4/1 GBG WINDOW PATTERN

LBM-000-004

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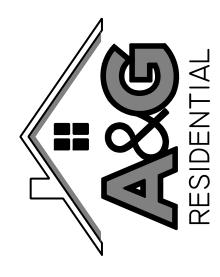
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S.C. CERTIFICATE NO.: 4679



A&G RESIDENTIAL UNION DRIVE RIGHT

DATE: NOVEMBER 29, 2021

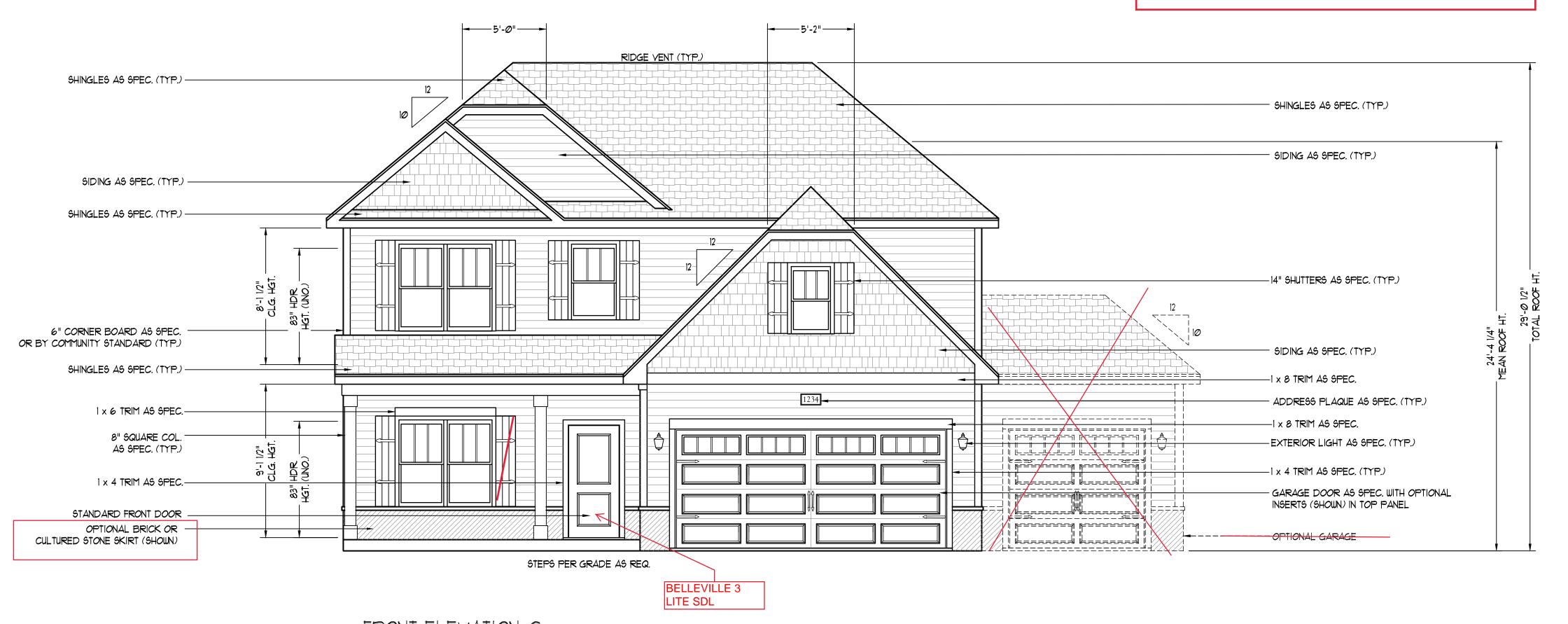
SCALE: AS NOTED

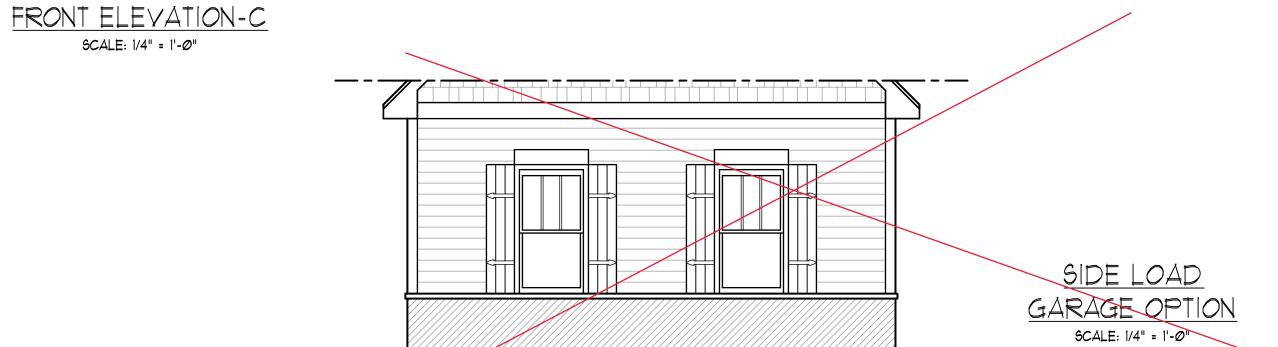
DRAWN BY: WG ENGINEERED BY:

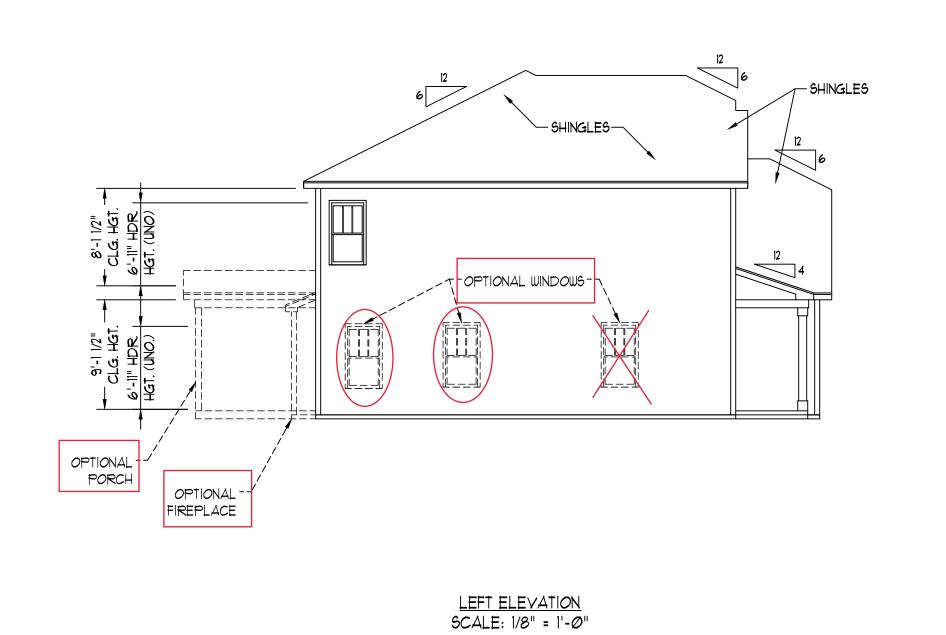
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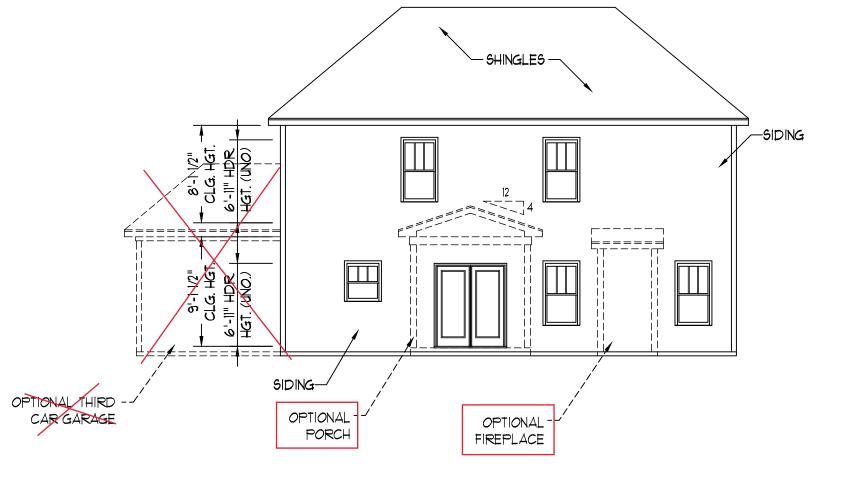
C - ELEVATIONS

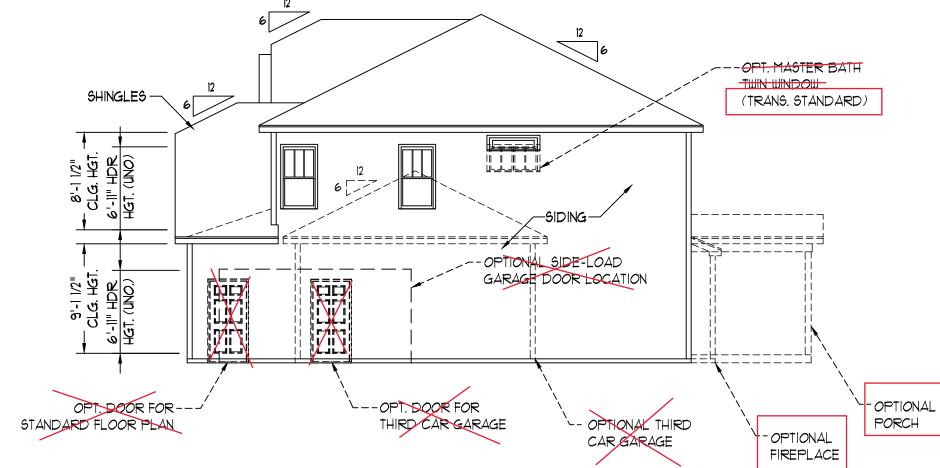
A-3











RIGHT ELEVATION SCALE: 1/8" = 1'-0"

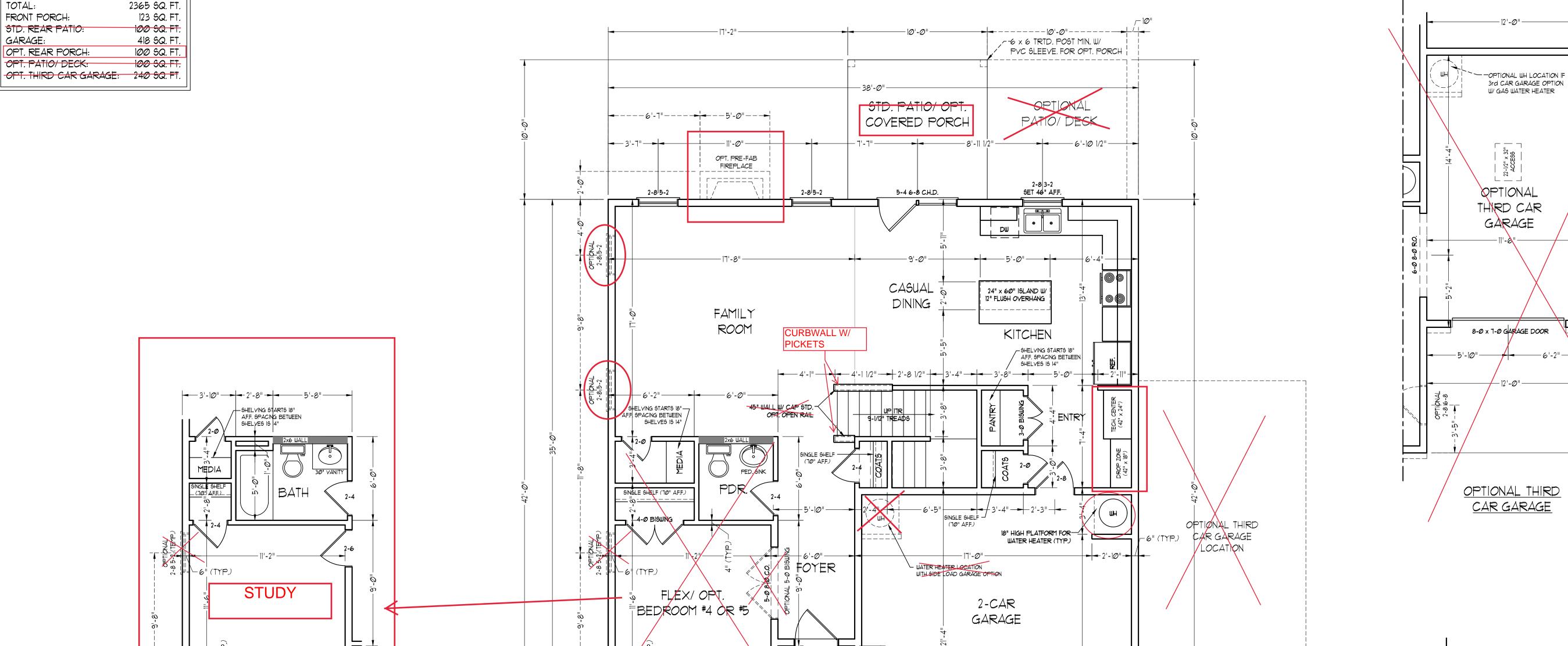
REAR ELEVATION SCALE: 1/8" = 1'-0"

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OPTIONAL VENEER — (SEE ELEVATION PAGES FOR LOCATIONS AND CONDITIONS)

8" SQUARE COLUMN — AS SPEC. (TYP.)

