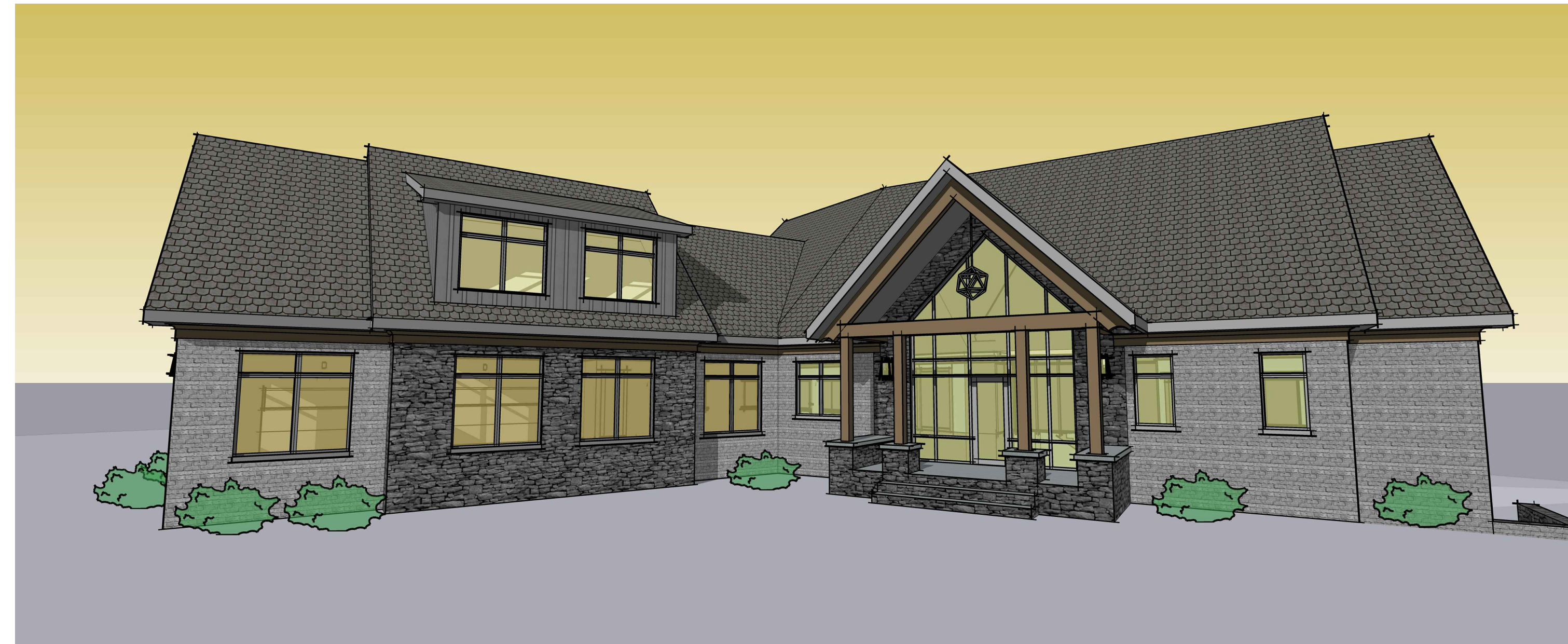


ROUKEMA BUCHANAN RESIDENCE

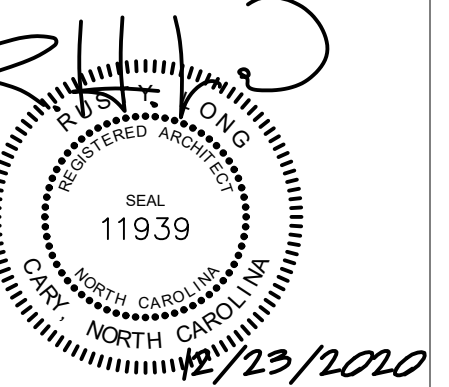


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ABBREVIATIONS

Ⓢ	AT	HT	HEIGHT
&	AND	HVAC	HEATING, VENTILATING, AIR CONDITIONING
A	AMPERE	HZ	HERTZ
A.B.	ANCHOR BOLT	INSUL	INSULATION
ABV	ABOVE	INV	INVERT
ACCU	AIR COOLED CONDENSING UNIT	KVA	KILOVOLT AMPERE
A.C.T.	ACOUSTICAL CEILING TILE	KW	KILOWATT
A.D.A.	AMERICAN WITH DISABILITIES ACT	LAV	LAVATORY
ADJ	ADJUSTABLE	LG	LONG
A.F.F.	ABOVE FINISH FLOOR	MATL	MATERIAL
A.H.U.	AIR HANDLING UNIT	MAX	MAXIMUM
ALUM	ALUMINUM	MBH	1,000 BRITISH THERMAL UNITS
APPROX	APPROXIMATE	MECH	MECHANICAL
BD	BOARD	MIL	MILLIMETER
BG	BELOW GRADE	MIN	MINIMUM
BLDG	BUILDING	M.H.	MOUNTING HEIGHT
BLK	BLOCK, BLOCKING	M.L.O.	MAIN LUG ONLY
BRG	BEARING	NO.	NUMBER
BRKR	BREAKER	NOM	NOMINAL
BS	BAR SINK	O.C.	ON CENTER
CFM	CUBIC FEET PER MINUTE	O.W.B.E.	OFF-WHITE BASE ENAMEL
CKT	CIRCUIT	P	PANEL
CLG	CEILING	P.D.	PRESSURE DROP
CMU	CONCRETE MASONRY UNITS	PH	PHASE
C.O.	CLEAN OUT	P.T.	PRESSURE TREATED
COL	COLUMN	PTD	PAINTED
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE
CONT	CONTINUOUS	PL. LAM.	PLASTIC LAMINATE
COP	COEFFICIENT OF PERFORMANCE	PLYWD	PLYWOOD
C.O.T.G.	CLEAN OUT TO GRADE	RCPT	RECEPTOR
CU	COPPER	REINF	REINFORCE
CW	COLD WATER	R.O.	ROUGH OPENING
	DIAMETER	RPBP	REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER
DBL	DOUBLE	RPM	REVOLUTIONS PER MINUTE
DIA	DIAMETER	SCHED	SCHEDULE
DISP	DISPENSER	SIM	SIMILAR
DWG	DRAWING	S.C.	SOLID CORE
EA	EACH	S.N.	SOLID NEUTRAL
ELEC	ELECTRICAL	SQ	SQUARE
ELEV	ELEVATION	SS	SLOP SINK
E.F.	EXHAUST FAN	STA	STATION
EQ	EQUAL	STL	STEEL
EQUIP	EQUIPMENT	SUSP	SUSPENDED
E.W.C.	ELECTRIC WATER COOLER	T.B.M.	TEMPORARY BENCH MARK
EXIST	EXISTING	TELE	TELEPHONE
F	FAHRENHEIT	TEMP	TEMPERED
F.C.	FOOT CANDLES	THRESHLD	THRESHOLD
F.D.	FLOOR DRAIN	TYP	TYPICAL
F.E.	FIRE EXTINGUISHER	UC	UNDERCUT
F.F.	FINISH FLOOR	U.O.N.	UNLESS OTHERWISE NOTED
FIN	FINISH	V	VENT
FTG	FOOTING	V.B.	VAPOR BARRIER
GALV	GALVANIZED	V.C.T.	VINYL COMPOSITION TILE
G.F.I.	GROUND FAULT INTERRUPTER	VERT	VERTICAL
GND	GROUND	V.D.O.T.	VIRGINIA DEPT. OF TRANSPORTATION
G.S.F.	GROSS SQUARE FOOTAGE	V.T.R.	VENT THROUGH ROOF
G.W.B.	GYPSON WALLBOARD	W	WATT
GYP	GYPSON	W/	WITH
H.C.	HOLLOW CORE	WB	WET BULB
HDWR	HARDWARE	WC	WATER CLOSET
H.M.	HOLLOW METAL	WD	WOOD
HP	HORSEPOWER	WG	WATER GAUGE
HW	HOT WATER	W.H.	WALL HYDRANT
HWH	HOT WATER HEATER	WP	WEATHERPROOF

PROJECT NARRATIVE

THIS DRAWING SET IS DESIGNED TO COMPLY WITH THE CURRENT VERSION OF THE NORTH CAROLINA RESIDENTIAL BUILDING CODE (INTERNATIONAL RESIDENTIAL CODE WITH NC AMENDMENTS)

ALL WORK SHALL BE ACCOMPLISHED BY APPROPRIATELY LICENSED GENERAL AND SPECIALTY CONTRACTORS, WHERE APPROPRIATE.

ARCHITECT:
RUSSELL LONG
LICENSE NO. 11939

919-602-4180
RUSTY@RUSTYLONG.COM

BUILDING AREA

FIRST FLOOR CONDITIONED:	3,121 SF
FIRST FLOOR GARAGE:	868 SF
FIRST FLOOR POOL ROOM:	380 SF
FRONT PORCH:	158 SF
REAR SCREENED PORCH:	317 SF
BASEMENT:	1,093 SF
BONUS ROOM:	655 SF

INDEX OF DRAWINGS

ARCHITECTURAL	STRUCTURAL		
A000	COVER PAGE	S100	GENERAL STRUCTURAL NOTES
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A010	BASEMENT FLOOR PLAN	S102	FIRST FLOOR FRAMING PLAN
A100	FIRST FLOOR PLAN	S103	SECOND FLOOR FRAMING PLAN
A110	BONUS FLOOR PLAN	S104	ROOF FRAMING OVER GARAGE PLAN
A200	ROOF PLAN	S201	WALL SECTIONS
A300	EXTERIOR RENDERING	S202	WALL SECTIONS
A310	EXTERIOR RENDERING	S203	WALL SECTIONS
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A400	EXTERIOR ELEVATIONS	S207	WALL SECTION AT STEEL
A410	EXTERIOR ELEVATIONS	S301	FOUNDATION DETAILS
A500	WINDOW AND DOOR SCHEDULES	S401	FRAMING DETAILS
A510	WALL SECTIONS		
A520	WALL SECTIONS		
A530	WALL SECTIONS		
A540	WALL SECTIONS		
A550	WALL SECTIONS		
A560	WALL SECTIONS		
A570	WALL SECTION AT STEEL		

COVER
PAGE

A000

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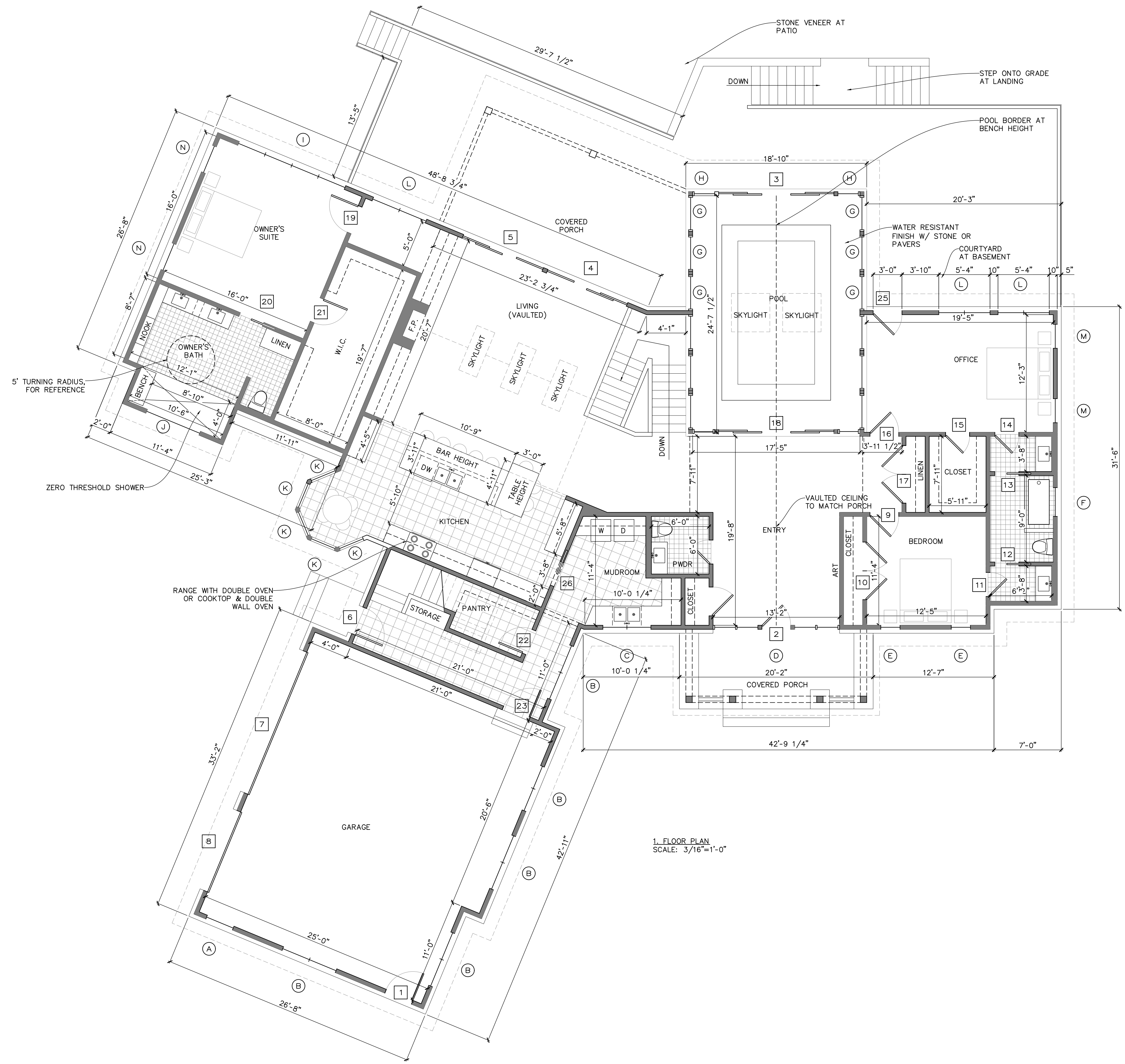
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**PROPOSED
FLOOR PLAN**

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1. FLOOR PLAN
SCALE: 3/16"=1'-0"



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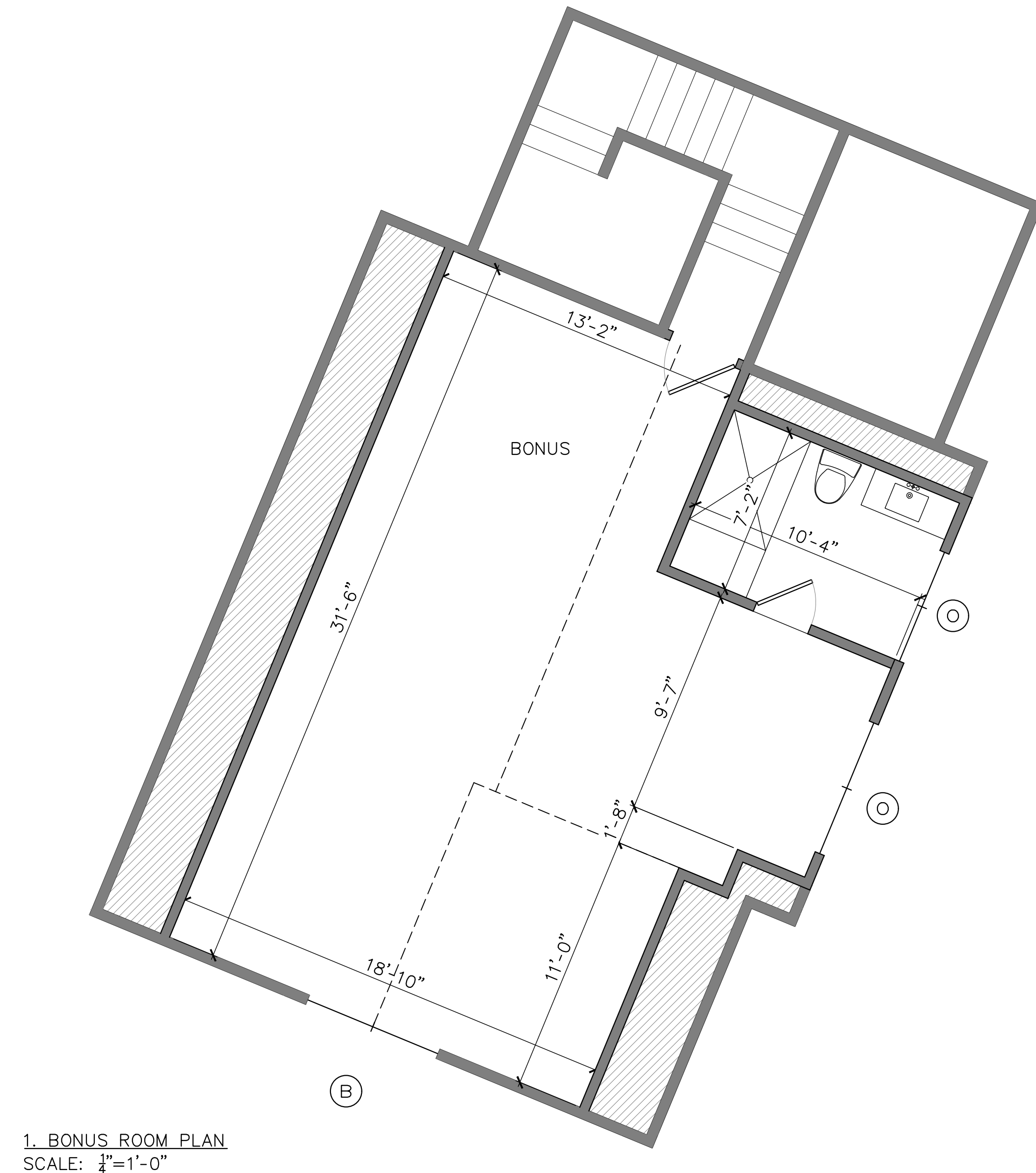
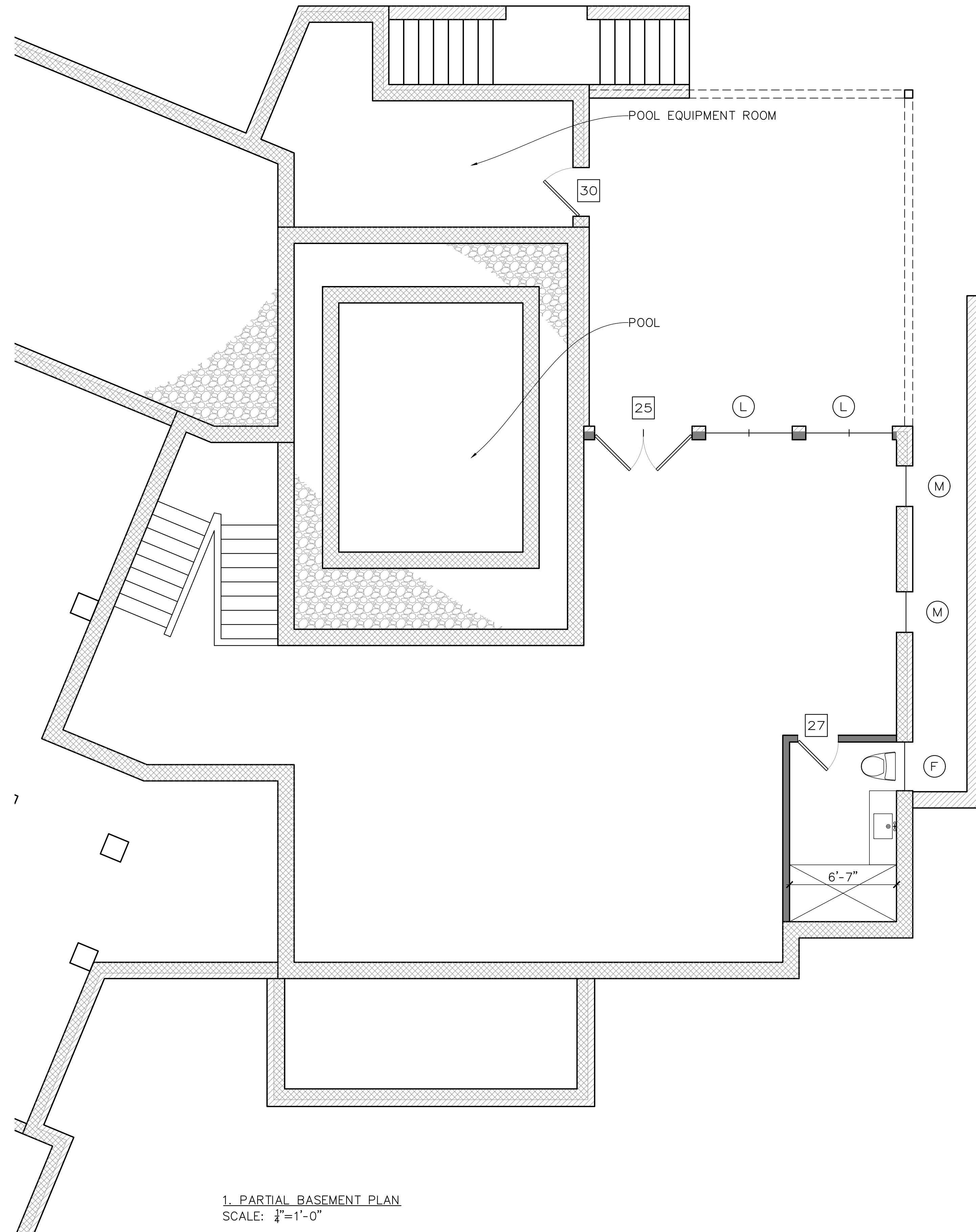
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BONUS ROOM

A110

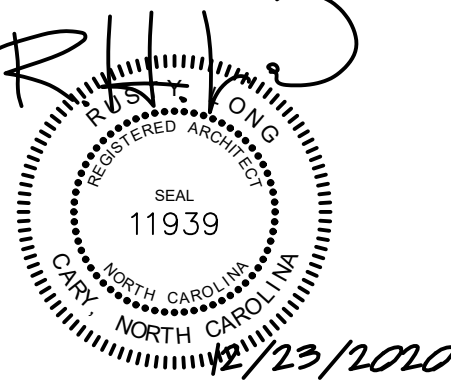
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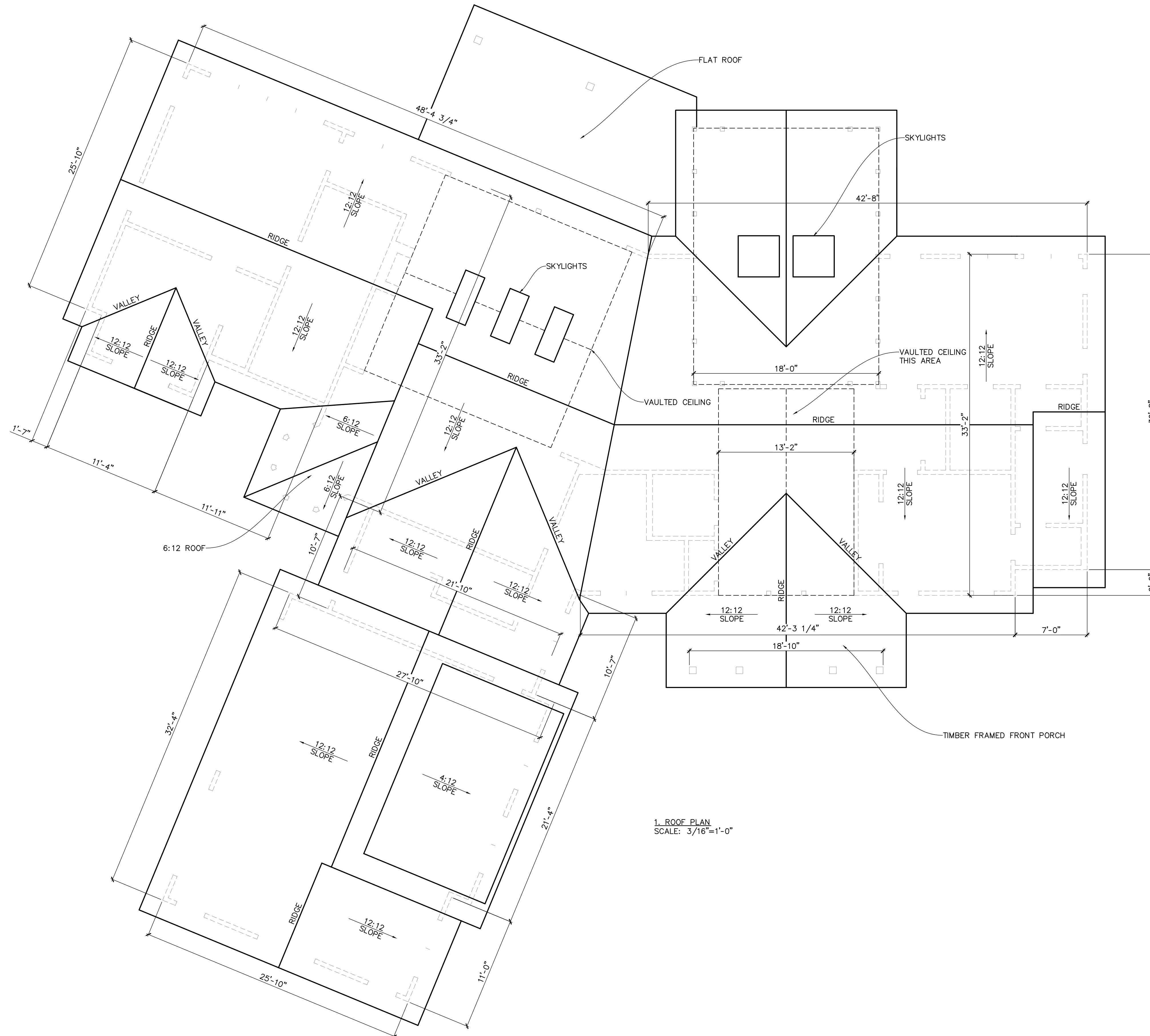
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**PROPOSED
ROOF PLAN**

A200

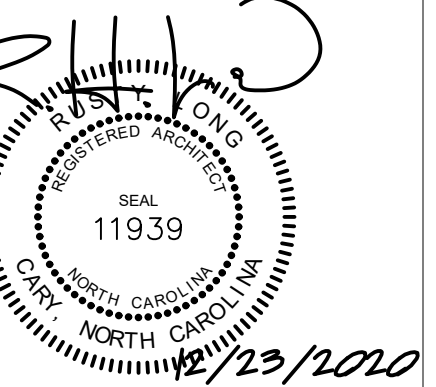
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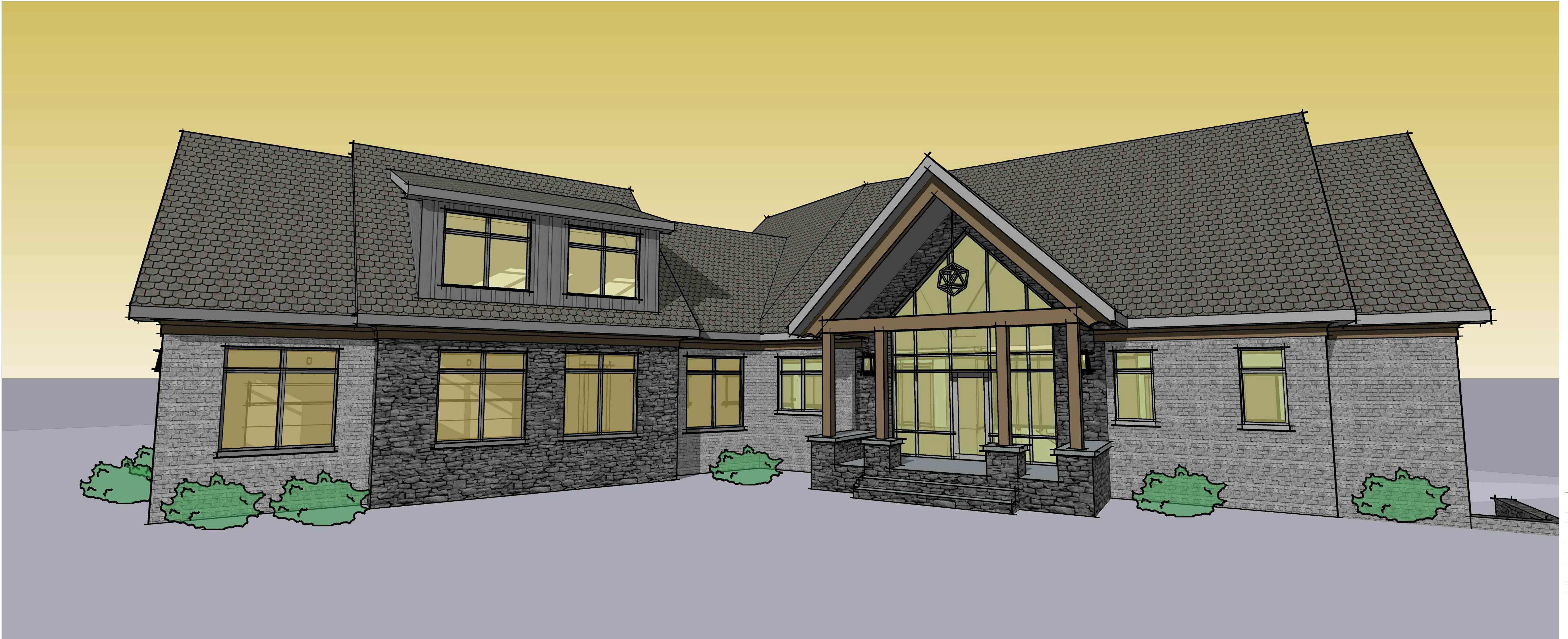
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EXTERIOR
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FRONT PERSPECTIVE - AT ENTRY



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FRONT PERSPECTIVE - AT SIDE OF GARAGE

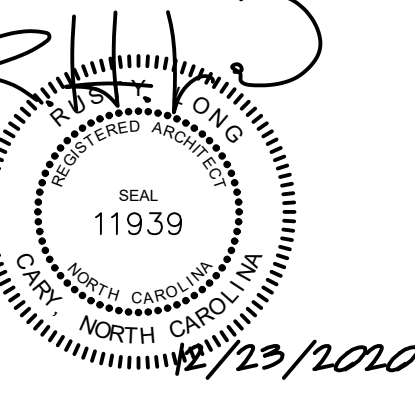


GARAGE AND MUDROOM ENTRANCE



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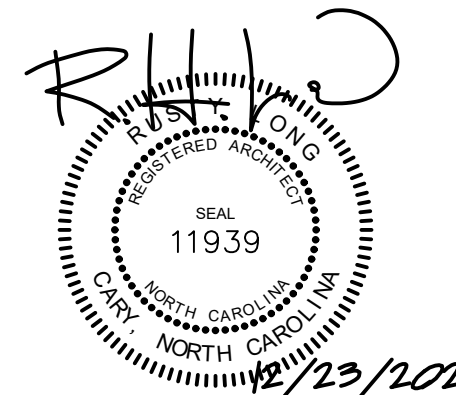


