATION



NOTES:
-SEE DETAILS ABOVE FOR TRENCH BOTTOM DIMENSIONS FOR VARIOUS TYPES OF PIPE
-IF BEDDING IS REQUIRED BY PIPE MANUFACTURERS' INSTALLATION GUIDELINES, BEDDING FOR PIPES TO BE PROVIDED IN ACCORDANCE WITH PIPE MANUFACTURERS' REQUIREMENTS.

STANDARD BEDDING DETAILS FOR V.C. AND R.C. PIPES



NOTES:
1. ALL UNDERGROUND UTILITY LINES OUTSIDE THE BUILDING FOOTPRINT, EXCEPT LAWN IRRIGATION LINES, SHALL BE REQUIRED TO HAVE A WARNING TAPE INSTALLED IN THE BACKFILL BETWEEN 6 INCHES AND 24 INCHES BELOW FINISHED GRADE, DIRECTLY OVER THE PIPING.
2. METALLIC LINES SHALL BE IDENTIFIED WITH PRINTED DURABLE PLASTIC MINIMUM 3" WIDE, WITH LETTERING TO IDENTIFY BURIED LINE BELOW.
3. NON-METALLIC PIPES, OTHER THAN GAS LINES, SHALL BE IDENTIFIED BY DETECTABLE WARNING TAPES, MINIMUM 2" WIDE, WITH LETTERING TO IDENTIFY BURIED LINES BELOW.
4. NON-METALLIC GAS LINES REQUIRE A YELLOW INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR TO BE INSTALLED ADJACENT TO UNDERGROUND NON-METALLIC PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT THE END OF THE NON-METALLIC PIPING. THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.

UNDERGROUND LINE WARNING TAPE

ALL UNDERGROUND LINES OUTSIDE BUILDING FOOTPRINT (EXCEPT LAWN IRRIGATION LINES) SHALL BE REQUIRED TO HAVE A WARNING TAPE INSTALLED IN THE BACKFILL BETWEEN 6 INCHES AND 24 INCHES BELOW FINISHED GRADE, DIRECTLY OVER PIPING.
- METALLIC LINES SHALL BE IDENTIFIED WITH PRINTED DURABLE PLASTIC WARNING TAPES, MINIMUM 3" WIDE, WITH LETTERING TO IDENTIFY BURIED LINE BELOW.
- NON-METALLIC GAS LINES SHALL FOLLOW 2009 NC GAS CODE 404.14.3 TRACER GUIDELINES. AN INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO UNDERGROUND NON-METALLIC PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT THE END OF THE NON-METALLIC PIPING. THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 18 AWG AND THE INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.

UNDERGROUND UTILITY WARNING TAPE NOTES

PUMPING AREA/CONTROLLER GENERAL NOTES

GENERAL INFORMATION: PUMPS SHALL BE OF THE SUBMERSIBLE TYPE. EACH PUMP SHALL BE MOUNTED ON A 02" RAIL SYSTEM. THE RAIL SYSTEM SHALL BE SELF ENGAGING RESULTING IN A LEAKPROOF COUPLING. THE RAIL SYSTEM SHALL INCLUDE THE BASE ELBOW, DISCHARGE FLANGE ASSEMBLY, 01" 304SS GUIDE RAILS, 316SS UPPER GUIDE BRACKET, 316SS LIFTING RAIL AND CABLE, AND A SIX-HOOK 316SS CABLE HOLDER. THE RAIL SYSTEM SHALL BE MOUNTED AND PRE-PIPED BY THE PUMP SUPPLIER.

PUMP CONSTRUCTION: THE PUMP VOLUTE, MOTOR AND SEAL HOUSING SHALL BE CONSTRUCTED OF CAST IRON, ASTM A-48. ALL EXTERNAL FASTENERS SHALL BE SERIES 300 STAINLESS STEEL. THE PUMP SHAFT SHALL BE CONSTRUCTED OF SERIES 416 STAINLESS STEEL.

IMPELLER: THE IMPELLER SHALL BE OF MULTI-VANE, SEMI-OPEN BRONZE CONSTRUCTION. THE IMPELLER SHALL INCLUDE PUMP-OUT VANES ON THE BACK OF THE IMPELLER AND SHALL BE STATICALLY AND HYDRAULICALLY BALANCED.

CUTTERS: A TWO-STAGE CUTTER ASSEMBLY SHALL BE MOUNTED ON THE SUCTION SIDE OF THE PUMP WITH DIRECT DISCHARGE INTO THE PUMP IMPELLER. THE GRINDER SHALL BE CAPABLE OF GRINDING ALL MATERIALS FOUND IN NORMAL, DOMESTIC SEWAGE, INCLUDING PLASTICS, RUBBER, SANITARY NAPKINS, DISPOSABLE DIAPERS AND WOOD PARTICLES, INTO A FINE SLURRY. BOTH THE STATIONARY AND ROTATING CUTTERS SHALL BE CONSTRUCTED OF HARDENED 440C STAINLESS STEEL.

MOTOR: THE MOTOR SHALL BE MOUNTED IN A SEALED, SUBMERSIBLE TYPE HOUSING. THE STATOR SHALL BE SECURELY HELD IN PLACE WITH A REMOVABLE END RING AND THREADED FASTENERS FOR EASE OF REMOVAL WITHOUT THE USE OF HEAT OR A PRESS. THE MOTOR WILL HAVE TWO HEAVY-DUTY BALL BEARINGS; ONE UPPER (RADIAL) AND ONE LOWER (THRUST), TO SUPPORT THE SHAFT. THE MOTOR SHALL BE EQUIPPED WITH A WINDING THERMOSTAT THAT AUTOMATICALLY SHUTS THE MOTOR OFF IN CASE OF MOTOR OVERHEATING.

SEAL CHAMBER: THE PUMP SHALL HAVE TWO MECHANICAL SEALS, MOUNTED IN TANDEM WITH AN OIL CHAMBER BETWEEN THE SEALS. THE PUMP SHALL BE EQUIPPED WITH A SEAL LEAK DETECTION PROBE AND WARNING SYSTEM BY USING A SEAL FAILURE SENSOR INSTALLED IN THE SEAL CHAMBER.

WET WELL: THE PUMP SUPPLIER SHALL PROVIDE THE FIBERGLASS WET WELL. THIS GLASS FIBER-REINFORCED POLYESTER BASIN SHALL BE CONSTRUCTED OF A COMMERCIAL GRADE OF GLASS FIBER AND SHALL BE PROVIDED WITH AN ANTI-FLOTATION RING WITH A MINIMUM DIAMETER OF THREE INCHES LARGER THAN THE BASIN DIAMETER. THE RAIL SYSTEM, INTERNAL PIPING AND DISCHARGE CONNECTIONS SHALL BE PRE-INSTALLED BY THE PUMP SUPPLIER. WELL TO BE REINFORCED POLYESTER RESIN.

HATCH COVER: THE HATCH COVER SHALL BE 2/3 HINGED TO ALLOW FOR MAXIMUM ACCESS TO THE WET WELL. THE HATCH COVER SHALL BE ALUMINUM WITH STAINLESS STEEL FASTENERS, RATED FOR 150 PSF OR GREATER. THE HATCH COVER SHALL INCLUDE A SINGLE OR DUAL DOOR OF DIMENSIONS SPECIFIED BY THE PUMP MANUFACTURER FOR PROPER PUMP CLEARANCE. THE COVER SHALL BE MANUFACTURED BY US FABRICATION, OR EQUAL. THE COVER SHALL BE WATERTIGHT.

VALVE BOX: THE VALVE BOX IS FIBERGLASS WITH ALUMINUM LOCKABLE COVER. STANDARD SIZE VALVE BOX IS 3' X 2 1/2' X 2'. VALVES: VALVES SHALL BE SEWAGE SWING CHECK WITH CLEAN-OUT PORTS AND BRASS GATE VALVES.

FLOATS: FLOATS SHALL BE ANCHOR SCIENTIFIC ROTO-FLOATS OR EQUAL.

CONTROLS: THE CONTROL PANEL SHALL BE UL508 LISTED. A NEMA 3R OR 4X ENCLOSURE SHALL BE PROVIDED IN EITHER FIBERGLASS OR STAINLESS STEEL. THE PANEL SHALL INCLUDE AN ALTERNATING CONTROL SCHEME (DUPLEX AND ABOVE), MAIN CIRCUIT BREAKER, GENERATOR RECEPTACLE, HIGH LEVEL ALARM LIGHT AND HORN, ELAPSED TIME METERS, VOLTAGE OR PHASE MONITOR, SEAL FAILURE AND OVERLOAD SENSORS. THE LIGHTNING ARRESTOR SHALL BE SHIPPED LOOSE FOR FIELD INSTALLATION.

SUPPLIER: PUMP SUPPLIER SHALL PROVIDE SUBMERSIBLE PUMPS, SLIDE RAIL ASSEMBLIES, CONTROL PANEL, FLOAT SWITCHES, ALUMINUM HATCHES AND ACCESSORIES TO INSURE PROPER OPERATIONS AND WARRANTY. THE COMPLETE PACKAGE PUMPING STATION SHALL HAVE PUMP BASES, RAIL ASSEMBLIES, AND DISCHARGE PIPING ASSEMBLED BY PUMP MANUFACTURER, READY FOR FIELD INSTALLATION.

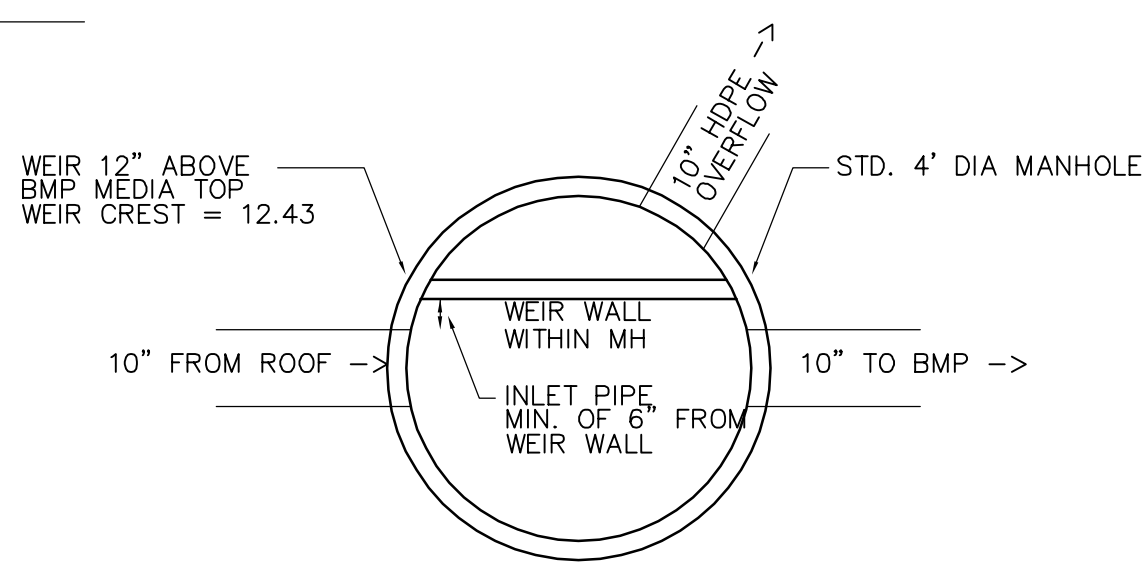
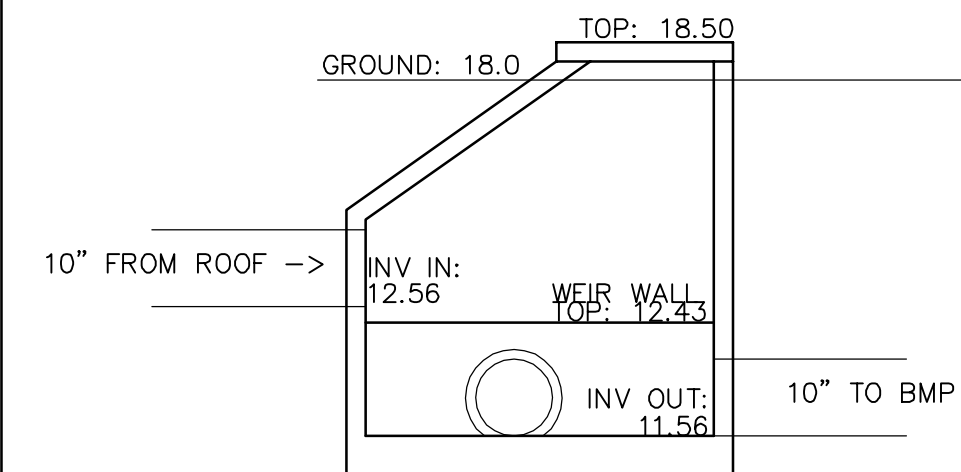
ELECTRICAL NOTES: NO ELECTRICAL SPLICES MAY BE MADE WITHIN THE PUMP STATION WETWELL OR ELECTRIC CONDUIT.

ALARM NOTES: ELECTRICAL POWER FOR THE ALARM SHALL BE SUPPLIED THROUGH A BRANCH CIRCUIT SEPARATE FROM THAT SUPPLYING THE PUMP MOTOR IN ACCORDANCE WITH THE NC PLUMBING CODE, SECTION 712.3.4.1.

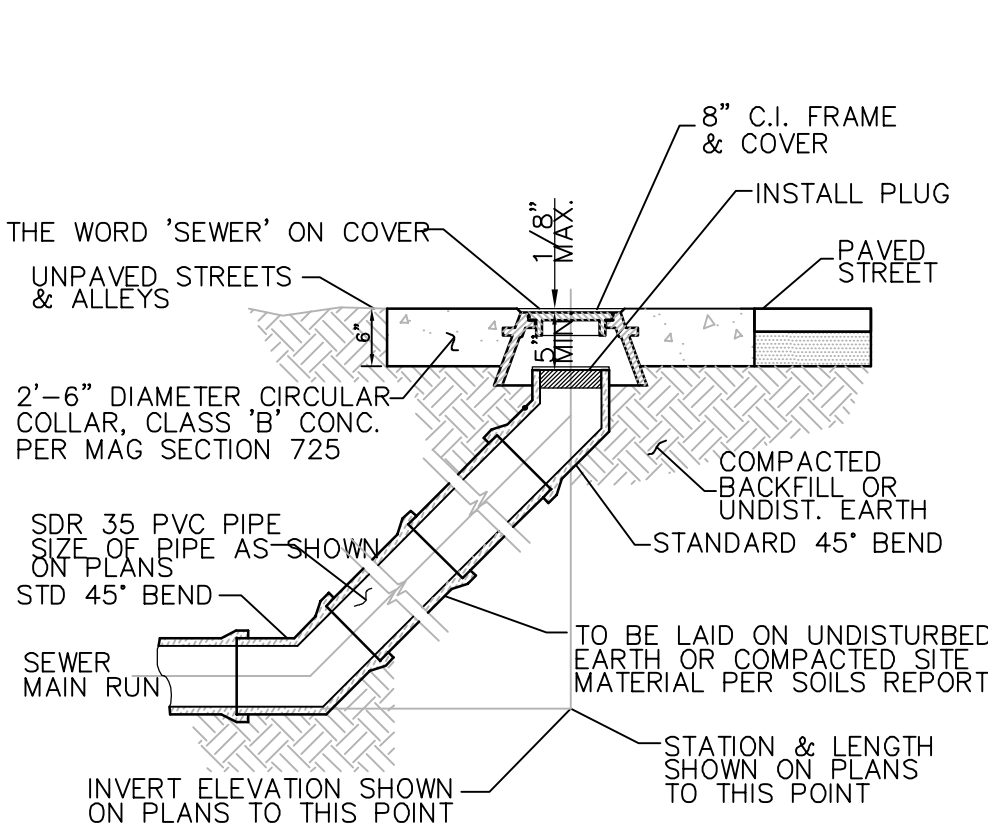
GENERAL NOTES: PUMP LAYOUT SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. FINAL INSTALLATION MAY VARY AS PER PUMP MANUFACTURER'S INSTRUCTIONS.

ALL PANELS SHALL CONFORM TO REQUIRED STANDARDS

- 1) GENERATOR RECEPTACLE WITH INTERLOCK FOR EMERGENCY POWER CONNECTION.
- 2) SURGE AND LIGHTNING PROTECTION SHALL BE PROVIDED BY CONTRACTOR AND MOUNTED EXTERNAL TO THE CONTROL PANEL.
- 3) PHASE OR VOLTAGE MONITOR SHALL BE PROVIDED IN CONTROL PANEL.
- 4) ALL PANELS, WET WELL, VALVE BOX, AND ACCESS DOORS SHALL HAVE LOCKABLE MECHANISMS. CONTRACTOR TO PROVIDE KEYED LOCKS.
- 5) POST UNOBSTRUCTED SIGN MADE OF DURABLE WEATHER RESISTANT MATERIAL WITH THE FOLLOWING:
PUBLIC NOTICE: IN CASE OF EMERGENCY CONTACT:
6) THE CONTROL PANEL SHALL BE SUITABLY INSTALLED TO PREVENT SETTLING OR TIPPING.
- 7) ELECTRICAL CONTRACTOR TO PROVIDE SERVICE DISCONNECT WITH LIGHTNING ARRESTOR MOUNTED PER LOCAL CODES.
- 8) FLOAT SWITCHES SHALL BE UL LISTED.

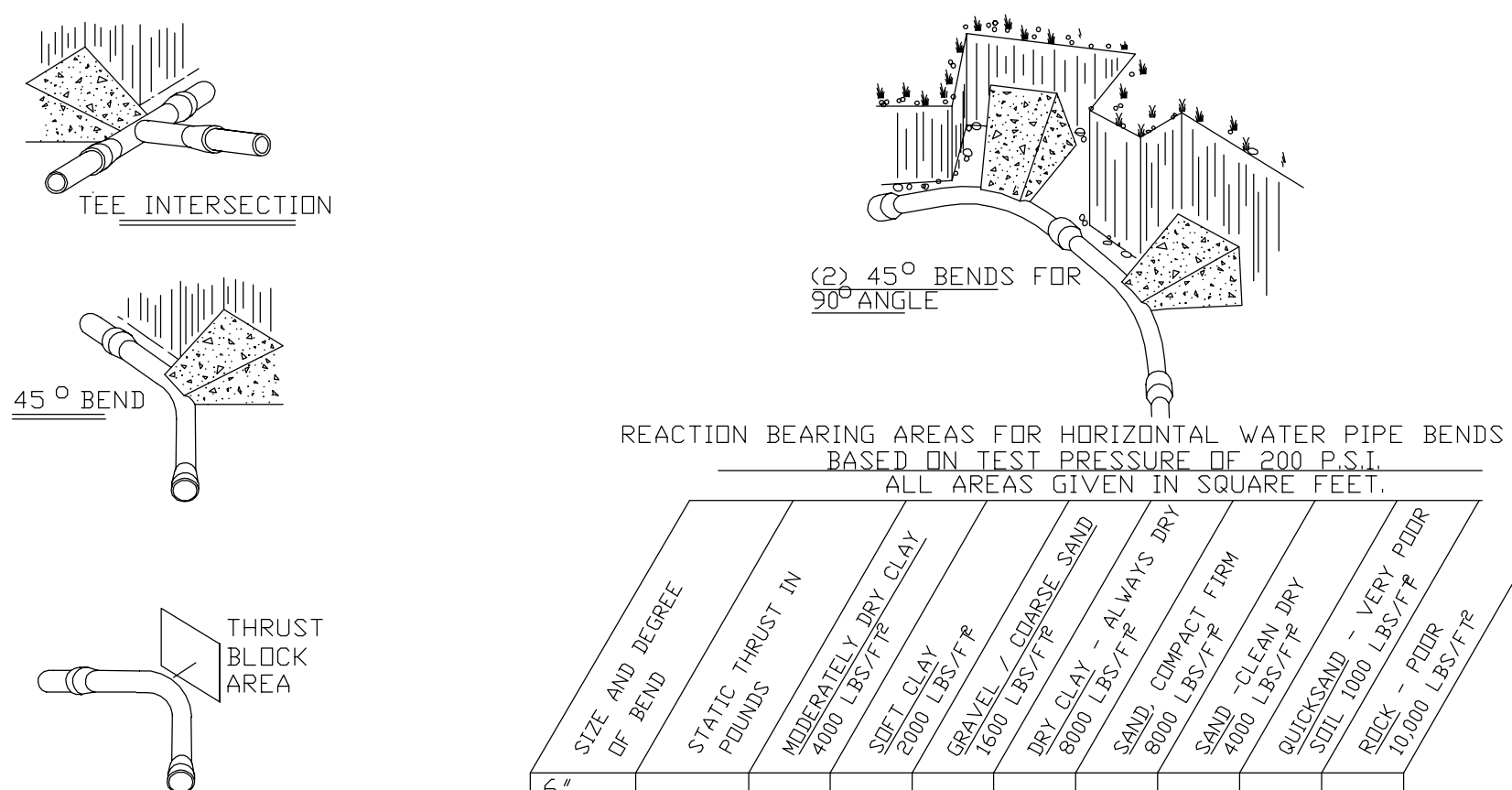


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NOTES:
1. THE FULL LENGTH OF THE SERVICE DITCH BE COMPACTED IN 6" LAYERS WITH MECHANICAL TAMP.
2. WHEN SEWER CLEAN OUT IS IN PAVEMENT IT MUST BE INSTALLED INSIDE A VALVE BOX WITH COVER.

SEWER CLEANOUT INSTALLATION DETAILS



NOTES:
1. CONCRETE SHALL BE 3000 PSI
2. CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINTS
3. TRENCHES SHALL CONFORM TO STANDARD DETAIL S-4 & S-5
4. SET STANDARD THRUST BLOCK TABLES TO THRU W-11 FOR AREA OF CONCRETE REQUIRED
5. ALL BENDS AND INTERSECTIONS SHALL HAVE CONCRETE THRUST BLOCKING

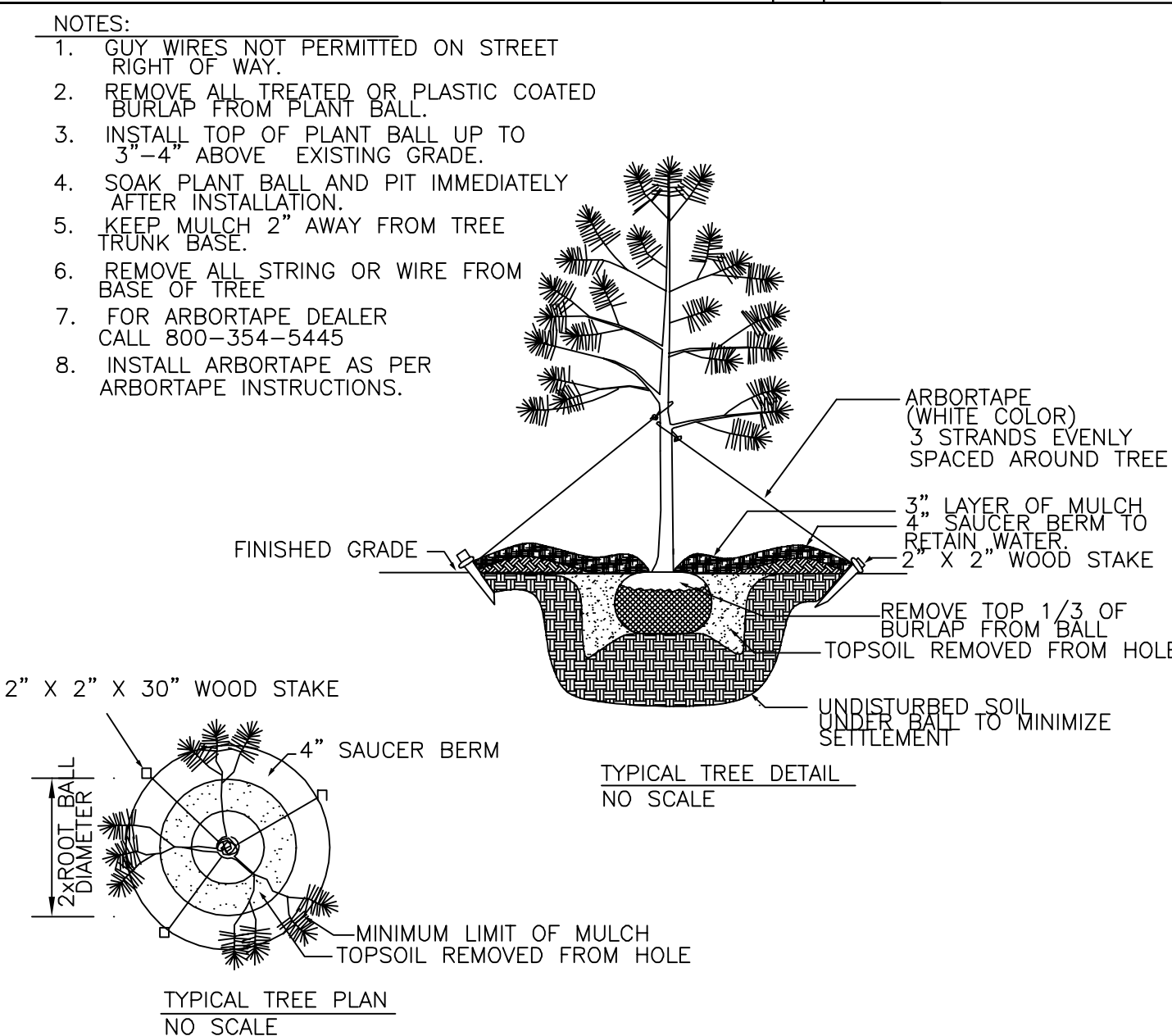
THRUST BLOCKING

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS BASED ON TEST PRESSURE OF 200 P.S.I. ALL AREAS GIVEN IN SQUARE FEET.

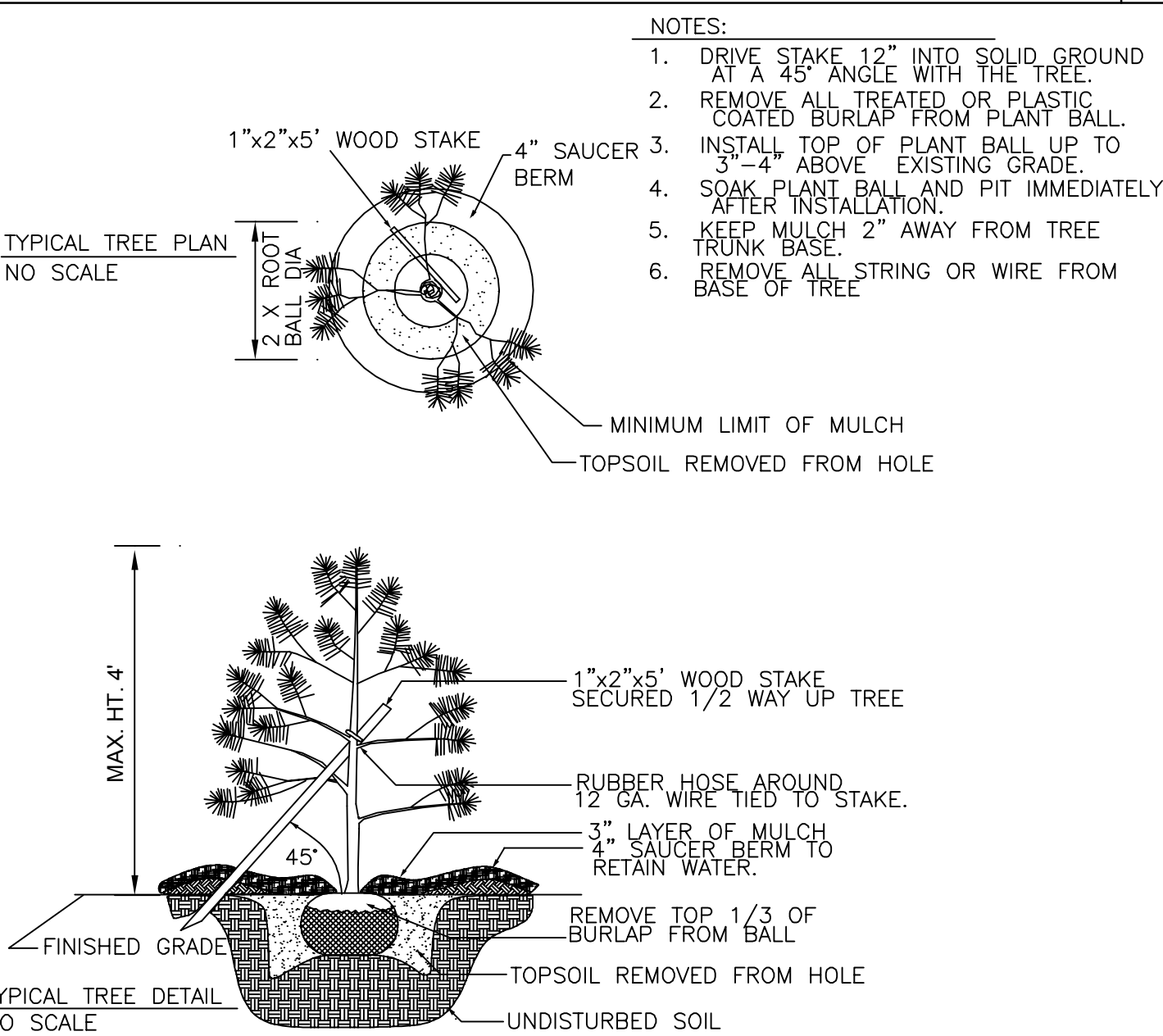
SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	SOFT CLAY 4000 LBS/FT ²	MODERATELY DRY CLAY 5000 LBS/FT ²	GRAVEL / COARSE SAND 1200 LBS/FT ²	DRY CLAY 8000 LBS/FT ²	SAND 1500 LBS/FT ²	COMPACT FIRM SAND 1500 LBS/FT ²	QUICKSAND - VERA POOR 1000 LBS/FT ²	ROCK - POOR 1000 LBS/FT ²
6"									
11 1/4°	1,108	1	1	1	1	1	2	1	
22 1/2°	2,207	1	2	2	1	1	3	1	
45°	4,328	2	3	3	1	1	2	5	1
90°	7,996	2	4	5	1	1	2	8	1
PLUG	5,655	2	3	4	1	1	2	6	1
8"									
11 1/4°	1,970	1	1	2	1	1	1	2	1
22 1/2°	3,922	1	2	3	1	1	1	4	1
45°	7,694	2	4	5	1	1	2	8	1
90°	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR. USE 6" - 90° BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

THRUST BLOCKING



PLANTING DETAIL-EVERGREEN TREE W/ARBORTAPE GUYS



PLANTING DETAIL-SMALL SHRUB WITH ANGLE STAKE

THRUST BLOCKING

BID DOCUMENTS

DESIGNED BY: FACILITIES DESIGN ARCHITECTS & ENGINEERS ARCHITECTS MANAGEMENT DIVISION NCDOT

CONSULTANT: B&F CONSULTING 2808 TORENOPI LANE RALEIGH, NORTH CAROLINA 27606 PHONE: 919-889-9102 NC LICENSE C2148

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DRAWN BY: AF

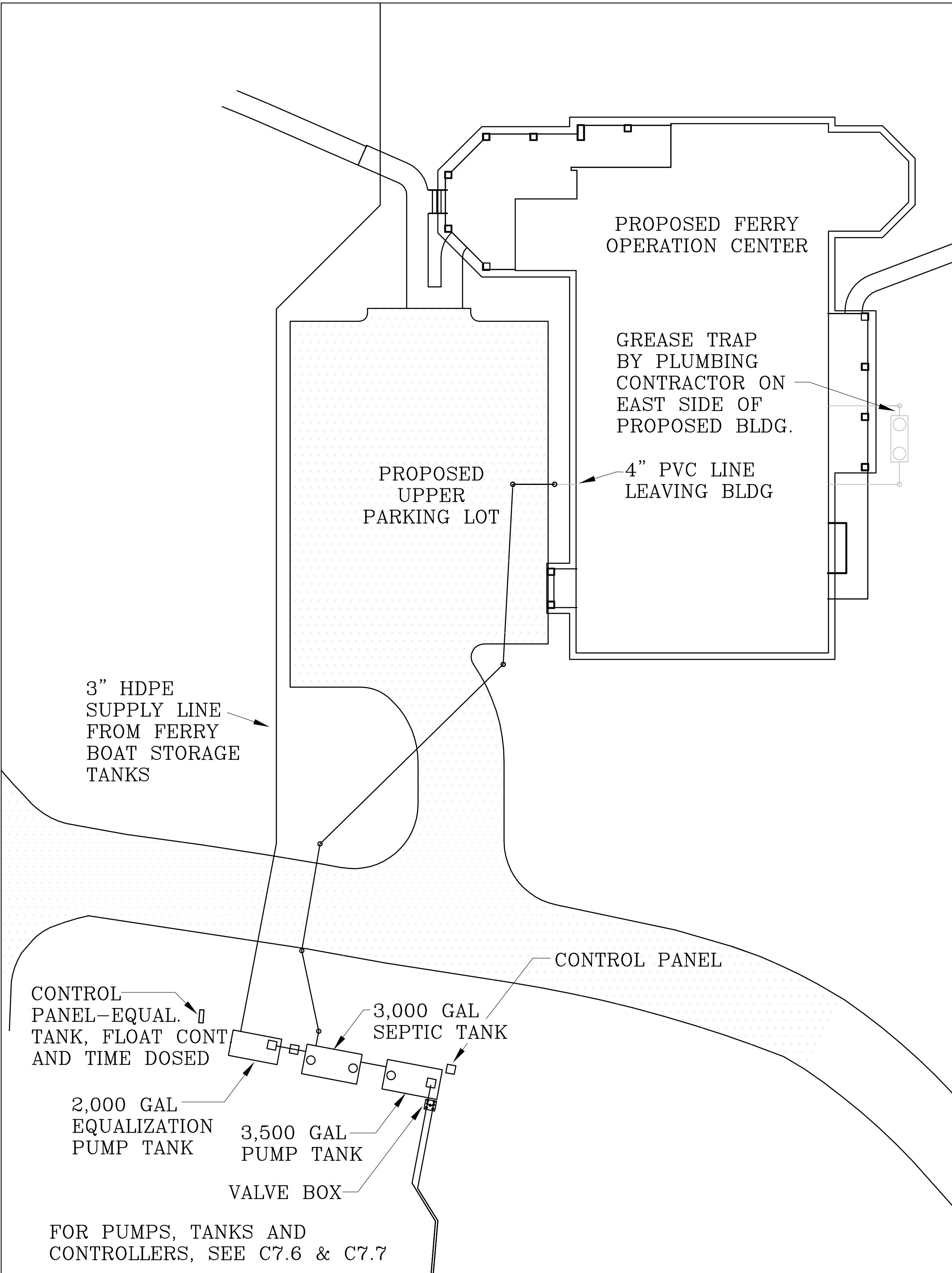
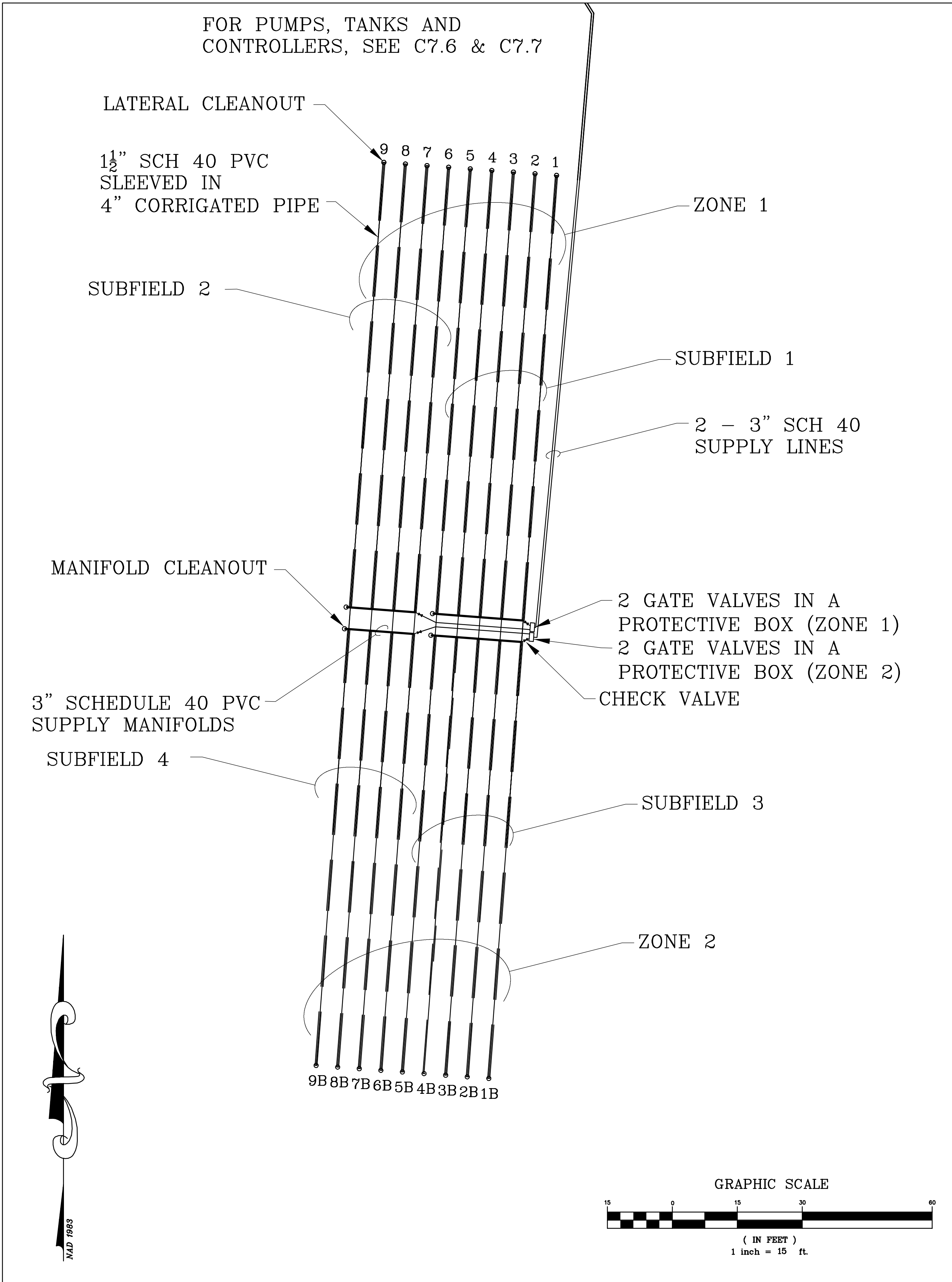
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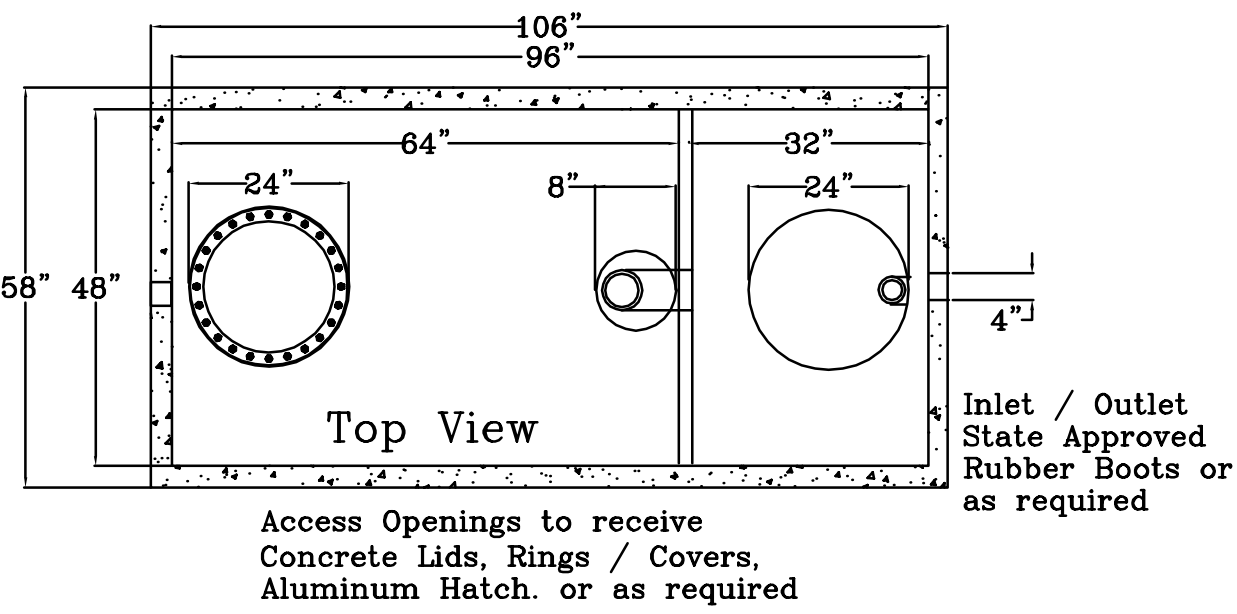
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4. ALL ROADWAY AND SITE WORK IS OWNED AND MAINTAINED BY NCDOT. ALL CONSTRUCTION FOR PUBLIC ACCESSES ARE TO ADHERE TO NCDOT STANDARDS AND SPECIFICATIONS

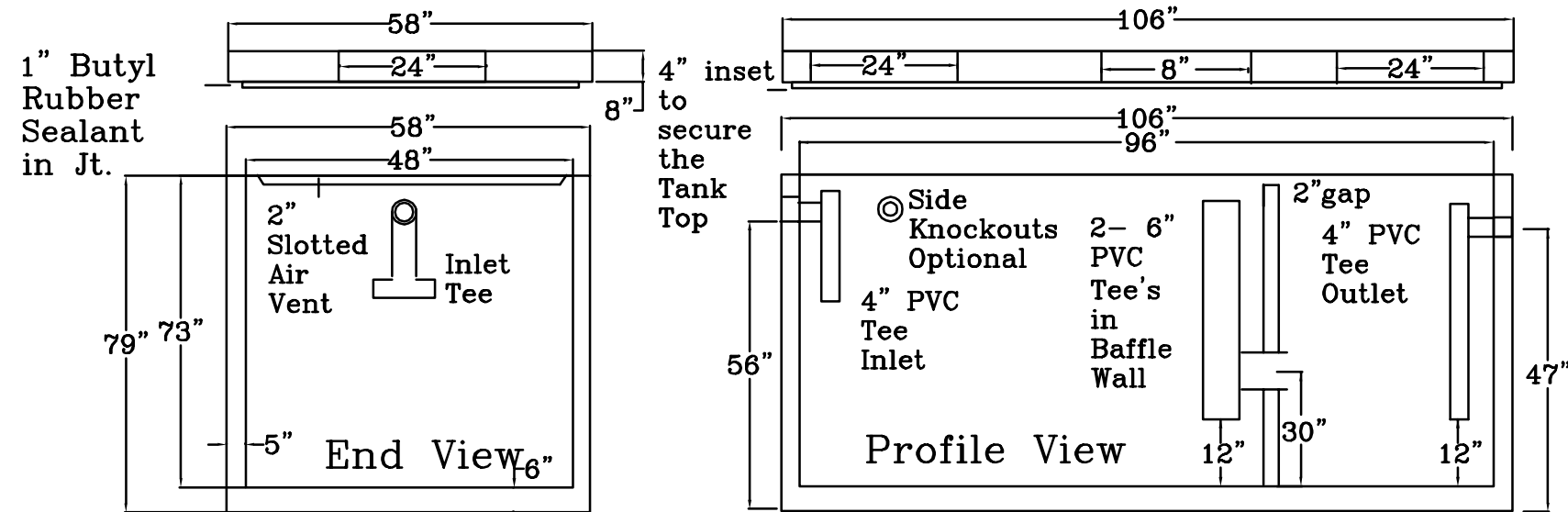


BID DOCUMENTS	
DESIGNED BY: FACILITIES DESIGN ARCHITECTS & ENGINEERS FACILITIES MANAGEMENT DIVISION NCDOT 1 SOUTH WILKINSON STREET RALEIGH, NORTH CAROLINA 27601 PHONE: 919/707-6540 FAX 919/715-0399	
CONSULTANT: B&F CONSULTING 2805 TOREMPORY LANE RALEIGH, NORTH CAROLINA 27606 PHONE: 919/889-9102 FAX: 919/889-9103 NC LICENSE C2148	
DRAWING TITLE / DESCRIPTION: SEPTIC SYSTEM SYSTEM DETAIL	
PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT	
STATE CONSTRUCTION ID.# 11-09079-01A	
ASSET NUMBER: 48	
REVISIONS NO.	DATE
DATE ISSUED: 8-14-15	
DRAWN BY: AF	
CHECKED BY: RJB	
SHEET NO.	
C7.5	



Specifications

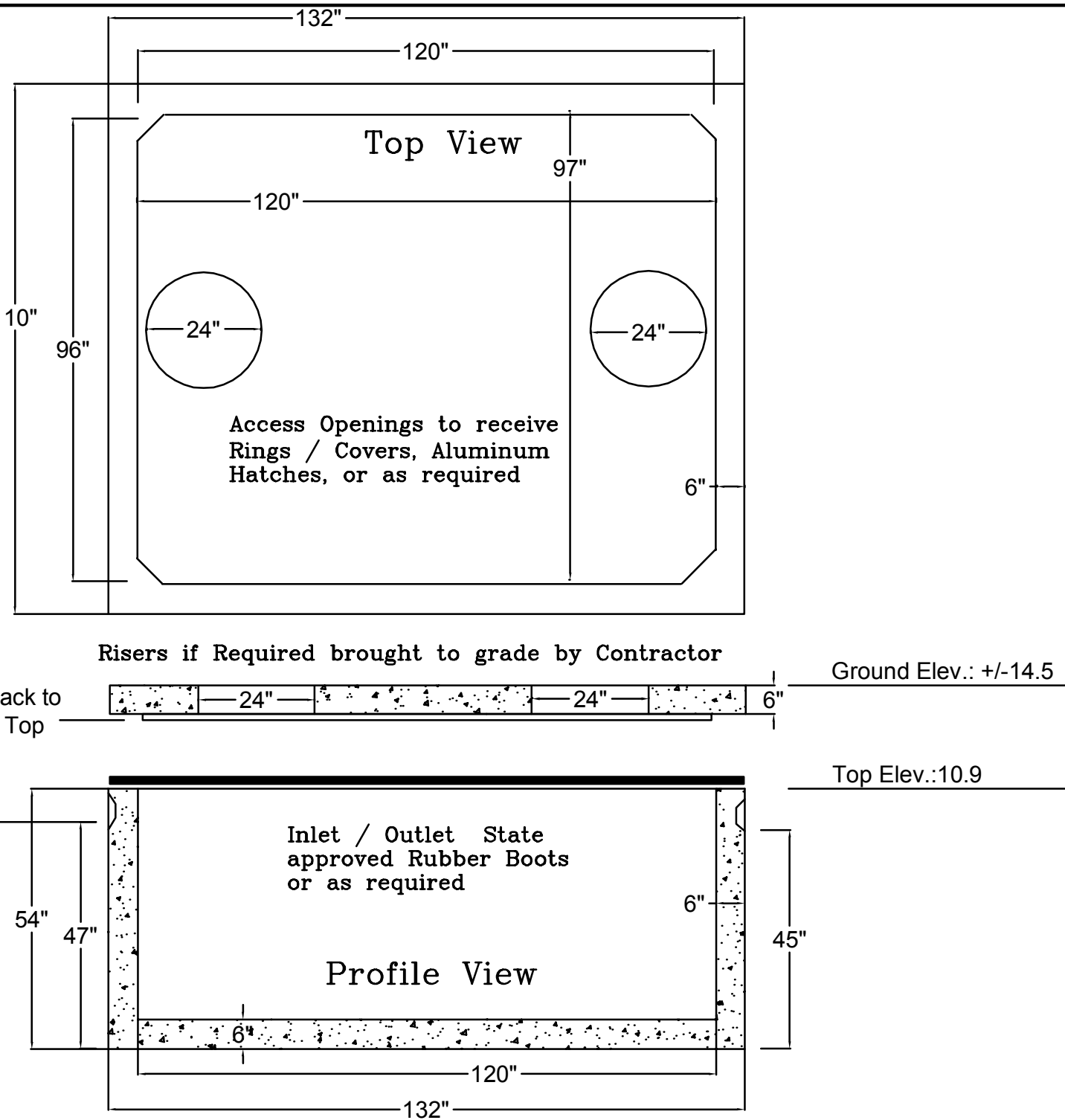
Grease Trap Tank: 1000 Gallon
Liquid Capacity: 1000 Gallons
Non Traffic Rated
Reinforcement Schedule #3 Grade 60 Rebar
4500 PSI Concrete w/ State Approved Structural Fiber
2.75 Yds. Est. Weight 11,000 lbs.
Blackwelder Tank Service STB-345
or Engineer approved State equal
Alternates: Northeastern Ready Mix
Stalling Septic Tank Company
Coastal Ready Mix Concrete Co.



Grease Trap Notes:

Grease Trap is to be provided and installed by plumbing contractor according to approved plumbing plan sheets. This plan is for approval of the overall septic system.

1000 GALLON GREASE TRAP
NOT TO SCALE



Specifications

Single Phase Simplex Control Panel
SJE Rhombus Installer Friendly Series -
IFS In-Site control panel
or Engineer approved State equivalent
Alternates: American Control Panel
CSI Control Panel

Pump (1)
Meyers Model ME50
or Engineer approved State Equivalent
Alternates: Zoeller Brand
Liberty Brand

Tank: 2000 Gallon Pump Tank
Liquid Capacity: 2400 Gallons - 50 gals/inch
Non Traffic Rated
Reinforcement Schedule #3 Grade 60 Rebar
4500 PSI Concrete w/ State Approved Structural Fiber
Est. Weight 28,000 lbs.
MC Precast Concrete PT-539 (approval 9/29/2006)
or Engineer approved State equal
Alternates: Page Septic Tank
Futrell Precast
Stalling Septic Tank Company
Coastal Ready Mix Concrete Co.

NOTES:

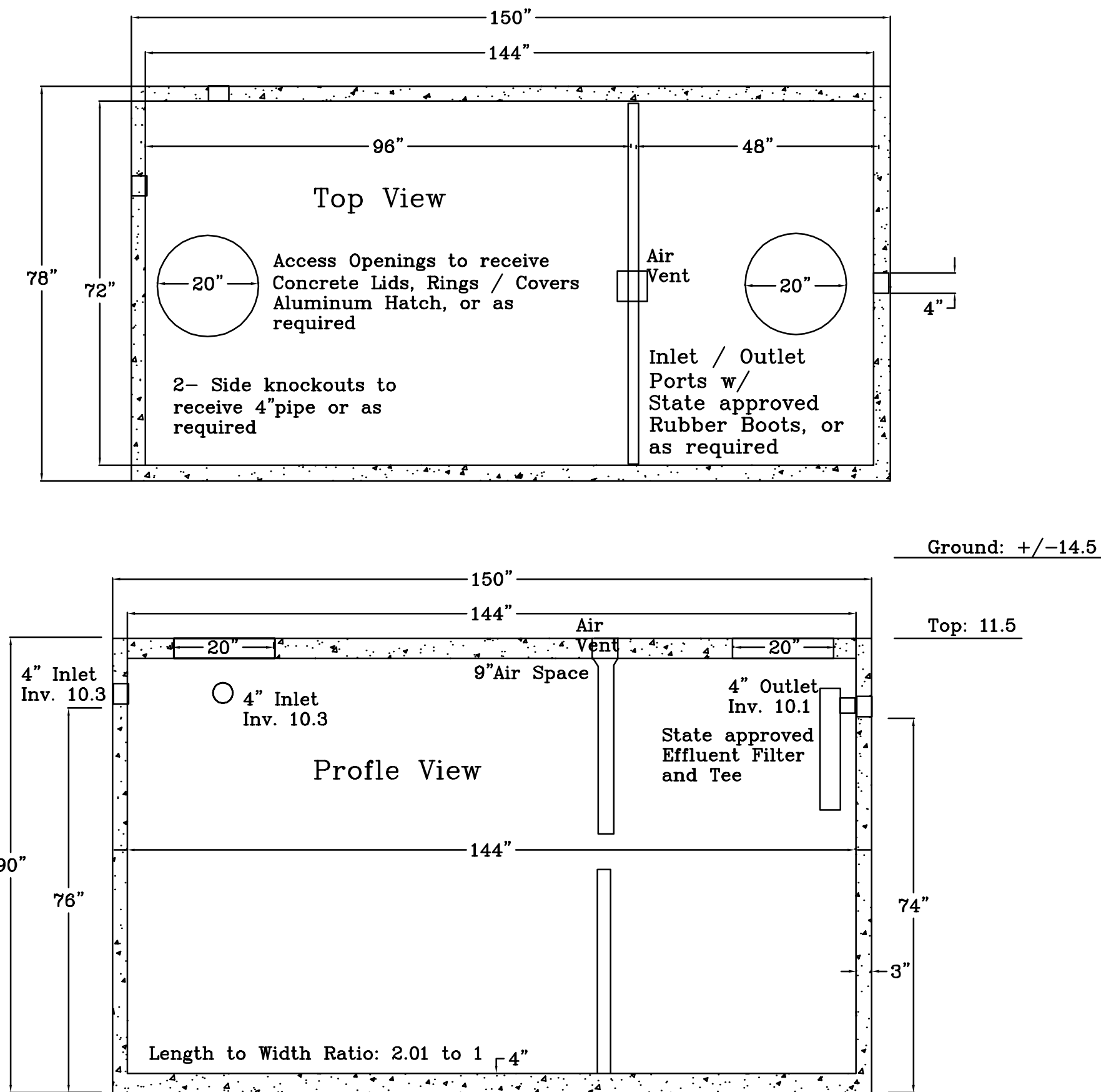
1. LAND DISTURBING AND EROSION CONTROL DETAILS SHALL ADHERE TO ALL APPLICABLE STATE CONSTRUCTION STANDARDS.
2. WATERLINE UTILITIES ARE MANAGED BY THE CRAVEN COUNTY, NORTH CAROLINA AND ARE TO ADHERE TO THEIR STANDARDS AND APPROVALS.
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4. ALL ROADWAY AND SITE WORK IS OWNED AND MAINTAINED BY NCDOT. ALL CONSTRUCTION FOR PUBLIC ACCESSES ARE TO ADHERE TO NCDOT STANDARDS AND SPECIFICATIONS

NOTES

1. THE TANKS WILL NOT BE INSTALLED IN THE WATER TABLE.
2. ALL TANKS SHALL BE LEAK TESTED SUCH THAT EXFILTRATION OCCURS AT A RATE WHICH DOES NOT EXCEED TEN GALLONS PER TWENTY-FOUR HOURS PER 1,000 GALLONS OF TANK CAPACITY.
3. ALL TANKS SHALL REST ON A BED OF #57 WASHED GRAVEL. THE MINIMUM THICKNESS OF THE GRAVEL BED IS 6 INCHES.
4. ALL TANKS MUST BE APPROVED FOR USE BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL HEALTH (DEH).
5. THE SOIL BEARING CAPACITY OF THE SOIL BENEATH THE PUMP TANK SHALL BE CHECKED PRIOR TO TANK INSTALLATION AND SHALL HAVE A A SOIL BEARING CAPACITY OF AT LEAST 3000 PSF.
6. PIPE PENETRATIONS IN THE PUMP TANK AND SEPTIC TANK ARE TO BE SEALED WITH PRESS-BOOT TYPE SEALS.
7. ALL HARDWARE INSTALLED INSIDE OF TANKS SHALL BE OF STAINLESS STEEL.

OPERATION AND MAINTENANCE

- ONCE PER MONTH
1. RECORD CYCLE COUNTERS AND RUN TIMER
 2. CHECK SLUDGE LEVELS IN BOTH PUMP TANK AND SEPTIC TANK. SLUDGE TO BE REMOVED AS NECESSARY.
 3. CHECK MANHOLES. CLEAN AS NECESSARY.
 4. CHECK EFFLUENT FILTERS. CLEAN AS NECESSARY.
- BI-ANNUALLY
1. FLUSH GRAVITY SEWER.
 2. PUMP SLUDGE FROM SEPTIC TANK AND PUMP TANK.
 3. EXERCISE ALL VALVES.
 4. CLEAN MANIFOLD TAPS.
 5. CHECK MANIFOLD HEAD PRESSURE. RESET AS NECESSARY.
 6. CHECK PUMP TANK DRAW DOWN.
 7. FLUSH MANIFOLDS AND LATERALS

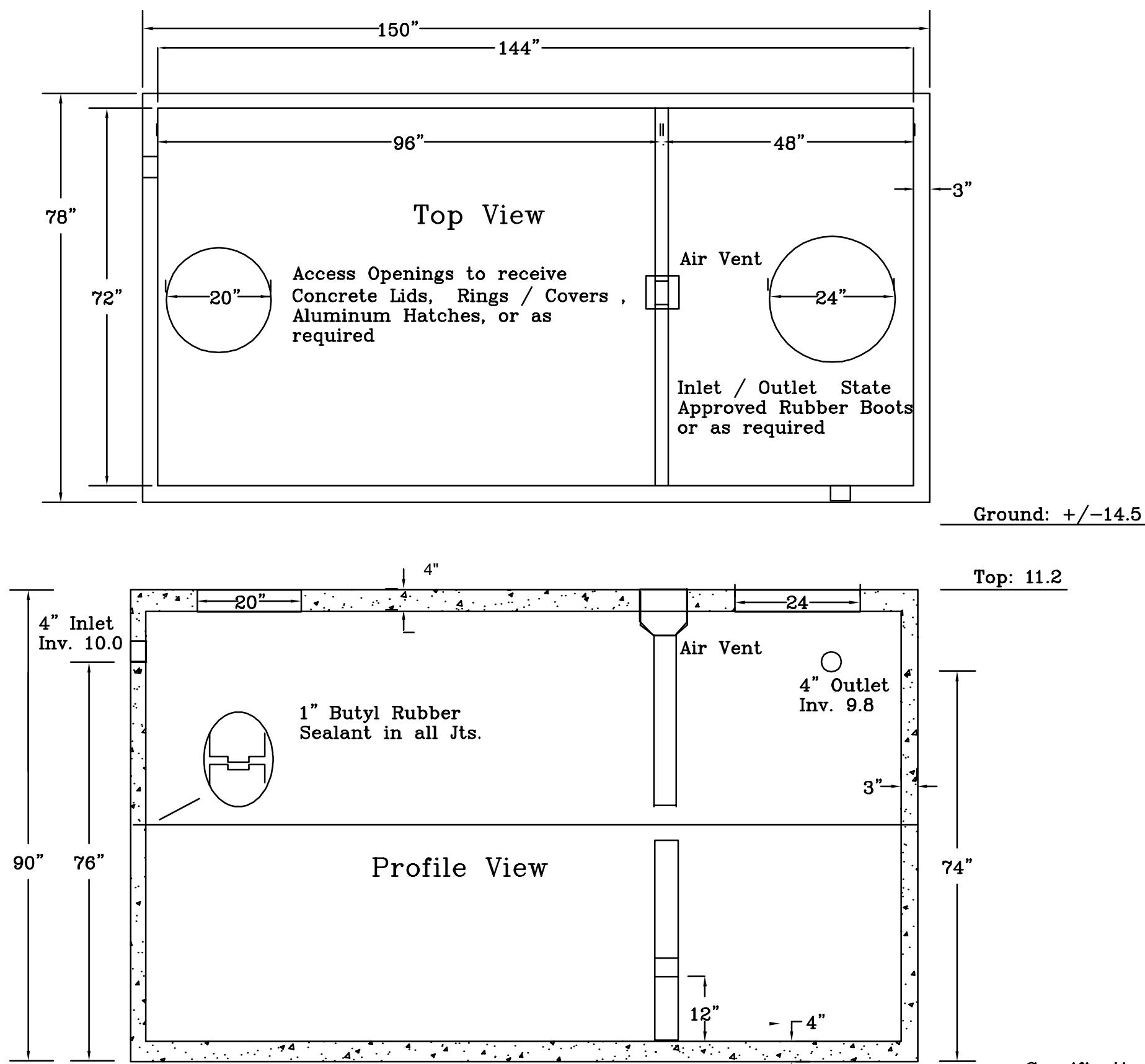


Specifications

Septic Tank Filter
Zoeller 170-0144 Residential Effluent Filter
or Engineer approved State equivalent
Alternates: Orenco Effluent Filter
GAG Sim/Tec Filters

Tank: 3000 Gallon Pump Tank
Liquid Capacity: 3141 Gallons
Non Traffic Rated
Reinforcement Schedule #3 Grade 60 Rebar
4500 PSI Concrete w/ State Approved Structural Fiber
4.7 Yds. Est. Weight 18,880 lbs.
Blackwelder Tank Service STB-349 Mid Seam (approval 8/14/1997)
or Engineer approved State equal
Alternates: Northeastern Ready Mix
Stalling Septic Tank Company
Coastal Ready Mix Concrete Co.

3000 GALLON SEPTIC TANK
NOT TO SCALE



Specifications

Single Phase Duplex Timed Dose Pump Control Panel
SJE Rhombus Model DTD control panel
or Engineer approved State equivalent
Alternates: American Duplex Control Panel
CSI Duplex Control Panel

Pumps (2)
Meyers Model ME75
or Engineer approved State Equivalent
Alternates: Zoeller Brand
Liberty Brand

Tank: 3500 Gallon Pump Tank
Liquid Capacity: 3528 Gallons - 44 gals/inch
Non Traffic Rated
Reinforcement Schedule #3 Grade 60 Rebar
4500 PSI Concrete w/ State Approved Structural Fiber
4.7 Yds. Est. Weight 18,880 lbs. 43.02 gals. per in.
Blackwelder Tank Service PT-307 (approval 1/6/2000)
or Engineer approved State equal
Alternates: Northeastern Ready Mix
Stalling Septic Tank Company
Coastal Ready Mix Concrete Co.

3500 GALLON PUMP TANK (FIELD DOSING)
NOT TO SCALE

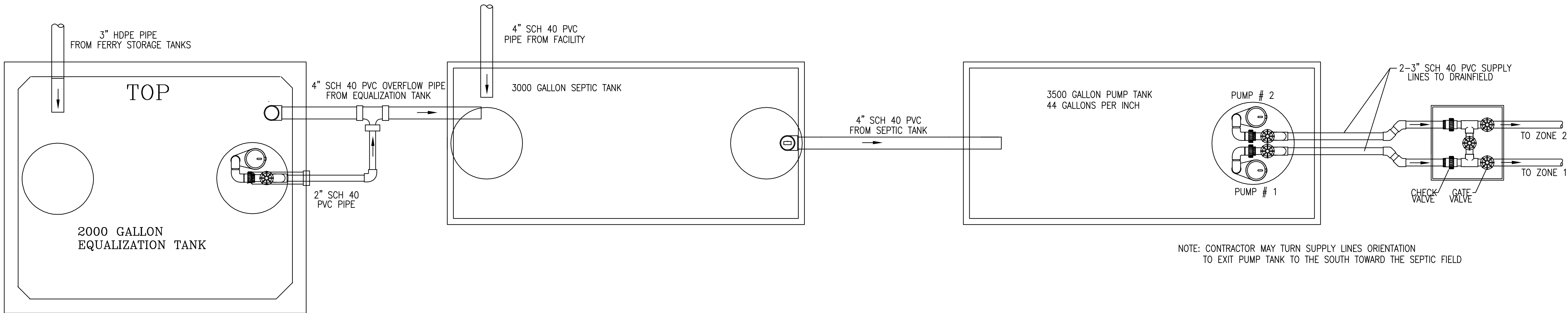
BID DOCUMENTS	
SEAL NOTARY PUBLIC STATE OF NORTH CAROLINA 02/7445 AMBER FARRELLY August 14, 2015	DESIGNED BY: FACILITIES DESIGN ARCHITECTS & ENGINEERS FACILITIES MANAGEMENT DIVISION NCDOT 1 SOUTH WILKINSON STREET RALEIGH, NORTH CAROLINA 27601 PHONE: 919/707-6540 FAX 919/715-0399
CONSULTANT: B&F CONSULTING 2805 TOBEMORY LANE RALEIGH, NORTH CAROLINA 27606 PHONE: 919/889-9102 NC LICENSE C2148	PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT 2300 FERRY ROAD, HAVELock, NC 28532 CRAVEN COUNTY, NORTH CAROLINA
DRAWING TITLE / DESCRIPTION: SEPTIC DETAILS TANK DETAILS	
STATE CONSTRUCTION ID # 11-09079-01A	
ASSET NUMBER: C7.7 SITE # 9106.7 48 - - -	
REVISIONS NO.	DATE
DATE ISSUED: 8-14-15 DRAWN BY: AF CHECKED BY: RJB SHEET NO.	
C7.6	

1. TANK DIMENSIONS VARY BY MANUFACTURER.
2. DRAWDOWN WILL VARY WITH TANK DIMENSIONS.
DRAWDOWN SHOWN BASED ON 1000 GALLONS
AT 90 GALLONS PER INCH
3. NO ELECTRICAL SPLICES SHALL BE MADE INSIDE
THE PUMP TANK.
4. ALL HARDWARE INSIDE THE PUMP TANK SHALL
BE OF STAINLESS STEEL.
5. FLOW SHALL BE TIMER DOSED TO SEPTIC TANK.
(SEE FLOW EQUALIZATION WORKSHEET)
6. DUPLEX PUMPS TO BE MYERS MODEL ME50
OR APPROVED EQUIVALENT SEE SHEET C7.6.
7. CONTROL PANEL TO BE INSTALLER FRIENDLY SERIES
IFS IN-SITE SINGLE PHASE SIMPLEX OR APPROVED
EQUIVALENT, SEE SHEET C7.6.

1. CONTROL PANELS TO BE ENCLOSED IN NEMA 4X ENCLOSURE PER STATE REQUIREMENTS.
2. CONTROL PANELS SHALL HAVE INTEGRAL MAIN DISCONNECT, SINGLE POINT CONNECTION, ALL STARTERS AND CONTROL WIRING INCLUDED.
3. SEE ELECTRICAL SITE PLANS FOR ELECTRICAL SERVICE TO CONTROL PANELS.

1. TANK DIMENSIONS VARY BY MANUFACTURER.
2. DRAWDOWN WILL VARY WITH TANK DIMENSIONS. DRAWDOWN SHOWN BASED ON 1860 GALLONS AT 44 GALLONS PER INCH
3. NO ELECTRICAL SPLICES SHALL BE MADE INSIDE THE PUMP TANK.
4. ALL HARDWARE INSIDE THE PUMP TANK SHALL BE OF STAINLESS STEEL.
5. DUPLEX PUMPS SHALL BE MYERS MODEL ME75 OR APPROVED EQUIVALENT. SEE SHEET C7.8.
6. CONTROL PANEL SHALL BE JUE RHOMBUS MODEL DTD OR APPROVED EQUIVALENT. SEE SHEET C7.6.
7. SEPTIC TANK EFFLUENT FILTER TO BE ZOELLER 170-0144 RESIDENTIAL EFFLUENT FILTER OR APPROVED EQUIVALENT. SEE SHEET C7.6.

1. LAND DISTURBING AND EROSION CONTROL DETAILS SHALL ADHERE TO ALL APPLICABLE STATE CONSTRUCTION STANDARDS.
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4. ALL ROADWAY WORK IS OWNED AND MAINTAINED BY NCDOT. ALL CONSTRUCTION FOR PUBLIC ACCESSSES ARE TO ADHERE TO NCDOT STANDARDS AND SPECIFICATIONS

[illegible][illegible]

Professional Engineer Seal for North Carolina, No. 027445, signed by Amber Farrelly, dated August 14, 2015.

CONSULTANT:
B&F
CONSULTING
2805 TOBERMORY LA
RALEIGH, NORTH CAR
PHONE: 919/389-8102
FAX 919/467-8827
NC LICENSE C-2149

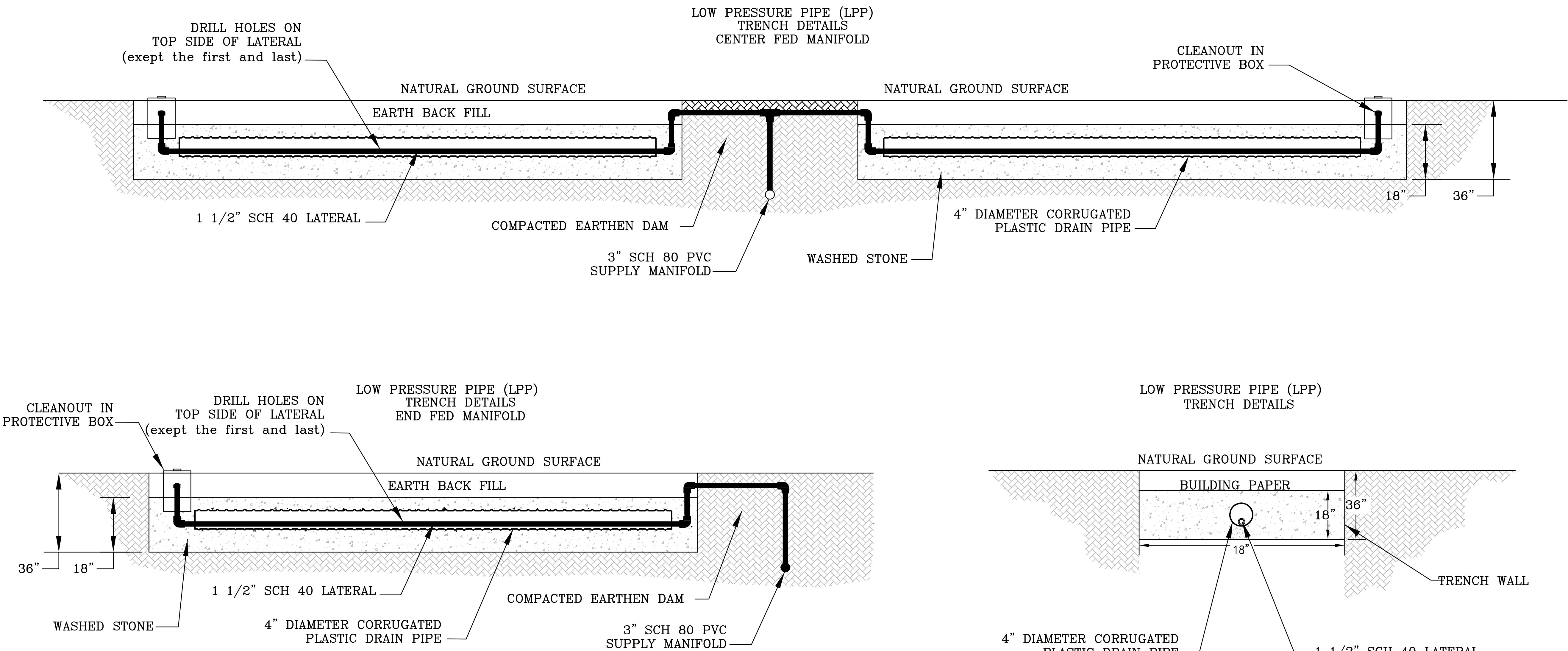
DRAWING TITLE / DESCRIPTION:
SEPTIC DETAILS
TANK DETAILS

SHEET NO.

C7.7

7

LOW PRESSURE PIPE (LPP)
TRENCH DETAILS



NOTES:
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BID DOCUMENTS

DESIGNED BY:
FACILITIES DESIGN
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1 SOUTH LAMINGTON STREET
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2805 FOREBROOK LANE
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PHONE: 919.889.8102
FAX: 919.889.8102
NC LICENSE C2148

DRAWING TITLE / DESCRIPTION:
SEPTIC DETAILS
TRENCH DETAILS

BID DOCUMENTS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

2300 FERRY ROAD, HAVELOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION
ID.# 11-09079-01A

ASSET NUMBER:
C7.8 SITE# BLDG#
48 . . .

REVISIONS
NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: AF
CHECKED BY: RJB
SHEET NO.

C7.8

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[illegible]

SEE 2/SI FOR ITEMS NOT NOTED

2x4 @ 16 OC MAX

$\frac{3}{4}$ " X 1'-5" ANCHOR
BOLT @ 32" OC, PLACE
INSIDE HORIZ REINF

TSP TIE TOP &
BOTT EA STUD

SLAB,
SEE PLAN

6"

OUTSIDE FACE OF SLAB EDGE
& WALL SHEATHING BEYOND

DBL BOTT PLATE

SLAB, SEE PLAN

FIN FLR
SEE PLAN

COLD JOINT,
GC OPTION

TURN SLAB DOWN
TO FTG AS SHOWN

6"

WALL FOOTING

2x6 BLKG AT FLASHING

2x6 @ 16 OC MAX

$\frac{3}{8}$ X 1'-5" ANCHOR BOLT @ 32" OC, PLACE INSIDE HORIZ REINF

DBL BOTT PLATE

SLAB, SEE PLAN

FIN FLR SEE PLAN

(2) #4 CONT

(3) #5 CONT W/ #4 TIES @ 32

SEE 11/56 FOR SILL ANCHORAGE

WALL SHEATHING, SEE PLAN

BRICK, SEE ARCH (FULL HT AT PORCH)

GROUT VOIDS SOLID BELOW FIN FLOOR, SEE ARCH FOR INSULATION & OTHER DETAILS

GRADE OR SLAB, SEE PLAN

TURN EXT SLAB DOWN TO FTG AS SHOWN

DOVETAIL SLOT @ 16" OC FOR MASONRY TIES

#4 BENT DOWEL @ 32" OC

8"

8"

8"

6"

2'-6"

1'-0"

8

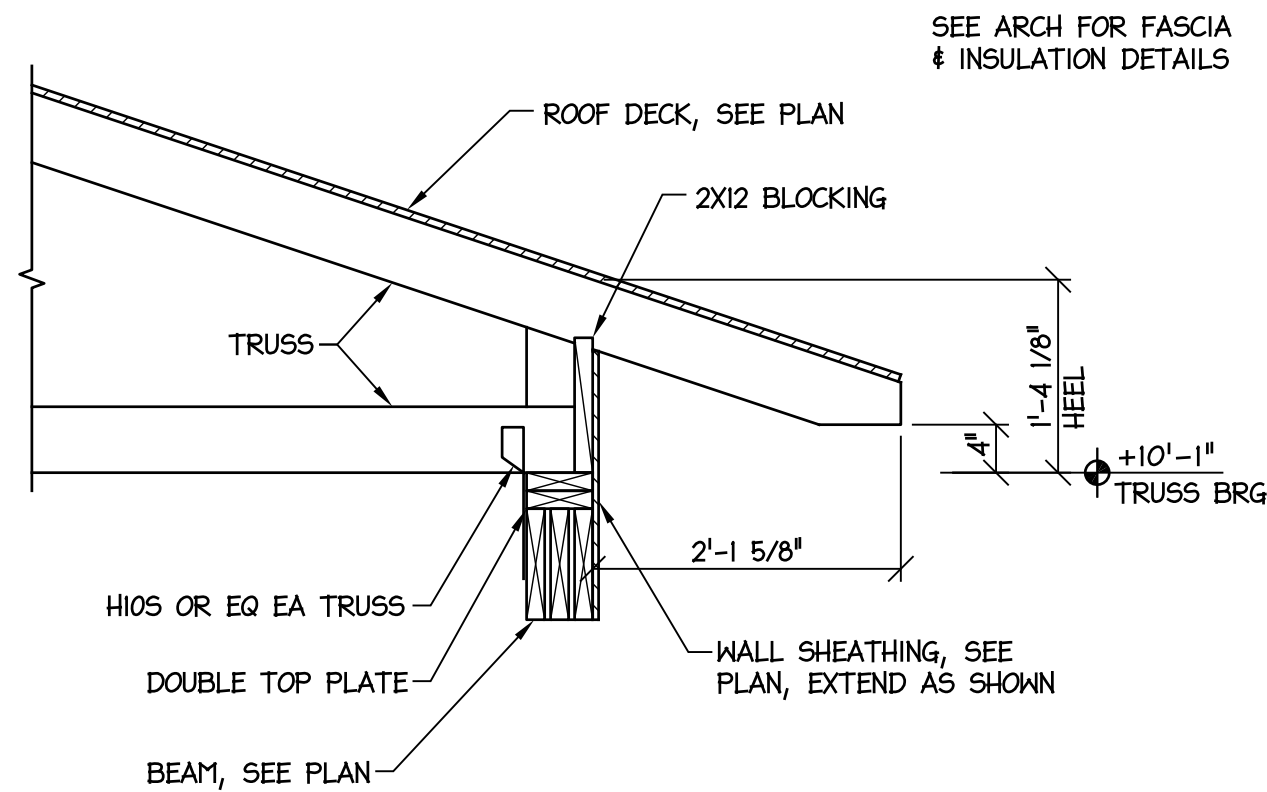
23

OUTSIDE FACE OF SHEATHING IS FLUSH W/ OUTSIDE FACE OF SLAB

1. SEE CIVIL & SPECIFICATIONS FOR EARTHWORK, COMPACTION, & FOUNDATION INSPECTION REQUIREMENTS;
2. ELEVATIONS SHOWN ON STRUCTURAL PLANS ARE ABOVE FINISH FLOOR, REF ELEVATION = +0'-0".
3. TOP OF FOOTING = -1'-4" BELOW FINISHED FLOOR, UCN.
4. CONCRETE STRENGTH FOR FOOTINGS = 3000 PSI.
5. CONCRETE STRENGTH FOR SLABS = 4000 PSI.
6. FLOOR SLAB SHALL BE 4" CONC REINF W/ 6X6 W/ .00X11.4 WWR ON VAPOR RETARDER ON 4" COMPACTED GRANULAR BASE, UCN.
7. SEE ARCH & PLING PLANS FOR SLOPES, DEPRESSIONS, DRAINS, & OTHER EMBEDDED ITEMS.
8. VAPOR RETARDER IS NOT REQUIRED UNDER EXTERIOR SLABS.
9. SEE ARCH PLANS FOR FLOOR FINISHES & DIMENSIONS NOT SHOWN. SEE ARCH & SITE PLANS FOR EXTERIOR CONCRETE.

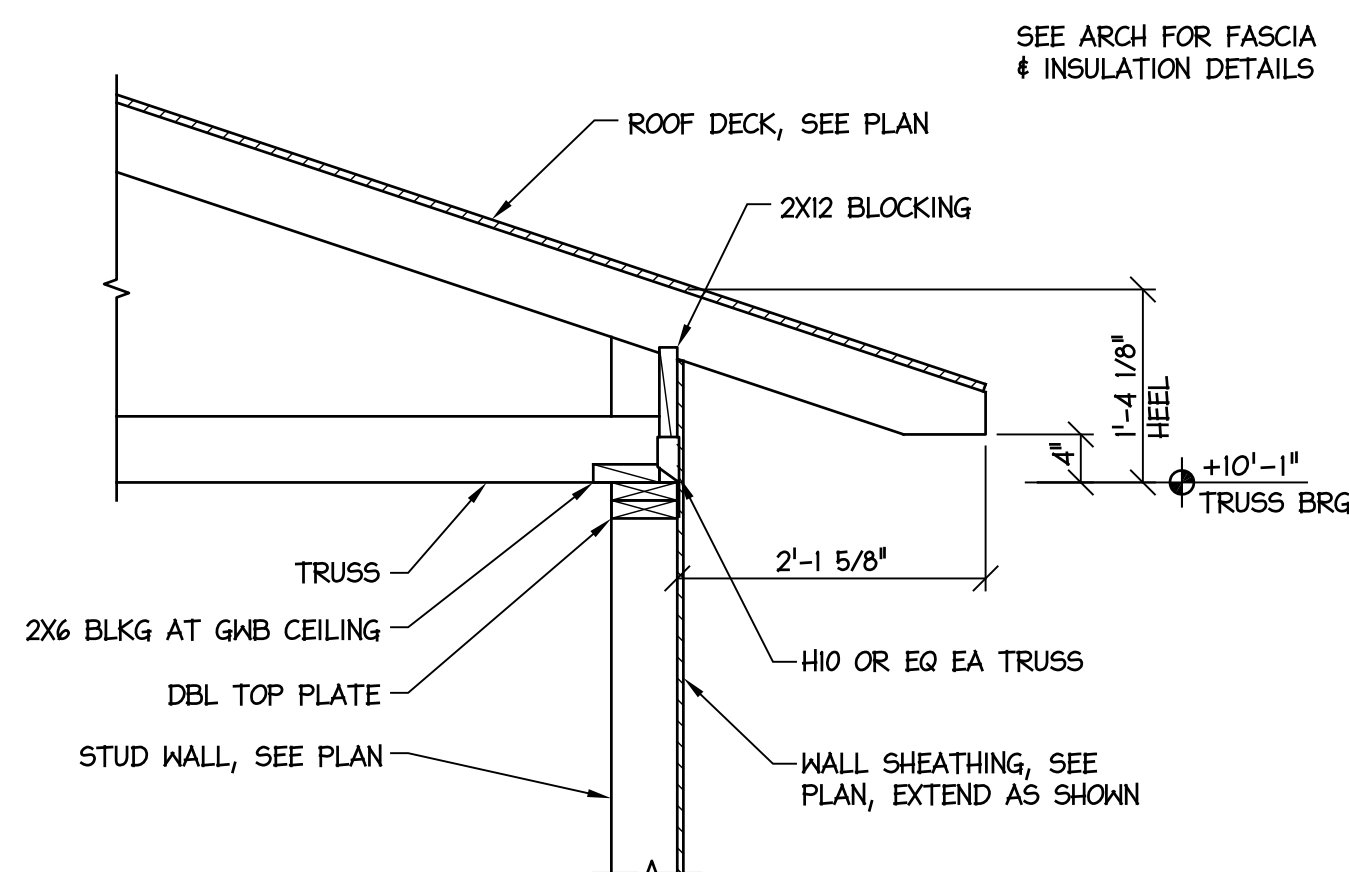
- 
- NORTH

S1



4 TRUSS BRG AT BEAM

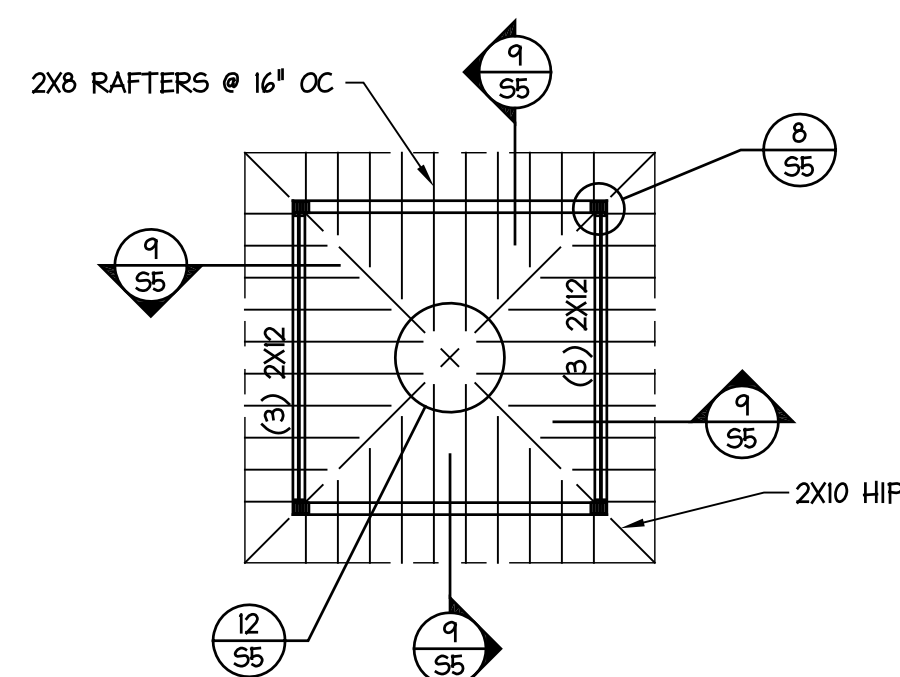
SCALE: 3/4" = 1'-0"



3 TYPICAL ROOF TRUSS BRG

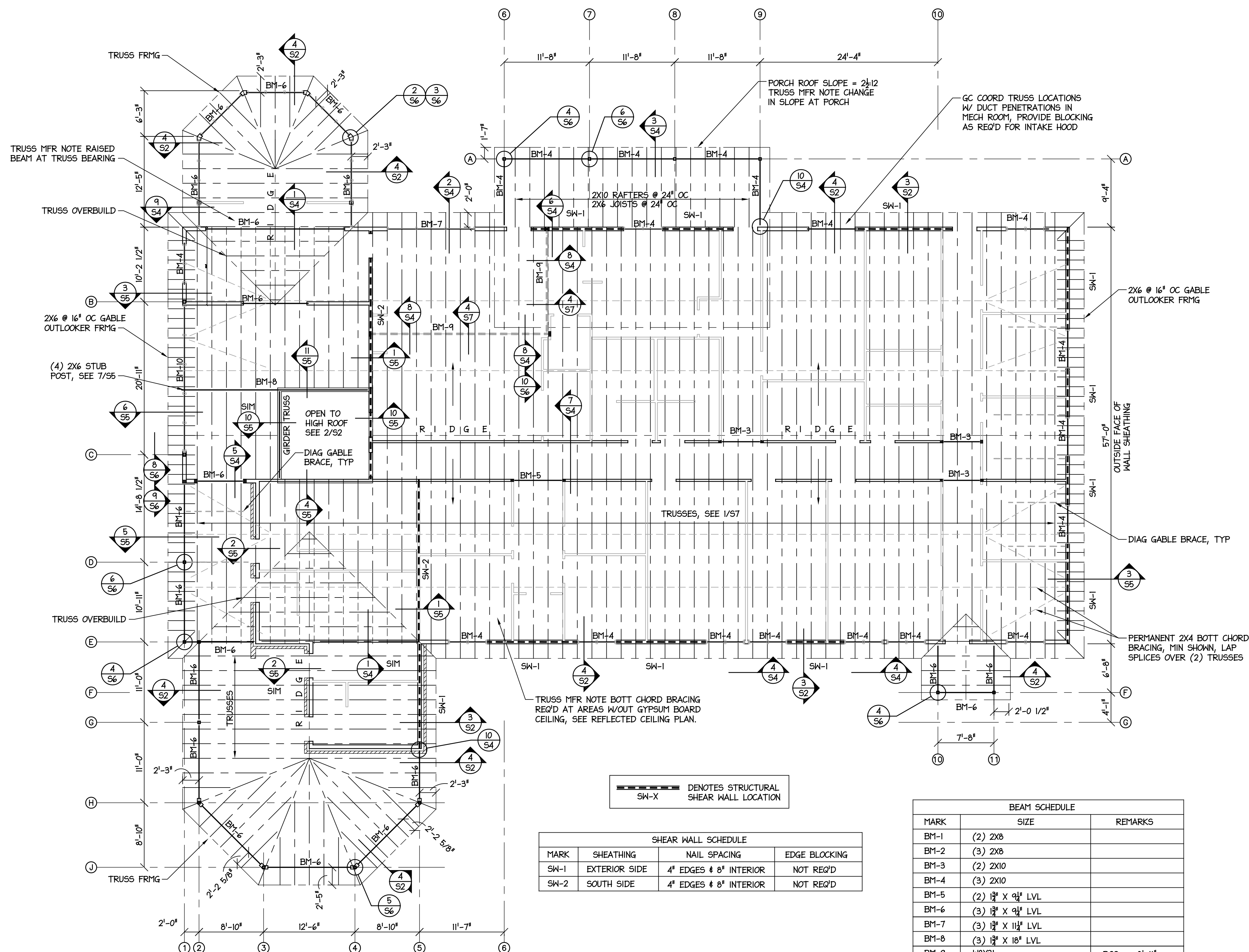
SCALE: 3/4" = 1'-0"

SEE 1/52 FOR ITEMS NOT NOTED



2 HIGH ROOF FRAMING

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



DENOTES STRUCTURAL
SW-X

SHEAR WALL SCHEDULE			
MARK	SHEATHING	NAIL SPACING	EDGE BLOCKING
SW-1	EXTERIOR SIDE	4" EDGES & 8" INTERIOR	NOT REQ'D
SW-2	SOUTH SIDE	4" EDGES & 8" INTERIOR	NOT REQ'D

BEAM SCHEDULE		
MARK	SIZE	REMARKS
BM-1	(2) 2X8	
BM-2	(3) 2X8	
BM-3	(2) 2X10	
BM-4	(2) 2X10	
BM-5	(2) 12" X 9 1/2" LVL	
BM-6	(3) 12" X 9 1/2" LVL	
BM-7	(3) 12" X 11 1/2" LVL	
BM-8	(3) 12" X 18" LVL	
BM-9	WBX31	BOS = +8'-11"
BM-10	HSS 12 X 6 X 1/4	BOS = +9'-2 1/2"

BEAMS NOT OTHERWISE SPECIFIED SHALL BE EITHER BM-1 OR BM-2 TO MATCH WALL THICKNESS

NOTES:

- WALL SHEATHING SHALL BE 1/2" APA STRUCTURAL I SHEATHING, 32/16 SPAN RATING, EXPOSURE 1, ATTACHED W/ 8D NAILS @ 6" OC ALONG PANEL EDGES & 8" OC AT INTERIOR OF PANEL. SEE SHEAR WALL SCHEDULE FOR NAIL SPACING AT SHEAR WALLS.
- ROOF TRUSSES SHALL BE DESIGNED FOR ALL LOADS INDICATED ON PLANS & SPECIFICATIONS. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NC. SEE SHEET G2 FOR STRUCTURAL DESIGN CRITERIA.
- BRIDGING & UPLIFT BRACING SHALL BE INSTALLED PER TRUSS MFR REQUIREMENTS. MFR IS RESPONSIBLE FOR BRACING DESIGN. TEMPORARY BRACING IS THE GC'S RESPONSIBILITY.
- MINIMUM ROOF DL FOR TRUSS DESIGN SHALL BE 15 PSF.
- USE 2X6 FOR TRUSS TOP & BOTTOM CHORDS.
- ROOF FRAMING SHALL BE DESIGNED FOR WIND PRESSURES SPECIFIED IN NC-SBC OR COMPONENT & CLADDING PRESSURES SHOWN IN DETAIL 2/57.
- ROOF SLOPE = 4:12, UNLESS OTHERWISE NOTED ON PLANS.
- PROVIDE DUCT CHASE IN TRUSSES, COORD W/ MECHANICAL CONTRACTOR FOR SIZES & LOCATIONS.
- ATTACH TRUSSES TO TOP PLATES W/ (4) 16D TOE NAILS IN ADDITION TO SPECIFIED UPLIFT CONNECTORS.
- ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS ARE ABOVE FIRST FINISH FLOOR, REF ELEVATION = +0'-0".
- ROOF DECK SHALL BE 5/8" CD PLYWOOD, APA RATED SHEATHING, 40/20 SPAN RATING, EXPOSURE 1. SEE DETAIL 2/57 FOR ATTACHMENT.
- SEE 1/51 FOR POST SIZES.

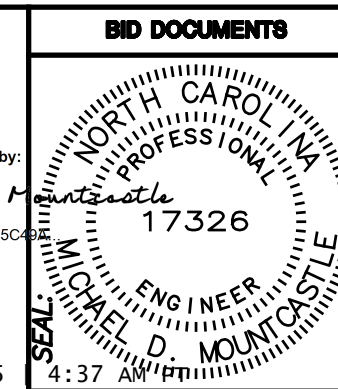
1 FRAMING PLAN

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

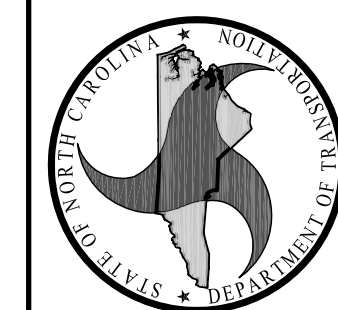


8/19/2015

DocuSigned by:
Michael P. Cantello
2ADEB86B55C



DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, NODOT
1 SOUTH WILKINSON STREET
FALCON, NORTH CAROLINA 27001
PHONE 919/707-4640 FAX 919/707-0999



CONSULTANT:

DRAWING TITLE / DESCRIPTION:
FRAMING PLAN
FRMG DETAILS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT
2300 FERRY ROAD, HAYLOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

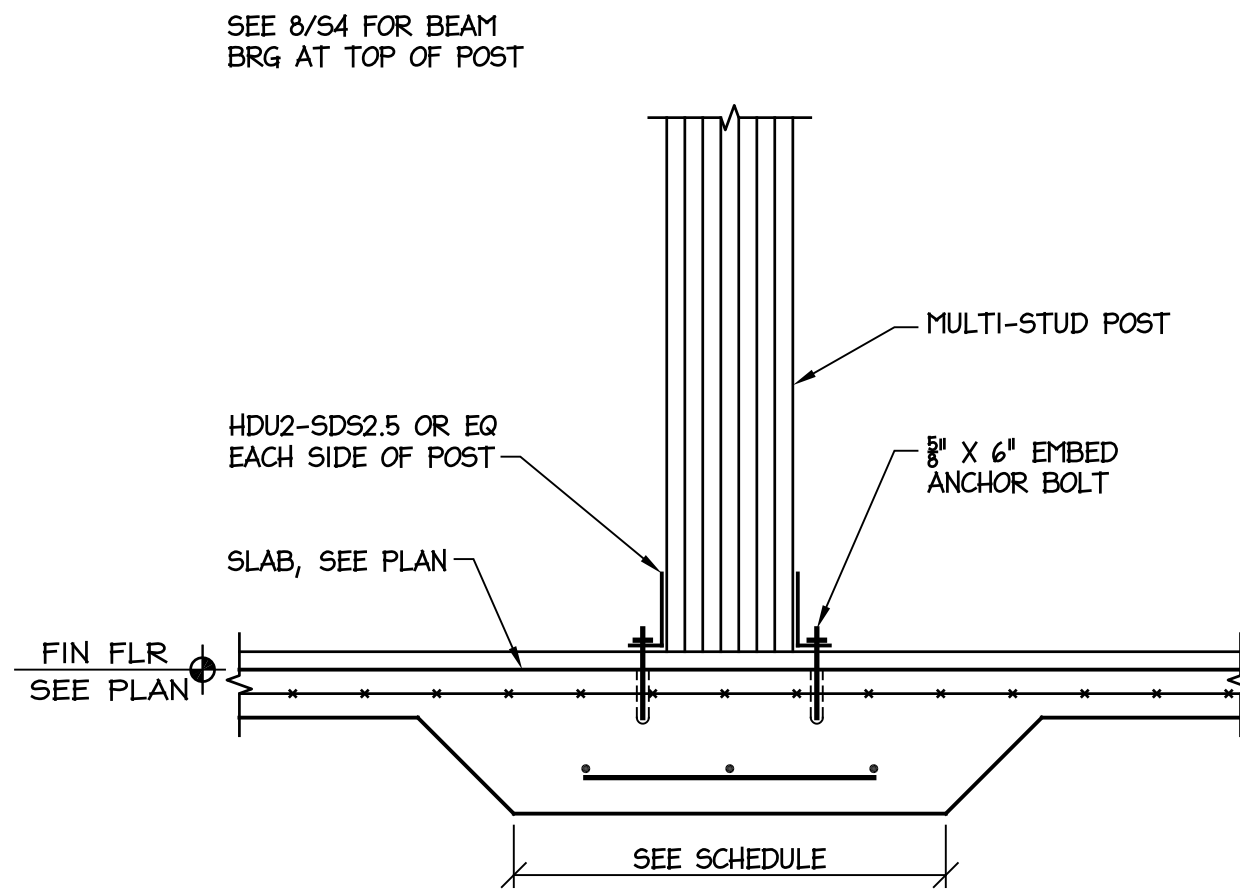
STATE CONSTRUCTION
ID.# 11-09079-01A

ASSET NUMBER:
CO.# SITE# BLDG.#
48 - - -

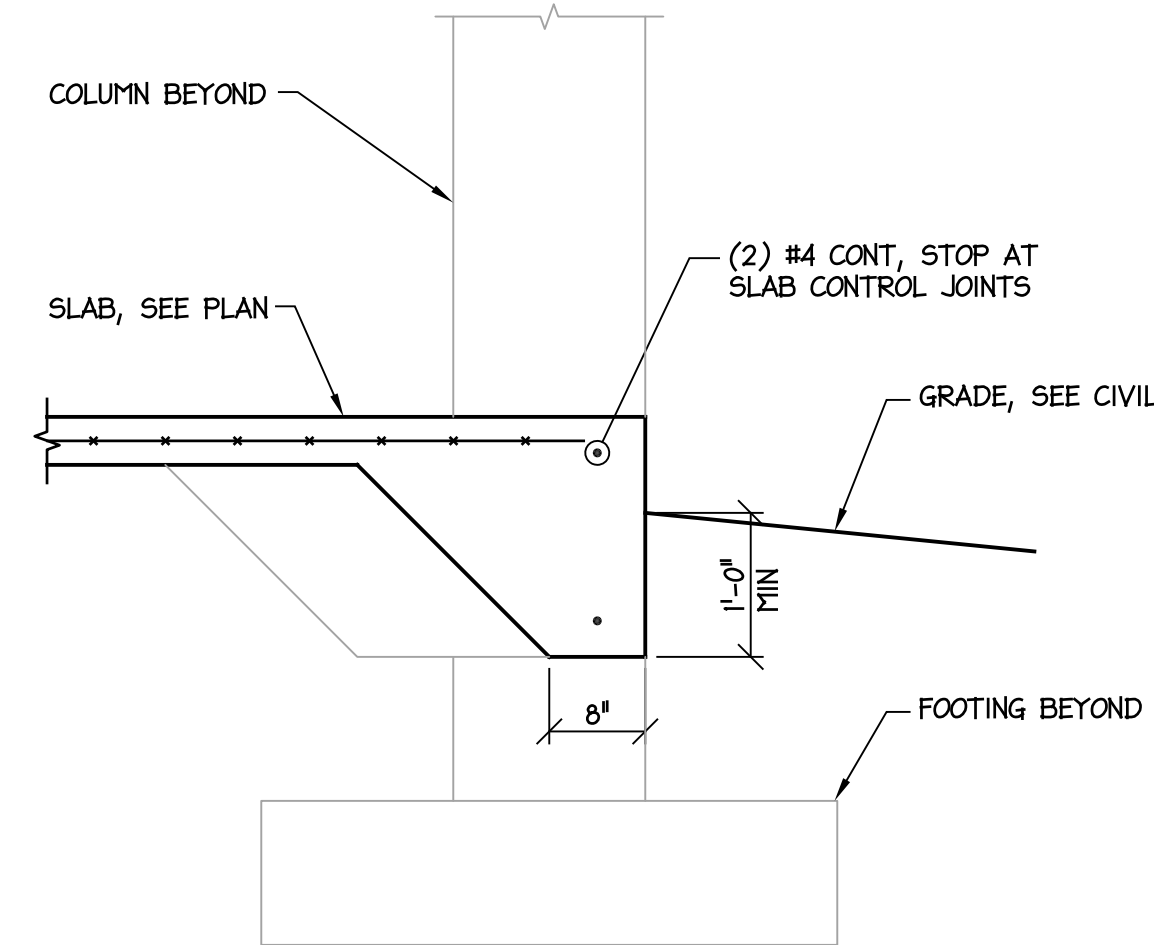
REVISIONS
NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: MDW
CHECKED BY: MDW
SHEET NO.

