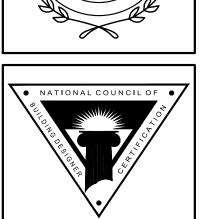


Viness Cates nmunities

© 2020 Caviness & Cates

639 Executive Place Suite 400 Fayetteville, NC 28305 Office: 910-481-0503 Sales: 910-240-4210 Fax: 910-481-0585

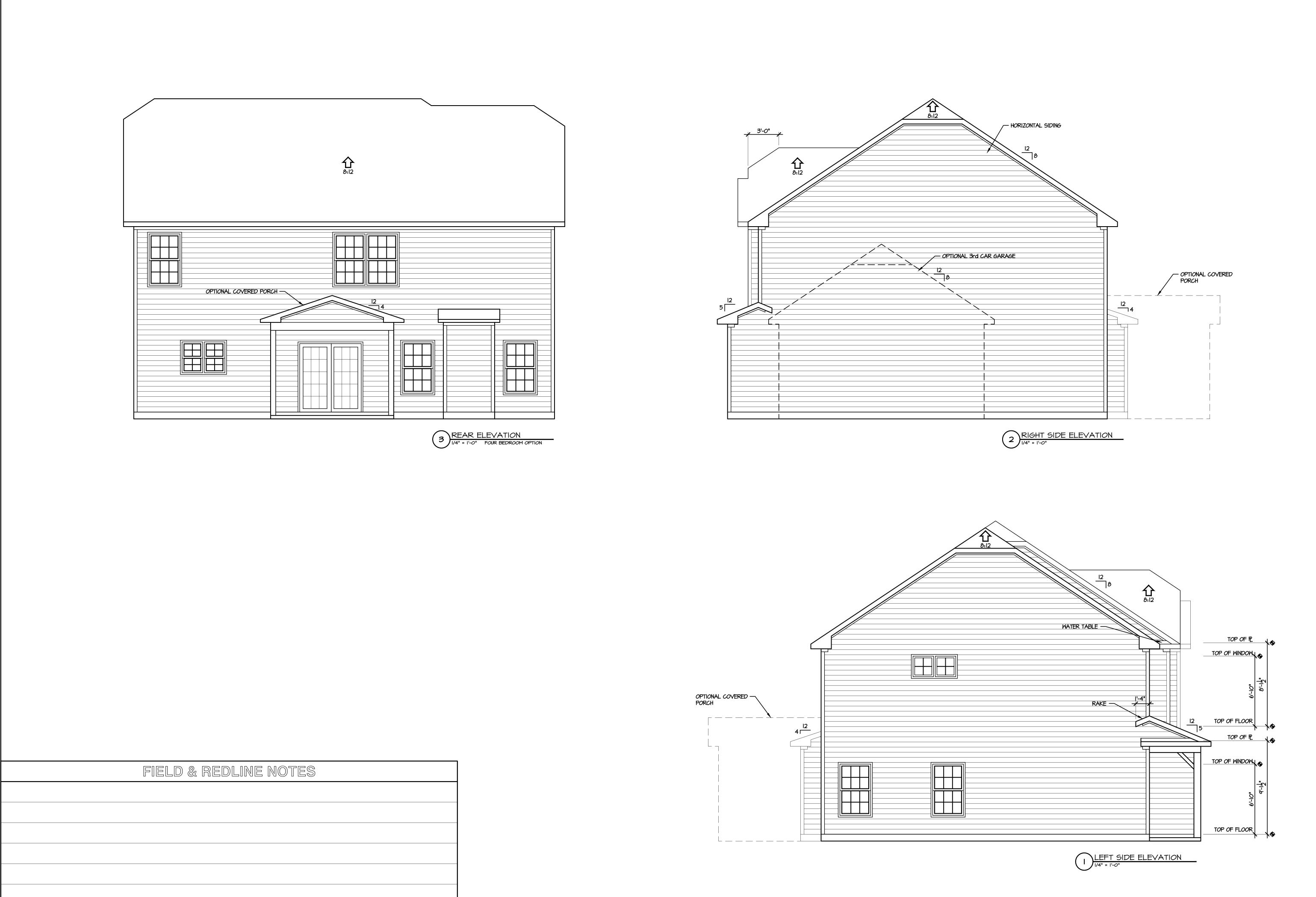


TODD TUCKER 34 - 156 FORTIFIED-WISE™ PROFESSIONAL 910-824-1474

PLAN NO: CC 2325

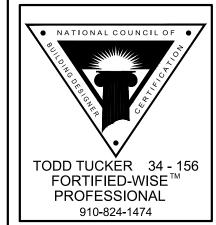
FEBRUARY 2020

REVISIONS:



© 2020 Caviness & Cates

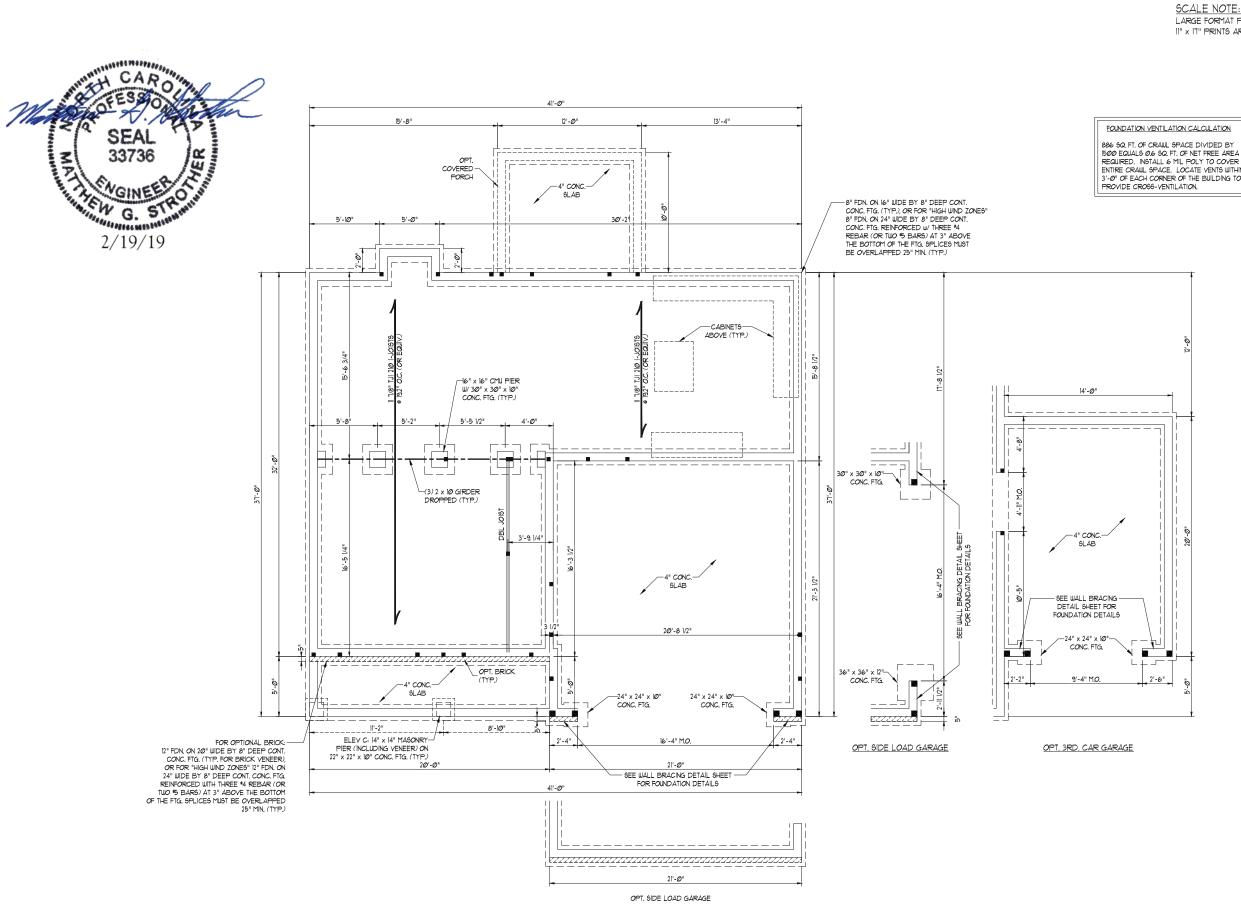
639 Executive Place Suite 400 Fayetteville, NC 28305 Office: 910-481-0503 Sales: 910-240-4210 Fax: 910-481-0585



CC 2325

DATE: FEBRUARY 2020

REVISIONS:



LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. 11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE

