# Residence for

# Garman Homes Lot 0261 Serenity Fuquay Varina, North Carolina



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- **REAR & RIGHT SIDE ELEVATIONS** FIRST & SECOND FLOOR PLANS
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- STRUCTURAL DETAILS
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## **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
4	CONCRETE	ROUGH WOOD
	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: 30'-6"
- 5. COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS:

MEAN ROOF HGT:	<b>UP TO 30'</b>	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

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

# AREA CALCULATIONS

HEATED (SQ. FT.)		UNHEATED (SC	). FT.)	UNFINISHED (SQ. FT.)	
1ST FLOOR: 2ND FLOOR:	885 752	GARAGE: FRONT PORCH: SCREEN PORCH:	280 38 100	1ST FLOOR: 2ND FLOOR: ATTIC:	N/A N/A N/A
TOTAL: 1637		TOTAL:	418	TOTAL:	N/A
				OVERALL DIMEN	ISIONS
				WIDTH: DEPTH:	43'-0" 52'-11"

# FOUNDATION VENTILATION CALCULATIONS

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

NOT APPLICABLE WITH SLAB FOUNDATIONS

# ATTIC VENTILATION REQUIREMENTS

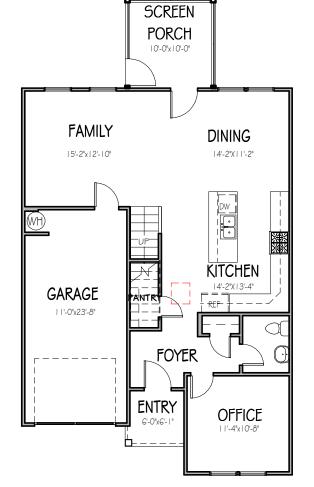
NATURAL ROOF VENTILATION CALCULATIONS MECHANICAL ROOF VENTILATION CALCULATIONS

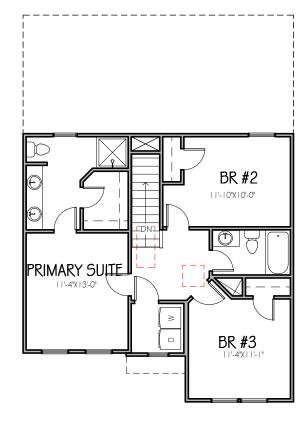
1203 SQ. FT. = 8.02 SQ. FT. VENT REQ'D

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS REQUIRED PER CODE 1203 SQ. FT. = 4.01 SQ. FT. VENT REQ'D 300

BUILDER TO PROVIDE APPROPRIATE VENTILATING AS REQUIRED PER CODE









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### Project Number Project Number Plan Number FP-1644

FORGE

SER ELEVATION B LOT 0261 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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Project Number Project Number Plan Number

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FORGET ME NOT

SER ELEVATION B LOT 0261 SERENITY

Drawn By МН Checked By CM Date Drawn 4/8/20 Revision Date 7/1/20 4/5/22 2/21/23

Sheet

FIBERGLASS SHINGLE ROOF - SHAKE SIDING - BRACKETS PER BUILDER INDOWS - CORNER TRIM AS SPEC 4" TRIM @ WINDOWS AND DOORS 2ND FIN. FLR . - CEMENTITIOUS SIDING WINDOWS NOTE: PROVIDE RAILS @ PORCH ONLY IF REQUIRED BY CODE 15" MIN. HGT. IST FIN. FLR. FOUNDATION FRONT (MAIN HOUSE) GRADE TO FINISHED FRONT PORCH 8" SQ. COL. STEPS TO GRADE AS PER SITE - BRICK VENEER FND. WALL

