

 SQUARE FOOTAGE

 1st FLOOR:
 1362 SQ. FT.

 2nd FLOOR:
 1090 SQ. FT.

TOTAL: 2452 SQ. FT. FRONT PORCH: 96 SQ. FT. STD. REAR PATIO. 96 SQ. FT. GARAGE: 425 SQ. FT.

SQUARE FOOTAGE (OPTIONS)

IST FLOOR (ALL BRICK): 1418 SQ. FT. 1127 SQ. FT. 2nd FLOOR (ALL BRICK): 2545 SQ. FT. TOTAL (ALL BRICK): 444 SQ. FT. GARAGE (ALL BRICK): 50 SO FT. FRONT PORCH (IIIRAP OPTION). REAR PORCH (8-0 DEEP): 96 SQ. FT. REAR PORCH (12-00 DEEP): 144 50. Ft 87 SQ. FT. OPT. PATIO/ DECK: (8-0 DEEP): OPT. PATIO/ DECK: (12-6 DEEP) 130 SQ. FT. THIRD CAR GARAGE: 240 SQ. FT.

THIRD CAR GARAGE (ALL BRICK):

-----OPTIONAL VENEER (SEE — ELEVATION RAGES FOR LOCATIONS AND CONDITIONS) 6 x 6 TRTD. POST MIN. W/---PVC SLEEVE, FOR OPT, PORCH OPT PATIO/ OPTIONAL COVERED PORCH — OPTIONAL VENEER (SEE ELEVATION PAGES FOR LOCATIONS AND CONDITIONS) 2-8 5-2 ₩" x 14" ACCESS FOR — OPT. WHIRLPOOL TUB ___ FIREPLACE___ __TRAY_CLG.__ (RAISED 10") MASTER 4" (TYP.)--SHELVING STARTS 18" A.F.F. SPACING BETWEEN SHELVES IS 14" PLUMBING DROP -42" WALL W/ CAP ---STD. OPT. OPEN RAIL W/ PICKETS 12" FLUSH OVERHANG-WALL ABOVE ______ -OPTIONAL WH LOCATION IF 3rd CAR GARAGE OPTION DOUBLE BHELF W/ GAS WATER HEATER SINGLE SHELF (10" AFF.) -SINGLE SHELF ⁻COATS[™] (68" AFF.) | × 35 NGLE SHELVES— (70" AFF.) SHELVING STARTS 18"-AFF. SPACING BETWEEN OPTIONAL THIRD SHELVES IS 14" CAR GARAGE DROPPED BEAM OR FRAME DOWN 1'-6" AFF. 18" HIGH PLATFORM FOR-WATER HEATER (TYP.) 2'-6" >-DROPPED BEAM OR FRAME DOWN 11-6" AFF. GOURMET KITCHEN DINING OPTION ROOM 8-0/x 1-0 GARAGE DOOR PER COMMUNITY STANDARDS (3) 2x4 STACKED 2-CAR GARAGE HOSE BIBB AS SPEC. OPTIONAL THIRD VENEER RETURN (TYP.) CAR GARAGE OPTIONAL VENEER (SEE ELEVATION PAGES — FOR LOCATIONS AND CONDITIONS) CONTINUE OPTIONAL VENEER FROM UNDER PORCH OPTIONAL WEAP AROUND PORCH————————— COVERED PORCH -WATER HEADER LOCATION W/ SIDE-LOAD GARAGE OPTION NOTE: MATCHED APEAS INDICATE
OPTIONAL FULL MGT. BRICK
OR STONE LOCATIONS 16-0 x 7-0 GARAGE DOOR OPTIONAL VENEER (SEE ELEVATION PAGES FOR LOCATIONS AND CONDITIONS) PER COMMUNITY STANDARDS - OPTIONAL VENEER (SEE ELEVATION PAGES FOR LOCATIONS AND CONDITIONS) STANDARD 8" SQUARE COLUMN OR -OPTIONAL 12" TAPEPED COL. ON

16" x 16" x 36" BRICK OR

STONE BASE AS SPEC. (TYP.) SIDE-LOAD GARAGE OPTION (NOT AVAILABLE WIT OPTIONAL THIRD CAR GARAGE)

> 8-0 x 1-0 GARAGE DOOR PER COMMUNITY STANDARDS

- 2Ø'-2" -

DOUBLE GARAGE

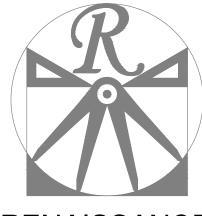
DOOR OPTION

8-0 x 1-0 GARAGE DOOR PER COMMUNITY STANDARDS ORT. 12-0 DEEP PATIO/ DECK

*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 WAL

* 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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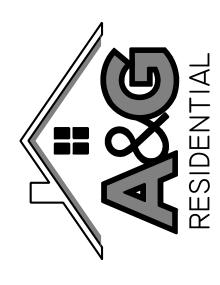
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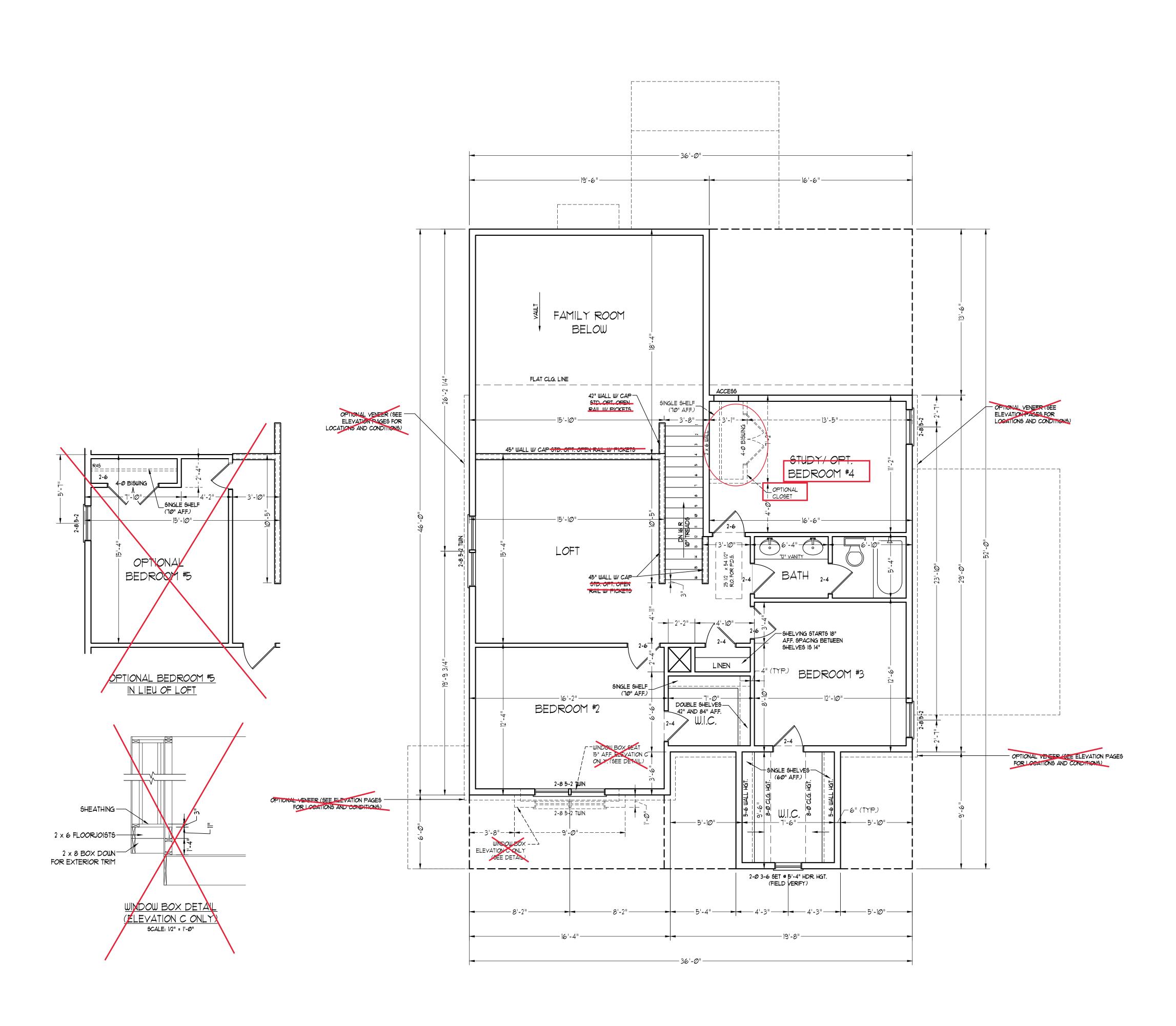
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FIRST FLOOR PLAN

