

# COLUMBIA - A, B, C

PLAN ID: 3142 - LEFT HAND - NORTH CAROLINA

DATE:	REVISION:
09/25/2017	INITIAL RELEASE OF PLANS
10/20/2017	REVISED ROOF PITCH AT FRONT GABLE AT ELEVATION 'A'
11/01/2017	RENAMED MASTER BEDROOM AND BATH TO OWNER'S BEDROOM AND BATH
02/07/2018	ELECTRICAL REVISIONS
06/11/2018	CLIENT REVISIONS
11/14/2018	CLIENT REVISIONS
07/23/2019	CLIENT REVISIONS
02/28/2020	CLIENT REVISIONS
06/06/2023	CLIENT REVISIONS

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4	ELECTRICAL - FLOOR PLANS

REVIEWERS STAMP LOCATION



MODEL 'COLUMBIA' SQUARE FOOTAGES

AREA	ELEV 'A'	ELEV 'B'	ELEV 'C'
1st FLOOR	1350 SF	1350 SF	1350 SF
2nd FLOOR	1758 SF	1758 SF	1758 SF
TOTAL LIVING	3108 SF	3108 SF	3108 SF
GARAGE	441 SF	441 SF	441 SF
PORCH	93 SF	93 SF	93 SF

**McKay Place**  
**Lot 0001**  
**Lillington, NC 27546**

COVERSHEET  
 'COLUMBIA'

PLAN REV DATE  
 06.06.23

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 SHEET NUMBER  
**CS**



Front Elevation 'A'  
SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT



Front Elevation 'B'  
SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT



Front Elevation 'C'  
SCALE: 1/4"=1'-0" AT 22'X34" LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT

QUICK VIEW	'COLUMBIA'
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PLAN REV DATE	06.06.23
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SHEET NUMBER	
0	

N.C ATTIC VENT CALCULATION FOR MODEL 'COLUMBIA': 1:150 RATIO.

THE NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE SPACE VENTILATED, PROVIDED THAT AT LEAST 50 PERCENT AND NOT MORE THAN 80 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE THE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION PROVIDED BY EAVE OR CORNICE VENTS.

EXCEPTIONS:  
1. ENCLOSED ATTIC/RAFTER SPACES REQUIRING LESS THAN 1 SQ FT OF VENTILATION MAY BE VENTED WITH CONTINUOUS SOFFIT VENTILATION ONLY.  
2. ENCLOSED ATTIC/RAFTER SPACES OVER UNCONDITIONED SPACE MAY BE VENTED WITH CONTINUOUS SOFFIT VENT ONLY.

GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL.

ALL OVERLAP FRAMED ROOF AREAS SHALL HAVE OPENINGS BETWEEN THE ADJACENT ATTICS IN THE ROOF SHEATHING (AS ALLOWED BY THE STRUCTURAL ENGINEER) TO ALLOW PASSAGE AND ATTIC VENTILATION BETWEEN THE TWO OR ISOLATED ATTIC SPACES SHALL BE VENTED INDEPENDENTLY TO CBC REQUIREMENTS.

PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED ARCHITECTURAL POP-OUTS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.

(PER NCRG SECTION R306.2)  
1 SQUARE INCH VENT FOR EVERY 150 SQUARE INCHES OF CEILING  
144 SQ. IN. = 1 SQ. FT.  
BLDG. CEILING (SF) X 144 = BLDG (SQ. IN.)  
BLDG. (SQ. IN.) / 150 = SQ. IN. OF VENT REQUIRED  
SQ. IN. OF VENT REQUIRED / 2 = 50% AT HIGH & 50% AT LOW.

ROOF AREA 1 = 1791 SF  
1791 SQ. FT. X 144 = 257904 SQ. IN.  
257904 SQ. IN. / 150 = 171936 SQ. IN. OF VENT REQ'D  
171936 SQ. IN. / 2 = 85968 SQ. IN.

85968 SQ. IN. OF VENT AT HIGH & 85968 SQ. IN. OF VENT AT LOW REQUIRED.

ROOF AREA 2 = 43 SF  
43 SQ. FT. X 144 = 6192 SQ. IN.  
6192 SQ. IN. / 150 = 4128 SQ. IN. OF VENT REQ'D  
4128 SQ. IN. / 2 = 2064 SQ. IN.

2064 SQ. IN. OF VENT AT HIGH & 2064 SQ. IN. OF VENT AT LOW REQUIRED.

N.C ATTIC VENT CALCULATION FOR MODEL 'COLUMBIA': 1:300 RATIO.

AS AN ALTERNATE TO THE 1/150 RATIO LISTED ABOVE, THE NET FREE CROSS-VENTILATION AREA MAY BE REDUCED TO 1/300 WHEN A GLASS (OR 1" VAPOR BARRIER IS INSTALLED ON THE WARM - IN - WINTER SIDE OF THE CEILING.

(PER NCRG SECTION R306.2)  
1 SQUARE INCH VENT FOR EVERY 300 SQUARE INCHES OF CEILING  
144 SQ. IN. = 1 SQ. FT.  
BLDG. CEILING (SF) X 144 = BLDG (SQ. IN.)  
BLDG. (SQ. IN.) / 300 = SQ. IN. OF VENT REQUIRED  
SQ. IN. OF VENT REQUIRED / 2 = 50% AT HIGH & 50% AT LOW.

ROOF AREA 1 = 1791 SF  
1791 SQ. FT. X 144 = 257904 SQ. IN.  
257904 SQ. IN. / 300 = 85968 SQ. IN. OF VENT REQ'D  
85968 SQ. IN. / 2 = 42984 SQ. IN.

42984 SQ. IN. OF VENT AT HIGH & 42984 SQ. IN. OF VENT AT LOW REQUIRED.

ROOF AREA 2 = 43 SF  
43 SQ. FT. X 144 = 6192 SQ. IN.  
6192 SQ. IN. / 300 = 2064 SQ. IN. OF VENT REQ'D  
2064 SQ. IN. / 2 = 1032 SQ. IN.

1032 SQ. IN. OF VENT AT HIGH & 1032 SQ. IN. OF VENT AT LOW REQUIRED.

GENERAL CONTRACTOR SHALL VERIFY THE NET FREE VENTILATION OF THE VENT PRODUCT SELECTED BY OWNER. VERIFY WITH MANUFACTURER OF HIGH AND LOW VENTS TO BE USED FOR MINIMUM CALCULATED VENTS REQUIRED. THE REQUIRED VENTILATION SHALL BE MAINTAINED. PROVIDE INSULATION STOP SUCH THAT INSULATION DOES NOT OBSTRUCT FREE AIR MOVEMENT AS REQUIRED BY THE BUILDING OFFICIAL.  
ALL OVERLAP FRAMED ROOF AREAS SHALL HAVE OPENINGS BETWEEN THE ADJACENT ATTICS IN THE ROOF SHEATHING (AS ALLOWED BY THE STRUCTURAL ENGINEER) TO ALLOW PASSAGE AND ATTIC VENTILATION BETWEEN THE TWO OR ISOLATED ATTIC SPACES SHALL BE VENTED INDEPENDENTLY TO CBC REQUIREMENTS.  
PER DEVELOPER, AT ALL CANTILEVERED FLOORS, CANTILEVERED ARCHITECTURAL POP-OUTS, AND ANY DOUBLE FRAMING PROJECTIONS THAT ARE SEPARATED FROM THE VENTING CALCULATIONS SHOWN ABOVE, PROVIDE A CONTINUOUS 2" CORROSION RESISTANT SOFFIT VENT AT UNDERSIDE OF FRAMED ELEMENT.

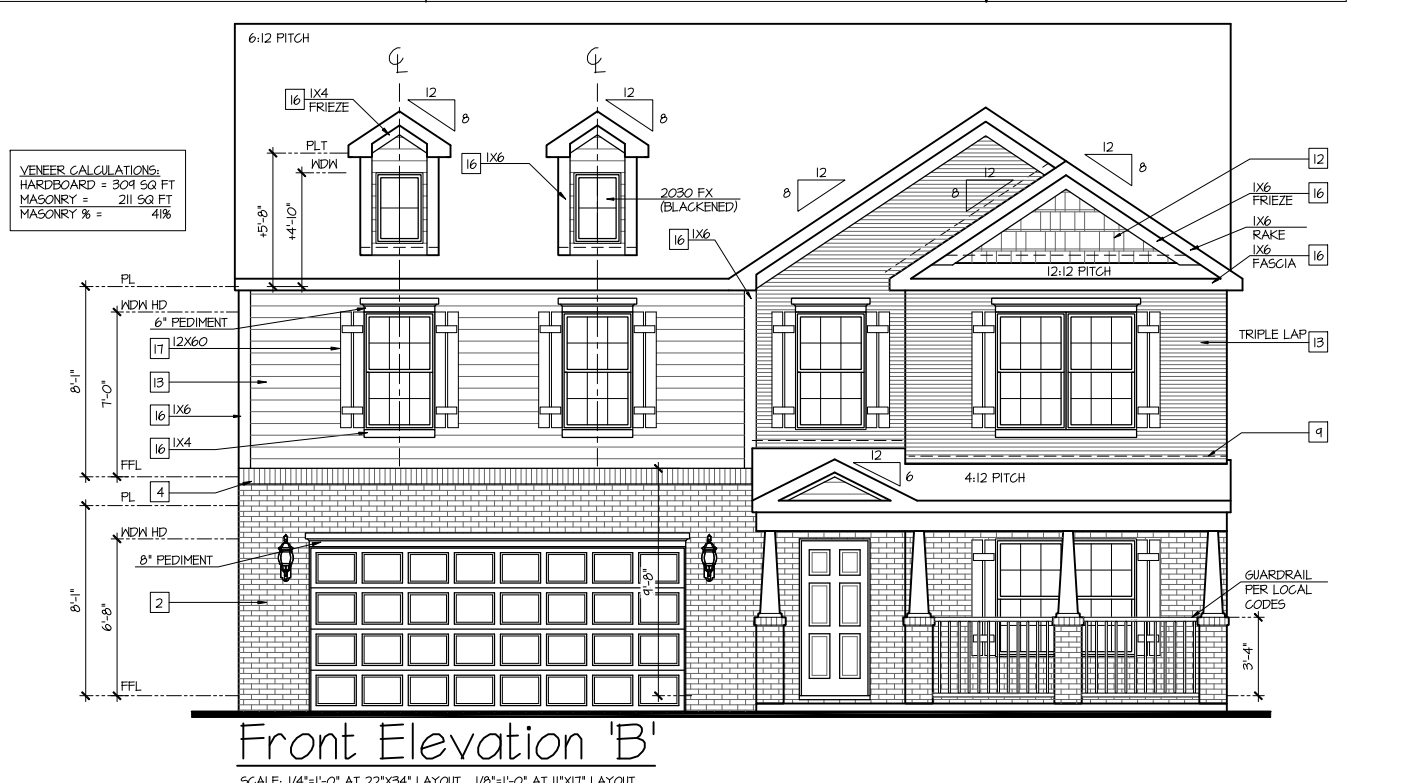
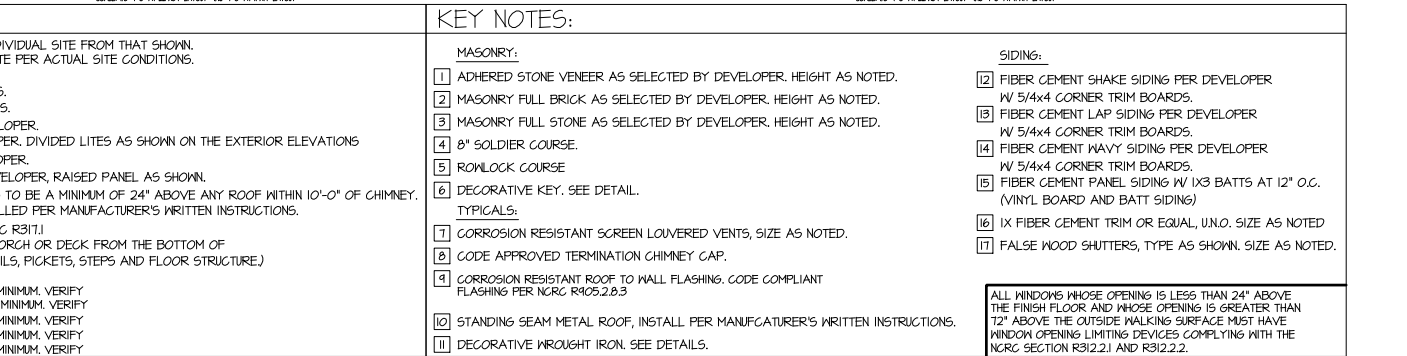
AT SINGLE FAMILY DETACHED PLANS: PREFINISHED VENTED SOFFIT AT EAVE PER MANUFACTURER. (VERIFY FIRE SEPARATION DISTANCE FOR SOFFIT PROTECTION PER NCRG SECTION R302.1.1 AND TABLE R302.1.)

TRUSS MANUFACTURE TO VERIFY HEELS PER COMMUNITY STANDARDS, BUILDER TO VERIFY PRIOR TO CONSTRUCTION

AVAILABLE WITH OPTIONAL 9'-1" FIRST FLOOR PLATE

NOTES AT OPT 9'-1" PLT:

- WDW HT SET AT 7'-6"
- INTERIOR SOFFITS AT 8'-0"
- EXTERIOR SOFFITS AT 8'-0"



NOTES:

- GRADE CONDITIONS MAY VARY FOR INDIVIDUAL SITE FROM THAT SHOWN. BUILDER SHALL VERIFY AND COORDINATE PER ACTUAL SITE CONDITIONS.
- WINDOW HEAD HEIGHTS:  
1ST FLOOR = 8'-0" UNO. ON ELEVATIONS.  
2ND FLOOR = 7'-0" UNO. ON ELEVATIONS.
- ROOFING: PITCHED SHINGLES PER DEVELOPER.
- WINDOWS: MANUFACTURER PER DEVELOPER, DIVIDED LITES AS SHOWN ON THE EXTERIOR ELEVATIONS
- ENTRY DOOR: AS SELECTED BY DEVELOPER.
- GARAGE DOORS: AS SELECTED BY DEVELOPER, RAISED PANEL AS SHOWN.
- CHIMNEY AS OCCURS: TOP OF CHIMNEYS TO BE A MINIMUM OF 24" ABOVE ANY ROOF WITHIN 10'-0" OF CHIMNEY.
- ALL EXTERIOR MATERIALS TO BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- PROTECTION AGAINST DECAY: PER NCRG R311.1 (ALL PORTIONS OF A PORCH, SCREEN PORCH OR DECK FROM THE BOTTOM OF THE HEADER DOWN, INCLUDING POST, RAILS, PICKETS, STEPS AND FLOOR STRUCTURE.)
- INSULATION: PER TABLE N102.1.2.  
EXTERIOR WALLS: R-15 BATTS MINIMUM. VERIFY  
CEILING WITH ATTIC ABOVE: R-38 BATTS MINIMUM. VERIFY  
FLOOR OVER GARAGE: R-19 BATTS MINIMUM. VERIFY  
ATTIC KNEEWALL: R-19 BATTS MINIMUM. VERIFY  
GRAVEL SPACE FLOORING: R-19 BATTS MINIMUM. VERIFY

KEY NOTES:

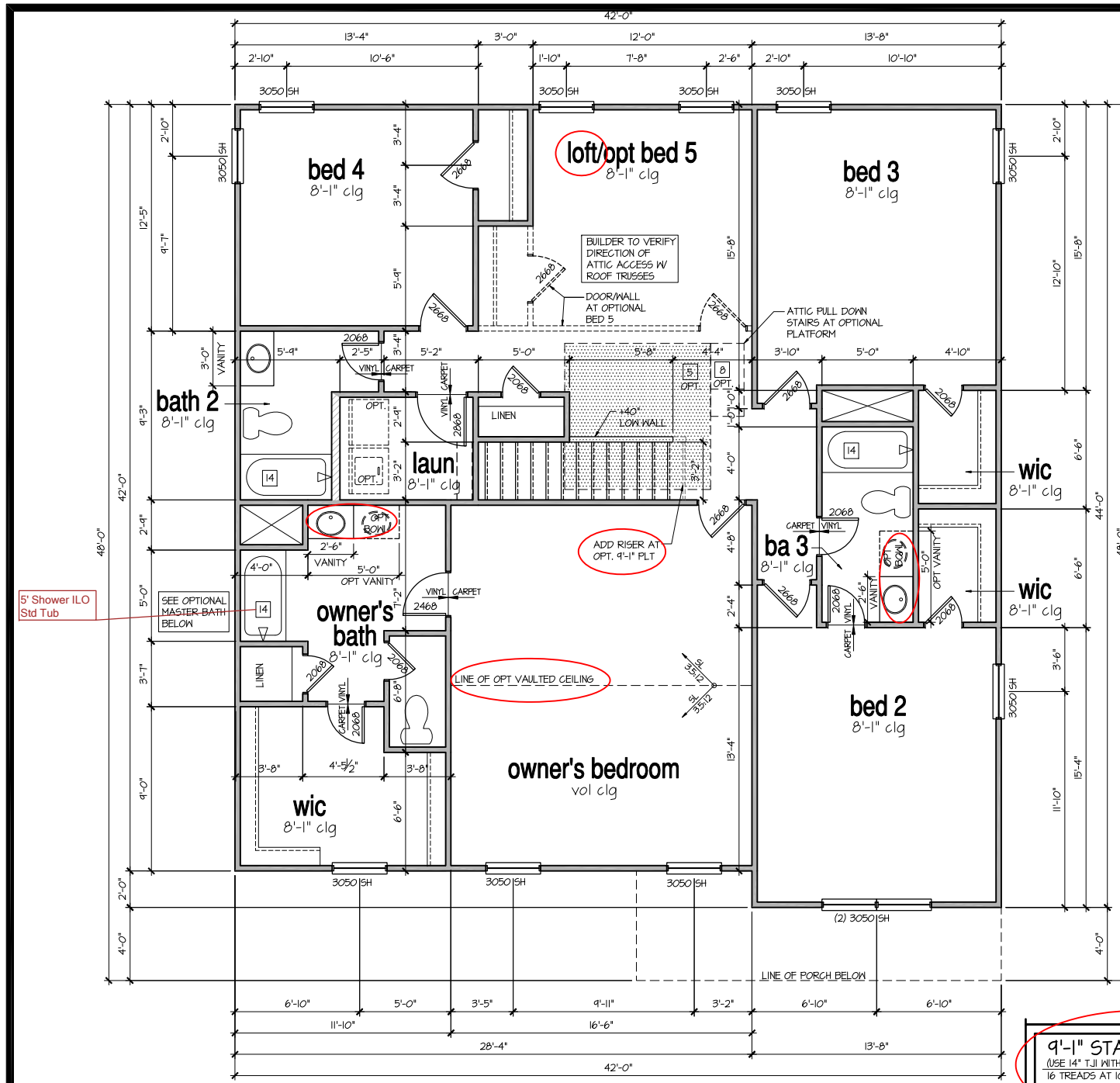
- MASONRY:
- ADHERED STONE VENEER AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
  - MASONRY FULL BRICK AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
  - MASONRY FULL STONE AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
  - 8" SOLDIER COURSE.
  - RONLOCK COURSE
  - DECORATIVE KEY. SEE DETAIL.
- TYPICALS:
- CORROSION RESISTANT SCREEN LOUVERED VENTS, SIZE AS NOTED.
  - CODE APPROVED TERMINATION CHIMNEY CAP.
  - CORROSION RESISTANT ROOF TO WALL FLASHING. CODE COMPLIANT FLASHING PER NCRG R405.2.8.3
  - STANDING SEAM METAL ROOF, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - DECORATIVE WROUGHT IRON. SEE DETAILS.
- SIDING:
- FIBER CEMENT SHAKE SIDING PER DEVELOPER
  - W 5/4x4 CORNER TRIM BOARDS.
  - FIBER CEMENT LAP SIDING PER DEVELOPER
  - W 5/4x4 CORNER TRIM BOARDS.
  - FIBER CEMENT WAVY SIDING PER DEVELOPER
  - W 5/4x4 CORNER TRIM BOARDS.
  - FIBER CEMENT PANEL SIDING W/ 1X3 BATTS AT 12" O.C. (VINYL BOARD AND BATT SIDING)
  - 1X FIBER CEMENT TRIM OR EQUAL, UNO. SIZE AS NOTED
  - FALSE MOOD SHUTTERS, TYPE AS SHOWN. SIZE AS NOTED.
- ALL WINDOWS WHOSE OPENING IS LESS THAN 24" ABOVE THE FINISH FLOOR AND WHOSE OPENING IS GREATER THAN 12" ABOVE THE OUTSIDE WALKING SURFACE MUST HAVE WINDOW OPENING LIMITING DEVICES COMPLYING WITH THE NCRG SECTION R312.2.1 AND R312.2.2.

ELEVATIONS  
'COLUMBIA'

PLAN REV DATE  
06.06.23

SHEET NUMBER  
1B

D.R.HORTON  
America's Builder  
8025 Knowledge Blvd., Charlotte, NC 28273 704.577.8000



2nd Floor Plan 'B'

1/4" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

**9'-1" STAIR NOTE:**  
 (USE 14" T.J.I WITH 3/4" PLYWOOD SUBFLOOR)  
 16 TREADS AT 10" EACH VERIFY  
 17 RISERS AT +/- 1.27" = 123 3/4" TOTAL  
 RISE VERIFY

**8'-1" STAIR NOTE:**  
 (USE 14" T.J.I WITH 3/4" PLYWOOD SUBFLOOR)  
 14 TREADS AT 10" EACH VERIFY  
 15 RISERS AT +/- 1.45" = 111 3/4" TOTAL  
 RISE VERIFY

AVAILABLE WITH OPTIONAL  
 9'-1" FIRST FLOOR PLATE

NOTES AT OPT 9'-1" PLT:  
 - WDW HT SET AT 7'-6"  
 - INTERIOR SOFFITS AT 8'-0"  
 - EXTERIOR SOFFITS AT 8'-0"

FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.  
 WINDOW HEAD HEIGHTS:  
 1ST FLOOR = 6'-8" U.N.O. ON ELEVATIONS.  
 2ND FLOOR = 7'-0" U.N.O. ON ELEVATIONS.

