

J J ROSE ARCHITECT

204 N. VIRGINIA AVE FAYETTEVILLE NORTH CAROLINA 28305

OUR REDEEMER LUTHERAN CHURCH WARMING KITCHEN 1605 VAN BUREN AVE / FAYETTEVILLE NORTH CAROLINA 28303

REVISIONS

Table with columns: ITEM, DATE, DESCRIPTION. Includes drawing details like DRAWN BY, CHECKED BY, DATE, PROJ CODE, SET NO., SHEET SUBJECT COVER.

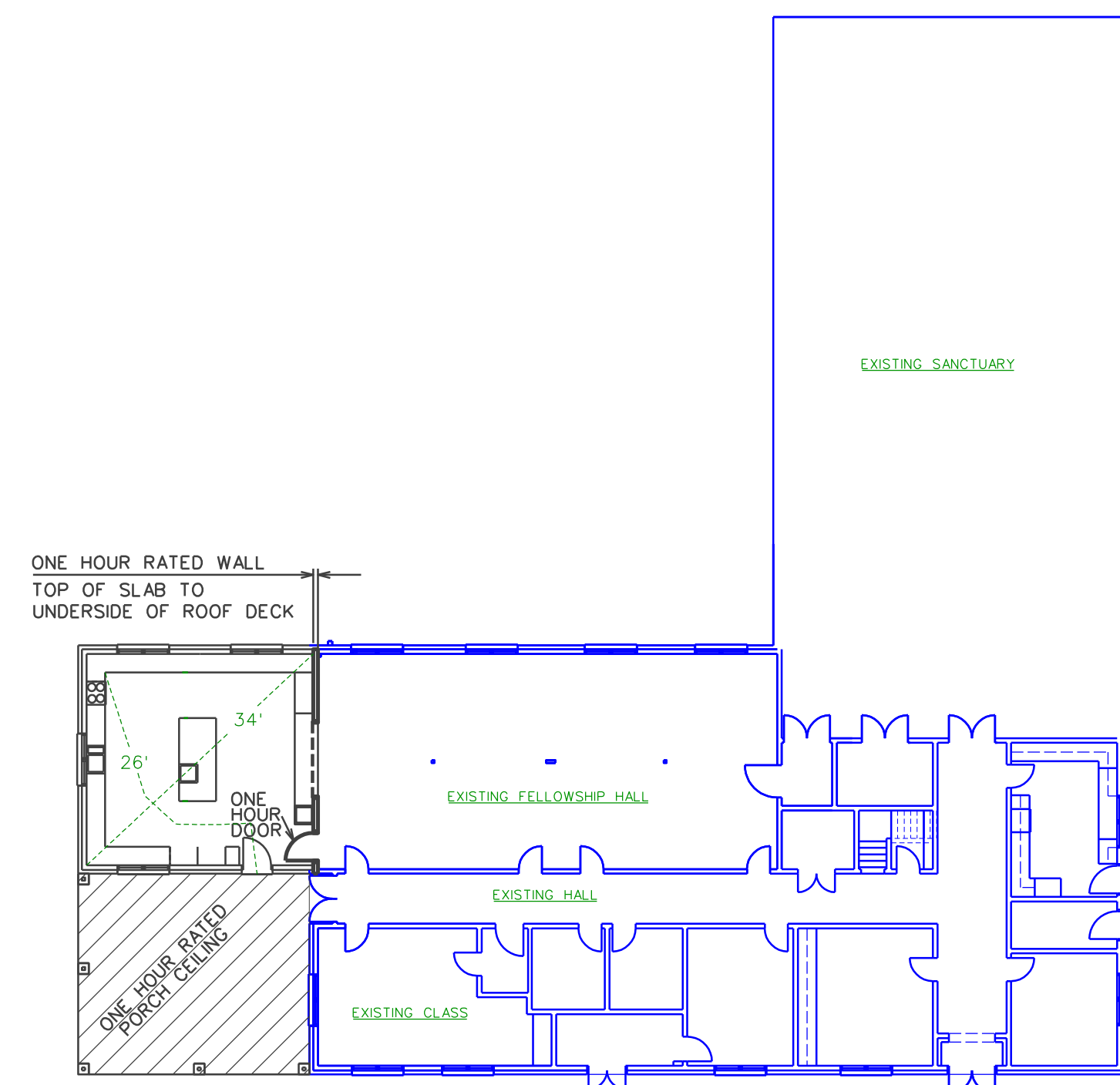
SHEET NO.

A1 OF 6 SHEETS

OUR REDEEMER LUTHERAN CHURCH

WARMING KITCHEN

1605 VAN BUREN AVE / FAYETTEVILLE NORTH CAROLINA 28303



LIFE SAFTY PLAN 1/8" = 1'-0"

Table with columns: Use Group, Area, No. of Occupants, Egress Width, Egress Width per Occupant, REQUIRED EXIT WIDTH, REQUIRED EXIT WIDTH (1005.1), REQUIRED EXIT WIDTH (1005.1) g/d x c, Actual Shown on Plans, Actual Shown on Plans. Includes data for KITCHEN.

BUILDING DATA: New Construction, Renovation (Existing Bldg), Upfit, Alteration. Construction Type: A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z.

Table with columns: Space Description, Area SF, Occupant Load Factor, Occupant Load, Exit Width, Exit Quantity. Includes data for KITCHEN.

Table with columns: Occupancy, Water Closets, Urinals, Lavatories, Showers/Tubs, Drink Fountains, Accessible Drink Fountains. Includes data for KITCHEN.

Table with columns: Building Element, Fire Separation, Rating, Protection, Detail, Design, Design. Includes data for various building elements.

Table with columns: Floor, Room, Area, Travel Distance, Means of Egress, Means of Egress (1004.1). Includes data for KITCHEN.

Table with columns: Lot or Parking Area, Total Parking Spaces, Accessible Spaces, Accessible Spaces Provided, Accessible Spaces with 5' Access Aisle, Accessible Spaces with 8' Access Aisle. Includes data for KITCHEN.

SPECIAL APPROVALS: Describe special approvals from City, County or State Department of Health, NC Department of Insurance, etc., below.

SEE P1 FOR PLUMBING APP B AND ENERGY SUMMARY SEE M1 FOR MECHANICAL APP B AND ENERGY SUMMARY SEE E1 FOR ELECTRICAL APP B AND ENERGY SUMMARY

CITY OF FAYETTEVILLE - BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS - NC 2012 BUILDING CODE (EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES). Project Name: OUR REDEEMER LUTHERAN CHURCH WARMING KITCHEN. Address: 1605 VAN BUREN AVE FAY NC 28303.

LEAD DESIGN PROFESSIONAL: J.J. ROSE ARCHITECT. Designer: J.J. ROSE ARCHITECT. License: NC 2404. Telephone: 910 2862766. Address: 204 N. VIRGINIA AVE FAYETTEVILLE NC 28305.

BUILDING CODE CODE: (X) 2012 NCBC. () 2009 NCBC. () 2009 NC REHAB. () 2009 CHAPTER 34 (ATTACH SUMMARY). () 1995 EXISTING BUILDING CODE VOL 9. () SHELL BUILDING. () FIRST TIME INTERIOR UPFIT. (X) ADDITION. () ALTERATION TO SHELL.

Table with columns: EXTERIOR WALL, ACTUAL LENGTH, OPEN LENGTH, WIDTH OF PUBLIC WAY OR OPEN SPACE. Includes data for North, South, East, West, Total.

INCREASE FRONTAGE: 19. SPRINKLERS: 0. FRONTAGE INCREASE FORMULA: ALLOWABLE AREA FORMULA. INCREASE = 100(F/P-0.25)W/30. INCREASE * 19 X.

Table with columns: Story No., Occupancy, (A) Building Area, (B) Area for Open Space, (C) Area for Sprinkler Increase, (D) Area for Sprinkler Increase H, (E) Rating of Wall, (F) Actual Allowable Area, (G) Maximum Bay Area, (H) Separation Rating. Includes data for ONE story.

1. Open space 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/P) b. Total Building Perimeter + (F/P) c. Ratio (F/P) + (F/P) d. W = Minimum width of public way + (F/P) e. Percent of frontage increase = 100(F/P-0.25)W/30 + (F/P) 2. The sprinkler increase per Section 506.3 is as follows: a. Multi-story building is = 200 percent. b. Single story building is = 300 percent. 3. Unlimited area applicable under conditions of Sections Group B, F, M, S, A-4 (507.1), 507.2, 507.3, 507.4, 507.7; Group A motion picture (507.8); Malls (507.11.6); and H-2 aircraft point hangars (507.9). 4. Maximum Building Area + total number of stories in the building + E but not greater than 3 x E. The maximum area of parking garages must comply with 403.8.5. The maximum area of air traffic control towers must comply with 412.3.

ALLOWABLE HEIGHT: Table with columns: Allowable, Increase for Sprinkler, Shown on Plans, Code Reference. Includes data for Type VB, N/A, VB, 501, 503.

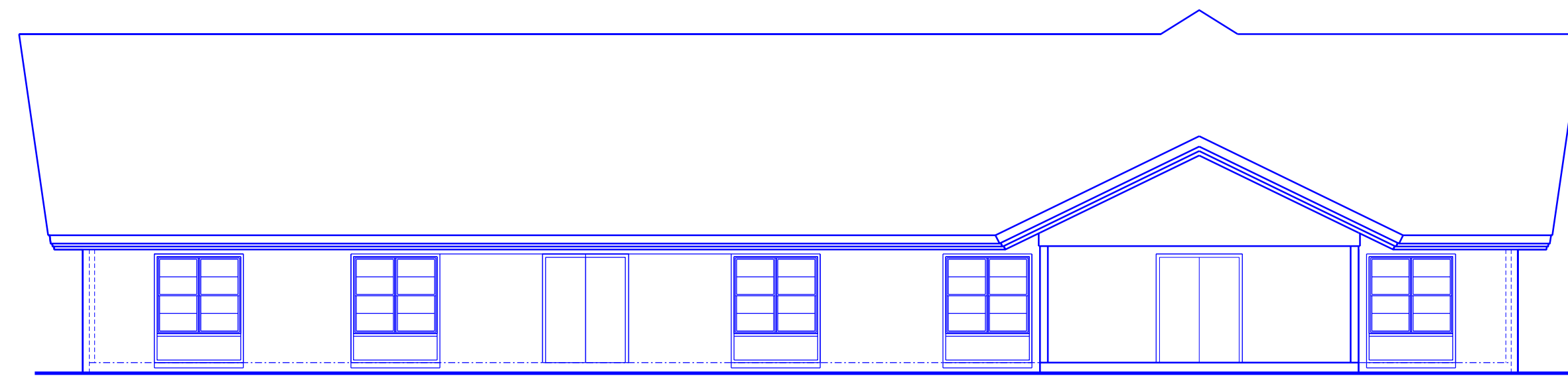
GROSS BUILDING AREA: Basement, Ground Floor 6901 SF EXISTING - NEW 616 SF HEATED / 542 SF UNHEATED. Mezzanine, 2nd Floor, 3rd Floor, 4th Floor. TOTAL: 6901 SF EXISTING - NEW 616 SF HEATED / 542 SF UNHEATED.

FIRE PROTECTION REQUIREMENTS: This section required for all projects. Life Safety Plan Sheet No. A1. If Provided: Yes, No. Includes data for Building Element, Fire Separation, Rating, Protection, Detail, Design, Design.

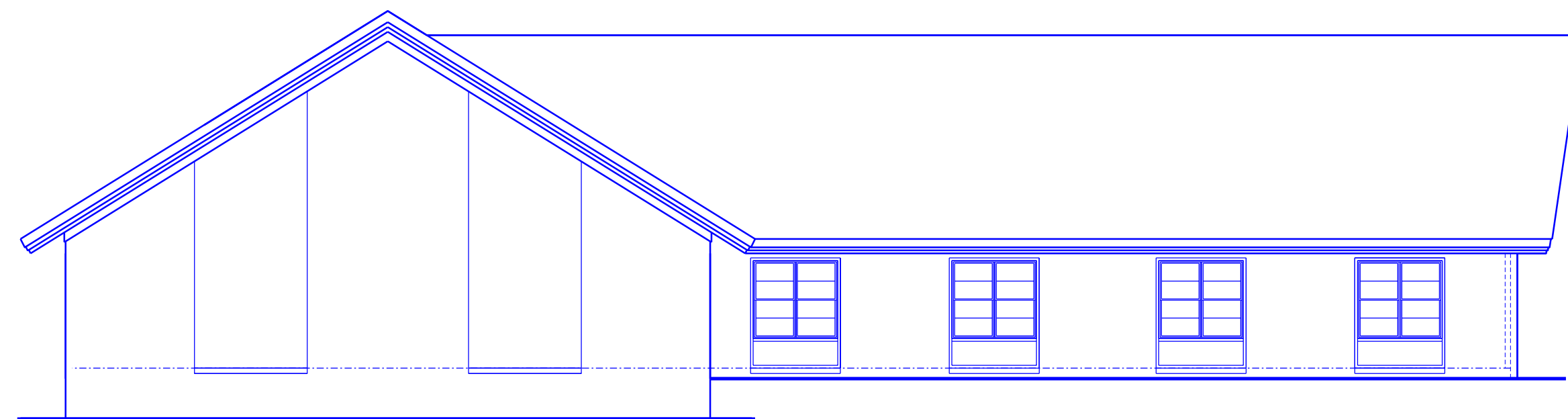
Table with columns: Floor, Room, Area, Travel Distance, Means of Egress, Means of Egress (1004.1). Includes data for KITCHEN.

LIFE SAFETY SYSTEM REQUIREMENTS: Emergency Lighting, No, Yes. Exit Signs, No, Yes. Fire Alarm, No, Yes. Smoke Detection System, No, Yes. Panic Hardware, No, Yes.

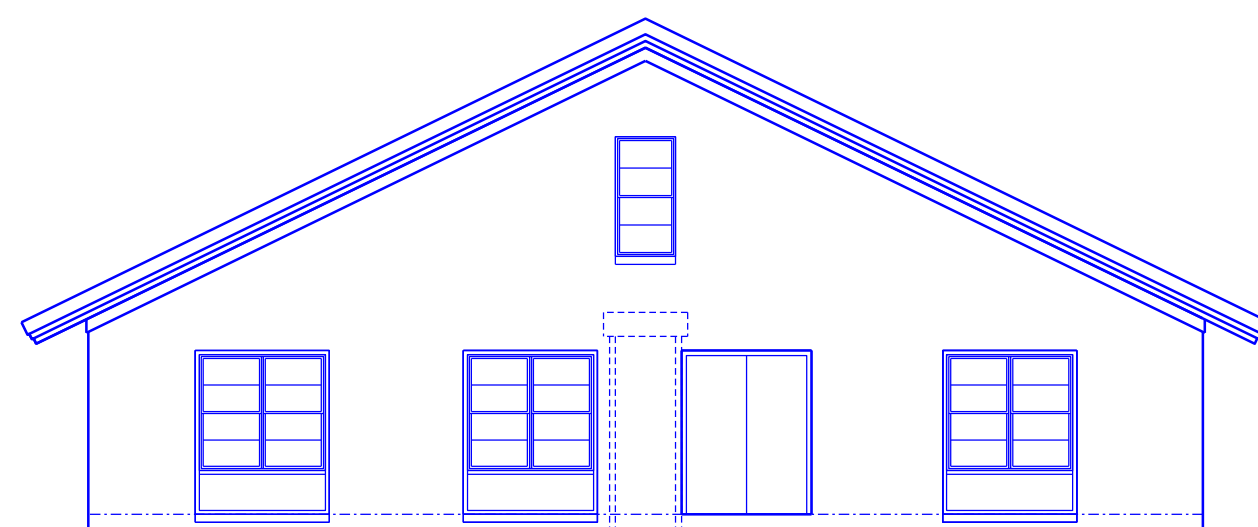
EXIT REQUIREMENTS: NUMBER AND ARRANGEMENT OF EXITS. This section required for all projects. Table with columns: Floor, Room, Area, Travel Distance, Means of Egress, Means of Egress (1004.1). Includes data for KITCHEN.



