

FRONT ELEVATION

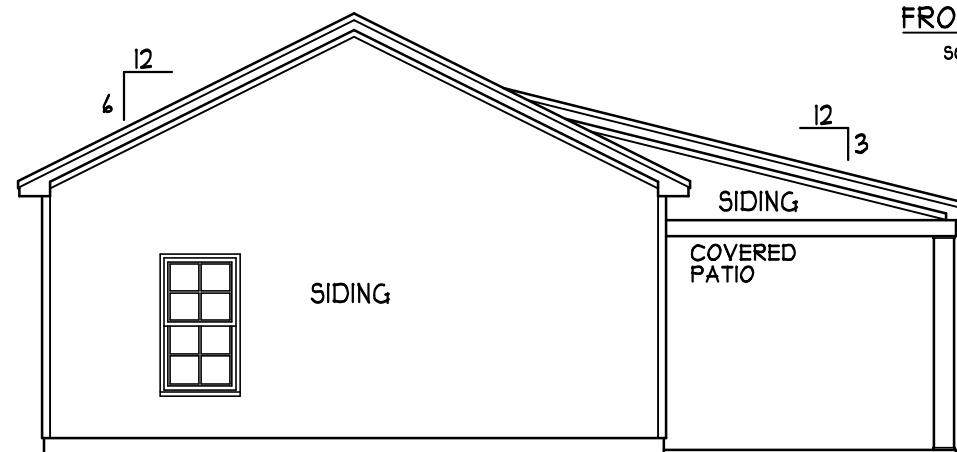
SCALE 1/4" = 1'-0"

ATTIC VENTILATION:

THE NET FREE VENTILATING AREA SHALL BE NOT LESS THAN 1 TO 150 OF THE AREA OF THE SPACE VENTILATED EXCEPT THAT THE AREA MAY BE 1 TO 300, PROVIDED AT LEAST 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION TO BE PROVIDED BY EAVE OR CORNICE VENTS.

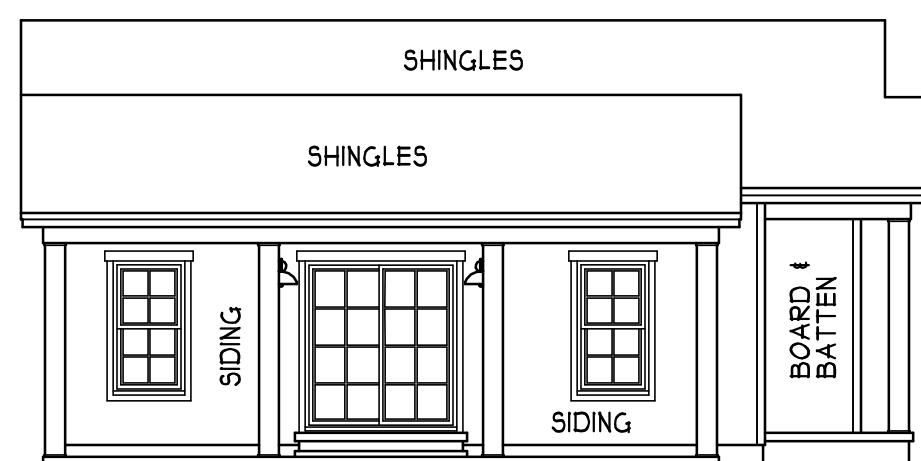
GROSS ATTIC AREA TO BE VENTILATED 910 SQ.FT.