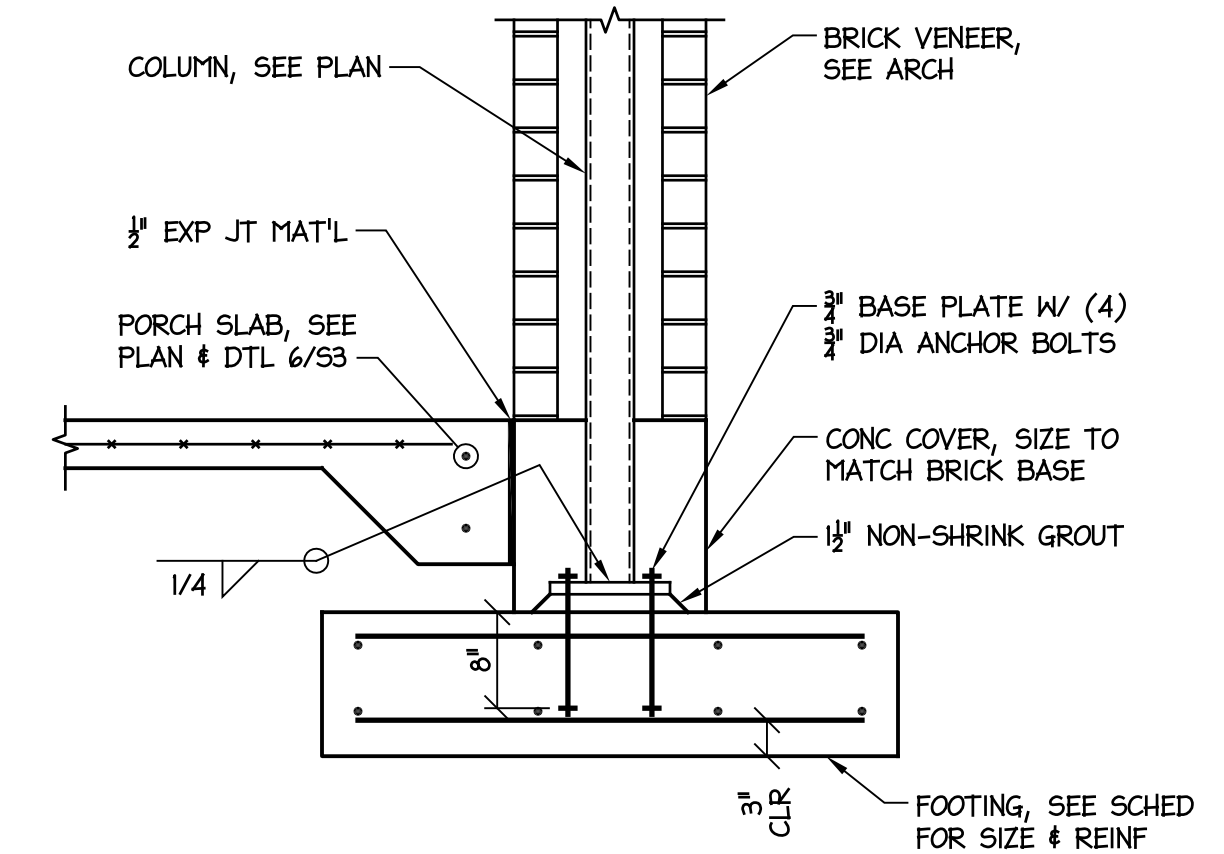
S2



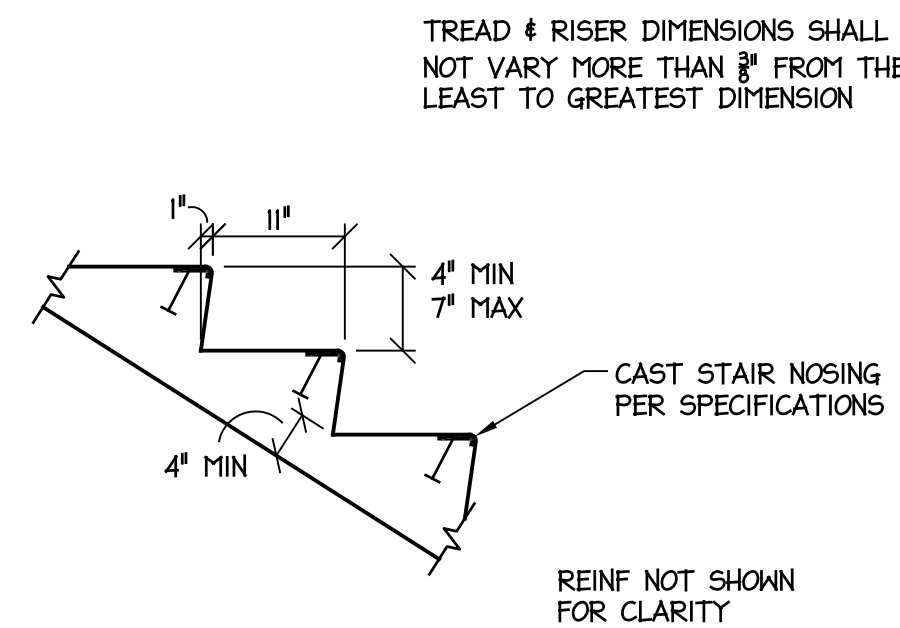
9 PARTITION POST FOOTING
SCALE: 3/4" = 1'-0"



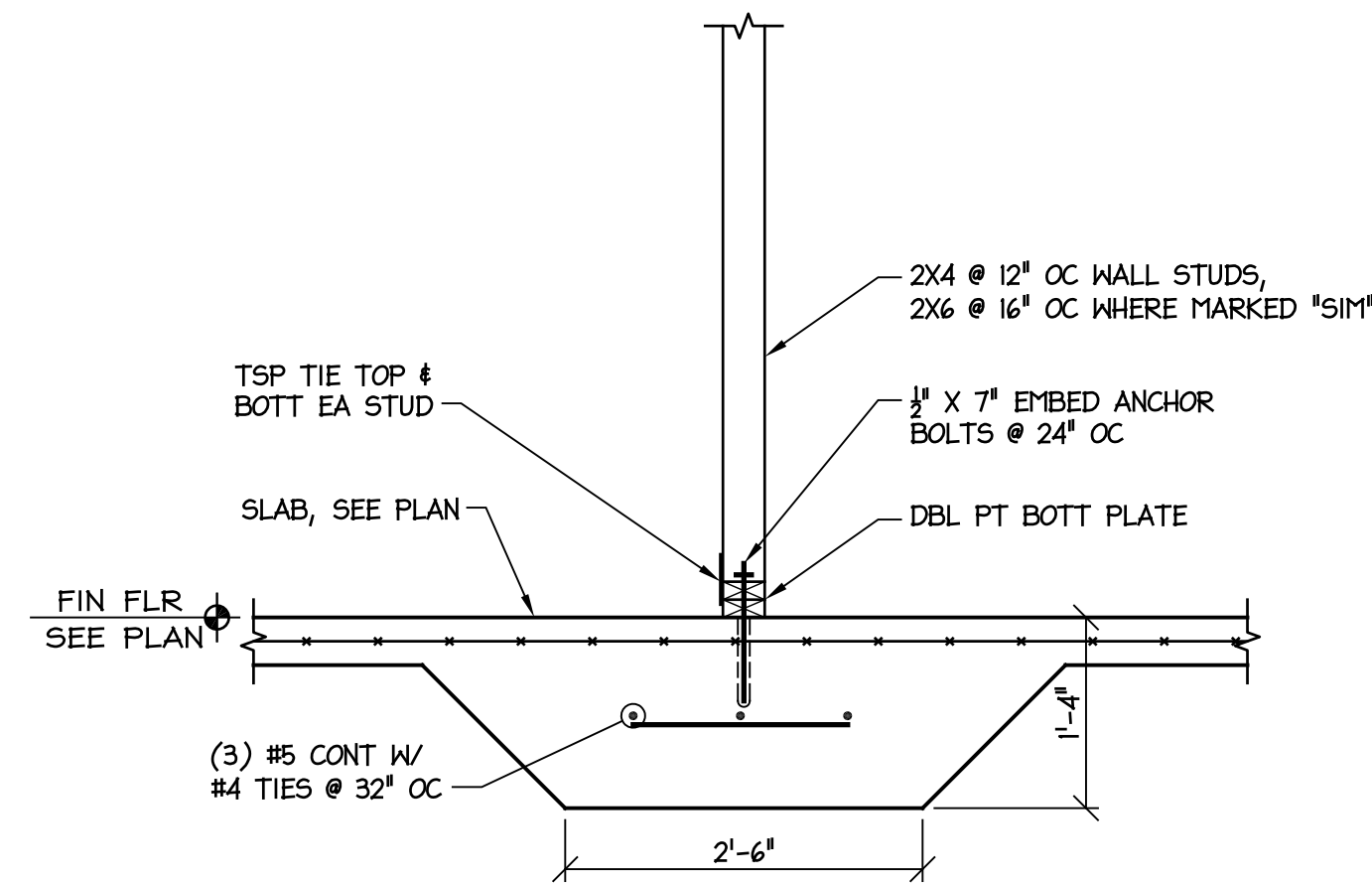
6 PORCH SLAB EDGE
SCALE: 3/4" = 1'-0"



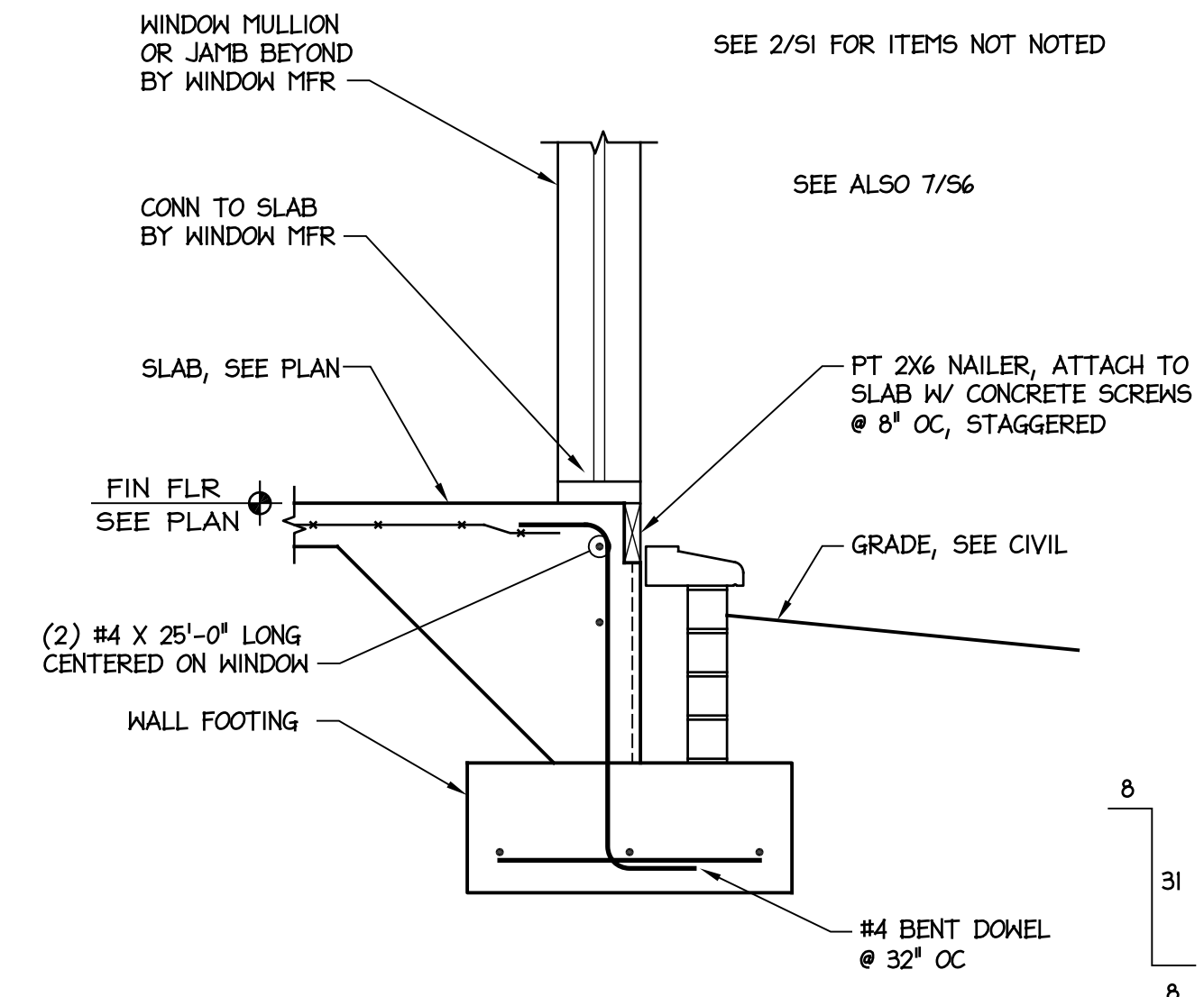
3 PORCH COLUMN FOOTING
SCALE: 3/4" = 1'-0"



8 PORCH STAIRS
SCALE: 3/4" = 1'-0"

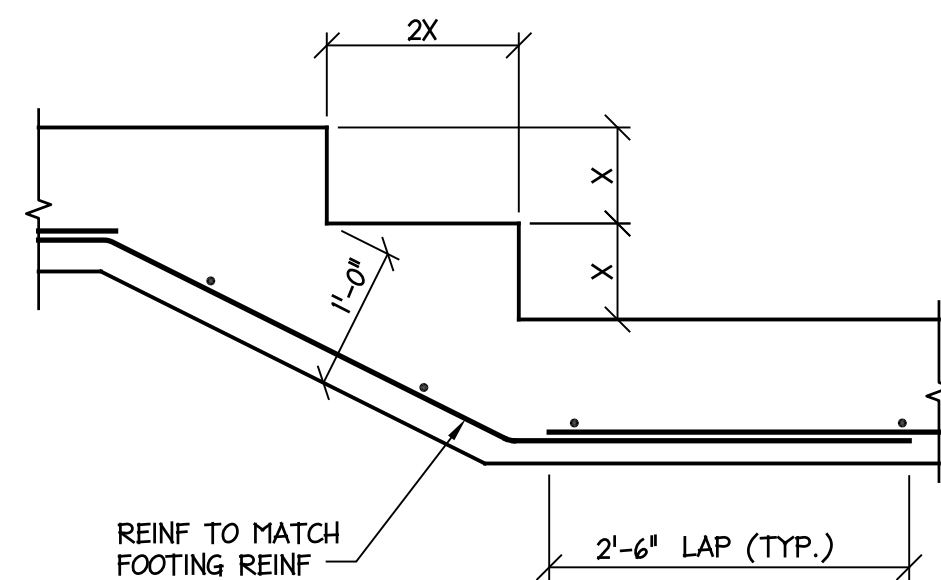


5 INTERIOR BEARING WALL FTG
SCALE: 3/4" = 1'-0"

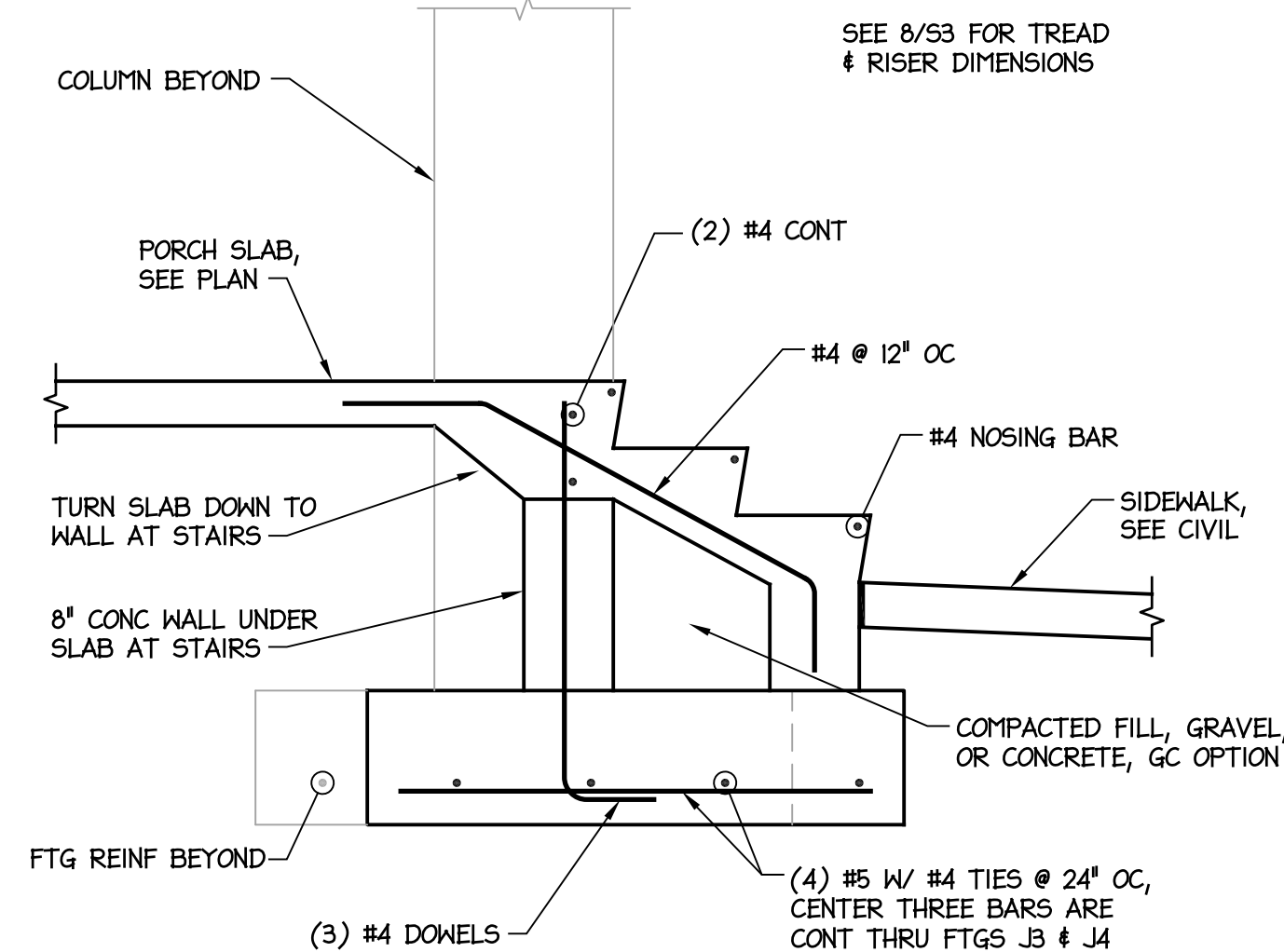


2 FDN AT FULL HT WINDOW
SCALE: 3/4" = 1'-0"

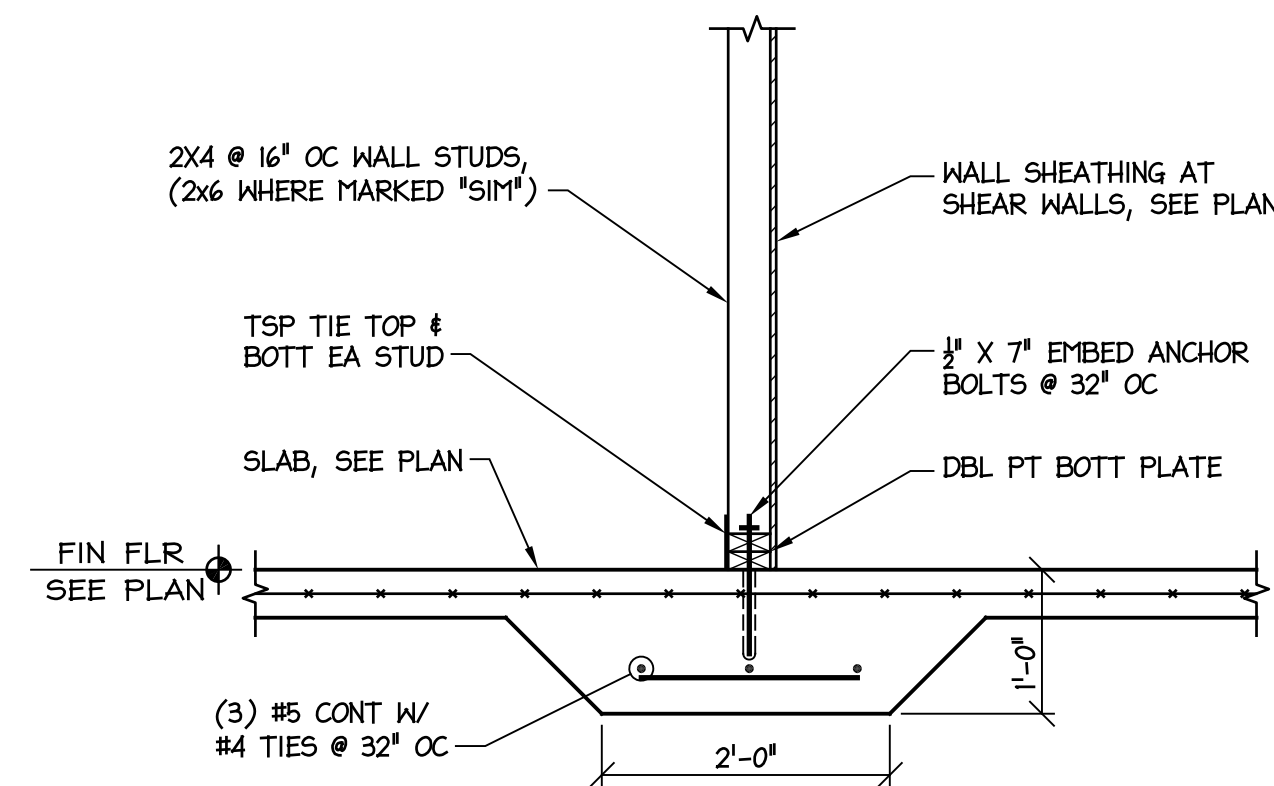
NOTE:
DIMENSION X TO BE IN MULTIPLES
OF 8" TO MATCH CMU COURSING.



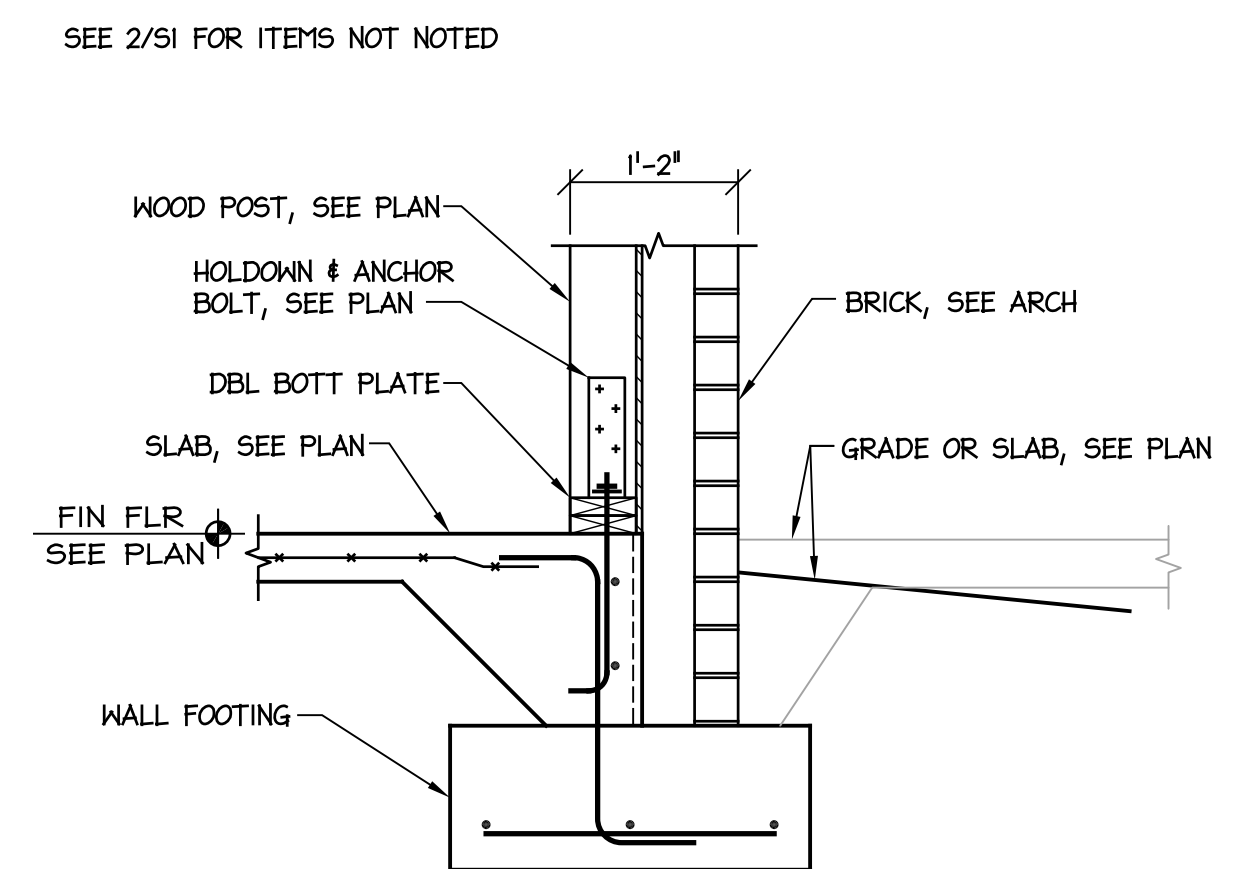
10 STEPPED FOOTING
SCALE: 3/4" = 1'-0"



7 PORCH STAIRS
SCALE: 3/4" = 1'-0"



4 INTERIOR BEARING WALL FTG
SCALE: 3/4" = 1'-0"



1 WOOD POST TIE DOWN
SCALE: 3/4" = 1'-0"

DocuSigned by
Michael Santangelo
24DEBE060305

8/19/2013 4:37 PM

BID DOCUMENTS

17326

ENGINEER

SEAL

STATE OF NORTH CAROLINA

DESIGNED BY:

FACILITIES DESIGN

ARCHITECTS & ENGINEERS

FACILITIES MANAGEMENT DIVISION, NCDOT

1 SOUTH WILMINGTON STREET
FALCON, NORTH CAROLINA 27001
PHONE: 910/707-4640 FAX: 910/707-0999

BID DOCUMENTS

CONSULTANT:

FDN DETAILS

PROJECT TITLE:

CHERRY BRANCH FERRY FACILITY

NORTH CAROLINA DOT

STATE CONSTRUCTION

ID.# 11-09079-01A

ASSET NUMBER:

CO.# SITE# BLDG.#

48 - - -

REVISIONS

NO.	DATE

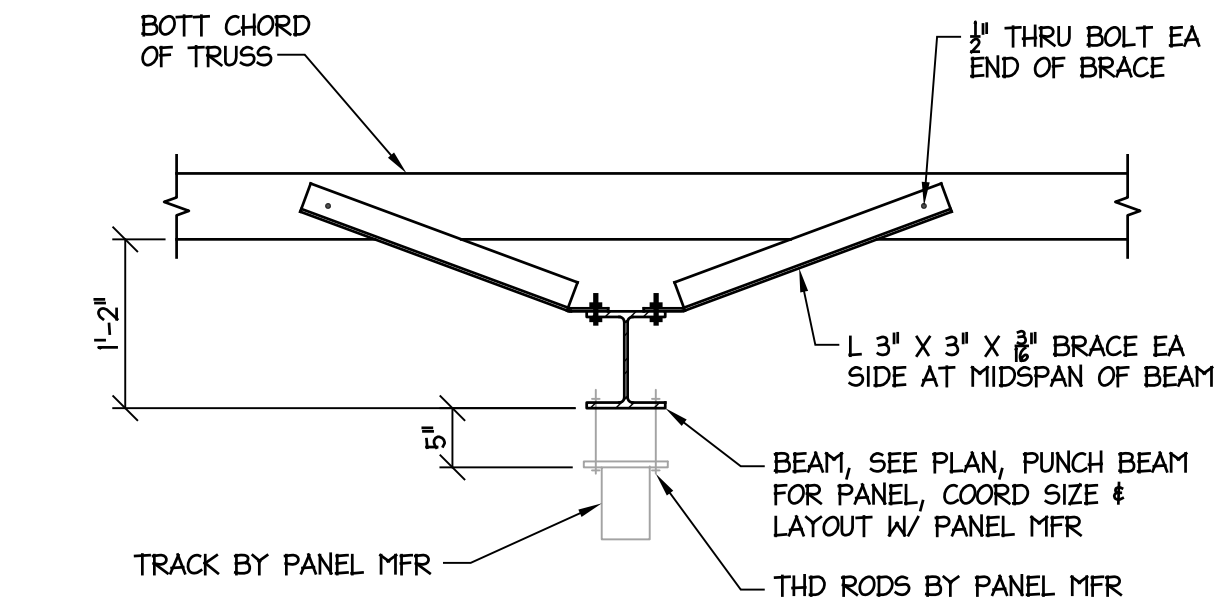
DATE ISSUED: 8-14-15

DRAWN BY: MDM

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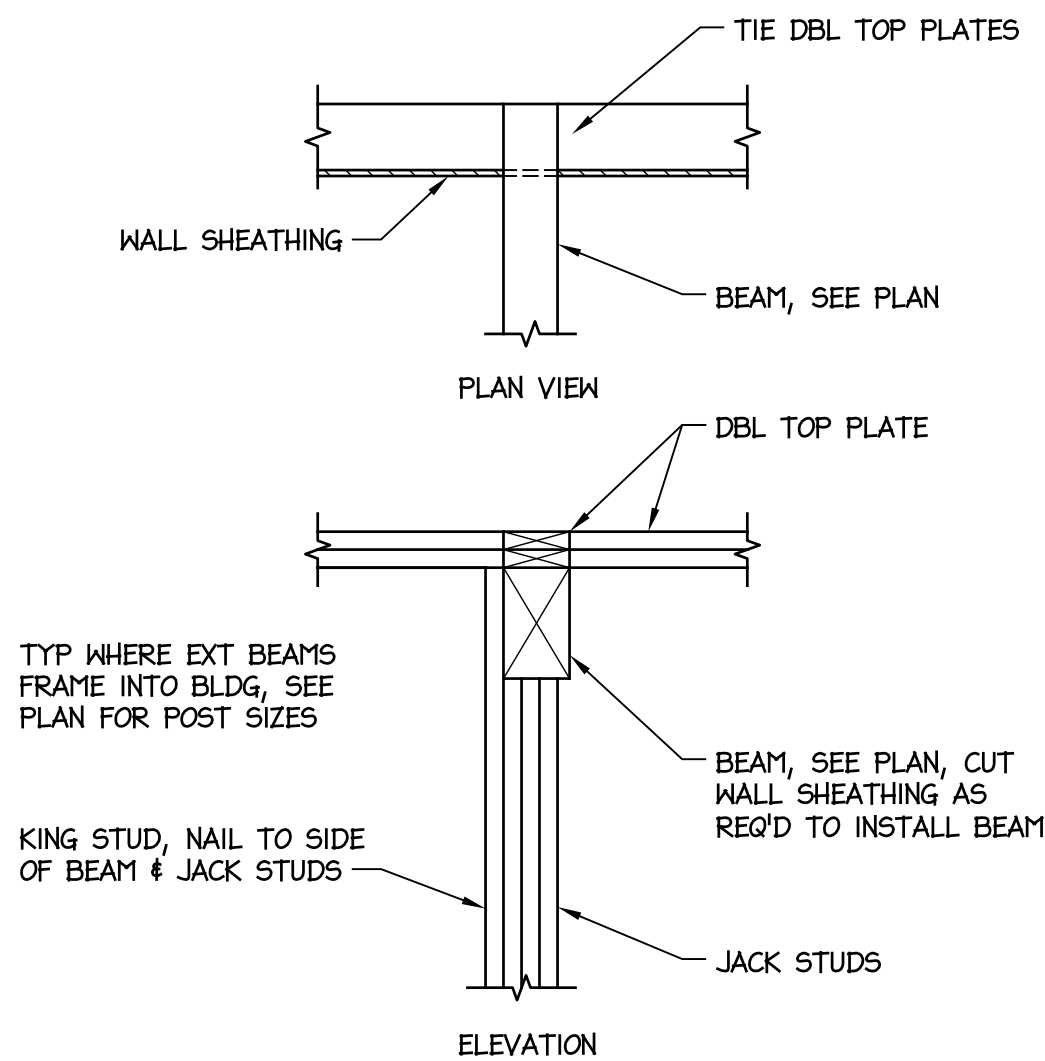
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S3

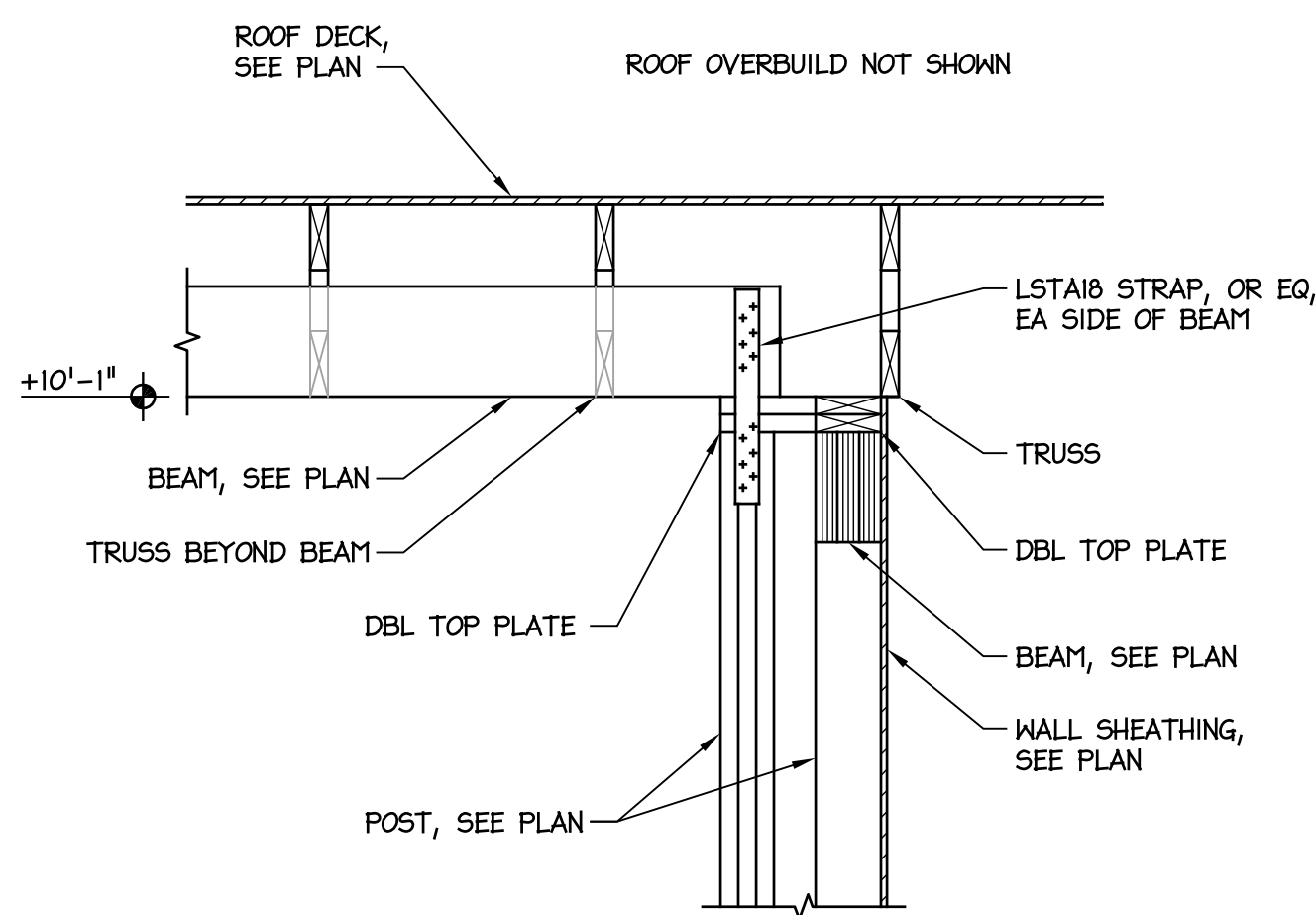


COORDINATE LOCATION & SPACING OF SUPPORTS W/ PANEL MFR.
VERIFY CLEARANCE OF SUPPORT COMPONENTS W/ CEILING DETAILS.
COORDINATE SUPPORT BEAM ELEVATION W/ ARCH & PANEL MFR.

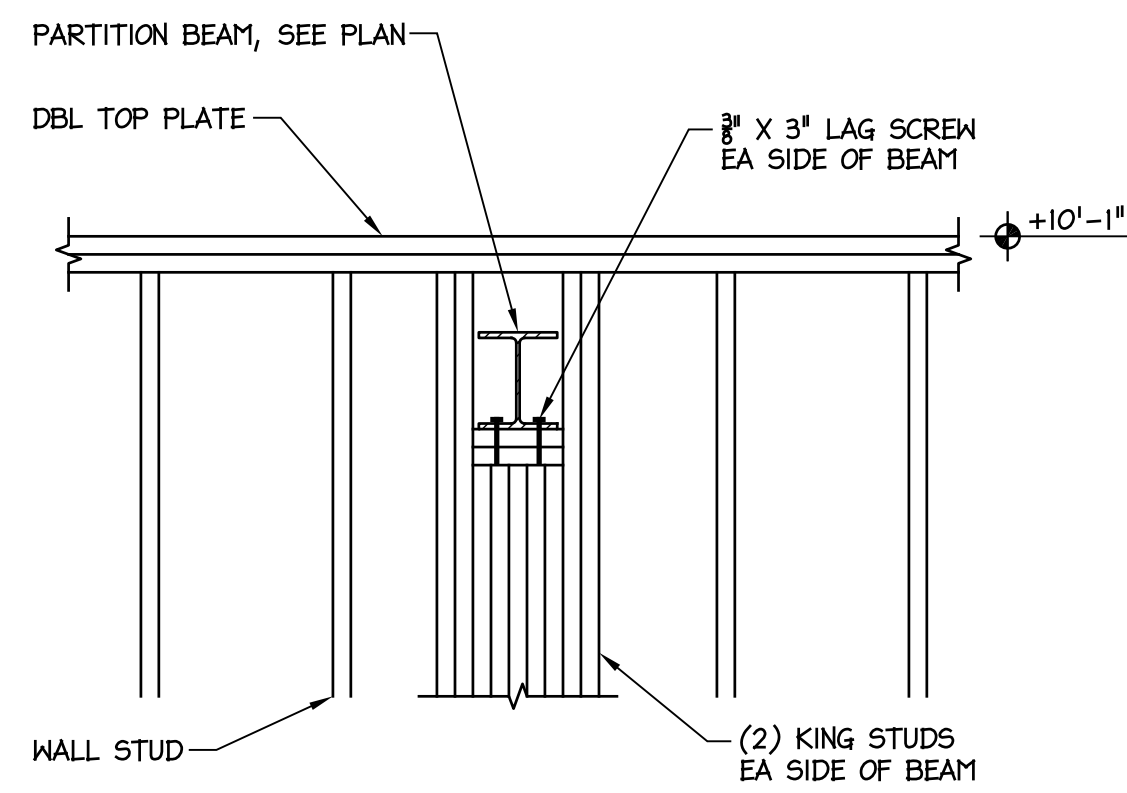
11 PANEL BEAM BRACE
SCALE: 3/4" = 1'-0"



10 TYP EXT BEAM BRG AT WALL
SCALE: 3/4" = 1'-0"

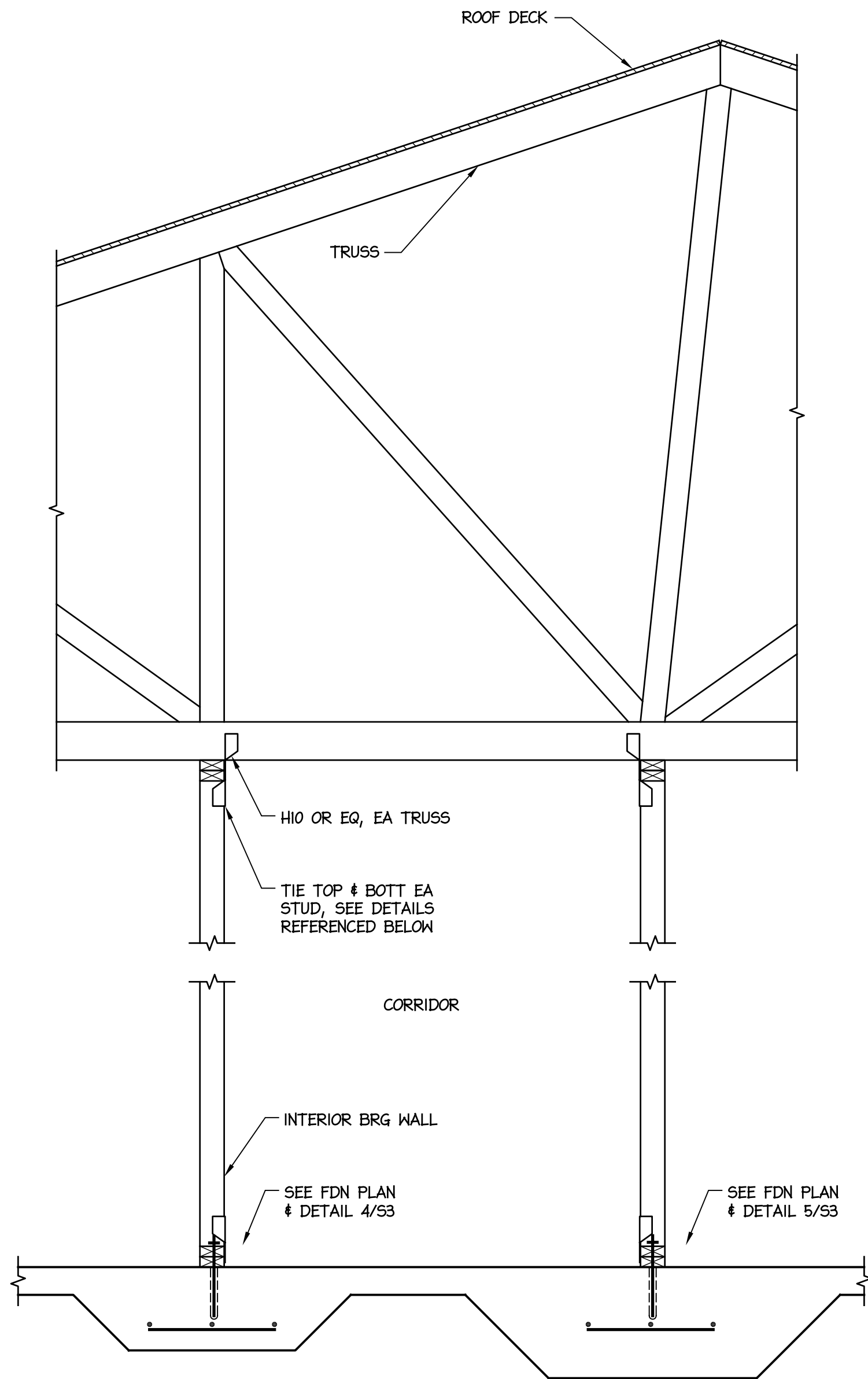


9 OFFICE BEAM BEARING
SCALE: 3/4" = 1'-0"

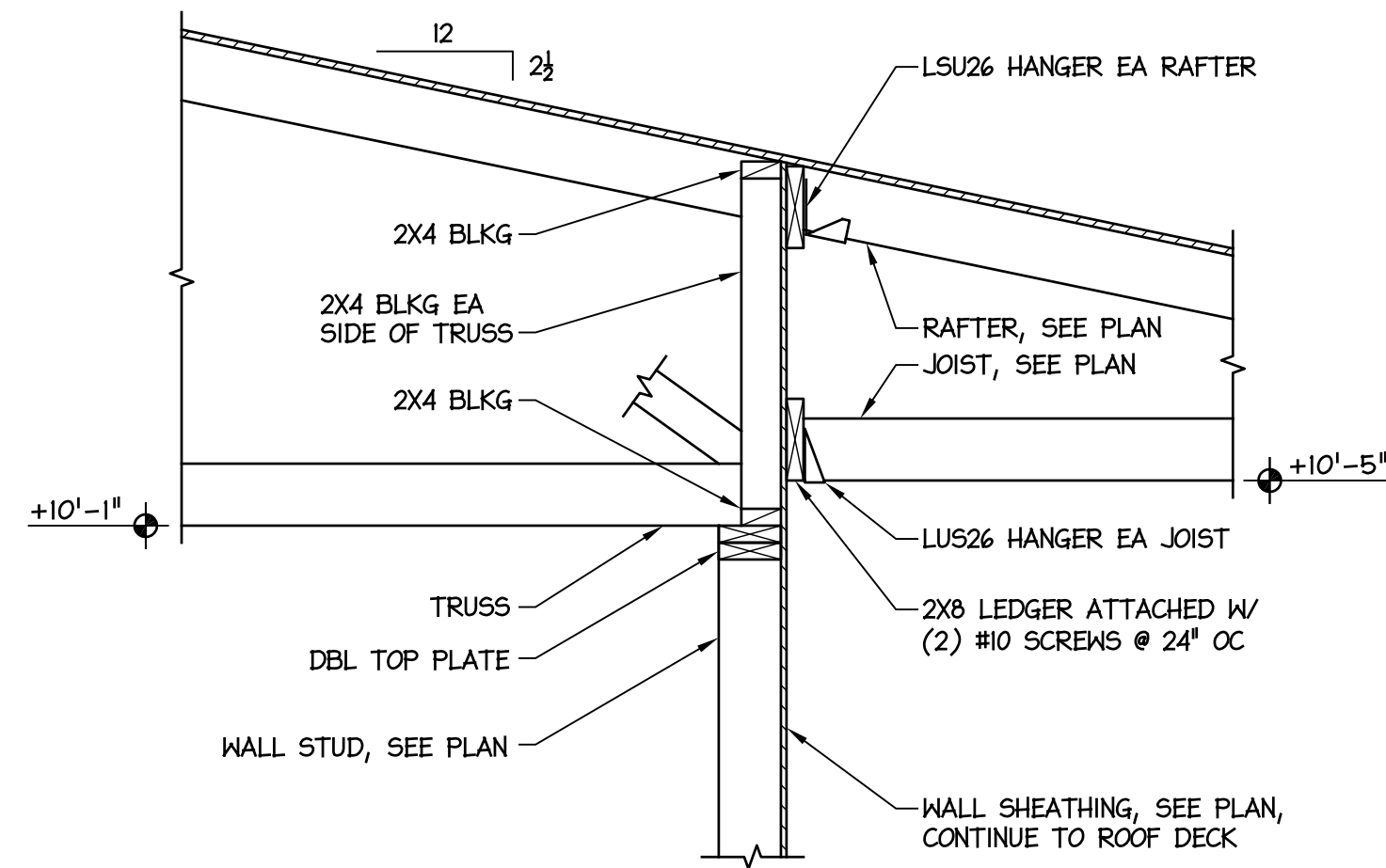


COORDINATE SUPPORT BEAM ELEVATION W/ ARCH & OP WALL MFR

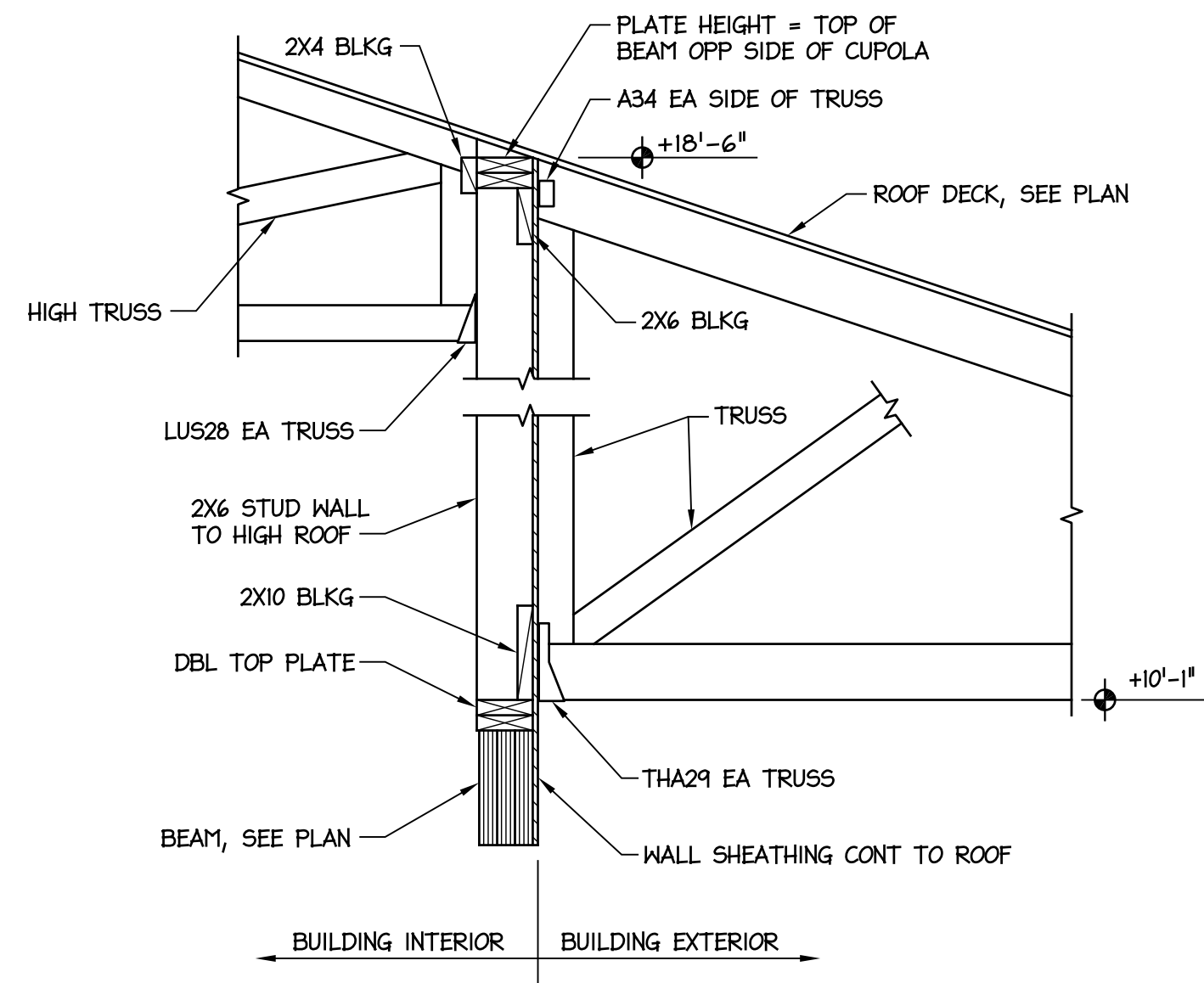
8 OPERABLE WALL BEAM BRG
SCALE: 3/4" = 1'-0"



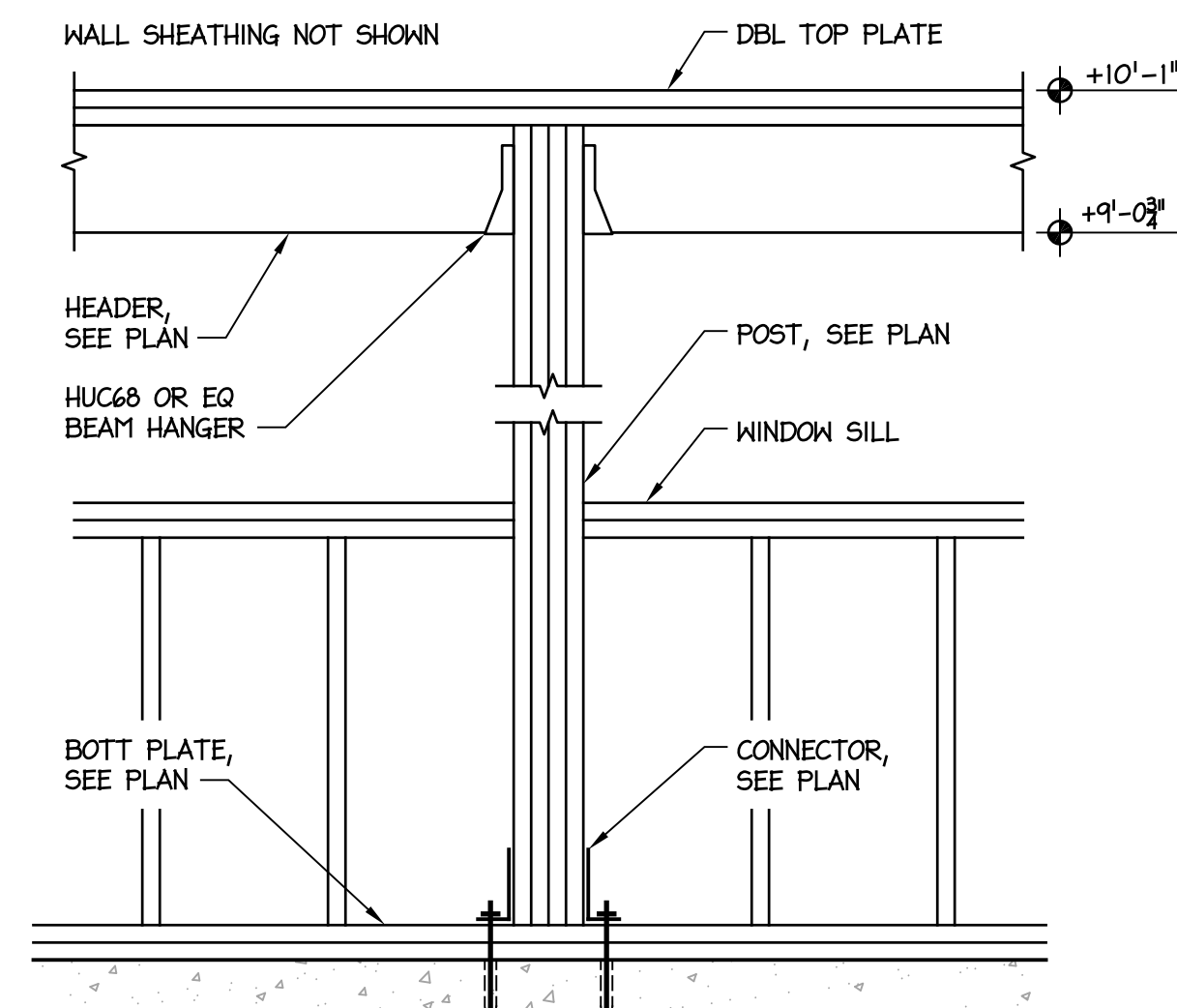
7 FRAMING AT CORRIDOR
SCALE: 3/4" = 1'-0"



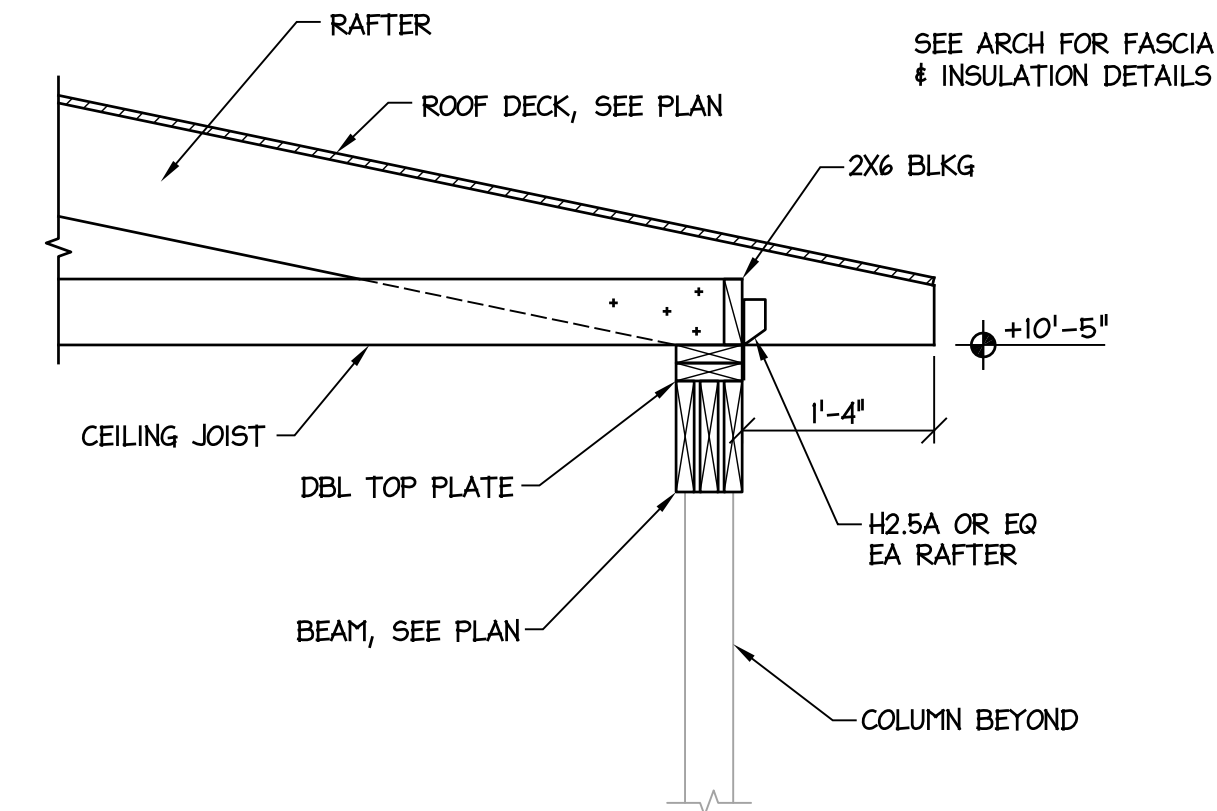
6 TRUSS BRG AT PORCH
SCALE: 3/4" = 1'-0"



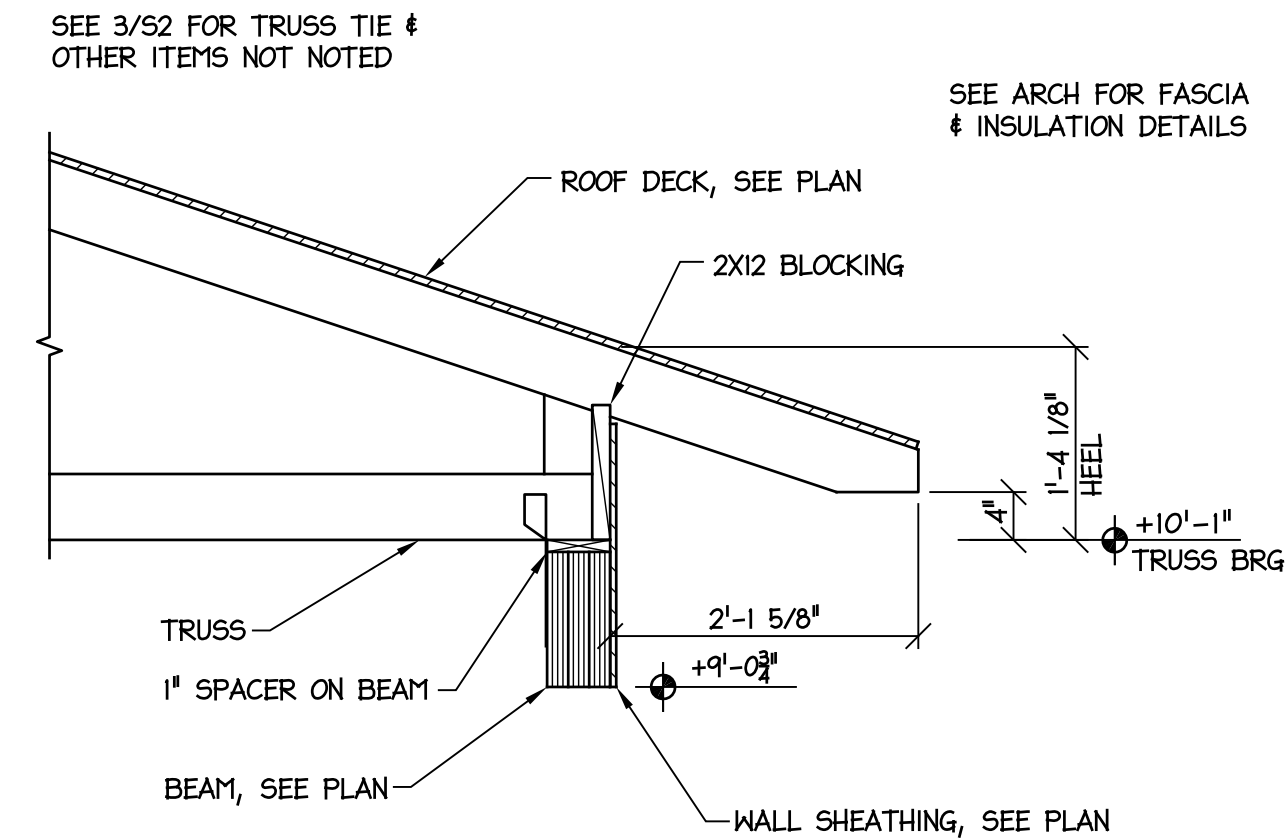
5 TRUSS BRG AT MAIN ENTRY
SCALE: 3/4" = 1'-0"



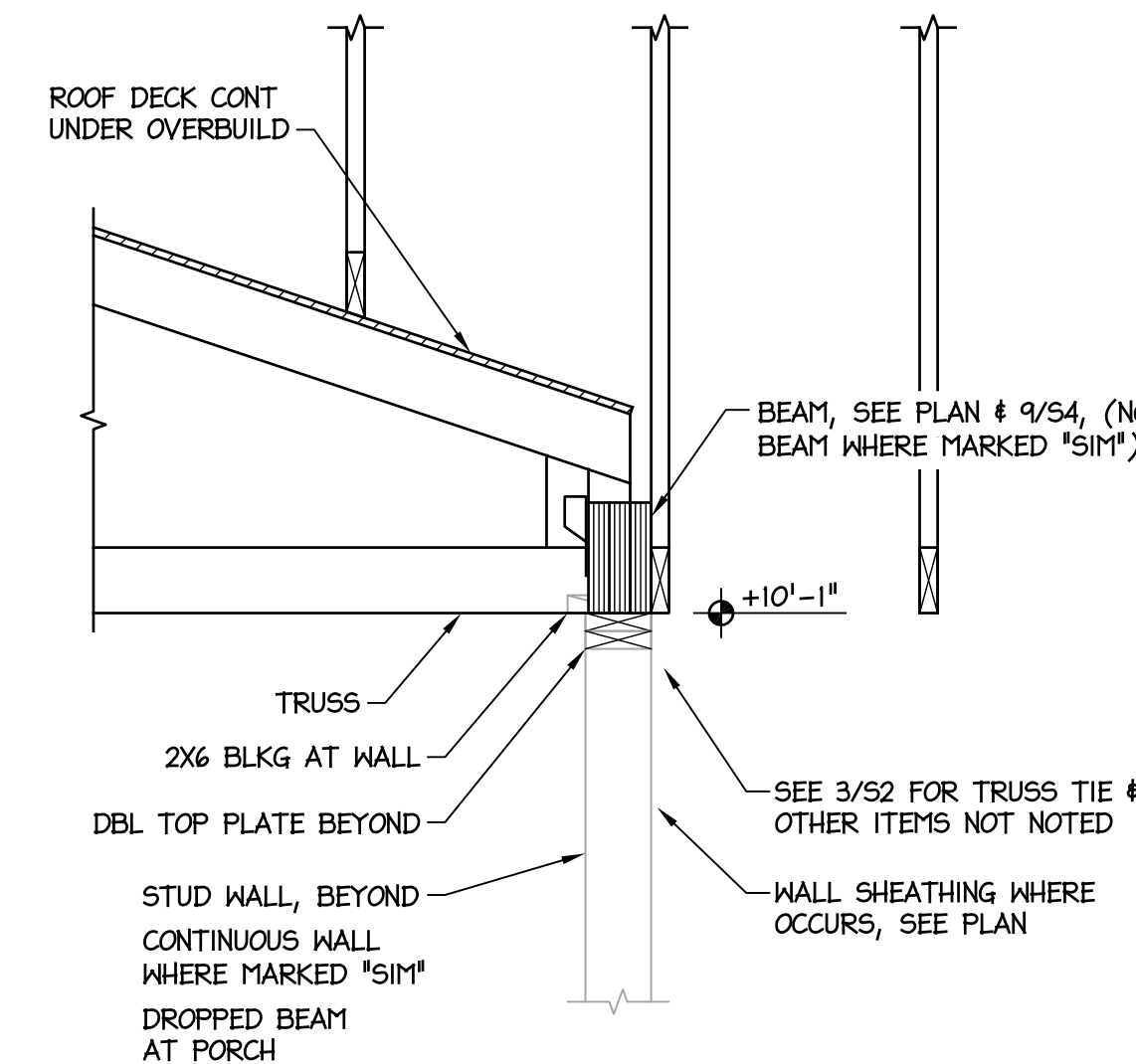
4 JAMB AT ADJACENT WINDOWS
SCALE: 3/4" = 1'-0"



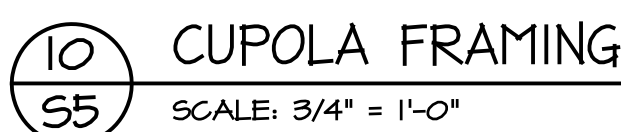
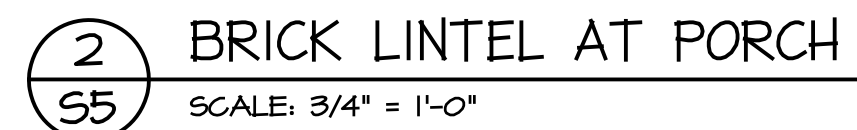
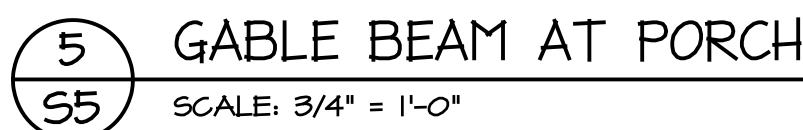
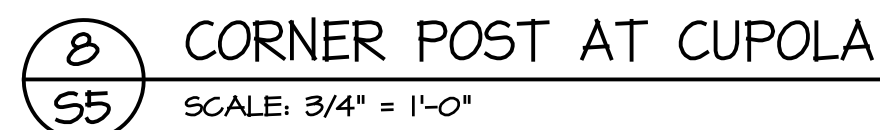
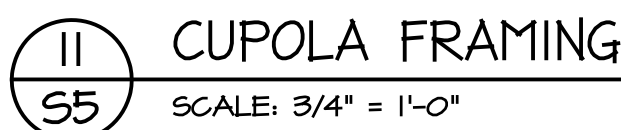
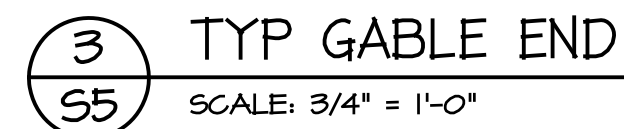
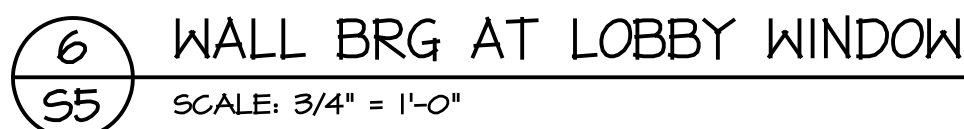
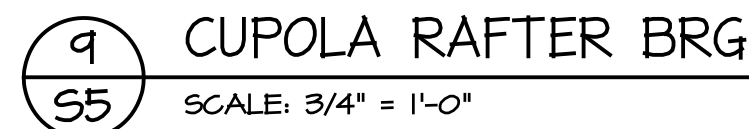
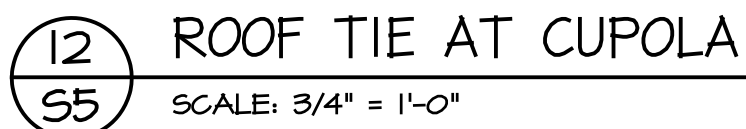
3 PORCH ROOF BEARING
SCALE: 3/4" = 1'-0"



2 TRUSS BRG AT GALLEY WINDOW
SCALE: 3/4" = 1'-0"

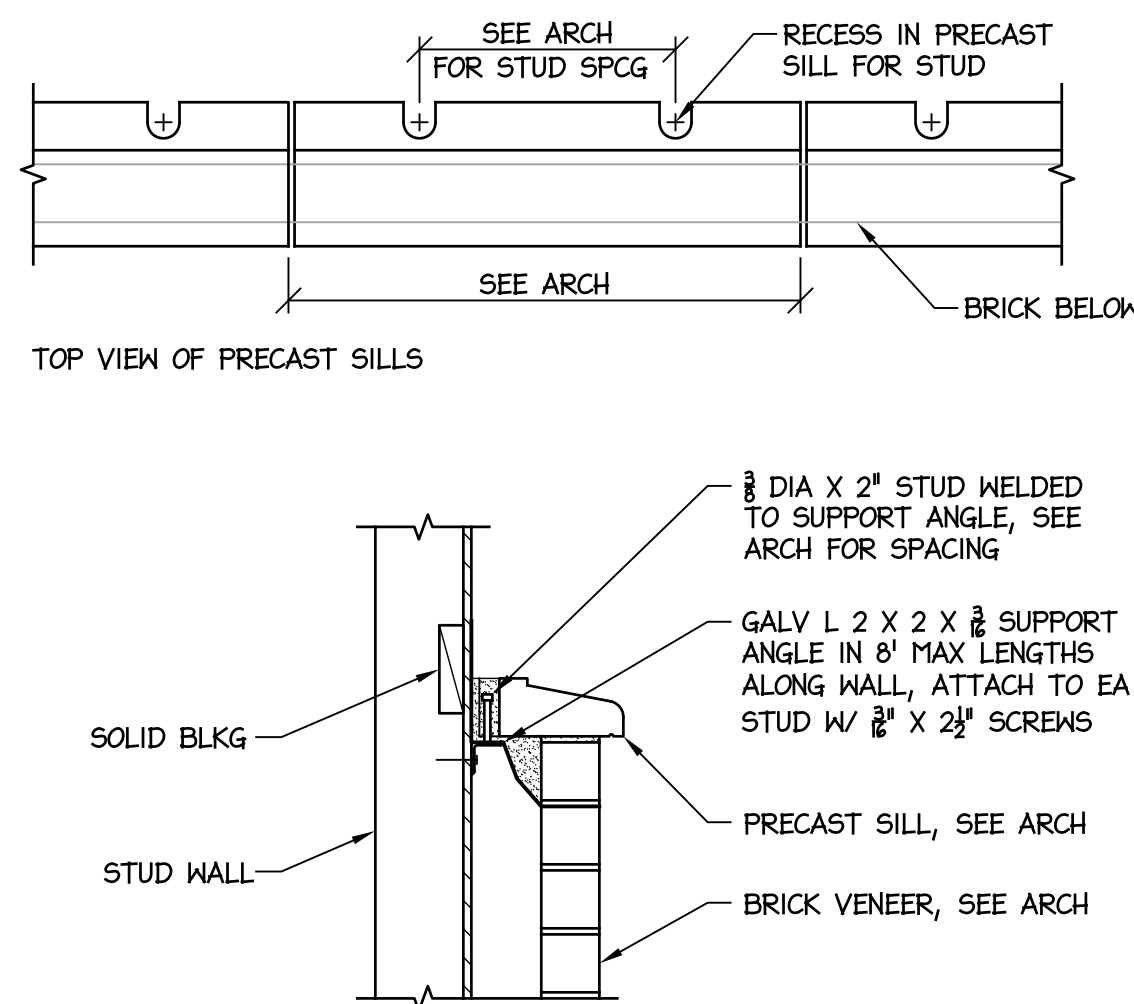


1 TRUSS BRG AT OVERBUILD
SCALE: 3/4" = 1'-0"

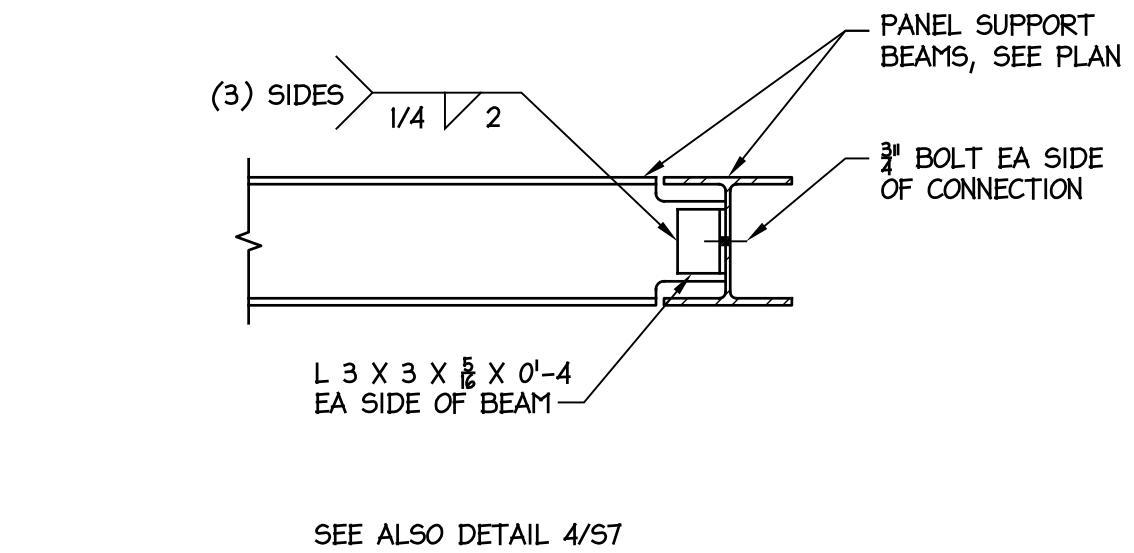




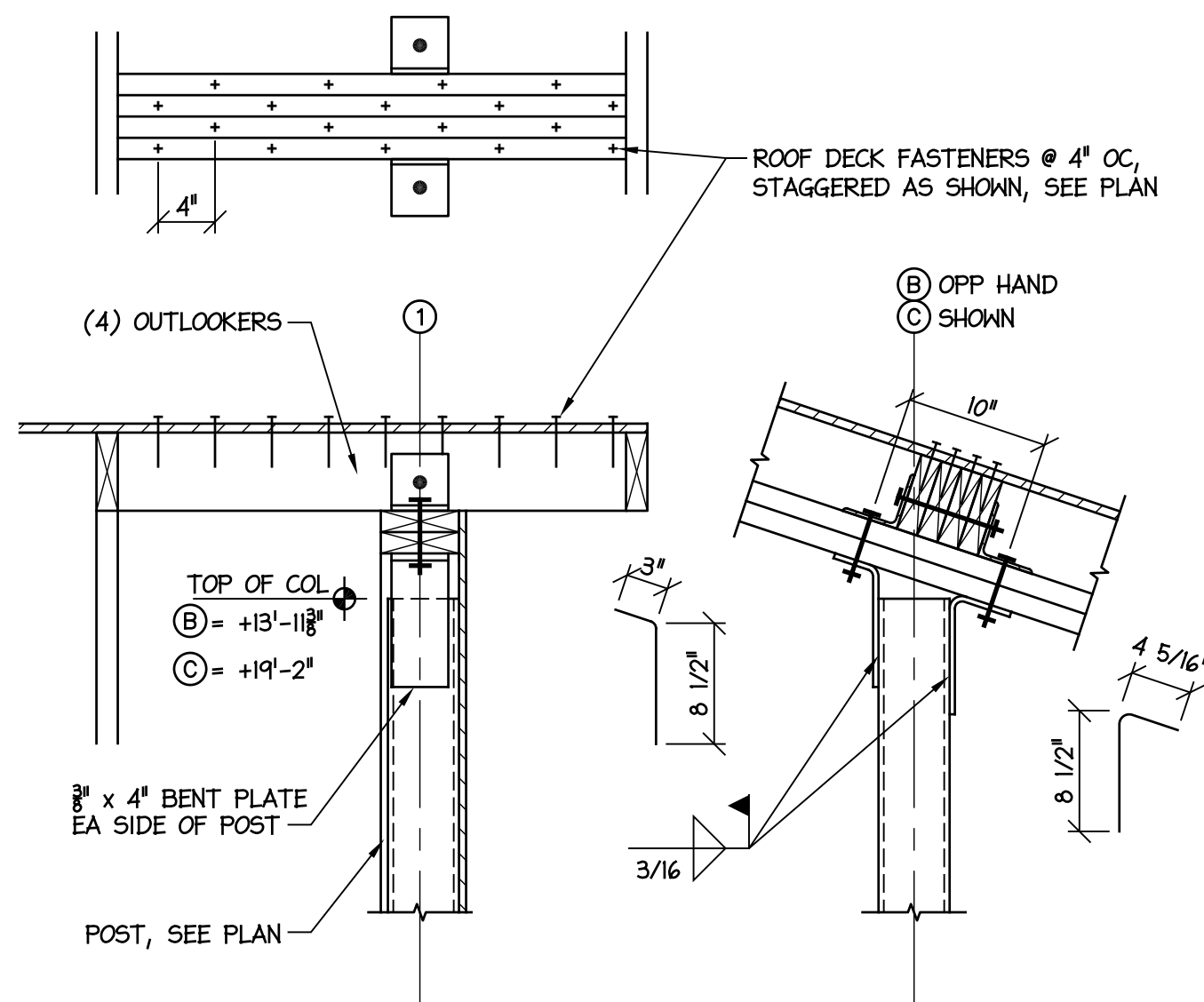
9 COL CAP AT LOBBY WINDOW
SCALE: 1" = 1'-0"



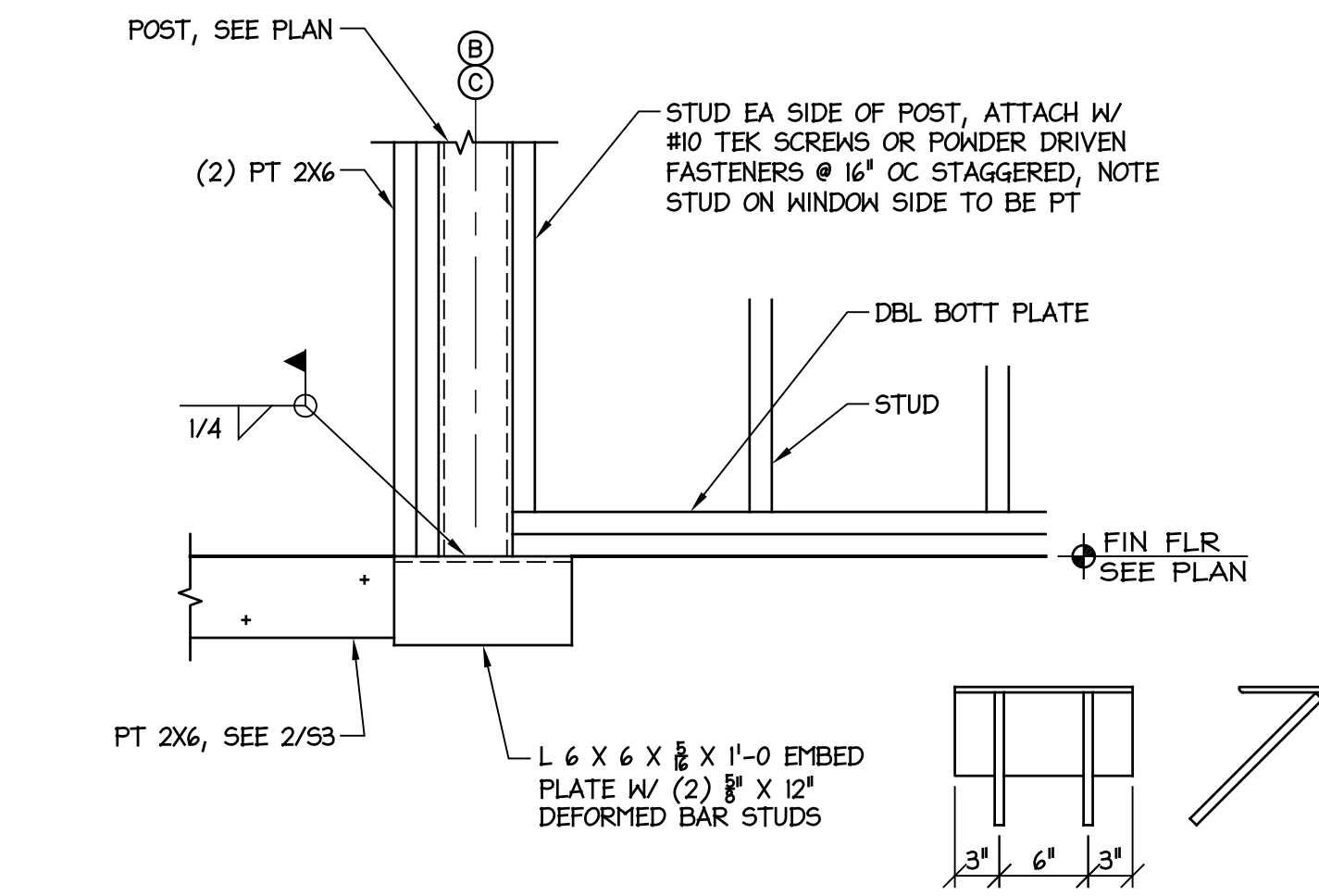
11 PRECAST SILL ANCHORAGE
SCALE: 1" = 1'-0"



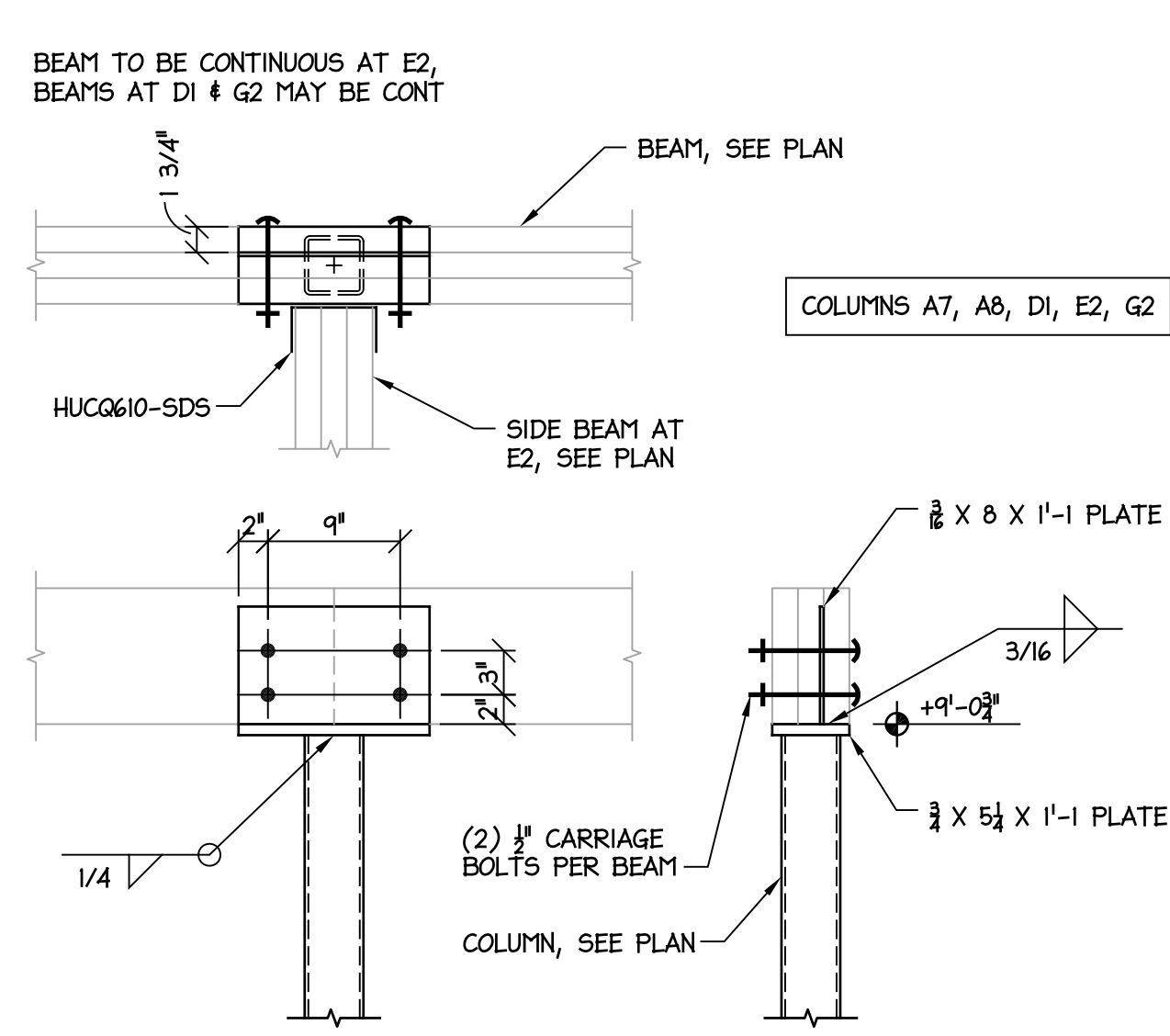
10 PARTITION BEAM CONNECTION
SCALE: 1" = 1'-0"



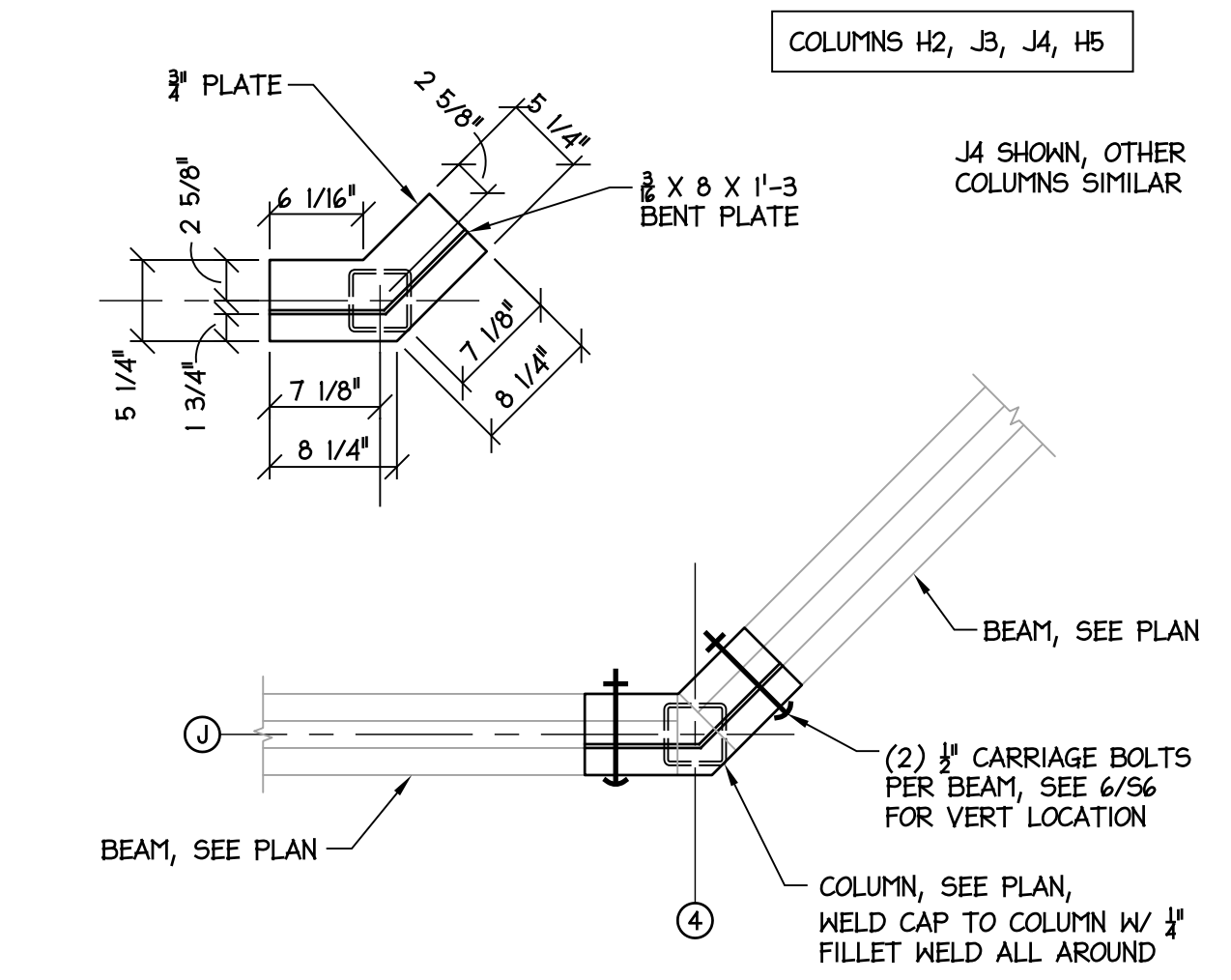
8 LOBBY WINDOW BEAM TO COLUMN
SCALE: 1" = 1'-0"



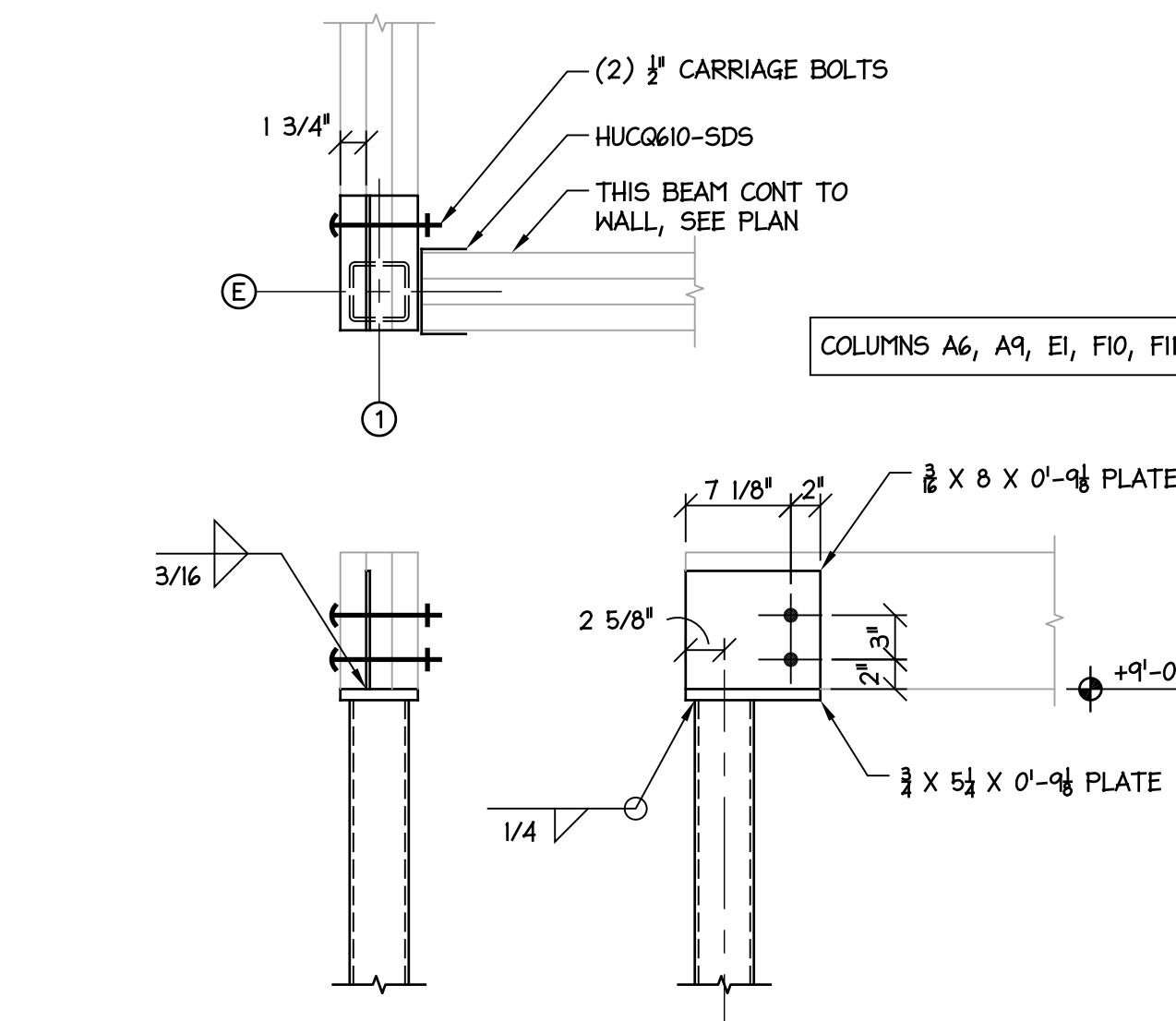
7 COL BASE AT LOBBY WINDOW
SCALE: 1" = 1'-0"



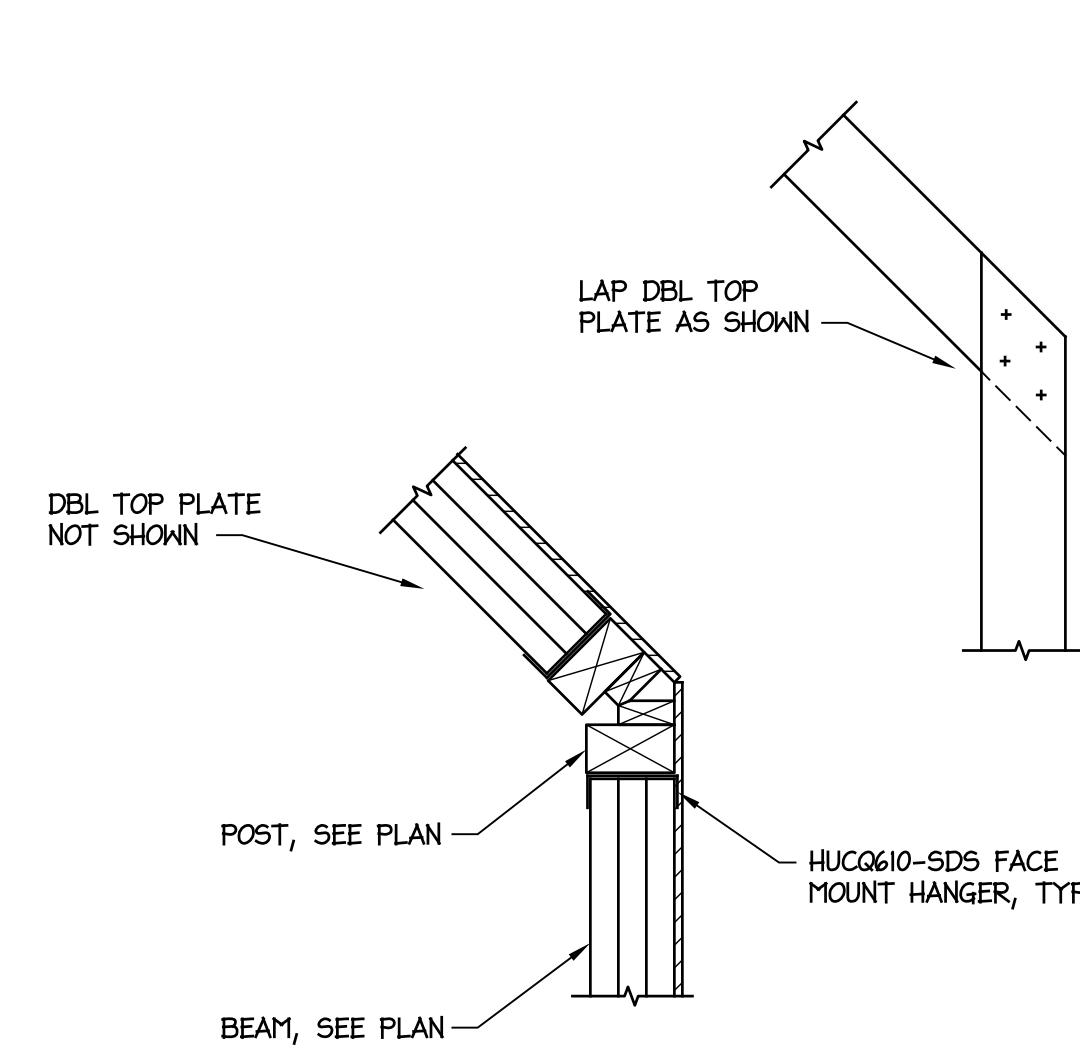
6 PORCH COLUMN CAP PLATE
SCALE: 1" = 1'-0"



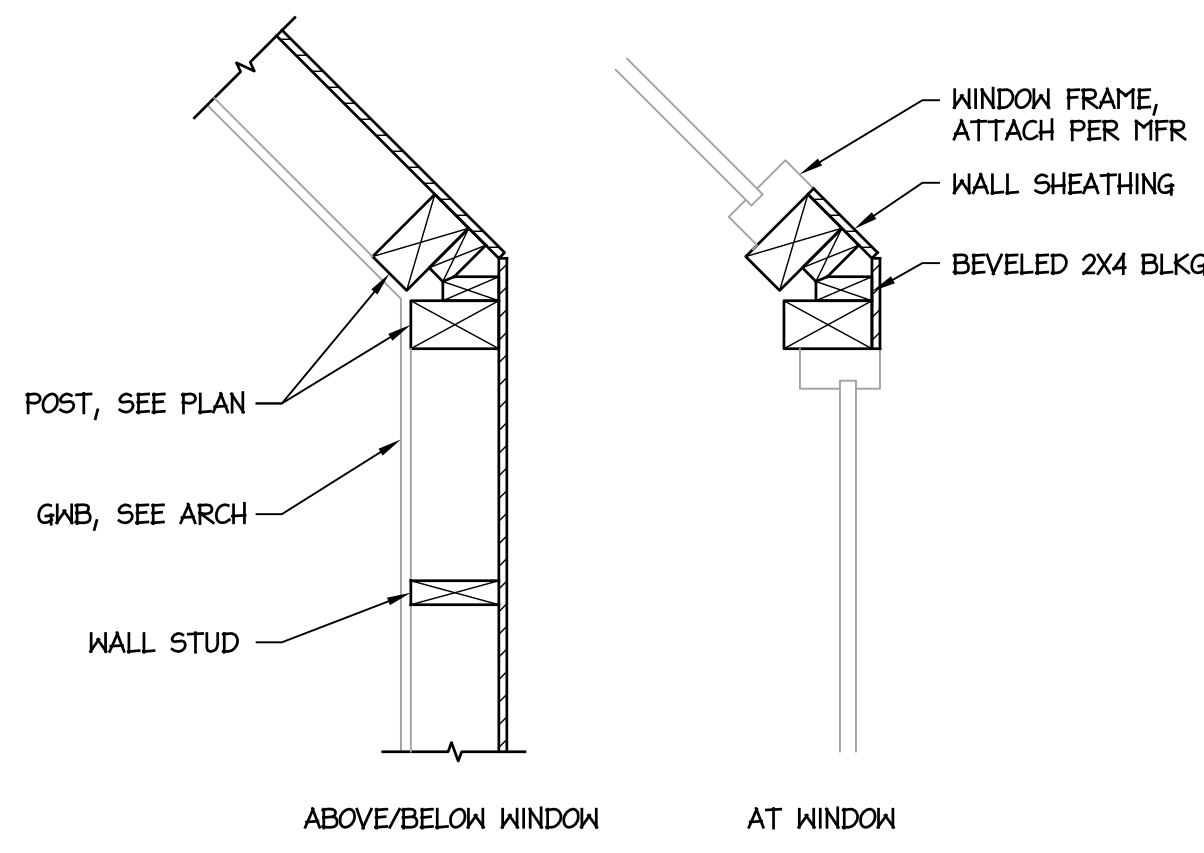
5 PORCH COLUMN CAP PLATE
SCALE: 1" = 1'-0"



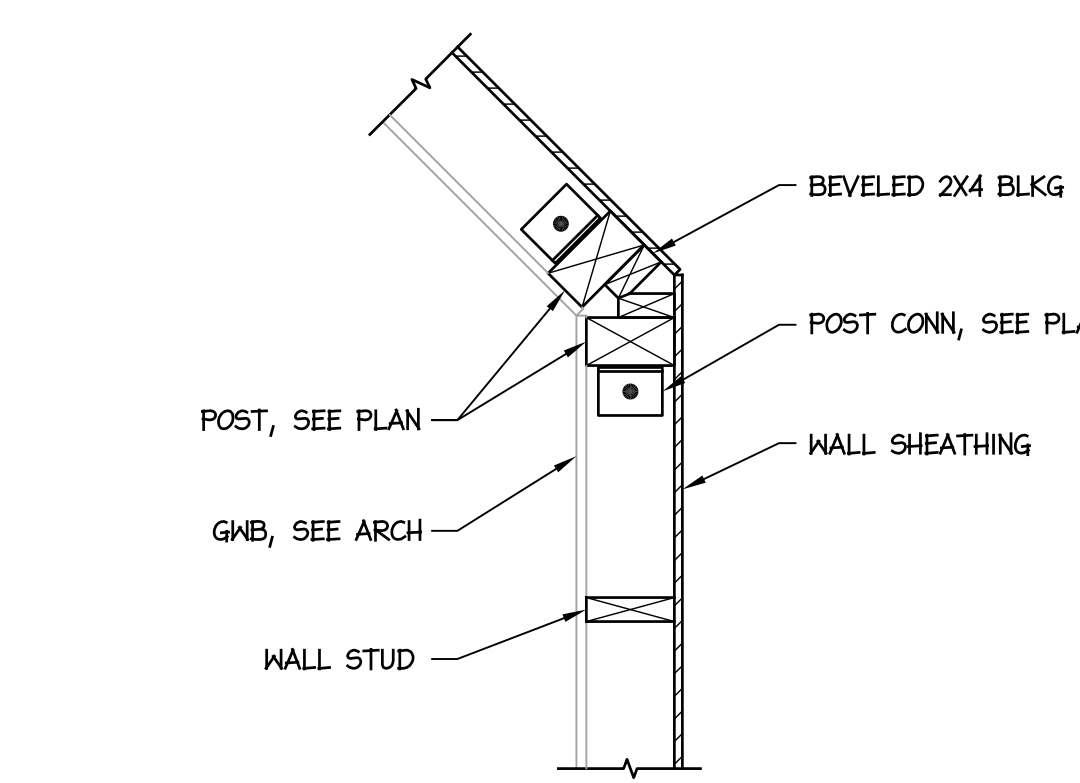
4 PORCH COLUMN CAP PLATE
SCALE: 1" = 1'-0"



3 POST AT 45° WALL CORNER
SCALE: 1" = 1'-0"



2 POST AT 45° WALL CORNER
SCALE: 1" = 1'-0"



1 POST BASE AT 45° WALL CORNER
SCALE: 1" = 1'-0"

DocuSigned by:
Michael M...
1A2DE8E98B35C40

8/19/2015

DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, NC DOT

CONSULTANT:

DRAWING TITLE / DESCRIPTION:
FRMG DETAILS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION
ID.# 11-09079-01A

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BID DOCUMENTS

1 SOUTH WILMINGTON STREET
FARMERSVILLE, NORTH CAROLINA 27834
PHONE 919-737-4625 FAX 919-737-0889

S6

GENERAL

1. See specifications for further information. In case of conflict between specifications & drawings, contact architect for resolution.
2. Contractor is responsible for coordination & distribution of all changes in contract documents to all subcontractors.
3. Contractor shall verify all field conditions, elevations, & dimensions prior to construction. Do not scale from plans.
4. Means & methods of construction, including temporary bracing, shoring, & jobsite safety, are the responsibility of the contractor.
5. Structural frame shall be braced until erection is complete & permanent connections & bracing are installed.
6. Provide silt fence or other erosion & sediment control measures as required.
7. If demolition is included in project, sawcut all edges of existing slab and asphalt to remain adjacent to new construction.

B. FOUNDATION

1. Footing excavations shall be reviewed by a geotechnical engineer or construction testing agency approved by the architect or engineer.
2. Footing depths shown are based on geotechnical investigation or presumptive soil properties. Soft or unsuitable soils shall be removed & replaced with suitable fill as specified.
3. Under slabs & footings, remove all topsoil, trash, & organic material, & replace with select fill compacted to 95% maximum density as measured by the Standard Proctor Method (ASTM 698) in 12 inch maximum lifts. The top 12" shall be compacted to 100% maximum density.
4. Contractor is responsible for shoring while excavating near existing structures.

C. CONCRETE

1. Compressive strength of concrete shall be 3000 psi for footings & 4000 psi for walls and slabs, unless otherwise noted.
2. Coordinate floor slopes and depressions with arch and plumbing plans. Maintain specified slab thickness below depressed and sloped areas.
3. If not specified on plans, provide sawed slab control joints in slabs on grade spaced at not more than 48 times the slab thickness.
4. Reinforcing steel shall meet ASTM A 615, Grade 60.
5. Welded wire reinforcement shall conform to ASTM A 185 & A 82.
6. Grout under all columns & beam bearing plates with non-shrink, non-metallic grout which meets ASTM C 1107.
7. Clear distance from face of concrete to main reinforcing, UON:

Suspended slabs and joists:	1"
Grade beams, pedestals, columns, walls:	2"
Footings & walls cast against earth:	3"
8. Provide (2) #4 x 48" diagonal corner bars at center of slab at all corners of floor slab openings.
9. Lap all reinforcement splices 48 bar diameters, UON.
10. Detailing, fabrication, & installation of reinforcing steel shall conform to ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315).
11. Workmanship, tolerances, & concrete placement shall conform to "Standard Specifications for Structural Concrete" (ACI 301).
12. Chamfer exposed edges of concrete 3/4", UON.
13. Anchor bolts shall conform to ASTM F 1554, Grade 36.
14. See architectural plans for floor finishes. Coordinate slab curing & sealing compounds with flooring materials.
15. Provide 3/8" expansion joint material between building and exterior concrete, UON.

D. MASONRY

1. Unless otherwise shown, provide control joints in concrete masonry walls at approx 20' OC, & brick expansion joints at approx 40' OC. Coord w/ architect.
2. Provide galvanized metal ties at 16" OC each way for all brick veneer, unless otherwise shown on architectural plans.

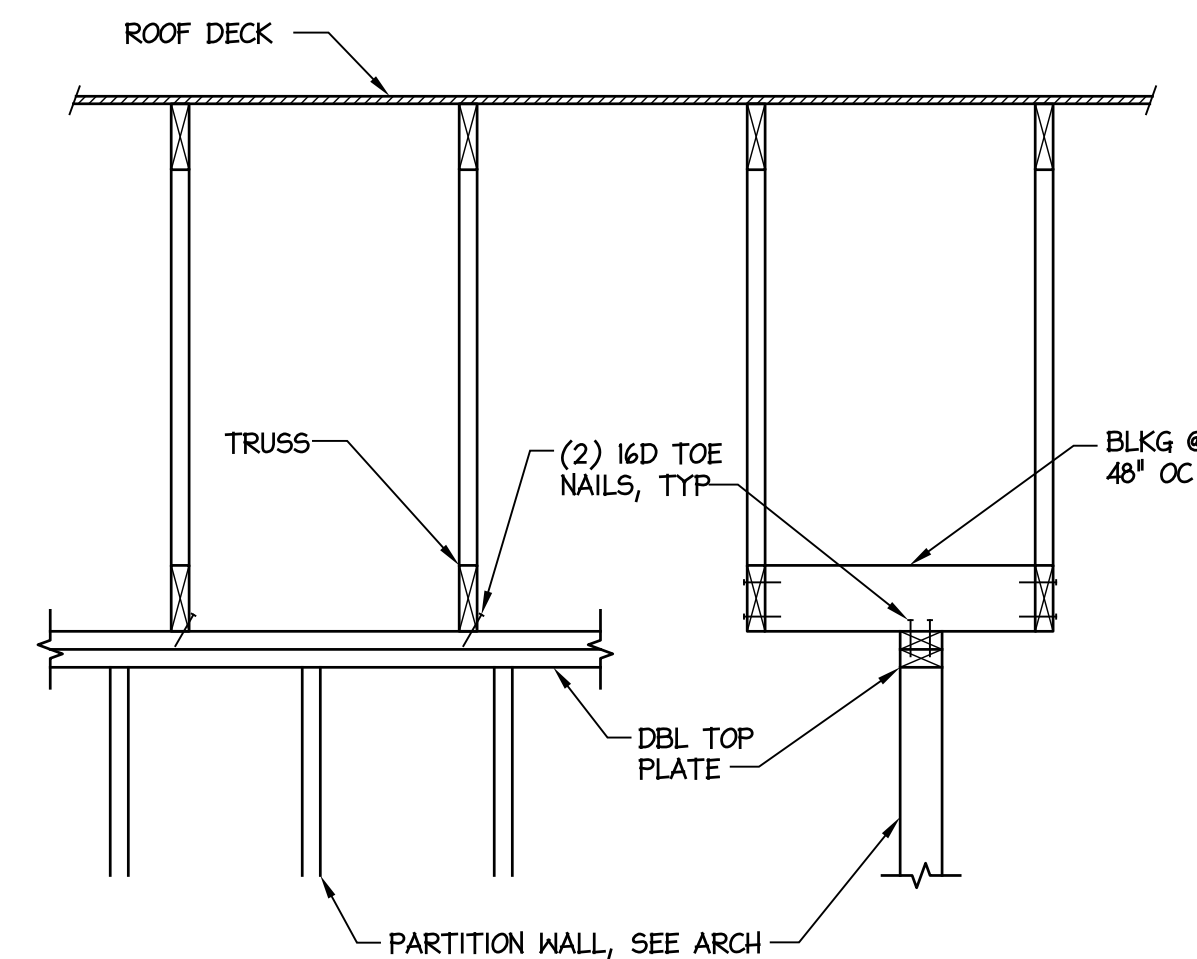
E. STRUCTURAL STEEL

1. Structural steel shall conform to ASTM A 572 except: round pipe shall be A 53, Grade B; square and rectangular tube shall be A 500, Grade B.
2. Steel construction shall conform to "Manual of Steel Construction, Allowable Stress Design," Ninth Edition.
3. Connection bolts shall be 3/4" ASTM A 325, UON. If connection loads not specified, design for loads shown in AISC beam span tables. Assume bearing type connections with threads included in the shear plane.
4. Cutting of structural members shall have all re-entrant corners shaped & notch free to a minimum 1/2" radius.
5. Unless otherwise designed by fabricator, weld material shall be E70XX.
6. See architectural & other drawings for miscellaneous steel not shown on structural plans.
7. Provide cap plate top of all tube & pipe columns, UON.
8. All field welds shall be cleaned & painted with a rust inhibiting paint compatible with the shop coat.
9. Beams & lintels shall bear 8" minimum on masonry, UON.