A-4

2-8 5-2

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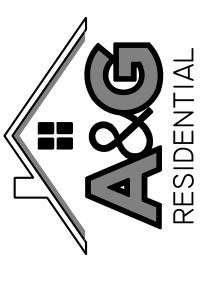
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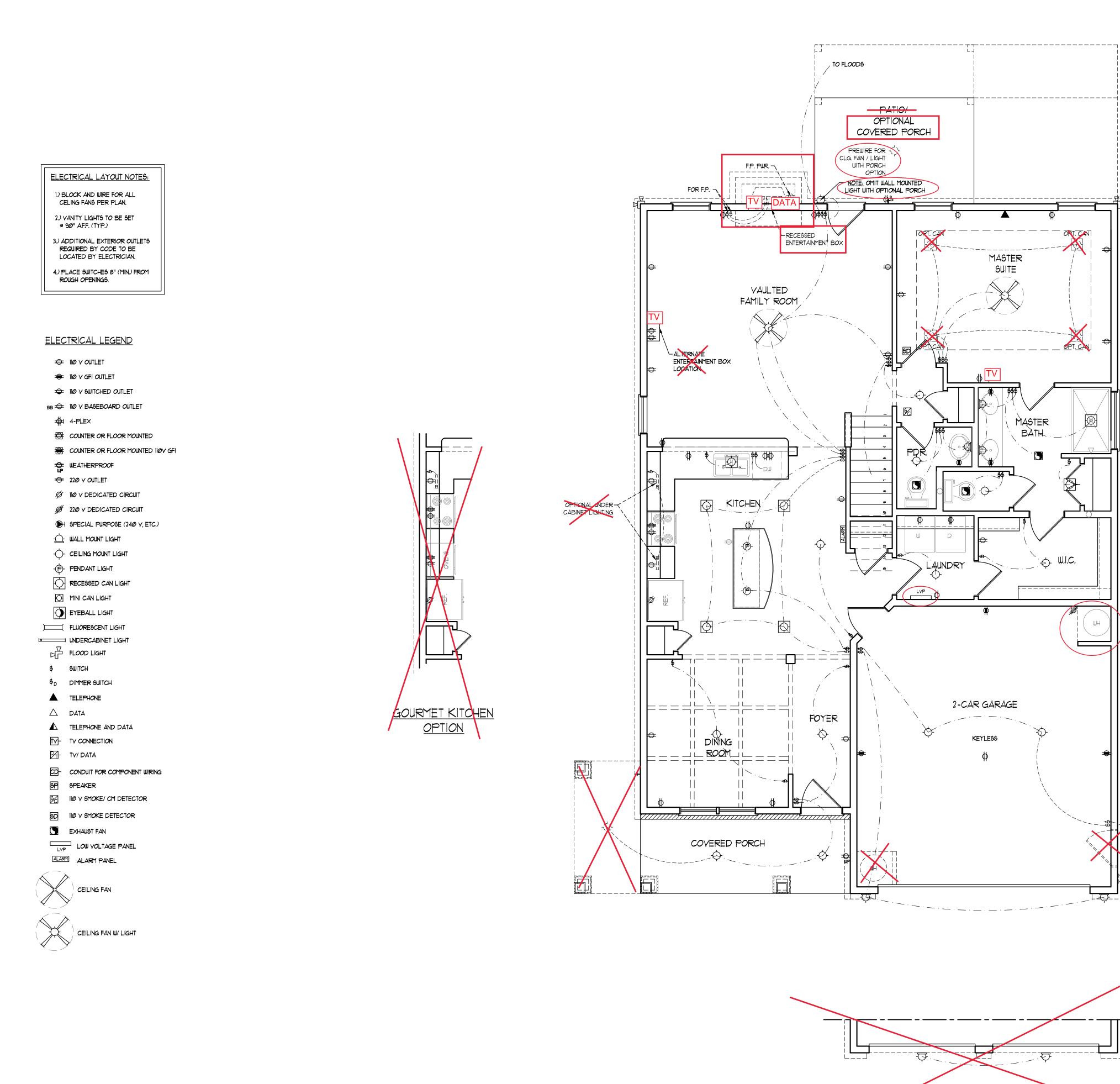
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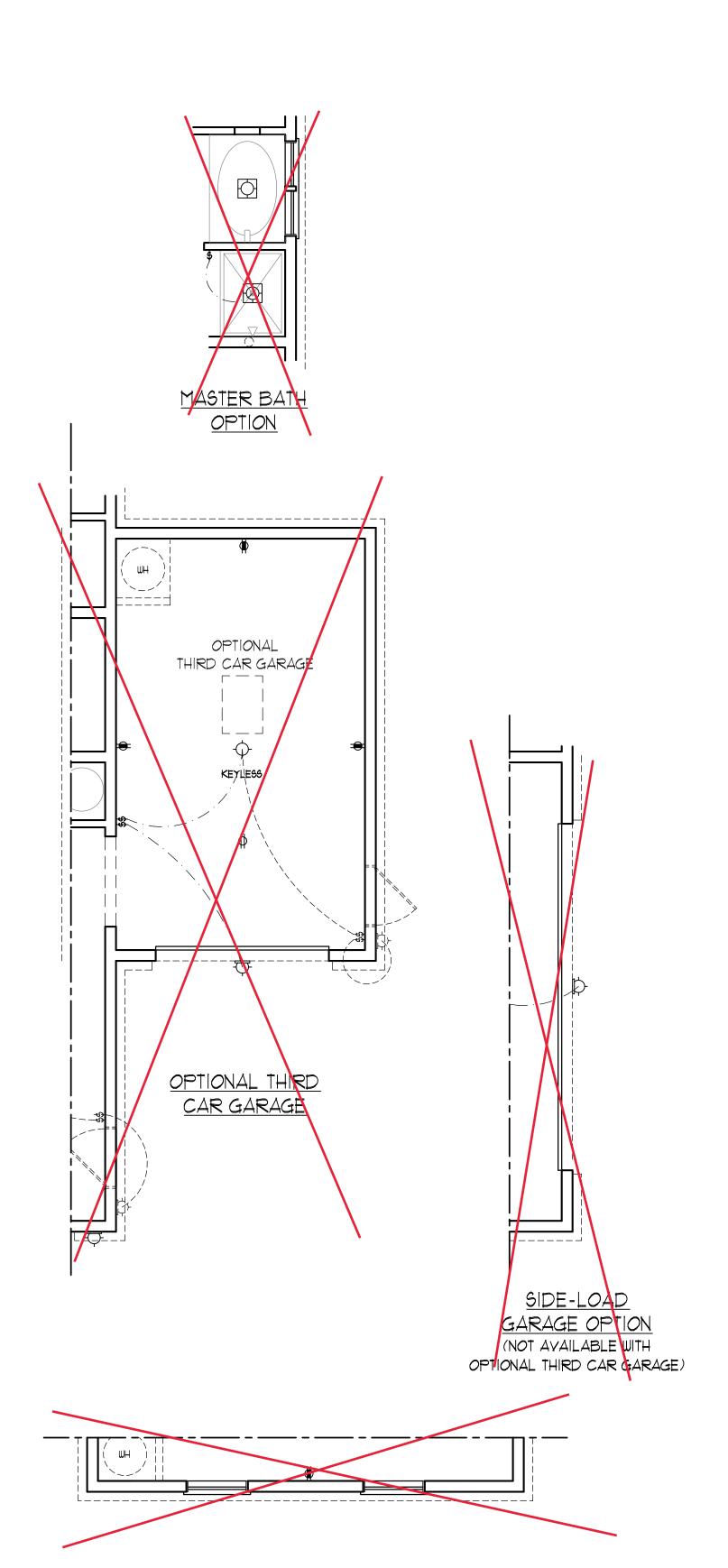
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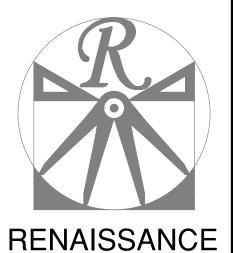
SECOND FLOOR PLAN