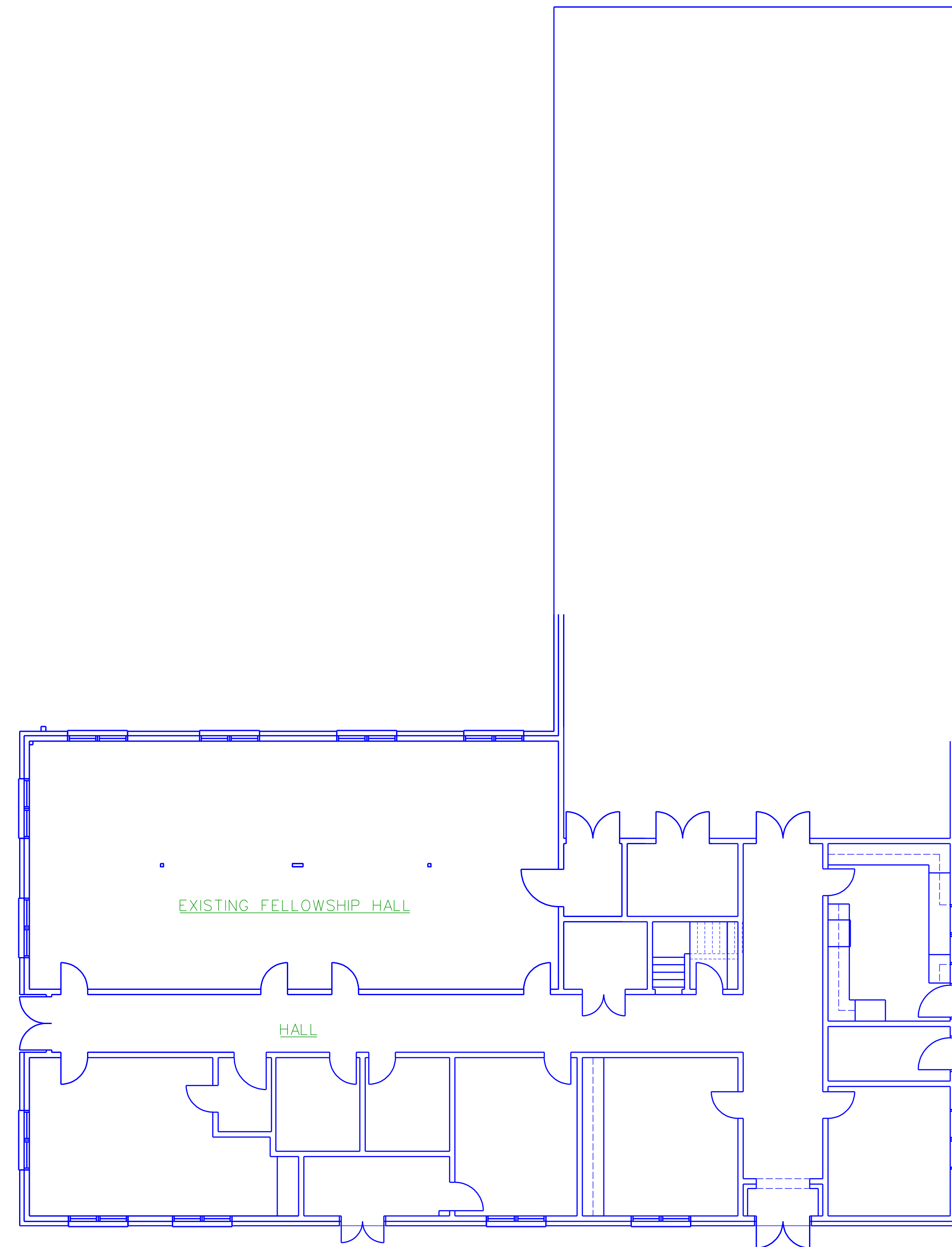
EXISTING REAR ELEVATION
1/8" = 1'-0"



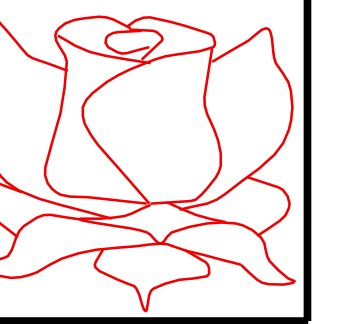
EXISTING FRONT ELEVATION
1/8" = 1'-0"



EXISTING SIDE ELEVATION
1/8" = 1'-0"



EXISTING FLOOR PLAN
1/8" = 1'-0" 6901 S.F. HEATED EXISTING



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OUR REDEEMER LUTHERAN CHURCH
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1605 VAN BUREN AVE / FAYETTEVILLE NORTH CAROLINA 28303

REVISIONS

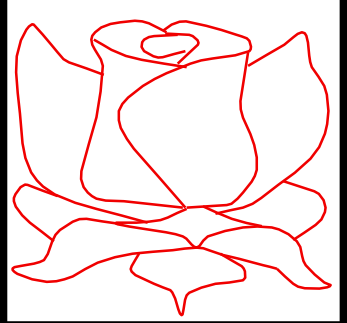
NO.	DATE	DESCRIPTION

DRAWN BY TS
CHECKED BY JR
DATE 3-22-17
PROJ CODE
SET NO.
SHEET SUBJECT
EXISTING

SHEET NO.

A2

OF 6 SHEETS



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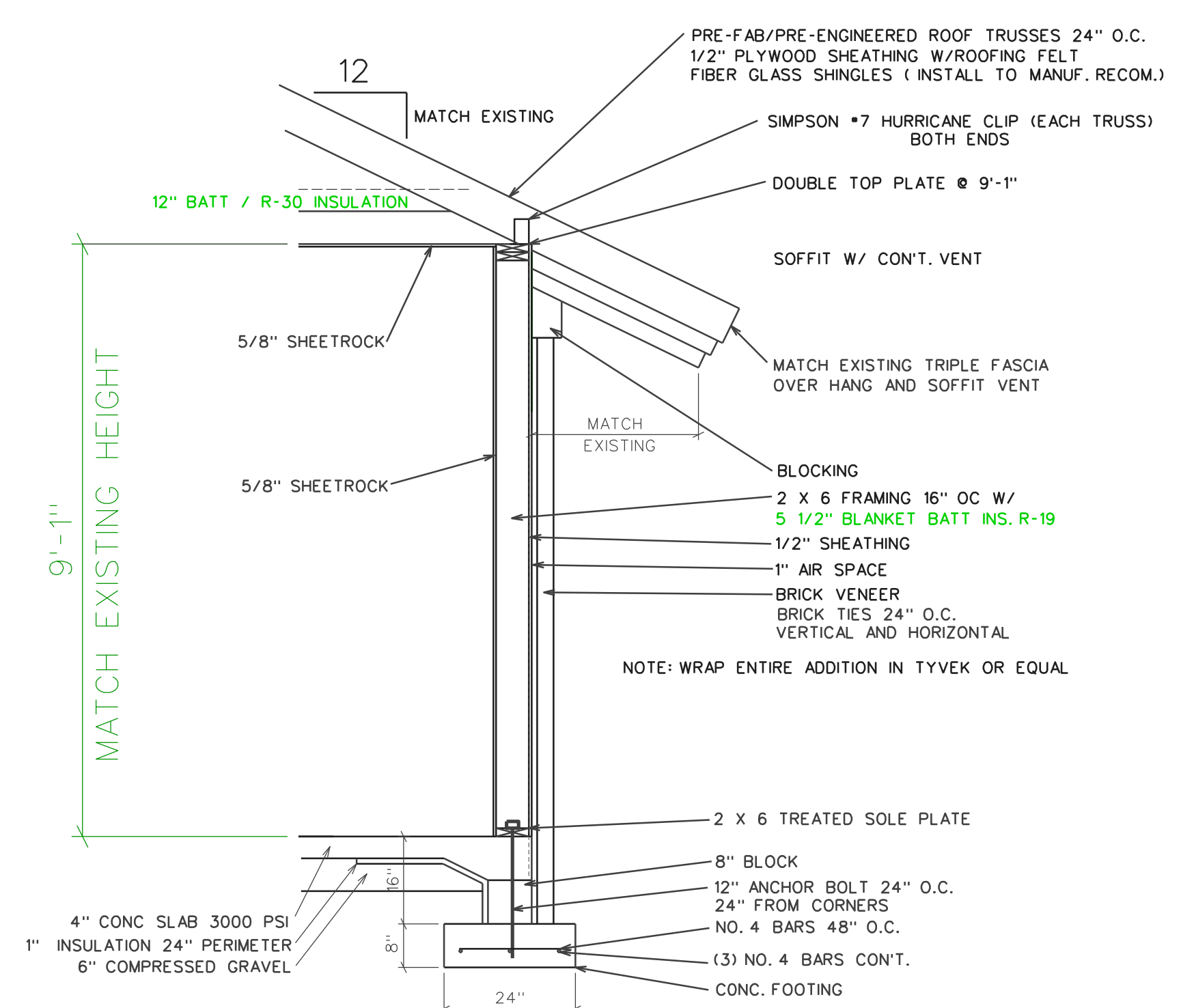
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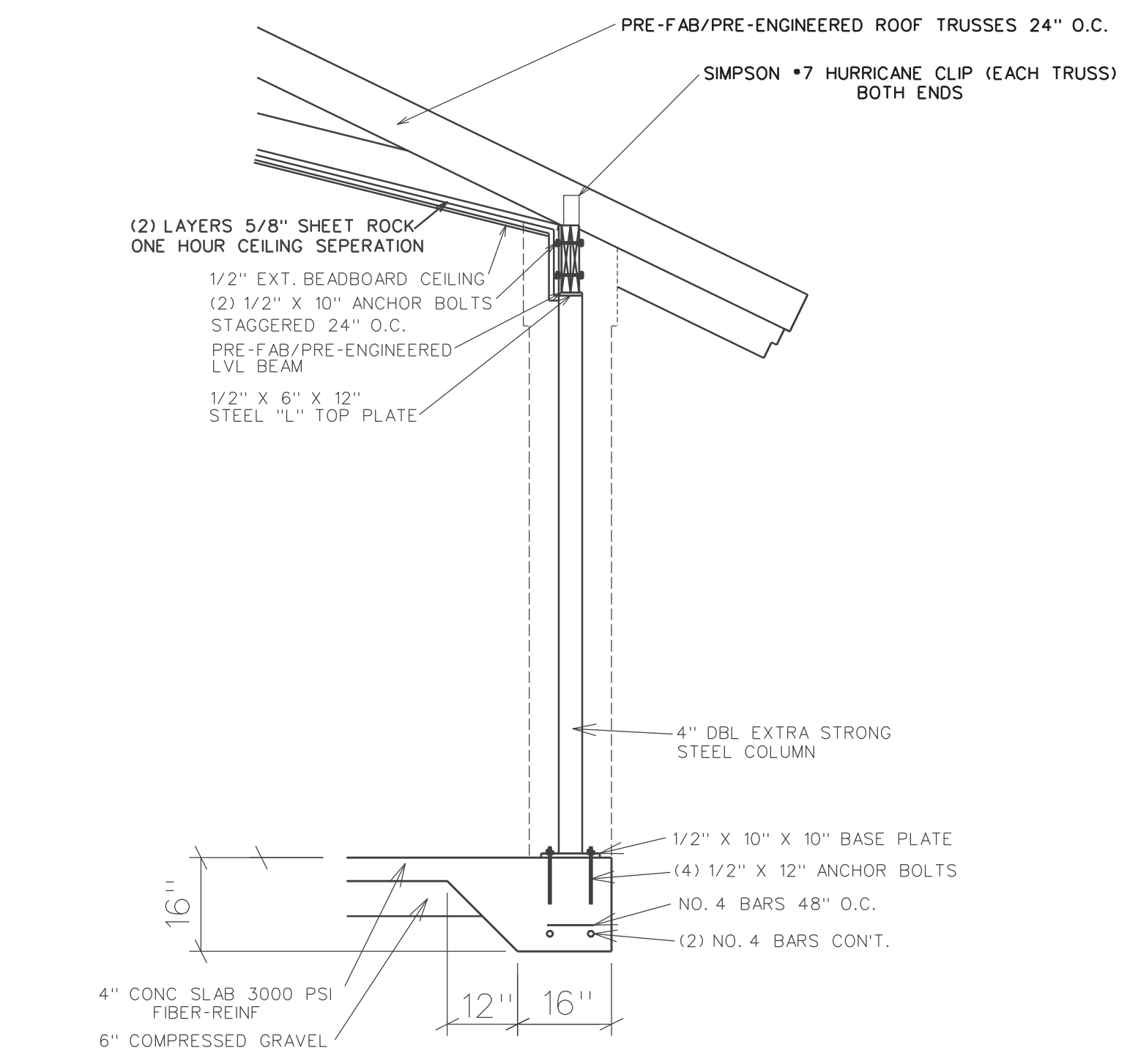
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DATE 3-22-17
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SHEET SUBJECT
FOUNDATION

SHEET NO.
A3
OF 6 SHEETS

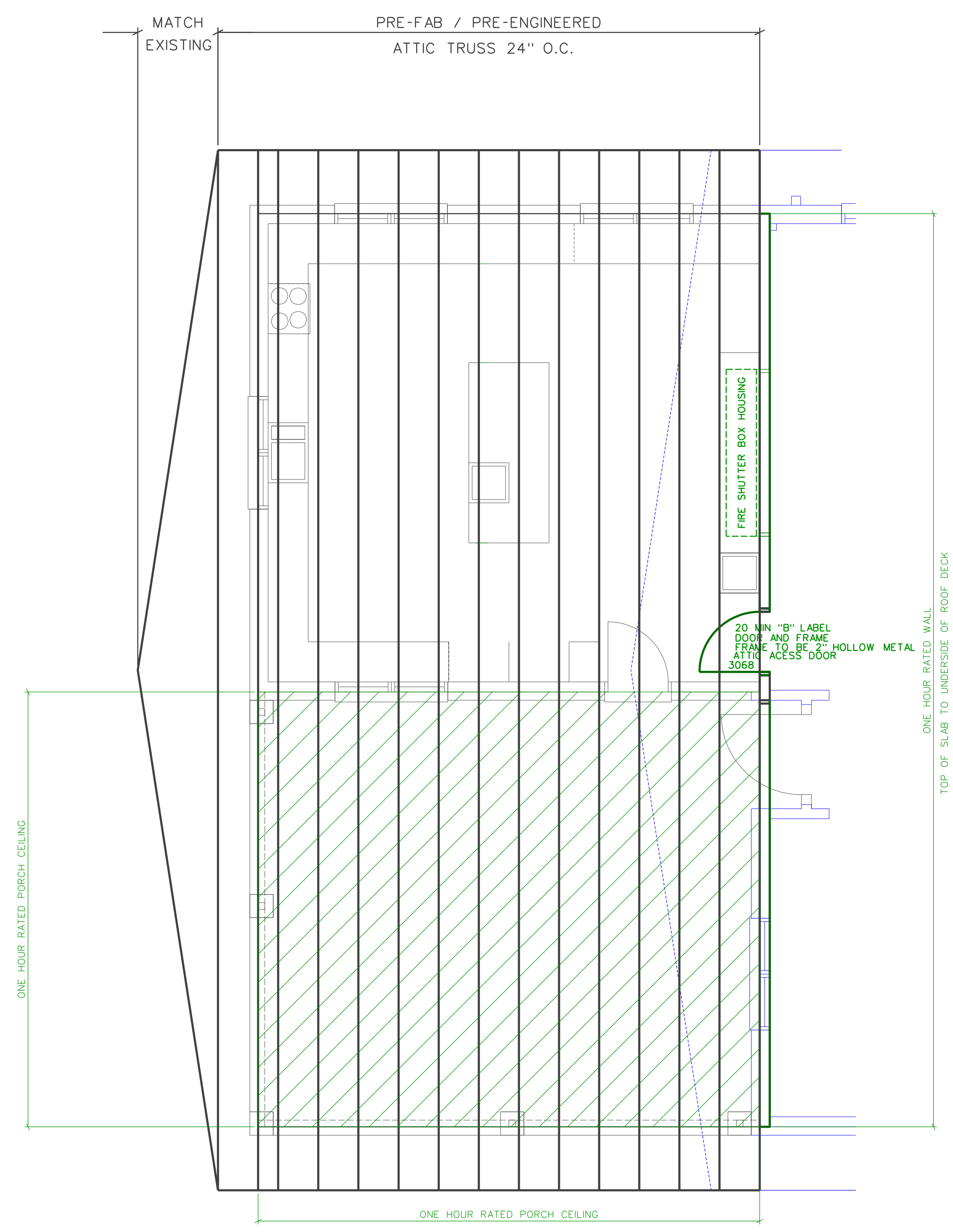


TYP WALL SECTION
1/2" = 1'-0"

