

/26/20

03/04/20 (RP)

03/11/20 (RP)

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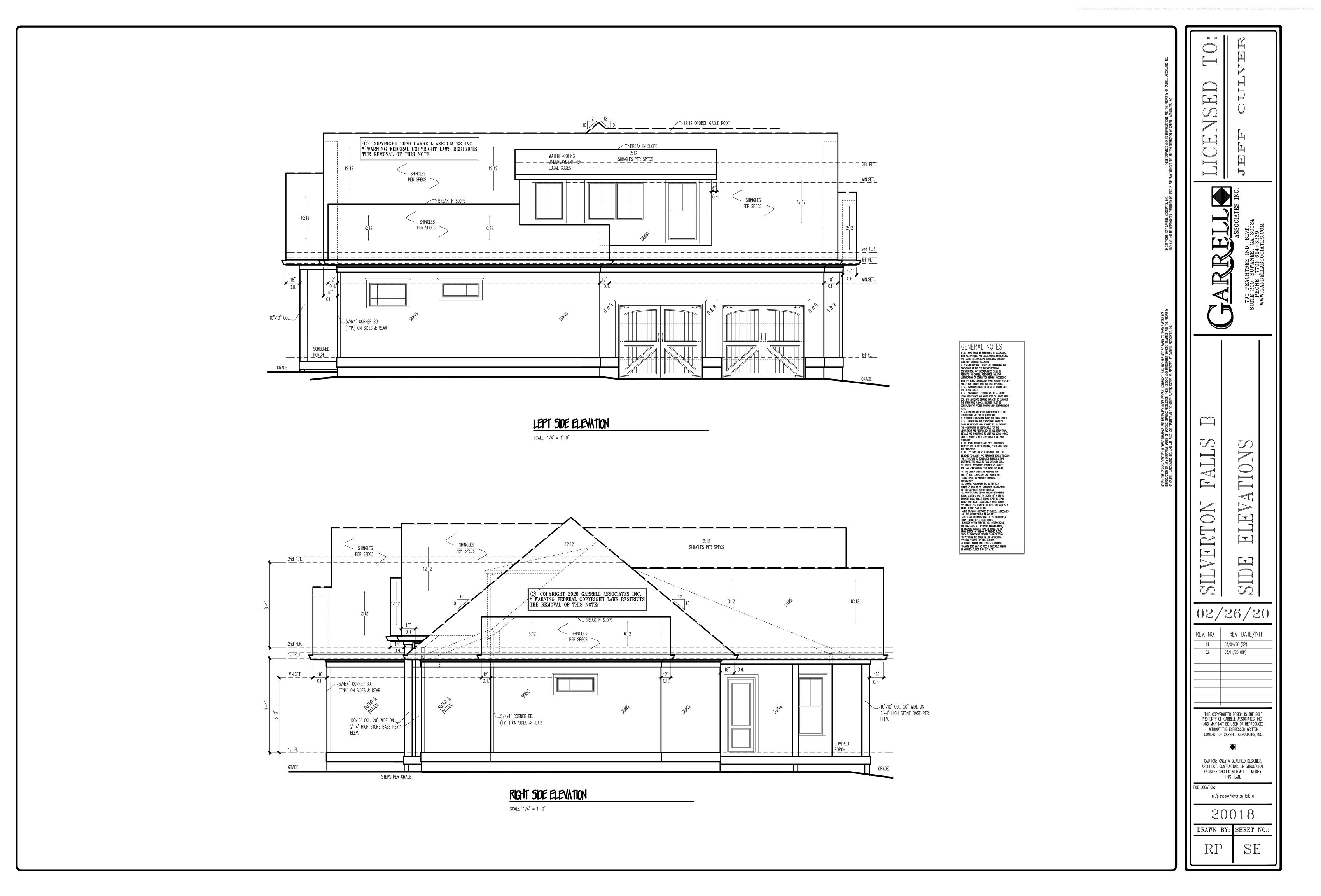
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