RIDGE VENT

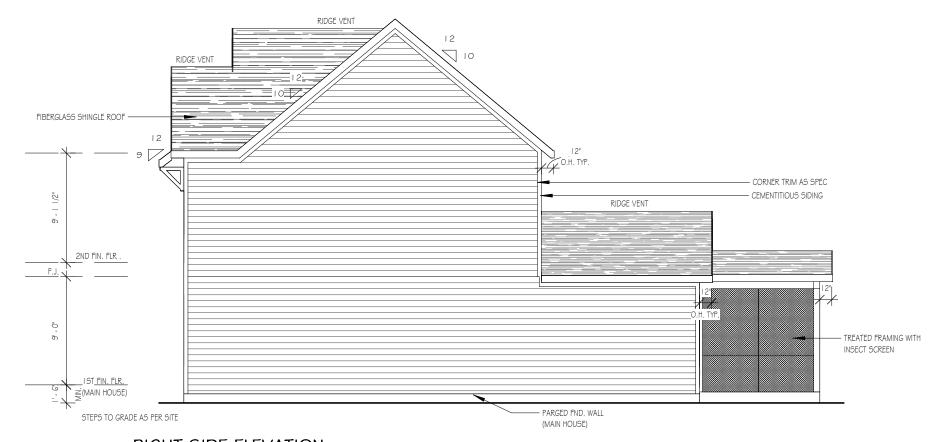
# **COLUMN DETAILS**

1/4" = 1'-0"

# FRONT ELEVATION

1/8" = 1'-0"

NOTE - SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE



# RIGHT SIDE ELEVATION



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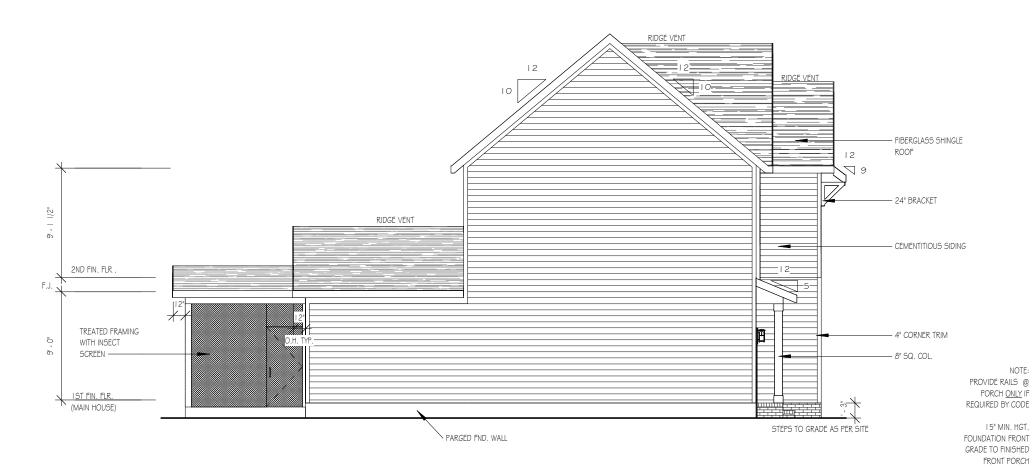
FORGET ME NOT

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Sheet



NOTE - SLOPE ALL GRADES AWAY FROM HOUSE FOR POSITIVE DRAINAGE



30' - 0"

30' - 0"

10' - 0"

8' - 6"

11' - 6"

FIRST FLOOR

1/8" = 1'-0"

NOTE:

PROVIDE RAILS AT PORCH

ONLY IF REQUIRED BY CODE

9'-0" CLG. HGT. U.N.O. SET WINDOWS @ 7'-6" U.N.O. ROUGH FRAME ALL CASED OPENINGS 2" BIGGER THAN

ROUGH FRAME ALL WINDOW OPENINGS 1/2" LARGER THAN

WINDOW THAT CALLS FOR DSP, ADD EXTRA TO OUTSIDE

FRAME ALL INTERIOR DOOR HEADERS AT 84" A.F.F.

FINISHED WINDOW CALLS FOR, WHEN PAIRED WITH ANOTHER

TOP OF ALL WINDOWS SILLS SHALL BE 24" MINIMUM ABOVE

INSTALLED IN ACCORDANCE WITH SECTION R312.2 OF

THE FINISHED FLOOR  $\underline{\mathsf{OR}}$  A FALL PREVENTION DEVICE SHALL BE

GBG (GRILL BETWEEN GLASS) TO BE ADDED TO WINDOWS ON

FINISHED OPENING CALLS FOR

MEASUREMENT OF WINDOW

ALL EXTERIOR WALLS 2X4

N.C.S.R.B.C., 2018 EDITION

CORNER LOT

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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# FORGET ME NOT SER ELEVATION B LOT 0261 SERENITY

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CM
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4/8/20
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7/1/20
4/5/22
2/21/23

Sheet

6' - 7"

30' - 0"

4' - 4 1/2"

3' - 3"

12' - 0"

4' - 4 1/2"

\_\_\_\_\_\_

# SECOND FLOOR

11' - 5"

1/8" = 1'-0"