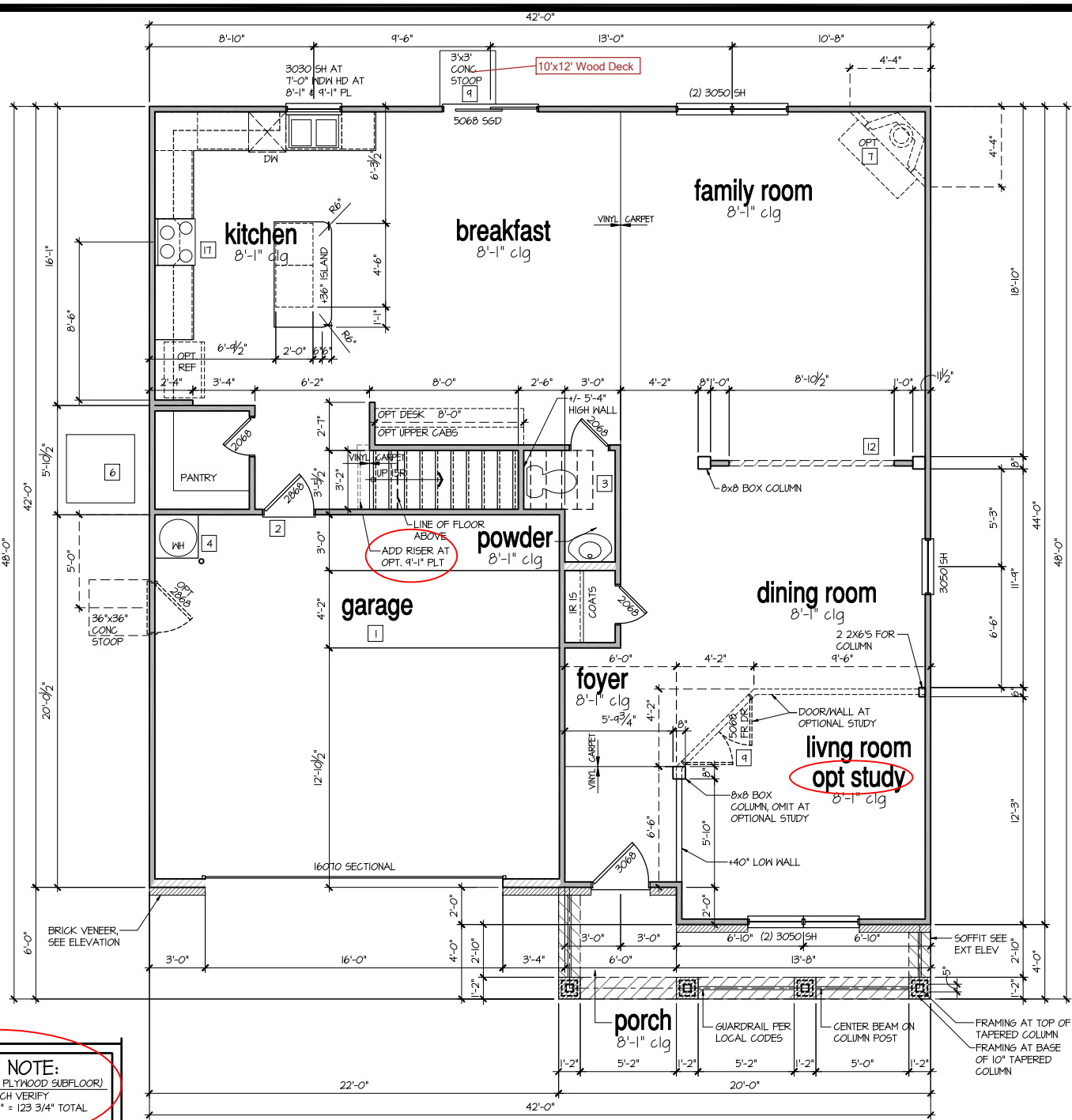
ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO CENTERLINE.

**WALL LEGEND:**

	FULL HEIGHT 2x4 WOOD STUD PARTITION		FULL HEIGHT 2x6 WOOD STUD PARTITION
	BRICK / STONE VENEER		STUD WALL BELOW HEIGHT AND STUD SIZE AS NOTED
	LOW GYPSUM BOARD WALL HEIGHT AND STUD SIZE AS NOTED		DRYWALL OPENING HEIGHT AS NOTED ON PLAN

**KEY NOTES FOR NORTH CAROLINA:**

- FIRE PROTECTION:**
- HOUSE TO GARAGE FIRE SEPARATION. GARAGE/HOUSE SEPARATION AT VERTICAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 1/2" GYPSUM BOARD. (PER N.C.R.C. TABLE R302.6.) GARAGE/HOUSE SEPARATION AT HORIZONTAL SURFACES SHALL BE PROTECTED WITH ONE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD. (PER N.C.R.C. TABLE R302.6.)
  - HOUSE TO GARAGE DOOR SEPARATION. PROVIDE 1-3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR. (PER N.C.R.C. SECTION R302.5.1.)
  - BENEATH STAIRS AND LANDINGS. 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS. (PER N.C.R.C. SECTION R302.7.) IN CONCEALED SPACES BETWEEN STAIR STRINGERS PROVIDE FIREBLOCKING PER R302.11
  - GAS WATER HEATER ON 18" HIGH PLATFORM. (PER CHAPTER 5 N.C.R.C. PLUMBING)
- TYPICALS:**
- FAU 8'x8' PLATFORM. VERIFY WITH TRUSS MANUFACTURER. (6'-6" MIN. CLEAR HEIGHT TO HORIZONTAL MEMBERS, 2'x6" OVER 2'x4" BOTTOM CHORD, OF TRUSS, VERIFY W/ TRUSSES.)
  - A/C CONDENSER PAD. (VERIFY)
  - PRE-FABRICATED METAL FIREPLACE. INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
  - ATTIC ACCESS LARGE ENOUGH TO REMOVE LARGEST PIECE OF EQUIPMENT BUT NOT LESS THAN 30"x22". FIRE RATED ACCESS AS NOTED. (PER N.C.R.C. 801.1) ATTIC ACCESS LADDER, VERIFY LOCATION AND SIZE WITH TRUSSES. (25 1/2" X 54" SIZE) FOR GARAGE TO ATTIC SEPARATION PER N.C.R.C. 302.51 EXCEPTION.
  - TEMPERED SAFETY GLASS. (PER N.C.R.C. SECTION 308.4)
  - PLYWOOD SHELF ABOVE WITH DRYWALL FINISH OVER. HEIGHT AS NOTED.
  - HALF WALL, HEIGHT AS NOTED.
  - INTERIOR SOFFITS: FFL = 8'-1" U.N.O. SFL = 7'-6" U.N.O.
  - BATHS:
    - SHOWER. TEMPERED GLASS ENCLOSURE.
    - TUB-SHOWER COMBO. TEMPERED GLASS ENCLOSURE.
    - CERAMIC TILE SHOWER AND FLOOR. TEMPERED GLASS ENCLOSURE.
    - ACRYLIC TUB W/ CERAMIC PLATFORM
  - KITCHEN:
    - 30" SLIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ABV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
    - 30" GAS COOKTOP AND HOOD. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
    - ELECTRIC OVEN WITH MICROWAVE OVEN.



1st Floor Plan 'B'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" LAYOUT

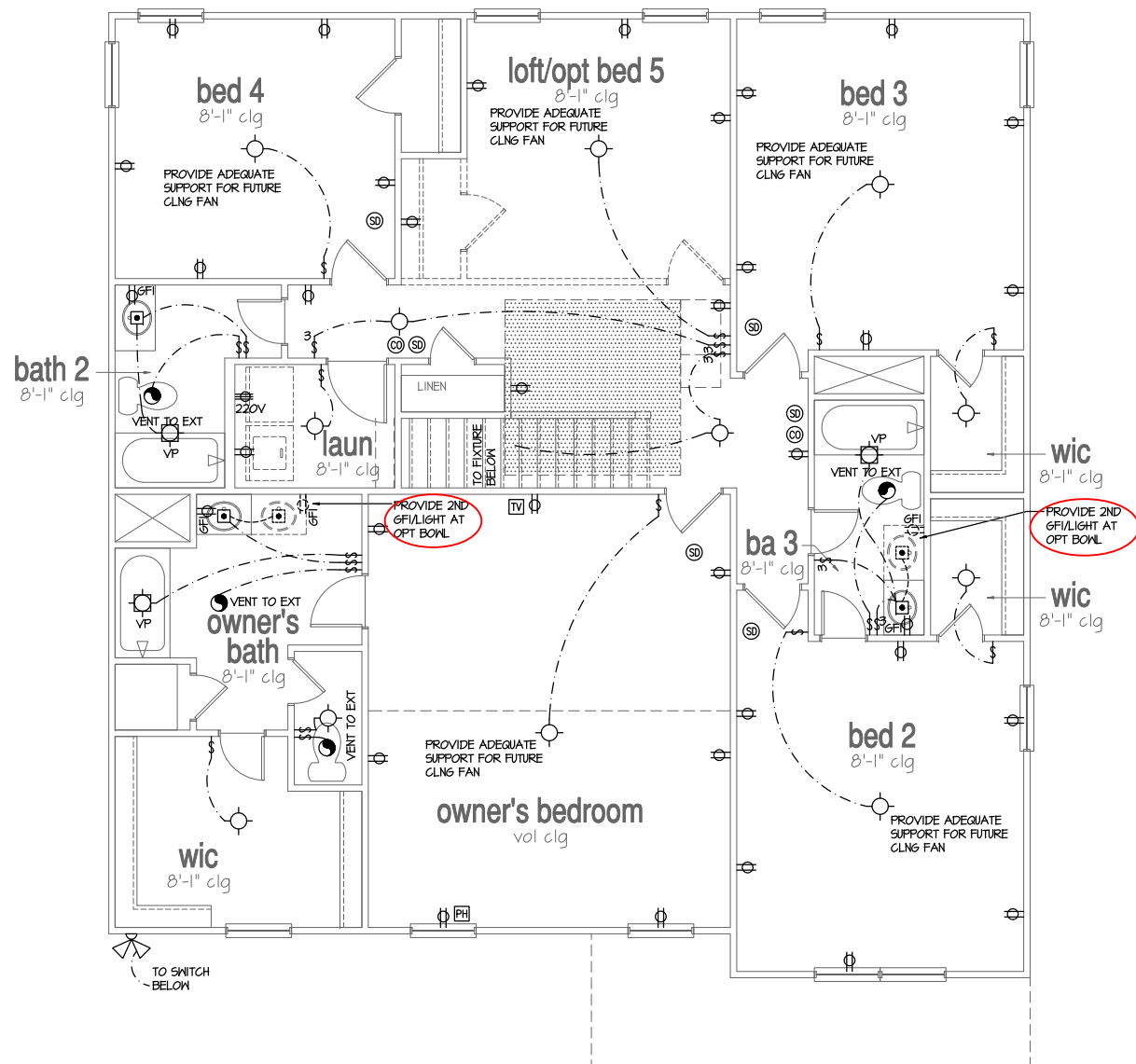
**D.R. HORTON**  
 America's Builder  
 8025 Arrowood Blvd., Charlotte, NC 28273 704.377.2006

FLOOR PLANS  
 'COLUMBIA'

PLAN REV DATE  
 06.06.23

SHEET NUMBER  
**3B**

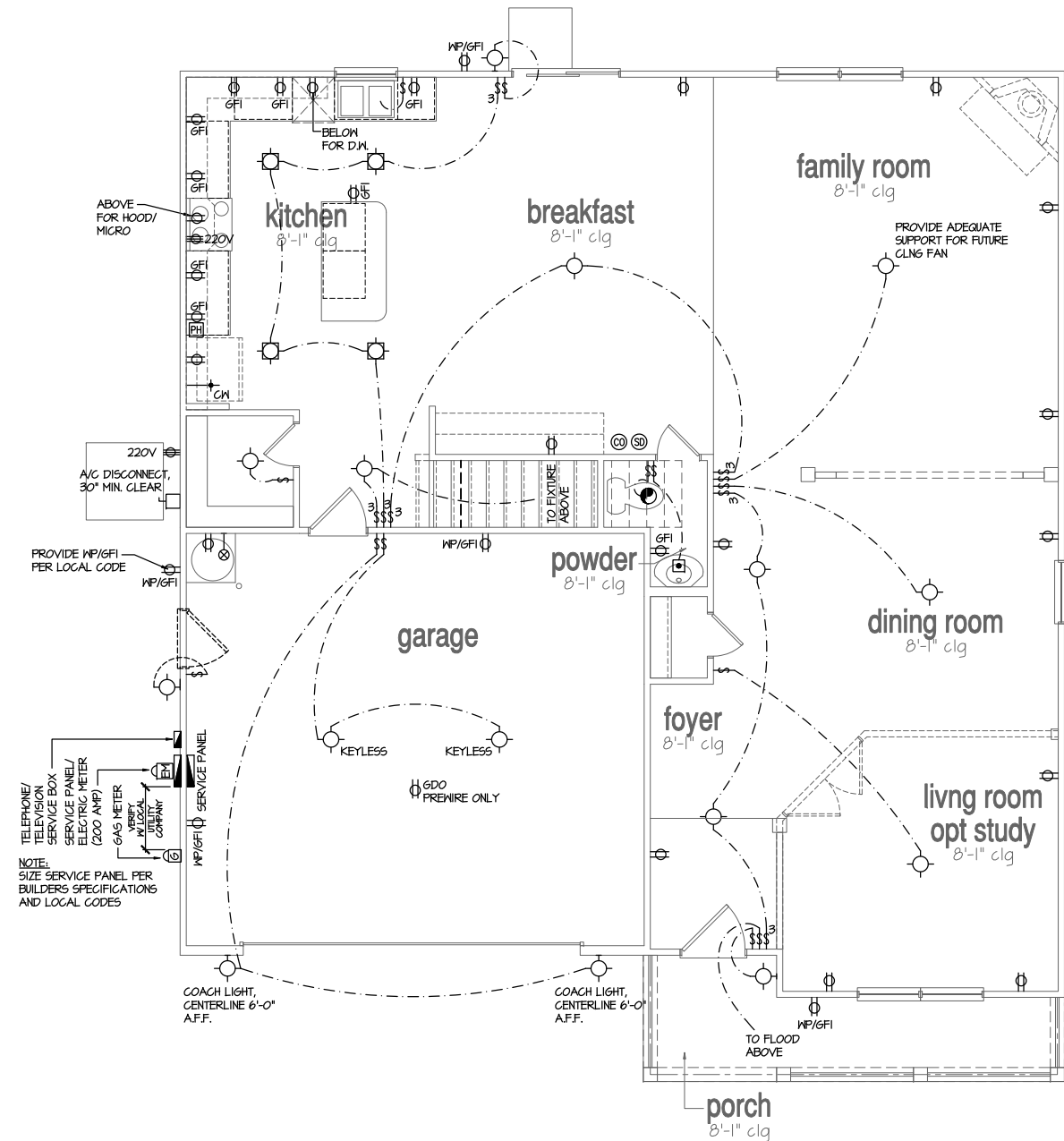




2nd Floor Plan 'A'

SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT

ALL ELEVATIONS ARE SIMILAR



1st Floor Plan 'A'

SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X11" LAYOUT

NOTES:

- PROVIDE GROUNDING ELECTRICAL ROD PER LOCAL CODES.
- PROVIDE AND INSTALL ARC FAULT CIRCUIT-INTERRUPTERS (AFCI) AS REQUIRED BY NATIONAL ELECTRICAL CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- ALL EXHAUST FANS SHALL HAVE BACKDRAFT DAMPERS.
- FANLIGHTS IN WET/DAMP LOCATIONS SHALL BE LABELED "SUITABLE FOR WET OR DAMP LOCATIONS."
- ELECTRICAL SYSTEMS ARE SHOWN FOR INTENT ONLY, THESE SYSTEMS SHALL BE ENGINEERED BY OTHERS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND PLACEMENT.
- PROVIDE AND INSTALL LOCALLY CERTIFIED SMOKE DETECTORS AND CO2 DETECTORS AS REQUIRED BY NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- PROVIDE AND INSTALL GROUND FAULT CIRCUIT-INTERRUPTERS (GFI) AS REQUIRED BY NATIONAL ELECTRICAL CODE (NEC) AND MEETING THE REQUIREMENTS OF ALL GOVERNING CODES.
- ELECTRICAL CONTRACTOR TO PROVIDE REQUIRED DIRECT HOOK-UPS/CUTOFFS.
- HVAC CONTRACTOR TO VERIFY THERMOSTAT LOCATIONS.
- ALL ELECTRICAL AND MECHANICAL EQUIPMENT (FURNACES, A/C UNITS, ELECTRICAL PANELS, SANITARY SUMP PITS, DRAIN TILE SUMP, AND WATER HEATERS) ARE SUBJECT TO RELOCATION DUE TO FIELD CONDITIONS.
- PROVIDE POWER, LIGHT AND SWITCH AS REQUIRED FOR ATTIC FURNACE PER CODE AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

LEGEND:

⊕	DUPLEX OUTLET	⊕	FLUSH-MOUNT LED CEILING FIXTURE	⊕	CHIMES
⊕ WP/GFI	WEATHERPROOF GFI DUPLEX OUTLET	⊕	HANGING FIXTURE	⊕	PUSHBUTTON SWITCH
⊕ GFI	GROUND-FAULT CIRCUIT-INTERRUPTER DUPLEX OUTLET	⊕	FLUSH-MOUNT LED CEILING FIXTURE (PROVIDE CEILING FAN SUPPORT)	⊕	110V SMOKE DETECTOR W/ BATTERY BACKUP
⊕	HALF-SWITCHED DUPLEX OUTLET	⊕	2-LIGHT VANITY FIXTURE	⊕	CO2 DETECTOR
⊕ 220V	220 VOLT OUTLET	⊕	3-LIGHT VANITY FIXTURE	⊕	THERMOSTAT
⊕	REINFORCED JUNCTION BOX	⊕	4-LIGHT VANITY FIXTURE	⊕	TELEPHONE
⊕	WALL SWITCH	⊕	WALL MOUNT FIXTURE	⊕	ELECTRIC METER
⊕ 3	THREE-WAY SWITCH	⊕	EXHAUST FAN (VENT TO EXTERIOR)	⊕	ELECTRIC PANEL
⊕ 4	FOUR-WAY SWITCH	⊕		⊕	DISCONNECT SWITCH

**DESIGN SPECIFICATIONS:**

Construction Type: Commercial  Residential

**Applicable Building Codes:**

- 2018 North Carolina Residential Building Code with All Local Amendments
- ASCE 7-10: Minimum Design Loads for Buildings and Other Structures

**Design Loads:**

- Roof Live Loads
  - Conventional 2x \_\_\_\_\_ 20 PSF
  - Truss \_\_\_\_\_ 20 PSF
    - Attic Truss \_\_\_\_\_ 60 PSF
- Roof Dead Loads
  - Conventional 2x \_\_\_\_\_ 10 PSF
  - Truss \_\_\_\_\_ 20 PSF
- Snow \_\_\_\_\_ 15 PSF
  - Importance Factor \_\_\_\_\_ 1.0
- Floor Live Loads
  - Type Dwelling \_\_\_\_\_ 40 PSF
  - Sleeping Areas \_\_\_\_\_ 30 PSF
  - Decks \_\_\_\_\_ 40 PSF
  - Passenger Garage \_\_\_\_\_ 50 PSF
- Floor Dead Loads
  - Conventional 2x \_\_\_\_\_ 10 PSF
  - I-Joist \_\_\_\_\_ 15 PSF
  - Floor Truss \_\_\_\_\_ 15 PSF
- Ultimate Design Wind Speed (3 sec. gust) \_\_\_\_\_ 130 MPH
  - Exposure \_\_\_\_\_ B
  - Importance Factor \_\_\_\_\_ 1.0
  - Wind Base Shear
    - 6.3.1. Vx = \_\_\_\_\_
    - 6.3.2. Vy = \_\_\_\_\_

**7. Component and Cladding (in PSF)**

MEAN ROOF HT.	UP TO 30'	30'1"-35'	35'1"-40'	40'1"-45'
ZONE 1	16.7-18.0	17.5-18.9	18.2-19.6	18.7-20.2
ZONE 2	16.7-21.0	17.5-22.1	18.2-22.9	18.7-23.5
ZONE 3	16.7-21.0	17.5-22.1	18.2-22.9	18.7-23.5
ZONE 4	18.2-19.0	18.2-20.0	19.9-20.7	20.4-21.3
ZONE 5	18.2-24.0	19.2-25.2	19.9-26.1	20.4-26.9

**8. Seismic**

- Site Class \_\_\_\_\_ D
- Design Category \_\_\_\_\_ C
- Importance Factor \_\_\_\_\_ 1.0
- Seismic Use Group \_\_\_\_\_ I
- Spectral Response Acceleration
  - 8.5.1. S<sub>s</sub> = %g
  - 8.5.2. S<sub>m1</sub> = %g
- Seismic Base Shear
  - 8.6.1. Vx = \_\_\_\_\_
  - 8.6.2. Vy = \_\_\_\_\_
- Basic Structural System (check one)
  - Bearing Wall
  - Building Frame
  - Moment Frame
  - Dual w/ Special Moment Frame
  - Dual w/ Intermediate R/C or Special Steel
  - Inverted Pendulum
- Arch/Mech Components Anchored \_\_\_\_\_ No
- Lateral Design Control: Seismic  Wind
- Assumed Soil Bearing Capacity \_\_\_\_\_ 2000psf



**STRUCTURAL PLANS PREPARED FOR:**

**COLUMBIA - LH**

**PROJECT ADDRESS:** TBD  
**OWNER:** DR Horton, Inc. 8001 Arrowridge Blvd. Charlotte, NC 28213

**DESIGNER:** GMD Design Group 107 Fountain Brook Circle, Suite C Cary, NC 27511

These drawings are to be coordinated with the architectural, mechanical, plumbing, electrical, and civil drawings. This coordination is not the responsibility of the structural engineering of record (SER). Should any discrepancies become apparent, the contractor shall notify SUMMIT Engineering, Laboratory & Testing, INC. before construction begins.

**PLAN ABBREVIATIONS:**

AB	ANCHOR BOLT	PT	PRESSURE TREATED
AFF	ABOVE FINISHED FLOOR	RS	ROOF SUPPORT
CJ	CEILING JOIST	SC	STUD COLUMN
CLR	CLEAR	SJ	SINGLE JOIST
DJ	DOUBLE JOIST	SFF	SPRUCE PINE FIR
DSP	DOUBLE STUD POCKET	SST	SIMPSON STRONG-TIE
EE	EACH END	SYP	SOUTHERN YELLOW PINE
EJW	EACH WAY	TJ	TRIPLE JOIST
NTS	NOT TO SCALE	TSP	TRIPLE STUD POCKET
OC	ON CENTER	TYP	TYPICAL
PSF	POUNDS PER SQUARE FOOT	UNO	UNLESS NOTED OTHERWISE
PSI	POUNDS PER SQUARE INCH	WUF	WELDED WIRE FABRIC

**SHEET LIST:**

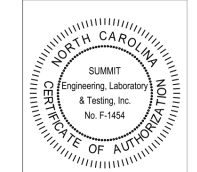
Sheet No.	Description
CS1	Cover Sheet, Specifications, Revisions
51.0m	Monolithic Slab Foundation
51.0s	Stem Wall Foundation
51.0c	Crawl Space Foundation
51.0b	Basement Foundation
52.0	Basement Plan
53.0	First Floor Plan
54.0	Second Floor Plan
55.0	Roof Framing Plan

**REVISION LIST:**

Revision No.	Date	Project No.	Description
1	2/10/17	12388R	Created LH and RH versions
2	5/24/17	12388R2	Revised garage slab, verified floor (423.15)
3	6/13/17	12388R3	Added stem wall foundation
4	11/5/17	12388R4	Revised SYP and pressure treated member notes
5	4/23/18	17869	Added crawl space foundation
6	7/10/18	17869R	Revised per new architectural plans (424.18)
7	8/30/18	17869R2	Added dimensions to tapered porch columns
8	10/5/18	17869R3	Added stick framed options at extended porch
9	11/28/18	17869R4	Revised NC version only for 2018 NCRC
10	3/14/19	21844	Revised TN version only for 2018 IRC
11	12/27/19	21844R	Revised SC version only for 2018 IRC
12	03/10/21	52810060	Verified roof (328.11), added interior bearing Added OX-15 Structural Insulated Sheathing Option
13	5/6/21	10060	Added SFF note option
14	6/30/21	10060	Added OX-15 bracing for framing
15	8/9/23	10060	Changed the direction of the floor system over the garage 4 updated garage header sizes
16	09/15/23	10060	Added Girder to Crawl Space Foundation

**DR HORTON PROJECT SIGN-OFF:**

Manager	Signature
Operations	
Operations System	
Operations Product Development	



CLIENT: DR Horton, Inc. 8001 Arrowridge Blvd. Charlotte, NC 28213

PROJECT: Columbia - LH  
Coversheet



STRUCTURAL MEMBERS ONLY

**DRAWING**

DATE: 09/05/23  
SCALE: 23/34 1/4"=1'-0"  
1/8"=1'-0"  
PROJECT: 1 52810060  
DRAWN BY: JEF  
CHECKED BY: JEF

ORIGINAL INFORMATION  
PROJECT: 1 52810060 DATE: 3/6/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

CS1

**GENERAL STRUCTURAL NOTES:**

- The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory & Testing, INC. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
- The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
- The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
- Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
- Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
- The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
- This structure and all construction shall conform to all applicable sections of the International Residential Code.
- This structure and all construction shall conform to all applicable sections of local building codes.
- All structural assemblies are to meet or exceed to requirements of the current local building code.

