


James Sales
06/30/2025

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POPLAR

DIV--COMM--LOT--UNIT

RLH-NM-1006-E

COMM--LOT

TOWNES AT NORTH MAIN - 1006E

STREET ADDRESS

APT. NO.

CITY

LILLINGTON

STATE

NC

ZIP

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STRUCTURAL DESIGN CRITERIA

• ALL LOCAL AND STATE CODES

• ROOF LIVE LOAD20 psf

• ULTIMATE WIND SPEED130 mph

• WIND EXPOSURE CATEGORYB

• SEISMIC DESIGN CATEGORYA / B



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[Signature]
James Sales
06/30/2025

FIRST FLOOR SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	579 SF
	579 SF

SECOND FLOOR SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
2ND FLOOR (BASE SF)	851 SF
	851 SF

GARAGE SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
ONE CAR GARAGE	232 SF
	232 SF

OUTDOOR SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR FRONT COVERED PORCH (ADD SF)	24 SF
	24 SF

TOTAL FINISHED SQUARE FOOTAGE

DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	579 SF
2ND FLOOR (BASE SF)	851 SF
	1430 SF

SET NO. -- VERSION

FLR00 - 01

SHEET NO.

CS-1

PAGE NO.

1

RELEASE NO. ----

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1. These plans and specifications are designed for the exclusive use by NVR, Inc. for the purpose of residential construction. As such, these products are offered for sale in NVR, Inc. communities only. NVR, Inc. is a production homebuilder and does not plan on the opportunity to customize these plans. The respective drawings contained herein in shall only be used as construction assembly drawings by NVR, Inc., and their sub-contractors. Any unauthorized use of these plans without the written permission of NVR, Inc. is prohibited. The standard notes, dimensions, elevation markers and title markers that reference "As" shall be considered "N" and "I" for sheet reference.
2. These plans are subjected to modification as necessary to meet code requirements or to facilitate mechanical/plumbing installations or to incorporate design improvements.
3. These plans are not to be scaled for construction purposes. Dimension lines and notes supersede all scale references.
4. Single Family Attached/Detached - Automatic residential fire sprinkler systems shall be installed in accordance with NCBCE F2104 or NFPA 13D where required.
5. This note sheet only covers major code requirements. The plans are intended to conform to all current applicable codes or engineering design in accordance with Section 101.3.

1. This note sheet only covers major code requirements. The plans are intended to conform to all current applicable codes including, but not limited to:
 NCRC 2018, NCMC 2018, NCPG 2018, NCFGC 2018, NEC 2020 w/ NC Amendments
 NCEC 2018, NCFPC 2018

2. Constr. Type: V-B

3. Max Stories: 3

1. Insulation requirements per 2018 NCRS Chapter II, Energy Efficiency, or Chapter 4 of the 2018 North Carolina Energy Conservation Code (NCECC), or Chapter 4 of the 2015 International Energy Conservation Code (IECC), Residential Energy Efficiency by the prescriptive method. See NVR "Standard Energy Package" for field procedures and details.

CLIMATE ZONE	PENESTRATION U-FACTOR	GLAZED PENESTRATION SHGC	CEILING R-VALUE	FRAME WALL R-VALUE 2x4 / 2x6	FLOOR R-VALUE	BASEMENT WALL R-VALUE UNFIN. / FIN.	SLAB R-VALUE & DEPTH	GRAVEL SPACE WALL R-VALUE
3	0.35	0.30	38	15 / 19	19	5 / 15	NA	5 / 15
4	0.35	0.30	38	15 / 19	19	10 / 15	10	10 / 15

5. See NVR "Standard Energy Package" for field procedures and details.

Floor Living Areas - 40# P.S.F. (Live)
- 10# P.S.F. (Dead) unless noted otherwise by calculations

Floor Sleeping Areas - 30# P.S.F. (Live) unless noted otherwise by calculations
- 10# P.S.F. (Dead) unless noted otherwise by calculations

Garage Floors - 50# P.S.F. (Live)
- 50# P.S.F. (Dead)

Roof Areas - Top Chord - 20# P.S.F. (Live)
- 10# P.S.F. (Dead)
- Bottom Chord - 10# P.S.F. (Live) (Attics without storage)
- 20# P.S.F. (Live) (Attics with limited storage)
- 10# P.S.F. (Dead)
- 30# P.S.F. (Live)

Habitable Attics
Trusses - Areas up to 130 mph ultimate wind speed per Table R301.2(4)
- Exposure category 'B'
- Areas up to 130 mph ultimate wind speed per Table R301.2(4)

Walls
- Areas up to 130 mph ultimate wind speed per Table R301.2(4)

Vult	115 mph	130 mph
Vasd	84 mph	101 mph

Note: Linear interpolation between contour lines permitted.

Stairs - 40# P.S.F. (Live)
- 10# P.S.F. (Dead)

Allowable deflection of structural members per IRC Table R301.7

Design Codes:

1. National Design specification for Wood Construction by National Forest Products Association.
2. Specification for the Design Fabrication and Erection of Structural Steel for Buildings by American Institute of Steel Construction.

* Where required, Laminated Veneer Lumber may be used per Engineering
 ** Structural Steel - A.S.T.M. A36

5. All plain and reinforced concrete shall comply with requirements in **ACI 318**.
6. Concrete footings shall be poured a maximum 5' slump, 2500 psi minimum strength per **Table R402.2**. Concrete walls shall be poured a maximum 5' slump, 5 1/2-bag mix, and 3,000 psi minimum strength per **Foundation Wall Design** table below. Special soil and/or wall height conditions may require a higher psi mix.
7. Walls and footings designed as unreinforced unless otherwise specified on foundation plans or details. Special soil and/or site conditions may require the addition of reinforcing.
8. Footing frost depth to be no less than 12" per **R403.1.4** and **Table R301.2(1)**.
9. Minimum Soil Bearing Capacity shall be 2,000 PSF per **Table R401.4.1**.
10. Slab requirements:

Interior slabs on grade (excluding garage slabs) to be minimum 3-1/2" concrete (may be represented on plans as nominal 4") over 4" sub-base, with vapor barrier (6-mil polyethylene) as required per **Section S06** and a minimum 2500 PSI per **Table R402.2**.

Non-structural garage slabs shall be nominal 3-1/2" thick and shall be installed on compacted / undisturbed soil per **Table R402.2**. Slabs shall be 3500 PSI air-entrained concrete.

Structural garage slabs utilizing grade beams shall be nominal 4" thick. Slabs shall be 3500 PSI air-entrained concrete.

Porch slab and exterior concrete work shall be nominal 4" minimum 3500 PSI air-entrained concrete with 6x6 in. 4x4x4 mesh or equivalent fiber mesh reinforcement.
11. Unconditioned crawl spaces shall have a minimum net area of ventilation not less than 1 square foot for each 150 square feet of area, unless the ground surface is covered by a Class I vapor retarder, in which case the minimum net area of ventilation shall be not less than 1 square foot for each 1500 square feet of area. One such ventilating opening shall be within 5 feet (914 mm) of each corner of the building, per **R408.1.2**.
12. Foundation drains shall be located per local codes and according to local site conditions. Drain discharge by gravity or mechanical means to conform with approved site plan and installed per **Section R405.1**.
13. The top course of block of foundation walls shall be semi-solid block or open cores of hollow block shall be filled with mortar.
14. Block piers to be solid block or mortar-filled hollow block.
15. A poured concrete foundation wall designed to withstand an equivalent fluid weight of 30# per cubic ft. may be substituted where masonry units (block) are shown on plans.
16. Concrete and masonry foundation walls shall be dampproofed with min. 3/8" Portland cement parging from footing to top of finished grade. The parging shall be covered with a coat of approved bituminous material applied at the recommended rate per **R406.1**.
17. Where required, concrete and masonry foundation walls shall be waterproofed with an approved membrane extending from footing to top of finished grade. The joints in the membrane shall be tapered and sealed with an adhesive compatible with the waterproofing membrane. Waterproofing to be in accordance with **R406.2**.
18. Reserved for future use.
19. Foundation framing anchors shall be 1/2"x18" anchor bolts with 7" minimum embedment or Simpson Strong-Tie MASA / USP FAS (16 gauge steel, galvanized) or equivalent set in concrete or grouted cell, 1'-0" maximum from corners and spaced at a maximum of 6' o.c. and in the middle third of the width of the plate. For walls connecting offset braced wall panels, those 24" in length or shorter shall have min. (1) anchor strap and those 12" or shorter can be installed without the anchor strap. Towhouses in seismic design category "C" shall require a 22"x4" x 3"x3" plate washer per **R403.1.6.1** and maximum anchor bolt spacing for buildings over two stories shall be 4'.
20. Steel columns and bases shall be given a shop coating of rust-inhibitive paint or equivalent to provide corrosion resistance per **R407.2**.
21. For masonry veneers:

18. Reserved for future use.

19. Foundation wall strip footing thickness to be 8" (or 6" with a single strip) unless otherwise noted as specified by engineering. Strip footing projections beyond the face of the foundation wall shall not exceed the footing thickness. Bump out footings, pier pads, and any other footing identified as being greater than 8" in thickness shall not be reduced.

20. Block foundation walls may be substituted for poured foundation walls shown on foundation plans provided all requirements of **Section R404** are met.

21. Termiticide treatment provided below slabs or to framing members per **R301.1**

WALL HEIGHT	WALL THICKNESS	LATERAL SOIL LOAD (a)	UNBALANCED FILL	VERTICAL REINFORCING (b)	HORIZONTAL REINFORCING (b)
8'-0"	8"	45	6'-0"	NOT REQUIRED	2- #4 BARS (f)
			7'-0"	NOT REQUIRED (d)	3- #4 BARS (de)
		60	6'-0"	NOT REQUIRED (d)	3- #4 BARS (de)
			7'-0"	#4 @ 22" O.C. (d)	3- #4 BARS (de)
	10"	45	6'-0"	NOT REQUIRED	2- #4 BARS (f)
			7'-0"	NOT REQUIRED	2- #4 BARS (f)
		60	6'-0"	NOT REQUIRED	2- #4 BARS (f)
			7'-0"	NOT REQUIRED	2- #4 BARS (f)
9'-0"	8"	45	7'-0"	NOT REQUIRED (d)	4- #4 BARS (de)
			8'-0"	#4 @ 14" O.C. (d)	4- #4 BARS (de)
		60	7'-0"	#4 @ 14" O.C. (d)	4- #4 BARS (de)
			8'-0"	#4 @ 15" O.C. (d)	4- #4 BARS (de)
	10"	45	7'-0"	NOT REQUIRED	3- #4 BARS (g)
			8'-0"	NOT REQUIRED (d)	4- #4 BARS (de)
		60	7'-0"	NOT REQUIRED (d)	4- #4 BARS (de)
			8'-0"	#4 @ 14" O.C. (d)	4- #4 BARS (de)

- a. SOIL CLASSES GM, GC, SM, SM-SC AND ML - 45 PSF
SOIL CLASSES SC, MH, ML-CL AND CL - 60 PSF
- b. SPACING SHOWN IS BASED UPON Fy = 60,000 PSI
STEEL FOR Fy = 40,000 PSI STEEL, REDUCE SPACING BY 0.67
- c. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI
- d. ENGINEERED DESIGN PER ACI 332-14, REQUIREMENTS FOR RESIDENTIAL CONCRETE CONSTRUCTION
- e. FOR ALL WALL HEIGHTS, ONE HORIZONTAL BAR SHALL BE LOCATED WITHIN THE TOP 24", ONE IN THE BOTTOM 24" WITH THE REMAINING BARS EQUALLY SPACED, MAINTAIN 2" OF CONCRETE COVER BETWEEN INSIDE FACE OF WALL AND FACE OF HORIZONTAL BARS.
- f. ONE BAR WITHIN 12" OF TOP AND AT MID-HEIGHT OF WALL PER TABLE R404.1(2)(i).
- g. ONE BAR WITHIN 12" OF TOP AND ONE BAR AT THIRD POINT OF WALL HEIGHT PER TABLE R404.1(2)(i).

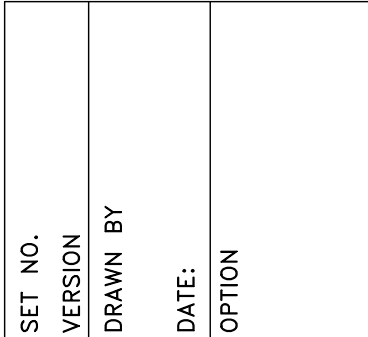
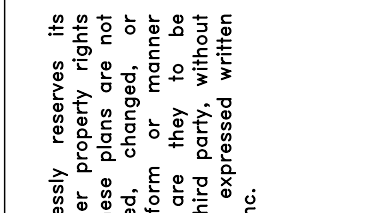
1. Habitable attic and sleeping rooms shall have a window or door as a second means of egress that shall be minimum 5.7 sq. ft. operable area (5.0 sq. ft. if at grade level) with maximum sill height 44" above finish floor (min. hgt. 24", min. width 20") per **R310.1**.
2. All emergency egress and rescue openings shall have a minimum net clear operable area of 4 sq ft. The minimum net clear opening height shall be 22" and a minimum net clear opening width of 20". Emergency egress and rescue openings must have a minimum total glazing area of not less than 5 sq ft in the case of a ground window and not less than 5.7 sq ft in the case of an upper story window per **R310.2.1**. Window wells where required, shall be installed per **R310.2.3** with a minimum of 4 sq ft and a minimum horizontal projection and width of 36". Wells with a greater depth of 44" shall have permanently affixed ladder or steps per **R310.2.3.1**.
3. Clear opening heights for exterior doors to be 6'-6" minimum per **R311.2**. All interior doors providing egress from habitable rooms shall have nominal minimum dimensions of 2'-6" by 6'-8" per **R311.6.1**. Habitable rooms with double doors less than 5'-0" in total width (less than 2'-6" per door slab) shall have a total opening width of at least 2'-6" with no slide bolts or locking devices installed on either door.
4. Sliding glass drs/patio drs/vids must be safely glazed per **R308.4**.
5. Interior stairways shall have minimum head room of 6'-8" per **311.1.2** and minimum tread depth of 4" and maximum riser height of 8 1/4". Handrails are required for stairs with four or more risers and shall have minimum height of 34" and maximum height of 38" above treads and landings. Handrail to have maximum 4 1/2" projection into width of stair per **Section R311.7**. Enclosed accessible space under stairs shall have walls on stair surface and all soffits protected on the enclosed side with 1/2" gypsum board per **R302.1**.
6. Guard rails to have minimum height of 36" and shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches in diameter per **R312**.
The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches (153 mm) in diameter per **R312.1.3**.
7. Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a stairway in accordance with **Section R311.7** (see item #5 above) or a ramp in accordance with **Section R311.8**.
8. Handrails shall be installed on exterior stairs having (4) or more risers per **R311.7.8**. Guards shall be installed at exterior porches / decks that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.
9. All flashing used (including at windows, doors, and with stone or masonry veneer) shall be corrosion-resistant per **R103.4**. See HVR Flashing Details.
10. Wood framed bearing walls shall 2 x 6 @ 24" o.c., maximum or 2 x 4 @ 16" o.c., maximum per **Table R602.3(3)** and **Table R602.3(5)** unless otherwise noted on plans.
11. All exterior sheathing to be structural sheathing designed in accordance with **R602.10**.
12. An approved water-resistant barrier shall be applied over sheathing of exterior walls per **Section R703.2**.
13. Interior sheathing shall be 1/2" gypsum wall board unless otherwise noted. Exceptions may include, but are not limited to, special requirements for wall bracing and fire separation.
14. Scaffolding is typical for gypsum installation and nailing will only be permitted at the perimeter of the board.
 - All screws shall be corrosion-resistant Type W1 -1/4" drywall screws.

- For 1/2" wallboard, nails shall be 1-1/4" long, 1/4" head and .098 diameter shanks with annular ring or acceptable equivalent and comply with ASTM C514.
- For 5/8" wallboard, nails shall be 1-3/8" long, 1/4" head and .098 diameter shanks.

- Garages shall be completely separated from the residence and attic areas by not less than 1/2" gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8" type X gyp. board. Where a structure is supporting a floor joist assembly above the space above the garage, the structure shall also be protected by not less than 1/2" gypsum board per **Section R302.6**. Openings and penetrations through the separation shall be protected by sealing the area around the penetration per **Section R302.5**. The garage door shall be a 20-minute fire-rated door and be equipped with a self-closing device installed per **Section R302.5.1**.
18. Asphalt shingles shall be installed per **Section R405.2**. For roof slopes of 2:12 through 4:12, in lieu of two layers of underlayment, a self-adhering polymer-modified bitumen underlayment shall be used per **Section R405.1 Exception #1**.
19. Attic spaces shall be ventilated w/ ridge and soffit vents unless otherwise noted. Venting provided per **R206.2**.
20. Fireblocking shall be installed between ceiling and floor openings per **R302.11**. Draftstopping to be installed in accordance with **R302.12**.
21. Water closet, lavatory or bidet shall not be set closer than 15 inches from its center to any side wall, partition or vanity or closet than 30 inches center-to-center between adjacent fixtures. There shall be a clearance of not less than 21 inches in front of the water closet, lavatory or bidet to any wall, fixture or door per **F201.5**.
22. Heating and cooling equipment installation shall be in accordance with **IRC Chapter 14** and the **International Mechanical Code**.
23. Mechanical fireplaces shall be installed per **Section R100.4** and **100.5**.
24. Single family attached structures to have 2-hour dwelling unit separation wall continuous to roof deck. Roofing material to be minimum class "C" over approved fire retardant wood decking extending 4" each side of dwelling unit separation wall per **R302.2** and **R302.3**.
25. Unretreated wood shall be minimum 8" above finished grade per **R301.1** item #2.
26. Bottom plates on slabs and any wood in contact w/ concrete per concrete or masonry to be pressure treated material per **Section R317**.
27. Exterior egress swing doors shall open onto a landing not more than 8 1/4" below the top of the threshold to the exterior door and 1 1/2" below the top of the threshold when the door swings out. The landing shall extend a minimum of 36" in the direction of travel and be at least the width of the doorway served per **R311.3**.
28. Air exhaust and intake openings that terminate outdoors shall be protected with corrosion-resistant screen, louvers, or grills having a min. opening size of 1/4" and maximum of 1/2" in any dimension per **R309.6**.
29. Fasteners and connectors for pressure preservative-treated wood shall be hot-dipped galvanized steel.
30. Windows that have an operable opening more than 12" above finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24" above the finished floor of the room in which the window is located. Glazing between the floor and 24" shall be fixed or have openings through which a 4" dia. sphere cannot pass per **Section R312.2**.
31. The final grade shall fall a minimum of 6 inches within the first 10 feet of the foundation per **R401.3**.
- Two- and two-family dwelling construction (R302.11):**
- Vinyl or aluminum soffit material shall be securely attached to framing members and use an underlayment material of either fire retardant treated wood 3/4-inch wood sheathing or 5/8-inch gypsum board. Venting requirements shall apply to both soffit and underlayment and shall be per **Section R206**. Where the property line is 10 feet or more from the building face, the provisions of this code section shall not apply.
- Townhouse construction (R302.2.5):**
- Projections extending into the fire-separation distance shall have not less than 1-hour fire-resistive construction on the underside. Vinyl or aluminum soffit material shall be securely attached to framing members and use an underlayment material of either fire retardant treated wood, 3/4-inch wood sheathing or 5/8-inch gypsum board. Venting requirements shall apply to both soffit and underlayment. Vents shall be nominal 2-inch construction or equivalent intermittent, and shall not exceed the minimum net free air requirements of **Section R206.2** by more than 50%. Vents in soffit are not allowed within 4 feet of fire walls or property lines per **R302.2.5** and **Section 2.06**.
- 1-hour fire-rated construction required on projections within 2' to 3' of lot line per **R302.1**. No projections allowed within 2' of property line.
- 1-hour fire-rated construction required on townhouse eaves within 3' of the property line.
- Single-Family Detached product will NOT be built within 3' of the property line.**
- Wall bracing is designed in compliance with **Section B602.10**. When wall bracing is beyond the criteria for a prescriptive approach, the structure is analyzed utilizing engineering in compliance with the North Carolina Building Code (NCBC). Refer to house-specific wall bracing detail sheets and wall bracing standard details. Adhesive attachment of wall sheathing, including Method GB, shall not be permitted in Seismic Design Category C.
35. Minimum floor sheathing shall be 5/8" tongue & groove decking underlayment grade plugged and sanded, exterior glue, glued and nailed on joists to meet "American Plywood Association" approved floor system, unless otherwise specified.

1. Ground-fault and arc-fault circuit interrupter protection is provided per **NFPA 70** (National Electric Code).
2. Electric panel box installation to be in accordance with **NFPA 70, Article 408 Section III**. Location may vary by design.
3. Approved smoke detectors shall be installed in each sleeping room; outside each separate sleeping area in the immediate vicinity of the bedrooms; and on each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. Where more than one smoke detector is required, the detectors shall be installed in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. All smoke detectors shall receive their primary power from the building wiring and be equipped with a battery backup.
4. Unless listed for installation in such locations, smoke detectors shall be installed at least 10 feet from a cooking appliance, at least 3 feet from the door to a bathroom containing a tub or shower, at least 3 feet from any air supply registers, and at least 3 feet from the tip of a ceiling fan blade. In sleeping rooms, smoke detectors should be located in the vicinity of the room entrance. They shall be installed at the highest portion of the ceiling (including tray or coffered ceilings) or within 12 inches vertically from the highest point in rooms with sloped ceilings.
5. Interior stairs shall be provided with an artificial light source in the vicinity of each landing or directly above each stair. The light source shall be located above each landing to a level not less than 1ft measured at the center of the tread or landing per **R303.7**.
6. Outlets within 6' of a sink must be GFI protected.
7. An approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom. **R315.3**.
8. Outlets installed in laundry areas must be GFI protected.

REV.	NO.	DATE	REMARKS
1		1/6/14	MBT - CODE UPDATES FOR 2016 NCRCB
2		3/1/14	MBT - UPDATED EINGRY NOTES
3		12/16/22	CAP - REVISE NOTE FOR 2044 OR 206 EXTERIOR WALLS



SHEET NO. 55-1



ROOF VENTILATION CALCULATIONS

HOUSE NAME
HOUSE VERSION
VENTILATION VALUES

POPLAR
PLR00_01
SOFFIT: 13.5 sq in of vent per ft
RIDGE: 18 sq in of vent per ft
BOX: 45 sq in of vent per unit

USER GUIDE		(any)		(any)	VENT OK	No action req'd.
					VENT OK	No action req'd.
					FAIL	Increase ridge
					FAIL	Decrease ridge
				(any)	FAIL	Increase total vent

MAIN HOUSE															
Location / Options	Area (A) sq in	Required: A/150 (sq in)	Required: A/300 (sq in)	Soffit (ft)	Soffit Vent (sq in)	Ridge (ft)	Ridge Vent (sq in)	Upper box vent (sq in)	Lower box vent (sq in)	TOTAL (sq in)	OK A/150	OK A/300	% vent at ridge	40%-50% OK?	Notes
MAIN HOUSE	321632.00	810.88	405.44	21.37	211.56	11.00	198.00	0.00	0.00	409.56	FAIL	FAIL	0.43		
	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			
	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			
	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			
	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			
	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			

FRONT PORCH															
Location / Options	Area (A) (sq ft)	Required: A/150 (sq ft)	Required: A/300 (sq ft)	Soffit (sq ft)	Soffit Vent (sq ft)	Ridge (ft)	Ridge Vent (sq ft)	Upper box vent (sq ft)	Lower box vent (sq ft)	TOTAL (sq ft)	OK A/150	OK A/300	% vent at ridge	40%-50% OK?	Notes
FRONT PORCH	3115.00	20.77	10.38	7.00	69.30	0.00	0.00	0.00	0.00	69.30	FAIL	FAIL	0.00		
		0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			
		0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			
		0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			
		0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			
		0.00	0.00		0.00		0.00	0.00	0.00	0.00	FAIL	FAIL			

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Version 2.0
(Last Revised 04/26/19)

HOUSE VOLUME CALCULATIONS

HOUSE NAME	POPLAR
HOUSE VERSION	PLR00-01
PRODUCT LINE	RYANHOMES

Note: The volume of the structure has been computed in accordance with "Title 5. of the Community Affairs, Chapter 23. Uniform Construction Code, Subchapter 2. Administration and enforcement: Process." (5)23-2.28. Volume computation

ELEVATION WITH INTERIOR UNIT "SAO"

Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Main section of the house	720.00	22.10	15911
Front porch of the house	23.00	9.24	213
Garage bump out from main house	98.67	20.09	1983
Total House Volume			18106

ELEVATION WITH INTERIOR UNIT "SAE"

Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Main section of the house	714.00	22.10	15779
Front porch of the house	23.00	9.24	213
Garage bump out from main house	97.33	20.09	1956
Total House Volume			17947

Additional areas of volume to be added to total house volume as needed

Location / Area of house / option	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Rear Covered Porch "EPE"	140.00	9.89	1385

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DIV-COMM-LOT-UNIT
RLH-NM-1006-E

COMM-LOT
TONNES AT NORTH MAIN - 1006

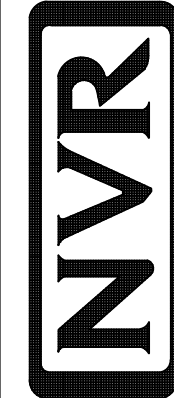
STREET ADDRESS

CITY
LILLINGTON

STATE
NC

ZIP

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5285 Westview Drive, Suite 100
Frederick, MD 21705

MODEL
POPLAR

SET NO. PLR00

VERSION 01

RELEASE NO. ----

DRAWING TITLE
ROOF VENT AND VOLUME CALCULATIONS

DRAWN BY
VOLUME CALCULATIONS

DATE
OPTION DESCRIPTION

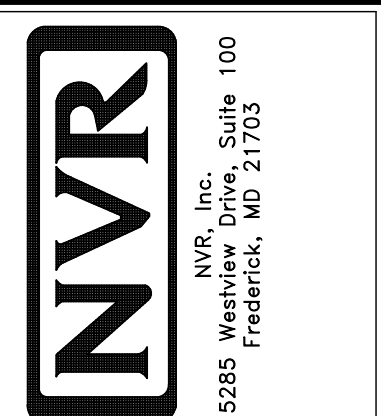
2

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James Sales
James Sales
06/30/2025

DIV-COMM-LOT-UNIT	
RLH-NM-1006 A-E	
COM-LOT	TONNES AT NORTH MAIN - 1006 A-E
STREET ADDRESS	-----
APT. NO.	-----
CITY	STATE
LILLINGTON	NC
ZIP	-----

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SHEET NO.	MODEL	SET NO.	PLR00
	POPLAR	VERSION	01
NC-1	DRAWING TITLE	RELEASE NO.	----
	STRIP ELEVATIONS	DRAWN BY	
2.1	OPTION DESCRIPTION	DATE:	
		OPTION	

V:\As-Sold\2-Jobs\Mitak Services\Assigned\RLH-NM-1006 A-E\NM_1006 A-E\UNIT E.2.1 NC-1 STRIP ELEV.dwg 07/23/25 - 3:04 pm



UNIT E
ELEVATION "B"
(REVERSE)
(POPLAR)

UNIT D
ELEVATION "A"
(PER PLAN)
(POPLAR)

UNIT C
ELEVATION "C"
(PER PLAN)
(POPLAR)

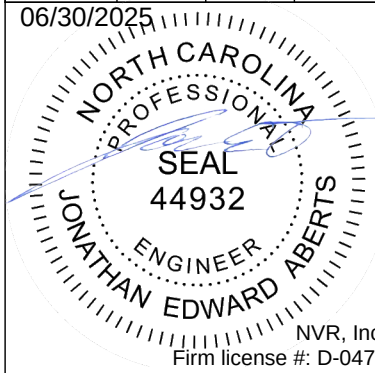
UNIT B
ELEVATION "A"
(PER PLAN)
(POPLAR)

UNIT A
ELEVATION "B"
(PER PLAN)
(POPLAR)

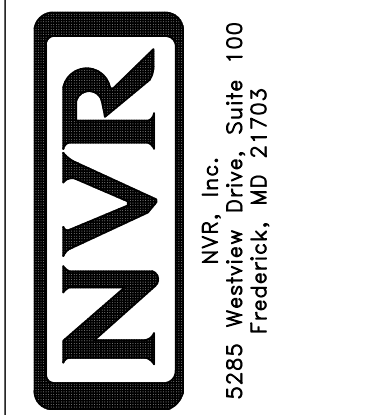
1
NC-1
FRONT ELEVATIONS
SCALE: 1/4" = 1'-0"

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RLH-NM-1006 A-E



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VERSION 01
RELEASE NO. ----
DRAWN BY
DATE:
OPTION

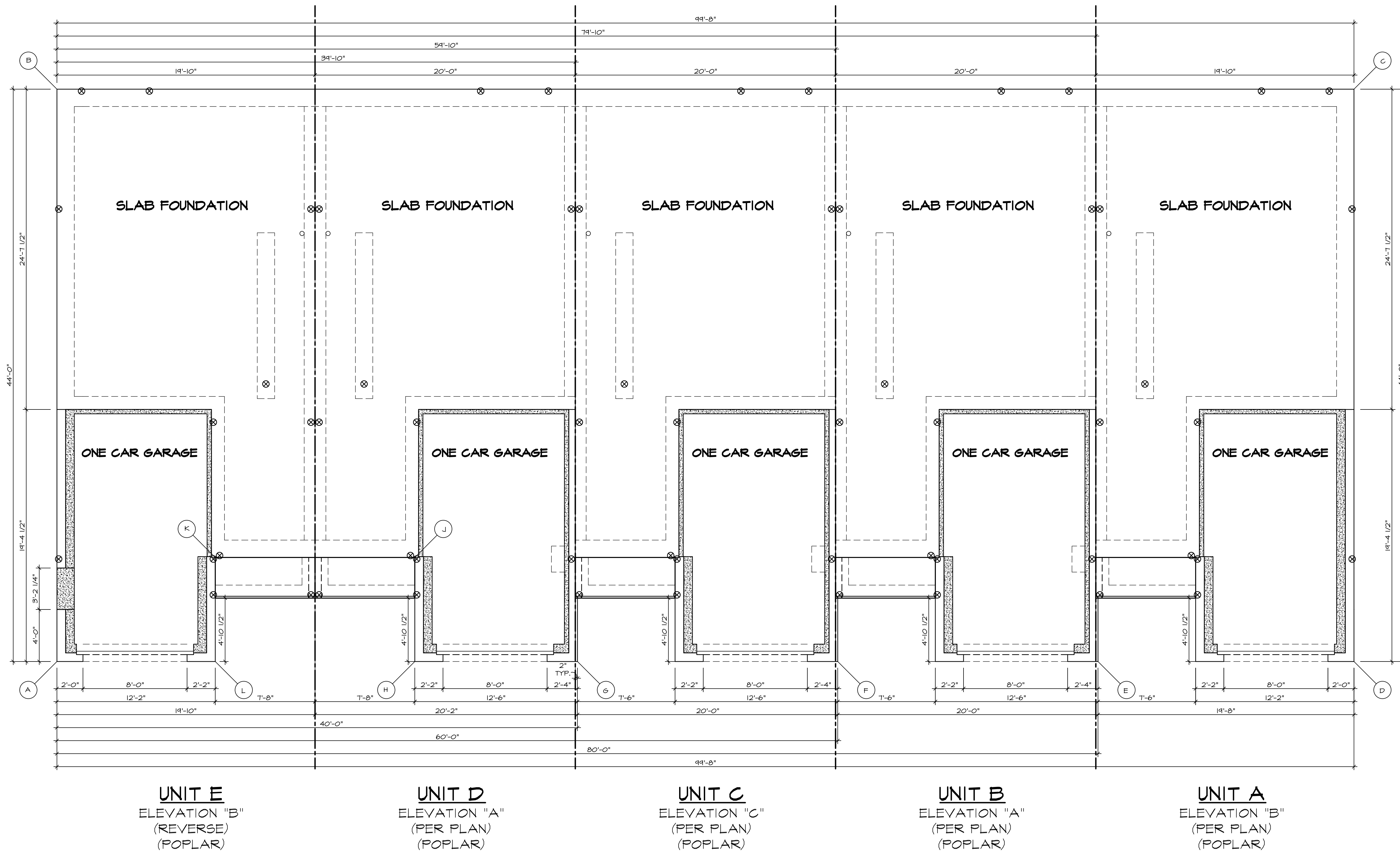
NOVEL
POPLAR
DRAWING TITLE
STRIP FOUNDATION
OPTION DESCRIPTION

SHEET NO.
NC-1
2.2

V:\As-Sold\2-Jobs\Mitak_Services\Assigned\RLH-NM-1006 A-E\UNIT E 2 & NC-1 STRIP FOUND.dwg 07/23/25 - 3:04 PM

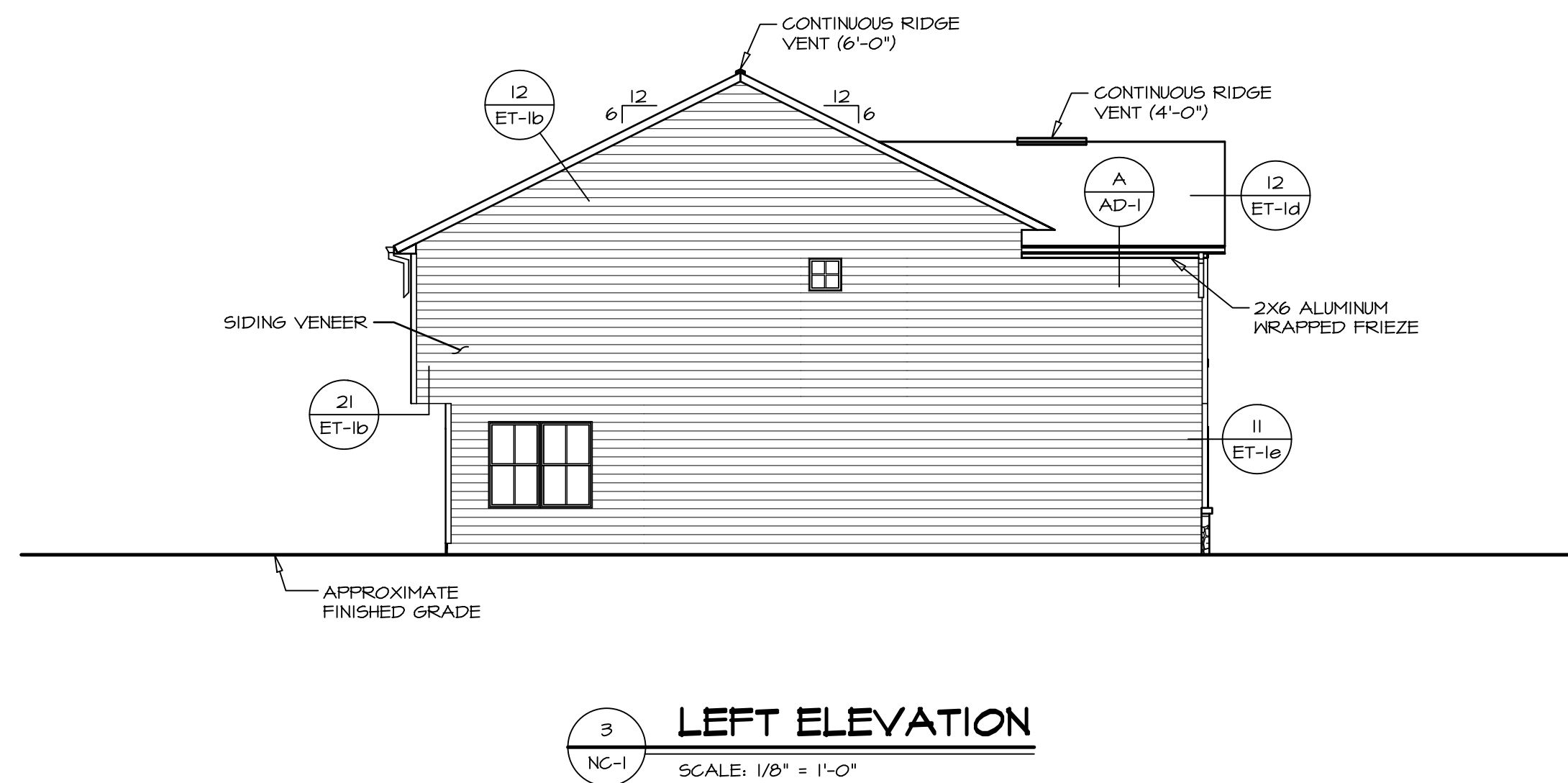
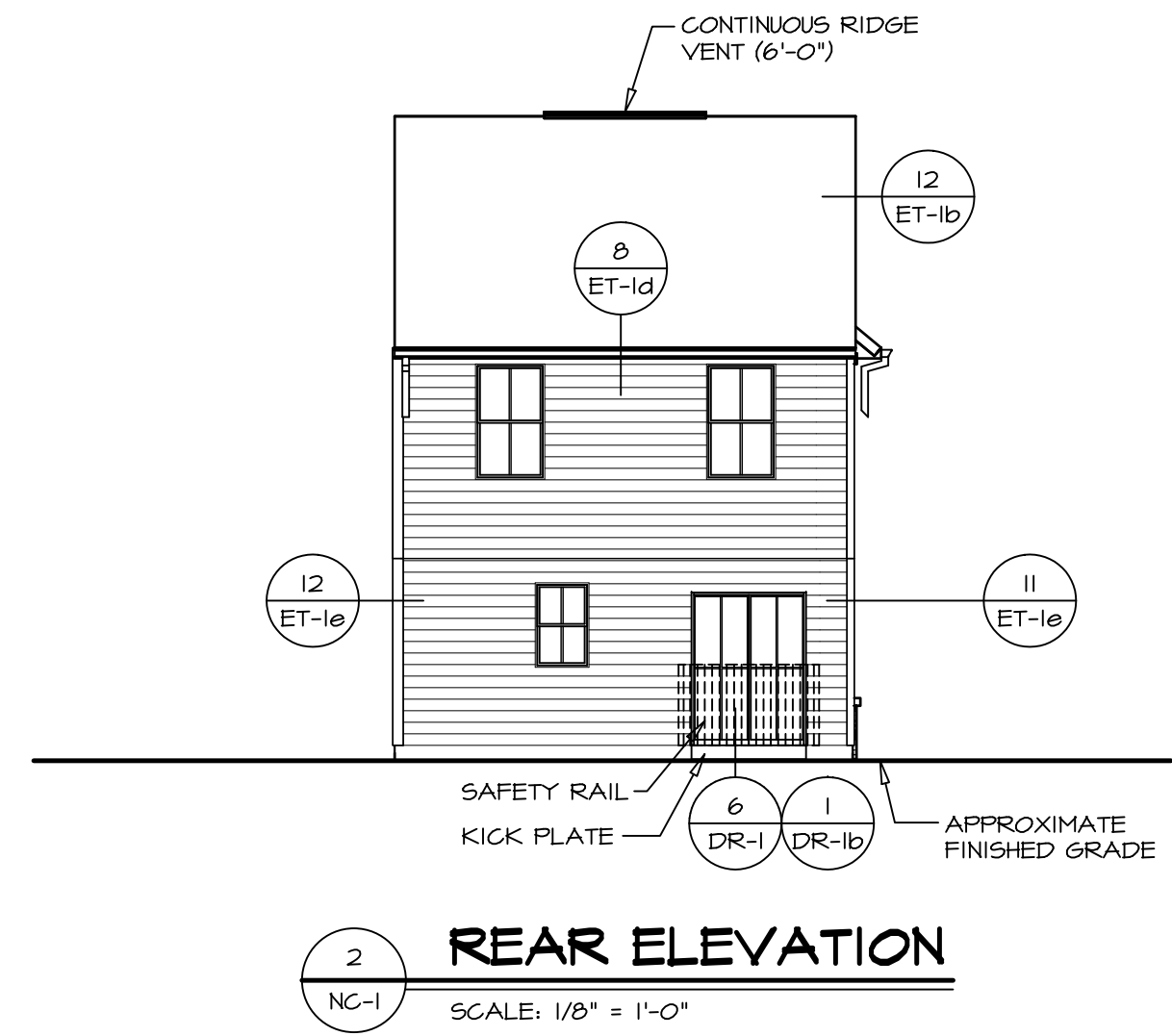
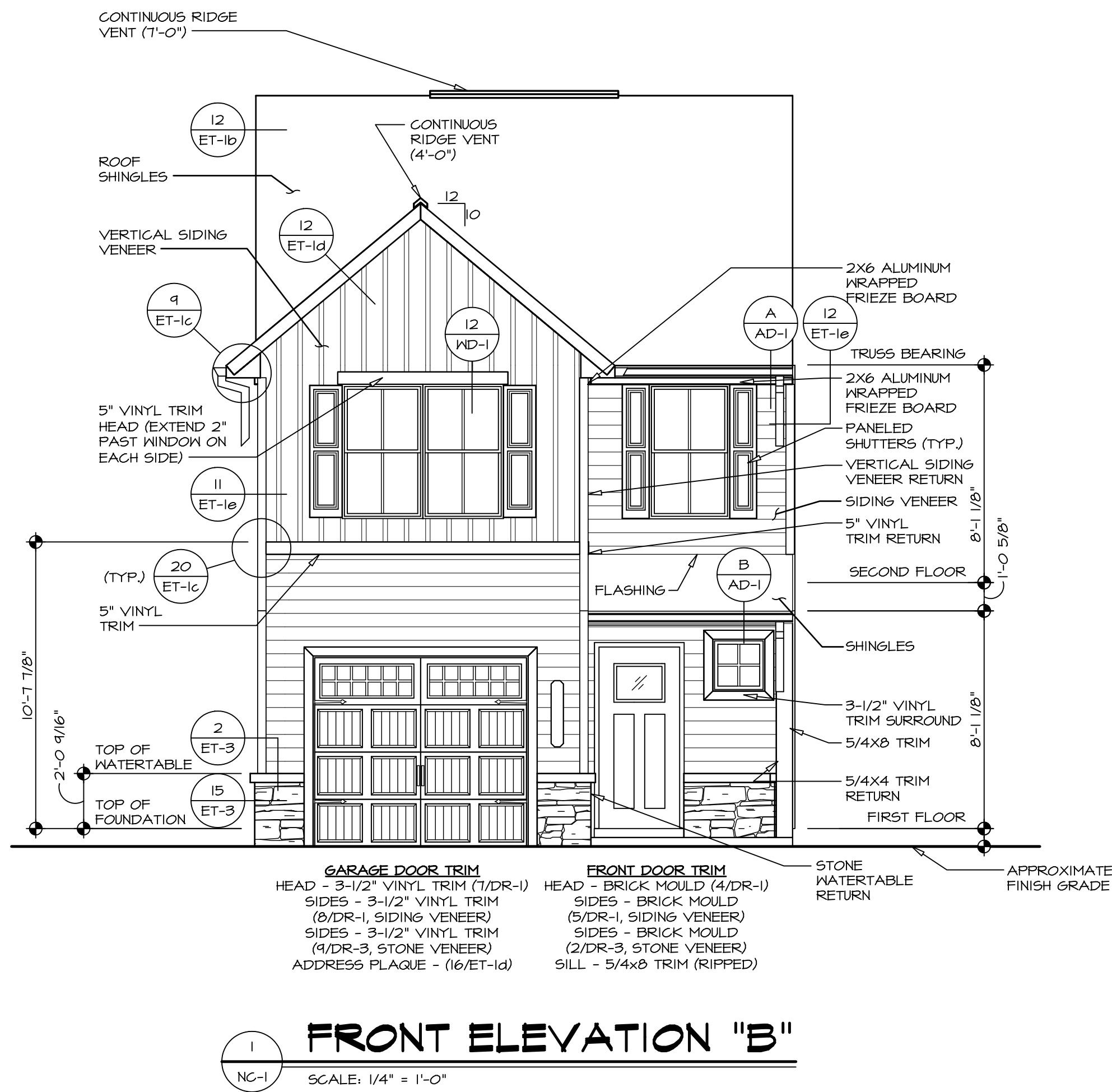
5-UNIT DIAGONALS