9'-0" CLG. HGT. U.N.O. SET WINDOWS @ 7'-4" 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 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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# FORGET ME NOT SER ELEVATION B LOT 0261 SERENITY

### NOTES:

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

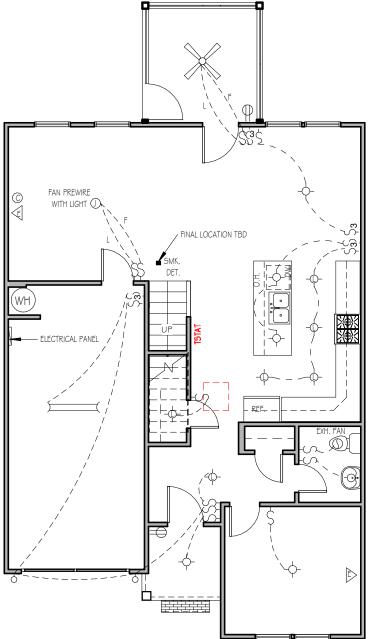
FRAME ALL INTERIOR DOOR HEADERS AT 84" A.F.F.

ALL EXTERIOR WALLS 2X4

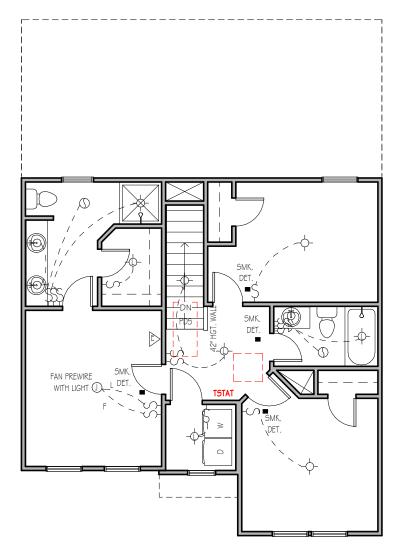
TOP OF ALL WINDOWS SILLS SHALL BE 24" MINIMUM ABOVE THE FINISHED FLOOR <u>OR</u> A FALL PREVENTION DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH SECTION R312.2 OF N.C.S.R.B.C., 2018 EDITION

GBG (GRILL BEWTEEN GLASS) ADDED TO WINDOWS ON CORNER LOT

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MH	
Checked By	
CM	
Date Drawn	
4/8/20	
Revision Date	
7/1/20	
4/5/22	
2/21/23	



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



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ELECTRICAL LEGEND

── FLUORESCENT LIGHT

■ The state of t

T THERMOSTAT

DIMMER SWITCH

O DOORBELL

D.B.

- FLUSH MOUNT/PENDANT LIGHT

-- LED DISK LIGHT

-- KEYLESS LIGHT

◆ FLOOD LIGHT

EXHAUST FAN

 $\bigcirc$ 

 $\odot$ 

E ETHERNET OUTLET

SMOKE DETECTOR

CABLE OUTLET

FLOOR RECEPTACLE

DUPLEX RECEPTACLE

GFCI RECEPTACLE

220 VOLT RECEPTACLE
ELECTRICAL PANEL

3-WAY SWITCH

RECESSED CAN LIGHT
WALL SCONCE

CEILING FAN



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2/21/23

Sheet

SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

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.

# FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

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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1/8" = 1'-0"

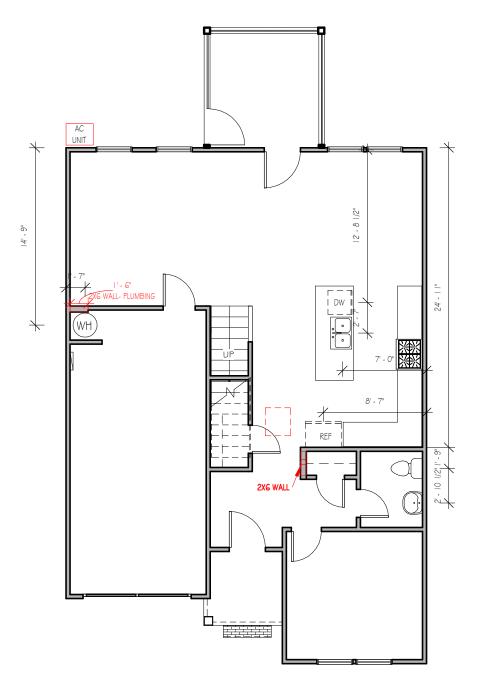
AC UNIT WATER SHUT OFF 

FIRST FLOOR MECHANICAL PAGE

1/8" = 1'-0"