REAR AT OUTDOOR KITCHEN



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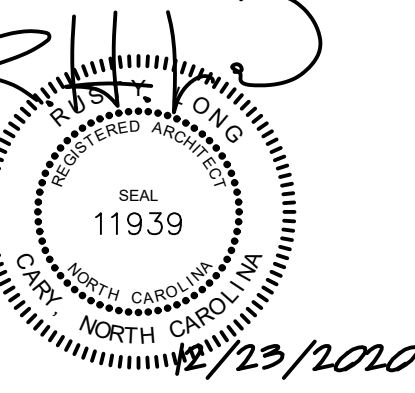
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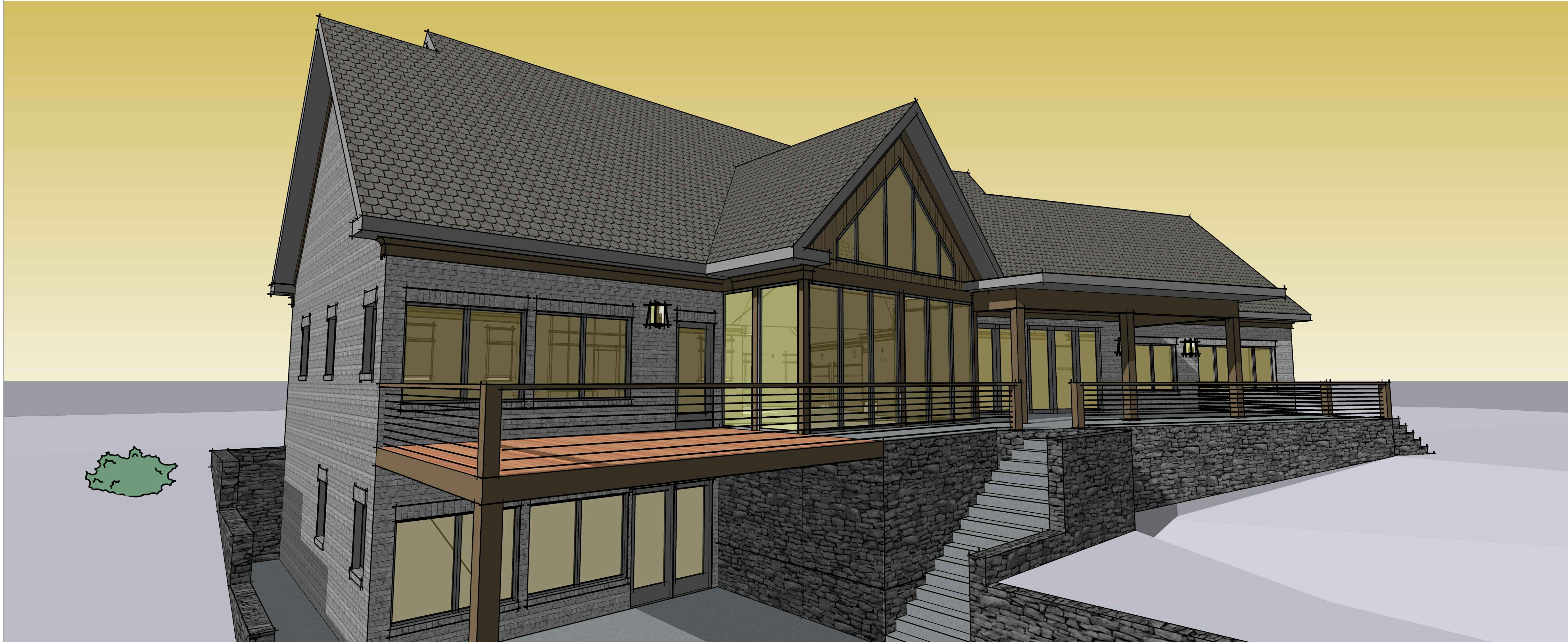
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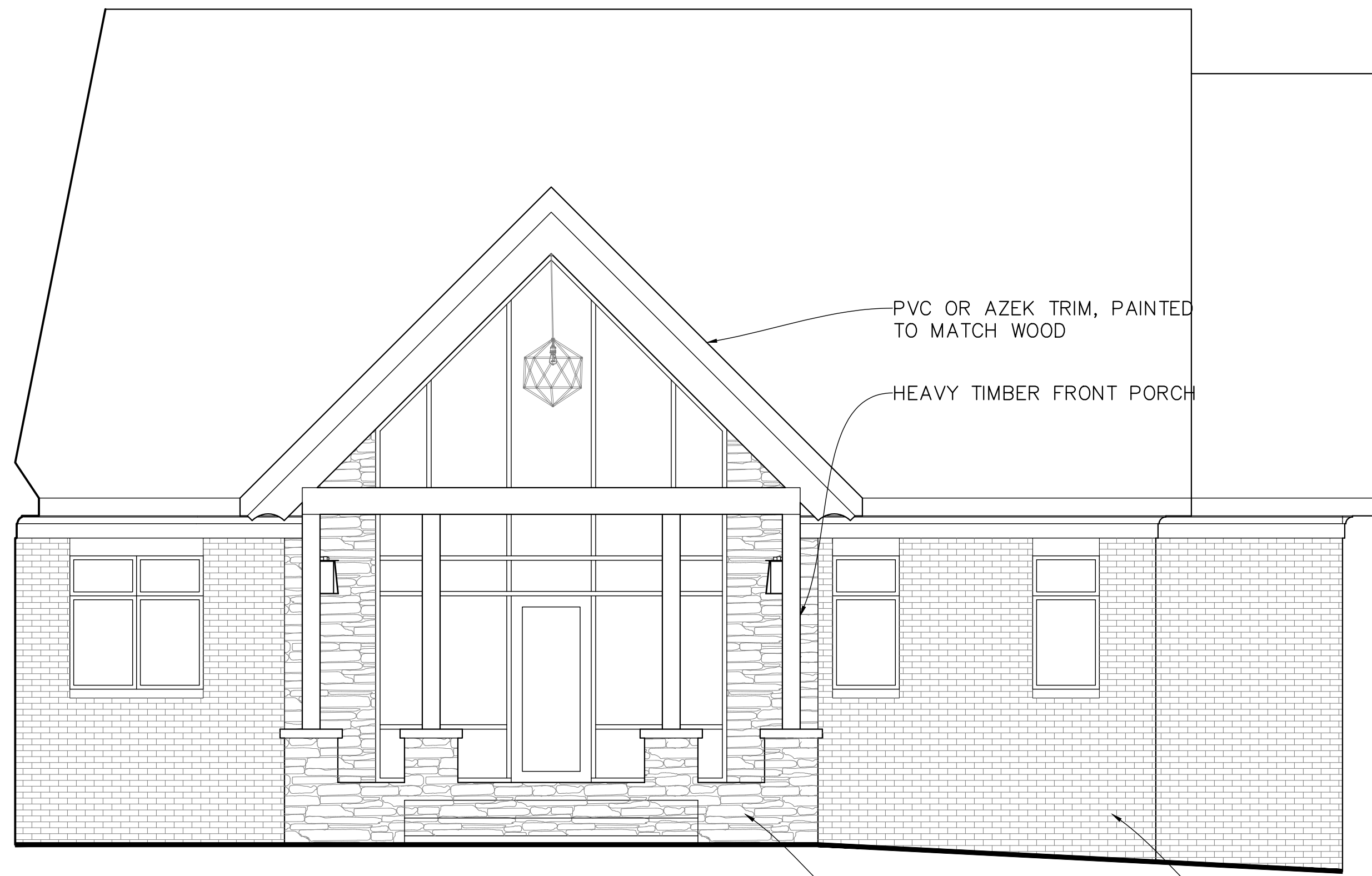
EXTERIOR
RENDERINGS

A340

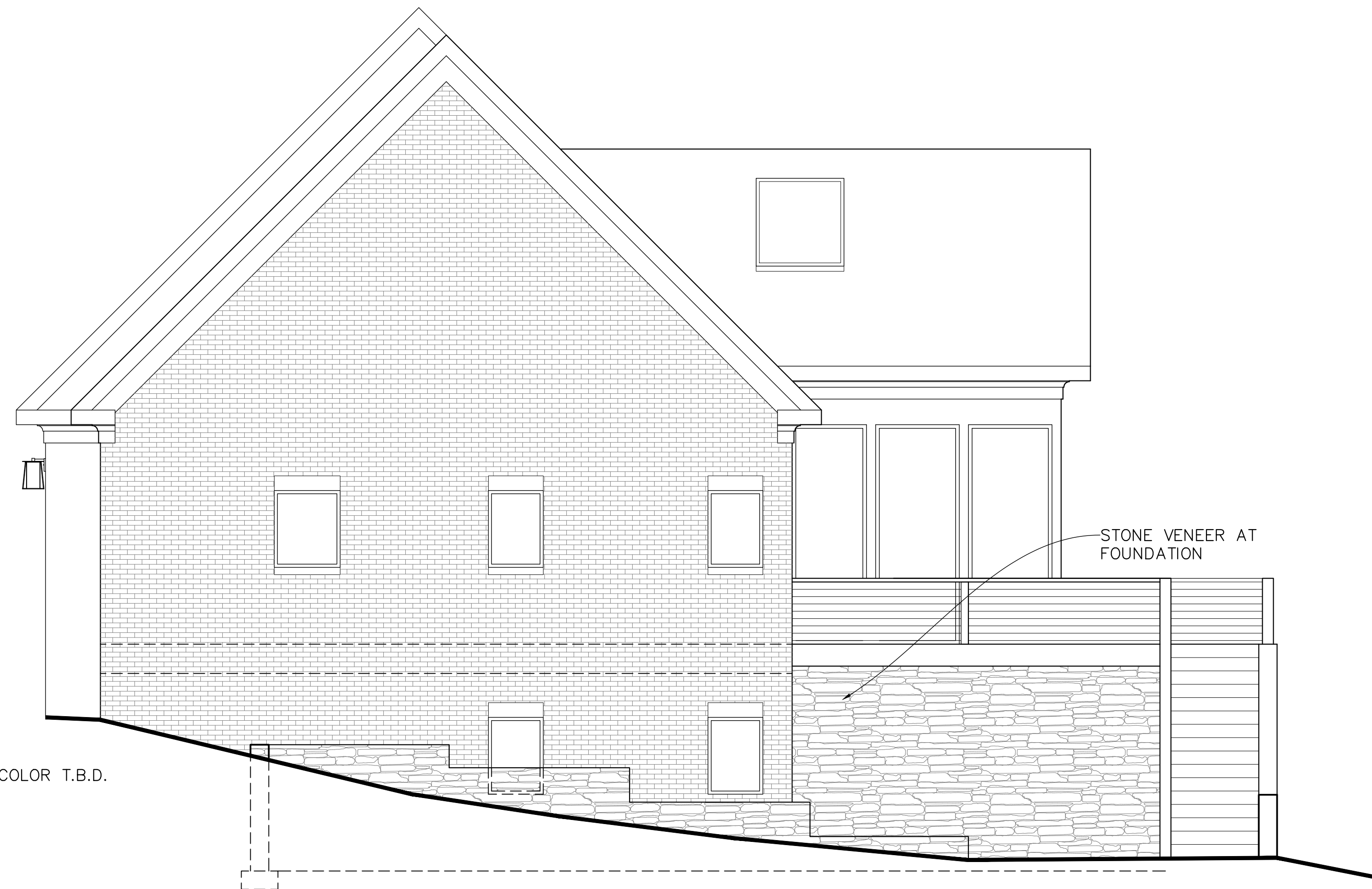
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REAR AT OFFICE AND POOL



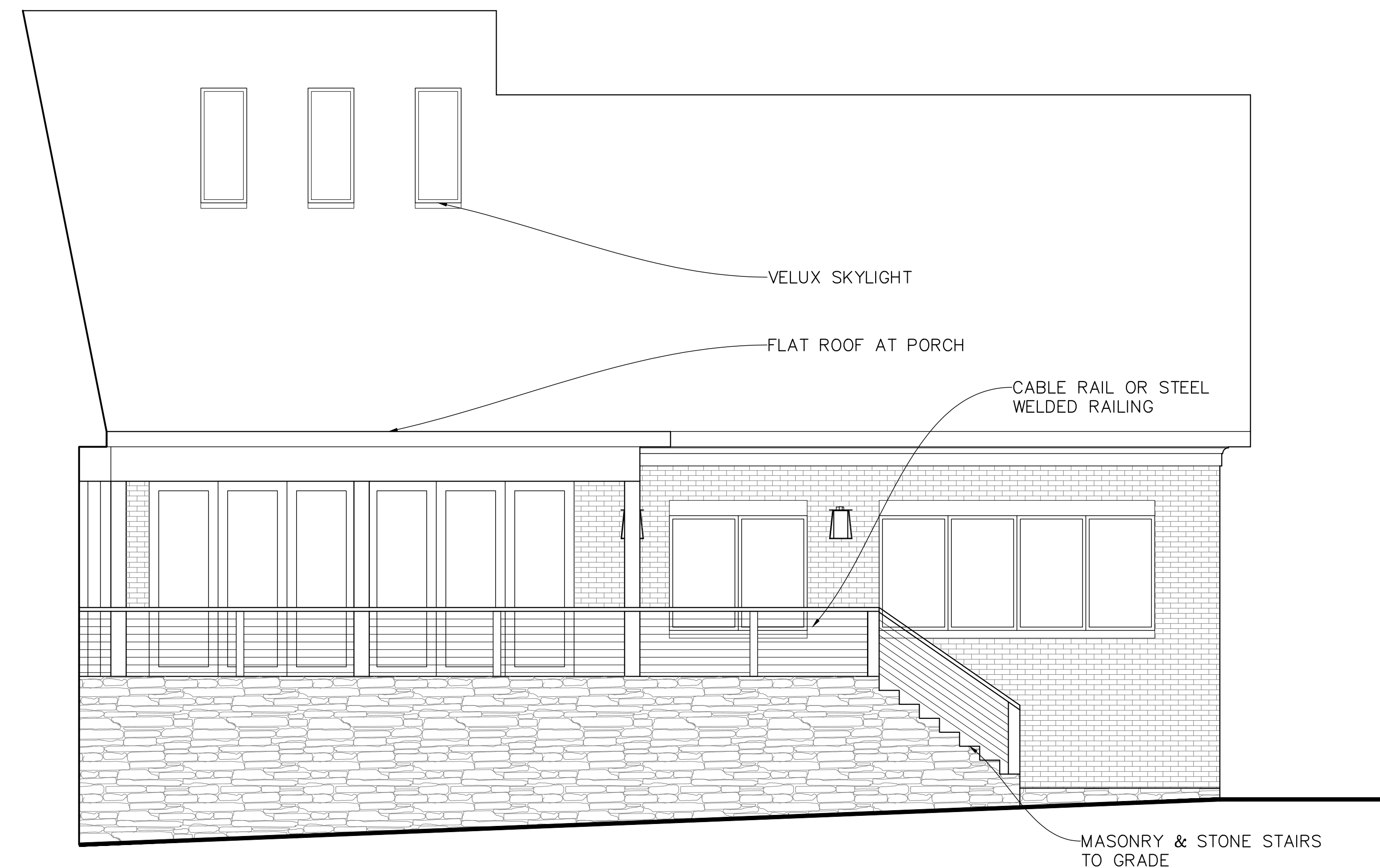
ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4



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ELEVATIONS
1-4

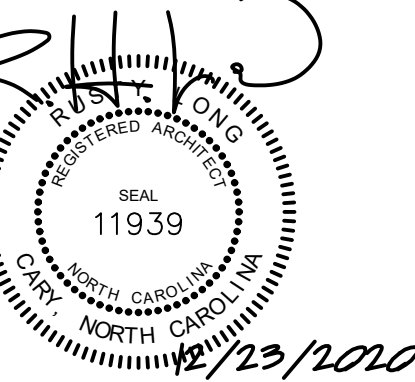
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ELEVATIONS
5-7

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ELEVATION 5



ELEVATION 6



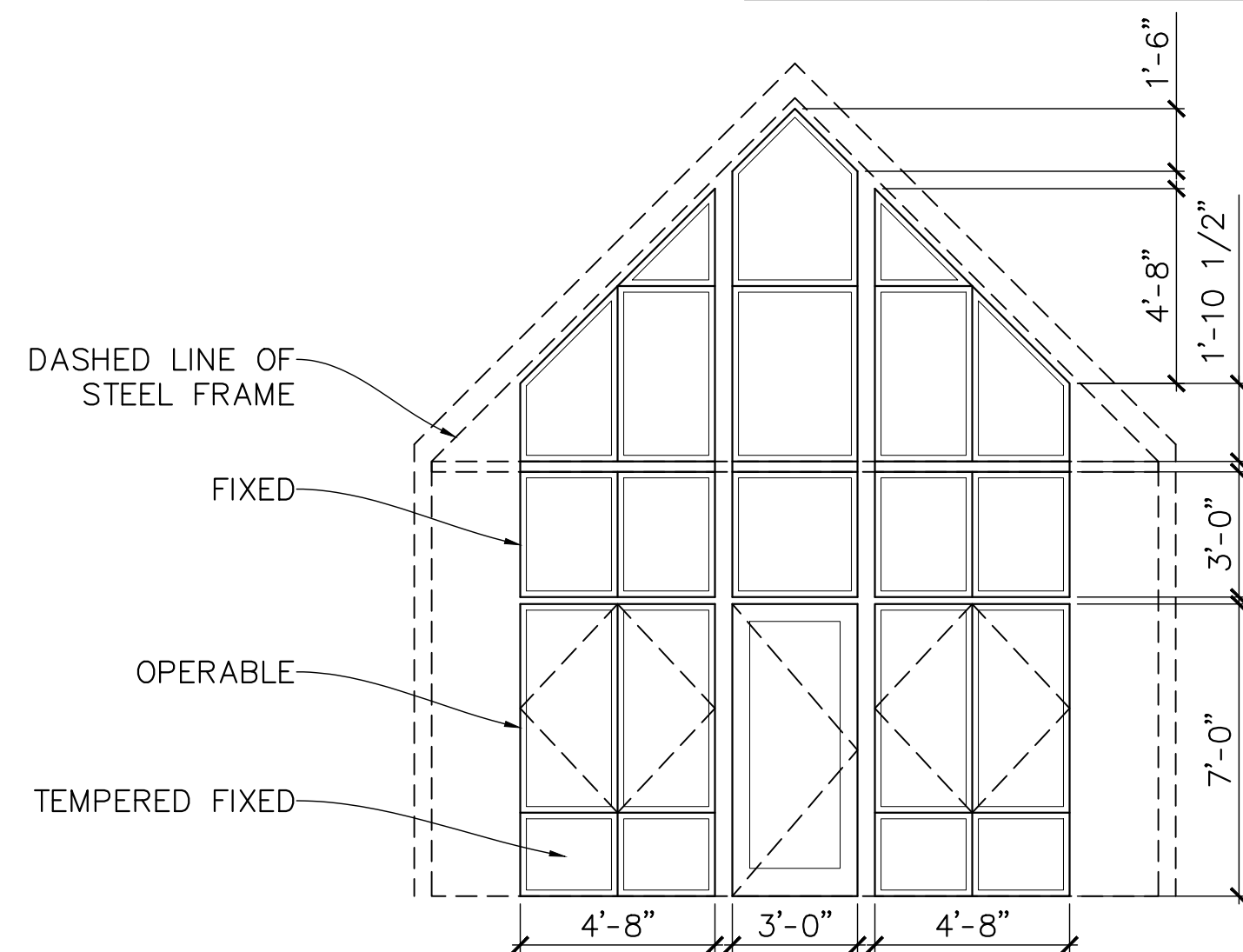
ELEVATION 7

WINDOW SCHEDULE

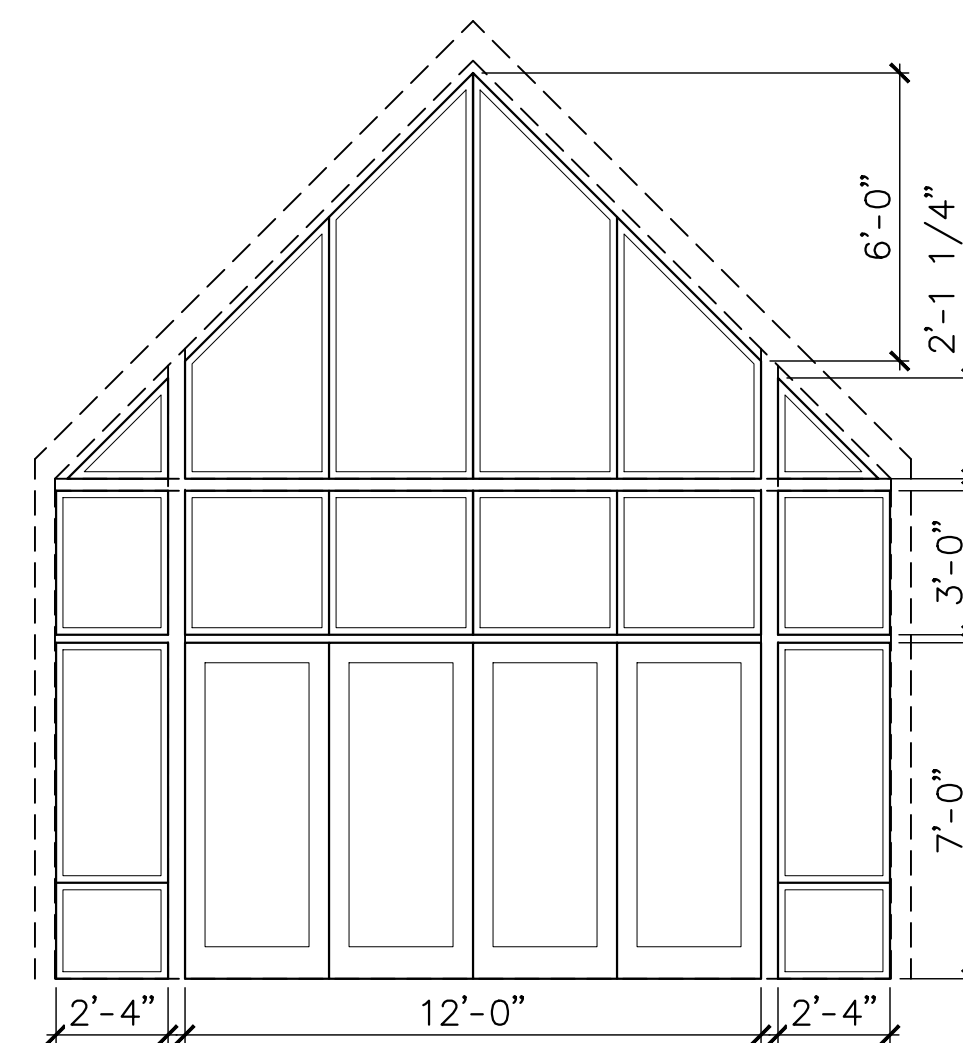
SYMBOL	TYPE	WIDTH	HEIGHT	TRANSOM HEIGHT	QUANTITY	NOTES
A	SINGLE	3'-0"	5'-0"	1'-6"	1	
B	DOUBLE	3'-0"	5'-0"	1'-6"	7	
C	DOUBLE	2'-6"	3'-6"	1'-6"	1	
D	MULTIPLE					CUSTOM ENTRY - SEE DETAIL
E	SINGLE	2'-6"	3'-6"	1'-6"	4	
F	SINGLE	3'-0"	3'-0"		2	HEAD AT TRANSOM HEIGHT
G	SINGLE	3'-6"	8'-6"		12	CUSTOM FIXED AT POOL
H	SINGLE	2'-3"	8'-6"		4	CUSTOM FIXED AT POOL
J	QUAD	3'-0"	5'-0"		1	
K	SINGLE	6'-0"	3'-6"		1	HEAD AT TRANSOM HEIGHT
L	SINGLE	2'-8"	5'-0"		5	
M	DOUBLE	2'-8"	5'-0"		4	
N	SINGLE	2'-6"	3'-6"		2	
O	SINGLE	3'-0"	5'-0"		4	
O	DOUBLE	3'-0"	4'-0"	1'-6"	2	HEAD T.B.D. BASED ON DORMER

DOOR SCHEDULE

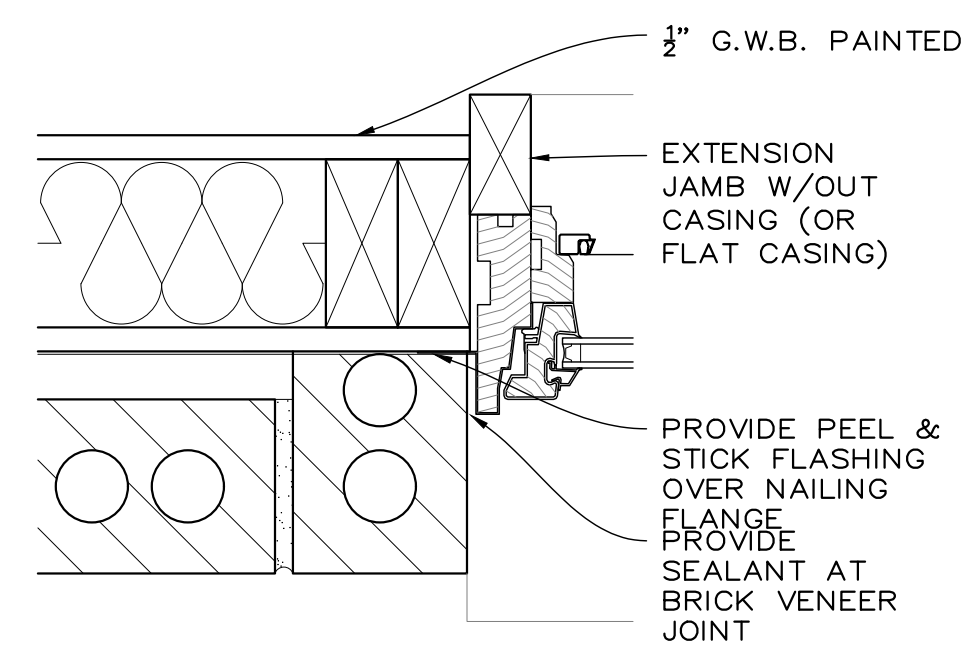
SYMBOL	TYPE	WIDTH	HEIGHT	TRANSOM HEIGHT	GLAZING	NOTES
1	ENTRY	3'-0"	7'-0"	1'-6"	FULL	
2	ENTRY	3'-0"	7'-0"		FULL	CUSTOM ENTRY W/ WINDOWS
3	SLIDING	12'-0"	7'-0"	1'-6"	FULL	
4	SLIDING	9'-0"	8'-6"		FULL	
5	SLIDING	9'-0"	8'-6"		FULL	
6	ENTRY	3'-0"	7'-0"	1'-6"	HALF	
7	GARAGE	18'-0"	7'-0"		QUARTER	
8	GARAGE	9'-0"	7'-0"		QUARTER	
9	INTERIOR	3'-0"	7'-0"		NONE	SOLID CORE
10	INTERIOR	6'-0"	7'-0"		NONE	
11	INTERIOR	2'-6"	7'-0"		NONE	SOLID CORE
12	POCKET	2'-6"	7'-0"		NONE	SOLID CORE
13	POCKET	2'-6"	7'-0"		NONE	SOLID CORE
14	INTERIOR	2'-6"	7'-0"		NONE	SOLID CORE
15	INTERIOR	2'-6"	7'-0"		NONE	
16	INTERIOR	3'-0"	7'-0"		NONE	SOLID CORE
17	INTERIOR	6'-0"	7'-0"		NONE	
18	SLIDING	12'-0"	7'-0"	1'-6"	FULL	
19	INTERIOR	3'-0"	7'-0"		NONE	SOLID CORE
20	POCKET	3'-0"	7'-0"		FROSTED	
21	INTERIOR	2'-8"	7'-0"		NONE	
22	INTERIOR	2'-8"	7'-0"		NONE	
23	RATED	3'-0"	7'-0"		NONE	
24	PATIO	6'-0"	7'-0"		FULL	
25	PATIO	6'-0"	7'-0"		FULL	OPTIONAL SLIDER
26	POCKET	2'-8"	7'-0"		FROSTED	
27	INTERIOR	2'-6"	7'-0"		NONE	SOLID CORE
28	INTERIOR	3'-0"	7'-0"		NONE	
29	INTERIOR	2'-6"	7'-0"		NONE	SOLID CORE
30	EXTERIOR	3'-0"	7'-0"		HALF	



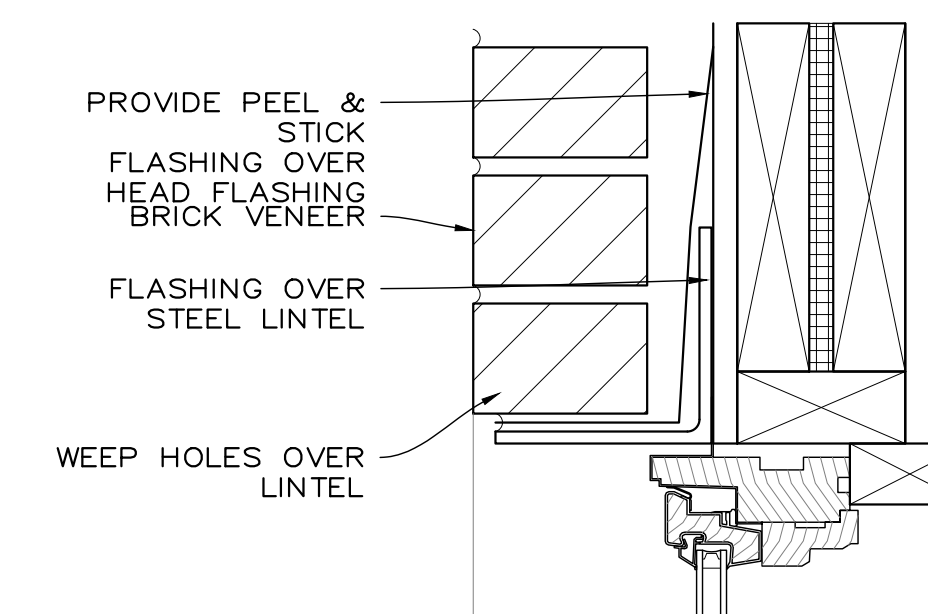
1. CUSTOM ENTRY WINDOWS
SCALE: 1/4"=1'-0"



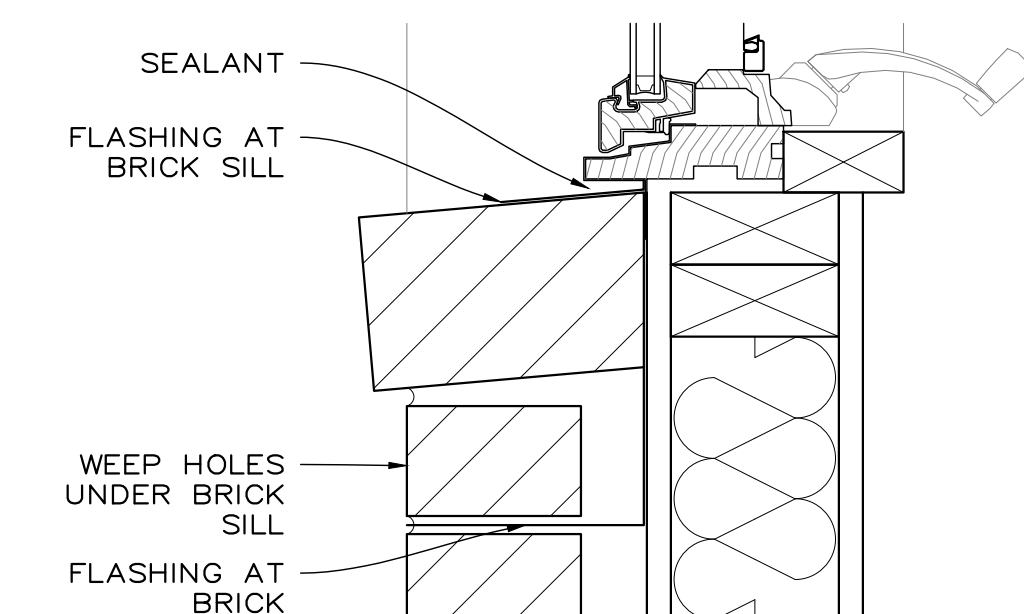
2. CUSTOM WINDOWS AT POOL ROOM
SCALE: 1/4"=1'-0"



3. TYPICAL JAMB AT BRICK
SCALE: 3/8"=1'-0"



4. TYPICAL HEAD AT BRICK
SCALE: 3/8"=1'-0"



5. TYPICAL SILL AT BRICK
SCALE: 3/8"=1'-0"



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WINDOW AND DOOR
SCHEDULES

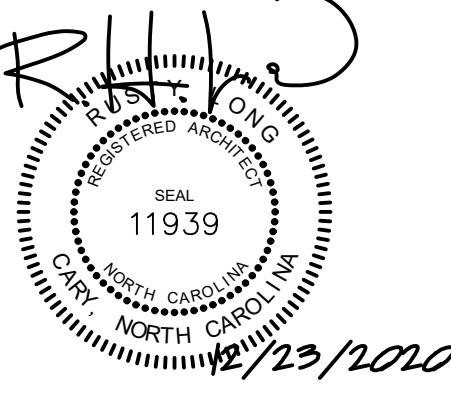
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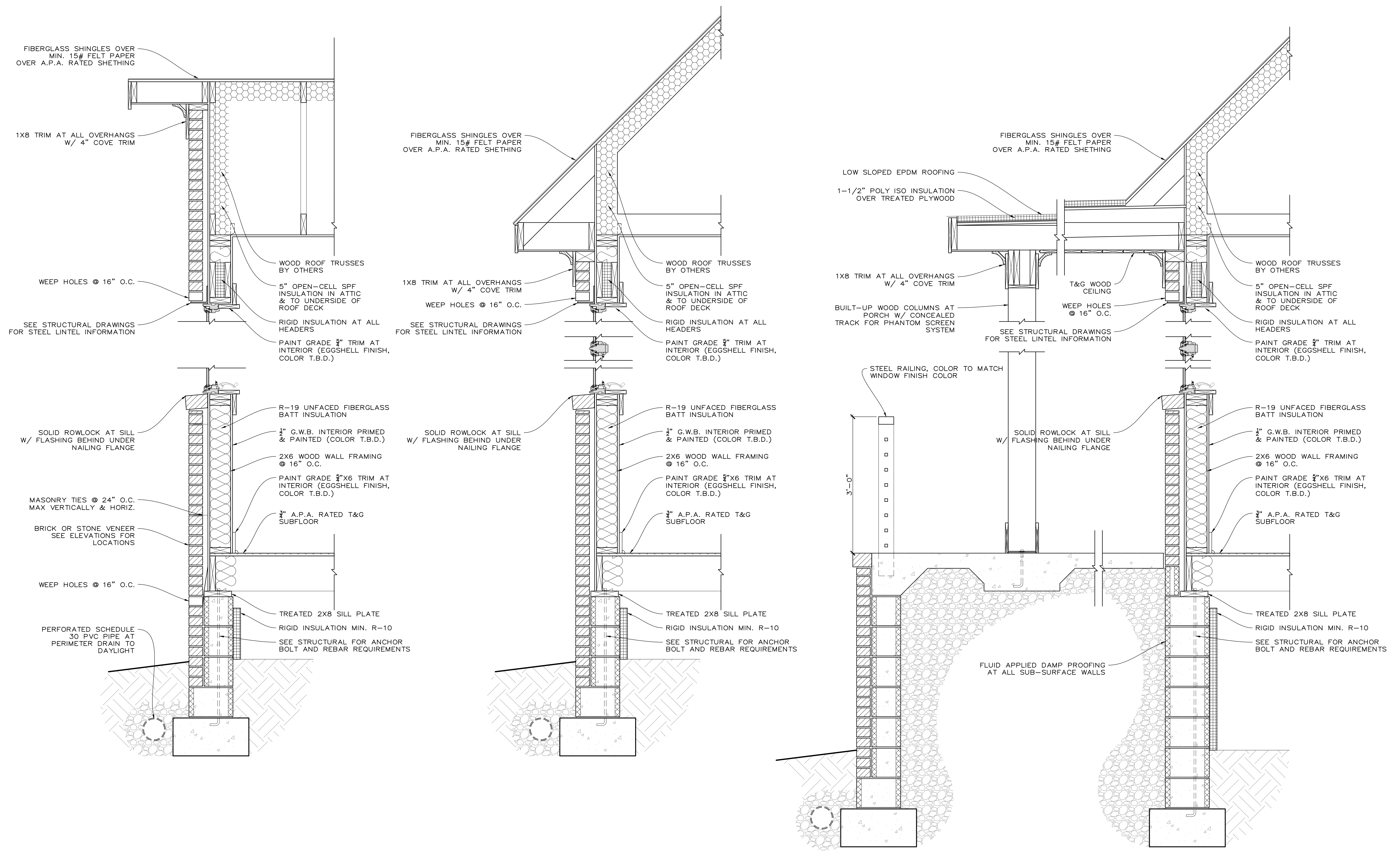
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WALL SECTIONS

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1. WALL SECTION 'A'
SCALE: 1"=1'-0"

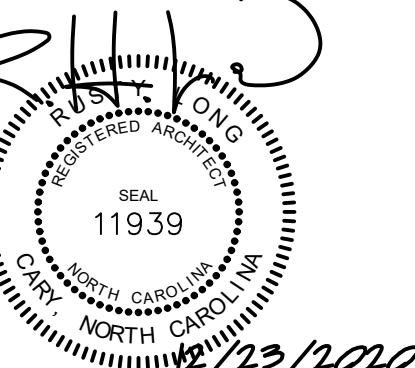
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SCALE: 1"=1'-0"

