Residence for

Garman Homes Lot 0104 Serenity Fuquay Varina, North Carolina

INDEX TO DRAWINGS

COVER SHEET

- FRONT & LEFT SIDE ELEVATIONS
- **REAR & RIGHT SIDE ELEVATIONS**
- FIRST & SECOND FLOOR PLANS
- FIRST & SECOND FLOOR ELECTRICAL PLANS
- FIRST & SECOND FLOOR MECHANICAL PLANS
- FIRST FLOOR PLUMBING PLAN
- CONSTRUCTION DETAILS

- FOUNDATION PLAN CRAWLSPACE STANDARD
 - FIRST FLOOR FRAMING PLAN SECOND FLOOR FRAMING
 - ROOF FRAMING PLAN
 - OPTIONAL IN-LAW SUITE DETAILS
 - S4 S5 SD1 SD2 STRUCTURAL DETAILS
 - STRUCTURAL DETAILS
 - SD3 STRUCTURAL DETAILS
 - CONSTRUCTION SPECIFICATIONS

GENERAL NOTES

- 1. ALL WORK TO BE DONE IN STRICT ACCORDANCE WITH NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE, 2018 EDITION (HEREWITH SHOWN AS N.C.S.R.B.C.).
- 2. DIMENSIONS SHOWN ON DRAWINGS GOVERN OVER SCALE.
- 3. STUD WALL DESIGN SHALL CONFORM TO ALL N.C.S.R.B.C.
- 4. CONTRACTOR SHALL USE TEMPERED SAFETY GLASS IN ALL LOCATIONS AS REQUIRED BY N.C.S.R.B.C., 2018 EDITION, SECTION
- 5. ANY HABITABLE ROOM SHALL MEET ALL LIGHT/VENTILATION AND EGRESS AS REQUIRED BY N.C.S.R.B.C. 2018 EDITION, SECTIONS R-303.1
- 6. ALL EXTERIOR WALLS SHOWN ON FLOOR PLANS ARE 2X6 FRAME UNLESS NOTED OTHERWISE. ALL INTERIOR WALLS SHOWN ON FLOOR PLANS ARE 2X4 FRAME UNLESS NOTED OTHERWISE
- 7. ALL ANGLED WALLS SHOWN ON FLOOR PLANS ARE 45 UNLESS NOTED OTHERWISE.
- 8. ALL WINDOWS SHALL HAVE A MINIMUM DPI RATING OF 25. BUILDER SHALL VERIFY WITH WINDOW MANUFACTURER THAT UNITS INSTALLED MEET THESE REQUIREMENTS AS PER N.C.S.R.B.C., 2018 EDITION, TABLE
- 9. ENERGY EFFICIENCY REQUIREMENTS FOR THE SPECIFIC CLIMATE ZONE WHERE STRUCTURE IS BEING BUILT SHALL BE IN ACCORDANCE WITH CHAPTER 11 OF THE N.C.S.R.B.C., 2018 EDITION, AS SHOWN IN SECTION N1101.2

MATERIALS LEGEND

EARTH/COMPACT FILL	FINISH WOOD
CONCRETE	ROUGH
BRICK	BLOCKING
CONCRETE BLOCK/STONE	PLYWOOD
STEEL	BATT INSULATION
ALUMINUM	RIGID INSULATION

TOILET ACCESSORIES LEGEND

PROVIDE 2X4 BLOCKING IN THE WALL FOR THE FOLLOWING:

TOWEL BAR TOILET PAPER HOLDER

TOWEL RING

MEDICINE CABINET

RESIDENTIAL BUILDING CODE SUMMARY

- 1. PLANS ARE DESIGNED TO THE 2018 N.C.S.R.B.C.
- 2. HOUSE IS DESIGNED FOR 115 MPH ULTIMATE DESIGN WIND SPEED (89 MPH NOMINAL
- 3. ANCHOR BOLTS SHALL BE MIN. 1/2" DIAMETER AND SHALL EXTEND 7" MIN. INTO MASONRY OR CONCRETE. BOLTS TO BE NO MORE THAN 6' O.C. AND WITHIN 12" FROM
- 4. MEAN ROOF HEIGHT: 29'-3"
- 5. COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS:

MEAN ROOF HGT:	UP TO 30'	30'-1" TO 35'	35'-1" TO 40'	40'-1" TO 45'
ZONE 1	16.5,-18.0	17.3,-18.9	17.3,-18.9	17.3,-18.9
ZONE 2	16.5,-21.0	17.3,-22.1	17.3,-22.1	17.3,-22.1
ZONE 3	16.5,-21.0	17.3,-22.1	17.3,-22.1	17.3,-22.1
ZONE 4	18.0,-19.5	18.9,-20.5	18.9,-20.5	18.9,-20.5
ZONE 5	18.024.1	18.925.3	18.925.3	18.925.3

- 6. MINIMUM VALUES FOR ENERGY COMPLIANCE: Zone 4
- 7. MAXIMUM GLAZING U-FACTOR: .35

HEATED (SO ET)

8. INSULATING VALUES: CEILING: R-38 / WALLS: R-15 / FLOOR: R-19 SLABS: R-10. CODE REFERENCE: TABLE N1102.1

AREA CALCULATIONS

HEATED (SQ	<u>. F1.)</u>	UNHEATED (SC	NHEATED (SQ. FT.) UNFINISHED		HEATED (SQ. FT.) UNFINISHED (SQ. FT.)		(SQ. FT.)
BASEMENT:	N/A	GARAGE:	280	BASEMENT:	N/A		
1ST FLOOR:	894	FRONT PORCH:	38	1ST FLOOR:	N/A		
2ND FLOOR:	750	PATIO:	100	2ND FLOOR:	N/A		
		SCREEN PORCH:		ATTIC:	N/A		
TOTAL: 1644 (OP		(OPTIONAL)	(OPTIONAL) N/A				
				TOTAL:	N/A		
		TOTAL:	418				
				OVERALL DIMENSIONS			
				WIDTH: DEPTH:	43'-0" 54'-0"		

FOUNDATION VENTILATION CALCULATIONS

(REFERENCE: N.C.S.R.B.C. 2018 EDITION SECTION R408)

NOT APPLICABLE WITH SLAB FOUNDATIONS

ATTIC VENTILATION REQUIREMENTS

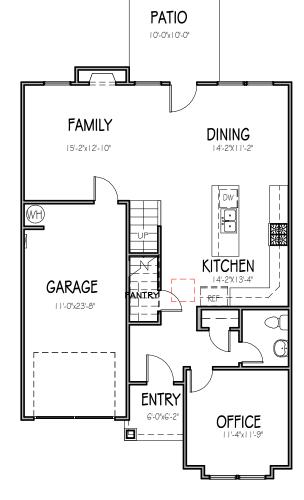
NATURAL ROOF VENTILATION CALCULATIONS MECHANICAL ROOF VENTILATION CALCULATIONS

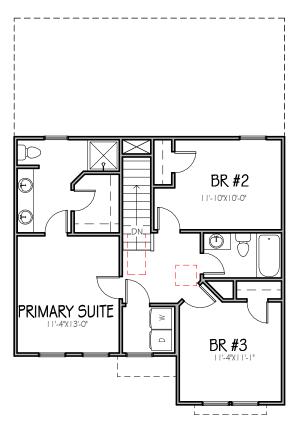
1212 SQ. FT. = 8.08 SQ. FT. VENT REQ'D

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS REQUIRED PER CODE 1212 SQ. FT. = 4.04 SQ. FT. VENT REQ'D

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS REQUIRED PER CODE









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Project Number Project Number Plan Number FP-1644

-ORGE

SER ELEVATION A LOT 0104 SERENITY

Drawn By MMH Checked By JM Date Drawn 2/16/20 **Revision Date** 7/1/20 4/5/22 11/22/22 2/21/23



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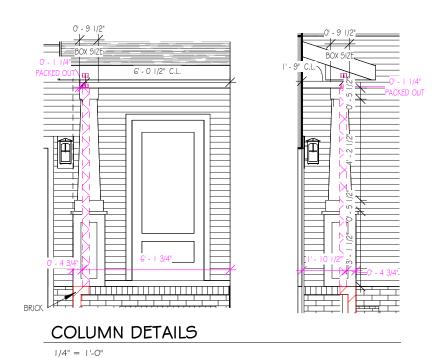
Drawn By МН Checked By CM Date Drawn 4/8/20