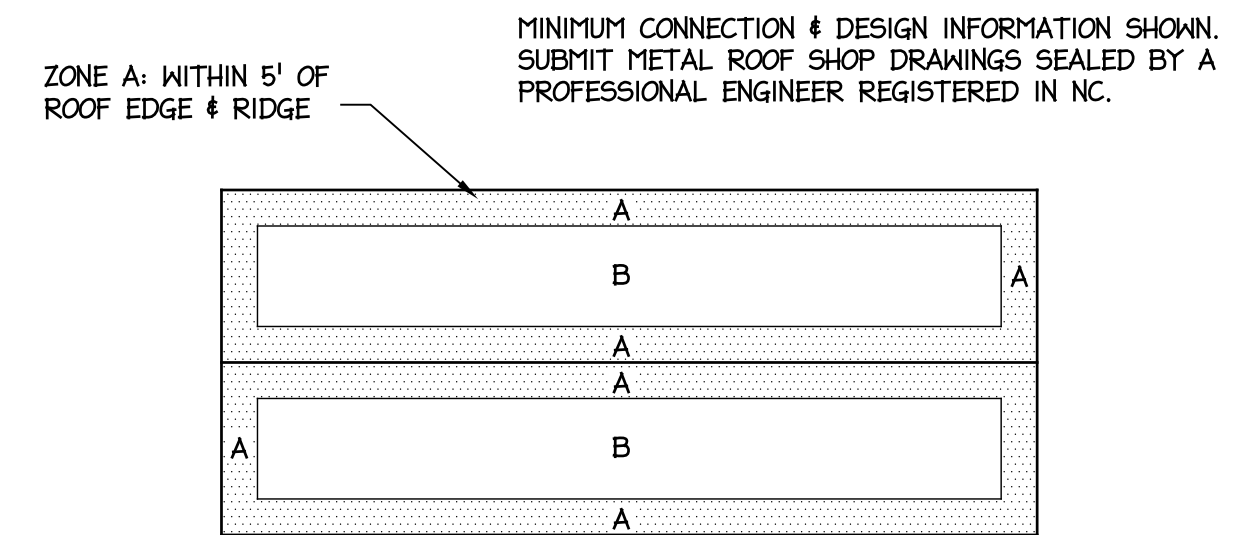
F. WOOD

1. Structural lumber shall be SPF #2 or better, UON. Wood for fabricated trusses shall be SYP #2 or better, except that webs may be SYP #3.
2. Wood in contact with concrete or masonry shall be treated.
3. Straps, ties, hangers, and other connection hardware shall be galvanized.
4. Connections not otherwise detailed shall be in accordance with Tables 2304.9.1-1 thru 2304.9.1.6 of the NC State Building Code.
5. Install 2" x 2" steel washers at anchor bolts on all bearing wall sill plates.
6. Trusses shall be designed for the full dead & live loads specified in the contract. Submit truss shop drawings bearing the seal of a registered professional engineer licensed in the state of NC. Show truss layout & truss designs including required bracing. Bracing design is the truss designer's responsibility.
7. Contractor shall install both temporary and permanent bracing. Note that permanent bracing is often shown on individual truss calculation pages instead of the truss layout sheet, especially where there is no hard ceiling applied to truss.
8. Additional bracing may be required by engineer of record as indicated on plans for support of gable walls or other items.
9. Install blocking in walls & ceiling where required for partitions, fixtures, & other misc items. Coordinate with all trades.
10. Add 3" plywood spacers at multi-ply wood beams & headers to match wall thickness.
11. All LVL beams & PSL columns shall meet the following:

	E (psi)	Fb (psi)	Fv (psi)	Fc (psi)
LVL	1,900,000	2600	285	n/a
PSL	1,800,000	2400	190	2500
12. Attach multiple LVL beams together with (2) Simpson SDW (or equal) screws @ 16" OC along length of beam.
13. Countersink bolted beam connections where required to clear architectural finishes.



57 SCALE: 3/4" = 1'-0"



MINIMUM CLIP SPACING:

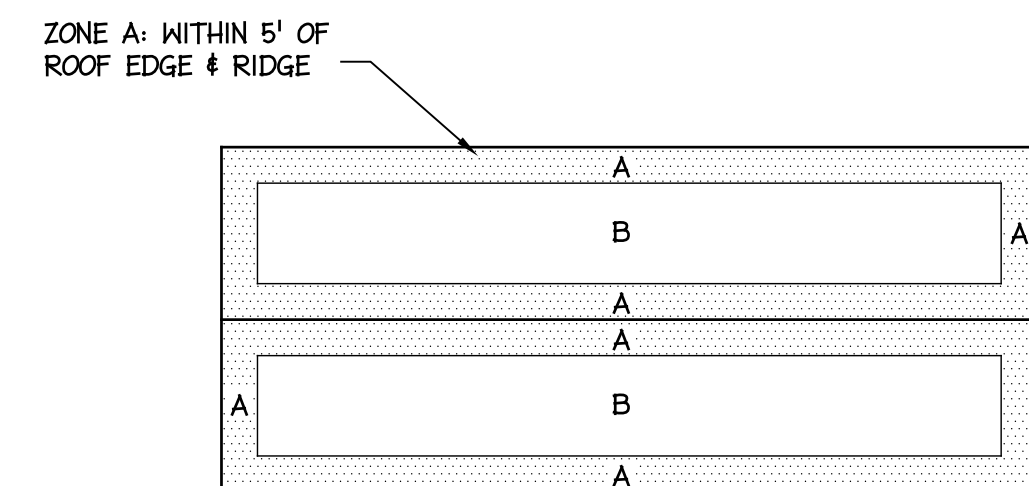
ZONE A: 20" OC ALONG EACH RIB
ZONE B: 34" OC ALONG EACH RIB
(BASED ON 16" RIB SPACING)

FASTENER TYPE:

MINIMUM (2) #10 SELF DRILLING SCREWS PER
CLIP, SCREW LENGTH SUFFICIENT TO PENETRATE
INSULATION & STRUCTURAL ROOF DECK

COMPONENT & CLADDING UPLIFT PRESSURES	
ZONE A:	60.5 PSF
ZONE B:	36.0 PSF
OVERHANG:	67.3 PSF

S7 SCALE: NTS



FASTENER SPACING:

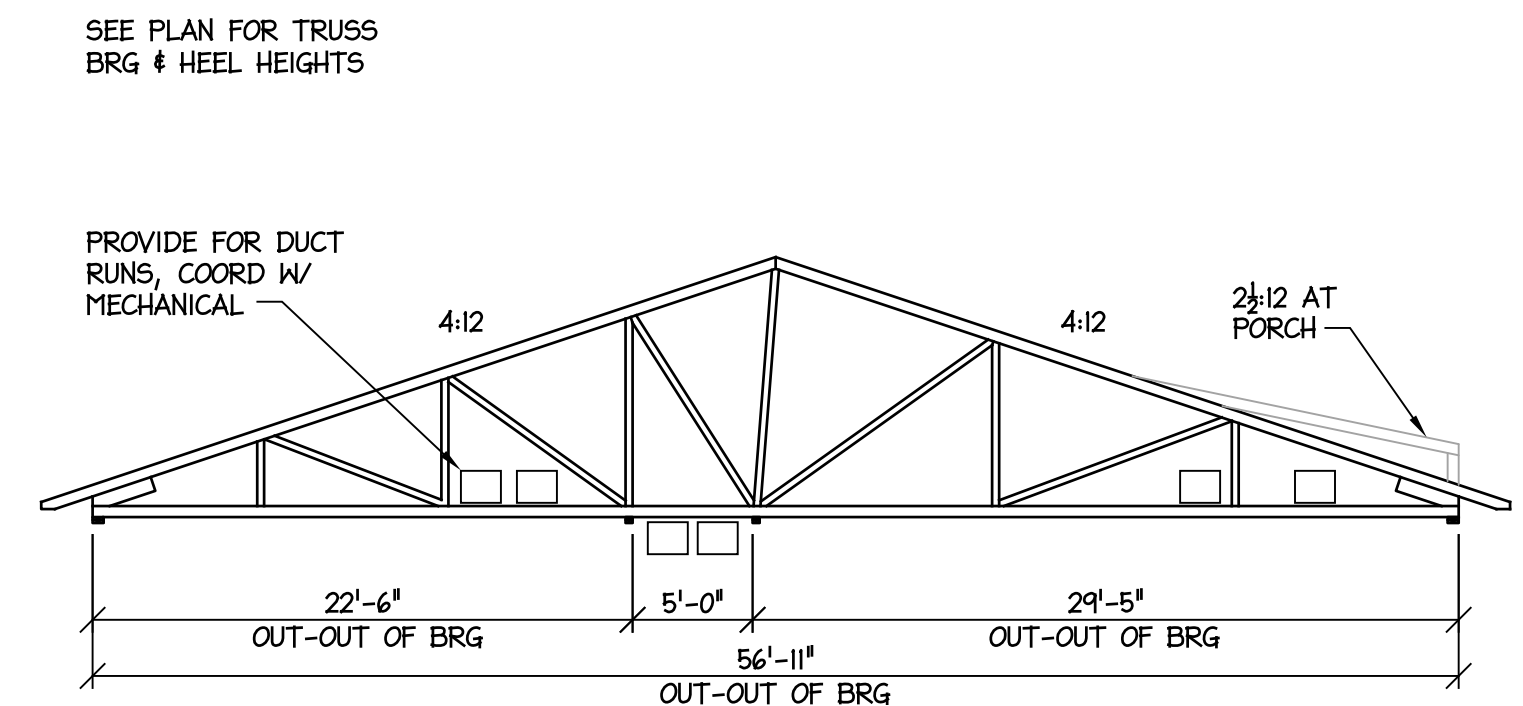
ZONE A: 8" OC & 5" OC ALONG PANEL EDGES,
ALL PANEL EDGES TO BE BLOCKED W/ 2X LUMBER

ZONE B: 8" OC & 6" OC ALONG PANEL EDGES
BLOCKING NOT REQUIRED AT PANEL EDGES

FASTENER TYPE:

#8 X 2" BUGLE HEAD SCREWS

(57) SCALE: NTS



(57) SCALF. $1/8" = 1'-0"$

DocuSigned by:
Michael H
2ADEBE9B8954

1/19/2015 5

ACILITIES DESIGN

**FACILITIES DESIGN
ARCHITECTS & ENGINEERS**

RALEIGH, NORTH CAROLINA 27601
PHONE: 919/707-4540 FAX 919/715-0399

BID DOCUMENTS

DETAILS GENERAL NOTES

CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

2300 FERRY ROAD, HAVELOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION
D.# 11-09079-01A

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DATE ISSUED: 8-14-15

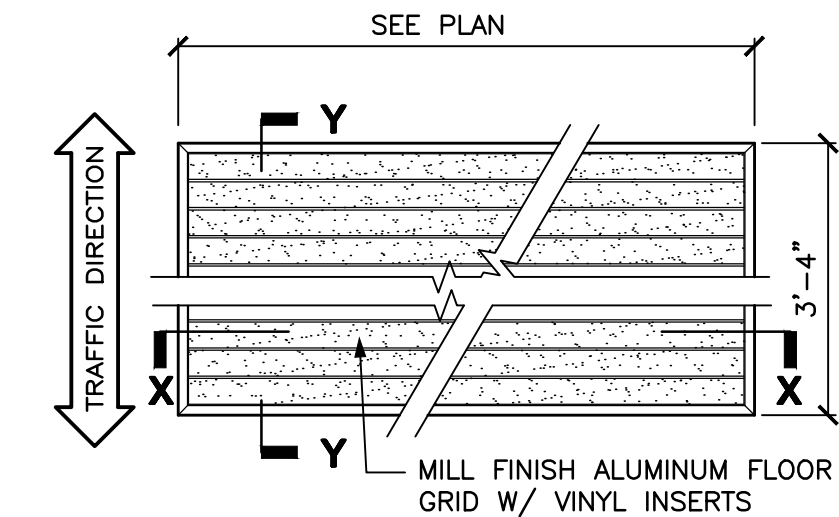
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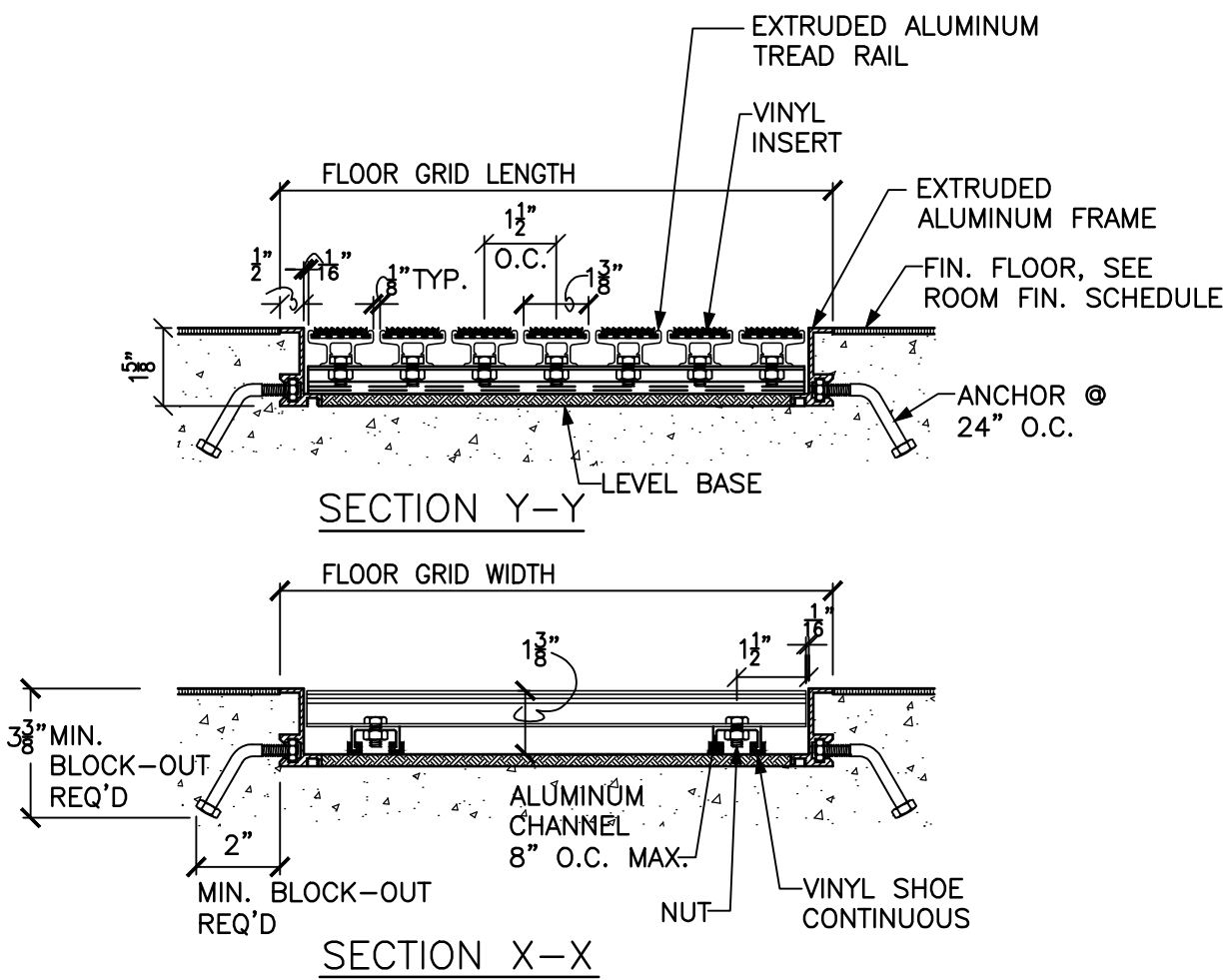
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GENERAL NOTES:

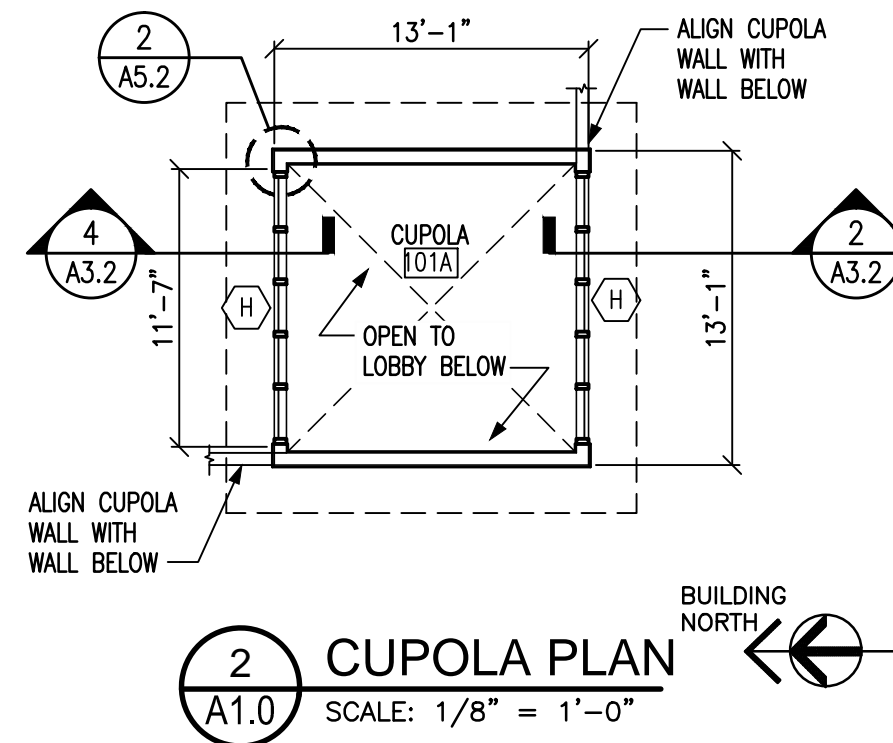
1. CONTRACTOR SHALL CAULK ALL INTERIOR FLOOR CONTROL AND EXPANSION JOINTS AT FLOORS TO RECEIVE FINISH FLOOR MATERIALS. SEE STRUCTURAL DRAWINGS FOR LOCATIONS.
2. CONTRACTOR SHALL PROVIDE GYPSUM BOARD CONTROL JOINTS AS INDICATED IN MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. G.C. TO PROVIDE AND INSTALL FIRE EXTINGUISHER & SEMI-RECESSED CABINETS (F.E.C.) PER NFPA-10 / NCSBG REQUIREMENTS. SEE DETAIL 3/A1.0
4. CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES. DO NOT SCALE DRAWINGS.
5. ALL WALL DIMENSIONS ARE TO THE FACE OF STUD (F.O.S.), UNLESS OTHERWISE NOTED OR DETAILED.
6. ALL EXTERIOR WALL STUD FRAMING IS 2x6 @ 16" O.C..
7. PROVIDE ACOUSTICAL SOUND BATTS IN INTERIOR WALLS AND ABOVE CEILINGS OVER SOUND-INSULATED WALLS (2'-0" WIDE x LENGTH OF WALL)
8. NOT USED
9. NOT USED
10. REFER TO ENLARGED PLAN & DETAIL DWGS FOR ADDITIONAL DIMENSIONS AND WALL TYPE DESIGNATIONS.
11. PROVIDE BLINDS AT ALL EXTERIOR WINDOWS EXCEPT IN LOBBY. INSTALL PER MANUFACTURER'S INSTRUCTIONS. SEE SPECIFICATION SECTION 12 2113.
12. PROVIDE CONCRETE PADS FOR MECHANICAL UNITS. PADS SHALL BE 4" WIDER THAN UNIT FOOTPRINT ALL AROUND.
13. PROVIDE & INSTALL RECESSED FLOOR GRIDS WITH VINYL INSERTS AS SHOWN ON PLAN. SEE SPECIFICATION SECTION 12 4813. GC. TO COORDINATE INSTALLATION WITH CONCRETE SLAB POUR AND THICKNESS OF FINISH FLOOR MATERIALS.
14. PROVIDE AND INSTALL STEEL SHELVING UNITS, 5'-0" HIGH x 36" LENGTH x 18" DEEP. SEE SPECIFICATION SECTION 10 5613.
15. SEE DRAWINGS E2.0 KEYNOTE 4 FOR EXTENT & LOCATION OF 1/2" FIRE RETARDANT PLYWOOD TELEPHONE BOARD(S).
16. ALL INTERIOR WALLS ARE TYPE 'C' U.O.N. SEE DETAIL 4/A3.6
17. SEE DETAIL 3/A1.0 FOR FIRE EXTINGUISHER CABINET.



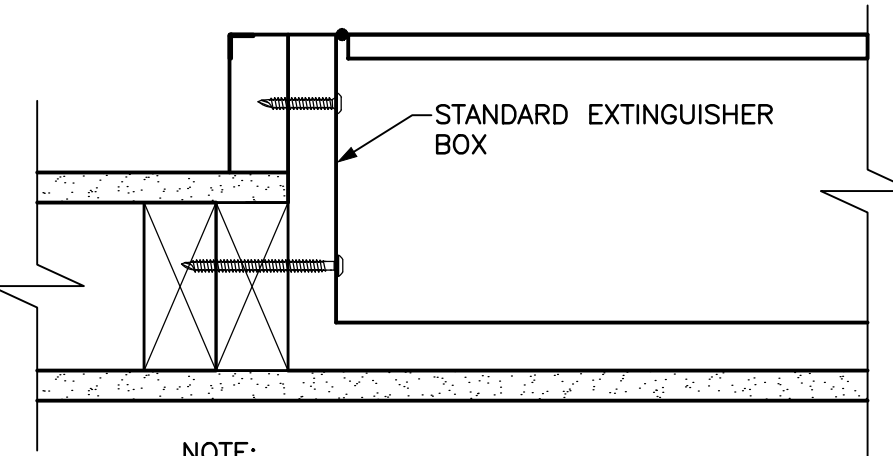
5 RECESSED FLOOR GRID - PLAN
A1.0 SCALE: 3" = 1'-0"
SEE NOTE 13



4 RECESSED FLOOR GRID - SECTION
A1.0 SCALE: 3" = 1'-0"
SEE NOTE 13

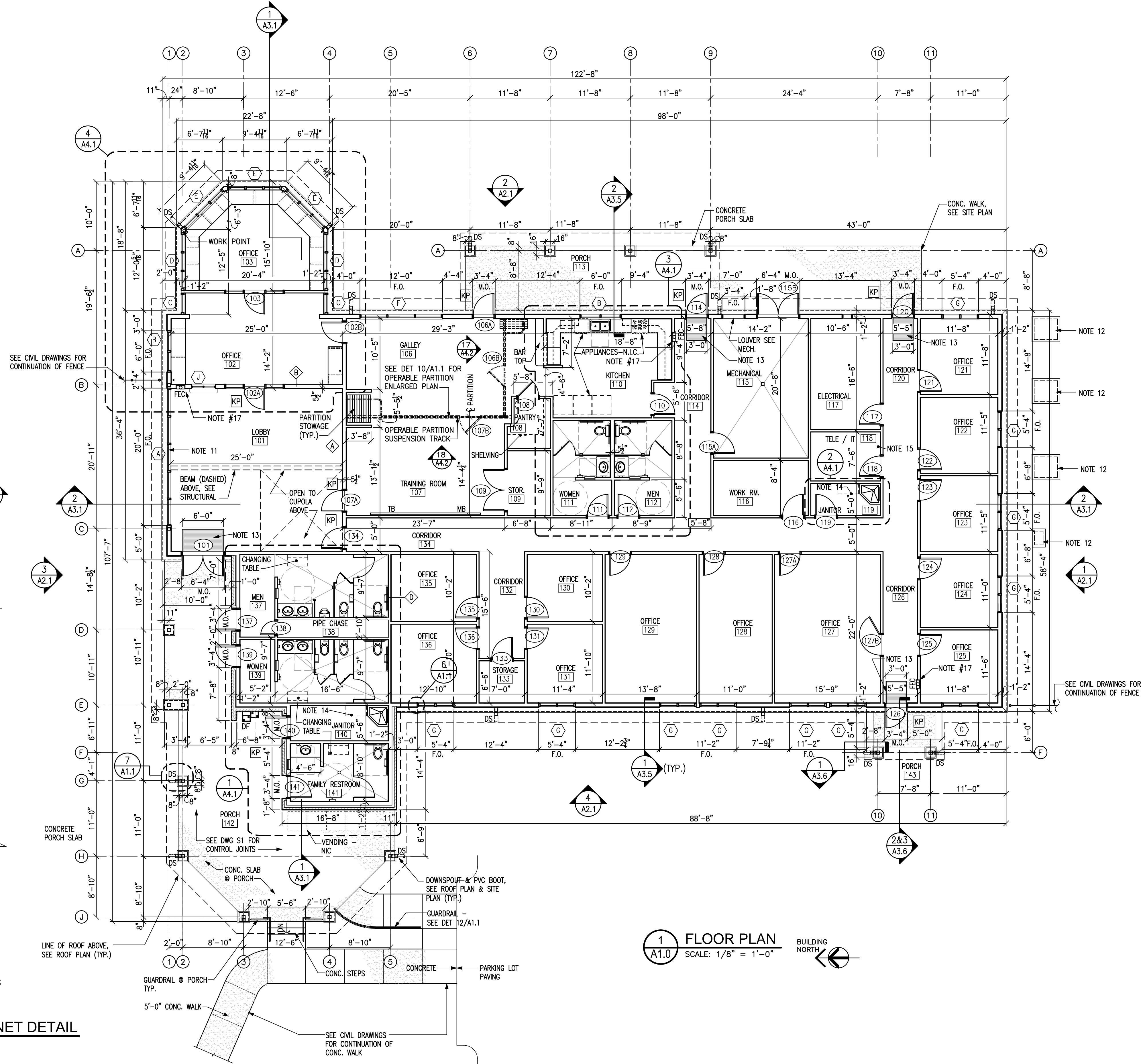


2 CUPOLA PLAN
A1.0 SCALE: 1/8" = 1'-0"



- NOTE:
1. PROVIDE NON-RATED CABINETS.
 2. SEE FLOOR PLAN FOR LOCATION OF (FEC) FIRE EXTINGUISHER CABINET
 3. REFER TO NFPA 10 & ADA MOUNTING HEIGHTS (48" MAX. A.F.F. TO DISPENSER CONTROLS)

3 FIRE EXTINGUISHER CABINET DETAIL
A1.0 SCALE: 3" = 1'-0"



1 FLOOR PLAN
A1.0 SCALE: 1/8" = 1'-0"

BID DOCUMENTS

MARK DOUGLAS GIBSON

REGISTERED ARCHITECT

5121

KNIGHTDALE, N.C.

DESIGNED BY:

FACILITIES DESIGN

ARCHITECTS & ENGINEERS

FACILITIES MANAGEMENT DIVISION, NODOT

1 SOUTH WILMINGTON STREET

FALESH, NORTH CAROLINA 27001

PHONE 910/707-4640 FAX 910/707-0896

CONSULTANT:

DRAWING TITLE / DESCRIPTION:

FLOOR PLAN

PROJECT TITLE:

CHERRY BRANCH FERRY FACILITY

NORTH CAROLINA DOT

2300 FERRY ROAD, HAYLOCK, NC 28532

CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION

ID.# 11-09079-01A

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CO.# SITE.# BLDG.#

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REVISIONS

NO. DATE

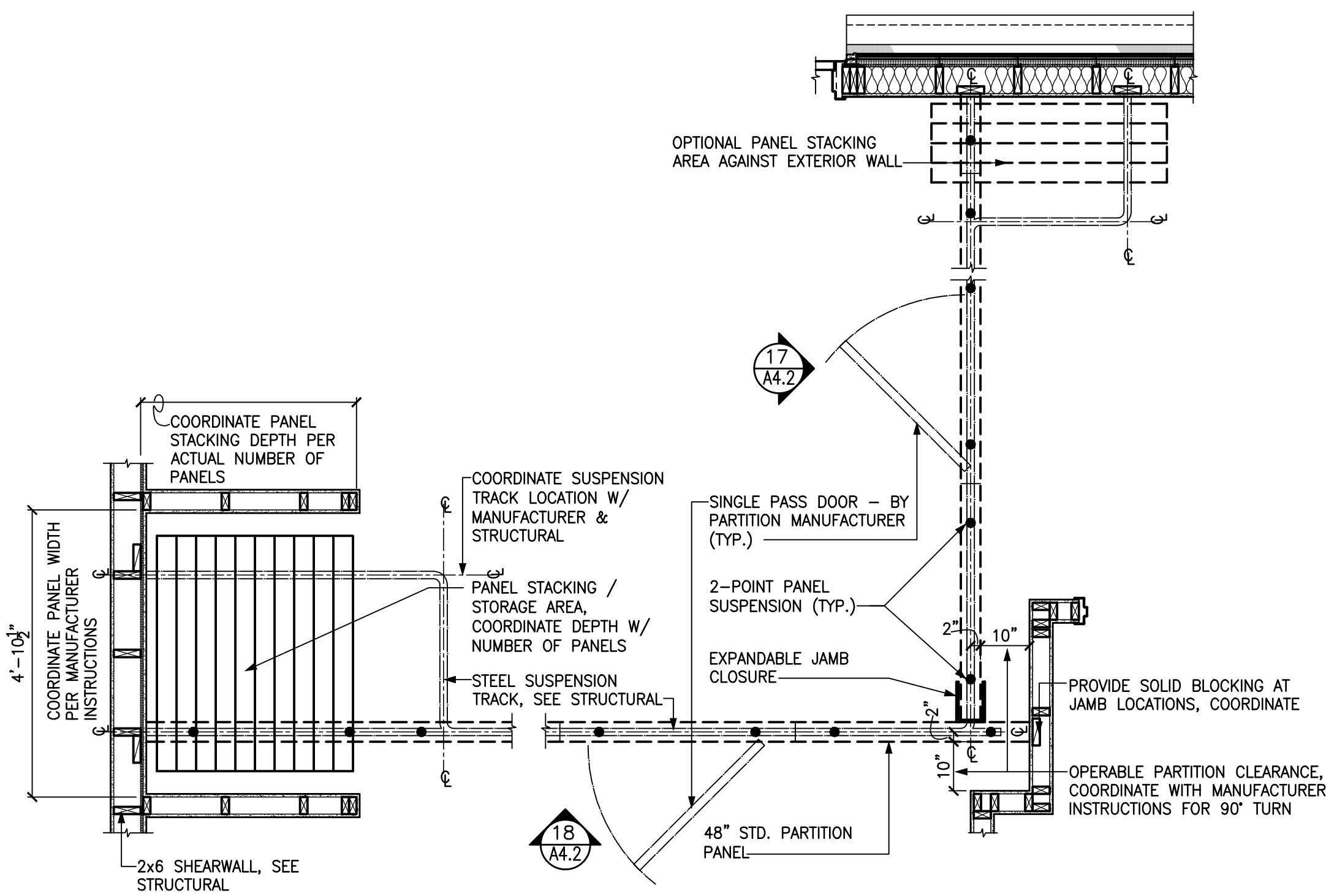
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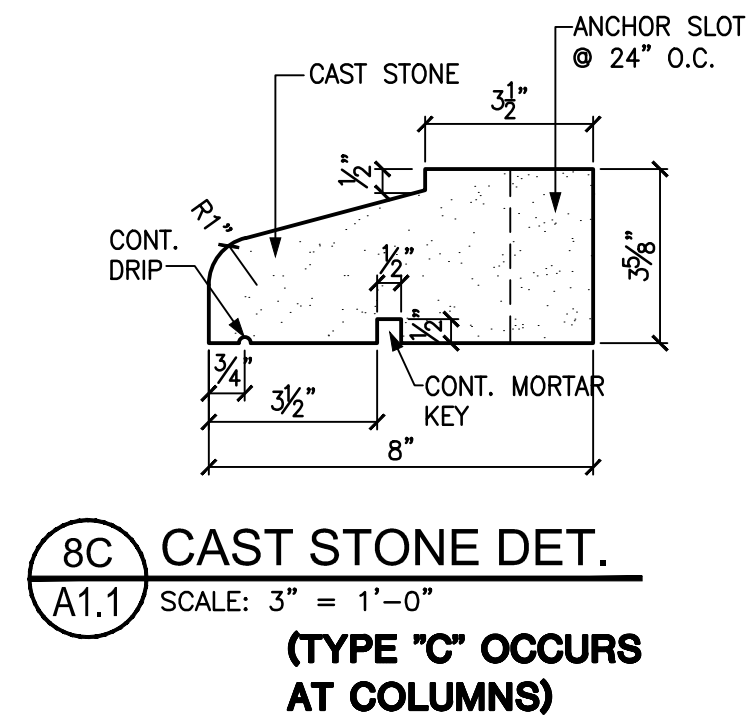
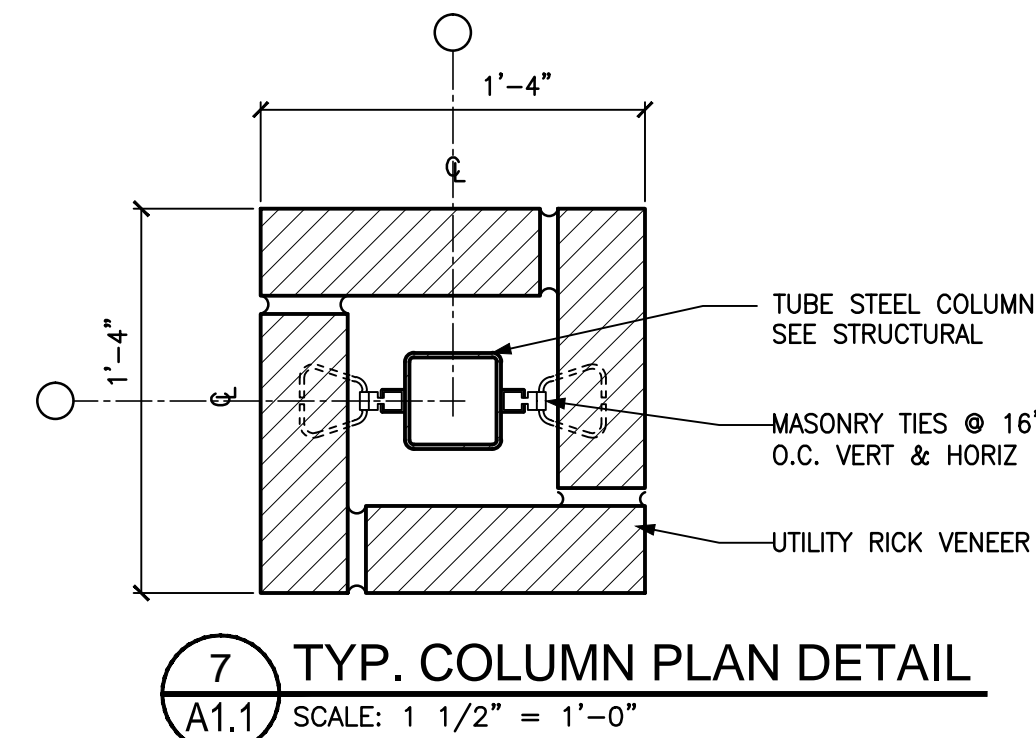
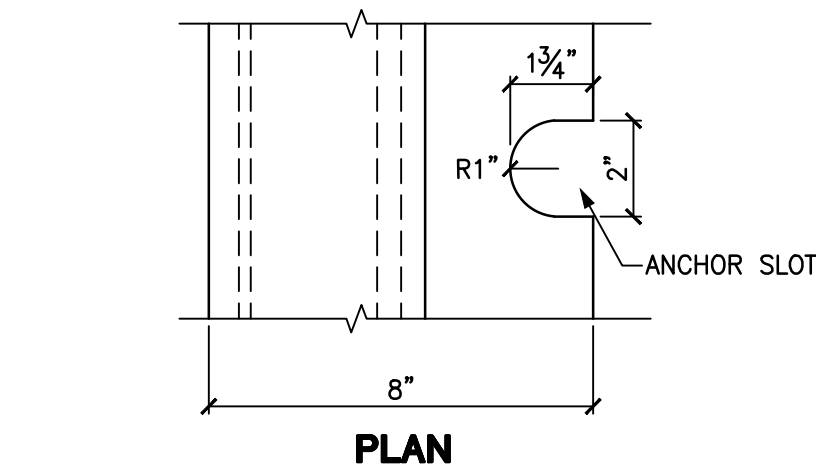
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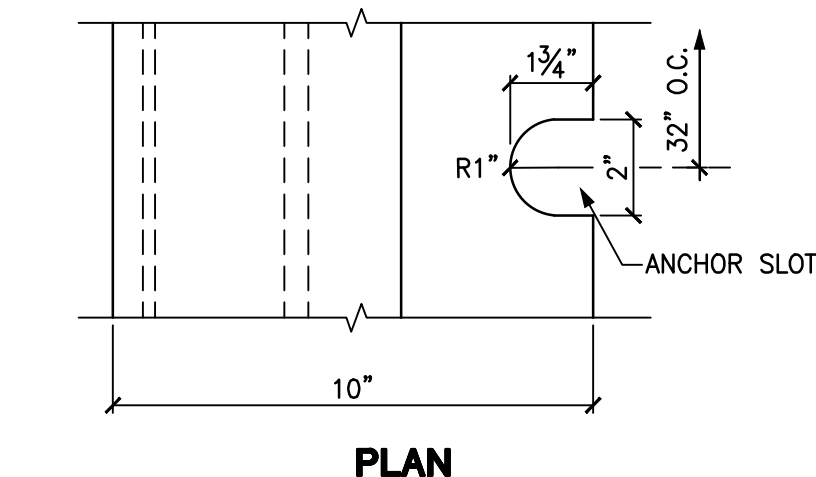
A1.0



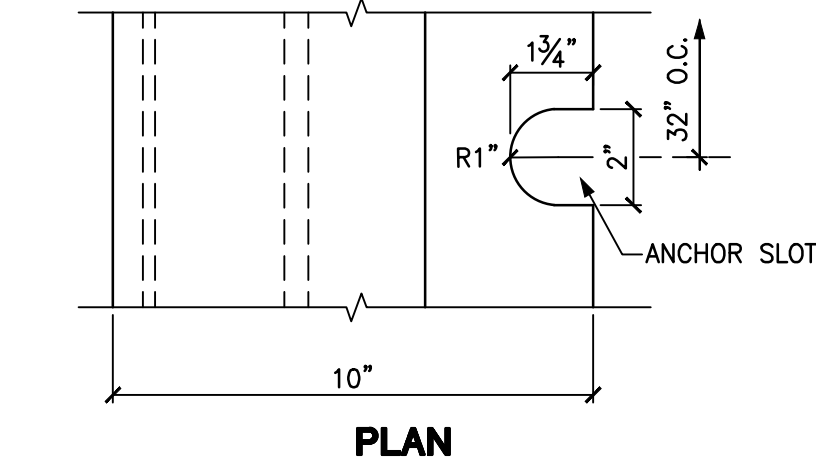
10 OPERABLE PARTITION PLAN
A1.1 SCALE: 1/2" = 1'-0"



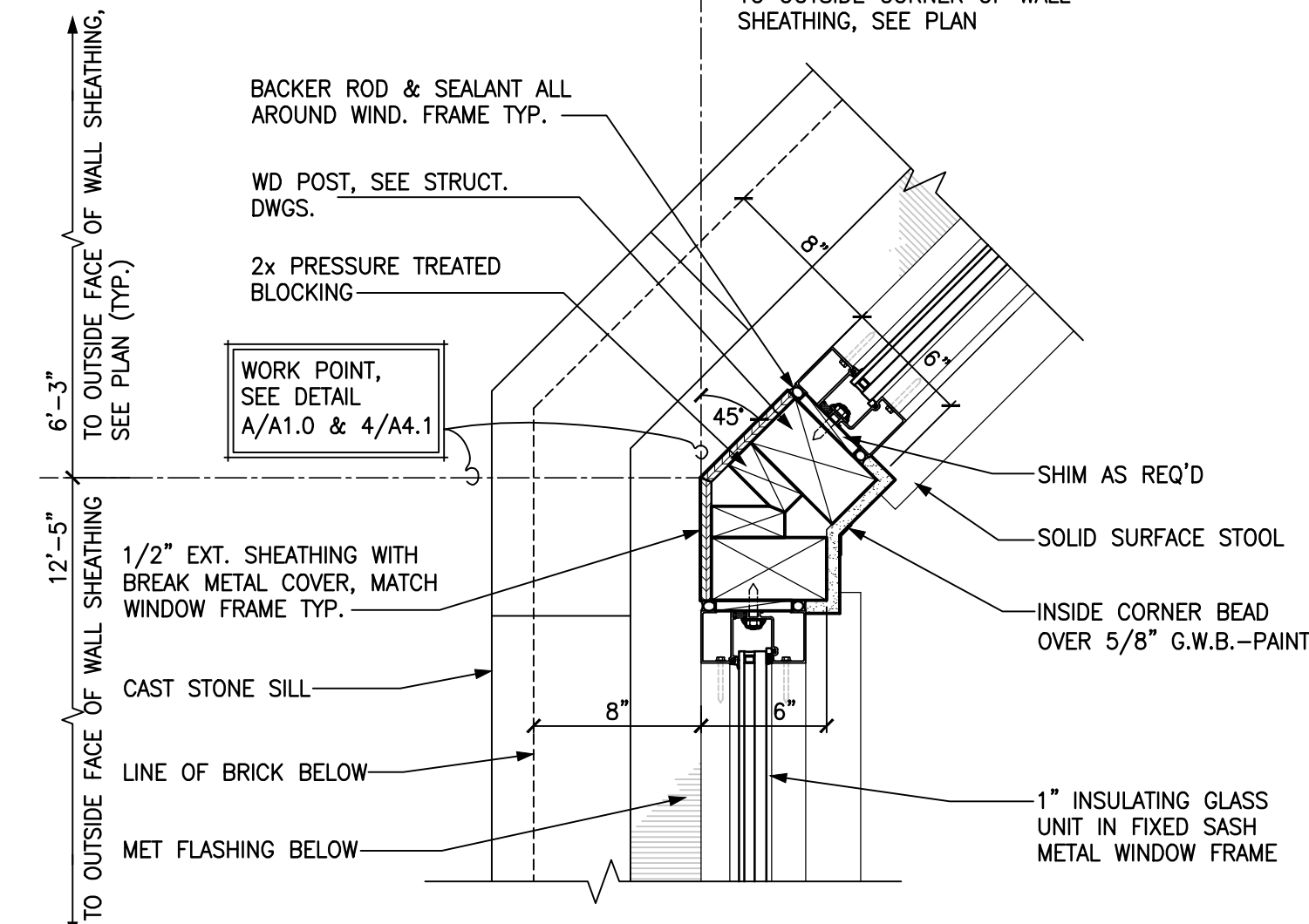
8C CAST STONE DET.
A1.1 SCALE: 3" = 1'-0"
(TYPE "C" OCCURS AT COLUMNS)



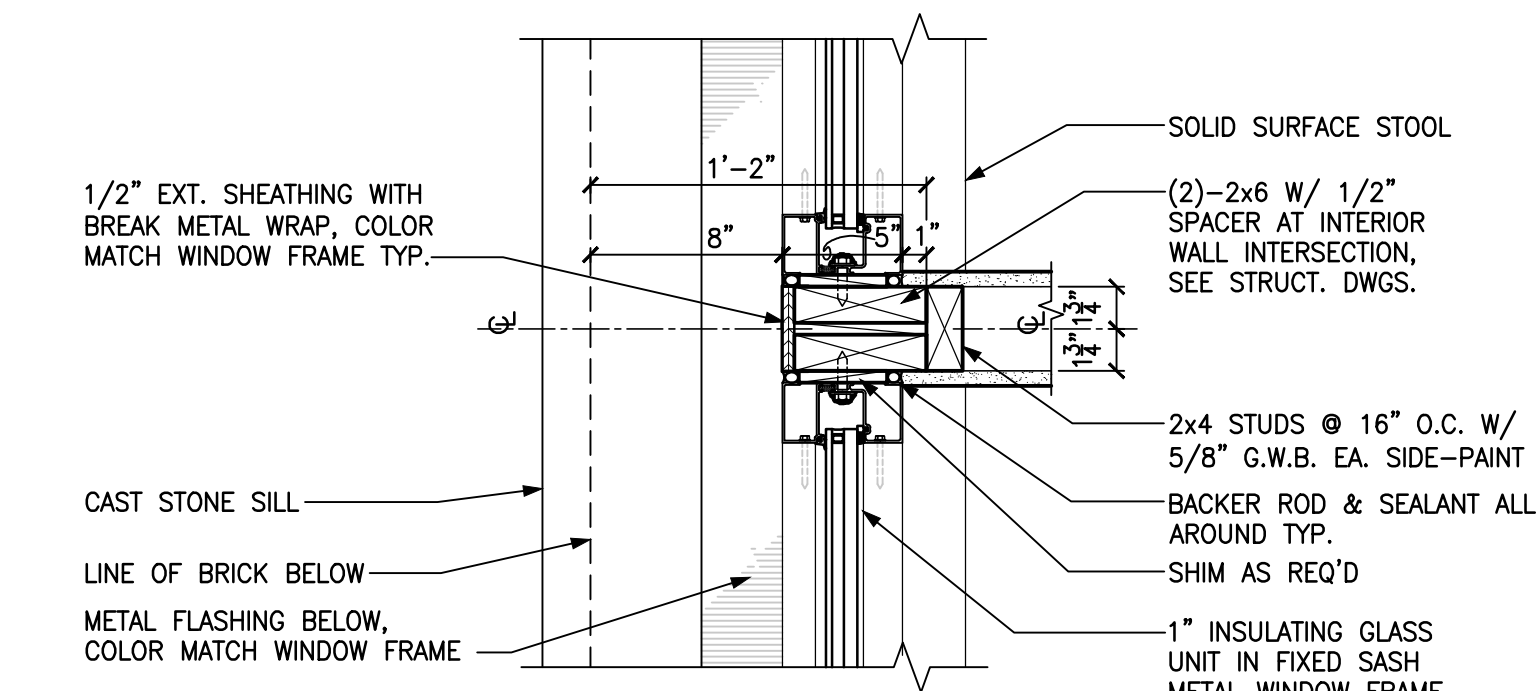
8B CAST STONE DET.
A1.1 SCALE: 3" = 1'-0"
(TYPE "B" OCCURS AT DETAIL 6/ AS2 ONLY)



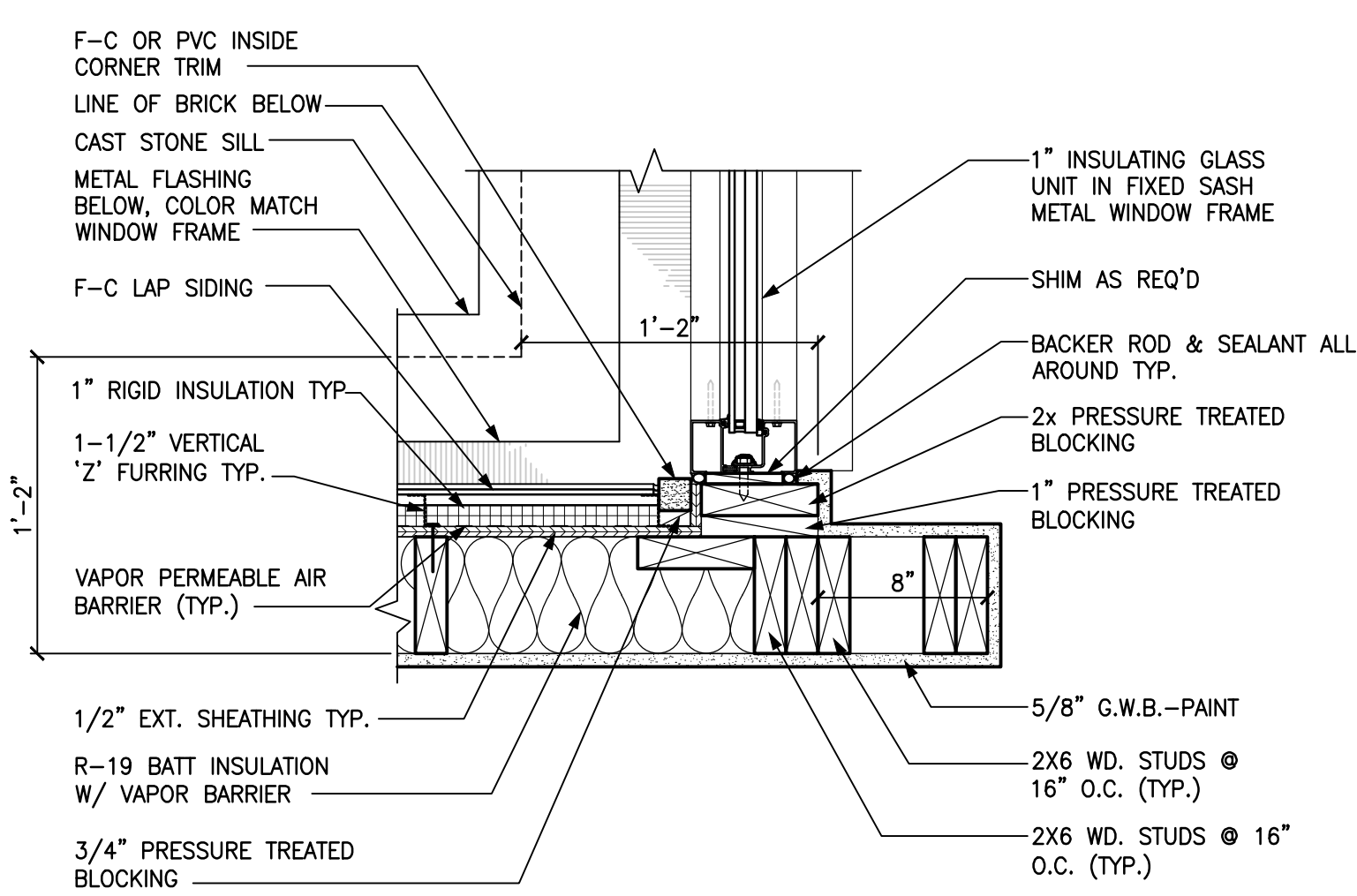
8A CAST STONE DET.
A1.1 SCALE: 3" = 1'-0"
(TYPE "A" TYPICAL)



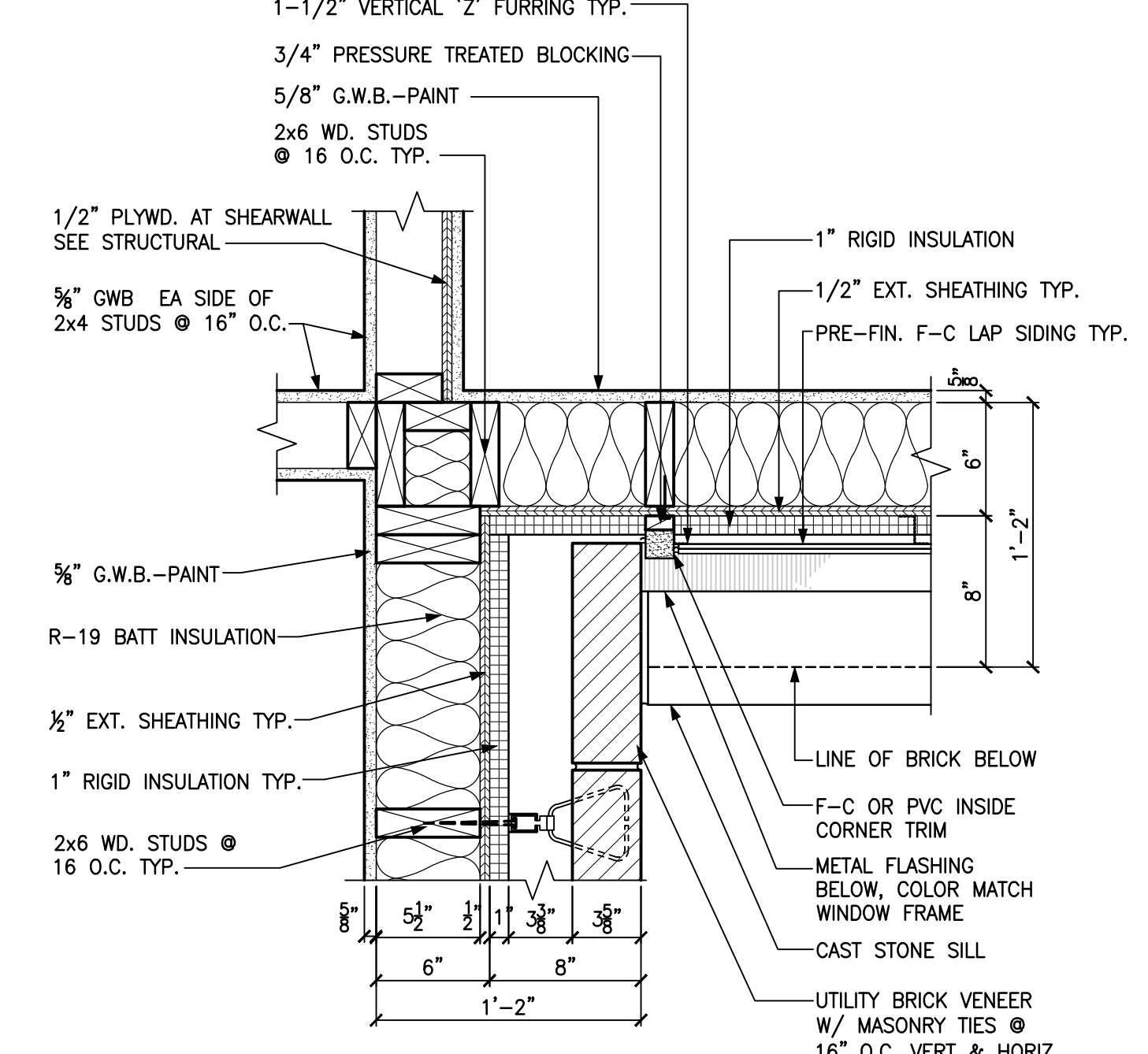
6 PLAN DETAIL
A1.1 SCALE: 1 1/2" = 1'-0"



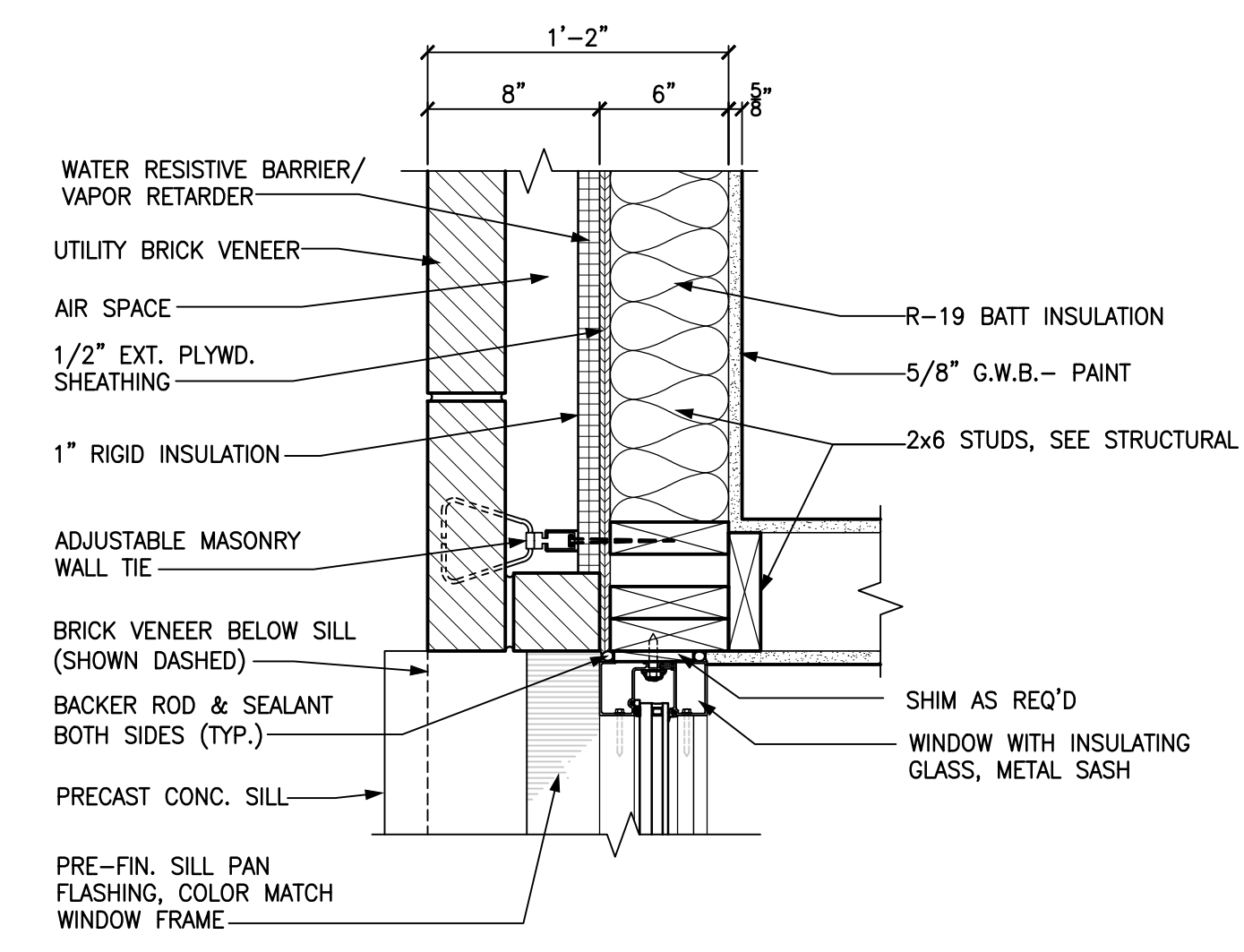
5 PLAN DETAIL
A1.1 SCALE: 1 1/2" = 1'-0"



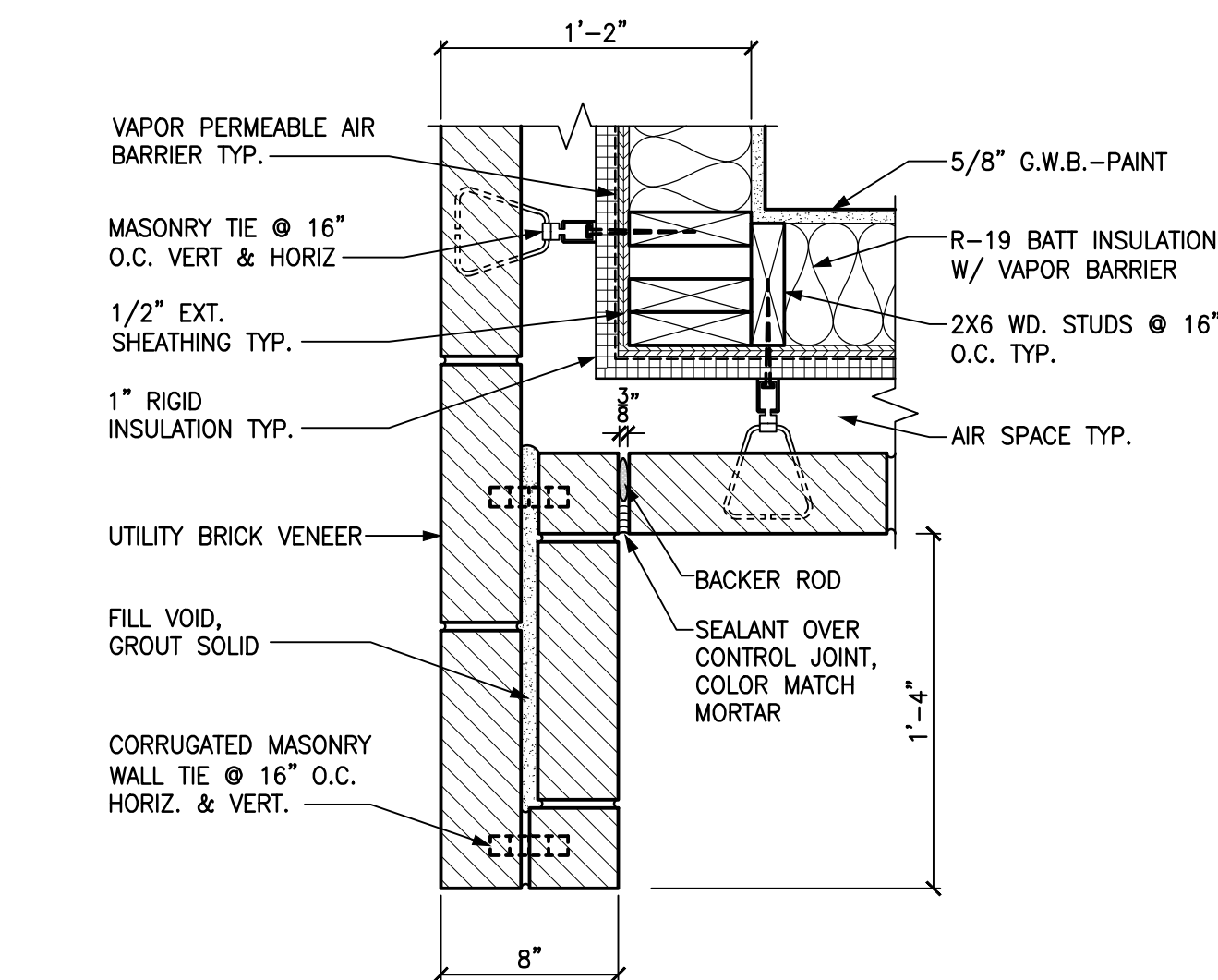
4 PLAN DETAIL
A1.1 SCALE: 1 1/2" = 1'-0"



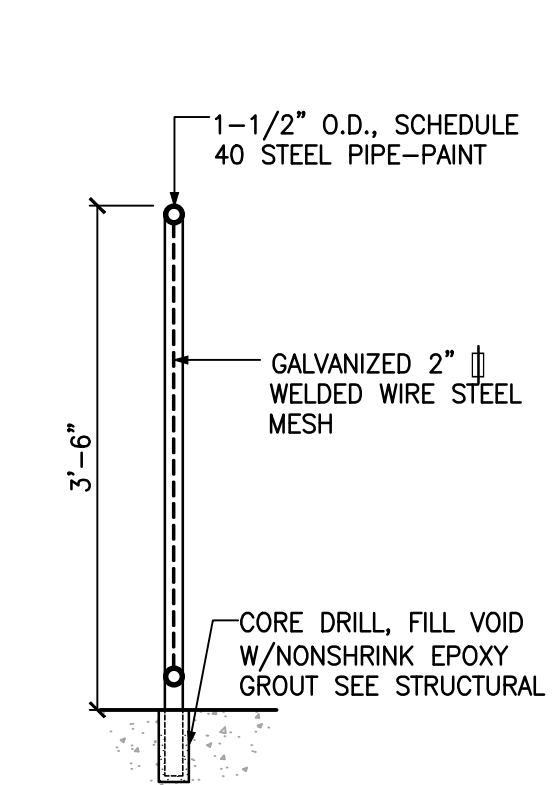
3 PLAN DETAIL
A1.1 SCALE: 1 1/2" = 1'-0"



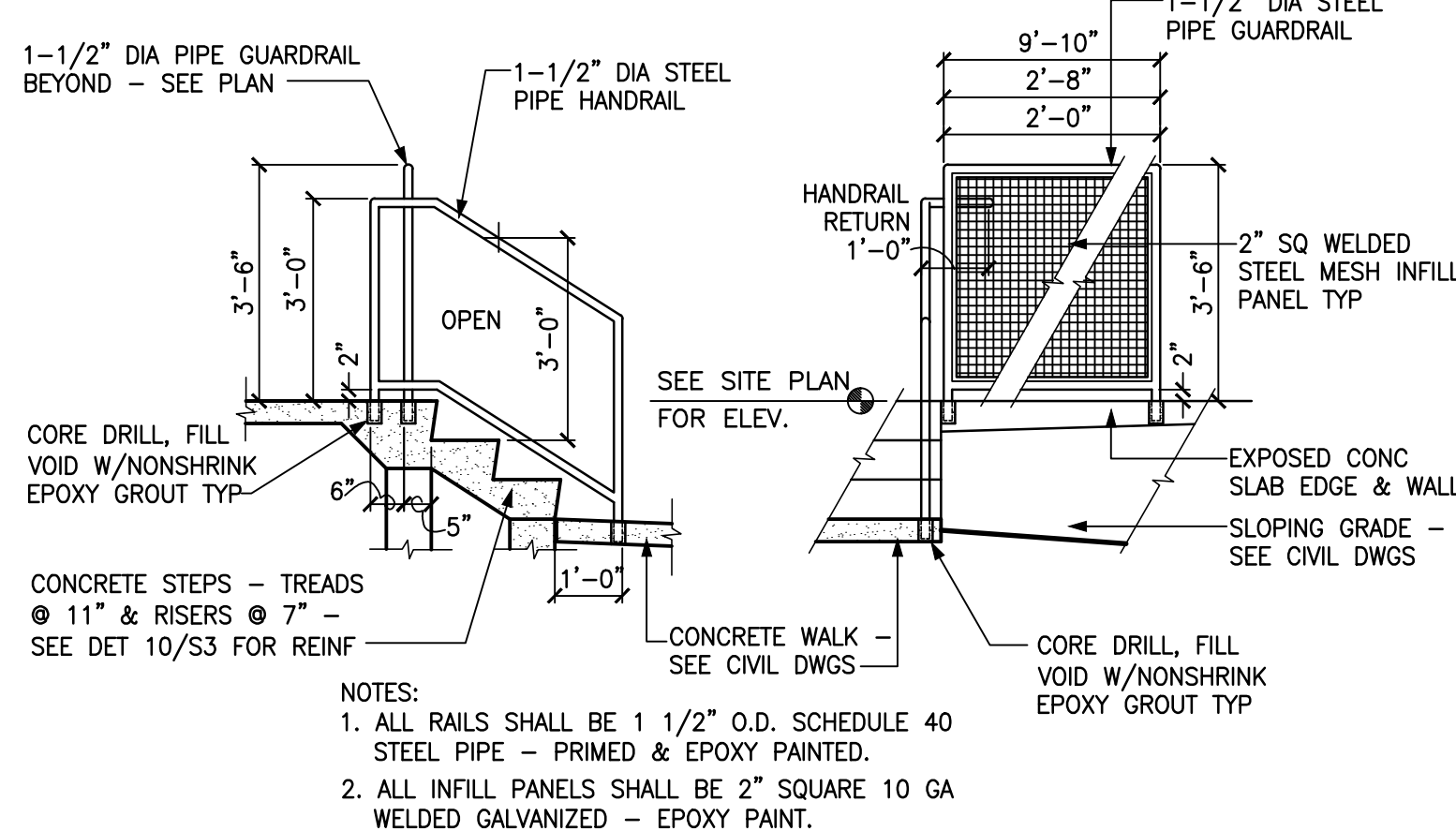
2 PLAN DETAIL
A1.1 SCALE: 1 1/2" = 1'-0"



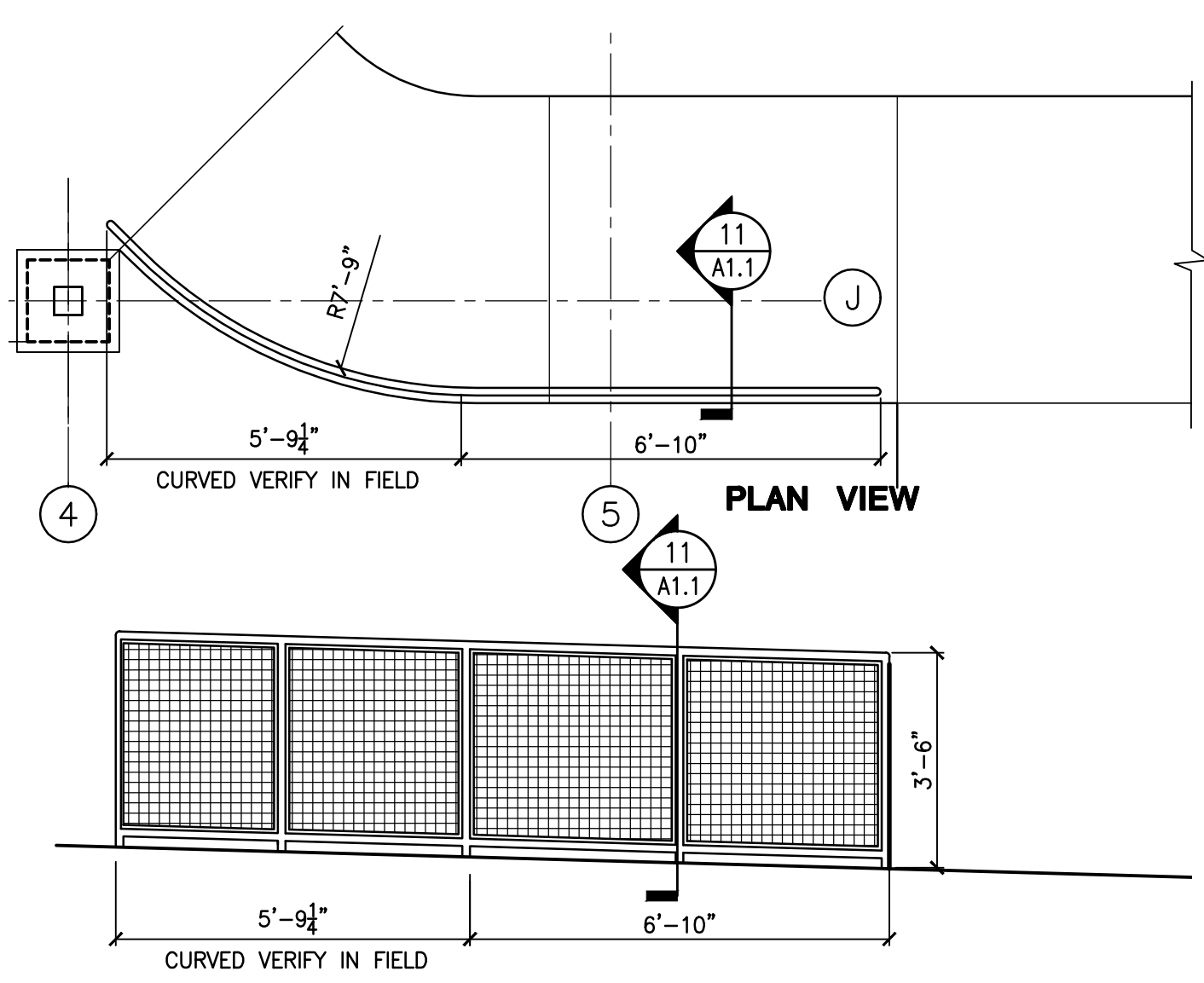
1 PLAN DETAIL @ CONTROL JT.
A1.1 SCALE: 1 1/2" = 1'-0"



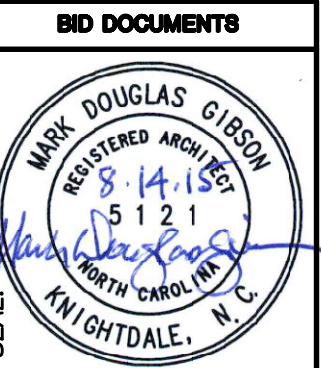
11 GUARDRAIL SECT.
A1.1 SCALE: 3/4" = 1'-0"



9 HANDRAILS & GUARDRAILS ELEVATIONS
A1.1 SCALE: 3/8" = 1'-0"



12 GUARD RAIL ELEVATION
A1.1 SCALE: 3/8" = 1'-0"



DESIGNED BY:
FACILITIES DESIGN
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1 SOUTH WILMINGTON STREET
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PHONE: 919/707-4640 FAX: 919/707-0886

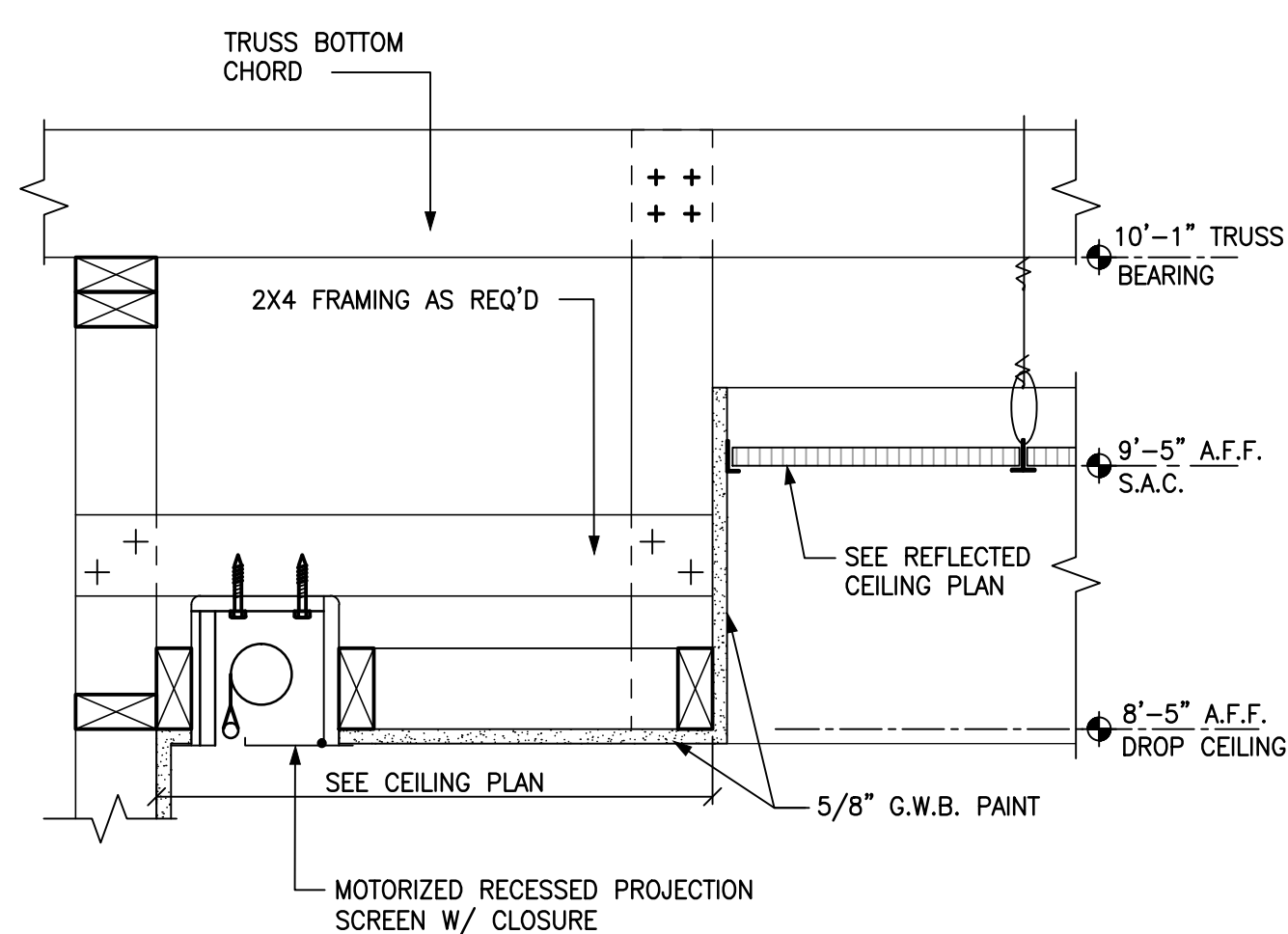


CONSULTANT:

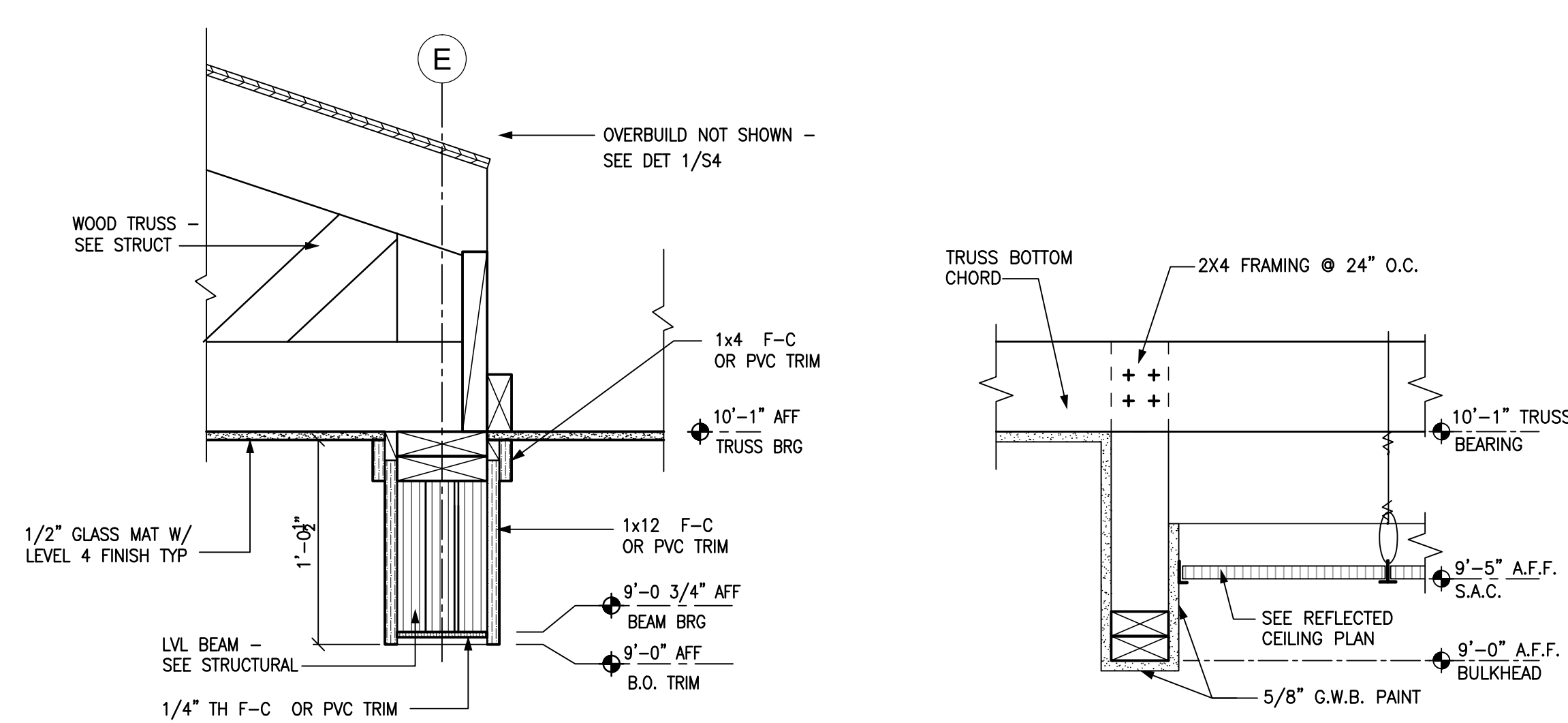
ENLARGED FLOOR PLAN DETAILS BID DOCUMENTS

PROJECT TITLE / DESCRIPTION:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT
2300 FERRY ROAD, HAYLOCK, NC 28632
CRAVEN COUNTY, NORTH CAROLINA

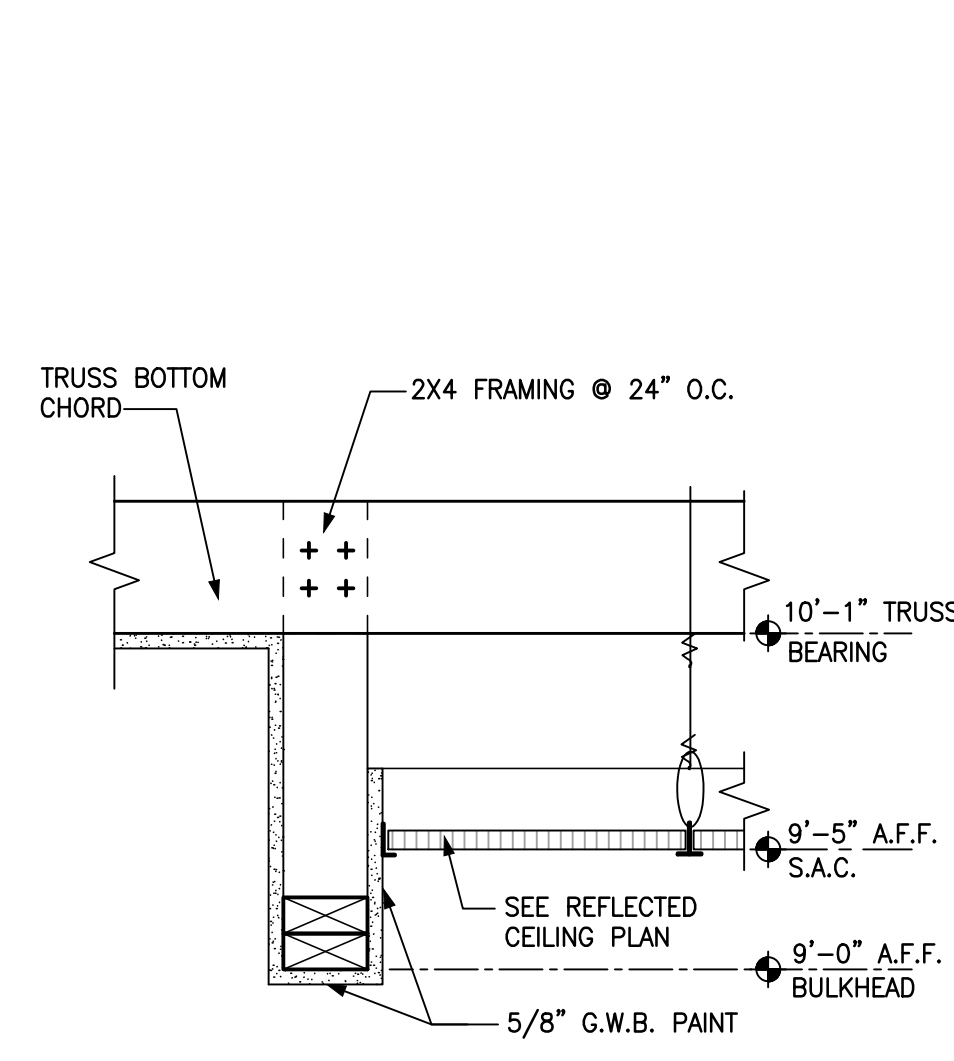
STATE CONSTRUCTION	
ID.# 11-09079-01A	
ASSET NUMBER:	
CO.#	SITE.# BLDG.#
48	- - -
REVISIONS	
NO.	DATE
	DB
	MG
DATE ISSUED: 8-14-15	
DRAWN BY: DB	
CHECKED BY: MDG	
SHEET NO.	



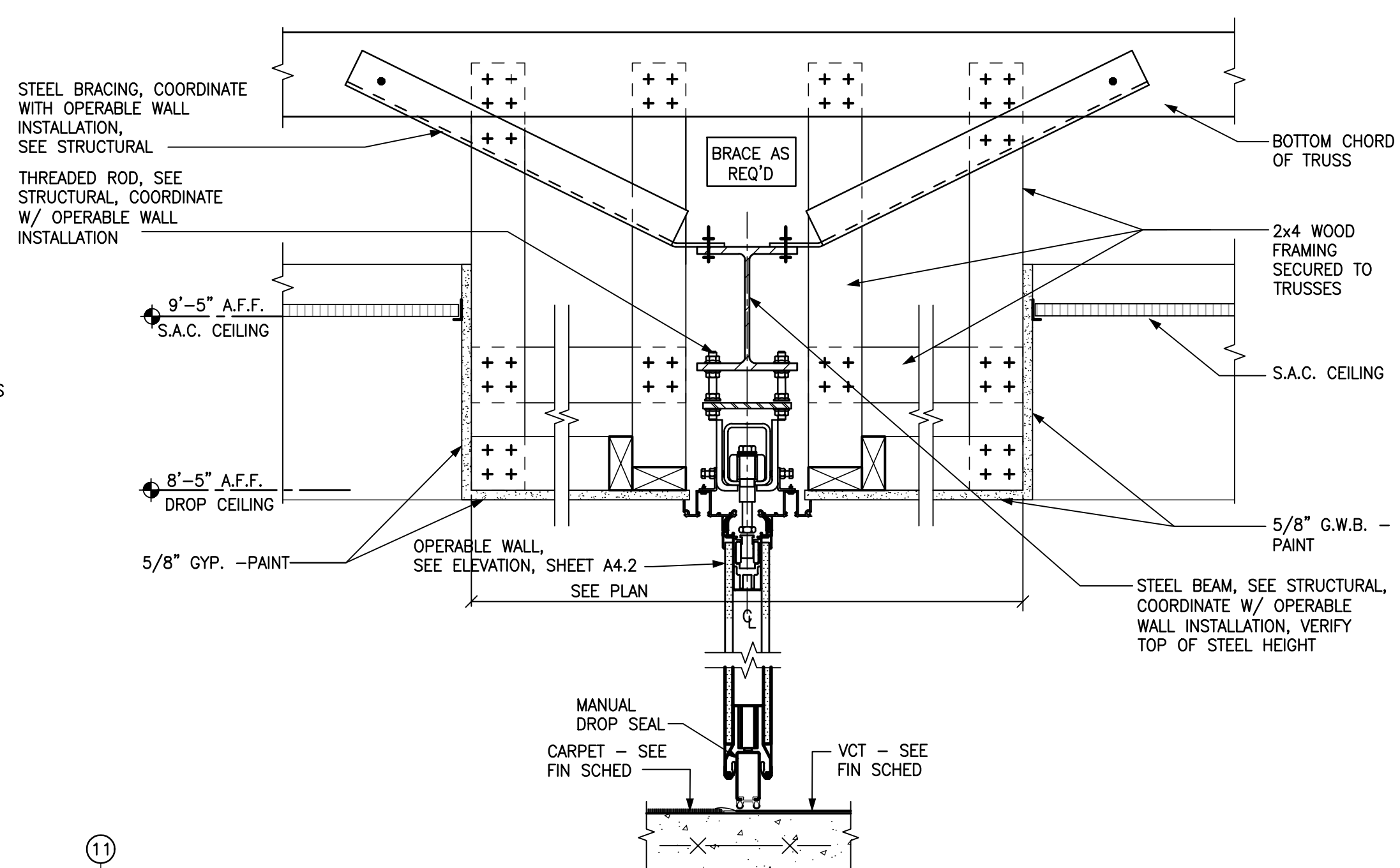
4 PROJECTION SCREEN DETAIL
A1.2 SCALE: 1 1/2" = 1'-0"



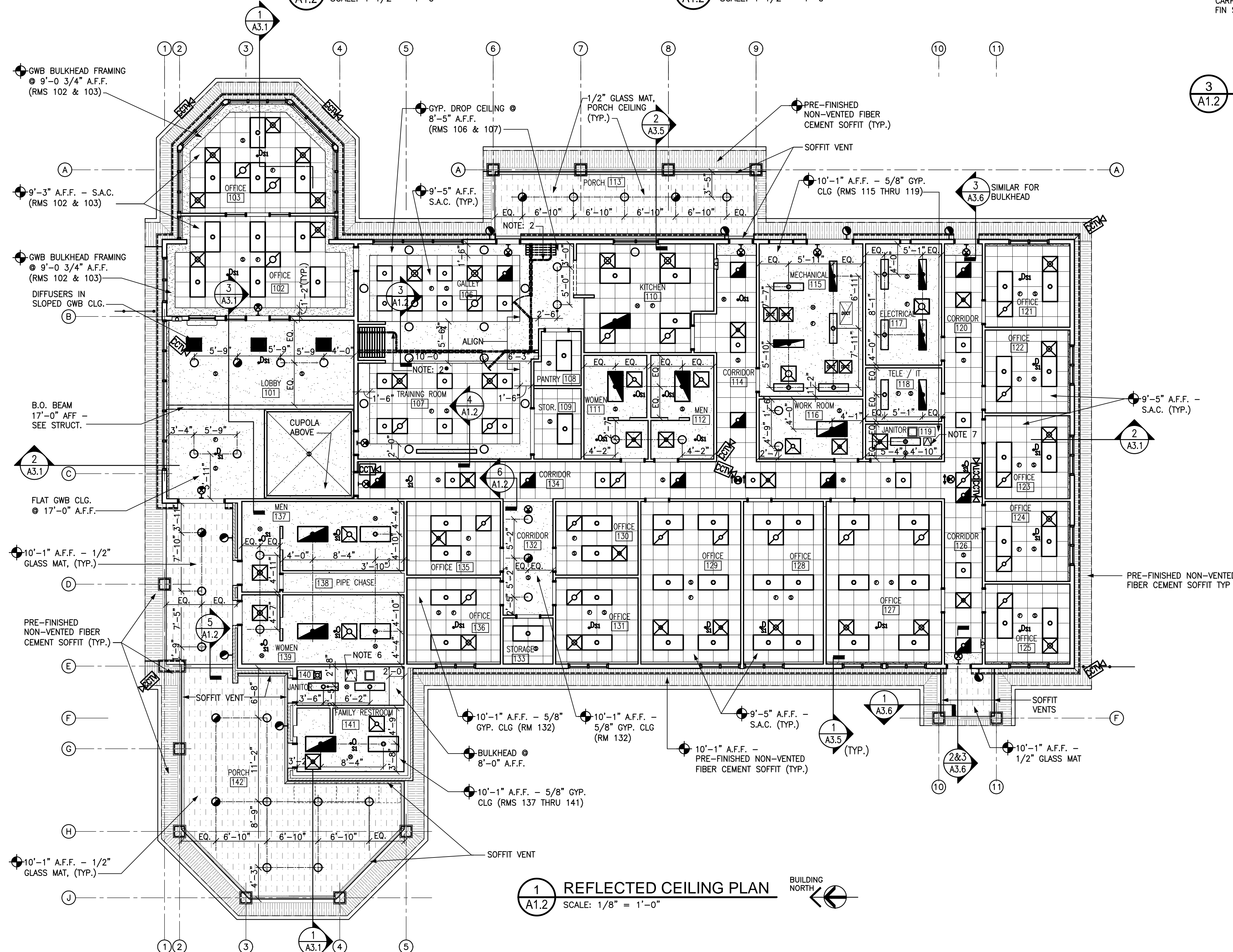
5 PORCH BULKHEAD DETAIL
A1.2 SCALE: 1 1/2" = 1'-0"



6 BULKHEAD DETAIL
A1.2 SCALE: 1 1/2" = 1'-0"



3 SECTION AT OPERABLE PARTITION
A1.2 SCALE: 1 1/2" = 1'-0"



1 REFLECTED CEILING PLAN
A1.2 SCALE: 1/8" = 1'-0"

GENERAL NOTES:

1. PROVIDE METAL ACCESS DOORS IN GYPSUM WALL BOARD CEILINGS AS REQUIRED TO ACCESS PLUMBING, MECHANICAL, AND ELECTRICAL DEVICES AND ACCESSORIES FOR MAINTENANCE AND REPLACEMENT. LOCATE ACCESS DOORS PER ARCHITECT'S APPROVAL.
2. GENERAL CONTRACTOR SHALL PROVIDE STRUCTURE AS REQUIRED FOR INSTALLATION OF OVERHEAD OPERABLE PARTITION TRACK. COORDINATE WITH MANUFACTURER.
3. PROVIDE LEVEL 5 FINISH AT EXTERIOR GLASS MAT SOFFITS AND CEILINGS.
4. PROVIDE LEVEL 3 FINISH AT GWB CEILINGS TO RECEIVE TEXTURED FINISHES.
5. PROVIDE LEVEL 5 FINISH AT INTERIOR GWB CEILINGS TO RECEIVE PAINT.
6. PROVIDE 18"x18" METAL ACCESS PANEL IN CEILING.
7. PROVIDE 12"x12" METAL ACCESS PANEL IN CEILING.