1500 EQUALS 0.6 SQ. FT. OF NET FREE AREA REQUIRED. INSTALL 6 MIL POLY TO COVER ENTIRE CRAWL SPACE. LOCATE VENTS WITHIN 3'-0" OF EACH CORNER OF THE BUILDING TO

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 FLOOR JOISTS WHERE NOTED ON THE PLANS.
- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION.
- SHADED PIERS TO BE FILLED 5. INSTALL LADDER WIRE @ 16" O.C.
- TO SECURE MULTIPLE WYTHE FOUNDATION WALLS TOGETHER REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

150 MPH ULTIMATE DESIGN WIND SPEED NOTES FOR LESS THAN 30' MEAN ROOF HEIGHT:

ENGINEER'S SEAL APPLIES ONLY TO

- STRUCTURAL COMPONENTS, ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT ACCURACY OR ARCHITECTURAL LAYOUT NICLUDING ROOF 9/91871
 STRUCTURAL DESIGN FER NORTH CAROLINA RESIDENTIAL CODE; 20/8
 EDITION WITH SPECIAL CONSIDERATION TO CHAPTER 45 ("HIGH WIND ZONES" FOR 150
 MPH WINDS).
 BUILDER 15 TO PROVIDE FRAMING.
 CONNECTIONS 43 PERGIMETED BY CHAPTER 50 CONNECTIONS 43 PERGIMETED BY CHAPTER.
- CONNECTIONS AS REQUIRED BY CHAPTER 45 ("HIGH WIND ZONES" FOR 150 MPH WINDS) OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- FOUNDATION ANCHORAGE TO COMPLY WITH SECTION 45/04 OF THE NORTH CAROLINA
- SECTION 4564 OF THE NORTH CARCUNA REGIDENTIAL CODE, 2018 FOURD NORTH REGIDENTIAL MEAN ROOF HEIGHT 16 LESS THAN 30 FEET. WALL CLADDING DESIGNED FOR 443 PSF AND -32 PSF (*) NDICATE POSITIVE / NEGATIVE PRESSURE (TYP). ROOF CLADDING DESIGNED FOR 122 PSF AND -32 PSF FOR ROOF PITCHES 710 TO 210 AND 144 PSF AND -51 PSF FOR ROOF PITCHEFT 375 TO 170
- PITCHED 2,25/12 TO T/12, T/16" OSB SHEATHING IS REQUIRED ON ALL EXTERIOR WALLS.
- EXTERIOR WALLS,

 WALLS TO BE BRACED IN ACCORDANCE
 WITH SECTION Re6210 OF THE NORTH
 CAROLINA RESIDENTIAL CODE, 2018
 EDITION AND AS NOTED ON PLANS,
 ENERGY EFFICIENCY COMPLIANCE AND
 INSULATION VALUES OF THE BUILDING TO
 BE IN ACCORDANCE WITH CHAPTER II OF
 THE NORC, 2018 EDITION.

120 MPH ULTIMATE DESIGN WIND SPEED NOTES FOR LESS THAN

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS, ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL
 ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
- INCLUDING MOCH 515 IET.

 STRICTURAL DESIGN FER NORTH CAROLINA
 RESIDENTIAL CODE, 20% EDITION

 NSTALL 1/2" ANCHOR BOLTS 61-0" OC. AND

 WITHIN 1-0" FROM IND OF EACH CORNER

 ANCHOR BOLTS MIST EXTEND A NIMITAL OF

 "INTO MACRIEN DE CONCETTE 1 OCH TOP

 "INTO MACRIEN DE CONCETTE 1 OCH TOP

 "INTO MACRIEN DE CONCETTE 1 OCH TOP

 "INTO MACRIEN DE CONCETTE 1 OCH TOP
- T" NTO MASONRY OR CONCRETE, LOCATE
 BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH
 MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
 EXTERIOR WALLS DESIGNED FOR 120 MPH
- INDDS.

 INDDS.
- NOTALL 1/8" OURS SHARMED ON ALL EXTERIOR WILLS OF ALL STORIES IN ACCORDANCE WITH SECTION REQUIPED OF THE NICKE, 2009 EDITION, SEE THE WALL BRACKING NOTES AND DETAILS SHEET FOR MORE INFORMATION.

 ENERGY EFFICIENCY COMPLIANCE AND INSLATION AULIES OF THE SUIL DING TO BE IN ACCORDANCE WITH CHAPTER II OF THE WEST AND SHOULD NOT THE STORY OF THE NICKE AND THE SECTION OF THE NICKE AND THE NICKE AND THE SECTION OF THE NICKE AND THE SECTION OF THE NICKE AND THE N
- NCRC, 2018 EDITION.

