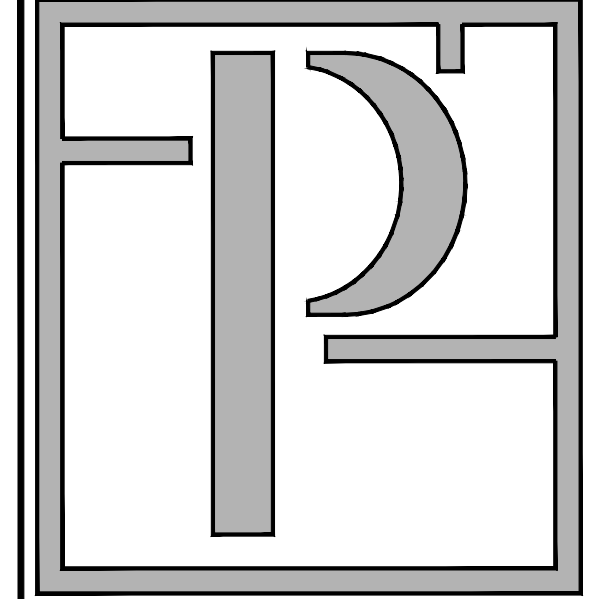


NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

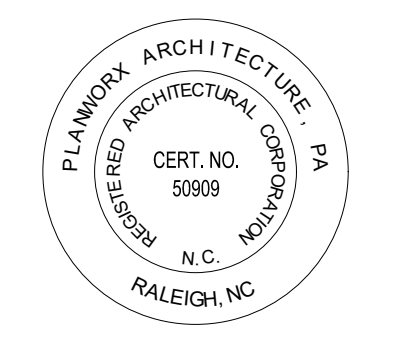
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code.

02/26/2021





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Holly Springs, NC



OWNER / CONTRACTOR NOTES:

- THE SEALING OF THIS PLAN AUTHORIZES THE CONSTRUCTION FROM THESE PLANS FOR ONE HOUSE ON ONE LOT. UNSEALED PLANS MUST NOT BE USED FOR CONSTRUCTION. CONSTRUCTION FROM THESE PLANS MUST BE FROM THE LATEST APPROVED DATE PLANS, INCLUDING REVISIONS AND ADDENDA.
- CONSTRUCTION DEVIATING FROM THESE PLANS WILL INVALIDATE THEIR PLANS REVIEW PERMITTED USE. THE ARCHITECT MUST BE NOTIFIED IMMEDIATELY OF CONSTRUCTION DEVIATING FROM DEPICTED OR IMPLIED INFORMATION HEREIN. LETTER FROM THE ARCHITECT/ENGINEER MAY BE OBTAINED FOR A FEE TO VERIFY THE FEASIBILITY AND COMPLIABILITY OF ANY CHANGES. HOWEVER, THE OWNER/CONTRACTOR ASSUMES ALL RISK FROM DEVIATING FROM THESE PLANS.
- DO NOT SCALE DRAWINGS, BUT RATHER INQUIRE OF PLANWORX ARCHITECTURE. REPRODUCTION OF THESE DRAWINGS ARE PROHIBITED UNLESS GRANTED WRITTEN CONSENT FROM PLANWORX ARCHITECTURE.
- THE OWNER AND/OR CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE FOLLOWING INFORMATION (NON-EXHAUSTIVE): BUILDING PERMITS, SITE ENGINEERING INCLUDING SURVEYING, TOPOGRAPHIC STUDIES, GEOTECHNICAL REPORTS, AND SEPTIC PERMITS; INTERIOR CASEWORK DESIGN; PLUMBING, MECHANICAL, AND ELECTRICAL DESIGN.

BUILDING CODE NOTES

THIS PLAN HAS BEEN DESIGNED UNDER THE 2018 NORTH CAROLINA RESIDENTIAL CODE.

APPLICABLE CODES:
N.C. FIRE CODE, 2018
N.C. MECHANICAL CODE, 2018
N.C. PLUMBING CODE, 2018
N.C. ENERGY CODE, 2018
N.C. ELECTRICAL CODE, 2017
N.C. GAS CODE 2018

CONSTRUCTION NOTES:

- THE FOLLOWING IS A NON-EXHAUSTIVE LIST OF SOME COMMONLY MISSED CODE REQUIREMENTS AND ARE ENFORCEABLE IN THE CONSTRUCTION FROM THESE PLANS. SEE THE N.C. RESIDENTIAL CODE BOOK FOR MORE INFO.
- (R308.4) ALL GLAZING WITHIN 24" OF EITHER SIDE OF A DOOR IN A CLOSED POSITION, AND ON THE SAME WALL PLANE SHALL BE TEMPERED. ALL WINDOWS THAT MEET ALL OF THE FOLLOWING CONDITIONS SHALL BE TEMPERED: A) INDIVIDUAL PANE OF MIN. 9 S.F., B) BOTTOM EDGE IS WITHIN 18" OF FLOOR, C) TOP EDGE IS AT LEAST 36" ABOVE FLOOR, AND D) GLAZING IS WITHIN 36" HORIZ OF WALKING SURFACE. TEMPERED GLAZING IS ALSO REQUIRED WITHIN 60" OF HOT TUBS OR STAIR LEADING AND FINISH EDGES. TEMPERED WINDOWS ALSO REQUIRED PER REMAINDER OF THIS CODE SECTION.
 - (R310.1) ALL SLEEPING ROOMS AND BASEMENTS WITH HABITABLE SPACE SHALL HAVE AT LEAST ONE EGRESS WINDOW CONFORMING TO THE FOLLOWING: A) MIN. 4.0 S.F. CLEAR OPENING, B) MIN. TOTAL GLASS AREA OF 5.0 SQ (GROUND FLOOR WINDOW) AND 5.7 S.F. (UPPER STORY WINDOW). IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHOOSE THE PROPER CONFORMING WINDOW, AND HAVE EGRESS WINDOWS PROPERLY DISTRIBUTED AND INSTALLED AS REQUIRED.
 - (R311.2) ALL INTERIOR EGRESS DOORS AND A MINIMUM OF ONE EXTERIOR EGRESS DOOR SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT USE OF A KEY OR SPECIAL KNOWLEDGE.
 - (R311.7.5) MAXIMUM STAIR RISER HEIGHT SHALL BE 8-1/4", AND MINIMUM TREAD SHALL BE 9".
 - (R314.3) SMOKE ALARMS SHALL BE INSTALLED AND INTERCONNECTED, WITH BATTERY BACK-UP IN THE FOLLOWING AREAS: EACH SLEEPING ROOM, IN THE AREA (HALLWAY) RIGHT OUTSIDE THE SLEEPING ROOMS, AND EACH STORY. THE ONE OUTSIDE THE SLEEPING ROOMS WILL SATISFY THAT STORY.
 - (R402.1.2) ALL LUMBER SHALL BE PRESSURE TREATED AND DRIED AFTER TREATMENT IN ACCORDANCE WITH AWPA U1 AND SHALL BEAR THE LABEL OF AN ACCREDITED AGENCY.
 - (R406.1) BITUMINOUS DAMPROOFING SHALL BE APPLIED TO EXTERIOR FOUNDATIONS OF ALL HABITABLE AND USABLE (STORAGE, ETC) SPACES.
 - (R408.1.2) INSTALL ONE FOUNDATION VENT WITHIN 3" OF EACH CORNER (NOT ONE EACH SIDE OF EACH CORNER).
 - (R703.4) FLASH ALL VALLEYS AND WALL/ROOF INTERSECTIONS, AND CHIMNEY AND OTHER ROOF PENETRATIONS, USE ICE AND WATER SHIELD ON ALL ROOFS LESS THAN 4:12 SLOPE. FLASHING TO BE NON-CORROSIIVE.
 - (R807.1) BUILDER TO LOCATE 22"x30" ATTIC ACCESS IN ALL ATTICS WITHOUT STAIR ACCESS. LOCATE ACCESS TO PROVIDE A 30" CLEAR SPACE ABOVE ACCESS DOOR-TYP.
 - (R1001) MASONRY FIREPLACE WALLS TO BE MIN. 8" THICK, AND MIN. 2" TO FRAMING. POURED HEARTH IS TO HAVE MIN #4@12" O.C. EACH WAY. HEARTHS TO BE MIN. 20" FROM FIREBOX AND HAVE MIN. 12" WIDER THAN FIREBOX ON EACH SIDE.
 - (R403.1.6) ANCHOR BOLTS SHALL BE MIN. 1/2" DIAMETER & SHALL EXTEND A MINIMUM 7" INTO MASONRY OR CONCRETE. ANCHOR BOLTS TO BE NO MORE THAN 6" O.C. AND WITHIN 12" OF THE CORNER.
 - (R315) INSTALL APPROVED CARBON MONOXIDE ALARM OUTSIDE EACH BEDROOM AND IN IMMEDIATE VICINITY OF EACH SEPARATE SLEEPING AREA.

CLIMATE ZONE	FENESTRATION U-FACTOR	FENEST SHGC	CEILING R-VALUE	FRAME WALL R-VALUE	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE	CRAWL WALL R-VALUE
3	0.35	0.30	38 OR 30 CONT.	15, 13+2.5	19	5/13	0	5/13
4	0.35	0.30	38 OR 30 CONT.	15, 13+2.5	19	10/15	10	10/15
5	0.35	NR	38 OR 30 CONT.	19, 13+5 OR 15+3	30	10/15	10	10/19

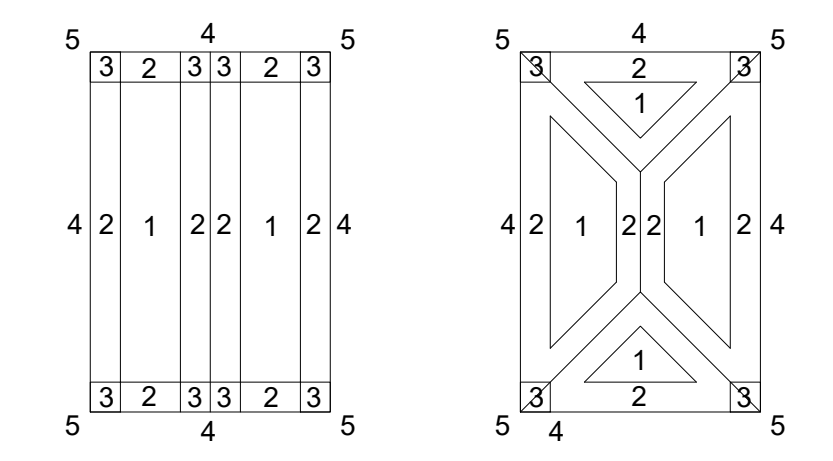
CLIMATIC AND GEOGRAPHIC NOTES:

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA (TABLE R301.2)(1)

ROOF TYPE	WIND SPEED (MPH) (BASED ON 30-MIN. DURATION)	DESIGN CATEGORY	SUBJECT TO DAMAGE FROM WIND UPLIFT	WIND UPLIFT (PSF)	ICE REMOVAL (REQUIRED)	FLOOD PROTECTION (REQUIRED)	MIN. FINISHING DEPTH	MIN. FINISHING DEPTH
10	115	II	WEATHERING	FRONT LINE	TERMINATE	DECAY	20	LOCAL
10	89	II	MOD. TO HEAVY	MOD. TO HEAVY	MOD. TO HEAVY	MOD. TO HEAVY	20	LOCAL

Wind Load: Basic Wind Speed 115 MPH (3-SECOND GUST)
Exposure Category B (Suburban)

Wind Zone Exposure Plans:



Note: 3 = 8' Long (Typ.)