A-C	108'-11 3/8"
A-J	28'-7 11/16"
A-K	14'-6 3/4"
B-D	108'-11 3/8"
B-E	91'-3 5/8"
B-F	74'-4 7/8"
B-G	54'-5 9/16"
B-H	51'-10 5/8"
B-J	45'-3 5/8"
B-K	38'-0"
B-L	45'-7 13/16"



FOUNDATION PLAN

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



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James Sales
06/30/2025

DIV-COMM-LOT-UNIT
RLH-NM-1006-E

COM-LOT
TONNES AT NORTH MAIN - 1006E

STREET ADDRESS

CITY
LILLINGTON

STATE
NC

ZIP

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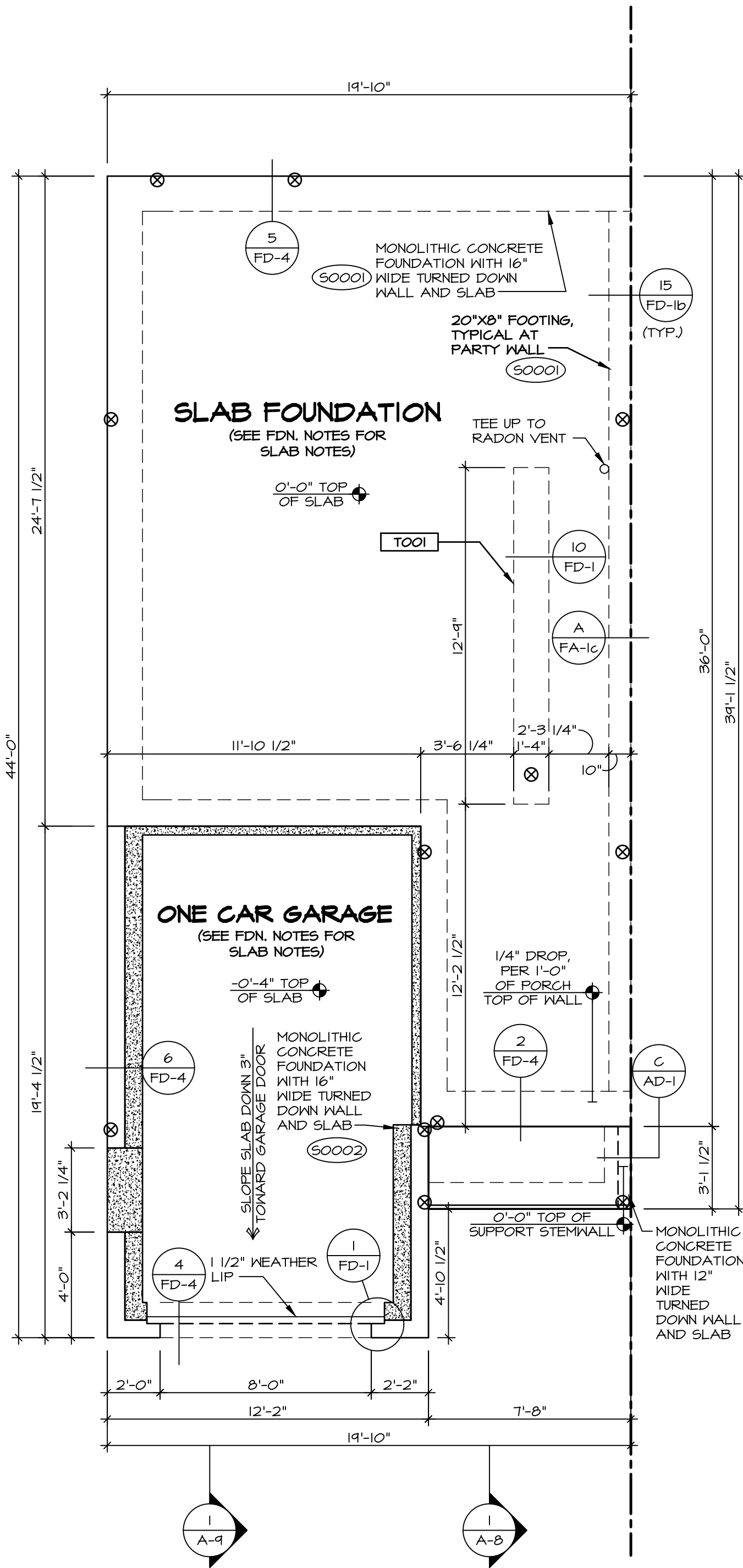
SET NO. PL200
VERSION 01
RELEASE NO. ----
DRAWN BY
DATE:
OPTION

MODEL
POPLAR
DRAWING TITLE
ELEVATIONS

SHEET NO.
NC-1

3

FOOTING/THICKENED SLAB SCHEDULE					
IDENTIFIER	LENGTH	WIDTH	HEIGHT	ENG. NUM.	REMARKS
T001	12'-4"	1'-4"	0'-8"	S0001	



1
NC-3
FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

FOUNDATION NOTES - ATTACHED

- SEE STANDARD DETAIL CATEGORY "FD" SHEET(S).
- CONCRETE SLAB ON VAPOR BARRIER OVER SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES)
- SLAB UNDER GARAGE:
- UNEXCAVATED WITH CONCRETE SLAB OVER SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES) OR STRUCTURAL CONCRETE SLAB OVER SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES)
- SEE FOUNDATION HOLD DOWN SHEET FOR CONNECTION INFORMATION.
- SLAB LEDGE LOCATIONS VARY W/ GRADE BEAM(S) ORIENTATION. SEE GB-1 FOR DETAILS.
- THE DIRECTION OF THE ARROW IS THE DIRECTION OF REBAR, AS REQUIRED.
- ALL FOOTINGS ARE PLAIN, NON-REINFORCED CONCRETE UNLESS NOTES OTHERWISE.
- SEE 15- DETAILS FOR FOOTER SLEEVE INFORMATION.
- THICKENED SLAB DEPTHS MEASURE FROM TOP OF SLAB. PAD FOOTING DEPTHS MEASURE 4" BELOW TOP OF SLAB.

LEGEND

- BEARING WALL
 - NON BEARING WALL
 - MASONRY WALL
 - INDICATES BEARING FROM POINT-LOAD ABOVE
 - JACKS
 - BEAM/HEADER
 - FOOTING/THICKENED SLAB
 - STEEL COLUMN
 - TRUSS TIE DOWN
 - PORTAL FRAME
 - JOIST/TRUSS
 - LVL
 - ENGINEERING PAGE NUMBER
 - WINDOW/DOOR TAG
 - PRECAST LINTEL TAG
- SEE FA DETAILS FOR FIRE ASSEMBLIES
-SEE FG DETAILS FOR FRAMING CONNECTORS AND MATERIAL USAGE

NOTES:

- REFER TO UNIT FOUNDATION DRAWING FOR ADDITIONAL FOUNDATION DIMENSIONS AND DETAILS.
- REFER TO STANDARD DETAIL FA-16 FOR PARTYWALL DETAILS

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DIV-COMM-LOT-UNIT
RLH-NM-1006-E

COMM-LOT
TOWNES AT NORTH MAIN - 1006E

STREET ADDRESS

CITY
LILLINGTON

STATE
NC

ZIP

APT. NO.

SEAL
44932

ENGINEER
JONATHAN EDWARD ABERTS

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Frederick, MD 21703

SET NO. PL200
VERSION 01
RELEASE NO. ----
DRAWN BY
DATE:
OPTION

NOVEL
POPLAR
DRAWING TITLE
FOUNDATION

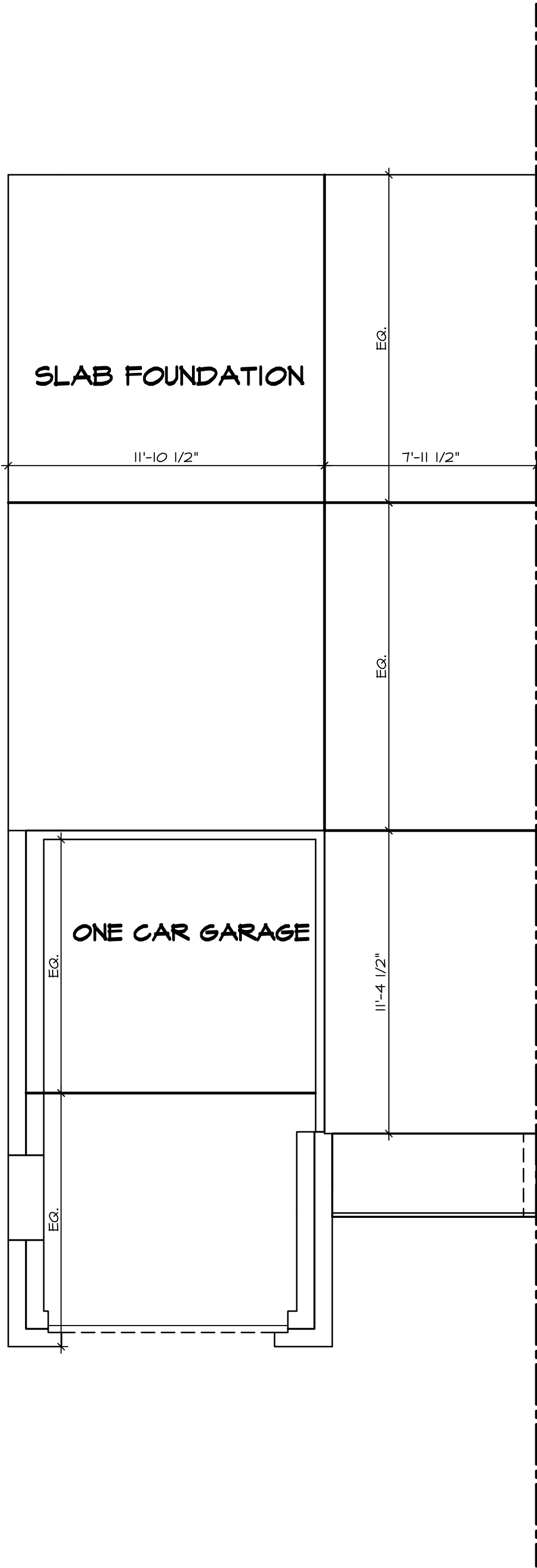
OPTION DESCRIPTION
NC-3

6



CONCRETE SLAB CONTROL JOINTS

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



CONTROL JOINT NOTES:

1. THE STARTING POINT FOR LAYING OUT JOINTS SHOULD INCLUDE A FRONT-TO-BACK LINE AND A SIDE-TO-SIDE LINE (A "T") OFF EACH COLUMN AND MAJOR FOUNDATION CORNER.
2. IF THAT PUTS MULTIPLE LINES TOO CLOSE TOGETHER (10' APART), CONSIDER GROUPING NEARBY LINES WHILE ENSURING EACH COLUMN AND HOUSE CORNER HAS AT LEAST ONE JOINT (FRONT-TO-BACK OR SIDE-TO-SIDE) EXTENDING FROM IT.
3. JOINT SPACING NOT TO EXCEED 15'.
4. CONTROL JOINT LOCATIONS AND QUANTITY MAY VARY DEPENDING ON ADDITIONAL CONCRETE REINFORCEMENT (INCLUDING BUT NOT LIMITED TO WELDED WIRE MESH OR FIBER MESH).
5. THIS SHEET DEPICTS GENERIC GUIDELINES AND EXAMPLES, SO EXACT LAYOUT MAY DIFFER FROM WHAT'S SHOWN HERE.
6. CONTROL JOINTS AT GARAGE SHALL BE "TOOLED" (1/4 DEPTH OF THE SLAB OR 1" MINIMUM) AND INSTALLED FOLLOWING STANDARDS.

SHEET NO.	NOVEL	SET NO.	PLR00
NC-3b	POPLAR	VERSION	01
	DRAWING TITLE	RELEASE	NO.
	FOUNDATION CONTROL JOINT	DRAWN BY	NN
	CONCRETE SLAB CONTROL JOINTS	DATE:	10/01/22
	OPTION DESCRIPTION	OPTION	
7			



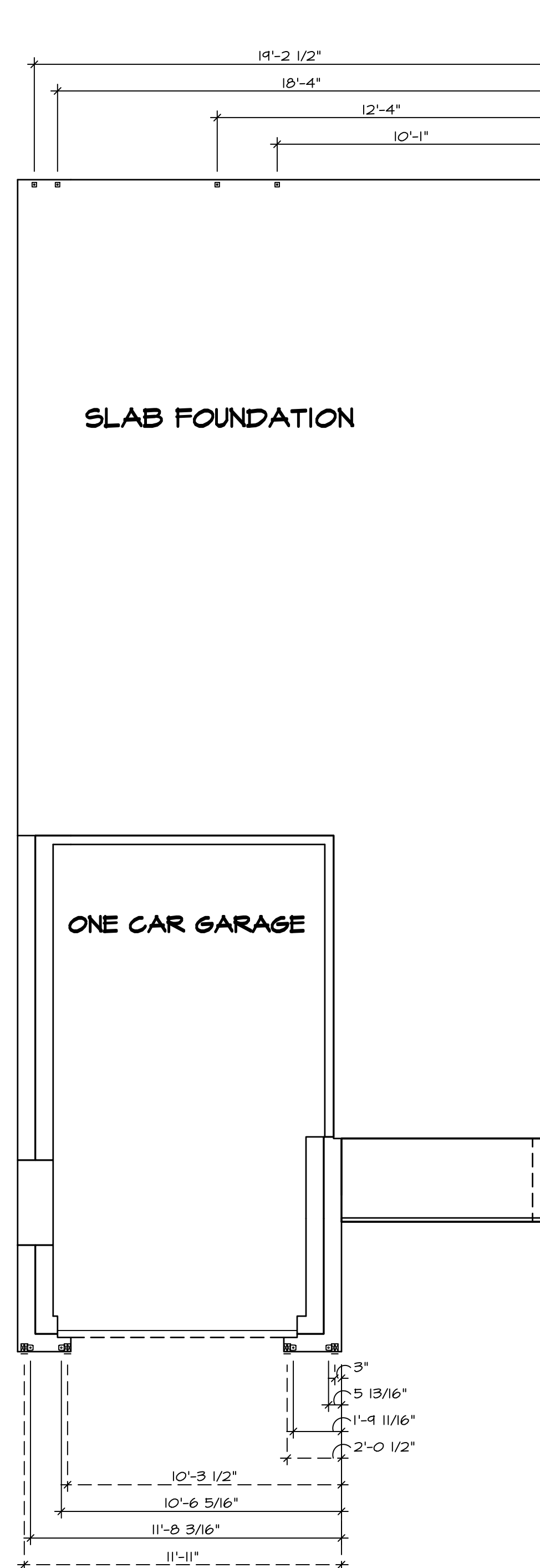
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DIV-COMM-LOT-UNIT
RLH-NM-1006-E

COM-LOT	TONNES AT NORTH MAIN - 1006E
STREET ADDRESS	-----
CITY	LILLINGTON
STATE	NC
ZIP	-----

James Sales
06/30/2025

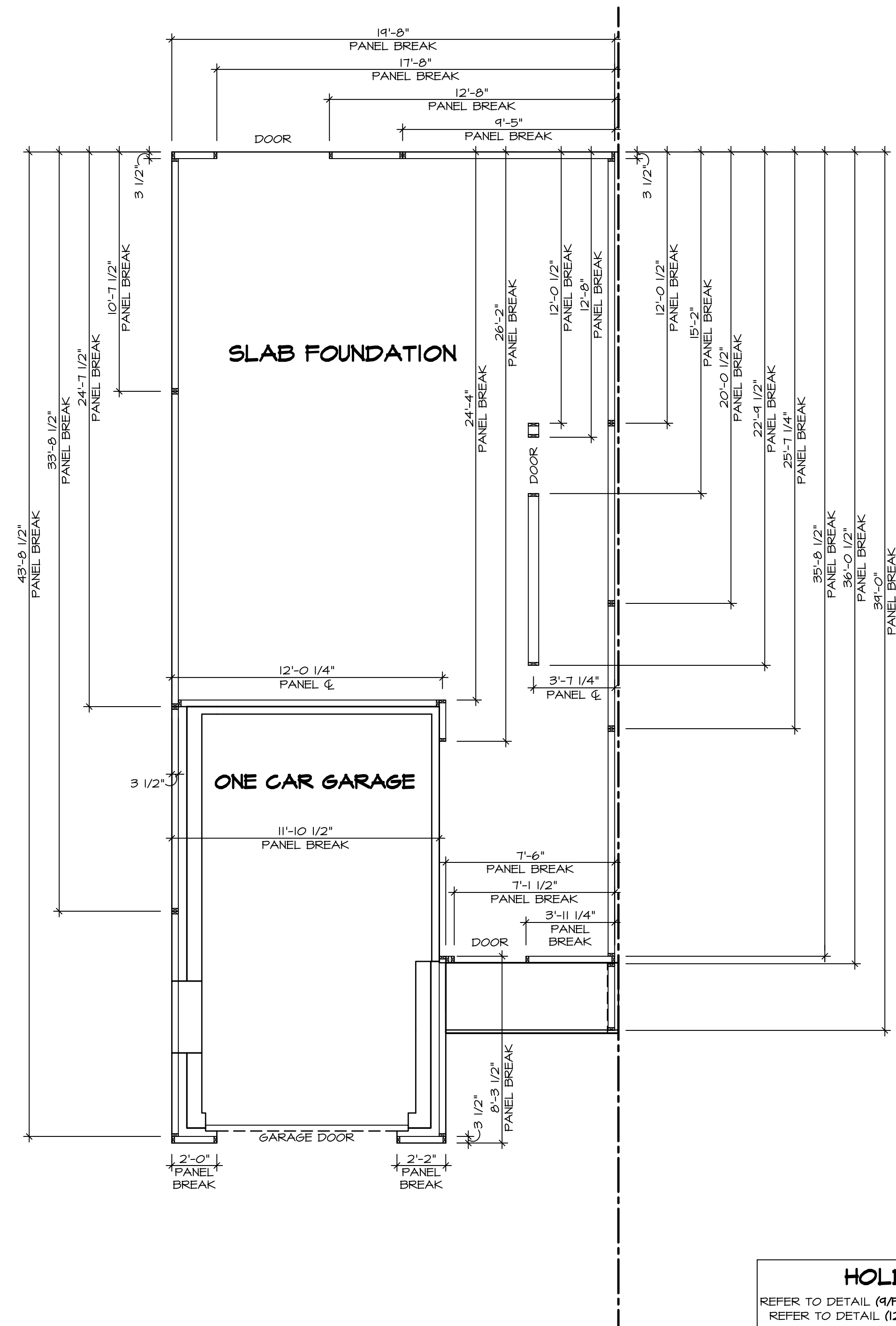
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1
NC-4

FOUNDATION HOLD DOWN DETAILS

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



2 FOUNDATION PANEL BREAKS

NC-4 SCALE: 1/4" = 1'-0"

HOLD DOWN NOTES

REFER TO DETAIL (A/FD-1) FOR HOLD DOWN OFFSET DIMENSIONS.
REFER TO DETAIL (12/FD-1) FOR HOLD DOWNS ON CMU BLOCK.



1" = 12"

1. ALL PANELS GREATER THAN 24" SHALL HAVE AN ANCHOR WITHIN 12" OF THE PANEL BREAKS / ENDS. (SEE DETAIL SHEET FC-1 FOR MORE INFORMATION ON ANCHOR DETAILS)

STRAP



1. STRAP:
 - a. ON FOUNDATION USE (5THD14)
 - b. ON FLOOR SYSTEM USE (5THD14R1)
2. ALL OTHER HOLD DOWNS SEE DETAIL MB_- FOR MORE INFORMATION.
3. STRAP LOCATION ON PLANS SHOWN BY DASHED DIMENSION TO CENTER OF STUDS

OR

BOLT



1. THREADED ROD
2. ALL OTHER HOLD DOWN SEE DETAIL MB_- FOR MORE INFORMATION.
3. BOLT LOCATION ON PLANS SHOWN BY SOLID DIMENSION TO CENTER OF BOLT

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RLH-NM-1006-E

06/30/2025
NORTH
PRO
JONATHAN
E

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SET NO: PL000
VERSION 01
RELEASE NO. ---

POPLAR

2-4-20

0

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**RADON REMEDIATION
RADON LOOP:**

- (4") PERFORATED "LOOP"
- MUST BE PLACED IN STONE BED SLIGHTLY HIGHER THAN ANY INTERIOR DRAINTILE
- LOOP TO BE SEPARATE FROM ANY DRAINTILE ELEMENTS
- TO BE CORRUGATED PIPE
- SCREWS TO BE INSTALLED THROUGH LOOP AT TEE UP INTO STACK

STACK REQUIREMENTS:

- 3" PVC STACK (4" IF BASEMENT IS GREATER THAN 2200 SGFT)
- NO PART OF STACK IS TO BE HORIZONTAL (45° ELBOWS PERMITTED AS REQUIRED)
- PIPE TO BE PHYSICALLY LABELED IN THE FIELD AS "RADON VENT" OR OTHER JURISDICTIONALLY REQUIRED LANGUAGE (ON EVERY LEVEL OF HOUSE)
- MINIMUM ANCHOR TO BE IN TOP 1/3 OF ROOF
- SCREEN OR VENT CAP INSTALLED TO KEEP PESTS OUT OF RADON VENT TO ROOF TERMINATION.



DIV-COMM-LOT-UNIT
RLH-NM-1006-E
 COMM-LOT
 TOWNES AT NORTH MAIN - 1006E
 STREET ADDRESS
 --- ----
 CITY STATE ZIP
 LILLINGTON NC ----

NVR

V:\As-Sold\2-Jobs\MiTek Services\Assigned\RLH-NM-1006 A-E\NM_1006 A-E\UNIT E\9 NC-5 PLMG_LS.dwg 07/23/25 - 3:04 pm

FIRST FLOOR JACK SCHEDULE			
IDENTIFIER	DESCRIPTION	ENG. NUM.	REMARKS
J101	JACK - (4) 2X4 SPF STUD GRADE	1004	
J102	JACK - (4) 2X4 SPF STUD GRADE	1004	
J103	JACK - (2) 2X6 SPF STUD GRADE	1006	
J104	JACK - (2) 2X4 SPF STUD GRADE	1008	
J105	JACK - (2) 2X4 SPF STUD GRADE	1008	
J106	JACK - (2) 2X4 SPF STUD GRADE	1010	
J107	JACK - (2) 2X4 SPF STUD GRADE	1010	
J108	JACK - (2) 2X4 SPF STUD GRADE	1010	
J109	JACK - (2) 2X4 SPF STUD GRADE	1024	
J110	JACK - (2) 2X4 SPF STUD GRADE	1024	
J111	JACK - (3) 2X4 SP#1	2007	
J112	JACK - (3) 2X4 SP#1	2007	

LEGEND

	BEARING WALL
	NON BEARING WALL
	MASONRY WALL
	INDICATES BEARING FROM POINT-LOAD ABOVE
	JACKS
	BEAM/HEADER
	FOOTING/THICKENED SLAB
	STEEL COLUMN
	TRUSS TIE DOWN
	PORTAL FRAME
	JOIST/TRUSS
	LVL
	ENGINEERING PAGE NUMBER
	WINDOW/DOOR TAG
	PREFCAST LINTEL TAG

-SEE FA DETAILS FOR FIRE ASSEMBLIES
-SEE FC DETAILS FOR FRAMING CONNECTORS AND MATERIAL USAGE

ALL WINDOWS HAVE 7'-0 1/2" HEADER
HEIGHT UNLESS OTHERWISE NOTED

FLOOR PLAN NOTES:

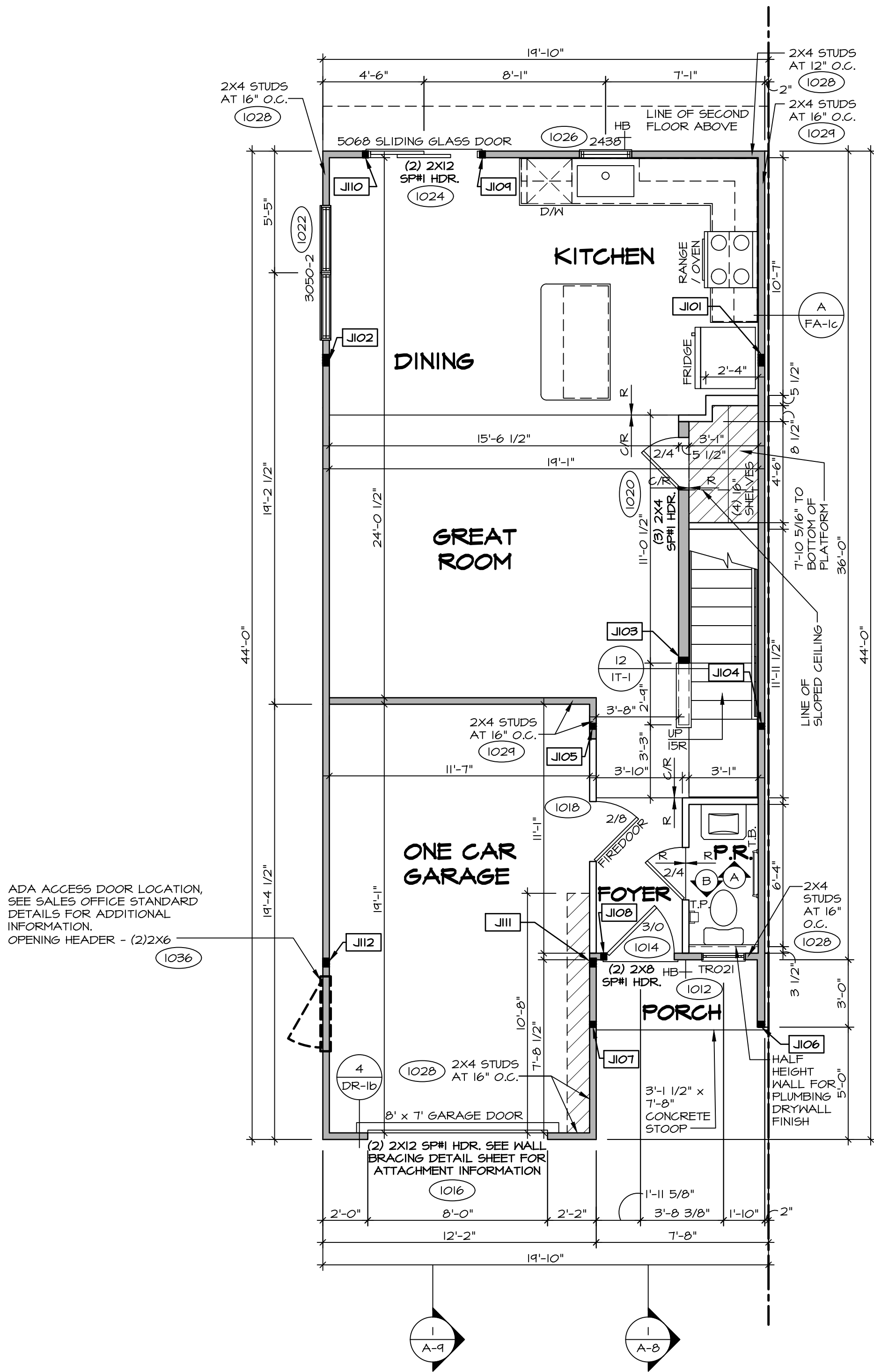
1. ALL HEADERS ARE (2) 2X6 W/ 2X4 WALLS AND (3) 2X6 W/ 2X6 WALLS, UNLESS OTHERWISE NOTED.
2. ALL HEADERS TO HAVE (1) 2X4 OR 2X6 JACK AND KING TRUD EAGLE AND UNLESS OTHERWISE NOTED.
MULTI OPENING HEADERS TO HAVE (2) JACKS AT INTERMEDIATE BEARING, UNLESS OTHERWISE NOTED. NO ADDITIONAL FLOOR SYSTEM BLOCKING OR CONTINUOUS LOAD PATH JACKS ARE REQUIRED UNLESS OTHERWISE NOTED.
3. ALL EXTERIOR WALLS TO BE 4" OR 6" AND ALL INTERIOR WALLS TO BE 3/12". UNLESS OTHERWISE NOTED.
HATCHED AREAS INDICATE DROPPED CEILINGS. ALL DROPPED CEILINGS TO BE UNLESS OTHERWISE NOTED.
SEE ARCHITECTURAL DETAIL B7-1/B FOR 3/4" FIRE STOPPING AT BULKHEAD / CEILING PANELS
5. SEE "BRACED WALL PANEL DETAIL SHEET" FOR SPECIAL WALL BEARING LOCATIONS AND HEADER SIZES, IF APPLICABLE.
6. SEE STANDARD DETAIL CATEGORY "1"1" SHEET(S) FOR INTERIOR TRIM DETAILS.
7. SEE DETAIL SHEET "AD" FOR HOUSE SPECIFIC INTERIOR TRIM.
8. ALL HEADERS IN NON-BEARING WALLS SHALL BE A SINGLE FLAT 2X4 OR 2X6 ATTACHED TO CRIPPLES ABOVE, UNLESS OTHERWISE NOTED.
9. TANKED WATER HEATERS SHALL BE BASE CONCRETE, OPTIONAL TANKLESS WATER HEATER IS AVAILABLE IN LIEU OF TANKED WATER HEATER.
10. INTERIOR HEADER HEIGHT FOR 8' CEILING WILL BE 6'-11" 4' CEILING WILL BE 6'-0" CEILING WILL BE 5'-3", UNLESS OTHERWISE NOTED.
11. ALL INTERIOR BEARING WALLS SHALL HAVE GYPSUM APPLIED TO AT LEAST ONE SIDE OR HAVE MID-HEIGHT BLOCKS AND STAYS.
13. NON-BEARING WALLS OVER CONCRETE TO BE HELD 1/2" SHORT OF FRAMING ABOVE.

GYPSUM NOTES:

AT GARAGE:
GYPSUM BOARD AT COMMON WALLS, CEILINGS, BEAM
WRAPS AND SUPPORTS PER STANDARD DETAIL FA-1(b).
FIRE ASSEMBLIES OR AS REQUIRED BY LOCAL CODE.

AT STAIRS:

1/2" GYPSUM BOARD AT UNDERSIDE OF STAIRS AND WALLS
IN CLOSET



FIRST FLOOR PLAN

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DIV-COMM-L0T-UNIT
RLH-NM-1006-E
COMM-L0T
TONNES AT NORTH MAIN - 1006E
STREET ADDRESS
CITY STATE ZIP
LILLINGTON NC
AFT. NO.

06/30/2025

NORTH CAROLINA
PROFESSIONAL
SEAL
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ENGINEER
JONATHAN EDWARD ALBERTS

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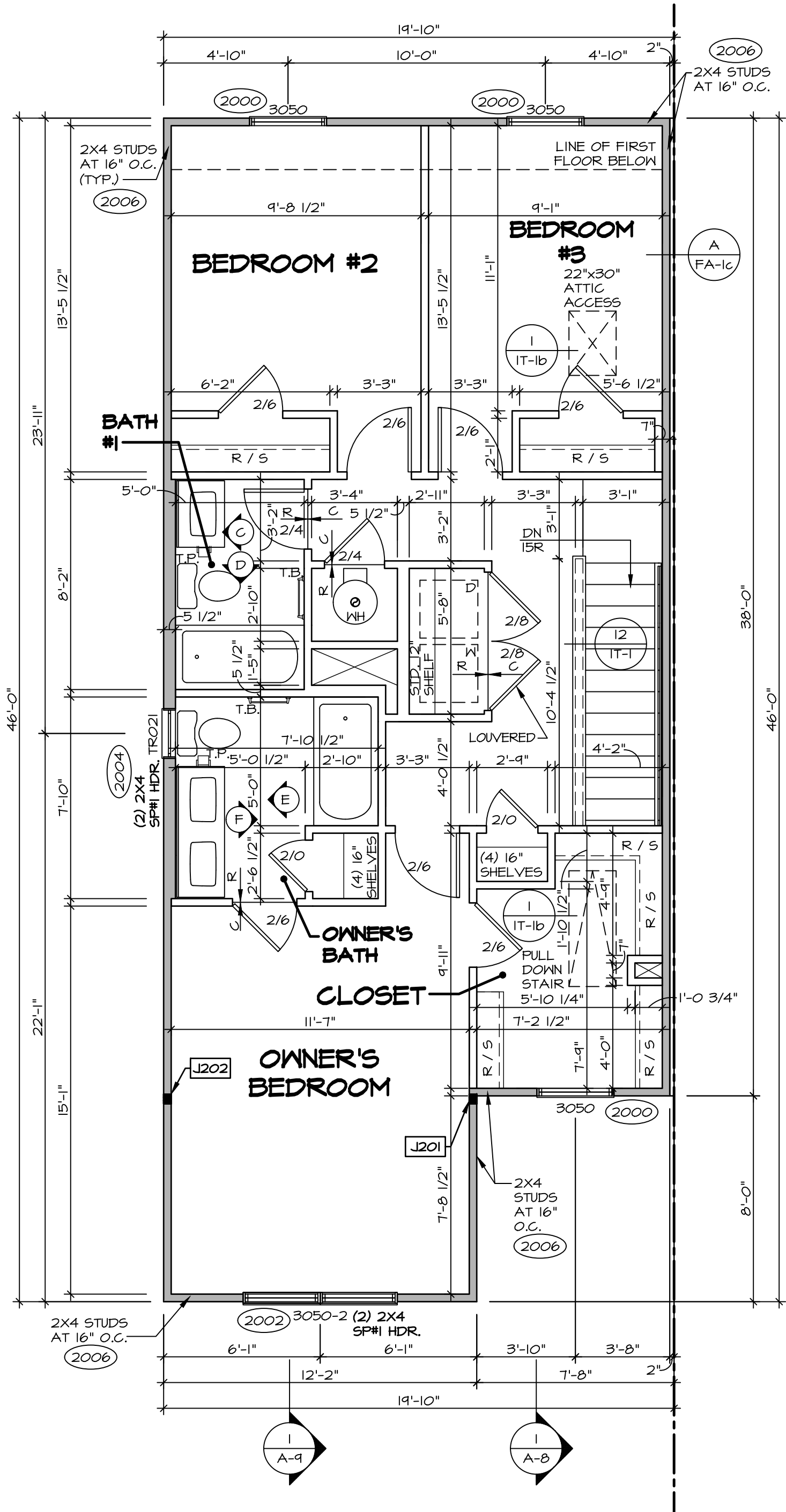
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SHEET NO.	MODEL	SET NO.
NC-6	POPLAR	FLOOR
DRAWING TITLE	DRAWING BY	VERSION OF
FIRST FLOOR PLAN	DATE:	RELEASE NO. ---
OPTION DESCRIPTION	OPTION	
10		

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SECOND FLOOR JACK SCHEDULE			
IDENTIFIER	DESCRIPTION	ENG. NUM.	REMARKS
J201	JACK - (3) 2X4 SP#1	2007	EXTEND THROUGH TOP PLATE
J202	JACK - (3) 2X4 SP#1	2007	EXTEND THROUGH TOP PLATE



1
NC-7
SCALE: 1/4" = 1'-0"

SECOND FLOOR PLAN

LEGEND	
	BEARING WALL
	NON BEARING WALL
	MASONRY WALL
	INDICATES BEARING FROM POINT-LOAD ABOVE
	JACKS
	BEAM/HEADER
	FOOTING/THICKENED SLAB
	STEEL COLUMN
	TRUSS TIE DOWN
	PORTAL FRAME
	JOIST/TRUSS
	LVL
	ENGINEERING PAGE NUMBER
	WINDOW/DOOR TAG
	PRECAST LINTEL TAG
-SEE FA DETAILS FOR FIRE ASSEMBLIES	
-SEE FC DETAILS FOR FRAMING CONNECTORS AND MATERIAL USAGE	

ALL WINDOWS HAVE 7'-0 1/2" HEADER HEIGHT UNLESS OTHERWISE NOTED

FLOOR PLAN NOTES:

- ALL HEADERS ARE (2) 2x6 w/ 2x4 WALLS OR (3) 2x6 w/ 2x6 WALLS, UNLESS OTHERWISE NOTED.
- ALL HEADERS TO HAVE (1) 2x4 OR 2x6 JACK AND KING STUD EACH END, UNLESS OTHERWISE NOTED. MULTI-OPENING HEADERS TO HAVE (2) JACKS AT INTERMEDIATE BEARING, UNLESS OTHERWISE NOTED. NO ADDITIONAL FLOOR SYSTEM BLOCKING OR CONTINUOUS LOAD PATH JACKS ARE REQUIRED UNLESS OTHERWISE NOTED.
- ALL EXTERIOR WALLS TO BE 4" OR 6" AND ALL INTERIOR WALLS TO BE 3 1/2", UNLESS OTHERWISE NOTED.
- HATCHED AREAS INDICATE DROPPED CEILINGS. ALL DROPPED CEILINGS ARE 12" UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DETAIL 0/IT-1B FOR 3/4" FIRE STOPPING AT BULKHEAD / CEILING PANELS.
- SEE "BRACED WALL PANEL DETAIL SHEET" FOR SPECIAL WALL FRAMING LOCATIONS AND HEADER SIZES, IF APPLICABLE.
- SEE STANDARD DETAIL CATEGORY "IT" SHEET(S) FOR INTERIOR TRIM DETAILS.
- SEE DETAIL SHEET "AD" FOR HOUSE SPECIFIC INTERIOR TRIM OPTION TABLE.
- ALL HEADERS IN NON-BEARING WALLS SHALL BE A SINGLE FLAT 2X4 OR 2X6 ATTACHED TO CRIPPLES ABOVE, UNLESS OTHERWISE NOTED.
- TANKED WATER HEATER SHOWN AS BASE CONDITION, OPTIONAL TANKLESS WATER HEATER IS AVAILABLE IN LIEU OF TANKED WATER HEATER.
- INTERIOR HEADER HEIGHT FOR 8' CEILING WILL BE 6'-11", 4' CEILING WILL BE 7'-11", 10' CEILING WILL BE 8'-3", UNLESS OTHERWISE NOTED.
- ALL INTERIOR BEARING WALLS SHALL HAVE GYPSUM APPLIED TO AT LEAST ONE SIDE OR HAVE MID-HEIGHT BLOCKING INSTALLED.
- NON-BEARING WALLS OVER CONCRETE TO BE HELD 1/2" SHORT OF FRAMING ABOVE.

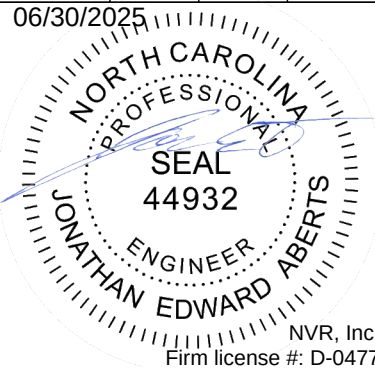
GYPSUM NOTES:

AT GARAGE:
GYPSUM BOARD AT COMMON WALLS, CEILINGS, BEAM WRAPS AND SUPPORTS PER STANDARD DETAIL FA-1(b) FIRE ASSEMBLIES OR AS REQUIRED BY LOCAL CODE.