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

ഗ

THOMPS

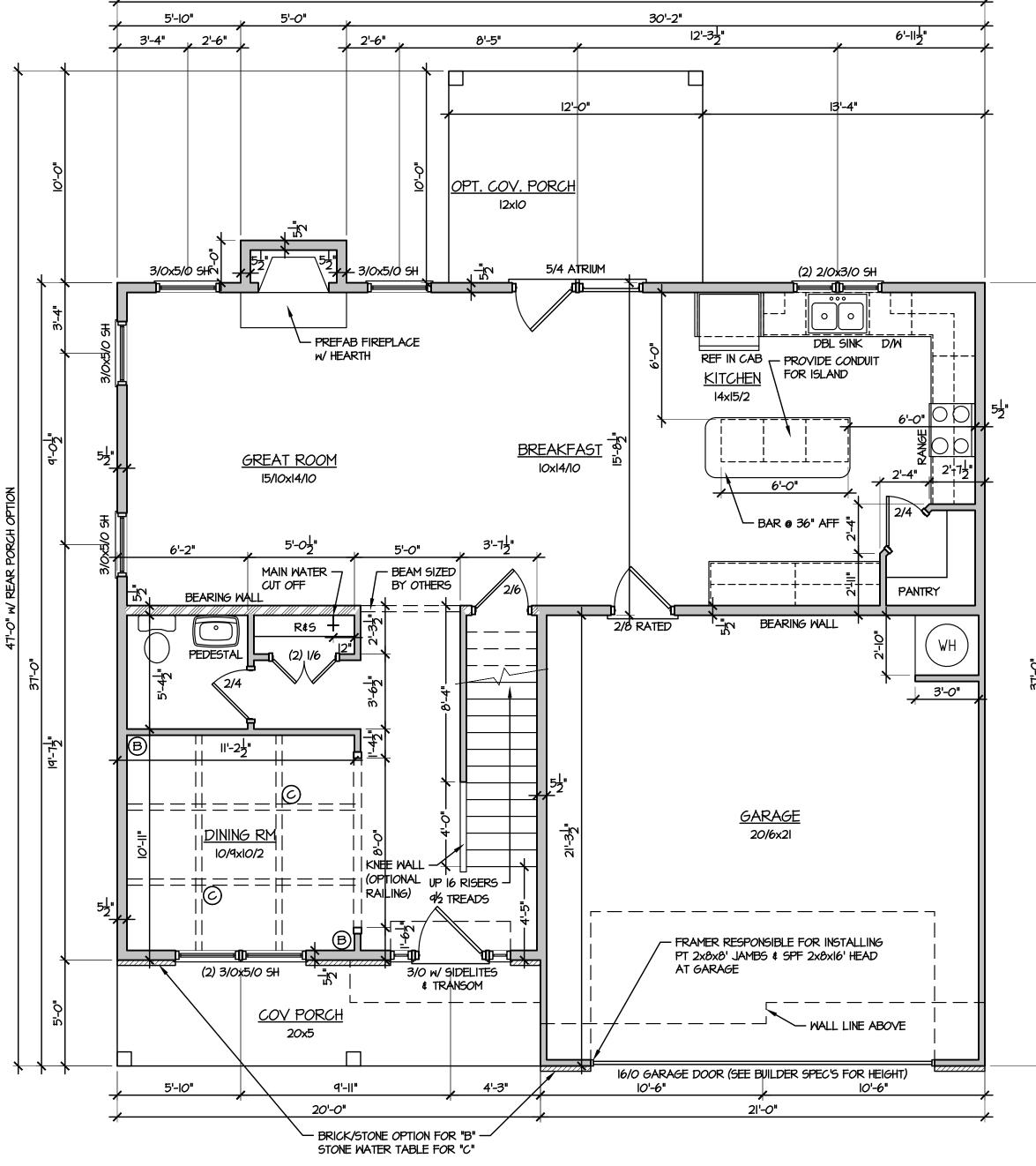
CC2325 CAVINESS AND

DATE: FEBRUARY 19, 2019

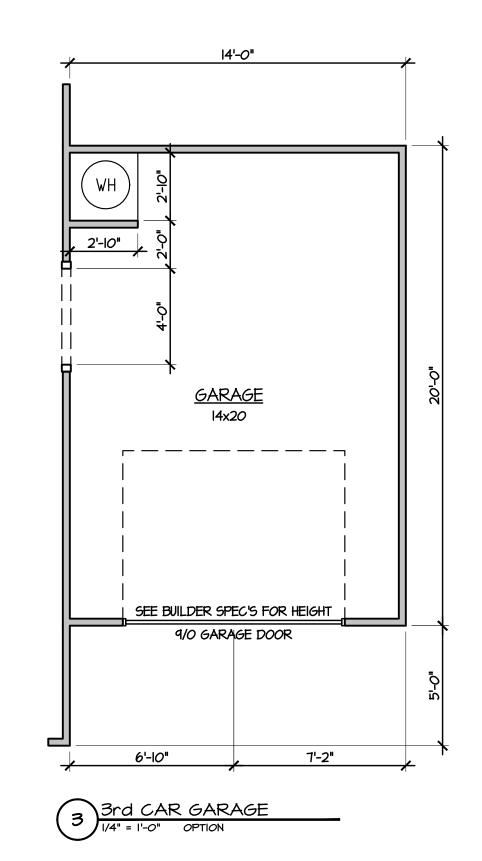
INEERED BY: WFB

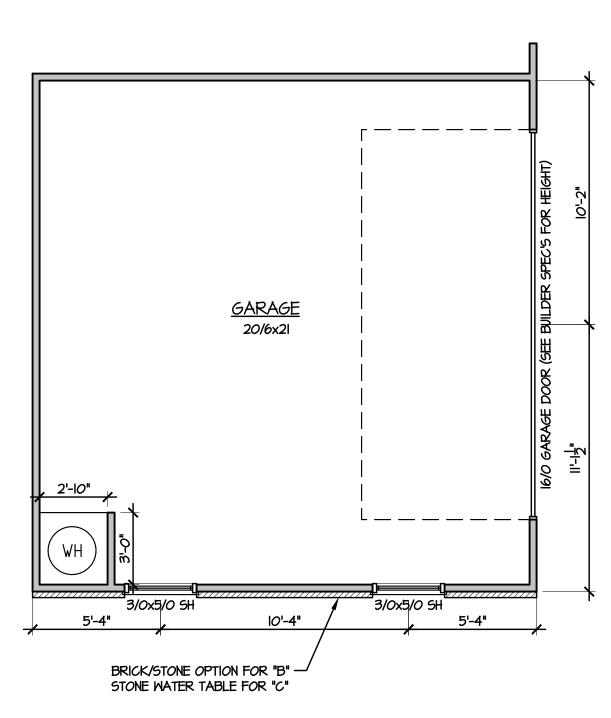
of: 6 S-1a

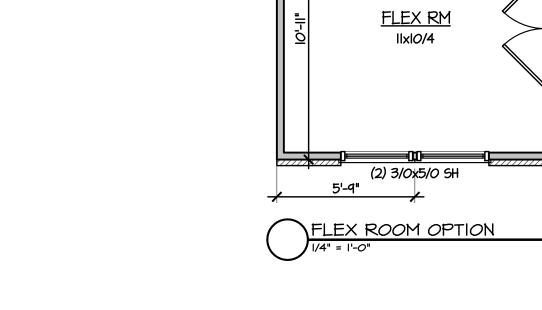
CRAWL FOUNDATION PLAN



FIRST FLOOR PLAN







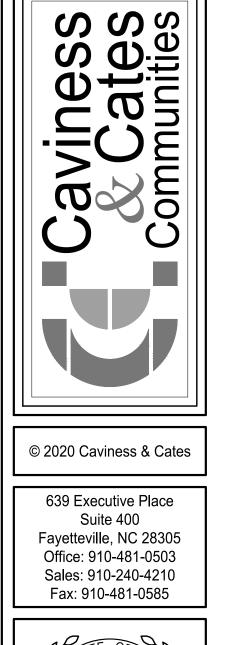
11'-2<mark>| "</mark>

GENERAL NOTE: ALL 2x4 WALLS DRAWN AS 3 1/2" ALL 2x6 WALLS DRAWN AS 5 1/2"

INTERIOR BEARING WALL

ALL EXTERIOR DIMENSIONS INCLUDE WALL SHEATHING

ALL WALLS ARE 2x4 WALLS UNLESS OTHERWISE NOTED



PLAN NO: CC 2325

FEBRUARY 2020

REVISIONS:

BRACED WALL DESIGN NOTES: BRACED IIIALL DESIGN PER SECTION R600 IO OF THE NCRC 2018 EDITION. C5-USP REFERS TO "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" CONTRACTOR IS TO INSTALL 1/16" OSB ON ALL EXTERIOR WALLS ATTACHED W/8d NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD. *GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 7" OC ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES. BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 130 MPH FOR HIGH WIND ZONES, BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE NCRC 2018 EDITION. FOR OPTIONAL PORCH: OPT. COVERED PORCH 4 x 4 TRTD. POST MIN. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION. EW G. BY OTHERS WEIGHT MENT BRACED WALL DESIGN 2/19/19 41'-Ø" SIDE 2A RECTANGLE A RECTANGLE B SIDE IA (FRONT LOAD) 5'-0" 4'-8 1/2" METHOD: CS-WSP/PF METHOD: PF/CS-WSP TOTAL REQUIRED LENGTH: 12' TOTAL REQUIRED LENGTH: 4.56 TOTAL PROVIDED LENGTH: 14.251 TOTAL PROVIDED LENGTH: 15 METHOD: CS-WSP (2) | 3/4" x 9 |/4" LVL METHOD: CS-WSP (2)2 х 1Ø ш/(TOTAL REQUIRED LENGTH: 12' TOTAL REQUIRED LENGTH: 456' TOTAL PROVIDED LENGTH: 20:83' TOTAL PROVIDED LENGTH: 14' -(3) 2 x 4 OR (3) SIDE 3A METHOD: CS-WSP SIDE 3B / 4A METHOD: CS-WSP 2 x 6 w/ OPT WINDOW ABOVE TOTAL REQUIRED LENGTH: 13.11 TOTAL REQUIRED LENGTH: 16.6 TOTAL PROVIDED LENGTH: 242' TOTAL PROVIDED LENGTH: 22.1 SIDE 4A METHOD: CS-WSP/PF SIDE 4B METHOD: CS-WSP TOTAL REQUIRED | ENGTH: 131' TOTAL REQUIRED LENGTH: 35' TOTAL PROVIDED LENGTH: 22.6' TOTAL PROVIDED LENGTH: 20' 14'-0" SIDE 2B LVL FLUSH -(3)2 x 6 (1) 1 3/4" x 14 NO STRUCTURAL CHANGES SIMPSON U414 HGR GARAGE PORTAL FRAME. 14" T.JI 210 I-JOISTS 6 SEE METHOD PF WALL 24" O.C. (OR EQUIV.) (2) 2 x 10 w/ (2) (2) 1 3/4" x 9 1/4 L v L w/ (2) JACK9 EA END (3) 2 x 12 CONT. FROM JACKS EA. END -(5)2 x 4 OR CORNER TO CORNER W/ (2 2 x 6 EA. BEARING POINT -(5)2 x 4 OPT, FLEX ROOM WALL ABOVE 3'-6" 4'-0" 14'-0" SIDE IB RECTANGLE B (2) 2 x 10 ((3) | 3/4" x | 1 1/8" LVL CONT, FROM CORNER (2) 1 3/4" x 9 1/4"/LVL TO CORNER W/ (3) 2 x 6 @ EA. BEARING POINT ROOF TRUSSES TO BE--4 x 4 TRTD. OR FOR BRICK: (3) 1 3/4" x 14" LVL OPT. SIDE LOAD GARAGE OPT. 3RD CAR GARAGE DESIGNED FOR SECOND POST MIN. (TYP.) GARAGE PORTAL FRAME, SEE METHOD PF WALL BRACING DETAIL 2'-6" CONTR CONTR 3'-9" 41'-Ø" SIDE IA TABLE R602.15 MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS MAXIMUM STUD SPACING (INCHES) HEADER SPAN (PER TABLE R6023(5) OPT. SIDE LOAD GARAGE

SCALE NOTE:

LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. 11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE

*NOTE: ALL EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 4 @ 16" O.C. MIN. (UNO). 2 x 6 @ 24" O.C. EXTERIOR WALLS MAY BE CONSTRUCTED IN LIEU OF 2 x 4 WALLS. ALL INTERIOR LOAD BEARING WALLS ARE TO BE 2 x 4 @ 16" O.C. (UNO) AND NON-LOAD BEARING INTERIOR WALLS ARE TO BE 2 x 4 @ 24" O.C. (UNO).