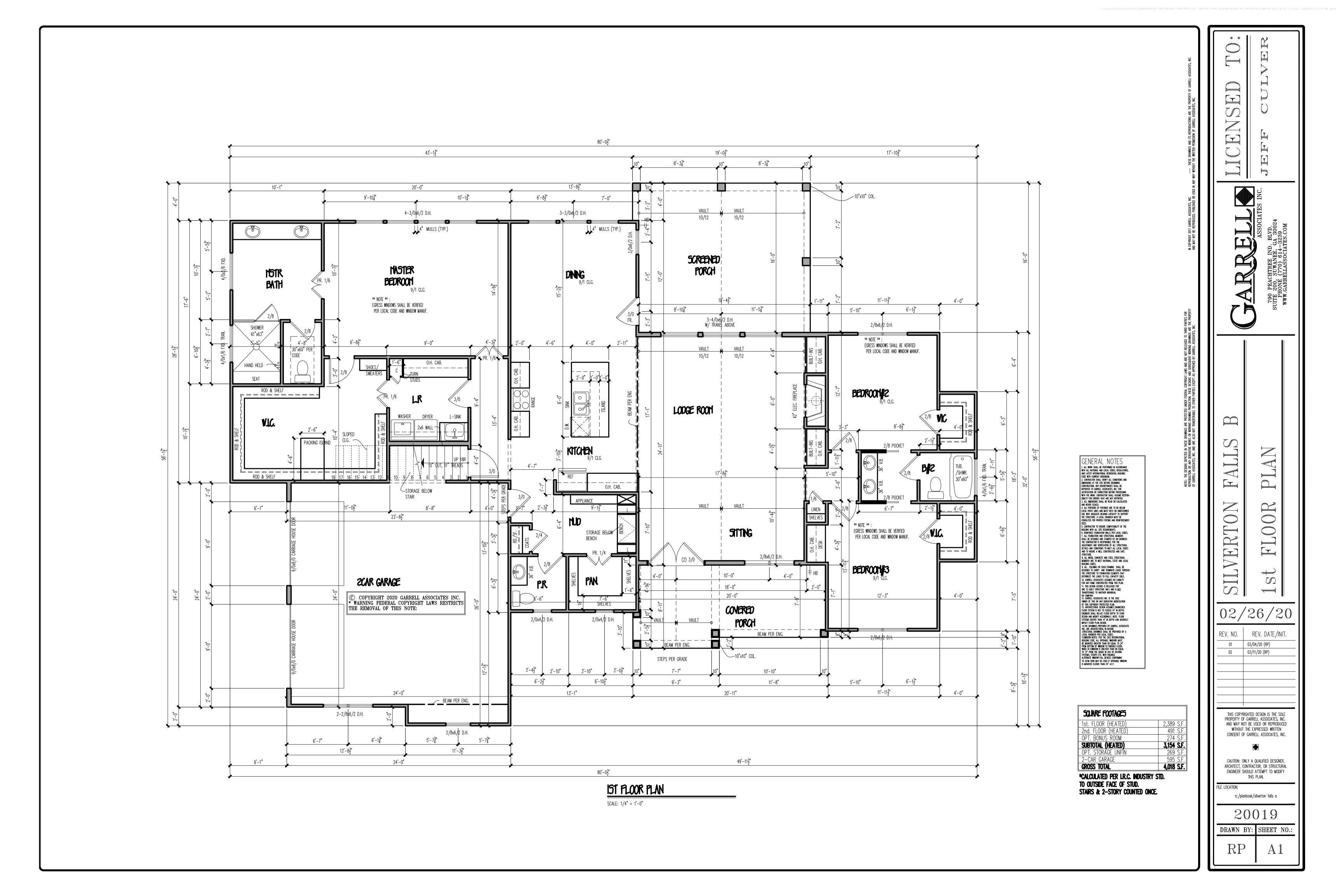
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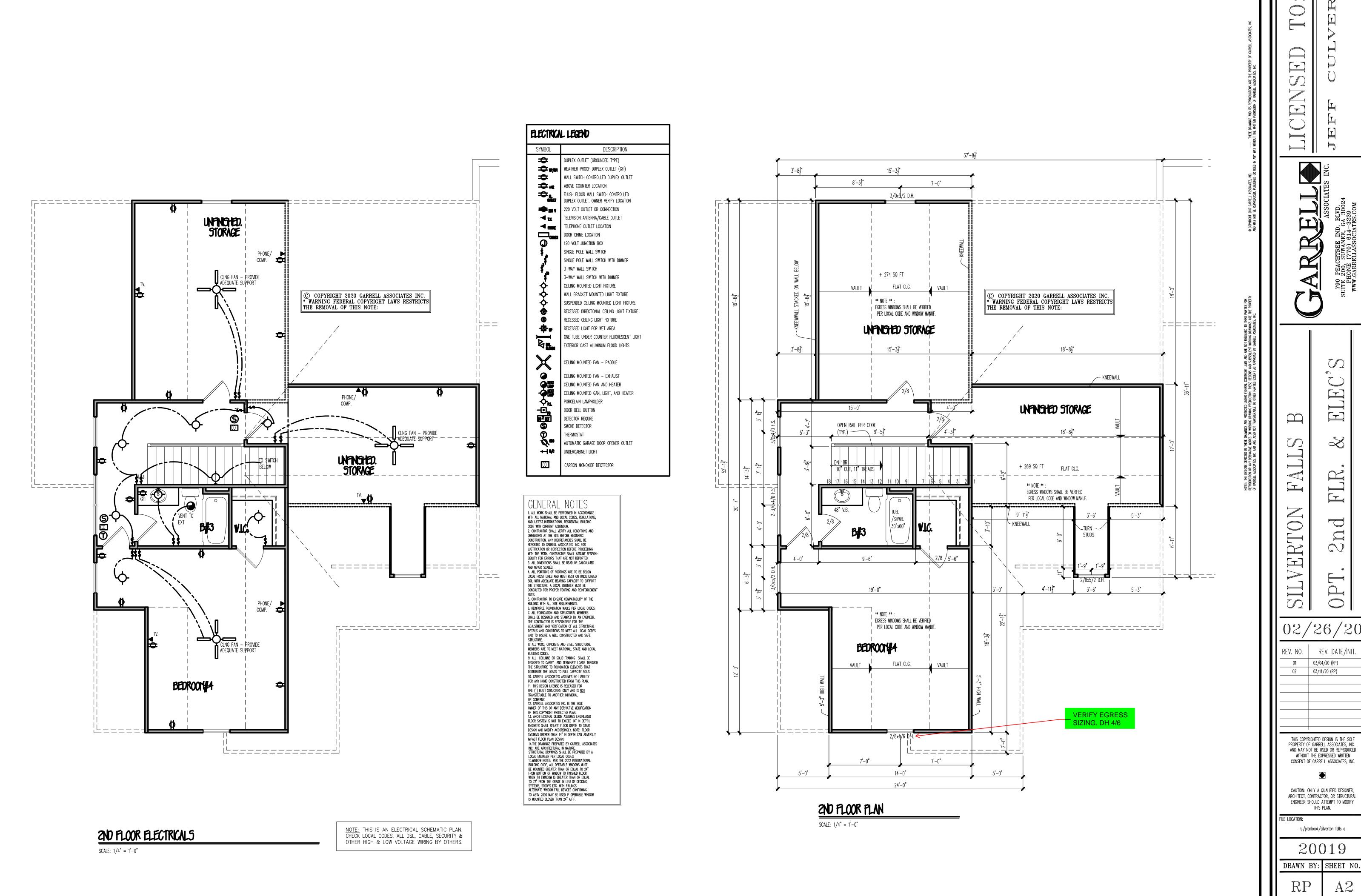