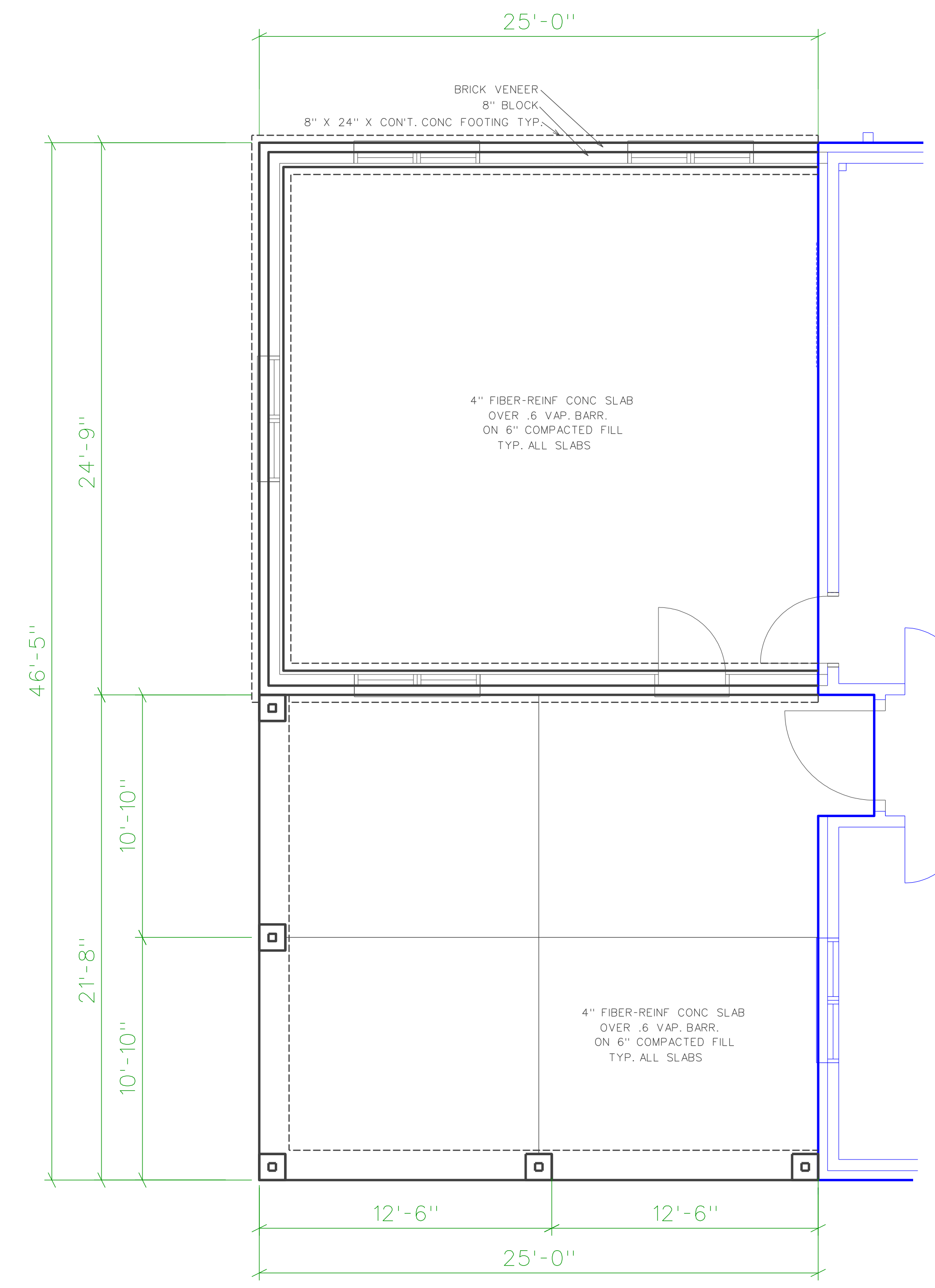
ARCHITECT TO APPROVE ALL ROOF TRUSS SHOP DRAWINGS
BEFORE ANY ARE MADE !!



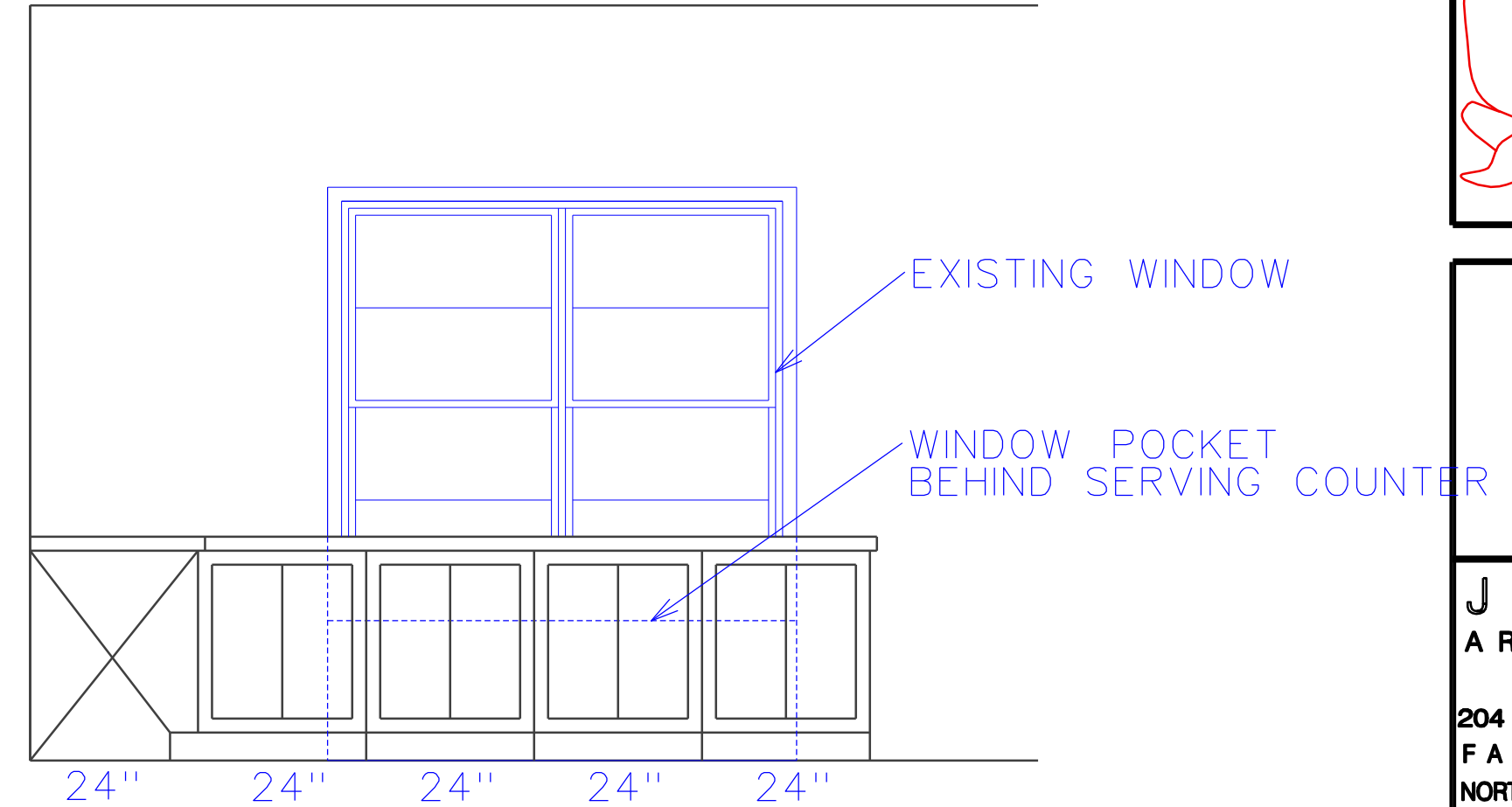
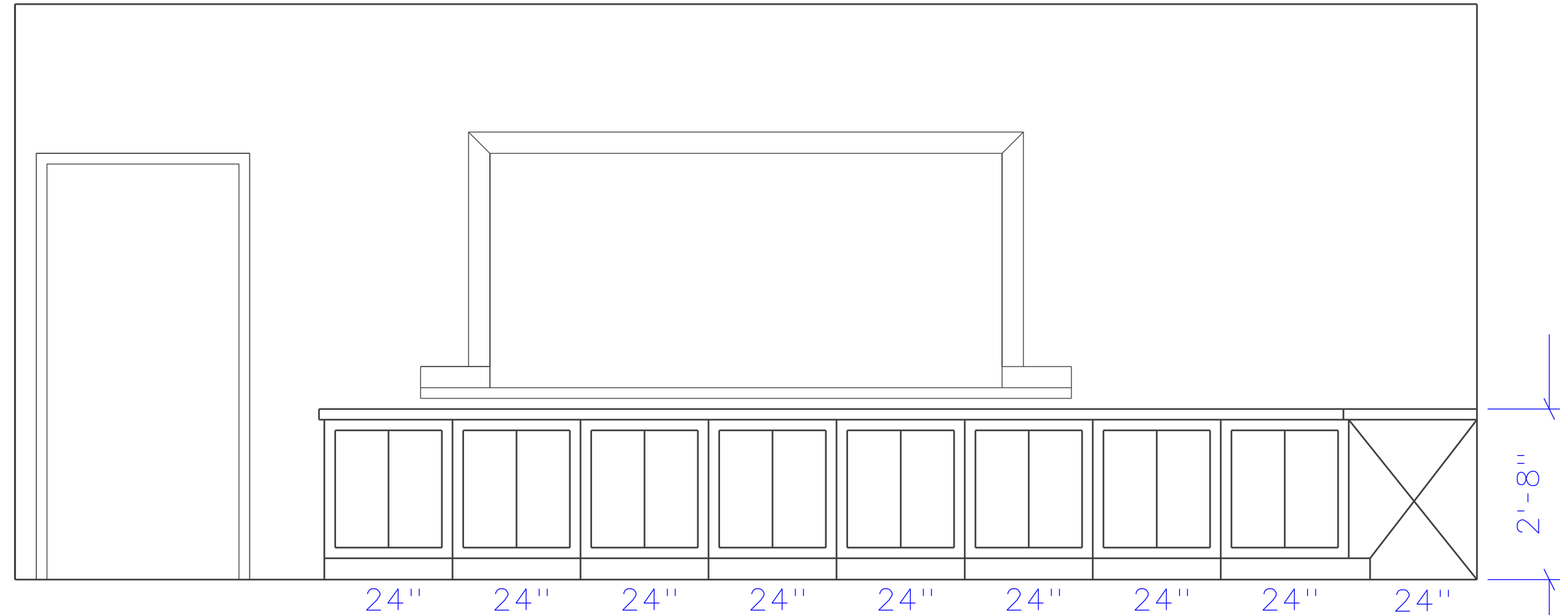
PORCH COLUMN DETAIL
1/2" = 1'-0"



ROOF FRAMING PLAN
1/4" = 1'-0"

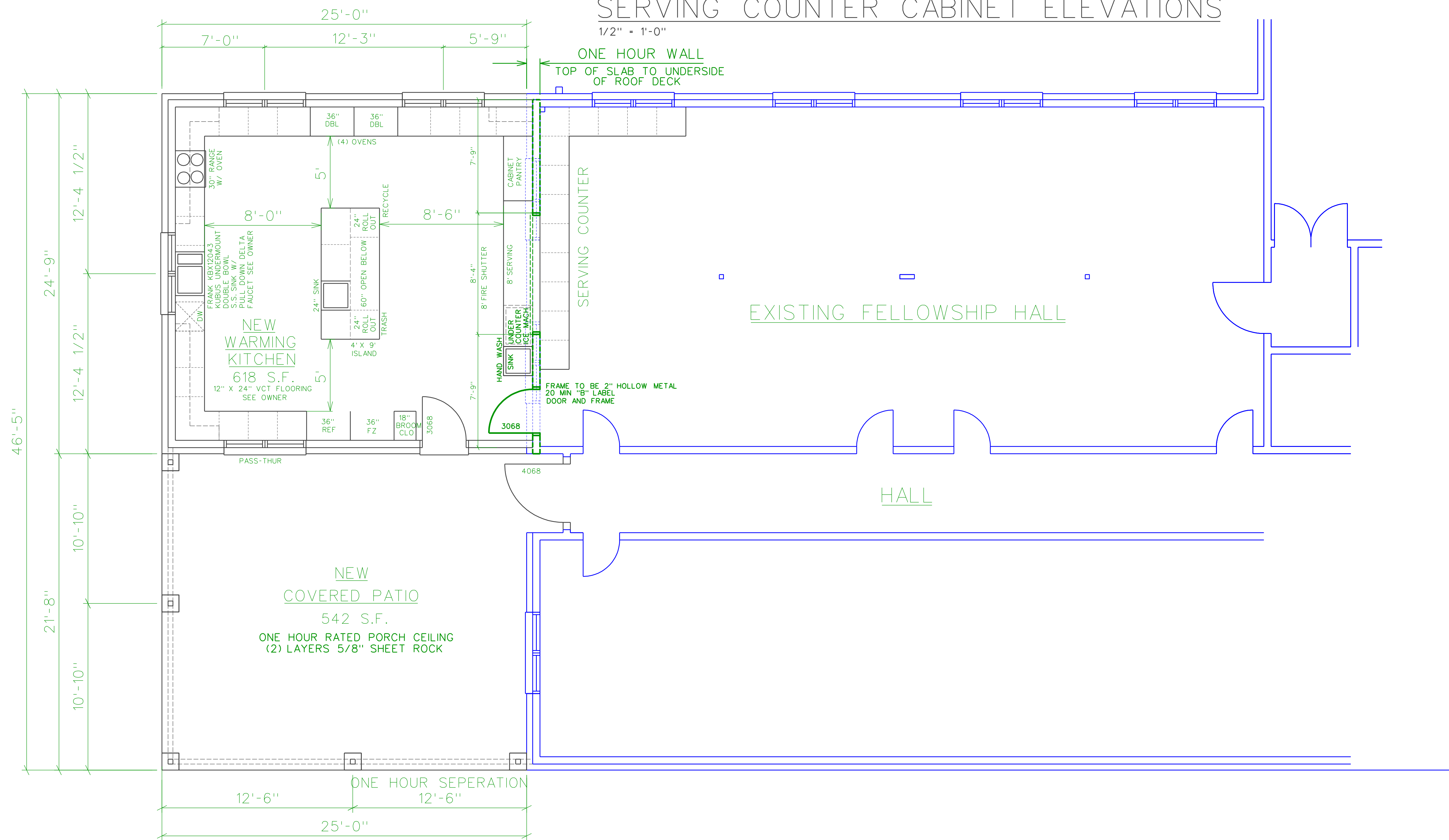


FOUNDATION PLAN
1/4" = 1'-0"