Revision Date 7/1/20 4/5/22

2/21/23

Sheet

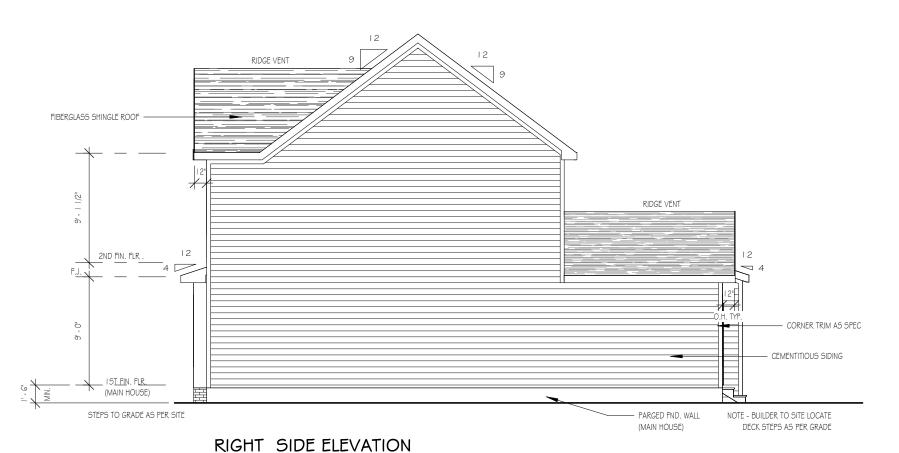
RIDGE VENT FIBERGLASS SHINGLE BOARD ¢ BATTEN SIDING WINDOWS - CORNER TRIM AS SPEC 4" TRIM @ WINDOWS AND 8" TRIM BOARD W/ DRIP CAP - CEMENTITIOUS SIDING `WINDOWS PROVIDE RAILS @ PORCH ONLY IF REQUIRED BY CODE (MAIN HOUSE) 15" MIN. HGT. STEPS TO GRADE BRICK VENEER FND. WALL FOUNDATION FRONT 12" BASE/8" TOP AS PER SITE TAPERED COL. ON GRADE TO FINISHED FRONT PORCH 16"X16" WOOD BASE



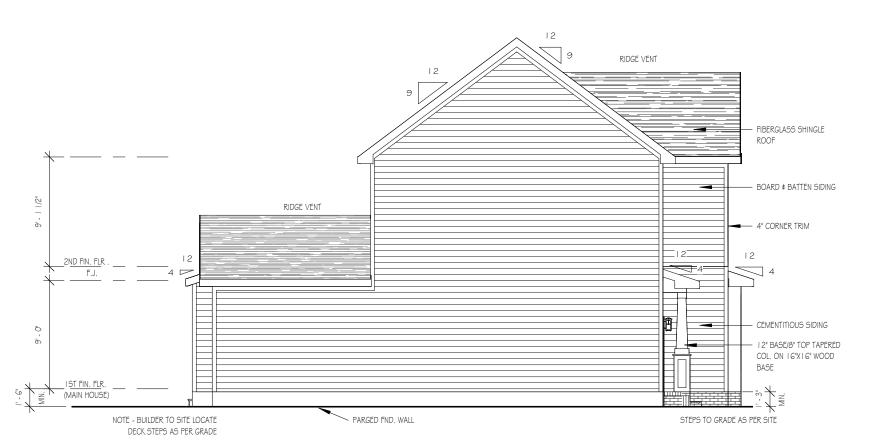
FRONT ELEVATION

1/8" = 1'-0"

NOTE - SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE



1/8" = 1'-0"



NOTE:
PROVIDE RAILS @
PORCH ONLY IF
REQUIRED BY CODE

I 5" MIN. HGT. FOUNDATION FRONT GRADE TO FINISHED FRONT PORCH THE PURPOSE OF THESE DRAWINGS IS TO SHOW THE INTENT OF THE DESIGN AND CONSTRUCTION OF THIS HOME. CONTRACTOR SHOULD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. ONCE A PERMIT HAS BEEN ISSUED, CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY TO THE ACCURACY OF THE PLANS AND ANY CHANGES MADE DURING CONSTRUCTION.



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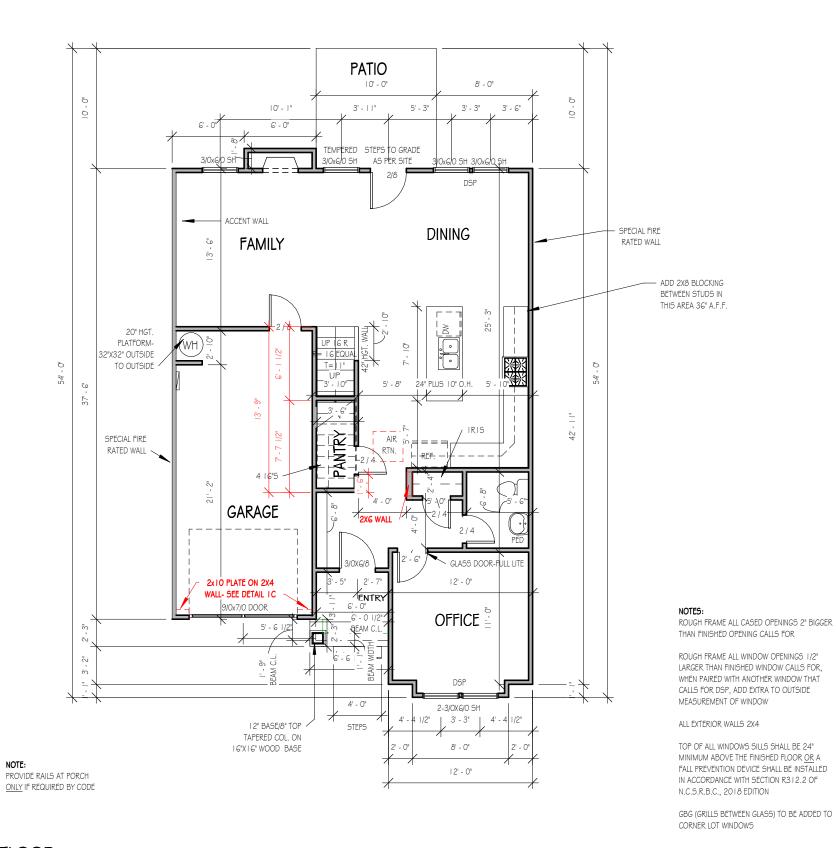
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7/1/20
4/5/22
2/21/23

Sheet

2

LEFT SIDE ELEVATION



FIRST FLOOR

NOTE:

1/8" = 1'-0"

9'-0" CLG. HGT. U.N.O. SET WINDOWS @ 7'-6" U.N.O.

THE PURPOSE OF THESE DRAWINGS IS TO SHOW THE INTENT OF THE DESIGN AND CONSTRUCTION OF THIS HOME. CONTRACTOR SHOULD VERIFY ALL
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Plan Number
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IOTES:

ROUGH FRAME ALL CASED OPENINGS 2" BIGGER THAN FINISHED OPENING CALLS FOR

ROUGH FRAME ALL WINDOW OPENINGS 1/2* LARGER THAN FINISHED WINDOW CALLS FOR, WHEN PAIRED WITH ANOTHER WINDOW THAT CALLS FOR DSP, ADD EXTRA TO OUTSIDE MEASUREMENT OF WINDOW

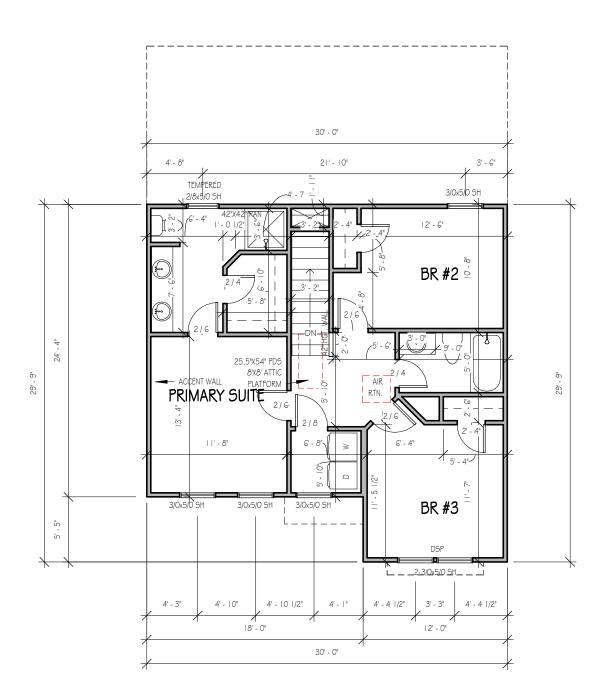
ALL EXTERIOR WALLS 2X4

TOP OF ALL WINDOWS SILLS SHALL BE 24" MINIMUM ABOVE THE FINISHED FLOOR <u>OR</u> A FALL PREVENTION DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH SECTION R3 | 2.2 OF N.C.S.R.B.C., 2018 EDITION

