

COLUMBIA -A, B, C

PLAN ID: 3142 - RIGHT 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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3C	ARCHITECTURALS - FLOOR PLANS C
4	ELECTRICAL - FLOOR PLANS

REVIEWERS STAMP LOCATION



MODEL 'COLUMBIA' SQUARE FOOTAGES		
AREA	ELEV 'B'	
1st FLOOR	1350 SF	
2nd FLOOR	1758 SF	
TOTAL LIVING	3108 SF	
GARAGE	441 SF	
PORCH	93 SF	

Mason Ridge
Lot 9
172 Fair Child Road
Spring Lake, NC 28390

COVERSHEET	'COLUMBIA'
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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"X17" LAYOUT



Front Elevation 'C'

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



Front Elevation 'B'

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

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

THE NET FREE VENTILATING AREA SHALL NOT BE LESS THAN 1/50 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 150 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 NRC SECTION R302.2)

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_i = 1791 SF

1791 SQ. FT. X 144 = 257904 SQ. IN.
257904 SQ. IN. / 150 = 1719.36 SQ. IN. OF VENT REQ'D
1719.36 SQ. IN. / 2 = 859.68 SQ. IN.

ROOF AREA 2_i = 43 SF

43 SQ. FT. X 144 = 6192 SQ. IN.
6192 SQ. IN. / 150 = 41.28 SQ. IN. OF VENT REQ'D
41.28 SQ. IN. / 2 = 20.64 SQ. IN.

44.64 SQ. IN. OF VENT AT HIGH & 44.64 SQ. IN. OF VENT AT LOW REQUIRED.

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

AS AN ALTERNATE TO THE 1/50 RATIO LISTED ABOVE, THE NET FREE CROSS-VENTILATION AREA MAY BE REDUCED TO 1/300 WHEN A CLASS II OR II VAPOR RETARDER IS INSTALLED ON THE WARM - IN - WINTER SIDE OF THE CEILING.

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 NRC SECTION R302.2)

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_i = 1791 SF

1791 SQ. FT. X 144 = 257904 SQ. IN.
257904 SQ. IN. / 300 = 859.68 SQ. IN. OF VENT REQ'D
859.68 SQ. IN. / 2 = 429.84 SQ. IN.

ROOF AREA 2_i = 43 SF

43 SQ. FT. X 144 = 6192 SQ. IN.
6192 SQ. IN. / 300 = 20.64 SQ. IN. OF VENT REQ'D
20.64 SQ. IN. / 2 = 10.32 SQ. IN.

22.32 SQ. IN. OF VENT AT HIGH & 22.32 SQ. IN. OF VENT AT LOW REQUIRED.

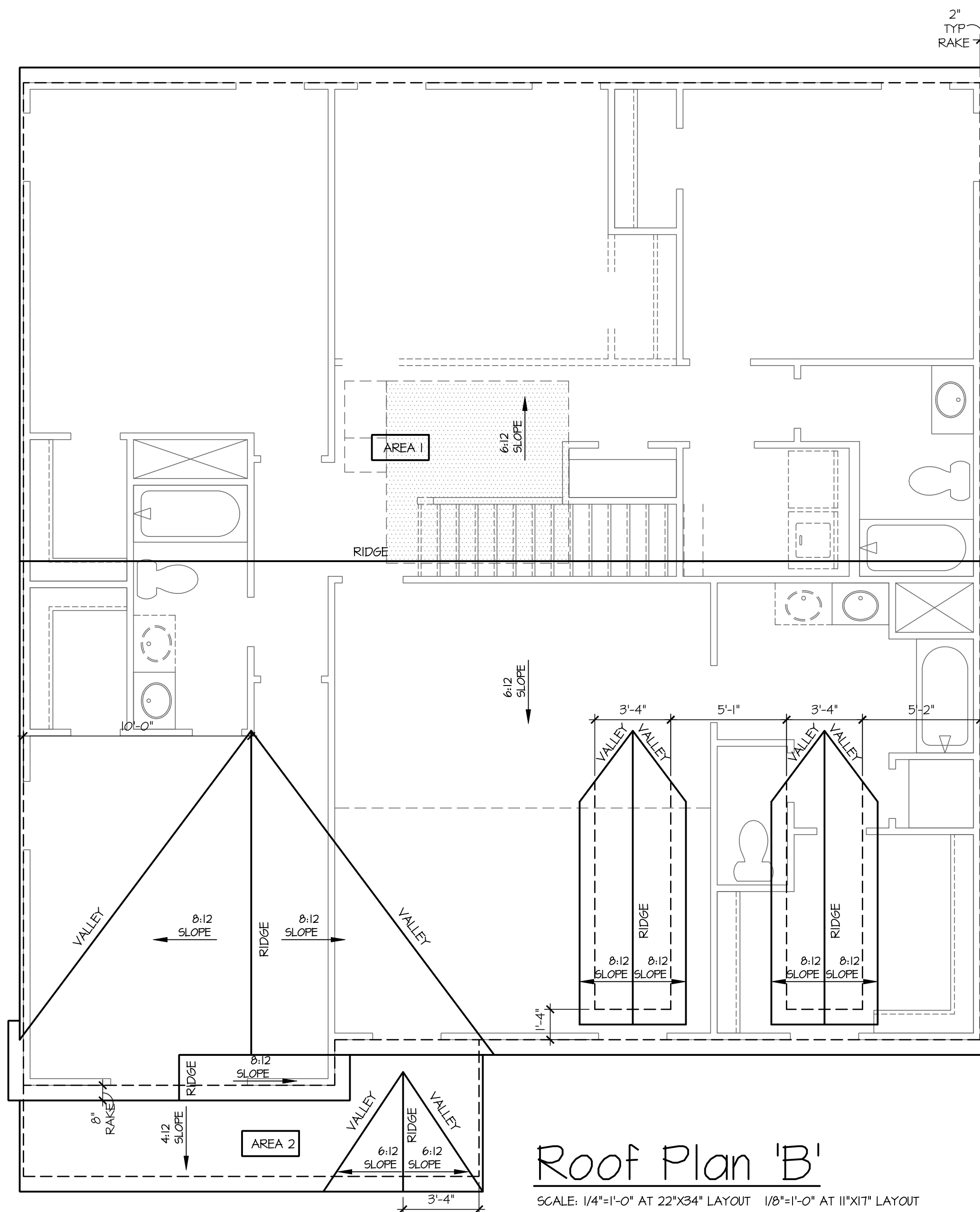
AT SINGLE FAMILY DETACHED PLANS:
PREFINISHED VENTED
SOFFIT AT EAVE PER MANUFACTURER.
(VERIFY FIRE SEPARATION DISTANCE FOR
SOFFIT PROTECTION PER NRC
SECTION R302.1.1 AND TABLE R302.1)

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"



Roof Plan 'B'

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



Left Elevation 'B'

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



Rear Elevation 'B'

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



Right Elevation 'B'

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

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 NRC R312.1.
(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-30 BATTS MINIMUM. VERIFY
FLOOR OVER GARAGE: R-19 BATTS MINIMUM. VERIFY
ATTIC KNEEWALL: R-19 BATTS MINIMUM. VERIFY
CRNL. SPACE FLOORING: R-19 BATTS MINIMUM. VERIFY

KEY NOTES:

MASONRY:

- 1] ADHERED STONE VENEER AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
- 2] MASONRY FULL BRICK AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
- 3] MASONRY FULL STONE AS SELECTED BY DEVELOPER. HEIGHT AS NOTED.
- 4] 8" SOLDIER COURSE.
- 5] ROWLOCK COURSE.
- 6] DECORATIVE KEY. SEE DETAIL.

TYPICALS:

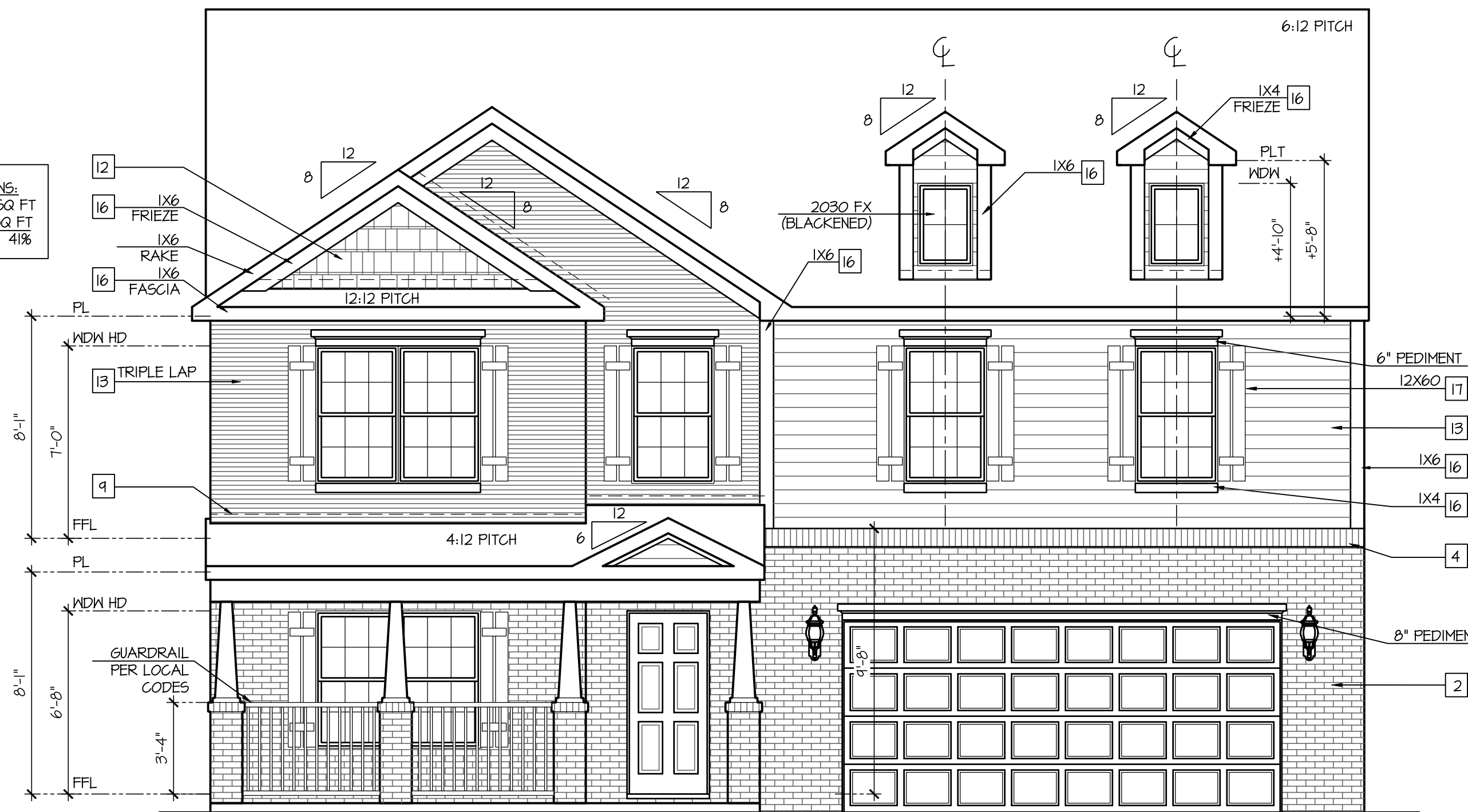
- 7] CORROSION RESISTANT SCREEN LOUVERED VENTS, SIZE AS NOTED.
- 8] CODE APPROVED TERMINATION CHIMNEY CAP.
- 9] CORROSION RESISTANT ROOF TO WALL FLASHING. CODE COMPLIANT FLASHING PER NRC R405.2.8.3
- 10] STANDING SEAM METAL ROOF, INSTALL PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 11] DECORATIVE WROUGHT IRON. SEE DETAILS.

SIDING:

- 12] FIBER CEMENT SHAKE SIDING PER DEVELOPER
- 13] W/ 5/4X4 CORNER TRIM BOARDS.
- 14] FIBER CEMENT LAP SIDING PER DEVELOPER
- 15] W/ 5/4X4 CORNER TRIM BOARDS.
- 16] FIBER CEMENT WAVY SIDING PER DEVELOPER
- 17] W/ 5/4X4 CORNER TRIM BOARDS.
- 18] FIBER CEMENT PANEL SIDING W/ 1X3 BATTS AT 12" O.C. (VINYL BOARD AND BATT SIDING)
- 19] 1X FIBER CEMENT TRIM OR EQUAL, UNO. SIZE AS NOTED
- 20] FALSE WOOD 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 NRC SECTION R312.2.1 AND R312.2.2.

VEENER CALCULATIONS:
HARDBOARD = 304 SQ FT
MASONRY = 211 SQ FT
MASONRY % = 41%



Front Elevation 'B'

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

ELEVATIONS

'COLUMBIA'

PLAN REV DATE

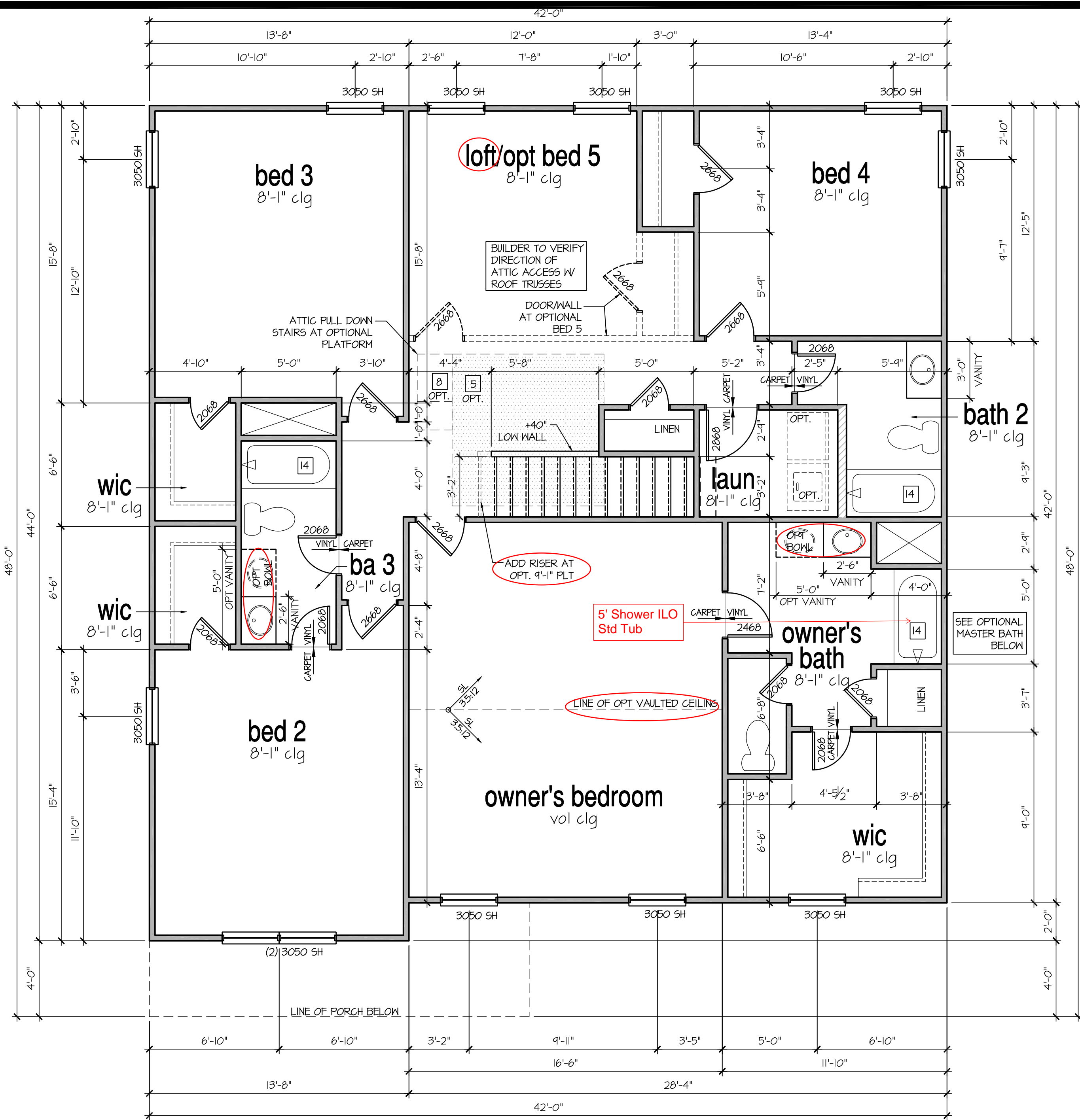
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SHEET NUMBER

1B

D.R.HORTON
America's Builder
8525 Arrowood Blvd., Charlotte, NC 28273 704.377.2005



2nd Floor Plan 'B'

SCALE: 1/4"=1'-0" AT 22"x34" LAYOUT 1/8"=1'-0" AT 11"x17" LAYOUT

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.

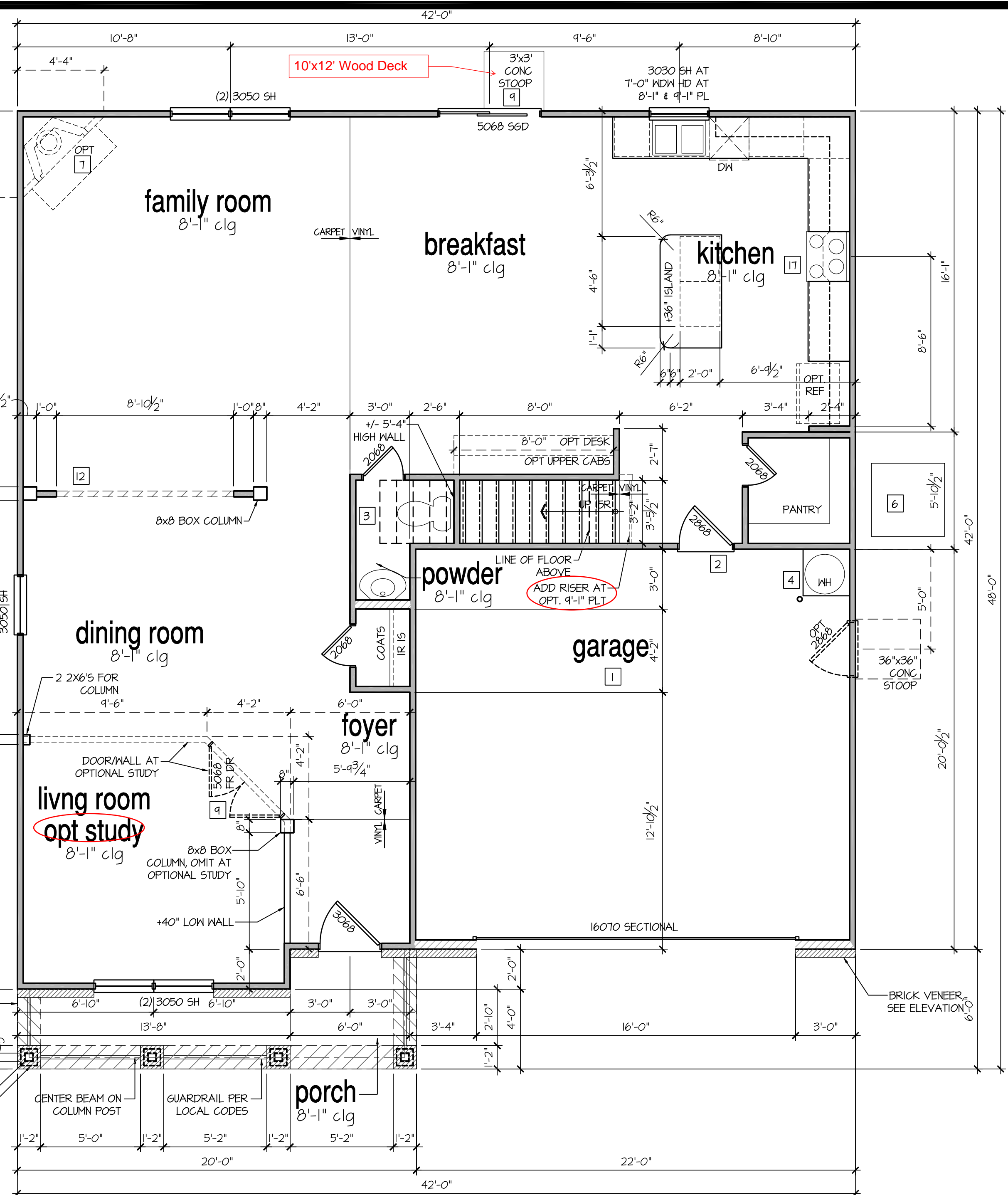
ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO CENTERLINE.

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 NCRG TABLE R302.6.)
 - HOUSE TO GARAGE DOOR SEPARATION, PROVIDE 1-3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR. (PER NCRG SECTION R302.5.1)
 - BENEATH STAIRS AND LANDINGS, 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS. (PER NCRG SECTION R302.7.) IN CONCEALED SPACES BETWEEN STAIR STRINGERS PROVIDE FIREBLOCKING PER R302.11
 - GAS WATER HEATER ON 18" HIGH PLATFORM. (PER CHAPTER 5 NCRG-PLUMBING)
- TYPICALS:
- TEMPERED SAFETY GLASS. (PER NCRG SECTION 308.4)
 - PLYWOOD SHELF ABOVE WITH DRYWALL FINISH OVER. HEIGHT AS NOTED.
 - HALF WALL, HEIGHT AS NOTED.
- 12 INTERIOR SOFFITS: FFL = 8'-1" U.N.O. SFL = 7'-6" U.N.O. BATHS:
- 13 SHOWER, TEMPERED GLASS ENCLOSURE.
- 14 TUB-SHOWER COMBO, TEMPERED GLASS ENCLOSURE.
- 15 CERAMIC TILE SHOWER AND FLOOR, TEMPERED GLASS ENCLOSURE.
- 16 ACRYLIC TUB W/ CERAMIC PLATFORM KITCHEN:
- 17 30" SLIDE-IN ELECTRICAL RANGE W/ HOOD AND MICRO ADV. VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 18 30" GAS COOKTOP AND HOOD, VENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
- 19 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

8'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
14 TREADS AT 10" EACH VERIFY
15 RISERS AT +/- 7.45" = 113 3/4" TOTAL
RISE VERIFY

9'-1" STAIR NOTE:
(USE 14" TJI WITH 3/4" PLYWOOD SUBFLOOR)
16 TREADS AT 10" EACH VERIFY
17 RISERS AT +/- 7.27" = 123 3/4" TOTAL
RISE VERIFY

D.R. HORTON
America's Builder
8525 Arrowhead Blvd., Charlotte, NC 28273 704.377.2006

FLOOR PLANS

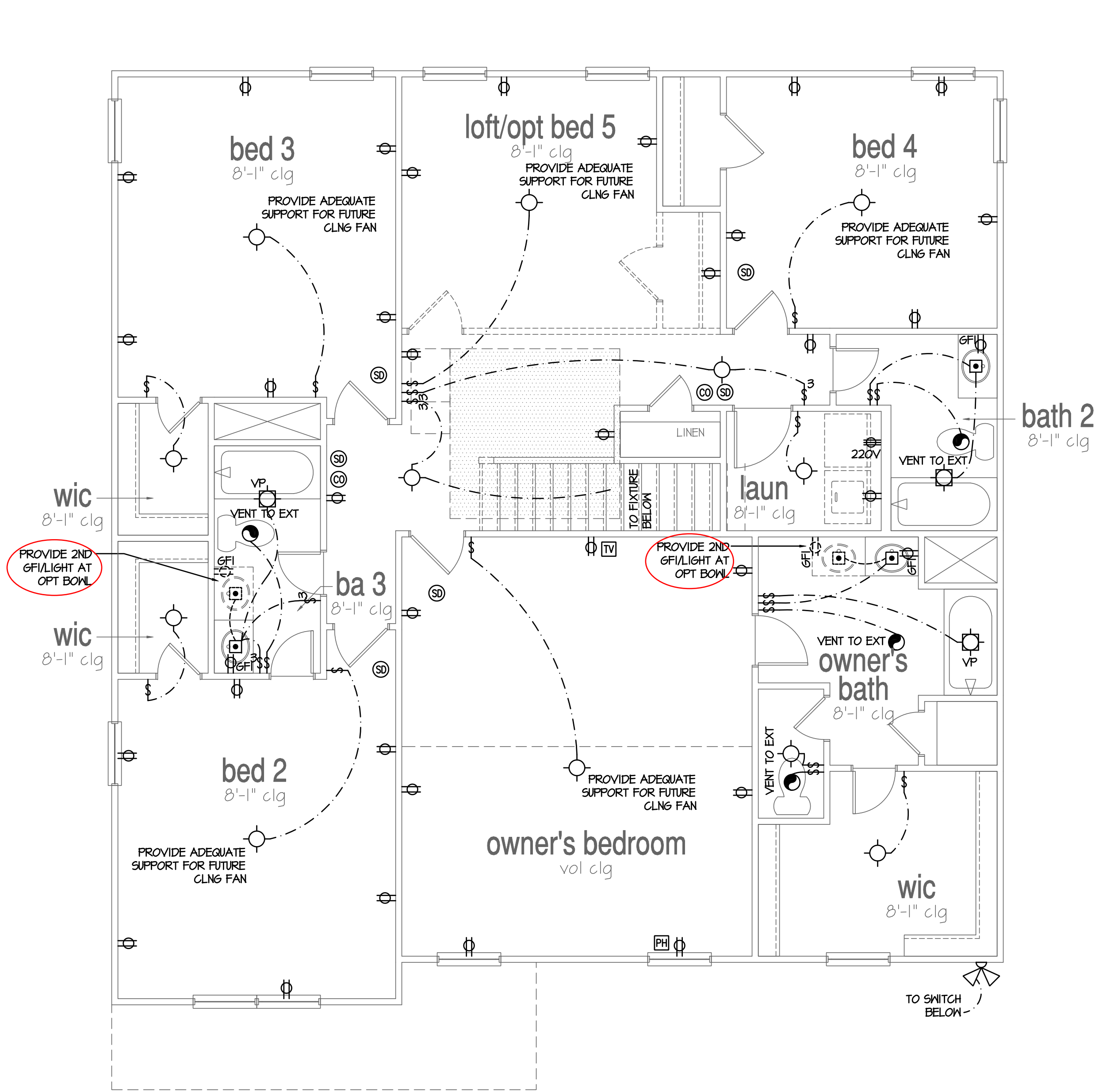
'COLUMBIA'

PLAN REV DATE

06.06.23

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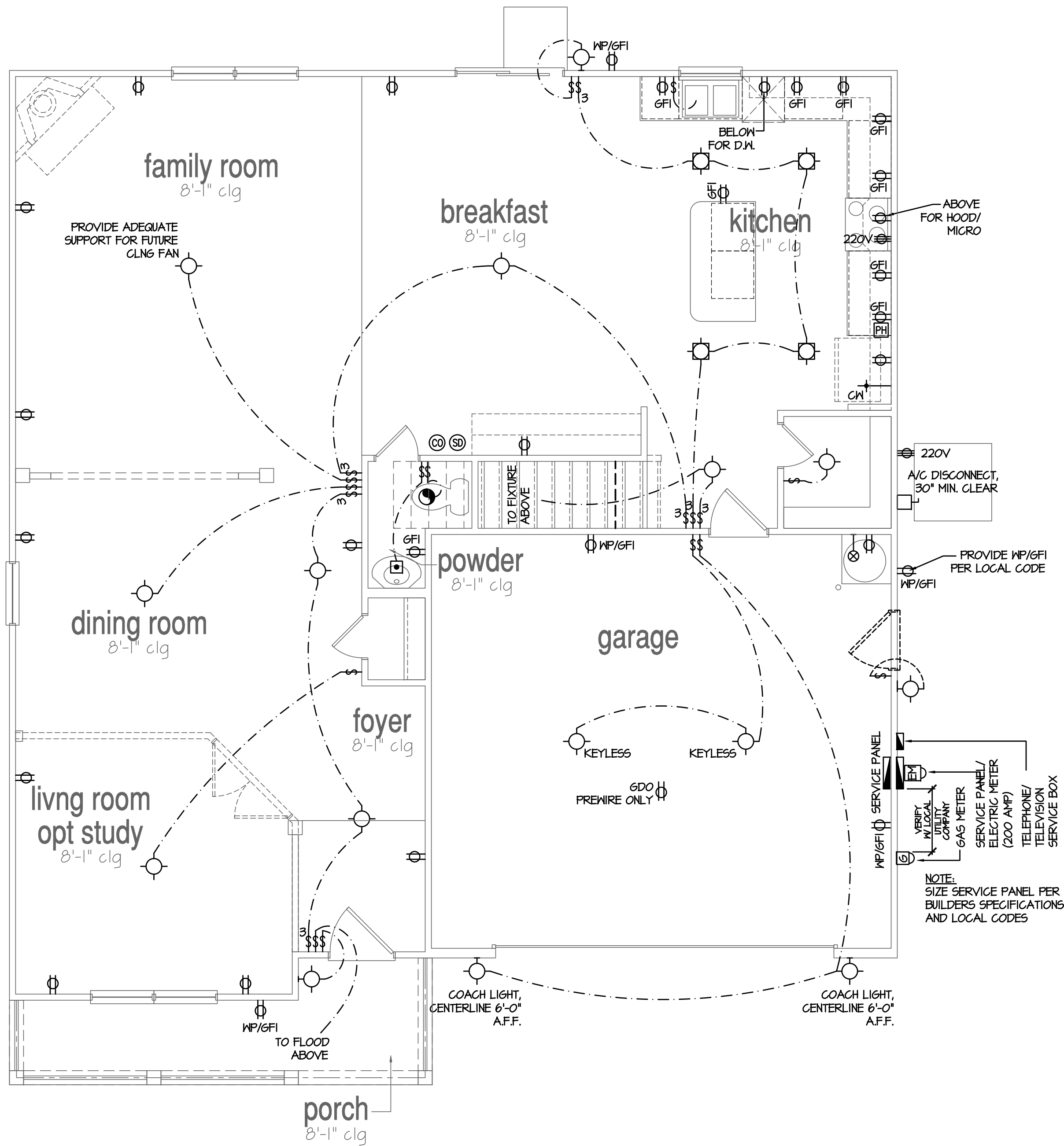
3B



2nd Floor Plan 'A'

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

ALL ELEVATIONS ARE SIMILAR



1st Floor Plan 'A'

SCALE: 1/4"=1'-0" AT 22"X34" LAYOUT 1/8"=1'-0" AT 11"X17" 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.
- FAN/LIGHTS 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	CEILING FAN (PROVIDE ADEQUATE SUPPORT)
WEATHERPROOF GFI DUPLEX OUTLET	HANGING FIXTURE	PUSHBUTTON SWITCH	
GFI 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	GAS SUPPLY WITH VALVE
REINFORCED JUNCTION BOX	4-LIGHT VANITY FIXTURE	TELEPHONE	HOSE BIBB
WALL SWITCH	WALL MOUNT FIXTURE	TELEVISION	
THREE-WAY SWITCH	EXHAUST FAN (VENT TO EXTERIOR)	ELECTRIC METER	WALL SCONCE
FOUR-WAY SWITCH		ELECTRIC PANEL	
		DISCONNECT SWITCH	

Construction Type: Commerical ☐ Residential ☒

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

1.	Roof Live Loads	
11.	Conventional 2x	20 PSF
12.	Truss	20 PSF
	121. Attic Truss	60 PSF
2.	Roof Dead Loads	
21.	Conventional 2x	10 PSF
22.	Truss	20 PSF
3.	Snow	15 PSF
31.	Importance Factor	10
4.	Floor Live Loads	
41.	Typ. Dwelling	40 PSF
42.	Sleeping Areas	30 PSF
43.	Decks	40 PSF
44.	Passenger Garage	50 PSF
5.	Floor Dead Loads	
51.	Conventional 2x	10 PSF
52.	I-Joist	15 PSF
53.	Floor Truss	15 PSF
6.	Ultimate Design Wind Speed (3 sec. gust)	130 MPH
61.	Exposure	B
62.	Importance Factor.....	10
63.	Wind Base Shear	

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	19.2-20.2	19.9-20.7	20.4-21.3
ZONE 5	18.2-24.0	19.2-25.0	19.9-26.1	20.4-26.9

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. S_{ms} = %g

8.5.2. S_{ml} = %g

8.6. Seismic Base Shear

8.6.1. V_x =

8.6.2. V_y =

8.7. 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

8.8. ArchMech Components Anchored No

8.9. Lateral Design Control: Seismic ☐ Wind ☐

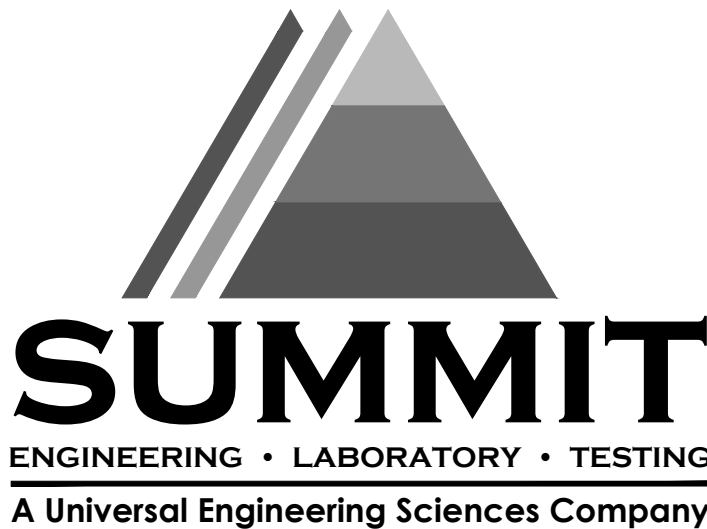
9. Assumed Soil Bearing Capacity 10000psf

1. Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practices 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 (F_y) 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.