> LINTEL SCHEDULE FOR BRICK/NATURAL STONE SUPPORT LENGTH (FT.) SIZE OF LINTEL UP TO 4 FT L 3 1/2 x 3 1/2 x 1/4 4-8 L 5 x 3 1/2 x 5/16 LLV 8 AND GREATER L 6 x 4 x 5/16 LLY

BRICK SUPPORT NOTES:

STAGGERED.

- LINTEL SCHEDULE APPLIES TO ALL ARCH DWGS. FOR SIZE AND LOCATION OF OPENINGS. (LLY) = LONG LEG VERTICAL
- LENGTH = CLEAR OPENING EMBED ALL ANGLE IRONS MIN. 4" EACH SIDE INTO YENEER TO PROVIDE BEARING.
- FOR ALL HEADERS 8'-0" AND GREATER IN LENGTH, ATTACH STEEL ANGLE TO HEADER W/ 1/2" LAG SCREWS @ 12" O.C.
- FOR ALL BRICK SUPPORT @ ROOF LINES, FASTEN (2) 2 x 10 BLOCKING BETWEEN STUDS w/ (4) 12d NAILS PER PLY, FASTEN A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10 BLOCKING w/ (2) 1/2" LAG SCREWS @ 12" O.C. STAGGERED. SEE SECTION RT03.82.1 OF THE 2018 NCRC FOR ADDITIONAL
- BRICK SUPPORT INFORMATION. PRECAST REINFORCED CONCRETE LINTELS ENGINEERED BY OTHERS MAY BE USED IN LIEU OF STEEL LINTELS.

STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE SPF *2 (UNO). ALL TREATED LUMBER TO BE SYP \$2 (UNO)
- x IØ SPF *2 OR SYP *2 (KILN DRIED) (UNO). HEADERS HAVE BEEN DESIGNED BASED ON CALCULATED LOADS. CODE TABLES HAVE NOT BEEN USED.
- WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.). SEE TABLE R602.7.5 FOR ADDITIONAL KING STUD REQUIREMENTS.
- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. ALL SQUARES TO BE (2) STUDS (UNO.)
- SPECIFIED SIMPSON STRONG-TIE PRODUCTS MAY BE SUBSTITUTED WITH THOSE MANUFACTURED BY USP STRUCTURAL CONNECTORS PROVIDED
 THAT THE LOAD CAPACITY AND FUNCTION
- IS EQUIVALENT. ALL 4 x 4 POSTS SHALL BE ANCHORED TO SLABS W/ SIMPSON ABU44 POST BASES (OR EQUAL) AND 6 x 6 POSTS W/ ABU66 POST BASES (OR EQUAL) (UNO), ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 100 LB CAPACITY UPLIFT CONNECTORS AT
- FOR FIBERGLASS, ALUMINUM, OR COLUMN ENG. BY OTHERS, SECURE TO SLAB w/ (2) METAL ANGLES USING 2" CONC. SCREWS. FASTEN ANGLES TO COLUMNS w/ 1/4" THROUGH BOLTS W/ NUTS AND WASHERS. LOCATE ANGLES ON OPPOSITE SIDES OF COLUMN. THROUGH BOLTS MUST BE INSTALLED PRIOR TO SETTING COLUMN.
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

0 ഗ **a 9** OM NINI S

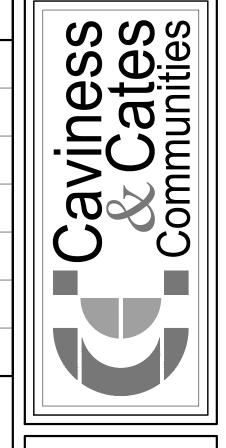
32325 AND

ATE: FEBRUARY 19, 2019

INEERED BY: WFB

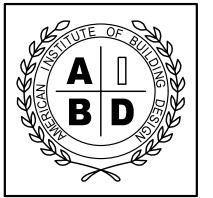
S-2

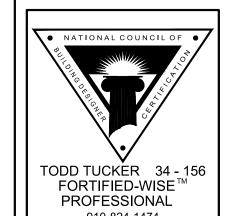
SECOND FLOOR FRAMING PLAN



© 2020 Caviness & Cates

639 Executive Place Suite 400 Fayetteville, NC 28305 Office: 910-481-0503 Sales: 910-240-4210 Fax: 910-481-0585





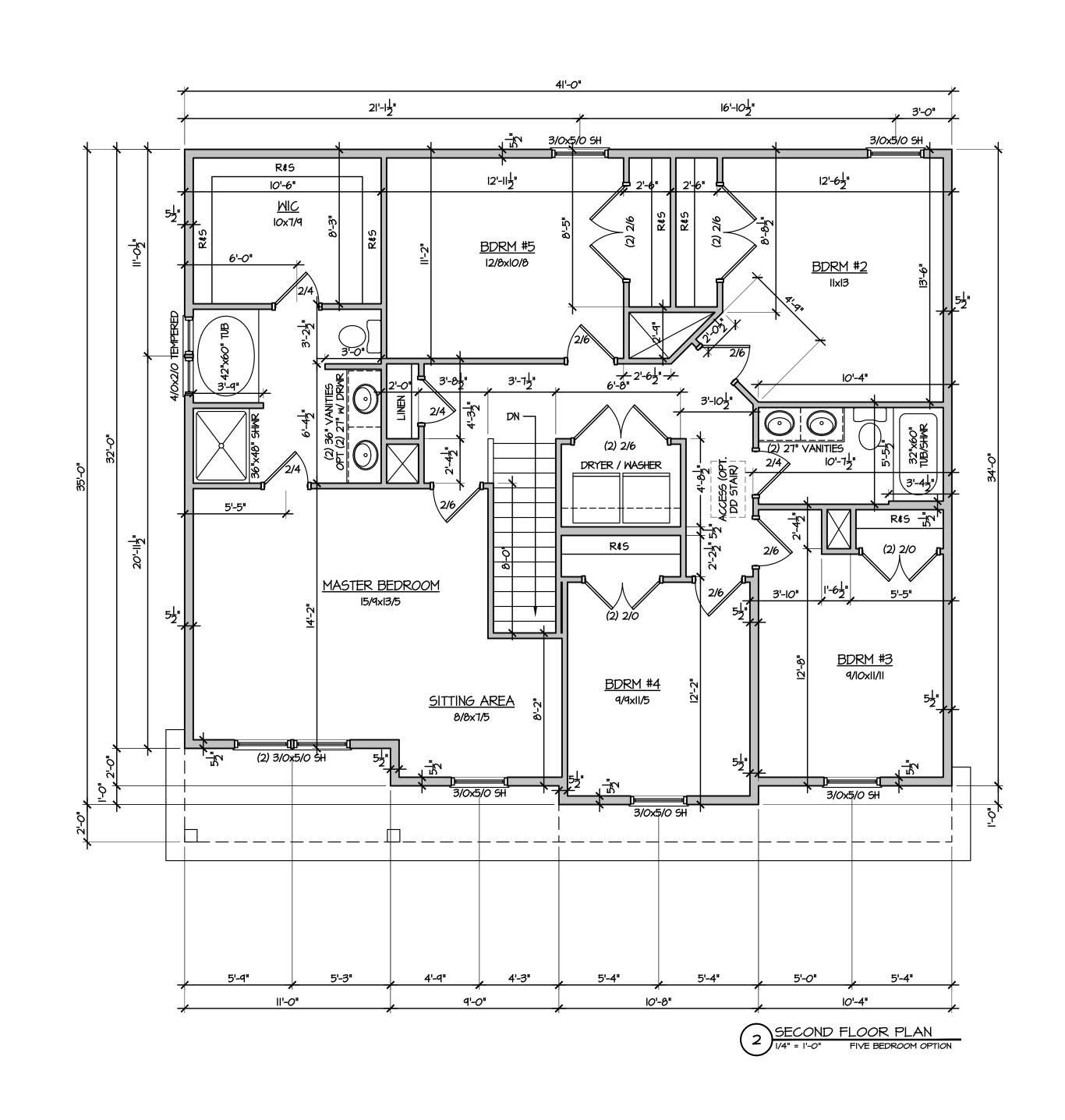
TODD TUCKER 34 - 156 FORTIFIED-WISE™ PROFESSIONAL 910-824-1474