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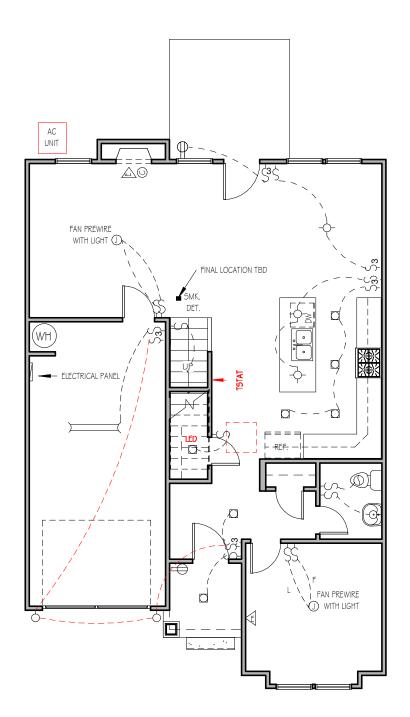
4



SECOND FLOOR

1/8" = 1'-0"

9'-0" CLG. HGT. U.N.O. SET WINDOWS @ 7'-4" U.N.O.



**NOTE: THREE ETHERNET OUTLETS IN THESE PREDETERMINED LOCATIONS ARE STANDARD. ANY ADDITIONAL OUTLETS ARE AN UPGRADE.

FIRST FLOOR ELECTRICAL PLAN

NOTE - ELECTRICAL RECEPTACLE AND SWITCH QUANTITIES AND LOCATIONS SHOWN ON PLAN ARE FOR ILLUSTRATION PURPOSES ONLY. ACTUAL NUMBER AN D LOCATIONS SHALL BE FIELD DETERMINED AS PER CLIENT AND BUILDER EXCEPT WHERE CODE REQUIREMENTS APPLY.

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ELECTRICAL LECEND

-∳- - LIGHT FIXTURE

MP- WATERPROOF GUILET

CI - RECESSED TRHUNS

. SINGLE PULL GATCH

DINHER SHITCH - SMOKE DETECTOR

& - D-MAY SMITCH & - 4-MAY SMITCH

^БД - Ньоор Цантэ

W - EYEDALL SPOTS

O - PAKLISHT



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SER ELEVATION A LOT 0104 SERENITY

CONTRACTOR - CLA PARLISHES - TRACK LIGHTS - Hukiminskiir Lievinia O - CABLE OVILET

- DUPLEX RECEPTABLE (162V)

DWITCHED RECEPTABLE (TOP MIRE ONLY)

- .220 VOLT WEGETTACLE

A - TELEPHONE OUTLET

A - COMPUTER DATA CUILET M - DURSLAR ALARM

FAN PREWIRE

(J) WITH LIGHT

D'

FAN PREWIRE

WITH LIGHT

DET.

SMK. DET. - INTERSOM NOTE: ALL ELECTRICAL TO SE VERIFIED BY OWNER/BULDER SCHOOL ROUGH-IN.

GROUND FAILT CIRCUIT INTERRUPTOR FORGET ME NOT

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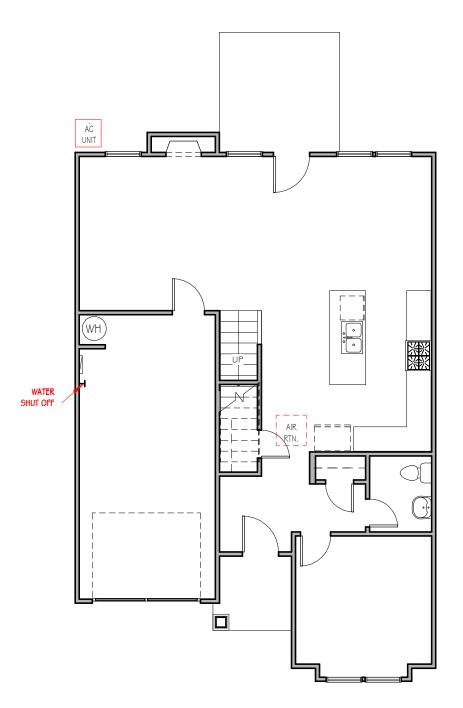
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SECOND FLOOR ELECTRICAL PLAN

FAN PREWIRE WITH LIGHT ()

NOTE - ELECTRICAL RECEPTACLE AND SWITCH QUANTITIES AND LOCATIONS SHOWN ON PLAN ARE FOR ILLUSTRATION PURPOSES ONLY. ACTUAL NUMBER AN D LOCATIONS SHALL BE FIELD DETERMINED AS PER CLIENT AND BUILDER EXCEPT WHERE CODE REQUIREMENTS APPLY.

LEDÓ



FIRST FLOOR MECHANICAL PAGE

1/8" = 1'-0"

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8X8 HVAC ATTIC PLATFORM

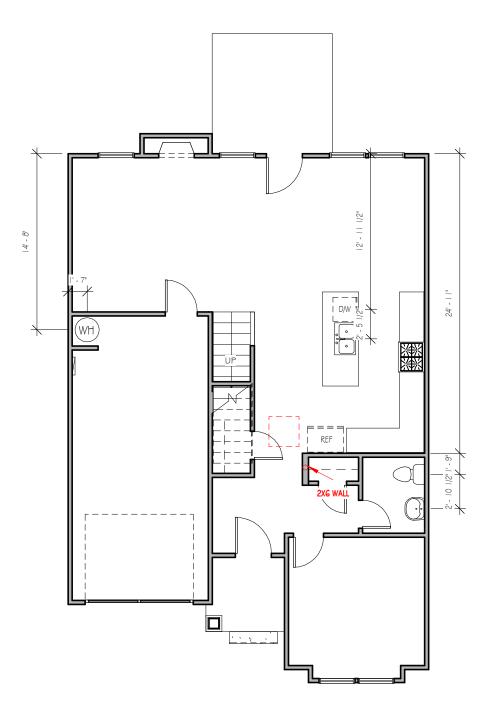
SECOND FLOOR MECHANICAL

PAGE

1/8" = 1'-0"

She

M



FIRST FLOOR PLUMBING

1/8" = 1'-0"

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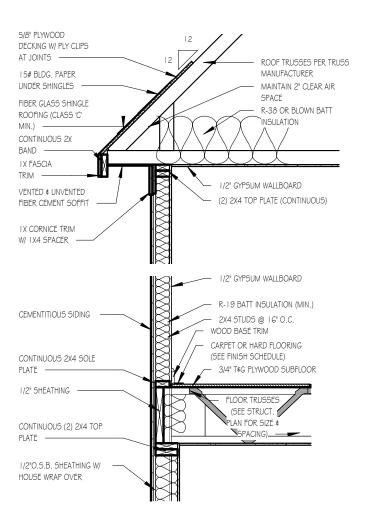


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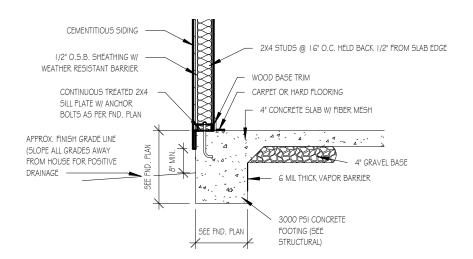
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TWO-STORY WALL SECTION