1. Concrete shall have a normal weight aggregate and a minimum compressive strength (f'_c) 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 GFR.

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, INC. (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.

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.



COLUMBIA - RH

PROJECT ADDRESS:	OWNER:
TBD	DR Horton, Inc. 8001 Arrowridge Blvd. Charlotte, NC 28273

DESIGNER:
GMD Design Group
102 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.

AB	ANCHOR BOLT	PT	FRESSURE TREATED
AFB	ABOVE FINISHED FLOOR	R8	ROOF SUPPORT
CJ	CEILING JOIST	9C	STUD COLUMN
CLR	CLEAR	5J	SINGLE JOIST
DJR	DOUBLE JOIST	6FF	6SPRUCE PINE FIR
DSP	DOUBLE STUD POCKET	5ST	SIMPSON STRONG-TIE
EE	EACH END	5YP	SOUTHERN YELLOW PINE
EW	EACH WAY	TJ	TRIPLE JOIST
NTS	NOT TO SCALE	T6P	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

5. Concrete slabs-on-grade shall be constructed in accordance with ACI 302R-96: "Guide for Concrete Slab and Slab Construction".
6. The concrete slab-on-grade has been designed using a subgrade modulus of $k=150$ 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.
9. Reinforcing steel may not extend through a control joint.
10. Reinforcing steel may extend through a saw cut joint.
11. All welded wire fabric (WUJF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WUJF shall be securely supported during the concrete pour.

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 C1116, any local building code requirements, and shall meet or exceed the current industry standards.
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 Practices 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.

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 Southern-Yellow-Pine (SYP) #2 or Southn-Spruce Pine (SFP) #2.
2. LVL or PSL engineered wood shall have the following minimum design values:
 - 2.1. E = 1,300,000 psi
 - 2.2. Fc = 2600 psi
 - 2.3. Fv = 285 psi
 - 2.4. Fc = 100 psi

3. 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
4. Nails shall be common wire nails unless otherwise noted.
5. Lag screws shall conform to ANS1/ASME standard B182.1-1981. 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" OC, unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinued at headers for window/door openings. A minimum of one stud shall be placed at each end of the header. Kings studs shall be continuous.
8. Individual studs forming a column shall be attached with one 1/2" nail @ 6" OC, 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" OC.
10. Four and five ply beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 16" OC, unless noted otherwise.

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 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.
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" (HB-9). 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.

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.

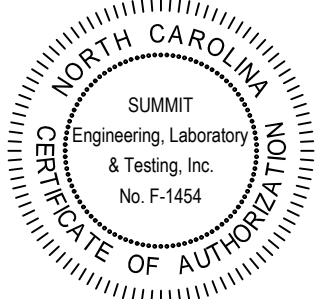
WOOD STRUCTURAL PANELS:

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.

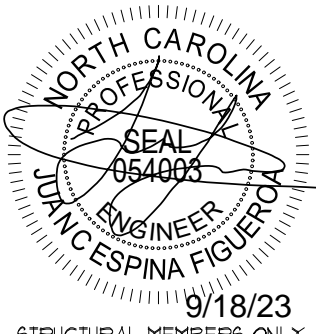
Manager	Signature
Operations	
Operations System	
Operations Product Development	

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.

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.



CLIENT:
DR Horton, Inc.
8001 Arrowridge Blvd.
Charlotte, NC 28273



STRUCTURAL MEMBERS ONLY

DRAWING

DATE: 09/05/2023

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

PROJECT # 528.10060

DRAIN BY: EO

CHECKED BY: JCF

ORIGINAL INFORMATION
PROJECT # DATE
T0060 03/10/2021

REFER TO COVER SHEET FOR A
COMPLETE LIST OF REVISIONS

SHEET

CS1

- 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.
 - PILASTERS 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	PL = 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 HOLDDOWNS. ADDITIONAL INFORMATION 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 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 R602.10.9 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 2/28/23. 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.

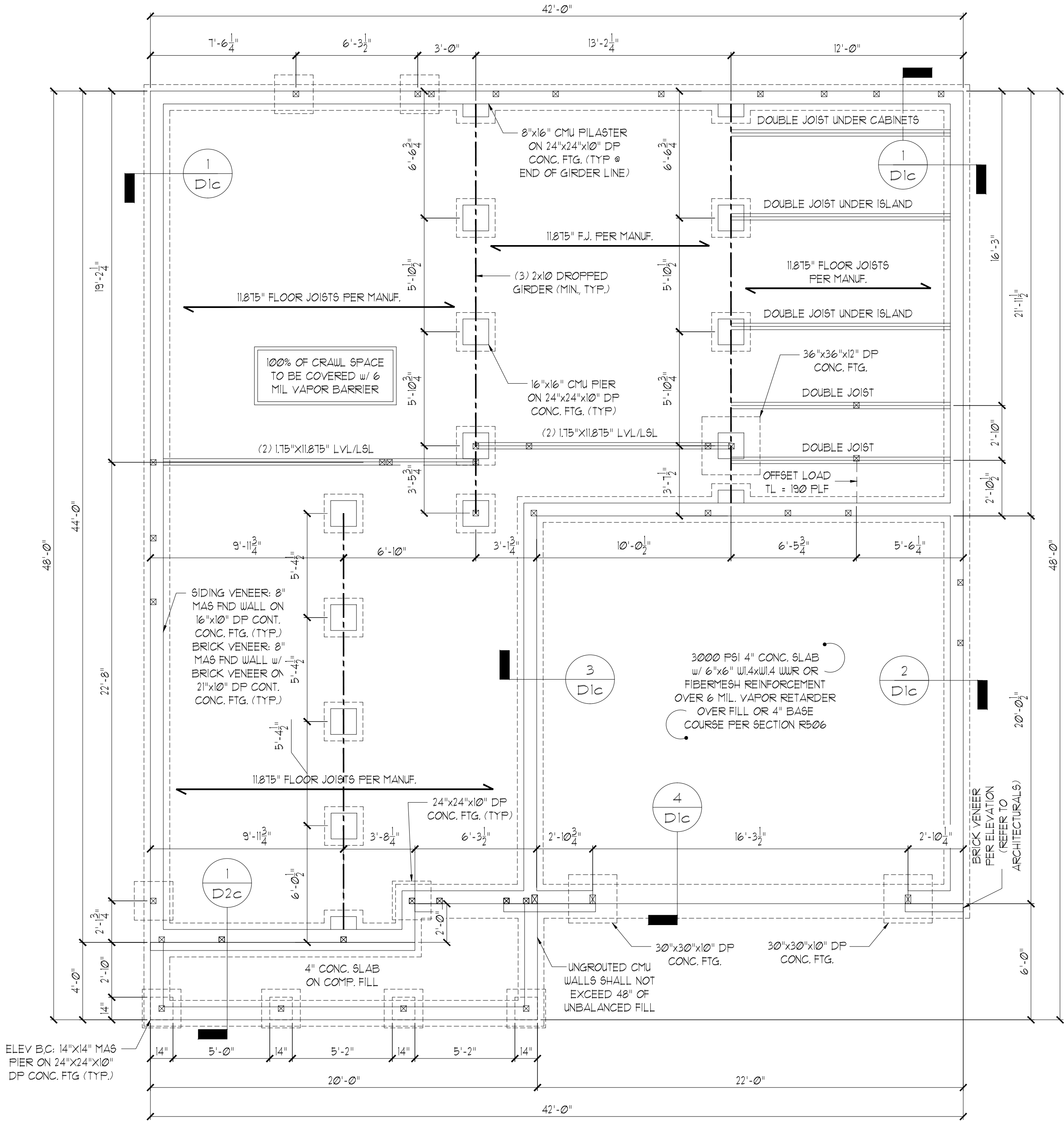
STRUCTURAL MEMBERS ONLY

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.

CRAWL SPACE FOUNDATION PLAN

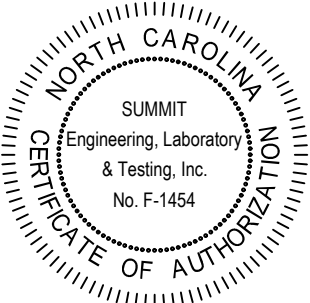
SCALE: 1/4"=1'-0" ON 22'x34' OR 1/8"=1'-0" ON 11'x11'



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:
DR Horton, Inc.
800 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT: RH
Columbia - RH
Crawl Space Foundation



DRAWING
DATE: 09/15/2023
SCALE: 22x34 1/4"=1'-0"
1/8"=1'-0"
PROJECT # 528700660
DRAWN BY: EO
CHECKED BY: JCF

ORIGINAL INFORMATION
PROJECT # 100660
DATE 09/10/2021

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
CS-WSP	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.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
PF	WOOD STRUCTURAL PANEL	1/16"	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:
MICROLLAM (LVL): $F_u = 2600$ PSI, $F_v = 285$ PSI, $E = 1.9 \times 10^6$ PSI
PARALLAM (PSL): $F_u = 2900$ 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 R403.1.6. 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 LVLs AND 3-PLY SIDE LOADED LVLs SHALL BE BOLTED TOGETHER WITH 1/2" DIA. THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL 10D31. 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
GT = GIRDER TRUSS
SC = STUD COLUMN
EE = EACH END
TJ = TRIPLE JOIST
CL = CENTER LINE

SJ = SINGLE JOIST
FT = FLOOR TRUSS
DR = DOUBLE RAFTER
TR = TRIPLE RAFTER
OC = ON CENTER
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 HOLDDOWNS 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 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

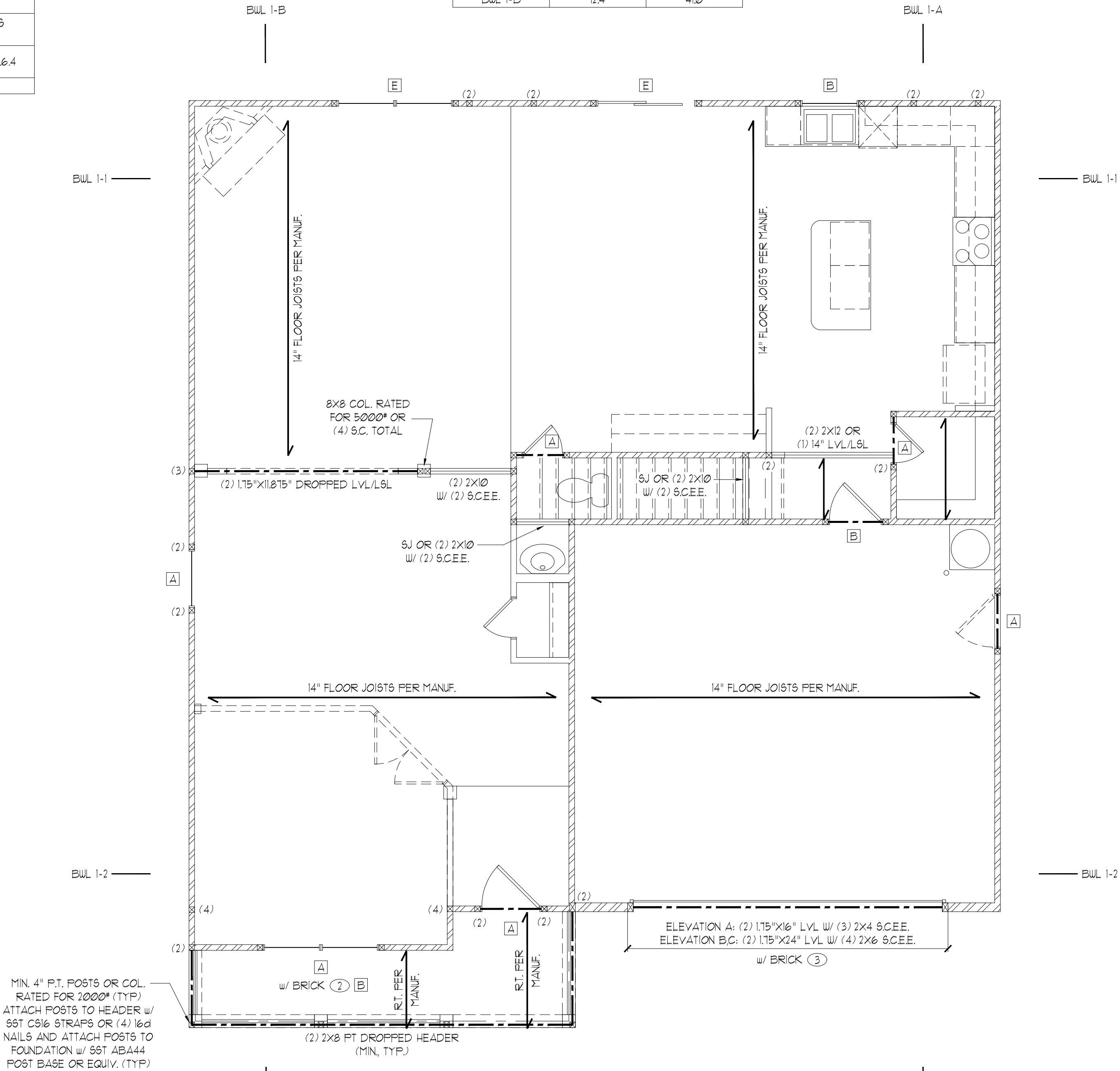
ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY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

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

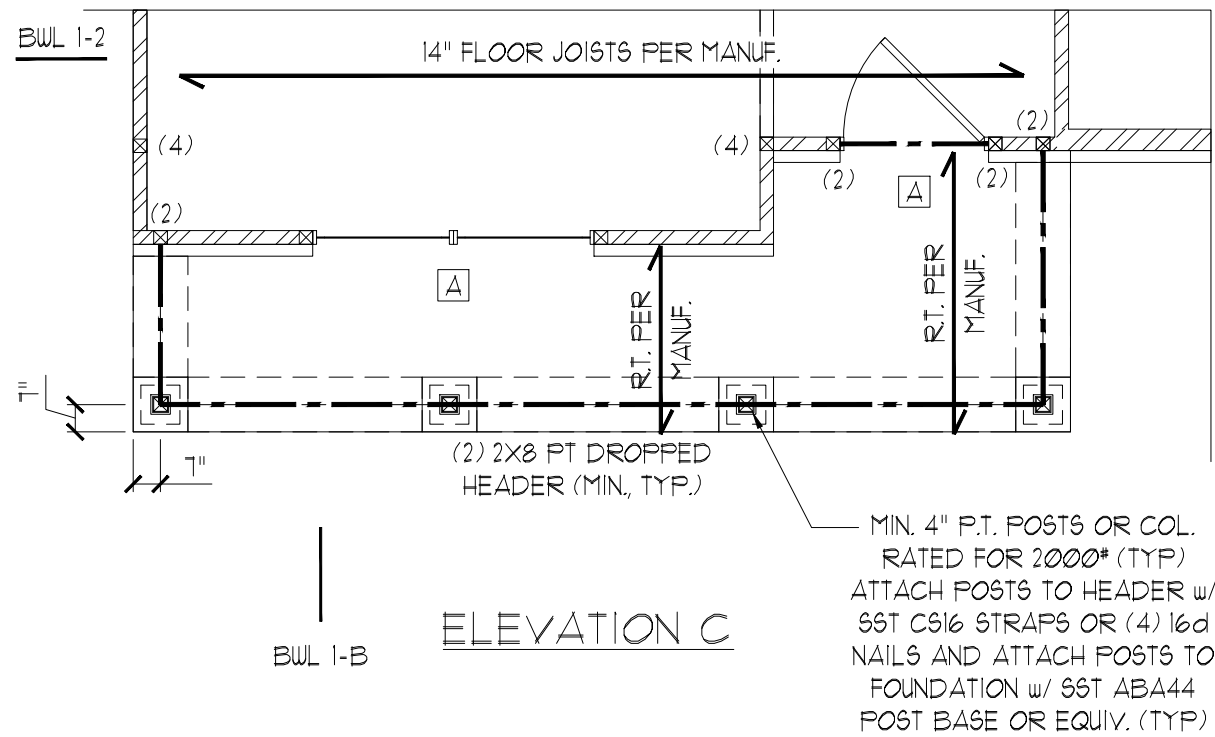
FIRST FLOOR FRAMING PLAN

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

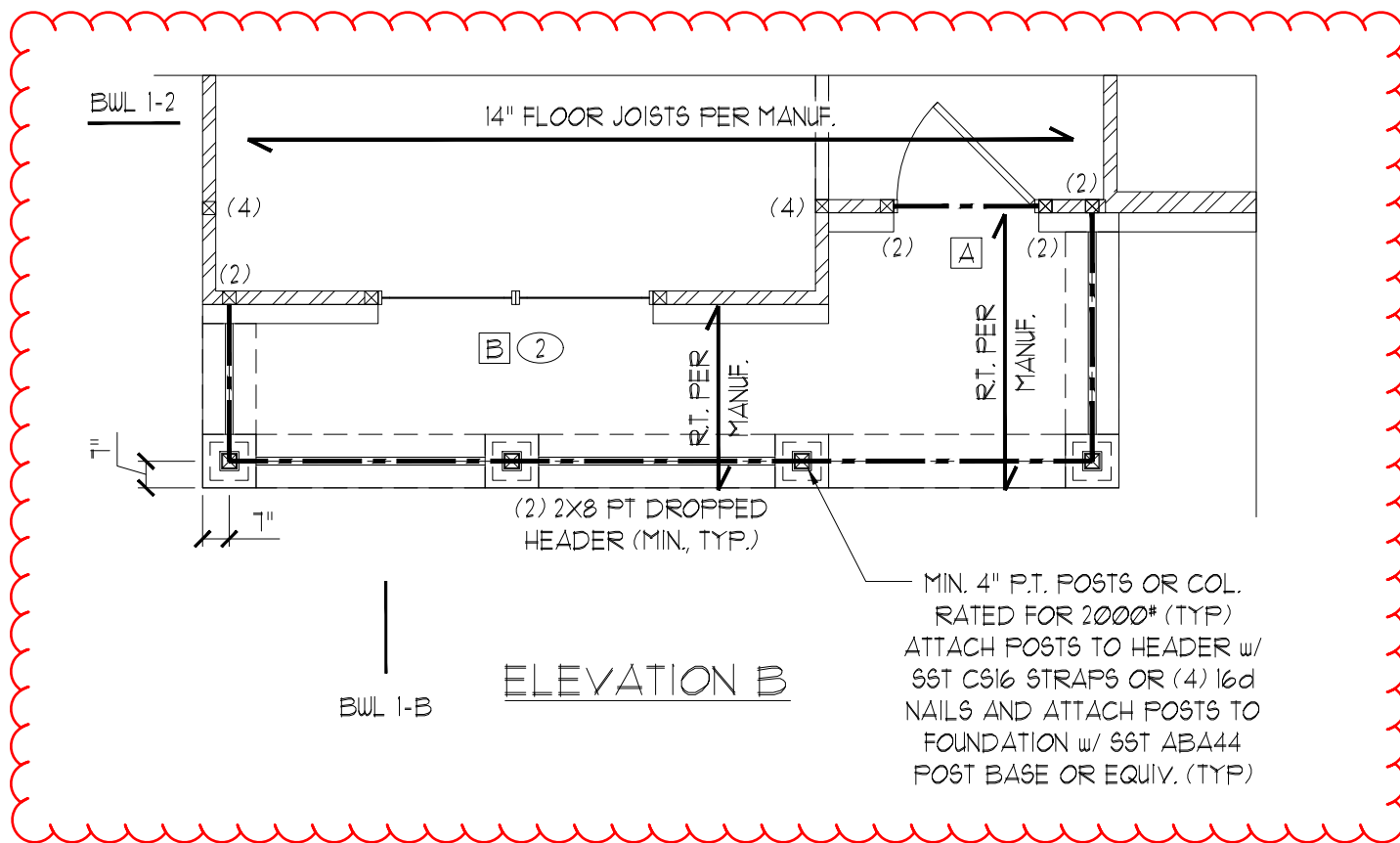
FIRST FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
BWL 1-1	13.1	21.5
BWL 1-2	13.1	15.1
BWL 1-A	12.4	42.0
BWL 1-B	12.4	41.0



FIRST FLOOR FRAMING PLAN - ELEVATION A



ELEVATION C



ELEVATION B

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\" 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	L5x3-1/2"x5/16"	GREATER THAN 10'-0"
④	L5x3-1/2"x5/16" ROLLED OR EQUIV.	ALL ARCHED OPENINGS
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)		

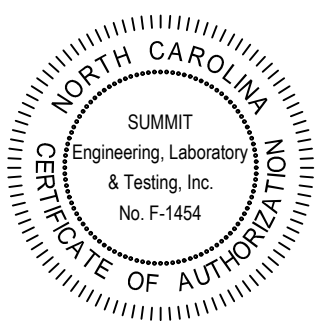
WALL STUD SCHEDULE	
1ST & 2ND FLOOR LOAD BEARING STUDS: 2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C. 1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC: 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BASEMENT LOAD BEARING STUDS: 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. NON-LOAD BEARING STUDS (ALL FLOORS): 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 R602.10.3 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
CS-XXXX = CONT. SHEATHED ENG = ENGINEERED SOLUTION
PF = PORTAL FRAME PF-ENG = ENG. PORTAL FRAME



CLIENT:
DR Horton, Inc.
800 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Columbia - RH
First Floor Framing Plan



DATE: 09/18/2023
SCALE: 22x34 1/4"=1'-0"
1/8"=1'-0"
PROJECT # 52870060
DRAIN BY: EO
CHECKED BY: JCBF
ORIGINAL INFORMATION
PROJECT # 10060
DATE 09/18/2021

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	# INTERMEDIATE SUPPORTS
CS-WSP	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** @ 7" O.C.	5d COOLER NAILS** @ 7" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
FF	WOOD STRUCTURAL PANEL	7/16"	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:
MICROLLAM (LVL): $F_b = 2600$ PSI, $F_v = 225$ PSI, $E = 1.9 \times 10^6$ 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 SPF UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP #2 SPF UNLESS NOTED ON PLAN.
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP #2 SPF 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 PROVIDE LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- FLITCH BEAMS, 4-PLY LVLs AND 3-PLY SIDE LOADED LVLs SHALL BE BOLTED TOGETHER WITH 1/2" DIA. THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL 1/D31. 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/SPF #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/SPF #2, DROPPED, (UNLESS NOTED OTHERWISE)
- ABBREVIATIONS:

DJ = DOUBLE JOIST
GT = GIRDER TRUSS
SC = STUD COLUMN
EE = EACH END
TJ = TRIPLE JOIST
CL = CENTER LINE

SJ = SINGLE JOIST
FT = FLOOR TRUSS
DR = DOUBLE RAFTER
TR = TRIPLE RAFTER
OC = ON CENTER
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 HOLDDOWNS 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 2015 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 2/28/20. 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

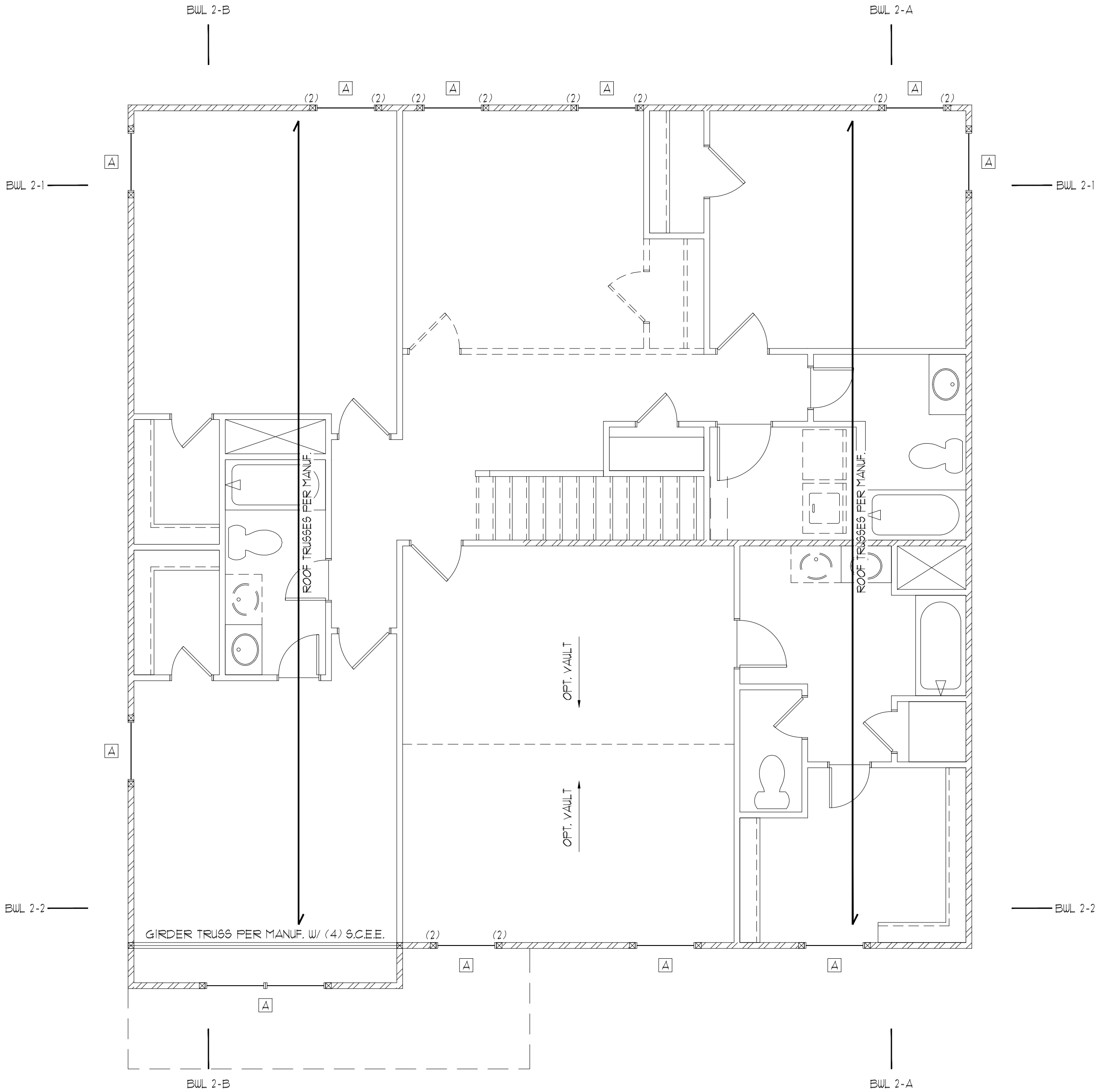
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

SECOND FLOOR FRAMING PLAN

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

SECOND FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
BUL 2-1	7.2	28.6
BUL 2-2	7.2	25.2
BUL 2-A	6.9	31.6
BUL 2-B	6.9	36.1



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	L5x3-1/2"x5/16"	GREATER THAN 10'-0"
④	L5x3-1/2"x5/16" ROLLED OR EQUIV.	ALL ARCHED OPENINGS

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		

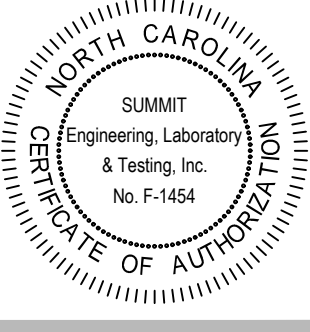
KING STUD REQUIREMENTS	
OPENING WIDTH	KING'S (EACH END)
LESS THAN 3'-0"	(1)
3'-0" TO 4'-0"	(2)
4'-0" TO 6'-0"	(3)
6'-0" TO 12'-0"	(5)
12'-0" TO 16'-0"	(6)

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 2015 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 R602.10.3.
- 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 R602.10.3 OF THE 2015 IRC.
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- 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).
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- ABBREVIATIONS:

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



CLIENT:
DR Horton, Inc.
800 Arrowridge Blvd.
Charlotte, NC 28273

PROJECT:
Columbia - RH
Second Floor Framing Plan



DRAWING
DATE: 09/18/2023
SCALE: 22x34 1/4"=1'-0" 1/8"=1'-0"
PROJECT # 528700660
DRAWN BY: EDO
CHECKED BY: JCF

ORIGINAL INFORMATION
PROJECT # 100660 DATE 09/18/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

54.0

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

NOTE: ROOF TRUSSES SHALL BE 6" 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.

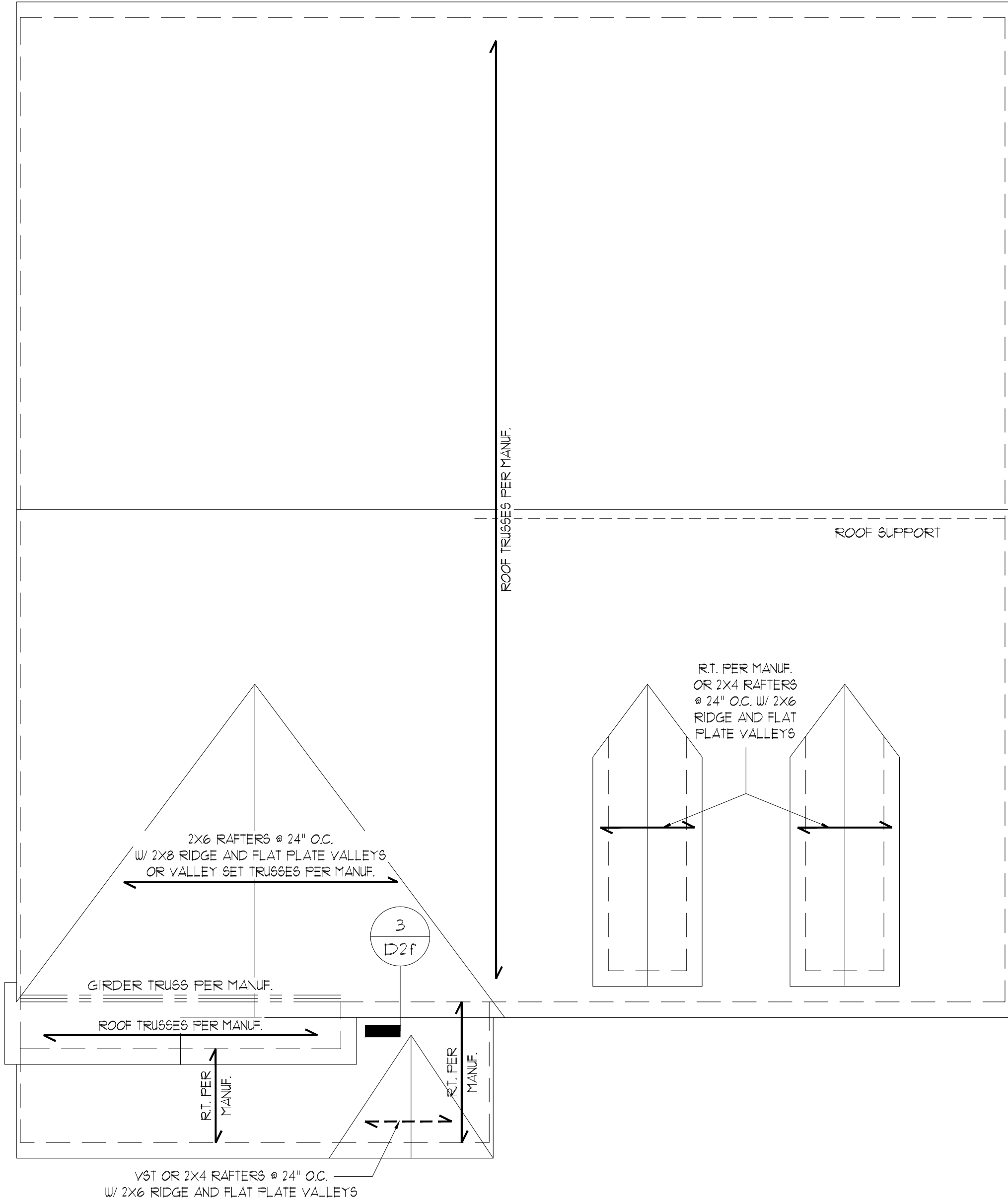
STRUCTURAL MEMBERS ONLY

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 NCRC.