2-8 5-0 TWIN



-6" (TYP.)

16-0 x 7-0 GARAGE DOOR

FRONT PORCH

*NOTE: ALL EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 6 @ 16" O.C. (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).

SQUARE FOOTAGE

1038 SQ. FT. 1327 SQ. FT.

1st FLOOR:

GARAGE:

2nd FLOOR: TOTAL:

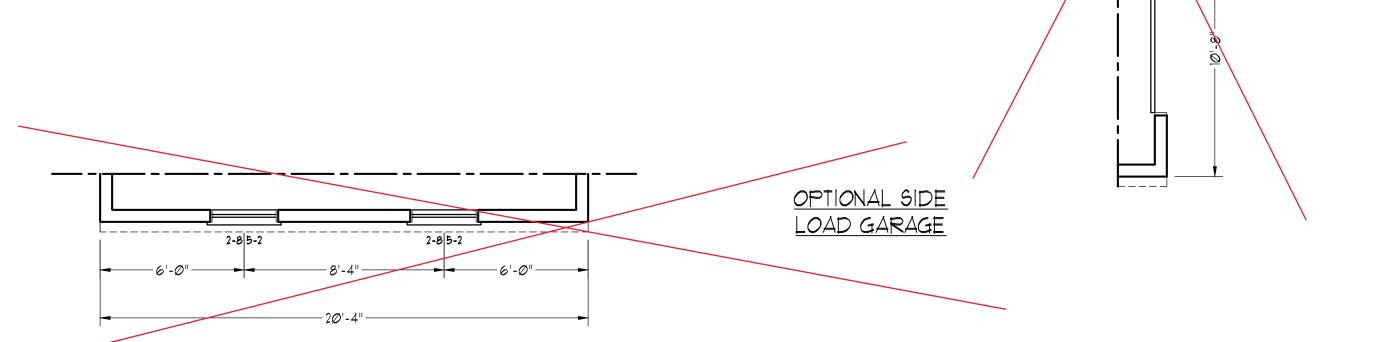
FRONT PORCH:

STD. REAR PATIO:

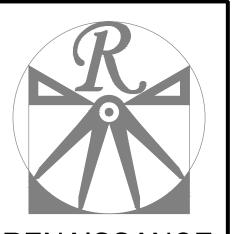
OPT. REAR PORCH:

OPT. PATIO/ DECK:

* SHADED INTERIOR WALLS ARE TO BE 2 x 6 @ 16" O.C. (LOAD BEARING) OR 2 x 6 @ 24" O.C. (NON-LOAD BEARING)



— OPTIONAL VENEER (SEE ELEVATION PAGES FOR LOCATIONS AND CONDITIONS)



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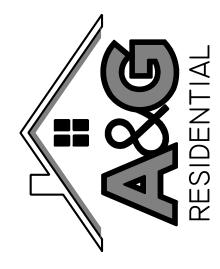
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RESIDEN

DATE: MARCH 16, 2021

SCALE: 1/4"=1'-0" DRAWN BY: WG

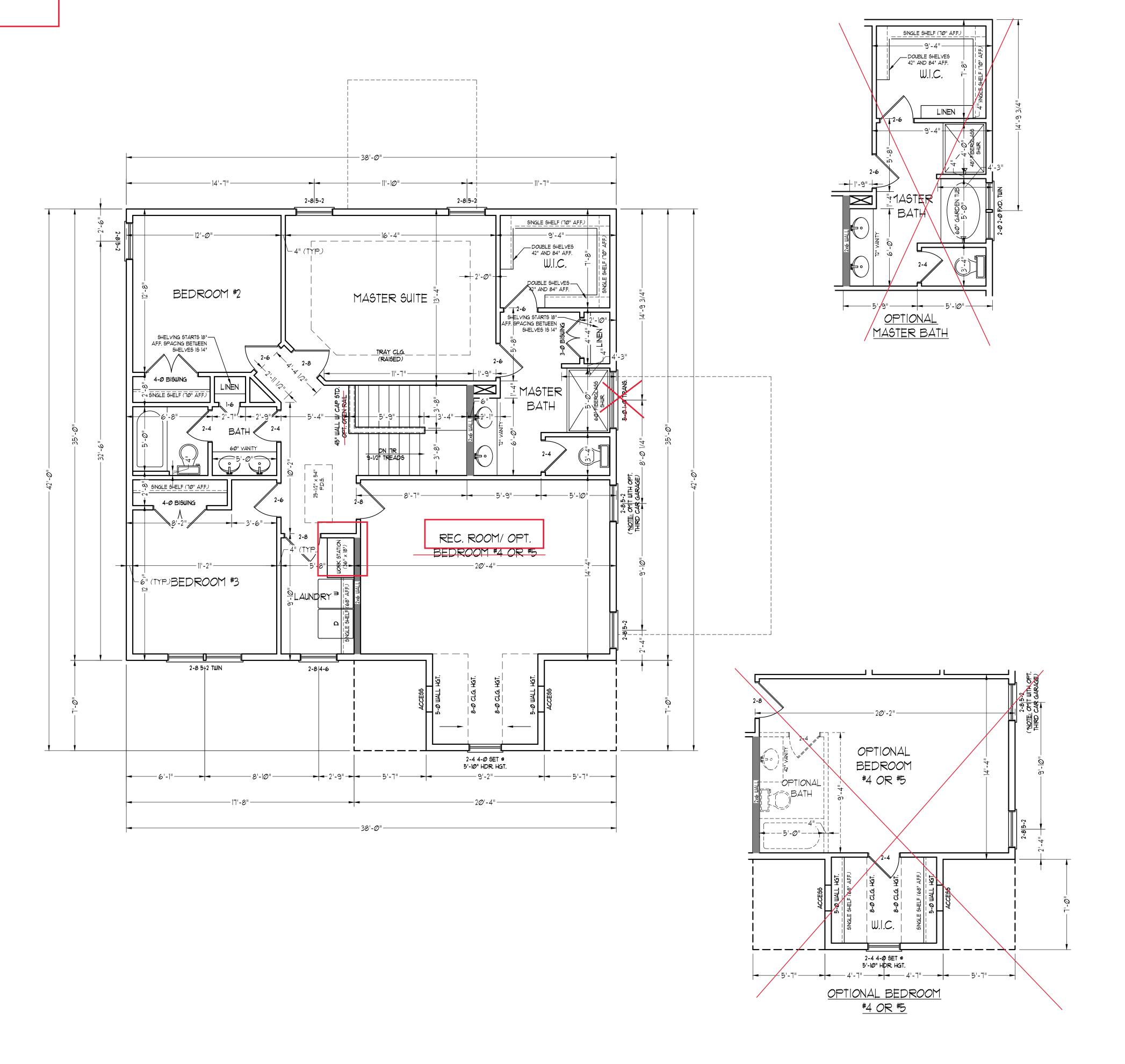
ENGINEERED BY:

REVIEWED BY:

FIRST FLOOR PLAN

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2x4 WALLS



*NOTE: ALL EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 6 @ 16" O.C. (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).

2x6 WA

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* SHADED INTERIOR WALLS ARE TO BE 2 x 6 @ 16" O.C. (LOAD BEARING) OR 2 x 6 @ 24" O.C. (NON-LOAD BEARING)

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S.C. CERTIFICATE NO.: 4679



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DATE: MARCH 16, 2021

REV.:

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

DRAWN BY: WG

ENGINEERED BY:
REVIEWED BY:

SECOND FLOOR PLAN

A-5

2x4 WALLS

ELECTRICAL LAYOUT NOTES: I.) BLOCK AND WIRE FOR ALL CELING FANS PER PLAN. 2.) VANITY LIGHTS TO BE SET 9 90" AFF. (TYP.) 3.) ADDITIONAL EXTERIOR OUTLETS REQUIRED BY CODE TO BE

LOCATED BY ELECTRICIAN.

ROUGH OPENINGS.

4.) PLACE SWITCHES 8" (MIN.) FROM

ELECTRICAL LEGEND

IIØ ∨ OUTLET ⇔ 110 V GFI OUTLET 👄

110 V SWITCHED OUTLET 👄

IIØ V BASEBOARD OUTLET ⇔BB 4-PLEX

COUNTER OR FLOOR MOUNTED

COUNTER OR FLOOR MOUNTED 110V GFI WEATHERPROOF 😄

22Ø ∨ OUTLET 👄

IIØ V DEDICATED CIRCUIT 🔌 220 V DEDICATED CIRCUIT

SPECIAL PURPOSE (240 V, ETC.)