REFLECTED CEILING PLAN LEGEND

- (SEE P/M/E DRAWINGS FOR ALL APPURTENANCES)
- — 2'x4' LAY-IN LIGHT FIXTURE
 - ◻ — EGRESS LIGHT FIXTURE
 - — 1'x4' LIGHT FIXTURE
 - ◻ — 2'x2' LIGHT FIXTURE
 - ◻ — 2'x2' SUPPLY MECHANICAL GRILLE
 - ◻ — 2'x2' RETURN MECHANICAL GRILLE
 - — SMOKE DETECTOR
 - — CEILING MOUNTED FIRE ALARM / STROBE
 - — CEILING MOUNTED HEAT DETECTOR
 - ◻ — PAINTED GYP. BD.
 - ◻ — PRE-FINISHED NON-VENTED FIBER CEMENT SOFFIT (TYP.)
 - ◻ — 1/2" GLASS MAT
 - — CEILING MOUNTED LT. FIXTURE
 - ◻ — EMERGENCY EXIT LT.
 - ◻ — EXHAUST
 - — OCCUPANCY SENSOR
 - ◻ — WALL MOUNTED EGRESS LT. FIXTURE
 - ◻ — CEILING MOUNTED EGRESS LT. FIXTURE
 - ◻ — CLOSED CIRCUIT TV / SECURITY CAMERA
 - ◻ — CEILING MOUNTED OCCUPANCY SENSOR
 - ◻ — CEILING MOUNTED DAY-LIGHT SENSOR

BID DOCUMENTS

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CONSULTANT: **KNIGHTDALE, P.C.**

REFLECTED CEILING PLAN

PROJECT TITLE: **CHERRY BRANCH FERRY FACILITY**
NORTH CAROLINA DOT
2300 FERRY ROAD, HAYLOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

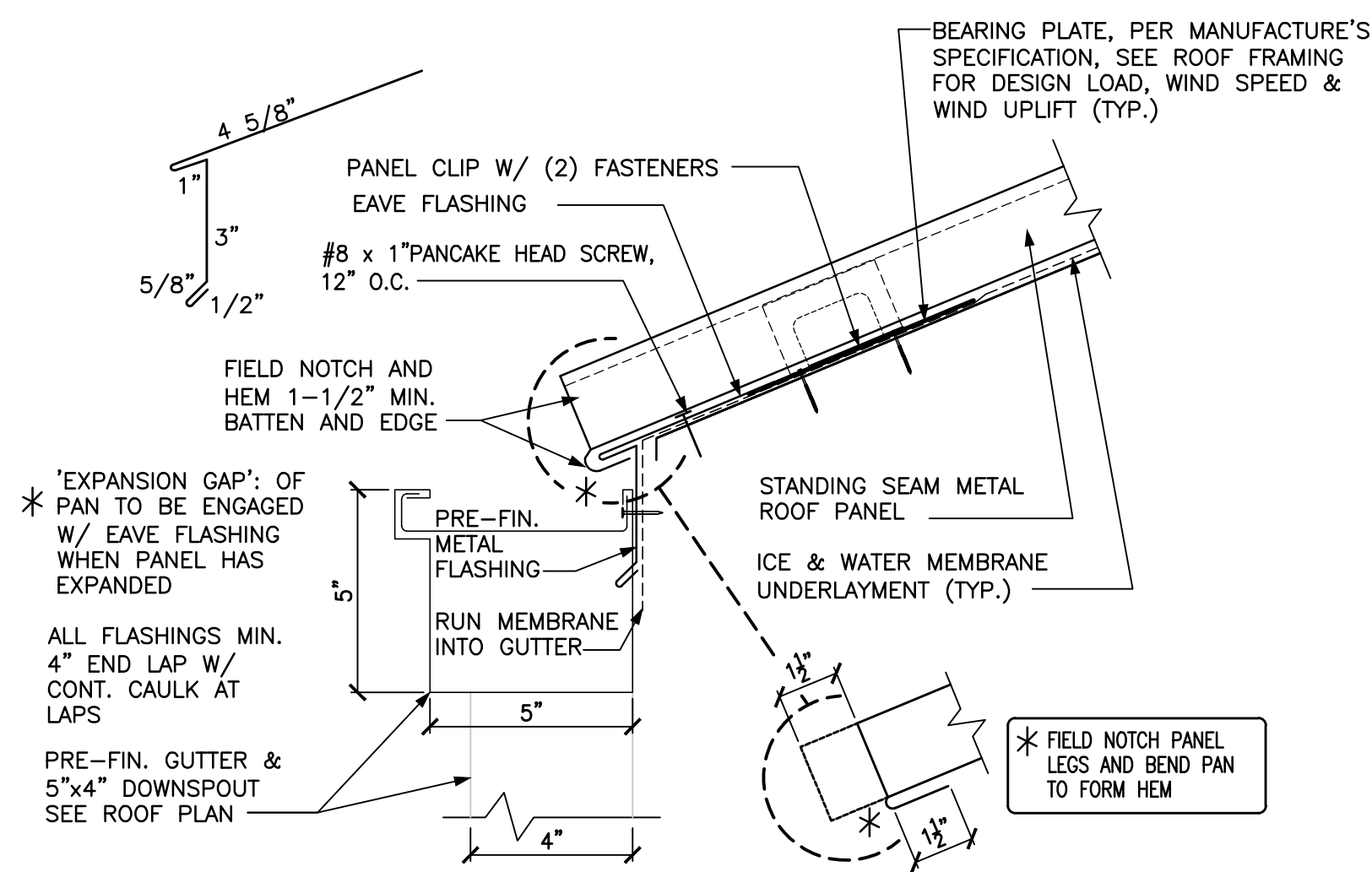
STATE CONSTRUCTION ID.# 11-09079-01A

ASSET NUMBER: **48**
CO.# **48** SITE.# **BLDG.#**

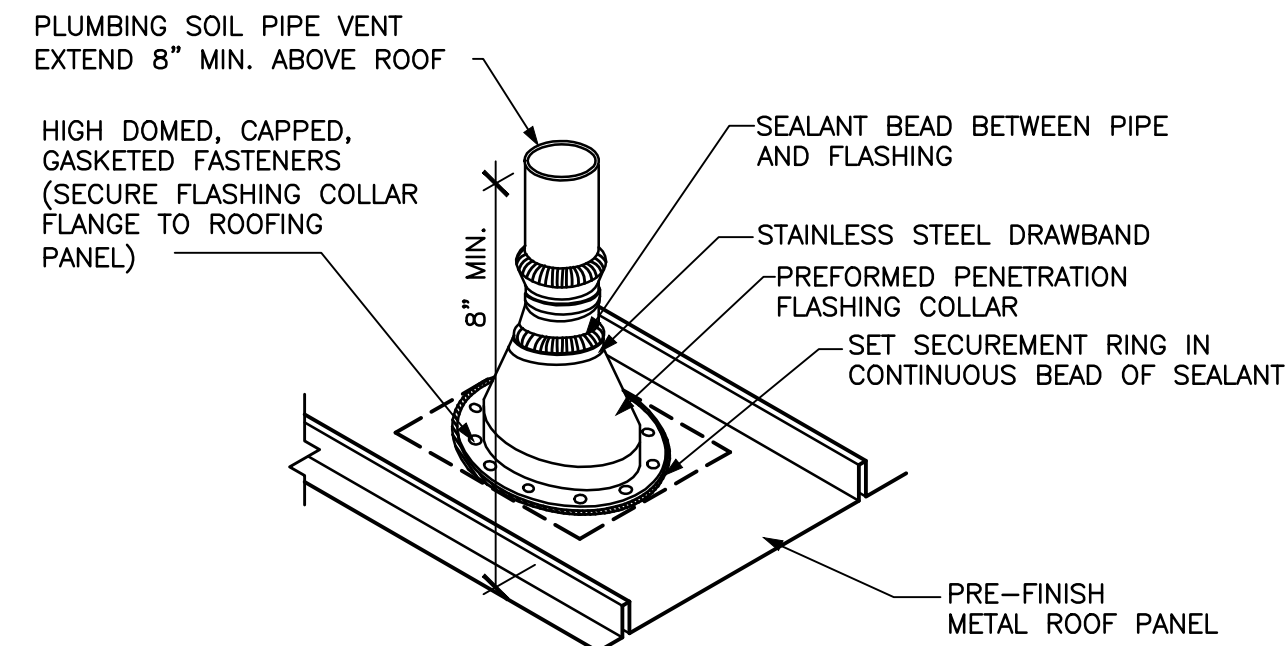
REVISIONS NO. DATE

DATE ISSUED: 8-14-15
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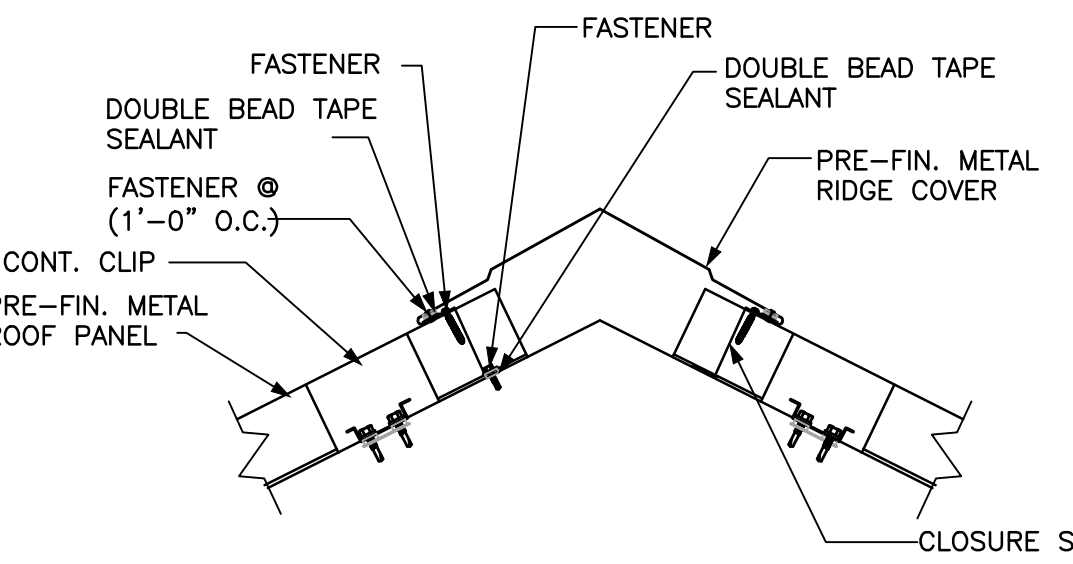
A1.2



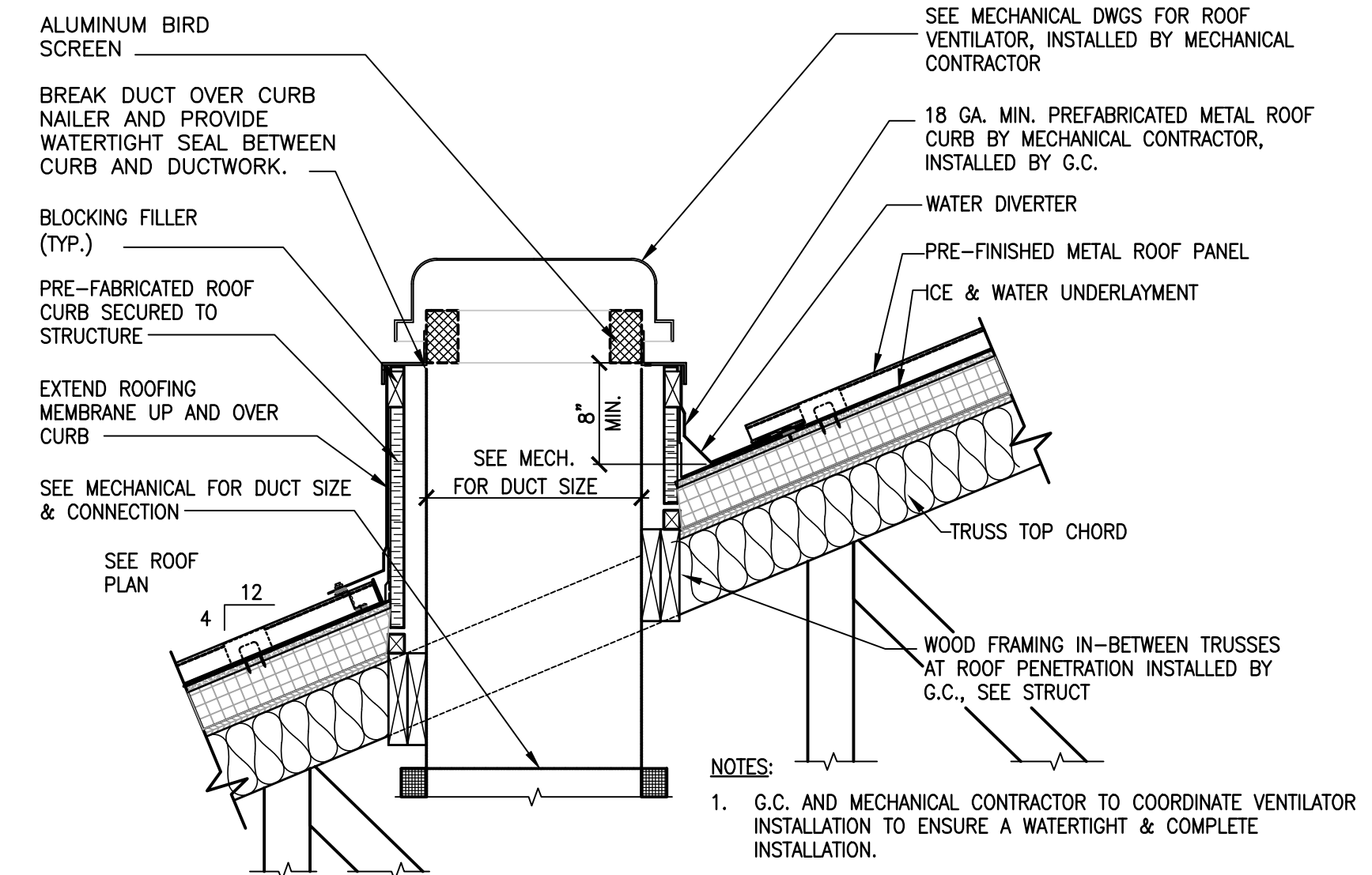
5 EAVE DETAIL
A1.3 SCALE: 3" = 1'-0"



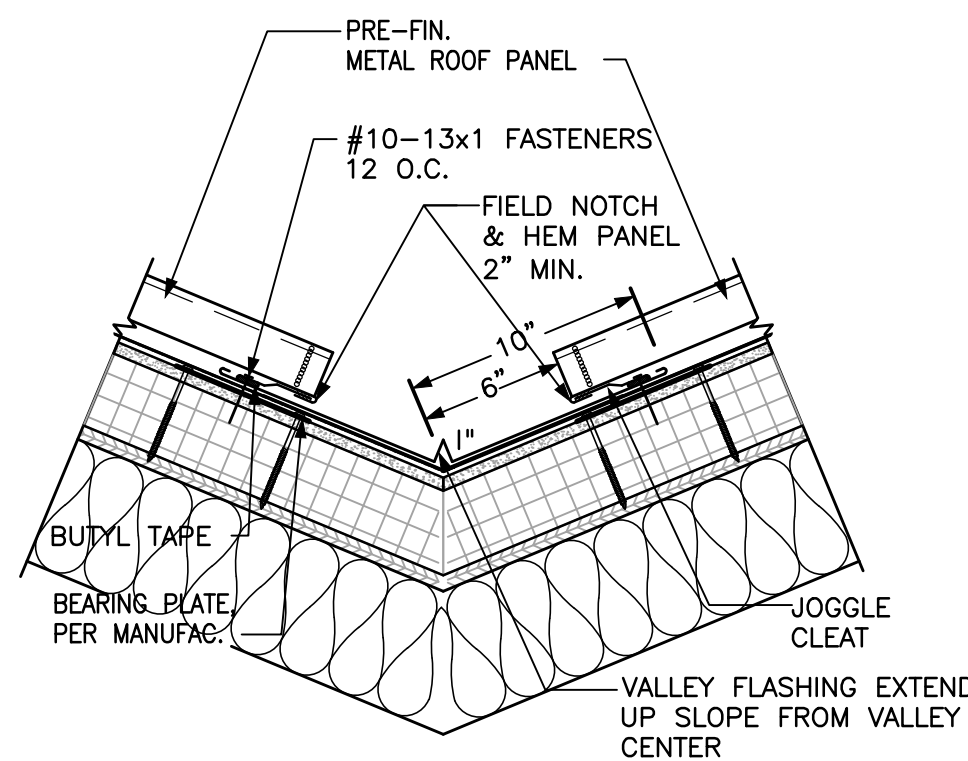
4 VTR DETAIL
A1.3 NOT TO SCALE



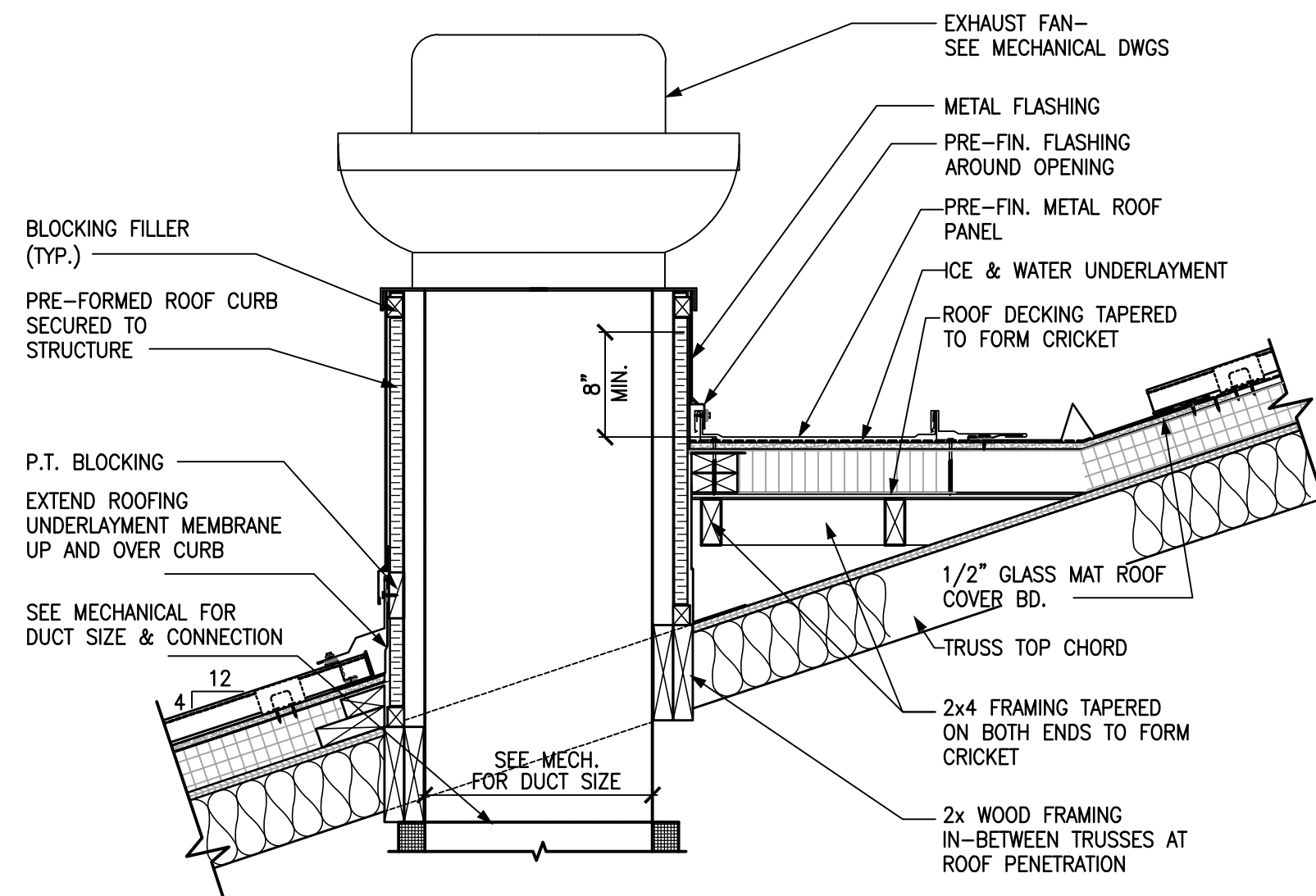
3 RIDGE DETAIL
A1.3 NOT TO SCALE



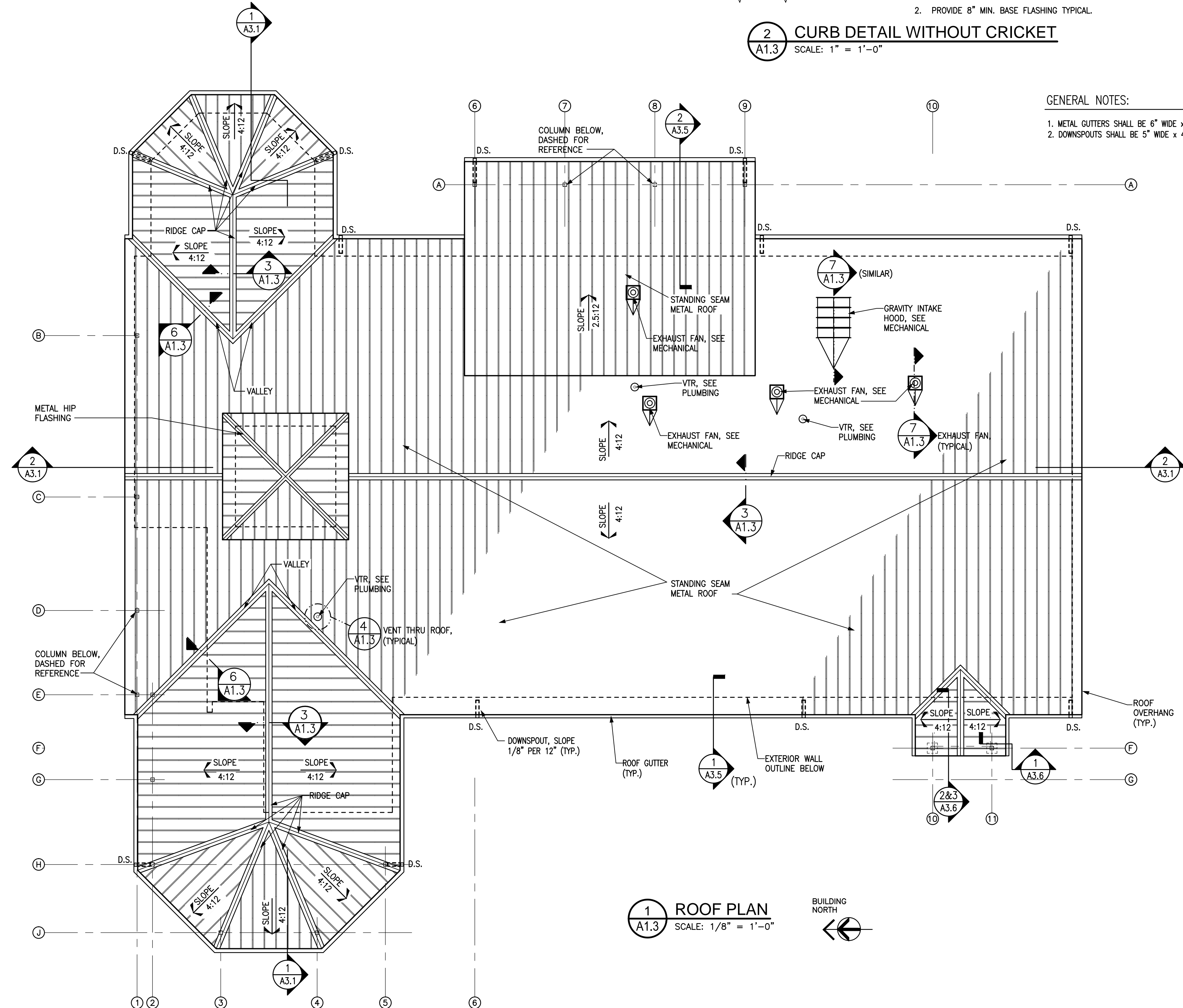
2 CURB DETAIL WITHOUT CRICKET
A1.3 SCALE: 1" = 1'-0"



6 VALLEY DETAIL
A1.3 NOT TO SCALE



7 CURB DETAIL W/ CRICKET
A1.3 SCALE: 1" = 1'-0"



1 ROOF PLAN
A1.3 SCALE: 1/8" = 1'-0"

GENERAL NOTES:
1. METAL GUTTERS SHALL BE 6" WIDE x 5" DEEP.
2. DOWNSPOUTS SHALL BE 5" WIDE x 4" DEEP.

BID DOCUMENTS

MARK DOUGLAS GILSON
REGISTERED ARCHITECT
5121
NORTH CAROLINA
KNIGHTDALE, N.C.

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CONSULTANT:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

ROOF PLAN

BID DOCUMENTS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION
ID.# 11-09079-01A

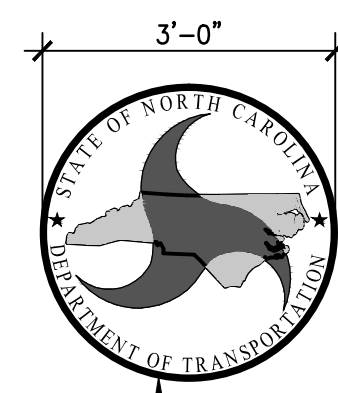
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48 - - -

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A1.3

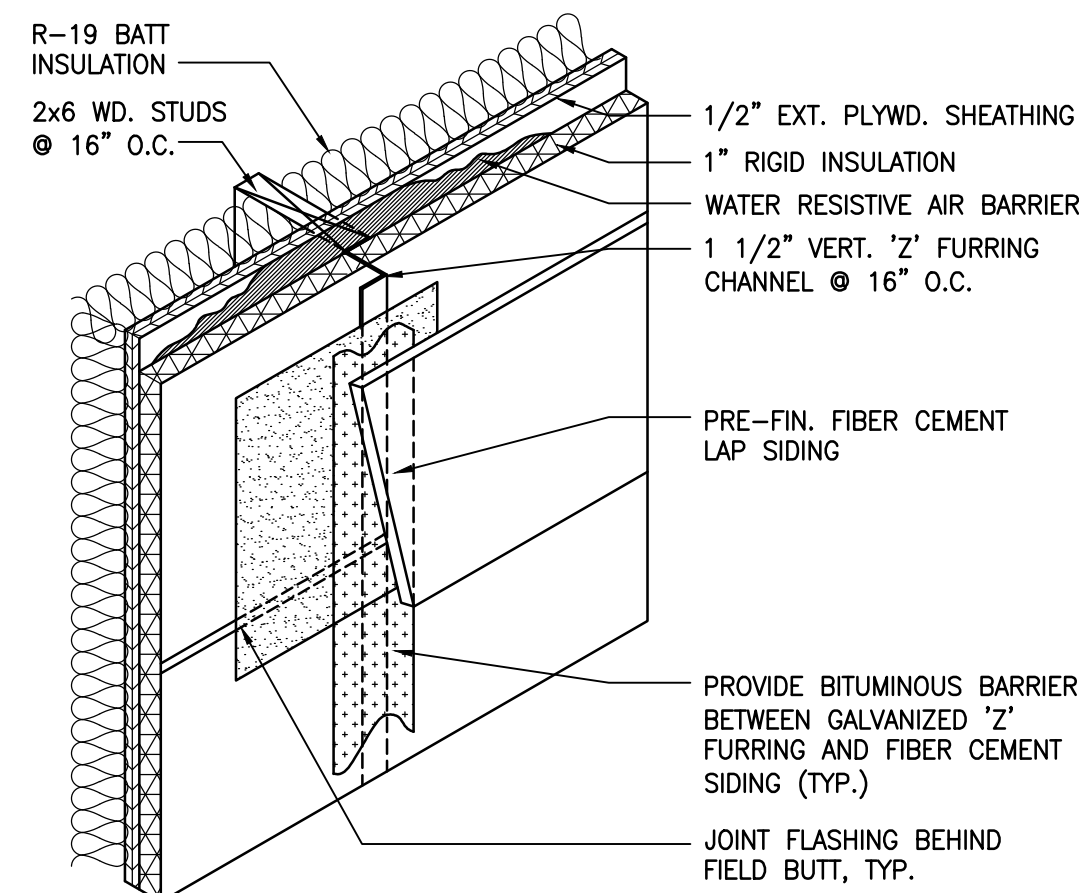


OFFICIAL NCDOT SYMBOL -
CAST ALUM PLAQUE 3/8"
THICK MIN W/ CONCEALED
ATTACHMENTS

PROVIDE SOLID BLOCKING IN
WALL FRAMING FOR ALL SIGNAGE

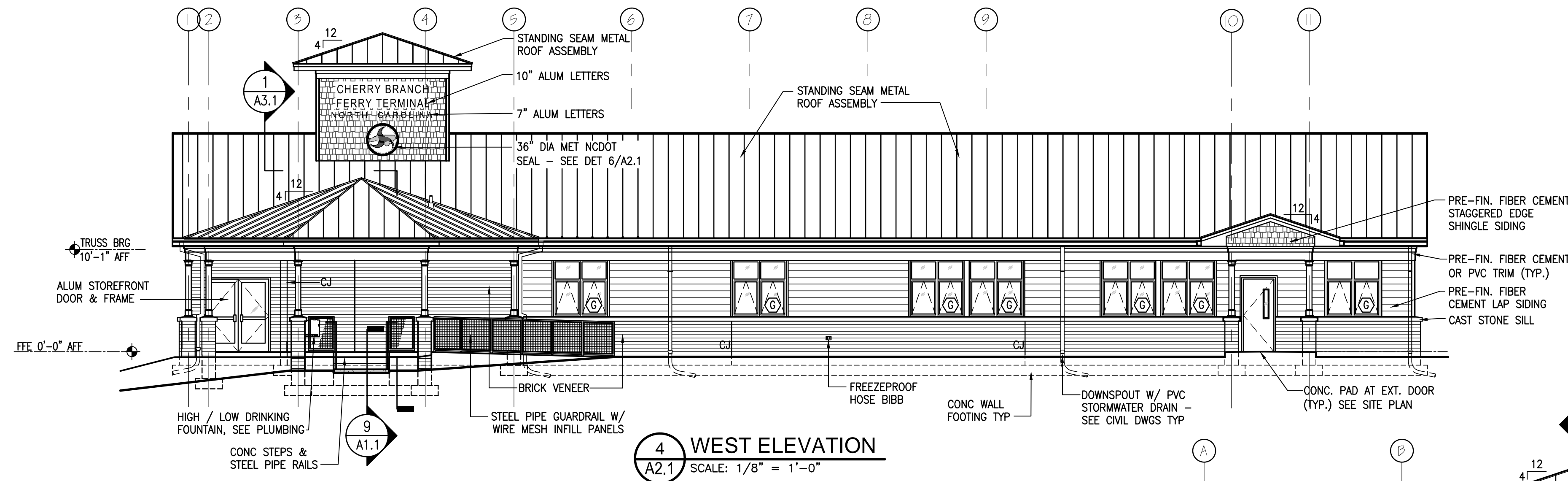
6 SIGNAGE ELEVATION

A2.1 SCALE: 1/2" = 1'-0"



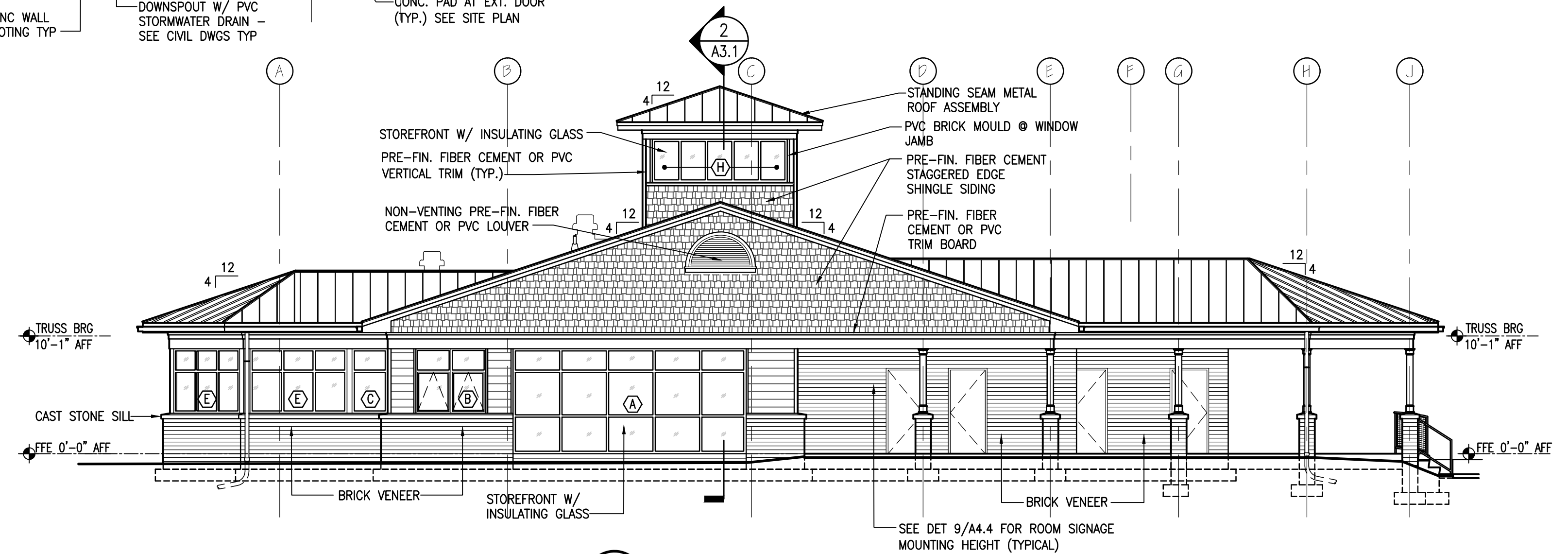
5 F.C. LAP SIDING BUTT JOINT DET.

A2.1 NOT TO SCALE



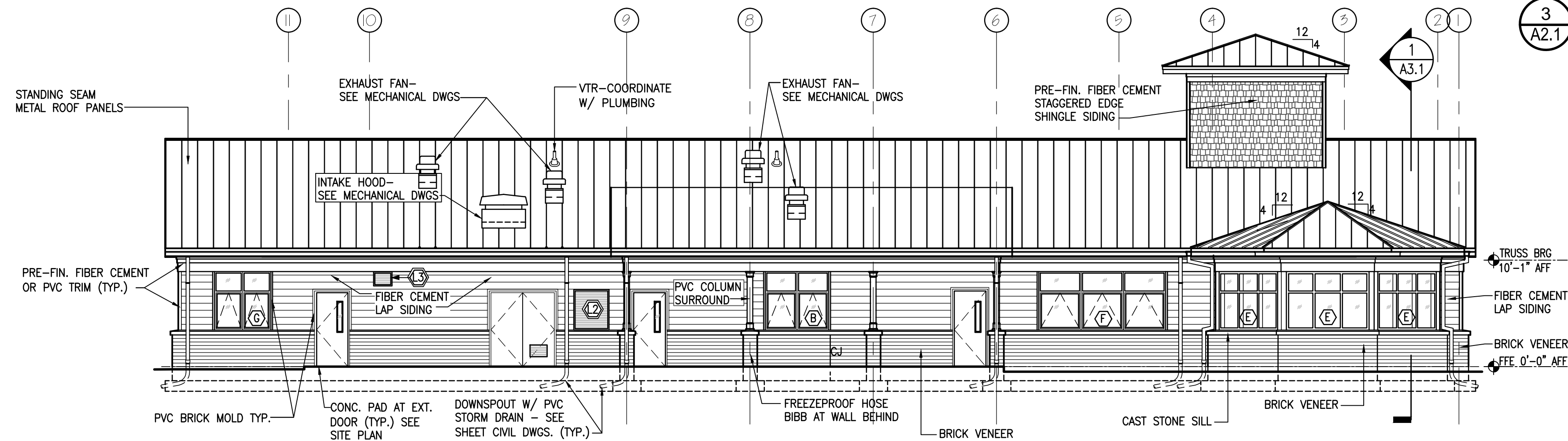
4 WEST ELEVATION

A2.1 SCALE: 1/8" = 1'-0"



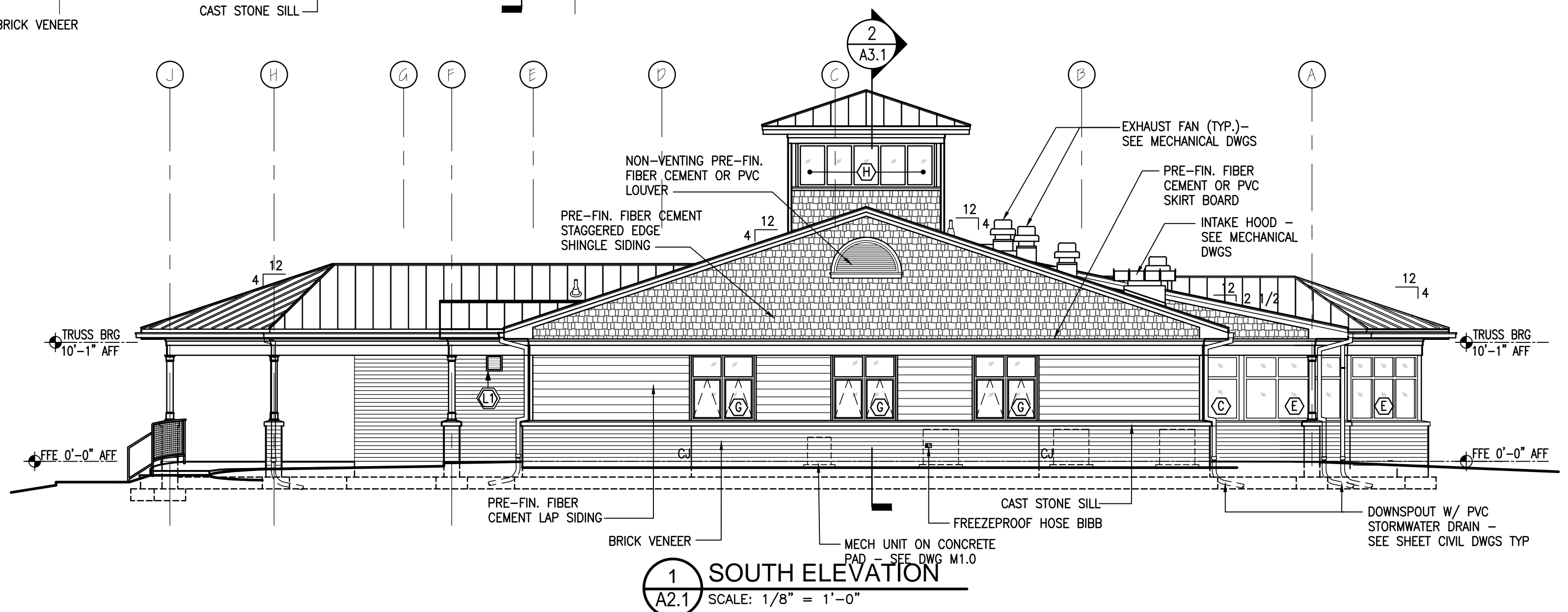
3 NORTH ELEVATION

A2.1 SCALE: 1/8" = 1'-0"



2 EAST ELEVATION

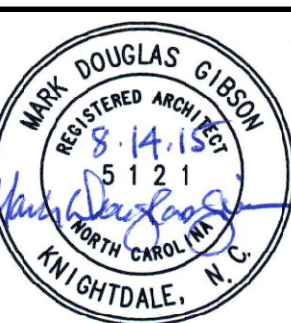
A2.1 SCALE: 1/8" = 1'-0"



1 SOUTH ELEVATION

A2.1 SCALE: 1/8" = 1'-0"

BID DOCUMENTS



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CONSULTANT:

EXTERIOR ELEVATIONS

BID DOCUMENTS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT
2300 FERRY ROAD, HAYLOCK, NC 28632
CRAVEN COUNTY, NORTH CAROLINA

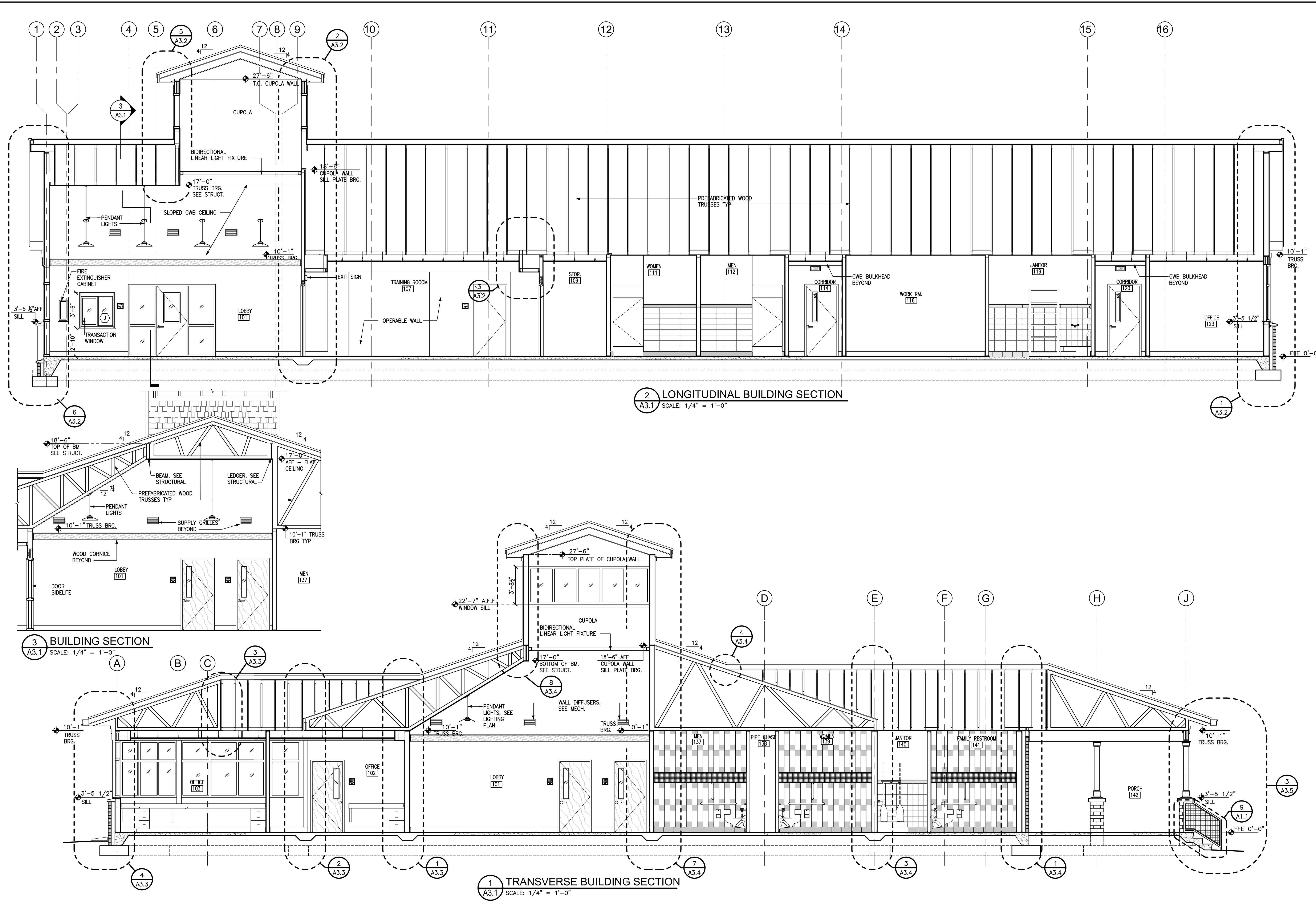
STATE CONSTRUCTION
ID.# 11-09079-01A

ASSET NUMBER:
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48 - - -

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A2.1



BID DOCUMENTS

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PHONE 910/707-4640 FAX 910/707-0896

CONSULTANT:
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BUILDING SECTIONS

BID DOCUMENTS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION
ID.# 11-09079-01A

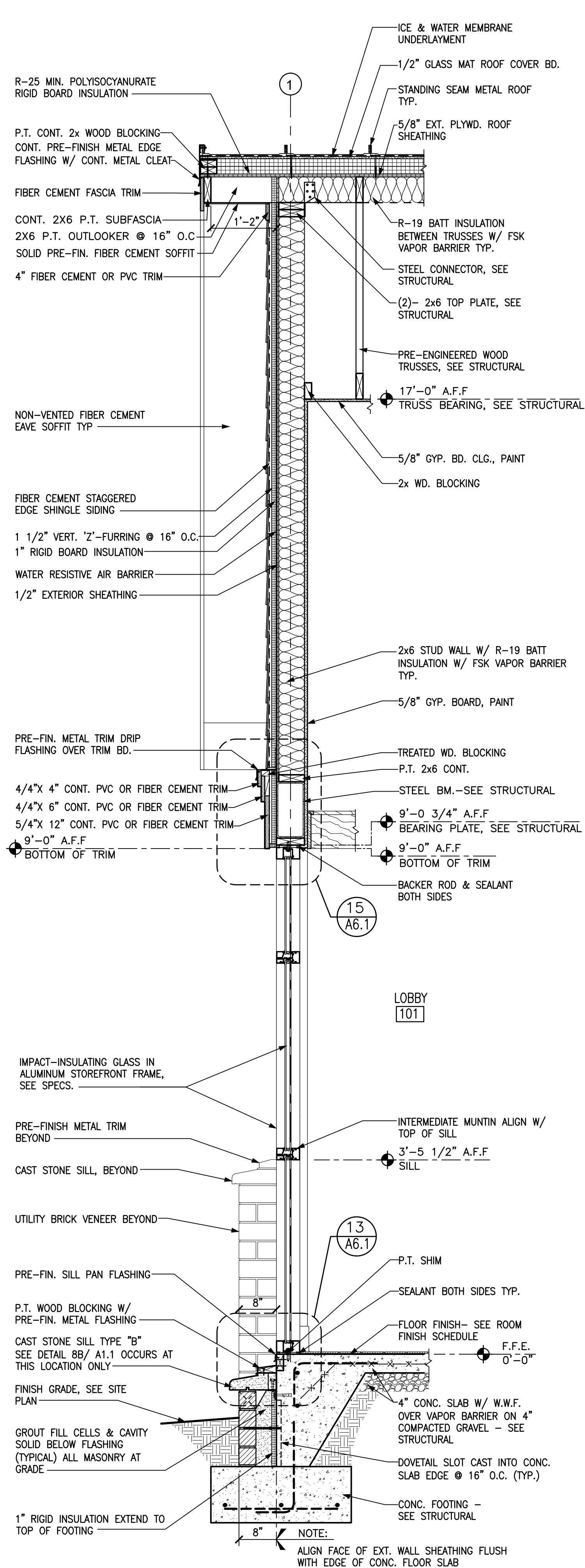
ASSET NUMBER:
CO.# SITE.# BLDG.#
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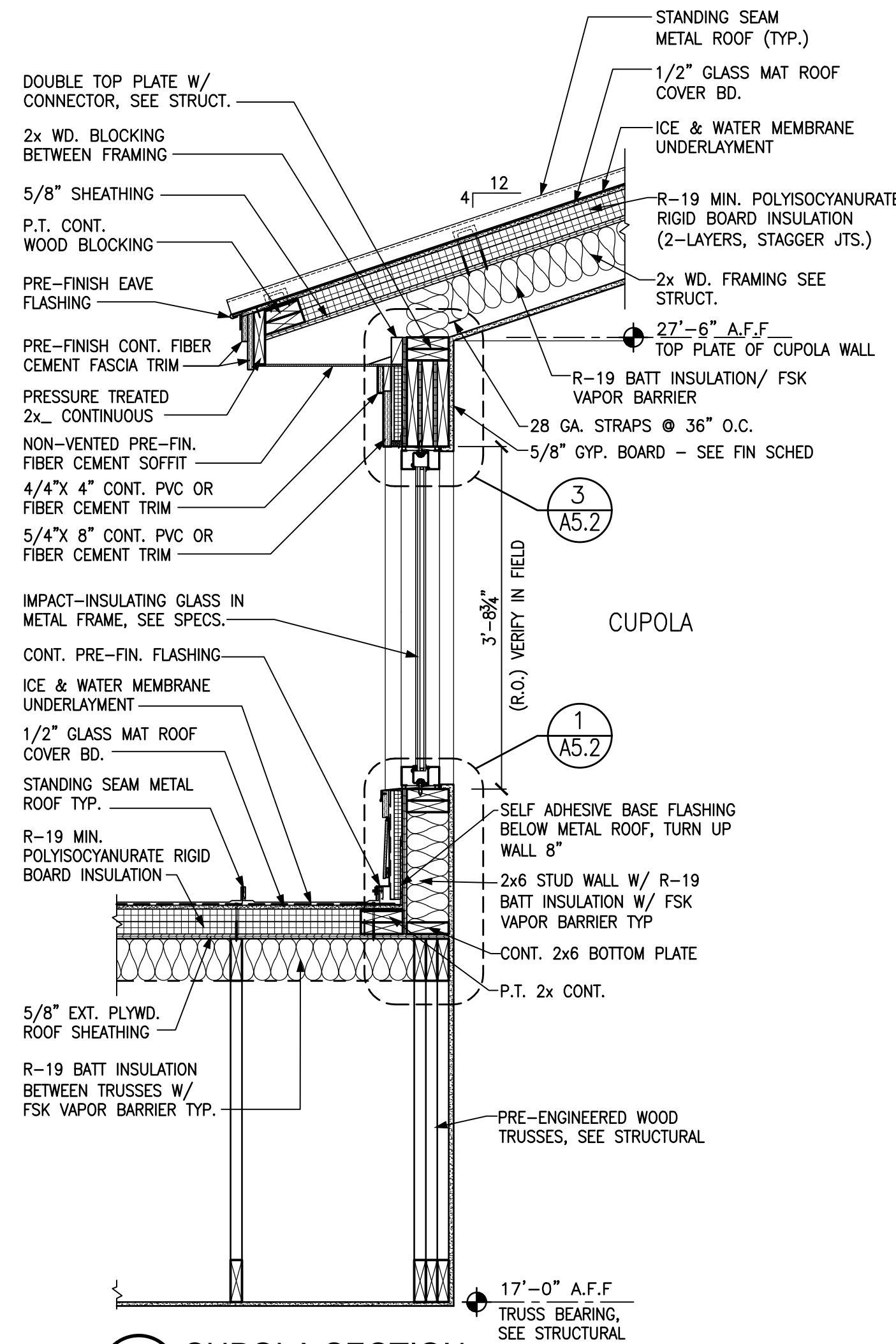
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SHEET NO.

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CRAVEN COUNTY, NORTH CAROLINA

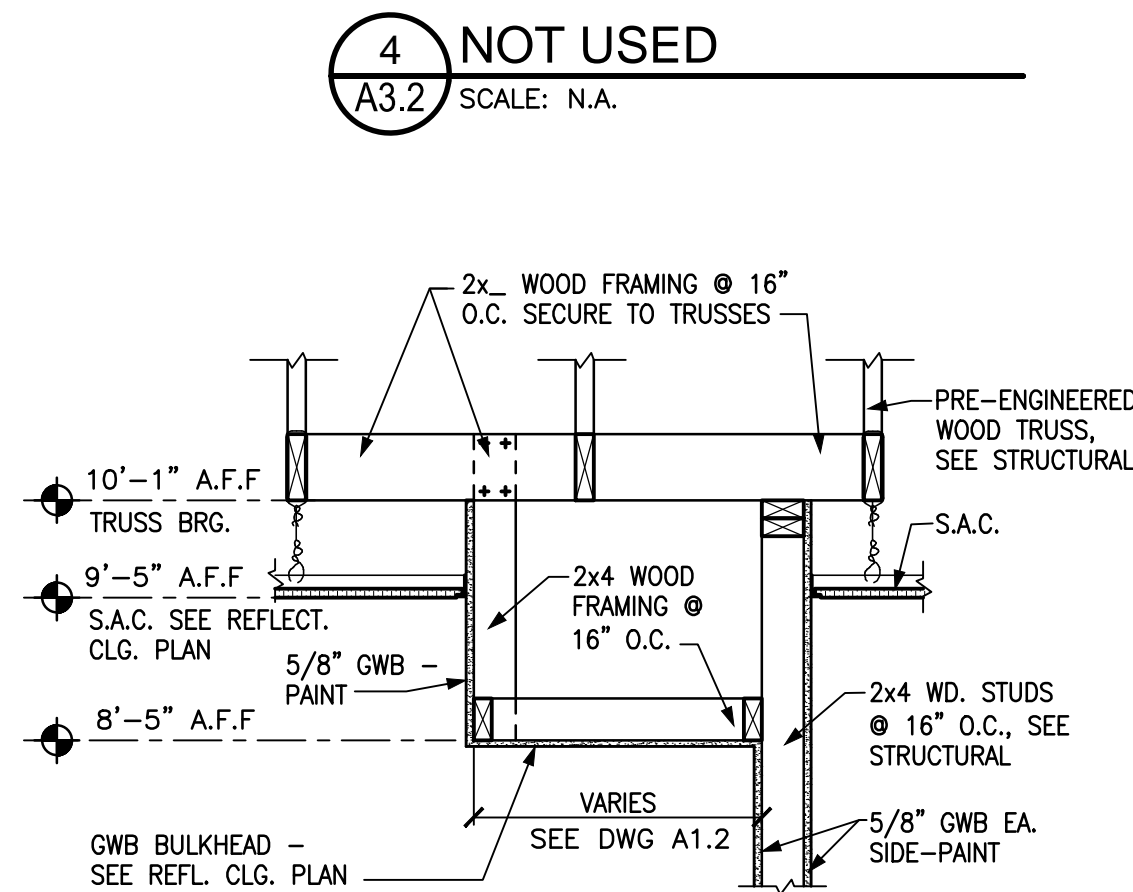
A3.1



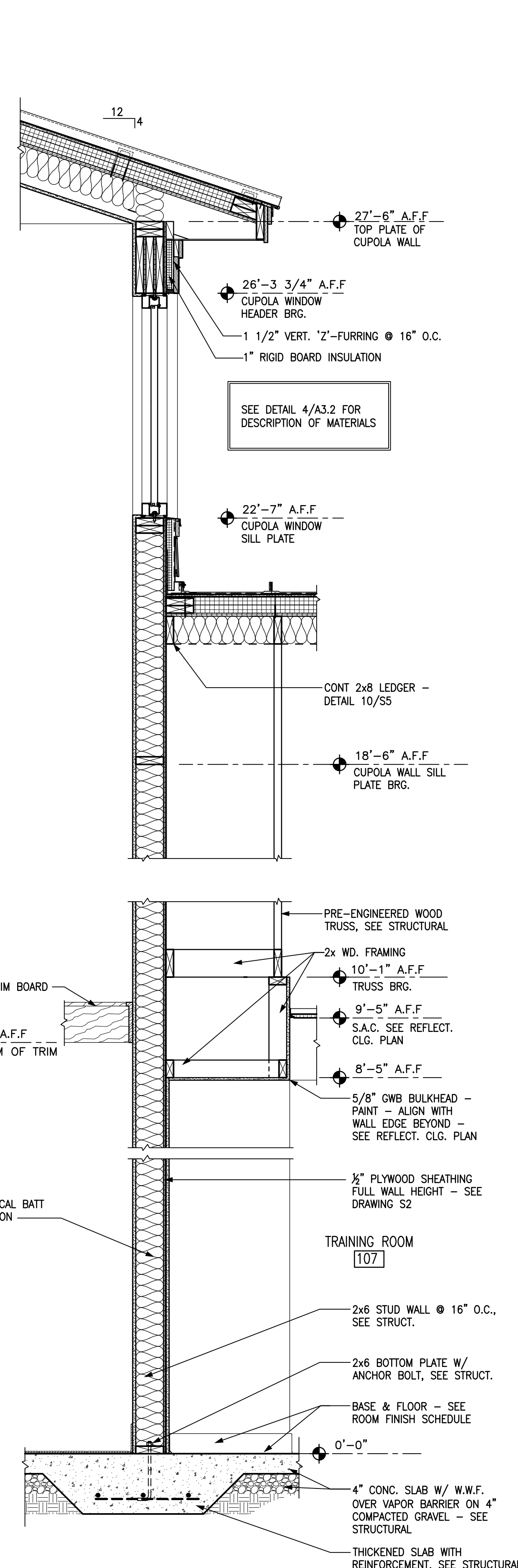
6 WALL SECTION
A3.2 SCALE: 3/4" = 1'-0"



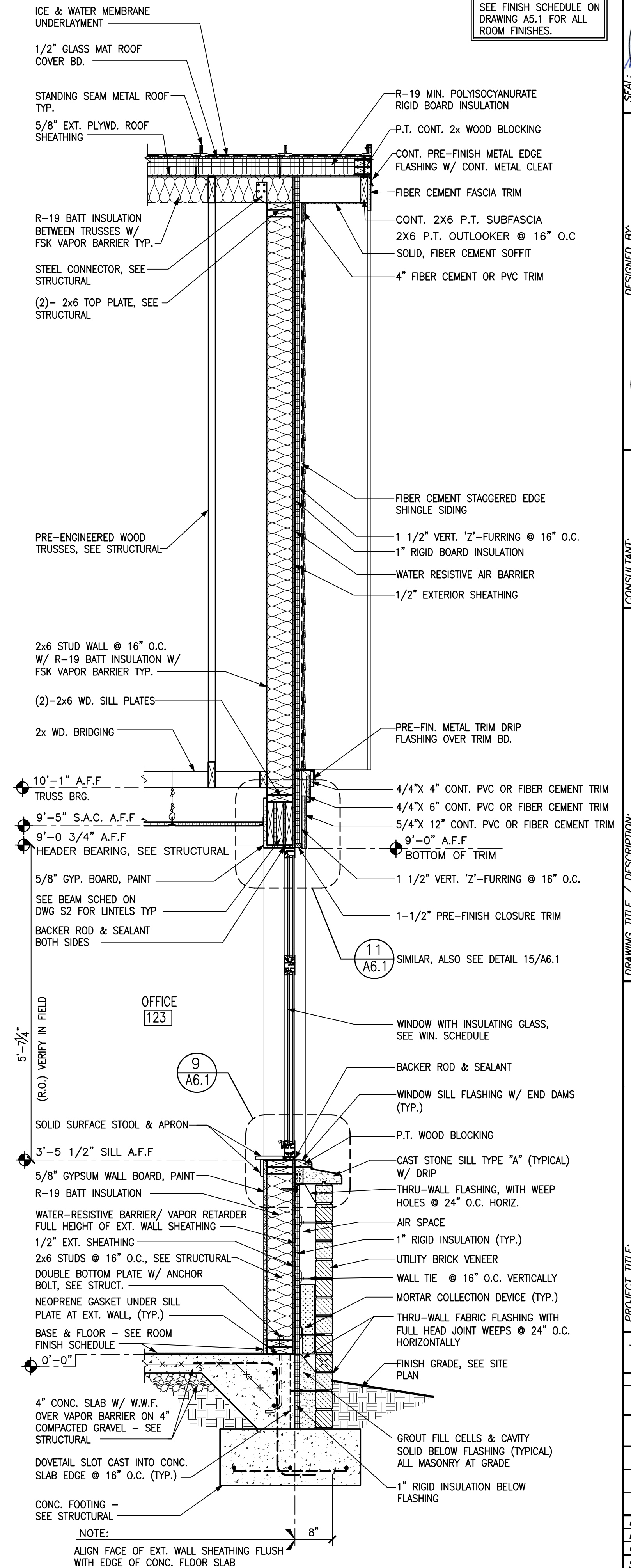
5 CUPOLA SECTION
A3.2 SCALE: 3/4" = 1'-0"



3 BULKHEAD DETAIL
A3.2 SCALE: 3/4" = 1'-0"



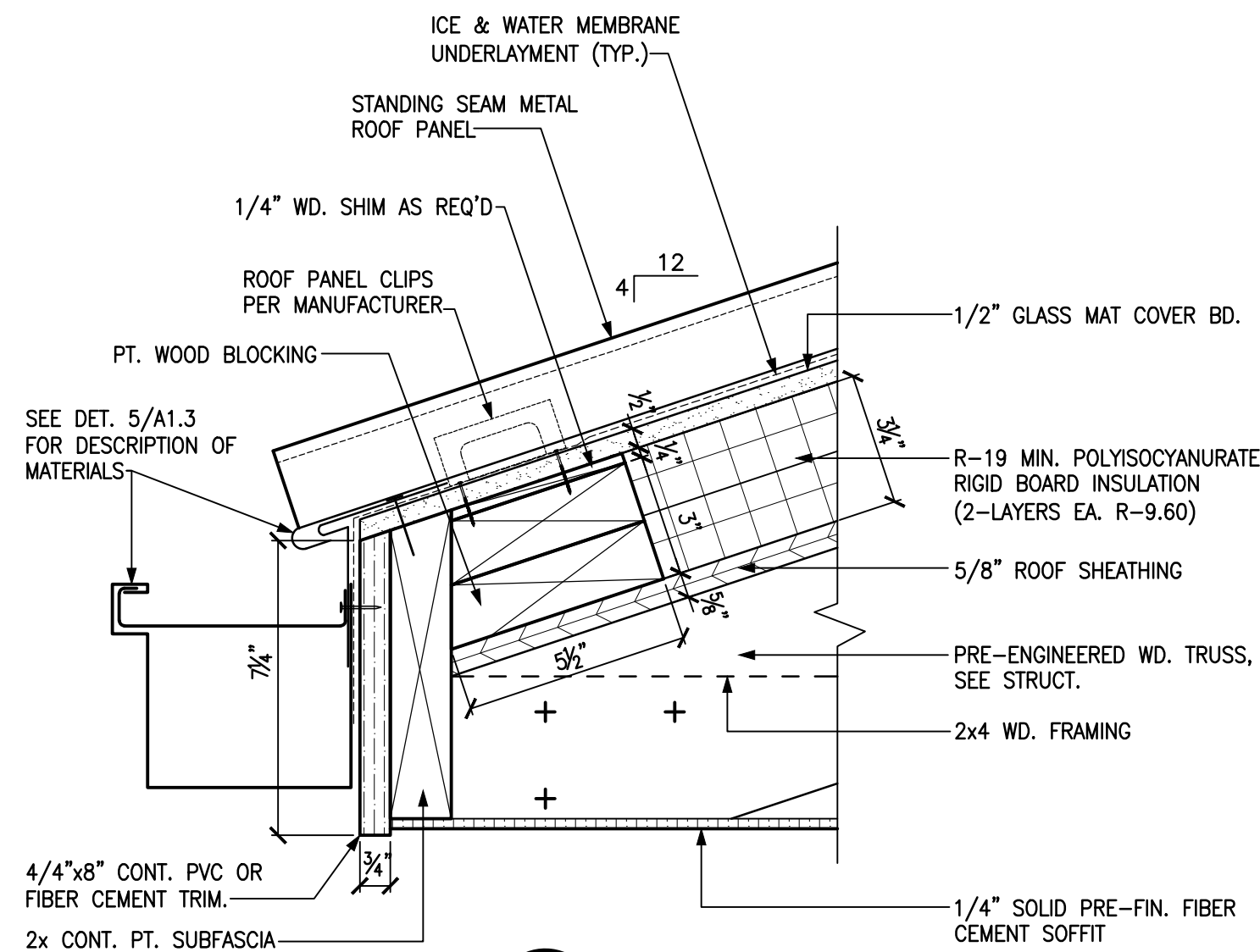
2 WALL SECTION at SHEAR WALL
A3.2 SCALE: 3/4" = 1'-0"



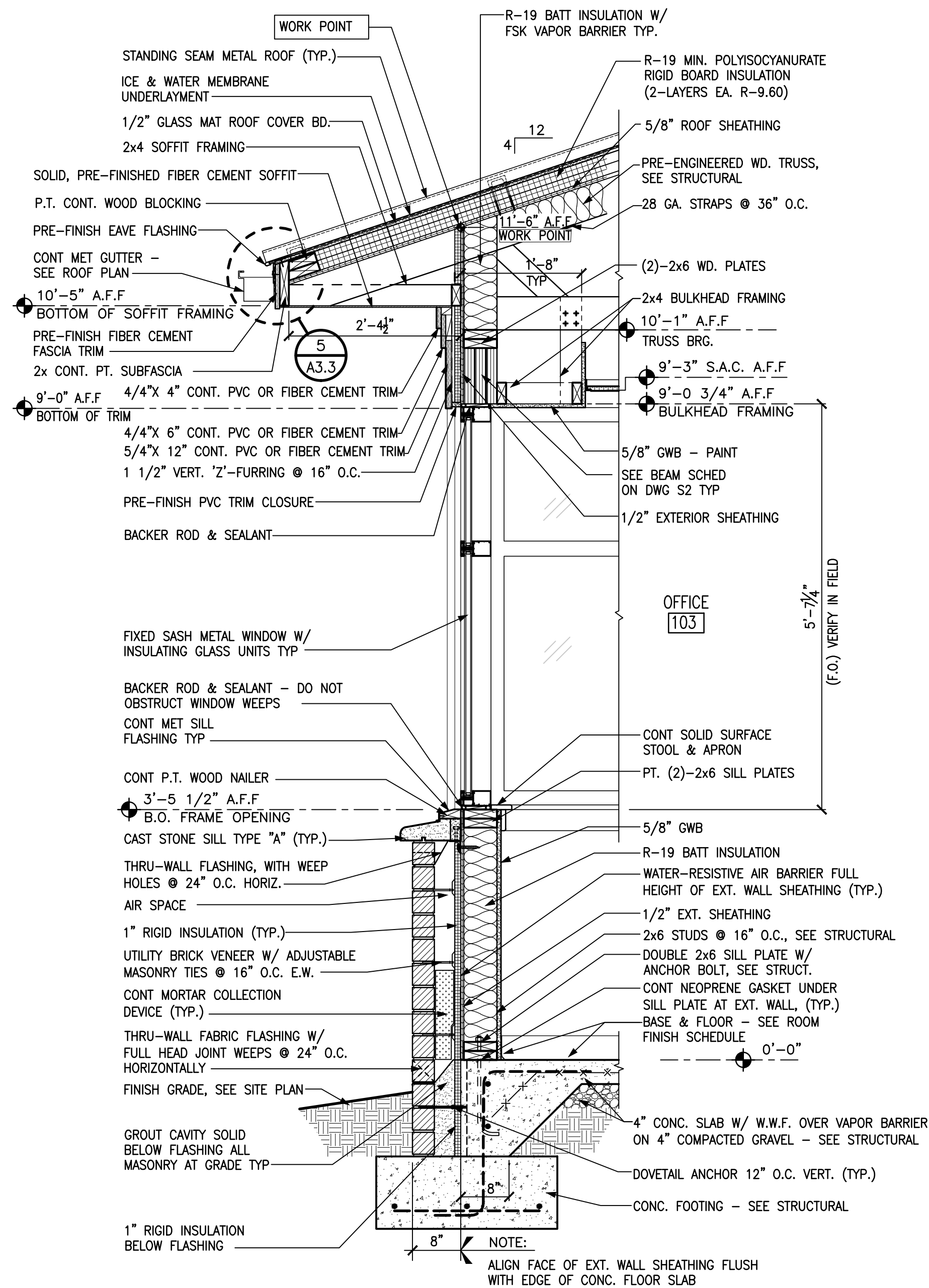
1 WALL SECTION
A3.2 SCALE: 3/4" = 1'-0"

NOTE:
SEE FINISH SCHEDULE ON
DRAWING A5.1 FOR ALL
ROOM FINISHES.

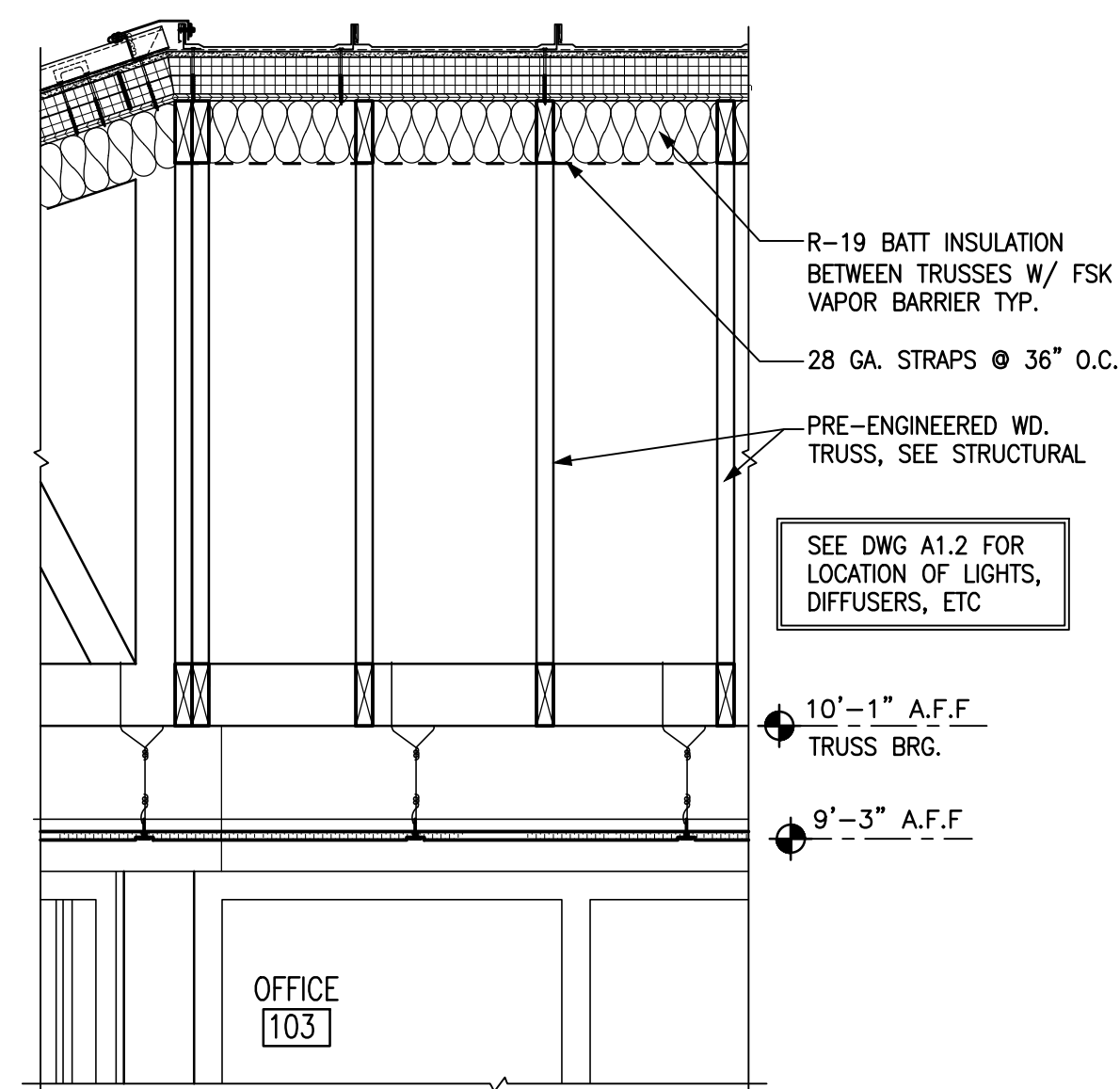
BID DOCUMENTS 	
DESIGNED BY: FACILITIES DESIGN ARCHITECTS & ENGINEERS FACILITIES MANAGEMENT DIVISION, NCDOT 1 SOUTH WILKINSON STREET RALEIGH, NORTH CAROLINA 27601 PHONE: 919/707-4640 FAX: 919/707-0986	
CONSULTANT: 	
DRAWING TITLE / DESCRIPTION: WALL SECTIONS	
PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT	
2300 FERRY ROAD, HAYLOCK, NC 28632 CRAVEN COUNTY, NORTH CAROLINA	
STATE CONSTRUCTION ID.# 11-09079-01A	
ASSET NUMBER: CO.# SITE.# BLDG.# 48 - - -	
REVISIONS NO.	DATE
DATE ISSUED: 8-14-15 DRAWN BY: DB CHECKED BY: MDG SHEET NO.	
A3.2	



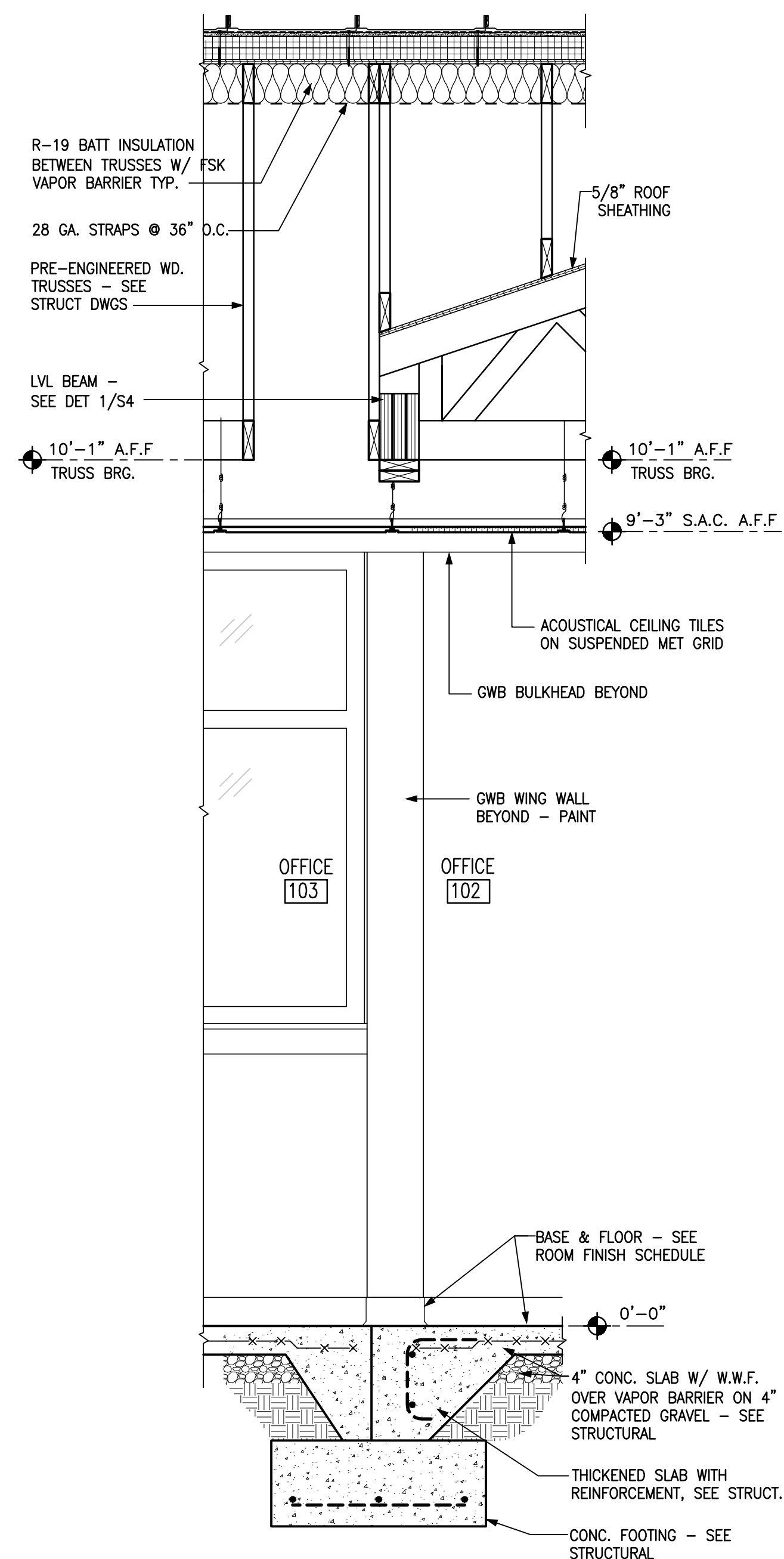
5 DETAIL
A3.3 SCALE: 3" = 1'-0"



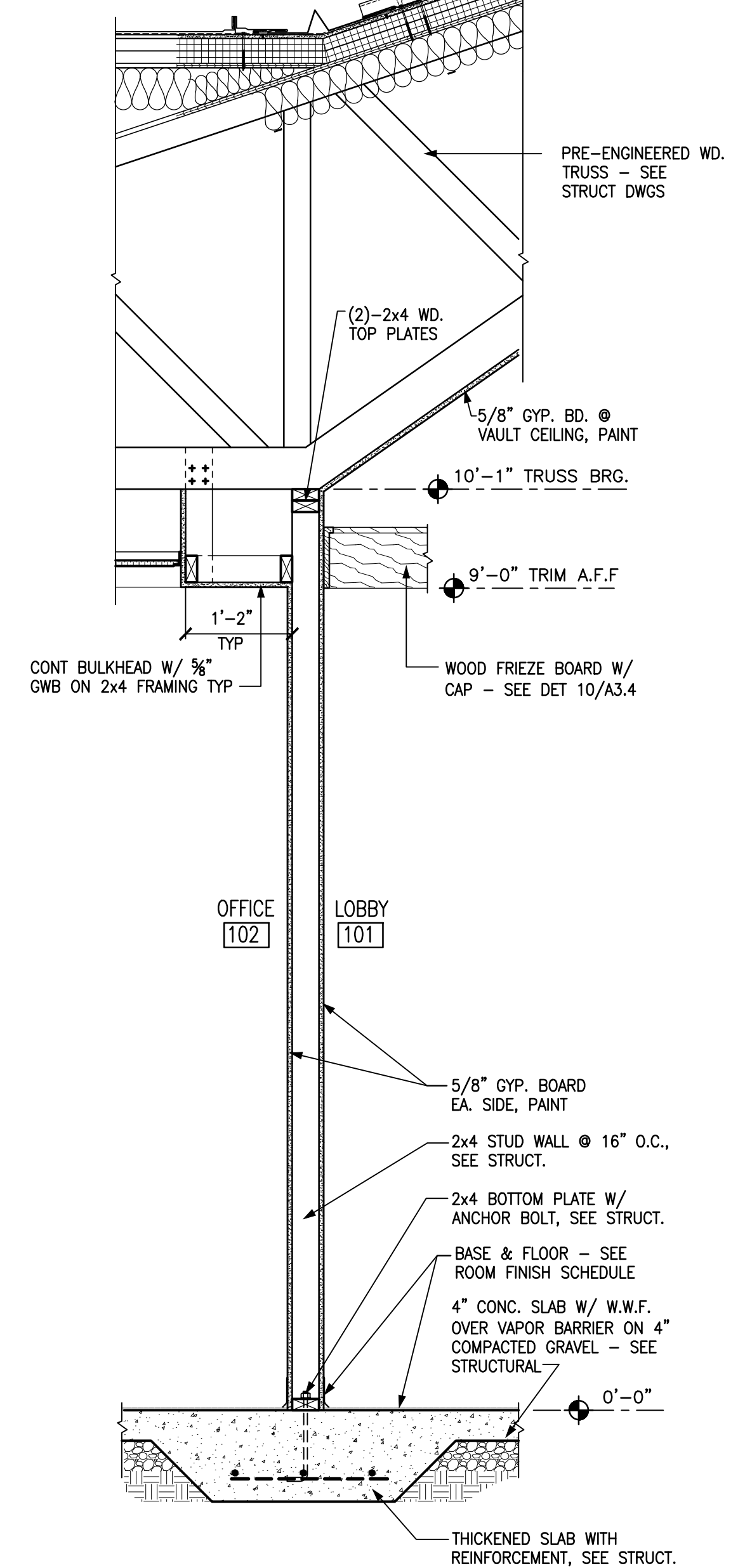
4 WALL SECTION
A3.3 SCALE: 3/4" = 1'-0"



3 SECTION
A3.3 SCALE: 3/4" = 1'-0"

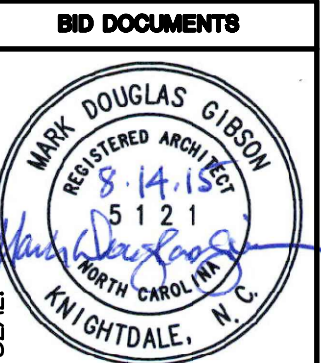


2 WALL SECTION
A3.3 SCALE: 3/4" = 1'-0"



1 WALL SECTION
A3.3 SCALE: 3/4" = 1'-0"

NOTE:
SEE FINISH SCHEDULE ON
DRAWING A5.1 FOR ALL
ROOM FINISHES.



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CONSULTANT:

DRAWING TITLE / DESCRIPTION:
WALL SECTIONS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT
2300 FERRY ROAD, HAYLOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

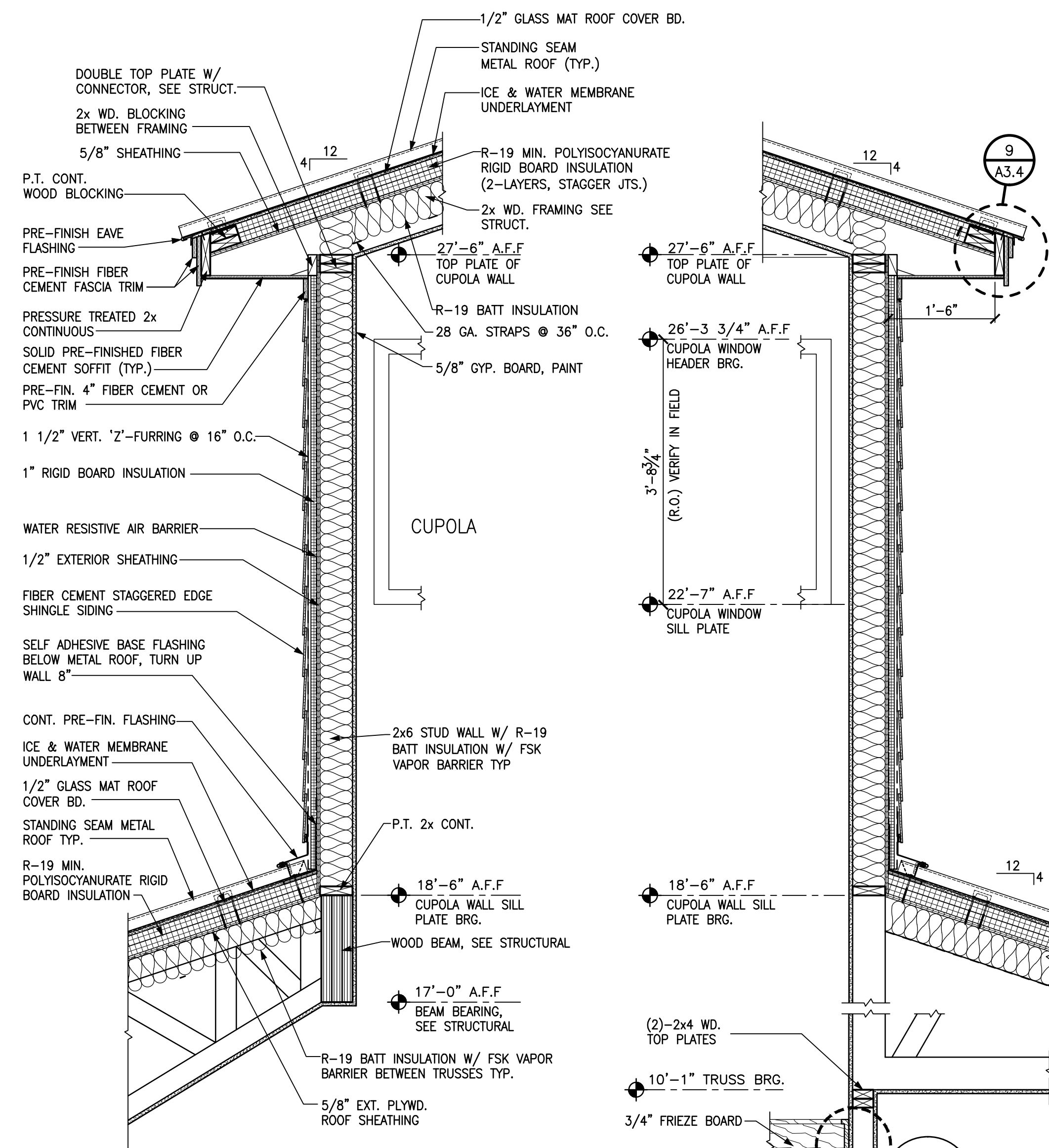
STATE CONSTRUCTION
ID.# 11-09079-01A

ASSET NUMBER:
CO.# SITE.# BLDG.#
48 - - -

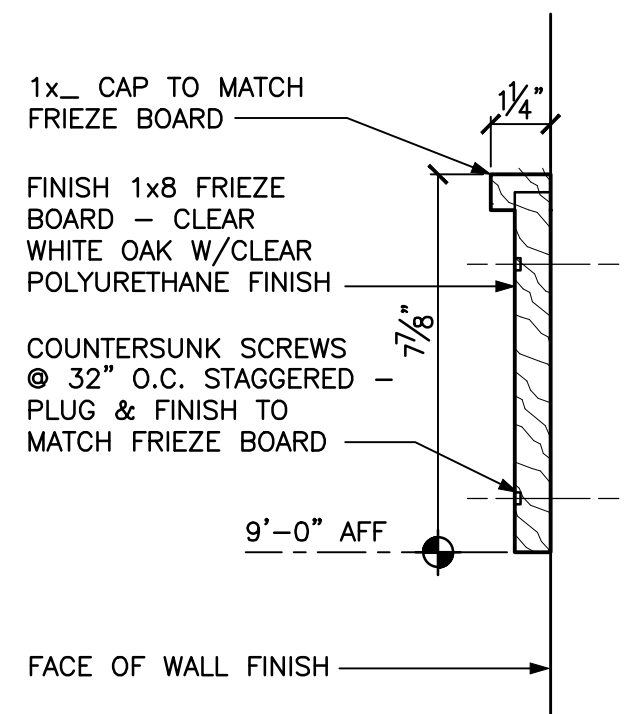
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SHEET NO.

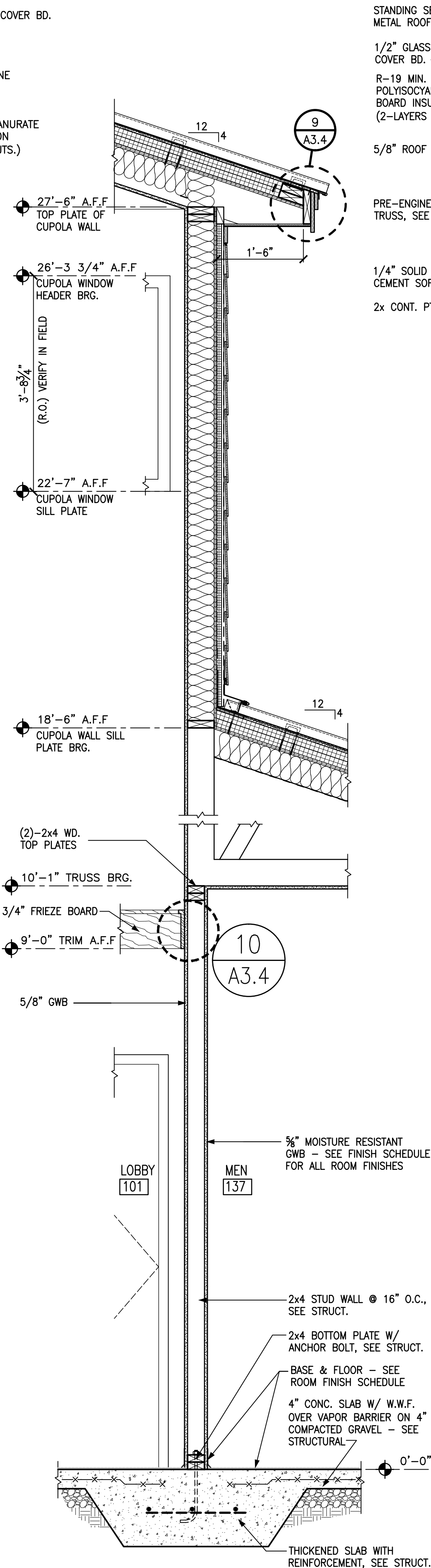
A3.3



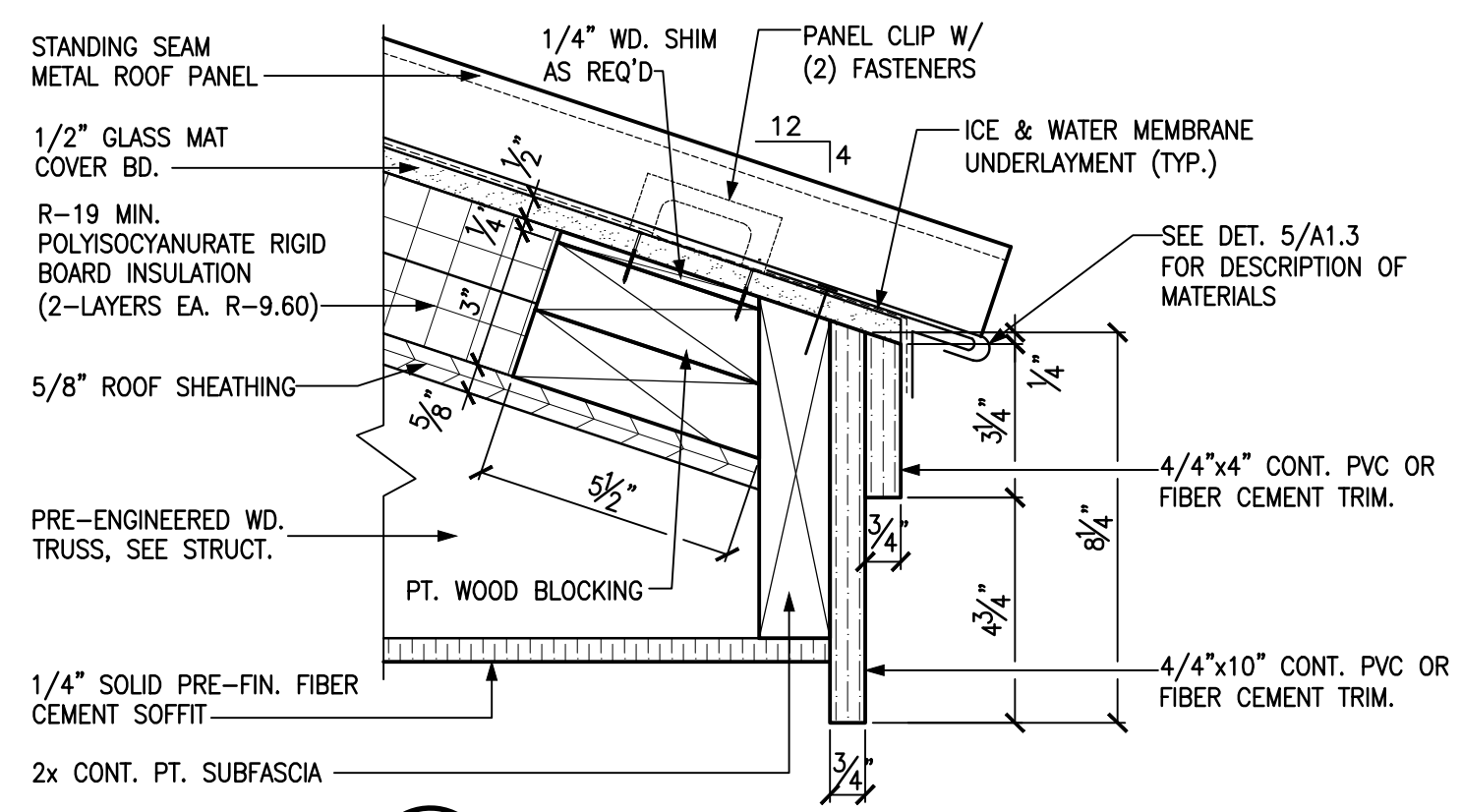
8 SECTION
A3.4 SCALE: 3/4" = 1'-0"



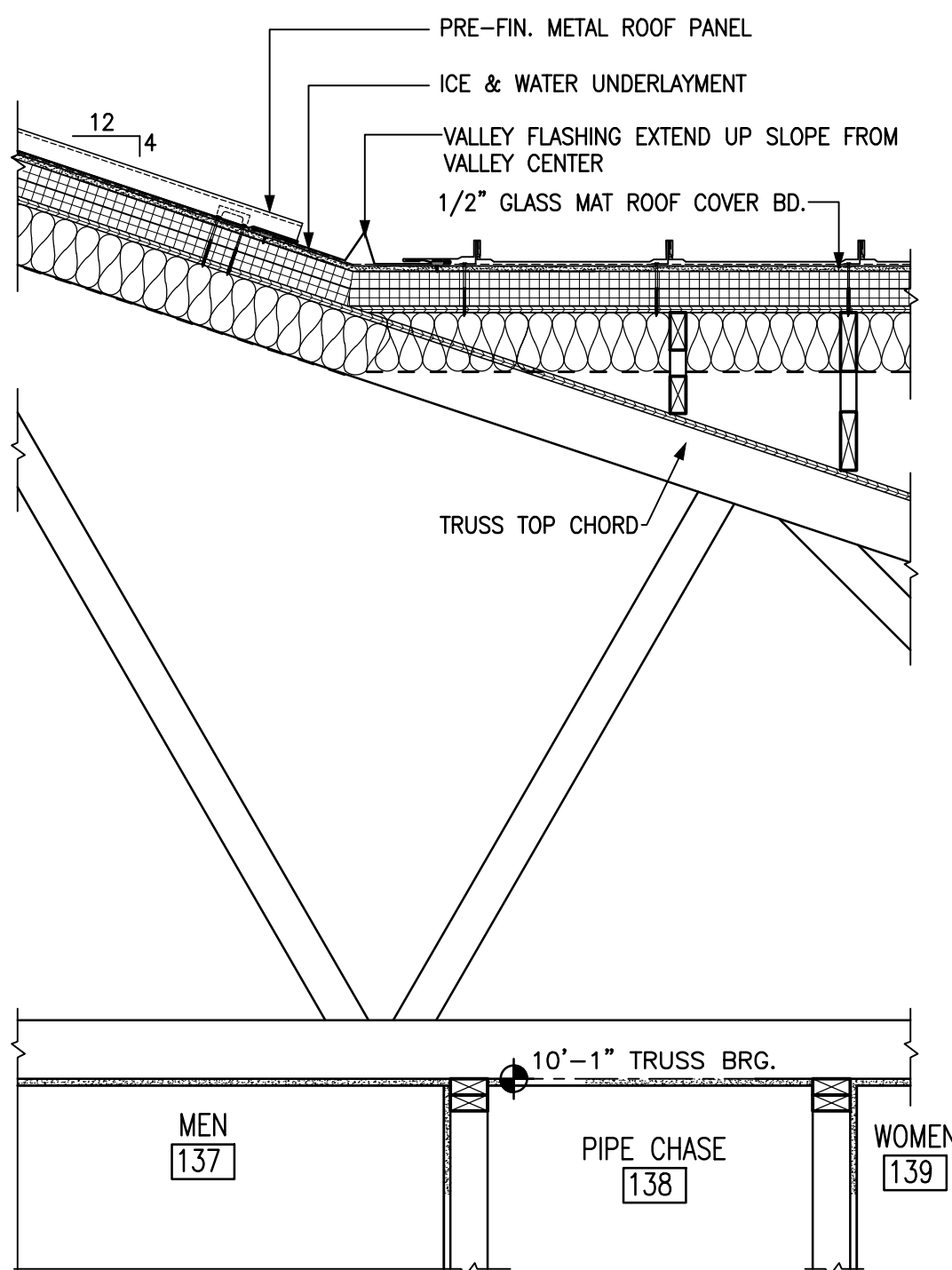
10 FRIEZE DETAIL
A3.4 SCALE: 3" = 1'-0"



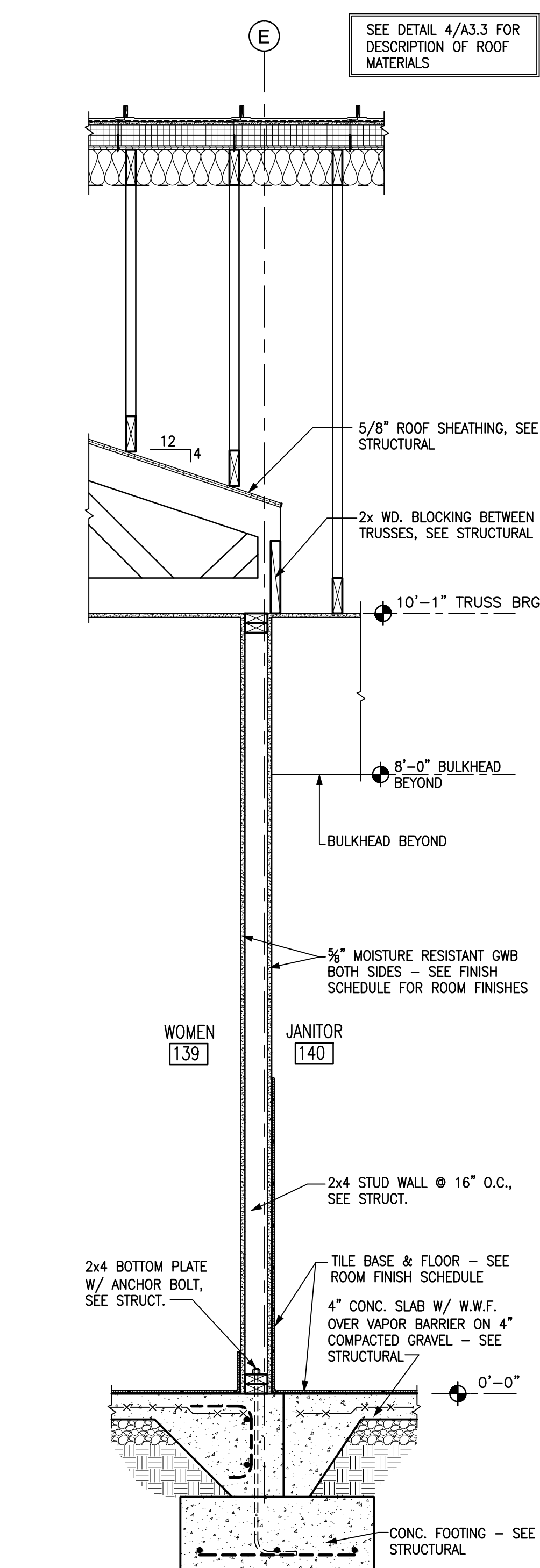
7 SECTION
A3.4 SCALE: 3/4" = 1'-0"



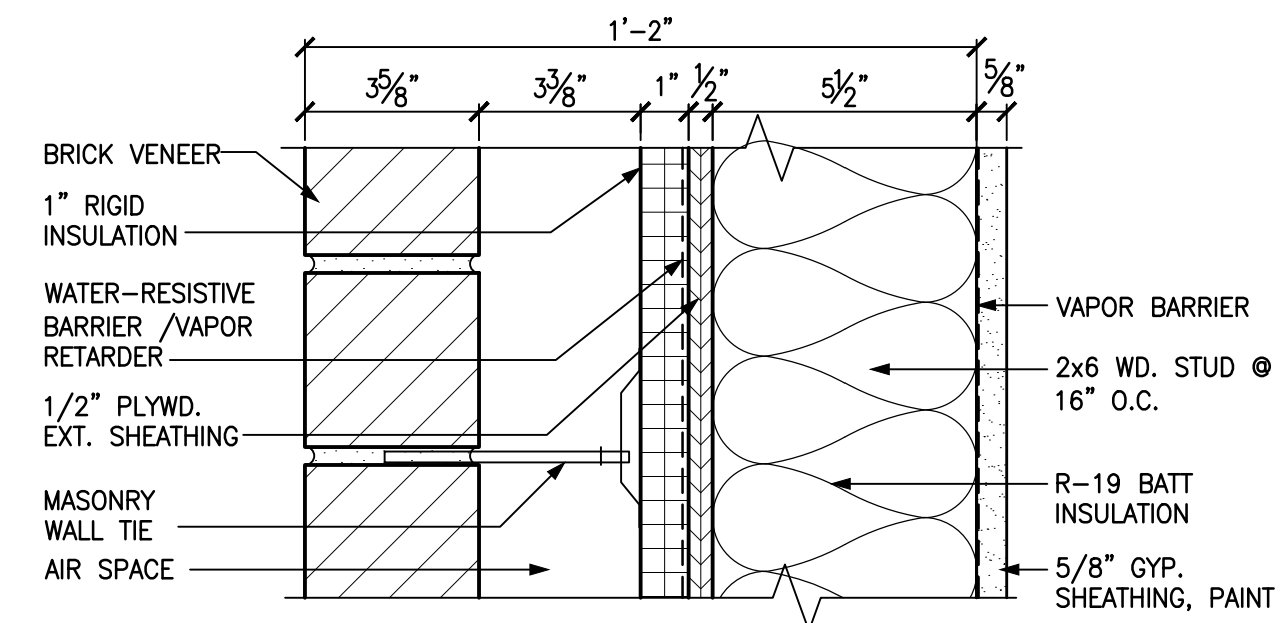
9 DETAIL
A3.4 SCALE: 3" = 1'-0"



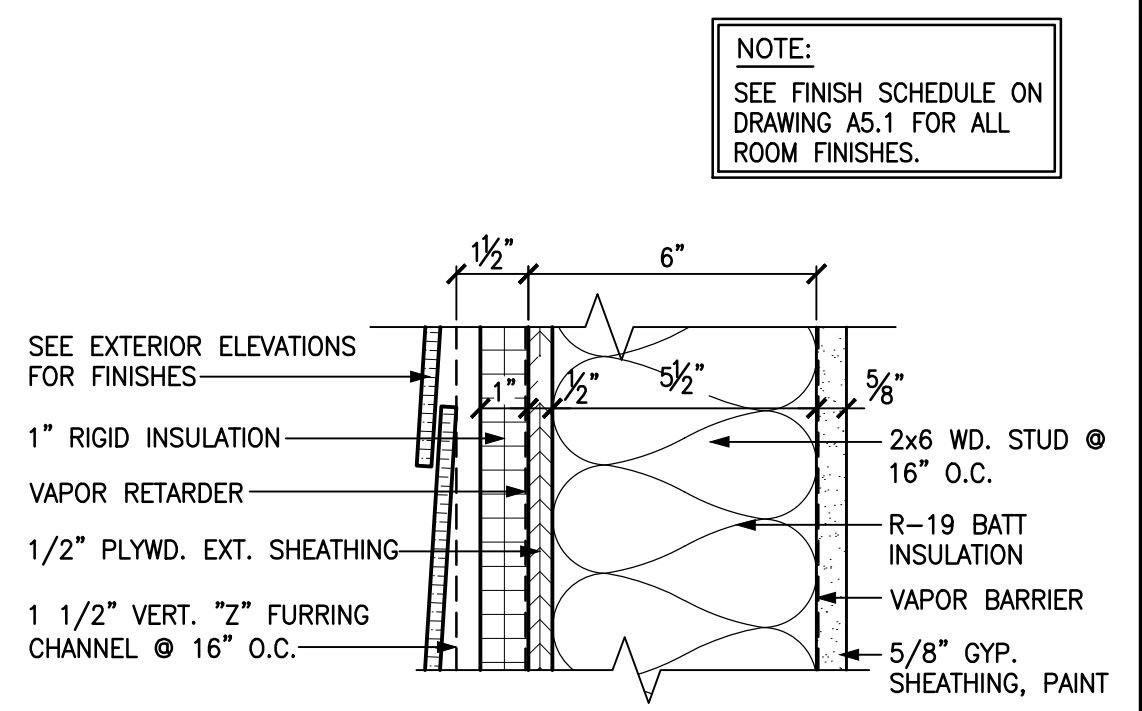
4 SECTION
A3.4 SCALE: 3/4" = 1'-0"



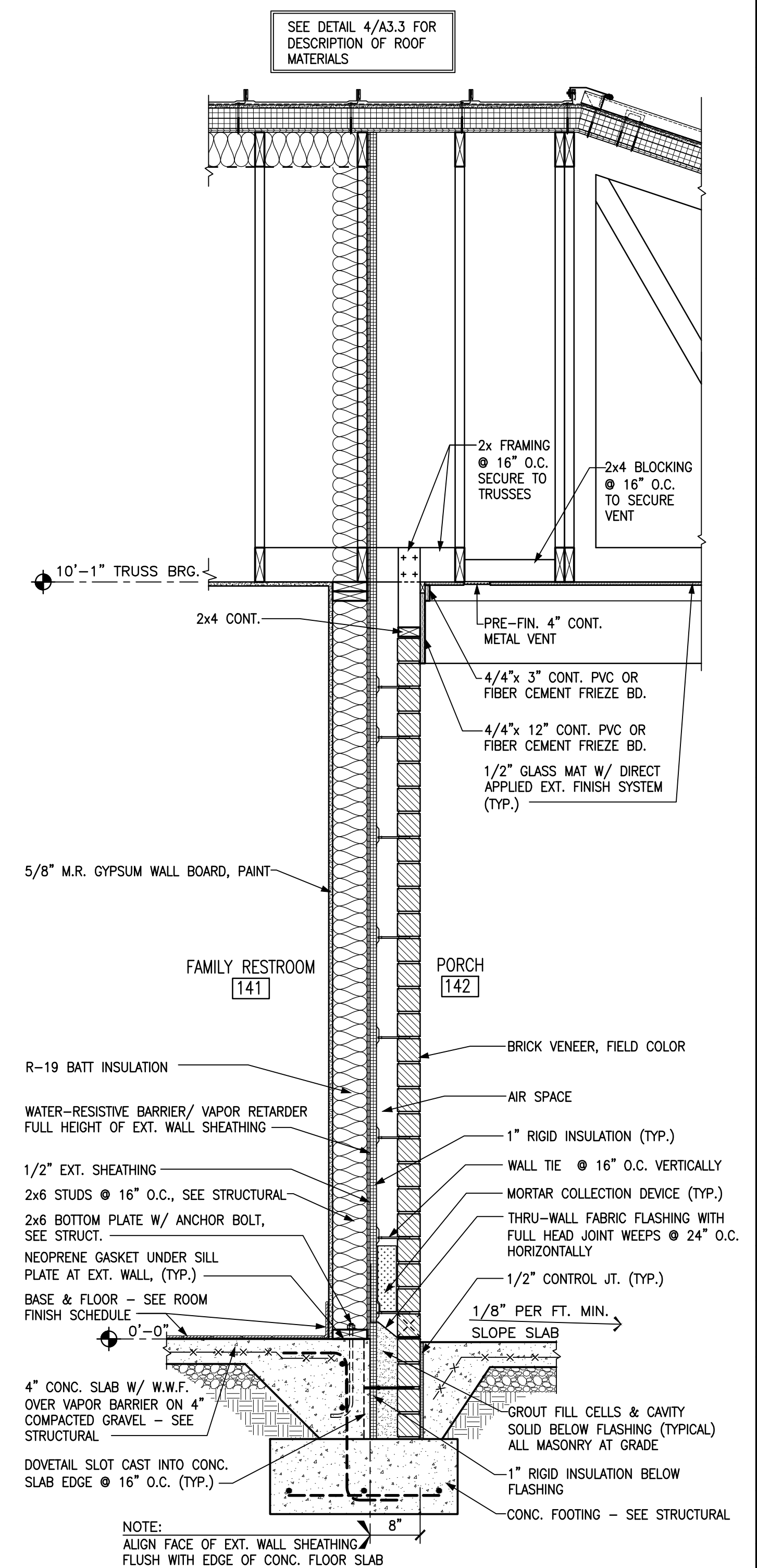
3 WALL SECTION
A3.4 SCALE: 3/4" = 1'-0"



5 WALL DETAIL
A3.4 SCALE: 3" = 1'-0"



6 WALL DETAIL
A3.4 SCALE: 3" = 1'-0"



1 WALL SECTION
A3.4 SCALE: 3/4" = 1'-0"

BID DOCUMENTS

DESIGNED BY: **FACILITIES DESIGN ARCHITECTS & ENGINEERS**
1 SOUTH WILKINSON STREET
FALCON, NORTH CAROLINA 27001
PHONE: 910/707-4640 FAX: 910/707-0989

CONSULTANT: **MARK DOUGLAS GIBSON**
REGISTERED ARCHITECT
5121
NORTH CAROLINA
KNIGHTDALE, N.C.

WALL SECTIONS

DRAWING TITLE / DESCRIPTION: **CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT**

PROJECT TITLE: **CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT**

STATE CONSTRUCTION ID.# 11-09079-01A

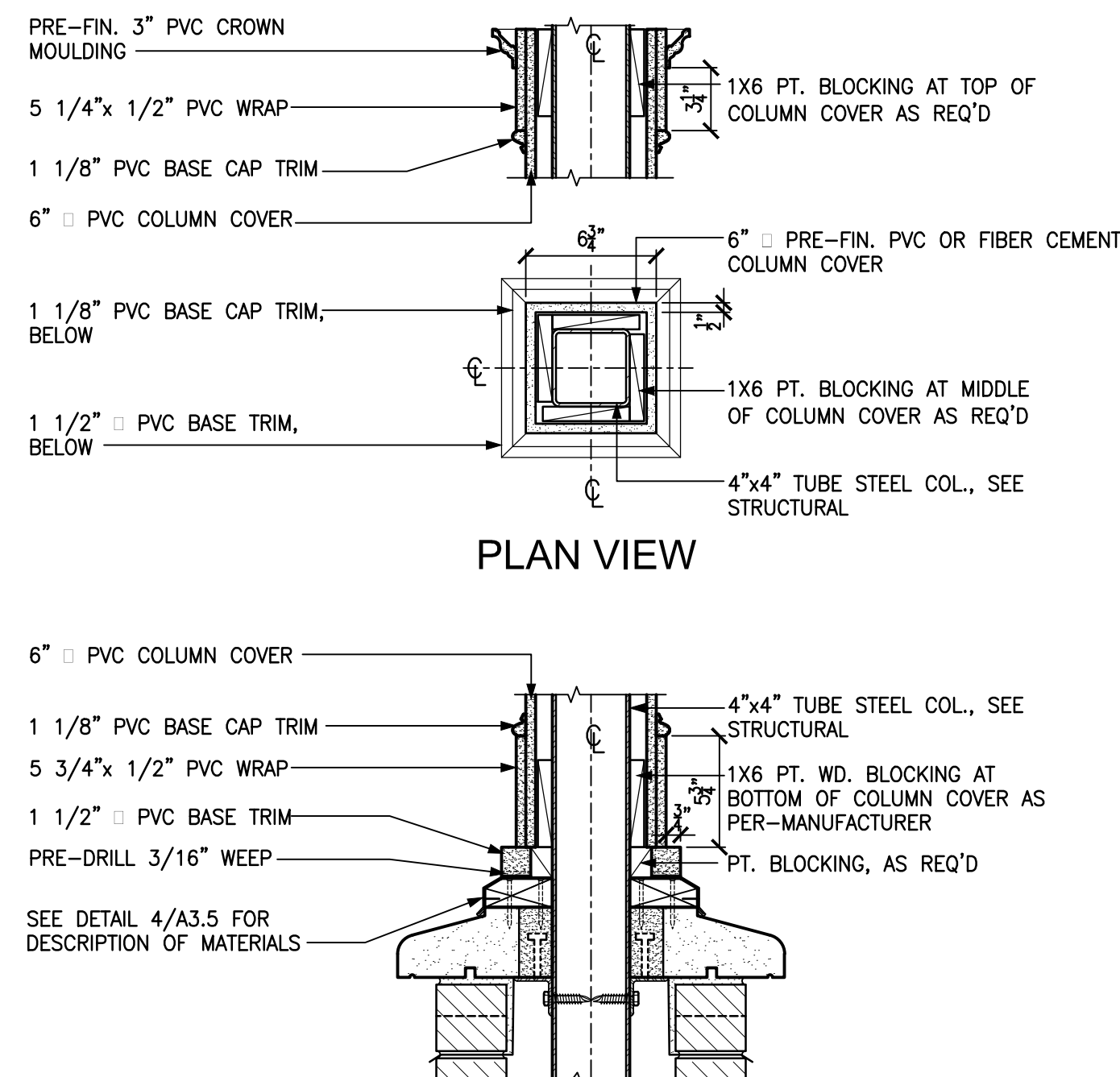
ASSET NUMBER: **48**

CO.# SITE.# BLDG.#

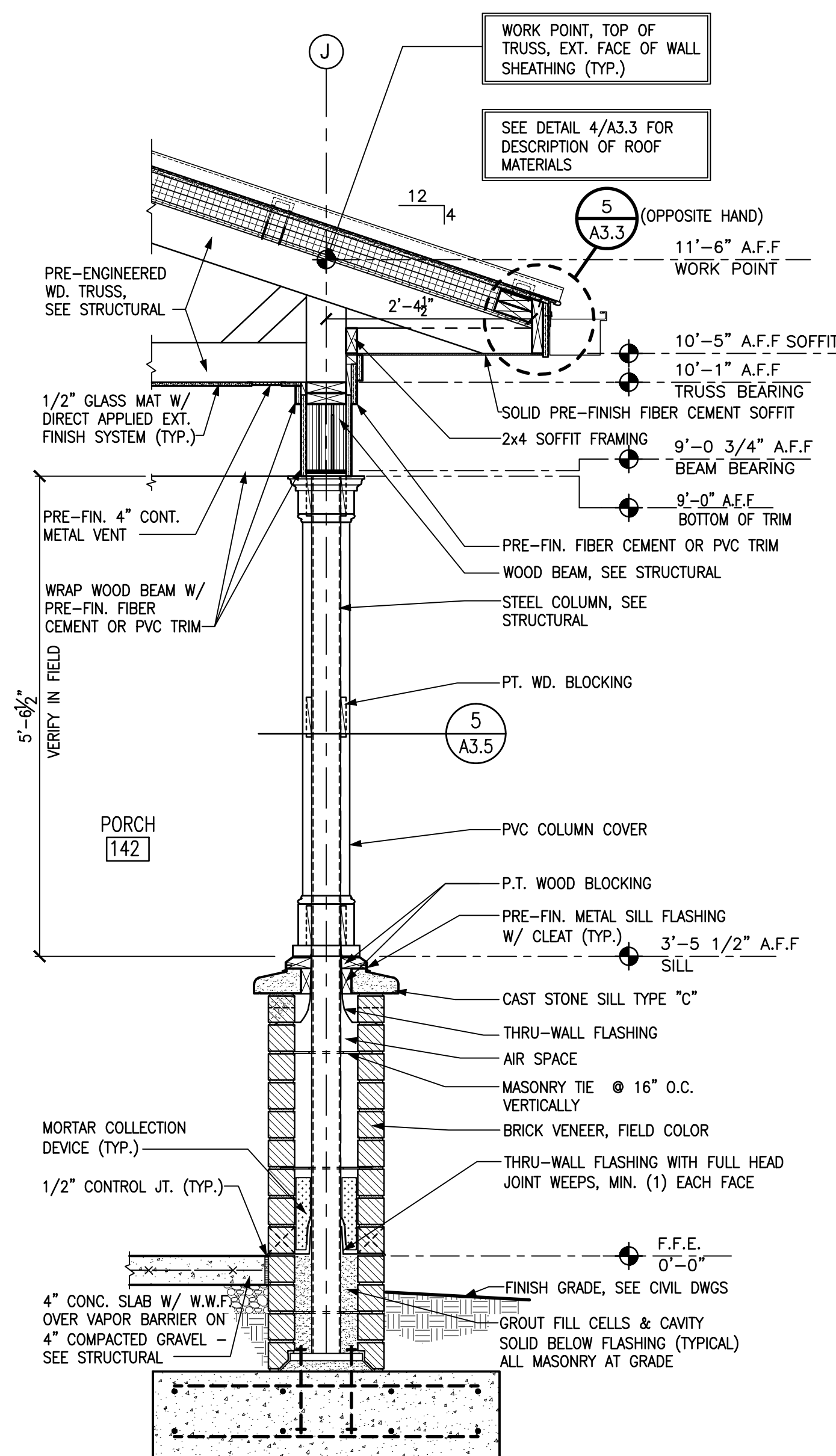
REVISIONS NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: DB
CHECKED BY: MDG
SHEET NO.