3. WALL SECTION 'C'
SCALE: 1"=1'-0"



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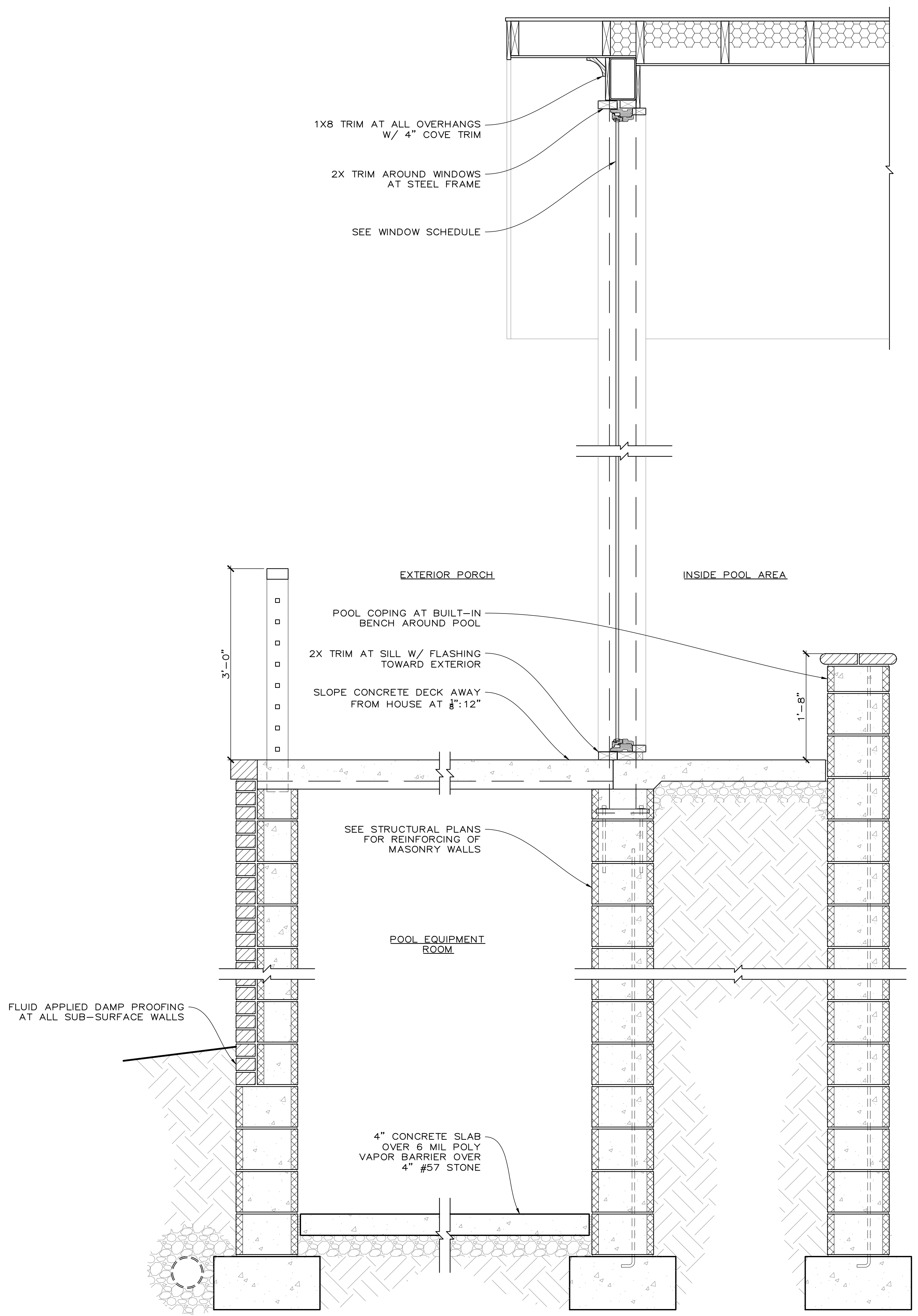
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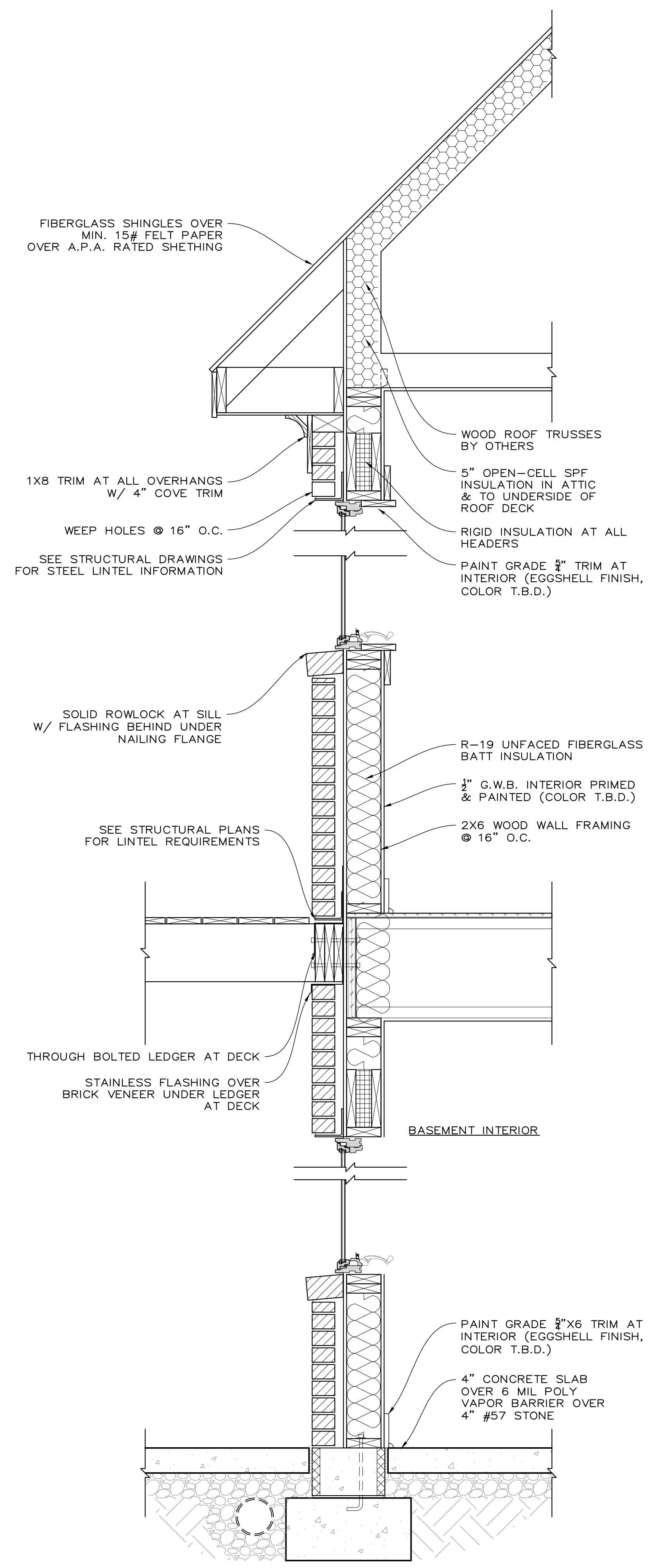
WALL SECTIONS

A520

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1. WALL SECTION 'D'
SCALE: 1"=1'-0"



2. WALL SECTION 'E'
SCALE: 1"=1'-0"



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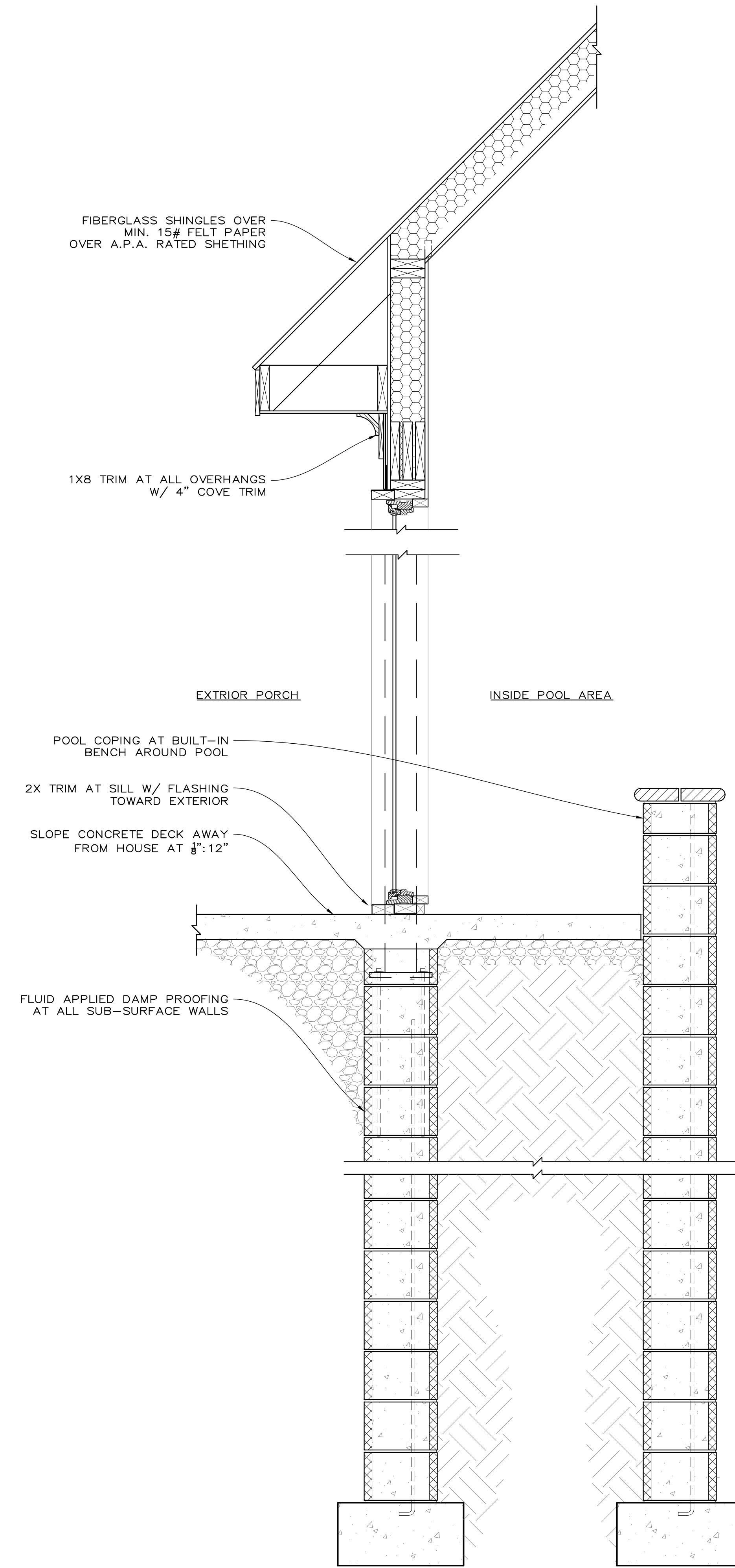
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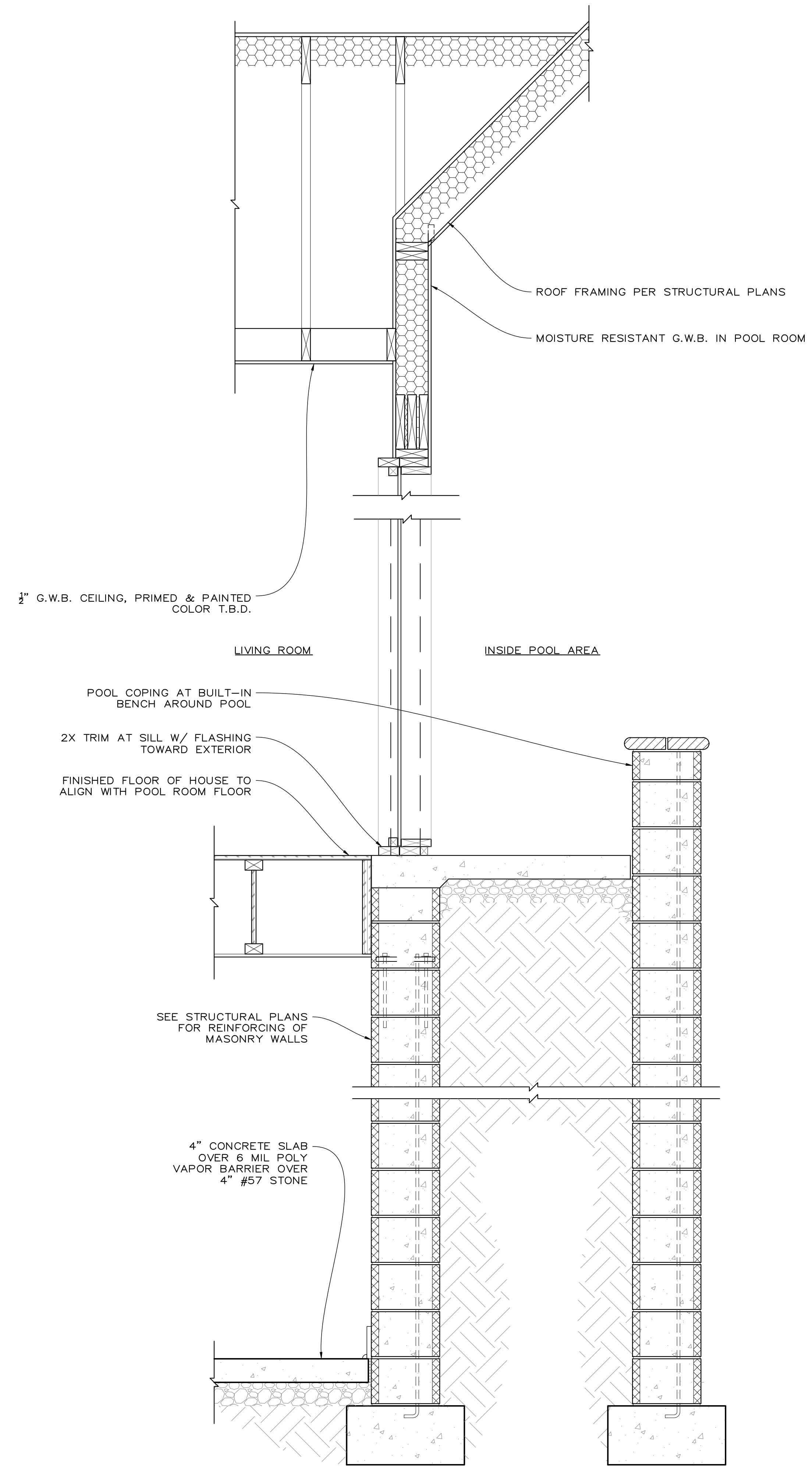
WALL SECTIONS

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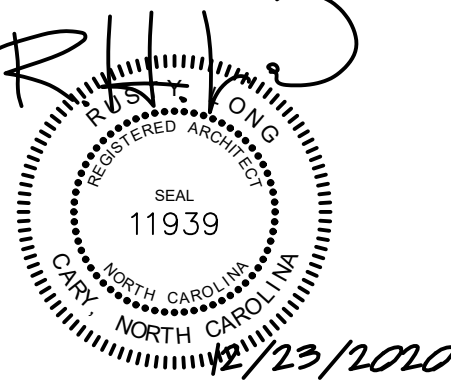


2. WALL SECTION 'G'
SCALE: 1"=1'-0"



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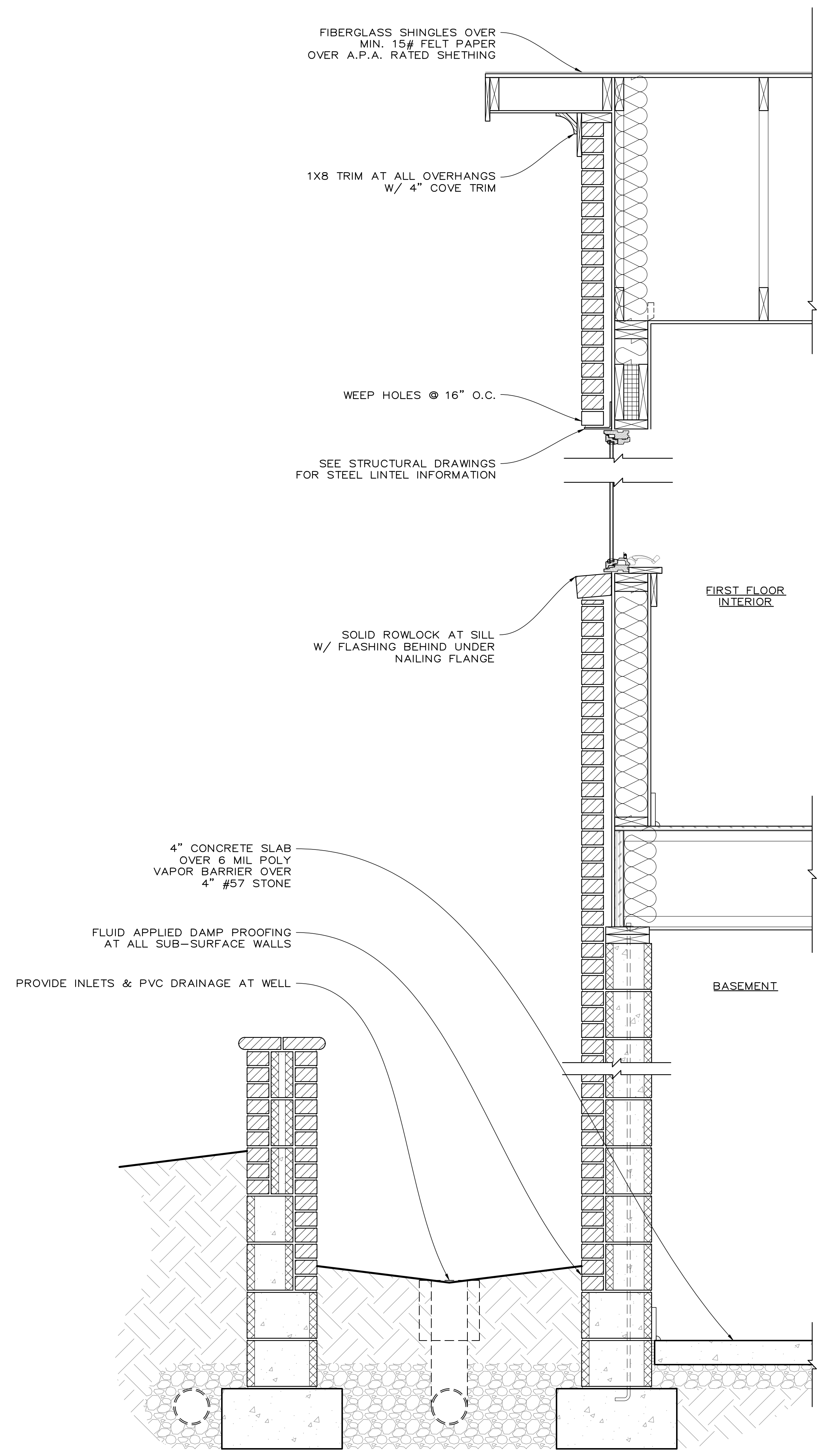
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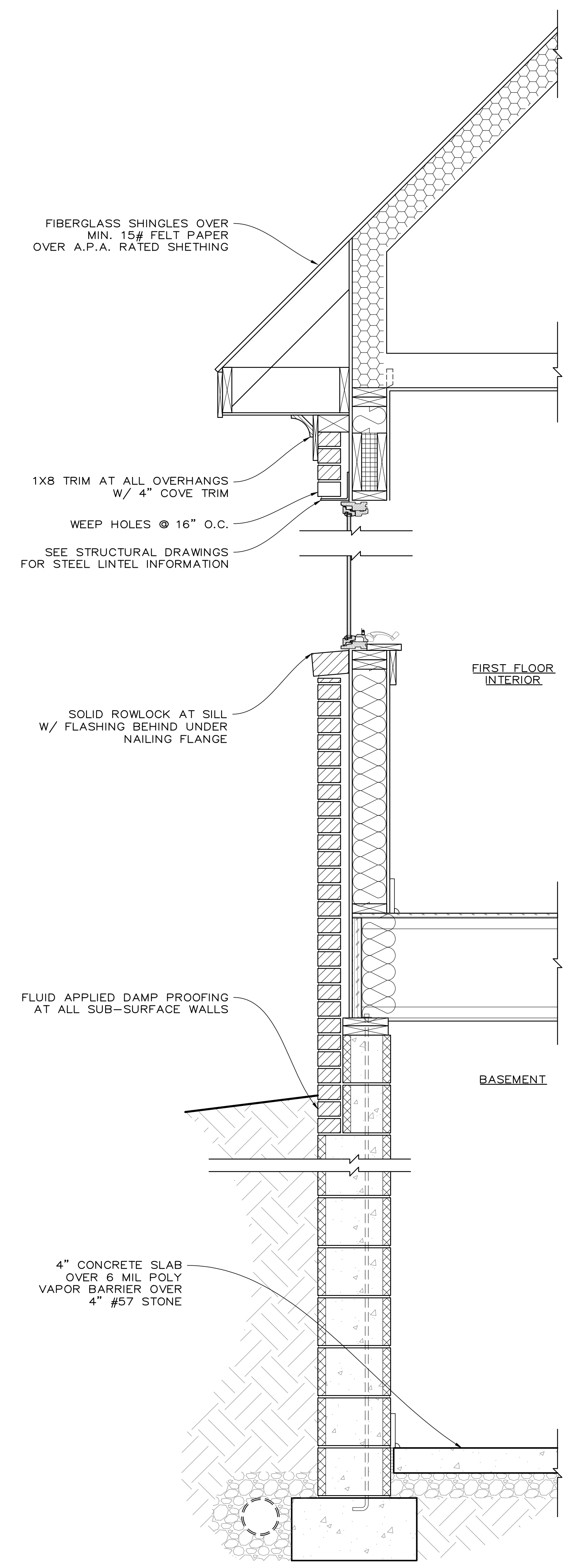
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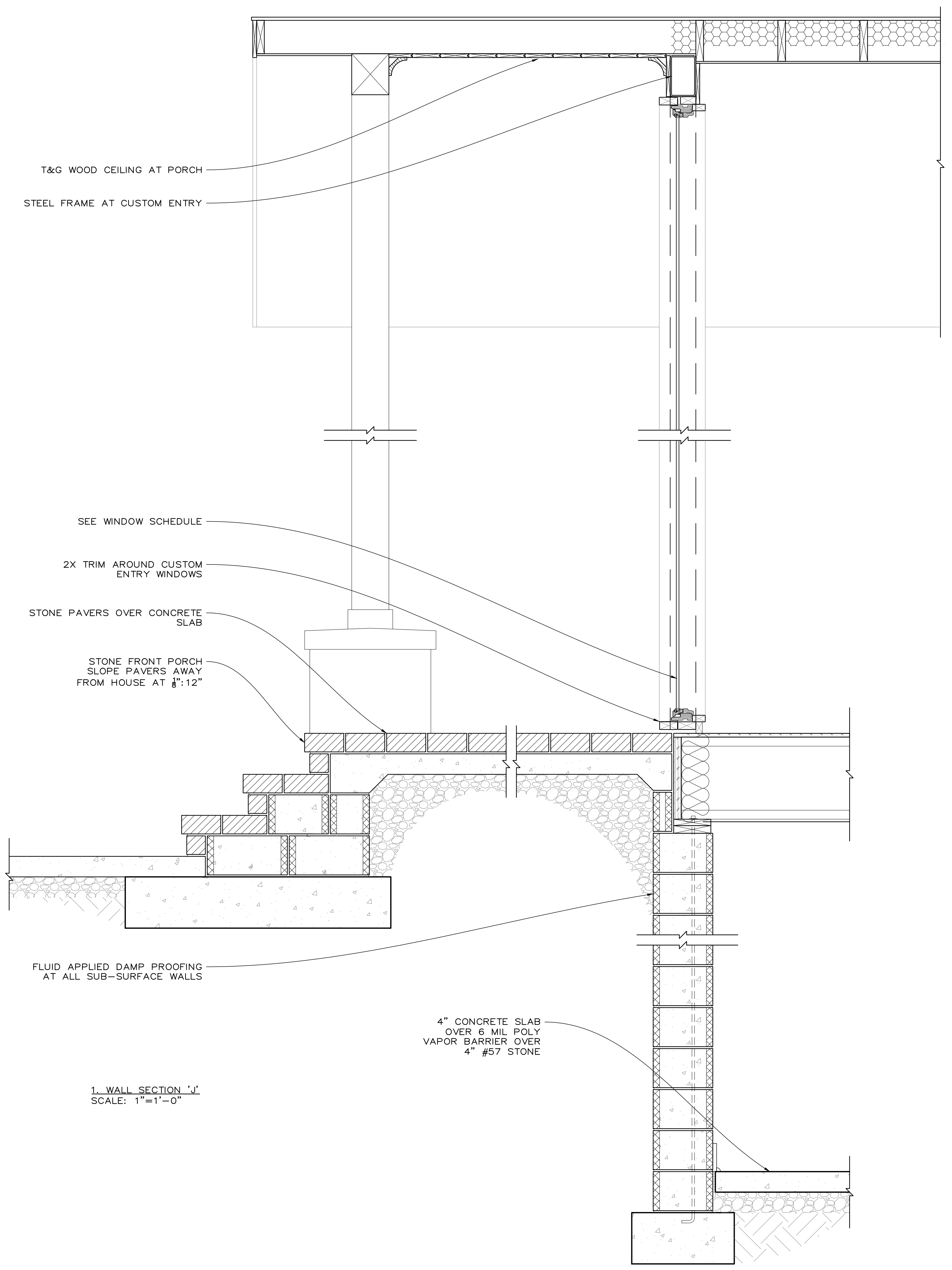
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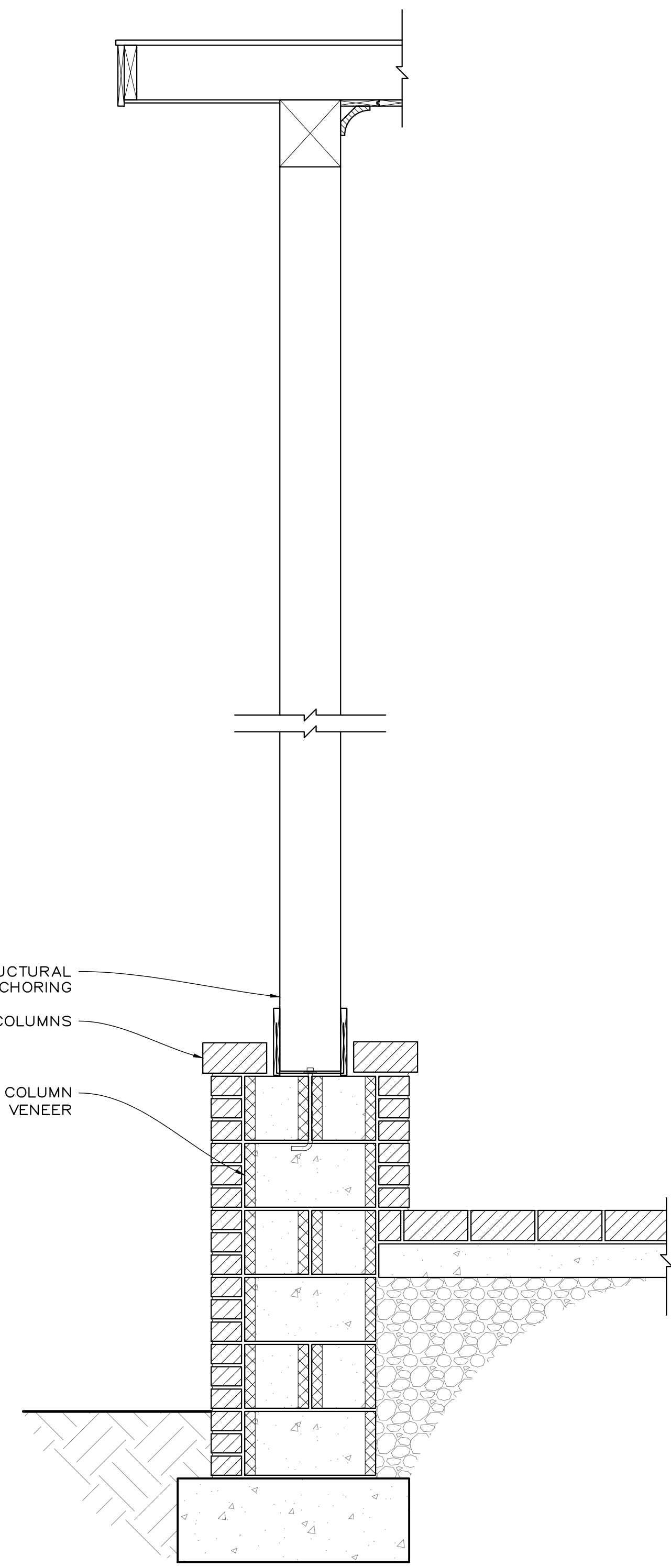
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SCALE: 1"=1'-0"



2. WALL SECTION 'I'
SCALE: 1"=1'-0"



1. WALL SECTION 'j'
SCALE: 1"=1'-0"



2. WALL SECTION 'k'
SCALE: 1"=1'-0"



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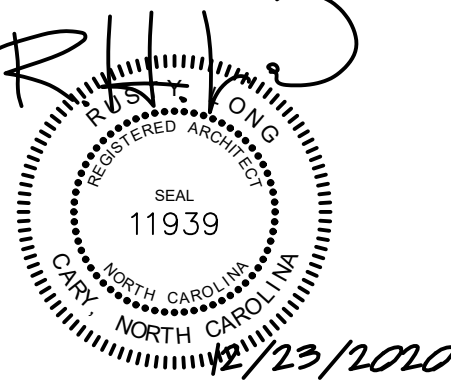
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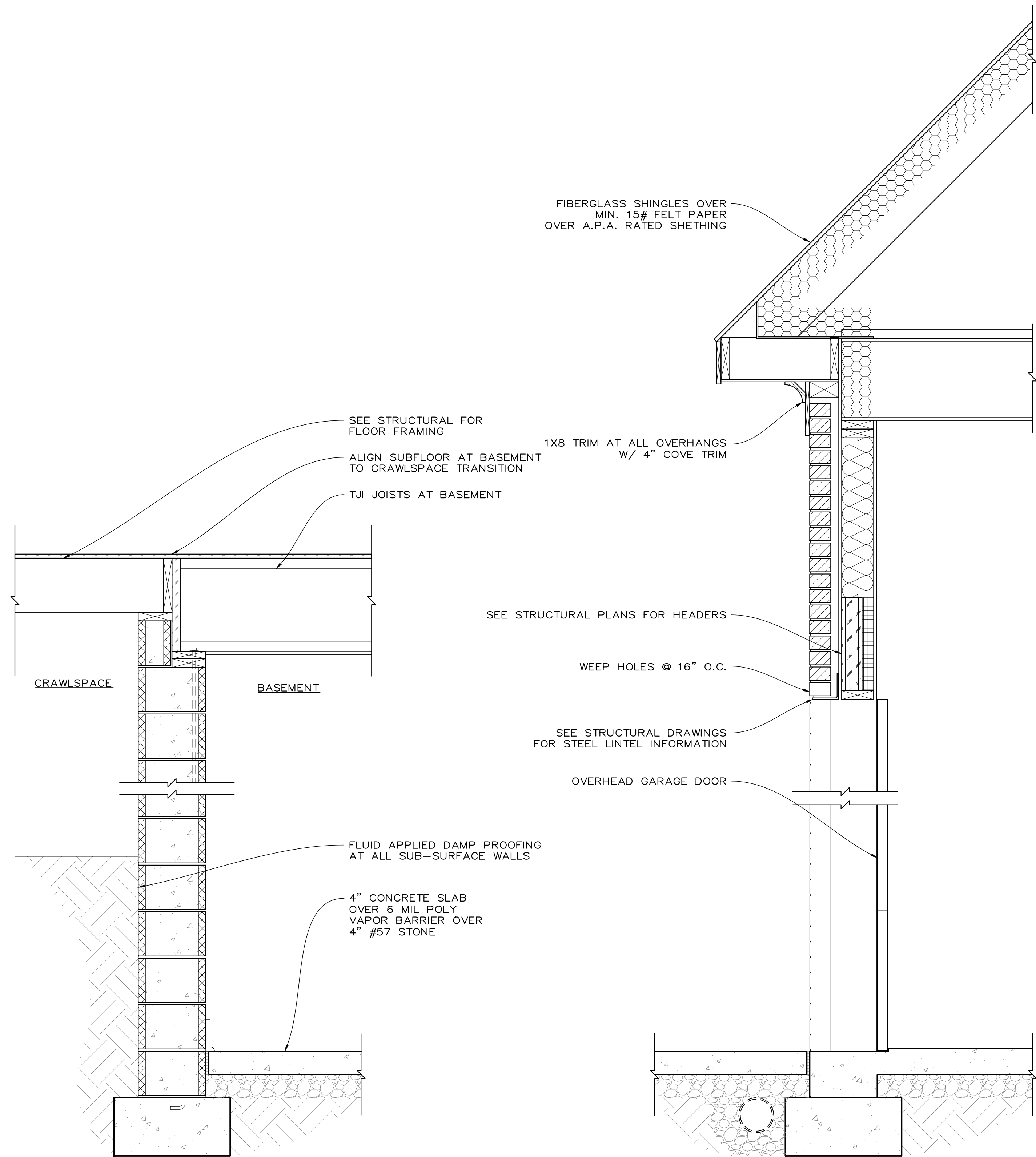
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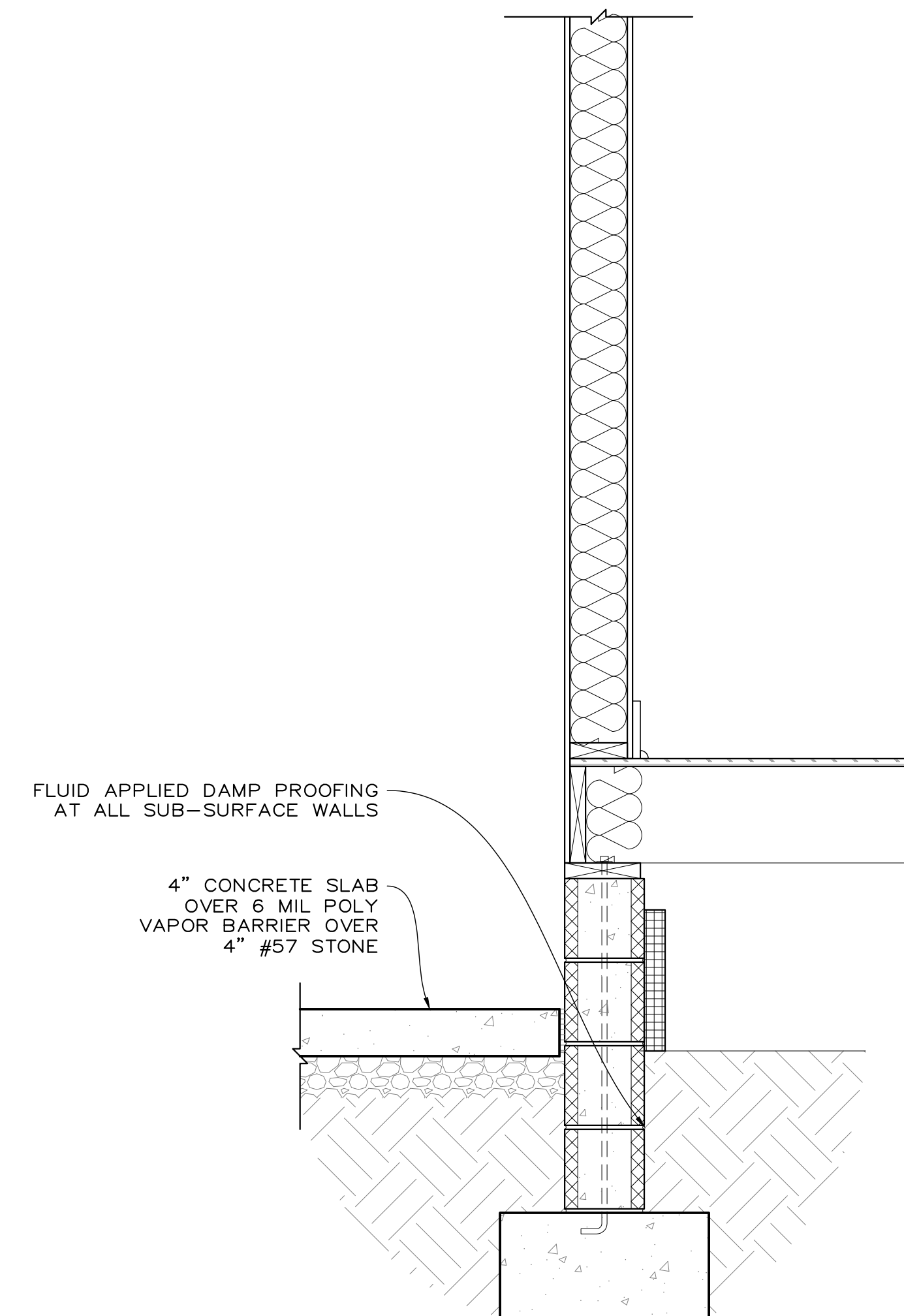
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1. WALL SECTION 'L'
SCALE: 1"=1'-0"

