

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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| 4 | ELECTRICAL - FLOOR PLANS |

REVIEWERS STAMP LOCATION



MODEL 'COLUMBIA' SQUARE FOOTAGES

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

McKay Place
Lot 28
226 Hawksmoore Lane
Lillington, NC 27546

COVERSHEET
 'COLUMBIA'

PLAN REV DATE
 06.06.23

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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' |
|------------|------------|

| | |
|---------------|----------|
| PLAN REV DATE | 06.06.23 |
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| 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 VENTILATING PROVIDED BY EAVE OR CORNICE VENTS.

EXCEPTIONS:
 1. ENCLOSED ATTIC/RAPTER SPACES REQUIRING LESS THAN 1 SQ FT OF VENTILATION MAY BE VENTED WITH CONTINUOUS SOFFIT VENTILATION ONLY.
 2. ENCLOSED ATTIC/RAPTER 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 NCRC 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 = 1719.36 SQ. IN. OF VENT REQ'D
 1719.36 SQ. IN. / 2 = 859.68 SQ. IN.

ROOF AREA 2 = 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 1/150 RATIO LISTED ABOVE, THE NET FREE CROSS-VENTILATION AREA MAY BE REDUCED TO 1/300 WHEN A GLASS (OR 1/2 VAPOR BARRIER 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 NCRC 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 = 859.68 SQ. IN. OF VENT REQ'D
 859.68 SQ. IN. / 2 = 429.84 SQ. IN.

ROOF AREA 2 = 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.

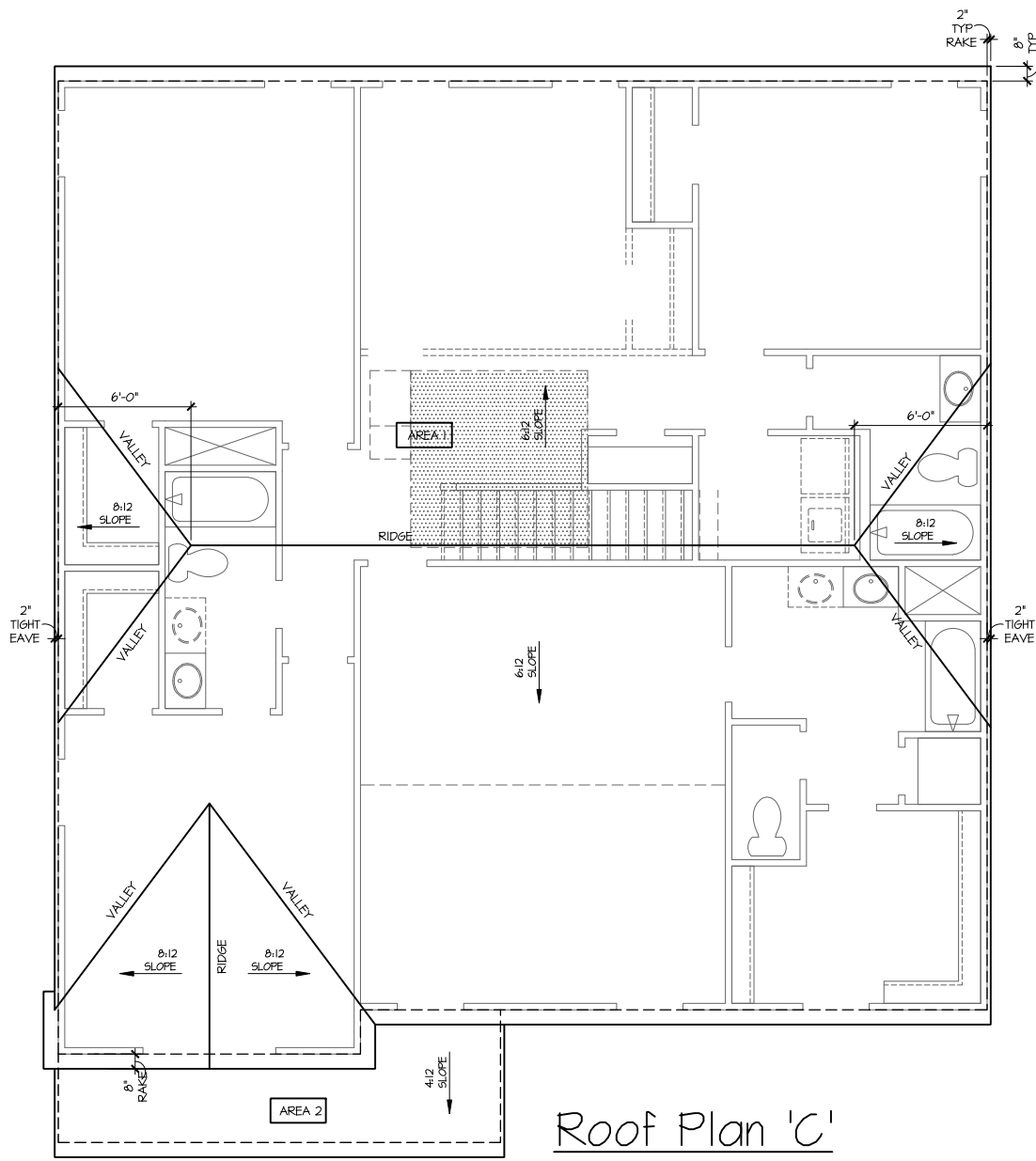
22.32 SQ. IN. OF VENT AT HIGH & 22.32 SQ. IN. OF VENT AT LOW REQUIRED.

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

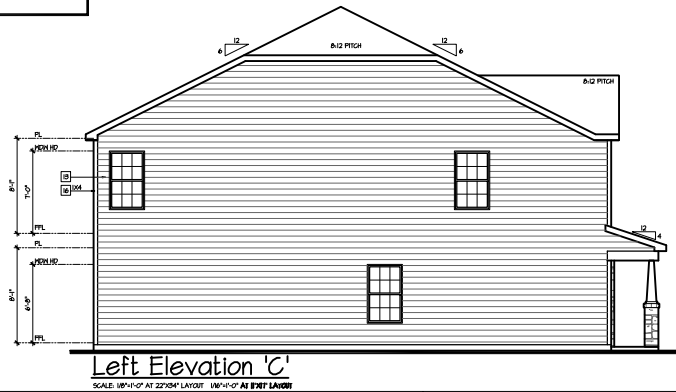
TRUSS MANUFACTURE TO VERIFY HEELS PER COMMUNITY STANDARDS, BUILDER TO VERIFY PRIOR TO CONSTRUCTION

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"



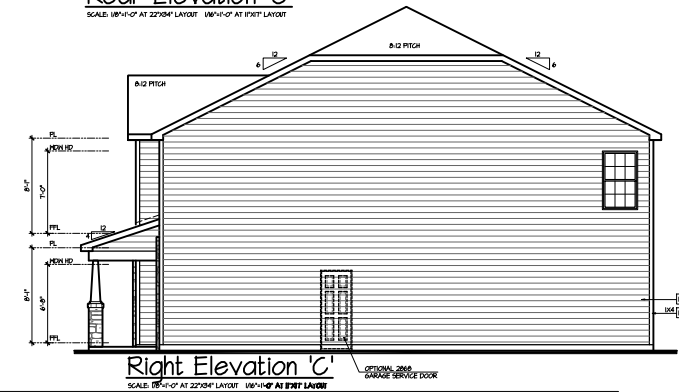
Roof Plan 'C'
 SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X17' LAYOUT



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



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



Right Elevation 'C'
 SCALE: 1/8"=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 NCRC 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-14 BATTS MINIMUM. VERIFY
 GRAIL SPACE FLOORING: R-14 BATTS MINIMUM. VERIFY

KEY NOTES:

- MASONRY:**
- ADHERED STONE VENER 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 NCRC 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 NCRC SECTION R312.2.1 AND R312.2.2.

VENER CALCULATIONS:
 HARDBOARD = 284 SQ FT
 MASONRY = 228 SQ FT
 MASONRY % = 45%



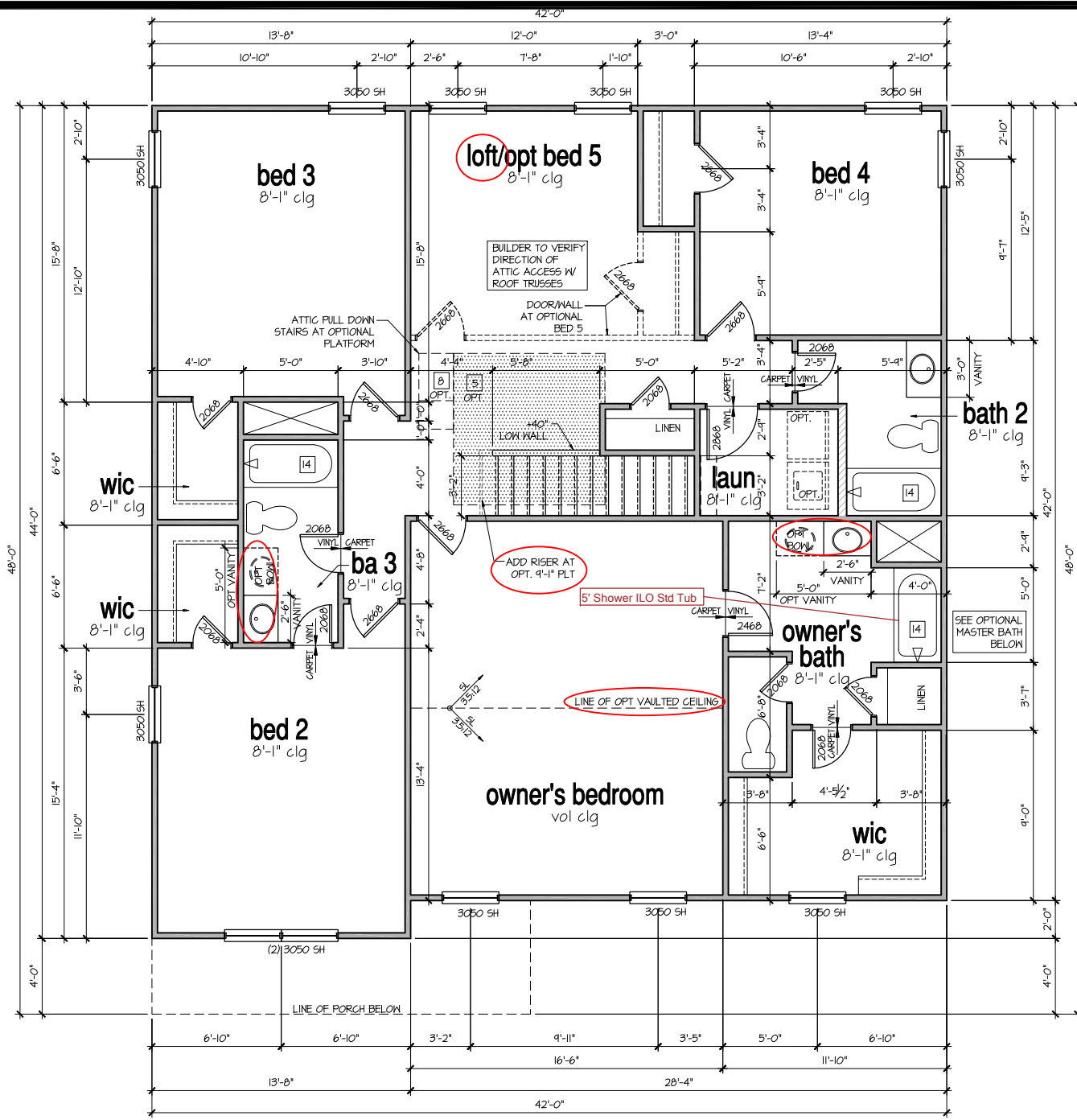
Front Elevation 'C'
 SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X17' LAYOUT

D.R. HORTON
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 8025 Knowledge Blvd., Charlotte, NC 28273 704.577.8000

ELEVATIONS
 'COLUMBIA'

PLAN REV DATE
 06.06.23

SHEET NUMBER
 1C



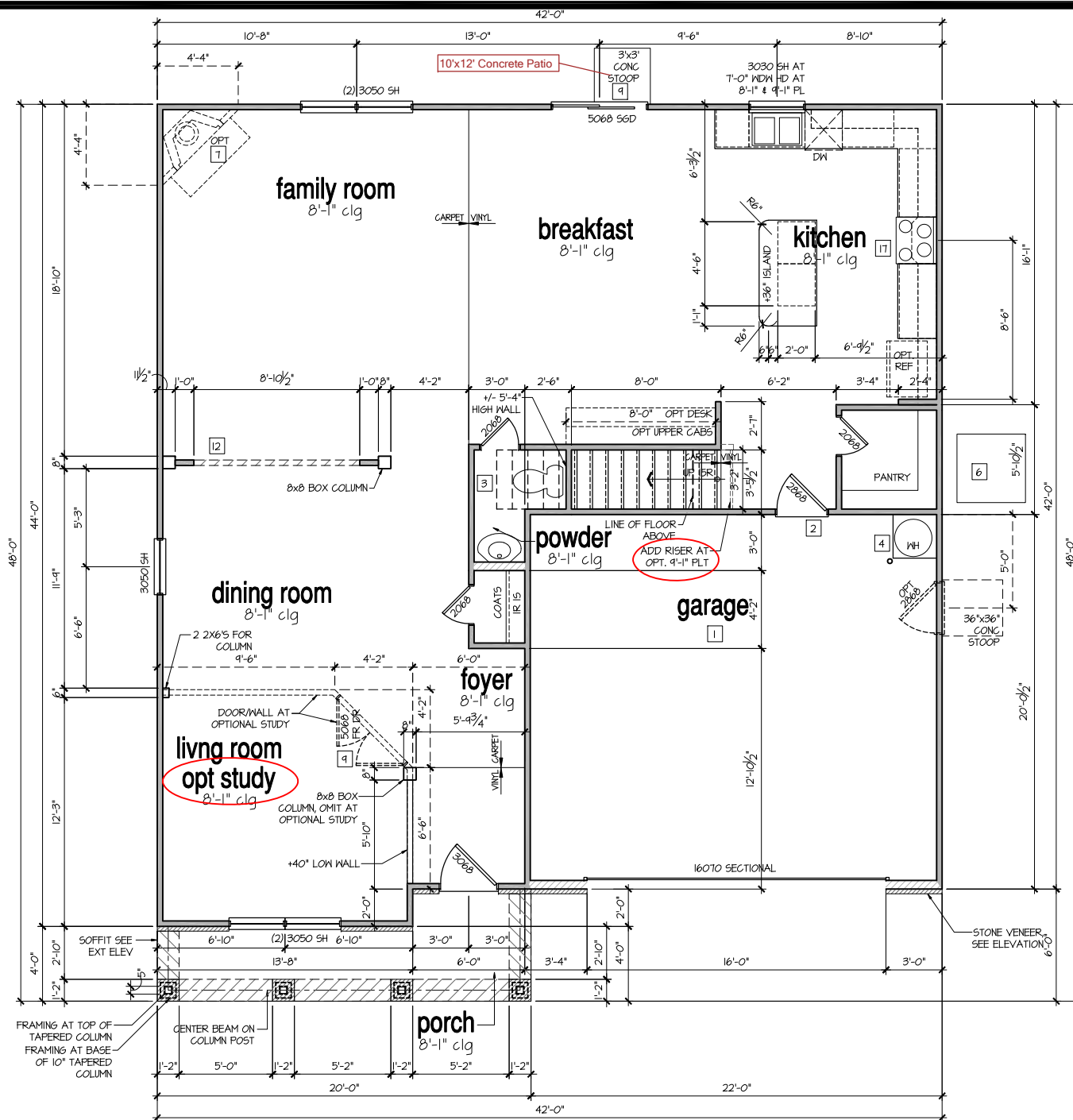
2nd Floor Plan 'C'

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"



1st Floor Plan 'C'

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

8'-1" STAIR NOTE:
(USE 14" T.J.I 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" T.J.I WITH 3/4" PLYWOOD SUBFLOOR)
16 TREADS AT 10" EACH VERIFY
17 RISERS AT +/- 7.27" = 123 3/4" TOTAL
RISE VERIFY

- FOR ADDITIONAL NOTES SEE GENERAL NOTES ON TITLE SHEET AND DETAILS.

- WINDOW HEAD HEIGHTS:
1ST FLOOR = 6'-8" UNO. ON ELEVATIONS.
2ND FLOOR = 7'-0" UNO. 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. 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. TABLE R302.6.)
- HOUSE TO GARAGE DOOR SEPARATION. PROVIDE 1-3/8" SOLID CORE DOOR OR APPROVED 20 MINUTE RATED DOOR. (PER N.C. SECTION R302.5.1.)
- BENEATH STAIRS AND LANDINGS. 1/2" GYPSUM BOARD ON WALLS AND CEILING OF ENCLOSED ACCESSIBLE AREAS. (PER N.C. SECTION R302.7.) IN CONCEALED SPACES BETWEEN STAIR STRINGERS PROVIDE FIREBLOCKING PER R302.11
- M.E.P.'S
- GAS WATER HEATER ON 10' HIGH PLATFORM. (PER CHAPTER 5, N.C. PLUMBING)

- 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. 807.1.) ATTIC ACCESS LADDER. VERIFY LOCATION AND SIZE WITH TRUSSES. (25 1/2" X 54" SIZE) FOR GARAGE TO ATTIC SEPARATION PER N.C. 302.5.1 EXCEPTION.
- TYPICALS:
- TEMPERED SAFETY GLASS. (PER N.C. SECTION 308.4)
- PLYWOOD SHELF ABOVE WITH DRYWALL FINISH OVER. HEIGHT AS NOTED.
- HALF WALL, HEIGHT AS NOTED.

- INTERIOR SOFFITS: FFL = 8'-1" UNO. SFL = 7'-6" UNO.
- 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.

FLOOR PLANS

'COLUMBIA'

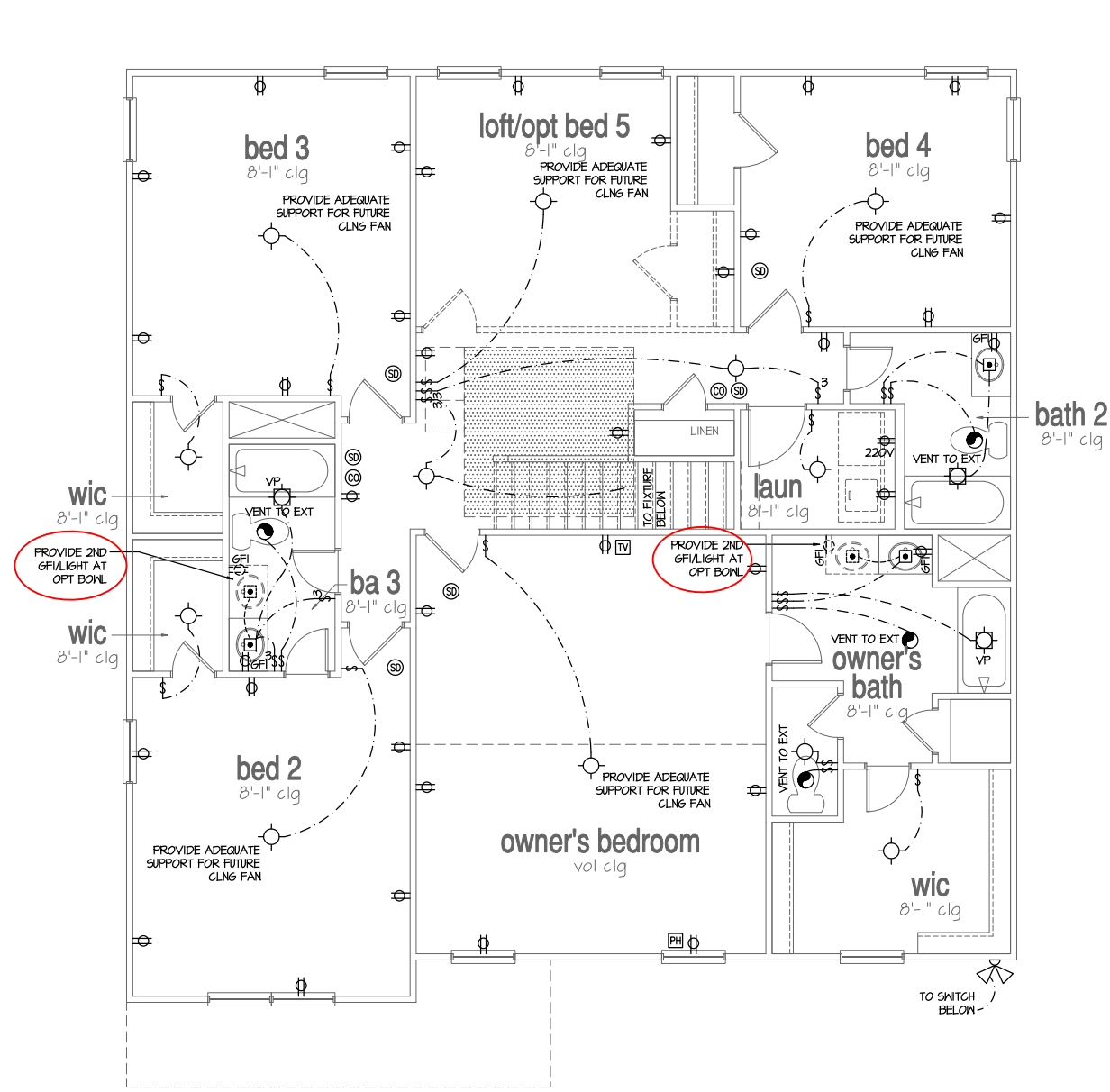
PLAN REV DATE

06.06.23

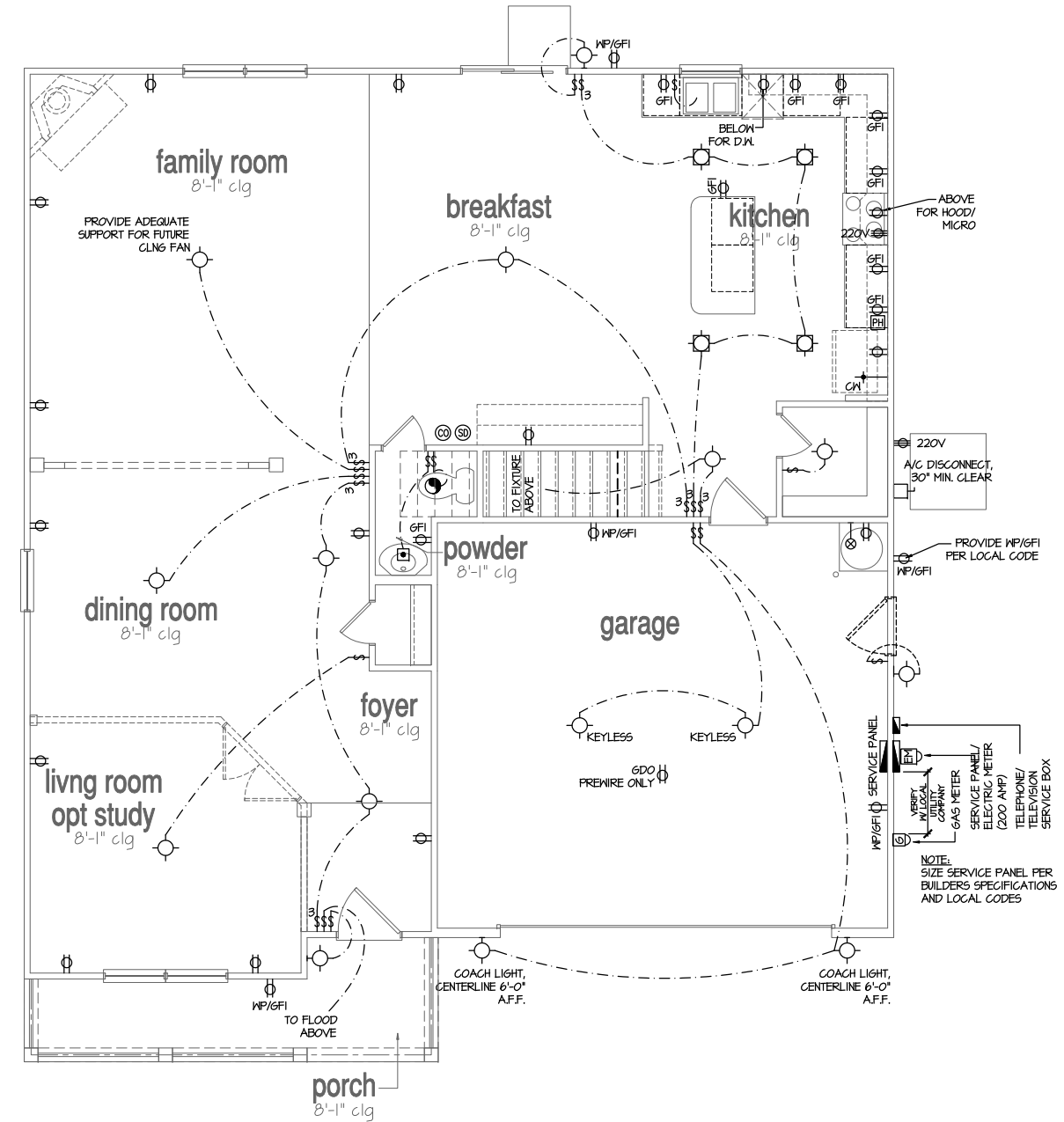
SHEET NUMBER

3C

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2nd Floor Plan 'A'
SCALE: 1/4"=1'-0" AT 22'X34' LAYOUT 1/8"=1'-0" AT 11'X11' LAYOUT