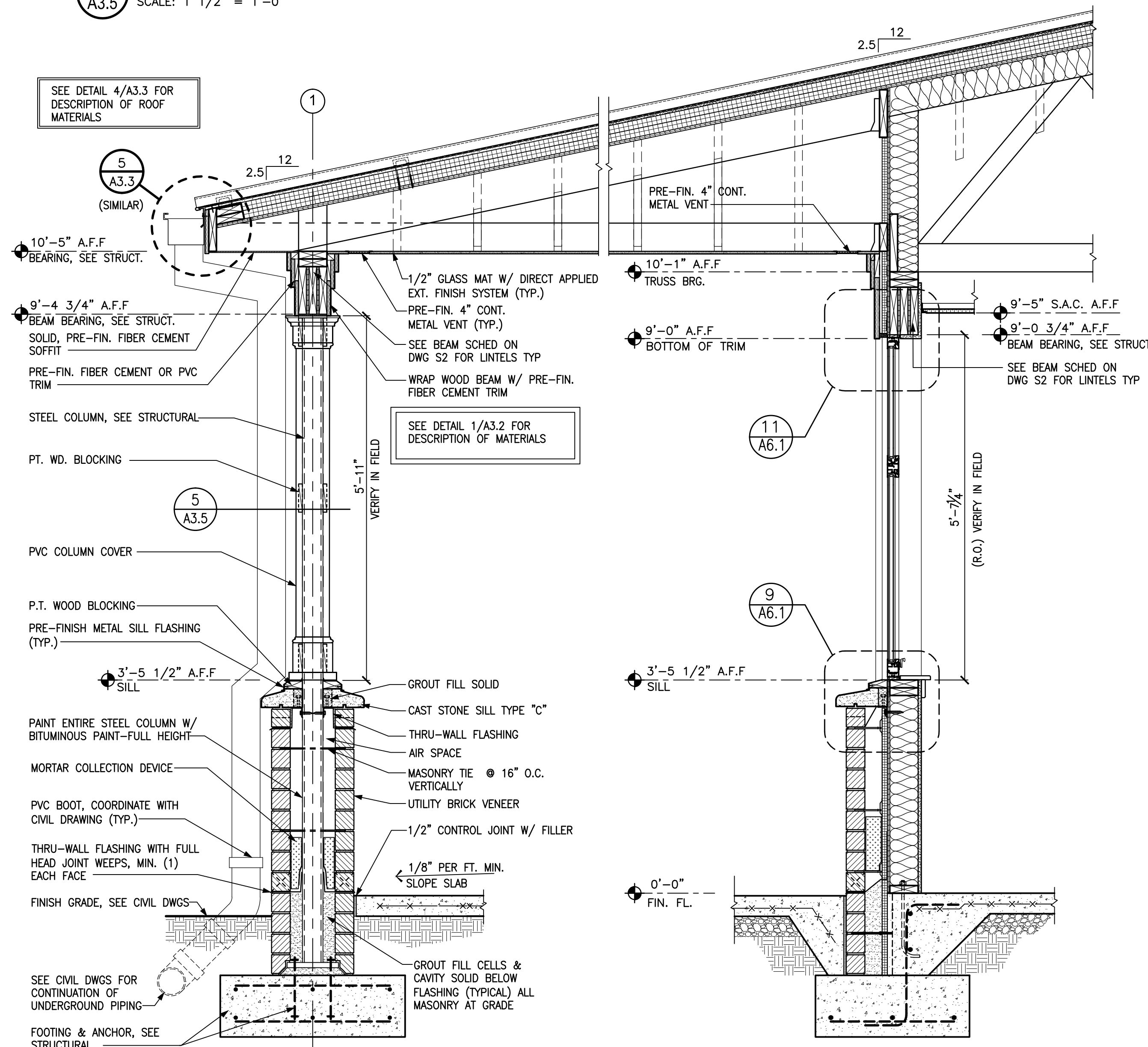
A3.4



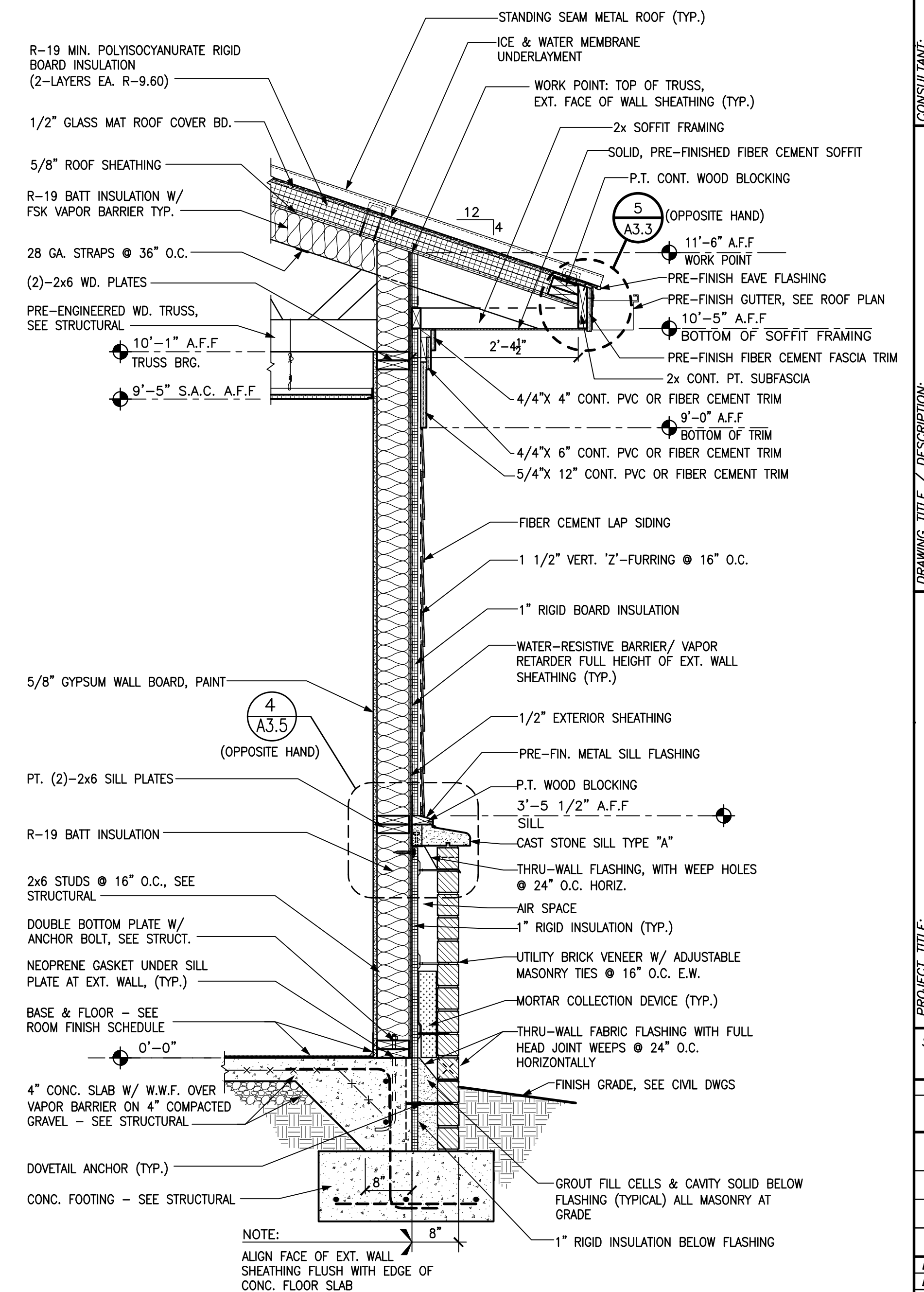
5 ENLARGED COLUMN COVER DETAIL
A3.5 SCALE: 1 1/2" = 1'-0"



3 WALL SECTION
A3.5 SCALE: 3/4" = 1'-0"



2 SECTION
A3.5 SCALE: 3/4" = 1'-0"



1 TYPICAL - WALL SECTION
A3.5 SCALE: 3/4" = 1'-0"

BID DOCUMENTS

MARK DOUGLAS GIBSON
REGISTERED ARCHITECT
5121
NORTH CAROLINA
KNIGHTDALE, N.C.

DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, NCDOT

1 SOUTH WILMINGTON STREET
FALMOUTH, NORTH CAROLINA 27001
PHONE 910/707-4640 FAX 910/708-0886

BID DOCUMENTS

WALL SECTIONS

PROJECT TITLE: CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

2300 FERRY ROAD, HAYLOCK, NC 28532
CRABEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION ID.# 11-09079-01A

ASSET NUMBER: CO.# SITE.# BLDG.#
48 - - -

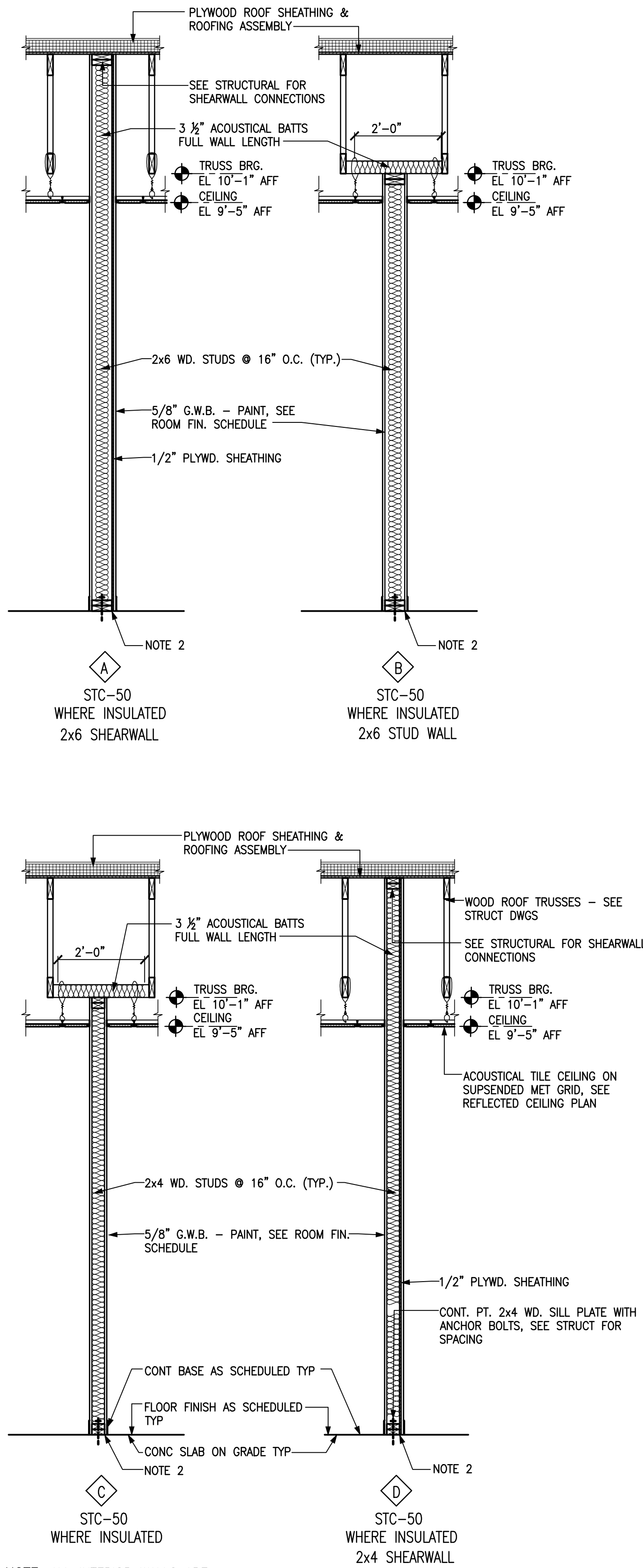
REVISIONS NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: DB
CHECKED BY: MDG
SHEET NO.

A3.5

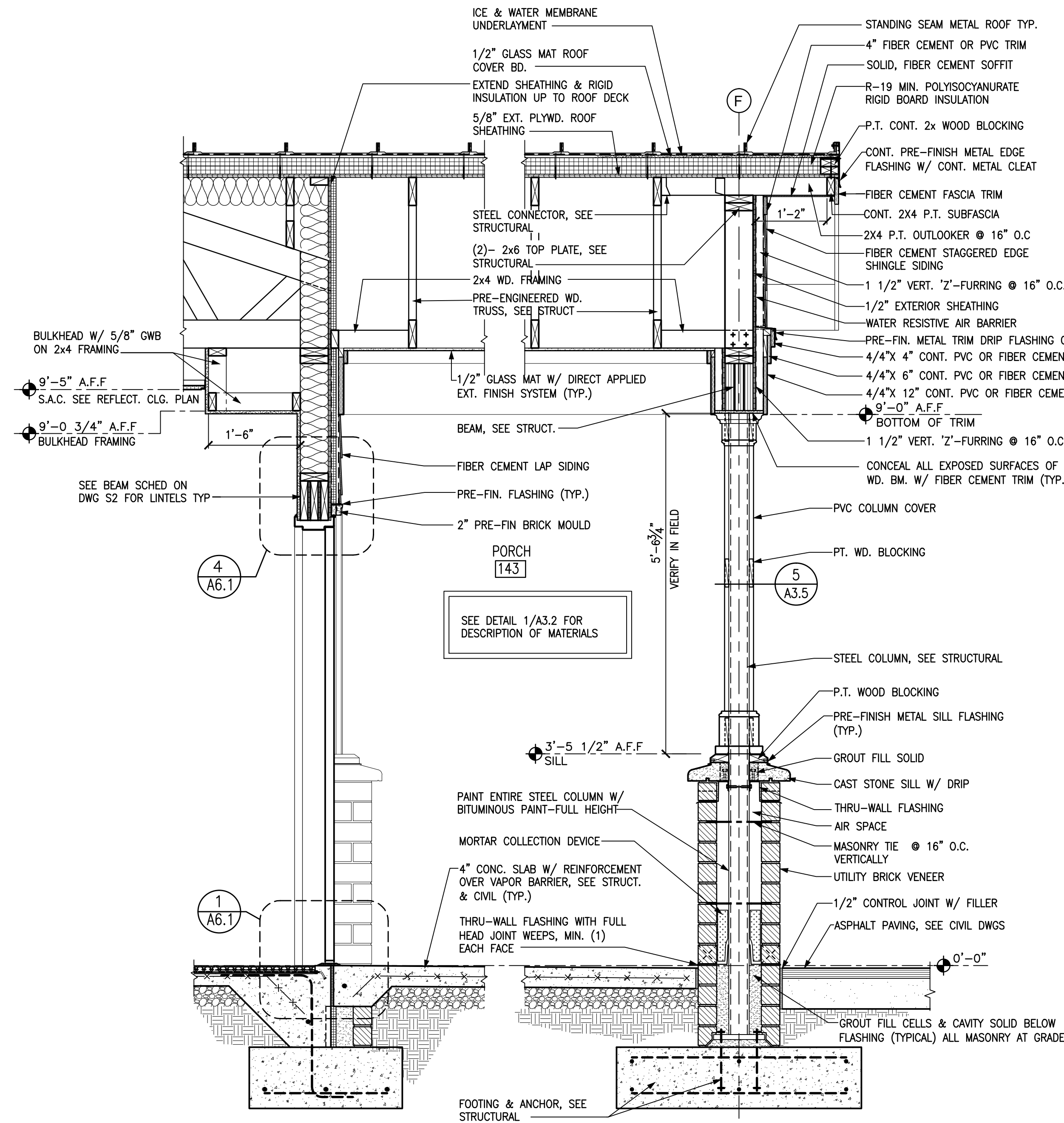
NOTES:

1. ALL INTERIOR WOOD STUD FRAMING 2x4 NOMINAL UNLESS OTHERWISE NOTED.
2. PROVIDE CONT ACOUSTICAL SEALANT FULL LENGTH OF ACOUSTICAL WALLS EACH SIDE TYP.
3. COORDINATE ACOUSTICAL BATT INSULATION
4. ALL INTERIOR WALLS TYPE 'C' UNLESS OTHERWISE NOTED



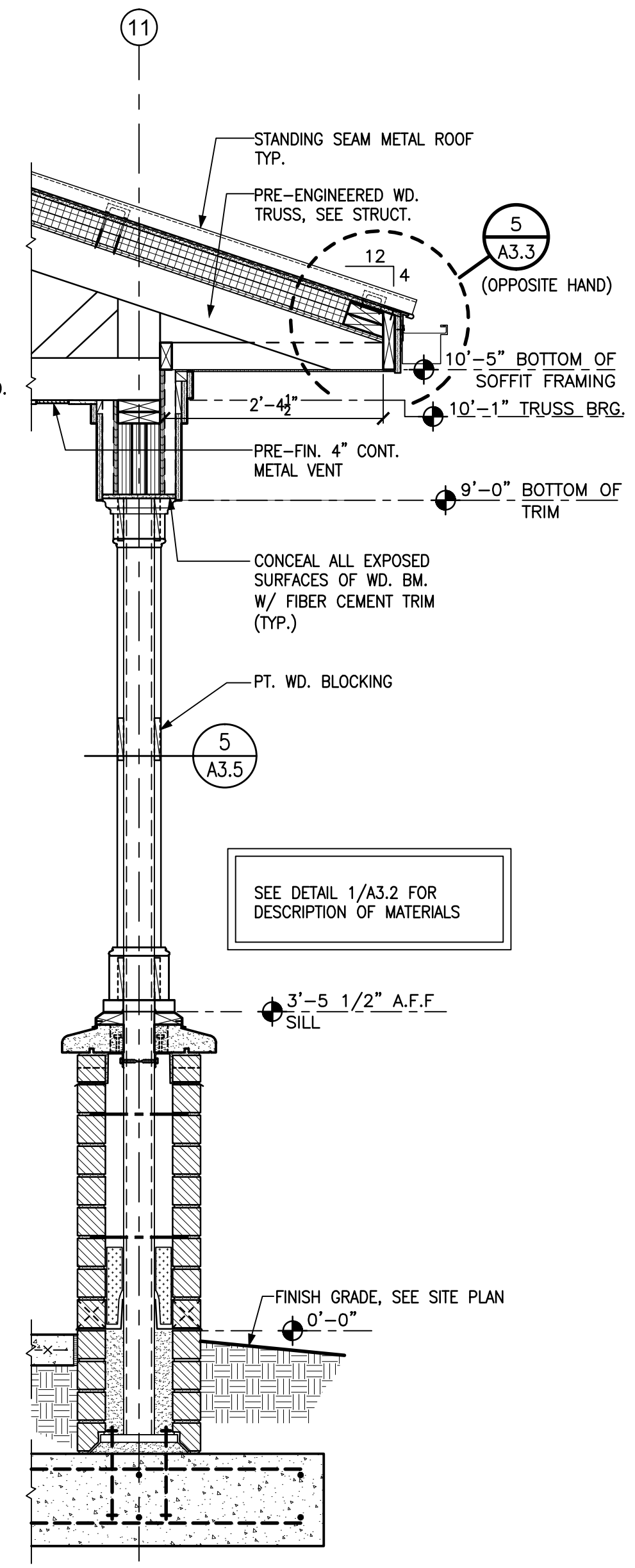
NOTE: ALL INTERIOR WALLS ARE TYPE 'C' 2x4 STUDS 16" O.C. UNLESS OTHERWISE NOTED

4 WALL TYPES
A3.6 SCALE: 1/2" = 1'-0"



3 SECTION AT PORCH 143
A3.6 SCALE: 3/4" = 1'-0"

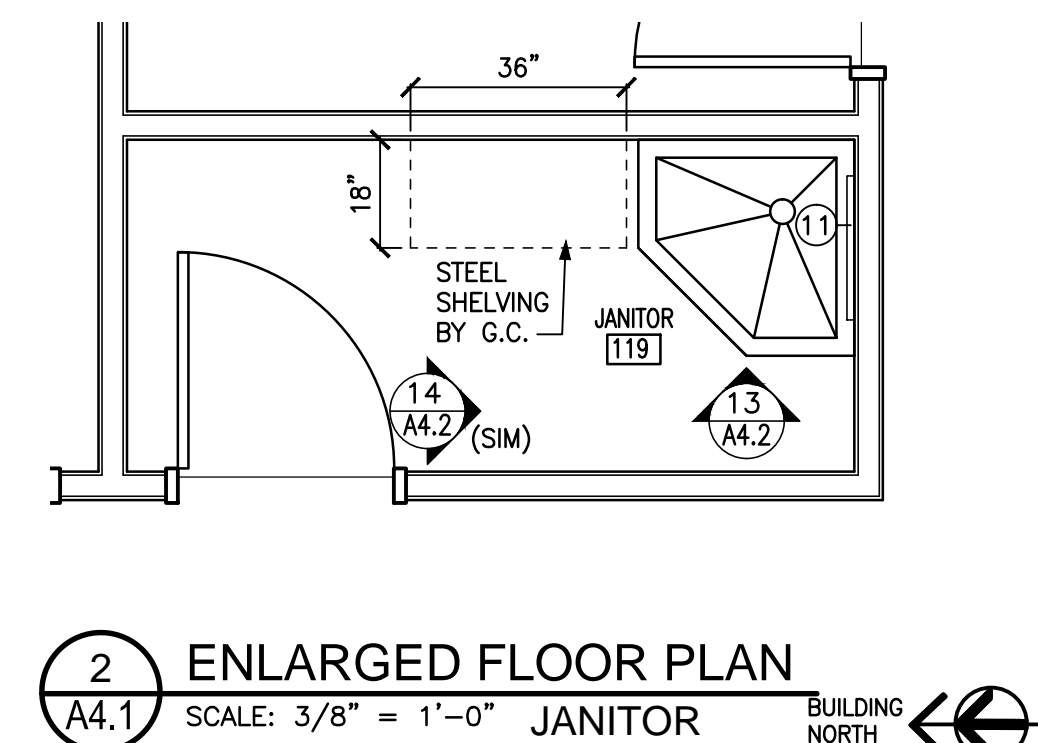
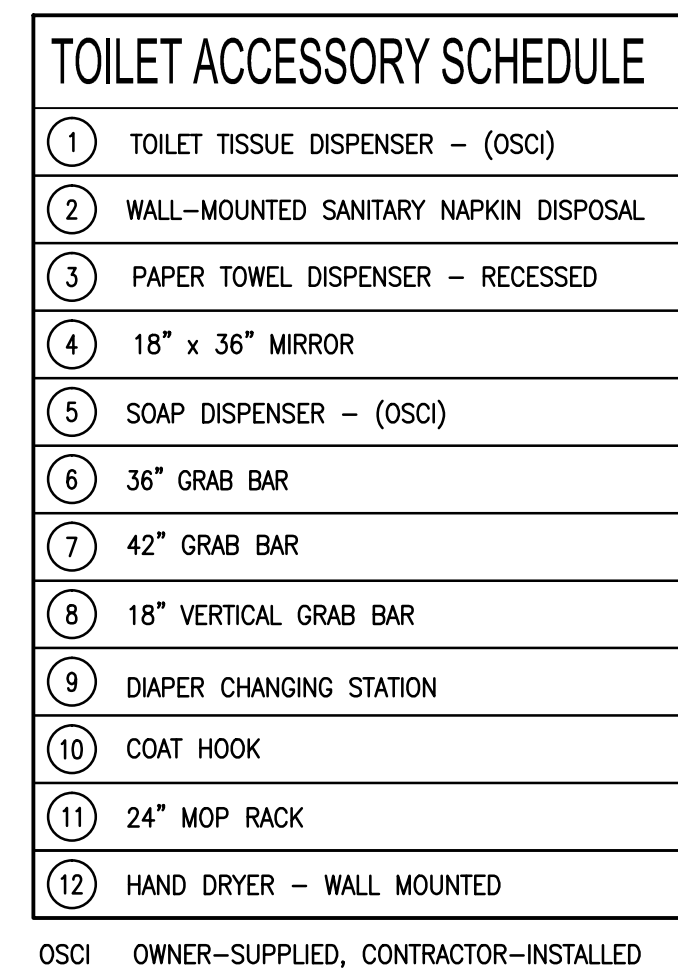
2 SECTION AT PORCH 143
A3.6 SCALE: 3/4" = 1'-0"



1 SECTION AT PORCH 143
A3.6 SCALE: 3/4" = 1'-0"

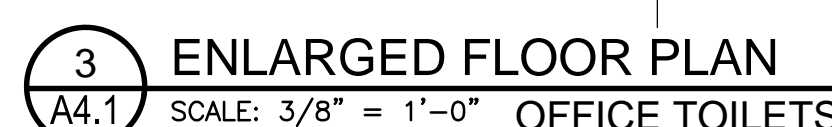
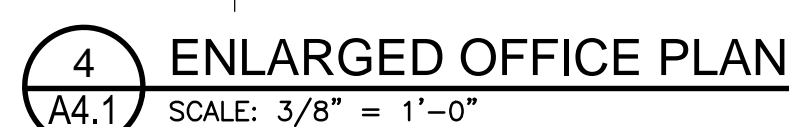
NOTE:
SEE FINISH SCHEDULE ON
DRAWING A5.1 FOR ALL
ROOM FINISHES.


<p>BID DOCUMENTS</p> <p>MARK DOUGLAS G. BROWN REGISTERED ARCHITECT 5121 NORTH CAROLINA KNIGHTDALE, N.C.</p>	
<p>DESIGNED BY: FACILITIES DESIGN ARCHITECTS & ENGINEERS FACILITIES MANAGEMENT DIVISION, NCDOT</p> <p>1 SOUTH WILMINGTON STREET RALEIGH, NORTH CAROLINA 27601 PHONE 919/707-4640 FAX 919/707-0999</p>	
<p>CONSULTANT:</p>	
<p>DRAWING TITLE / DESCRIPTION:</p> <p>WALL SECTIONS</p> <p>BID DOCUMENTS</p>	
<p>PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT</p> <p>2300 FERRY ROAD, HAYLOCK, NC 28632 CRAVEN COUNTY, NORTH CAROLINA</p>	
<p>STATE CONSTRUCTION ID.# 11-09079-01A</p>	
<p>ASSET NUMBER: CO.# SITE.# BLDG.# 48 - - -</p>	
<p>REVISIONS NO. DATE</p>	
<p>DATE ISSUED: 8-14-15 DRAWN BY: DB CHECKED BY: MDG SHEET NO.</p>	
<p>A3.6</p>	

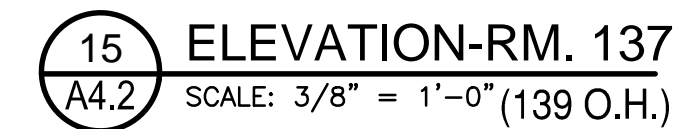
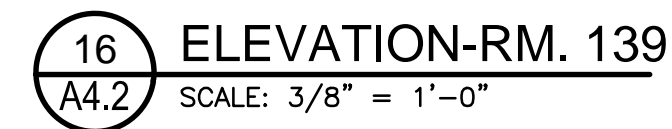
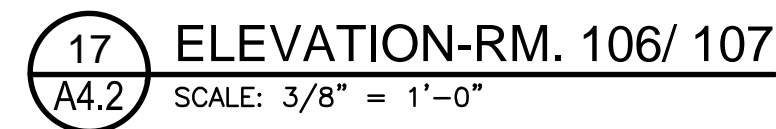
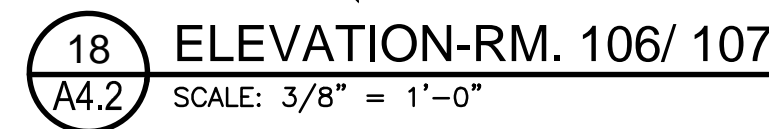


5 TYPICAL TOILET ACCESSORY MOUNTING ELEVATIONS

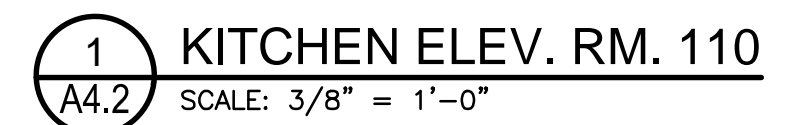
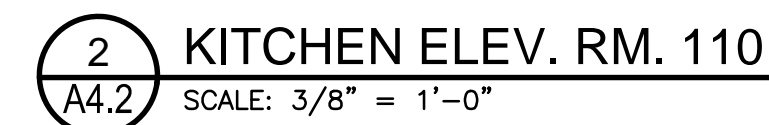
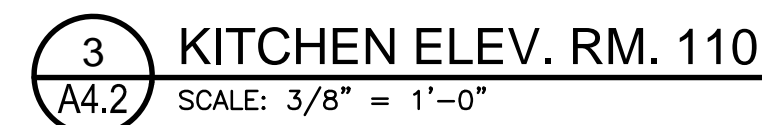
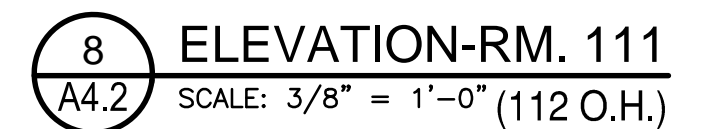
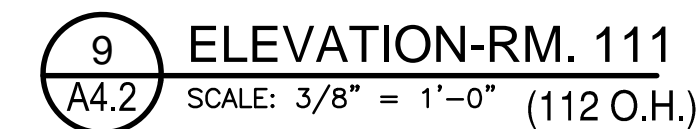
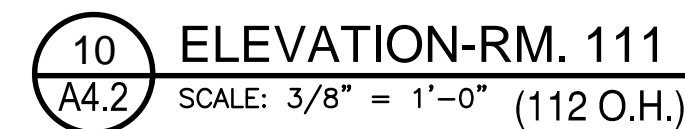
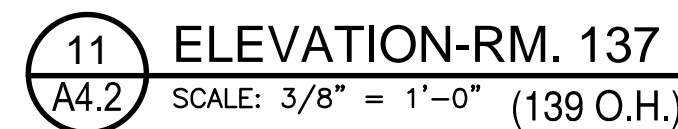
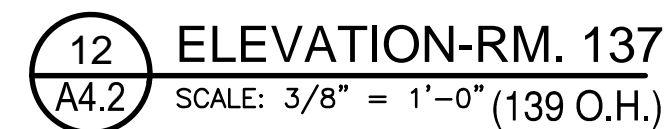
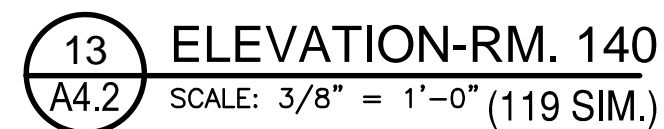
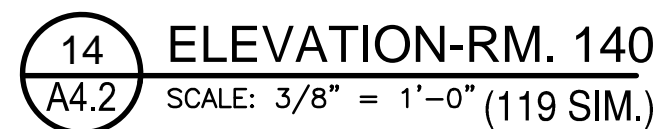
A4.1 SCALE: 1/2" = 1'-0"

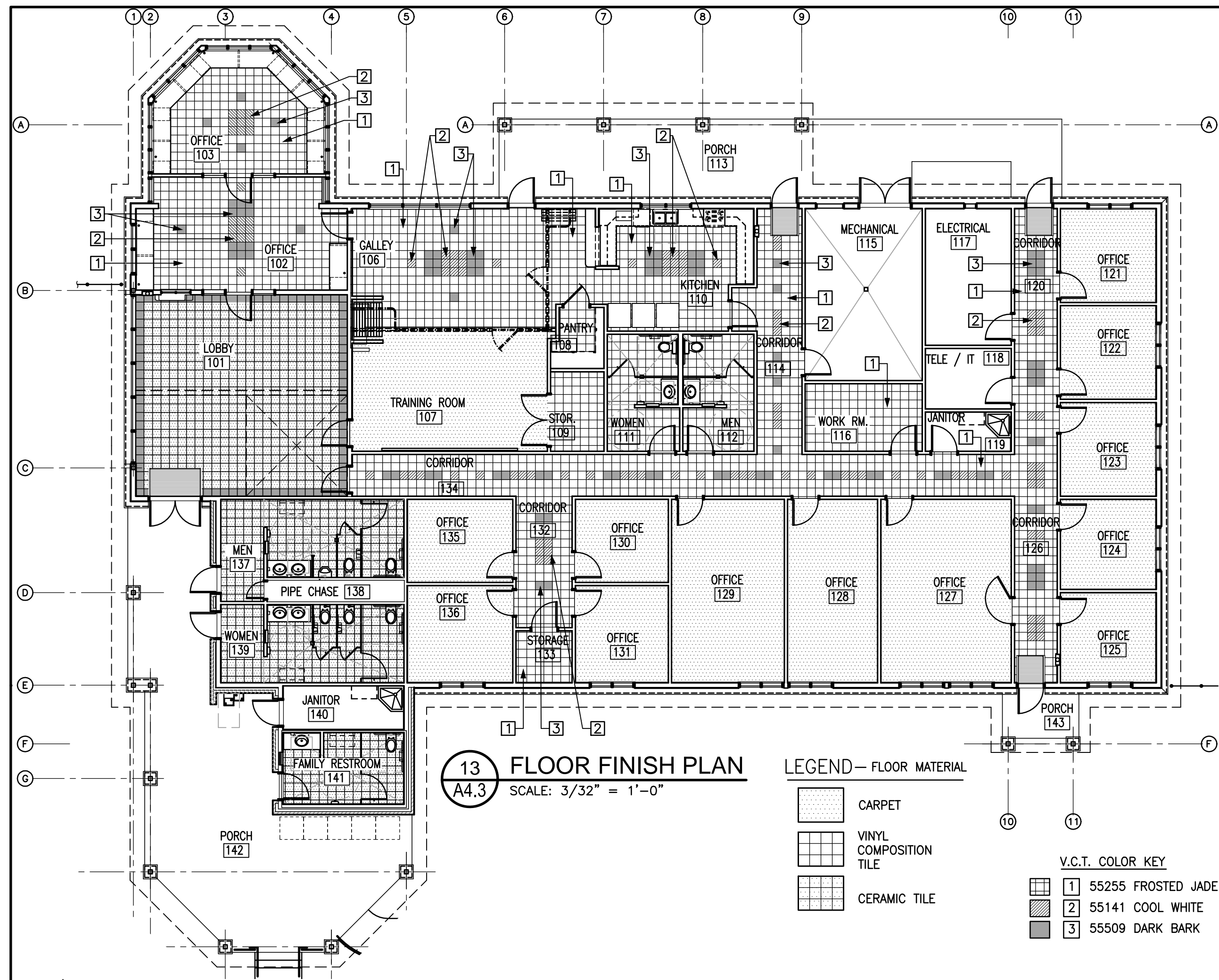


BID DOCUMENTS 		SCALE:	
DESIGNED BY: FACILITIES DESIGN ARCHITECTS & ENGINEERS FACILITIES MANAGEMENT DIVISION, NCOT 1 SOUTH WILKINSON STREET RALEIGH, NORTH CAROLINA 27601 PHONE 919/737-4640 FAX 919/737-0999			
DRAWING TITLE / DESCRIPTION: <h1 style="text-align: center;">ENLARGED PLAN</h1>		CONSULTANT:	
PROJECT TITLE: CHERRY BRANCH FERRY FACILITY NORTH CAROLINA DOT		R I D D O C U M E N T S	
STATE CONSTRUCTION ID.# 11-09079-01A		2300 FERRY ROAD, HAYELLOCK, NC 28532 CRAVEN COUNTY, NORTH CAROLINA	
ASSET NUMBER: CO.# SITE.# BLDG.# 48			
REVISIONS			
NO.	DATE		
DATE ISSUED: 8-14-13 DRAWN BY: DB CHECKED BY: MDG SHEET NO.			
<h1 style="text-align: center;">A4.1</h1>			



1. WATER CLOSET FLUSH HANDLE SHALL BE ON OPEN (WIDE) SIDE OF WATER CLOSET.
2. TOP OF TOILET SEAT SHALL BE 17"-19" A.F.F. TYPICAL.
3. ALL EXPOSED SINK HOT WATER & DRAIN LINES SHALL BE INSULATED.
4. PROVIDE WOOD BLOCKING AS REQUIRED FOR TOILET PARTITION MOUNTING.
5. SEE SHEET A4.3 & A5.1 FOR ROOM FINISHES.
6. PROVIDE CERAMIC TILE BASE AT ALL WALLS SHOWN TO HAVE CERAMIC FLOOR TILE.



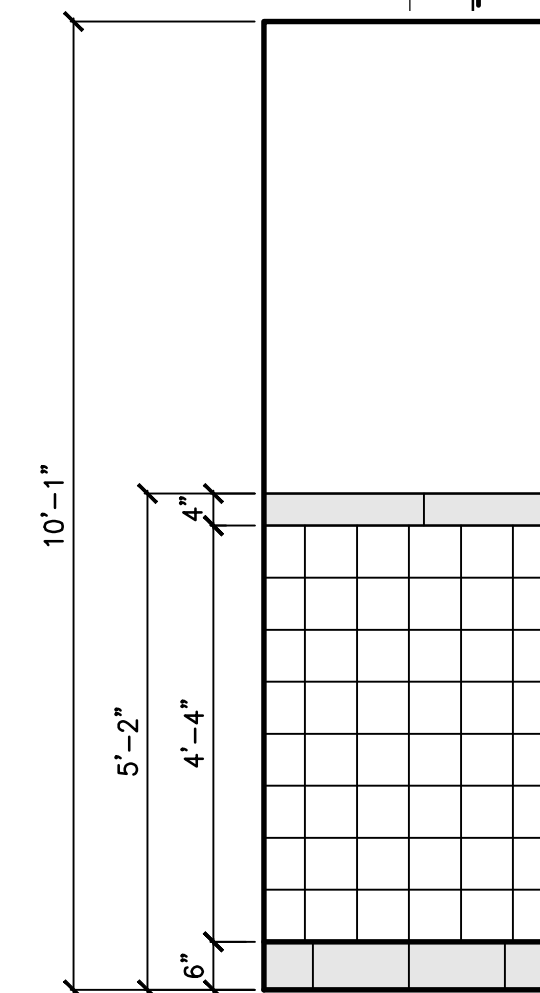
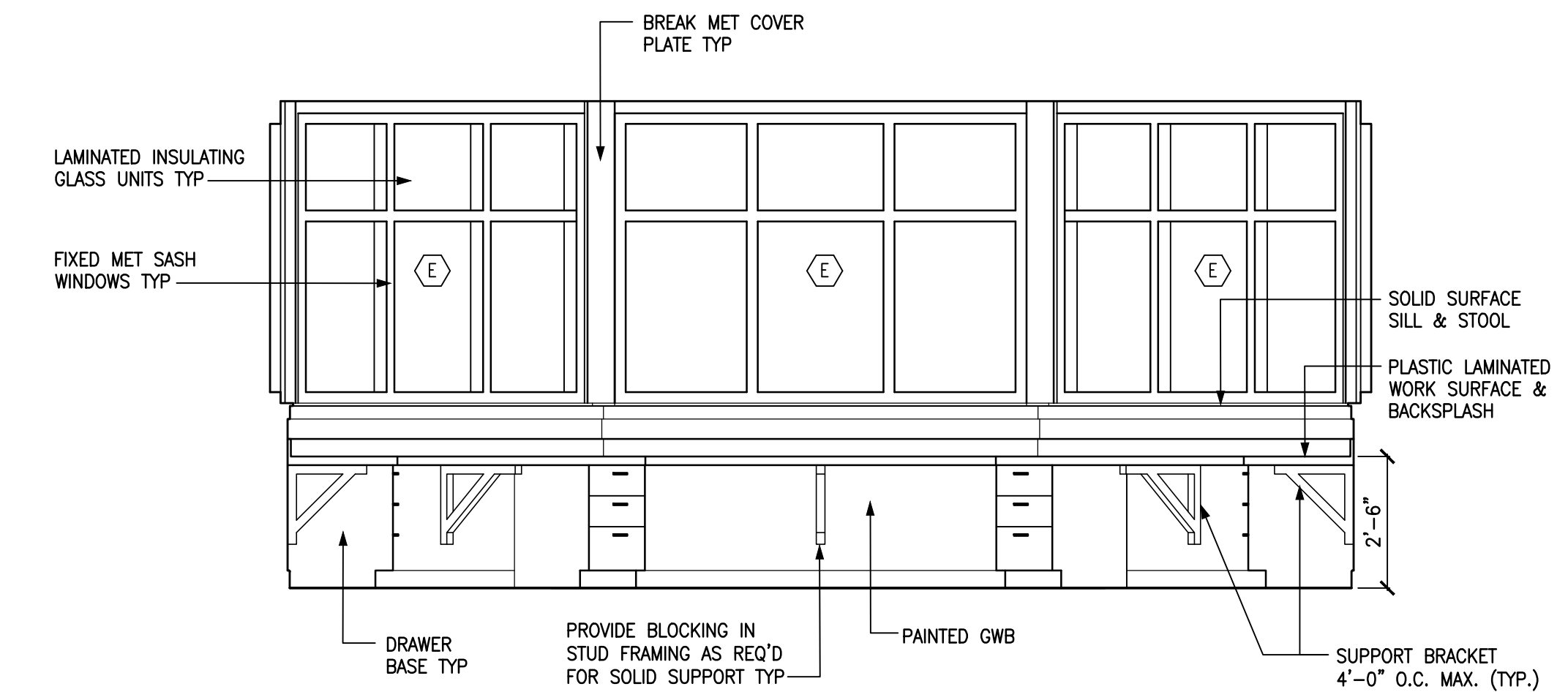
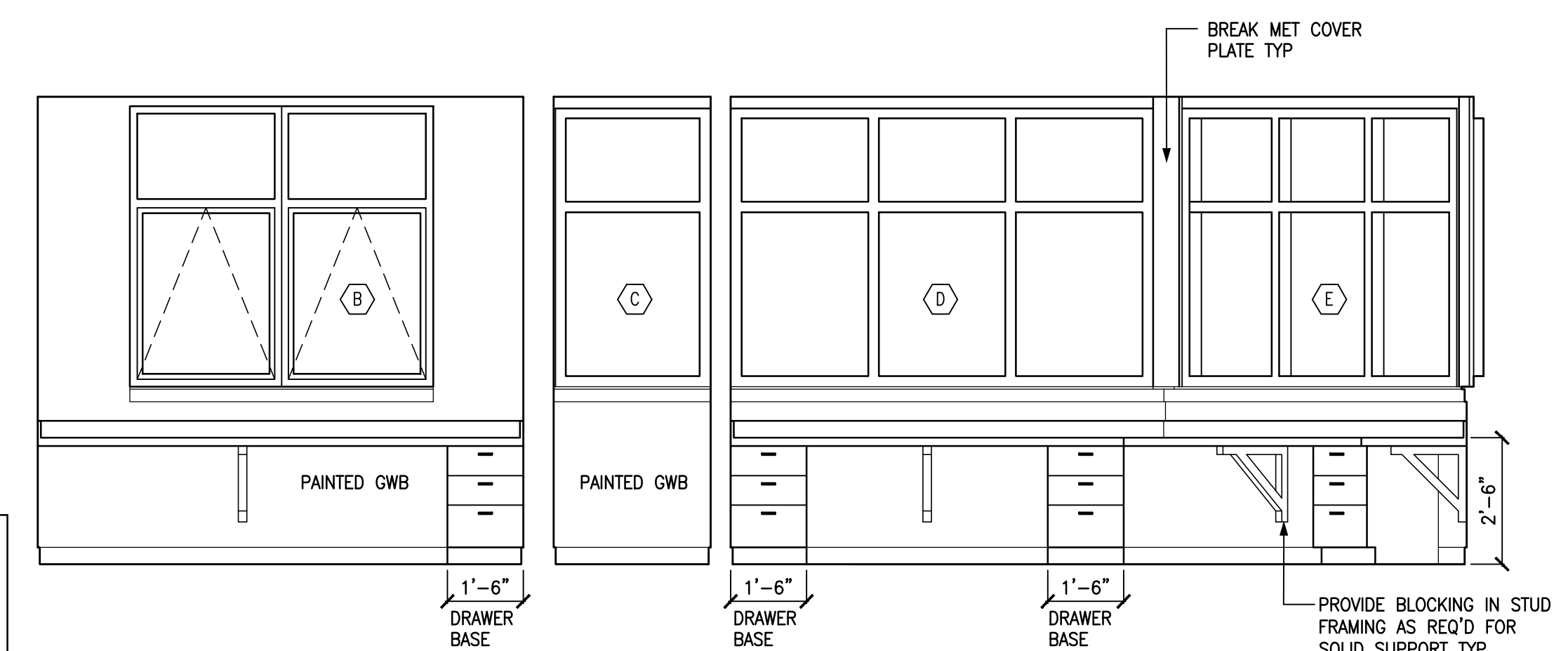


FLOOR/ WALL BASE - FINISH MATERIAL

<p>LOBBY 101: FLOOR- CERAMIC TILE BASE: DAL TILE: PORCEALTO, UPTOWN TAUPE CD02 (S-36C9T 6"X 12").</p> <p>FLOOR- FIELD: DAL TILE: TORREON, BRINO TN98 (12"X 12").</p> <p>FLOOR- BORDER: DAL TILE: PORCEALTO, UPTOWN TAUPE CD02 (12"X 12").</p> <p>FLOOR- GROUT: QUARTZ LOCK² SANDSTONE 267.</p> <p>GYP- FIELD: SHERWIN WILLIAMS: INCREDIBLE WHITE- SW 7028</p>	<p>OFFICE 102, 103, GALLEY 106, KITCHEN 110, CORRIDOR 114, 120, 126, 132, 134: FLOOR- RUBBER BASE: ROPPE: P129 DOLPHIN</p> <p>FLOOR- FIELD: MANNINGTON: 55255 FROSTED JADE</p> <p>FLOOR- ACCENT: MANNINGTON: 55509 DARK BARK, 55141 COOL WHITE</p> <p>GYP- FIELD: SHERWIN WILLIAMS: INCREDIBLE WHITE- SW 7028</p>	<p>CONFERENCE 107: FLOOR- RUBBER BASE: ROPPE: P129 DOLPHIN</p> <p>FLOOR- FIELD: MILKEN: PH415 TILT, PINHOLE</p> <p>GYP- FIELD: SHERWIN WILLIAMS: INCREDIBLE WHITE- SW 7028</p>
<p>PANTRY 108, STORAGE 109, WOMEN 111, MEN 112, WORKROOM 116, STORAGE 133: FLOOR- RUBBER BASE: ROPPE: P129 DOLPHIN</p> <p>FLOOR- FIELD: MANNINGTON: 55255 FROSTED JADE</p> <p>GYP- FIELD: SHERWIN WILLIAMS: INCREDIBLE WHITE- SW 7028</p>	<p>MEN 137, WOMEN 139, FAMILY RESTROOM 141: FLOOR- FIELD: DAL TILE: TORREON, BRINO TN98 (12"X 12").</p> <p>FLOOR- GROUT: QUARTZ LOCK² SANDSTONE 267.</p>	<p>OFFICE 121, 122, 123, 124, 125, 127, 128, 129, 130, 131, 135, 136: FLOOR- RUBBER BASE: ROPPE: P129 DOLPHIN</p> <p>FLOOR- FIELD: MILKEN: PH 415</p> <p>GYP- FIELD: SHERWIN WILLIAMS: INCREDIBLE WHITE- SW 7028</p>

INTERIOR ELEVATION NOTES:

- WATER CLOSET FLUSH HANDLE SHALL BE ON OPEN (WIDE) SIDE OF WATER CLOSET.
- TOP OF TOILET SEAT SHALL BE 17"-19" A.F.F. TYPICAL.
- ALL EXPOSED SINK HOT WATER & DRAIN LINES SHALL BE INSULATED.
- PROVIDE & INSTALL WOOD BLOCKING AS SHOWN FOR FUTURE GRAB BARS.
- SEE SHEET A4.3 & A5.1 FOR ROOM FINISHES.
- PROVIDE CERAMIC TILE BASE AT ALL WALLS SHOWN TO HAVE CERAMIC WALL TILE.



LEGEND JANITOR 119, & 140

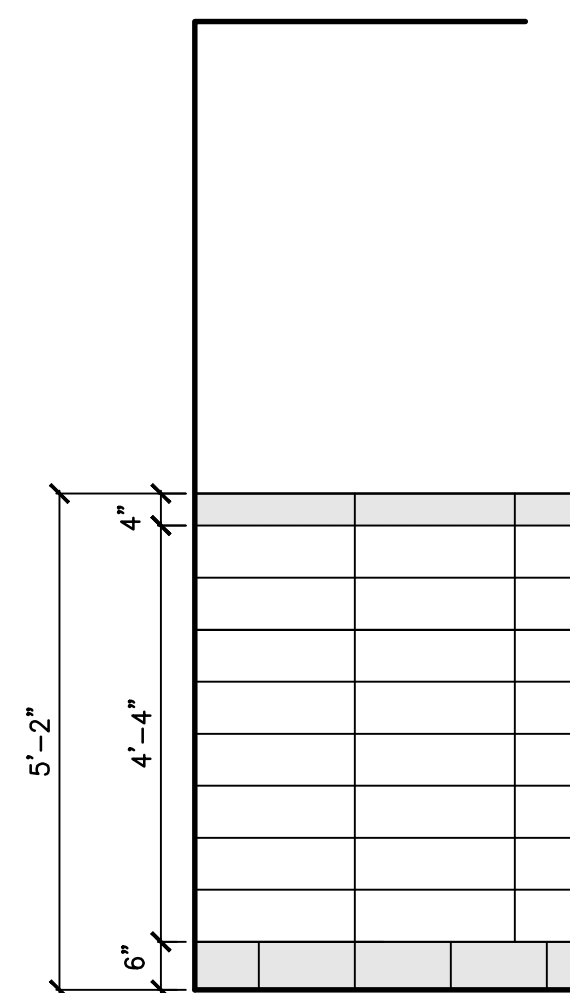
CERAMIC TILE BASE:
DAL TILE: PORCEALTO, UPTOWN TAUPE CD02 (S-36C9T 6"X 12").

FIELD:
DAL TILE: VERANDA SOLIDS, LEATHER P506 (6-1/2"X 6-1/2").

TRIM (BULLNOSE):
DAL TILE: VERANDA SOLIDS, LEATHER P506 (S-44K9S 4"X 20").

GROUT:
QUARTZ LOCK² SANDSTONE 267.

G.W.B. PAINT:
SHERWIN WILLIAMS: INCREDIBLE WHITE- SW 7028



LEGEND WOMEN 111 & MEN 112

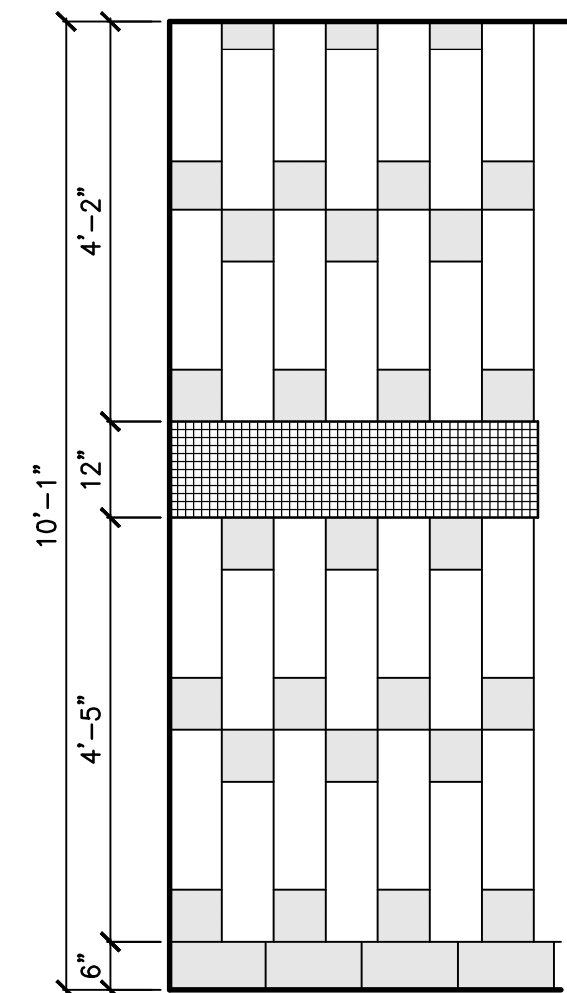
CERAMIC TILE BASE:
DAL TILE: PORCEALTO, UPTOWN TAUPE CD02 (S-36C9T 6"X 12").

FIELD:
DAL TILE: VERANDA SOLIDS, LEATHER P506 (6-1/2"X 20").

TRIM (BULLNOSE):
DAL TILE: VERANDA SOLIDS, LEATHER P506 (S-44K9S 4"X 20").

GROUT:
QUARTZ LOCK² SANDSTONE 267.

G.W.B. PAINT:
SHERWIN WILLIAMS: INCREDIBLE WHITE- SW 7028



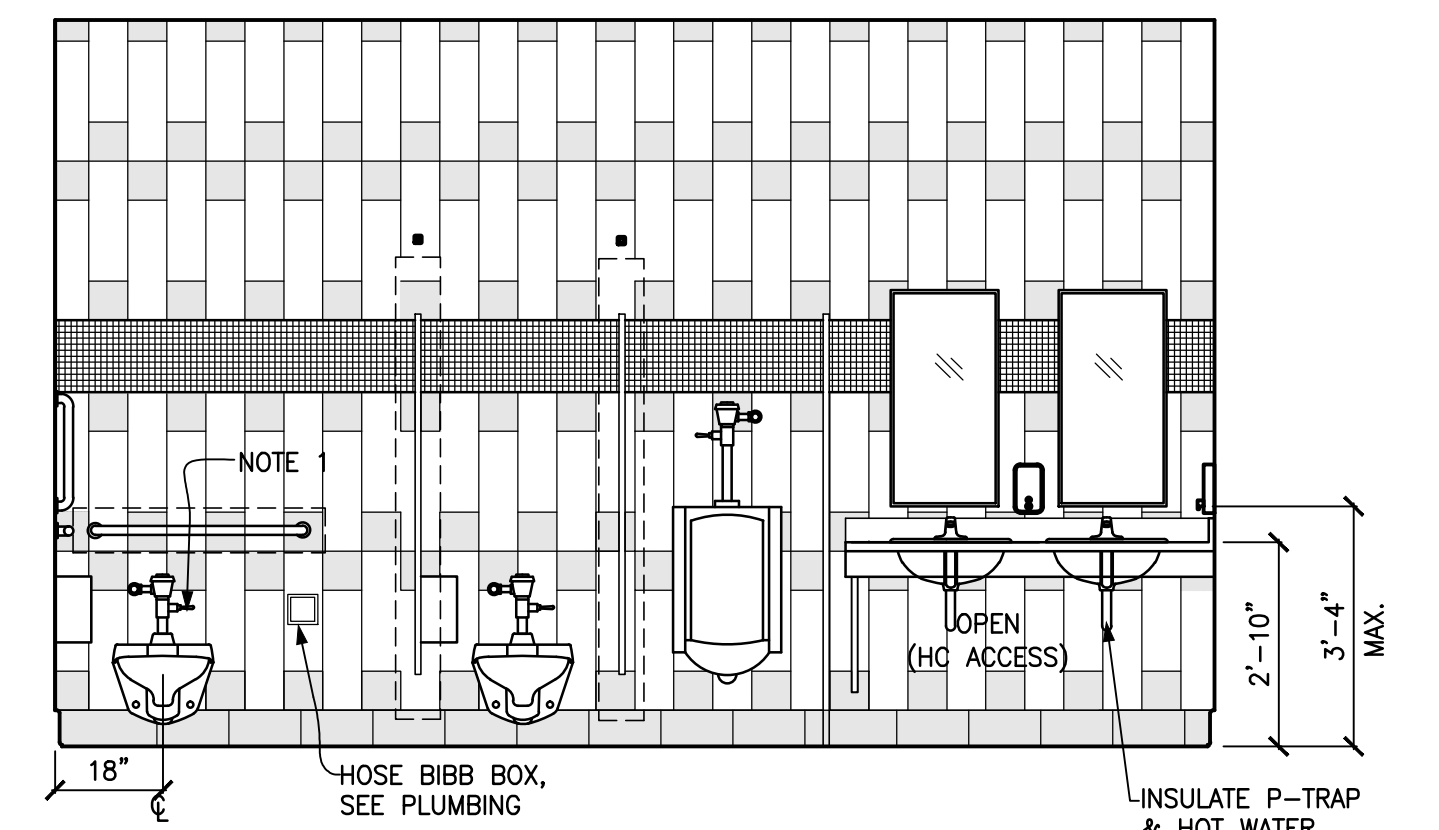
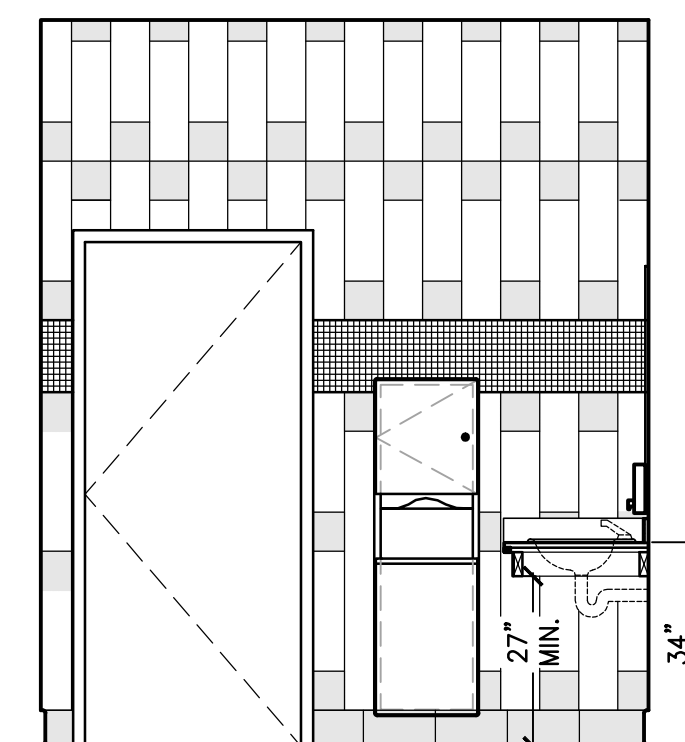
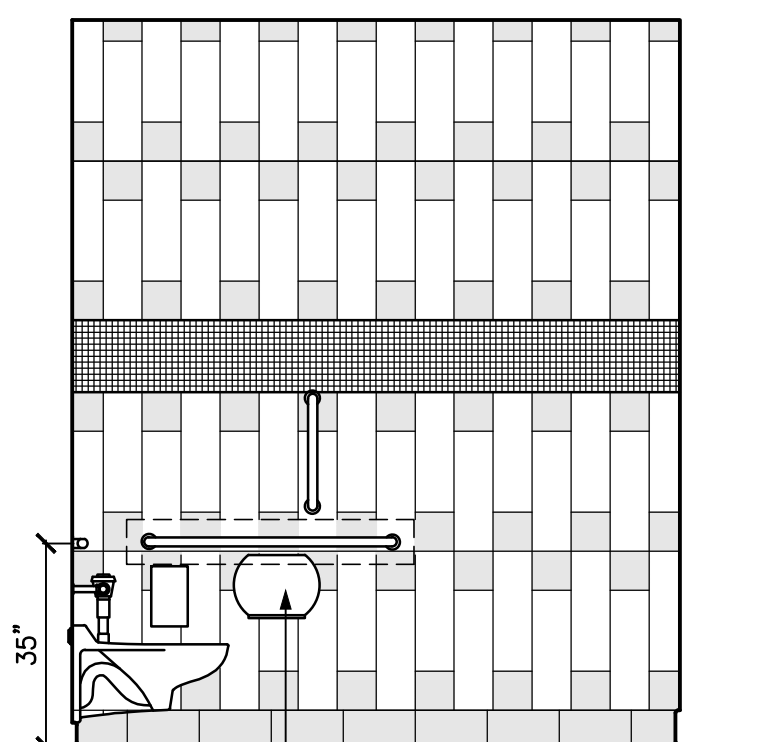
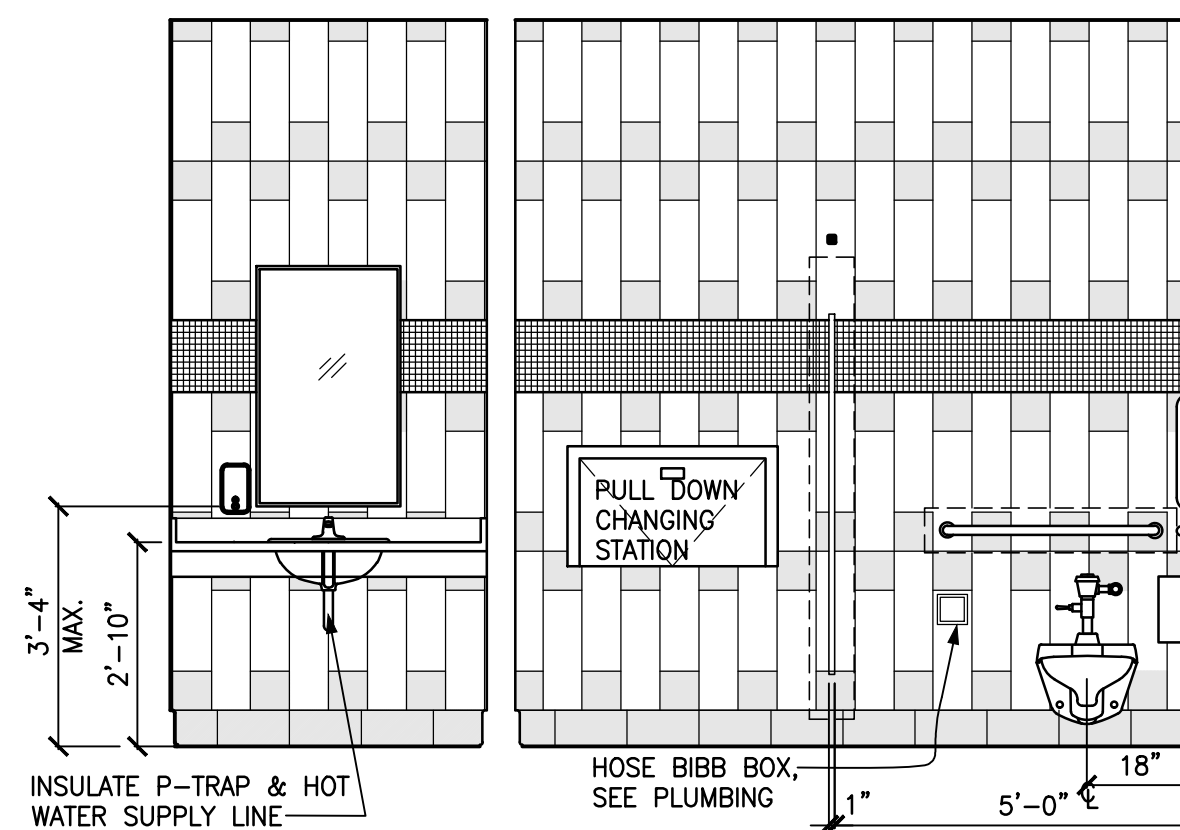
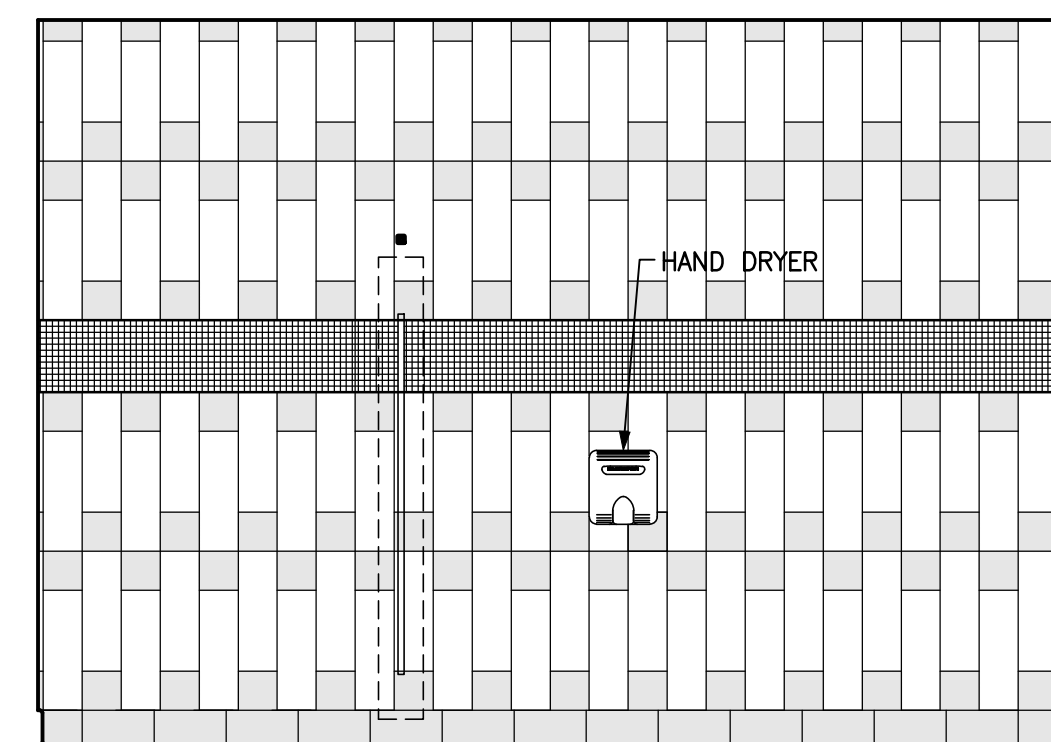
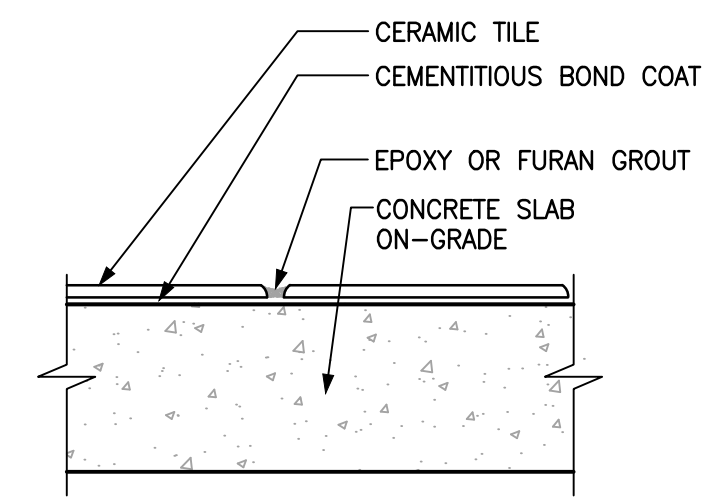
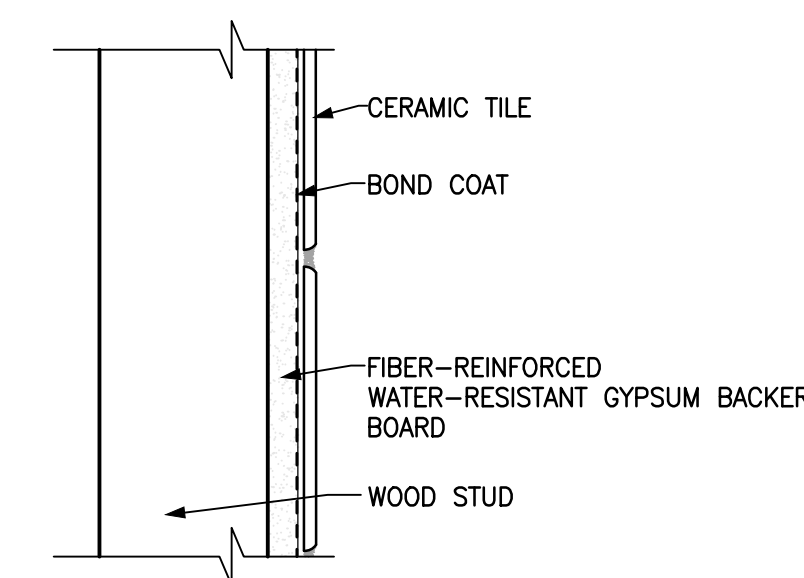
LEGEND MEN 137, WOMEN 139, FAMILY RESTROOM 141

CERAMIC TILE BASE:
DAL TILE: PORCEALTO, UPTOWN TAUPE CD02 (S-36C9T 6"X 12").

FIELD:
DAL TILE: VERANDA SOLIDS, GRAVEL P501 (6-1/2"X 20"), LEATHER P506 (6-1/2"X 6-1/2").

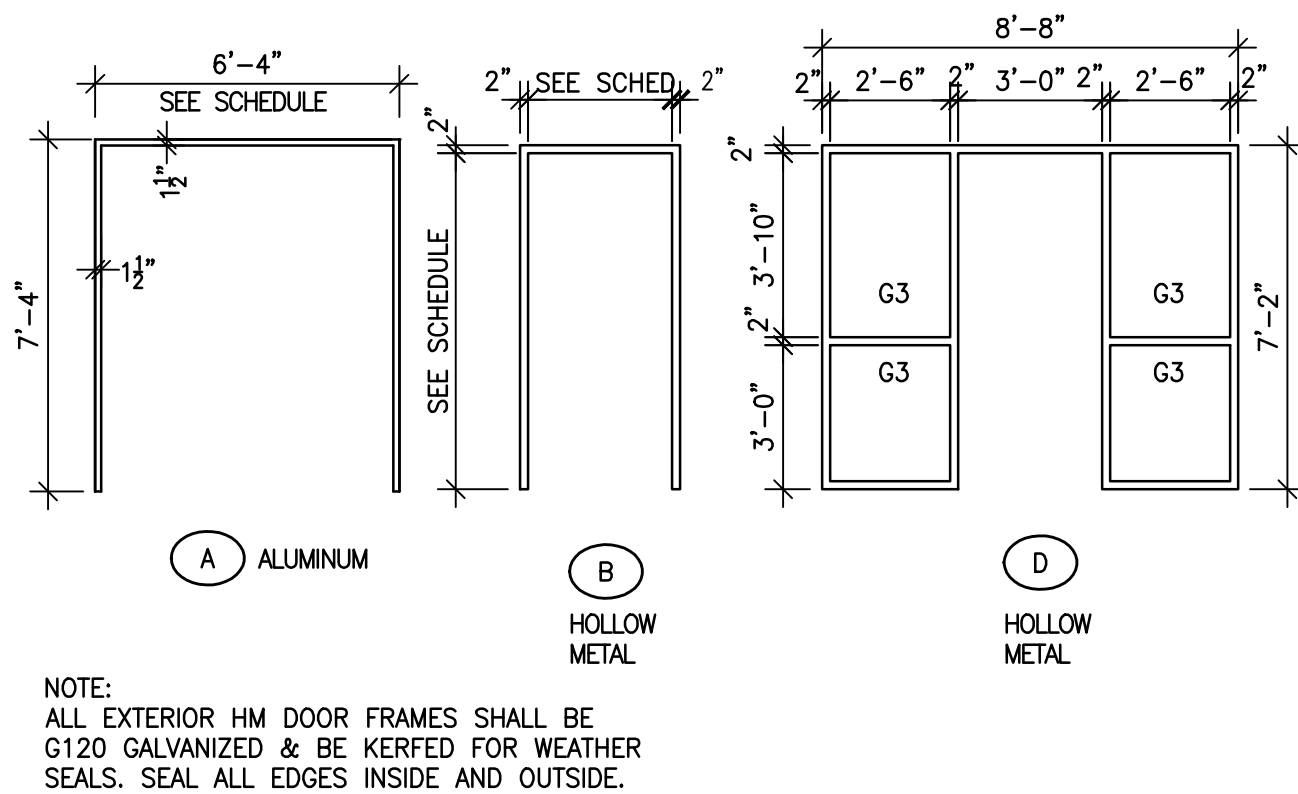
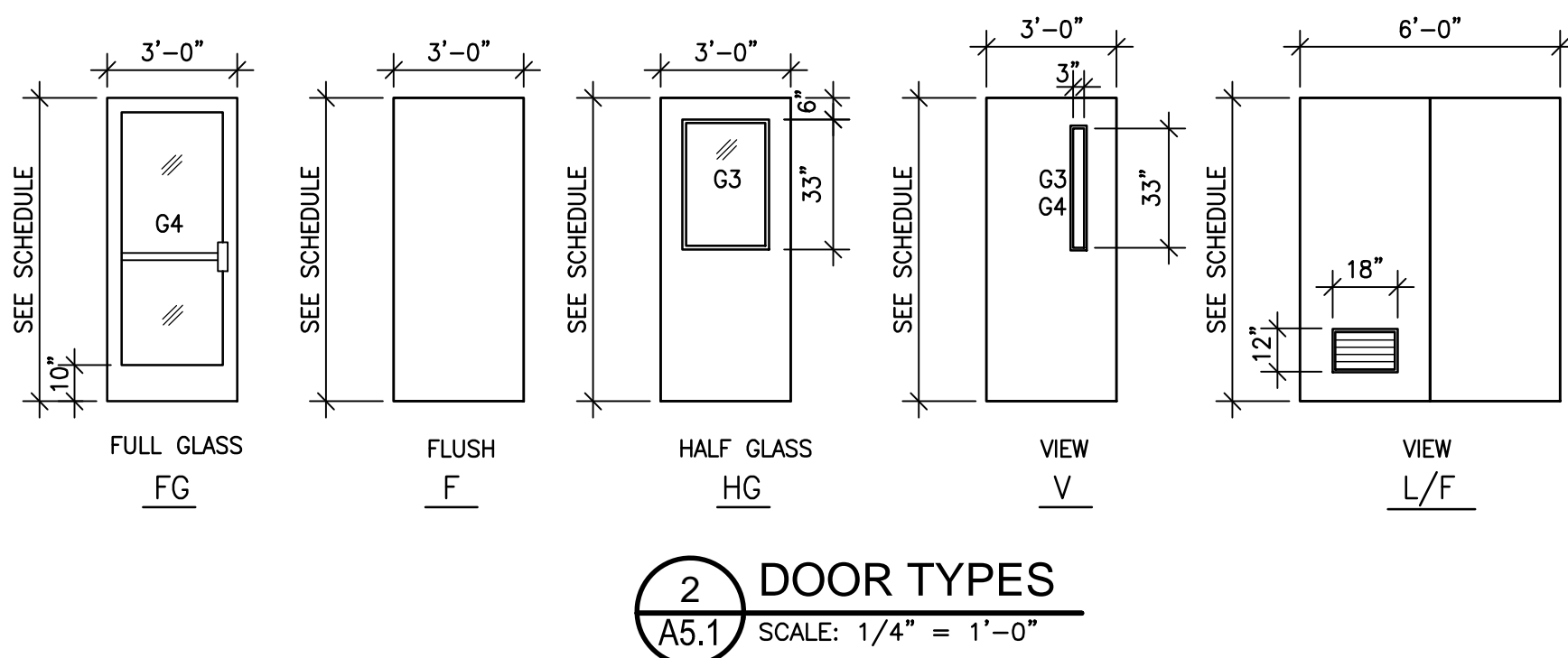
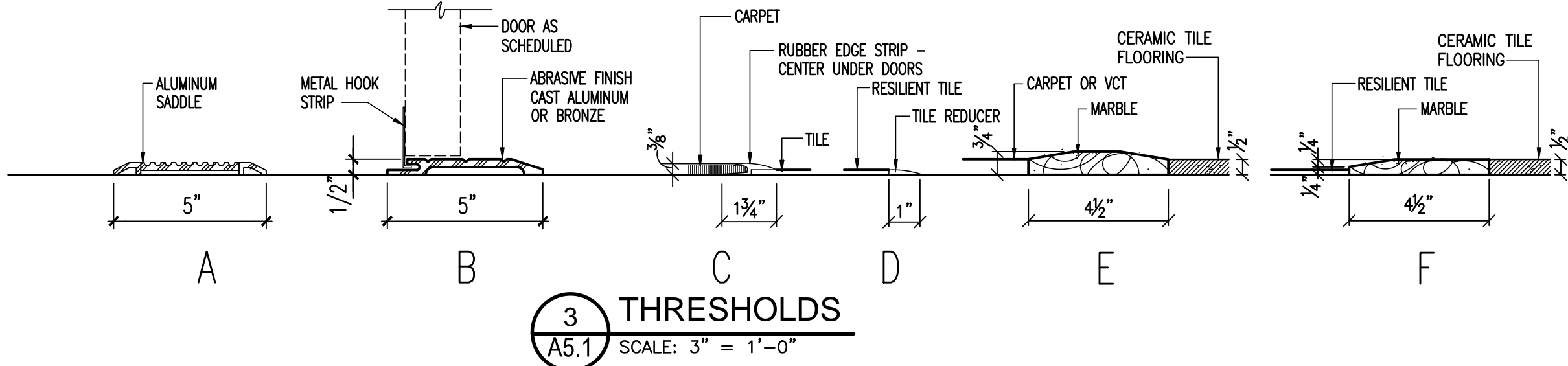
ACCENT:
DAL TILE: COLOR WAVE, RAIN FOREST CW25 (12- 1"X 1" MOSAIC).

GROUT:
QUARTZ LOCK² SANDSTONE 267.



ROOM FINISH SCHEDULE									
ROOM		FLOOR	BASE	WALL			CEILING		REMARKS
NO.	NAME	MATL.	MATL.	NORTH	SOUTH	EAST	WEST	MATL.	
101	LOBBY	CT	CT	PGWB	PGWB	PGWB	PGWB	MRGWB	VARIES
102	OFFICE	VCT	RB	PGWB	PGWB	PGWB	PGWB	SAC*	8'-8"
103	OFFICE	VCT	RB	PGWB	PGWB	PGWB	PGWB	SAC*	9'-3" *ACCENT PGWB SOFFIT @ 9'-3/4", SEE DWG A1.2
104	NOT USED	-	-	-	-	-	-	-	-
105	NOT USED	-	-	-	-	-	-	-	-
106	GALLEY	VCT	RB	PGWB	PGWB	PGWB	-	SAC*	9'-5" *ACCENT PGWB SOFFIT @ 8'-5", SEE DWG A1.2
107	TRAINING ROOM	C	RB	PGWB	PGWB	-	PGWB	SAC*	9'-5" *ACCENT PGWB SOFFIT @ 8'-5", SEE DWG A1.2
108	PANTRY	VCT	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
109	STOR.	VCT	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
110	KITCHEN	VCT	RB	PGWB	PGWB	PGWB	PGWB	MRGWB	9'-5" *ACCENT PGWB SOFFIT @ 8'-5", SEE DWG A1.2
111	WOMEN	CT	CT	CT/PGWB	CT/PGWB	CT/PGWB	CT/PGWB	MRGWB	10'-1" CT TO 5'-2" AFF; PGWB ABOVE, SEE DWG A4.2/ A4.3
112	MEN	CT	CT	CT/PGWB	CT/PGWB	CT/PGWB	CT/PGWB	MRGWB	10'-1" CT TO 5'-2" AFF; PGWB ABOVE, SEE DWG A4.2/ A4.3
113	PORCH	SC	-	-	-	-	-	FC	10'-5"
114	CORRIDOR	VCT	RB	PGWB	PGWB	PGWB	-	SAC	9'-5"
115	MECHANICAL	SC	-	PGWB	PGWB	PGWB	PGWB	MRGWB	10'-1"
116	WORK ROOM	VCT	RB	PGWB	PGWB	PGWB	PGWB	MRGWB	10'-1"
117	ELECTRICAL	SC	-	PGWB	PGWB	PGWB	PGWB	MRGWB	10'-1"
118	TELE / IT	SC	-	PGWB	PGWB	PGWB	PGWB	MRGWB	10'-1"
119	JANITOR	SC	-	CT/PGWB	CT	CT/PGWB	CT/PGWB	MRGWB	10'-1" CT FULL HEIGHT BEHIND MOP SINK, SEE ELEV. 14/A4.2
120	CORRIDOR	VCT	RB	PGWB	PGWB	PGWB	-	SAC	9'-5"
121	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
122	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
123	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
124	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
125	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
126	CORRIDOR	VCT	RB	PGWB	PGWB	-	PGWB	SAC	9'-5"
127	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
128	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
129	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
130	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
131	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
132	CORRIDOR	VCT	RB	PGWB	PGWB	-	PGWB	MRGWB	10'-1"
133	STORAGE	VCT	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
134	CORRIDOR	VCT	RB	PGWB	-	PGWB	PGWB	SAC	9'-5"
135	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
136	OFFICE	C	RB	PGWB	PGWB	PGWB	PGWB	SAC	9'-5"
137	MEN	CT	CT	CT	CT	CT	CT	MRGWB	10'-1" SEE DWG A4.2 & A4.3
138	PIPE CHASE	SC	-	-	-	-	-	MRGWB	10'-1"
139	WOMEN	CT	CT	CT	CT	CT	CT	MRGWB	10'-1" SEE DWG A4.2 & A4.3
140	JANITOR	SC	-	CT/PGWB	CT	CT/PGWB	CT/PGWB	MRGWB	10'-1" CT FULL HEIGHT BEHIND MOP SINK, SEE ELEV. 14/A4.2
141	FAMILY RESTROOM	CT	CT	CT	CT	CT	CT	MRGWB	10'-1" SEE DWG A4.2 & A4.3
142	PORCH	SC	-	-	-	-	-	FC	10'-5"
143	PORCH	SC	-	-	-	-	-	FC	10'-5"

FINISH LEGEND			
FLOOR FINISH	BASE FINISH	WALL FINISH	CEILING FINISH
C CARPET CT CERAMIC TILE SC SEALED CONCRETE VCT VINYL COMP. TILE	CT CERAMIC TILE RB RUBBER BASE	CT CERAMIC TILE WALLS TCNA-W247-12; FIBER-REINFORCED WATER-RESISTANT GYPSUM BACKER BOARDS ON STUDS. PGWB PAINTED GYPSUM WALL BOARD	SAC SUSPENDED ACOUSTICAL CEILING MRGWB: MOISTURE-RESISTANT GYPSUM WALL BOARD FC FIBER CEMENT



DOOR & FRAME SCHEDULE														
DOOR NO	DOOR				FRAME			HARDWARE GROUP (SEE NOTE 1)	HEAD	JAMB	SILL	THRESH	REMARKS	
	TYPE	SIZE	MAT.	FINISH	GLASS	TYPE	MAT.	FINISH						
101	FG	6'-0"x7'-2"x1 3/4"	ALUMINUM	FF	G2	A	ALUM.	FF	01	7	6	1 SIM	A	EXIT DEVICE KP
102A	HG	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	D	HM	PAINT	04	17	16	----	E	EXIT DEVICE KP
102B	HG	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	03	17	16	----		
103	HG	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	D	HM	PAINT	05	17	16	----	E	
104	N O T	U S E D	-	-	-	-	-	-		-	-	-	-	
105	N O T	U S E D	-	-	-	-	-	-		-	-	-	-	
106A	V	3'-0"x7'-2"x1 3/4"	HM	PAINT	G4	B	HM	PAINT	02	4	2&3	1 SIM	B	
106B	F	3'-0"x7'-0"x1 3/4"												BY PARTITION MANUFACTURER
107A	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	04	17	16	----	E	EXIT DEVICE KF KP
107B	F	3'-0"x7'-0"x1 3/4"												BY PARTITION MANUFACTURER
108	F	3'-0"x7'-0"x1 3/4"	WOOD	STAIN		B	HM	PAINT	06	17	16	----	*	
109	F	6'-0"x7'-0"x1 3/4"	WOOD	STAIN		B	HM	PAINT	08	17	16	----	C	
110	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	07	17	16	----	*	
111	F	3'-0"x7'-0"x1 3/4"	WOOD	STAIN		B	HM	PAINT	12	17	16	----	F	
112	F	3'-0"x7'-0"x1 3/4"	WOOD	STAIN			HM	PAINT	12	17	16	----	F	
113	N O T	U S E D											*	
114	V	3'-0"x7'-2"x1 3/4"	HM	PAINT	G4	B	HM	PAINT	02	4	2&3	1	B	EXIT DEVICE KF KP
115A	F	3'-0"x7'-0"x1 3/4"	WOOD	STAIN		B	HM	PAINT	09	17	16	----	C	
115B	L/F	6'-0"x7'-2"x1 3/4"	HM	PAINT		B	HM	PAINT	10	17	16	----	*	
116	F	3'-0"x7'-0"x1 3/4"	WOOD	STAIN		B	HM	PAINT	11	17	16	----	*	
117	F	3'-0"x7'-0"x1 3/4"	WOOD	STAIN		B	HM	PAINT	19	17	16	----	C	
118	F	3'-0"x7'-0"x1 3/4"	WOOD	STAIN		B	HM	PAINT	13	17	16	----	C	
119	F	3'-0"x7'-0"x1 3/4"	WOOD	STAIN		B	HM	PAINT	11	17	16	----	C	
120	V	3'-0"x7'-2"x1 3/4"	HM	PAINT	G4	B	HM	PAINT	02	4	2&3	1	B	EXIT DEVICE KF KP
121	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
122	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
123	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
124	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
125	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
126	V	3'-0"x7'-2"x1 3/4"	HM	PAINT	G4	B	HM	PAINT	02	4	2&3	1	B	EXIT DEVICE KF KP
127A	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
127B	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
128	HG	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	D	HM	PAINT	14	17	16	----	C	
129	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
130	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
131	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
133	F	3'-0"x7'-0"x1 3/4"	WOOD	STAIN		B	HM	PAINT	06	17	16	----	*	
134	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	04	17	16	----	E	EXIT DEVICE KP
135	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
136	V	3'-0"x7'-0"x1 3/4"	WOOD	STAIN	G3	B	HM	PAINT	14	17	16	----	C	
137	F	3'-0"x7'-2"x1 3/4"	HM	PAINT		B	HM	PAINT	15	7 SIM	6 SIM	1 SIM	B	
138	F	2'-0"x7'-0"x1 3/4"	HM	PAINT		B	HM	PAINT	17	17	16	----	E	
139	F	3'-0"x7'-2"x1 3/4"	HM	PAINT		B	HM	PAINT	15	7 SIM	6 SIM	1 SIM	B	
140	F	3'-0"x7'-2"x1 3/4"	HM	PAINT		B	HM	PAINT	18	7 SIM	6 SIM	1 SIM	B	
141	F	3'-0"x7'-2"x1 3/4"	HM	PAINT		B	HM	PAINT	16	7 SIM	6 SIM	1 SIM	B	

- DOOR SCHEDULE NOTES:**
- ALL DOOR HARDWARE SHALL COMPLY WITH NCSBC REQUIREMENTS. HARDWARE SCHEDULE SHALL BE PROVIDED BY A CERTIFIED DOOR HARDWARE CONSULTANT. ALL HARDWARE SHALL HAVE BRUSHED STAINLESS STEEL FINISH.
 - PROVIDE PANIC HARDWARE AT ALL REQUIRED EGRESS DOORS IN A3 OCCUPANCY EQUIPPED WITH EXIT LIGHTS. SEE LIFE SAFETY PLAN 1/G3.

ADDITIONAL ABBREVIATIONS:

FF = FACTORY FINISH
KP = KEYPAD LOCKSET

GLASS SCHEDULE	
MARK	DESCRIPTION
G1	1" INSULATING LAMINATED GLASS
G2	NOT USED
G3	1/4" TEMPERED GLASS
G4	5/8" TEMPERED INSULATING GLASS
G5	1" INSULATING FLOAT GLASS

NOTE:
ALL EXTERIOR HM DOOR FRAMES SHALL BE
G120 GALVANIZED & BE KERFED FOR WEATHER
SEALS. SEAL ALL EDGES INSIDE AND OUTSIDE.

1
A5.1 FRAME TYPES
SCALE: 1/4" = 1'-0"

2
A5.1 DOOR TYPES
SCALE: 1/4" = 1'-0"

3
A5.1 THRESHOLDS
SCALE: 3" = 1'-0"

BID DOCUMENTS

MARK DOUGLAS G. BROWN

REGISTERED ARCHITECT

5121

North Carolina

KNIGHTDALE, N.C.

SEAL

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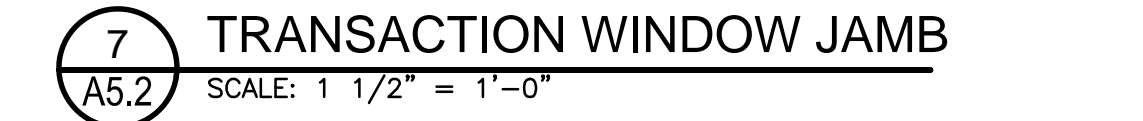
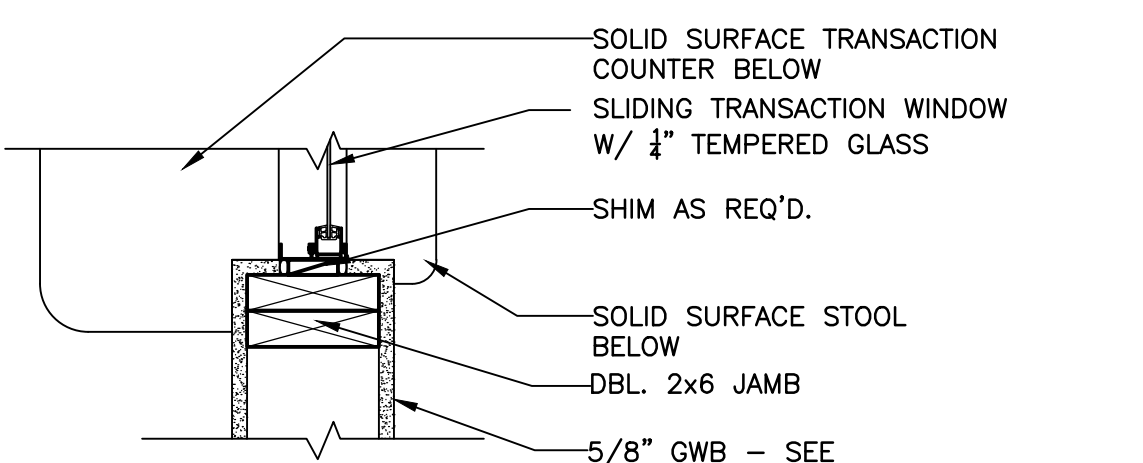
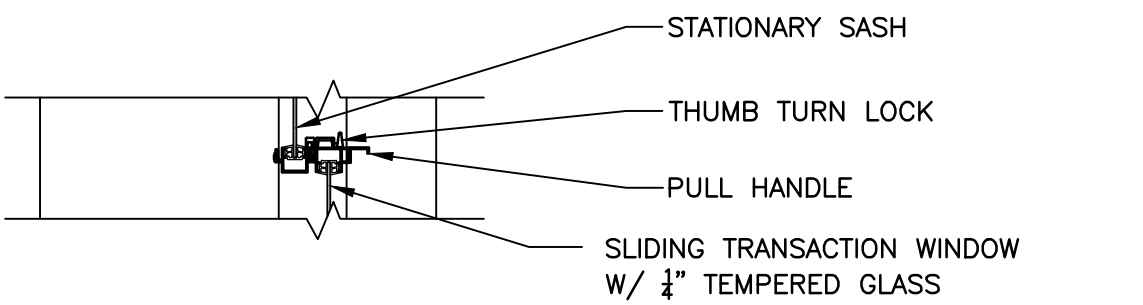
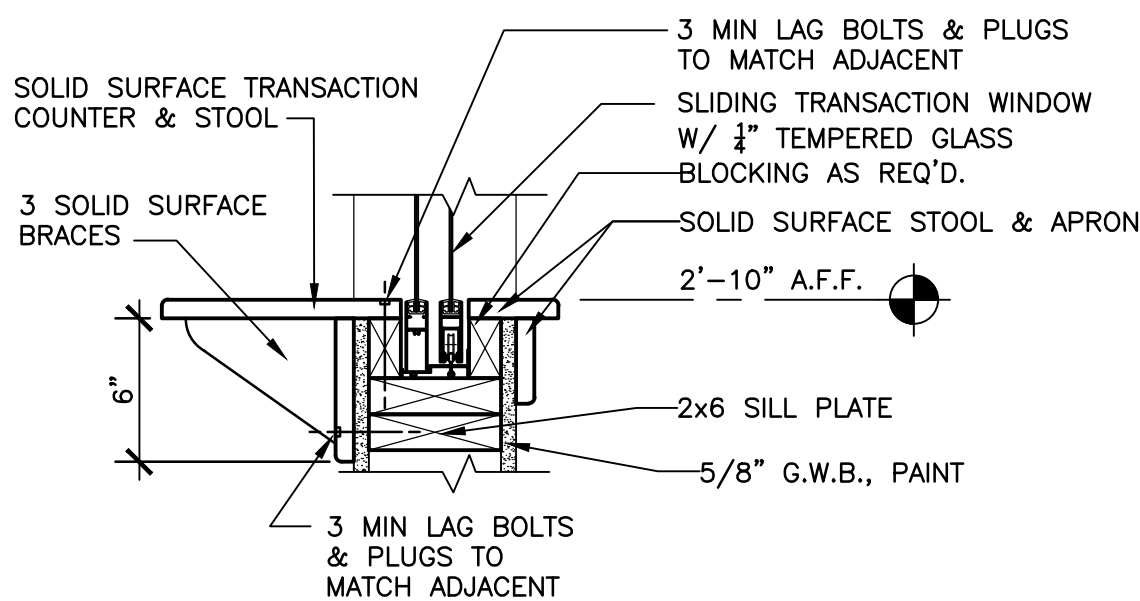
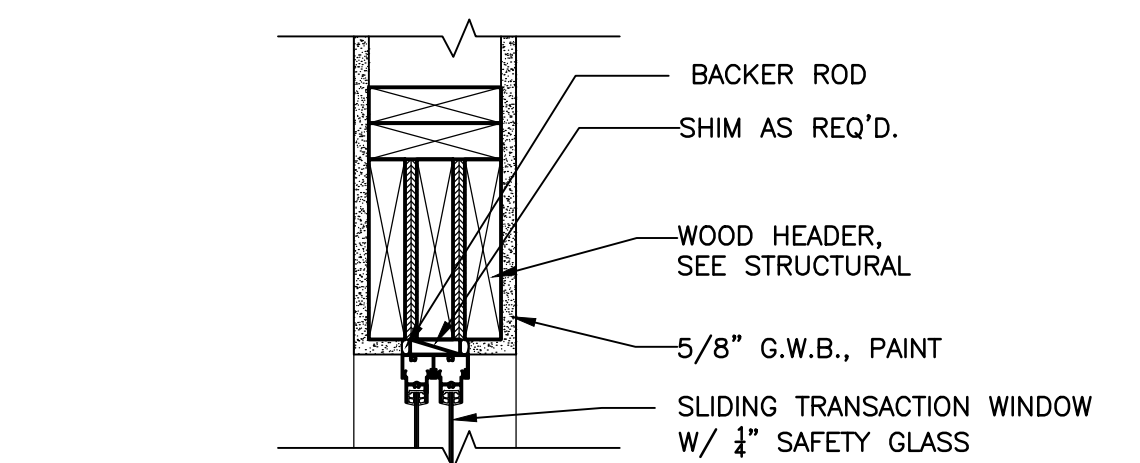
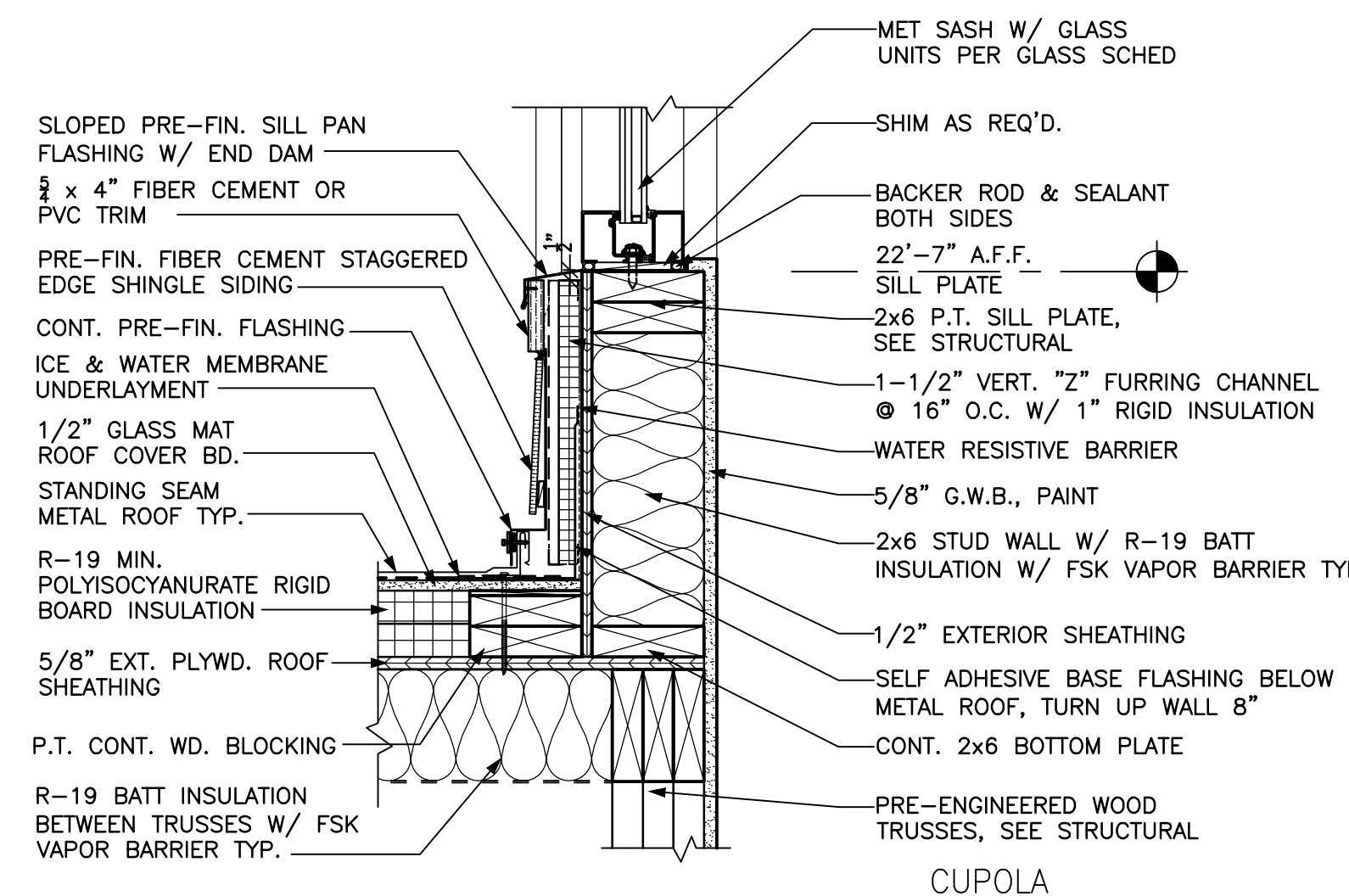
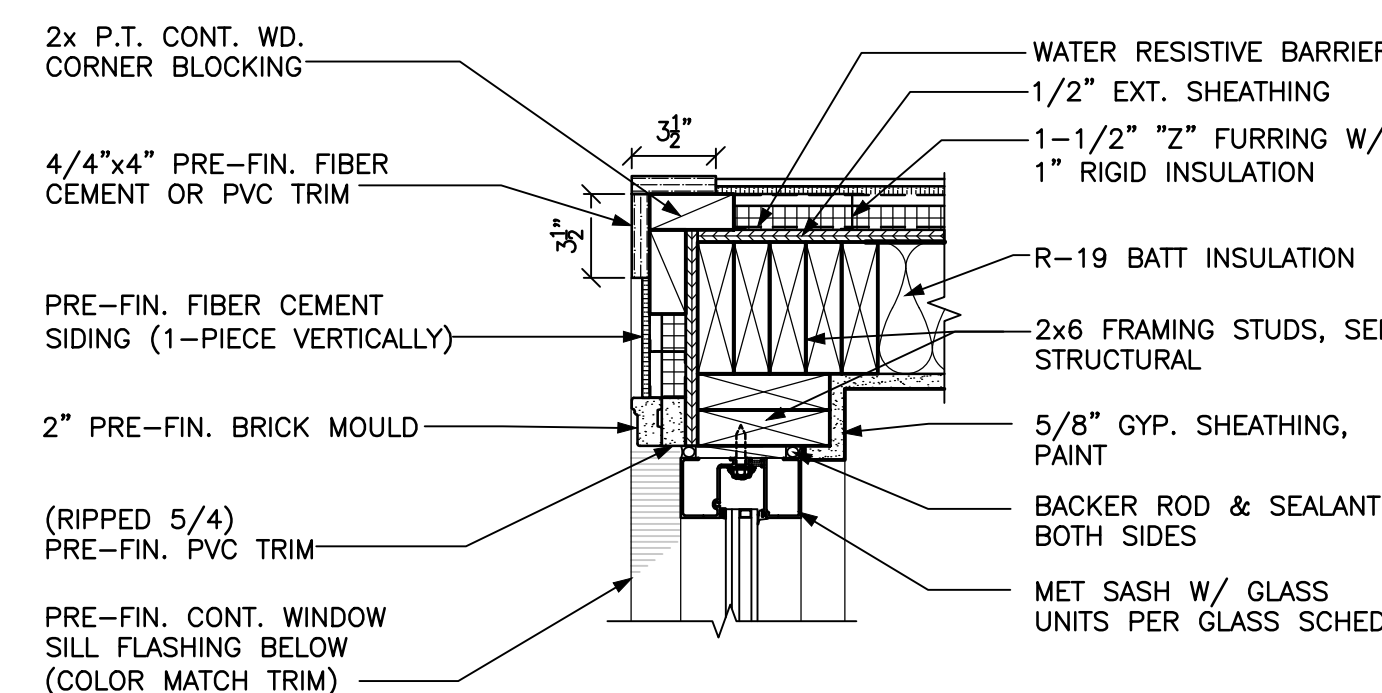
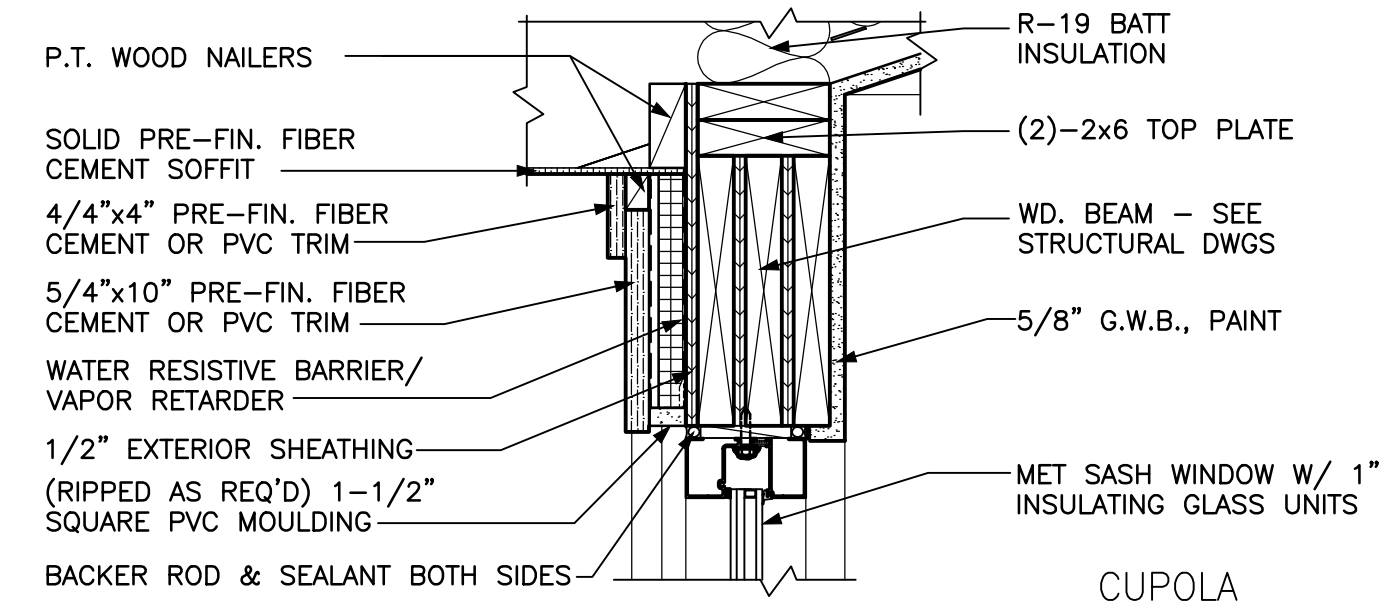
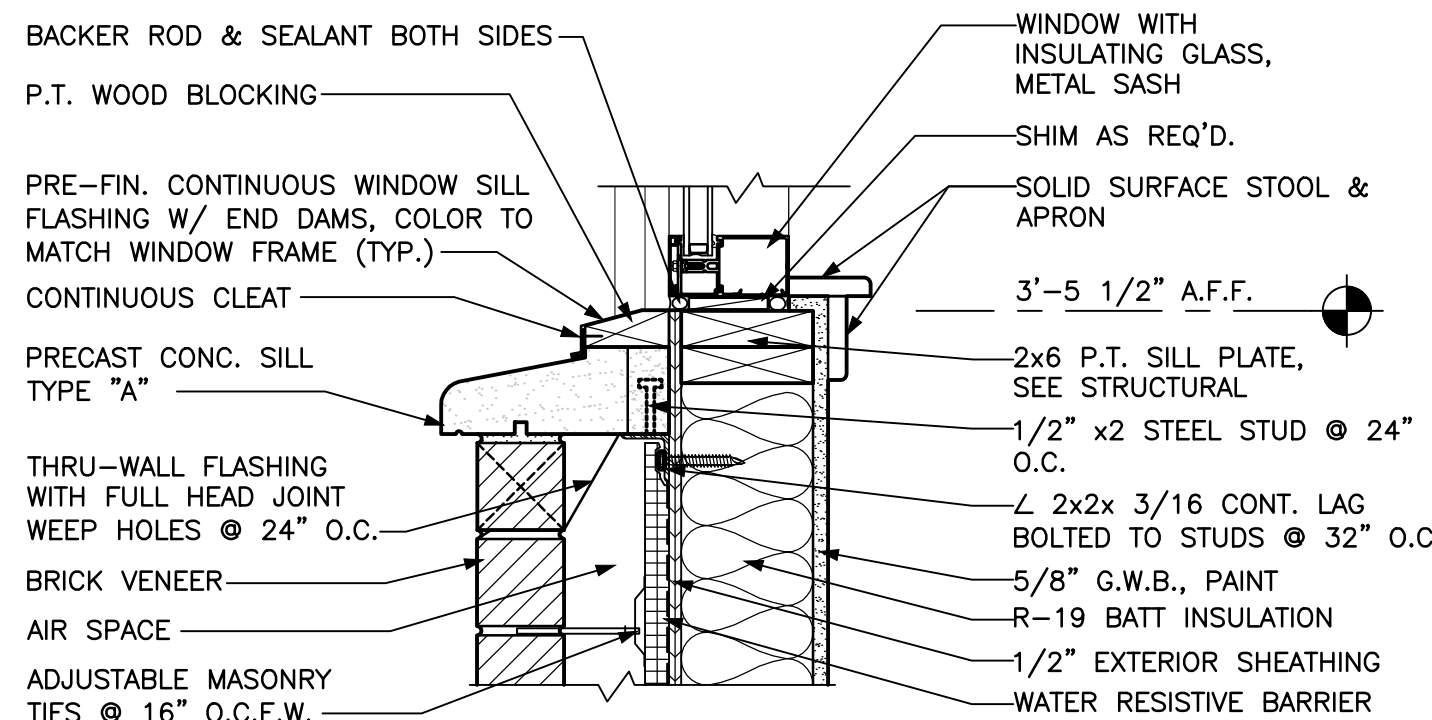
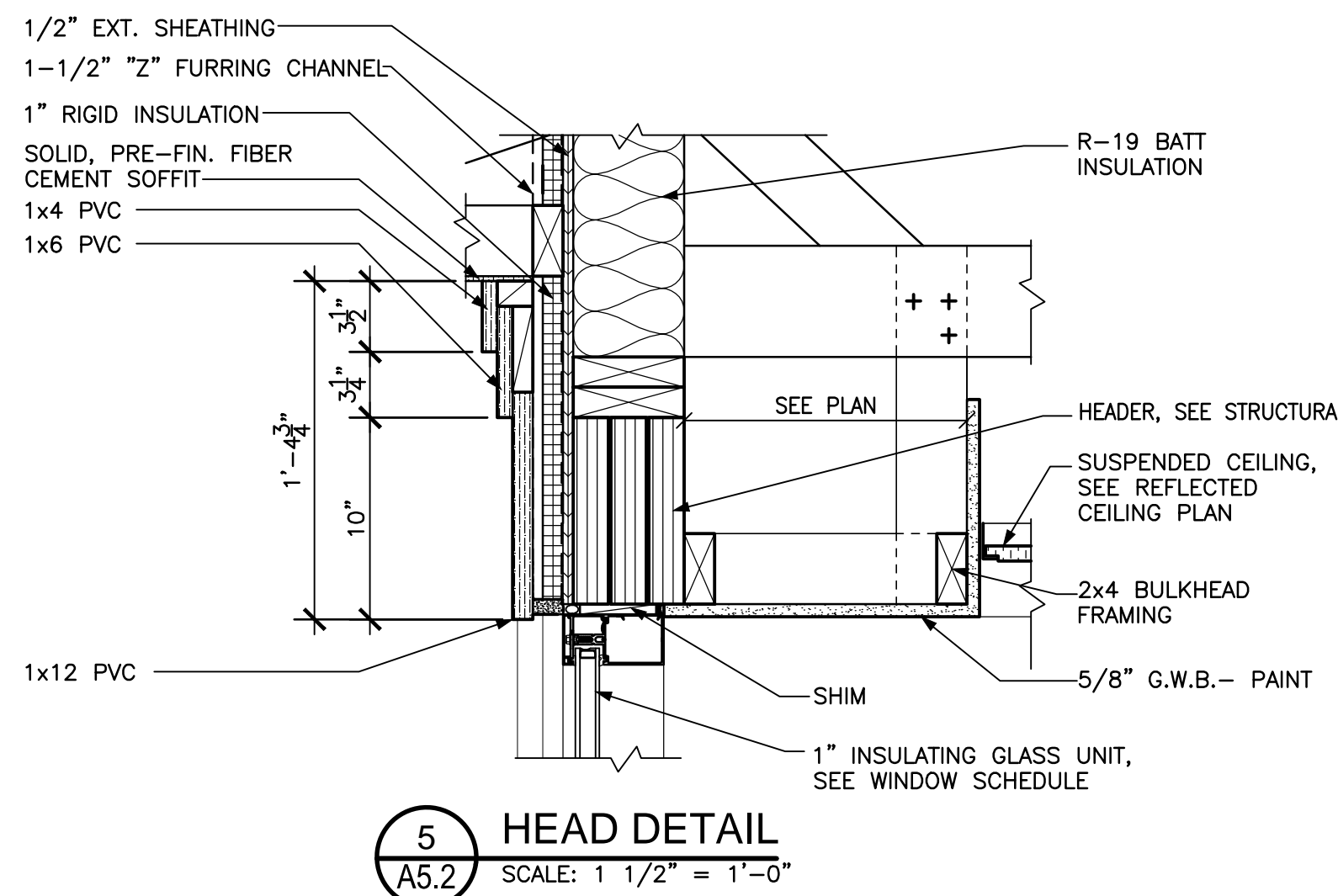
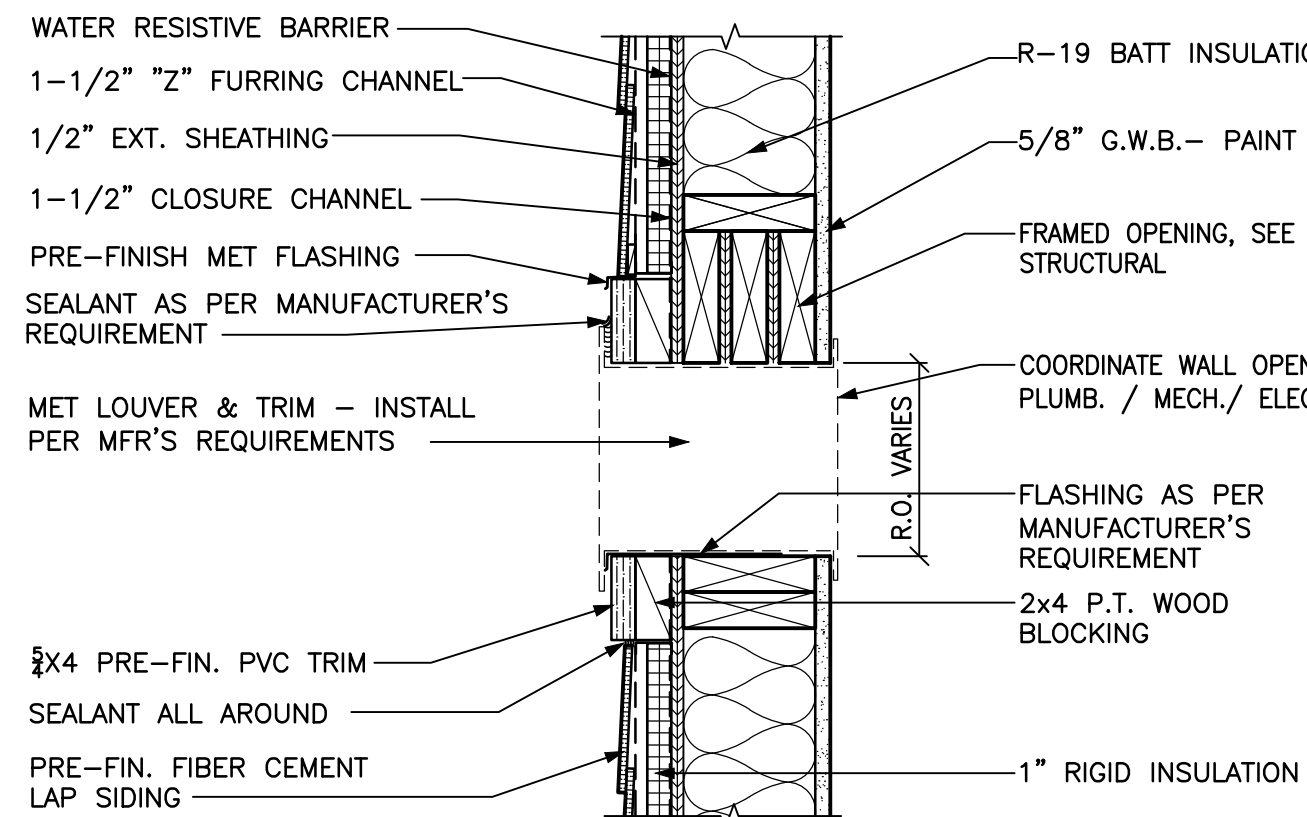
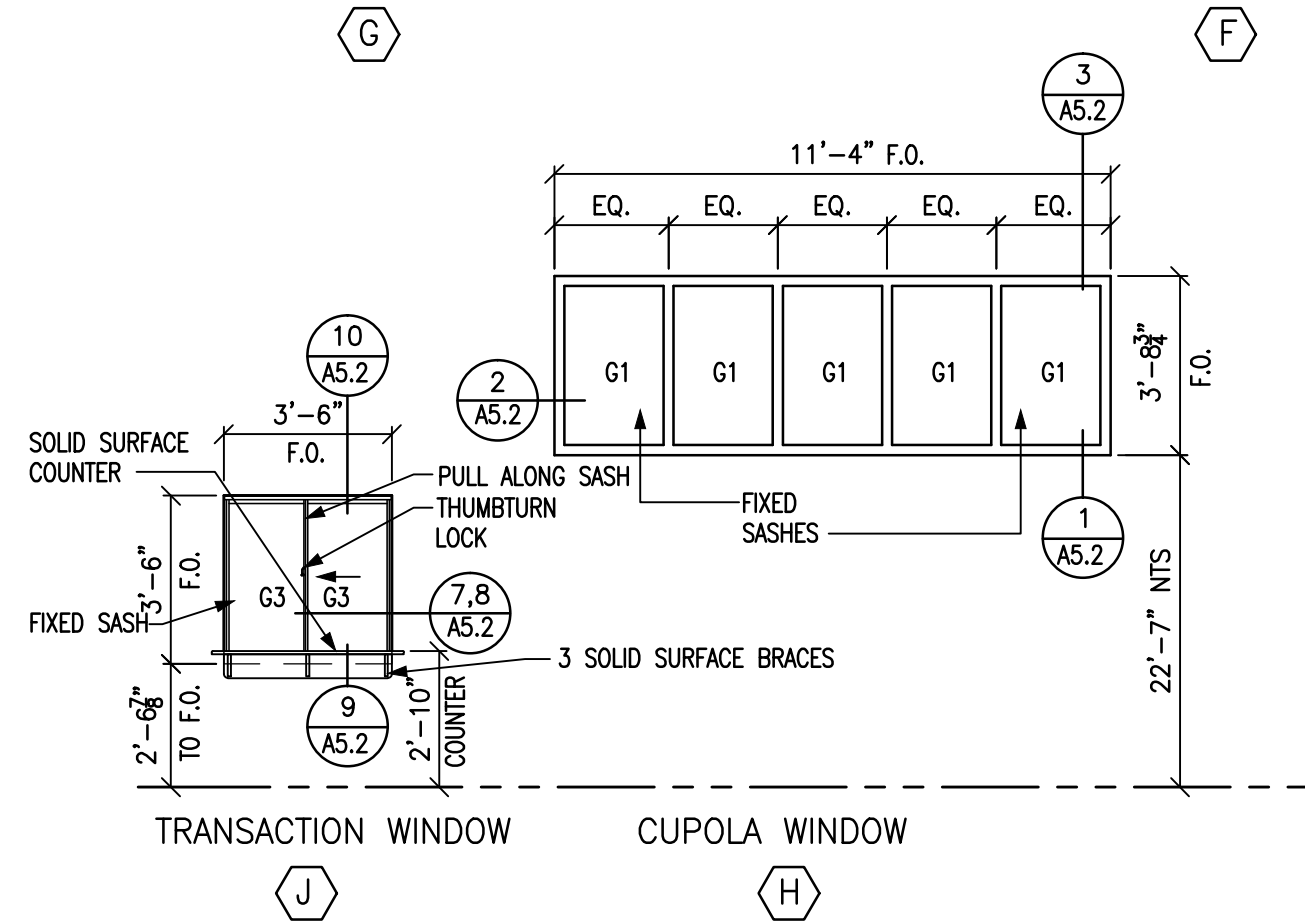
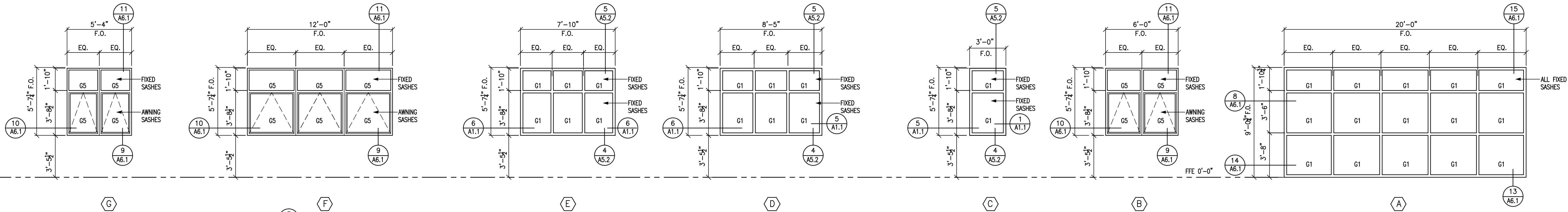
CONSULTANT:

DRAWING TITLE / DESCRIPTION:
ROOM FINISH & DOOR SCHEDULES

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT
2300 FERRY ROAD, HAYLOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION ID.# 11-09079-01A
ASSET NUMBER:
CO.# SITE.# BLDG.#
48 - - -
REVISIONS NO. DATE
DATE ISSUED: 8-14-15
DRAWN BY: DB
CHECKED BY: MDG
SHEET NO.