Component and Cladding Loads: (TABLE R301.2)(2) & (3)
Worst Case - 10 s.f. (typ.)

Mean Roof Hgt.	Up to 30'	30'-1' - 35'	35'-1' - 40'	40'-1' - 45'
Exposure Zone	Design Pressure	Uplift Force	Design Pressure	Uplift Force
Zone 1:	16.7 psf	-18.0 psf	17.5 psf	-18.9 psf
Zone 2:	16.7 psf	-21.0 psf	17.5 psf	-22.1 psf
Zone 3:	16.7 psf	-24.0 psf	17.5 psf	-22.9 psf
Wall, Zone 4:	18.2 psf	-18.0 psf	19.1 psf	-20.0 psf
Wall, Zone 5:	18.2 psf	-24.0 psf	19.1 psf	-25.2 psf

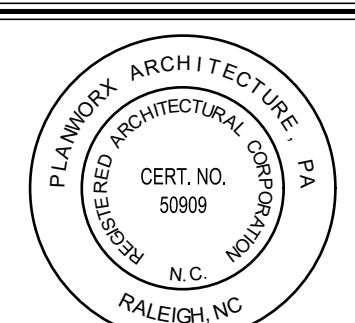
Windows:
***All windows shall be labeled to conform with AAMA WDMA/CSA 1011.5 2/A440
***All windows shall be rated with Impact Glazing if windspeeds are equal to or exceed 145 MPH

PROJECT DATA:

LEAD DESIGN CORPORATION: Planworx Architecture, P.A.
CERTIFICATION #: 50909

PLAN DESIGNER: FIRM NAME: Planworx Architecture, P.A. Marc W. Mills, R.A.
License #: 7579 Telephone #: (919) 846-8100

Structural: Planworx Architecture, P.A. Marc W. Mills, R.A.
License #: 7579 Telephone #: (919) 846-8100



DESIGN DATA:

PROJECT SQUARE FOOTAGES

Heated Square Footage	Value
First Floor	2,285.0
Second Floor	393.9
Total	2,678.9

Unheated Square Footage

Front Porch	250.7
Garage	478.0
Grill Deck	66.7
Screened Porch	226.8
Unfin. Attic	957.3

BUILDING DATA:

Construction Type: V-B
Use Group: R-3
Building Height: 26'-10"
Number of Stories: 2
Mean Roof Height: 19'-9"

Structure: Bearing Wall
Basic Structural System: Earthquake Wind
Soil Bearing Capacity: 2,000 psf (Presumptive)

HEIGHTS ARE BASED ON GRADE LINE PROVIDED ON ELEVATIONS - VERIFY IN FIELD

INDEX OF DRAWINGS:

SHEET	SHEET NAME
CS-1	Cover Sheet
A-1	Elevations - Front and Left
A-2	Elevations - Rear and Right
A-3	Roof Thumbnail Details
A-4	First Floor Plan
A-5	Second Floor Plan
AS-1	Crawl Foundation & First Floor Framing
AS-2	Second Floor Framing
AS-3	Second Floor Ceiling Framing
AS-4	Roof Framing
D-1	Standard Details
D-2	Standard Details
D-3-C	Standard Details
D-4	Standard Details

PROGRESS DATE:	2/15/19	DESCRIPTION
ISSUE DATE:		
REVISIONS NUMBER:		
DATE:		

PROJECT NO: 001719
DRAWN BY: JT
CHECKED BY: BB/JT

SHEET TITLE: Cover Sheet

SHEET NUMBER:

CS-1

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5. Planworx Architecture, P.A. retains ownership of all of designs depicted and implied herein. 6. Planworx Architecture, P.A. is not responsible for estimating, maintaining, or regulating construction costs associated with these plans.
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FRONT ELEVATION
1/4"=1'-0"

ARCHITECTURAL PLANS
EXTERIOR MATERIALS

- = SHINGLE ROOF PER BUILDER
- = METAL ROOF PER BUILDER
- = HORIZONTAL SIDING PER BUILDER
- = VERTICAL SIDING PER BUILDER. EXPOSURE TO BE DET. BY BUILDER U.N.O., OVER FULL 15# FELT PAPER, LAPPED 6"
- = SHAKE SIDING PER BUILDER
- = BOARD-N-BATTEN PER BUILDER
- = BRICK PER BUILDER
- = STONE PER BUILDER
- = STUCCO PER BUILDER
- = SCREEN PER BUILDER
- = BRICK ROWLOCK/SOLDIER PER BUILDER
- = STONE ROWLOCK/SOLDIER PER BUILDER

