

# MACON COUNTY REST AREA ADDITION AND RENOVATION

## "CD - SUBMITTAL"

TIP PROJECT #: K-5103; SCO ID #: 14-11043-01A

US -23/441, MACON COUNTY, NC  
 NC DEPARTMENT OF TRANSPORTATION  
 FACILITIES MANAGEMENT DIVISION

### ARCHITECT OF RECORD

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### STRUCTURAL ENGINEER OF RECORD

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### PLUMBING / MECHANICAL / ELECTRICAL ENGINEER OF RECORD

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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		

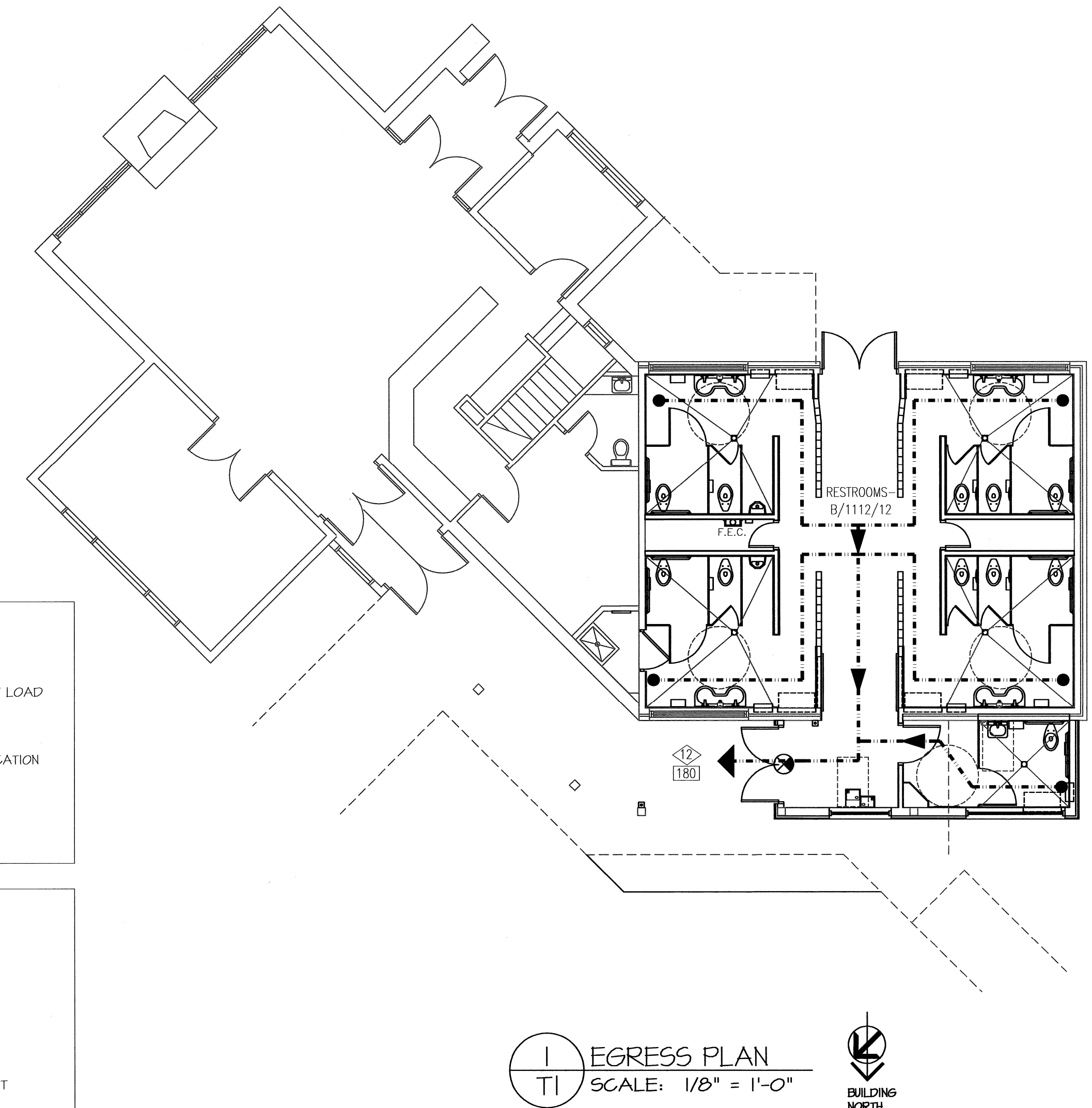
	DETAIL NUMBER SHEET NUMBER		BREAK LINE
	KEYED NOTE		PROPERTY LINE
	ROOM NUMBER		EXISTING CONTOUR
	DOOR MARKER		NEW CONTOUR
	WINDOW MARKER		FENCE
	CENTER LINE, DATUM LINE		SILT FENCE
	HIDDEN LINE		SPOT ELEVATION OR DATUM
			SOIL BORING NO. 1

TABLE 1: EXIT WIDTH, NUMBER & ARRANGEMENTS OF EXITS

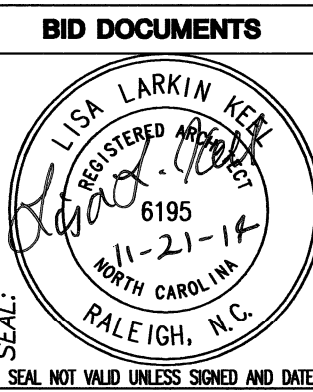
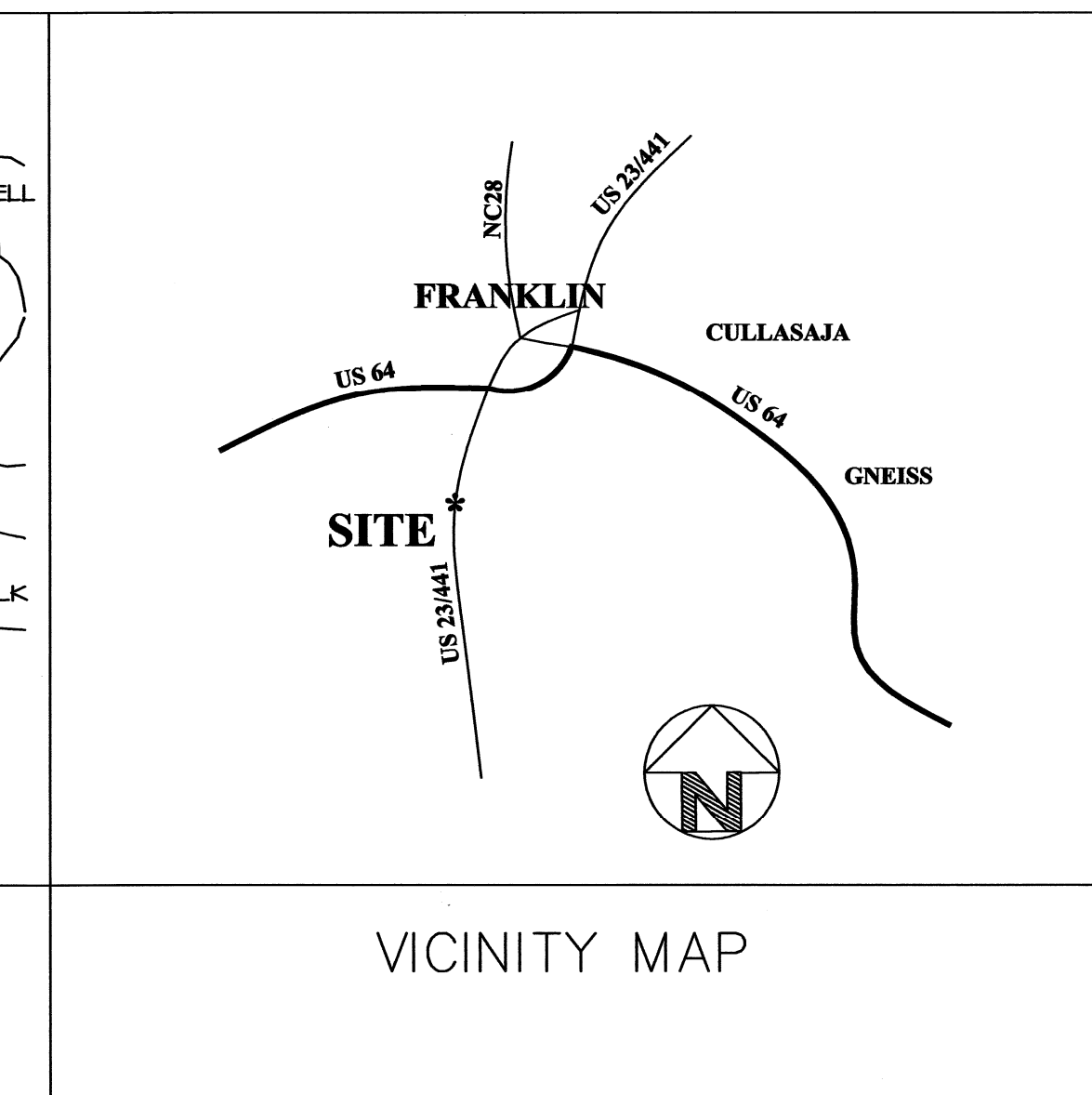
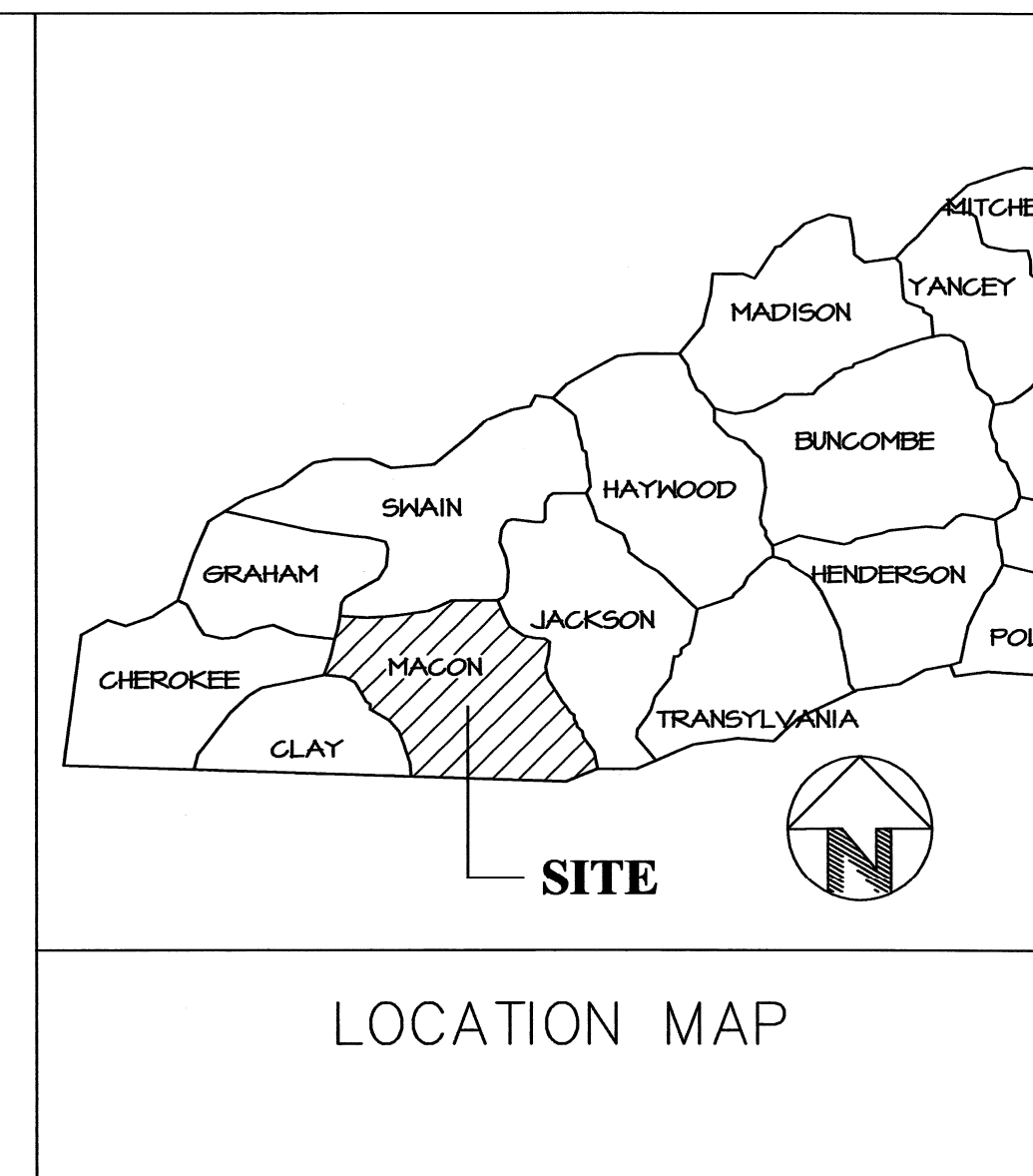
USE GROUP OR SPACE DESCRIPTION	OCCUPANCY TYPE (SEE NOTE 1)	EXIT WIDTH						NUMBER AND ARRANGEMENT OF EXITS							
		(A) AREA SQ. FT.	(B) AREA PER OCCUPANT (TABLE 1004.1.1)	CALCULATED OCCUPANT LOAD	TOTAL OCCUP. LOAD PER GROUP	(C) EGRESS WIDTH PER OCCUPANT (1005.1)		EXIT WIDTH (in)		MINIMUM NUMBER OF EXITS	TRAVEL DISTANCE				
						STAIR LEVEL	STAIR LEVEL	REQUIRED WIDTH (SECTION 1005.1) (a+b)xc	ACTUAL WIDTH SHOWN ON PLANS		ALLOWABLE TRAVEL DISTANCE (TABLE 1016.1)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS			
RESTROOMS	BUSINESS	1112	100	2	12	.3"	.2"	N/A	1.2"	N/A	36"	1	1	75	56'-0"

#### EGRESS/LIFE SAFETY NOTES:

- THE BUILDING TOTAL OCCUPANCY (INCLUDING RESTROOMS AREA & VISITOR CENTER) IS 38 PEOPLE.
- VISITOR'S CENTER SECOND FLOOR (NOT SHOWN) = 729 GROSS SQ. FT. IT HAS TWO OFFICES AND A 165 NET SQ FT CONFERENCE ROOM; 165 SQ FT/ 15 = 11 OCCUPANTS MAX.



∠ ANGLE, LENGTH	D DBL DOUBLE	HB HOSE BIB	PNL PANEL	T TREAD
AL ALUMINUM	DET DETAIL	HM HOLLOW METAL	PL LAM PLASTIC LAMINATE	T&G TONGUE AND GROOVE
AB ANCHOR BOLT	DIA DIAMETER	H HORIZ HORIZONTAL	PL PLATE	TLT TOILET
AFF ABOVE FINISH FLOOR	DIAG DIAGONAL	H HIGH, HEIGHT	PLM PLUMBING	TOF TOP OF FOOTING
ALT ALTERNATE	DN DOWN	INSUL INSULATION	PLND PLYWOOD	TOJ TOP OF JOIST
APRX APPROXIMATE	DS DOWNSPOUT	INT INTERIOR	PRFAB PREFABRICATED	TOS TOP OF STEEL
ARCH ARCHITECTURAL	EA EACH	INV INVERT	PSI POUNDS PER SQ INCH	TOW TOP OF WALL
AVG AVERAGE	EN EACH WAY	JC JANITOR'S CLOSET	R RISER, ROD	TRTD TREATED
BB BACK TO BACK	ELEC ELECTRICAL	JST JOIST	RD ROOF DRAIN	TYP TYPICAL
BSMT BASEMENT	EL ELEVATION	KS KNEE SPACE	REF REFRIGERATOR	UNFIN UNFINISHED
BRG BEARING	ELEV ELEVATOR	LAV LAVATORY	REQD REQUIRED	UNLESS OTHERWISE NOTED
BN BENCHMARK	EXIST EXISTING	LB, # FOUND	REV REVERSED, REVISION	VERT VERTICAL
BLKG BLOCKING	EJ EXPANSION JOINT	MFR MANUFACTURER	SAC SUSPENDED ACOUSTICAL TILE	W WIDE, WIDTH
BD BOARD	EXT EXTERIOR	MO MASONRY OPENING	SCT SANITARY	W/ WITH
BLDG BUILDING	EAC EXTERIOR WATER COOLER	MATL MATERIAL	SECT SECTION	WVF WOVEN WIRE FABRIC
CAB CABINET	FE, FEC FIRE EXTINGUISHER, CABINET	MAX MAXIMUM	SFGL SAFETY GLASS	WD WOOD
CANTL CANTILEVER	FD FLOOR DRAIN	MIN MINIMUM	SHT SHELF, SHELVES	
CB CATCH BASIN	FF FACTORY FINISH	MTD MOUNTED	SHT SHEET	
C16 CURB AND GUTTER	FFE FINISH FLOOR ELEVATION	MLD MOULDING	SHT& SHEATHING	
CIP CAST IRON PIPE	FIN FL FINISH FLOOR	NIC NOT IN CONTRACT	SIM SIMILAR	
C-J CONTROL JT, CEILING JST	FTG FOOTING	NTS NOT TO SCALE	SPEC SPECIFICATION	
CL CENTERLINE	FV FIELD VERIFY	NO. NUMBER	SQ SQUARE	
CLR AN CLEAR ANODIZED	FOM FACE OF MASONRY	OC ON CENTER	SS STAINLESS STEEL, SANITARY SEWER	
CLG CEILING	FOS FACE OF STUD	OPNG OPENING	STD STANDARD	
CLKG CAULKING	FOF FACE OF FINISH	OSB ORIENTED STRAND BOARD	STL STEEL	
CMU CONCRETE MASONRY UNIT			STO STORAGE	
COL COLUMN				
CONC CONCRETE				
CONT CONTINUOUS				
CRS COURSES				



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DRAWING TITLE / DESCRIPTION:  
**TITLE SHEET/ EGRESS PLAN**

PROJECT TITLE:  
**MACON COUNTY REST AREA, NCDOT**  
 US-23/441, NC 28763  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO. 14-11043-01A  
 TIP PROJ. NO. K-5103  
 WBS NO. 42231.3.1  
 FEDERAL ID NO. NHPP-0023(31)  
 ASSET NUMBER:  
 CO. # SITE # BLDG #  
 56 - 16 - 1  
 REVISIONS  
 NO. DATE  
 DATE ISSUED: 11-21-14  
 DRAWN BY: AS  
 CHECKED BY: LLK  
 SHEET NO.  
**T1**



**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: **MACON COUNTY REST AREA RENOVATION/ ADDITION**  
 Address: **US-23/441, MACON COUNTY, NC** Zip Code **28734**  
 Proposed Use: **RESTROOM FACILITY- BUSINESS (B)**  
 Owner/Authorized Agent: **NCDOT** Phone # ( 919 ) **707 -4548** E-Mail **llkeel@ncdot.gov**  
 Owned By:  City/County  Private  State  
 Code Enforcement Jurisdiction:  City  County  State

**LEAD DESIGN PROFESSIONAL:** Lisa Keel  
 DESIGNER FIRM NAME LICENSE # TELEPHONE # E-MAIL  
 Architectural **NCDOT** Lisa Keel 6195 (919) 707-4550 llkeel@ncdot.gov  
 Civil ( )  
 Electrical Burke Design Group Ben Burke 22038 (919) 771-1916 benburke@nc.rr.com  
 Fire Alarm Burke Design Group Ben Burke 22038 (919) 771-1916 benburke@nc.rr.com  
 Mechanical Burke Design Group Ben Burke 22038 (919) 771-1916 benburke@nc.rr.com  
 Sprinkler System ( )  
 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) 1990 ORIGINAL USE(S) (Ch. 3):  
 RENOVATED: (date) CURRENT USE(S) (Ch. 3):  
 PROPOSED USE(S) (Ch. 3):

BASIC BUILDING DATA			
Construction Type:	<input type="checkbox"/> I-A	<input type="checkbox"/> II-A	<input type="checkbox"/> III-A
(check all that apply)	<input type="checkbox"/> I-B	<input type="checkbox"/> II-B	<input type="checkbox"/> III-B
Sprinklers:	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Partial	<input type="checkbox"/> Yes
Standpipes:	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes	Class <input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> Wet <input type="checkbox"/> Dry
Fire District:	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (Primary)	Flood Hazard Area: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
Building Height: (feet)	31'-0"		
Gross Building Area:			
FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6 <sup>th</sup> Floor			
5 <sup>th</sup> Floor			
4 <sup>th</sup> Floor			
3 <sup>rd</sup> Floor			
2 <sup>nd</sup> Floor	729	0	729
Mezzanine			
1 <sup>st</sup> Floor	2,867	192	3,059
Basement			
TOTAL	3,596	192	3,788

**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  
 I-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  
 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  
 I-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: \_\_\_\_\_ Hr. 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.  

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

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 <sup>3</sup> AREA	(C) AREA FOR FRONTAGE INCREASE <sup>2</sup>	(D) AREA FOR SPRINKLER INCREASE <sup>2</sup>	(E) ALLOWABLE AREA OR UNLIMITED <sup>2</sup>	(F) MAXIMUM BUILDING AREA <sup>4</sup>
1	B	3,788	9,000	NOT USED	N/A	9,000	18,000
2	B	729	9,000	NOT USED	N/A	9,000	

<sup>1</sup> 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 = \_\_\_ (F)  
 b. Total Building Perimeter = \_\_\_ (P)  
 c. Ratio (F/P) = \_\_\_ (F/P)  
 d. W = Minimum width of public way = \_\_\_ (W)  
 e. Percent of frontage increase  $I_r = 100 [ F/P - 0.25 ] \times W/30 = \_\_\_ (\%)$   
<sup>2</sup> 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  
<sup>3</sup> Unlimited area applicable under conditions of Section 507.  
<sup>4</sup> Maximum Building Area = total number of stories in the building x E (506.4).  
<sup>5</sup> 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				
Type of Construction	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type <b>V-B</b>			Type <b>V-B</b>	<b>602.5</b>
Building Height in Feet	<b>40</b>	Feet = H + 20' = <b>N/A</b>	<b>29'-0"</b>	<b>503</b>
Building Height in Stories	<b>2</b>	Stories + 1 = <b>N/A</b>	<b>1</b>	<b>503</b>

FIRE PROTECTION REQUIREMENTS						
BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	REQ'D	RATING PROVIDED (W/ REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses	>30'	0				
Bearing Walls		0				
Exterior						
North						
East						
West						
South						
Interior		0				
Nonbearing Walls and Partitions		0				
Exterior walls						
North						
East						
West						
South						
Interior walls and partitions		0				
Floor Construction						
Including supporting beams and joists		0				
Roof Construction		0				
Including supporting beams and joists						
Shaft Enclosures - Exit						
Shaft Enclosures - Other						
Corridor Separation						
Occupancy Separation						
Party/Fire Wall Separation						
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 #: **T1**  
 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 schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation  
 Location of doors with panic hardware (1008.1.10)  
 Location of doors with delayed egress locks and the amount of delay (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 sq. ft.  
 Note any code exceptions or table notes that may have been utilized regarding the items above

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 REQUIRED	PROVIDED	# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
			REGULAR WITH 5' ACCESSIBLE	VAN SPACES WITH 13' ACCESSIBLE	8' ACCESSIBLE	
TOTAL						

**STRUCTURAL DESIGN**

**DESIGN LOADS:**  
 Importance Factors: Wind (I<sub>w</sub>) **1.0**  
 Snow (I<sub>s</sub>) **1.0**  
 Seismic (I<sub>e</sub>) **1.0**  
 Live Loads: Roof **20** psf  
 Mezzanine **100** psf  
 Floor **100** psf  
 Ground Snow Load: **15** psf

**Wind Load:** Basic Wind Speed **90** mph (ASCE-7)  
 Exposure Category **B**  
 Wind Base Shears (for MWFRS) V<sub>x</sub> = \_\_\_\_\_ V<sub>y</sub> = \_\_\_\_\_

**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<sub>s</sub> **40.2** %g S<sub>1</sub> **10.7** %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<sub>x</sub> = \_\_\_\_\_ V<sub>y</sub> = \_\_\_\_\_  
 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) \_\_\_\_\_ psf  
 Presumptive Bearing capacity **1,500** psf  
 Pile size, type, and capacity \_\_\_\_\_  
**SPECIAL INSPECTIONS REQUIRED:**  Yes  No

USE	WATERCLOSETS		URINALS		LAVATORIES		SHOWERS/TUBS	DRINKING FOUNTAINS	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE		REGULAR	ACCESSIBLE
	A	EXISTING	4	6	2	2	2	0	1
	NEW	4	6	2	3	3	0	1	1
	REQUIRED	1	1	0	1	1	0	1	1

**SPECIAL APPROVALS**

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

**ENERGY REQUIREMENTS:**  
 The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Climate Zone:  3  4  5  
**Method of Compliance:**  
 Prescriptive (Energy Code)  
 Performance (Energy Code)  
 Prescriptive (ASHRAE 90.1)  
 Performance (ASHRAE 90.1)

**THERMAL ENVELOPE (Applies to the new building addition only)**

**Roof/ceiling Assembly (each assembly)**  
 Description of assembly: Asphalt shingle roof w/ attic batt insulation  
 U-Value of total assembly: 0.025  
 R-Value of insulation: 38  
 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: Cedar siding, 2" air space, 1.5" rigid insulation, R-19 in 2x6 stud wall.  
 U-Value of total assembly: 0.33  
 R-Value of insulation: 26.5  
 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: 0.73  
 R-Value of insulation: R-10  
 Horizontal/vertical requirement: 16"  
 slab heated: NO

**MECHANICAL SUMMARY**

**MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT**

**Thermal Zone** 4A  
 winter dry bulb: 11  
 summer dry bulb: 88  
**Interior design conditions**  
 winter dry bulb: 72  
 summer dry bulb: 75  
 relative humidity: 50%  
**Building heating load:** 79,000  
**Building cooling load:** 39,100  
**Mechanical Spacing Conditioning System**  
 Unitary  
 description of unit: 3.5 TON SPLIT SYSTEM HEAT PUMP  
 heating efficiency: SEE EQUIPMENT SCHEDULES  
 cooling efficiency: \_\_\_\_\_  
 size category of unit: " " "  
 Boiler  
 Size category. If oversized, state reason: N/A  
 Chiller  
 Size category. If oversized, state reason: \_\_\_\_\_  
**List equipment efficiencies:** \_\_\_\_\_

**ELECTRICAL SUMMARY**

**ELECTRICAL SYSTEM AND EQUIPMENT**

**Method of Compliance:**  
 Energy Code:  Prescriptive  Performance  
 ASHRAE 90.1:  Prescriptive  Performance  
**Lighting schedule (each fixture type)**  
 lamp type required in fixture SEE LIGHT FIXTURE SCHEDULE  
 number of lamps in fixture " " " "  
 ballast type used in the fixture " " " "  
 number of ballasts in fixture " " " "  
 total wattage per fixture " " " "  
 total interior wattage specified vs. allowed (whole building or space by space) 1231 VA/ 1233 VA  
 total exterior wattage specified vs. allowed  
**Additional Prescriptive Compliance**  
 506.2.1 More Efficient Mechanical Equipment  
 506.2.2 Reduced Lighting Power Density  
 506.2.3 Energy Recovery Ventilation Systems  
 506.2.4 Higher Efficiency Service Water Heating  
 506.2.5 On-Site Supply of Renewable Energy  
 506.2.6 Automatic Daylighting Control Systems

**BID DOCUMENTS**

LISA LARKIN KEEL  
 ARCHITECTS & ENGINEERS  
 6195  
 11-21-11  
 NORTH CAROLINA  
 RALEIGH, N.C.  
 SEAL NOT VALID UNLESS SIGNED AND DATED

DESIGNED BY:  
**ARCHITECTS & ENGINEERS**  
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CONSULTANT:  
 NORTH CAROLINA  
 NORTHERN DEVELOPMENT  
 150 S. 7th St.  
 RALEIGH, N.C.

DRAWING TITLE / DESCRIPTION:  
**BUILDING CODE SUMMARY**

PROJECT TITLE:  
**MACON COUNTY  
REST AREA, NCDOT  
MACON COUNTY, NORTH CAROLINA**

SCD ID NO. 14-11043-01A  
 TIP PROJ. NO. K-5103  
 WBS NO. 42231.3.1  
 FEDERAL ID NO. NHPP-002(31)  
 ASSET NUMBER: \_\_\_\_\_  
 CO.# SITE.# BLDG.#  
**56 = 16 = 1**  
 REVISIONS  
 NO. DATE  
 DATE ISSUED: 11-21-14  
 DRAWN BY: AS  
 CHECKED BY: LLK  
 SHEET NO.

**T2**

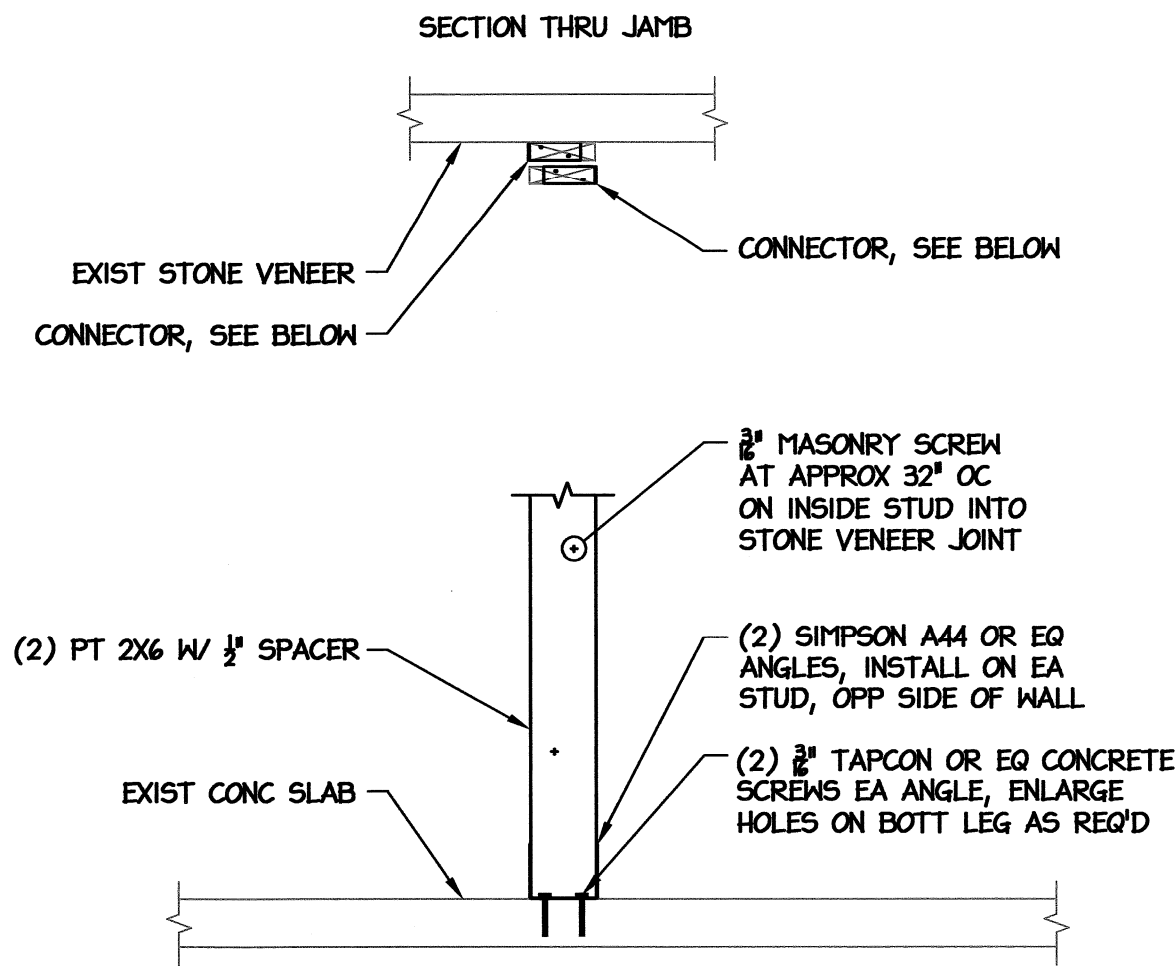


**GENERAL NOTES:**

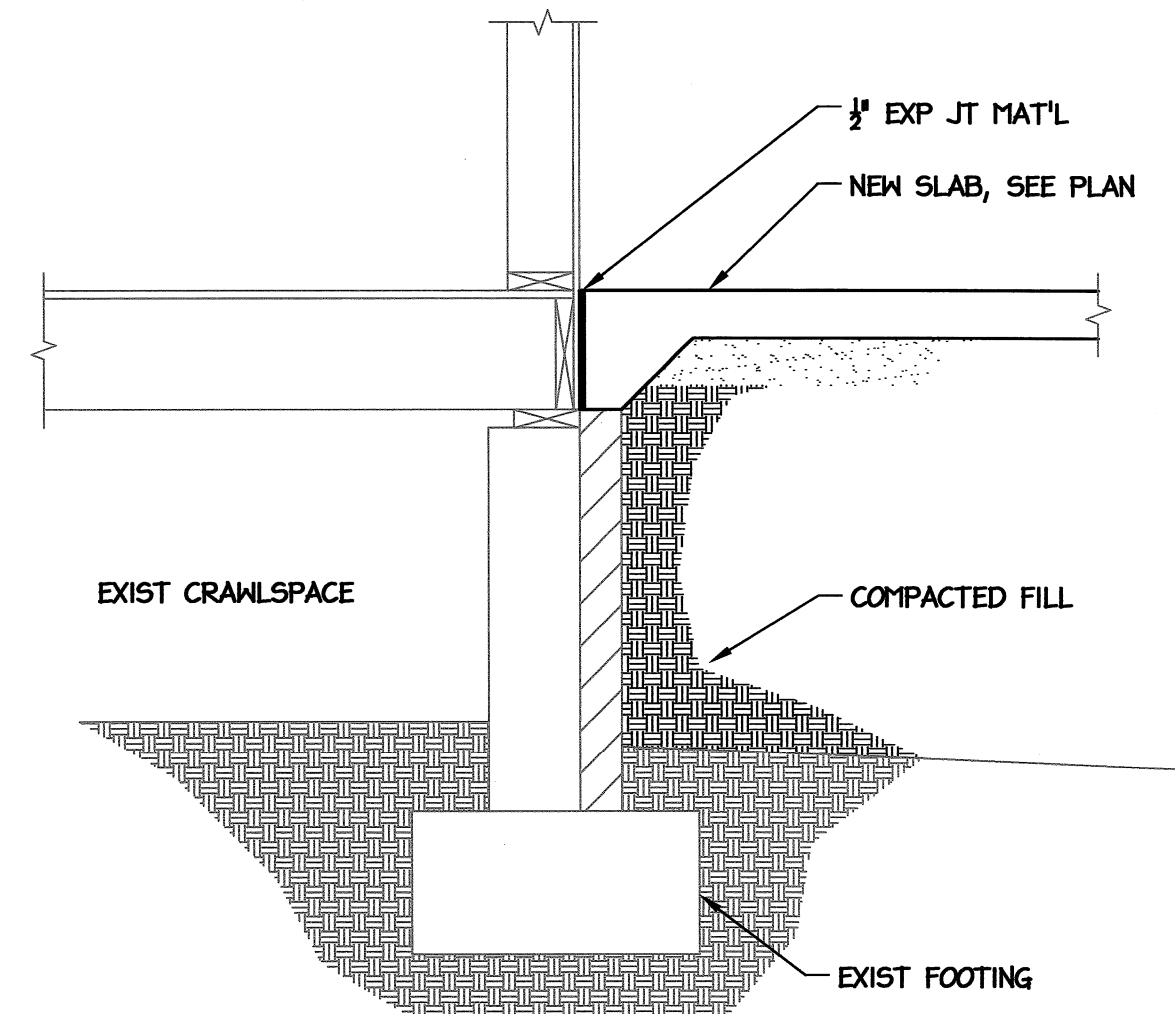
- A. GENERAL**
- See specifications for further information. In case of conflict between specifications & drawings, contact architect for resolution.
  - Contractor is responsible for coordination & distribution of all changes in contract documents to all subcontractors.
  - Contractor shall verify all field conditions, elevations, & dimensions prior to construction. Do not scale from plans.
  - Means & methods of construction, including temporary bracing, shoring, & jobsite safety, are the responsibility of the contractor.
  - Structural frame shall be braced until erection is complete & permanent connections & bracing are installed.
  - Provide silt fence or other erosion & sediment control measures as required.
  - If demolition is included in project, sawcut all edges of existing slab and asphalt to remain adjacent to new construction.
- B. FOUNDATION**
- Footing excavations shall be reviewed by a geotechnical engineer or construction testing agency approved by the architect and paid for by the owner. Presumptive soil bearing capacity = 1500 psf.
  - Footing depths shown are based on presumptive soil properties. Soft or unsuitable soils shall be removed & replaced with suitable fill as specified.
  - 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 98% maximum density.
  - Contractor is responsible for shoring while excavating near existing structures.

- C. CONCRETE**
- Compressive strength of concrete shall be 4000 psi, unless otherwise noted on plans.
  - Coordinate floor slopes and depressions with arch and plumbing plans. Maintain specified slab thickness below depressed or sloped areas.
  - If not specified on plans, provide sawed slab control joints in slabs on grade spaced at not more than 48 times the slab thickness.
  - Reinforcing steel shall meet ASTM A 615, Grade 60.
  - Welded wire reinforcement shall conform to ASTM A 185 & A 82.
  - Grout under all columns & beam bearing plates with non-shrink, non-metallic grout which meets ASTM C 1107.
  - Clear distance from face of concrete to main reinforcing:
- |   |    |
|---|----|
| Suspended slabs and joists:             | 1" |
| Grade beams, pedestals, columns, walls: | 2" |
| Footings & walls cast against earth:    | 3" |
- Provide (2) #4 x 48" diagonal corner bars at center of slab at all corners of floor slab openings.
  - Lap all reinforcement splices 48 bar diameters, UON.
  - Detailing, fabrication, & installation of reinforcing steel shall conform to ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" (ACI 315).
  - Workmanship, tolerances, & concrete placement shall conform to "Standard Specifications for Structural Concrete" (ACI 301).
  - Chamfer exposed edges of concrete 3/4", UON.
  - Anchor bolts shall conform to ASTM F 1554, Grade 36.
  - See architectural plans for floor finishes. Coordinate slab curing & sealing compounds with flooring materials.

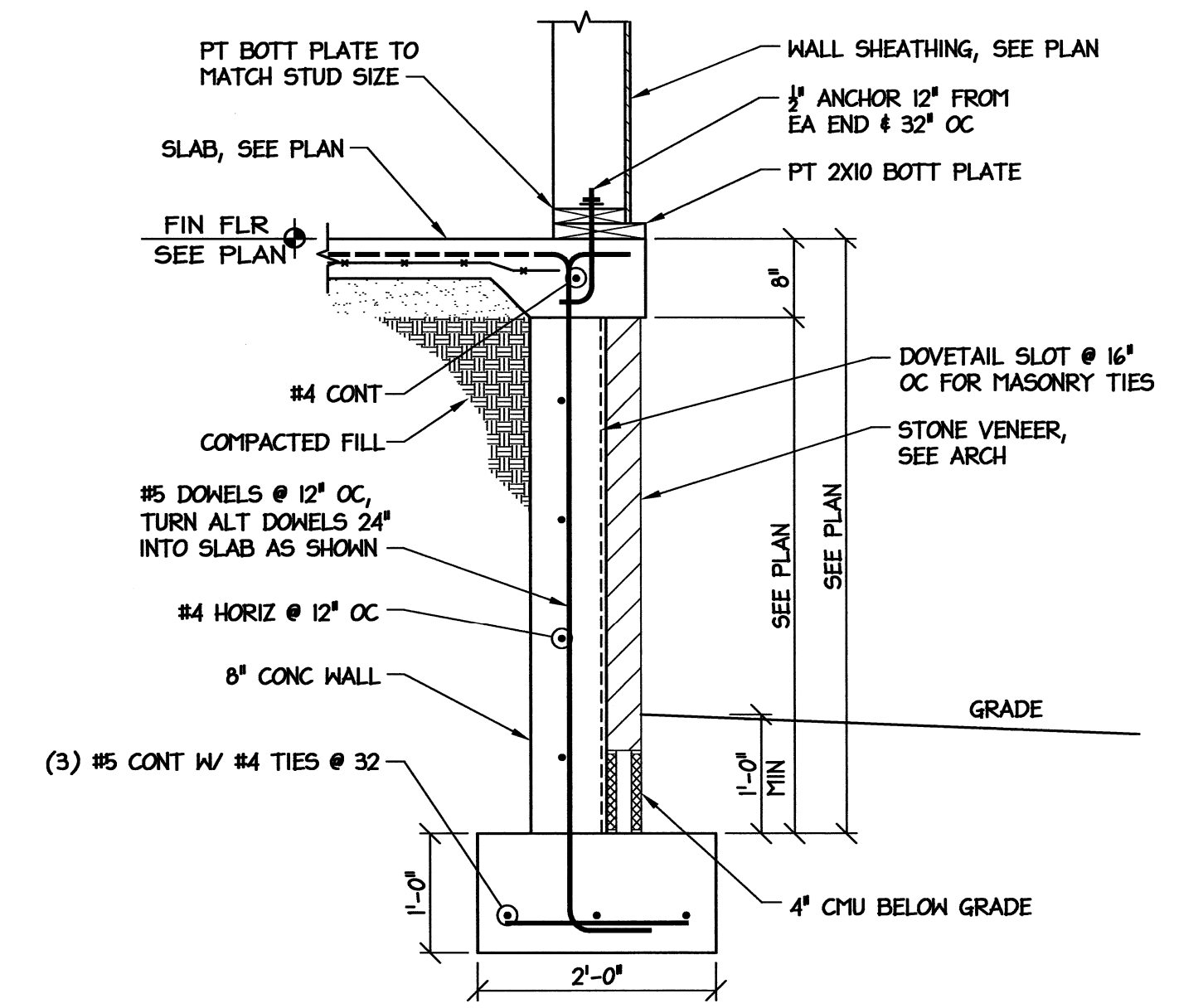
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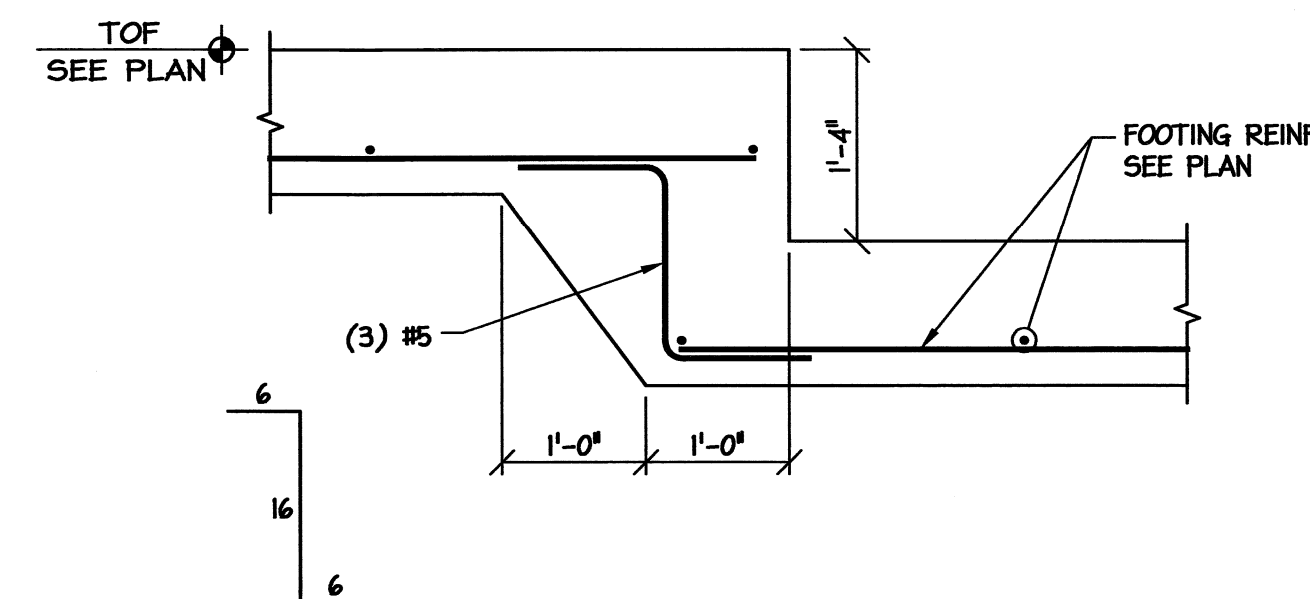
**6** NEW JAMB AT EXIST WALL  
SCALE: 3/4" = 1'-0"



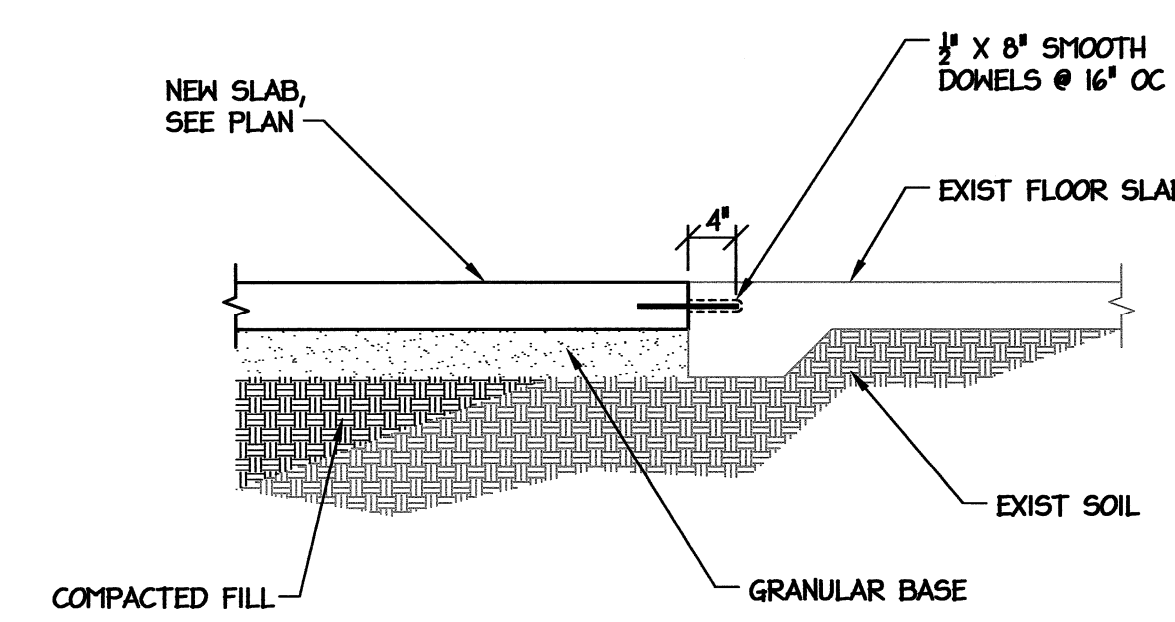
**3** NEW SLAB AT EXIST WALL  
SCALE: 3/4" = 1'-0"



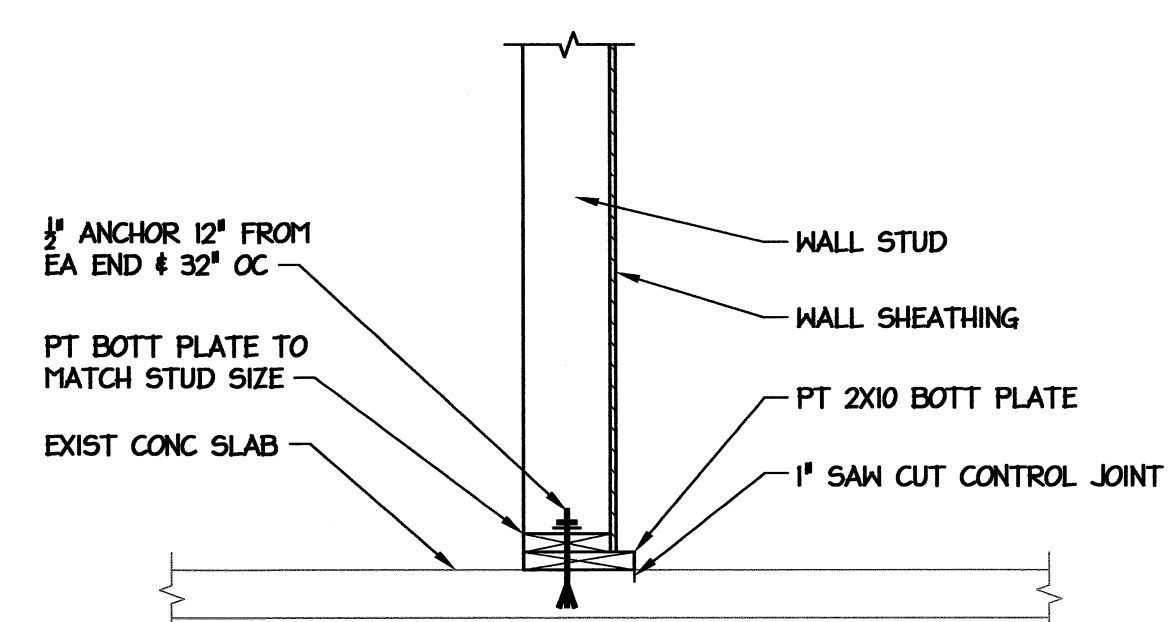
**2** NEW STRIP FOOTING  
SCALE: 3/4" = 1'-0"



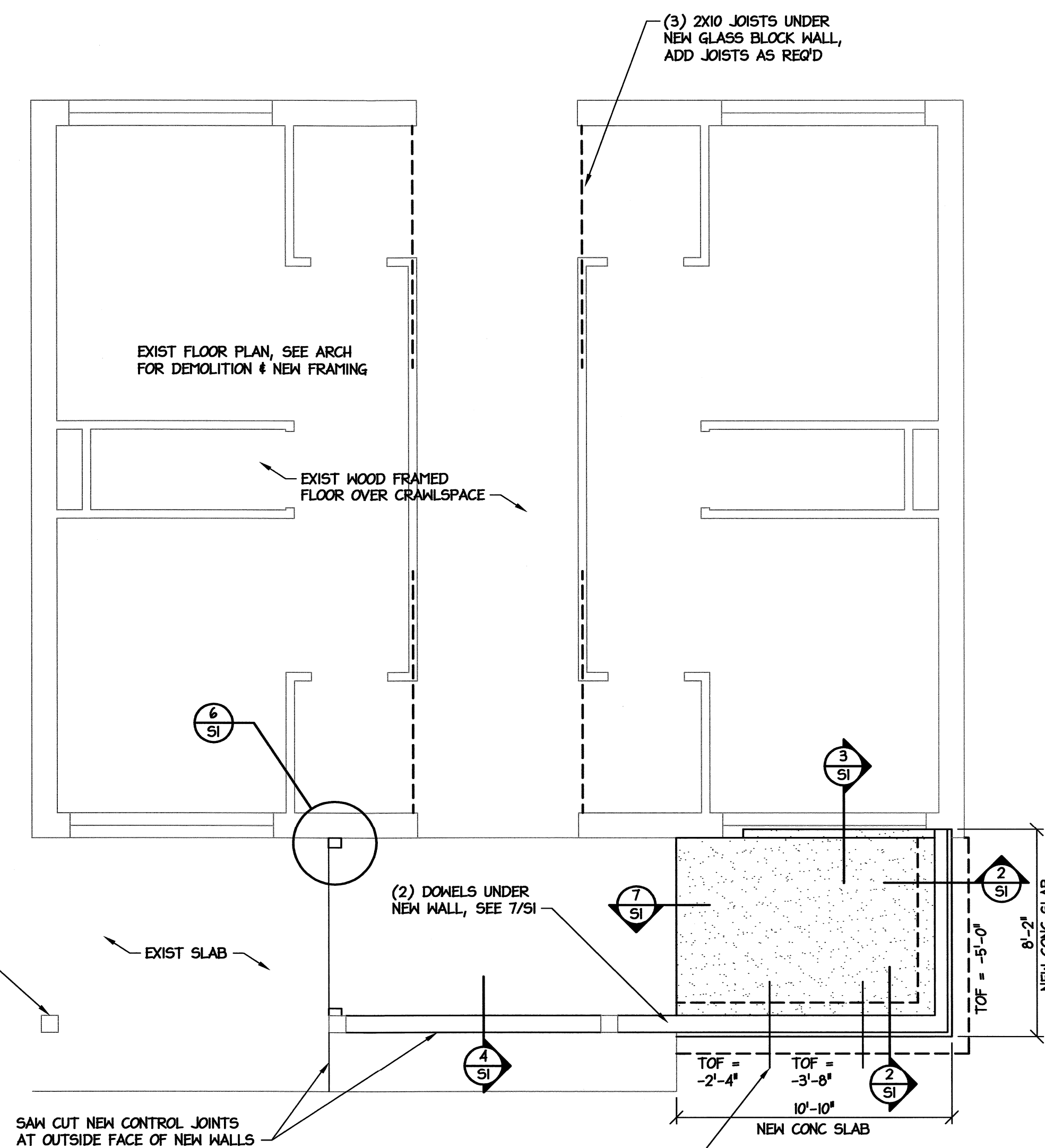
**5** FOOTING STEP  
SCALE: 3/4" = 1'-0"



**7** NEW SLAB AT EXIST SLAB  
SCALE: 3/4" = 1'-0"



**4** NEW WALL ON EXIST SLAB  
SCALE: 3/4" = 1'-0"



- NOTES:**
- CONCRETE STRENGTH FOR FOOTINGS & SLAB = 4000 PSI.
  - DO NOT SCALE FROM DRAWINGS. USE GIVEN DIMENSIONS. FIELD VERIFY DIMENSIONS SHOWN W/ EXISTING STRUCTURE.
  - ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS ARE ABOVE FIRST FINISH FLOOR, REF ELEVATION = +0'-0". NEW FLOOR ELEVATION TO MATCH EXISTING FLOOR ELEVATION.
  - FLOOR SLAB SHALL BE 4" THICK CONCRETE REINF W/ 6X6 - W1.4 X W1.4 WWR ON MIN 6 MIL VAPOR RETARDER OVER 4" COMPACTED GRANULAR BASE
  - SEE ARCH PLANS FOR FLOOR FINISHES & DIMENSIONS NOT SHOWN.
  - SEE ARCH & SITE PLANS FOR EXTERIOR CONCRETE & GRADING.