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

ALL ELEVATIONS ARE SIMILAR

- 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 |
| ⊕/MP/GFI | WEATHERPROOF GFI DUPLEX OUTLET | ⊕ | HANGING FIXTURE |
| ⊕/GFI | GROUND-FAULT CIRCUIT-INTERRUPTER DUPLEX OUTLET | ⊕ | FLUSH-MOUNT LED CEILING FIXTURE (PROVIDE CEILING FAN SUPPORT) |
| ⊕ | HALF-SWITCHED DUPLEX OUTLET | ⊕ | 2-LIGHT VANITY FIXTURE |
| ⊕/220V | 220 VOLT OUTLET | ⊕ | 3-LIGHT VANITY FIXTURE |
| ⊕ | REINFORCED JUNCTION BOX | ⊕ | 4-LIGHT VANITY FIXTURE |
| ⊕ | WALL SWITCH | ⊕ | WALL MOUNT FIXTURE |
| ⊕/3 | THREE-WAY SWITCH | ⊕ | EXHAUST FAN (VENT TO EXTERIOR) |
| ⊕/4 | FOUR-WAY SWITCH | ⊕ | FLUSH-MOUNT LED CEILING FIXTURE |
| ⊕ | | ⊕ | HANGING FIXTURE |
| ⊕ | | ⊕ | FLUSH-MOUNT LED CEILING FIXTURE (PROVIDE CEILING FAN SUPPORT) |
| ⊕ | | ⊕ | 2-LIGHT VANITY FIXTURE |
| ⊕ | | ⊕ | 3-LIGHT VANITY FIXTURE |
| ⊕ | | ⊕ | 4-LIGHT VANITY FIXTURE |
| ⊕ | | ⊕ | WALL MOUNT FIXTURE |
| ⊕ | | ⊕ | EXHAUST FAN (VENT TO EXTERIOR) |
| ⊕ | | ⊕ | FLUSH-MOUNT LED CEILING FIXTURE |
| ⊕ | | ⊕ | HANGING FIXTURE |
| ⊕ | | ⊕ | FLUSH-MOUNT LED CEILING FIXTURE (PROVIDE CEILING FAN SUPPORT) |
| ⊕ | | ⊕ | 2-LIGHT VANITY FIXTURE |
| ⊕ | | ⊕ | 3-LIGHT VANITY FIXTURE |
| ⊕ | | ⊕ | 4-LIGHT VANITY FIXTURE |
| ⊕ | | ⊕ | WALL MOUNT FIXTURE |
| ⊕ | | ⊕ | EXHAUST FAN (VENT TO EXTERIOR) |

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FLOOR PLANS
'COLUMBIA'

PLAN REV DATE
06.06.23

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SHEET NUMBER
4

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:

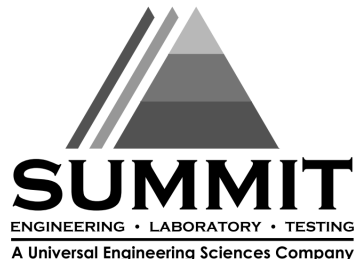
- 1. Roof Live Loads
11. Conventional 2x 20 PSF
12. Truss 20 PSF
12.1. Attic Truss 60 PSF
2. Roof Dead Loads
21. Conventional 2x 10 PSF
22. Truss 20 PSF
3. Snow 15 PSF
3.1. Importance Factor 1.0
4. Floor Live Loads
41. Typ. Dwelling 40 PSF
42. Sleeping Areas 20 PSF
43. Decks 40 PSF
44. Passenger Garage 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
6.1. Exposure B
6.2. Importance Factor 1.0
6.3. Wind Base Shear
6.3.1. Vx =
6.3.2. Vy =

7. Component and Cladding (in PSF)

Table with columns: MEAN ROOF HT., ZONE 1-5, and values for various wind directions.

8. Seismic

- 8.1. Site Class D
8.2. Design Category C
8.3. Importance Factor 1.0
8.4. Seismic Use Group 1
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 Control: Seismic Wind
9. Assumed Soil Bearing Capacity 2000psf



STRUCTURAL PLANS PREPARED FOR:

COLUMBIA - RH

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:

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

SHEET LIST:

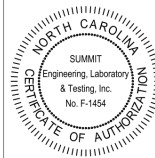
Table with columns: Sheet No., Description. Lists sheets CS1 through 55.0.

REVISION LIST:

Table with columns: Revision No., Date, Project No., Description. Lists revisions 1 through 16.

DR HORTON PROJECT SIGN-OFF:

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



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

PROJECT: Columbia - RH Coversheet



STRUCTURAL MEMBERS ONLY

DRAWING

DATE: 09/02/23
SCALE: 22x4 1/4" x 35"
PROJECT: 1 52810060
DRAIN BY: JDF
CHECKED BY: JDF

ORIGINAL INFORMATION
PROJECT # 10060 DATE 09/02/2021

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 & 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.

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=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.
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. Reinforcing steel may extend through a saw cut joint.
10. 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:

- 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 Southern-Yellow-Pine (SYP) #2 or South-Spruce Pine (SFP) #2.
2. LVL or FSL engineered wood shall have the following minimum design values:
2.1. E = 1,900,000 psi
2.2. Fv = 2600 psi
2.3. Fv = 285 psi
2.4. Fc = 1000 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 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 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.
9. Multi-ply beams shall have each ply attached with (3) 10d nails @ 24" O.C.
10. Four and five ply beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 16" O.C. unless otherwise noted.

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 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" (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.
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.

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 FILASTERS 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 R6-02.10.6.5, R6-02.10.7, R6-02.10.8(1) AND R6-02.10.8(2) OF THE 2018 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

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.

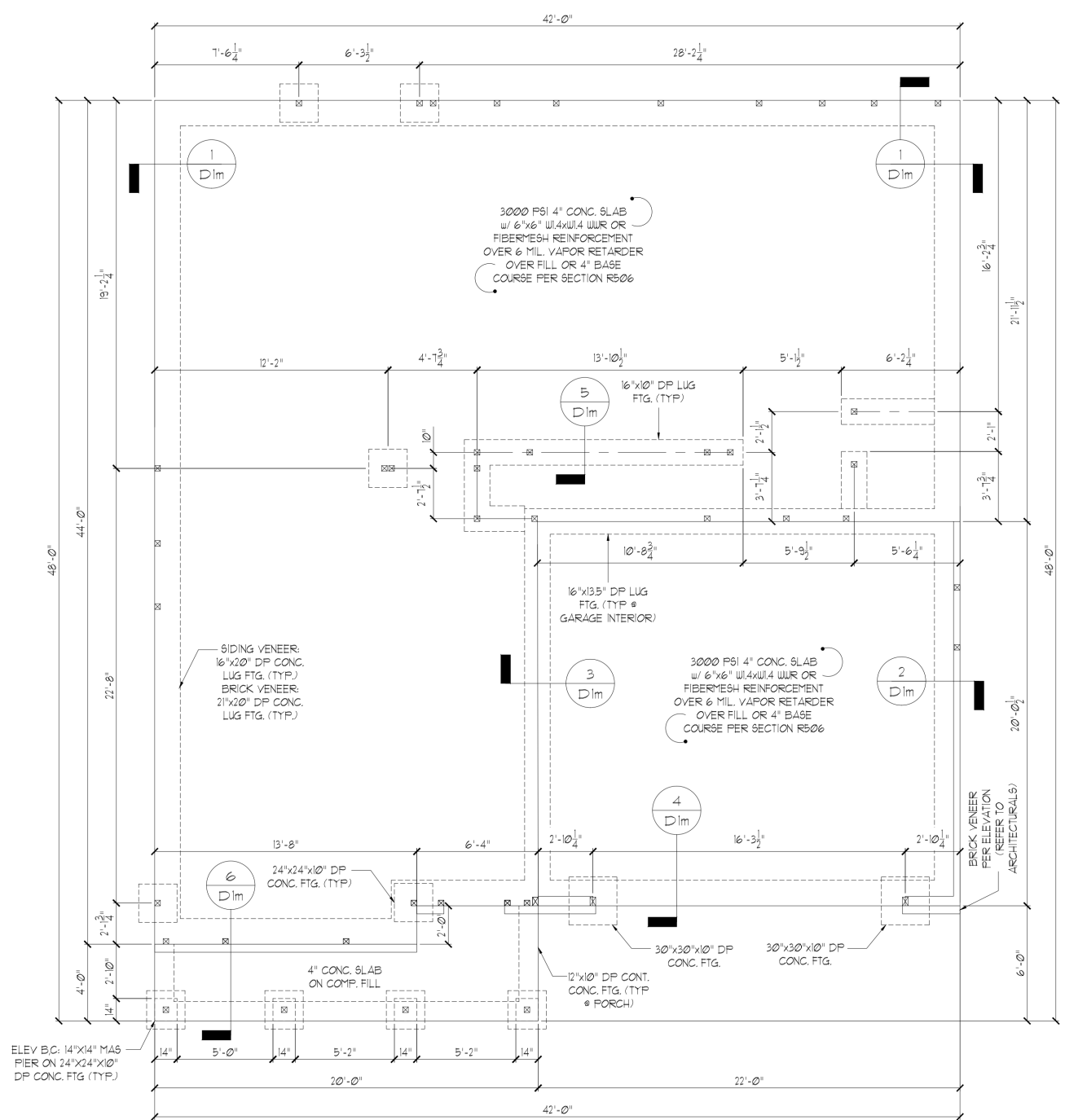
STRUCTURAL MEMBERS ONLY

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.

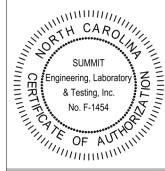
STRUCTURAL ANALYSIS BASED ON 2018 NCR. C.

MONOLITHIC SLAB FOUNDATION PLAN

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



MONOLITHIC SLAB FOUNDATION - ALL ELEVATIONS



CLIENT:
DE LUXION, INC.
8000 Ardenwood Blvd.
Charlotte, NC 28213

PROJECT:
Columbia - RH
Monolithic Slab Foundation



9/18/23
STRUCTURAL MEMBERS ONLY

DRAINS
DATE: 09/18/23
SCALE: 22x34 1/4"=1'-0"
16"=1'-0"
PROJECT # 23070060
DRAWN BY: ED
CHECKED BY: JCF

ORIGINAL INFORMATION
PROJECT # 23070060 DATE 09/18/23

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
SLOM

| 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. |
| 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 1/D3F. 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 = TRIFLE 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.

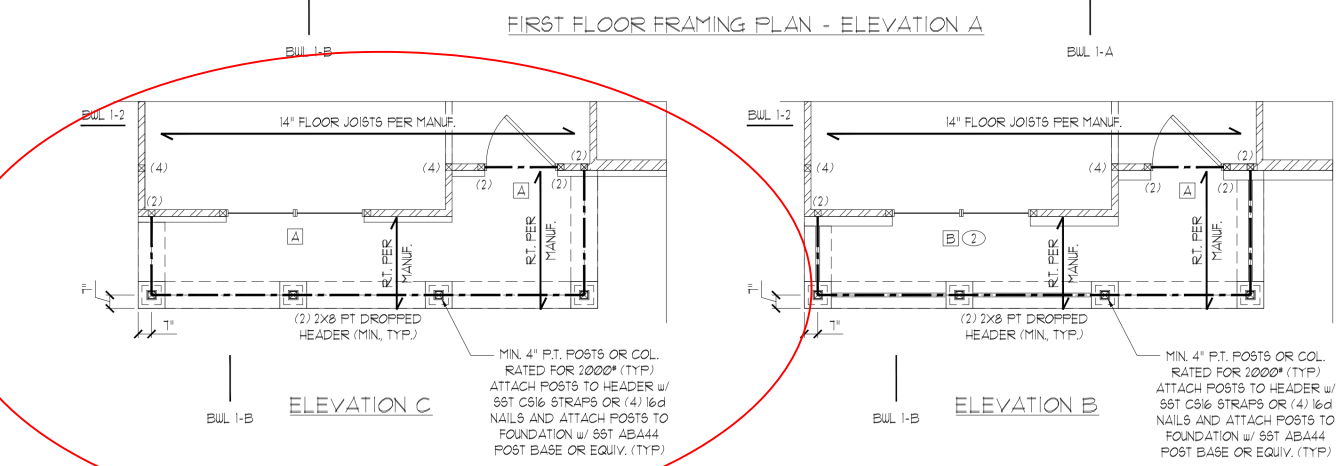
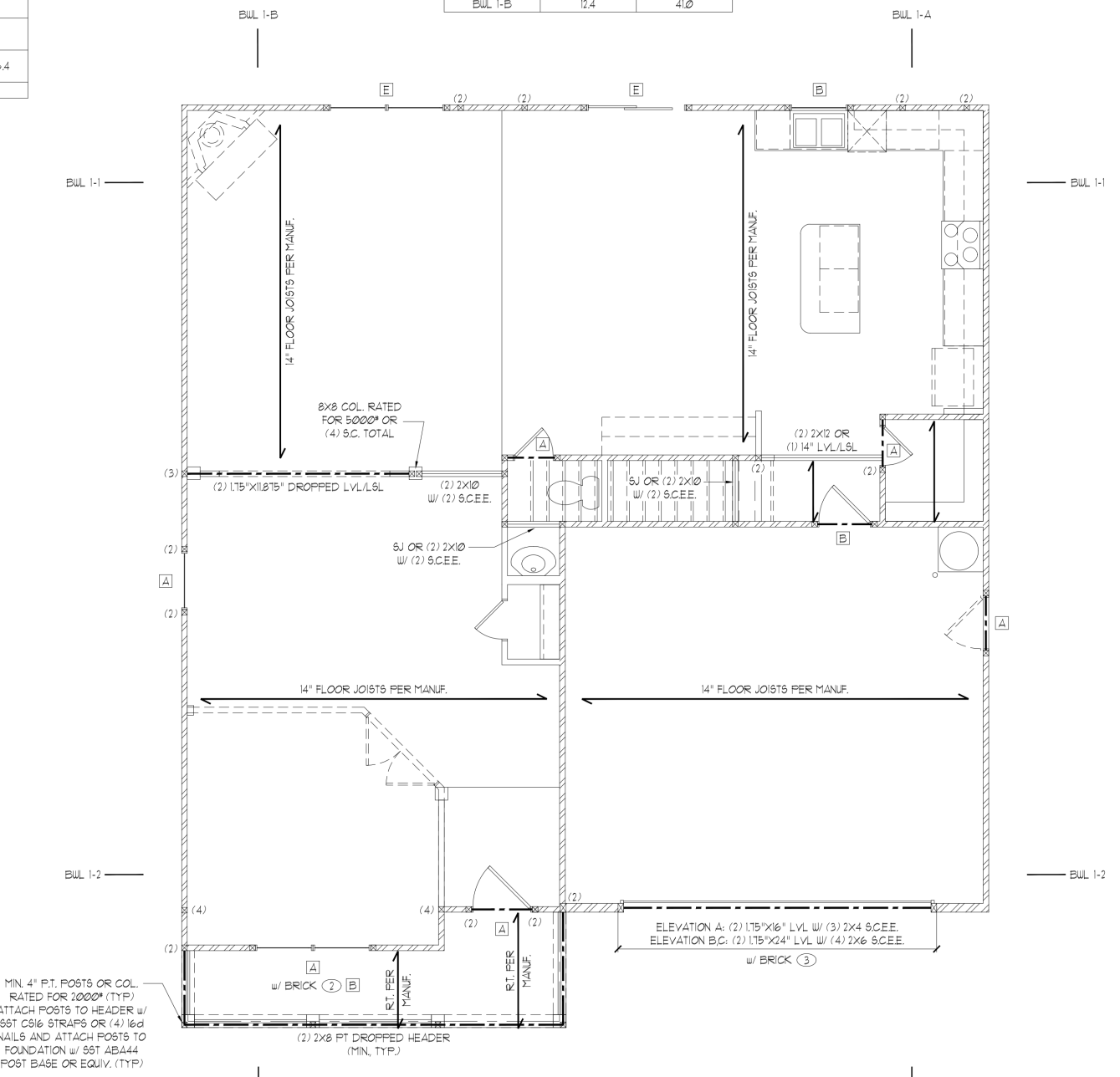
JOIST & BEAM SIZES SHOWN ARE MINIMUMS. BUILDER MAY INCREASE DEPTH FOR EASE OF CONSTRUCTION.

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.

| 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" 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 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 |

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
FF = PORTAL FRAME FF-ENG = ENG. PORTAL FRAME

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.

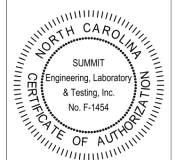
STRUCTURAL MEMBERS ONLY

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.

FIRST FLOOR FRAMING PLAN

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



CLIENT: DE LUKON, INC. 8000 Ardenwood Blvd. Charlotte, NC 28217

PROJECT: Columbia - RH First Floor Framing Plan



9/18/23

DRAINING: DATE: 09/18/23
SCALE: 22x34 1/4" = 1'-0" 18'x11'-0"
PROJECT: 150810060
DRAWN BY: ED
CHECKED BY: JCF

ORIGINAL INFORMATION: PROJECT: 150810060 DATE: 09/18/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

| 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. |
| FF | WOOD STRUCTURAL PANEL | 1/8" | PER FIGURE R602.106.4 | PER FIGURE R602.106.4 |

| SECOND FLOOR BRACING (FT) | | |
|---------------------------|-----------------------------|----------|
| | CONTINUOUS SHEATHING METHOD | |
| | REQUIRED | PROVIDED |
| BULL 2-1 | 12 | 28.6 |
| BULL 2-2 | 12 | 25.2 |
| BULL 2-A | 6.3 | 31.6 |
| BULL 2-B | 6.3 | 36.7 |

| 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 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 FLOOR 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

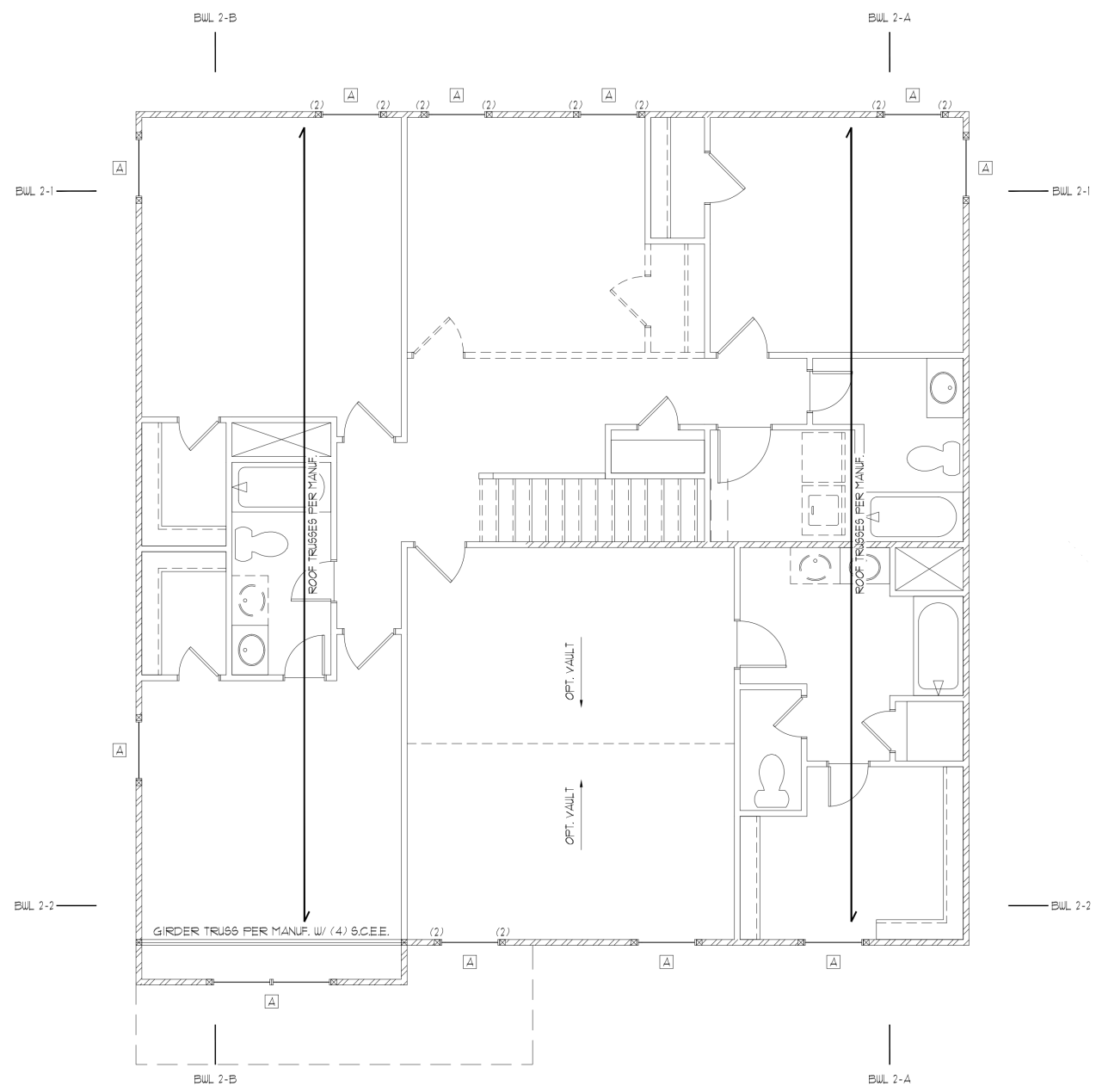
- GENERAL STRUCTURAL NOTES:
- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
 - CONTRACTOR SHALL VERIFY ALL DIMENSIONS. CONTRACTOR SHALL COMPLY WITH THE CONTENTS OF THE DRAWING FOR THIS SPECIFIC PROJECT. ENGINEER IS NOT RESPONSIBLE FOR ANY DEVIATIONS 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" (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL 1D31. 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 HOLD-DOWNS 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.



SECOND FLOOR FRAMING PLAN - ALL ELEVATIONS

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.

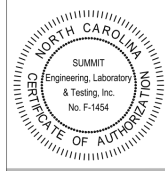
STRUCTURAL MEMBERS ONLY
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STRUCTURAL ANALYSIS BASED ON 2018 NCR.