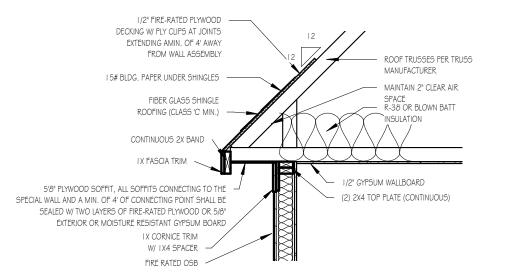
1/2" = 1'-0"

1/2" = 1'-0"



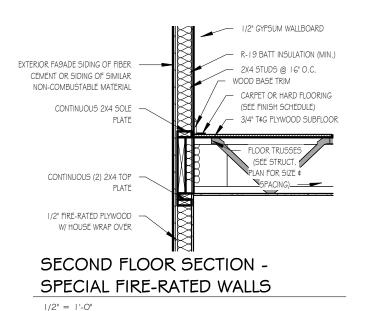
FOUNDATION DETAIL - SLAB

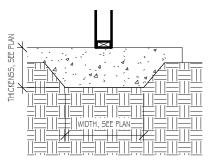
1/2" = 1'-0"



ROOF DETAIL SPECIAL FIRE-RATED WALLS

1/2" = 1'-0"





LUG FOOTING

1/2" = 1'-0"

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SERENITY COLLECTION

Drawn By

MMH

Checked By

JM

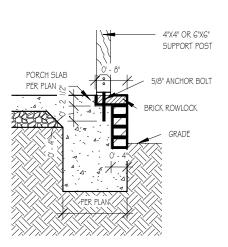
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10/28/20

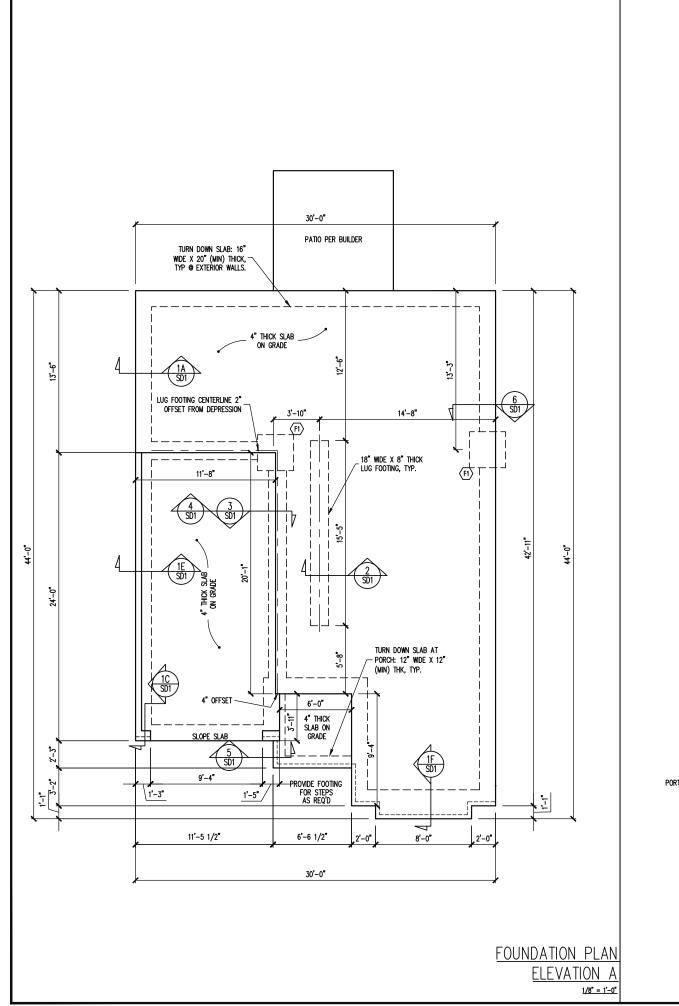
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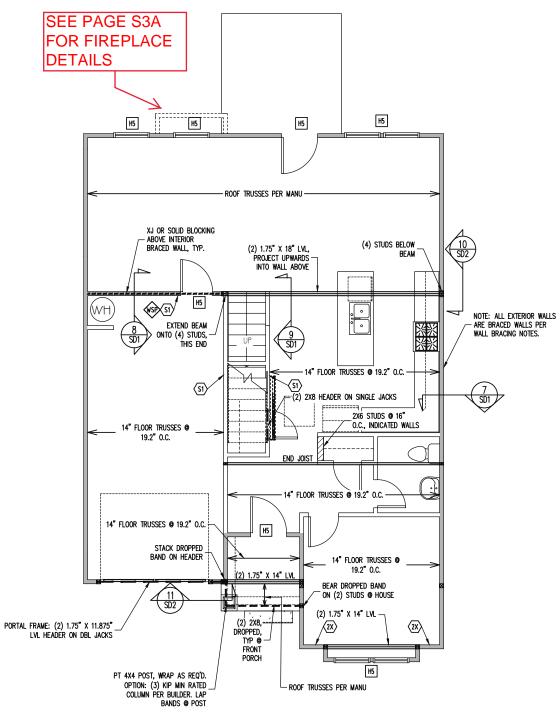
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FRONT PORCH COLUMNS SUPPORT ATTACHMENT





1ST FLOOR FRAMING PLAN **ELEVATION A**

> WALLS AND CEILING 1/8" = 1'-0"

FRAMING SCEDULE

INTERIOR LOAD BEARING WALL: SECURE TO THICKENED SLAB BELOW WITH 1/2" RED HEADER ANCHOR (OR EQUAL) @ 6'-0" O.C., 12" MAX FROM ENDS / CORNERS OF WALL, 7" MIN EMBEDMENT INTO SLAB BELOW.

JOIST SUBSTITUTION

14" FLOOR TRUSSES PERMITTED TO BE SUBSTITUTED WITH 14" I-JOISTS.

MAINTAIN MINIMUM SPACING AS CALLED OUT ON PLANS.

SIMP. IUS/ITS3.56/14 HANGERS TO BE SUBSTITUTED WITH SIMP. IUS/ITS2.06/14 HANGER WHEN I-JOISTS HAVE BEEN INSTALLED.

CONSTRUCTION SPECIFICATIONS **INSTANT REFERENCES**

REFER TO THE CONSTRUCTION SPECIFICATIONS SECTIONS FOR THE FOLLOWING INFORMATION:

PART 1.01: CURRENT GOVERNING CODE

PART 14: STUD SUPPORT FOR BEAMS

PART 17: KING STUDS FOR EXTERIOR WALLS

SEE DETAIL / CONSTRUCTION SPECIFICATIONS SHEETS FOR I-JOISTS ALLOWABLE SUBSTITUTIONS

WALL BRACING

SHADED WALLS:

ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

- WSP ONE SIDE OF INTERIOR WALL OR INSIDE OF EXTERIOR WALL WITH 3/8" MIN. THICKNESS WOOD STRUCTURAL PANELING. ATTACH WSP TO STUD WALL WITH 8d NAILS @ 4" O.C. AT PANEL EDGES, 8" O.C. IN PANEL FIELD.
- Sheath Both Sides of Stud Wall with 76 APA RATED OSB, NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

PROVIDED CONTINUOUS SHEATHING = 155' MIN.

REFERENCE PART 16.02 OF CONSTRUCTION SPECIFICATIONS FOR GENERAL WIND BRACING INFORMATION.

HEADER SCHEDULE

- SINGLE 2X4 TURNED FLAT (A)
- H2 (2) 2X4'S ON SINGLE JACKS (B)
- H3 (2) 2X10'S ON SINGLE JACKS (C)
- (2) 1.75" X 9.25" LVL'S ON DBL JACKS
- (2) 2X8'S ON SINGLE JACKS
- TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.
- TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.
- TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

-HEADERS IN NON LOAD BEARING INTERIOR
WALLS ARE NOT LABELED.

FOUNDATION SCHEDULE

ENLARGE FOOTING TO 36" SQ. X 12" THK

-HEIGHT AND BACKFILL LIMITATIONS FOR FOUNDATION WALLS ARE TO BE GOVERNED BY THE NCSBC, LATEST EDITION.