ROOF FRAMING PLAN

SCALE: 1/4"=1'-0" ON 22'x34" OR 1/8"=1'-0" ON 11'x11'



ROOF FRAMING PLAN - ELEVATION B

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

PROJECT:
Columbia - RH
Roof Framing Plan

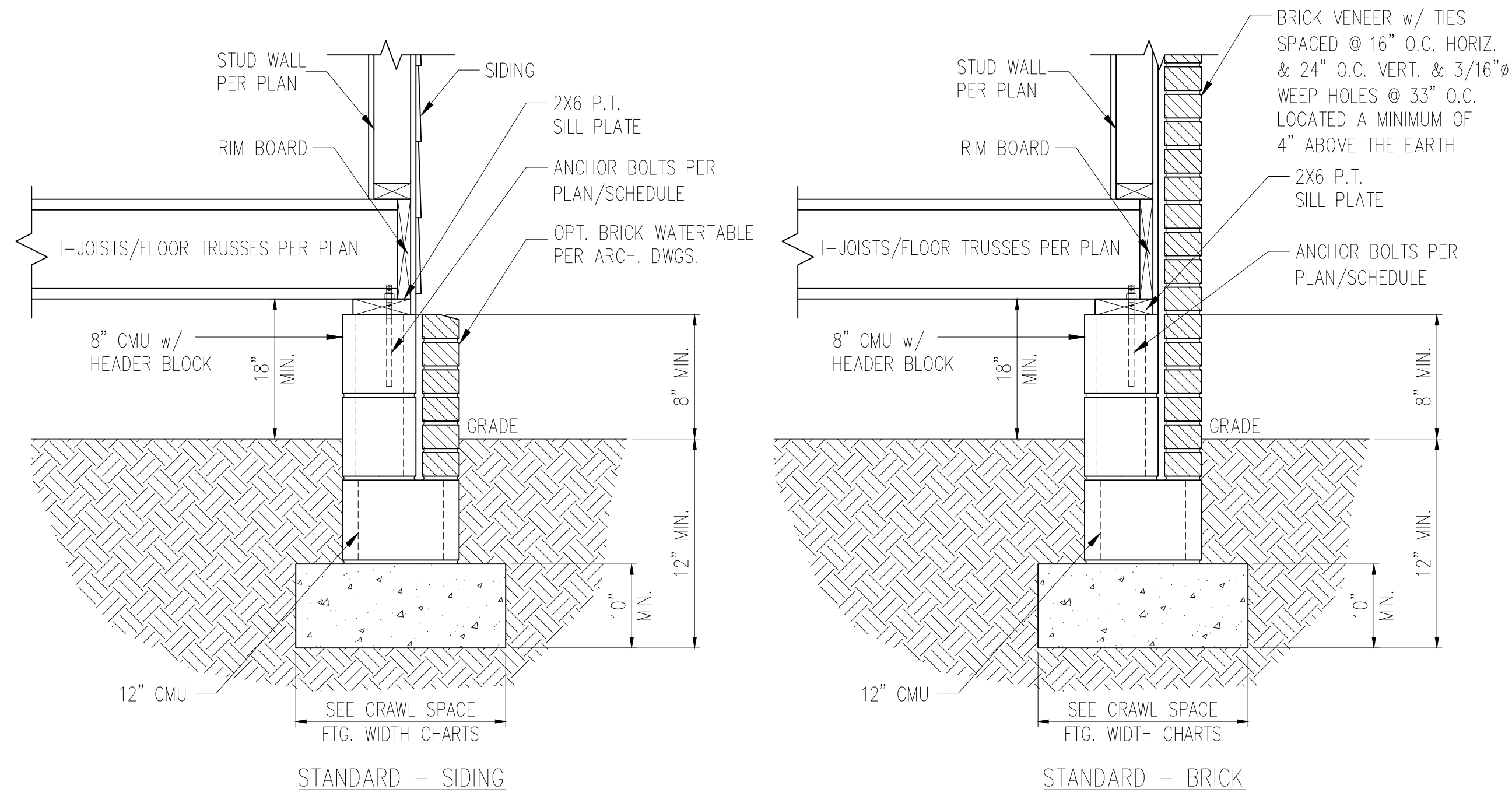
DRAWING
DATE: 09/15/2023
SCALE: 22x34 1/4"=1'-0"
11x11 1/8"=1'-0"
PROJECT # 528700660
DRAWN BY: EO
CHECKED BY: JCF

ORIGINAL INFORMATION
PROJECT # 100660 DATE 09/10/2021

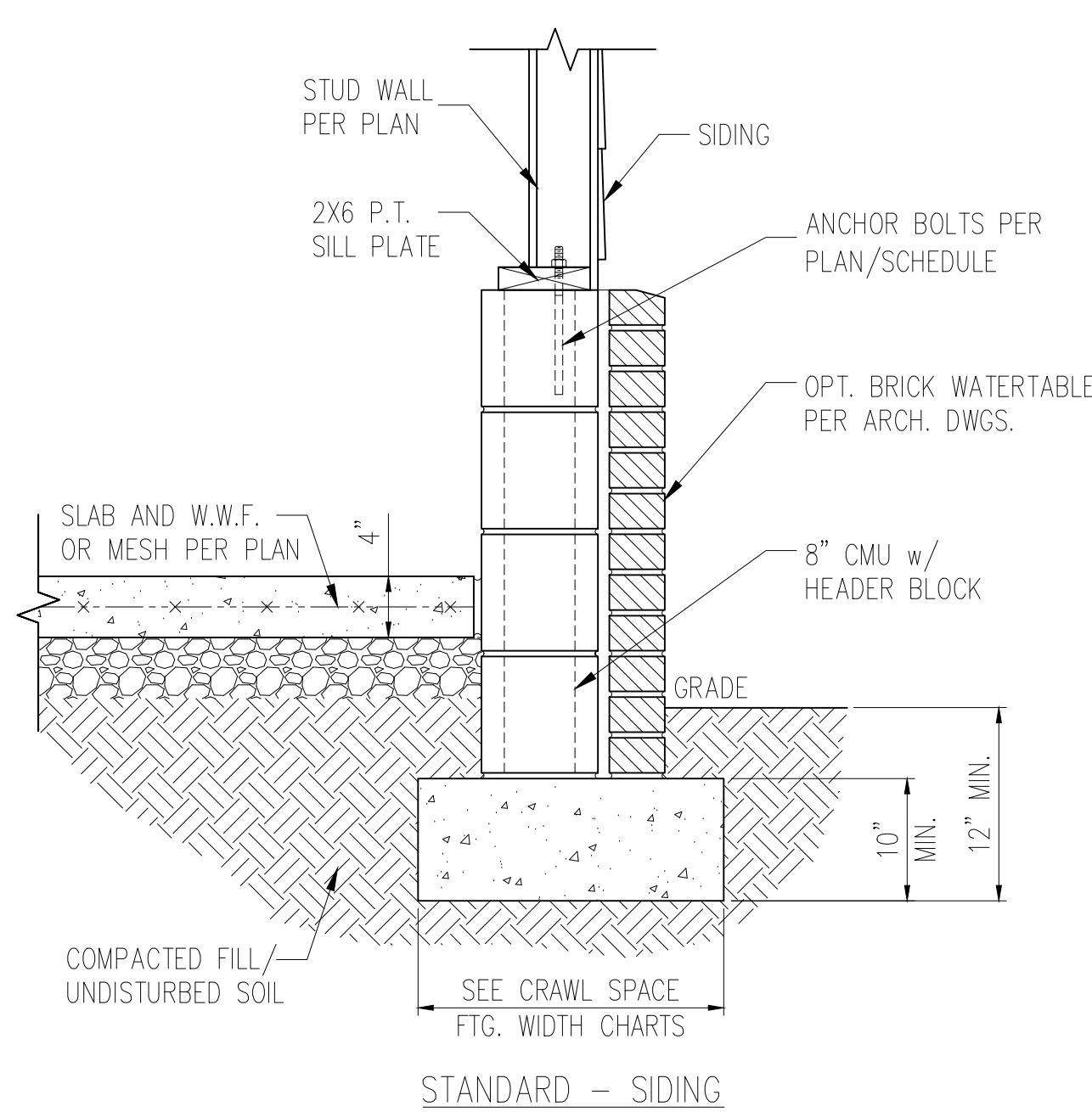
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

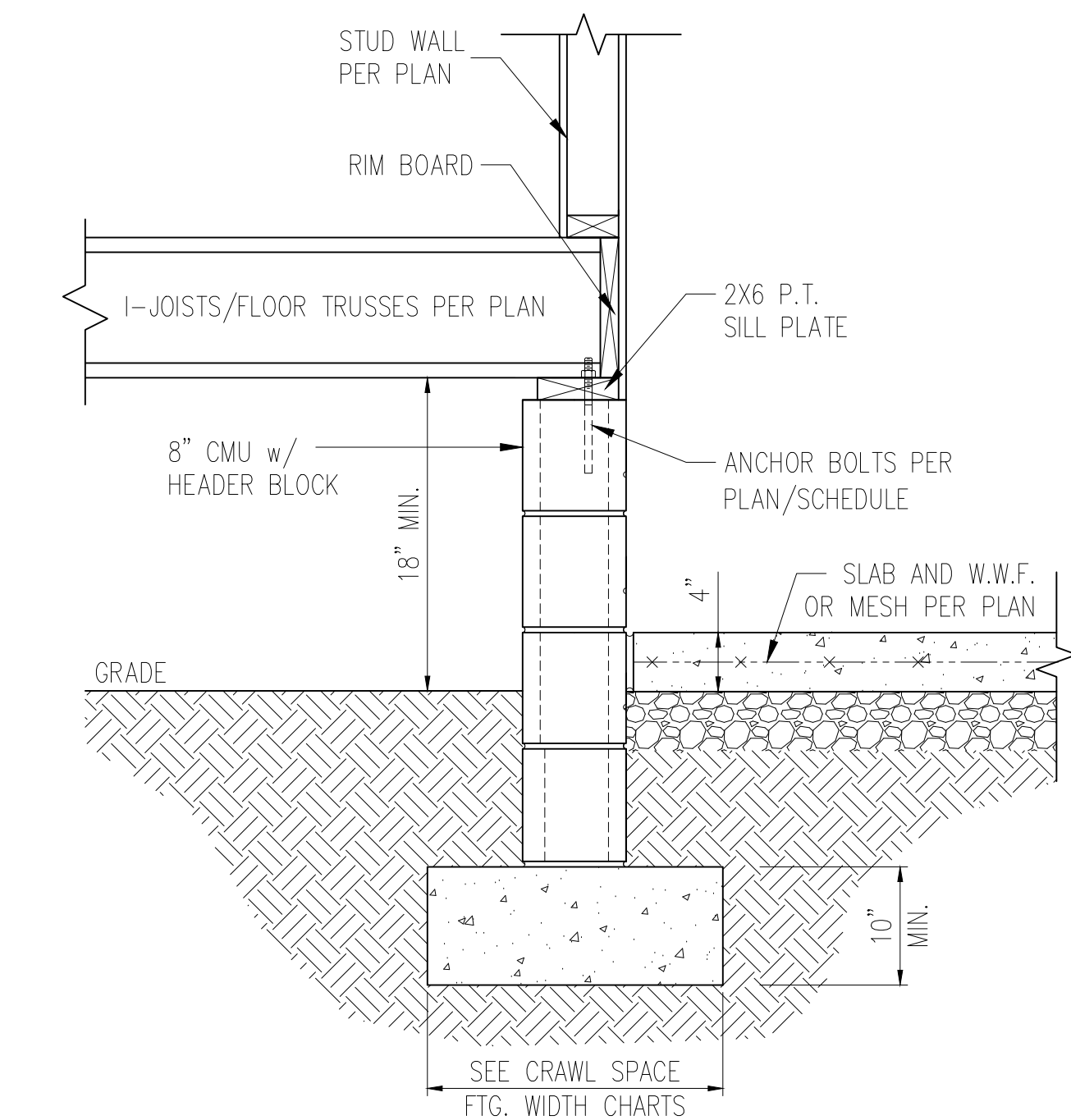
55.1



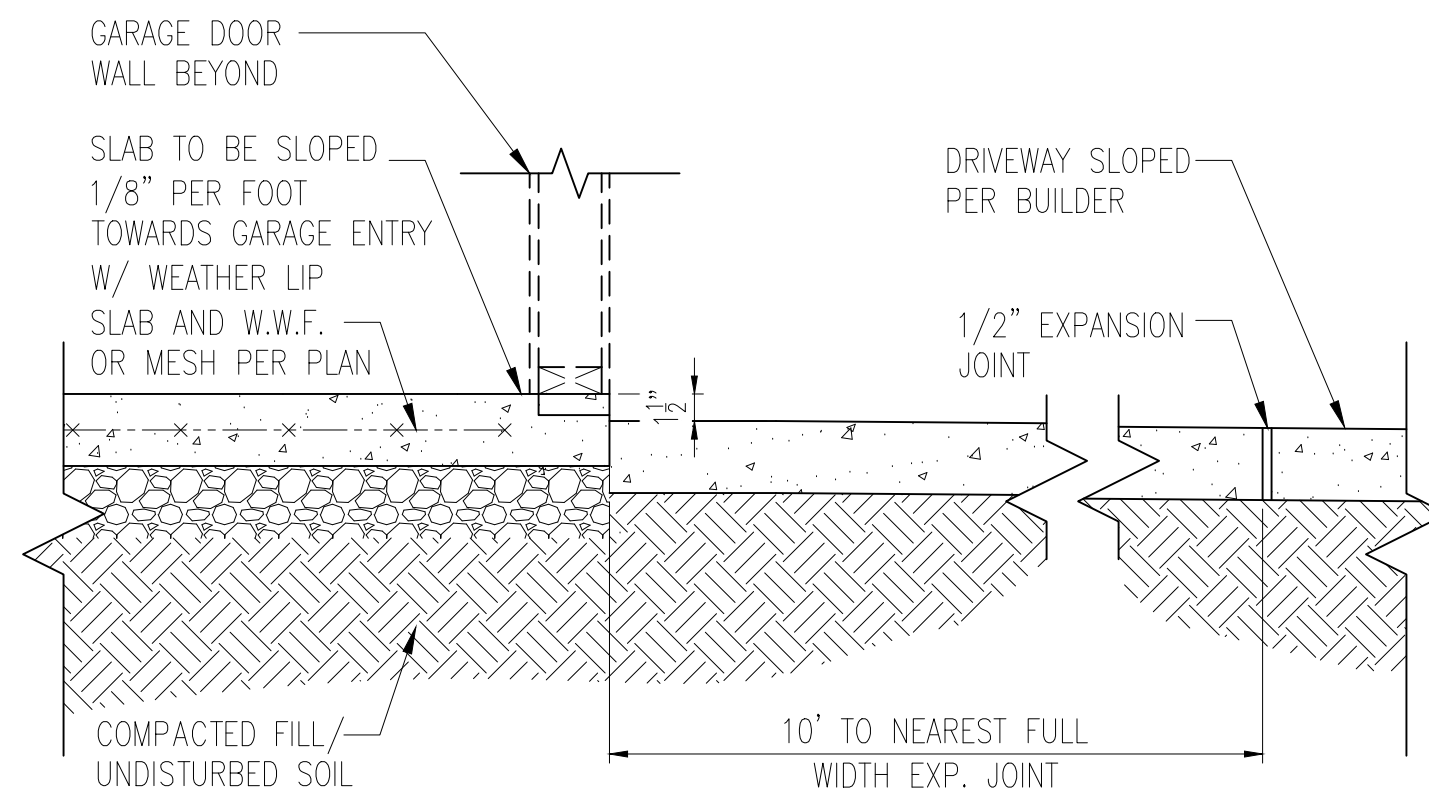
1 TYP. FOUNDATION WALL DETAIL
D1c N.T.S.



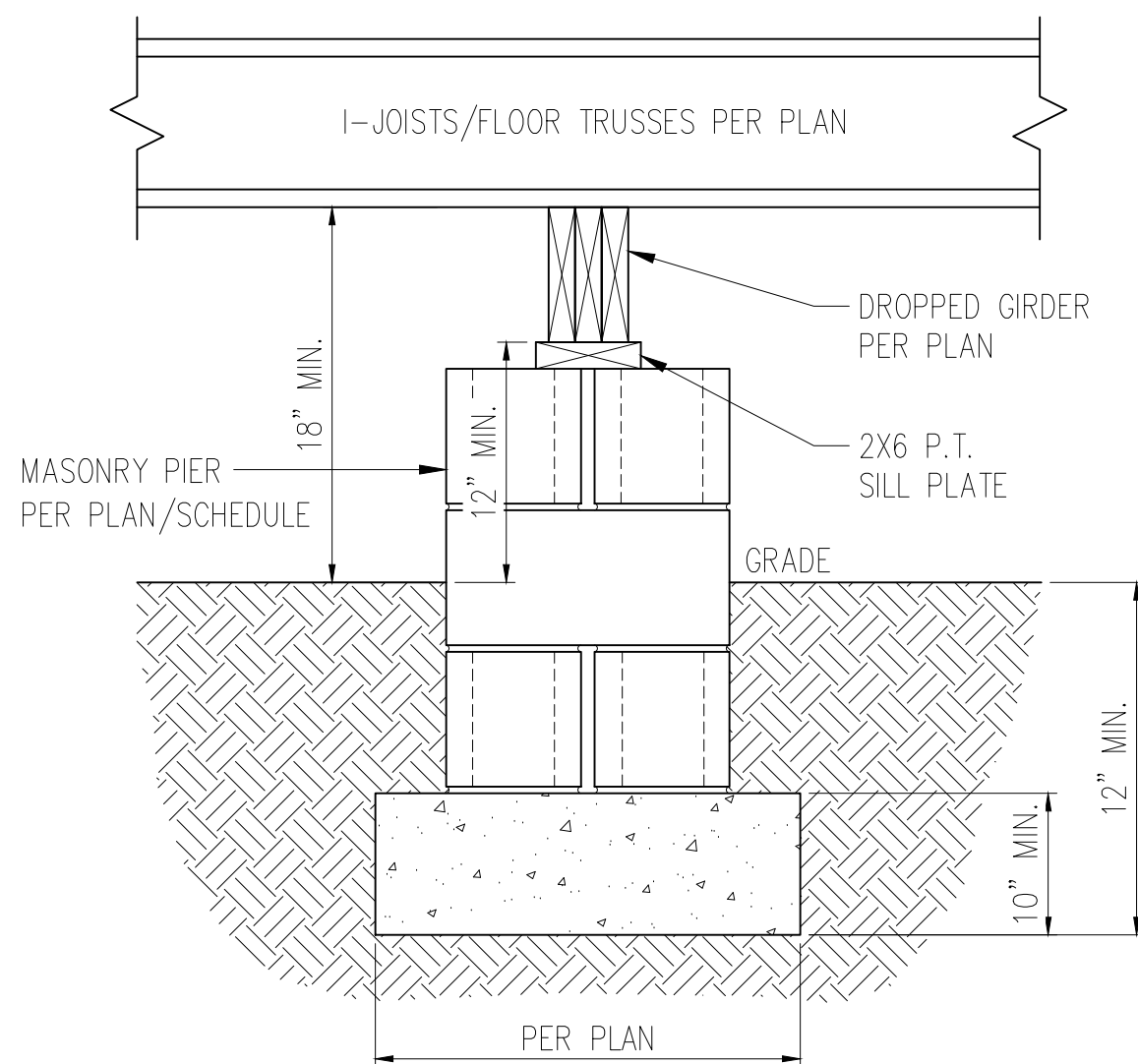
2 TYP. GARAGE CURB DETAIL
D1c N.T.S.



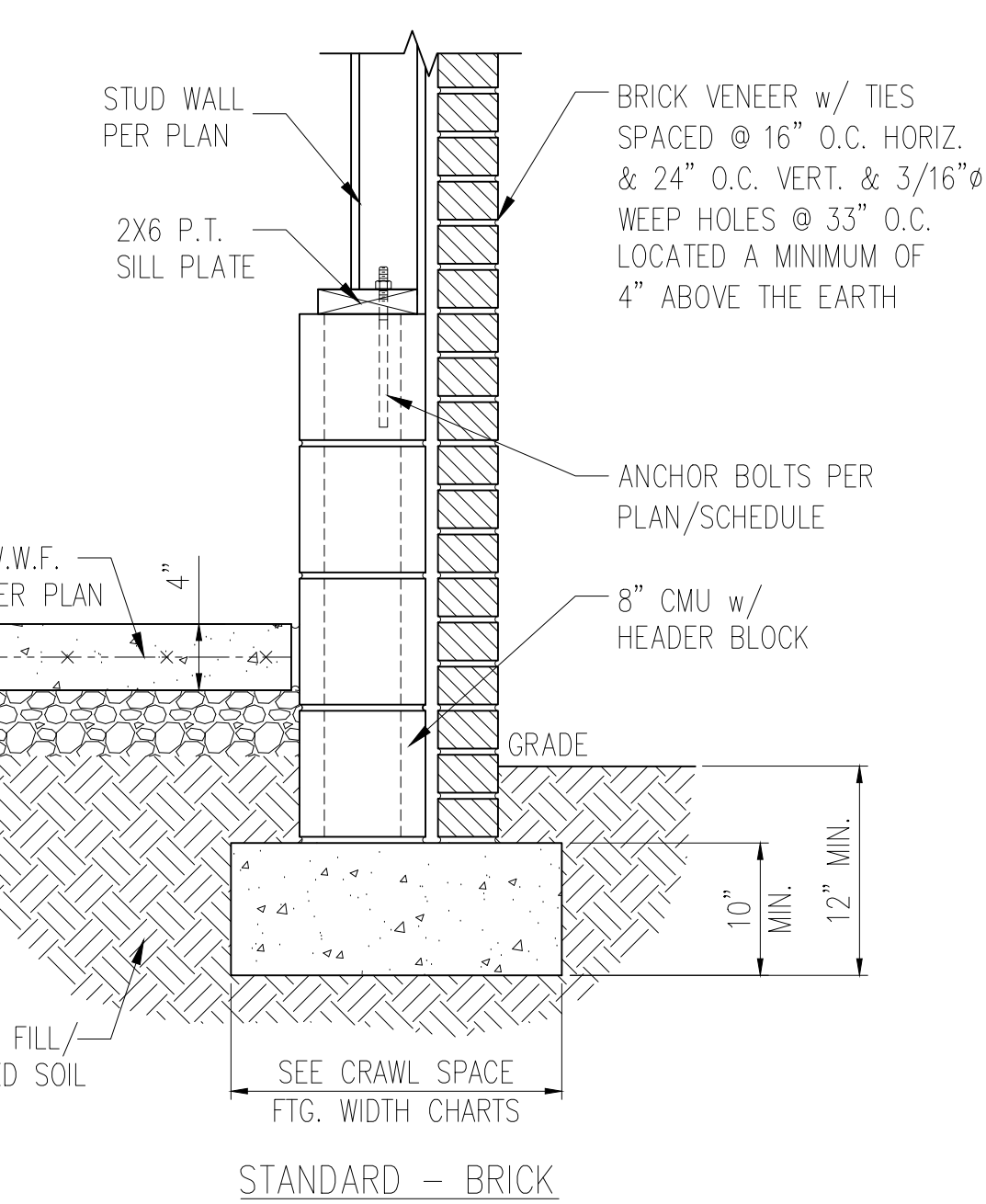
3 HOUSE/GARAGE WALL DETAIL
D1c N.T.S.



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			

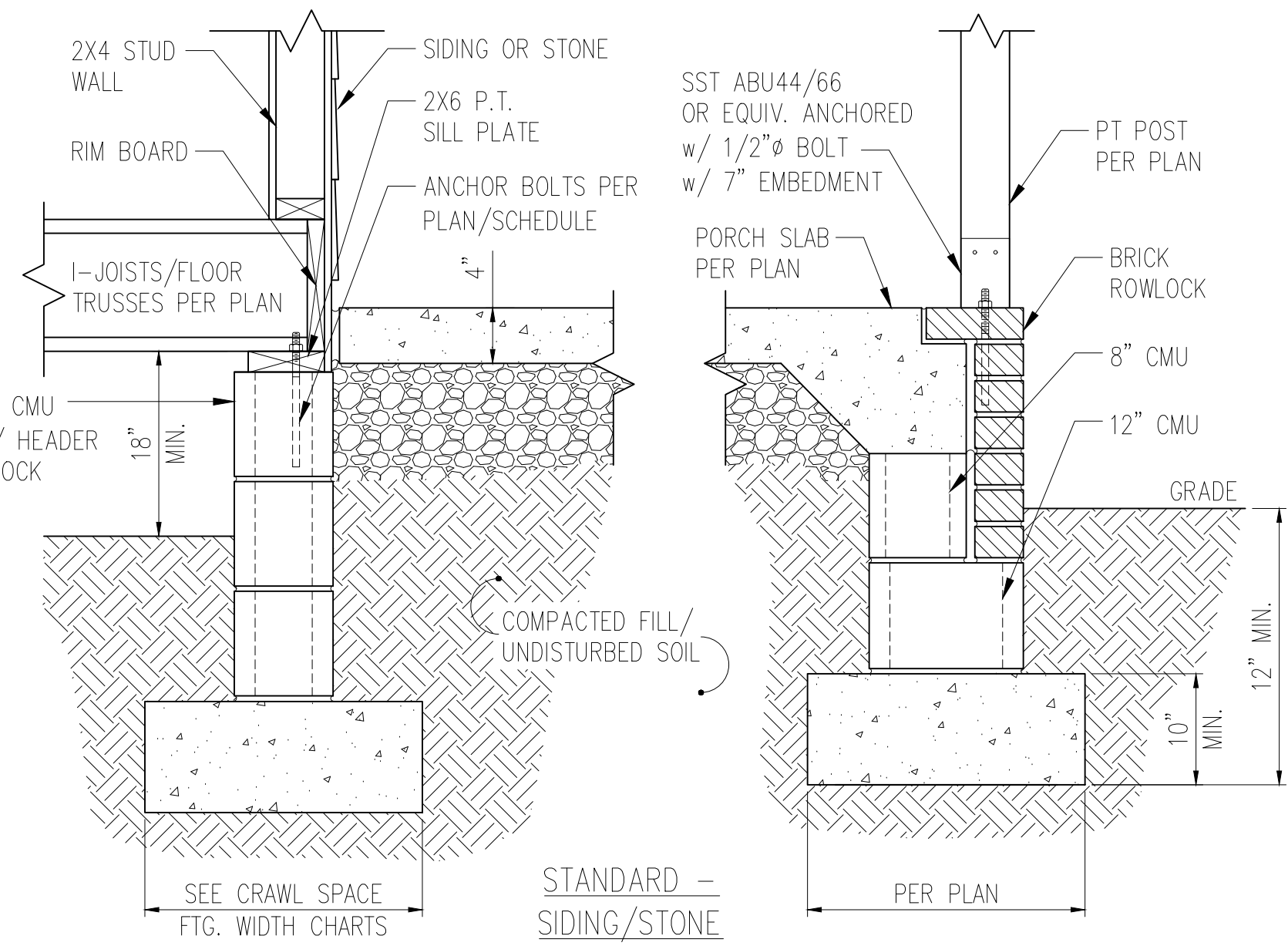
WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING	INTERIOR WALL	EXTERIOR WALL
1/2"Ø A307 BOLTS w/ STD. 90° BEND	7"	6'-0"	YES	YES
SST - MAS	4"	5'-0"	NO	YES
SIMPSON TITEN HD 1/2"Ø - 8"	6-1/2"	6'-0"	YES	YES
1/2"Ø HILTI THREADED ROD w/ HIT HY150 ADHESIVE	7"	6'-0"	YES	YES
1/2"Ø HILTI KWIK BOLT, SST WEDGE-ALL, OR EQUIVALENT WEDGE ANCHORE	7"	6'-0"	YES	YES -2