910/150 = 6.06 SQ.FT. NET FREE AREA



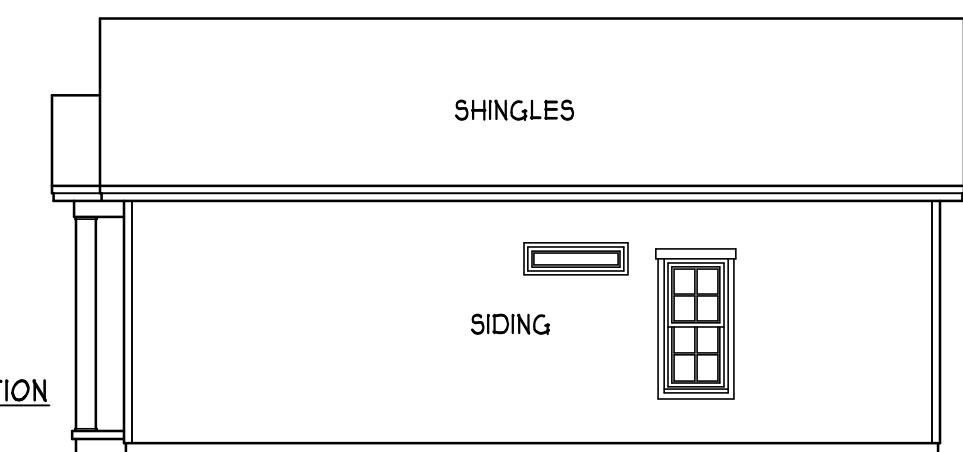
REAR ELEVATION

SCALE 1/8" = 1'-0"



LEFT ELEVATION

SCALE 1/8" = 1'-0"



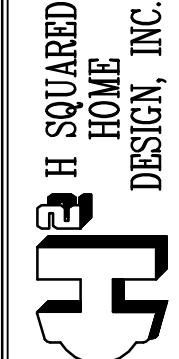
RIGHT ELEVATION

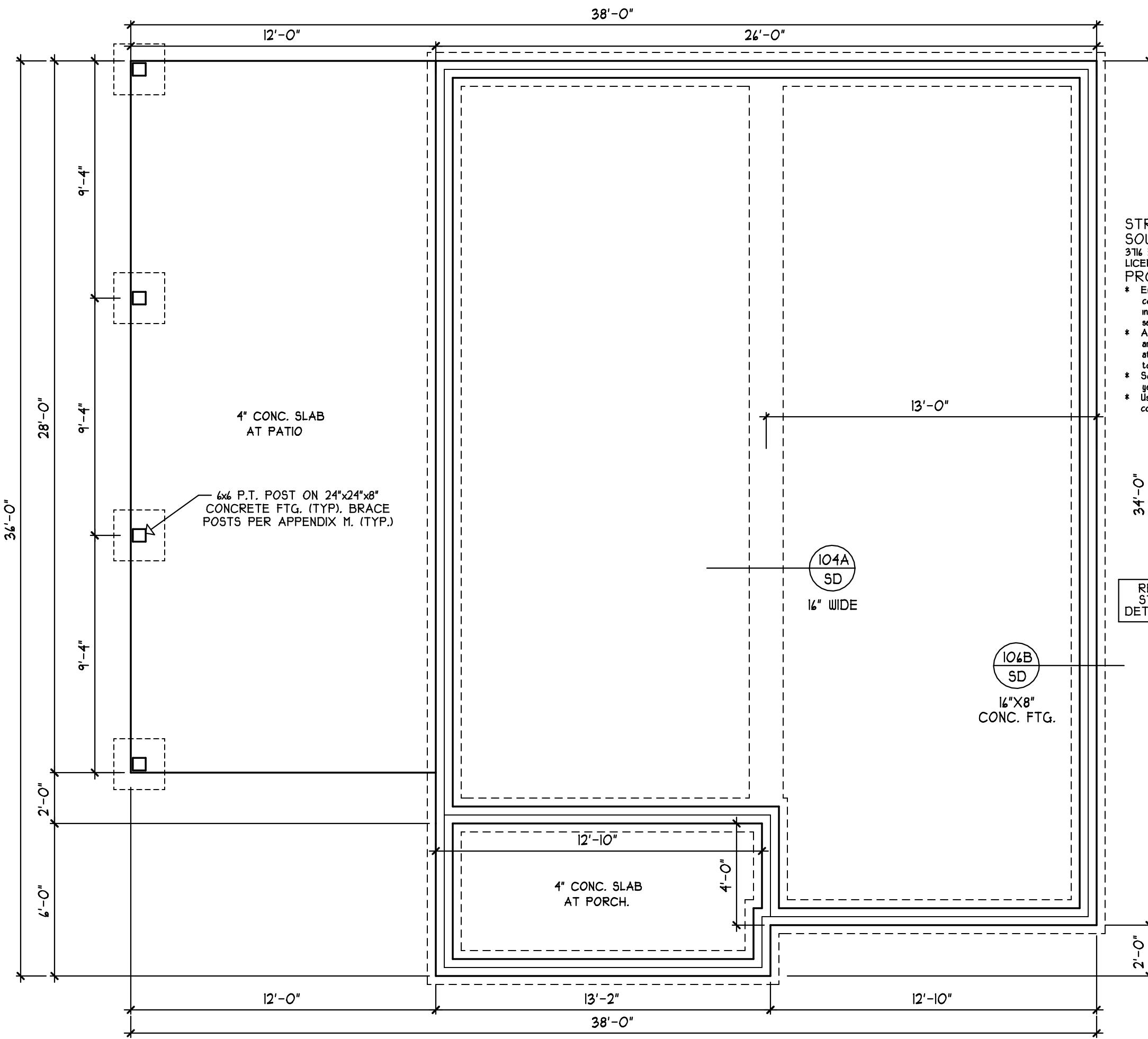
SCALE 1/8" = 1'-0"