Engineering from Engine only. ission listed perm client li written for the without plans are P.A. These eering place Engin takes property of permitting t G SEAL VALID FOR 1 YEAR ONLY. real design of this plan is the prathese plans if construction or pe

The second second

STRUCTURAL ENGINEERS
License No. C-3870
W Millbrook Rd, Suite 201
leigh, North Carolina 27609
Phone (919) 844-1661 W Mille leigh, No

FRESH PAINT STRUCTURAL ADDENDUM

ENG: NBG/CMC DATE: 5/19/2022

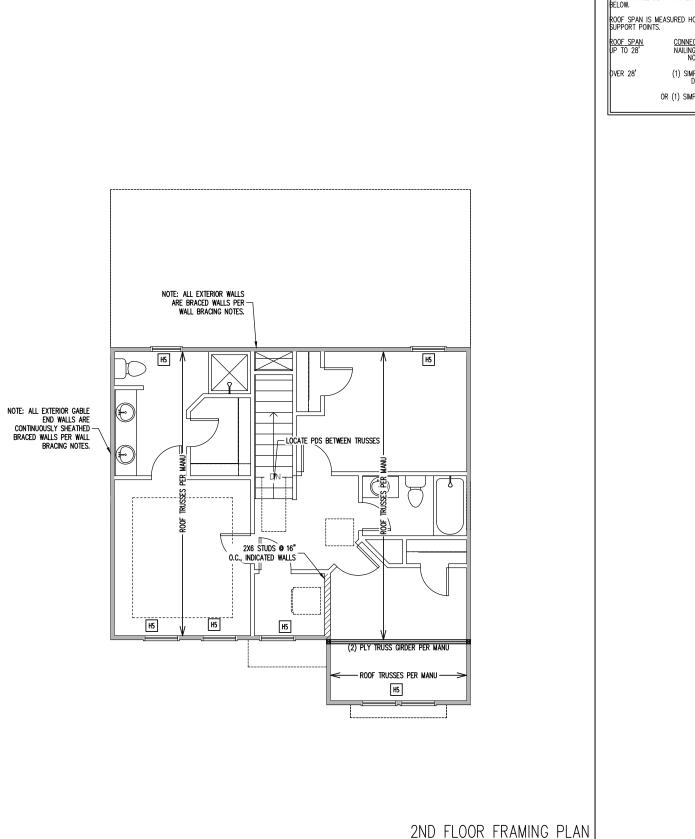
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SHEET NO. S₁A 1 of 6

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22-30-060



ELEVATION A

WALLS AND CEILING

1/8" = 1'-0"

TRUSS UPLIFT CONNECTORS

RUSSES SHALL BE ATTACHED TO SUPPORT WALL FOR UPLIFT RESISTANCE. CONTINUOUS OSB WALL SHEATHING BELOW PROVIDES CONTINUOUS UPLIFT RESISTANCE TO FOUNDATION. ALL TRUSSES SUPPORTED BY INTERMEDIATE SUPPORT WALLS, KNEWALLS OR BEAMS SHALL BE ATTACHED TO SUPPORTING MEMBER PER SCHEDULE BELOW.

ROOF SPAN IS MEASURED HORIZONTALLY BETWEEN FURTHEST SUPPORT POINTS.

OR (1) SIMPSON H3 CLIP TO SINGLE 2X4 PLATE

- OPTIONAL SCREENED PORCH DN 4:12 DN 4:12

DN 4:12 DN 4:12 TRUSSES TRUSSES <u>____4:12__</u> DN 12:12 DN 12:12

> ROOF FRAMING PLAN **ELEVATION A** 1/8" = 1'-0"

4:12

FRAMING NOTES

-ROOF TRUSSES PER MANU. TYPICAL U.N.O.
-VERIFY ALL KNEEWALL HEIGHTS, ROOF PITCHES,
AND ARCHITECTURAL OVERHANGS PRIOR TO CONSTRUCTION

CONSTRUCTION SPECIFICATIONS INSTANT REFERENCES

REFER TO THE CONSTRUCTION SPECIFICATIONS SECTIONS FOR THE FOLLOWING INFORMATION:

PART 1.01: CURRENT GOVERNING CODE

PART 14: STUD SUPPORT FOR BEAMS

PART 17: KING STUDS FOR EXTERIOR WALLS WALL BRACING

SHADED WALLS:

ALL EXTERIOR STUD WALLS, EXTERIOR SIDE, ARE TO BE CONTINUOUSLY SHEATHED WITH 7/16 APA RATED OSB NAILED TO STUDS WITH 8d NAILS @ 6" O.C. AT PANEL EDGES, 12" O.C. IN PANEL FIELD.

PROVIDED CONTINUOUS SHEATHING = 119' MIN.

REFERENCE PART 16.02 OF CONSTRUCTION SPECIFICATIONS FOR GENERAL WIND BRACING INFORMATION.

HEADER SCHEDULE

- SINGLE 2X4 TURNED FLAT (A)
- (2) 2X4'S ON SINGLE JACKS (B)
- (2) 2X10'S ON SINGLE JACKS (C)
- (2) 1.75" X 9.25" LVL'S ON DBL JACKS
- H5 (2) 2X8'S ON SINGLE JACKS
- TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPENING 38" MAX.
- TYPICAL FOR INTERIOR NON LOAD BEARING WALLS ONLY, ROUGH OPNG 38" TO 74" MAX.
- TYPICAL FOR ALL CONDITIONS NOT LISTED IN (A) OR (B) UNO.

-HEADERS IN NON LOAD BEARING INTERIOR WALLS ARE NOT LABELED.

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STRUCTURAL ENCINEERS
License No. C-3870
8 W Millbrook Rd, Suite 201
aleigh, North Carolina 27609
Phone (919) 844-1661 318 W Millb Raleigh, No

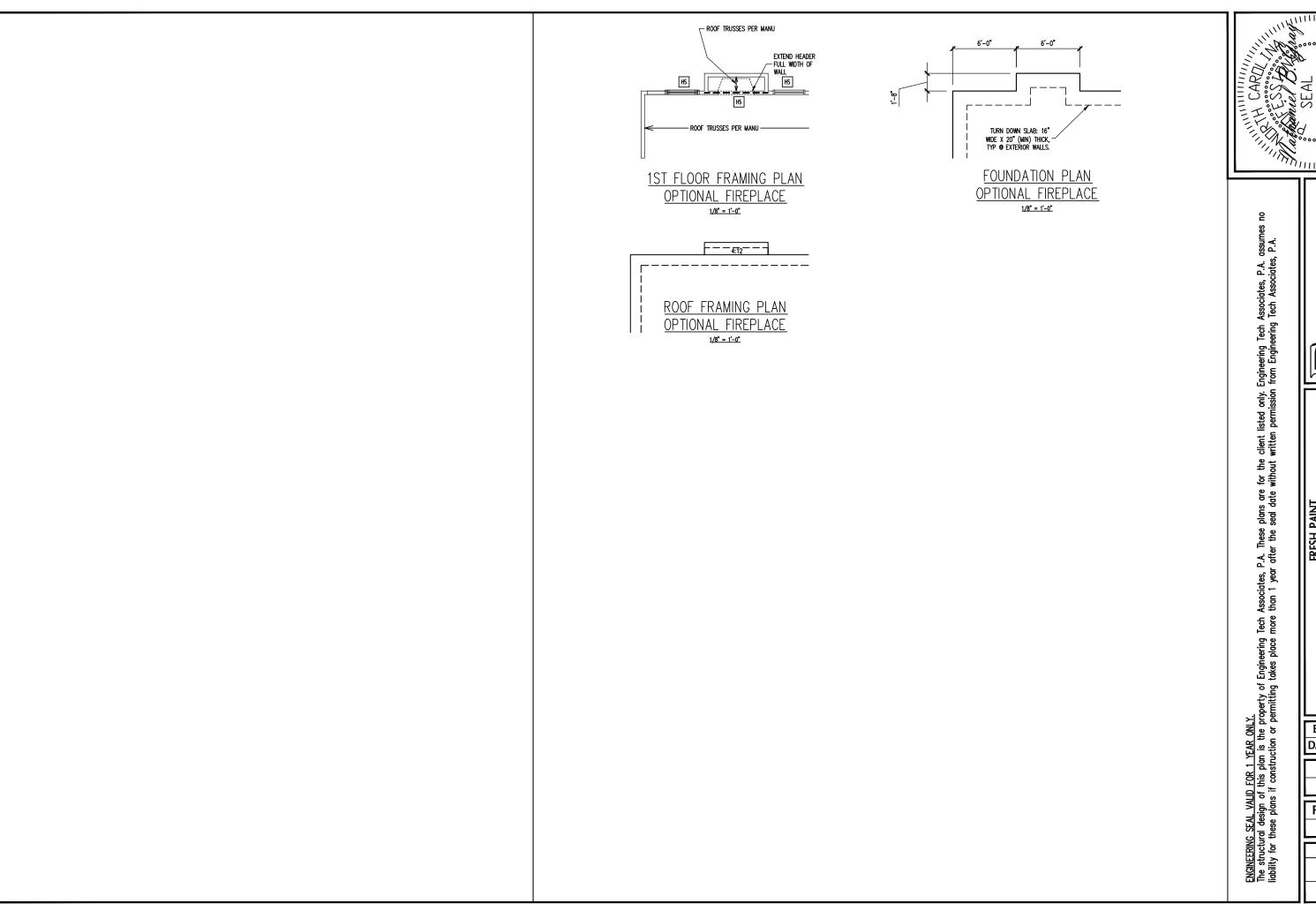
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> ENG: NBG/CMC DATE: 5/19/2022