↓ CALLED NORTH

**1** FDN & FLOOR FRAMING PLAN  
SCALE: 1/4" = 1'-0"

BD DOCUMENTS

DESIGNED BY: **FACILITIES DESIGN ARCHITECTS & ENGINEERS**  
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CONSULTANT:

DRAWING TITLE / DESCRIPTION: **FOUNDATION PLAN FOUNDATION DETAILS**

PROJECT TITLE: **MACON COUNTY REST AREA, NCDOT**  
US-28/441, NC 28763  
MACON COUNTY, NORTH CAROLINA

SCO ID NO.	14-11043-01A	
TIP PROJ. NO.	K-5103	
WBS NO.	42231.3.1	
FEDERAL ID NO.	NHPP-0023(31)	
ASSET NUMBER:		
CO.#	SITE.#	BLDG.#
56	16	1

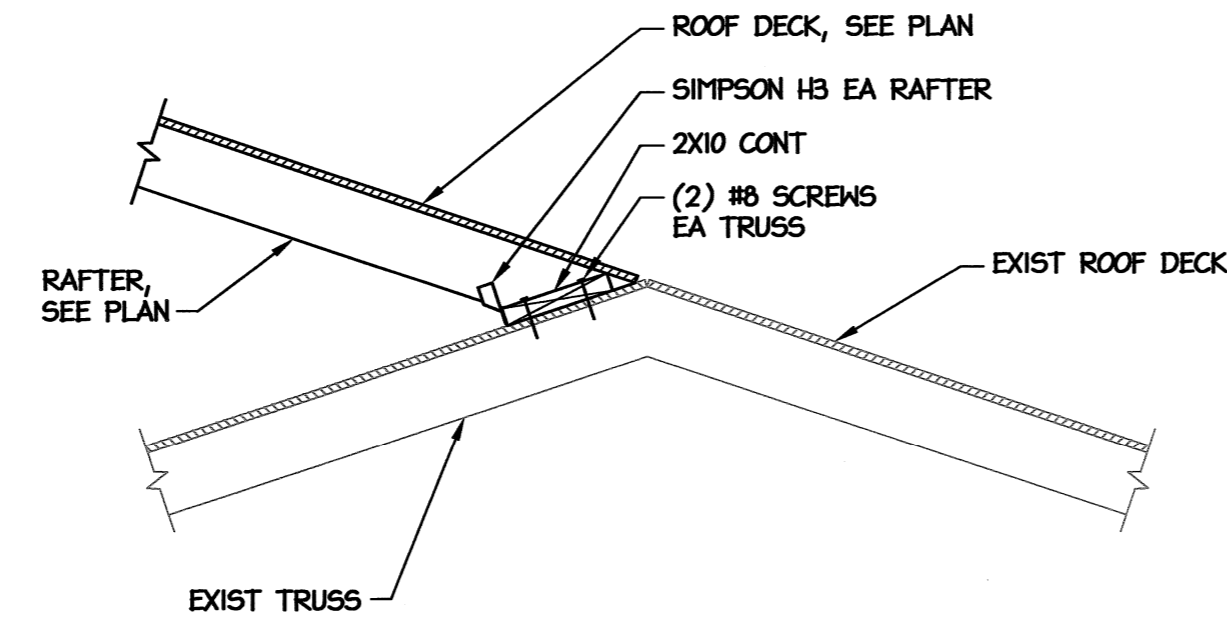
REVISIONS

NO.	DATE

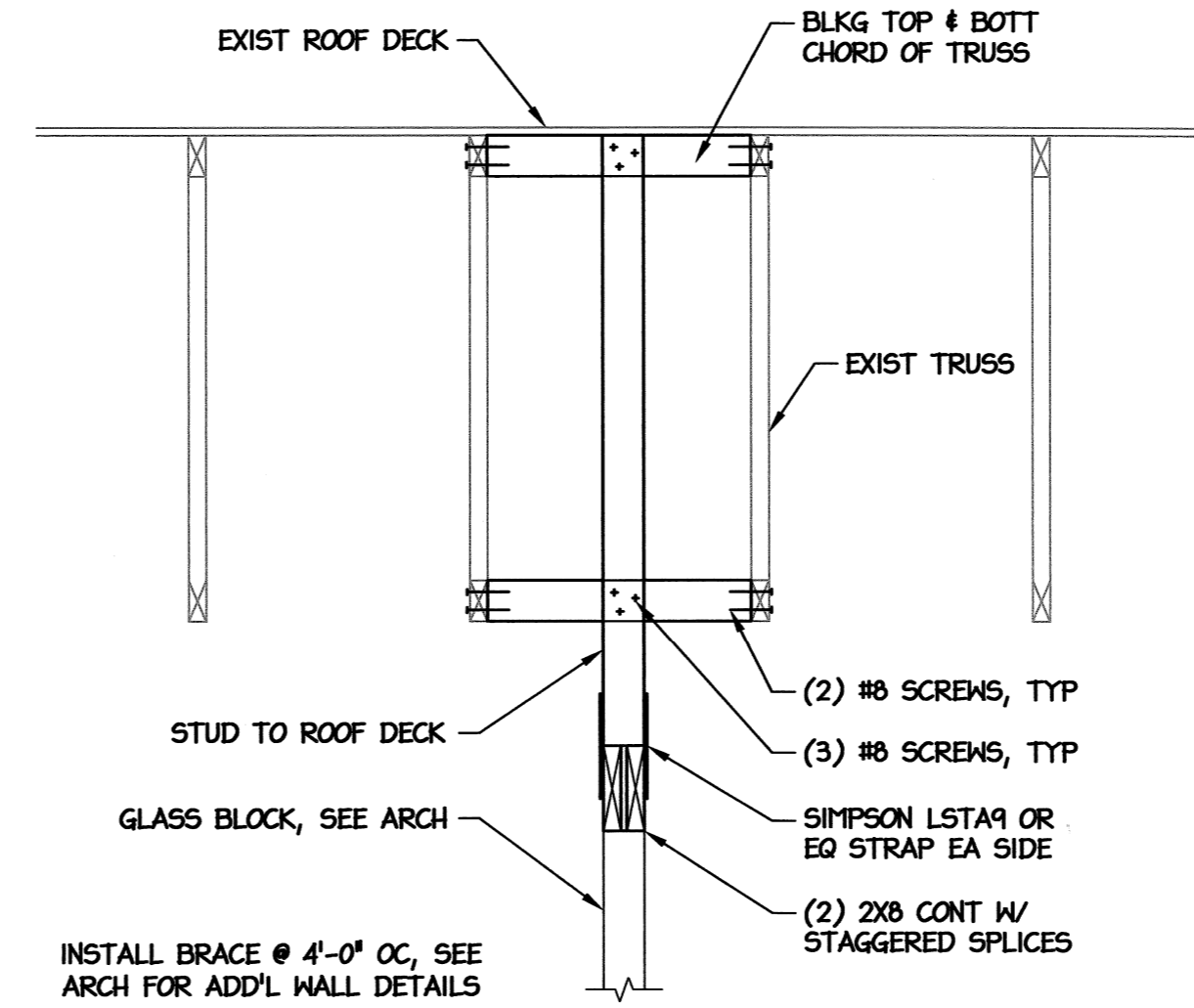
DATE ISSUED: 11-21-14  
DRAWN BY: MDX  
CHECKED BY: MDX  
SHEET NO. **S1**

**GENERAL NOTES (CONT'D):**

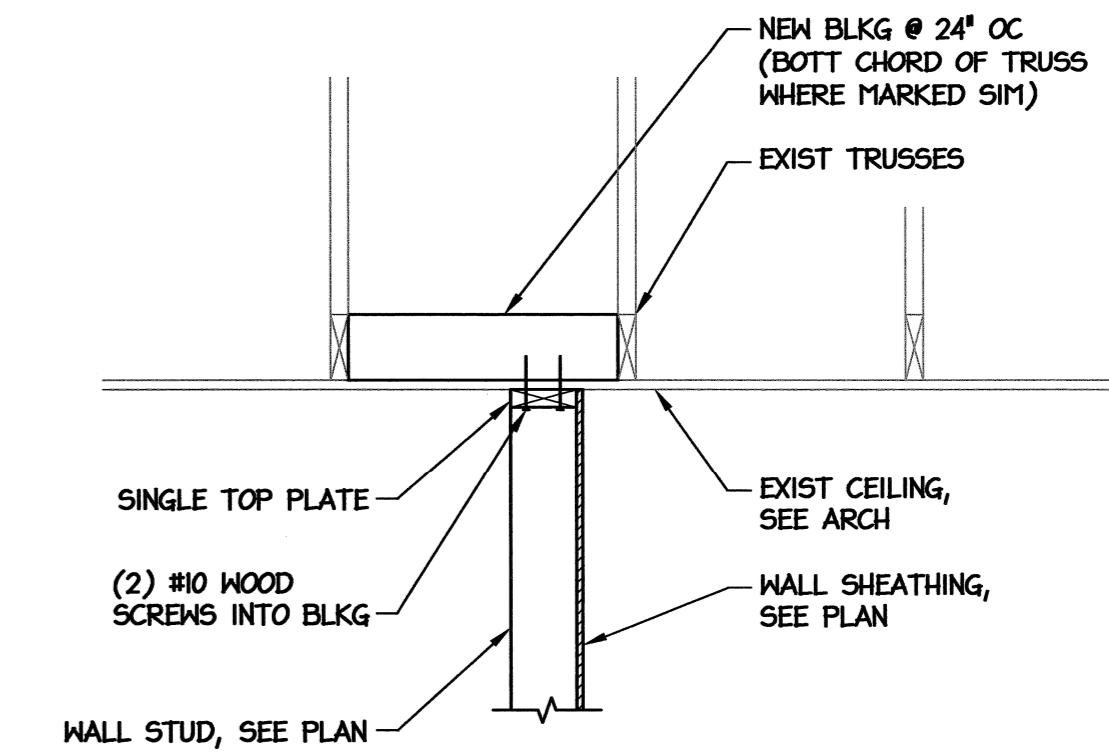
- D. WOOD**
- Structural lumber shall be SPF #2 or better, UON. Wood for fabricated trusses shall be SYP #2 or better, except that webs may be SYP #3.
  - Wood in contact with concrete or masonry shall be treated.
  - Straps, ties, hangers, & other connection hardware shall be galvanized.
  - Connections not otherwise detailed shall be in accordance with Tables 2304.9.1.1 thru 2304.9.1.6 of the NC State Building Code.
  - 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.
  - 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.
  - Additional bracing may be required by engineer of record as indicated on plans for support of gable walls or other items.
  - Install blocking in walls & ceiling where required for partitions, fixtures, & other misc items. Coordinate with all trades.
- E. MASONRY**
- Unless otherwise shown, provide control joints in concrete masonry walls at approx 20' OC, & brick expansion joints at approx 40' OC. Coord w/ architect.
  - Use preformed neoprene gasket material at all CMU control joints.
  - Grout all reinforced cells w/ 2000 psi grout meeting ASTM C 476. Consolidate grout by mechanical vibration and reconsolidate by mechanical vibration after initial water loss and settlement has occurred.
  - Masonry shall be laid in running bond with type S mortar.
  - Reinforce all CMU walls with 9 gauge ladder type joint reinforcement @ 16" OC vertical (every other course).



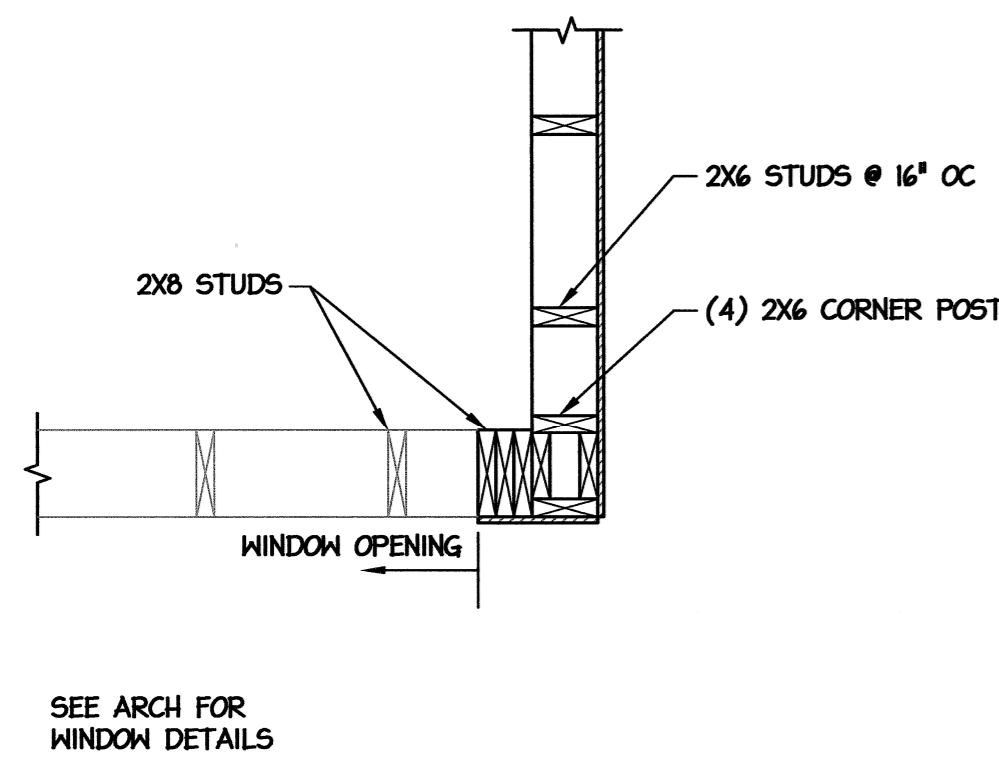
**6** NEW ROOF OVERBUILD  
SCALE: 3/4" = 1'-0"



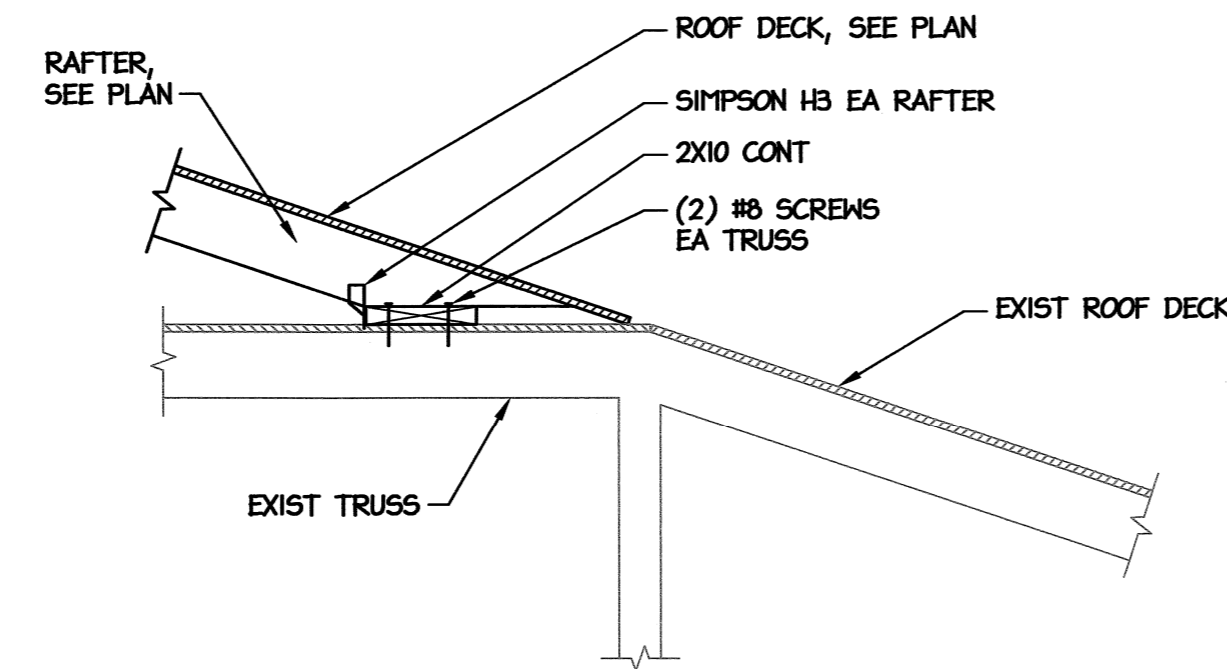
**3** WALL BRACE DETAIL  
SCALE: 3/4" = 1'-0"



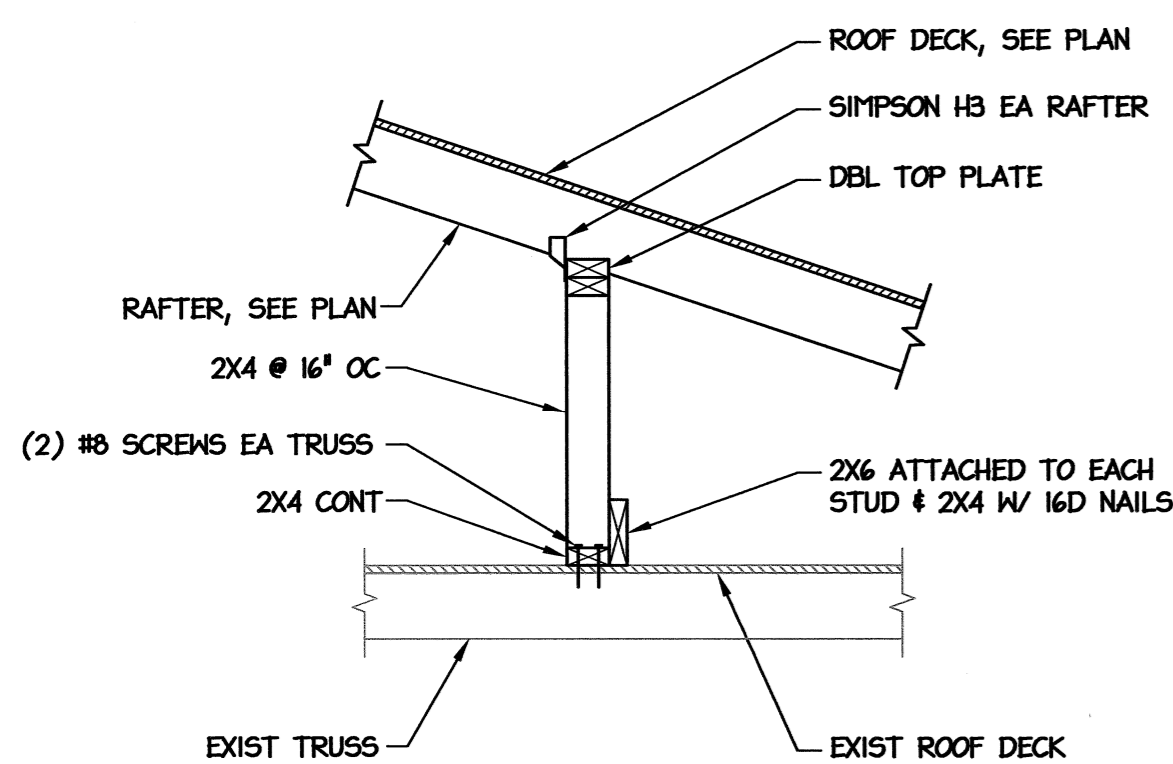
**2** NEW WALL AT EXIST SOFFIT  
SCALE: 3/4" = 1'-0"



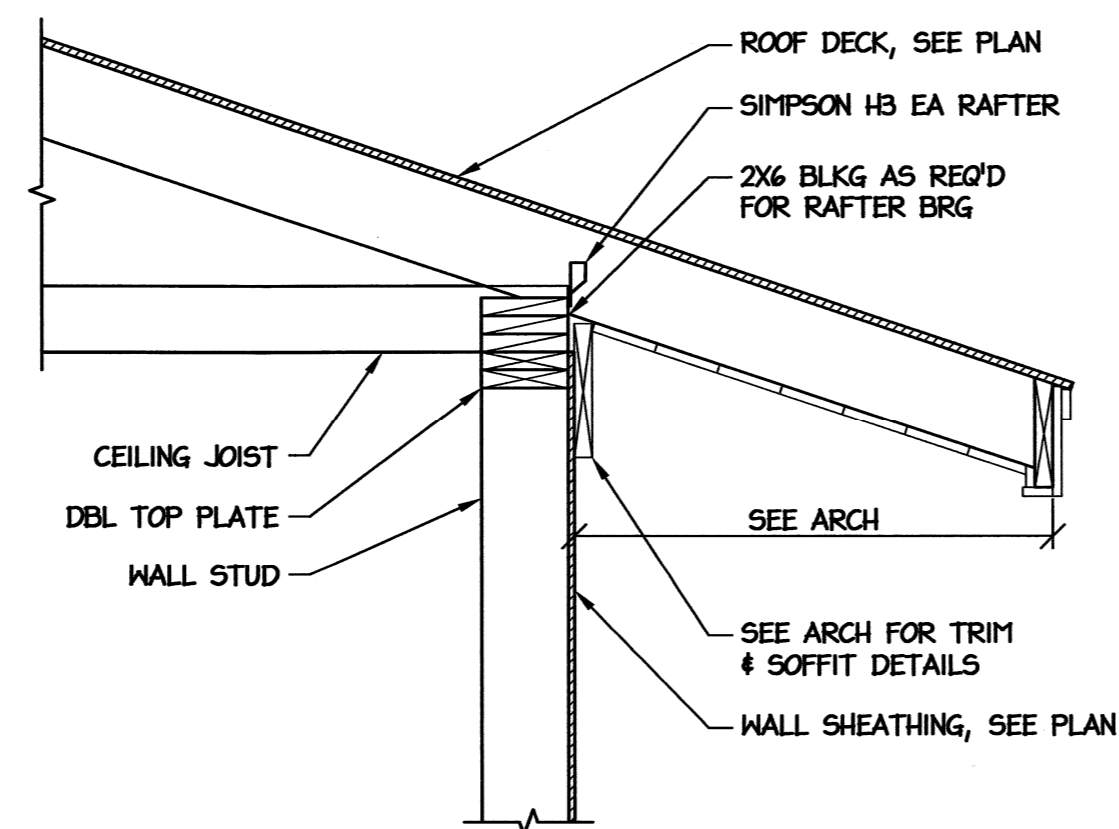
**8** WALL CORNER DETAIL  
SCALE: 3/4" = 1'-0"



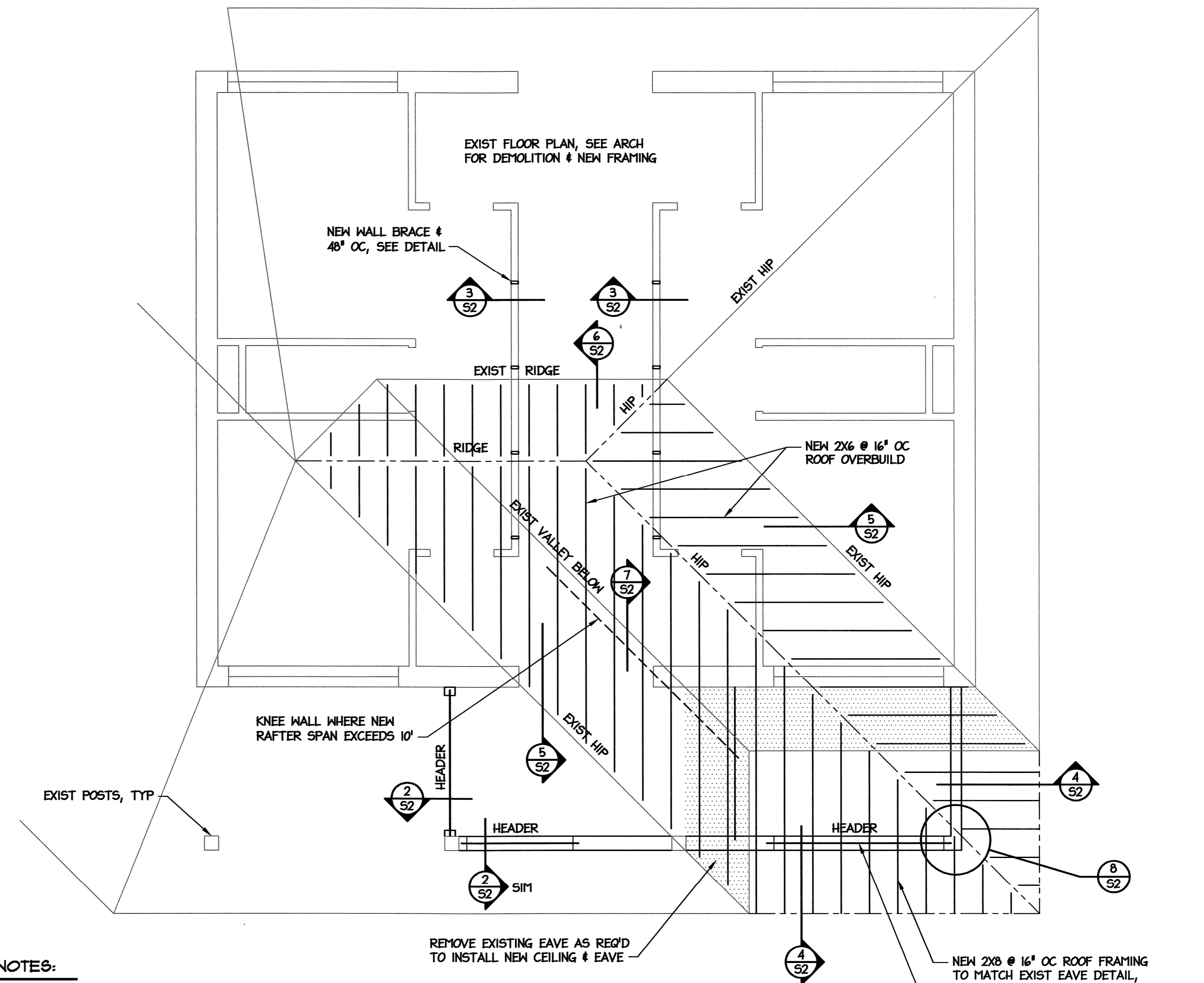
**5** NEW ROOF OVERBUILD  
SCALE: 3/4" = 1'-0"



**7** NEW ROOF KNEEWALL  
SCALE: 3/4" = 1'-0"



**4** NEW ROOF FRAMING  
SCALE: 3/4" = 1'-0"



**NOTES:**

- FIELD VERIFY EXISTING SLOPES & DIMENSIONS PRIOR TO CONSTRUCTION.
- NEW EAVE CONDITION IS TO MATCH EXISTING.
- REMOVE ALL EXISTING SHINGLES & FELT PAPER WHERE ROOF OVERBUILD BEARS ON OR ATTACHES TO EXISTING ROOF.
- ELEVATIONS SHOWN ON STRUCTURAL DRAWINGS ARE ABOVE FIRST FINISH FLOOR, REF ELEVATION = +0'-0". NEW FLOOR ELEVATION TO MATCH EXISTING FLOOR ELEVATION.
- SEE ARCH PLANS FOR DIMENSIONS NOT SHOWN.
- NEW ROOF SHEATHING SHALL BE 5/8" PLYWOOD OR OSB TO MATCH EXISTING. WALL SHEATHING SHALL BE 5/8" PLYWOOD OR OSB, RATED SHEATHING.
- EXISTING ROOF SLOPE = 4:12, FIELD VERIFY.
- SIMPSON CONNECTORS SHOWN FOR REFERENCE. PRODUCTS OF EQUAL CAPACITY & APPLICATION MAY BE USED.

**1** ROOF FRAMING PLAN  
SCALE: 1/4" = 1'-0"

BID DOCUMENTS

REGISTERED PROFESSIONAL ENGINEER  
17326  
11-21-14

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**FACILITIES DESIGN ARCHITECTS & ENGINEERS**  
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PH: 707-444-4440 FAX: 707-444-0088

CONSULTANT:

DRAWING TITLE / DESCRIPTION:  
FRAMING PLAN  
FRAMING DETAILS

PROJECT TITLE:  
**MACON COUNTY REST AREA, NCDOT**  
US-29/441, NC 28788  
MACON COUNTY, NORTH CAROLINA

SCO ID NO. 14-11043-01A  
TIP PROJ. NO. K-5103  
WBS NO. 42231.3.1  
FEDERAL ID NO. NHP-002(31)  
ASSET NUMBER:  
CD.# SITE.# BLDG.#  
56 = 16 = 1  
REVISIONS  
NO. DATE

DATE ISSUED: 11-21-14  
DRAWN BY: MDM  
CHECKED BY: MDM  
SHEET NO.

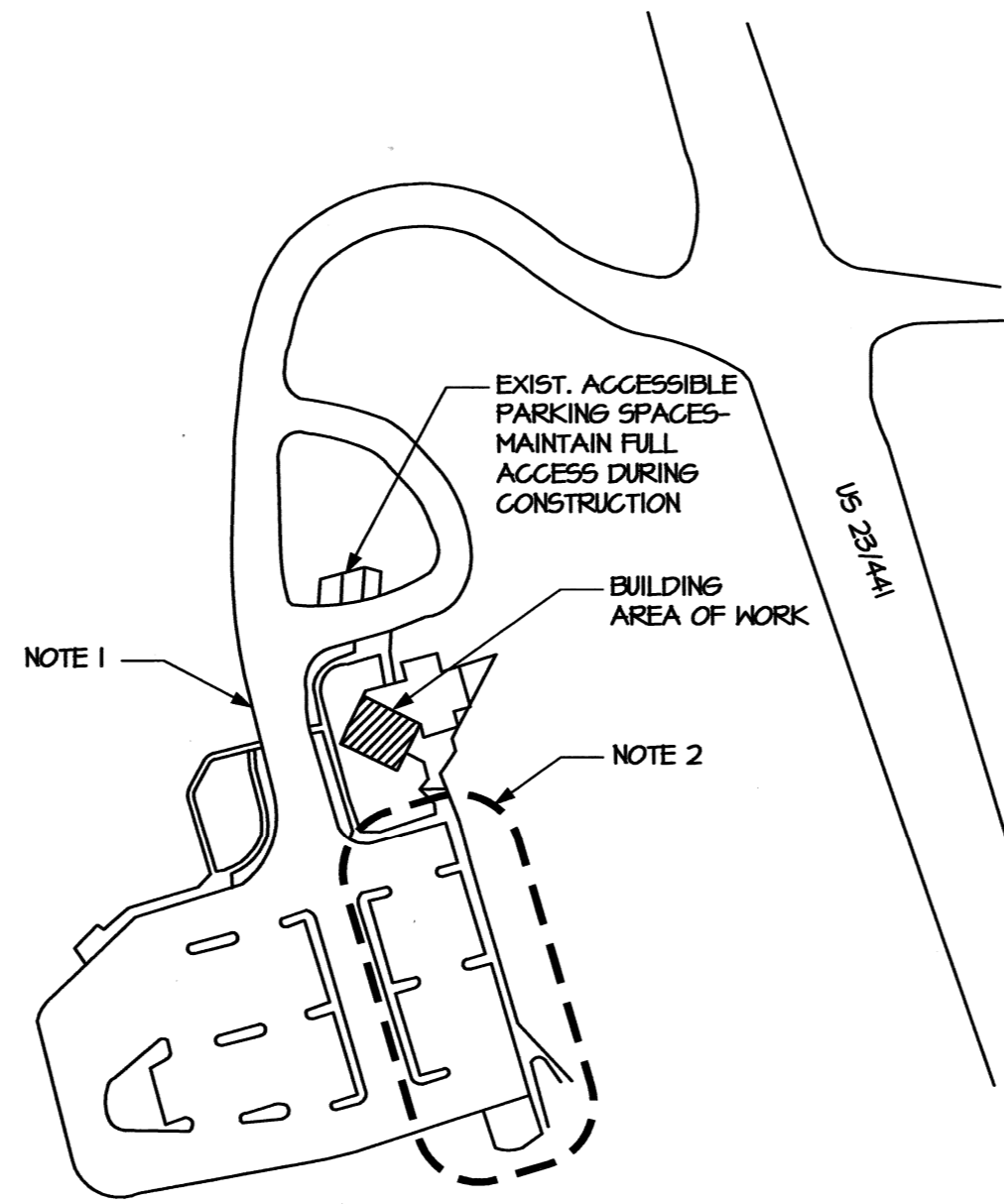
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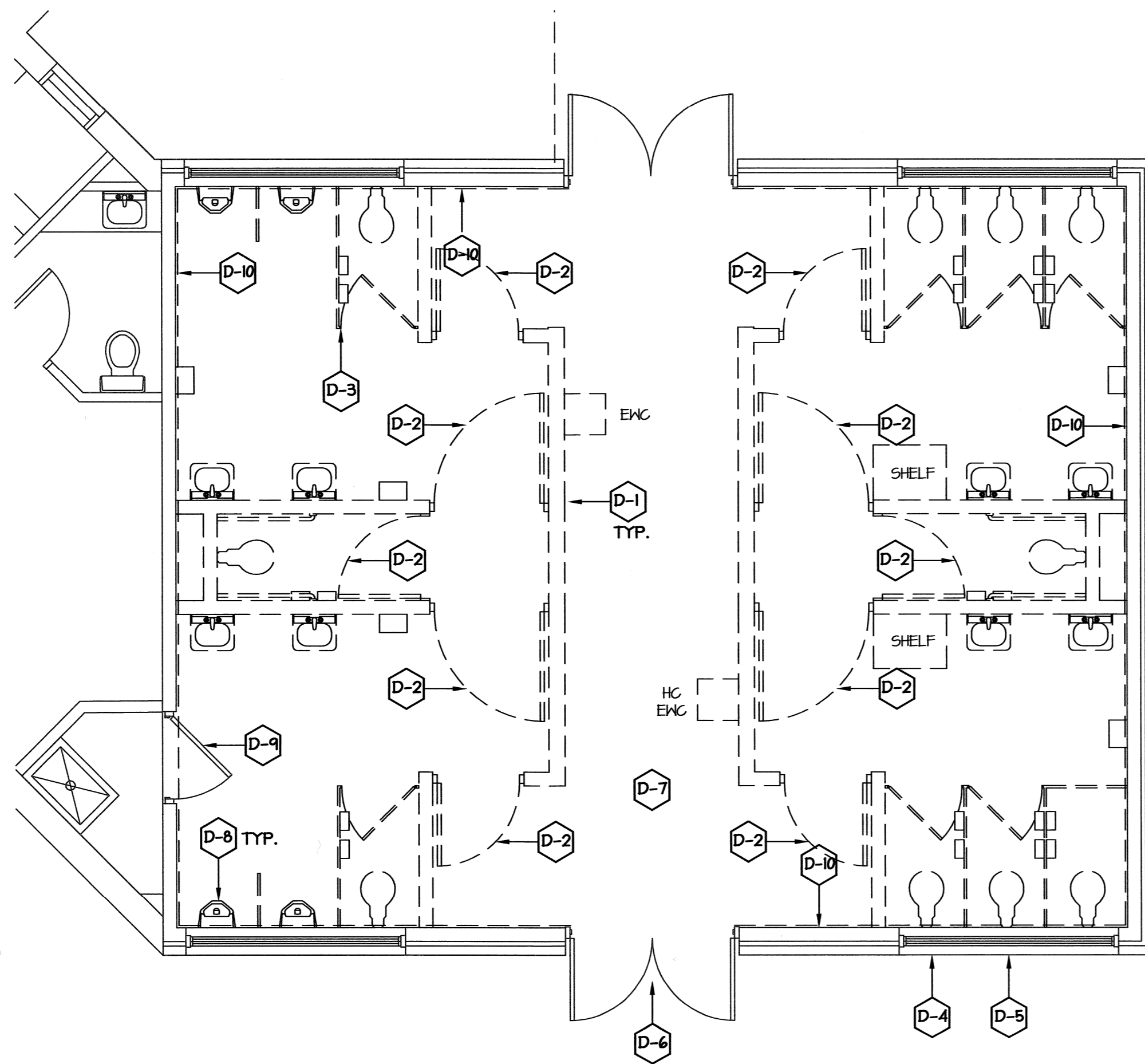
**CONTRACTOR WORK STAGING NOTES:**

1. THE VISITOR CENTER WILL REMAIN OPEN 24/7 DURING THE DURATION OF THE PROJECT. ANY ACCESS TO THE BUILDING, DRIVEWAY & PARKING LOTS SHALL NOT BE COMPROMISED BY CONTRACTOR ACTIVITY ON SITE DURING THE PROJECT.

2. ALL CONTRACTOR'S ACTIVITY ON SITE DURING THE PROJECT (VEHICLES PARKING, DELIVERY & UNLOADING OF MATERIALS, TEMPORARY FACILITIES, ETC.) SHALL BE RESTRICTED TO THE INDICATED AREA OF THE VISITOR'S PARKING LOT.



**2 WORK STAGING PLAN**  
A1.0 SCALE: NTS



**LEGEND**

--- EXISTING CONSTRUCTION TO BE DEMOLISHED (UCN)

**1 DEMOLITION PLAN**  
A1.0 SCALE: 1/4" = 1'-0"

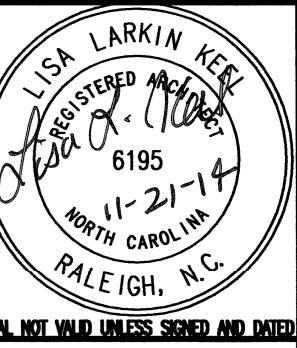


**GENERAL DEMOLITION / CONSTRUCTION NOTES:**

- CONTRACTOR SHALL REVIEW EXISTING FIELD CONDITIONS AND REPORT ANY DISCREPANCIES BETWEEN CONDITIONS AND THE DRAWINGS TO THE ARCHITECT. LOCATE ALL UNDERGROUND UTILITIES.
- CONTRACTOR SHALL REMOVE THOSE ITEMS OF DEMOLITION IN ITS ENTIRETY INCLUDING HANGERS AND CONNECTIONS TO REMAINING CONSTRUCTION. AFTER REMOVAL, PATCH & REPAIR EXPOSED SURFACES & FINISH SURFACE TO MATCH EXISTING ADJACENT SURFACES.
- CONTRACTOR SHALL USE MATCHING MASONRY COMPONENTS OF SIZE & TEXTURE FOR ALL MASONRY IN-FILLS.
- THOSE REMAINING WALLS ADJACENT TO DEMOLITION ARE TO BE SMOOTHED OR THE SHELL WALL CUT OUT AND REPLACE IN THE AREA OF ORIGINAL INTERSECTION.
- REMOVE ALL STUD WALLS DOWN TO EXISTING PLYWOOD SUB-FLOOR & REPAIR SUB-FLOOR AS REQUIRED.
- RELOCATE ANY INTERRUPTED MISCELLANEOUS WALL & CEILING DEVICES NOT SHOWN ON PLAN TO THE NEAREST REMAINING AREA U.O.N.
- REPAINT ENTIRE WALL TO MATCH EXISTING WHERE DEMOLITION HAS OCCURRED & WALL HAS BEEN PATCHED / REPAIRED.
- CONTRACTOR SHALL VERIFY WITH USER / REPRESENTATIVE THOSE ITEMS TO REMOVE & TURN OVER TO THE OWNER PRIOR TO ANY DEMOLITION. LEGALLY DISPOSE OF ALL DEMOLITION.
- CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH OTHER TRADES, PLUMBING, MECHANICAL & ELECTRICAL.
- CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING TO INSURE STRUCTURAL INTEGRITY PRIOR TO DEMOLITION WORK FOR OPENINGS OF NEW DOORS AND WINDOWS.
- CONTRACTOR TO REMOVE ALL FINISHED MATERIALS (GMB, CERAMIC TILE W/BACKERBOARD, ETC.) ON THE INTERIOR OF EXTERIOR WALLS U.O.N. SEE DEMOLITION KEY NOTES FOR FURTHER DESCRIPTION.

**DEMOLITION KEY NOTES**

- D-1 CONTRACTOR TO REMOVE ALL EXISTING INTERIOR WALLS DOWN TO FINISHED FLOOR. EXISTING PLYWOOD SUBFLOOR SHALL BE PRESERVED.
- D-2 CONTRACTOR TO REMOVE INDICATED DOORS AND FRAMES AND TURN OVER TO OWNER.
- D-3 CONTRACTOR TO REMOVE ALL EXISTING TOILET PARTITIONS.
- D-4 CONTRACTOR TO REMOVE 4" STONE VENEER FROM INDICATED SECTION OF EXTERIOR WALL, CLEAN & PRESERVE/STORE FOR FUTURE USE ON THE NEW ADDITION. PATCH ALL DAMAGE TO EXISTING PLYWOOD SHEATHING. EXTENT OF REMOVAL SHOULD BE COORDINATED WITH NEW FLOOR PLAN & DETAIL 4/AS.2.
- D-5 CONTRACTOR TO REMOVE EXISTING WINDOW W/FRAME AND SAVE FOR FUTURE RELOCATION TO WINDOW OPENING IN THE NEW ADDITION. FRAME THE EXISTING OPENING AS PART OF PREPARATION WORK FOR TURNING THE EXTERIOR WALL INTO INTERIOR WALL.
- D-6 CONTRACTOR TO REMOVE EXISTING STOREFRONT DOOR & FRAME ASSEMBLY AND SAVE FOR FUTURE RE-USE ON THE NEW ADDITION (DOOR 101, DWG A1.1)
- D-7 CONTRACTOR TO REMOVE EXISTING FLOOR TILE, & MORTAR BED IN ITS ENTIRETY. EXISTING PLYWOOD FLOOR SHALL BE PRESERVED.
- D-8 CONTRACTOR TO REMOVE ALL PLUMBING FIXTURES (TOILETS, URINALS, LAVATORIES & WATER FOUNTAINS) & ACCESSORIES. SEE PLUMBING DRAWINGS FOR RE-ROUTING ALL EXISTING PLUMBING CONNECTIONS.
- D-9 CONTRACTOR TO REMOVE EXISTING DOOR & FRAME AND SAVE FOR FUTURE INSTALLATION IN THE NEW OPENING AS SHOWN ON DWG A1.1. FRAME EXISTING OPENING, PATCH & REPAIR GMB AS REQUIRED TO MATCH ADJACENT SURFACES.
- D-10 CONTRACTOR TO REMOVE ALL FINISHED MATERIAL ON THE INTERIOR OF EXTERIOR WALLS.



DESIGNED BY:  
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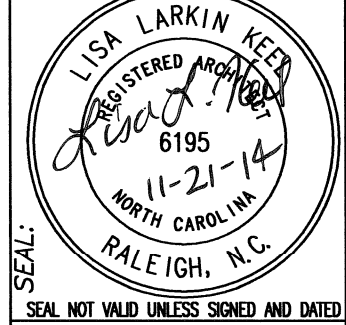


CONSULTANT:

DRAWING TITLE / DESCRIPTION:  
**DEMOLITION PLAN**

PROJECT TITLE:  
**MACON COUNTY REST AREA, NCDOT**  
US-28/441, NC 28768  
MACON COUNTY, NORTH CAROLINA

SCO ID NO.	14-11043-01A
TIP PROJ. NO.	K-5103
WBS NO.	42231.3.1
FEDERAL ID NO.	NHPP-002(31)
ASSET NUMBER:	
CO. #	56
SITE #	16
BLDG #	1
REVISIONS NO.	DATE
DATE ISSUED:	11-21-14
DRAWN BY:	AS
CHECKED BY:	LLK
SHEET NO.	



DESIGNED BY:  
**FACILITIES DESIGN ARCHITECTS & ENGINEERS**  
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 PH: 910-762-0090 FAX: 910-762-0090



CONSULTANT:

DRAWING TITLE / DESCRIPTION:  
**FLOOR PLAN**

PROJECT TITLE:  
**MACON COUNTY REST AREA, NCDOT**  
 MACON COUNTY, NORTH CAROLINA

SCD ID NO. 14-11043-01A  
 TIP PROJ. NO. K-5103  
 WBS NO. 42231.3.1  
 FEDERAL ID NO. NHPP-0023(31)

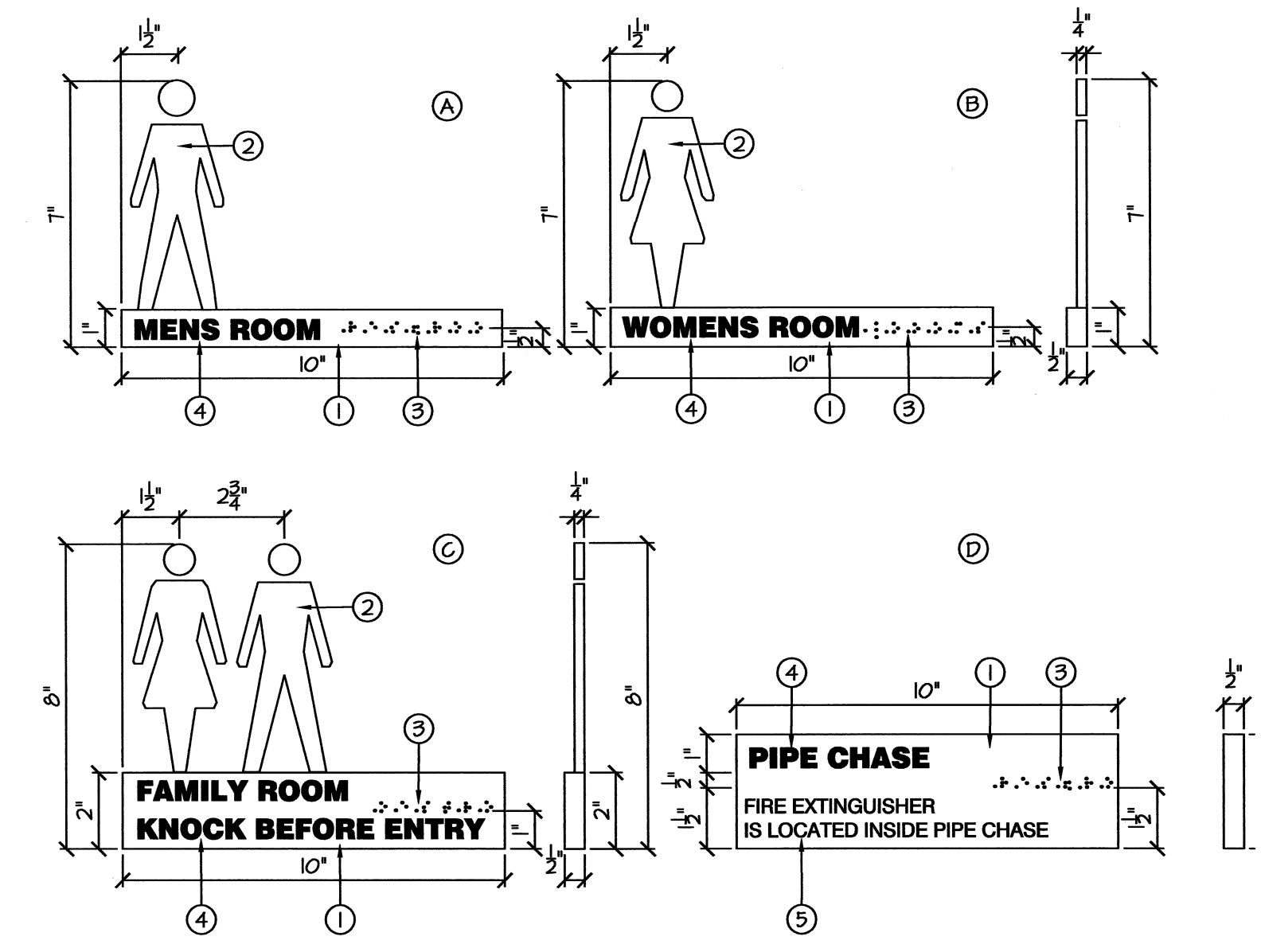
ASSET NUMBER:  
 CO.# SITE.# BLDG.#  
 56 = 16 = 1

REVISIONS NO.	DATE

DATE ISSUED: 11-21-14  
 DRAWN BY: AS  
 CHECKED BY: LLK  
 SHEET NO.

**GENERAL NOTES:**

- PROVIDE 5/8" GYPSUM BOARD @ ALL CEILINGS.
- ALL FINISHED FLOOR ELEVATIONS F.F.E. ARE 0'-0" FOR BLDG. REF. ELEV. ONLY AND ALL FLOOR DRAINS SHALL BE SET AT 1-1/2" BELOW F.F.E.
- PROVIDE 3-1/2" SOUND BATTS IN ALL INTERIOR WALLS
- INSIDE DIMENSIONS ARE TO THE FACE OF THE FRAMING.
- PROVIDE MIN. 34" CLEAR OPENING TOILET PARTITION DOOR W/ PILASTERS @ INTERIOR OF FAMILY RESTROOM 102. PROVIDE SOLID WOOD BLOCKING FOR ALL TOILET PARTITIONS & ACCESSORIES.
- SEE SHEET A4.4 FOR BATHROOM ACCESSORY LOCATIONS & INFORMATION.
- USE THIN-SET TILE INSTALLATION AT CONCRETE FLOORS & TILE BACKER PANELS AT WOOD STUD WALLS.
- CAULK ALL INSIDE CORNERS AT TILE WALLS.
- SEE SHEETS A4.1 THROUGH A4.3 FOR FINISHES TYPE & APPLICATION, SEE SPECIFICATION FOR EQUAL OR COMPETITIVE MANUFACTURERS OF FINISHES.
- SIGNS PLACEMENT IS AS SHOWN ON INTERIOR ELEVATIONS, SEE ROOM SIGNAGE ON SHEET A4.4 FOR SIGNS DESCRIPTION & PLACEMENT HEIGHT.
- FIELD VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ARCHITECT. 3'-0" CLEAR PASSAGEWAYS INTO RESTROOMS MUST BE MAINTAINED.



ROOM NO.	ROOM NAME	SIGNAGE TYPE	QTY
103, 108	MEN	A	2
104, 104	WOMEN	B	2
102	FAMILY RESTROOM	C	1
105	PIPE CHASE	D	1
103, 108	MEN	E	1
104, 104	WOMEN	F	1

**SIGNAGE NOTES:**

- REFER TO DOOR SCHEDULE FOR ROOM NUMBER, ROOM NAME, AND SIGNAGE LOCATION UOJA.
- SIGNAGE SHALL COMPLY WITH ICC A111-2004, CH. 7.
- SIGNS A THRU D SHALL BE MOUNTED WITH CENTERLINE OF PLAQUE AT 60" AFF (60" MAX TO THE BOTTOM OF BRAILLE CHARACTERS).
- SEE FLOOR PLAN SHEET A1.1 FOR SIGNS LOCATIONS.
- SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

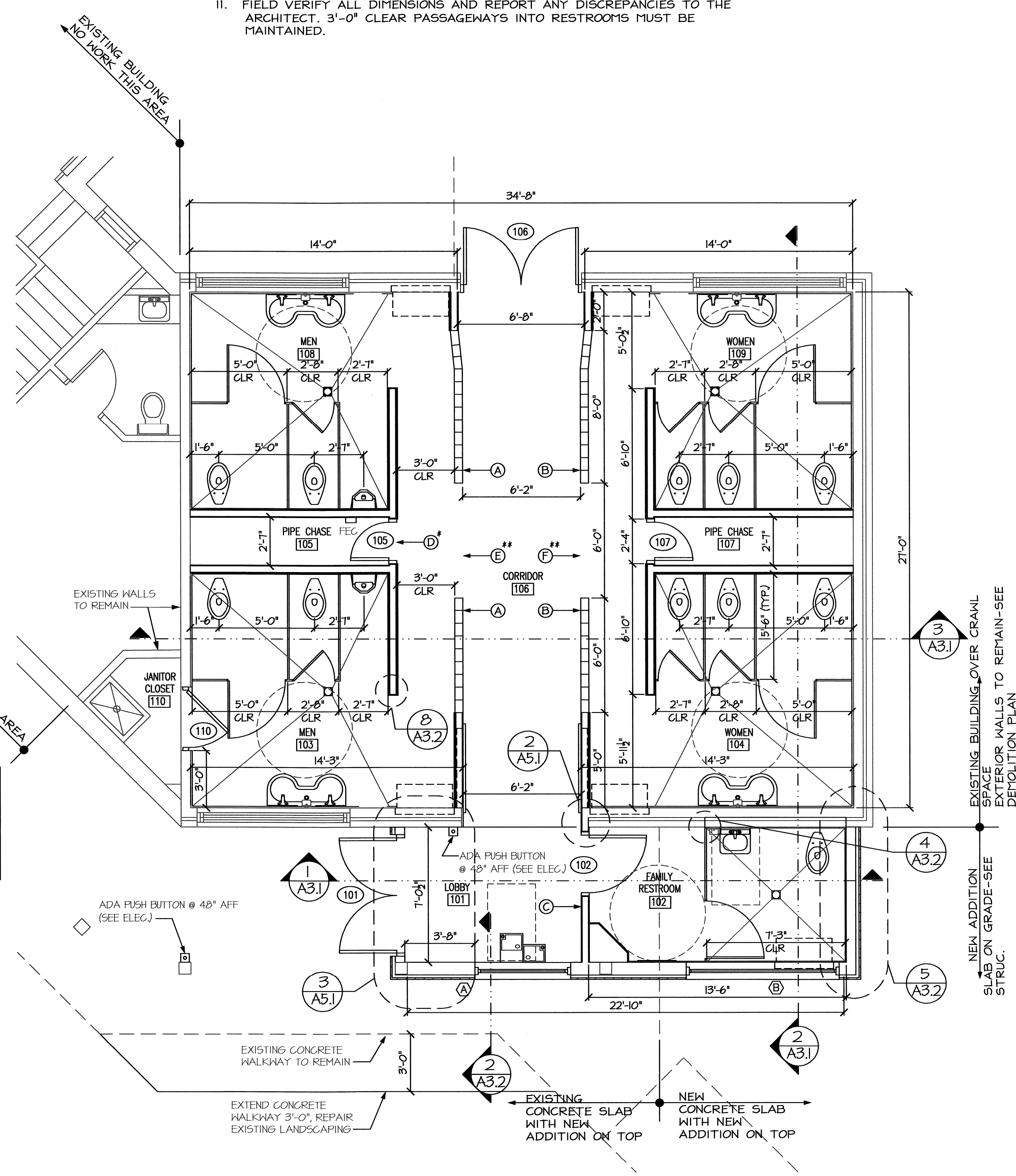
**KEY NOTES:**

- 1/2" THICK MILLED POLISHED ALUMINUM PLAQUE.
- 1/4" THICK MILLED BRUSHED ALUMINUM PLAQUE.
- RAISED METAL BEAD BRAILLE.
- BLUE SILKSCREENED LETTERING- HELVETICA BOLD FONT, 5/8" TEXT HEIGHT.
- BLUE SILKSCREENED LETTERING- HELVETICA BOLD FONT, 3/8" TEXT HEIGHT.
- INDIVIDUAL METAL LETTERS.
- 1/2" THICK MILLED BRUSHED ALUMINUM PLATE, BLUE SILKSCREENED LETTERING- HELVETICA BOLD FONT, 10" TEXT HEIGHT.

**ROOM SIGNAGE NOTES:**  
 \* SIGN D IS MOUNTED ON DOOR 105.  
 \*\* SIGNS E & F ARE MOUNTED ABOVE THE OPENING- SEE INTERIOR ELEVATIONS SHEET A4.2.

**WALL LEGEND**

- EXISTING EXTERIOR WALL- 6" WOOD STUDS @ 16" O.C., W/STONE VENEER
- NEW EXTERIOR WALL- 6" WOOD STUDS @ 16" O.C., W/ 1.5" RIGID INSULATION & CEDAR SIDING
- NEW INTERIOR WALL- 4" WOOD STUDS @ 16" O.C.
- NEW INTERIOR WALL- 8"x8"x4" GLASS BLOCK



**2 ROOM SIGNAGE**  
 A1.1 SCALE: NTS

**1 FLOOR PLAN**  
 A1.1 SCALE: 1/4" = 1'-0"







CONSULTANT:

DRAWING TITLE / DESCRIPTION:  
**REFLECTED CEILING PLAN,  
 ROOF PLAN & DETAILS**

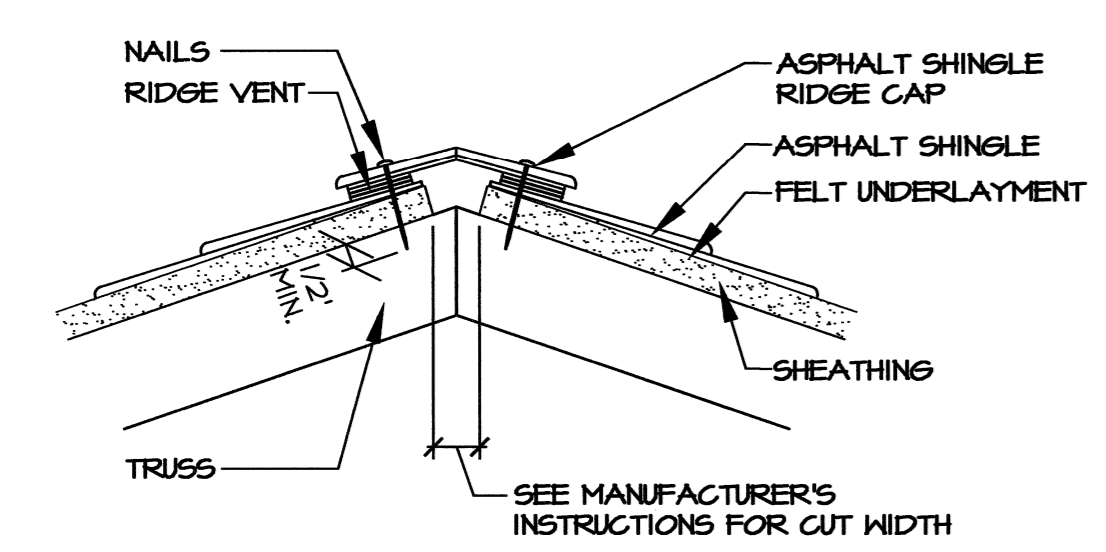
PROJECT TITLE:  
**MACON COUNTY  
 REST AREA, NCDOT**  
 US-28/441, NC 28788  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO.	14-11043-01A	
TIP PROJ. NO.	K-5103	
WBS NO.	42231.3.1	
FEDERAL ID NO.	NHPP-0023(31)	
ASSET NUMBER:		
CO. #	SITE #	BLDG. #
56	16	1
REVISIONS NO.	DATE	

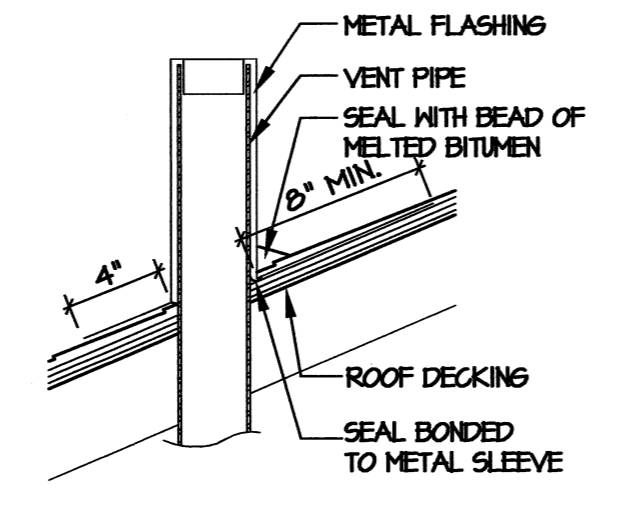
DATE ISSUED: 11-21-14  
 DRAWN BY: AS  
 CHECKED BY: LLK  
 SHEET NO.

