

ATTIC YENTILATION

TOTAL NET FREE VENTILATING AREA.

VENTILATION MAY BE REDUCED 50%
PROVIDED AT LEAST 50 PERCENT AND
NOT MORE THAN 80 PERCENT OF THE
REQUIRED VENTILATING AREA IS
PROVIDED BY VENTILATORS LOCATED IN
THE UPPER PORTION OF THE SPACE TO
BE VENTILATED AT LEAST 3'-O" ABOVE
EAVE OR CORNICE VENTS WITH THE
BALANCE OF THE REQUIRED VENTILOTION
PROVIDED BY EAVE OR CORNICE VENTS.

Areas

First Floor	1026
Second Floor	1214
	=========
Heated Sq.Ft.	2240
Garage	435
Front Porch	99
Opt. Covered Paral	h 100

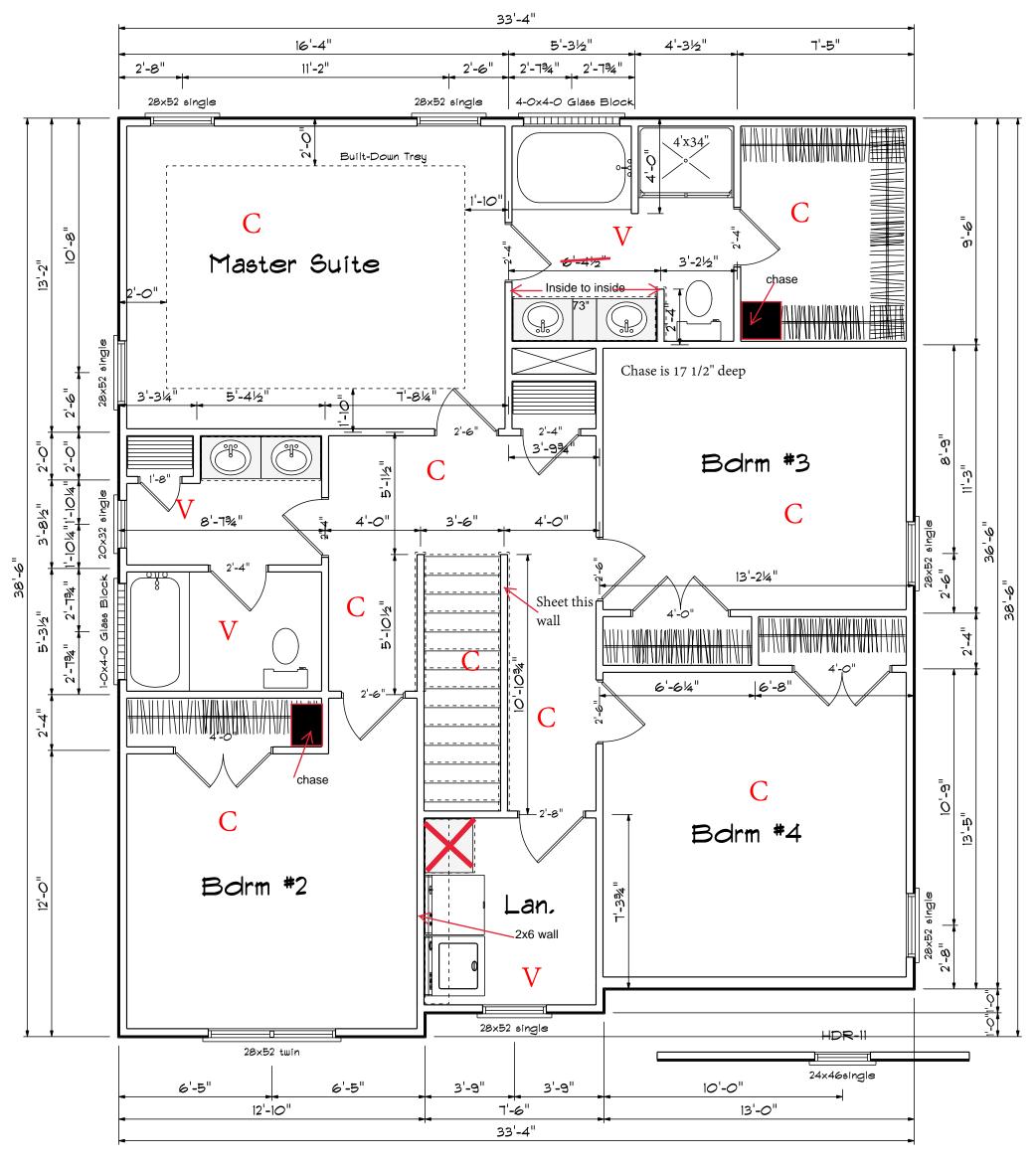
REMOVE FIREPLACE AND BOOKCASES

LVP - LUXURY VINYL
PLANK
C - CARPET
V - VINYL

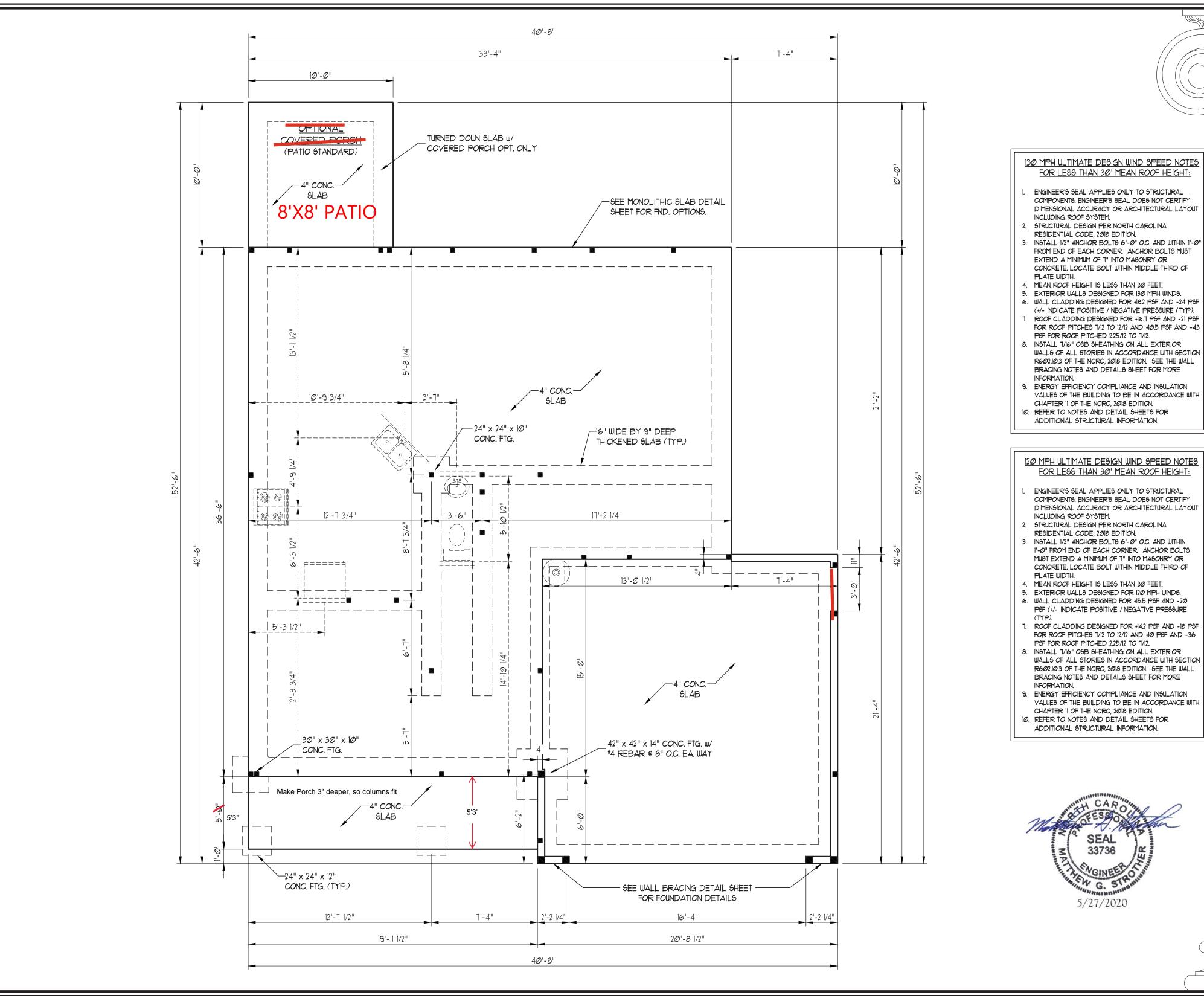
DO NOT ADD COFFER CIELING IN DR

First Floor Plan





Second Floor Plan



130 MPH ULTIMATE DESIGN WIND SPEED NOTES

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT
- FROM END OF EACH CORNER. ANCHOR BOLTS MUST EXTEND A MINIMUM OF 1" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF
- 4. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
- 5. EXTERIOR WALLS DESIGNED FOR 130 MPH WINDS. 6. WALL CLADDING DESIGNED FOR +18.2 PSF AND -24 PSF
- (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP). 7. ROOF CLADDING DESIGNED FOR +16.7 PSF AND -21 PSF
- PSF FOR ROOF PITCHED 2,25/12 TO 1/12. 8. INSTALL 1/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.10.3 OF THE NCRC, 2018 EDITION. SEE THE WALL
- 9. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH
- 10. REFER TO NOTES AND DETAIL SHEETS FOR

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

- COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT
- 3. INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER ANCHOR BOLTS MUST EXTEND A MINIMUM OF 1" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF
- 4. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
- 6. WALL CLADDING DESIGNED FOR +15.5 PSF AND -20 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE
- ROOF CLADDING DESIGNED FOR +14.2 PSF AND -18 PSF FOR ROOF PITCHES 1/12 TO 12/12 AND +10 PSF AND -36 PSF FOR ROOF PITCHED 2.25/12 TO 7/12.
- 8. INSTALL 1/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.10.3 OF THE NCRC, 2018 EDITION. SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE
- YALUES OF THE BUILDING TO BE IN ACCORDANCE WIT CHAPTER 11 OF THE NCRC, 2018 EDITION.
- 10. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

DATE: MAY 27, 2020

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

DRAWN BY: JSJ BUILDERS, INC.

ENGINEERED BY: WFB

SHEET: 2 OF: 6 S-1b

MONO SLAB FOUNDATION PLAN

THE PINEWOOD JSJ BUILDERS, INC

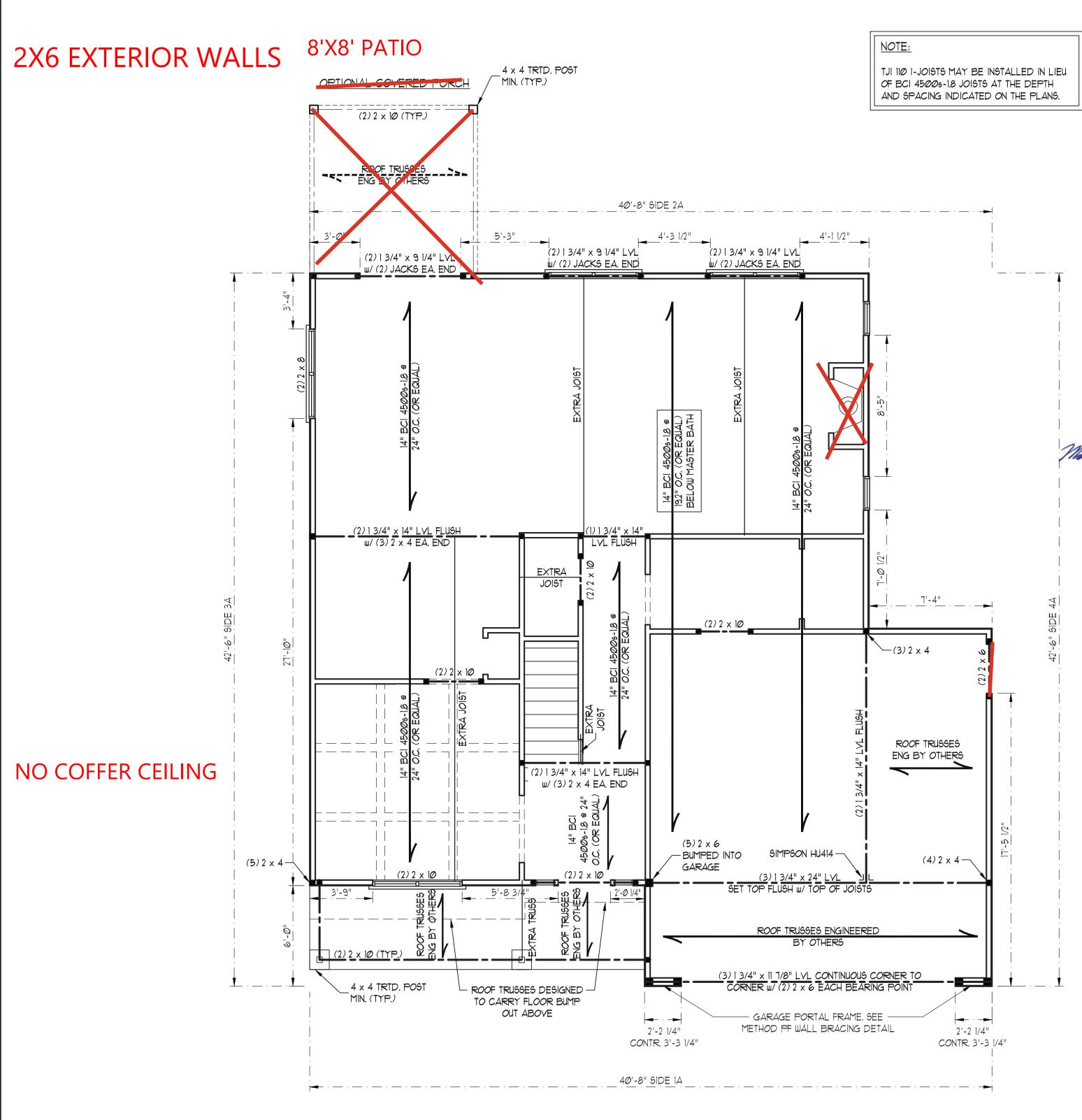
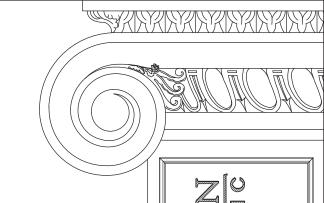


TABLE R602.7.5

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
		I	ı



BRACED WALL DESIGN NOTES

- 1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
- 2. CS-WSP 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.
- 3. *GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH I 1/4" SCREWS OR I 5/8" NAILS SPACED 1" O.C. ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES
- 4. 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.
- 5. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.