**FOUNDATIONS:**

- The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.

- The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.
- Any fill shall be placed under the direction or recommendation of a licensed professional engineer.
- The resulting soil shall be compacted to a minimum of 95% maximum dry density.
- Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.
- No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.

**STRUCTURAL STEEL:**

- Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and the manual of Steel Construction "Load Resistance Factor Design" latest editions.
- Structural steel shall receive one coat of shop applied rust-inhibitive paint.
- All steel shall have a minimum yield stress (F<sub>y</sub>) of 36 ksi unless otherwise noted.
- Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D11. Electrodes for shop and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.

**CONCRETE:**

- Concrete shall have a normal weight aggregate and a minimum compressive strength (f<sub>c</sub>) at 28 days of 3000 psi, unless otherwise noted on the plan.
- Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".
- Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows:
  - Footings: 5%
  - Exterior Slabs: 5%
- No admixtures shall be added to any structural concrete without written permission of the SER.

- Concrete slabs-on-grade shall be constructed in accordance with ACI 302.1R-96: "Guide for Concrete Slab and Slab Construction".
- The concrete slab-on-grade has been designed using a subgrade modulus of k=750 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions.
- Control or saw cut joints shall be spaced in interior slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" unless otherwise noted.
- Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished.
- Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint.
- All welded wire fabric (WUF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WUF shall be securely supported during the concrete pour.

**CONCRETE REINFORCEMENT:**

- Fibrous concrete reinforcement, or fibermesh specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased abrasion resistance, and residual strength.
- Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
- Application of fibermesh per cubic yard of concrete shall equal a minimum of 0.1% by volume (15 pounds per cubic yard).
- Fibermesh shall comply with ASTM C116, any local building code requirements, and shall meet or exceed the current industry standard.
- Steel reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
- Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 318: "Manual of Standard Practice for Detailing Concrete Structures"
- Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice.
- Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.

- Where reinforcing dowels are required, they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
- Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

**WOOD FRAMING:**

- Solid saun wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Southern-Yellow-Pine (SYP) #2 or South-Spruce Pine (SFP) #2.
- LVL or FSL engineered wood shall have the following minimum design values:
  - E = 1,900,000 psi
  - F<sub>b</sub> = 2600 psi
  - F<sub>v</sub> = 285 psi
  - F<sub>c</sub> = 1000 psi
- Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AIAFA standard C-15. All other moisture exposed wood shall be treated in accordance with AIAFA standard C-2.
- Nails shall be common wire nails unless otherwise noted.
- Lag screws shall conform to ANSI/ASME standard B18.21-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
- All beams shall have full bearing on supporting framing members unless otherwise noted.
- Exterior and load bearing stud walls are to be 2x4 SYP #2 @ 16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum of one king stud shall be placed at each end of the header. King studs shall be continuous.
- Individual studs forming a column shall be attached with one 10d nail @ 6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be properly blocked at all floor levels to ensure proper load transfer.
- Multi-ply beams shall have each ply attached with (3) 10d nails @ 24" O.C.
- Four and five ply beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 16" O.C. unless noted otherwise.

**WOOD TRUSSES:**

- The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses.
- The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures," (ASCE 7-10), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses.
- The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction" (NDS) and "Design Specification for Metal Plate Connected Wood Trusses."
- The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-8). This bracing, both temporary and permanent, shall be shown on the shop drawings. Also, the shop drawings shall show the required attachments for the trusses.
- Any chords or truss webs shown on these drawings have been shown as a reference only. The final design of the trusses shall be per the manufacturer.

**EXTERIOR WOOD FRAMED DECKS:**

- Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

**WOOD STRUCTURAL PANELS:**

- Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.
- All structurally required wood sheathing shall bear the mark of the APA.

- Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
- Roof sheathing shall be APA rated sheathing exposure 1 or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6" o/c at panel edges and at 12" o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of plywood clips or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
- Wood floor sheathing shall be APA rated sheathing exposure 1 or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshank nail at 6" o/c at panel edges and at 12" o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T&G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
- Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

**STRUCTURAL FIBERBOARD PANELS:**

- Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
- All structurally required fiberboard sheathing shall bear the mark of the AFA.
- Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information.
- Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the AFA.

**FOUNDATION NOTES:**

- FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- STRUCTURAL CONCRETE TO BE  $F_c = 3000$  PSI, PREPARED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318.
- FOOTINGS TO BE PLACED ON UNDISTURBED EARTH, BEARING A MINIMUM OF 12" BELOW ADJACENT FINISHED GRADE, OR AS OTHERWISE DIRECTED BY THE CODE ENFORCEMENT OFFICIAL.
- FOOTING SIZES BASED ON A PRESUMPTIVE SOIL BEARING CAPACITY OF 2000 PSF. CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE SUITABILITY OF THE SITE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION.
- FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS. PROVIDE 2" MINIMUM FOOTING PROJECTION FROM THE FACE OF MASONRY.
- MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN SECTION R404.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- FILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
- PROVIDE FOUNDATION WATERPROOFING, AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CONDITIONS.
- PROVIDED PERIMETER INSULATION FOR ALL FOUNDATIONS PER 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- CORBEL FOUNDATION WALL AS REQUIRED TO ACCOMMODATE BRICK VENEERS.
- CRAWL SPACE TO BE GRADED LEVEL, AND CLEARED OF ALL DEBRIS.
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.16. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- ABBREVIATIONS:
 

DJ = DOUBLE JOIST	SJ = SINGLE JOIST
GT = GIRDER TRUSS	FT = FLOOR TRUSS
SC = STUD COLUMN	DR = DOUBLE RAFTER
EE = EACH END	TR = TRIPLE RAFTER
TJ = TRIPLE JOIST	OC = ON CENTER
CL = CENTER LINE	FL = POINT LOAD
- ALL PIERS TO BE 16"x16" MASONRY AND ALL PILASTERS TO BE 8"x16" MASONRY, TYPICAL (UNO).
- WALL FOOTINGS TO BE CONTINUOUS CONCRETE, SIZES PER STRUCTURAL PLAN.
- A FOUNDATION EXCAVATION OBSERVATION SHOULD BE CONDUCTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER, OR HIS QUALIFIED REPRESENTATIVE, IF ISOLATED AREAS OF YIELDING MATERIALS AND/OR POTENTIALLY EXPANSIVE SOILS ARE OBSERVED IN THE FOOTING EXCAVATIONS AT THE TIME OF CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, INC. MUST BE PROVIDED THE OPPORTUNITY TO REVIEW THE FOOTING DESIGN PRIOR TO CONCRETE PLACEMENT.
- ALL FOOTINGS & SLABS ARE TO BEAR ON UNDISTURBED SOIL OR 95% COMPACTED FILL, VERIFIED BY ENGINEER OR CODE OFFICIAL.

REFER TO BRACED WALL PLAN FOR PANEL LOCATIONS AND ANY REQUIRED HOLDINGS. ADDITIONAL INFORMATION PER SECTION R602.10.3 AND FIGURES R602.10.6.5, R602.10.7, R602.10.8(1) AND R602.10.8(2) OF THE 2015 IRC

NOTE: ALL EXTERIOR FOUNDATION DIMENSIONS ARE TO FRAMING AND NOT BRICK VENEER, UNO

NOTE: A 4" CRUSHED STONE BASE COURSE IS NOT REQUIRED WHEN SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1 PER TABLE R405.1

REINFORCE GARAGE PORTAL WALLS PER FIGURE R602.10.3 OF THE 2015 IRC.

BEAM POCKETS MAY BE SUBSTITUTED FOR MASONRY PILASTERS AT GIRDER ENDS. BEAM POCKETS SHALL HAVE A MINIMUM 4" SOLID MASONRY BEARING.

NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR. HORTON. COMPLETED/REVISED ON 2/28/20. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, INC. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, INC. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

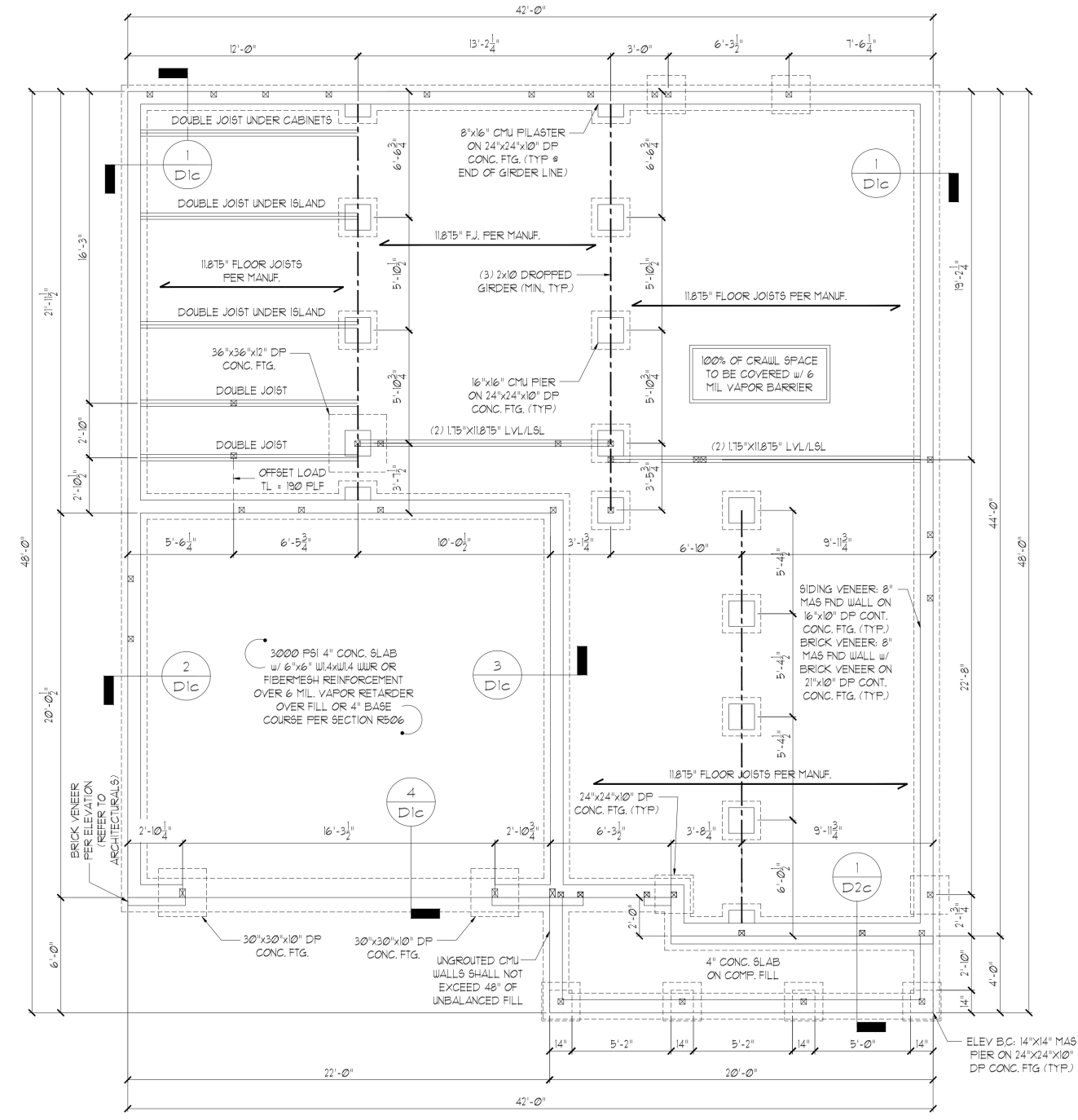
**STRUCTURAL MEMBERS ONLY**

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, INC. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCR.

**CRAWL SPACE FOUNDATION PLAN**

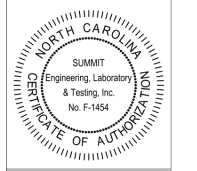
SCALE: 1/4"=1'-0" ON 22'x34' OR 1/8"=1'-0" ON 17'x17'



CRAWL SPACE FOUNDATION - ALL ELEVATIONS

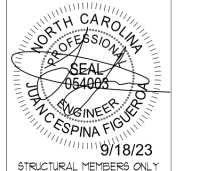
18"x24" MIN. CRAWL SPACE ACCESS DOOR TO BE LOCATED IN FIELD PER BUILDER. PROVIDE MIN. (2) 2x10 HEADER OVER DOOR w/ MIN. 4" BEARING EACH END. AVOID SHOWN POINT LOADS.

DECK FLOOR JOISTS SHALL BE SPACED AT MAX. 12" ON CENTER WHEN DECKING INSTALLED DIAGONALLY



CLIENT:  
DE Lickon, Inc.  
8000 Ardenwood Blvd.  
Charlotte, NC 28215

PROJECT:  
Columbia - LH  
Crawl Space Foundation



DATE: 09/15/2023  
SCALE: 22x34 1/4"=1'-0"  
16'1 1/2"=1'-0"  
PROJECT # 20230060  
DRAWN BY: ED  
CHECKED BY: JCF

ORIGINAL INFORMATION  
PROJECT # DATE  
10060 3/8/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
51.0c

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			# PANEL EDGES	# INTERMEDIATE SUPPORTS
C5-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYP SUM BOARD	1/2"	5d COOLER NAILS** @ 1" O.C.	5d COOLER NAILS** @ 1" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
FF	WOOD STRUCTURAL PANEL	1/6"	PER FIGURE R602.10.6.4	PER FIGURE R602.10.6.4

\*\*OR EQUIVALENT PER TABLE R102.3.5

**GENERAL STRUCTURAL NOTES:**

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS. CONTRACTOR SHALL COMPLY WITH THE CONTENTS OF THE DRAWING FOR THIS SPECIFIC PROJECT. ENGINEER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THIS PLAN.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY BRACING REQUIRED TO RESIST ALL FORCES ENCOUNTERED DURING ERECTION.
- PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS:  
MICRO-LAM (LVL):  $F_b = 2600$  PSI,  $F_v = 285$  PSI,  $E = 1.9 \times 10^6$  PSI  
PARALLAM (PSL):  $F_b = 2900$  PSI,  $F_v = 290$  PSI,  $E = 1.25 \times 10^6$  PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP #1 SFF UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP #1 SFF (UNO).
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP #1 SFF STUD COLUMN AT EACH END UNLESS NOTED OTHERWISE.
- ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM A615 AND SHALL HAVE A MINIMUM COVER OF 3".
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.1.6. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- CONTRACTOR TO PROVIDED LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- FLITCH BEAMS, 4-PLY LVL'S AND 3-PLY SIDE LOADED LVL'S SHALL BE BOLTED TOGETHER WITH 1/2" DIA. THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL I/D3. MIN. EDGE DISTANCE SHALL BE 2" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH END OF THE BEAM.
- ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 2x4 SYP #1 SFF #2, DROPPED, FOR NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN 2'-0" OF CRIPPLE WALL ABOVE, SHALL BE (2) FLAT 2x4 SYP #1 SFF #2, DROPPED. (UNLESS NOTED OTHERWISE)
- ABBREVIATIONS:

DJ = DOUBLE JOIST	SJ = SINGLE JOIST
GT = GIRDER TRUSS	FT = FLOOR TRUSS
SC = STUD COLUMN	DR = DOUBLE RAFTER
EE = EACH END	TR = TRIPLE RAFTER
TJ = TRIPLE JOIST	OC = ON CENTER
CL = CENTER LINE	PL = POINT LOAD

NOTE: ----- DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

JOIST & BEAM SIZES SHOWN ARE MINIMUMS. BUILDER MAY INCREASE DEPTH FOR EASE OF CONSTRUCTION.

INSTALL ANY REQUIRED HOLD-DOWNS PER SECTION R602.10.8 AND FIGURES R602.10.6.5, R602.10.7, R602.10.8(1) AND R602.10.8(2) OF THE 2018 IRC

NOTE: MEMBER NOTED AS PRESSURE TREATED MAY BE FRAMED WITH NON-PRESSURE TREATED LUMBER PROVIDED THE ENTIRETY OF THE MEMBER IS WRAPPED TO PREVENT MOISTURE INTRUSION.

NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 2/28/20. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, INC. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, INC. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

**STRUCTURAL MEMBERS ONLY**

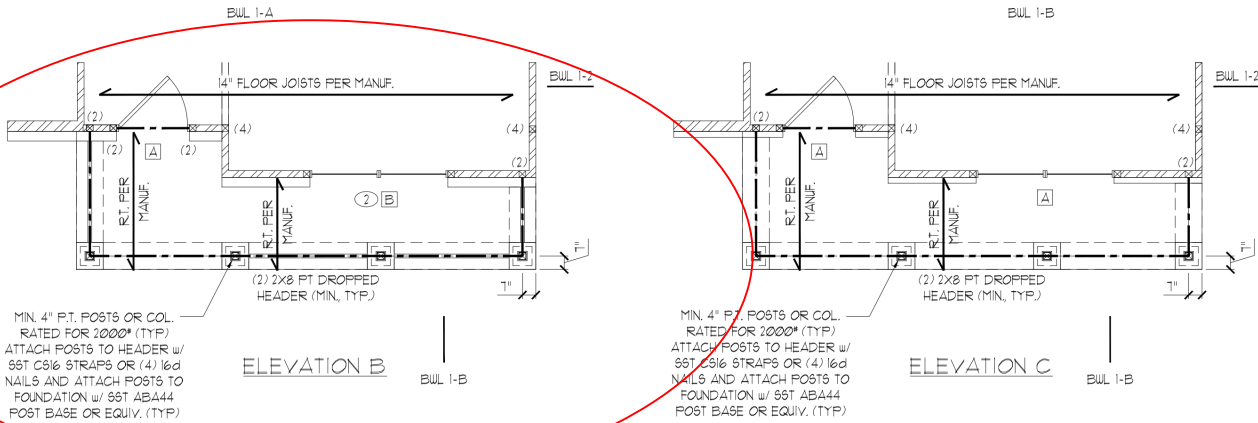
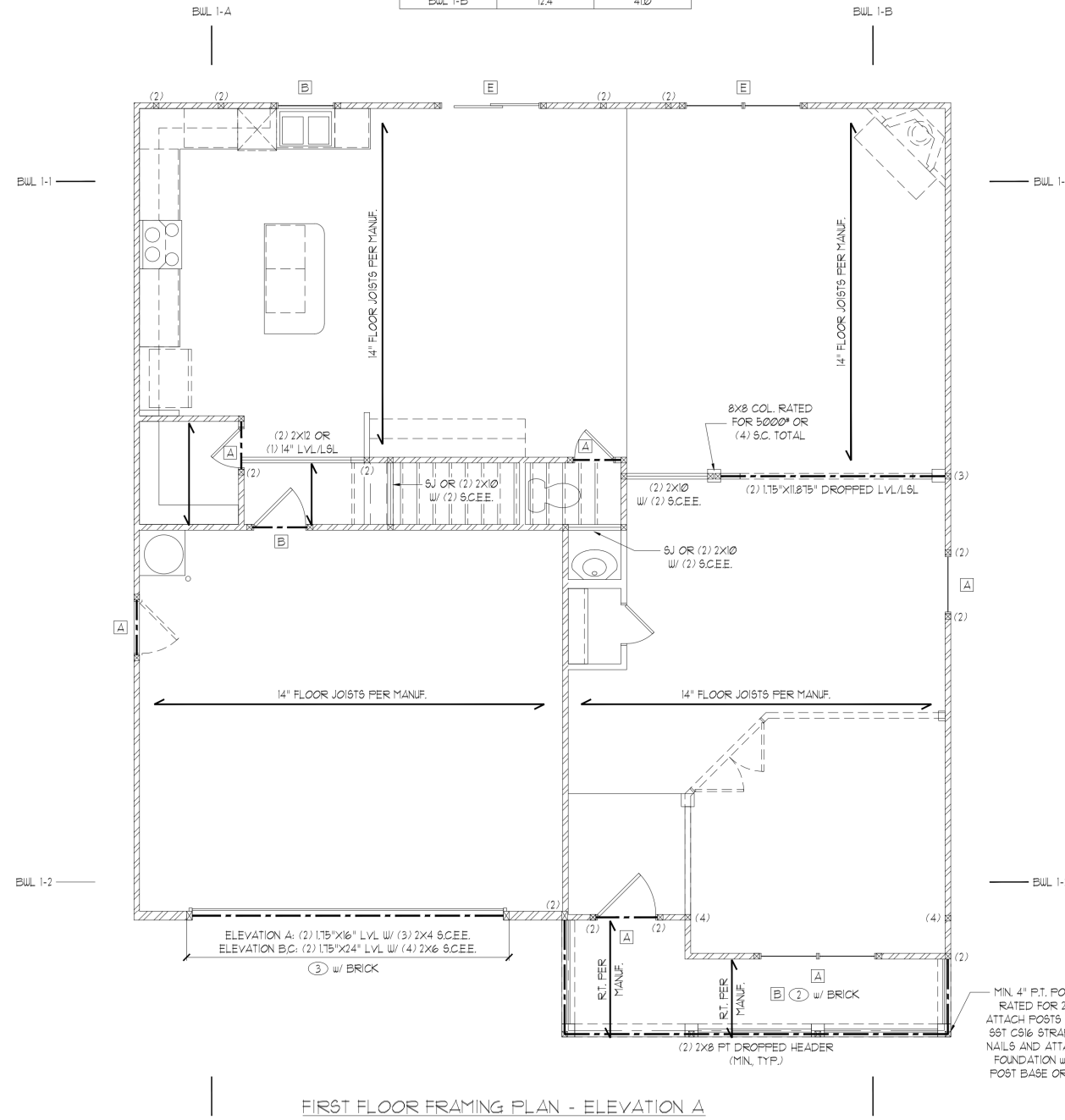
ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, INC. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCR. C.