2. WALL SECTION 'M'
SCALE: 1"=1'-0"

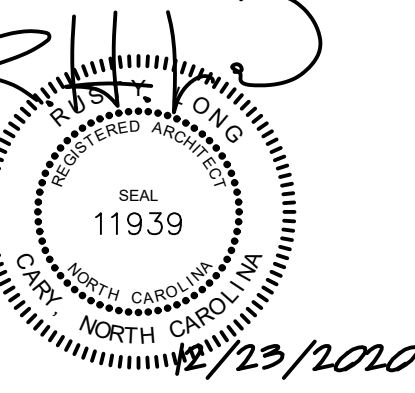


3. WALL SECTION 'N'
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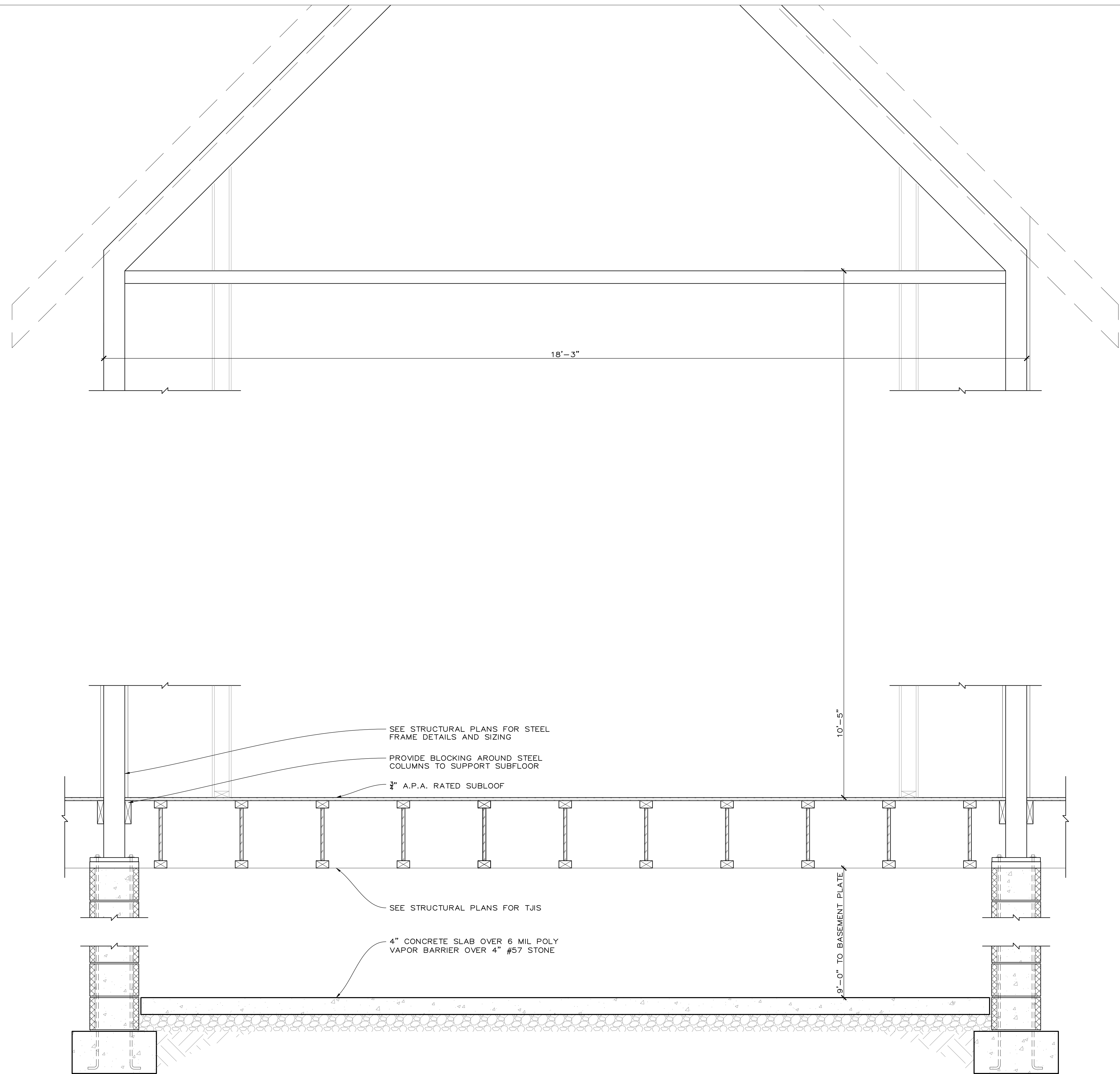
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**WALL SECTION
AT STEEL**

A570

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1. SECTION AT STEEL FRAME
SCALE: 1"=1'-0"

GENERAL STRUCTURAL NOTES

GENERAL

THESE DRAWINGS, AS INSTRUMENTS OF PROFESSIONAL SERVICE, ARE THE PROPERTY OF LYSAGHT & ASSOCIATES, P.A., FOR USE SOLELY WITH THIS PROJECT AND SHALL NOT BE REPRODUCED FOR OTHER PURPOSES.

THE PROFESSIONAL ENGINEER WHOSE SEAL APPEARS ON THESE DRAWINGS IS THE PROJECT STRUCTURAL ENGINEER-OF-RECORD (SER) WHO BEARS LEGAL RESPONSIBILITY FOR THE PERFORMANCE OF THE STRUCTURAL FRAMING RELATING TO PUBLIC HEALTH, SAFETY AND WELFARE. NO OTHER PARTY, WHETHER OR NOT A PROFESSIONAL ENGINEER, MAY COMPLETE, CORRECT, REVISE, DELETE OR ADD TO THESE CONSTRUCTION DOCUMENTS OR PERFORM INSPECTIONS OF THE WORK WITHOUT THE WRITTEN PERMISSION OF THE SER.

IN GENERAL, THE FOUNDATION AND FRAMING DETAILS FOR THIS PROJECT CAN BE CATEGORIZED AS "STANDARD RESIDENTIAL CONSTRUCTION" AND ARE TO BE WORKED OUT BY THE CONTRACTOR, IN THE FIELD. SPECIAL DETAILS ARE SHOWN ON THE DRAWINGS. IF ANY SPECIAL CONDITIONS ARISE THAT ARE NOT DETAILED ON THE DRAWINGS, CONTACT THE STRUCTURAL ENGINEER.

CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "NORTH CAROLINA RESIDENTIAL CODE", 2018 EDITION.

ALL MEMBERS SHALL BE FRAMED, ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.

THE STRUCTURE SHOWN ON THESE DRAWINGS IS STRUCTURALLY SOUND ONLY IN ITS COMPLETED FORM. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BRACINGS TO STABILIZE THE BUILDING DURING CONSTRUCTION.

SCOPE OF STRUCTURAL ENGINEERING SERVICES

THE STRUCTURAL ENGINEER HAS PERFORMED THE STRUCTURAL DESIGN AND REVIEWED THE ARCHITECTURAL PLANS FOR THIS PROJECT. IF THE CONTRACTOR (OR OWNER) WOULD LIKE FOR CONSTRUCTION REVIEW SERVICES TO BE INCLUDED IN THE SCOPE AS AN ADDITIONAL SERVICE, THEN THE CONTRACTOR (OR OWNER) SHALL CONTACT THE STRUCTURAL ENGINEER AT THE FOLLOWING STAGES OF CONSTRUCTION FOR A FIELD REVIEW OF THE WORK.

- 1. AFTER COMPLETION OF THE WOOD FRAMING SYSTEM, BEFORE INTERIOR FINISHES ARE INSTALLED.
2. AT ANY STAGE OF CONSTRUCTION WHEN DESIGN OR CONSTRUCTION PROBLEMS ARE ENCOUNTERED.

A "FIELD REPORT" WILL BE SENT TO THE OWNER, ARCHITECT AND CONTRACTOR FOLLOWING EACH FIELD TRIP. THE CONTRACTOR WILL BE INVOICED FOR EACH FIELD TRIP.

THE STRUCTURAL ENGINEER HAS NOT SEEN A SITE GRADING PLAN. IF THE SITE HAS A SIGNIFICANT SLOPE ADDITIONAL DESIGN MAY BE REQUIRED FOR CANTILEVERED RETAINING WALLS, REINFORCED FOUNDATION WALLS AND REINFORCED PIERS. THIS DESIGN IS THE RESPONSIBILITY OF THE CONTRACTOR.

THE STRUCTURAL ENGINEER IS RESPONSIBLE FOR THE DESIGN OF THE PRIMARY STRUCTURAL SYSTEM, EXCEPT FOR THE COMPONENTS NOTED ABOVE. RESPONSIBILITY FOR ANY SECONDARY STRUCTURAL AND NON-STRUCTURAL SYSTEMS NOT SHOWN ON THE STRUCTURAL PLANS RESTS WITH THE CONTRACTOR.

THE STRUCTURAL ENGINEER HAS NOT DONE A SUBSURFACE INVESTIGATION (HE IS NOT A SOILS SPECIALIST). THE FOUNDATION DESIGN IS BASED UPON AN ASSUMED ALLOWABLE BEARING PRESSURE AS SHOWN IN THE "FOUNDATION" STRUCTURAL NOTES. THIS ALLOWABLE BEARING PRESSURE SHALL BE VERIFIED BY THE CONTRACTOR OR OWNER. IF PROBLEMS ARE ENCOUNTERED, A SOILS ENGINEER SHOULD BE RETAINED TO EVALUATE THE CONDITIONS AND RECOMMEND THE APPROPRIATE FOUNDATION SYSTEM.

THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK; NOR WILL HE BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

FIELD MEASUREMENTS AND THE VERIFICATION OF DIMENSIONS SHOWN ON THE ARCHITECTURAL PLANS ARE NOT THE STRUCTURAL ENGINEER'S RESPONSIBILITY.

ABBREVIATIONS

Table of abbreviations: @ AT, ASD ALLOWABLE STRESS DESIGN, AYC ALASKAN YELLOW CEDAR, BU/ BUILT-UP, C/J CONTROL JOINT IN SLAB, CLNG CEILING, COL COLUMN, DJ DOUBLE JOIST, DR DOUBLE RAFTER, HD HOLD DOWN, KW KNEEWALL, LBW LOAD BEARING WALL, LLV LONG LEG VERTICAL, LVL LAMINATED VENEER LUMBER, NTS NOT TO SCALE, OG ON CENTER, PSL PARALLEL STRAND LUMBER (PARALLAM), PT PRESSURE TREATED, SER STRUCTURAL ENGINEER-OF-RECORD, S-P-F SPRUCE-PINE-FIR, STD STANDARD, STL STEEL, SW SHEAR WALL, SY SOUTHERN YELLOW PINE, TJ TRIPLE JOIST, TYP TYPICAL, UD UPSIDE DOWN, UNO UNLESS NOTED OTHERWISE.

DESIGN LOADS

Table of design loads: ROOF DEAD LOAD 15 PSF, ROOF LIVE LOAD 20 PSF, FIRST FLOOR DEAD LOAD 20 PSF, SECOND FLOOR DEAD LOAD 10 PSF, ATTIC DEAD LOAD 10 PSF, FLOOR LIVE LOAD: 40 PSF, ATTIC LIVE LOAD (NO STORAGE) 10 PSF.

NOTE - FOR ROOF TRUSS FRAMING AND OTHER ROOF FRAMING WITH "NO STORAGE" THE ATTIC LIVE LOAD IS NOT APPLIED CONCURRENTLY WITH THE ROOF LIVE LOAD.

ULTIMATE WIND LOAD (3 SECOND GUST) 115 MPH

FOUNDATIONS

ALL FOOTINGS SHALL REST ON SOIL CAPABLE OF SAFELY SUPPORTING 2000 PSF. THE CONTRACTOR SHALL CONTACT THE STRUCTURAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED.

FOUNDATIONS SHALL EXTEND NOT LESS THAN 12" BELOW THE FINISHED NATURAL GRADE OR ENGINEERED FILL, IN NO CASE LESS THAN THE FROST LINE DEPTH.

THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE AND SHALL BE GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.

WHEN TOP OR SUBSOILS ARE EXPANSIVE, COMPRESSIBLE OR SHIFTING, SUCH SOILS SHALL BE REMOVED TO A DEPTH AND WIDTH SUFFICIENT TO ASSURE STABLE MOISTURE CONTENT IN EACH ACTIVE ZONE AND SHALL NOT BE USED AS FILL.

USE A GRANULAR BACKFILL AGAINST BASEMENT WALLS TO MINIMIZE THE LATERAL EARTH PRESSURE. PROVIDE FRENCH DRAIN AT THE BOTTOM OF THE WALL TO ELIMINATE HYDROSTATIC PRESSURE.

CONCRETE

MINIMUM 28 DAY COMPRESSIVE STRENGTH OF CONCRETE SHALL BE 3000 PSI FOR FOOTINGS AND 4000 PSI FOR SLAB ON GRADE. DO NOT CAST CONCRETE IN WATER OR ON FROZEN GROUND.

REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. CLEAR CONCRETE COVER OVER BARS SHALL BE 3" FOR FOOTINGS.

PROVIDE ISOLATION JOINTS IN SLABS AS FOLLOWS:

- 1. BETWEEN SLABS ON GRADE AND FOUNDATION WALLS,
2. BETWEEN SLABS AND INSERTS SUCH AS PIPES,
3. AT JUNCTION OF GARAGE SLAB AND DRIVEWAY,
4. AROUND STEEL COLUMNS AT SPREAD FOOTINGS.

PROVIDE CONTRACTION JOINTS IN CONTINUOUS FLOOR SLABS ON GROUND IN A SQUARE PATTERN LOCATED AT NOT MORE THAN 12' O.C. IN BOTH DIRECTIONS UNLESS INTERMEDIATE CRACKS ARE ACCEPTABLE.

THE MINIMUM CEMENT CONTENT OF CONCRETE MIXTURES FOR EXTERIOR PORCHES, GARPORT SLABS, AND STEPS THAT WILL BE EXPOSED TO FREEZING AND THAWING SHALL BE 520 LBS OF CEMENT MEETING ASTM C150 OR C595, PER CU YD OF CONCRETE.

BASEMENT WALLS, FOUNDATION WALLS, EXTERIOR WALLS, AND OTHER VERTICAL CONCRETE WORK EXPOSED TO THE WEATHER SHALL BE AIR ENTRAINED. TOTAL AIR CONTENT (PERCENT BY VOLUME OF CONCRETE) SHALL BE NOT LESS THAN 5 PERCENT OR MORE THAN 7 PERCENT.

SLAB-ON-GRADE CONSTRUCTION

CONCRETE SHALL BE DESIGNED TO MEET 4000 PSI COMPRESSIVE STRENGTH @ 28 DAYS AND EXHIBIT <0.04% SHRINKAGE @ 28 DAYS. THE MIX SHALL CONTAIN APPROXIMATELY 1/2 CUBIC FEET OF COARSE AGGREGATE (1 1/4" TOP SIZE), THE SPECIFIED WATER REDUCING ADMIXTURE AND ACHIEVE A W/CM RATIO OF 0.53 (MAX.). INTERIOR SLABS SHALL NOT BE AIR-ENTRAINED; EXTERIOR SLABS SHALL BE AIR ENTRAINED.

Table of materials and mix requirements: CEMENT, FLY ASH/SLAG, COARSE AGGREGATE, FINE AGGREGATE, TUF-STRAND FIBER, WATER CONTENT, AIR CONTENT (ENTRAPPED AIR ONLY), AIR CONTENT, MID-RANGE WATER REDUCER (TYPE A/F), W/CM, INITIAL SLUMP (WATER), FINAL SLUMP, SHRINKAGE.

CALCIUM CHLORIDE OR ADMIXTURES CONTAINING MORE THAN 0.05% CHLORIDE IONS ARE NOT PERMITTED. FLYASH, SLAG, AND BOTTOM ASH ARE NOT PERMITTED.

INTERIOR CURING: MOISTURE RETAINING COVER. ALL INTERIOR CONCRETE SLABS SHALL BE PROTECTED FROM PREMATURE DRYING FOR A MINIMUM OF FIVE DAYS, AS REQUIRED IN ACI 301, USING MOISTURE-RETAINING COVER. FLOOD THE INTERIOR SLAB WITH SUFFICIENT WATER TO COVER THE SLAB. COVER CONCRETE SURFACES WITH MOISTURE-RETAINING COVER, PLACED IN WIDEST PRACTICAL WIDTH WITH SIDES AND ENDS LAPPED AT LEAST 3' AND SEALED BY WATERPROOF TAPE OR ADHESIVE. IMMEDIATELY REPAIR ANY HOLES OR TEARS DURING CURING PERIOD USING COVER MATERIAL AND WATERPROOF TAPE. REMOVE ANY AIR BUBBLES IN BETWEEN THE COVER AND THE INTERIOR SLAB, AFTER THE MINIMUM FIVE DAY CURING PERIOD, REMOVE MOISTURE-RETAINING COVER AND IMMEDIATELY SCRUB THE ENTIRE AREA WITH AUTO-SCRUBBER AND INTERIOR CONCRETE FLOOR CLEANER. AFTER INTERIOR CONCRETE SLAB IS THOROUGHLY CLEANED OF ALL SALTS, LAITANCE, DIRT AND DEBRIS, ALLOW DRYING FOR AT LEAST SIX (6) HOURS.

EXTERIOR CURING AND SEALING: ASTM C1315, TYPE I, CLASS B, (100G/L). LIQUID TYPE MEMBRANE FORMING CURING COMPOUND, CLEAR STYRENE ACRYLATE TYPE, COMPLYING WITH ASTM C1315, TYPE I, CLASS B, 25% SOLIDS CONTENT MINIMUM. MOISTURE LOSS SHALL BE NOT MORE THAN 0.30 KG/M2 WHEN APPLIED AT 300 SQ. FT./GAL. MANUFACTURER'S CERTIFICATION IS REQUIRED. ACCEPTABLE PRODUCTS: "SUPER REZ SEAL" BY ELLCUD CHEMICAL OR "KURE N SEAL 30" BY BASF.

PLACE FLOOR SLAB ON A WELL COMPACTED BASE. THE SUBGRADE SHALL BE GRANULAR, NON-EXPANSIVE SOIL (THAT IS, WITHOUT CLAY), WHICH HAS BEEN COMPACTED TO AT LEAST 95% AND VERIFIED BY ON-SITE TESTING.

CONCRETE STRENGTH SHALL BE 4000 PSI AT 28 DAYS. USE A WATER REDUCING ADMIXTURE TO REDUCE WATER, INCREASE WORKABILITY AND DECREASE SHRINKAGE CRACKS.

THE CONTROL JOINT SPACINGS SHALL BE APPROXIMATELY 12' FOR A 4" THICK SLAB. PLACE CONTROL JOINTS TO AVOID REINTRANT CORNERS. MAKE SAWCUTS TO FORM WEAKEN PLANE CONTROL JOINTS AS SOON AS POSSIBLE.

LIGHTLY DAMPEN THE SUBGRADE BEFORE PLACING CONCRETE TO PREVENT THE SUBGRADE FROM ABSORBING WATER FROM CONCRETE MIX. APPLY WATER AT NEARLY THE SAME RATE IT SOAKS INTO THE SUBGRADE SURFACE.

STEEL TROWEL THE CONCRETE TO A SHINY FINISH WHICH RESULTS IN A HARD, DENSE SURFACE.

DURING HOT WEATHER, USE A FOG SPRAY TO KEEP THE SURFACE DAMP BEFORE CURING.

START CURING AS SOON AS THE FINISHERS ARE DONE.

REINFORCING STEEL

ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH THE LATEST "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.

REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60. CLEAR CONCRETE COVER OVER BARS SHALL BE 3" FOR FOOTINGS.

ALL SLABS ON GRADE SHALL BE REINFORCED WITH 6 X 6 W 1.4 X W 1.4 WUF, PLACED 1" BELOW TOP OF SLAB.

PROVIDE CORNER BARS AT ALL FOOTING STEPS AND CORNERS. BARS SHALL BE A MINIMUM OF 2#4 LONG AND SHALL HAVE THE SAME SIZE AND SPACING AS HORIZONTAL REINFORCING.

LAP ALL SPLICES AS SPECIFICALLY CALLED FOR, BUT AT LEAST 12 BAR DIAMETERS IN MASONRY AND 40 BAR DIAMETERS IN CONCRETE, UNLESS NOTED OTHERWISE.

PROVIDE DOWELS IN WALL FOOTINGS EQUIVALENT IN SIZE AND NUMBER TO VERTICAL STEEL EXTENDING 24 BAR DIAMETERS INTO FOOTING AND 50 BAR DIAMETERS INTO WALL, UNLESS NOTED OTHERWISE.

MASONRY

BRICK AND STONE MASONRY ON THIS PROJECT ARE NON-STRUCTURAL. SEE ARCHITECTURAL PLANS FOR ALL REQUIREMENTS.

CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM SPECIFICATIONS FOR HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS (ASTM C90, ASA A791). MORTAR SHALL CONFORM TO THE REQUIREMENTS OF ASTM STANDARD SPECIFICATIONS FOR MORTAR FOR UNIT MASONRY (ASTM C270), TYPE "M" OR "S" FOR FOUNDATION WALLS. TYPE "N" MORTAR IS ACCEPTABLE FOR SOLID FILLED PIERS OR HOLLOW MASONRY WALLS (FOR DESIGN WIND PRESSURE LESS THAN 20 PSF). THE MINIMUM COMPRESSIVE STRENGTH, FM = 1500 PSI.

HOLLOW PIERS SHALL BE CAPPED WITH 8" OF SOLID MASONRY OR CONCRETE OR SHALL HAVE CAVITIES OF THE TOP COURSE FILLED WITH CONCRETE OR GROUT. THE MAXIMUM HEIGHT OF UNFILLED HOLLOW PIERS SHALL NOT EXCEED FOUR TIMES THEIR LEAST DIMENSION.

THE UNSUPPORTED HEIGHT OF SOLID MASONRY PIERS SHALL NOT EXCEED TEN TIMES THEIR LEAST DIMENSION.

ALL STEEL BEARING SHALL BE ON SOLID BLOCK OR 8" OF BRICK.

STRUCTURAL STEEL

INTERIOR STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RUST INHIBITIVE PAINT. EXTERIOR STRUCTURAL STEEL SHALL BE HOT DIP GALVANIZED.

THE STEEL USED SHALL HAVE THE FOLLOWING MINIMUM YIELD STRESS:

Table of steel yield stress requirements: WIDE FLANGE SHAPES 50 KSI, STRUCTURAL PIPE COLUMNS 35 KSI, STRUCTURAL TUBE COLUMNS 36 KSI, MISCELLANEOUS SHAPES 50 KSI.

BEAMS AND LINTELS SHALL BEAR ON 8" MINIMUM OF MASONRY UNLESS OTHERWISE NOTED.

USE 3/4" DIAMETER A-325 BOLTS FOR ALL STEEL TO STEEL CONNECTIONS U.N.O. USE 3/4" DIAMETER A-307 BOLTS FOR ALL ANCHOR BOLTS U.N.O. USE E-10 ELECTRODES FOR ALL SHOP AND FIELD WELDINGS.

DESIGN OF THE STRUCTURAL STEEL CONNECTIONS SHALL BE PERFORMED BY THE STEEL SUPPLIER. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION FOR ALL SHOP AND FIELD WELDINGS.

WOOD TRUSSES

THE WOOD TRUSS FABRICATOR IS RESPONSIBLE FOR THE DESIGN OF THE WOOD TRUSSES. SUBMIT CALCULATIONS WITH THE SHOP DRAWINGS SEALED BY A PROFESSIONAL ENGINEER LICENSED IN NORTH CAROLINA.

LUMBER DEFECTS SUCH AS HANE OR KNOTS OCCURRING IN THE CONNECTOR PLATE AREA SHALL NOT AFFECT MORE THAN TEN PERCENT OF REQUIRED PLATE AREA OR NUMBER OF EFFECTIVE TEETH REQUIRED FOR EACH TRUSS MEMBER. CONNECTOR PLATES SHALL BE APPLIED TO BOTH FACES OF TRUSS AT EACH JOINT, AND SHOULD PROVIDE FIRM EVEN CONTACT BETWEEN THE PLATE AND THE WOOD. ALL WOOD MEMBERS SHALL BE ACCURATELY CUT AND FABRICATED SO THAT ALL MEMBERS HAVE GOOD BEARING AND ALL COMPLETED TRUSS UNITS ARE UNIFORM. SEE LATEST EDITION OF TRUSS PLATE INSTITUTE "QUALITY CONTROL MANUAL" FOR TOLERANCES AND OTHER SPECIAL REQUIREMENTS.

THE DESIGN, FABRICATION AND ERECTION OF THE WOOD TRUSSES SHALL COMPLY WITH THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" AND THE DESIGN SPECIFICATION FOR METAL PLATE CONNECTED WOOD TRUSSES". ALL TRUSSES SHALL BE SECURELY BRACED BOTH DURING ERECTION AND AFTER PERMANENT INSTALLATION IN ACCORDANCE WITH "BUILDING COMPONENT SAFETY INFORMATION (BCSI), GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES", LATEST EDITION.

THE TRUSS FABRICATOR SHALL SHOW ALL RECOMMENDED BRACING, BOTH TEMPORARY AND PERMANENT, ON THE TRUSS SHOP DRAWINGS. ALSO, THE DRAWINGS SHALL SHOW ALL RECOMMENDED DETAILS FOR CONNECTING THE TRUSSES TO EACH OTHER AND/OR THEIR SUPPORTS (IN GENERAL, USE HURRICANE CLIPS).

AN EXTRA FLOOR TRUSS SHALL BE PLACED UNDER NON-LOAD BEARING PARTITIONS WHICH RUN PARALLEL TO THE FLOOR TRUSSES. (THIS NOTE GOVERNS OVER INFORMATION SHOWN ON THE FRAMING PLANS.)

WOOD FRAMING

HEAVY TIMBER ROOF FRAMING AT FRONT ENTRY AND REAR PORCH SHALL BE #1 GRADE ALASKAN CEDAR FOR DECAY RESISTANCE. SIZE SHOWN ARE NOMINAL.

FLOOR, ROOF JOISTS AND EXTERIOR STUDS SHALL BE #2 GRADE S-P-F.

NONBEARINGS INTERIOR STUDS MAY BE UTILITY GRADE LUMBER.

PLYWOOD SHALL CONFORM TO THE AMERICAN PLYWOOD ASSOCIATION "PLYWOOD DESIGN SPECIFICATION". PLYWOOD SHALL BE CDX (UNO).

HEADERS OVER OPENINGS IN LOAD BEARING WALLS SHALL BE AS SHOWN AT THE "HEADER SCHEDULE" DETAIL.

LVL HEADERS THAT ARE DOUBLED SHALL BE NAILED TOGETHER WITH 2 ROWS OF 16D NAILS @ 12" O.C. STAGGERED. PROVIDE CONTINUOUS LATERAL SUPPORT FOR TOP OF HEADER. STRENGTH OF LVL HEADERS SHALL BE EQUAL TO THAT PROVIDED BY MICROLAM HEADERS AS MANUFACTURED BY TRUS JOIST: FV = 285 PSI, FB = 2600 PSI, E = 1900 KSI.

PARALLAM, PARALLEL STRAND LUMBER (PSL), IS MADE FROM LONG, THIN STRANDS OF WOOD STRUCTURALLY BONDED TOGETHER IN A MICROWAVE PROCESS TO MAKE A LARGE CROSS-SECTION BEAMS AND COLUMNS. PARALLAM MEMBERS SHOWN ON THE DRAWINGS SHALL BE THE WIDTH SHOWN AND NOT BUILT UP FROM MULTIPLE PLIES. PARALLAM MEMBERS SHALL HAVE THE FOLLOWING MINIMUM STRUCTURAL PROPERTIES: FV = 280 PSI, FB = 2400 PSI, E = 2000 KSI, PARALLAM CAN BE SUBSTITUTED FOR LVL BUT LVL CANNOT BE SUBSTITUTED FOR PARALLAM.

BUILT-UP STUD COLUMNS SHALL BE SECURELY NAILED TOGETHER TO ACT AS A COMPOSITE MEMBER. USE (2) 12D NAILS FOR EACH STUD AT 9" O.C. WITH NAILS INSTALLED ON ALTERNATE SIDES OF COLUMN.

THE HEIGHT OF STUD BEARING WALLS IS LIMITED TO 10' BETWEEN LATERAL BRACINGS UNLESS NOTED OTHERWISE BY STRUCTURAL ENGINEER. CONTACT STRUCTURAL ENGINEER FOR STUD HEIGHTS GREATER THAN 10'-0". STUDS SHALL NOT BE SPLICED AT TALL WALLS, EXCEPT AT POINTS OF LATERAL SUPPORT.

ANY WOOD EXPOSED TO THE ELEMENTS, OR IN CONTACT WITH MASONRY, SHALL BE PRESERVATIVE TREATED TO THE RETENTIONS SHOWN IN THE BUILDING CODE.

OUTDOOR DECKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH APPENDIX M OF THE BUILDING CODE.

LIGHT GAGE SIMPSON CONNECTIONS

SOME PRESERVATIVE TREATED WOOD HAS A CORROSIVE EFFECT ON LIGHT GAGE CONNECTIONS. USE TYPE 304 OR 316 STAINLESS STEEL UNLESS GALVANIZED CONNECTORS ARE SPECIFICALLY RECOMMENDED BY THE TREATED WOOD SUPPLIER.

CONTRACTOR SHALL SELECT SIMPSON HANGERS THAT HAVE ALLOWABLE WORKING LOADS THAT EXCEED THE VALUES SHOWN IN THE SCHEDULE.

STRUCTURAL REQUIREMENTS IN 15 MPH WIND ZONES

PRESERVATIVE TREATED WOOD SILLS ON CONTINUOUS FOUNDATION WALLS SHALL BE ANCHORED WITH 1/2" BOLTS WITH 2 X 2 X 1/8 WASHERS SPACED NOT MORE THAN 4'-0" APART AND WHICH ARE EMBEDDED AT LEAST 8" IN CONCRETE OR 16" IN MASONRY UNITS. INSTALL TWO ANCHOR BOLTS WITHIN 6" OF THE CORNERS OF THE BUILDING, AT EACH DOOR AND WINDOW JAMB AND WITHIN 12" OF EACH END AT SILL SPLICES.

INSTALL THREE STUDS (MIN) AT EVERY CORNER OF AN EXTERIOR WALL.

PRESERVATIVE TREATED WOOD POSTS AT DECKS, PORCHES, CANOPIES ETC. SHALL BE ANCHORED AT BOTH ENDS WITH SIMPSON HANGERS THAT HAVE A MINIMUM UPLIFT CAPACITY OF 1000#. ARCHITECTURAL, PREFABRICATED COLUMNS SHALL BE INSTALLED AROUND THE STRUCTURAL POSTS.

ALL EXTERIOR WALLS SHALL BE FULLY SHEATHED WITH 1/2" STRUCTURAL SHEATHING TO PROVIDE LATERAL STRENGTH FOR WIND LOADS AND TO PROVIDE A CONTINUOUS TIE FROM THE RAFTERS DOWN TO THE FOUNDATION WALL. SHEATHING SHALL BE ATTACHED TO THE STUDS WITH 8D NAILS AT 6" O.C. ALONG THE PANEL EDGES AND 12" O.C. AT INTERMEDIATE LOCATIONS. BLOCK BETWEEN STUDS AT PLYWOOD JOINTS.