SECOND FLOOR FRAMING PLAN

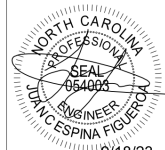
SCALE: 1/4"=1'-0" ON 22"x34" OR 1/8"=1'-0" ON 11"x17"

- 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(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-XXX = CONT. SHEATHED ENG = ENGINEERED SOLUTION
FF = PORTAL FRAME FF-ENG = ENG. PORTAL FRAME



CLIENT:
DE Luxon, Inc.
8000 Ardenwood Blvd.
Charlotte, NC 28217

PROJECT:
Columbia - RH
Second Floor Framing Plan



9/18/23
STRUCTURAL MEMBERS ONLY

DATE: 09/18/23
SCALE: 22x34 1/4"=1'-0" / 11"=1'-0"
PROJECT: 15070060
DRAWN BY: ED
CHECKED BY: JCF

ORIGINAL INFORMATION
PROJECT: 10060 DATE: 09/05/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
54.0

CLIENT:
DE LICKER, INC.
8000 Ardenwood Blvd.
Charlotte, NC 28217

PROJECT:
Columbia - RH
Roof Framing Plan

STRUCTURAL MEMBERS ONLY

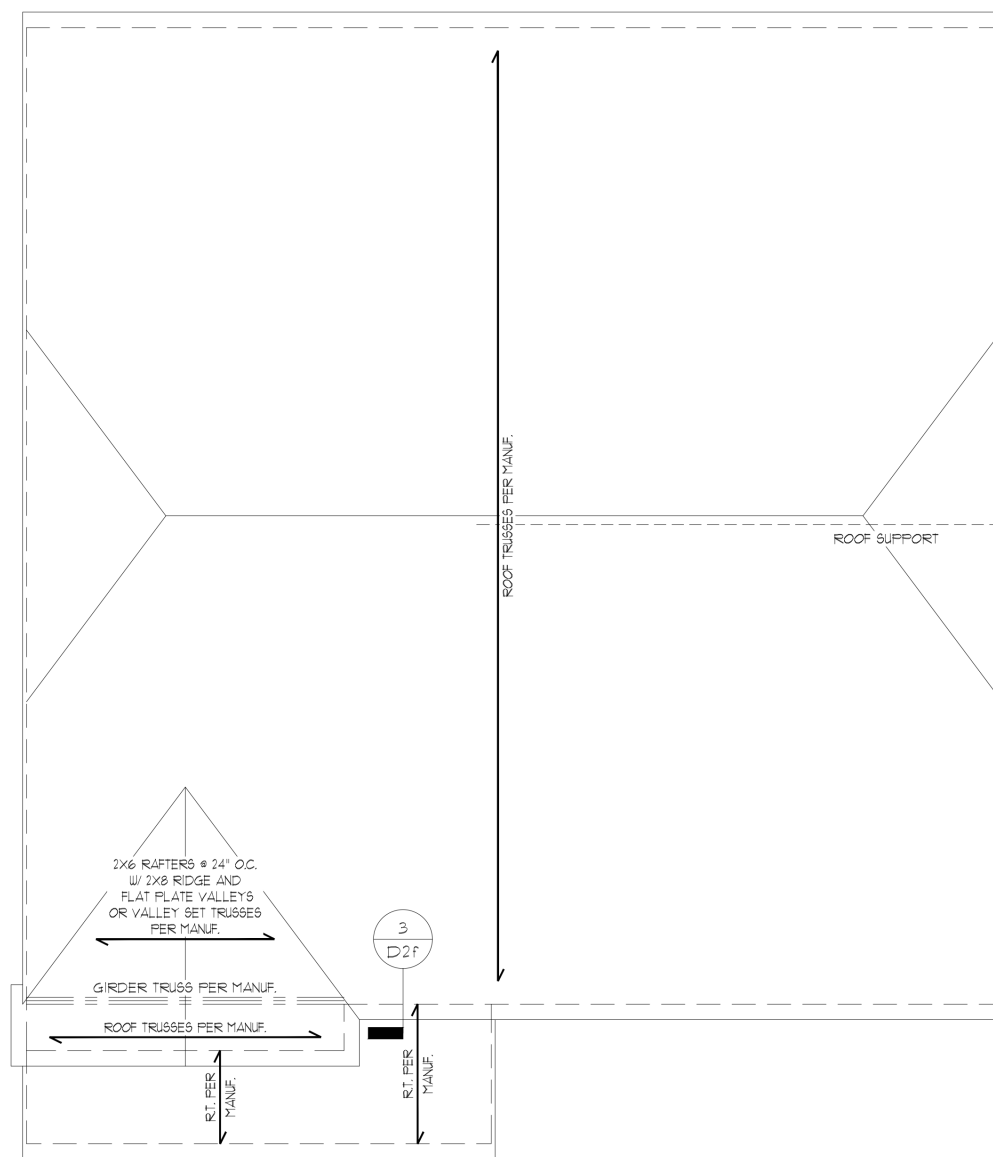
DRAINS
DATE: 09/15/2023
SCALE: 22x4 1/4"-1'-0"
1x7 1/2" 1/8"-1'-0"
PROJECT # 538100660
DRAIN BY: ED
CHECKED BY: JCF

ORIGINAL INFORMATION
PROJECT # DATE
100660 09/15/2023

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

55.2



ROOF FRAMING PLAN - ELEVATION C

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

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

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STRUCTURAL MEMBERS ONLY

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

ROOF FRAMING PLAN

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

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:

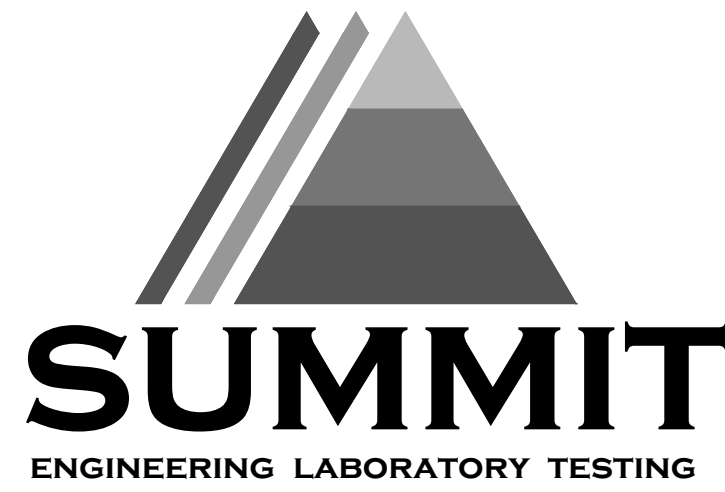
- 1. Roof Live Loads
11. Conventional 2x 20 PSF
12. Truss 20 PSF
12.1. Attic Truss 60 PSF
2. Roof Dead Loads
2.1. Conventional 2x 10 PSF
2.2. Truss 20 PSF
3. Snow 15 PSF
3.1. Importance Factor 1.0
4. Floor Live Loads
4.1. Typ. Dwelling 40 PSF
4.2. Sleeping Areas 30 PSF
4.3. Decks 40 PSF
4.4. Passenger Garage 50 PSF
5. Floor Dead Loads
5.1. Conventional 2x 10 PSF
5.2. I-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. Wind Base Shear
6.3.1. Vx =
6.3.2. Vy =

7. Component and Cladding (in PSF)

Table with 5 columns: MEAN ROOF HT., UP TO 30', 30'-35', 35'-40', 40'-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. Sm = %g
8.5.2. Sm1 = %g
8.6. Seismic Base Shear
8.6.1. Vx =
8.6.2. Vy =
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 2000psf



STRUCTURAL PLANS PREPARED FOR:

STANDARD DETAILS

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

ARCHITECT/DESIGNER:

G*MD 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 & Testing, P.C. before construction begins.

PLAN ABBREVIATIONS:

Table with 2 columns: Abbreviation and Description. Includes AB ANCHOR BOLT, AFF ABOVE FINISHED FLOOR, CJ CEILING JOIST, etc.

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to SUMMIT Engineering, Laboratory & 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:

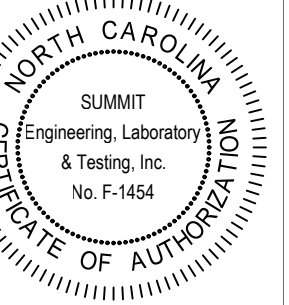
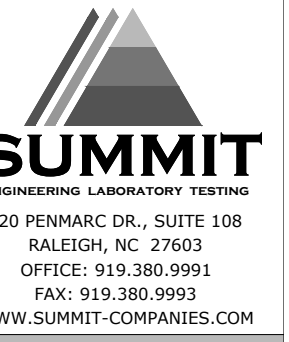
Table with 2 columns: Sheet No. and Description. Includes CS1 Cover Sheet, D1m Monolithic Slab Foundation Details, etc.

REVISION LIST:

Table with 4 columns: Revision No., Date, Project No., Description. Lists 14 revisions including added box bay detail, revised stem wall insulation, etc.

DR HORTON PROJECT SIGN-OFF:

Table for signature and operations system. Includes Manager, Operations, Operations System, Operations Product Development.



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

PROJECT: Standard Details (OX-15)
Cover sheet



DRIVING DATE: 05/14/2023
SCALE: 2/24 (H) 1/4"=1'-0"
PROJECT #: 158-048
DRAWN BY: JCF
CHECKED BY: BCP

ORIGINAL INFORMATION PROJECT # DATE 1/31/2021

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET CSI

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 & 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 (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 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.
9. Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint.
10. All welded wire fabric (WUWF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WUWF 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 FSL engineered wood shall have the following minimum design values:
2.1. E = 1900000 psi
2.2. Fv = 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 AUPA standard C-15. All other moisture exposed wood shall be treated in accordance with AUPA standard C-2
4. Nails shall be 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 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.
9. Multi-ply beams shall have each ply attached with (3) 10d nails @ 24" O.C.
10. Filch 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 7-05), 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-31). 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.

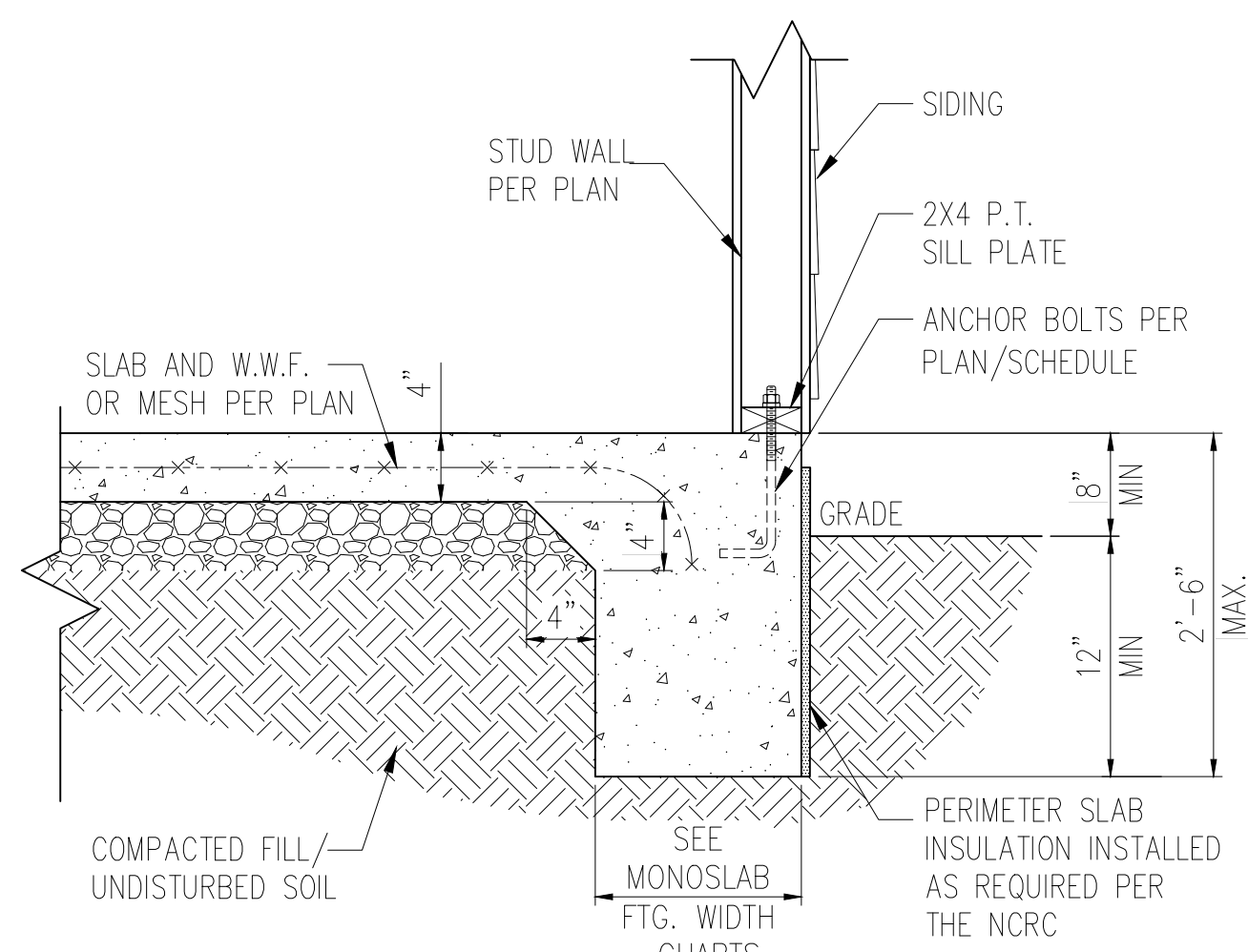
WOOD STRUCTURAL PANELS:

- 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.

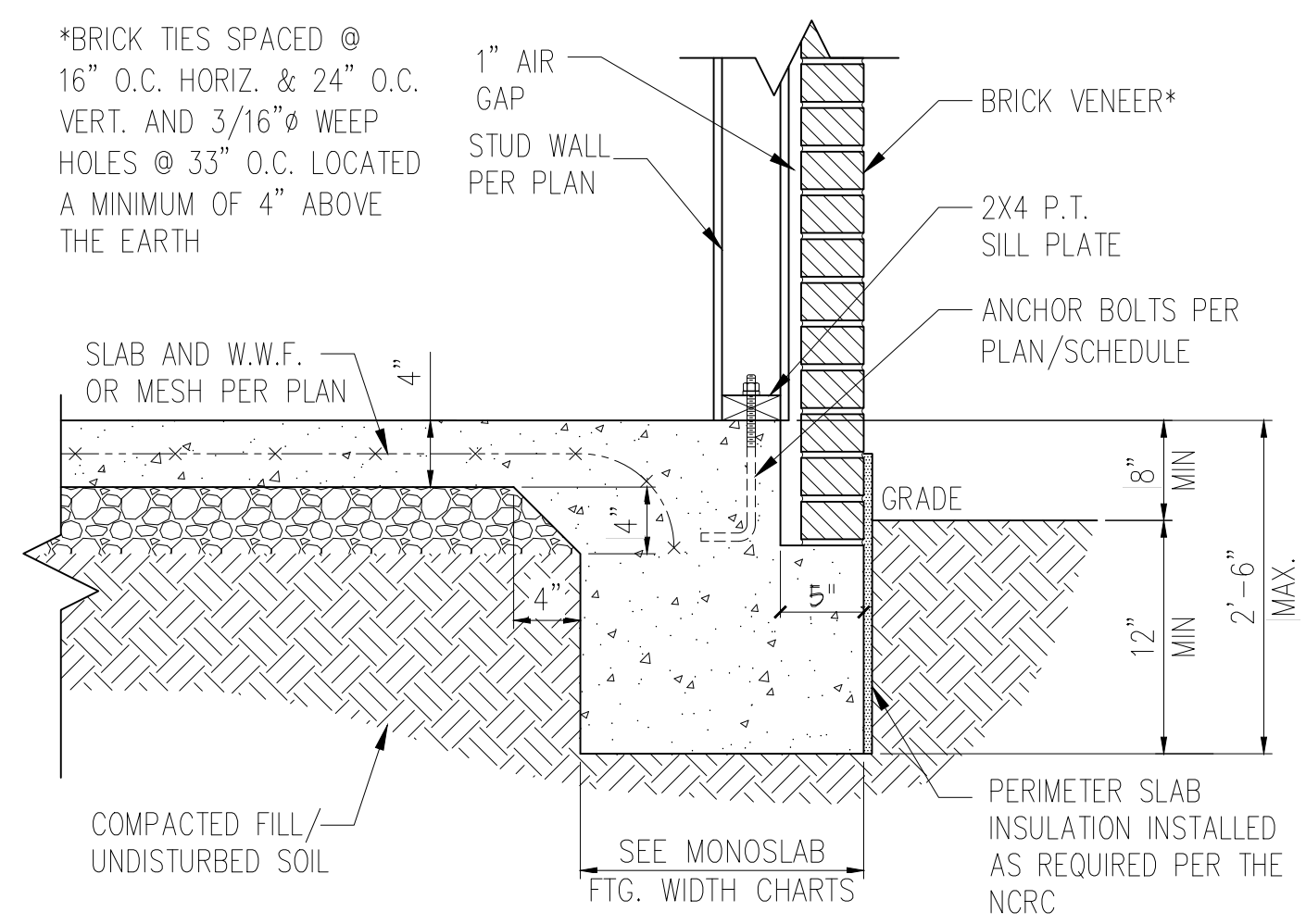
- 3. Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
4. Roof sheathing shall be AFA 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 AFA 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:

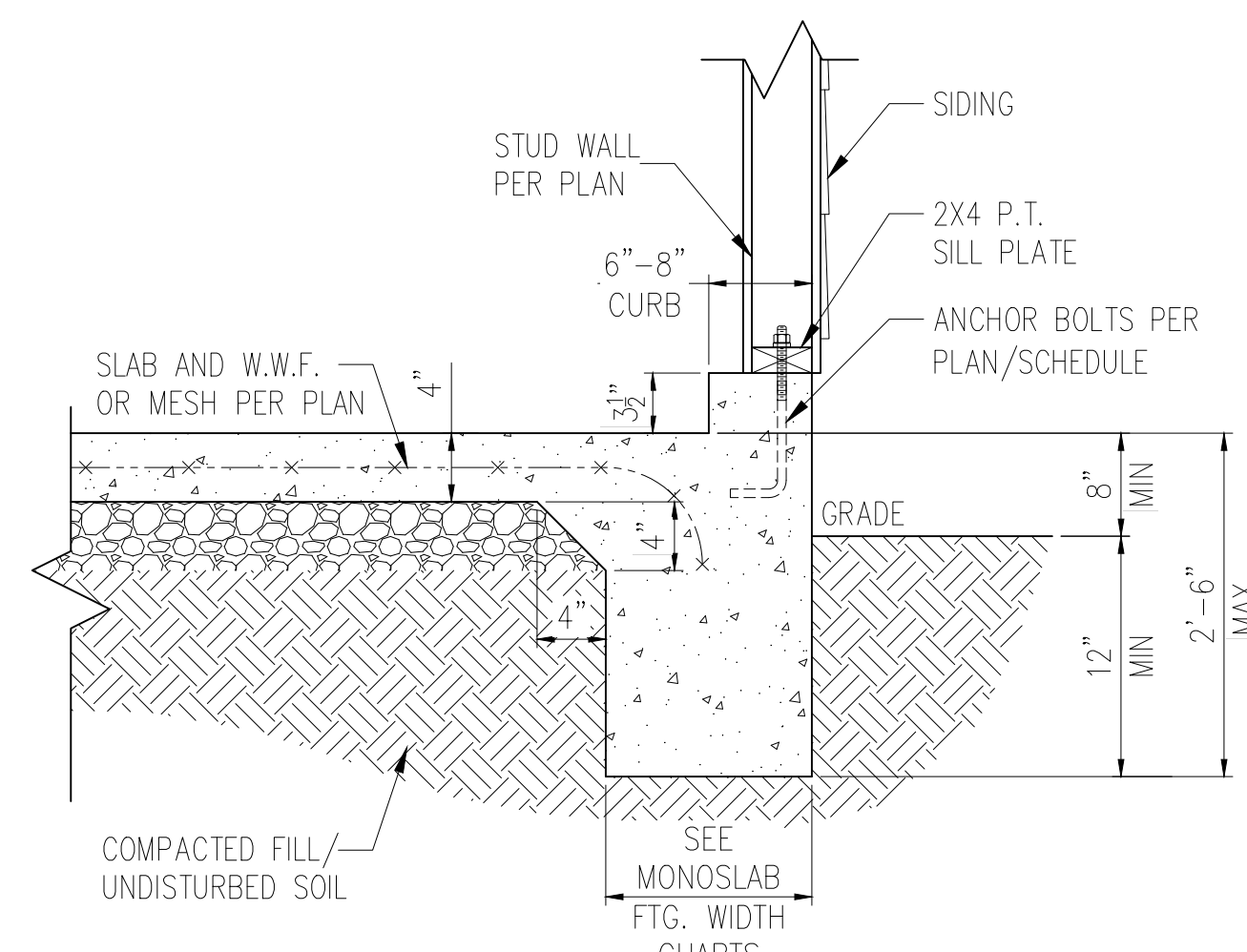
- 1. Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
2. All structurally required fiberboard sheathing shall bear the mark of the AFA.
3. Fiberboard wall sheathing shall comply with the requirements of local building codes for the 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.