A5.1



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DRAWING TITLE / DESCRIPTION: WINDOW ELEVATIONS & DETAILS

PROJECT TITLE: CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

2300 FERRY ROAD, HAYLOCK, NC 28632
CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION ID.# 11-09079-01A

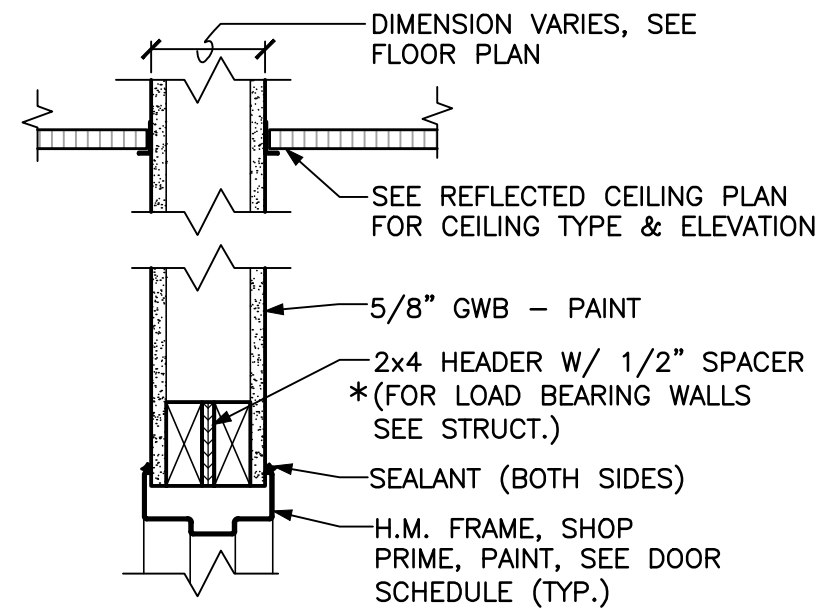
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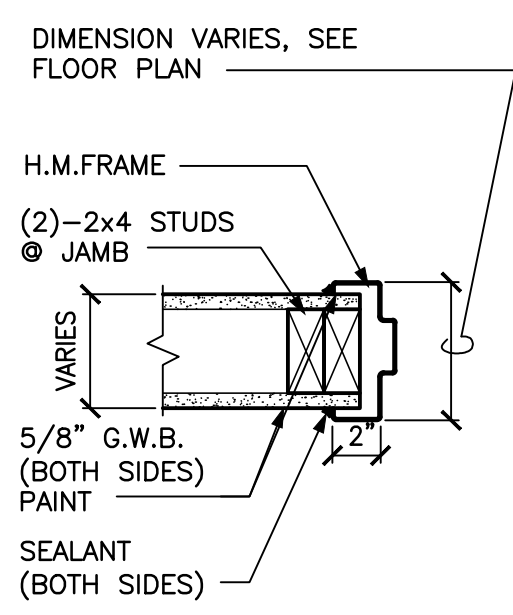
REVISIONS NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: DB
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SHEET NO.

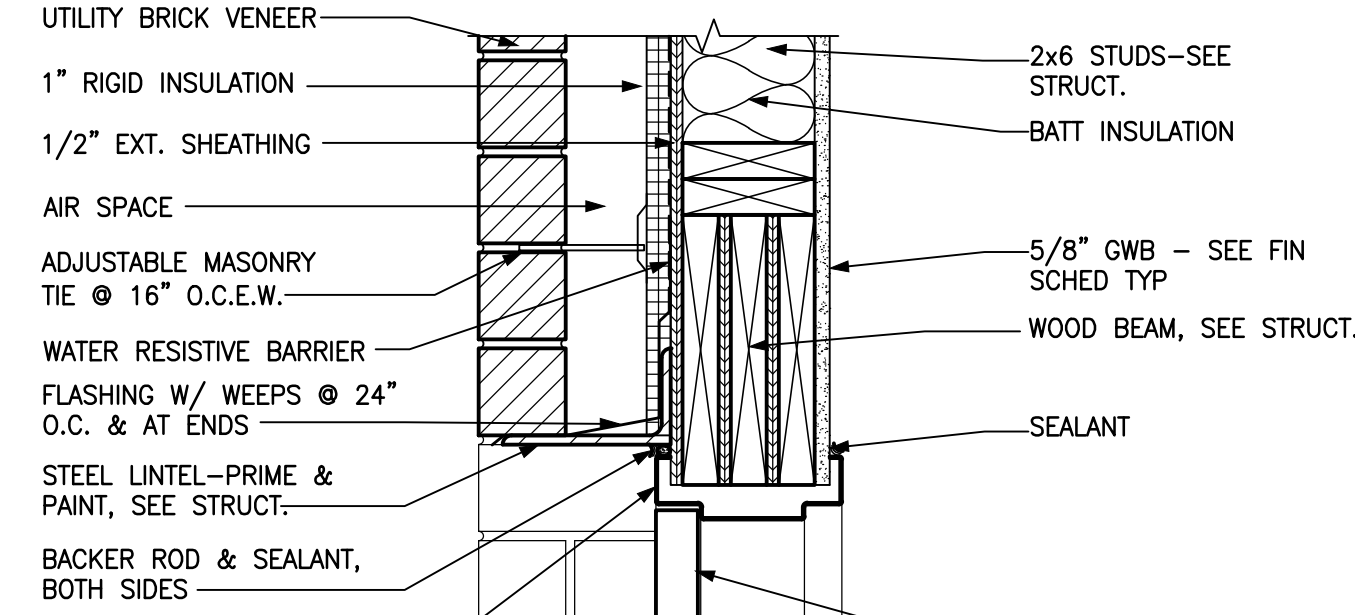
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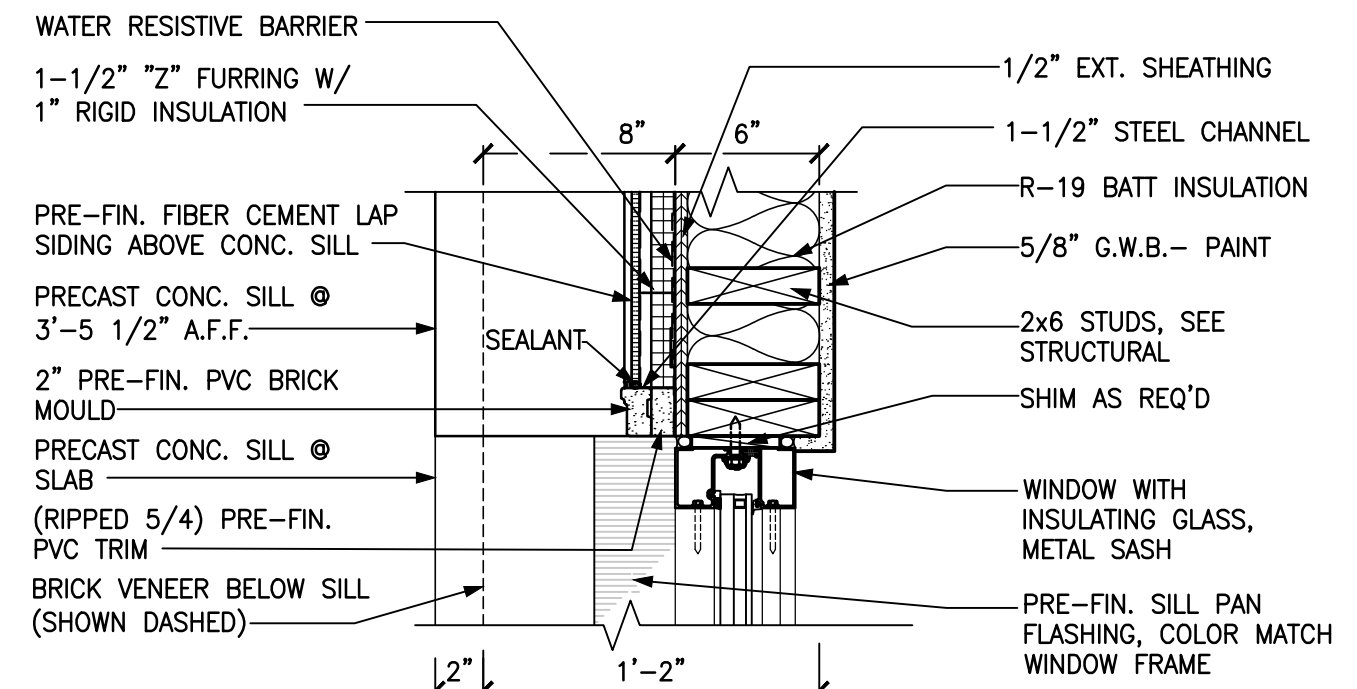
17 HEAD DETAIL
A6.1 SCALE: 1 1/2" = 1'-0"



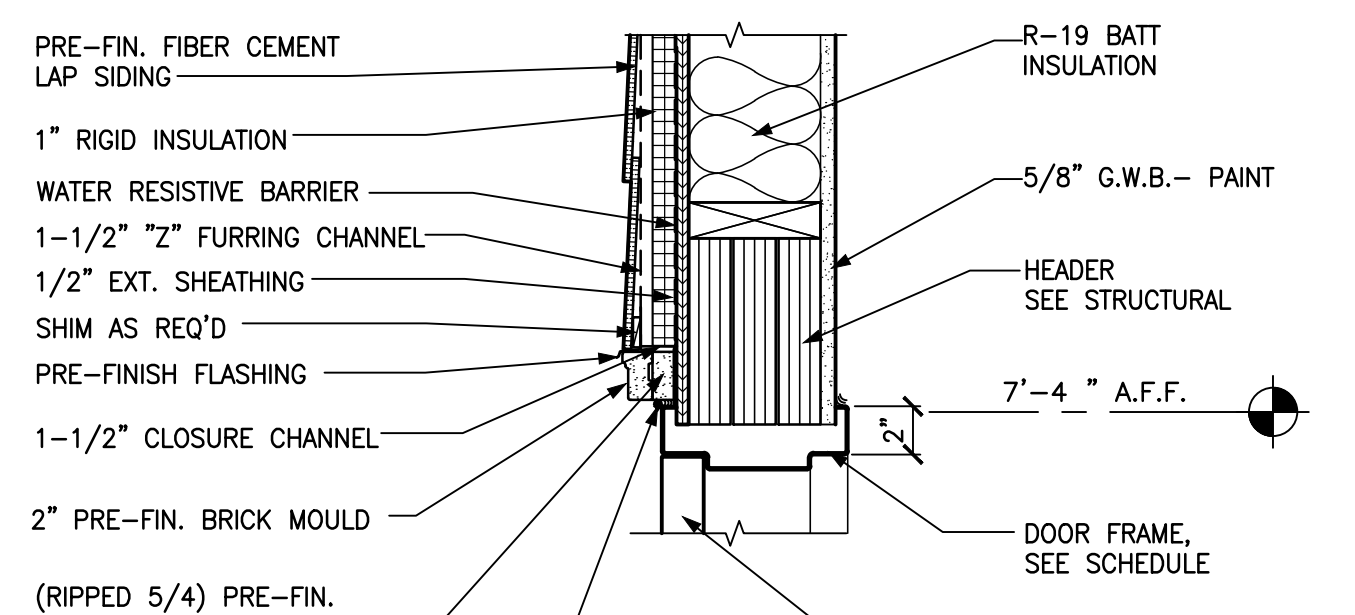
16 JAMB DETAIL
A6.1 SCALE: 1 1/2" = 1'-0"



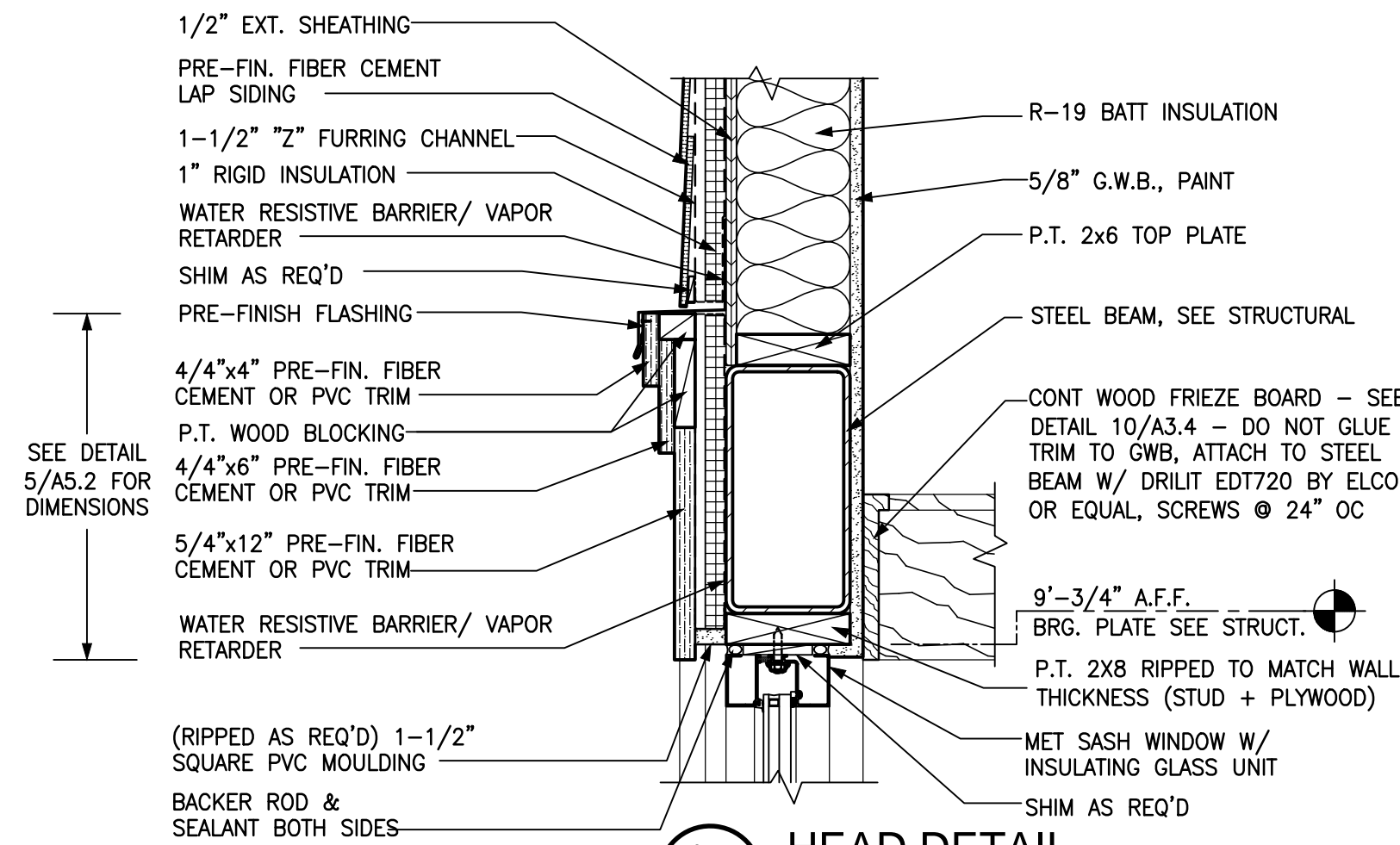
12 HEAD DETAIL
A6.1 SCALE: 1 1/2" = 1'-0"



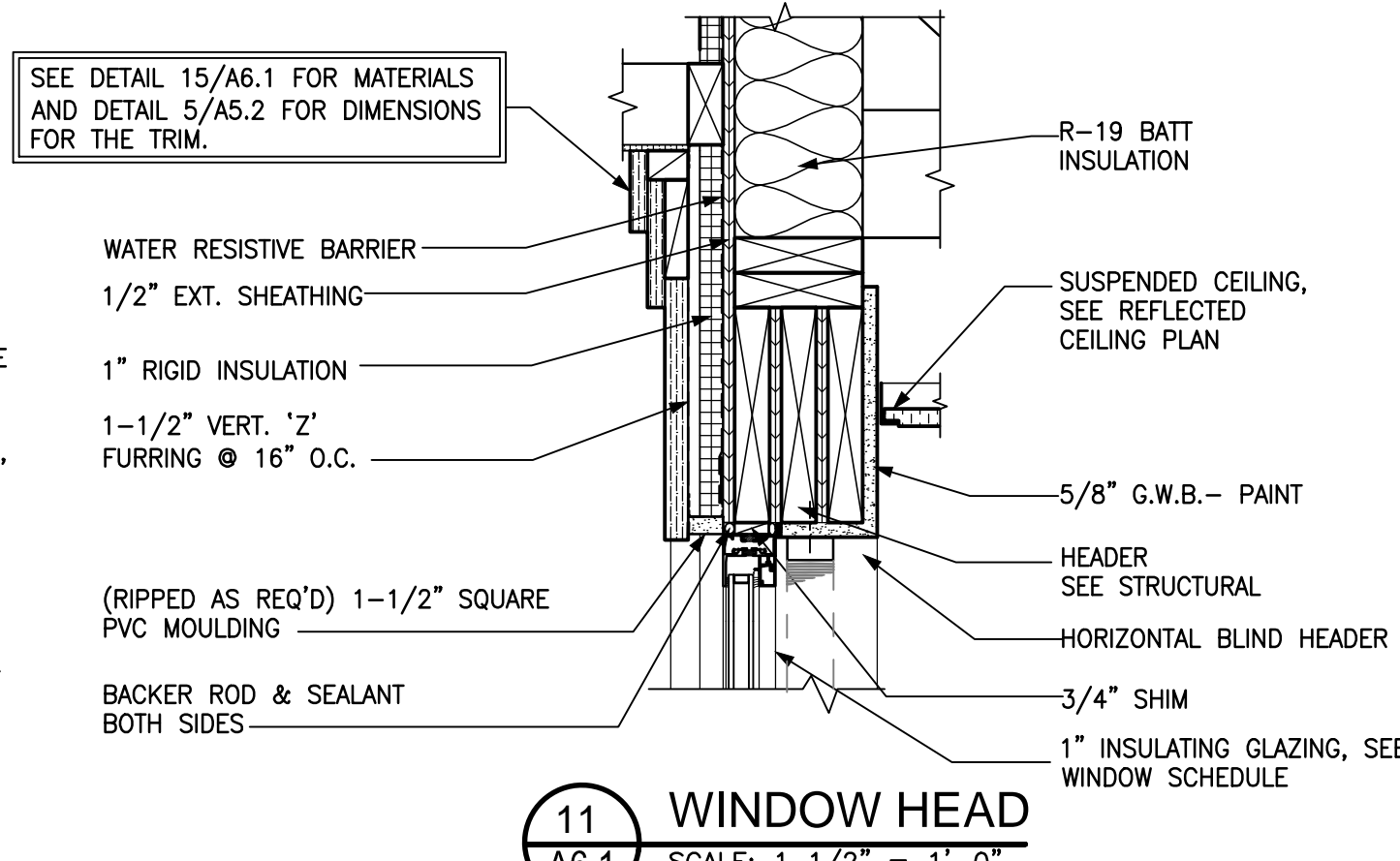
8 JAMB DETAIL AT SIDING
A6.1 SCALE: 1 1/2" = 1'-0"



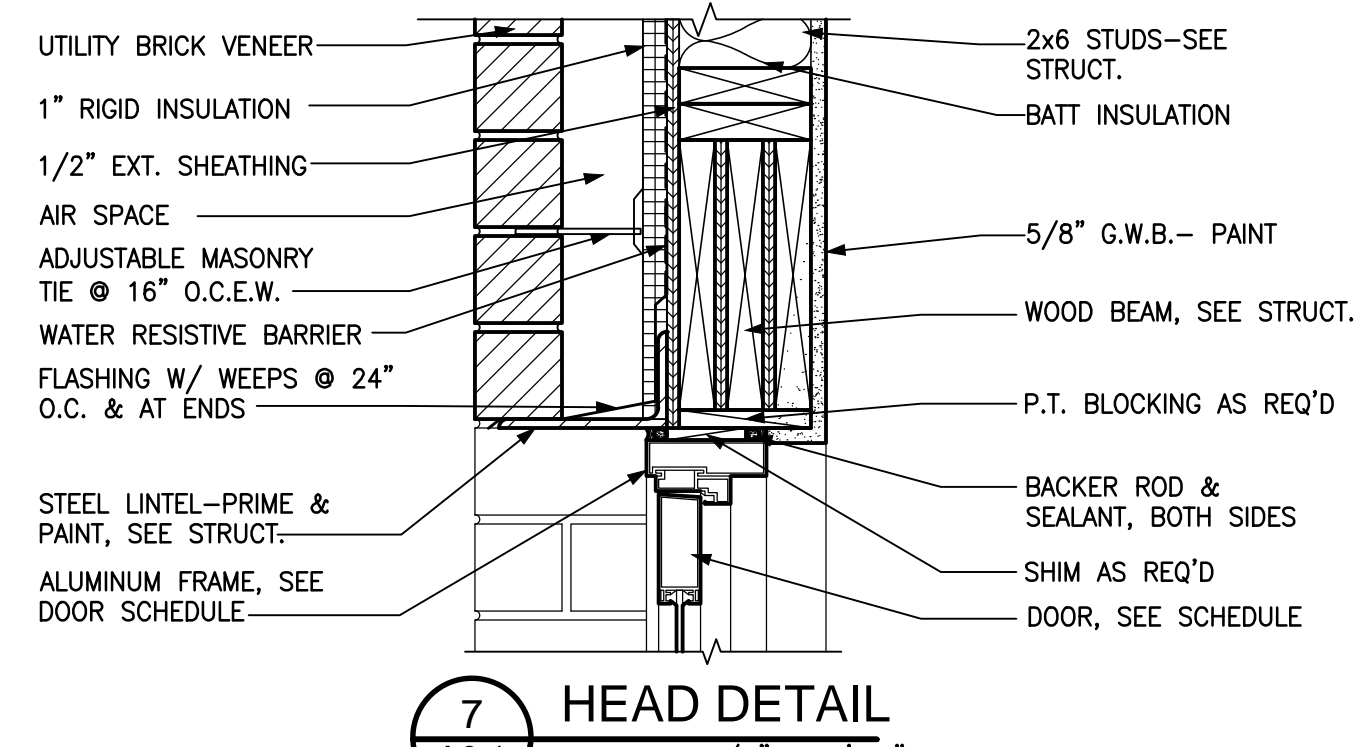
4 HEAD DETAIL
A6.1 SCALE: 1 1/2" = 1'-0"



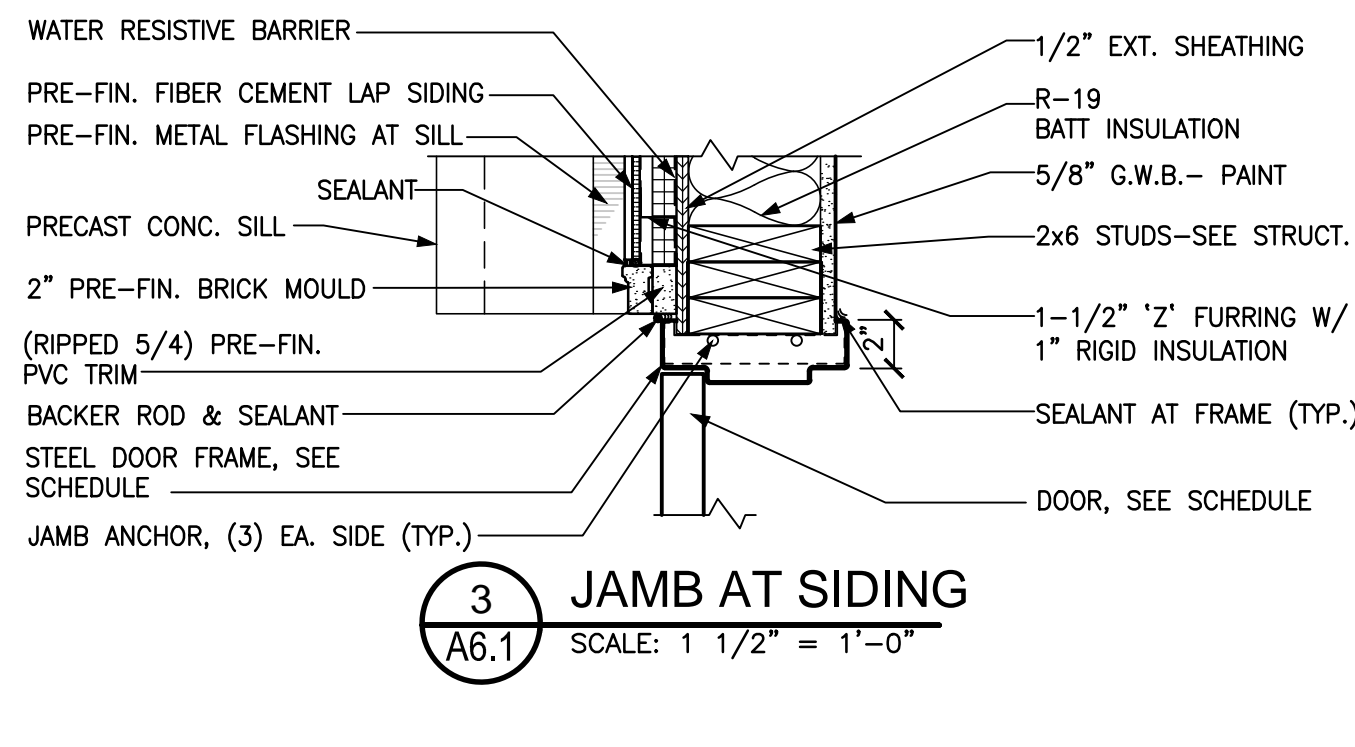
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A6.1 SCALE: 1 1/2" = 1'-0"



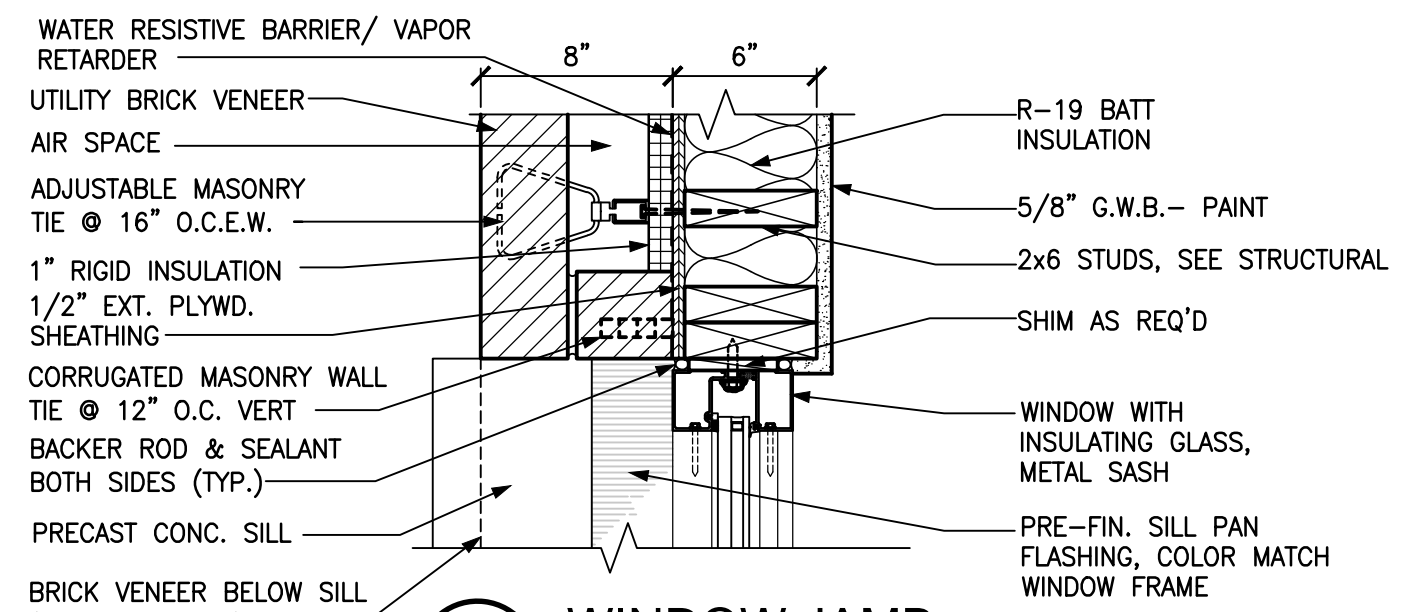
11 WINDOW HEAD
A6.1 SCALE: 1 1/2" = 1'-0"



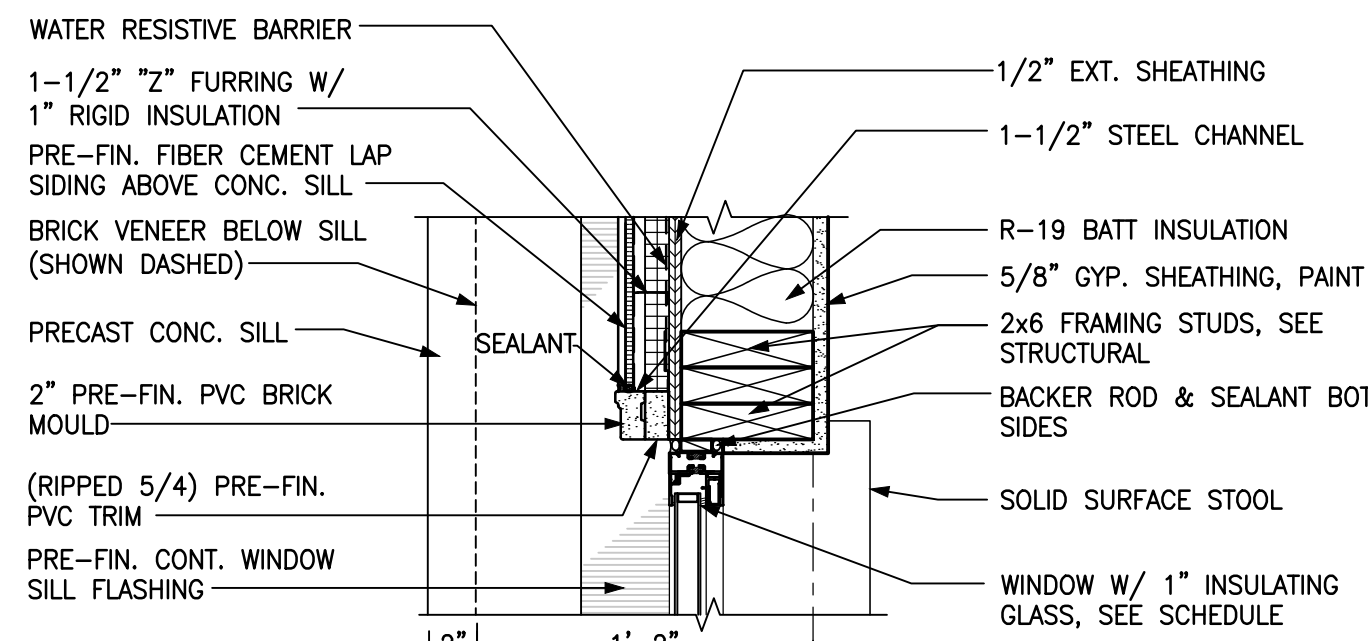
7 HEAD DETAIL
A6.1 SCALE: 1 1/2" = 1'-0"



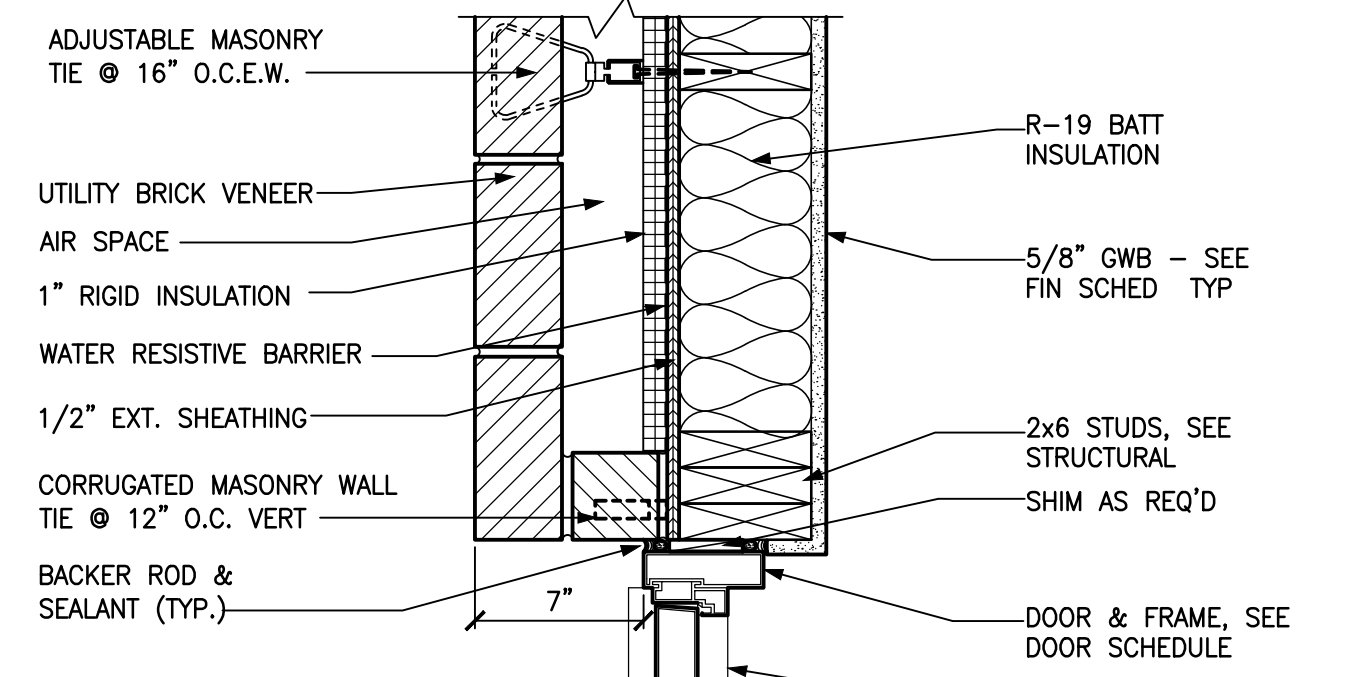
3 JAMB AT SIDING
A6.1 SCALE: 1 1/2" = 1'-0"



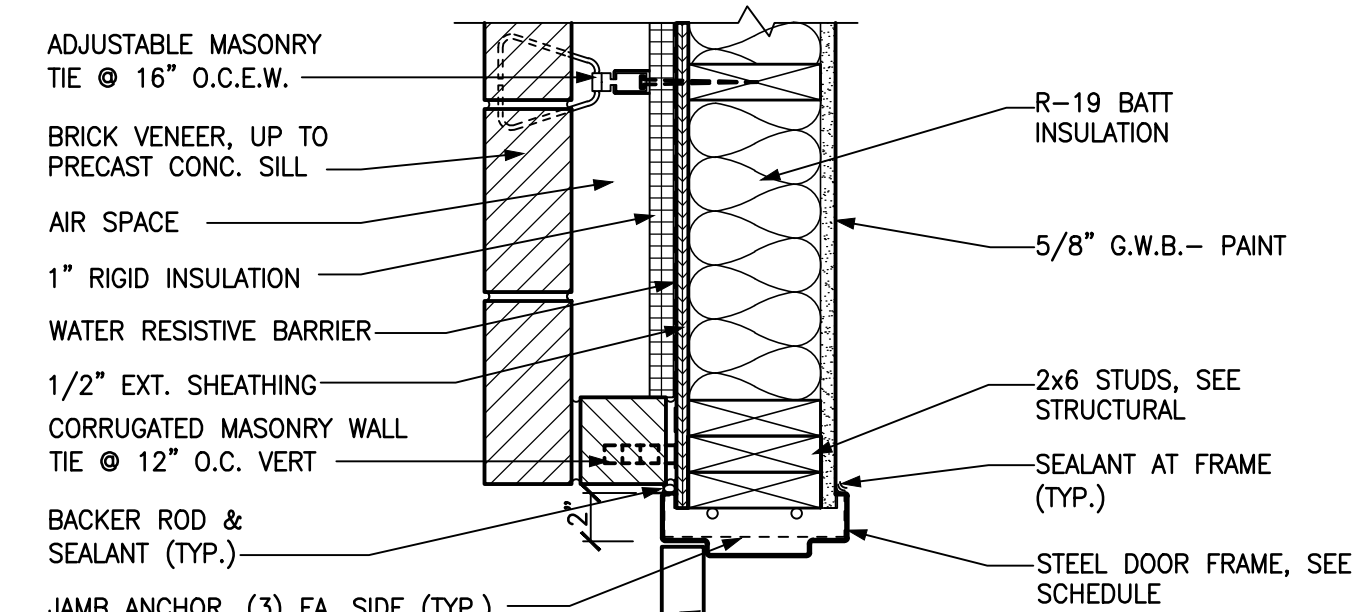
14 WINDOW JAMB
A6.1 SCALE: 1 1/2" = 1'-0"



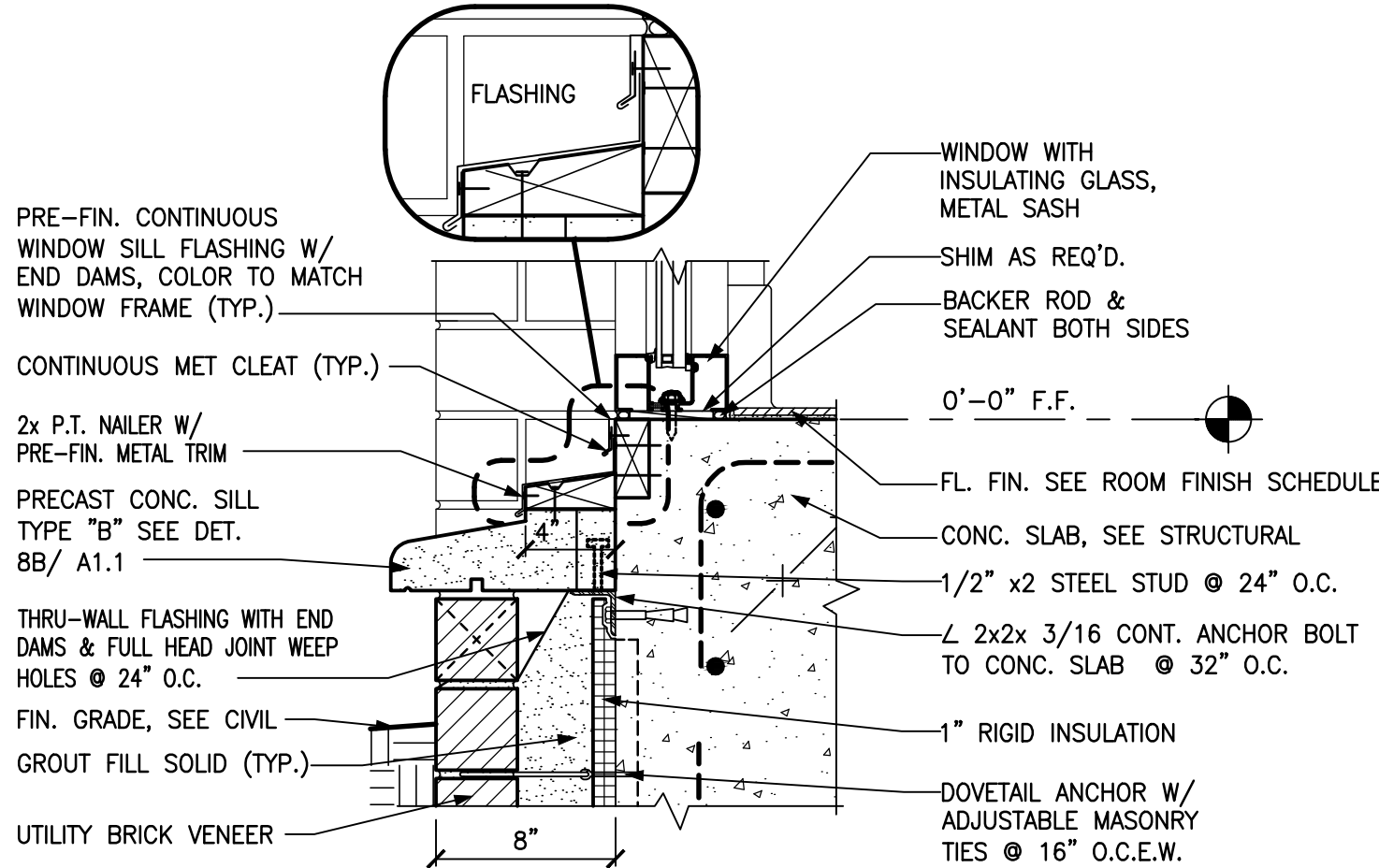
10 WINDOW JAMB AT SIDING / WALL
A6.1 SCALE: 1 1/2" = 1'-0"



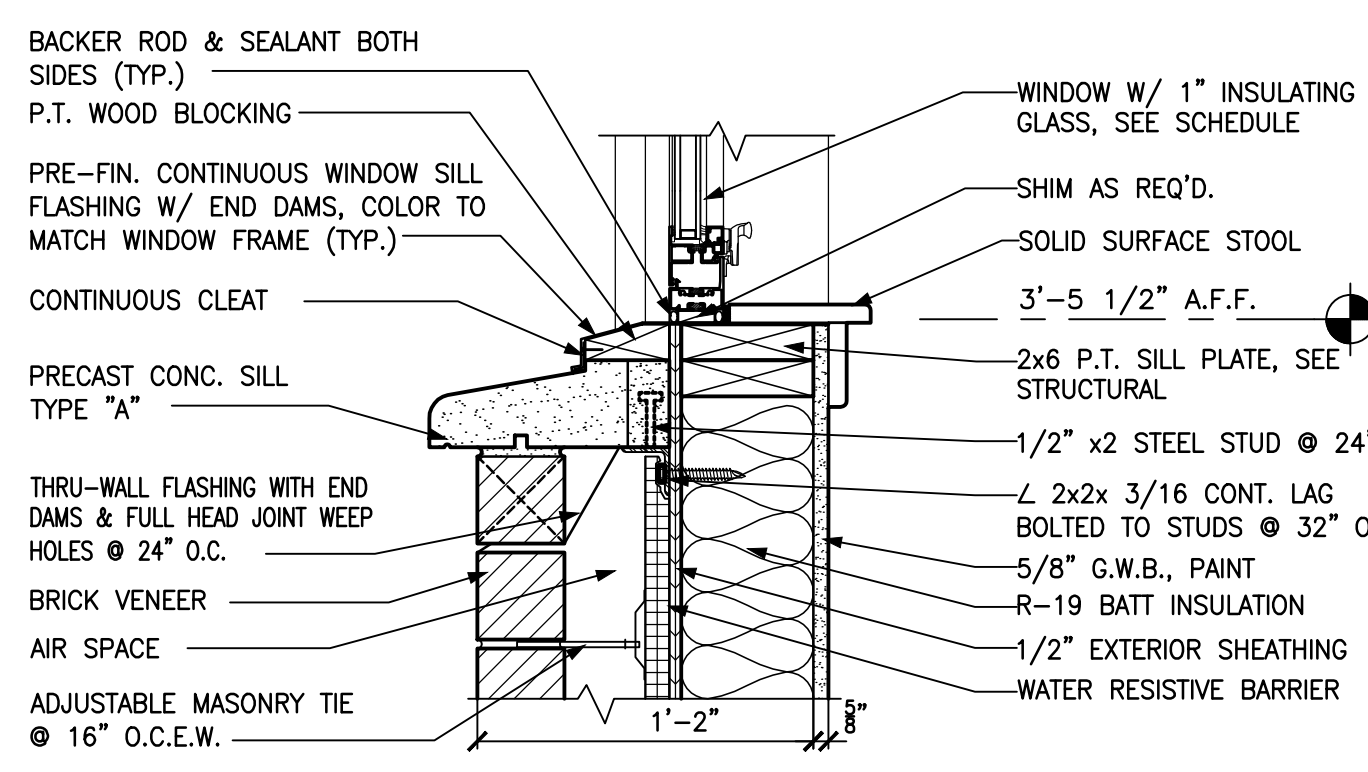
6 JAMB AT MASONRY
A6.1 SCALE: 1 1/2" = 1'-0"



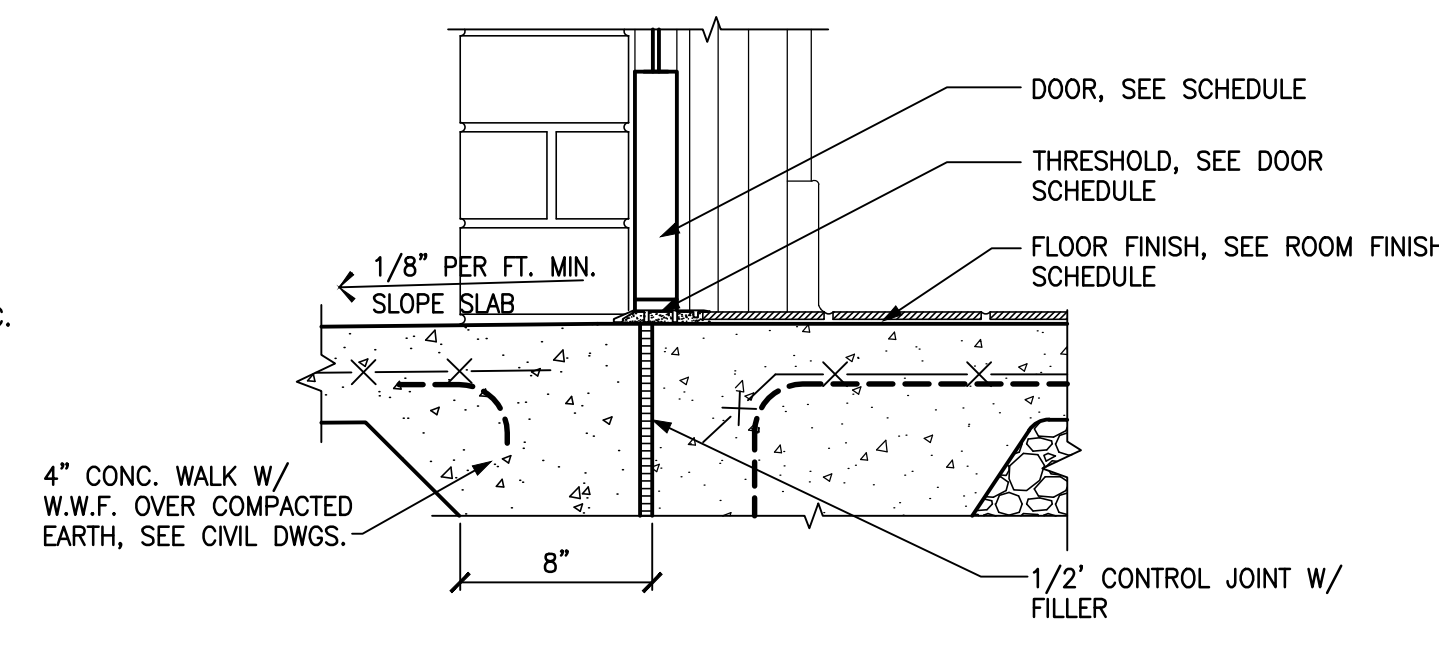
2 JAMB AT MASONRY
A6.1 SCALE: 1 1/2" = 1'-0"



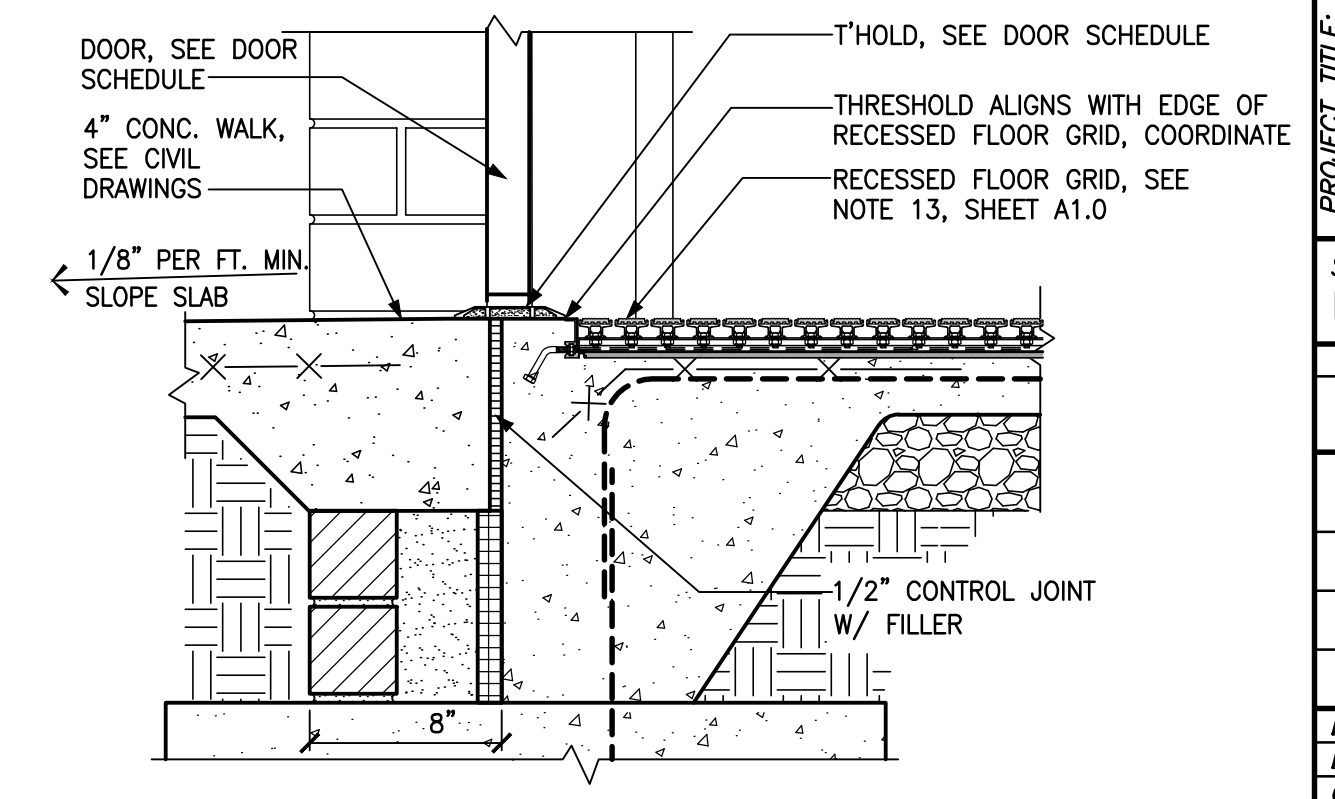
13 WINDOW SILL
A6.1 SCALE: 1 1/2" = 1'-0"



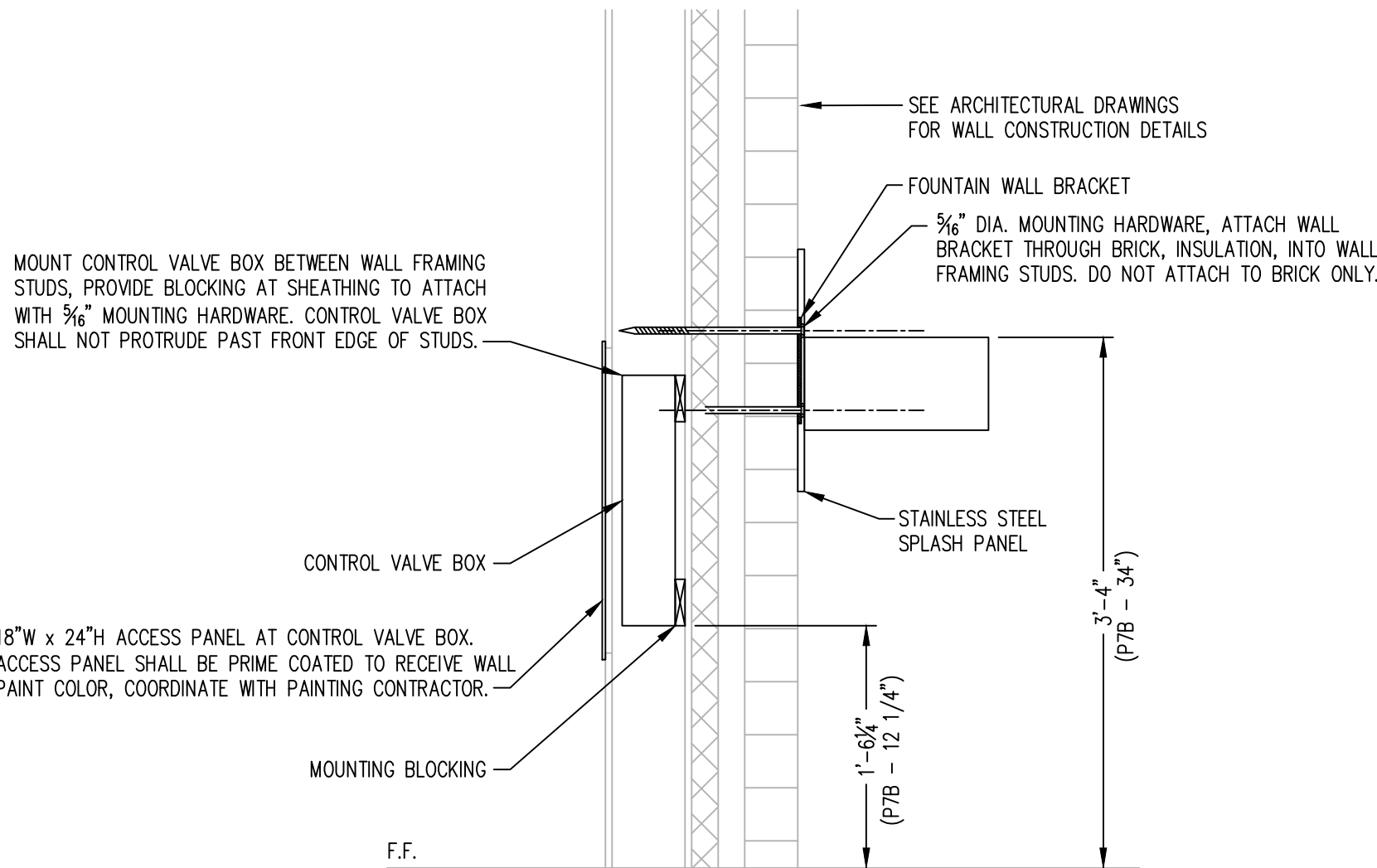
9 WINDOW SILL
A6.1 SCALE: 1 1/2" = 1'-0"



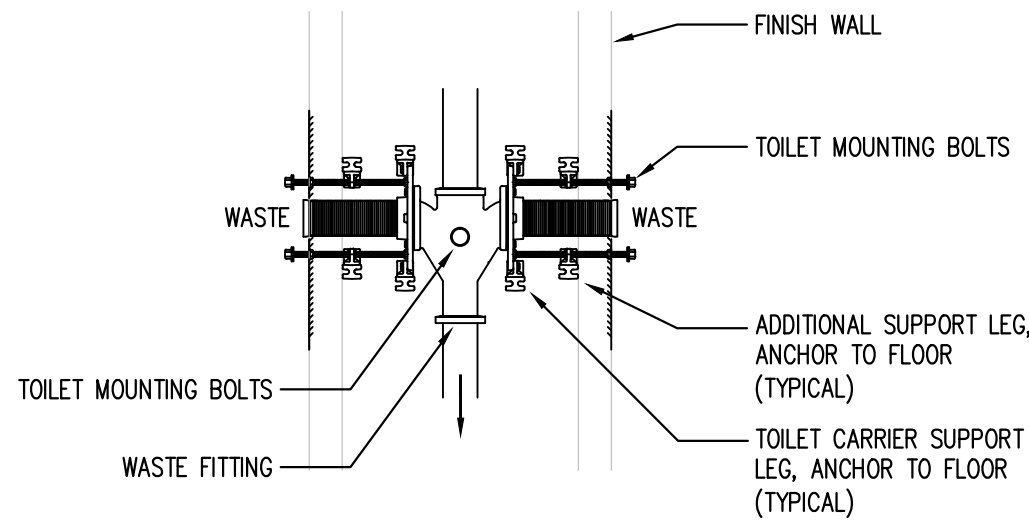
5 SILL DETAIL
A6.1 SCALE: 1 1/2" = 1'-0"



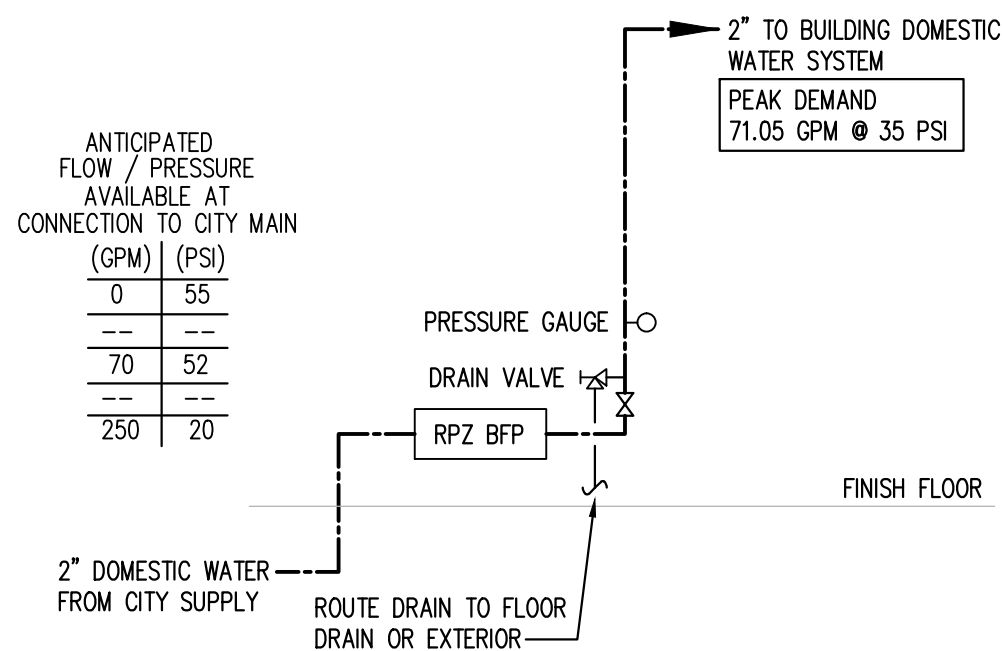
1 SILL
A6.1 SCALE: 1 1/2" = 1'-0"



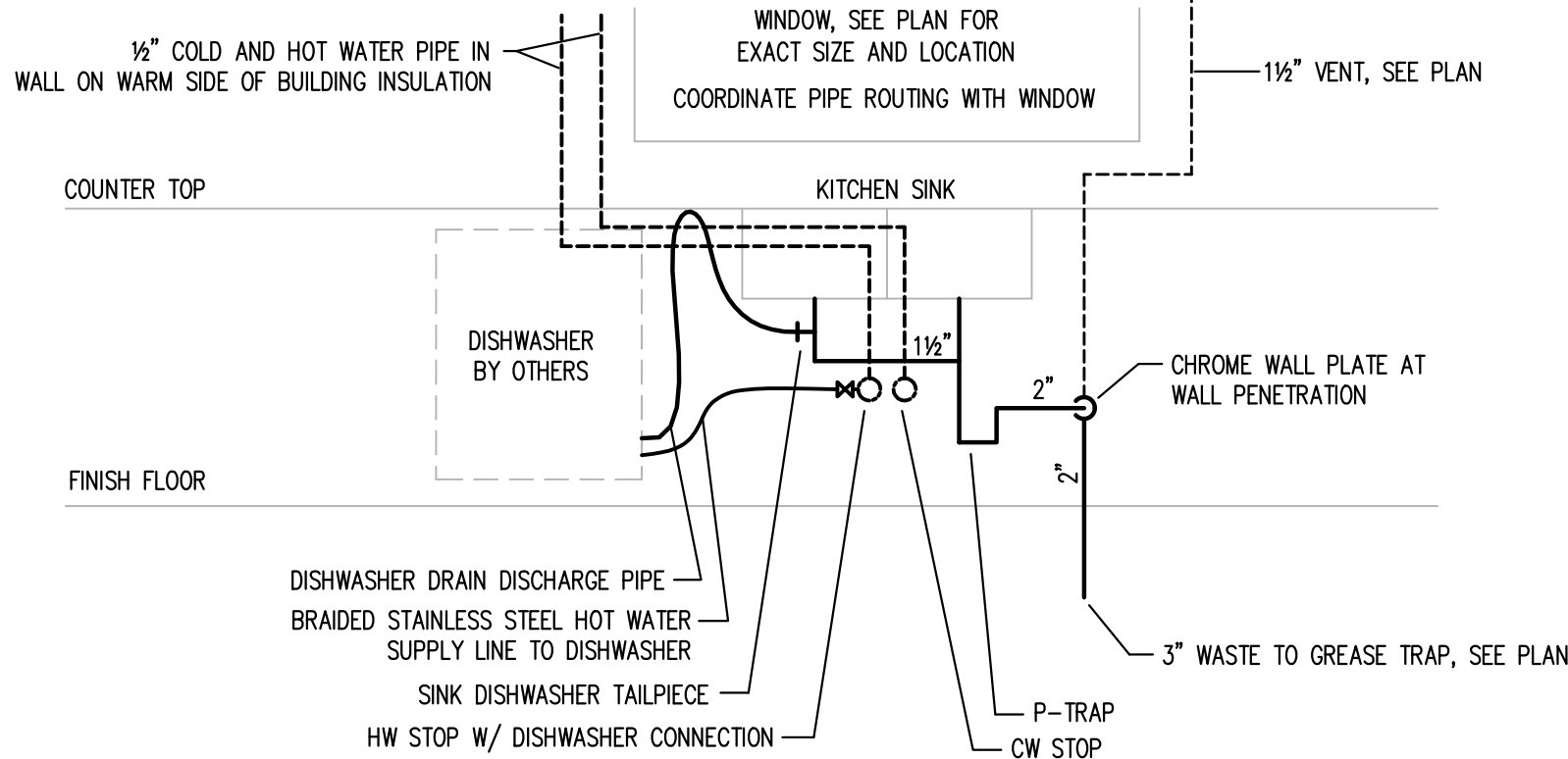
7 P7A MOUNTING SCHEMATIC (P7B SIMILAR)
SCALE: 1"=1'-0"



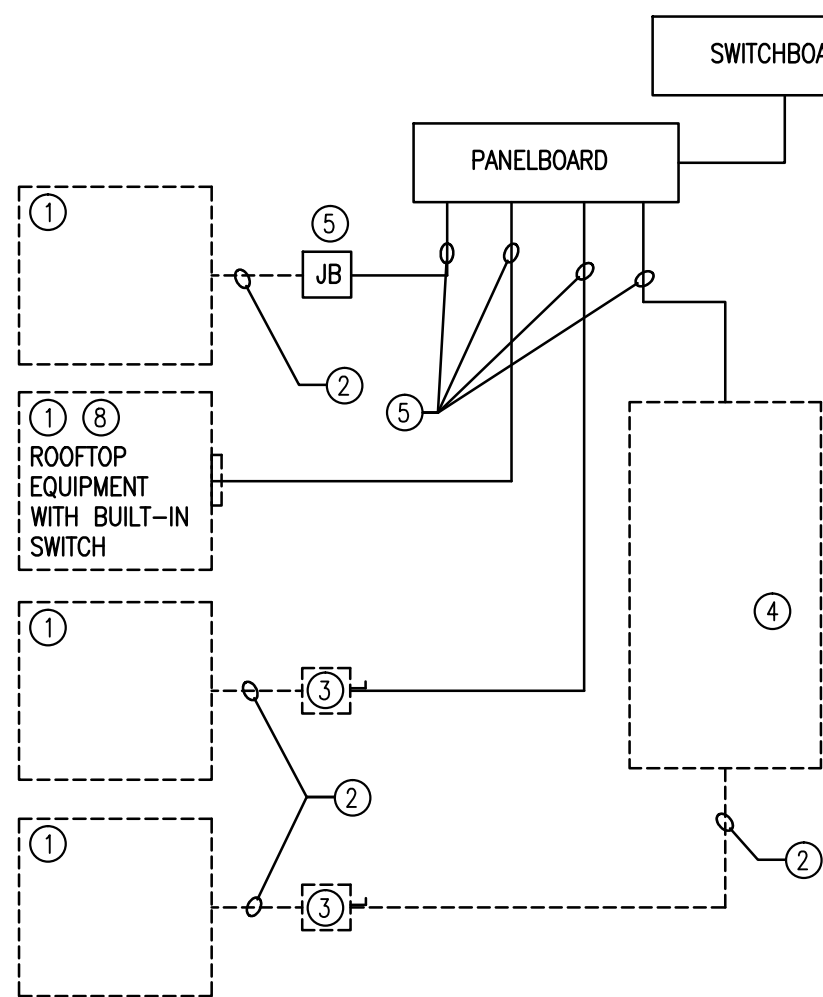
5 BACK TO BACK CARRIER SCHEMATIC
NOT TO SCALE



6 DOMESTIC WATER SUPPLY SCHEMATIC
SCALE: NONE

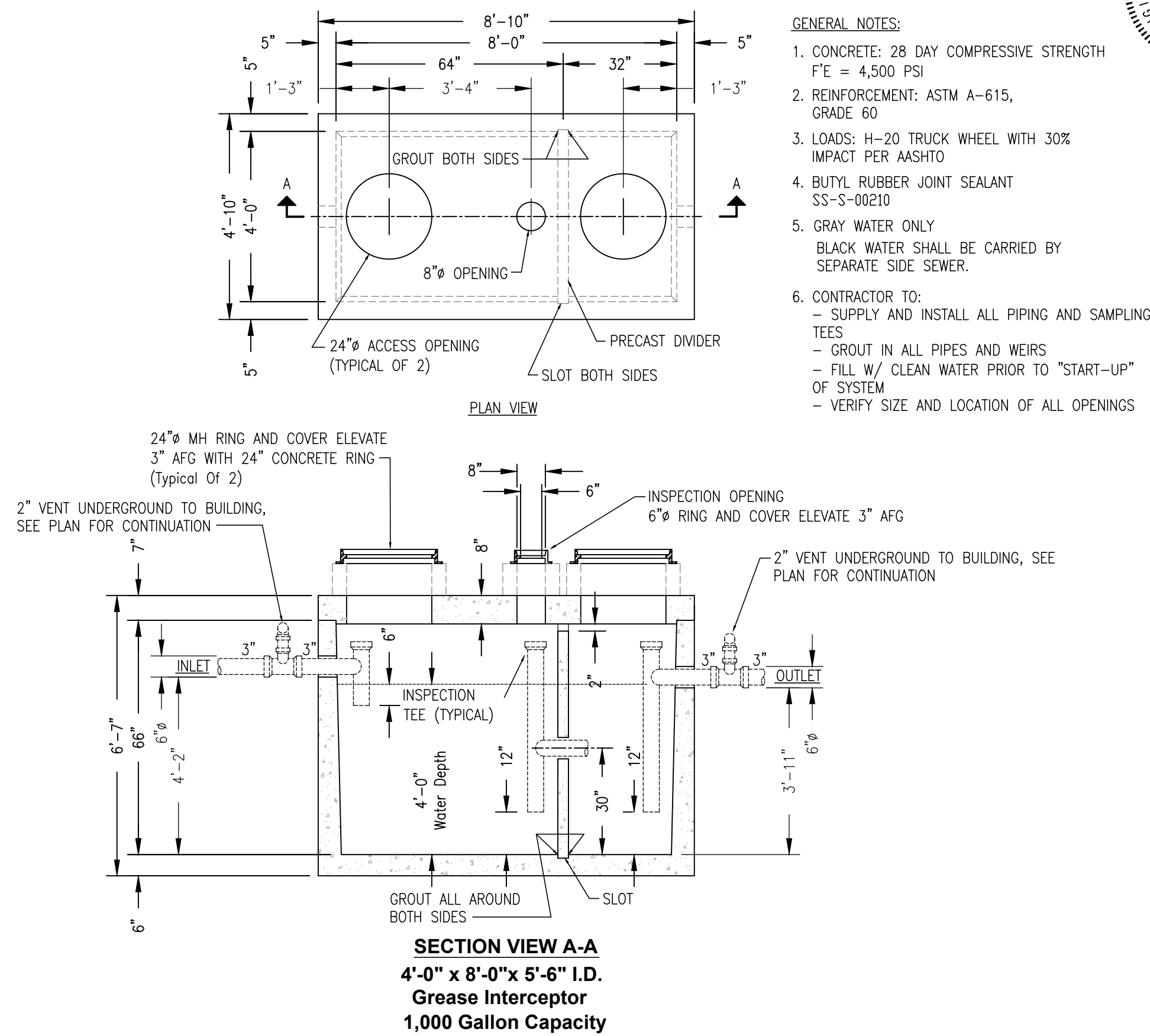


4 KITCHEN SINK SCHEMATIC
NOT TO SCALE

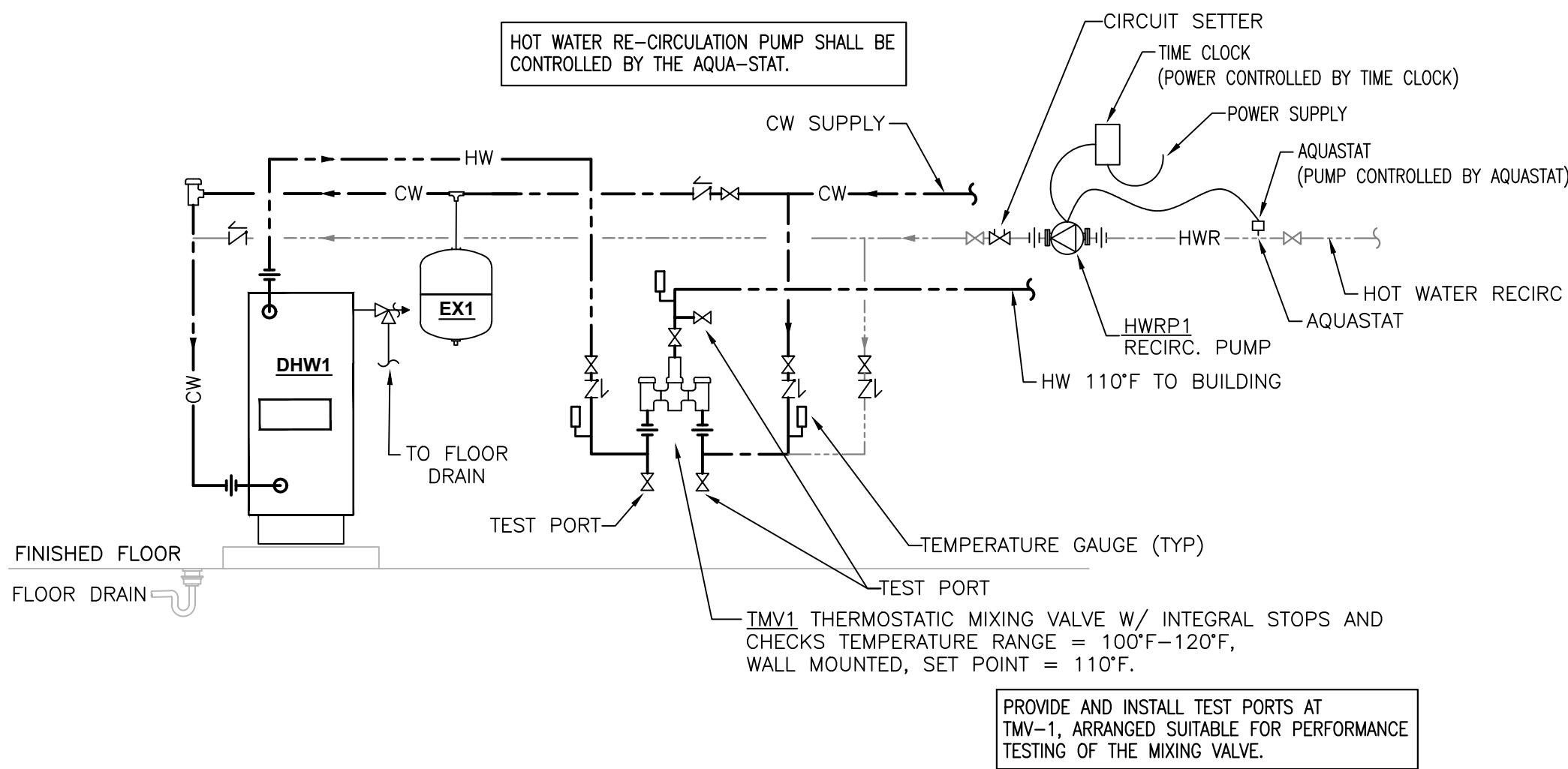


3 ELECTRICAL EQUIPMENT CONNECTION
NOT TO SCALE

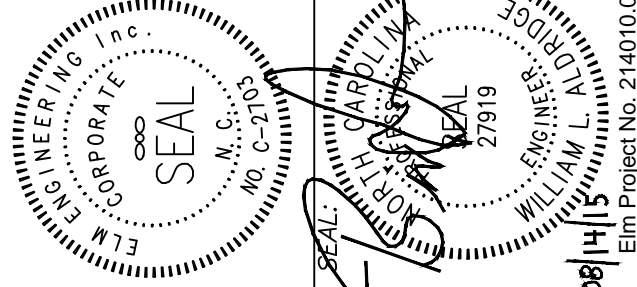
- DETAIL NOTES:**
- EQUIPMENT OF TRADES OTHER THAN ELECTRICAL
 - CONDUIT AND WIRING BY HVAC, PLUMBING CONTRACTOR, OR OTHER TRADES
 - IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC, IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
 - A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. LOCATE ADJACENT TO EQUIPMENT.
 - FEEDER CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER SIZES
 - JUNCTION BOX MAY BE SHOWN ON ELECTRICAL PLANS FOR SOME EQUIPMENT. IF NO STARTER OR DISCONNECT IS SUPPLIED, A JUNCTION BOX SHALL BE INSTALLED ADJACENT TO EQUIPMENT. THE ELECTRICAL CONTRACTOR SHALL PROVIDE LINE SIDE WIRING TO THE JUNCTION BOX. LOAD SIDE WIRING WILL BE PROVIDED BY MECHANICAL CONTRACTOR OR OTHER TRADES.
 - IN ALL CASES THE EQUIPMENT SHALL MAKE FINAL CONNECTIONS, START UP AND TEST EQUIPMENT.
 - IF THE ROOF TOP FAN IS NOT PROVIDED WITH BUILT IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.
 - IN A SINGLE PRIME CONTRACT, IT IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR TO COORDINATE BETWEEN THE ELECTRICAL AND OTHER TRADES.



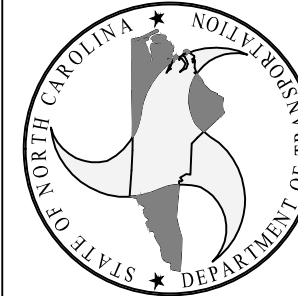
2 UNDERGROUND GREASE INTERCEPTOR SCHEMATIC
NOT TO SCALE



1 DOMESTIC WATER HEATING SCHEMATIC
NOT TO SCALE



DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, INCOT



CONSULTANT:
elm
Elin Engineering Inc.
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www.elmengi.com

DRAWING TITLE / DESCRIPTION:
PLUMBING DETAILS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

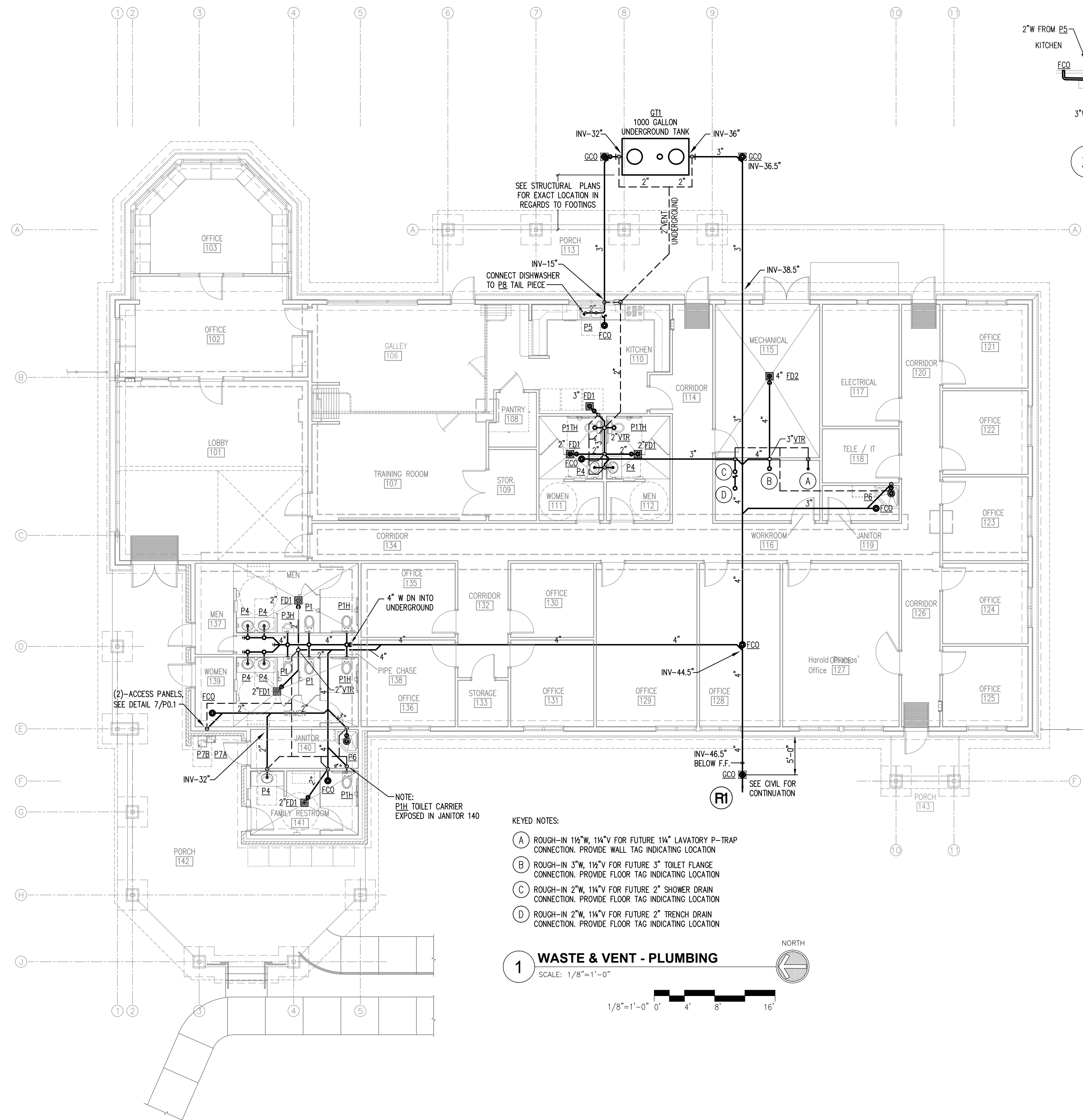
STATE CONSTRUCTION
ID.# 11-09079-01A

ASSET NUMBER:
CO.# SITE.# BLDG.#

REVISIONS
NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: DRB
CHECKED BY: WLA
SHEET NO.

P0.1



2 GREASE TRAP SCHEMATIC

KEYED NOTES:

- (A) ROUGH-IN 1/2"W, 1/4"W FOR FUTURE 1/4" LAVATORY P-TRAP CONNECTION. PROVIDE WALL TAG INDICATING LOCATION
- (B) ROUGH-IN 3/4", 1/2"W FOR FUTURE 3" TOILET FLANGE CONNECTION. PROVIDE FLOOR TAG INDICATING LOCATION
- (C) ROUGH-IN 2"W, 1/4"W FOR FUTURE 2" SHOWER DRAIN CONNECTION. PROVIDE FLOOR TAG INDICATING LOCATION
- (D) ROUGH-IN 2"W, 1/4"W FOR FUTURE 2" TRENCH DRAIN CONNECTION. PROVIDE FLOOR TAG INDICATING LOCATION

BID DOCUMENTS

DESIGNED BY:

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CONSULTANT:

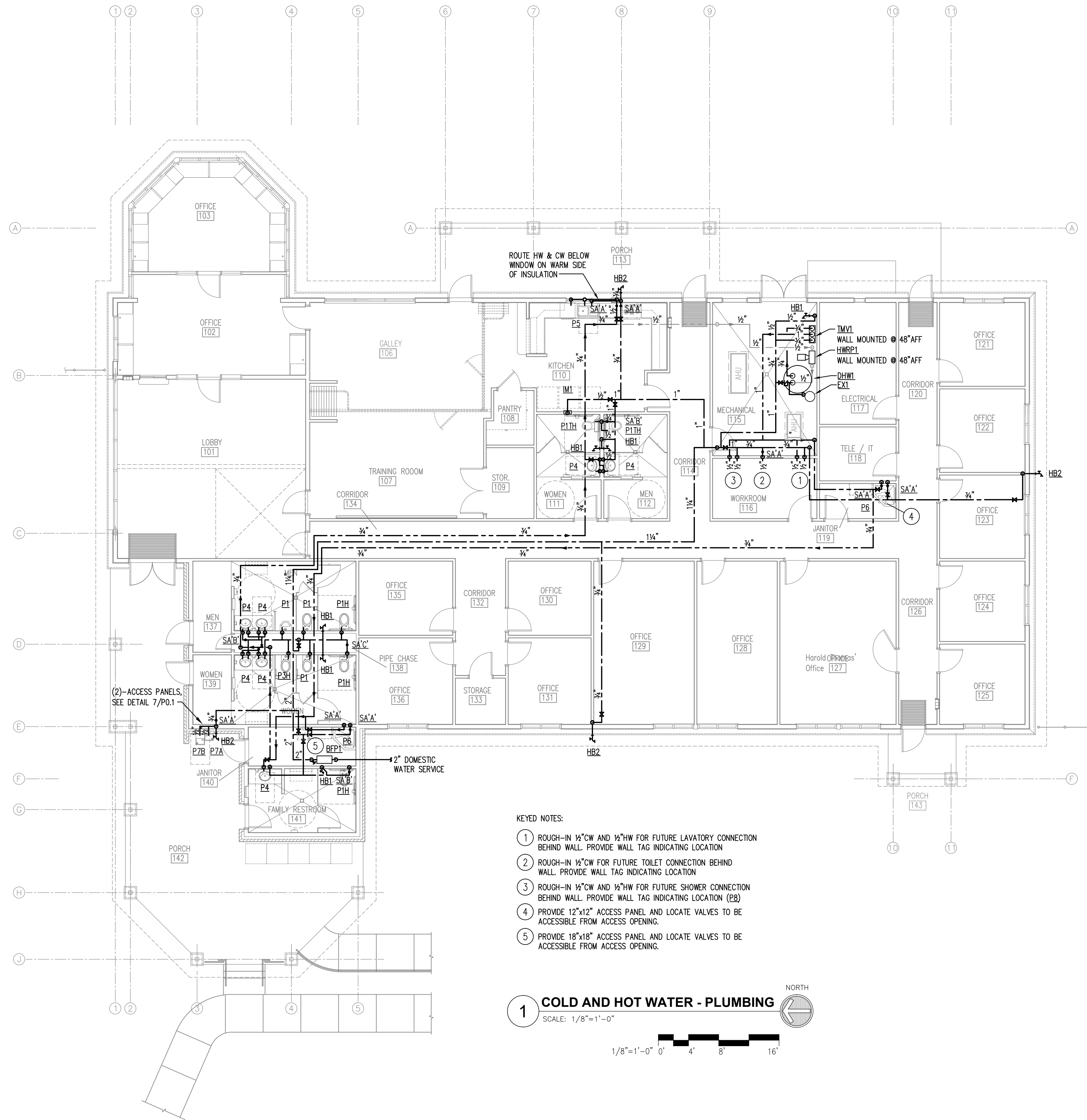
 **elm.**

**ENVIRONMENTAL
CONSULTING
ENGINEERING**

Elm Engineering Inc.
900 Center Park Drive
Suite E
Charlotte, NC 28217
Tel 704.335.0396
Fax 704.335.0399
www.elmengi.com

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT
2300 FERRY ROAD, HAVELOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

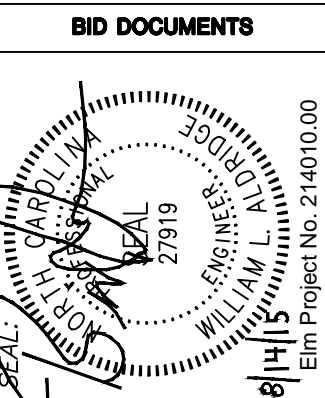
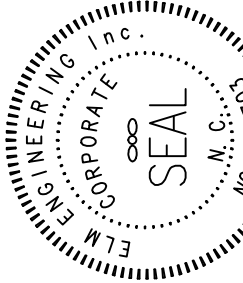
P1.0



- KEYED NOTES:
1. ROUGH-IN 1/2" CW AND 1/2" HW FOR FUTURE LAVATORY CONNECTION BEHIND WALL. PROVIDE WALL TAG INDICATING LOCATION
 2. ROUGH-IN 1/2" CW FOR FUTURE TOILET CONNECTION BEHIND WALL. PROVIDE WALL TAG INDICATING LOCATION
 3. ROUGH-IN 1/2" CW AND 1/2" HW FOR FUTURE SHOWER CONNECTION BEHIND WALL. PROVIDE WALL TAG INDICATING LOCATION (P8)
 4. PROVIDE 12"x12" ACCESS PANEL AND LOCATE VALVES TO BE ACCESSIBLE FROM ACCESS OPENING.
 5. PROVIDE 18"x18" ACCESS PANEL AND LOCATE VALVES TO BE ACCESSIBLE FROM ACCESS OPENING.

1 COLD AND HOT WATER - PLUMBING
SCALE: 1/8"=1'-0"

1/8"=1'-0" 0' 4' 8' 16'



DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, NCDOT
1 SOUTH WILMINGTON STREET
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DRAWING TITLE / DESCRIPTION:
**PLUMBING FLOOR PLAN -
COLD AND HOT WATER PIPING**

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**
2300 FERRY ROAD, HAVELock, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

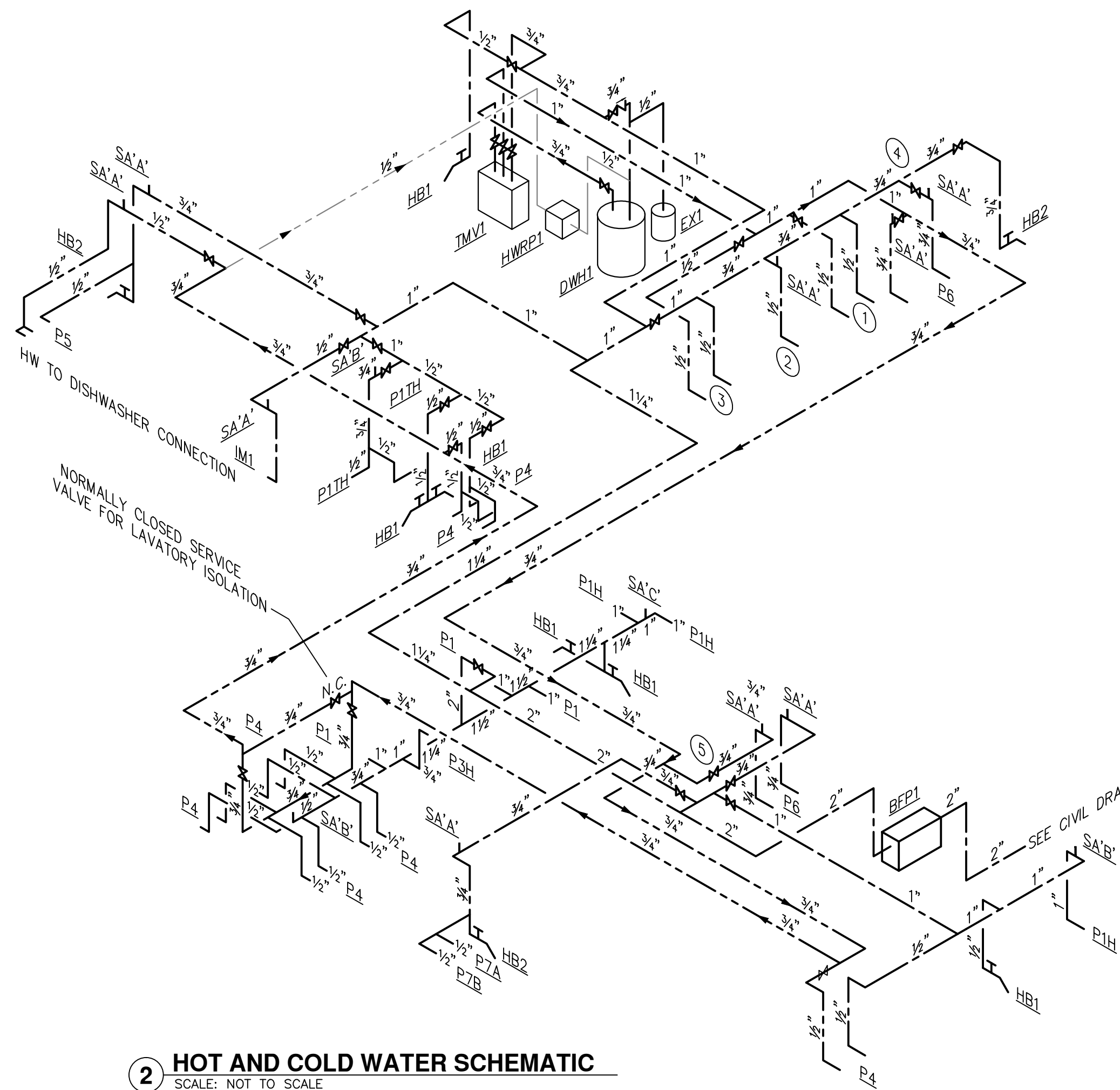
STATE CONSTRUCTION
ID.# 11-09079-01A

ASSET NUMBER:
CO.# SITE.# BLDG.#
48 . . .