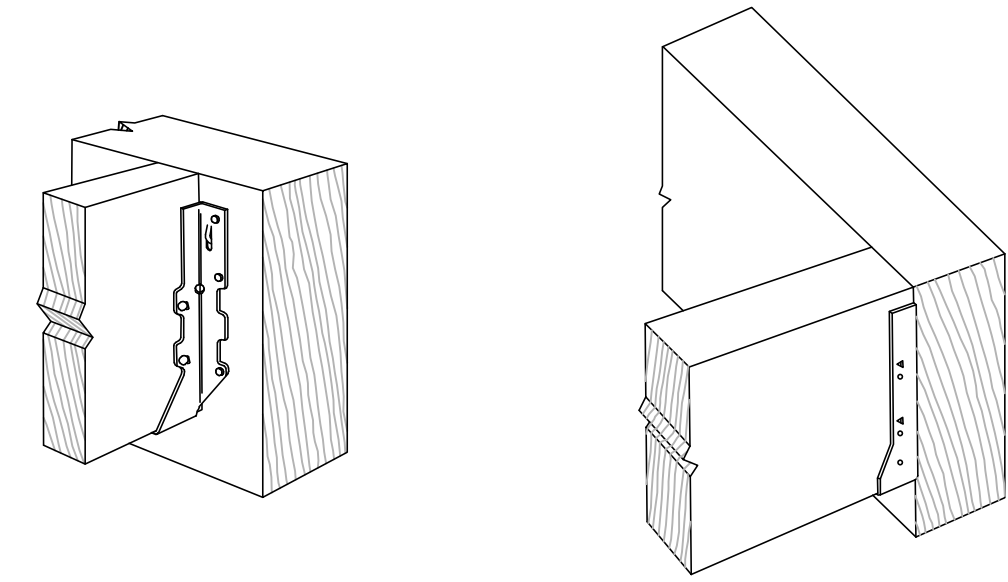
EACH RAFTER AND/OR ROOF TRUSS SHALL BE ATTACHED TO THE EXTERIOR WALL WITH A SIMPSON HURRICANE TIE.

WALL BRACING HAS BEEN DESIGNED TO COMPLY WITH SECTION R301.1, SO IT MEETS THE REQUIREMENTS OF R602.10.

HANGER SCHEDULE table with columns: WOOD MEMBER SIZE, HANGER MODEL NUMBER (FACE MOUNTED, CONCEALED, ALLOW. LOAD), ALLOW. LOAD.

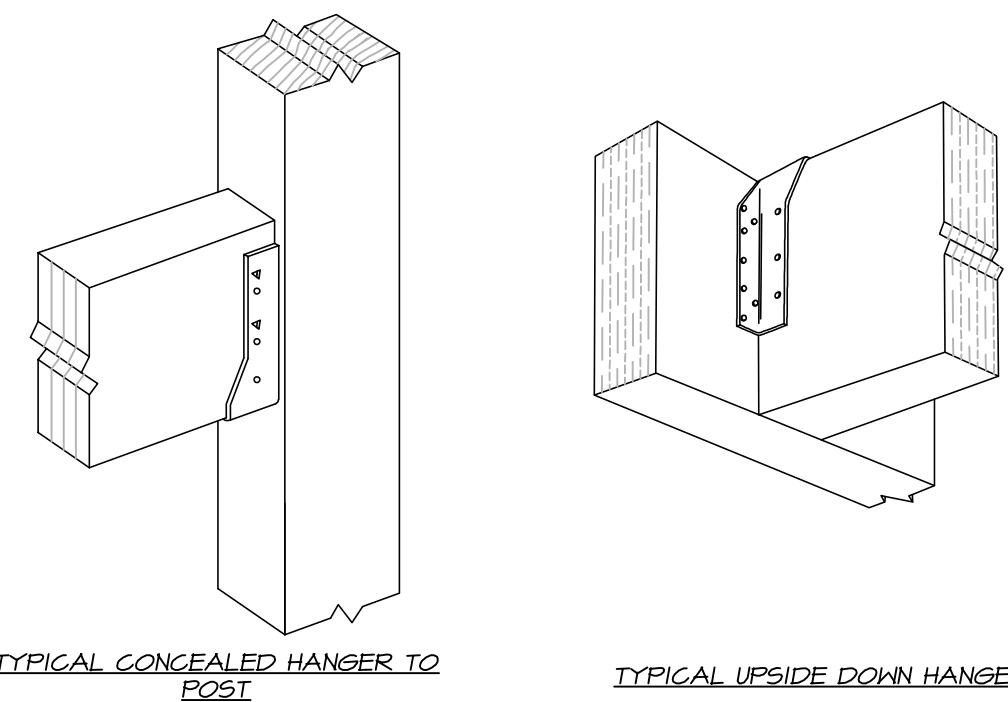
NOTES:

- 1. TABULATED VALUES ARE PER THE SIMPSON STRONG-TIE WOOD CONSTRUCTION MANUAL C-C-2017 REFER TO FOR TECHNICAL INFORMATION AND ADDITIONAL SPECIFICATIONS.
2. HANGERS USED IN EXTERIOR CONDITIONS THAT ARE EXPOSED TO THE ELEMENTS MUST ADHERE TO SIMPSON'S SPECIFICATIONS FOR CORROSION RESISTANCE. E.G. TO COORDINATE CORROSION RESISTANT HANGERS.
3. SEE DETAILS BELOW FOR TYPICAL CONNECTION DETAILS.
4. INSTALL HANGERS AS DESCRIBED PER THE PLANS, I.E. UPSIDE DOWN.



TYPICAL FACE MOUNTED HANGER

TYPICAL CONCEALED HANGER



TYPICAL CONCEALED HANGER TO POST

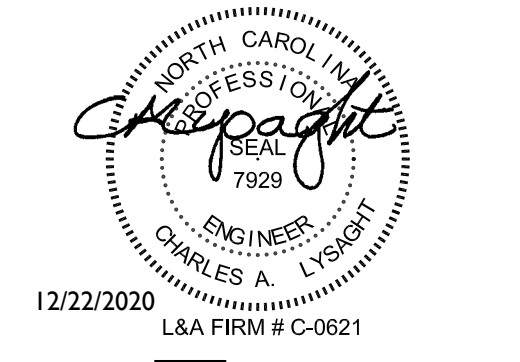
TYPICAL UPSIDE DOWN HANGER



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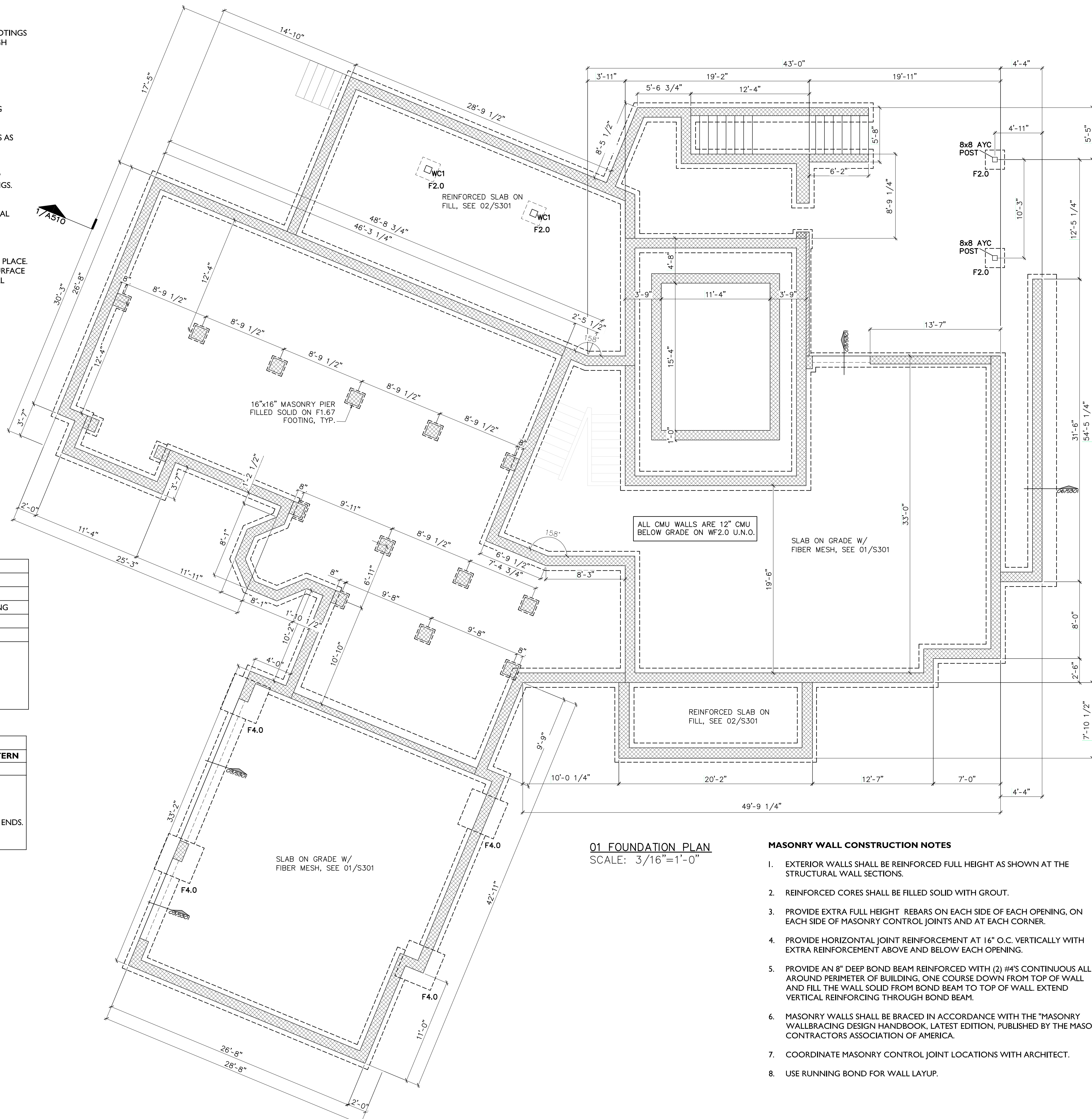
GENERAL STRUCTURAL NOTES

S100

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FOUNDATION NOTES

1. WALL FOOTINGS ARE TO BE POURED MONOLITHICALLY WITH SPREAD FOOTINGS AND WALL FOOTING REINFORCING SHALL RUN CONTINUOUSLY THROUGH SPREAD FOOTINGS
2. SEE DETAIL FOR TYPICAL STEPPED FOOTING DETAIL.
3. THE PIERS ARE 16" X 16". FILL ALL PIERS SOLID WITH CONCRETE
4. FILL CONCRETE BLOCK WALL SOLID UNDER STEEL BEAM/COLUMN BEARING POINTS.
5. WOOD SILLS SHALL BE ATTACHED TO CONTINUOUS FOUNDATION WALLS AS SPECIFIED IN THE GENERAL STRUCTURAL NOTES.
6. SEE PLUMBING DRAWINGS FOR FLOOR DRAIN AND PIPING PENETRATIONS THROUGH THE FLOOR SLAB AND FOR PIPES ENTERING THE BUILDING. STEP FOOTINGS AS REQUIRED SO THAT PIPES CAN GO UNDER OR OVER FOOTINGS. COMPACT SOIL AROUND PIPES.
7. THE SLAB ON GRADE SHALL BE CONSTRUCTED AS SPECIFIED IN THE GENERAL STRUCTURAL NOTES.
8. SEE ARCHITECTURAL PLANS FOR DEPRESSED AND/OR SLOPED SLAB AREAS.
9. DO NOT BACKFILL THE BASEMENT WALLS BEFORE THE FIRST FLOOR IS IN PLACE. SLOPE FINISHED GRADE AWAY FROM THE BASEMENT WALLS FOR GOOD SURFACE DRAINAGE. DO NOT OPERATE HEAVY EQUIPMENT ANY CLOSER TO A WALL THAN THE DISTANCE EQUAL TO THE HEIGHT OF THE FILL.
10. SLOPE EXTERIOR SLABS AWAY FROM BUILDING FOUNDATION WALLS FOR DRAINAGE.



FOOTING SCHEDULE			
MK#	SIZE	REINFORCING	NOTES
WF2.0	2'-0" WIDE X 12" THICK	(3) #5 CONTINUOUS	TYPICAL
F1.67	1'-8" X 1'-8" X 10"	UNREINFORCED	PIER FOOTING
F2.0	2'-0" X 2'-0" X 8"	UNREINFORCED	SPREAD FTG
F4.0	4'-0" X 4'-0" X 12"	(5) #5'S EACH WAY	SPREAD FTG

NOTES

1. REINFORCING TO BE LOCATED 3" CLEAR FROM BOTTOM OF FOOTING.
2. SEE SITE RETAINING WALL SCHEDULE FOR WIDER FOOTINGS.

COLUMN SCHEDULE				
MK#	SIZE	BASE PLATE	A.B.'S	A. B. PATTERN
CI	HSS 5 X 5 X 3/8	1 X 11-1/2 X 11-1/2	(4) 1"	7" X 7"

NOTES

1. TUBE COLUMNS ARE ASTM A500 (Fy = 46 KSI)
2. USE F1554 (GRADE 36) A.B.'S WITH WASHERS AND HEAVY HEX NUTS BOTH ENDS.
3. A.B.'S SHALL EXTEND 20" INTO CMU WALL AND HAVE 3" HOOK ON END.

01 FOUNDATION PLAN
SCALE: 3/16"=1'-0"

MASONRY WALL CONSTRUCTION NOTES

1. EXTERIOR WALLS SHALL BE REINFORCED FULL HEIGHT AS SHOWN AT THE STRUCTURAL WALL SECTIONS.
2. REINFORCED CORES SHALL BE FILLED SOLID WITH GROUT.
3. PROVIDE EXTRA FULL HEIGHT REBARS ON EACH SIDE OF EACH OPENING. ON EACH SIDE OF MASONRY CONTROL JOINTS AND AT EACH CORNER.
4. PROVIDE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. VERTICALLY WITH EXTRA REINFORCEMENT ABOVE AND BELOW EACH OPENING.
5. PROVIDE AN 8" DEEP BOND BEAM REINFORCED WITH (2) #4'S CONTINUOUS ALL AROUND PERIMETER OF BUILDING, ONE COURSE DOWN FROM TOP OF WALL AND FILL THE WALL SOLID FROM BOND BEAM TO TOP OF WALL EXTEND VERTICAL REINFORCING THROUGH BOND BEAM.
6. MASONRY WALLS SHALL BE BRACED IN ACCORDANCE WITH THE "MASONRY WALLBRACING DESIGN HANDBOOK, LATEST EDITION, PUBLISHED BY THE MASON CONTRACTORS ASSOCIATION OF AMERICA.
7. COORDINATE MASONRY CONTROL JOINT LOCATIONS WITH ARCHITECT.
8. USE RUNNING BOND FOR WALL LAYUP.

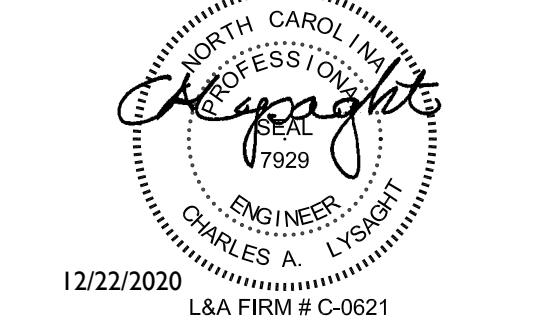


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FOUNDATION AND BASEMENT PLAN

S101

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LOOSE LINTEL ANGLE SCHEDULE

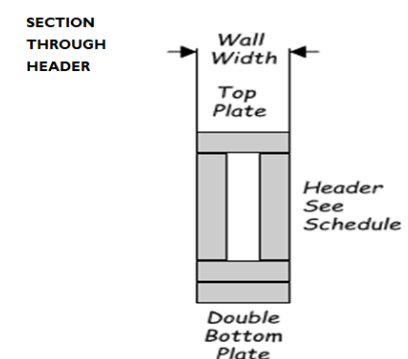
MK#	MAX OPNG	SIZE	BEARING EACH END	NOTES
L1	4.0	L 3 1/2 x 3 1/2 x 5/16	4.0	1,2,3,4,5
L2	6.0	L 4 x 3 1/2 x 5/16 (LLV)	5.0	1,2,3,4,5
L3	8.0	L 5 x 3 1/2 x 5/16 (LLV)	6.0	1,2,3,4,5
L4	10.0	L 6 x 3 1/2 x 5/16 (LLV)	7.0	1,2,3,4,5
L5	12.0	L 7 x 4 x 3/8 (LLV)	8.0	1,2,3,4,5

- NOTES**
- THE UNITS IN THIS SCHEDULE ARE: "MAX OPNG" = FT, "BRNG EACH END" = IN.
 - THIS SCHEDULE ASSUMES THAT MASONRY CONTROL JOINTS ARE NOT LOCATED ON EITHER SIDE OF THE OPENING SO THAT ARCHING ACTION CAN BE UTILIZED IN THE DESIGN.
 - THE LINTEL IS DESIGNED FOR THE WEIGHT OF THE (ARCHING) BRICK ONLY. THERE MUST BE NO OTHER STRUCTURAL LOADS ON THE LINTEL.
 - LINTELS SHALL BE HOT DIP GALVANIZED.

WOOD HEADER SCHEDULE

MK#	WOOD SIZE	MAX. SPAN	NOTES
H1	(2) 2 X 8	4'-0"	1,2
H2	(2) 2 X 10	6'-0"	1,2
H3	(2) 2 X 12	8'-0"	1,2
H4	(2) 1 3/4 X 9 1/4 LVL	10'-0"	1,3
H5	(2) 1 3/4 X 11 1/4 LVL	12'-0"	1,3

- NOTES**
- PROVIDE ONE STUD UNDER AND TWO FULL HEIGHT STUDS BEYOND EACH END OF H1 AND H2. PROVIDE TWO STUDS UNDER AND THREE FULL HEIGHT STUDS BEYOND EACH END OF H3, H4, AND H5.
 - USE #2 GRADE S-P-F FOR SOLID HEADERS. SIZES SHOWN ARE NOMINAL.
 - Fv = 285 PSI, Fb = 2600 PSI, E = 1900000 PSI FOR LVL HEADERS. SIZES SHOWN ARE ACTUAL.
 - CONTACT STRUCTURAL ENGINEER FOR WIDER OPENINGS.



STUD COLUMN SCHEDULE

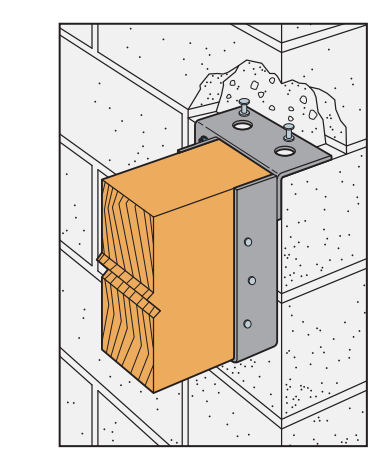
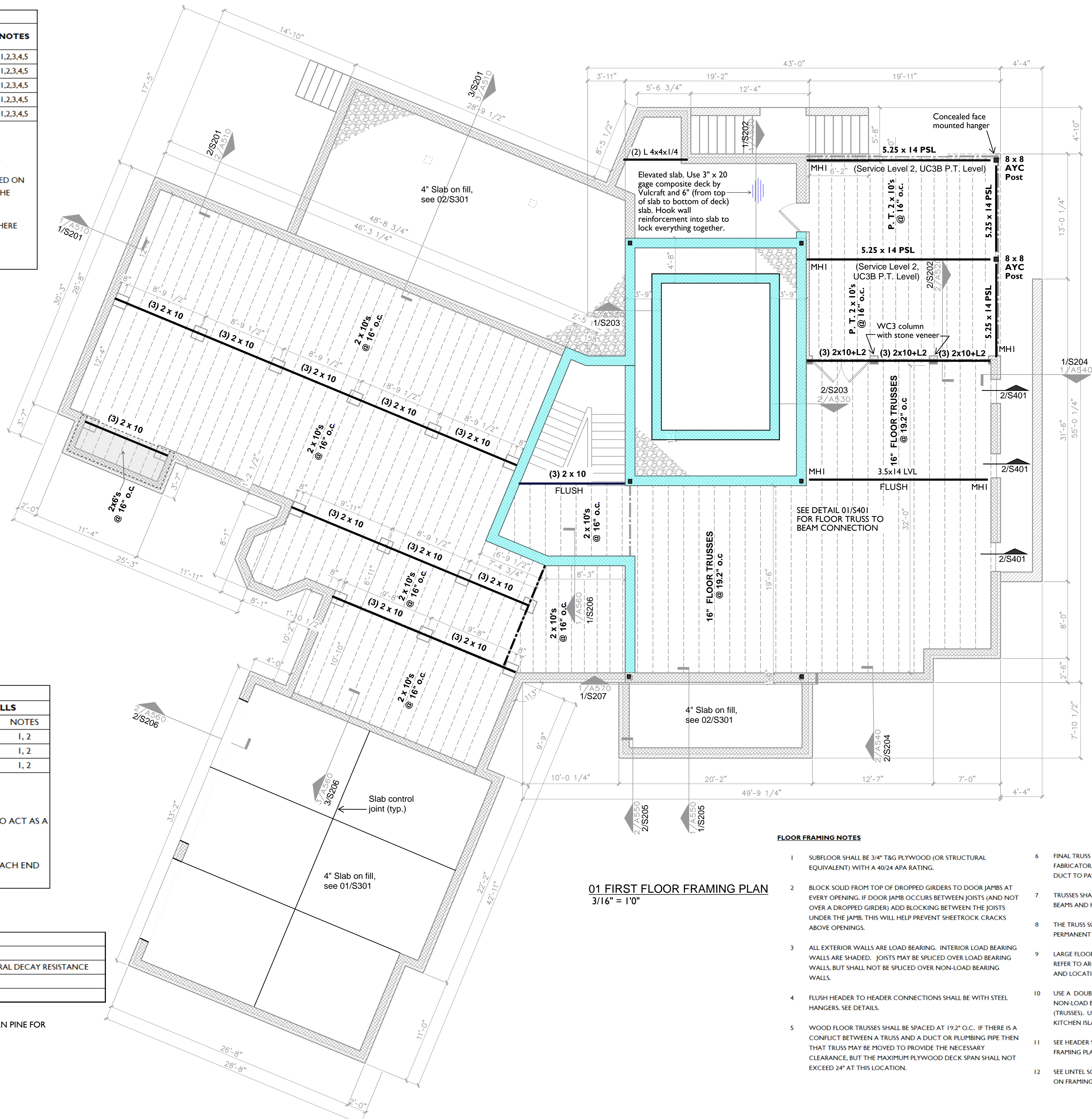
2 X 4 STUD WALLS			2 X 6 STUD WALLS		
MK#	SIZE	NOTES	MK#	SIZE	NOTES
4SC2	(2) 2 X 4	I	6SC2	(2) 2 X 6	1, 2
4SC3	(3) 2 X 4	I	6SC3	(3) 2 X 6	1, 2
4SC4	(4) 2 X 4	I	6SC4	(4) 2 X 6	1, 2

- NOTES**
- BUILT-UP STUD COLUMNS SHALL BE SECURELY NAILED TOGETHER TO ACT AS A COMPOSITE MEMBER. USE (2) 12d NAILS FOR EACH STUD AT 10" O.C.
 - SEE HEADER SCHEDULE FOR JACK AND KING STUDS REQUIRED AT EACH END OF HEADER.

WOOD COLUMN SCHEDULE

MK#	SIZE	NOTES
WC1	8 X 8	SIZE IS NOMINAL. SPECIES IS ALASKAN YELLOW CEDAR FOR NATURAL DECAY RESISTANCE
WC2	5 X 5	SIZE IS NOMINAL. COX P.T. LAMINATED WOOD.
WC3	6 X 6	SIZE IS NOMINAL. PRESERVATIVE TREATED PSL.

NOTE
IT IS ACCEPTABLE TO SUBSTITUTE #1 GRADE, PRESERVATIVE TREATED, SOUTHERN PINE FOR ALASKAN YELLOW CEDAR.



MHI = MASONRY HANGER

FLOOR FRAMING NOTES

- SUBFLOOR SHALL BE 3/4" T&G PLYWOOD (OR STRUCTURAL EQUIVALENT) WITH A 40/24 APA RATING.
- BLOCK SOLID FROM TOP OF DROPPED GIRDERS TO DOOR JAMBS AT EVERY OPENING. IF DOOR JAMB OCCURS BETWEEN JOISTS (AND NOT OVER A DROPPED GIRDER) ADD BLOCKING BETWEEN THE JOISTS UNDER THE JAMB. THIS WILL HELP PREVENT SHEETROCK CRACKS ABOVE OPENINGS.
- ALL EXTERIOR WALLS ARE LOAD BEARING. INTERIOR LOAD BEARING WALLS ARE SHADED. JOISTS MAY BE SPICED OVER LOAD BEARING WALLS, BUT SHALL NOT BE SPICED OVER NON-LOAD BEARING WALLS.
- FLUSH HEADER TO HEADER CONNECTIONS SHALL BE WITH STEEL HANGERS. SEE DETAILS.
- WOOD FLOOR TRUSSES SHALL BE SPACED AT 19.2" O.C. IF THERE IS A CONFLICT BETWEEN A TRUSS AND A DUCT OR PLUMBING PIPE THEN THAT TRUSS MAY BE MOVED TO PROVIDE THE NECESSARY CLEARANCE, BUT THE MAXIMUM PLYWOOD DECK SPAN SHALL NOT EXCEED 24" AT THIS LOCATION.
- FINAL TRUSS WEB CONFIGURATION SHALL BE DETERMINED BY FABRICATOR, BUT THERE SHALL BE ROOM FOR A 14" WIDE X 10" HIGH DUCT TO PASS THROUGH THE TRUSS AT MIDSPAN.
- TRUSSES SHALL BE BOTTOM CHORD BEARING EXCEPT AT FLUSH BEAMS AND HEADERS.
- THE TRUSS SUPPLIER SHALL NOTE THE LOCATION OF ANY PERMANENT TRUSS BRACING, WHERE REQUIRED.
- LARGE FLOOR PENETRATIONS ARE NOTED ON THE FRAMING PLAN. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR SIZE AND LOCATION OF SMALLER OPENINGS.
- USE A DOUBLE JOIST OR EXTRA FLOOR TRUSS UNDER ALL NON-LOAD BEARING WALLS THAT RUN PARALLEL TO THE JOISTS (TRUSSES). USE DOUBLE JOISTS UNDER HEAVY BATHTUBS AND KITCHEN ISLANDS TO CARRY THE EXTRA WEIGHT, THE TUB.
- SEE HEADER SCHEDULE FOR SIZES OF MEMBERS DENOTED ON FRAMING PLAN AS H1, H2, H3, ETC.
- SEE LINTEL SCHEDULE FOR SIZES OF LOOSE LINTEL ANGLES DENOTED ON FRAMING PLAN AS L1, L2, L3, ETC.

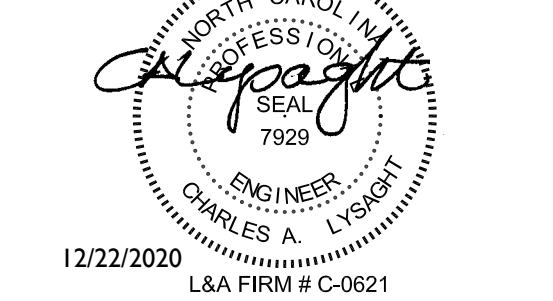


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**FIRST FLOOR
FRAMING PLAN**

S102

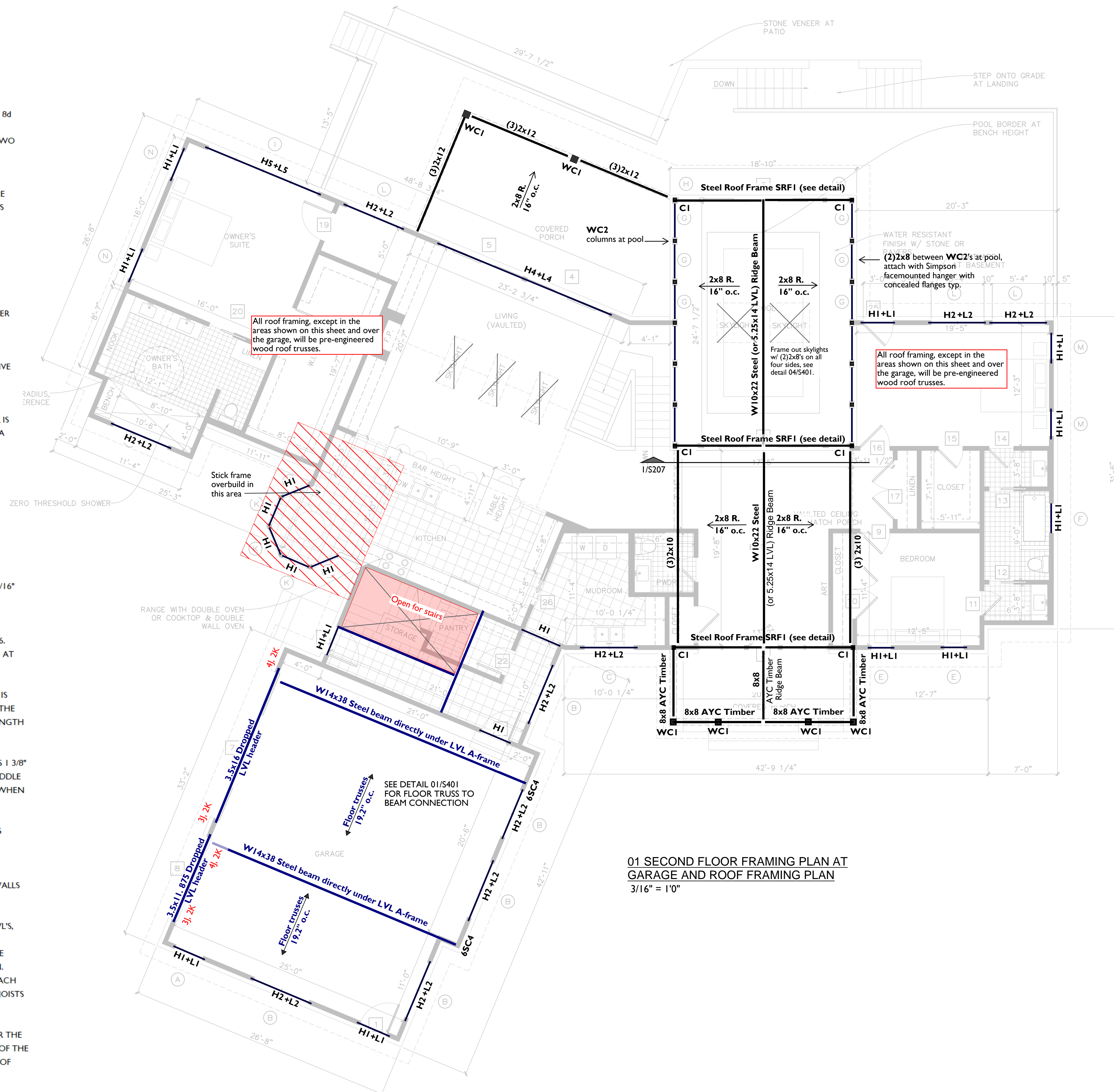
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ROOF FRAMING NOTES

- SEE ARCHITECTURAL FOR TYPICAL ROOF TRUSS BEARING ELEVATIONS.
- HEAVY TIMBER ROOF FRAMING AT FRONT ENTRY AND REAR PORCH SHALL BE #1 GRADE ALASKAN CEDAR FOR DECAY RESISTANCE. SIZE SHOWN ARE NOMINAL.
- USE APA RATED SHEATHING: 40/20, 5/8" MINIMUM THICKNESS. USE 8d NAILS AT 6" OC ALONG THE PANEL EDGES AND 12" OC ALONG INTERMEDIATE SUPPORTS. PANELS SHALL BE CONTINUOUS OVER TWO OR MORE TRUSSES WITH THE LONG DIMENSION (STRENGTH AXIS) ACROSS THE TRUSSES.
- THE TRUSS SUPPLIER IS RESPONSIBLE FOR THE FINAL LAYOUT OF THE ROOF TRUSSES. THE CONTRACTOR SHALL REFER TO THE SUPPLIER'S ERECTION DRAWINGS FOR THIS LAYOUT.
- TRUSSES SUPPORTING OVERBUILT ROOF FRAMING SHALL HAVE PLYWOOD SHEATHING ATTACHED TO TOP CHORDS EXCEPT FOR BLOCKOUTS FOR ATTIC ACCESS AND VENTILATION.
- COORDINATE OPENINGS IN THE ROOF FRAMING WITH THE ARCHITECTURAL AND MECHANICAL DRAWINGS. OPENINGS LARGER THAN 6" SHALL BE FRAMED ON ALL SIDES WITH 2 X 4 HEADERS.
- IT IS THE STRUCTURAL ENGINEER'S UNDERSTANDING THAT THE MECHANICAL SYSTEM IN THE POOL AREA WILL MAINTAIN A RELATIVE HUMIDITY LOW ENOUGH THAT PRESERVATIVE TREATED LUMBER IS NOT REQUIRED. THE PERIMETER POSTS WILL BE PRESERVATIVE TREATED SINCE THEY WILL BE CLOSE TO THE WATER, BUT THE REMAINING WOOD IS NOT PRESERVED RETREATED AND THE STEEL IS NOT GALVANIZED. THE STEEL SHALL BE EPOXY PAINTED FOR EXTRA PROTECTION.