LEGEND

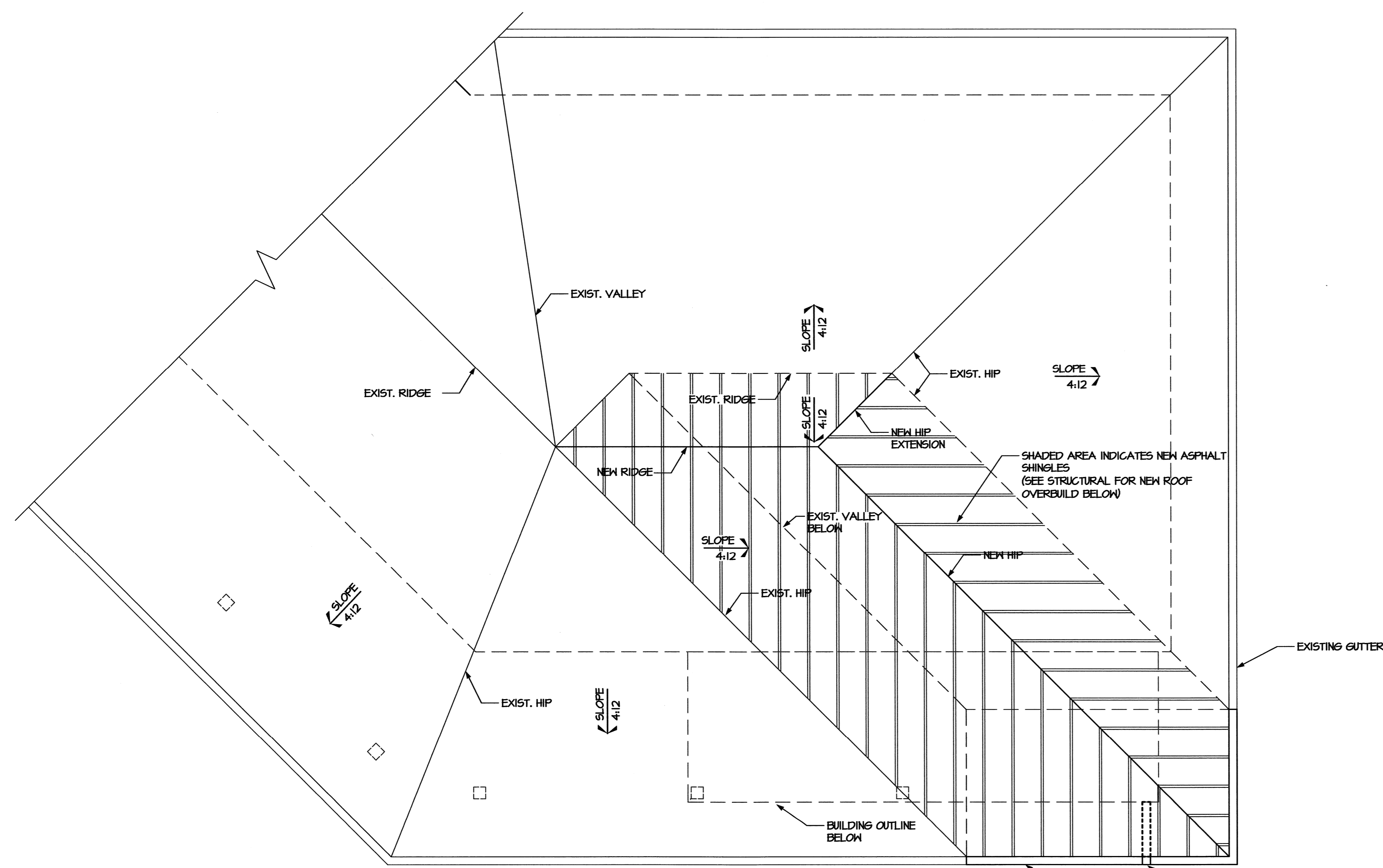
SYMBOL	DESCRIPTION
	48" STANDARD STRIP LIGHT, W/ WIRE GUARD
	DECORATIVE PENDANT LIGHT
	6" RECESSED CAN LIGHT
	6" RECESSED WALL WASH CAN
	DECORATIVE WALL SCONCE
	SUPPLY DIFFUSER
	RETURN AIR GRILL
	CEILING EXHAUST FAN



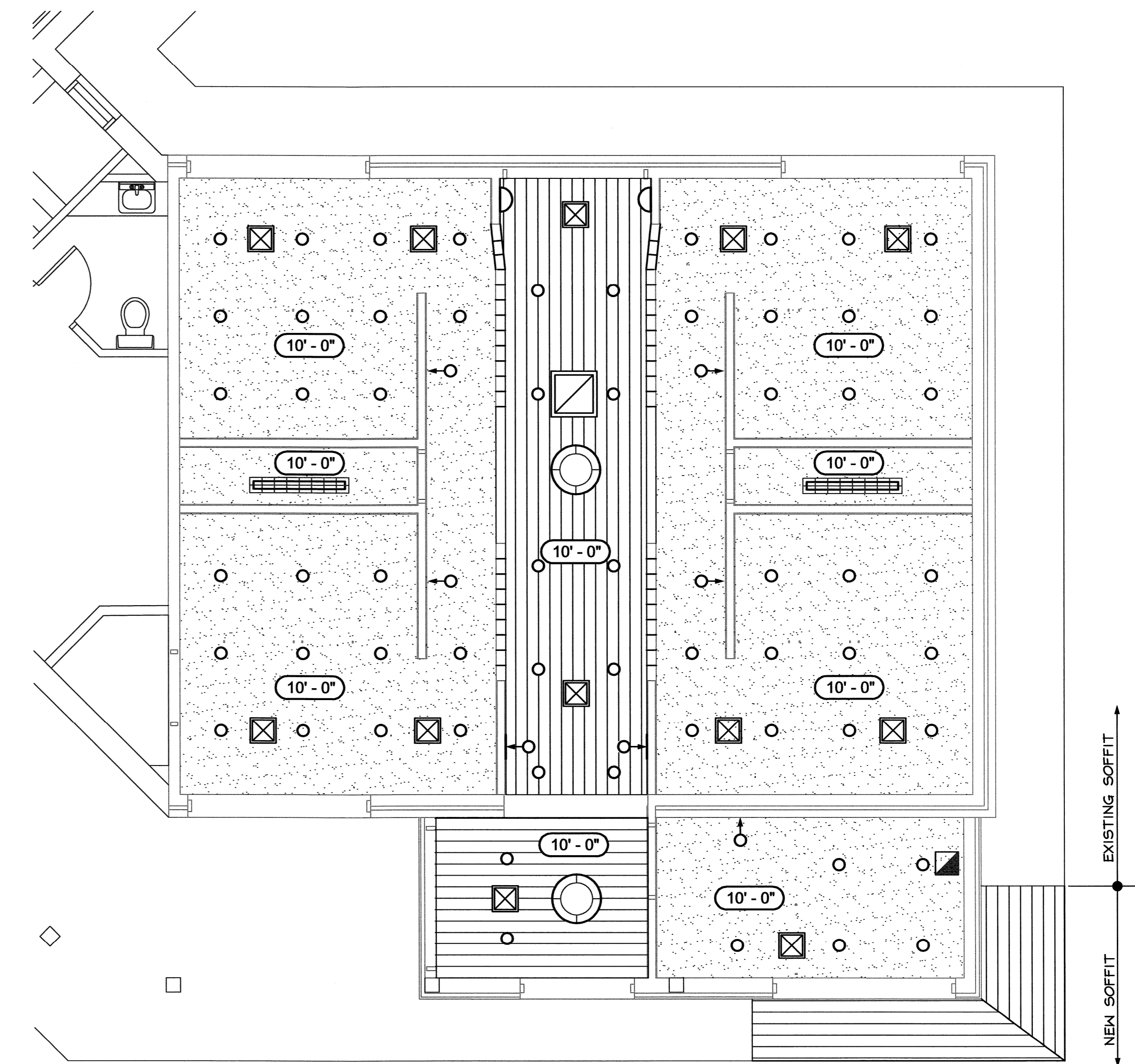
**4** RIDGE VENT DETAIL  
 A1.2 SCALE: 3" = 1'-0"



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



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



CEILING & SOFFIT LEGEND

	5/8" GYPSUM WALL BOARD CEILING
	CEILING: 6" T&G CEDAR BOARDS, STAINED
	SOFFIT: 6" T&G CEDAR BOARDS, PAINTED TO MATCH EXISTING

**1** REFLECTED CEILING PLAN  
 A1.2 SCALE: 1/4" = 1'-0"



BID DOCUMENTS  
 LISA LARKIN ACE  
 REGISTERED ARCHITECT  
 6195  
 11-21-14  
 NORTH CAROLINA  
 RALEIGH, N.C.

DESIGNED BY:  
**FACILITIES DESIGN**  
 ARCHITECTS & ENGINEERS  
 FACILITIES MANAGEMENT DIVISION, NCDOT  
 1 SOUTH WILMINGTON STREET  
 RALEIGH, NORTH CAROLINA 27601  
 PHONE/707-4640 FAX/919/776-5996



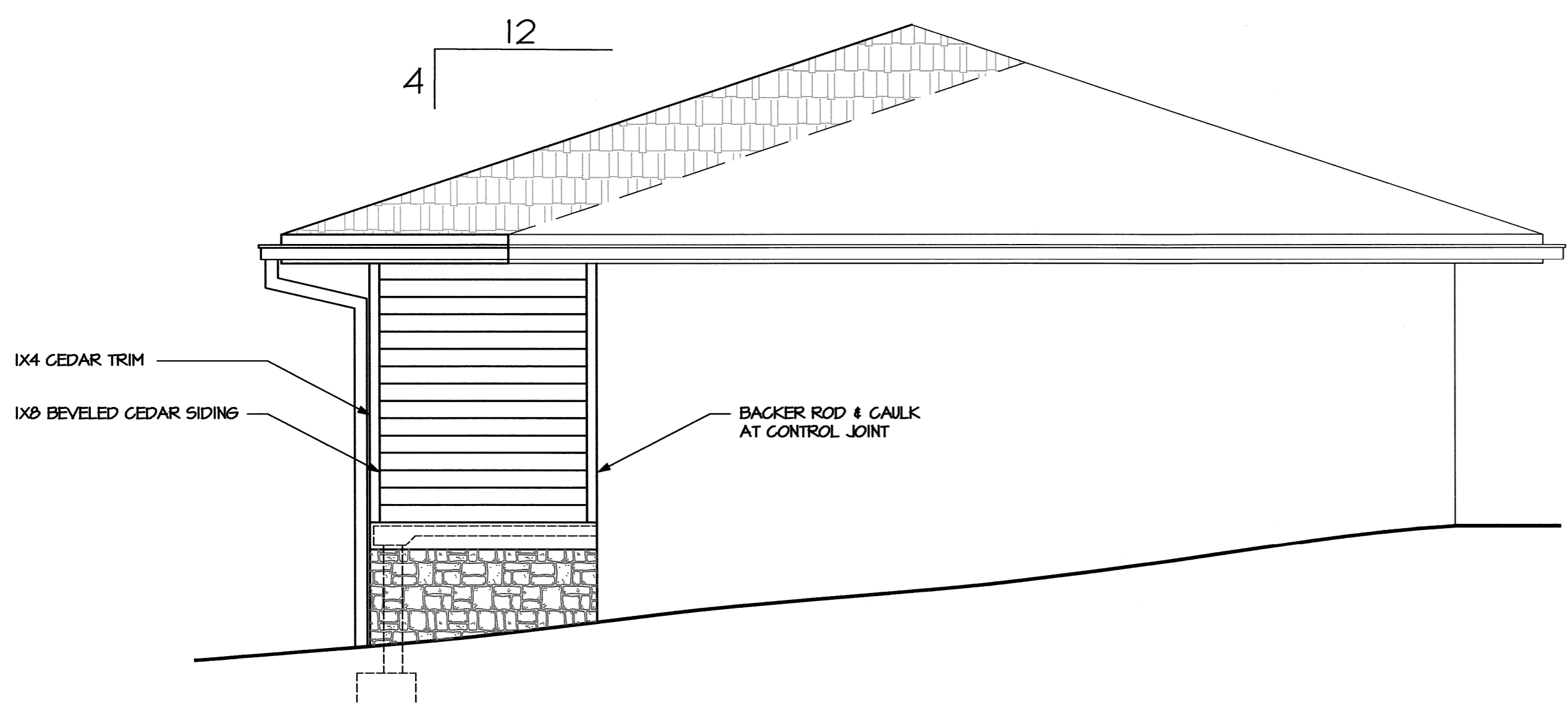
CONSULTANT:  
 NORTH CAROLINA  
 NORTH CAROLINA  
 DEPARTMENT OF  
 TRANSPORTATION

DRAWING TITLE / DESCRIPTION:  
**EXTERIOR ELEVATIONS**

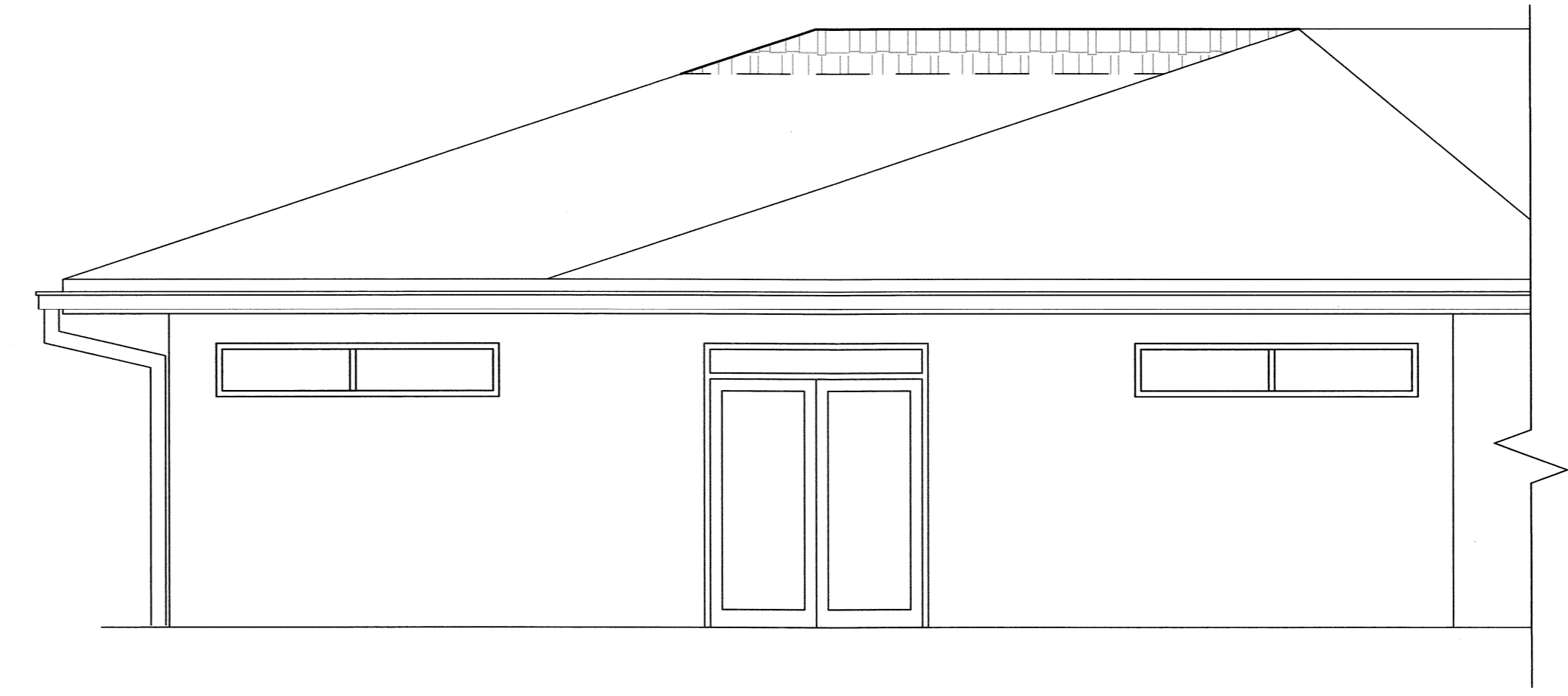
PROJECT TITLE:  
**MACON COUNTY  
 REST AREA, NCDOT**  
 US-28/441, NC 28765  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO.	14-11043-01A	
TIP PROJ. NO.	K-5103	
WBS NO.	42231.3.1	
FEDERAL ID NO.	NHPP-002(31)	
ASSET NUMBER:		
CO. #	SITE #	BLDG. #
56	16	1
REVISIONS NO.	DATE	
DATE ISSUED:	11-21-14	
DRAWN BY:	AS	
CHECKED BY:	LLK	
SHEET NO.		

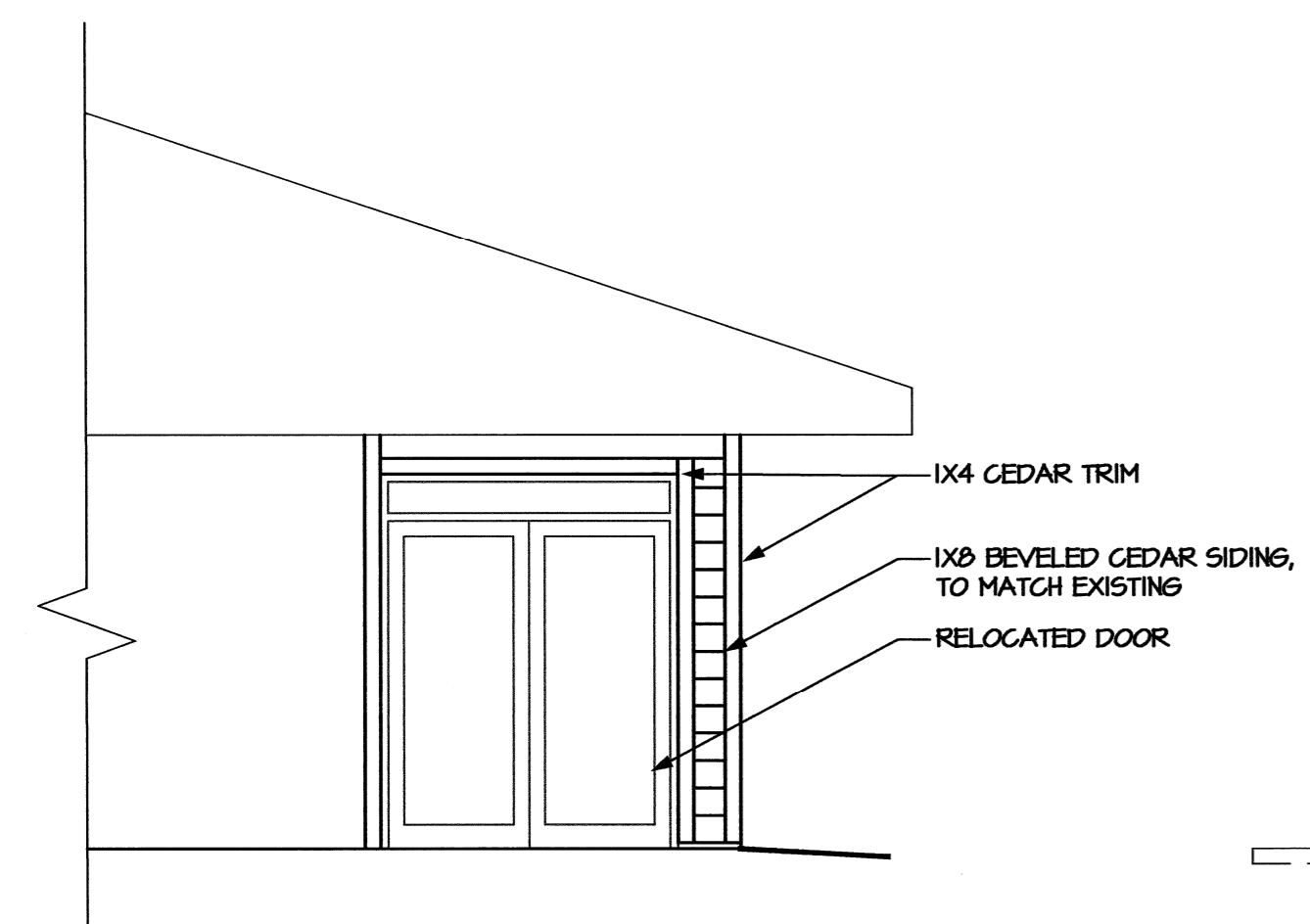
**A2.1**



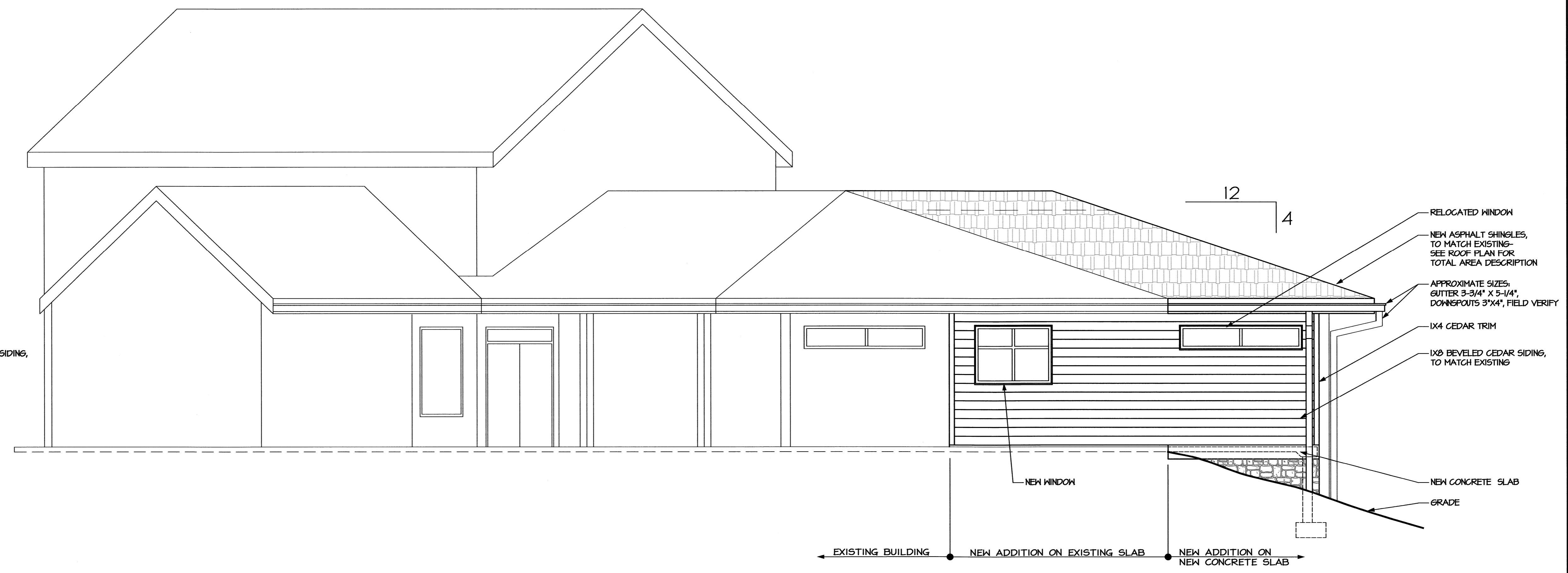
**4 WEST ELEVATION (VISITOR CENTER IS NOT SHOWN)**  
 A2.1 SCALE: 1/4" = 1'-0"



**3 SOUTH ELEVATION (VISITOR CENTER IS NOT SHOWN)**  
 A2.1 SCALE: 1/4" = 1'-0"

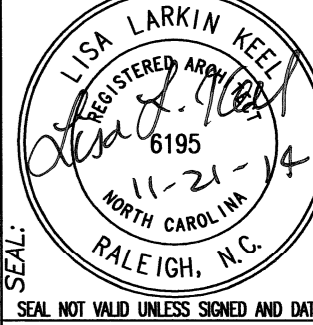


**2 PARTIAL EAST ELEVATION**  
 A2.1 SCALE: 1/4" = 1'-0"

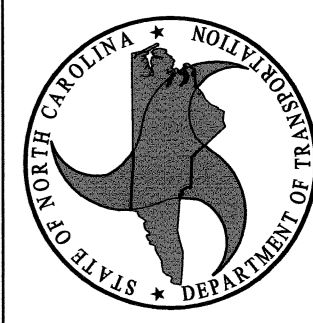


**1 NORTH ELEVATION**  
 A2.1 SCALE: 1/4" = 1'-0"





DESIGNED BY:  
**FACILITIES DESIGN ARCHITECTS & ENGINEERS**  
FACILITIES MANAGEMENT DIVISION, NCDOT  
10001 WILKINSON AVENUE  
DURHAM, NORTH CAROLINA 27707  
PHONE/707-4440 FAX/919/742-0586



CONSULTANT:

DRAWING TITLE / DESCRIPTION:  
**BUILDING SECTIONS**

PROJECT TITLE:  
**MACON COUNTY REST AREA, NCDOT**  
MACON COUNTY, NORTH CAROLINA  
US-28/441, NC 28768

SCO ID NO. 14-11043-01A  
TIP PROJ. NO. K-5103  
WBS NO. 42231.3.1  
FEDERAL ID NO. NHPP-0023(31)

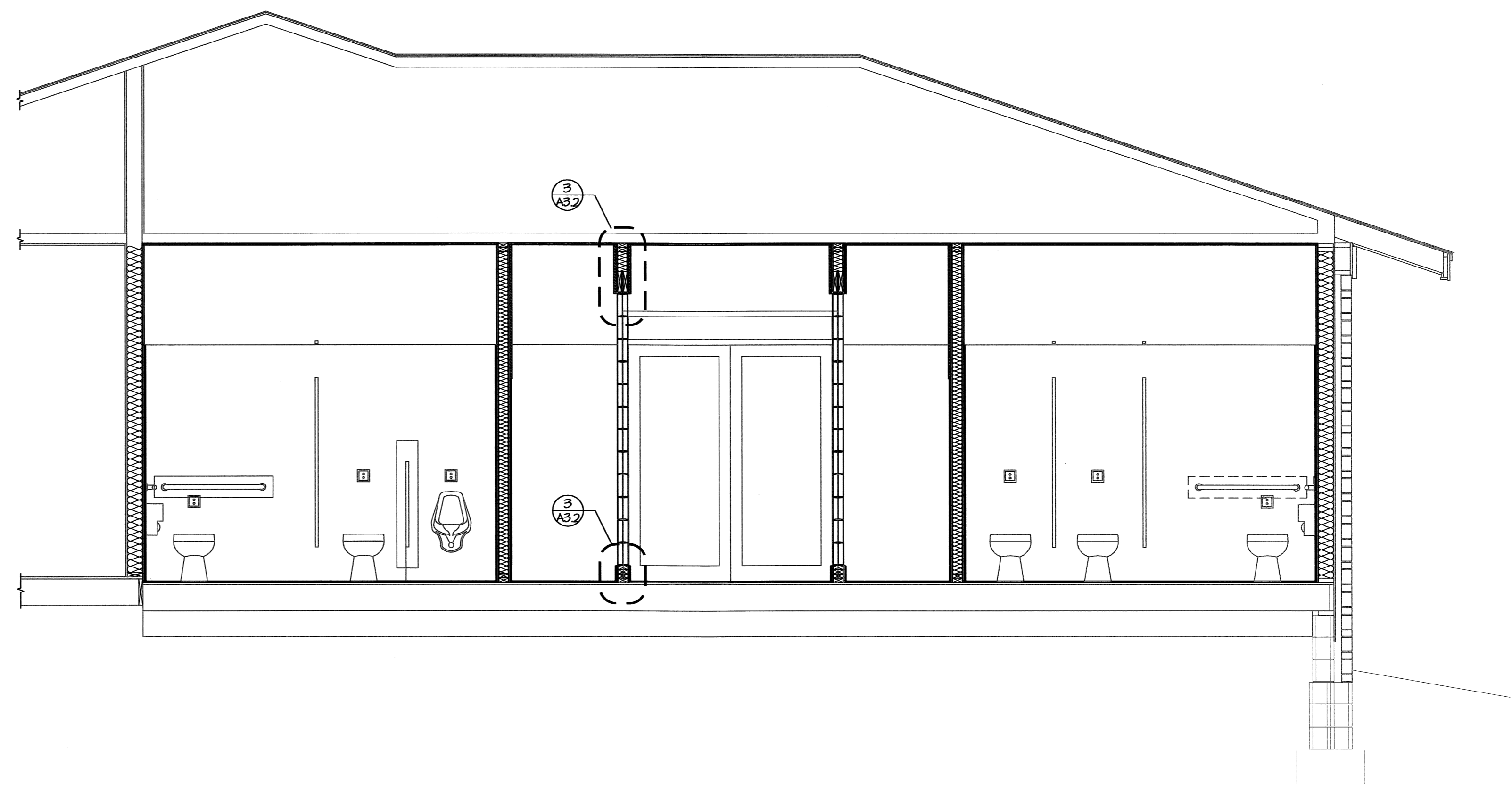
ASSET NUMBER:  
CO.# SITE.# BLDG.#  
56 = 16 = 1

REVISIONS NO.	DATE

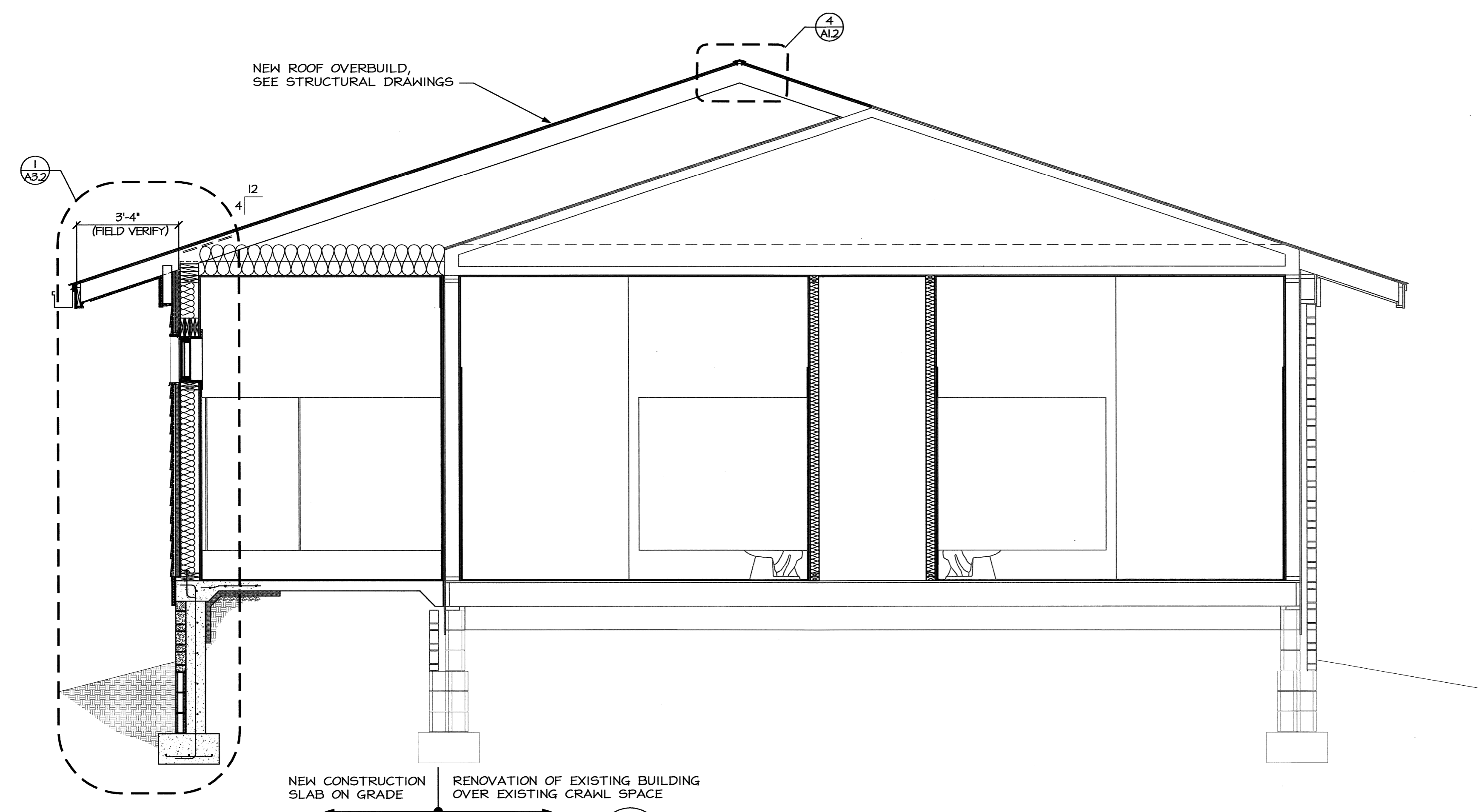
DATE ISSUED: 11-21-14  
DRAWN BY: AS  
CHECKED BY: LLK

SHEET NO.

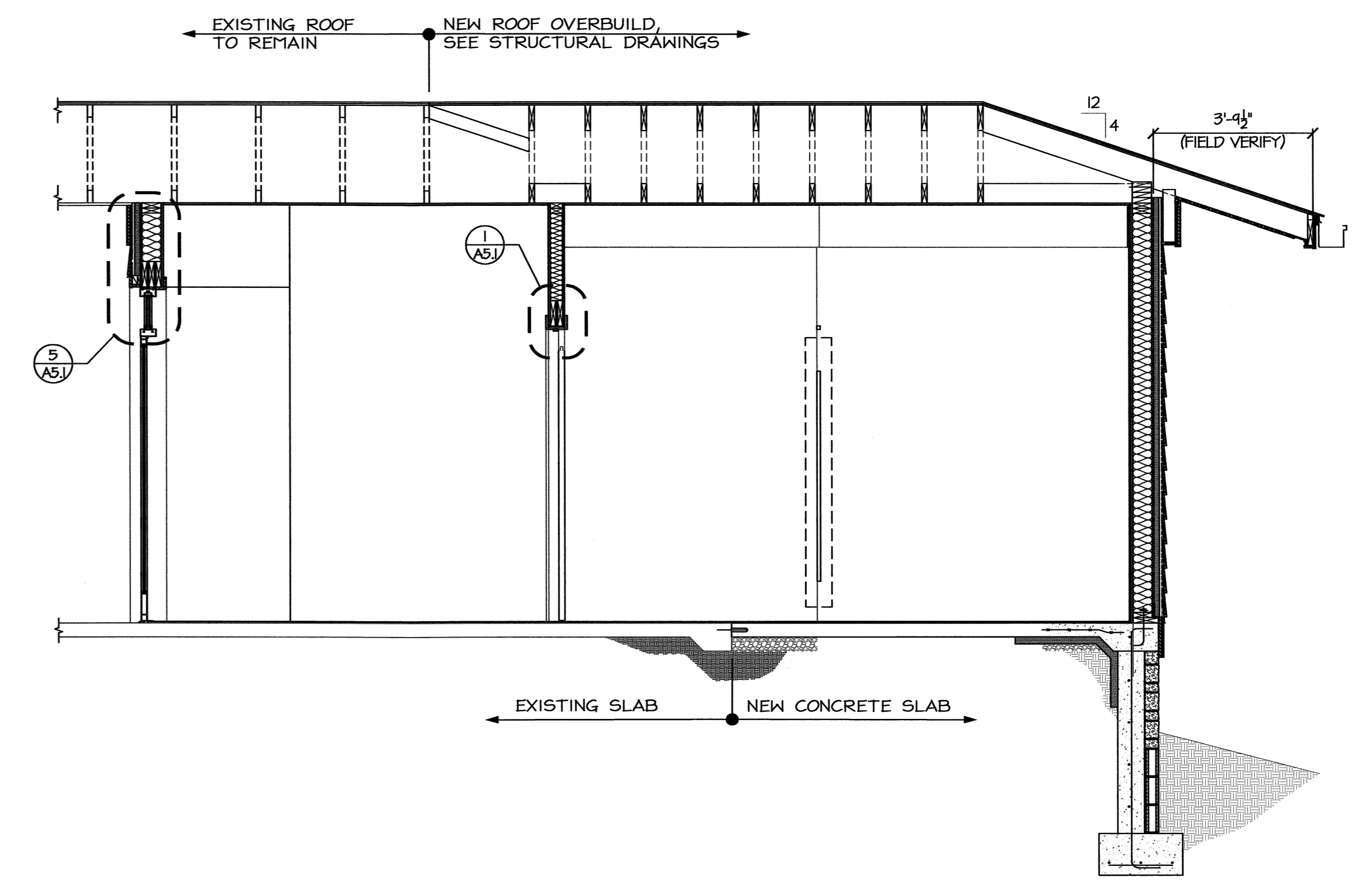
**A3.1**



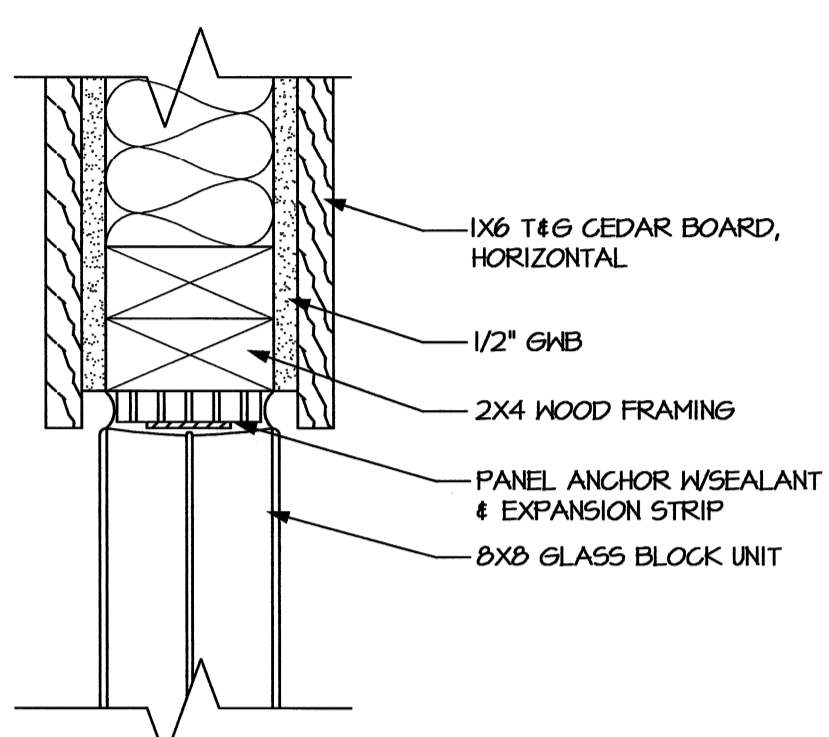
**3** LONGITUDINAL BUILDING SECTION  
A3.1 SCALE: 3/8" = 1'-0"



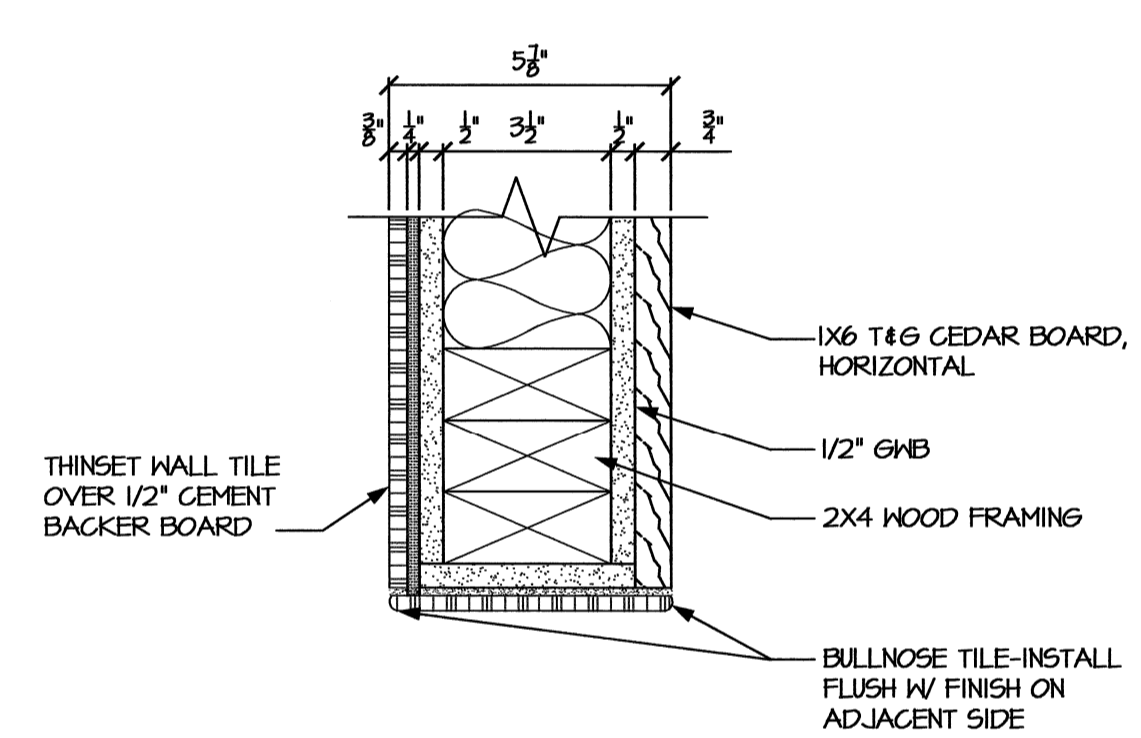
**2** LATERAL BUILDING SECTION  
A3.1 SCALE: 3/8" = 1'-0"



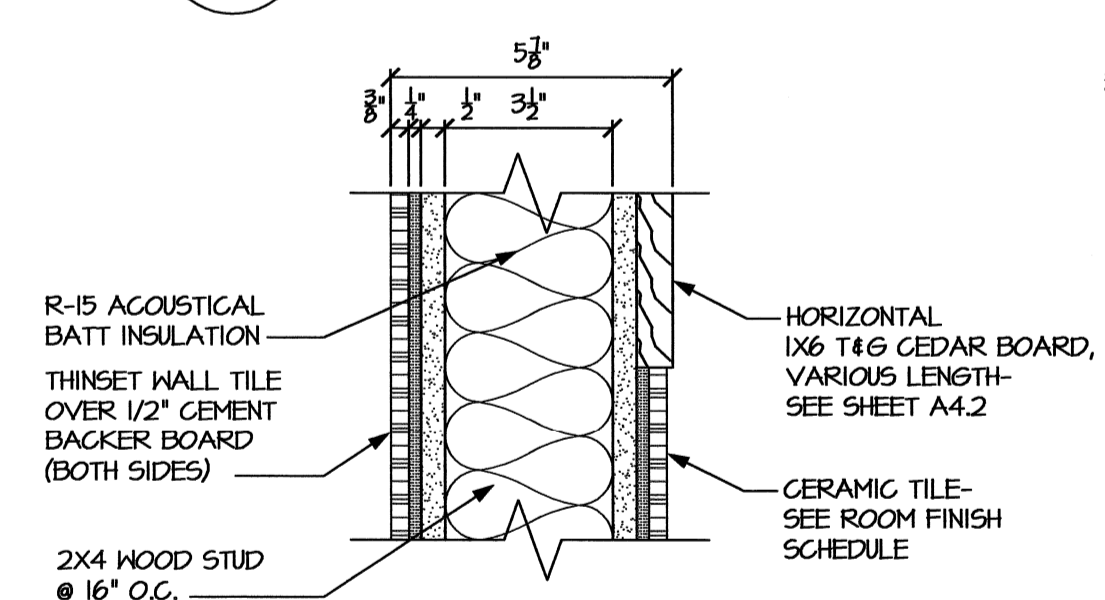
**1** NEW ADDITION BUILDING SECTION  
A3.1 SCALE: 3/8" = 1'-0"



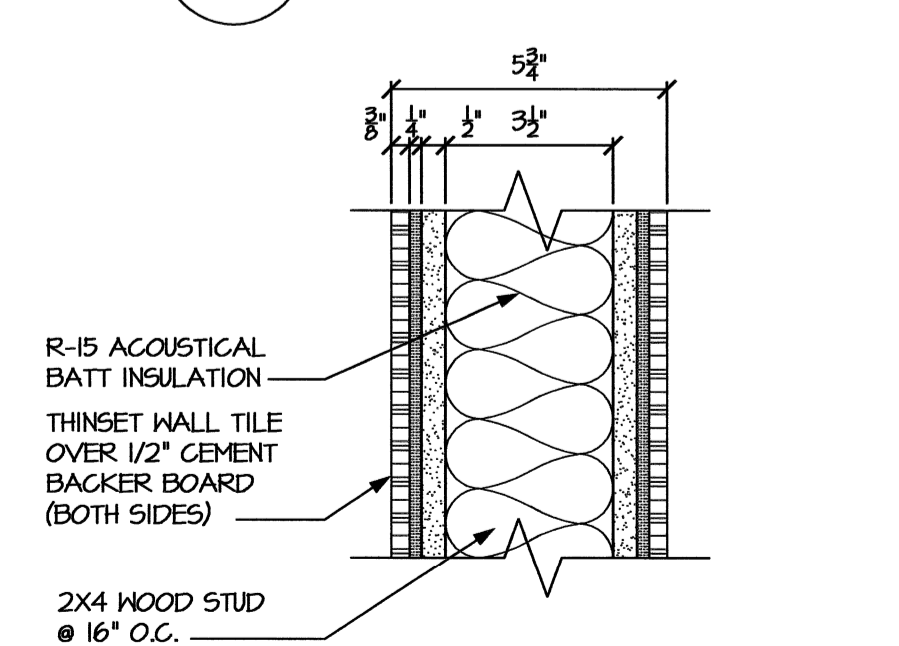
9  
A3.2  
GLASS BLOCK TO STUD WALL  
TRANSITION DETAIL - JAMB  
SCALE: 3" = 1'-0"



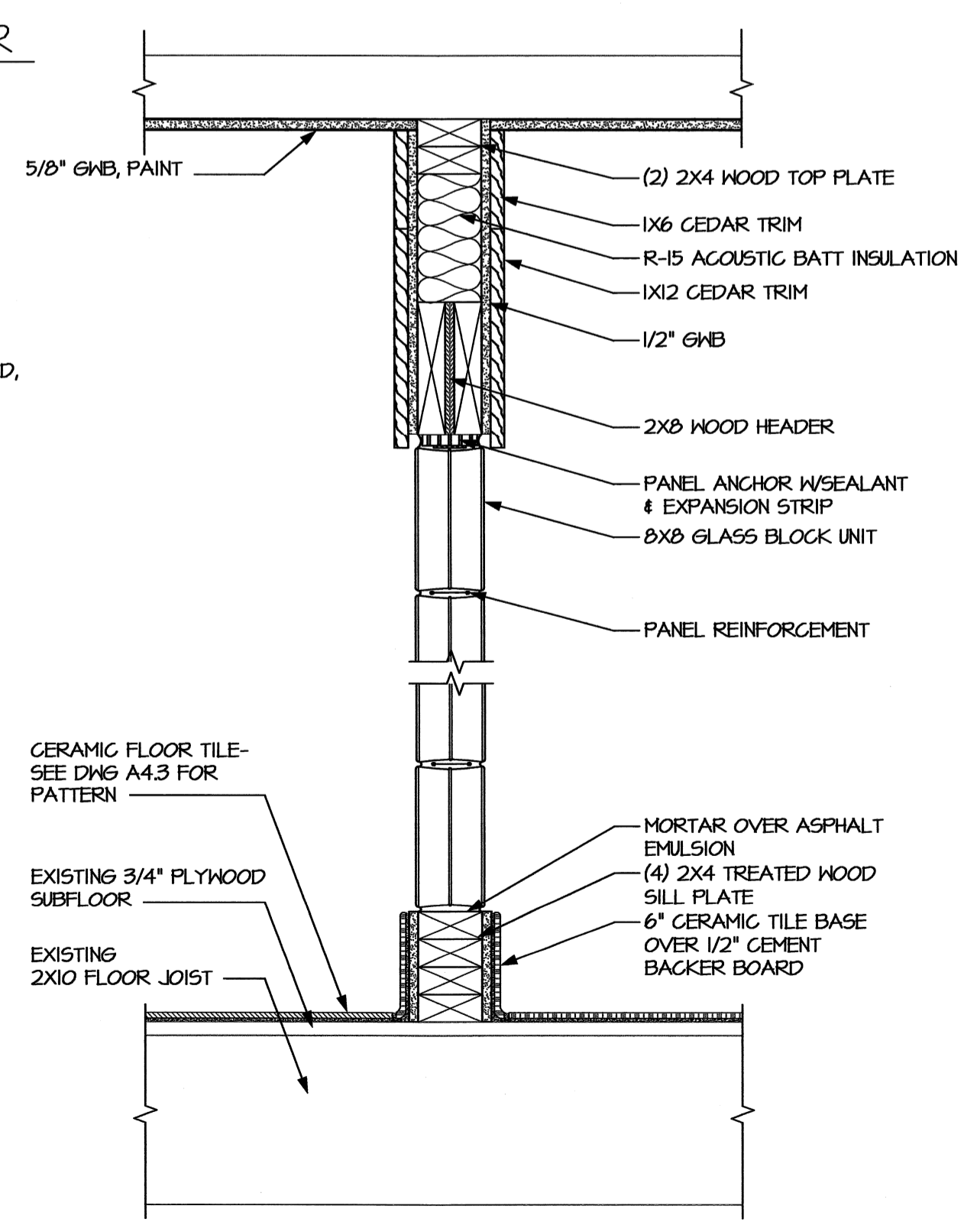
8  
A3.2  
TYP. TILE TO CEDAR  
TRANSITION DETAIL @ CORNER  
SCALE: 3" = 1'-0"



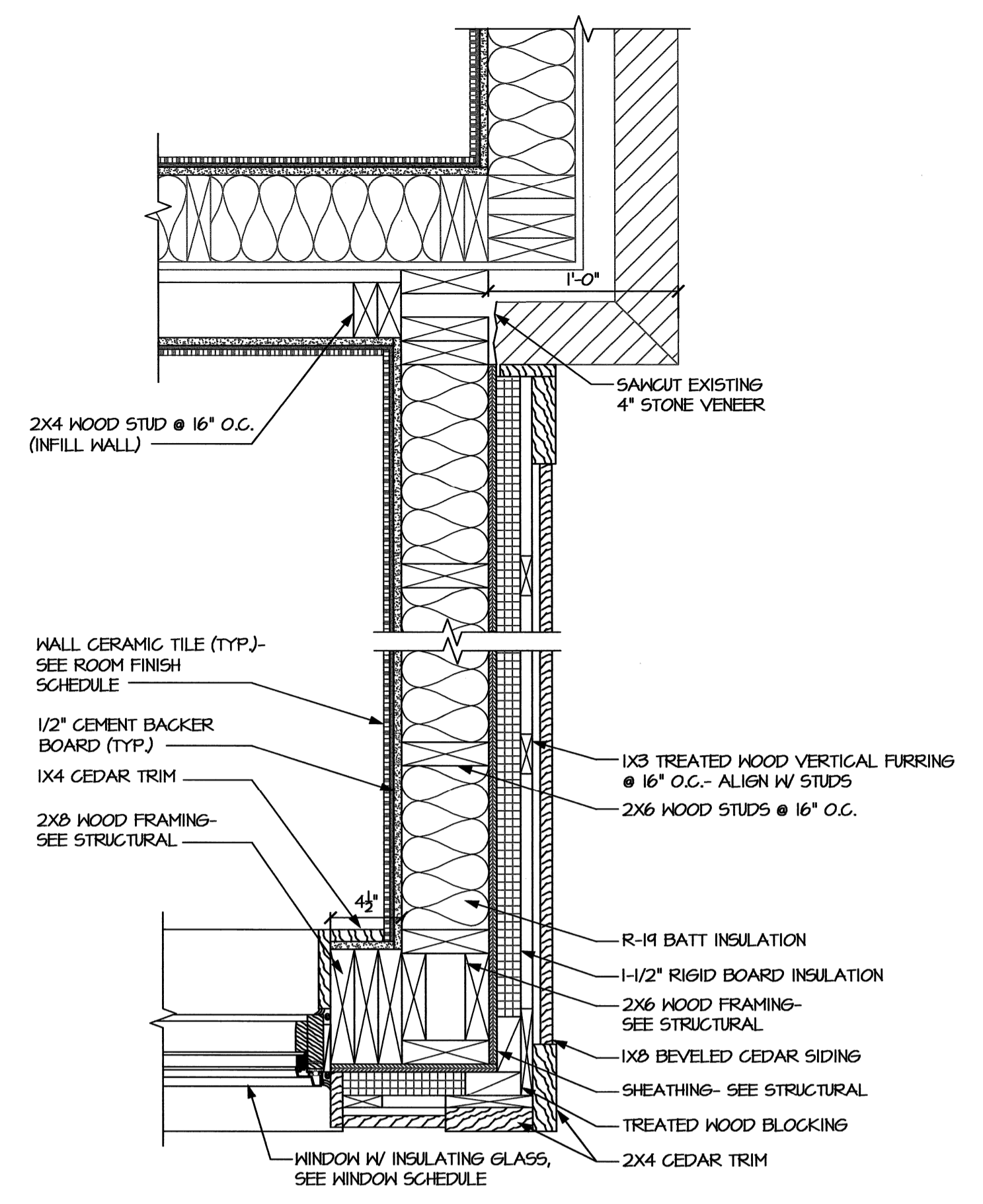
7  
A3.2  
TILE TO CEDAR  
TRANSITION DETAIL  
SCALE: 3" = 1'-0"



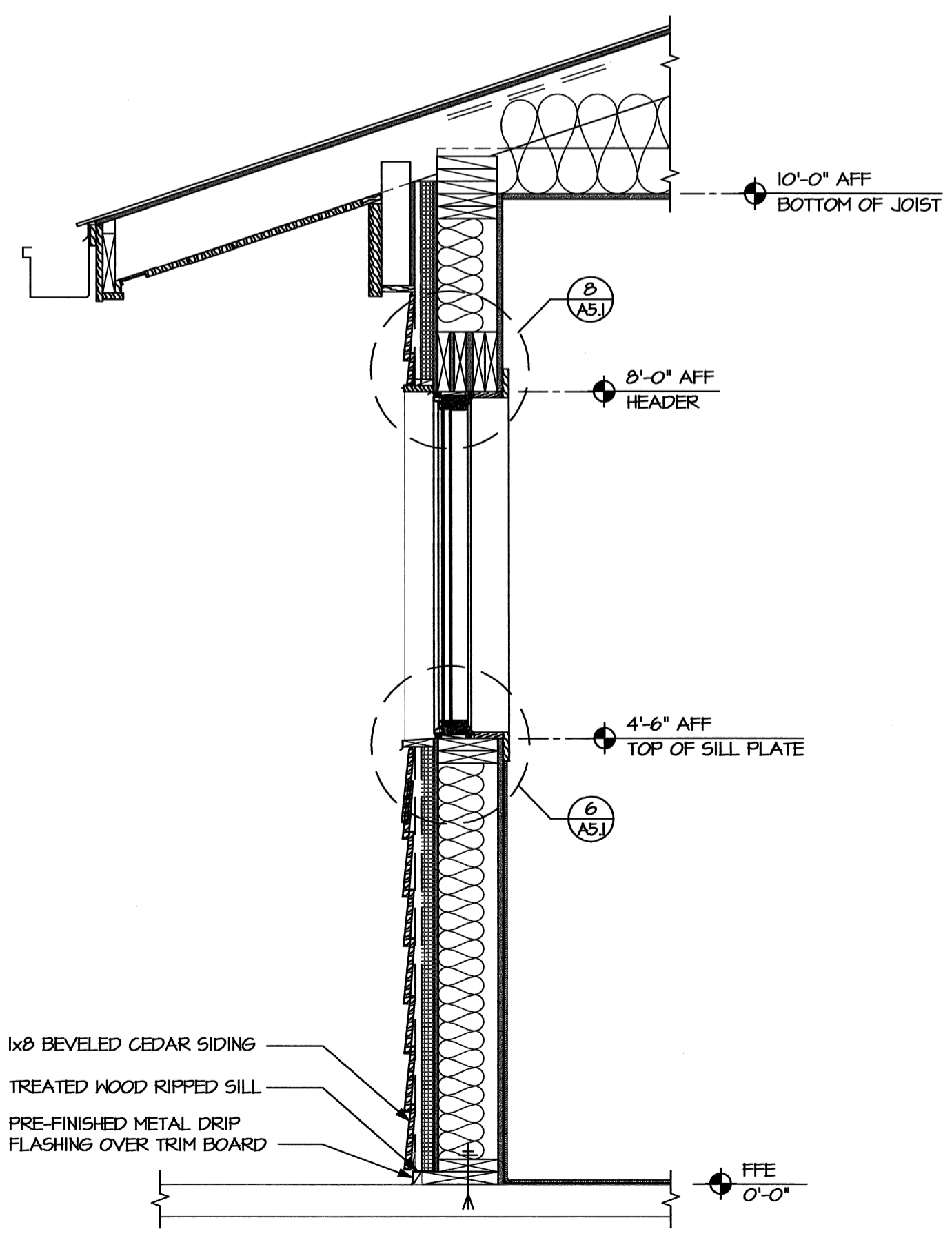
6  
A3.2  
TYP. INTERIOR WALL  
W/ TILE FINISH DETAIL  
SCALE: 3" = 1'-0"



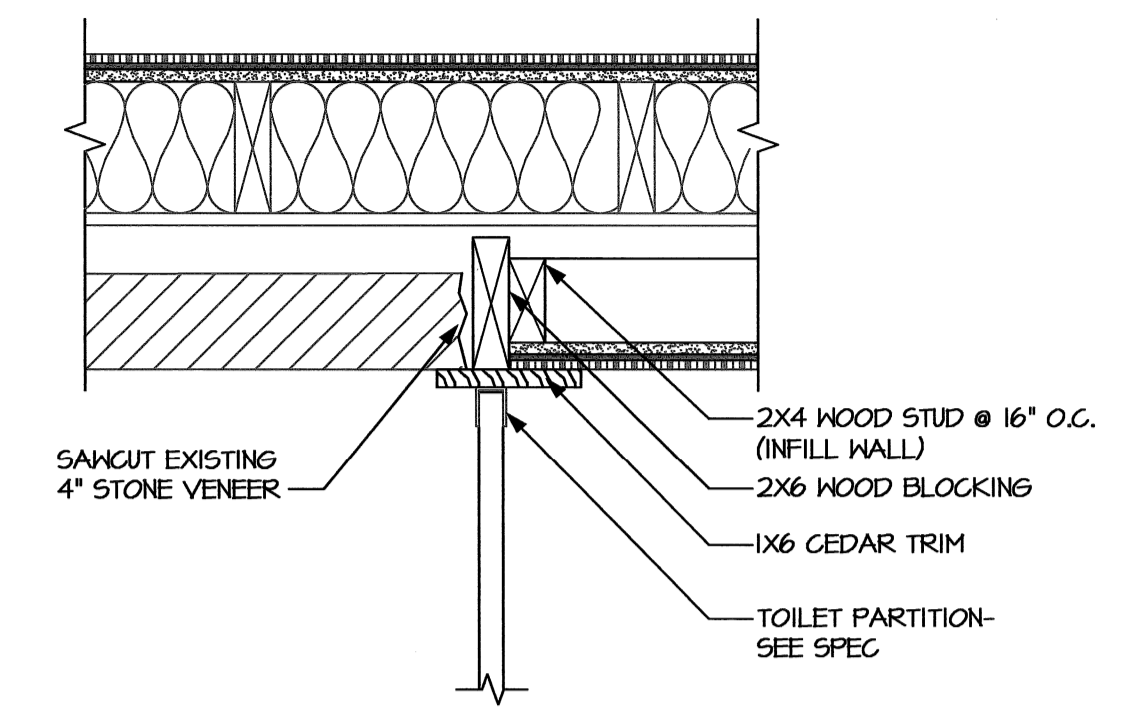
3  
A3.2  
SECTION @ GLASS BLOCK WALL  
SCALE: 1-1/2" = 1'-0"