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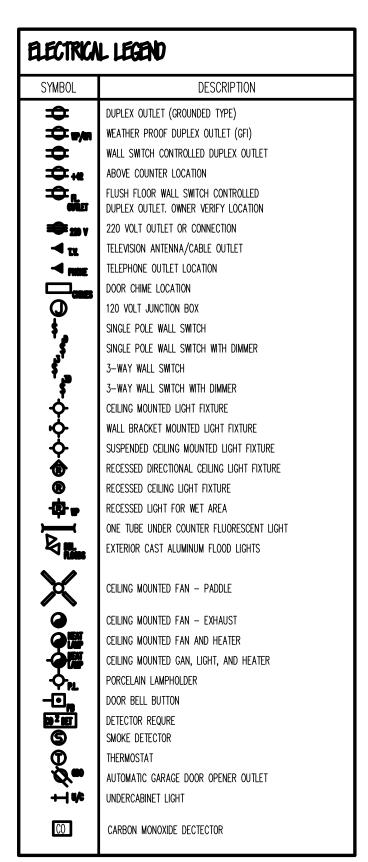
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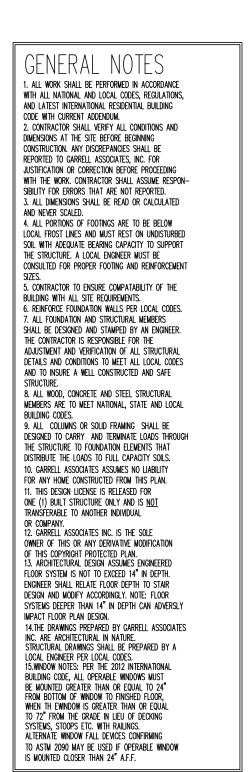