RACED WALL DESIGN

RECTANGLE A

METHOD: C5-W5P/PF

TOTAL REQUIRED LENGTH: 13.75'

TOTAL PROVIDED LENGTH: 25.33'

SIDE 2A

METHOD: C5-W5P

TOTAL REQUIRED LENGTH: 13.75'

TOTAL PROVIDED LENGTH: 16.66'

SIDE 3A

METHOD: C5-W5P

TOTAL REQUIRED LENGTH: 13.3'

TOTAL REQUIRED LENGTH: 13.3'
TOTAL PROVIDED LENGTH: 31.11'
<u>SIDE 4A</u>
METHOD: CS-WSP

TOTAL REQUIRED LENGTH: 13.3'
TOTAL PROVIDED LENGTH: 32.92'

STRUCTURAL NOTES:

- 1. ALL FRAMING LUMBER TO BE SPF #2 (UNO). ALL TREATED LUMBER TO BE SYP #2 (UNO.)
- ALL LOAD BEARING HEADERS TO BE (2) 2 x 6 SPF *2
 OR SYP *2 (KILN DRIED) (UNO). HEADERS HAVE BEEN
 DESIGNED BASED ON CALCULATED LOADS. CODE
 TABLES HAVE NOT BEEN USED.
- 3. INSTALL AN EXTRA JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON THE PLANS.
- 4. 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.
- 5. SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. ALL SQUARES TO BE (2) STUDS (UNO.)
- 6. 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 TOP (UNO.)
- . 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.
- 8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

THE PINEWOOD JSJ BUILDERS, INC

DATE: MAY 27, 2020

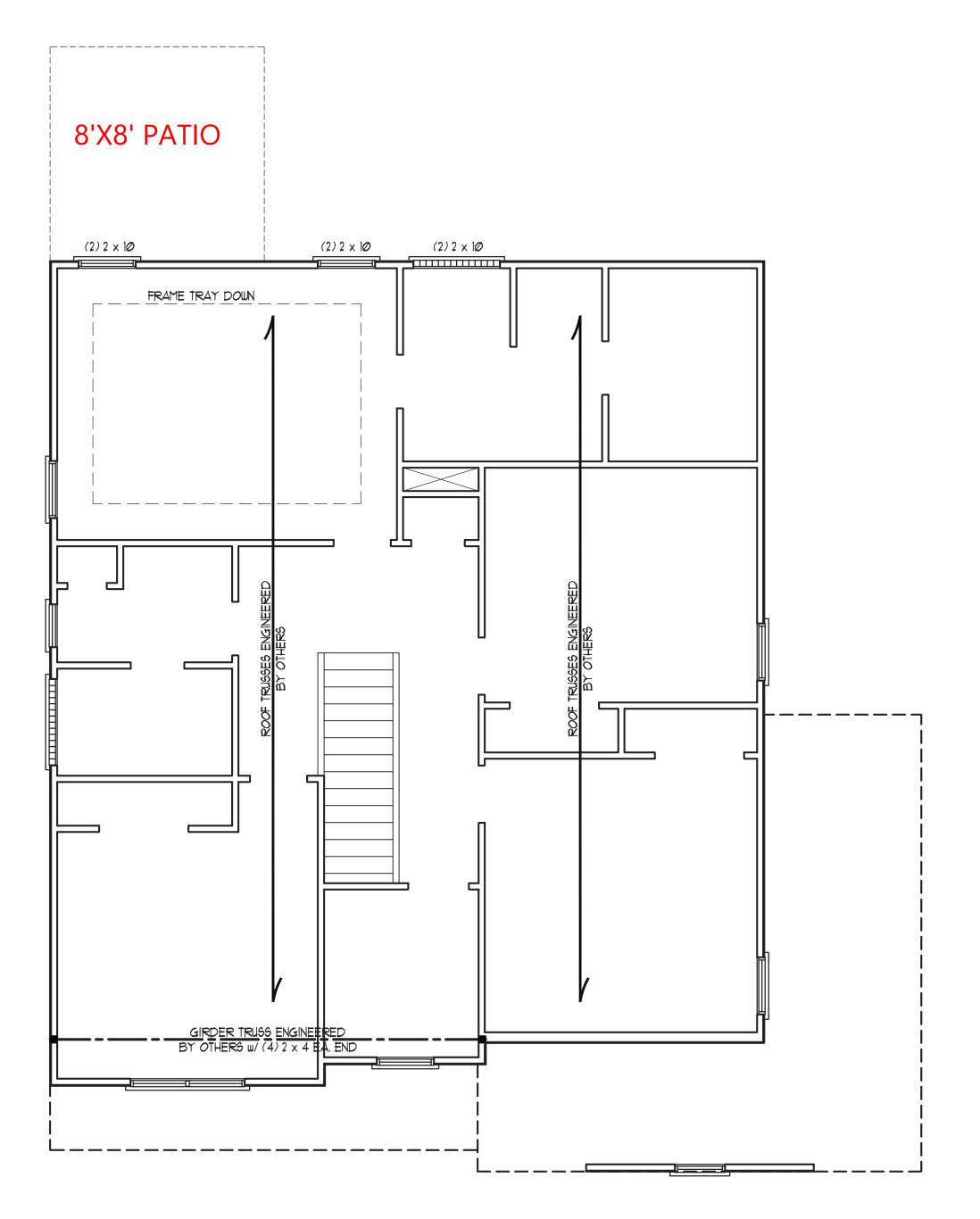
SCALE: 1/4" = 1'-0"

DRAWN BY: JSJ BUILDERS, INC.

ENGINEERED BY: WFB

S-2

S-Z SECOND FLOOR FRAMING PLAN



BRACED WALL DESIGN NOTES:

- 1. BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
- 2. C5-WSP 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.
- 3. *GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH I 1/4" SCREWS OR I 5/8" NAILS SPACED TO O.C. ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES.
- 4. 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.
- 5. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

NOTE:

- 1. 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.
- 2. SHEATH ALL EXTERIOR WALLS WITH 1/16" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

STRUCTURAL NOTES:

- I. ALL FRAMING LUMBER TO BE #2 SPF (UNO).
- 2. ALL LOAD BEARING HEADERS TO BE (2) 2 x 6 (UNO).
- 3. 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.
- 4. SQUARES DENOTE POINT LOADS
 WHICH REQUIRE SOLID BLOCKING TO
 GIRDER OR FOUNDATION. SQUARES
 TO BE (2) STUDS (UNO.)
- 5. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

TABLE R602.7.5 MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS

HEADER S	PAN (PER TAP	MAXIMUM STUD SPACING (INCHES) (PER TABLE R6023(5)	
(1221)	16	24	
UP TO 3	3' 1	1	
4'	2	1	
8'	3	2	
12'	5	3	
16'	6	4	



DATE: MAY 27, 2020

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

DRAWN BY: JSJ BUILDERS, INC.