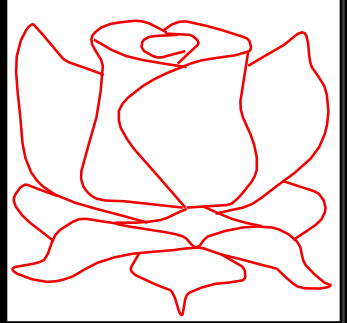
SERVING COUNTER CABINET ELEVATIONS

1/2" = 1'-0"



NEW FLOOR PLAN

1/4" = 1'-0"



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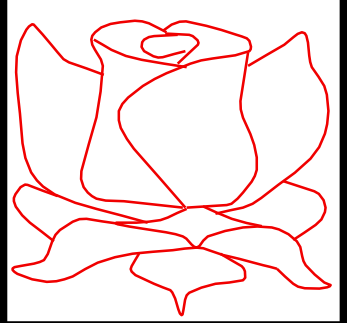
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FLOOR PLAN

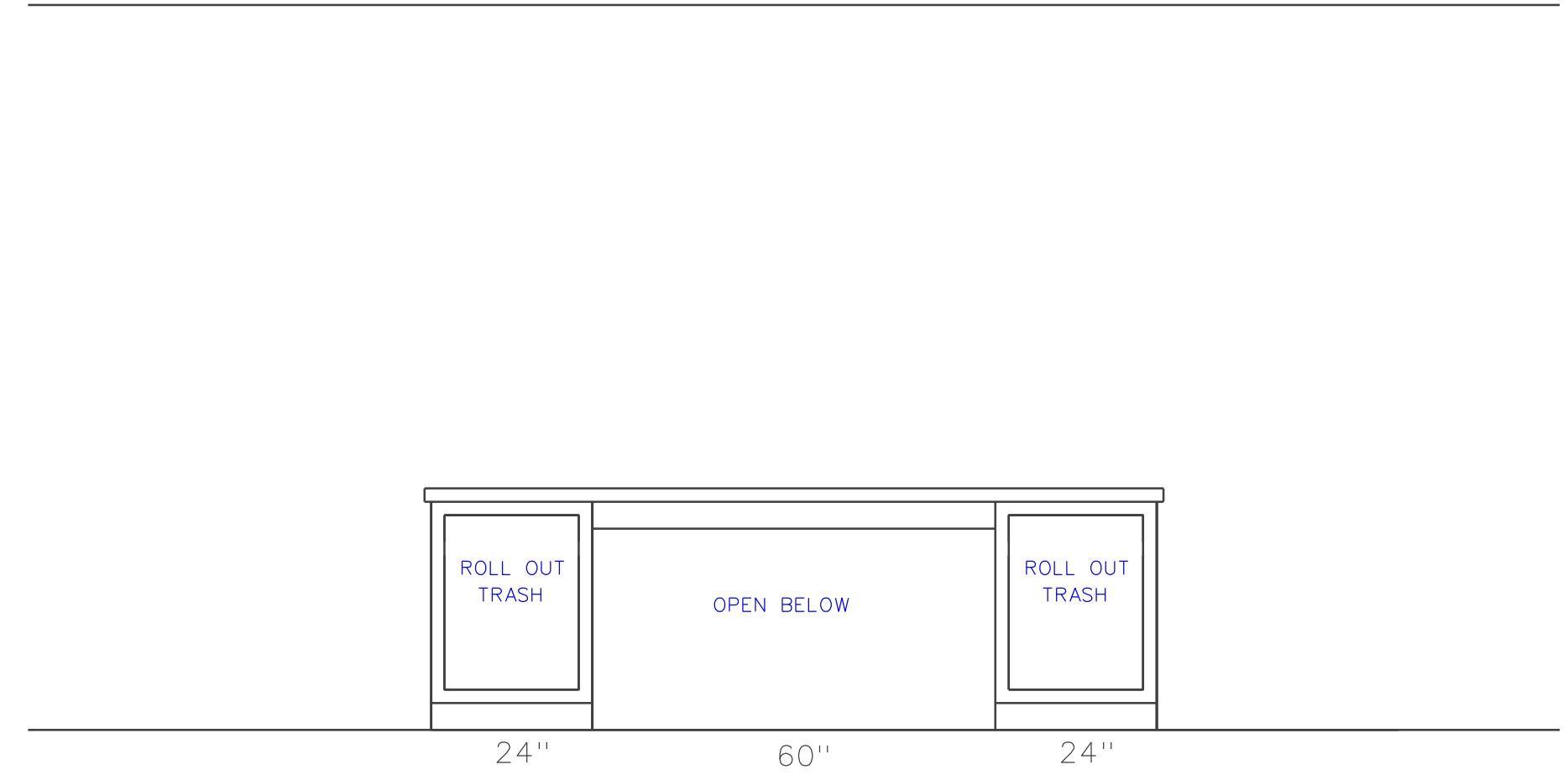
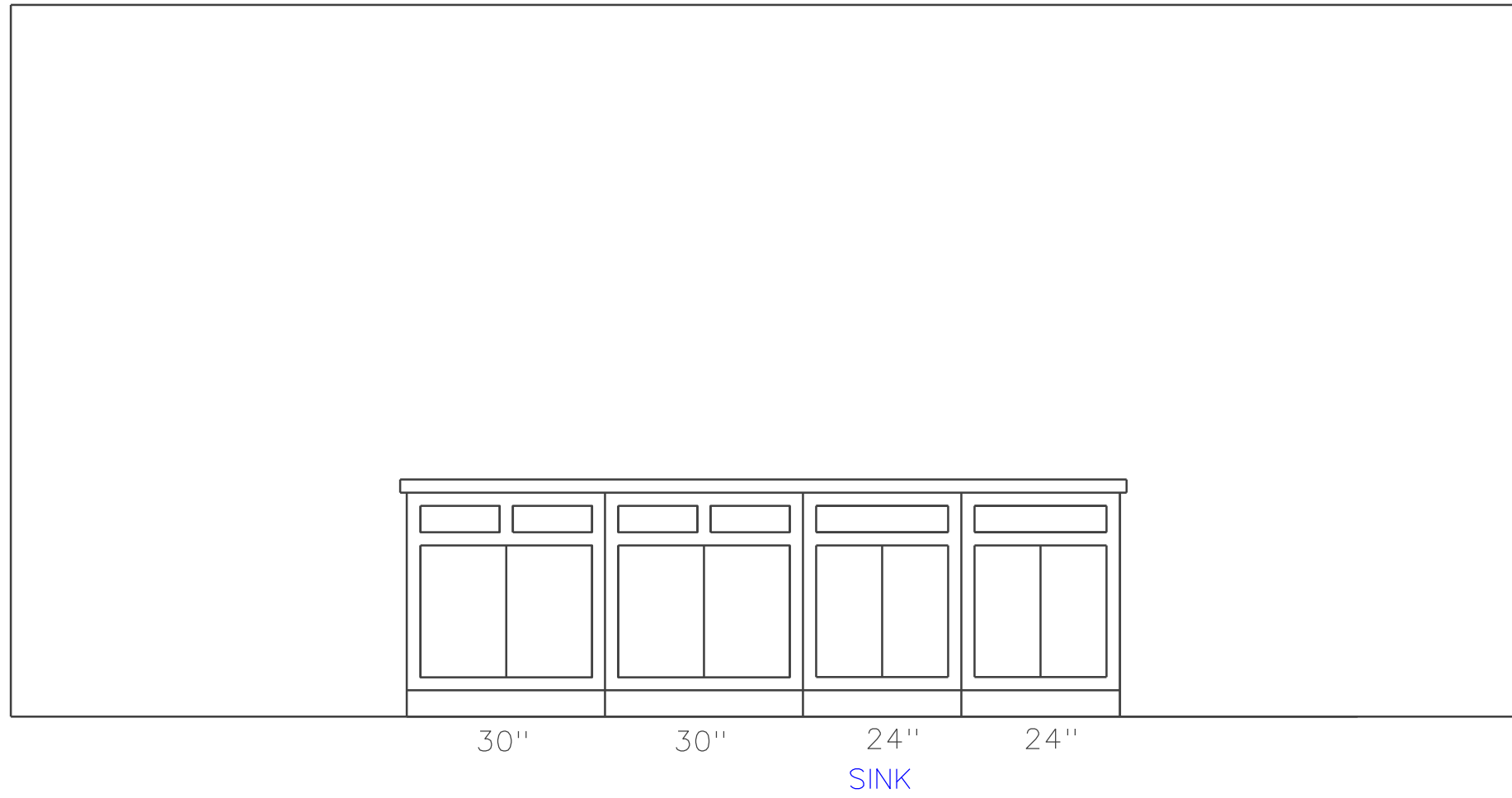
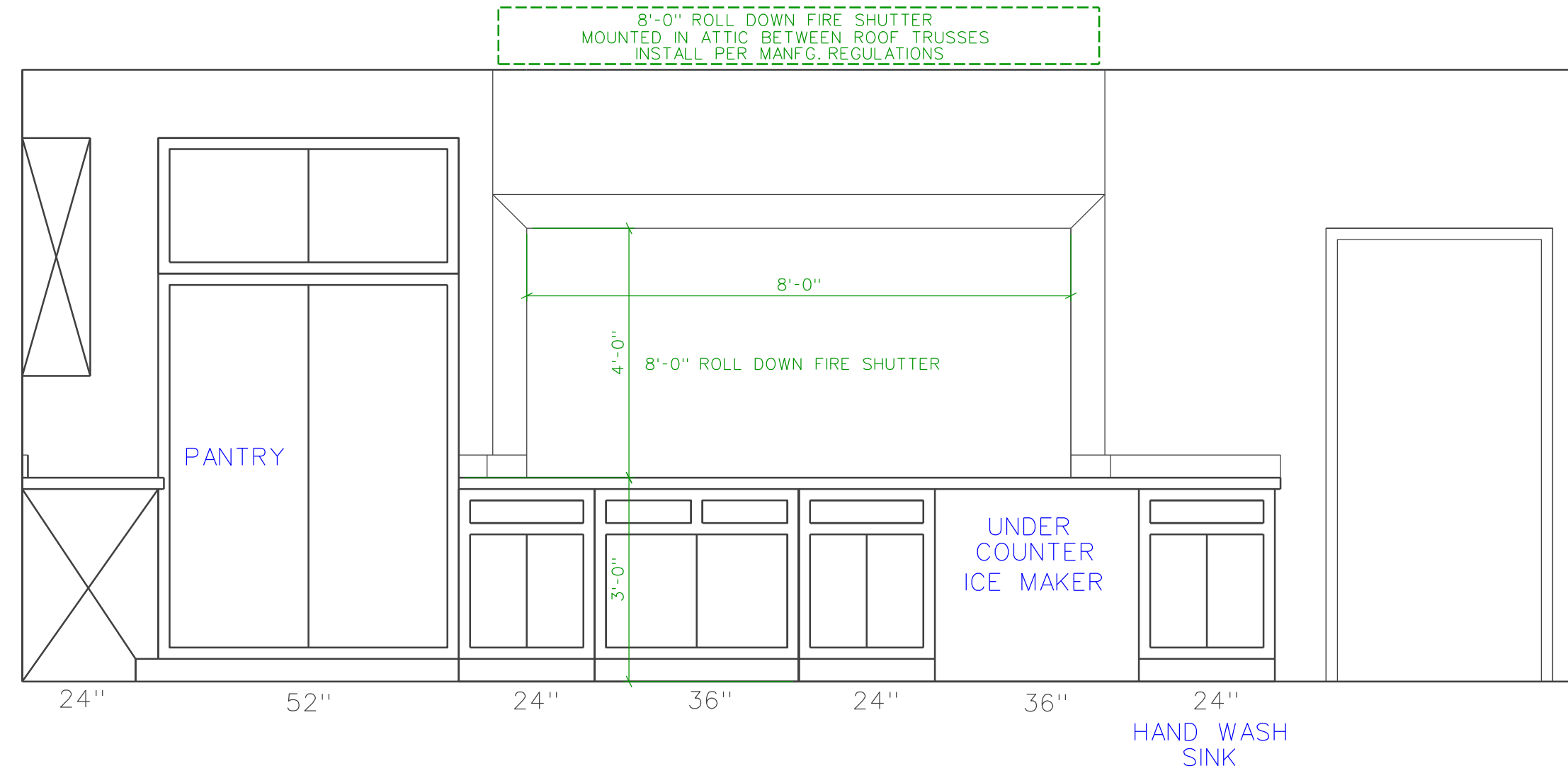
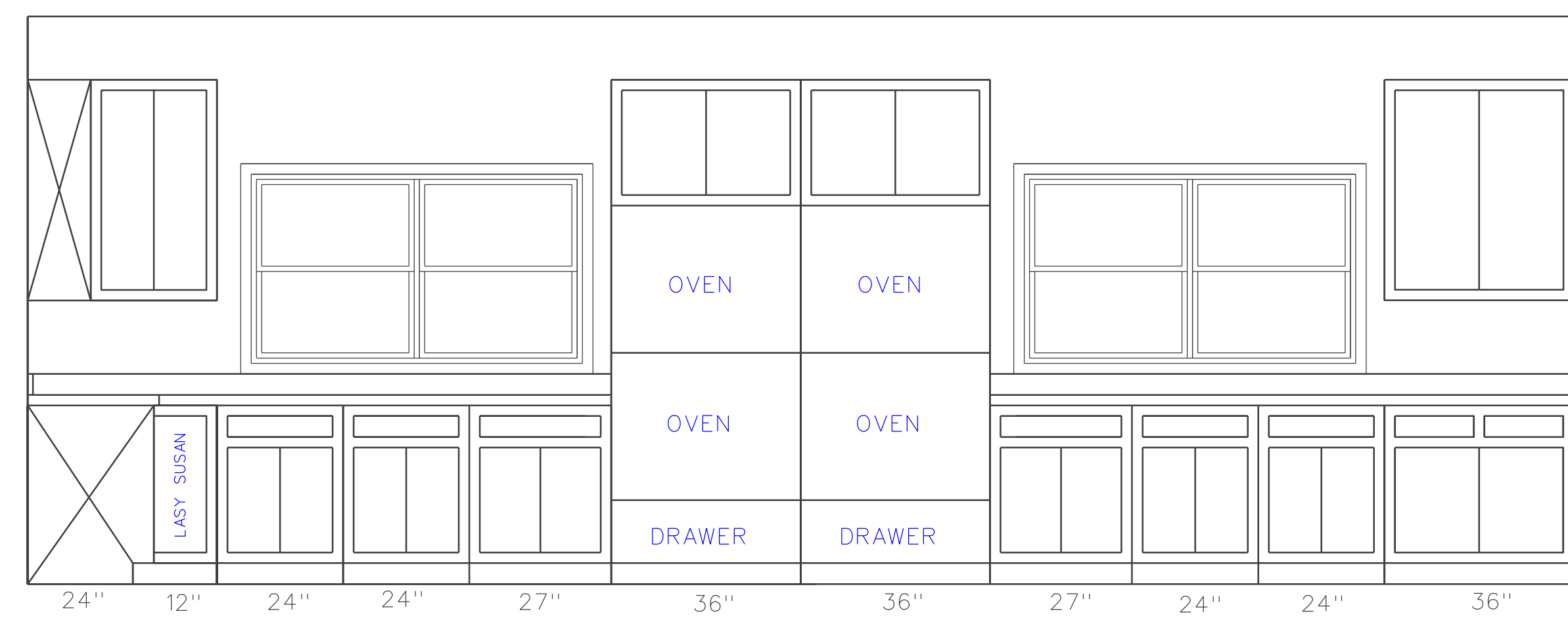
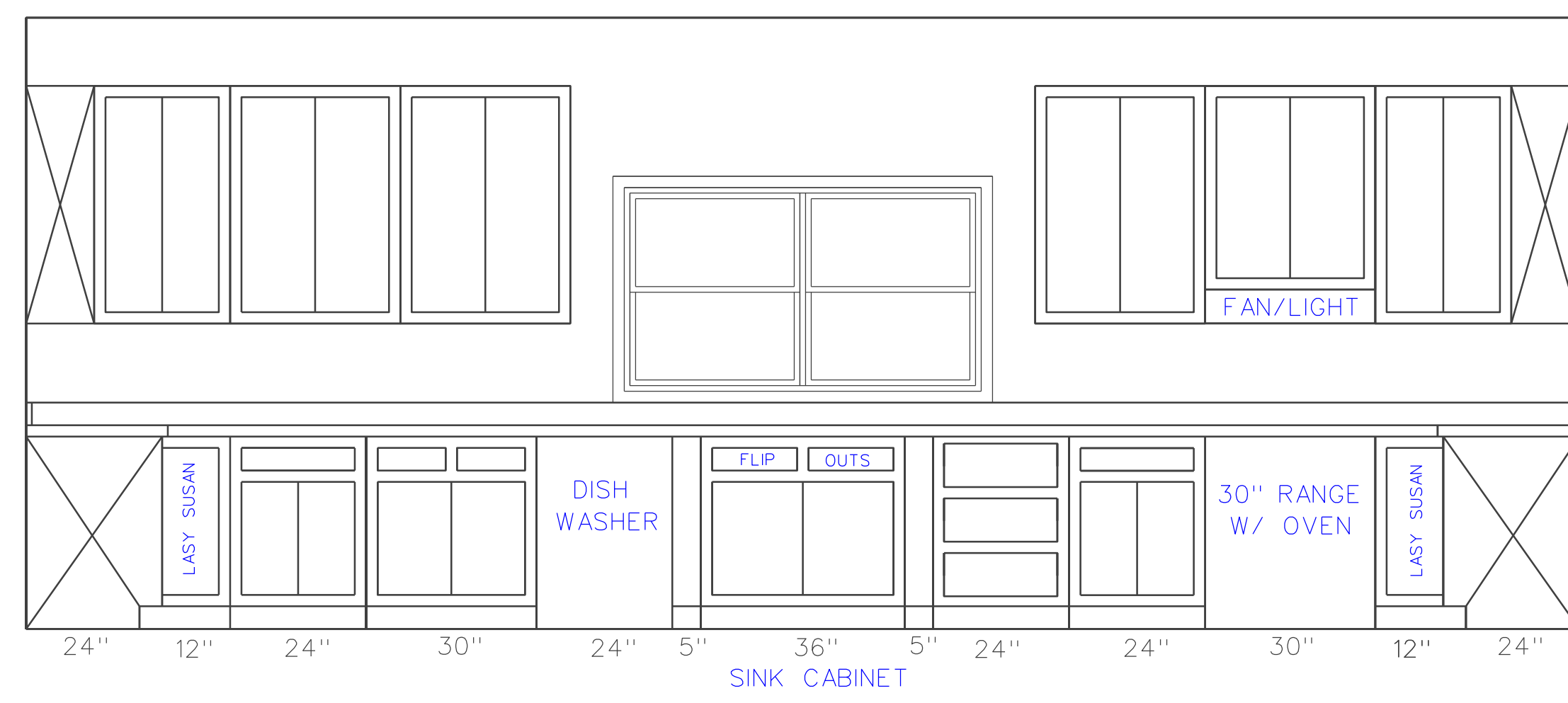
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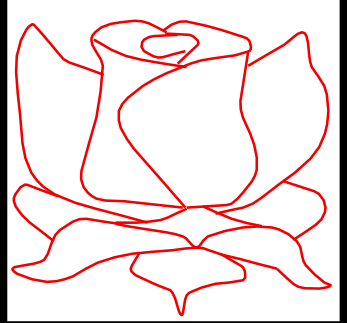