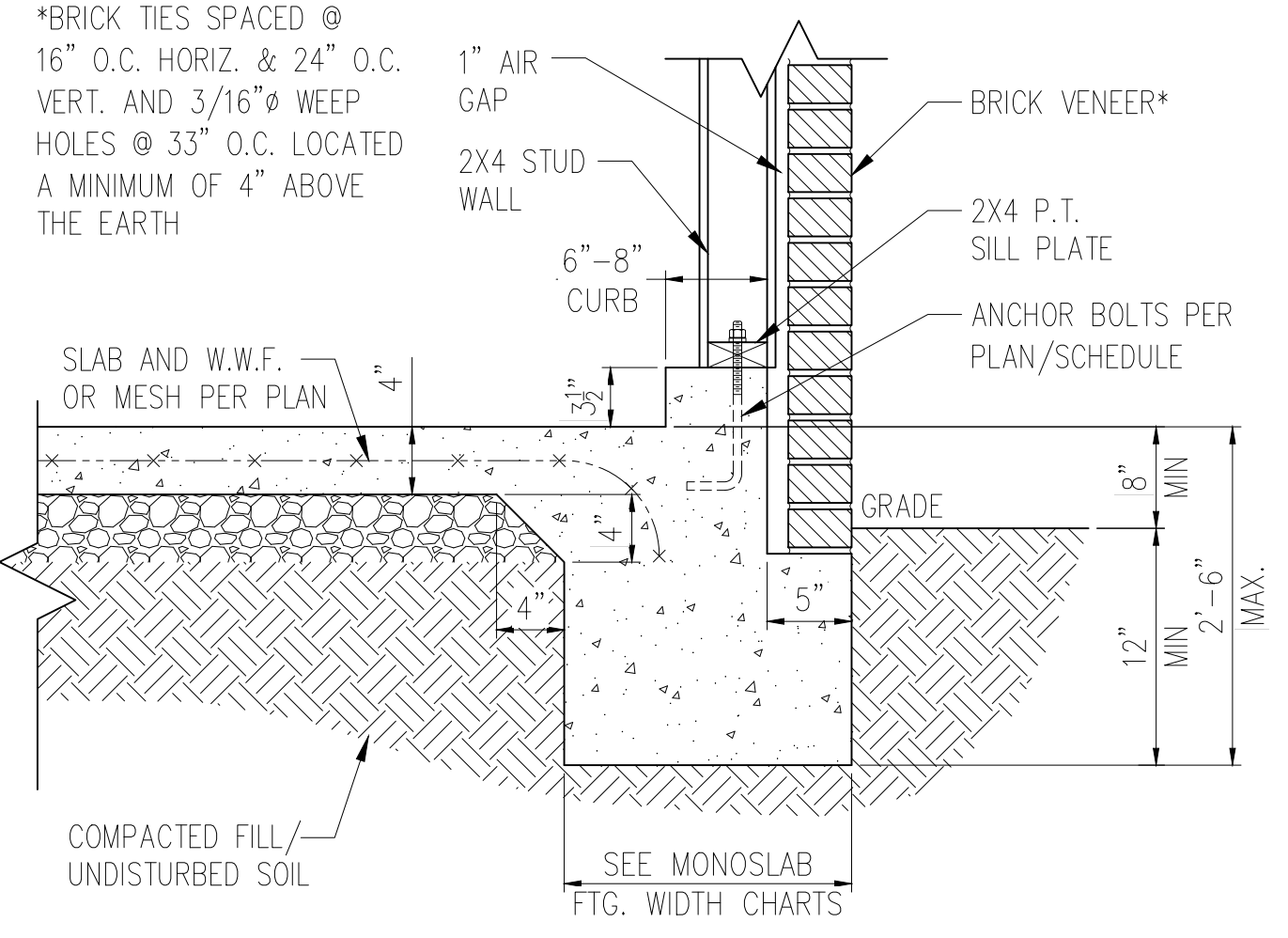
STANDARD - SIDING



STANDARD - BRICK



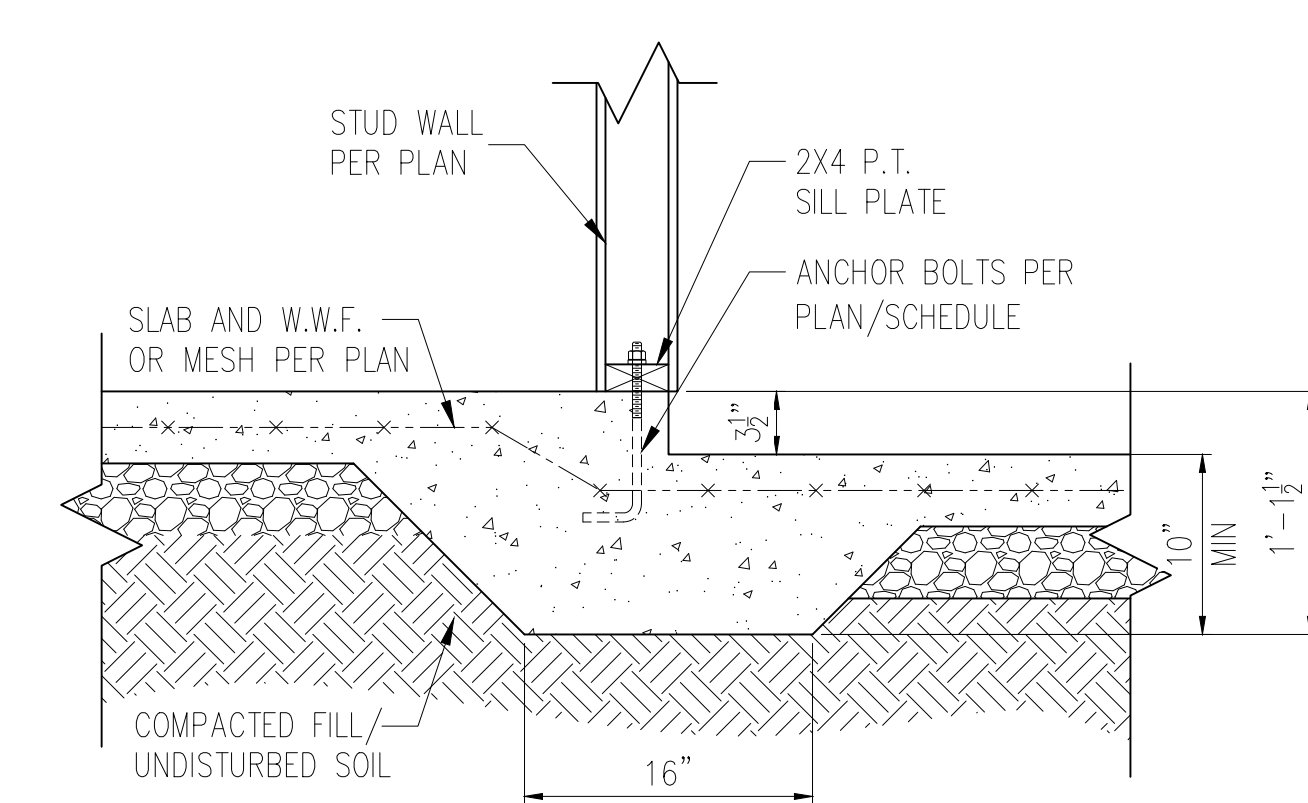
STANDARD - SIDING



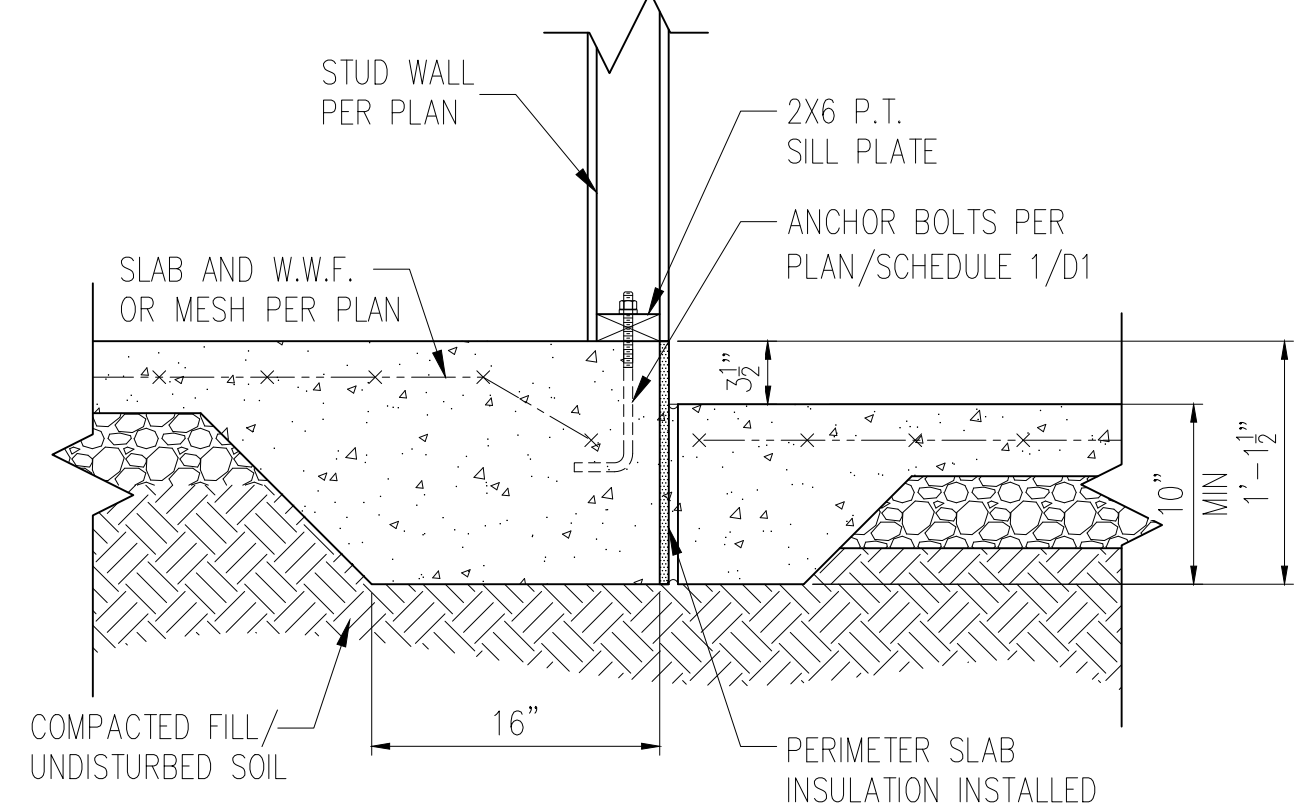
STANDARD - BRICK

1 TYP. SLAB DETAIL
D1m N.T.S.

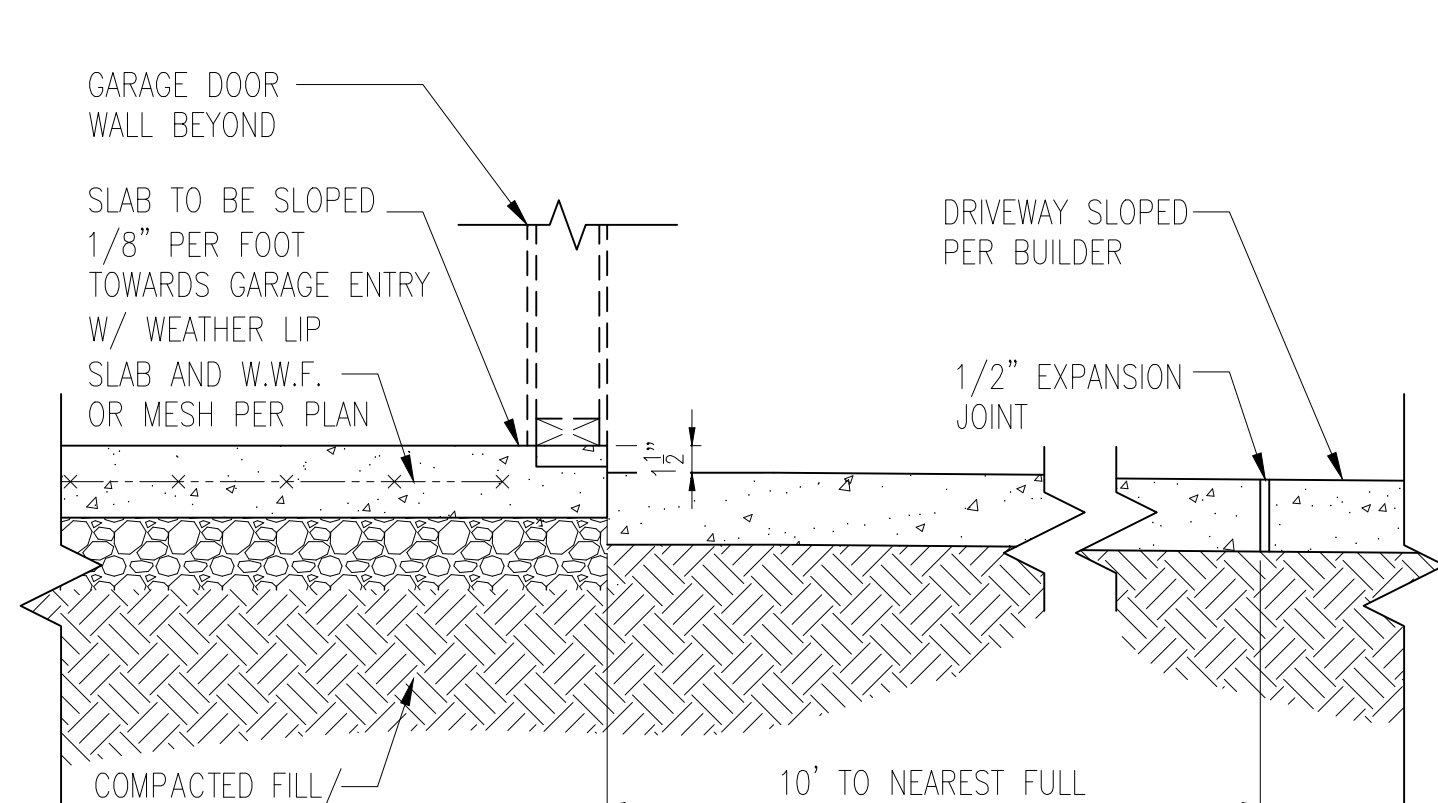
2 TYP. GARAGE CURB DETAIL
D1m N.T.S.



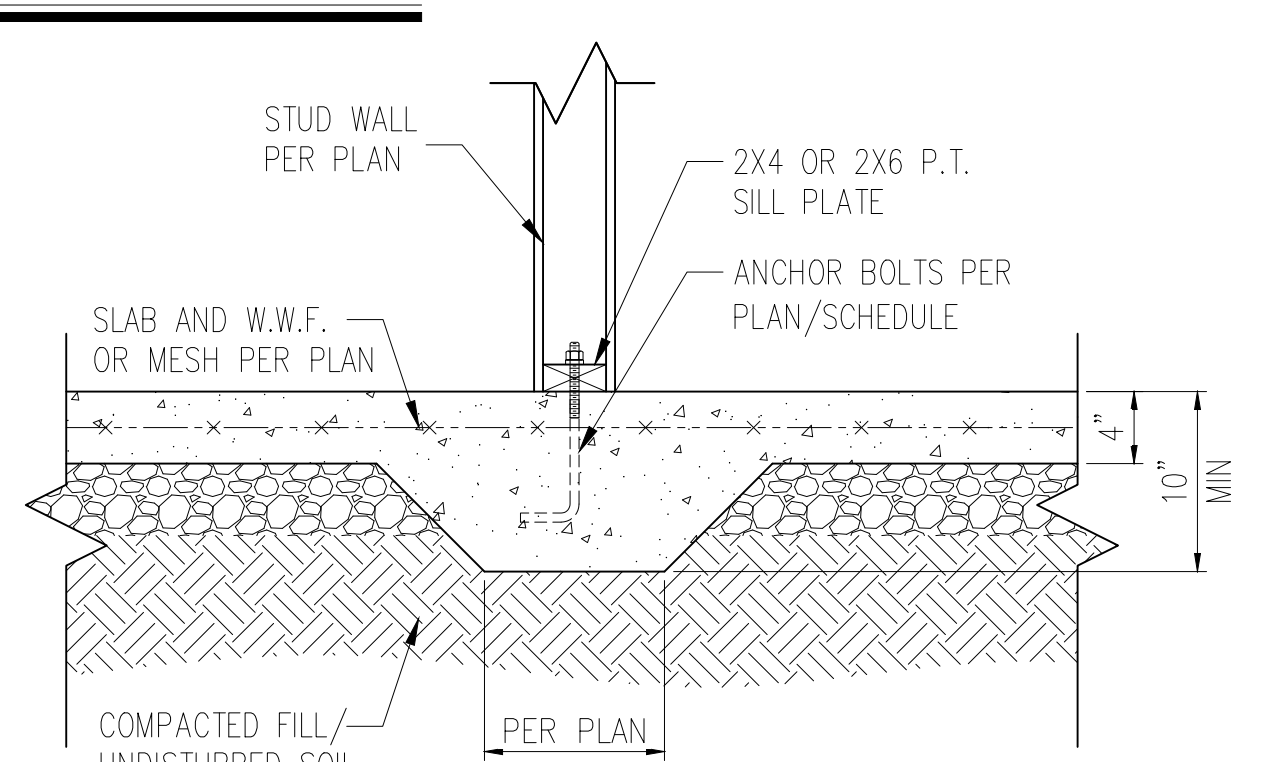
3 STEP IN GARAGE
D1m N.T.S.



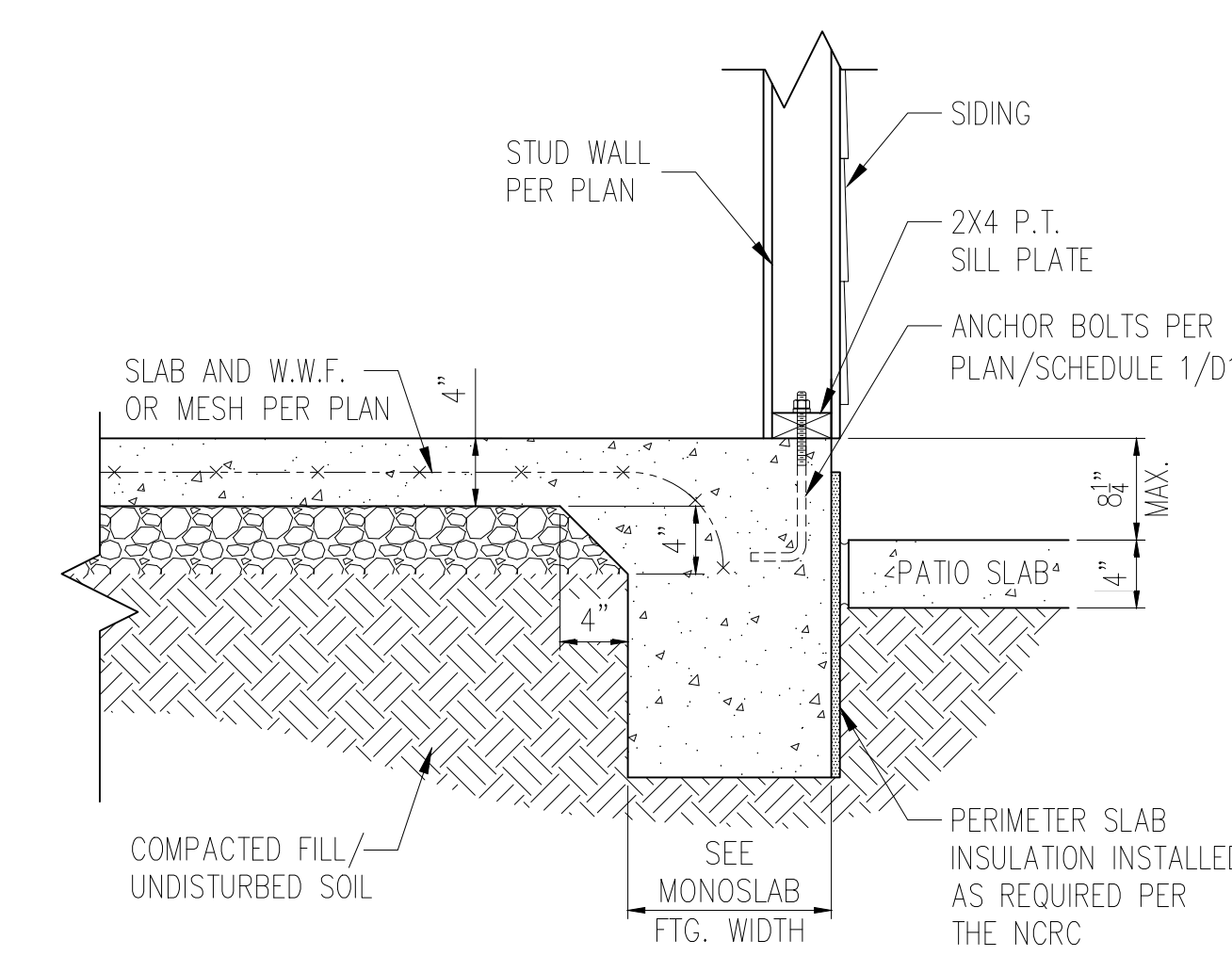
3A ALTERNATE TWO-POUR DETAIL
D1m N.T.S.



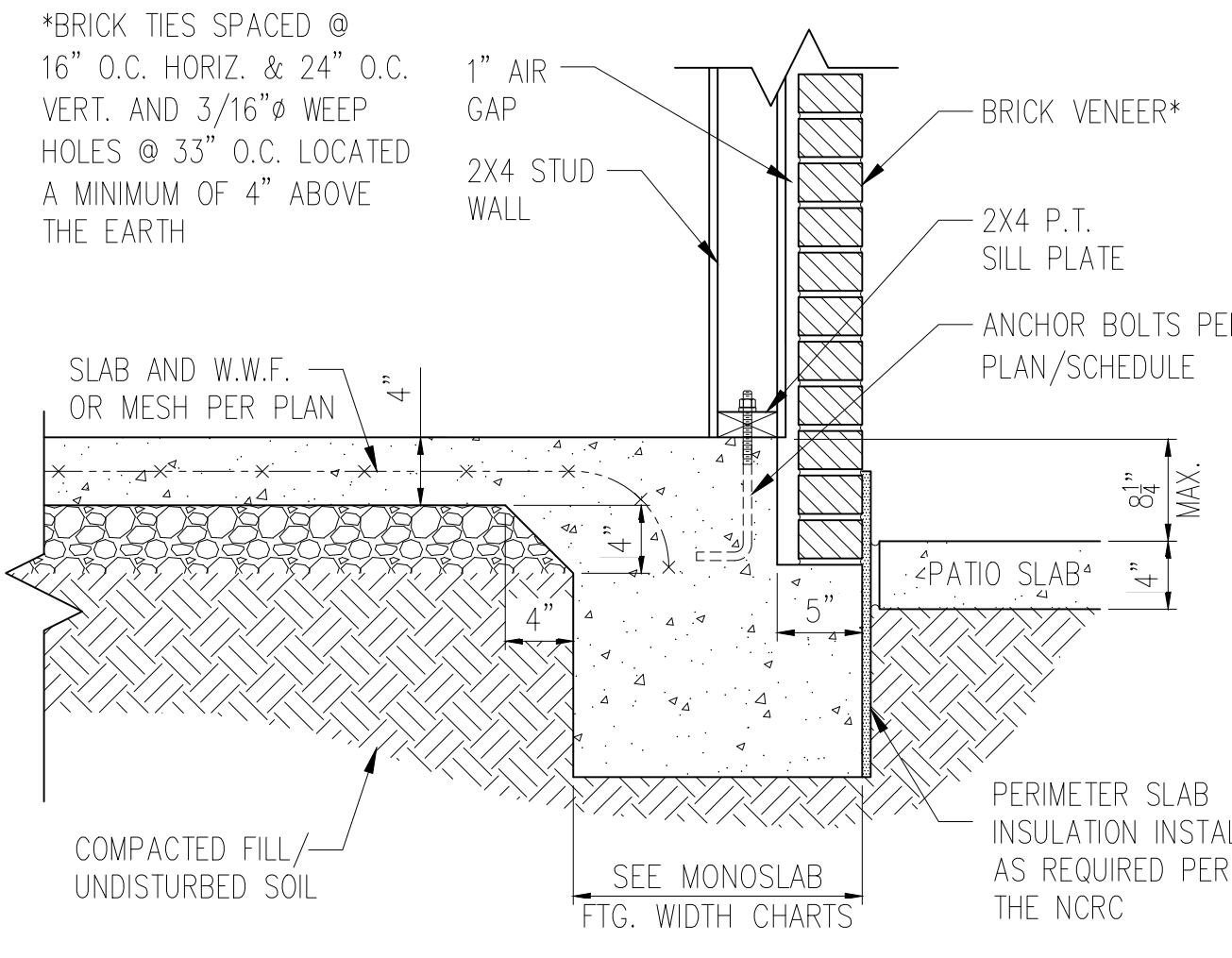
4 SLAB AT GARAGE DOOR
D1m N.T.S.



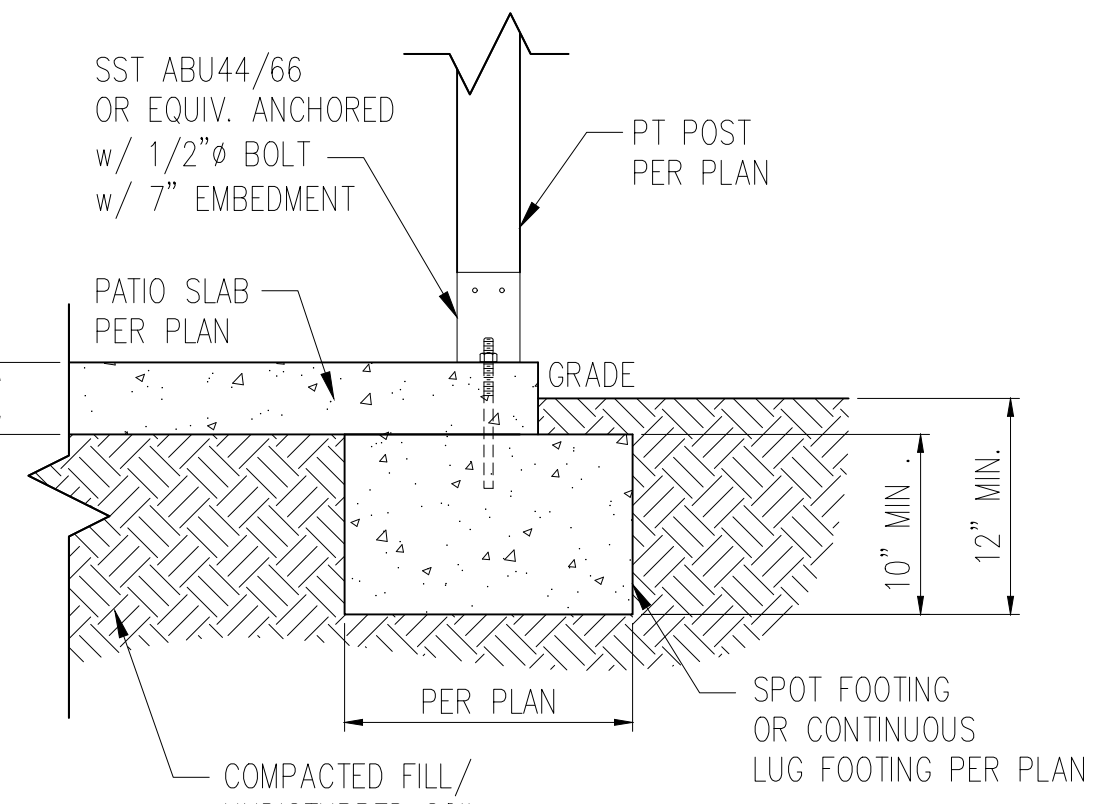
5 TYP. THICKENED SLAB DETAIL
D1m N.T.S.



STANDARD - SIDING



STANDARD - BRICK



6A COVERED PATIO DETAIL
D1m N.T.S.