ENGINEERED BY: WFB

S-3
ATTIC FLOOR
FRAMING PLAN

5/27/2020

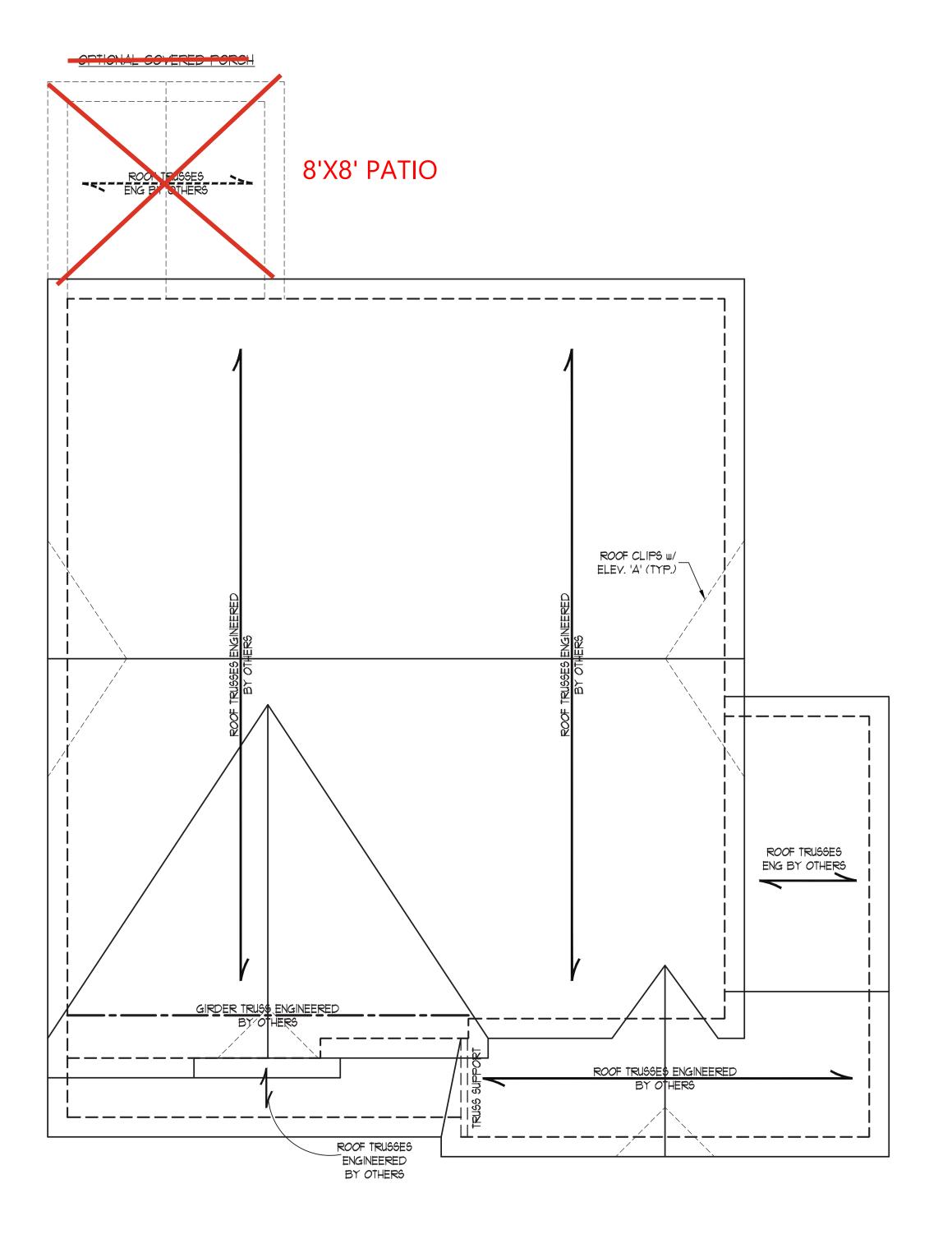
Soll HOMPSON

ON GINEERING, IN

ON WADE AVE., SUITE 104 RALEIGH, NC 27605

PHONE, (919) 789,9971

THE PINEWOOD JSJ BUILDERS, INC



STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE #2 SPF (UNO).
- CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
- FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS.
- HIP SPLICES ARE TO BE SPACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS @ 16" O.C. (TYP.)
- 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.
- 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. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A MIN. OF (6) 12d TOE NAILS.
- REFER TO SECTION R802.11 OF THE 2018 NCRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

THE PINEWOOD JSJ BUILDERS, INC

DATE: MAY 27, 2020

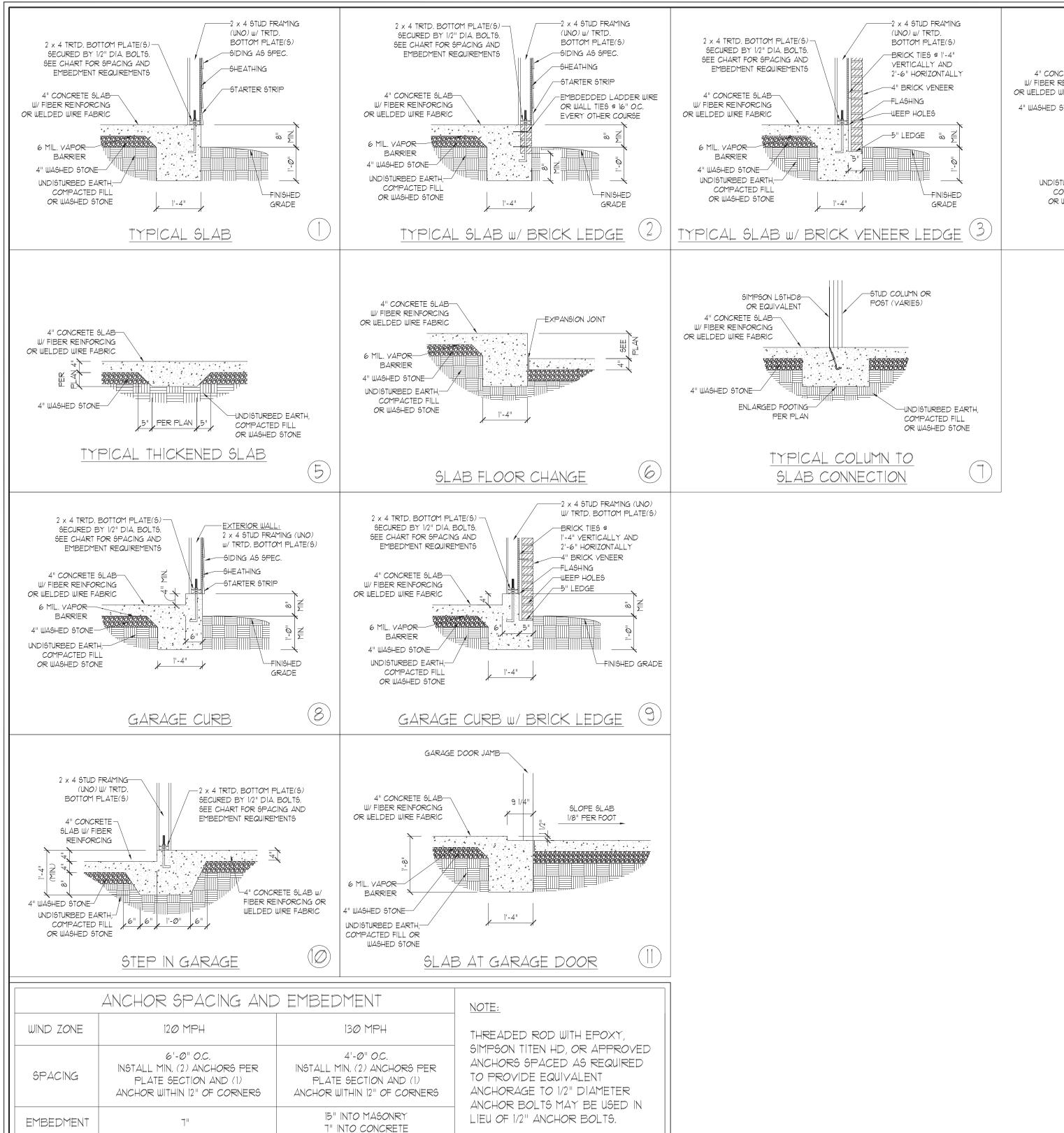
SCALE: 1/4" = 1'-0"

DRAWN BY: JSJ BUILDERS, INC.

ENGINEERED BY: WFB

ROOF FRAMING PLAN

5/27/2020



-TREATED POST PER PLAN 4" CONCRETE SLAB-POST BASE PER PLAN W/ FIBER REINFORCING OR WELDED WIRE FABRIC -FINISHED GRADE 4" WASHED STONE UNDISTURBED EARTH, COMPACTED FILL OR WASHED STONE (4)PORCH/SCREEN PORCH

MONOLITHIC SLAB FOUNDATION DETAIL

DATE: May 27,2020 SCALE: NTS

ENGINEERED BY: JST

DRAWN BY: JST

5/27/2020

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under N.C. Statute § 89C-23

FOUNDATION **DETAILS**

12" CMU

UNGROUTED

UNGROUTED

GROUT SOLID w/ #4

REBAR @ 64" O.C.

GROUT SOLID w/ #4

REBAR @ 64" O.C.

GROUT SOLID w/ #4

REBAR @ 64" O.C.

GROUT SOLID w/ #4

REBAR @ 24" O.C.