ITEM	DATE	DESCRIPTION

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 PROJ CODE
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 SHEET SUBJECT
 CABINET
 ELEVATIONS

KITCHEN CABINET DETAILS

1/2" = 1'-0"



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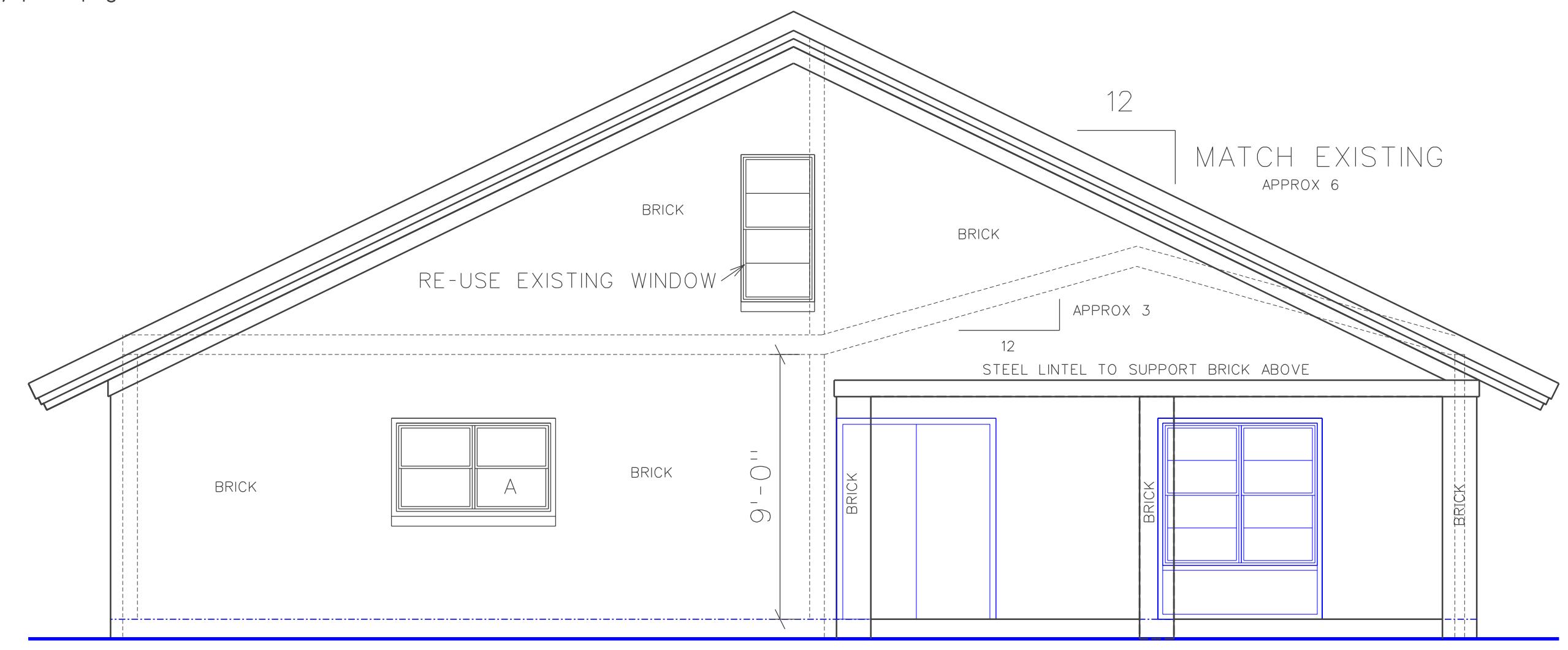
NO.	DATE	DESCRIPTION

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DATE 3-22-17
PROJ CODE
SET NO.
SHEET SUBJECT
ELEVATIONS

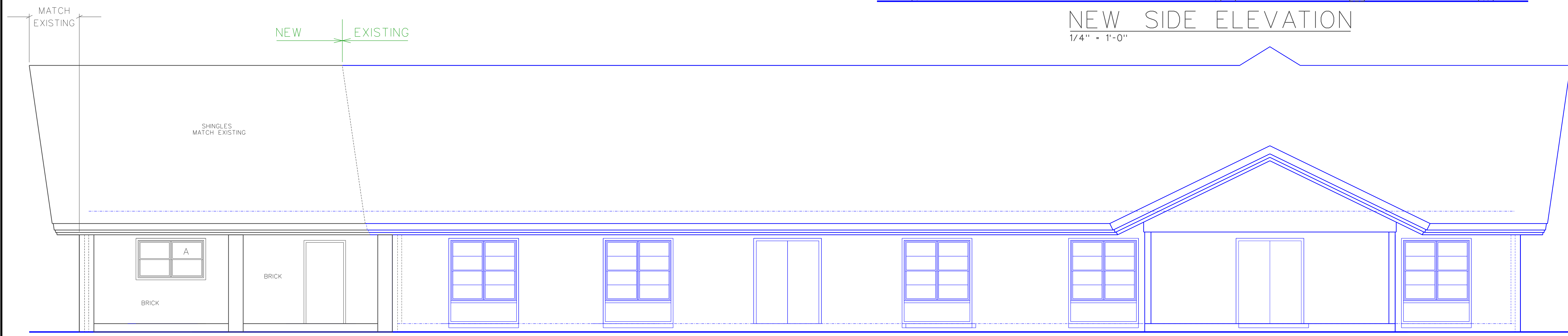
SHEET NO.
A6
OF 6 SHEETS



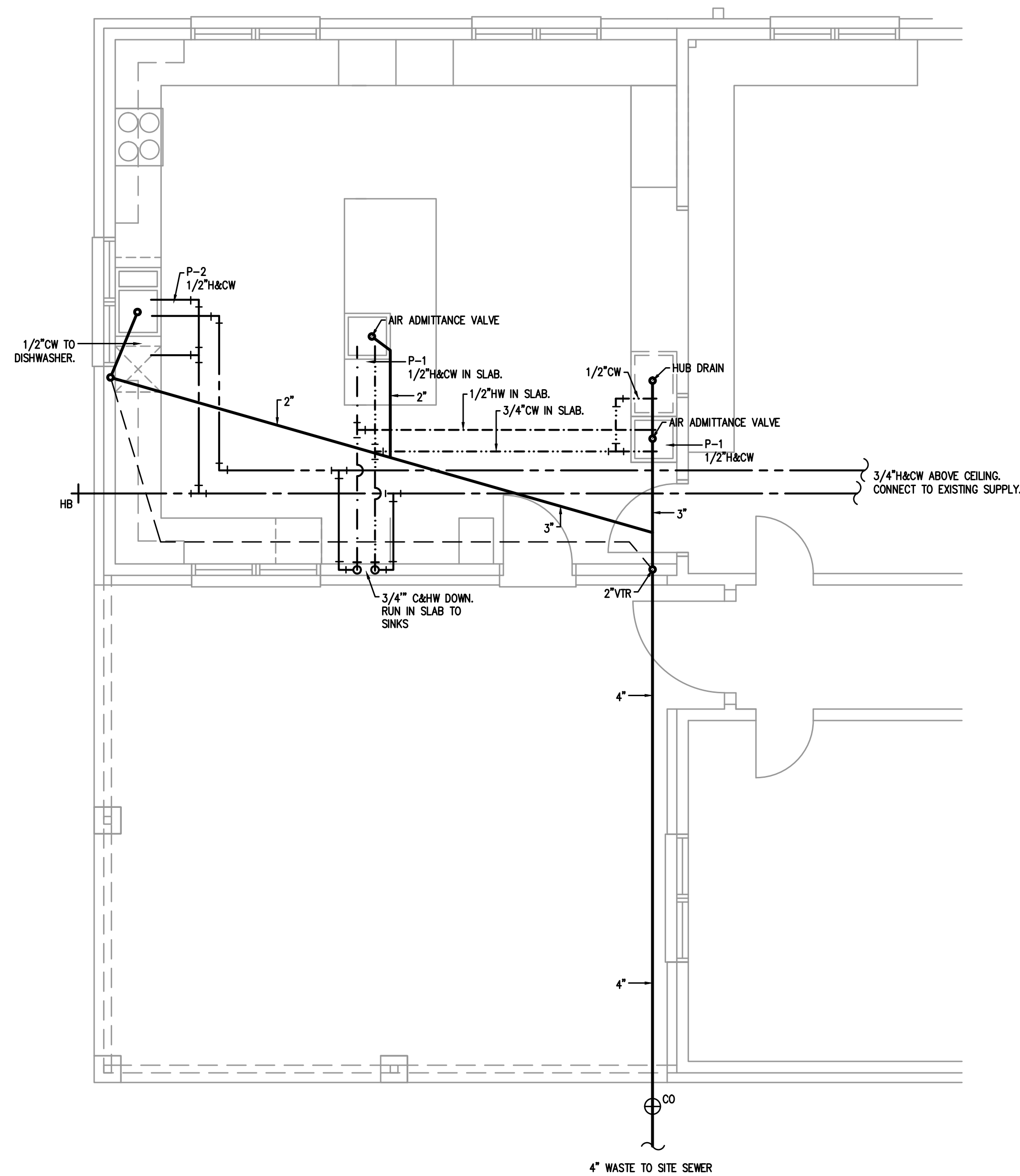
NEW FRONT ELEVATION
1/4" = 1'-0"



NEW SIDE ELEVATION
1/4" = 1'-0"



NEW REAR ELEVATION
1/4" = 1'-0"



1 PLUMBING PLAN
1/4"=1'-0"

SYMBOL	MANUFACTURER	MODEL #	FIXTURE DESCRIPTION	ACCESSORIES	SUPPLY	WASTE	VENT	REMARKS
P-1	ELKAY	DLR-2522-10	STAINLESS STEEL SINK, (ONE COMPARTMENT)	DELTA MODEL 400 FAUCET	1/2" H.W./C.W.	2"	1-1/2"	
P-2	ELKAY	LR3322	KITCHEN SINK	DELTA MODEL 400 FAUCET, W/SPRAYER	1/2" H.W./C.W.	2"	1-1/2"	
HB	WOODFORD		HOSE BIB, OUTDOOR FREEZEPROOF	-	1/2" C.W.	-	-	

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE CODE AS WELL AS ALL LOCAL AND OTHER APPLICABLE CODES.
 ALL WORK SHALL BE PERFORMED BY EXPERIENCED AND SKILLED CRAFTSMEN.
 WATER LINES BELOW GRADE SHALL BE TYPE "K" COPPER (NO JOINTS BELOW GRADE) AND ABOVE GRADE TYPE "L" COPPER SUPPORTED AS REQUIRED AND SHALL BE HYDROSTATICALLY TESTED FOR TWO HOURS AT 100 PSI. ALL WATER PIPING AT WATER FIXTURES SHALL BE PROVIDED WITH 18" AIR CHAMBERS OR SHOCK ABSORBERS. STOPS SHALL BE PROVIDED ON HOT AND COLD WATER LINES. HOT WATER PIPING SHALL BE INSULATED WITH 1" CLOSED CELL RUBBER. THE ENTIRE WATER SYSTEM SHALL BE DISINFECTED PRIOR TO PLACING IN SERVICE. PVC/PEX MAYBE SUBSTITUTED FOR COPPER.
 SANITARY SEWER LINES SHALL BE PVC.
 PROVIDE PRESSURE REDUCING VALVE IF STREET WATER EXCEEDS 80 PSI.
 GAS PIPING WILL BE SCHEDULE 40 BLACK STEEL WITH BLACK MALLEABLE IRON SCREW-TYPE FITTINGS.
 THE PLUMBING CONTRACTOR SHALL PROVIDE ALL OPENINGS REQUIRED FOR THE PLUMBING WORK AND SHALL INSTALL FIRE RATED SLEEVES WHEREVER PENETRATIONS OF RATED WALLS OR FLOORS ARE MADE. THE PATCHING SHALL BE BY THE PLUMBING CONTRACTOR. THE PLUMBING CONTRACTOR SHALL REVIEW ALL UTILITY SITE PLANS AND ARCHITECTURAL SITE PLANS FOR WORK BY OTHERS.
 LOCATION OF UTILITIES (WASTE AND WATER LINES, MANHOLES ETC.) THAT ARE TO BE CONNECTED TO ARE ASSUMED. IT SHALL BE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR TO VERIFY THESE LOCATIONS AND MAKE THE FINAL CONNECTION AS REQUIRED.
 ALL FLOOR DRAINS SHALL BE PROVIDED WITH TRAP PRIMERS

2 PLUMBING NOTES
N.T.S.

GENERAL PLUMBING SYMBOLS	
	UNION
	PIPE UP
	PIPE DOWN
	POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
	TEE
	ELBOW
	WALL CLEANOUT
	FLOOR CLEANOUT
	GATE VALVE
	COLD WATER
	HOT WATER
	VENT PIPING
	WASTE PIPING
	ROOF DRAIN PIPING



Coastal Plains Engineering, P.A.
 License No. C-2689

268 LOCKLEAR RD
 P.O. Box 1117
 Pembroke, NC 28572
 Phone: 810-821-7213
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 www.coastalplainseng.com

OUR REDEMER LUTHERAN CHURCH
 KITCHEN / COVERED PORCH ADDITION
 1605 VAN BUREN AVE / FAYETTEVILLE NORTH CAROLINA 28303

REVISIONS

NO.	DATE	DESCRIPTION

DRAWN BY: M.J.L.
 CHECKED BY: CSL
 DATE: 12-7-16
 PROJ #: 2016-144
 SET NO.
 SHEET SUBJECT

SHEET NO.

