ROUKEMA BUCHANAN RESIDENCE

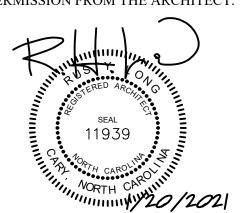






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| | | BROADWAY, NC | | | |
|---|---|--|---|---|-------------------------|
| ABBREVIATIONS | | PROJECT NARRATIVE | BUILDING AREA | | |
| © AT & AND A AMPERE A.B. ANCHOR BOLT ABV ABOVE ACCU AIR COOLED CONDENSING UNIT A.C.T. ACOUSTICAL CEILING TILE A.D.A. AMERICAN WITH DISABILITIES ACT ADJ ADJUSTABLE A.F.F. ABOVE FINISH FLOOR A.H.U. AIR HANDLING UNIT ALUM ALUMINUM APPROX APPROXIMATE BD BOARD BG BELOW GRADE BLDG BUILDING BLK BLOCK, BLOCKING BRG BEARING BRKR BREAKER BS BAR SINK CFM CUBIC FEET PER MINUTE CKT CIRCUIT CLG CEILING CMU CONCRETE MASONRY UNITS C.O. CLEAN OUT COL COLUMN CONC CONCRETE CONT CONTINUOUS COP COEFFICIENT OF PERFORMANCE C.O.T.G. CLEAN OUT TO GRADE | HT HEIGHT HVAC HEATING, VENTILATING, AIR CONDITIONING HZ HERTZ INSUL INSULATION INV INVERT KVA KILOVOLT AMPERE KW KILOWATT LAV LAVATORY LG LONG MATL MATERIAL MAX MAXIMUM MBH 1,000 BRITISH THERMAL UNITS MECH MECHANICAL MIL MILLIMETER MIN MINIMUM M.H. MOUNTING HEIGHT M.L.O. MAIN LUG ONLY NO. NUMBER NOM NOMINAL O.C. ON CENTER O.W.B.E. OFF – WHITE BASE ENAMEL P PANEL P.D. PRESSURE DROP PH PHASE P.T. PRESSURE TREATED PTD PAINTED PVC POLYVINYL CHLORIDE PL. LAM.PLASTIC LAMINATE PLYWD PLYWOOD RCPT RECEPTOR | 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 | FIRST FLOOR CONDITIONED: FIRST FLOOR GARAGE: FIRST FLOOR POOL ROOM: FRONT PORCH: REAR SCREENED PORCH: BASEMENT: BONUS ROOM: | 3,121 SF 868 SF 380 SF 158 SF 317 SF 1,093 SF 655 SF | R E 12/4/2 12/23 1/20/2 |
| CU COPPER CW COLD WATER DIAMETER | REINF REINFORCE R.O. ROUGH OPENING RPBP REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER | | INDEX | OF DRAWINGS | |
| DBL DOUBLE DIA DIAMETER DISP DISPENSER DWG DRAWING EA EACH ELEC ELECTRICAL ELEV ELEVATION E.F. EXHAUST FAN EQ EQUAL EQUIP EQUIPMENT E.W.C. ELECTRIC WATER COOLER EXIST EXISTING F FAHRENHEIT F.C. FOOT CANDLES F.D. FLOOR DRAIN F.E. FIRE EXTINGUISHER F.F. FINISH FLOOR FIN FINISH | RPM REVOLUTIONS PER MINUTE SCHED SCHEDULE SIM SIMILAR S.C. SOLID CORE S.N. SOLID NEUTRAL SQ SQUARE SS SLOP SINK STA STATION STL STEEL SUSP SUSPENDED T.B.M. TEMPORARY BENCH MARK TELE TELEPHONE TEMP TEMPERED THRSHLDTHRESHOLD TYP TYPICAL UC UNDERCUT U.O.N. UNLESS OTHERWISE NOTED V B VAPOR BARRIER | | ARCHITECTURAL A000 COVER PAGE A001 SITE PLAN A010 BASEMENT FLOOR PLAN A100 FIRST FLOOR PLAN A110 BONUS FLOOR PLAN A200 ROOF PLAN A300 EXTERIOR RENDERING A310 EXTERIOR RENDERING A320 EXTERIOR RENDERING A330 EXTERIOR RENDERING A340 EXTERIOR RENDERING A340 EXTERIOR RENDERING A4400 EXTERIOR RENDERING A410 EXTERIOR ELEVATIONS A410 EXTERIOR ELEVATIONS A510 WALL SECTIONS A520 WALL SECTIONS A530 WALL SECTIONS A540 WALL SECTIONS A550 WALL SECTIONS A550 WALL SECTIONS A550 WALL SECTIONS | STRUCTURAL S100 GENERAL STRUCTURAL NOTES S101 FOUNDATION & BASEMENT PLAN S102 FIRST FLOOR FRAMING PLAN S103 SECOND FLOOR FRAMING PLAN S104 ROOF FRAMING OVER GARAGE PLAN S201 WALL SECTIONS S202 WALL SECTIONS S202 WALL SECTIONS S203 WALL SECTIONS S204 WALL SECTIONS S206 WALL SECTIONS S206 WALL SECTIONS S207 WALL SECTION AT STEEL S301 FOUNDATION DETAILS SS S401 FRAMING DETAILS | PDCHE |

V.B. VAPOR BARRIER

VERT VERTICAL

W/

WB

WD

W.H.

WATT

WITH

WOOD

V.C.T. VINYL COMPOSITION TILE

V.T.R. VENT THROUGH ROOF

WET BULB

WATER CLOSET

WATER GAUGE

WALL HYDRANT

WEATHERPROOF

V.D.O.T. VIRGINIA DEPT. OF TRANSPORTATION

FTG

GND

GYP

FOOTING

GROUND

GYPSUM

HDWR HARDWARE

G.F.I. GROUND FAULT INTERRUPTER

G.S.F. GROSS SQUARE FOOTAGE

G.W.B. GYPSUM WALLBOARD

HOLLOW CORE

HOLLOW METAL

HOT WATER HEATER

HORSEPOWER

HOT WATER

GALV GALVANIZED

A560 A570 WALL SECTIONS

WALL SECTION AT STEEL

ROUKEMA BUCHANAN BROADWAY, NC

RUSTY LONG ARCHITECT CARY, NC 919-602-4180

R E V I S I O N S

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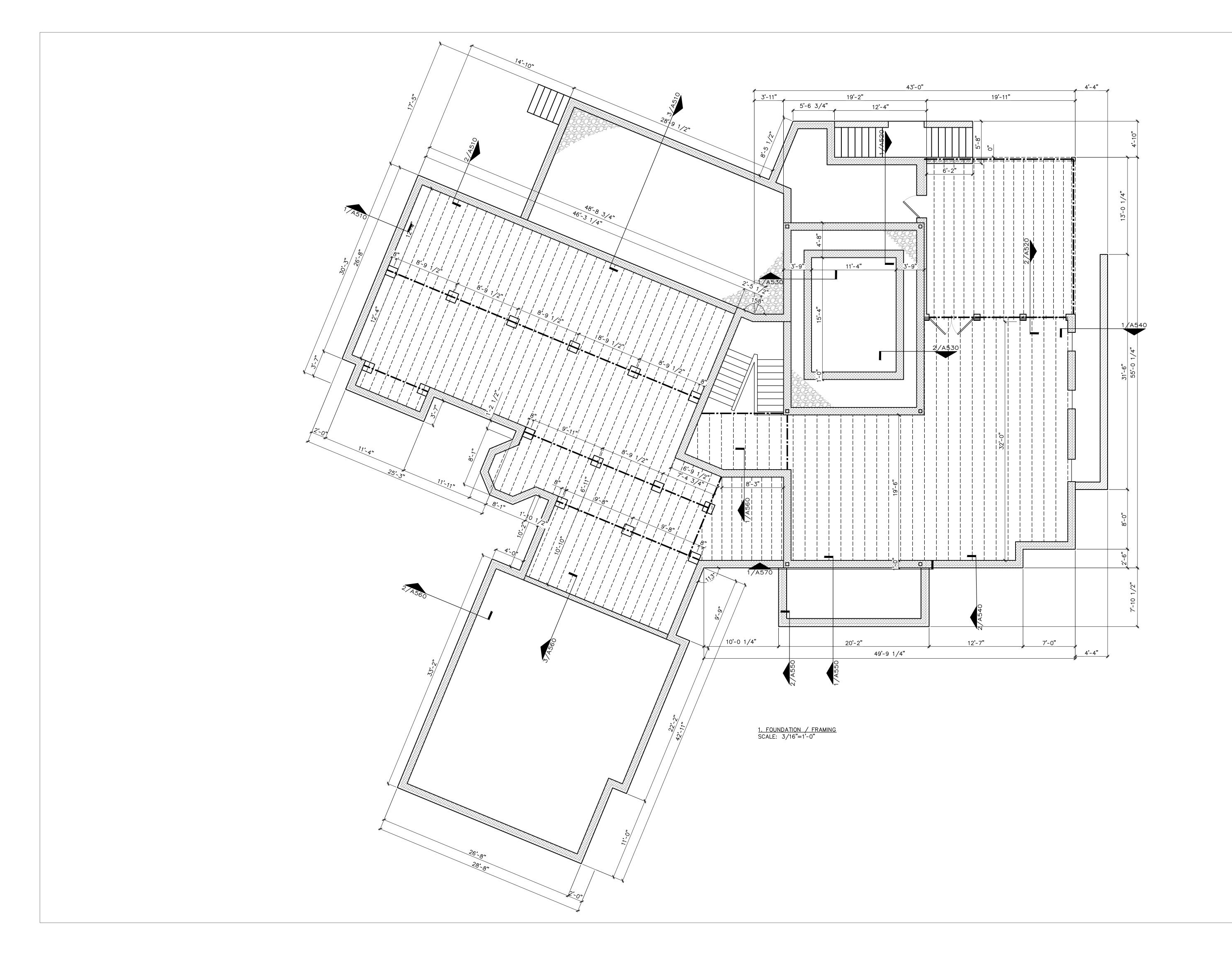
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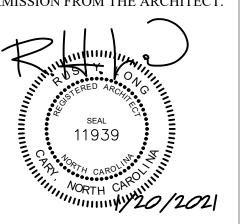
> COVER PAGE

A000





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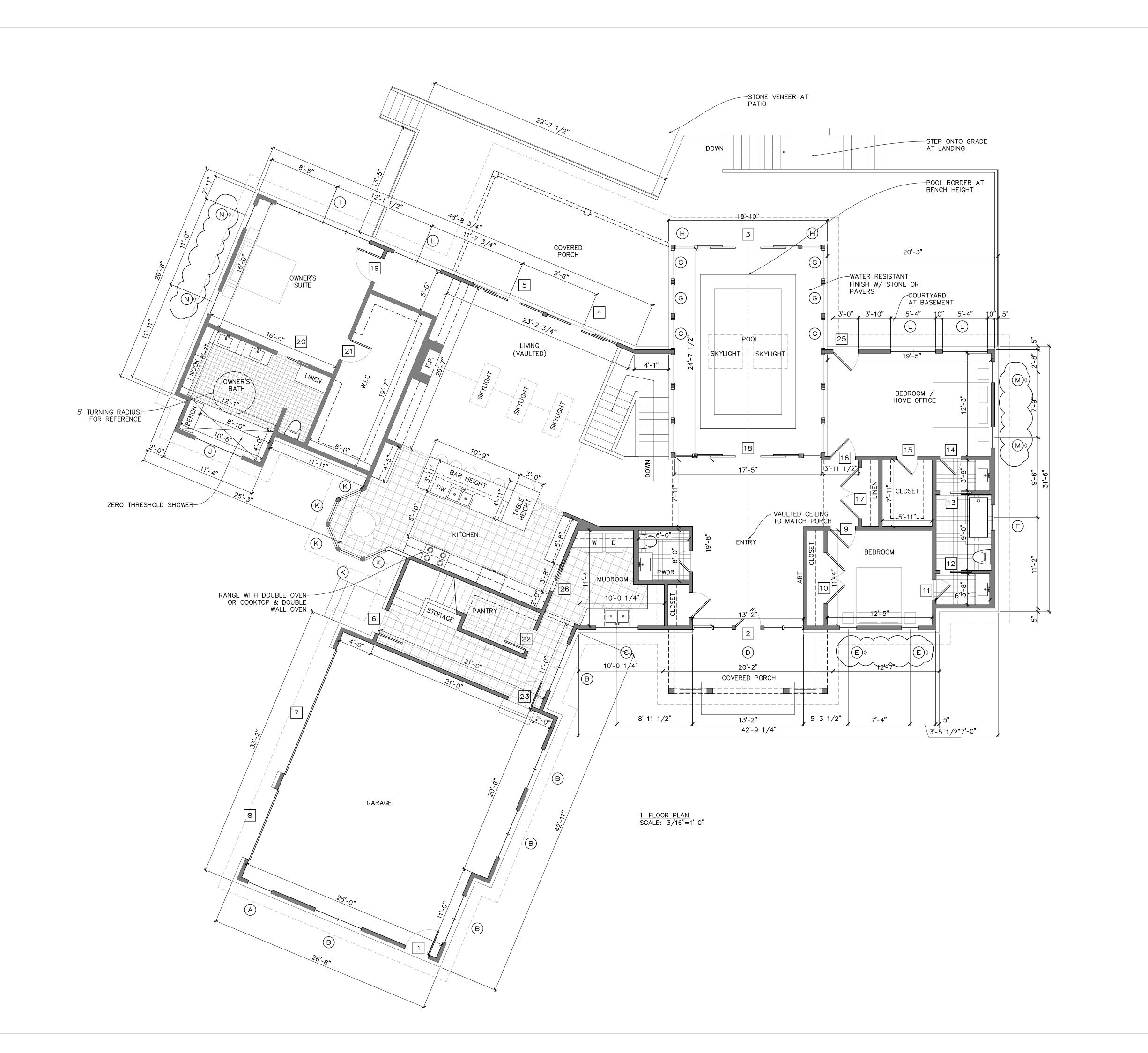
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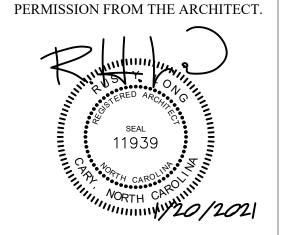
> BASEMENT PLAN