PROJECT NO. 22-30-060

> SHEET NO. S2A

2 of 6

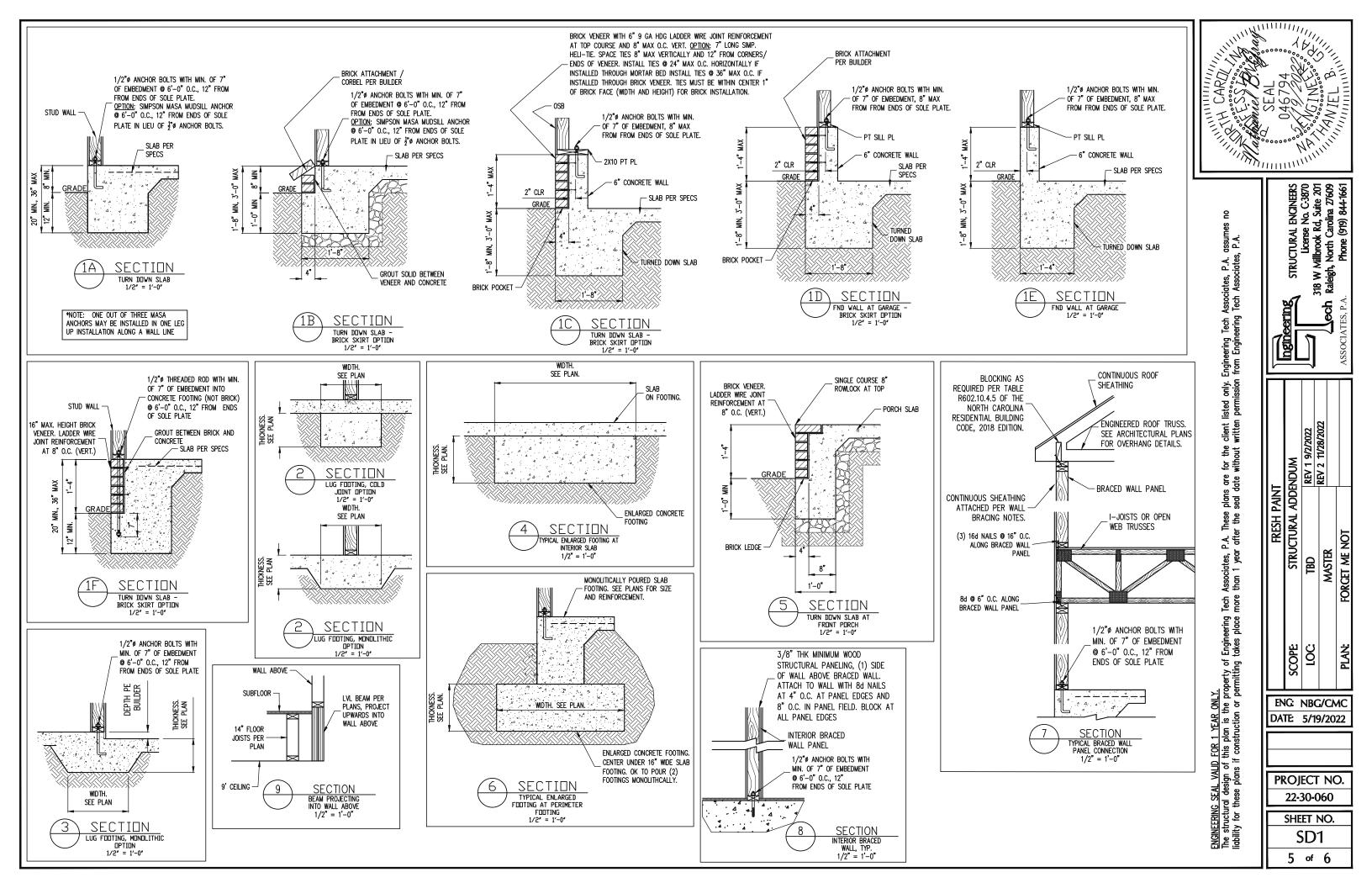


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ENG: NBG/CMC DATE: 5/19/2022

PROJECT NO. 22-30-060

> SHEET NO. S3A 3 of 6



CONSTRUCTION SPECIFICATIONS

PART 1: GENERAL

- CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE. 2018 EDITION.
- 1.02 DIMENSIONS SHOWN SHALL GOVERN OVER SCALE ON THESE DRAWINGS.
- METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR, WHO SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

PART 2: DESIGN LOADS

2.01 DESIGN LOADS SHALL CONFORM WITH THE TABLE BELOW: USE

BALCONIES, DECKS, ATTICS WITH FIXED STAIR ACCESS, DWELLING UNITS INCLUDING ATTICS WITH FIXED STAIR ACCESS, STAIRS, FIRE ESCAPES	40	10
GARAGES (PASSENGER CARS ONLY)	50	
ATTICS (NO STORAGE, LESS THAN 5' HEADROOM)	10	10
ATTICS (WITH STORAGE)	20	10
ROOF	20	10 (15 FOR VAULTS)

LIVE LOAD (PSF) DEAD LOAD (PSF)

- NOTES: INDIVIDUAL STAIR TREADS ARE TO BE DESIGNED FOR THE UNIFORMLY DISTRIBUTED LIVE LOAD OF 40 PSF OR A 300 LB. CONCENTRATED LOAD ACTING OVER AN AREA OF 4 SQ. WHICHEVER PRODUCES THE GREATER STRESS.

 BUILDER TO VERIFY DEAD LOAD DOES NOT EXCEED 10 PSF WHEN HEAVY FLOOR OR
 - ROOF FINISHES SUCH AS TILE OR SLATE ARE UTILIZED. NOTIFY ENGINEERING UNDER
- 2.02 INTERIOR WALLS: 5 PSF LATERAL
- 2.03 BASIC WIND DESIGN VELOCITY OF 120 MPH.
- SOIL BEARING CAPACITY 2000 PSF (PRESUMPTIVE).

PART 5: CONCRETE AND SLABS ON GRADE

- CAST IN PLACE CONCRETE SHALL BE OF NORMAL WEIGHT, 6% AIR ENTRAINMENT, AND SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS TYP UNO. ALL CONCRETE, INCLUDING CONCRETE FOR FOOTINGS, IS TO BE CAST IN PLACE, TYP
- SLABS ON GRADE, IF ANY, SHALL CONTAIN SYNTHETIC POLYPROPYLENE FIBRILLATED MICRO FIBERS, FIBER LENGTH 1 1/2", DOSAGE RATE 1 1/2 LBS/CU YD. SLAB TO BE PLACED ON A 6 MIL VAPOR BARRIER ON 2" MIN GRANULAR FILL ON SOIL WITH 90% ARD PROCTOR DENSITY. VAPOR BARRIER MAY BE OMITTED FOR SLABS NOT

PART 7: MASONRY

- 7.03 MORTAR SHALL BE TYPE S. MORTAR AND GROUT SHALL CONFORM TO ASTM C476, MIN COMPRESSIVE STRENGTH OF 2000 PSI.
- LADDER WIRE REINFORCEMENT SHALL CONFORM TO ASTM A951. 6" MIN LAPS FOR CONTINUOUS WALL APPLICATIONS

PART 8: BOLTS AND LAG SCREWS

8.03 ANCHOR RODS AND BOLTS SHALL CONFORM TO ASTM F1554-15 GRADE 36 UNO. BENT ANCHOR BOLTS SHALL HAVE A 2" MIN HOOK UNO

NAILS, SPIKES AND STAPLES SHALL CONFORM TO ASTM F 1667- 05. NAILS ARE TO BE COMMON WIRE OR BOX

PART 10: DIMENSIONAL LUMBER

SOLID SAWN WOOD FRAMING DESIGN IS BASED ON NO. 2 SPRUCE PINE FIR \underline{OR} SYP #2 FOR JOISTS, RAFTERS, GIRDERS, BEAMS, STUDS, ETC.