STUD WALL FRAMING NOTES

- ALL EXTERIOR STUDS SHALL BE 2 X 6 NOMINAL (1 1/2" X 5 1/2" ACTUAL) #2 GRADE S-P-F AT 16" O.C.
- ALL EXTERIOR STUD WALLS SHALL BE FULLY SHEATHED WITH 7/16" PLYWOOD OR STRUCTURAL GRADE SHEATHING TO PROVIDE OVERALL STABILITY TO THE HOUSE.
- THE SILL PLATE SHALL BE SOLID SOUTHERN PINE, TREATED 2 X 6. WALL SHALL BE ANCHORED TO THE FOUNDATION AS SHOWN AT THE DETAILS.
- THE MAXIMUM SIZE HOLE THAT MAY BE DRILLED INTO A STUD IS 2-3/16" DIAMETER LOCATED AT LEAST 5/8" FROM THE EDGE OF THE STUD. THIS SIZE HOLE MAY BE CUT ANYWHERE ALONG THE LENGTH OF THE STUD.
- THE MAXIMUM SIZE NOTCH THAT MAY BE CUT INTO A STUD IS 1 3/8" X 3 1/2". THE NOTCH CAN BE CUT ANYWHERE EXCEPT THE MIDDLE 1/3 OF THE LENGTH OF THE STUD. STUDS SHALL BE DOUBLED WHEN NOTCHED IN MIDDLE 1/3 OF LENGTH.
- NOTCHES AND HOLES SHALL NOT OCCUR IN THE SAME CROSS SECTION.
- UNBRACED STUD HEIGHT IS LIMITED TO 10' UNLESS NOTED OTHERWISE ON THE DRAWINGS. BALLON FRAME GABLE ENDWALLS AND PROVIDE LATERAL SUPPORT FOR STUDS AT ATTIC LEVEL.
- USE DOUBLE STUDS UNDER DOUBLE JOISTS AND 3 1/2" WIDE LVL'S, TRIPLE STUDS UNDER 5 1/4" WIDE LVL'S, AND FOUR STUDS UNDER 7" WIDE LVL'S. STEEL BEAM WILL HAVE THE NUMBER OF STUDS REQUIRED SHOWN ON THE FRAMING PLAN. THESE STUDS SHALL GO FROM BOTTOM OF BEAM, THROUGH EACH LEVEL, DOWN TO THE FOUNDATION. BLOCK SOLID BETWEEN JOISTS UNDER STUD COLUMN AT EACH LEVEL.
- AT DOOR AND WINDOW OPENINGS, USE "JACK" STUDS UNDER THE HEADER AND FULL HEIGHT "KING" STUDS BEYOND EACH END OF THE HEADER. REFER TO THE HEADER SCHEDULE FOR THE NUMBER OF JACK AND KING STUDS REQUIRED.

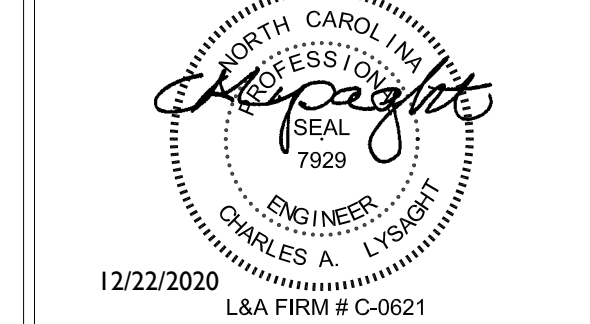


01 SECOND FLOOR FRAMING PLAN AT GARAGE AND ROOF FRAMING PLAN
3/16" = 1'0"



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SECOND FLOOR FRAMING PLAN AT GARAGE AND ROOF FRAMING PLAN

S103

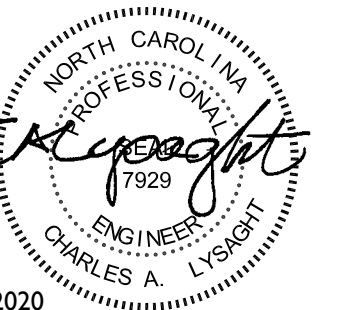
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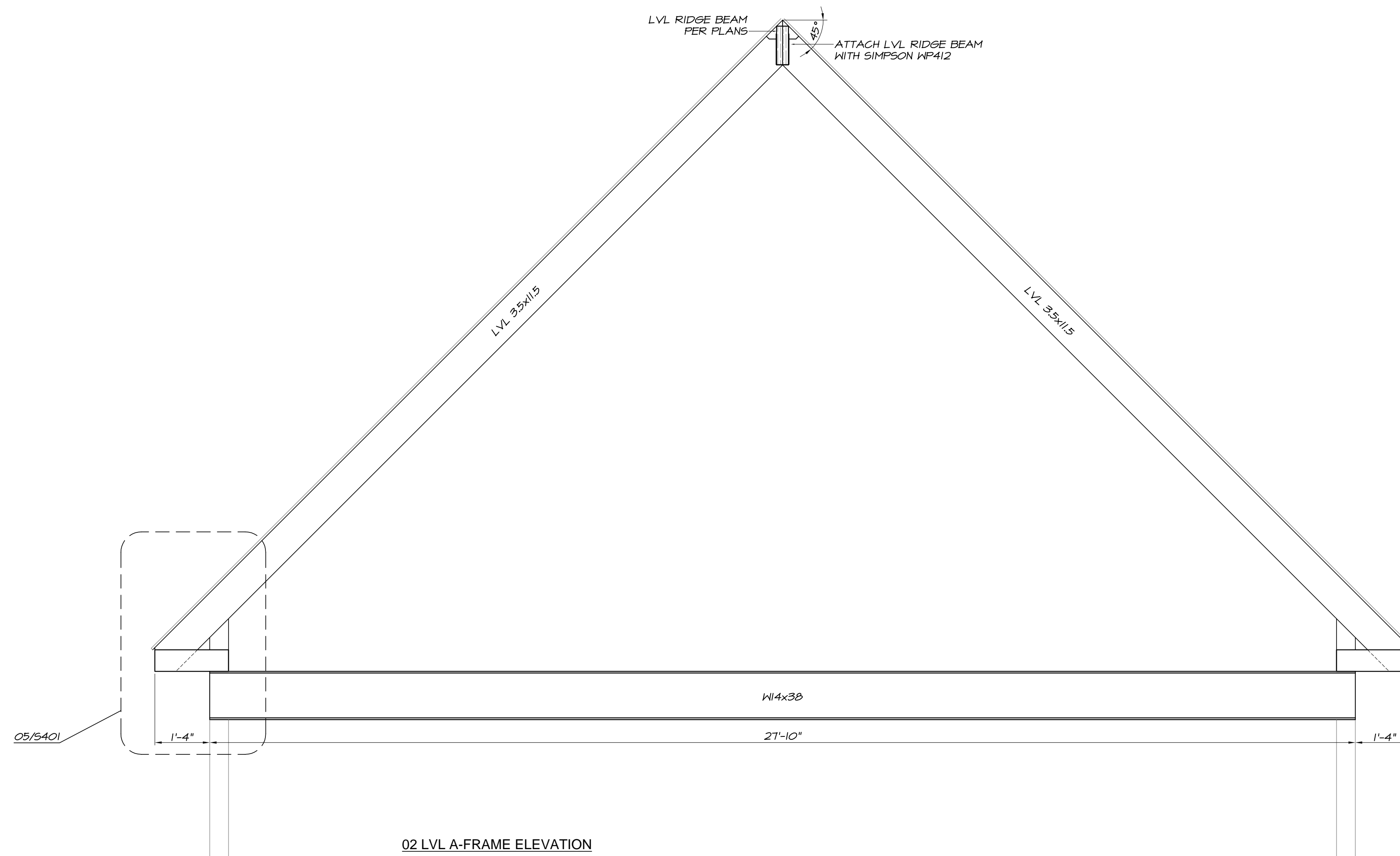
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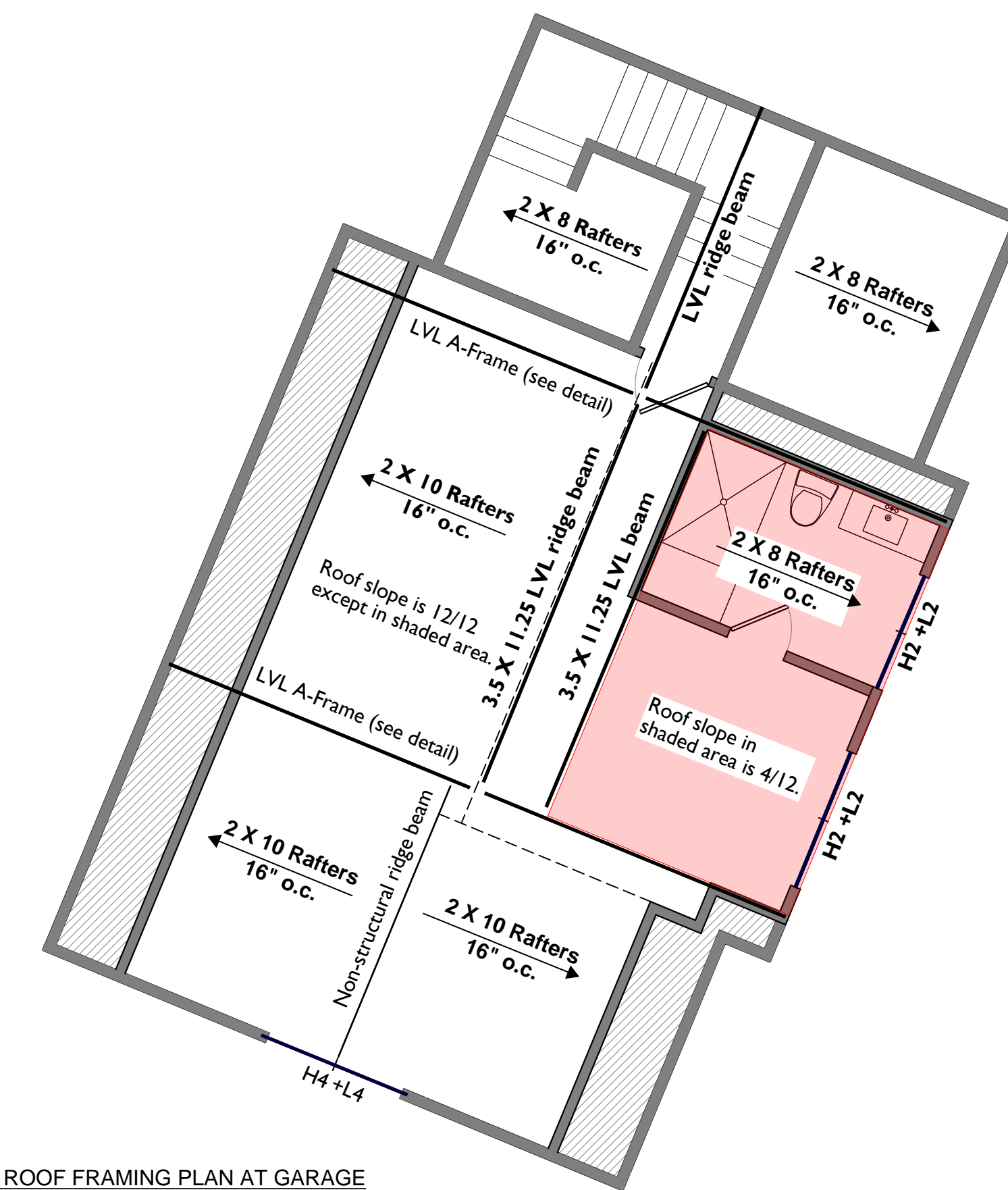
ROOF FRAMING
OVER GARAGE PLAN

S104

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02 LVL A-FRAME ELEVATION



01 ROOF FRAMING PLAN AT GARAGE
3/16" Scale



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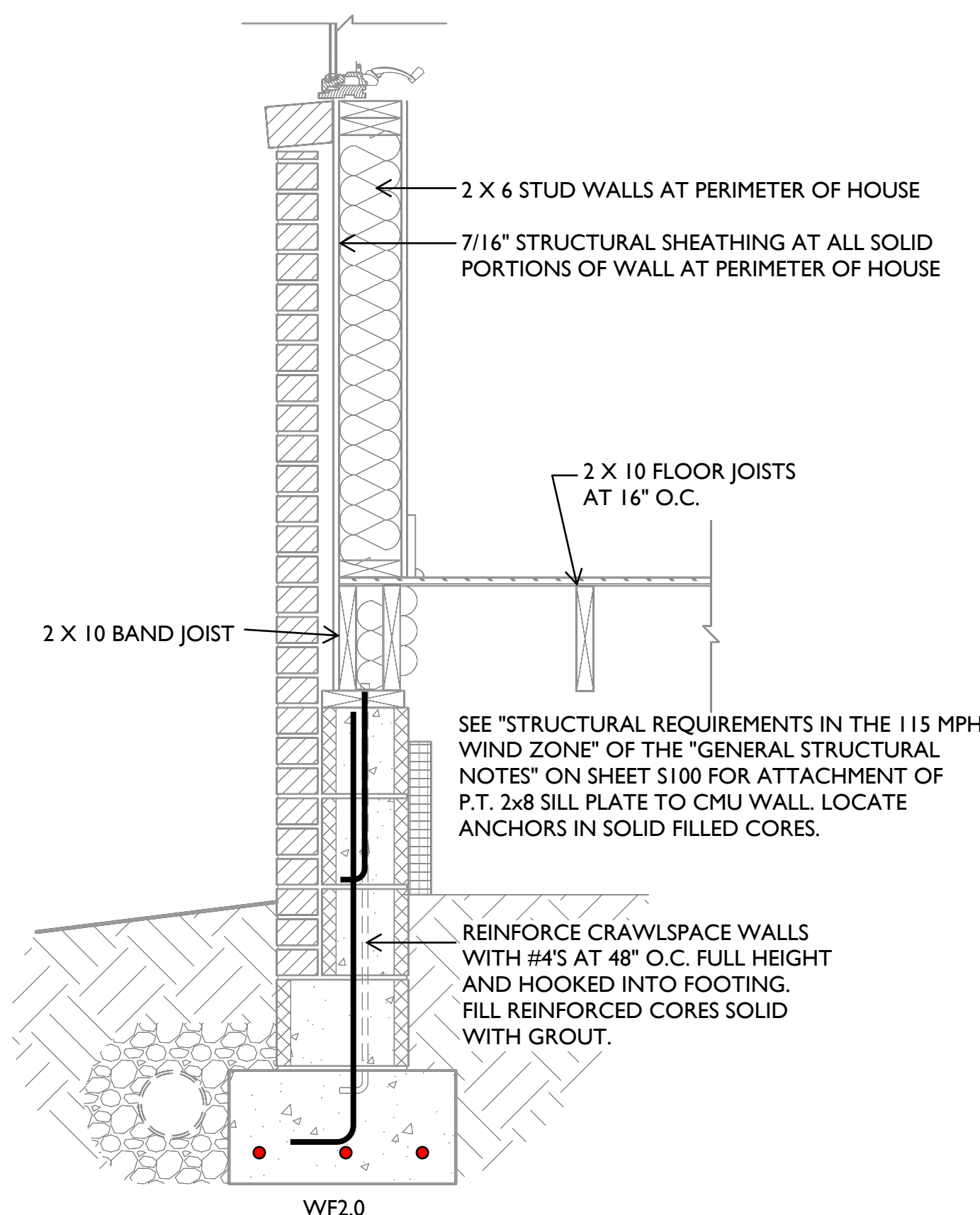
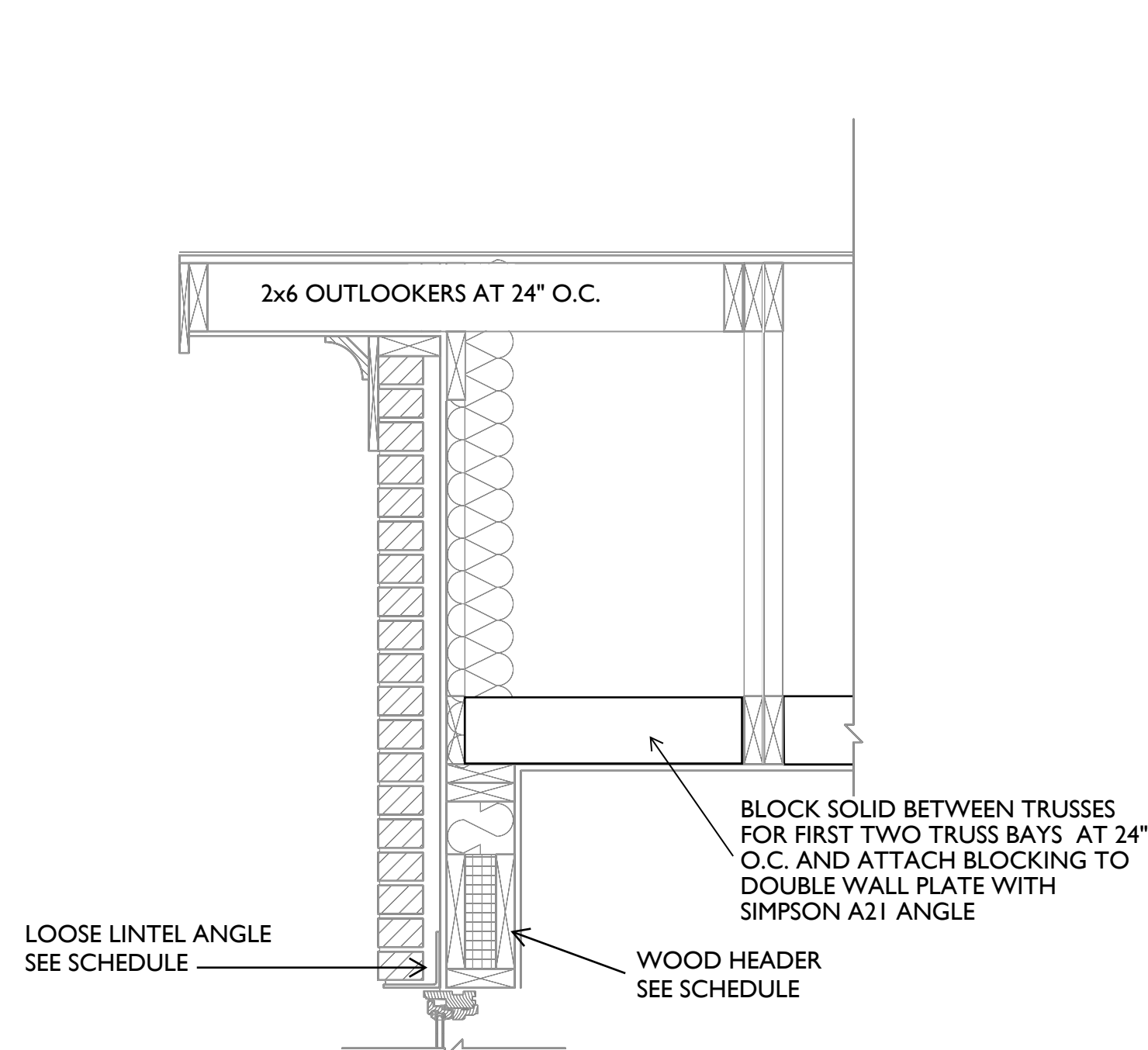
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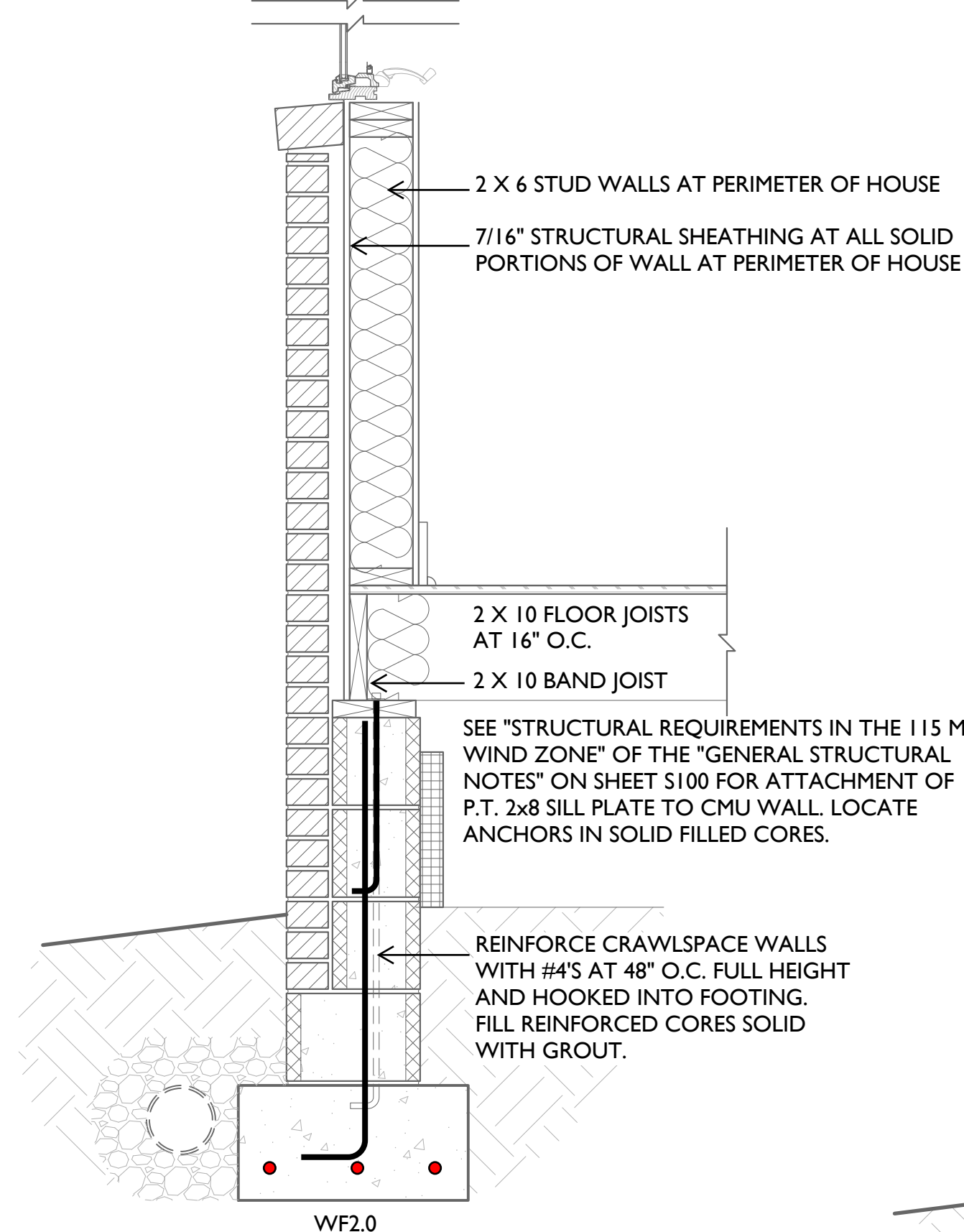
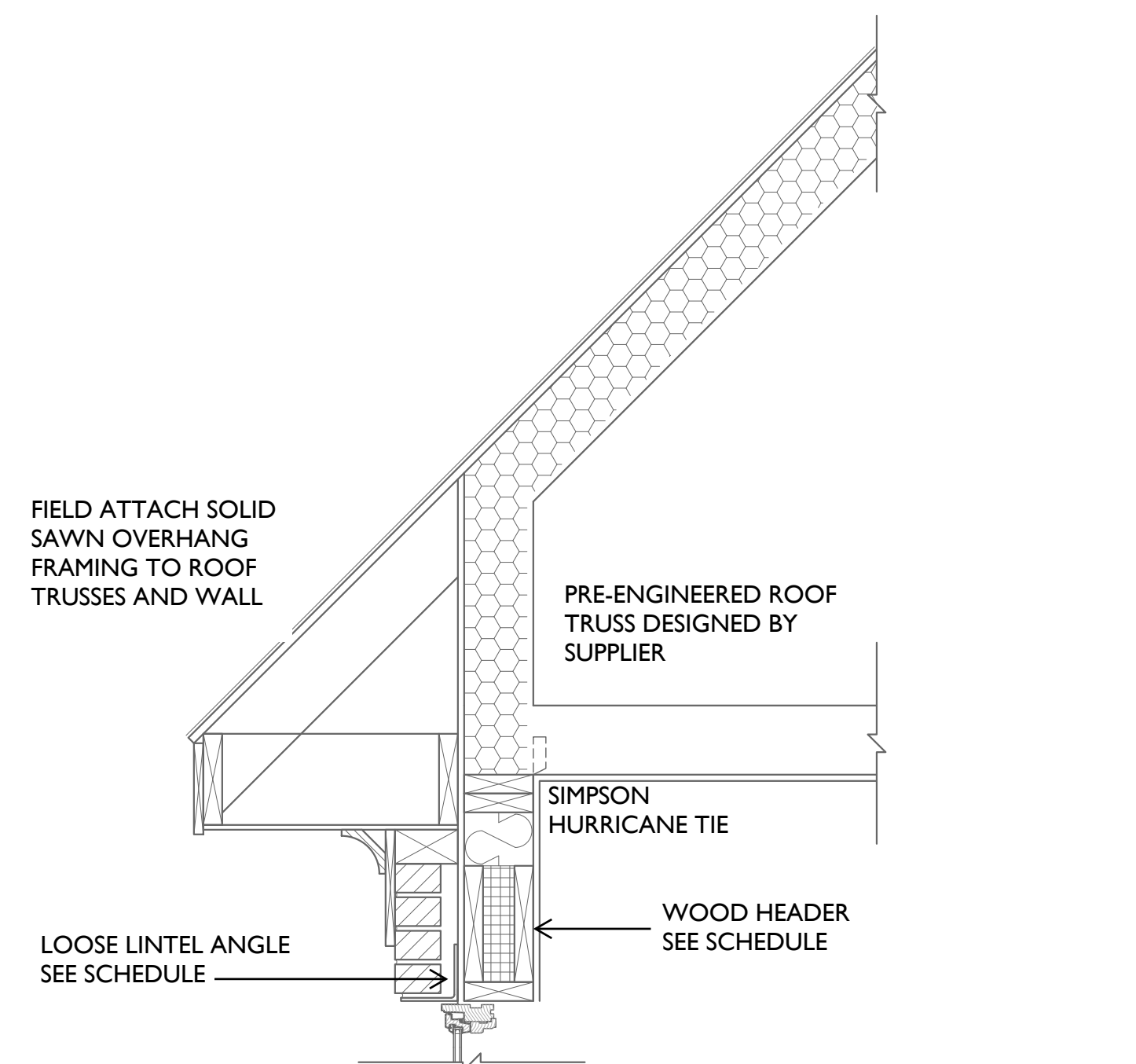
WALL SECTIONS

S201

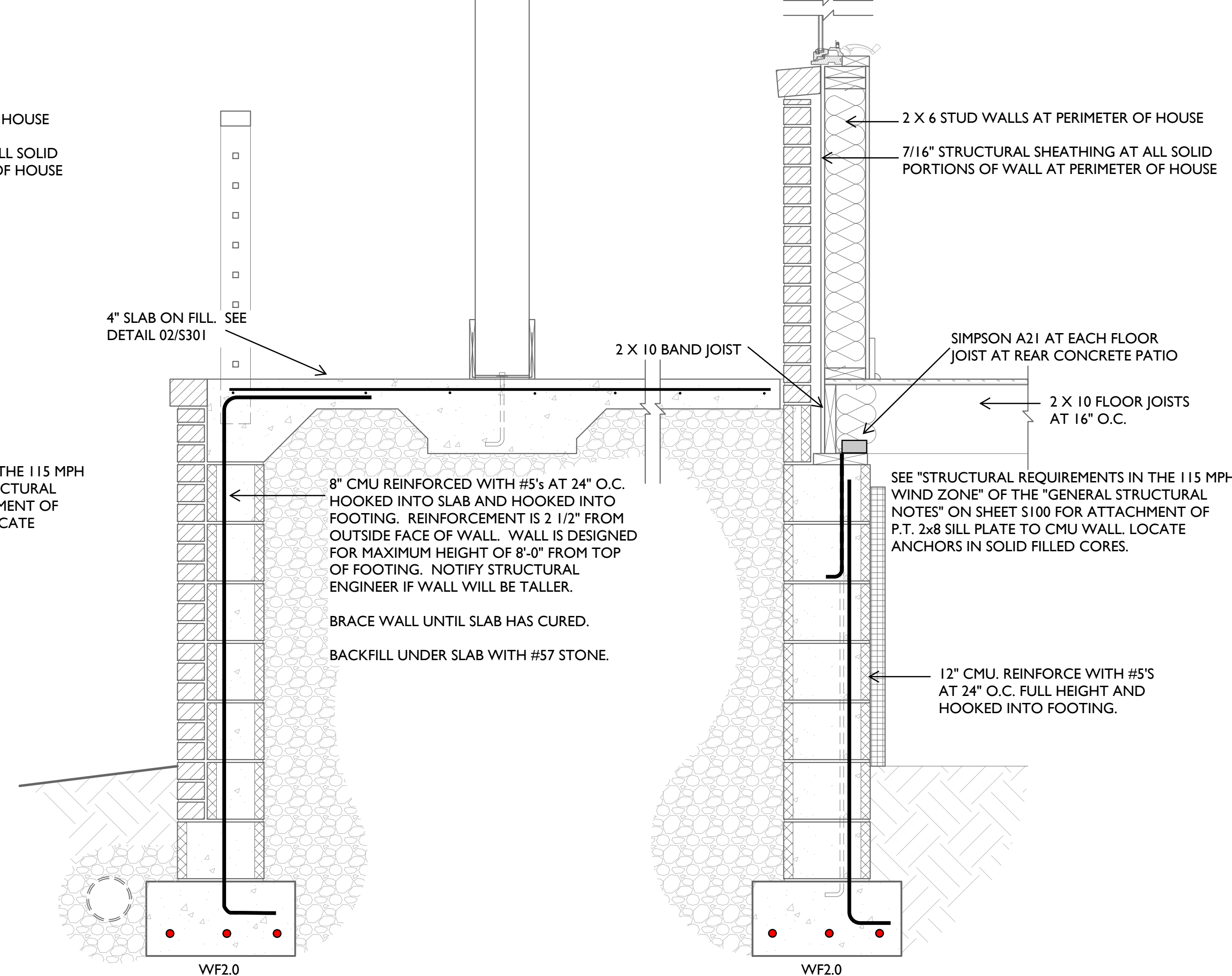
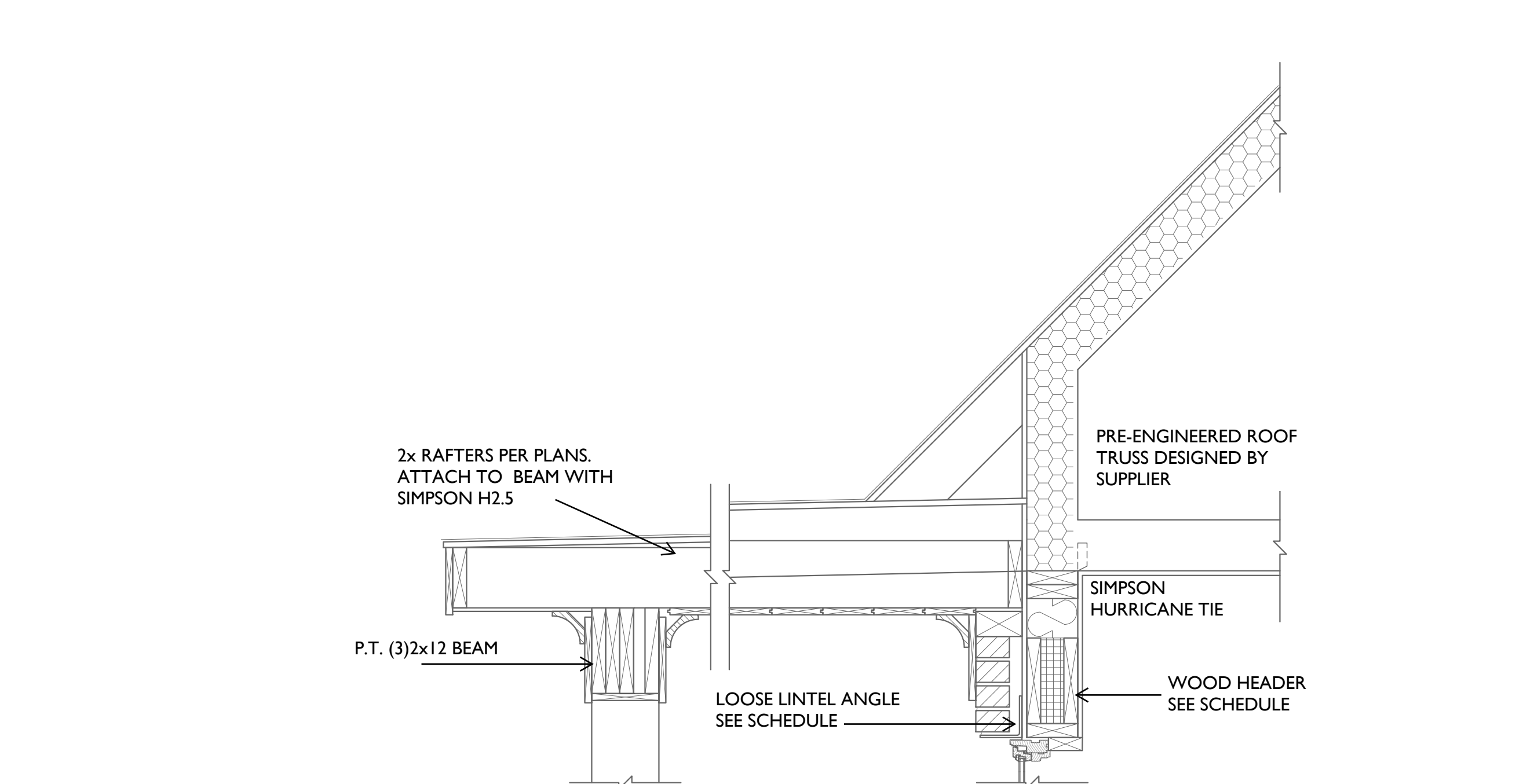
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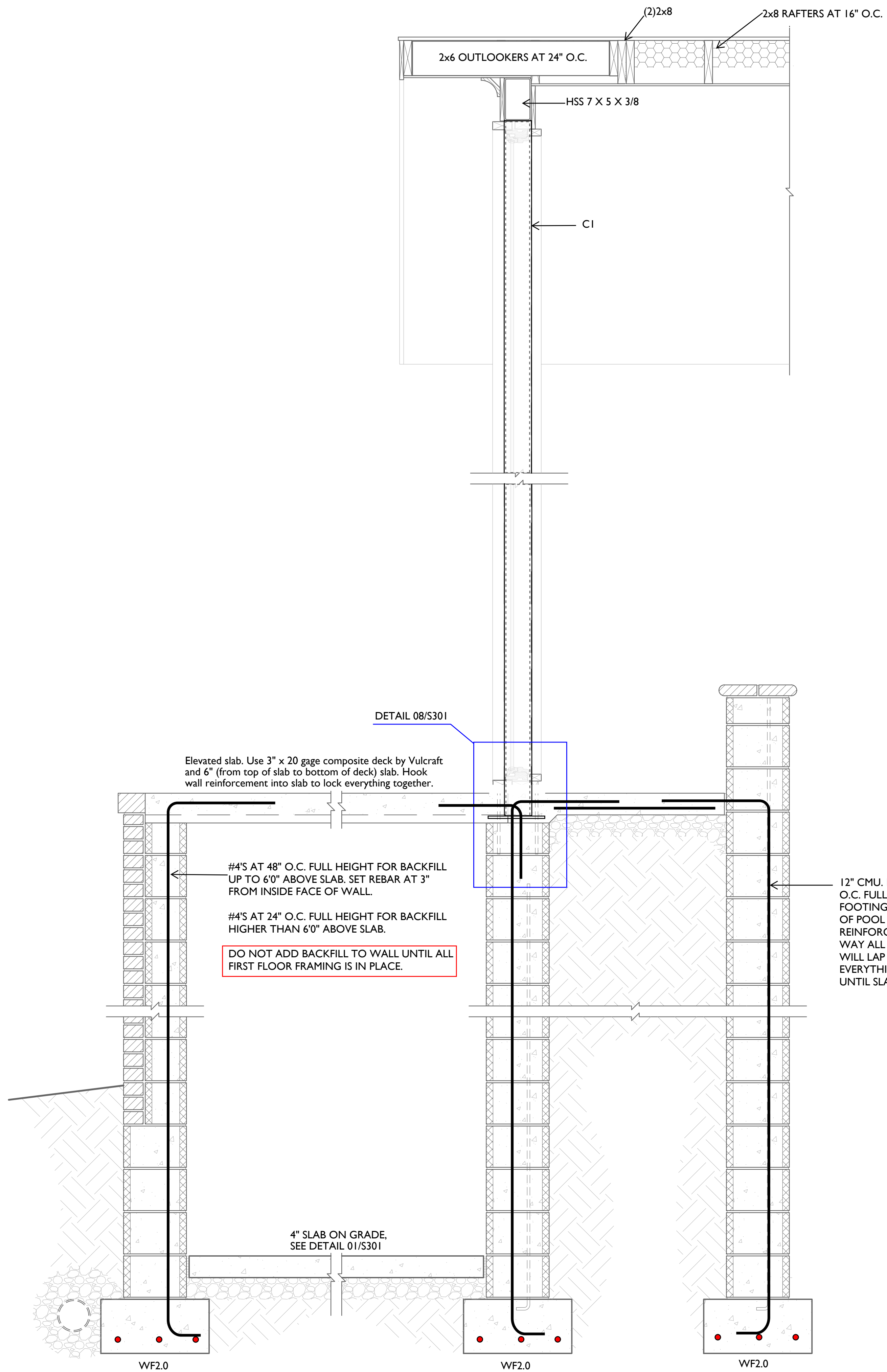
1. WALL SECTION 'A'
SCALE: 1"=1'-0"