WALL MOUNT LIGHT -

CEILING MOUNT LIGHT PENDANT LIGHT -P-

RECESSED CAN LIGHT MINI CAN LIGHT 🔘

EYEBALL LIGHT

FLUORESCENT LIGHT UNDERCABINET LIGHT

SWITCH

DIMMER SWITCH D\$

TELEPHONE A

DATA \triangle

TELEPHONE AND DATA $oldsymbol{\Lambda}$

TY CONNECTION -TY TV/ DATA -

CONDUIT FOR COMPONENT WIRING -ED

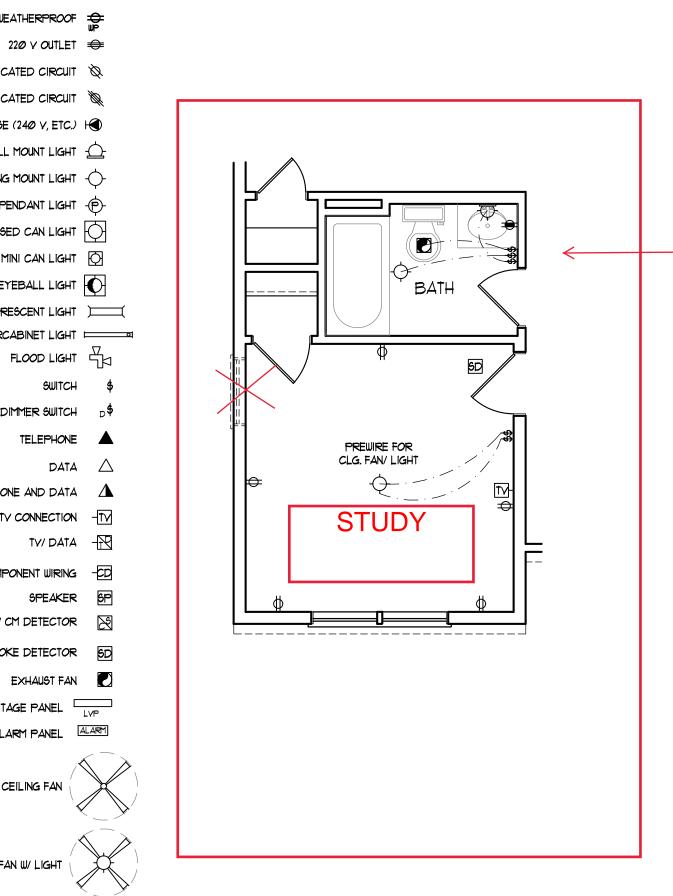
SPEAKER SP 110 V SMOKE/ CM DETECTOR

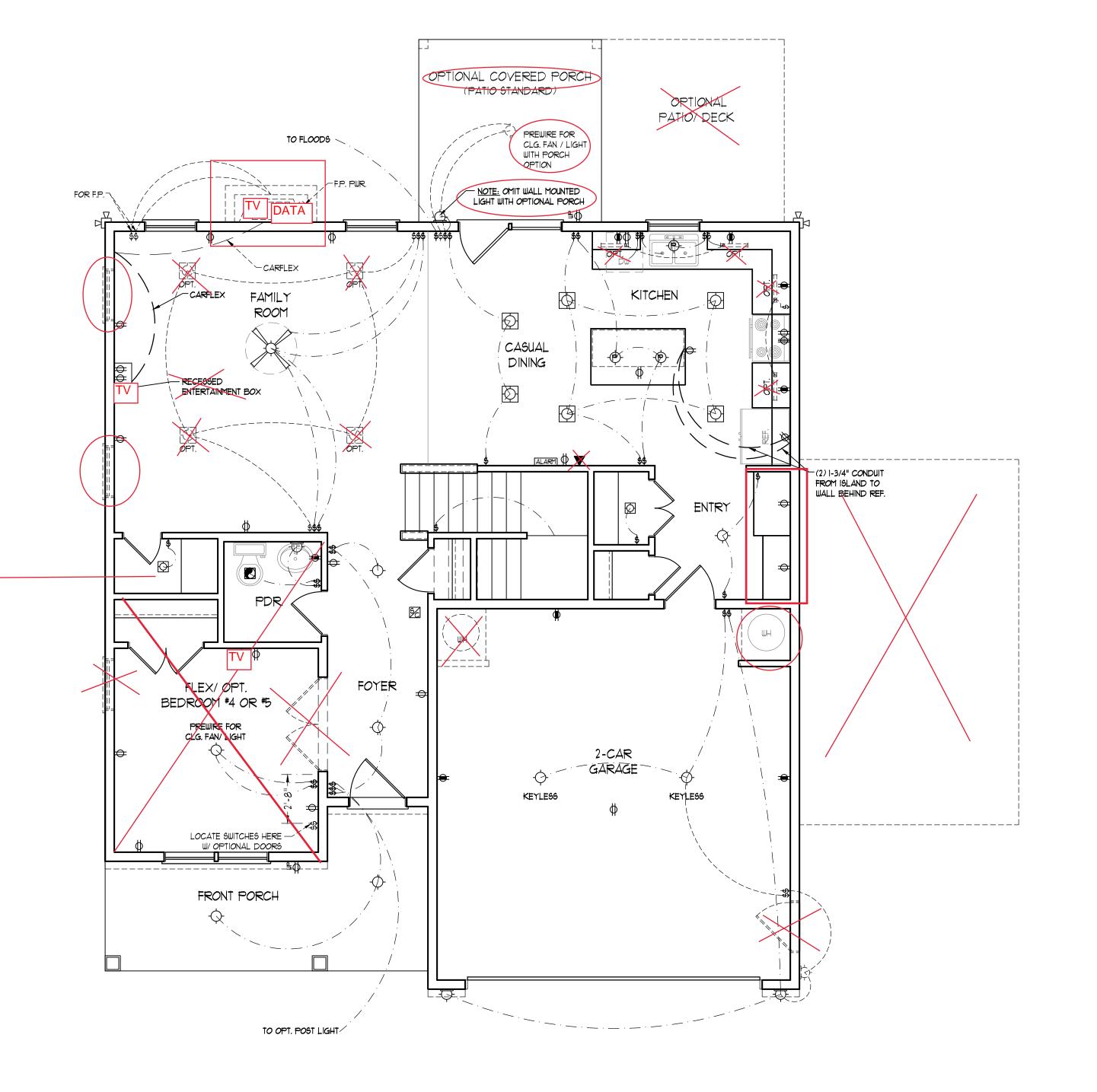
110 V SMOKE DETECTOR 6D

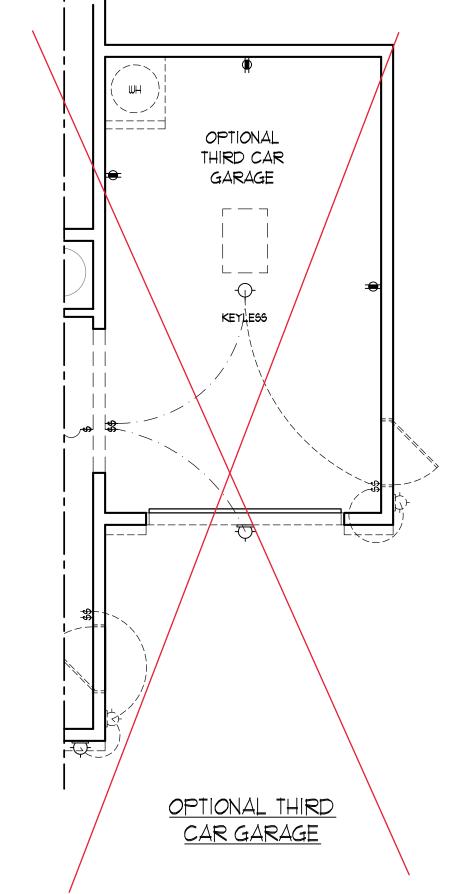
EXHAUST FAN LOW VOLTAGE PANEL LYP

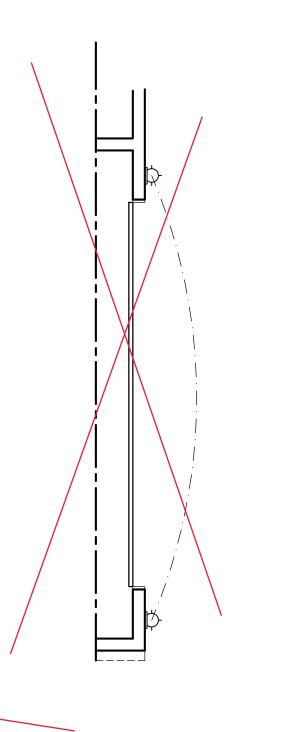
ALARM PANEL ALARM



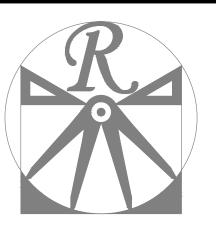








OPTIONAL SIDE LOAD GARAGE



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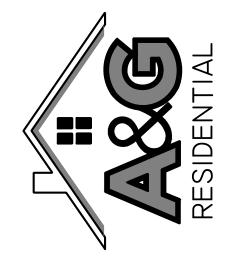
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3 RESIDENTIAL

DATE: MARCH 16, 2021 REV.:

SCALE: 1/4"=1'-0" DRAWN BY: WG

ENGINEERED BY:

REVIEWED BY:

FIRST FLOOR ELECTRICAL PLAN

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2x4 WALLS

ELECTRICAL LAYOUT NOTES:

1.) BLOCK AND WIRE FOR ALL CELING FANS PER PLAN.

2.) VANITY LIGHTS TO BE SET

(a) 90" AFF. (TYP.)

3.) ADDITIONAL EXTERIOR OUTLETS
REQUIRED BY CODE TO BE
LOCATED BY ELECTRICIAN.

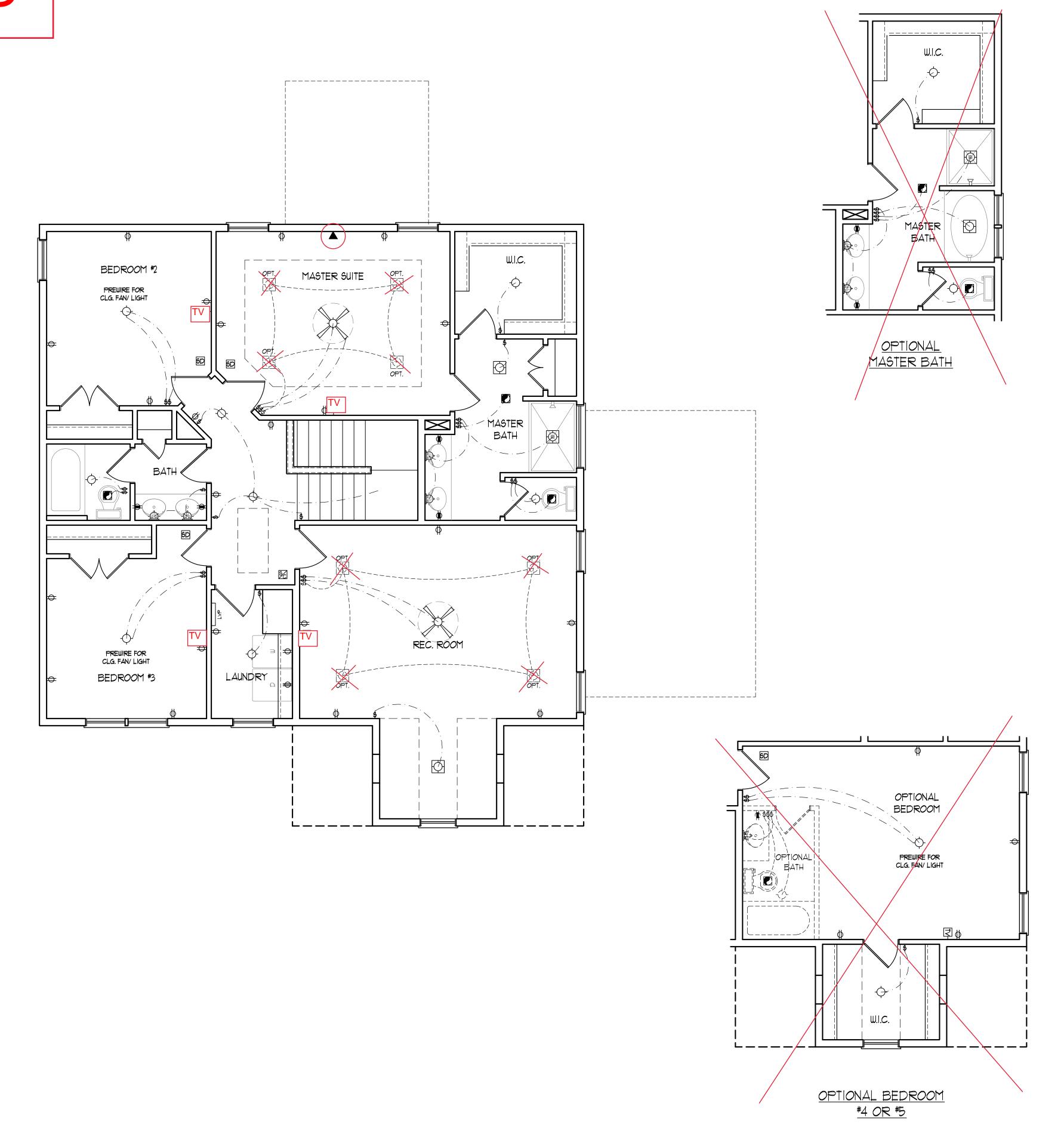
4.) PLACE SWITCHES 8" (MIN.) FROM
ROUGH OPENINGS.

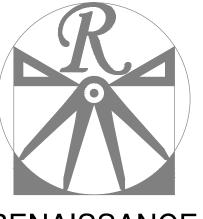
ELECTRICAL LEGEND

- IIØ ∨ OUTLET ⇔
- 110 ∨ GFI OUTLET 👄
- 110 V SWITCHED OUTLET 👄
- IIØ V BASEBOARD OUTLET → BB
- 4-PLEX (COUNTER OR FLOOR MOUNTED (COUNTED (COUNT
- COUNTER OR FLOOR MOUNTED 110V GFI
 - WEATHERPROOF ++-
 - 22Ø ∨ OUTLET 👄
 - IIØ V DEDICATED CIRCUIT 🔌
 - 220 Y DEDICATED CIRCUIT (SPECIAL PURPOSE (240 Y, ETC.)
 - WALL MOUNT LIGHT -
 - CEILING MOUNT LIGHT
 - PENDANT LIGHT -
 - RECESSED CAN LIGHT
 - MINI CAN LIGHT (
 - FLUORESCENT LIGHT UNDERCABINET LIGHT
 - FLOOD LIGHT SWITCH \$
 - DIMMER SWITCH D\$
 - TELEPHONE A
 - TELEPHONE AND DATA
 - TV CONNECTION -TY
- CONDUIT FOR COMPONENT WIRING -CD
- SPEAKER SP
- IIØ V SMOKE/ CO DETECTOR SD
 - EXHAUST FAN
- LOW VOLTAGE PANEL LVP

ALARM PANEL ALARM







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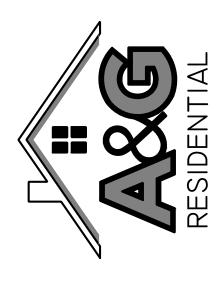
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DATE: MARCH 16, 2021

REV.:

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

DRAWN BY: WG

ENGINEERED BY:

REVIEWED BY:

SECOND FLOOR ELECTRICAL PLAN

E-2

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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 INCLUDING ROOF SYSTEM.
 STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION WITH SPECIAL CONSIDERATION TO CHAPTER 45 ("HIGH WIND ZONES" FOR 150
- EDITION WITH SPECIAL CONSIDERATION TO CHAPTER 45 ("HIGH WIND ZONES" FOR 150 MPH WINDS).

 BUILDER 15 TO PROVIDE FRAMING 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 4504 OF THE NORTH CAROLINA
RESIDENTIAL CODE, 2018 EDITION.