A-5

STANDARD SECOND FLOOR PLAN







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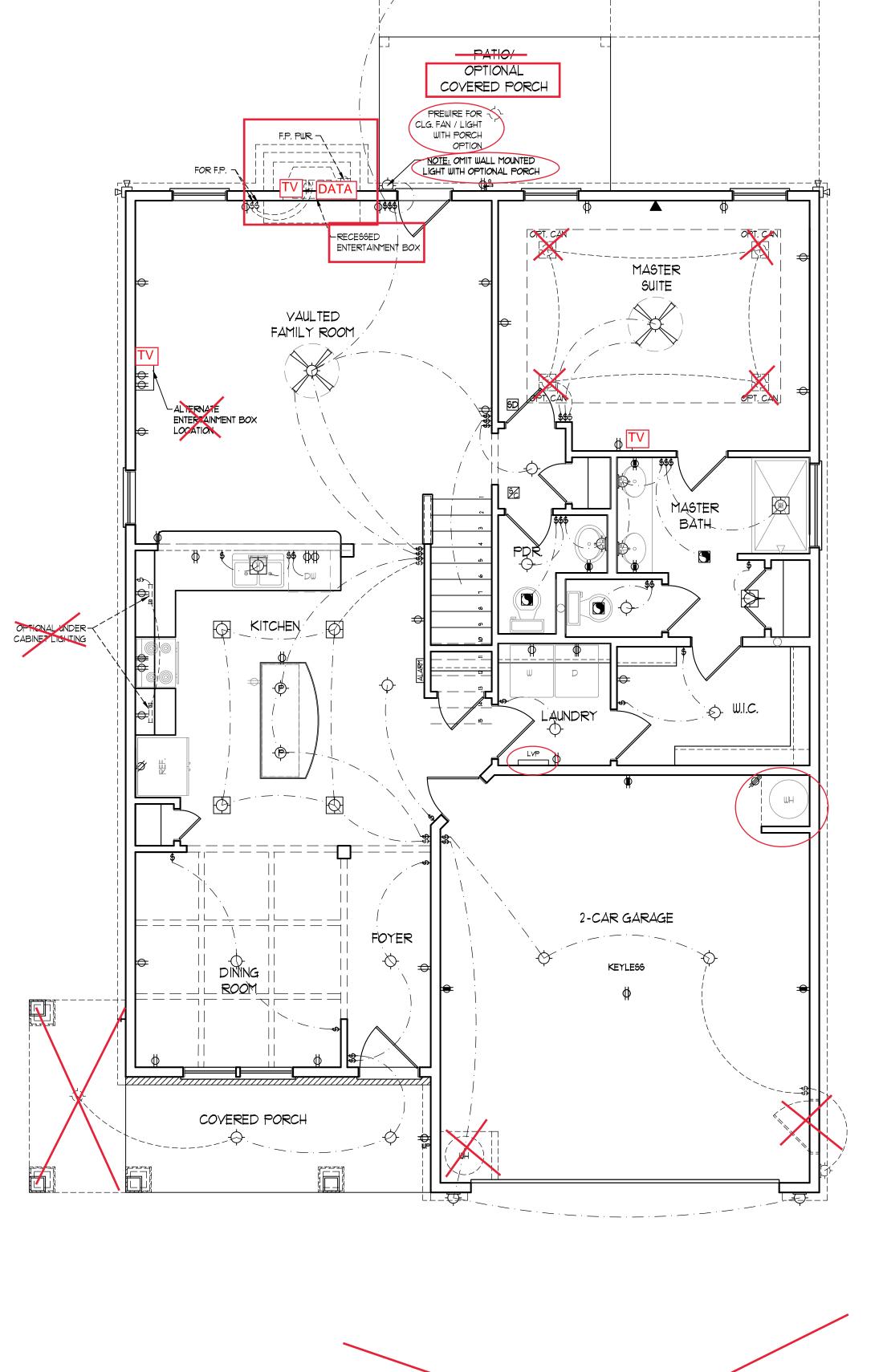
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ENGINEERED BY: WFB REVIEWED BY: MGS

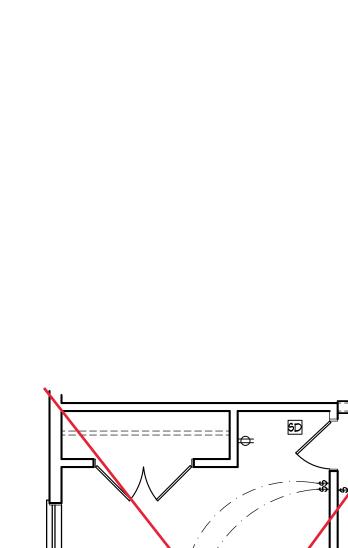
FIRST FLOOR ELECTRICAL PLAN

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DOUBLE GARAGE

DOOR OPTION



ELECTRICAL LAYOUT NOTES:

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

2.) VANITY LIGHTS TO BE SET

@ 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

110 ∨ OUTLET 🚓

4-PLEX 🖶

110 y GFI OUTLET 👄

WEATHERPROOF +

22**Ø** ∨ **O**UTLET =

WALL MOUNT LIGHT -

RECESSED CAN LIGHT

MINI CAN LIGHT

EYEBALL LIGHT

FLUORESCENT LIGHT UNDERCABINET LIGHT -FLOOD LIGHT

SWITCH \$

DIMMER SWITCH D\$

TELEPHONE AND DATA $\ oldsymbol{\Delta}$

CONDUIT FOR COMPONENT WIRING -CD

110 V SMOKE/ CO DETECTOR

110 V SMOKE DETECTOR SD

LOW VOLTAGE PANEL LVP

CEILING FAN

CEILING FAN W/ LIGHT

TY CONNECTION -TY

TV/ DATA -

SPEAKER SP

EXHAUST FAN

ALARM PANEL [ALARM]

TELEPHONE 🔺

data riangle

110 V SWITCHED OUTLET 👄

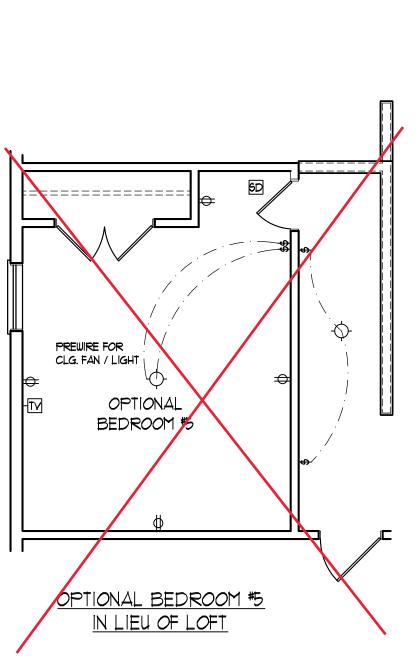
110 V BASEBOARD OUTLET ⇒ BB

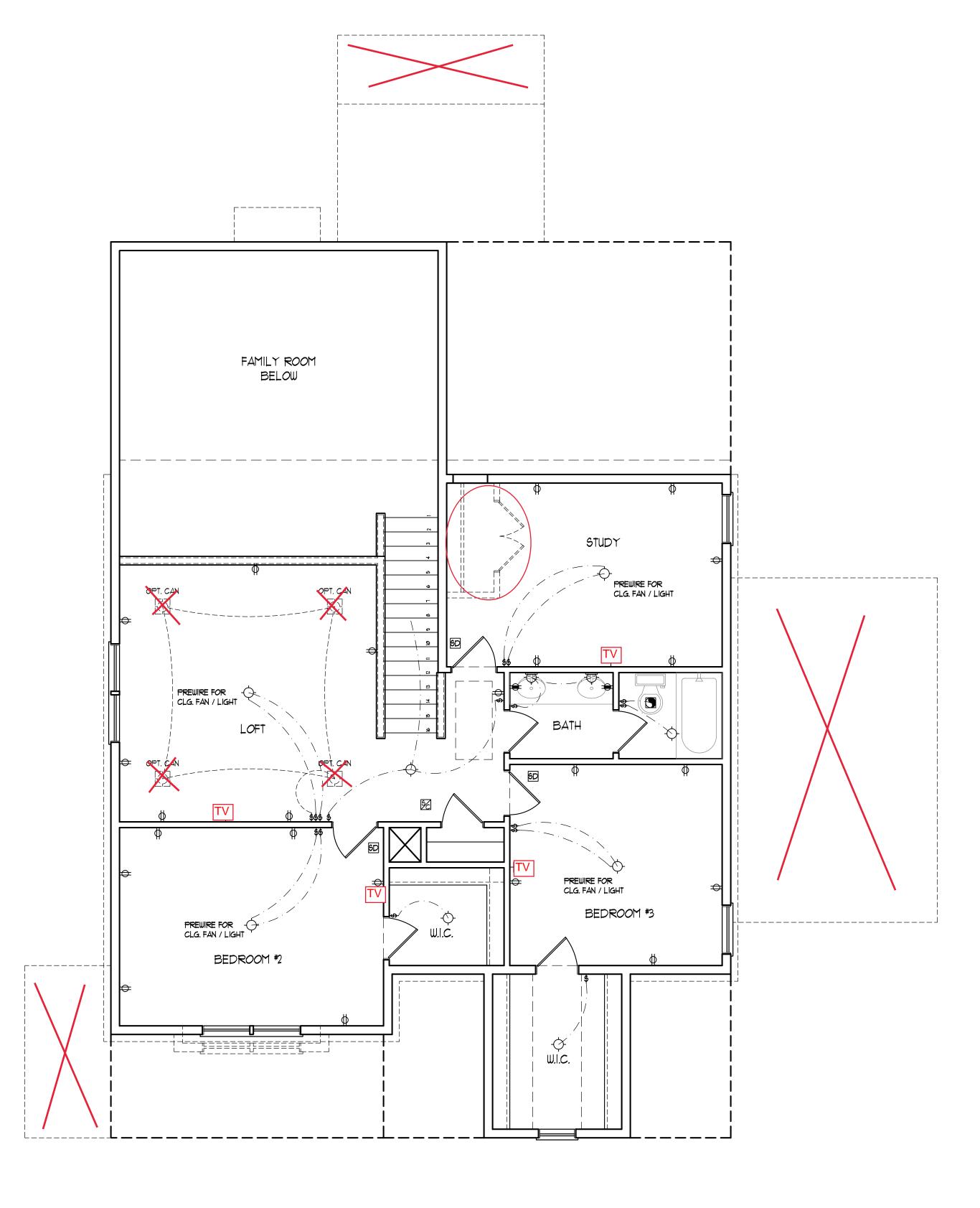
COUNTER OR FLOOR MOUNTED

IIØ V DEDICATED CIRCUIT 🔌 220 Y DEDICATED CIRCUIT

SPECIAL PURPOSE (240 V, ETC.)