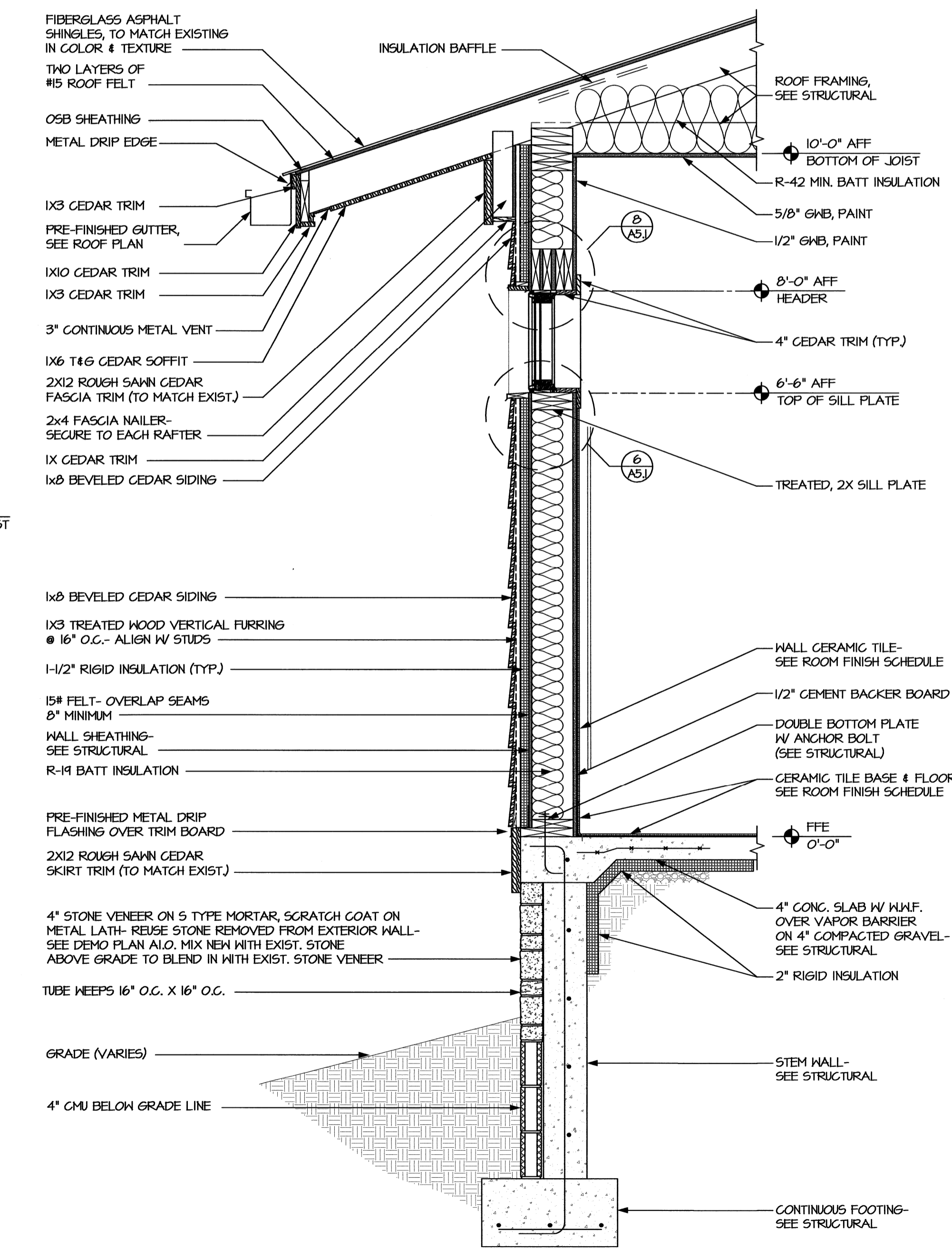
5  
A3.2  
SECTION @ NEW ADDITION -  
FAMILY RESTROOM WALL  
SCALE: 1-1/2" = 1'-0"



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

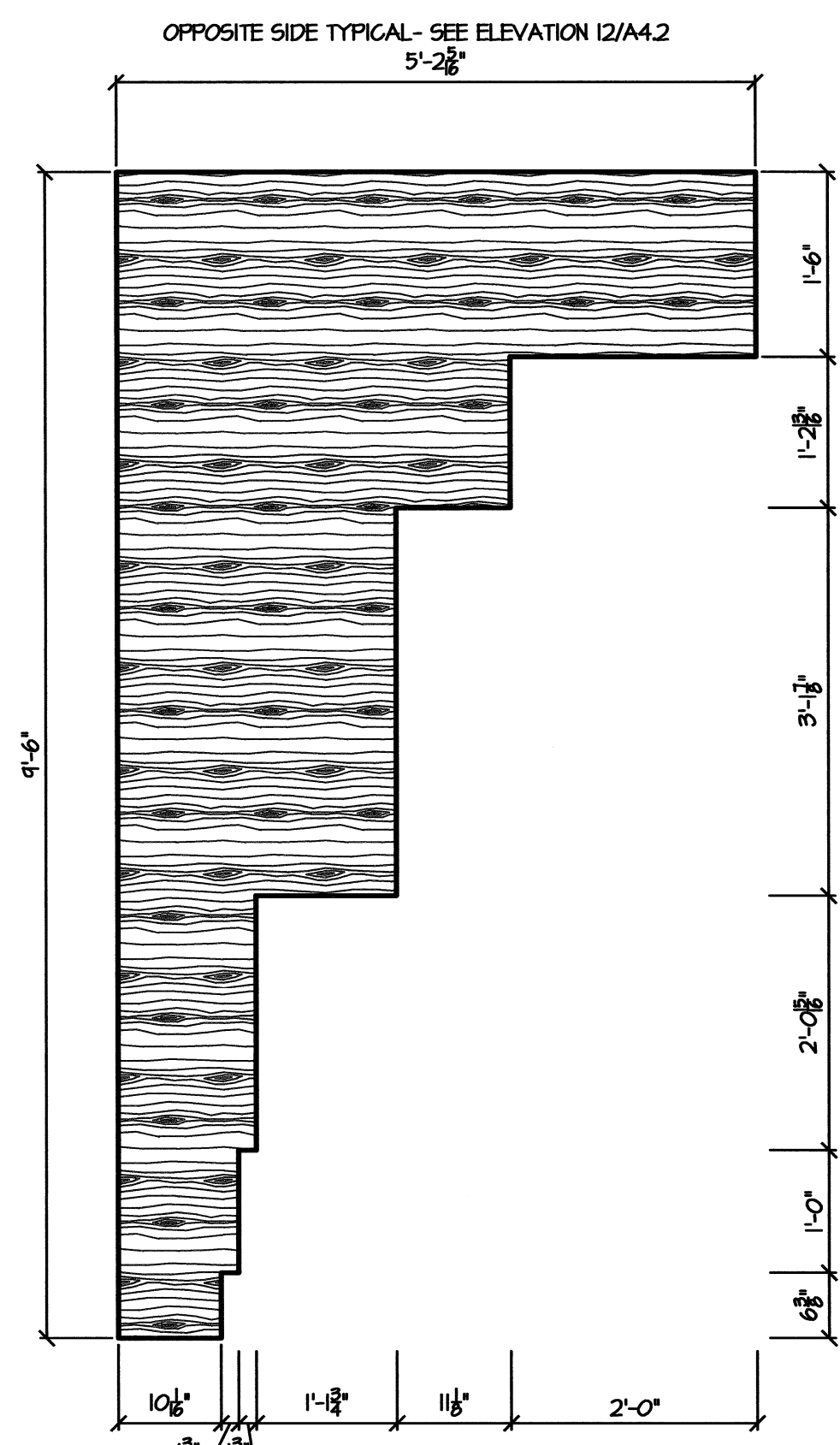


4  
A3.2  
SECTION @ NEW ADDITION -  
STONE TO TILE TRANSITION  
SCALE: 1-1/2" = 1'-0"

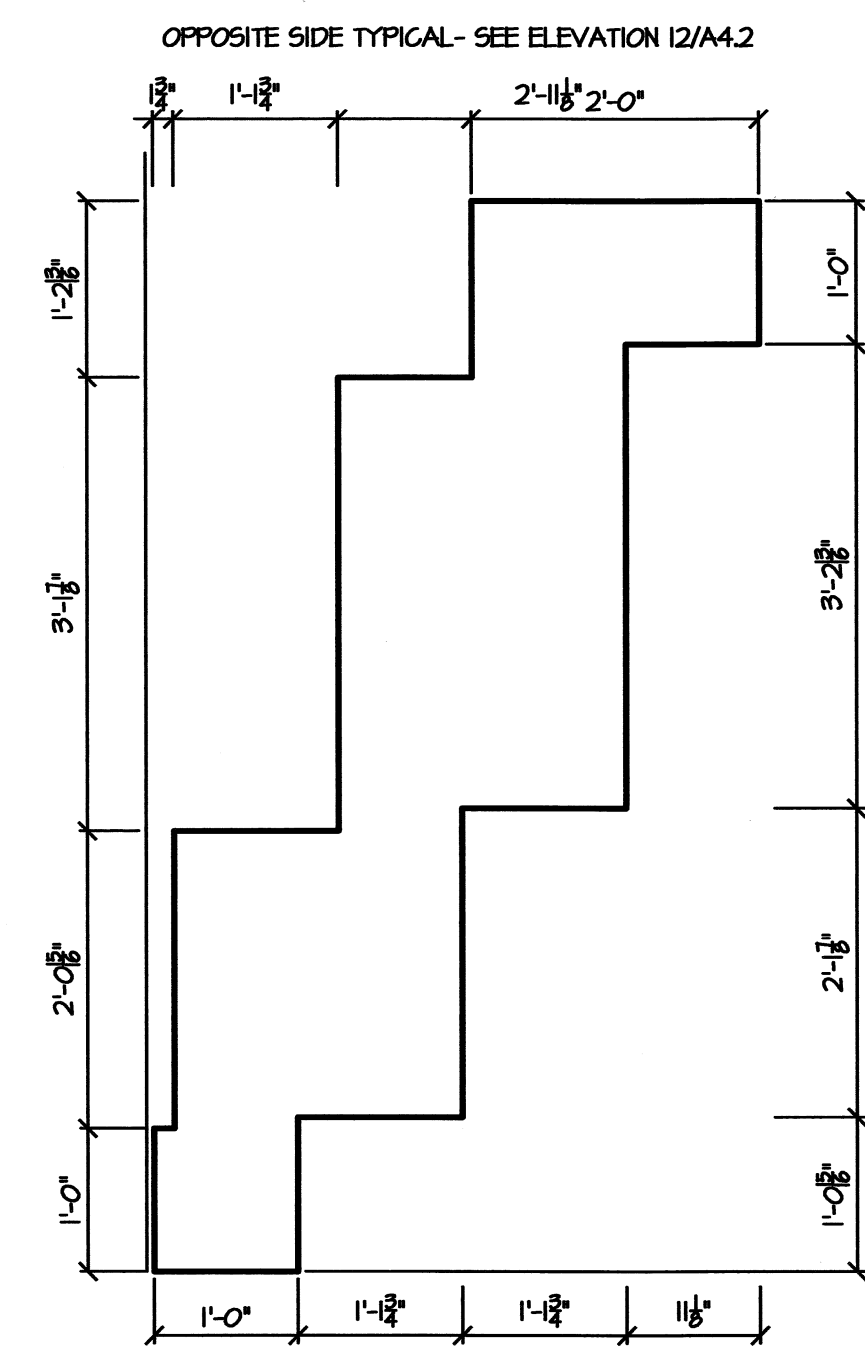


1  
A3.2  
WALL SECTION  
SCALE: 3/4" = 1'-0"

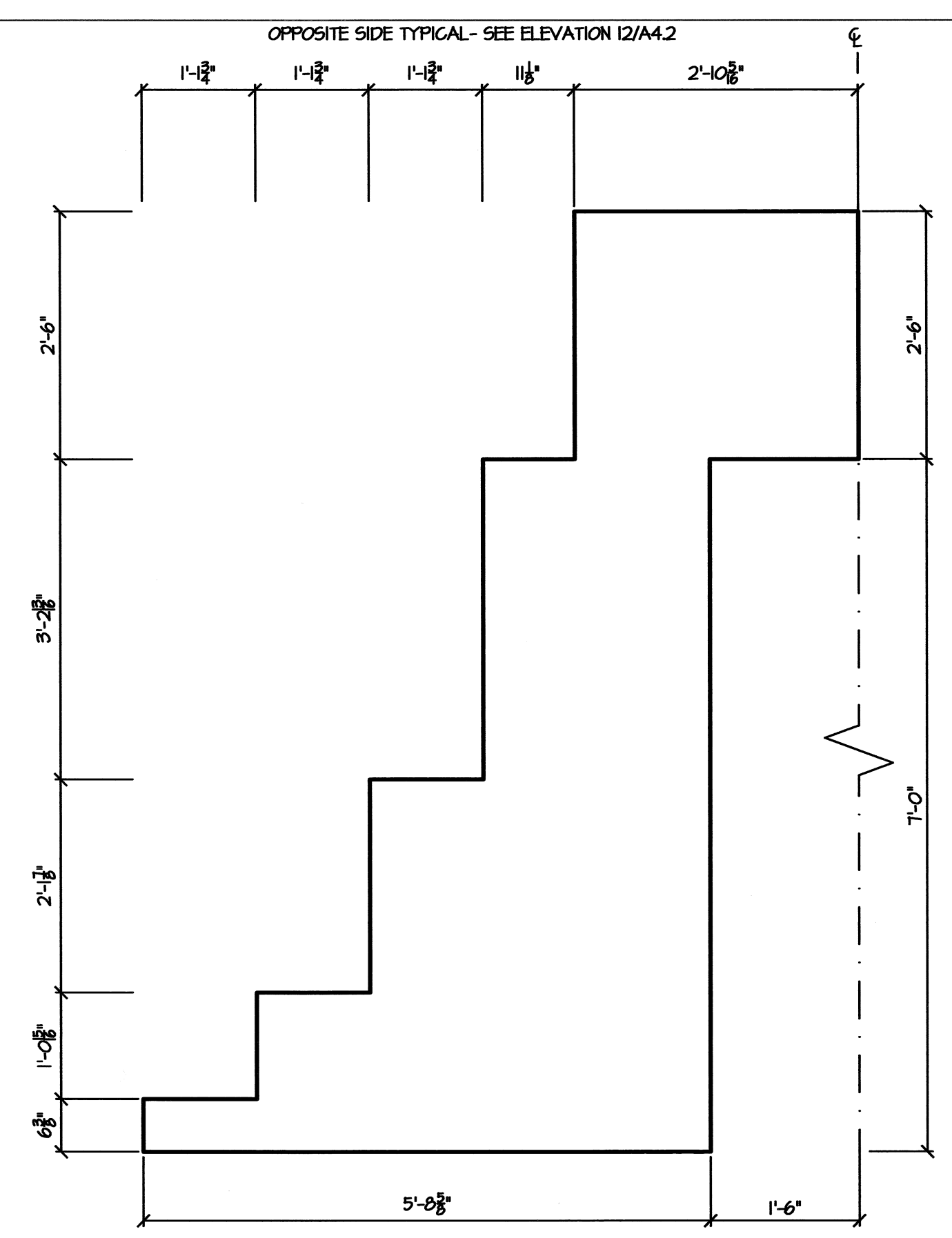




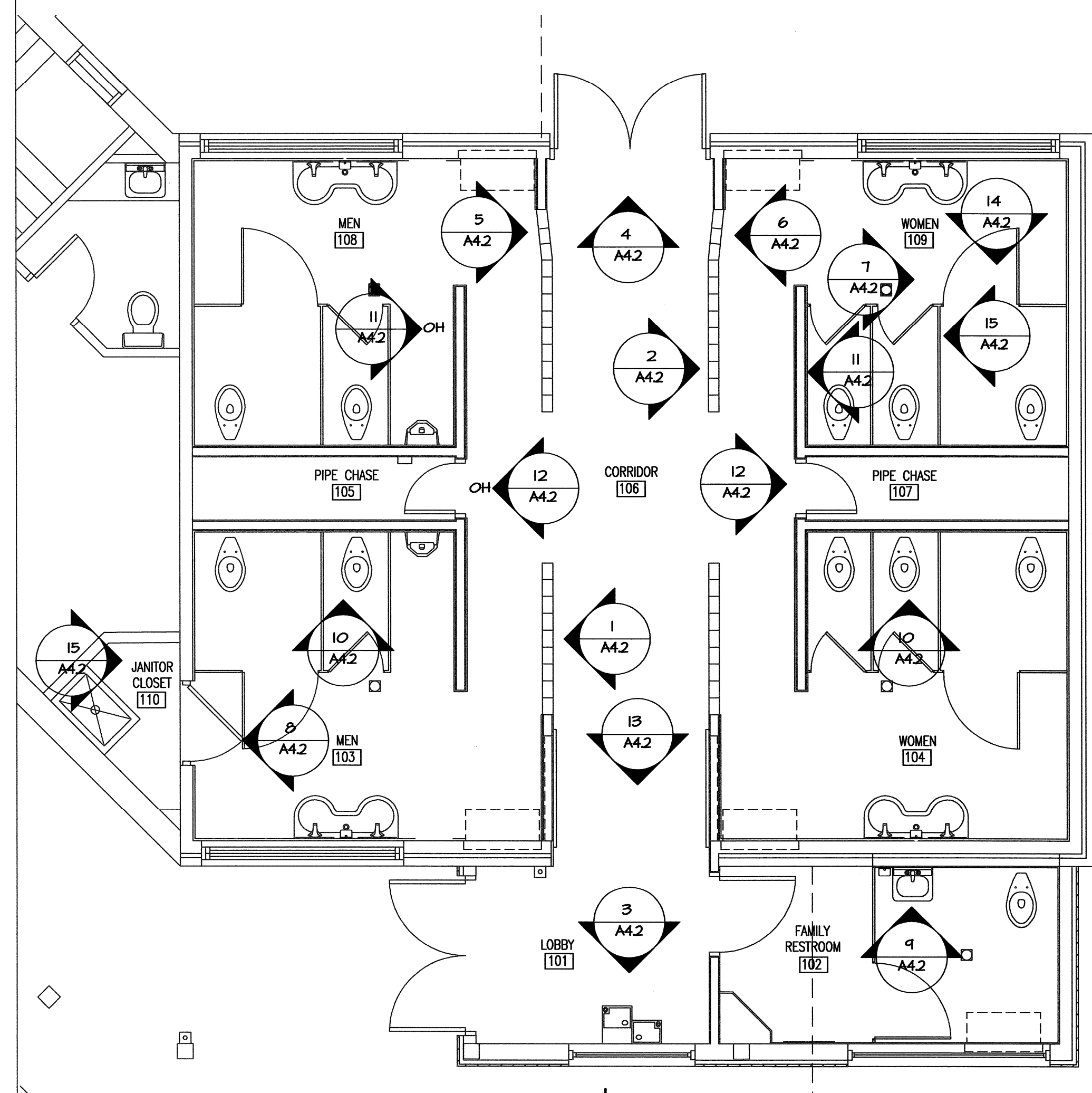
7 CEDAR ACCENT  
A4.1 SCALE: 3/4" = 1'-0"



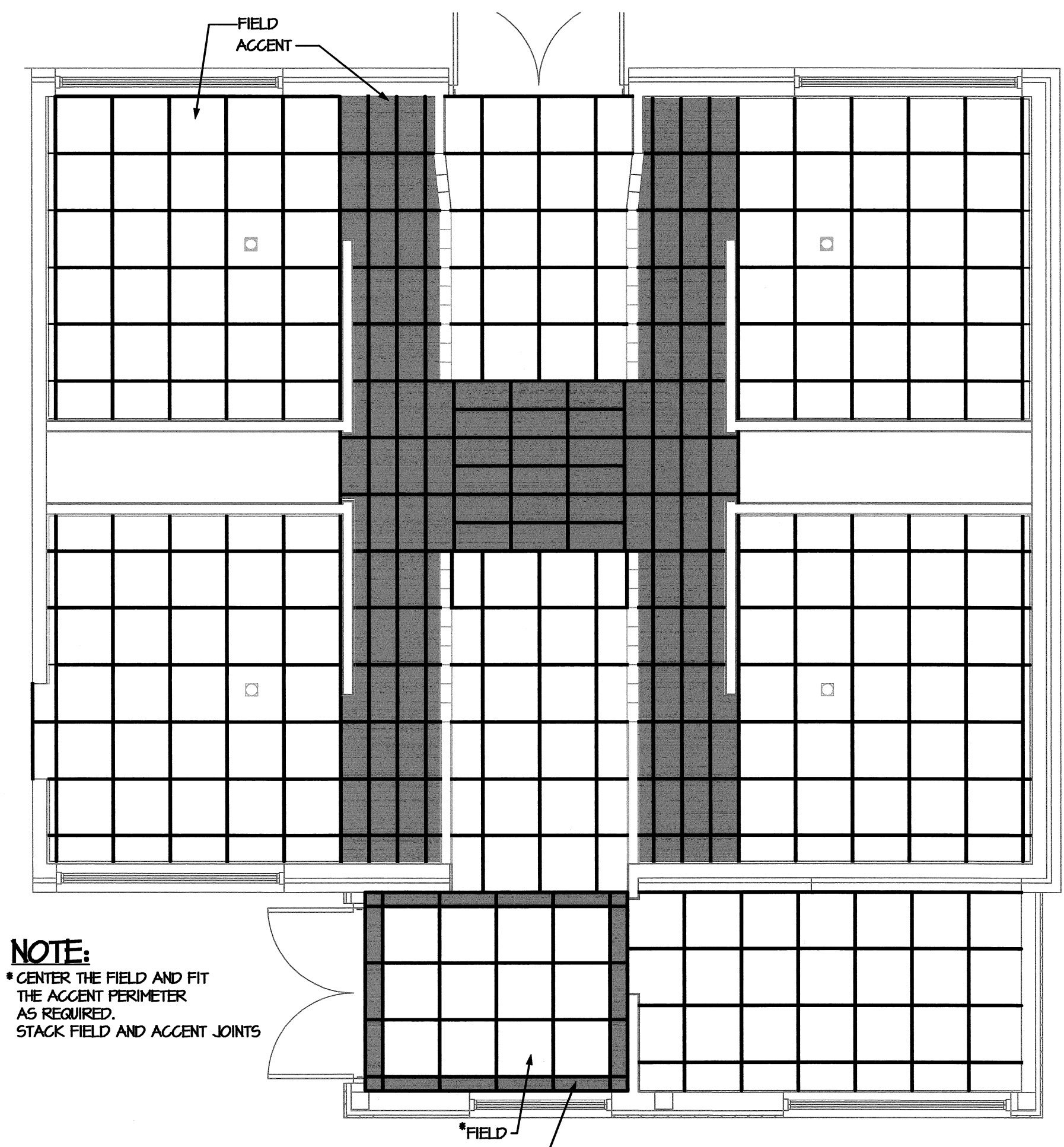
6 ACCENT 3  
A4.1 SCALE: 3/4" = 1'-0"



5 ACCENT 2  
A4.1 SCALE: 3/4" = 1'-0"

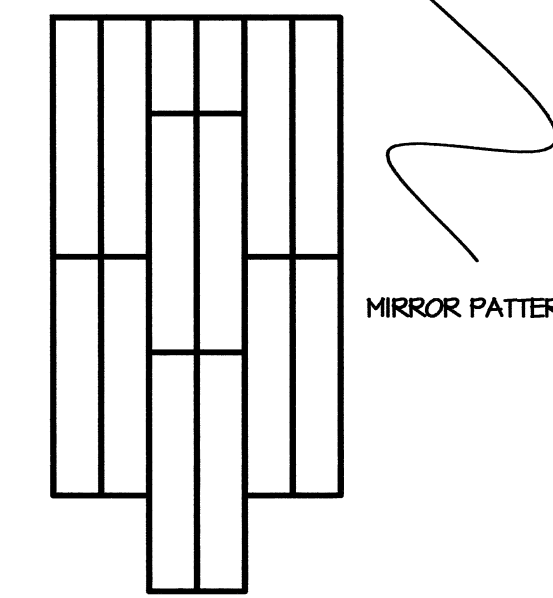
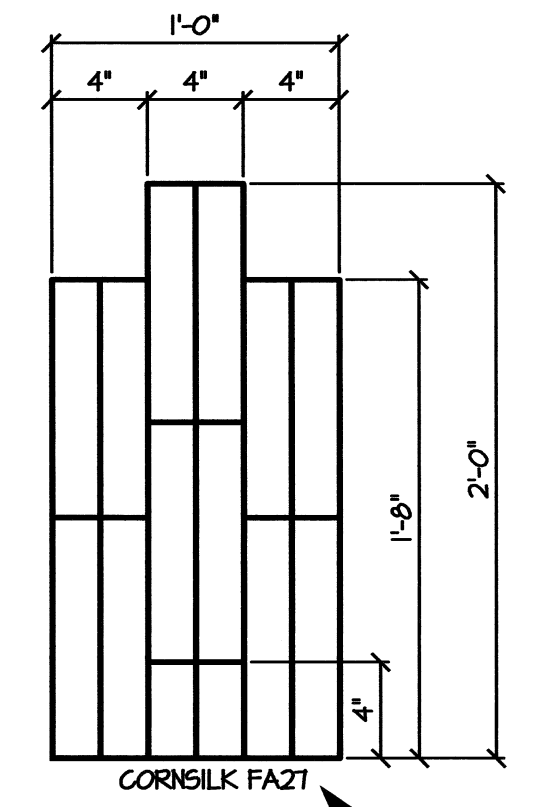


1 ELEVATION KEY  
A4.1 NTS BUILDING NORTH

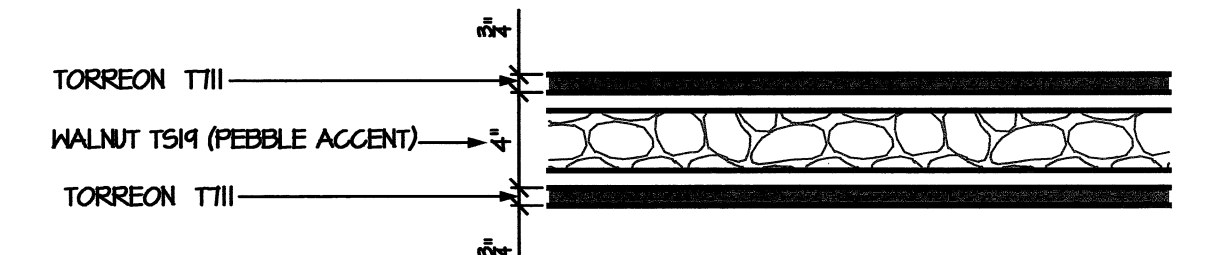


NOTE:  
\* CENTER THE FIELD AND FIT THE ACCENT PERIMETER AS REQUIRED.  
\* STACK FIELD AND ACCENT JOINTS

2 FLOOR TILE PATTERN  
A4.1 SCALE: 1/4" = 1'-0" BUILDING NORTH



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



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

BID DOCUMENTS  
LISA LARKIN ACEL  
REGISTERED ARCHITECT  
11-21-14  
NORTH CAROLINA  
RALEIGH, N.C.  
SEAL NOT VALID UNLESS SIGNED AND DATED

DESIGNED BY:  
FACILITIES DESIGN  
ARCHITECTS & ENGINEERS  
FACILITIES MANAGEMENT DIVISION, NCDOT  
1 SOUTH WILMINGTON STREET  
RALEIGH, NORTH CAROLINA 27601  
PHONE: 707-4440 FAX: 919-716-0888



CONSULTANT:

DRAWING TITLE / DESCRIPTION:  
ELEVATION KEY  
FLOOR TILE PATTERN  
DETAILS

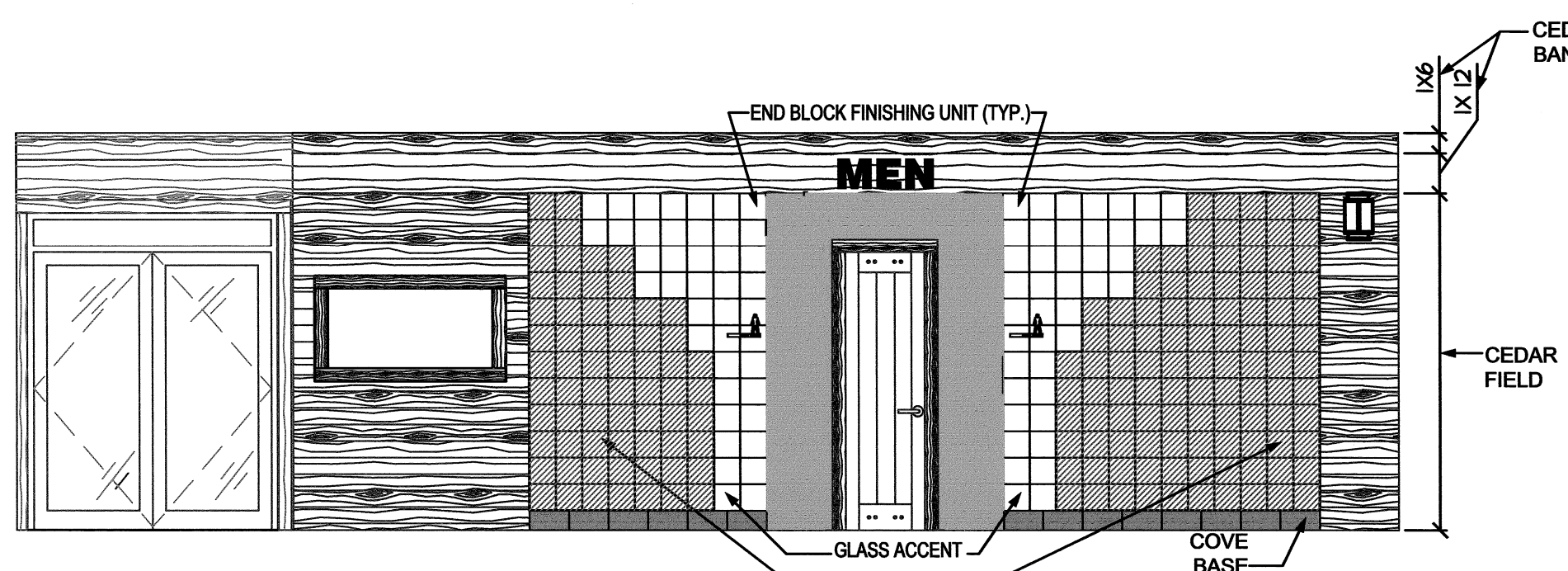
PROJECT TITLE:  
MACON COUNTY  
REST AREA, NCDOT  
US-28/441, NC 28783  
MACON COUNTY, NORTH CAROLINA

SCO ID NO.	14-11043-01A
TIP PROJ. NO.	K-5103
WBS NO.	42231.3.1
FEDERAL ID NO.	NHPP-0023(31)
ASSET NUMBER:	
CO. #	56
SITE #	16
BLDG. #	1
REVISIONS	
NO.	DATE

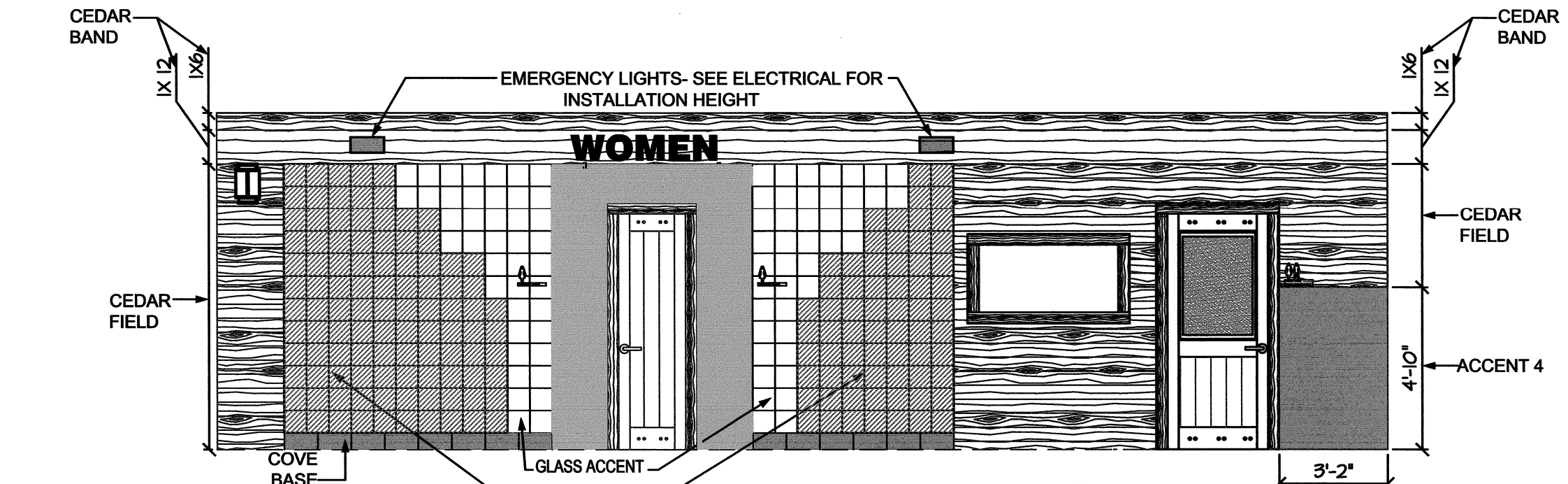
DATE ISSUED: 11-21-14  
DRAWN BY: RA  
CHECKED BY: LLK  
SHEET NO.

A4.1

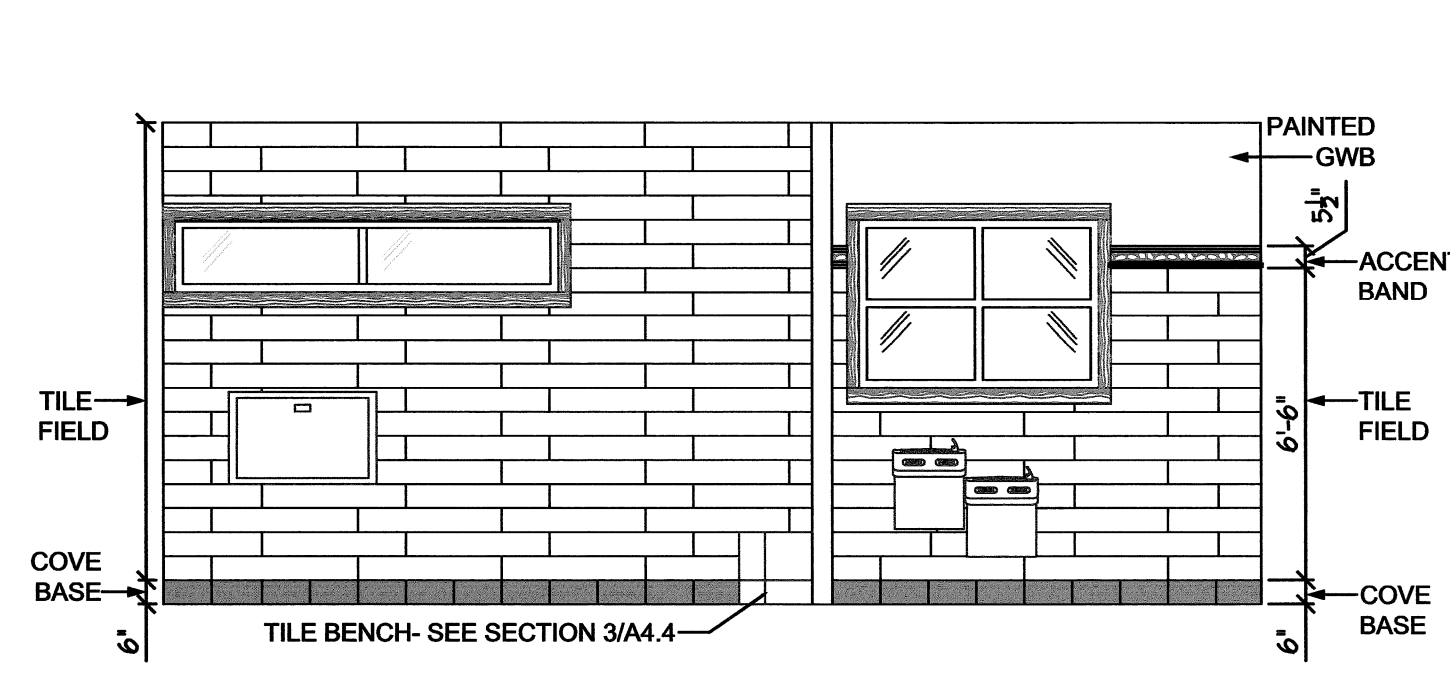




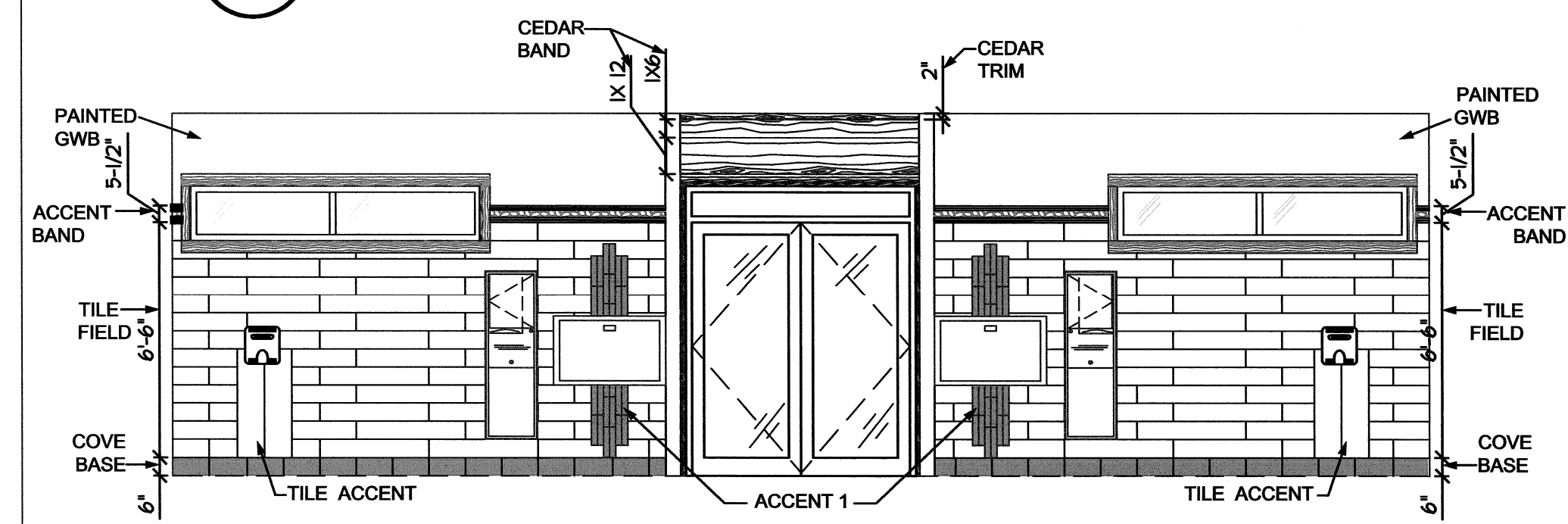
1 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



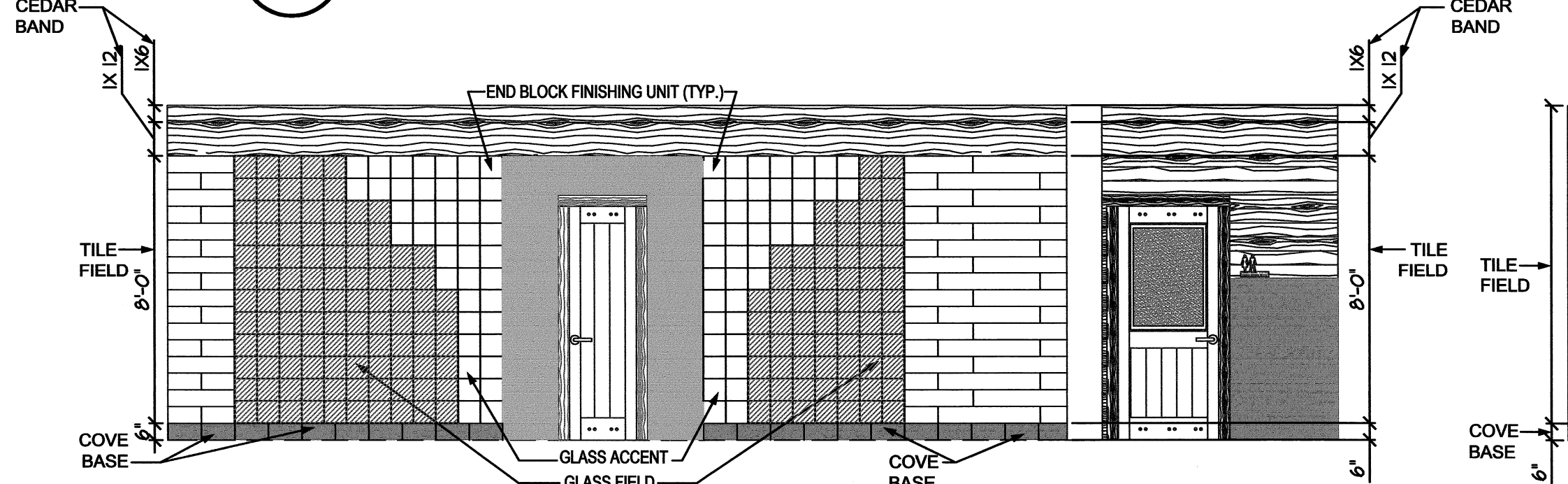
2 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



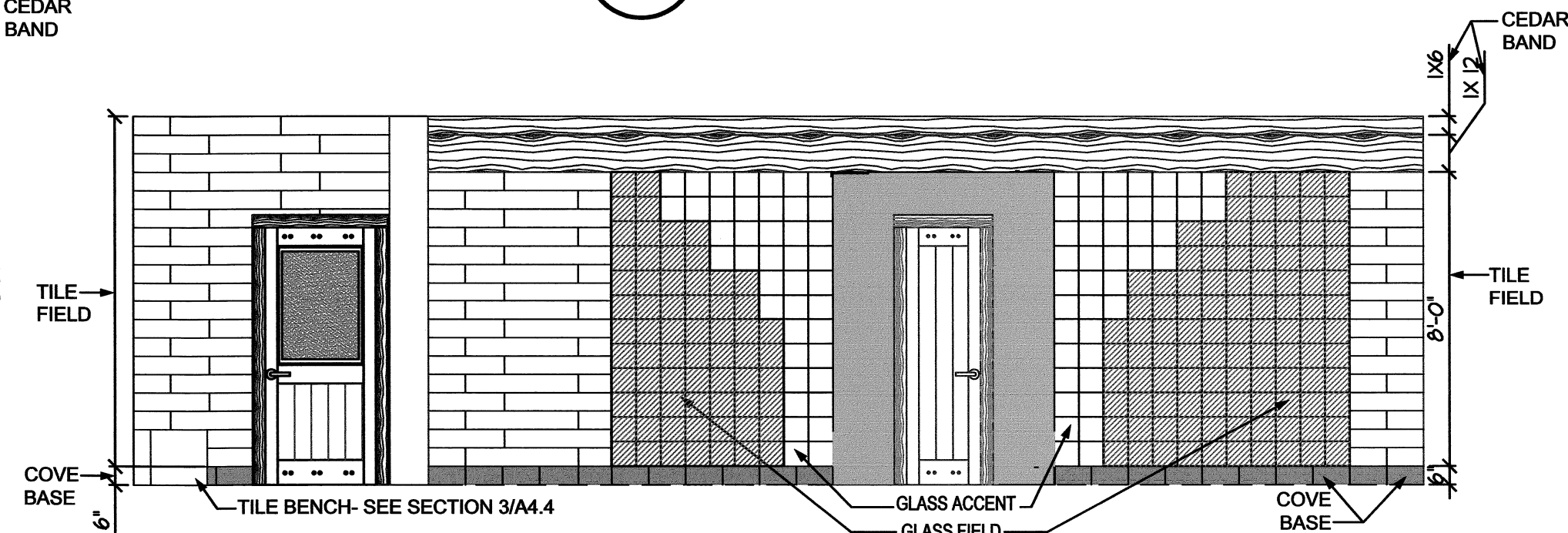
3 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



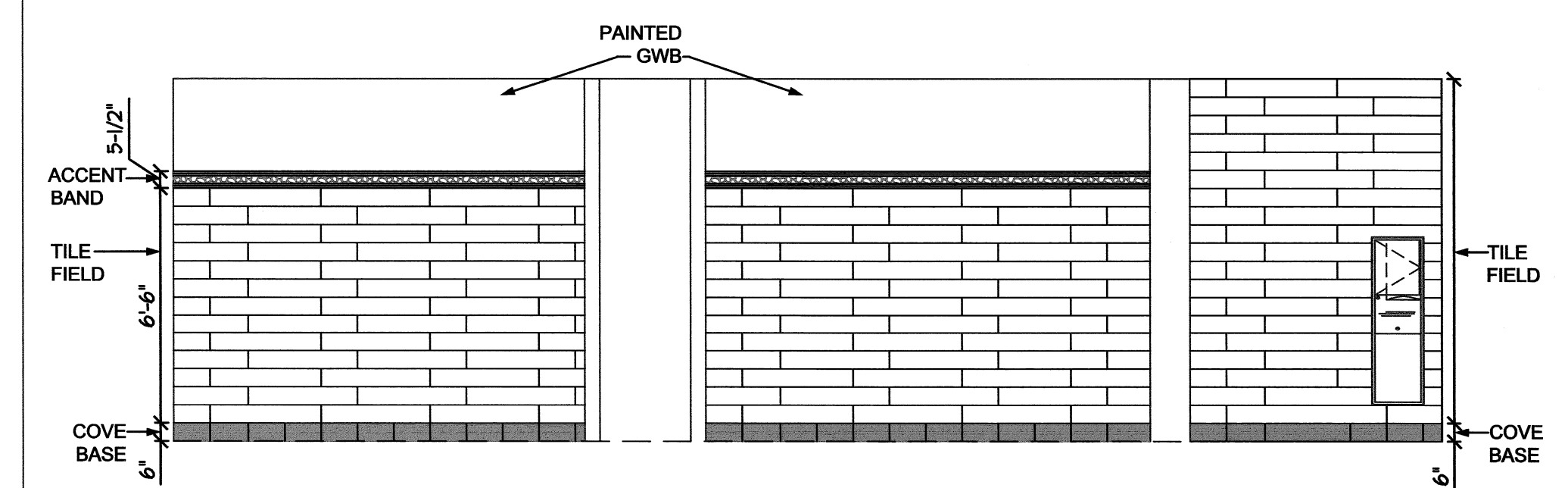
4 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



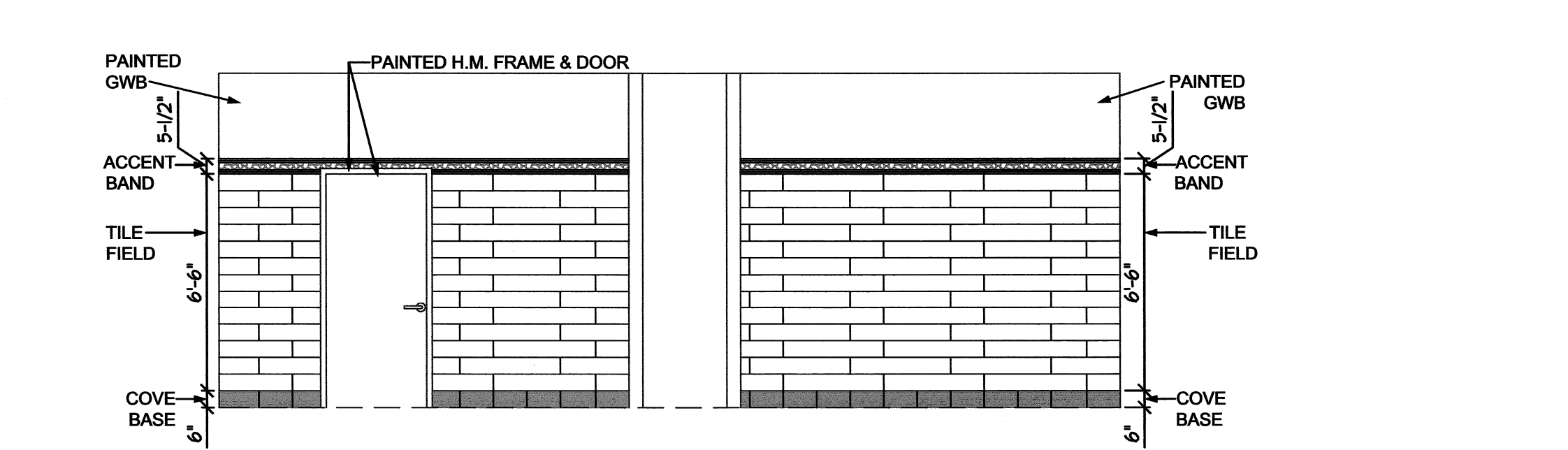
5 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



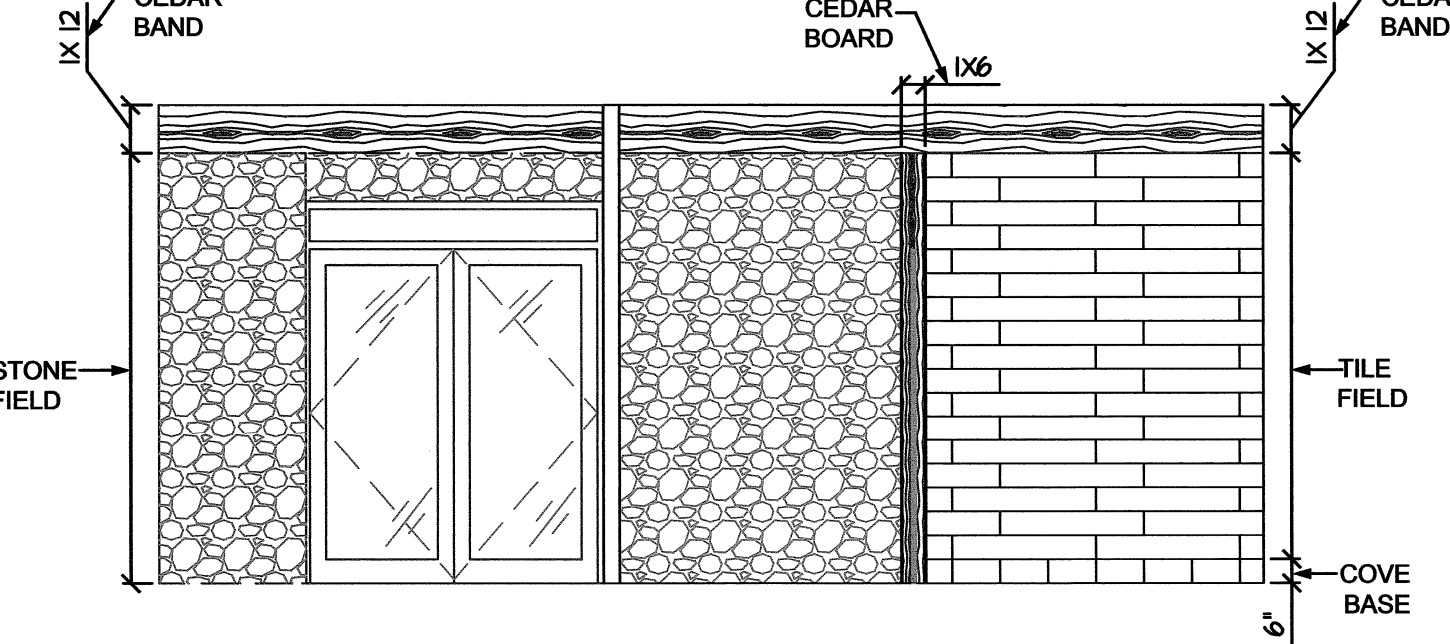
6 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



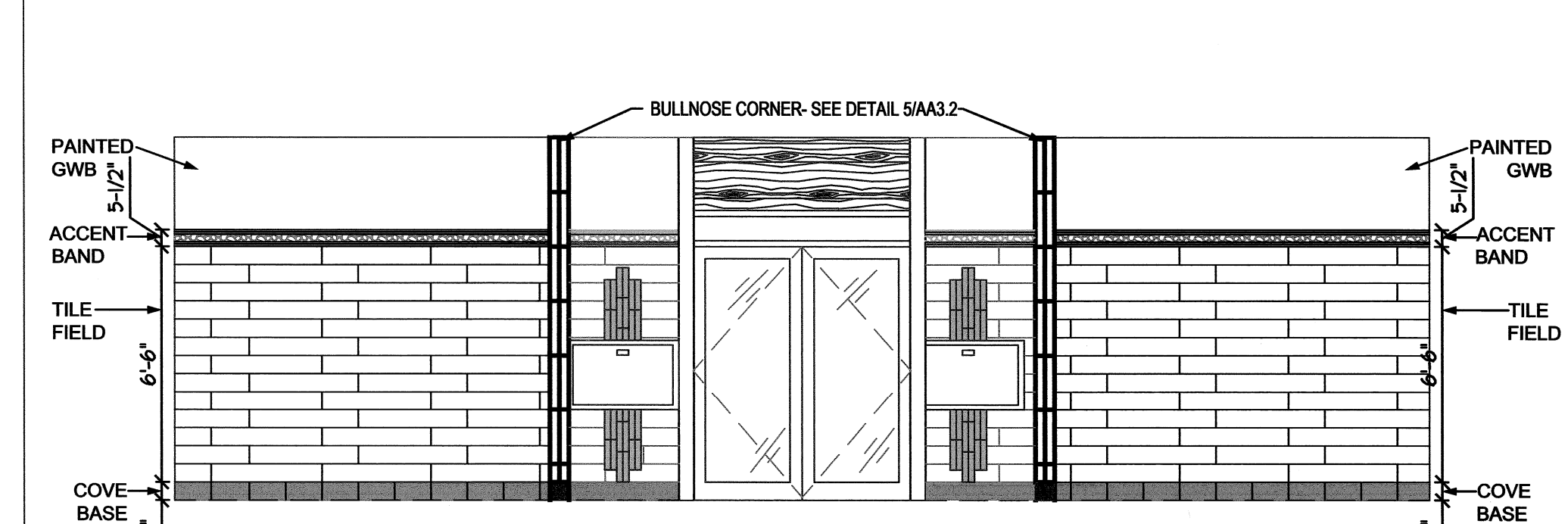
7 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



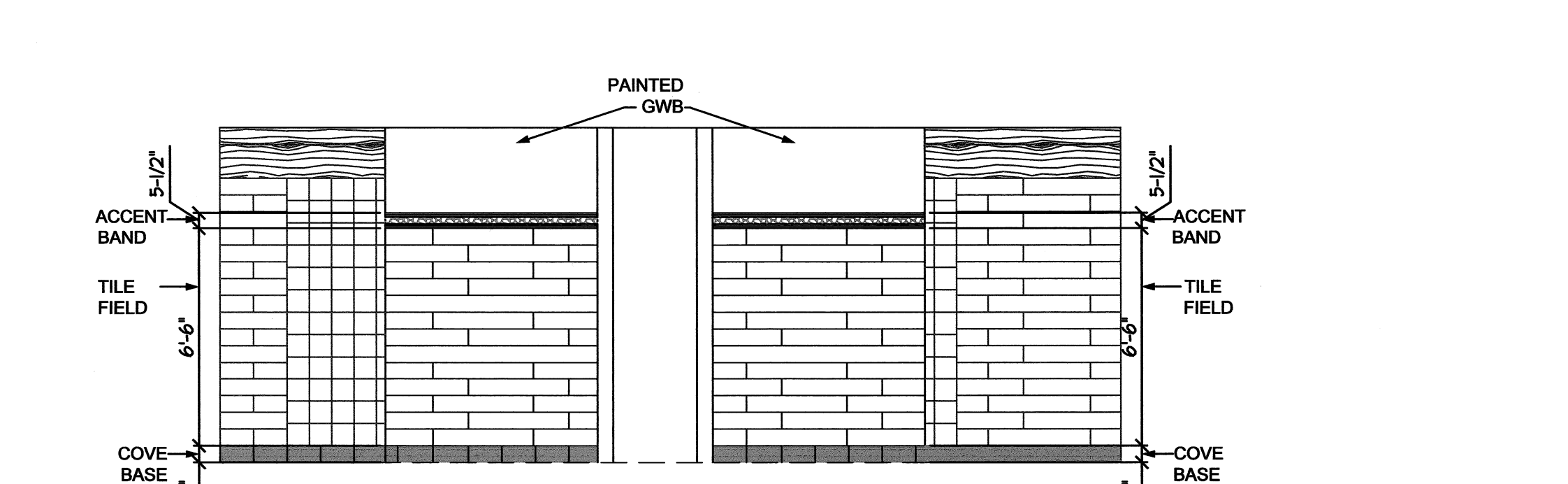
8 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



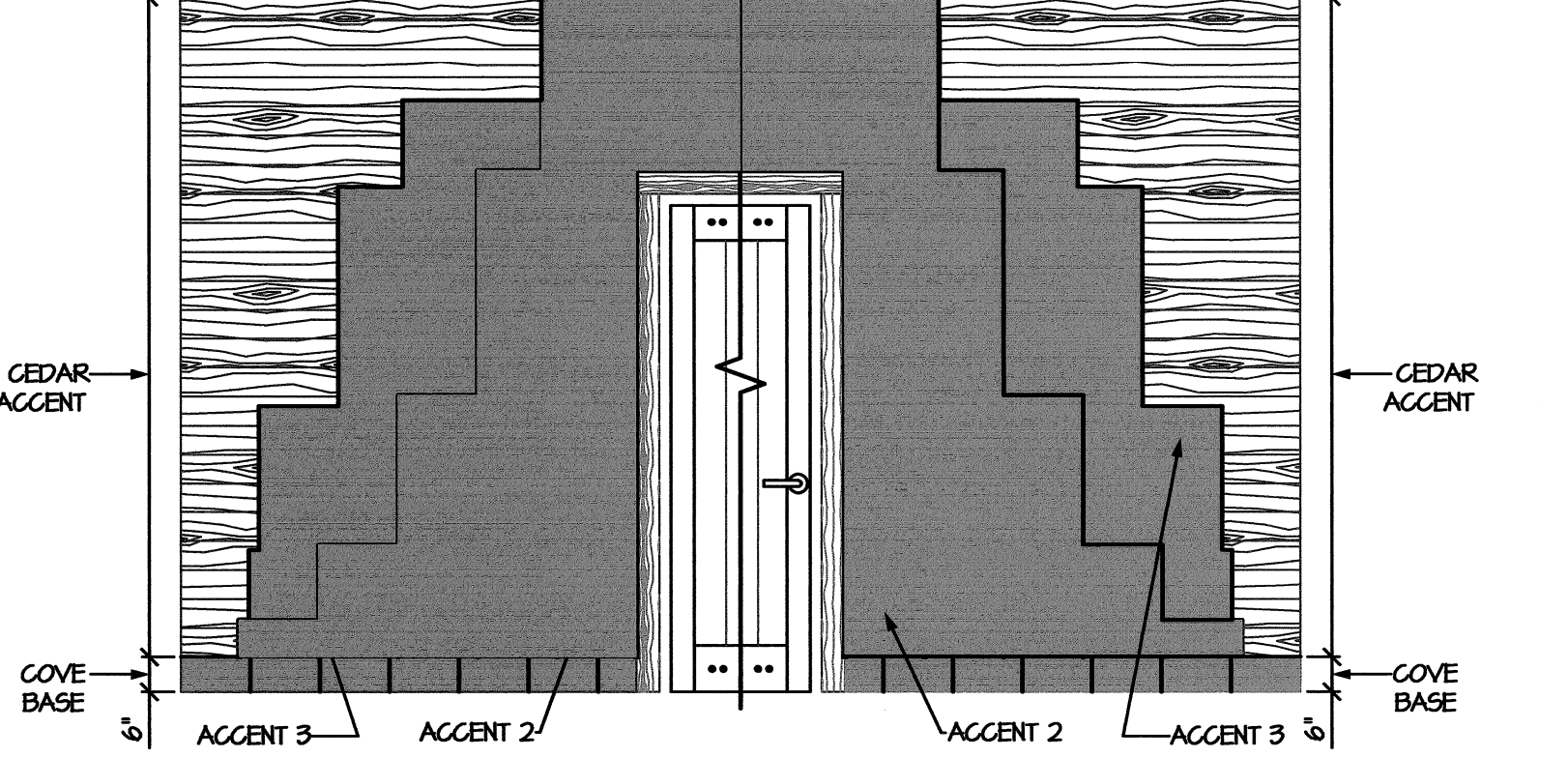
9 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