> > A010





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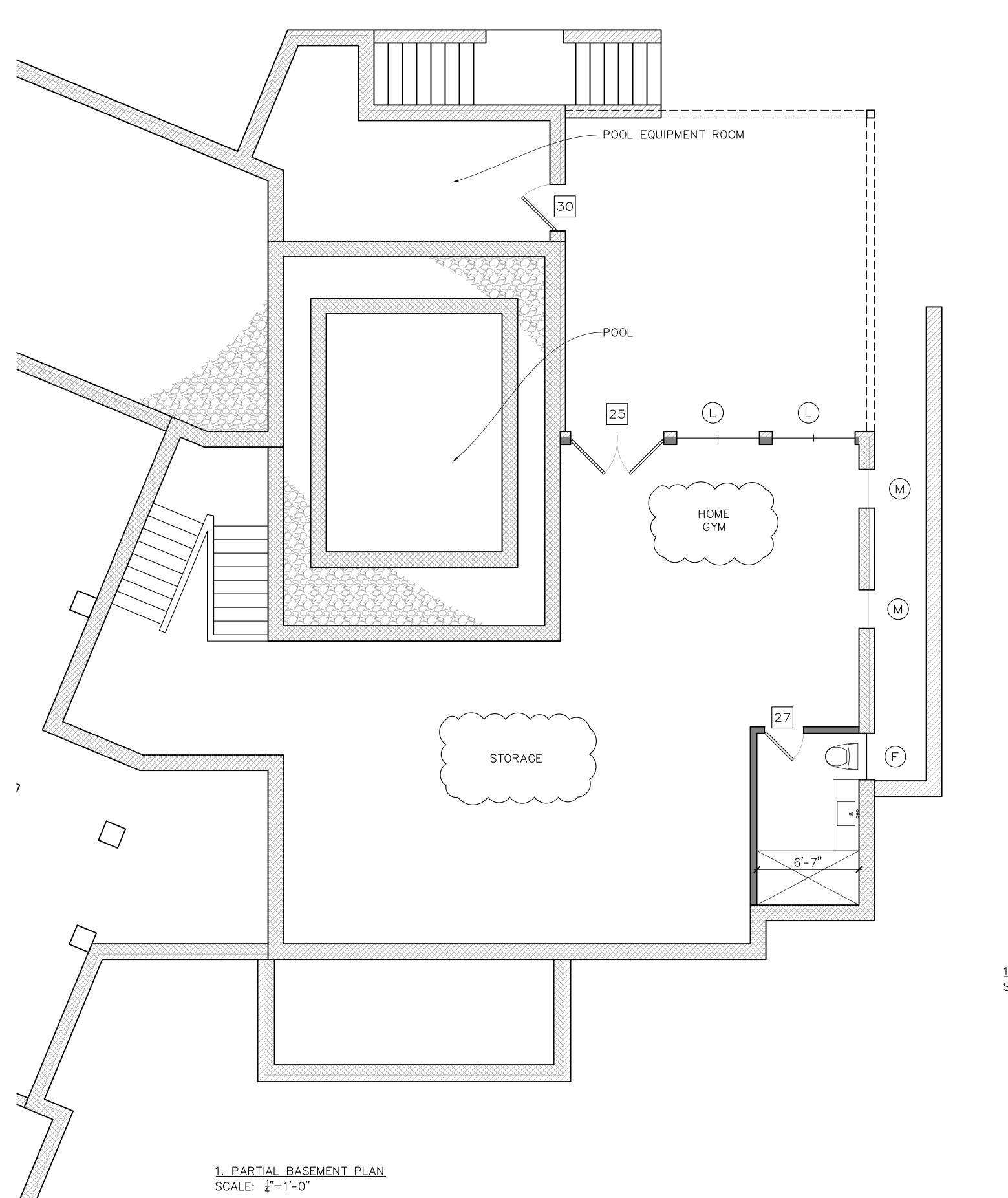
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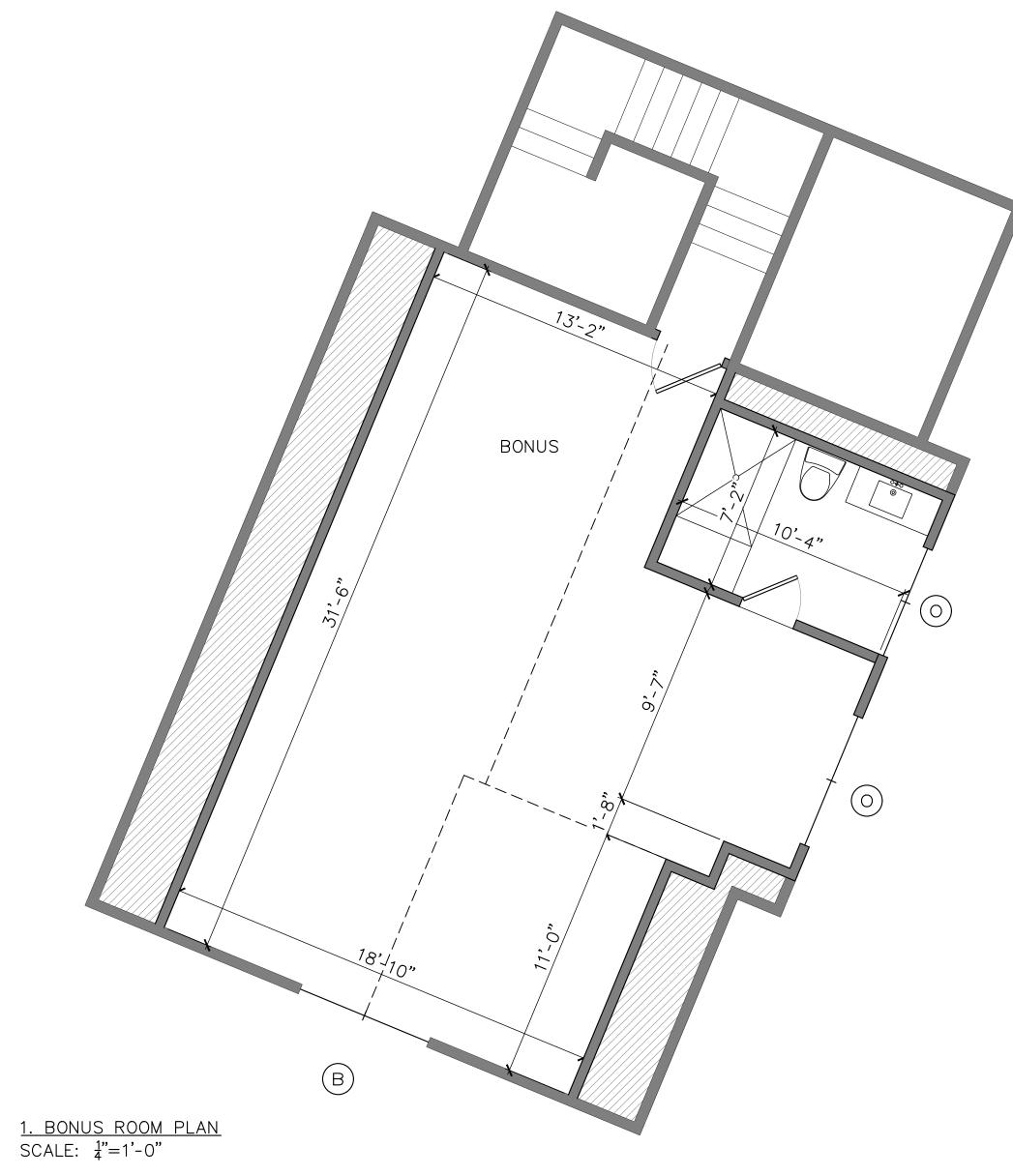
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> PROPOSED FLOOR PLAN

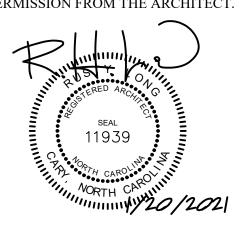
> > A100







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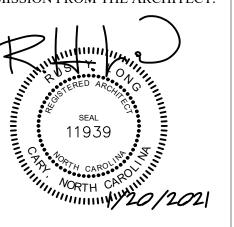
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BONUS ROOM

A110



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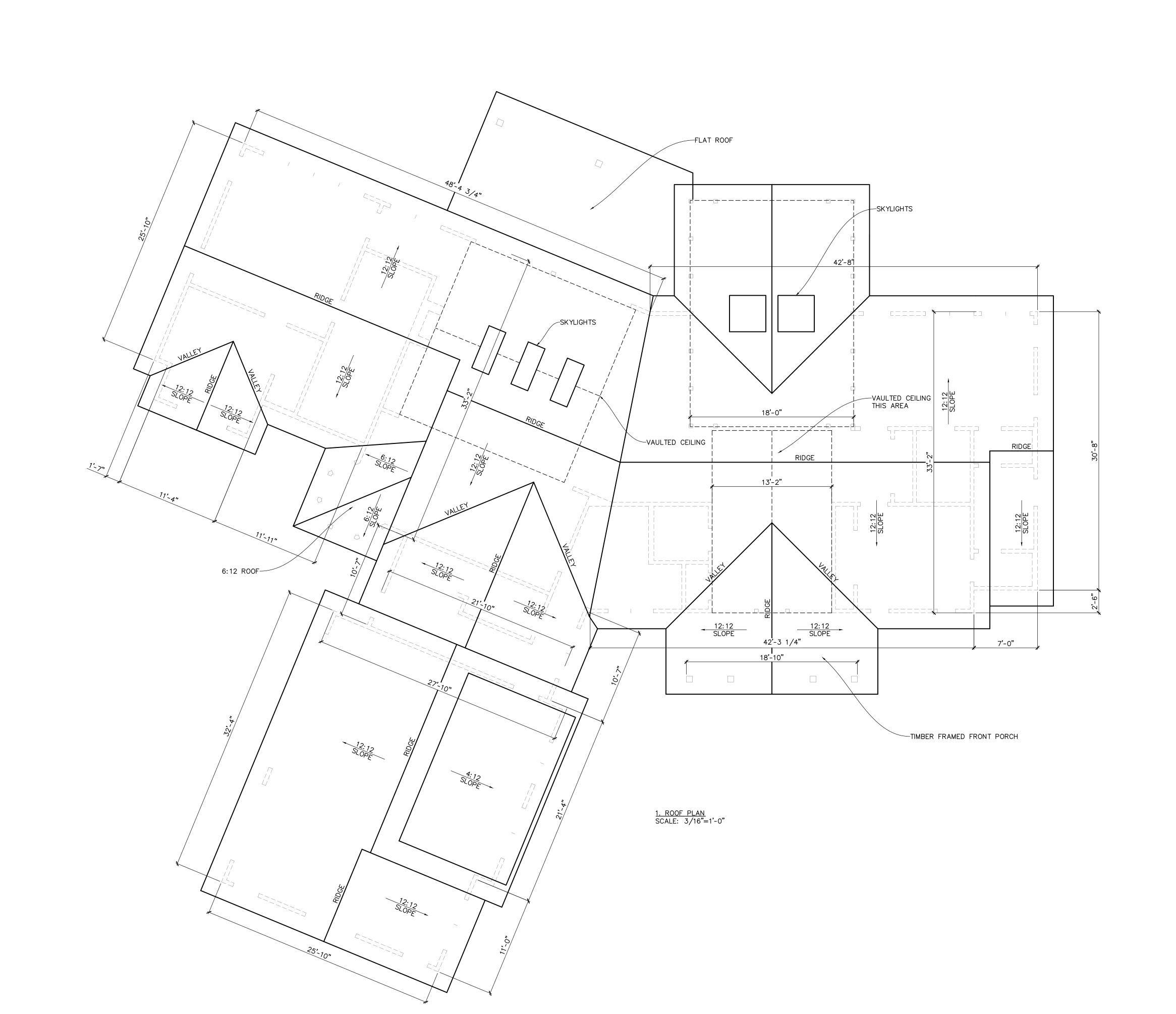
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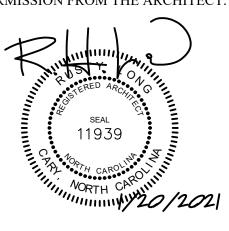
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> PROPOSED ROOF PLAN

> > A200



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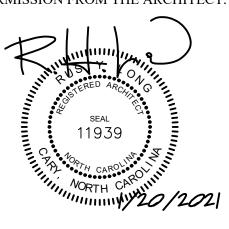
> EXTERIOR RENDERINGS

> > A300



FRONT PERSPECTIVE - AT ENTRY

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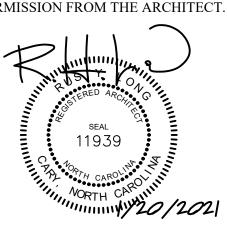
> EXTERIOR RENDERINGS

> > A310



FRONT PERSPECTIVE - AT SIDE OF GARAGE

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> EXTERIOR RENDERINGS

> > A320

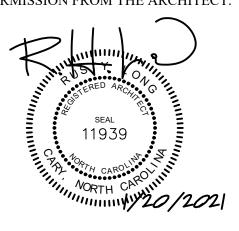
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GARAGE AND MUDROOM ENTRANCE

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> EXTERIOR RENDERINGS

> > A330

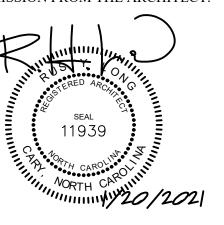
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REAR AT OUTDOOR KITCHEN

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> EXTERIOR RENDERINGS

> > A340

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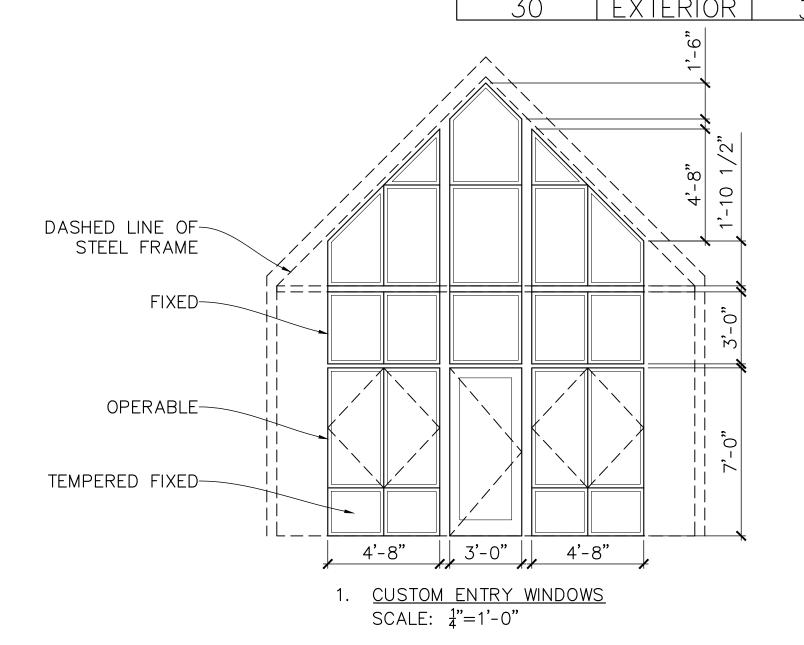
REAR AT OFFICE AND POOL

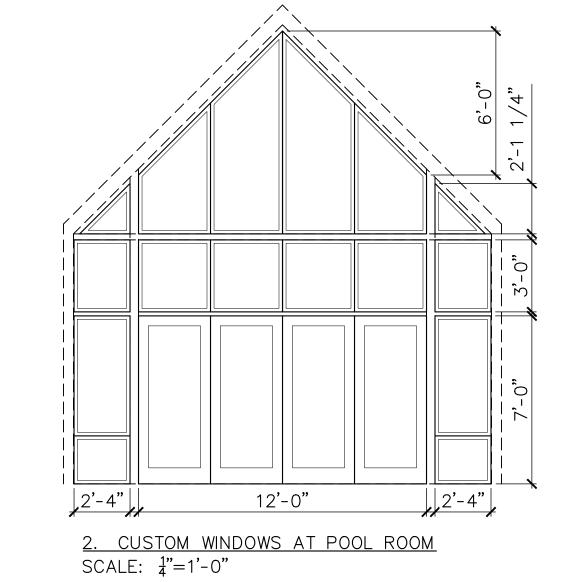


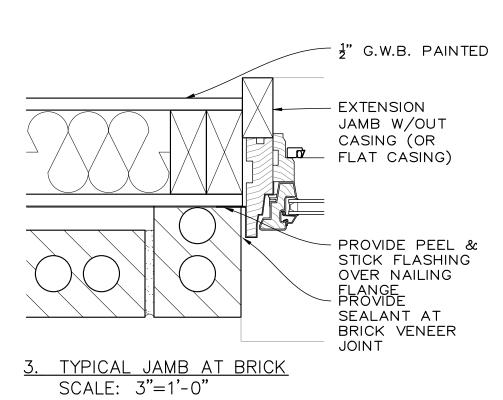


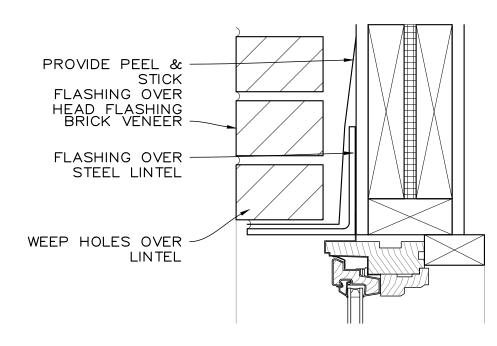
| | | | | V | VINDOW SCHEDU | JLE |
|----------|----------|--------------|--------|----------------|---------------|---|
| | | | | | | |
| SYMBOL | TYPE | WIDTH | HEIGHT | TRANSOM HEIGHT | QUANTITY > | NOTES |
| А | SINGLE | 3'-0" | 5'-0" | 1'-6" | 1 } | |
| В | DOUBLE | 3'-0" | 5'-0" | 1'-6" | 7 | |
| С | DOUBLE | 2'-6" | 3'-6" | 1'-6" | 1 | |
| D | MULTIPLE | | | | | CUSTOM ENTRY - SEE DETAIL |
| E | SINGLE | 2'-6" | 3'-6" | 1'-6" | 4 (| NOTE: BEDROOM WINDOWS EGRESS (MARKED ON PLAN 'V') |
| F | SINGLE | 3'-0" | 3'-0" | | 2 > | HEAD AT TRANSOM HEIGHT |
| G | SINGLE | 3'-6" | 8'-6" | | 12 | CUSTOM FIXED AT POOL |
| <u>H</u> | SINGLE | <u>2'-3"</u> | 8'-6" | | 4 () | CUSTOM FIXED AT POOL . |
| | QUAD | 3'-0" | 5'-0" | | 1 / | |
| J | SINGLE | 6'-0" | 3'-6" | | 1 | HEAD AT TRANSOM HEIGHT |
| K | SINGLE | 2'-8" | 5'-0" | | 5 (| • |
| L | DOUBLE | 2'-8" | 5'-0" | | 4 (| |
| M | SINGLE | 2'-6" | 3'-6" | | 2 > | NOTE: BEDROOM WINDOWS EGRESS (MARKED ON PLAN 'V') |
| N | SINGLE | 3'-0" | 5'-0" | | 4 (| NOTE: BEDROOM WINDOWS EGRESS (MARKED ON PLAN 'O') |
| 0 | DOUBLE | 3'-0" | 4'-0" | 1'-6" | 2 | HEAD T.B.D. BASED ON DORMER |
| | | | | | | |

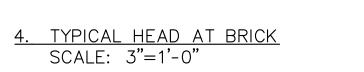
| DOOR SCHEDULE | | | | | | |
|-----------------|-------------------|----------------|--------|----------------|-----------------|-------------------------|
| SYMBOL | TYPE | WIDTH | HEIGHT | TRANSOM HEIGHT | GLAZING | NOTES |
| 1 | ENTRY | 3'-0" | 7'-0" | 1'-6" | FULL | |
| 2 | ENTRY | 3'-0" | 7'-0" | | 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 | <u>3'-0"</u> | 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" | / - 0 | | NONE | SOLID CORE |
| 13 | POCKET | 2'-6" | 7'-0" | | NONE | SOLID CORE |
| 14 | INTERIOR | 2'-6" | / - 0 | | NONE | SOLID CORE |
| 15 | INTERIOR | 2-6 | /-0; | | NONE | |
| 16 | INTERIOR | 3'-0" | / - () | | NONE | SOLID CORE |
| / | INTERIOR | 6'-0" | /-0, | 4, 0, | NONE | |
| 18 | SLIDING | 12'-0" | 7'-0" | 1'-6" | FULL | COLID CODE |
| <u>19</u> 20 | INTERIOR | 3'-0" 3'-0" | 7'-0" | | NONE | SOLID CORE |
| <u> </u> | POCKET | <u> </u> | 7'-0" | | FROSTED NONE | |
| <u>21</u> 22 | INTERIOR INTERIOR | <u> </u> | 7'-0" | + | NONE | |
| 23 | RATED | <u> </u> | 7'-0" | | NONE | |
| 24 | PATIO | <u> </u> | 7'-0" | | FULL | |
| <u>24</u> 25 | PATIO | 6'-0" | 7'-0" | + | FULL | OPTIONAL SLIDER |
| 26 | POCKET | 2'-8" | 7'-0" | | FROSTED | OI HOWAL SLIDEN |
| <u>20</u> 27 | INTERIOR | 2'-6" | 7'-0" | | NONE | SOLID CORE |
| 28 | INTERIOR | 3'-0" | 7'-0" | | NONE | SOLID SOILE |
| <u>29</u> | INTERIOR | 2'-6" | 7'-0" | | NONE | SOLID CORE |
| <u> </u> | EXTERIOR | 3'-0" | 7'-0" | | HALF | |