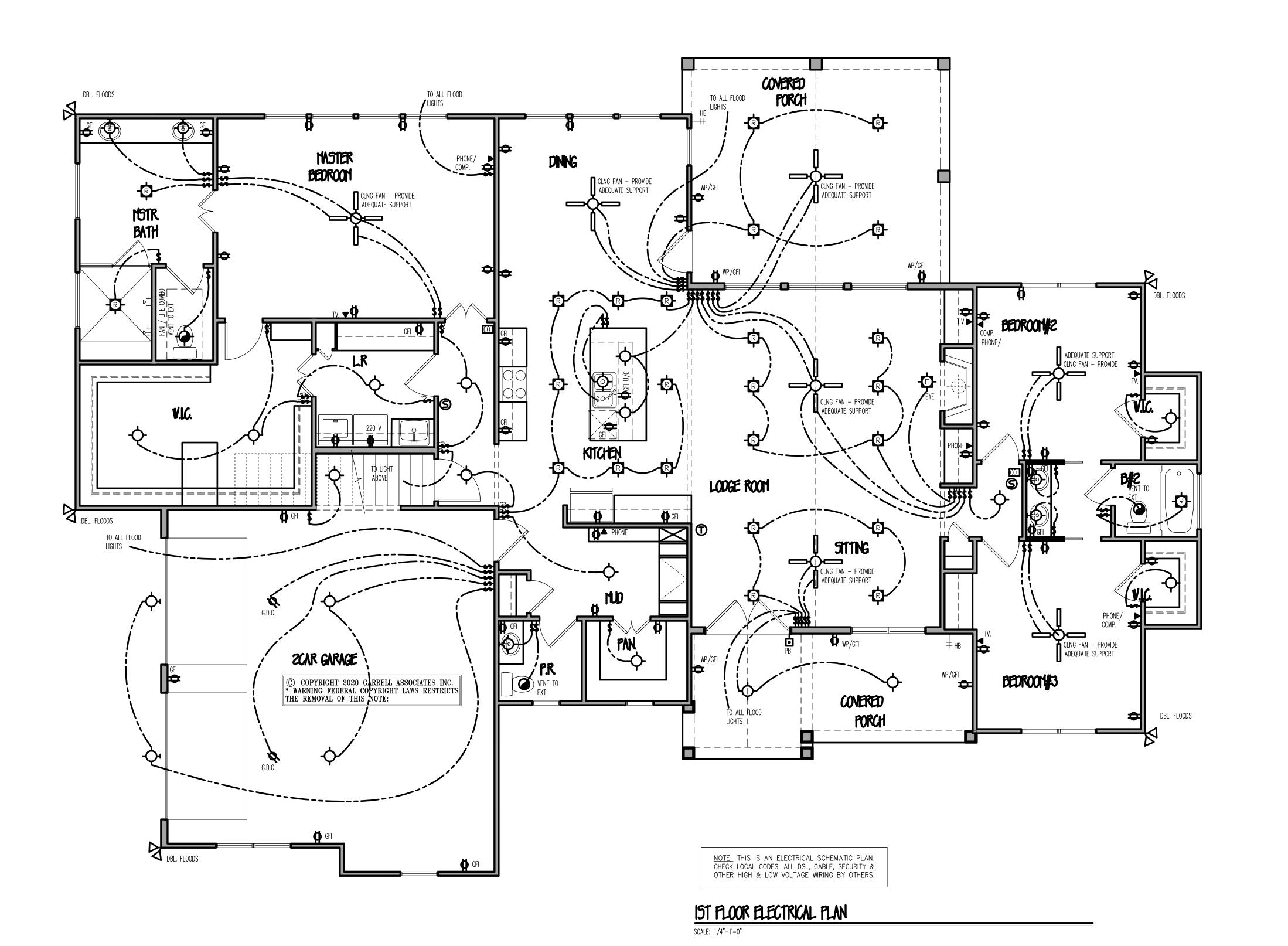




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FILE LOCATION:

n;/planbook/silverton falls a

20019

DRAWN BY: SHEET NO.

ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NCRC), 2018 EDITION AND 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.

3.	DESIGN LOADS (R301)		LIVE L	OAD I	DEAD LOAD	DEFLECTION
	, ,		(PSF)	(	(PSF)	(LL)
	ROOMS OTHER THAN SLEEPING	ROOMS	40	•	10	L/360
	SLEEPING ROOMS		30		10	L/360
	ATTIC WITH LIMITED STORAGE		20	•	10	L/240
	ATTIC WITHOUT STORAGE		10	•	10	L/360
	STAIRS		40	•	10	L/360
	EXTERIOR BALCONIES		40	•	10	L/360
	DECKS		40	•	10	L/360
	HANDRAILS	200 LB OR	50 PLF	•	10	L/360
	PASSENGER VEHICLE GARAGES		50	•	10	L/360
	GROUND SNOW LOAD		20			
	WILL LOAD DED SESTION D	7040 /1154		LICIOLIT	.25 CCCT	EVENOUIDE D