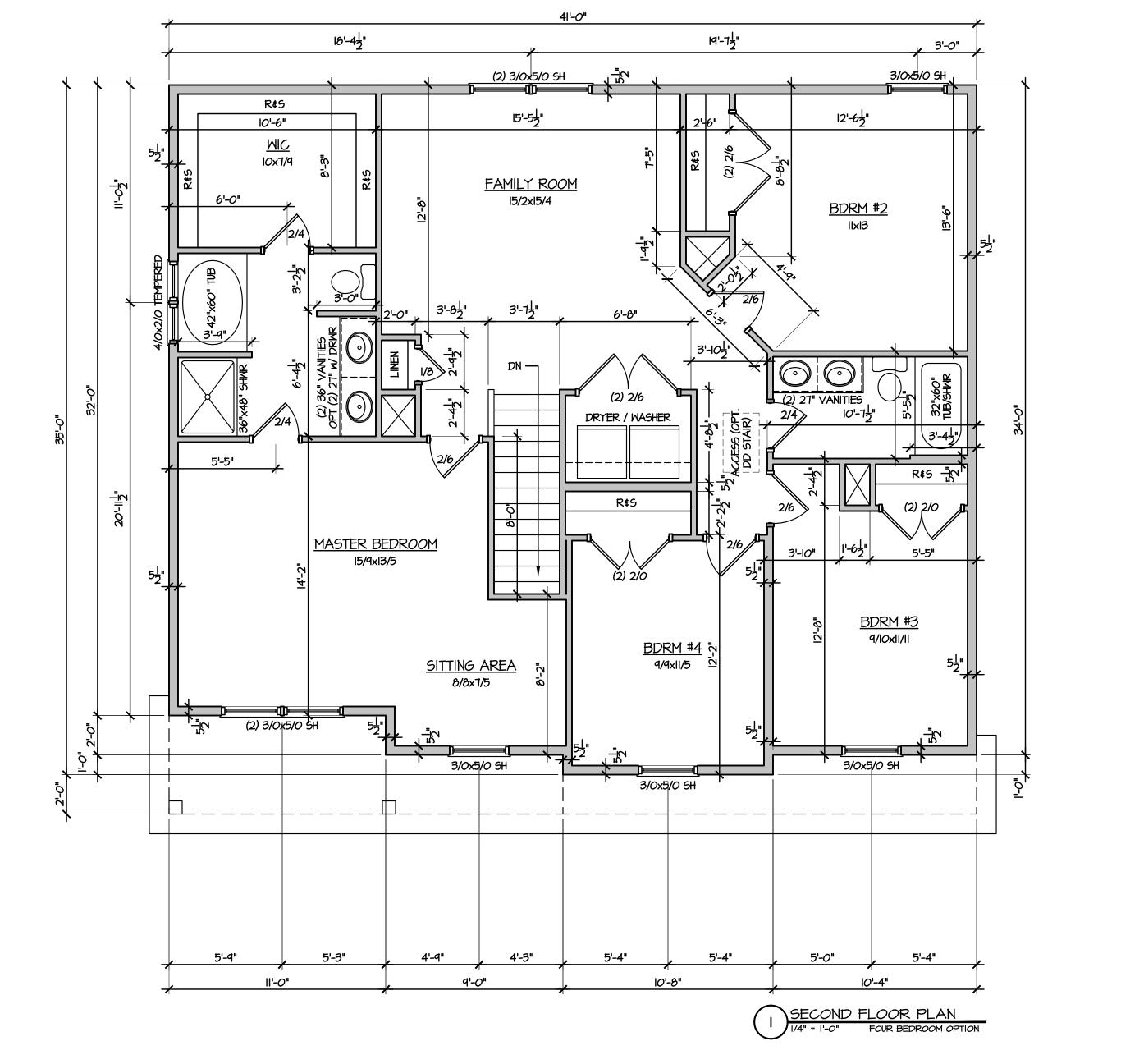
CC 2325

FEBRUARY 2020

SHEET NO:





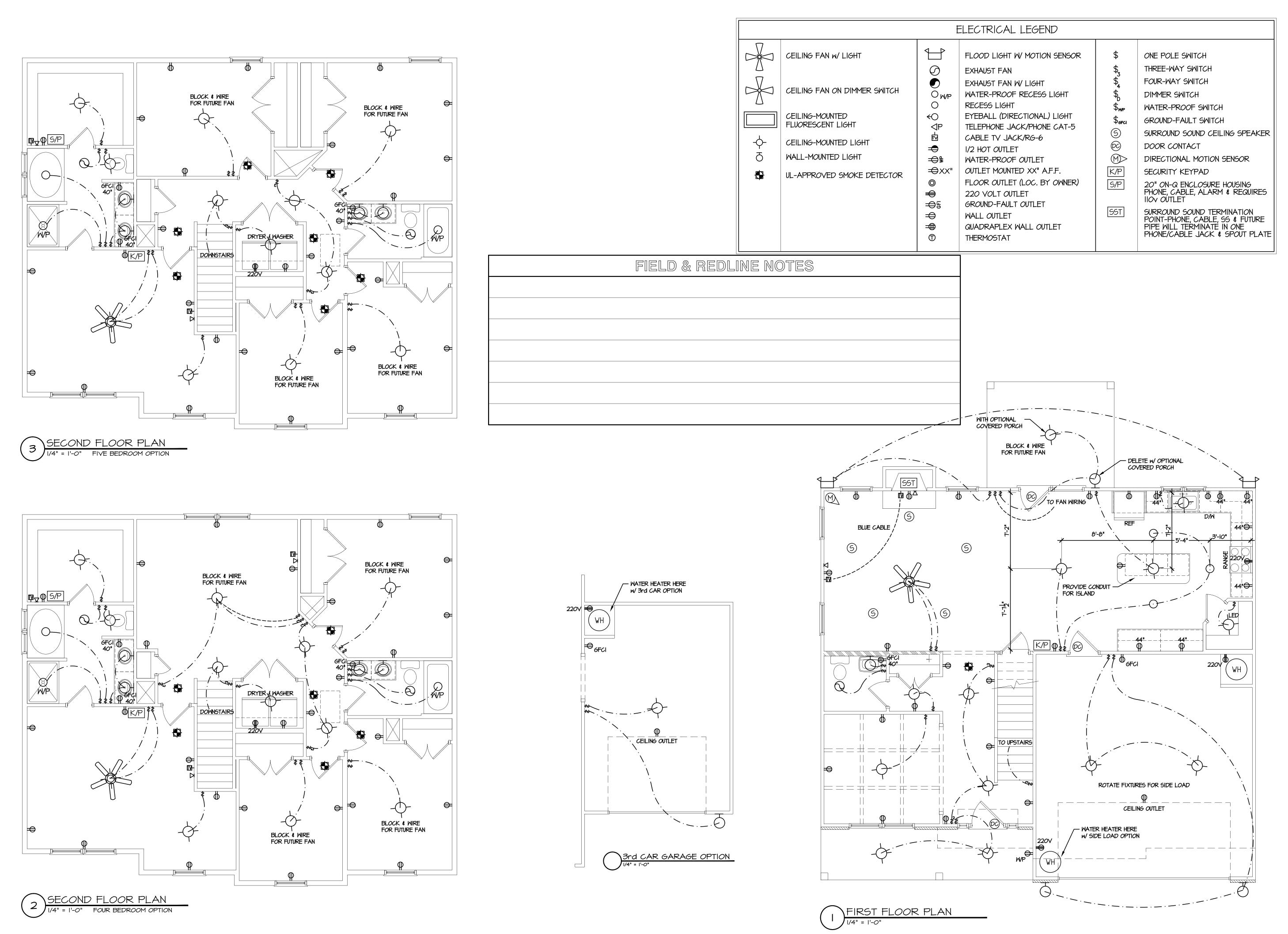


<u>GENERAL NOTE:</u> ALL 2x4 WALLS DRAWN AS 3 1/2" ALL 2x6 WALLS DRAWN AS 5 1/2"