6 PATIO SLAB DETAIL
D1m N.T.S.

MONOLITHIC 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 MONOLITHIC FOOTING WIDTH FOR BRICK SUPPORT

WALL ANCHOR SCHEDULE

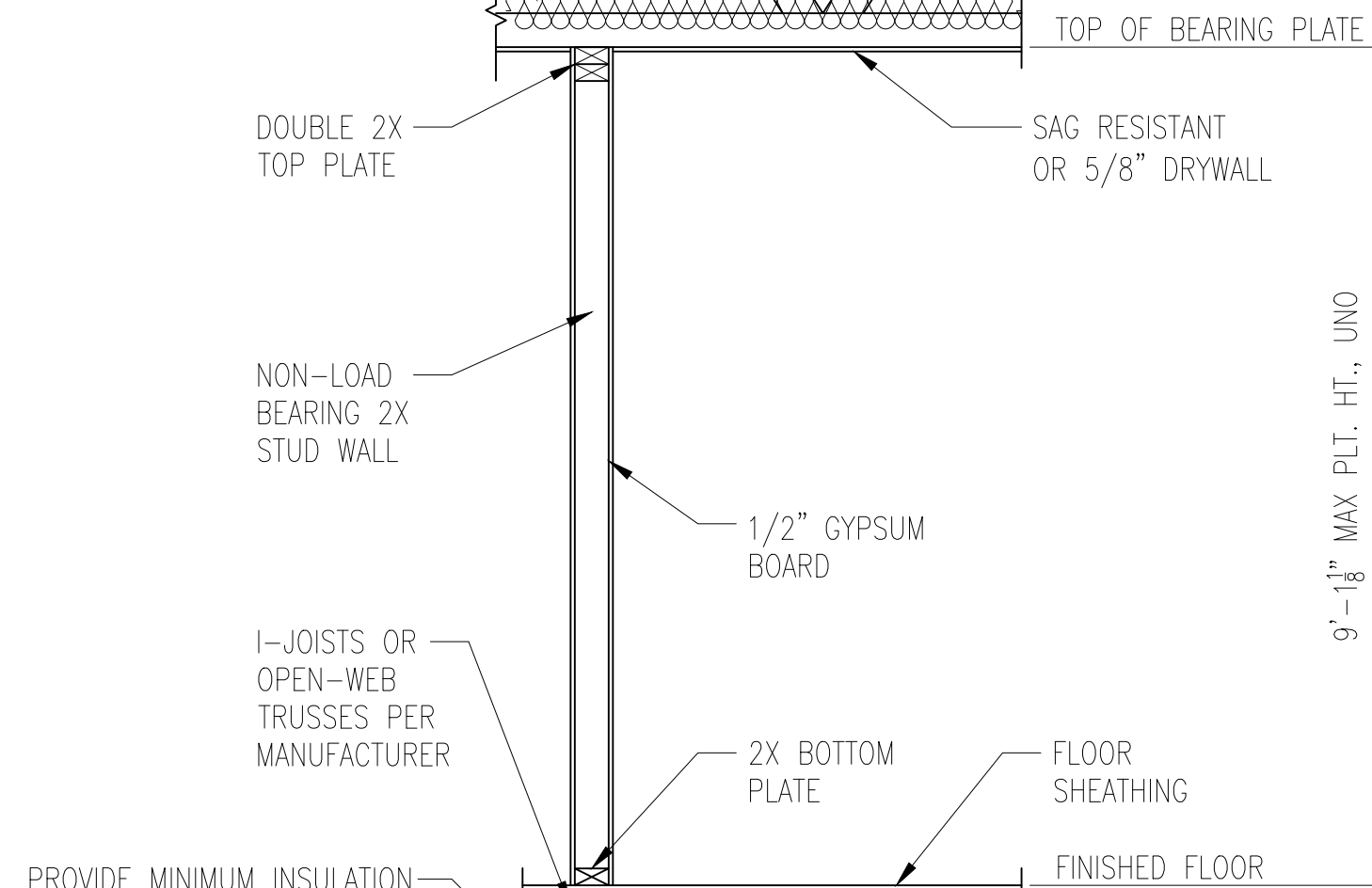
| TYPE OF ANCHOR | MIN. CONC. EMBEDMENT | SPACING | INTERIOR WALL | EXTERIOR WALL |
|--|----------------------|---------|---------------|---------------|
| 1/2" ϕ A307 BOLTS w/ STD. 90° BEND | 7" | 6'-0" | YES | YES |
| SST - MAS | 4" | 5'-0" | NO | YES |
| HILTI KWIK BOLT KBI 1/2-2-3/4 | 2-1/4" | 6'-0"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

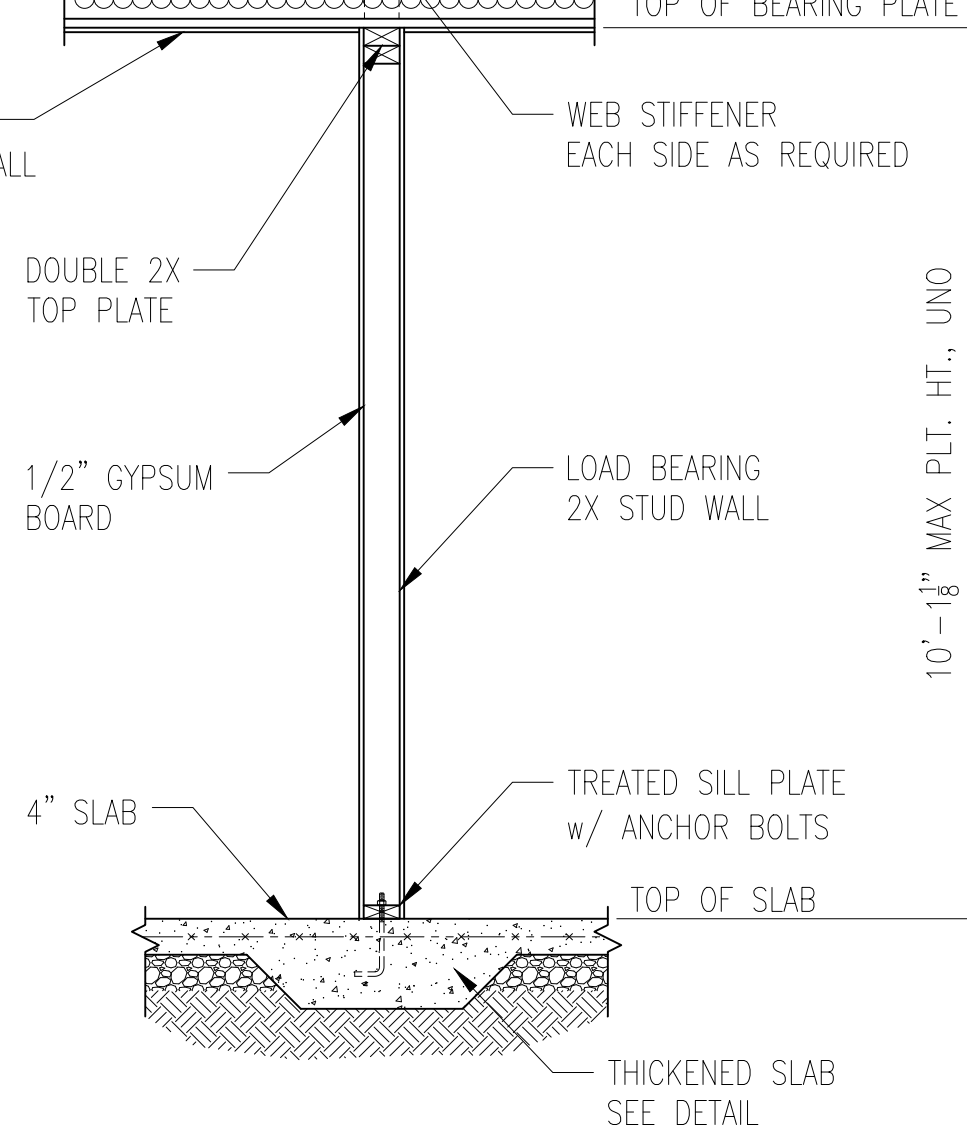
- NOTES:
- REFER TO GENERAL NOTES & SPECIFICATIONS ON COVERSHEET FOR ADDITIONAL INFORMATION.
 - PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
 - SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.
 - REFER TO STRUCTURAL PLANS AND FRAMING DETAILS FOR BRACED WALL PANEL LAYOUT,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

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



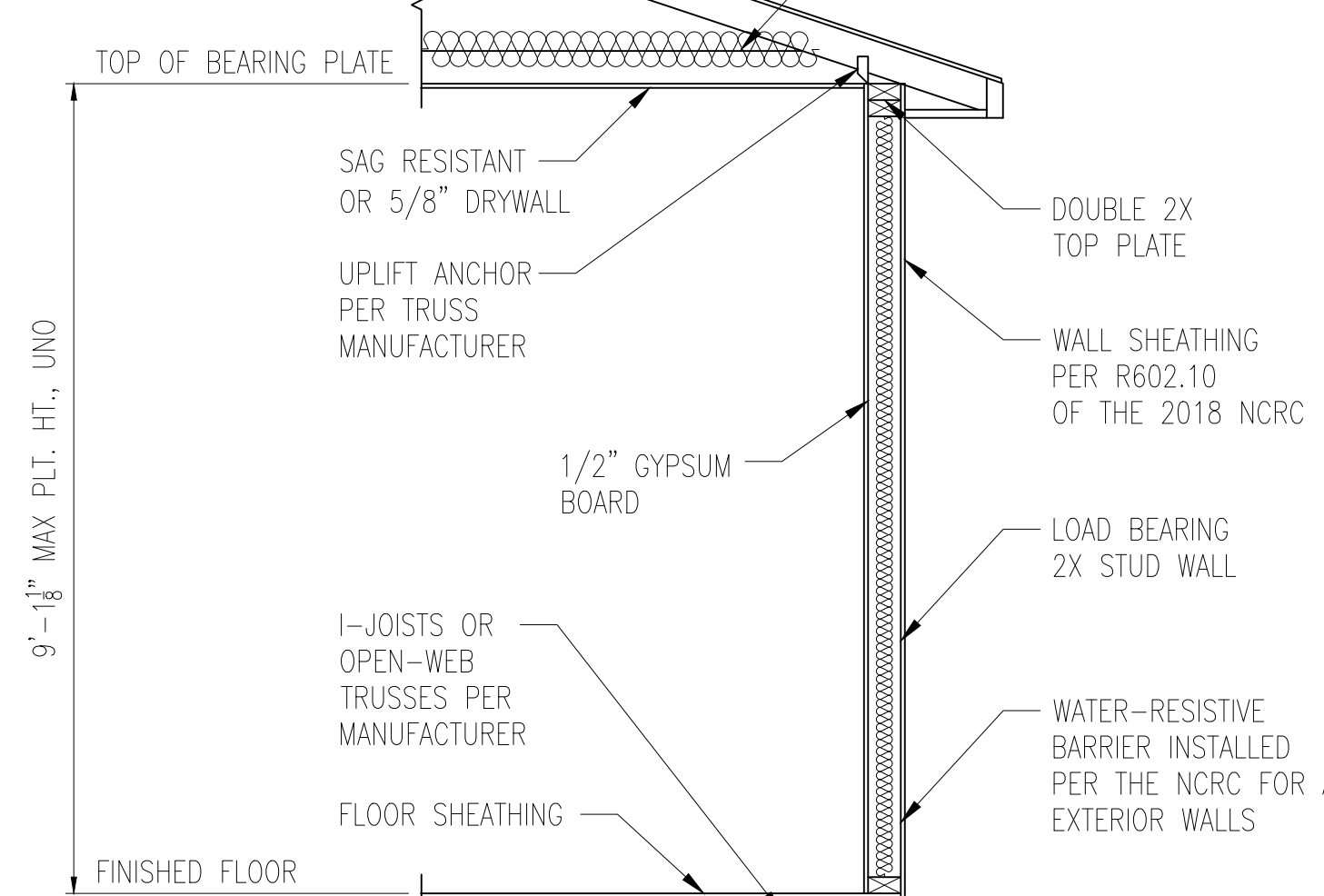
PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC



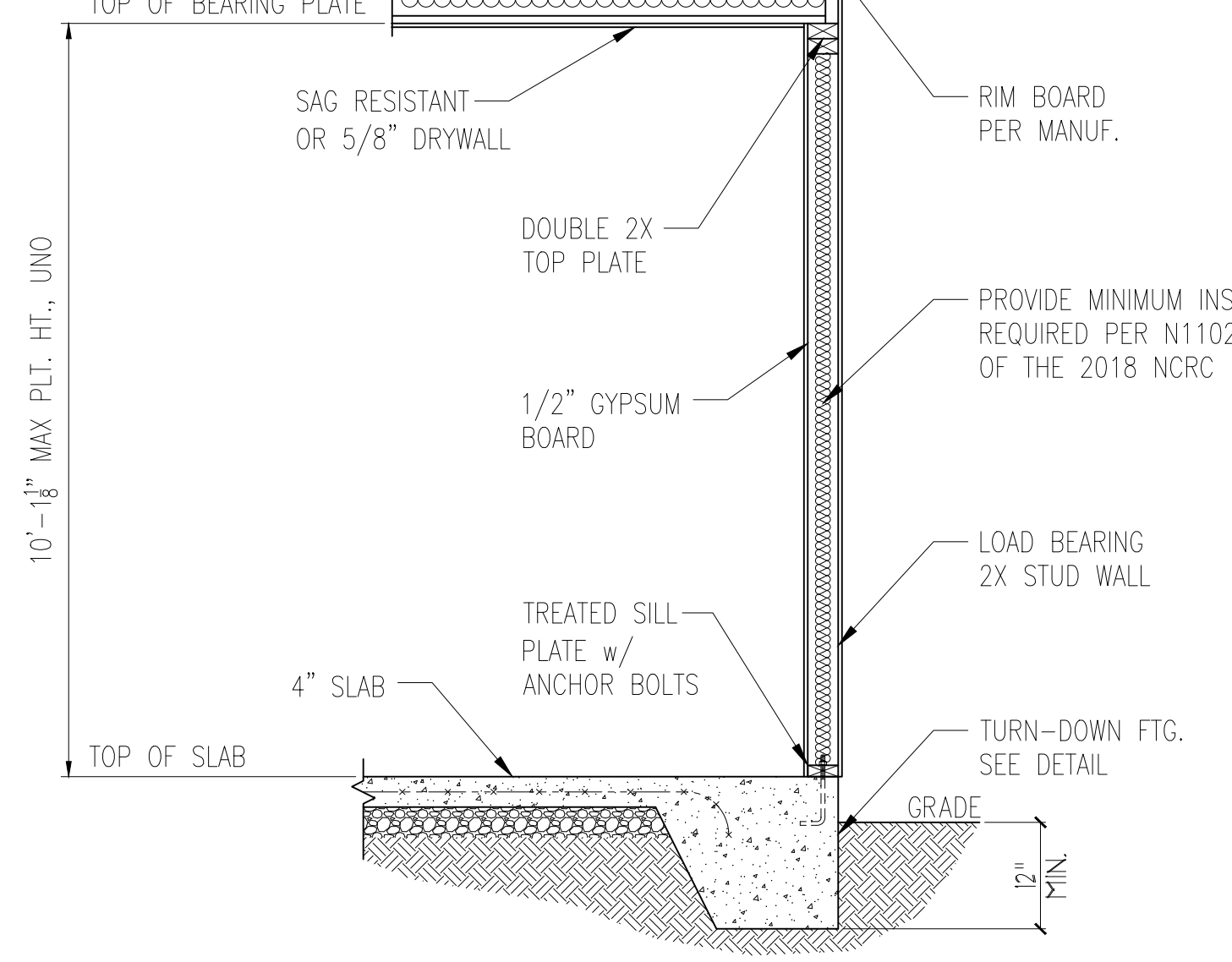
1 TYP. INTERIOR LOAD BEARING WALL SECTION
D2m N.T.S.

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



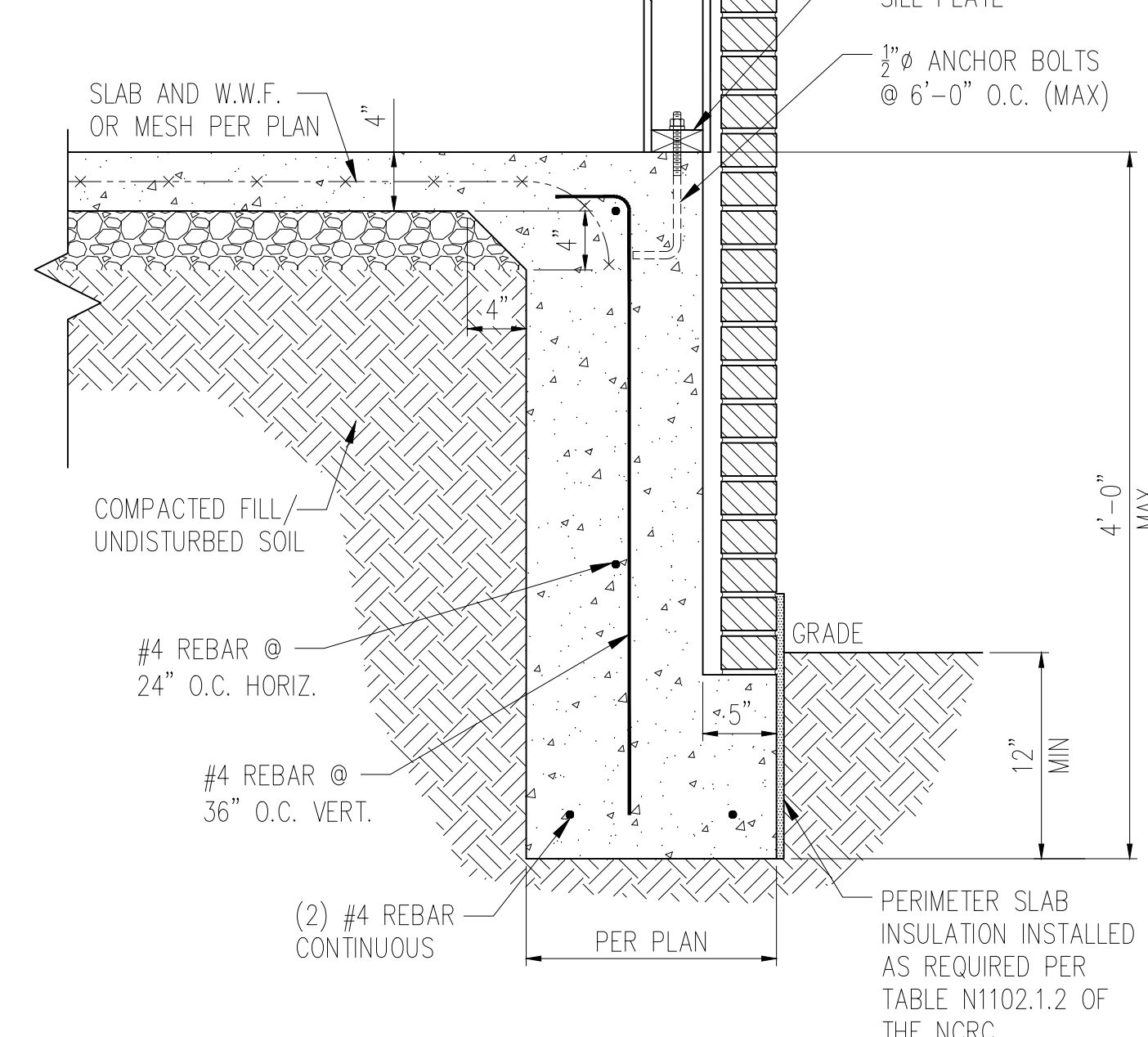
PROVIDE MINIMUM INSULATION REQUIRED PER N1102.1.2 OF THE 2018 NCRC



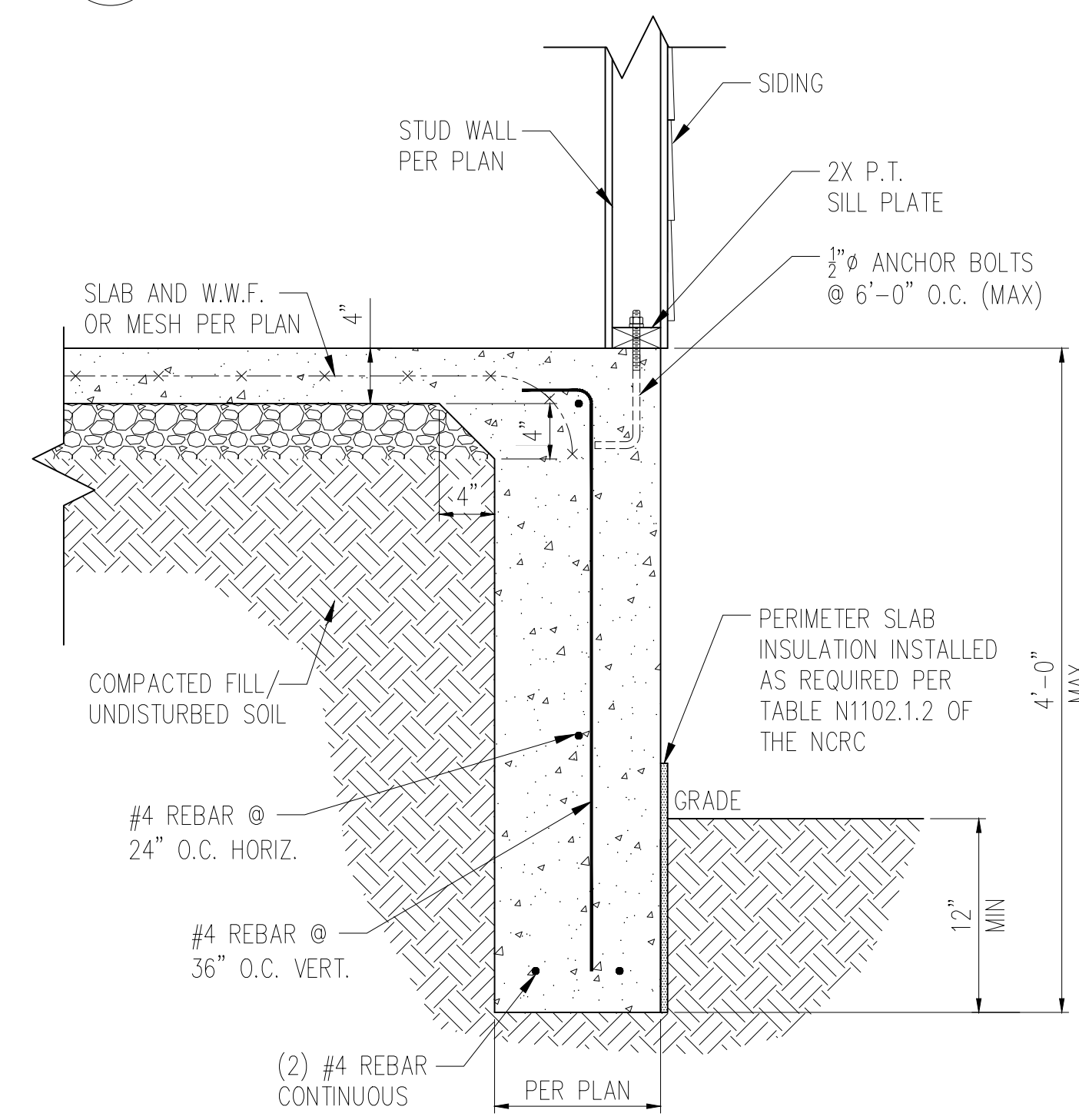
2 TYP. EXTERIOR LOAD BEARING WALL SECTION
D2m N.T.S.

-SIMILAR w/ BRICK AND STONE
-BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.
-MIN. 3/16" WEEP HOLES @ 33" O.C.