ENERGY COMPLIANCE

ZONE 3 = MAX. GLAZING U-FACTOR .35
R-VALUE = CEILING R38, WALLS R15, FLOORS R19
FOR JOHNSTON, SAMPSON, WAYNE COUNTY

ZONE 4 = MAX. GLAZING U-FACTOR .35
R-VALUE = CEILING R38, WALLS R15, FLOORS R19
FOR WAKE, DURHAM, ORANGE COUNTY

POOL HOUSE	
HEATED FOOTAGE: #833	@ WEISS RES.
SQUARE FOOTAGE: POOL HOUSE = 833 FRONT PORCH = 77 PATIO = 336	
DESIGNED BY: HEATHER or JOHNATHAN HALL 165 HEATHERSTONE CT BENSON NC 27504 (919) 207-1403	
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DATE: 10/04/21	
I STORY	
FILE: 080521	



POOL HOUSE
@ WEISS RES.

HEATED FOOTAGE:
#833

SQUARE FOOTAGE:
POOL HOUSE = 833
FRONT PORCH = 77
PATIO = 336

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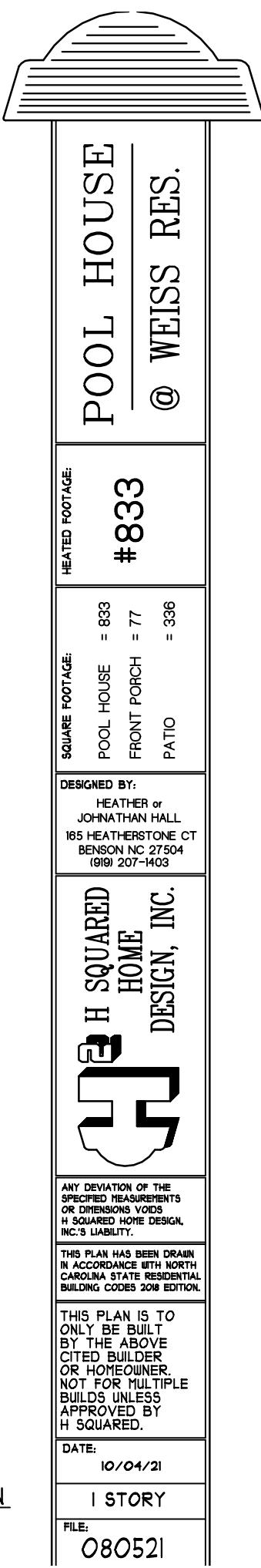
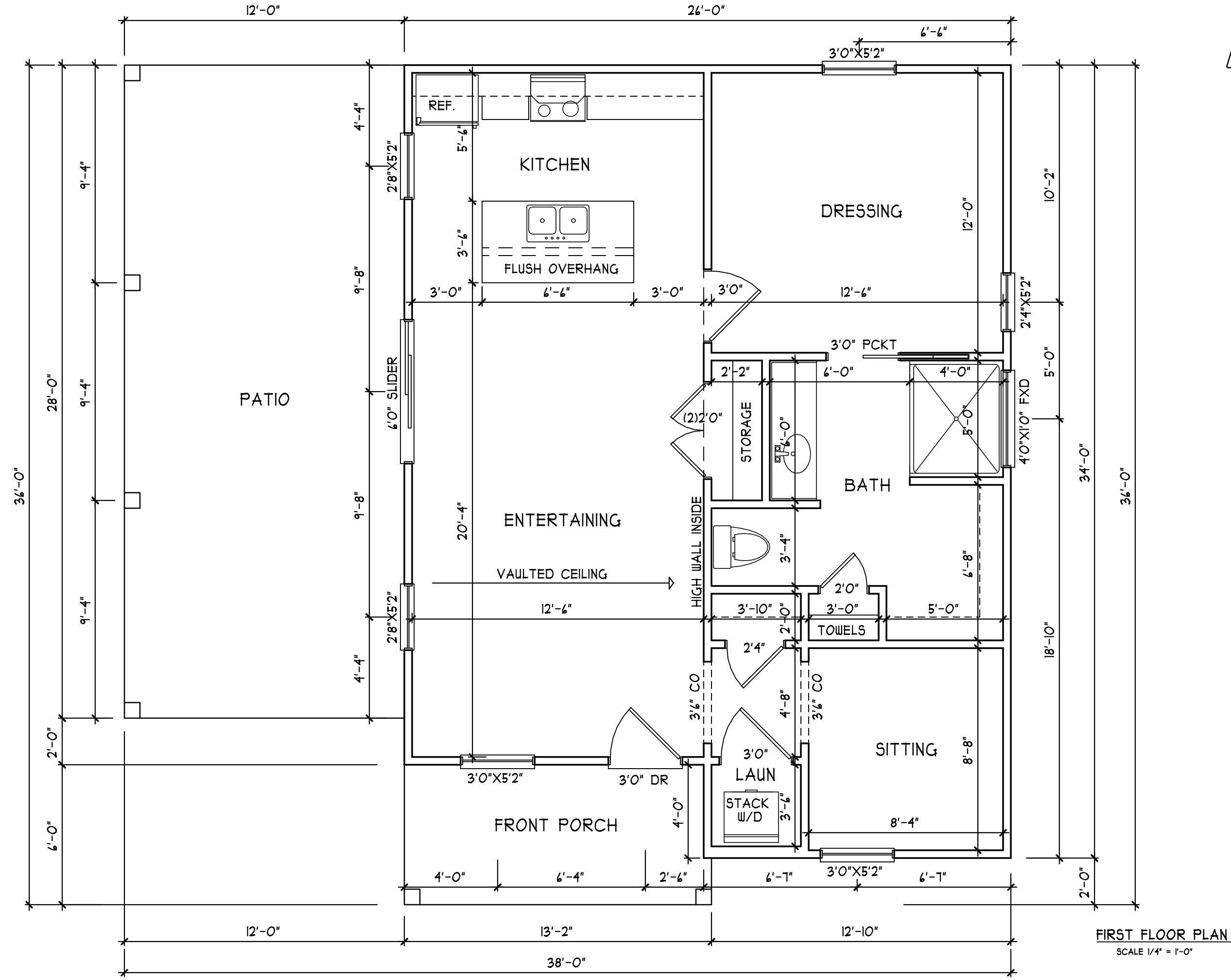
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DATE:
10/04/21

1 STORY

FILE:
080521





POOL HOUSE
@ WEISS RES.