COUNTER OR FLOOR MOUNTED 110/ GFI





STANDARD SECOND FLOOR PLAN



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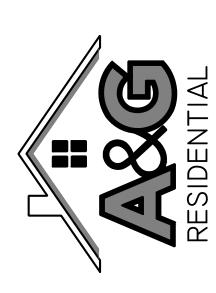
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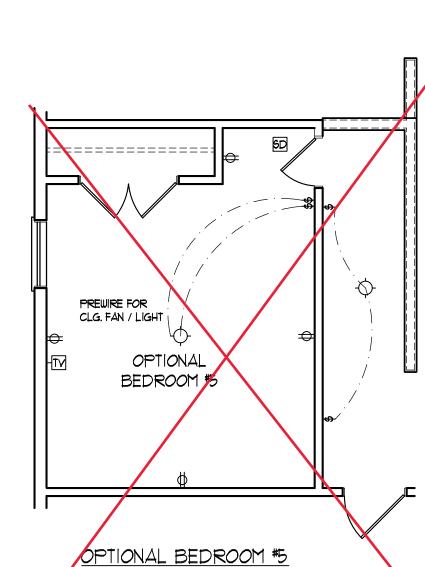
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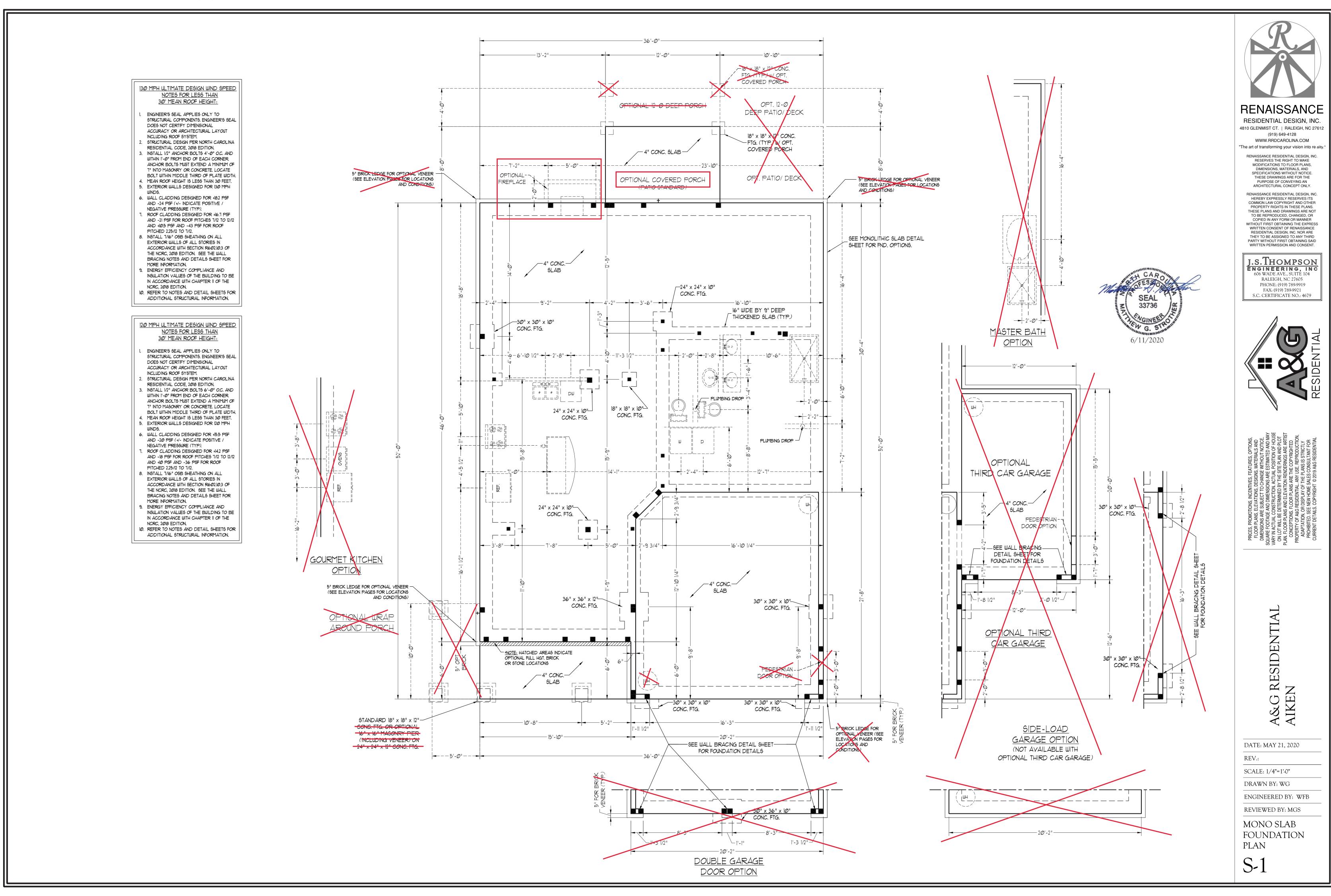
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SECOND FLOOR

ELECTRICAL PLAN

E-2





BRACED WALL DESIGN

SIDE IB

SIDE 2B

SIDE 4B

BRACED WALL DESIGN PER SECTION R602.10 OF THE

CS-WSP REFERS TO "CONTINUOUS SHEATHING - WOOD

O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

STRUCTURAL NOTES:

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

ALL LOAD BEARING HEADERS TO BE

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

SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO

GIRDER OR FOUNDATION. ALL

ALL 4 x 4 POSTS SHALL BE

ANCHORED TO SLABS W/

SQUARES TO BE (2) STUDS (UNO.)

SIMPSON ABU44 POST BASES (OR

4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 100 LB CAPACITY

EQUAL) AND 6 x 6 POSTS w/ ABU66

POST BASES (OR EQUAL) (UNO). ALL

UPLIFT CONNECTORS AT TOP (UNO.)

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

REFER TO NOTES AND DETAIL SHEETS

PRIOR TO SETTING COLUMN.

FOR ADDITIONAL STRUCTURAL

INFORMATION.

FOR FIBERGLASS, ALUMINUM, OR

INSTALL AN EXTRA JOIST UNDER WALLS PARALLEL TO FLOOR JOISTS

WHERE NOTED ON THE PLANS.

SYP #2 (UNO.)

(2) 2×6 (UNO).

REQUIREMENTS.

METHOD: CS-WSP/PF

METHOD: CS-WSP

METHOD: CS-WSP/GB

METHOD: CS-WSP

RECTANGLE A

SIDE IA (FRONT LOAD)

SIDE 2A

SIDE 3A

METHOD: CS-WSP

METHOD: CS-WSP

SIDE 4A (SIDE LOAD)

METHOD: CS-WSP/PF

METHOD: CS-WSP/PF/GB

TOTAL REQUIRED LENGTH: 16'

TOTAL REQUIRED LENGTH: 16'

TOTAL REQUIRED LENGTH: 11.4'

TOTAL REQUIRED LENGTH: 11.4'

BRACED WALL DESIGN NOTES:

NCRC 2018 EDITION.

BOTTOM PLATES.