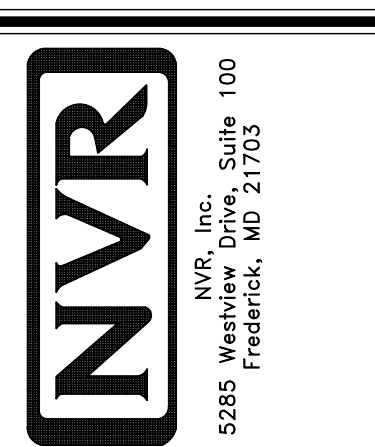
AT STAIRS:
1/2" GYPSUM BOARD AT UNDERSIDE OF STAIRS AND WALLS IN CLOSET

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DIV-COMM-LOT-UNIT
RLH-NM-1006-E
COMM-LOT
TOWNES AT NORTH MAIN - 1006E
STREET ADDRESS
APT. NO. ----
CITY STATE NC ZIP ----
LILLINGTON



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SHEET NO. NC-7	NOVEL POPLAR	SET NO. FLR00
	DRAWING TITLE SECOND FLOOR PLAN	VERSION 01
OPTION DESCRIPTION 		RELEASE NO. ----
		DRAWN BY DATE: OPTION

James Bales
06/30/2025

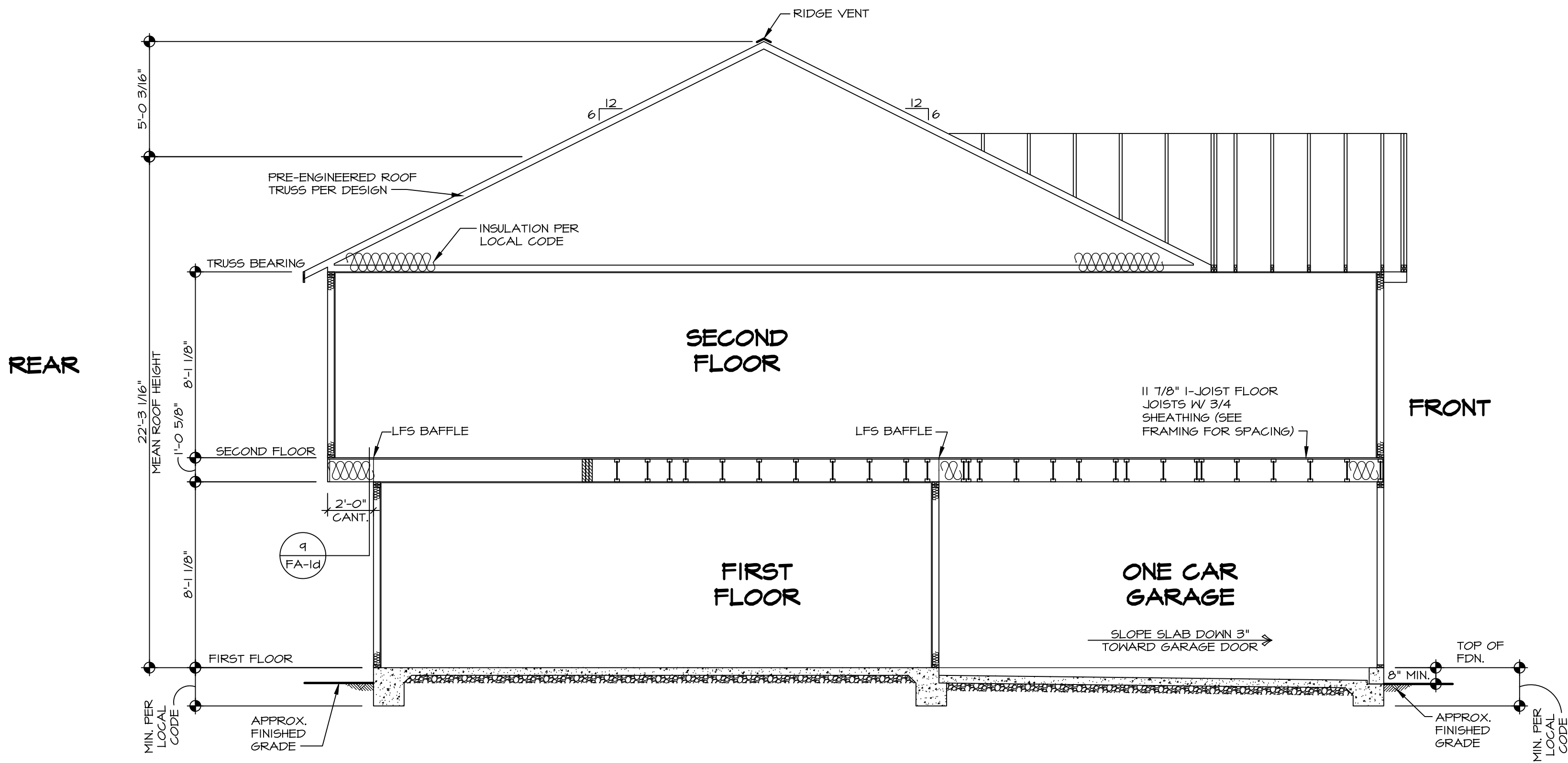
COMM-LOT	TOWNES AT NORTH MAIN - 1006E	APT. NO.
STREET ADDRESS		



V: As-Sold 2-Jobs MiTek Services Assigned RLH-NM-1006 A-E NM_1006 A-E UNIT E 12 NC-8 SECT_LS.dwg 07/23/25 - 3:04 pm

2





1
NC-9

BUILDING SECTION - GARAGE

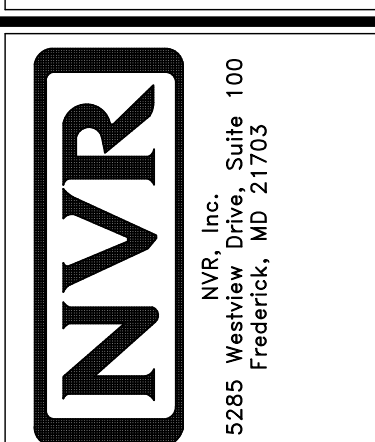
SCALE: 1/4" = 1'-0"

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James Sales
James Sales
06/30/2025

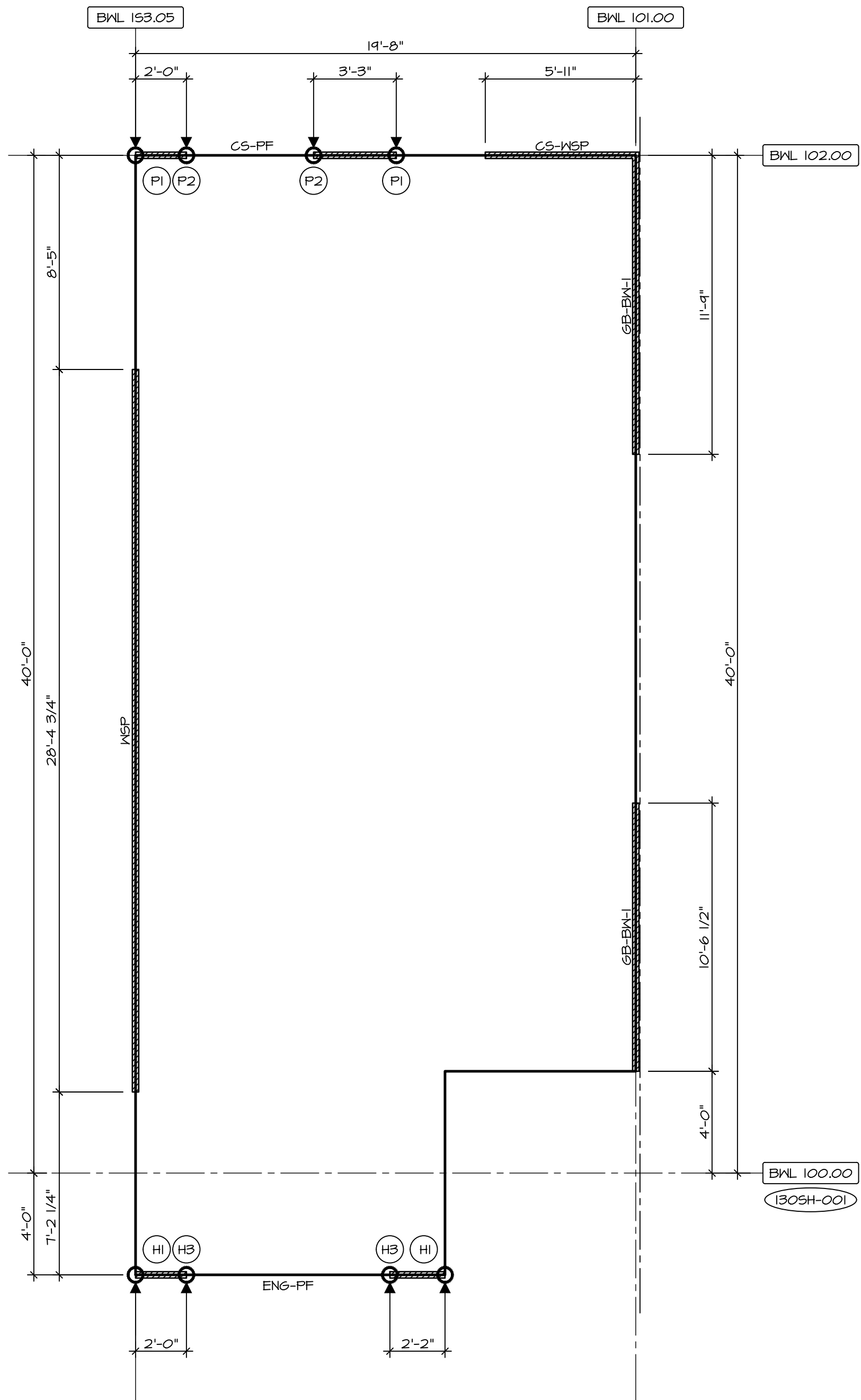
DIV-COMM-LOT-UNIT RLH-NM-1006-E			
COMM-LOT	TOWNES AT NORTH MAIN - 1006E		
STREET ADDRESS	-----	APT. NO.	----
CITY	LILLINGTON	STATE	NC
		ZIP	----

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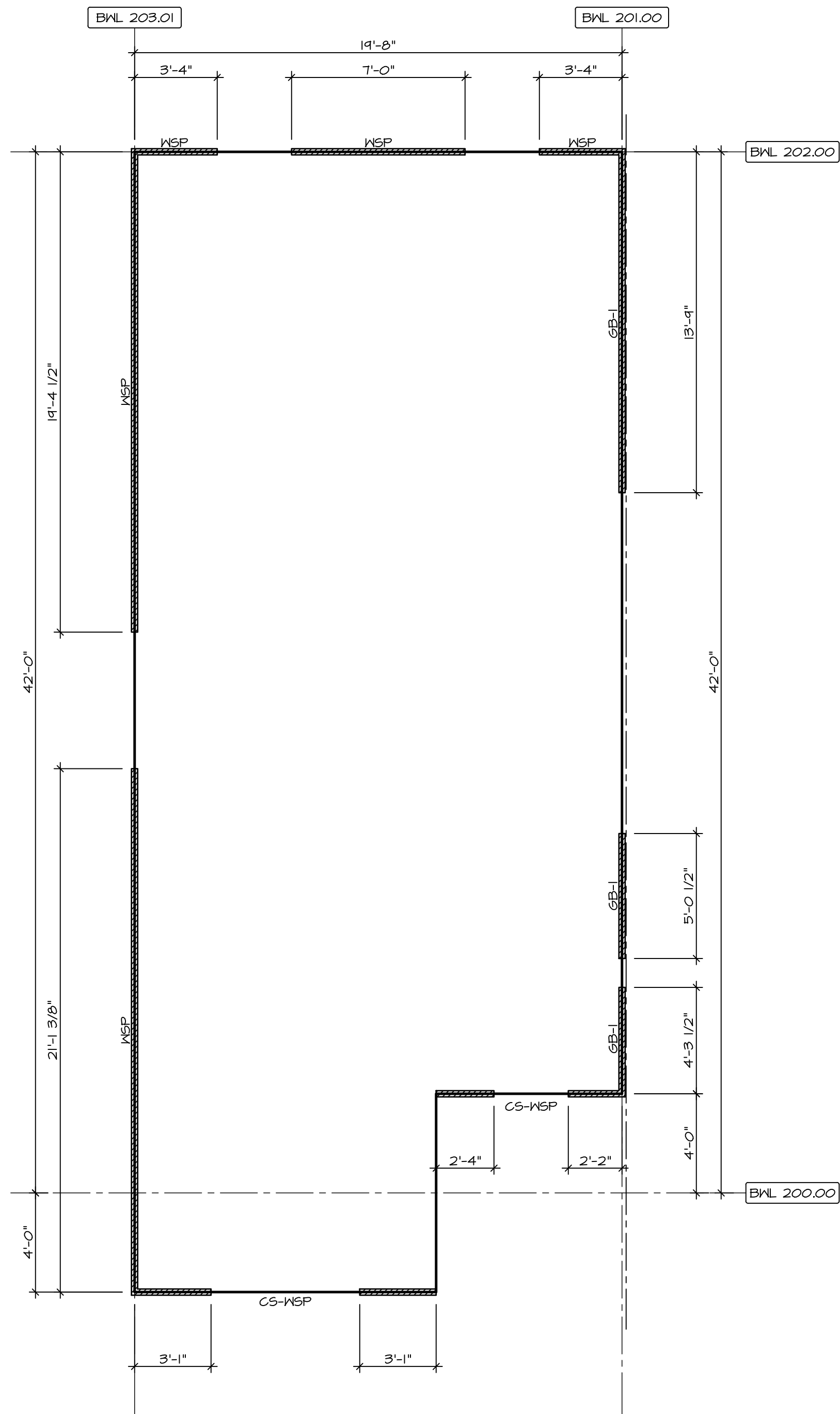


SHEET NO. NC-9	MODEL POPLAR	SET NO. FLR00	BUILDING SECTION - GARAGE
	DRAWING TITLE	VERSION 01	
	BUILDING SECTION - GARAGE	RELEASE NO. ----	
		DRAWN BY	
13	OPTION DESCRIPTION	DATE:	
		OPTION	

BRACED WALL LINE SCHEDULE				
WIND SPEED (ULT)	IDENTIFIER	REQUIRED (FT)	ACTUAL (FT)	METHOD
130 MPH	BWL 100.00	N/A	N/A	ENGINEERED
130 MPH	BWL 101.00	10.05'	11.15'	GB BLOCKED
130 MPH	BWL 102.00	13.60'	13.60'	CONTINUOUS (WITH GNB)
130 MPH	BWL 153.05	8.72'	28.40'	WSP (WITH GNB)
130 MPH	BWL 200.00	7.25'	10.66'	CONTINUOUS (WITH GNB)
130 MPH	BWL 201.00	7.68'	11.54'	GB
130 MPH	BWL 202.00	8.63'	12.44'	WSP (WITH GNB)
130 MPH	BWL 203.01	4.51'	20.24'	WSP (WITH GNB)



1 FIRST FLOOR BRACED WALLS
SCALE: 1/4" = 1'-0"



2 SECOND FLOOR BRACED WALLS
SCALE: 1/4" = 1'-0"

BRACING LEGEND

BWL XXXXX	BRACED WALL LINE I.D.
—	BRACED WALL LINE
—	HOUSE WALL
▨	BRACED WALL PANEL
(X)	ENGINEERING PAGE NUMBER
WSP	WOOD STRUCTURAL PANEL
GB	GYPSUM BOARD (1) SIDED OR (2) SIDED
GB-BW	GYPSUM BOARD BLOCKED WALL CONSTRUCTION (1) SIDED OR (2) SIDED (SEE STANDARD DETAIL 6 /WB-2)
LIB	LET-IN BRACING (SEE STANDARD DETAIL F /WB-2)
CS-WSP	CONTINUOUS SHEATHING - WOOD STRUCTURAL PANEL
CS-PF	CONTINUOUS SHEATHING - PORTAL FRAME, SEE FLOOR PLANS FOR PORTAL FRAME HEADER INFORMATION (SEE STANDARD DETAIL A, C /WB-2)
CS-G	CONTINUOUS SHEATHING - WOOD STRUCTURAL PANEL ADJACENT TO GARAGE OPENINGS
ENG-WSP-A	ENGINEERED DESIGN W/ WALL STRUCTURAL PANEL SHEATHING TYPE 'A' FASTENING REQUIREMENTS (NO HOLD DOWNS REQUIRED UNLESS NOTED)
ENG-WSP-B	ENGINEERED DESIGN W/ WALL STRUCTURAL PANEL SHEATHING TYPE 'B' FASTENING REQUIREMENTS (NO HOLD DOWNS REQUIRED UNLESS NOTED)
ENG-WSP-C	ENGINEERED DESIGN W/ WALL STRUCTURAL PANEL SHEATHING ON BOTH SIDES OF THE WALL TYPE 'C' FASTENING REQUIREMENTS (NO HOLD DOWNS REQUIRED UNLESS NOTED)
ENG-PF	ENGINEERED DESIGN W/ PORTAL FRAME, SEE FLOOR PLANS FOR PORTAL FRAME HEADER INFORMATION (SEE STANDARD DETAIL PAGE WB-1)
ENG-GBI-A	ENGINEERED DESIGN W/ (1) SIDED GYPSUM BOARD TYPE 'A' FASTENING REQUIREMENTS
ENG-GBI-B	ENGINEERED DESIGN W/ (1) SIDED GYPSUM BOARD TYPE 'B' FASTENING REQUIREMENTS
ENG-BW	ENGINEERED DESIGN W/ BLOCK WALL CONSTRUCTION (SEE STANDARD DETAIL IT/WB-1)
⊙	HOLD-DOWN: 1. SEE SHEET WB-2 FOR "P." INDICATOR SCHEDULE AND DETAILS 2. SEE SHEET WB-1 FOR "H." INDICATOR SCHEDULE AND DETAILS 3. ARROW INDICATES LOCATION.

NOTES:
HOUSE HAS BEEN ANALYZED UTILIZING A PRESCRIPTIVE METHOD IN COMPLIANCE WITH INTERNATIONAL RESIDENTIAL CODES (IRC) UNLESS OTHERWISE NOTED. ENGINEERED WALL LINES ARE IN COMPLIANCE WITH INTERNATIONAL BUILDING CODES (IBC).

FASTENING SCHEDULE

SHEATHING	FASTENER	SPACING	
		EDGES	FIELD
PRESCRIPTIVE 1/16" WOOD STRUCTURAL PANELS OR EQUIVALENT (W METHOD WSP, CS-WSP, CS-G)	8d COMMON NAILS	6" O.C.	6" O.C.
	ALTERNATIVE FASTENER 1-3/4" 16-GAUGE CORROSION RESISTANT STAPLES	3" O.C.	6" O.C.
ENGINEERED 1/16" WOOD STRUCTURAL PANELS (W METHOD ENG-WSP-A, ENG-WSP-B, ENG-WSP-C)	A - 8d COMMON NAILS	4" O.C.	6" O.C.
	A - 1-3/4" 16-GAUGE CORROSION RESISTANT STAPLES	3" O.C.	6" O.C.
	B - 8d COMMON NAILS*	3" O.C.	6" O.C.
	B - 1-3/4" 16-GAUGE CORROSION RESISTANT STAPLES	N/A	6" O.C.
	C - 8d COMMON NAILS* SHEATHING ON BOTH SIDES OF THE WALL	3" O.C.	6" O.C.
	C - 1-3/4" 16-GAUGE CORROSION RESISTANT STAPLES SHEATHING ON BOTH SIDES OF THE WALL	N/A	6" O.C.
1/2" GYPSUM WALLBOARD (W METHOD GB-I, GB-2, ENG-GBI-A)	1-1/4" LONG, 1/4" HEAD, 0.08" DIA. ANNULAR-RINGED NAILS	7" O.C.	7" O.C.
	CORROSION RESISTANT TYPE W 1-1/4" DRYWALL SCREWS	7" O.C.	7" O.C.
1/2" GYPSUM WALL BOARD BLOCKED AT THE EDGES (W METHOD GB-BW-I, GB-BW-2, ENG-BW)	BLOCKING REQUIRED AT ALL GYPSUM EDGES. USE CORROSION RESISTANT TYPE W 1-1/4" DRYWALL SCREWS	4" O.C.	12" O.C.

- NOTES:**
- MINIMUM 1/16" CROWN WIDTH FOR STAPLES IN WOOD STRUCTURAL PANEL.
 - SPECIFIED GYPSUM FASTENING REQUIRED ONLY WHERE METHOD GB IS IDENTIFIED. SEE PHASE SPECS FOR TYPICAL GYPSUM FASTENER SPACING.
 - USE OF STAPLES IN WOOD STRUCTURAL PANEL AS FASTENING METHOD ON WALLS PER ENGINEERED ALTERNATIVE.
 - STAPLE ALTERNATIVE FOR USE IN FIELD ONLY. WALL PANELS NOT IDENTIFIED AS BRACED WALL PANELS SHALL BE FASTENED IN ACCORDANCE WITH THE WSP/ENG-WSP-A METHOD.

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DIV-COMM-LOT-UNIT
RLH-NM-1006-E

COMM-LOT
TOWNES AT NORTH MAIN - 1006E

STREET ADDRESS

CITY

STATE

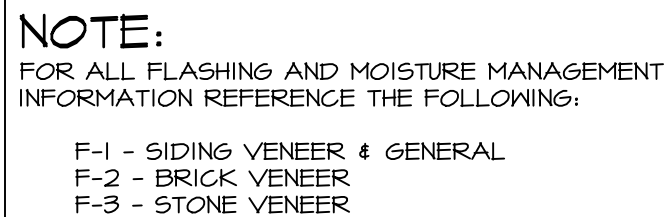
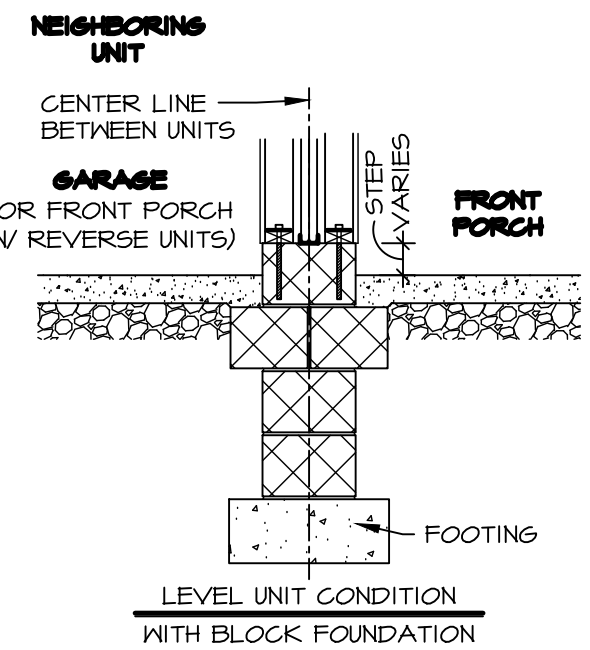
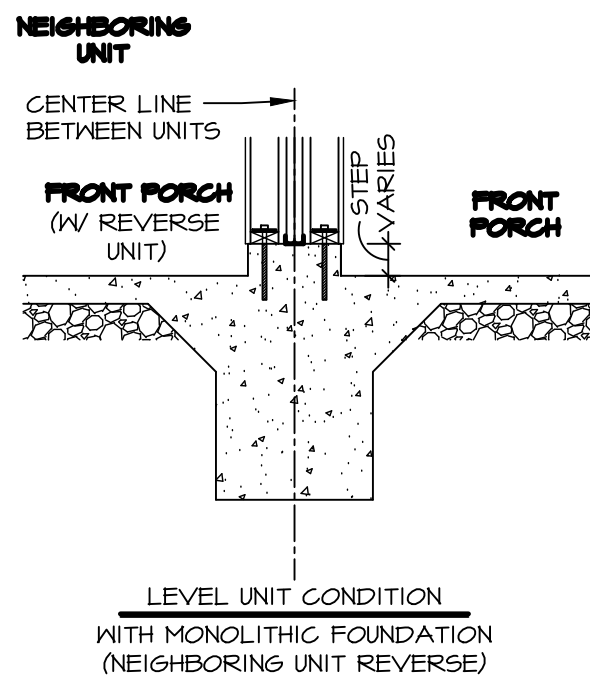
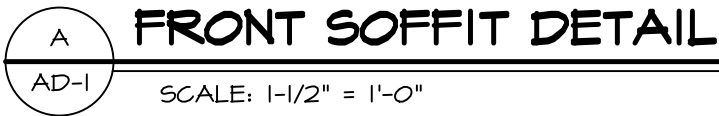
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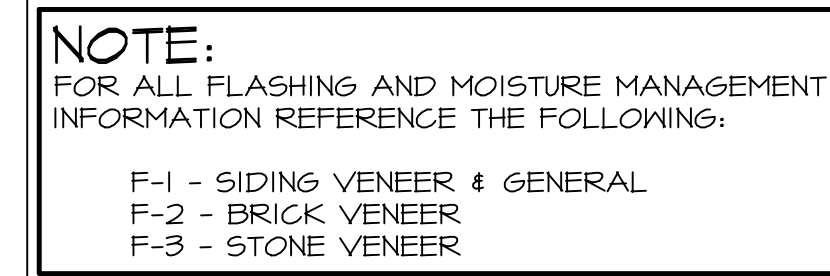
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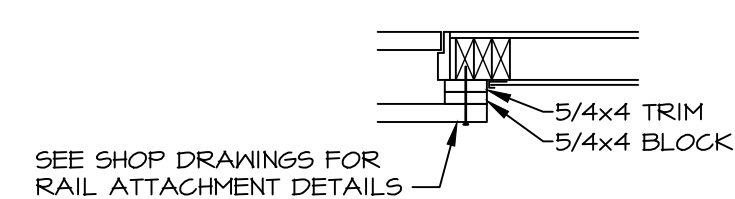
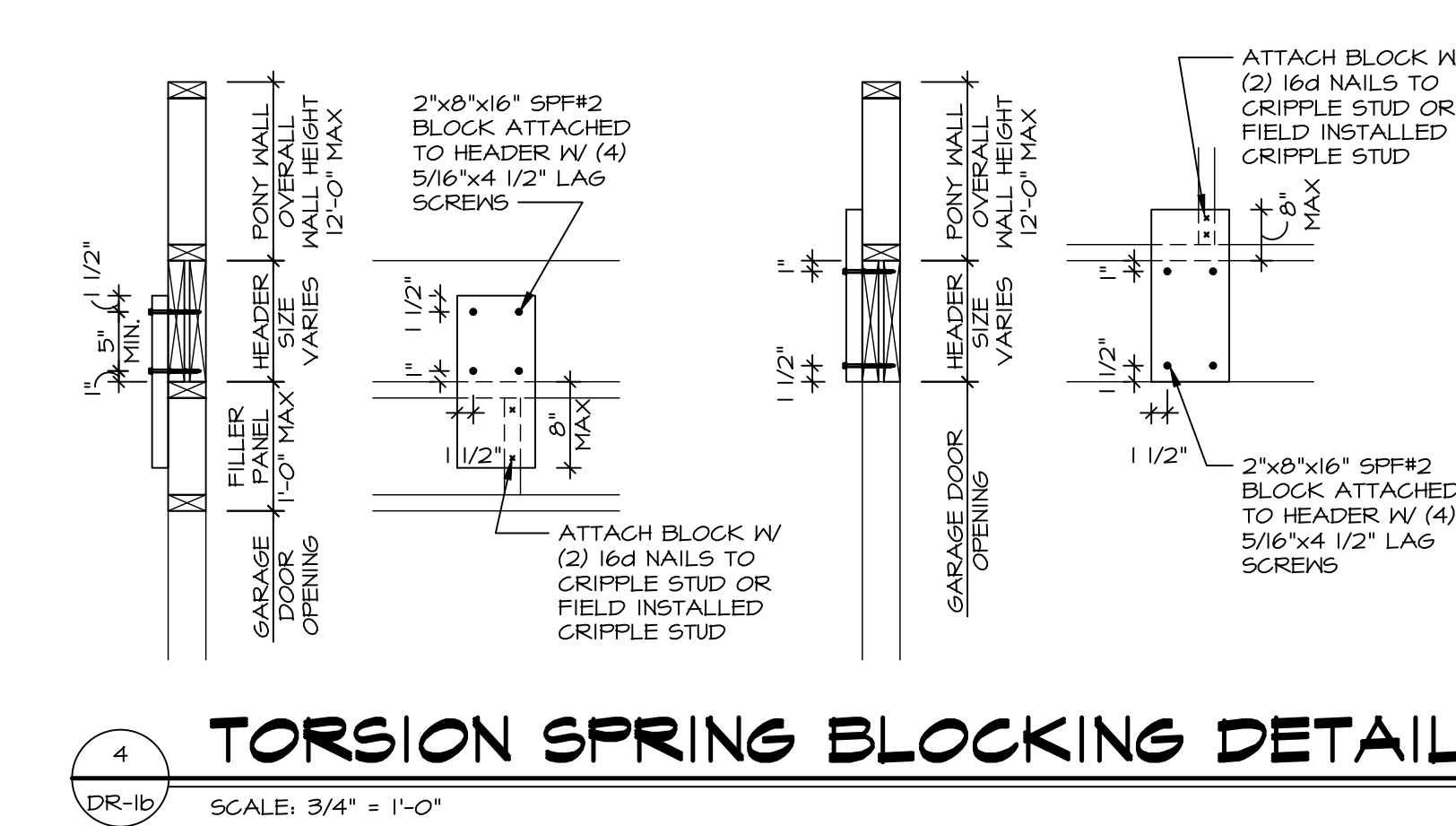
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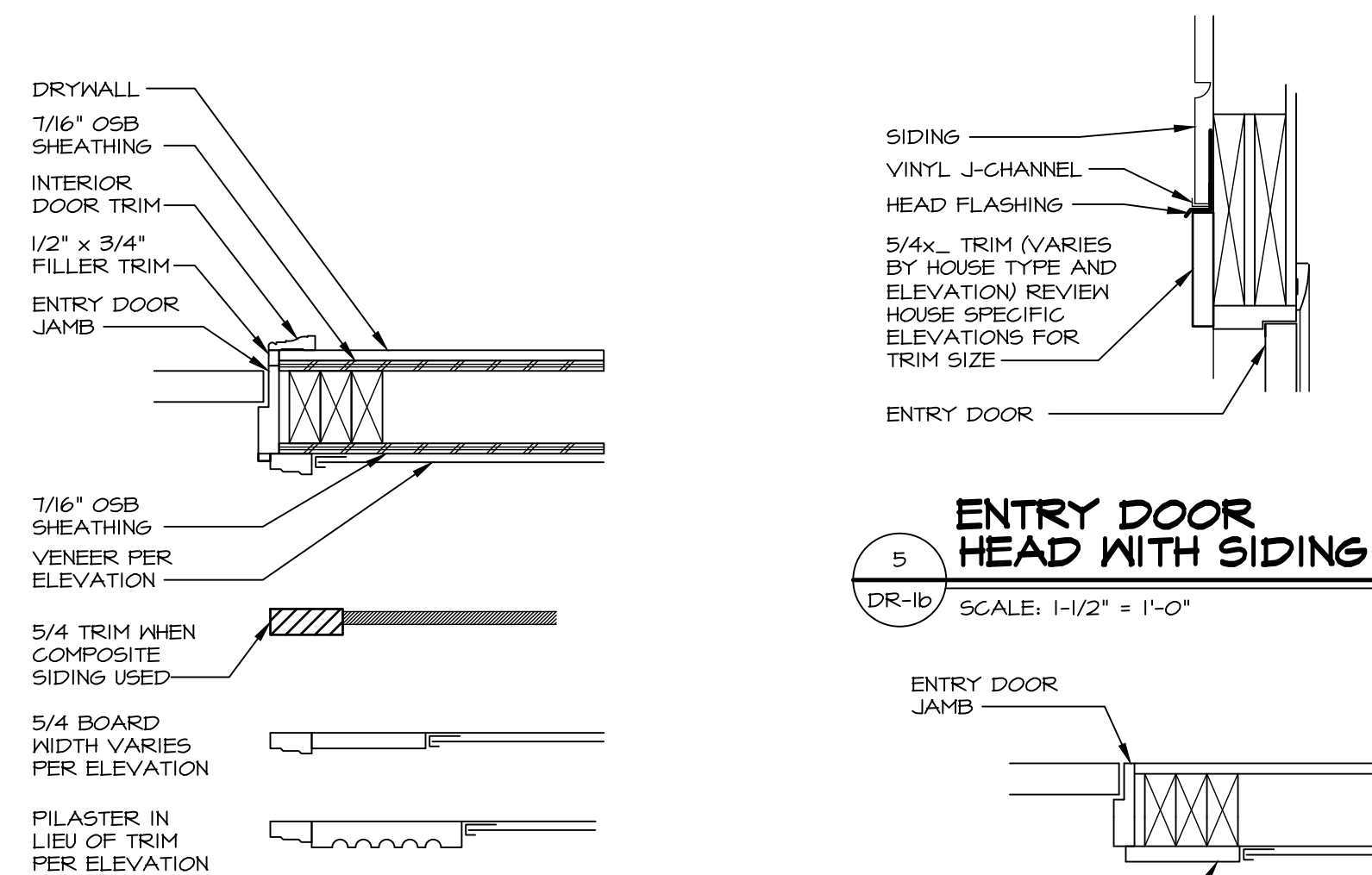
SET NO. FLROO	DRAWN BY MTN
VERSION O1	
RELEASE NO. ----	DATE: 08/24/2020
	OPTION



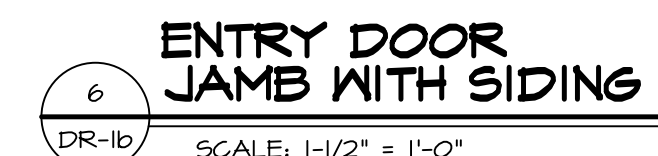




ENTRY DOOR
HEAD WITH SIDING



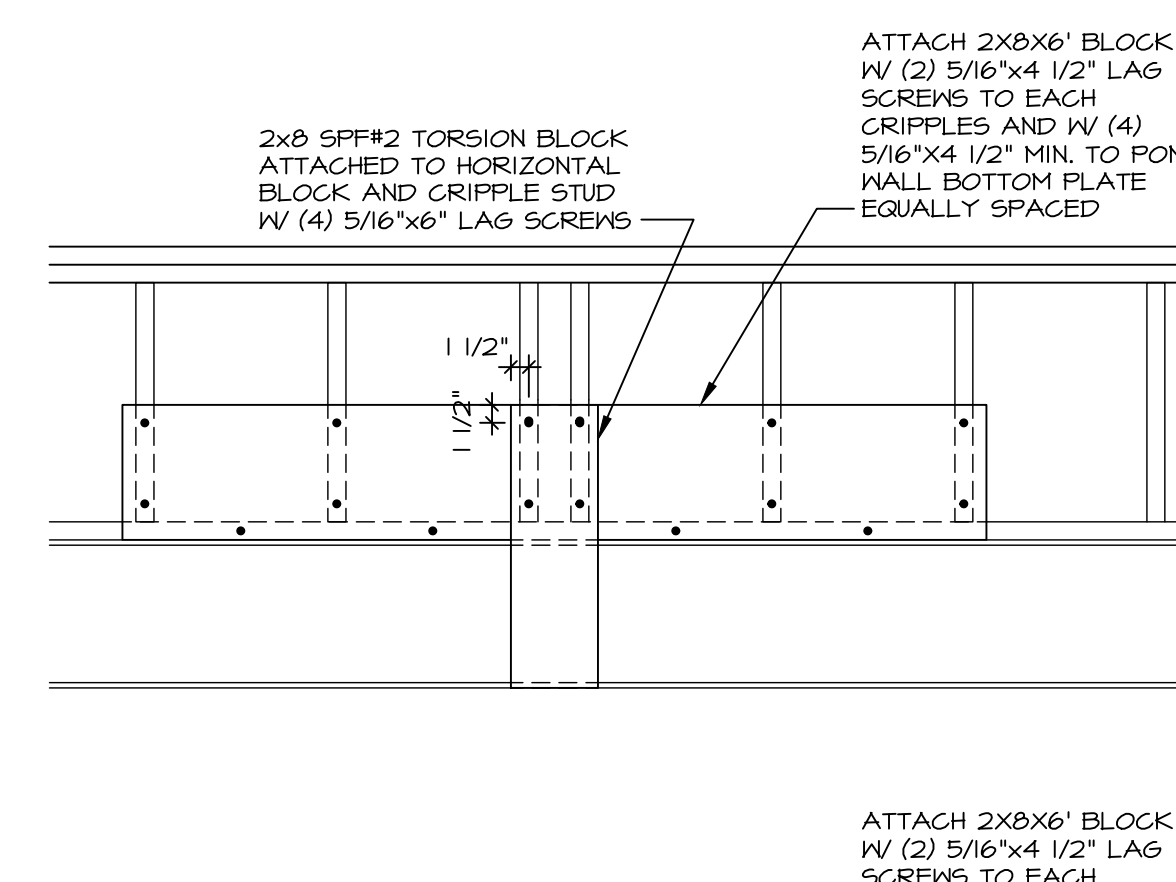
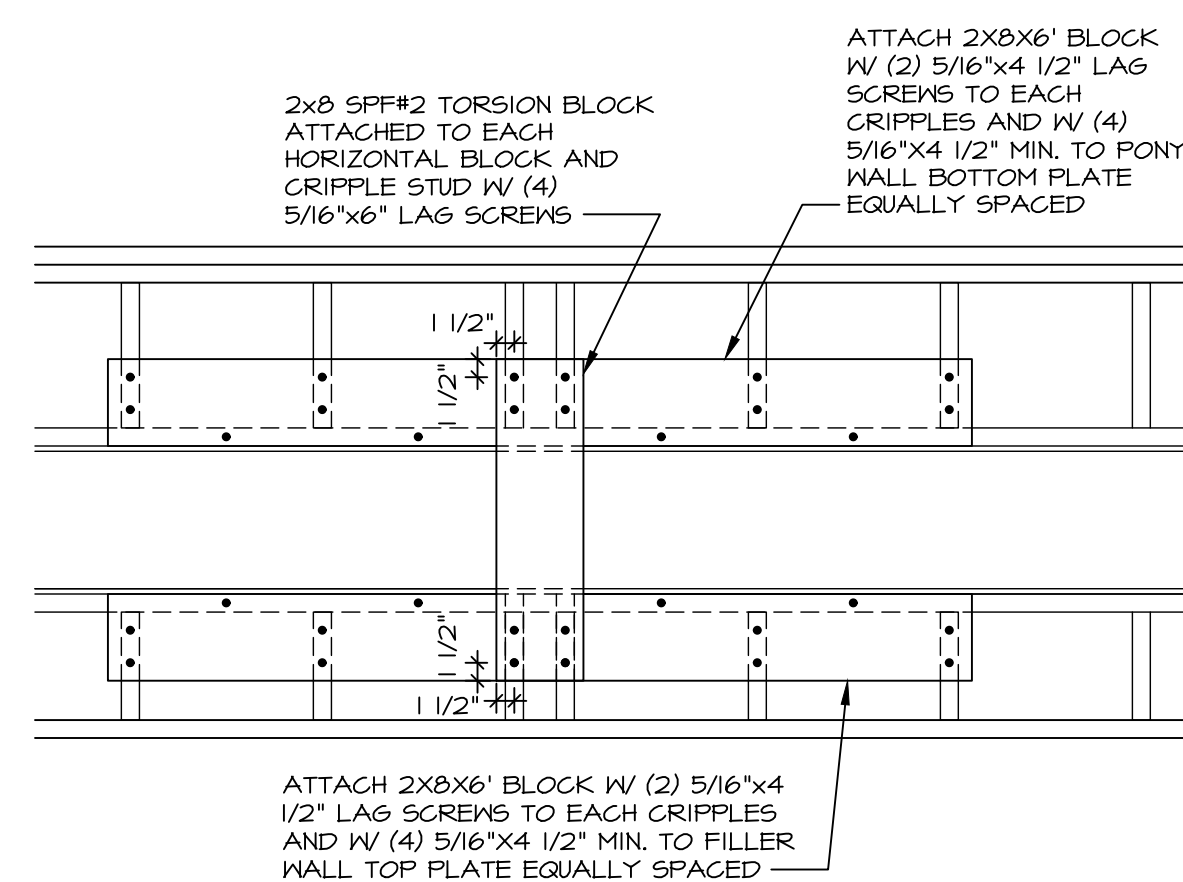
ENTRY DOOR JAMB
WITH SIDING AND
2-SIDES SHEATHING



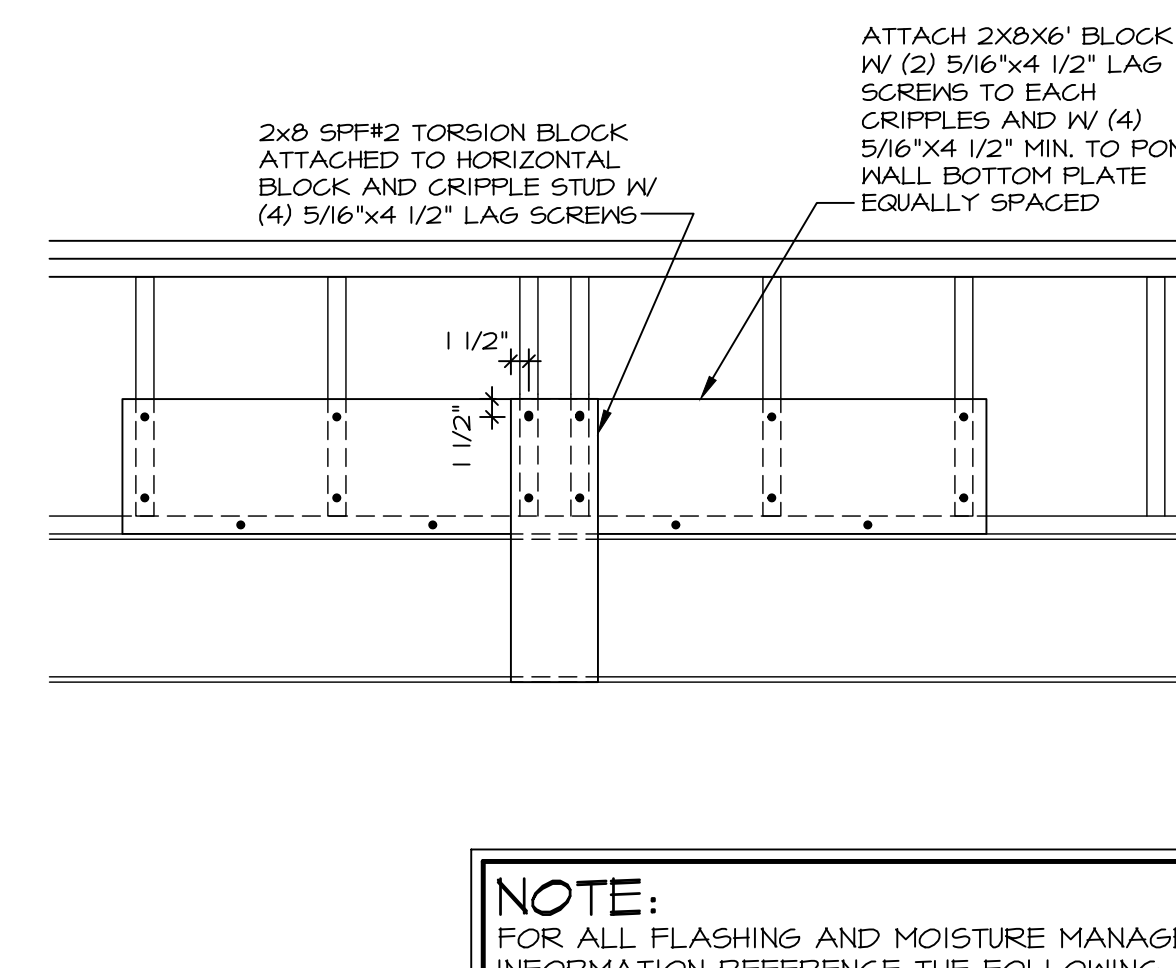
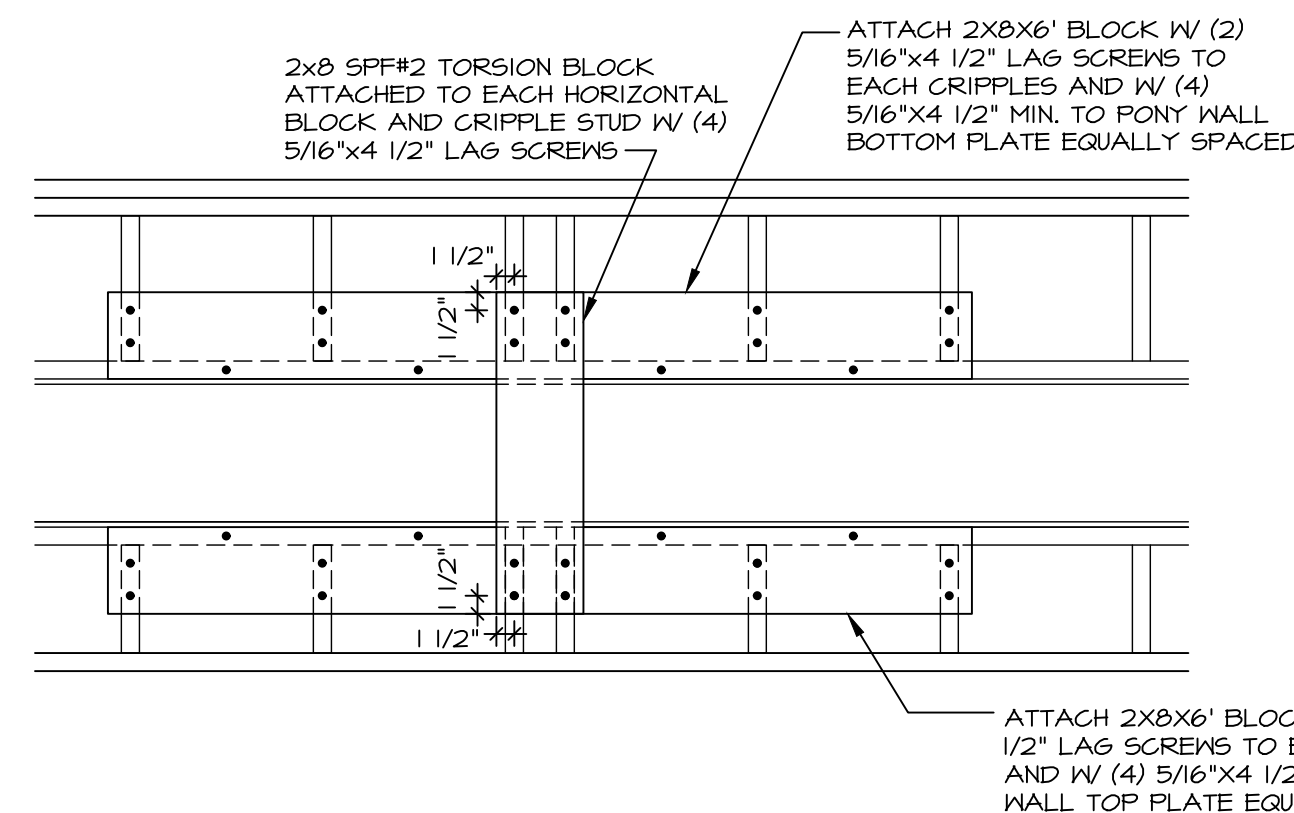
ENTRY DOOR
JAMB WITH SIDING