WEISS RES.

STRUCTURAL DESIGN BY:
SOUTHERN ENGINEERS, P.A.
3116 BENSON DR., RALEIGH, NC 27609
LICENSE: C-4112, PHONE: 919-878-1417
PROJECT #: 21-3260

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 - * Any deviations or discrepancies on plans are to be brought to the immediate attention of Southern Engineers. Failure to do so will void Southern Engineer's liability
 - * Seal is valid for a project permitted one year from date of seal.
 - * Use of these plans constitutes approval of terms & conditions as defined in the customer agreement.

REFER TO "SD" SHEET(S) FOR
STANDARD DETAILS, BRACING
DETAILS, AND STRUCTURAL NOTES

ATED FOOTAGE:
#833

HEATED FOOTAGE:

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BENSON NC 27504
(919) 527-1422

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DATE:

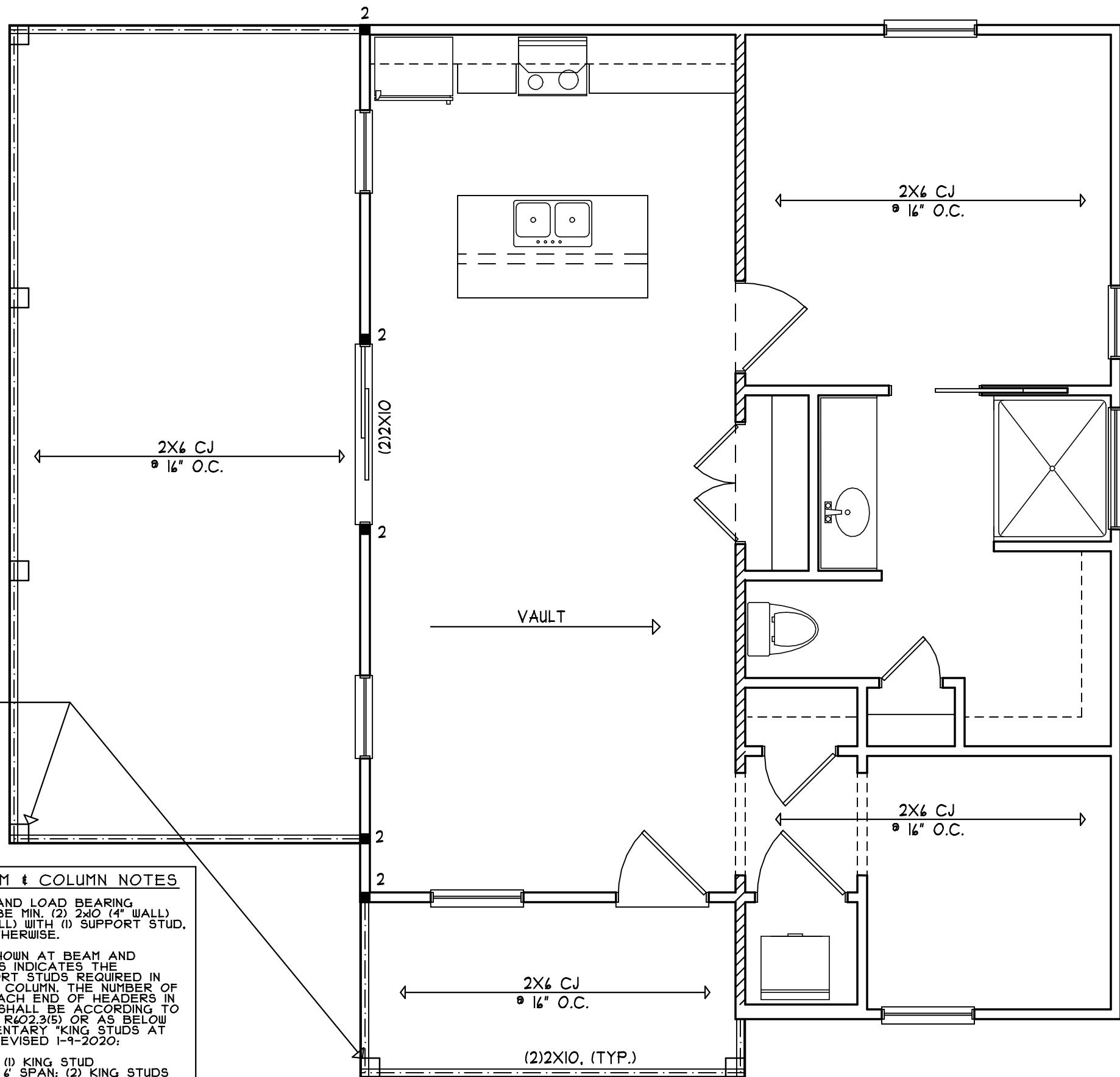
1 STORY

FILE:
080521

6"X6" TRT'D POST OR EQUIV. (TYP.).
ATTACH RAFTERS @ PORCH W/
HURRICANE CONNECTORS (SIMPSON