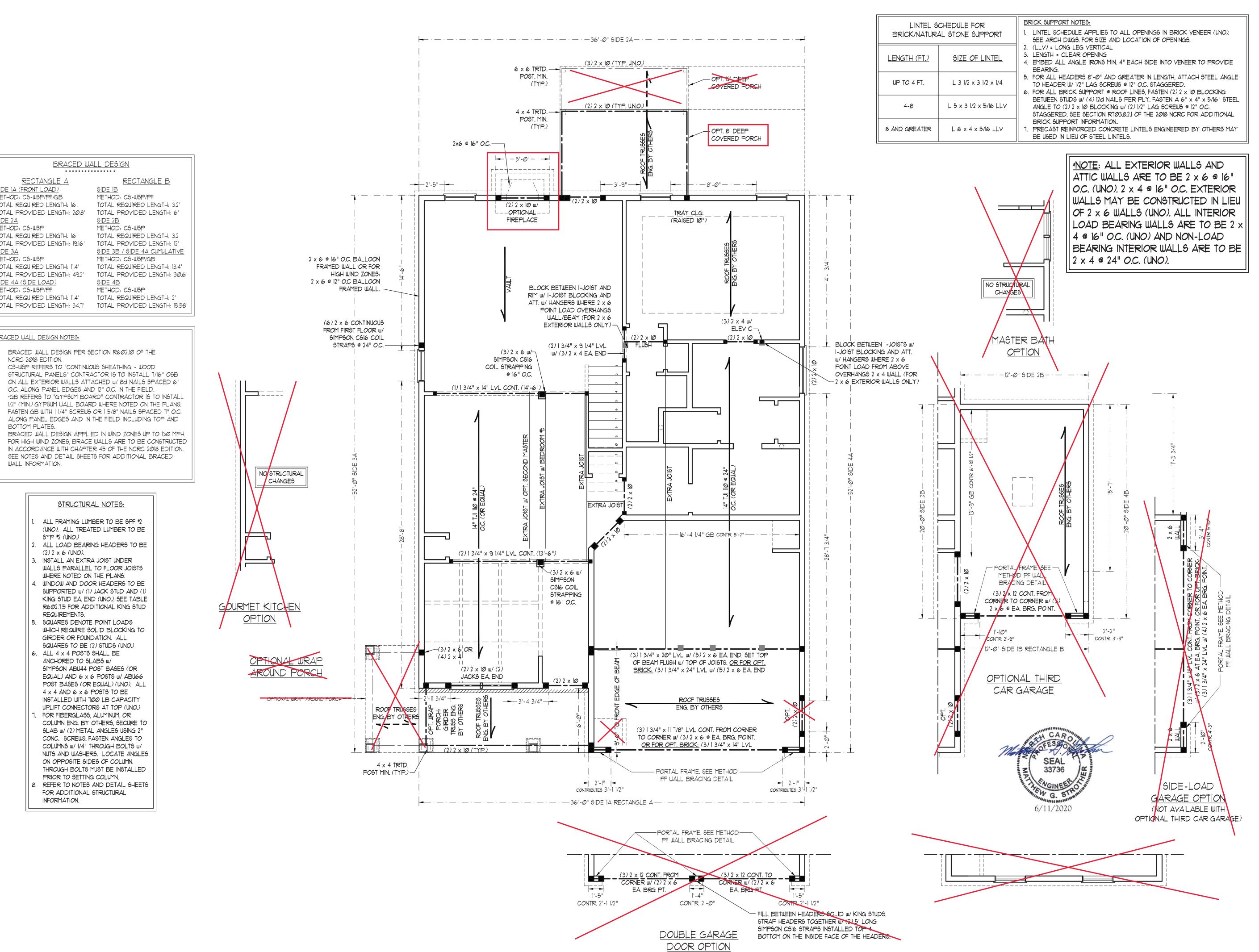
WALL INFORMATION.

TOTAL PROVIDED LENGTH: 34.7'

TOTAL PROVIDED LENGTH: 49.2'

TOTAL PROVIDED LENGTH: 19.16'

TOTAL PROVIDED LENGTH: 20.8'



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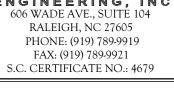
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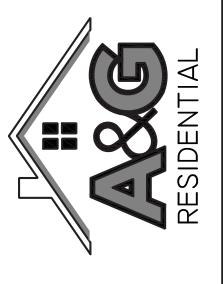
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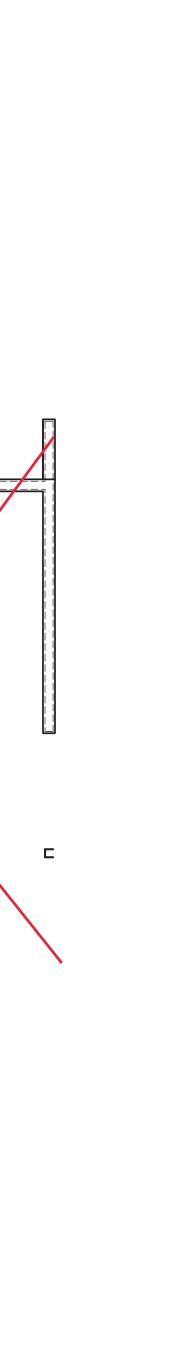
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SECOND FLOOR FRAMING PLAN



OPTIONAL BEDROOM #5

IN LIEU OF LOFT

WINDOW BOX DETAIL

-2 x & FLOOR JOISTS @

16" O.C. SHEATHING TO

COVER JOISTS AS WELL.

FASTEN JOISTS _ TO EA. STUD w/

(4) 12d NAILS

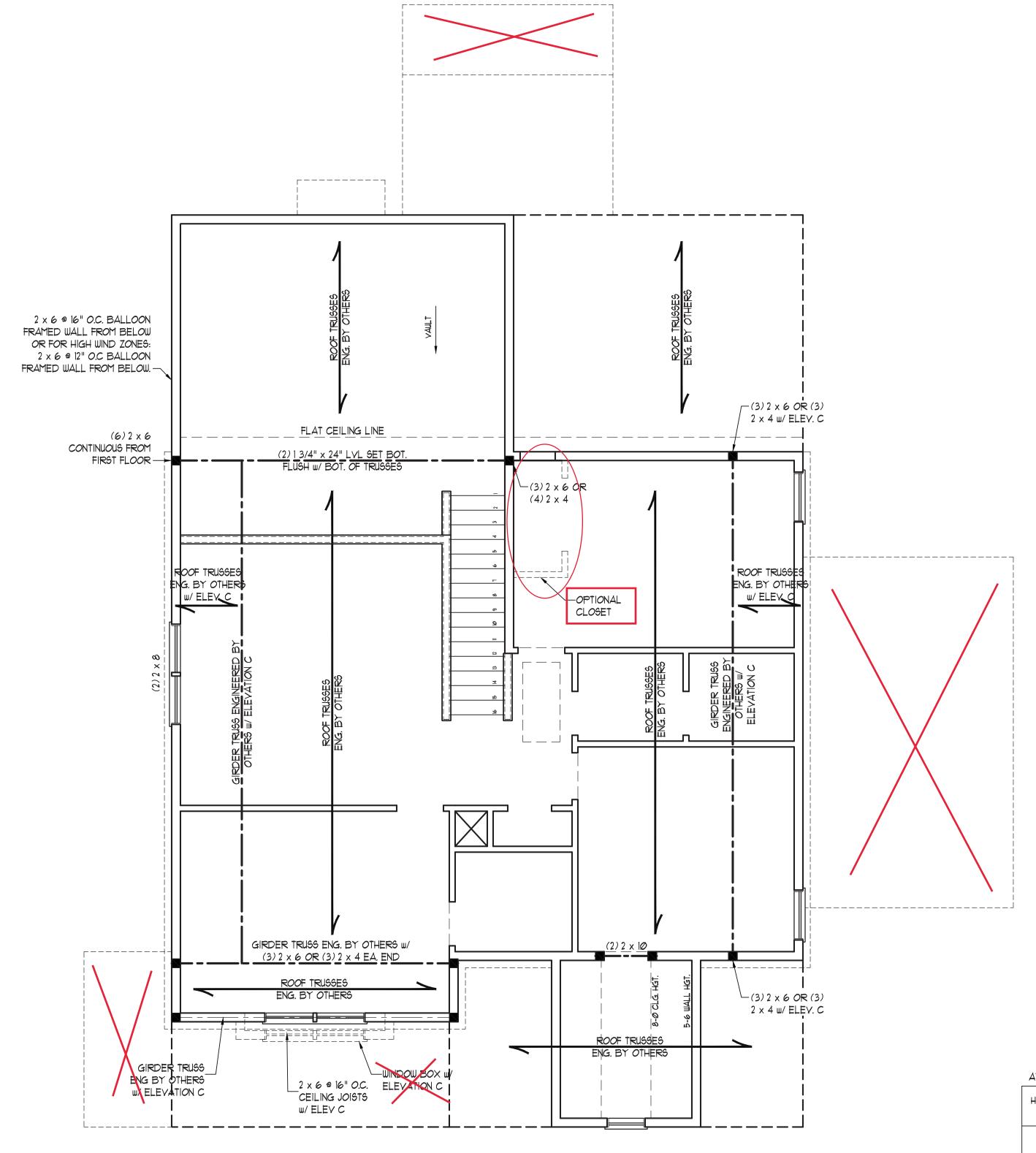
INSTALL CONT. 7/16" 05B SHEATHING ON

FRAME DOWN PER DETAIL ON SECOND

FLOOR ARCHITECTURAL SHEET

OUTSIDE OF BRACED WALLS. ATTACH

OSB WITH 80 NAILS 3" O.C. ALONG EDGES AND 6" O.C. IN THE FIELD. INSTALL SIMPSON LTØ CORNER BRACKETS 24" O.C. IN CORNERS.



NOTE: NO STRUCTURAL CHANGES W/ OPT. SECOND MASTER FLOOR PLAN

STANDARD SECOND FLOOR PLAN

BRACED WALL DESIGN NOTES:

I. 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 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 NORC 2018 EDITION.
 SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED.
- 5. SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

NOTE

- I. 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.

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

	LINTEL SCHEDULE FOR BRICK/NATURAL STONE SUPPORT				
	LENGTH (FT.)	<u>SIZE OF LINTEL</u>			
	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 LLV			
		·			

BRICK SUPPORT NOTES:

- LINTEL SCHEDULE APPLIES TO ALL OPENINGS IN BRICK VENEER (UNO). SEE ARCH DUGS. FOR SIZE AND LOCATION OF OPENINGS.
- (LLV) = LONG LEG VERTICAL
- 3. LENGTH = CLEAR OPENING 4. EMBED ALL ANGLE IRONS MIN. 4" EACH
- SIDE INTO VENEER TO PROVIDE BEARING.