**FIRST FLOOR FRAMING PLAN**

SCALE: 1/4" = 1'-0" OR 22'x34" OR 18'x11'-0" ON 11"x17"

FIRST FLOOR BRACING (FT)		
	CONTINUOUS SHEATHING METHOD	
	REQUIRED	PROVIDED
BULL 1-1	13.1	21.5
BULL 1-2	13.1	15.1
BULL 1-A	12.4	42.0
BULL 1-B	12.4	41.0



HEADER SCHEDULE		
TAG	SIZE	JACKS (EACH END)
A	(2) 2x6	(1)
B	(2) 2x8	(2)
C	(2) 2x10	(2)
D	(2) 2x12	(2)
E	(2) 9-1/4\"/>	

HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. SC NOTED ON PLAN OVERRIDES SC LISTED ABOVE.

LINTEL SCHEDULE		
TAG	SIZE	OPENING SIZE
1	L3x3x1/4"	LESS THAN 6'-0"
2	L5x3x1/4"	6'-0" TO 10'-0"
3	L5x3-1/2"x5/16"	GREATER THAN 10'-0"
4	L5x3-1/2"x5/16"	ALL ARCHED OPENINGS ROLLED OR EQUIV.

SECURE LINTEL TO HEADER w/ (2) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" O.C. (TYP FOR 3)

ALL HEADERS WHERE BRICK IS USED, TO BE: 1 (UNO)

WALL STUD SCHEDULE	
1ST & 2ND FLOOR LOAD BEARING STUDS: 2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C.	
1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC: 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C.	
BASEMENT LOAD BEARING STUDS: 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C.	
NON-LOAD BEARING STUDS (ALL FLOORS): 2x4 STUDS @ 24" O.C.	
TWO STORY WALLS: 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY	

KING STUD REQUIREMENTS	
OPENING WIDTH	KINGS (EACH END)
LESS THAN 3'-0"	(1)
3'-0" TO 4'-0"	(2)
4'-0" TO 8'-0"	(3)
8'-0" TO 12'-0"	(5)
12'-0" TO 16'-0"	(6)

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

**BRACED WALL NOTES:**

- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 INTERNATIONAL RESIDENTIAL CODE AS ALLOWED PER SECTION R602.10 OF THE 2018 NC RESIDENTIAL CODE.
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH IRC TABLE R602.10.4.
- ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.5.
- THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).
- FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
- FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- A BRACED WALL PANEL SHALL BE LOCATED WITHIN 10 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 20 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.9 OF THE 2018 IRC.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.2 AND FIGURES R602.10.8(1)&(2)&(3).
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.11.
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.6.4 (UNO).
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:

GB = GYPSUM BOARD WSP = WOOD STRUCTURAL PANEL  
C5-XXX = CONT. SHEATHED ENG = ENGINEERED SOLUTION  
FF = PORTAL FRAME FF-ENG = ENG. PORTAL FRAME



CLIENT: DE LUXON, INC. 8001 Arrows Blvd. Charlotte, NC 28217

PROJECT: Columbia - LH First Floor Framing Plan



9/18/23

STRUCTURAL MEMBERS ONLY  
DATE: 09/18/23  
SCALE: 22x34 1/4" = 1'-0" 18" = 1'-0"  
PROJECT: 150470060  
DRAWN BY: ED  
CHECKED BY: JCF

ORIGINAL INFORMATION  
PROJECT: 150470060 DATE: 9/18/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET: 53.0



REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			# PANEL EDGES @ 6" O.C.	# INTERMEDIATE SUPPORTS @ 12" O.C.
CS-U&P	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSUM BOARD	1/2"	5d COOLER NAILS** @ 1" O.C.	5d COOLER NAILS** @ 1" O.C.
U&P	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
FF	WOOD STRUCTURAL PANEL	1/16"	PER FIGURE R602.106.4	PER FIGURE R602.106.4

\*\*OR EQUIVALENT PER TABLE R102.3.5

	CONTINUOUS SHEATHING METHOD	
	REQUIRED	PROVIDED
BUL 2-1	12	28.6
BUL 2-2	12	25.2
BUL 2-A	6.3	31.6
BUL 2-B	6.3	36.7

**GENERAL STRUCTURAL NOTES:**

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS. CONTRACTOR SHALL COMPLY WITH THE CONTENTS OF THE DRAWING FOR THIS SPECIFIC PROJECT. ENGINEER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THIS PLAN.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY BRACING REQUIRED TO RESIST ALL FORCES ENCOUNTERED DURING ERECTION.
- PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS:  
MICROLLAM (LVL):  $F_b = 2600$  PSI,  $F_v = 285$  PSI,  $E = 1.3 \times 10^6$  PSI  
PARALLAM (PSL):  $F_b = 2300$  PSI,  $F_v = 230$  PSI,  $E = 1.25 \times 10^6$  PSI
- ALL WOOD MEMBERS SHALL BE #2 SYP/#2 SFF UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP/#2 SFF (UNO).
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP/#2 SFF STUD COLUMN AT EACH END UNLESS NOTED OTHERWISE.
- ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM A615 AND SHALL HAVE A MINIMUM COVER OF 3".
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.16. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- CONTRACTOR TO PROVIDE LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- FLITCH BEAMS, 4-PLY LVL'S AND 3-PLY SIDE LOADED LVL'S SHALL BE BOLTED TOGETHER WITH 1/2" DIA. THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL U3. MIN. EDGE DISTANCE SHALL BE 2" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH END OF THE BEAM.
- ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 2x4 SYP #2/SFF #2, DROPPED, FOR NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN 2'-0" OF CRIPPLE WALL ABOVE, SHALL BE (2) FLAT 2x4 SYP #2/SFF #2, DROPPED, (UNLESS NOTED OTHERWISE)
- ABBREVIATIONS:

- |                   |                    |
|-------------------|--------------------|
| DJ = DOUBLE JOIST | SJ = SINGLE JOIST  |
| GT = GIRDER TRUSS | FT = FLOOR TRUSS   |
| SC = STUD COLUMN  | DR = DOUBLE RAFTER |
| EE = EACH END     | TR = TRIPLE RAFTER |
| TJ = TRIPLE JOIST | OC = ON CENTER     |
| CL = CENTER LINE  | PL = POINT LOAD    |

NOTE:  
----- DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

JOIST & BEAM SIZES SHOWN ARE MINIMUMS. BUILDER MAY INCREASE DEPTH FOR EASE OF CONSTRUCTION.

INSTALL ANY REQUIRED HOLDOWNS PER SECTION R602.10.8 AND FIGURES R602.10.6.5, R602.10.1, R602.10.8(1) AND R602.10.8(2) OF THE 2018 IRC

NOTE: MEMBER NOTED AS PRESSURE TREATED MAY BE FRAMED WITH NON-PRESSURE TREATED LUMBER PROVIDED THE ENTIRETY OF THE MEMBER IS WRAPPED TO PREVENT MOISTURE INTRUSION.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON COMPLETED/REVISED ON 2/28/22. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, INC. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, INC. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

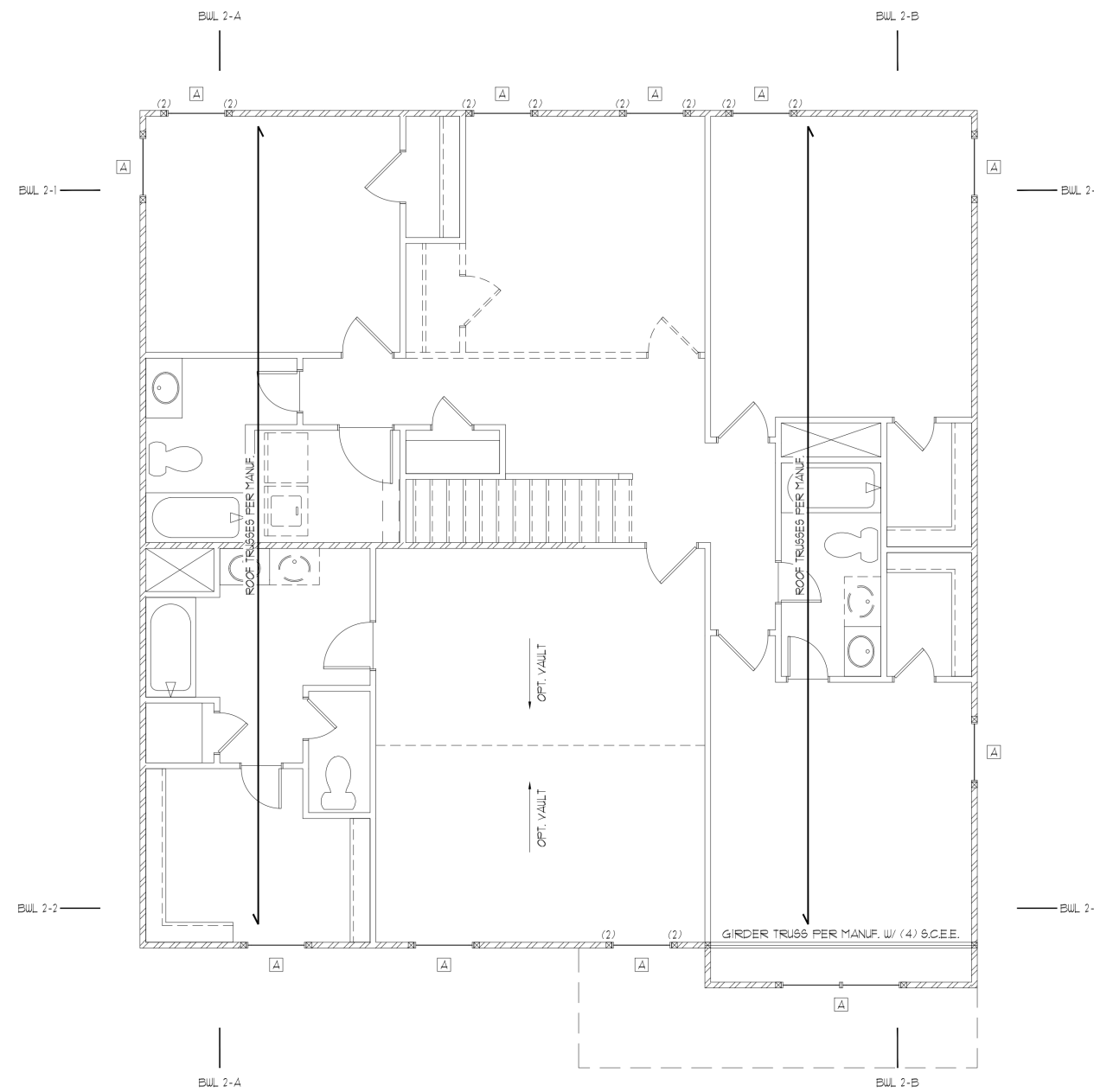
**STRUCTURAL MEMBERS ONLY**

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, INC. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCRS.

**SECOND FLOOR FRAMING PLAN**

SCALE: 1/4"=1'-0" ON 22"x34" OR 1/8"=1'-0" ON 11"x17"



SECOND FLOOR FRAMING PLAN - ALL ELEVATIONS

HEADER SCHEDULE		
TAG	SIZE	JACKS (EACH END)
A	(2) 2x6	(1)
B	(2) 2x8	(2)
C	(2) 2x10	(2)
D	(2) 2x12	(2)
E	(2) 3-1/4" LSL/LVL	(3)
F	(3) 2x6	(1)
G	(3) 2x8	(2)
H	(3) 2x10	(2)
I	(3) 2x12	(2)

HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. SC NOTED ON PLAN OVERRIDE SC LISTED ABOVE.

LINTEL SCHEDULE		
TAG	SIZE	OPENING SIZE
1	L3x3x1/4"	LESS THAN 6'-0"
2	L5x3x1/4"	6'-0" TO 10'-0"
3	L5x3-1/2x5/16"	GREATER THAN 10'-0"
4	L5x3-1/2x5/16"	ALL ARCHED OPENINGS

SECURE LINTEL TO HEADER w/ (2) 1/2" DIA METER LAG SCREWS STAGGERED @ 16" O.C. (TYP FOR (3))

ALL HEADERS WHERE BRICK IS USED, TO BE: (1) (UNO)

**WALL STUD SCHEDULE**

- 1ST & 2ND FLOOR LOAD BEARING STUDS:  
2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C.  
1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC:  
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C.  
BASEMENT LOAD BEARING STUDS:  
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C.  
NON-LOAD BEARING STUDS (ALL FLOORS):  
2x4 STUDS @ 24" O.C.  
TWO STORY WALLS:  
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY

**KING STUD REQUIREMENTS**

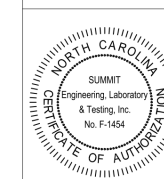
OPENING WIDTH	KINGS (EACH END)
LESS THAN 3'-0"	(1)
3'-0" TO 4'-0"	(2)
4'-0" TO 8'-0"	(3)
8'-0" TO 12'-0"	(5)
12'-0" TO 16'-0"	(6)

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

**BRACED WALL NOTES:**

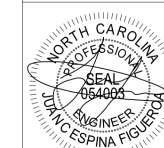
- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 INTERNATIONAL RESIDENTIAL CODE AS ALLOWED PER SECTION R602.10 OF THE 2018 NC RESIDENTIAL CODE.
- WALLS ARE DESIGNED FOR SEISMIC ZONES 4-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH IRC TABLE R602.10.4.
- ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.5.
- THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).
- FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS AND ON GABLE END WALLS.
- FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- A BRACED WALL PANEL SHALL BE LOCATED WITHIN 10 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 20 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.9 OF THE 2018 IRC.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.8.2 AND FIGURES R602.10.8(1)&(2)&(3).
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.11.
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.6.4 (UNO).
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:

- |                         |                             |
|-------------------------|-----------------------------|
| GB = GYPSUM BOARD       | U&P = WOOD STRUCTURAL PANEL |
| CS-XXX = CONT. SHEATHED | ENG = ENGINEERED SOLUTION   |
| FF = PORTAL FRAME       | FF-ENG = ENG. PORTAL FRAME  |



CLIENT:  
DE Luxon, Inc.  
8600 Arrows Blvd.  
Charlotte, NC 28217

PROJECT:  
Columbia - LH  
Second Floor Framing Plan



9/18/23  
STRUCTURAL MEMBERS ONLY

DATE: 09/18/23  
SCALE: 22x34 1/4"=1'-0"  
11x17 1/2"=1'-0"  
PROJECT: 152470060  
DRAWN BY: ED  
CHECKED BY: JCF

ORIGINAL INFORMATION  
PROJECT: 152470060 DATE: 9/18/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

CLIENT:  
DE LUXON, Inc.  
8000 Ardwick Blvd.  
Charlotte, NC 28217

PROJECT:  
Columbia - LH  
Roof Framing Plan

NORTH CAROLINA  
PROFESSIONAL  
SEAL  
064004  
ENGINEER  
ANGELICA FIGUEROA  
9/18/23

STRUCTURAL MEMBERS ONLY

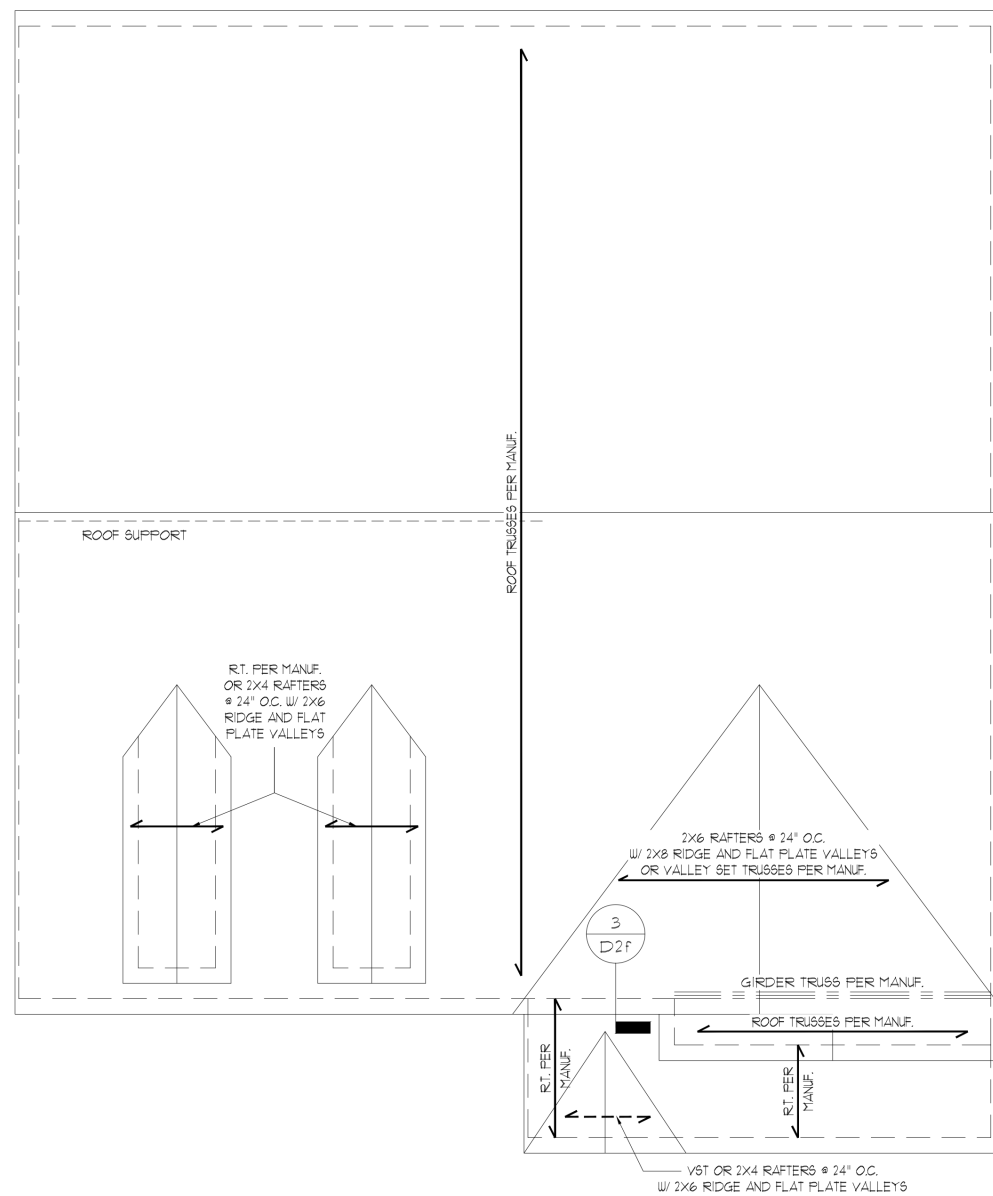
DRAINS  
DATE: 09/05/2023  
SCALE: 2x/4 1/4"=1'-0"  
1x/1 1/2"=1'-0"  
PROJECT # 230700040  
DRAWN BY: ED  
CHECKED BY: JCF

ORIGINAL INFORMATION  
PROJECT # DATE  
10046 3/05/2011

REFER TO COVER SHEET FOR A  
COMPLETE LIST OF REVISIONS

SHEET

95.1



ROOF FRAMING PLAN - ELEVATION B

NOTE: 1ST PLY OF ALL SHOWN GIRDER TRUSSES TO ALIGN WITH INSIDE FACE OF WALL (TYP, UNO)

NOTE: ROOF TRUSSES SHALL BE SPACE TO SUPPORT FALSE FRAMED DORMER WALLS (TYP, UNO)

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY DR HORTON. COMPLETED/REVISED ON 2/28/20. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, INC. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, INC. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

**STRUCTURAL MEMBERS ONLY**

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, INC. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCR.

**ROOF FRAMING PLAN**

SCALE: 1/4"=1'-0" ON 22'x34' OR 1/8"=1'-0" ON 17x17'

DESIGN SPECIFICATIONS:

Construction Type: Commercial  Residential

Applicable Building Codes:

- 2018 North Carolina Residential Building Code with All Local Amendments
ASCE 1-10, Minimum Design Loads for Buildings and Other Structures

Design Loads:

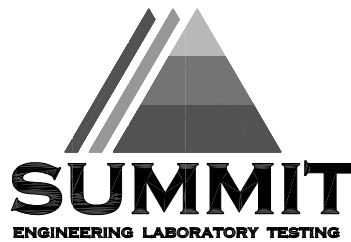
- 1. Roof Live Loads
11. Conventional 2x 20 PSF
12. Truss 20 PSF
12.1. Attic Truss 60 PSF
2. Roof Dead Loads
21. Conventional 2x 10 PSF
22. Truss 20 PSF
3. Snow 15 PSF
3.1. Importance Factor 1.0
4. Floor Live Loads
4.1. Typ. Dwelling 40 PSF
4.2. Sleeping Areas 30 PSF
4.3. Decks 40 PSF
4.4. Passenger Garage 50 PSF
5. Floor Dead Loads
5.1. Conventional 2x 10 PSF
5.2. 1-Joist 15 PSF
5.3. Floor Truss 15 PSF
6. Ultimate Wind Speed (3 sec. gust) PER PLAN
6.1. Exposure B
6.2. Importance Factor 1.0
6.3.1. Vx = 63.2 Vy =

7. Component and Cladding (in PSF)

Table with 5 columns: MEAN ROOF HT., UP TO 30', 30'1"-35', 35'1"-40', 40'1"-45'. Rows for ZONE 1 through ZONE 5.

8. Seismic

- 8.1. Site Class D
8.2. Design Category C
8.3. Importance Factor 1.0
8.4. Seismic Use Group I
8.5. Spectral Response Acceleration
8.5.1. Ss = %g
8.5.2. Sml = %g
8.6. Seismic Base Shear
8.6.1. Vx = 8.6.2. Vy =
8.7. Basic Structural System (check one)
8.8. Arch/Mech Components Anchored No
8.9. Lateral Design Controls: Seismic  Wind 
9. Assumed Soil Bearing Capacity 2000psf



STRUCTURAL PLANS PREPARED FOR:

STANDARD DETAILS

PROJECT ADDRESS: TBD OUNER: DR Horton Carolinas Division 8001 Arrowridge Blvd Charlotte, NC 28213

ARCHITECT/DESIGNER: GMD Design Group 1845 Satellite Blvd. Duluth, GA 30091

These drawings are to be coordinated with the architectural, mechanical, plumbing, electrical, and civil drawings. This coordination is not the responsibility of the structural engineering of record (SER). Should any discrepancies become apparent, the contractor shall notify SUMMIT Engineering, Laboratory 4 Testing, P.C. before construction begins.

PLAN ABBREVIATIONS:

Table with 4 columns: ABBREVIATION, DESCRIPTION, ABBREVIATION, DESCRIPTION. Includes items like AFF ABOVE FINISHED FLOOR, CJ CEILING JOIST, CLR CLEAR, etc.