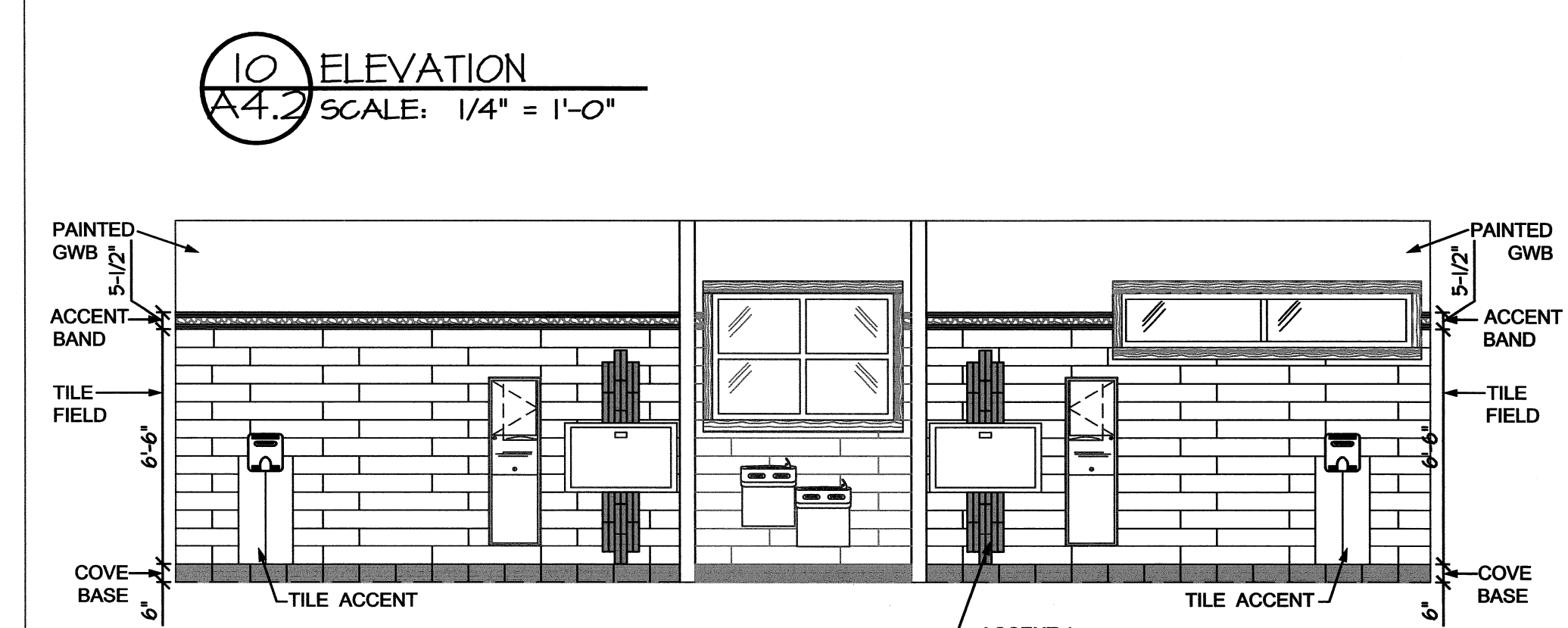
10 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



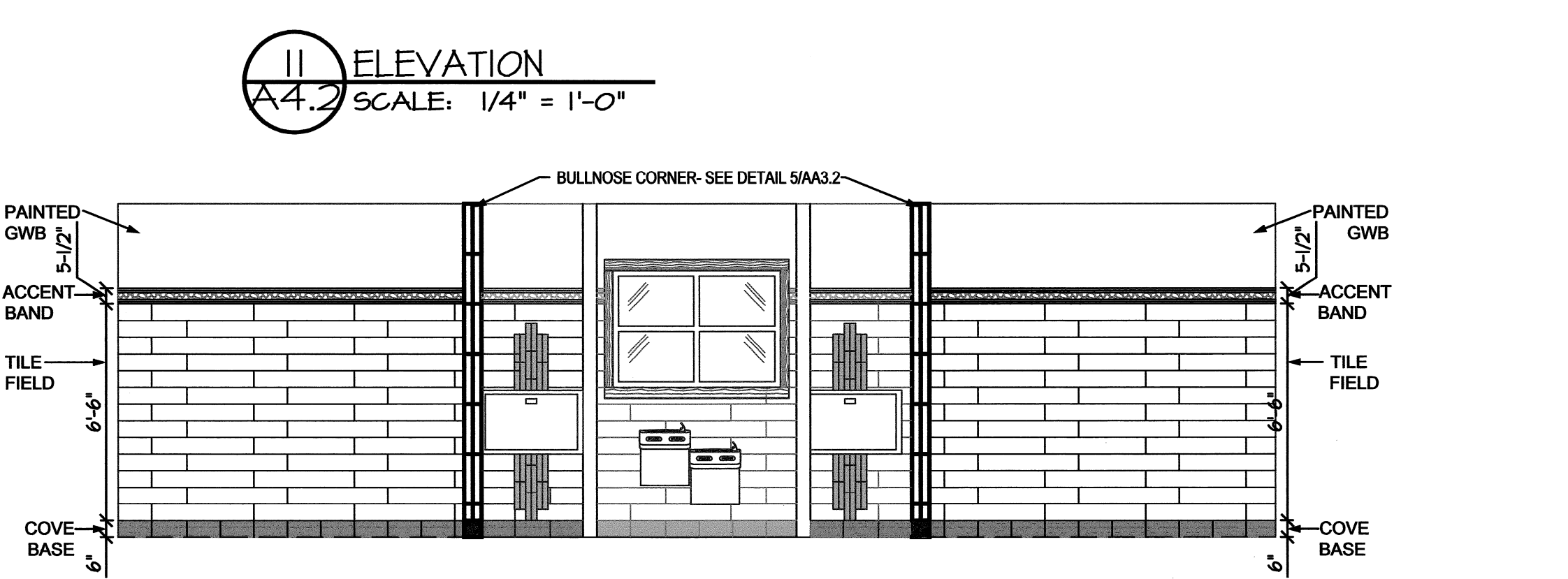
11 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



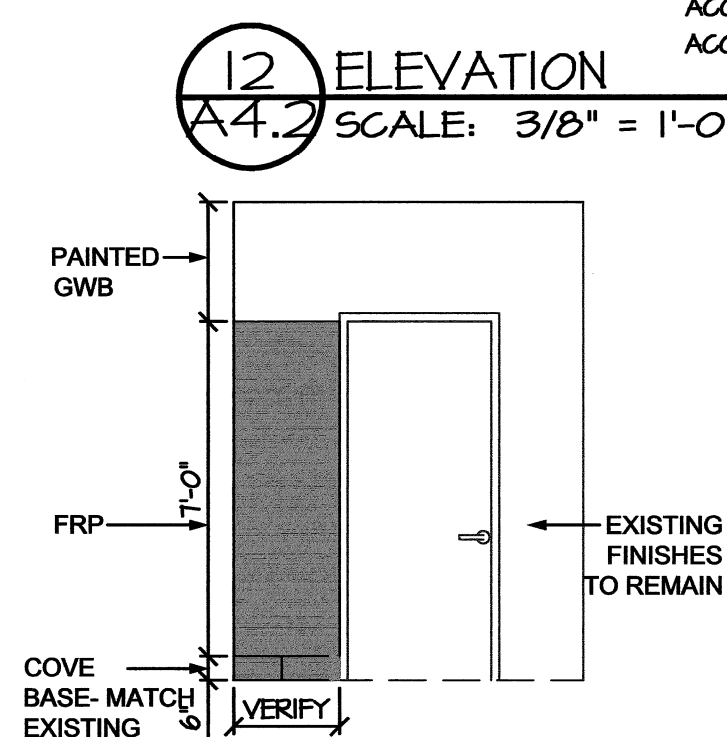
12 ELEVATION  
A4.2 SCALE: 3/8" = 1'-0"



13 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



14 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"



15 ELEVATION  
A4.2 SCALE: 1/4" = 1'-0"

BID DOCUMENTS  
LISA LARKIN KELL  
REGISTERED ARCHITECT  
6195  
11-21-14  
RALEIGH, N.C.  
SEAL NOT VALID UNLESS SIGNED AND DATED  
DESIGNED BY:  
FACILITIES DESIGN  
ARCHITECTS & ENGINEERS  
FACILITIES MANAGEMENT DIVISION, NCDOT  
1 SOUTH WILKINSON STREET  
RALEIGH, NORTH CAROLINA 27601  
PHONE: 707-4640 FAX: 919-776-0588

CONSULTANT:  
DRAWING TITLE / DESCRIPTION:  
INTERIOR FINISHES

PROJECT TITLE:  
MACON COUNTY  
REST AREA, NCDOT  
109-28/441 NC 28783  
MACON COUNTY, NORTH CAROLINA  
SCO ID NO. 14-11043-01A  
TIP PROJ. NO. K-5103  
WBS NO. 42231.3.1  
FEDERAL ID NO. NHPP-002(31)  
ASSET NUMBER:  
CO.# SITE.# BLDG.#  
56 - 16 - 1  
REVISIONS  
NO. DATE  
DATE ISSUED: 11-21-14  
DRAWN BY: RA  
CHECKED BY: LLK  
SHEET NO.

A4.2



**ROOM FINISH - COLOR SCHEDULE**

NO.	ROOM	FLOOR		BASE		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL		CEILING			REMARKS
		MAT.	COLOR	MAT.	COLOR	MATERIAL	COLOR	MATERIAL	COLOR	MATERIAL	COLOR	MATERIAL	COLOR	MAT.	COLOR	HEIGHT	
101	LOBBY	CT	SEE SPEC.	CT	SEE SPEC.	SEE ELEVATION 3/A4.2	SEE SPEC.	SEE ELEVATION 1/A4.2	SEE SPEC.	SEE ELEVATION 9/A4.2	SEE SPEC.	SEE ELEVATION 2/A4.2	SEE SPEC.	GWB	SEE SPEC.	10'-0"	
102	FAMILY RESTROOM	CT		CT		SEE ELEVATION 3/A4.2		SEE ELEVATION 15/A4.2		SEE ELEVATION 9/A4.2		SEE ELEVATION 7/A4.2					
103	MEN	CT		CT		SEE ELEVATION 13/A4.2		SEE ELEVATION 8/A4.2		SEE ELEVATION 10/A4.2		SEE ELEVATION 11/A4.2					
104	WOMEN	CT		CT		SEE ELEVATION 13/A4.2		SEE ELEVATION 15/A4.2		SEE ELEVATION 10/A4.2		SEE ELEVATION 7/A4.2					
105	PIPE CHASE	CONC.		CONC.		GWB		GWB		GWB		GWB					
106	CORRIDOR	CT		CT		N/A		SEE ELEVATION 1/A4.2		SEE ELEVATION 4/A4.2		SEE ELEVATION 2/A4.2					
107	PIPE CHASE	CONC.		CONC.		GWB		GWB		GWB		GWB					
108	MEN	CT		CT		SEE ELEVATION 14/A4.2		SEE ELEVATION 8/A4.2		SEE ELEVATION 4/A4.2		SEE ELEVATION 11/A4.2					
109	WOMEN	CT		CT		SEE ELEVATION 14/A4.2		SEE ELEVATION 15/A4.2		SEE ELEVATION 4/A4.2		SEE ELEVATION 7/A4.2					
110	JANITOR CLOSET	N/A		N/A		N/A		N/A		N/A		N/A	N/A	N/A	N/A	N/A	*SEE ELEVATION 15/A4.2

**GENERAL NOTE:**  
FOR ROOM FINISH- COLOR SCHEDULE, REFER TO WALL/ FLOOR LEGENDS SHEET A4.1.

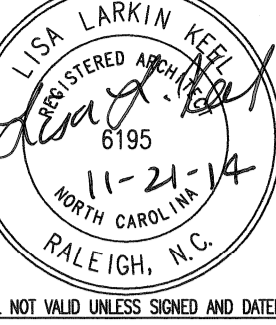
**LEGEND (FLOOR):**

FIELD	AMERICAN OLEAN, RELEVANCE, 24X 24 ESSENTIAL CHARCOAL RLO4 UNPOLISHED.
ACCENT	AMERICAN OLEAN, RELEVANCE, 12X 24 ESSENTIAL CHARCOAL RLO4 TEXTURED.
GROUT	QUARTZ LOCK <sup>2</sup> , 380 CHARCOAL GRAY.

**LEGEND (WALL):**

CEDAR BAND	1X 6 & 1X 12 CLEAR (NO KNOTS)- NATURAL STAIN- INSTALL AS SHOWN.
CEDAR FIELD	1X 6 CLEAR (NO KNOTS) T & G- FOR STAIN COLOR, SEE SPECS- INSTALL AS SHOWN.
CEDAR BOARD	1X 6 CLEAR (NO KNOTS)- FOR STAIN COLOR, SEE SPECS- INSTALL AS SHOWN.
CEDAR TRIM	1X 2 CLEAR (NO KNOTS)- FOR STAIN COLOR, SEE SPECS- INSTALL AS NEEDED.
CEDAR ACCENT- SEE DETAIL 7/A4.1	1X 6 CLEAR (NO KNOTS)- FOR STAIN COLOR, SEE SPECS- INSTALL AS SHOWN.
STONE FIELD	EXISTING STONE VENEER TO REMAIN.
TILE FIELD	DALTILE, ACACIA VALLEY, ARK AV06- 6'X 36" (STAGGERED JOINTS).
TILE ACCENT	DALTILE, ACACIA VALLEY, ARK AV14- 9'X 36" (STACKED JOINTS).
BULLNOSE CORNER	DALTILE, ACACIA VALLEY, ARK AV06- 3'X 18" ( 5-43H1 STACKED JOINTS).
TILE BENCH	DALTILE, ACACIA VALLEY, ARK AV06- 6'X 36" (STACKED JOINTS).
TILE GROUT	QUARTZ LOCK <sup>2</sup> , 245 WHEAT.
COVE BASE	AMERICAN OLEAN, RELEVANCE, ESSENTIAL CHARCOAL RLO4 TEXTURED- 6'X 12"- 5-3609T.
COVE BASE GROUT	QUARTZ LOCK <sup>2</sup> , 380 CHARCOAL GRAY.
ACCENT BAND- SEE DETAIL 3/A4.1	DALTILE, TRAVERTINE COLLECTION, TORREON T111- 3/4"X 12" PENCIL RAIL & DALTILE, TRAVERTINE COLLECTION, WALNUT (PEBBLE ACCENT) T514- 4" X 12" DECO ACCENT.
ACCENT 1- SEE DETAIL 4/A4.1	DALTILE, FASHION ACCENTS, CORN SILK, FA27- 2'X 10'.
*ACCENT 2- SEE DETAIL 5/A4.1	DALTILE, SERENADE, MEMPHIS BLUES F181- 13-23/32"X 12-15/16" SHEET MOUNTED, RANDOM INTERLOCKING.
*ACCENT 3- SEE DETAIL 6/A4.1	DALTILE, TRAVERTINE COLLECTION, FOSSIL RIDGE, T102. CROSS CUT- 3/8"X RANDOM POLISHED, HONED, & SPLIT-FACE- 12'X 12" SHEET MOUNTED.
ACCENT 4- SEE ELEV. 2/A4.2	DALTILE, TRAVERTINE COLLECTION, FOSSIL RIDGE, T102. CROSS CUT- 3/8"X RANDOM POLISHED, HONED, & SPLIT-FACE- 12'X 12" SHEET MOUNTED.
PAINTED GWB (WALL/ CEILING)	SHERWIN WILLIAMS, MINDFUL GRAY- 5M 7016.
PAINTED H.M. FRAME & DOOR	SHERWIN WILLIAMS, MINDFUL GRAY- 5M 7016.
GLASS FIELD	PITTSBURGH GLASS BLOCK, HIGH PERFORMANCE THICKSET, THICKSET DECORA PATTERN
GLASS ACCENT	PITTSBURGH GLASS BLOCK, PREMIERE SERIES GLASS BLOCK, DECORA PATTERN
FRP ACCENT- SEE ELEV. 16/A4.2	MARLITE, SMOOTH SURFACE, S186 ALMOND

\* DALTILE, SERIES SERENADE- GLASS TILE (ACCENT 2) SHALL BE RUN VERTICALLY AND IS 1/8" THICKNESS. ADJOINING DALTILE, SERIES FOSSIL RIDGE, NATURAL STONE TILE (ACCENT 3) AND SHALL BE RUN VERTICALLY AND IS 3/8" THICKNESS. CONTRACTOR IS NOT REQUIRED TO INSTALL THE ACCENT 2 TILE- TO A FLUSH LEVEL WITH ACCENT 3 TILE.



DESIGNED BY:  
**FACILITIES DESIGN ARCHITECTS & ENGINEERS**  
FACILITIES MANAGEMENT DIVISION, NCDOT  
1 BOUTWICK WILKINSON STREET  
RALEIGH, NORTH CAROLINA 27601  
P: 919/707-4640 F: 919/707-5886



CONSULTANT:

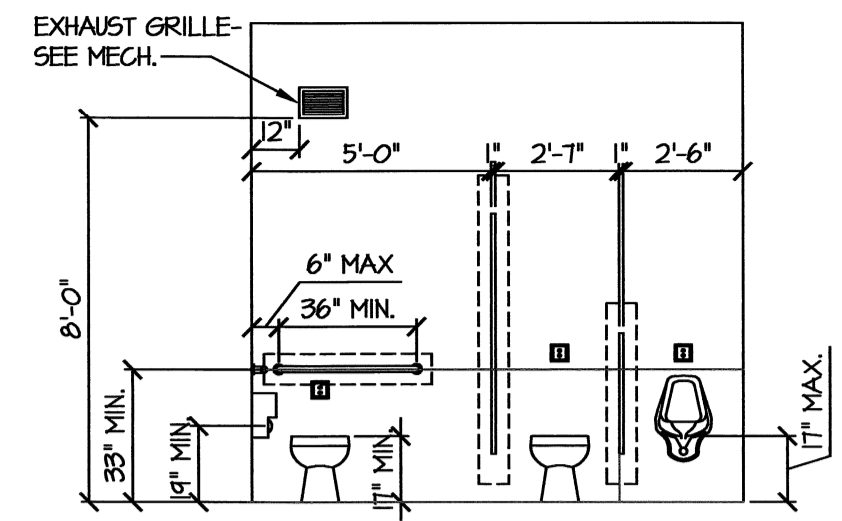
DRAWING TITLE / DESCRIPTION:  
**ROOM FINISH- COLOR SCHEDULE  
LEGEND FLOOR/ WALL**

PROJECT TITLE:  
**MACON COUNTY  
REST AREA, NCDOT**  
US-28/441, NC 28783  
MACON COUNTY, NORTH CAROLINA

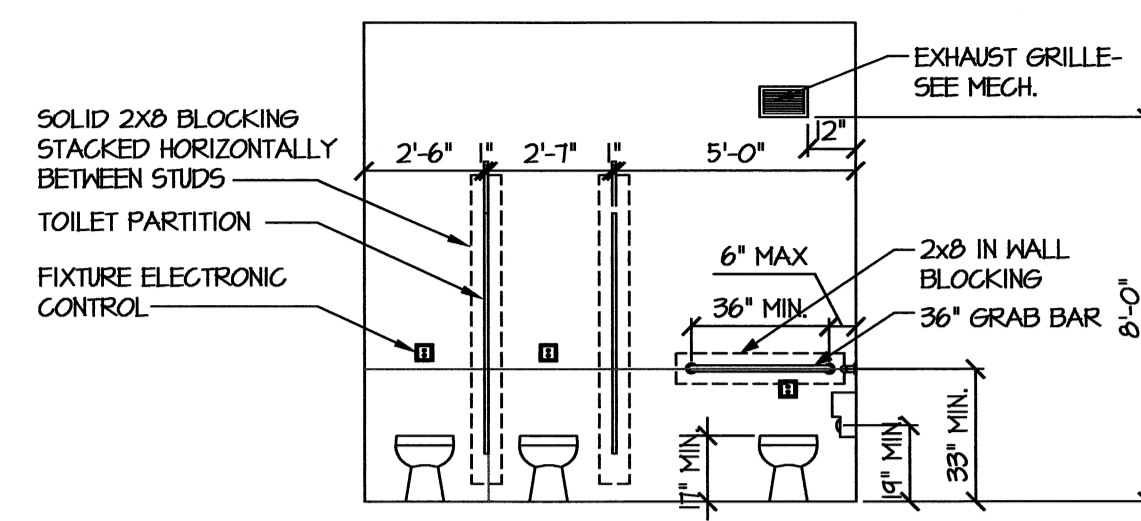
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TIP PROJ. NO.	K-5103	
WBS NO.	42231.3.1	
FEDERAL ID NO. (NHPP-0023(31))		
ASSET NUMBER:		
CO.#	SITE.#	BLDG.#
56	16	1
REVISIONS		
NO.	DATE	

DATE ISSUED: 11-21-14  
DRAWN BY: RA  
CHECKED BY: LLK

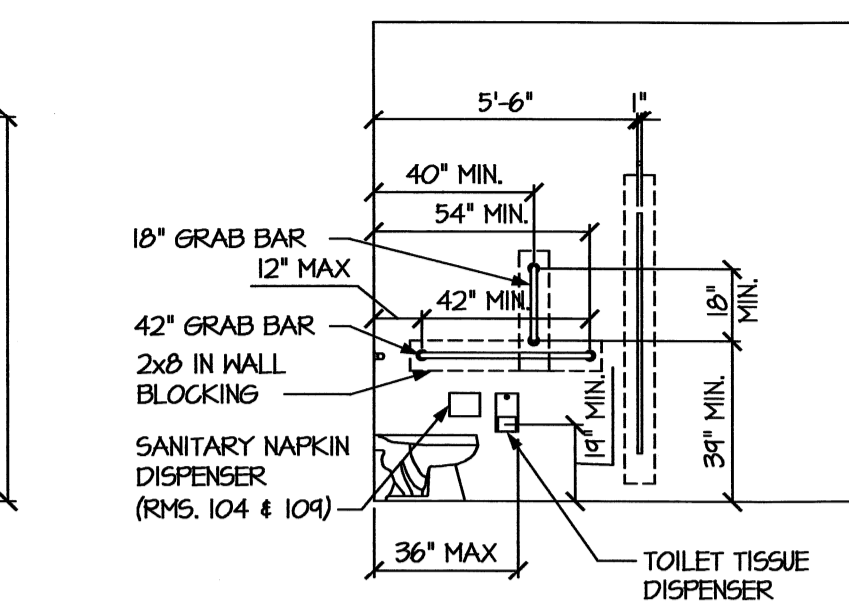
SHEET NO.  
**A4.3**



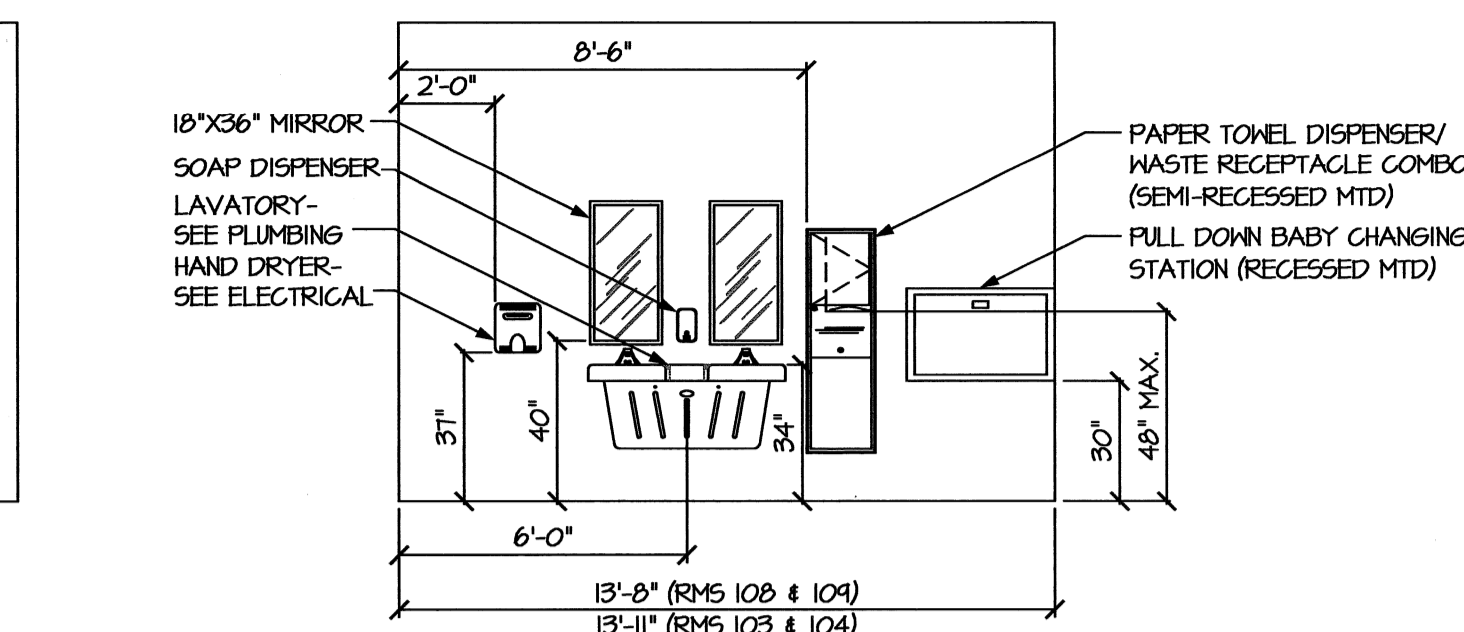
1 ELEVATION: RM 103  
(RM 108- OPPOSITE HAND)  
A4.4 SCALE: 1/4" = 1'-0"



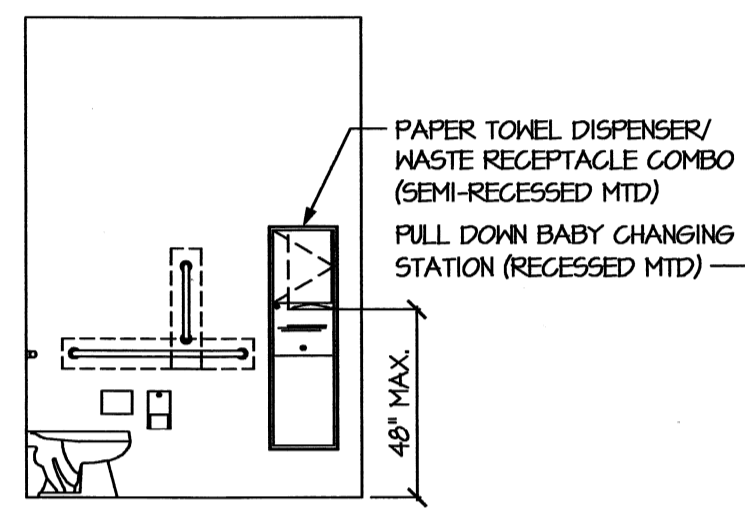
2 ELEVATION: RM 104  
(RM 109- OPPOSITE HAND)  
A4.4 SCALE: 1/4" = 1'-0"



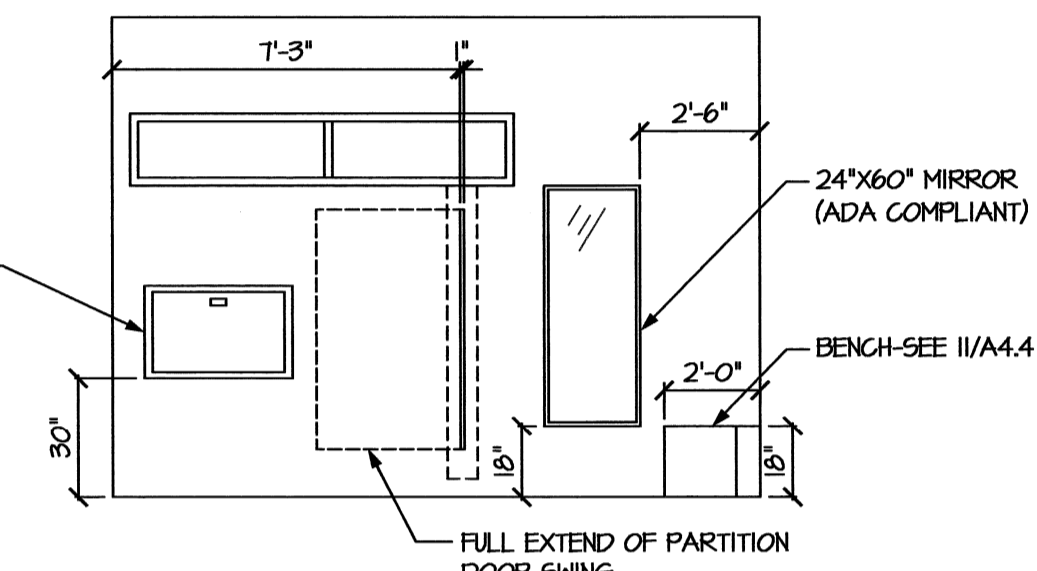
3 ELEVATION: ADA STALL (TYP.)  
A4.4 SCALE: 1/4" = 1'-0"



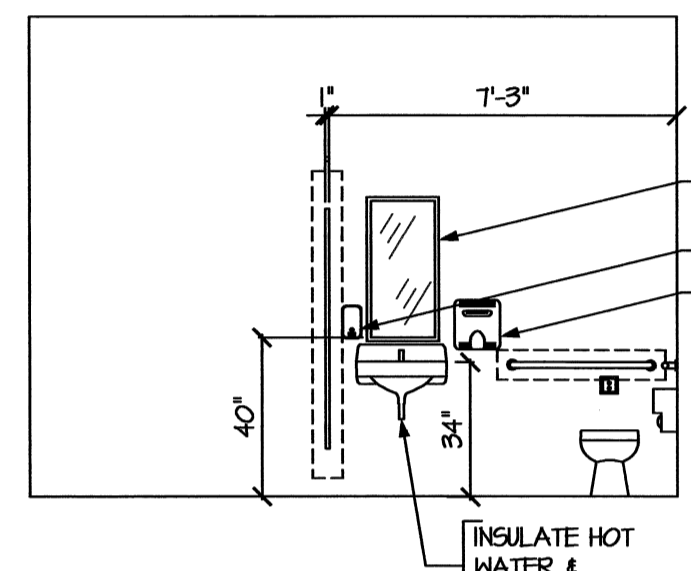
4 ELEVATION: RMS 104 & 108  
(RMS 103 & 109- OPPOSITE HAND)  
A4.4 SCALE: 1/4" = 1'-0"



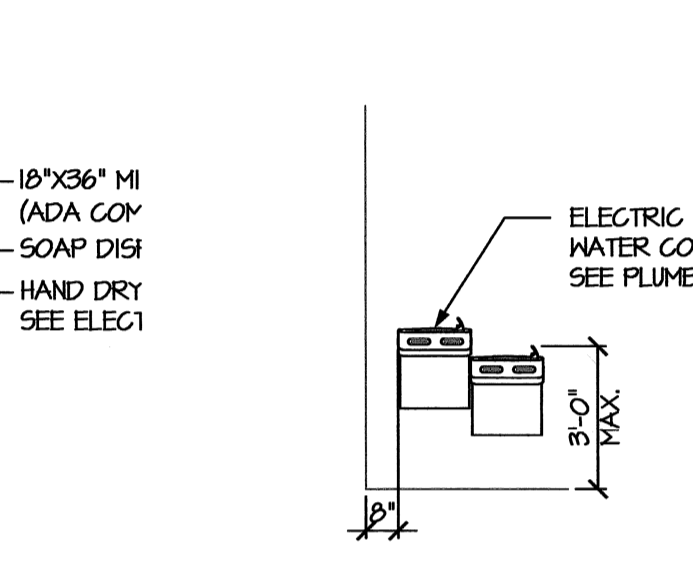
5 ELEVATION:  
FAMILY RESTROOM 102  
A4.4 SCALE: 1/4" = 1'-0"



6 ELEVATION:  
FAMILY RESTROOM 102  
A4.4 SCALE: 1/4" = 1'-0"

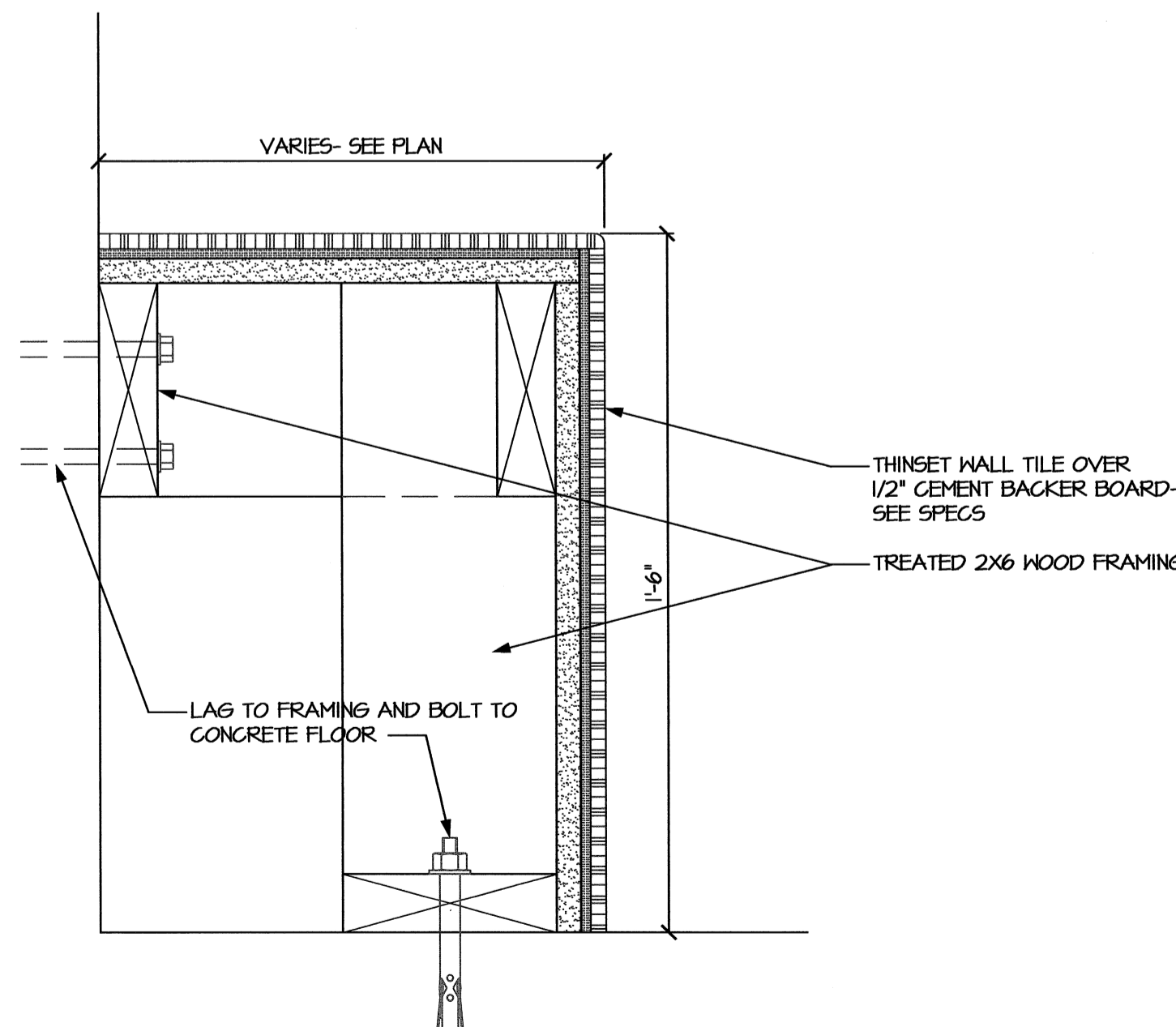


7 ELEVATION:  
FAMILY RESTROOM 102  
A4.4 SCALE: 1/4" = 1'-0"

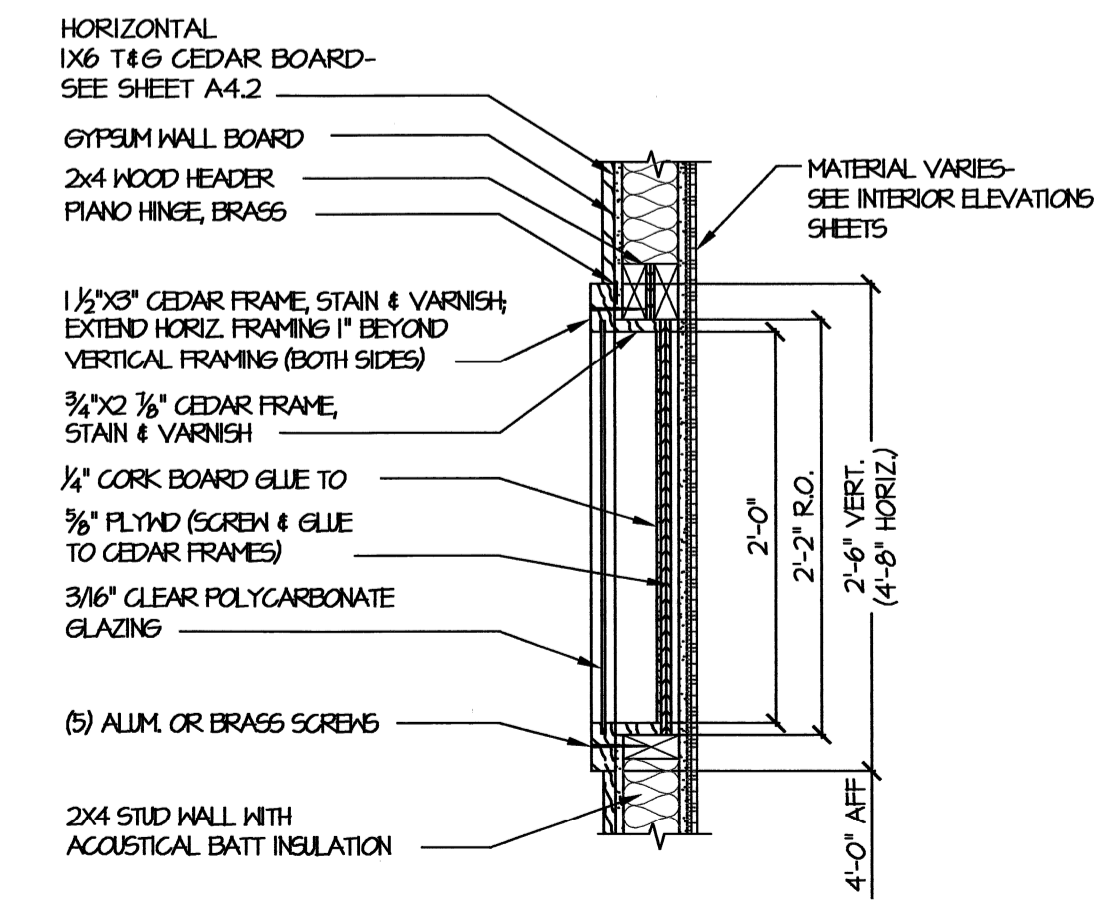


8 ELEVATION @ EWC  
A4.4 SCALE: 1/4" = 1'-0"

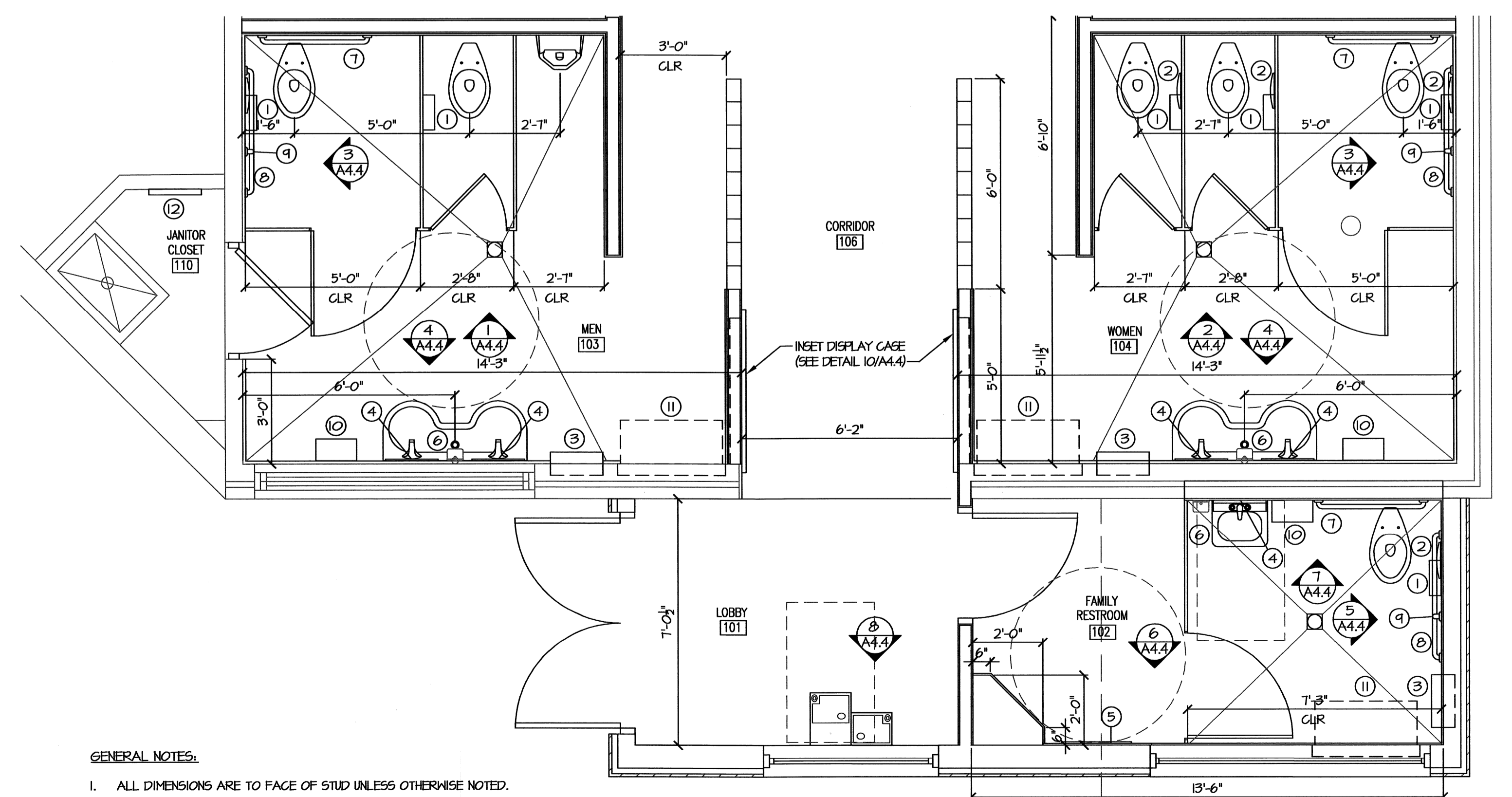
TOILET ACCESSORY SCHEDULE	
1	TOILET TISSUE DISPENSER
2	SANITARY NAPKIN DISPOSAL
3	PAPER TOWEL DISPENSER/ WASTE RECEPTACLE COMBO- SEMI-RECESSED
4	18" x 36" MIRROR
5	24 x 60" MIRROR
6	SOAP DISPENSER
7	36" GRAB BAR
8	42" GRAB BAR
9	18" VERTICAL GRAB BAR
10	HAND DRYER - WALL MOUNTED
11	BABY CHANGING STATION- RECESSED
12	24" MOP RACK



11 TILE BENCH SECTION  
A4.4 SCALE: 3" = 1'-0"



10 SECTION- DISPLAY CASE  
A4.4 SCALE: 1" = 1'-0"

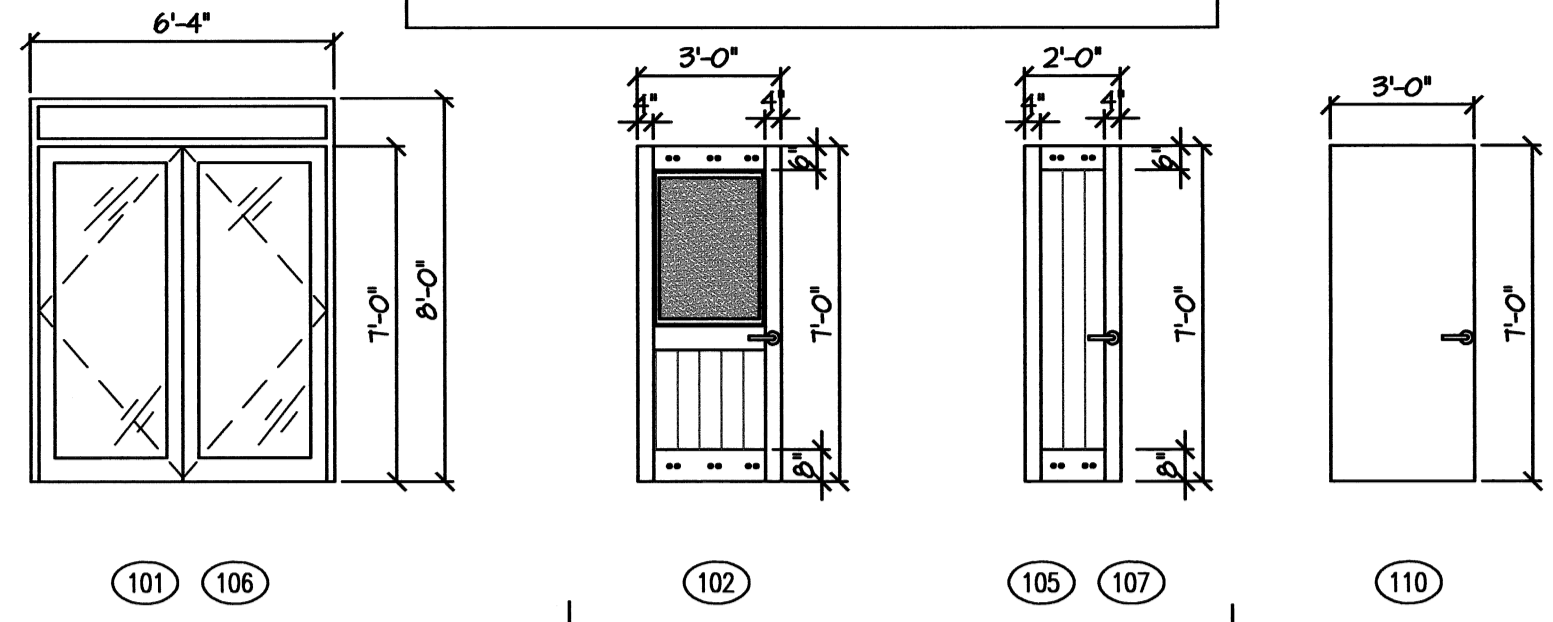


GENERAL NOTES:  
1. ALL DIMENSIONS ARE TO FACE OF STUD UNLESS OTHERWISE NOTED.  
2. LAYOUT OF ROOMS 108 & 109 (NOT SHOWN) IS OPPOSITE HAND TO ROOMS 103 & 104 RESPECTIVELY (SEE FLOOR PLAN ALL).

9 ENLARGED PARTIAL FLOOR PLAN  
A4.4 SCALE: 3/8" = 1'-0"



NOTES:  
 1. SPECIFIED DIMENSIONS ARE FOR DOOR ROUGH OPENING.  
 2. SEE THIS SHEET FOR TYP. DOOR FRAMING DETAILS.



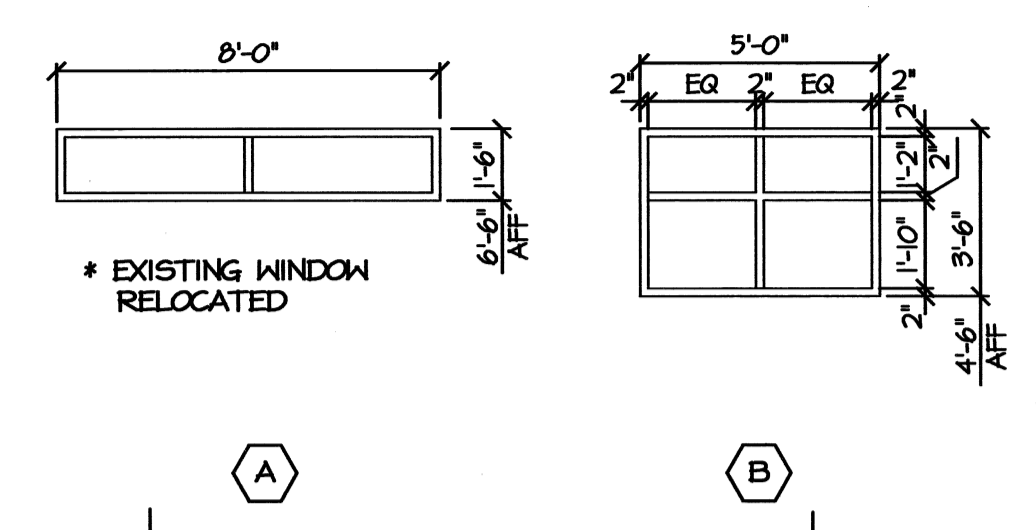
SEE FOLLOWING TYPICAL DOOR FRAMING DETAILS:  
 3/A5.1- JAMB,  
 4/A5.1- SILL,  
 5/A5.1- HEAD

SEE FOLLOWING TYPICAL DOOR FRAMING DETAILS:  
 1/A5.1- HEAD,  
 2/A5.1- JAMB

SEE FOLLOWING TYPICAL DOOR FRAMING DETAILS:  
 9/A5.1- HEAD,  
 10/A5.1- JAMB,  
 11/A5.1- SILL

**13 DOOR ELEVATIONS**  
 A5.1 SCALE: 1/4" = 1'-0"

NOTES:  
 1. SPECIFIED DIMENSIONS ARE FOR WINDOW ROUGH OPENING.  
 2. SEE THIS SHEET FOR TYP. WINDOW FRAMING DETAILS.



SEE FOLLOWING TYPICAL WINDOW FRAMING DETAILS:  
 8/A5.1- HEAD,  
 7/A5.1- JAMB,  
 6/A5.1- SILL

**12 WINDOW ELEVATIONS**  
 A5.1 SCALE: 1/4" = 1'-0"

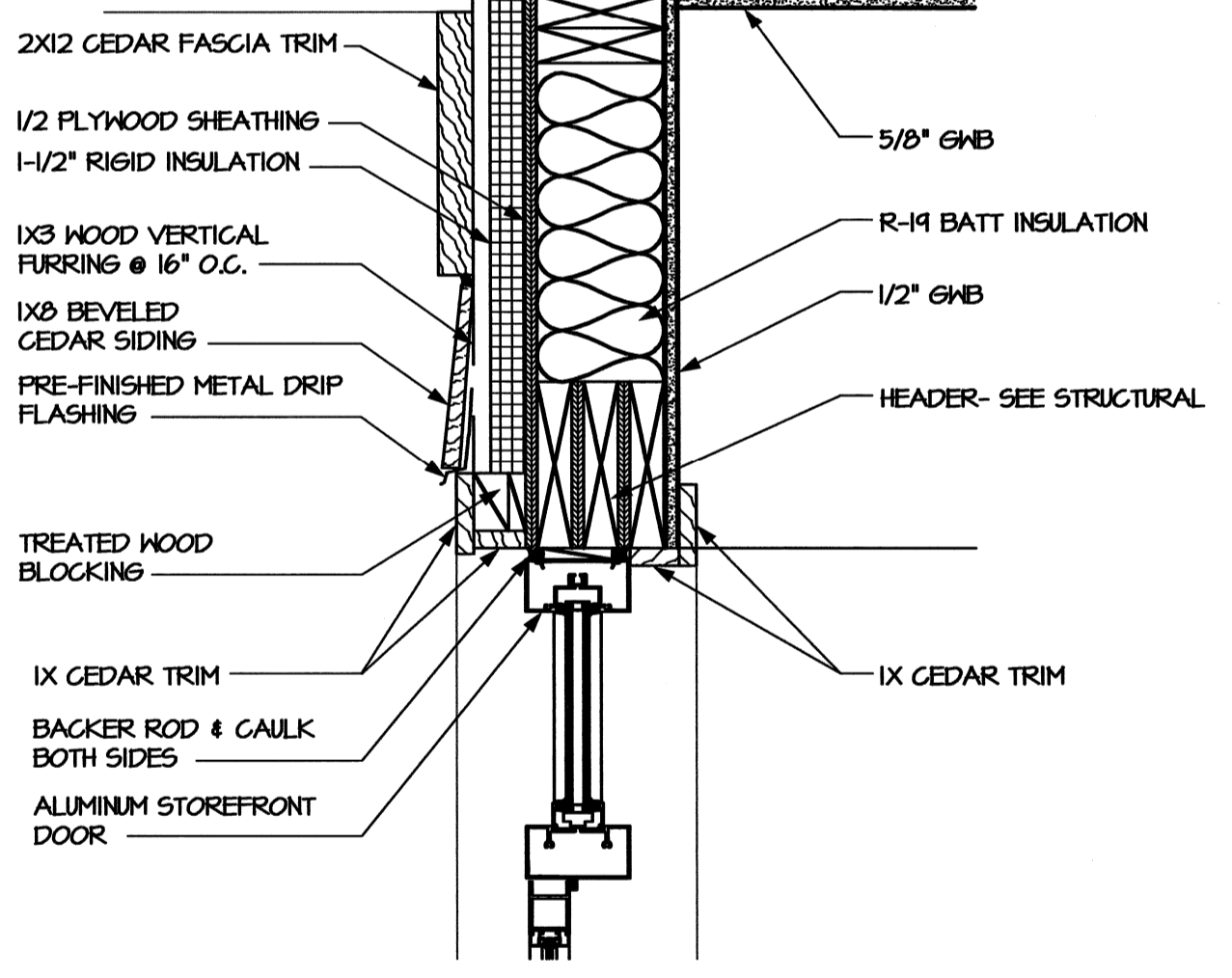
**DOOR & FRAME SCHEDULE**

DOOR NO	SIZE	DOOR		FRAME		HARDWARE GROUP (SEE NOTE 1)	HEAD	JAMB	SILL	REMARKS
		MAT.	FINISH	MAT.	FINISH					
101	(2) 3'-0"x7'-0"x1/2" 3/4"	ALUMI GLASS	DARK BRONZE	ALUM.	CLEAR ANOD.	HH-1	5	3	4	EXISTING DOOR TO BE RELOCATED; ROMER OPERATED DOOR
102	3'-0"x7'-0"x1/2" 3/4"	WOOD	STAINED	WOOD	N/A	HH-2	1	2	-	TEMPERED FROSTED GLASS
103	2'-0"x7'-0"x1/2" 3/4"	WOOD	STAINED	WOOD	N/A	HH-3	1	2	-	
106	3'-0"x7'-0"x1/2" 3/4"	ALUMI GLASS	DARK BRONZE	ALUM.	CLEAR ANOD.	-	-	-	-	EXISTING DOOR TO REMAIN
107	2'-0"x7'-0"x1/2" 3/4"	WOOD	STAINED	WOOD	N/A	HH-3	1	2	-	
110	3'-0"x7'-0"x1/2" 3/4"	HM	PAINT	HM.	PAINT	HH-3	4	10	11	EXISTING DOOR TO BE RELOCATED

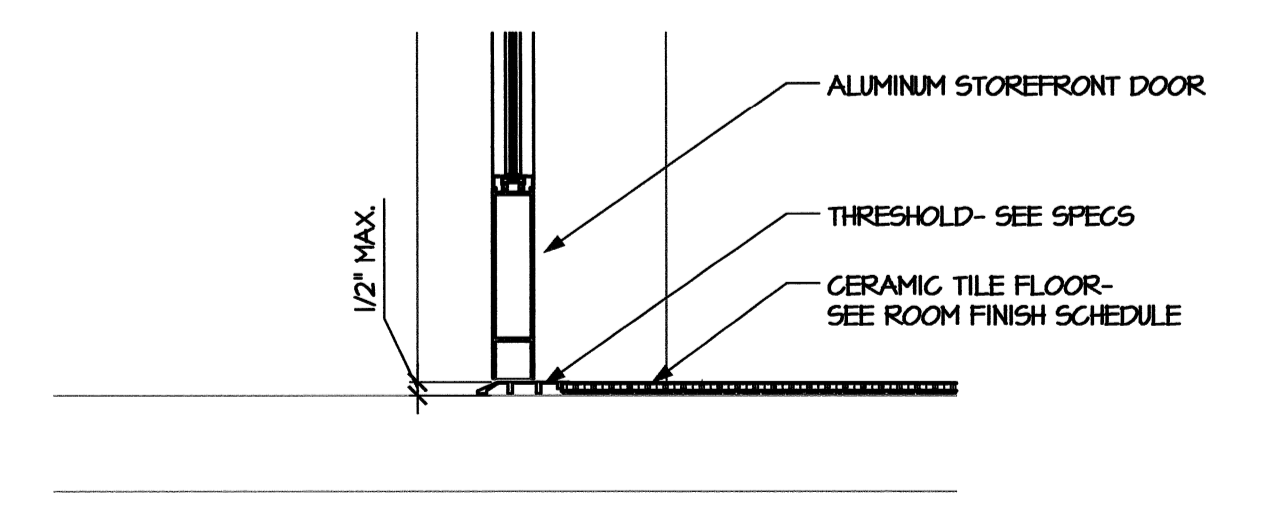
DOOR SCHEDULE NOTES:  
 1. ALL DOOR HARDWARE SHALL COMPLY WITH NESBEQ REQUIREMENTS. HARDWARE SCHEDULE SHALL BE PROVIDED BY A CERTIFIED DOOR HARDWARE CONSULTANT. ALL HARDWARE SHALL HAVE BRUSHED STAINLESS STEEL FINISH.  
 2. DOORS 103, 104, 108 & 109 NOT USED.