PART 11: ENGINEERED LUMBER

- LVL OR PSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS: E= 1.9 X 10E6 PSl, Fb = 2600 PSl, Fv = 285 PSl, Fc = 750 PSl LSL MINIMUM ALLOWABLE DESIGN STRESSES ARE AS FOLLOWS: E= 1.3 X 10E6 PSl, Fb = 1700 PSl, Fv = 400 PSl, Fc = 680 PSl
- 11.02 LVL OR PSL MEMBERS MAY BE RIPPED FROM DEEPER MEMBERS TO MATCH THE MEMBER

PART 12: PRESSURE TREATED LUMBER

LUMBER IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD C-15. ALL OTHER EXPOSED LUMBER SHALL BE TREATED IN ACCORDANCE WITH AWPA STANDARD C-2 OR BY ANY METHOD GIVING EQUAL PROTECTION. THE BUILDING CODE OFFICE MAY ALSO APPROVE A NATURAL DECAY RESISTANT WOOD PER SECTION 19-6(A)

PART 14: STUD SUPPORTS FOR BEAMS

14.01 STEEL, ENGINEERED LUMBER, AND FLITCH PLATE BEAMS BEARING ON A STUD WALL

- 1-WHEN THE BEAM IS PERPENDICULAR TO, OR SKEWED RELATIVE TO THE WALL, THE BEAM SHALL BEAR <u>FULL WIDTH</u> ON THE SUPPORTING WALL INDICATED AND SHALL BE SUPPORTED BY A MINIMUM OF THREE GANGED STUDS, OR A GANGED STUD COLUMN WITH A NUMBER OF STUDS SUCH THAT THE STUD COLUMN IS AT LEAST AS WIDE AS THE TRUE WIDTH OF THE BEAM BEING SUPPORTED, WHICHEVER IS GREATER, TYP UNO. FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM
 2-BEAMS BEARING ONTO THE END OF A STUD WALL PARTLEL TO THE BEAM SHALL BEAR A MINIMUM OF A 1.0° CONTO THE WALL AND BE SUPPORTED BY A TOPL STUD CANCED.
- A MINIMUM OF 4 1/2" ONTO THE WALL AND BE SUPPORTED BY A TRPL STUD GANGED

4.02 DIMENSIONAL LUMBER BEAMS BEARING ON A STUD WALL SHALL BEAR AS FOLLOWS:

- 1-when the Beam is perpendicular to, or skewed relative to the wall, the Beam Shall Bear <u>Full width</u> on the supporting wall indicated (less 1 1/2" to allow for a continuous rim joist where applicable) and shall be supported by a GANGED STUD COLUMN THE SAME MOTH AS THE BEAM TYP UNO. (E.G. A TRIPLE 2XIO IS TO BE SUPPORTED BY (3) STUDS). FOR THE SKEWED CONDITION PARTICULAR CARE SHALL BE TAKEN TO ENSURE STUD COLUMN IS CENTERED ON THE BEAM 2-BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR A MINIMUM OF 3" ONTO THE WALL AND BE SUPPORTED BY A DBL STUD GANGED COLUMN
- 14.03 EXTRA JOISTS BEARING ON A STUD WALL PERPENDICULAR TO OR SKEWED RELATIVE TO THE BEAM SHALL BE SUPPORTED BY ONE ADDITIONAL STUD.
- STUDS THAT ARE GANGED TO FORM A COLUMN SHALL HAVE ADJACENT STUDS WITHIN THE COLUMN NAILED TOGETHER WITH ONE ROW OF 10d NAILS AT 8" O.C. (TWO ROWS THE COLOMIN NATILED TOGETHER WITH ONE NOW OF TOG NAILS AT 8 JUL. (TWO ROWS OF TOG NAILS A 8 C.O., 3" APART, FOR 2X8 OR 2X10 STUDS) ALL COLUMNS SHALL BE CONTINUOUS DOWN TO THE FOUNDATION OR OTHER PROPERLY DESIGNED STRUCTURAL ELEMENT SUCH AS A BEAM. COLUMNS TRANSFERRING LOADS THROUGH FLOOR LEVELS SHALL BE SOUNLY BLOCKED FOR THE FULL WIDTH OF THE STUD COLUMN WITHIN THE CAVITY FORMED BY THE

PART 15: NAILING OF MULTI PLY WOOD BEAMS

- SOLID SAWN LUMBER JOISTS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM NAILED TOGETHER WITH THREE ROWS OF 10d NAILS @ 16" O.C. FOR 2X10 OR LARGER, TWO ROWS OF 10d NAILS @ 16" O.C. FOR 2X8, ONE 15.01 ROW OF 10d NAILS @ 16" O.C. FOR 2X6 OR SMALLER. STAGGER ROWS 5" MIN.
- 15.02 LV. MEMBERS THAT ARE GANGED TO FORM A BEAM SHALL HAVE ADJACENT MEMBERS IN THE BEAM FASTENED TOGETHER PER MANUFACTURERS RECOMMENDATIONS, TYP

PART 16: WALL FRAMING AND BRACING

- 6.01 STUD WALLS SHALL CONSIST OF 2X4 STUDS SPACED AT 16" O.C. UNO. STUDS SHALL STUD WALLS SHALL CONSIST OF ZXA STUDS SPACED AT 16 O.C. UNO. STUDS SHALL BE CONTINUOUS FROM SOLE PLATE AT FLOOR TO DOUBLE TOP PLATE AT THE CEILING OR ROOF. NO INTERMEDIATE BANDS OR PLATES SHALL CAUSE DISCONTINUITIES IN A STUD WALL EXCEPT AS REQUIRED FOR DOOR OR WINDOW OPENINGS. THE KING STUDS FOR SUCH OPENINGS SHALL BE CONTINUOUS, TYP UNO.

 MAX ALLOWABLE WALL HEIGHTS FOR EXTERIOR STUD WALLS, WITH SOLE PLATE AND DBL TOP PLATE AND 7/16" OSB EXTERIOR BRACING AND ROW OF ZXA /
 - 2X6 PURLINS AT 8' HEIGHT (AND AT 16' HEIGHT FOR TALL WALLS), TYP UNO
- 16.02 FOR WALL BRACING THE FOLLOWING SHALL APPLY:

 -BLOCKING AT UNSUPPORTED PANEL EDGES IS REQUIRED TYP UNO.

 -WALL BRACING IS BY ENGINEERED DESIGN AND NOT PRESCRIPTIVE PER SECTION 602.10 OF THE 2018 NCRC. CONTINUOUS SHEATHING HAS BEEN PROVIDED, ALONG WITH ALTERNATIVE METHODS TO INSURE THE MINIMUM INTENT OF SECTION 602.10 OF THE 2018 NCRC HAS BEEN MET AND EXCEEDED.

 -BRACED WALL PANELS SHALL BE FASTENED IN ACCORDANCE WITH TABLE 602.3(1) TO

 - -BRACED WALL PANELS SHALL BE FASTENED IN ACCORDANCE WITH TABLE 602.3(1) TO PROVIDE CONTINUOUS PANEL UPLIFT RESISTANCE AND COMPLIANCE WITH NCRBC R602.3.5 AND R802.11 UNLESS NOTED OTHERWISE ON STRUCTURAL PLANS.

 -MAY SUBSTITUTE WSP FOR 68
 -SINCLE JOIST, CONTINUOUS RIM JOIST, OR BLOCKING OF EQUAL DEPTH IS REQUIRED ABOVE AND BELOW ALL BRACED WALLS. NAIL BLOCKING ABOVE WALL TO TOP PLATE WITH 16d TOE NAILS @ 6" O.C. NAIL SOLE PLATE OF BRACED WALL TO BLOCKING BELOW WITH (3) 16d NAILS @ 16" O.C. BLOCKING AT HORIZONTAL JOINTS IN BRACED WALL INDIPED AT SHADED WALLS IN THE STRUCKING AT HORIZONTAL JOINTS IN BRACED WALL INDIPED AT SHADED WALLS. WALL LINES ONLY REQUIRED AT SHADED WALLS, UNO.