- 8'X8' HVAC ATTIC PLATFORM

SECOND FLOOR MECHANICAL PAGE



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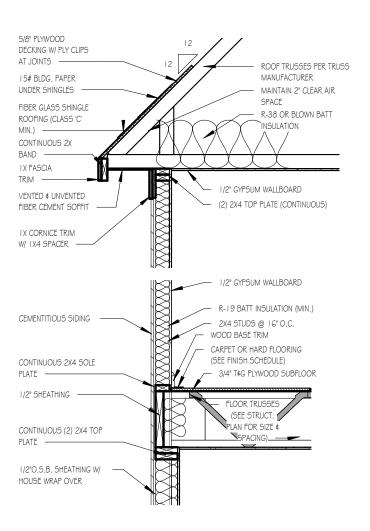
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# FORGET ME NOT SER ELEVATION B LOT 0261 SERENITY

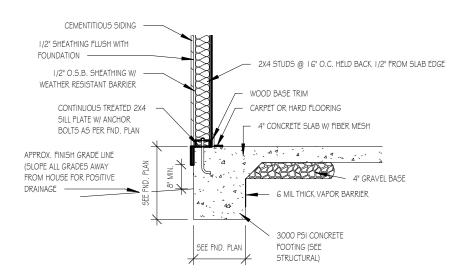
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D	ate Drawn	
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	7/1/20	
	4/5/22	
	2/21/23	

FIRST FLOOR PLUMBING



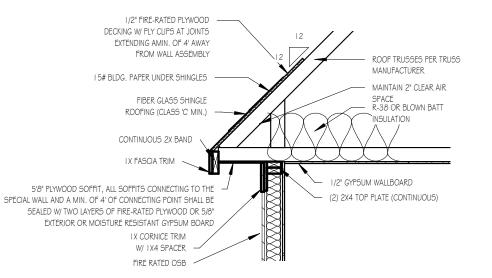
# TWO-STORY WALL SECTION

1/2" = 1'-0"



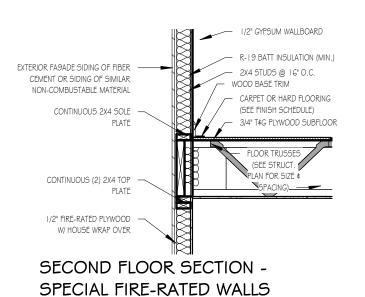
# FOUNDATION DETAIL - SLAB

1/2" = 1'-0"

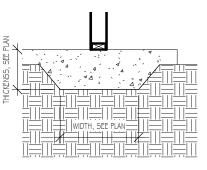


# ROOF DETAIL SPECIAL FIRE-RATED WALLS

1/2" = 1'-0"



1/2" = 1'-0"



# LUG FOOTING

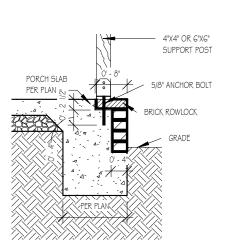
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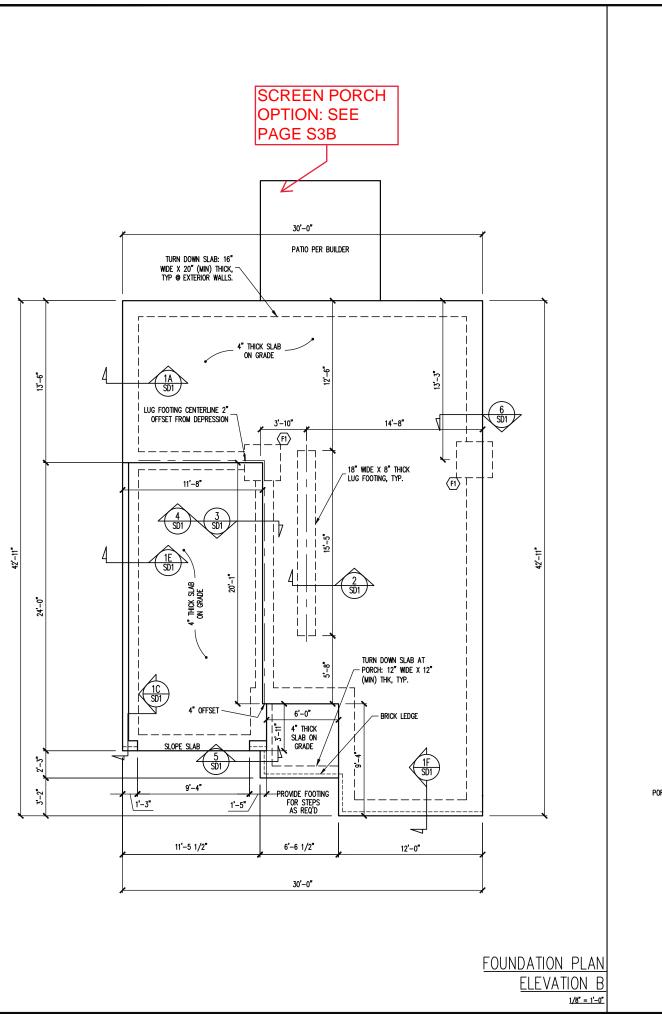
# SERENITY COLLECTION