**WINDOW SCHEDULE**

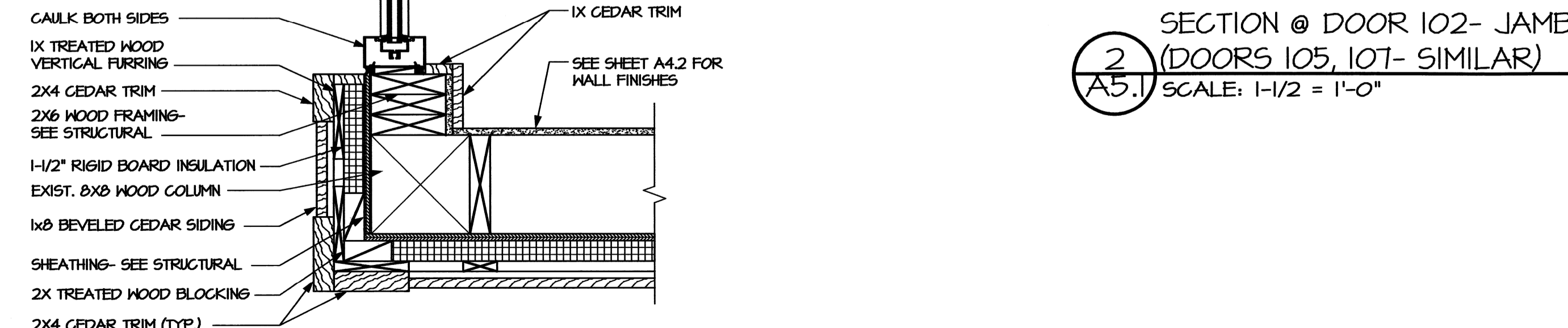
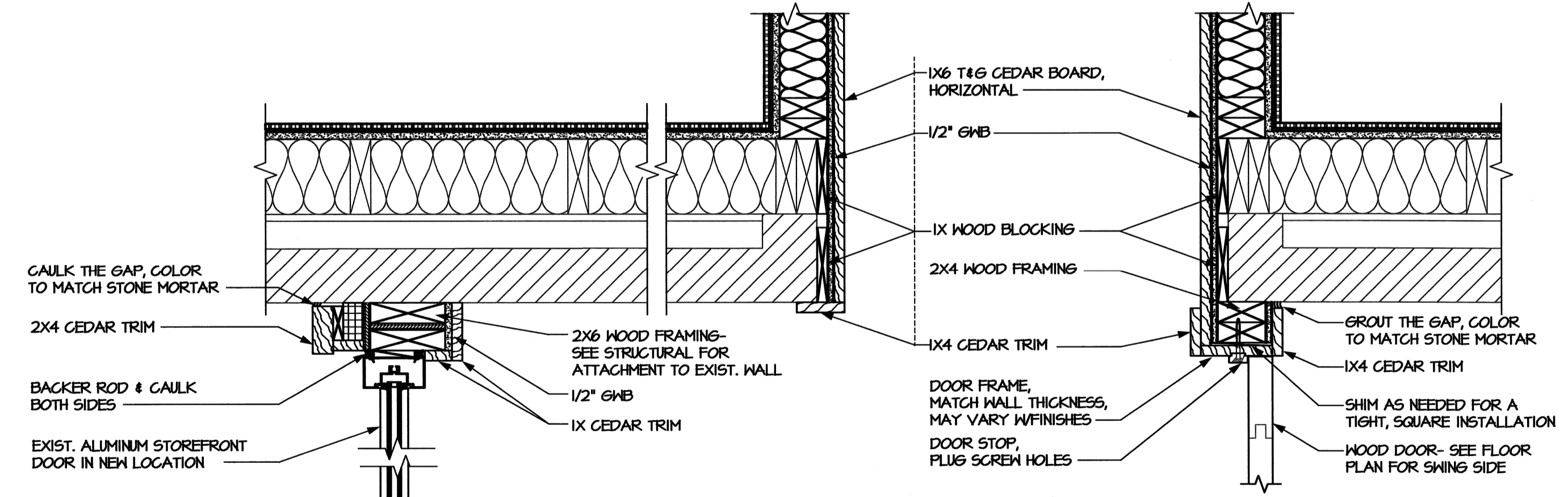
MARK	SIZE (R.O.)	TYPE	FRAME			GLAZING	REMARKS
			MATERIAL	FINISH	SCREEN		
A	8'-0" X 1'-6"	AWNING	ALUMINUM GLAD WOOD	EXIST.	YES	EXIST.	EXIST. WINDOW TO BE RELOCATED W/ THERMAL BREAK FINISH TO MATCH EXIST. WINDOWS
B	5'-0" X 6'-0"	FIXED	ALUMINUM GLAD WOOD	DARK BRONZE	YES	SEE SPECS	



**5 SECTION @ EXTERIOR DOOR- HEAD**  
 A5.1 SCALE: 1-1/2" = 1'-0"

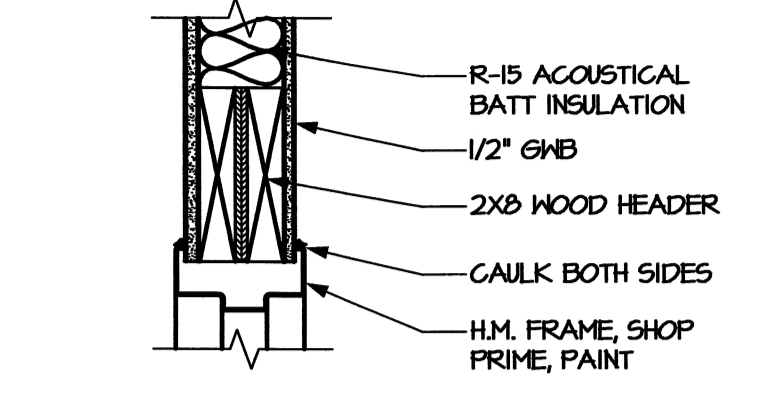


**4 SECTION @ EXTERIOR DOOR- SILL**  
 A5.1 SCALE: 1-1/2" = 1'-0"

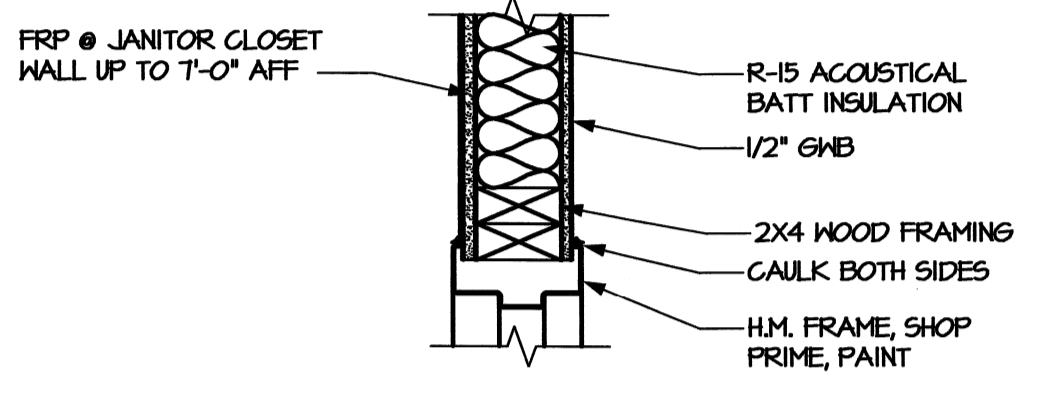


**3 SECTION @ EXTERIOR DOOR- JAMB**  
 A5.1 SCALE: 1-1/2" = 1'-0"

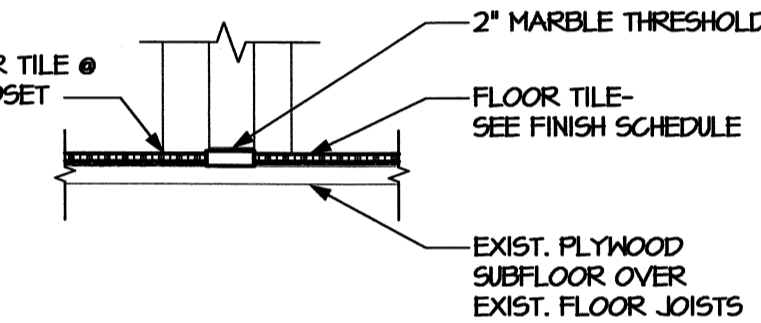
**2 SECTION @ DOOR 102- JAMB (DOORS 105, 107- SIMILAR)**  
 A5.1 SCALE: 1-1/2" = 1'-0"



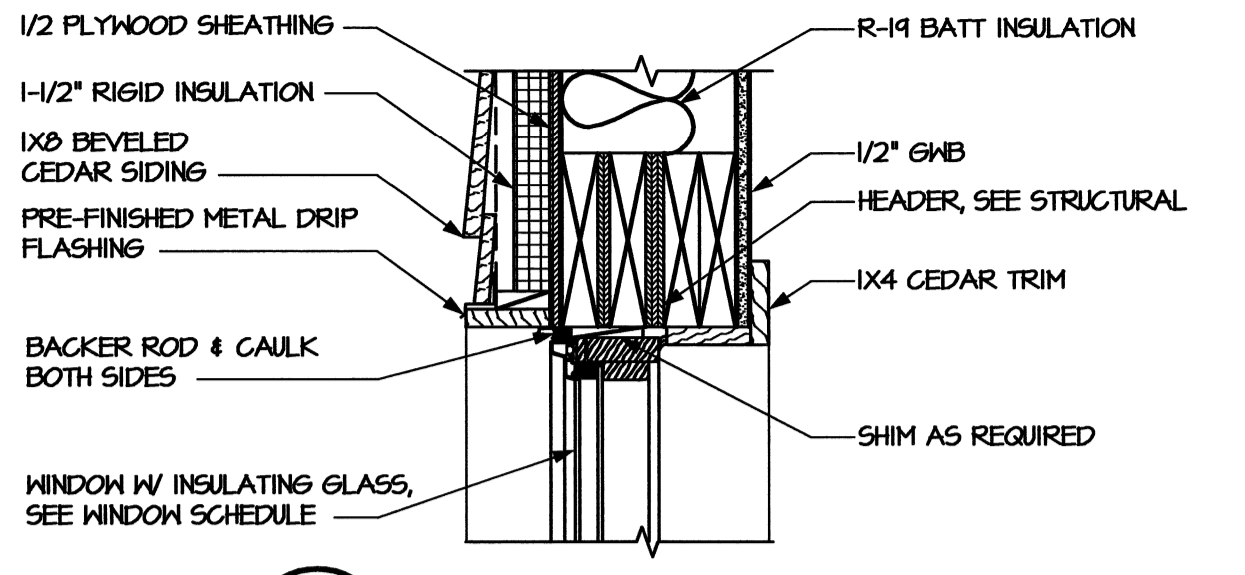
**9 H.M. DOOR- HEAD**  
 A5.1 SCALE: 1-1/2" = 1'-0"



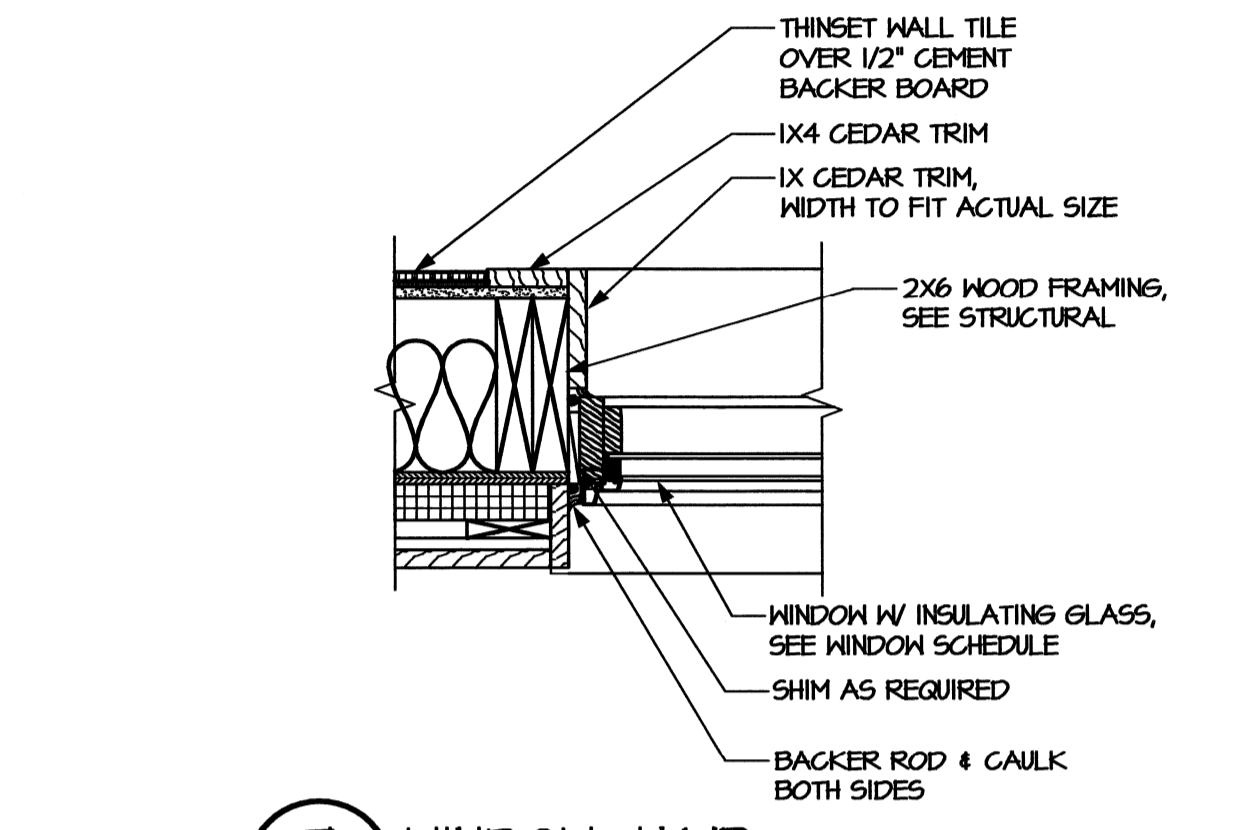
**10 H.M. DOOR- JAMB**  
 A5.1 SCALE: 1-1/2" = 1'-0"



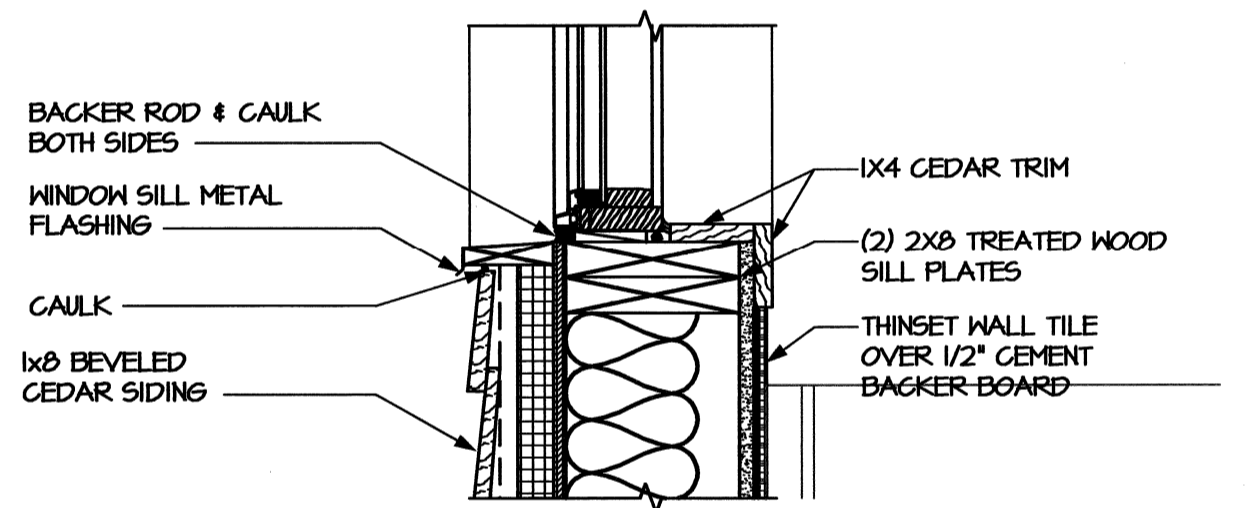
**11 H.M. DOOR- SILL**  
 A5.1 SCALE: 1-1/2" = 1'-0"



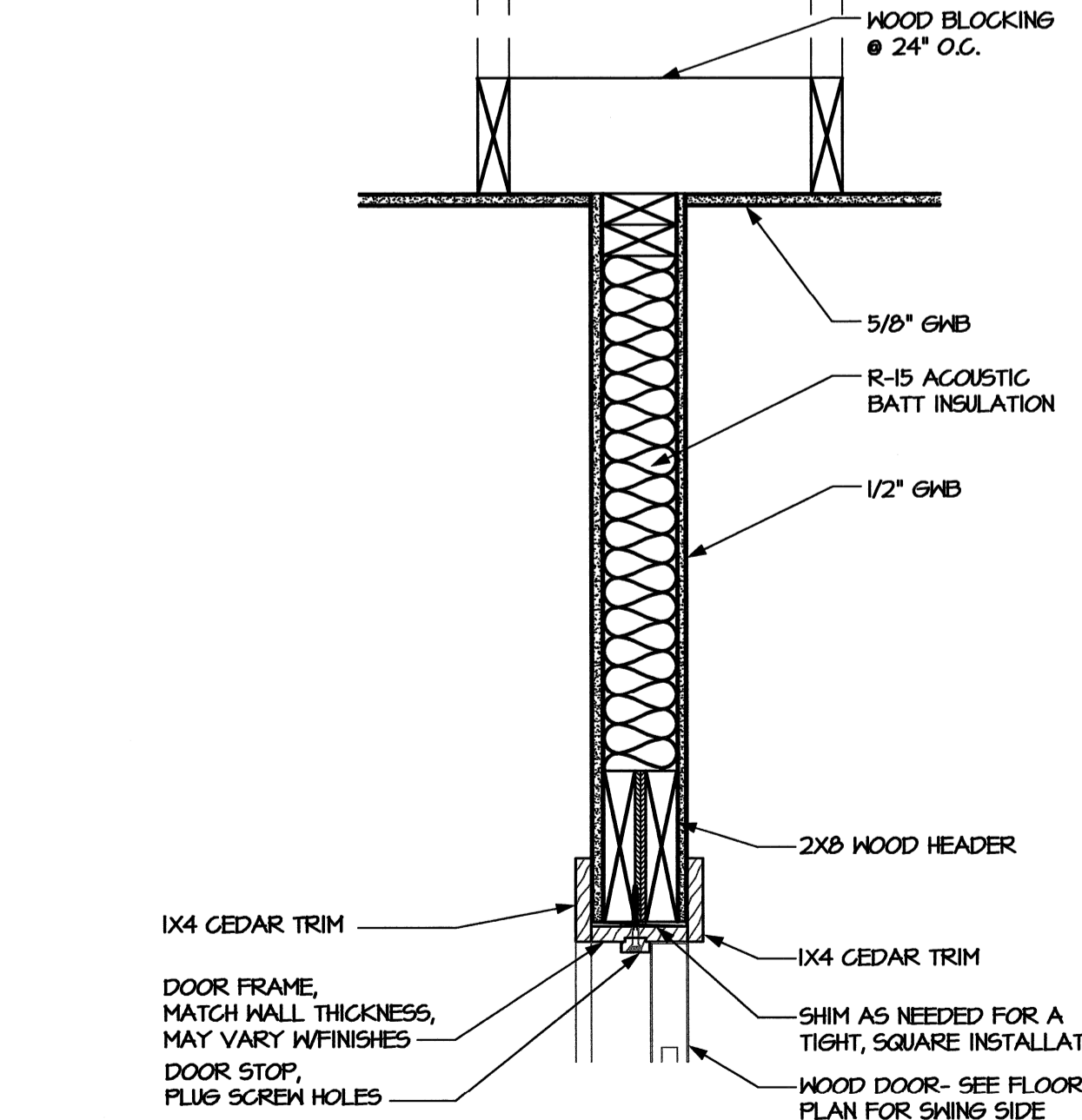
**8 WINDOW HEAD**  
 A5.1 SCALE: 1-1/2" = 1'-0"



**7 WINDOW JAMB**  
 A5.1 SCALE: 1-1/2" = 1'-0"



**6 WINDOW SILL**  
 A5.1 SCALE: 1-1/2" = 1'-0"



**1 TYP. SECTION @ INTERIOR WOOD DOOR- HEAD**  
 A5.1 SCALE: 1-1/2" = 1'-0"

PLUMBING FIXTURE SCHEDULE \*

MARK	DESCRIPTION	ALTERNATE MANUFACTURER/MODEL	ALTERNATE MANUFACTURER/MODEL
WC1, WC3	WATER CLOSET (FLOOR MOUNT BACK SPUD) AMERICAN STANDARD "PRIMO FLOWSE" #3697.001, ELONGATED BOWL, 1.28 GPF, VITREOUS CHINA, AND 1 1/2" TOP SPUD, ADA COMPLIANT. PROVIDE OPEN FRONT SEAT, AND SENSOR W/ MANUAL OVERRIDE FLUSH VALVE, EQUAL TO SLOAN OPTIMA 140-1.28-ES-S (AC POWERED) FLUSH VALVE.	ZURN #28647-BWL FIXTURE, ZURN #ZEM58152AV-HET, 1.28 GPF VALVE.	FIXTURE-NO 3RD CHOICE AVAILABLE. HYDROTEK H-8CB-128, 1.28 GPF VALVE.
WC2	WATER CLOSET (FLOOR MOUNT TOP SPUD) AMERICAN STANDARD "MADERA FLOWSE" #3461.001, ELONGATED BOWL, 1.28 GPF, VITREOUS CHINA, AND 1 1/2" TOP SPUD, ADA COMPLIANT. PROVIDE OPEN FRONT SEAT, AND SENSOR W/ MANUAL OVERRIDE FLUSH VALVE, EQUAL TO SLOAN OPTIMA 111-1.28-ES-S (AC POWERED) FLUSH VALVE.	ZURN #28665 FIXTURE, ZURN #ZEM56000S FLUSH VALVE.	KOHLER HIGHCREST #K-4302 FIXTURE, HYDROTEK HB-128 VALVE.
UR	URINAL AMERICAN STANDARD "WASHBROOK FLOWSE" #6515.001, 1.0 GPF, VITREOUS CHINA, 3/4" BACK SPUD, AND SENSOR W/ MANUAL OVERRIDE FLUSH VALVE, SLOAN #195-1.0-ES-S (AC POWERED), ADA COMPLIANT.	ZURN #5760 WITH ZURN ZEM58195AV-OB FLUSH VALVE.	TOTO #UT104EV WITH TOTO #TEU2LH11 FLUSH VALVE.
L1	LAVATORY (ACCESSIBLE, WALL HUNG) AMERICAN STANDARD "LUCERNE" # 0356.421 WHITE WITH CONCEALED ARM CARRIER AND DRAIN ASSEMBLY (7723.018), ADA COMPLIANT. FURNISH WITH SLOAN ETE-610 AC POWERED SENSOR FAUCET. PROVIDE ACCESSORIES AS REQUIRED. COORDINATE TRIM AND SINK FAUCET DRILLING FOR SINGLE HOLE OR AS REQUIRED PER OWNER.	KOHLER GREENWICH #K-2032 WITH HYDROTEK H-1000C FAUCET.	ELJER MURRAY II #051-0244 WITH AMERICAN STANDARD INNSBROOK #6059.205.
L2	2- STATION LAVATORY (ACCESSIBLE) SLOAN SLOANSTONE TWO STATION LAVATORY # ELS-72275-MSD, ADA COMPLIANT, COLOR MDB- VERIFY COLOR W/ARCH. FURNISH WITH SLOAN OPTIMA EAF-275 SOLAR POWERED FAUCETS. PROVIDE BATTERY POWERED SOAP DISPENSER ESD-350.	BRADLEY MODEL EXD-2N WITH HYDROTEK 7000SLE SOLAR SENSOR FAUCETS.	WILLOUGHBY MODEL WAW-232-DMF WITH TOTO TEL3G510 SOLAR SENSOR FAUCETS.
CP	CIRCULATING PUMP BELL & OSSETT, SERIES NBF-22 IN-LINE CIRCULATOR PUMP, 1/12 HP, 115 VAC, FLA=0.8 1 PH, 3/4" CONN., WITH A MAXIMUM OF 22 GPM AND 15' TDH. PUMP TO BE ALL BRONZE CONSTRUCTION, COORDINATE WITH ELEC. CONTRACTOR FOR POWER FEED. PROVIDE DISCONNECT SWITCH.	TACO MODEL #110.	ARMSTRONG MODEL #5-25.
EWC	HIGH/LOW ELECTRIC WATER COOLER OASIS DUAL LEVEL ELECTRIC WATER COOLER, MODEL # PBACSL, ADA COMPLIANT. PIPE TO SINGLE DRAIN AND SUPPLY LINE. VERIFY HIGH/LOW UNIT MOUNTING SIDES AND MODEL.	HALSEY TAYLOR #HAC8BL-Q.	ELKAY MODEL #EZSLBLC.
HB	HOSE BIBB ZURN Z-1330-C, 3/4" WALL HYDRANT WITH VANDAL RESISTANT VACUUM BREAKER. ENCASED WITH KEY LOCK.	WATTS #HY-330.	JAY R. SMITH #5509QT.
URS	URINAL SUPPORTS ZURN Z-1222 WITH ADJUSTABLE PLATES.	JAY R. SMITH #0637.	JOSAM #17550.
FD	FLOOR DRAIN ZURN ZH-415 WITH DEEP SEAL P-TRAP, 5" X 5" TYPE "S" SQUARE STRAINER AND 3" CONNECTION, VANDAL-PROOF TOP. PROVIDE MODEL WITH TRAP PRIMER CONNECTION ONLY FOR FLOOR DRAINS IN AREAS NOTED ON SHEET P300.	JOSAM #30000-S.	JAY R. SMITH #2005-B.
GWH	NATURAL GAS WATER HEATER W/4 GAL. EXPANSION TANK AO SMITH MODEL BTX-80, DIRECT VENT, 76,000 BTUH, 50 GALLON, 3/4" INLET AND OUTLET, 85 GPH RECOVERY AT 100 DEGREE RISE. PROVIDE EXHAUST AND INTAKE VENTS PER MANUFACTURERS RECOMMENDATION. PROVIDE DRAIN PAN, PRESSURE RELIEF VALVE. PROVIDE AO SMITH EXPANSION TANK PMC-5.	RHEEM #ES85-12-G, AMTROL ST-12-0 EXPANSION TANK.	BRADFORD WHITE #0H-75T-60FB-3N, STATE ETC-SX EXPANSION TANK.
EWI	ELECTRIC WATER HEATER W/2 GAL. EXPANSION TANK A.O. SMITH MODEL EJC-10, 10 GALLON, 1,650 WATT, 3/4" INLET AND OUTLET, 120V. MOUNT ON WALL. MODEL# PMC-2 EXPANSION TANK.	RHEEM #RDPV75-75, AMTROL ST-5-C EXPANSION TANK.	BRADFORD WHITE #M-1-10USS, STATE ETC-2X EXPANSION TANK.

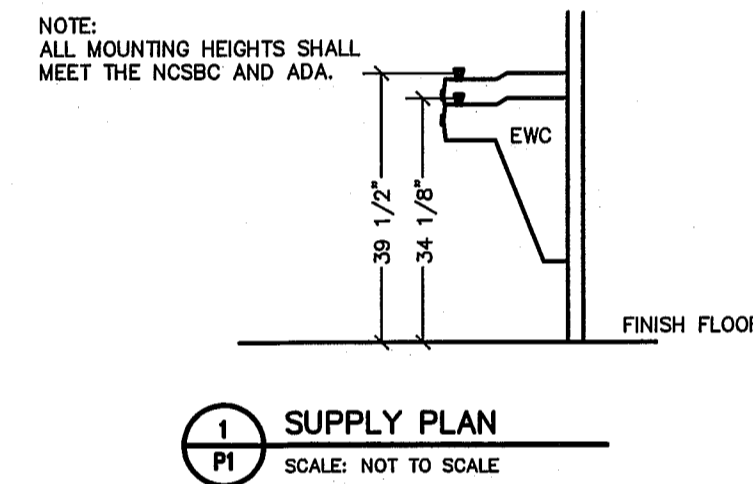
\* OR APPROVED EQUAL

GENERAL NOTES - PLUMBING

- PREPLAN ALL WORK PRIOR TO ORDERING, PURCHASING, OR FABRICATING ANY PART OF THE WORK DESCRIBED BY THIS DRAWING.
- IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS WITH EXISTING FIELD CONDITIONS OR THE WORK OF OTHER TRADES.
- RESOLVE ALL CONFLICTS PRIOR TO INCURRING ANY MATERIAL OR LABOR EXPENSES.
- COMPLY WITH THE MANUFACTURER'S TECHNICAL INSTRUCTIONS WHEN INSTALLING PLUMBING FIXTURES, MATERIALS, AND DEVICES.
- LOCATE FIXTURES AND EQUIPMENT GENERALLY AS SHOWN ON THE PLANS; HOWEVER, COORDINATE LOCATIONS WITH ACTUAL FIELD CONDITIONS TO PRESERVE ALL CODE-REQUIRED AND MANUFACTURER - REQUESTED SERVICE CLEARANCES.
- COORDINATE ROUTING OF ALL PIPING WITH BUILDING STRUCTURE AND BEAMS AND JOISTS AS NECESSARY.
- ALL HANDICAP FIXTURES AND INSTALLATION OF HANDICAP FIXTURES SHALL CONFORM TO ADA REQUIREMENTS.
- AT EXTERIOR WALL, INSTALL WATER PIPING ON HEATED SIDE OF WALL INSULATION.
- PROVIDE WATER HAMMER ARRESTORS AT THE END OF EACH COLD AND HOT WATER BRANCH RISER. SIZE ARRESTOR APPROPRIATELY.
- PROVIDE CONCRETE RING FOR ALL EXTERIOR CLEAN-OUTS.
- REVIEW SITE PLAN FOR UTILITIES AND ORIENTATION PRIOR TO START OF WORK.
- O.C. TO PROVIDE ROOF PENETRATIONS.
- PROVIDE HTHW AT 120 DEGREES (F) AND LTHW AT 90 DEGREES (F).

LOAD SUMMARY - PLUMBING

WASTE DEMAND (U)	WATER DEMAND (U)	WATER DEMAND (GPM)
88.0	148.5	78.7

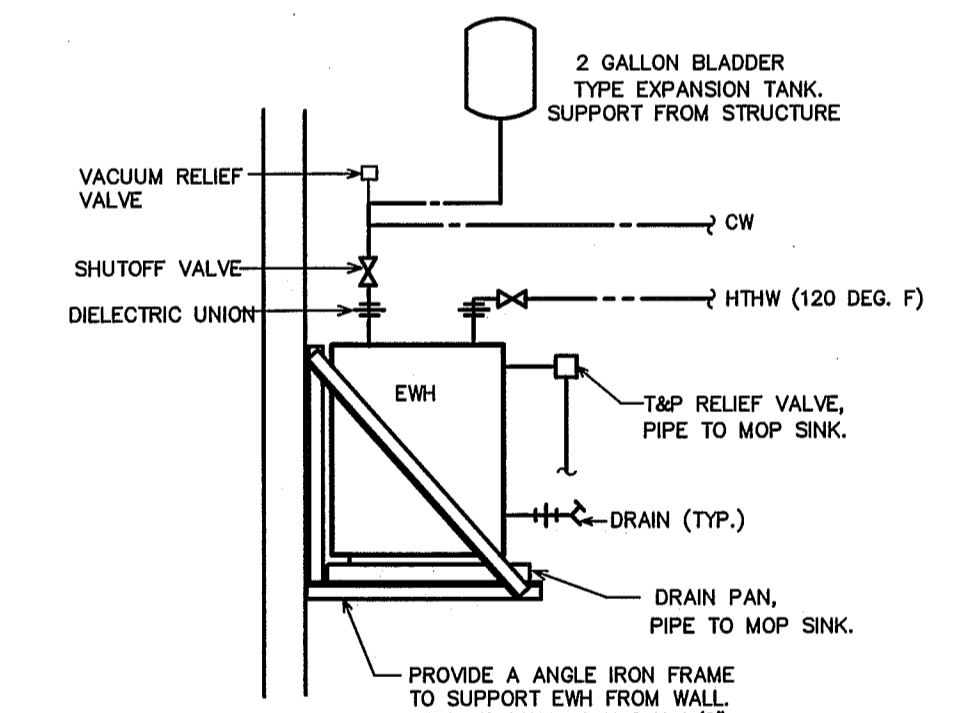


1 SUPPLY PLAN  
SCALE: NOT TO SCALE

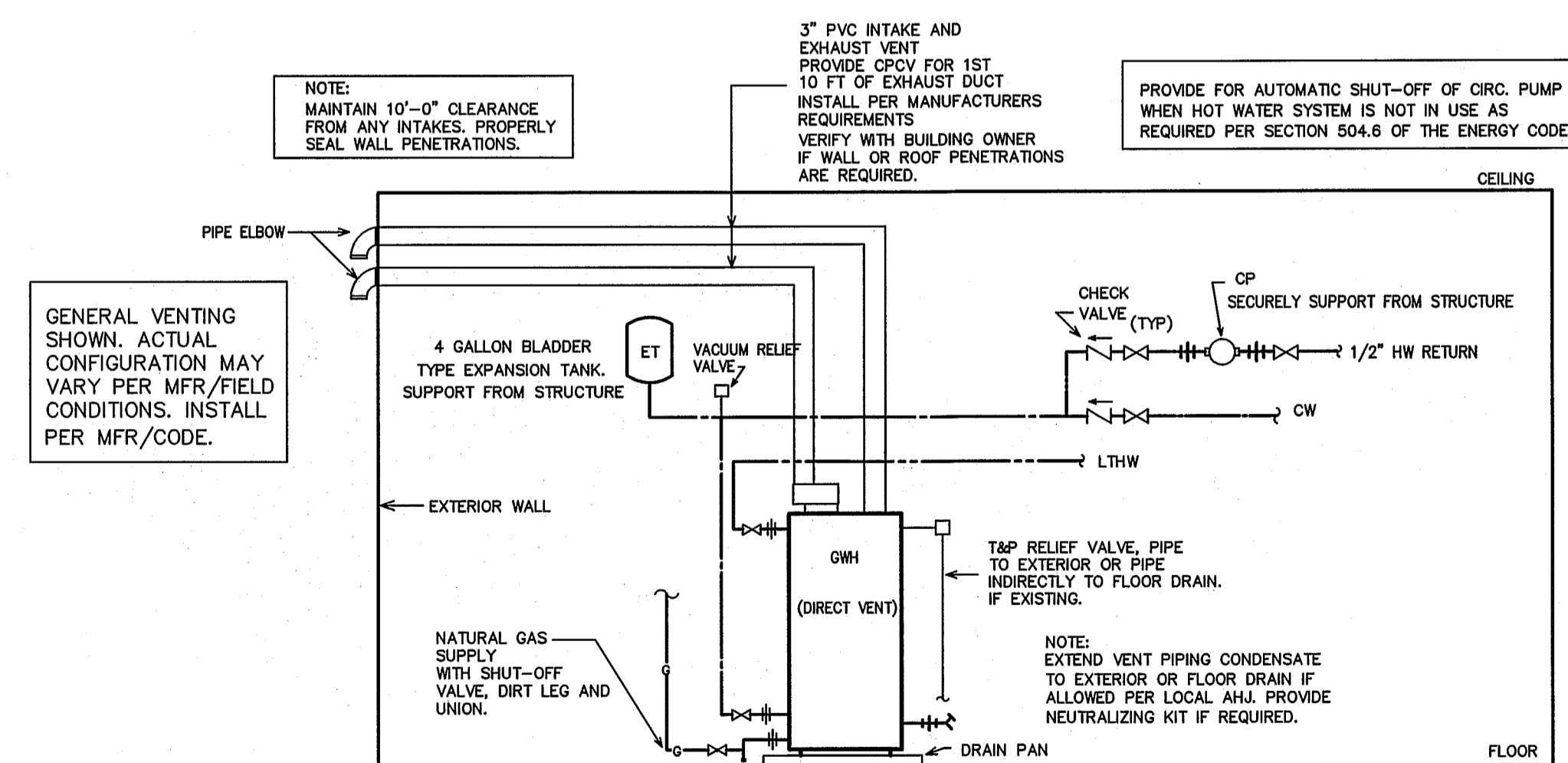
SYMBOL LEGEND - PLUMBING

SYMBOL	DESCRIPTION
---	WASTE PIPING (W)
- - - - -	VENT PIPING (V)
---	NATURAL GAS PIPING (G)
---	COLD WATER PIPING (CW)
---	HOT WATER PIPING (HW)
---	HOT WATER RETURN PIPING (HWR)
---	HIGH TEMPERATURE HW PIPING (HTHW) 120 DEG. F
---	LOW TEMPERATURE HW PIPING (LTHW) 90 DEG. F
○	CLEANOUT FINISH FLOOR
⊥	WALL/HORIZONTAL CLEANOUT
⊕	CLEANOUT FINISH GRADE - PROVIDE FLUSH CONCRETE COLLAR AND BRONZE COVER
	DIELECTRIC UNION
⊗	SHUT-OFF VALVE
⊚	CHECK VALVE
⊗	BALANCING VALVE
○	CIRCULATION PUMP (CP)
○	WATER METER (MTR)
⊥	VENT THRU ROOF (VTR)

PROVIDE HEAT TRAPS ON THE SUPPLY AND DISCHARGE PIPING OF THE WATER HEATERS UNLESS PROVIDED BY WATER HEATER MANUFACTURER. PROVIDE "HUSH HEAT TRAP FITTINGS" BY PERFECTION CORPORATION OR APPROVED EQUAL. HEAT TRAPS ARE REQUIRED PER SECTION 804.4 OF THE ENERGY CODE.

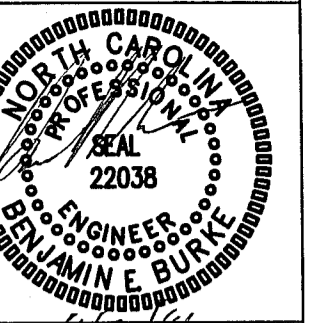


2 EWH DETAIL  
SCALE: NOT TO SCALE



3 GWH DETAIL  
SCALE: NOT TO SCALE

BID DOCUMENTS



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PLUMBING SPECIFICATIONS

PROJECT:  
MACON COUNTY  
REST AREA, NCDOT  
US-23/441, NC 28763  
MACON COUNTY, NORTH CAROLINA

SCO ID NO. 14-11043-01A  
TIP PROJ. NO. K-5103  
WBS NO. 42231.3.1  
FEDERAL ID NO. NHPP-0023(31)  
ASSET NUMBER:  
CD# SITE# BLDG#  
56 = 16 = 1

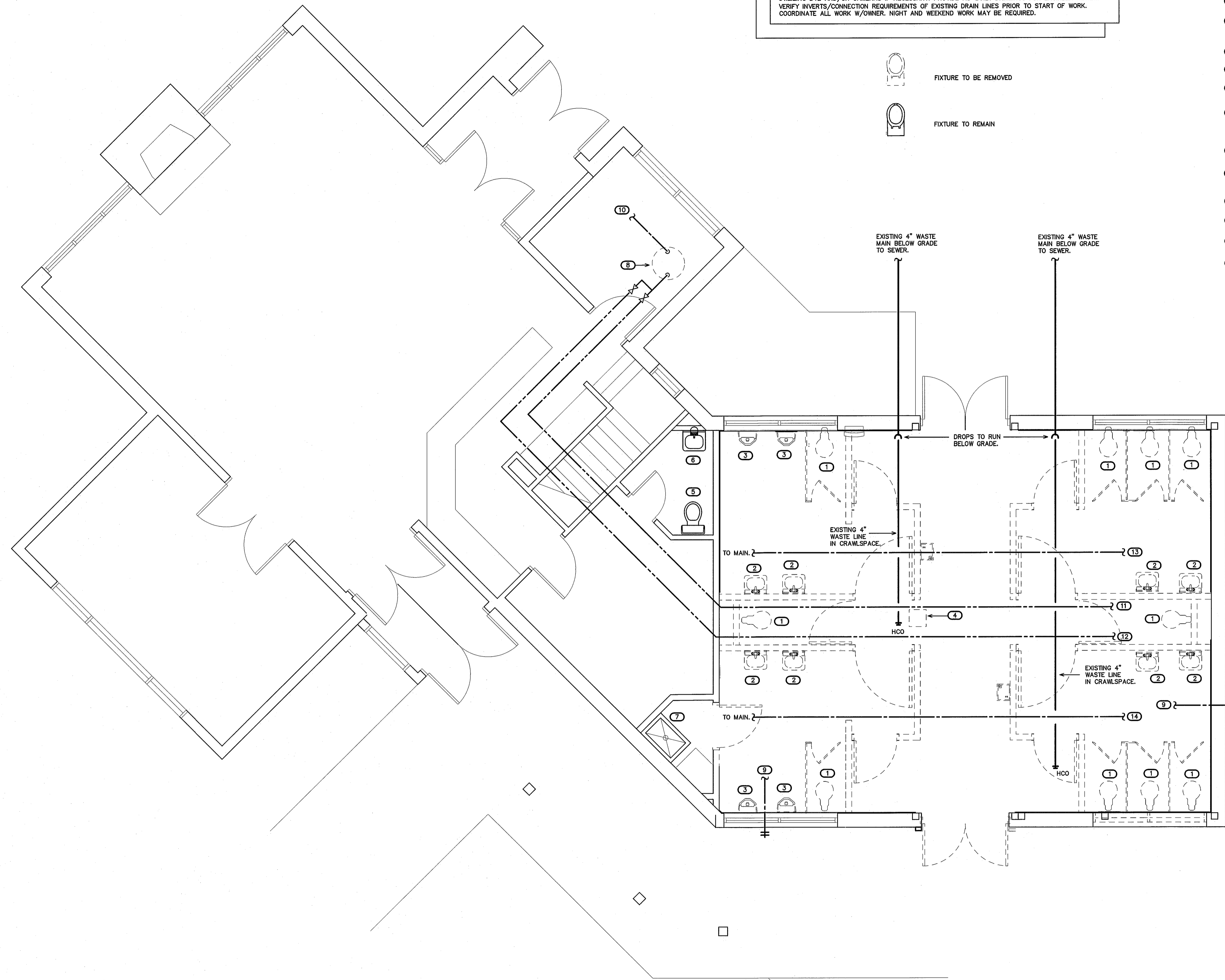
REVISIONS  
NO. DATE

DATE ISSUED: 11-21-14  
DRAWN BY: DS  
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SHEET NO.

P1

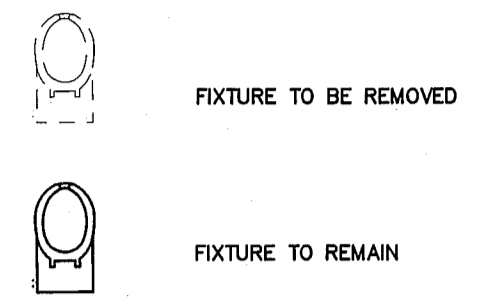




NOTE:  
 THE EXISTING INFORMATION SHOWN ON THIS DRAWING IS FROM A FIELD INVESTIGATION AND FROM PREVIOUS PERMIT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

THE SCOPE OF DEMOLITION IS AS FOLLOWS—  
 REMOVE EXISTING FIXTURES IN WORK AREA AS SHOWN. PROVIDE CLEANOUTS ON UNUSED DRAIN LINES AT FINAL FINISHES TO PREVENT DEAD-ENDS PER CODE. REMOVE UNUSED VENT LINES TO ABOVE CEILING AND CAP AT MAIN. REMOVE ALL UNUSED CW & HW LINES/STUB-OUTS, ETC., AND CAP LINES BEHIND FINAL FINISHES. REMOVE AND REPLACE ALL CONCRETE, WALL BOARD AND CEILING AS REQUIRED TO LOCATE EXISTING LINES/INSTALL NEW LINES. COORDINATE WITH REVISED PLANS FOR LINES TO BE REUSED. ALL FIXTURES/PIPING NOT SHOWN (FLOOR DRAINS, ETC.). VERIFY ALL FIXTURES/PIPING TO BE REMOVED.

THE PLUMBING CONTRACTOR SHALL TRACE ALL EXISTING DRAIN LINES PRIOR TO THE START OF WORK UTILIZING DYE AND/OR CAMERAS IF NECESSARY. PROVIDE AS-BUILT DRAWINGS FOR ENGINEER REVIEW. VERIFY INVERTS/CONNECTION REQUIREMENTS OF EXISTING DRAIN LINES PRIOR TO START OF WORK. COORDINATE ALL WORK W/OWNER. NIGHT AND WEEKEND WORK MAY BE REQUIRED.

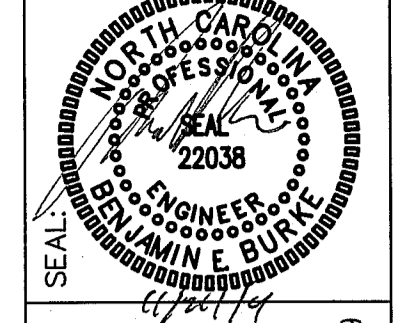


- KEY NOTES FOR SHEET P2
- 1 WATER CLOSET TO BE REMOVED.
  - 2 LAVATORY TO BE REMOVED.
  - 3 URINAL TO BE REMOVED.
  - 4 REMOTE CHILLER IN CRAWLSPACE BELOW FOR WATER COOLERS TO BE REMOVED. VERIFY LOCATION.
  - 5 WATER CLOSET TO REMAIN.
  - 6 LAVATORY TO REMAIN.
  - 7 MOP SINK TO REMAIN. HW TO BE RE-SUPPLIED FROM NEW EWH. SEE P4.
  - 8 EXISTING ELECTRIC WATER HEATER IN UTILITY ROOM AREA BELOW MAIN FLOOR TO BE REMOVED. SEE SHEET P1/P4 FOR NEW EWH.
  - 9 EXTERIOR HOSE BIBB SUPPLIED FROM CRAWLSPACE CW PIPING TO REMAIN.
  - 10 CW FROM MAIN TO EXISTING WATER HEATER TO BE REMOVED/UPSIZED. IF REQUIRED, SEE SHEET P4.
  - 11 HW MAIN TO SOUTH SIDE FIXTURES.
  - 12 HW MAIN TO NORTH SIDE FIXTURES.
  - 13 2" CW MAIN IN CRAWLSPACE TO SOUTH SIDE FIXTURES.
  - 14 2" CW MAIN IN CRAWLSPACE TO NORTH SIDE FIXTURES.

NOTE:  
 MAINTAIN DHW/SUPPLY TO ALL FIXTURES TO REMAIN. COORDINATE W/REVISED PLANS FOR LINES TO BE REUSED. ALL EXISTING LINE LOCATIONS SHOWN ARE APPROXIMATE.

1 EXISTING/DEMOLITION PLAN  
 P2 SCALE: 1/4" = 1'-0"

BID DOCUMENTS



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DRAWING TITLE / DESCRIPTION:  
 DEMO PLAN

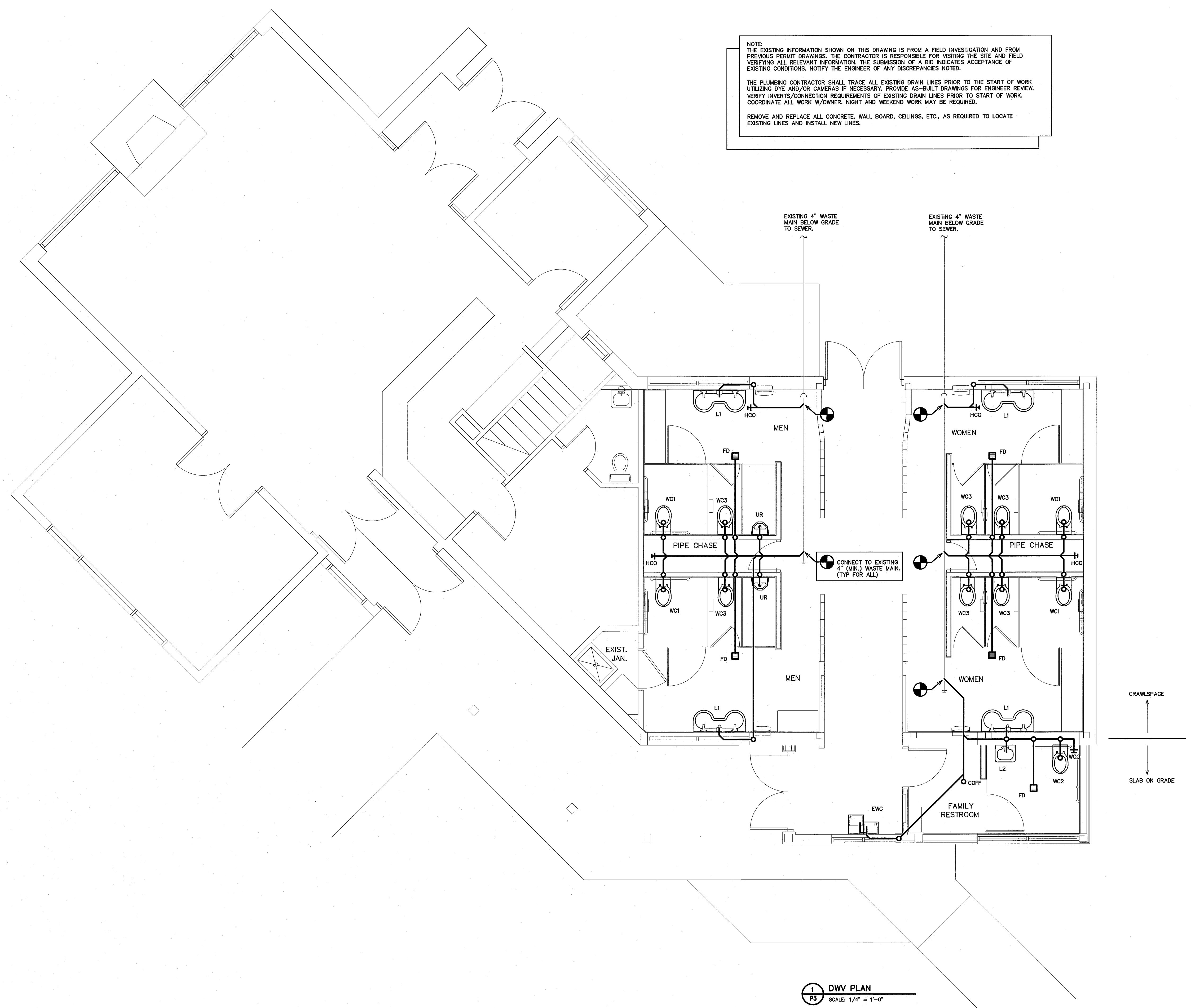
PROJECT:  
 MACON COUNTY  
 REST AREA, NCDOT  
 US-23/441, NC 28763  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO.	14-11043-01A	
TIP PROJ. NO.	K-5103	
WBS NO.	42231.3.1	
FEDERAL ID NO.	NHPP-0023(31)	
ASSET NUMBER:		
CO. #	SITE #	BLDG. #
56	16	1

REVISIONS	
NO.	DATE

DATE ISSUED: 11-21-14  
 DRAWN BY: DS  
 CHECKED BY: BB

SHEET NO.  
**P2**

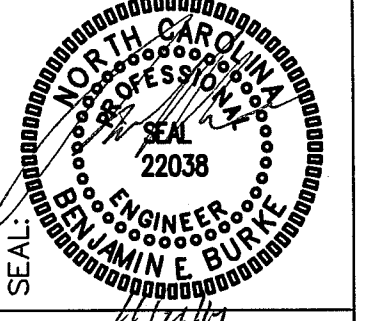


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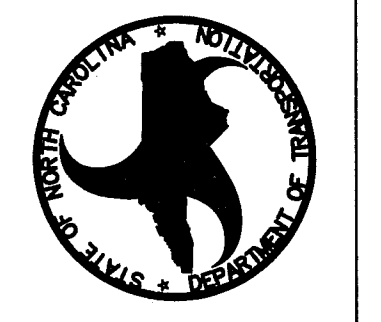
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REMOVE AND REPLACE ALL CONCRETE, WALL BOARD, CEILINGS, ETC., AS REQUIRED TO LOCATE EXISTING LINES AND INSTALL NEW LINES.

1 DWV PLAN  
 P3 SCALE: 1/4" = 1'-0"



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DRAWING TITLE / DESCRIPTION:  
 DWV PLAN

PROJECT:  
 MACON COUNTY  
 REST AREA, NCDOT  
 US-23/441, NC 28763  
 MACON COUNTY, NORTH CAROLINA

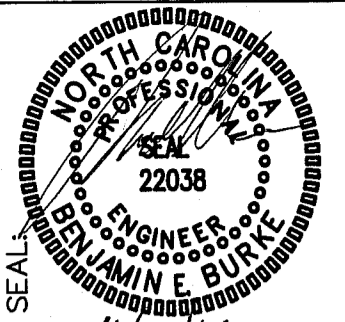
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TIP PROJ. NO.	K-5103
WBS NO.	42231.3.1
FEDERAL ID NO.	WHP-0023(31)
ASSET NUMBER	
COL SITE BLDG	56 16 1

REVISIONS	
NO.	DATE

DATE ISSUED: 11-21-14  
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 CHECKED BY: BEB

SHEET NO.





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DRAWING TITLE / DISCRPTION:  
**WATER SUPPLY &  
 NATURAL GAS PLAN**

PROJECT:  
**MACON COUNTY  
 REST AREA, NCDOT  
 US-23/441 NC 28763  
 MACON COUNTY, NORTH CAROLINA**

SCO ID NO.	14-11043-01A	
TIP PROJ. NO.	K-5103	
WBS NO.	42231.3.1	
FEDERAL ID NO.	NHPP-0023(31)	
ASSET NUMBER:		
CO. #	SITE #	BLDG. #
56	16	1

REVISIONS NO.	DATE

DATE ISSUED: 11-21-14  
 DRAWN BY: DS  
 CHECKED BY: BBB

SHEET NO.  
**P4**

NOTE:  
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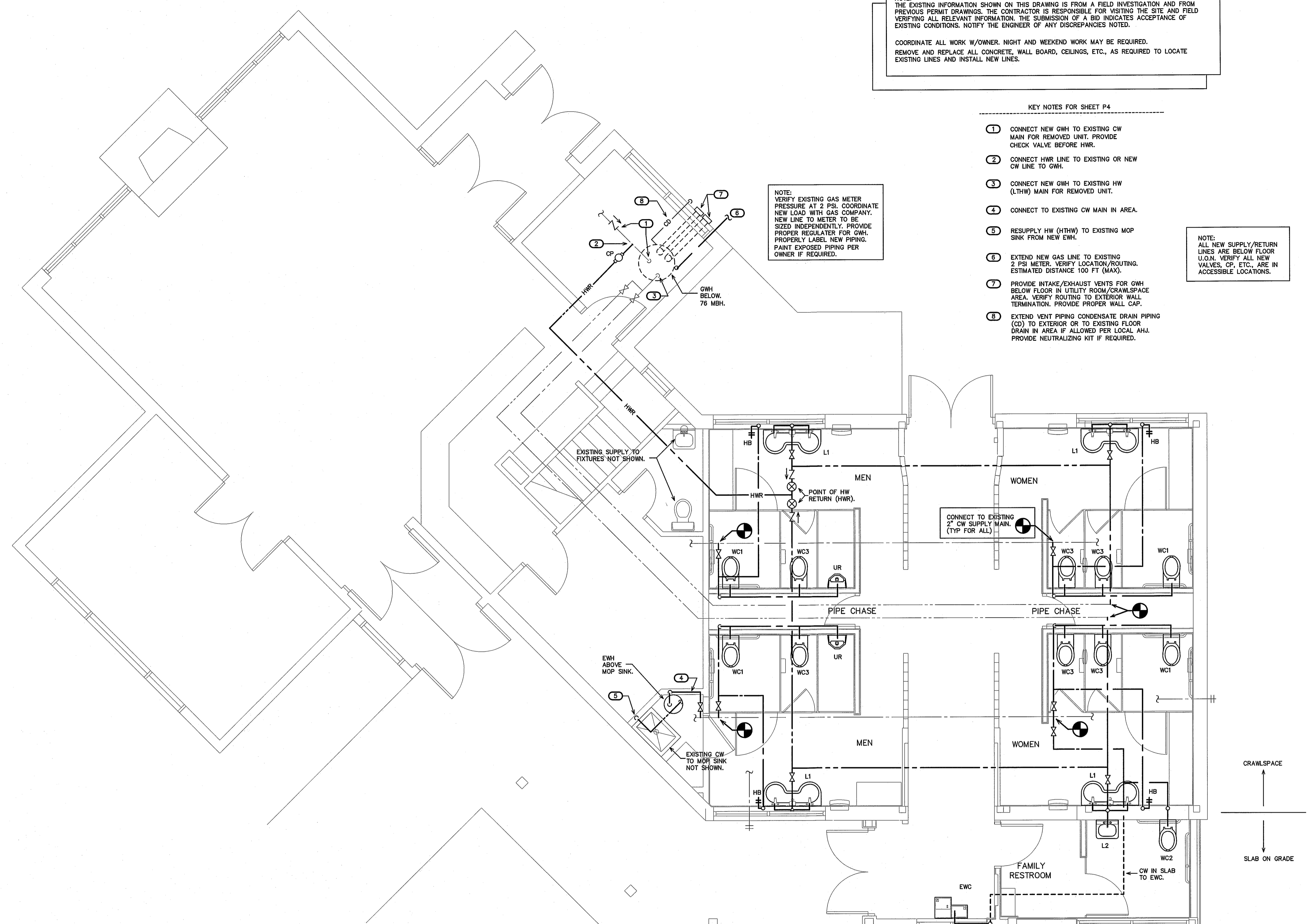
COORDINATE ALL WORK W/OWNER. NIGHT AND WEEKEND WORK MAY BE REQUIRED.  
 REMOVE AND REPLACE ALL CONCRETE, WALL BOARD, CEILINGS, ETC., AS REQUIRED TO LOCATE EXISTING LINES AND INSTALL NEW LINES.