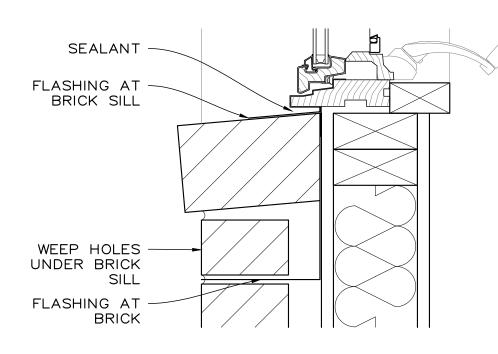










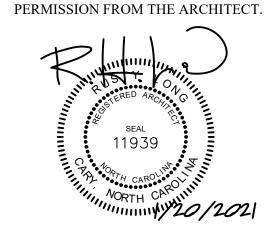


5. TYPICAL SILL AT BRICK SCALE: 3"=1'-0"

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ARCHITECT
EST. 2010

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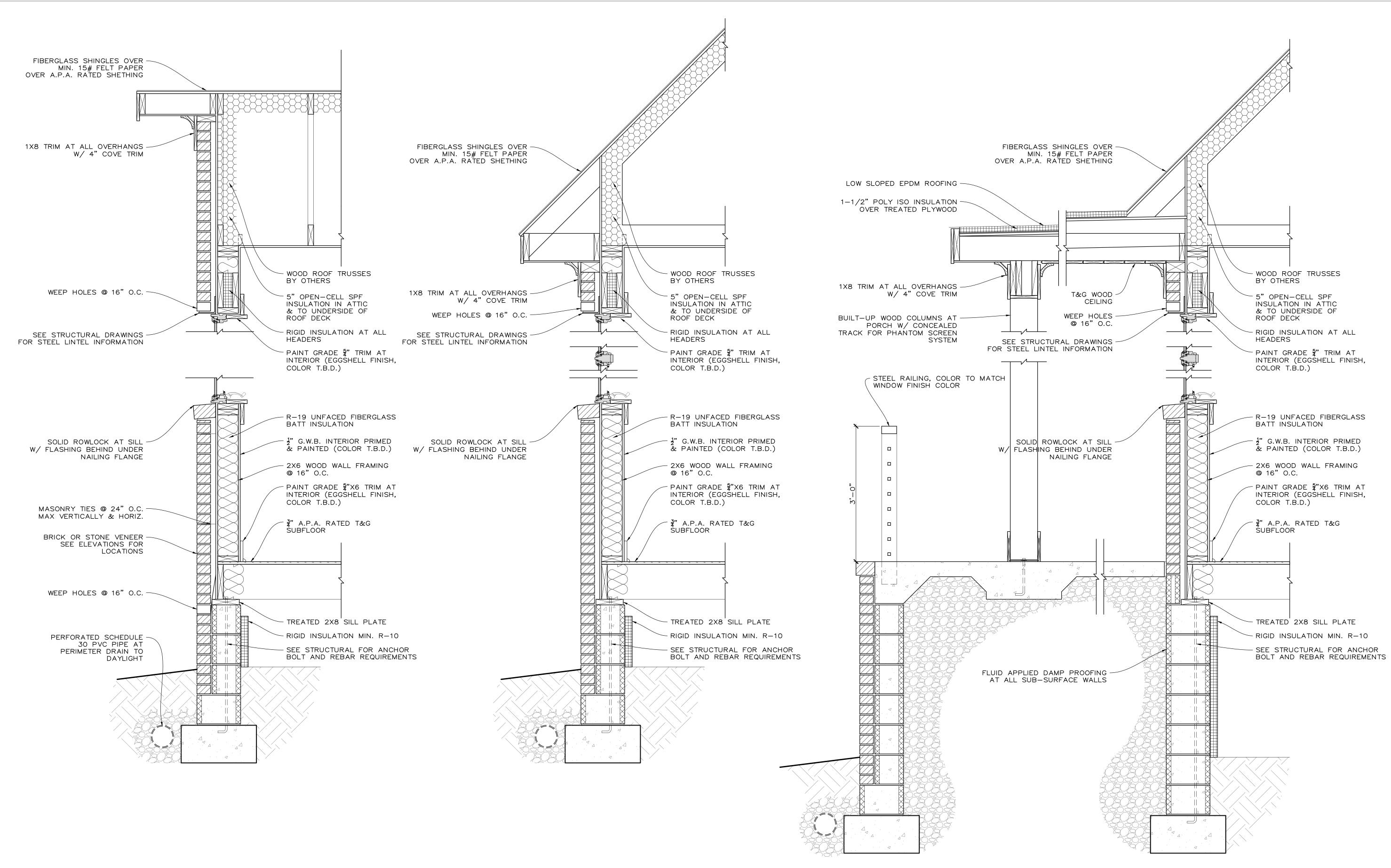
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WINDOW AND DOOR SCHEDULES

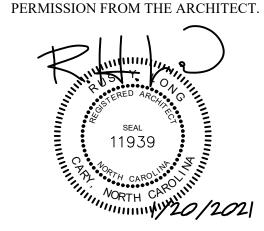
A500



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EST. 2010

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WALL SECTIONS

A510

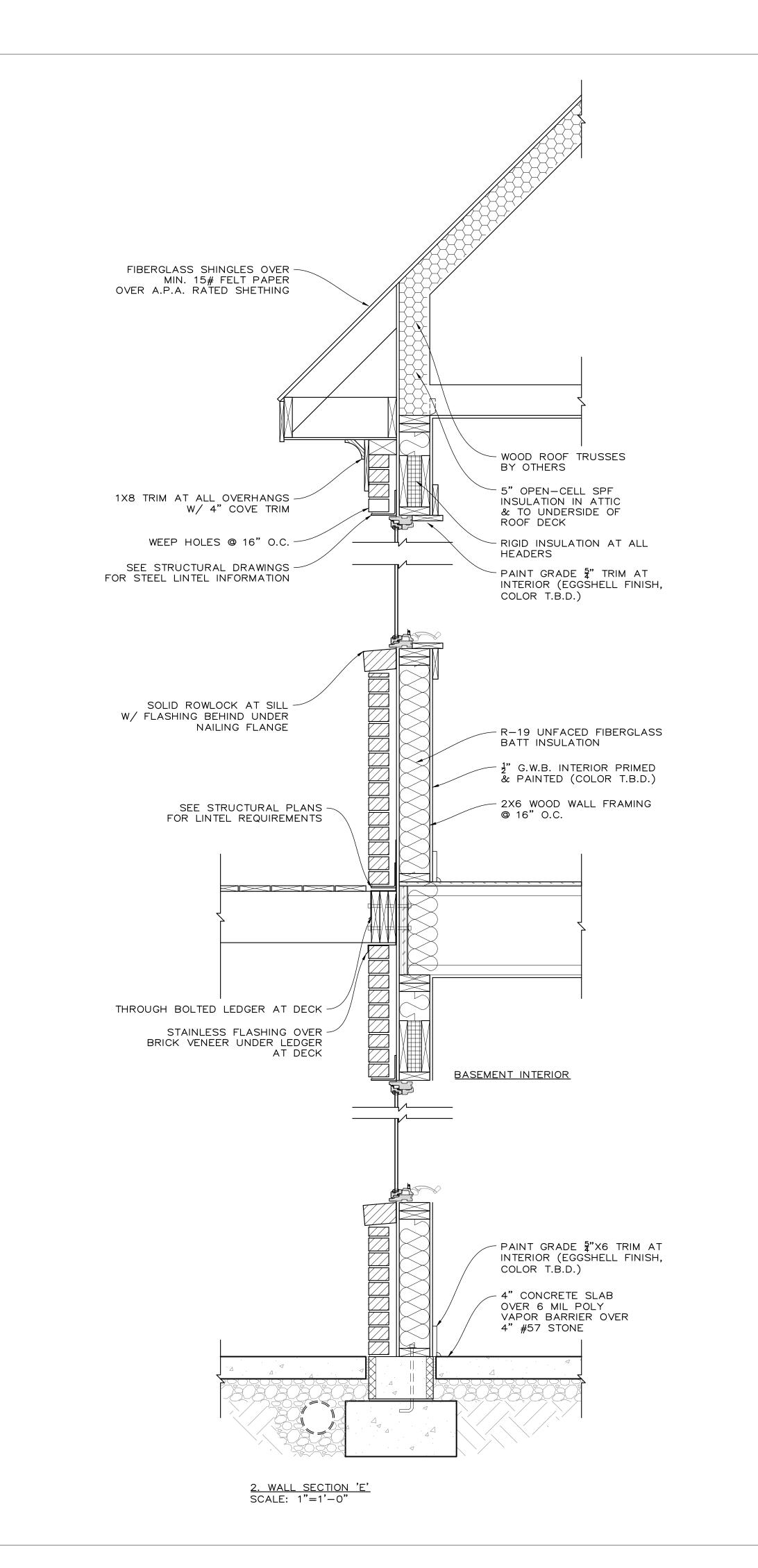
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1. WALL SECTION 'A'
SCALE: 1"=1'-0"

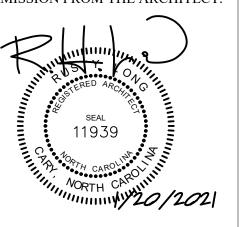
2. WALL SECTION 'B'
SCALE: 1"=1'-0"

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





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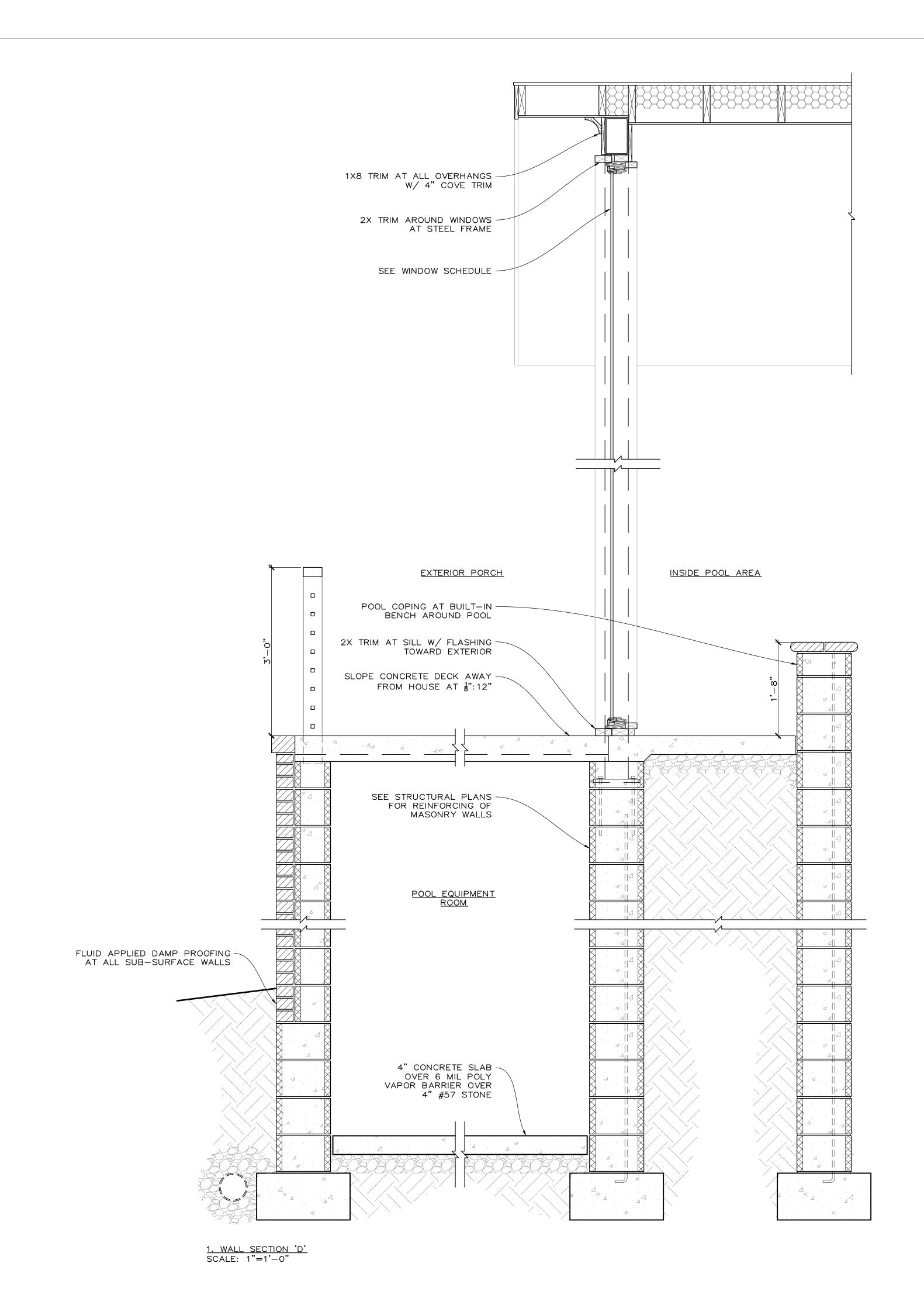
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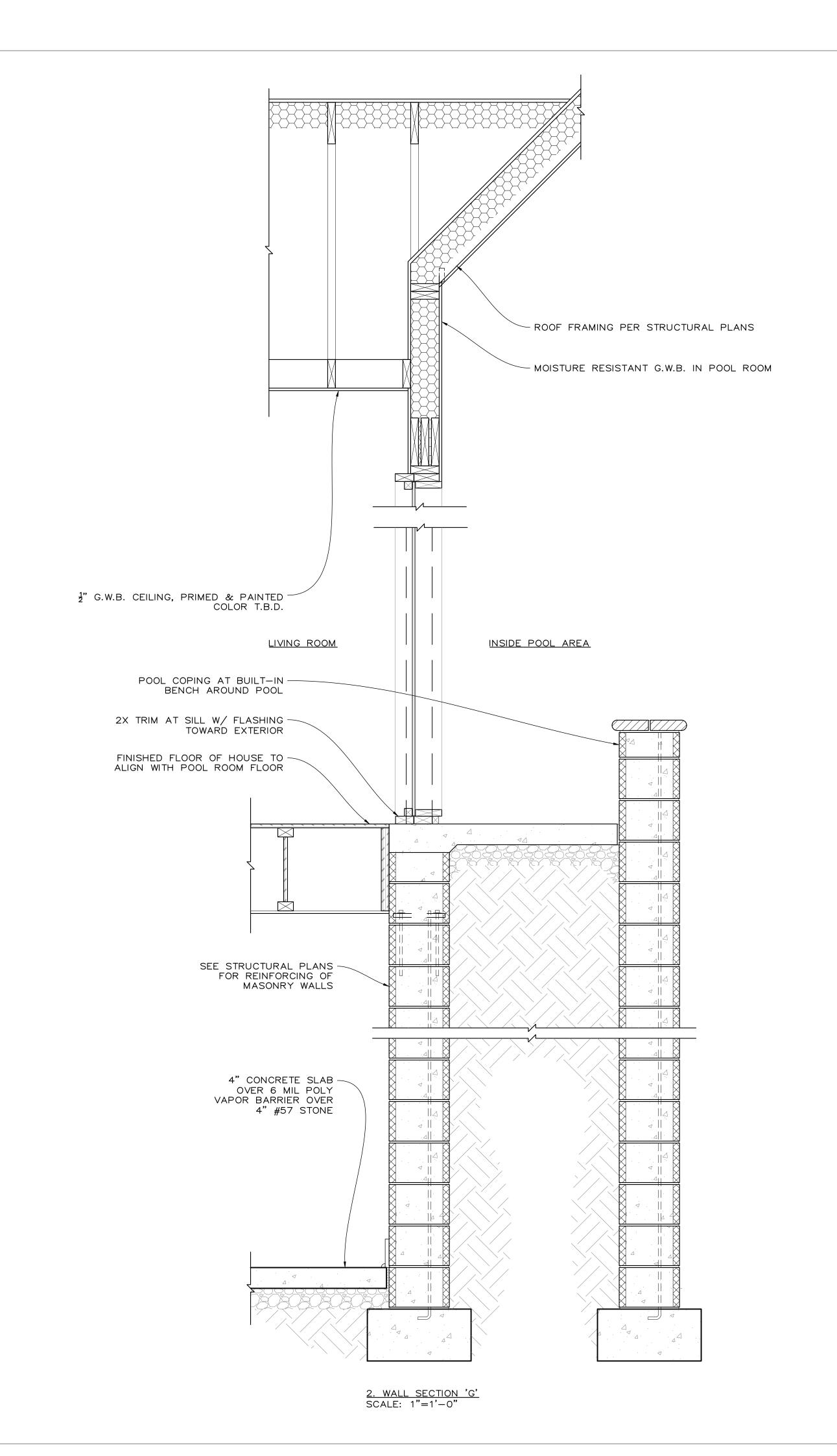
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WALL SECTIONS