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

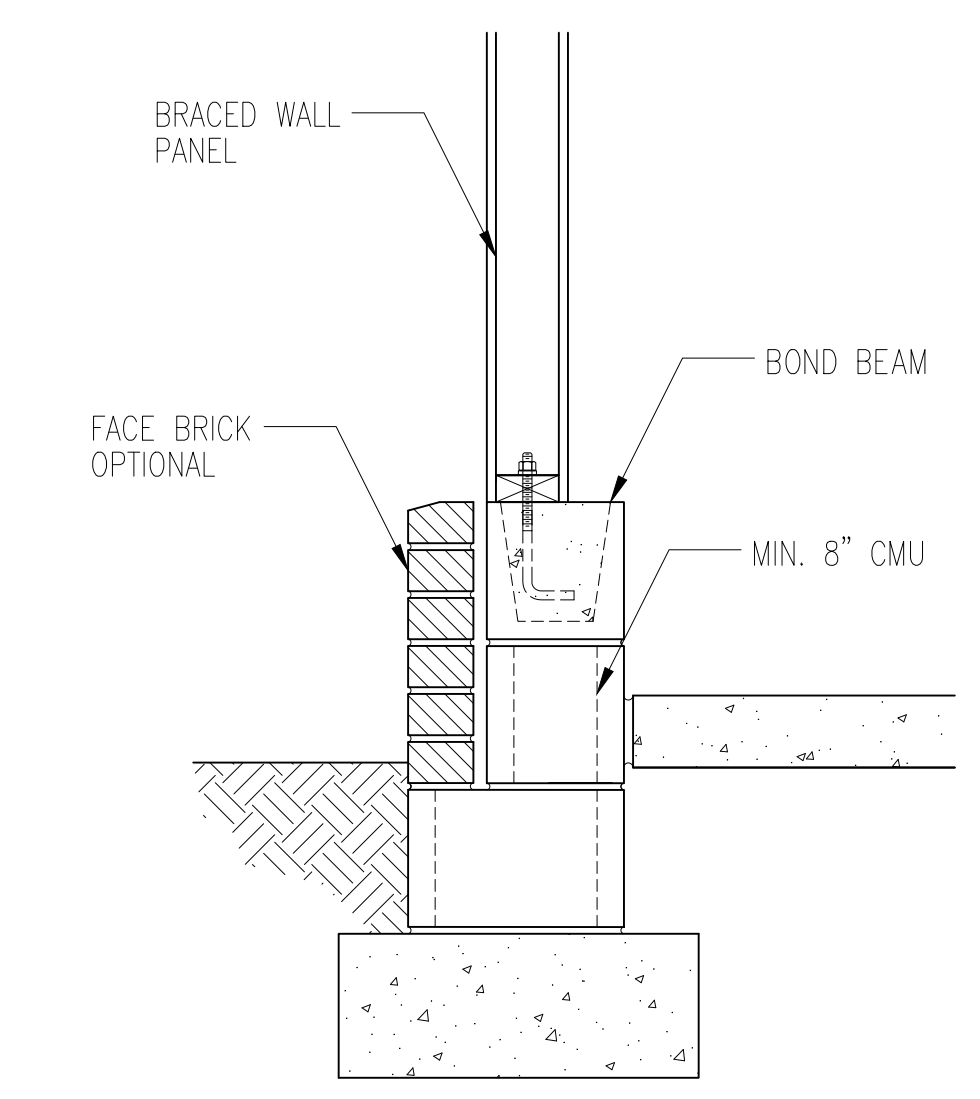
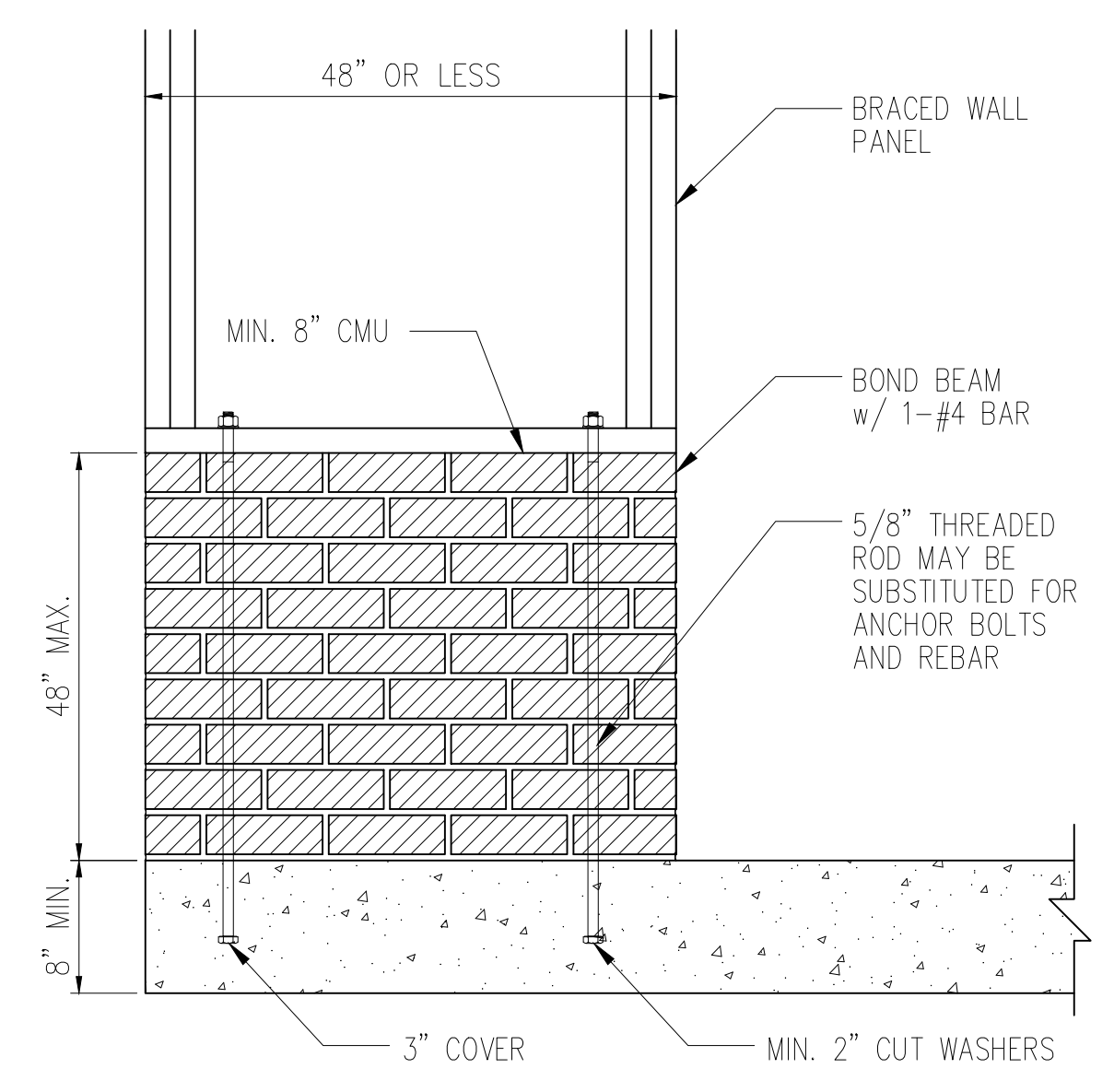
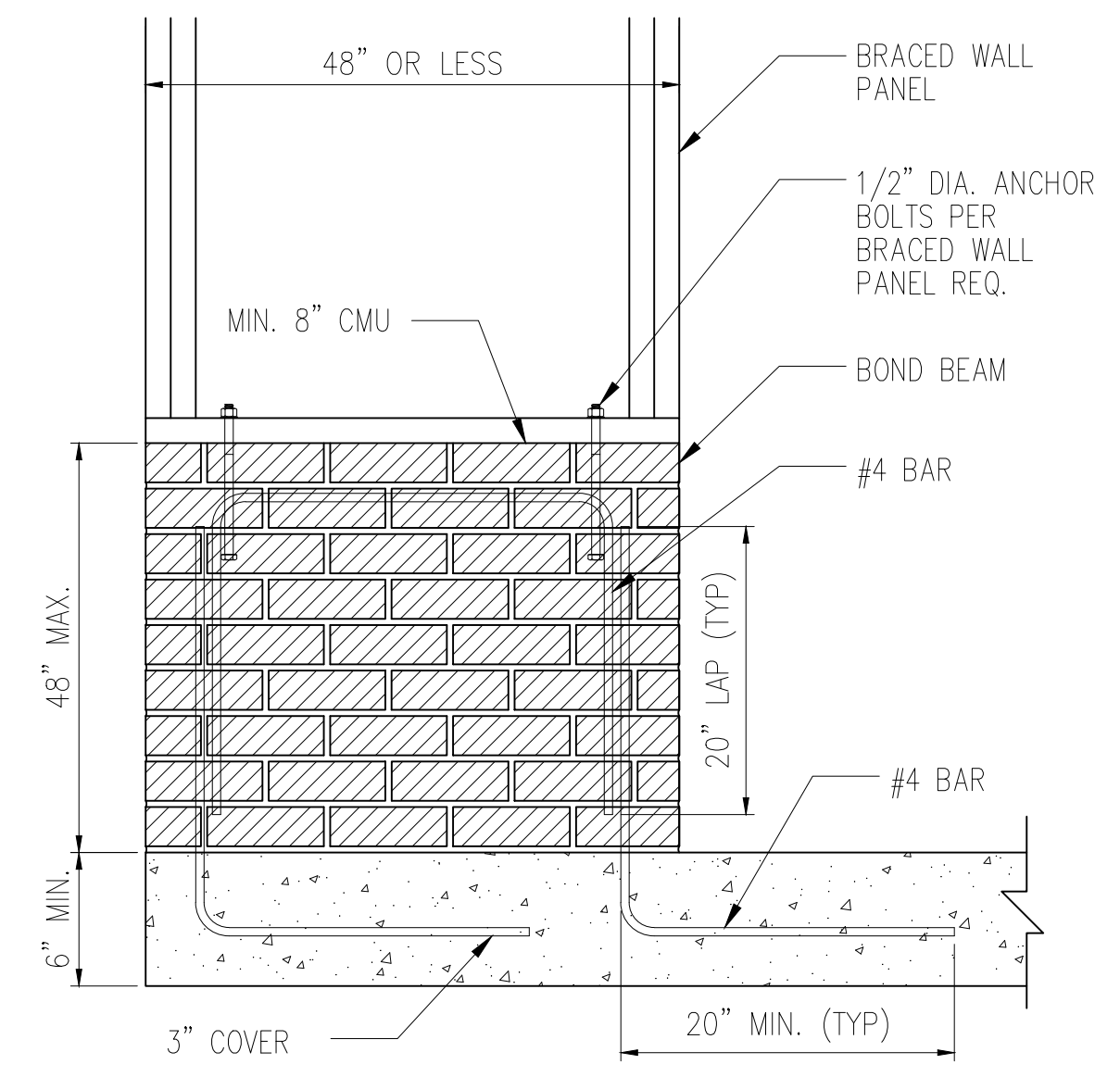
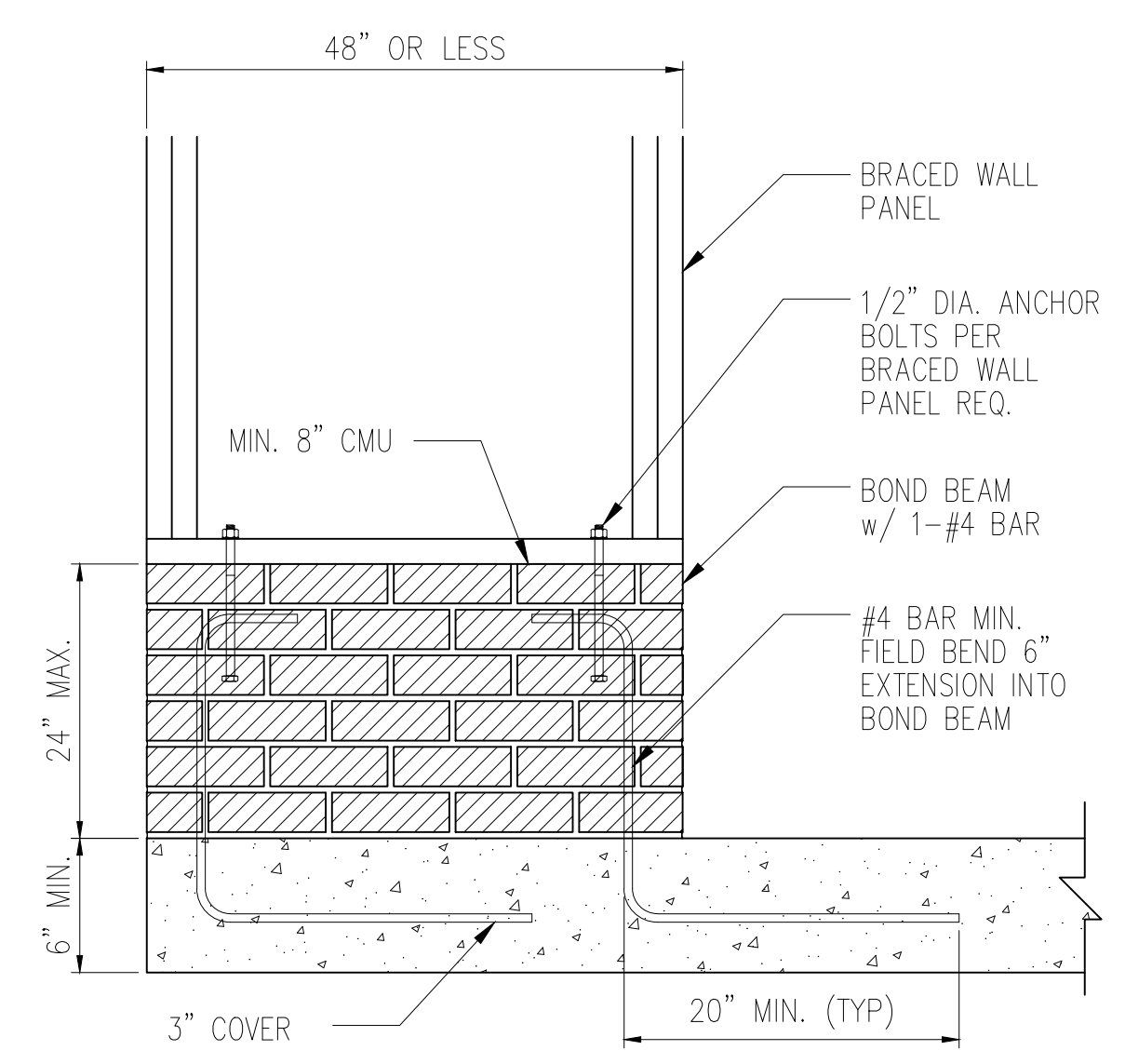
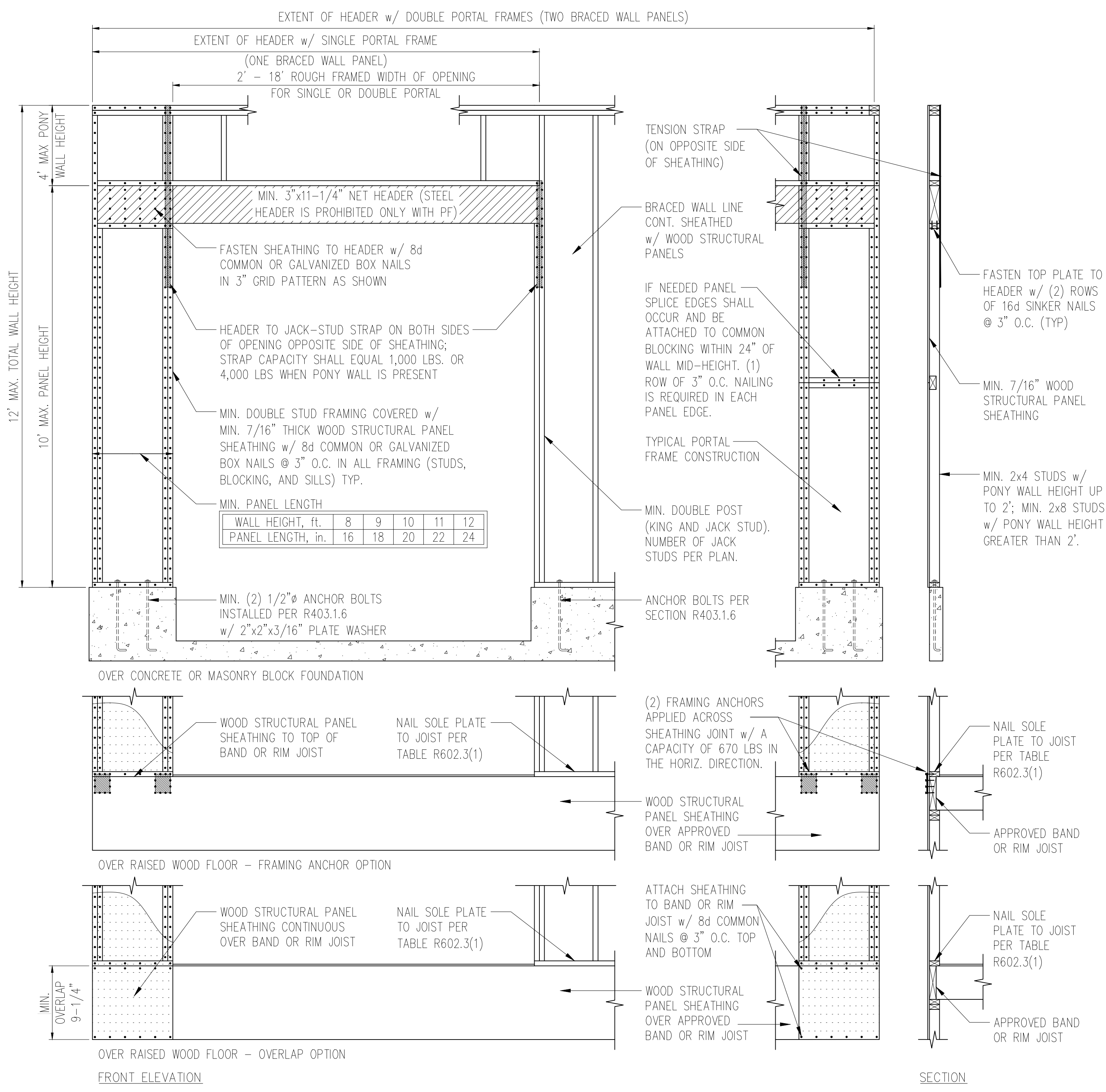


3 TALL SLAB DETAIL w/ BRICK VENEER
D2m N.T.S.



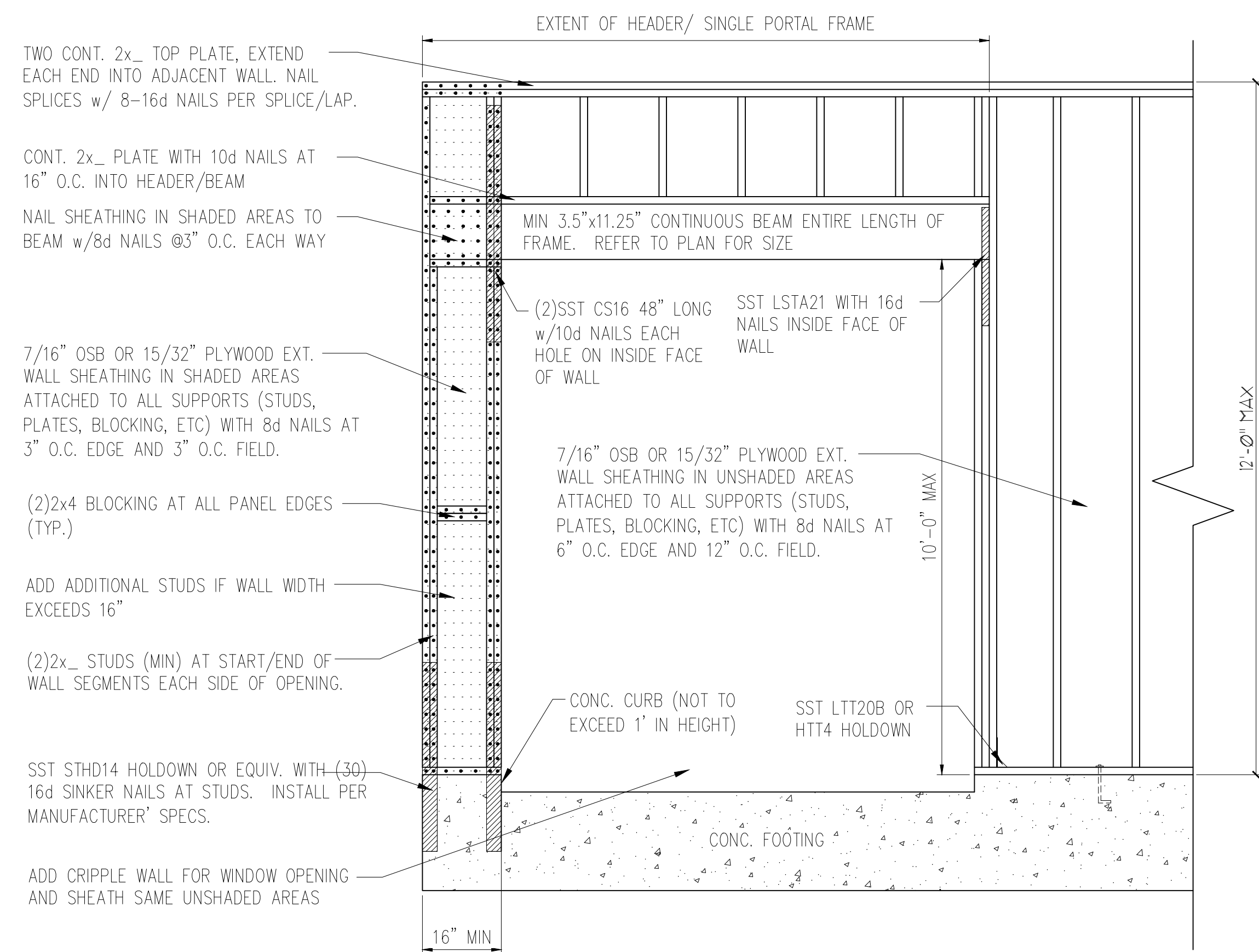
4 TALL SLAB DETAIL w/ SIDING
D2m N.T.S.

- 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

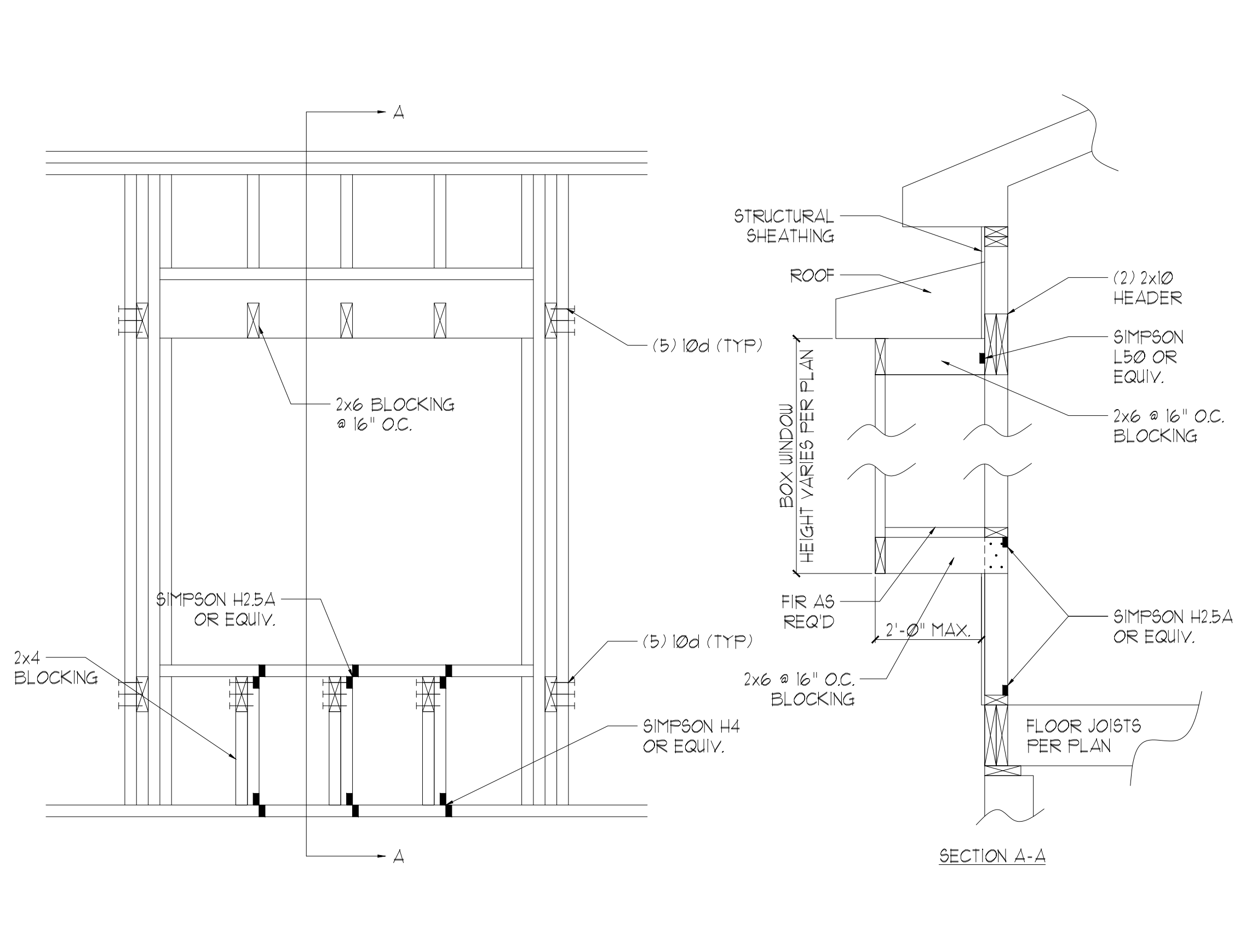
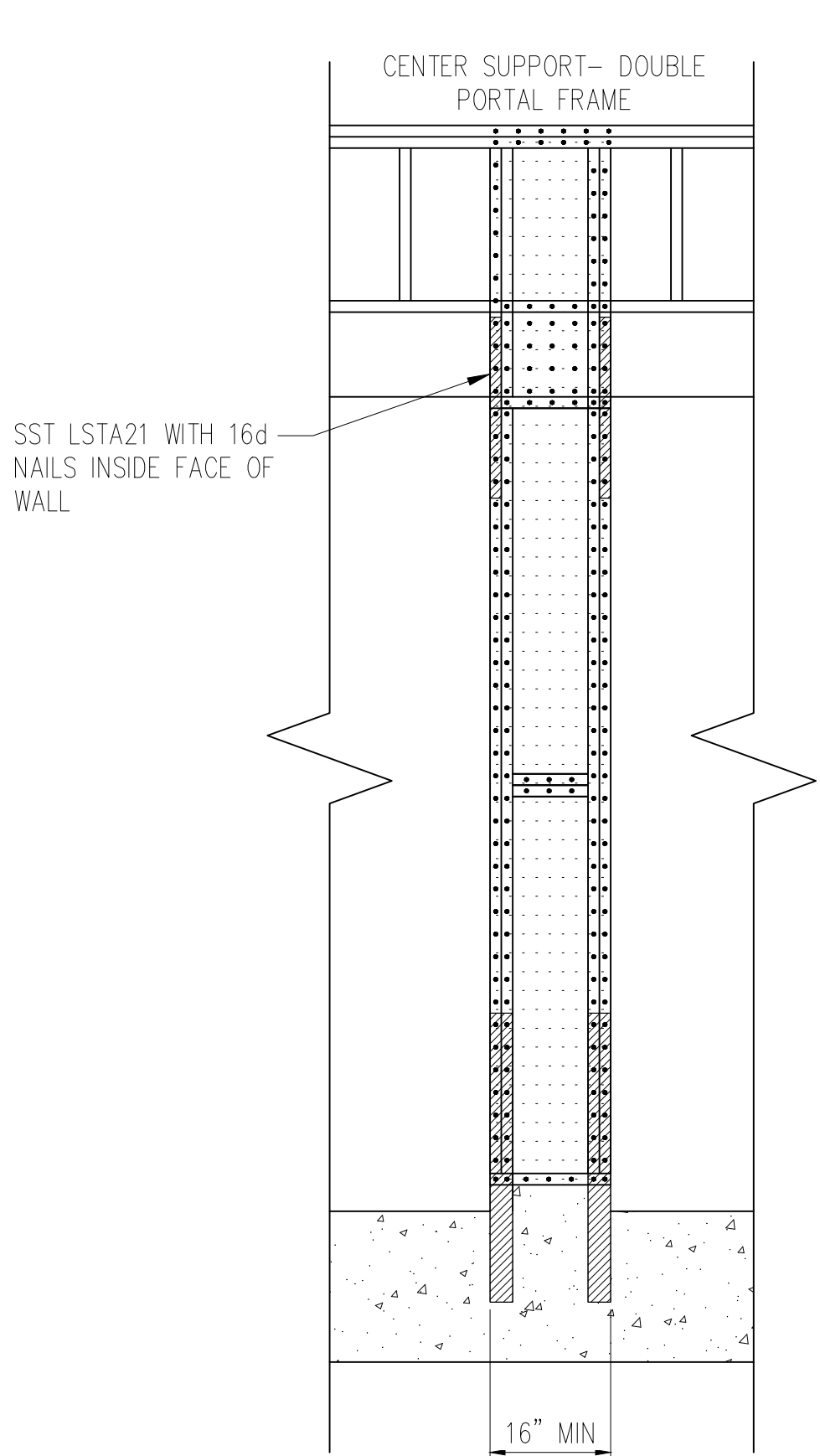