17.01 KING STUDS FOR OPENINGS IN EXTERIOR WALLS SHALL BE AS FOLLOWS:

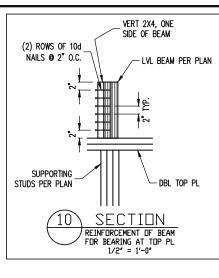
X OPENIN	G WIDTH	5'-0"	NUMBE 9'-0"		ig studs 17'–0"	21'-0"
	2X4	1	2	3	4	5
TUD SIZE	2X6	1	1	2	2	2
	2X8	1	1	1	1	2

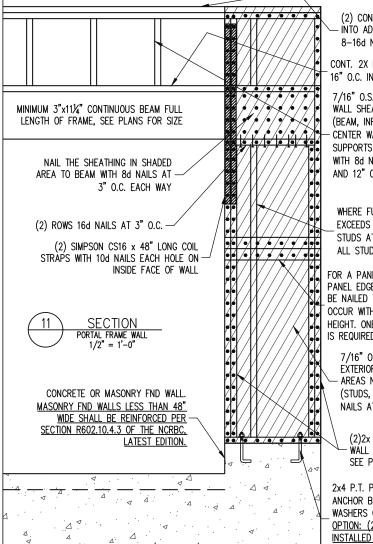
PART 18: SUBSTITUTIONS

MATERIAL OR MEMBER SIZE SUBSTITUTIONS OR PLAN DEVIATIONS REQUIRE THE WRITTEN AUTHORIZATION OF THE DESIGNERS. UNAUTHORIZED DEVIATIONS ARE THE SOLE

PART 19: OWNERSHIP OF STRUCTURAL DESIGN

THE STRUCTURAL DESIGN OF THIS PLAN IS THE PROPERTY OF ENGINEERING TECH ASSOCIATES (ETA). THESE PLANS ARE FOR THE ONE TIME USE AT THE LOCATION INDICATED AND FOR THE CLIENT LISTED, ETA ASSUMES NO LIABILITY FOR THESE PLANS IF THEY ARE REPRODUCED, IN WHOLE OR IN PART, FOR CONSTRUCTION AT ANY OTHER LOCATION





(2) CONT. 2X TOP PLATES, EXTEND EACH END - INTO ADJACENT WALL. NAIL SPLICES WITH 8-16d NAILS PER SPLICE/LAP.

CONT. 2X PLATE WITH 10d NAILS AT 16" O.C. INTO HEADER/BEAM

7/16" O.S.B. OR 15/32" PLYWOOD EXTERIOR WALL SHEATHING AT UNSHADED AREAS (BEAM, INFILL WALL ABOVE BEAM, AND CENTER WALL). NAIL SHEATHING TO ALL SUPPORTS (STUDS, PLATES, BLOCKING, ETC.) WITH 8d NAILS AT 6" O.C. AT SHEET EDGES AND 12" O.C. IN THE FIELD.

WHERE FULL HEIGHT PANEL WIDTH EXCEEDS 16", PROVIDE ADDITIONAL STUDS AT 16" O.C. NAIL SHEATHING TO ALL STUDS WITH 8d NAILS AT 3" O.C.

FOR A PANEL SPLICE (IF NEEDED) PANEL EDGES SHALL OCCUR OVER AND BE NAILED TO COMMON BLOCKING AND OCCUR WITHIN MIDDLE 24" OF WALL HEIGHT. ONE ROW OF 3" O.C. NAILING IS REQUIRED IN EACH PANEL EDGE.

> 7/16" O.S.B. OR 15/32" PLYWOOD EXTERIOR WALL SHEATHING. AT SHADED AREAS NAIL SHEATHING TO ALL SUPPORTS (STUDS, PLATES, BLOCKING, ETC.) WITH 8d NAILS AT 3" O.C.

(2)2x STUD MIN. AT START AND END OF WALL SEGMENTS EACH SIDE OF OPENING. SEE PLANS FOR ADDITIONAL STUDS

2x4 P.T. PLATE WITH TWO 1/2" DIA x 7" EMBED ANCHOR BOLTS WITH A 3/16"x2"x2" PLATE WASHERS OR ADDITIONAL HOLDOWN PER PLANS. OPTION: (2) 5/8" DIA. THREADED RODS INSTALLED PER SECTION R602.10.4.3 OF THE NCRBC, LATEST EDITION.

NOTES

THE BUILDER IS RESPONSIBLE FOR REVIEWING PLANS PRIOR TO CONSTRUCTION. THE BUILDER SHALL IMMEDIATELY CONTACT THE ENGINEER OF RECORD (EOR) BEFORE PROCEEDING IF THE FOLLOWING CONDITIONS ARE NOTED BEFORE OR DURING CONSTRUCTION:

- 1) THE WORKING PLANS DO NOT BEAR THE SEAL OF THE EOR
- 2) THE PLANS CONTAIN DISCREPANT OR INCOMPLETE INFORMATION

ANY ERRORS DUE TO A FAILURE TO FOLLOW THE ABOVE PROCEDURES SHALL NOT BE THE RESPONSIBILITY OF THE FOR, FURTHERMORE, IT IS THE RESPONSIBILITY OF THE BUILDER TO ENSURE THAN ANY REVISIONS ISSUED BY THE EOR ARE PROMPLY DISTRIBUTED TO THE

THE EOR DOES NOT PERFORM FENESTRATION OR VENTING CALCULATIONS OR ANY OTHER CALCULATIONS THAT ARE NOT DIRECTLY RELATED TO STRUCTURAL ENGINEERING.

ROOF AND FLOOR TRUSSES TO BE DESIGNED BY AN ENGINEER REGISTERED BY THE STATE, FINA TRUSS DRAWING SHOULD BE SUBMITTED TO THE EOR FOR REVIEW

ALLOWABLE I-JOIST SUBSTITUTION

PLANS. SIMPSON FACE SIMPSON TO MANUFACTURER DEPTH SERIES MOUNT HGR FLANGE HGR BLI 40 BOISE CASCADE BCI 5000s IUS2.06/14 ITS2.06/14 BOISE CASCADE 14" BCI 6000S IUS2.37/14 ITS2.37/14 LP CORP LPI 20+ IUS2.56/14 ITS2 56 /14 NORDIC NI 40X IUS2.56/14 ITS2.56/14 ROSEBURG RFPI 40s IIIS2 56 /14 ITS2 56 /14 14" WEYERHAFUSER TJI 210 IUS2.06/14 ITS2.06/14 14" WEYERHAFUSER IUS2.37/14 ITS2.73/14 FFI-20

NOTE: MAINTAIN JOIST DEPTH, DIRECTION, AND SPACING SPECIFIED ON

JOISTS NOT LISTED IN THE ABOVE TABLE MAY BE LISED PROVIDED THEY MEET OR EXCEED THE PROPERTIES OF THOSE LISTED. SUBSTITUTE USP BRAND HANGERS WITH EQUIVALENT VALUES AS DESIRED

ABBREVIATIONS

ABV ABOVE

BOTH FNDS BTWN BETWEEN CAST IN PLACE CONC CONCRETE CONTINUOUS SHEATHING

DIA DIAMETER DBL DOUBLE DOUBLE JOIST DSP DBI_STUD_POCKET

FA FACH FLG FLANGE L PL FLITCH PLATE FIR FLOOR

GALVANIZED HGR HANGER LVL LAMINATED VENEER NTS NOT TO SCALE O.C. ON CENTER PSL PARALLEL STRAND LUMBER PT PRESSURE TREATED

QJ QUAD JOIST

SQ SQUARE

SP STUD POCKET

FND FOUNDATION

HDG HOT DIPPED

TRPL TSP UNO UNLESS NOTED OTHERWISE XJ EXTRA JOIST

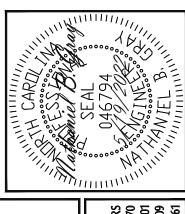
TJ TRIPLE JOIST

TYP TYPICAL TRIPI F TRIPLE STUD POCKE

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22-30-060

6 of 6