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to SUMMIT Engineering, Laboratory 4 Testing, P.C. (SUMMIT) prior to the initial design. Therefore, truss and joist directions were assumed based on the information provided by DR Horton, Inc. Subsequent plan revisions based on roof truss and floor joist layouts shall be noted in the revision list, indicating the date the layouts were provided. Should any discrepancies become apparent, the contractor shall notify SUMMIT immediately.

SHEET LIST:

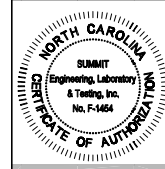
Table with 2 columns: Sheet No., Description. Lists sheets CS1 through D1F.

REVISION LIST:

Table with 4 columns: Revision No., Date, Project No., Description. Lists revisions 1 through 14.

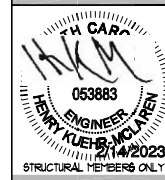
DR HORTON PROJECT SIGN-OFF:

Table with 2 columns: Manager, Signature. Rows for Operations, Operations System, Operations Product Development.



CLIENT: DR Horton Carolina Division 8001 Arrowridge Blvd. Charlotte NC 28213

PROJECT: Standard Details (OX-15) Coversheet



DRAWING DATE: 05/04/2023 SCALE: 2/24 1/4"=1'-0" PROJECT: 1508-06R DRAIN BY: JCF CHECKED BY: BCP

ORIGINAL INFORMATION PROJECT # DATE 15/20/21 REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET CS1

GENERAL STRUCTURAL NOTES:

- 1. The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory 4 Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
2. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
3. The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
4. Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
5. Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
6. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
7. This structure and all construction shall conform to all applicable sections of the International Residential Code.
8. This structure and all construction shall conform to all applicable sections of local building codes.
9. All structural assemblies are to meet or exceed to requirements of the current local building code.

FOUNDATIONS:

- 1. The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.

- 2. The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.
3. Any fill shall be placed under the direction or recommendation of a licensed professional engineer.
4. The resulting soil shall be compacted to a minimum of 95% maximum dry density.
5. Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.
6. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.

STRUCTURAL STEEL:

- 1. Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and the manual of Steel Construction "Load Resistance Factor Design" latest editions.
2. Structural steel shall receive one coat of shop applied rust-inhibitive paint.
3. All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
4. Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D11. Electrodes for shop and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.

CONCRETE:

- 1. Concrete shall have a normal weight aggregate and a minimum compressive strength (fc) at 28 days of 3000 psi, unless otherwise noted on the plan.
2. Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".
3. Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows:
3.1. Footings: 5%
3.2. Exterior Slabs: 5%
4. No admixtures shall be added to any structural concrete without written permission of the SER.

- 5. Concrete slabs-on-grade shall be constructed in accordance with ACI 302.1R-96: "Guide for Concrete Slab and Slab Construction".
6. The concrete slab-on-grade has been designed using a subgrade modulus of k=250 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions.
7. Control or saw cut joints shall be spaced in interior slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" unless otherwise noted.
8. Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished. Reinforcing steel may not extend through a control joint.
9. Reinforcing steel may extend through a saw cut joint.
10. All welded wire fabric (WWF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WWF shall be securely supported during the concrete pour.

CONCRETE REINFORCEMENT:

- 1. Fibrous concrete reinforcement, or fibermesh, specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased abrasion resistance, and residual strength.
2. Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
3. Application of fibermesh per cubic yard of concrete shall equal a minimum of 0.1% by volume (15 pounds per cubic yard).
4. Fibermesh shall comply with ASTM C116, any local building code requirements, and shall meet or exceed the current industry standard.
5. Steel reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
6. Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 318: "Manual of Standard Practice for Detailing Concrete Structures".
7. Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice.
8. Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.

- 9. Where reinforcing dowels are required, they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

WOOD FRAMING:

- 1. Solid sawn wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Spruce-Yellow-Pine (SYP) #2.
2. LVL or PSL engineered wood shall have the following minimum design values:
2.1. E = 1,900,000 psi
2.2. Fv = 2,600 psi
2.3. Fy = 285 psi
2.4. Fc = 100 psi
3. Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AIAA standard C-19. All other moisture exposed wood shall be treated in accordance with AIAA standard C-7.
4. Nails shall use common wire nails unless otherwise noted.
5. Lag screws shall conform to ANSI/ASME standard B18.21-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
6. All beams shall have full bearing on supporting framing members unless otherwise noted.
7. Exterior and load bearing stud walls are to be 2x4 SYP #2 @ 16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum of one king stud shall be placed at each end of the header. King studs shall be continuous.
8. Individual studs forming a column shall be attached with one 1/2" nail @ 6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be properly blocked at all floor levels to ensure proper load transfer.
9. Multi-ply beams shall have each ply attached with (3) 1/2" nails @ 24" O.C.
10. Fitch beams, 4-ply beams and 3-ply side loaded beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 16" O.C. unless noted otherwise. Min. edge distance shall be 2" and (2) bolts shall be located a min. 6" from each end of the beam.

WOOD TRUSSES:

- 1. The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses.
2. The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures" (ASCE 1-05), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses.
3. The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction" (NDS) and "Design Specification for Metal Plate Connected Wood Trusses".
4. The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-3). This bracing, both temporary and permanent, shall be shown on the shop drawings. Also, the shop drawings shall show the required attachments for the trusses.
5. Any chords or truss webs shown on these drawings have been shown as a reference only. The final design of the trusses shall be per the manufacturer.

EXTERIOR WOOD FRAMED DECKS:

- 1. Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

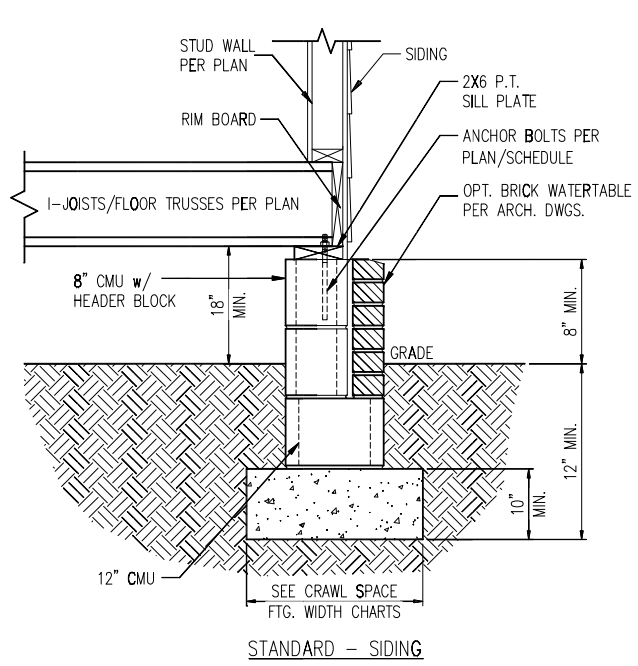
WOOD STRUCTURAL PANELS:

- 1. Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.
2. All structurally required wood sheathing shall bear the mark of the APA.

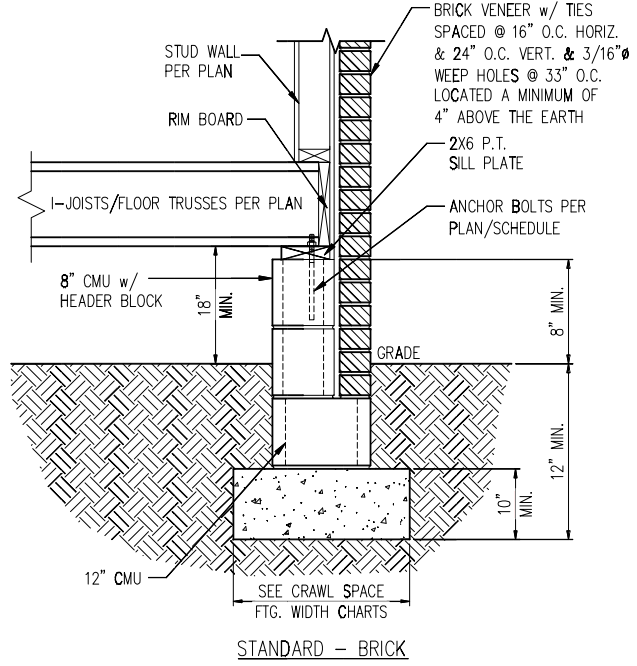
- 3. Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
4. Roof sheathing shall be APA rated sheathing exposure 1 or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6" o/c at panel edges and at 12" o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of plywood clips or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
5. Wood floor sheathing shall be APA rated sheathing exposure 1 or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshank nail at 6" o/c at panel edges and at 12" o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T&G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
6. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

STRUCTURAL FIBERBOARD PANELS:

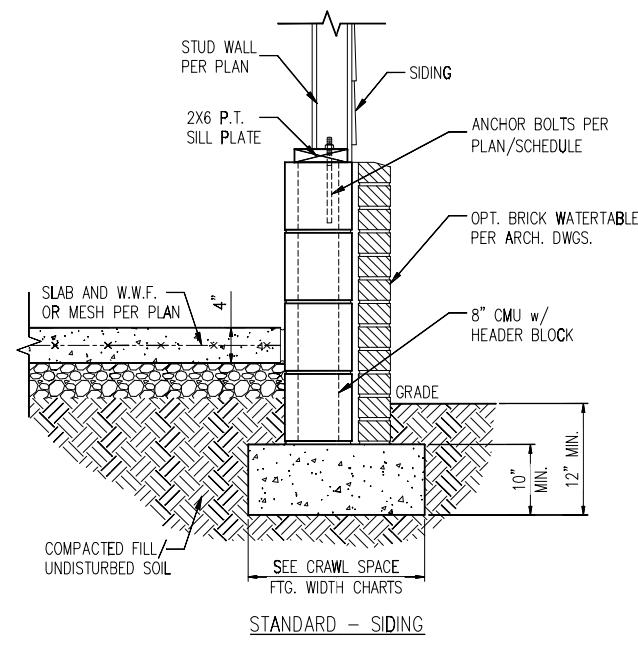
- 1. Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
2. All structurally required fiberboard sheathing shall bear the mark of the AFA.
3. Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information.
4. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the AFA.



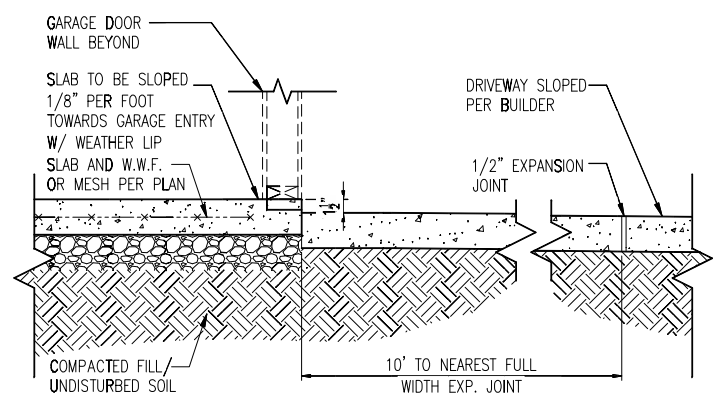
1 TYP. FOUNDATION WALL DETAIL  
D1c N.T.S.



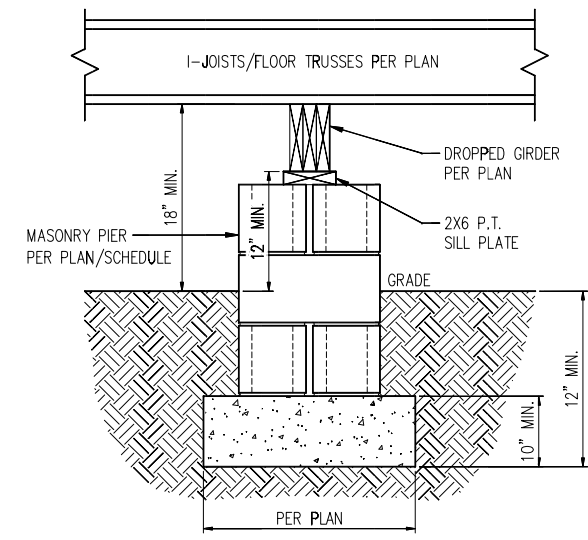
2 TYP. GARAGE CURB DETAIL  
D1c N.T.S.



3 HOUSE/GARAGE WALL DETAIL  
D1c N.T.S.



4 SLAB AT GARAGE DOOR  
D1c N.T.S.



5 TYP. PIER & GIRDER DETAIL  
D1c N.T.S.

PIER SIZE AND HEIGHT SCHEDULE

SIZE	HOLLOW	SOLID
8"x16"	UP TO 32" HEIGHT	UP TO 5'-0" HEIGHT
12"x16"	UP TO 48" HEIGHT	UP TO 9'-0" HEIGHT
16"x16"	UP TO 64" HEIGHT	UP TO 12'-0" HEIGHT*
24"x24"	UP TO 96" HEIGHT	UP TO 12'-0" HEIGHT*

\* (4) #4 CONT. REBAR w/ #3 STIRRUPS @ 16" O.C. AND 24" MIN. LAP JOINTS

CRAWL SPACE FOOTING WIDTH

# OF STORIES	WIDTH BASED ON SOIL BEARING CAPACITY		
	1500 PSF	2000 PSF	2500 PSF
1 STORY - STD.	16"	16"	16"
1 STORY - BRICK VENEER	21"*	21"*	21"*
2 STORY - STD.	16"	16"	16"
2 STORY - BRICK VENEER	21"*	21"*	21"*
3 STORY - STD.	23"	18"	18"
3 STORY - BRICK VENEER	32"*	24"*	24"*

\*5" BRICK LEDGE HAS BEEN ADDED TO THE CRAWL SPACE FOOTING WIDTH FOR BRICK SUPPORT

WALL ANCHOR SCHEDULE

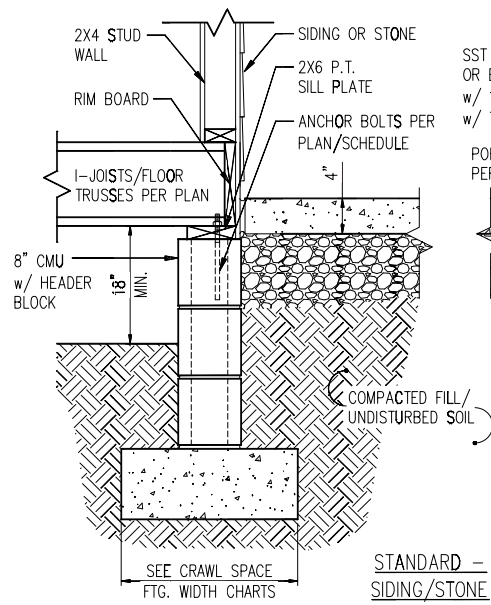
TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING EMBEDMENT	WALL	
			INTERIOR	EXTERIOR
1/2" A307 BOLTS w/ STD. 90° BEND	7"	6'-0"	YES	YES
SST - MAS	4"	5'-0"	NO	YES
HILTI KWIK BOLT KBI 1/2-2-3/4	2-1/4"	6'-0"	YES	NO
1/2" HILTI THREADED ROD w/ HIT HY150 ADHESIVE	7"	6'-0"	YES	YES

NOTE: INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.

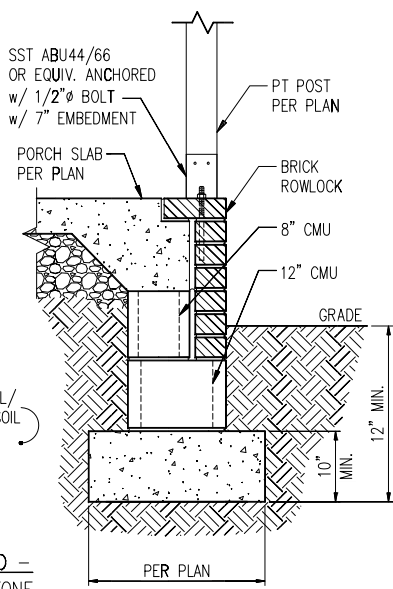
NOTES:

- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
- PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
- SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
- REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
- REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
- PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRS

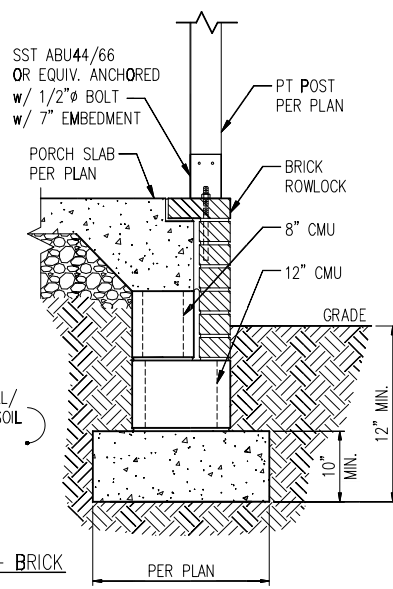




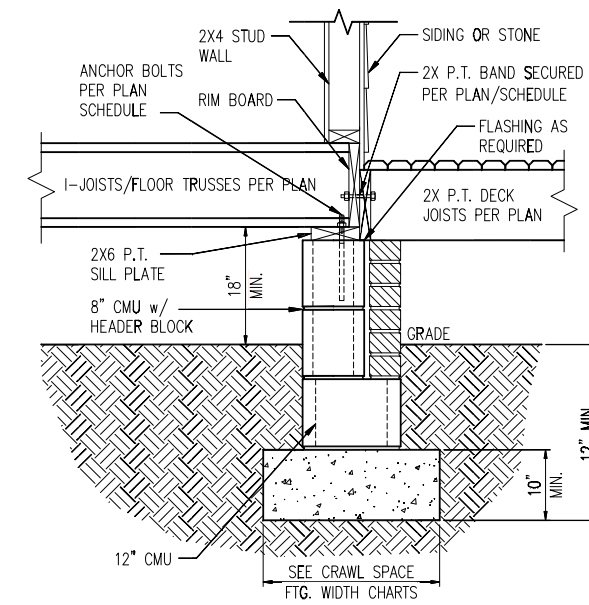
STANDARD - SIDING/STONE



STANDARD - BRICK

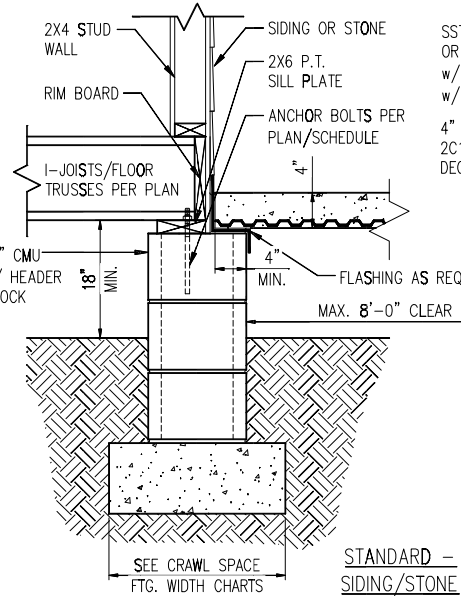


STANDARD - SIDING/STONE

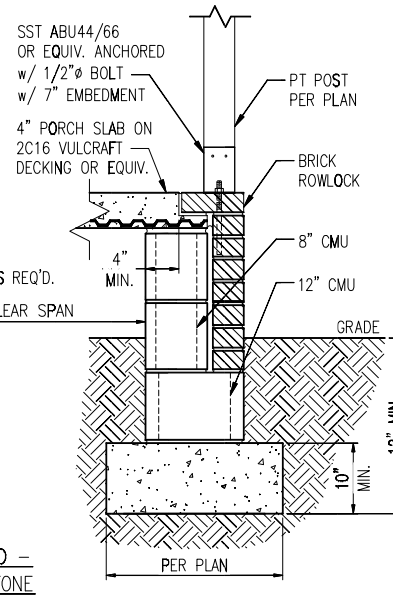


STANDARD - BRICK

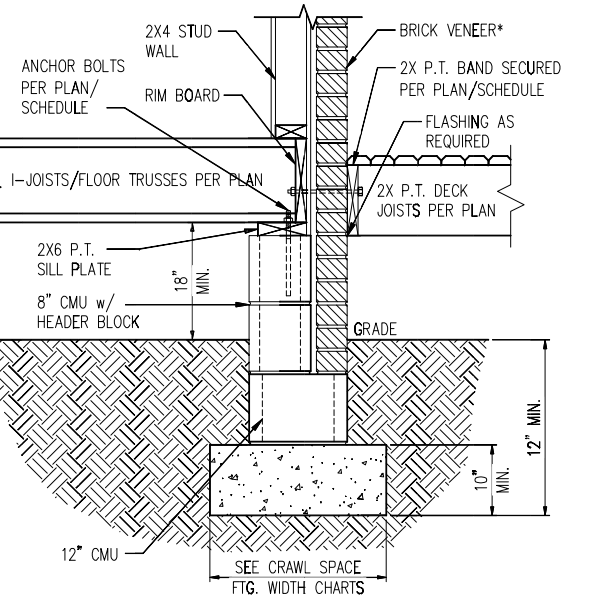
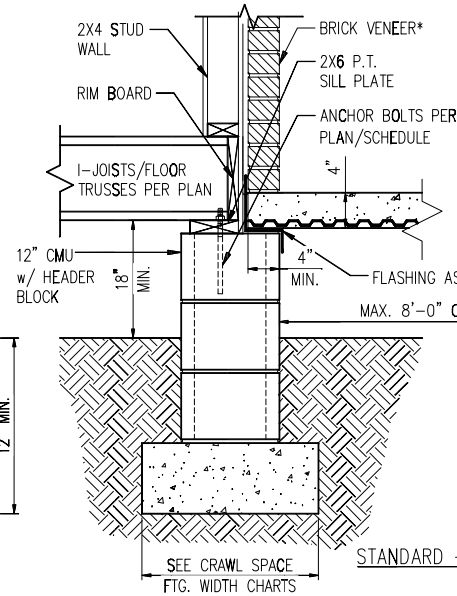
1 TYP. FRONT PORCH DETAIL  
D2c N.T.S.



STANDARD - SIDING/STONE



STANDARD - BRICK



1a FRONT PORCH DETAIL w/ SUSPENDED SLAB  
D2c N.T.S.

3 DECK ATTACHMENT DETAIL W/ BRICK  
D2c N.T.S.

DECK ATTACHMENT SCHEDULE (ALL STRUCTURES EXCEPT BRICK)

FASTENERS	MAX. 8'-0" JOIST SPAN	MAX. 16'-0" JOIST SPAN
5/8" GALV. BOLTS w/ NUT & WASHER <sup>a</sup>	(1) @ 3'-6" O.C.	(1) @ 1'-8" O.C.
AND	AND	AND
12d COMMON GALV. NAILS <sup>c</sup>	(2) @ 8" O.C.	(3) @ 6" O.C.

- a. ATTACHMENT INTERPOLATION BETWEEN 8' AND 16' JOIST SPANS IS ALLOWED.
- b. MINIMUM EDGE DISTANCE FOR BOLTS IS 2 1/2".
- c. NAILS MUST PENETRATE THE SUPPORTING STRUCTURE BAND A MINIMUM OF 1 1/2"

DECK ATTACHMENT SCHEDULE (BRICK STRUCTURES)

FASTENERS	MAX. 8'-0" JOIST SPAN	MAX. 16'-0" JOIST SPAN
5/8" GALV. BOLTS w/ NUT & WASHER <sup>b</sup>	(1) @ 2'-4" O.C.	(1) @ 1'-4" O.C.