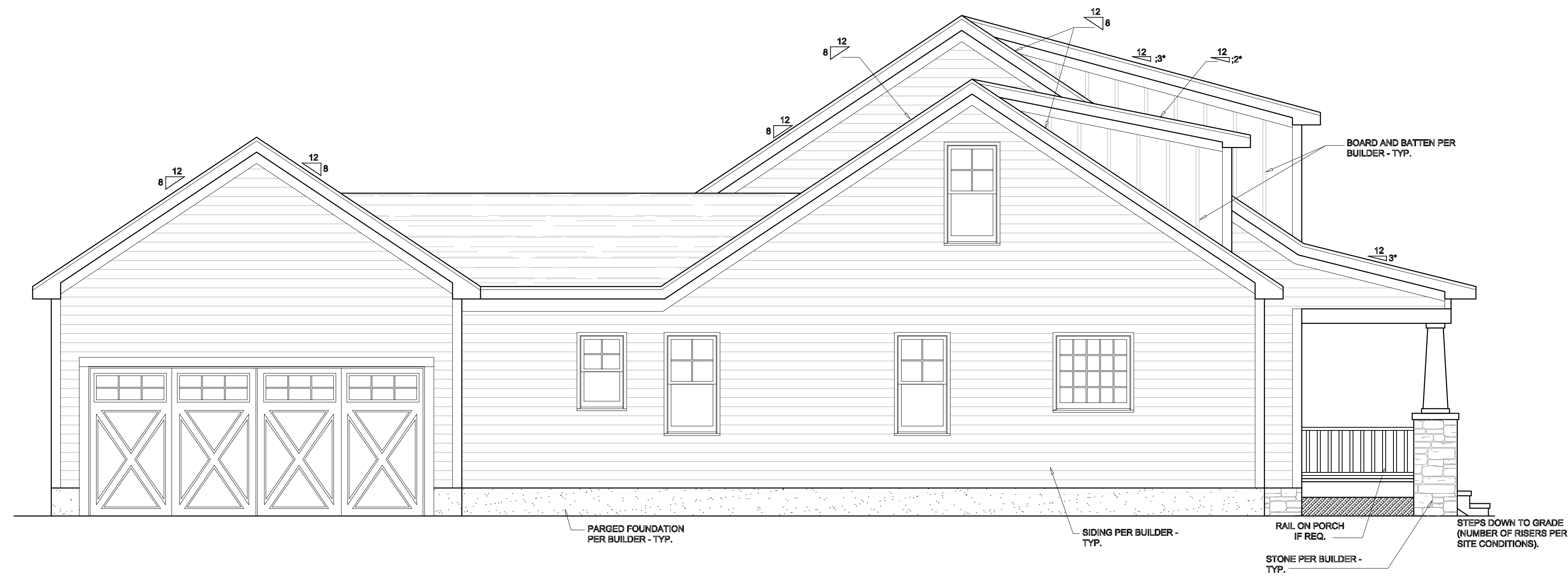
GENERAL NOTES

- *USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.
- SEE FLOOR PLANS, ROOF PLAN, AND/OR ROOF FRAMING DETAIL SHEET FOR PLATE HEIGHTS AT RAFTER AND/OR TRUSS BEARING LOCATIONS.
- SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATIONS.
- SEE SHEET D-2 FOR FLASHING DETAILS AND REQUIRED LOCATIONS.

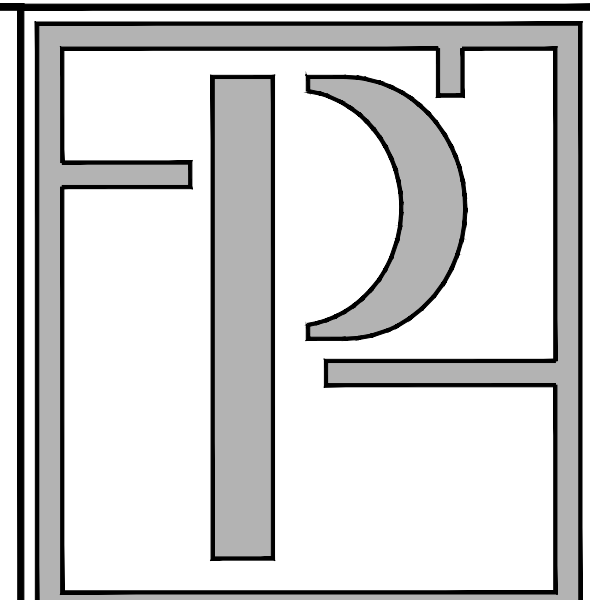
REQUIRED FLASHING LOCATIONS

- 1) ALL MATERIAL CHANGE INTERSECTIONS.
- 2) ALL WINDOW / DOOR OPENINGS.
- 3) ALL ROOF VALLEYS.

BUILDER TO VERIFY ON SITE FLASHING IS INSTALLED TO MEET CODE REQUIREMENTS.