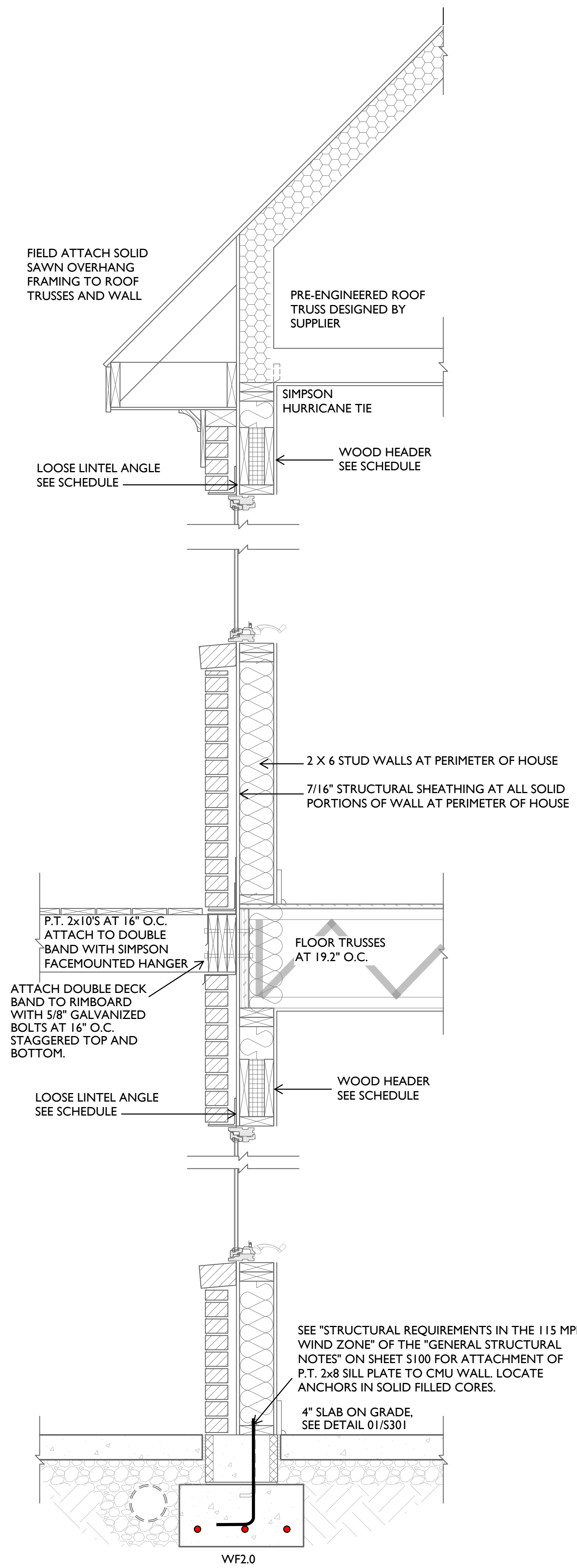
2. WALL SECTION 'B'
SCALE: 1"=1'-0"



3. WALL SECTION 'C'
SCALE: 1"=1'-0"



1. WALL SECTION 'D'
SCALE: 1"=1'-0"

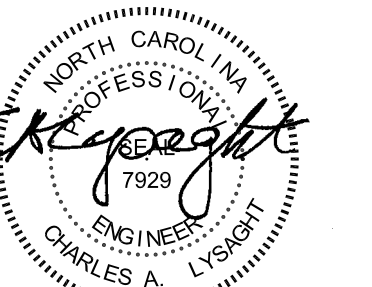


2. WALL SECTION 'E'
SCALE: 1"=1'-0"



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BROADWAY, NC

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WALL SECTIONS

S202

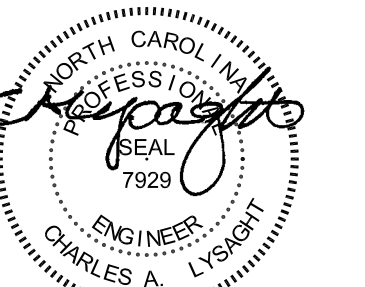
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BROADWAY, NC**

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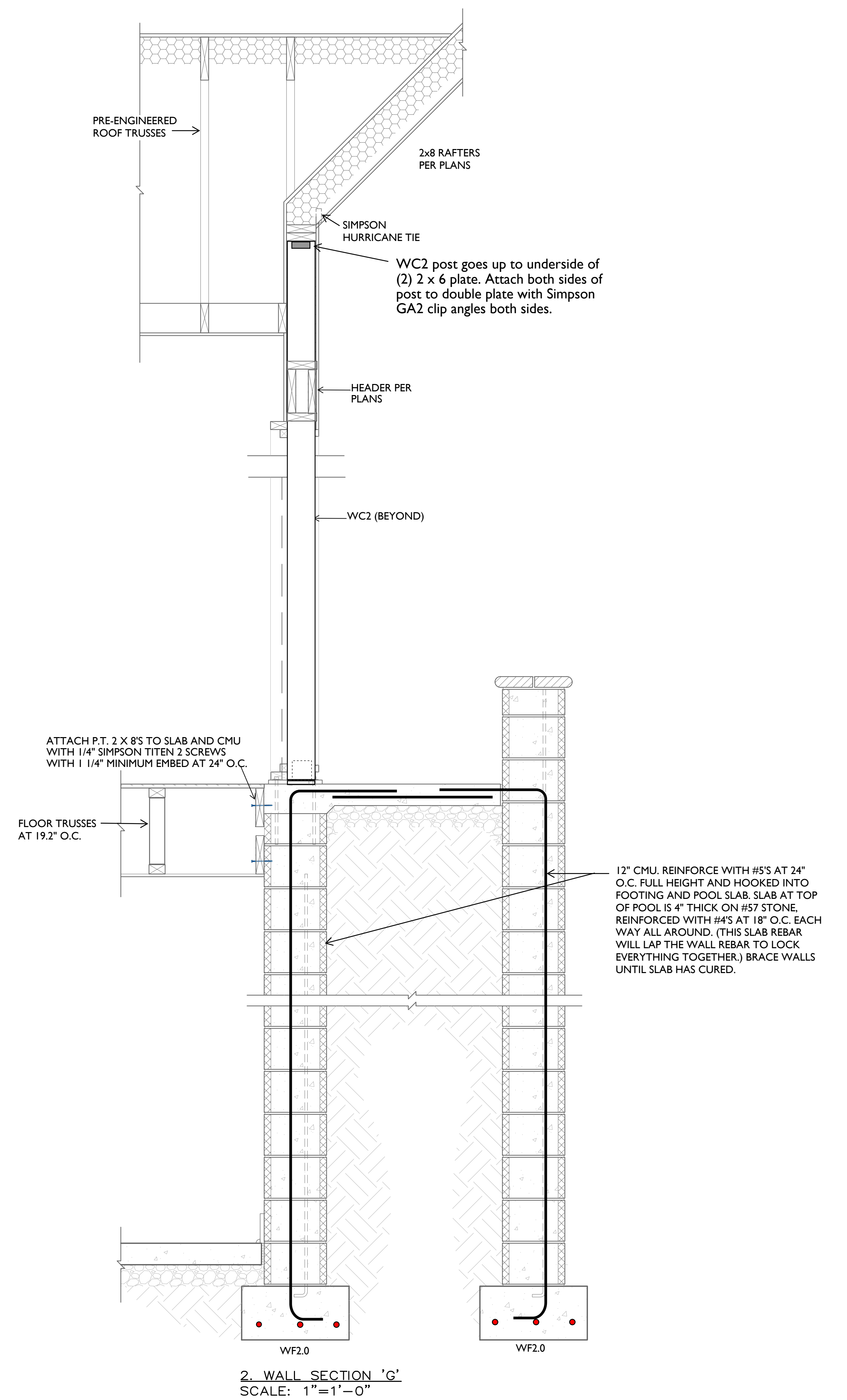
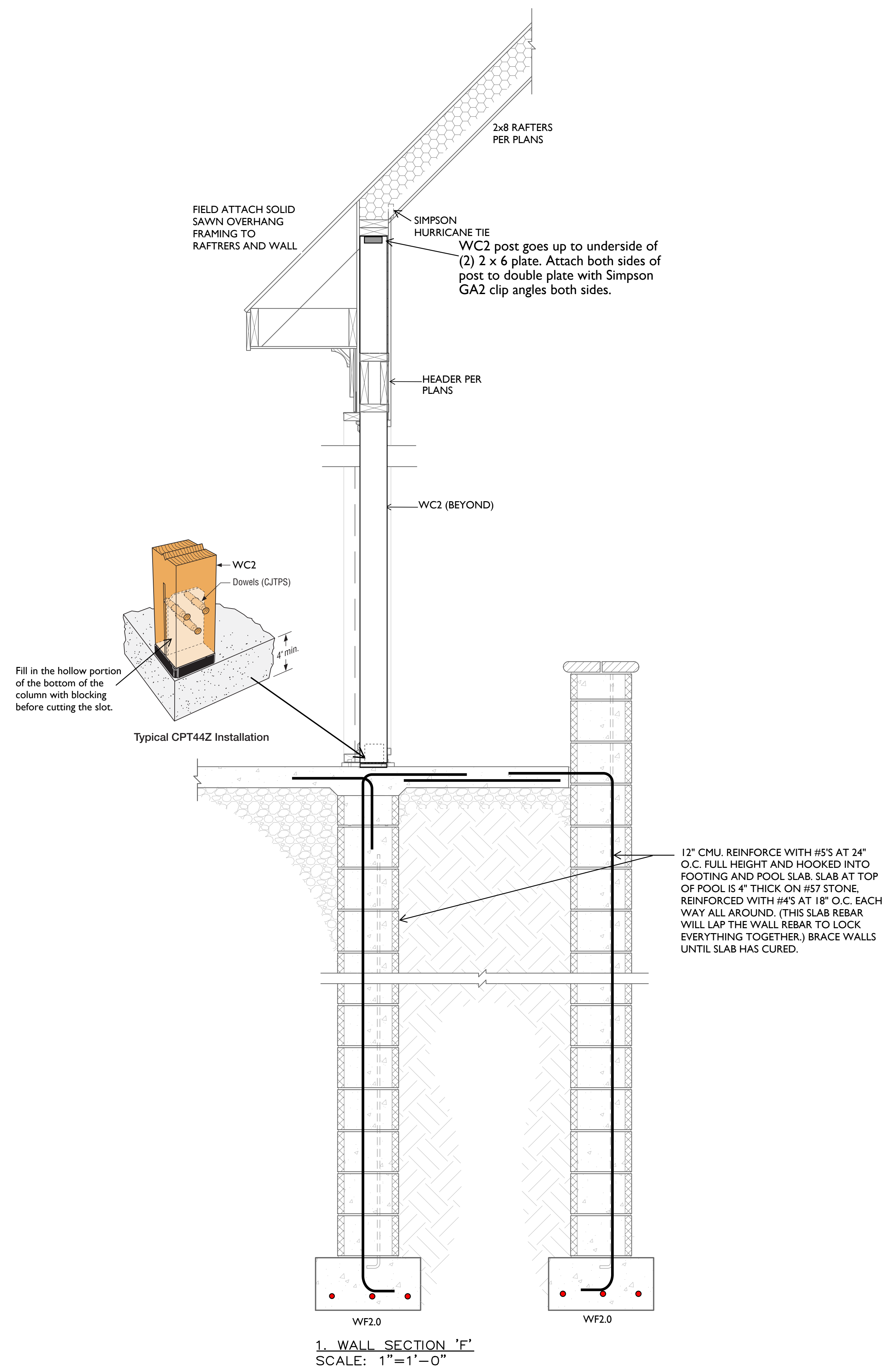
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WALL SECTIONS

S203

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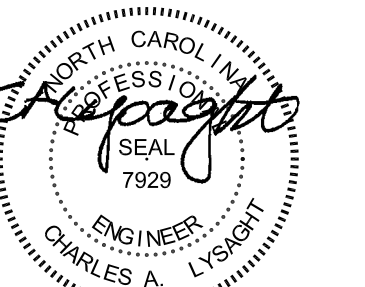




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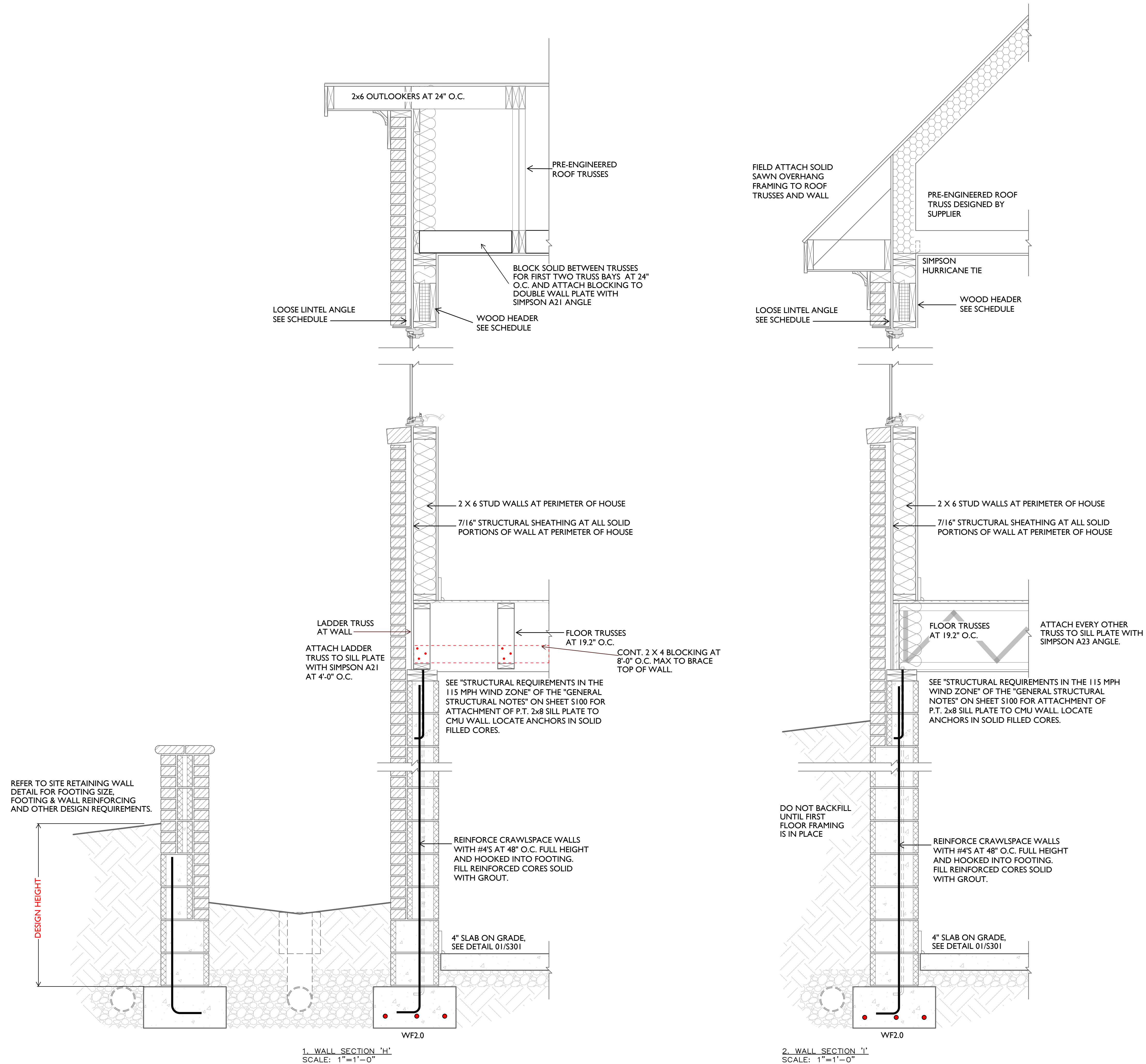
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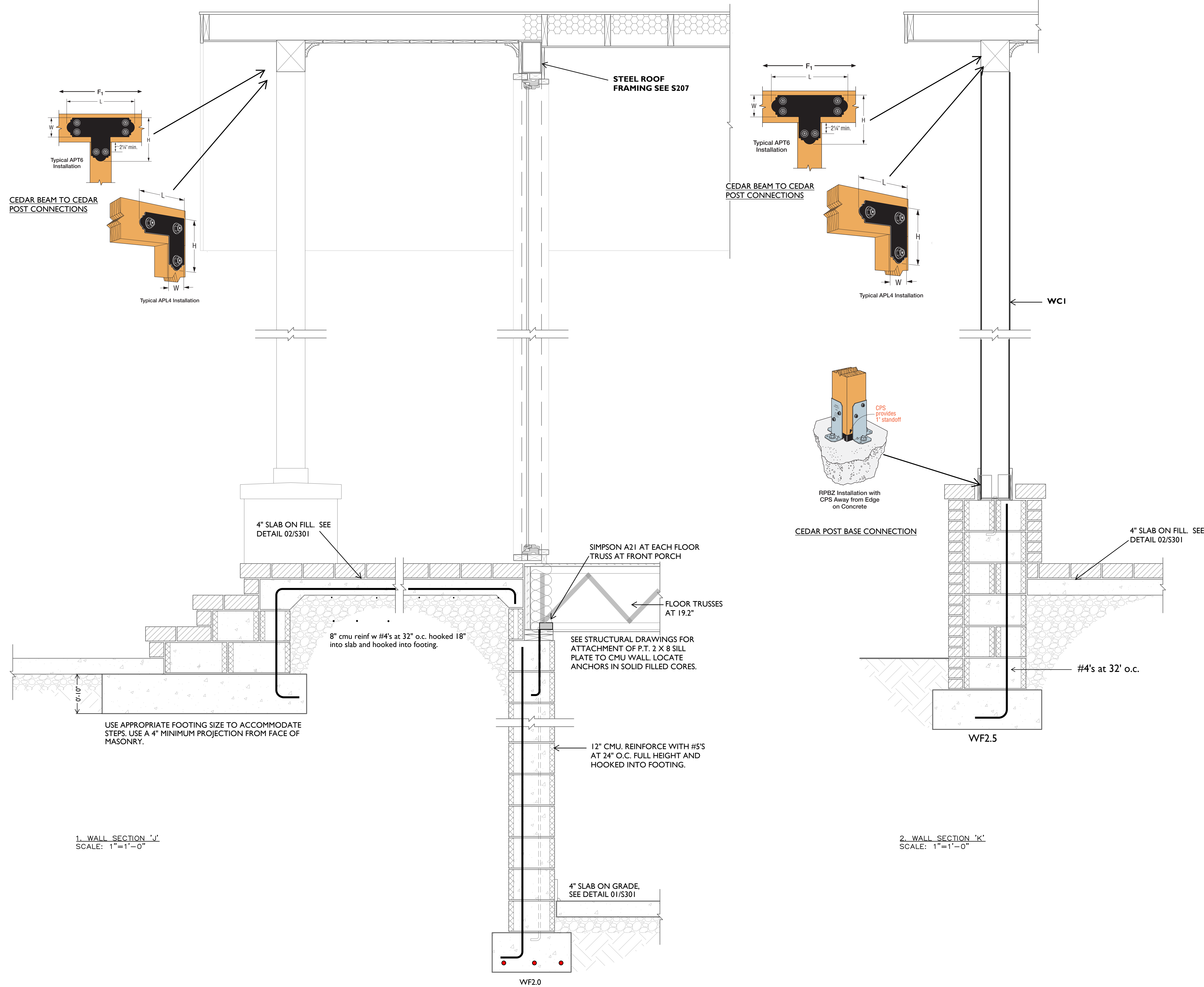
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WALL SECTIONS

S204

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1. WALL SECTION "J"
SCALE: 1"=1'-0"

2. WALL SECTION "K"
SCALE: 1"=1'-0"



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WALL SECTIONS

S205

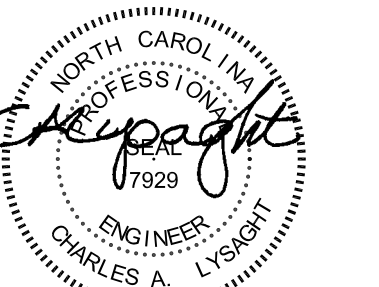
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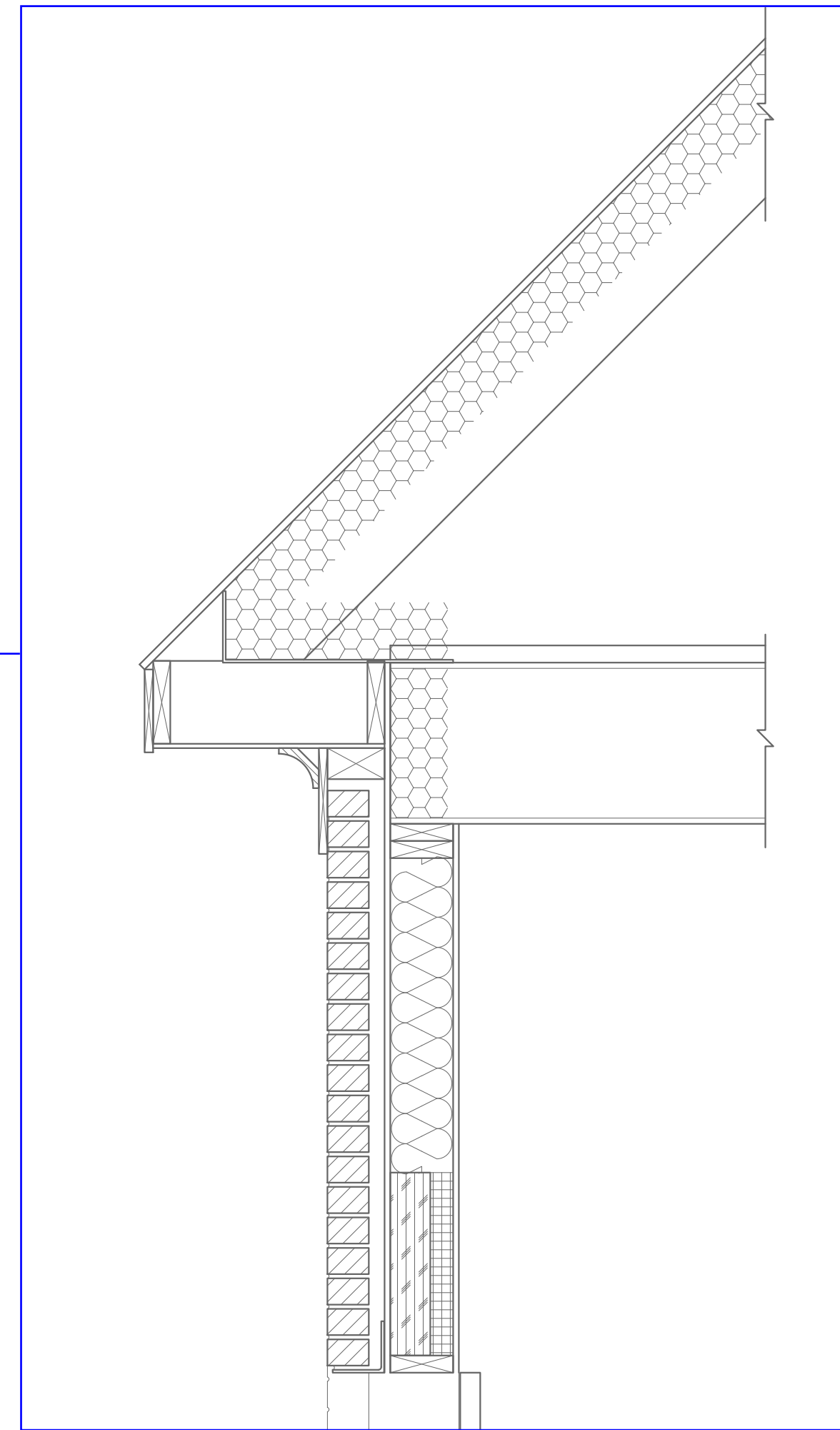
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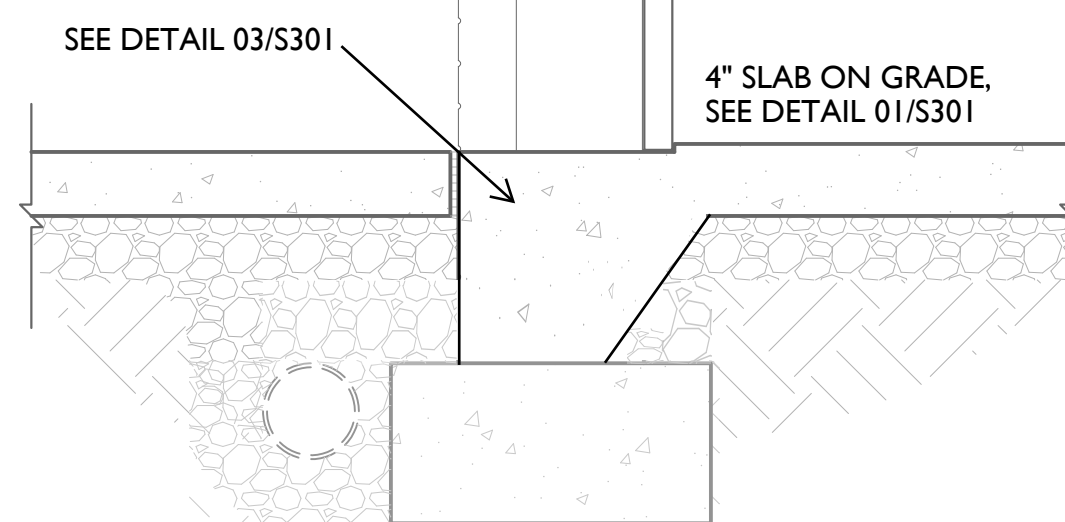
WALL SECTIONS

S206

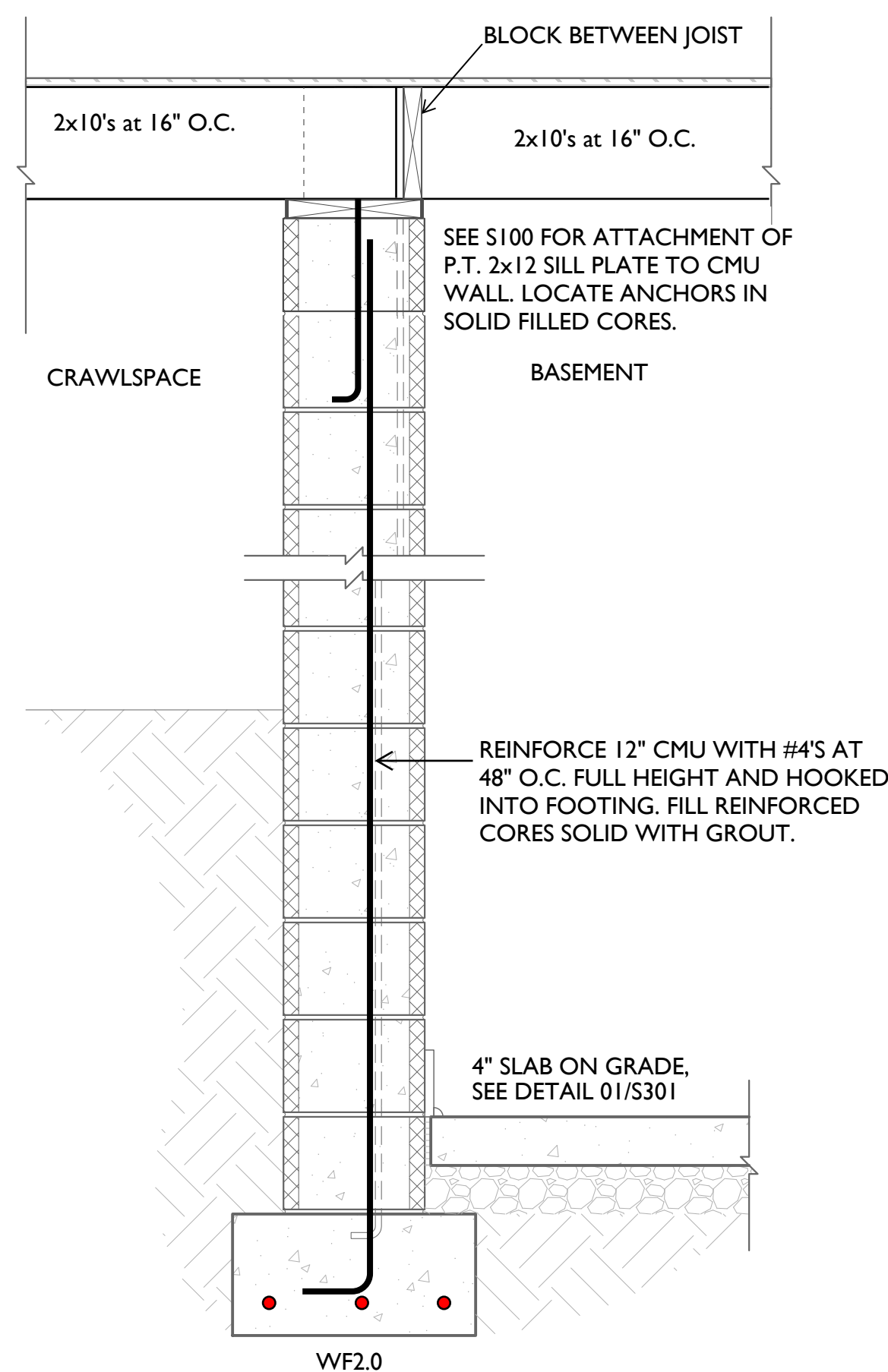
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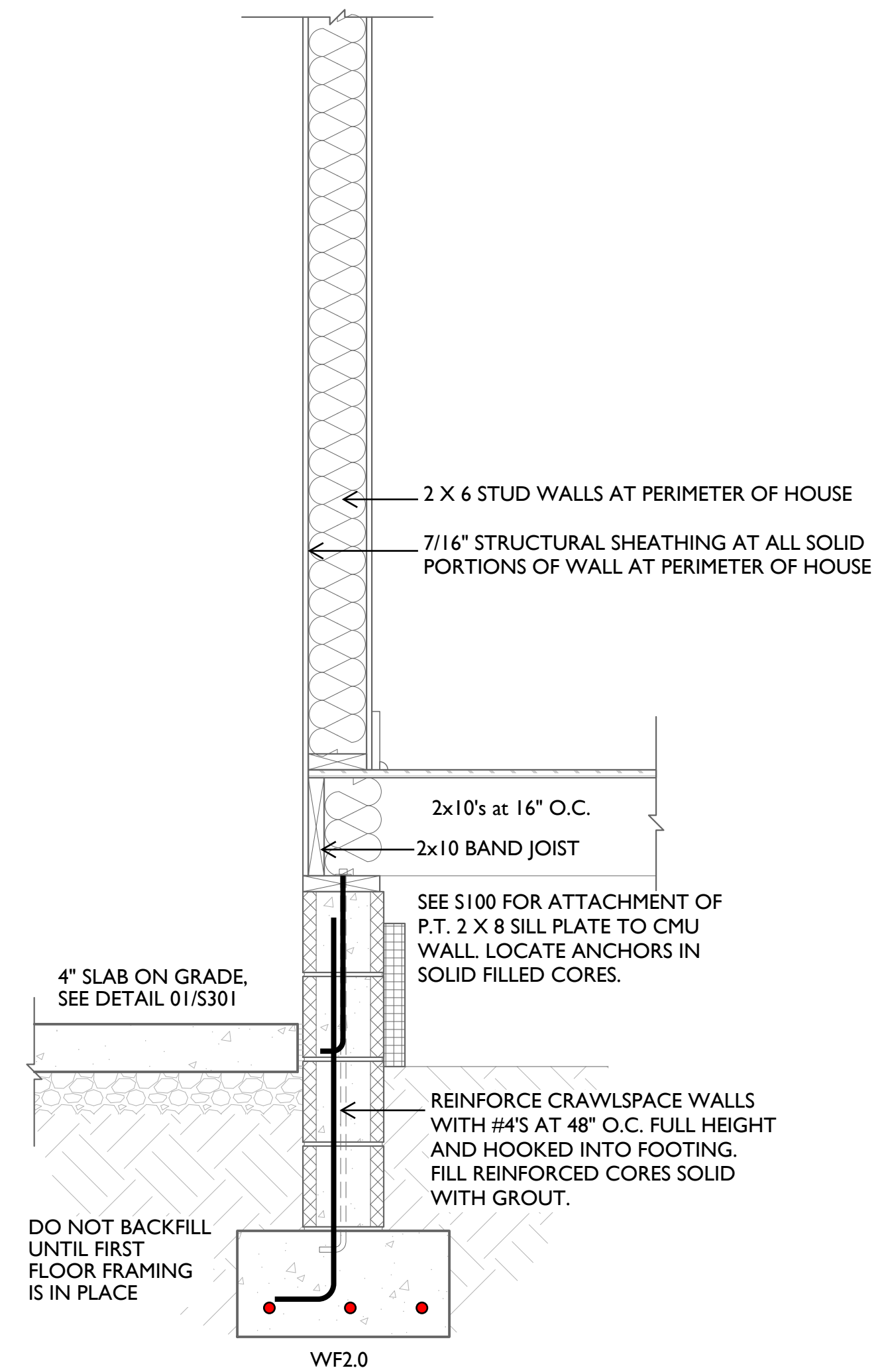
SEE DETAIL 05/S401