SAFETY RAIL

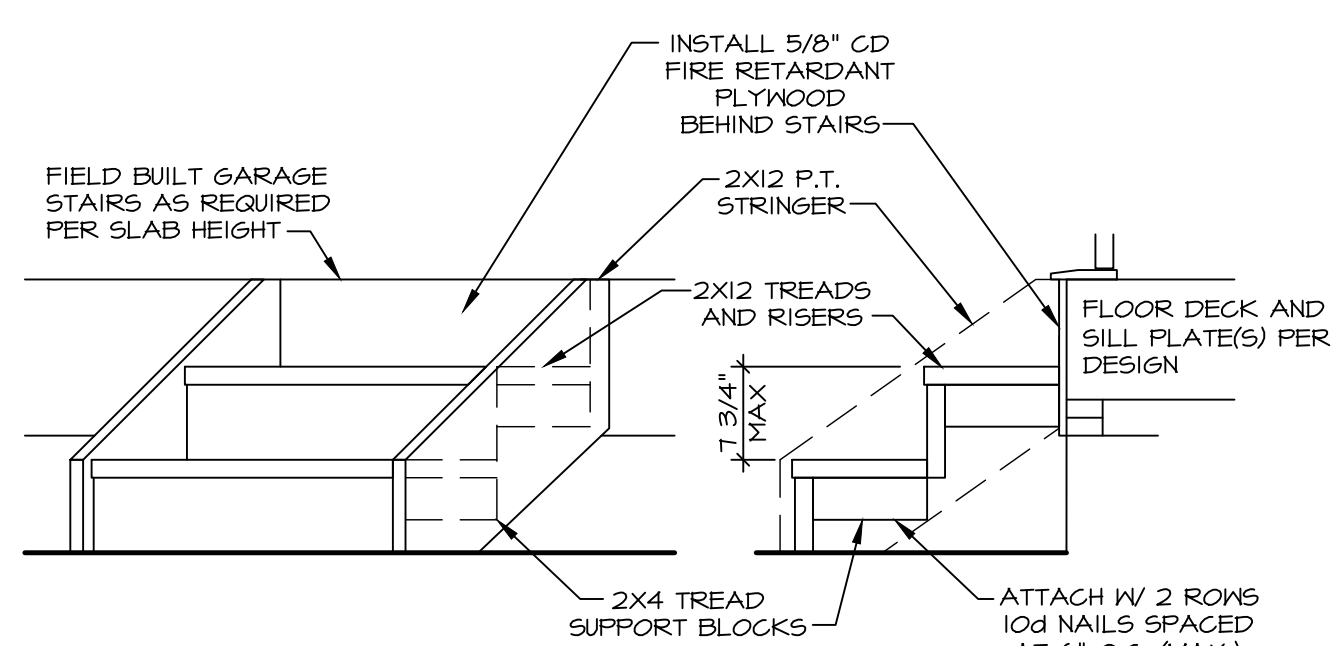


SHOE MOLDING AT EXTERIOR DOORS W/ HARD SURFACE FLOORING



NOTE:
FOR ALL FLASHING AND MOISTURE MANAGEMENT
INFORMATION REFERENCE THE FOLLOWING:

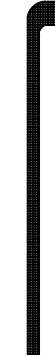
F-1 - SIDING VENEER & GENERAL
F-2 - BRICK VENEER
F-3 - STONE VENEER



GARAGE / HOUSE ENTRY

SECTION "A"

TORSION SPRING BLOCKING DETAIL

SHEET NO.	MODEL	SET NO. NVR	 NVR, Inc. 5285 Westview Drive, Suite 100 Frederick, MD 21703	© NVR, Inc. The owner, expressly reserves its copyright and other property rights in this drawing. No part of this drawing may be reproduced, changed, or copied in any form or manner without the prior written consent of NVR, Inc.	10 - 5/5/20 ATK - DETAIL VDR-IP ADDED 5/4X TRIM AND BLOCK (GC#46396) 11 - 6/16/20 ATK - ADDED INSTALLATION NOTATION TO DETAIL VDR-16 (REQUEST #6714) 12 - 10/29/20 5PM - ADDED STAIR BUILD DETAILS TO SECTION "A" ON ZDR-16 (REQUEST #6694) 13 - 3/1/22 ATK - ADDED METAL SAFETY RAIL DETAILS TO VDR-16 (GC#1559) 5 - 3/14/16 ZDM - CREATED DETAIL #4 (REQUEST #4940) 6 - 10/29/16 ZDM - CREATED DETAIL #5 & 6 (REQUEST #5226) 7 - 12/11/16 ZDM - DELETED DETAIL #5 & 6 (REQUEST #5226) 8 - 6/5/14 ZDM - ADDED DETAILS 5 & 6 (REQUEST #5023) 9 - 7/26/14 NS - MOISTURE MANAGEMENT REVISION (JOB #3686)
	DRAWING TITLE DR-16 DOOR DETAILS GENERAL DETAILS OPTION DESCRIPTION	VERSION DRAWN BY DATE: OPTION			

90 MINUTE DOOR (PER LOCAL CODES)

B-LABELED 90-MINUTE FIRE DOOR AND STEEL FRAMES SPECIFICATIONS

FIRE DOORS: EMBOSED AND FLUSH STYLES CARRY THE 90-MINUTE B-LABEL FIRE RATING. GALVANIZED STEEL FACE PANELS WITH FORMED EDGES ALSO COVER THE STILES AND INTERLOCK ALONG THE VERTICAL STRIKE EDGE. CORE IS FOAMED IN PLACE WHICH FILLS THE ENTIRE AREA AND BONDS THE STILES, RAILS AND FACES INTO A SOLID PANEL. DOORS ARE PREPARED FOR THREE THERMA-TRU 4" X 4" HINGES (P.I.) PUNCHED. DOORS ARE PRIMED TO ACCEPT FINISH PAINT, AND ARE AVAILABLE IN 2'8" AND 3'0" WIDTHS BY 6'8" HEIGHTS. ALL FIRE DOORS CARRY A CERTIFIED, SEQUENTIALLY NUMBERED 90-MINUTE LABEL PER ASTM E-152.

FRAMES: EXPANDABLE STEEL FRAMES - THROAT OPENINGS FOR SINGLE AND DOUBLE-DOOR APPLICATIONS. THROAT EXPANDS FROM 4 3/4" TO 1 1/8". 18-GAUGE GALVANIZED STEEL. EXPANDABLE-PLUS STEEL FRAMES - TWO CLOSURE SECTIONS AVAILABLE FOR THROAT EXPANSIONS FROM 4 1/2" TO 6 3/4" AND 6 1/4" TO 4". 20-GAUGE GALVANIZED STEEL. ALL FRAMES REINFORCED AT HINGES AND STRIKE, PREPPED FOR 4" X4" HINGES. FIRE-RATED COMPRESSION WEATHERSTRIP. ALL FRAMES CARRY A CERTIFIED SEQUENTIALLY NUMBERED LABEL AS PER ASTM E-152.

FIRE-RATING PERFORMANCE STANDARDS: SINCE FIRE AND BUILDING CODES VARY THROUGHOUT THE COUNTRY, THE CODES OF LOCAL AUTHORITIES SHALL HAVE JURISDICTION AND MUST BE CONFORMED TO. CONSULT ASTM E-152 FOR FURTHER INFORMATION ON TESTING PROCEDURES AND STANDARDS AND THEIR MEANING. MODIFICATION OF THE PRODUCTS DESCRIBED IN THIS BROCHURE WHICH CARRY THE B-LABEL FIRE RATING (DOORS AND FRAMES) MAY VOID THE B-LABEL FIRE RATING.

90-MINUTE B-LABEL STEEL DOOR				
DIMENSIONAL DATA - 7'-0" DOOR AND FRAME				
	SIZE	ACTUAL UNIT SIZE	ROUGH OPENING	
EXPANDABLE	2/6	34 9/16" X 86 1/4"	32 9/16" X 85 1/8"	
STEEL FRAME	2/6	36 9/16" X 86 1/4"	34 9/16" X 85 1/8"	
EXPANDABLE-PLUS	3/0	40 9/16" X 86 1/4"	38 9/16" X 85 1/8"	
STEEL FRAME	2/6	35 9/16" X 86 1/2"	31 9/16" X 85 1/4"	
	2/8	35 9/16" X 86 1/2"	33 9/16" X 85 1/4"	
	3/0	39 9/16" X 86 1/2"	37 9/16" X 85 1/4"	

PRESCRIPTIVE 20 MINUTE DOOR

FIBER-CLASSIC DOOR SPECIFICATIONS

DOORS 2'8" AND 3'0" X 6'8" AND 7'0". DOOR PANELS WITH FORMED EDGES LOCK INTO WOOD STILES AND RAILS AND ARE BOUNDED BY A FOAMED-IN-PLACE POLYURETHANE CORE. ENTIRE UNIT IS READY TO ACCEPT FINISH OR STAIN.

SYSTEM: 4 1/8" JAMBS OR 6 3/4" JAMBS WHICH INTERLOCK INTO THE HEAD AND SILL. SILL COMBINED WITH SELF-SEALING SILL AND DOOR BOTTOM COMPLETES THE ENTRANCE SEALS. ARCTIC WEATHERSTRIP MECHANICALLY FASTENED IN FRAME ON HINGE, LOCK AND HEAD. NEITHER ARE NEEDED ON INTERIOR APPLICATIONS.

20-MINUTE FIBER-CLASSIC FIRE DOOR				
DIMENSIONAL DATA - 7'-0" DOOR AND WOOD EDGE ONLY				
ACTUAL DOOR SIZE				
2/6	30" X 83 3/16"			
2/8	32" X 83 3/16"			
3/0	36" X 83 3/16"			
20-MINUTE FIBER-CLASSIC AND STEEL DOORS				
DIMENSIONAL DATA - 7'-0" DOOR AND FRAME				
	SIZE	ACTUAL UNIT SIZE	ROUGH OPENING	
INSWING	2/6	31 1/8" X 86"	32 1/8" X 86 1/2"	
	2/8	33 1/8" X 86"	34 1/8" X 86 1/2"	
	3/0	37 1/8" X 86"	38 1/8" X 86 1/2"	
OUTSWING	2/6	31 1/4" X 84 1/2"	32 1/8" X 85"	
	2/8	33 1/4" X 84 1/2"	34 1/8" X 85"	
	3/0	37 1/4" X 84 1/2"	38 1/8" X 85"	

FOR MORE INFORMATION, CALL US TODAY

IF YOU NEED TO KNOW MORE ABOUT OUR FIBER-CLASSIC OR STEEL FIRE RATED DOORS, CALL 1-419-537-1431. OR WRITE, THERMA-TRU CORP., 2806 NORTH REYNOLDS ROAD, TOLEDO, OHIO 43615

6 GARAGE DOOR RATING

- ASK (PARTYWALL) REPAIRS-
- PAPER TEARS AND CURLS, USE PROFORM QUICK SET OVER THE AREA TO SMOOTH OUT AND FLATTEN SURFACE. FILL GAPS (1/4") AND HOLES.
 - FOR PATCH AREAS, FILL VOIDS WITH QUICK SET. APPLY 1" LINER RIPS OR 1/2" TYPE C OVER PATCH. PATCH AREAS TO EXTEND 3" BEYOND CUTS AND ALL DIRECTIONS, AND MUST EXTEND TO STUD, WHERE THE PATCH BOARD WILL BE SCREEN-ATTACHED INTO STUD.

COMMON WALLS AND WALLS SUPPORTING PROTECTED FLOOR/CEILING ABOVE

One hour rated interior bearing wall - (1) layer 5/8" type "x" gypsum wall board on each side of 2x4 studs at 16" o.c. Wall board nailed 1" o.c. w/ 6d - 1 7/8" long cement coated nails.

PER: U305 (1-Hour)

GARAGE CEILING

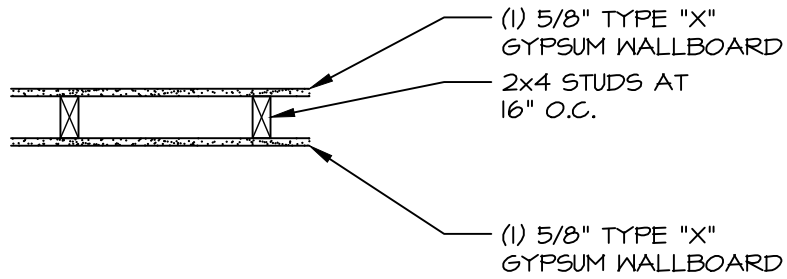
PER: 6A FILE NO. FC 5406

STEEL BEAM

PER: 6A FILE NO. FC 5406

1-HOUR RATED GARAGE SEPARATION (IF REQUIRED PER LOCAL CODES)

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



FLOOR SYSTEM OR TRUSSES ABOVE

(2) LAYERS 5/8" TYPE "X" GYPSUM BD. BASE LAYER FASTENED WITH 1 1/4" TYPE W OR S DRYWALL SCREWS AT 12" O.C. AND FACE LAYER FASTENED WITH 1 7/8" TYPE W OR S DRYWALL SCREWS AT 12" O.C. BASE AND FACE LAYER JOINTS SHALL BE OFFSET 24"

FLOOR SYSTEM ABOVE

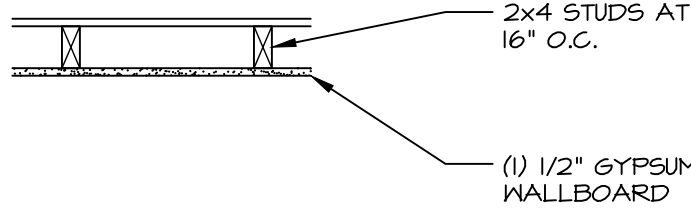
(2) LAYERS 5/8" TYPE "X" GYPSUM BD. BEAM BOX FRAMING STEEL BEAM

COMMON WALLS AND WALLS SUPPORTING PROTECTED FLOOR/CEILING ABOVE

GARAGE CEILING WITH FULL OR PARTIAL CONDITIONED SPACE ABOVE

GARAGE CEILING WITH NO CONDITIONED SPACE ABOVE

STEEL BEAM



FLOOR SYSTEM ABOVE (1) LAYER 5/8" TYPE "X" GYPSUM BD.

FLOOR SYSTEM ABOVE (1) LAYER 1/2" GYPSUM BD.

FLOOR SYSTEM ABOVE

(1) LAYER 5/8" TYPE "X" GYPSUM BD. (1) LAYERS 5/8" TYPE "X" GYPSUM BD. BEAM BOX FRAMING STEEL BEAM

MODEL CODE PRESCRIPTIVE GARAGE SEPARATION

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

NOTE: 5'-0" FIRE SEPARATION DISTANCE (FSD) SHOWN. REQUIRED (FSD) MAY BE REDUCED DUE TO FIRE SUPPRESSION SYSTEM OR LOCAL CODE AMENDMENT.

NOTE: FOR ALL FLASHING AND MOISTURE MANAGEMENT INFORMATION REFERENCE THE FOLLOWING:
F-1 - SIDING VENEER & GENERAL
F-2 - BRICK VENEER
F-3 - STONE VENEER

As directed by the North Carolina Board of Architecture and Registered Interior Designers, architectural seals are not required for – and should not be placed by NVR on – these plans and specifications.

REV. NO.	DATE	REMARKS
1	10/25/16	GUE - REMEMBERED DETAILS
2	7/27/17	ELH - SPLIT GARAGE GUE DETAILS INTO TWO SEP. DETAILS ON 6A-1b
3	11/29/17	CALB - UPDATED GARAGE CEILING NOTE ON 1 HOUR RATED SEPARATION DETAIL
4	7/26/19	NS - MOISTURE MANAGEMENT REVISION (JOB 15696)

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SHEET NO.	MODEL	SET NO.	VERSION	DRAWN BY	GUE
FA-1b	STANDARD DETAIL				
	DRAWING TITLE				
	FIRE SEPARATION ASSEMBLY DETAILS				
	OPTION DESCRIPTION				

UL DESIGN #U336

USG BUILDING SYSTEMS

TWO HOUR FIRE-RATED WALL DESCRIPTIONS
ASH 1000 GYPSUM WALLBOARD, METAL H STUDS AT UNIT

SEPARATION WALL: (2) LAYERS 1" THICK, 24" WIDE, PROPRIETARY TYPE SLX GYPSUM LINER PANELS INSERTED BETWEEN NO. 25 MSG GALV. STEEL "H" STUDS SPACED 24" O.C. STEEL STUDS SHALL BE 2" DEPTH WITH 1-3/8" FLANGE WIDTH, HORIZONTAL RUNNERS SHALL BE INSTALLED AT FLOOR, SIDE WALL, AND CEILING LOCATIONS AND CONSIST OF 2" WIDE NO. 25 MSG GALV. STEEL CHANNELS WITH 1" LEGS SECURED WITH SUITABLE FASTENERS SPACED 24" O.C.

PROTECTED WALL: (BEARING OR NONBEARING) A 3/4" MINIMUM AIR SPACE MUST BE MAINTAINED BETWEEN STEEL COMPONENTS AND ADJACENT WOOD FRAMING. WOOD FRAMING SHALL CONSIST OF NOMINAL 2" X 4" STUDS WITH MAX. SPACING 24" O.C. COVERED WITH MIN. 1/2" THICK GYPSUM WALLBOARD (CLASSIFIED OR UNCLASSIFIED) SECURED BY 1-1/4" STEEL DRYWALL NAILS SPACED 8" O.C. JOINTS AND FASTENERS COVERED WITH PAPER TAPE AND JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND.

ATTACHMENT CLIPS: BREAKAWAY HEAT SOFTENING ALUMINUM ALLOY CLIPS (063" THICK ALUMINUM ANGLE, 2" WIDE WITH 2" AND 2-1/4" LEGS) SHALL BE SECURED INTO BOTH SIDES OF EACH VERTICAL METAL STUD WITH (2) 3/8" TYPE 5 SCREWS TO "H" STUDS AND (1) 1-1/4" TYPE W SCREWS TO WOOD FRAMING THROUGH PROVIDED HOLES IN THE CLIP. WHERE NECESSARY, WOOD FRAMING SHALL BE CROSS-BRACED AT MID-HEIGHT FOR CLIP ATTACHMENT. VERTICAL CLIP PLACEMENT BETWEEN "H" STUDS AND WOOD FRAMING SHALL BE AS FOLLOWS:
(A). SEPARATION WALLS UP TO 23'-0" HIGH - CLIPS SHALL BE SPACED A MAX. 10' O.C. VERTICALLY.
(B). SEPARATION WALLS UP TO 44'-0" HIGH - CLIPS SHALL BE SPACED AS DESCRIBED IN (A) FOR THE TOP 24' AND AT A MAX OF 5' O.C. VERTICALLY FOR THE REMAINING WALL BELOW.
(C). SEPARATION WALLS UP TO 66'-0" HIGH - CLIPS SHALL BE SPACED AS DESCRIBED IN (A) FOR THE TOP 24', AS DESCRIBED IN (B) FOR THE NEXT 20' BELOW, AND AT A MAX OF 3' O.C. VERTICALLY FOR THE REMAINING WALL BELOW.
SOUND TESTING: SOUND TESTING BASED ON 2" X 4" STUD WALL FACED WITH 1/2" REGULAR GYPSUM WALLBOARD ON EACH SIDE OF SEPARATION WALL ASSEMBLY FOR A MINIMUM 11-1/2" TOTAL THICKNESS. STUD CAVITIES ARE INSULATED WITH 3-1/2" GLASS FIBER BATT ON (1) OR (2) SIDES. SEE DESIGN DATA BELOW FOR STC RATINGS. CAULKING AND SEALANTS: INTENDED FOR USE AS AN AIR BARRIER - NOT EVALUATED AS FIREBLOCKING - A BEAD OF SEALANT APPLIED AROUND THE PARTITION PERIMETER IN THE 3/4" IN. AIR SPACE BETWEEN PROTECTED WALL AND SEPARATION WALL TO CREATE AN AIR BARRIER. GREAT STUFF GAPS AND CRACKS, GREAT STUFF PRO GAPS AND CRACKS

DESIGN DATA

THICKNESS (FIRE): 3-1/2" MINIMUM
THICKNESS (SOUND): 11-1/2" MINIMUM
HEIGHT: 66'-0" MAXIMUM
APPROXIMATE HEIGHT: 4 PSF
WALL RATING: 2 HOUR
FINISH RATING: 120 MIN.

REFERENCED DOCUMENTS

- (1) UL DESIGN NO. U336, BXUVJ336, 10-27-2010
- (2) GA-600-2012 FIRE RESISTANCE DESIGN MANUAL, GA FILE NO. ASH 1000
- (3) USG AREA SEPARATION WALL SYSTEMS BROCHURE - SA925/REV. 4-10

UL DESIGN #U347

NATIONAL GYPSUM

TWO HOUR FIRE-RATED WALL DESCRIPTIONS
ASH 0949 GYPSUM WALLBOARD, METAL H STUDS AT UNIT

SEPARATION WALL: (2) LAYERS 1" THICK, 24" WIDE, PROPRIETARY TYPE FSN, FSN-B, OR FSN-T GYPSUM LINER PANELS INSERTED BETWEEN NO. 25 MSG GALV. STEEL "H" STUDS SPACED 24" O.C. STEEL STUDS SHALL BE 2" DEPTH WITH 1-3/8" FLANGE WIDTH, HORIZONTAL RUNNERS SHALL BE INSTALLED AT FLOOR, SIDE WALL, AND CEILING LOCATIONS AND CONSIST OF 2" WIDE NO. 25 MSG GALV. STEEL CHANNELS WITH 1" LEGS SECURED WITH SUITABLE FASTENERS SPACED 24" O.C.

PROTECTED WALL: (BEARING OR NONBEARING) A 3/4" MINIMUM AIR SPACE MUST BE MAINTAINED BETWEEN STEEL COMPONENTS AND ADJACENT WOOD FRAMING. WOOD FRAMING SHALL CONSIST OF NOMINAL 2" X 4" STUDS WITH MAX. SPACING 24" O.C. COVERED WITH MIN. 1/2" THICK GYPSUM WALLBOARD (CLASSIFIED OR UNCLASSIFIED) SECURED BY 1-1/4" STEEL DRYWALL NAILS SPACED 12" O.C. ALTERNATIVELY, (BEARING OR NONBEARING) MINIMUM 5/8" THICK, MINIMUM 6" WIDE BATTEN STRIPS, APPLIED ON BOTH SIDES OF STEEL STUDS AND HORIZONTAL BACK TO BACK STEEL TRACK, MINIMUM 5/8" THICK, MINIMUM 3" WIDE BATTEN STRIPS APPLIED TO BOTH SIDES OF SINGLE STEEL TRACK AT PERIMETER OF ASSEMBLY. BATTEN STRIPS SECURED TO STUDS WITH 1-1/4" LONG TYPE 5 STEEL SCREWS SPACED 12" O.C. BATTEN JOINTS SHALL BE BUTTED TIGHT TO FORM A CLOSED JOINT. AS AN OPTION, ENTIRE SHEET OF GYPSUM BOARD MAY BE USED IN LIEU OF THE BATTENS. NOTE: SEE FULL U347 DESIGN FOR ALT. WOOD FRAMING COVERINGS. OPTIONAL: JOINTS COVERED WITH PAPER TAPE AND JOINT COMPOUND. SCREW HEADS COVERED WITH JOINT COMPOUND.

ATTACHMENT CLIPS: BREAKAWAY HEAT SOFTENING ALUMINUM ALLOY CLIPS (044" THICK ALUMINUM ANGLE, 2" WIDE WITH 2" AND 2-1/4" LEGS) SHALL BE SECURED INTO BOTH SIDES OF EACH VERTICAL METAL STUD WITH (2) 3/8" TYPE 5 SCREWS TO "H" STUDS AND (1) 1-1/4" TYPE W SCREWS TO WOOD FRAMING THROUGH PROVIDED HOLES IN THE CLIP. WHERE NECESSARY, WOOD FRAMING SHALL BE CROSS-BRACED AT MID-HEIGHT FOR CLIP ATTACHMENT. VERTICAL CLIP PLACEMENT BETWEEN "H" STUDS AND WOOD FRAMING SHALL BE AS FOLLOWS:
(A). SEPARATION WALLS UP TO 23'-0" HIGH - CLIPS SHALL BE SPACED A MAX. 10' O.C. VERTICALLY.
(B). SEPARATION WALLS UP TO 54'-0" HIGH - CLIPS SHALL BE SPACED AS DESCRIBED IN (A) FOR THE TOP 24' AND AT A MAX OF 5' O.C. VERTICALLY FOR THE REMAINING WALL BELOW.
(C). SEPARATION WALLS UP TO 66'-0" HIGH - CLIPS SHALL BE SPACED AS DESCRIBED IN (A) FOR THE TOP 24', AS DESCRIBED IN (B) FOR THE NEXT 30' BELOW, AND AT A MAX OF 3' O.C. VERTICALLY FOR THE REMAINING WALL BELOW.
SOUND TESTING: SOUND TESTING BASED ON 2" X 4" STUD WALL FACED WITH 1/2" REGULAR GYPSUM WALLBOARD ON EACH SIDE OF SEPARATION WALL ASSEMBLY FOR A MINIMUM 11-1/2" TOTAL THICKNESS. STUD CAVITIES ARE INSULATED WITH 3-1/2" GLASS FIBER ON (1) OR (2) SIDES. SEE DESIGN DATA BELOW FOR STC RATINGS. NOTE: SEE FULL U347 DESIGN FOR ADDITIONAL STC RATING CONFIGURATIONS. CAULKING AND SEALANTS: INTENDED FOR USE AS AN AIR BARRIER - NOT EVALUATED AS FIREBLOCKING - A BEAD OF SEALANT APPLIED AROUND THE PARTITION PERIMETER IN THE 3/4" IN. AIR SPACE BETWEEN PROTECTED WALL AND SEPARATION WALL TO CREATE AN AIR BARRIER. GREAT STUFF GAPS AND CRACKS, GREAT STUFF PRO GAPS AND CRACKS

DESIGN DATA

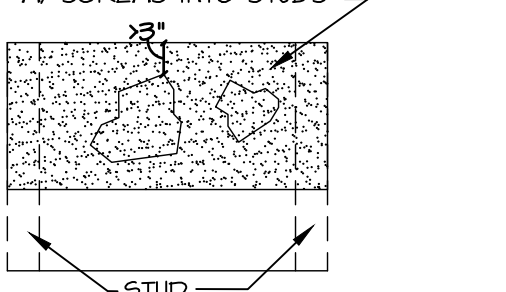
THICKNESS (FIRE): 3-1/2" MINIMUM
THICKNESS (SOUND): 11-1/2" MINIMUM
HEIGHT: 66'-0" MAXIMUM
APPROXIMATE HEIGHT: 4 PSF
WALL RATING: 2 HOUR
FINISH RATING: 120 MIN.

REFERENCED DOCUMENTS

- (1) UL DESIGN NO. U347, BXUVJ347, 5-30-2022
- (2) GA-600-2018 FIRE RESISTANCE DESIGN MANUAL, GA FILE NO. ASH 0949
- (3) NATIONAL GYPSUM CONSTRUCTION GUIDE - 14TH EDITION, REV. 1/17

PARTYWALL DRYWALL (ASH REPAIR)

1. PAPER TEARS AND CURLS: USE PROFORM QUICKSET TO SMOOTH OUT AND FLATTEN SURFACES.
2. PATCHING: FILL VOIDS WITH QUICKSET. INSTALL STUD TO STUD WITH 1" LINER RIPS OR 1/2" TYPE C DRYWALL. 3" BEYOND CUT AREA. W SCREWS INTO STUDS.



15 PARTYWALL REPAIR

FA-1d SCALE: NOT TO SCALE

UL DESIGN #U373

GEORGIA PACIFIC

TWO HOUR FIRE-RATED WALL DESCRIPTIONS
ASH 1002 GYPSUM WALLBOARD, METAL H STUDS AT UNIT

SEPARATION WALL: (2) LAYERS 1" THICK, 24" WIDE, SOLID TYPE M2TECH OR GLASSROC SHAFTLINER GYPSUM PANELS INSERTED BETWEEN NO. 25 MSG GALV. STEEL "H" STUDS SPACED 24" O.C. STEEL STUDS SHALL BE 2" DEPTH WITH 1-3/8" FLANGE WIDTH, HORIZONTAL RUNNERS SHALL BE INSTALLED AT FLOOR, SIDE WALL, AND CEILING LOCATIONS AND CONSIST OF 2" WIDE NO. 25 MSG GALV. STEEL CHANNELS WITH 1" LEGS SECURED WITH SUITABLE FASTENERS SPACED 24" O.C.

PROTECTED WALL: (BEARING OR NONBEARING) A 3/4" MINIMUM AIR SPACE MUST BE MAINTAINED BETWEEN STEEL COMPONENTS AND ADJACENT WOOD FRAMING. WOOD FRAMING SHALL CONSIST OF NOMINAL 2" X 4" STUDS WITH MAX. SPACING 24" O.C. COVERED WITH MIN. 1/2" THICK GYPSUM WALLBOARD (CLASSIFIED OR UNCLASSIFIED) SECURED BY 1-1/4" STEEL DRYWALL NAILS SPACED 8" O.C. JOINTS AND FASTENERS FINISHED WITH CERTAINTED FINISHING SYSTEM OR EQUIVALENT.

ATTACHMENT CLIPS: BREAKAWAY HEAT SOFTENING ALUMINUM ALLOY CLIPS (063" THICK ALUMINUM ANGLE, 2" WIDE WITH 2" AND 2-1/4" LEGS) SHALL BE SECURED INTO BOTH SIDES OF EACH VERTICAL METAL STUD WITH (2) 3/8" TYPE 5 SCREWS TO "H" STUDS AND (1) 1-1/4" TYPE W SCREWS TO WOOD FRAMING THROUGH PROVIDED HOLES IN THE CLIP. WHERE NECESSARY, WOOD FRAMING SHALL BE CROSS-BRACED AT MID-HEIGHT FOR CLIP ATTACHMENT. VERTICAL CLIP PLACEMENT BETWEEN "H" STUDS AND WOOD FRAMING SHALL BE AS FOLLOWS:
(A). SEPARATION WALLS UP TO 23'-0" HIGH - CLIPS SHALL BE SPACED A MAX. 10' O.C. VERTICALLY.
(B). SEPARATION WALLS UP TO 44'-0" HIGH - CLIPS SHALL BE SPACED AS DESCRIBED IN (A) FOR THE TOP 24' AND AT A MAX OF 5' O.C. VERTICALLY FOR THE REMAINING WALL BELOW.
SOUND TESTING: SOUND TESTING BASED ON 2" X 4" STUD WALL FACED WITH 1/2" REGULAR GYPSUM WALLBOARD ON EACH SIDE OF SEPARATION WALL ASSEMBLY FOR A MINIMUM 11-1/2" TOTAL THICKNESS. STUD CAVITIES ARE INSULATED WITH 3-1/2" GLASS FIBER ON (1) OR (2) SIDES. SEE DESIGN DATA BELOW FOR STC RATINGS. CAULKING AND SEALANTS: INTENDED FOR USE AS AN AIR BARRIER - NOT EVALUATED AS FIREBLOCKING - A BEAD OF SEALANT APPLIED AROUND THE PARTITION PERIMETER IN THE 3/4" IN. AIR SPACE BETWEEN PROTECTED WALL AND SEPARATION WALL TO CREATE AN AIR BARRIER. GREAT STUFF GAPS AND CRACKS, GREAT STUFF PRO GAPS AND CRACKS

DESIGN DATA

THICKNESS (FIRE): 3-1/2" MINIMUM
THICKNESS (SOUND): 11-1/2" MINIMUM
HEIGHT: 66'-0" MAXIMUM
APPROXIMATE HEIGHT: 4 PSF
WALL RATING: 2 HOUR
FINISH RATING: 120 MIN.

REFERENCED DOCUMENTS

- (1) UL DESIGN NO. U373, BXUVJ373, 8-19-2008
- (2) GA-600-2018 FIRE RESISTANCE DESIGN MANUAL, GA FILE NO. ASH 1002

UL DESIGN #U366

CERTAINTED

TWO HOUR FIRE-RATED WALL DESCRIPTIONS
ASH 0949 GYPSUM WALLBOARD, METAL H STUDS AT UNIT

SEPARATION WALL: (2) LAYERS 1" THICK, 24" WIDE, SOLID TYPE M2TECH OR GLASSROC SHAFTLINER GYPSUM PANELS INSERTED BETWEEN NO. 25 MSG GALV. STEEL "H" STUDS SPACED 24" O.C. STEEL STUDS SHALL BE 2" DEPTH WITH 1-3/8" FLANGE WIDTH, HORIZONTAL RUNNERS SHALL BE INSTALLED AT FLOOR, SIDE WALL, AND CEILING LOCATIONS AND CONSIST OF 2" WIDE NO. 25 MSG GALV. STEEL CHANNELS WITH 1" LEGS SECURED WITH SUITABLE FASTENERS SPACED 24" O.C.

PROTECTED WALL: (BEARING OR NONBEARING) A 3/4" MINIMUM AIR SPACE MUST BE MAINTAINED BETWEEN STEEL COMPONENTS AND ADJACENT WOOD FRAMING. WOOD FRAMING SHALL CONSIST OF NOMINAL 2" X 4" STUDS WITH MAX. SPACING 24" O.C. COVERED WITH MIN. 1/2" THICK GYPSUM WALLBOARD (CLASSIFIED OR UNCLASSIFIED) SECURED BY 1-1/4" STEEL DRYWALL NAILS SPACED 8" O.C. JOINTS AND FASTENERS FINISHED WITH CERTAINTED FINISHING SYSTEM OR EQUIVALENT.

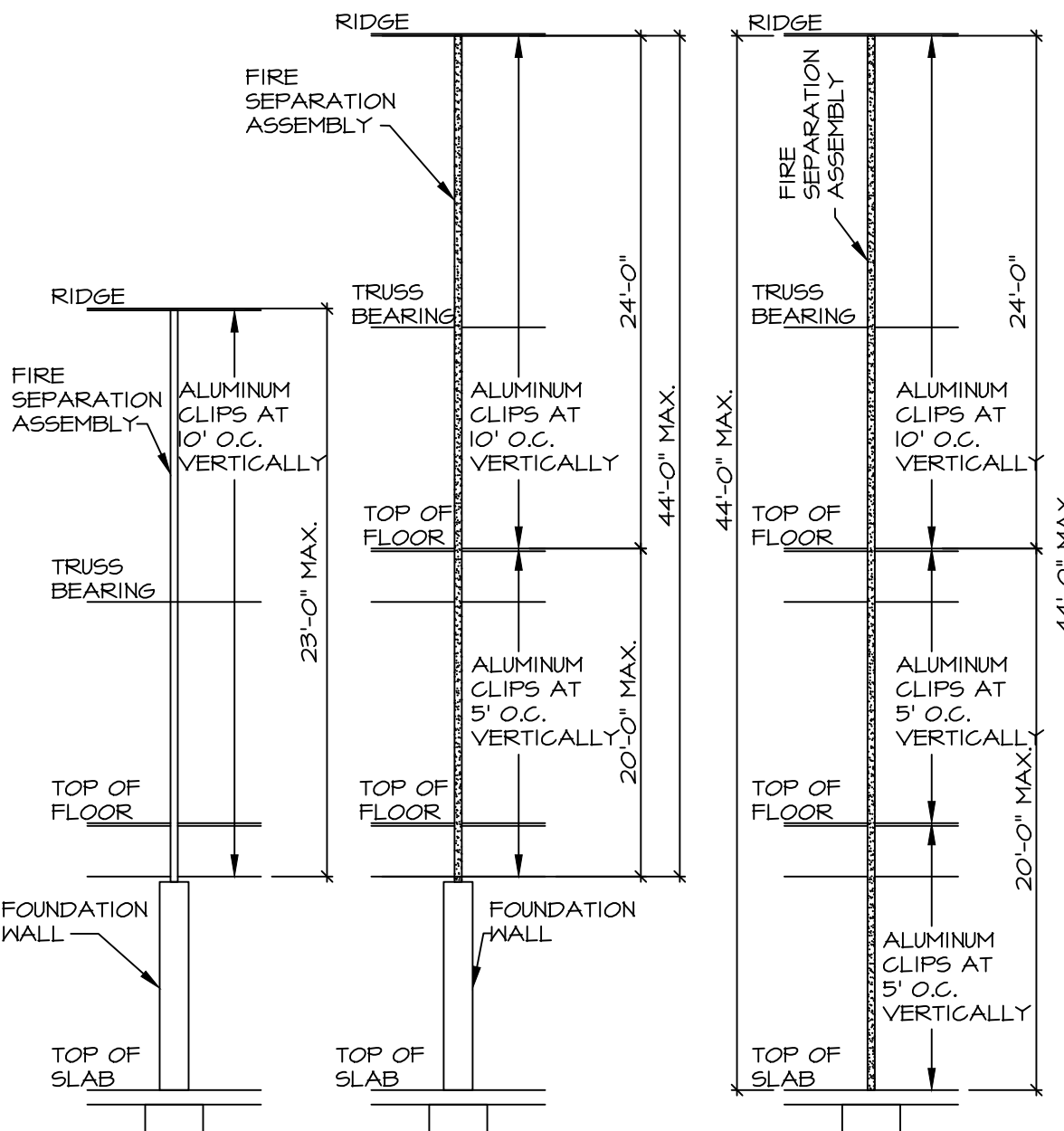
ATTACHMENT CLIPS: BREAKAWAY HEAT SOFTENING ALUMINUM ALLOY CLIPS (063" THICK ALUMINUM ANGLE, 2" WIDE WITH 2" AND 2-1/4" LEGS) SHALL BE SECURED INTO BOTH SIDES OF EACH VERTICAL METAL STUD WITH (2) 3/8" TYPE 5 SCREWS TO "H" STUDS AND (1) 1-1/4" TYPE W SCREWS TO WOOD FRAMING THROUGH PROVIDED HOLES IN THE CLIP. WHERE NECESSARY, WOOD FRAMING SHALL BE CROSS-BRACED AT MID-HEIGHT FOR CLIP ATTACHMENT. VERTICAL CLIP PLACEMENT BETWEEN "H" STUDS AND WOOD FRAMING SHALL BE AS FOLLOWS:
(A). SEPARATION WALLS UP TO 23'-0" HIGH - CLIPS SHALL BE SPACED A MAX. 10' O.C. VERTICALLY.
(B). SEPARATION WALLS UP TO 70'-0" HIGH - CLIPS SHALL BE SPACED AS DESCRIBED IN (A) FOR THE TOP 24' AND AT A MAX OF 5' O.C. VERTICALLY FOR THE REMAINING WALL BELOW.
SOUND TESTING: SOUND TESTING BASED ON 2" X 4" STUD WALL FACED WITH 1/2" REGULAR GYPSUM WALLBOARD ON EACH SIDE OF SEPARATION WALL ASSEMBLY FOR A MINIMUM 11-1/2" TOTAL THICKNESS. STUD CAVITIES ARE INSULATED WITH 3-1/2" GLASS FIBER ON (1) OR (2) SIDES. SEE DESIGN DATA BELOW FOR STC RATINGS. CAULKING AND SEALANTS: INTENDED FOR USE AS AN AIR BARRIER - NOT EVALUATED AS FIREBLOCKING - A BEAD OF SEALANT APPLIED AROUND THE PARTITION PERIMETER IN THE 3/4" IN. AIR SPACE BETWEEN PROTECTED WALL AND SEPARATION WALL TO CREATE AN AIR BARRIER. GREAT STUFF GAPS AND CRACKS, GREAT STUFF PRO GAPS AND CRACKS

DESIGN DATA

THICKNESS (FIRE): 3-1/2" MINIMUM
THICKNESS (SOUND): 11-1/2" MINIMUM
HEIGHT: 70'-0" MAXIMUM
APPROXIMATE HEIGHT: 4 PSF
WALL RATING: 2 HOUR
FINISH RATING: 120 MIN.