MEAN ROOF HEIGHT IS LESS THAN 30 FEET.

- 6. WALL CLADDING DESIGNED FOR +24.3 PSF AND -32 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP).
 1. ROOF CLADDING DESIGNED FOR +22.2 PSF AND -28 PSF FOR ROOF PITCHES 1/12 TO
- 12/12 AND +14 PSF AND -51 PSF FOR ROOF PITCHED 2.25/12 TO 1/12. 3. 1/16" OSB SHEATHING IS REQUIRED ON ALL EXTERIOR WALLS.
- 9. WALLS TO BE BRACED IN ACCORDANCE
 WITH SECTION R602.10 OF THE NORTH
 CAROLINA RESIDENTIAL CODE, 2018
 EDITION AND AS NOTED ON PLANS.
 10. ENERGY EFFICIENCY COMPLIANCE AND
 INSULATION VALUES OF THE BUILDING TO
 BE IN ACCORDANCE WITH CHAPTER II OF

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

THE NCRC, 2018 EDITION.

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

 2. STRUCTURAL DESIGN PER NORTH CAROLINA
- RESIDENTIAL CODE, 2018 EDITION.

 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 T" INTO MASONRY OR CONCRETE. LOCATE
- BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.

 4. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.

 5. EXTERIOR WALLS DESIGNED FOR 120 MPH
- 6. WALL CLADDING DESIGNED FOR +15.5 PSF AND -20 PSF (+/- INDICATE POSITIVE /
- NEGATIVE PRESSURE (TYP).

 1. 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 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 BRACING NOTES AND DETAILS SHEET FOR
- BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.

 9. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE
- NCRC, 2018 EDITION.

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

	LEGEND		
CONT	CONTINUOUS		
XJ	EXTRA JOIST		
DJ	DOUBLE JOIST		
ŤJ	TRIPLE JOIST		
EA	EACH		
FDN	FOUNDATION		
FTG	FOOTING		
oc	ON CENTER		
SPF	SPRUCE PINE FIR		
SYP	SOUTHERN YELLOW PINE		
TRID	PRESSURE TREATED		
TYP	TYPICAL		
UNO	UNLESS NOTED OTHERWISE		

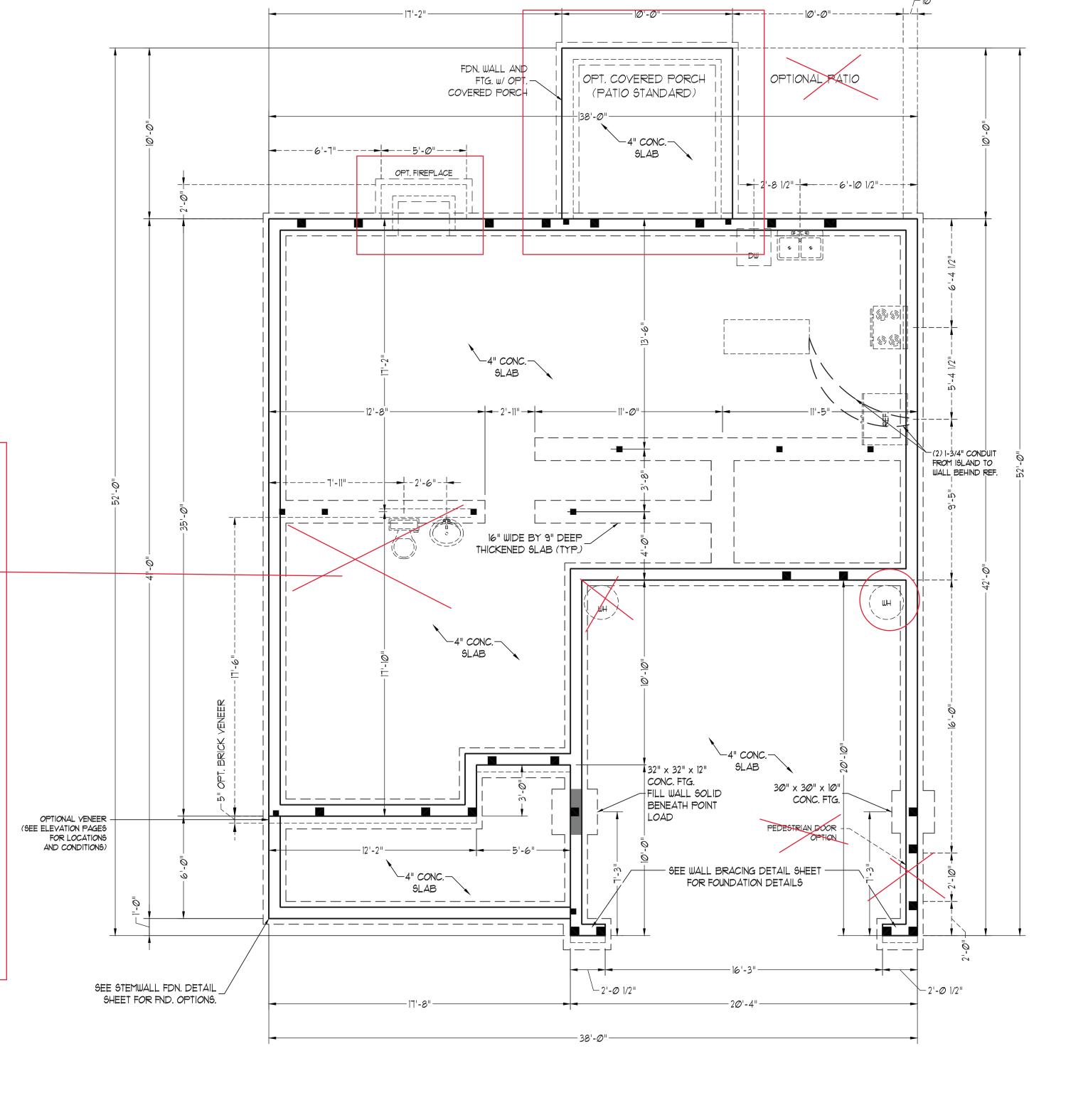
2X4 WALLS

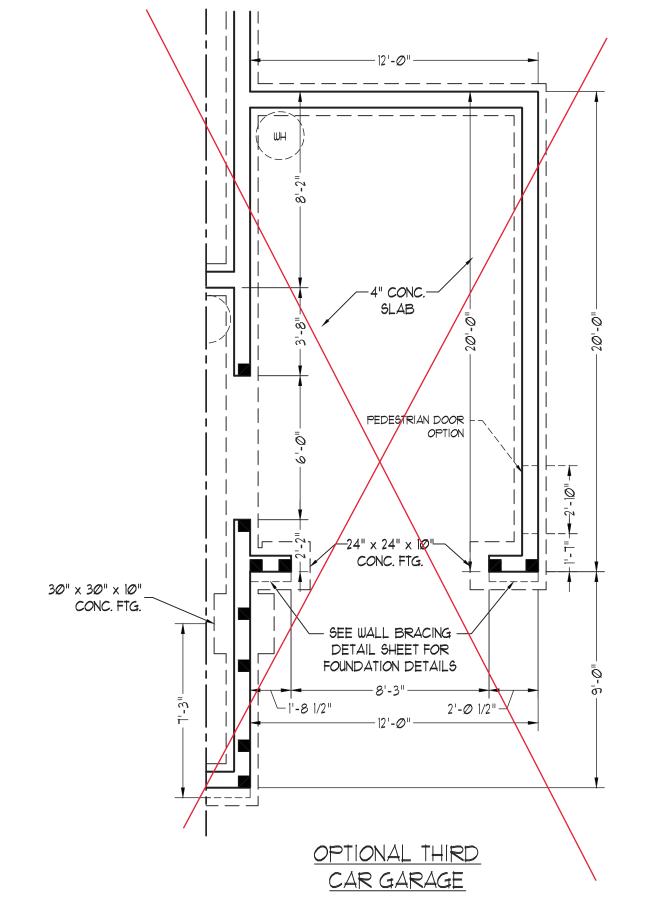
12'-8"

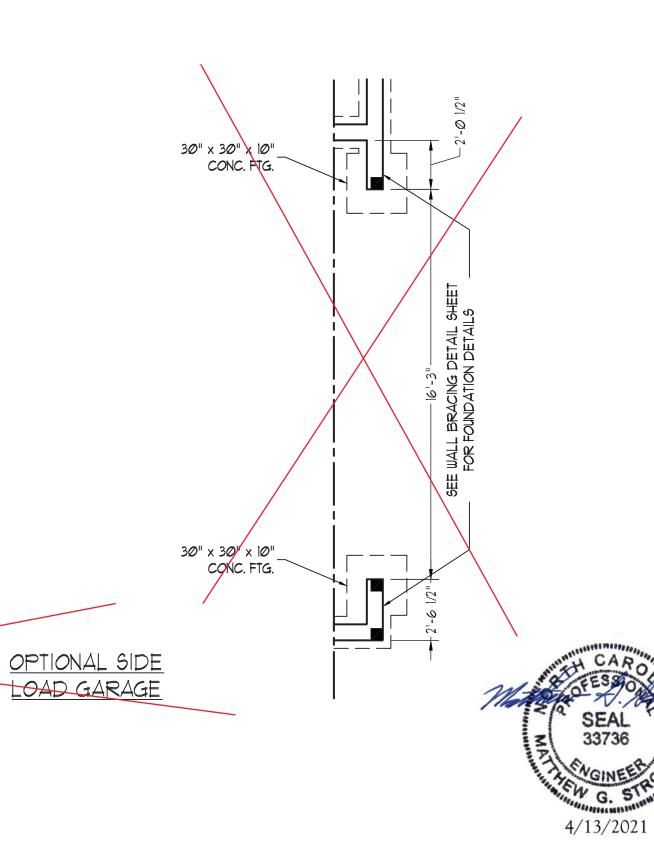
--5'-2"----2'-9"---2'-8"--

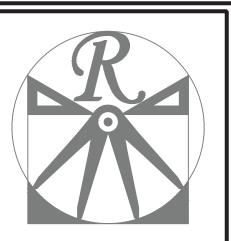
~4" CONC. ~

SLAB









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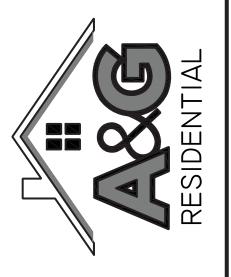
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A&G RESIDENTIAL UNION

DATE: MARCH 16, 2021

REV.:

SCALE: 1/4"=1'

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

DRAWN BY: WG

ENGINEERED BY:

REVIEWED BY:

STEMWALL SLAB FOUNDATION PLAN

S-

BRACED WALL DESIGN

RECTANGLE A SIDE 1A <u>SIDE IB</u> METHOD: CS-WSP/PF/GB METHOD: CS-WSP/PF

TOTAL REQUIRED LENGTH: 13.6' SIDE 2A

METHOD: CS-WSP TOTAL REQUIRED LENGTH: 13.6' TOTAL REQUIRED LENGTH: 2.5' TOTAL PROVIDED LENGTH: 20.67' TOTAL PROVIDED LENGTH: 12.0' SIDE 3B

METHOD: CS-WSP TOTAL REQUIRED LENGTH: 12.4' TOTAL PROVIDED LENGTH: 39.17' TOTAL PROVIDED LENGTH: 15.58'

SIDE 4B/3A SHARED METHOD: CS-WSP METHOD: CS-WSP TOTAL REQUIRED LENGTH: 12.4'

TOTAL REQUIRED LENGTH: 14.4' TOTAL PROVIDED LENGTH: 39.5' TOTAL PROVIDED LENGTH: 19.17'

LEGEND CONT | CONTINUOUS RECTANGLE B XJ EXTRA JOIST DJ DOUBLE JOIST TOTAL REQUIRED LENGTH: 2.5' TJ TRIPLE JOIST TOTAL PROVIDED LENGTH: 18.79' TOTAL PROVIDED LENGTH: 5.63' EA EACH METHOD: CS-WSP

NUMBER OF STUDS DSP DOUBLE STUD POCKET TSP TRIPLE STUD POCKET OC ON CENTER METHOD: CS-WSP SPRUCE PINE FIR TOTAL REQUIRED LENGTH: 2.0' SYP SOUTHERN YELLOW PINE

TRTD | PRESSURE TREATED TYPICAL UNO UNLESS NOTED OTHERWISE

BRACED WALL DESIGN NOTES:

- BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
- 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.
- *GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 7" 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.