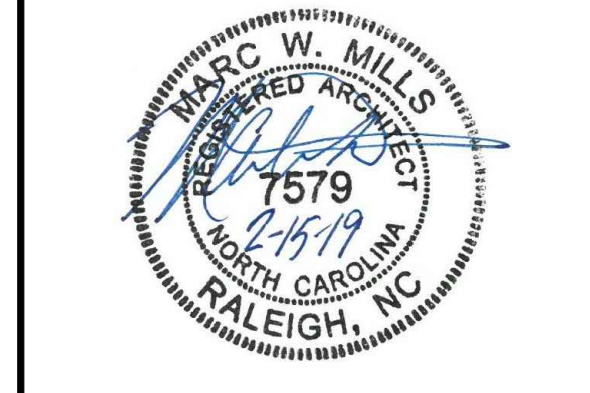
LEFT ELEVATION
1/4"=1'-0"



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PROGRESS DATE:	2/15/19	DESCRIPTION
ISSUE DATE:		
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PROJECT NO: 001719
DRAWN BY: JT
CHECKED BY: BB/JT
SHEET TITLE:
Elevations - Front and Left
SHEET NUMBER:

A-1

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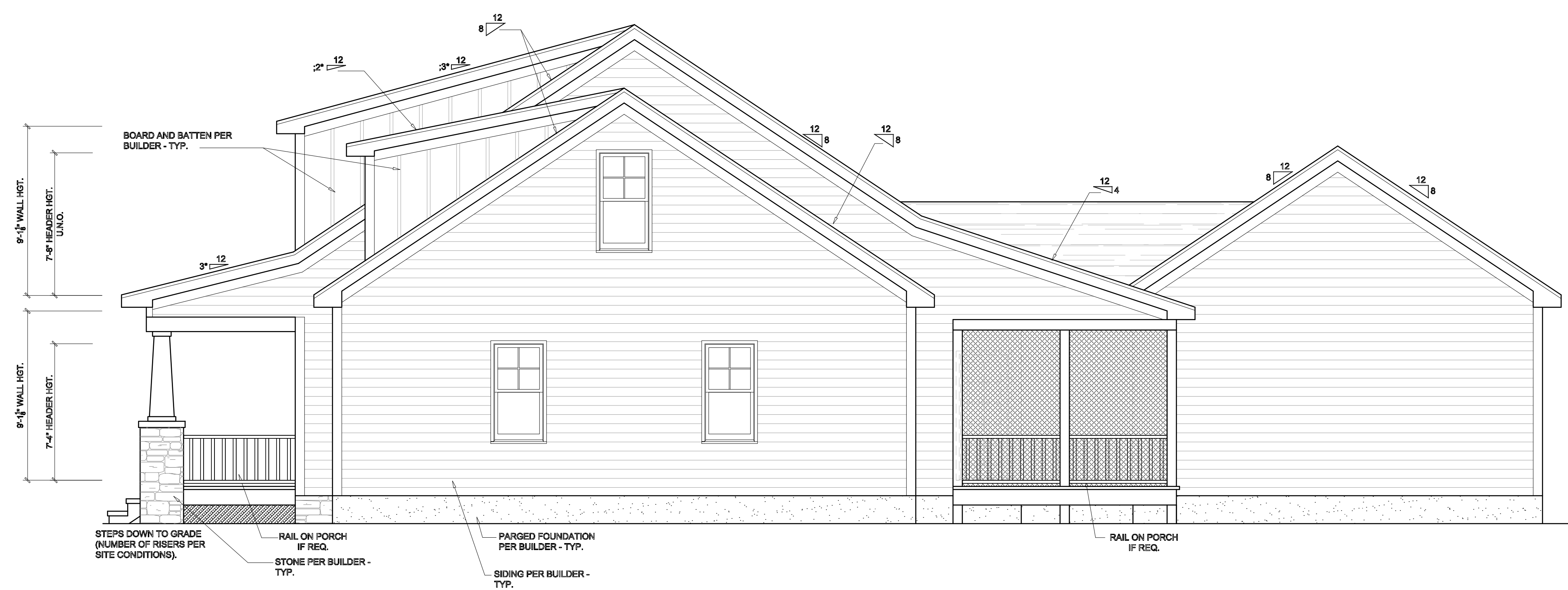
REAR ELEVATION

1/4"=1'-0"

ARCHITECTURAL PLANS	
EXTERIOR MATERIALS	
	= SHINGLE ROOF PER BUILDER
	= METAL ROOF PER BUILDER
	= HORIZONTAL SIDING PER BUILDER
	= VERTICAL SIDING PER BUILDER. EXPOSURE TO BE DET. BY BUILDER U.N.O., OVER FULL 15# FELT PAPER, LAPPED 6"
	= SHAKE SIDING PER BUILDER
	= BOARD-N-BATTEN PER BUILDER
	= BRICK PER BUILDER
	= STONE PER BUILDER
	= STUCCO PER BUILDER
	= SCREEN PER BUILDER
	= BRICK ROWLOCK/SOLDIER PER BUILDER
	= STONE ROWLOCK/SOLDIER PER BUILDER

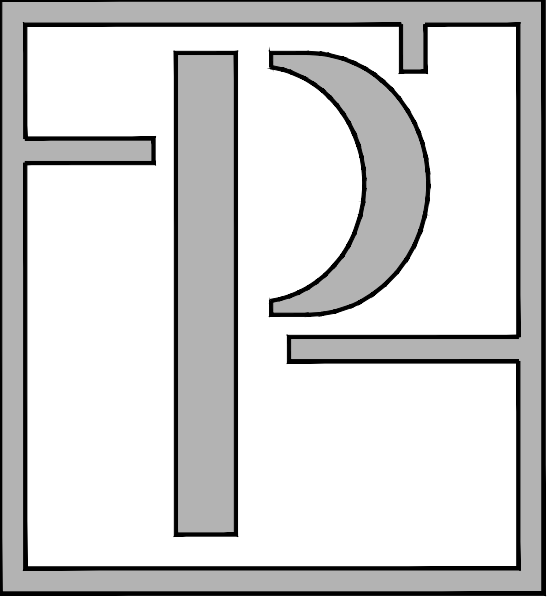
GENERAL NOTES
 *USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.
 SEE FLOOR PLANS, ROOF PLAN, AND/OR ROOF FRAMING DETAIL SHEET FOR PLATE HEIGHTS AT RAFTER AND/OR TRUSS BEARING LOCATIONS.
 SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATIONS.
 SEE SHEET D-2 FOR FLASHING DETAILS AND REQUIRED LOCATIONS.