REFERENCED DOCUMENTS

- (1) UL DESIGN NO. U366, BXUVJ366, 12-4-2020
- (2) GA-600-2018 FIRE RESISTANCE DESIGN MANUAL, GA FILE NO. ASH 0949



12 CLIP SPACING DETAIL

FA-1d SCALE: 1/4" = 1'-0"

UL DESIGN #V344

AMERICAN GYPSUM

TWO AND HALF HOUR FIRE-RATED WALL DESCRIPTIONS
GYPSUM WALLBOARD, METAL H STUDS AT UNIT

SEPARATION WALL: (4) LAYERS 1/2" THICK, 24" WIDE, SOLID TYPE EKCEL GYPSUM BOARDS INSERTED BETWEEN NO. 25 MSG GALV. STEEL "H" STUDS SPACED 48" O.C. STEEL STUDS SHALL BE 2" DEPTH WITH 1-3/8" FLANGE WIDTH, HORIZONTAL RUNNERS SHALL BE INSTALLED AT FLOOR, SIDE WALL, AND CEILING LOCATIONS AND CONSIST OF 2" WIDE NO. 25 MSG GALV. STEEL CHANNELS WITH 1" LEGS SECURED WITH SUITABLE FASTENERS SPACED 24" O.C.

PROTECTED WALL: (BEARING OR NONBEARING) A 3/4" MINIMUM AIR SPACE MUST BE MAINTAINED BETWEEN STEEL COMPONENTS AND ADJACENT WOOD FRAMING. WOOD FRAMING SHALL CONSIST OF NOMINAL 2" X 4" STUDS WITH MAX. SPACING 24" O.C. COVERED WITH MIN. 1/2" THICK GYPSUM WALLBOARD (CLASSIFIED OR UNCLASSIFIED) SECURED BY 1-1/4" STEEL DRYWALL NAILS SPACED 8" O.C. JOINTS AND FASTENERS FINISHED WITH CERTAINTED FINISHING SYSTEM OR EQUIVALENT.

ATTACHMENT CLIPS: BREAKAWAY HEAT SOFTENING ALUMINUM ALLOY CLIPS (063" THICK ALUMINUM ANGLE, 2" WIDE WITH 2" AND 2-1/4" LEGS) SHALL BE SECURED INTO BOTH SIDES OF EACH VERTICAL METAL STUD WITH (2) 3/8" TYPE 5 SCREWS TO "H" STUDS AND (1) 1-1/4" TYPE W SCREWS TO WOOD FRAMING THROUGH PROVIDED HOLES IN THE CLIP. WHERE NECESSARY, WOOD FRAMING SHALL BE CROSS-BRACED AT MID-HEIGHT FOR CLIP ATTACHMENT. VERTICAL CLIP PLACEMENT BETWEEN "H" STUDS AND WOOD FRAMING SHALL BE AS FOLLOWS:
(A). SEPARATION WALLS UP TO 23'-0" HIGH - CLIPS SHALL BE SPACED A MAX. 10' O.C. VERTICALLY.
(B). SEPARATION WALLS UP TO 44'-0" HIGH - CLIPS SHALL BE SPACED AS DESCRIBED IN (A) FOR THE TOP 24' AND AT A MAX OF 5' O.C. VERTICALLY FOR THE REMAINING WALL BELOW.
(C). SEPARATION WALLS UP TO 66'-0" HIGH - CLIPS SHALL BE SPACED AS DESCRIBED IN (A) FOR THE TOP 24', AS DESCRIBED IN (B) FOR THE NEXT 20' BELOW, AND AT A MAX OF 40' O.C. VERTICALLY FOR THE REMAINING WALL BELOW.
SOUND TESTING: SOUND TESTING BASED ON 2" X 4" STUD WALL FACED WITH 1/2" REGULAR GYPSUM WALLBOARD ON EACH SIDE OF SEPARATION WALL ASSEMBLY FOR A MINIMUM 11-1/2" TOTAL THICKNESS. STUD CAVITIES ARE INSULATED WITH 3-1/2" GLASS FIBER ON (1) OR (2) SIDES. SEE DESIGN DATA BELOW FOR STC RATINGS. CAULKING AND SEALANTS: INTENDED FOR USE AS AN AIR BARRIER - NOT EVALUATED AS FIREBLOCKING - A BEAD OF SEALANT APPLIED AROUND THE PARTITION PERIMETER IN THE 3/4" IN. AIR SPACE BETWEEN PROTECTED WALL AND SEPARATION WALL TO CREATE AN AIR BARRIER. GREAT STUFF GAPS AND CRACKS, GREAT STUFF PRO GAPS AND CRACKS

DESIGN DATA

THICKNESS (FIRE): 3-1/2" MINIMUM
THICKNESS (SOUND): 11-1/2" MINIMUM
HEIGHT: 66'-0" MAXIMUM
APPROXIMATE HEIGHT: 4 PSF
WALL RATING: 2 1/2 HOUR
FINISH RATING: 150 MIN.

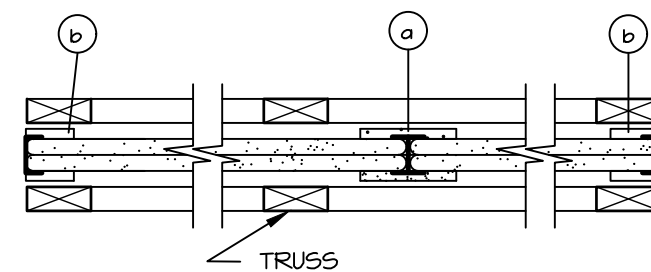
REFERENCED DOCUMENTS

- (1) UL DESIGN NO. V344, BXUVJ344, 02-04-2022

GYPSUM BATTEN STRIPS
a - MIN. 5/8" THICK, MIN. 6" WIDE, APPLIED ON BOTH SIDES
b - MIN. 5/8" THICK, MIN. 3" WIDE, APPLIED ON BOTH SIDES

6x6 STRIPS SECURED TO STUDS OR HORIZONTAL CHANNEL WITH 1-1/4" LONG TYPE 5 STEEL SCREWS

WHEN 5/8" THICK BATTEN STRIPS ARE APPLIED OVER THE H-STUDS OR HORIZONTAL CHANNEL, THE BREAKAWAY HEAT SOFTENING ALUMINUM ALLOY CLIPS SHALL BE SECURED INTO BOTH SIDES OF EACH VERTICAL METAL STUD WITH (2) 1" TYPE 5 SCREWS TO "H" STUDS OR HORIZONTAL CHANNEL.

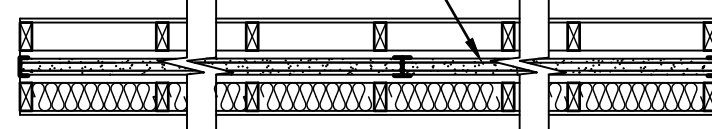


14 PLAN VIEW

FA-1d SCALE: 6" = 1'-0" BATTEN STRIPS

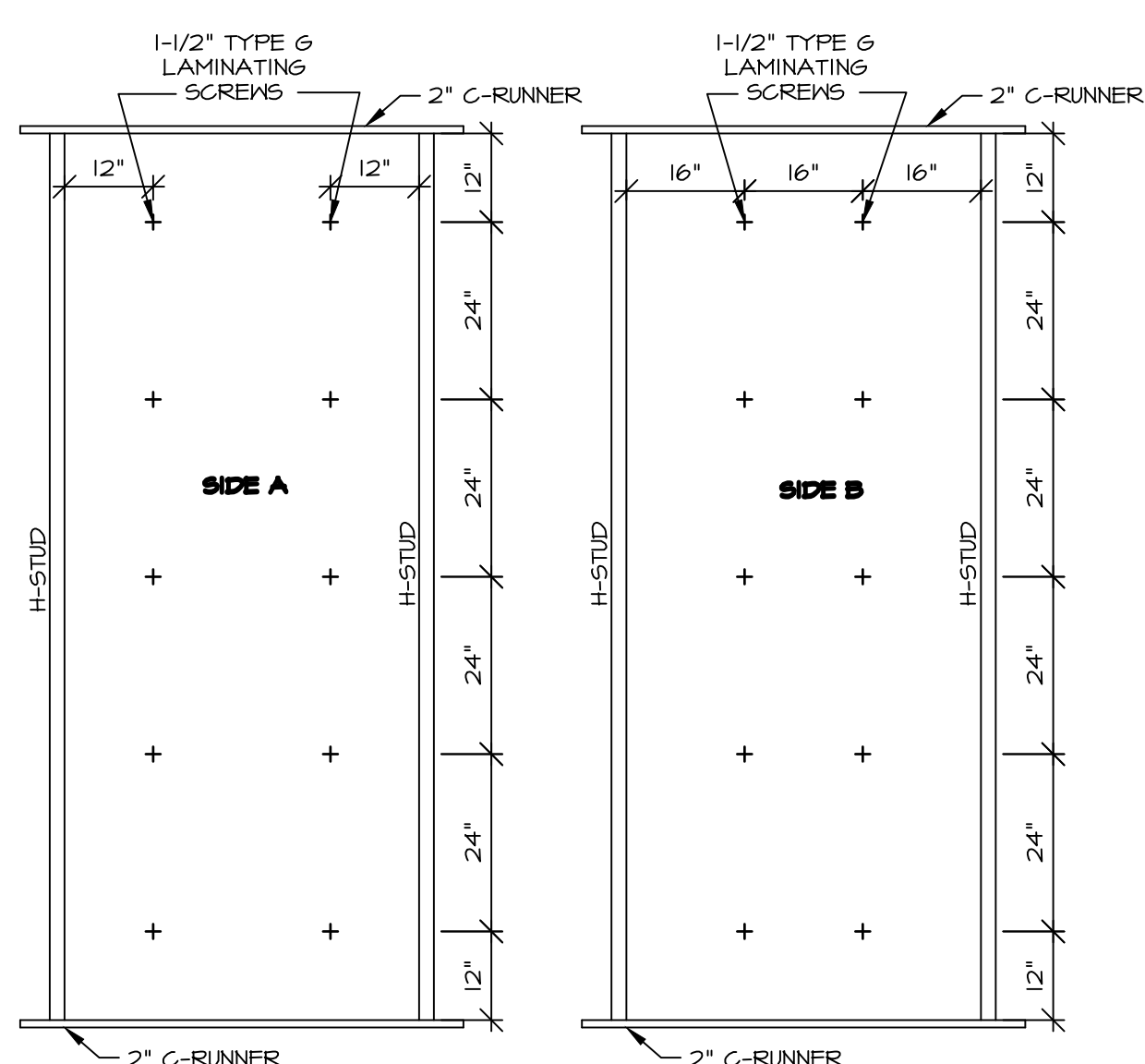
FIRE SEPARATION ASSEMBLY

1" CORE BOARD BETWEEN 1/2" TYPE X OR TYPE C GYPSUM LINER PANELS ON EACH SIDE SET BETWEEN NO. 25 MSG GALV. STEEL H-STUDS AT 24" O.C. - MIN. 3/4" AIRSPACE BOTH SIDES SEPARATING LINER PANELS FROM ANY ADJACENT COMBUSTIBLE CONSTRUCTION



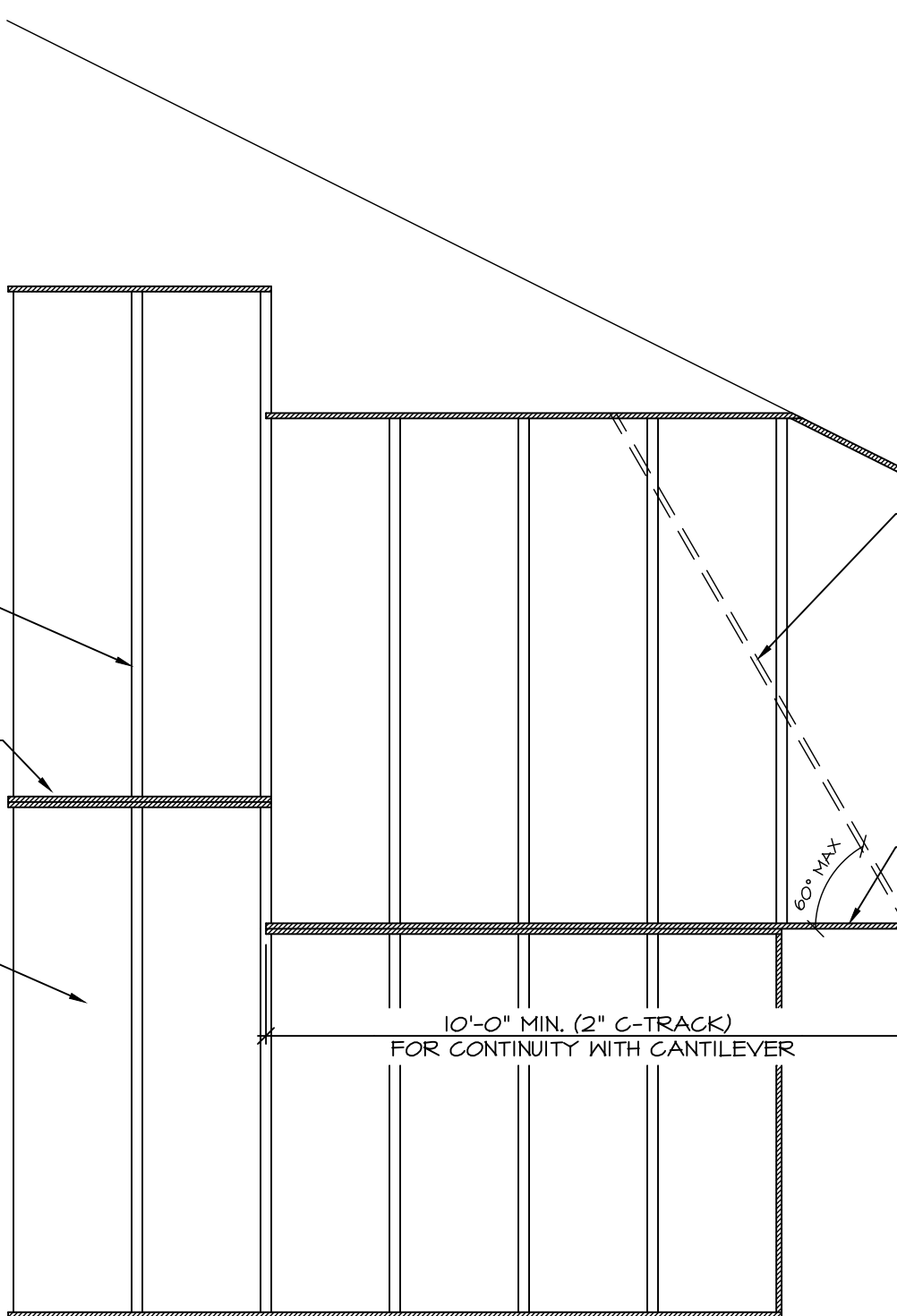
17 ALTERNATE CORE WALL ASSEMBLY

FA-1d SCALE: 1/2" = 1'-0" PLAN VIEW



LAMINATING SCREW DETAIL

FA-1d SCALE: 3/4" = 1'-0" UL V344 ONLY



DIAGONAL STEEL STRAP (MB43C) APPLIED TO EACH SIDE OF THE WALL, ATTACHED WITH (3/8" TYPE S PAN-HEAD SCREWS) FROM THE BOTTOM CORNER OF EACH LOWER CANTILEVER AT THE C-TRACK WITH (4) SCREWS TO THE TOP OF THE PANEL AT THE C-TRACK WITH (2) SCREWS WITH AT EACH H-STUD. THE STRAP TO NOT EXCEED MORE THAN A 60° ANGLE (REQUIRED WITH 2' UP TO 3' CANTILEVER ONLY).

STEP DOWN THE SHAFTLINER TO ALIGN WITH THE BOTTOM OF THE CANTILEVER FLOOR FRAMING.

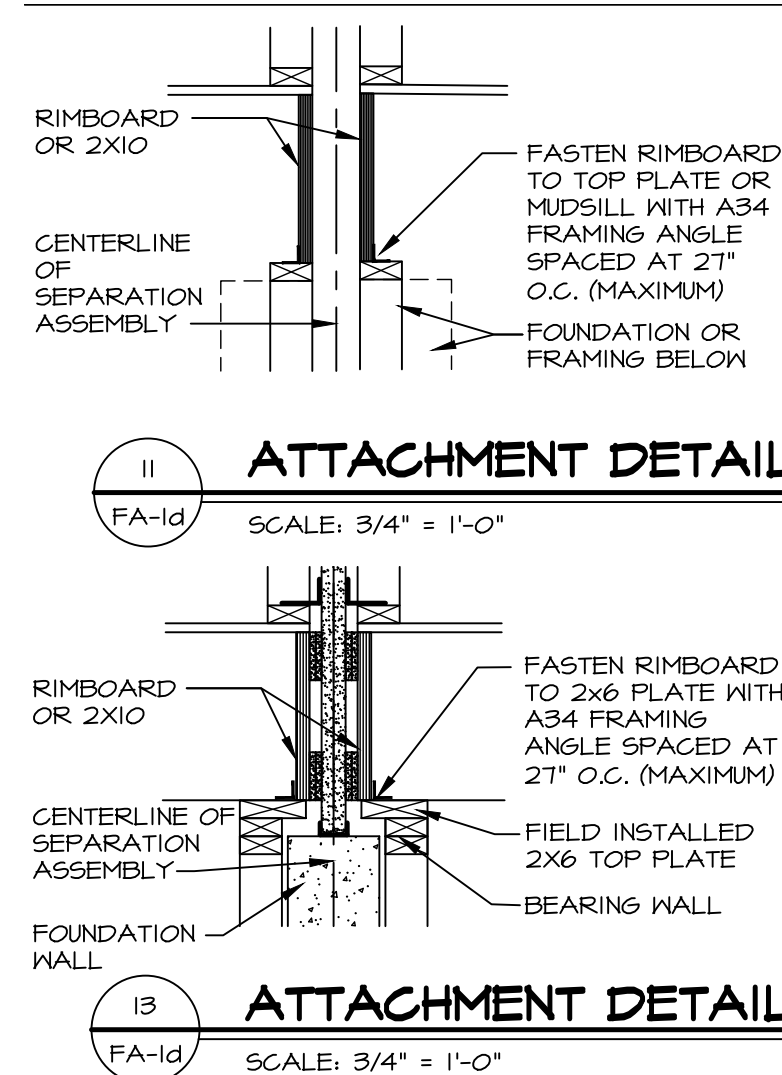
NOTE: THE MAXIMUM LENGTH FOR THE PARTY WALL ASSEMBLY THAT CAN BE CANTILEVERED IS 3'-0".

16 CANTILEVER STRAP

FA-1d SCALE: 3/8" = 1'-0"

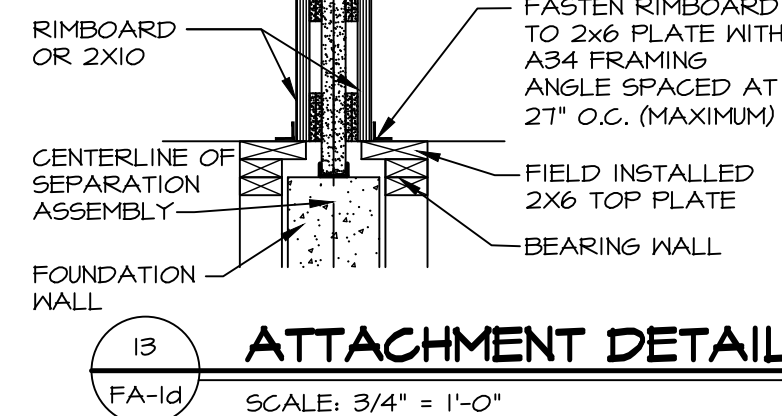
NOTES:

- THIS DETAIL APPLIES TO #U336, #U341, #U366, #U373
- THIS SUBSTITUTION FOLLOWS T.Z. HARMATHY'S TEN RULES OF FIRE RESISTANCE, SPECIFICALLY RULE#1, RULE#1, THE "THERMAL" FIRE ENDURANCE OF A CONSTRUCTION CONSISTING OF A NUMBER OF PARALLEL LAYERS IS GREATER THAN THE SUM OF THE "THERMAL" FIRE ENDURANCE CHARACTERISTICS OF THE INDIVIDUAL LAYERS WHEN EXPOSED SEPARATELY TO FIRE.
- ALL OTHER ELEMENTS OF THESE ASSEMBLIES SHALL BE CONSTRUCTED AS IN ACCORDANCE WITH THE STANDARD FIRE ASSEMBLY WALL SECTION.



ATTACHMENT DETAIL

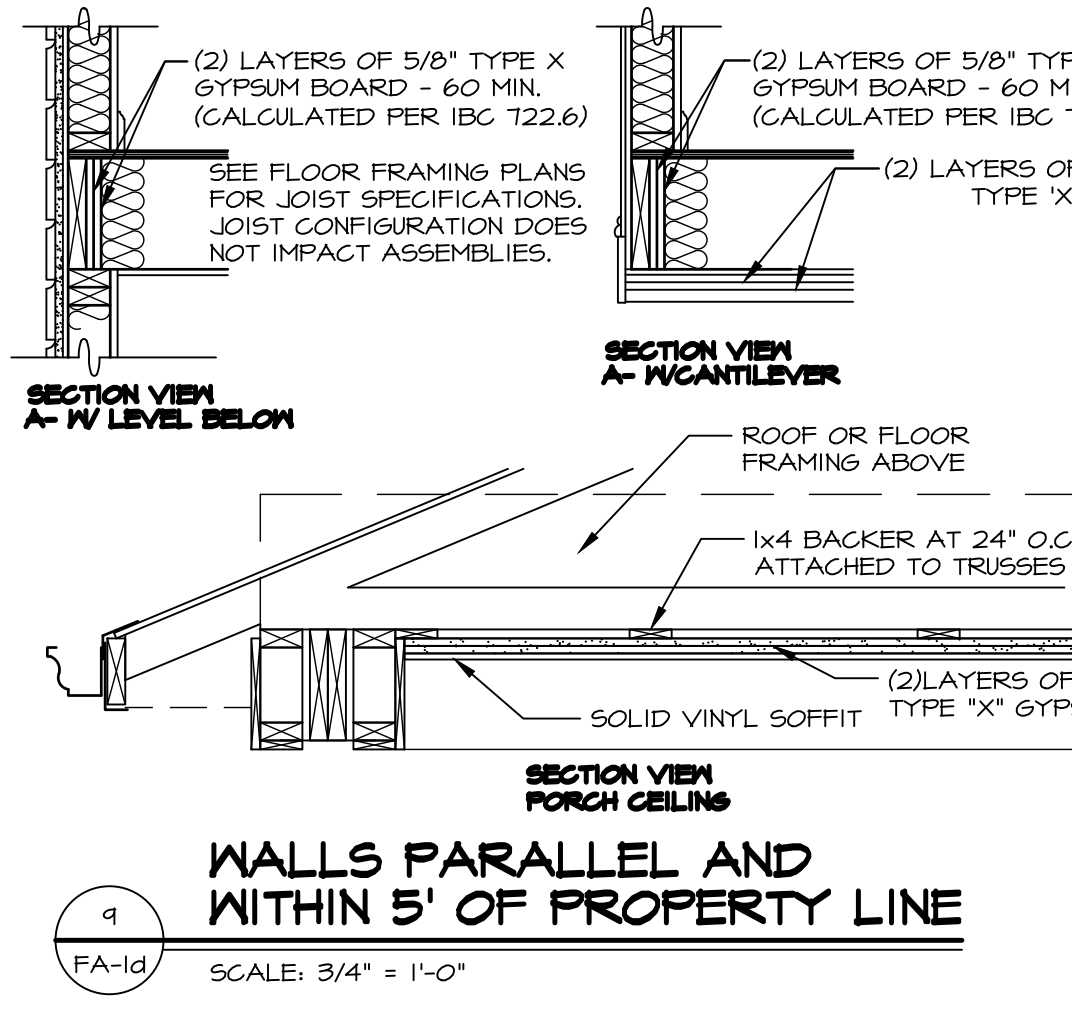
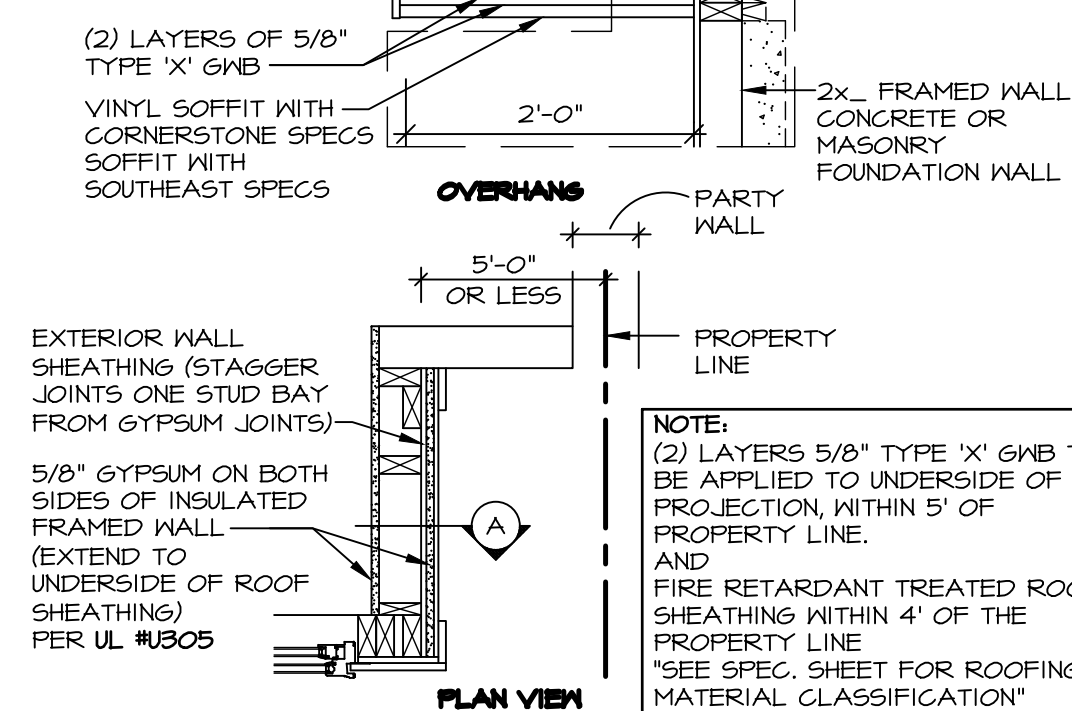
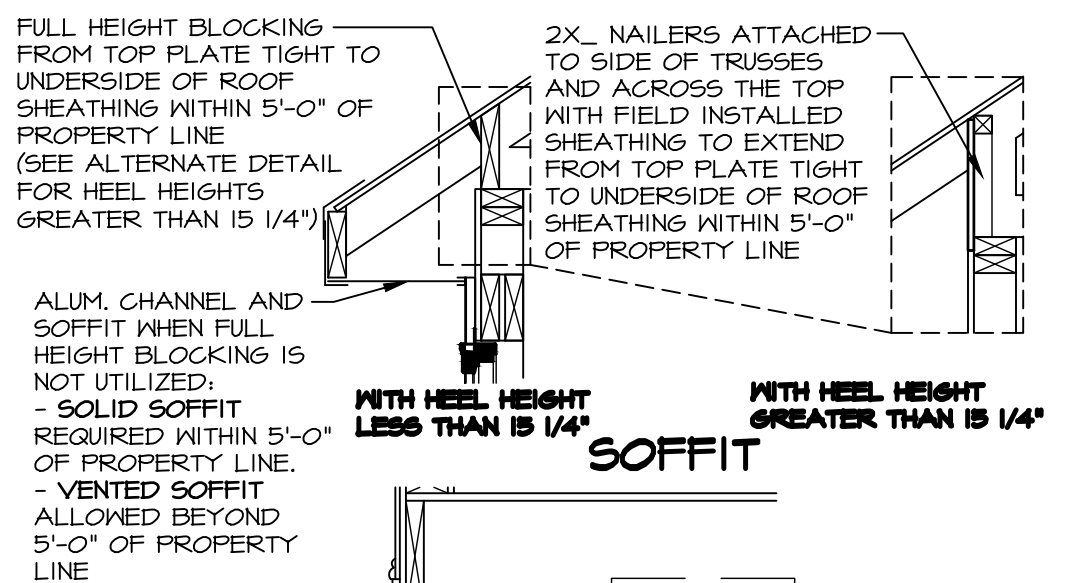
SCALE: 3/4" = 1'-0"



ATTACHMENT DETAIL

SCALE: 3/4" = 1'-0"

GA FILE NO. FC 5406 - WOOD JOISTS	I-HOUR FIRE
Base layer 5/8" type X gypsum wallboard applied at right angles to wood joists 24" o.c. (max.) with 1 1/4" Type W or 5 drywall screws 24" o.c. Face layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to 1-joists with 1 7/8" Type W or 5 drywall screws 12" o.c. at joints and intermediate 1-joists and 1 1/2" Type G drywall screws 12" o.c. placed 2" back on either side of end joints. Joints offset 24" from base layer joints. Wood 1-joists supporting 1/2" wood structural panels applied at right angles to joists with 8d nails.	
Approx. Ceiling Weight: 5 psf FM FC 172, 2-25-72; ITS, 8-6-98	



9 WALLS PARALLEL AND WITHIN 5' OF PROPERTY LINE

SCALE: 3/4" = 1'-0"

NOTE:

5'-0" FIRE SEPARATION DISTANCE (FSD) SHOWN, REQUIRED (FSD) MAY BE REDUCED DUE TO FIRE SUPPRESSION SYSTEM OR LOCAL CODE AMENDMENT.

NOTE:

FOR ALL FLASHING AND MOISTURE MANAGEMENT INFORMATION REFERENCE THE FOLLOWING:

- F-1 - SIDING VENEER & GENERAL
- F-2 - BRICK VENEER
- F-3 - STONE VENEER

As directed by the North Carolina Board of Architecture and Registered Interior Designers, architectural seals are not required for – and should not be placed by NVR on – these plans and specifications.

REV. NO.	DATE	REMARKS
14	7/26/14	NS - MOISTURE MANAGEMENT REVISION (JOB 15666)
20	10/16/14	GTO - ADDED NUMBER OF FASTENERS FOR UL ASSEMBLIES REQUEST #9426
21	10/17/14	ELM - REVISED CONCRETE NOTES FOR FA-1 / 2 (PER PAR #5944)
22	10/17/14	ELM - ADDED CONCRETE PILING CONDITION IN FA-1 / 2 (PER PAR #5944)
23	10/10/14	GTO - ADDED HORIZ. FIREBLOCKING TO AIR SPACE DET. UP TO 10' (PER PAR #5944)
24	12/12/14	ELM - REVISED/ADDED DET. #1, #14, AND #15 ASH WALL (PER PAR #5944)
25	10/20/20	ELM - ADDED 23' MAX CONDITION IN FA-1/2 PER PAR #5944
26	7/17/20	ELM - ADDED NOTES FOR 14FA-1D PER GCM 16670
27	5/6/23	ARS - MADE OC #9218 REVISIONS ADDED PORCH CEILING DETAIL TO DETAIL 9

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NVR, Inc.
5285 Westwick, Suite 100
Frederick, MD 21703

SHEET NO.	VERSION	SET NO.
FA-1d	DRAWN BY JDS	1
	DATE: 4/1/15	
	OPTION	
	DRAWING TITLE	
	FIRE SEPARATION ASSEMBLY DETAILS	
	OPTION DESCRIPTION	

As directed by the North Carolina Board of Architecture and Registered Interior Designers, architectural seals are not required for – and should not be placed by NVR on – these plans and specifications.

James Sales
06/30/2025

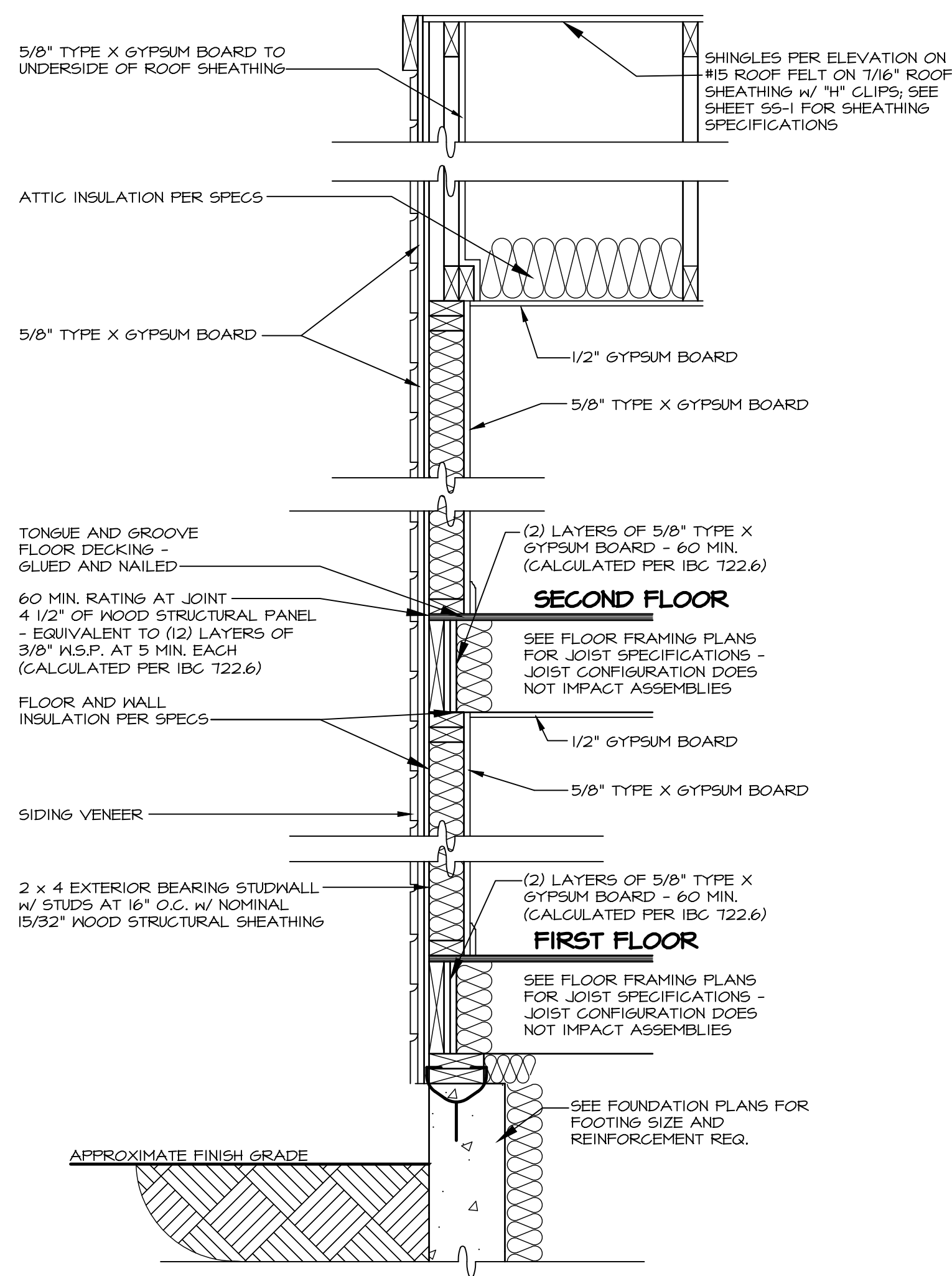
REV. NO.	DATE	REMARKS
1	10/17/19	1-MBT - REMOVED UL344, REPLACED WITH CALCULATED METHOD
2	9/21/14	1-MBT - ADDED NOTE 6
3	7/26/14	1S - MOISTURE MANAGEMENT REVISION (JOB 19606)

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5285 Westwick, Frederick, MD 21703

SHEET NO.	MODEL	SET NO.	VERSION	DRAWN BY	CAP	DATE	OPTION
FA-2	STANDARD DETAILS DRAWING TITLE 1-HOUR RATED EXTERIOR WALLS (NON-STANDARD) OPTION DESCRIPTION	1	1	T/10/17			

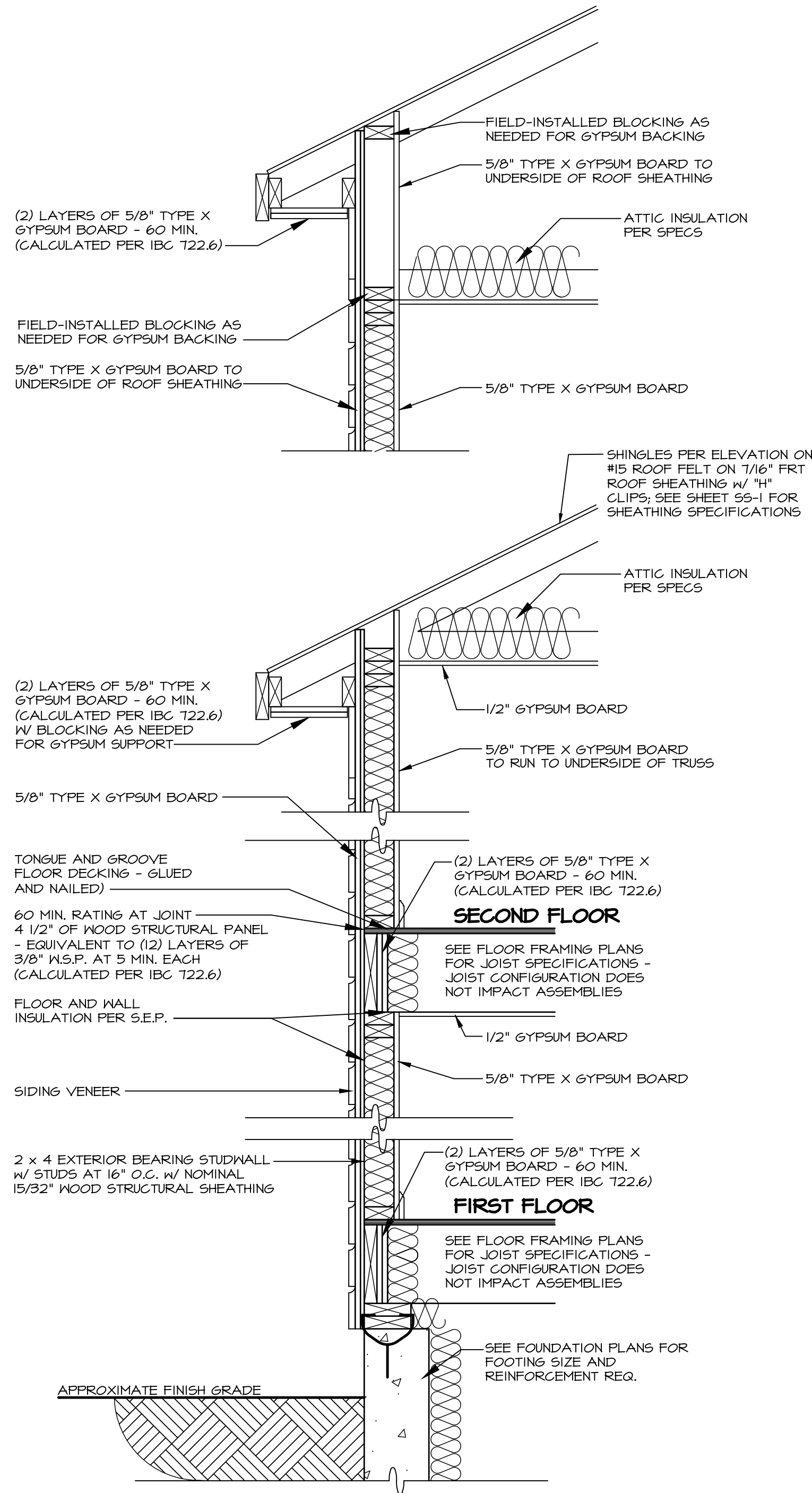
J:\PROJECTS\DETAILS\NVR_Assembly\FA-2.dwg 05/07/25 - 2:55 pm



1-HOUR GABLE WALL SECTION
SCALE: 1" = 1'-0"
TRUSS PARALLEL TO WALL

- NOTES:**
1. WALLS WITHIN 5' OF PROPERTY LINE SHALL HAVE A MAXIMUM OF 25% OPENINGS AREA.
 2. WALLS WITHIN 3' SHALL HAVE NO GLAZING AND ANY FRAMED OPENINGS SHALL BE CLOSED IN.
 3. NO OVERHANGS SHALL EXTEND WITHIN 2' OF PROPERTY LINE.
 4. GYPSUM USED ON EXTERIOR (INCLUDING IN SOFFIT) MUST BE APPROVED FOR EXTERIOR USE.
 5. CLASS A, B OR C ROOFING SHALL BE INSTALLED WHEN THE EDGE OF THE ROOF IS LESS THAN 3 FEET FROM A LOT LINE.
 6. DETAILS '1 & 2' APPLY TO MULTIPLE STORY DWELLINGS AND ACCESSORY SUCH AS GARAGES AND SHEDS.