STRUCTURAL NOTES:

- 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. PROVIDE AN EXTRA JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS WHERE NOTED ON PLANS...
- 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.)
- 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. 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 WAL			
HEADER SPAN (FEET)	MAXIMUM STUD SPACING (INCHE (PER TABLE R602.3(5)		
(1 == 1)	16	24	
UP TO 3'	1	1	
4'	2	1	
8'	3	2	
12'	5	3	
16'	6	4	

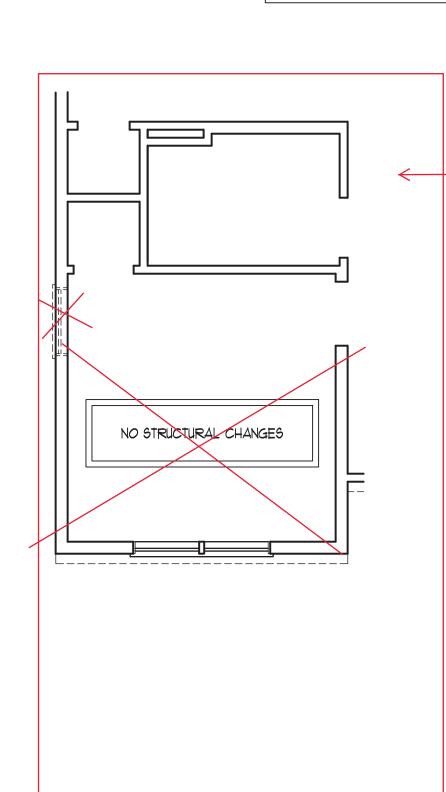
2X4 WALLS

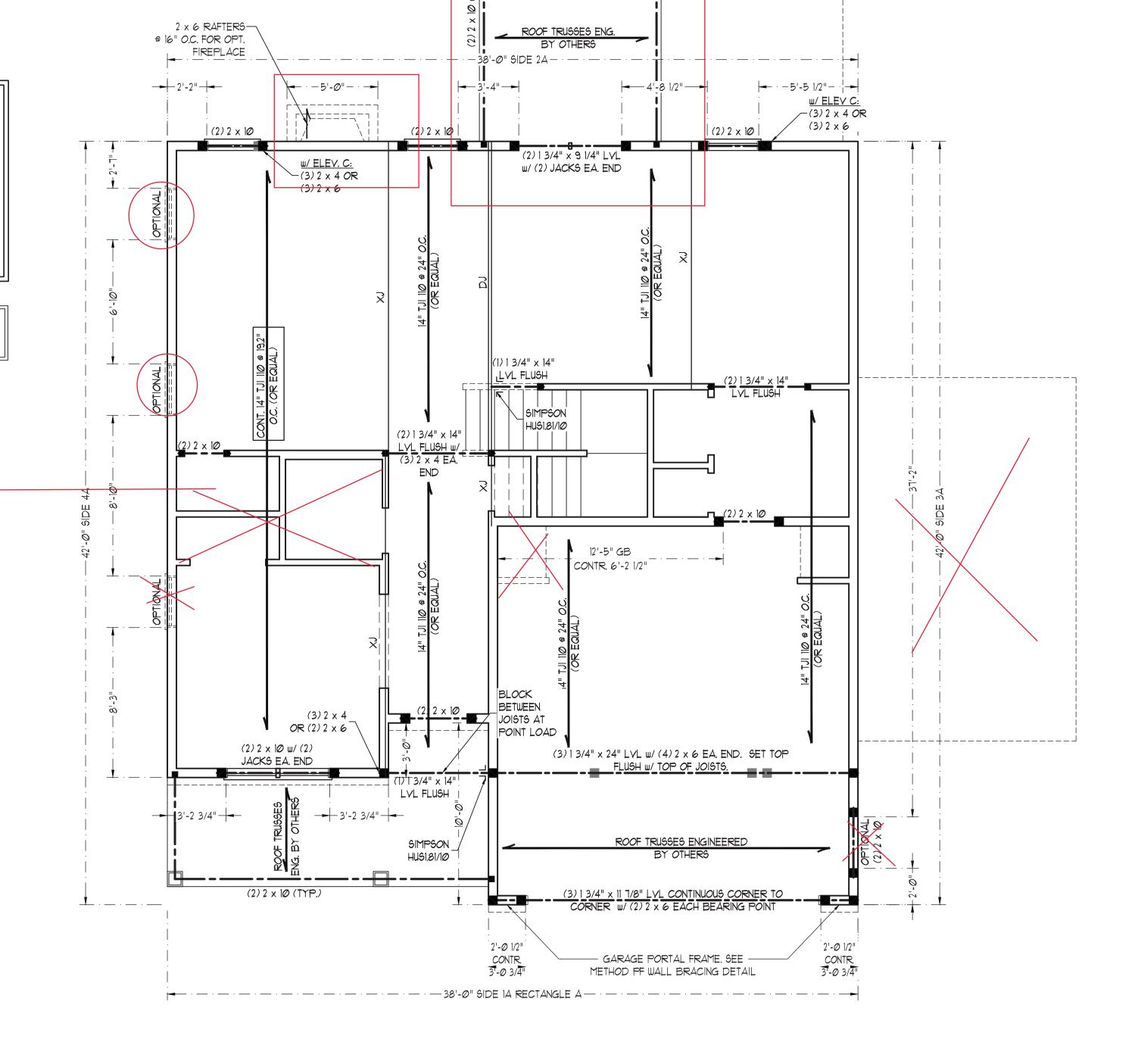
4 x 4 TRTD. POST

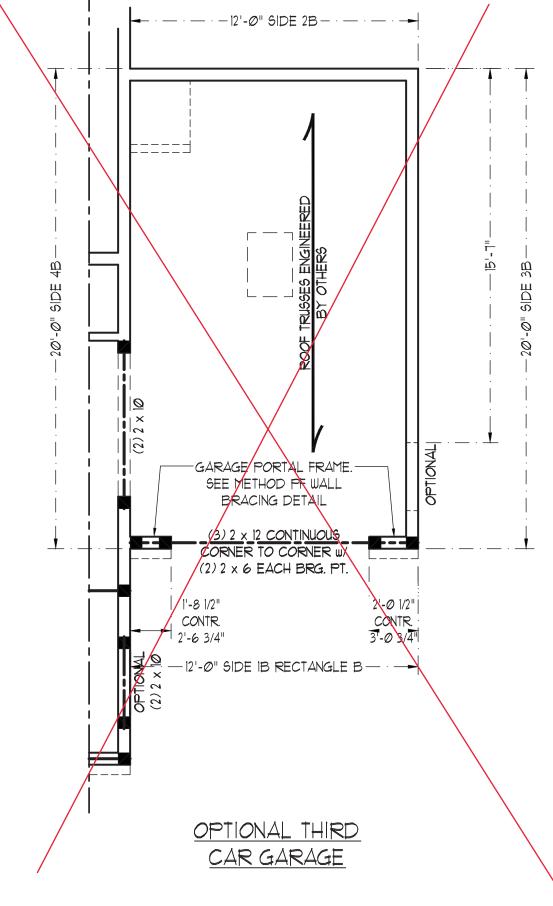
MIN. (TYP.)

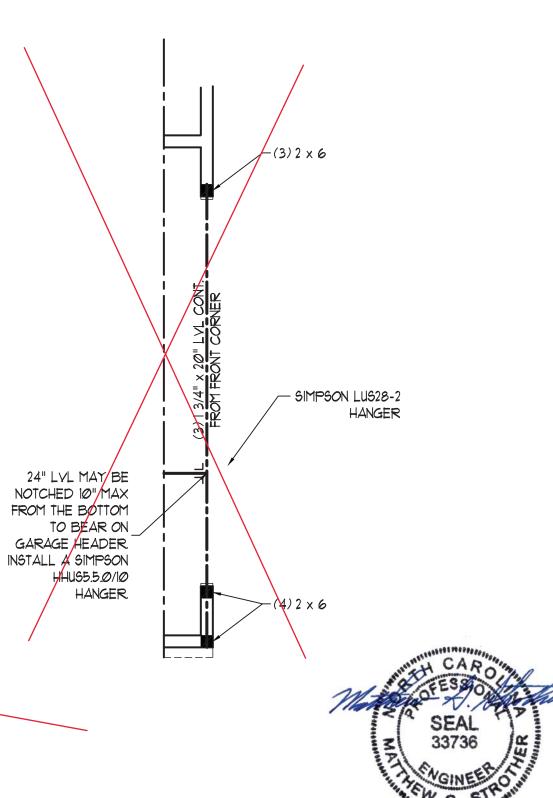
*NOTE: ALL EXTERIOR WALLS AND ATTIC WALLS ARE TO BE 2 x 6 @ 16" 0.C. (UNO), 2 x 4 @ 16" O.C. EXTERIOR WALLS MAY BE CONSTRUCTED IN LIEU OF 2 x 6 WALLS (UNO). ALL INTERIOR LOAD BEARING WALLS ARE TO BE 2 x 4 @ 16" O.C. (UNO) AND NON-LOAD BEARING INTERIOR WALLS ARE TO BE || 2 × 4 @ 24" O.C. (UNO).

> NOTE: BCI 45006-1.8 JOISTS MAY BE INSTALLED IN LIEU OF TJI 110 JOISTS AT THE DEPTH AND SPACING INDICATED ON THE



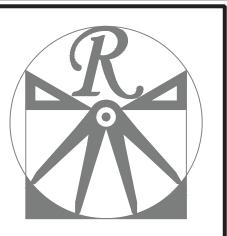






4/13/2021

OPTIONAL SIDE LOAD GARAGE



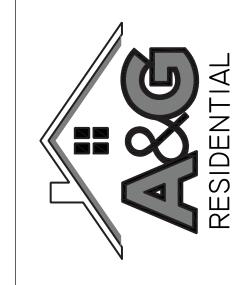
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j.s.Thompson ENGINEERING. INC 606 WADE AVE., SUITE 104 RALEIGH, NC 27605 PHONE: (919) 789-9919 FAX: (919) 789-9921 N.C. CERTIFICATE NO.: C-1733



RESIDENT ON

DATE: MARCH 16, 2021 REV.:

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

DRAWN BY: WG ENGINEERED BY: **REVIEWED BY:**

SECOND FLOOR FRAMING PLAN

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J.S.THOMPSON ENGINEERING, INC

606 WADE AVE., SUITE 104

RALEIGH, NC 27605

PHONE: (919) 789-9919

FAX: (919) 789-9921

N.C. CERTIFICATE NO.: C-1733

BRACED WALL DESIGN NOTES:

- BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
- CS-WSP REFERS TO "CONTINUOUS SHEATHING WOOD STRUCTURAL PANELS" CONTRACTOR IS TO INSTALL 7/16" 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 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 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

*NOTE: ALL EXTERIOR WALLS AND

ATTIC WALLS ARE TO BE 2 x 6 @ 16"

O.C. (UNO). 2 x 4 @ 16" O.C. EXTERIOR

WALLS MAY BE CONSTRUCTED IN LIEU

LOAD BEARING WALLS ARE TO BE 2 X

BEARING INTERIOR WALLS ARE TO BE

OF 2 x 6 WALLS (UNO). ALL INTERIOR

4 @ 16" O.C. (UNO) AND NON-LOAD

2 x 4 @ 24" O.C. (UNO).