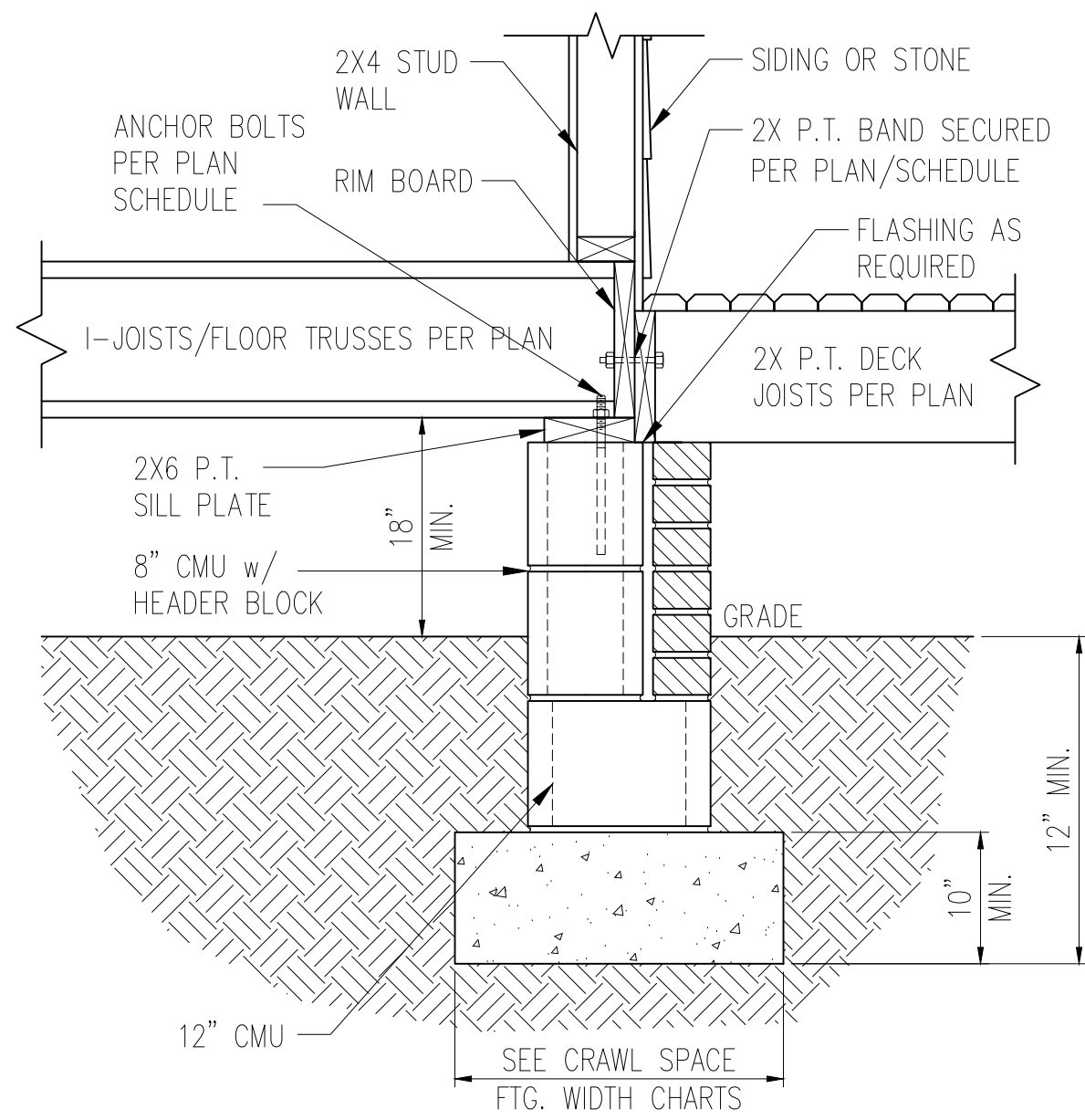
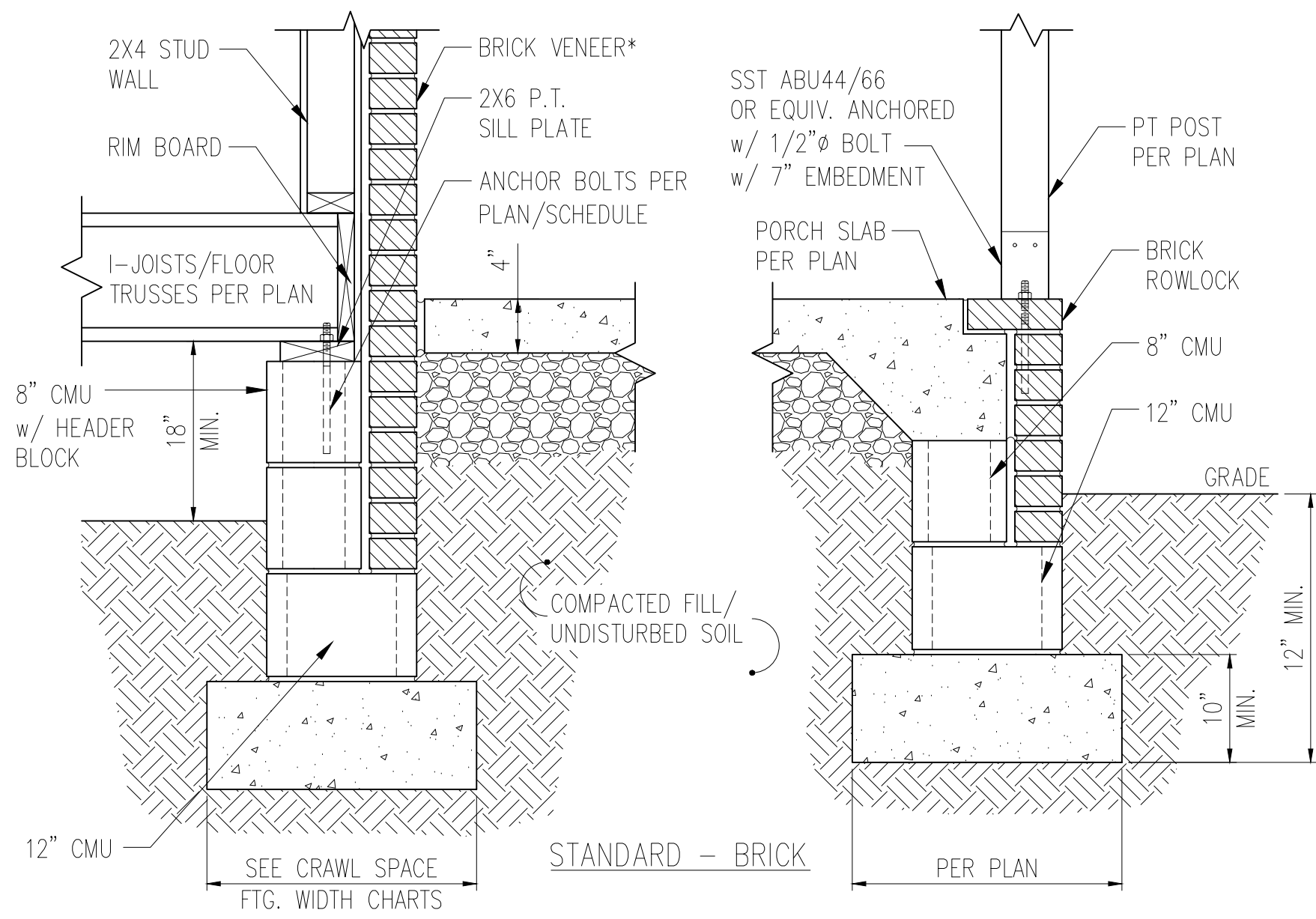
NOTE: 1. INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.
2. EXPANSION ANCHORS MAY BE INSTALLED ONLY AS ALLOWED PER MANUFACTURE SPECIFICATIONS.

NOTES:

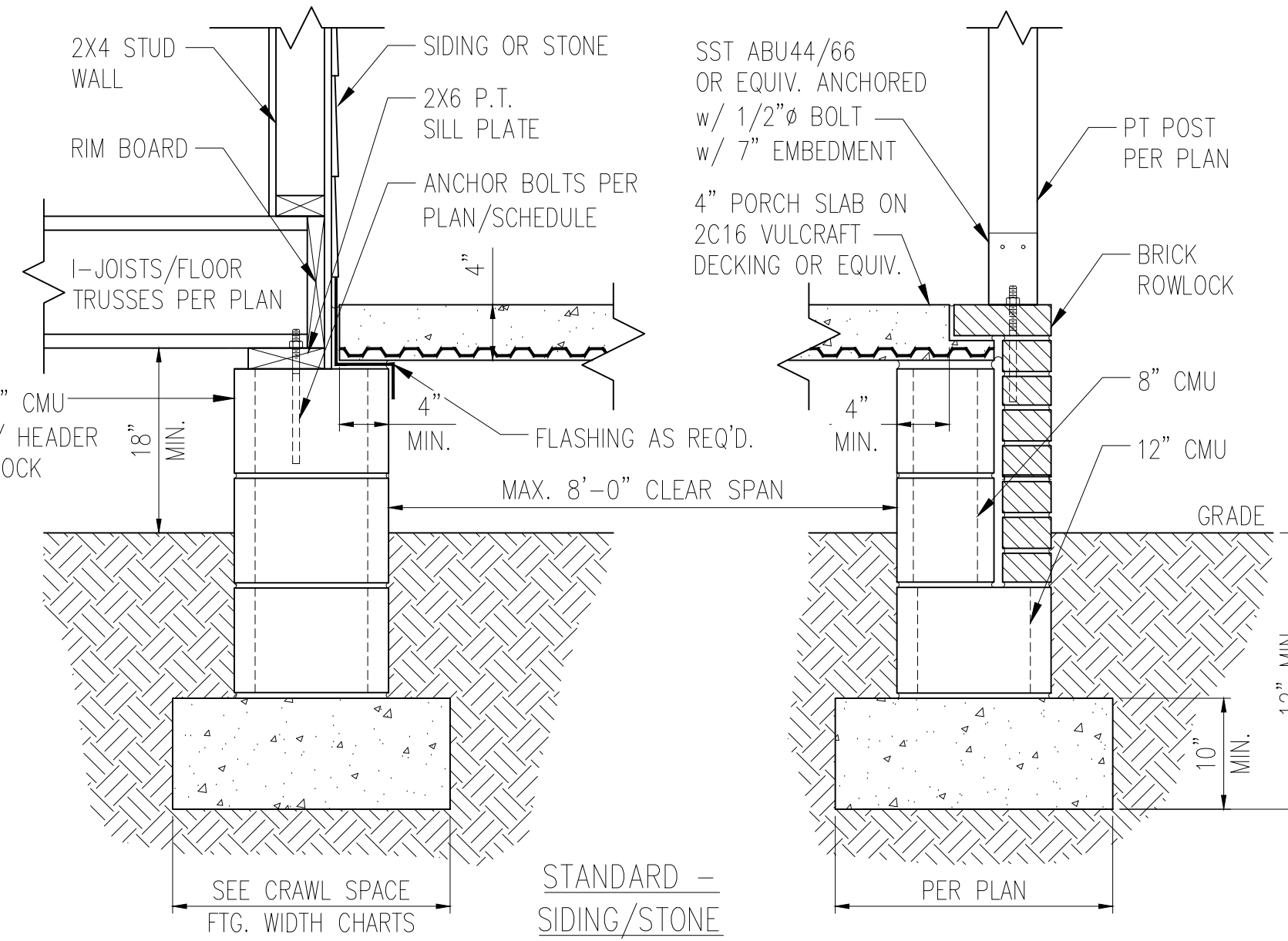
- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
- PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
- SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
- REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, 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



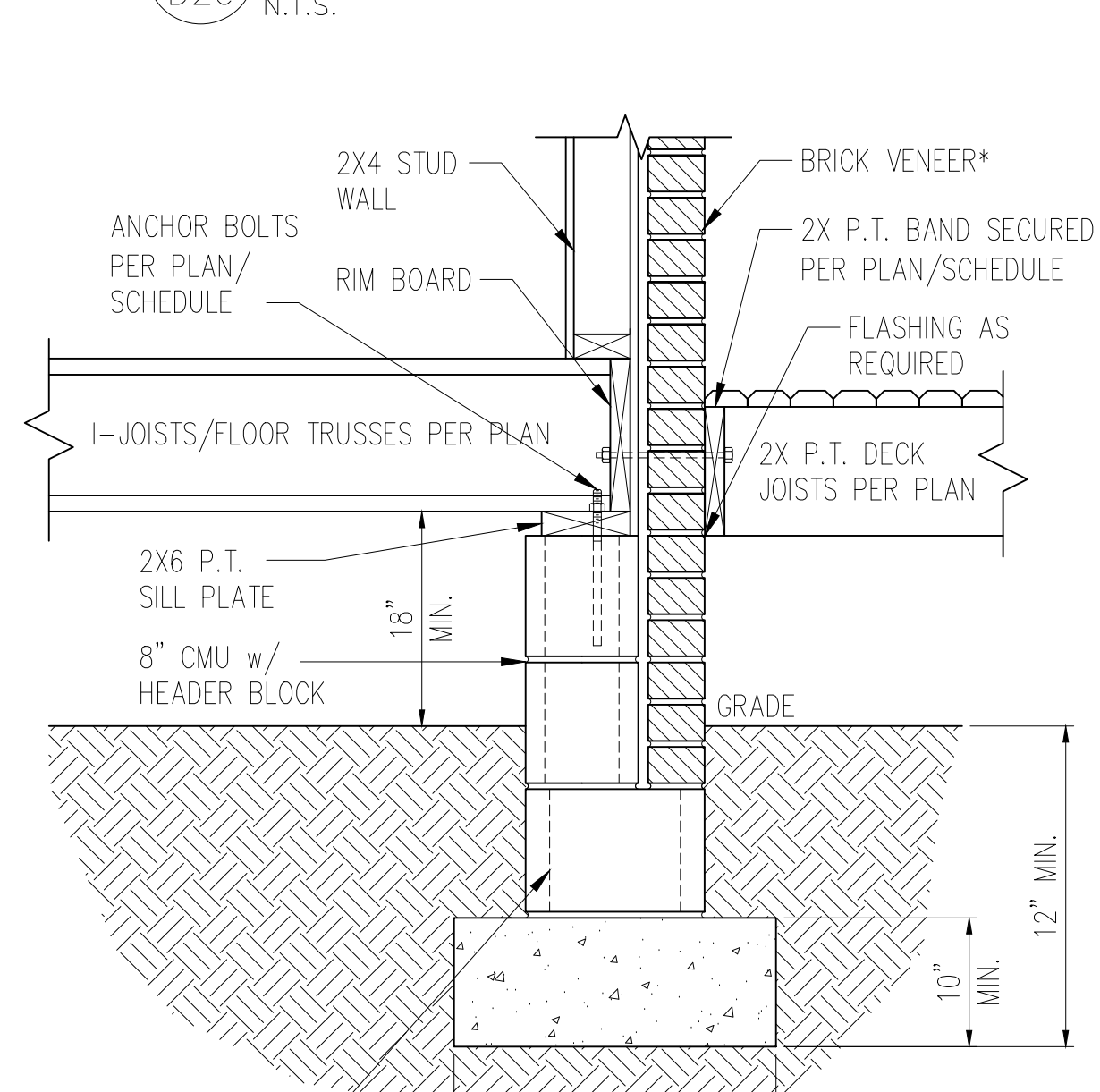
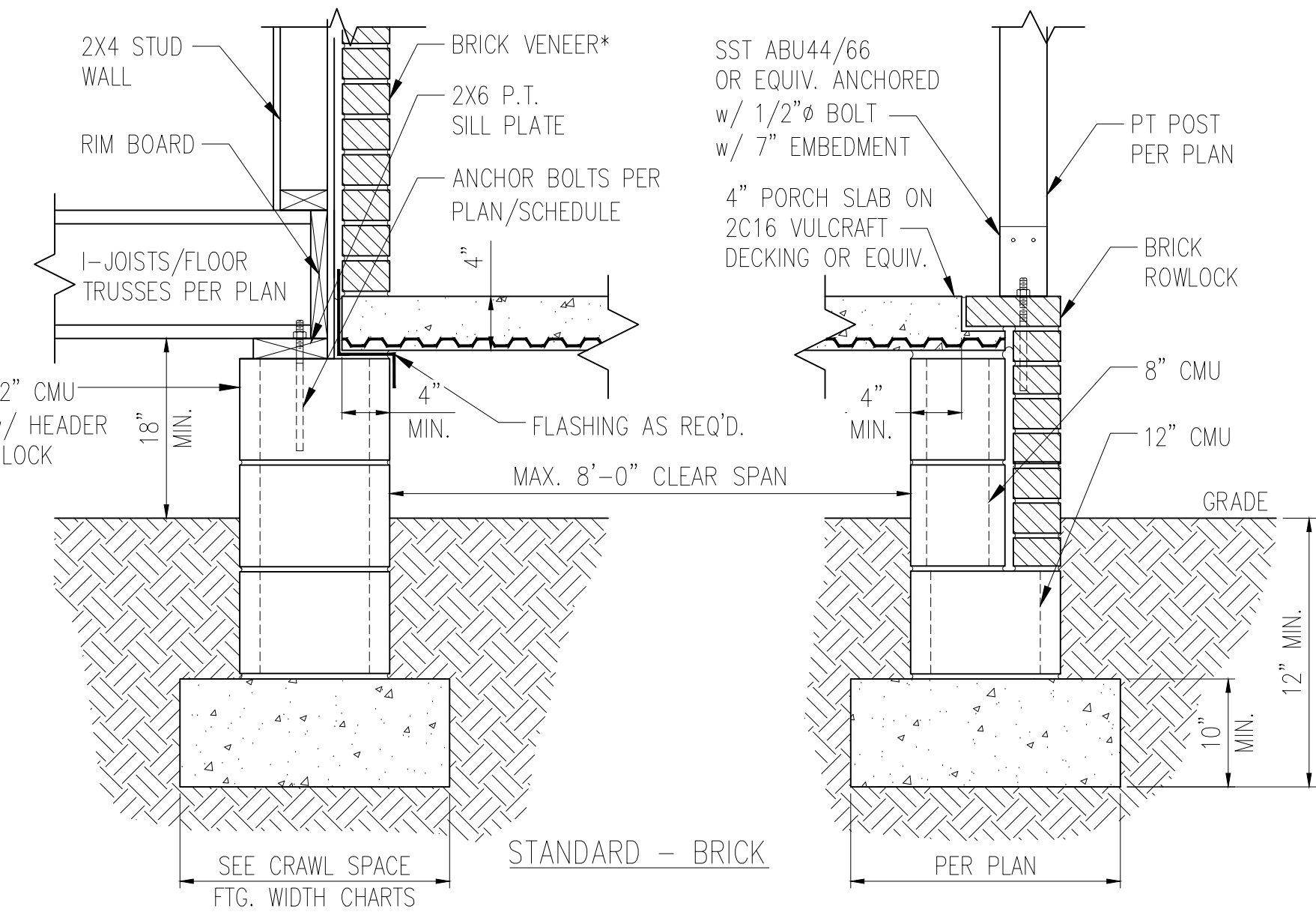
1 TYP. FRONT PORCH DETAIL
D2c N.T.S.



2 DECK ATTACHMENT DETAIL
D2c N.T.S.



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



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

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

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

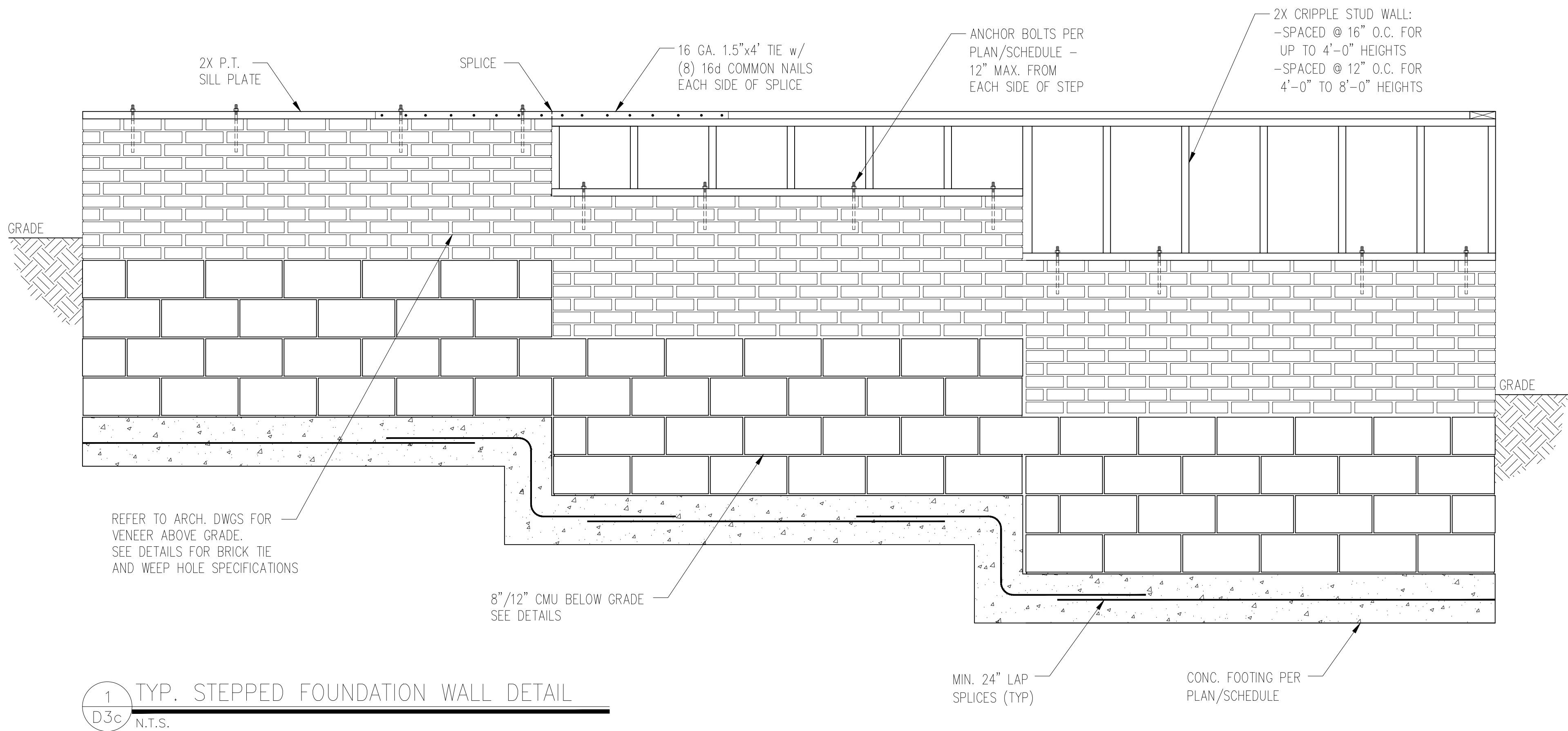
- a. ATTACHMENT INTERPOLATION BETWEEN 8' AND 16' JOIST SPANS IS ALLOWED.
b. MINIMUM EDGE DISTANCE FOR BOLTS IS 2 1/2".

# 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:
- 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

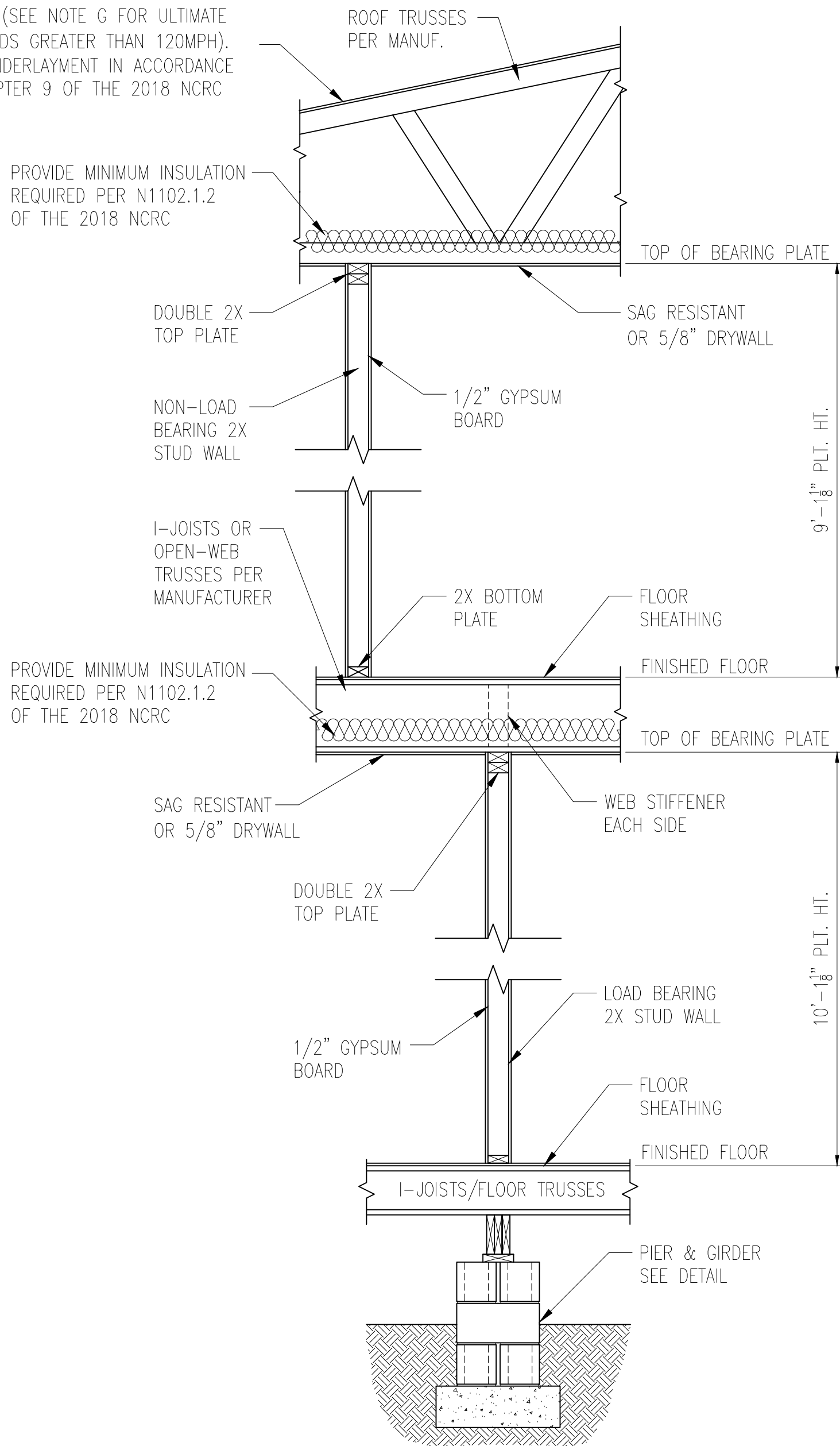


1 TYP. STEPPED FOUNDATION WALL DETAIL
D3c N.T.S.

NOTES:

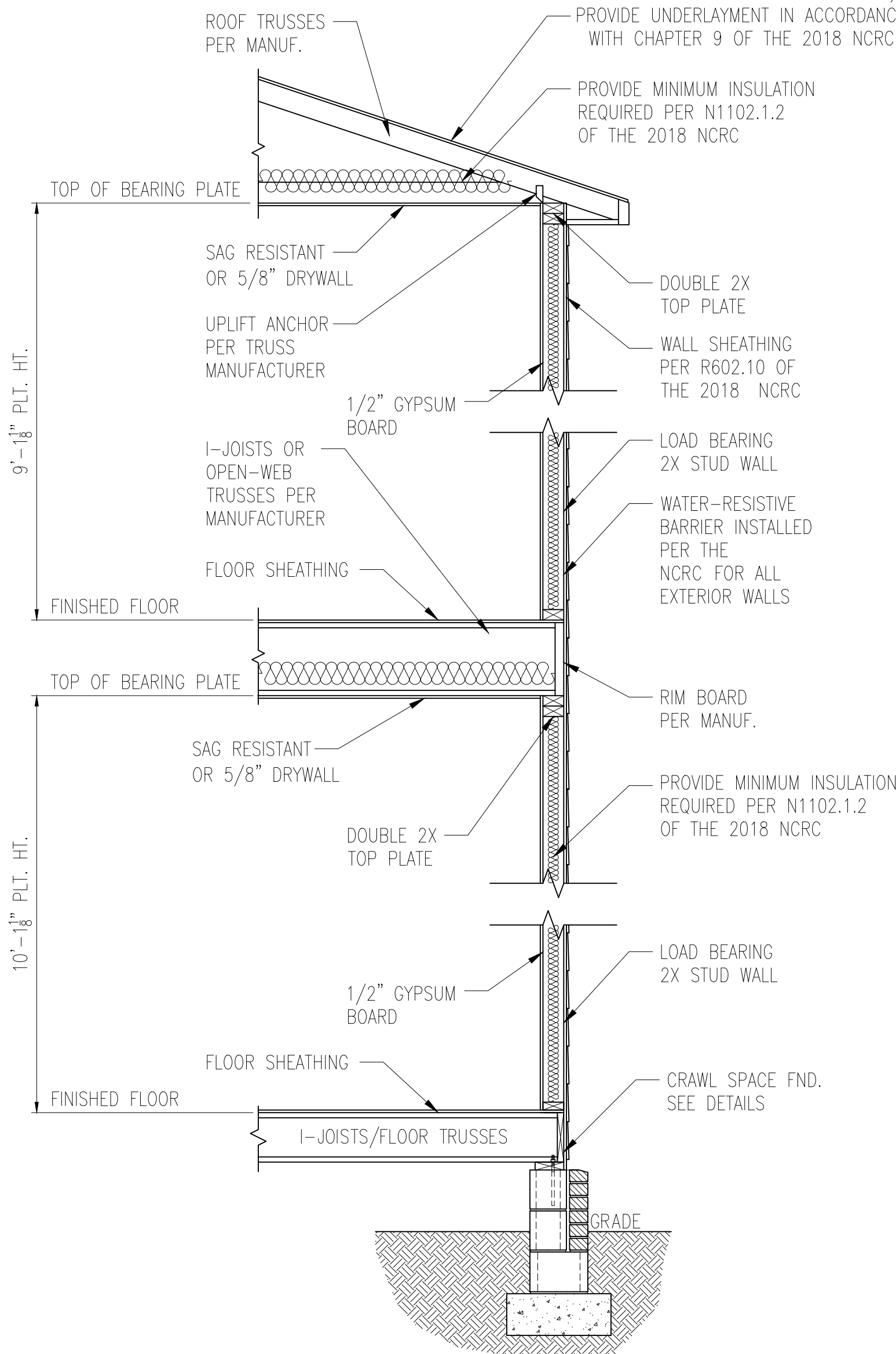
1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
4. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, 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 2018 NCRC

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



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

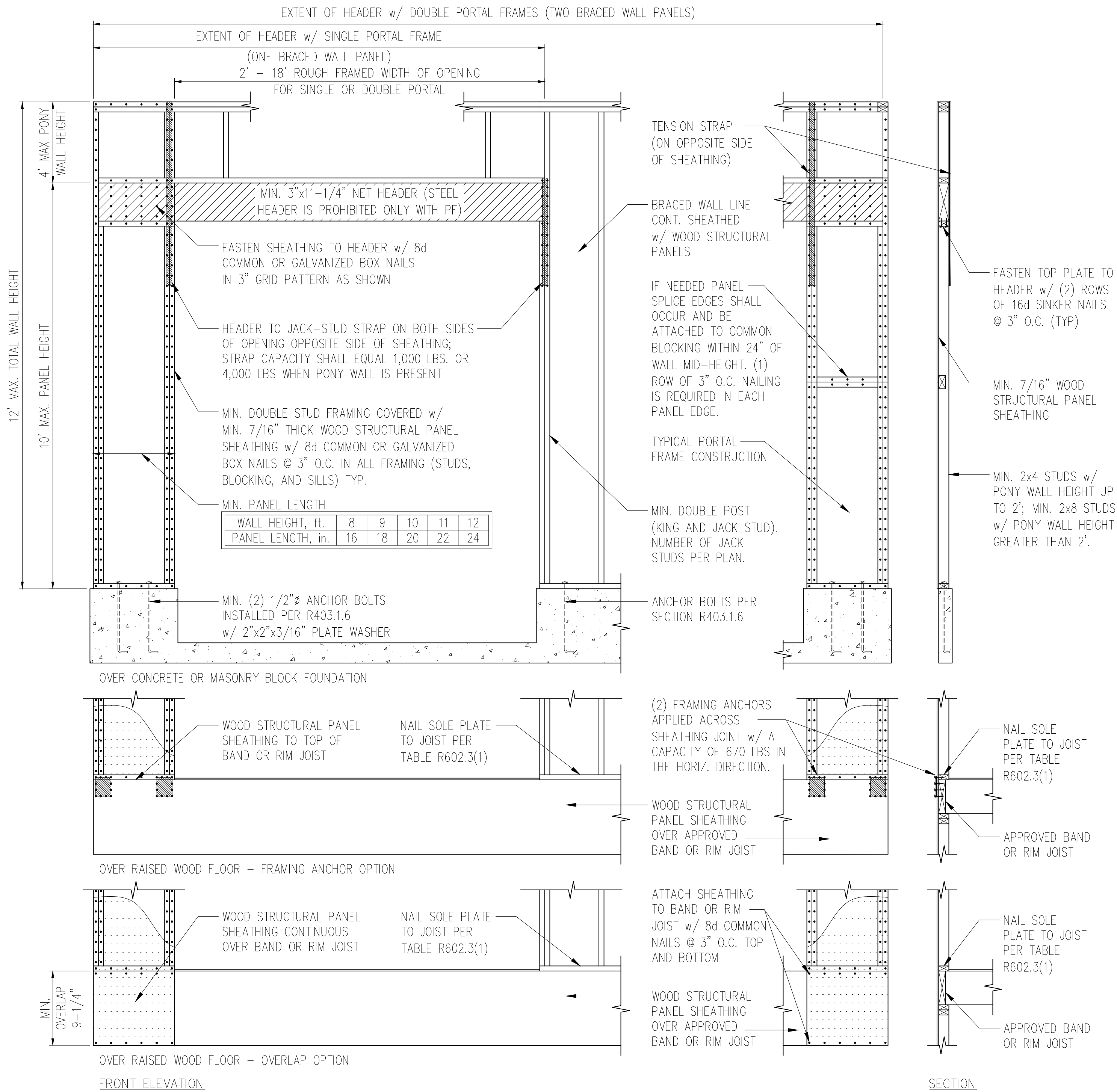
MIN. 3/8" ROOF SHEATHING SECURED IN
ACCORDANCE WITH FIGURE TABLE
R602.3(1) (SEE NOTE G FOR ULTIMATE
WIND SPEEDS GREATER THAN 120MPH).
PROVIDE UNDERLAYMENT IN ACCORDANCE
WITH CHAPTER 9 OF THE 2018 NCRC