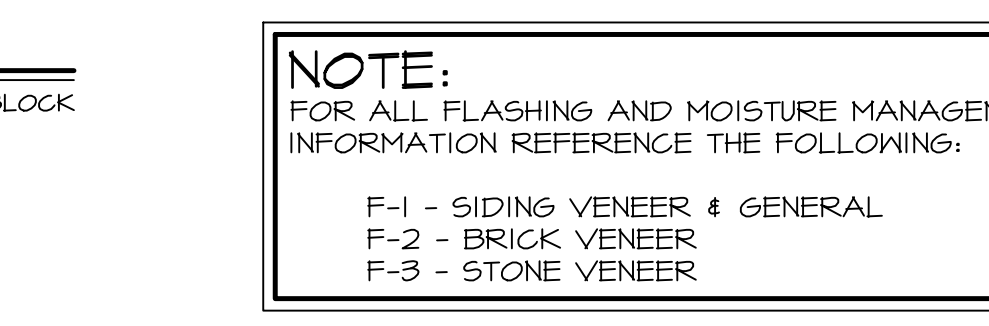
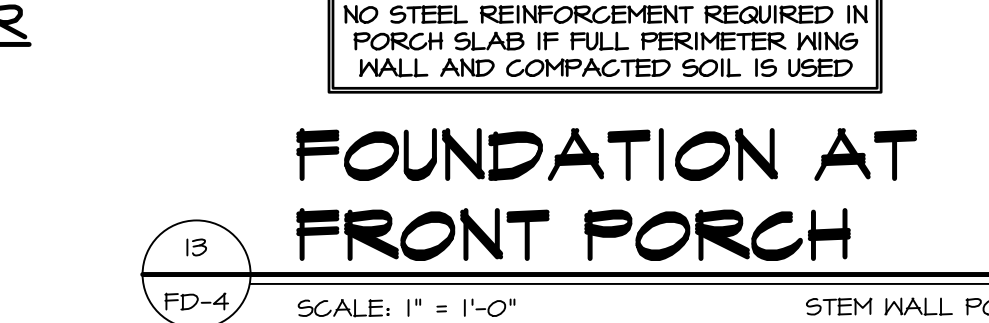
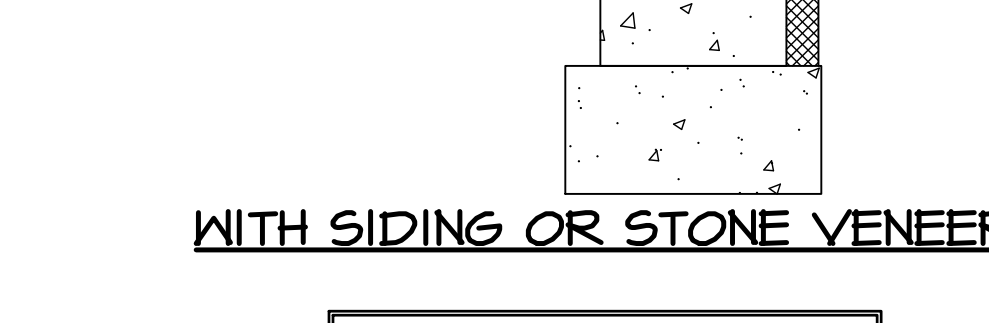
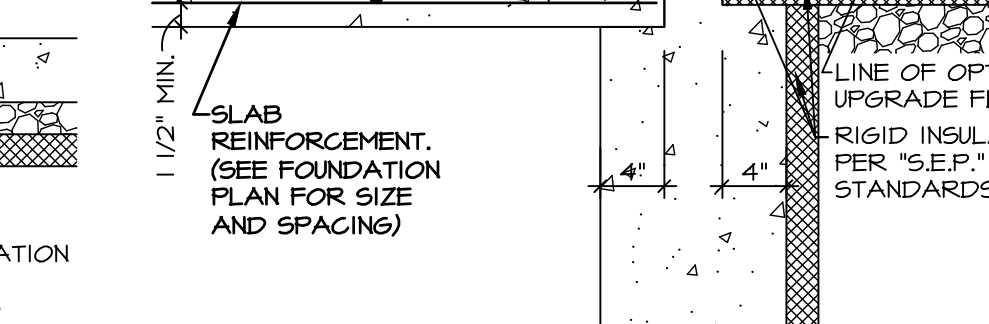
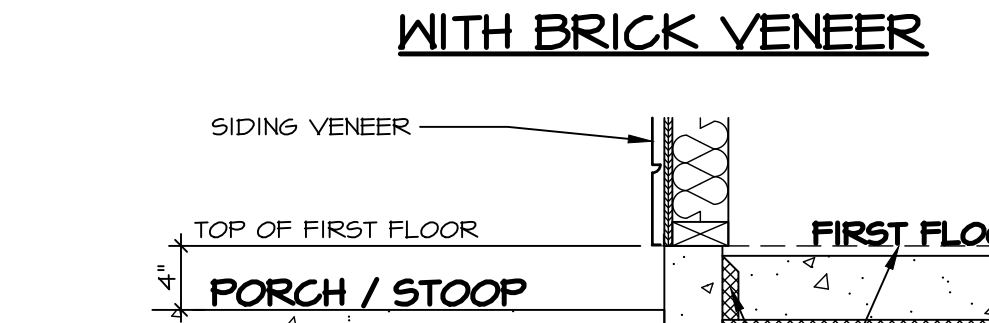
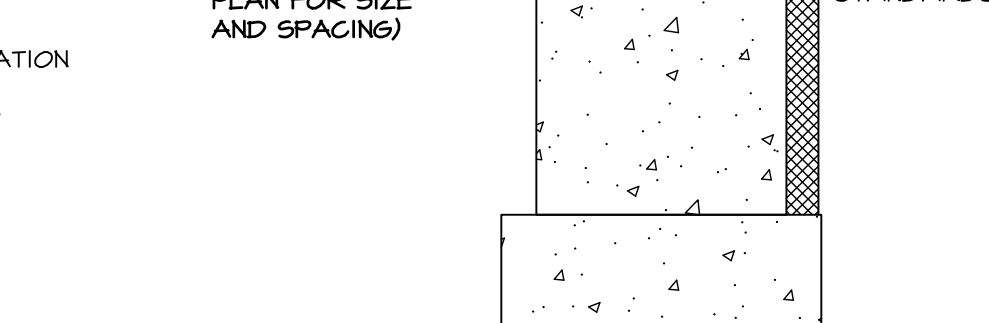
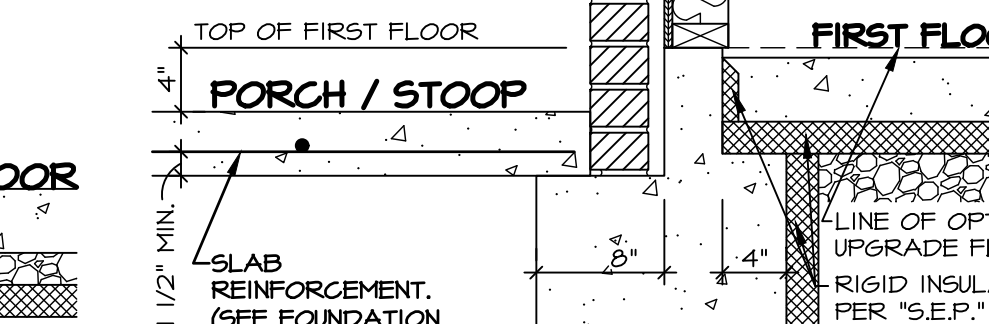
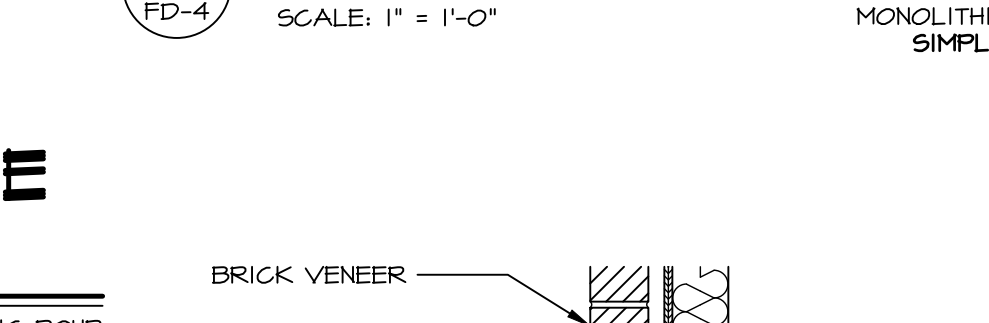
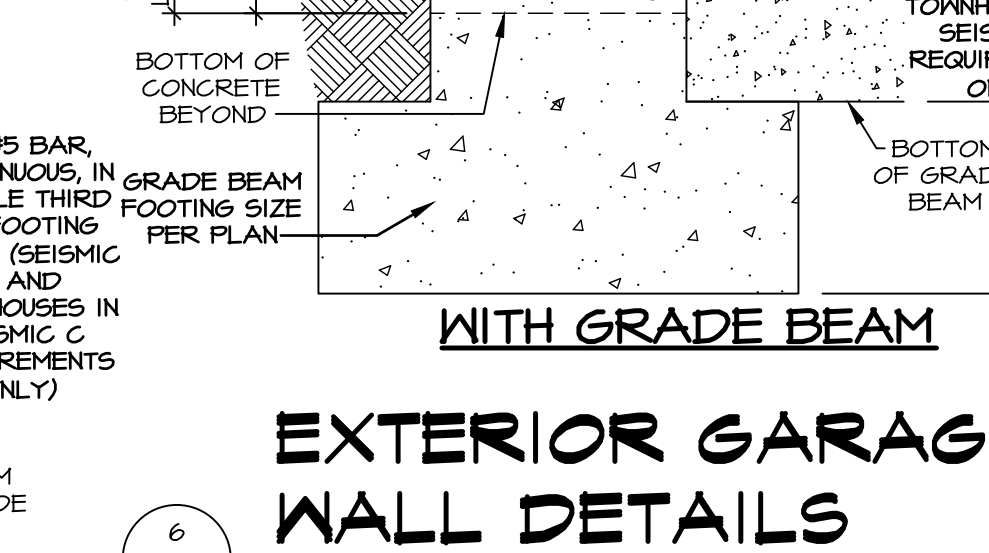
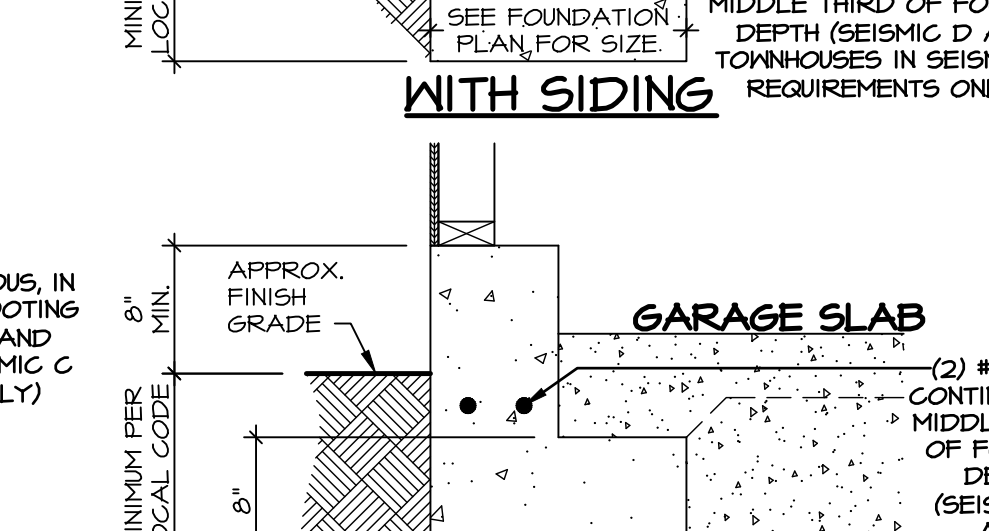
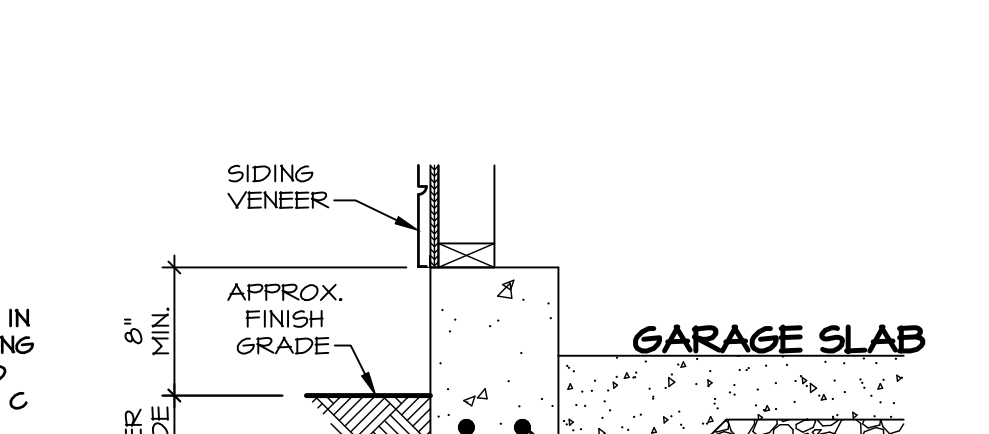
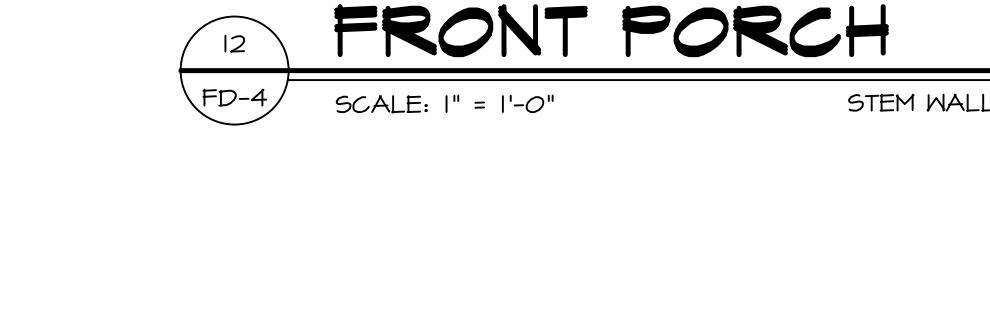
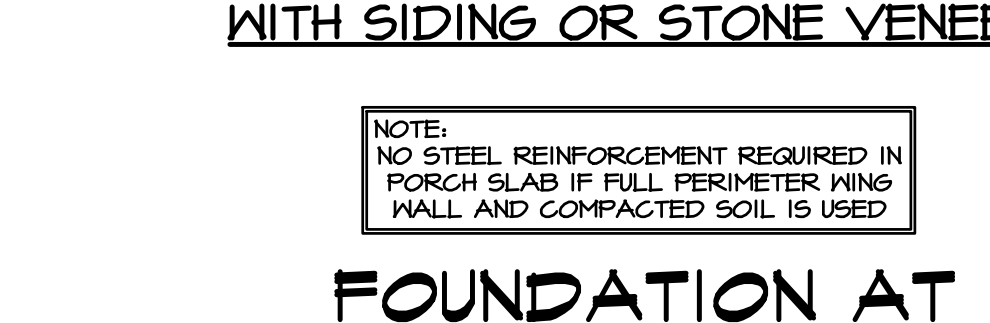
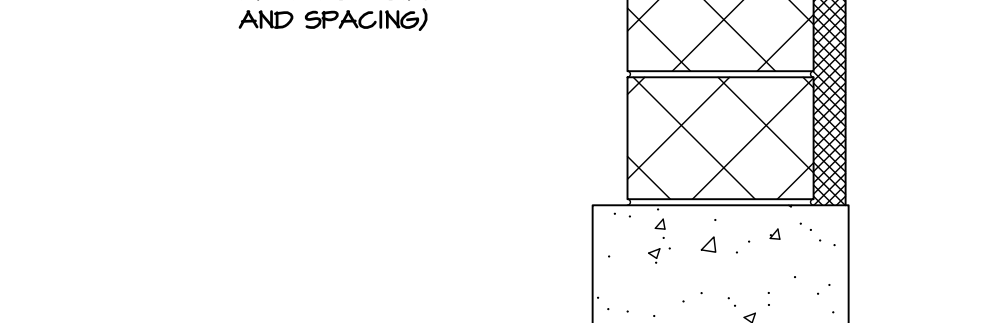
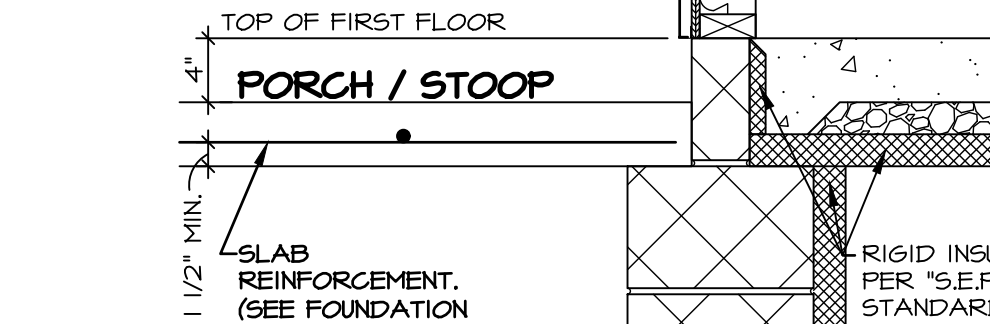
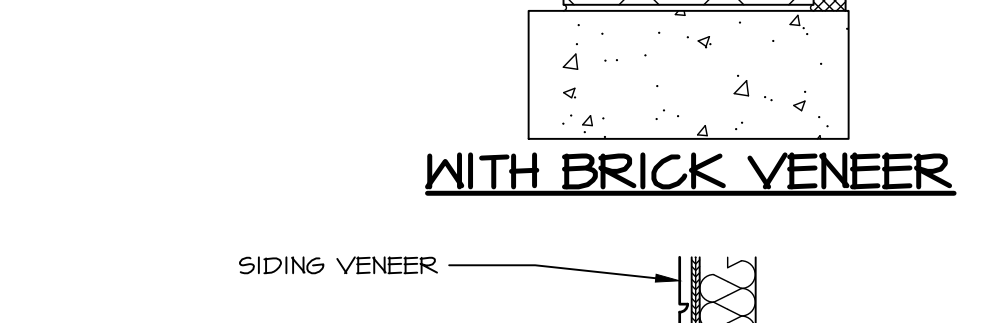
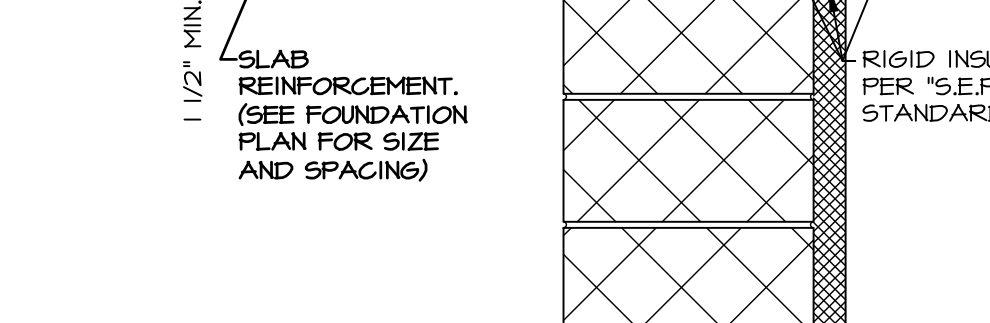
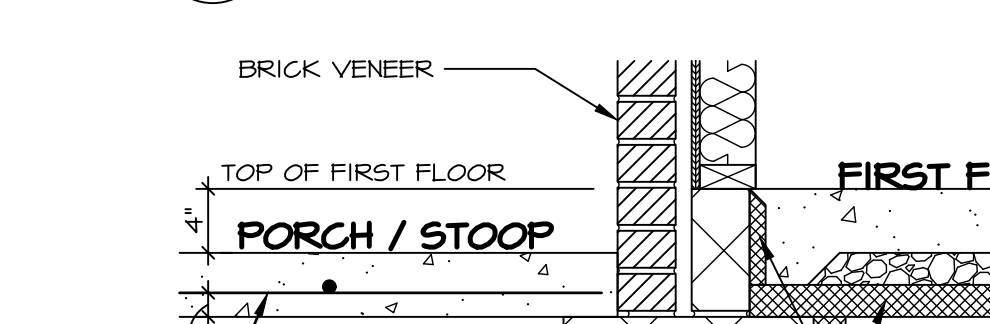
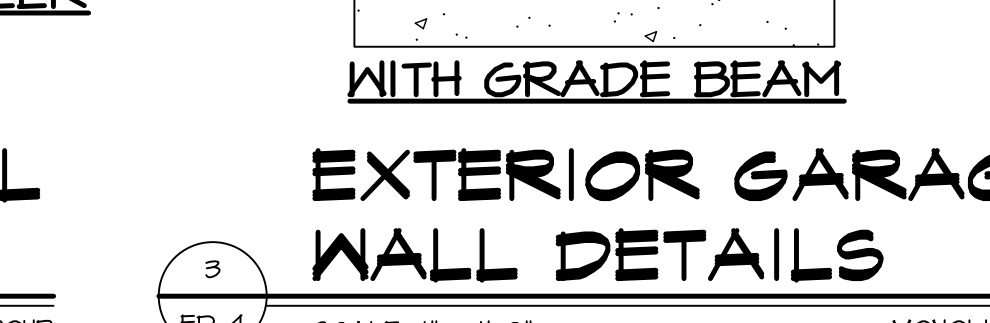
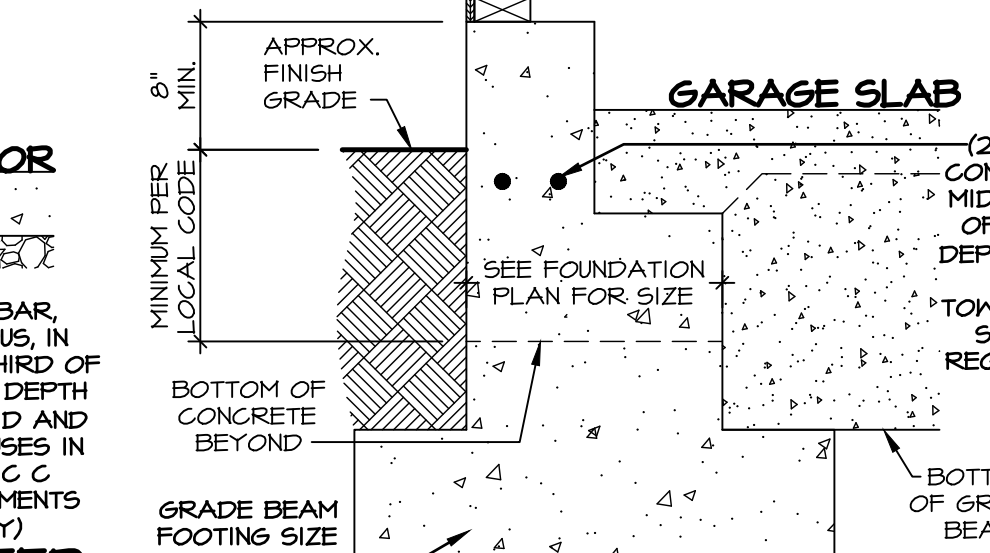
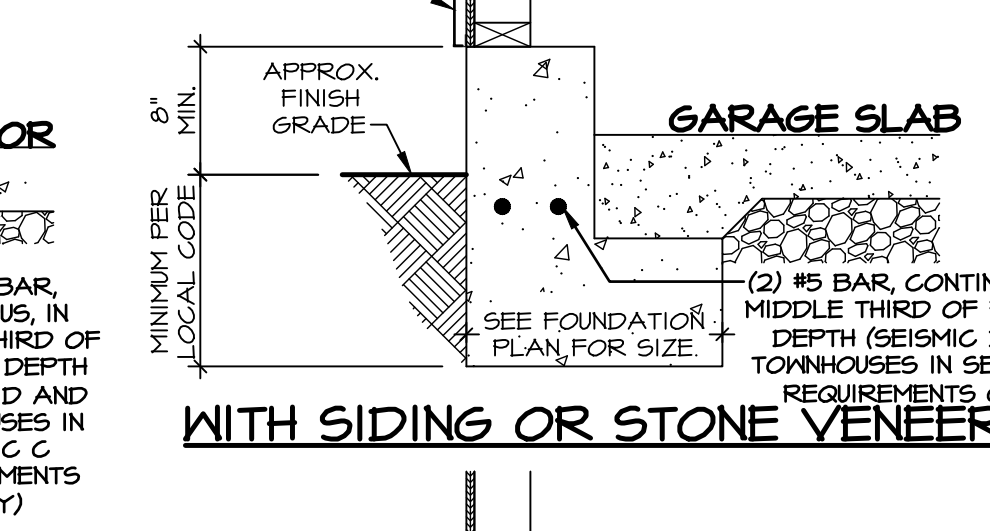
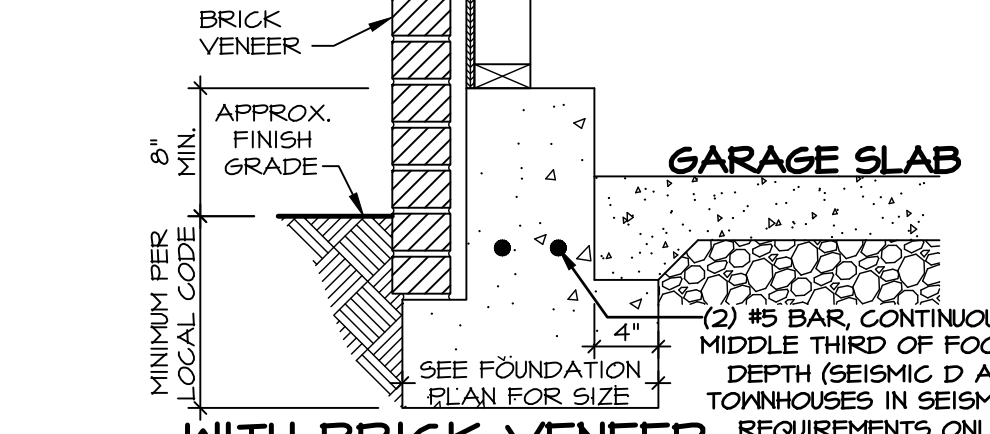
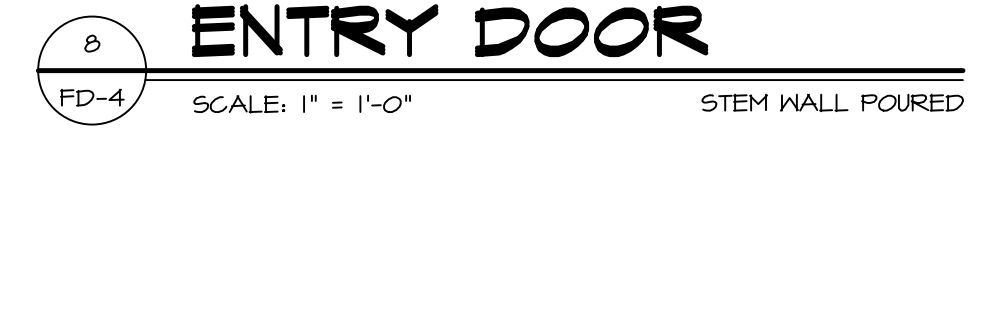
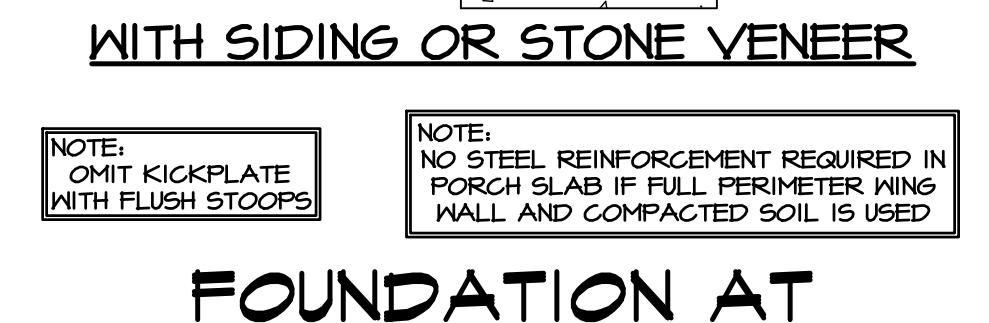
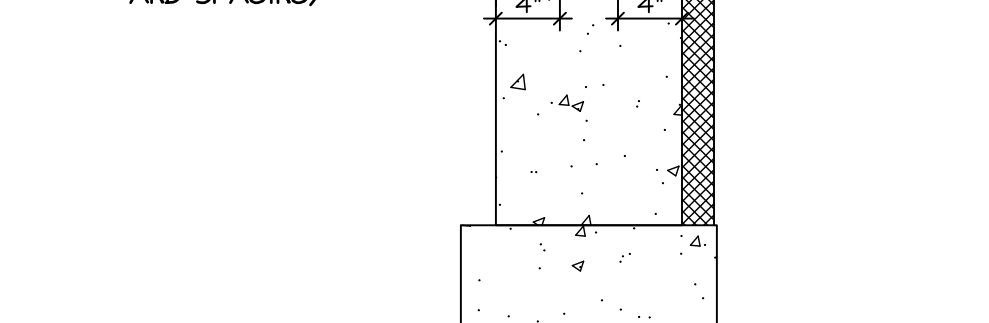
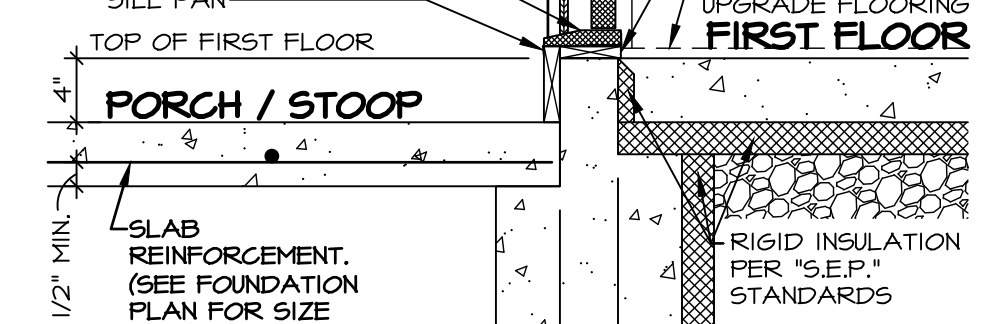
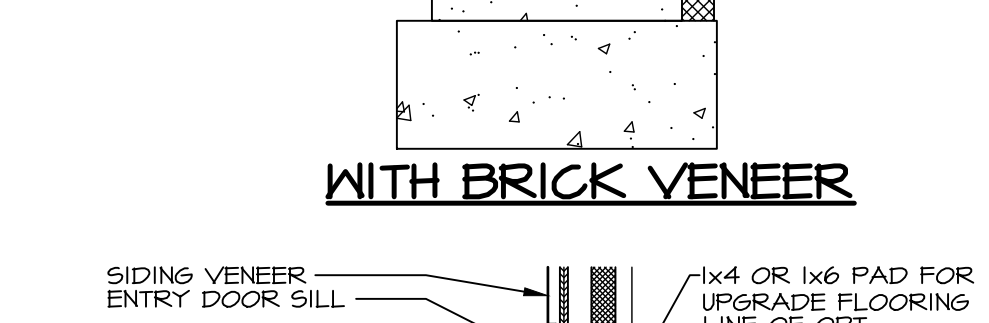
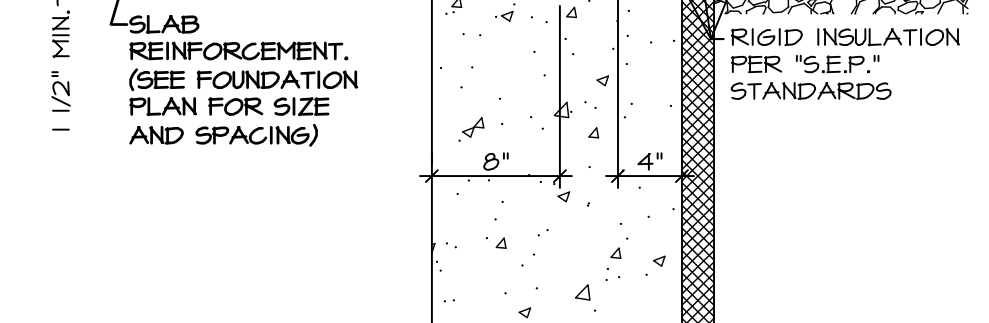
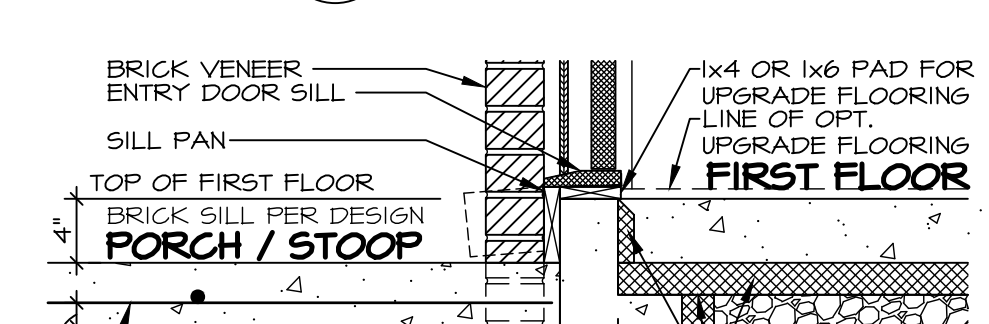
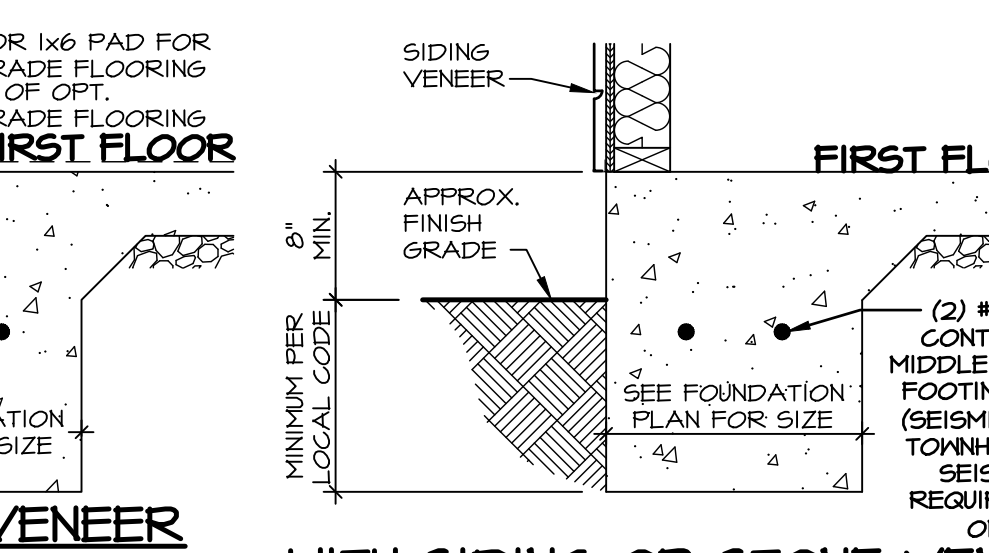
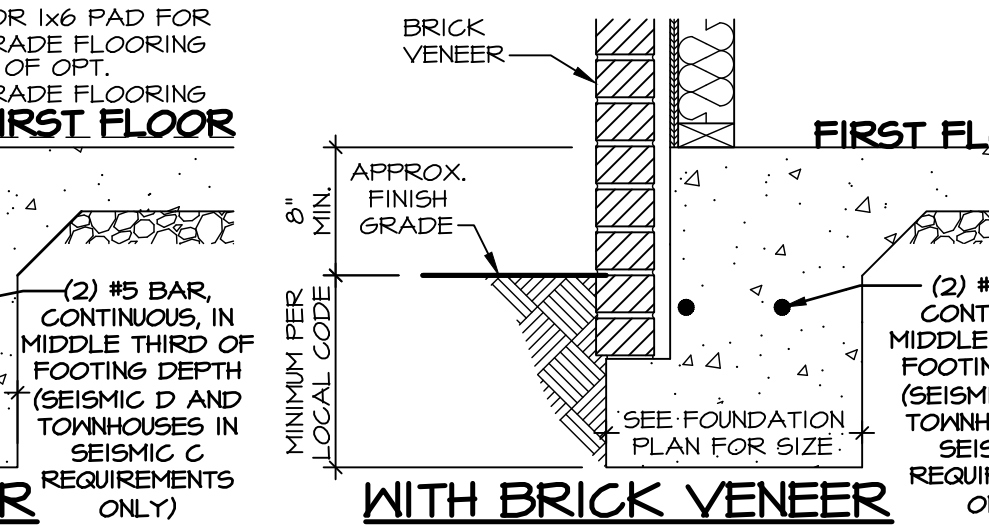
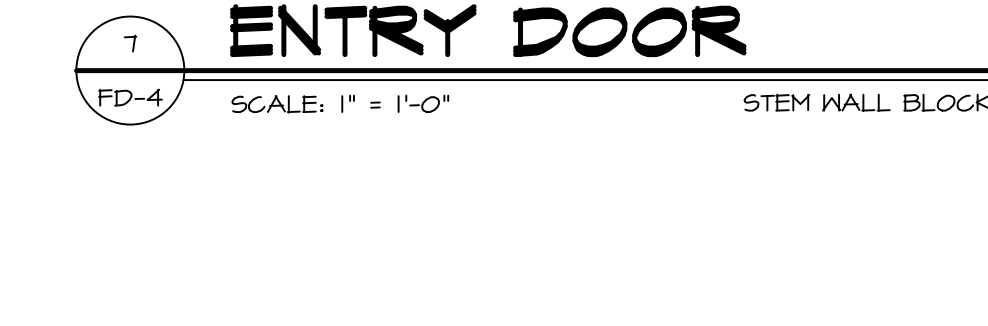
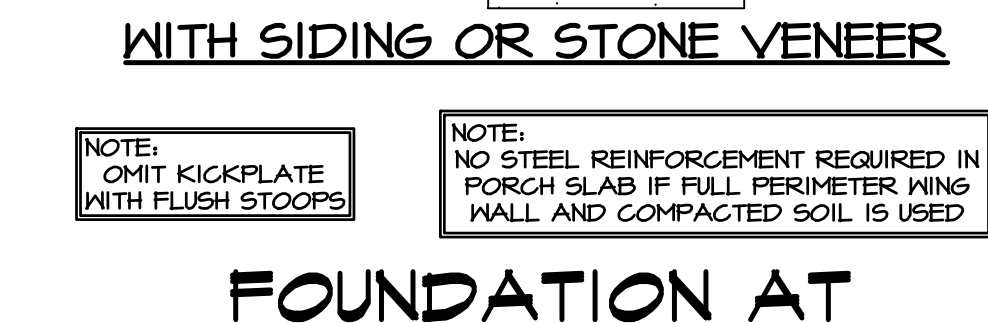
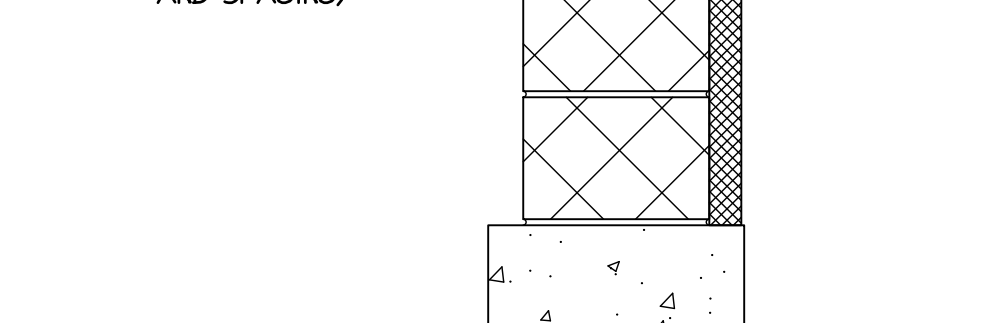
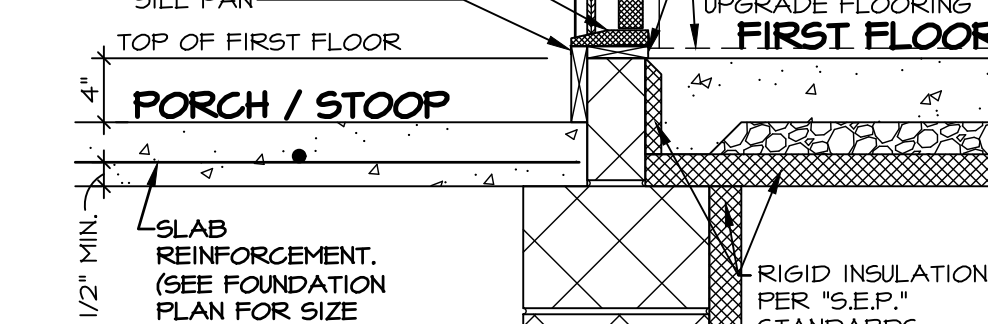
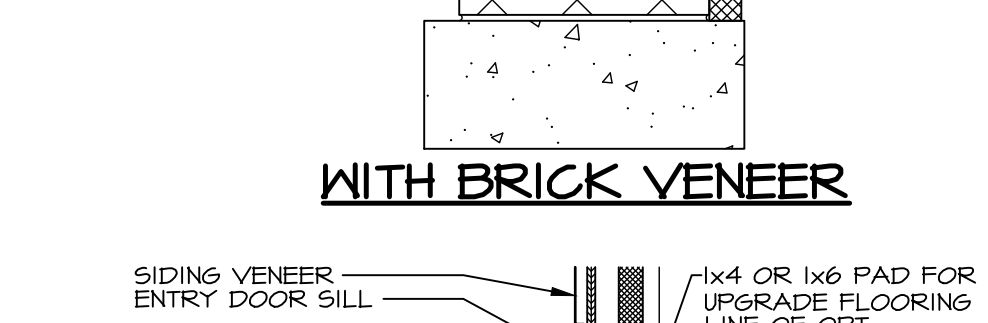
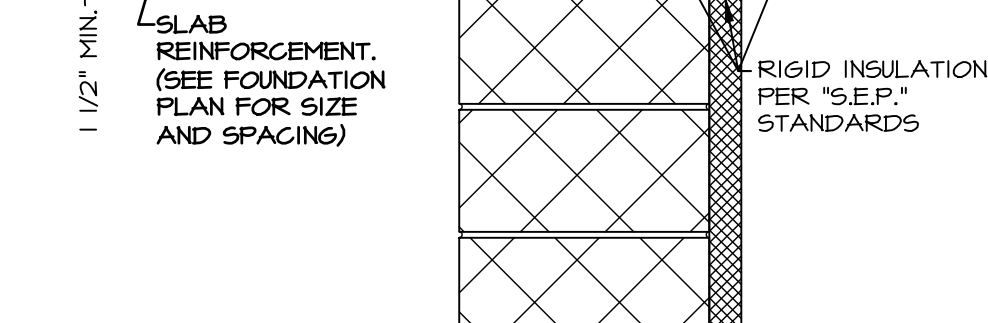
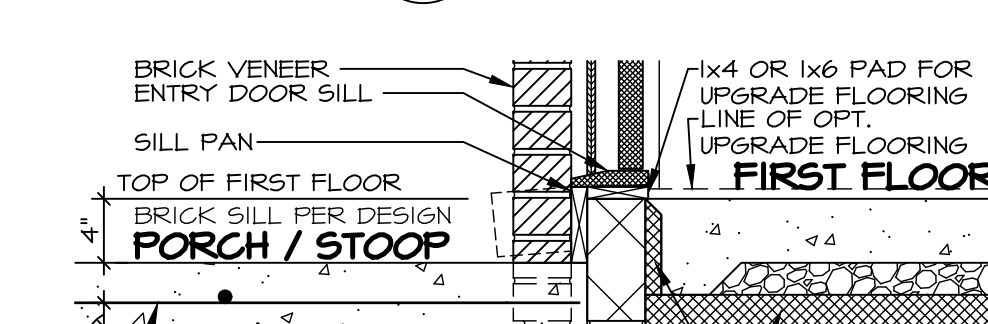
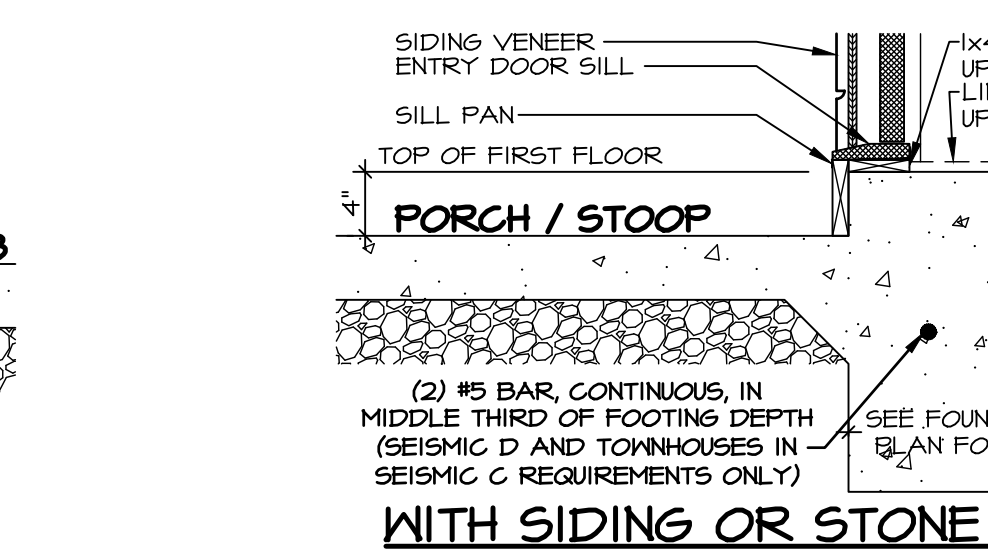
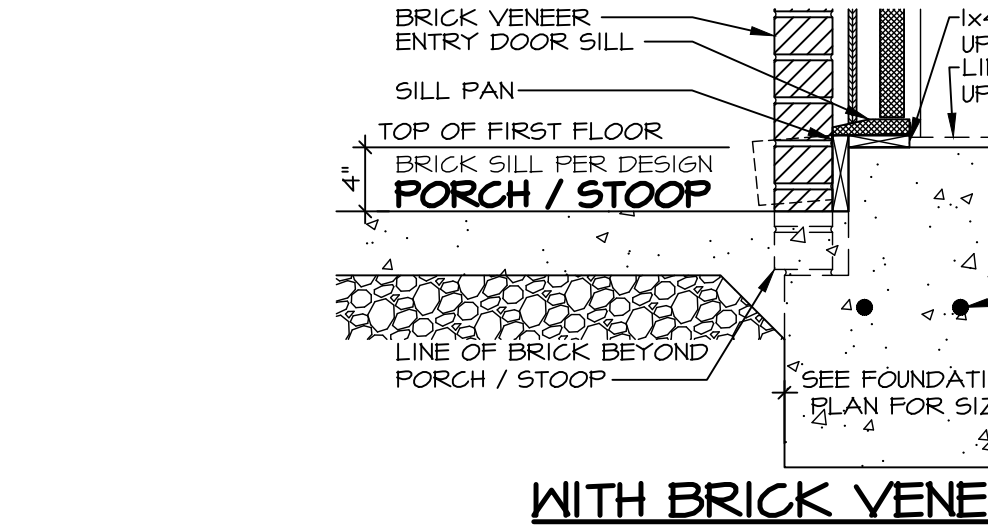
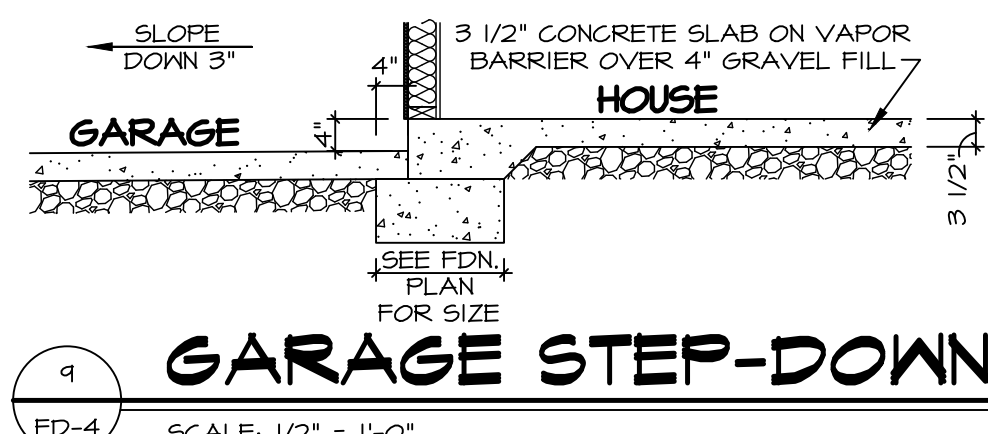
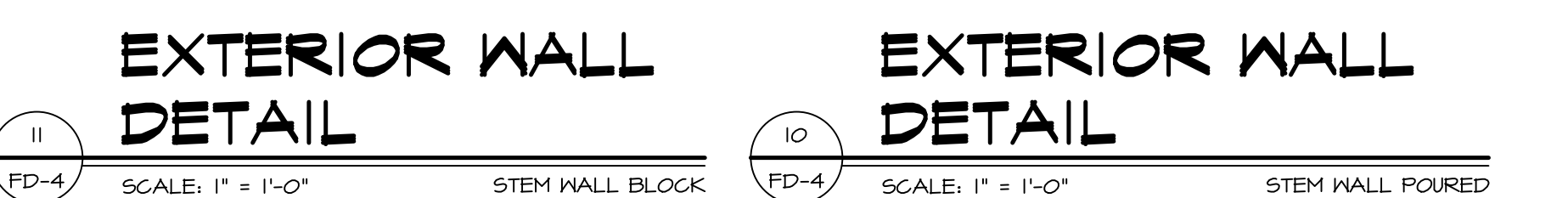
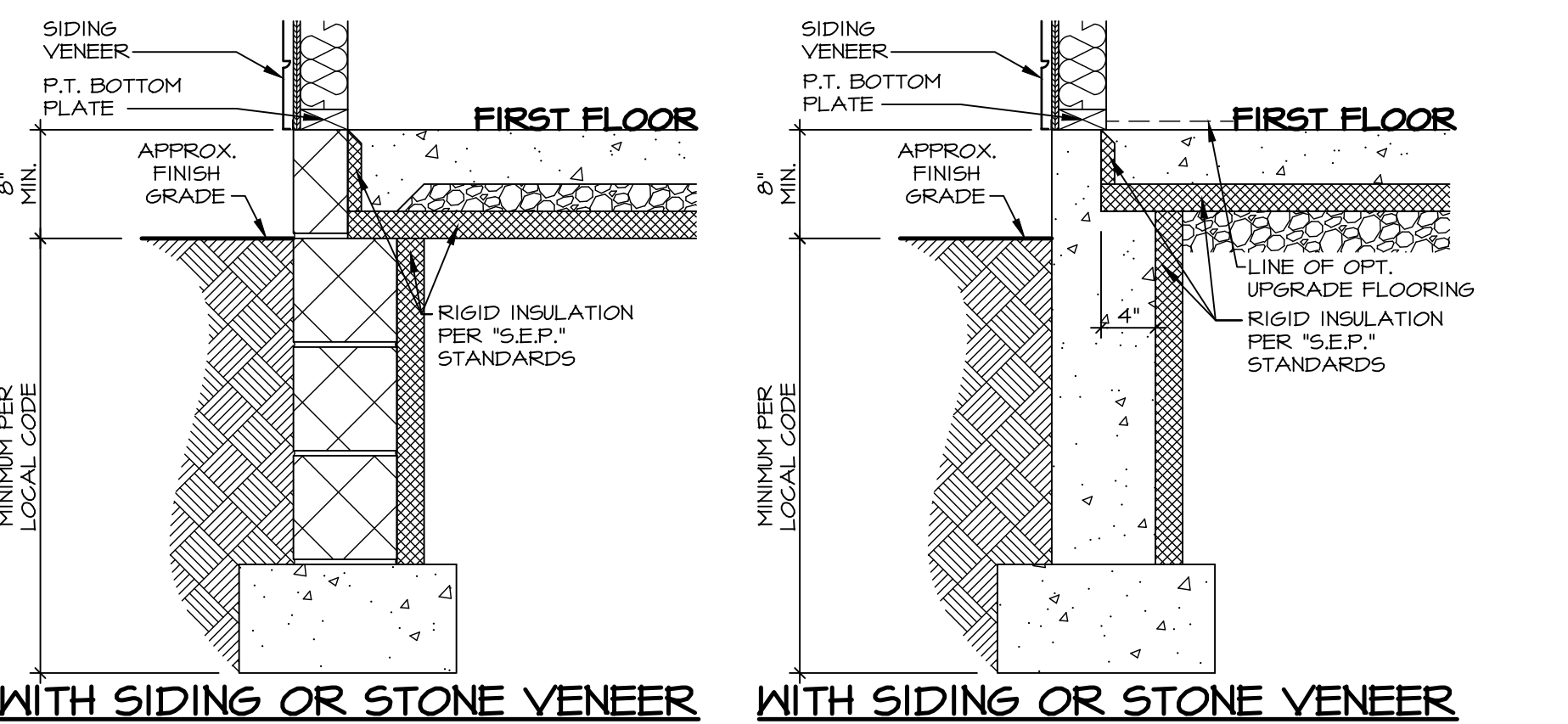
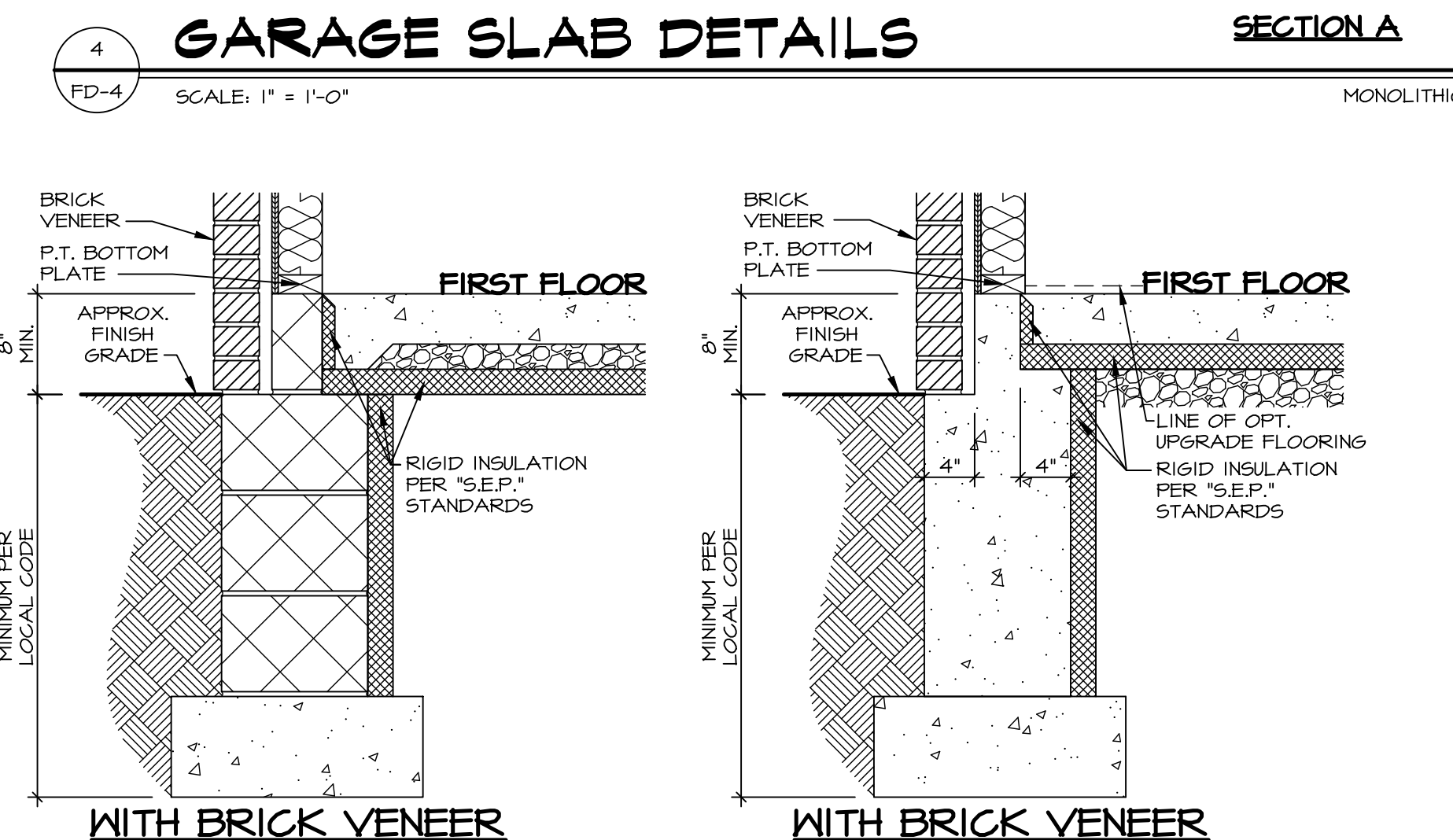
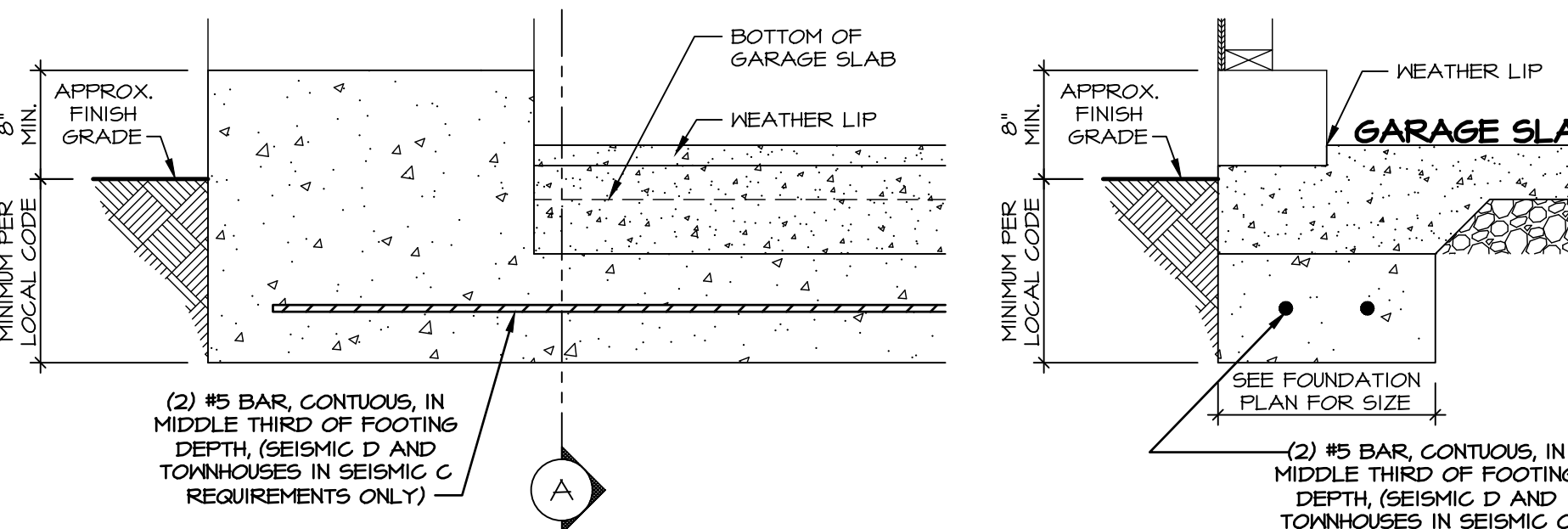
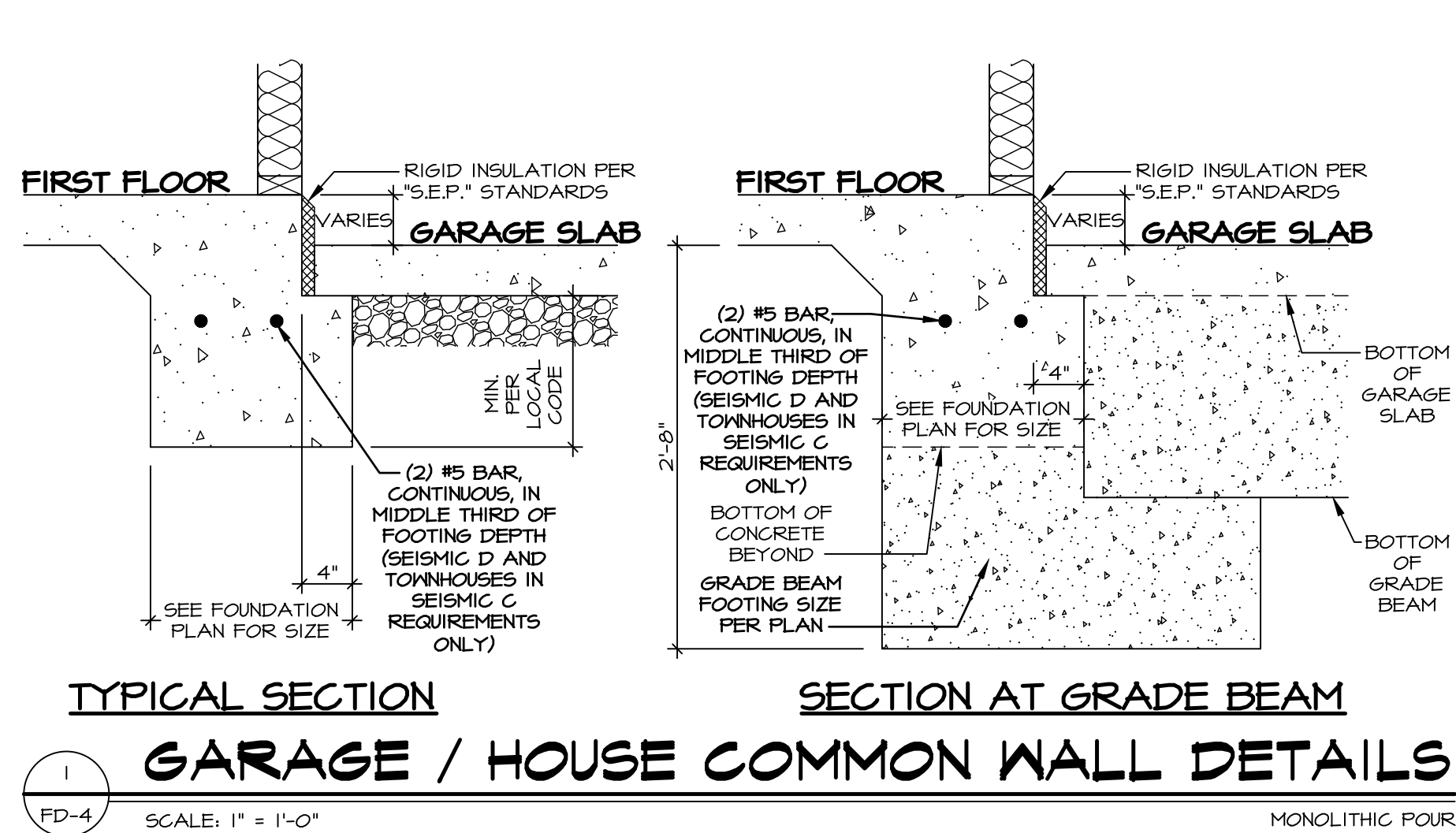
FIRE RATING DETAILS	
From Exterior:	
At Walls -	
Calculated assembly per IBC T22.6	
15/32-inch W.S.P. = 10 min. TABLE T22.6.2(1)	
5/8-inch Type X gypsum = 40 min. TABLE T22.6.2(1)	
Wood frame (wall) = 20 min. TABLE T22.6.2(2)	
TOTAL = 60 min.	
At Floors -	
Calculated assembly per IBC T22.6	
15/32-inch W.S.P. = 10 min. TABLE T22.6.2(1)	
5/8-inch Type X gypsum = 40 min. TABLE T22.6.2(1)	
Wood frame (floor) = 10 min. TABLE T22.6.2(2)	
TOTAL = 60 min.	
From Interior:	
At Walls -	
Calculated assembly per IBC T22.6	
5/8-inch Type X gypsum = 40 min. TABLE T22.6.2(1)	
Wood frame (wall) = 20 min. TABLE T22.6.2(2)	
Insulation = 15 min. TABLE T22.6.2(5)	
TOTAL = 60 min. (max. allowable per T22.6.1.1)	
At Floors -	
Calculated assembly per IBC T22.6	
(2) layers 5/8-inch Type X gypsum	
(2) x 40 min. ea. = 80 min. TABLE T22.6.2(1)	
TOTAL = 60 min. (max. allowable per T22.6.1.1)	
NOTE: CODE REFERENCED IS 2015 AND 2018 INTERNATIONAL BUILDING CODE (IBC). FOR 2009 IBC, CALCULATED FIRE RESISTANCE IS IN ACCORDANCE WITH SECTION T21.6.	