P-1

OF SHEETS



Coastal Plains Engineering, P.A.
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 KITCHEN / COVERED PORCH ADDITION**
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NO.	DESCRIPTION

SHEET NO. _____ OF _____ SHEETS

M-1

2012 North Carolina Energy Conservation Code

Commercial Energy Efficiency – Mechanical Summary
 THIS SECTION REQUIRED FOR ALL PROJECTS THAT INCLUDE MECHANICAL DESIGN

- 501.1 METHOD OF COMPLIANCE** NC SPECIFIC COMCHECK PROVIDED
 2012 NCECC CHAPTER 5 20% IMPROVEMENT OVER ASHRAE 90.1-2007
- 501.2 APPLICATION COMPLIANCE**
- 506.2.1 EFFICIENT MECH EQUIPMENT 506.2.4 HI EFFICIENCY DOMESTIC HW
 506.2.2 REDUCED LTG DENSITY 506.2.5 ONSITE RENEWABLE ENERGY
 506.2.3 ENERGY RECOVERY SYSTEMS 506.2.6 DAYLIGHTING CONTROLS
- 301.1 CLIMATE ZONE**
 3A CUMBERLAND COUNTY, NORTH CAROLINA
- DESIGN CONDITIONS**
 EXTERIOR (ASHRAE 90.1 – 2007 TABLE D – 1)
 winter dry bulb 18° F.
 summer dry bulb 91° F.
 summer wet bulb 74° F.
 INTERIOR (2012 NCECC SECTION 302.1)
 winter dry bulb 72° F.
 summer dry bulb 75° F.

503.2 HEATING & COOLING LOADS AND EQUIPMENT & SYSTEM SIZING

BUILDING HEATING LOAD IN BTUHs:	28,050
BUILDING COOLING LOAD IN BTUHs:	11,462
INSTALLED HEATING CAPACITY IN BTUHs:	28,600
INSTALLED COOLING CAPACITY:	30,200

503.2.3 HVAC EQUIPMENT REQUIREMENTS
 SYSTEM DESCRIPTION: SPLIT SYSTEM HEAT PUMPS – ELEC. HEAT

COOLING EQUIPMENT EFFICIENCY COMPLIANCE Per Tables 503.2.3 (1 – 7):

EQUIP TYPE	SIZE CATEGORY	MINIMUM EFF.	INSTALLED
HEAT PUMP	<31,000 BTU	11.0 SEER	13.0 SEER

HEATING EQUIPMENT EFFICIENCY COMPLIANCE Per Tables 503.2.3 (1 – 7):

EQUIP TYPE	SIZE CATEGORY	MINIMUM EFF.	INSTALLED
HEAT PUMP	<29,000 BTU	3.1 C.O.P.	3.1 C.O.P.

E_c = COMBUSTION EFFICIENCY
 E_t = THERMAL EFFICIENCY

503.2.4 THROUGH 503.2.9
 HVAC SYSTEMS ARE FULLY COMPLIANT WITH THE REQUIREMENTS FOR HVAC
 SYSTEM CONTROL, VENTILATION, ENERGY RECOVERY, DUCT AND PLENUM INSULATION AND SEALING, PIPING INSULATION, AND SYSTEM COMPLETION.

503.2.10 – AIR SYSTEM DESIGN AND CONTROL
 AIR FANS INSTALLED ON THE PROJECT ARE BELOW 5 HP AND ARE EXEMPT FROM THESE REQUIREMENTS.

503.3 – SIMPLE HVAC SYSTEMS AND EQUIPMENT (PRESCRIPTIVE)
 PROJECT CONSISTS OF ONLY DX SINGLE ZONE SYSTEMS FULLY COMPLIANT WITH THE SIMPLE PRESCRIPTIVE REQUIREMENTS OF 503.3.

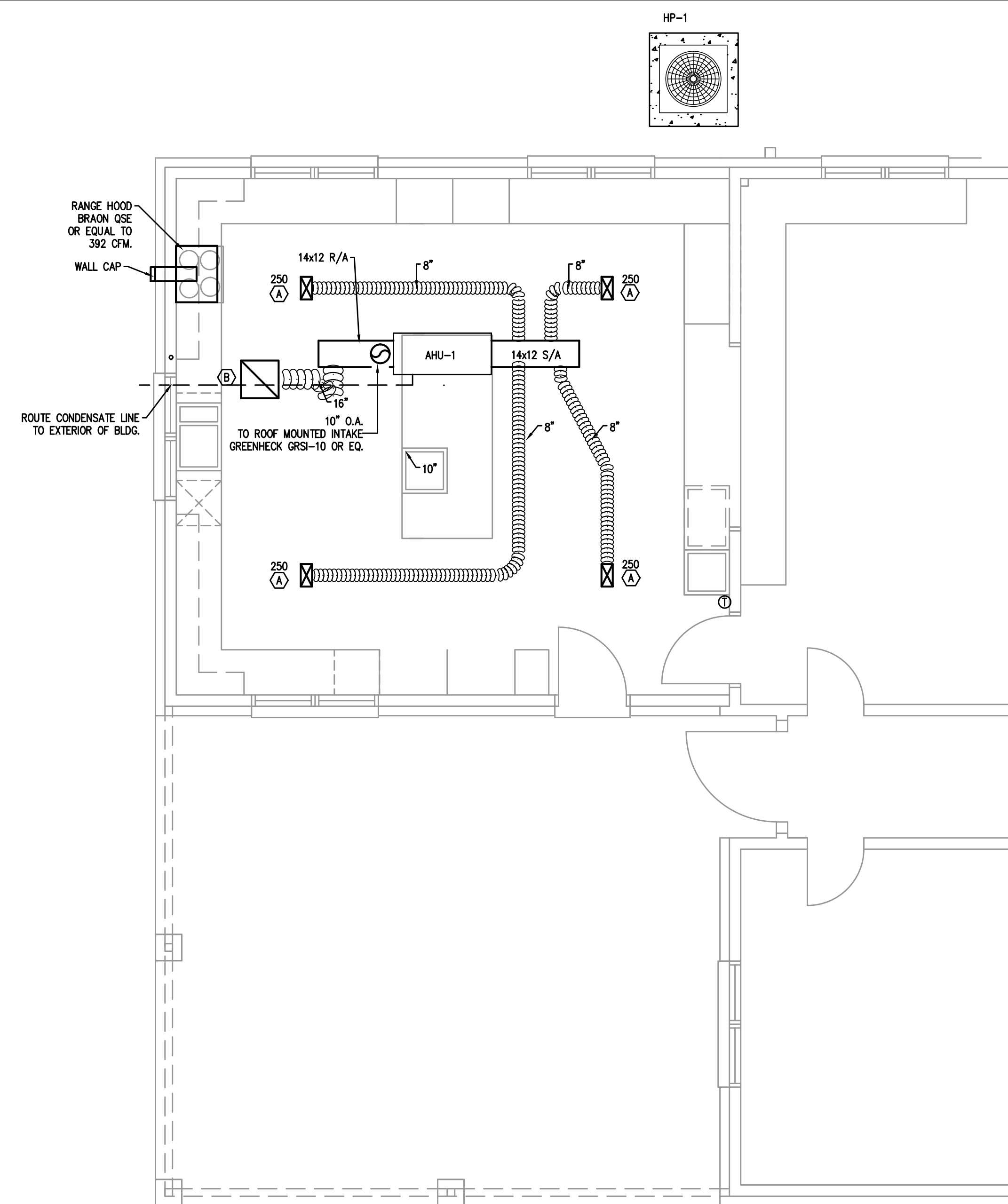
503.4 – COMPLEX HVAC SYSTEMS AND EQUIPMENT (PRESCRIPTIVE)
 N/A SIMPLEX HVAC SYSTEMS
 PROJECT CONSISTS OF HVAC SYSTEMS FULLY COMPLIANT WITH THE COMPLEX PRESCRIPTIVE REQUIREMENTS OF 503.4.

506.2.1 – EFFICIENT MECHANICAL EQUIPMENT
 INSTALLED COOLING EFFICIENCY MEETS APPLICATION REQUIREMENTS OF 506.2.1

SIGNED: _____
 NAME: Chris S. Locklear
 TITLE: Engineer

OUTSIDE AIR CALCULATION -2012 NC MECHANICAL CODE (TABLE 403.3) Vbz = RpPz + RaAz

OCCUPANCY TYPE:	SF (Az)	# OF OCCUPANTS (Pz)	O.A. CFM PER PERSON (Rp)		O.A. CFM PER SQ FT (Ra)		O.A. CFM REQUIRED (Vbz)	EXHAUST CFM REQUIRED
			PERSON (Rp)	Sq Ft (Ra)	PERSON (Rp)	Sq Ft (Ra)		
AHU-1	560					0	392	
KITCHEN						0	392	
TOTAL CFM REQUIRED						0	392	
TOTAL CFM FURNISHED						0	392	

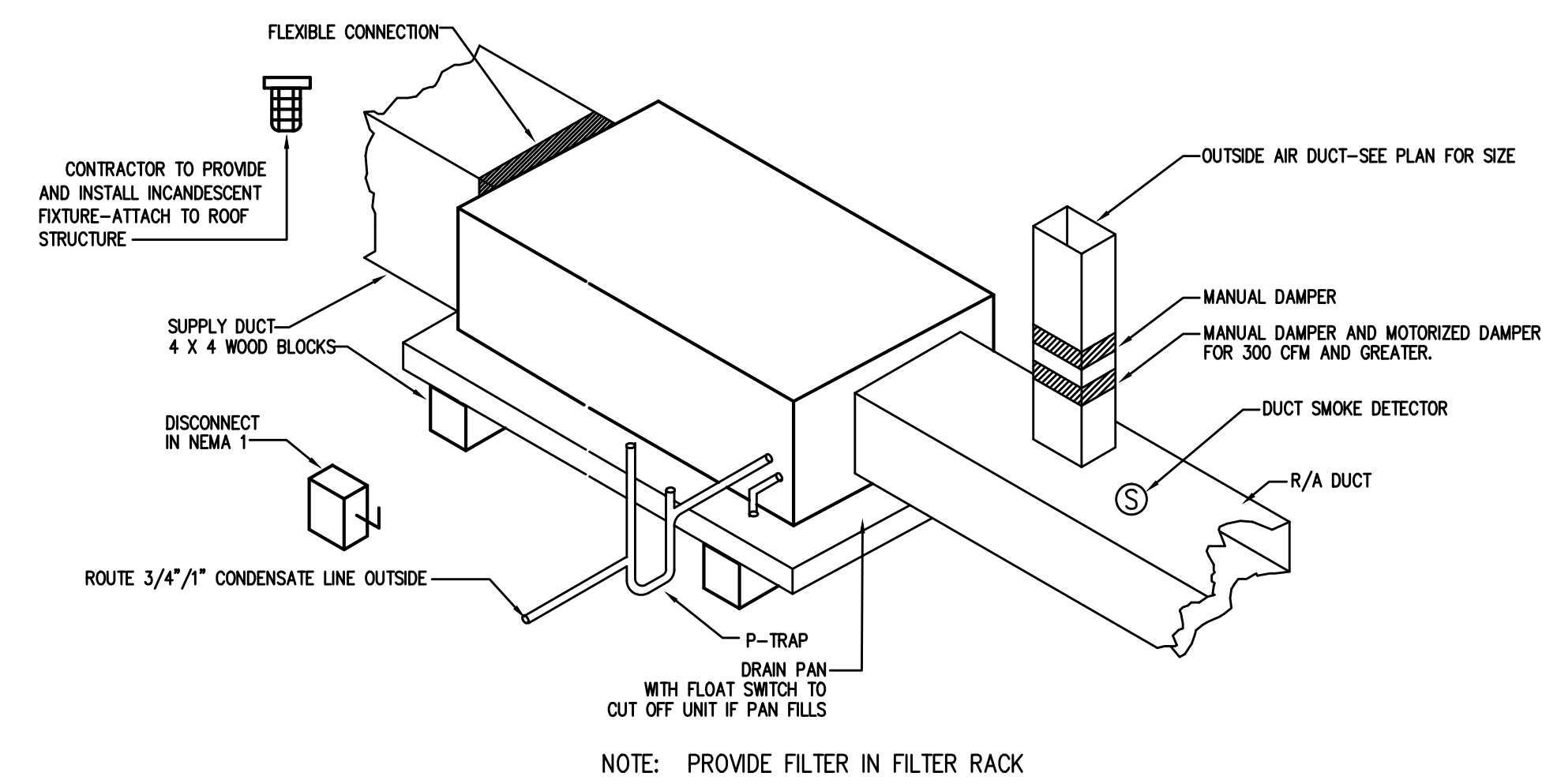


1 HVAC PLAN
 1/4" = 1' - 0"

MARK ON PLANS	CFM	AIR PATTERN	NECK SIZE	RUNOUT SIZE	REMARKS
(A)	250	SINGLE DEFLECTION	10 x 6	10"	PRICE SERIES 610 OFF WHITE, ALUM.
(B)	N/A	N/A	20 x 20	SEE PLAN	PRICE SERIES 630 OFF WHITE, ALUM., RETURN

UNIT NO.	CFM	OA CFM	ESP IN WG	FAN MOTOR HP	FAN MOTOR				MFG. & MODEL	REMARKS		
					VOLTS	PHASE	CYCLE	FLA				
AHU-1	1000	392	0.40"	1/3	208	1	60	2.8	38	40	TRANE GMSA0A30	2.5 TON AIR HANDLER W/ 5.76 KW STRIPS

UNIT NO.	COMPRESSOR AMPS	NO. OF COMPR.	FAN AMPS	NO. OF FANS	UNIT		MOCF	MCA	WIRE SIZE (DU, 75 C)	CAPACITIES		MFG. & MODEL	REMARKS	
					VOLT	PHASE				TOTAL COOLING	MIN. SEER			HEATING
HP-1	7.9	1	0.7	1	208	3	15	11	10	30,200	13.00	28,600	TRANE 4TWA3030A3	2.5 TON HEAT PUMP UNIT



3 AIR HANDLER DETAIL
 N.T.S.

ALL WORK SHALL BE IN ACCORDANCE WITH THE 2012 NC MECHANICAL CODE.

ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL IN ACCORDANCE WITH ASHRAE & SMACNA. DUCT SIZES SHOWN ARE NET FREE AREA REQUIRED. ALL SUPPLY AND RETURN DUCTS AND FLEX SHALL BE INSULATED WITH MIN. R-8.0 INSULATION UNLESS OTHERWISE NOTED IN THE DRAWING.

ALL DUCTS SHALL BE AIR TIGHT, RIGID AND FREE FROM VIBRATION AND NOISE. ALL LAP JOINTS SHALL BE IN THE DIRECTION OF FLOW. VOLUME OR SPLITTER DAMPERS SHALL BE INSTALLED WHERE NECESSARY TO GUIDE AND CONTROL THE AIR FLOW. PROVIDE SHEET METAL SLEEVES AND COLLARS WHERE DUCTS PASS THROUGH WALLS.

STRUCTURAL MEMBERS OF THE BUILDING SHALL NOT BE CUT IN ANY MANNER FOR THE INSTALLATION OF ANY EQUIPMENT UNLESS PRIOR APPROVAL IS OBTAINED FROM THE ARCHITECT.

MECHANICAL CONTRACTOR TO CONFIRM BREAKER/DISCONNECT SIZES OF HIS EQUIPMENT WITH THE ELECTRICAL CONTRACTOR.

FURNISH AND INSTALL A DUCT MOUNTED SMOKE DETECTOR IN THE RETURN DUCT OF THE A/C UNIT IN ACCORDANCE WITH 2012 NC MECHANICAL CODE. THE DETECTOR SHALL BE WIRED TO SHUT DOWN THE FAN IN THE EVENT THE DETECTOR IS ACTIVATED. THE MECHANICAL CONTRACTOR SHALL FURNISH AND INSTALL THE DUCT DETECTOR AND RUN THE NECESSARY CONTROL WIRING FROM THE DETECTOR TO HIS EQUIPMENT. SMOKE DETECTORS ARE ONLY REQUIRED FOR UNITS SUPPLYING 2000 CFM OR MORE.

MECHANICAL CONTRACTOR SHALL PROVIDE A TEST AND BALANCE REPORT. SYSTEM COMPLIANCE STATEMENT REQUIRES A WRITTEN TAB REPORT. FINAL PROJECT SIGNOFF WILL BE DENIED WITHOUT THIS REPORT.

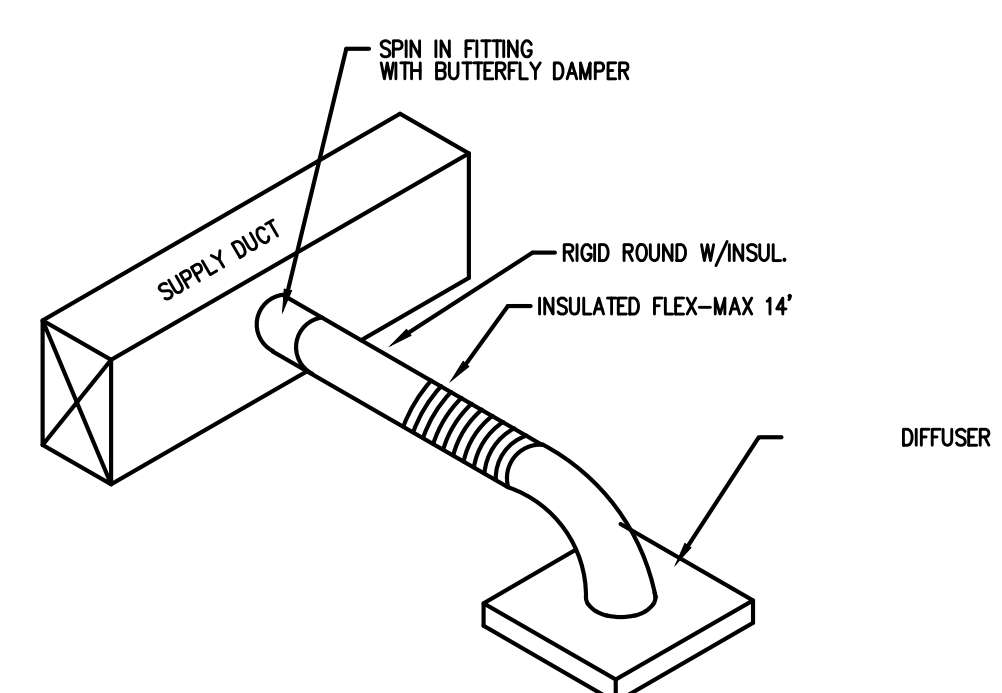
MECHANICAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE LOCATIONS AND ROUTING OF ALL DUCTWORK WITH OTHER TRADES TO AVOID CONFLICTS.

ALL EQUIPMENT MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR AFTER FINAL ACCEPTANCE OF THE WORK OR IN ACCORDANCE WITH THE PARTICULAR MANUFACTURER'S STANDARD GUARANTEE, IF LONGER. ANY FAILURE MATERIAL OR WORKMANSHIP OR FAILURE OF ANY PART OF THE SYSTEM DURING NORMAL OPERATIONS UNDER THIS GUARANTEE SHALL BE CORRECTED WITHOUT COST TO THE OWNER.

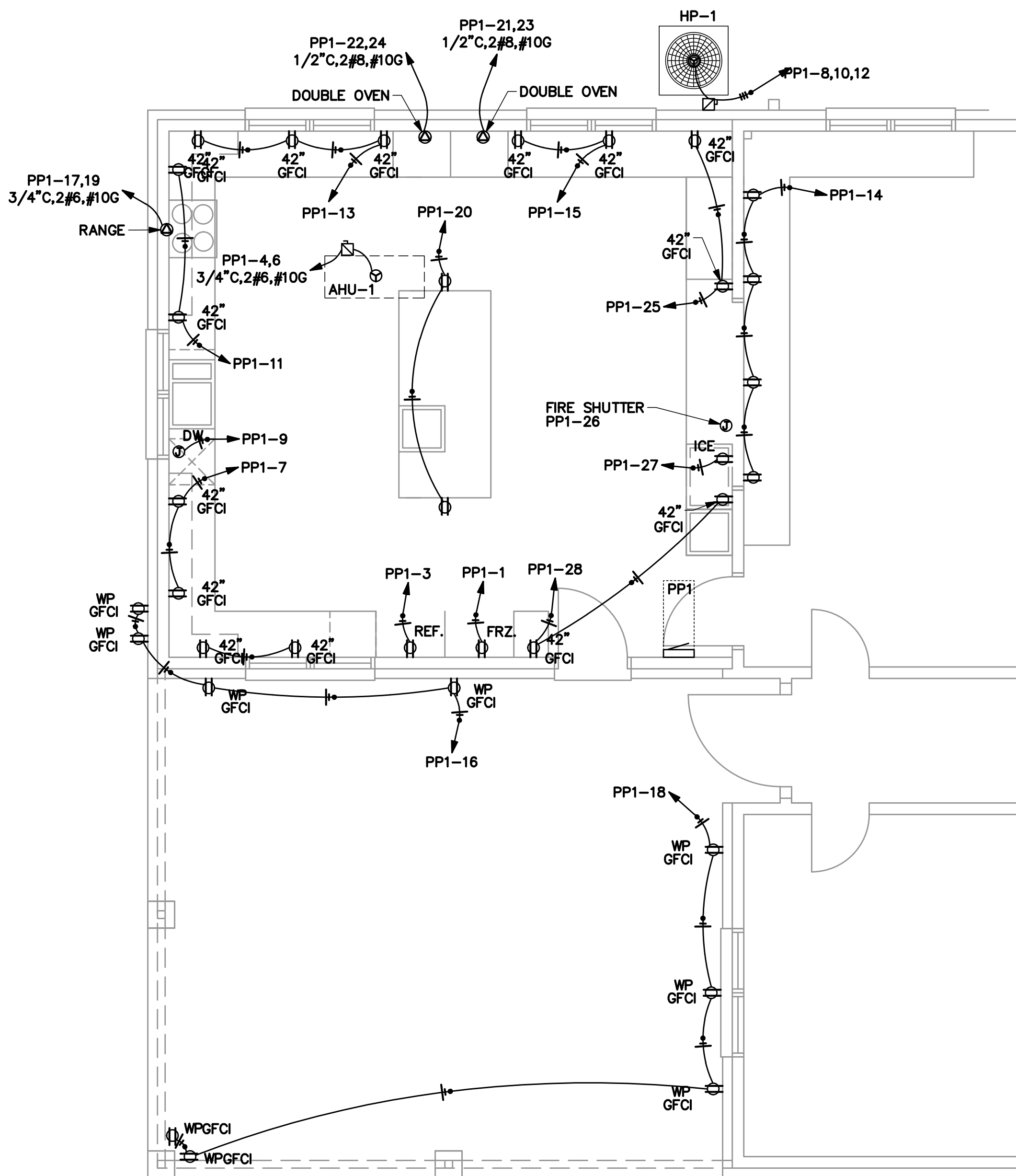
ALL THERMOSTATS SHALL BE OF A PROGRAMMABLE TYPE.

BUILDING CONTRACTOR SHALL PROVIDE PERMANENT ACCESS TO ROOF STRUCTURE FOR ACCESS TO MECHANICAL EQUIPMENT WHEN ROOF STRUCTURE IS GREATER THAN 16'-0" HIGH.

2 HVAC NOTES
 N.T.S.



4 DIFFUSER TAKE OFF DETAIL
 N.T.S.



ROOM		VOLTS 208Y/120V 3P 4W		AIC 10,000			
MOUNTING FLUSH		BUS AMPS 125		MAIN BKR MLO			
FED FROM UTILITY		NEUTRAL 100%		LUGS STANDARD			
NOTE							
CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION	CKT #	CKT BKR	LOAD KVA	CIRCUIT DESCRIPTION
1	20/1	0.8	FRZ.	a 2	20/1	0.943	HOOD, LIGHTING
3	20/1	0.8	REF.	b 4	45/2	7.9	AHU-1
5	20/1	0.36	RECEPTACLE	c 6			
7	20/1	0.36	RECEPTACLE	a 8	15/3	3.96	HP-1
9	20/1	1.2	DW	b 10			
11	20/1	0.36	RECEPTACLE	c 12			
13	20/1	0.54	RECEPTACLE	a 14	20/1	0.72	RECEPTACLE
15	20/1	0.36	RECEPTACLE	b 16	20/1	0.72	RECEPTACLE
17	50/2	8	RANGE	c 18	20/1	0.9	RECEPTACLE
19				a 20	20/1	0.36	RECEPTACLE
21	40/2	8.21	DOUBLE OVEN	b 22	40/2	8.21	DOUBLE OVEN
23				c 24			
25	20/1	0.36	RECEPTACLE	a 26	20/1	0.864	FIRE SHUTTER
27	20/1	0.8	ICE	b 28	20/1	0.36	RECEPTACLE
29	20/1	0	SPACE	c 30	20/1	0	SPACE
31	20/1	0	SPACE	a 32	20/1	0	SPACE
33	20/1	0	SPACE	b 34	20/1	0	SPACE
35	20/1	0	SPACE	c 36	20/1	0	SPACE
37	20/1	0	SPACE	a 38	20/1	0	SPACE
39	20/1	0	SPACE	b 40	20/1	0	SPACE
41	20/1	0	SPACE	c 42	20/1	0	SPACE

	CONN KVA	CALC KVA		CONN KVA	CALC KVA		
LIGHTING	0.583	0.729	(125%)	0	0	(125%)	
LARGEST MOTOR	3.96	0.991	(25%)	HEATING	0	0	(100%)
OTHER MOTORS	0.864	0.864	(100%)	COOLING	3.96	0	(0%)
RECEPTACLES	7.8	7.8	(50%>10)	NONCONTINUOUS	0.36	0.36	(100%)
KITCHEN EQUIP	25.6	16.7	(65%)	DIVERSE	0	0	(N/A)
				METERED DEMAND	0	0	(125%)
				TOTAL KVA	47.1	35.3	
				BALANCED 3-PHASE AMPS	98	98	

PHASE BALANCE PERCENT: PHASE A 64.1% PHASE B 116% PHASE C 120%

CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY FOR SERVICE. A COMPLETE AND WORKING SYSTEM IS REQUIRED FOR COMPLIANCE WITH THESE DOCUMENTS. DETERMINE THE POINT OF CONNECTION TO THE UTILITY WITH THE UTILITY REPRESENTATIVE AND PROVIDE ACCORDINGLY FOR A COMPLETE WORKING SYSTEM.

WIRE AND CABLE SHALL BE INSULATED, TYPE THWN OR THHN, 600 VOLTS, WITH COPPER CONDUCTORS. CONDUCTOR SIZES NO. 8 AWG AND LARGER MAY BE STRANDED. CONDUCTOR SIZES NO. 10 AWG AND SMALLER MAY BE SOLD OR STRANDED. NO ROMEX PERMITTED.

EMT SHALL BE GALVANIZED STEEL TUBING, 1/2-INCH MINIMUM SIZE, EQUAL TO ELECTRUTITE BRAND OR APPROVED AND USED ONLY WITH HEXAGONAL ALL STEEL COMPRESSION FITTINGS.

PLASTIC CONDUIT SHALL BE RIGID, 3/4-INCH MINIMUM NON-METALLIC, HEAVY DUTY, HIGH IMPACT, POLYVINYLCHLORIDE (PVC), TYPE I WILL BE USED FOR CONCRETE ENCASEMENT. FITTINGS SHALL BE THE SAME MATERIALS AND MANUFACTURER AS THE PLASTIC CONDUIT.

FLEXIBLE METAL CONDUIT SHALL BE 1/2-INCH MINIMUM SINGLE STRIP, STEEL, HOT DIPPED GALVANIZED INSIDE AND OUTSIDE, MAXIMUM LENGTH 72 INCHES FOR LIGHTING AND 36" FOR MOTORS. FLEXIBLE METAL CONDUIT SHALL BE LIQUIDTIGHT OR WATERTIGHT WITH PVC JACKET WHERE USED IN DAMP, WET OR OUTSIDE AREAS, AND LIQUIDTIGHT OR WATERTIGHT CONNECTORS SHALL BE USED.

NO RECEPTACLES OR TEL. OUTLETS TO BE MOUNTED BACK TO BACK, KEEP AT LEAST 2 INCHES BETWEEN RECEPTACLES AND TEL. OUTLETS.

ALL CONDUCTOR SHALL BE COPPER WITH A MINIMUM SIZE OF #12 AWG EXCEPT FOR FIRE ALARM. THESE CONDUCTORS SHOULD COMPLY WITH NFPA.

CONTRACTOR SHALL ALIGN FIXTURES, SMOKE DETECTORS, CEILING DIFFUSERS ETC. AS REQUIRED TO PROVIDE A UNIFORM PRESENTATION. AT NO TIME WILL AN IONIZATION DETECTOR BE LOCATED WITHIN 3'-0" OF A SUPPLY OR RETURN AIR GRILLE.

CIRCUIT BREAKERS AND WIRE ARE SIZED FOR SPECIFIC EQUIPMENT. BEFORE ORDERING WIRE, BREAKERS AND CONDUIT FOR THIS PROJECT THE CONTRACTOR SHALL COORDINATE WITH THE OTHER CONTRACTORS ON THE JOB AND VERIFY THE ELECTRICAL DATA FOR THE EQUIPMENT WHICH WILL ACTUALLY BE INSTALLED, RECOMPUTING WIRE AND BREAKER SIZES IF REQUIRED BY THE NEC.

ALL CONDUIT TERMINATING IN THE CEILING CAVITIES IS TO BE LABELED.