 5. FOR ALL HEADERS 8'-0" AND GREATER
 IN LENGTH, ATTACH STEEL ANGLE TO
 HEADER W/ 1/2" LAG SCREWS @ 12" O.C.
 STAGGERED.
- 6. 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 RT03.8.2.1 OF THE 2018 NCRC FOR ADDITIONAL BRICK SUPPORT INFORMATION.

 1. PRECAST REINFORCED CONCRETE LINTELS ENGINEERED BY OTHERS MAY BE

USED IN LIEU OF STEEL LINTELS.

TABLE R602.7.5

MINIMUM NUMBER OF FULL HEIGHT STUDS

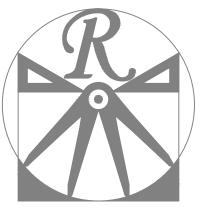
EACH END OF HEADERS IN EXTERIOR IIIALI

IT EACH END OF HEADERS IN EXTERIOR WALLS						
HEADER SPAN	MAXIMUM STUD SPACING (INCHES) (PER TABLE R602.3(5)					
(1441)	16	24				
UP TO 3'	1	1				
4'	2					
8'	3	2				
12'	5	3				
16'	6	4				



STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE #2 5PF
- 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
 TO BE (2) STUDS (UNO.)
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



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A&G RESIDENTIAI AIKEN

DATE: MAY 21, 2020

REV.:

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

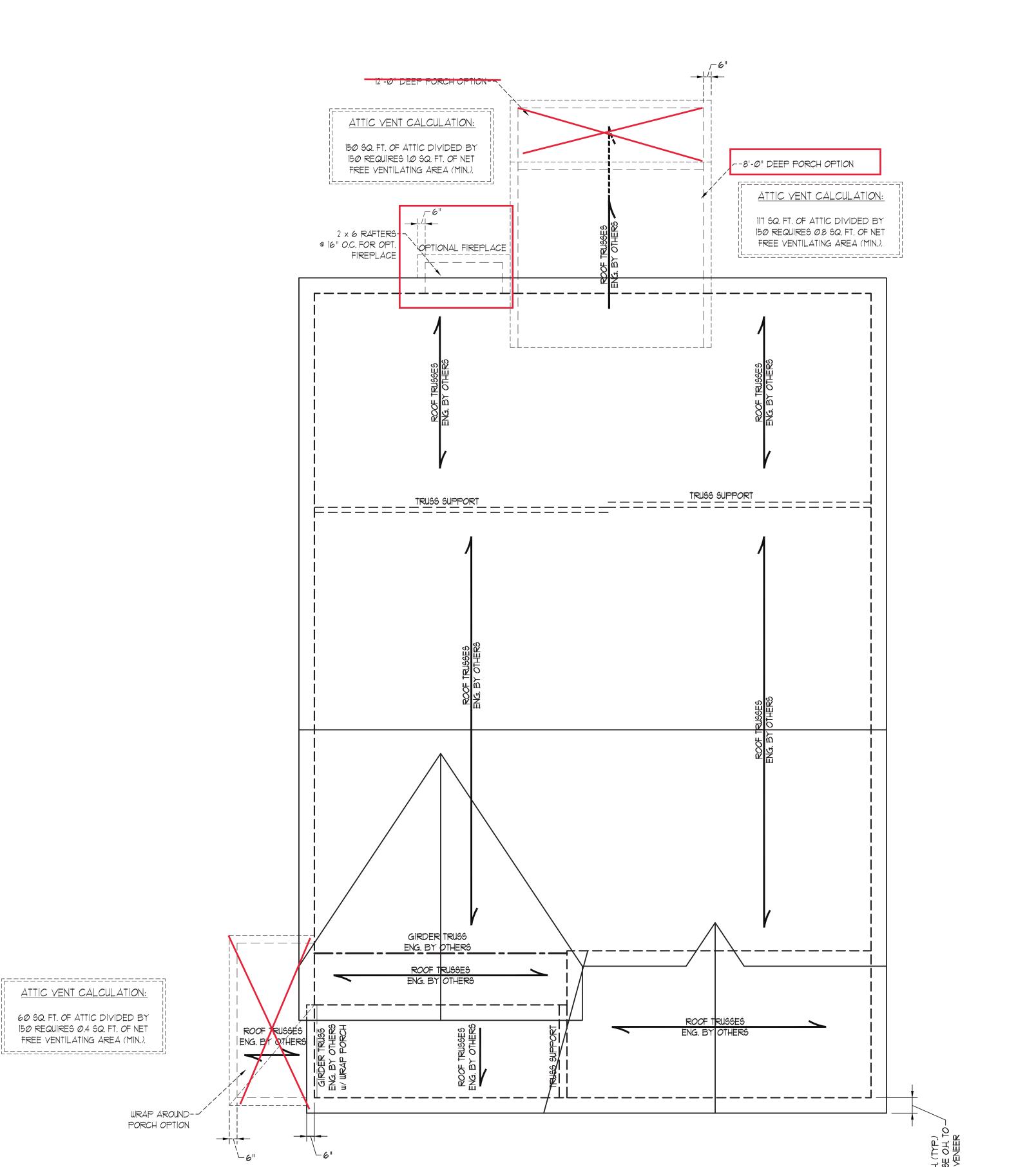
DRAWN BY: WG

ENGINEERED BY: WFB

REVIEWED BY: MGS

ATTIC FLOOR FRAMING PLAN

S-3



ELEVATION A AND B

ATTIC VENT CALCULATION:

60 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 0.4 SQ. FT. OF NET

FREE VENTILATING AREA (MIN.).

ATTIC VENT CALCULATION:

STRUCTURAL NOTES:

- HIP SPLICES ARE TO BE SPACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF
- STICK FRAME OVER-FRAMED
- FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH TIES THROUGH NOTCH IN ROOF
- TOE NAILS. REFER TO SECTION R802.11 OF THE 2018 NCRC FOR REQUIRED UPLIFT
- REFER TO NOTES AND DETAIL

2030 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 13.5 SQ. FT. OF NET FREE VENTILATING AREA (MIN.).

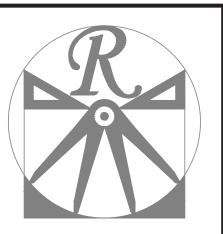
- ALL FRAMING LUMBER TO BE #2 SPF (UNO).
- CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
- FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS.
- 12d NAILS @ 16" O.C. (TYP.)
- ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 16" O.C. AND FLAT 2 x 10 VALLEYS OR USE VALLEY TRUSSES.
- SIMPSON H2.5A HURRICANE TIES @ 32" O.C. MAX. PASS HURRICANE SHEATHING. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A MIN. OF (6) 12d
- RESISTANCE AT RAFTERS AND TRUSSES.
- SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

ATTIC VENT CALCULATION:

294 SQ. FT. OF ATTIC DIVIDED BY 150 REQUIRES 2.0 SQ. FT. OF NET FREE VENTILATING AREA (MIN.).

<u>PPTIONAL THIRD</u>

<u>CAR GARAGE</u>



RENAISSANCE

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DATE: MAY 21, 2020

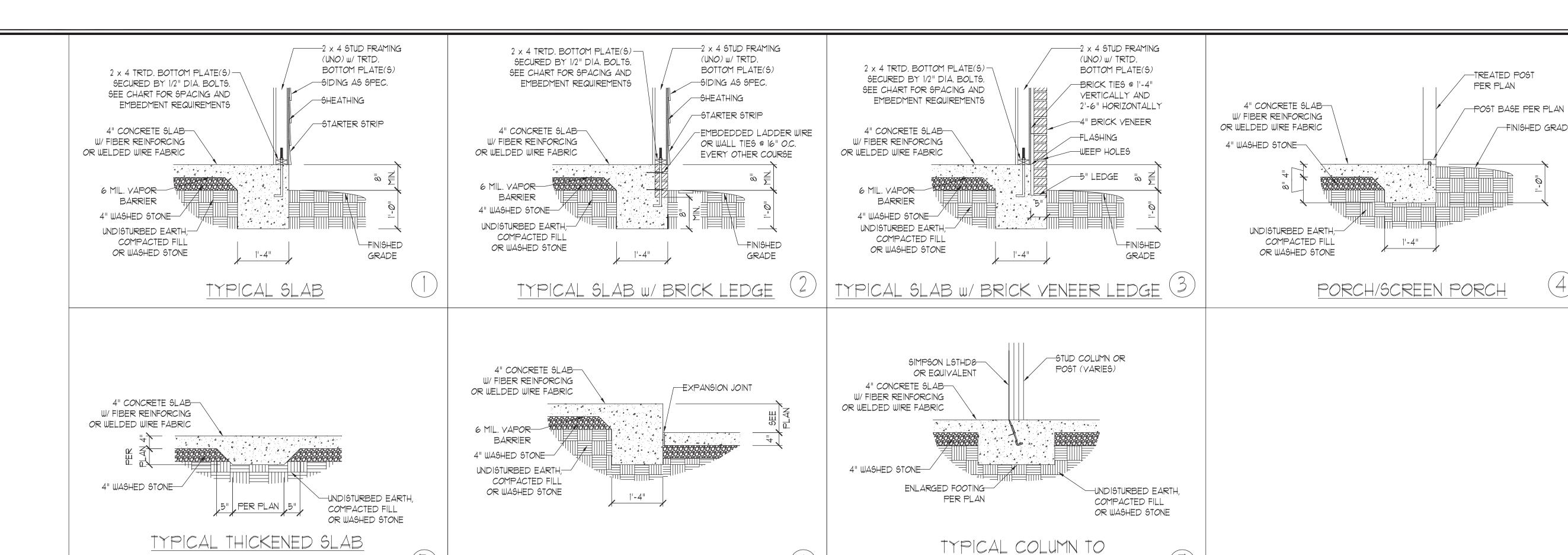
REV.: SCALE: 1/4"=1'-0"

DRAWN BY: WG

ENGINEERED BY: WFB REVIEWED BY: MGS

ROOF PLAN ELEVATION - A

S-4



SLAB FLOOR CHANGE

(6)

 -2×4 STUD FRAMING (UNO)

-FINISHED GRADE

SLAB CONNECTION

SLAB ETAIL MONOLITHIC S FOUNDATION DE

DATE: NOVEMBER 1, 2018 SCALE: NTS DRAWN BY: JST ENGINEERED BY: JST

> FOUNDATION DETAILS

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-FINISHED GRADE

NOTE: THREADED ROD WITH EPOXY, TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER LIEU OF 1/2" ANCHOR BOLTS.