- a. ATTACHMENT INTERPOLATION BETWEEN 8' AND 16' JOIST SPANS IS ALLOWED.
- b. MINIMUM EDGE DISTANCE FOR BOLTS IS 2 1/2".

CRAWL SPACE FOOTING WIDTH

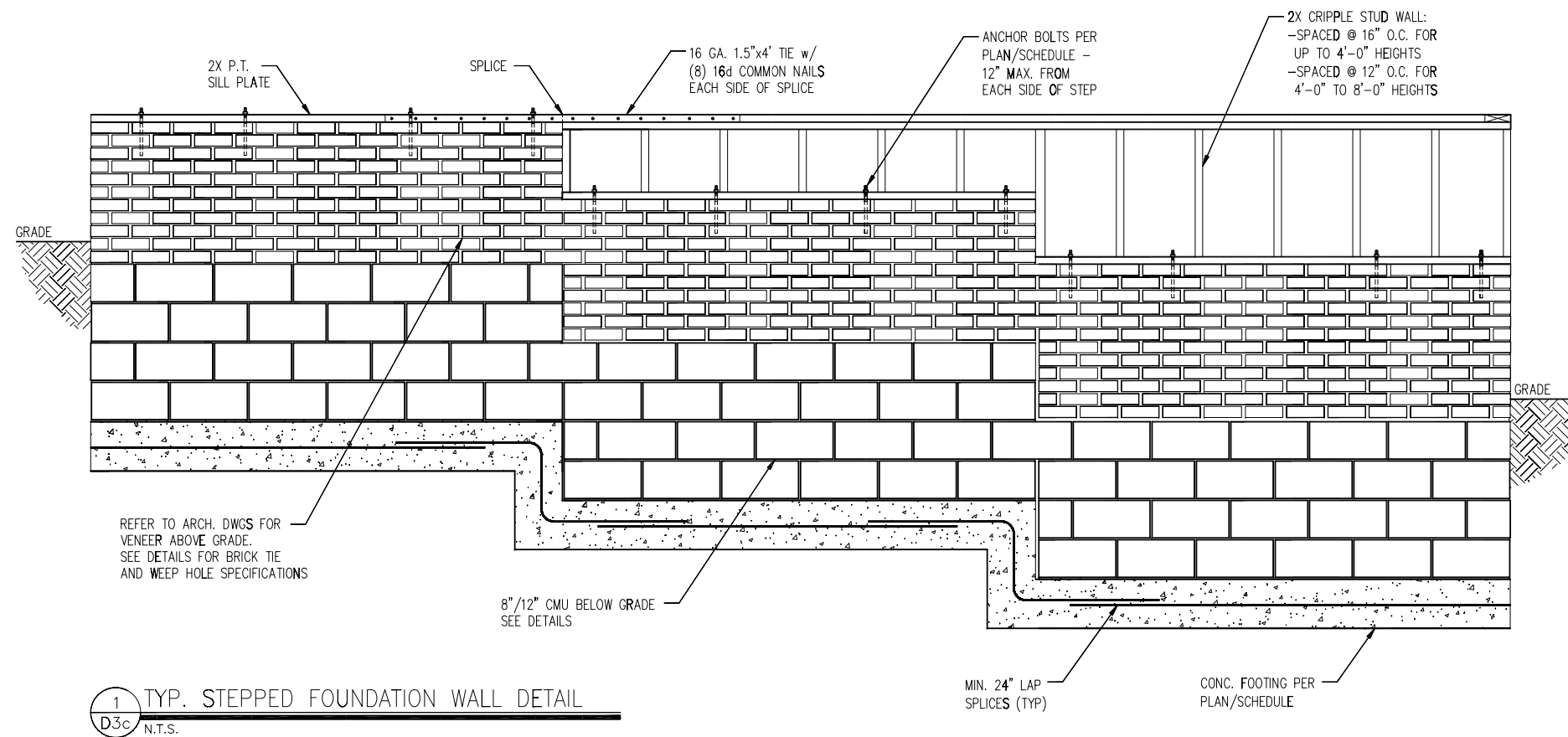
# OF STORIES	WIDTH BASED ON SOIL BEARING CAPACITY		
	1500 PSF	2000 PSF	2500 PSF
1 STORY - STD.	16"	16"	16"
1 STORY - BRICK VENEER	21"*	21"*	21"*
2 STORY - STD.	16"	16"	16"
2 STORY - BRICK VENEER	21"*	21"*	21"*
3 STORY - STD.	23"	18"	18"
3 STORY - BRICK VENEER	32"*	24"*	24"*

\*5" BRICK LEDGE HAS BEEN ADDED TO THE CRAWL SPACE FOOTING WIDTH FOR BRICK SUPPORT

\*BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT. AND 3/16" Ø WEEP HOLES @ 33" O.C. LOCATED A MINIMUM OF 4" ABOVE THE EARTH

NOTES:

1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
4. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
5. REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
6. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRS



1 TYP. STEPPED FOUNDATION WALL DETAIL  
 D3c N.T.S.

REFER TO ARCH. DWGS FOR VENEER ABOVE GRADE. SEE DETAILS FOR BRICK TIE AND WEEP HOLE SPECIFICATIONS

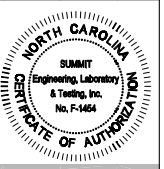
8"/12" CMU BELOW GRADE SEE DETAILS

MIN. 24" LAP SPLICES (TYP)

CONC. FOOTING PER PLAN/SCHEDULE

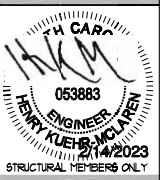
NOTES:

1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
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5. REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
6. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRS



CLIENT:  
 DR Horton Carolina Division  
 8200 Aronowood Blvd.  
 Charlotte NC 28215

PROJECT:  
 Standard Details (0x-1b)  
**Crawl Space Foundation Details**



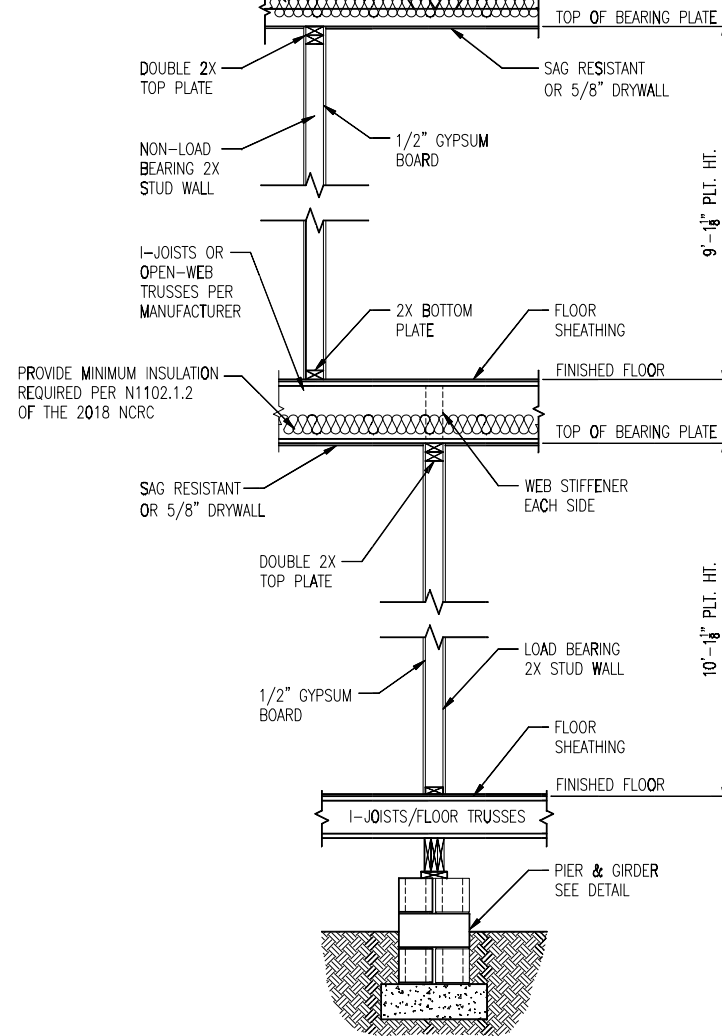
DRAWING  
 DATE: 05/04/2023  
 SCALE: 2/24 1/4"=1'-0"  
 PROJECT: A 508-06R  
 DRAWN BY: JCF  
 CHECKED BY: BCP

ORIGINAL INFORMATION  
 PROJECT # DATE  
 15/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

MIN. 3/8" ROOF SHEATHING SECURED IN ACCORDANCE WITH FIGURE TABLE R602.3(1) (SEE NOTE G FOR ULTIMATE WIND SPEEDS GREATER THAN 120MPH). PROVIDE UNDERLAYMENT IN ACCORDANCE WITH CHAPTER 9 OF THE 2018 NCRC

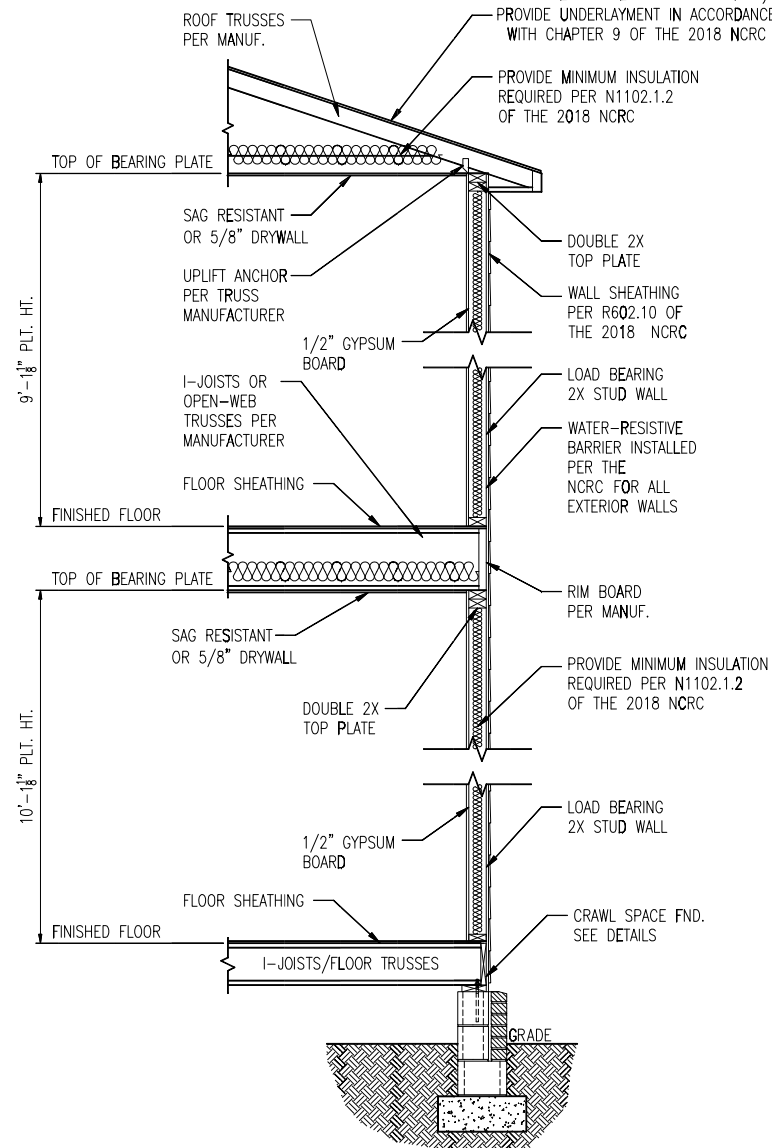
PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC



1 TYP. INTERIOR LOAD BEARING WALL SECTION  
D4c 3/4" = 1'-0"

MIN. 3/8" ROOF SHEATHING SECURED IN ACCORDANCE WITH FIGURE TABLE R602.3(1) (SEE NOTE G FOR ULTIMATE WIND SPEEDS GREATER THAN 120MPH). PROVIDE UNDERLAYMENT IN ACCORDANCE WITH CHAPTER 9 OF THE 2018 NCRC

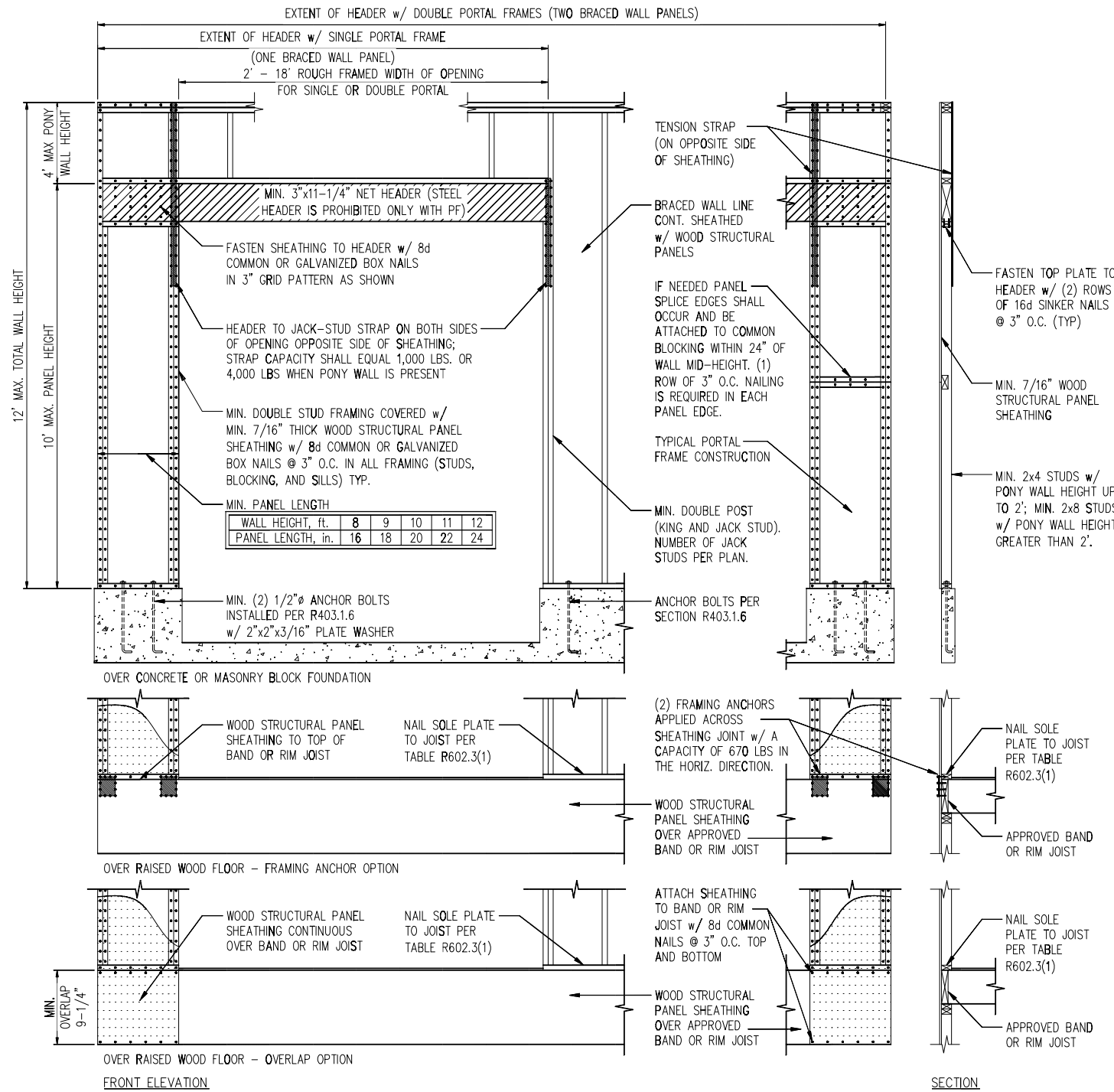
PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC



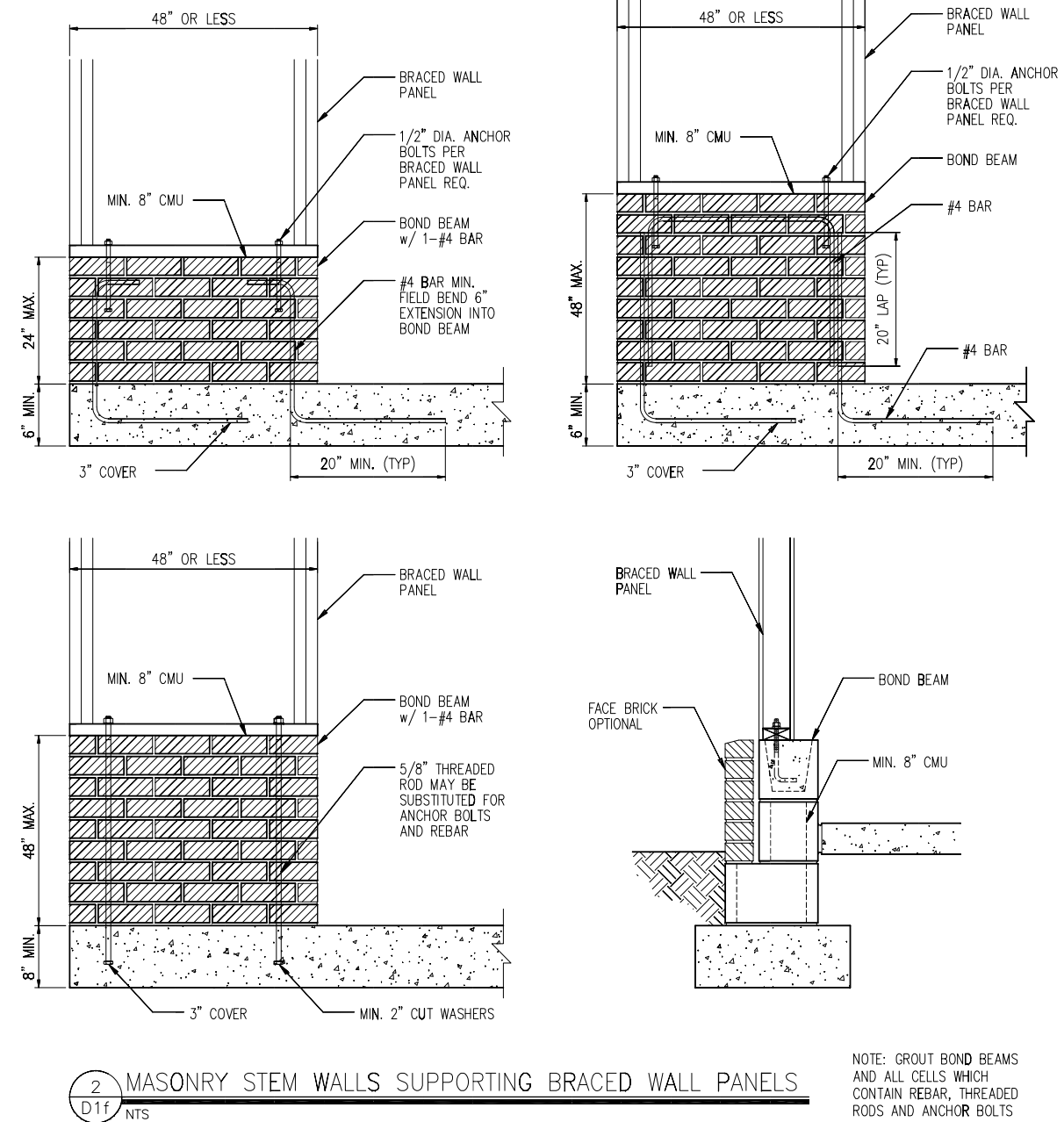
2 TYP. EXTERIOR LOAD BEARING WALL SECTION  
D4c 3/4" = 1'-0"  
-SIMILAR w/ BRICK AND STONE  
-BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.  
-MIN. 3/16" Ø WEEP HOLES @ 33" O.C.