KEY NOTES FOR SHEET P4

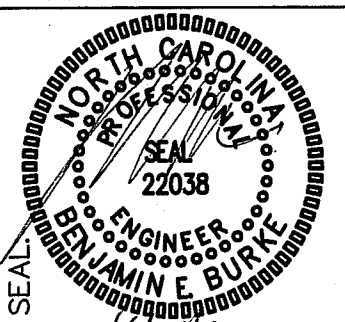
- 1 CONNECT NEW GWH TO EXISTING CW MAIN FOR REMOVED UNIT. PROVIDE CHECK VALVE BEFORE HWR.
- 2 CONNECT HWR LINE TO EXISTING OR NEW CW LINE TO GWH.
- 3 CONNECT NEW GWH TO EXISTING HW (LTHW) MAIN FOR REMOVED UNIT.
- 4 CONNECT TO EXISTING CW MAIN IN AREA.
- 5 RESUPPLY HW (HWH) TO EXISTING MOP SINK FROM NEW EWH.
- 6 EXTEND NEW GAS LINE TO EXISTING 2 PSI METER. VERIFY LOCATION/ROUTING. ESTIMATED DISTANCE 100 FT (MAX).
- 7 PROVIDE INTAKE/EXHAUST VENTS FOR GWH BELOW FLOOR IN UTILITY ROOM/CRAWLSPACE AREA. VERIFY ROUTING TO EXTERIOR WALL TERMINATION. PROVIDE PROPER WALL CAP.
- 8 EXTEND VENT PIPING CONDENSATE DRAIN PIPING (CD) TO EXTERIOR OR TO EXISTING FLOOR DRAIN IN AREA IF ALLOWED PER LOCAL AHJ. PROVIDE NEUTRALIZING KIT IF REQUIRED.

NOTE:  
 ALL NEW SUPPLY/RETURN LINES ARE BELOW FLOOR U.O.N. VERIFY ALL NEW VALVES, CP, ETC., ARE IN ACCESSIBLE LOCATIONS.

NOTE:  
 VERIFY EXISTING GAS METER PRESSURE AT 2 PSI. COORDINATE NEW LOAD WITH GAS COMPANY. NEW LINE TO METER TO BE SIZED INDEPENDENTLY. PROVIDE PROPER REGULATOR FOR GWH. PROPERLY LABEL NEW PIPING. PAINT EXPOSED PIPING PER OWNER IF REQUIRED.



1 WATER/NATURAL GAS PLAN  
 P4 SCALE: 1/4" = 1'-0"



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DRAWING TITLE / DESCRIPTION:  
**RISERS**

PROJECT:  
**MACON COUNTY**  
**REST AREA, NCDOT**  
 US-23/441 NC 28763  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO. 14-11043-01A  
 TIP PROJ. NO. K-5103  
 WBS NO. 42231.3.1  
 FEDERAL ID NO. NHPP-0023(31)  
 ASSET NUMBER:  
 CO. # SITE # BLDG. #  
 56 - 16 - 1

DATE ISSUED: 11-21-14  
 DRAWN BY: DS  
 CHECKED BY: RB

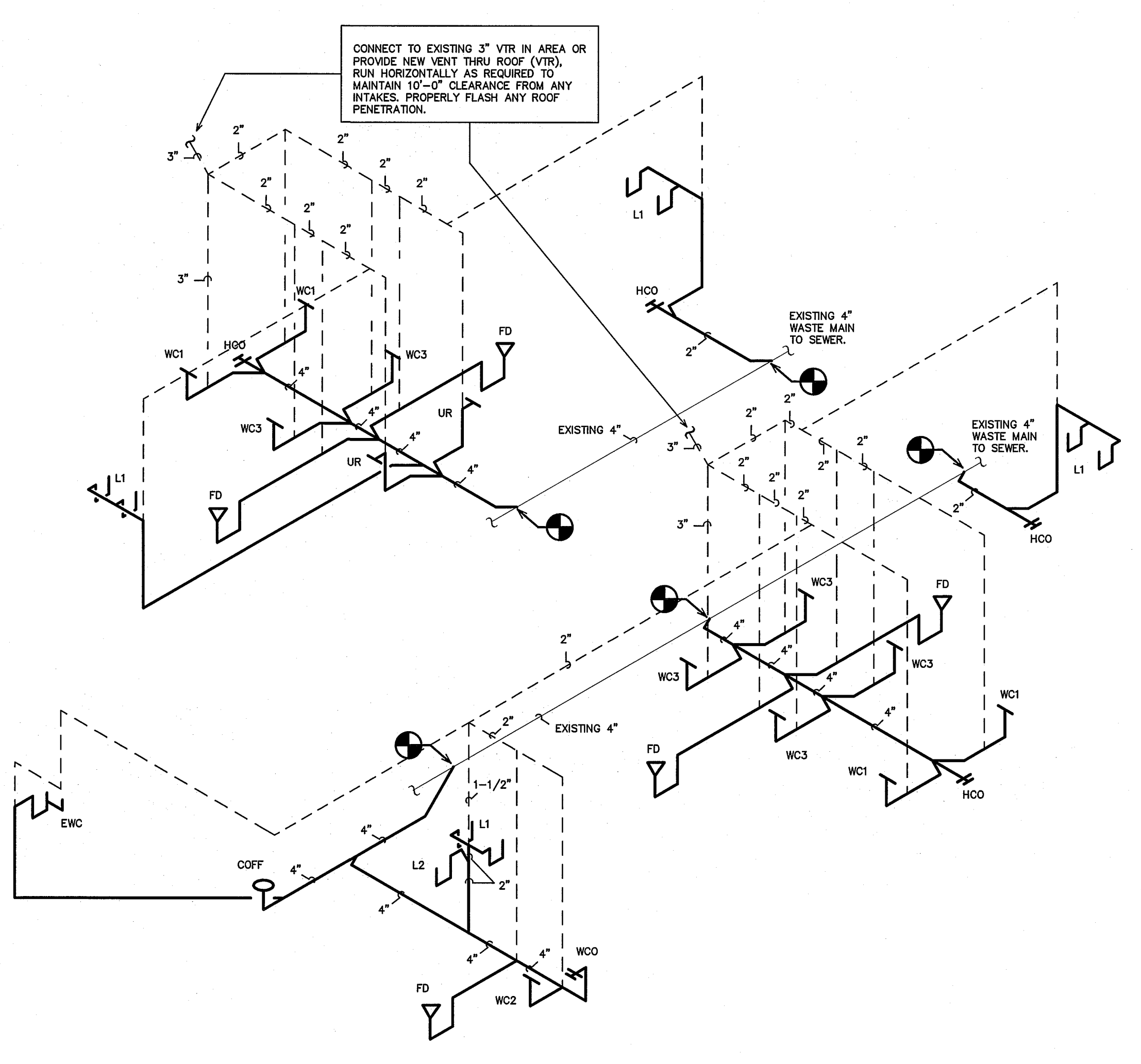
SHEET NO.  
**P5**

( VERIFY ALL EQUIPMENT REQUIREMENTS PRIOR TO ROUGH-IN )

PIPE SIZING SCHEDULE				
FIXTURE TYPE	DRAIN	VENT	CW	HW
(WC) FLUSH VALVE WATER CLOSET	3"	1 1/2"	1"	-
(L) LAVATORY	1 1/2"	1 1/4"	1/2"	1/2"
(UR) URINAL	2"	1 1/2"	3/4"	-
(HB) HOSE BIBB	-	-	1/2"	-
(EWC) ELECTRIC WATER COOLER	1 1/4"	1 1/4"	1/2"	-
(MS) EXISTING MOP SINK	-	-	-	1/2"
(FD) FLOOR DRAIN	3"	1 1/2"	-	-

\* PROVIDE BACKFLOW PREVENTER PER NCSBC-PLUMBING SECT. 608.3, AND ASSE 1024 (WATTS SERIES 7 OR EQUAL) OR ASSE 1022 (WATTS SERIES SD-3 OR EQUAL) WHERE REQUIRED.

DWV/SUPPLY RISER NOTES:  
 REPRESENTATIVE SIZES ARE GIVEN FOR EACH TYPE OF FIXTURE.  
 SEE PIPE SIZING SCHEDULE.  
 MINIMUM 2" DRAIN LINE SIZE UNDER SLAB.  
 MAINTAIN PIPE SIZES SHOWN UNTIL LARGER SIZE IS REACHED.  
 PIPE SIZES ARE MINIMUMS FOR INDIVIDUAL FIXTURES U.O.N.



**1 DWV RISER**  
 SCALE: NOT TO SCALE

2012 NCSBC, FUEL GAS CODE- TABLE 402.4(3)  
 NOTE:  
 GAS PIPE SIZES BASED UPON A INITIAL PRESSURE OF 2 PSI AND A PRESSURE DROP OF 1 PSI AT 100 FEET (VERIFY) IN DEVELOPED LENGTH.  
 TOTAL CONNECTED LOAD (NEW LINE TO GWH ONLY) = 76,000 BTUH

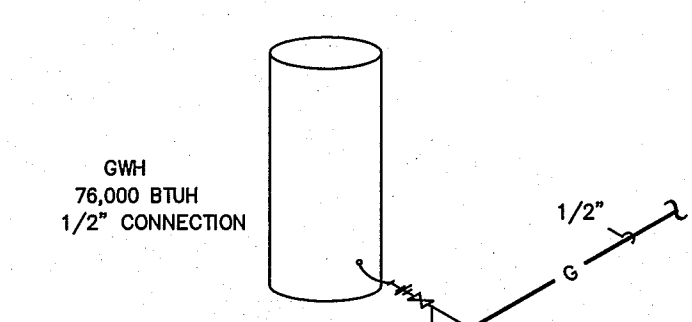
NOTE:  
 GAS PIPING SHALL BE BLACK STEEL, SCHEDULE 40 WITH SWEATED (LESS THAN 2-1/2" DIA. PIPING) OR WELDED (GREATER THAN OR EQUAL TO 2-1/2" DIA. PIPING) FITTINGS. TEST AND INSTALL ALL PIPING PER THE NCSBC.

NOTE:  
 VERIFY EXISTING GAS METER PRESSURE AT 2 PSI. COORDINATE NEW LOAD WITH GAS COMPANY. NEW LINE TO METER TO BE SIZED INDEPENDENTLY. PROVIDE PROPER REGULATOR FOR GWH. PROPERLY LABEL NEW PIPING. PAINT EXPOSED PIPING PER OWNER IF REQUIRED.

COORDINATE NEW LOADS WITH GAS COMPANY. FIELD VERIFY LOCATION PRIOR TO BID.

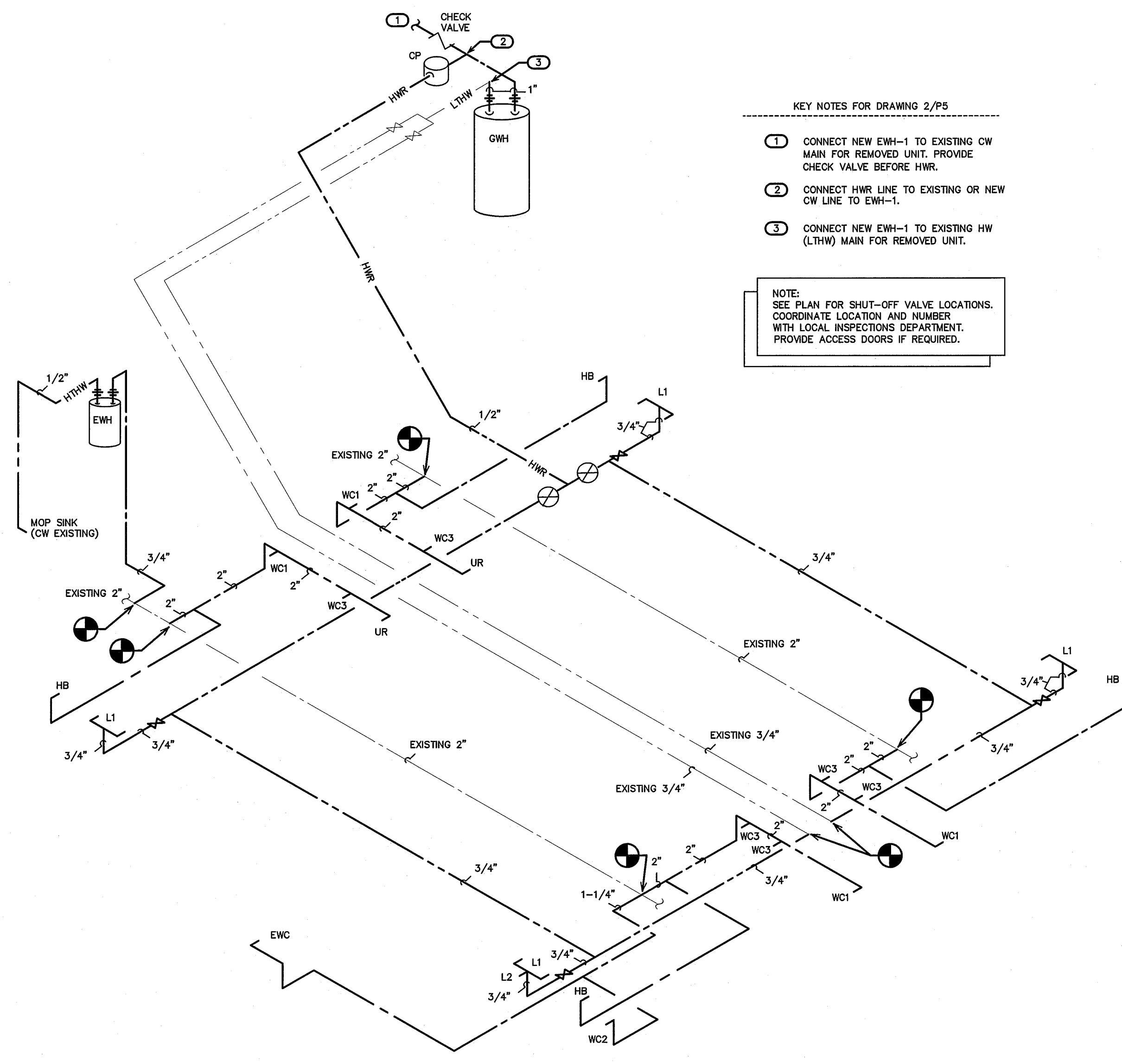
NOTE:  
 VERIFY ROUTING OF GAS PIPING FROM METER TO WORK AREA.

EXISTING 2 PSI GAS METER  
 UNDERGROUND GAS SUPPLY BY GAS COMPANY



NOTE:  
 PROVIDE PROPER REGULATOR AT NEW NAT. GAS WATER HEATER. PROVIDE DIRTLEG, UNION, SHUT-OFF VALVE AND FLEXIBLE CONNECTION OR AS REQUIRED TO UNIT. VERIFY CONNECTION TYPE/SIZE.

**3 NATURAL GAS RISER**  
 SCALE: NOT TO SCALE



- KEY NOTES FOR DRAWING 2/P5
- CONNECT NEW EWH-1 TO EXISTING CW MAIN FOR REMOVED UNIT. PROVIDE CHECK VALVE BEFORE HWR.
  - CONNECT HWR LINE TO EXISTING OR NEW CW LINE TO EWH-1.
  - CONNECT NEW EWH-1 TO EXISTING HW (LTHW) MAIN FOR REMOVED UNIT.

NOTE:  
 SEE PLAN FOR SHUT-OFF VALVE LOCATIONS. COORDINATE LOCATION AND NUMBER WITH LOCAL INSPECTIONS DEPARTMENT. PROVIDE ACCESS DOORS IF REQUIRED.

**2 SUPPLY RISER**  
 SCALE: NOT TO SCALE



HVAC EQUIPMENT SCHEDULE	
HVAC SYSTEM #1	
GF #1 NATURAL GAS CONDENSING FURNACE	* CARRIER MODEL #59MCB80-16 DELUXE, 4 WAY, MULTIPOISE, DIRECT VENT, CONDENSING, NATURAL GAS FURNACE, 80,000 BTUH INPUT, 1400 CFM NOMINAL, PROVIDE PVC VENTS TO EXTERIOR, 3.5 TON. PROVIDE PROGRAMMABLE THERMOSTAT AND FILTER RACK WITH HINGED DOOR, 115V, 1 PHASE, 7.9A FLA MOTOR, 13.4A UNIT MCA, 15A MOCP. INSTALL FURNACE IN VERTICAL POSITION.
COOLING COIL	* CARRIER MODEL CNPVP42, CASED COOLING COIL. VERIFY REQUIRED POSITION PRIOR TO ORDERING UNIT. 3.5 TON.
CJ #1 OUTDOOR AIR- CONDITIONING UNIT	* CARRIER MODEL #24AB8442A0030, 3.5 TON OUTDOOR CONDENSING UNIT, 15 SEER, PROVIDE CYCLE PROTECTOR, LOW PRESSURE SWITCH, CRANKCASE HEATER, 208V, 1 PHASE 17.9A COMPRESSOR RLA, 23.6A UNIT MCA, 40A MOCP.

\* OR APPROVED EQUAL BY TRANE OR YORK

AIR DISTRIBUTION SCHEDULE							
MARK	MANUFACTURER *	MODEL NO.	FACE SIZE	NECK SIZE	MATERIAL	SERVICE	NOTES
A	CARNES	SASA-40	-	8" DIA	ALUMINUM	SUPPLY	COLOR BY ARCHITECT GYPSUM BOARD CEILING
RA	CARNES	RAAMH	14" X 14"	24" X 14"	ALUMINUM	RETURN	COLOR BY ARCHITECT GYPSUM BOARD CEILING MOUNT
EA	CARNES	RAAMH	12" X 8"	14" X 10"	ALUMINUM	EXHAUST	COLOR BY ARCHITECT SIDEWALL MOUNT

COORDINATE BORDER TYPE WITH THE CEILING/WALL TYPE. SEE ARCH SHEETS PROVIDE DUCT TRANSITIONS AS REQUIRED.

\* OR APPROVED EQUAL BY TUTTLE & BAILEY, OR METALAIR

\*\* PROVIDE LINED PLENUM BOX ON TOP OF GRILLE/DIFFUSERS WITH SIDE INLET FOR ROUND DUCT.

EXHAUST FAN SCHEDULE	
EF-1	
EXHAUST FAN #1	* CARNES MODEL# VCDD015C EXHAUST FAN, 140 CFM @ 1/4" SP, 710 RPM, 1.4 AMPS, 120V. THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE SWITCH AND WIRE THE UNIT. THE HVAC CONTRACTOR SHALL PROVIDE UNIT, RIGID DUCT TO EXTERIOR ROOF CAP. LOCATE EXHAUST TERMINATION A MINIMUM OF 10'-0" FROM ANY INTAKES.

\* OR APPROVED EQUAL BY GREENHECK OR PENN

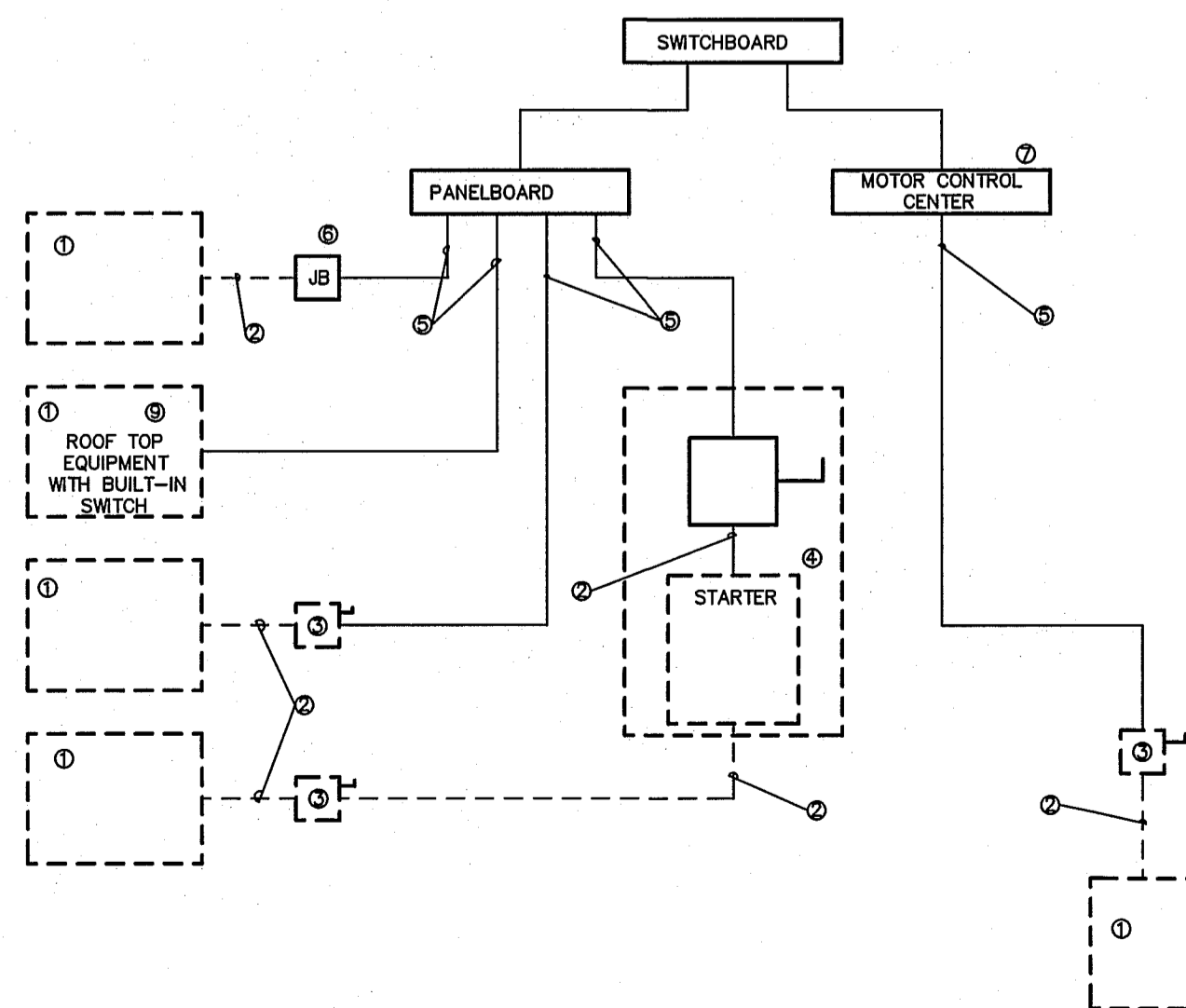
ENERGY RECOVERY UNIT SCHEDULE															
EQUIP. NUMBER	MODEL NO.	FLOW	THERMAL PERFORMANCE											NOTES:	
			FANS / MOTORS					ENERGY RECOVERY (THERMAL) CAPACITY		INLET / OUTLET CONDITIONS					
			STATIC PRESSURE (EXTERNA)	FAN MOTORS	FLA (FOR UNIT SINGLE POINT)	VOLTS/PHASES/ HZ	MCA	FUSE/CB MAX	COOLING CAPACITY (MBH / TON)	HEATING CAPACITY (MBH)	OUTSIDE AIR TEMP (F) & HUMIDITY (DB) / (WB)	ROOM AIR TEMP (F) & HUMIDITY (DB) / (WB OR RH)			
ERV-1	MICROMETL FMB22H9000HEF	1000 CFM	0.5 IN H <sub>2</sub> O	(2) FOR FANS	22.16 A	208-230V 1 PH 60 HZ	27.7 A	40 A	14.0/1.17	44.4	88F / 72F	11F	75F / 50%	68F / 50%	ALL

NOTES:

- FLOW & LOADS BASED ON ARI-1060 PERFORMANCE & CERTIFIED CORE.
- PROVIDE WITH FUSED DISCONNECT SWITCH.
- VENTILATION TYPE: ERV WHEEL, HEAT & HUMIDITY TRANSFER.
- INCLUDE INTERNAL DISPOSABLE FILTERS (OUTSIDE AND ROOM AIR) WITH MERV8 OR BETTER RATING.
- INCLUDE SINGLE POINT ELECTRICAL POWER CONNECTION.
- HOUSING SHALL BE GALVANIZED, .20 GAUGE (OR THICKER) STEEL WITH LAPPED CORNERS.
- OR EQUALS BY SEMCO, OR THYBAR.
- SERVICE ACCESS DOORS SHALL BE GASKETED & PROVIDE ACCESS FOR MAINTENANCE OF ALL COMPONENTS.
- INCLUDE INSULATION ON ALL CASE WALLS & DOORS.
- INCLUDE THERMALLY PROTECTED MOTORS WITH STARTERS.
- UL LISTED 1995

ELECTRICAL NOTES

- EQUIPMENT OF TRADES OTHER THAN ELECTRICAL.
- CONDUIT & 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.
- FEDER CIRCUT 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.
- PROJECTS UTILIZING AN MCC, THE STARTER, CB, OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- IN ALL CASES THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP, AND TEST EQUIPMENT.
- IF THE ROOF TOP EQUIPMENT 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 OTHERS TRADES.

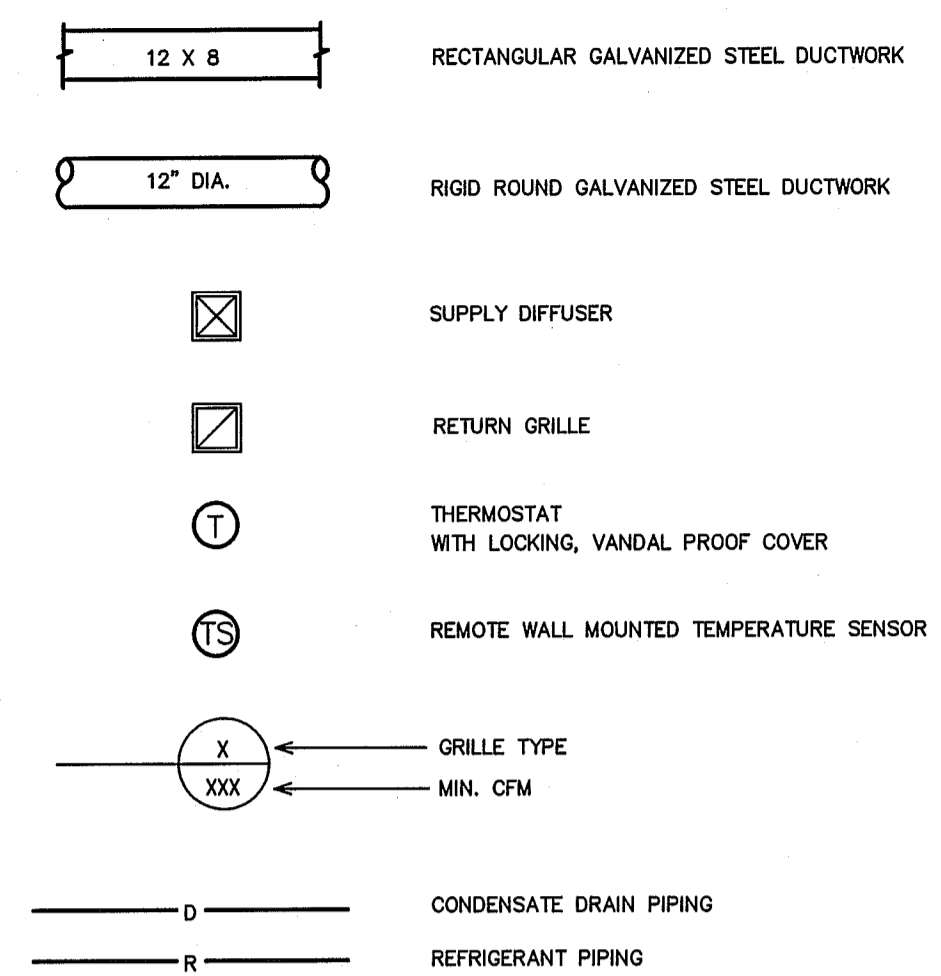


1 M1 ELECTRICAL EQUIPMENT CONNECTION NOT TO SCALE

GENERAL NOTES - MECHANICAL

- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE AND ALL LOCAL AND OTHER APPLICABLE CODES.
- ANY PERMITS AND INSPECTION FEES SHALL BE SECURED AND PAID FOR BY THE MECHANICAL CONTRACTOR (MC).
- ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN. THE MC SHALL COORDINATE ALL OF HIS WORK WITH THE GENERAL CONTRACTOR (GC) AND OTHER TRADES.
- THE LOCATION OF ALL DUCT, PIPING AND EQUIPMENT SHALL BE ADJUSTED TO ACCOMMODATE ANTICIPATED OR ENCOUNTERED INTERFERENCES.
- THESE PLANS ARE DIAGRAMMATIC AND MAY NOT SHOW MINOR DETAILS AND LOCATIONS. FOR DIMENSIONS REFER TO THE ARCHITECTURAL PLANS.
- THE MC SHALL BE RESPONSIBLE FOR ALL ELECTRICAL STARTERS INTERLOCKS, CONTROL WIRING CONDUIT AND POWER WIRING FROM DISCONNECTS TO HIS EQUIPMENT, USING A LICENSED ELECTRICIAN.
- THE MC SHALL USE FIRE DAMPERS FOR PROTECTION OF THE OPENING IN ACCORDANCE WITH STATE AND LOCAL CODES IN ALL LOCATIONS WHERE PENETRATIONS OF RATED WALLS AND FLOORS OCCUR. SEE ARCHITECTURAL PLANS FOR RATED WALL AND FLOOR LOCATIONS. PROVIDE ACCESS DOORS AT ALL DAMPER LOCATIONS. LOCATE DOORS FOR EASY ACCESS. THERE ARE NO RATED WALLS PENETRATED IN THIS HVAC UPFIT.
- INSTALL FLEXIBLE CONNECTORS ON SUPPLY AND RETURN DUCTWORK AHU. ALL MECHANICAL EQUIPMENT SHALL OPERATE FREE OF OBJECTIONAL NOISE AND VIBRATION.
- INSTALL TURNING VANES IN SUPPLY DUCTS AT ALL ELBOWS AND SPLITTER DAMPERS. PROVIDE BALANCING DAMPERS IN ALL DUCTS WHERE SHOWN OR REQUIRED FOR SYSTEM BALANCING. PROVIDE SPIN IN STARTING COLLARS WITH DAMPERS AT ALL SUPPLY TAKEOFFS.
- DUCT DIMENSIONS ARE SHOWN INSIDE CLEAR. COORDINATE EXACT SIZE WITH SPACE AVAILABLE DUCT INSULATION SHALL BE 2" FIBERGLASS EXTERIOR DUCT INSULATION WITH FOIL FACING.
- THERMOSTAT, WIRING AND CONDUIT ARE TO BE FURNISHED BY THE MC. MOUNT THERMOSTAT 48" ABOVE THE FINISHED FLOOR. COORDINATE LOCATION WITH OWNER. PROVIDE AUTO CHANGEOVER THERMOSTAT WITH UNIT OFF POSITION AS MINIMUM. PROVIDE AN EMERGENCY SHUT-OFF SWITCH ABOVE THE THERMOSTAT. PROPERLY LABEL SHUT-OFF SWITCH.
- THE MC SHALL KEEP THE PREMISES CLEAR OF DEBRIS FROM HIS WORK DURING CONSTRUCTION AND LEAVE THE AREA AND BUILDING CLEAN AT THE COMPLETION OF HIS WORK. HE SHALL ALSO LEAVE CLEAN ALL EXPOSED EQUIPMENT IN HIS CONTRACT.
- COORDINATE DIFFUSER AND CEILING EXHAUST GRILLE LOCATIONS WITH LIGHTS AND GRID. COORDINATE MOUNTING FRAME WITH CEILING TYPE.
- THE M.C. SHALL COORDINATE WITH AND PROVIDE EQUIPMENT SPEC. SHEETS TO THE GENERAL AND ELECTRICAL CONTRACTORS FOR REVIEW PRIOR TO ORDERING EQUIPMENT.
- PROPERLY SUPPORT FLEXIBLE DUCT, MINIMUM 75% DEFORMATION. PROVIDE SHEET METAL ELBOWS AT ALL 90 DEGREE BENDS.
- ALL DUCT JOINTS SHALL BE SEALED AIRTIGHT WITH FIBER ENPREGNATED MASTIC OR HARDCAST AND TAPE.
- SUPPORT AHU, EXHAUST FANS, HEAT WHEEL AND ALL DUCTWORK, ETC. FROM STRUCTURE. PIPE STRAPPING WILL NOT BE ALLOWED.

LEGEND - MECHANICAL



MECHANICAL SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE:

Prescriptive  Energy Cost Budget

Thermal Zone 4A

Exterior Design Conditions

winter dry bulb 11 F  
summer dry bulb 88 F

Interior Design Conditions

winter dry bulb 72 F  
summer dry bulb 75 F  
relative humidity 50%

Building Heating Load 79,000 BTU/hr  
-44,400 BTU/hr (heat wheel reduction)  
34,600 BTU/hr

Building Cooling Load 39,100 BTU/hr  
-14,000 BTU/hr (heat wheel reduction)  
25,100 BTU/hr

Mechanical Spacing Conditioning System

Unitary - The building is served by one 3.5 ton split system heat pump with an energy recovery ventilator.

Boiler - Not applicable to this project.  
Chiller - Not applicable to this project.

Equipment efficiencies  
Efficiencies and outputs are listed on equipment schedules - See drawings.

Equipment schedules with motors.  
Motors used on this project are included in the efficiency rating of the unit. See drawings for efficiencies.

FLEXIBLE DUCTWORK SIZES  
MAXIMUM CFM'S

SIZES	SUPPLY	RETURN
4"	100	75
6"	150	100
8"	200	150
10"	350	300
12"	550	450
14"	NA	700
16"	NA	850
18"	NA	1200

FLEXIBLE DUCTWORK NOTES

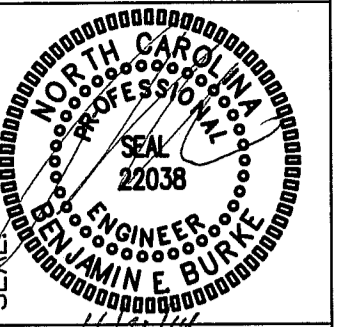
- INSTALL FLEXIBLE DUCTWORK RUNS AS STRAIGHT AS POSSIBLE.
- DO NOT ALLOW FLEXIBLE DUCT TO SAG BETWEEN SUPPORTS.
- DO NOT STRETCH A SHORT SECTION TO FIT A SLIGHTLY LONGER SECTION. THIS DISTORTS THE DUCT SHAPE AND IMPEADS AIR FLOW.
- DO NOT CRUSH DUCTWORK TO FIT IN A SPACE SMALLER THAN ITS ORIGINAL OUTSIDE DIAMETER. MAXIMUM ALLOWABLE DEFORMATION IS 15% OF ORIGINAL VOLUME.
- USE RIGID 90 DEGREE ELBOWS AT ANY LOCATION WHERE THE DUCTWORK BECOMES DISTORTED.
- EXTREME CARE SHALL BE TAKEN TO ELIMINATE ANY REDUCTION IN FLOW WITHIN THE FLEXIBLE DUCTS. THE TECH. CONTRACTOR WILL BE REQUIRED TO REPLACE THE FLEXIBLE DUCT WITH RIGID IF PROPER FLOW IS NOT OBTAINED.
- SIZE ALL FLEXIBLE DUCT SO AS NOT TO EXCEED MAXIMUM CFM'S GIVEN IN TABLE.

OUTDOOR AIR CALCULATIONS

OUTDOOR VENTILATION AIR PROVIDED PER TABLE 403.3, 2012 NORTH CAROLINA STATE BUILDING CODE MECHANICAL CODE.

APPLICATION	CFM/FLUSHING FIXTURE
GANG TOILET ROOMS	70 CFM EACH
12 FLUSHING FIXTURES X 70 CFM = 840 CFM 500 CFM EXHAUST PROVIDED BY 16 ERV	
APPLICATION	CFM/FLUSHING FIXTURE
FAMILY TOILET ROOM	70 CFM EACH
1 FLUSHING FIXTURE X 70 CFM = 70 CFM 140 CFM EXHAUST PROVIDED BY INDIVIDUAL INTERMITTENT FAN MAKE UP AIR BY TRANSFER AIR	
APPLICATION	CFM/SQ.FT.
CORRIDORS	0.08 CFM/SQ.FT.
342 SQ. FT. X 0.08 CFM/SQ.FT. = 28 CFM	
TOTAL OUTSIDE AIR REQUIRED - 861 CFM TOTAL OUTSIDE PROVIDED - 1000 CFM GF-1 = 1000 CFM PROVIDED FROM ERV	

BID DOCUMENTS



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DRAWING TITLE / DESCRIPTION:  
HVAC SCHEDULES

PROJECT:  
MACON COUNTY  
REST AREA, NCDOT  
US-23/441, NC 28763  
MACON COUNTY, NORTH CAROLINA

SCO ID NO.	14-11043-01A
TIP PROJ. NO.	K-5103
WBS NO.	42231.3.1
FEDERAL ID NO.	NHPP-0023(31)
ASSET NUMBER	56 = 16 = 1
CO. SITE # BLDG #	
REVISIONS	
NO.	DATE

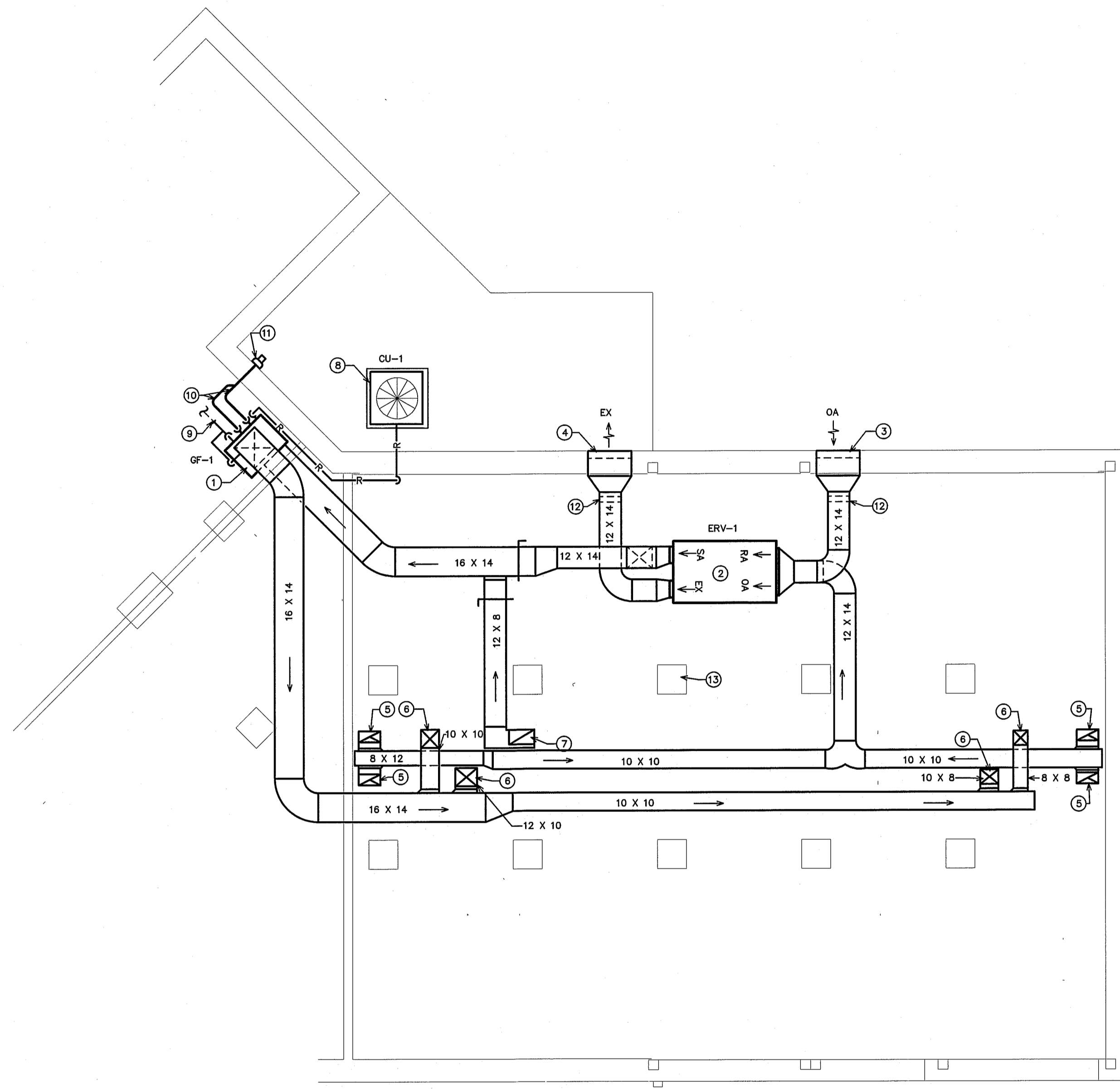
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CHECKED BY: BEB

SHEET NO.

M1

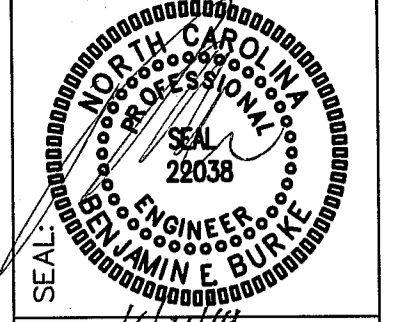






- KEY NOTES FOR SHEET M3
- 1 NEW CONDENSING GAS FURNACE IN BASEMENT MECHANICAL ROOM.
  - 2 NEW 1000 CFM ENERGY RECOVERY VENTILATOR (ERV) IN CRAWL SPACE.
  - 3 OUTSIDE AIR INTAKE LOUVER.
  - 4 EXHAUST LOUVER.
  - 5 12" X 6" EXHAUST DUCT UP IN CHASE TO TOILET ABOVE. SEE 1/M4 FOR CONTINUATION.
  - 6 SUPPLY AIR DUCT UP IN CHASE. SEE 1/M4 FOR CONTINUATION.
  - 7 14" X 8" RETURN AIR UP IN CHASE. SEE 1/M4 FOR CONTINUATION.
  - 8 NEW 4 TON OUTDOOR CONDENSING UNIT.
  - 9 CONNECT NEW CONDENSATE FROM COOLING COIL AND FROM CONDENSING FURNACE TO EXISTING PVC CONDENSATE LINE FROM REMOVED CONDENSING FURNACE.
  - 10 TWO (2) SCHEDULE 40 PVC PIPES, ONE FOR FURNACE EXHAUST AND ONE FOR FURNACE COMBUSTION AIR. SIZE OF PIPES SHALL BE PER MANUFACTURER'S INSTRUCTIONS.
  - 11 FACTORY PVC CONCENTRIC VENT FOR FURNACE INTAKE/EXHAUST MOUNTED ON EXTERIOR WALL. INSTALLATION OF VENT AND VENT PIPING SHALL BE PER THE FURNACE MANUFACTURER'S INSTRUCTIONS.
  - 12 GRAVITY BACKDRAFT DAMPER.
  - 13 FOUNDATION PIER (TYPICAL).

**1** REVISED CRAWL SPACE HVAC PLAN  
**M3** SCALE: 1/4" = 1'-0"



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DRAWING TITLE / DESCRIPTION:  
**REVISED HVAC PLAN**

PROJECT:  
**MACON COUNTY REST AREA, NCDOT**  
 US-23/441, NC 28763  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO.	14-11043-01A
TIP PROJ. NO.	K-5103
WBS NO.	42231.3.1
FEDERAL ID NO.	NHPP-002X(31)

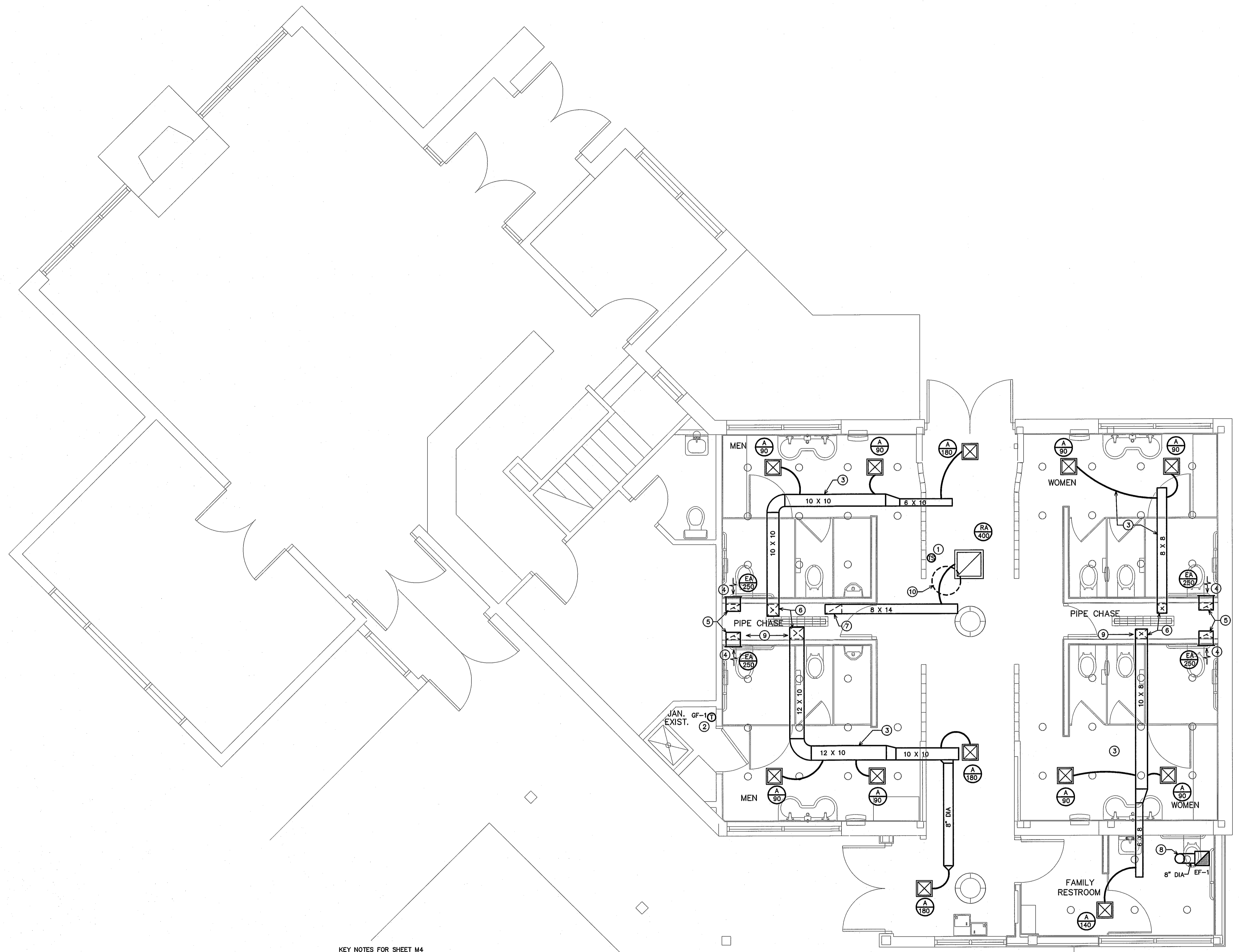
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 CO.# SITE# FLAG#  
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REVISIONS	
NO.	DATE

DATE ISSUED: 11-21-14  
 DRAWN BY: WBE  
 CHECKED BY: BEB

SHEET NO.

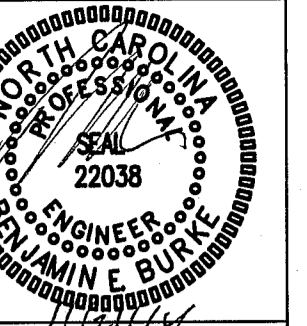
**M3**



KEY NOTES FOR SHEET M4

- ① REMOTE WALL MOUNTED TEMPERATURE SENSOR
- ② MOUNT THERMOSTAT AT 48" AFF. THERMOSTAT SHALL BE ELECTRONIC PROGRAMMABLE TYPE WITH SETBACK CAPABILITIES PER THE 2012 NCSBC ENERGY CONSERVATION CODE.
- ③ RUN DUCTWORK ABOVE CEILING. (TYPICAL).
- ④ HIGH SIDEWALL MOUNTED EXHAUST AIR GRILLE. MOUNT BOTTOM AT 8'-0" AFF.
- ⑤ 12" X 6" EXHAUST DUCT DOWN IN CHASE TO CRAWL SPACE. SEE 1/M3 FOR CONTINUATION.
- ⑥ SUPPLY AIR DUCT DOWN IN CHASE TO CRAWL SPACE. SEE 1/M3 FOR CONTINUATION.
- ⑦ RETURN AIR DOWN IN CHASE TO CRAWL SPACE. SEE 1/M3 FOR CONTINUATION.
- ⑧ 8" DIA. EXHAUST DUCT UP TO ROOF MOUNTED EXHAUST CAP. EXHAUST DISCHARGE SHALL BE 10'-0" MIN. FROM ANY OUTSIDE AIR INTAKE.
- ⑨ COORDINATE LOCATION OF DUCTS IN CHASE WITH CARRIERS FOR WATER CLOSETS AND URINALS. LOCATE DUCTS SO THAT ACCESS IN CHASE IS NOT RESTRICTED. (TYPICAL).
- ⑩ ROOF MOUNTED ATTIC VENTILATION FAN TO REMAIN.

1 REVISED HVAC PLAN  
SCALE: 1/4" = 1'-0"



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DRAWING TITLE / DESCRIPTION:  
 REVISED HVAC PLAN

PROJECT:  
 MACON COUNTY  
 REST AREA, NCDOT  
 US-23/441, NC 28763  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO. 14-11043-01A  
 TIP PROJ. NO. K-5103  
 WBS NO. 42231.3.1  
 FEDERAL ID NO. NHPP-0023(31)

ASSET NUMBER:  
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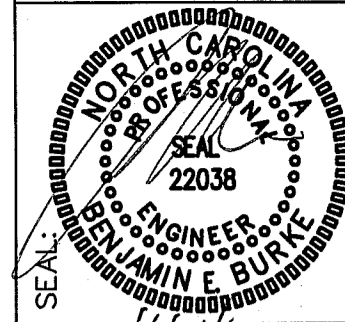
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NO.	DATE

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 DRAWN BY: WBE  
 CHECKED BY: WBE

SHEET NO.

**M4**





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DRAWING TITLE / DESCRIPTION:  
**ELECTRICAL NOTES**

PROJECT:  
**MACON COUNTY  
 REST AREA, NCDOT  
 US-23/441, NC 28763  
 MACON COUNTY, NORTH CAROLINA**

SCO ID NO. 14-11043-01A  
 TIP PROJ. NO. K-5103  
 WBS NO. 42231.3.1  
 FEDERAL ID NO. NHPP-0023(31)  
 ASSET NUMBER:  
 CO.# SITE.# BLDG.#  
 56 = 16 = 1  
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 DRAWN BY: ME  
 CHECKED BY: BEB

SHEET NO.