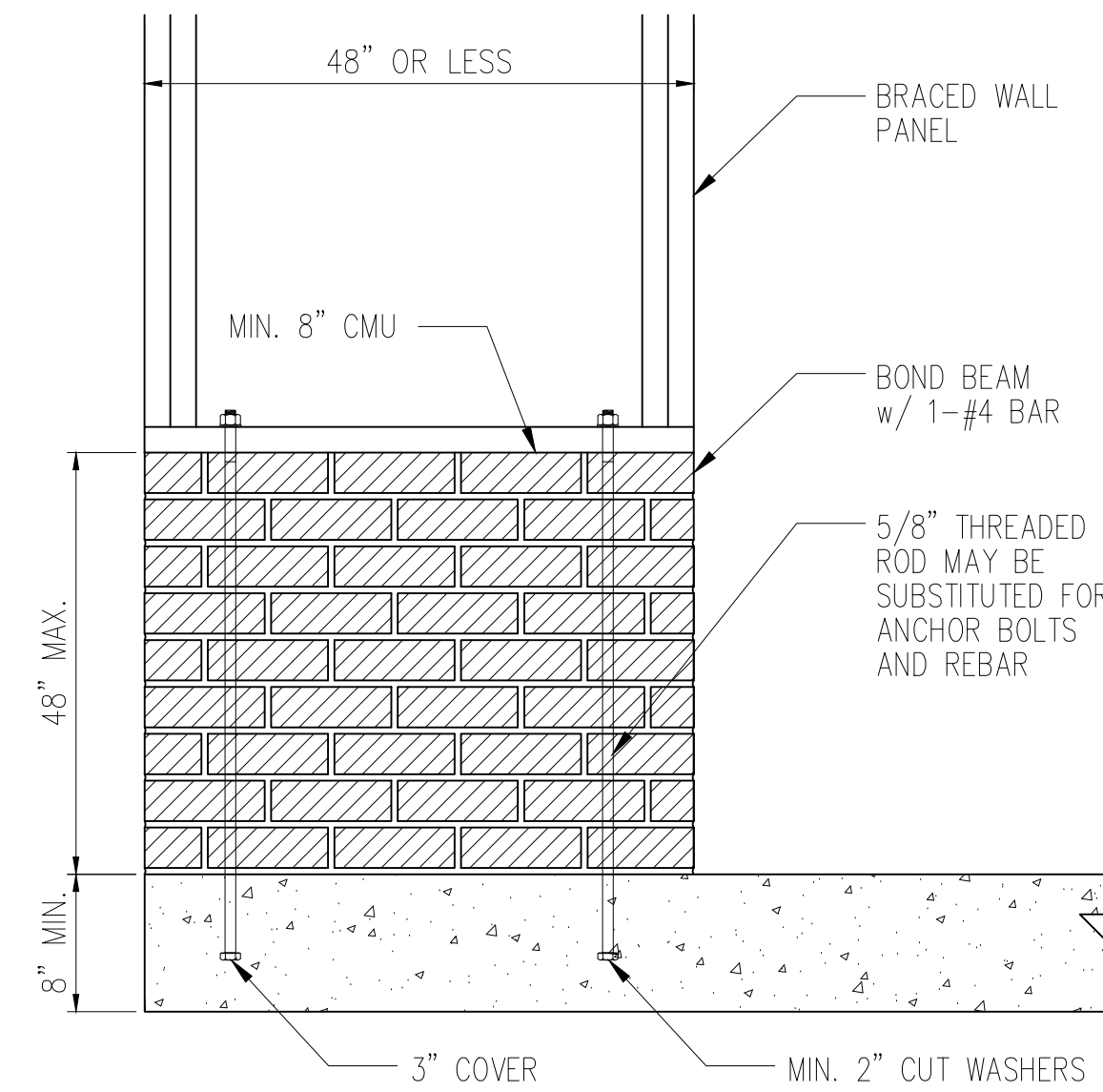
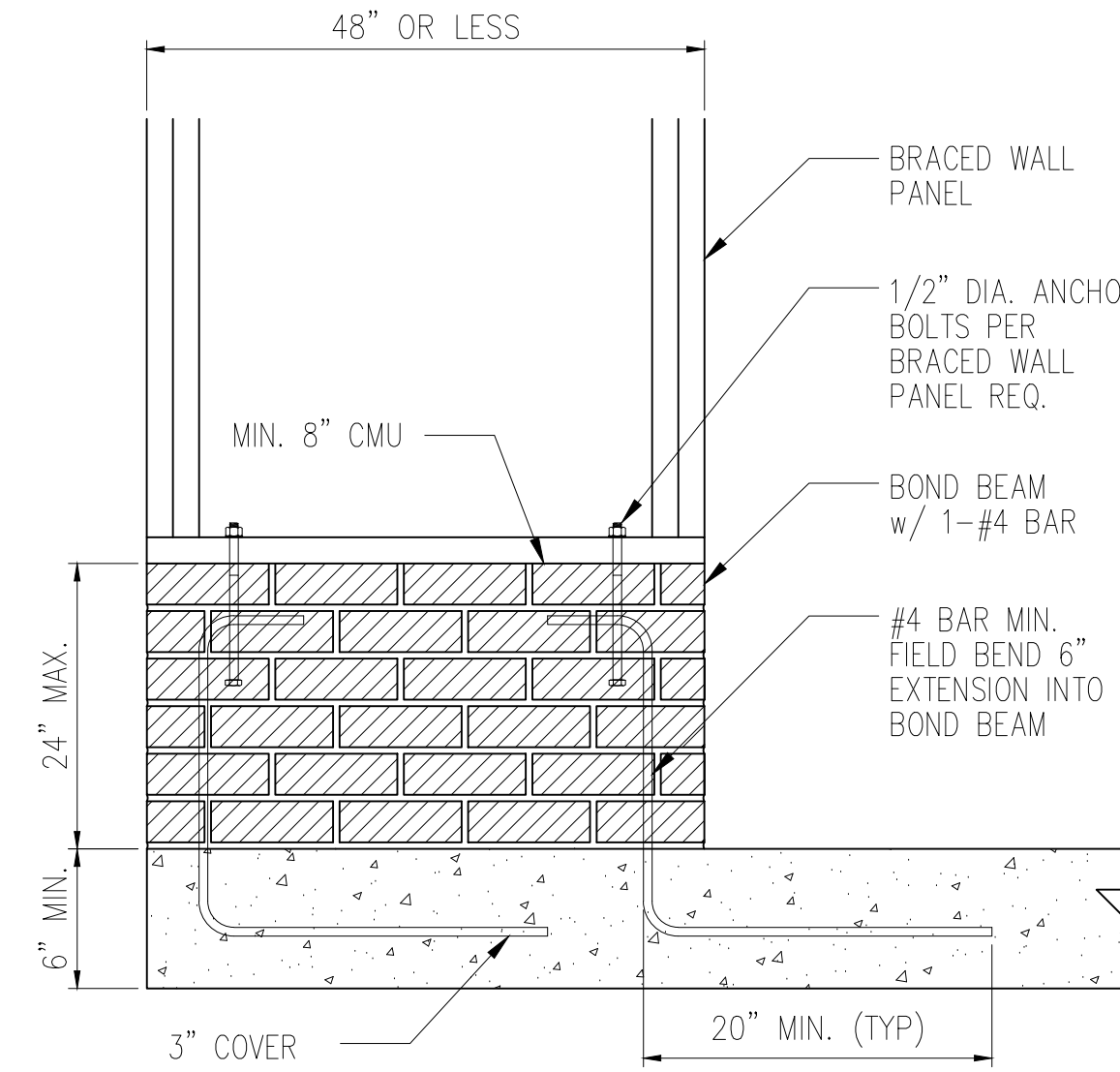
2 TYP. EXTERIOR LOAD BEARING WALL SECTION
D4c 3/4" = 1'-0"
-SIMILAR w/ BRICK AND STONE
-BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.
-MIN. 3/16"Ø WEEP HOLES @ 33" O.C.

NOTES:

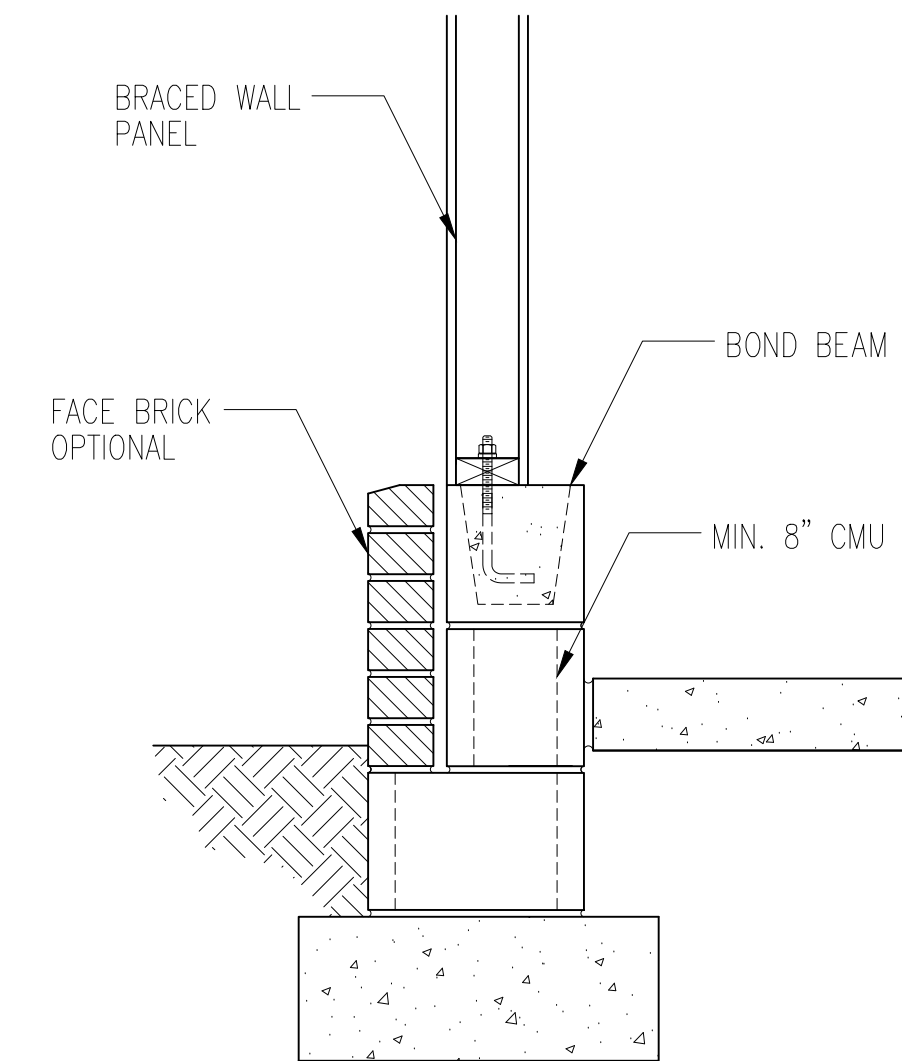
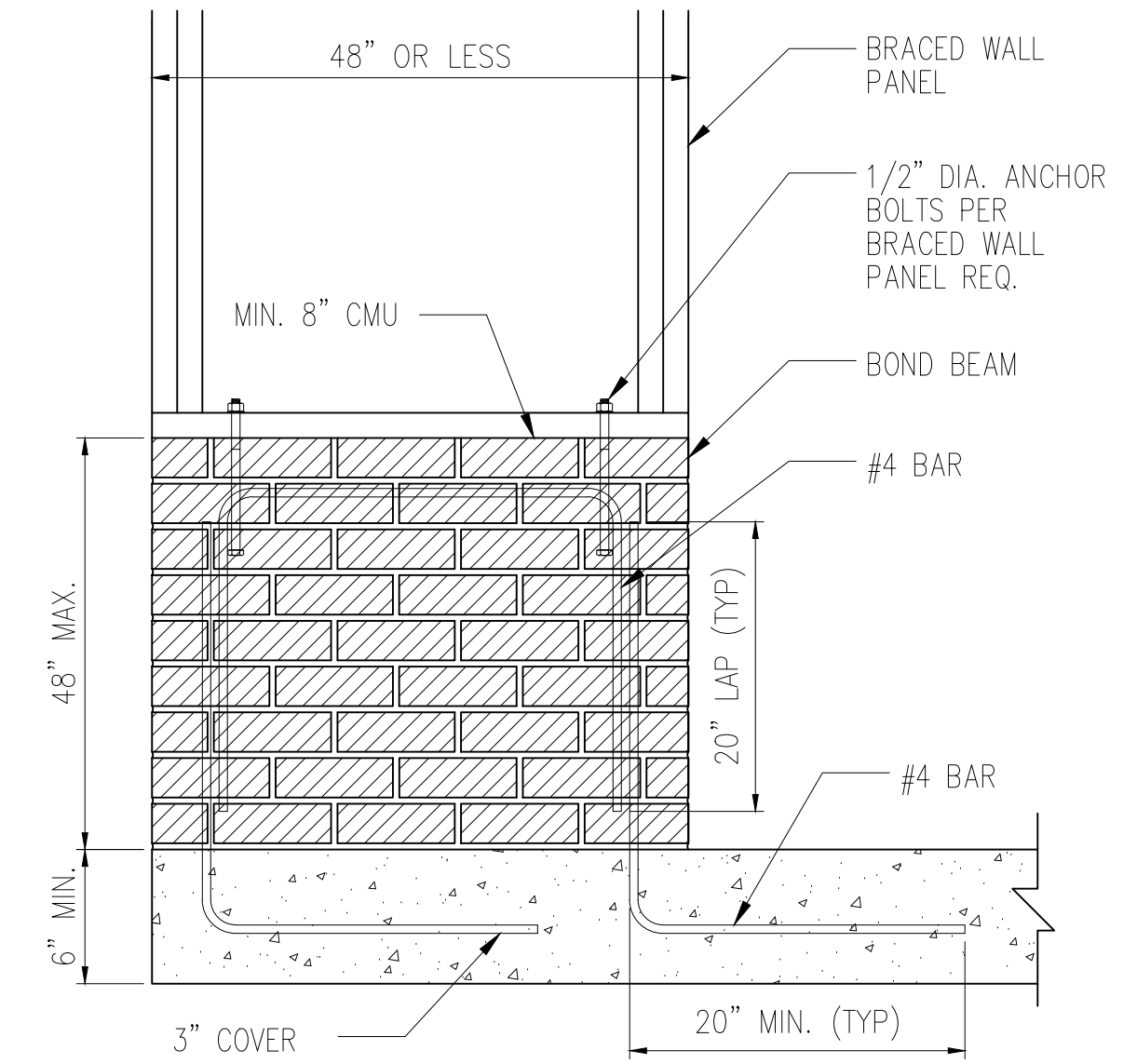
1. REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
4. REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT, DIMENSIONS, 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 NCRC



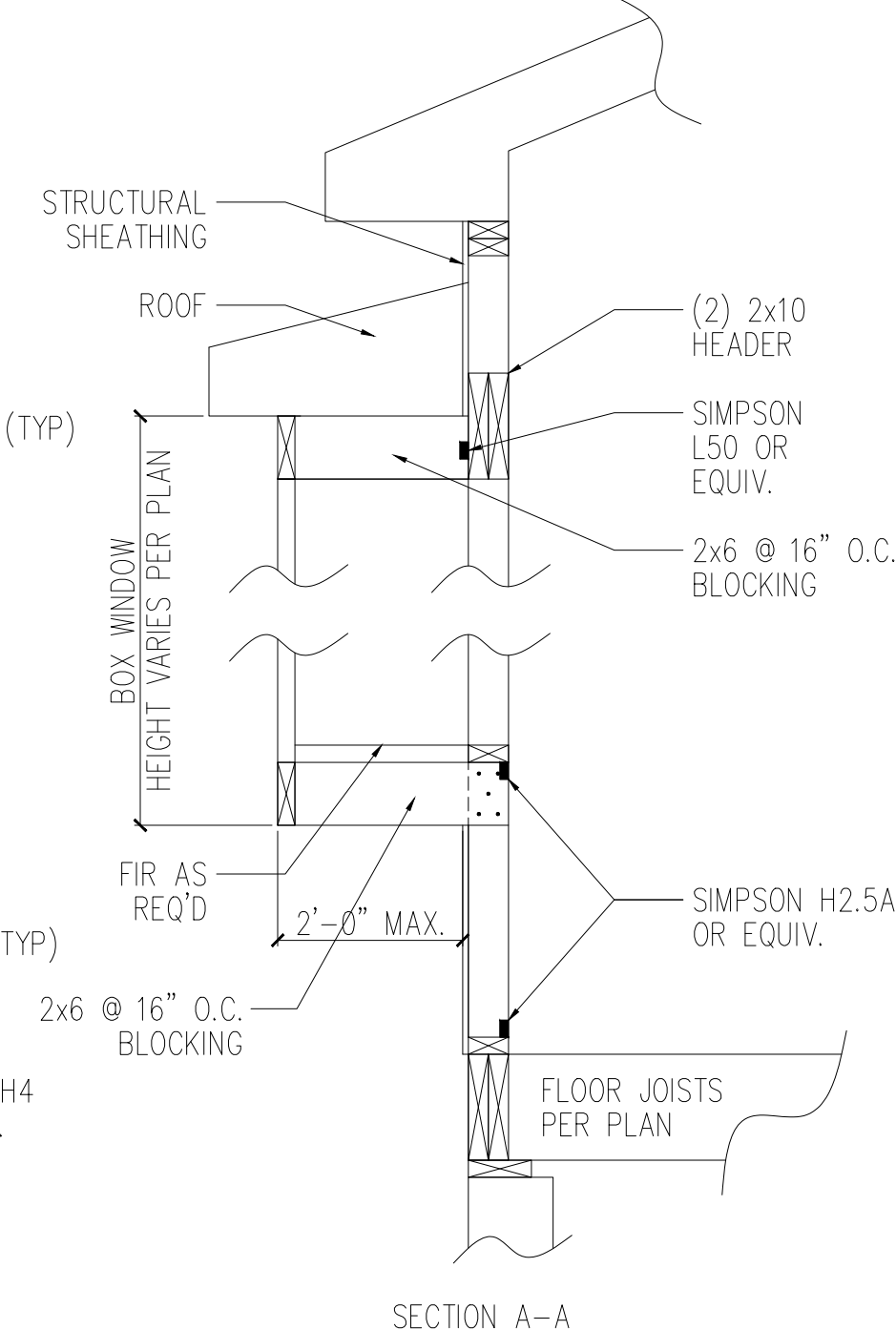
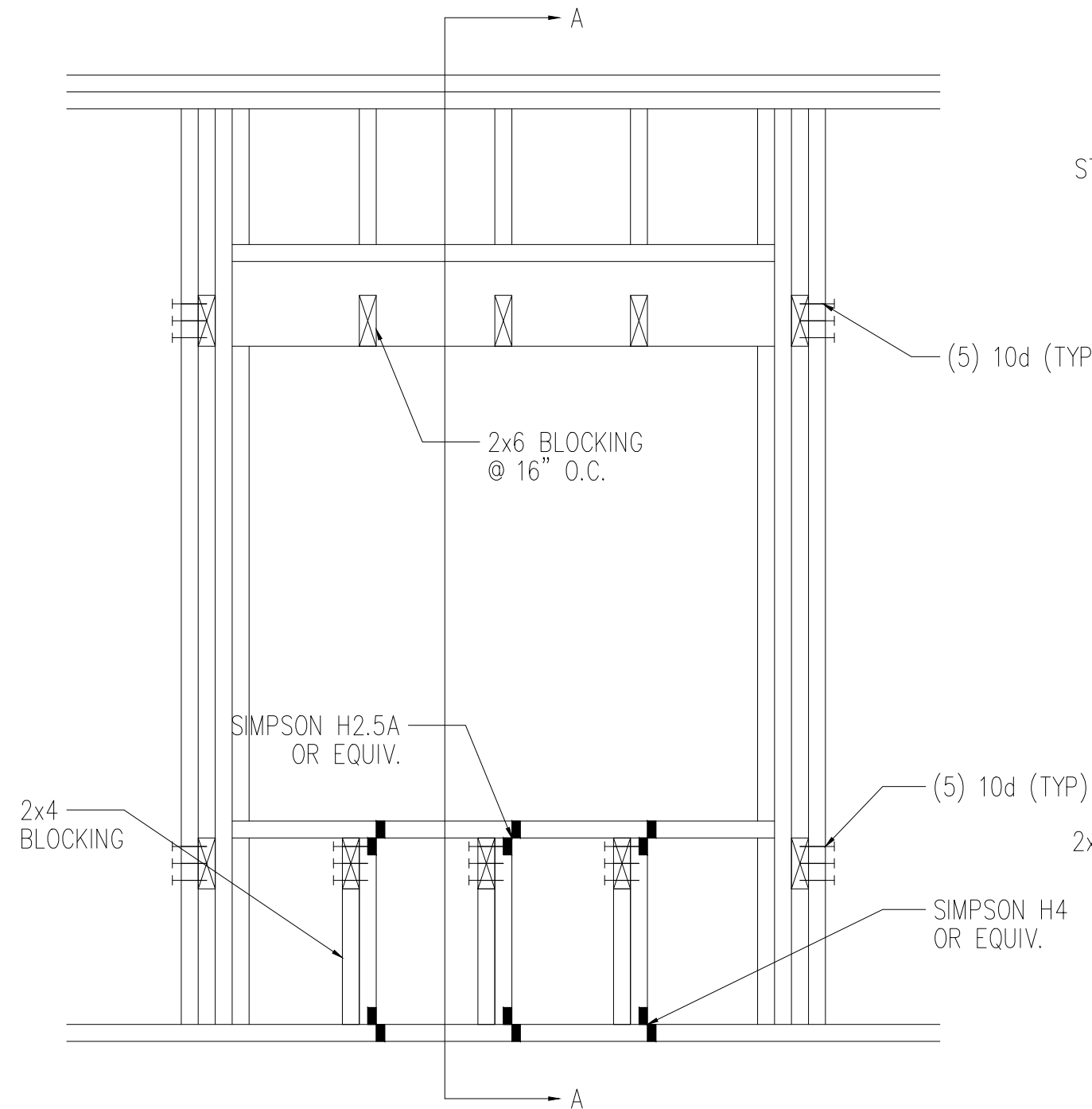
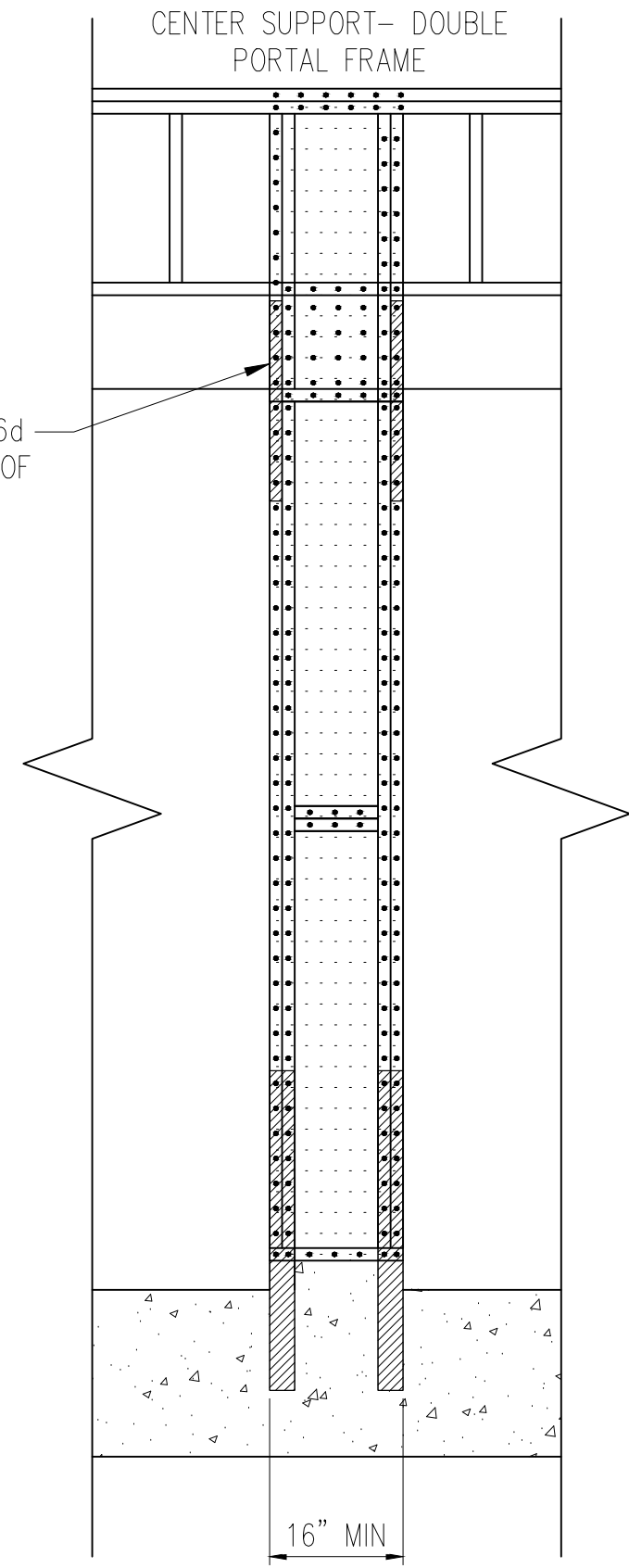
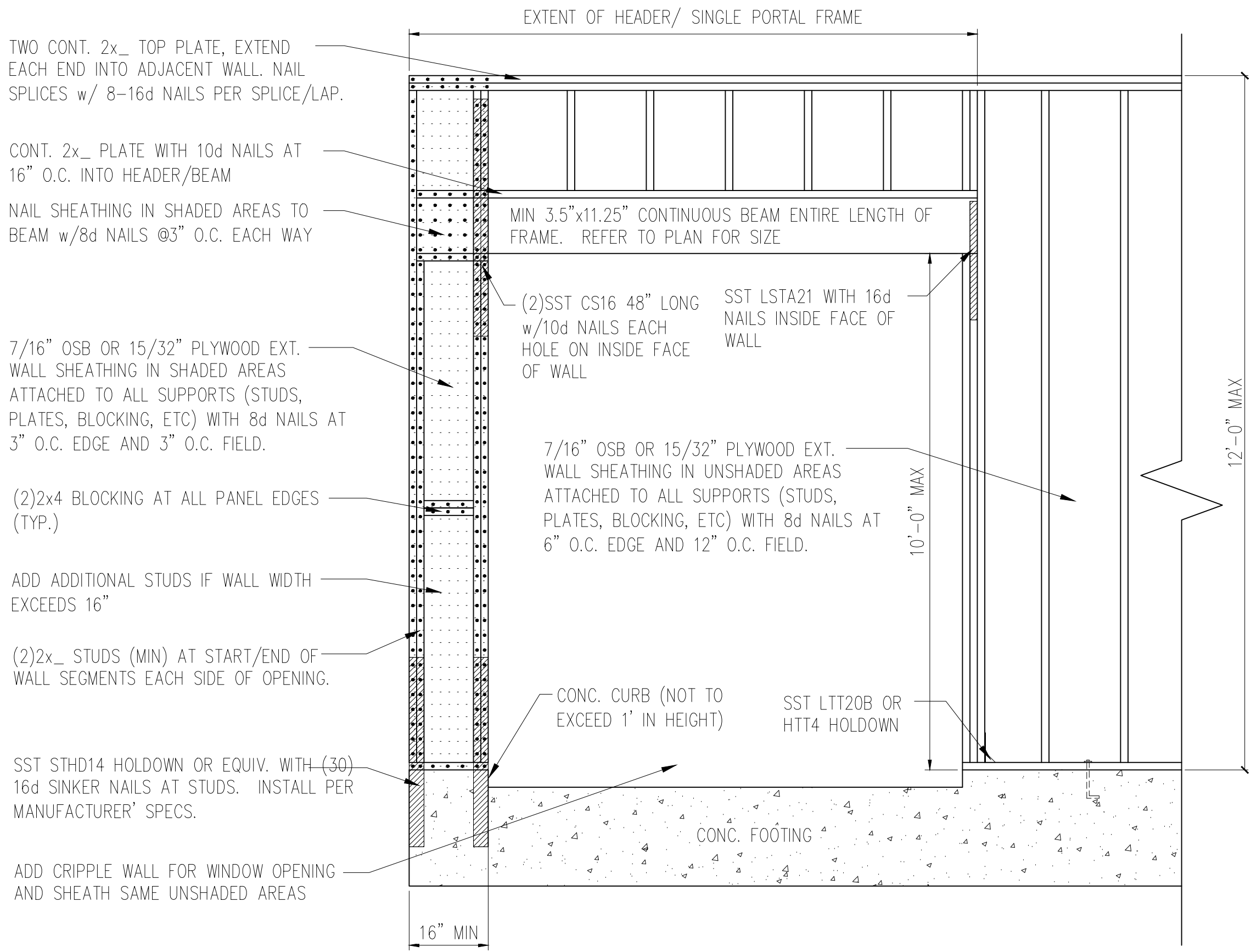
1 METHOD PF: PORTAL FRAME DETAIL
3/8" = 1'-0"