DATE: May 27, 2020

SCALE: NTS DRAWN BY: JST

ENGINEERED BY: JST

FOUNDATION DETAILS

MASONRY STEMWALL SPECIFICATIONS MASONRY WALL TYPE BRICK TIES @ 1'-4" VERTICALLY AND WALL HEIGHT 2'-6" HORIZONTALLY 4" BRICK AND 4" BRICK AND (FEET) -4" BRICK VENEER 8" CMU 4" CMU 8" CMU -FLASHING WEEP HOLES 2 AND UNGROUTED UNGROUTED GROUT SOLID BELOW UNGROUTED 3 UNGROUTED GROUT SOLID ADDER WIRE GROUT SOLID w/ #4 EVERY OTHER GROUT SOLID GROUT SOLID COURSE REBAR @ 48" O.C. GROUT SOLID w/ #4 GROUT SOLID w/ #4 NOT APPLICABLE 5 REBAR @ 36" O.C. REBAR @ 36" O.C.

STRUCTURAL NOTES:

1) WALL HEIGHT MEASURED FROM TOP OF FOOTING TO TOP OF THE WALL.

GROUT SOLID w/#4

REBAR @ 24" O.C.

- 2) TIE MULTIPLE WYTHES TOGETHER WITH LADDER WIRE AT 16" O.C. VERTICALLY.
- 3) CHART APPLICABLE FOR HOUSE FOUNDATION ONLY. CONSULT ENGINEER FOR DESIGN OF GARAGE FOUNDATION NOT COMMON TO HOUSE.

NOT APPLICABLE

ENGINEERED DESIGN BASED ON SITE CONDITIONS

- 4) BACKFILL OF CLEAN #51 / #61 WASHED STONE IS ALLOWABLE.
- 5) BACKFILL OF WELL DRAINED OR SAND GRAVEL MIXTURE SOILS (45 PSF/FT BELOW GRADE) CLASSIFIED AS GROUP I ACCORDING TO UNIFIED SOILS CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL CODE ARE ALLOWABLE.
- 6) PREP SLAB PER <u>R506.2.1</u> AND <u>R506.2.2</u> BASE AND <u>EXCEPTION</u> OF 2018 NORTH CAROLINA RESIDENTIAL CODE.
- 1) MINIMUM 24" LAP SPLICE LENGTH.

7 AND

GREATER

- 8) LOCATE REBAR IN CENTER OF FOUNDATION WALL.
- 9) WHERE REQUIRED, FILL BLOCK SOLID WITH TYPE "S" MORTAR OR 3000 PSI GROUT. USE OF "LOW LIFT GROUTING" METHOD REQUIRED WHEN FILLING WALLS WITH GROUT AT HEIGHTS OF 5' AND GREATER.

TOP TWO COURSES OF STEM WALL AND ALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID. EVERY OTHER COURSE EVERY OTHER COURSE WALL REINFORCEMENT, SEE CHART FOR SPACING 16" WIDE BY 8" DEEP CONT. CONC. FTG.	UNDISTURBED EARTH, COMPACTED FILL OR WASHED STONE TOP TWO COURSES OF STEM WALL AND ALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID. WALL REINFORCEMENT, SEE CHART FOR SPACING 20" WIDE BY 8" DEEP CONT. CONC. FTG.
STEM WALL FON. DETAIL 1	STEM WALL FDN. W/ BRICK AND CURB (2)
2 x 4 STUD FRAMING (UNO) W/ TRID. BOTTOM PLATE(\$) 2 x 4 TRID. BOTTOM PLATE(\$) 5ECURED BY 1/2" DIA. BOLTS. 5EE CHART FOR \$PACING AND EMBEDMENT REQUIREMENTS 4" CONCRETE \$LAB W/ FIBER REINFORCING OR WELDED WIRE FABRIC 6 MIL. VAPOR BARRIER 4" WASHED STONE UNDISTURBED EARTH, COMPACTED FILL OR WASHED STONE TOP TWO COURSES OF STEM WALL AND ALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID. BRICK TIES * 1'-4" VERTICALLY AND 2'-6" HORIZONTALLY 4" BRICK VENEER FLASHING FLASHING LADDER WIRE EVERYMOTHER COURSE 12" CMU BLOCK CHART FOR SPACING 20" WIDE BY 8" DEEP CONT. CONC. FTG.	2 x 4 STUD FRAMING (UNO) W/ TRTD. BOTTOM PLATE(\$) 2 x 4 TRTD. BOTTOM PLATE(\$) SECURED BY 1/2" DIA. BOLTS. SEE CHART FOR SPACING AND EMBEDMENT REQUIREMENTS 4" CONCRETE SLAB W/ FIBER REINFORCING OR WELDED WIRE FABRIC 6 MIL. VAPOR BARRIER 4" WASHED STONE UNDISTURBED EARTH, COMPACTED FILL OR WASHED STONE TOP TWO COURSES OF STEM WALL AND ALL CELLS W/ REINFORCEMENT TO BE FILLED SOLID. WALL REINFORCEMENT, SEE CHART FOR SPACING FOR OPTIONAL BRICK WATERTABLE, INCREASE TO 20" WIDE BY 8" DEEP CONT. CONC. FTG.
STEM WALL FDN. W/ BRICK DETAIL 3	STEM WALL FDN. W/ OPTIONAL BRICK WATERTABLE DETAIL 4

-SIDING AS SPEC.

LADDER WIRE IN TOP TWO

-OPTIONAL BRICK VENEER

COURSES (w/ VENEER ONLY)

FINISHED GRADE

LADDER WIRE

-SHEATHING

2 x 4 STUD FRAMING (UNO)

W/ TRTD. BOTTOM PLATE(S)

2 x 4 TRTD. BOTTOM PLATE(S)—

SECURED BY 1/2" DIA. BOLTS.

EMBEDMENT REQUIREMENTS

SEE CHART FOR SPACING AND

4" CONCRETE SLAB-W/ FIBER REINFORCING

> 6 MIL. VAPOR-BARRIER

OR WELDED WIRE FABRIC

4" WASHED STONE-

2 x 4 STUD FRAMING (UNO)-W/ TRTD. BOTTOM PLATE(S)

2 x 4 TRTD. BOTTOM PLATE(S)-

SECURED BY 1/2" DIA. BOLTS.

SEE CHART FOR SPACING AND

THICKENED SLAB-

4" CONCRETE SLAB-

6 MIL. VAPOR-

BARRIER

W/ FIBER REINFORCING

OR WELDED WIRE FABRIC

EMBEDMENT

NOT REQUIRED

EMBEDMENT REQUIREMENTS

ANCHOR SPACING AND EMBEDMENT NOTE: WIND ZONE 120 MPH 130 MPH THREADED ROD WITH EPOXY, SIMPSON TITEN HD, OR APPROVED 6'-0" O.C. 4'-Ø" O.C. ANCHORS SPACED AS REQUIRED INSTALL MIN. (2) ANCHORS PER INSTALL MIN. (2) ANCHORS PER SPACING TO PROVIDE EQUIVALENT PLATE SECTION AND (1) PLATE SECTION AND (1) ANCHORAGE TO 1/2" DIAMETER ANCHOR WITHIN 12" OF CORNERS ANCHOR WITHIN 12" OF CORNERS ANCHOR BOLTS MAY BE USED IN