INTERIOR BEARING WALL

ALL EXTERIOR DIMENSIONS INCLUDE WALL SHEATHING

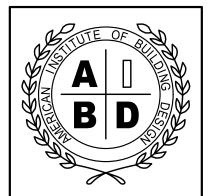
ALL WALLS ARE 2x4 WALLS UNLESS OTHERWISE NOTED

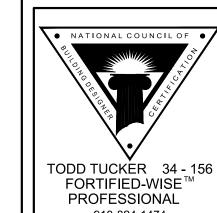


iness Cates munities

© 2020 Caviness & Cates

639 Executive Place Suite 400 Fayetteville, NC 28305 Office: 910-481-0503 Sales: 910-240-4210 Fax: 910-481-0585

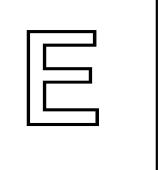


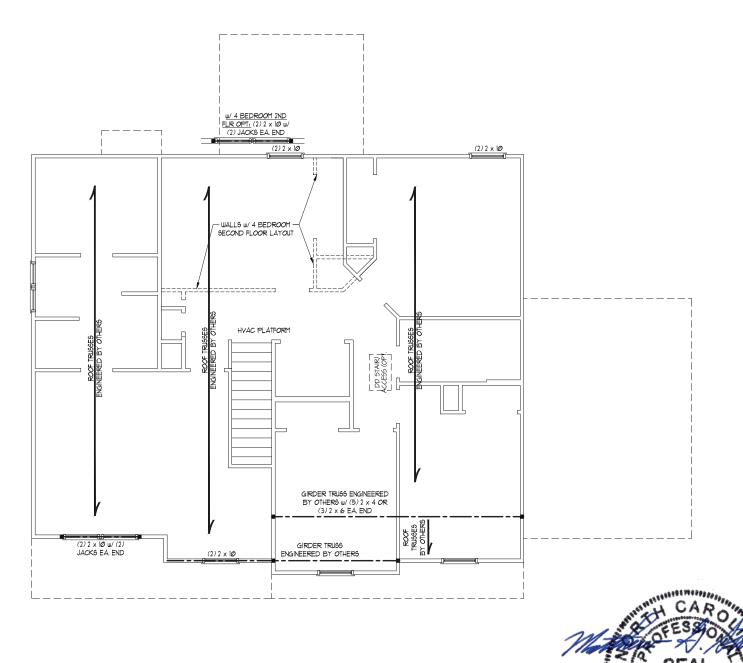


910-824-1474

PLAN NO: CC 2325

FEBRUARY 2020 REVISIONS:





SCALE NOTE:

LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. 11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE

TABLE R602.1.5 MINIMUM NUMBER OF FULL HEIGHT STUDS
AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER SPAN (FEET)	MAXIMUM STUD SPACING (INCHES) (PER TABLE R602.3(5)			
	16	24		
UP TO 3'	1	1		
4'	2	1		
8'	3	2		
12'	5	3		
16'	6	4		

STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE #2 SPF
- (UNO).
 ALL LOAD BEARING HEADERS TO BE
 (2) 2 x 6 (UNO).
 WINDOW AND DOOR HEADERS TO BE
- SUPPORTED W/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.). SEE TABLE R602.7.5 FOR ADDITIONAL KING STUD REQUIREMENTS.

 SQUARES DENOTE POINT LOADS
- WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SQUARES
- GINDER OR POWNDATION. SQUARES
 TO BE (2) STUDS (UNO.)

 SPECIFIED SIMPSON STRONG-TIE
 PRODUCTS MAY BE SUBSTITUTED WITH
 THOSE MANUFACTURED BY USP STRUCTURAL CONNECTORS PROVIDED THAT THE LOAD CAPACITY AND FUNCTION IS FOUNDALENT
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL

*NOTE: ALL EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 4 @ 16" O.C. MIN. (UNO), 2 x 6 @ 24" O.C. EXTERIOR WALLS MAY BE CONSTRUCTED IN LIEU OF 2 x 4 WALLS (UNO). ALL INTERIOR LOAD BEARING WALLS ARE TO BE 2 x 4 @ 16" O.C. (UNO) AND NON-LOAD BEARING INTERIOR WALLS ARE TO BE 2 x 4 @ 24" O.C. (UNO).

BRACED WALL DESIGN NOTES:

- BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
 C5-WSP REFERS TO "CONTINUOUS SHEATHING - WOOD
- STRUCTURAL PANELS" CONTRACTOR IS TO INSTALL TI/6" OSB ON ALL EXTERIOR WALLS ATTACHED W/ 8d NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.
- O.C. ALONS PANEL ELOGES AND 12" O.C. IN THE FIELD.

 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS.
 FASTEN GB WITH I I/4" SCREWS OR I 5/8" NAILS SPACED 1" O.C.
 ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND
 BOTTOM PLATES.
- BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 130 MPH. FOR HIGH WIND ZONES, BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE NCRC 2018 EDITION. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

NOTE:

- 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.
- SHEATH ALL EXTERIOR WALLS WITH T/16" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

SINEERING, INC.

CC2325 CAVINESS AND

DATE: FEBRUARY 19, 2019

SINEERED BY: WFB

SHEET: 5 OF: 6

S-3 CEILING FRAMING PLAN

SCALE NOTE:

LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. 11" x 17" PRINTS ARE ONE HALF THE NOTED SCALE

ATTIC VENT CALCULATION:

1517 SQ, FT, OF ATTIC DIVIDED BY 150 REQUIRES 10 SQ, FT, OF NET FREE VENTILATING AREA (MIN.).

STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE *2*
 SFF (UNO).
 2. CIRCLES DENOTE (3) 2 x 4 POSTS
 FOR ROOF SUPPORT.
 3. FRAME DORMER WALLS ON TOP
 OF DOUBLE OR TRIPLE RAFTERS.
 4. HIP SPLICES ARE TO BE SPACED
 A MIN. OF 8'-0". FASTEN
 MEMBERS WITH THREE ROUS OF
 12d NALLS & 16" OC. (TYP)
 5. STICK FRAME OVER-FRAMED
 ROOF SECTIONS WI 2 x 8 RIDGES,
 2 x 6 RAFTERS * 16" OC. CAND
- ROOF SECTIONS W 2 x 8 RIDGES, 2 x 6 RAFTERS ® 16" O.C. AND FLAT 2 x 10" VALLEYS OR USE VALLEY TRUSSES. 6. FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON H25A HURRICANE TIES ® 32" O.C. MAX. PAGS HURRICANE TIES TIEDGEL MODIFIED
- 30" OC. MAX. PASS HURRICANE TIES THROUGH NOTCH IN ROOF SHEATHING. EACH RAFTER IS TO BE FASTENED TO THE FLAT YALLEY WITH A MIN. OF (6) 12d TOE NAILS. I. RETER TO SECTION REQUIL OF THE
- 2018 NCRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND
- TRUSSES.
 REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

J.S.THOMPSON
ENGINEERING, INC

GOWNER, SUITE IGH, NC. 27665
PHONE, (919) 784-2017

CC2325 CAVINESS AND CATES

DATE: FEBRUARY 19, 2019

GINEERED BY: WFB

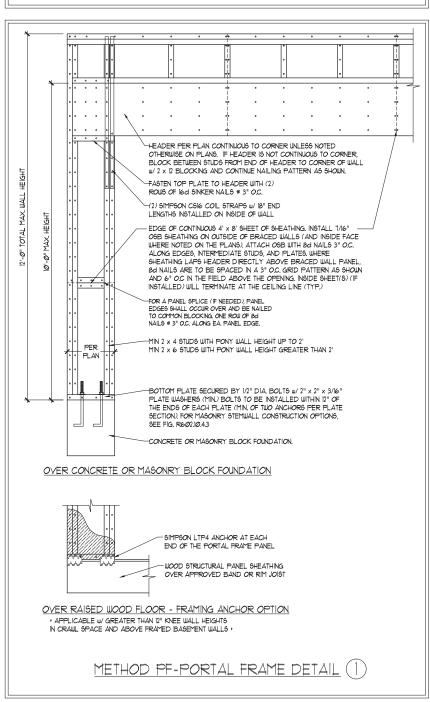
of: 6

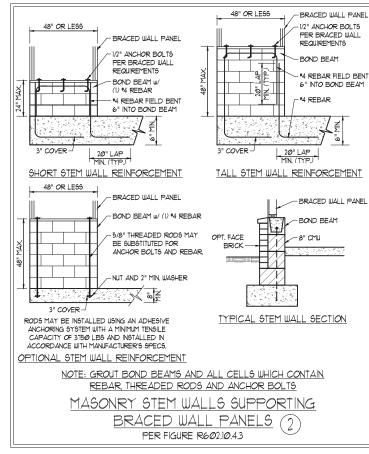
S-4 ROOF FRAMING PLAN

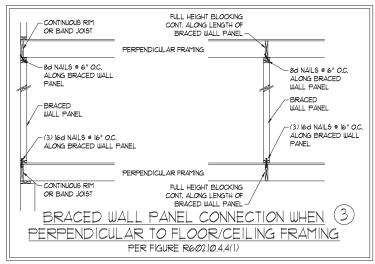
EW G. ST Maintenant Marie 2/19/19

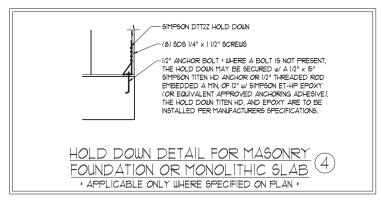
GENERAL WALL BRACING NOTES:

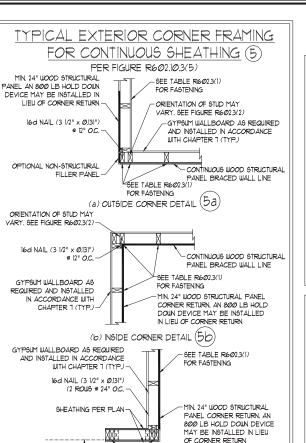
- WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE (NCRC). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NCRC. SEE THIS SHEET FOR GENERAL DETAILS. REFER TO THE 2018 NCRC FOR ADDITIONAL INFORMATION AS NEEDED.
- SEE STRUCTURAL SHEETS FOR BRACED WALL LOCATIONS, DIMENSIONS, HOLD DOWN TYPE AND LOCATIONS, BRACED WALL LINE KEY WITH WALL DESIGN SUMMARY OF REQUIRED/PROVIDED TOTALS FOR EACH WALL LINE AND ANY SPECIAL NOTES OR REQUIREMENTS.
- ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH CS-WSP IN ACCORDANCE WITH SECTION R602.10.3 UNLESS NOTED
- ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPSUM INSTALLED, WHEN NOT USING METHOD "GB", GYPSUM TO BE FASTENED PER TABLE R10/3.35, METHOD GB TO BE FASTENED PER TABLE R60/1/0/1
 6. CS-USP REFERS TO THE "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 1/1/6" 0/9B
- SHEATHING 16 TO BE INSTALLED ON ALL EXTERIOR WALLS ATTACHED W/ 6d COMMON NAILS OR 8d (2 1/2" LONG \times 0/113" DIAMETER) NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UN.O.).
- GB REFERS TO THE "GYPSUM BOARD" WALL BRACING METHOD. 1/2" (MIN.) GYPSUM WALL BOARD IS TO BE INSTALLED ON BOTH SIDES OF THE BRACED WALL FASTENED WITH 1/4" SCREWS OR 1 5/8" NAILS SPACED TO OC. ALONG PANEL EDGES INCLUDING TOP AND BOTTOM PLATES AND INTERMEDIATE SUPPORTS (WNO.). VERIFY ALL FASTENER OPTIONS FOR 1/2" AND 5/8" GYPSUM PRIOR TO CONSTRUCTION. FOR INTERIOR FASTENER OPTIONS SEE TABLE RT02.3.5. FOR EXTERIOR FASTENER OPTIONS SEE TABLE R602.3(1). EXTERIOR GB TO BE INSTALLED VERTICALLY
- REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602, 103, METHOD C5-WSP CONTRIBUTES 115 ACTUAL LENGTH, METHOD GB CONTRIBUTES 5 115 ACTUAL LENGTH, AND METHOD PF CONTRIBUTES 15 TIMES 115 ACTUAL LENGTH.











ASTENERS ON EACH STUD (5C)

ADDITIONAL FRAMING

MEMBER DIRECTLY BELOW BRACED WALL PANEL

AT EACH PANEL EDGE

(c) GARAGE DOOR CORNER DETAIL (SEE PLAN FOR ADDITIONAL

STRUCTURAL INFORMATION OR ALTERNATE CONFIGURATIONS)

CONTINUOUS WOOD

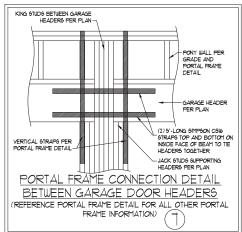
TINUOUS RIM W/ FINGER

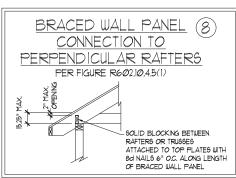
JOISTS OR DBL. BAND JOIST

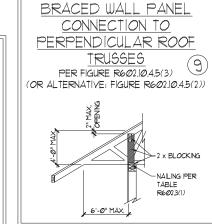
STRUCTURAL PANEL

SCALE NOTE:

LARGE FORMAT PRINTS ARE TO SCALE AS NOTED. II" x IT" PRINTS ARE ONE HALF THE NOTED SCALE







>(2) 16d NAILS EA. SIDE FULL HEIGHT BLOCKING ® 16" O.C. ALONG LENGTH OF BRACED WALL PANEL CAR VGINEE EW G.

2/19/19

INEERED BY: IST

DETAILS

BRACED WALL PANEL CONNECTION WHEN 6 PARALLEL TO FLOOR/CEILING FRAMING PER FIG. R602.10.4.4(2) FULL HEIGHT BLOCKING - ADDITIONAL FRAMING 16" O.C. ALONG LENGTH OF MEMBER DIRECTLY ABOVE BRACED WALL PANEL - CONTINUOUS RIM OR BAND JOIST BRACED WALL PANEL TOE NAIL (3) 8d NAILS AT 8d NAILS @ 6" O.C. ALONG -8d NAILS @ 6" O.C. ALONG BRACED WALL PANEL EA, BLOCKING MEMBER BRACED WALL PANEL BRACED WALL PANEL - BRACED WALL PANEL BRACED WALL PANEL (3) 16d NAILS @ 16" O.C. -(3) 16d NAILS @ 16" O.C. -(3) 16d NAILS @ 16" O.C. AT EA. BLOCKING ALONG BRACED WALL PANEL ALONG BRACED WALL PANEL MEMBER

This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

Z S O 2 OM N

S

DETAILS

Z Š

AND **BRACING NOTES**

ATE: OCTOBER 30, 2018 RAWN BY: JST

> BRACED WALL NOTES AND DETAILS AND PF

0

S

GENERAL NOTES

- I. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS, HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIERS, GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OF ARCHITECTURAL LAYOUT INCLUDING ROOF. ENGINEER'S SEAL DOES NOT APPLY TO 1-JOIST OR FLOOR/ROOF TRUSS LAYOUT DESIGN AND ACCURACY.
- 2. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NORC.), 2018 EDITION, 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 SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTORS FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 3. STRUCTURAL DESIGN BASED ON THE PROVISIONS OF THE NCRC, 2018 EDITION (R301.4 R301.1)

DESIGN CRITERIA:	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (IN)
ATTIC WITH LIMITED STORAGE	20	10	L/240 (L/360 w/ BRITTLE FINISHES)
ATTIC WITHOUT STORAGE	10	10	L/360
DECK\$	40	10	L/36Ø
EXTERIOR BALCONIES	40	10	L/36Ø
FIRE ESCAPES	40	10	L/36Ø
HANDRAILS/GUARDRAILS	200 LB OR 50 (PLF)	10	L/36Ø
PASSENGER VEHICLE GARAGE	5Ø	10	L/36Ø
ROOMS OTHER THAN SLEEPING ROOM	40	10	L/36Ø
SLEEPING ROOMS	3Ø	10	L/36Ø
STAIRS	4Ø	10	L/36Ø
WIND LOAD (BASED ON TABLE R3Ø12(4) WIND ZONE AND EXPOSURE))
GROUND SNOW LOAD: Pg	20 (PSF)		

- I-JOIST SYSTEMS DESIGNED WITH 12 PSF DEAD LOAD AND DEFLECTION (IN) OF L/480
- FLOOR TRUSS SYSTEMS DESIGNED WITH 15 PSF DEAD LOAD
- 4. FOR 115 AND 120 MPH WIND ZONES, FOUNDATION ANCHORAGE 15 TO COMPLY WITH SECTION R403.16 OF THE NCRC, 2016 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE 15 TO COMPLY WITH SECTION 4504 OF THE NCRC, 2016 EDITION.
- 5. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER II OF THE NCRC, 2018 EDITION.

FOOTING AND FOUNDATION NOTES

- FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTACT GEOTECHNICAL ENGINEER IF BEARING CAPACITY IS NOT ACHIEVED.
- 2. FOR ALL CONCRETE SLABS AND FOOTINGS, THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL. REHOVED. FILL MATERIAL, SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILLS HALL BE COMPACTED TO ASSURE UNIFORM SUPPORT OF THE SLAB, AND EXCEPT WHERE APPROVED, THE FILL DEPTHS SHALL NOT EXCEPD 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 I ACCORDING TO THE INDIFFO SOIL CLASSIFIED AS
- 3. PROPERLY DEWATER EXCAYATION PRIOR TO POURING CONCRETE WHEN BOTTOM OF CONCRETE SLAB IS AT OR BELOW WATER TABLE. IF APPLICABLE, 344" I" DEEP CONTROL JOINTS ARE TO BE SAWED WITHIN 4 TO 12 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED. ADJUST WHERE NECESSARY.
- 4. CONCRETE SHALL CONFORM TO SECTION R4022 OF THE NCRC, 2018 EDITION. CONCRETE REINFORCING STEEL TO BE ASTM A615 GRADE 60. WELDED WIRE FABRIC TO BE ASTM A185. MAINTAIN A HIMMUM CONCRETE COVER AROUND REINFORCING STEEL OF 3" IN FOOTINGS AND 11/2" IN SLABS. FOR POURED CONCRETE WALLS, CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE INSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 3/4". CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 11/2" FOR 15 BARS OR SMALLER, AND NOT LESS THAN 2" FOR 16 BARS OR LARGER.
- 5. MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL COMFORM TO ASTM C170.
- 6. 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. PERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR S MORTAR PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.
- THE CENTER OF EACH OF THE PIERS SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING, EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF THE PIERS.
- 8. ALL CONCRETE AND MASONRY FOUNDATION WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION RADA OF THE NCRC, 2019 EDITION OR IN ACCORDANCE WITH ACI 318, ACI 332, NCMA TRE6.4- OR ACE 5303/ASCE 51719: 402, MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE RADALIKI), RADALIKI2), RADALIKI3), OR RADALIKI4) OF THE NCRC, 2019 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE RADALIKI5 OF THE NCRC, 2019 EDITION. STEP CONCRETE FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT IS "OC. WHERE GRADE PERMITS (UNO).