NOTES:

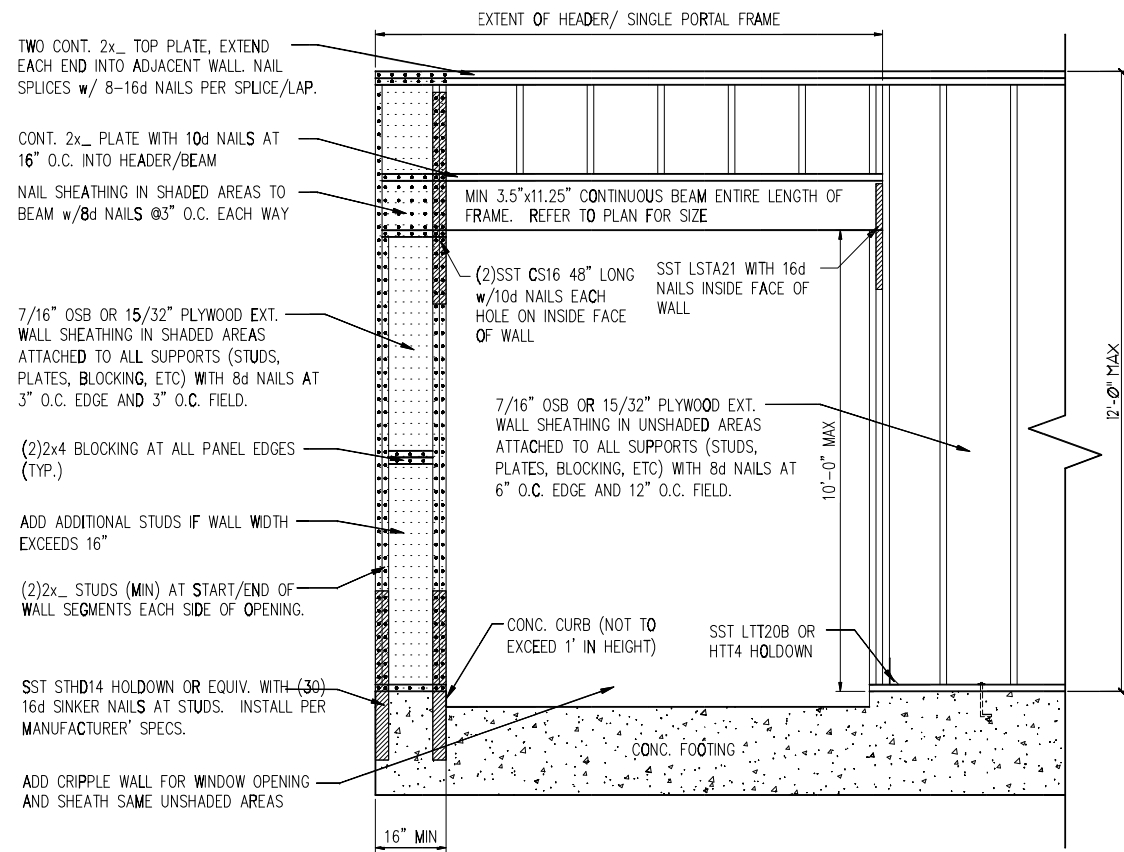
- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
- PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
- SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
- REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
- REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
- PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE 2018 NCRC



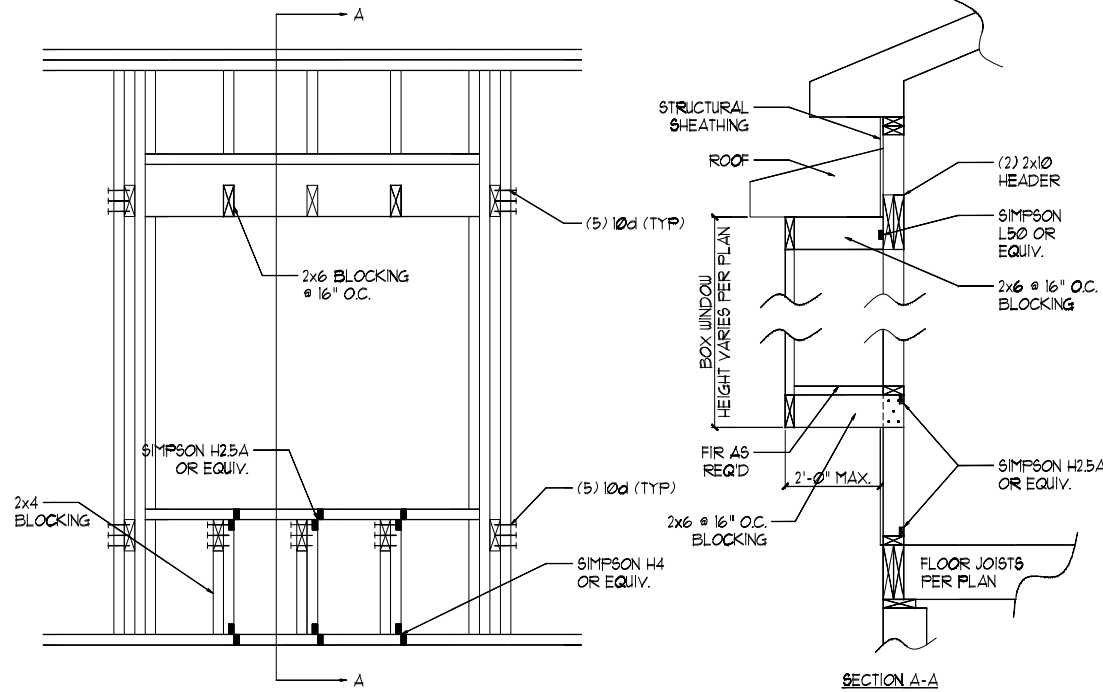
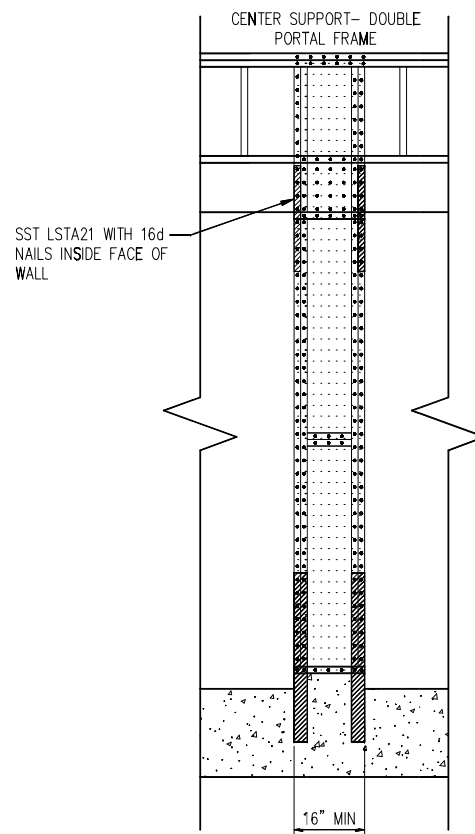
1 METHOD PF: PORTAL FRAME DETAIL  
D1f 3/8" = 1'-0"



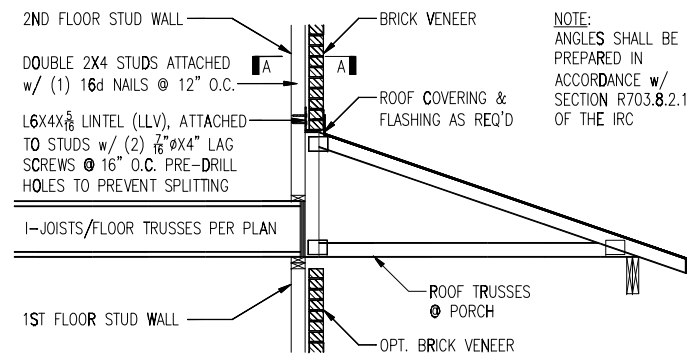




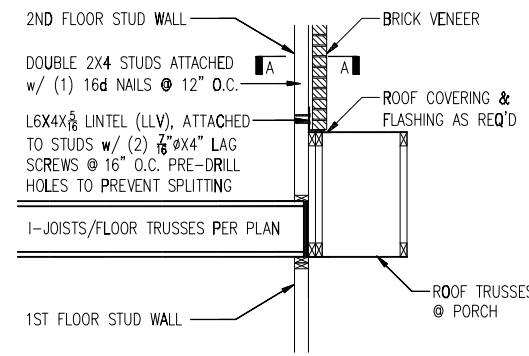
1 METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS  
D2f 3/4" = 1'-0"



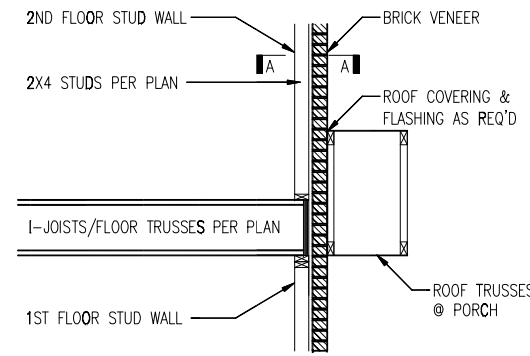
2 BOX WINDOW DETAIL  
D2f N.T.S.



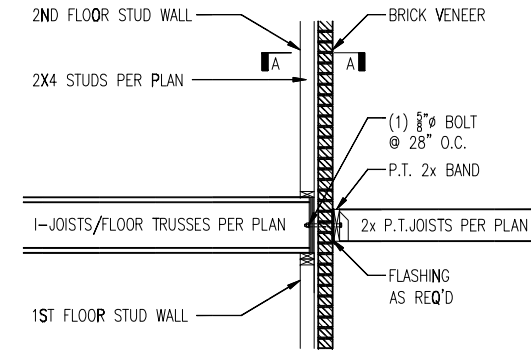
TRUSSES PERPENDICULAR TO STUD WALL



TRUSSES PARALLEL TO STUD WALL

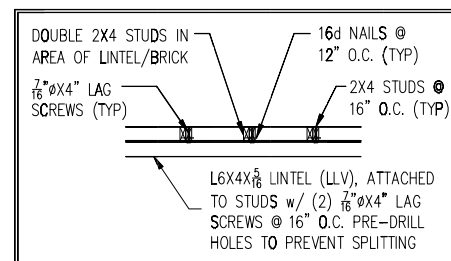


TRUSSES PARALLEL TO STUD WALL  
w/ CONTINUOUS BRICK VENEER



4 BALCONY JOIST ATTACHMENT  
D2f N.T.S.

3 BRICK SUPPORT ABOVE STORAGE/PORCH ROOF DETAIL  
D2f N.T.S.

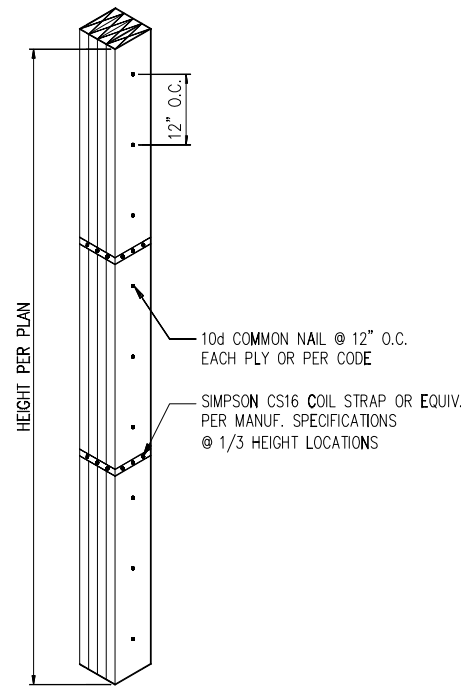


SECTION A-A  
N.T.S.

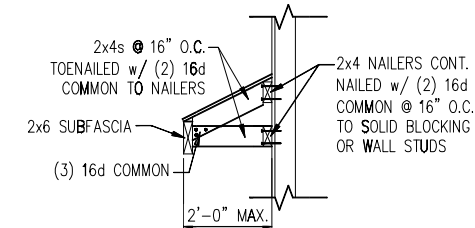
**MINIMUM FASTENING REQUIREMENTS FOR TOP- AND SIDE-LOADED MEMBERS**

FASTENER TYPE	LVL DEPTH	3 1/2" WIDE		5 1/4" WIDE		7" WIDE	
		2-Ply 1 1/4"	3-Ply 1 1/4"	1 3/4" + 3 1/2"	4-Ply 1 1/4"	2-Ply 1 1/4" + 3 1/2"	2-Ply 3 1/2"
10d (0.128" x 3") Nails	7/4" ≤ d < 14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. (ES)	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. (ES)	-
	d ≥ 14"	4 rows @ 12" o.c.	4 rows @ 12" o.c. (ES)	4 rows @ 12" o.c.	-	4 rows @ 12" o.c. (ES)	-
16d (0.162" x 3 1/2") Nails	7/4" ≤ d < 14"	2 rows @ 12" o.c.	2 rows @ 12" o.c. (ES)	2 rows @ 12" o.c.	-	2 rows @ 12" o.c. (ES)	-
	d ≥ 14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. (ES)	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. (ES)	-
1/2" Through Bolts	d ≥ 7 1/4"	2 rows @ 24" o.c.		2 rows @ 24" o.c.		2 rows @ 24" o.c.	
SDS 1/4" x 3 1/2", WS35, 3 3/4" TrussLok		2 rows @ 24" o.c.	1 row @ 24" o.c. (ES)	2 rows @ 24" o.c.	-	2 rows @ 24" o.c. (ES)	-
SDS 1/4" x 6", WS6		-	-	-	2 rows @ 24" o.c. (ES)		-
5" TrussLok		-	2 rows @ 24" o.c.		-	-	-
6 3/4" TrussLok		-	-	-	2 rows @ 24" o.c.		-

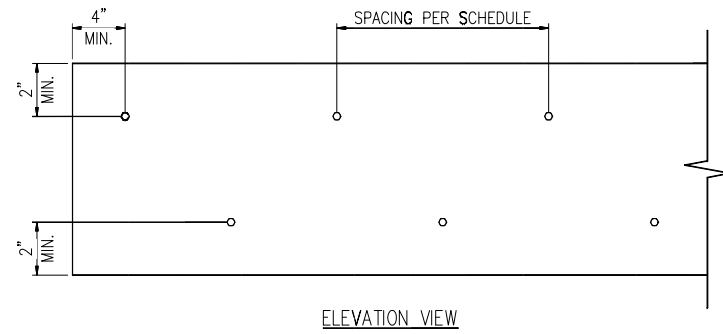
- NOTES:**
- All fasteners must meet the minimum requirements in the table above. Side-loaded multiple-ply members must meet the minimum fastening and side-loading capacity requirements given on page 48.
  - Minimum fastening requirements for depths less than 7/4" require special consideration. Please contact your technical representative.
  - Three general rules for staggering or offsetting for a certain fastener schedule:
    - If staggering or offsetting is not referenced, then none is required;
    - If staggering is referenced, then fasteners installed in adjacent rows on the front side are to be staggered up to one-half the o.c. spacing, but maintaining the fastener clearances above; and
    - If "ES" is referenced, then the fastener schedule must be repeated on each side, with the fasteners on the back side offset up to one-half the o.c. spacing of the front side (whether or not it is staggered).



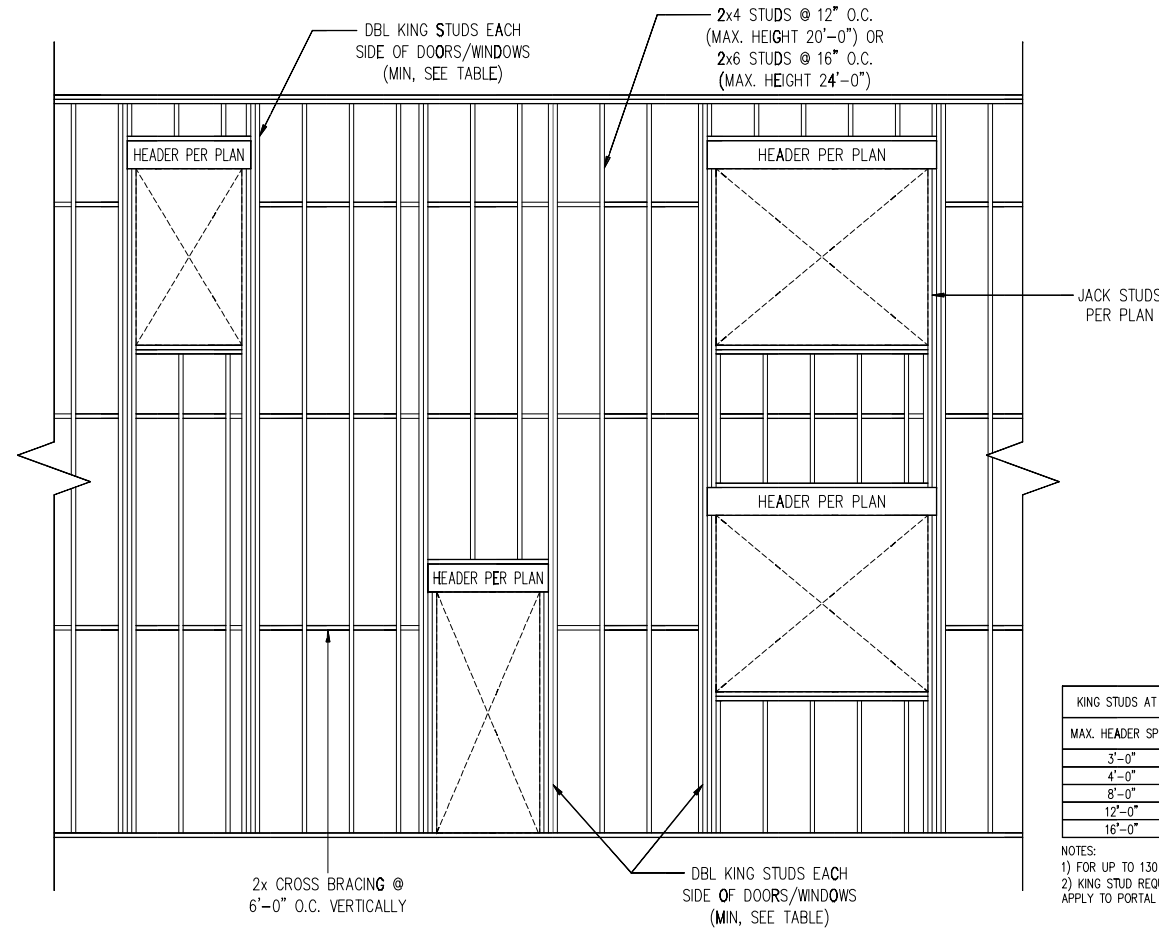
**2 MULTI-PLY STUD CONNECTION DETAIL**  
D3f N.T.S. 4+ PLYS



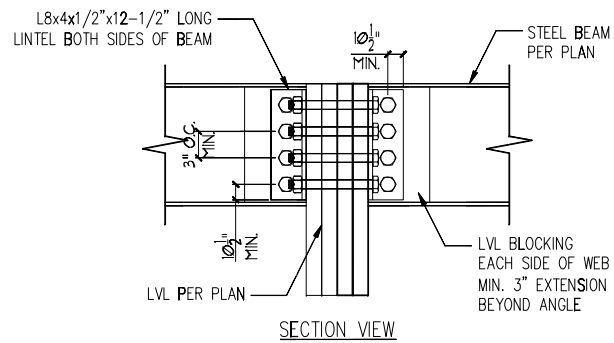
**5 GABLE ROOF RETURN**  
D3f N.T.S.



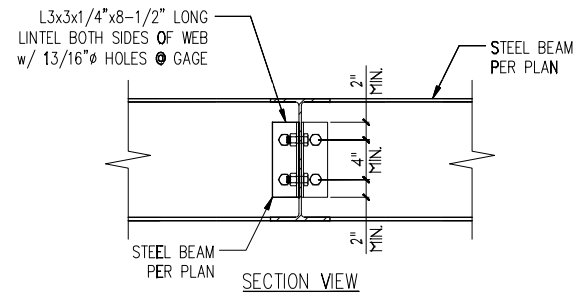
**1 MULTI-PLY BEAM CONNECTION DETAIL**  
D3f N.T.S.



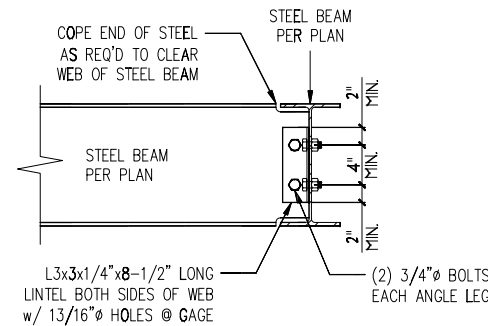
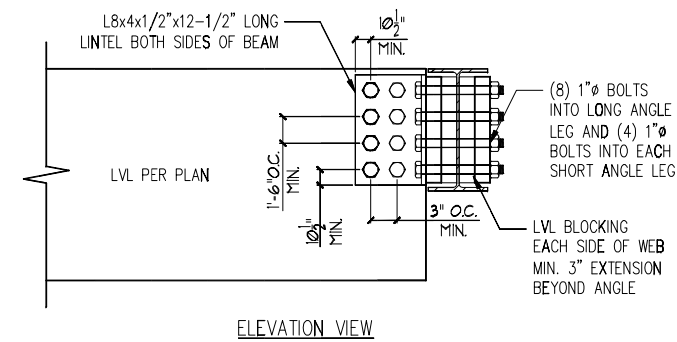
**6 TYP. BALLOON FRAMING DETAIL**  
D3f N.T.S.



**3 LVL TO STEEL DETAIL**  
D3f N.T.S.



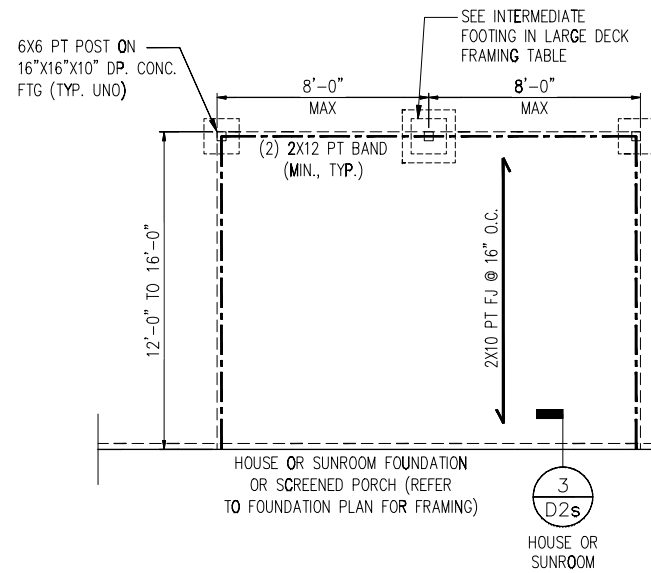
**4 STEEL TO STEEL DETAIL**  
D3f N.T.S.



KING STUDS AT EACH END OF HEADERS	
MAX. HEADER SPAN	STUDS (MIN.)
3'-0"	1
4'-0"	2
8'-0"	3
12'-0"	5
16'-0"	6

- NOTES:**
- FOR UP TO 130 MPH, EXPOSURE B
  - KING STUD REQUIREMENTS DO NOT APPLY TO PORTAL FRAMED OPENINGS

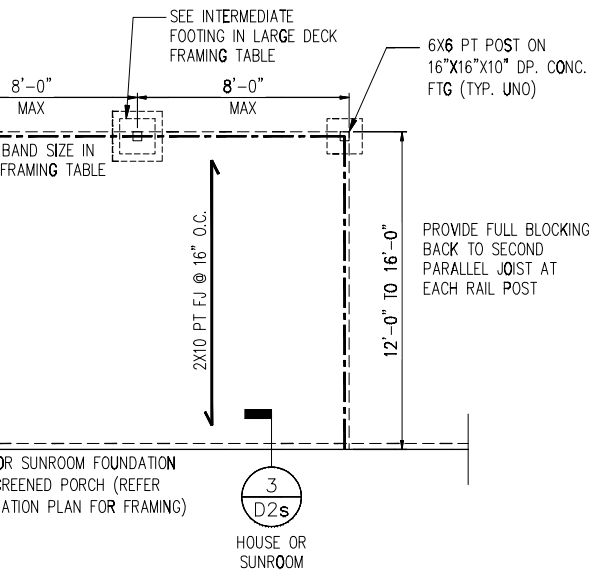
NOTE: BRACE POSTS PER CODE



PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

LARGE DECK FRAMING

	INTERMEDIATE FOOTING
STANDARD	16"x16"x10"
W/ 8'X8' GRILL DECK	24"x24"x10"



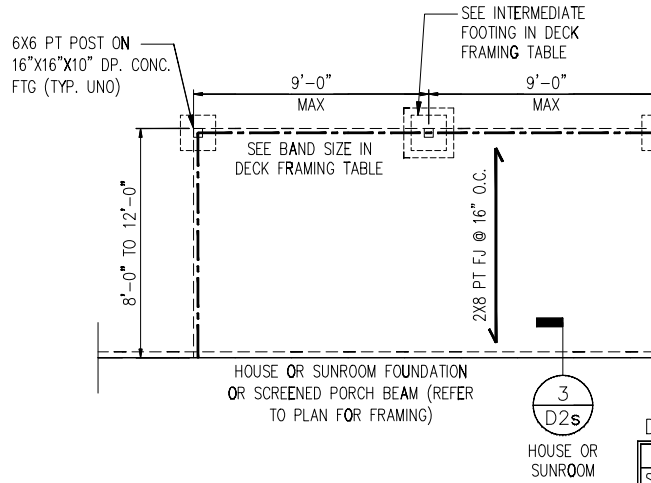
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. LARGE SIDE DECK PLAN

TYP. LARGE REAR DECK PLAN

N.T.S.

N.T.S.