REQUIRED FLASHING LOCATIONS
 1) ALL MATERIAL CHANGE INTERSECTIONS.
 2) ALL WINDOW / DOOR OPENINGS.
 3) ALL ROOF VALLEYS.
 BUILDER TO VERIFY ON SITE FLASHING IS INSTALLED TO MEET CODE REQUIREMENTS.



RIGHT ELEVATION

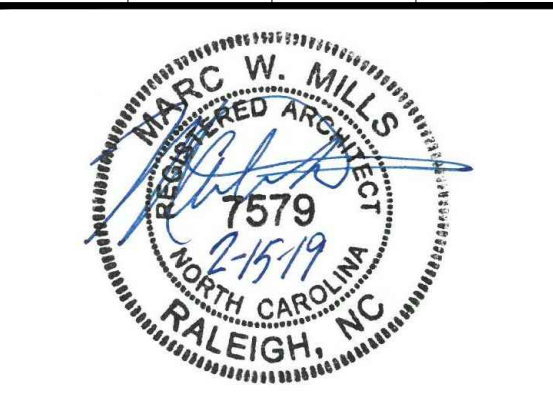
1/4"=1'-0"



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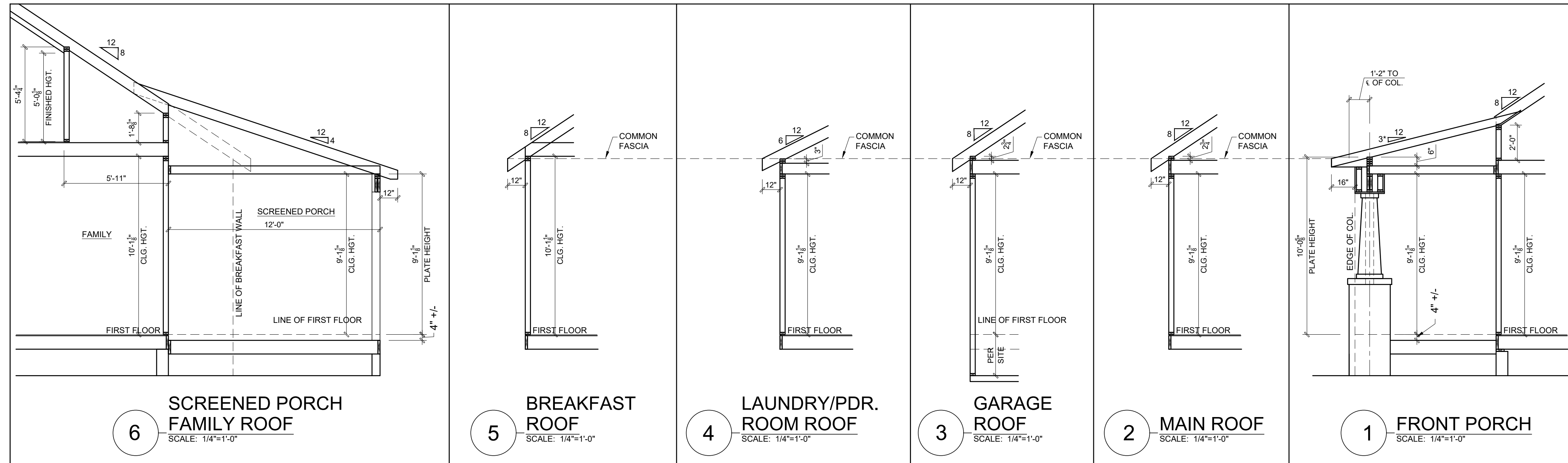
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NUMBER		