2 MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS
D1f NTS

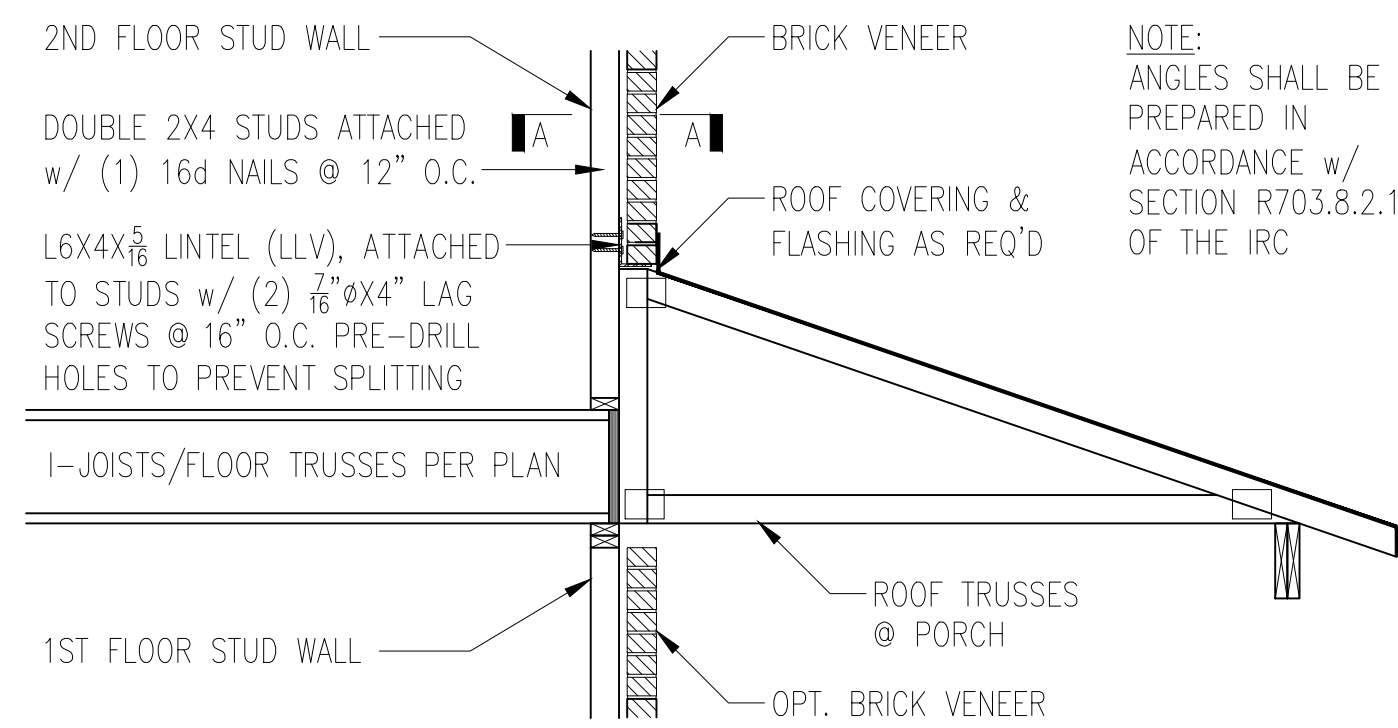


NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS

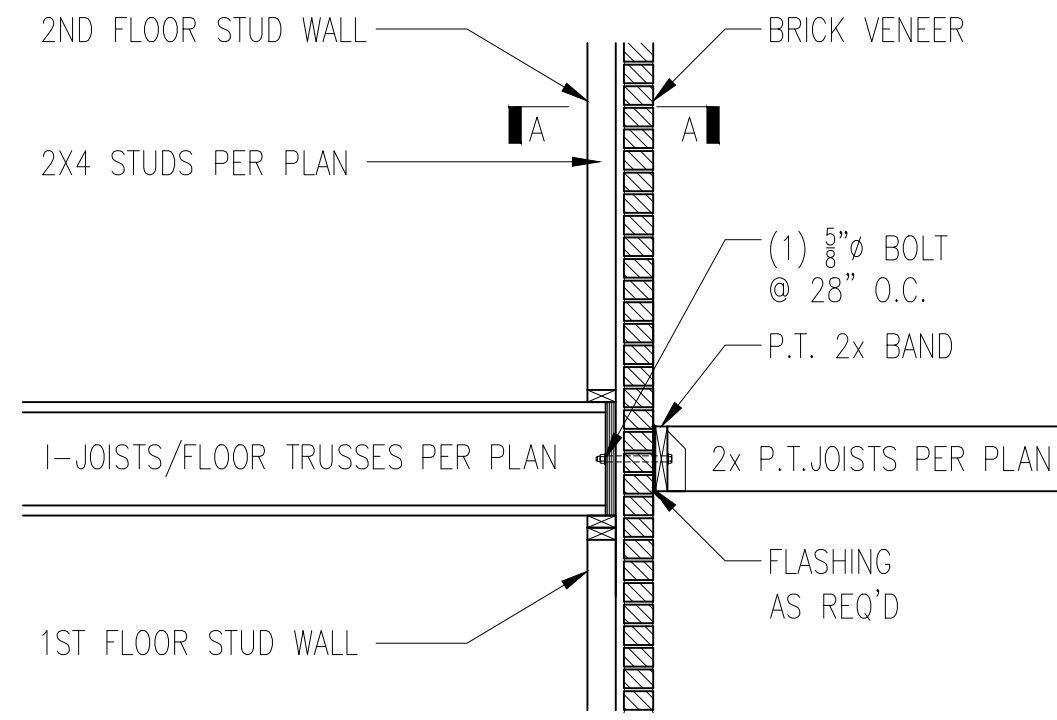
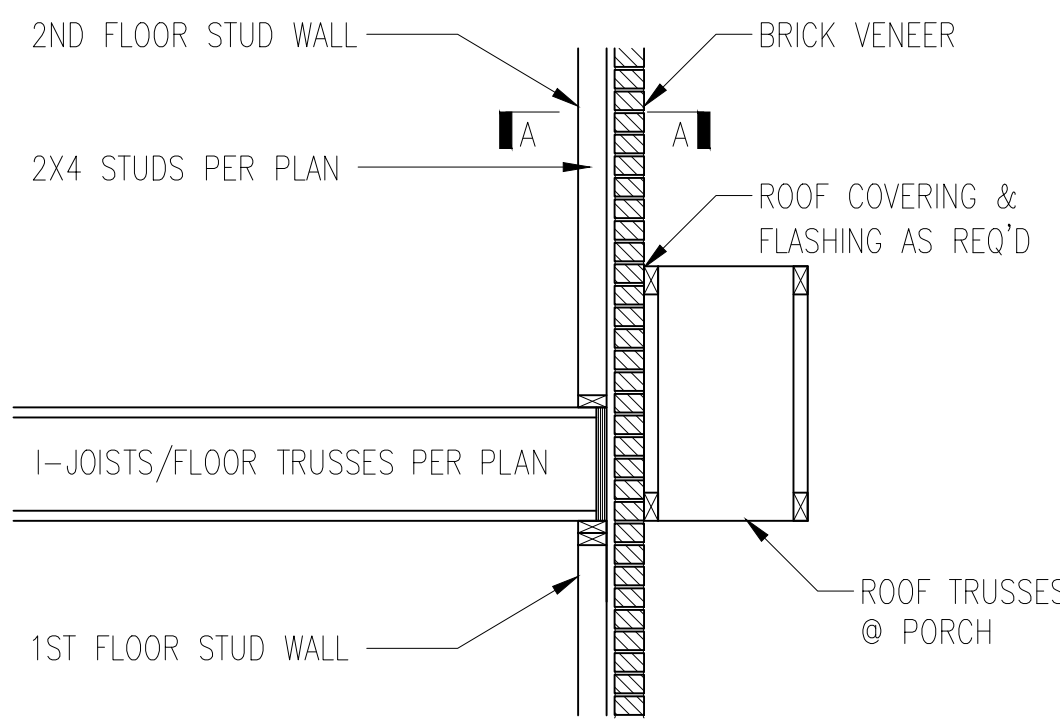
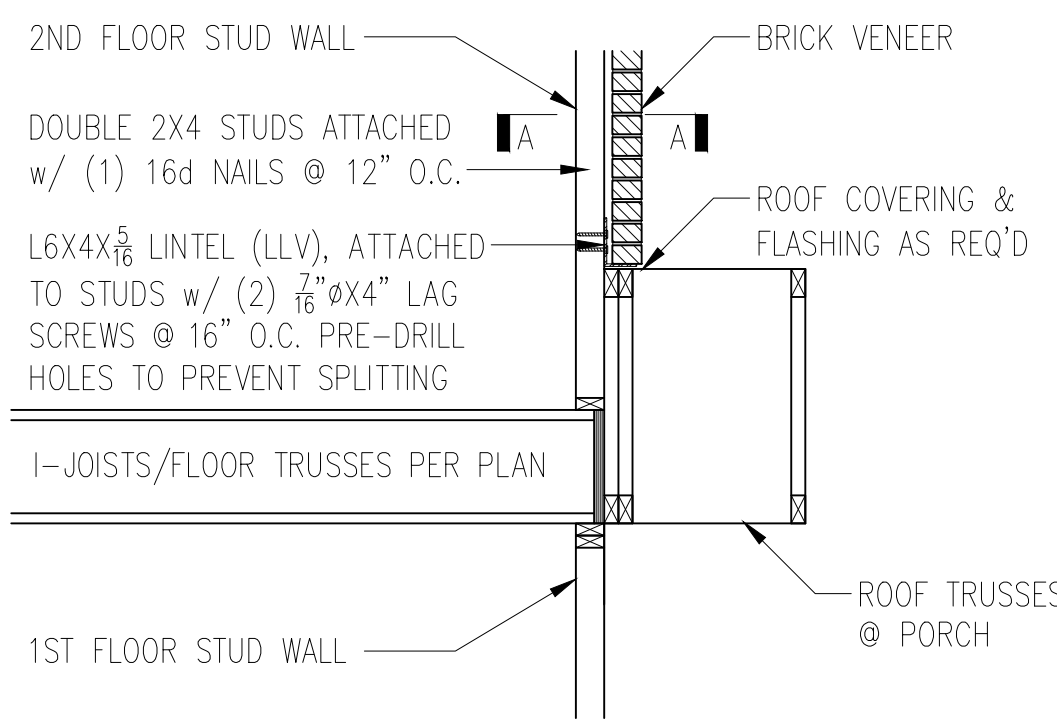


1 METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS
D2f 3/4" = 1'-0"

2 BOX WINDOW DETAIL
D2f N.T.S



NOTE:
ANGLES SHALL BE PREPARED IN ACCORDANCE w/ SECTION R703.8.2.1 OF THE IRC

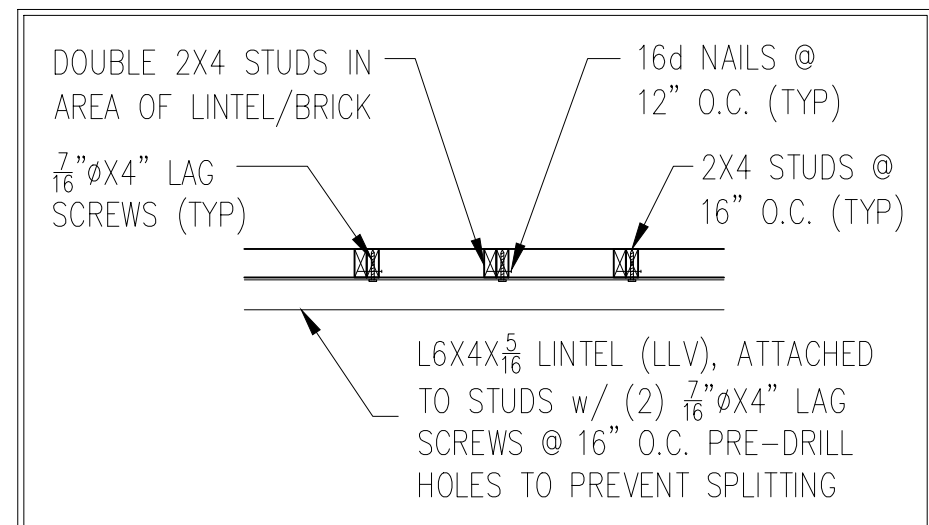


TRUSSES PERPENDICULAR TO STUD WALL

TRUSSES PARALLEL TO STUD WALL

TRUSSES PARALLEL TO STUD WALL w/ CONTINUOUS BRICK VENEER

3 BRICK SUPPORT ABOVE STORAGE/PORCH ROOF DETAIL
D2f NTS



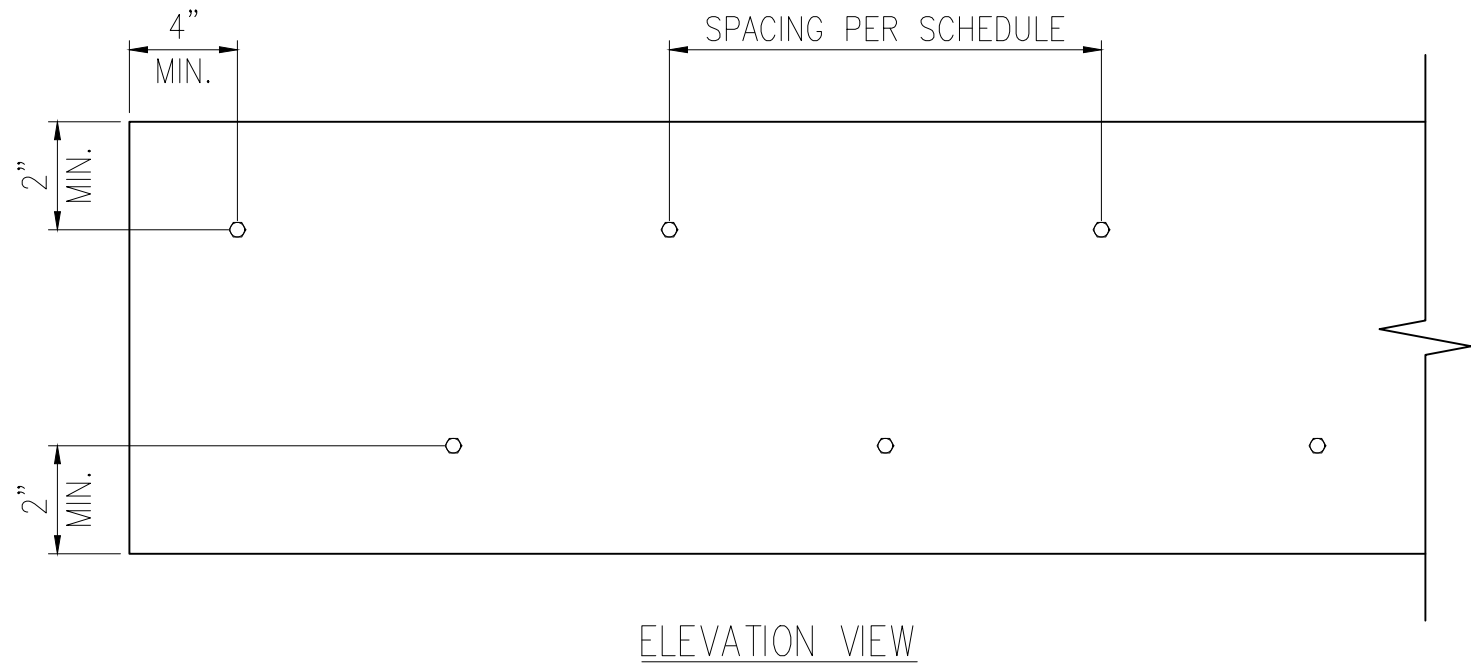
SECTION A-A
NTS

4 BALCONY JOIST ATTACHMENT
D2f NTS

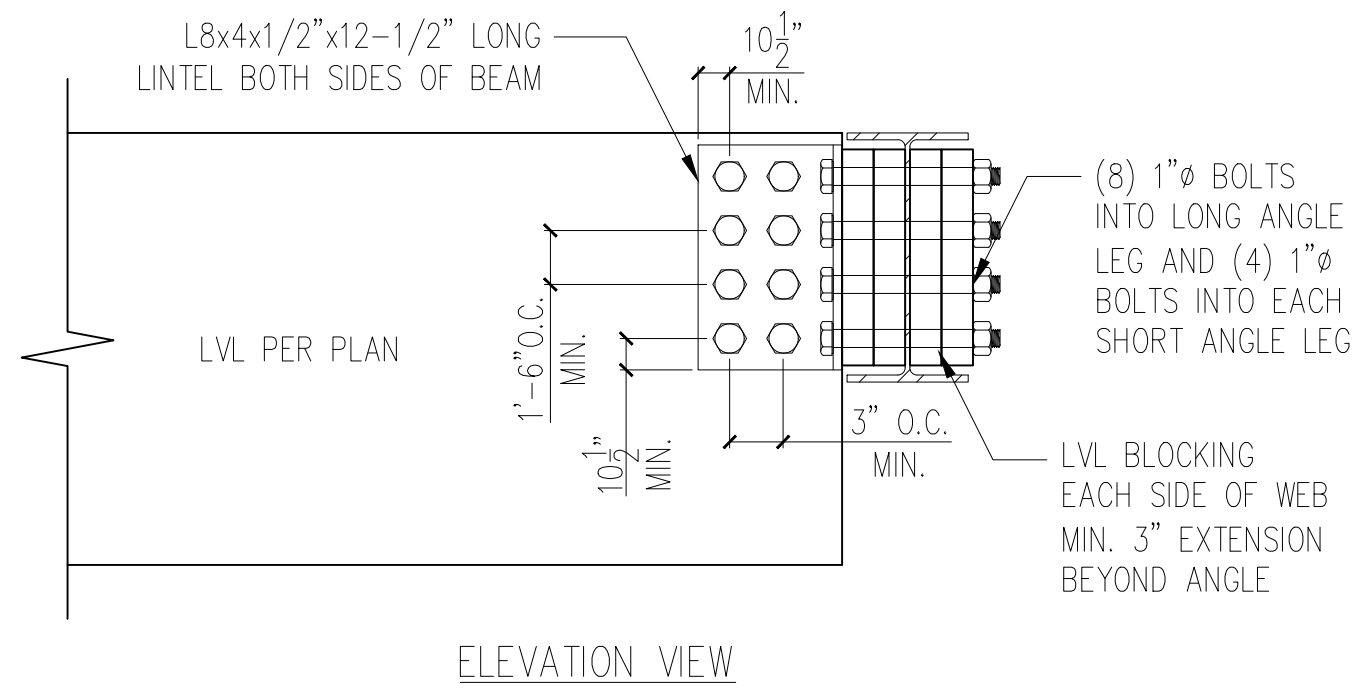
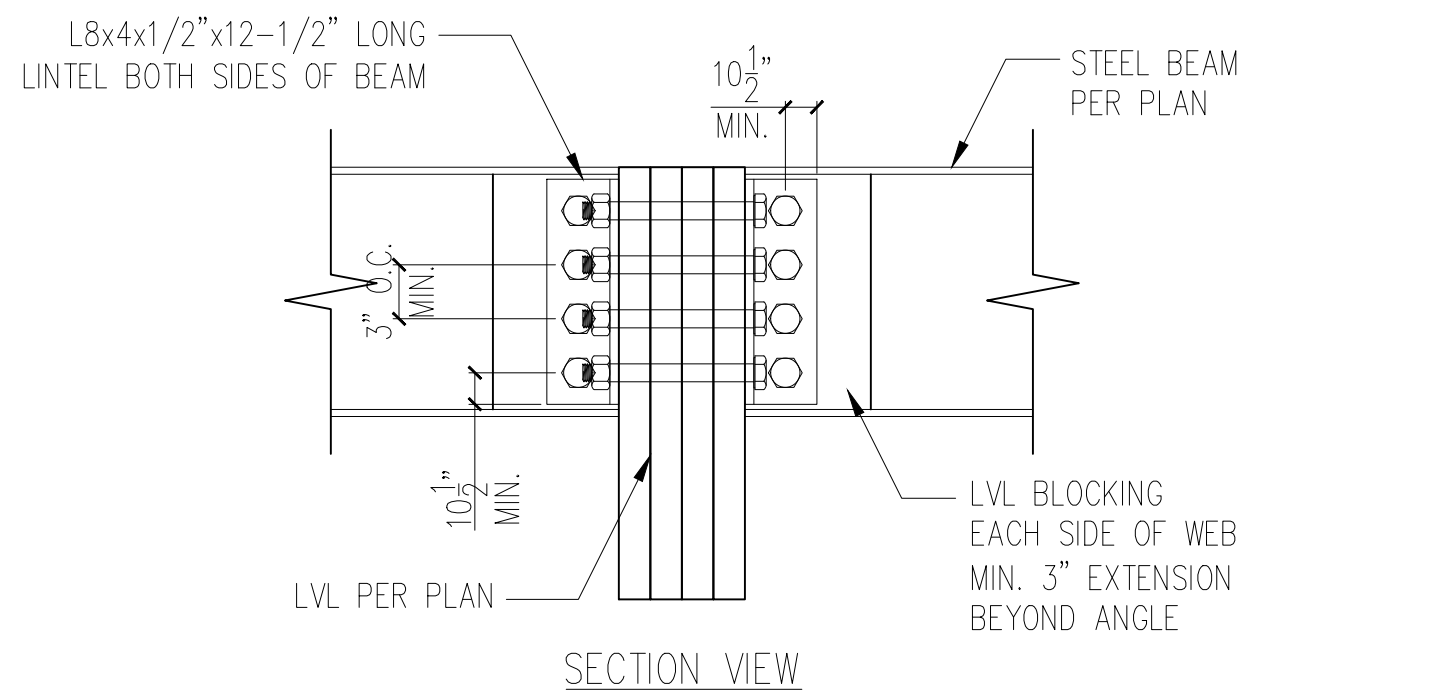
MINIMUM FASTENING
REQUIREMENTS FOR
TOP- AND SIDE-LOADED
MEMBERS

FASTENER TYPE	LVL DEPTH	3 1/2" WIDE	5 1/4" WIDE		7" WIDE		
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. (ES)	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 3/8" TrussLok		2 rows @ 24" o.c.	2 rows @ 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.		

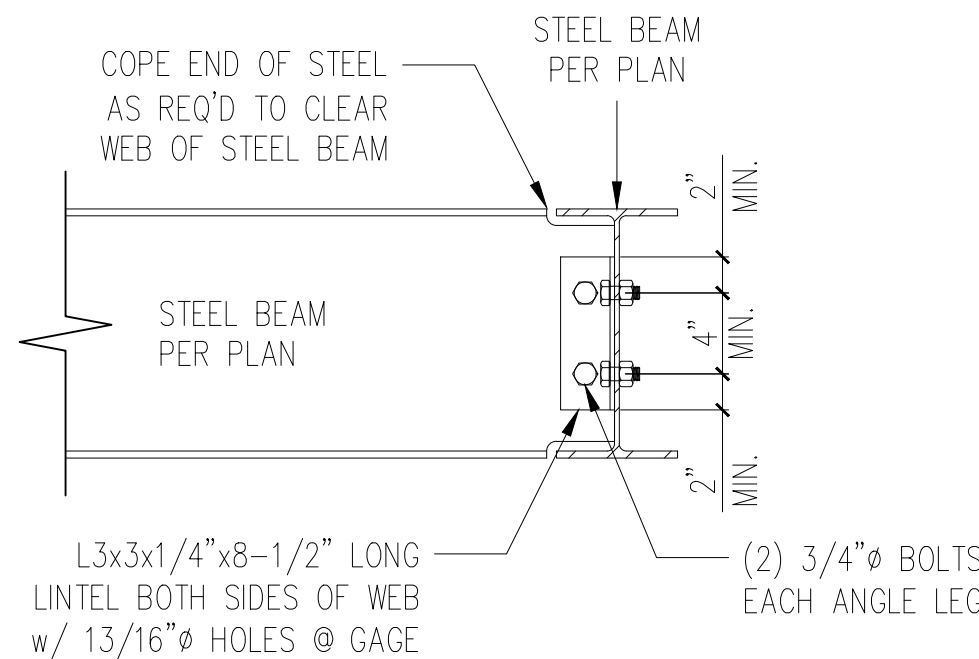
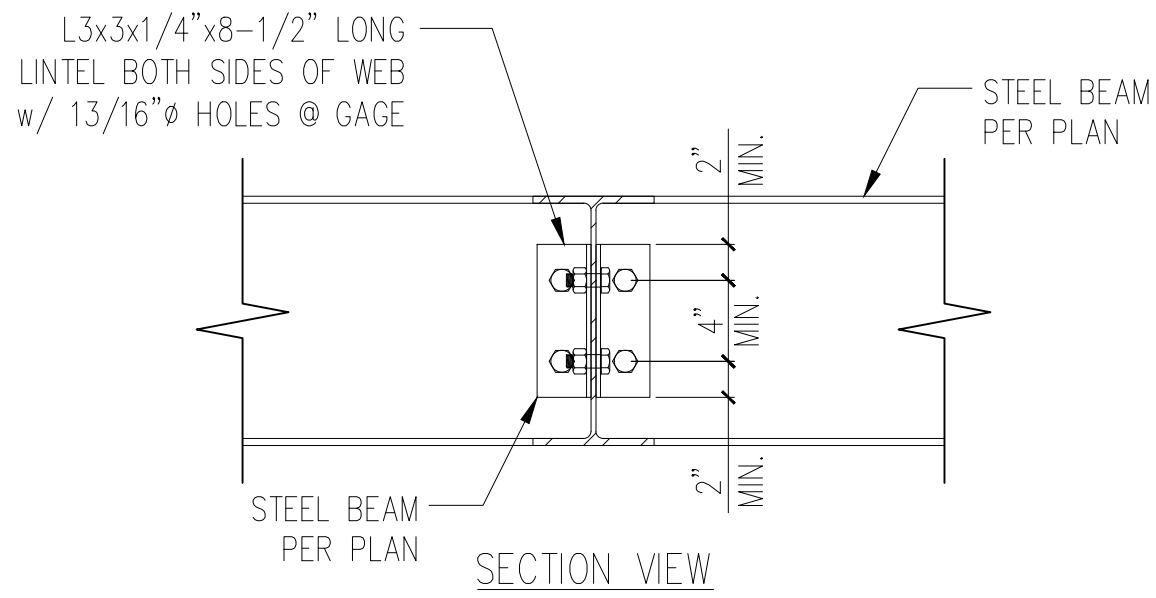
- NOTES:**
- All fasteners must meet the minimum requirements in the table above. Side-loaded multiple-ply members must meet the minimum fastening and side-loading capacity requirements given on page 48.
 - Minimum fastening requirements for depths less than 7 1/4" require special consideration. Please contact your technical representative.
 - Three general rules for staggering or offsetting for a certain fastener schedule:
(1) if staggering or offsetting is not referenced, then none is required;
(2) 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
(3) 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).



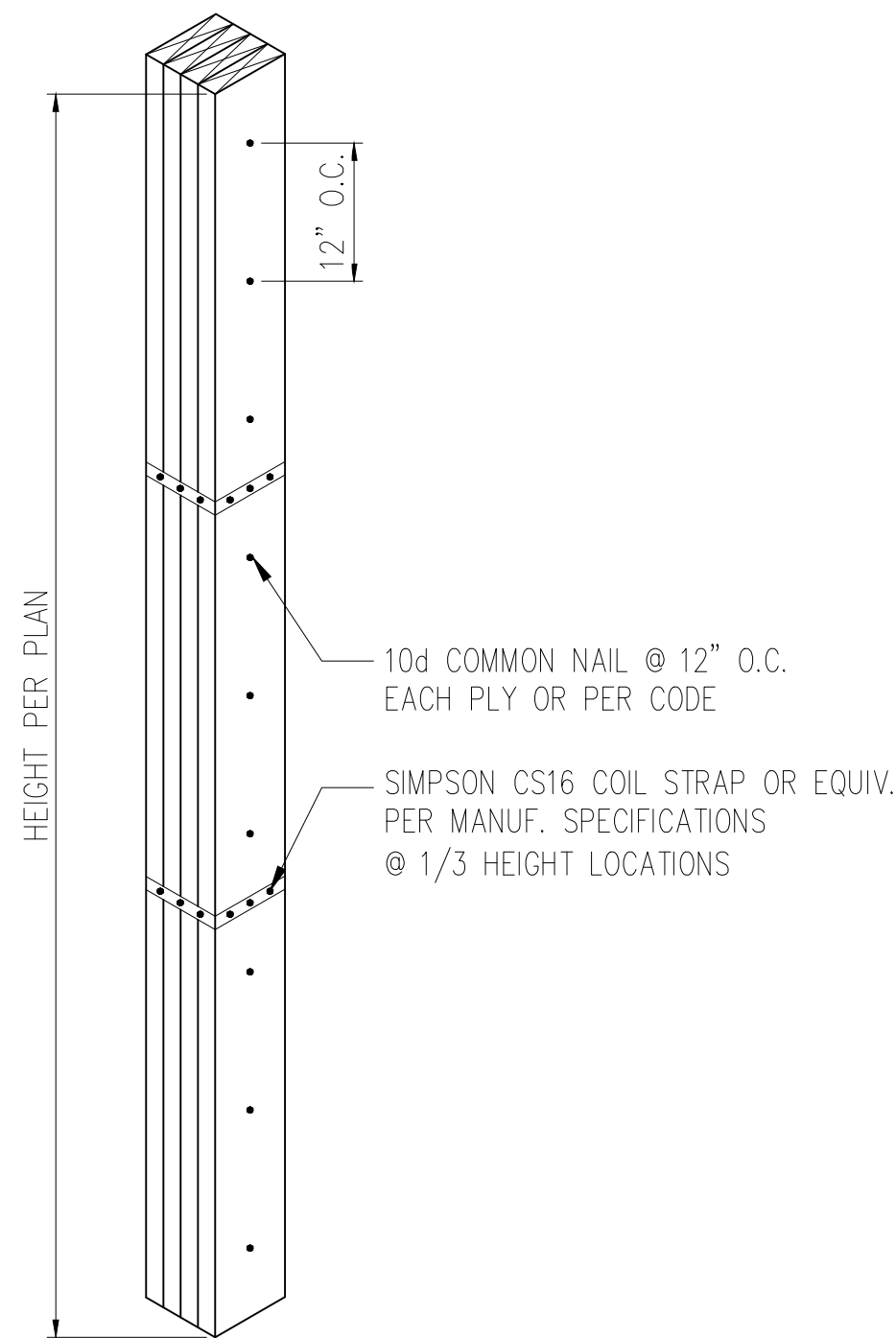
1 MULTI-PLY BEAM CONNECTION DETAIL
D3f N.T.S.



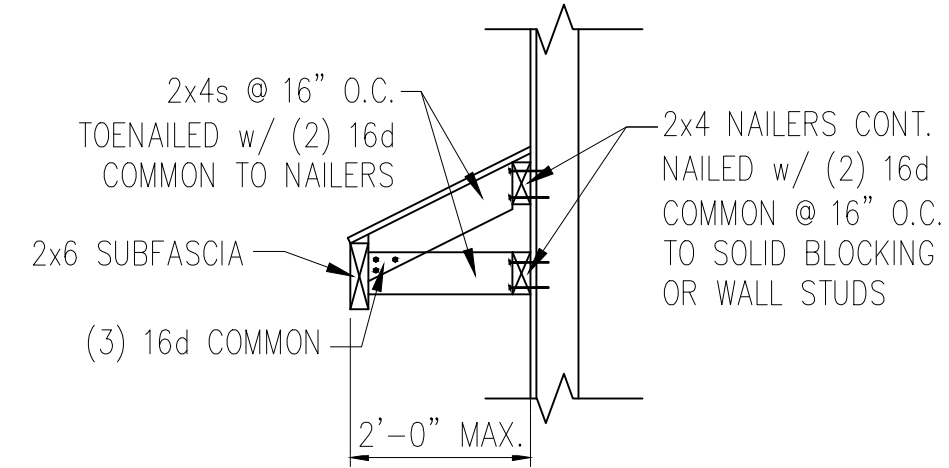
3 LVL TO STEEL DETAIL
D3f N.T.S.



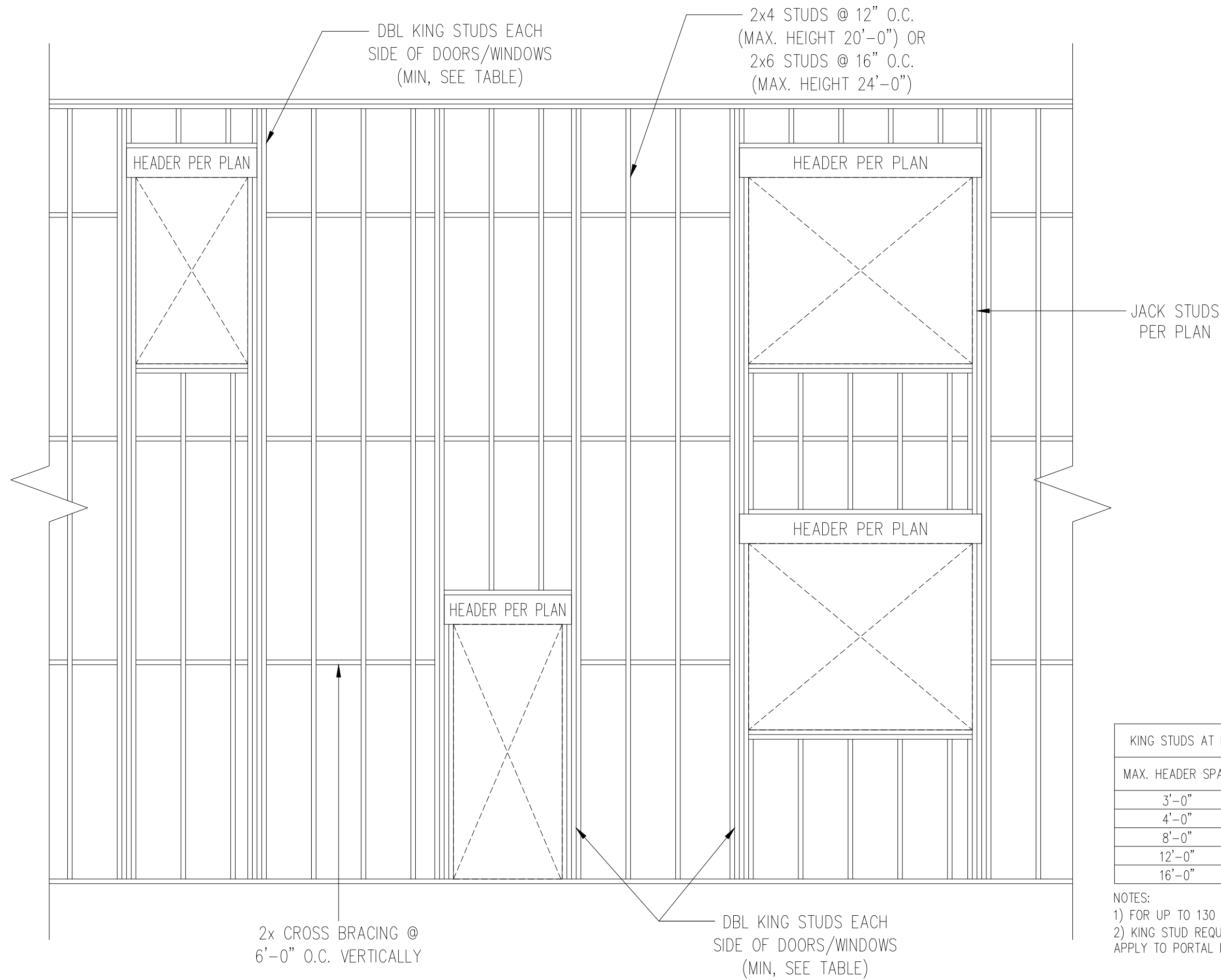
4 STEEL TO STEEL DETAIL
D3f N.T.S.