H2.5A OR EQUIV.). ATTACH
HEADER TO POST AND POST TO
BASE W/ A POST CAP, METAL
STRAP(S), BRACKET(S) AND/OR
POST BASE

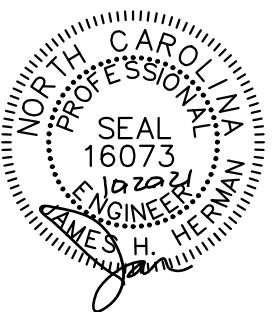
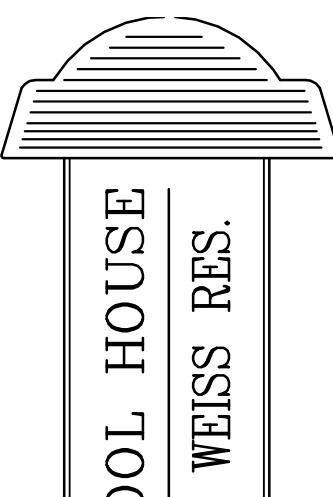
HEADER/BEAM & COLUMN NOTES

- I. ALL EXTERIOR AND LOAD BEARING
HEADERS SHALL BE MIN. (2) 2x10 (4" WALL)
OR (3) 2x10 (6" WALL) WITH (1) SUPPORT STUD.
UNLESS NOTED OTHERWISE.
 2. THE NUMBER SHOWN AT BEAM AND
HEADER SUPPORTS INDICATES THE
NUMBER OF SUPPORT STUDS REQUIRED IN
STUD POCKET OR COLUMN. THE NUMBER OF
KING STUDS AT EACH END OF HEADERS IN
EXTERIOR WALLS SHALL BE ACCORDING TO
ITEM "d" IN TABLE R602.3(5) OR AS BELOW
PER NCDOI COMMENTARY "KING STUDS AT
WALL OPENINGS" REVISED 1-9-2020:
 - UP TO 3' SPAN: (1) KING STUD
 - OVER 3' UP TO 6' SPAN: (2) KING STUDS
 - OVER 6' UP TO 9' SPAN: (3) KINGS STUDS
 - OVER 9' UP TO 12' SPAN: (4) KING STUDS
 - OVER 12' UP TO 15' SPAN: (5) KING STUDS



FIRST FLOOR STRUCTURAL PLAN

SCALE 1/4" = 1'-0"