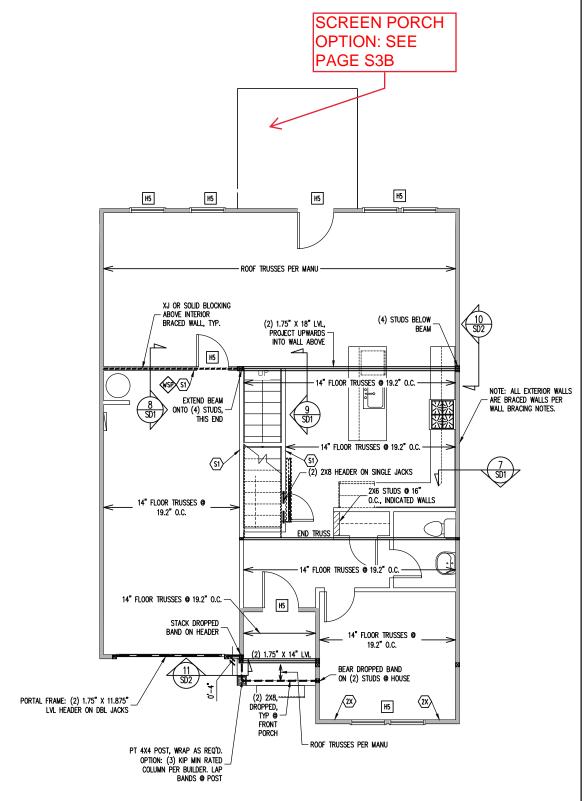


FRONT PORCH COLUMNS SUPPORT ATTACHMENT

Drawn By MMH Checked By JM Date Drawn 10/28/20 **Revision Date** 9/14/22 9/20/22

1/2" = 1'-0"





1ST FLOOR FRAMING PLAN ELEVATION B

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
- 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.

NOTES:

-HEIGHT AND BACKFILL LIMITATIONS FOR
FOUNDATION WALLS ARE TO BE GOVERNED
BY THE NCSBC, LATEST EDITION,
REINFORCEMENT AND GROUTING SHALL BE
DETERMINED BY FINAL SITE CONDITIONS.

-BUILDER TO FIELD LOCATE CRAWLSPACE ACCESS OPENING WITH MINIMUM DIMENSIONS OF 18X24. DO NOT LOCATE ACCESS OPENING BELOW POINT LOADS FROM ABOVE WITHOUT ENGINEER APPROVAL.