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



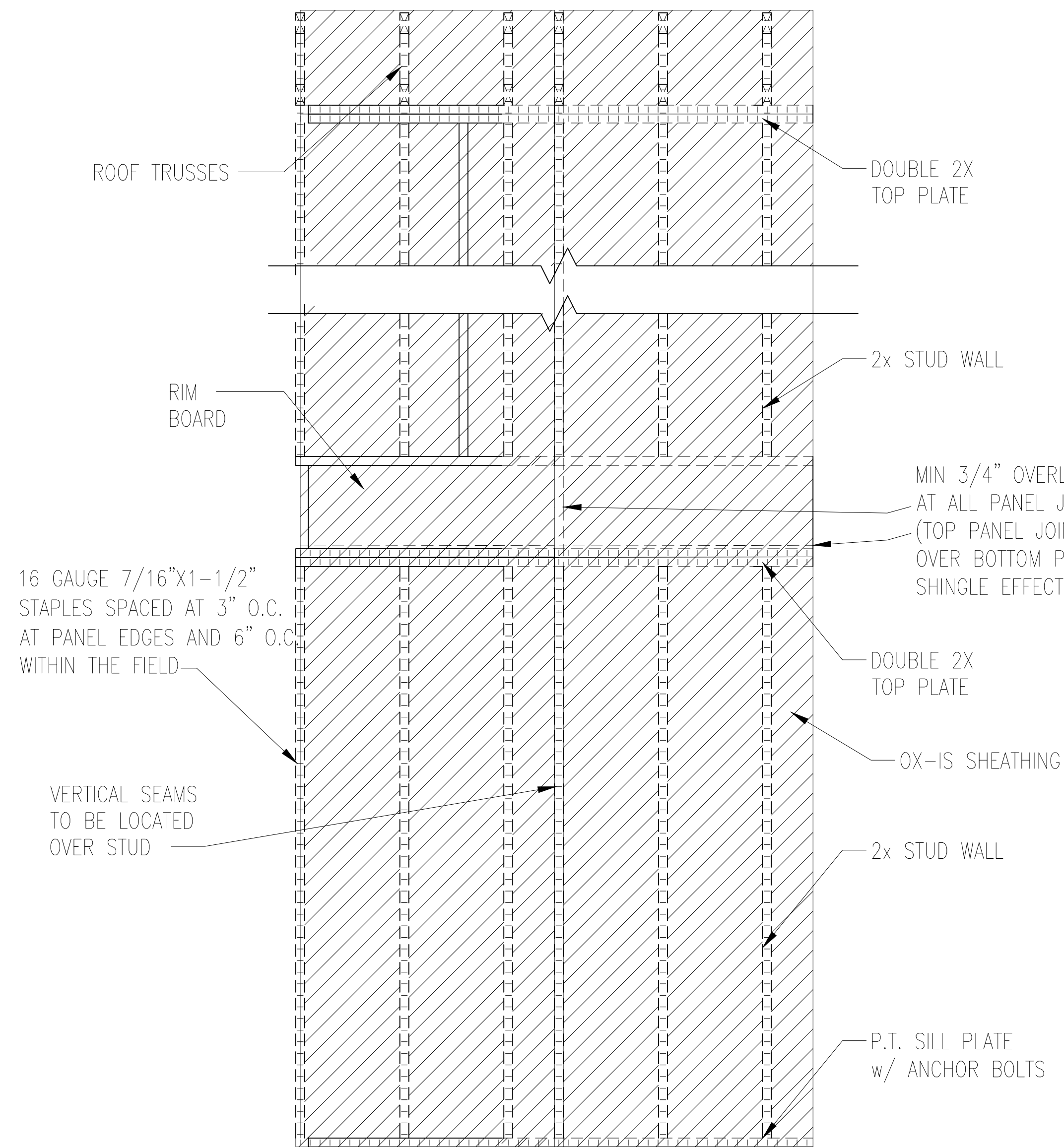
5 GABLE ROOF RETURN
D3f N.T.S.



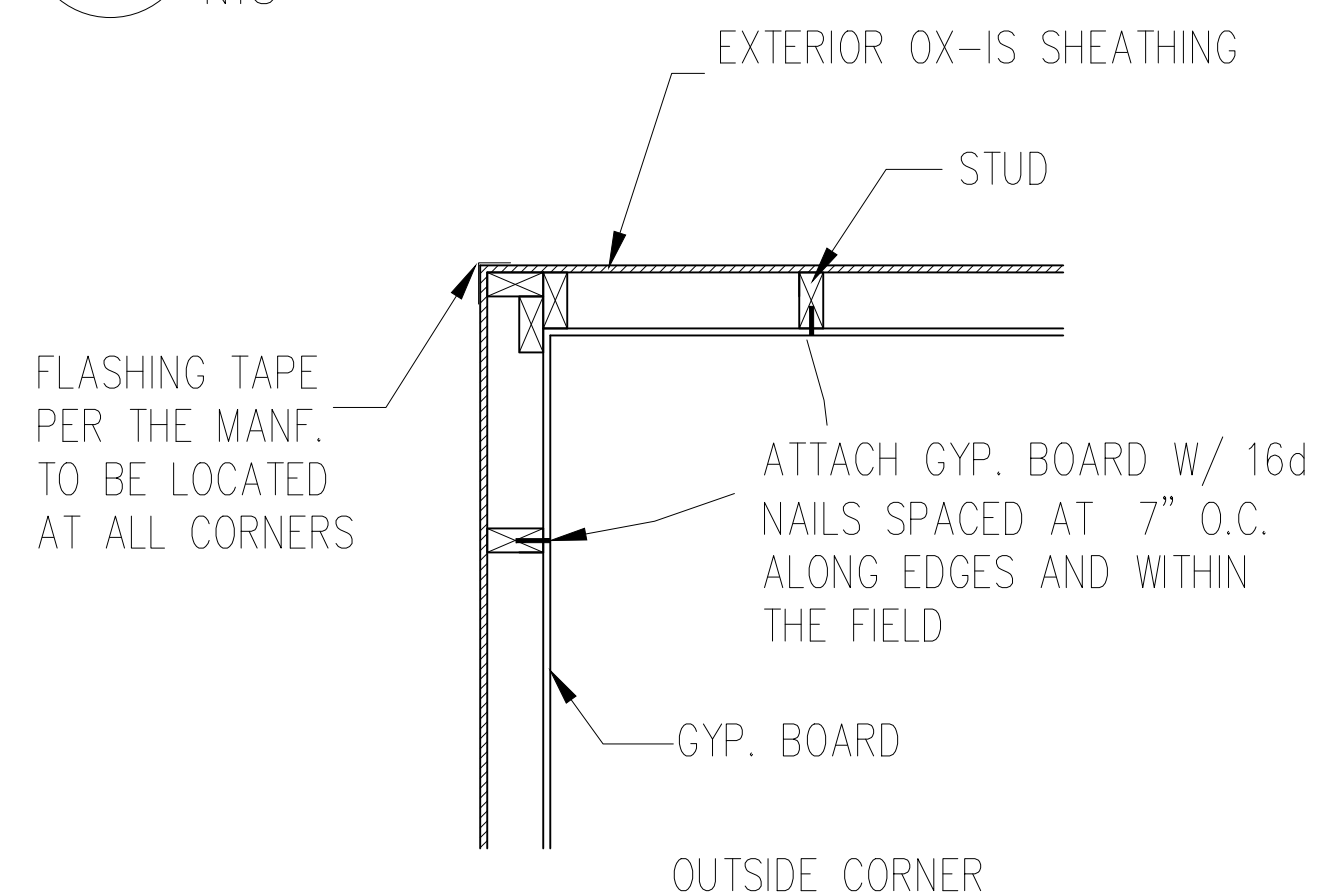
KING STUDS AT EACH END OF HEADERS	
MAX. HEADER SPAN	STUDS (MIN.)
3'-0"	1
4'-0"	2
8'-0"	3
12'-0"	5
16'-0"	6

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

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



1 TYP. WALL BRACING
D4f NTS



2 TYP. EXTERIOR CORNER ATTACHMENT
D4f NTS

TWO CONT. 2x_ TOP PLATE, EXTEND EACH END INTO ADJACENT WALL. NAIL SPLICES WITH 8-16d NAILS PER SPLICE/LAP.

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

OX-IS EXT. WALL SHEATHING IN SHADED AREAS ATTACHED TO ALL SUPPORTS (STUDS, PLATES, BLOCKING, ETC) WITH 16 GA. STAPLES AT 3" O.C. EDGE AND 3" O.C. FIELD 1" MIN. EMBEDMENT.

(2)2x4 BLOCKING AT ALL PANEL EDGES (TYP.)

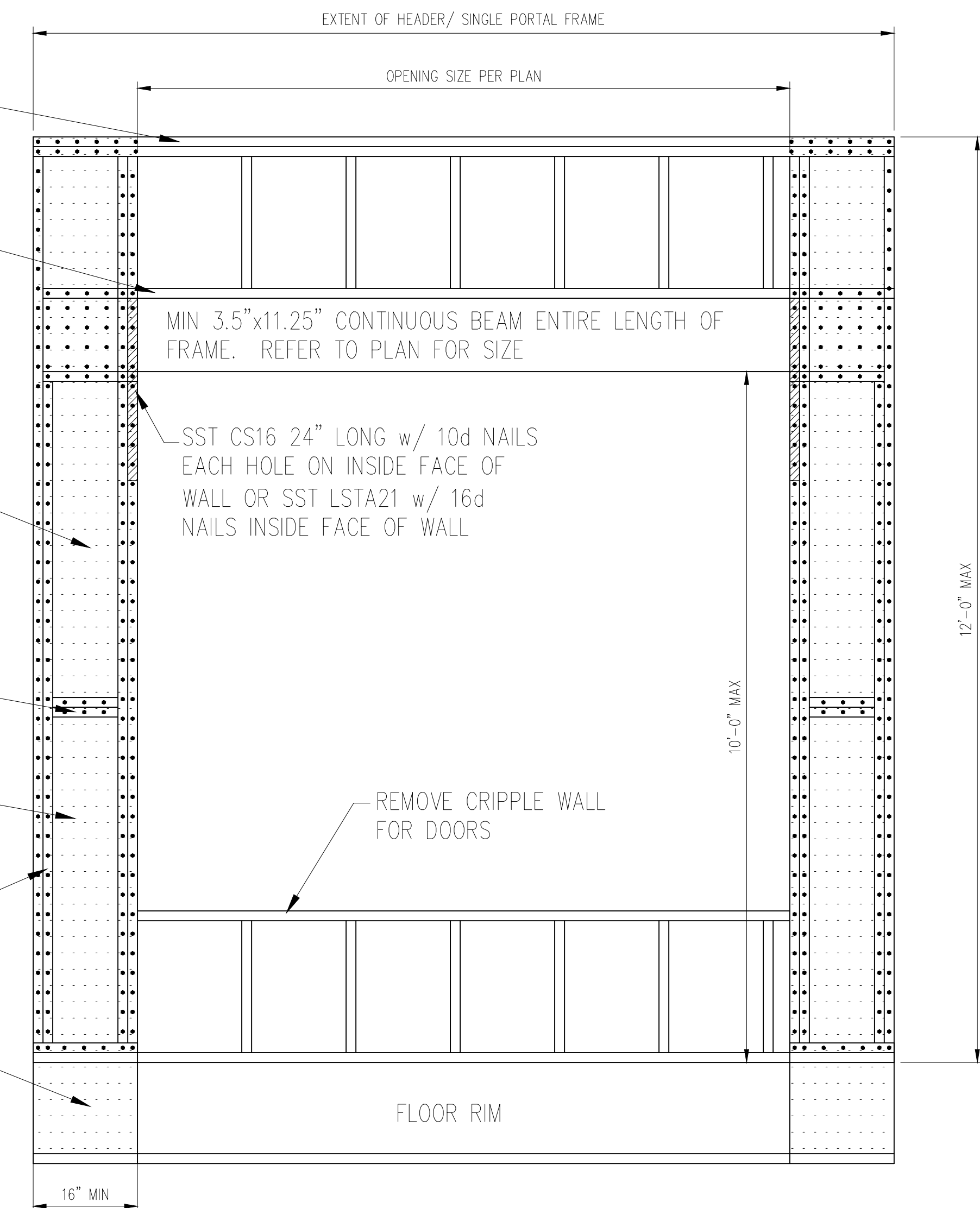
ADD ADDITIONAL STUDS IF WALL WIDTH EXCEEDS 16"

(2)2x_ STUDS (MIN) AT START/END OF WALL SEGMENTS EACH SIDE OF OPENING.

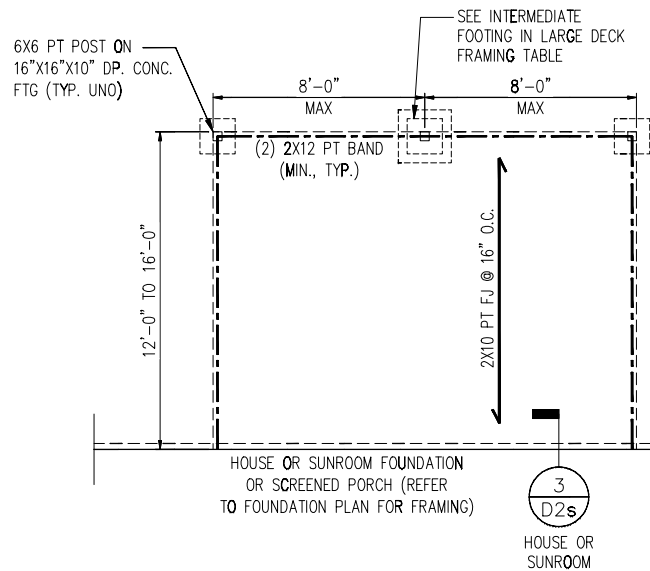
EXTEND OX-IS SHEATHING TO COVER FLOOR RIM AND ATTACH TO SILL PLATE ON FOUNDATION OR TOP PLATE OF WALL BELOW. SAME ATTACHMENT AS ALL OTHER SHADED AREAS.

2x4 P.T. PLATE WITH (2)1/2" DIA ANCHOR BOLTS EMBEDDED IN CONC. 7" MIN. WITH 3/16"x2"x2" PLATE WASHERS

NOTES:
-OX-IS MAY BE INSTALLED IN LIEU OF OSB FOR CS-WSP AND CS-PF BRACING METHODS SHOWN ON THE BRACING PLAN.
BRACED WALLS SHALL BE INSTALLED PER LENGTHS SHOWN ON THE SEALED PLANS.
-16 GA. STAPLES MAY BE SUBSTITUTED WITH 0.113-INCH DIAMETER (3/8" HEAD OR 2" CAP) NAILS WITH MINIMUM 1" EMBEDMENT.
-STAPLES MAY RUN PARALLEL WITH WOOD GRAIN OF FRAMING STUDS AT SHEATHING SEAMS.
-WHERE 3/4" OVERLAP IS NOT INSTALLED, CONTRACTOR MAY COVER SEAM WITH 5" BUTYL FLASHING TAPE.
-FLASH WINDOWS AND DOORS PER MANF.
-THE DETAILS ABOVE ARE LIMITED TO 130 MPH WIND ZONES.



3 METHOD PF: PORTAL FRAME DETAIL
D4f NTS

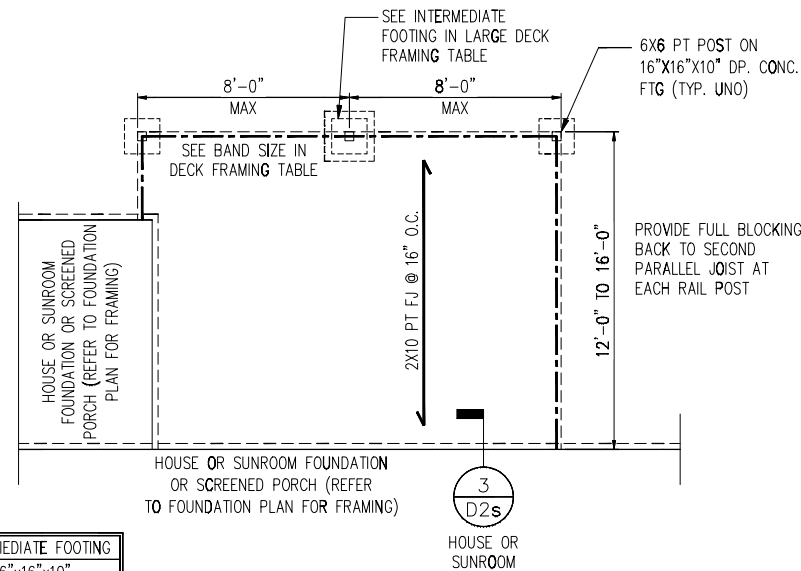


TYP. LARGE REAR DECK PLAN

N.T.S.

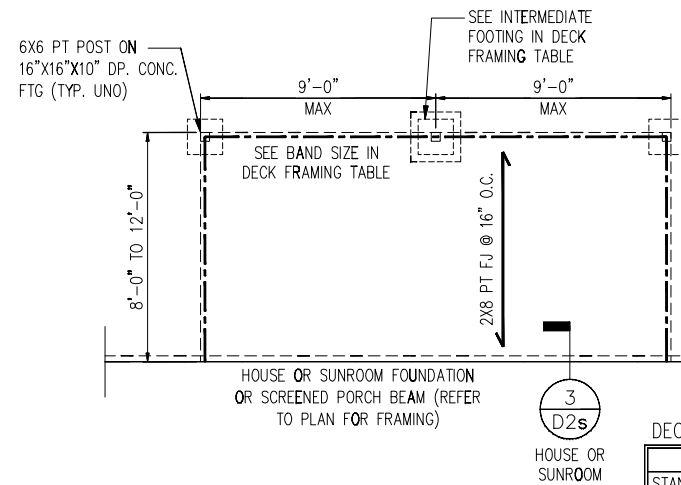
PROVIDE FULL BLOCKING BACK TO SECOND PARALLEL JOIST AT EACH RAIL POST

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



TYP. LARGE SIDE DECK PLAN

N.T.S.



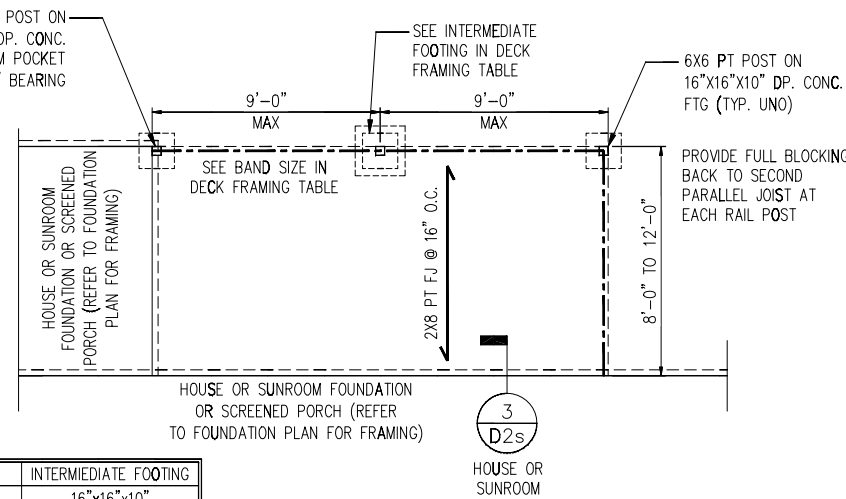
TYP. REAR DECK PLAN

N.T.S.

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

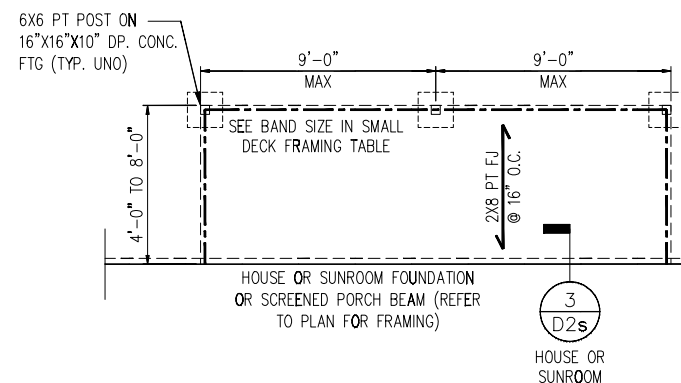
DECK FRAMING		
	BAND SIZE*	INTERMEDIATE FOOTING
STANDARD	(2) 2X10	16"x16"x10"
W/ 8'X8' GRILL DECK	(3) 2X10	24"x24"x10"

* SOUTHERN PINE #2 PT LUMBER



TYP. SIDE DECK PLAN

N.T.S.



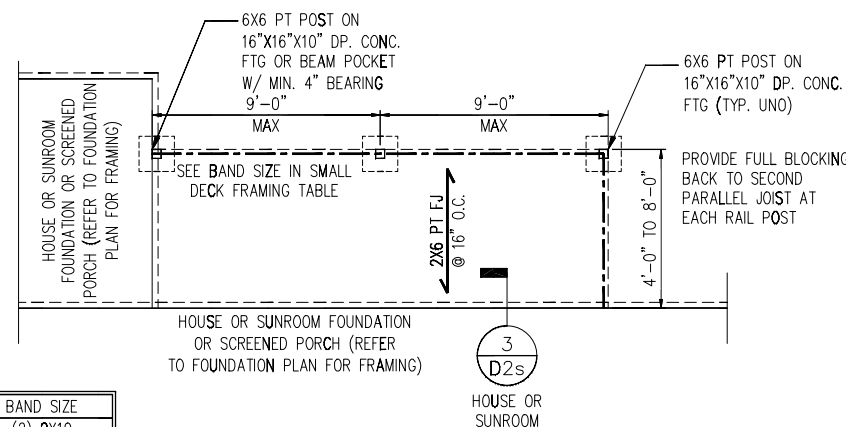
TYP. SMALL REAR DECK PLAN

N.T.S.

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

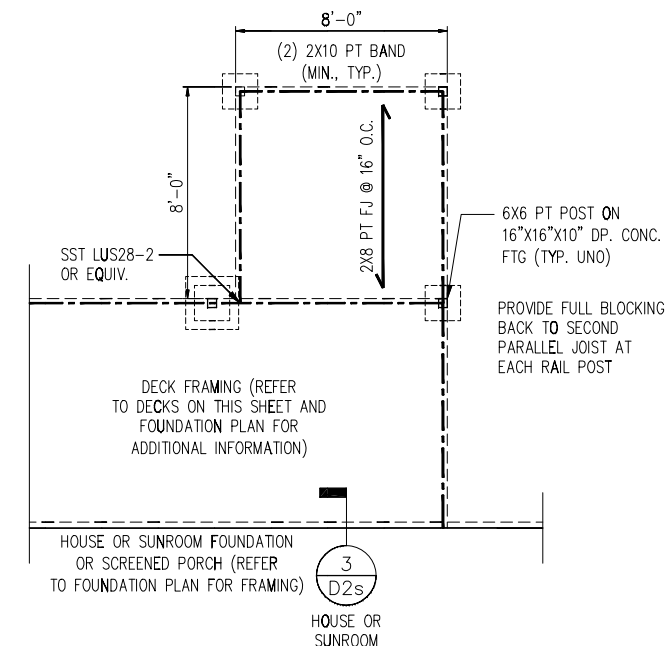
SMALL DECK FRAMING	
STANDARD	BAND SIZE
(2) 2X10	(2) 2X10
W/ 8'X8' GRILL DECK	(3) 2X10

* SOUTHERN PINE #2 PT LUMBER



TYP. SMALL SIDE DECK PLAN

N.T.S.



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

N.T.S.

NOTE: BRACE POSTS PER CODE

- 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

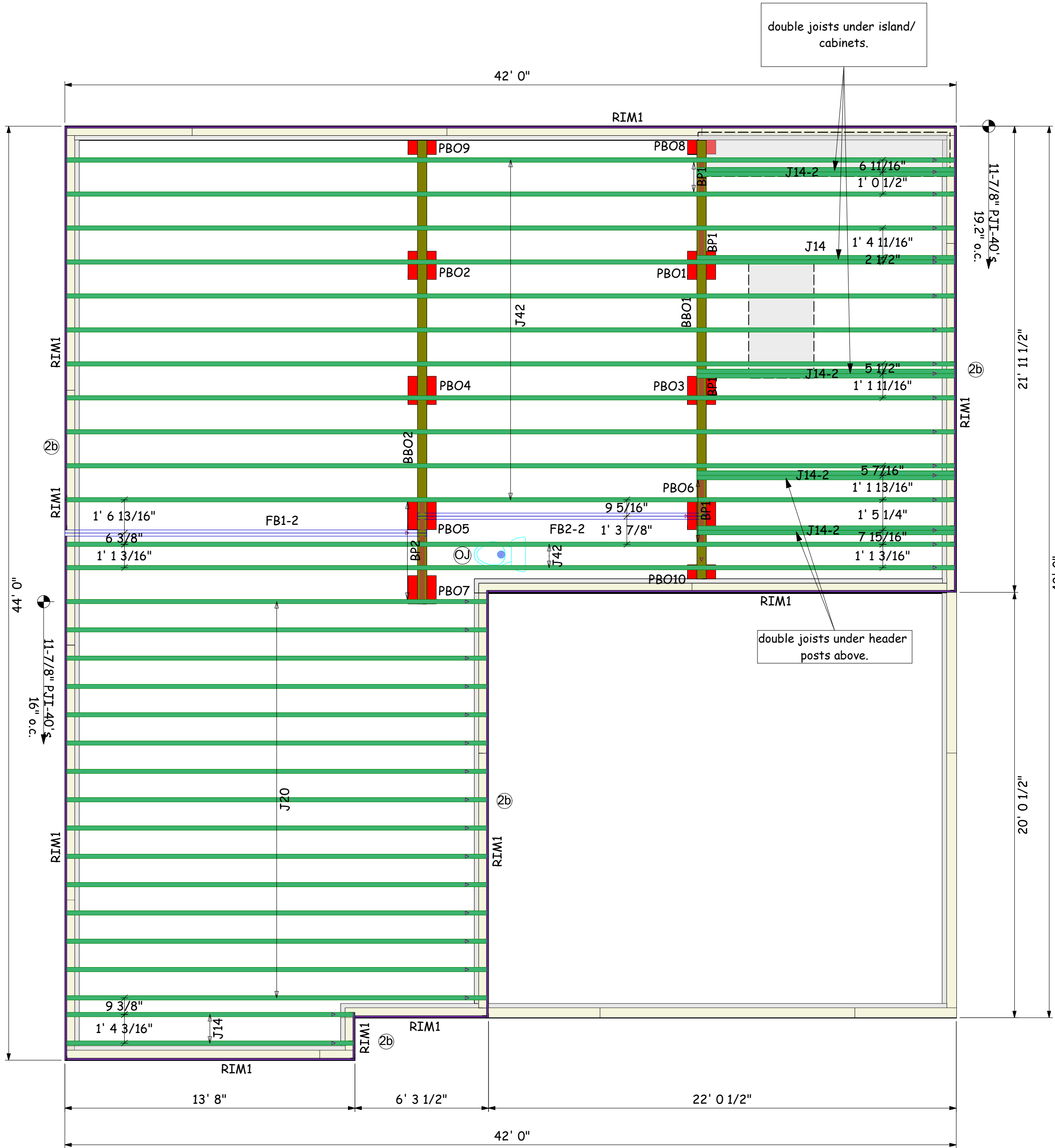
General Notes: ** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