PROJECT NO: 001719
 DRAWN BY: JT
 CHECKED BY: BB/JT

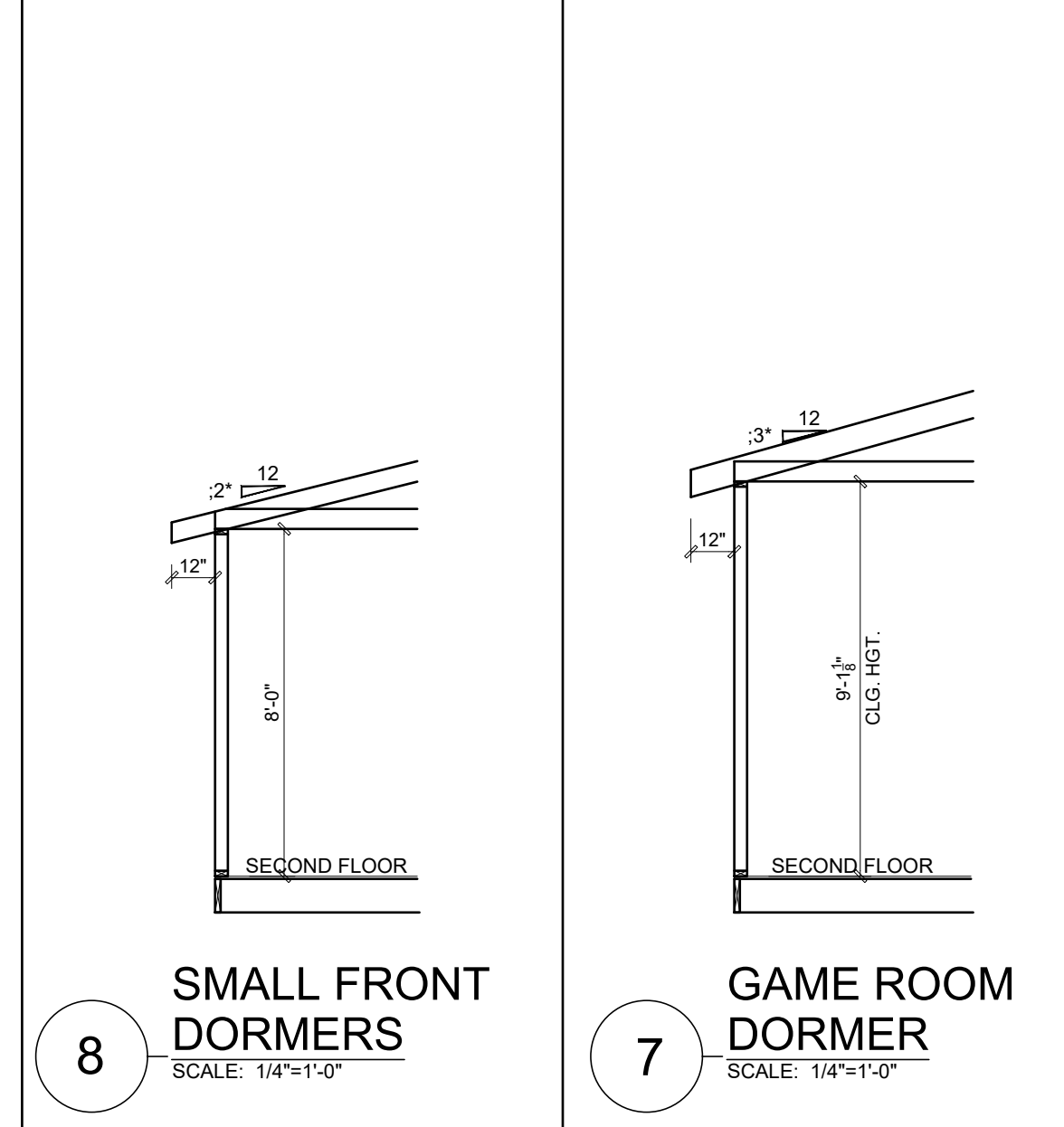
SHEET TITLE:
 Elevations - Rear and Right

SHEET NUMBER:
 A-2

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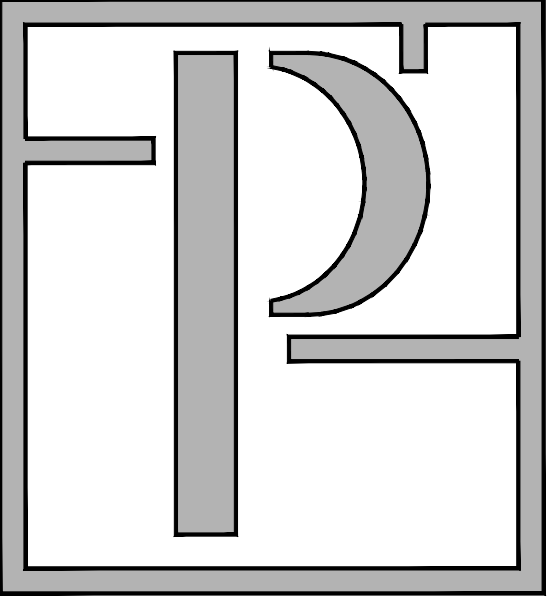


**NOTE: DETAILS PROVIDED ARE FOR PLATE DETAILS ONLY. REFER TO STRUCTURAL SHEETS TO CONFIRM FLOOR MEMBER SIZE & DIRECTIONS, RAFTER SIZE & DIRECTIONS, AND ROOF OVERHANGS.

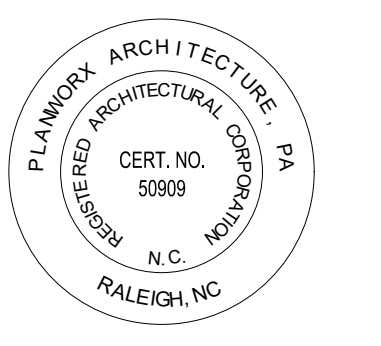


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 SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATIONS.
 SEE SHEET D-2 FOR FLASHING DETAILS AND REQUIRED LOCATIONS.

REQUIRED FLASHING LOCATIONS
 1) ALL MATERIAL CHANGE INTERSECTIONS.
 2) ALL WINDOW / DOOR OPENINGS.
 3) ALL ROOF VALLEYS.
 BUILDER TO VERIFY ON SITE FLASHING IS INSTALLED TO MEET CODE REQUIREMENTS.



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PROGRESS DATE:	2/15/19	DESCRIPTION:	
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PROJECT NO:	001719		
DRAWN BY:	JT		
CHECKED BY:	BB/JT		
SHEET TITLE:	Roof Thumbnail Details		
SHEET NUMBER:	A-3		

WINDOW FALL PREVENTION PROTECTION
 IF ANY PART OF THE CLEAR OPENING OF THE OPERABLE PORTION OF A WINDOW IS LOCATED MORE THAN 72" ABOVE THE EXTERIOR GRADE THEN THE LOWEST PART OF THE CLEAR OPENING MUST BE AT LEAST 24" ABOVE THE FLOOR OF THE ROOM IN WHICH IT IS LOCATED.