15" INTO MASONRY

1" INTO CONCRETE

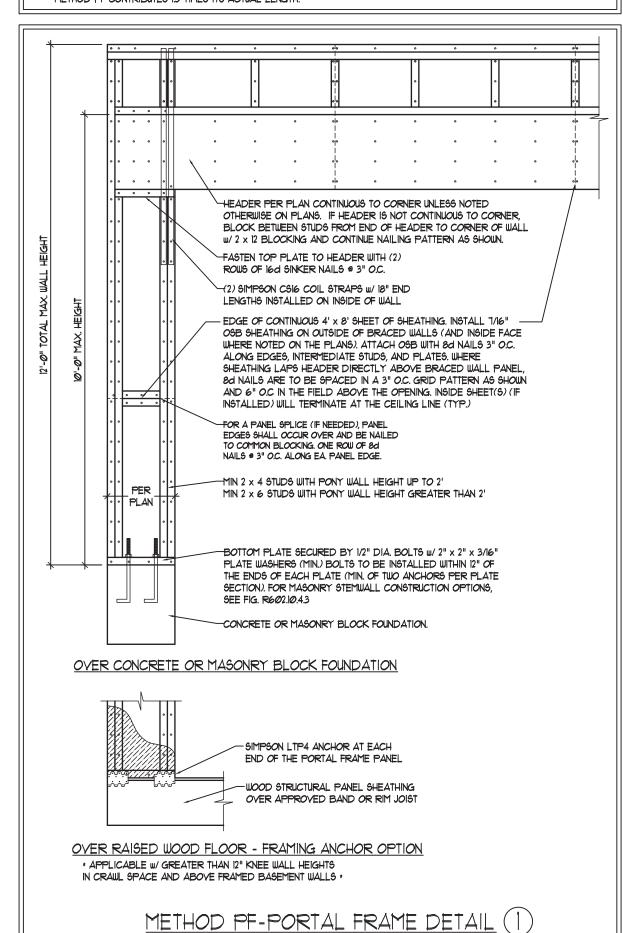
LIEU OF 1/2" ANCHOR BOLTS.

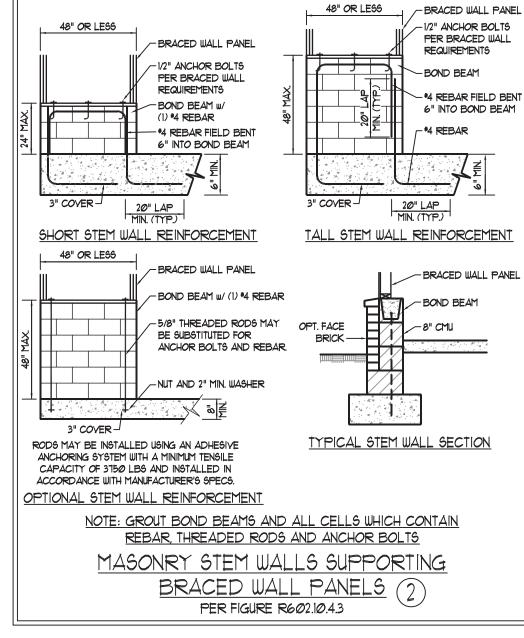


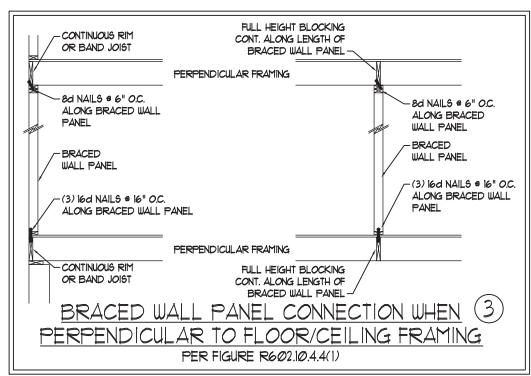
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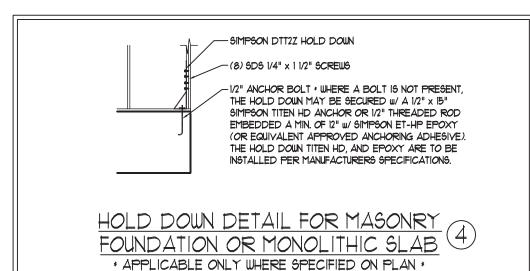
GENERAL WALL BRACING NOTES:

- 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 . BRACED EXTERIOR WALLS SUPPORTING ROOF TRUSSES AND RAFTERS, INCLUDING STORIES BELOW THE TOP FLOOR, HAVE BEEN DESIGNED PER R60235 (3), WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST COMBINED UPLIFT AND SHEAR FORCES IN ACCORDANCE WITH ACCEPTED ENGINEERED PRACTICE.
- 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
- 5. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH CS-WSP IN ACCORDANCE WITH SECTION R602.103 UNLESS NOTED
- 6. ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPSUM INSTALLED. WHEN NOT USING METHOD "GB", GYPSUM TO BE FASTENED PER TABLE R1023.5. METHOD GB TO BE FASTENED PER TABLE R602.10.1
- CS-USP REFERS TO THE "CONTINUOUS SHEATHING WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 1/16" OSB SHEATHING IS TO BE INSTALLED ON ALL EXTERIOR WALLS ATTACHED W/ 6d COMMON NAILS OR 8d (2 1/2" LONG x Ø.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 16 TO BE INSTALLED ON BOTH SIDES OF THE BRACED WALL FASTENED WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 1" O.C. ALONG PANEL EDGES INCLUDING TOP AND BOTTOM PLATES AND INTERMEDIATE SUPPORTS (UN.O.). VERIFY ALL FASTENER OPTIONS FOR 1/2" AND 5/8" GYP6UM PRIOR TO CONSTRUCTION. FOR INTERIOR FASTENER OPTIONS SEE TABLE R102.3.5. FOR EXTERIOR FASTENER OPTIONS SEE TABLE R6023(1). EXTERIOR GB TO BE INSTALLED VERTICALLY.
- REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602. 10.3. METHOD C5-USP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES .5 ITS ACTUAL LENGTH, AND METHOD PF CONTRIBUTES 1.5 TIMES ITS ACTUAL LENGTH.