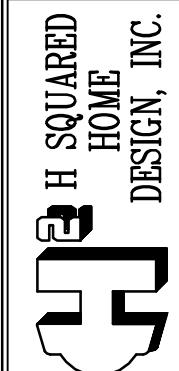
STRUCTURAL DESIGN BY:
SOUTHERN ENGINEERS, P.A.
3716 BENSON DR. RALEIGH, NC 27609
LICENSE: C-4112, PHONE: 919-878-1617
PROJECT #: 21-3260

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POOL HOUSE = 833	#833
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PATIO = 336	

DESIGNED BY:
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BENSON NC 27504
(919) 207-1403



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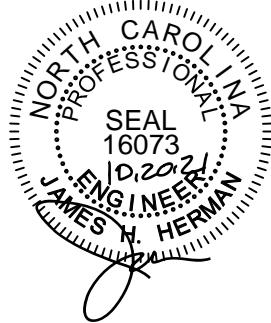
DATE:

10/04/21

I STORY

FILE:
080521

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



STRUCTURAL NOTES

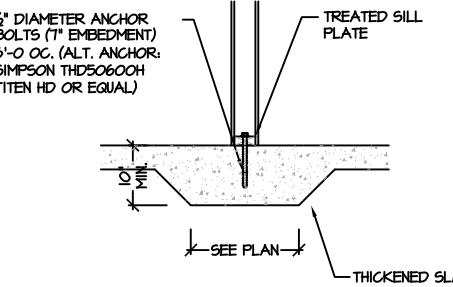
NC (2018 NCRC): Wind: 115-120 mph

- I. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM, FOOTING, AND PILING SYSTEM. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. SOUTHERN ENGINEERS, P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.
2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE 2018 NC RESIDENTIAL CODE, PLUS ALL LOCAL CODES AND REGULATIONS. 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 THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.
3. DESIGN LOADS (LISTED AS: LIVE LOAD, DEAD LOAD, DEFLECTION)
 - ROOMS OTHER THAN SLEEPING ROOMS: (40 PSF, 10 PSF, L/360)
 - SLEEPING ROOMS: (30 PSF, 10 PSF, L/360)
 - ATTIC WITH PERMANENT STAIR: (40 PSF, 10 PSF, L/360)
 - ATTIC WITHOUT PERMANENT STAIR: (20 PSF, 10 PSF, L/360)
 - ATTIC WITHOUT STORAGE: (10 PSF, 10 PSF, L/240)
 - STAIRS: (40 PSF, 10 PSF, L/360)
 - EXTERIOR BALCONIES: (60 PSF, 10 PSF, L/360)
 - DECKS: (40 PSF, 10 PSF, L/360)
 - GUARDRAILS AND HANDRAILS: (200 LBS)
 - PASSENGER VEHICLE GARAGES: (50 PSF, 10 PSF, L/360)
 - FIRE ESCAPES: (40 PSF, 10 PSF, L/360)
 - SNOW: (20 PSF)
4. WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANELS. SEE FRAMING NOTES FOR THICKNESS AND NAILING REQUIREMENTS.
5. SEE APPENDIX M (DCA6) FOR EXTERIOR DECK REQUIREMENTS INCLUDING ATTACHMENTS FOR LATERAL LOADS.
6. CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINED PER TABLE R602.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP. CONTROL JOINTS IN SLABS SHALL BE SPACED ON A GRID OF +30 TIMES THE DEPTH (D). CONTROL JOINTS SHALL BE SAWCUT TO A DEPTH OF I/D. (I.E. 4" CONCRETE SLABS SHALL HAVE 1/4" DEEP CONTROL JOINTS SAWCUT IN SLAB ON A +10'-0" x +10'-0" GRID).
7. ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTURAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. 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.
8. ALL FRAMING LUMBER SHALL BE SPF #2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2. PLATE MATERIAL MAY BE SPF # 3 OR SYP #3 (Fd(perp) = 425 PSI - MIN).
9. L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=14x10 PSI.
 9.1. P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2400 PSI, Fv=240 PSI, E=2.0x10 PSI.
 9.2. L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=200 PSI, E=1.55x10 PSI.
 INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.
10. ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.
11. ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500.
12. REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60. LAP ALL REBAR SPLICES 30 BAR DIAMETERS.
13. FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A325) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX), AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.
14. BRICK LINTELS (WHEN REQUIRED) SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 9'-0". SEE PLANS FOR SPANS OVER 9'-0". SEE ALSO SECTION R703.8.3 LINTELS.