2 MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS
D1f NTS

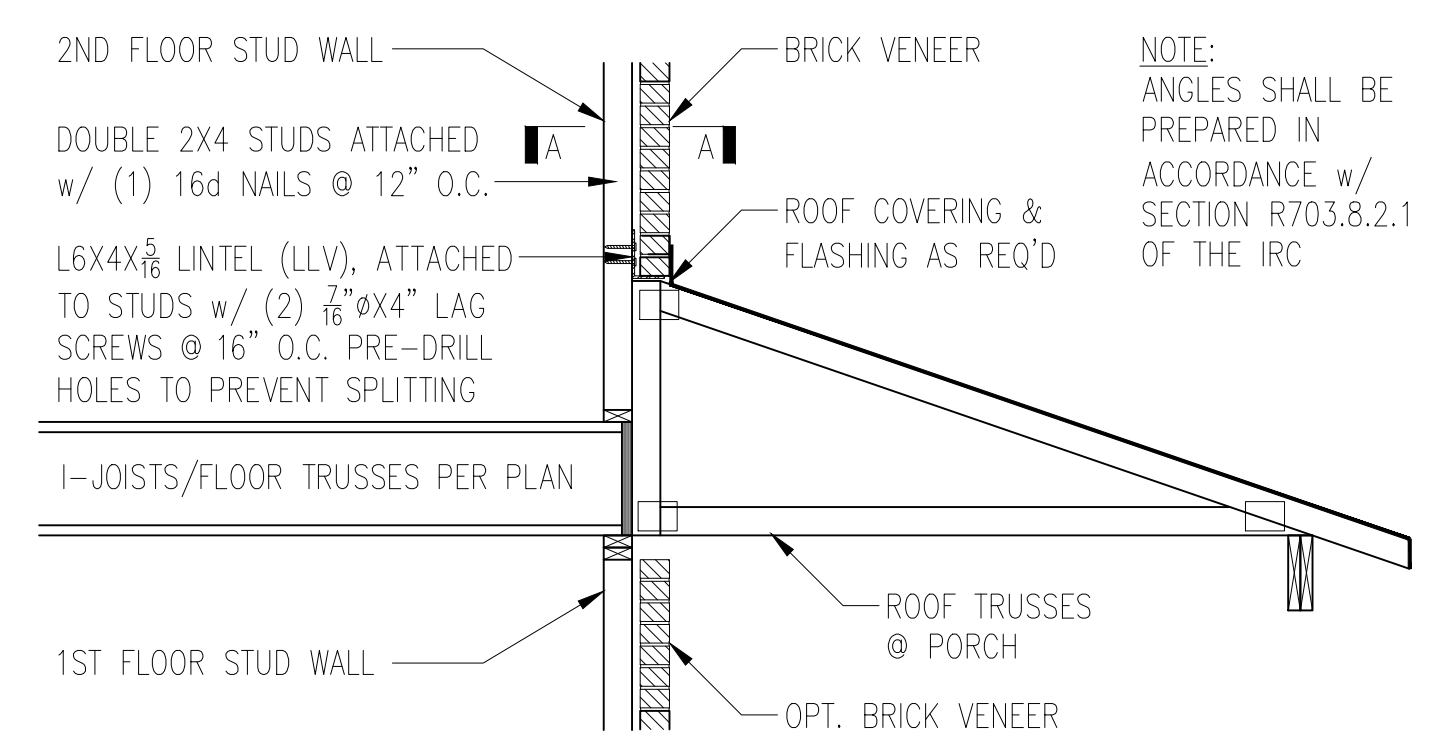
NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS



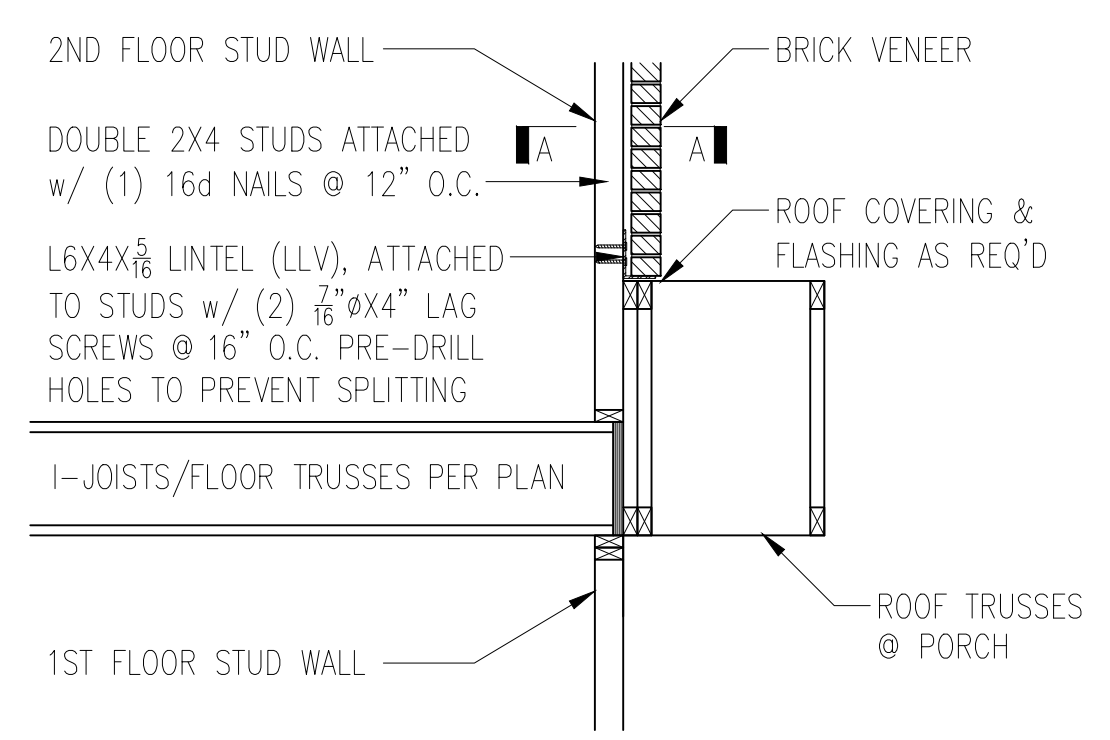
1 METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS
D2f 3/4" = 1'-0"



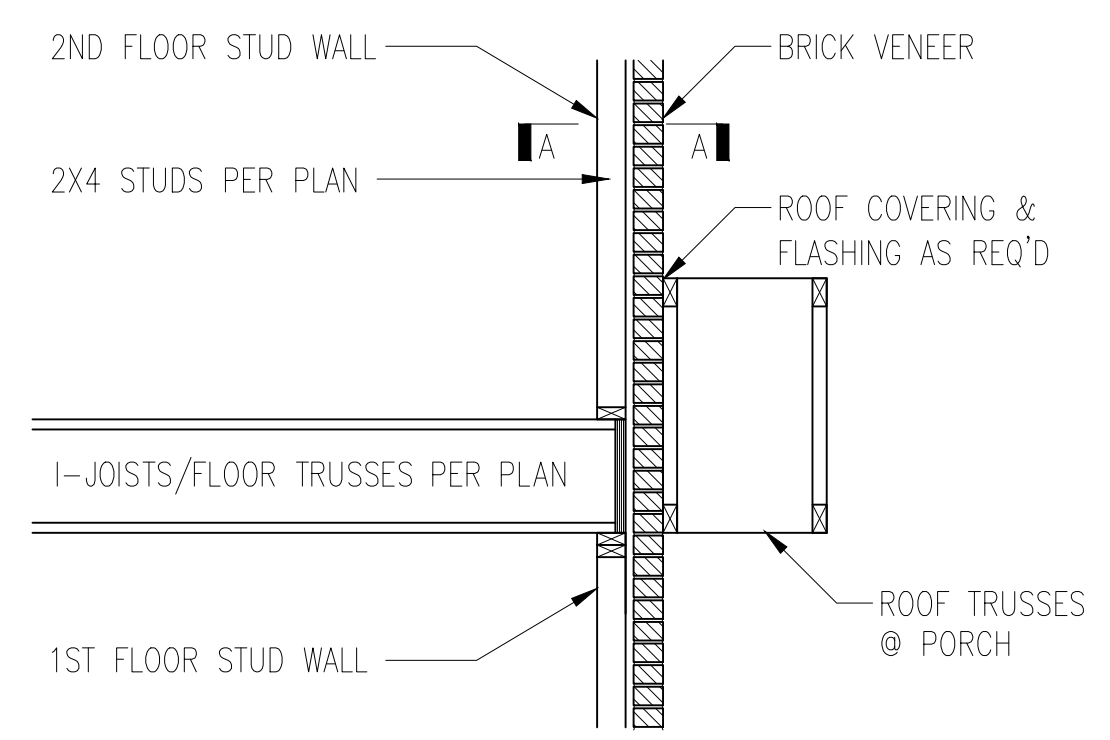
2 BOX WINDOW DETAIL
D2f N.T.S.



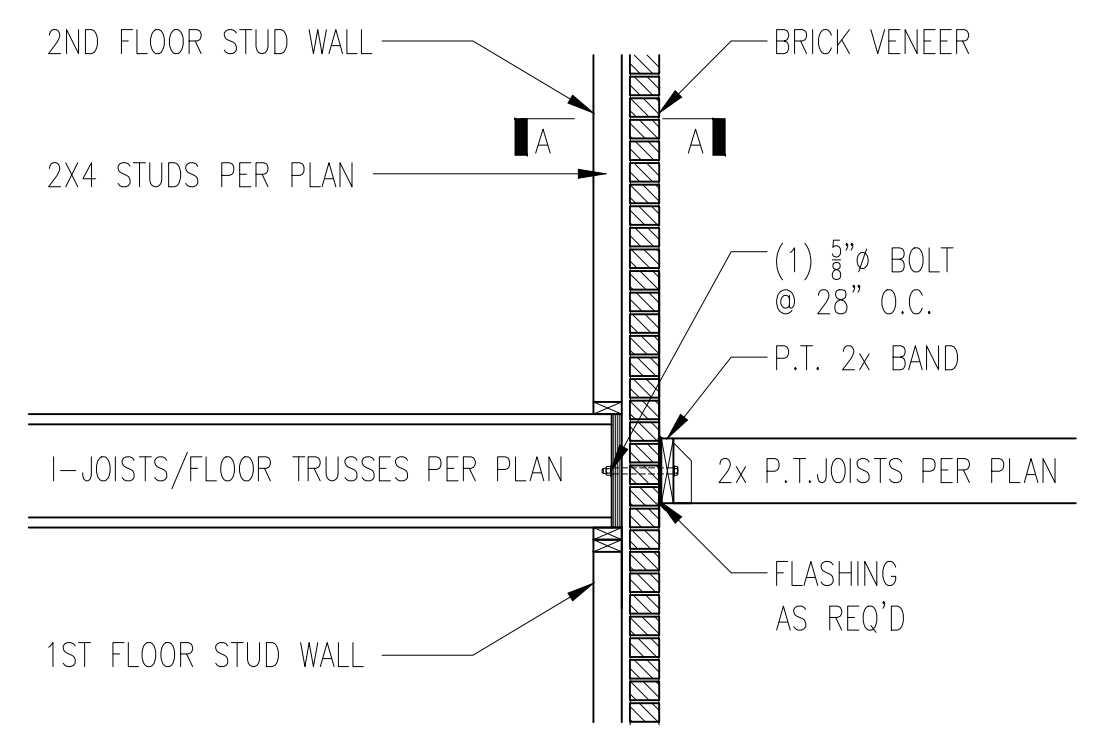
TRUSSES PERPENDICULAR TO STUD WALL



TRUSSES PARALLEL TO STUD WALL

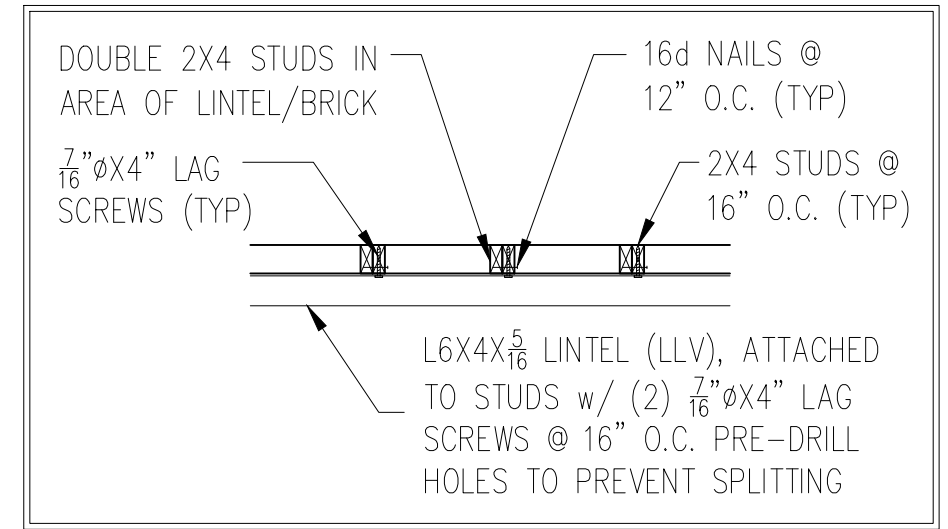


TRUSSES PARALLEL TO STUD WALL
w/ CONTINUOUS BRICK VENEER



4 BALCONY JOIST ATTACHMENT
D2f N.T.S.

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

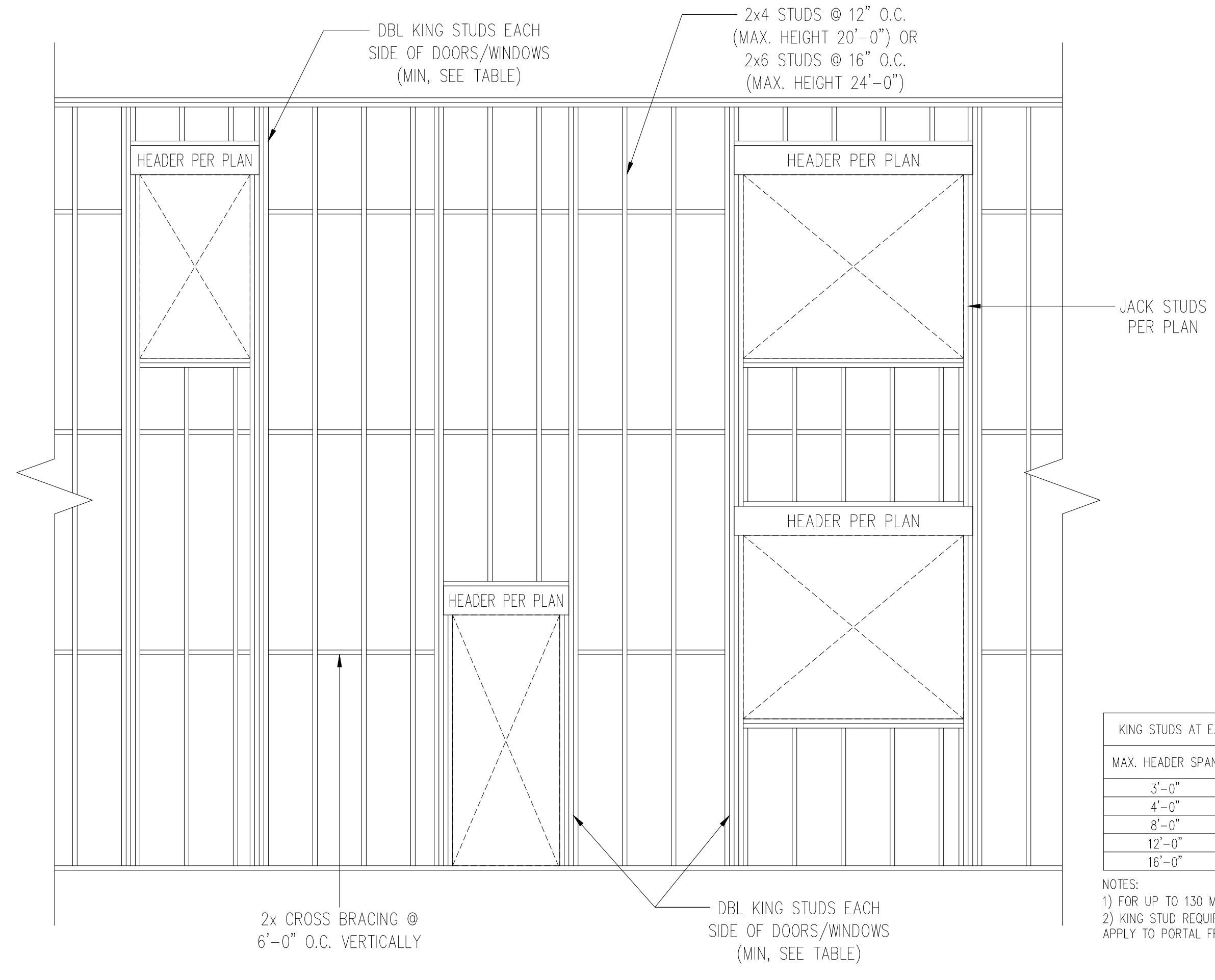
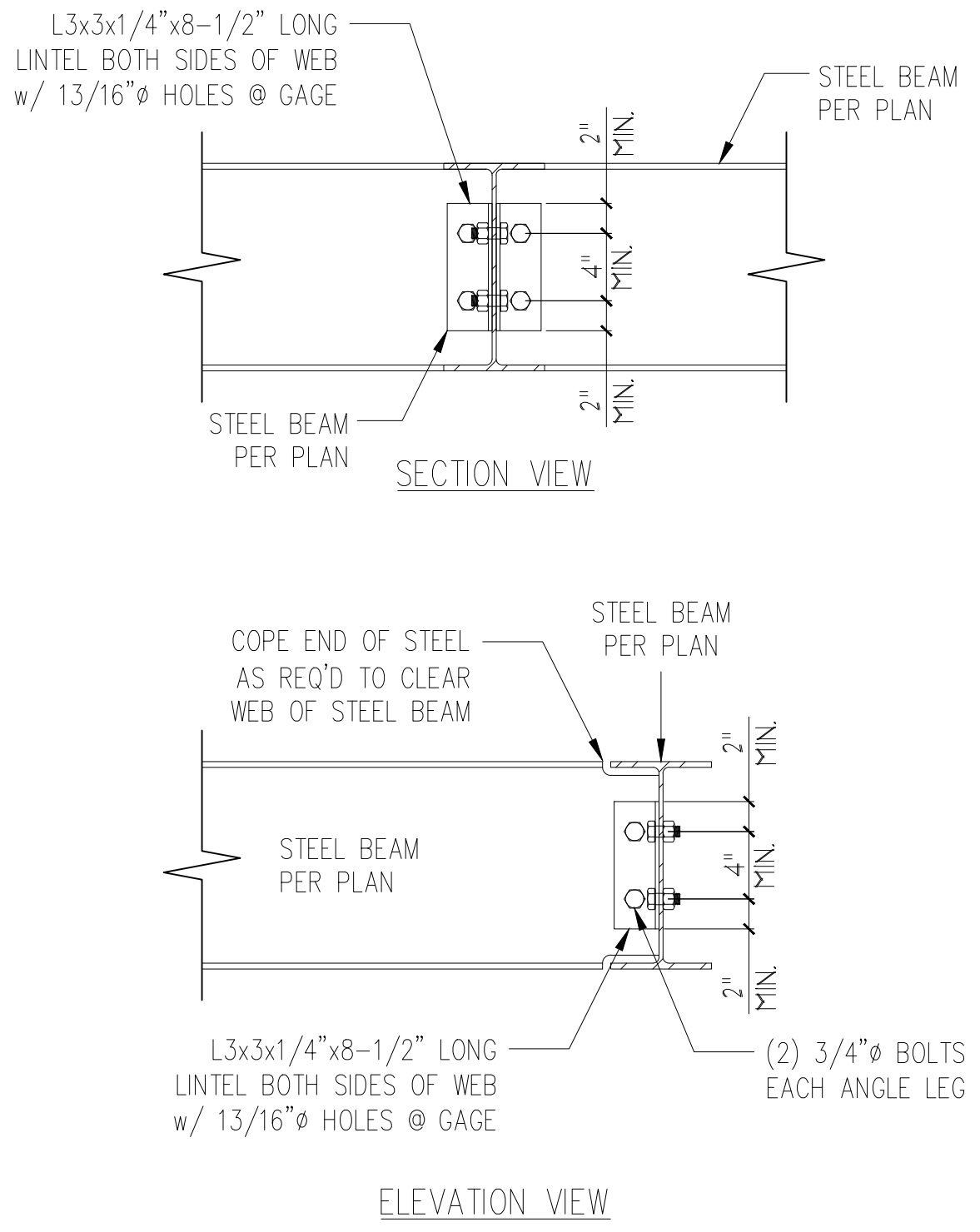
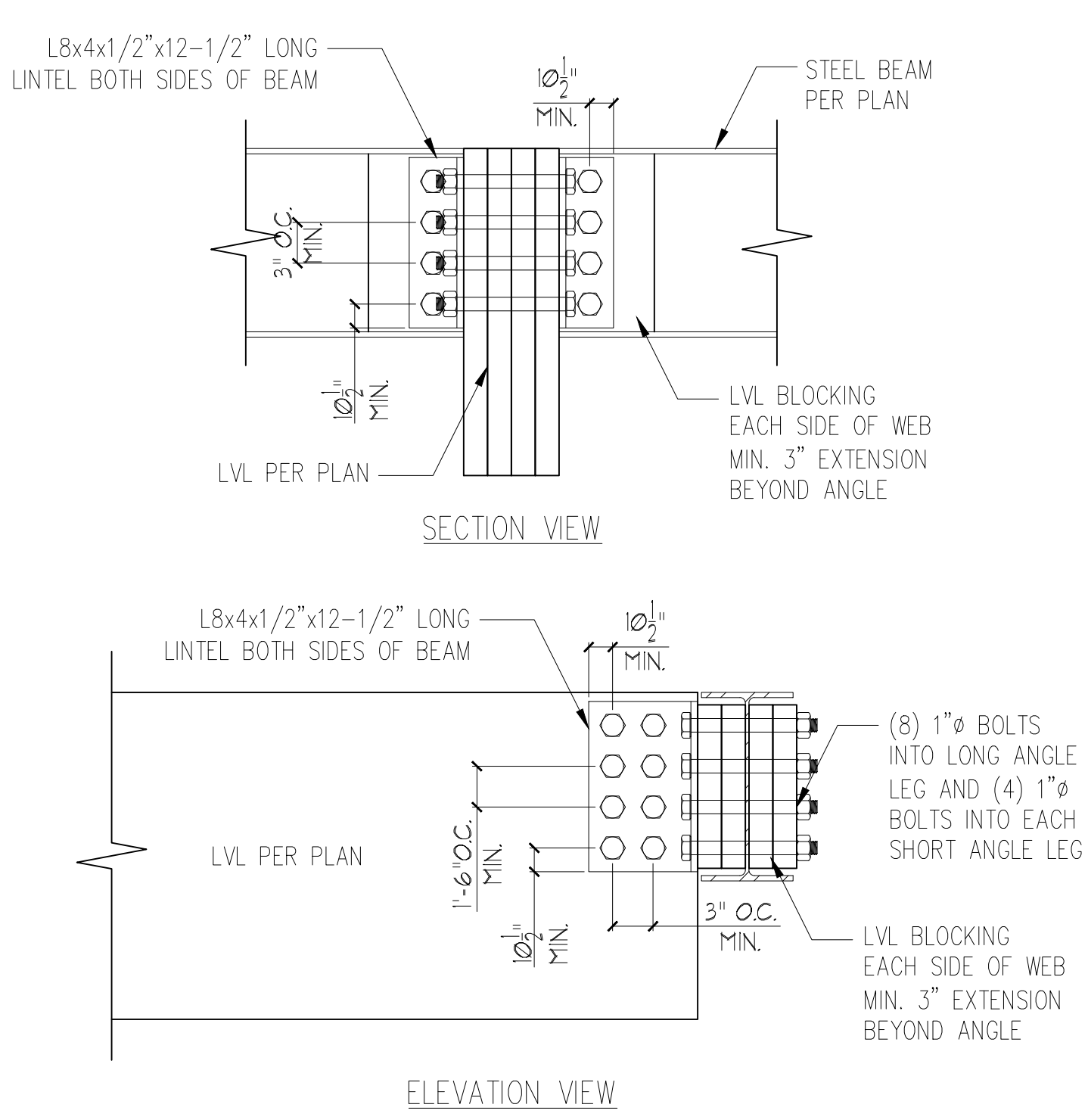
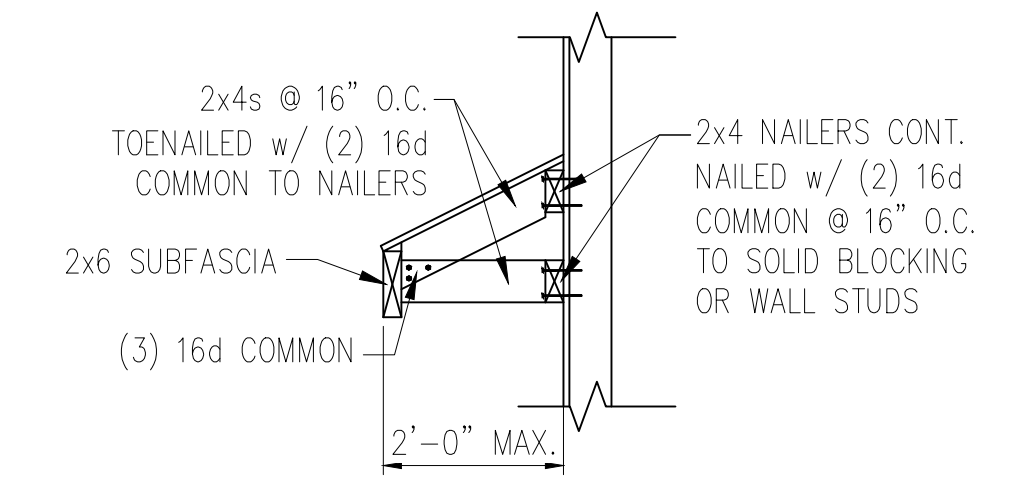
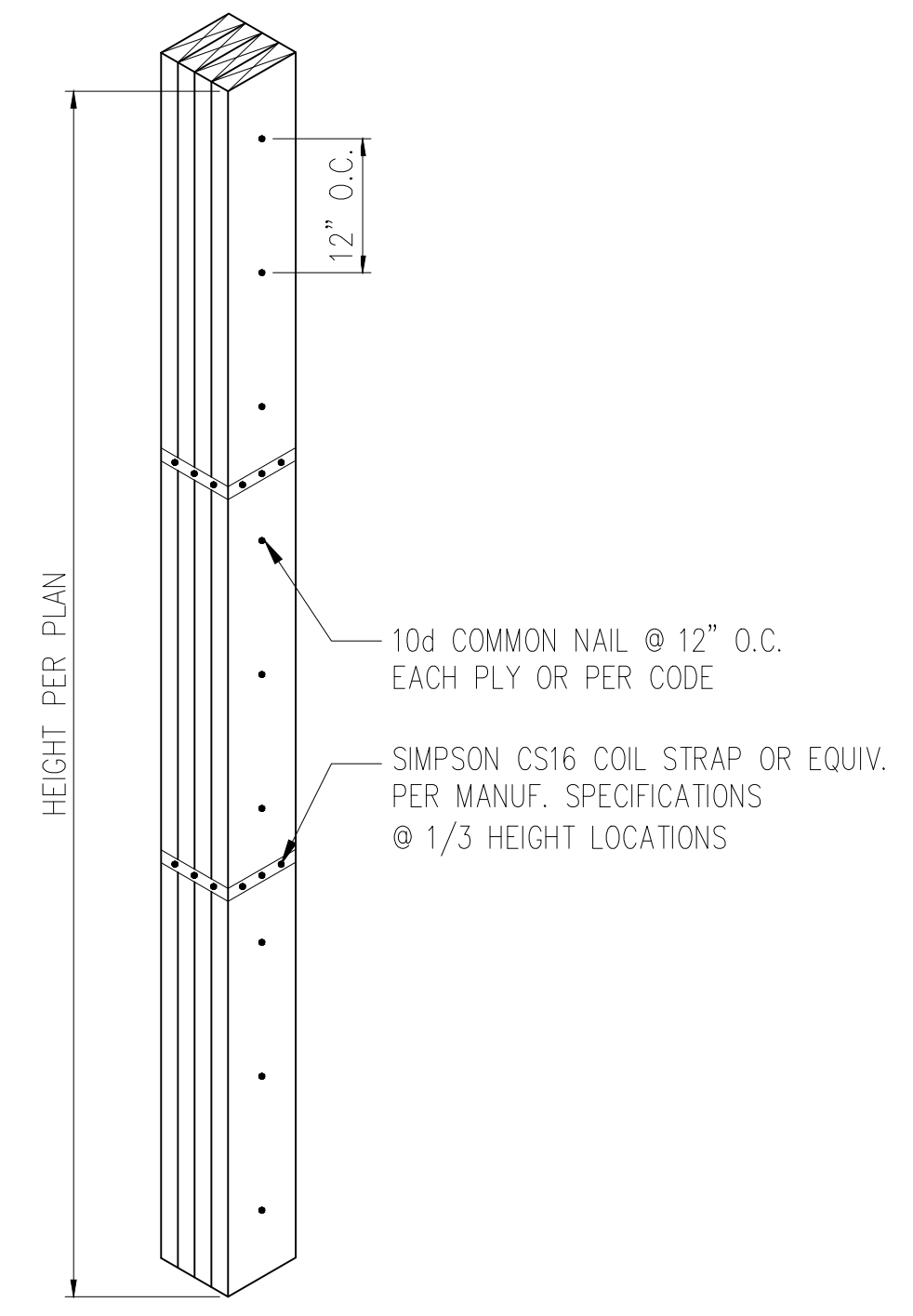
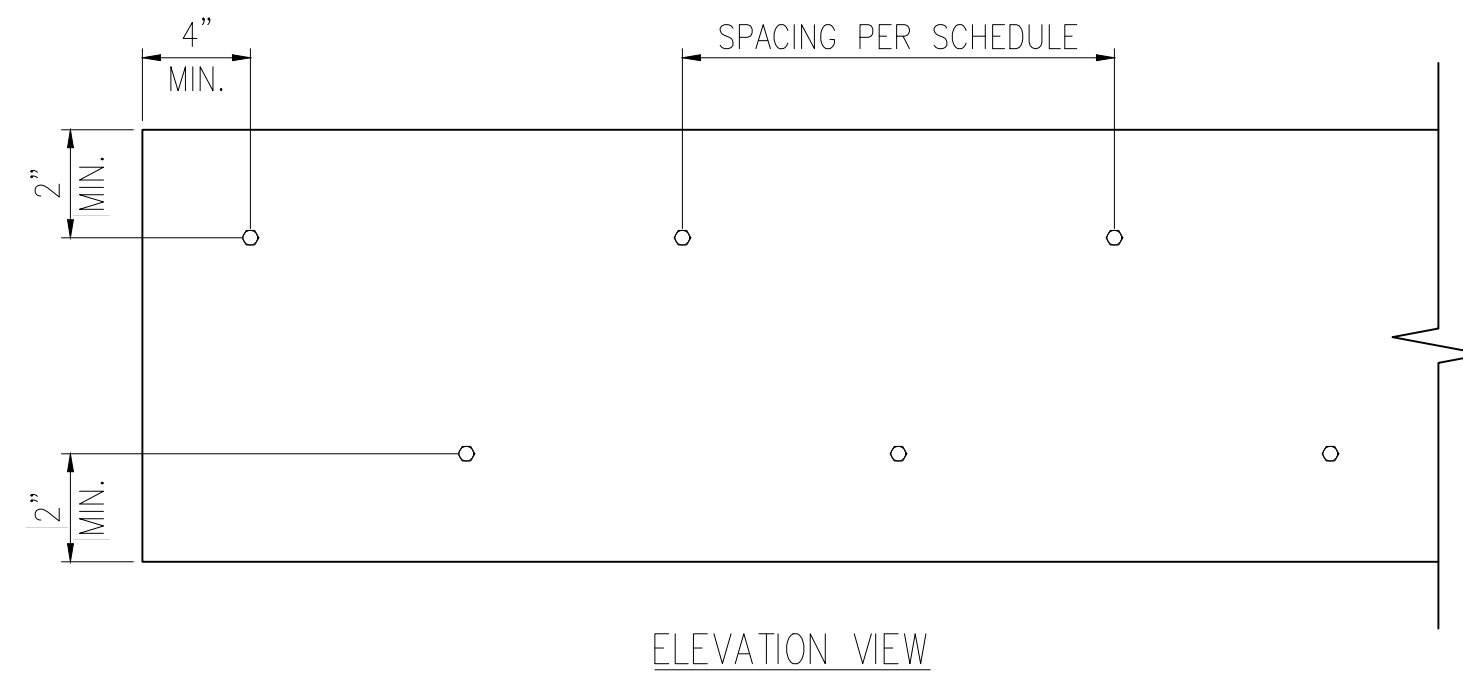