- WIND LOAD PER SECTION R301.2. (MEAN ROOF HEIGHT <35 FEET, EXPOSURE B)
- I-JOIST FLR. SYSTEMS DESIGNED WITH 12 PSF DL AND L/480 DEFLECTION.
- 4. THE STRUCTURE IS DESIGNED FOR 120 MPH ULTIMATE DESIGN WIND SPEEDS.
- 5. WALL CLADDING DESIGNED FOR +15.5 PSF AND -20 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP).
- 6. ROOF CLADDING DESIGNED FOR +14.2 PSF AND -18 PSF FOR ROOF PITCHES 7/12
- TO 12/12 AND +10 PSF AND -36 PSF FOR ROOF PITCHED 2.25/12 TO 7/12. '. THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS FOR A
- MEAN ROOF HEIGHT OF 35 FEET OR LESS IS 25 PSF.
- B. FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTACT ENGINEER IF ALLOWABLE BEARING CAPACITY CAN NOT BE ACHIEVED.
- 9. FOUNDATION ANCHORAGE TO COMPLY WITH SECTION R403.1.6 OF THE 2018 NCRC.
- 10. FOR ALL CONCRETE SLABS AND FOOTINGS, THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED. FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED TO 95% TO ASSURE UNIFORM SUPPORT OF THE SLAB, AND EXCEPT WHERE APPROVED, THE FILL DEPTHS SHALL NOT EXCEED 24" FOR CLEAN SAND OR GRAVEL. A 4" THICK BASED COURSE CONSISTING OF CLEAN GRADED SAND OR GRAVEL SHALL BE PLACED. A BASE COURSE IS NOT REQUIRED WHERE A CONCRETE SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1, ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE NCRC, 2018
- . CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NCRC, 2018 EDITION. CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI. CONCRETE REINFORCING STEEL SHALL BE ASTM A615 GRADE 60. WELDED WIRE FABRIC SHALL BE ASTM A185. MAINTAIN A MINIMUM CONCRETE COVER AROUND REINFORCING STEEL OF 3" IN FOOTINGS AND 1 1/2" IN SLABS.
- 12. MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL CONFORM TO ASTM C270.
- 13. THE UNSUPPORTED HEIGHT OF MASONRY PIERS SHALL NOT EXCEED FOUR TIMES THEIR LEAST DIMENSION FOR UNFILLED HOLLOW CONCRETE MASONRY UNITS AND TEN TIMES THEIR LEAST DIMENSION FOR SOLID OR SOLID FILLED PIERS. PIERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR S MORTAR. PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.
- 14. THE CENTER OF EACH PIER SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING, EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF EA. PIER.
- 15. ALL CONCRETE AND MASONRY FOUNDATION WALLS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE 2018 NCRC, OR IN ACCORDANCE WITH ACI 318, ACI 332, NCMA TR68-A OR ACE 530/ASCE 5/TMS 402. MASONRY FOUNDATION WALLS SHALL BE REINFORCED PER TABLE R404.1.1(1), R404.1.1(2), R404.1.1(3), OR R404.1.1(4) OF THE 2018 NCRC. CONCRETE FOUNDATION WALLS SHALL BE REINFORCED PER TABLE R404.1.1(5) OF THE NCRC, 2018 EDITION. STEP FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE
- 16. ALL FRAMING LUMBER SHALL BE SPF #2 AND ALL TREATED LUMBER SHALL BE SYP #2 (UNO).
- 17. LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MIN. PROPERTIES: Fb = 2600 PSI, Fv = 285 PSI, È = 1900000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.
- 18. ALL LOAD BEARING HEADERS SHALL CONFORM TO TABLES R602.7(1) AND R602.7(2) OF THE 2018 NCRC UNLESS NOTED OTHERWISE ON THE PLANS. ALL HEADERS SHALL BE SUPPORTED WITH (1) JACK STUD AND (1) KING STUD EACH END (UNO). SECURE THE FIRST KING STUD EACH SIDE OF THE HEADER TO THE HEADER WITH (4) 16d END-NAILS. INSTALL KING STUDS PER SECTION R602.7.5 OF THE 2018 NCRC (UNO).
- 19. ALL I-JOIST AND TRUSS LAYOUTS SHALL BE IN COMPLIANCE WITH THE OVERALL DESIGN SPECIFIED ON THE PLANS. IF ALTERNATE I-JOISTS ARE USED, THE JOISTS MUST HAVE EQUIVALENT STRUCTURAL PROPERTIES TO THOSE SPECIFIED ON THE PLANS. ALL DEVIATIONS TO I-JOIST OR TRUSS LAYOUTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.
- 20. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER II OF THE NCRC, 2018 EDITION.

CRAWL SPACE VENTILATION CALCULATION

2356 SQ. FT. OF CRAWL SPACE DIVIDED BY 150 EQUALS 15.7 SQ. FT. OF NET FREE AREA REQUIRED. SEE SECTION R408.1 OF THE 2018 NCRC (2015 IRC).

FREE VENT AREA MAY BE REDUCED TO 1/1500 IF AN APPROVED VAPOR BARRIER IS INSTALLED OVER 100% OF THE CRAWL FLOOR AND VENTS ARE INSTALLED TO PERMIT CROSS-VENTILATION OF CRAWL SPACE.

SEE SECTION R408.1.1 OF THE 2018 NCRC.

CRAWL SPACE STRUCTURAL NOTES

ALL FRAMING LUMBER TO BE #2 SPF (UNO). ALL TREATED LUMBER TO BE #2 SYP (UNO)

INSTALL AN EXTRA OR DOUBLE JOIST UNDER WALLS PARALLEL TO THE FLOOR JOISTS WHERE NOTED ON THE

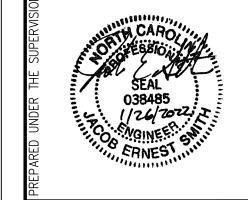
SHADED PIERS TO BE FILLED SOLID. INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER. (MIN (2) ANCHORS PER

PLATE SECTION.) ANCHOR BOLTS MUST EXTEND A MINIMUM

OF 7" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH. INSTALL JOINT REINFORCEMENT @ 16" O.C. TO SECURE

MULTIPLE WYTHE FOUNDATION WALLS TOGETHER. REFER TO NOTES ON SHEET S-4 AND DETAIL PAGES FOR

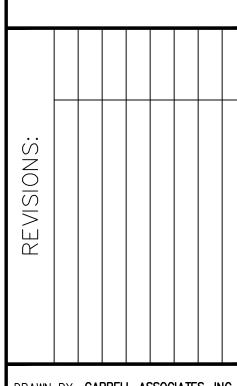
ADDITIONAL INFORMATION.







SILVERTO Y-VARINA, IANGLE HO



DRAWN BY: GARRELL ASSOCIATES, INC.