This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

FRAMING NOTES

- ALL FRAMING LUMBER SHALL BE 12 SPF MINIMUM (Fb = 815 PS), Fv = 315 PS), E = 1600000 PS)) UNLESS NOTED OTHERWISE (UNO). ALL
 TREATED LUMBER SHALL BE 12 SYP MINIMUM (Fb = 915 PS), Fv = 115 PS), E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO).
- 2. LAMINATED VENEER LUMBER (LYL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2600 PSI, Fv = 285 PSI, E = 1900000 PSI. LAMINATED STRAND LUMBER (LSL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2325 PSI, Fv = 310 PSI, E = 18500000 PSI. PARALLEL STRAND LUMBER (PSL) UP TO 7" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2500 PSI, E = 18000000 PSI. PARALLEL STRAND LUMBER (PSL) UP TO 7" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2900 PSI, E = 20000000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.
- 3. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS

A. W AND WT SHAPES: ASTM A992
B. CHANNELS AND ANGLES: ASTM A36
C. PLATES AND BARS: ASTM A36
D. HOLLOW STRUCTURAL SECTIONS: ASTM A500 GRADE B
E. STEEL PIPE: ASTM A53, GRADE B, TYPE E OR S

4. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH (UNO). PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED AT THE BOTTOM FLANGE TO EACH SUPPORT AS FOLLOWS (UNO).

A WOOD FRAMING (2) 1/2" DIA. x 4" LONG LAG SCREWS

B. CONCRETE (2) 1/2" DIA. x 4" WEDGE ANCHORS

C. MASONRY (FULLY GROUTED) (2) 1/2" DIA x 4" LONG SMIPSON TITEN HD ANCHORS

LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE 2x NAILER ON TOP OF THE STEEL BEAM, AND THE 2x NAILER ON TOP OF THE 2x NAILER ON TOP OF THE STEEL BEAM, AND THE 2x NAILER ON TOP OF THE 2x NAILER ON TOP ON TOP OF THE 2x NAILER ON TOP OF THE 2x NAILER ON TOP OF THE 2x NAILER ON TOP OF THE 2

THE 2X NAILER IS SECURED TO THE TOP OF THE STEEL BEAM W/ (2) ROUS OF SELF TAPPING SCREWS # 16" O.C. OR (2) ROUS OF 12" DIAMETER BOLTS # 16" O.C. IF 1/2" BOLTS ARE USED TO FASTEN THE NAILER, THE STEEL BEAM SHALL BE FABRICATED W/ (2) ROUS OF 9/6" DIAMETER HOLES # 16" O.C.

- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SHADED SQUARES DENOTE POINT LOADS FROM ABOVE WHICH REQUIRE SOLID BLOCKING TO SUPPORTING MEMBER BELOW.
- 6. ALL LOAD BEARING HEADERS TO CONFORM TO TABLE R602.1(1) AND R602.1(2) OF THE NCRC, 2018 EDITION OR BE (2) 2 x 6 WITH (1) JACK AND (1) KING STUD EACH BND (UNO), WHICHEYER 15 GREATER ALL HEADERS TO BE SECURED TO EACH JACK STUD WITH (4) 8d NAILS. ALL BEAMS TO BE SUPPORTED WITH (2) STUDS AT EACH BEARING POINT (UNO). INSTALL KING STUDS PER SECTION R602.15 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- 1. ALL BEAMS, HEADERS, OR GIRDER TRUSSES PARALLEL TO WALL ARE TO BEAR FULLY ON (1) JACK OR (2) STUDS MINIMUM OR THE NUMBER OF JACKS OR STUDS NOTED. ALL BEAMS OR GIRDER TRUSSES PERPENDICUL AR TO WALL AND SUPPORTED BY (3) STUDS OR LESS ARE TO HAVE I 1/2* MINIMUM BEARING (UNO). ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY MORE THAN (3) STUDS OR OTHER NOTED COLUMN ARE TO BEAR PULLY ON SUPPORT COLUMN FOR ENTIRE WALL DEPTH (UNO). BEAM ENDS THAT BUTT INTO ONE ANOTHER ARE TO EACH BEAR EQUAL LENGTHS (UNO).
- 8. FLITCH BEAN'S SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A201) WITH WASHERS PLACED AT THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED AT TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH (2) BOLTS LOCATED AT 6" PROM EACH END (UND).
- 9. ALL I-JOIST OR TRUSS LAYOUTS ARE TO BE IN COMPLIANCE WITH THE OVERALL DESIGN SPECIFIED ON THE PLANS. ALL DEVIATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
- IØ. BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO THE NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION WALL BRACING CRITERIA. THE AMOUNT, LENGTH, AND LOCATION OF BRACING SHALL COMPLY WITH ALL APPLICABLE TABLES IN SECTION R602.10.
- II. PROVIDE DOUBLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS. PROVIDE SUPPORT UNDER ALL WALLS PARALLEL TO FLOOR TRUSSES OR I-JOISTS PER MANUFACTURER'S SPECIFICATIONS. INSTALL BLOCKING BETWEEN JOISTS OR TRUSSES FOR POINT LOAD SUPPORT FOR ALL POINT LOADS ALONG OFFSET LOAD LINES.
- 2. FOR ALL HEADERS SUPPORTING BRICK VENEER THAT ARE LESS THAN 8'-0" IN LENGTH, REST A 6" x 4" x 5/6" STEEL ANGLE WITH 6" MINIMUM EMBEDMENT AT SIDES FOR BRICK SUPPORT (UNO). FOR ALL HEADERS 8'-0" AND GREATER IN LENGTH, BOLT A 6" x 4" x 5/6" STEEL ANGLE TO HEADER WITH 1/2" LAG SCREWS AT 12" OC. STAGGERED FOR BRICK SUPPORT. FOR ALL BRICK SUPPORT AT ROOF LINES, BOLT A 6" x 4" x 5/6" STEEL ANGLE TO (2) 2 x 10 BLOCKING INSTALLED W/ (4) 12 NAILS EA PLY BETWEEN WALL STUDS WITH (2) ROUS OF 1/2" LAG SCREWS AT 2" OC. STAGGERED AND IN ACCORDANCE WITH SECTION R103.82.1 OF THE NCRC, 2018 EDITION.
- 6. FOR STICK FRAMED ROOFS: CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF MEMBER SUPPORT. HIP SPLICES ARE TO BE SPACED A MINIMUM OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS AT 16" O.C. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS AS SHOWN (UNO).
- 14. FOR TRUSSED ROOFS: FRAME DORMER WALLS ON TOP OF 2 x 4 LADDER FRAMING AT 24" O.C. BETWEEN ADJACENT ROOF TRUSSES. STICK FRAME OVER-FRAMED ROOF SECTIONS WITH 2 x 8 RIDGES, 2 x 6 RAFTERS AT 16" O.C. AND FLAT 2 x 10 VALLEYS (UNO).
- 5. ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 700 LB CAPACITY UPLIFT CONNECTORS TOP AND BOTTOM (UNO.) POSTS MAY BE SECURED USING ONE SIMPSON H6 OR LITSIC UPLIFT CONNECTOR FASTENED TO THE BAND AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POST. ONE 16" SECTION OF SIMPSON CSIC COIL STRAPPING WITH (8) 84 HDG NAILS AT EACH END MAY BE USED IN LIEU OF EACH TWIST STRAP IF DESIRED. FOR MASONEY OR CONCRETE FOUNDATION USE SIMPSON POST BASE.

HOMP

STANDARD STRUCTURAL NOTES

SEAL
33736

WGINEEL
2/19/19

DATE OCTOBER 29, 2018

DRAWN BY, JES

ENGINEERED BY, JST

SHEET:

STRUCTURAL
NOTES