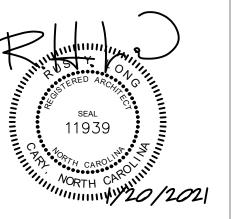
A520







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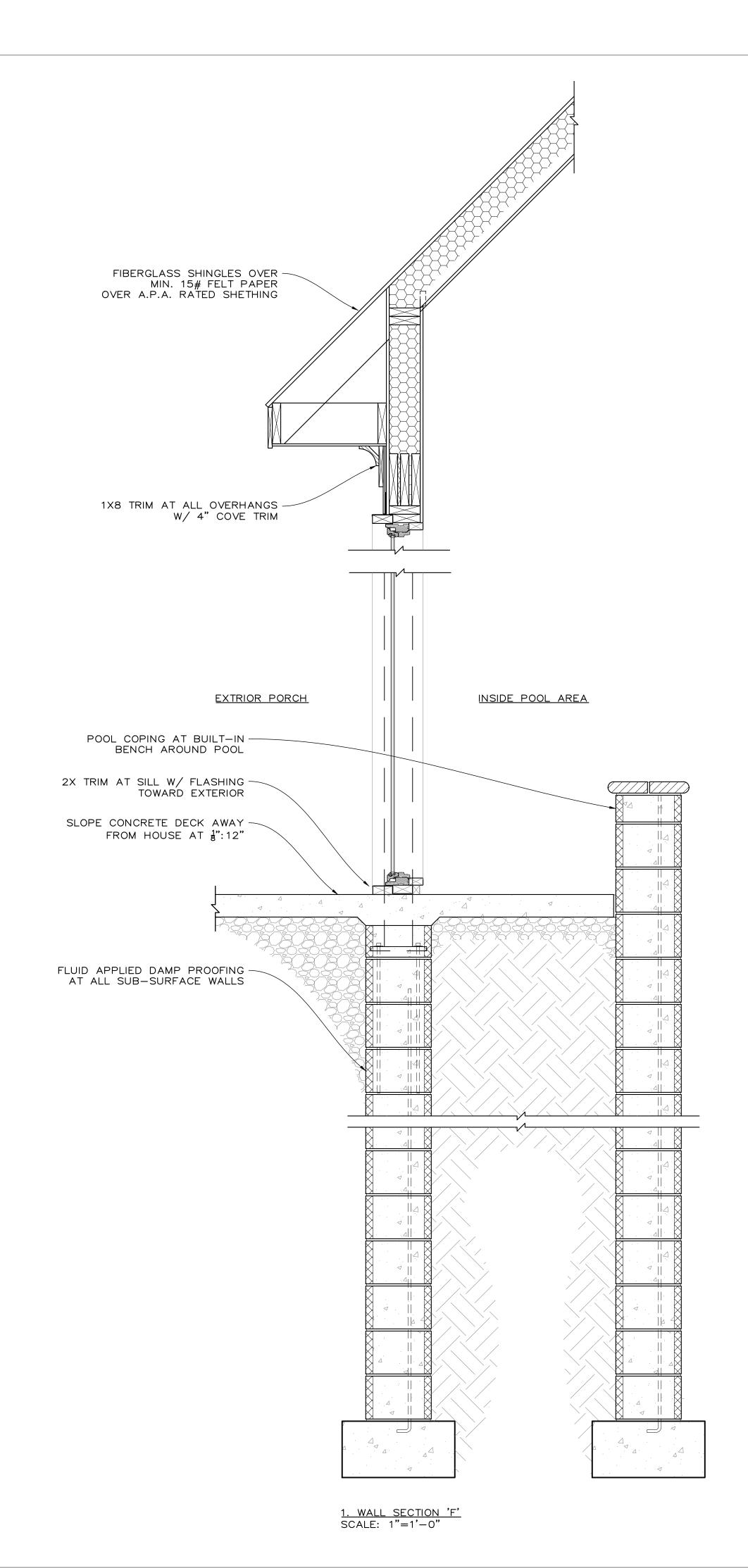
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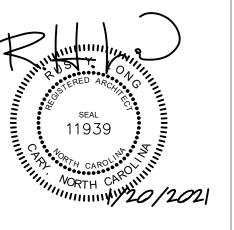
WALL SECTIONS

A530





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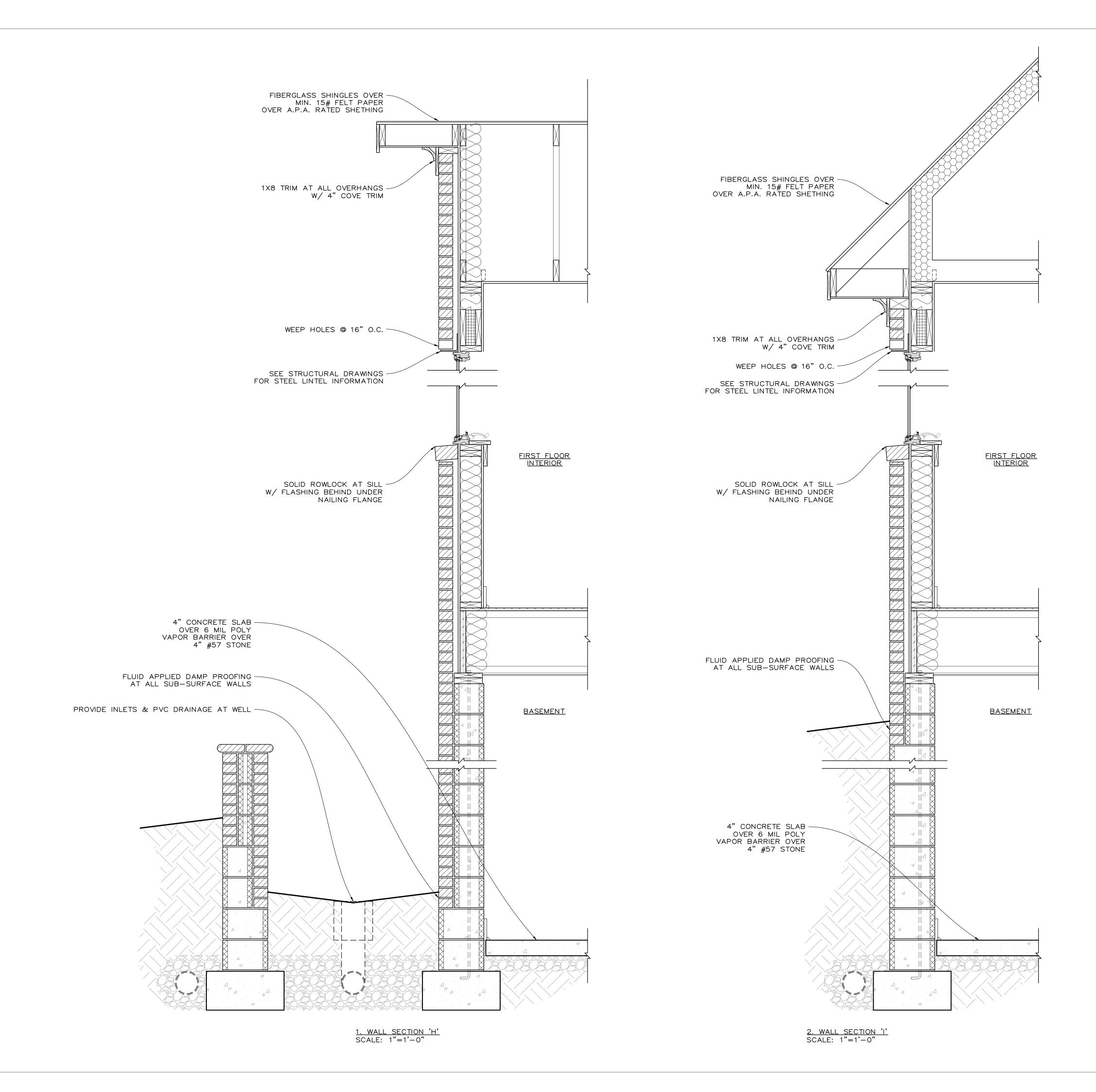
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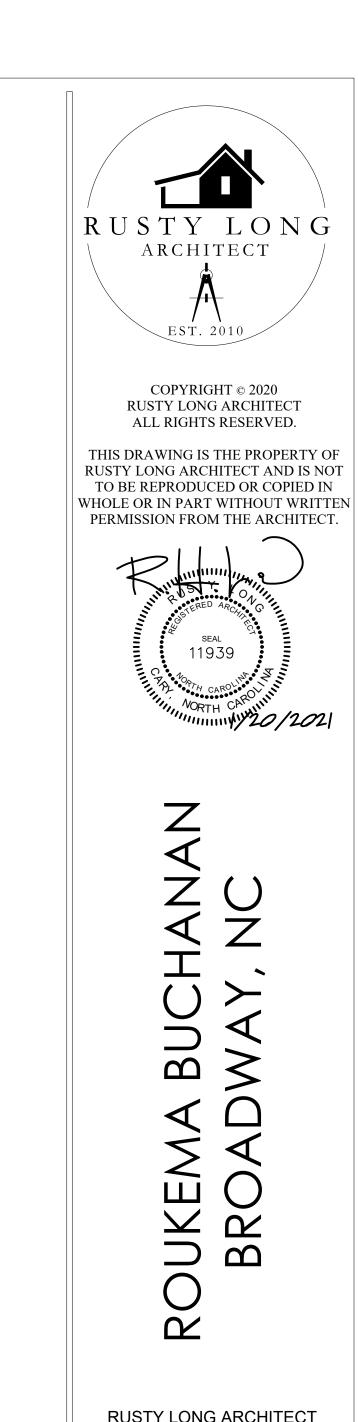
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WALL SECTIONS

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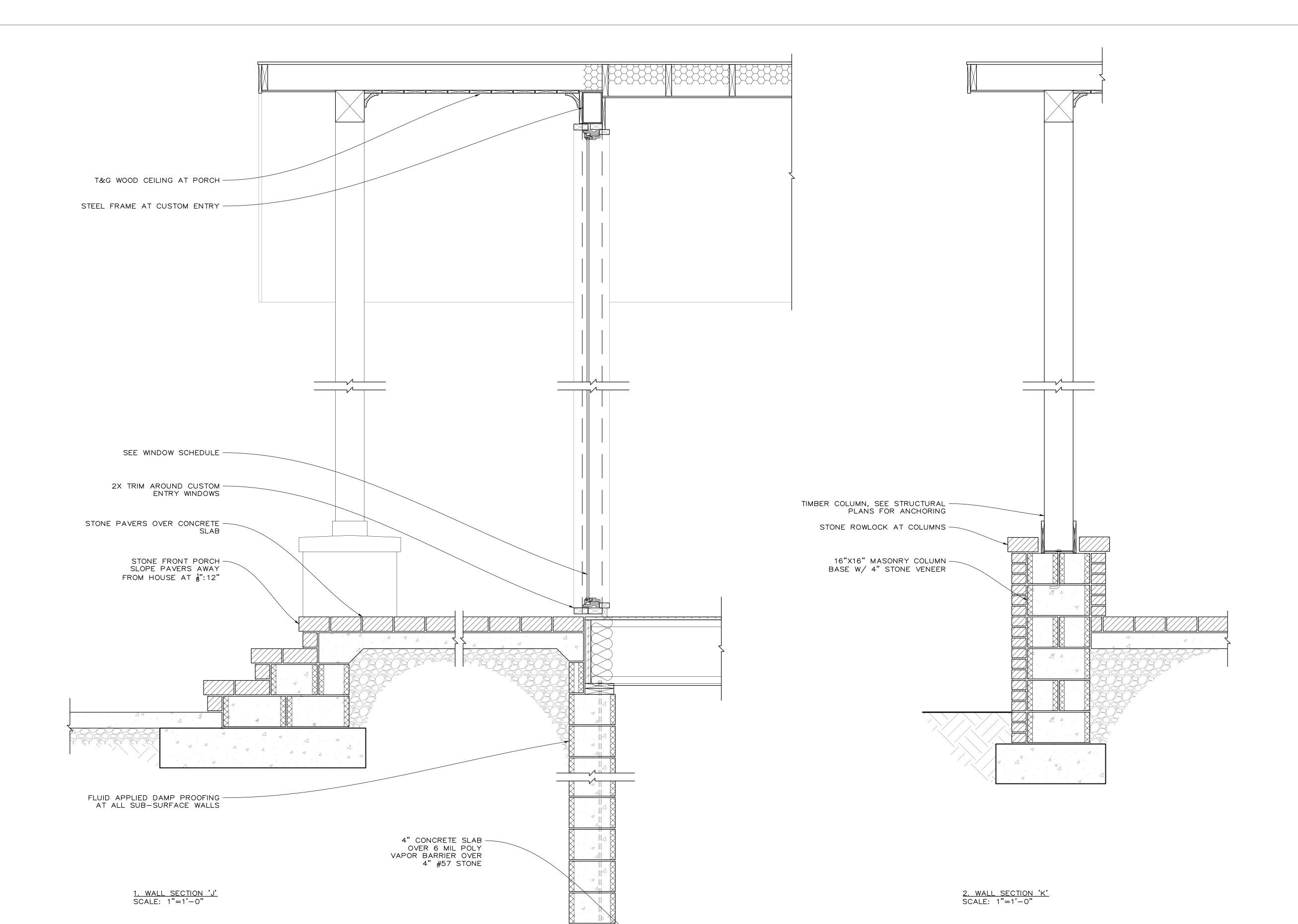
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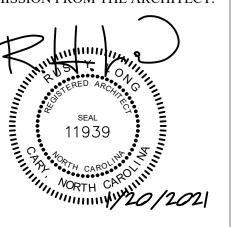
WALL SECTIONS

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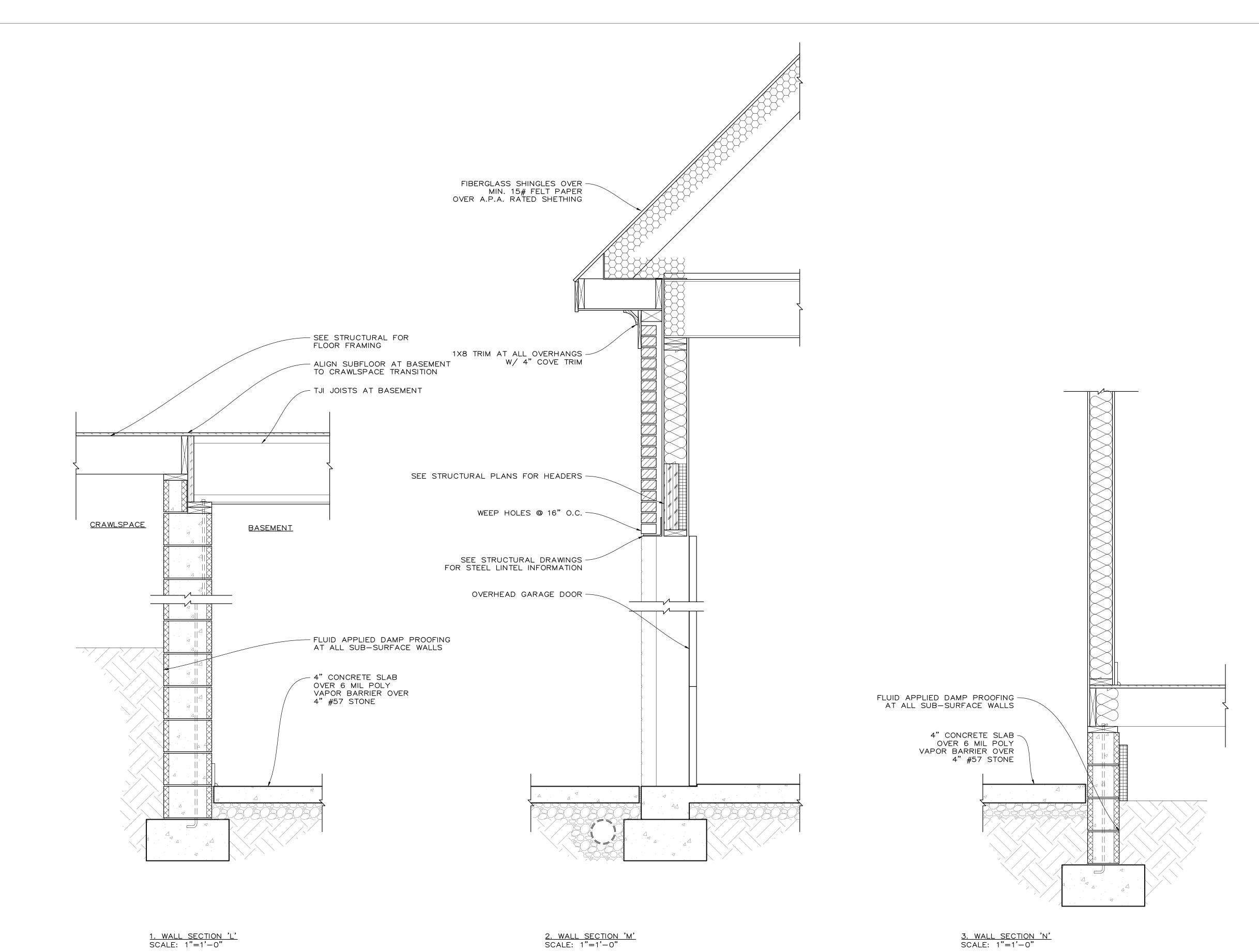
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GENERAL STRUCTURAL NOTES

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

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 BRACING 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:

- 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

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 ALLOWABLE STRESS DESIGN AYC ALASKAN YELLOW CEDAR BΝ BUILT-UP CONTROL JOINT IN SLAB CLNG CEILING COLUMN COLDOUBLE JOIST DR DOUBLE RAFTER HDHOLD DOWN KW KNEEWALL LBW LOAD BEARING WALL LONG LEG VERTICAL LLVLAMINATED VENEER LUMBER LVLNTS NOT TO SCALE 00 ON CENTER PARALLEL STRAND LUMBER (PARALLAM) PSL PRESSURE TREATED PΤ SER STRUCTURAL ENGINEER-OF-RECORD SPRUCE-PINE-FIR STD STANDARD STL SHEAR WALL SYP SOUTHERN YELLOW PINE LT TRIPLE JOIST TYP TYPICAL UD UPSIDE DOWN UNLESS NOTED OTHERWISE

DESIGN LOADS

ROOF DEAD LOAD 15 PSF 20 PSF ROOF LIVE LOAD 20 PSF FIRST FLOOR DEAD LOAD SECOND FLOOR DEAD LOAD PSF 10 PSF ATTIC DEAD LOAD 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.