REVISIONS
NO. DATE

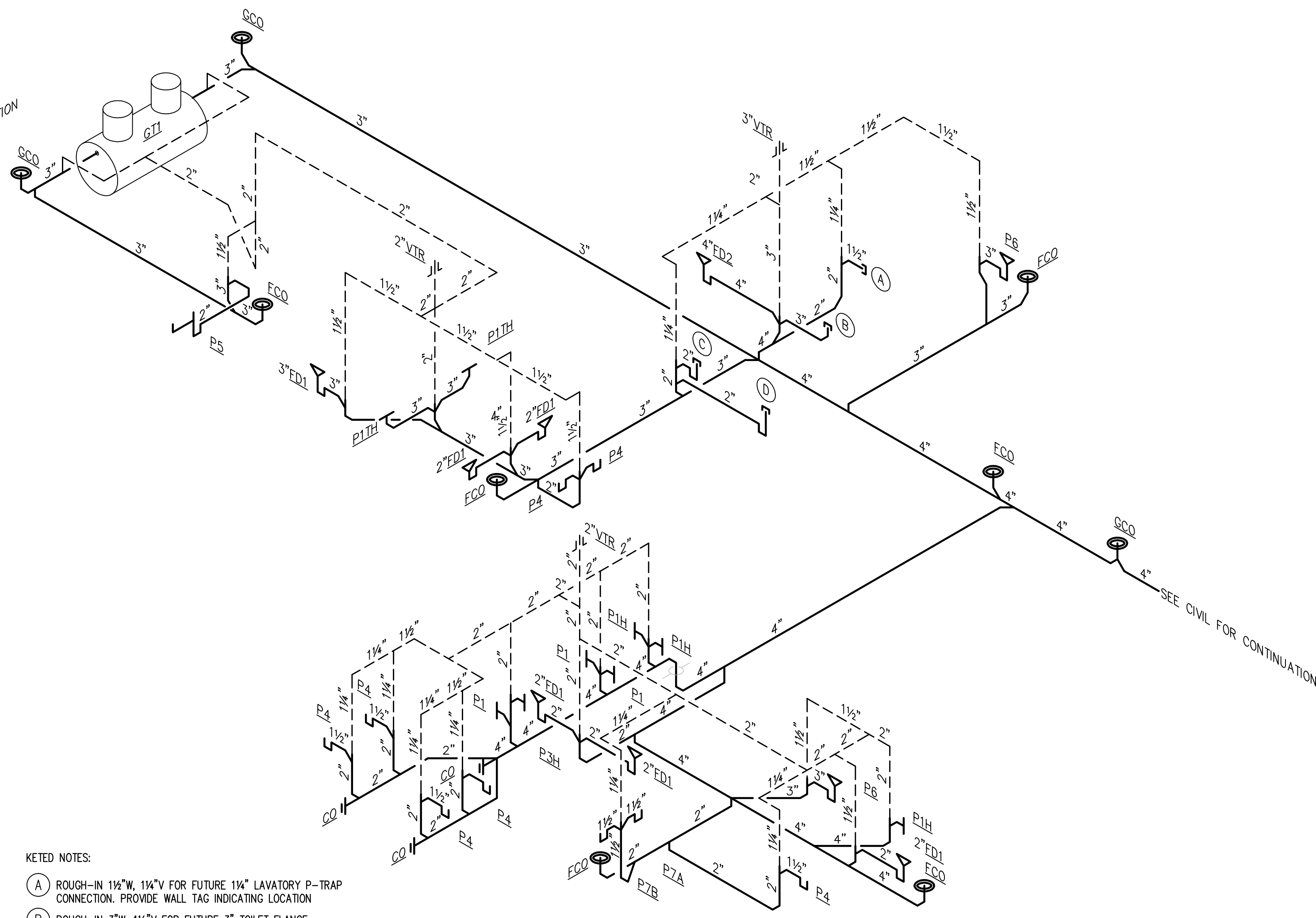
DATE ISSUED: 8-14-15
DRAWN BY: DRB
CHECKED BY: WLA
SHEET NO.

P1.1



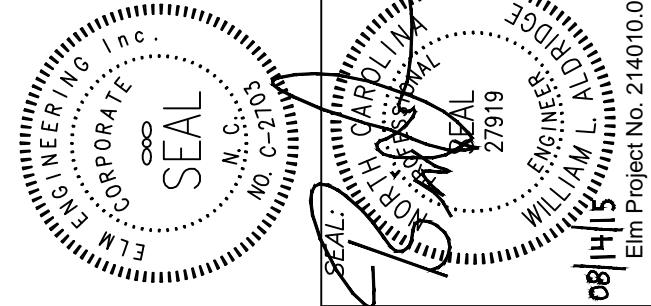
2 HOT AND COLD WATER SCHEMATIC
SCALE: NOT TO SCALE

- KEYED NOTES:
- 1 ROUGH-IN 1/2" CW AND 1/2" HW FOR FUTURE LAVATORY CONNECTION BEHIND WALL. PROVIDE WALL TAG INDICATING LOCATION.
 - 2 ROUGH-IN 1/2" CW FOR FUTURE TOILET CONNECTION BEHIND WALL. PROVIDE WALL TAG INDICATING LOCATION.
 - 3 ROUGH-IN 1/2" CW AND 1/2" HW FOR FUTURE SHOWER CONNECTION BEHIND WALL. PROVIDE WALL TAG INDICATING LOCATION.
 - 4 PROVIDE 12"x12" ACCESS PANEL AND LOCATE VALVES TO BE ACCESSIBLE FROM ACCESS OPENING.
 - 5 PROVIDE 18"x18" ACCESS PANEL AND LOCATE VALVES TO BE ACCESSIBLE FROM ACCESS OPENING.



- KEYED NOTES:
- A ROUGH-IN 1 1/2"W, 1 1/4"V FOR FUTURE 1 1/4" LAVATORY P-TRAP CONNECTION. PROVIDE WALL TAG INDICATING LOCATION.
 - B ROUGH-IN 3"W, 1 1/2"V FOR FUTURE 3" TOILET FLANGE CONNECTION. PROVIDE FLOOR TAG INDICATING LOCATION.
 - C ROUGH-IN 2"W, 1 1/4"V FOR FUTURE 2" SHOWER DRAIN CONNECTION. PROVIDE FLOOR TAG INDICATING LOCATION.
 - D ROUGH-IN 2"W, 1 1/4"V FOR FUTURE 2" TRENCH DRAIN CONNECTION. PROVIDE FLOOR TAG INDICATING LOCATION.

1 WASTE AND VENT RISER R1 SCHEMATIC
SCALE: NOT TO SCALE



DESIGNED BY:
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DRAWING TITLE / DESCRIPTION:
PLUMBING RISERS

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**
2300 FERRY ROAD, HAVELock, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION	ID.# 11-09079-01A
ASSET NUMBER:	CO.# SITE.# BLDG.#
48	.
REVISIONS	NO. DATE
DATE ISSUED: 8-14-15	
DRAWN BY: DRB	
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SHEET NO.	

P2.0

GENERAL NOTES	
1. DO NOT SCALE DRAWINGS. CONTRACT DOCUMENT DRAWINGS FOR MECHANICAL WORK (HVAC, PLUMBING, AND FIRE PROTECTION) ARE DIAGRAMMATIC AND ARE INTENDED TO CONVEY SCOPE AND GENERAL ARRANGEMENT ONLY. THE LOCATIONS OF ALL ITEMS SHOWN ON THE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS THAT ARE NOT DEFINITELY FIXED BY DIMENSIONS ARE APPROXIMATE ONLY. THE EXACT LOCATIONS NECESSARY TO SECURE THE BEST CONDITIONS AND RESULTS MUST BE DETERMINED BY THE PROJECT SITE CONDITIONS.	B. RUN ALL PIPING AND DUCTWORK INSULATION CONTINUOUSLY THROUGH FLOORS AND PARTITIONS, UNLESS NOTED OR SHOWN OTHERWISE.
2. COORDINATE CONSTRUCTION OF ALL MECHANICAL WORK WITH ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL WORK, ETC., SHOWN ON OTHER CONTRACT DRAWINGS. FIXED WORK SUCH AS DUCTWORK AND PLUMBING SHALL BE INSTALLED PRIOR TO ANY TRADE WORK THAT CAN BE EASILY RELOCATED OR OFFSET SUCH AS ELECTRICAL CONDUIT, SMALL WATER PIPING, FIRE PROTECTION, ETC.	8. WALL, FLOOR, ROOF AND BEAM PENETRATIONS FOR EQUIPMENT, DUCTWORK, PIPING AND CONDUIT: A. COORDINATE SIZE AND LOCATION WITH ALL OTHER TRADES INVOLVED. B. WEATHERPROOF ALL PENETRATIONS TO EXTERIOR. C. COORDINATE LINTEL REQUIREMENTS.
3. LOCATE ALL TEMPERATURE, PRESSURE AND FLOW MEASURING DEVICES IN ACCESSIBLE LOCATIONS WITH STRAIGHT SECTION OF PIPE OR DUCT UP- AND DOWNSTREAM AS RECOMMENDED BY THE MANUFACTURER FOR GOOD ACCURACY.	9. SUPPORTS: A. SUPPORT ALL DUCTWORK, PIPING AND EQUIPMENT FROM STRUCTURAL STEEL. B. DO NOT SUPPORT ANY MECHANICAL ITEM FROM CEILING SUSPENSION SYSTEM. C. PROVIDE ADDITIONAL SUPPORTS ON BOTH SIDES AND WITHIN 18" OF FIRE RATED WALLS. DUCTWORK OR PIPING SHALL NOT BE SUPPORTED FROM ANY FIRE RATED WALL. D. PROVIDE ADDITIONAL SUPPORTS OR HANGERS ADJACENT TO ELBOWS AND AT DROPS TO PREVENT WEIGHT OF PIPING BEING PLACED ON THE EQUIPMENT OR FLEXIBLE JOINTS.
4. MECHANICAL EQUIPMENT: A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, CONTRACT DOCUMENTS, APPLICABLE CODES AND REGULATIONS. B. COORDINATE ALL EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. C. PROVIDE DUCT AND PIPE TRANSITIONS REQUIRED AT EQUIPMENT CONNECTIONS. D. COORDINATE CONNECTIONS WITH OWNER SUPPLIED EQUIPMENT. E. LOCATE ALL EQUIPMENT FOR UNOBSTRUCTED ACCESS TO UNIT ACCESS PANELS, CONTROLS AND VALVING.	10. WALL MOUNTED THERMOSTATS: A. COORDINATE LOCATION WITH INTERCOM AND LIGHT SWITCHES. B. PROVIDE JUNCTION BOX BEHIND THERMOSTATS. C. SECURE THERMOSTAT TO JUNCTION BOX. D. ENCLOSE CONTROL WIRING LOCATED WITHIN WALLS IN CONDUIT. E. COORDINATE THERMOSTAT LOCATIONS WITH OTHER TRADES. F. PROVIDE ANY DEVICE REQUIRING A THERMOSTAT FOR CONTROL WITH A THERMOSTAT WHETHER INDICATED ON DRAWING OR NOT. G. CONTROL EACH CONTROL TERMINAL UNIT AND EACH REHEAT COIL BY A THERMOSTAT UNLESS "GANG" OPERATION IS SPECIFIED. H. SUBMIT THERMOSTAT LOCATION DRAWINGS FOR OWNER AND ARCHITECT REVIEW.
5. CONCRETE HOUSEKEEPING PADS: A. PROVIDE UNDER ALL MECHANICAL EQUIPMENT. B. EXTEND 4" IN ALL DIRECTIONS BEYOND EQUIPMENT FOOTPRINT. C. EXTEND 4" ABOVE FINISHED FLOOR OR GRADE. D. PROVIDE ANCHOR BOLTS AND FINISH LEVEL.	11. ADJUSTMENT DEVICES: A. BALANCING DAMPERS SHALL BE INSTALLED WHERE THE BRANCH JOINS THE MAIN FOR ALL BRANCHES THAT CONNECT TO OUTLETS AND INLETS WHETHER THE DAMPER IS SHOWN ON THE DRAWING OR NOT. B. LOCATIONS OF DUCT MOUNTED ADJUSTMENT DEVICES SHALL BE INDICATED FOR THE TEST AND BALANCE CONTRACTOR VIA A 24" LONG COLORED FABRIC "FLAG". ATTACH "FLAG" TO THE ADJUSTMENT DEVICE AND EXTEND THROUGH DUCT INSULATION. C. FINAL SETTINGS ON ALL BALANCING FITTINGS SHALL BE PERMANENTLY MARKED.
6. DUCTWORK: A. CLEAR DOORS AND WINDOWS. B. DUCT DIMENSIONS ARE INSIDE CLEAR DIMENSIONS. C. INCREASE DUCT SIZE TO COMPENSATE FOR DUCT LINING THICKNESS. D. DRAWINGS DO NOT SHOW ALL VERTICAL ELEVATION CHANGES OF DUCTS REQUIRED TO AVOID STRUCTURAL AND OTHER INTERFERENCES. VERTICAL ELEVATION CHANGES ARE TO BE MADE WITHOUT CHANGES TO CROSS SECTIONAL AREAS AND WITH MAX. ANGLES OF 30'. E. GROUND ALL DUCTS ACROSS FLEXIBLE CONNECTIONS WITH FLEXIBLE COPPER GROUNDING STRAPS. BOLTED OR SOLDERED GROUNDING STRAPS TO BOTH THE EQUIPMENT AND THE DUCT. F. LOCATE REDUCERS DOWNSTREAM OF AIRFLOW DIVERGENCE AND UPSTREAM OF AIRFLOW CONVERGENCE.	12. PROVIDE ALL MISCELLANEOUS STEEL REQUIRED TO ENSURE PROPER INSTALLATION AND AS SHOWN IN DETAILS FOR PIPING, DUCTWORK, AND EQUIPMENT (UNLESS OTHERWISE NOTED).
7. INSULATION: A. ALL TESTS SHALL BE COMPLETED BEFORE ANY MECHANICAL EQUIPMENT OR PIPING INSULATION IS APPLIED.	13. ALL EQUIPMENT SUBSTITUTIONS SHALL BE APPROVED BY ENGINEER PRIOR TO RECEIPT OF BIDS. NO SUBSTITUTIONS SHALL BE ACCEPTED AFTER RECEIPT OF BIDS.

SYMBOLS AND LEGENDS		
SYMBOL	ABBREVIATIONS	DESCRIPTION
	AIR COND	AIR CONDITIONING
	ACU-1	AIR CONDITIONING UNIT & NUMBER
	AFF	ABOVE FINISHED FLOOR
	AFMD-1	AIR FLOW MONITOR DEVICE & NUMBER
	AHU-1	AIR HANDLING UNIT & NUMBER
	BAS	BUILDING AUTOMATED SYSTEM
	BTU	BRITISH THERMAL UNIT
	CFM	CUBIC FEET PER MINUTE
	CLG	CEILING
	CLR	CLEAR
	CM	CONSTRUCTION MANAGER
	COND	CONDENSATE LINE
	CRAC-1	COMPUTER ROOM AIR CONDITIONER & NUMBER
	DB	DRY BULB
	DIFF	DIFFUSER
	DD	DUCT-MOUNTED SMOKE DETECTOR
	EAT	ENTERING AIR TEMPERATURE
	E., EXIST.	EXISTING
	EC	ELECTRICAL CONTRACTOR
	EF-1	EXHAUST FAN & NUMBER
	EFF	EFFICIENCY
	EL	ELEVATION
	EWH-1	ELECTRIC WALL HEATER & NUMBER
	EWI	ENTERING WATER TEMPERATURE
	FA	FACE AREA
	F.DPR.	FIRE DAMPER
	FMS-1	FLOW MEASURING STATION & NUMBER
	GC	GENERAL CONTRACTOR
	HP	HORSE POWER
	HSTAT	HUMIDISTAT
	LAT	LEAVING AIR TEMPERATURE

INDEX OF MECHANICAL DRAWINGS:

M0.0	MECHANICAL COVER SHEET
M0.1	MECHANICAL DETAILS
M0.2	MECHANICAL SCHEDULES
M0.3	ASHRAE 62.1 CALCULATIONS
M1.0	FLOOR PLAN - MECHANICAL

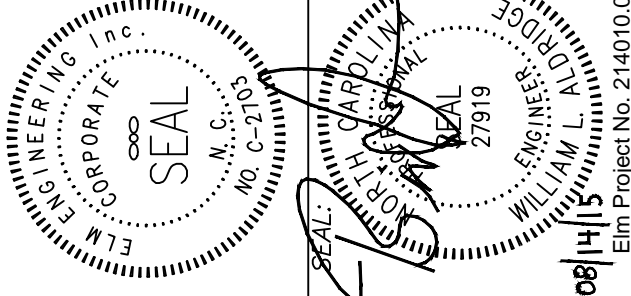
SYMBOLS AND LEGENDS		
SYMBOL	ABBREVIATIONS	DESCRIPTION
	MAI-1	MAKEUP AIR INTAKE HOOD & NUMBER
	MBH	1000 BTU PER HOUR
	MC	MECHANICAL CONTRACTOR
	MD	MANUAL DAMPER (OPPOSED BLADE)
	MD	MANUAL DAMPER (OPPOSED BLADE)
	MOD	MOTOR-OPERATED DAMPER
	MODAD	MOTOR-OPERATED OUTSIDE AIR DAMPER
	MORAD	MOTOR-OPERATED RETURN AIR DAMPER
	MORD	MOTOR-OPERATED RELIEF DAMPER
	N/A	NOT APPLICABLE
	NTS	NOT TO SCALE
	OA	OUTSIDE AIR
	PC	PLUMBING CONTRACTOR
	PSI	POUNDS PER SQUARE INCH
	RA, RET	RETURN AIR
	RH	RELATIVE HUMIDITY
	RPM	REVOLUTIONS PER MINUTE
	SA, SUP	SUPPLY AIR
	SP	STATIC PRESSURE
	SPEC	SPECIFICATION
	TEMP	TEMPERATURE
	TSTAT	THERMOSTAT - TEMPERATURE SENSOR
	TYP	TYPICAL
	VEL	VELOCITY
	WB	WET BULB
		FLEXIBLE DUCT
		20" DIAMETER ROUND DUCT
		40"x20" RECTANGULAR DUCT
		PIPE UP
		PIPE DOWN
		UNDERCUT DOOR, COORDINATE W/ ARCH.

ENERGY CODE DATA

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT	
METHOD OF COMPLIANCE Prescriptive ■ Energy Cost Budget□	
Thermal Zone	Zone 3A - Craven County
Exterior design conditions	
Winter Dry Bulb	26°F
Summer Dry Bulb	92°F
Summer Wet Bulb	76°F
Interior design conditions	
Winter Dry Bulb	72°F
Summer Dry Bulb	75°F
Relative Humidity	50%
Heating Load	153.9 MBTUH
Cooling Load	188.4 MBTUH
Mechanical Spacing Conditioning System	
HEAT PUMPS	
Heating Capacity	171.0 MBTUH
Cooling Capacity	208.0 MBTUH
ELECTRIC HEATERS	
Heating Capacity	13.6 MBTUH

DESIGNER STATEMENT:
To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the North Carolina State Building Code, Volume X Energy.

NAME: WILLIAM L. ALDRIDGE, PE
TITLE: Mechanical Engineer



DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, NC DOT
1 SOUTH WILMINGTON STREET
FALCON NORTH CAROLINA 28501
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DRAWING TITLE / DESCRIPTION:
MECHANICAL COVER SHEET

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**

**2300 FERRY ROAD, HAVELock, NC 28532
CRAVEN COUNTY, NORTH CAROLINA**

STATE CONSTRUCTION
ID.# 11-09079-01A

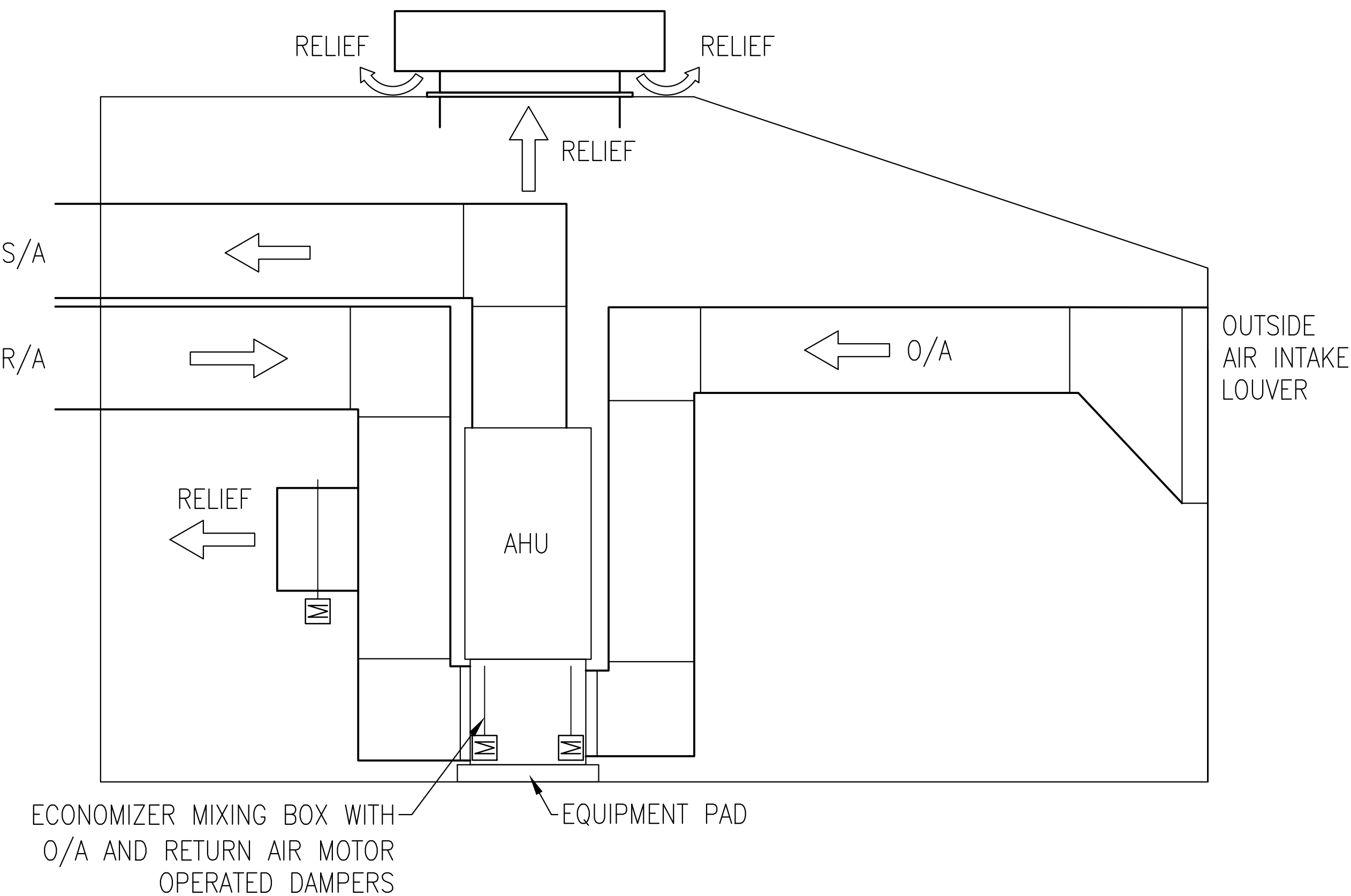
ASSET NUMBER:
CD.# SITE.# BLDG.#
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NO. DATE

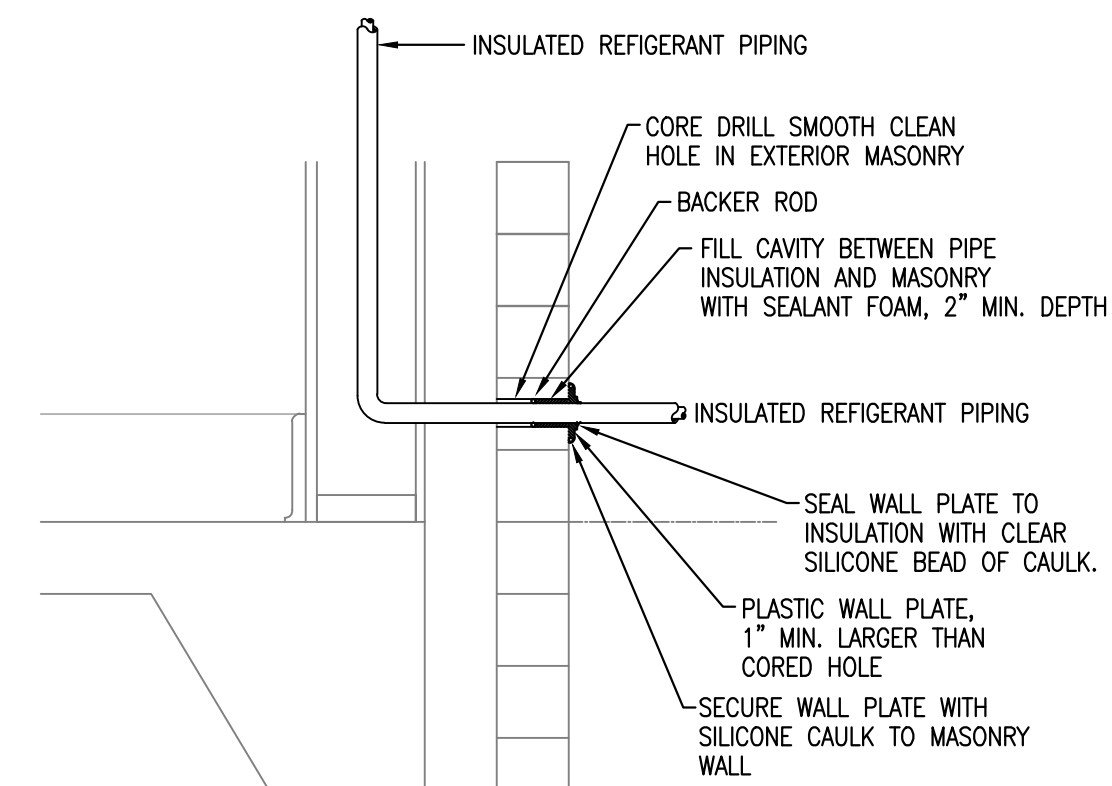
DATE ISSUED: 8-14-15
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M0.0



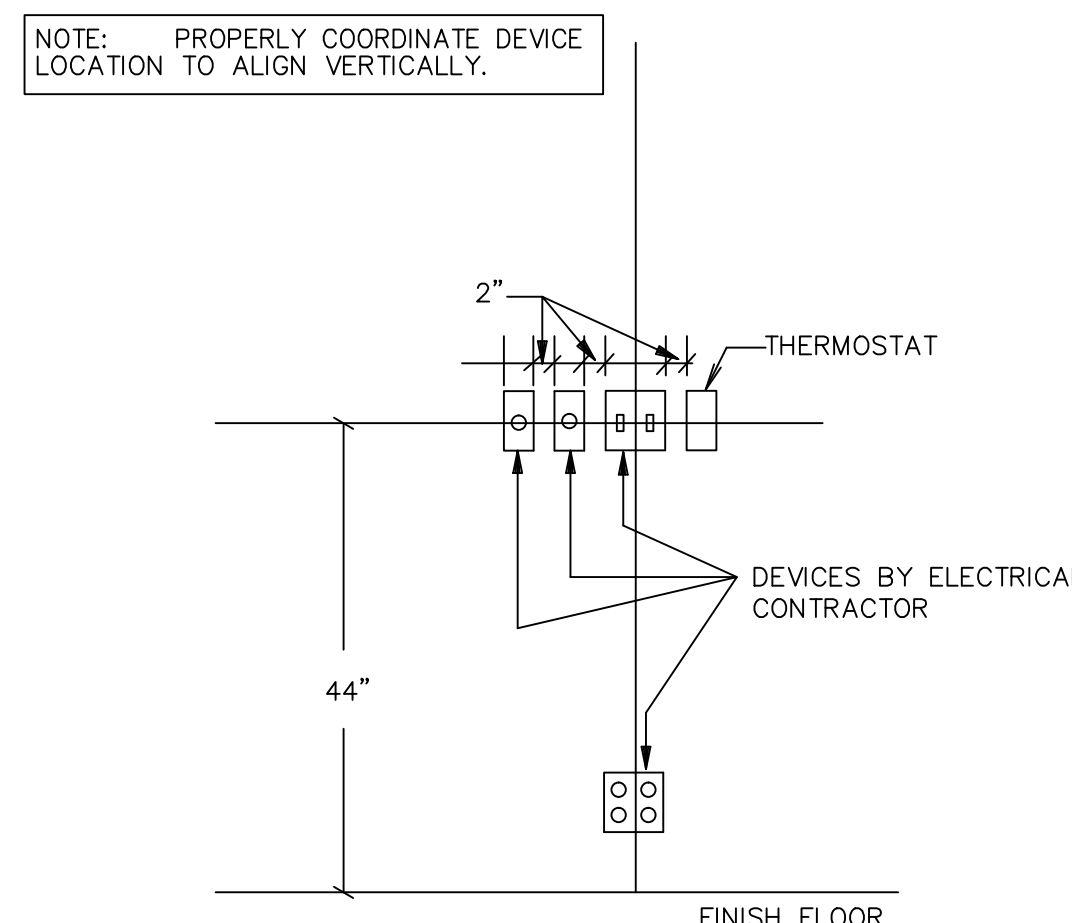
9 AIR HANDLER SCHEMATIC
SCALE: NTS



REFRIGERANT LINE EXTERIOR WALL PENETRATION

SCALE: NONE

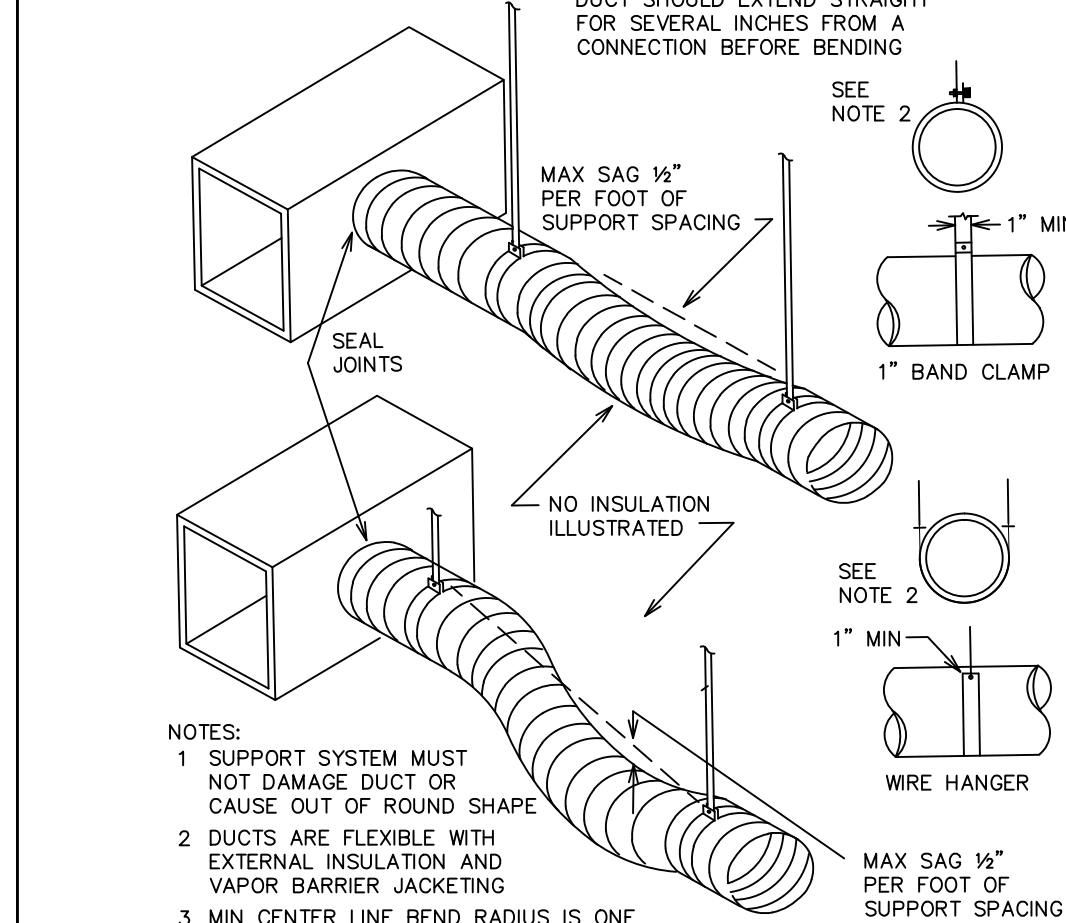
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THERMOSTAT ALIGNMENT

SCALE: NONE

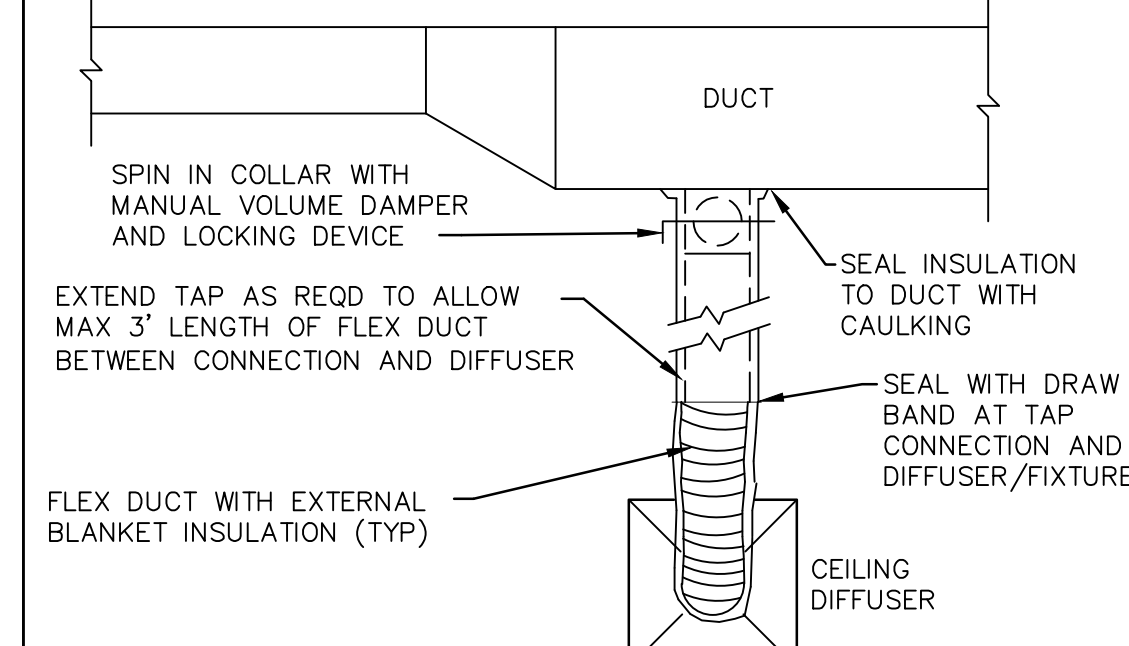
1



FLEXIBLE DUCT SUPPORTS

SCALE: NONE

2



CONNECTIONS BETWEEN MAIN DUCT AND AIR SUPPLY OR RETURN DIFFUSERS & FIXTURES

SCALE: NONE

3

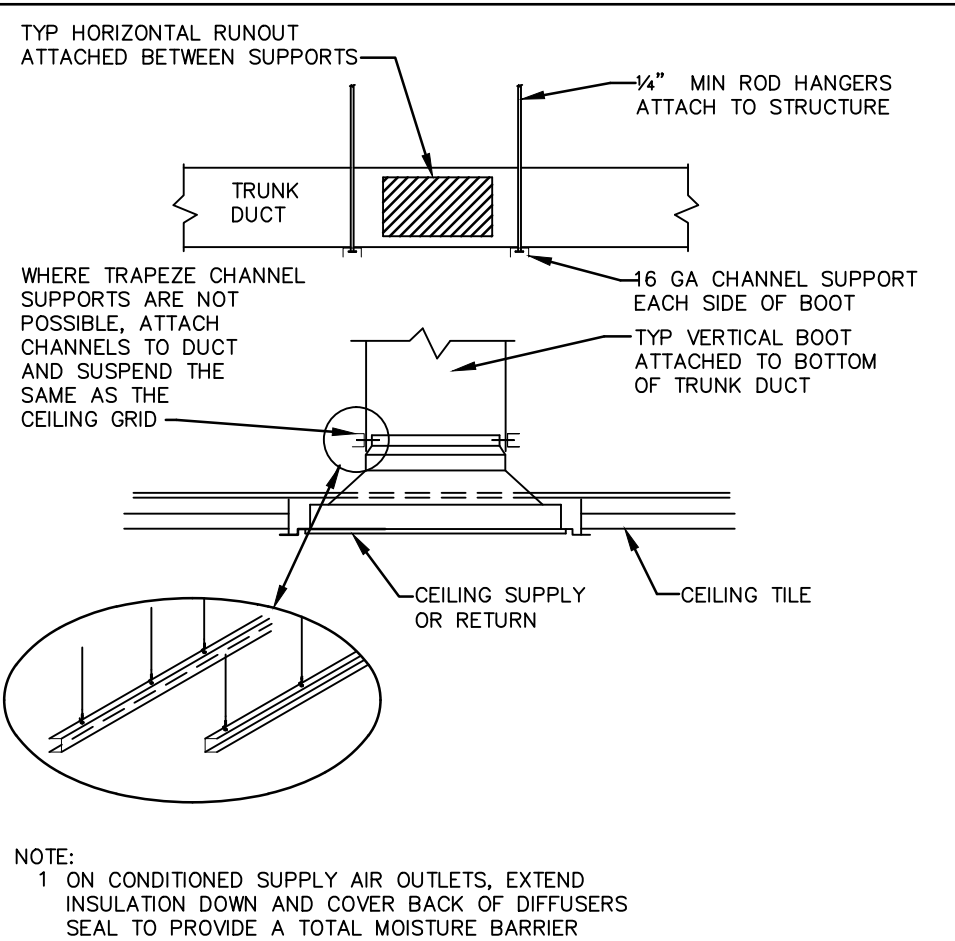
CONDENSATE TRAP DETAILS

SCALE: NONE

VERTICAL MIXING BOX

SCALE: NONE

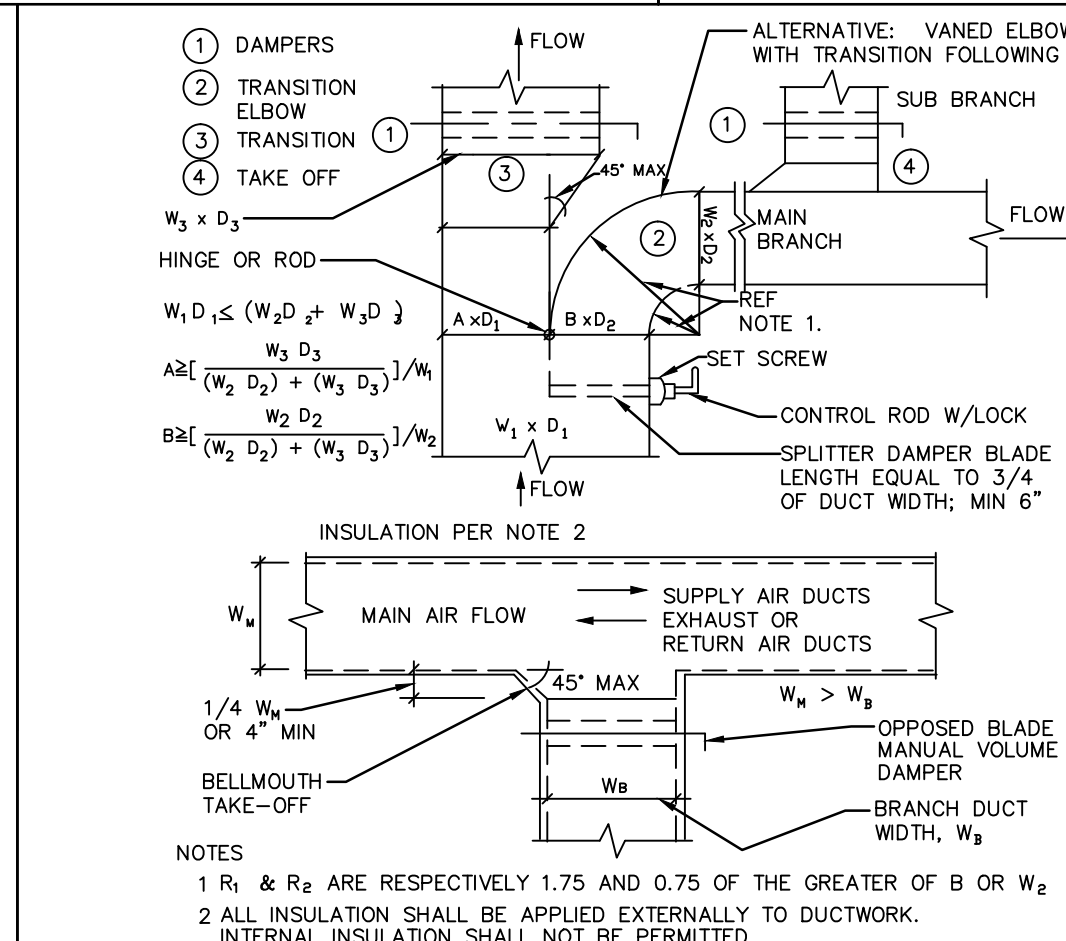
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DUCT SUPPORT AT AND ABOVE CEILING SUPPLY OR RETURN

SCALE: NONE

4



DUCT MAIN & TAKEOFFS

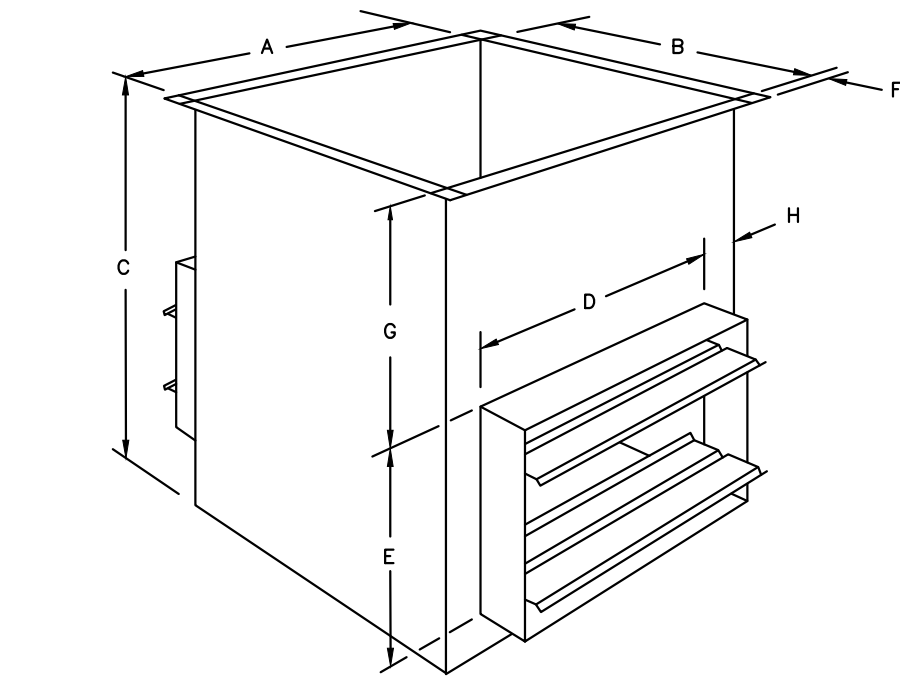
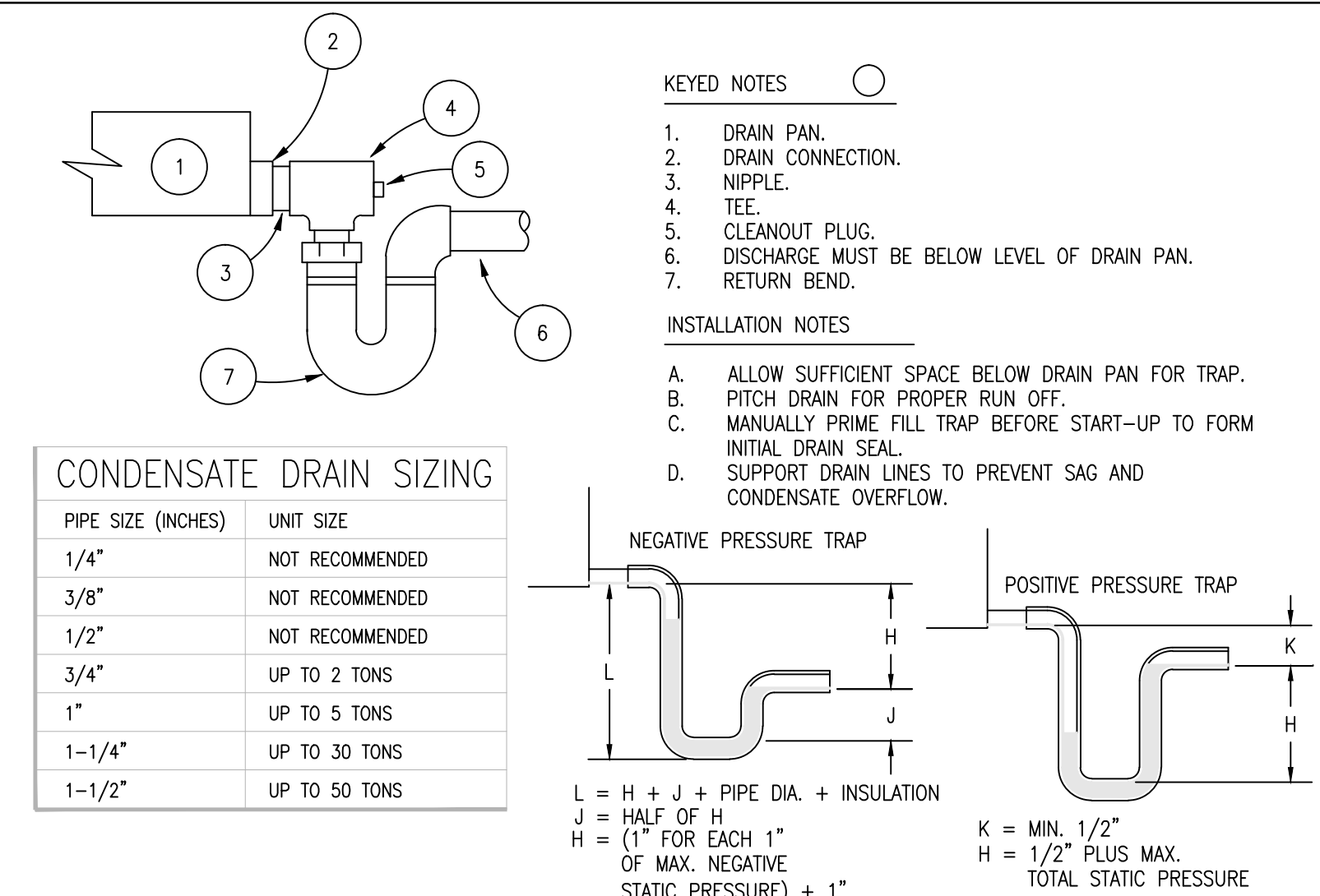
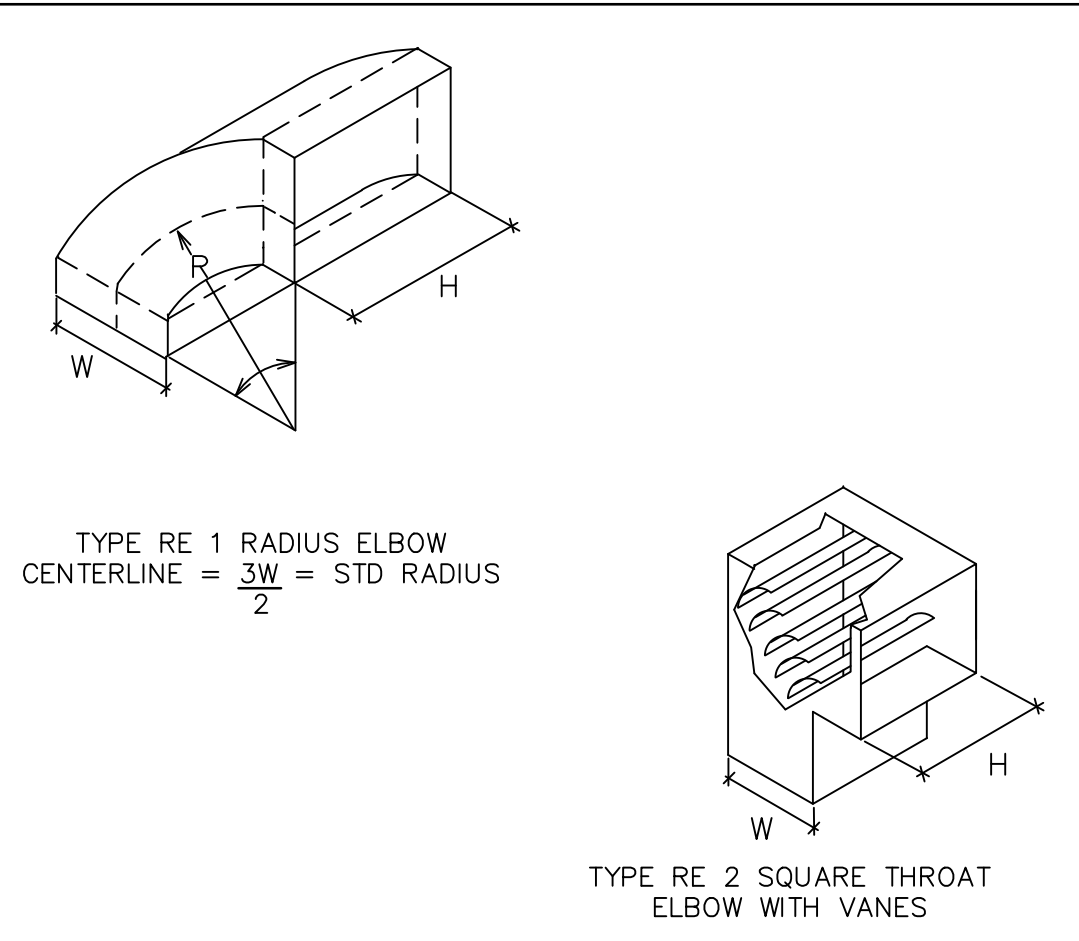
SCALE: NONE

5

RECT. SHEETMETAL ELBOWS

SCALE: NONE

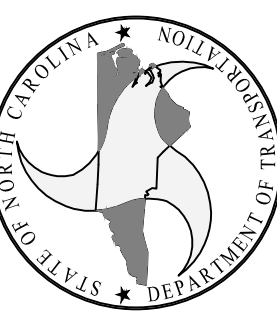
6



TRANE MODEL	PLENUMS INC. MODEL	A	B	C	D	E	F	G	H
TWE051D/061D/E	TMB60V	36"	20"	24 5/8"	32"	14"	5/8"	8 5/8"	2"
TWE076D/090D/E	TMB90V	45 1/2"	23"	23 5/8"	42"	14"	1"	8 5/8"	1 3/4"
TWE101/120D/E	TMB120V	61 1/2"	23"	24 5/8"	58"	14"	1"	8 5/8"	1 3/4"
TWE126/150/156/180E	TMB180V	77 1/2"	25 5/8"	23 5/8"	74"	14"	1"	8 5/8"	1 3/4"
TWE201/240/251/300E	TMB240V	90 1/2"	28 3/4"	25 5/8"	86"	16"	1"	8 5/8"	2 1/4"

BID DOCUMENTS

DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, INCOT



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DRAWING TITLE / DESCRIPTION:
MECHANICAL DETAILS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION ID.# 11-09079-01A

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48 . . .

REVISIONS
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DATE ISSUED: 8-14-15

DRAWN BY: JML

CHECKED BY: WLA

SHEET NO.

M0.1

BID DOCUMENTS

2300 FERRY ROAD, HAVELOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

08/14/15
Elm Project No. 24010.00

SPLIT SYSTEM SCHEDULE				
INDOOR UNIT				
GENERAL	MARK	AHU-1	AHU-2	
	MANUFACTURER	TRANE	TRANE	
	MODEL #	TWE150E3	TWE090D1	
	NC ENERGY CODE REQ'D. EER	11.0	11.0	
	SYSTEM EER	11.0	11.0	
	SYSTEM IEER	12.6	12.6	
	SYSTEM AHRI REF. NUMBER	7548120	7056501	
ELEC.	WEIGHT (LBS)	755	350	
	VOLTS/HZ/PH	208/60/3	208/60/1	
INDOOR COIL	SINGLE-POINT MCA/MOCP (AMPS)	33.5/40	37.8/40	
	COIL TYPE	LANCED	LANCED	
INDOOR FAN	FACE AREA (SQ. FT.)	11.2	8.1	
	ROWS/FPI	4/14	4/14	
	# OF REFRIGERANT CIRCUITS	2	1	
	NOMINAL AIRFLOW (CFM)	4000	2400	
	G/A FLOW (CFM)	875	350	
	FAN TYPE	CENTRIFUGAL	CENTRIFUGAL	
	DRIVE TYPE	BELT	BELT	
	MOTOR HP	2.00	2.00	
	MOTOR RPM	817	990	
	TOTAL STATIC PRESSURE (IN. HG)	1.0	1.0	
ELECTRIC HEATER	MODEL #	BAYHTRM330A	BAYHTRL106A	
	TOTAL KW	10	5.76	
	CAPACITY (MBH)	34.1	19.7	
OUTDOOR UNIT				
GENERAL	MARK	CU-2	CU-3	CU-4
	MANUFACTURER	TRANE	TRANE	TRANE
	MODEL #	4TWA3060B3	4TWA3060B3	TWA073D3
	REFRIGERANT	R-410A	R-410A	R-410A
	WEIGHT	244	244	328
	VOLTS/HZ/PH	208/60/3	208/60/3	208/60/3
	MCA/MOCP (AMPS)	20/35	20/35	31.1/40
ELEC.	FAN RLA	10.0	10.0	8.5
	COOLING CAPACITY (MBH)	118	78	78
PERFORMANCE	HEATING CAPACITY - HIGH TEMP (MBH)	102	69	69
	HEATING CAPACITY - LOW TEMP (MBH)	66	40	40
	NC ENERGY CODE REQ'D COP	3.3	3.3	3.3
	HEATING MODE COP	3.3	3.3	3.3
	COMPRESSOR TYPE	SCROLL	SCROLL	SCROLL
	COMPRESSOR TONS	-	-	5.6
	AIRFLOW (CFM)	-	-	6530
OUTDOOR FAN	FAN TYPE	-	-	PROPELLER
	DRIVE TYPE	-	-	DIRECT
	MOTOR HP	-	-	0.50
	MOTOR RPM	-	-	1100
NOTES:				
1. PROVIDE 2 SETS OF THROWAWAY FILTERS				
2. PROVIDE UNIT MOUNTED DISCONNECT SWITCH WITH OVER CURRENT PROTECTION				
3. PROVIDE DIRTY FILTER SWITCH AND FAN FAILURE SWITCH				
4. EITHER UNIT BEING ENERGIZED SHALL OPEN DAMPER. DAMPER SHALL NOT CLOSE UNLESS BOTH UNITS ARE DE-ENERGIZED.				
5. INTERLOCK AHUs 1&2 WITH OUTSIDE AIR INTAKE LOUVER (L-3) MOTOR-OPERATED DAMPER				
6. PROVIDE BOTH AHUS WITH 30 DAY PROGRAMMABLE THERMOSTATS.				

FAN SCHEDULE																
FAN #	SERVICES	LOCATION	CFM	FAN RPM	STATIC PRESSURE (IN. W.G.)	MAX TIP SPEED	MINIMUM WHEEL DIA.	FAN WHEEL TYPE	MOTOR HP/VOLT/PHASE	DRIVE TYPE	FAN TYPE	CONTROL SWITCH & INTERLOCK TYPE	MFG. & MODEL # DESIGN BASED ON	STARTER	DISC. SW.	NOTES
EF-1	TOILETS 111, 112, 116; JAN 119	CEILING	275	1705	0.25	3627	–	CENTRIFUGAL	0.167/120/1	DIRECT	INLINE	TIME CLOCK	GREENHECK SQ-75-VG	BY M.C.	BY M.C.	1, 25, 31
EF-2	TOILETS 137, 139, 140, 141	CEILING	565	1664	0.5	4736	–	CENTRIFUGAL	0.167/120/1	DIRECT	INLINE	TIME CLOCK	GREENHECK SQ-95-VG	BY M.C.	BY M.C.	1, 25, 31
EF-3	KITCHEN 110	CEILING	250	1626	0.25	3459	–	CENTRIFUGAL	0.167/120/1	DIRECT	INLINE	HOOD FAN SWITCH	GREENHECK SQ-75-VG	BY M.C.	BY M.C.	1, 25
EF-4	ELECTRICAL 117	CEILING	300	1084	0.25	3086	–	CENTRIFUGAL	0.167/120/1	DIRECT	INLINE	T-STAT CONTROL	GREENHECK SQ-95-VG	BY M.C.	BY M.C.	1, 25, 32
EF-5	MECHANICAL 115	CEILING	250	1626	0.25	3459	–	CENTRIFUGAL	0.167/120/1	DIRECT	INLINE	T-STAT CONTROL	GREENHECK SQ-75-VG	BY M.C.	BY M.C.	1, 25, 32
<div>NOTES:</div> <div><div><div>1. PROVIDE BACKDRAFT DAMPER, BIRD SCREEN AND DISCONNECT SWITCH.</div><div>2. PROVIDE ROOF CURB, BACKDRAFT DAMPER, AND BIRD SCREEN.</div><div>3. PROVIDE ELECTRONIC SPEED CONTROL.</div><div>4. PROVIDE EXPLOSION-PROOF MOTOR AND SPARK-PROOF FAN.</div><div>5. PROVIDE VIBRATION ISOLATORS - SEE SPECS.</div><div>6. PROVIDE MOTOR-OPERATED DAMPER WITH ACTUATOR.</div><div>7. PROVIDE WITH WASHABLE ALUMINUM FILTERS.</div><div>8. PROVIDE HIGH TEMPERATURE BEARINGS & HEAT SLINGER.</div><div>9. PROVIDE DISCONNECT SWITCH.</div><div>10. PROVIDE COMB. STARTER & DISC. SW. MTD. NEAR THE FAN.</div><div>11. PROVIDE ADJUSTABLE COUNTER-BALANCED BACK-DRAFT DMPR, ROOF CURB,</div></div><div><div>BIRDSCREEN, FILTER FRAMES & HINGED & LATCHED HOOD COVERS.</div><div>12. HOUSING SHALL BE CONSTRUCTED OF SPUN ALUMINUM.</div><div>13. PROVIDE MOTOR-SIDE GUARD.</div><div>14. PROVIDE BLADE GUARD.</div><div>15. PROVIDE BELT GUARD WITH TACHOMETER HOLES.</div><div>16. PROVIDE VENTILATED MOTOR COVER.</div><div>17. PROVIDE HOUSING DRAIN.</div><div>18. PROVIDE VARIABLE INLET VANE DAMPERS AND LINKAGES.</div><div>19. SEE PLANS FOR THE NUMBER OF FANS TO PROVIDE.</div><div>20. PROVIDE VFD WITH MANUAL BYPASS. COORDINATE WITH E.C. FANS CAN START ACROSS THE LINE.</div><div>21. FAN SHALL HAVE BACK-DRAFT DAMPER, CEILING GRILLE, LINED GALV. SHT. MTL.</div></div><div><div>HOUSING, AND BUILT-IN THERMAL O.L. PROTECTION.</div><div>22. PROVIDE SPECIAL COATING (AIR-DRYED PHENOLIC, 4 MILS THICK, MINIMUM)</div><div>23. EQUIVALENTS BY PENN. BREIDERT.</div><div>24. EQUIVALENTS BY BAYLEY, OR MK PLASTICS.</div><div>25. EQUIVALENTS BY PENN BARRY, PRICE, NEW YORK BLOWER, BREIDERT OR COOK.</div><div>26. EQUIVALENTS BY NEW YORK BLOWER, BARRY BLOWER, OR PRICE</div><div>27. FAN PLENUMS SHALL HAVE SAME COATING AS FANS. SEE NOTES ON PLAN FOR ACCESSORIES.</div><div>28. M.C. SHALL PROVIDE WALL CAP WITH BIRDSCREEN AT EXHAUST DISCHARGE.</div><div>29. SEE SPECS REGARDING VARIABLE FREQUENCY DRIVES & MOTORS.</div><div>30. PROVIDE WALL-MOUNTING HOUSING AND BACK-DRAFT DAMPER.</div><div>31. M.C. SHALL PROVIDE 7-DAY, 24-HOUR TIME CLOCK WITH SPRING CARRYOVER.</div><div>32. PROVIDE THERMOSTAT CONTROL, 80°F (ADJUSTABLE).</div></div></div> </																

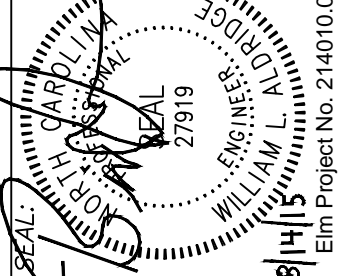
GRAVITY HOOD SCHEDULE						
MARK	MANUFACTURER	MODEL	THROAT SIZE (IN.)	STATIC PRESSURE DROP (IN. W.G.)	CFM	WEIGHT (LB.)
GH-1	GREENHECK	FABRA HOOD	24x42	0.102	6000	95
NOTES: 1. PROVIDE MOTOR-OPERATED DAMPERS. INTERLOCK WITH AHUs 1&2.						

LOUVER SCHEDULE				
MARK	DIMENSIONS	TYPE	MATERIAL	REMARKS
L-1	16x16	EXHAUST	ALUMINUM	1,3
L-2	36x48	INTAKE	ALUMINUM	1,2,3
L-3	NOT USED			
L-4	16x16	EXHAUST	ALUMINUM	1,3
NOTES: 1. BASIS OF DESIGN IS RUSKIN ELF6375DXD LOUVER. 2. PROVIDE WITH MOTOR OPERATED DAMPER AND INTERLOCK WITH AHUs-1&2. 3. PROVIDE LOUVER WITH BIRDSCREEN.				

ELECTRIC UNIT HEATER SCHEDULE								
UNIT #	BASIS OF DESIGN		CFM	LOCATION	TYPE	HEATER ELEMENT		
	MANUF.	MODEL				VOLT/PH/HZ	KW	AMPS
UH-1	MARKEL	F1F5103N	400	MECHANICAL 115	UNIT HEATER	208/1/60	2.0	15.9
UH-2	MARKEL	F1F5103N	400	ELECTRICAL 117	UNIT HEATER	208/1/60	2.0	15.9
NOTES: 1. PROVIDE HORIZONTAL DISCHARGE WITH INTEGRAL THERMOSTAT AND WALL MOUNTING BRACKET. 2. PROVIDE WITH INTEGRAL CIRCUIT BREAKER.								

TELECOM/ELECTRICAL ROOM UNIT		
INDOOR UNIT		
GENERAL	MARK	CRAC-1
	MANUFACTURER	EMI
	MODEL/SIZE	WLCG12
	OPERATING WEIGHT (POUNDS)	
	TOTAL CAPACITY (MBH)	12,000
ELECTRICAL	VOLTS	208
	PHASE	1
	HZ	60
	MCA	0.4
	MOCP	15
	OUTDOOR UNIT	
GENERAL	MARK	CU-1
	MANUFACTURER	EMI
	MODEL/SIZE	S1CG2000
	SEER	13.0
	EER	11.9
	OPERATING WEIGHT (POUNDS)	98.0
	VOLTS	208
ELECTRICAL	PHASE	1
	HZ	60
	MCA	7.3
	MOCP	15
	NOTES:	
1. SIZE REFRIGERANT LINES ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.		
2. PROVIDE ALL UNITS WITH CONDENSATE PUMP.		
3. PROVIDE LOW AMBIENT TO OFF CONTROL.		
4. INDOOR UNITS POWERED THROUGH OUTDOOR UNITS.		
5. PROVIDE DISCONNECT.		

SUPPLY TERMINAL SCHEDULE				RETURN TERMINAL SCHEDULE				EXHAUST TERMINAL SCHEDULE			
SYMBOL	CFM	UNIT DESCRIPTION	TYPE	SYMBOL	CFM	UNIT DESCRIPTION	TYPE	SYMBOL	CFM	UNIT DESCRIPTION	TYPE
<div>1</div> <div>CFM</div>	0 - 120	SQUARE CONE SUPPLY - 24"x24" 6"Ø NECK	PRICE SCD	<div>1</div> <div>CFM</div>	0 - 135	PERFORATED RETURN - 24"x24" 6"Ø NECK	PRICE PDDR	<div>A</div> <div>CFM</div>	0 - 135	PERFORATED EXHAUST - 24"x24" 6"Ø NECK	PRICE PDDR
<div>2</div> <div>CFM</div>	121 - 240	SQUARE CONE SUPPLY - 24"x24" 8"Ø NECK	PRICE SCD	<div>2</div> <div>CFM</div>	136 - 210	PERFORATED RETURN - 24"x24" 8"Ø NECK	PRICE PDDR	<div>B</div> <div>CFM</div>	136 - 210	PERFORATED EXHAUST - 24"x24" 8"Ø NECK	PRICE PDDR
<div>3</div> <div>CFM</div>	241 - 360	SQUARE CONE SUPPLY - 24"x24" 10"Ø NECK	PRICE SCD	<div>3</div> <div>CFM</div>	211 - 400	PERFORATED RETURN - 24"x24" 10"Ø NECK	PRICE PDDR	<div>C</div> <div>CFM</div>	211 - 400	PERFORATED EXHAUST - 24"x24" 10"Ø NECK	PRICE PDDR
<div>4</div> <div>CFM</div>	0 - 135	SQUARE CONE SUPPLY - 12"x12" 6"Ø NECK	PRICE SCD					<div>D</div> <div>CFM</div>	0 - 135	PERFORATED EXHAUST - 12"x12" 6"Ø NECK	PRICE SCD
<div>5</div> <div>CFM</div>	0 - 230	SIDEWALL GRILLE SUPPLY - 10"x6"	PRICE 520/520D								
<div>6</div> <div>CFM</div>	231 - 380	SIDEWALL GRILLE SUPPLY - 16"x6"	PRICE 520/520D								
NOTES: 1. ACCEPTABLE MANUFACTURERS: PRICE, NAILOR, METALAIRE, ANEMOSTAT 2. SEE ARCH CELING PLAN FOR PROPER FRAME STYLE				NOTES: 1. ACCEPTABLE MANUFACTURERS: PRICE, NAILOR, METALAIRE, ANEMOSTAT 2. SEE ARCH CELING PLAN FOR PROPER FRAME STYLE				NOTES: 1. ACCEPTABLE MANUFACTURERS: PRICE, NAILOR, METALAIRE, ANEMOSTAT 2. SEE ARCH CELING PLAN FOR PROPER FRAME STYLE			



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DRAWING TITLE / DESCRIPTION:
MECHANICAL SCHEDULES

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**
2300 FERRY ROAD, HAVELOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION ID.# 11-09079-01A
ASSET NUMBER: CO.# . SITE.# . BLDG.# .
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DATE ISSUED: 8-14-15
DRAWN BY: JML
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SHEET NO.

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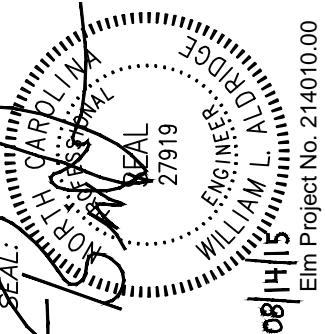
ASHRAE 62.1–2007 CALCULATIONS

AHU	Zone Name	Occupancy Category	Rp	Ra	Occupant Density		Pz (Default)	Pz	Az	Rp*Pz	Ra*Az	Vbz	Ez	Voz	Vpz	Zp	Evz	Critical Zone
					Default?	#/1000sf												
1	101 Lobby	GEN - Coffee stations	5	0.06	Yes	20	11.8	1	592	59.2	35.52	94.72	0.8	118.40	1080	0.11	1.00	Critical
	102 Office	OB - Office space	5	0.06	Yes	5	1.5	0	306	7.7	18.36	26.01	0.8	32.51	250	0.13	1.00	
	103 Office	OB - Office space	5	0.06	Yes	5	1.2	8	245	6.1	14.70	20.83	0.8	26.03	750	0.03	1.00	
	106 Galley	FBS - Restaurant dining rooms	7.5	0.18	Yes	70	24.0	5	343	180.1	61.74	241.82	0.8	302.27	600	0.50	0.65	
	107 Training Room	EF - Lecture classroom	7.5	0.06	Yes	65	21.5	4	330	160.9	19.80	180.68	0.8	225.84	450	0.50	0.65	
	110 Kitchen	GEN - Non-occupiable	0	0	Yes	0	0.0	5	298	0.0	0.00	0.00	0.8	0.00	600	0.00	1.00	

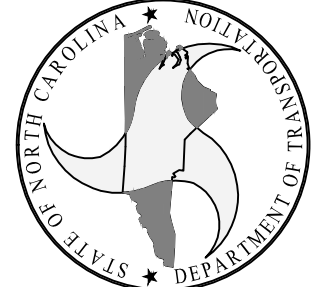
D	ΣRp*Pz	ΣRa*Az	Vou	Vps	Xs	Ev	Vot
1	413.9	150.1	564.0	3730	0.15	0.65	871.2

2	111 Women	GEN - Non-occupiable	0	0	Yes	0	0.0	1	592	0.0	0.00	0.00	0.8	0.00	25	0.00	1.00	Critical
	112 Men	GEN - Non-occupiable	0	0	Yes	0	0.0	0	306	0.0	0.00	0.00	0.8	0.00	25	0.00	1.00	
	114/120/126/132/134 Corridor	GEN - Corridors	0	0.06	Yes	0	0.0	8	933	0.0	55.98	55.98	0.8	69.98	200	0.35	0.74	
	116 Work Rm	OB - Office space	5	0.06	Yes	5	0.6	5	110	2.8	6.60	9.35	0.8	11.69	75	0.16	0.94	
	119 Janitor	GEN - Non-occupiable	0	0	Yes	0	0.0	4	48	0.0	0.00	0.00	0.8	0.00	50	0.00	1.00	
	121 Office	OB - Office space	5	0.06	Yes	5	0.6	5	125	3.1	7.50	10.63	0.8	13.28	125	0.11	0.98	
	122 Office	OB - Office space	5	0.06	Yes	5	0.6	5	125	3.1	7.50	10.63	0.8	13.28	125	0.11	0.98	
	123 Office	OB - Office space	5	0.06	Yes	5	0.6	5	125	3.1	7.50	10.63	0.8	13.28	125	0.11	0.98	
	124 Office	OB - Office space	5	0.06	Yes	5	0.6	5	120	3.0	7.20	10.20	0.8	12.75	125	0.10	0.99	
	125 Office	OB - Office space	5	0.06	Yes	5	0.6	5	121	3.0	7.26	10.29	0.8	12.86	125	0.10	0.99	
	127 Office	OB - Office space	5	0.06	Yes	5	1.7	5	333	8.3	19.98	28.31	0.8	35.38	300	0.12	0.97	
	128 Office	OB - Office space	5	0.06	Yes	5	1.1	5	228	5.7	13.68	19.38	0.8	24.23	200	0.12	0.97	
	129 Office	OB - Office space	5	0.06	Yes	5	1.4	5	286	7.2	17.16	24.31	0.8	30.39	200	0.15	0.94	
	130 Office	OB - Office space	5	0.06	Yes	5	0.5	5	107	2.7	6.42	9.10	0.8	11.37	75	0.15	0.94	
	131 Office	OB - Office space	5	0.06	Yes	5	0.6	5	124	3.1	7.44	10.54	0.8	13.18	150	0.09	1.00	
	135 Office	OB - Office space	5	0.06	Yes	5	0.6	5	122	3.1	7.32	10.37	0.8	12.96	75	0.17	0.92	
	136 Office	OB - Office space	5	0.06	Yes	5	0.7	5	142	3.6	8.52	12.07	0.8	15.09	150	0.10	0.99	
	137 Men	GEN - Non-occupiable	0	0	Yes	0	0.0	1	210	0.0	0.00	0.00	0.8	0.00	150	0.00	1.00	
	139 Women	GEN - Non-occupiable	0	0	Yes	0	0.0	1	195	0.0	0.00	0.00	0.8	0.00	150	0.00	1.00	
	140 Janitor	GEN - Non-occupiable	0	0	Yes	0	0.0	1	43	0.0	0.00	0.00	0.8	0.00	50	0.00	1.00	
	141 Family Restroom	GEN - Non-occupiable	0	0	Yes	0	0.0	5	120	0.0	0.00	0.00	0.8	0.00	50	0.00	1.00	

D	ΣRp*Pz	ΣRa*Az	Vou	Vps	Xs	Ev	Vot
1	51.7	180.1	231.8	2550	0.09	0.74	312.8



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DRAWING TITLE / DESCRIPTION:
**ASHRAE 62.1-2007
CALCULATIONS**

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**
**2300 FERRY ROAD, HAVELock, NC 28532
CRAVEN COUNTY, NORTH CAROLINA**

STATE CONSTRUCTION
ID.# 11-09079-01A
ASSET NUMBER:
CO.# SITE.# BLDG.#
48 . . .
REVISIONS
NO. DATE

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CHECKED BY: WLA
SHEET NO.

GENERAL NOTES

- BEFORE SUBMITTING SHOP DRAWINGS, VERIFY VOLTAGES AVAILABLE FOR MECHANICAL EQUIPMENT WITH ELECTRICAL CONTRACTOR. VERIFY PROVISION OF ALL STARTERS, VFDs AND DISCONNECTS.
- BEFORE FABRICATING ANY SHEET METAL DUCTWORK, COORDINATE LOCATION AND SIZE WITH SPRINKLER & PLUMBING PIPING, CONDUITS, LIGHT FIXTURES, ETC. PLANS ARE SCHEMATIC AND ARE NOT SHOP DRAWINGS. SUBMIT DUCTWORK COORDINATION DRAWINGS, IF SPEC'D. SEE NOTE (3) BELOW REGARDING ROUTING AND OFFSETS OF DUCTWORK, PIPING, AND CONDUITS.
- ALL CONDUITS, PIPING, & DUCTWORK MUST BE CONCEALED ABOVE CEILINGS AND IN CHASES, UNLESS NOTED OTHERWISE. CONDUITS, PIPING AND DUCTWORK MAY BE ROUTED THRU & BETWEEN BAR JOISTS & BETWEEN BEAMS (WITH OFFSETS AS NEEDED) WHERE REQUIRED BY SPACE RESTRICTIONS AND/OR OBSTRUCTIONS. NO CHANGE ORDERS ACCEPTED FOR CONTRACTORS RE-ROUTING. ALL REQUIRED COORDINATION AND ADDED MATERIALS REQUIRED FOR THESE CHANGES SHALL BE PROVIDED BY THE CONTRACTOR.
- PROVIDE NEW CONDENSATE DRAIN WITH P-TRAP FOR FOR ALL AHUS AND/OR EQUIPMENT WITH COOLING COILS. RUN DRAIN LINE TO CLOSEST ROOF OR FLOOR DRAIN OR AS NOTED ON DRAWINGS. CONDENSATE DRAIN SIZE SHALL MATCH UNIT CONDENSATE LINE OUTLET SIZE ALL THE WAY TO DRAINS.
- PROVIDE ESCUTCHEON PLATES WHERE DUCTS OR PIPES PENETRATE CEILINGS OR WALLS IN AREAS EXPOSED TO VIEW. ESCUTCHEONS FOR DUCTS SHALL BE CONSTRUCTED OF SAME MATERIAL AS DUCT. PIPE ESCUTCHEONS SHALL BE CHROME-PLATED BRASS.
- CONTRACTOR SHALL VERIFY SEISMIC DESIGN CATEGORY AND RISK CATEGORY WITH STRUCTURAL DRAWINGS/DESIGN. CONFIRM THE REQUIREMENTS FOR SEISMIC BRACING WITH THE LOCAL BUILDING CODE AUTHORITIES PRIOR TO BID.
- NOT USED.
- NOT USED.
- NOT USED.
- ALL EXTERIOR MOUNTED MECHANICAL EQUIPMENT EXPOSED TO WIND SHALL BE DESIGNED AND INSTALLED TO RESIST THE WIND PRESSURES DETERMINED IN ACCORDANCE WITH CHAPTERS 26 TO 29 OF ASCE7-10.
- FOR ALL COMPONENTS REQUIRING SEISMIC RESTRAINT, THE COMPONENT SUPPORTS AND ATTACHMENTS SHALL BE DESIGNED BY A REGISTERED DESIGN PROFESSIONAL WITH PROPER SEALS.
- ALL NEW HVAC AND ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED.
- ALL NEW EQUIPMENT SHALL MEET ALL APPLICABLE SECTIONS OF THE CURRENT MECHANICAL CODE AND BE LABELED IN ACCORDANCE WITH SUCH CODES.
- COORDINATE FINAL LOCATION OF THERMOSTATS AND/OR ROOM MOUNTED SENSORS WITH ARCHITECT. VERIFY USE OF LOCKABLE THERMOSTAT COVERS WITH ARCHITECT.
- ALL FLOOR OR GRADE MOUNTED MECHANICAL EQUIPMENT SHALL BE MOUNTED ON A CONCRETE EQUIPMENT PAD. COORDINATE WITH STRUCTURAL DRAWINGS ANY REQUIREMENTS FOR SPECIALIZED EQUIPMENT PADS.
- NOT USED.
- SMOKE DETECTORS SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY THE MECHANICAL CONTRACTOR. PROVIDE DUCT ACCESS DOORS AT EACH DETECTOR. INSTALL DETECTORS IN COMPLETE ACCORDANCE WITH THE STATE MECHANICAL CODE AND MANUFACTURER'S INSTRUCTIONS.
- WHERE A SPECIFIC PRODUCT IS SPECIFIED OR INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS, BY MANUFACTURER AND MODEL NUMBER, IT IS DONE SO TO ESTABLISH THE STANDARD OF QUALITY OF THE PRODUCTS INTENDED. REFER TO SPECIFICATIONS AND SCHEDULES FOR APPROVED EQUALS.
- ALL WORK SHALL BE DONE BY LOCAL STATE LICENSED CONTRACTORS, IN ACCORDANCE WITH THE LOCAL STATE BUILDING CODE, ALL CHAPTERS.
- CLOSE COORDINATION IS REQUIRED BETWEEN ALL TRADES THROUGHOUT THIS PROJECT. GENERAL CONTRACTOR IS RESPONSIBLE FOR THIS COORDINATION AND ASSURING THAT ALL CONFLICTS ARE RESOLVED IN AN ACCEPTABLE MANNER WITH NO AFFECT TO PROJECT OR SYSTEM PERFORMANCE AS WELL AS NO ADDITIONAL COST TO THE OWNER.
- ALL MISCELLANEOUS STEEL REQUIRED FOR PROPER MECHANICAL SYSTEM MOUNTING AND INSTALLATION SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR.
- MECHANICAL CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL DRAWINGS FROM ALL TRADES AND COORDINATING THEIR WORK WITH ALL OTHER TRADES.
- WHERE CONFLICTS OCCUR BETWEEN NOTES, DRAWINGS, OR SPECIFICATIONS, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE MECHANICAL ENGINEER. THE CONTRACTOR SHALL NOT PROCEED WITH THE AFFECTED WORK UNTIL THE MECHANICAL ENGINEER ISSUES AN OFFICIAL CLARIFICATION. MECHANICAL CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCURRED BY SUBMITTING APPROVED EQUAL, BUT OTHER THAN SPECIFIED ON DRAWINGS, EQUIPMENT. THIS SHALL INCLUDE ANY REQUIRED REDESIGN OF DUCTWORK, PIPING, ELECTRICAL, CONTROLS AND/OR STRUCTURAL.
- ALL SUBSTITUTIONS TO SPECIFIED EQUIPMENT MUST BE APPROVED BY THE ENGINEER PRIOR TO BID.
- PIPE, CONDUIT AND DUCT OPENINGS THROUGH WALLS AND SLABS AROUND AND ABOVE MECHANICAL/ELECTRICAL EQUIPMENT ROOMS OR CLOSETS SHALL BE PACKED WITH SOUND ABSORBING MATERIAL AND SEALED.
- ALL PIPING SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS IN A NEAT WORKMANSHIP-LIKE MANNER AND BE SUPPORTED AS REQUIRED BY CODES. PIPING SHALL BE SET UP AND DOWN AND OFFSET AS REQUIRED TO SUIT FIELD CONDITIONS. DIELECTRIC COUPLINGS SHALL BE USED WHERE DISSIMILAR METALS ARE JOINED.
- PIPING HANGERS SHALL BE SPACED SO AS TO PREVENT SAG AND PERMIT PROPER DRAINAGE AND SHALL NOT BE SPACED MORE THAN EIGHT FEET APART UNLESS A GREATER SPACE IS DEFINITELY INDICATED ON THE DRAWINGS. A HANGER SHALL BE PLACED WITHIN (1) FOOT OF EACH HORIZONTAL ELBOW.
- THE INSTALLATION OF ALL INSULATION SHALL BE PERFORMED BY AN EXPERIENCED CRAFTSMAN IN A NEAT WORKMANSHIP-LIKE MANNER AND SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN PUBLISHED RECOMMENDATIONS FOR SERVICE INTENDED.
- NOT USED.
- UNLESS OTHERWISE NOTED ON DRAWINGS, ALL DUCTWORK SHALL BE GALVANIZED SHEET METAL, FABRICATED AND INSTALLED IN ACCORDANCE WITH ASHRAE STANDARDS AND SMACNA "HVAC DUCT CONSTRUCTION STANDARDS".
- LOW PRESSURE DUCTS SHALL BE RUN FROM UNITS WITH EXTERNAL STATIC PRESSURES LESS THAN 2.0 INCHES, W.G. ALL LOW PRESSURE SUPPLY AIR, RETURN AIR, OUTSIDE AIR, AND EXHAUST AIR DUCTS SHALL BE SEALED PER SMACNA SEAL CLASS A.
- M.C. SHALL CAREFULLY COORDINATE HIS WORK WITH THE DIMENSIONS OF THE CHASE WALLS, WITH OTHER CONTRACTORS, AND WITH THE GEN. CONTR. TO PROVIDE ADEQUATE CLEARANCES FOR ELBOWS, MITERED TEES, FIRE DAMPER SLEEVES, ETC., AS REQ'D. FOR FIRE PENETRATION SEALANTS OR DAMPERS.
- WHERE POWER WIRING, CONDUIT, GROUND WIRES, AND OTHER ELECTRICAL EQUIPMENT ARE PROVIDED UNDER THE MECHANICAL CONTRACT, THESE ITEMS SHALL BE PROVIDED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE ELECTRICAL SPECIFICATIONS.
- ALL WIRING, PIPING, EQUIPMENT AND DEVICES MOUNTED OR LOCATED ABOVE THE CEILINGS SHALL BE PLENUM RATED. M.C. SHALL COORDINATE WITH G.C. TO ENSURE ALL TRADES ADHERE TO THIS REQUIREMENT.
- PROVIDE REMOVABLE ACCESS DOORS AT ALL MOTOR OPERATED DAMPERS, FIRE DAMPERS, DUCT COILS, SMOKE DETECTORS, AND SIMILAR ITEMS REQUIRING MAINTENANCE OR ADJUSTMENT.
- PROVIDE MANUAL VOLUME DAMPER IN LOW PRESSURE BRANCH SUPPLY, RETURN OR EXHAUST DUCTS TO EACH GRILLE, DIFFUSER, REGISTER, ETC. DAMPER SHALL BE AS CLOSE TO THE MAIN DUCT AS POSSIBLE. ALSO, PROVIDE MANUAL VOLUME DAMPERS AT OTHER LOCATIONS INDICATED ON PLANS. PROVIDE ACCESS TO QUADRANT LOCKS.
- CONFIRM EXACT LOCATION OF ALL CEILING DEVICES (DIFFUSERS, GRILLES, ACCESS DOORS, ETC.) WITH THE ARCHITECT'S REFLECTED CEILING PLANS PRIOR TO SUBMITTING DUCTWORK COORDINATION DRAWINGS AND/OR BEGINNING CONSTRUCTION OF THE DUCTWORK.
- PROVIDE RADIUS ELBOWS AT ALL CHANGES IN DIRECTION IN SUPPLY, RETURN AND EXHAUST DUCTWORK WHERE POSSIBLE. MINIMUM RADIUS AT CENTERLINE SHALL BE EQUAL TO 1.5 TIMES DUCT WIDTH, UNLESS OTHERWISE SHOWN. WHERE SQUARE ELBOWS ARE SHOWN, PROVIDE ELBOWS WITH TURNING VANES. TURNING VANES SHALL BE AIRFOIL TYPE, ONLY, PER SMACNA DETAILS. ELBOWS WITHOUT FULL RADIUS OR TURNING VANES WILL NOT BE ACCEPTED, UNLESS SPECIFICALLY NOTED ON THE DRAWINGS AND/OR APPROVED BY THE ENGINEER.
- M.C. SHALL PROVIDE STARTUP, TEST AND BALANCE AND ALL SUPPORTING DOCUMENTATION FOR ALL NEW HVAC EQUIPMENT AND ASSOCIATED AIR AND HYDRONIC SPECIALTIES SHOWN ON DRAWINGS.
- PROVIDE ALL AIR HANDLING EQUIPMENT WITH DEDICATED SHUT DOWN TERMINALS FOR DUCT DETECTOR ACTIVATION. DUCT DETECTOR TO BE PROVIDED BY E.C.
- M.C. IS RESPONSIBLE FOR COORDINATING ALL REQUIRED FIRE ALARM SEQUENCES REQUIRED BY CODE AND AUTHORITIES HAVING JURISDICTION WITH THE E.C. AND FIRE ALARM CONTRACTOR. COORDINATE REQUIRED SEQUENCES WITH ELECTRICAL AND FIRE ALARM DRAWINGS. IT IS THE RESPONSIBILITY OF THE M.C. TO RETURN ANY EXISTING MECHANICAL EQUIPMENT TO ITS ORIGINAL CONDITION WITH REGARDS TO FIRE ALARM SEQUENCES UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS OR ON THE DRAWINGS. THIS INCLUDES BUT IS NOT LIMITED TO RELOCATING FIRE ALARM MODULES AND/OR RELAYS, EXTENDING WIRING AND POSSIBLE REPROGRAMMING.
- M.C. SHALL FURNISH A COMPLETE SET OF AS-BUILT DRAWINGS, SHOWING ALL CHANGES AND DEVIATIONS TO THE ARCHITECT/ENGINEER PRIOR TO COMPLETION OF THE PROJECT.
- REFER TO ARCHITECTURAL RCP FOR COORDINATED CEILING DEVICE LOCATIONS.

KEYED NOTES

- M.C. SHALL RUN MANUFACTURER'S RECOMMENDED DX LINES FROM INDOOR UNIT TO OUTDOOR CONDENSING UNIT.
- M.C. SHALL PROVIDE 4" CONCRETE EQUIPMENT PAD FOR EACH CONDENSING UNIT.
- M.C. SHALL RUN MANUFACTURER'S RECOMMENDED SIZE CONDENSATE LINE TO FLOOR DRAIN.
- M.C. SHALL PROVIDE 6" CONCRETE EQUIPMENT PAD FOR EACH AIR HANDLING UNIT.
- E.C. TO PROVIDE SWITCH FOR FAN EXHAUST. COORDINATE WITH ARCHITECTURAL DRAWINGS (IF NOT PROVIDED ON FAN BY MANUF. G.C. TO COORDINATE).
- PROVIDE AHU-1 & AHU-2 WITH SECONDARY EMERGENCY DRAIN PANS. PROVIDE WATER/MOISTURE DETECTOR TO DE-ENERGIZE UNIT UPON DETECTION OF CONDENSATE.
- M.C. SHALL PROVIDE AN ECONOMIZER BOX CAPABLE OF SUPPORTING THE WEIGHT OF AHU. ECONOMIZER SHALL BE PROVIDED WITH OUTSIDE AIR AND RETURN MOTOR OPERATED DAMPERS. PROVIDE CONTROLLER WITH ECONOMIZER. CONTROLLER SHALL INCLUDE PREWIRED MODULATING SPRING RETURN MOTOR ACTUATORS, COMPRESSOR LOCKOUT, MINIMUM POSITION POTENTIOMETER, OUTDOOR AIR (ENTHALPY) CONTROL, MIXED AIR SENSOR, HEAT PUMP RELAY, MULTI-TAP TRANSFORMER, AND DAMPER LINKAGE. ECONOMIZER BASIS OF DESIGN IS PLENUMS MODEL TMB90V AND TMB180V. CONTROLLER BASIS OF DESIGN IS PLENUMS MODEL EC720. EQUALS SHALL MATCH BASIS OF DESIGN FUNCTION AND QUALITY. EQUALS SHALL BE APPROVED BY ENGINEER. M.C. SHALL COORDINATE ECONOMIZER OPERATION WITH AHU/CONDENSING UNIT MANUFACTURER'S CONTROLLER TO ENSURE PROPER OPERATION.
- PROVIDE MOTOR-OPERATED DAMPER IN RELIEF DUCT, INTERLOCKED WITH AIR HANDLER ECONOMIZER CONTROLS.

- 20"x48" RELIEF AIR DUCT FROM MECHANICAL ROOM CEILING UP TO ROOF-MOUNTED HOOD GH-1. PROVIDE BIRDSCREEN AT MECHANICAL ROOM CEILING OPENING.
- M.C. SHALL CLOSELY COORDINATE WITH P.C. IN 140 JANITOR TO ENSURE PROPER ACCESS TO EF-2 AND PLUMBING ELEMENTS.
- 10" ROUND DUCT FROM EXHAUST GRILLE IN CEILING UP TO ROOF-MOUNTED EXHAUST FAN. COORDINATE DUCT RUN AND EXHAUST FAN LOCATION WITH ATTIC STRUCTURE.
- PROVIDE ROOF-MOUNTED 10" GREENHECK GRSR WITH ROOF CURB. TRANSITION AS REQUIRED.
- DUCT BELOW CEILING, MAINTAIN 7'-0" AFF CLEARANCE MINIMUM.

AHU SEQUENCE OF OPERATION

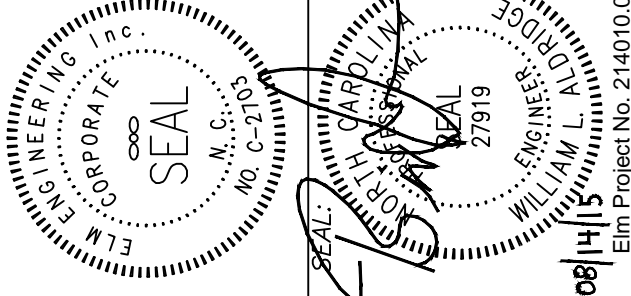
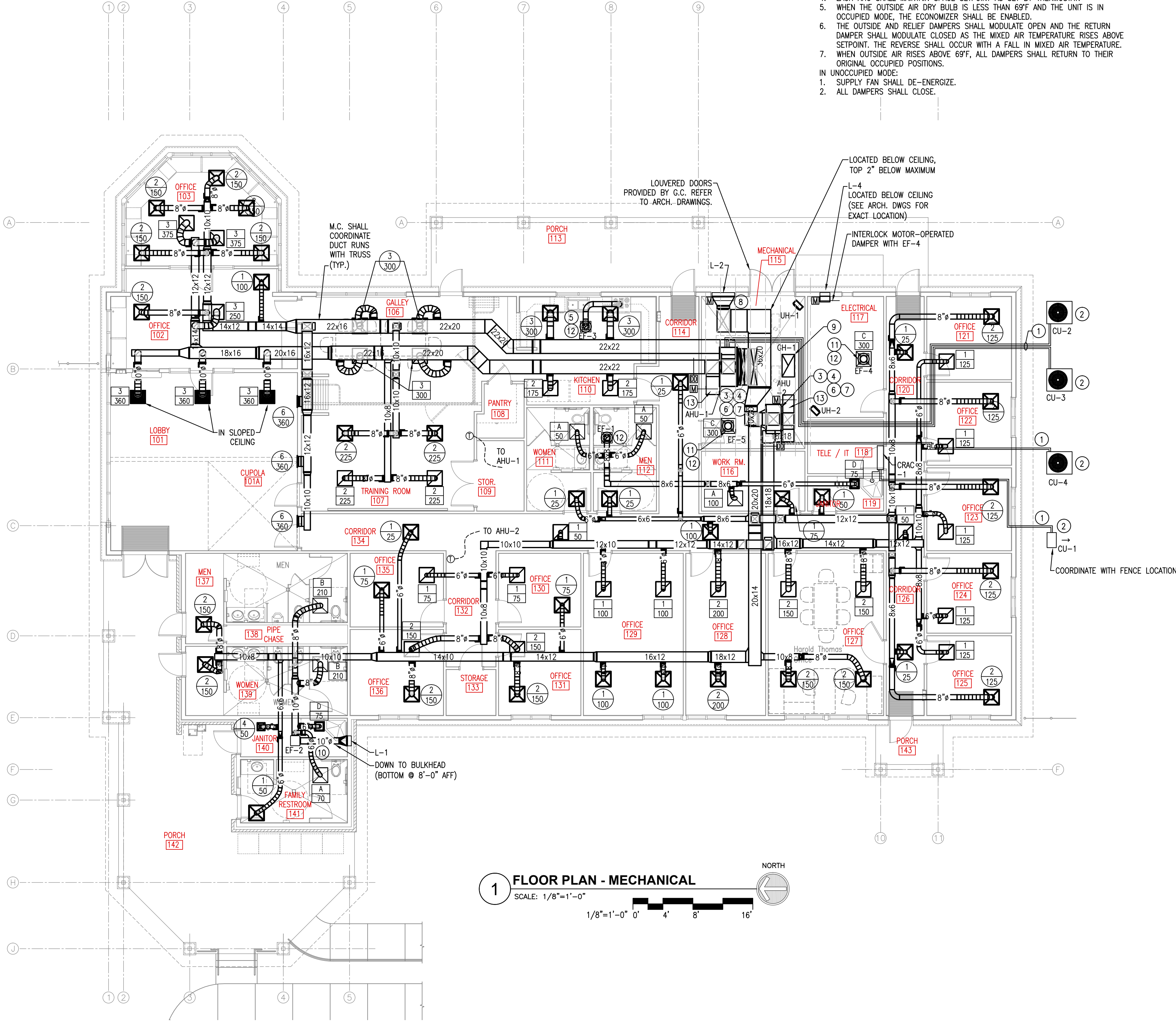
BOTH UNITS SHALL HAVE OCCUPIED AND UNOCCUPIED MODES OF OPERATION.

IN OCCUPIED MODE:

- OUTSIDE AIR DAMPER SHALL MODULATE TO ITS MINIMUM OUTSIDE AIR POSITION.
- RELIEF AND RETURN DAMPERS SHALL MODULATE TO THEIR RESPECTIVE OCCUPIED POSITIONS AS DETERMINED BY THE TEST AND BALANCE OF THE SYSTEM.
- SUPPLY FAN SHALL BE ENERGIZED.
- EACH AHU SHALL MAINTAIN SPACE SETPOINT AS SET BY THERMOSTAT.
- WHEN THE OUTSIDE AIR DRY BULB IS LESS THAN 69°F AND THE UNIT IS IN OCCUPIED MODE, THE ECONOMIZER SHALL BE ENABLED.
- THE OUTSIDE AND RELIEF DAMPERS SHALL MODULATE OPEN AND THE RETURN DAMPER SHALL MODULATE CLOSED AS THE MIXED AIR TEMPERATURE RISES ABOVE SETPOINT. THE REVERSE SHALL OCCUR WITH A FALL IN MIXED AIR TEMPERATURE.
- WHEN OUTSIDE AIR RISES ABOVE 69°F, ALL DAMPERS SHALL RETURN TO THEIR ORIGINAL OCCUPIED POSITIONS.

IN UNOCCUPIED MODE:

- SUPPLY FAN SHALL DE-ENERGIZE.
- ALL DAMPERS SHALL CLOSE.



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DRAWING TITLE / DESCRIPTION:
MECHANICAL FLOOR PLAN

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**

STATE CONSTRUCTION
ID.# 11-09079-01A
ASSET NUMBER:
CO.# SITE.# BLDG.#
48 . . .
REVISIONS
NO. DATE
DATE ISSUED: 8-14-15
DRAWN BY: JML
CHECKED BY: WLA
SHEET NO.

M1.0

ELECTRICAL GENERAL NOTES		
1.	IT SHALL BE UNDERSTOOD THAT ALL WORK PERFORMED SHALL BE DONE BY A LICENSED ELECTRICAL CONTRACTOR AND IN A FIRST CLASS WORKMANLIKE MANNER.	
2.	ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, LATEST EDITION NEC AND THE LATEST EDITIONS OF ALL LOCAL CODES, RULES, AND ORDINANCES HAVING JURISDICTION.	
3.	IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO PROVIDE ALL LABELED MATERIALS, AND SUPERVISION NECESSARY TO ACCOMPLISH THE WORK SHOWN AND/OR NOTED ON THE DRAWINGS.	
4.	ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO BID AND VERIFY ALL CONDITIONS, LOCATIONS, DIMENSIONS AND COUNTS AS SHOWN AND/OR NOTED ON THE DRAWINGS.	
5.	CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.	
6.	THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR TO ORIGINAL CONDITIONS ANY AND ALL DAMAGES TO BUILDING SURFACES, EQUIPMENT AND FURNISHINGS CAUSED DURING PERFORMANCE OF WORK.	
7.	ELECTRICAL CONTRACTOR SHALL NOT SCALE DRAWINGS. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT UNLESS NOTED OTHERWISE.	
8.	ALL ELECTRICAL EQUIPMENT, DEVICES, WIRE, ETC., SHALL BE LISTED FOR THE INTENDED USE WITH UNDERWRITER'S LABORATORIES, INC. (NFCBI) OR OTHER NDCPOI THIRD PARTY LISTED AND LABELED, AS A MINIMUM, ALL EQUIPMENT SHALL MEET THE FOLLOWING: A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI). B. ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA). C. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM). D. NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA). NOTE: THESE STANDARDS ARE SUBORDINATE TO CODES AND STANDARDS SET BY UL.	
9.	IT SHALL NOT BE THE INTENT OF THESE PLANS AND/OR SPECIFICATIONS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE ELECTRICAL CONTRACTOR SHALL BE EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.	
10.	ALL CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY. EXACT ROUTING SHALL BE DETERMINED IN THE FIELD, UNLESS OTHERWISE NOTED. THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL THE PROPER NUMBER OF CONDUITORS IN ALL RACEWAYS AS REQUIRED TO ACCOMPLISH THE PROPER FUNCTIONING OF THE DEVICE OR EQUIPMENT AS SHOWN. A. THE ELECTRICAL CONTRACTOR SHALL PROVIDE & INSTALL A SPARE 3/4" E.C. FROM EACH FLUSH MOUNTED PANELBOARD. TERMINATE 6" ABOVE CEILING AND LABEL "SPARE".	
11.	THE ELECTRICAL CONTRACTOR SHALL KEEP ALL AREAS IN WHICH WORK IS BEING PERFORMED FREE FROM DEBRIS AT ALL TIMES AND SAID AREAS SHALL BE LEFT BROOM CLEAN AT THE END OF EACH WORKING DAY.	
12.	CONTRACTOR SHALL PAY FOR ALL PERMITS, FEES, INSPECTIONS, AND TESTING.	
13.	ARCHITECTURAL AND/OR ENGINEERING EXPENSES THAT ARE INCURRED DUE TO REVISIONS OR SUBSTITUTIONS REQUESTED BY THE CONTRACTOR SHALL BE PAID FOR BY THAT CONTRACTOR.	
14.	ELECTRICAL CONTRACTOR SHALL SUBMIT (6) COPIES OF EQUIPMENT LAYOUT FOR ALL ELECTRICAL SPACES, ROOMS, ETC. TO ENGINEER FOR APPROVAL PRIOR TO ORDERING EQUIPMENT OR INSTALLING CONDUITS, ETC. LAYOUT SHALL CONSIST OF PLAN VIEWS (SCALED AT 1/2" = 1'-0") AND ELEVATIONS (DIMENSIONED) FOR EACH SUCH SPACE, ROOM, ETC.	
15.	UNLESS NOTED AS EXISTING, ALL EQUIPMENT, WIRING, DEVICES, ETC., SHALL BE NEW UNLESS SHOWN OTHERWISE.	
16.	COORDINATE ALL ELECTRICAL SITE WORK WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.	
17.	FOR ELECTRIC POWER SYSTEM: A. COORDINATE POWER SERVICE WITH POWER COMPANY. B. VERIFY LOCATION OF POWER SERVICE TERMINATION WITH POWER COMPANY PRIOR TO SUBMITTING BID.	
18.	FOR TELEPHONE SYSTEM: A. PROVIDE GROUNDING FOR ALL TELEPHONE/DATA OUTLETS AND EQUIPMENT PER REQUIREMENTS OF OWNERS TELEPHONE COMPANY. B. VERIFY LOCATION OF TELEPHONE SERVICE WITH TELEPHONE COMPANY, PRIOR TO SUBMITTING BID.	
19.	ALL CONDUCTORS SHALL BE IN CONDUIT. ALL CONDUITS SHALL BE INTERMEDIATE (MC) OR RIGID GALVANIZED STEEL (RMC) EXCEPT THAT: (a) POLYVINYL CHLORIDE (PVC) CONDUITS MAY BE USED UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RMC. (b) ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN WALLS WHERE NOT SUBJECT TO MECHANICAL DAMAGE, DAMP CONDITIONS OR CORROSIVE CONDITION; (c) LIQUID-TIGHT FLEXIBLE CONDUIT WHERE REQUIRED; (d) FLEXIBLE METALLIC CONDUIT WHERE REQUIRED IN DRY LOCATIONS; ALL CONDUITS IN HAZARDOUS AREAS (PER NEC) SHALL MEET THE REQUIREMENTS OF NEC CHAPTER (e) ALL FITTINGS FOR EMT SHALL BE MADE USING STEEL PLATED HEXAGONAL COMPRESSION CONNECTORS. NO POT-METAL, SETSCREW OR INDENTED TYPE FITTINGS SHALL BE UTILIZED. (f) MC CABLE WILL NOT BE PERMITTED.	
20.	FOR UNDERGROUND ELECTRICAL CONDUITS, PROVIDE PULL BOXES, SUCH THAT NO SINGLE CONDUIT RUN HAS BENDS IN EXCESS OF 360. PULL BOXES SHALL BE SUITABLE AND APPROVED FOR THE INTENDED USE. WHERE CONDUITS PASS UNDERNEATH PAVED AREAS THEY SHALL BE RGS. WHERE UNDERGROUND CONDUITS ARE NOT EXPOSED TO MECHANICAL DAMAGE OR ARE NOT UNDER PAVED AREAS, THEY MAY BE SCHEDULED 40 PVC, BUT ALL CONDUIT RISERS SHALL BE RGS. RGS CONDUITS SHALL EXTEND A MINIMUM OF 18" BELOW GRADE.	
21.	APPLY BITUMASTIC COATING TO ALL METALLIC CONDUITS IN SLABS OR UNDERGROUND.	
22.	ALL CONDUCTORS SHALL BE COPPER, RATED 75° WET/DRY EXCEPT WHERE OTHERWISE REQUIRED BY U.L. OR CODES (UON). MINIMUM WIRE SIZE SHALL BE #12 AWG EXCLUDING CONTROL WIRING. PROVIDE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT.	
23.	WIRE WAYS SHALL BE SIZED AS REQUIRED, PER NEC, UNLESS OTHERWISE NOTED.	
24.	ALL ELECTRICAL EQUIPMENT SHALL BE RAIN-TIGHT WHERE EXPOSED TO THE WEATHER. ALL FLEX CONDUITS CONNECTED TO SUCH EQUIPMENT SHALL BE LIQUID-TIGHT. ALL PVC OR LFMC RACEWAYS EXPOSED TO WEATHER MUST HAVE 3RD PARTY LISTING FOR SUNLIGHT RESISTANCE.	
25.	OUTLET BOXES SHALL BE STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURE FOR OTHER CLASSIFIED AREAS. PROPER PLASTER RINGS SHALL BE USED WITH OUTLET BOXES. PROPER COORDINATION BETWEEN ELECTRICAL SUBCONTRACTOR AND GENERAL CONTRACTOR FOR PLASTER RING INITIATION WILL BE REQUIRED. ALL OUTLET BOXES SHALL BE SET PROPERLY AT INSTALLATION AS NO "GODD" RINGS WILL BE ALLOWED. ALL OUTLET BOXES SHALL BE SECURELY FASTENED. ALL DEVICES SHALL BE WHITE (DECORA TYPE) WITH STAINLESS STEEL PLATES (UON).	
26.	MOTOR STARTERS SHALL BE MANUAL OR MAGNETIC, AS INDICATED OR REQUIRED, WITH GLASS TO OVERLOAD RELAYS IN EACH HOT LEG.	
27.	FURNISH AND INSTALL DISCONNECT SWITCHES AND WIRING FOR MECHANICAL EQUIPMENT PER MANUFACTURER RECOMMENDATIONS. CONTROLS ARE TO BE SUPPLIED BY HVAC CONTRACTOR AND CONNECTED BY ELECTRICAL CONTRACTOR.	
28.	ALL DISCONNECT SWITCHES SHALL BE SIZED BY NEC TO ACCOMMODATE EQUIPMENT SERVED, INCLUDING REQUIRED FUSES, U.O.N., DISCONNECT SWITCHES SHALL BE HORSEPOWER RATED, HEAVY-DUTY TYPE.	
29.	ALL FUSES SHALL BE CURRENT LIMITING, PER U.L., RATED 600 VOLTS, UNLESS OTHERWISE NOTED.	
30.	ELECTRICAL CONTRACTOR SHALL VERIFY CIRCUIT PROTECTIVE DEVICE RATING FOR EQUIPMENT PRIOR TO CONSTRUCTION.	
31.	TWO AND THREE-POLE CIRCUIT BREAKERS SHALL HAVE COMMON TRIP. NO TIE HANDLES SHALL BE PERMITTED. ALL PANELBOARDS SHALL HAVE COPPER BUS. ALL CIRCUIT BREAKERS SHALL BE INVERTED TIE-TYPE (THERMAL-MAGNETIC).	
32.	WHERE CORE DRILLING OF FLOOR/WALLS IS REQUIRED, CONTRACTOR SHALL SEAL OPENINGS WATERIGHT AFTER UTILITIES HAVE BEEN INSTALLED. LOCATION OF CORED HOLES SHALL BE COORDINATED WITH LOCATION OF EQUIPMENT IN A MANNER TO BE CLEAN AND FUNCTIONAL. THE CONTRACTOR SHALL INSTALL ONLY ONE CONDUIT PER HOLE AND SEAL THE OPENING AROUND THE CONDUIT AS SPECIFIED.	
33.	PROVIDE FIRE RETARDANT U.L. APPROVED SEALANT ON ALL PENETRATIONS OF FIRE RATED PARTITIONS, WALLS AND STRUCTURAL SLABS. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO VERIFY, PRIOR TO SUBMITTING BID, LOCATIONS OF ALL SUCH FIRE RATED PARTITIONS, WALLS, AND STRUCTURAL SLABS.	
34.	ALL OPENINGS FOR LIGHT FIXTURES IN CEILING SHALL BE PROTECTED IN A MANNER (PER ALL COVERING CODES) THAT WILL PROVIDE THE SAME RATING AS THE CEILING. (THIS APPLIES TO ALL FIRE RATED CEILINGS).	
35.	ALL FLUORESCENT BALLASTS SHALL BE ELECTRONIC P.S. AND HAVE P. F. OF 0.90. ALL BALLASTS FOR METAL HALIDE AND HIGH PRESSURE SODIUM FIXTURES SHALL BE CONSTANT WATTAGE TYPE WITH 5% LAMP WATTS FOR 10% NOMINAL LINE VOLTAGE VARIATION.	
36.	PROVIDE LAMPS WITH FIXTURES, SEE LUMINAIRE SCHEDULE FOR LAMP TYPE.	
37.	ALL CONNECTIONS TO GROUND RODS & BUILDING STEEL SHALL BE MADE WITH UL APPROVED WELDED CONNECTIONS, UNLESS OTHERWISE NOTED.	
38.	PROVIDE MOUNTING BACKBOARDS FOR ELECTRICAL AND COMMUNICATION EQUIPMENT SHALL BE 1/2" FIRE RETARDANT PLYWOOD BACKBOARDS; DO NOT PAINT OVER ALL THE FIRE RETARDANT LABELS. LEAVE AT LEAST ONE LABEL ON EACH BOARD VISIBLE FOR THE INSPECTOR.	
39.	PROVIDE A FUSE HOLDER AND FUSE IN THE PRIMARY SIDE OF EACH UNGROUNDED CONDUCTOR FOR EACH BALLAST (BUSBUS AND/OR EQUAL), AT THE HAND HOLE OF EACH EXTERIOR POLE MOUNTED LIGHTING FIXTURE OR J-BOX FOR WALL OR GROUND MOUNTED FIXTURE.	
40.	PROVIDE TEMPORARY ELECTRICAL SERVICE FOR USE BY ALL TRADES DURING CONSTRUCTION AND REMOVE SAME AT COMPLETION OF PROJECT.	
41.	THE ELECTRICAL CONTRACTOR SHALL FURNISH A COMPLETE SET OF AS-BUILT DRAWINGS, SHOWING ALL CHANGES AND DEVIATIONS TO THE ARCHITECT/ENGINEER PRIOR TO COMPLETION OF THE PROJECT.	
42.	PREPARE AND AFFIX A TYPEWRITTEN DIRECTORY TO THE INSIDE COVER OF EACH NEW AND OR EXISTING (REVISED) PANELBOARD INDICATING LOADS CONTROLLED BY EACH CIRCUIT.	
43.	MULTIWIRE BRANCH CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR, NO SHARED NEUTRALS SHALL BE PERMITTED.	
44.	WHERE INSTALLING METAL RACEWAYS ON THE INTERIOR FACE OF EXTERIOR WALLS, PROVIDE BACK STRAPS OR SUPPORTS TO MAINTAIN 1/4" CLEARANCE FROM THE WALL.	
45.	SEAL ENDS OF ALL UNDERGROUND SERVICE AND FEEDER CONDUITS WHERE THEY ENTER CABINETS OR ENCLOSURES.	
46.	A GREEN INSULATED GROUNDING CONDUCTOR PROPERLY SIZED PER NEC SHALL BE RUN IN ALL POWER RACEWAYS.	