1-HOUR WALL SECTION
SCALE: 1" = 1'-0"
TRUSS PERPENDICULAR TO WALL

NOTE:
5'-0" FIRE SEPARATION DISTANCE (FSD) SHOWN. REQUIRED (FSD) MAY BE REDUCED DUE TO FIRE SUPPRESSION SYSTEM OR LOCAL CODE AMENDMENT.

NOTE:
FOR ALL FLASHING AND MOISTURE MANAGEMENT INFORMATION REFERENCE THE FOLLOWING:
F-1 - SIDING VENEER & GENERAL
F-2 - BRICK VENEER
F-3 - STONE VENEER



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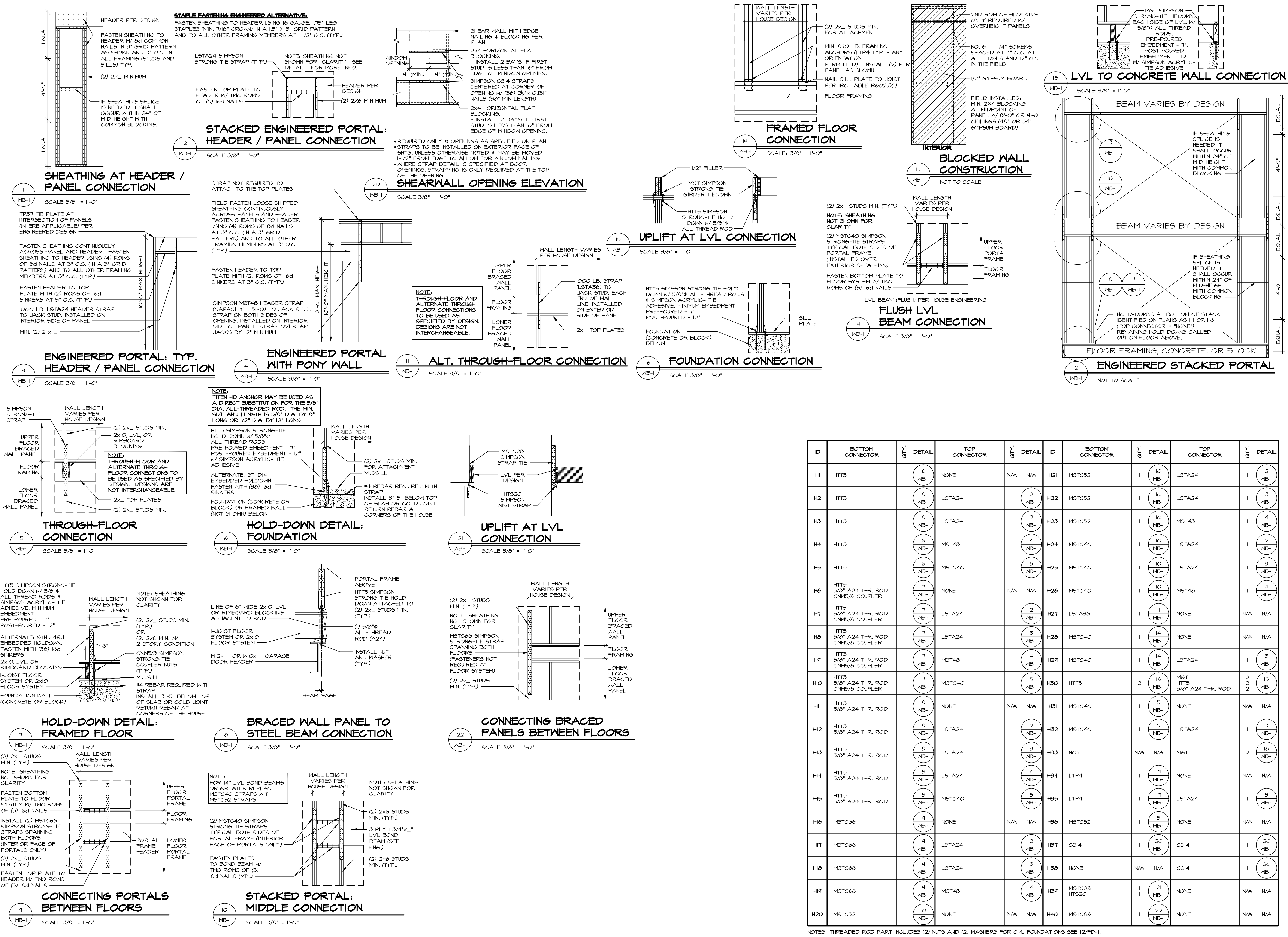
REV. NO.	DATE	REMARKS
1	7/20/14	DRH - MOISTURE MANAGEMENT REVISION (JOB #566)
2	6/23/21	DRA - DETAILS 1, 2, 3, 4, AND 6 REVISED REPAIR NVR SEISMIC D TO "MIDDLE THIRD"
3	11/9/21	DRA - DETAIL 11, 12, 13, 14, AND 15 REVISED REPAIR NVR SEISMIC D TO "MIDDLE THIRD"
4	5/9/22	DRA - DETAILS 1, 6, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
5	11/24/23	RDP - REMOVED GRADE BEAM INFORMATION ON DETAIL 4
6	6/17/24	SEA - REMOVED DIMENSION ON DETAIL 1, 2, 3, 4, 5, 6, 9
7	5/21/24	DRA - DETAIL 1, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
8	7/22/24	DRA - DETAIL 1, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

NVR
 NORTH CAROLINA REGISTERED VENDOR
 SEAL 44932
 JONATHAN EDWARD ABERTS
 NVR, Inc.
 Firm license #: D-0477

STANDARD DETAILS
 FOUNDATION DETAILS
 SLAB FOUNDATION
 OPTION DESCRIPTION

FD-4

PROJECT DETAILS: NVR - Foundation - FD-4.dwg 05/07/25 - 303.0m



ID	BOTTOM CONNECTOR	QTY.	DETAIL	TOP CONNECTOR	QTY.	DETAIL	ID	BOTTOM CONNECTOR	QTY.	DETAIL	TOP CONNECTOR	QTY.	DETAIL
H1	HTT5	1	WB-1	NONE	N/A	N/A	H21	MSTC52	1	WB-1	LSTA24	1	WB-1
H2	HTT5	1	WB-1	LSTA24	1	WB-1	H22	MSTC52	1	WB-1	LSTA24	1	WB-1
H3	HTT5	1	WB-1	LSTA24	1	WB-1	H23	MSTC52	1	WB-1	MST48	1	WB-1
H4	HTT5	1	WB-1	MST48	1	WB-1	H24	MSTC40	1	WB-1	LSTA24	1	WB-1
H5	HTT5	1	WB-1	MSTC40	1	WB-1	H25	MSTC40	1	WB-1	LSTA24	1	WB-1
H6	HTT5 5/8" A24 THR. ROD C/NK5/8 COUPLER	1	WB-1	NONE	N/A	N/A	H26	MSTC40	1	WB-1	MST48	1	WB-1
H7	HTT5 5/8" A24 THR. ROD C/NK5/8 COUPLER	1	WB-1	LSTA24	1	WB-1	H27	LSTA36	1	WB-1	NONE	N/A	N/A
H8	HTT5 5/8" A24 THR. ROD C/NK5/8 COUPLER	1	WB-1	LSTA24	1	WB-1	H28	MSTC40	1	WB-1	NONE	N/A	N/A
H9	HTT5 5/8" A24 THR. ROD C/NK5/8 COUPLER	1	WB-1	MST48	1	WB-1	H29	MSTC40	1	WB-1	LSTA24	1	WB-1
H10	HTT5 5/8" A24 THR. ROD C/NK5/8 COUPLER	1	WB-1	MSTC40	1	WB-1	H30	HTT5	2	WB-1	MST HTT5 5/8" A24 THR. ROD	2	WB-1
H11	HTT5 5/8" A24 THR. ROD	1	WB-1	NONE	N/A	N/A	H31	MSTC40	1	WB-1	NONE	N/A	N/A
H12	HTT5 5/8" A24 THR. ROD	1	WB-1	LSTA24	1	WB-1	H32	MSTC40	1	WB-1	LSTA24	1	WB-1
H13	HTT5 5/8" A24 THR. ROD	1	WB-1	LSTA24	1	WB-1	H33	NONE	N/A	N/A	MGT	2	WB-1
H14	HTT5 5/8" A24 THR. ROD	1	WB-1	LSTA24	1	WB-1	H34	LTP4	1	WB-1	NONE	N/A	N/A
H15	HTT5 5/8" A24 THR. ROD	1	WB-1	MSTC40	1	WB-1	H35	LTP4	1	WB-1	LSTA24	1	WB-1
H16	MSTC66	1	WB-1	NONE	N/A	N/A	H36	MSTC52	1	WB-1	NONE	N/A	N/A
H17	MSTC66	1	WB-1	LSTA24	1	WB-1	H37	CS14	1	WB-1	CS14	1	WB-1
H18	MSTC66	1	WB-1	LSTA24	1	WB-1	H38	NONE	N/A	N/A	CS14	1	WB-1
H19	MSTC66	1	WB-1	MST48	1	WB-1	H39	MSTC28 HTS20	1	WB-1	NONE	N/A	N/A
H20	MSTC52	1	WB-1	NONE	N/A	N/A	H40	MSTC66	1	WB-1	NONE	N/A	N/A

NOTES: THREADED ROD PART INCLUDES (2) NUTS AND (2) WASHERS FOR CMU FOUNDATIONS SEE 12/FD-1.

As directed by the North Carolina Board of Architecture and Registered Interior Designers, architectural seals are not required for these plans and specifications.

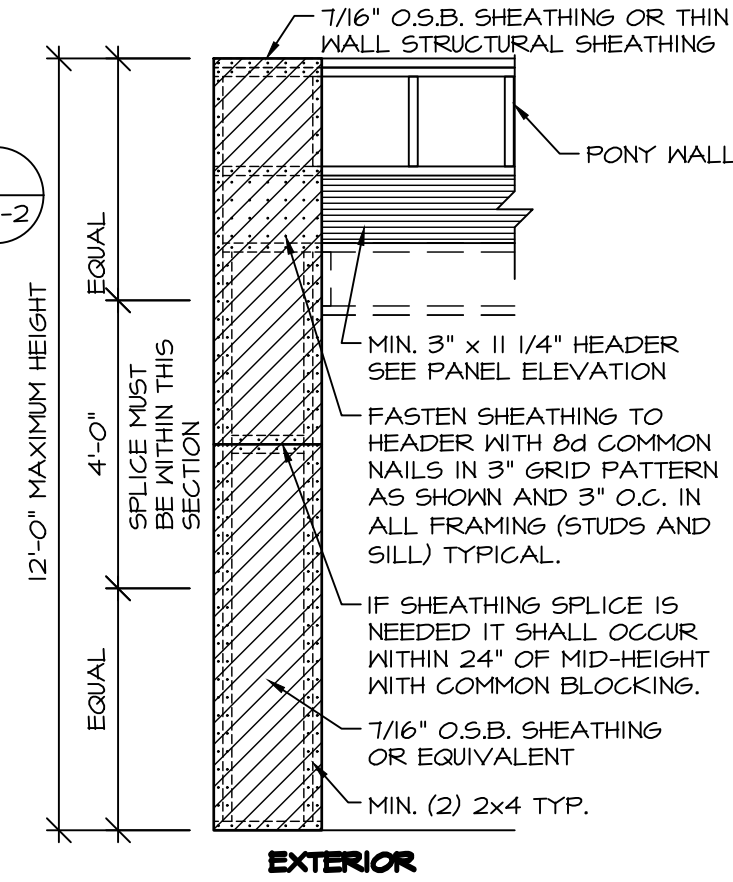
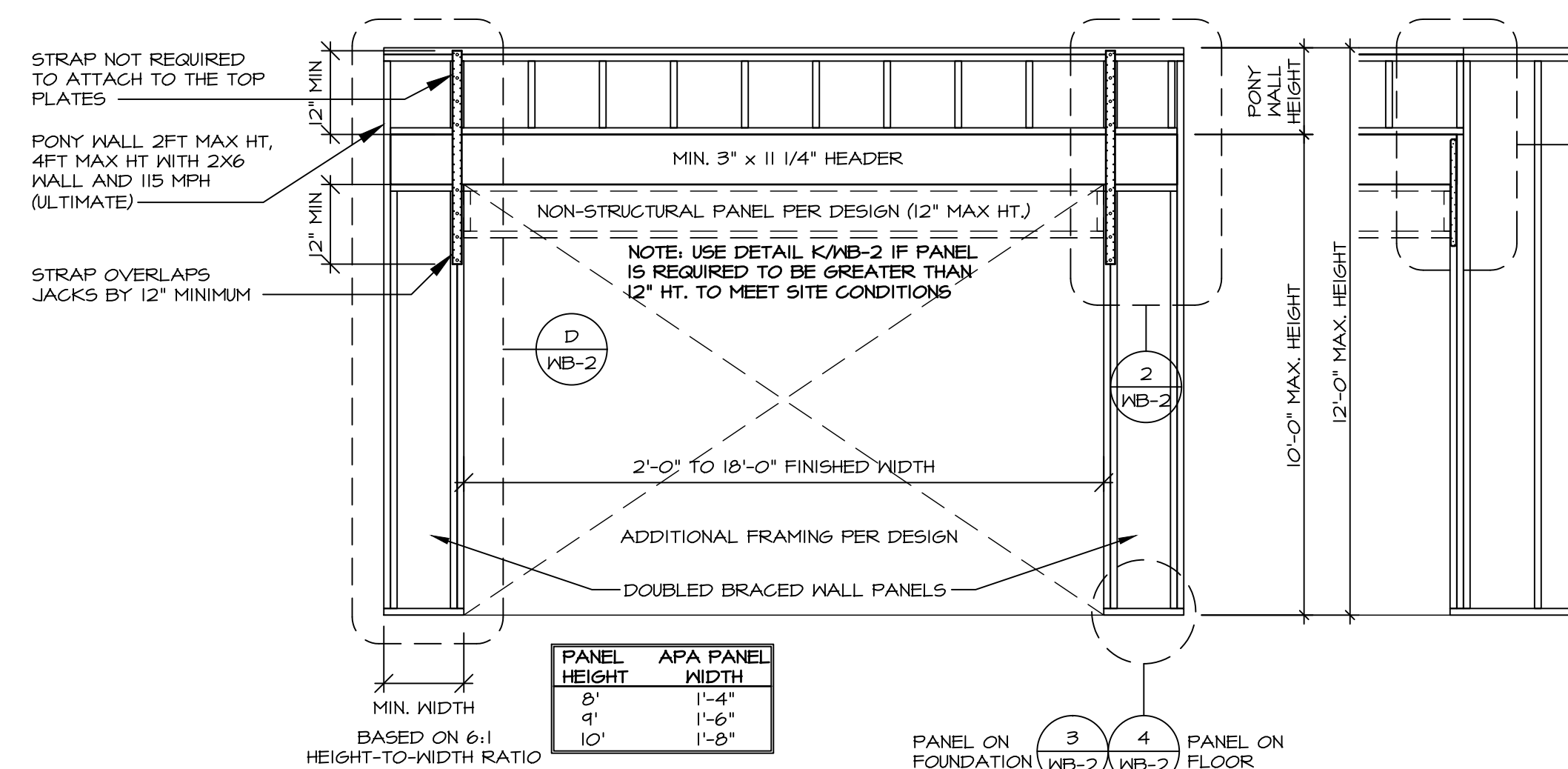
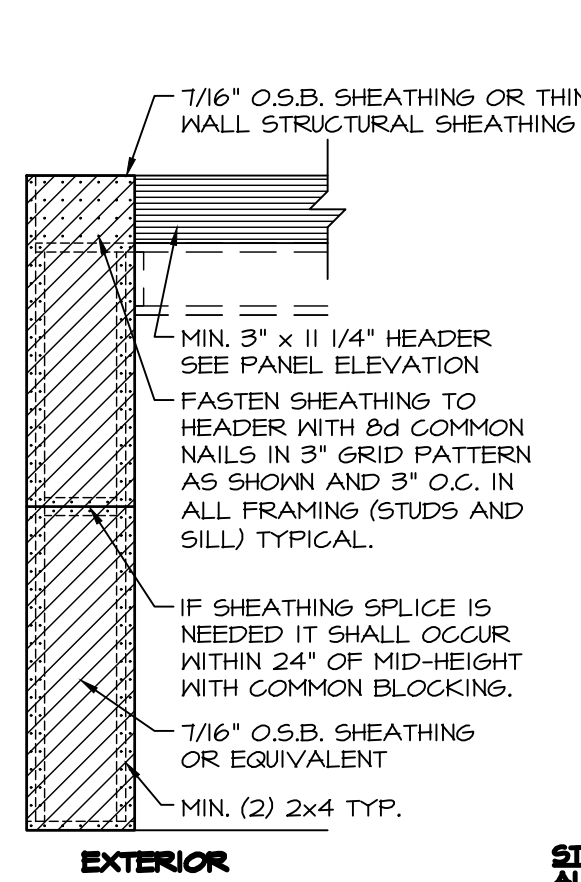
REV. NO.	DATE	REMARKS
18	2/6/22	NE - REVISED DETAIL 5/WB-1, ADDED HB6
19	2/6/22	ADM - GC (HT408) REVISED DETAILS UTILIZING STUDS TO INCLUDE REBAR
20	2/6/22	ADM - GC (HT408) REVISED DETAILS UTILIZING STUDS TO INCLUDE REBAR
21	6/14/23	CEL - REVISED DETAIL 20, 157, 158
22	6/14/23	CEL - REVISED DETAIL 21, 151
23	9/12/23	DLX - REVISED CONNECTOR CHART, REMOVED PART NUMBERS
24	9/12/23	DLR - REVISED DETAIL 22, H40
25	11/01/23	JAS - ADDED INTERIOR NOTE TO MSTC66 STRAPS DETAIL #4 (ARC-1195)
17	3/9/20	CEL - ADDED PONT NOTES TO 4/WB-1 FOR STRAP
16	1/10/20	CEL - REVISED 12/WB-1 TO REFERENCE 9/WB-1

NORTH CAROLINA PROFESSIONAL SEAL
44932
JOATHAN EDWARD ABERTS
NVR, Inc.
Firm license #: D-1477

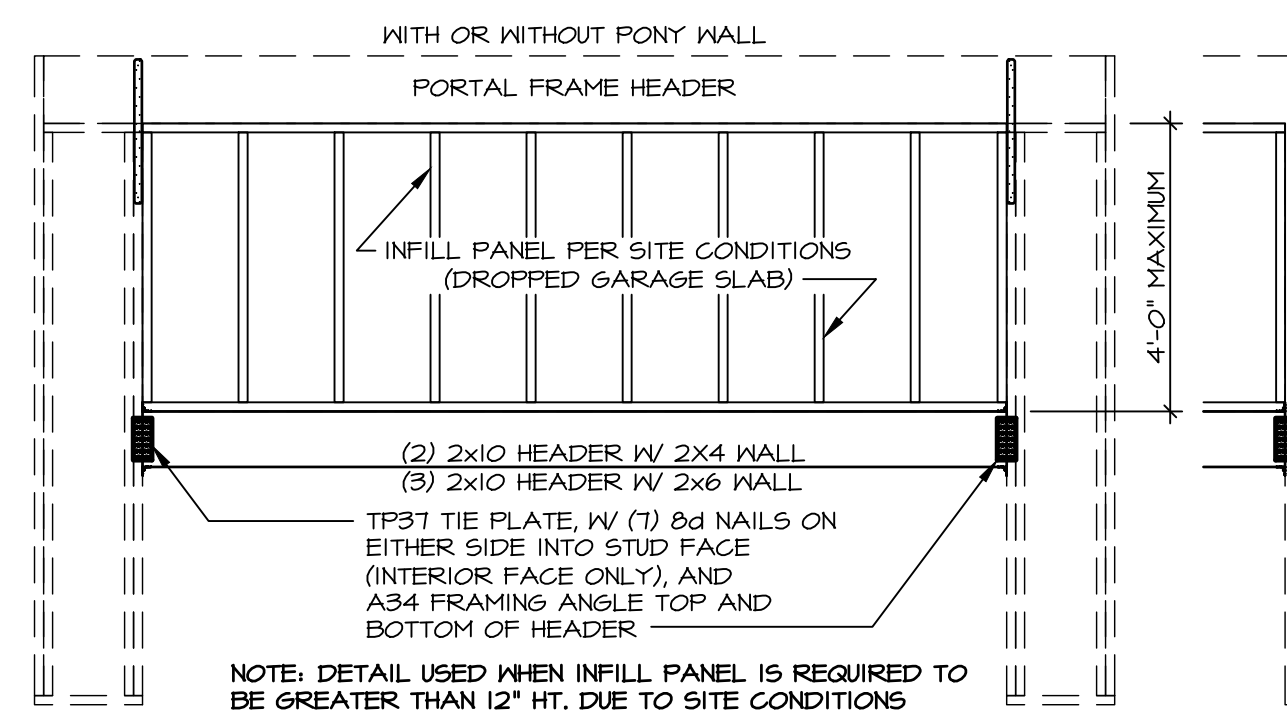
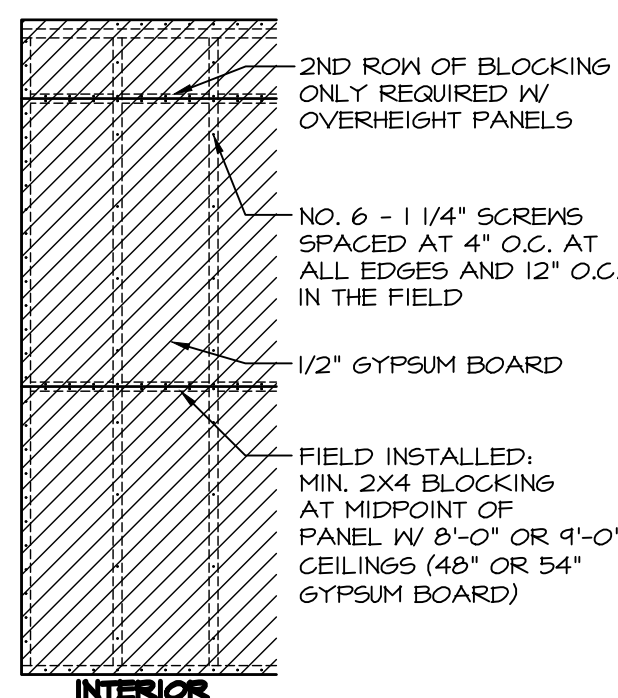
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5285