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

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:

- BETWEEN SLABS ON GRADE AND FOUNDATION WALLS,
- BETWEEN SLABS AND INSERTS SUCH AS PIPES, AT JUNCTION OF GARAGE SLAB AND DRIVEWAY,
- 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, CARPORT 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

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

INITIAL SLUMP (WATER)

CONCRETE SHALL BE DESIGNED TO MEET 4000 PSI COMPRESSIVE STRENGTH @ 28 DAYS AND EXHIBIT (0.04% SHRINKAGE @ 28 DAYS. THE MIX SHALL CONTAIN APPROXIMATELY 12 CUBIC FEET OF COARSE AGGREGATE (11/2" 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.

517-560 LBS FLY ASH/SLAG PROHIBITED COARSE AGGREGATE 12 CU FT +/- .50 7 CU FT +/- (ADJUST AS NECESSARY) FINE AGGREGATE TUF-STRAND FIBER 3 LBS/ CU YD WATER CONTENT 250 - 300 LBS. AIR CONTENT (ENTRAPPED AIR ONLY) 3.0% (MAX.) AT INTERIOR SLABS 4% - 6% AT EXTERIOR SLABS AIR CONTENT MID-RANGE WATER REDUCER (TYPE A/F) 30Z.-100Z./100WT +/-0.53 (MAX.)

5.5" (MAX.) FINAL SLUMP SHRINKAGE < 0.04% @ 28 DAYS

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

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 CI315, 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 EUCLID 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

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

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

LIGHTLY DAMPEN THE SUBGRADE BEFORE PLACING CONCRETE TO PREVENT THE

START CURING AS SOON AS THE FINISHERS ARE DONE.

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

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 I.4 X W I.4 W.W.F. PLACED I" BELOW TOP OF SLAB.

PROVIDE CORNER BARS AT ALL FOOTING STEPS AND CORNERS. BARS SHALL BE A MINIMUM OF 2'-6" 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 48 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.

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 A79.1). 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, F'M = 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

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.

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:

WIDE FLANGE SHAPES 50 KSI STRUCTURAL PIPE COLUMNS 35 KSI STRUCTURAL TUBE COLUMNS 46 KSI MISCELLANEOUS SHAPES 36 KSI

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

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-70 ELECTRODES FOR ALL SHOP AND FIELD WELDING.

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

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 WANE 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

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

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 #I GRADE ALASKAN CEDAR FOR DECAY RESISTANCE. SIZE SHOWN ARE NOMINAL.

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

NONBEARING INTERIOR STUDS MAY BE UTILITY GRADE LUMBER.

DESIGN SPECIFICATION". PLYWOOD SHALL BE CDX (UNO).

PLYWOOD SHALL CONFORM TO THE AMERICAN PLYWOOD ASSOCIATION "PLYWOOD

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,

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 = 290 PSI, FB = 2900 PSI, E = 2000 KSI. PARALLAM CAN BE SUBSTITUTED FOR LYL BUT LYL CANNOT BE SUBSTITUTED FOR PARALLAM.

BUILT-UP STUD COLUMNS SHALL BE SECURELY NAILED TOGETHER TO ACT AS A COMPOSITE MEMBER. USE (2) I2D 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 BRACING 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 115 MPH WIND ZONES

PRESERVATIVE TREATED WOOD SILLS ON CONTINUOUS FOUNDATION WALLS SHALL BE ANCHORED WITH I/2" BOLTS WITH 2 X 2 X I/8 WASHERS SPACED NOT MORE THAN 4'-O" 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

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.

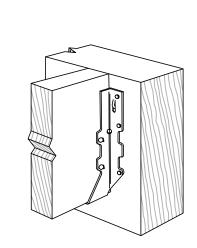
ALL EXTERIOR WALLS SHALL BE FULLY SHEATHED WITH 1/16" STRUCTURAL SHEATHING TO PROVIDE LATERAL STRENGTH FOR WIND LOADS AND TO PROVIDE A CONTINUOUS TIE FROM THE RAFTERS DOWN TO THE FOUNDATION WALL. SHEATHING SHALL BE ATTACHED TO THE STUDS WITH &D NAILS AT 6" O.C. ALONG THE PANEL EDGES AND 12" O.C. AT INTERMEDIATE 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.

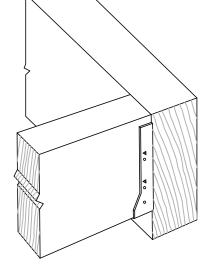
| IANGER SCHEDULE | | | | |
|------------------|-----------------|----------------|-------------|----------------|
| HOOD MEMBER CIZE | | HANGER MO | DEL NUMBER | |
| WOOD MEMBER SIZE | FACE MOUNTED | ALLOW. LOAD | CONCEALED | ALLOW. LOAD |
| | SOLID SAV | NN LUMBER | | |
| 2X6 | LU526 | 865 # | LUC26Z | 845 # |
| (2)2X6 | LU526-2 | 1030 # | HUC26-2 | 1135 # |
| (3)2X6 | LUS26-3 | 1165 # | HUC26-3 | 1135 # |
| 2X8 | LU528 | 1105 # | LUC26Z | 845 # |
| (2)2X8 | LUS28-2 | 1315 # | HUC28-2 | 2085 # |
| (3)2X8 | LUS28-3 | 1315 # | HUC26-3 | 1785 # |
| 2XIO | LU5210 | 1340 # | LUC2IOZ | 1410 # |
| (2)2XIO | LU5210-2 | 1830 # | HUC210-2 | 2085 # |
| (3)2XIO | LUS210-3 | 1830 # | HUC210-3 | 2085 # |
| (3)2XI2 | HU212-3 | 2380 # | HUC212-3 | 2380 # |
| 5 | TRUCTURAL COI | MPOSITE LUME | BER | |
| 3.5X7.25 | HHUS48 | 4210 # | HUC48 | 2085 # |
| 3.5X9.25 | HHU5410 | 4870 # | HUCQ410-SDS | 3370 # |
| 5.25X9.25 | HHU5.50/10 | 4870 # | HUCQ610-SDS | 3370 # |
| 3.5XII.25-II.875 | HGUS412 | 8255 # | HUCQ412-SDS | 3930 # |
| 5.25XI4 | HGUS5.50/14 | 8685 # | HUCQ612-SDS | <i>382</i> 5 # |

- I. 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. G.C. 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.

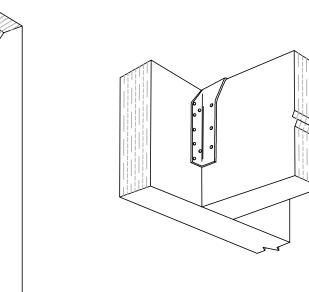


TYPICAL FACE MOUNTED HANGER

TYPICAL CONCEALED HANGER TO



TYPICAL CONCEALED HANGER



TYPICAL UPSIDE DOWN HANGER



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RUSTY LONG ARCHITECT CARY, NC 919-602-4180

REVISIONS 12/4/2020 ENGINEERING COORD.

> DATE: 12/17/20 PROJECT #: LA-12869

DRAWN BY: CAL/GTH

CHECKED BY: CAL

GENERAL

STRUCTURAL NOTES

S100

X FOR CONSTRUCTION ☐ NOT FOR CONSTRUCTION

FOUNDATION NOTES

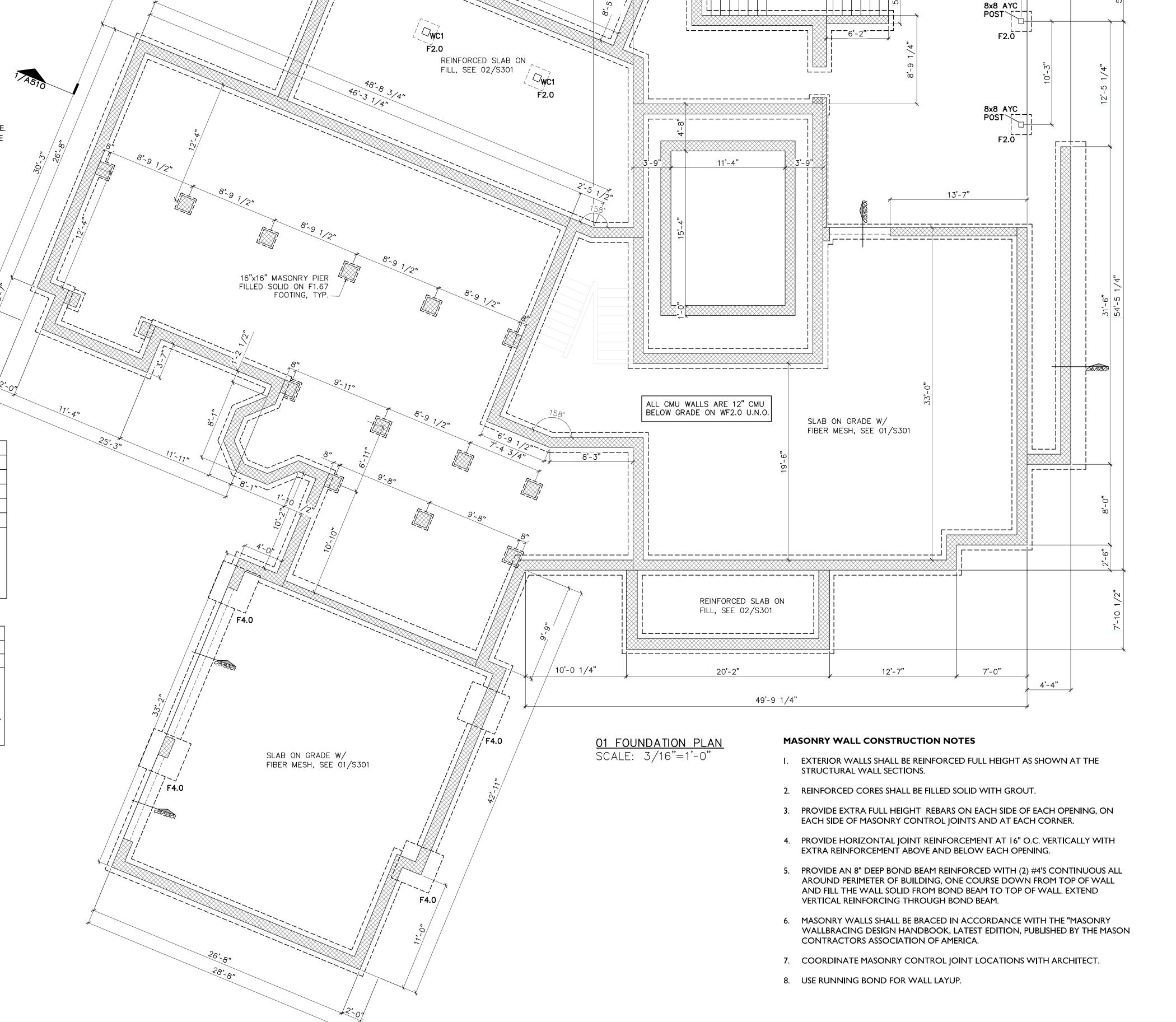
- I. WALL FOOTINGS ARE TO BE POURED MONOLITHICALLY WITH SPREAD FOOTINGS AND WALL FOOTING REINFORCING SHALL RUN CONTINUOUSLY THROUGH SPREAD FOOTINGS
- 2. SEE DETAIL FOR TYPICAL STEPPED FOOTING DETAIL.
- 3. THE PIERS ARE 16" X 16". FILL ALL PIERS SOLID WITH CONCRETE
- 4. FILL CONCRETE BLOCK WALL SOLID 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.
- 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 | I'-8" X I'-8" X I0" | UNREINFORCED | PIER FOOTING | | |
| F2.0 | 2'-0" × 2'-0" × 8" | UNREINFORCED | SPREAD FTG | | |
| F4.0 | 4'-0" × 4'-0" × 12" | (5) #5'S EACH WAY | SPREAD FTG | | |

NOTES

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

| MK# | SIZE | BASE PLATE | A.B.'S | A. B. PATTERN |
|--------|----------------------|-------------------------|------------|------------------|
| CI | HSS 5 X 5 X 3/8 | I X II-I/2 X II-I/2 | (4) 1" | 7" × 7" |
| NOTES | | , | • | |
| I. TU | IBE COLUMNS ARE AS | STM A500 (Fy = 46 KSI) | | |
| 2. US | E F1554 (GRADE 36) A | a.B.'S WITH WASHERS ANI | D HEAVY HE | X NUTS BOTH ENDS |
| 3. A.E | B.'S SHALL EXTEND 20 | " INTO CMU WALL AND | HAVE 3" HC | OOK ON END. |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



3'-11"

43'-0"

19'-11"

4'-11"

19'-2"

12**'-4"**

5'-6 3/4"



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12/22/2020



L&A FIRM # C-0621

EMA BUCHANAN DADWAY, NC

RUSTY LONG ARCHITECT CARY, NC 919-602-4180

REVISIONS

12/4/2020 ENGINEERING COORD.

DATE: 12/17/20 PROJECT #: LA-12869 DRAWN BY: CAL/GTH

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FOUNDATION AND BASEMENT PLAN

SIOI

| LOOSE LINTEL ANGLE SCHEDULE | | | | | | |
|-----------------------------|------|--------------------------|----------|-----------|--|--|
| MK# | MAX | SIZE | BEARING | NOTES | | |
| | OPNG | | EACH END | | | |
| LI | 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 | | |

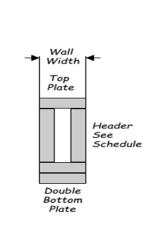
NOTES

- . 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 ARCHNG ACTION CAN BE UTILIZED IN THE DESIGN.
- 3. THE LINTEL IS DESIGNED FOR THE WEIGHT OF THE (ARCHING) BRICK ONLY. THERE MUST BE NO OTHER STRUCTURAL LOADS ON THE LINTEL.
- 4. LINTELS SHALL BE HOT DIP GALVANIVED.

| WOOD HEADER SCHEDULE | | | | | | |
|----------------------|------------------------|-----------|-------|--|--|--|
| MK# | WOOD SIZE | MAX. SPAN | NOTES | | | |
| HI | (2) 2 X 8 | 4'-0" | 1,2 | | | |
| H2 | (2) 2 X 10 | 6'-0" | 1,2 | | | |
| Н3 | (2) 2 X 12 | 8'-0" | 1,2 | | | |
| H4 | (2) I 3/4 X 9 I/4 LVL | 10'-0" | 1,3 | | | |
| H5 | (2) I 3/4 X II I/4 LVL | 12'-0 | 1,3 | | | |

NOTES

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



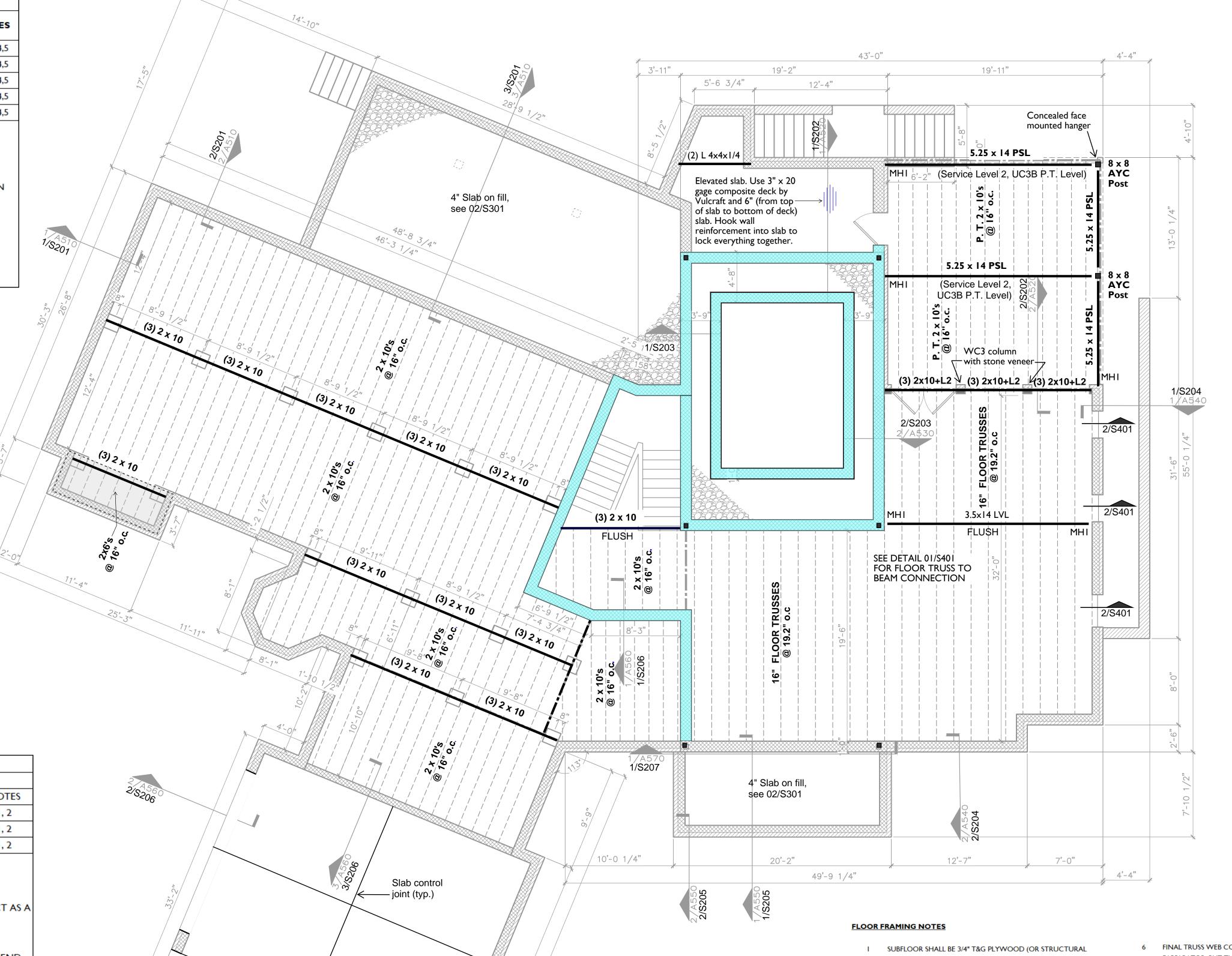
| STUD COL | STUD COLUMN SCHEDULE | | | | | |
|----------------------------|----------------------|-------|--|------|-----------|-------|
| 2 X 4 STUD WALLS 2 X 6 STU | | | | | 6 STUD WA | LLS |
| MK# | SIZE | NOTES | | MK# | SIZE | NOTES |
| 4SC2 | (2) 2 X 4 | I | | 6SC2 | (2) 2 X 6 | 1, 2 |
| 4SC3 | (3) 2 X 4 | I | | 6SC3 | (3) 2 X 6 | 1, 2 |
| 4SC4 | (4) 2 X 4 | Ī | | 6SC4 | (4) 2 X 6 | 1, 2 |