FIRE ALARM LEGEND:
ALL MAY NOT APPLY.

	CEILING MOUNTED SMOKE DETECTOR		FIRE ALARM PULL STATION, MOUNT 46" AFF TO THE CENTER OF DEVICE UNO
	COMBINATION CARBON MONOXIDE/SMOKE DETECTOR		FIRE ALARM HORN/STROBE UNIT; WALL MOUNT AT 84" AFF TO BOTTOM OF DEVICE UNO; *cd - INDICATES CANDELA RATING
	CEILING MOUNTED SMOKE DETECTOR FOR KITCHEN HOOD		FIRE ALARM STROBE ONLY UNIT; WALL MOUNT 84" AFF TO BOTTOM OF DEVICE UNO; *cd - INDICATES CANDELA RATING
	CEILING MOUNTED SMOKE DETECTOR W/SOUNDER BASE		CEILING MOUNTED FIRE ALARM HORN/STROBE UNIT; *cd - INDICATES CANDELA RATING
	WALL MOUNTED SMOKE DETECTOR		CEILING MOUNTED FIRE ALARM SPEAKER/STROBE UNIT; *cd - INDICATES CANDELA RATING
	CEILING MOUNTED HEAT DETECTOR		FIRE ALARM CONTROL PANEL
	CEILING MOUNTED STROBE DEVICE; *cd - INDICATES CANDELA RATING		FIRE ALARM LCD ANNUNCIATOR
	DUCT SMOKE DETECTOR		POST INDICATOR VALVE
			REMOTE ALARM LIGHT FOR CONCEALED FIRE ALARM DEVICE

ELECTRICAL SUMMARY	
ELECTRICAL SYSTEM AND EQUIPMENT	
Method of Compliance:	
Energy Code:	<input checked="" type="checkbox"/> Prescriptive <input type="checkbox"/> Performance
ASHRAE 90.1:	<input checked="" type="checkbox"/> Prescriptive <input type="checkbox"/> Performance
Lighting schedule (each fixture type)	
Lamp type required in fixture	SEE LIGHTING FIXTURE SCHEDULE
number of lamps in fixture	
ballast type used in fixture	
number of ballasts in fixture	
total wattage per fixture	
total interior wattage specified vs allowed (whole building): 5900W SPECIFIED VS. 7349W ALLOWED	N/A
exterior lamp efficacy	
Additional Prescriptive Compliance:	
<input type="checkbox"/> 506.2.1	More Efficient Mechanical Equipment
<input checked="" type="checkbox"/> 506.2.2	Reduced Lighting Power Density
<input type="checkbox"/> 506.2.3	Energy Recovery Ventilation System
<input type="checkbox"/> 506.2.4	Higher Efficiency Service Water Heating
<input type="checkbox"/> 506.2.5	On-site Supply of Renewable Energy
<input type="checkbox"/> 506.2.6	Automatic Daylighting Control Systems

COMMUNICATIONS LEGEND:

ALL MAY NOT APPLY.	
	COMMUNICATION OUTLET, MOUNT AT 18" AFF TO THE CENTER OF DEVICE UNO WITH 1" ABOVE ACCESSIBLE CEILING. * = NUMBER OF JACKS.
	TELEPHONE OUTLET, MOUNT AT 18" AFF TO THE CENTER OF DEVICE UNO WITH 1" ABOVE ACCESSIBLE CEILING.
	TELEPHONE/DATA OUTLET, MOUNT AT 18" AFF TO THE CENTER OF DEVICE UNO WITH 1" ABOVE ACCESSIBLE CEILING.
	TELEPHONE OUTLET, MOUNT AT 42" AFF OR 6" ABOVE BACKSLASH TO THE CENTER UNO.
	TELEPHONE/DATA OUTLET, MOUNT AT 42" AFF OR 6" ABOVE BACKSLASH TO THE CENTER UNO.
<input checked="" type="checkbox"/>	FLUSH MOUNTED FLOOR BOX WITH COMMUNICATION OUTLET, 1" FOR DATA TO NEAREST WALL & ROUTED UP TO ABOVE ACCESSIBLE CEILING UNO.
	FLUSH MOUNTED CEILING BOX WITH COMMUNICATION OUTLET.
	OUTLET FOR WIRELESS ACCESS POINT WITH 1" TO ABOVE ACCESSIBLE CEILING
	DOOR BELL TRANSFORMER, LOCATED ABOVE CEILING
	LOW VOLTAGE STEP DOWN TRANSFORMER FOR DOOR BELL
	CABLE TV OUTLET RECESSED ON WALL, MOUNT AT 18" AFF TO THE CENTER UNO, WITH 3/4" TO ABOVE ACCESSIBLE CEILING UNO. WM-INDICATES WALL MOUNT AT 72" AFF
	SIGNAL BELL FOR DOOR BELL SYSTEM
	DOOR BELL BUZZER AT 84" AFF TO THE BOTTOM OF DEVICE UNO
	SLEEVES WITH INSULATED BUSHINGS FOR COMMUNICATION WIRING PATHWAYS.
	TYPICAL SYMBOL DENOTES KEY PAD. PROVIDE FLUSH JUNCTION BOX TO SUIT SECURITY SYSTEMS DEVICES. PROVIDE 1" EMPTY CONDUIT WITH PULL WIRE TO TELE/COMM. ROOM 120 FOR CABLEING BY OTHERS. FINAL JUNCTION BOX HEIGHT AS DIRECTED BY THE OWNER'S SECURITY PERSONNEL.
	TYPICAL SYMBOL DENOTES SECURITY CAMERA. PROVIDE FLUSH JUNCTION BOX TO SUIT SECURITY SYSTEMS DEVICES. PROVIDE 1" EMPTY CONDUIT WITH PULL WIRE TO TELE/COMM. ROOM 120 FOR CABLEING BY OTHERS. STA - STATIONARY PITZ - PAN/TILT/ZOOM WP - WEATHER-PROOF HOUSING.

ABBREVIATIONS:

A	ABOVE COUNTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GROUND
ATS	AUTOMATIC TRANSFER SWITCH
BAS	BUILDING AUTOMATION SYSTEM PANEL
C	CONDUIT
CAV	CABLE TELEVISION
Cd	CANDELA RATING
CB	CIRCUIT BREAKER
EC	ELECTRICAL CONTRACTOR
EW	ELECTRIC WATER COOLER CONNECTION WITH GROUND FAULT PROTECTION
EX	EXISTING TO REMAIN
FACP	FIRE ALARM CONTROL PANEL
FATC	FIRE ALARM TERMINAL CABINET
FSS	FUSIBLE SAFETY SWITCH
G	EQUIPMENT GROUNDING CONDUCTOR
GF	GROUND FAULT CIRCUIT INTERRUPTER
GC	GENERAL CONTRACTOR
LC	LIGHTING CONTRACTOR
P	POLE
PH	PHASE
PMT	PAD MOUNTED TRANSFORMER
PNL	PANELBOARD
PP	POWER POLE
REC	RECEPTACLE
RM	EXISTING DEVICE TO REMAIN
TP	TAMPER RESISTANCE
TIB	TELEPHONE TERMINAL BOARD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VAV	VARIABLE AIR VOLUME BOX
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS, WIRES
WP	WEATHERPROOF
XFMR	TRANSFORMER
STA	STATIONARY
PITZ	PAN/TILT/ZOOM

POWER LEGEND:

ALL MAY NOT APPLY.	
	FLUSH MOUNTED CEILING DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, 125 VOLT, MOUNT AT 18" AFF TO THE CENTER, UNO
	FLUSH MOUNTED FLOOR DUPLEX RECEPTACLE
	DUPLEX RECEPTACLE, 125 VOLT, MOUNT AT 42" AFF OR 4" ABOVE BACKSLASH TO THE CENTER, UNO
	PEDESTAL MOUNTED DUPLEX RECEPTACLE, NEMA 5-20R, 125V, GFCI, HORIZONTAL MOUNT
	DOUBLE DUPLEX RECEPTACLE WITH COMMON BOX AND COVER PLATE, MOUNT AT 18" AFF TO THE CENTER, UNO
	FLUSH MOUNTED FLOOR DOUBLE DUPLEX RECEPTACLE
	DOUBLE DUPLEX RECEPTACLE, 125 VOLT, MOUNT AT 42" AFF OR 4" ABOVE BACKSLASH TO THE CENTER, UNO
	SINGLE RECEPTACLE, 125 VOLT, MOUNT 18" AFF TO CENTER, HD = HAND DRYER
	SPECIAL RECEPTACLE, NEMA CONFIGURATION AS INDICATED, MOUNT AT 18" AFF TO THE CENTER, UNO
	JUNCTION BOX, SIZE PER NEC
	FLUSH MOUNTED FLOOR JUNCTION BOX, SIZE PER NEC
	WALL MOUNTED JUNCTION BOX, SIZE PER NEC
	LOAD CENTER PANELBOARD, SEE SCHEDULE FOR MOUNTING
	PANELBOARD, SEE SCHEDULE FOR MOUNTING
	PUSH BUTTON OR EMERGENCY POWER OFF SWITCH
	MUSHROOM-STYLE PUSH BUTTON
	ELECTRIC MOTOR
	MANUAL MOTOR SWITCH WITH HOA, 1P, 120V
	MOMENTARY CONTACT SWITCH, MOUNT AT 46" AFF TO CENTER OF DEVICE UNO
	EMERGENCY EXHAUST FAN SWITCH
	CEILING MOUNTED DOOR OPERATOR
	WALL MOUNTED DOOR OPERATOR
	OUTLET BOX FOR DOOR OVERHEAD PUSH PLATE, MOUNT 46" AFF TO CENTER UNO
	AUTOMATIC TRANSFER SWITCH
	NON-FUSED DISCONNECT SWITCH MOUNTED 6'-7" MAX. AFF TO OPERATING HANDLE, UNO. COORDINATE VOLTAGE AND CURRENT RATING WITH EQUIPMENT BEING SERVED.
	FUSED DISCONNECT SWITCH MOUNTED 6'-7" MAX. AFF TO OPERATING HANDLE, UNO. COORDINATE VOLTAGE AND CURRENT RATING WITH EQUIPMENT BEING SERVED.
	DRY TYPE TRANSFORMER
	PAD MOUNTED TRANSFORMER
	SUSPENDED TRANSFORMER
	ELECTRIC HAND DRYER
	REMOTE EMERGENCY LIGHTS BATTERY PACK
	HAND HOLE - SEE DRAWING E002 FOR SIZE

INTERIOR LIGHTING LEGEND:
ALL MAY NOT APPLY.

	2X4 LUMINAIRE WITH DESIGNATION
	2X4 LUMINAIRE ON EMERGENCY CIRCUIT WITH DESIGNATION
	2X4 EGRESS LUMINAIRE WITH DESIGNATION
	1X4 LUMINAIRE WITH DESIGNATION
	1X4 LUMINAIRE ON EMERGENCY CIRCUIT WITH DESIGNATION
	1X4 EGRESS LUMINAIRE WITH DESIGNATION
	1X4 WALL MOUNTED LUMINAIRE WITH DESIGNATION
	1X4 WALL MOUNTED LUMINAIRE ON EMERGENCY CIRCUIT WITH DESIGNATION

INTERIOR LIGHTING LEGEND (CONTINUED):
ALL MAY NOT APPLY.

	4' LUMINAIRE WITH DESIGNATION
	4' LUMINAIRE ON EMERGENCY CIRCUIT WITH DESIGNATION
	4' SUSPENDED LUMINAIRE WITH DESIGNATION
	4' SUSPENDED LUMINAIRE ON EMERGENCY CIRCUIT WITH DESIGNATION
	4' EGRESS SUSPENDED LUMINAIRE WITH DESIGNATION
	1X2 LUMINAIRE WITH DESIGNATION
	1X2 EMERGENCY LUMINAIRE WITH DESIGNATION
	1X2 EGRESS LUMINAIRE WITH DESIGNATION
	2' LUMINAIRE WITH DESIGNATION
	2' LUMINAIRE ON EMERGENCY CIRCUIT WITH DESIGNATION
	2X2 LUMINAIRE WITH DESIGNATION
	2X2 LUMINAIRE ON EMERGENCY CIRCUIT WITH DESIGNATION
	2X2 EGRESS LUMINAIRE WITH DESIGNATION
	LUMINAIRE WITH DESIGNATION
	EMERGENCY LUMINAIRE WITH DESIGNATION
	EGRESS LUMINAIRE WITH DESIGNATION
	WALL MOUNTED LUMINAIRE WITH DESIGNATION
	WALL MOUNTED EMERGENCY LUMINAIRE WITH DESIGNATION
	WALL MOUNTED EGRESS LUMINAIRE WITH DESIGNATION
	EMERGENCY BATTERY PACK, SEE LUMINAIRE SCHEDULE
	CEILING MOUNTED SINGLE FACE EXIT SIGN
	WALL MOUNTED SINGLE FACE EXIT SIGN
	SINGLE POLE TOGGLE SWITCH MOUNTED 46" AFF TO CENTER OF DEVICE UNO
	3 WAY TOGGLE SWITCH, MOUNT 46" AFF TO CENTER OF DEVICE UNO
	4 WAY TOGGLE SWITCH, MOUNT 46" AFF TO CENTER OF DEVICE UNO
	DIMMER SWITCH, MOUNT 46" AFF TO CENTER OF DEVICE UNO
	OCCUPANCY SENSOR SWITCH WITH OVERRIDE SWITCH, MOUNTED 46" AFF TO CENTER OF DEVICE UNO
	SINGLE POLE TOGGLE DUAL SWITCH MOUNTED 46" AFF TO CENTER OF DEVICE UNO
	3 WAY TOGGLE DUAL SWITCH, MOUNT 46" AFF TO CENTER OF DEVICE UNO
	WALL MOUNTED LIGHTING CONTROL SWITCH, MOUNTED AT 46" AFF TO CENTER OF DEVICE UNO. SUBSCRIPT DENOTES CONTROL SEQUENCE AND REQUIRED HARDWARE. PROVIDE ALL HARDWARE DEFINED IN CONTROL SEQUENCE. IF OCCUPANCY SENSOR SWITCH IS REQUIRED, PROVIDE WITH OVERRIDE SWITCH.
	DUAL TECHNOLOGY OCCUPANCY SENSOR, CEILING MOUNTED, UNO. SUBSCRIPT DENOTES CONTROL SEQUENCE. SEE LIGHTING CONTROL SCHEDULE FOR DETAILS.
	DAY-LIGHT SENSOR CEILING MOUNTED, UNO. SUBSCRIPT DENOTES CONTROL SEQUENCE. SEE LIGHTING CONTROL SCHEDULE FOR DETAILS.
	3 WAY TOGGLE LIGHTING CONTROL SWITCH, MOUNTED AT 46" AFF TO CENTER OF DEVICE UNO. SUBSCRIPT DENOTES CONTROL SEQUENCE AND REQUIRED HARDWARE. PROVIDE ALL HARDWARE DEFINED IN CONTROL SEQUENCE. IF OCCUPANCY SENSOR SWITCH IS REQUIRED, PROVIDE WITH OVERRIDE SWITCH.
	LIGHTING CONTRACTOR
	DUAL TECHNOLOGY OCCUPANCY SENSOR, CEILING MOUNTED, UNO
	CEILING MOUNTED PHOTO-CELL
	DAY-LIGHT SENSOR CEILING MOUNTED

ELECTRICAL DRAWING INDEX:

E0.0	COVER SHEET - ELECTRICAL
E0.1	POWER RISER DIAGRAMS
E0.2	FIRE ALARM RISER DIAGRAM
E0.3	SITE PLAN
E1.0	FLOOR PLAN - LIGHTING
E2.0	FLOOR PLAN - POWER AND COMMUNICATIONS
E2.1	FLOOR PLAN - SYSTEMS
E3.0	ELECTRICAL DETAILS
E3.1	PANEL SCHEDULES
E4.0	PANEL SCHEDULES
E4.1	PANEL SCHEDULES

BID DOCUMENTS

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DRAWING TITLE / DESCRIPTION:
ELECTRICAL COVER SHEET

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

STATE CONSTRUCTION
ID.# 11-09079-01A

ASSET NUMBER:
CO.# SITE.# BLDG.#
48 . . .

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NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: SNS
CHECKED BY: MCR
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08/14/15
Eln Project No. 244010.00

FIRE ALARM SYSTEM MATRIX	BUILDING SYSTEM OUTPUTS														CENTRAL COMM			
	ACTIVATE COMMON ALARM SIGNAL INDICATOR	ACTIVATE AUDIBLE ALARM SIGNAL	ACTIVATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTIVATE AUDIBLE SUPERVISORY SIGNAL	ACTIVATE COMMON TROUBLE SIGNAL INDICATOR	ACTIVATE AUDIBLE TROUBLE SIGNAL	ACTIVATE GENERAL EVACUATION SIGNAL	DISPLAY CHANGE OF STATUS	ACTUATE EXTERNAL HORN/STROBE	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION	SHUT DOWN RESPECTIVE AIR HANDLER	SHOW CHANGE OF STATUS ON ANNUNCIATOR	SHOW CHANGE OF STATUS ON CENTRAL PANEL	TRANSMIT FIRE ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
MANUAL FIRE ALARM PULL BOXES	X	X					X	X	X	X				X	X	X		
BUILDING SMOKE DETECTOR	X	X					X	X	X	X				X	X	X		
DUCT SMOKE DETECTOR		X	X	X			X	X			X		X				X	
FIRE ALARM A.C. POWER FAILURE					X	X		X				X		X	X			X
FIRE ALARM SYSTEM LOW BATTERY					X	X		X				X		X	X			X
OPEN CIRCUIT					X	X		X				X		X	X			X
GROUND FAULT					X	X		X				X		X	X			X
NOTIFICATION APPLIANCE CIRCUIT SHORT					X	X		X				X		X	X			X

SEQUENCE OF OPERATION

- A. ALARM DETECTION: WHEN A FIRE ALARM CONDITION IS DETECTED BY ONE OF THE SYSTEM INITIATING DEVICES, THE FOLLOWING FUNCTIONS SHALL IMMEDIATELY OCCUR:

1. SYSTEM ALARM INDICATOR SHALL FLASH CONTINUOUSLY.

2. A LOCAL SOUNDING DEVICE IN THE PANEL SHALL BE ACTIVATED.

3. CONTROL PANEL DISPLAY SHALL INDICATE ALL PERTINENT INFORMATION ASSOCIATED WITH THE ALARM AND ITS LOCATION IN THE ALARM MESSAGE QUEUE.

4. APPROPRIATE STATUS CHANGE MESSAGE SHALL BE DISPLAYED ON ALL PRINTERS SO PROGRAMMED.

5. ALL AUTOMATIC PROGRAMS ASSIGNED TO THE ALARM POINT SHALL BE EXECUTED AND THE ASSOCIATED NOTIFICATION APPLIANCE CIRCUITS AND CONTROL RELAYS ADDRESSED AND ACTIVATED.
- B. TROUBLE DETECTION: WHEN A TROUBLE CONDITION IS DETECTED BY ONE OF THE SYSTEM INITIATING DEVICES, THE FOLLOWING FUNCTIONS SHALL IMMEDIATELY OCCUR:

1. SYSTEM TROUBLE INDICATOR SHALL FLASH.

2. A LOCAL SOUNDING DEVICE IN THE PANEL SHALL SOUND.

3. CONTROL PANEL SHALL INDICATE ALL PERTINENT INFORMATION ASSOCIATED WITH THE TROUBLE CONDITION AND ITS LOCATION.

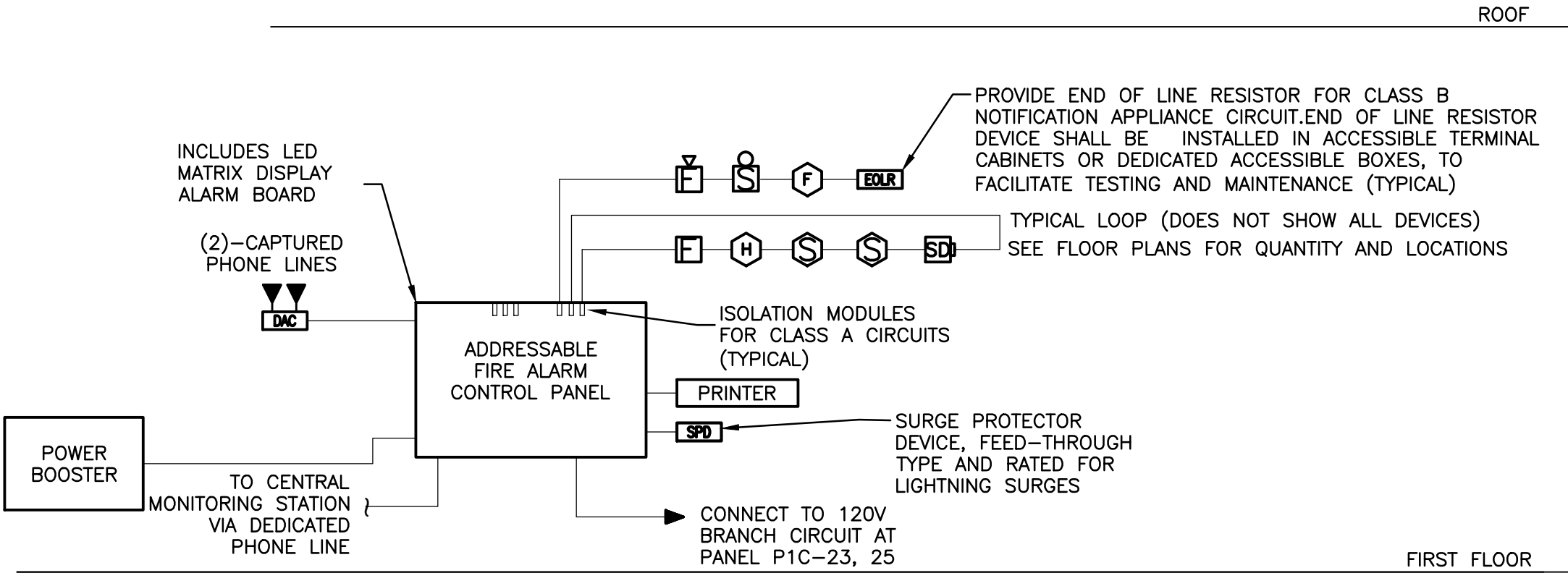
4. UNACKNOWLEDGED ALARM MESSAGES SHALL HAVE PRIORITY OVER TROUBLE MESSAGES, AND IF SUCH AN ALARM MUST ALSO BE DISPLAYED, THE TROUBLE MESSAGE WILL NOT BE DISPLAYED UNTIL THE OPERATOR HAS ACKNOWLEDGED ALL ALARM MESSAGES.

ANNUNCIATION

1. ALL VISUAL NOTIFICATION DEVICES SHALL BE SYNCHRONIZED.

SYSTEM DEVICES

1. PROVIDE ADDRESSABLE DEVICES ONLY IN CONDITIONED SPACES. NO ADDRESSABLE DEVICES ARE ALLOWED IN UNCONDITIONED SPACES.
2. DUCT-MOUNTED SMOKE DETECTORS ARE SUPPLIED AND INSTALLED BY FIRE PROTECTION CONTRACTOR. PROVIDE CONNECTION TO DUCT-MOUNTED SMOKE DETECTORS AFTER DEVICES ARE SECURED IN FINAL LOCATION.
3. PROVIDE PHOTOELECTRIC TYPE SMOKE DETECTORS WHERE MOUNTED IN DUCTWORK.



1 FIRE ALARM RISER

SCALE: NONE

FIRE ALARM SYSTEM NOTES:

- A. AUDIBLE SIGNAL SOUND LEVEL SHALL BE AT LEAST 15dBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR 5dBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF 60 SECONDS MINIMUM, WHICHEVER IS LOUDER, MEASURED FIVE FEET ABOVE THE FLOOR IN THE OCCUPIABLE AREA.
- B. THE TOTAL SOUND LEVEL PRODUCED BY COMBINING AMBIENT SOUND WITH ALL ALARM SIGNALS SHALL NOT EXCEED 120dBA.
- C. "cd" RATING IS CALCULATED PER NFPA AND IT IS MINIMUM. PROVIDE MINIMUM OR HIGHER.
- D. IN MECHANICAL EQUIPMENT ROOMS, THE AVERAGE AMBIENT SOUND LEVEL SHALL BE AT LEAST 90dBA. LOCATE FIRE ALARM PULL STATION WITHIN 5' OF EXIT DOORS.
- E. PROVIDE SMOKE/HEAT DETECTOR WITHIN 5' OF THE FIRE ALARM EQUIPMENT FACP, FATC).
- F. LOCATION OF CEILING MOUNTED SMOKE/HEAT DETECTORS SHALL BE FIELD COORDINATED PRIOR TO ROUGH IN. THE DETECTOR SHALL BE A MINIMUM OF 2' AWAY FROM LIGHT FIXTURES AND A MINIMUM OF 3' AWAY FROM AIR DISTRIBUTION DEVICES.
- G. ACTIVATION OF AN ALARM ZONE SHALL CAUSE ALL AIR HANDLING EQUIPMENT TO SHUT DOWN (ALL DAMPERS, AIR HANDLERS AND EXHAUST FANS MUST STOP).
- H. BRANCH CIRCUIT BREAKERS SUPPLYING THE FA SYSTEM MUST BE PHYSICALLY PROTECTED BY PANELBOARD LOCK OR HANDLE LOCK AND MUST BE IDENTIFIED WITH 1/4" PERMANENT RED DOT APPLIED TO HANDLE OR EXPOSED AREA
- I. END OF LINE DEVICES SHALL BE INSTALLED IN ACCESSIBLE TERMINAL CABINETS OR DEDICATED ACCESSIBLE BOXES TO FACILITATE TESTING AND MAINTENANCE.

GENERAL BUILDING NOTES:

1. UPON ACTIVATION OF FIRE ALARM ALL DOORS CONTROLLED BY CARD READERS SHALL BE UNLOCKED TO PROVIDE FREE EGRESS.
2. THIS OCCUPANCY CONTAINS NO STORAGE OF ANY HAZARDOUS MATERIALS.

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

2300 FERRY ROAD, HAVELock, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION
ID.# 11-09079-01A

ASSET NUMBER:
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48 . . .

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FALCON NORTH CAROLINA 28401
PHONE 919/707-4640 FAX 919/716-0389

SEAL: [Stamp]
REGISTERED PROFESSIONAL ENGINEER
NO. 15886
EXPIRATION DATE 12/31/2015
ELM ENGINEERING INC.

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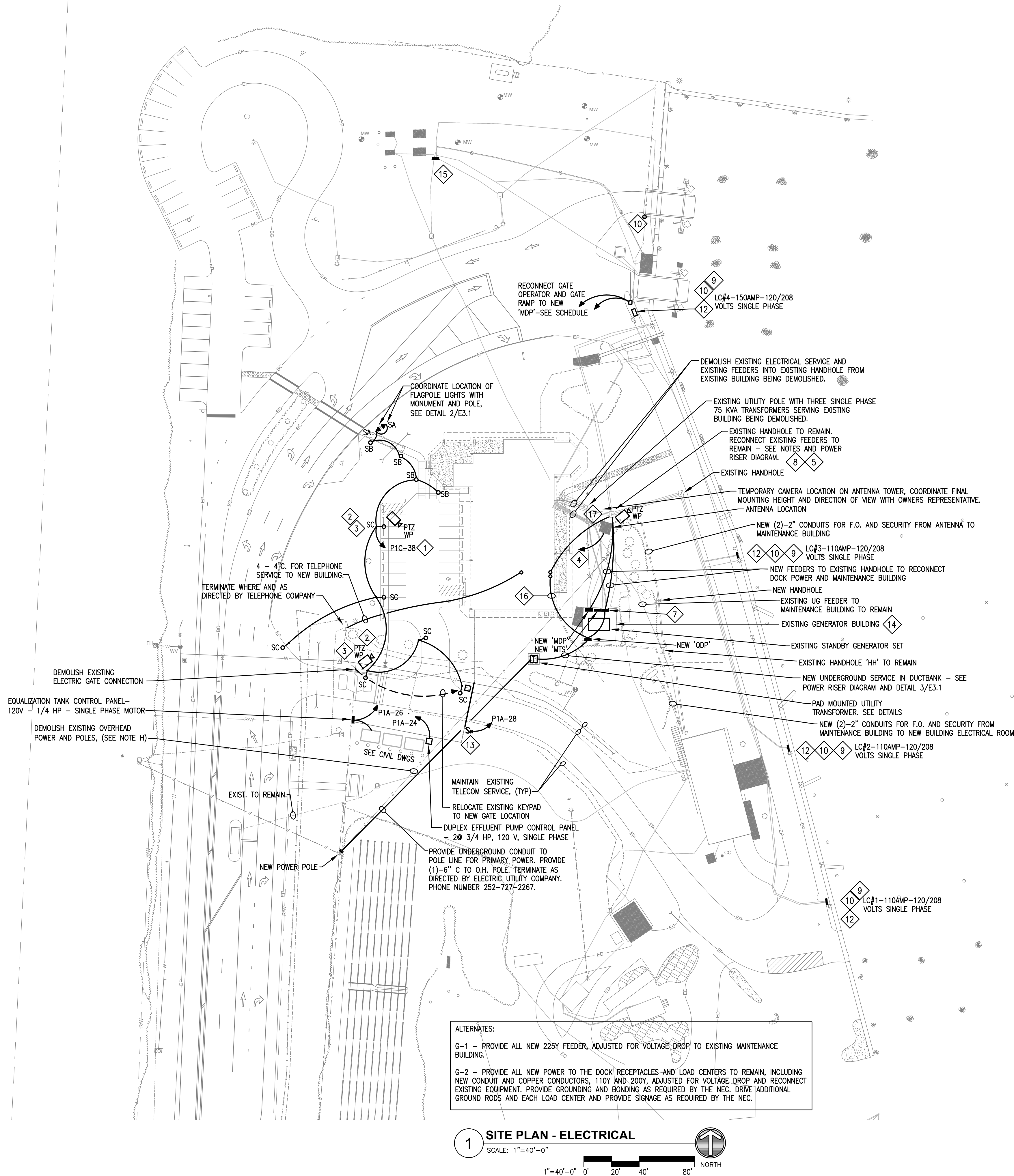
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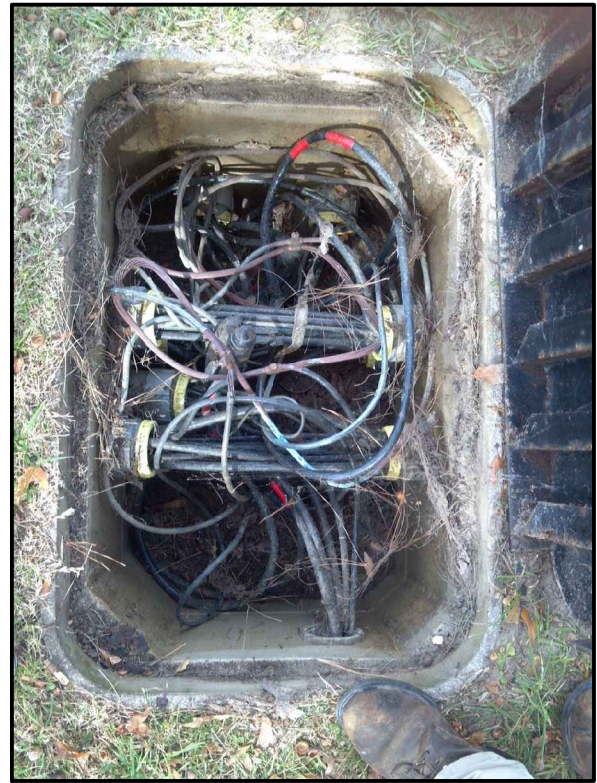


GENERAL NOTES:

- PROVIDE PULL-STRING IN EACH CONDUIT AND CAP ALL CONDUIT ENDS LOCATED AT EXTERIOR TO BUILDING OR IN UNFINISHED SPACES.
- INSTALL-CONDUIT AT 24" BELOW FINISHED GRADE OR 30" BELOW ROADWAYS AND OTHER PAVED SURFACES. COORDINATE EXACT ROUTING IN FIELD, SO AS TO NOT INTERFERE WITH OTHER UTILITIES.
- CONNECT SITE LIGHTING CIRCUITS VIA LIGHTING CONTROLS. PROVIDE 1" CONDUIT MINIMUM FOR SITE LIGHTING CIRCUITRY.
- COORDINATE EXTERIOR LUMINAIRE LOCATIONS WITH LANDSCAPE PLAN.
- NO SITE UNDERGROUND UTILITIES ARE SHOWN ON THIS PLAN. REFER TO FINAL CIVIL DRAWINGS FOR ALL EXISTING AND NEW UTILITIES.
- MAINTAIN TELEPHONE SERVICE TO SITE AND TEMPORARY TRAILER DURING CONSTRUCTION.
- REFER TO DUCT BANK DETAILS, SHEET E3.1. PROVIDE CONCRETE ENCASEMENT FOR ALL ELECTRICAL, GENERATOR, AND TELECOMMUNICATIONS SERVICE CONDUITS.
- CONTRACTOR SHALL COMPLETE ALL ELECTRICAL SERVICE WORK IN GENERATOR BUILDING AND RECONNECT EXISTING SHORE POWER LOAD CENTERS, MAINTENANCE BUILDING, AND SHORE POWER RECEPTACLES PRIOR TO DEMOLISHING EXISTING BUILDING AND EXISTING BUILDING SERVICE. THE EXISTING ELECTRICAL SERVICE TO THE OPERATIONS BUILDING SERVES THE ENTIRE EXISTING SITE. SERVICE TO THE EXISTING SITE SHALL BE MAINTAINED AT ALL TIMES.
- FOR ALL DIRECT BURY CONDUIT, SEE DETAIL 5/E3.1

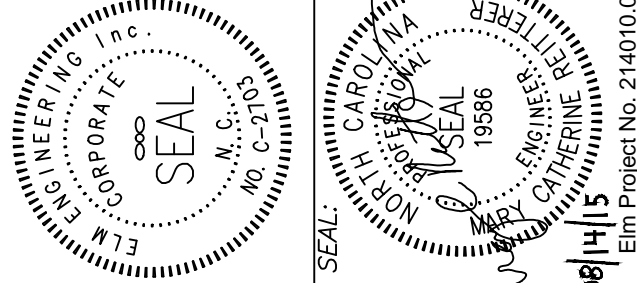
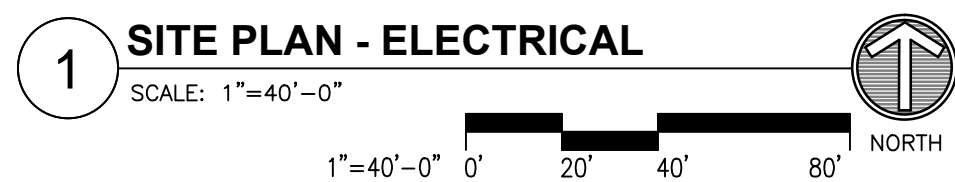
KEY NOTES:

- VIA PHOTOCELL, LC, AND TIME CLOCK CONTROL.
- PROVIDE 1" TO TELECOM ROOM FOR CAMERAS. FINAL LOCATION IN ROOM AS DIRECTED BY OWNER'S IT PERSONNEL.
- PROVIDE CONDUIT STUB UP INTO POLE FOR CCTV CAMERAS.
- PROVIDE 2" CONDUIT FOR EXISTING RADIO ANTENNA. STUB UP AS DIRECTED.
- EXISTING HANDHOLE, SEE PHOTO BELOW.
- NOT USED
- DEMOLISH EXISTING GENERATOR OUTPUT PANELBOARD AND REUSE AS JUNCTION BOX. PROVIDE NEW LOCKING COVER. RECONNECT EXISTING FEEDER TO MAINTENANCE BUILDING.
- LOCATION OF EXISTING HAND HOLE WITH FEEDERS TO 'SHORE' (DOCK) POWER. MAINTAIN POWER CONTINUITY TO THREE PHASE DOCK RECEPTACLES AT ALL TIMES EXCEPT DURING CUTOVERS. EACH RECEPTACLE SHALL BE CUT OVER INDIVIDUALLY. ONLY ONE OUTLET MAY BE TAKEN OUT OF POWER AT A TIME. SEE PHOTO BELOW
- DEMOLISH ALL EXISTING RUSSELLSTOLL PIN AND SLEEVE, SINGLE PHASE DOCK POWER RECEPTACLES. CUT OFF CONDUITS FLUSH WITH GRADE AND CAP. DO NOT PULL OUT WIRING BUT CUT OFF FLUSH WITH GRADE. (FOUR LOCATIONS)
- EXISTING THREE PHASE, FIVE WIRE DOCK POWER RECEPTACLES SHALL REMAIN. (FIVE LOCATIONS). EXISTING RECEPTACLES ARE RUSSELLSTOLL, 200 AMP, THREE PHASE, FIVE WIRE, WATERTIGHT PIN AND SLEEVE CONNECTORS.
- EXISTING DOCK LOAD CENTER POWER PANELBOARD SHALL REMAIN. RECONNECT TO NEW 'MDP' IN GENERATOR BUILDING VIA EXISTING HAND HOLE. SPLICE FEEDER IN HANDHOLE TO EXISTING LOAD CENTER FEEDER. MAINTAIN SERVICE AT ALL TIMES. ONLY ONE LOAD CENTER MAY BUT TAKEN OUT OF POWER AT A TIME DURING CUTOVERS. (FOUR LOCATIONS)
- CONNECT TO ELECTRIC GATE CONTROLLER. PROVIDE WEATHERPROOF MANUAL MOTOR STARTER DISCONNECT SWITCH WITH HOA. CONNECT TO MOTOR FOR GATE. COORDINATE WITH GATE MANUFACTURER. 120 VOLT, SINGLE PHASE, 3/4 HP.
- DEMOLISH EXISTING LIGHTING FIXTURE IN GENERATOR BUILDING AND REPLACE WITH NEW TYPE H LUMINAIRE. PROVIDE WITH 90 MINUTE BATTERY BACK UP AND RECONNECT TO EXISTING CIRCUIT IN ROOM. PROVIDE NEW 20 AMP, GFCI DUPLEX RECEPTACLE ON WALL AND CONNECT TO EXISTING RECEPTACLE CIRCUIT.
- EXISTING SITE ELECTRICAL POWER TO REMAIN. MAINTAIN SERVICE AT ALL TIMES TO THIS PANEL.
- NEW FEEDERS TO PANELBOARDS IN DUCTBANK, SEE DETAIL 1/E3.1
- PROVIDE 1" CONDUIT AND POWER TO TEMPORARY CAMERA ON ANTENNA TOWER. CONNECT CLOSET CIRCUIT THAT IS LIVE FOR THE DURATION OF THE PROJECT.



5 DETAIL - PHOTO OF EXISTING HANDHOLE SEE NOTES

ALTERNATES:
G-1 - PROVIDE ALL NEW 225V FEEDER, ADJUSTED FOR VOLTAGE DROP TO EXISTING MAINTENANCE BUILDING.
G-2 - PROVIDE ALL NEW POWER TO THE DOCK RECEPTACLES AND LOAD CENTERS TO REMAIN, INCLUDING NEW CONDUIT AND COPPER CONDUCTORS, 110Y AND 200Y, ADJUSTED FOR VOLTAGE DROP AND RECONNECT EXISTING EQUIPMENT. PROVIDE GROUNDING AND BONDING AS REQUIRED BY THE NEC. DRIVE ADDITIONAL GROUND RODS AND EACH LOAD CENTER AND PROVIDE SIGNAGE AS REQUIRED BY THE NEC.



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CONSULTANT:
elm
Elm Engineering Inc.
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Charlotte, NC 28217
Tel: 704.335.0399
Fax: 704.335.0399
www.elmengi.com

DRAWING TITLE / DESCRIPTION:
ELECTRICAL SITE PLAN

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**
2300 FERRY ROAD, HAVELOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

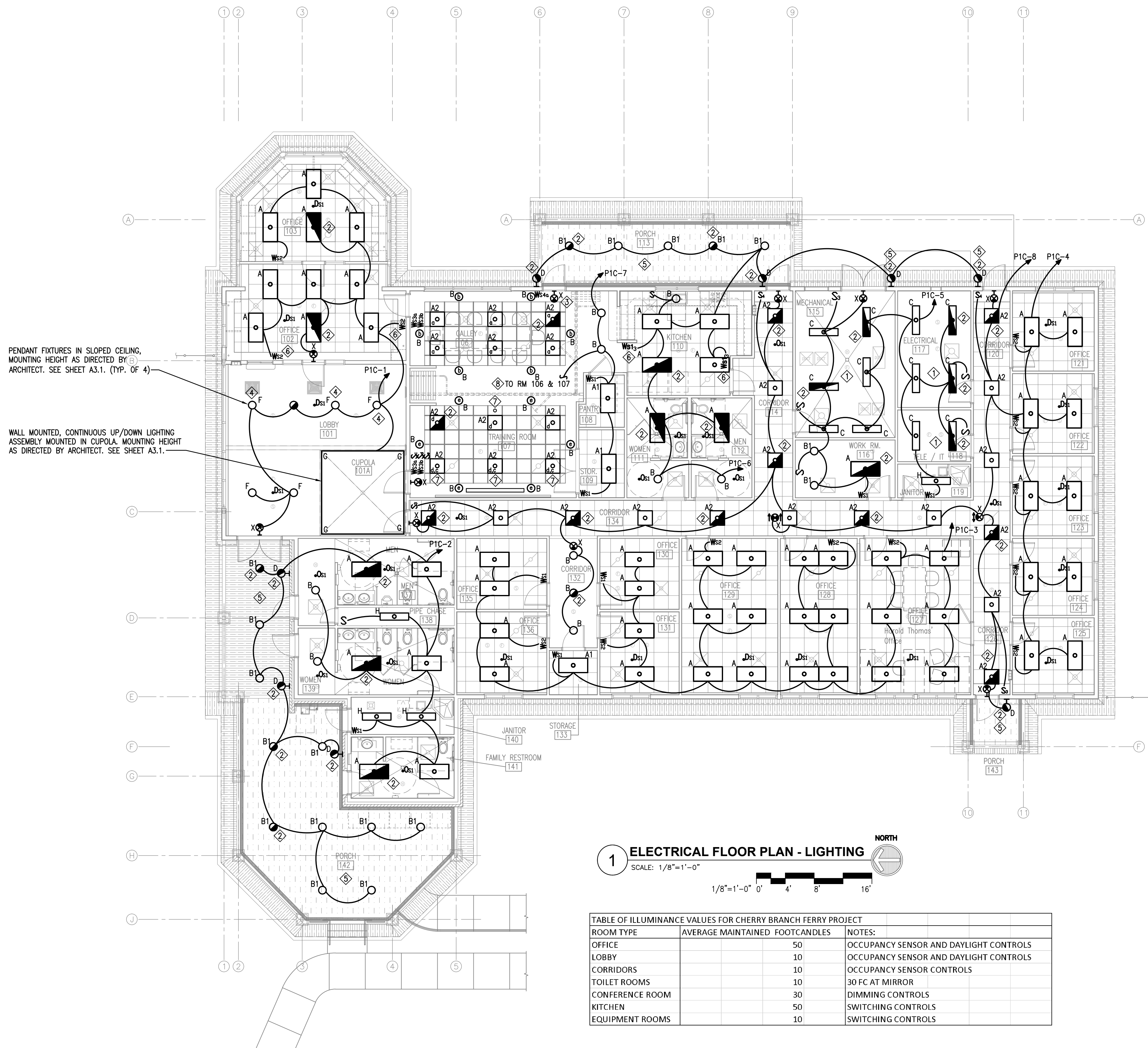
STATE CONSTRUCTION
ID.# 11-09079-01A

ASSET NUMBER:
CO.# SITE.# BLDG.#
48 . . .

REVISIONS
NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: SNS
CHECKED BY: MCR
SHEET NO.

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GENERAL NOTES:

- CONNECT ALL BATTERY INVERTERS AND EXIT SIGNS AHEAD OF ALL LOCAL SWITCHING.
- CONNECT ALL LIGHTING CIRCUITS THROUGH LIGHTING CONTROLS. LIGHTING CIRCUITS SHALL BE CONTROLLED BY TIME CLOCK, PHOTOCELL, OR BOTH. SEE PANELBOARD SCHEDULES.
- PROVIDE OCCUPANCY SENSORS AS SHOWN ON THE PLANS, AND AS DETAILED IN THE ROOM CONTROLS SCHEDULE AND LIGHTING CONTROLS SCHEDULE.
- COORDINATE AIMING AND SENSITIVITY OF OCCUPANCY SENSORS IN FIELD TO LIMIT RANGE TO ROOM ENTRY AND OCCUPANT SEATING LOCATIONS TO AVOID NUISANCE SWITCHING. ENSURE SENSITIVITY IS GREAT ENOUGH TO MINIMIZE FALSE "OFF" TRIGGERING.
- SEE ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT LOCATION OF ALL CEILING MOUNTED LUMINAIRES PRIOR TO ROUGH IN.
- FIELD VERIFY EXACT LOCATION OF LUMINAIRES IN MECHANICAL SPACES TO AVOID CONFLICT WITH DUCTWORK, PIPING, AND EQUIPMENT. DO NOT SUPPORT LUMINAIRES FROM DUCTWORK OR PIPING. PROVIDE CHAIN HANGERS WHERE LUMINAIRES CANNOT BE DIRECTLY MOUNTED TO CEILING OR STRUCTURE.
- EXCEPT AS NOTED ON THE PLANS, INSTALL LUMINAIRES AT MOUNTING HEIGHT INDICATED IN LUMINAIRE SCHEDULE.
- ALL WALL MOUNTED INTERIOR AND EXTERIOR LIGHT FIXTURES AND EGRESS BATTERY PACKS SHALL BE APPROVED BY ARCHITECT TO DETERMINE MOUNTING HEIGHT PRIOR TO FIXTURE INSTALLATION.
- ALL EXIT SIGNS AND "EGRESS" LUMINAIRES AS INDICATED BY SHADING OF FIXTURE SYMBOL SHALL HAVE 90 MINUTE FULL LIGHT OUTPUT BATTERY BACK UP.
- REFER TO ARCHITECTURAL RCP FOR COORDINATED CEILING DEVICE LOCATIONS.

KEY NOTES:

- COORDINATE LIGHTING IN THIS ROOM TO AVOID CONFLICTS WITH UTILITIES, ELECTRICAL, TELEPHONE OR MECHANICAL EQUIPMENT. LIGHT FIXTURE REFLECTOR ELEVATION SHALL BE BELOW BOTTOM OF DUCTS AND OBSTRUCTIONS.
- PROVIDE FIXTURE WITH 90 MINUTE BATTERY PACK.
- MOUNT "B" FIXTURE IN CEILING, MOUNT EXIT SIGN TO WALL ABOVE DOOR.
- PROVIDE SLOPE ADAPTOR FOR SLOPED CEILING.
- ALL EXTERIOR LIGHTING FIXTURES AND CIRCUITS SHALL BE CONTROLLED BY PHOTOCELL.
- PROVIDE 3-WAY SWITCHING IN THIS SPACE.
- PROJECTOR LOCATION
- CONNECT ALL LIGHTS, INCLUDING EXIT SIGNS TO CIRCUIT P1C-7. CONTROL LIGHTS AS INDICATED BY SUPERSCRIPTS.



BID DOCUMENTS

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ELECTRICAL FLOOR PLAN - LIGHTING

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

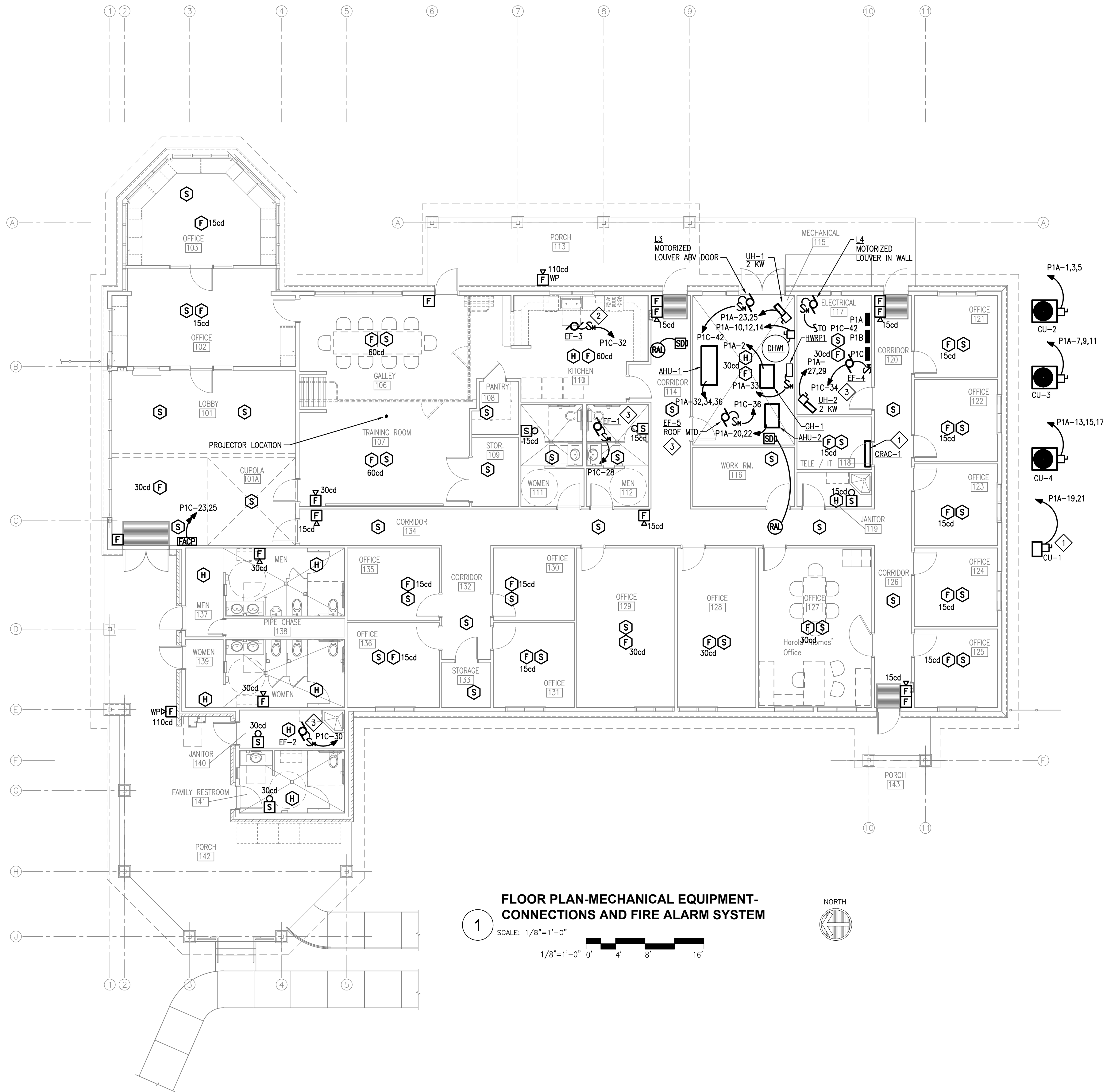
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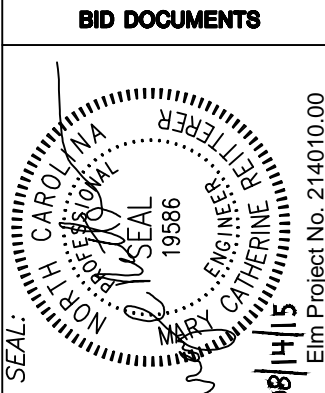
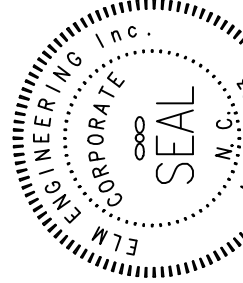


GENERAL NOTES:

- COORDINATE DEVICE LOCATIONS WITH FINAL FURNITURE ARRANGEMENT AND ARCHITECT.
- FIRE STOP ALL PENETRATIONS AT RATED ASSEMBLIES.
- RECEPTACLES AT WET LOCATIONS SHALL BE GROUND FAULT PROTECTED.
- VERIFY CONNECTION REQUIREMENTS OF ALL APPLIANCES AND EQUIPMENT WITH ARCHITECT PRIOR TO ROUGH-IN. FINAL CONNECTION TO THE EQUIPMENT SHALL BE BY THE CONTRACTOR PROVIDING THE EQUIPMENT.
- PROVIDE SEPARATE NEUTRAL CONDUCTOR FOR EACH CIRCUIT SERVING COMPUTER OR NON-LINEAR LOADS.
- WHERE INSTALLING METAL RACEWAY ON INTERIOR FACE OF EXTERIOR WALLS, PROVIDE BACK STRAPS OR SUPPORTS TO MAINTAIN A MINIMUM OF 1/4" CLEARANCE FROM THE WALL.
- COORDINATE DISCONNECT SWITCHES AND ROUGH IN LOCATIONS FOR ALL EQUIPMENT PRIOR TO PERFORMING ROUGH IN AND PRIOR TO ORDERING ELECTRICAL POWER DISTRIBUTION EQUIPMENT.
- COORDINATE LOCATION OF DUCT DETECTORS WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION. LOCATIONS SHOWN ARE APPROXIMATE.
- LOCATE SMOKE DETECTORS 36" MINIMUM FROM ALL AIR SUPPLY DIFFUSERS THROUGH THE BUILDING.
- REFER TO ARCHITECTURAL RCP FOR COORDINATED CEILING DEVICE LOCATIONS.

KEY NOTES:

- INDOOR UNIT POWERED FROM OUTDOOR UNIT. PROVIDE WIRE AND CONDUIT BETWEEN THE UNITS PLUS ASSORTED CONTROL WIRING.
- EF-3: FOR RANGE HOOD, CONTROLLED BY HOOD.
- TYPICAL EXHAUST FAN. CONTROL VIA 7 DAY 24 HOUR TIME CLOCK AS DIRECTED BY THE MECH. ENGINEER.



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DRAWING TITLE / DESCRIPTION:
**ELECTRICAL FLOOR PLAN -
MECHANICAL & FIRE ALARM
SYSTEMS**

PROJECT TITLE:
**CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT**
3200 FERRY ROAD, HAVELock, NC 28532
CRaven COUNTY, NORTH CAROLINA

STATE CONSTRUCTION
ID.# 11-09079-01A

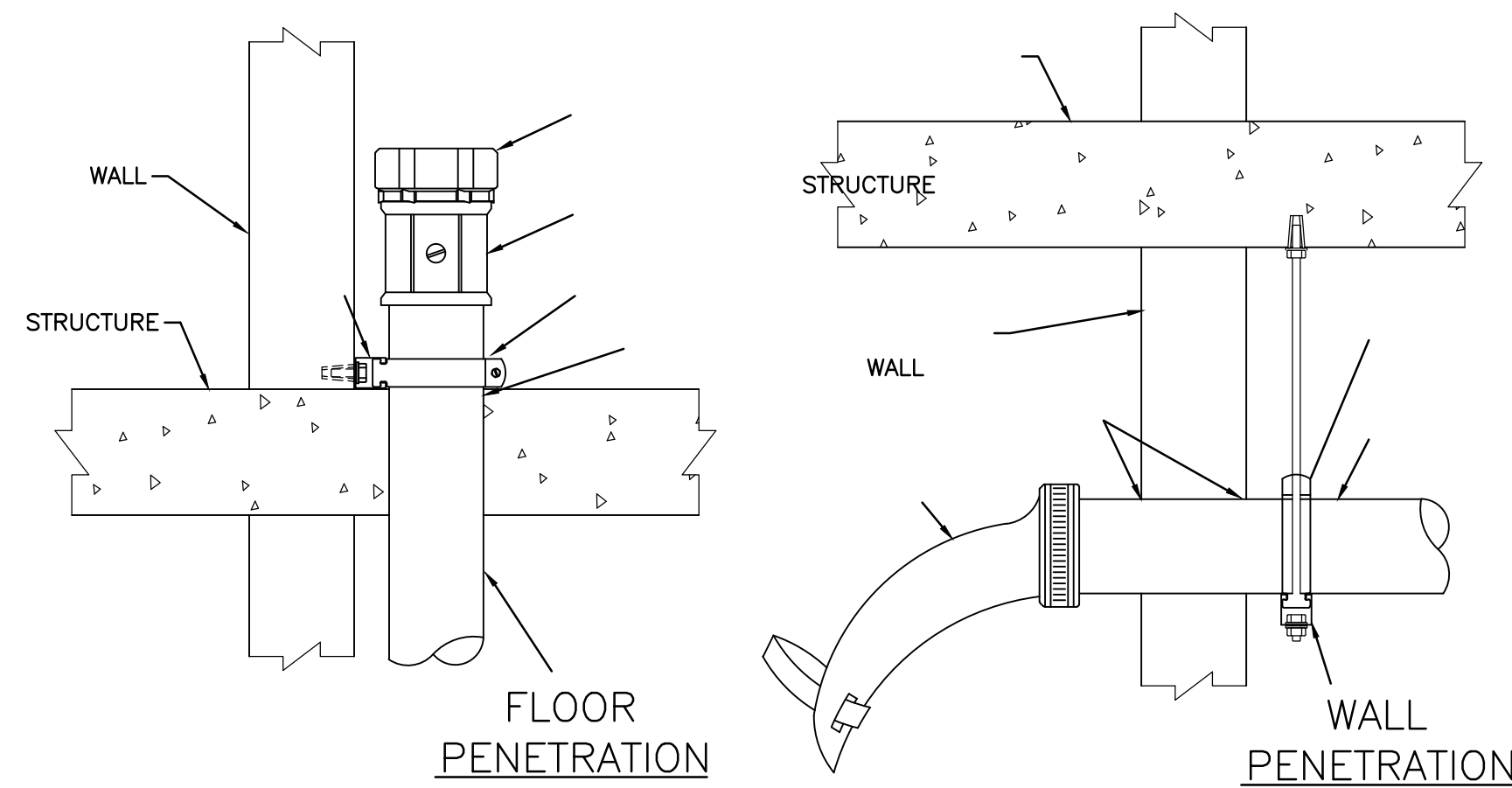
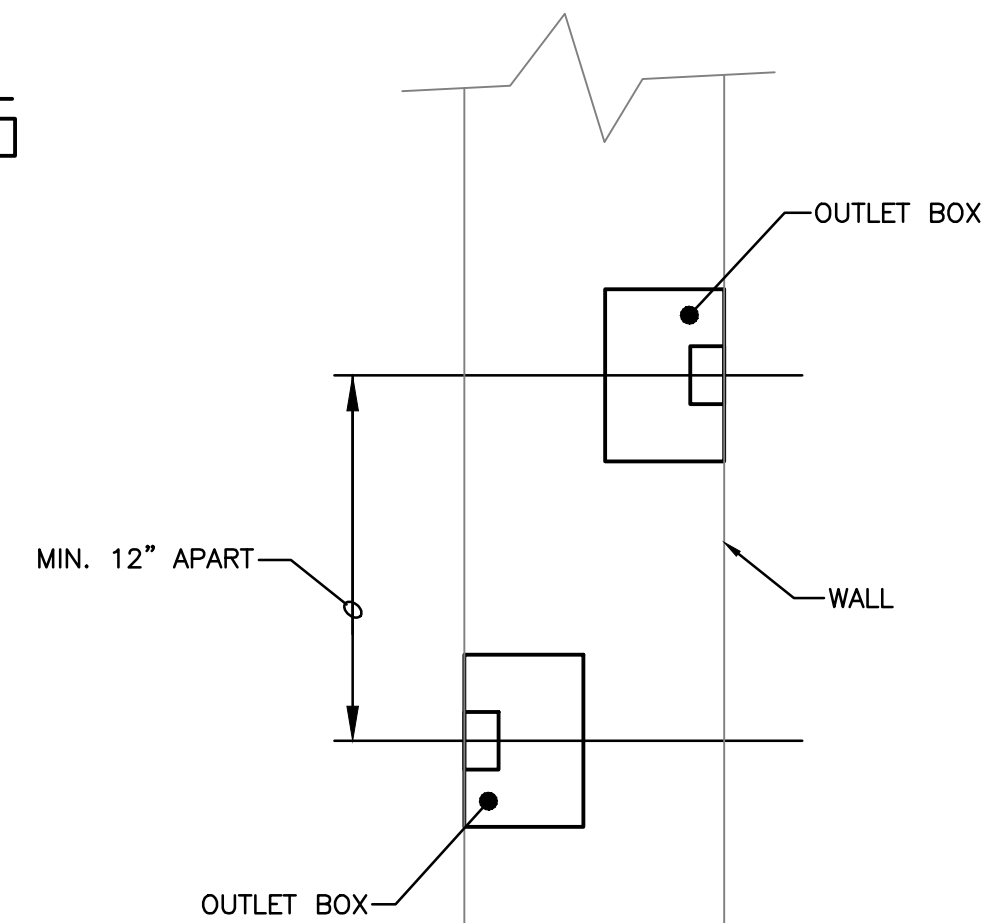
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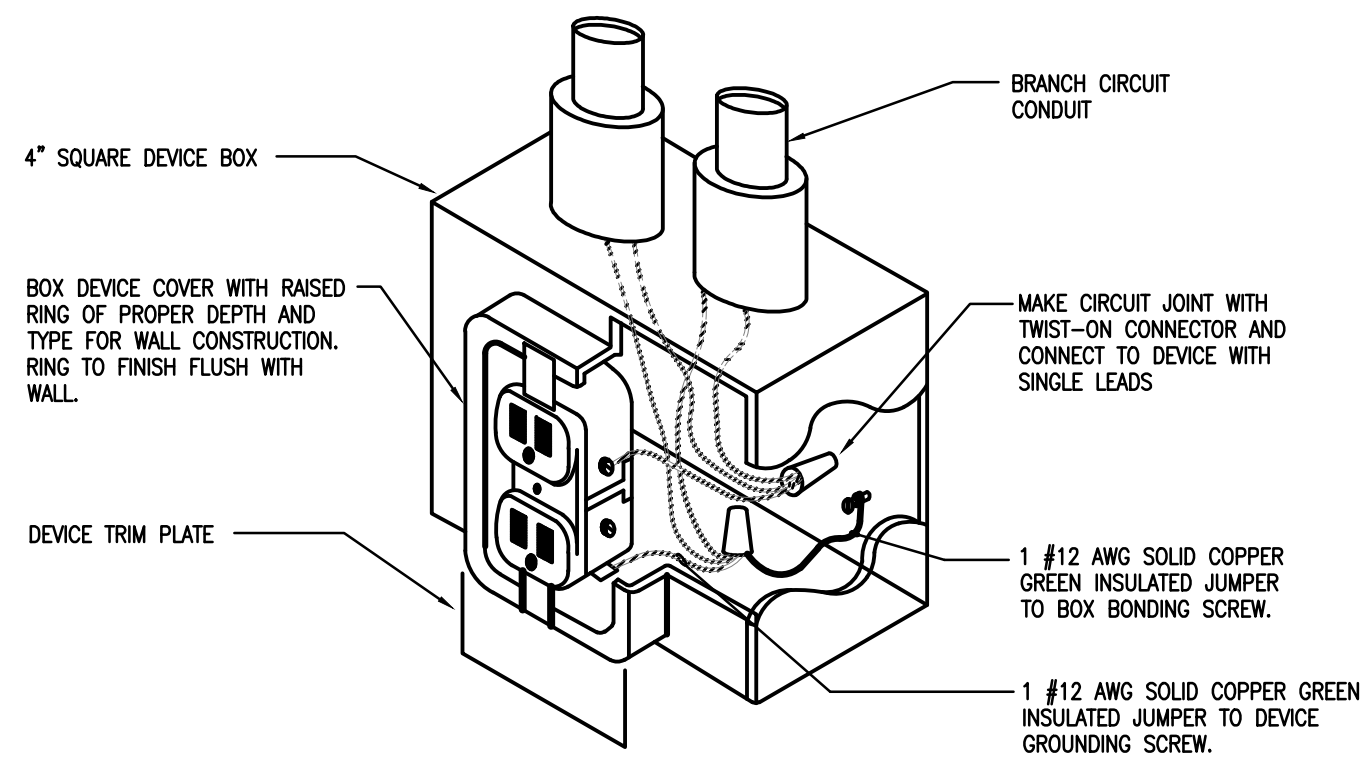
REVISIONS
NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: SNS
CHECKED BY: MCR

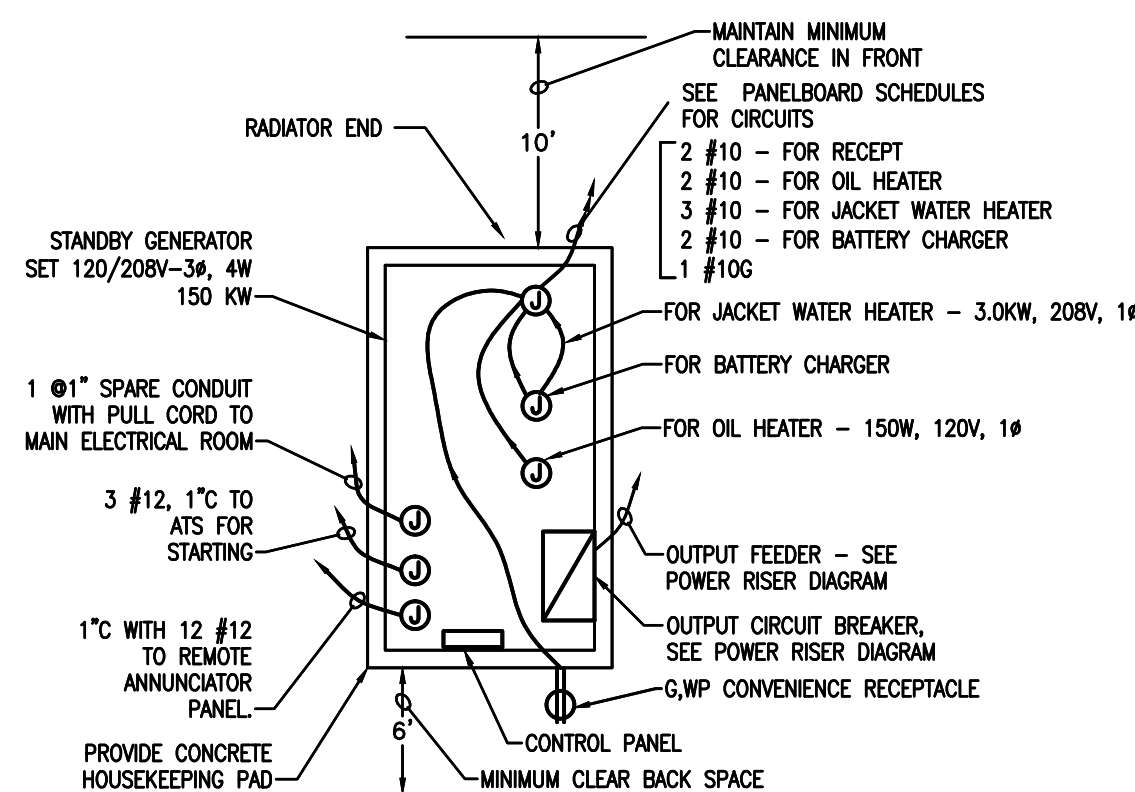
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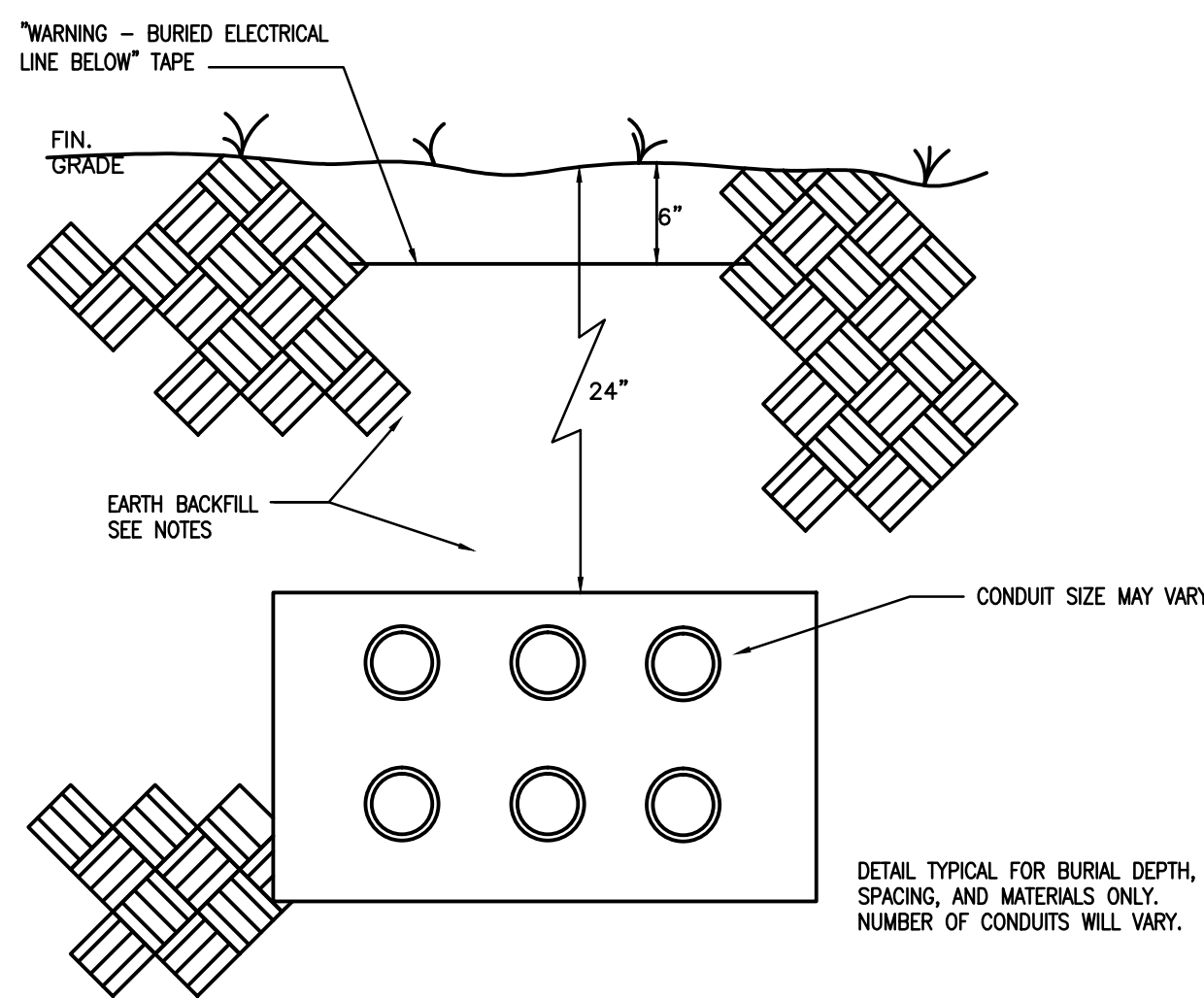




7 RECEPTACLE GROUNDING DETAIL
SCALE: NONE

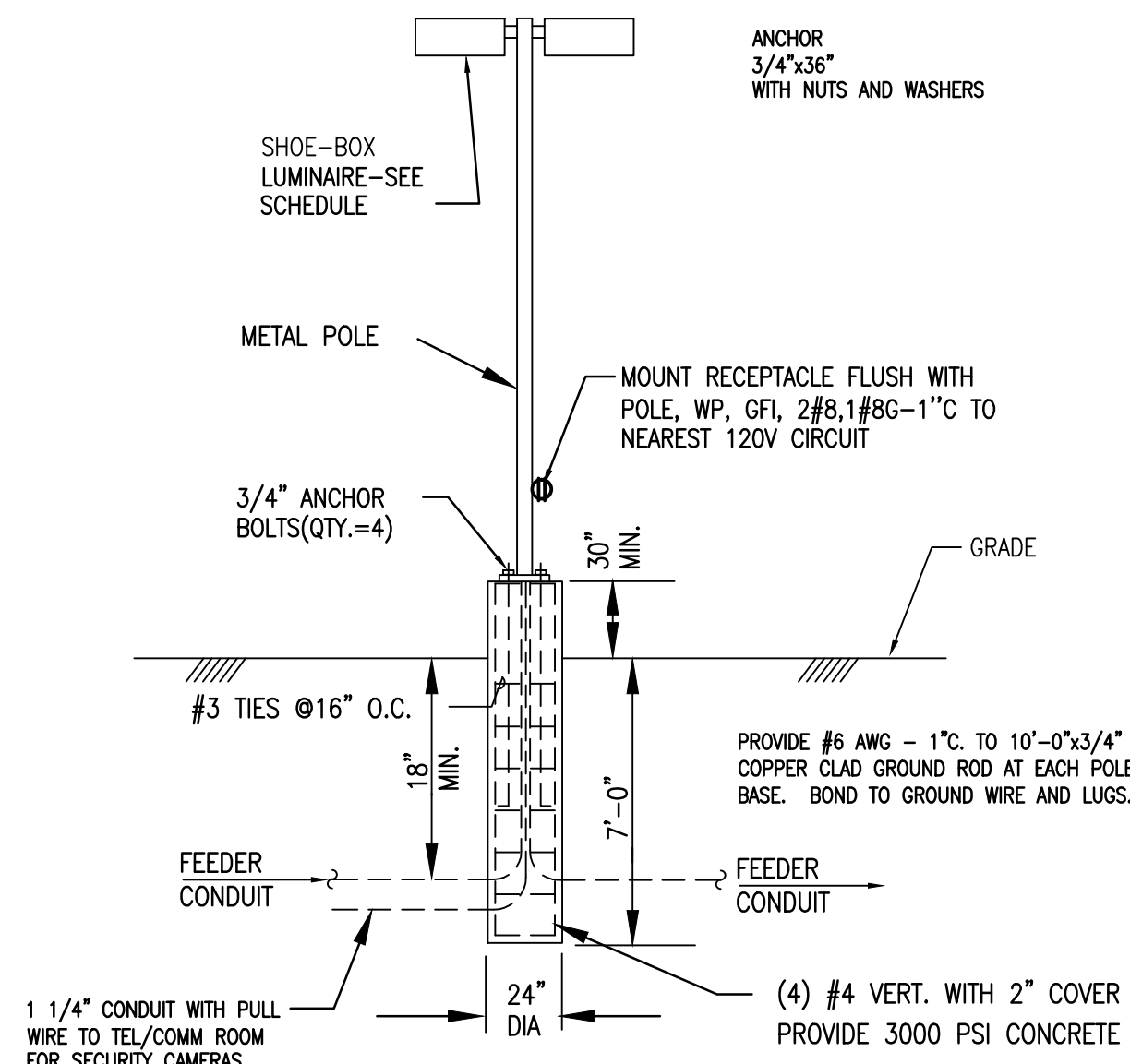


6 GENERATOR SET DETAIL
SCALE: NONE

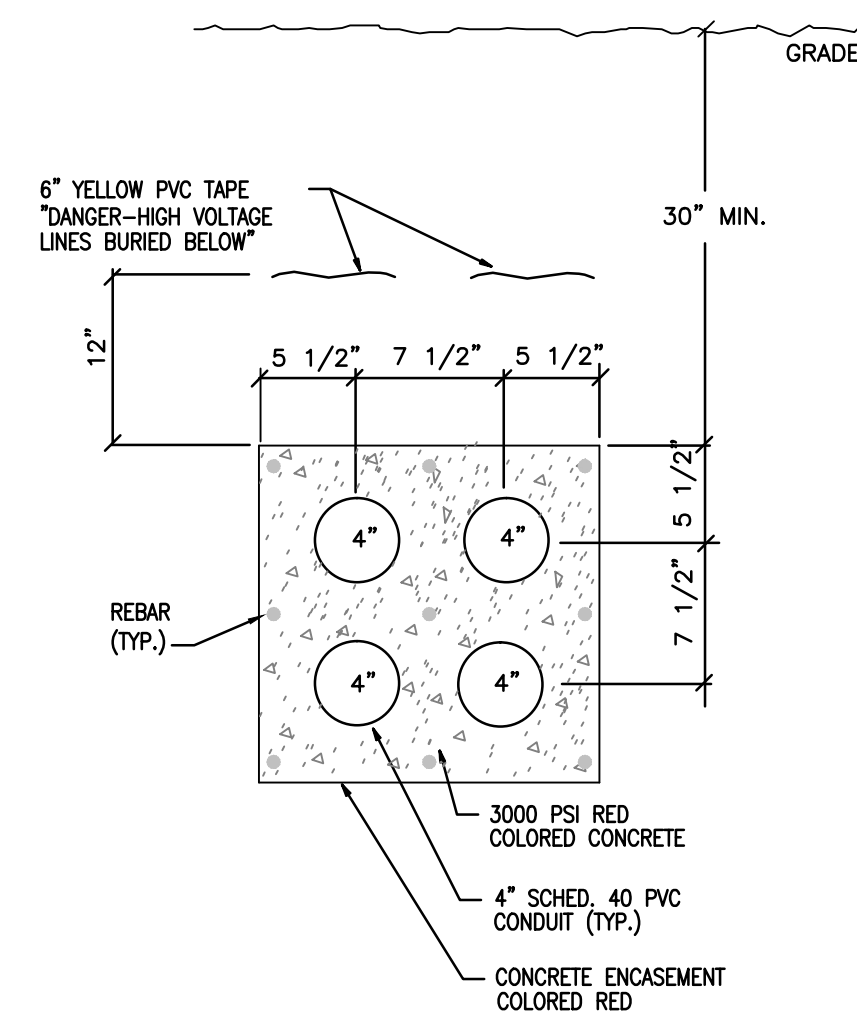


5 TYPICAL DIRECT BURIED CONDUIT DETAIL
SCALE: NONE

NOTE:
FOR ALL FEEDERS AND SERVICES.

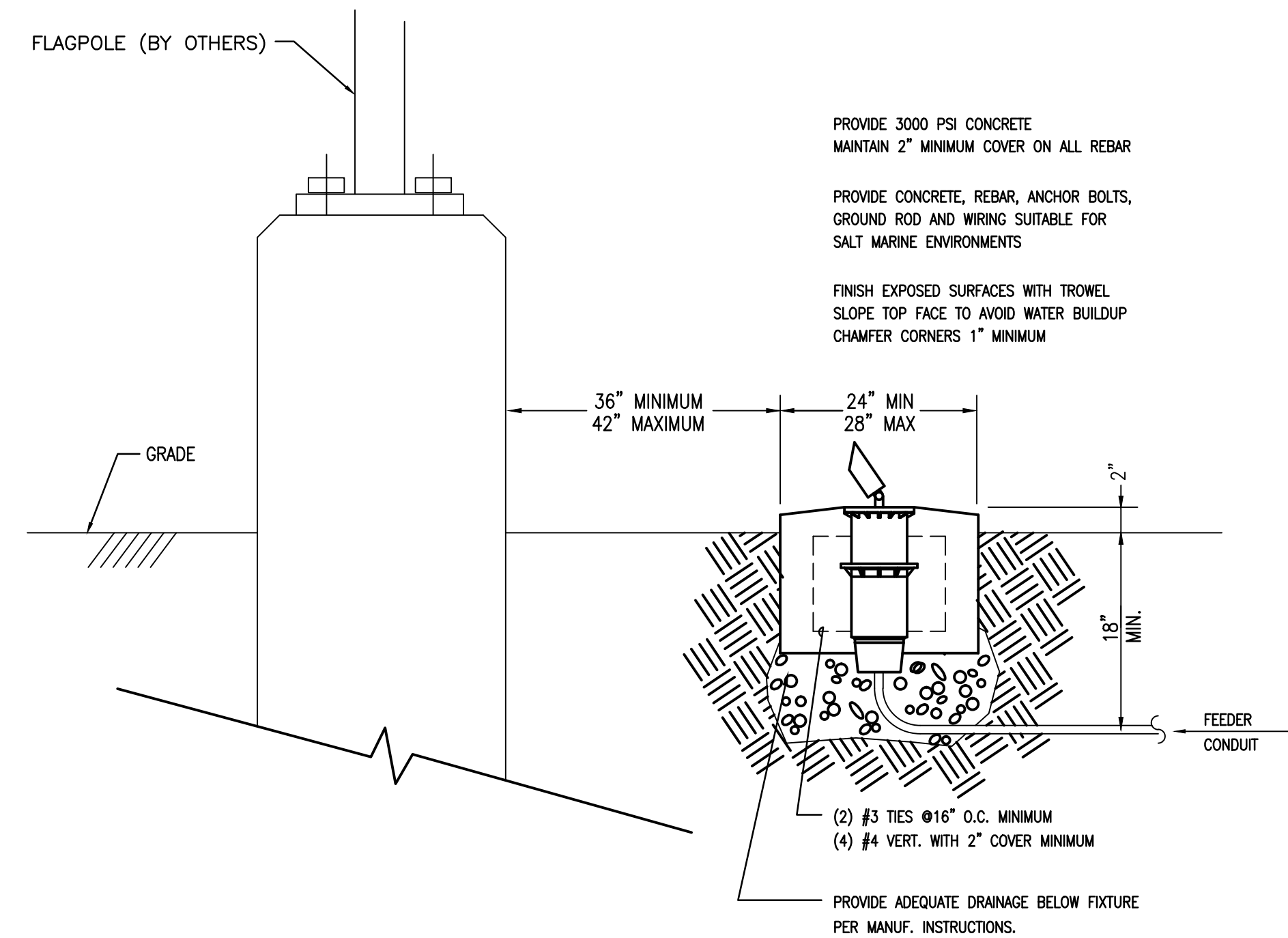


4 LIGHTING POLE BASE DETAIL
SCALE: NONE

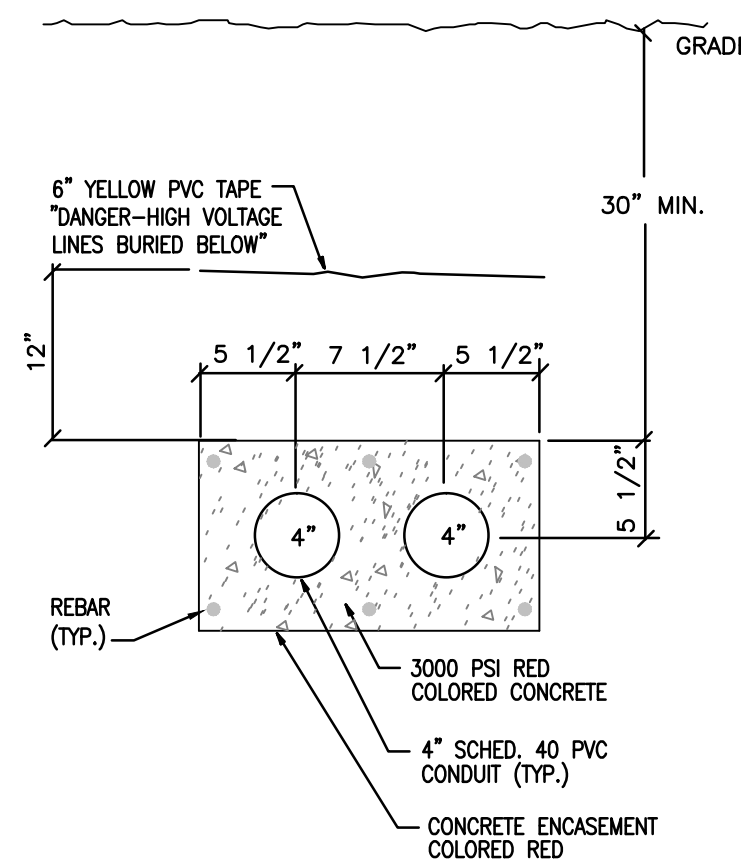


3 DUCTBANK DETAIL
SCALE: NONE

NOTE:
FOR ALL FEEDERS AND SERVICES.



2 FLAGPOLE LIGHT INSTALLATION DETAIL
SCALE: NONE

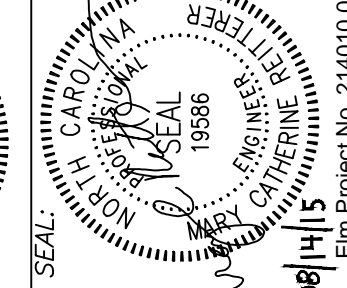


1 DUCTBANK DETAIL
SCALE: NONE

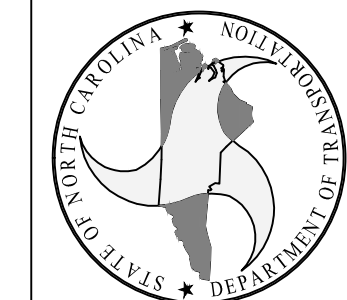
NOTE:
FOR ALL FEEDERS AND SERVICES.

DUCTBANK GENERAL NOTES (APPLY TO ALL DUCTBANKS)

- NOTES**
- USE DB, PVC CONDUIT FOR ALL DUCT BANK INSTALLATIONS, 6" SIZE.
 - RUN DUCTS AS STRAIGHT AS POSSIBLE. THE SUM OF ALL THE BENDS WITHIN A RUN OF DUCT SHALL NOT EXCEED 180 DEGREES UNLESS CABLE-PULLING CALCULATIONS ARE MADE. THE MINIMUM ALLOWABLE RADIUS FOR BENDS IS 36".
 - THE OVERALL LENGTH OF A DUCT RUN SHALL NOT EXCEED 450 FEET UNLESS CABLE-PULLING CALCULATIONS ARE MADE.
 - THE TOP OF THE DUCT BANK ENCASUREMENT SHALL BE A MINIMUM OF 24" BELOW FINAL GRADE.
 - THE ENVELOPE OF CONCRETE SURROUNDING THE PERIMETER OF THE DUCT BANK SHALL BE AT LEAST THREE INCHES THICK.
 - BOTTOM OF TRENCH SHALL BE SMOOTH AND FREE OF ROCKS AND DEBRIS. A FOUR-INCH BED OF SAND SHALL BE ADDED IF THE BOTTOM IS ROCKY. SHORING OR SLOPING IS REQUIRED WHENEVER THE TRENCH DEPTH EXCEEDS FIVE FEET. SLOPE THE TRENCH BOTTOM AT LEAST ONE INCH IN TWENTY FEET FOR DRAINAGE TOWARD THE VAULT OR MANHOLE.
 - INSTALL DUCT SPACERS APPROXIMATELY EVERY FOUR FEET ALONG THE DUCT ROUTE.
 - CONCRETE SHALL BE 2000 PSI, WITH A MAXIMUM AGGREGATE SIZE OF 3/8 INCH.
 - BACKFILL WITH EARTH THAT IS FREE OF VEGETATION, LARGE ROCKS AND OTHER FOREIGN MATTER. BACKFILL IN 6-INCH LAYERS, TAMPING EACH LAYER THOROUGHLY.
 - THE #2 BARE COPPER WIRE SHALL BE INSTALLED IN THE CONCRETE OF THE DUCT BANK FOR THE PURPOSE OF LOWERING THE GROUND RESISTANCE IN THE TRANSFORMER VAULTS AND MANHOLES. THE WIRE IS TO BE USED ONLY FOR GROUNDING, NOT AS A SUBSTITUTE FOR THE SYSTEM NEUTRAL. DO NOT CONNECT THIS WIRE TO THE NEUTRAL TERMINAL IN THE TRANSFORMER. CONNECT WIRE AT THE SERVICE ENTRANCE EQUIPMENT AS A CONCRETE ENCASED ELECTRODE PER NEC 250.52 (3).
 - INSTALL THE #2 BARE COPPER WIRE ALTERNATING FROM POSITION "A" TO POSITION "B" IN THE CONDUIT SPACERS. THE WIRE SHOULD BE SAGGED WITH A 2" CLEARANCE FROM THE BOTTOM OF THE CONCRETE DUCT BANK.
 - WHERE INSTALLING METAL RACEWAY ON INTERIOR FACE OF EXTERIOR WALLS, PROVIDE BACK STRAPS OR SUPPORTS TO MAINTAIN A MINIMUM OF 1/4" CLEARANCE FROM THE WALL.



DESIGNED BY:
FACILITIES DESIGN
ARCHITECTS & ENGINEERS
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ELECTRICAL DETAILS

PROJECT TITLE:
CHERRY BRANCH FERRY FACILITY
NORTH CAROLINA DOT

2300 FERRY ROAD, HAVELock, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

STATE CONSTRUCTION
ID.# 11-09079-01A

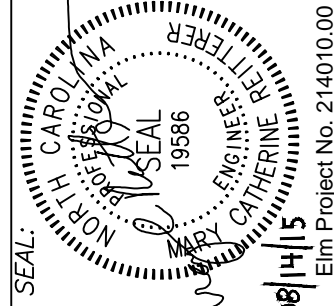
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REVISIONS
NO. DATE

DATE ISSUED: 8-14-15
DRAWN BY: SNS
CHECKED BY: MCR

SHEET NO.

E3.1



**FACILITIES DESIGN
ARCHITECTS & ENGINEERS
FACILITIES MANAGEMENT DIVISION, NCDOT**



CONSULTANT:

BID DOCUMENTS

2300 FERRY ROAD, HAVELOCK, NC 28532
CRAVEN COUNTY, NORTH CAROLINA

510

PANELBOARD "P1A"

VOLTAGE : 208 Y / 120V 3PH 4W

LOCATION: ELECT, ROOM

MOUNTING: SURFACE

400 A MAIN BUS RATING

MAIN CIRCUIT BREAKER

BRANCH CIRCUIT										BRKR			BRKR			BRANCH CIRCUIT									
CKT	LOAD DESCRIPTION	LOAD (KVA)					WIRE SIZE	C (IN)	TRIP/ POLE	PHASE			TRIP/ POLE	WIRE SIZE	C (IN)	LOAD (KVA)					LOAD DESCRIPTION	CKT			
		LTG	REC	MTR	HVC	OTH				A	B	C				LTG	REC	MTR	HVC	OTH			KIT		
1					2.40								20/1	2#12, 1#12G	1/2					0.20	GH-1	2			
3	CU-2				2.40		3#8, 1#10G	1	35/3				20/1									SPARE	4		
5					2.40								20/1									SPARE	6		
7					2.40								20/1									SPARE	8		
9	CU-3				2.40		3#8, 1#10G	1	35/3												3.00	DWH1	10		
11					2.40								35/3	2#8, 1#10G	1						3.00		12		
13					3.70																3.00		14		
15	CU-4				3.70		3#8, 1#10G	1	40/3				20/1									SPARE	16		
17					3.70								20/1									SPARE	18		
19					0.80																3.90		20		
21	CU-1				0.80		2#12, 1#12G	1/2	15/2				40/2	2#8, 1#10G	1						3.90	AHU-2	22		
23					1.00								30/1	2#8, 1#8 G	1						2.40	DUPLEX EFFLUENT PUMPS	24		
25	UH-1				1.00		2#12, 1#12G	1/2	20/2				20/1	2#8, 1#8 G	1						1.00	EQUALIZATION TANK	26		
27					1.00								20/1	2#8, 1#8 G	1						0.90	ELECTRIC GATE	28		
29	UH-2				1.00		2#12, 1#12G	1/2	20/2				20/1									SPARE	30		
31	SPARE								20/1												4.00		32		
33	1#AMP1				1.84		2#12, 1#12G	1/2	20/1				40/3	3#8, 1#10G	1						4.00	AHU-1	34		
35	SPARE								20/1												4.00		36		
37		0.00	8.62	0.00	0.00	5.00										3.34	0.00	0.51	0.00	0.50	3.00		38		
39	P1B	0.00	8.64	0.00	0.00	4.00			150/3				100/3			2.13	0.00	1.02	0.00	0.00	9.56	P1C	40		
41		0.00	8.10	0.00	0.00	3.00										1.07	0.00	1.52	0.00	0.50	7.00		42		

CONNECTED LOAD

KVA

AMPS

PHASE A

43.6

363

PHASE B

49.3

410

PHASE C

41.1

342

TOTAL

134.0

372

22,000 AMPS MIN. INTERRUPTING CAPACITY (RMS SYM. AMPS)

NOTES:

A. DOOR IN DOOR CONSTRUCTION

B. COPPER BUSES.

C. WIRE SIZES ARE MINIMUM, INCREASE FOR VOLTAGE DROP.

D. U.L. SERVICE ENTRANCE RATED

KEYED NOTES:

NONE

CONNECTED (KVA)

DEMAND (KVA)

LIGHTING/CONTINUOUS

6.5

6.5

RECEPTACLES

25.6

17.8

MOTORS

5.8

5.8

HVAC

54.3

54.3

OTHER

22.2

22.2

KITCHEN

19.6

12.7

LARGEST MOTOR (KVA)

TOTAL DEMAND LOAD

119.3

KVA

DEMAND AMPS

331

AMPS

PANELBOARD "P1C"

VOLTAGE : 208 Y / 120V 3PH 4W

LOCATION: ELECT. ROOM

MOUNTING: SURFACE

100 A MAIN BUS RATING

MLO

BRANCH CIRCUIT

BRKR

BRKR

LOAD (KVA)

WIRE SIZE

C (IN)

PHASE

TRIP/ POLE

WIRE SIZE

C (IN)

LOAD (KVA)

LOAD DESCRIPTION

LTG

REC

MTR

HVC

OTH

LTG

REC

MTR

HVC

OTH

LTG

REC

MTR

HVC

OTH

LTG

REC

MTR

HVC

OTH

1	LTG. RM. 101, 102, 103	0.91						3#12, 1#12G	3/4	20/1		20/1	3#12, 1#12G	3/4	0.73				LTG. RM. 137-142	2
2	LTG. RM. 129-131, 133, 135, 136	1.01						3#12, 1#12G	3/4	20/1		20/1	3#12, 1#12G	3/4	1.12				LTG. RM. 129-127	4
5	LTG. RM. 115-118	0.44						3#12, 1#12G	3/4	20/1		20/1	3#12, 1#12G	3/4	0.63				LTG. RM. 110-113	6
7	LTG. RM. 108-109	0.67						3#12, 1#12G	3/4	20/1		20/1	3#12, 1#12G	3/4	0.37				LTG. RM. 114, 134	8
9	REC. KITCHEN						1.00	3#12, 1#12G	3/4	20/1		50/2						4.00	RANGE	10
11	REC. KITCHEN						1.00	3#12, 1#12G	3/4	20/1								4.00		12
13	REFRIGERATOR						1.00	3#12, 1#12G	3/4	20/1		20/1							SPARE	14
15	REFRIGERATOR						1.00	3#12, 1#12G	3/4	20/1		20/1	3#12, 1#12G	3/4				1.00	REC. KITCHEN	16
17	REFRIGERATOR						1.00	3#12, 1#12G	3/4	20/1		20/1	3#12, 1#12G	3/4				1.00	REC. KITCHEN	18
19	REC. KITCHEN						1.00	3#12, 1#12G	3/4	20/1		20/1	3#12, 1#12G	3/4				1.00	REC. KITCHEN	20
21	REC. KITCHEN						1.00	3#12, 1#12G	3/4	20/1		20/1							SPARE	22
23	FACP - LOO					0.50		3#12, 1#12G	3/4	20/1		20/1							SPARE	24
25	FACP - LOO					0.50		3#12, 1#12G	3/4	20/1		20/1							SPARE	26
27	DISHWASHER						1.20	3#12, 1#12G	3/4	20/1		20/1	3#12, 1#12G	3/4			0.51		EF-1	28
29	SPARE								20/1		20/1	3#12, 1#12G	3/4				0.51		EF-2	30
31	SPARE								20/1		20/1	3#12, 1#12G	3/4				0.51		EF-3	32
33	SPARE								20/1		20/1	3#12, 1#12G	3/4				0.51		EF-4	34
35	SPARE								20/1		20/1	3#12, 1#12G	3/4				0.51		EF-5	36
37	SPARE								20/1		20/1	3#10, 1#10G	3/4	0.66					SITE LIGHTING	38
39	SPARE								20/1		20/1	3#12, 1#12G	3/4				0.36		HOOD	40
41	SPARE								20/1		20/1	3#12, 1#12G	3/4			0.50			L3 - LOUVER	42

CONNECTED LOAD

KVA

AMPS

PHASE A

7.3

61

PHASE B

12.7

106

PHASE C

10.1

84

TOTAL

30.2

84

22,000 AMPS MIN. INTERRUPTING CAPACITY (RMS SYM. AMPS)

NOTES:

A. DOOR IN DOOR CONSTRUCTION

B. COPPER BUSES.

C. WIRE SIZES ARE MINIMUM, INCREASE FOR VOLTAGE DROP.

D. LOD = LOCK OUT DEVICE

KEYED NOTES:

NONE

CONNECTED (KVA)

DEMAND (KVA)

LIGHTING/CONTINUOUS

6.5

6.5

RECEPTACLES

0.0

0.0

MOTORS

3.1

3.1

HVAC

0.0

0.0

OTHER

1.0

1.0

KITCHEN

19.6

LARGEST MOTOR (KVA)

TOTAL DEMAND LOAD

23.3

KVA

DEMAND AMPS

65

AMPS

PANELBOARD "QDP"										LOCATION: ELECT. ROOM				600 A MAIN BUS RATING								
VOLTAGE : 208 Y / 120V 3PH 4W										MOUNTING: SURFACE				500 A MAIN CB								
BRANCH CIRCUIT										BRKR				BRKR		BRANCH CIRCUIT						
CKT	LOAD DESCRIPTION	LOAD (KVA)						WIRE SIZE	C (IN)	TRIP/ POLE	PHASE A B C	TRIP/ POLE	WIRE SIZE	C (IN)	LOAD (KVA)						LOAD DESCRIPTION	CKT
		LTG	REC	MTR	HVC	OTH	KIT								LTG	REC	MTR	HVC	OTH	KIT		
1		3.34	8.82	0.51	10.80	7.70	4.00								2.00	4.00		5.00			EXISTING MAINTENANCE BUILDING PANELBOARD	2
3	NEW PANELBOARD "P1A"	2.13	8.64	3.76	10.90	6.00	9.56	SEE POWER RISER		400/3		225/3	SEE POWER RISER		2.00	4.00		5.00				4
5		1.07	8.10	1.52	12.70	5.50	7.00								2.00	4.00		5.00				6
7																						8
9	SPACE									200/3		150/3									SPARE	10
11																						12
13																						14
15	SPACE									100/3		100/3									SPARE	16
17																						18
										CONNECTED LOAD		KVA	AMPS	42,000 AMPS MIN. INTERRUPTING CAPACITY (RMS SYM. AMPS)								
										PHASE A		46.2	384									
										PHASE B		52.0	433									
										PHASE C		46.9	390									
										TOTAL		145.1	403									