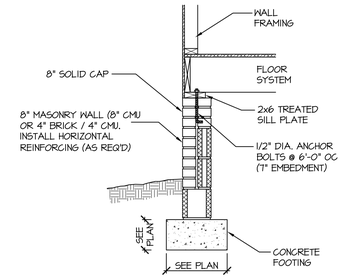
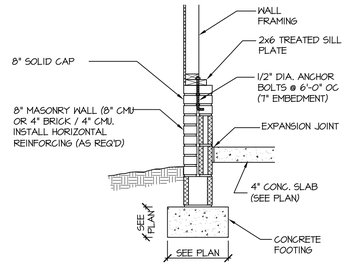
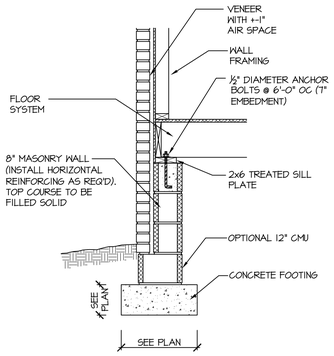


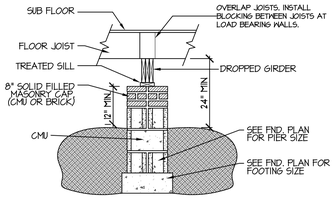
115-120 MPH | 110B 5D — CRAWL SPACE FOOTING
(SIDING W/ BRICK SKIRT)



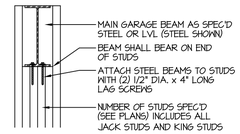
115-120 MPH | 111B 5D — GARAGE WALL FOOTING
(SIDING W/ BRICK SKIRT)



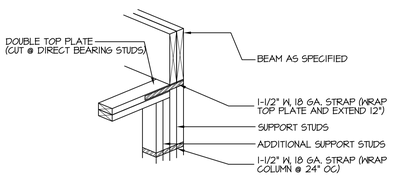
115-120 MPH | 112A 5D — CRAWL SPACE FOOTING
(VENEER)



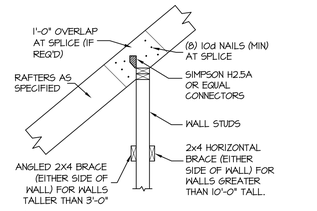
122A 5D — DROPPED GIRDER
NTS



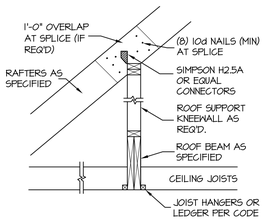
204A 5D — TYP. GARAGE BEAM BEARING
NTS



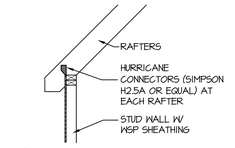
206A 5D — DIRECT BEAM BEARING
PSL COLUMN



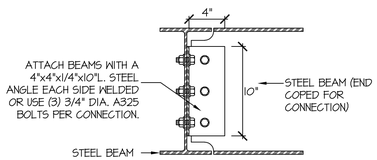
302A 5D — TYPICAL RAFTER SUPPORT ON ATTIC KNEEWALL
2X4 BRACES NOT REQ'D FOR WALLS THAT ARE SHEATHED W/ WSP OR DRYWALL.
NTS.