NOTES

- I. 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.
- 2. SEE HEADER SCHEDULE FOR JACK AND KING STUDS REQUIRED AT EACH END OF HEADER.

| WOOD COLUMN SCHEDULE | | | | | |
|----------------------|-------|---|--|--|--|
| MK# | SIZE | NOTES | | | |
| WCI | 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. | | | |

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



01 FIRST FLOOR FRAMING PLAN

3/16" = 1'0"

4" Slab on fill,

see 01/S301

- 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.
- 3 ALL EXTERIOR WALLS ARE LOAD BEARING. INTERIOR LOAD BEARING WALLS ARE SHADED. JOISTS MAY BE SPLICED OVER LOAD BEARING WALLS, BUT SHALL NOT BE SPLICED OVER NON-LOAD BEARING
- 4 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.
- 10 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.
- 12 SEE LINTEL SCHEDULE FOR SIZES OF LOOSE LINTEL ANGLES DENOTED ON FRAMING PLAN AS L1, L2, L3, ETC.



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Top Flange Offset Left

MHI= MASONRY HANGER

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L&A FIRM # C-0621

RUSTY LONG ARCHITECT CARY, NC 919-602-4180

REVISIONS 12/4/2020 ENGINEERING COORD.

DATE: 12/17/20 PROJECT #: LA-12869 DRAWN BY: CAL/GTH CHECKED BY: CAL

> FIRST FLOOR FRAMING PLAN

> > S102

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ROOF FRAMING NOTES

- I SEE ARCHITECTURAL FOR TYPICAL ROOF TRUSS BEARING ELEVATIONS.
- 2 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.
- 4 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.
- 6 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.

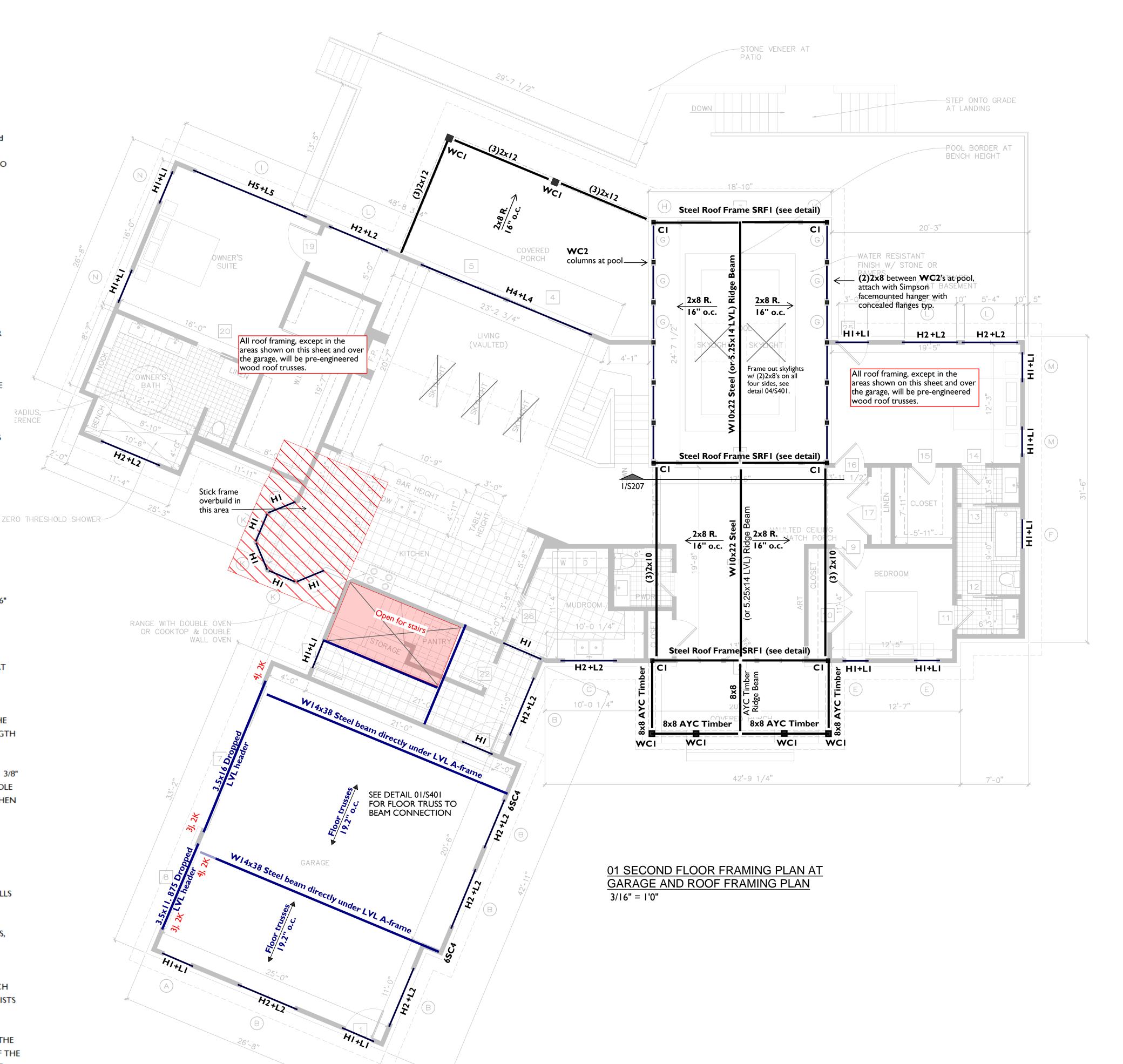
STUD WALL FRAMING NOTES

- I ALL EXTERIOR STUDS SHALL BE 2 X 6 NOMINAL (I 1/2" X 5 1/2" ACTUAL) #2 GRADE S-P-F AT 16" O.C.
- 2 ALL EXTERIOR STUD WALLS SHALL BE FULLY SHEATHED WITH 7/16" PLYWOOD OR STRUCTURAL GRADE SHEATHING TO PROVIDE OVERALL STABILITY TO THE HOUSE.
- 3 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.
- 6 NOTCHES AND HOLES SHALL NOT OCCUR IN THE SAME CROSS SECTION.
- 7 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.
- 9 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.





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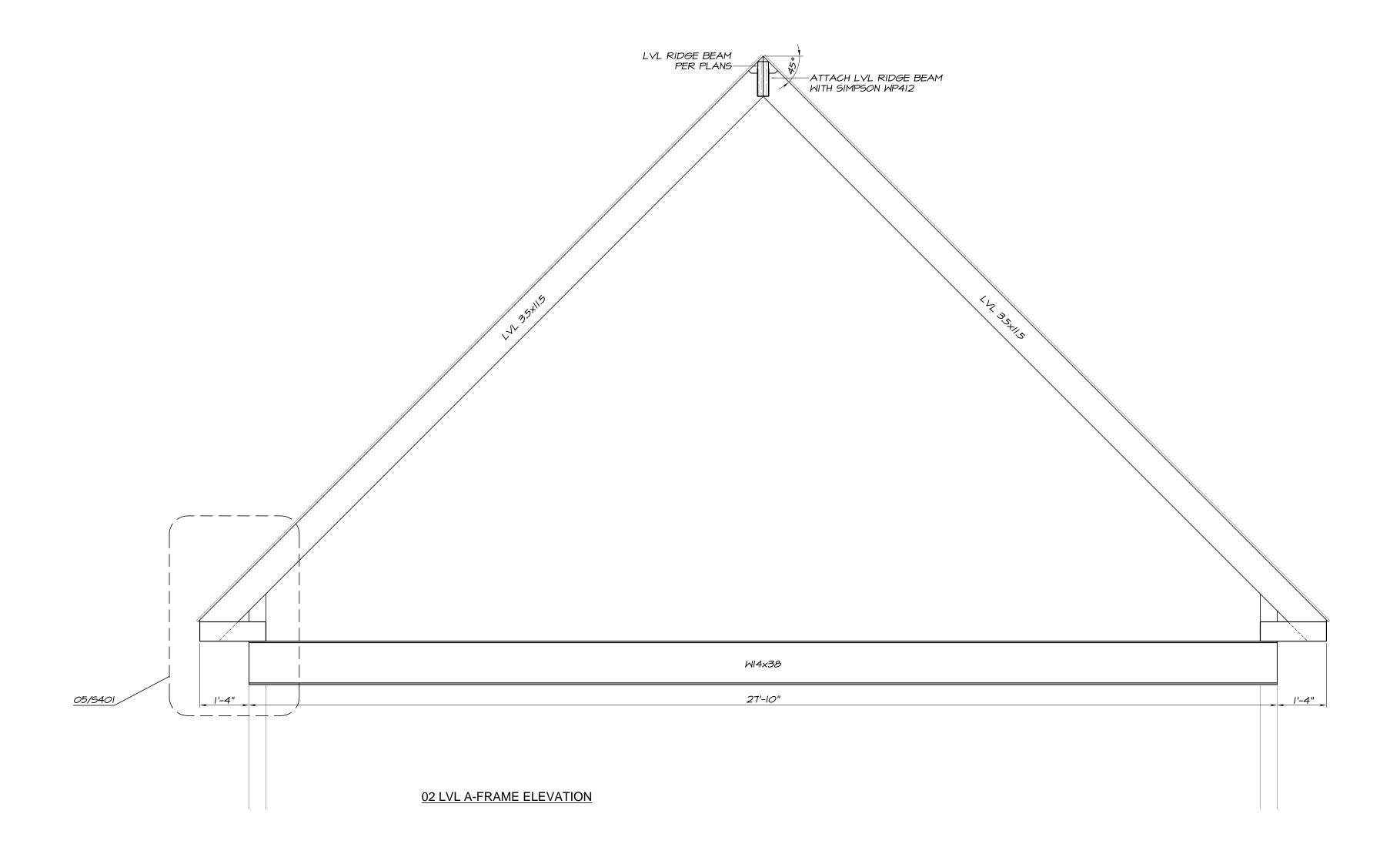
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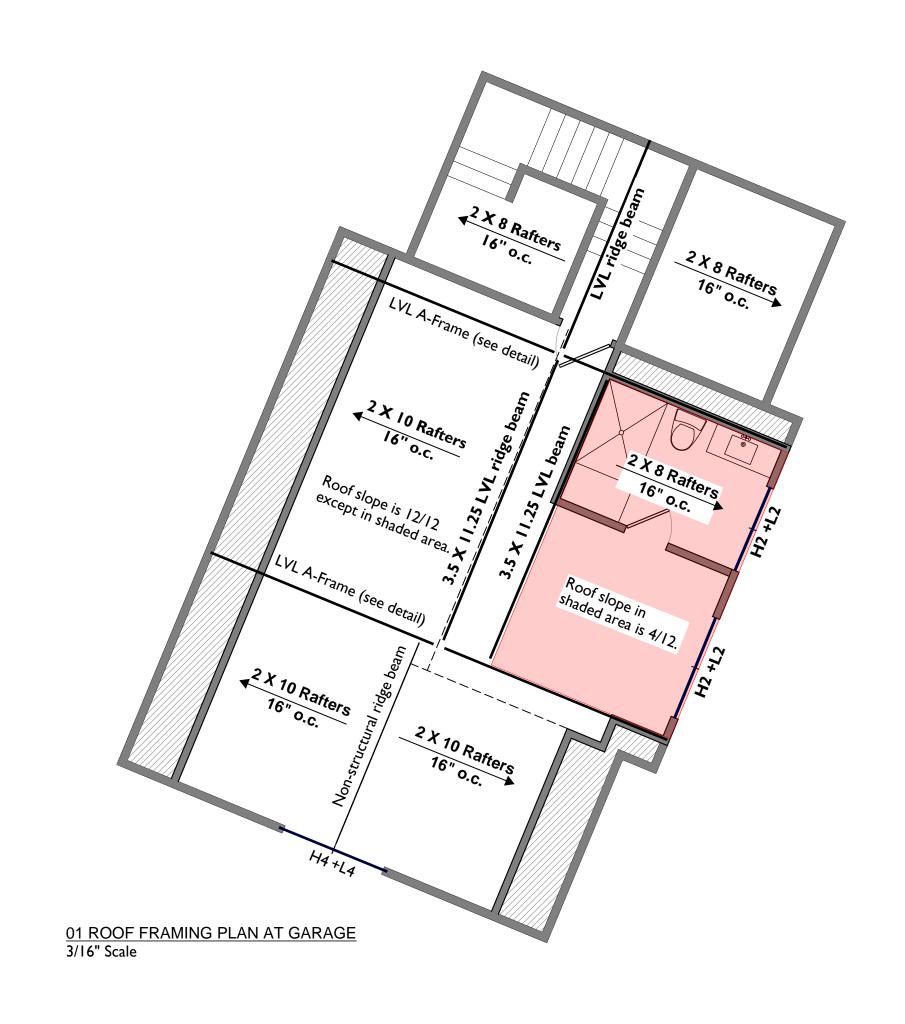
SECOND FLOOR FRAMING PLAN AT GARAGE AND ROOF FRAMING PLAN