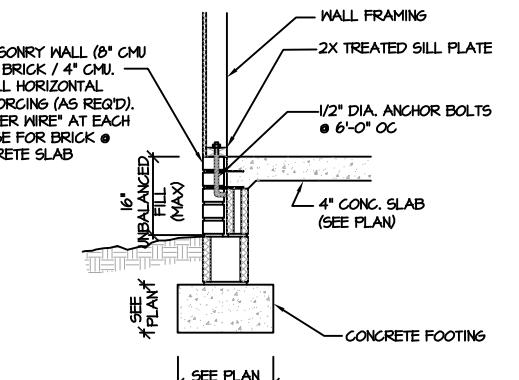
FRAMING NOTES

NC (2018 NCRC) Wind: 115-120 mph

- I. BRACING METHOD AND TYPE: CONTINUOUSLY SHEATHED WSP, CS-WSP. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY SECTION R602.10 OF THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING AND WALL FRAMING.
2. EXTERIOR WALL SHEATHING: WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANEL SHEATHING (WSP) (EXPOSURE B, 7/16", EXPOSURE C, 15/32"), SHEATHING SHALL BE ATTACHED WITH 8d NAILS AT A 6 1/2" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES.
3. WSP SHEATHING SHALL EXTEND TO THE UPPERMOST DOUBLE BEARING PLATE, BLOCK AT ROOF PER SECTION R602.10.4.5 AND ATTACH BRACED WALLS PER CODE. WSP SHEATHING BETWEEN FLOORS SHALL BE SPLICED ALONG CONTINUOUS BAND OR THE WSP SHEATHING MAY BE SPLICED ACROSS STUDS (CONTINUOUS ACROSS FLOOR SYSTEM) WITH BLOCKING AT PANEL EDGES. (MINIMUM 12" BEYOND FLOOR BREAK) OR OTHER APPROVED METHOD.
4. "HD" = HOLD-DOWN: HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY.
 - **"GROUND/FIRST FLOOR:** USE "HD HOLD-DOWN DETAIL" ON SD SHEET (OR EQUIV.)
 - **"UPPER FLOORS:** ATTACH BASE OF KING STUD WITH A SIMPSON CS22 STRAP DOWN ACROSS THE BAND AND DOWN TO A STUD BELOW OR HEADER BELOW. EXTEND STRAP 7" MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (1) 8d NAILS.
5. INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (GB) ON EACH SIDE OF WALL WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" O.C. ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.
6. INTERIOR BRACED WALL-WOOD STRUCTURAL PANEL: (NOTED AS "IBW-WSP" ON PLANS). ATTACH ONE SIDE WITH 7/16" WSP SHEATHING WITH 8d NAILS AT A 6 1/2" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES. ATTACH GB OVER WSP AS REQUIRED. ATTACH OPPOSITE SIDE WITH 1/2" GB WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 7" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS.



115-120 MPH 104A SD **THICKENED SLAB**
(INTERIOR BEARING WALL)



115-120 MPH 106B SD **STEM WALL SLAB FOOTING**
(SIDING W/ BRICK SKIRT)

H SQUARED HOME DESIGN, INC.

Pool House at
Weiss Residence

SD

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