ENGINEERED BY: J. SMITH

SCALE: 1/4" = 1'-0"

DATE: **1-26-2022** 

<u>LEGEND</u>

ARCHITECTURAL DRAWINGS)

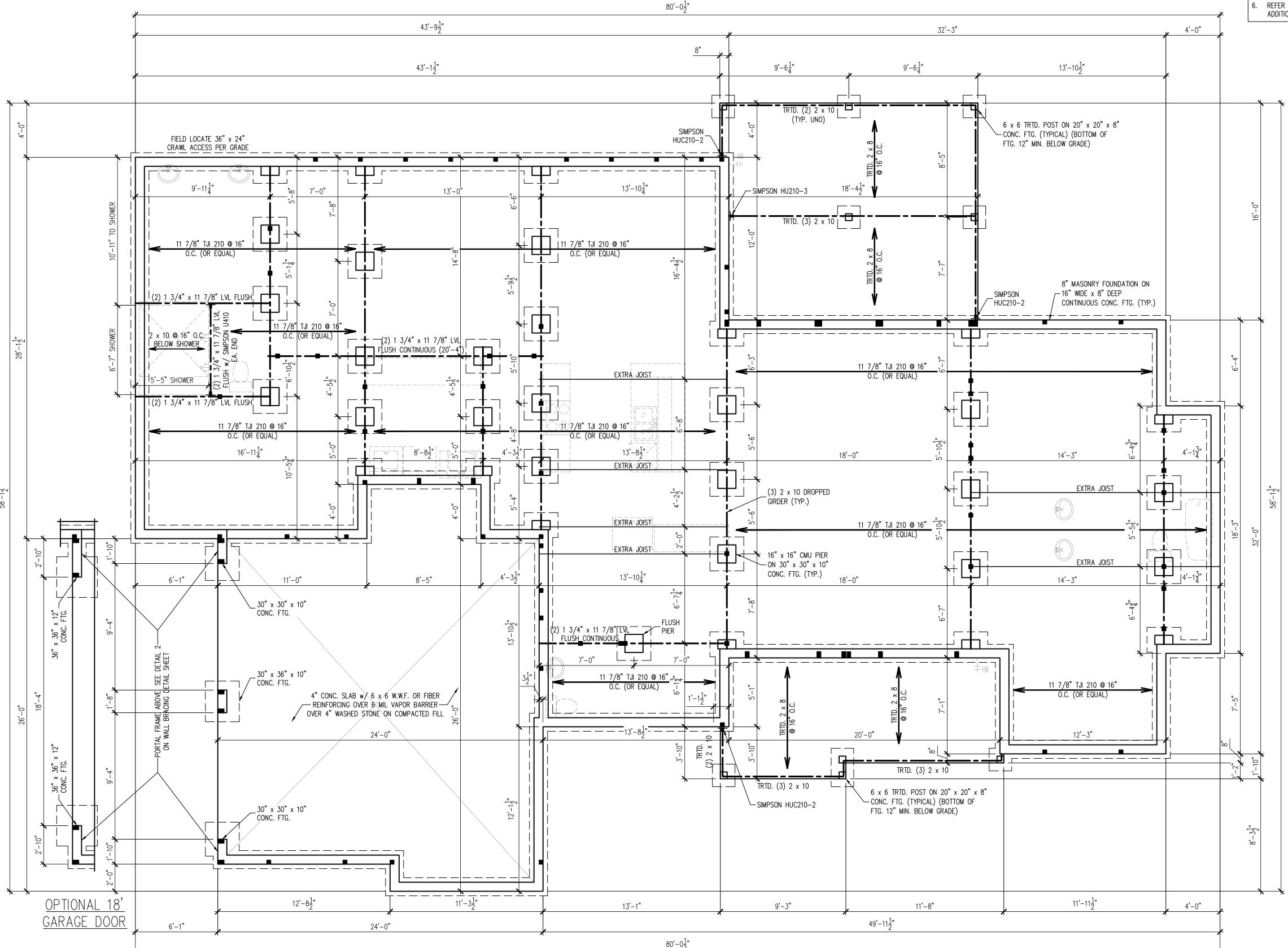
(UNO) UNLESS NOTED OTHERWISE

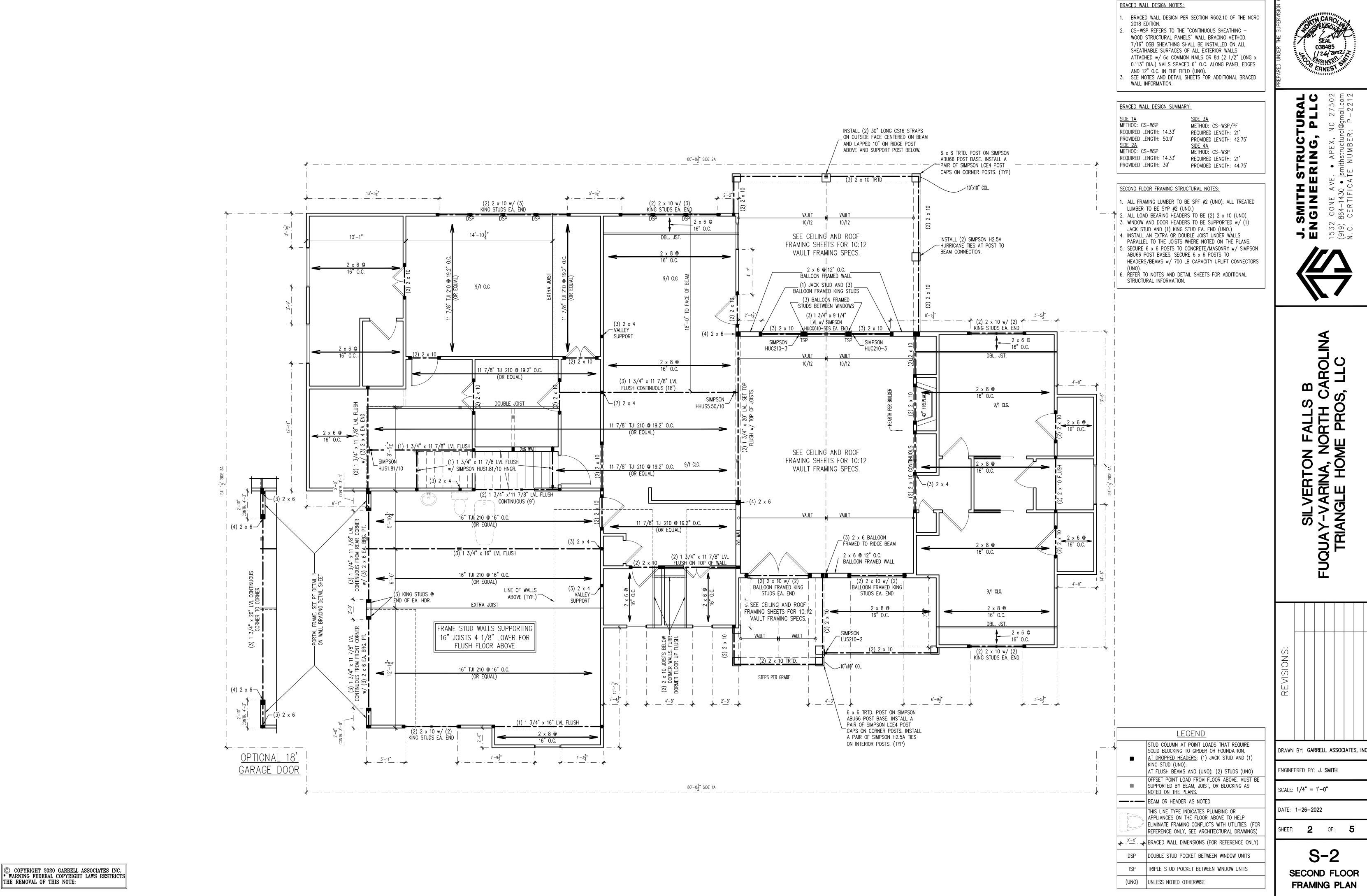
STUD COLUMN ON FLOOR ABOVE THAT REQUIRE

SOLID BLOCKING TO GIRDER OR FOUNDATION. PLUMBING OR APPLIANCES ON THE FLOOR ABOVE TO HELP ELIMINATE FRAMING CONFLICTS WITH UTILITIES. (FOR REFERENCE ONLY, SEE

SHEET: 1 OF: 5

CRAWL SPACE **FOUNDATION PLAN** 





## BRACED WALL DESIGN NOTES:

- BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION. PER SECTION R602.10.3.2 OF THE 2018 NCRC, THE AMOUNT OF BRACING ON THE SECOND FLOOR EXCEEDS THE AMOUNT REQUIRED FOR THE FIRST FLOOR AND NO
- BRACED WALL ANALYSIS IS REQUIRED. CS-WSP REFERS TO THE "CONTINUOUS SHEATHING -WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 7/16" OSB SHEATHING SHALL BE INSTALLED ON ALL SHEATHABLE SURFACES OF ALL EXTERIOR WALLS ATTACHED w/ 6d COMMON NAILS OR 8d (2 1/2" LONG x 0.113" DIA.) NAILS SPACED 6" O.C. ALONG PANEL EDGES
- AND 12" O.C. IN THE FIELD (UNO). SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

## CEILING FRAMING STRUCTURAL NOTES:

- . ALL FRAMING LUMBER TO BE SPF #2 (UNO). ALL TREATED LUMBER TO BE SYP #2 (UNO.) 2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 10 (UNO).
- 5. WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.) 4. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL
- STRUCTURAL INFORMATION.

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SILVERTON F FUQUAY-VARINA, NC TRIANGLE HOME

DRAWN BY: GARRELL ASSOCIATES, INC.

ENGINEERED BY: J. SMITH

SCALE: 1/4" = 1'-0"

DATE: **1-26-2022** 

STUD COLUMN AT POINT LOADS THAT REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. ■ AT DROPPED HEADERS: (1) JACK STUD AND (1)

AT FLUSH BEAMS AND (UNO): (2) STUDS (UNO)