SECTION A-A
N.T.S.

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 3/4" | 3-Ply 1 3/4" | 1 3/4" + 3 1/2" | 4-Ply 1 3/4" | 2-Ply 1 3/4" + 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 | | 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 | d ≥ 7 1/4" | 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. | | - |

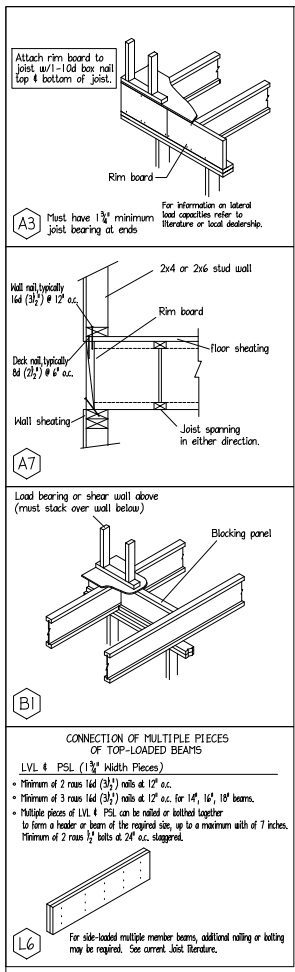
- NOTES:**
- All fasteners must meet the minimum requirements in the table above. Side-loaded multiple-ply members must meet the minimum fastening and side-loading capacity requirements given on page 48.
 - Minimum fastening requirements for depths less than 7 1/4" require special consideration. Please contact your technical representative.
 - Three general rules for staggering or offsetting for a certain fastener schedule:
 - 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).



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



ENGINEERED WOOD MATERIAL LIST

DR HORTON
COLUMBIA
2ND FLOOR I-JOIST PLACEMENT PLAN

| BASE - ALL ELEVATIONS | | | | |
|-----------------------|-----|------------|-----------------------------|---------------|
| MARK | QTY | CUT LENGTH | DESCRIPTION | (Notes) |
| 4 | 7 | 4'-0" | 1 1/2" x 14" BCI 4500 | |
| 14a | 1 | 14'-0" | 1 1/2" x 14" BCI 4500 < 1 > | |
| 17 | 2 | 17'-0" | 1 1/2" x 14" BCI 4500 | |
| 19a | 13 | 19'-0" | 1 1/2" x 14" BCI 4500 < 1 > | |
| 20a | 1 | 20'-0" | 1 1/2" x 14" BCI 4500 | |
| 20b | 11 | 20'-0" | 1 1/2" x 14" BCI 4500 < 1 > | |
| 22a | 4 | 22'-0" | 1 1/2" x 14" BCI 4500 < 1 > | |
| 23 | 2 | 23'-0" | 1 1/2" x 14" BCI 4500 | |
| 42a | 10 | 42'-0" | 1 1/2" x 14" BCI 4500 | |
| 42b | 5 | 42'-0" | 1 1/2" x 14" BCI 4500 < 1 > | (Total 1327') |

| ACCESSORIES & OTHER MATERIALS (Simpson Hangers) | | | |
|---|-----|-----------|---|
| ITEM | QTY | UNIT | DESCRIPTION |
| 14" Rim | 192 | LF | 1 1/2" x 14" Rim 16 pcs@12' or 12 pcs@16' |
| BP | 1 | 1'-2 1/4" | 14" Blocking Panel |
| BP | 16 | 1'-5 3/8" | 14" Blocking Panel [Total 34'] |
| Hbc | 13 | PCS | IUS1.81/14 Single Face Mnt Hanger |
| 10CUT14C | 34 | HOLE | 10" Circular Cutout |
| BCGUIDE | 1 | PCS | BCI Installation Guide |
| BCLAYOUT | 1 | PCS | BCI Placement Layout |

SEE MATERIAL LIST FOR DEPTH, GRADE & LENGTH

INDICATES I-JOIST
INDICATES TYPED/STANDARD WOOD, L.S.
INDICATES FLOOR/CEILING JOIST
INDICATES PARALLEL PSL
INDICATES BLOCK/PLATE

INDICATES A SECTION FROM THE INSULATION GUIDE SHEET IS ALSO SHOWN ON THIS SHEET

LOAD BEARING WALL ABOVE
BEAM BY CHAIR
EXTRA JOIST (1) UNDER HALL
DOUBLE JOIST (2)
1-JOIST BRACKET PANEL
LOAD OR USE WITH BOARD
LOCATED UNDER FLOOR
LOAD FROM ABOVE
DEPT. MEAT FLOOR MAT

THIS SHOP DRAWING IS BASED ON THE FOLLOWING

PROJECT LOCATION :
PROJECT NUMBER :
ARCHITECT DNGS BY :
ARCH LATEST REVISION :
STRUCTURAL REVIEW BY :
DATE :

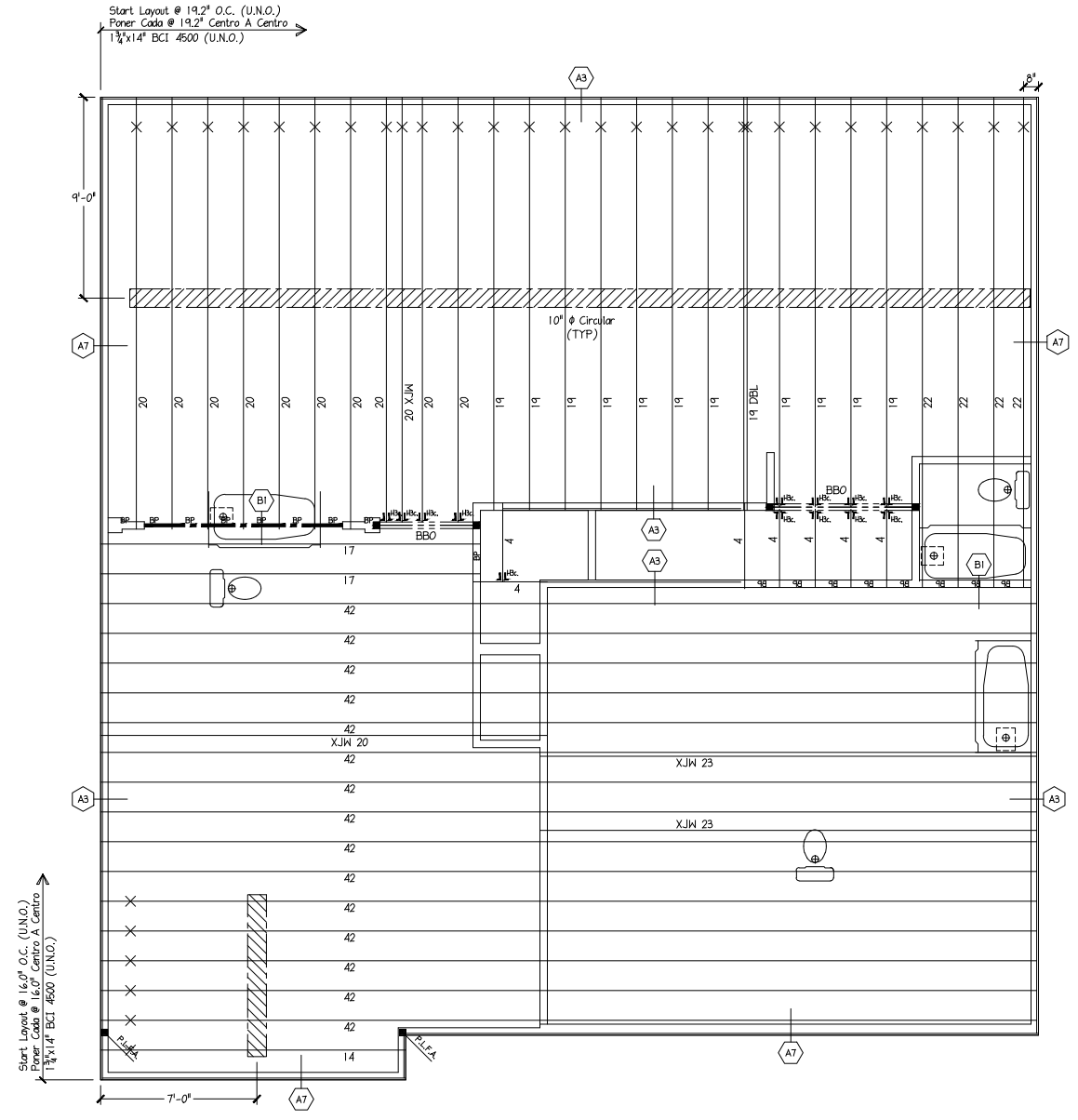
| REV | BY | DATE / DESC. |
|-----|----|--------------|
| SD | SE | 11/28/19 |

DESIGN DATA

LIVE 40 PSF
DEAD 10 PSF
TOTAL LOAD = 50 PSF

STRESS DURATION = 100%

DEFLECTION CRITERIA : (L/480)



2ND FLOOR I-JOIST PLACEMENT PLAN
DR HORTON - COLUMBIA

I-Joists

12BCI4500 = 12TJI110
12BCI5000 = 12TJI210
14BCI4500 = 14TJI110
14BCI5000 = 14TJI210
14BCI6000 = 14TJI230
16BCI5000 = 16TJI210
16BCI60 = 16TJI360

POINT LOAD FROM ABOVE (P.L.F.A.)

USE SOLID BLOCKING TO TRANSFER LOAD FROM ABOVE TO FOUNDATION

DO NOT CUT ORANGE END
NO CORTE EL COLOR NARANJA

"X" INDICATES ORANGE END
"X" INDICAR EL COLOR NARANJA

SCALE: 1/4" = 1'-0" 0 5 10'

CONTRACTOR: DR HORTON

ENGINEER: BUILDERS FIRSTSOURCE

COORDINATOR: APPROPRIATE

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BUILDER: DR HORTON
MODEL: COLUMBIA
TYPE: 2ND FLOOR I-JOIST PLACEMENT PLAN
DATE: WEDNESDAY, 28 FEBRUARY 2024 - 8:18 AM
FILE: I:\APEX\1\1\ACADD\DR HORTON\COLUMBIA.DWG

DRAWN BY: NJH DATE: 9/16/19

SHEET: 2 OF 2 SHEETS

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.

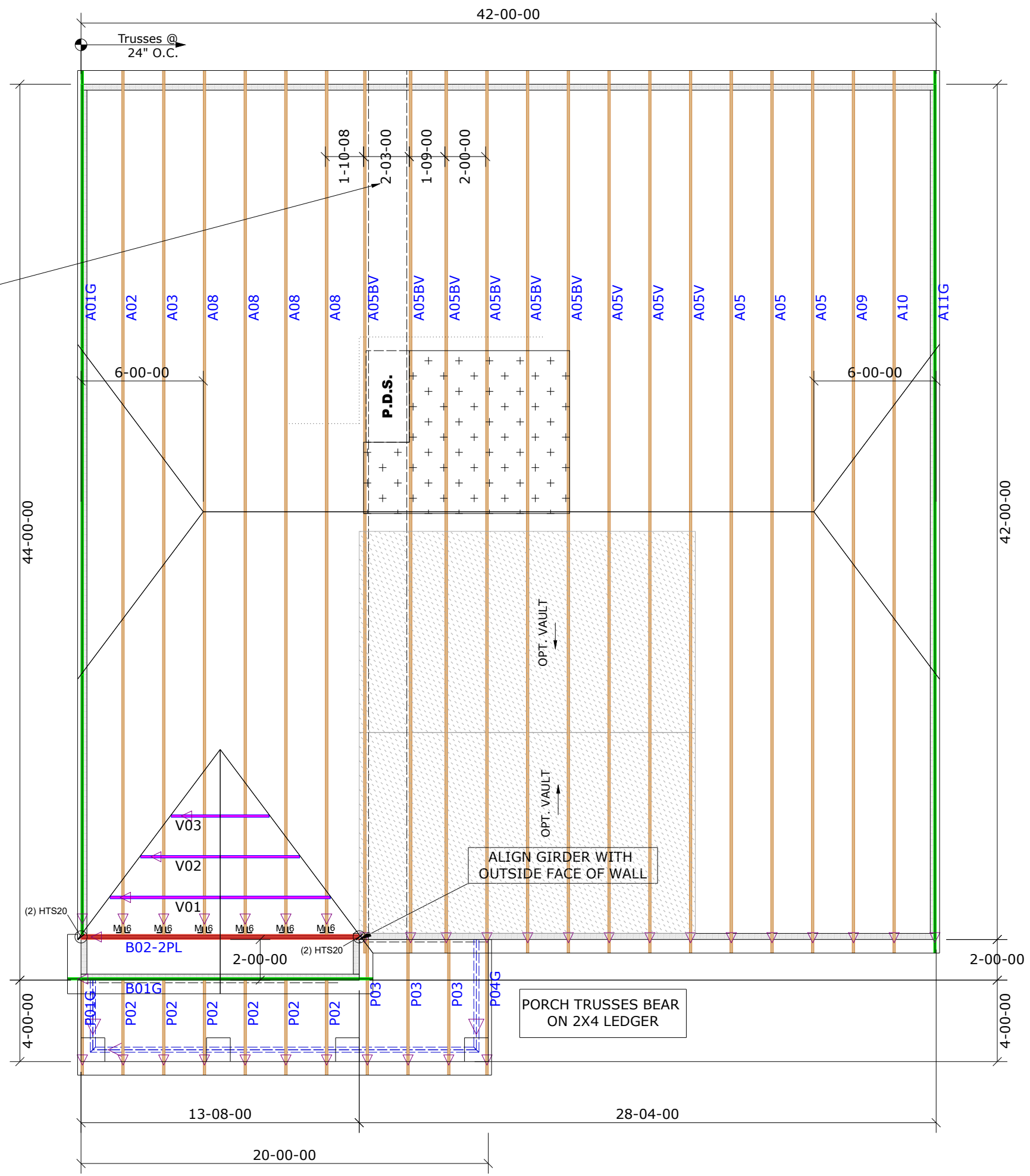
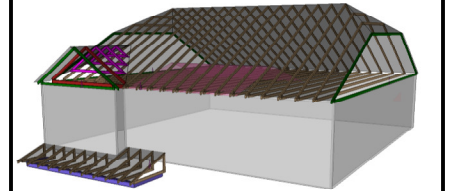
Floor notes:

- 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

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



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.

| HANGER LIST | | ALL TIE DOWNS H2.5A UNLESS NOTED | |
|------------------------------------|-----------|----------------------------------|----------|
| 6 | HTU26 | M16 | |
| | | SPECIAL ITEMS LIST | |
| | | 4 | HTS20 |
| MISC MATERIAL | | | |
| DR HORTON | | | |
| COLUMBIA | ELEV: | C | |
| MCKAY PLACE | | | |
| --- | NC | LOT: | 28 |
| 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: | CV | B.C.L.L. | 0 PSF |
| L/O DATE: | 5/22/2024 | 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.: | PTE31 |
| SALES NO.: | --- | ACCT NO.: | --- |

| HATCH LEGEND | |
|--------------|----------------|
| | ATTIC ROOM |
| | VOLUME CEILING |
| | STICK FRAMING |