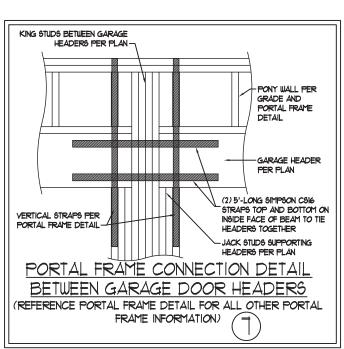


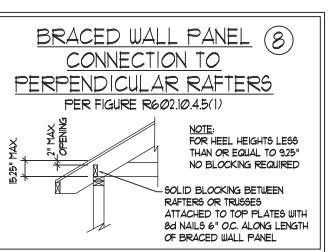


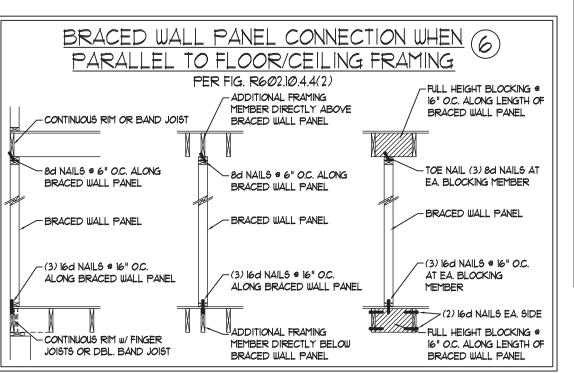




TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING (5) PER FIGURE R602.10.3(5) MIN. 24" WOOD STRUCTURAL - SEE TABLE R602.3(1) PANEL AN 800 LB HOLD DOWN FOR FASTENING DEVICE MAY BE INSTALLED IN LIEU OF CORNER RETURN-ORIENTATION OF STUD MAY VARY. SEE FIGURE R6023(2) 16d NAIL (3 1/2" x Ø.131") -GYPSUM IIJAI I BOARD AS REQUIRED AND INSTALLED IN ACCORDANCE WITH CHAPTER 1 (TYP.) OPTIONAL NON-STRUCTURAL -CONTINUOUS WOOD STRUCTURAL PANEL BRACED WALL LINE SEE TABLE R6023(1) FILLER PANEL -FOR FASTENING (a) OUTSIDE CORNER DETAIL (5a) ORIENTATION OF STUD MAY VARY. SEE FIGURE R602.3(2) 16d NAIL (3 1/2" x Ø.131") -CONTINUOUS WOOD STRUCTURAL @ 12" O.C. -PANEL BRACED WALL LINE SEE TABLE R602.3(1) GYPSUM WALLBOARD AS FOR FASTENING REQUIRED AND INSTALLED MIN. 24" WOOD STRUCTURAL PANEL IN ACCORDANCE WITH CORNER RETURN. AN 800 LB HOLD CHAPTER 1 (TYP.)-DOWN DEVICE MAY BE INSTALLED IN LIEU OF CORNER RETURN (b) INSIDE CORNER DETAIL (5b) GYPSUM WALLBOARD AS REQUIRED - SEE TABLE R602.3(1) AND INSTALLED IN ACCORDANCE FOR FASTENING WITH CHAPTER 1 (TYP.) 16d NAIL (3 1/2" x Ø.131") (2 ROWS @ 24" O.C. --MIN. 24" WOOD STRUCTURAL SHEATHING PER PLAN-PANEL CORNER RETURN. AN 800 LB HOLD DOWN DEVICE MAY BE INSTALLED IN LIEU OF CORNER RETURN CONTINUOUS WOOD STRUCTURAL PANEL FASTENERS ON EACH STUD 5C BRACED WALL LINE -(c) GARAGE DOOR CORNER DETAIL (SEE PLAN FOR ADDITIONAL STRUCTURAL INFORMATION OR ALTERNATE CONFIGURATIONS)





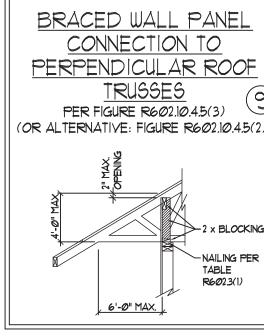


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9 (OR ALTERNATIVE: FIGURE R602.10.4.5(2)) -2 x BLOCKING

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

DRAWN BY: IST ENGINEERED BY: JST

> BRACED WALL NOTES AND DETAILS AND PF DETAIL

AND NOTES BRACING

DATE: ' May 27, 2020

5/27/2020

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 (NCRC), 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
DECK5	4Ø	10	L/360
EXTERIOR BALCONIES	40	10	L/360
FIRE ESCAPES	4Ø	10	L/360
HANDRAILS/GUARDRAILS	200 LB OR 50 (PLF)	10	L/360
PASSENGER VEHICLE GARAGE	5Ø	10	L/360
ROOMS OTHER THAN SLEEPING ROOM	4Ø	10	L/360
SLEEPING ROOMS	3Ø	10	L/360
STAIRS	4Ø	10	L/360
WIND LOAD	(BASED ON TABLE R3Ø1.2(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 IS TO COMPLY WITH SECTION R403.1.6 OF THE NCRC, 2018 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 4504 OF THE NCRC, 2018 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

- I. 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 REMOVED. FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED 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 I, ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE NCRC, 2018 EDITION.
- 3. PROPERLY DEWATER EXCAVATION PRIOR TO POURING CONCRETE WHEN BOTTOM OF CONCRETE SLAB IS AT OR BELOW WATER TABLE. IF APPLICABLE, 3/4" 1" 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 R402.2 OF THE NCRC, 2018 EDITION. CONCRETE REINFORCING STEEL TO BE ASTM A615 GRADE 60. WELDED WIRE FABRIC TO BE ASTM A185. MAINTAIN A MINIMUM CONCRETE COVER AROUND REINFORCING STEEL OF 3" IN FOOTINGS AND 1 1/2" 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 1 1/2" FOR #5 BARS OR SMALLER, AND NOT LESS THAN 2" FOR #6 BARS OR LARGER.
- 5. MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL COMFORM TO ASTM C270.
- 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.
- 1. 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 R404 OF THE NCRC, 2018 EDITION OR IN ACCORDANCE WITH ACI 318, ACI 332, NCMA TR68-A OR ACE 530/ASCE 5/TMS 402. MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.I.(1), R404.I.(2), R404.I.(3), OR R404.I.(4) OF THE NCRC, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.I.(5) OF THE NCRC, 2018 EDITION. STEP CONCRETE FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (UNO).



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FRAMING NOTES

- 1. ALL FRAMING LUMBER SHALL BE *2 SPF MINIMUM (Fb = 875 PSI, Fv = 375 PSI, E = 16000000 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE *2 SYP MINIMUM (Fb = 975 PSI, Fv = 175 PSI, E = 16000000 PSI) UNLESS NOTED OTHERWISE (UNO).
- 2. LAMINATED VENEER LUMBER (LVL) 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 = 1550000 PSI.

 PARALLEL STRAND LUMBER (PSL) UP TO 1" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2500 PSI, E = 18000000 PSI.

 PARALLEL STRAND LUMBER (PSL) MORE THAN 1" 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

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 SIMPSON 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 IS SECURED TO THE TOP OF THE STEEL BEAM w/ (2) ROWS OF SELF TAPPING SCREWS @ 16" O.C. OR (2) ROWS OF 1/2" DIAMETER BOLTS @ 16" O.C. IF 1/2" BOLTS ARE USED TO FASTEN THE NAILER, THE STEEL BEAM SHALL BE FABRICATED w/ (2) ROWS OF 9/16" DIAMETER HOLES @ 16" O.C.

- 5. 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 R602.7(1) AND R602.7(2) OF THE NCRC, 2018 EDITION OR BE (2) 2 x 6 WITH (1) JACK AND (1) KING STUD EACH END (UNO), WHICHEVER IS 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 R602.7.5 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 PERPENDICULAR 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 FULLY ON SUPPORT COLUMN FOR ENTIRE WALL DEPTH (UNO). BEAM ENDS THAT BUTT INTO ONE ANOTHER ARE TO EACH BEAR EQUAL LENGTHS (UNO).
- 8. FLITCH BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A3ØT) 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" FROM EACH END (UNO).
- 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.
- 10. 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.
- 11. PROVIDE DOUBLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS. PROVIDE SUPPORT UNDER ALL WALLS PARALLEL TO FLOOR TRUSSES OR 1-JOISTS PER MANUFACTURER'S SPECIFICATIONS. INSTALL BLOCKING BETWEEN JOISTS OR TRUSSES FOR POINT LOAD SUPPORT FOR ALL POINT LOADS ALONG OFFSET LOAD LINES.
- 12. FOR ALL HEADERS SUPPORTING BRICK VENEER THAT ARE LESS THAN 8'-0" IN LENGTH, REST A 6" x 4" x 5/16" STEEL ANGLE WITH 6" MINIMUM EMBEDMENT AT SIDES FOR BRICK SUPPORT (UN.O). FOR ALL HEADERS 8'-0" AND GREATER IN LENGTH, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO HEADER WITH 1/2" LAG SCREWS AT 12" O.C. STAGGERED FOR BRICK SUPPORT. FOR ALL BRICK SUPPORT AT ROOF LINES, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10 BLOCKING INSTALLED W/ (4) 12d NAILS EA. PLY BETWEEN WALL STUDS WITH (2) ROWS OF 1/2" LAG SCREWS AT 12" O.C. STAGGERED AND IN ACCORDANCE WITH SECTION RT03.8.2.1 OF THE NCRC, 2018 EDITION.
- 13. 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).
- 15. ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 100 LB CAPACITY UPLIFT CONNECTORS TOP AND BOTTOM (UNO.) POSTS MAY BE SECURED USING ONE SIMPSON H6 OR LTS12 UPLIFT CONNECTOR FASTENED TO THE BAND AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POST. ONE 16" SECTION OF SIMPSON CS16 COIL STRAPPING WITH (8) 8d HDG NAILS AT EACH END MAY BE USED IN LIEU OF EACH TWIST STRAP IF DESIRED. FOR MASONRY OR CONCRETE FOUNDATION USE SIMPSON POST BASE.