** LVL AND JOISTS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

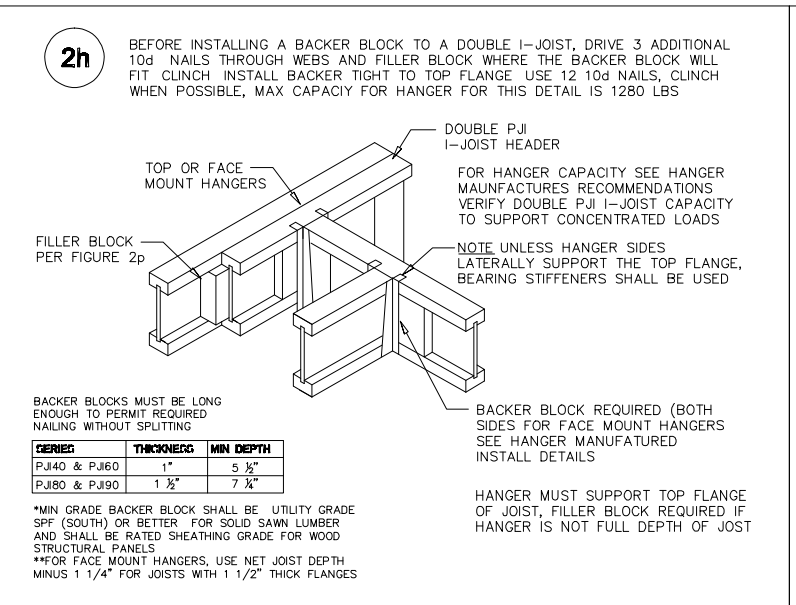
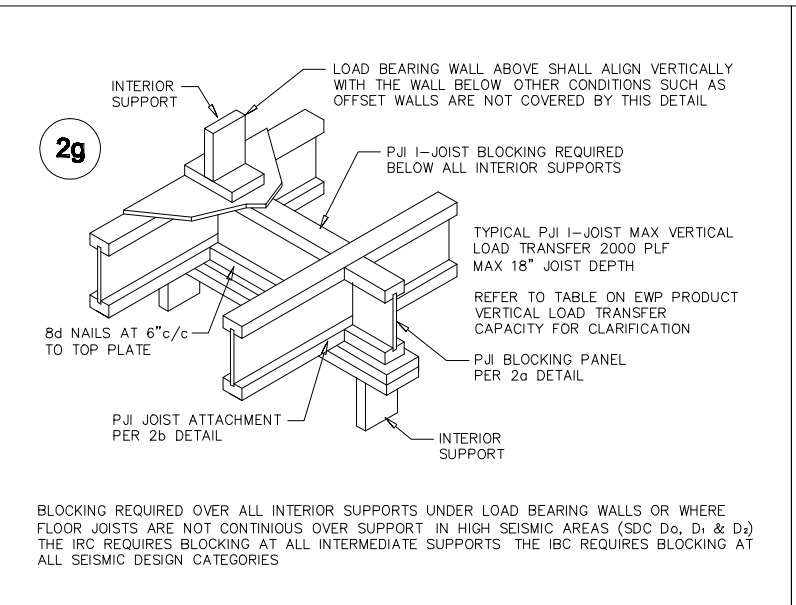
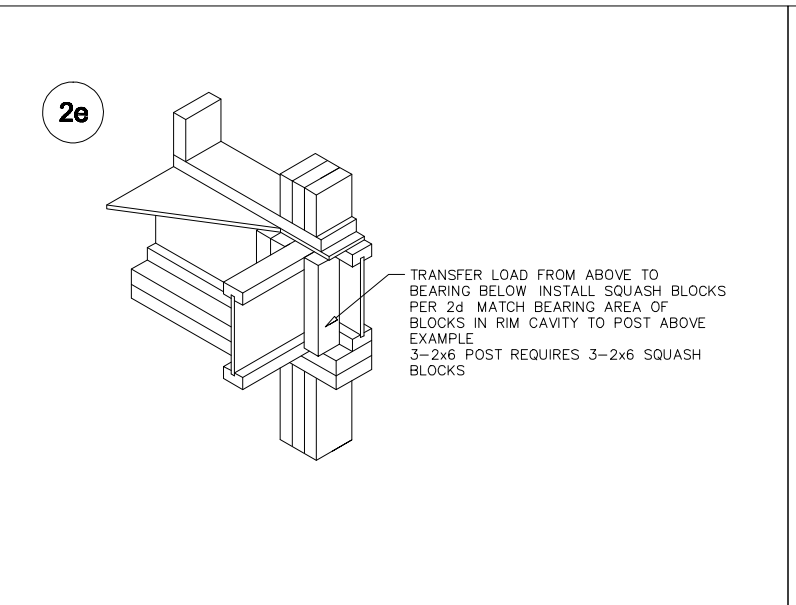
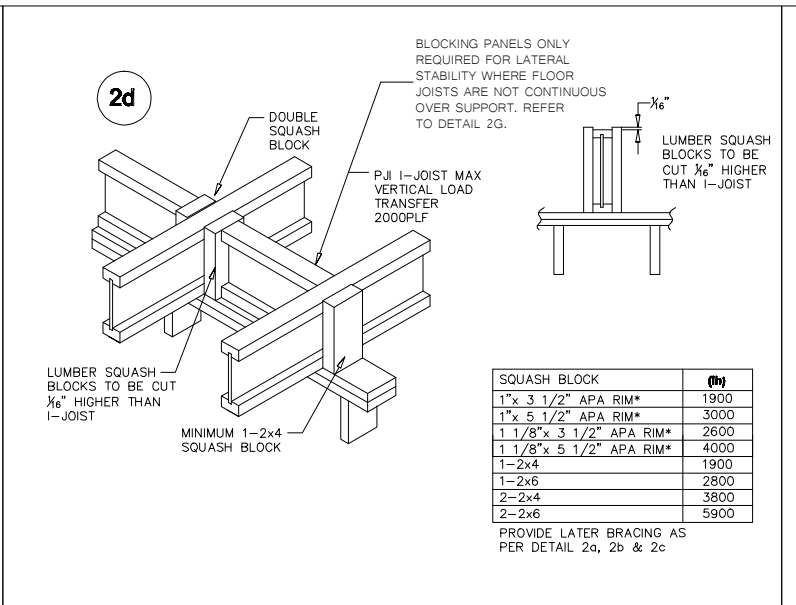
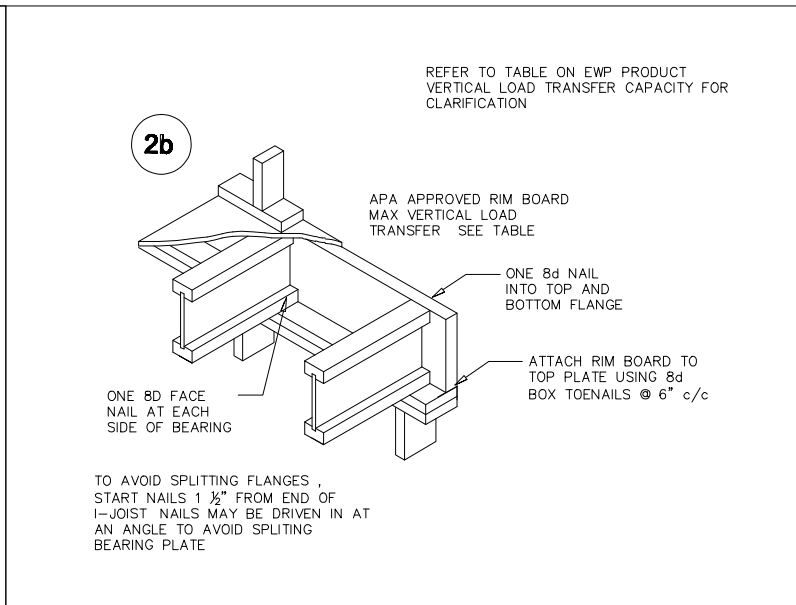
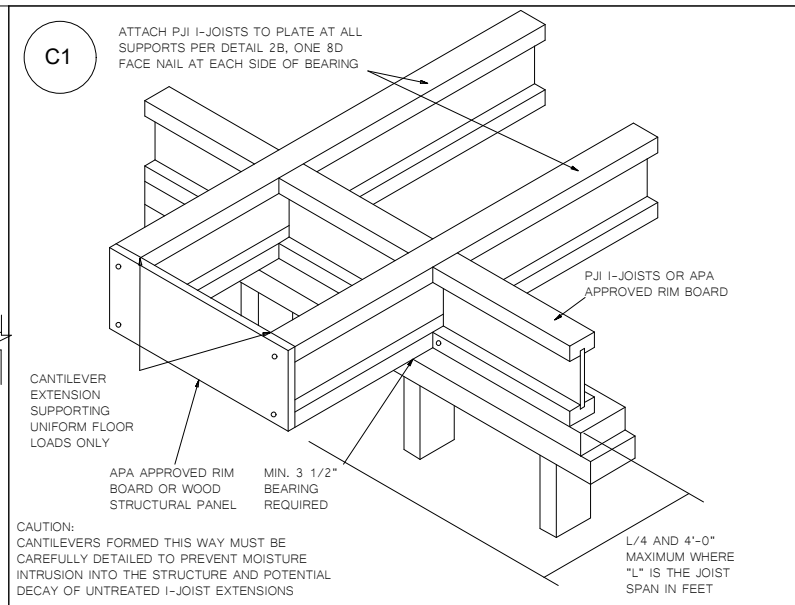
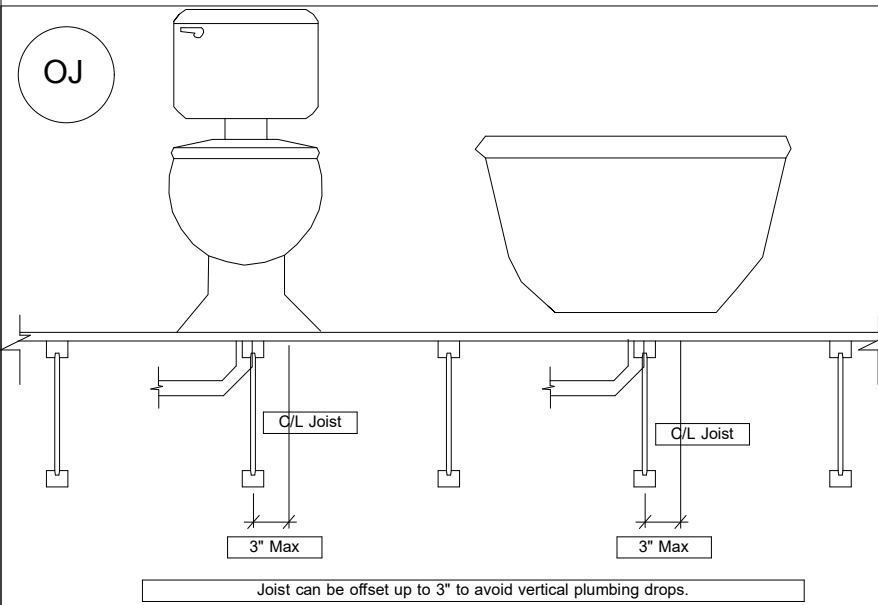
Products					
Net Qty	Plies	Product	Length	PlotID	
13	1	11 7/8" PJI-40	42-00-00	J42	
15	1	11 7/8" PJI-40	20-00-00	J20	
3	1	11 7/8" PJI-40	14-00-00	J14	
8	2	11 7/8" PJI-40	14-00-00	J14-2	
2	2	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	18-00-00	FB1-2	
2	2	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	14-00-00	FB2-2	
15	1	1 1/8" x 11 7/8" APA Rim Board	12-00-00	RIM1	
3	1	11 7/8" PJI-40	2-00-00	BP1	
2	1	11 7/8" PJI-40	2-00-00	BP2	

Accessories					
Net Qty	Plies	Product	Length	PlotID	
43	1	3/4" 4x8 OSB			

KEMPSVILLE BUILDING MATERIALS IS NOT RESPONSIBLE FOR THE DESIGN OR CALCULATION OF ANY AND ALL I-JOIST AND LVL/PSL BEAM MATERIAL. ALL ENGINEERING AND INFORMATION FOR THIS MATERIAL IS TO BE PROVIDED BY THE ENGINEER OF RECORD MARKED ON APPROVED SET OF PLANS. ALL BEAM PLACEMENTS ARE PER THE ENGINEERING RECEIVED. ALL CONNECTION DETAILS TO BE PROVIDED BY ENGINEER OF RECORD. REFER TO ENGINEER OR RECORD FOR ALL MULTI-PLY LVL/ I-JOIST CONNECTION PATTERNS. BUILDER TO VERIFY ALL MATERIAL LENGTHS, QUANTITIES, AND SIZES PRIOR TO ORDERING.



1ST FLOOR LAYOUT



LABEL LEGEND	
BBO	= Beam by Others
PBO	= Post by Others
GBO	= Girder by Others
J	= I-Joist
FB	= Flush Beam
DB	= Dropped Beam
RB	= Roof Beam
BP	= Blocking Panels
SB	= Squash Blocks

** PLUMBING DROPS NOTED ARE IN APPROXIMATE LOCATIONS PER PLAN. BUILDER MUST VERIFY LOCATIONS BEFORE SETTING JOISTS.

** ALL POINT LOADS FROM ABOVE MUST BE TRANSFERRED TO BEARING FROM UNDER SIDE OF SHEATHING.

** REFER TO INSTALLATION GUIDE FOR PLY TO PLY CONNECTIONS.

** DAMAGED FLOOR JOISTS SHOULD NOT BE INSTALLED UNLESS APPROVED BY COMPONENT PLANT.

** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.

** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

This is an I-Joist Placement Plan Only. All designs of I-Joists follow the IBC/IRC Code Requirements along with Manufacturer's guidelines. This is NOT an engineered placement plan. This placement plan is created from plans provided by the customer using Manufacturer's guidelines. It is the responsibility of the EOR, or builder to review and approve all bearing conditions, connections, spans, loading, product usage, and quantities. Do not notch or drill holes in beams or flanges on joists without prior approval from the manufacturing Representative unless following hole guidelines in the installation guide of product. Builder takes full responsibility for doing so and NO Back charge will be accepted.



DR Horton

9 Mason Ridge
Columbia B

FLOOR JOIST LAYOUT

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

Date: // 05/13/25

Designer: DW

Project #: 25050082

Sheet Number:

1 / 2

General Notes: ** CUTTING OR DRILLING OF COMPONENTS SHOULD NOT BE DONE WITHOUT CONTACTING COMPONENT SUPPLIER FIRST. CUSTOMER TAKES FULL RESPONSIBILITY FOR COMPONENTS IF CUT BEFORE AUTHORIZATION.

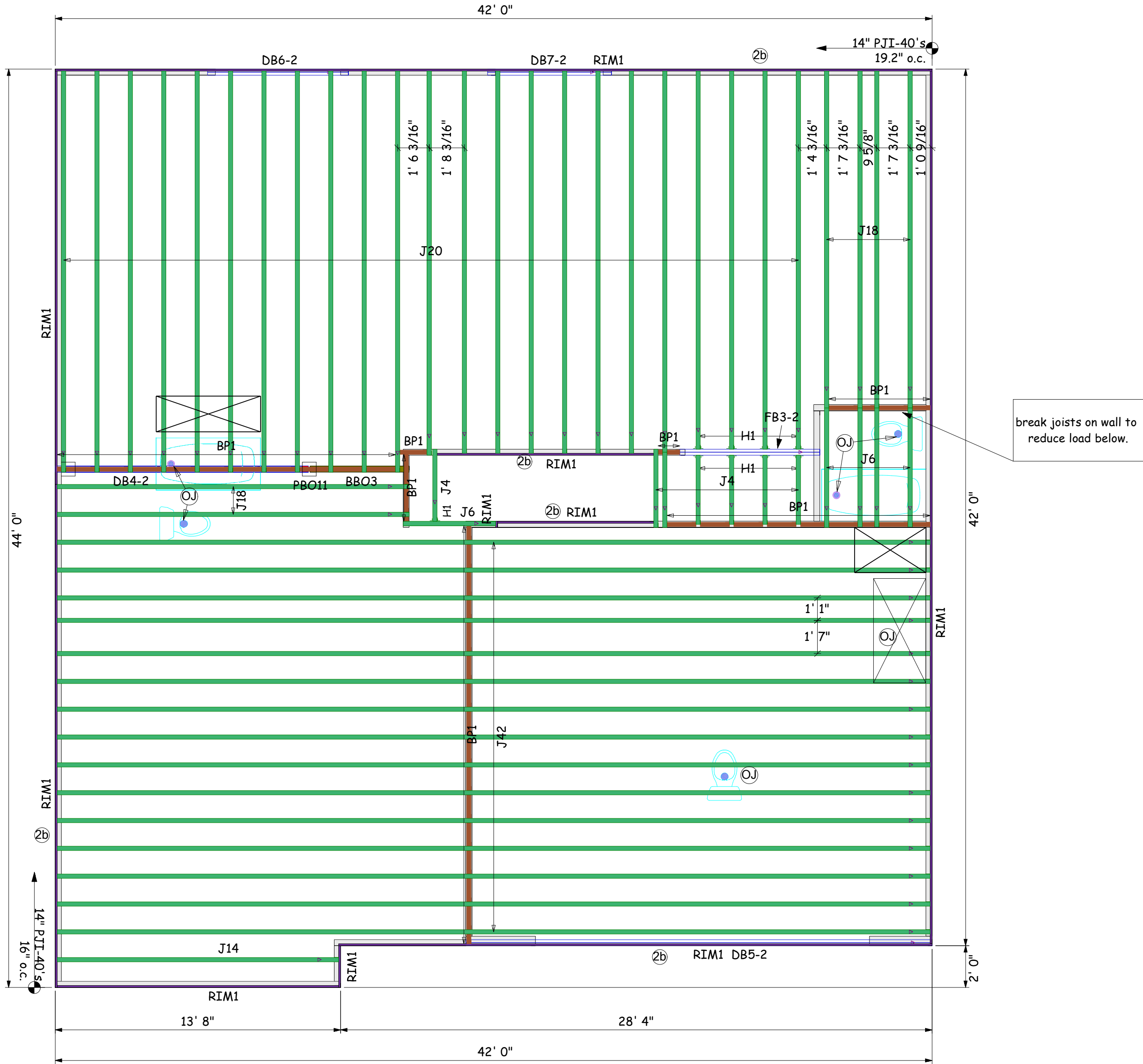
** LVL AND JOISTS MUST BE FULLY CONNECTED TOGETHER PRIOR TO ADDING ANY LOADS.

Products					
Net Qty	Plies	Product	Length	PlotID	
15	1	14" PJI-40	42-00-00	J42	
23	1	14" PJI-40	20-00-00	J20	
6	1	14" PJI-40	18-00-00	J18	
1	1	14" PJI-40	14-00-00	J14	
5	1	14" PJI-40	6-00-00	J6	
7	1	14" PJI-40	4-00-00	J4	
2	2	2.1 RigidLam SP LVL 1-3/4 x 9-1/4	8-00-00	DB6-2	
2	2	2.1 RigidLam SP LVL 1-3/4 x 9-1/4	6-00-00	DB7-2	
2	2	2.1 RigidLam SP LVL 1-3/4 x 11-7/8	14-00-00	DB4-2	
2	2	2.1 RigidLam SP LVL 1-3/4 x 14	8-00-00	FB3-2	
2	2	2.1 RigidLam SP LVL 1-3/4 x 24	24-00-00	DB5-2	
16	1	1 1/8" x 14" APA Rim Board	12-00-00	RIM1	
26	1	14" PJI-40	2-00-00	BP1	

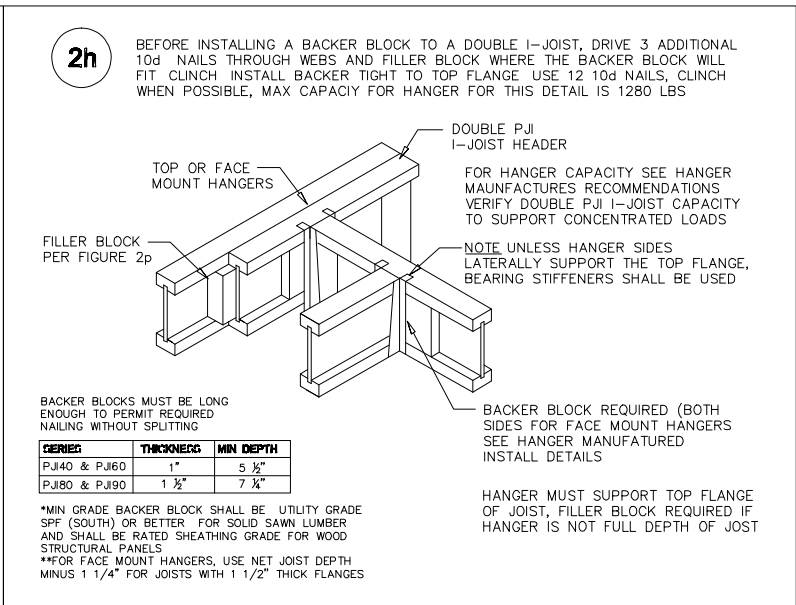
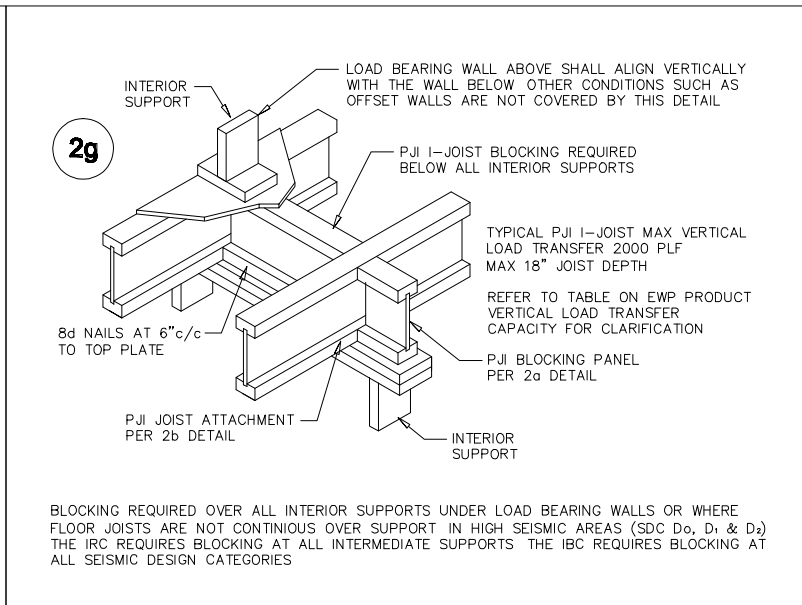
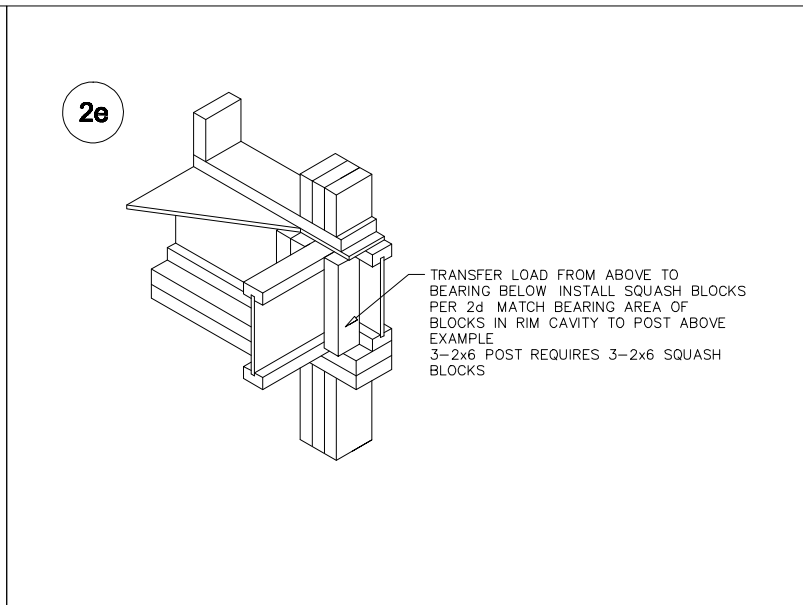
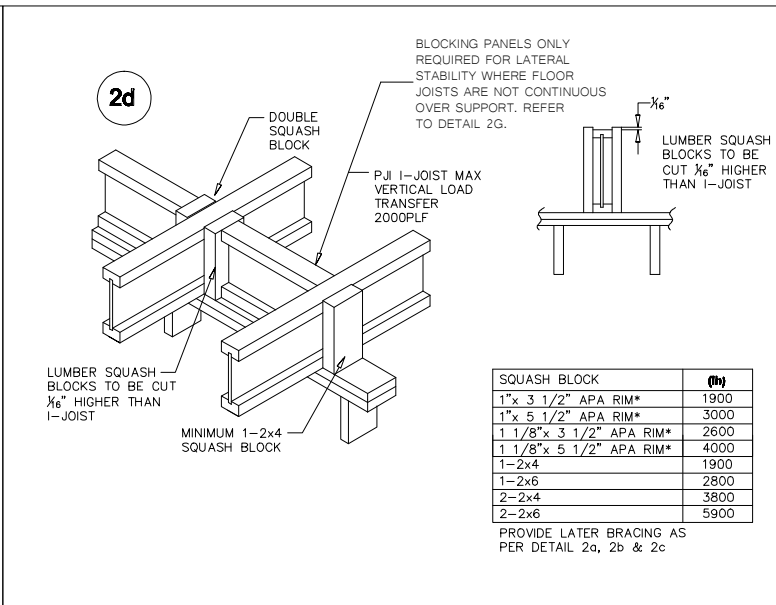
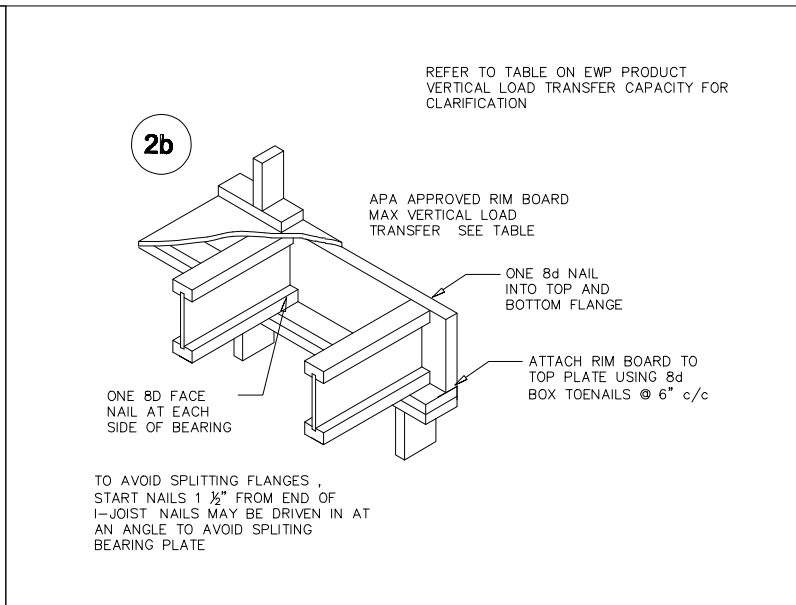
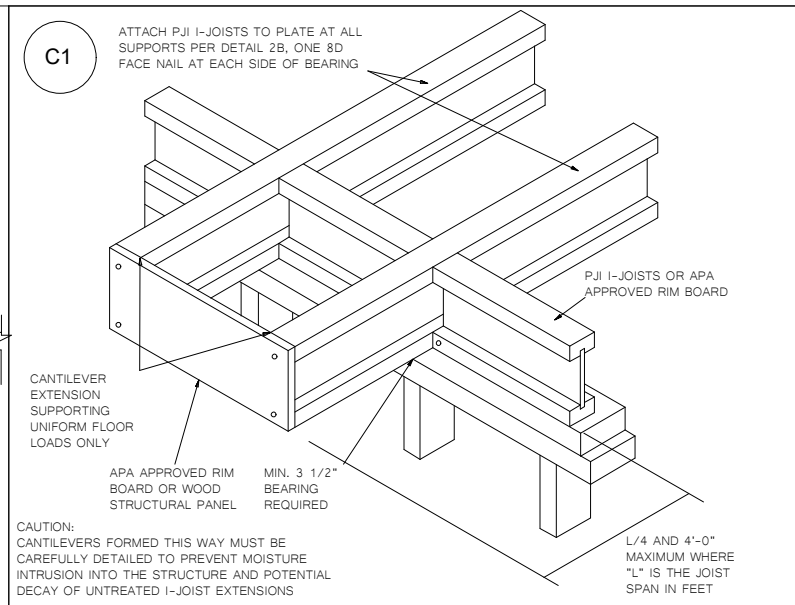
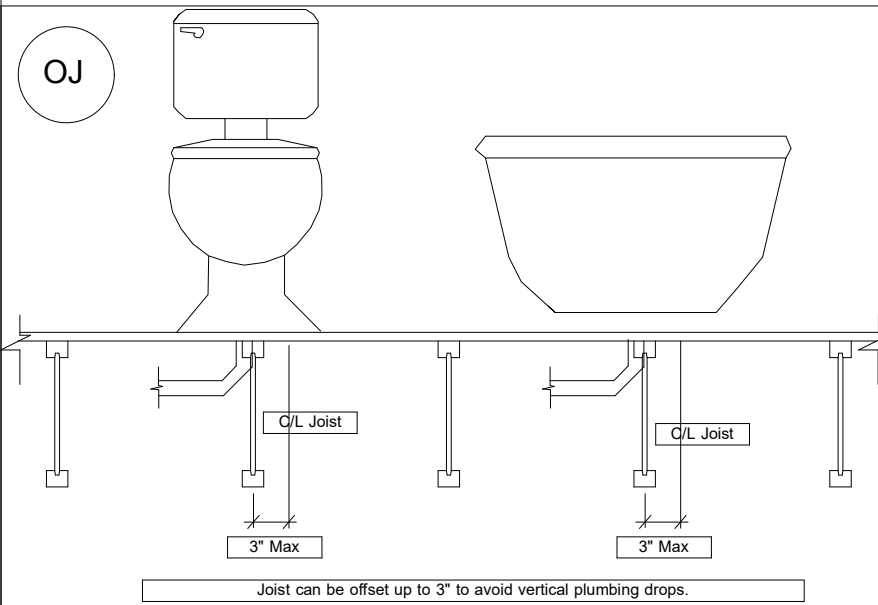
Accessories					
Net Qty	Plies	Product	Length	PlotID	
55	1	3/4" 4x8 OSB			

Connector Summary					
Web Stiff	Backer Blocks	Product	Manuf	Qty	PlotID
No	No	IUS2.56/14	Simpson	9	H1

KEMPSVILLE BUILDING MATERIALS IS NOT RESPONSIBLE FOR THE DESIGN OR CALCULATION OF ANY AND ALL I-JOIST AND LVL/PSL BEAM MATERIAL. ALL ENGINEERING AND INFORMATION FOR THIS MATERIAL IS TO BE PROVIDED BY THE ENGINEER OF RECORD MARKED ON APPROVED SET OF PLANS. ALL BEAM PLACEMENTS ARE PER THE ENGINEERING RECEIVED. ALL CONNECTION DETAILS TO BE PROVIDED BY ENGINEER OF RECORD. REFER TO ENGINEER OR RECORD FOR ALL MULTI-PLY LVL/ I-JOIST CONNECTION PATTERNS. BUILDER TO VERIFY ALL MATERIAL LENGTHS, QUANTITIES, AND SIZES PRIOR TO ORDERING.



2ND FLOOR LAYOUT



LABEL LEGEND		
BBO	= Beam by Others	
PBO	= Post by Others	
GBO	= Girder by Others	
J	= I-Joist	
FB	= Flush Beam	
DB	= Dropped Beam	
RB	= Roof Beam	
BP	= Blocking Panels	
SB	= Squash Blocks	

** PLUMBING DROPS NOTED ARE IN APPROXIMATE LOCATIONS PER PLAN. BUILDER MUST VERY LOCATIONS BEFORE SETTING JOISTS.

** ALL POINT LOADS FROM ABOVE MUST BE TRANSFERRED TO BEARING FROM UNDER SIDE OF SHEATHING.

** REFER TO INSTALLATION GUIDE FOR PLY TO PLY CONNECTIONS.

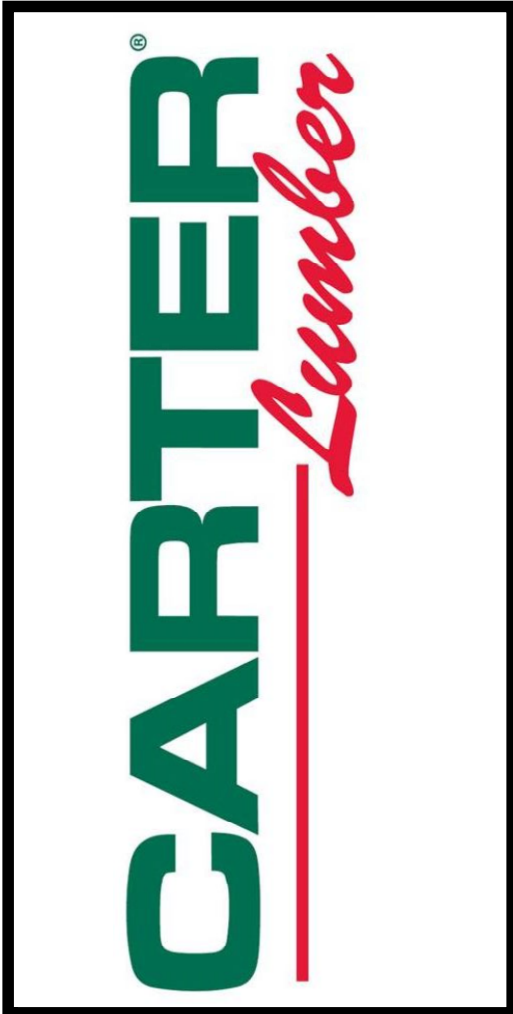
** DAMAGED FLOOR JOISTS SHOULD NOT BE INSTALLED UNLESS APPROVED BY COMPONENT PLANT.

** DIMENSIONS ARE READ AS: FOOT-INCH-SIXTEENTH.

** FRAMER MUST REFER TO PLANS WHILE SETTING COMPONENTS.

Revisions	
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name
00/00/00	Name

This is an I-Joist Placement Plan Only. All designs of I-Joist follow the ISC/IPC Code Requirements along with Manufacturer's guidelines. This is NOT an engineered placement plan. This placement plan is created from plans provided by the customer using Manufacturer's guidelines. It is the responsibility of the EOR, or builder to review, product all bearing conditions, connections, spans, loading, product usage, and quantities. Do not notch or drill holes in beams or flanges on joists without prior approval from the manufacturing Representative unless following hole guidelines in the installation guide of product. Builder takes full responsibility for doing so and NO Back charge will be accepted.



DR Horton
9 Mason Ridge
Columbia B
FLOOR JOIST LAYOUT

Scale: 1/4" = 1'-0"
Date: // 05/13/25
Designer: DW
Project #: 25050082
Sheet Number:
2 / 2