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W Mille leigh, No

MASTER 180

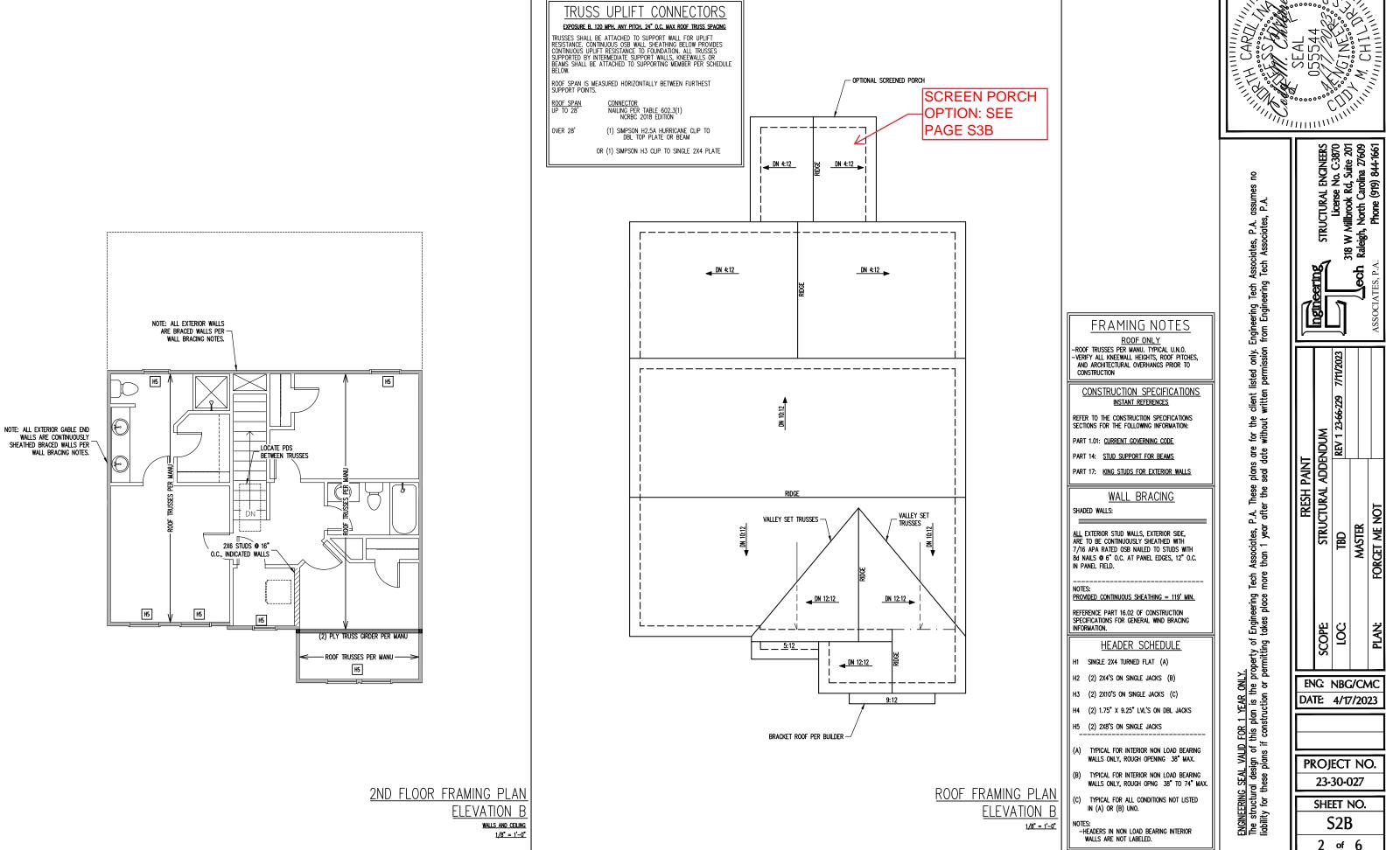
STRUCTURAL ENGINEERS
License No. C-3870
W Millbrook Rd, Suite 201
leigh, North Carolina 27609
Phone (919) 844-1661 Engineering from Engine only. ission listed perm client I written for the without FRESH PAINT STRUCTURAL ADDENDUM plans are seal date P.A. These eering place Engin takes

> ENG: NBG/CMC DATE: 4/17/2023

> > PROJECT NO. 23-30-027

> > > SHEET NO. S<sub>1</sub>B 1 of 6

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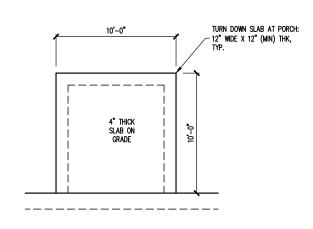


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ENG: NBG/CMC DATE: 4/17/2023