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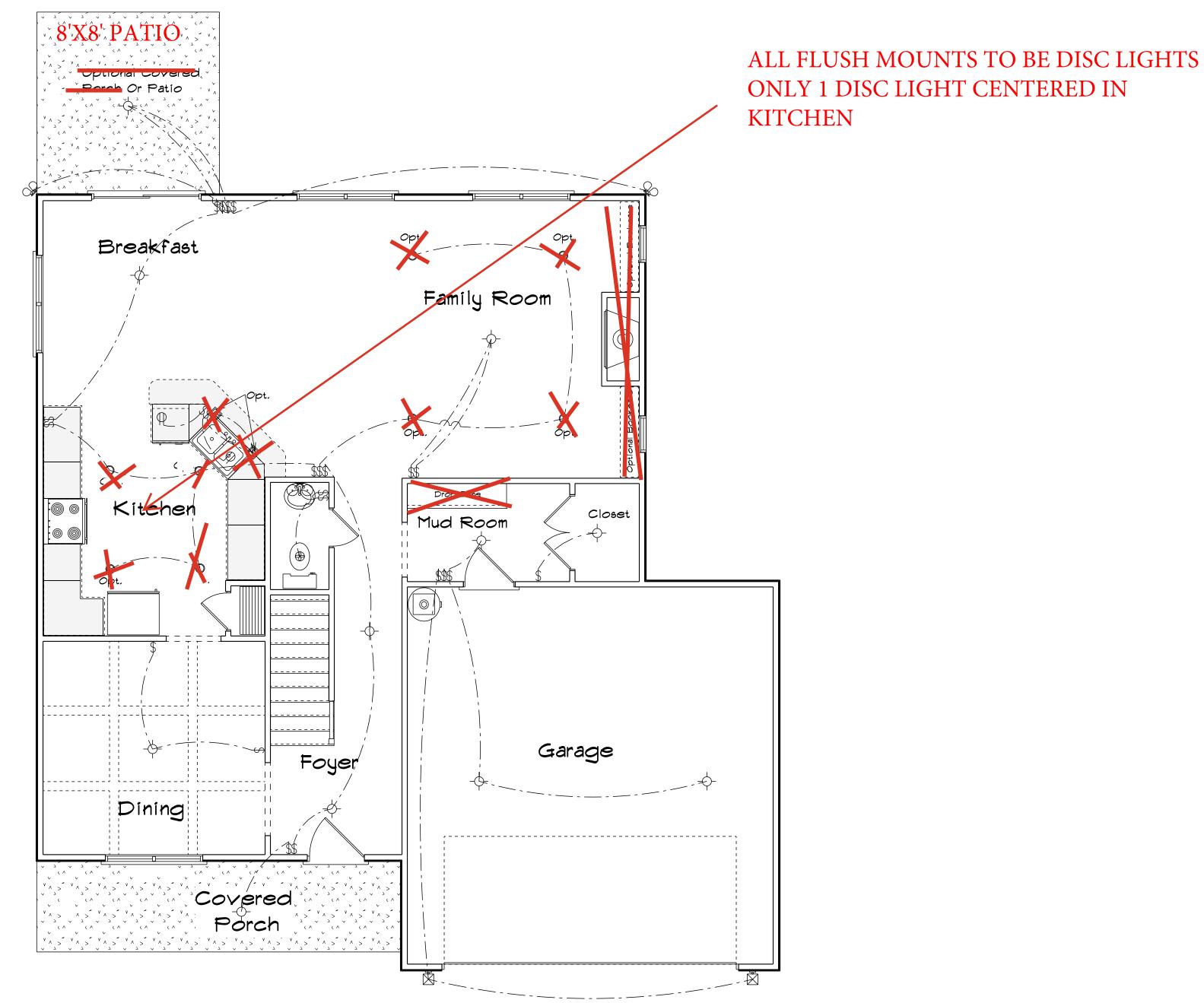
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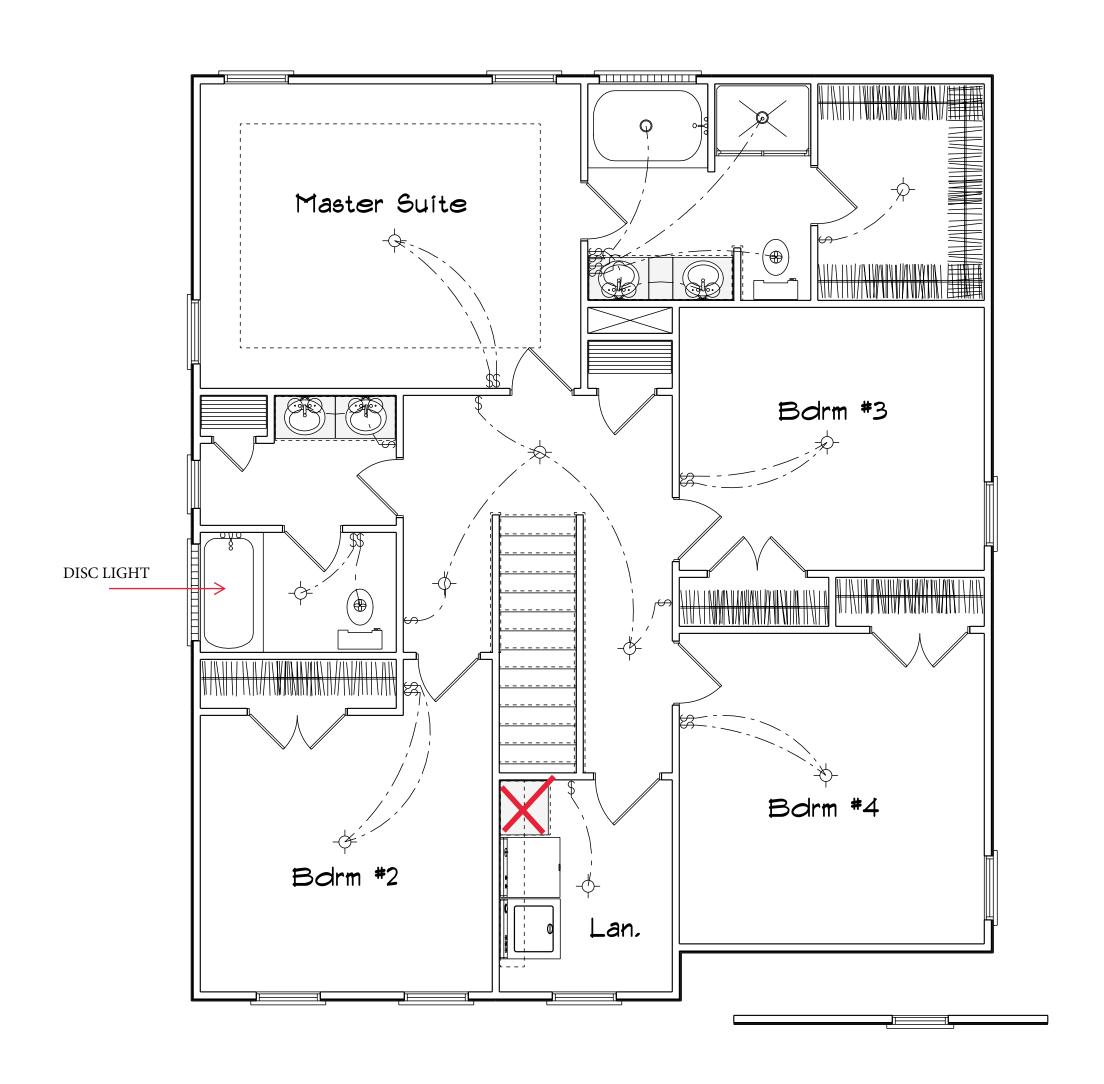
STRUCTURAL NOTES



NO COFFER CEILING

First Floor Electrical Plan





Second Floor Electrical Plan