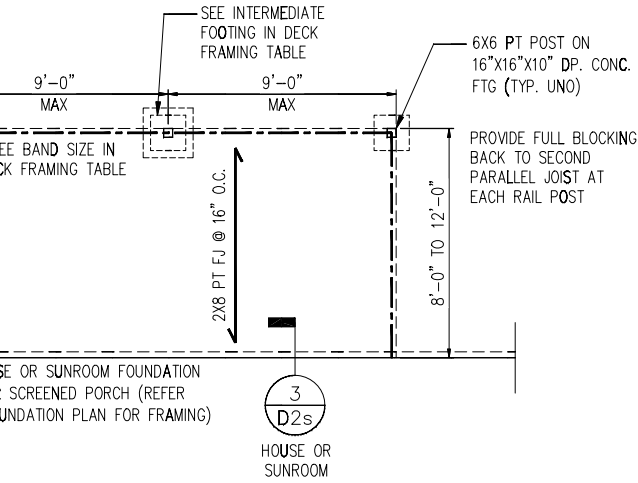


PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

DECK FRAMING

	BAND SIZE*	INTERMEDIATE FOOTING
STANDARD	(2) 2X10	16"x16"x10"
W/ 8'X8' GRILL DECK	(3) 2X10	24"x24"x10"

\* SOUTHERN PINE #2 PT LUMBER



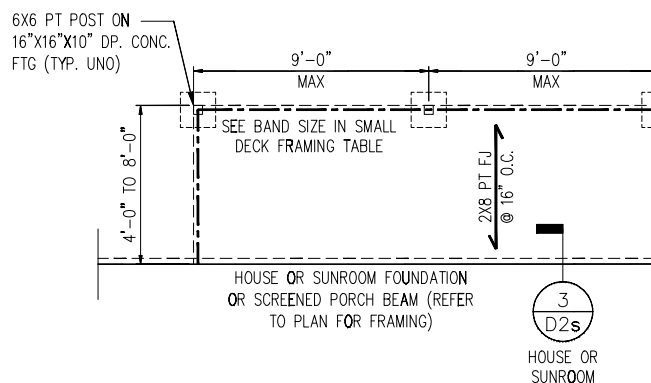
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. SIDE DECK PLAN

TYP. REAR DECK PLAN

N.T.S.

N.T.S.

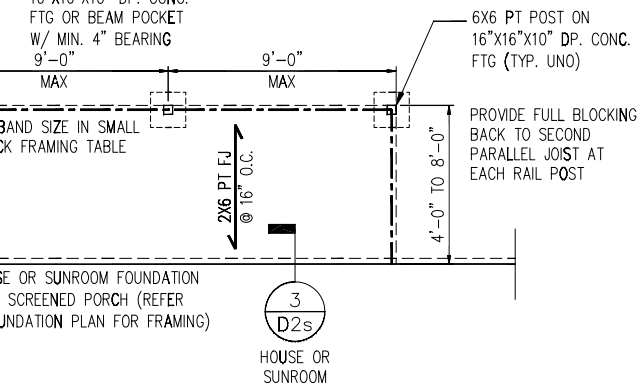


PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

SMALL DECK FRAMING

	BAND SIZE
STANDARD	(2) 2X10
W/ 8'X8' GRILL DECK	(3) 2X10

\* SOUTHERN PINE #2 PT LUMBER



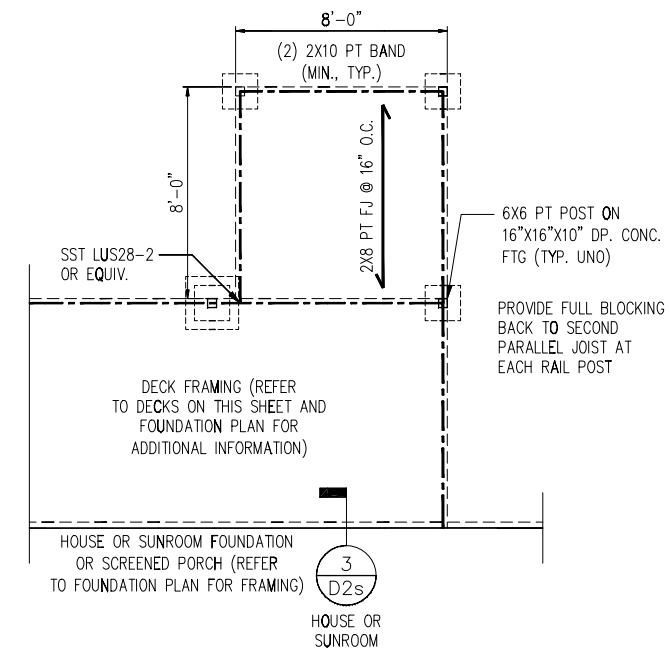
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. SMALL SIDE DECK PLAN

TYP. SMALL REAR DECK PLAN

N.T.S.

N.T.S.



PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

TYP. DECK PLAN W/ 8'X8' GRILL DECK

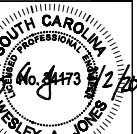
N.T.S.

NOTES:

1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
4. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, ATTACHMENT AND CONNECTIONS
5. REFER TO LOCAL AND STATEWIDE CODES FOR ADDITIONAL AMENDMENTS AND REQUIREMENTS NOT SHOWN
6. PERIMETER INSULATION SHOWN AS REQUIRED BY LOCAL CLIMATE ZONE. INSTALL PER TABLE N1102.1.2 OF THE IRC

CLIENT:  
 Drake-Horton, Caroling Division  
 2001 Arroyo Circle Blvd.  
 Charlotte, NC 28219

PROJECT:  
 Standard Details  
 Stem Wall Foundation Details



STRUCTURAL MEMBERS ONLY

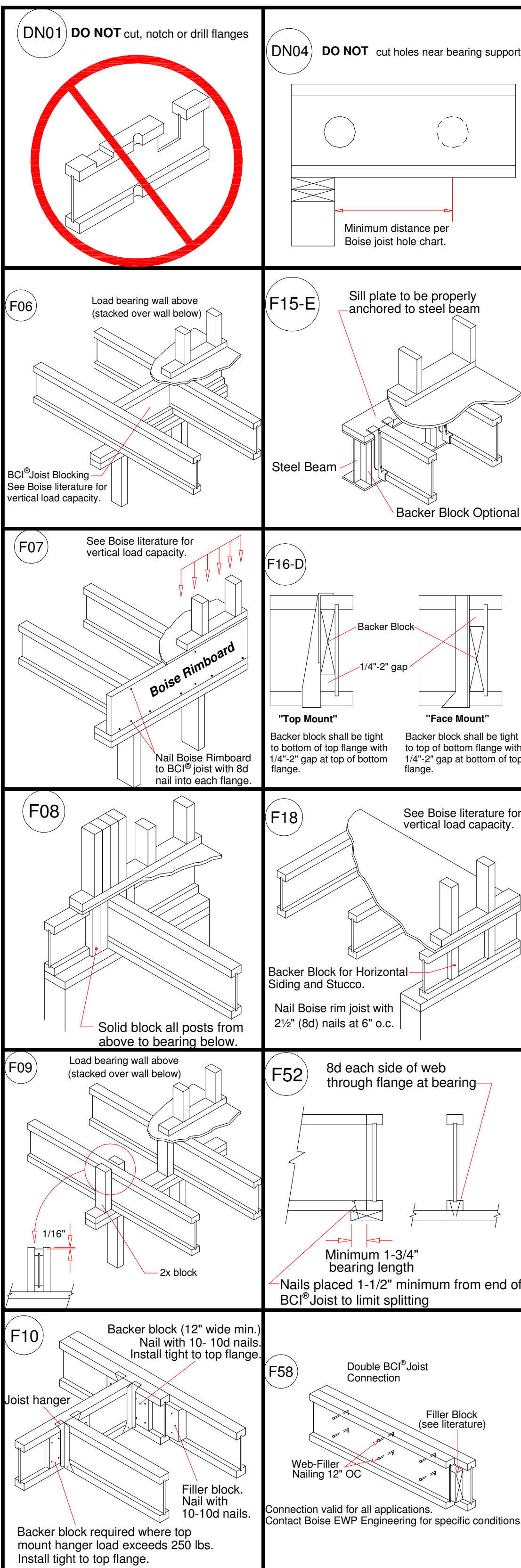
DRAWING  
 DATE: 10/20/09  
 SCALE: 1/8"=1'-0"  
 PROJECT: 1308-04R  
 DRAWN BY: LAG  
 CHECKED BY: WJL

ORIGINAL INFORMATION  
 PROJECT # DATE  
 130804 10/20/09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

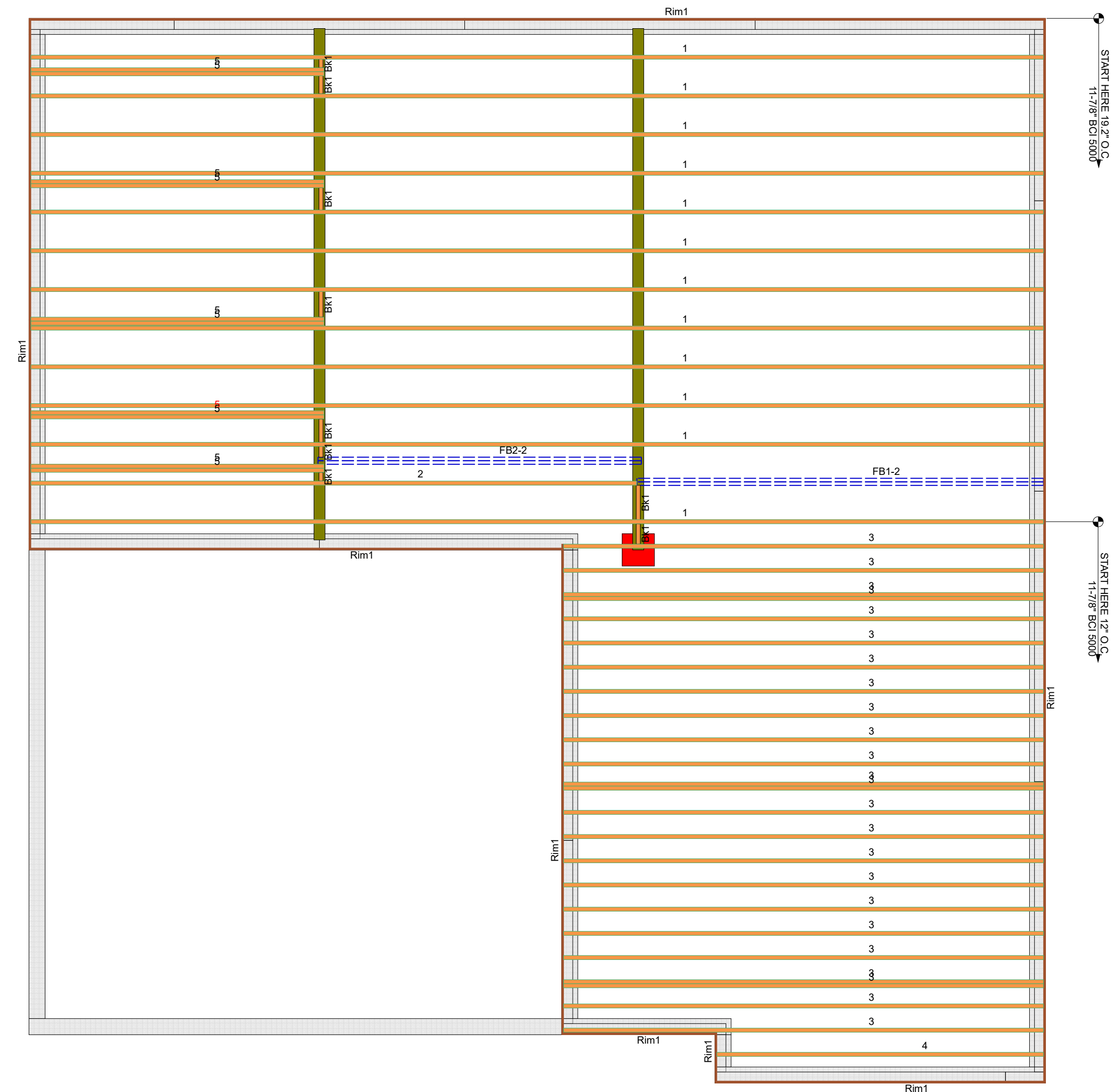






**GENERAL NOTES & DESIGN ASSUMPTIONS**

ALL DIMENSIONAL DROPPED GIRDERS NOT INCLUDED W EWP PACKAGE  
 ALL CEILING JOISTS ARE 2x8 SPF #2 SPACING PER IRC (UNO)  
 ALL RAFTERS ARE 2x8 SPF #2 SPACING PER IRC (UNO)  
 ALL LOAD HEADERS, NOT SHOWN ON LAYOUT, ARE (2)2x10 SYP #2 (UNO)  
 ALL 2x4, 2x6 & 2x8 ARE SPF #2 (UNO)  
 ALL 2x10 & 2x12 JOISTS ARE SYP #2 (UNO)  
 ALL RIDGES AND HIP RAFTERS ARE 2x10 or 2x12 (UNO)  
 ALL VALLEY RAFTERS ARE 2x12 (UNO)  
 #J = NUMBER OF 2x4 SPF #2 JACK STUDS REQUIRED (LVL POST PT#)



Joist & Rafter Area Loads	Live Load psf	Dead Load psf
Primary Living	40	10
Secondary & Attic Permanent Stairs	30	10
Ceiling - Limited Storage	20	10
Ceiling - No Storage	10	5
Roof - No Ceiling Load	20	10
Flat Roof or Cathedral w/Drywall Ceiling	20	15

**Builders FirstSource**  
 www.bldr.com

**Boise Cascade**  
 7601 BOEING DRIVE  
 GREENSBORO, NC 27409  
 V (336) 884-5454

4575 HAMPTON ROAD  
 CLEMMONS, NC 27409  
 V (336) 712-9910

1135 ROBESON STREET  
 FAYETTEVILLE, NC 28305  
 V (910) 485-1111

3189 NC HIGHWAY 5  
 ABERDEEN NC 28315  
 V (910) 944-2516

This layout and associated materials list has been prepared based on project plans and/or information provided to Builders FirstSource (BFS). It remains the responsibility of the builder, architect, designer, or other responsible persons to review this information to assure that it is appropriate, accurate, complete and complies with applicable building codes.

PlotID	Length	Product	Plies	Net Qty
1	42-00-00	11-7/8" BCI@ 5000s-1.8	1	12
2	26-00-00	11-7/8" BCI@ 5000s-1.8	1	1
3	20-00-00	11-7/8" BCI@ 5000s-1.8	1	24
4	14-00-00	11-7/8" BCI@ 5000s-1.8	1	1
5	13-00-00	11-7/8" BCI@ 5000s-1.8	1	10
FB1-2	18-00-00	1-3/4" x 11-7/8" VERSA-LAM@ LVL 2.1E 3100 SP	2	2
FB2-2	14-00-00	1-3/4" x 11-7/8" VERSA-LAM@ LVL 2.1E 3100 SP	2	2
Rim1	12-00-00	1" x 11-7/8" BC RIM BOARD OSB	1	15
Bk1	2-00-00	11-7/8" BCI@ 5000s-1.8	1	4

- GENERAL NOTES:**
- 1.) READ THE INSTALLATION GUIDE BEFORE FRAMING.
  - 2.) ALL WALLS SHOWN ARE LOAD BEARING UNLESS NOTED OTHERWISE. WALLS NOT SHOWN ARE CONSIDERED NON-LOAD BEARING.
  - 3.) UNLESS STATED OTHERWISE ALL CEILING & ROOF LOADS BRACE DIRECTLY TO LOAD BEARING WALLS SUPPORTED BY FOUNDATION.
  - 4.) CONTACT BUILDERS FIRSTSOURCE BEFORE MAKING ANY ALTERATIONS OR ADJUSTMENTS...FAILURE TO DO SO MAY RESULT IN COSTLY REPAIRS.

**DR HORTON**

**COLUMBIA MASTER CRAWL LH**

FIRST FLOOR EWP PLACEMENT PLAN

Builders FirstSource, Central Carolina Markets

DRAWN BY: ZTU DATE: 9/14/2023

SCALE: 1/4" = 1' JOB NUMBER:

MINIMUM DESIGN DATA

LIVE LOAD 40 PSF  
 DEAD LOAD 10 PSF

TOTAL LOAD 50 PSF

DOL = 100%

DEFLECTION CRITERIA L/480 (MINIMUM)

ARCHITECTURAL PLAN DATE **XX-XX-XX**

REVISED ARCH. PLAN DATE **XX-XX-XX**

**XXXXXXXX**

Sheet  
 1 of 1

**General Notes:**

- Per ANSI/TPI 1-2002 all " Truss to Wall" connections are the responsibility of the Building Designer, not the Truss Manufacturer.
- Dimensions are Feet-Inches- Sixteenths.
- Trusses are to be 24" o.c. unless noted otherwise (U.N.O.)
- Trusses are not designed to support brick U.N.O.
- Do not cut or modify trusses without first contacting Builders FirstSource.
- Immediately contact Builders FirstSource if trusses are damaged.

**Connection Notes:**

- All hangers are to be Simpson or equivalent U.N.O.
- Use Manufacturer's specifications for all hanger connections U.N.O.
- Use 10d x 1 1/2" Nails in hanger connections to single ply roof girder trusses.

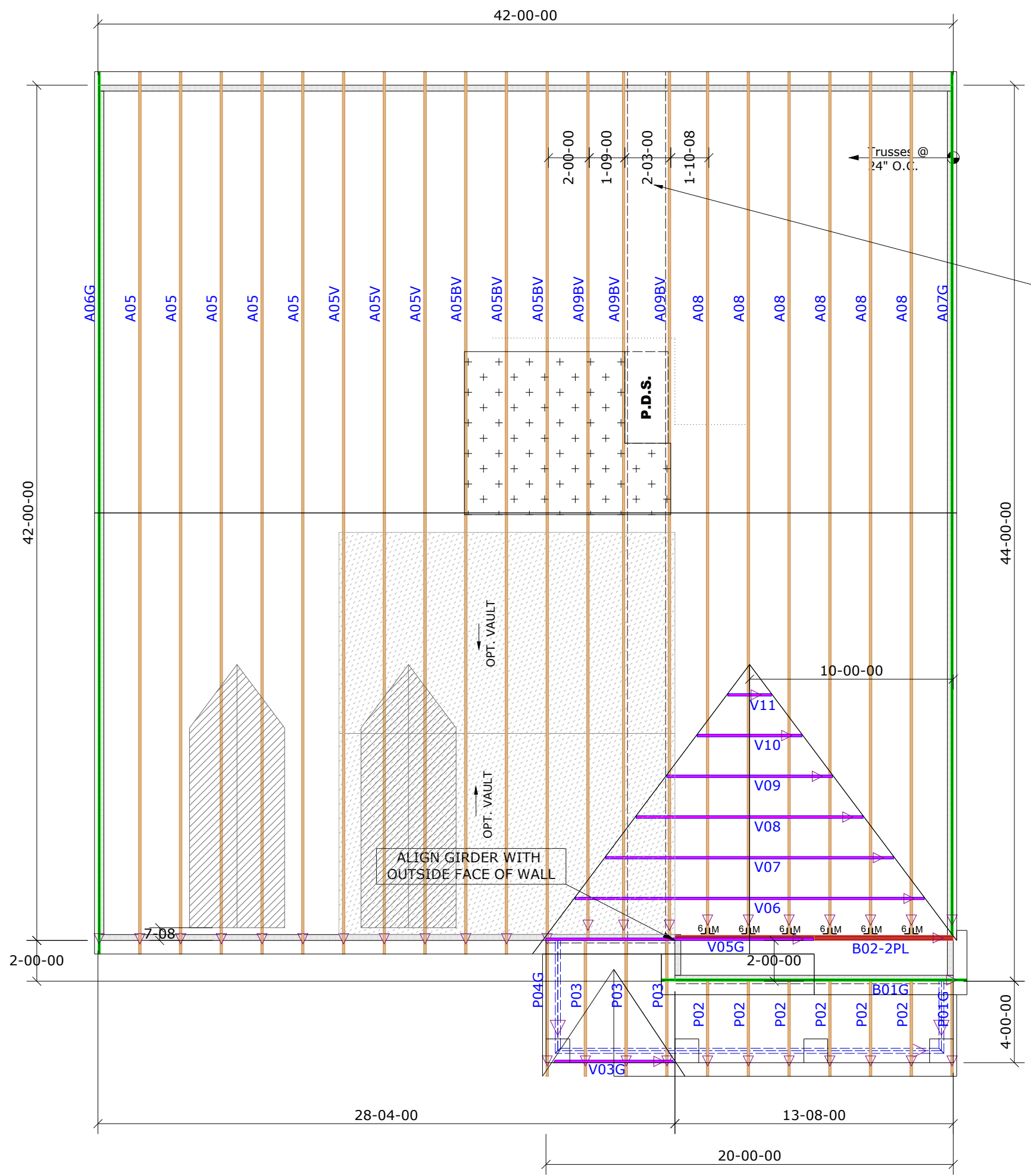
**Floor notes:**

- Shift truss as required to avoid plumbing traps.
- Installation Contractor and/or Field Supervisor are to verify all dimensions, trap locations, and options prior to installation

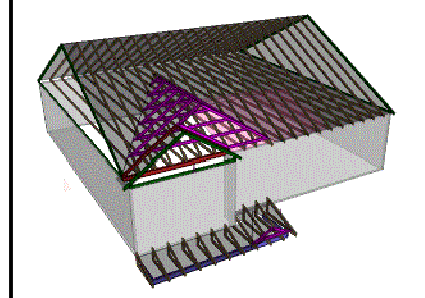
**Dimension Notes:**

- Drawing not to scale. Do not scale dimensions

**SPACE TRUSSES 2' O.C. UNLESS A WIDE P.D.S. IS GOING TO BE INSTALLED. IF WIDE P.D.S. IS USED, FOLLOW SPECIAL TRUSS SPACING AS NOTED ON LAYOUT, & ATTACH 2X4 LEDGERS TO TOP & BOTTOM CHORDS W/ 12d NAILS @ 16" O.C.**



△ ◁ ▷ LEFT END OF TRUSS AS SHOWN ON TRUSS DETAIL DRAWINGS ARE INDICATED BY TRIANGLE ICONS.



HANGER LIST		ALL TIE DOWNS H2.5A UNLESS NOTED	
6	HTU26	M	6
SPECIAL ITEMS LIST			
MISC MATERIAL			
DR HORTON			
COLUMBIA	ELEV:	B	
MCKAY PLACE			
---	NC	LOT:	1
APPWRIGHT #			
---			
• OPTIONAL VAULT @ OWNER'S BEDROOM		CODE:	IRC 2015
		LOADING:	
		T.C.L.L.	20 PSF
DESIGNED BY:	AS	T.C.D.L.	10 PSF
LAYOUT:	BV	B.C.L.L.	0 PSF
L/O DATE:	5/23/2024	B.C.D.L.	10 PSF
REVISION HISTORY		WIND:	
REV1:	XX/XX/XX	M.P.H.	120 MPH
REV2:	XX/XX/XX	EXPOSURE CATEGORY	
REV3:	XX/XX/XX	B (WOODED AREAS/OTHERS)	
PICK TICKET:	---	JOB NO:	PTE13
SALES NO:	---	ACCT NO:	---

HATCH LEGEND	
	ATTIC ROOM
	VOLUME CEILING
	STICK FRAMING