> PROJECT NO. 23-30-027

SHEET NO. S<sub>2</sub>B



# OPTIONAL SCREENED PORCH MONOSLAB FOUNDATION

NON LOAD—BEARING

(2) 2X10 BAND,
DROPPED, TYP © SCREENED

ROOF TRUSSES
PER MANU

NO BAND SPLICES, THIS SPAN

BEAR DROPPED BAND ON
(2) STUDS © HOUSE, TYP
© SCREENED PORCH

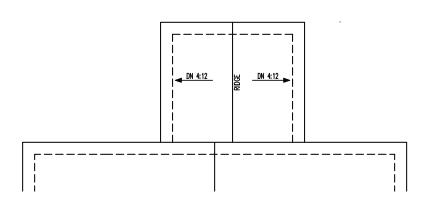
NON LOAD—BEARING
COLUMN

NON LOAD—BEARING
COLUMN

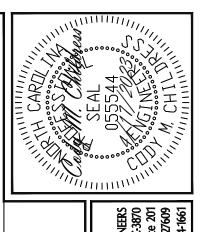
NON LOAD—BEARING
COLUMN

NON LOAD—BEARING
COLUMN

1ST FLOOR FRAMING PLAN
OPTIONAL SCREENED PORCH
1/8" = 1'-0"



ROOF FRAMING PLAN
OPTIONAL SCREENED PORCH
1/8" = 1"-0"



FRESH PAINT
STRUCTURAL ADDENDUM
TBD REV 1 23-66-229 7/
MASTER
FORGET ME NOT 10C ENG: NBG/CMC

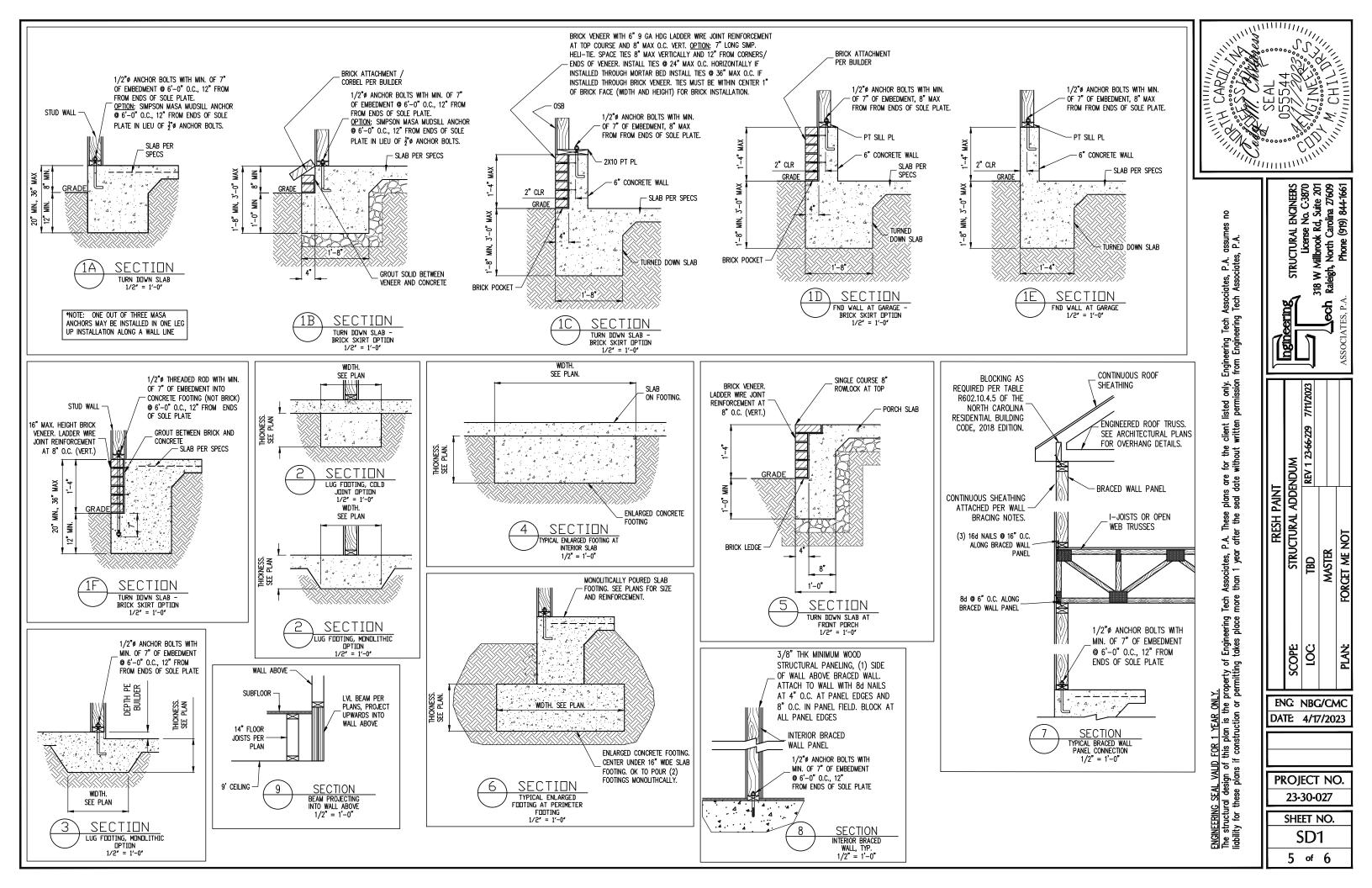
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ENG: NBG/CMC
DATE: 4/17/2023

PROJECT NO.