**E1**

**GENERAL LEGEND**

- FLUORESCENT LAY-IN FIXTURE: LETTER DENOTES TYPE OF LIGHT FIXTURE
- DUPLEX RECEPTACLE - 120V; MOUNT 18" TO CENTER AFF UNLESS NOTED OTHERWISE; WP INDICATES WEATHER PROOF, GFI INDICATES GROUND FAULT CURRENT INTERRUPT PROTECTED.
- QUADRAPLEX RECEPTACLE - 120V
- LIGHT SWITCH - 120V
- NUMBER DENOTES THREE-WAY, FOUR-WAY, ETC. SWITCHING LETTER (M) DENOTES MANUAL ON-AUTO OFF MOTION SENSOR (K) DENOTES KEY OPERATOR
- MOTOR RATED SWITCH - 120V
- PHOTOCELL
- TELE/DATA OUTLET - PROVIDE J-BOX AND CONDUIT ABOVE THE LAY-IN CEILING
- SINGLE-POLE HOMERUN TO PANELBOARD
- TWO-POLE OR 3-POLE HOMERUN TO PANELBOARD
- EMERGENCY LIGHT
- COMBINATION EXIT SIGN & EMERGENCY LIGHT
- BRANCH CIRCUIT WIRING
- SWITCH LEG
- GROUND CONNECTION
- DISTRIBUTION PANELBOARD
- MAIN TELEPHONE PANEL - PROVIDE FIRE RESISTANT 2'X4'X1/2" PLYWOOD BACKBOARD, TWO 2" CONDUITS BACK TO TELEPHONE SERVICE ENTRY POINT  
FIELD VERIFY EXACT LOCATION
- DISCONNECTING MEANS AS REQUIRED BY CODE; 208V, CLASS 3130

**2012 NC ENERGY CODE ELECTRICAL SUMMARY**

**ELECTRICAL SYSTEM AND EQUIPMENT**

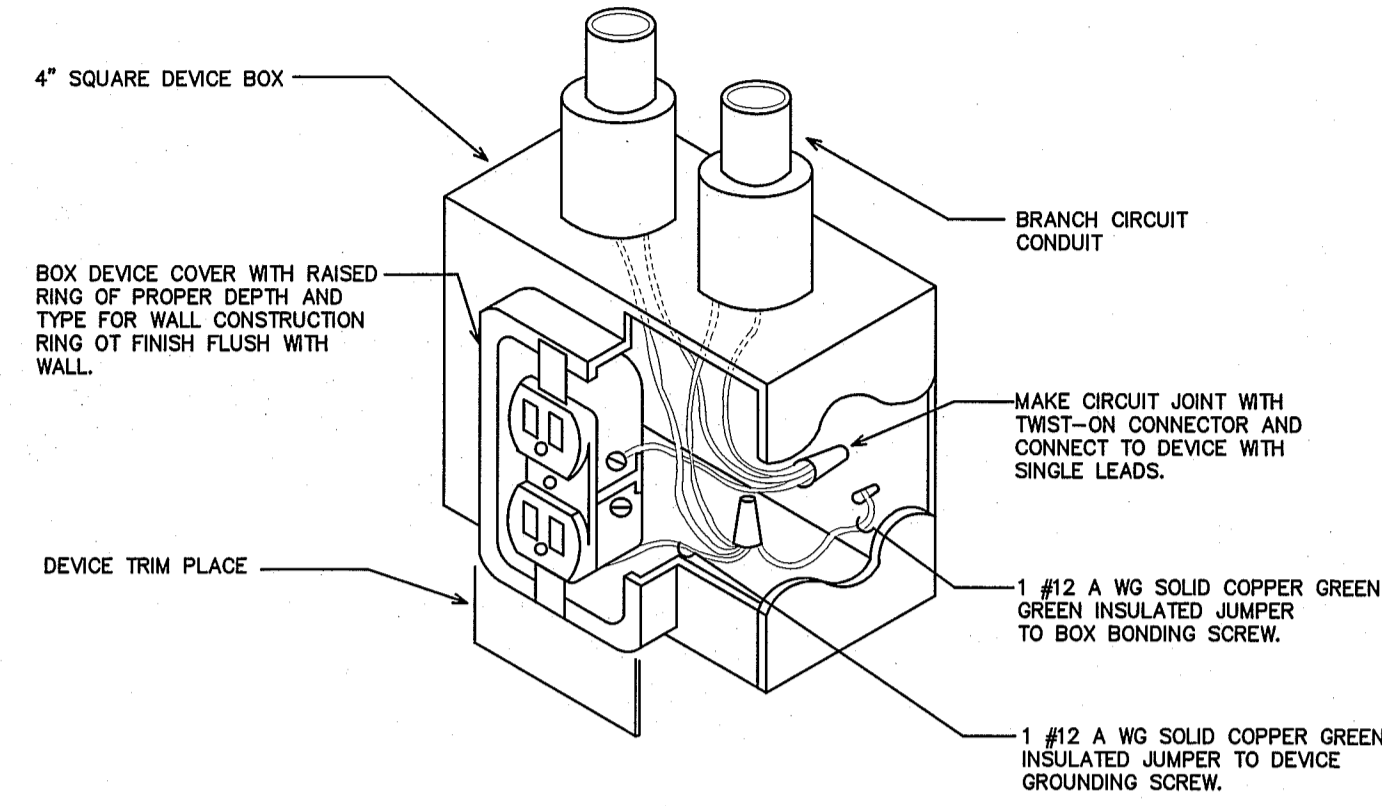
**Method of Compliance:**  
 Energy Code:  Prescriptive  Performance  
 ASHRAE 90.1:  Prescriptive  Performance

**Lighting schedule (each fixture type)**  
 lamp type required in fixture  
 number of lamps in fixture  
 ballast type used in the fixture  
 number of ballasts in fixture  
 total wattage per fixture  
 total interior wattage specified vs allowed 1231 VA / 1233 VA  
 (whole building or space by space)  
 total exterior wattage specified vs allowed

See Light Fixture Schedule

**Additional Prescriptive Compliance**

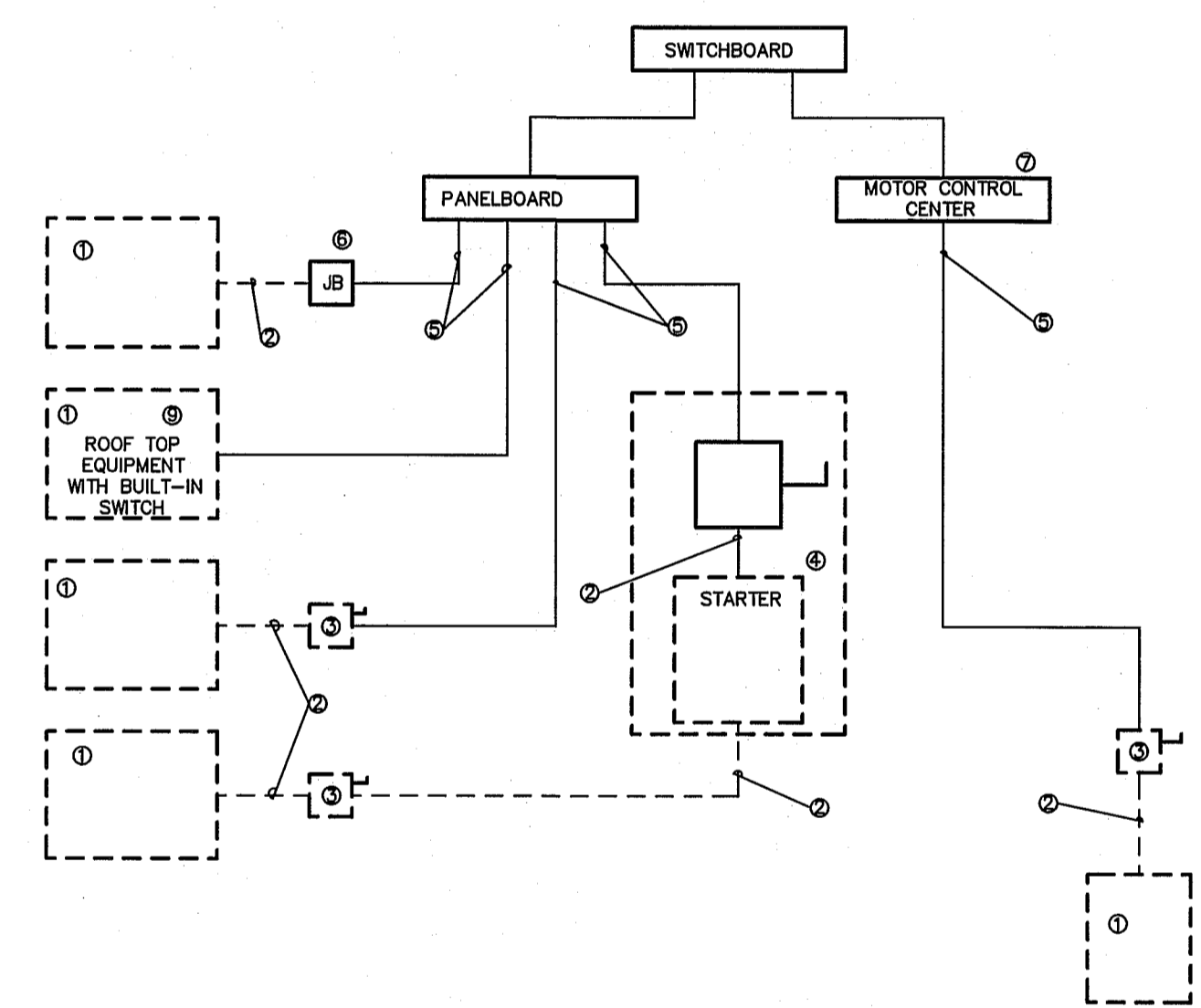
- 506.2.1 More Efficient Mechanical Equipment
- 506.2.2 Reduced Lighting Power Density
- 506.2.3 Energy Recovery Ventilation Systems
- 506.2.4 Higher Efficiency Service Water Heating
- 506.2.5 On-Site Supply of Renewable Energy
- 506.2.6 Automatic Daylighting Control Systems



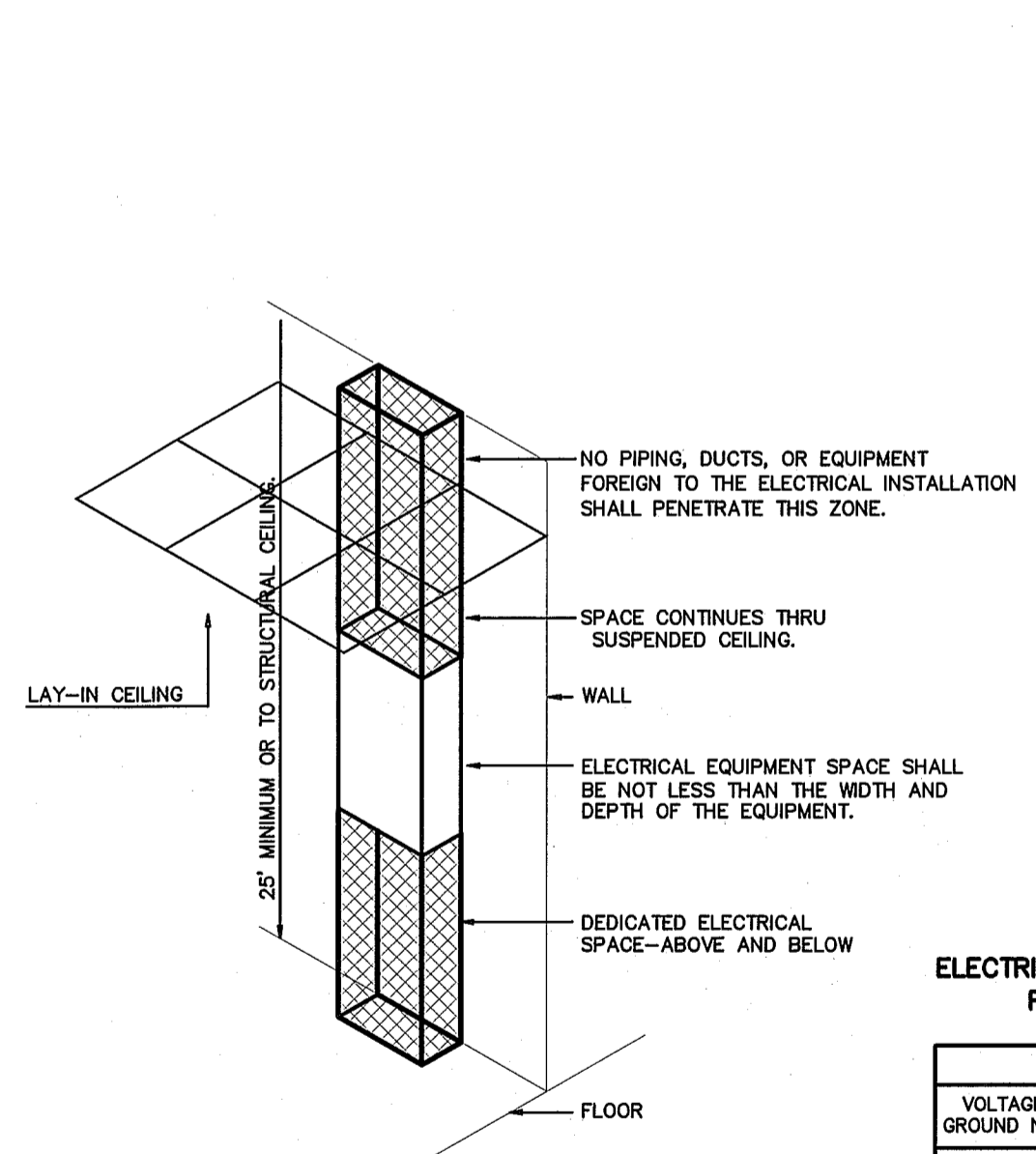
**1 RECEPTACLE GROUNDING DETAIL**  
 NOT TO SCALE

**ELECTRICAL NOTES**

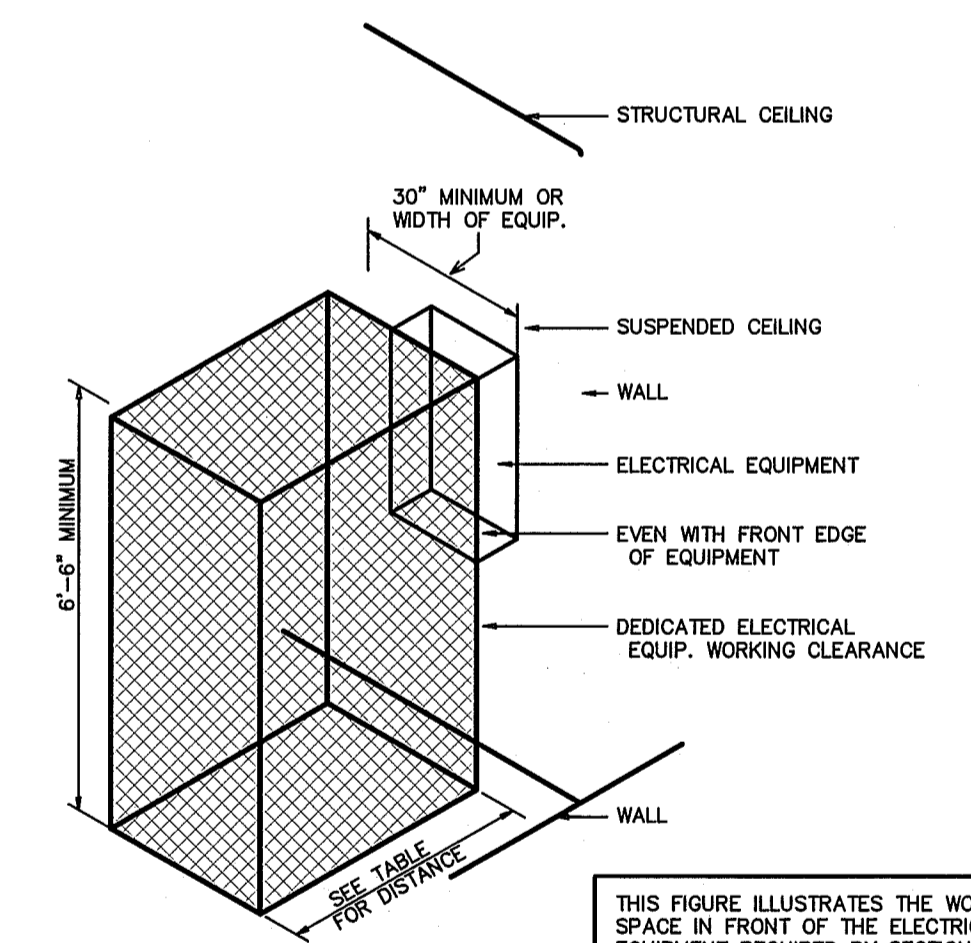
- 1 EQUIPMENT OF TRADES OTHER THAN ELECTRICAL.
- 2 CONDUIT & WIRING BY HVAC PLUMBING CONTRACTOR, OR OTHER TRADES
- 3 IF AN ADDITIONAL DISCONNECT IS REQUIRED BY NEC/IT SHALL BE PROVIDED AND INSTALLED BY THE EQUIPMENT CONTRACTOR.
- 4 A COMBINATION STARTER OR VFD MAY BE USED IN LIEU OF A SEPARATE DISCONNECT SWITCH AND STARTER. LOCATE ADJACENT TO EQUIPMENT.
- 5 FEEDER CIRCUIT WIRING AND CONDUIT IN ELECTRICAL WORK. SEE PANELBOARD SCHEDULES FOR WIRE AND BREAKER SIZES.
- 6 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.
- 7 PROJECTS UTILIZING AN MCC, THE STARTER, CB, OR VFD IN THE MCC ARE PROVIDED BY THE ELECTRICAL CONTRACTOR.
- 8 IN ALL CASES THE EQUIPMENT CONTRACTOR SHALL MAKE FINAL CONNECTIONS, START UP, AND TEST EQUIPMENT.
- 9 IF THE ROOF TOP EQUIPMENT IS NOT PROVIDED WITH BUILT IN SWITCH, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A DISCONNECT SWITCH.
- 10 IN A SINGLE PRIME CONTRACT, IT IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR TO COORDINATE BETWEEN THE ELECTRICAL AND OTHERS TRADES.



**2 ELECTRICAL EQUIPMENT CONNECTION**  
 NOT TO SCALE



**3 DEDICATED SPACE**  
 PER ARTICLE 110.26.F.1 OF N.E.C.  
 NOT TO SCALE



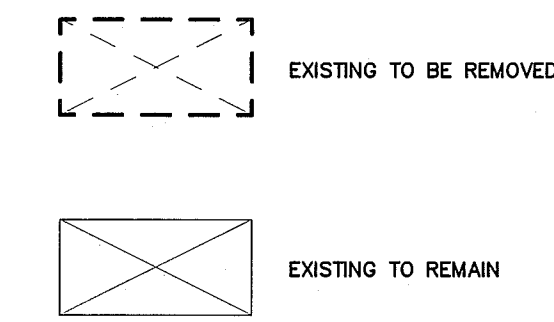
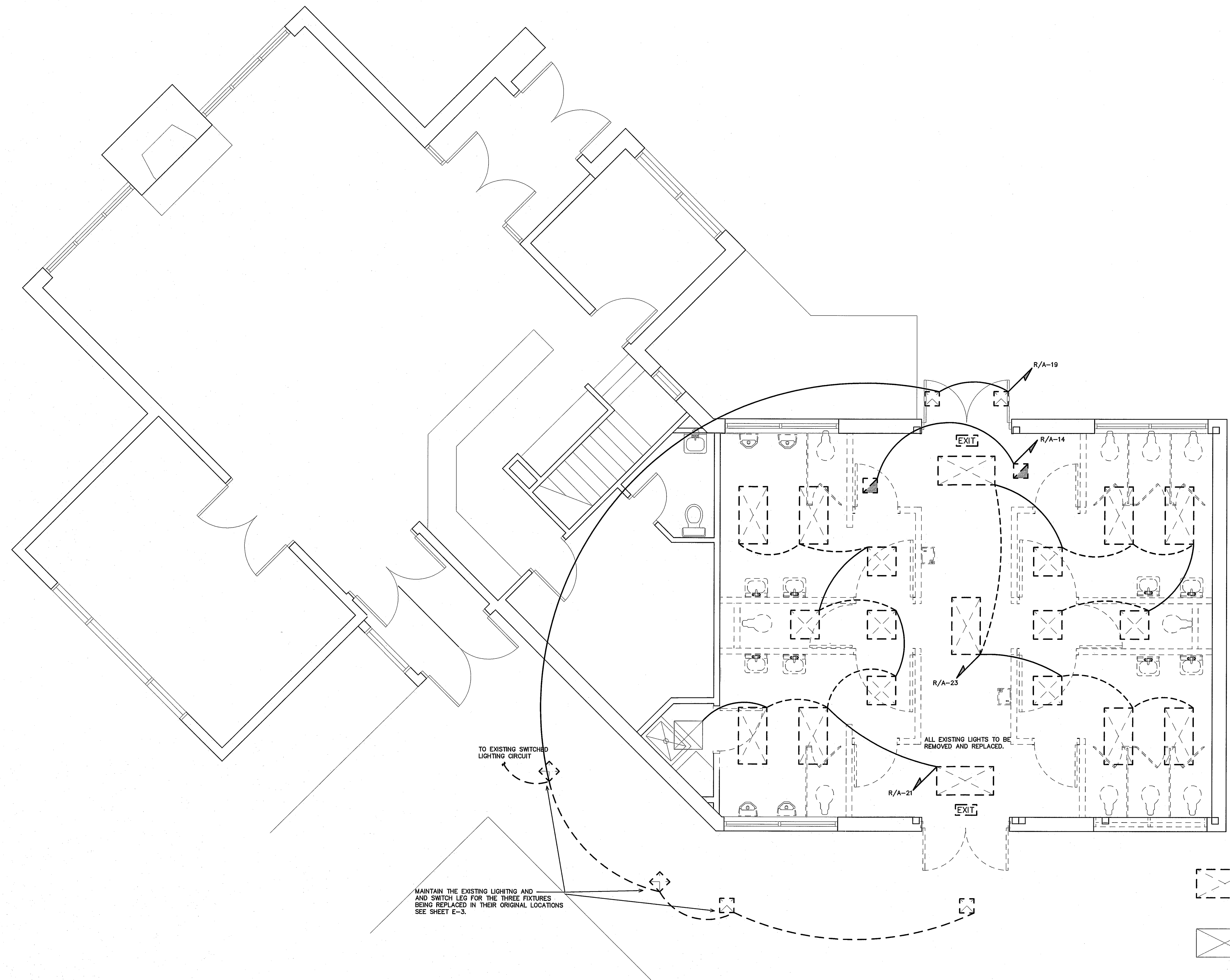
**ELECTRICAL EQUIPMENT WORKING CLEARANCE**  
 PER ARTICLE 110.26 OF N.E.C.

VOLTAGE TO GROUND NOMINAL	WORKING CLEARANCES		
	MIN. CLEAR DISTANCE IN FEET	CONDITION 1	CONDITION 2
0-150	3	3	3
151-600	3	3-1/2	4

**4 ELECTRICAL CLEARANCES**  
 NOT TO SCALE

**WHERE THE CONDITIONS ARE AS FOLLOWS:**

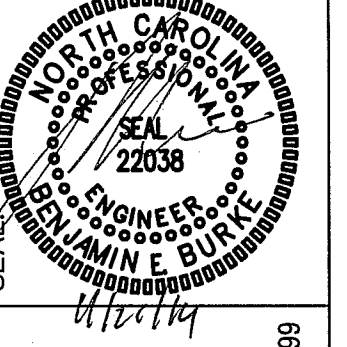
- 1 EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND NO LIVE OR GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE, OR EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORKING SPACE THAT ARE EFFECTIVELY GUARDED BY INSULATING MATERIALS.
- 2 EXPOSED LIVE PARTS ON ONE SIDE OF THE WORKING SPACE AND GROUNDED PARTS ON THE OTHER SIDE OF THE WORKING SPACE. CONCRETE, BRICK OR TILE WALLS SHALL BE CONSIDERED AS GROUNDED.
- 3 EXPOSED LIVE PARTS ON BOTH SIDES OF THE WORK SPACE.



**1**  
**E2** EXISTING / DEMOLITION LIGHTING PLAN  
SCALE: 1/4" = 1'-0"

NOTE:  
THE EXISTING INFORMATION SHOWN ON THIS DRAWING IS FROM FIELD INVESTIGATION & PREVIOUS PERMIT DRAWINGS.  
THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION.  
THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS.  
NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

BID DOCUMENTS



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DRAWING TITLE / DESCRIPTION:  
**EXISTING/DEMOLITION LIGHTING PLAN**

PROJECT:  
**MACON COUNTY REST AREA, NCDOT**  
US-23/441, NC 28763  
MACON COUNTY, NORTH CAROLINA

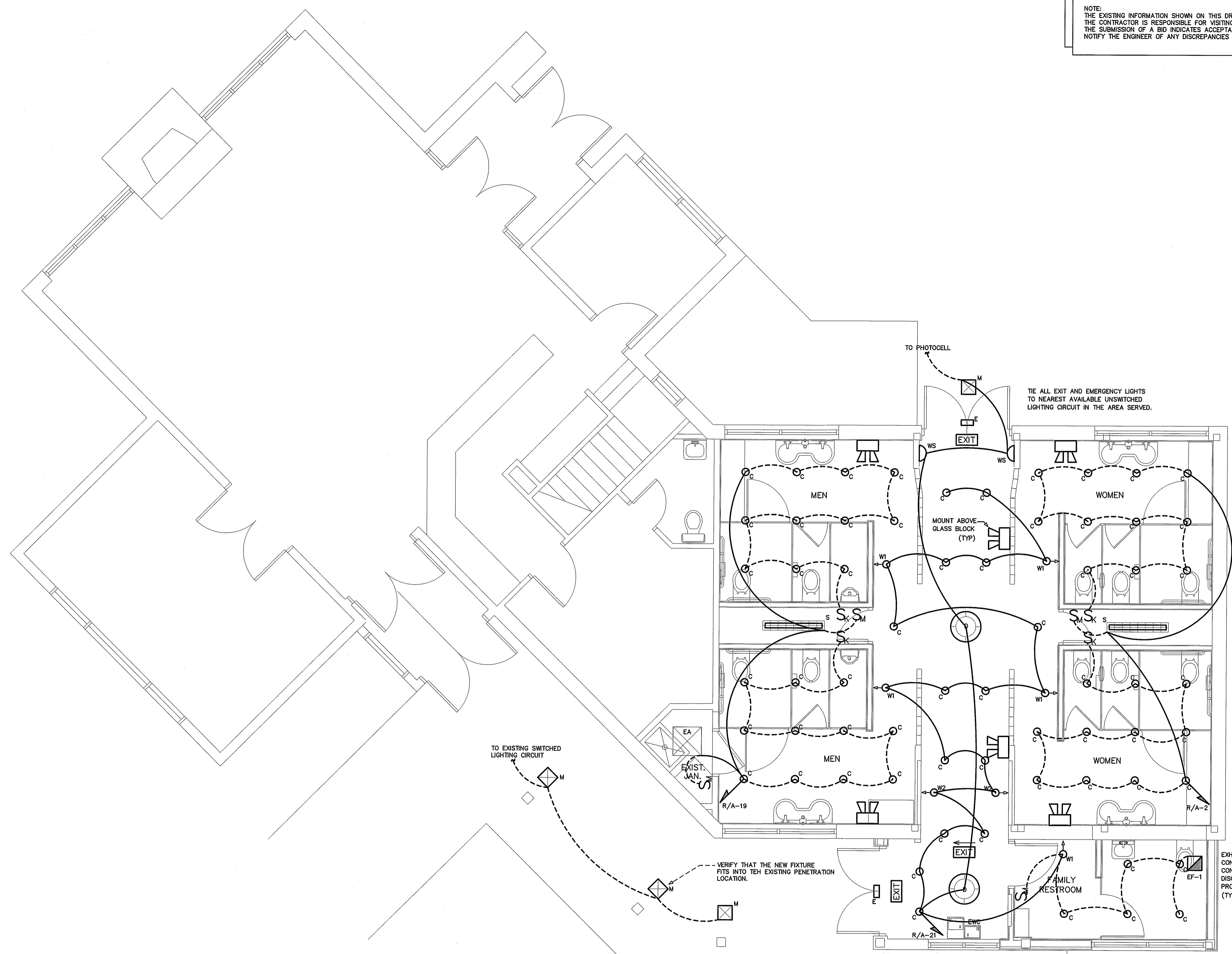
SCO ID NO.	14-11043-01A
TIP PROJ. NO.	K-5103
WBS NO.	42231.3.1
FEDERAL ID NO.	NHPP-0023(31)
ASSET NUMBER:	
CO.#	SITE.# BLDG.#
56	16 1

REVISIONS	
NO.	DATE

DATE ISSUED: 11/21/2014  
DRAWN BY: JME  
CHECKED BY: BEB

SHEET NO.  
**E2**





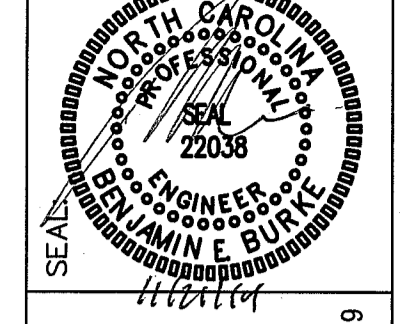
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 NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

MARK	MANUFACTURER	CATALOG NO.	VOLT.	LAMPS	BALLAST	W/ FIXTURE	LUMENS	REMARKS
C	JUNO	IC922LEDG4-3500-U-27HYP3-C-WH	120	LED 15.5	-	15.8	800	6" RECESSED CAN, PROVIDE IC RATED FIXTURE.
W1	JUNO	IC43L-835-N-U	120	LED 13.0	-	13.0	670	6" RECESSED WALL WASH CAN. W/ EMERGENCY BATTERY PACK VERIFY TRIM WITH ARCHITECT.
W2	JUNO	IC43L-835-N-U	120	LED 13.0	-	13.0	670	6" RECESSED WALL WASH CAN. VERIFY TRIM WITH ARCHITECT.
E	SIGNTEX	MUEBB10AW-DG	120	LED	-	-	10	EXTERIOR EMERGENCY LIGHT
S	DAY-BRITE	T132-UNV-1/2-EB-004	120	1 TB 32	-	32		48" STANDARD STRIP, WIRE GUARD **
EA	EXISTING		120	4 FL 20	-	80		EXISTING 2'X2' FIXTURE
D	TROY	F3102	120	-	-	-	50	DECORATIVE CHANDELIER. COORDINATE MOUNTING HEIGHT WITH ARCHITECT.
M	HALO	H2EF-123P	120	2 FL 26	-	52		12" SQUARE RECESSED EXTERIOR FIXTURE
WS	(CHOSEN BY OWNER/ARCH; PROVIDED BY EC)		120	-	-	-	25	DECORATIVE WALL SCONCE
MULE	MURR-6-12-B-SD		120	2 HAL 5	-	10		EMERGENCY LIGHT
EXIT	MULE	CEL-2-B-RC-BA-U-SD	120	LED	-	5		EXIT LIGHT, EMERGENCY BATTERY
EXIT	MULE	AL-2-R-BB-SD	120	LED	-	1.5		COMBINATION EMERGENCY/EXIT LIGHT

\* OR APPROVED EQUAL BY LITHONIA, DAYBRITE, COLUMBIA. PROVIDE CUT SHEETS FOR OWNER APPROVAL PRIOR TO ORDERING FIXTURES. FOR FLUORESCENT FIXTURES CONTROLLED BY MOTION SENSOR, PROVIDE "PROGRAMMED RAPID START" BALLASTS. CATALOG NUMBERS ARE FOR REFERENCE ONLY, ACTUAL NUMBERS MAY VARY. "EB" DENOTES ELECTRONIC BALLAST.  
 \*\* VERIFY FIXTURE HAS INTEGRAL LOCAL DISCONNECTING MEANS PER NEC 410.130 (G) (2011).

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

BID DOCUMENTS



DESIGNED BY:  
**FACILITIES DESIGN**  
 ARCHITECTS & ENGINEERS  
 FACILITIES MANAGEMENT DIVISION, NCDOT  
 1 SOUTH WILMINGTON STREET  
 RALEIGH, NORTH CAROLINA 27601  
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CONSULTANT:  
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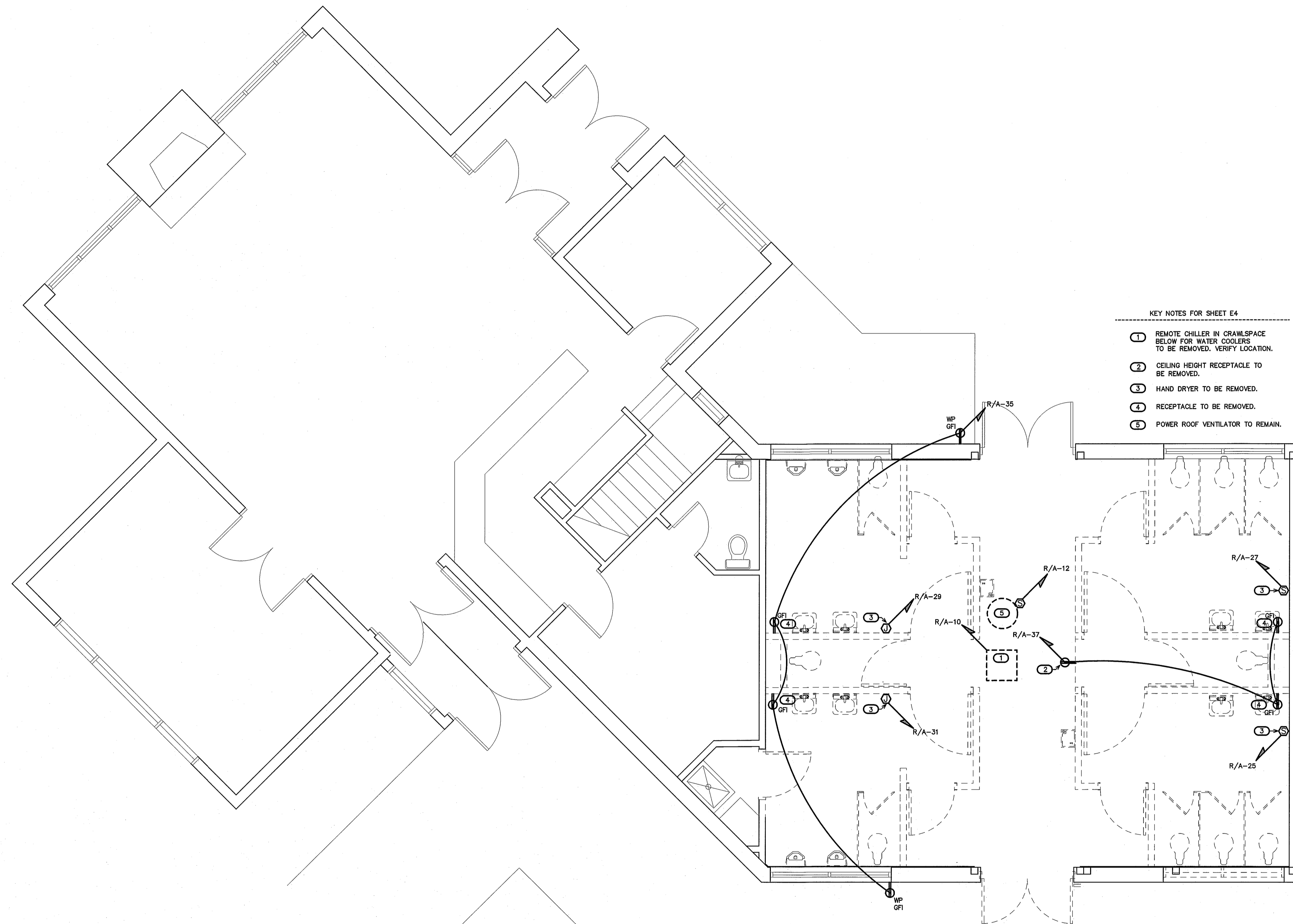
DRAWING TITLE / DISCRPTION:  
 LIGHTING PLAN

PROJECT:  
 MACON COUNTY  
 REST AREA, NCDOT  
 US-23/441, NC 28763  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO.	14-11043-01A	
TIP PROJ. NO.	K-5103	
WBS NO.	42231.3.1	
FEDERAL ID NO.	NHPP-0023(31)	
ASSET NUMBER:		
CO. #	SITE #	BLDG. #
	56	16
REVISIONS	NO.	DATE

DATE ISSUED: 11/21/2014  
 DRAWN BY: JME  
 CHECKED BY: BEB

SHEET NO.  
**E3**

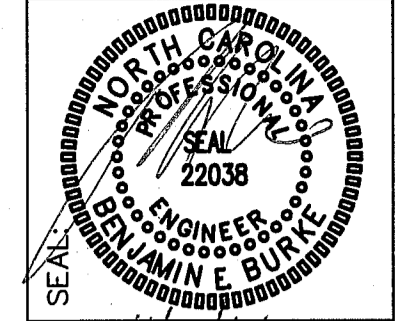


- KEY NOTES FOR SHEET E4
- 1 REMOTE CHILLER IN CRAWLSPACE BELOW FOR WATER COOLERS TO BE REMOVED. VERIFY LOCATION.
  - 2 CEILING HEIGHT RECEPTACLE TO BE REMOVED.
  - 3 HAND DRYER TO BE REMOVED.
  - 4 RECEPTACLE TO BE REMOVED.
  - 5 POWER ROOF VENTILATOR TO REMAIN.

NOTE:  
 THE EXISTING INFORMATION SHOWN ON THIS DRAWING IS FROM FIELD INVESTIGATION & PREVIOUS PERMIT DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND FIELD VERIFYING ALL RELEVANT INFORMATION. THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

EXISTING DEVICES BEING REMOVED SHALL BE REMOVED ALONG WITH WIRING AND CONDUIT BACK TO PROPER TERMINATION POINT WHERE APPLICABLE. DEVICES DOWN LINE FROM DEVICES BEING REMOVED SHALL BE REENERGIZED.

1 EXISTING / DEMOLITION POWER PLAN  
 E4 SCALE: 1/4" = 1'-0"



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 919-876-9186 / 919-778-0626  
 blurkengr.com  
 Corp. License # C-2682

DRAWING TITLE / DESCRIPTION:  
 EXISTING / DEMOLITION POWER PLAN

PROJECT:  
 MACON COUNTY  
 REST AREA, NCDOT  
 US-23/441, NC 28763  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO. 14-11043-01A  
 TIP PROJ. NO. K-5103  
 WBS NO. 42231.3.1  
 FEDERAL ID NO. NHPP-0023(31)

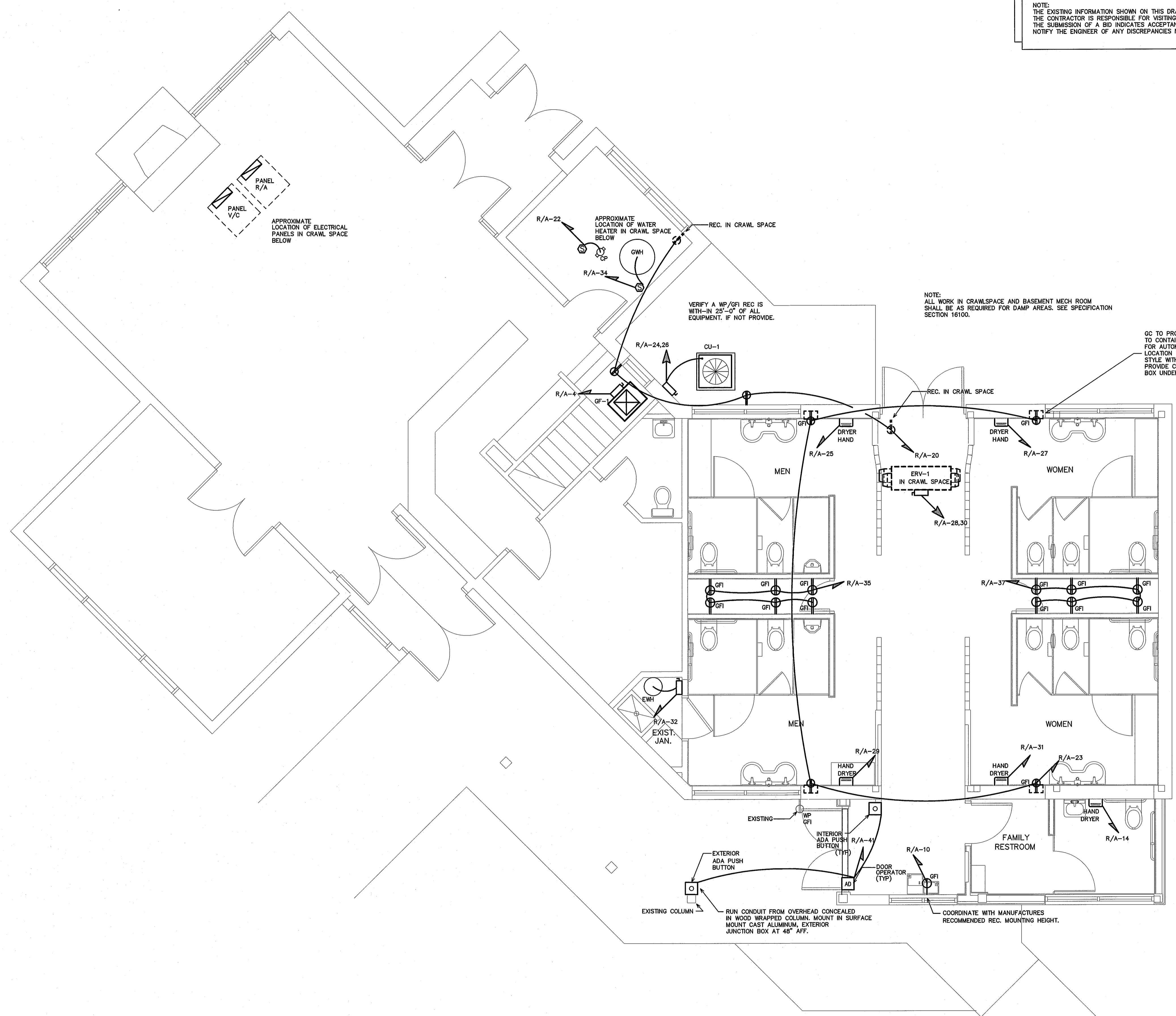
ASSET NUMBER:  
 CO.# SITE.# BLDG.#  
 56 - 16 - 1

REVISIONS	
NO.	DATE

DATE ISSUED: 11/21/2014  
 DRAWN BY: JME  
 CHECKED BY: BEB

SHEET NO.  
**E4**





NOTE:  
 THE EXISTING INFORMATION SHOWN ON THIS DRAWING IS FROM FIELD INVESTIGATION & PREVIOUS PERMIT DRAWINGS.  
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 THE SUBMISSION OF A BID INDICATES ACCEPTANCE OF EXISTING CONDITIONS.  
 NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED.

NOTE:  
 ALL WORK IN CRAWLSPACE AND BASEMENT MECH ROOM  
 SHALL BE AS REQUIRED FOR DAMP AREAS. SEE SPECIFICATION  
 SECTION 16100.

GC TO PROVIDE WALL BOX WITH LOCKING COVER  
 TO CONTAIN RECEPTACLE AND TRANSFORMER  
 FOR AUTOMATIC FAUCETS. COORDINATE SIZE AND  
 LOCATION WITH GC AND PC. VERIFY TERMINATION  
 STYLE WITH PC. PROVIDE SWITCH IF HARD-WIRED.  
 PROVIDE CONDUIT FROM WALL BOX TO JUNCTION  
 BOX UNDER LAV FOR LOW VOLTAGE WIRING. (TYP X4)

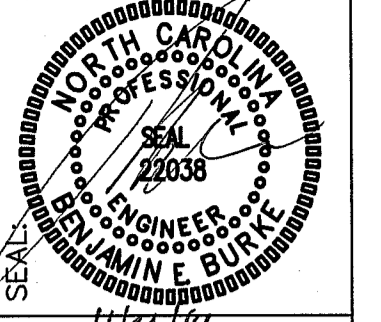
PANEL  
 R/A  
 APPROXIMATE  
 LOCATION OF ELECTRICAL  
 PANELS IN CRAWL SPACE  
 BELOW

VERIFY A WP/GFI REC IS  
 WITH-IN 25'-0" OF ALL  
 EQUIPMENT. IF NOT PROVIDE.

EXISTING COLUMN  
 RUN CONDUIT FROM OVERHEAD CONCEALED  
 IN WOOD WRAPPED COLUMN. MOUNT IN SURFACE  
 MOUNT CAST ALUMINUM. EXTERIOR  
 JUNCTION BOX AT 48" AFF.

COORDINATE WITH MANUFACTURERS  
 RECOMMENDED REC. MOUNTING HEIGHT.

**1** POWER PLAN  
 E5 SCALE: 1/4" = 1'-0"



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 email: burkades@bdcg.com  
 Corp. License # C-2825

DRAWING TITLE / DESCRIPTION:  
**POWER PLAN**

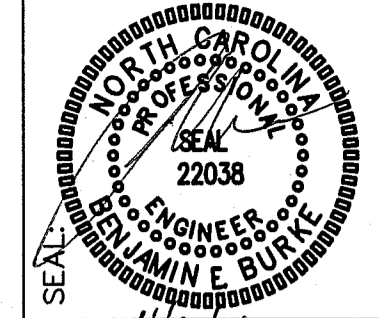
PROJECT:  
**MACON COUNTY  
 REST AREA, NCDOT**  
 US-23/441 NC 28763  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO. 14-11043-01A  
 TIP PROJ. NO. K-5103  
 WBS NO. 42231.3.1  
 FEDERAL ID NO. NHPP-0023(31)  
 ASSET NUMBER:  
 CC # SITE # BLDG #  
 56 - 16 - 1

REVISIONS NO.	DATE

DATE ISSUED: 11/21/2014  
 DRAWN BY: ME  
 CHECKED BY: BEB

SHEET NO.



DESIGNED BY:  
**FACILITIES DESIGN**  
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 919-876-9100 Fax: 919-876-0826  
 email: burkedi@bdcgr.com  
 Lic. License # C-2652

DRAWING TITLE / DESCRIPTION:  
**ELECTRICAL RISER/PANELS**

PROJECT:  
**MACON COUNTY**  
**REST AREA, NCDOT**  
 US-23/441, NC 28763  
 MACON COUNTY, NORTH CAROLINA

SCO ID NO. 14-11043-01A  
 TIP PROJ. NO. K-5103  
 WBS NO. 42231.3.1  
 FEDERAL ID NO. NHPP-0023(31)  
 ASSET NUMBER:  
 CO.# SITE# BLDG.#  
 56 - 16 - 1  
 REVISIONS  
 NO. DATE  
 DATE ISSUED: 11-21-14  
 DRAWN BY: ME  
 CHECKED BY: BEB

SHEET NO.  
**E6**

EXISTING PANEL- 'R/A'		MAKE: SQUARE D		RATING: 120/240V 1 PHASE 3 WIRE		200A MAIN CIRCUIT BREAKER		
		TYPE: NQ00		MOUNTING: SURFACE		EQUIPMENT GROUND BUS: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
		OR APPROVED EQUAL		MINIMUM AIC: VERIFY		SERVICE ENTRY RATED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
LOAD SERVICE	CKT BRKR	WATTS PER PHASE		NEUTRAL		WATTS PER PHASE		LOAD SERVICE
AREA LIGHTING	40A	A	B	NO	A B	A	B	20A FURNACE
AREA LIGHTING	30A	---	---	3	4	---	---	20A SPARE
AREA LIGHTING	50A	---	---	5	6	---	---	50A A/C
AREA LIGHTING	50A	---	---	7	8	---	---	20A WATER CHILLER
AREA LIGHTING	50A	---	---	9	10	---	---	20A POWER ROOF VENTILATOR
AREA LIGHTING	50A	---	---	11	12	---	---	20A INTAKE EXHAUST FAN
AREA LIGHTING CONTROLS	20A	---	---	13	14	---	---	20A DECK LTS
SECURITY LTS	20A	---	---	15	16	---	---	20A DECK LTS
MENS RESTROOM, HALL	20A	1200	1050	17	18	---	---	30A HOT WATER HEATER
WOMENS RESTROOM, HALL	20A	---	---	19	20	---	---	---
FRONT WOMENS HAND DRYER	30A	---	---	21	22	---	---	---
BACK WOMENS HAND DRYER	30A	---	---	23	24	---	---	---
FRONT MENS HAND DRYER	30A	---	---	25	26	---	---	---
BACK MENS HAND DRYER	30A	---	---	27	28	---	---	---
DECK LTS	20A	---	---	29	30	---	---	---
REC- MENS RM, OUTSIDE	20A	1550	---	31	32	---	---	---
REC- WOMENS RM, HALL	20A	---	---	33	34	---	---	---
BUILD FASCAD E LTS	20A	---	---	35	36	---	---	---
SPARE	20A	---	---	37	38	---	---	---
NOTES		SUB-TOTALS 'B'		200A BUS		SUB-TOTALS 'A'		TOTAL CONNECTED LOAD
				200A LUGS		SUB-TOTALS 'B'		
				200A FEED		GRAND TOTAL		
				VERIFY SIZE		--A --A		

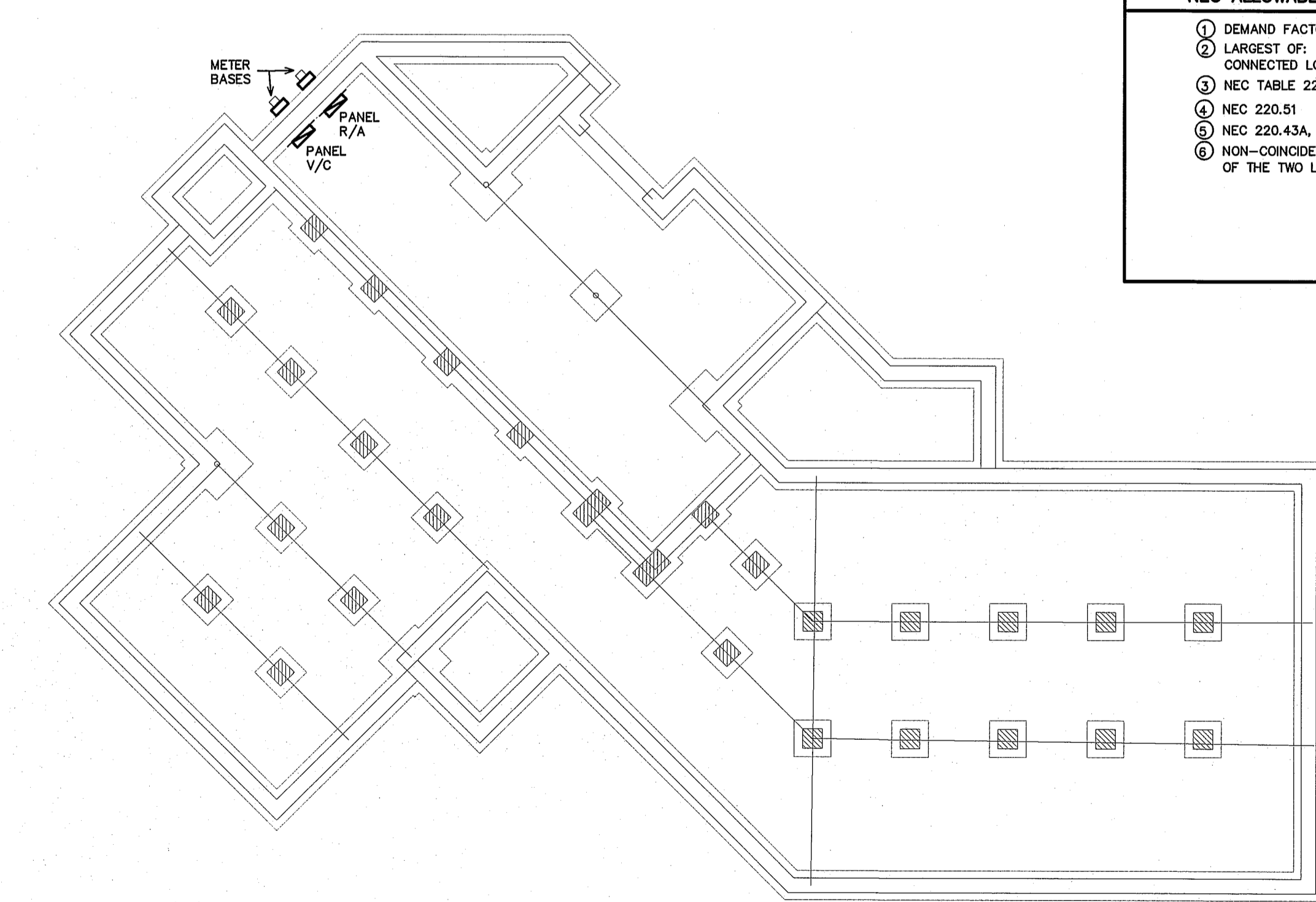
REVISED PANEL- 'R/A'		MAKE: SQUARE D		RATING: 120/240V 1 PHASE 3 WIRE		200A MAIN CIRCUIT BREAKER		
		TYPE: NQ00		MOUNTING: SURFACE		EQUIPMENT GROUND BUS: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
		OR APPROVED EQUAL		MINIMUM AIC: VERIFY		SERVICE ENTRY RATED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
LOAD SERVICE	CKT BRKR	WATTS PER PHASE		NEUTRAL		WATTS PER PHASE		LOAD SERVICE
AREA LIGHTING	30A	772	772	1	2	613	948	20A LTS-M/W BATH RIGHT, EF-1
AREA LIGHTING	30A	---	---	3	4	---	---	15A GF-1 (7.9 FLA)
AREA LIGHTING	50A	1288	1288	5	6	---	---	50A SPARE
AREA LIGHTING	50A	---	---	7	8	---	---	20A EWC
AREA LIGHTING	50A	---	---	9	10	---	---	20A POWER ROOF VENTILATOR
AREA LIGHTING	50A	---	---	11	12	---	---	20A HAND DRYER FAMILY REST RM.
AREA LIGHTING	50A	---	---	13	14	1500	250	20A DECK LTS
AREA LIGHTING	50A	---	---	15	16	---	---	20A DECK LTS
AREA LIGHTING CONTROLS	20A	180	---	17	18	250	---	20A REC. SERVICE FOR EQUIPMENT
LTS-M/W BATH LEFT	20A	---	445	19	20	---	720	20A CIRCULATION PUMP
LTS- FAMILY BATH, HALLWAY, OUTDOOR	20A	927	---	21	22	528	---	20A CU-1
REC-WALL BOXES	20A	---	720	23	24	---	2388	40A 17.9 COMP.
HAND DRYER MENS RIGHT BATH RM.	20A	1500	---	25	26	2388	---	40A ERV-1
HAND DRYER WOMENS LEFT BATH RM.	20A	---	1500	27	28	---	2659	40A 22.16 FLA
HAND DRYER MENS LEFT BATH RM.	20A	1500	---	29	30	2659	---	20A EWH
HAND DRYER WOMENS RIGHT BATH RM.	20A	---	1500	31	32	---	1650	20A GWH
DECK LTS	20A	1550	---	33	34	100	---	20A REC.
REC.	20A	---	1080	35	36	---	360	20A PH BOX
REC.	20A	---	---	37	38	---	360	20A REC.
BUILD FASCAD E LTS	20A	---	350	39	40	---	540	20A REC.
AUTO DOOR OPERATOR	20A	500	---	41	42	900	---	20A REC.
NOTES		SUB-TOTALS 'B'		200A BUS		SUB-TOTALS 'A'		TOTAL CONNECTED LOAD
		11353 9711		10186 10016		SUB-TOTALS 'B'		
				200A LUGS		GRAND TOTAL		
				200A FEED		AMPS/PHASE		

NEC ALLOWABLE DEMAND FACTORS	DIVERSIFIED LOAD SUMMARY
1 DEMAND FACTORS PER NEC 220	LOAD TYPE DEMAND FACTOR
2 LARGEST OP: NEC TABLE 220.12 OR CONNECTED LOAD	GENERAL LIGHTING 125% 8504 7138 15642
3 NEC TABLE 220.56	TRACK LIGHTING 125% --- --- ---
4 NEC 220.51	GENERAL USE RECEPTACLES 125% 2340 3420 5760
5 NEC 220.43A, 200 VA/LINEAR FT	WATER HEATERS 125% 2985 2985 5970
6 NON-COINCIDENT LOADS, LARGEST OF THE TWO LOADS IS COUNTED	EQUIPMENT ALL OTHERS 100% 8804 6836 15640
	KITCHEN EQUIPMENT 125% 125 2063 2188
	FIX. ELEC. SPACE HEAT. 100% --- --- ---
	SHOW WINDOW LIGHTS 125% --- --- ---
	SIGN 125% --- --- ---
	MISC 100% --- --- ---
	PHASE (TOTAL VA) 22758 22442 45200
	TOTAL AMPS 190A 187A VOLT AMPS = 188A TOTAL AMPS

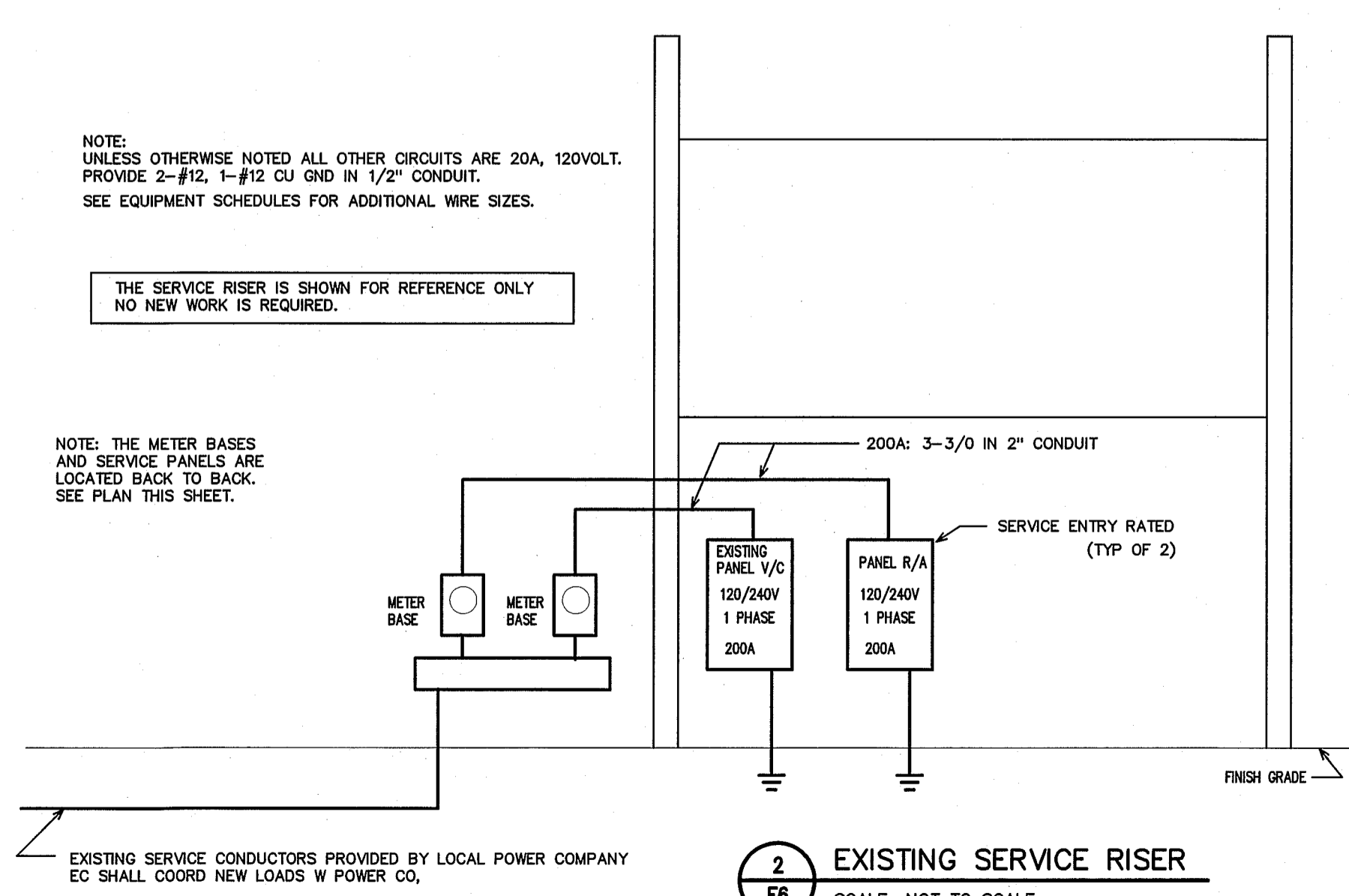
EXISTING PANEL- 'V/C'		MAKE: SQUARE D		RATING: 120/240V 1 PHASE 3 WIRE		200A MAIN CIRCUIT BREAKER		
		TYPE: NQ00		MOUNTING: SURFACE		EQUIPMENT GROUND BUS: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
		OR APPROVED EQUAL		MINIMUM AIC: VERIFY		SERVICE ENTRY RATED: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
LOAD SERVICE	CKT BRKR	WATTS PER PHASE		NEUTRAL		WATTS PER PHASE		LOAD SERVICE
UPSTAIRS OFFICE	20A	1760	---	1	2	---	---	20A 1ST FLOOR FURNACE
UPSTAIRS STAIRWAY	20A	---	840	3	4	---	---	20A 2ND FLOOR FURNACE
OFFICE AND WORK RM	20A	1255	---	5	6	---	---	60A 1ST FLOOR A/C
DISPLAY RM	20A	---	1635	7	8	---	---	---
SECURITY/MEDIA RM	20A	1650	---	9	10	---	---	20A 2ND FLOOR A/C
BASEMENT	20A	---	1000	11	12	---	---	---
REC- UPSTAIRS OFFICE	20A	---	---	13	14	---	---	20A REC- BASEMENT
REC- UPSTAIRS OFFICE	20A	---	---	15	16	---	---	20A REC- DISPLAY FLOOR
REC- UPSTAIRS CONFERENCE	20A	---	---	17	18	---	---	20A REC- WORK/BATH RM, O/S
POWER ROOF VENTILATION	20A	---	---	19	20	---	---	20A REC- WORK RM
WATER CHILLER	20A	---	---	21	22	---	---	20A REC- COUNTER
REC- POS	15A	---	---	23	24	---	---	20A REC- DISPLAY RM
SPACE	---	---	---	25	26	---	---	20A REC- DISPLAY RM
SPACE	---	---	---	27	28	---	---	20A REC- MEDIA RM
SPACE	---	---	---	29	30	---	---	20A REC- OUTSIDE DECK
SPACE	---	---	---	31	32	---	---	20A FIRE ALARM PANEL
SPACE	---	---	---	33	34	---	---	---
SPACE	---	---	---	35	36	---	---	---
SPACE	---	---	---	37	38	---	---	---
SPACE	---	---	---	39	40	---	---	---
SPACE	---	---	---	41	42	---	---	---
NOTES		SUB-TOTALS 'B'		200A BUS		SUB-TOTALS 'A'		TOTAL CONNECTED LOAD
				200A LUGS		SUB-TOTALS 'B'		
				200A FEED		GRAND TOTAL		
				VERIFY SIZE		--A --A		

EQUIPMENT WIRING SCHEDULE					
EQUIPMENT	MCA	MOCV	VOLTS	PH	WIRE SIZE
ERV-1	27.7A	40A	208V	1	2-#8, 1-#10 GND IN 3/4" CONDUIT
CU-1	23.6A	40A	208V	1	2-#8, 1-#10 GND IN 3/4" CONDUIT

NOTE: THE ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT ELECTRICAL REQUIREMENTS PRIOR TO ROUGH-IN AND RELEASING GEAR. ADJUST BREAKER, WIRE SIZES, ETC. AS REQUIRED.



1 CRAWL SPACE PLAN  
 SCALE: 1/8" = 1'-0"



2 EXISTING SERVICE RISER  
 SCALE: NOT TO SCALE

VERIFY AVAILABLE FAULT CURRENT AT SERVICE LOCATION WITH LOCAL POWER COMPANY. PROVIDE INFORMATION TO ENGINEER TO CALCULATE MINIMUM PANEL AIC RATING PRIOR TO COMPLETION OF PROJECT. AIC RATING ON PANELS ARE FOR PERMIT REVIEW AND PRICING ONLY. EC SHALL PROVIDE LABELING INDICATING FAULT CURRENT AT SERVICE ENTRY AND ON ALL PANELS PRIOR TO CO. PROVIDE PHENOLIC LABELS WITH STAINLESS STEEL SCREWS.