S103

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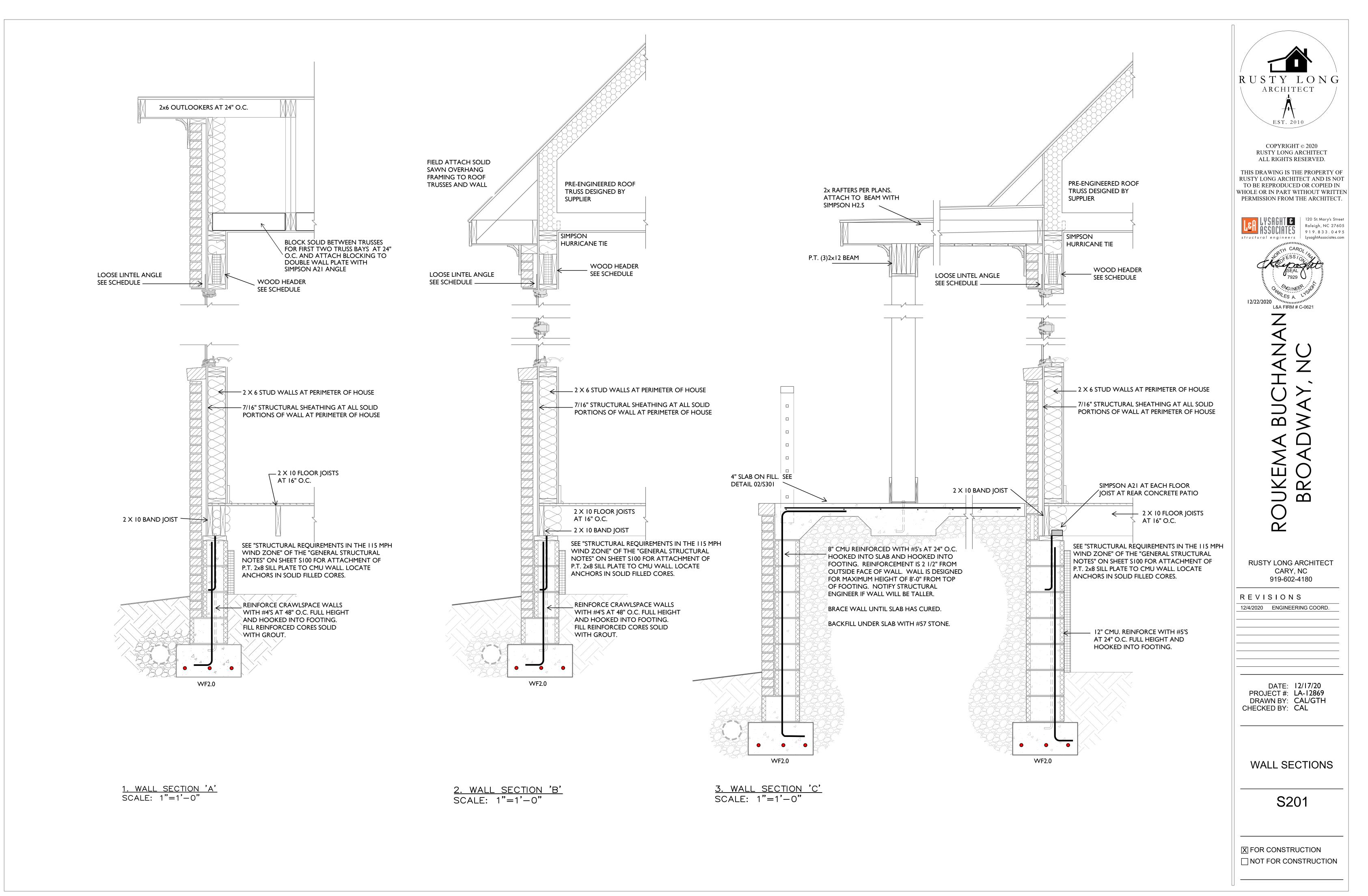
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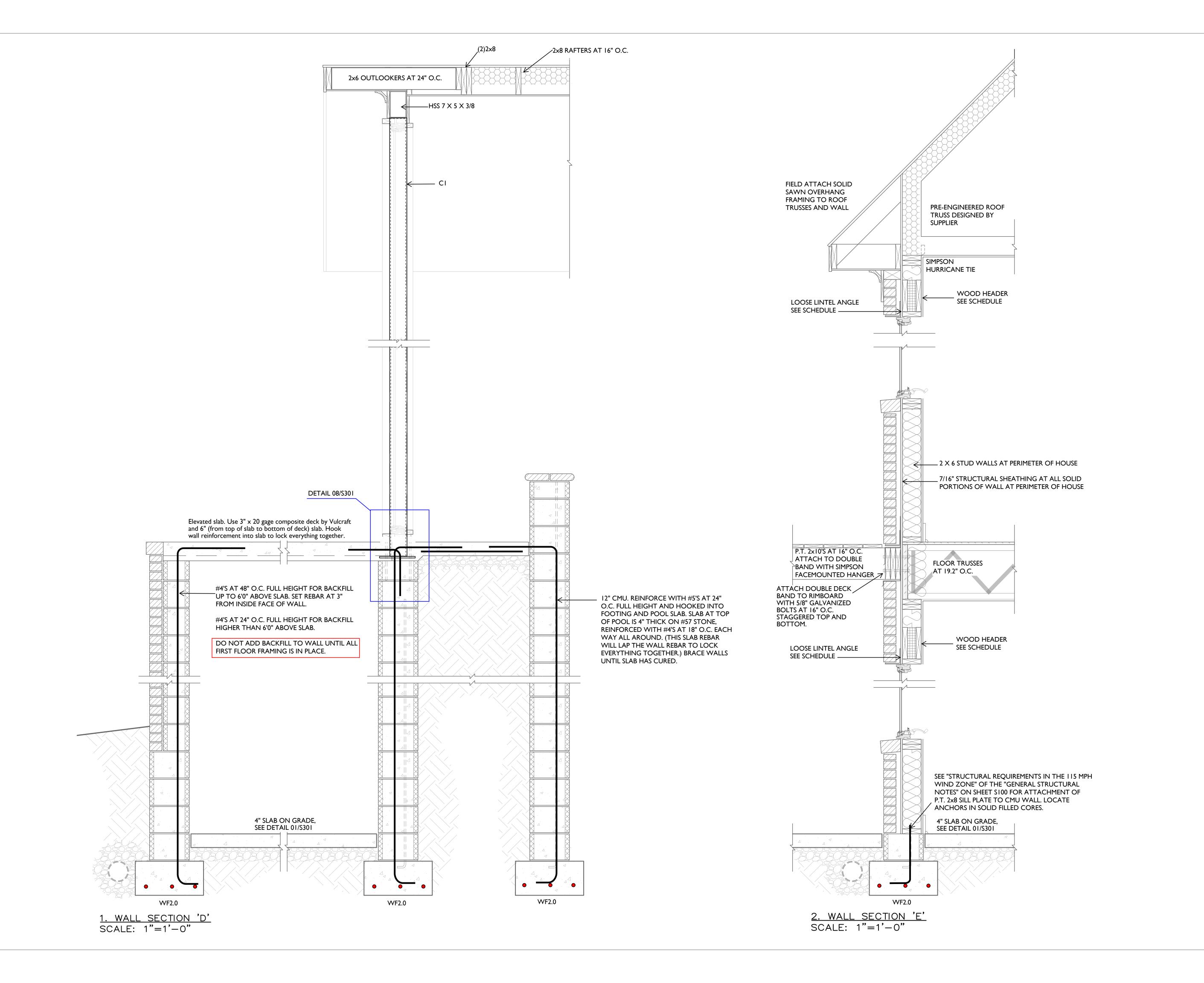
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ROOF FRAMING OVER GARAGE PLAN

S104







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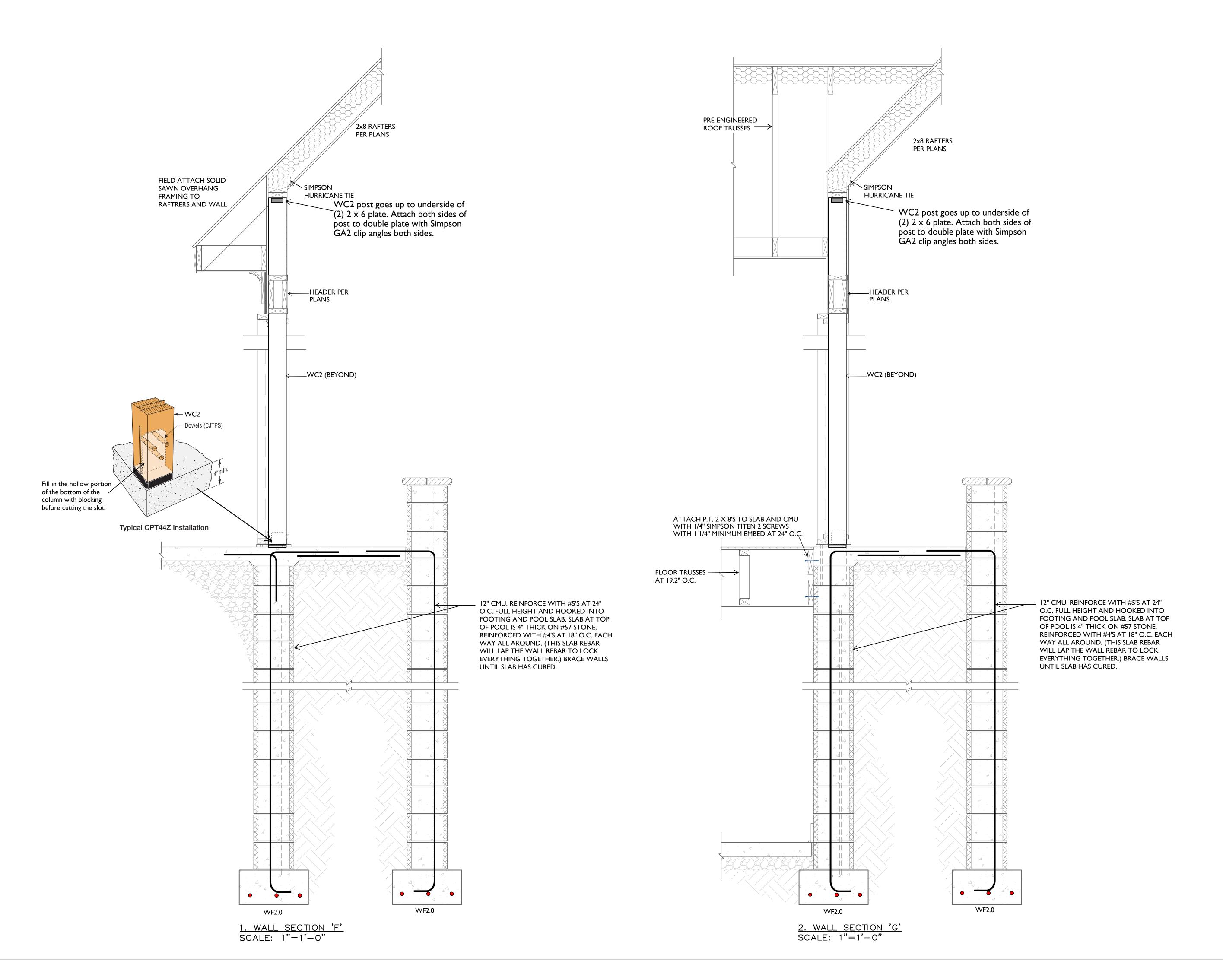
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WALL SECTIONS

S202





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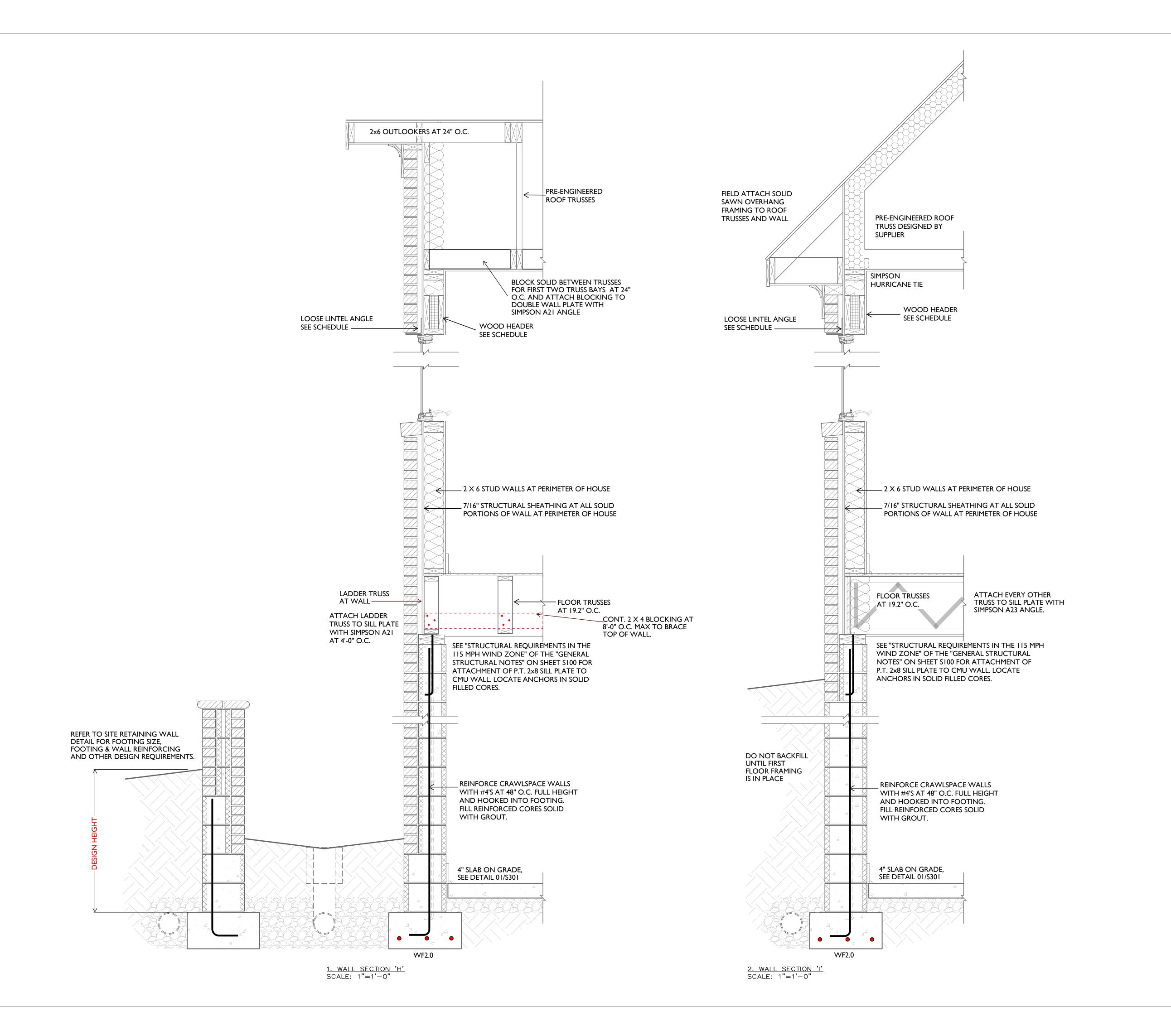
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WALL SECTIONS

S203





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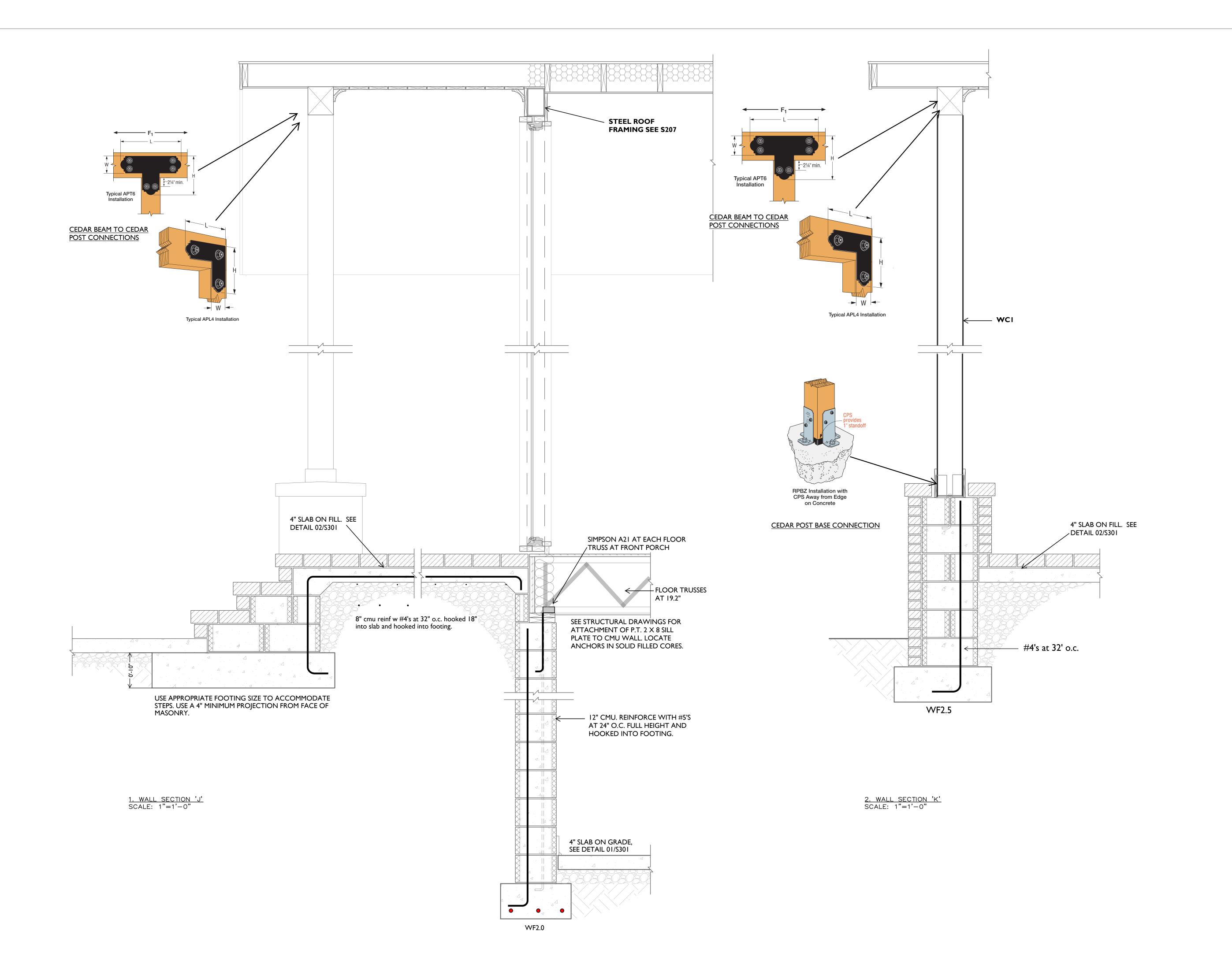
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WALL SECTIONS