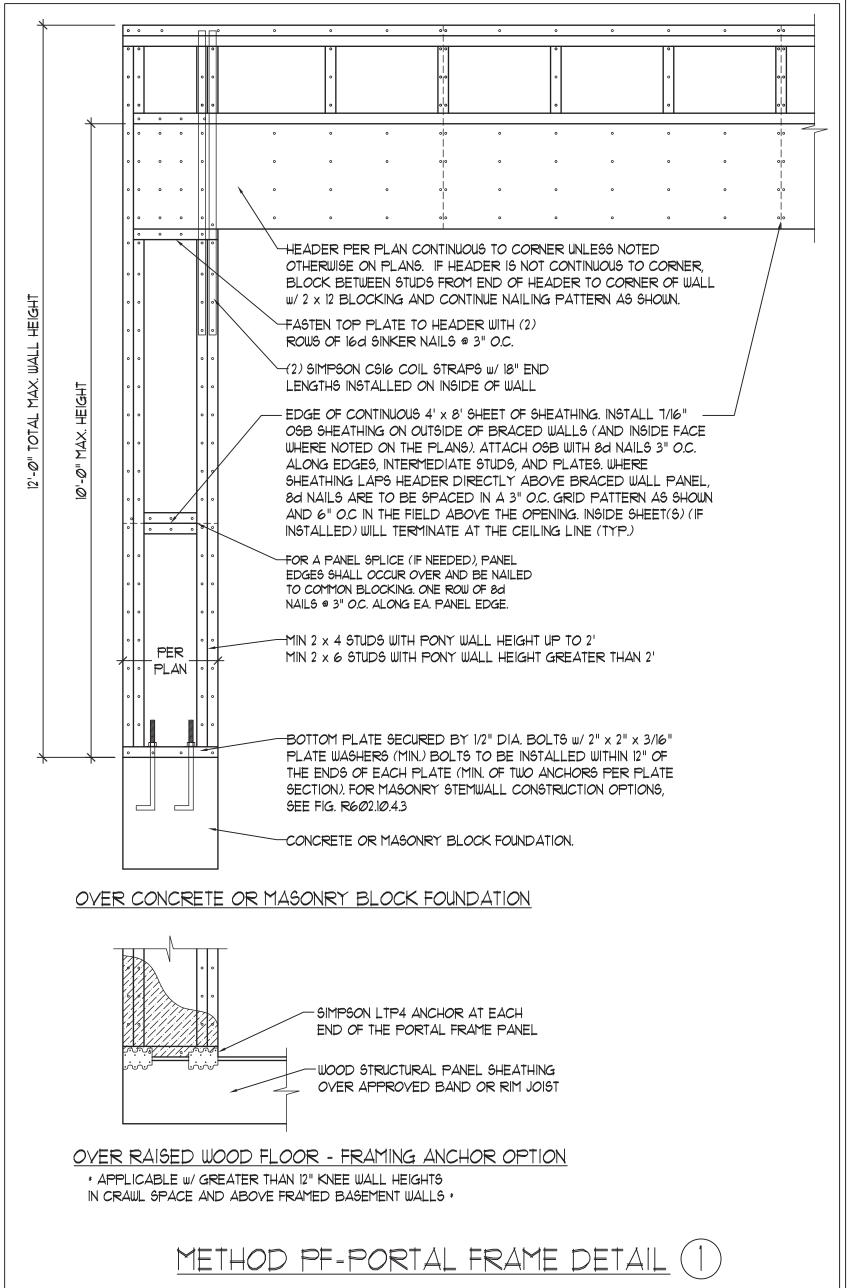
W/ TRTD. BOTTOM PLATE(S) 2 x 4 TRTD. BOTTOM PLATE(S) -2 x 4 TRTD. BOTTOM PLATE(S)--EXTERIOR WALL: SECURED BY 1/2" DIA. BOLTS. BRICK TIES @ SECURED BY 1/2" DIA. BOLTS. 2 x 4 STUD FRAMING (UNO) SEE CHART FOR SPACING AND 1'-4" VERTICALLY AND SEE CHART FOR SPACING AND w/ TRTD. BOTTOM PLATE(S) EMBEDMENT REQUIREMENTS 2'-6" HORIZONTALLY EMBEDMENT REQUIREMENTS 4" BRICK VENEER SIDING AS SPEC. FLASHING SHEATHING 4" CONCRETE SLAB 4" CONCRETE SLAB WEEP HOLES STARTER STRIP W/ FIBER REINFORCING W/ FIBER REINFORCING ∕-5" LEDGE OR WELDED WIRE FABRIC OR WELDED WIRE FABRIC 6 MIL. VAPOR— BARRIER 6 MIL. VAPOR-4" WASHED STONE-BARRIER UNDISTURBED EARTH 4" WASHED STONE COMPACTED FILL OR WASHED STONE 1'-4" UNDISTURBED EARTH,— COMPACTED FILL OR WASHED STONE FINISHED GRADE 1'-4" 8 GARAGE CURB W/ BRICK LEDGE GARAGE CURB

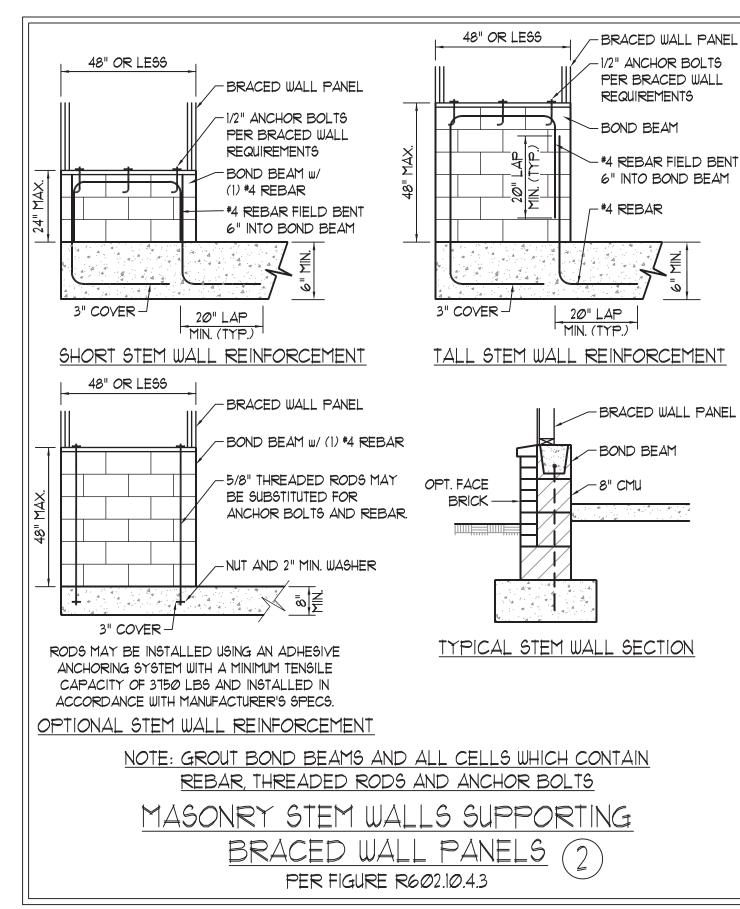
GARAGE DOOR JAMB 2 x 4 STUD FRAMING (UNO) W/ TRTD. -2×4 TRTD. BOTTOM PLATE(5) 4" CONCRETE SLAB BOTTOM PLATE(S) SECURED BY 1/2" DIA. BOLTS. SEE CHART FOR SPACING AND W/ FIBER REINFORCING SLOPE SLAB 1/8" PER FOOT OR WELDED WIRE FABRIC EMBEDMENT REQUIREMENTS 4" CONCRETE-SLAB W/ FIBER REINFORCING A . A . A . A . A . A . A . A . A 6 MIL. VAPOR BARRIER -4" CONCRETE \$LAB w/ FIBER REINFORCING OR 4" WASHED STONE-WELDED WIRE FABRIC 4" WASHED STONE UNDISTURBED EARTH, 6" 6" 6" 6" 6" 6" 6" 6" 1'-4" UNDISTURBED EARTH,-COMPACTED FILL OR WASHED STONE SLAB AT GARAGE DOOR STEP IN GARAGE