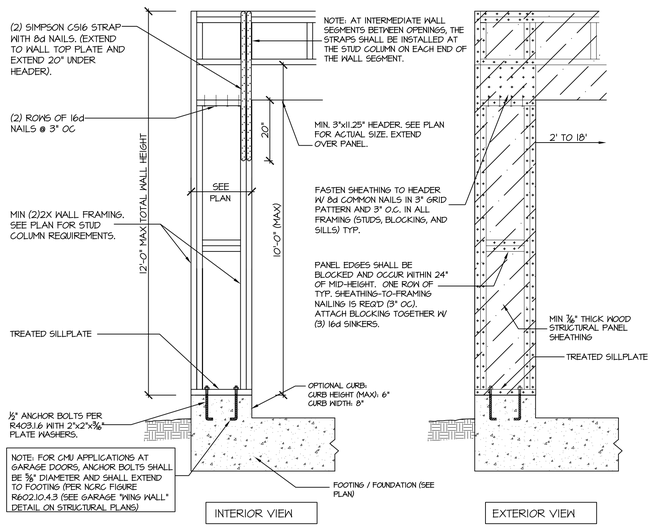
303A 5D — ROOF BEAM
NTS.



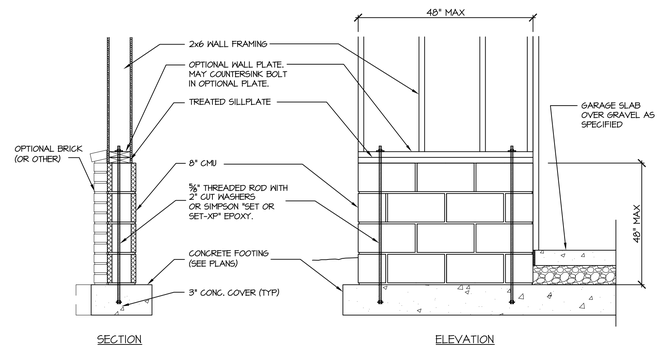
304A 5D — RAFTER TIE @ VAULT
NTS.



501 SD — BEAM CONNECTION DETAIL
(THREE BOLTS)
NTS



905 SD — CS-PF: CONTINUOUS PORTAL FRAME CONSTRUCTION
DETAIL AND APPLICATION BASED ON NCRC FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION



907 SD — GARAGE 'WING WALL' REINFORCING
PER IRC FIGURE R602.10.4.3

STRUCTURAL NOTES

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

1. 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)
   - DECKS AND EXTERIOR BALCONIES: (40 PSF, 10 PSF, L/360)
   - PASSENGER VEHICLE GARAGES: (50 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 402.2. 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 1/D. (I.E. 4" CONCRETE SLABS SHALL HAVE ¼" 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 ($F_{c\perp}$ = 425 PSI - MIN).

9. L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9x10 PSI.
   - 9.1. P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2400 PSI, Fv=290 PSI, E=2.0x10 PSI.
   - 9.2. L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 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 MANUFACTURES 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.

15. METAL CONNECTORS REFERENCED ON PLANS CORRESPOND TO SIMPSON STRONG-TIE BRAND. CONNECTORS OF EQUAL OR BETTER CAPACITY ARE ACCEPTABLE. CORROSION RESISTANCE PER CODE AND AS RECOMMENDED BY MANUFACTURER.

12-8-23 REVISION: ADDED MISSING DETAIL "501/SD"

STRUCTURAL DESIGN BY:
SOUTHERN ENGINEERS, P.A.
3716 BENSON DRIVE RALEIGH, NC 27609
LICENSE: C-4772, PHONE: 919-878-1617

PROJECT #: 23-1180

- Engineers seal applies only to structural components on this document. Seal does not include construction means, methods, techniques, sequences, procedures or safety precautions.
- 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 within one year from date of seal.
- Use of these plans constitutes approval of terms and conditions as defined in the customer agreement.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33153 REGISTERED MARK M. MINSHEW 12-8-23

STRUCTURAL DETAILS

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HALCYON HOMES
COTTON FARM
LOT #54

DRAWN BY: TWG
DATE: 7-6-11
FILE NAME: HH-2-2758

REVISIONS		
4-3-14	TWG	PLAN
2-12-15	TWG	PLAN
6-8-17	TWG	PLAN
2-28-23	TWG	PLAN

HOUSE NAME:

HOUSE NUMBER:

PAGE NUMBER:

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