ANALYSIS IS REQUIRED. 2. SHEATH ALL EXTERIOR WALLS WITH 7/16" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

STRUCTURAL NOTES:

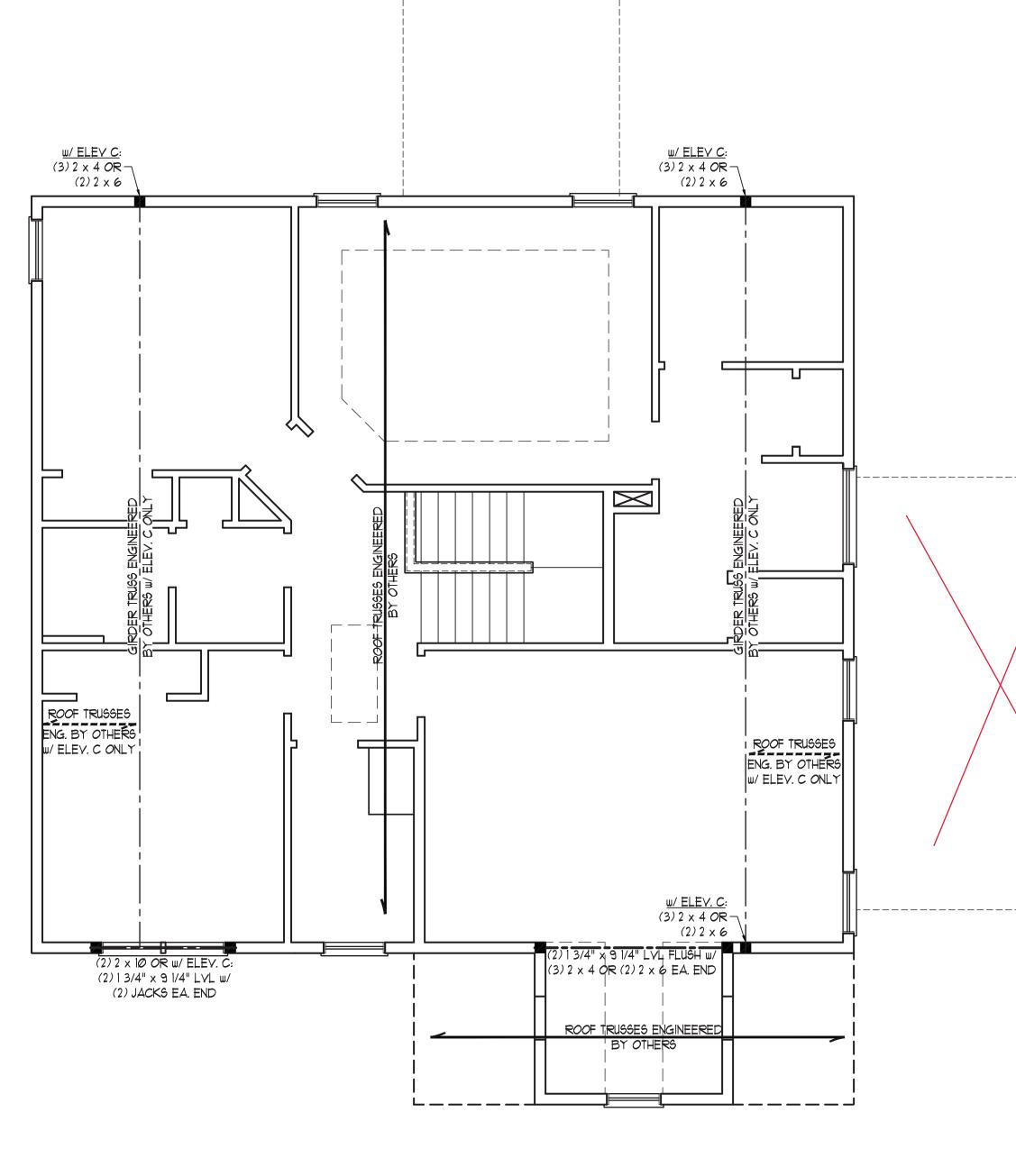
- ALL FRAMING LUMBER TO BE #2 SPF
- ALL LOAD BEARING HEADERS TO BE (2) 2×6 (UNO).
- WINDOW AND DOOR HEADERS TO BE SUPPORTED w/(1) JACK STUD AND (1) KING STUD EA. END (UNO.). SEE TABLE R602.7.5 FOR ADDITIONAL KING STUD REQUIREMENTS.
- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SQUARES TO BE (2) STUDS (UNO.)
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

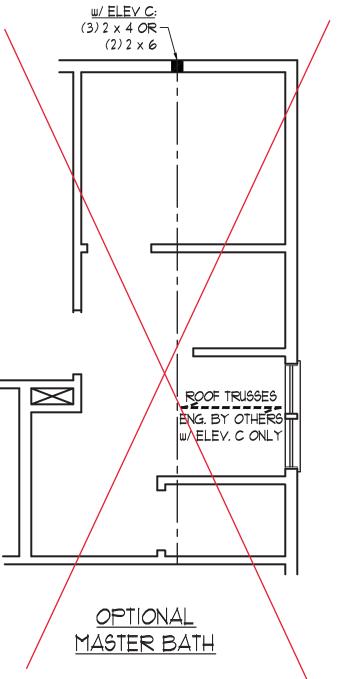
TABLE R602.7.5 MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF HEADERS IN EXTERIOR IIIALLS

AT LACH LIND OF HEADERS IN EXTERIOR WA				
	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	

LEGEND		
CONT	CONTINUOUS	
XJ	EXTRA JOIST	
DJ	DOUBLE JOIST	
ŤJ	TRIPLE JOIST	
EA	EACH	
()	NUMBER OF STUDS	
DSP	DOUBLE STUD POCKET	
TSP	TRIPLE STUD POCKET	
oc	ON CENTER	
SPF	SPRUCE PINE FIR	
SYP	SOUTHERN YELLOW PINE	
TRTD	PRESSURE TREATED	
TYP TYPICAL		
UNO	UNLESS NOTED OTHERWISE	

2X4 WALLS





<u>w/ ELEV. C:</u> (3) 2 x 4 OR ¬ (2)2 x 6

ROOF TIRUSSES ENGINEERED

OPTIONAL BEDROOM #4 OR #5

BATH (NO STRUCTURAL CHANGES)



A&G RESIDENTIAI UNION

DATE: MARCH 16, 2021 REV.:

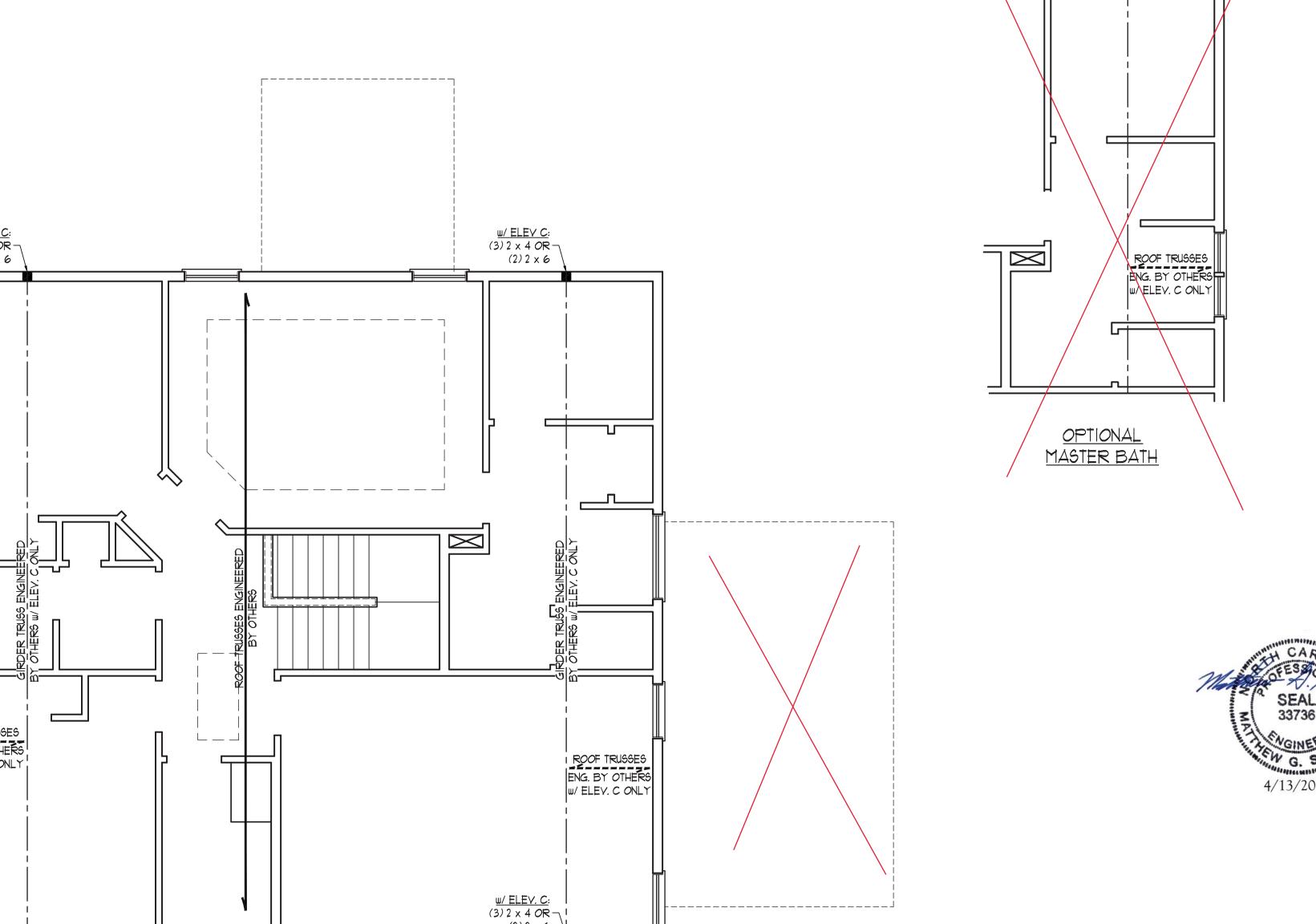
SCALE: 1/4"=1'-0" DRAWN BY: WG

ENGINEERED BY:

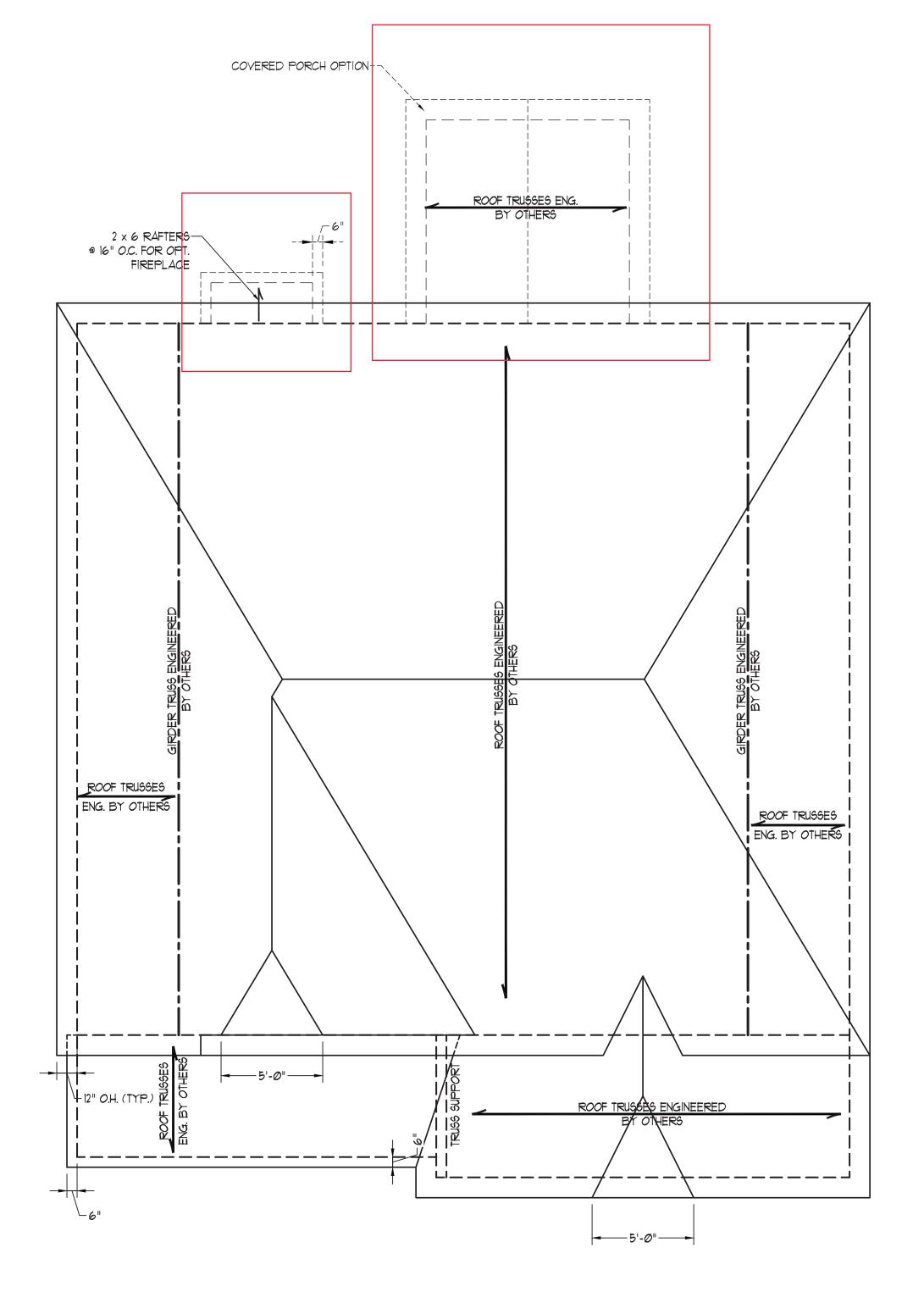
REVIEWED BY:

ATTIC FLOOR FRAMING PLAN

S-3



2X4 WALLS

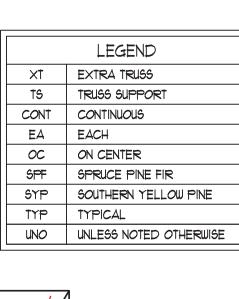


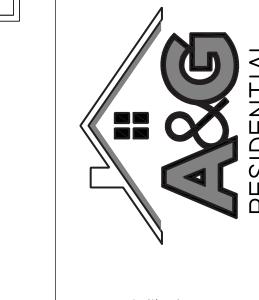
ELEVATION C

STRUCTURAL NOTES:

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

LEGEND			
XT	EXTRA TRUSS		
TS	TRUSS SUPPORT		
CONT	CONTINUOUS		
EA	EACH		
ОС	ON CENTER		
SPF	SPRUCE PINE FIR		
SYP	SOUTHERN YELLOW PINE		
TYP	TYPICAL		
UNO	UNLESS NOTED OTHERWISE		





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A&G RESIDENTIAL UNION DRIVE RIGHT

DATE: NOVEMBER 29, 2021

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

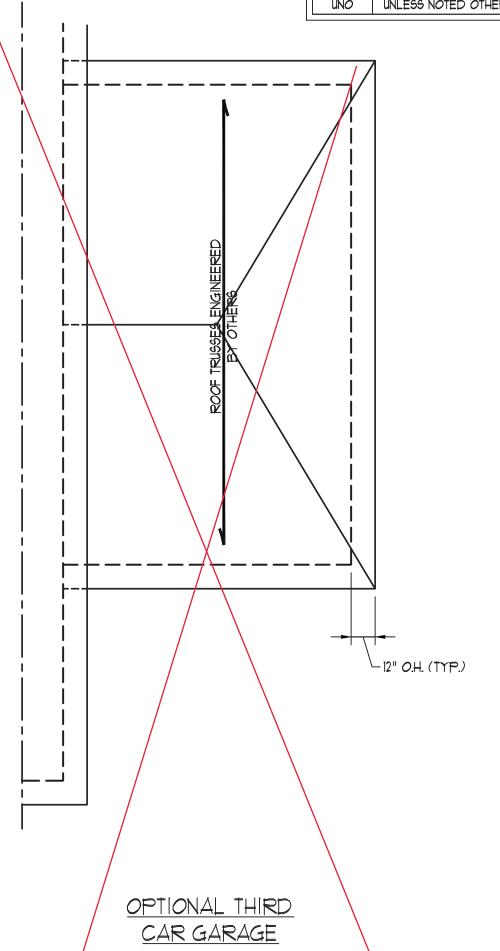
REVIEWED BY:

DRAWN BY: WG ENGINEERED BY:

ROOF PLAN ELEVATION - C

S-4

12/10/2021





DATE: NOVEMBER 1, 2018 SCALE: NTS

DRAWN BY: JST

ENGINEERED BY: JST

FOUNDATION DETAILS

2 x 4 STUD FRAMING (UNO) W/ TRTD. BOTTOM PLATE(S) BRICK TIES @ 1'-4" VERTICALLY AND 2'-6" HORIZONTALLY 2 x 4 TRTD. BOTTOM PLATE(6)--4" BRICK VENEER SECURED BY 1/2" DIA. BOLTS. SEE CHART FOR SPACING AND EMBEDMENT REQUIREMENTS WEEP HOLES 4" CONCRETE SLAB-W/ FIBER REINFORCING OR WELDED WIRE FABRIC 6 MIL. VAPOR-BARRIER LADDER WIRE EVERY OTHER 4" WASHED STONE COURSE UNDISTURBED EARTH, COMPACTED FILL -12" CMU BLOCK OR WASHED STONE TOP TWO COURSES OF STEM WALL AND-ALL CELLS W/ REINFORCEMENT TO BE WALL REINFORCEMENT, SEE CHART FOR SPACING

FILLED SOLID.

STEM WALL FON. DETAIL

-SIDING AS SPEC.

-LADDER WIRE IN TOP TWO

-OPTIONAL BRICK VENEER

COURSES (W/ VENEER ONLY)

-FINISHED GRADE

EVERY OTHER

COURSE

-WALL REINFORCEMENT, SEE

CHART FOR SPACING

-BRICK TIES @ I'-4" VERTICALLY AND

LADDER WIRE

EVERYMOTHER COURSE

-12" CMU BLOCK

-WALL REINFORCEMENT, SEE

CHART FOR SPACING

-20" WIDE BY 8" DEEP

CONT. CONC. FTG.

2'-6" HORIZONTALLY

-4" BRICK VENEER

-FLASHING

WEEP HOLES

H6" WIDE BY 8" DEEP

CONT. CONC. FTG.

-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.

SEE CHART FOR SPACING AND

THICKENED SLAB-

4" CONCRETE SLAB-

6 MIL. VAPOR-

UNDISTURBED EARTH,

COMPACTED FILL OR WASHED STONE

TOP TWO COURSES OF STEM WALL AND-

ALL CELLS W/ REINFORCEMENT TO BE

2 x 4 STUD FRAMING (UNO)

W/ TRTD. BOTTOM PLATE(S)

2 x 4 TRTD. BOTTOM PLATE(6)

SECURED BY 1/2" DIA. BOLTS.

EMBEDMENT REQUIREMENTS

SEE CHART FOR SPACING AND

4" CONCRETE SLAB-

6 MIL. VAPOR-

UNDISTURBED EARTH,

COMPACTED FILL

OR WASHED STONE

TOP TWO COURSES OF STEM WALL AND-

ALL CELLS w/ REINFORCEMENT TO BE

FILLED SOLID.

4" WASHED STONE

EMBEDMENT

BARRIER

W/ FIBER REINFORCING
OR WELDED WIRE FABRIC

FILLED SOLID.

W/ FIBER REINFORCING OR WELDED WIRE FABRIC

4" WASHED STONE

NOT REQUIRED

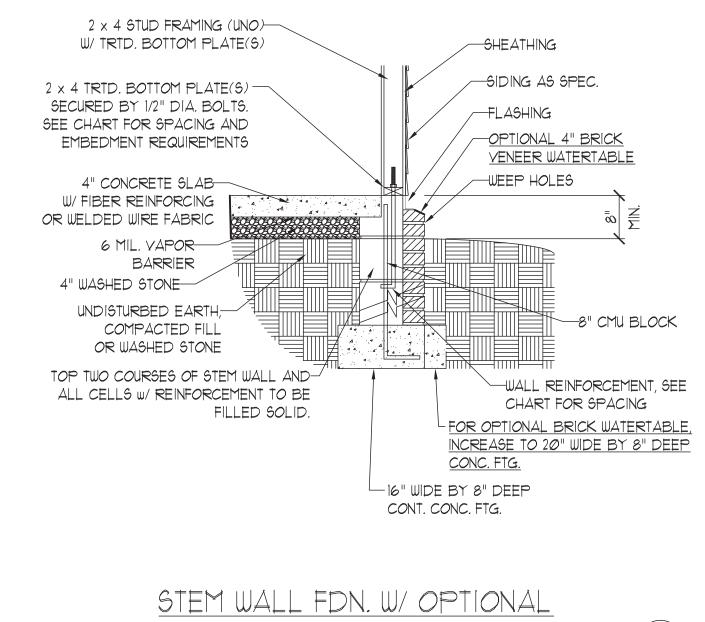
EMBEDMENT REQUIREMENTS



-20" WIDE BY 8" DEEP

4

CONT. CONC. FTG.



LIEU OF 1/2" ANCHOR BOLTS.

<u>5</u> †	EM WALL FDN. W/ BRICK D	DETAIL 3	STEM WALL FDN. W/ OPTIONA BRICK WATERTABLE DETAIL
	ANCHOR SPACING AND	NOTE:	
WIND ZONE	120 MPH	130 MPH	THREADED ROD WITH EPOXY,
SPACING	6'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS	4'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS	SIMPSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER ANCHOR BOLTS MAY BE USED IN

15" INTO MASONRY

7" INTO CONCRETE

MASONRY STEMWALL SPECIFICATIONS				
	MASONRY WALL TYPE			
WALL HEIGHT (FEET)	8" CMU	4" BRICK AND 4" CMU	4" BRICK AND 8" CMU	12" CMU
2 AND BELOW	UNGROUTED	GROUT SOLID	UNGROUTED	UNGROUTED
3	UNGROUTED	GROUT SOLID	UNGROUTED	UNGROUTED
4	GROUT SOLID	GROUT SOLID w/#4 REBAR @ 48" O.C.	GROUT SOLID	GROUT SOLID w/#4 REBAR @ 64" O.C.
5	GROUT SOLID w/ #4 REBAR @ 36" O.C.	NOT APPLICABLE	GROUT SOLID w/ #4 REBAR @ 36" O.C.	GROUT SOLID w/#4 REBAR @ 64" O.C.
6	GROUT SOLID w/ #4 REBAR @ 24" O.C.	NOT APPLICABLE	GROUT SOLID w/ #4 REBAR @ 24" O.C.	GROUT SOLID w/ #4 REBAR @ 64" O.C.
7 AND GREATER	ENGINEERED DESIGN BASED ON SITE CONDITIONS			

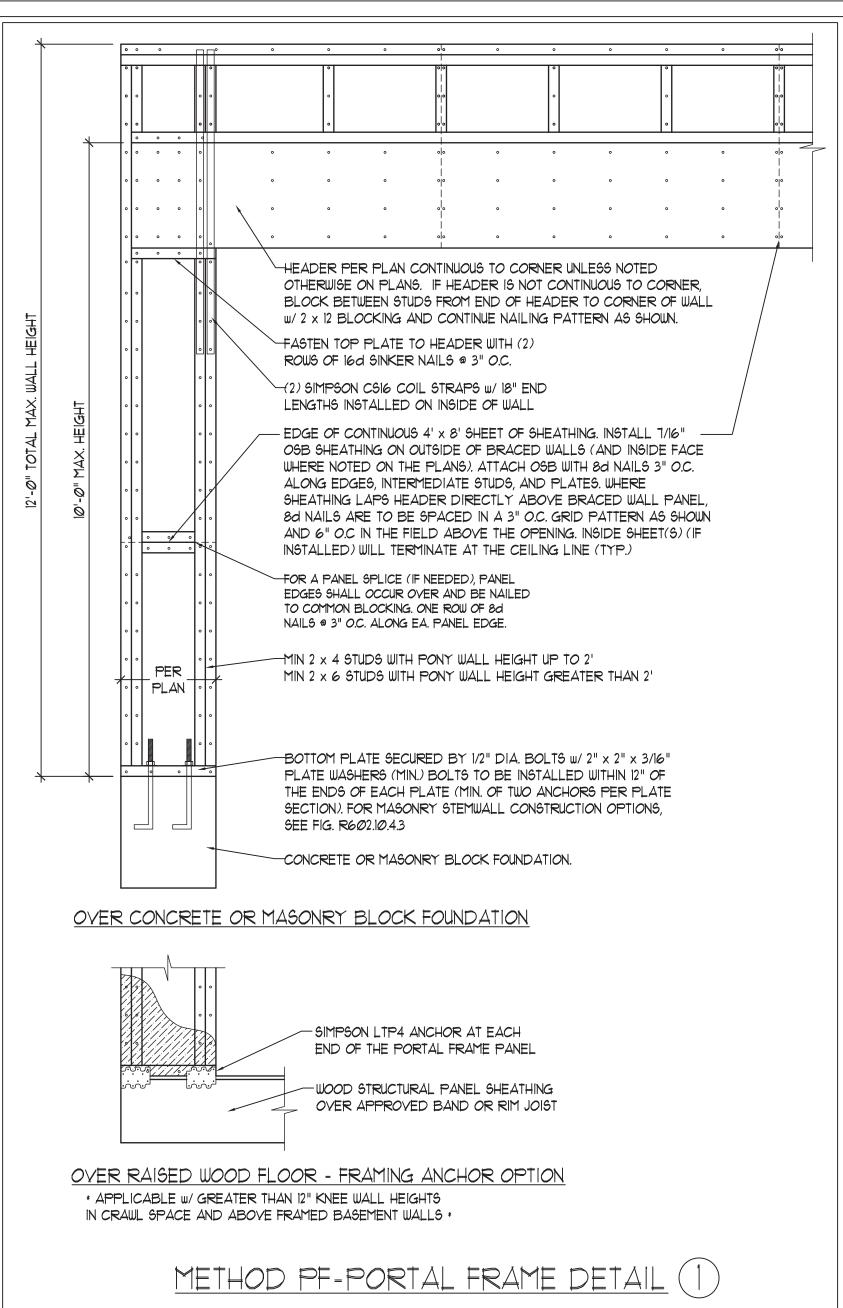
STRUCTURAL NOTES:

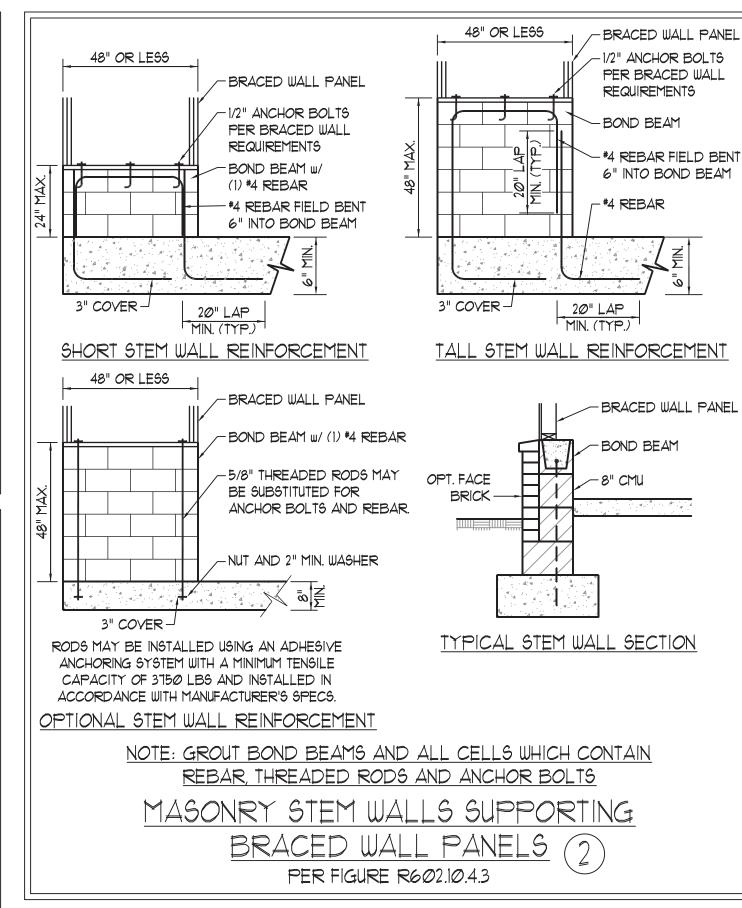
- 1) WALL HEIGHT MEASURED FROM TOP OF FOOTING TO TOP OF THE WALL.
- 2) TIE MULTIPLE WYTHES TOGETHER WITH LADDER WIRE AT 16" O.C. VERTICALLY.
- 3) CHART APPLICABLE FOR HOUSE FOUNDATION ONLY. CONSULT ENGINEER FOR DESIGN OF GARAGE FOUNDATION NOT COMMON TO HOUSE.
- 4) BACKFILL OF CLEAN #51 / #61 WASHED STONE 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.
- 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.

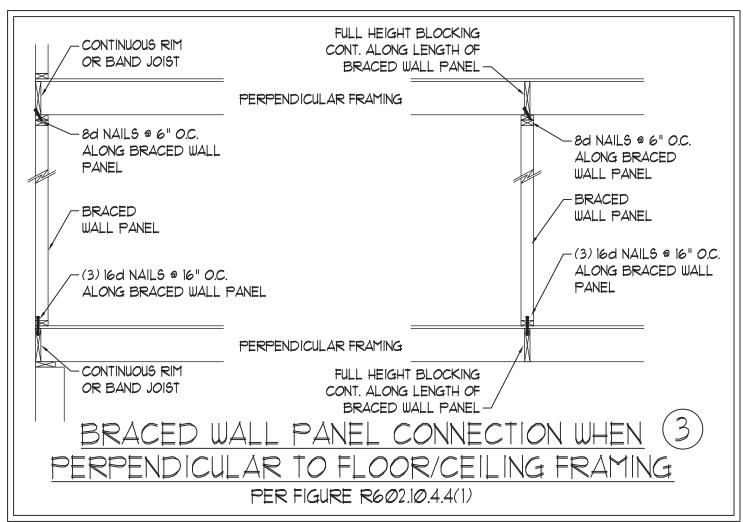


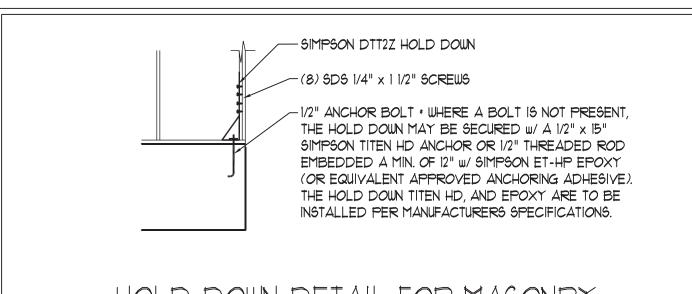
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- 1. WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE (NCRC). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NCRC.
- SEE THIS SHEET FOR GENERAL DETAILS. REFER TO THE 2018 NCRC FOR ADDITIONAL INFORMATION AS NEEDED.
 BRACED EXTERIOR WALLS SUPPORTING ROOF TRUSSES AND RAFTERS, INCLUDING STORIES BELOW THE TOP FLOOR, HAVE BEEN DESIGNED PER R602.3.5 (3). WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST COMBINED UPLIFT AND SHEAR FORCES IN ACCORDANCE WITH ACCEPTED ENGINEERED PRACTICE.
- 4. 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.
- 5. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH CS-WSP IN ACCORDANCE WITH SECTION R602.10.3 UNLESS NOTED OTHERWISE.
- 6. ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPSUM INSTALLED. WHEN NOT USING METHOD "GB", GYPSUM TO BE FASTENED PER TABLE R102.3.5. METHOD GB TO BE FASTENED PER TABLE R602.10.1
- 1. CS-WSP 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 (U.N.O.).
- 8. 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 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" GYPSUM PRIOR TO CONSTRUCTION. FOR INTERIOR FASTENER OPTIONS SEE TABLE R102.3.5. FOR EXTERIOR FASTENER OPTIONS SEE TABLE R102.3.5.
- 9. REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602. 10.3. METHOD C9-WSP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES .5 ITS ACTUAL LENGTH, AND METHOD PF CONTRIBUTES I.5 TIMES ITS ACTUAL LENGTH.

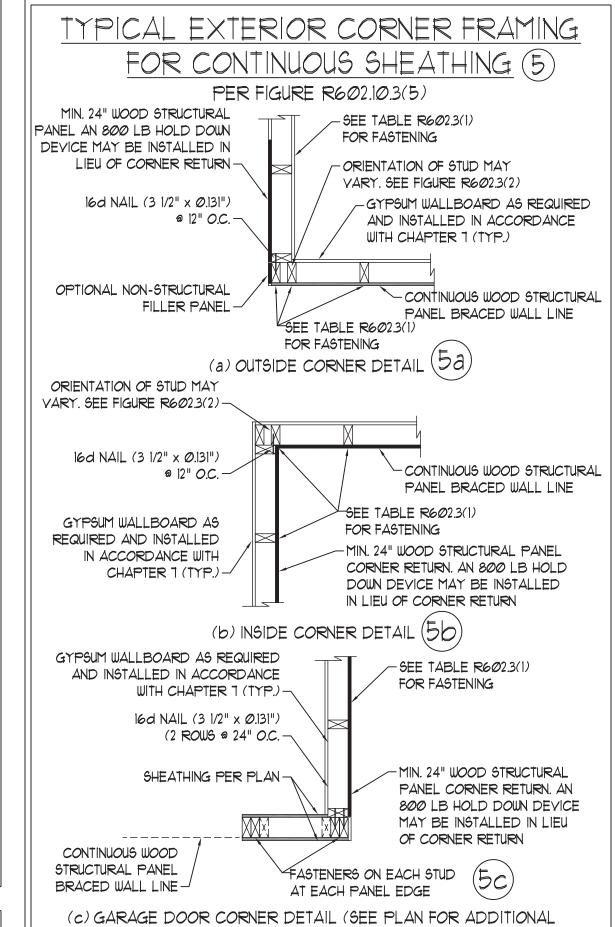




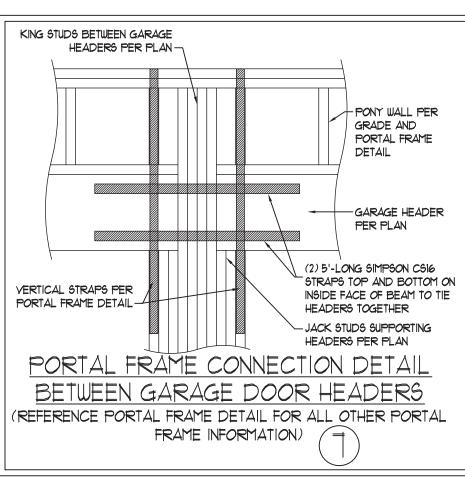


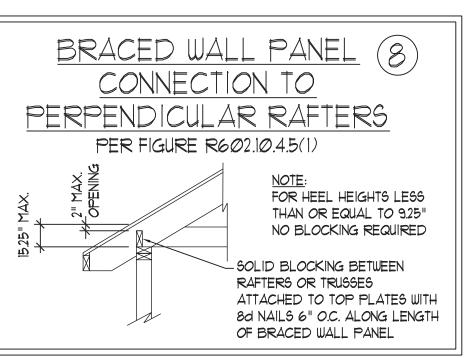


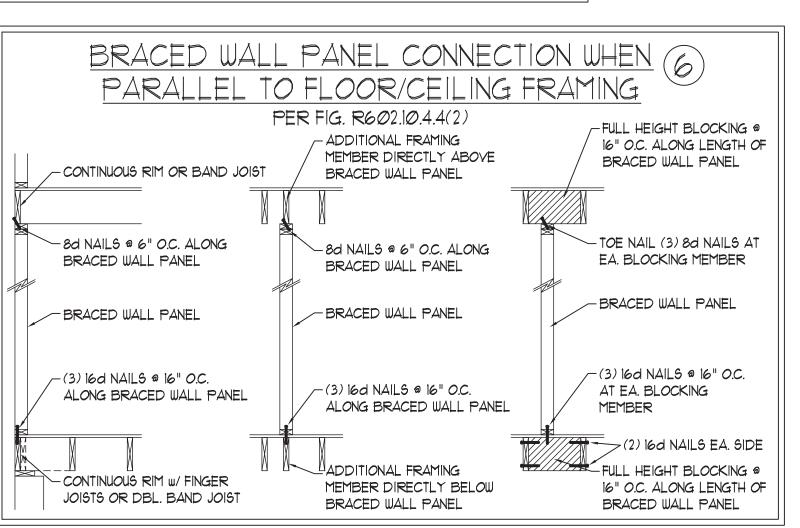
HOLD DOWN DETAIL FOR MASONRY
FOUNDATION OR MONOLITHIC SLAB
* APPLICABLE ONLY WHERE SPECIFIED ON PLAN *

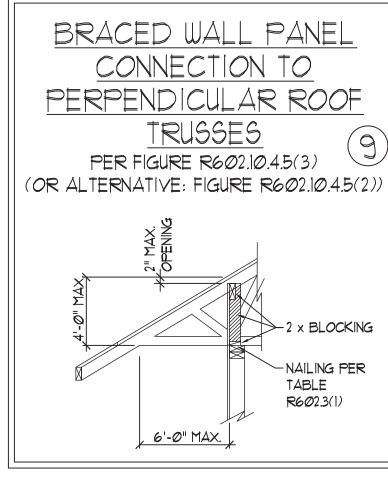


STRUCTURAL INFORMATION OR ALTERNATE CONFIGURATIONS)









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WALL BRACING NOTES AND DETAILS

DATE: MAY 18, 2020

DRAWN BY: JST

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

ENGINEERED BY: JST

BRACED WALL NOTES AND DETAILS AND PF DETAIL

AND PF DETAIL

- 1. 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 R301.7)

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	40	10	L/360
EXTERIOR BALCONIES	4Ø	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	3 <i>Ø</i>	10	L/360
STAIRS	4Ø	10	L/360
WIND LOAD	(BASED ON TABLE R3Ø1.2(4) WIND ZONE AND EXPOSURE)		
GROUND SNOW LOAD: Pa	2Ø (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 R403.1.6 OF THE NCRC, 2018 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE 15 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 11 OF THE NCRC, 2018 EDITION.

FOOTING AND FOUNDATION NOTES

- 1. 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 R404.1.1(1), R404.1.1(2), R404.1.1(3), OR R404.1.1(4) OF THE NCRC, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1.1(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 = 1600000 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 6HAPE6: 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:

B. CONCRETE

C. MASONRY (FULLY GROUTED)

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

(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 I/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 1-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.
- 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 (U.N.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'-Ø". 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.



4/13/2021

DATE: OCTOBER 29, 2018

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

DRAWN BY: JES

ENGINEERED BY: JST

STRUCTU

STRUCTURAL NOTES