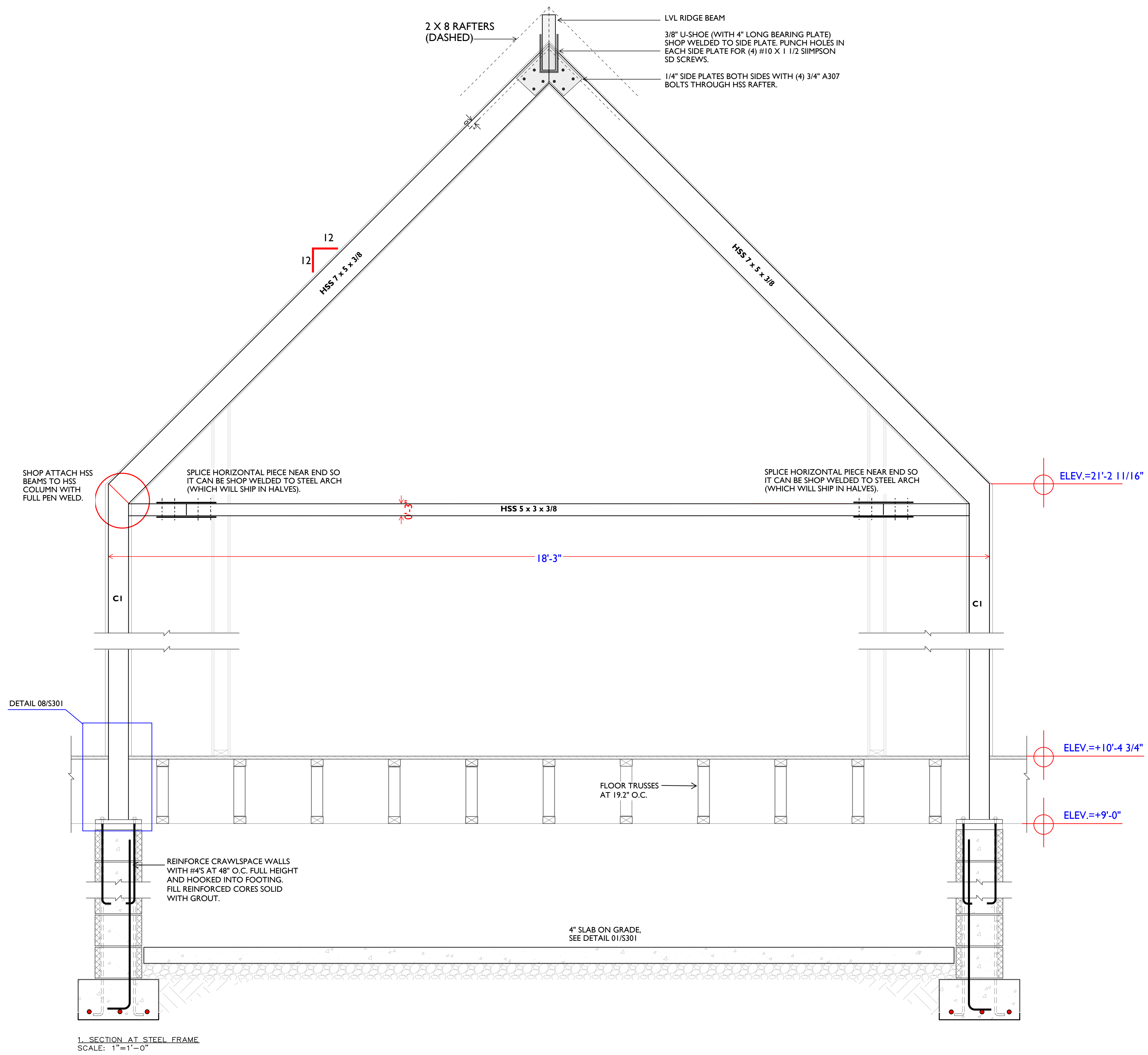
2. WALL SECTION 'M'
SCALE: 1"=1'-0"



1. WALL SECTION 'L'
SCALE: 1"=1'-0"



3. WALL SECTION 'N'
SCALE: 1"=1'-0"



1. SECTION AT STEEL FRAME
SCALE: 1"=1'-0"



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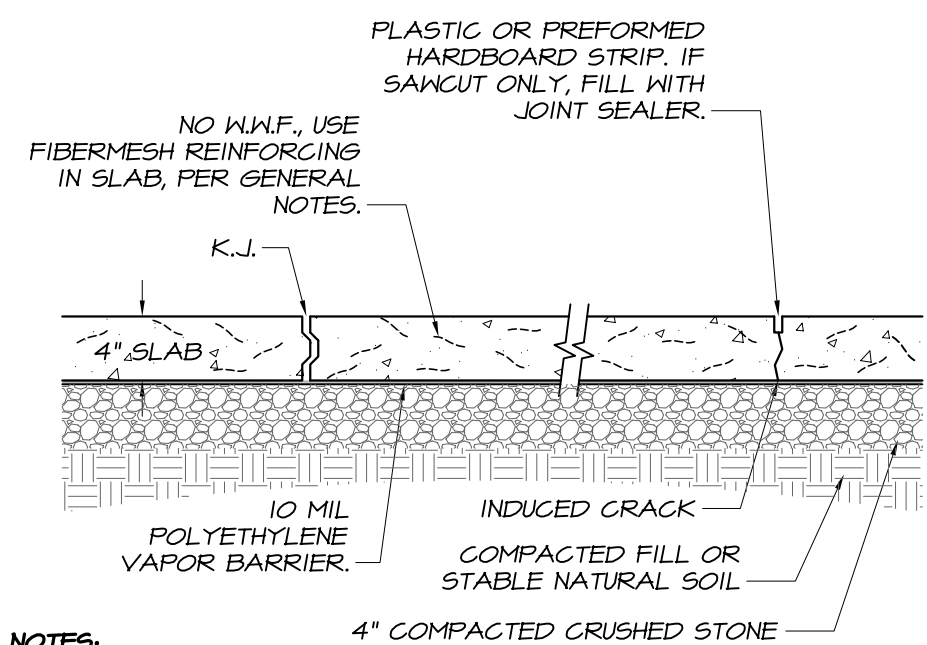
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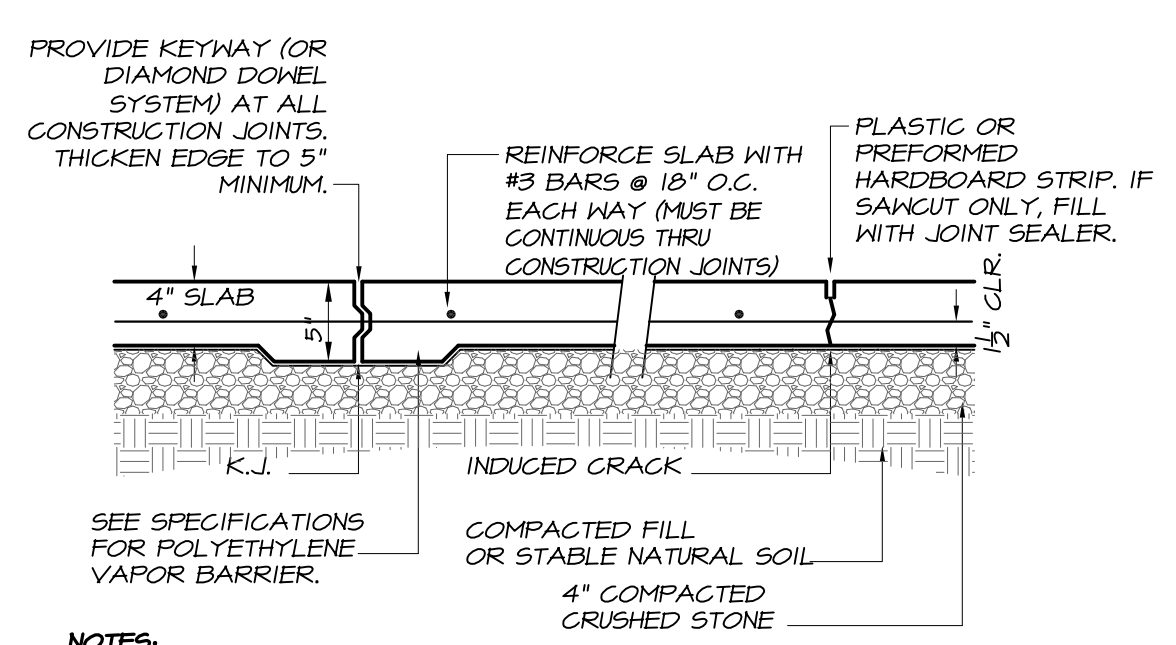
WALL SECTION
AT STEEL

S207

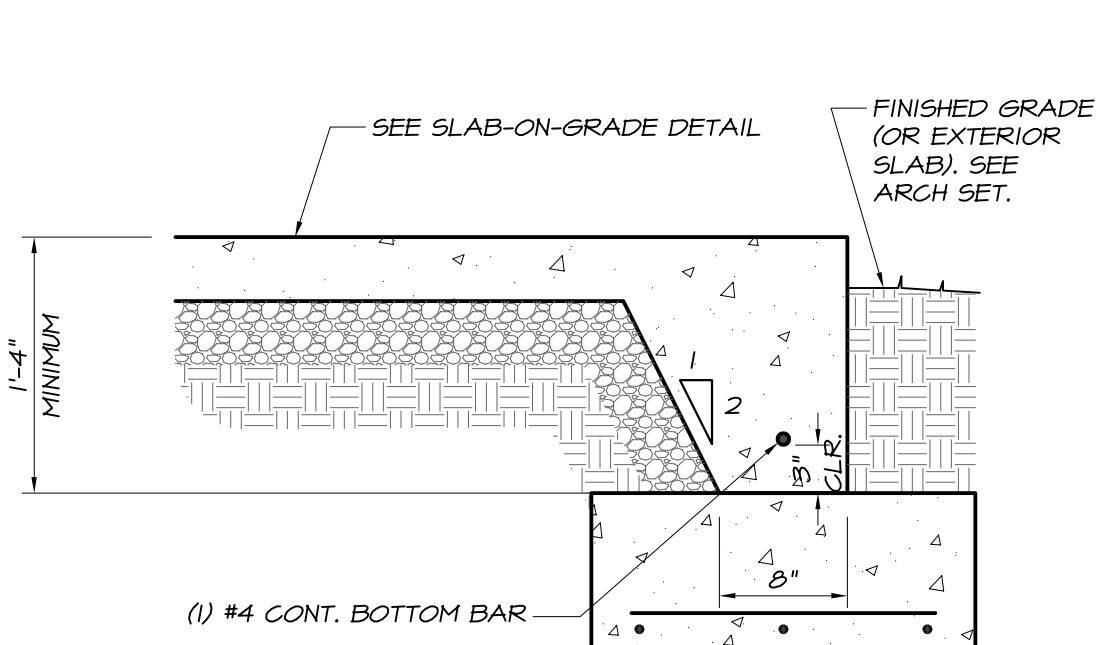
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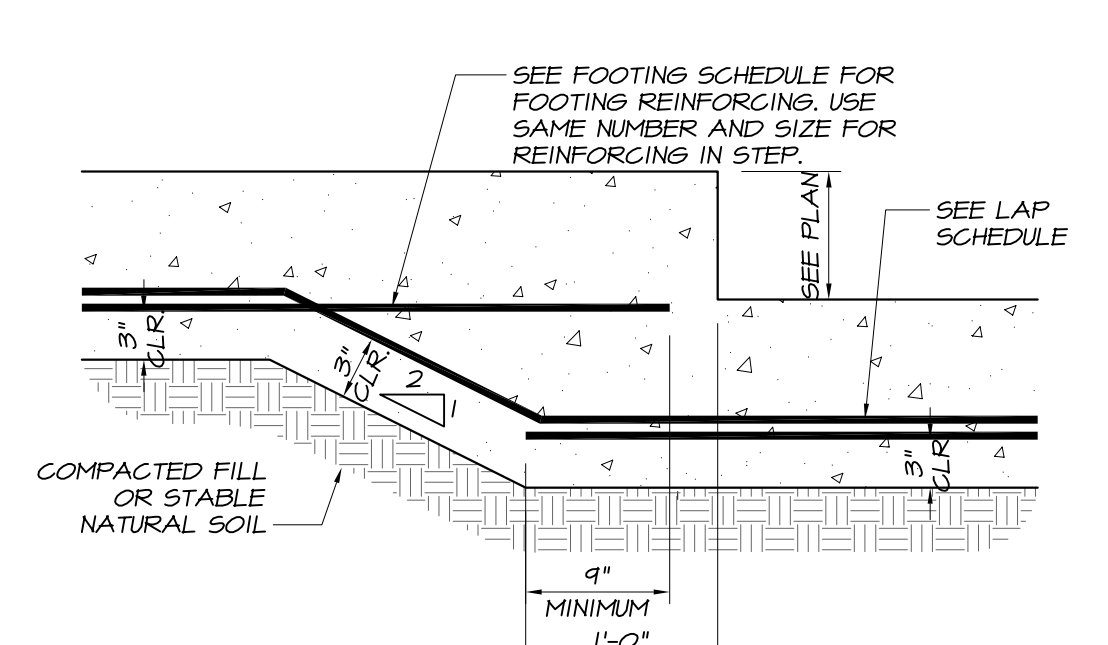
- NOTES:**
- EXTERIOR SLABS-ON-GRADE DO NOT REQUIRE A 10 MIL VAPOR BARRIER.
 - USE A KEYED CONSTRUCTION JOINT (K-J) BETWEEN POURS.
 - SLAB IS DESIGNED FOR RESIDENTIAL OCCUPANCY WITH A MAXIMUM LIVE LOAD OF 100 PSF AND NO LARGE CONCENTRATED LOADS.
 - SEE GENERAL NOTES FOR CONCRETE SPECIFICATIONS.
 - SEE ARCHITECTURAL SET FOR SLOPE REQUIREMENTS.
- 01 TYPICAL 4" FIBER REINFORCED SLAB-ON-GRADE DETAIL** NOT TO SCALE



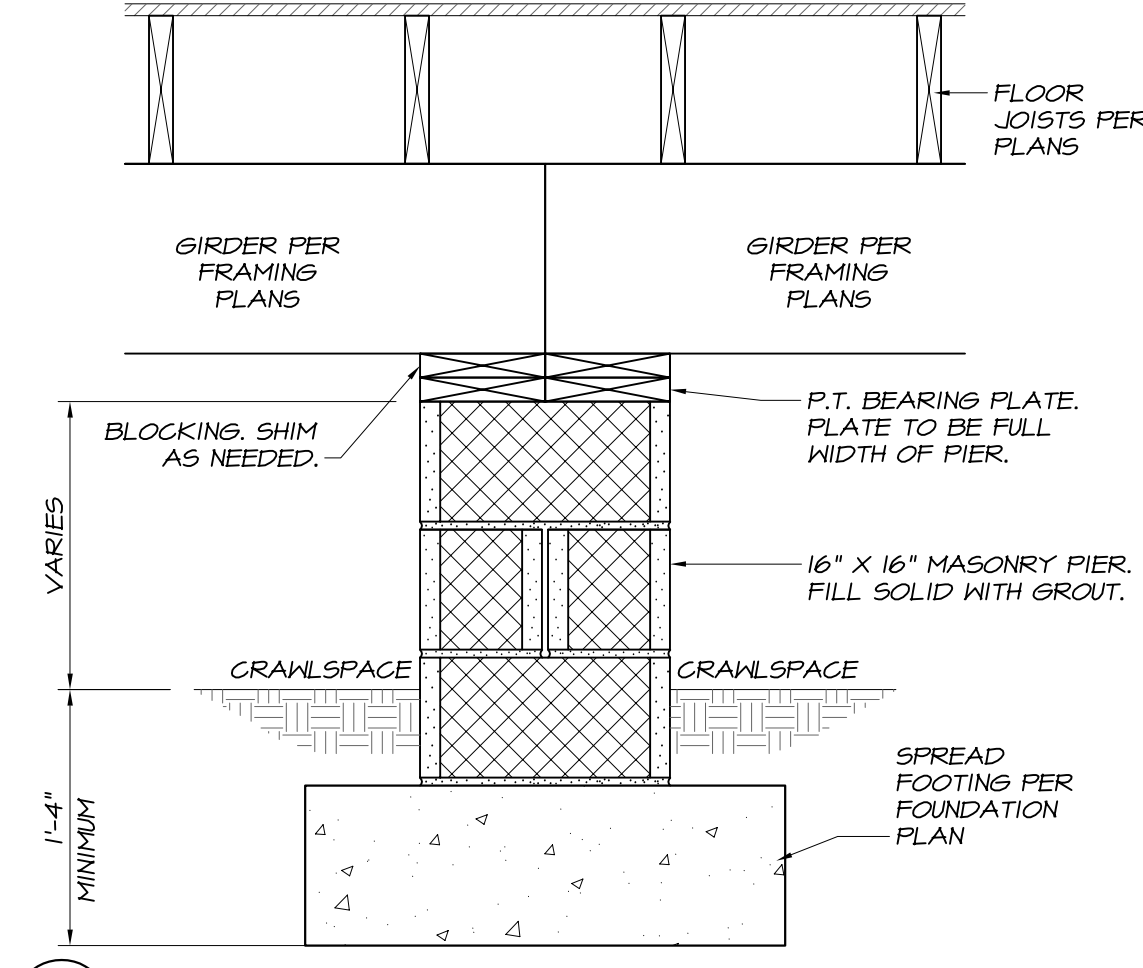
- NOTES:**
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 - SEE GENERAL NOTES FOR CONCRETE SPECIFICATIONS.
 - SEE ARCHITECTURAL SET FOR SLOPE REQUIREMENTS.
- 02 REINFORCED SLAB ON FILL** NOT TO SCALE



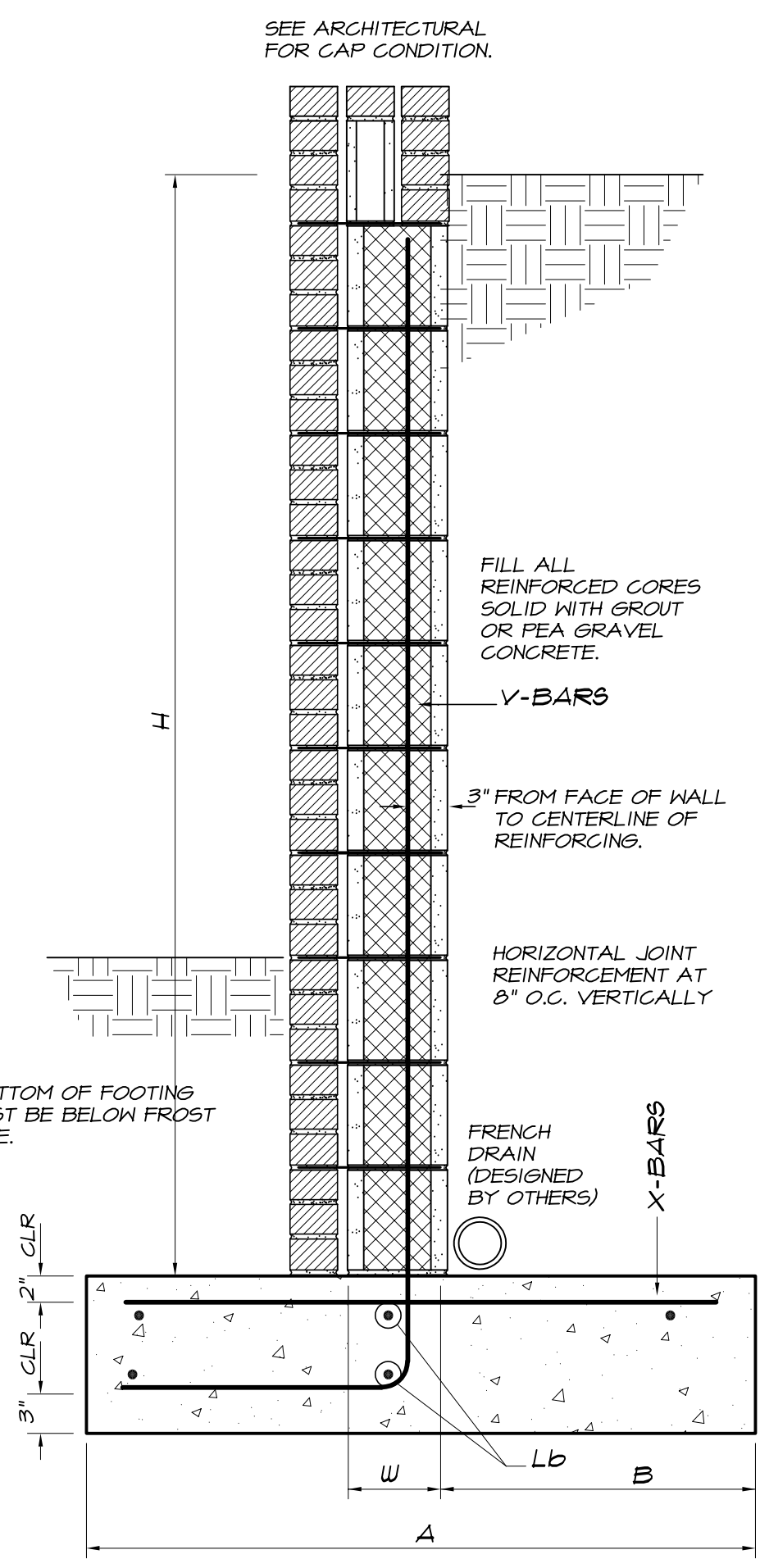
- NOTES:**
- SEE GENERAL NOTES FOR CONCRETE AND REINFORCING SPECIFICATIONS.
 - BOTTOM OF TURN-DOWN MUST BE A MINIMUM OF 1/4" BELOW FINISHED GRADE. USE DEEPER TURN-DOWN IF NECESSARY.
- 03 TURN-DOWN SLAB DETAIL AT GARAGE** 1" SCALE



- NOTES:**
- SEE GENERAL NOTES FOR CONCRETE AND REINFORCING SPECIFICATIONS.
 - 1 VERTICAL TO 2 HORIZONTAL STEP RATIO, MAXIMUM 2" VERTICAL / 4" HORIZONTAL STEP. CONTACT S.E.R. IF STEP IS GREATER THAN 2" VERTICAL.
 - IF PLAN DOES NOT SHOW STEP HEIGHT, STEP FOOTING AS NEEDED WITHIN THE 1:2 RATIO. IF CMU IS BEARING ON THE FOOTING, CONSIDER STEPPING SO THE CMU SHALL COURSE OUT.
- 04 TYPICAL STEPPED FOOTING DETAIL** NOT TO SCALE



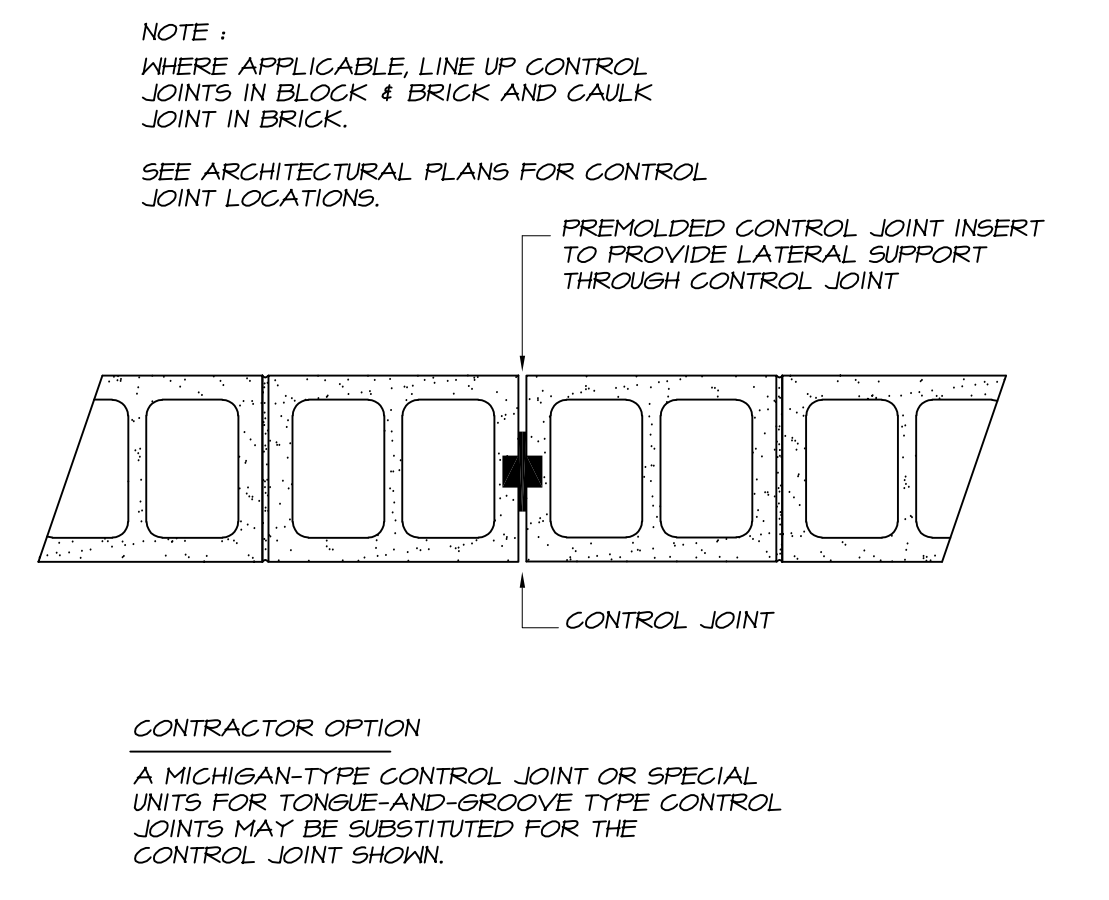
- 05 CMU PIER DETAIL** NOT TO SCALE



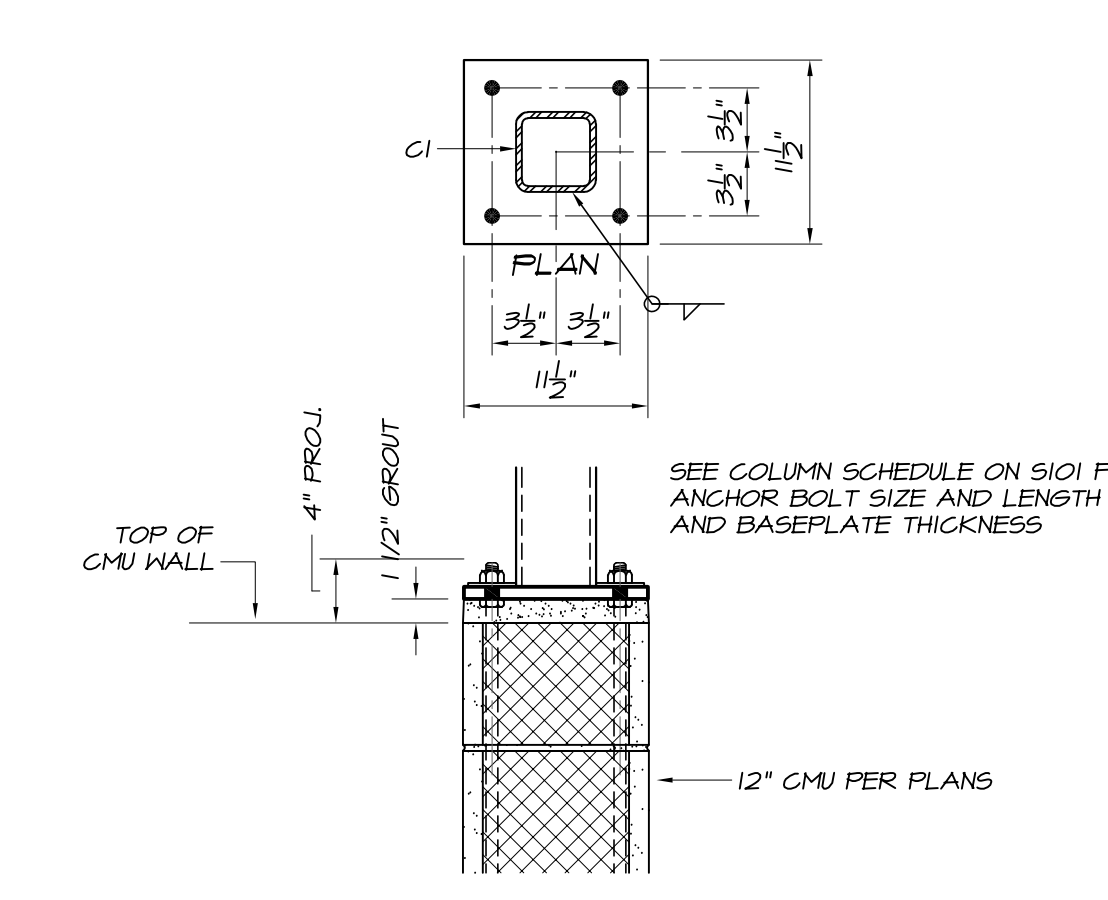
- CANTILEVERED MASONRY RETAINING WALL NOTES**
- USE CLASS "A" SOIL FOR BACKFILL BEHIND WALL TO MINIMIZE LATERAL PRESSURE. CLASS "A" IS CLEAN SAND OR GRAVEL, FREE OF FINES THAT MIGHT OBSTRUCT FREE DRAINAGE. BACKFILL MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER.
 - STRUCTURAL DATA: $f'_c = 3,000$ PSI FOR FOOTINGS, $f'_m = 1,500$ PSI FOR WALLS, GRADE 60 REBARS, 2,000 PSF ALLOWABLE SOIL BEARING PRESSURE, 40 PCF EQUIVALENT FLUID PRESSURE AT CANTILEVERED RETAINING WALLS.
 - THIS DESIGN IS BASED UPON LEVEL (OR LOW SLOPE) BACKFILL AND NO ADDITIONAL SURCHARGE LOAD. CONTACT THE STRUCTURAL ENGINEER FOR A REDESIGN OF THE WALL AND FOOTING IF THERE WILL BE A STEEPLY SLOPING BACKFILL OR SURCHARGE LOAD.
 - REINFORCING BARS SHALL BE ACCURATELY PLACED AT THE LOCATIONS SHOWN AT THE DETAILS TO ENSURE THAT THE COMPLETED CONSTRUCTION WILL REFLECT THE STRUCTURAL DESIGN.
 - PROVIDE MASONRY CONTROL JOINTS AT APPROXIMATELY 24'-0" O.C. HORIZONTALLY FOR THE FULL HEIGHT OF THE WALL.
 - CONCRETE FOOTINGS SHALL BE ON FIRM UNDISTURBED EARTH (OR ENGINEERED FILL) AND SHALL BE PLACED BELOW THE FROST LINE.
 - REFER TO ARCHITECTURAL PLANS AND/OR SPECIFICATIONS FOR WATER-PROOFING AND DRAINAGE REQUIREMENTS.
 - DO NOT BACKFILL BEHIND WALL UNTIL THE GROUT HAS CURED.
 - SPLICE VERTICAL REBARS 50 BAR DIAMETERS.
 - USE THE SCHEDULE TO DETERMINE STRUCTURAL REQUIREMENTS OF WALL. STEP FOOTINGS AS REQUIRED TO SUIT FINISH GRADE. CONTACT STRUCTURAL ENGINEER FOR TALLER DESIGNS NOT COVERED IN THE SCHEDULE.

RETAINING WALL SCHEDULE

M/C#	H	A	B	H	V-BARS	X-BARS	Ld
CM13	3'-0"	3'-0"	1'-0"	8"	#5 @ 16"	#5 @ 16"	(5) #4
CM14	4'-0"	3'-6"	1'-6"	8"	#5 @ 16"	#5 @ 16"	(5) #4
CM15	5'-0"	4'-0"	2'-0"	8"	#5 @ 16"	#5 @ 16"	(5) #4
CM16	6'-0"	4'-6"	2'-6"	8"	#5 @ 16"	#5 @ 16"	(5) #4
CM17	7'-0"	5'-0"	3'-0"	8"	#6 @ 16"	#6 @ 16"	(5) #5
CM18	8'-0"	5'-6"	3'-6"	12"	#7 @ 16"	#6 @ 16"	(5) #5
CM19	9'-0"	6'-0"	4'-0"	12"	#7 @ 8"	#6 @ 12"	(5) #5



- NOTE:** WHERE APPLICABLE, LINE UP CONTROL JOINTS IN BLOCK & BRICK AND CAULK JOINT IN BRICK.
- SEE ARCHITECTURAL PLANS FOR CONTROL JOINT LOCATIONS.
- 07 CONCRETE MASONRY CONTROL JOINT** NOT TO SCALE



- 08 C1 STEEL COLUMN SETTING DETAIL** NOT TO SCALE

06 CANTILEVERED CONCRETE MASONRY SITE RETAINING WALL NOT TO SCALE



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FOUNDATION DETAILS
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