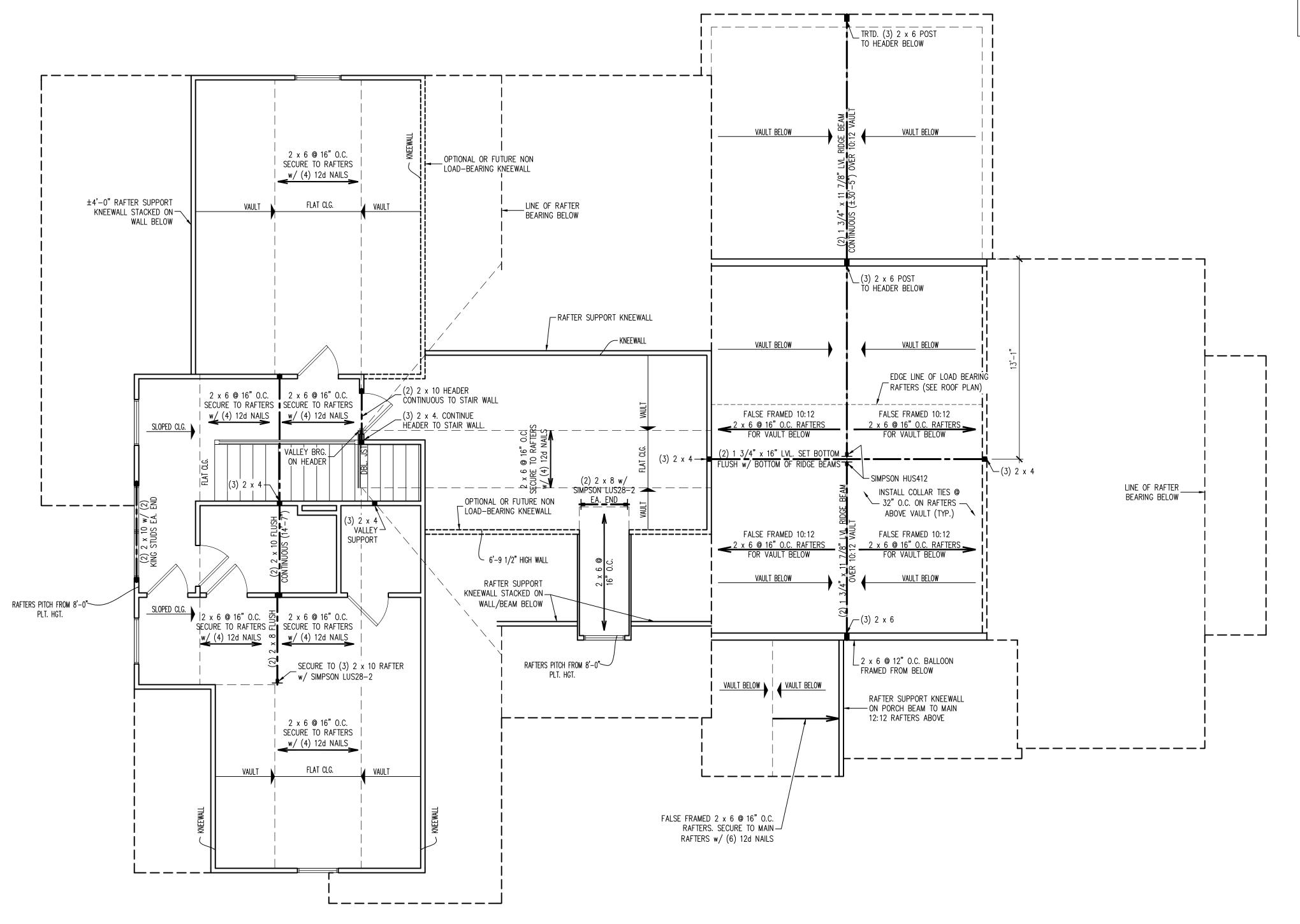
KING STUD (UNO).

BEAM OR HEADER AS NOTED

(UNO) UNLESS NOTED OTHERWISE

SHEET: **3** OF: **5** 

S-3 CEILING FRAMING **PLAN** 



REQUIRED ATTIC VENTILATION: 3448 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 22.98 SQ. FT. OF NET FREE

VENTILATING AREA (MIN.).

ROOF FRAMING STRUCTURAL NOTES:

 ALL FRAMING LUMBER TO BE #2 SPF (UNO).
SHEATH ROOF w/ 7/16" OSB SHEATHING SECURED w/ 8d NAILS @ 6" O.C. ALONG EDGES AND 12" O.C. IN THE FIELD. CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT. 4. STICK FRAME OVER-FRAMED ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 16" O.C. AND FLAT 2 x 10

VALLEYS OR USE VALLEY TRUSSES. 5. HIP SPLICES ARE TO BE SPACED 8'-0" O.C. MINIMUM. FASTEN MEMBERS WITH (3) ROWS OF 12d NAILS @ 16" O.C. 6. FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON H2.5A HURRICANE TIES @ 32" O.C. MAX. PASS HURRICANE TIES THROUGH NOTCH IN ROOF SHEATHING IF REQUIRED. SECURE RAFTERS TO FLAT VALLEYS WITH A MIN.

OF (6) 12d TOE NAILS. '. INSTALL (1) SIMPSON H2.5A HURRICANE TIE (OR EQUAL) @ EA. RAFTÈR BEARING.

8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.





DRAWN BY: GARRELL ASSOCIATES, INC.

ENGINEERED BY: J. SMITH

SCALE: 1/4" = 1'-0"

DATE: **1-26-2022** 

SHEET: 4 OF: 5

**S-4** ROOF FRAMING PLAN