SHEET NO.	MODEL	WALL BRACING DETAILS	VERSION	DRAWN BY	KFT	DATE	2/16/12	OPTION	DESCRIPTION
WB-1	WB-1	WB-1	WB-1	WB-1	WB-1	WB-1	WB-1	WB-1	WB-1

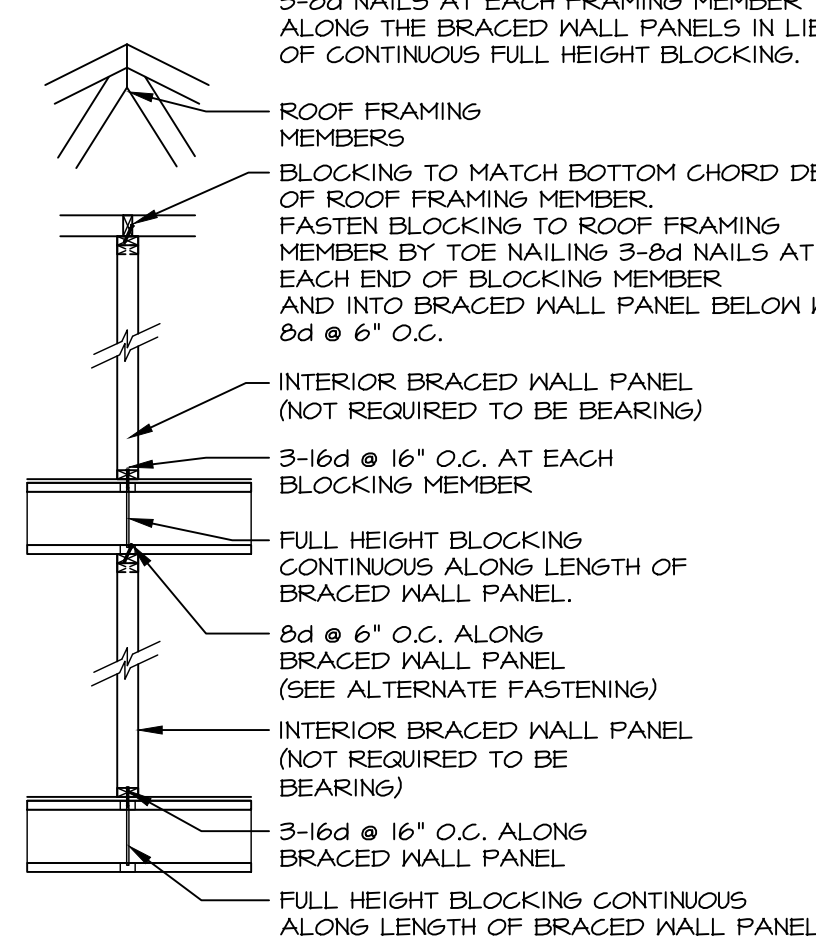
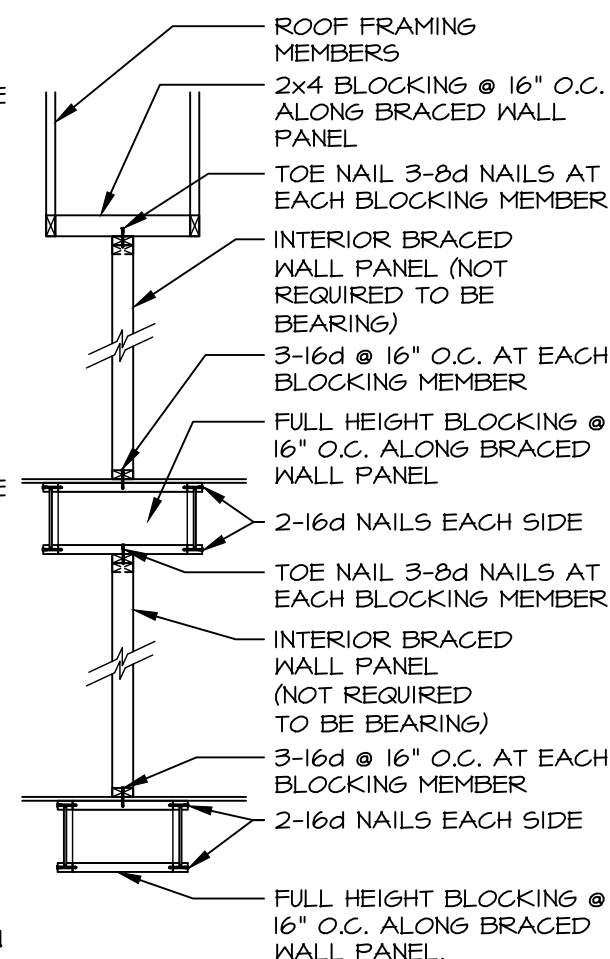
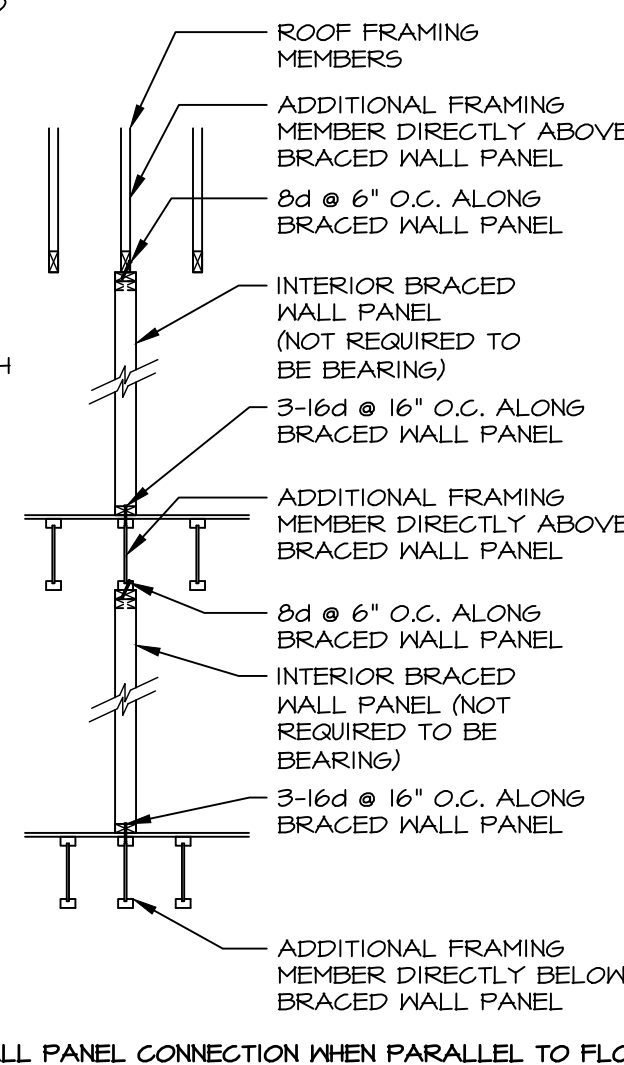
PROJECT DETAILS: NVR - Wall Bracing WB-1 - BRACED WALL - ENG.dwg 05/20/25 - 3:07 PM



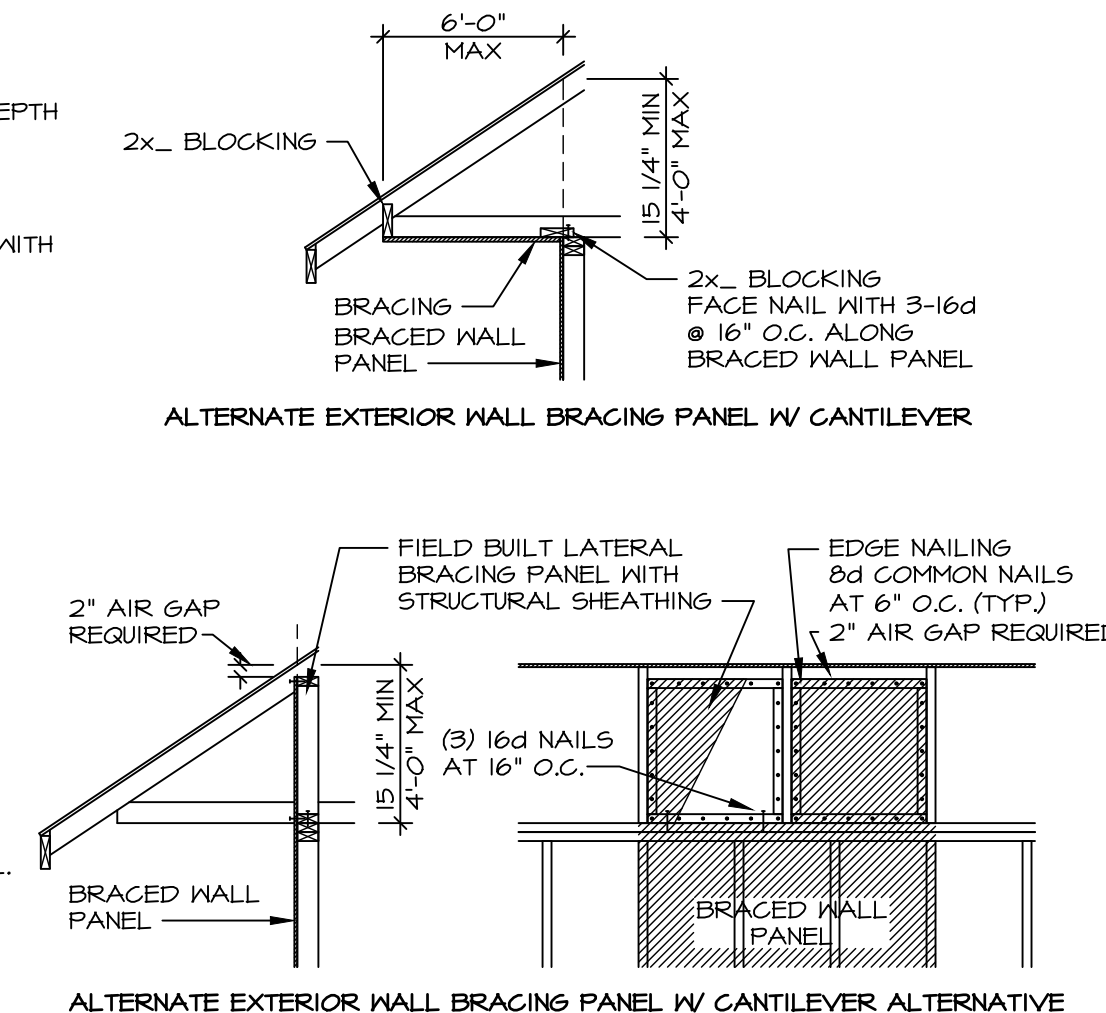
**PORTAL FRAME:
SHEATHING
APPLICATION DETAIL**



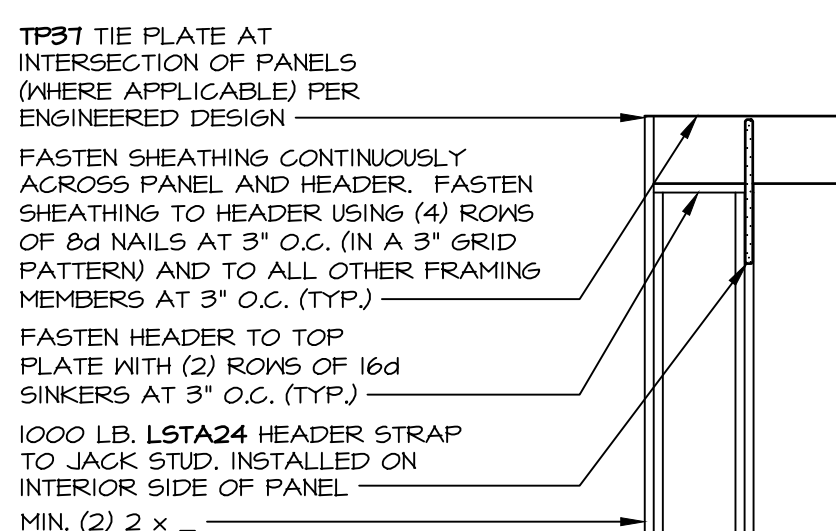
BLOCKED WALL CONSTRUCTION



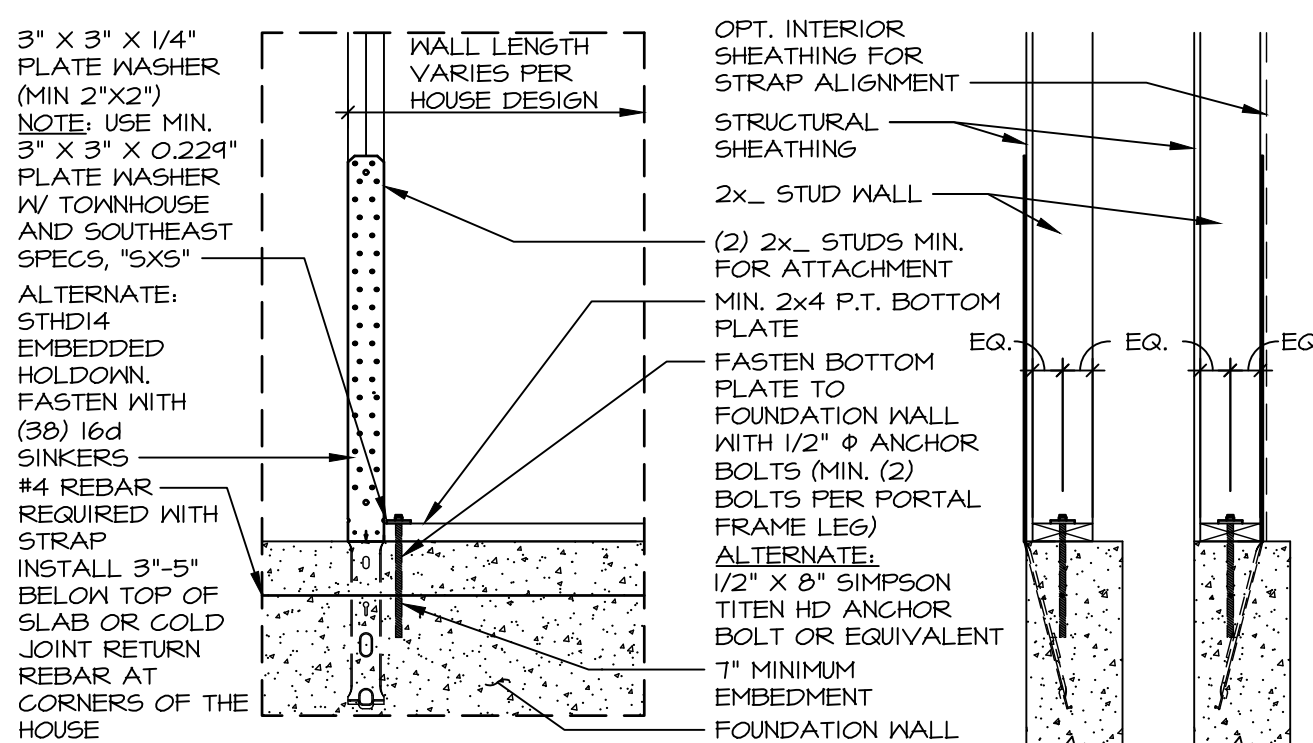
INFILL PANEL DETAIL



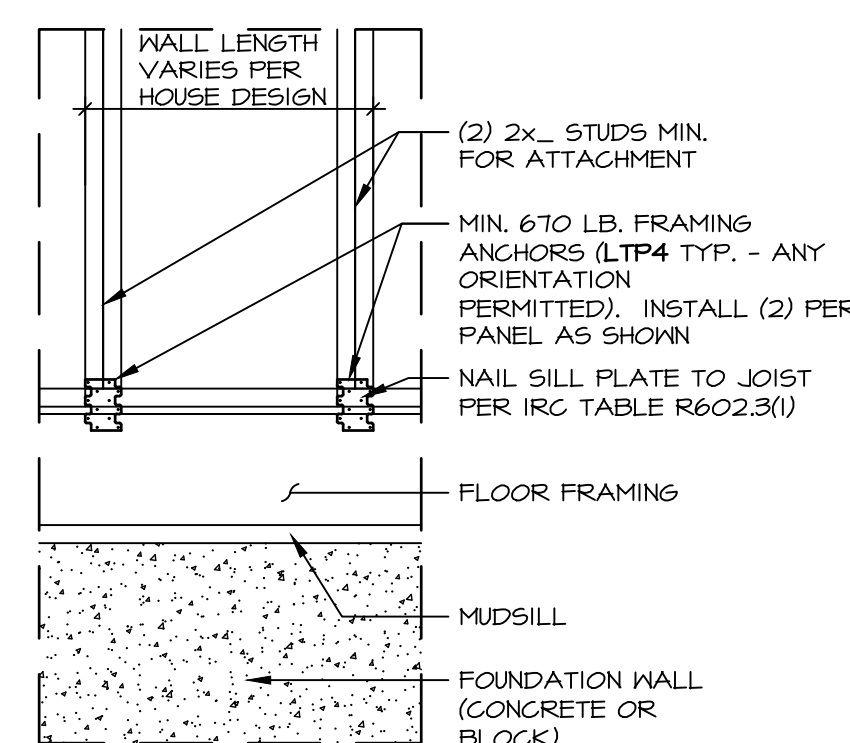
WALL BRACING PANEL CONNECTION DETAILS



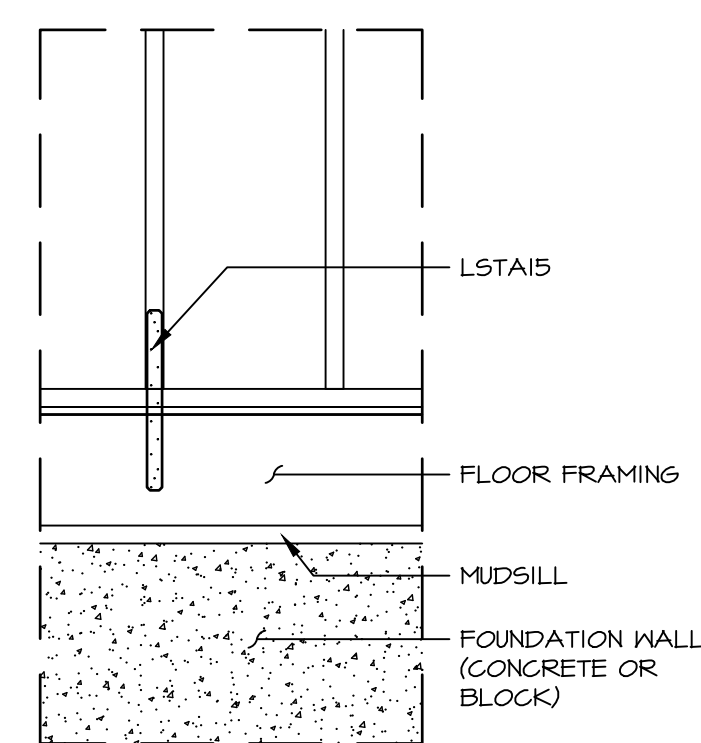
CONTINUOUSLY SHEATHED
PORTAL: TYP. HEADER /
PANEL CONNECTION



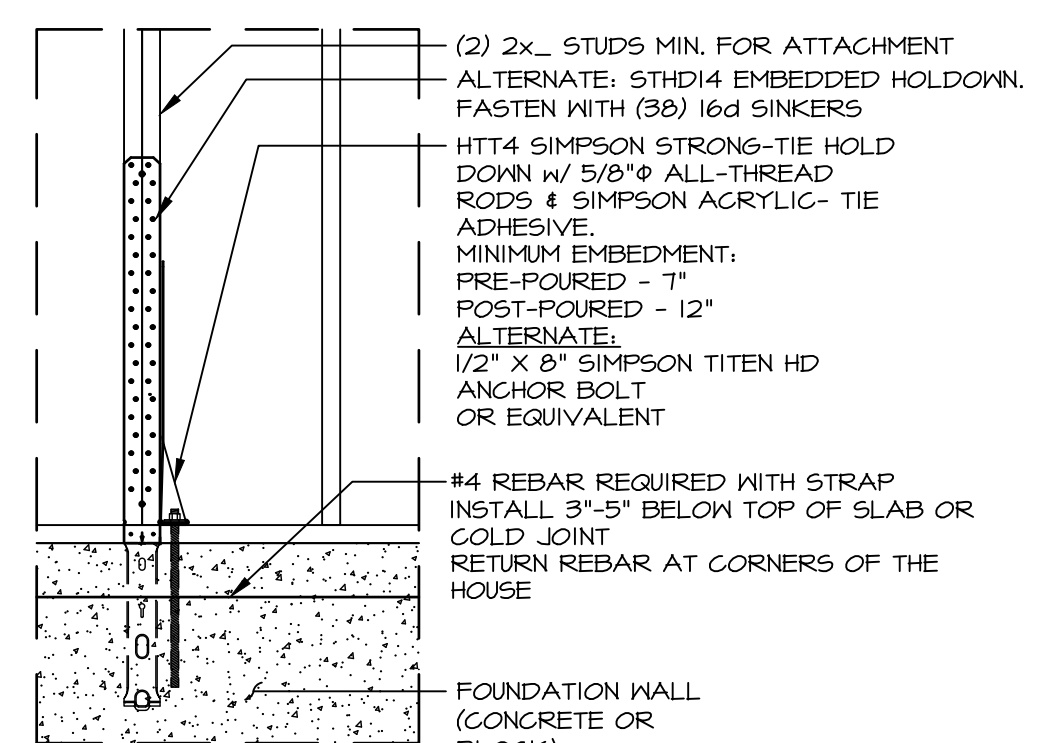
HOLD-DOWN DETAIL: FOUNDATION



HOLD-DOWN DETAIL: FRAMED FLOOR



HOLD-DOWN DETAIL:
FRAMED FLOOR



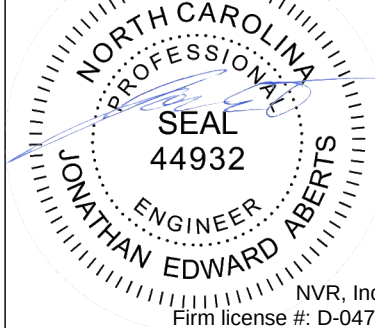
HOLD-DOWN DETAIL:
FOUNDATION

ID	BOTTOM CONNECTOR	QTY.	DETAIL	TOP CONNECTOR	QTY.	DETAIL
P1	3"x3"x1/4" PLATE WASHER 1/2" THREADED ROD	1		NONE	N/A	N/A
P2	3"x3"x1/4" PLATE WASHER 1/2" THREADED ROD	1		LSTA24	1	
P3	3"x3"x1/4" PLATE WASHER 1/2" THREADED ROD	1		MST46	1	
P4	LTP4	1		NONE	N/A	N/A
P5	LTP4	1		LSTA24	1	
P6	LTP4	1		MST46	1	
P7	LSTA15	1		NONE	N/A	N/A
P8	HTT4 5/8" A24 THR. ROD	1		NONE	N/A	N/A
P9	NONE	N/A	N/A	LSTA24	1	
P10	NONE	N/A	N/A	MST46	1	

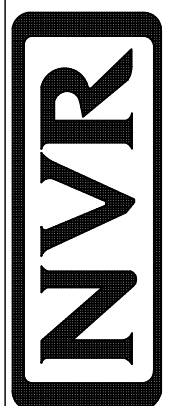
NOTES: THREADED ROD PART INCLUDES (2) NUTS AND (2) WASHERS

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REV.	NO.	DATE	REMARKS
	37	1/14/24	ARS - GC#B503 DETAIL B REVISED STAPLE SIZE FROM 1 1/4" TO 1 3/4"
	38	1/23/24	DLR - GC#45764 - REMOVED DETAIL E#203 CORNER DETAIL
	39	3/25/25	ARS - ADDED TO DETAIL H GC-PPH-4420
	34	3/25/25	ARS - ADDED DETAIL H GC-PPH-4420
	35	10/15/20	CEL - REVISED HWB#2 TO INCLUDE FLOOR TRUSSES
	32	10/15/20	CEL - ADDED NOTES DETAILING WHEN TO USE K#B-2
	33	6/9/21	ARS - REV. DTL C POINT WALL NOTES
	34	6/9/21	ARS - GC#F7829 - REVISED HWB#2 TO REMOVE USE OF FLAT BLOCKING
	35	12/15/22	DLR - GC#45626 - ADDED PEEP. WALL BRACING DTL. AND ALT. FSING. TO HWB-2
	36	9/4/23	DLR - GC#45626 - REVISED CONNECTORS CHART. REMOVED PARTS 1&2&3&5&6&7&8



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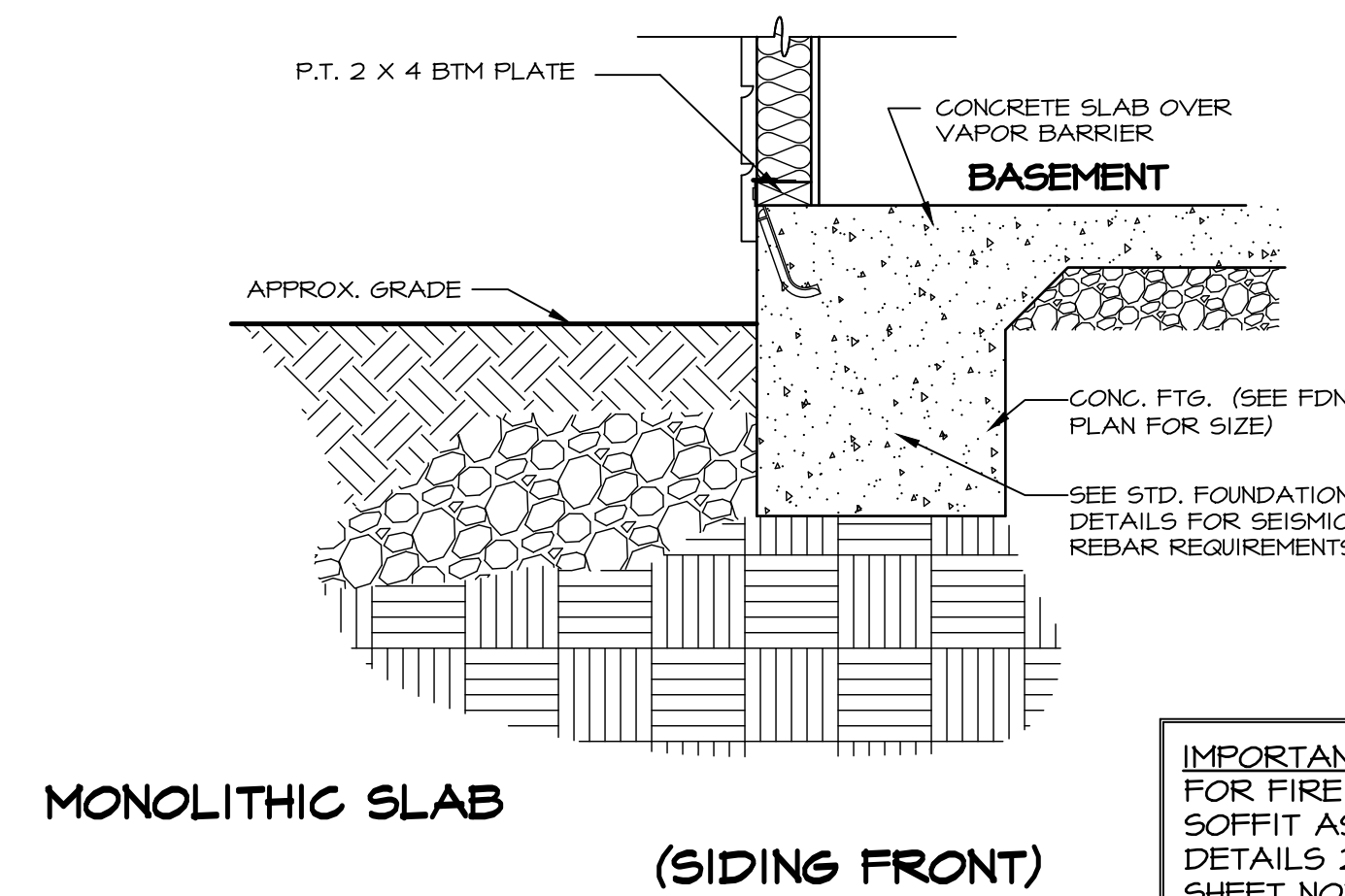
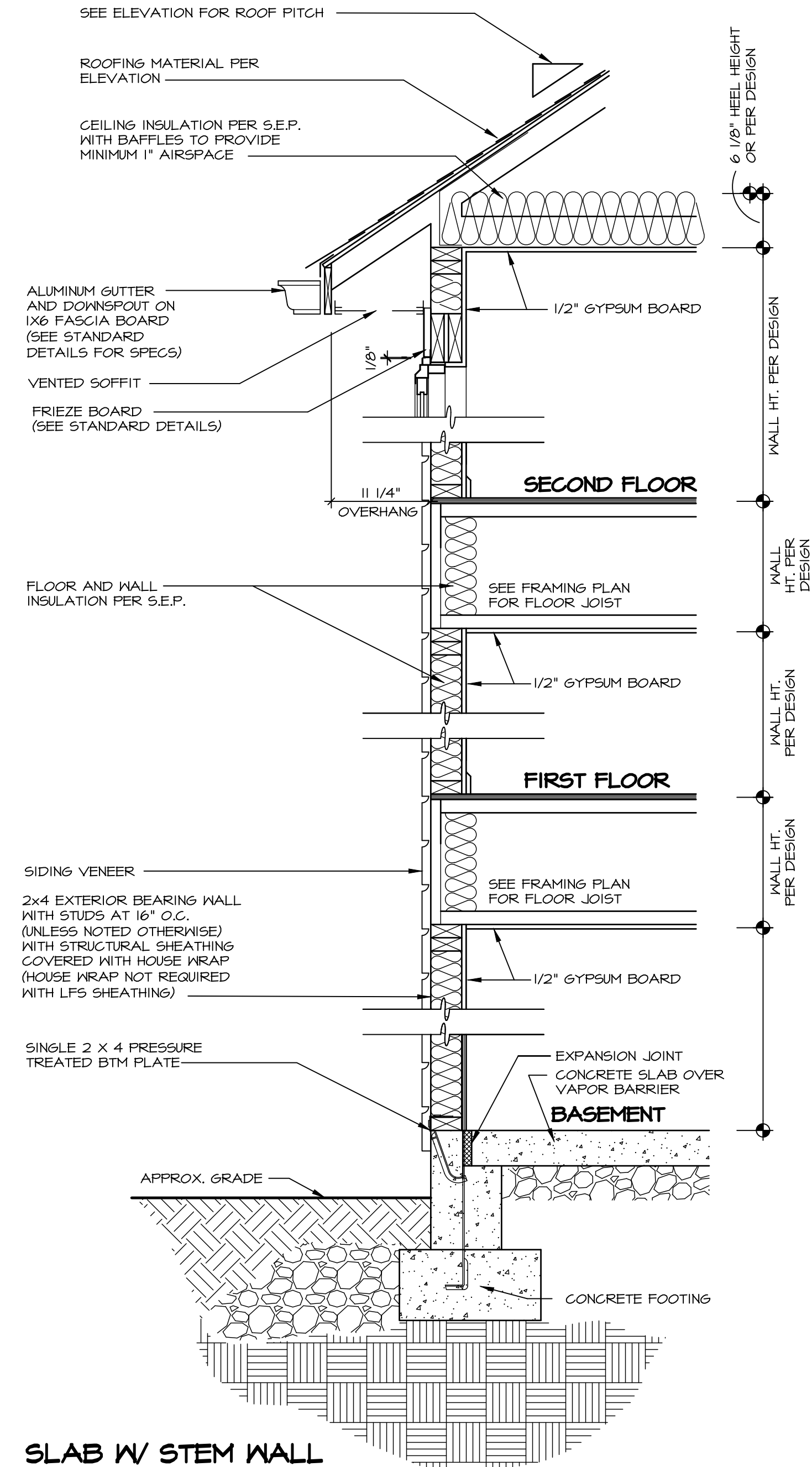
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SET NO.	
VERSION	
DRAWN BY	ELH
DATE:	4/8/14
OPTION	

SHEET NO.	MODEL
WB-2	WALL BRACING DETAILS
	DRAWING TITLE
	PREScriptive WALL BRACING DESIGN

	OPTION DESCRIPTION
--	--------------------

X:\NVR\2D AS SOLD\QA for As Sold\Detail\WB2 BRACED WALL PRESCRIPTIVE.dwg 05/08/25 - 10:40 am

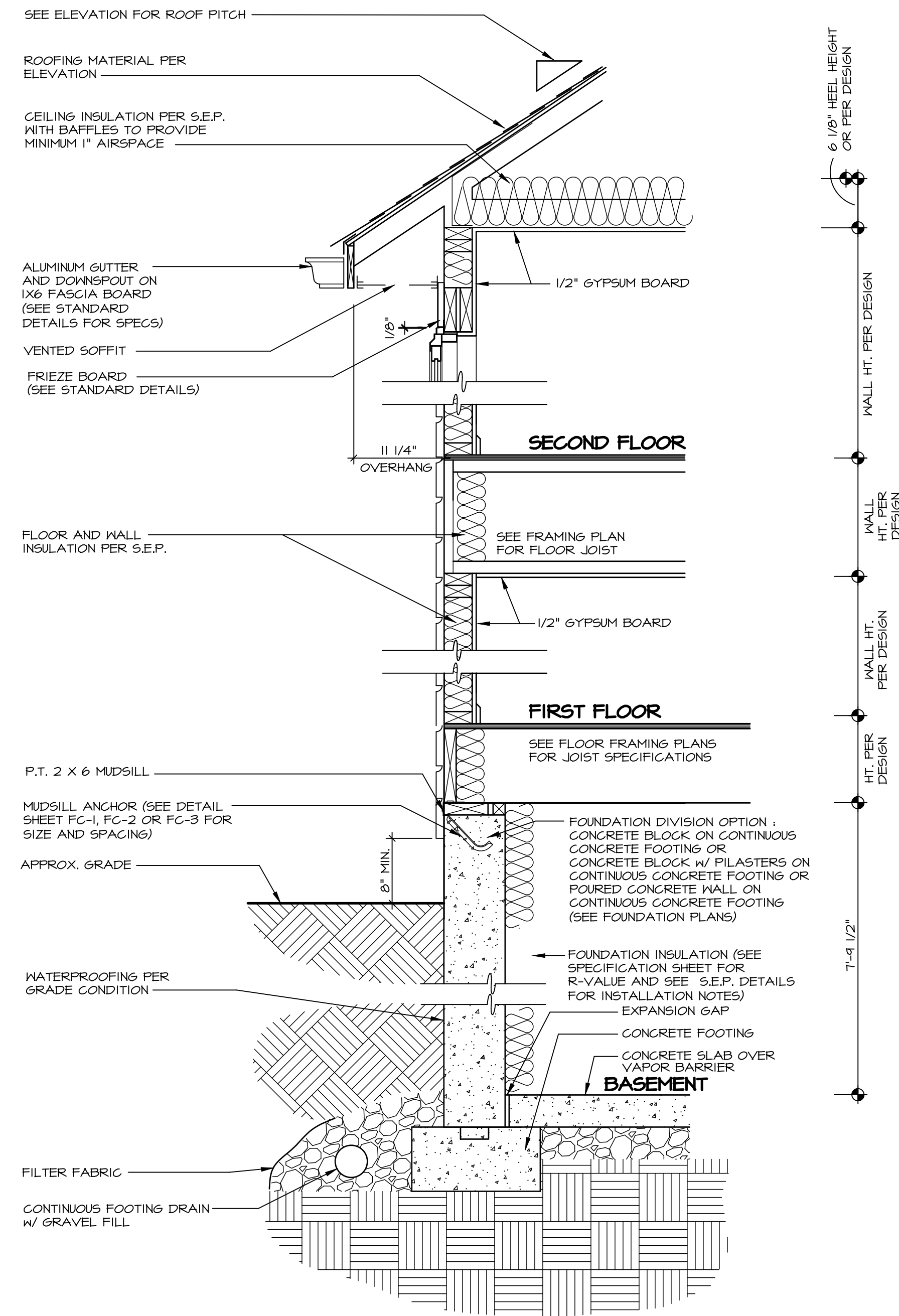


WALL SECTION GENERAL NOTE:

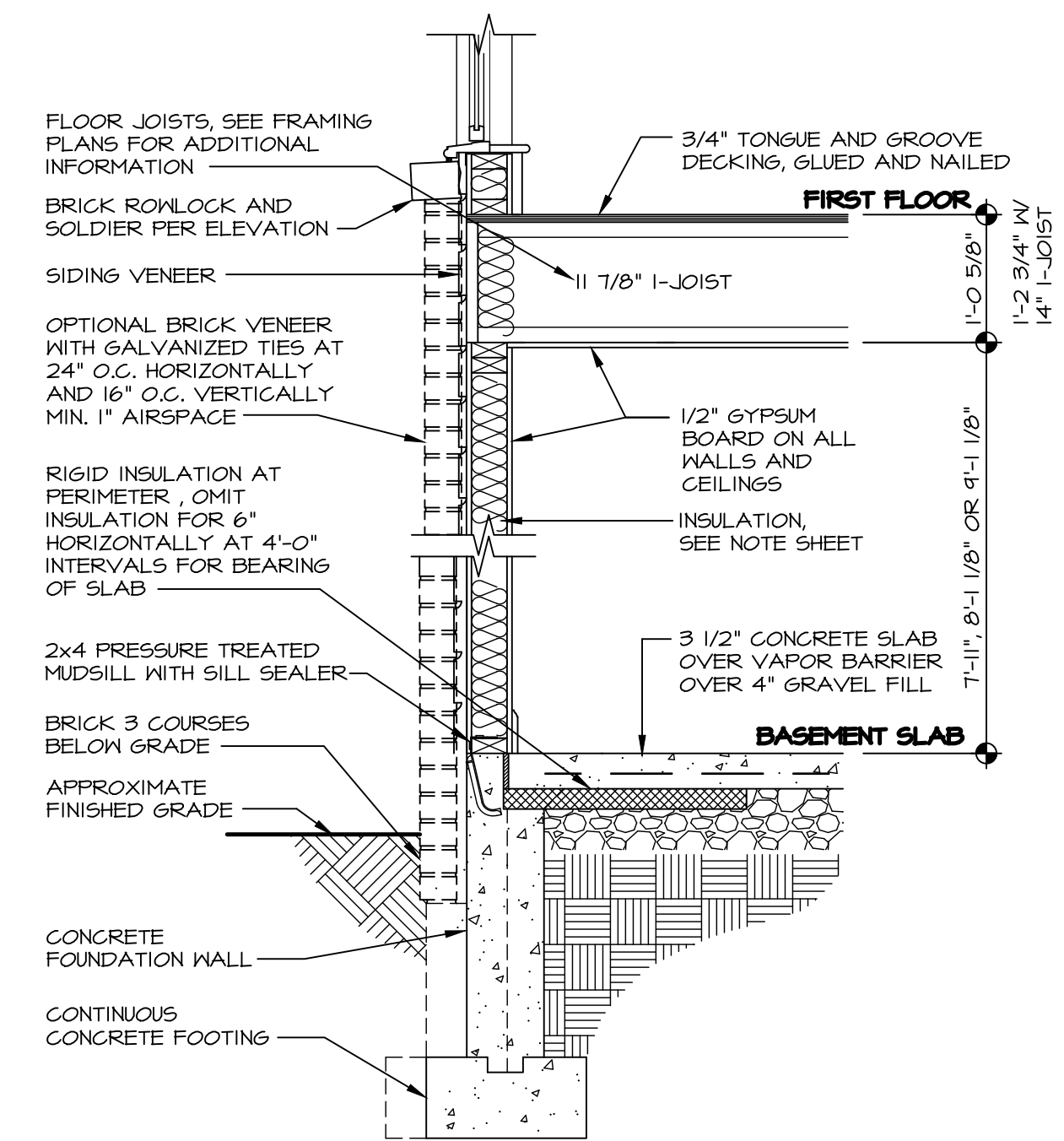
1. BRICK VENEER WEEP HOLES AND FLASHINGS SEE SPEC SHEET "FOUNDATION" SECTION NOTE #17
2. FOUNDATION FRAMING ANCHORS SEE SPEC SHEET "FOUNDATION" SECTION NOTE #15.
3. REFER TO "INSULATION" SECTION OF SPEC SHEET FOR R-VALUES.
4. SEE ATTACHED LOCAL INSULATION REQUIREMENTS

1
WS-IF
SCALE: 1" = 1'-0"
FOUNDATION TYPES
"FTE", "FTD", "FTS"

IMPORTANT NOTE:
FOR FIRE PROTECTION OF
SOFFIT AS SHOWN IN
DETAILS 2 AND 4, SEE SPEC
SHEET NOTES #31, #32, #33
UNDER THE "PLAN" SECTION



2
WS-IF
SCALE: 1" = 1'-0"
FOUNDATION TYPE "FBA", "FTA"



3
WS-IF
SCALE: 3/4" = 1'-0"
BASEMENT LEVEL / WALKOUT

NOTE:
FOR ALL FLASHING AND MOISTURE MANAGEMENT
INFORMATION REFERENCE THE FOLLOWING:
F-1 - SIDING VENEER & GENERAL
F-2 - BRICK VENEER
F-3 - STONE VENEER

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REV. NO.	DATE	REMARKS
1	7/1/17	E.B. - MISC. DRAWING CORRECTIONS
2	10/1/16	E.M. - REVISED LPS SHEATHING NOTE FOR WS-IF AND 2 (REQUEST 559)
3	9/16/14	GTO - REVISED SEISMIC D FOOTING REBAR REQUIREMENTS ON DETAIL 1
4	7/26/14	NS - MOISTURE MANAGEMENT REVISION (JOB 15606)
5	10/12/20	JPS - ADDED DETAIL (3)
6	1/31/23	SJB - REMOVED MIL SPEC

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SHEET NO.	SET NO.	VERSION	DRAWN BY	DATE:	OPTION
WS-IF	STANDARD DETAILS	WS-IF	WALL SECTION DETAILS	ATTACHED - SIMPLY RYAN	