23-30-027 SHEET NO.

S3B



# CONSTRUCTION SPECIFICATIONS

LIVE LOAD (PSF) DEAD LOAD (PSF)

### 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)

- 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

### 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 FULL WIDTH 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 UND, 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 DARRHEE TO THE SECULOR STUD SECULOR SECULOR STUD SECULOR SE
- 2-BEAMS BEARING ONTO THE END OF A STUD WALL PARALLEL TO THE BEAM SHALL BEAR 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:

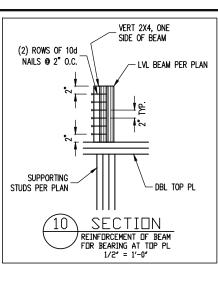
X OPENIN	G WIDTH	5'-0"	NUMBE 9'-0"		ig studs 17'–0"	21'-0"
	2X4	1	2	3	4	5
TUD SIZE	2X6	1	1	2	2	2
	2X8	1	1	1	1	2

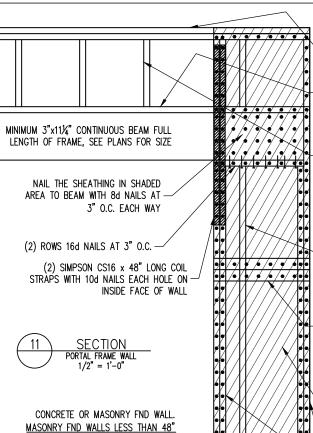
### PART 18: SUBSTITUTIONS

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

ABV ABOVE

BTWN BETWEEN

CONC CONCRETE

DIA DIAMETER

DBL DOUBLE

FA FACH

FLG FLANGE

FIR FLOOR

BOTH FNDS

CAST IN PLACE

DOUBLE JOIST

DSP DBI STUD POCKET

PL FLITCH PLATE

CONTINUOUS SHEATHING

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.

TJ TRIPLE JOIST

UNO UNLESS NOTED

XJ EXTRA JOIST

OTHERWISE

TRIPLE STUD POCKET

TYP TYPICAL

TRPL TSP TRIPI F

**ABBREVIATIONS** 

FND FOUNDATION

HDG HOT DIPPED

HGR HANGER

GALVANIZED

LVL LAMINATED VENEER

PSL PARALLEL STRAND

PT PRESSURE TREATED

NTS NOT TO SCALE

O.C. ON CENTER

LUMBER

QJ QUAD JOIST

SO SQUARE

SP STUD POCKET

# **NOTES**

WIDE SHALL BE REINFORCED PER

LATEST EDITION

SECTION R602.10.4.3 OF THE NCRBC.

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

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

MANUFACTURER	DEPTH	SERIES	SIMPSON FACE MOUNT HGR	SIMPSON TOP
BLUELINX	14"	BLI 40	IUS2.56/14	ITS2.56/14
BOISE CASCADE	14"	BCI 5000s	IUS2.06/14	ITS2.06/14
BOISE CASCADE	14"	BCI 6000S	IUS2.37/14	ITS2.37/14
LP CORP	14"	LPI 20+	IUS2.56/14	ITS2.56/14
NORDIC	14"	NI 40X	IUS2.56/14	ITS2.56/14
ROSEBURG	14"	RFPI 40s	IUS2.56/14	ITS2.56/14
WEYERHAEUSER	14"	TJI 210	IUS2.06/14	ITS2.06/14
WEYERHAEUSER	14"	EEI-20	IUS2.37/14	ITS2.73/14

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

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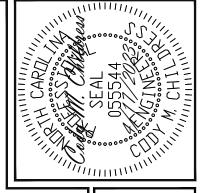
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DATE: 4/17/2023

PROJECT NO. 23-30-027

> SHEET NO. SD2 6 of 6