ALL CONDUIT SHALL BE COLOR CODED WITH 1/2" WIDE TAPE, 10'-0" ON CENTER IN ACCORDANCE WITH STANDARD INDUSTRY PRACTICE.

THE MOUNTING HEIGHTS AND LOCATIONS OF ALL WALL MOUNTED OUTLETS AND JUNCTION BOXES SHALL BE REVIEWED AND COORDINATED WITH THE ARCHITECT AND OWNER, PRIOR TO INSTALLATION, FOR USE WITH ACTUAL EQUIPMENT.

EACH CONTRACTOR WILL PROVIDE HIS OWN SUPPORT OF ALL DEVICES AND EQUIPMENT PROVIDED BY HIM AND SHALL SUPPORT SUCH EQUIPMENT PER APPROVED GOVERNING CODES OR PER APPROVAL OF THE ENGINEER/ARCHITECT. UNACCEPTABLE WORKMANSHIP OR MATERIALS SHALL BE REPLACED AT THE REQUEST OF THE ENGINEER/ARCHITECT AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR FLOOR PLAN DIMENSIONS.

THE CONTRACTOR SHALL COORDINATE ANY AND ALL WORK WITH OTHER TRADES INVOLVED IN THIS PROJECT PRIOR TO THE INSTALLATION OF HIS EQUIPMENT, SO AS TO AVOID CONFLICTS DURING CONSTRUCTION AND ALLOW FOR OPTIMUM WORKING SPACE AND MAINTENANCE.

ALL FUSES DISCONNECT SWITCHES AND BREAKER SIZES SHOWN FOR MECHANICAL EQUIPMENT SHALL BE VERIFIED BEFORE PURCHASE AND INSTALLATION OF SAID EQUIPMENT WITH THE EQUIPMENT SUPPLIER AND MECHANICAL CONTRACTOR.

WHERE EQUIPMENT PENETRATES EXTERIOR WALL OR ROOF THEY SHALL BE PROPERLY SEALED WITH METHODS APPROVED BY THE ARCHITECT/ENGINEER.

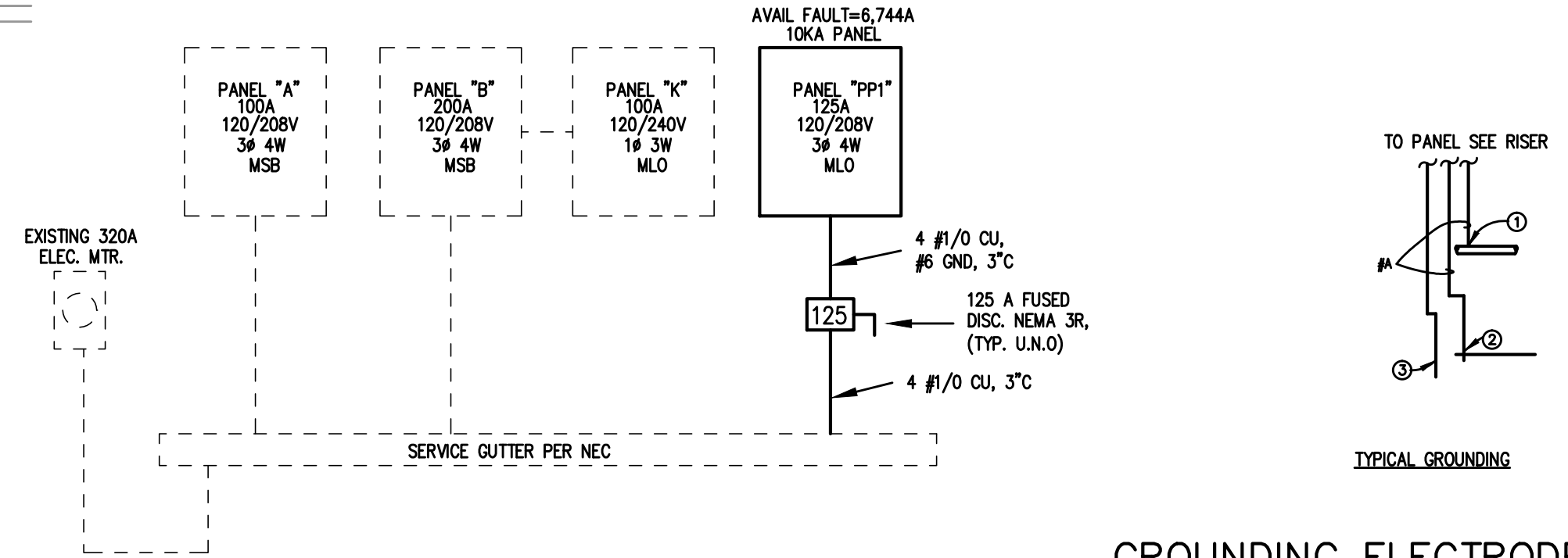
ALL WORK IS TO BE DONE IN STRICT COMPLIANCE WITH THE LATEST VERSION OF THE NEC AND APPLICABLE STATE CODES

RECESSED FIXTURES INSTALLED IN RATED ASSEMBLIES SHALL BE INSTALLED WITH AN ENCLOSURE SO AS TO MAINTAIN THE RATING OF ASSEMBLY.

2 ELECTRICAL NOTES
N.T.S.

1 ELECTRICAL PLAN
1/4"=1'-0"

3 ELECTRICAL RISER
N.T.S.



GROUNDING ELECTRODE DETAILS
GROUNDING ELECTRODE CONDUCTORS SHALL BE #4 BARE COPPER. OTHER MATERIAL AND INSTALLATION PER NEC

① CONNECT TO METALIC WATER PIPE AS REQ'D. ③ 3/4"x10' LONG COPPER CLAD GROUNDING ROD W/ #6 COPPER GROUND.

② #4 COPPER GROUND PLACED TO BLDG STEEL

A=#6 CU PP1

ELECTRICAL SYMBOLS

- ⊖ TYPICAL WALL RECEPTACLE
- ⊖ 42 110 V - 42" AFF
- ⊖ 1/2 HALF HOT AND HALF SWITCHED
- ⊖ WP WEATHERPROOF RECEPTACLE
- ⊖ 220⊖ 220 V OUTLET
- ⊖ FLOOR OUTLET
- ⊖ CEILING RECEPTACLE
- ⊖ TYPICAL SWITCH
- ⊖ 3 WAY OR MORE (SEE PLAN)
- ⊖ DIMMER SWITCH
- ⊖ PHONE JACK
- ⊖ SMOKE DETECTOR
- ⊖ PULL STATION
- ⊖ HORN/STROBE
- ⊖ ELECTRIC PANEL
- ⊖ FACP FIRE ALARM CONTROL PANEL
- ⊖ DISCONNECT
- ⊖ PHOTOCELL CONTROL
- ⊖ LIGHT FIXTURES



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OUR REDEEMER LUTHERAN CHURCH
KITCHEN / COVERED PORCH ADDITION
1605 VAN BUREN AVE / FAYETTEVILLE NORTH CAROLINA 28303

REVISIONS

NO.	DATE	DESCRIPTION

DRAWN BY MJL
CHECKED BY CSL
DATE 12-7-16
PROJ # 2016-144
SET NO.
SHEET SUBJECT

02-23-17



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E-2

OF SHEETS

CALLOUT	SYMBOL	LAMP	DESCRIPTION	BALLAST	MOUNTING	MODEL	INPUT WATTS	VOLTS	QUANTITY
A		LED	LOW PROFILE LED WRAPAROUND	ELECTRONIC	SURFACE	COLUMBIA LAW 4 - 40 HL - EU	60	120V 1P 2W	6
EMER/EXIT		(2) 1.5W LED	COMBINATION EXIT/EMERGENCY UNIT WITH SEALED BEAM DUAL REMOTE HEADS	ELECTRONIC	WALL/CEILING	LITHONIA LHQM S W 1 R 120/277 ELA NX H0606	3	120V 1P 2W	1
H		(1)	SURFACE MTD. LED LIGHT FIXTURE	ELECTRONIC	SURFACE	HUBBELL CLO 24NB55 5K 5X5 UNV SQ BBT OR EQ.	55	120V 1P 2W	4

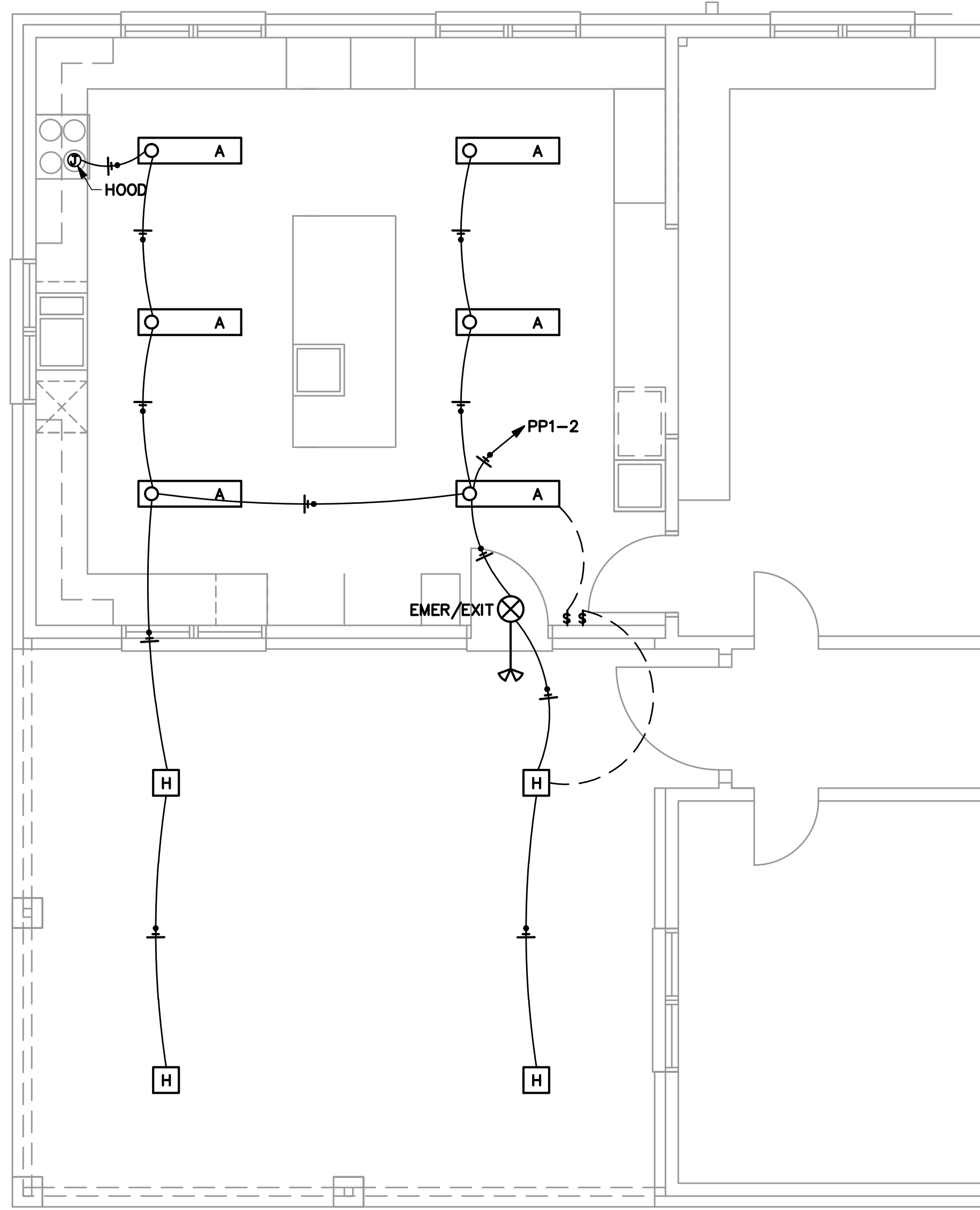
2012 North Carolina Energy Conservation Code

Commercial Energy Efficiency - Electrical Summary

THIS SECTION REQUIRED FOR ALL PROJECTS THAT INCLUDE ELECTRICAL DESIGN

- 501.1 METHOD OF COMPLIANCE NC SPECIFIC COMCHECK PROVIDED
 2012 NCECC CHAPTER 5 20% IMPROVEMENT OVER ASHRAE 90.1-2007
- 501.2 APPLICATION COMPLIANCE
 - 506.2.1 EFFICIENT MECH EQUIPMENT 506.2.4 HI EFFICIENCY DOMESTIC HW
 - 506.2.2 REDUCED LTG DENSITY 506.2.5 ONSITE RENEWABLE ENERGY
 - 506.2.3 ENERGY RECOVERY SYSTEMS 506.2.6 DAYLIGHTING CONTROLS
- 505.2 INTERIOR LIGHTING CONTROLS (MANDATORY REQUIREMENTS)
 - INTERIOR LIGHTING SYSTEMS ARE PROVIDED WITH CONTROLS AS REQUIRED PER SECTION 505.2, EXCEPT WHERE EXEMPTED.
- 505.3- TANDEM WIRING (MANDATORY REQUIREMENTS)
 - FLUORESCENT LUMINARIES LOCATED WITHIN THE SAME AREA ARE TANDEM WIRED AS REQUIRED PER SECTION 505.3, EXCEPT WHERE EXEMPTED.
- 505.4- EXIT SIGNS (MANDATORY REQUIREMENTS)
 - INTERNALLY ILLUMINATED EXIT SIGNS DO NOT EXCEED 5 WATTS PER SIDE.
- 505.5- INTERIOR LIGHTING POWER REQUIREMENTS (PRESCRIPTIVE) (NON-EXEMPT)
 - 505.5.1 - TOTAL CONNECTED INTERIOR LIGHTING POWER:
 363 _____ WATTS SPECIFIED
 _____43. % REDUCTION OF SPECIFIED VS. ALLOWED
 - 505.5.2 - TOTAL ALLOWED INTERIOR LIGHTING POWER:
 METHOD OF COMPLIANCE:
 BUILDING AREA METHOD SPACE-BY-SPACE METHOD
 _____638 _____ WATTS ALLOWED
- 505.6.1 - EXTERIOR BUILDING GROUNDS LIGHTING:
 - LAMPS OPERATING AT GREATER THAN 100 WATTS FOR EXTERIOR BUILDING GROUNDS LUMINARIES HAVE A MINIMUM EFFICIENCY OF 60 LUMENS PER WATT.
- 505.6.2 - EXTERIOR BUILDING LIGHTING POWER (NON-EXEMPT)
 - 505.6.2 - TOTAL CONNECTED EXTERIOR LIGHTING POWER:
 _____55 _____ WATTS SPECIFIED
 - 505.6.2 - TOTAL ALLOWED EXTERIOR LIGHTING POWER:
 _____136 _____ WATTS ALLOWED
- 505.6.3 - SHIELDING OF EXTERIOR BUILDING LIGHTING FIXTURES:
 - ONLY FULLY SHIELDED EXTERIOR BUILDING LIGHTING FIXTURES ARE PROVIDED, EXCEPT WHERE EXEMPTED.
 - ALTERNATIVE EXTERIOR BUILDING LIGHTING FIXTURES ARE PROVIDED FOR GREATER ENERGY EFFICIENCY OVER FULLY SHIELDED EXTERIOR BUILDING LIGHTING FIXTURES.
- 505.7 - ELECTRICAL ENERGY CONSUMPTION (DWELLING UNITS):
 - N/A SEPARATE TENANT METERING TO DETERMINE ELECTRICAL ENERGY CONSUMPTION HAS BEEN PROVIDED FOR BUILDINGS HAVING INDIVIDUAL DWELLING UNITS.

SIGNED: _____
 NAME: Chris S. Locklear
 TITLE: Engineer



1 LIGHTING PLAN
 E2 1/4"=1'-0"