S204





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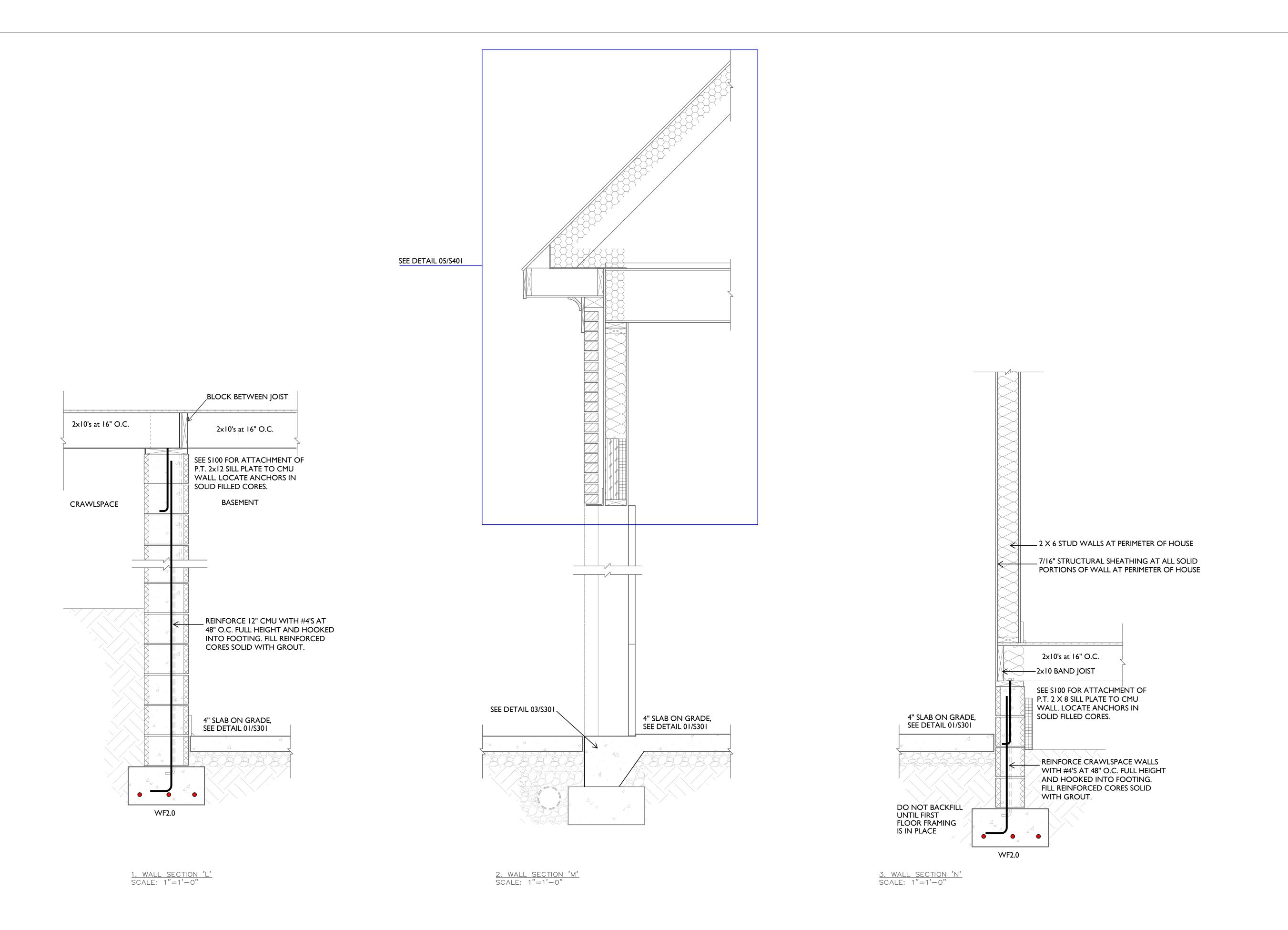
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WALL SECTIONS

S205

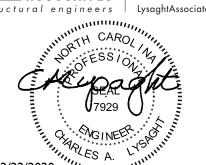


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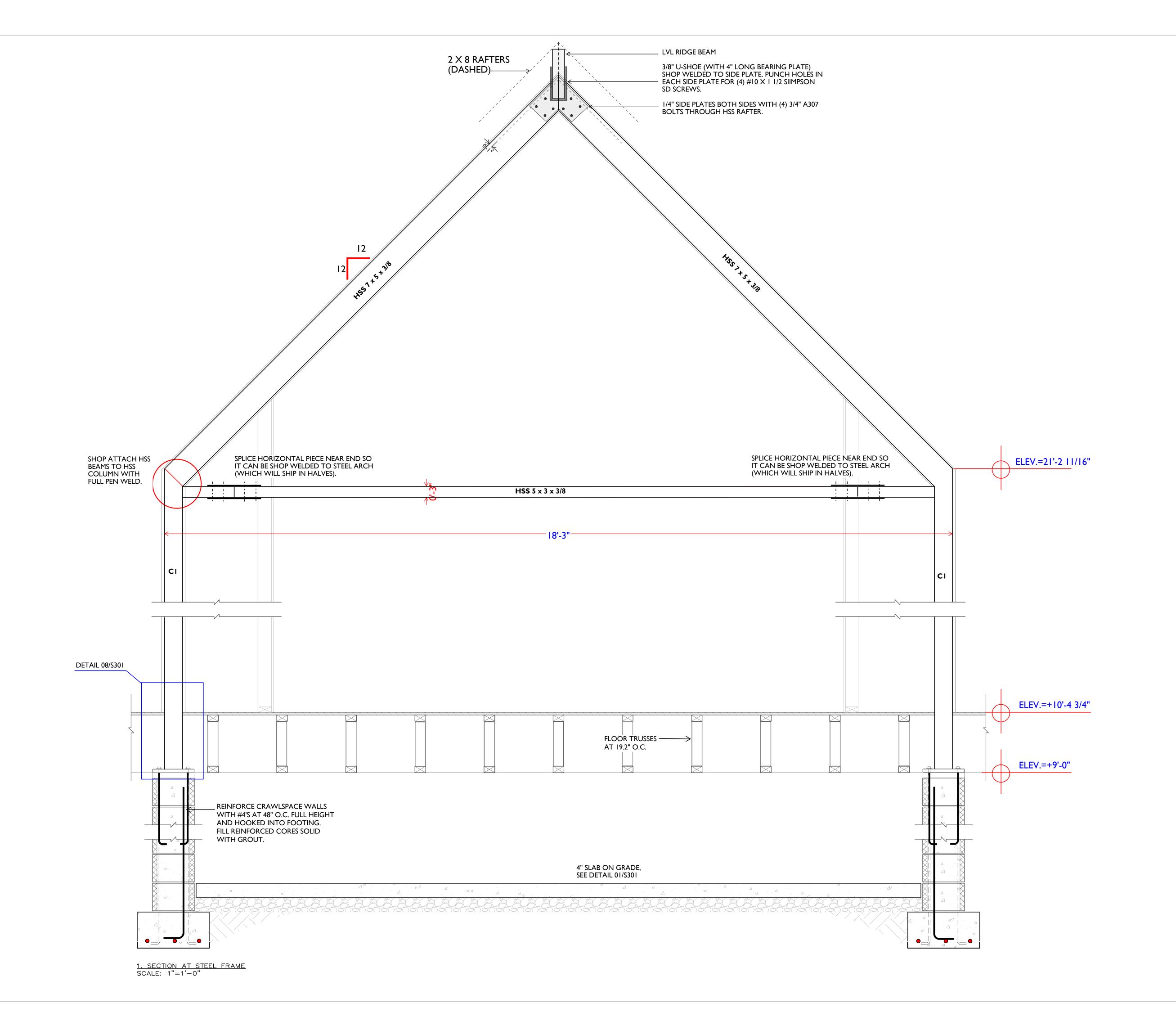
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WALL SECTIONS

S206

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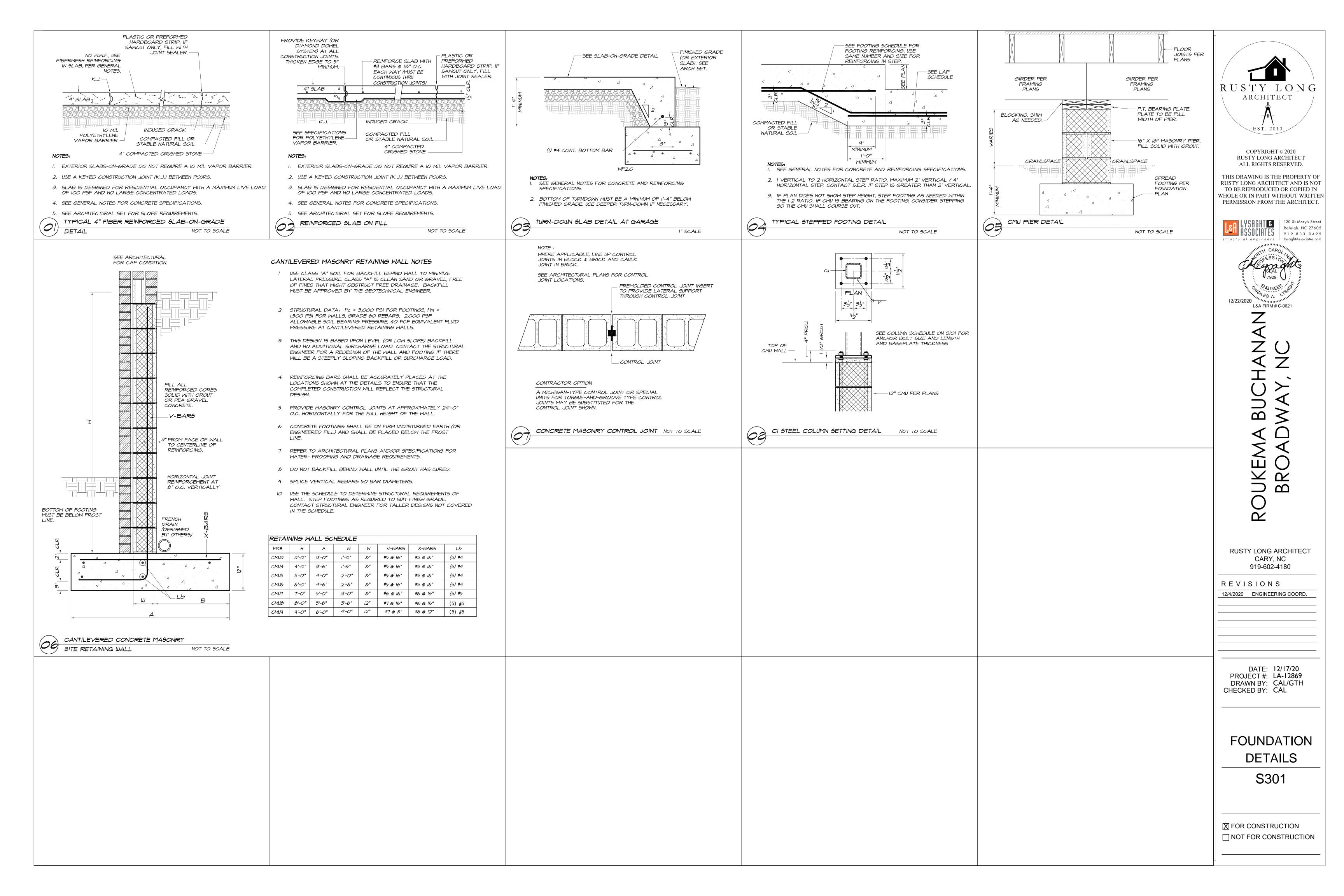
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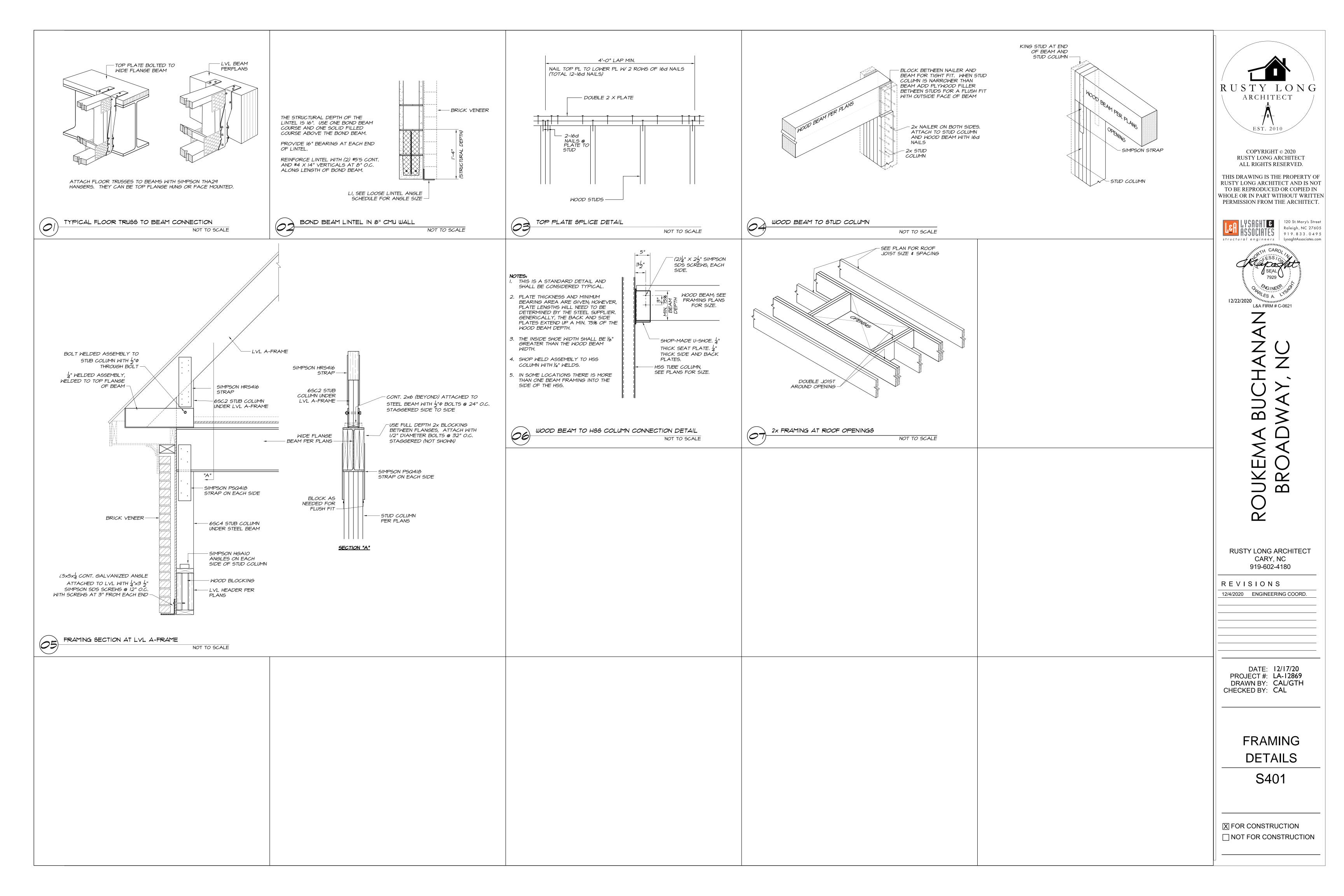
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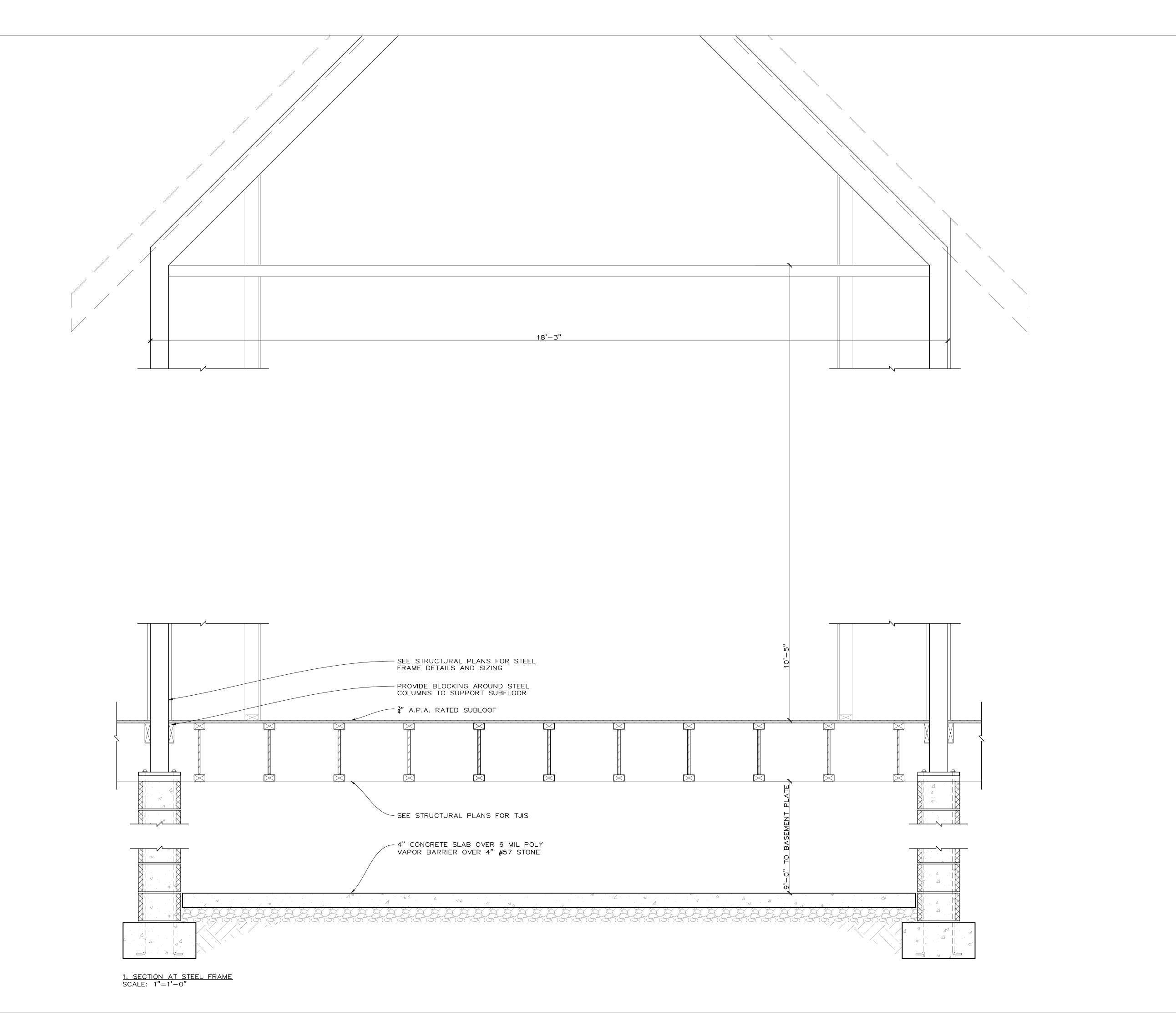
WALL SECTION AT STEEL

S207

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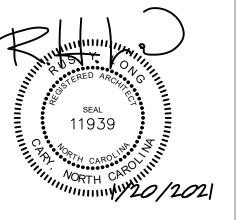








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WALL SECTION AT STEEL

A570