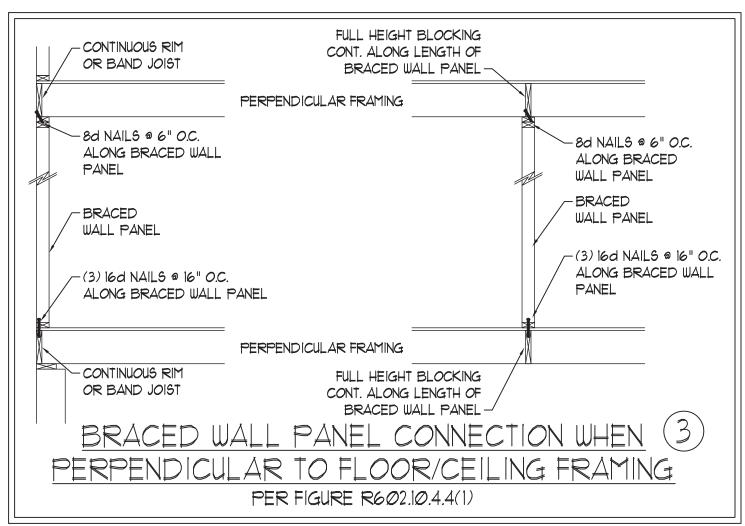
ANCHOR SPACING AND EMBEDMENT WIND ZONE 120 MPH 130 MPH 6'-0" O.C. 4'-Ø" O.C. INSTALL MIN. (2) ANCHORS PER INSTALL MIN. (2) ANCHORS PER SPACING PLATE SECTION AND (1) PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS ANCHOR WITHIN 12" OF CORNERS 15" INTO MASONRY EMBEDMENT 7" 7" INTO CONCRETE

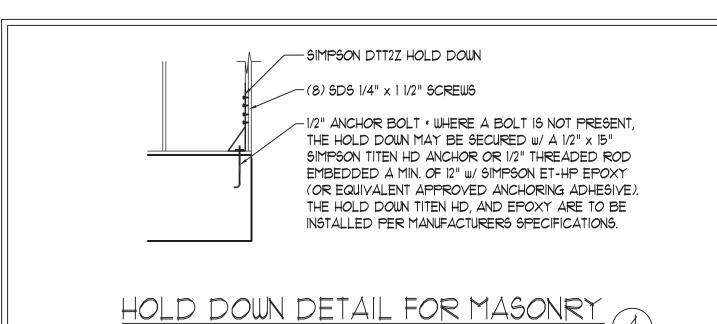
SIMPSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED ANCHOR BOLTS MAY BE USED IN

- 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 (UN.O.).
- 3. 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 (U.N.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 R602.3(1). EXTERIOR GB TO BE INSTALLED VERTICALLY.
- 9. REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602. 10.3. METHOD CS-WSP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES .5 ITS ACTUAL LENGTH, AND METHOD PF CONTRIBUTES I.5 TIMES ITS ACTUAL LENGTH.









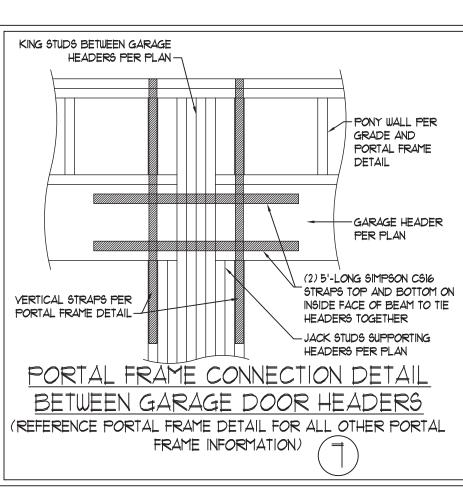
FOUNDATION OR MONOLITHIC SLAB

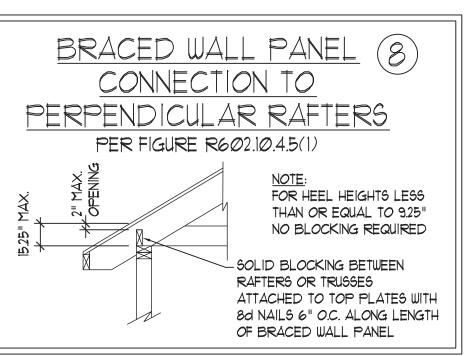
* APPLICABLE ONLY WHERE SPECIFIED ON PLAN !

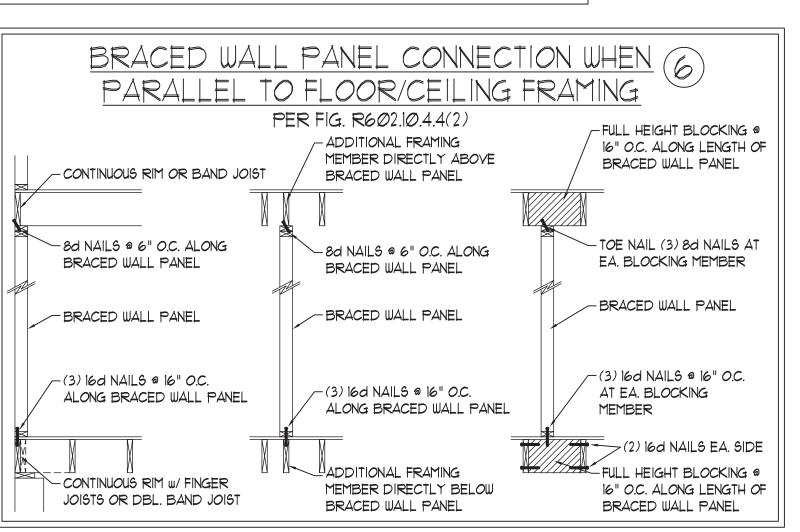
TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING (5) PER FIGURE R602.10.3(5) MIN. 24" WOOD STRUCTURAL SEE TABLE R602.3(1) PANEL AN 800 LB HOLD DOWN FOR FASTENING DEVICE MAY BE INSTALLED IN LIEU OF CORNER RETURN --ORIENTATION OF STUD MAY VARY. SEE FIGURE R602.3(2) 16d NAIL (3 1/2" x Ø.131") -GYPSUM WALLBOARD AS REQUIRED a 12" O.C. -AND INSTALLED IN ACCORDANCE WITH CHAPTER 1 (TYP.) OPTIONAL NON-STRUCTURAL \sim continuous wood structural FILLER PANEL PANEL BRACED WALL LINE SEE TABLE R602.3(1) 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 a 12" O.C. -PANEL BRACED WALL LINE -SEE TABLE R6*0*2.3(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 R6*0*2.3(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)
AT EACH PANEL EDGE BRACED WALL LINE-AT EACH PANEL EDGE

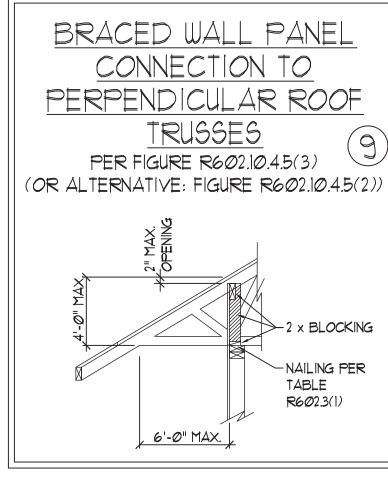
(c) GARAGE DOOR CORNER DETAIL (SEE PLAN FOR ADDITIONAL

STRUCTURAL INFORMATION OR ALTERNATE CONFIGURATIONS)









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WALL BRACING NOTES AND DETAILS

DATE: MAY 18, 2020

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

DRAWN BY: JST

ENGINEERED BY: JST

BRACED WALL NOTES AND DETAILS AND PF DETAIL

GENERAL NOTES

- 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	2Ø	10	L/240 (L/360 w/ BRITTLE FINISHES)	
ATTIC WITHOUT STORAGE	10	10	L/360	
DECKS	40	10	L/360	
EXTERIOR BALCONIES	40	10	L/360	
FIRE ESCAPES	40	10	L/360	
HANDRAILS/GUARDRAILS	200 LB OR 50 (PLF)	10	L/360	
PASSENGER VEHICLE GARAGE	50	10	L/360	
ROOMS OTHER THAN SLEEPING ROOM	40	10	L/360	
SLEEPING ROOMS	3Ø	10	L/360	
STAIRS	40	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 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 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

- 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 5 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 = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO).
- 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 = 1800000 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

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

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 1 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'-Ø" 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 YALLEYS (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 HE 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.



DATE: OCTOBER 29, 2018

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

DRAWN BY: JES

ENGINEERED BY: JST

STRUCTURAL NOTES

33736 6/11/2020