EXCEPTIONS:
 1. THE WINDOW IS A FIXED UNIT
 2. THE OPENING DOES NOT ALLOW THE PASSAGE OF A 4- INCH DIAMETER SPHERE.
 3. THE WINDOW IS EQUIPPED WITH A WINDOW FALL PREVENTION DEVICE MEETING ASTM F2099.
 4. THE WINDOW IS EQUIPPED WITH AN APPROVED WINDOW OPENING LIMITING DEVICE.

NOTE: WHEN USED WITH AN EMERGENCY ESCAPE AND RESCUE WINDOW, OPENING LIMITING DEVICES AND FALL PREVENTION DEVICES MUST BE APPROVED FOR EMERGENCY ESCAPE AND RESCUE PROVISIONS.

GENERAL NOTES

WALL THICKNESS / ANGLES
 ALL EXTERIOR STUD WALLS ARE DRAWN 4" THICK U.N.O.
 ALL INTERIOR STUD WALLS ARE DRAWN 4" THICK U.N.O.
 ANGLED WALLS ARE DRAWN @ 45° U.N.O.

EGRESS
 ALL BEDROOMS MUST HAVE AT LEAST ONE WINDOW WHICH CONFORMS TO EGRESS REQUIREMENTS FOR CLEAR OPENING HEIGHT AND WIDTH. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EGRESS SIZING PER CODE BASED ON CHOSEN MANUFACTURER, AS PRODUCT SIZES MAY VARY.

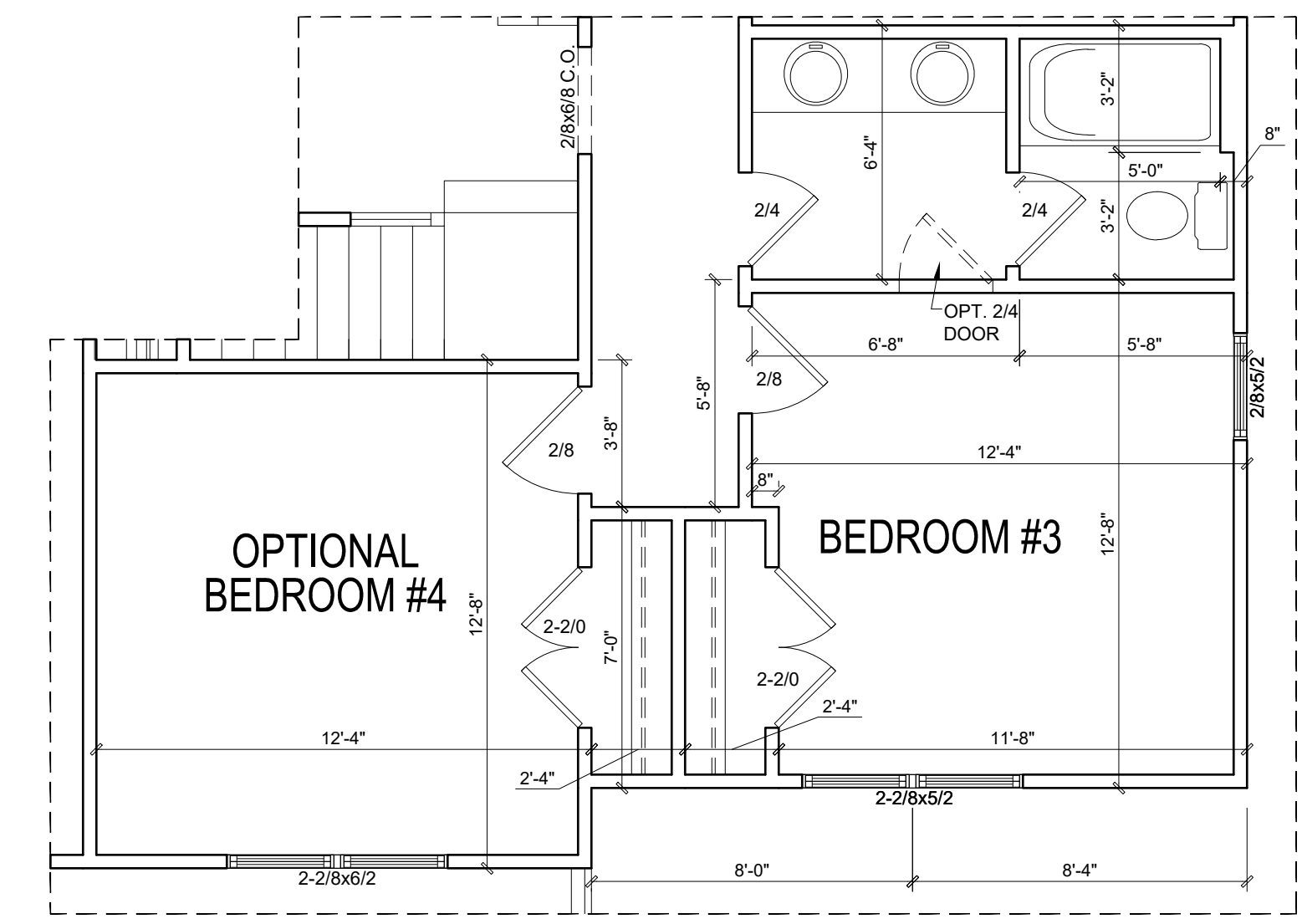
WALL/CEILING HEIGHTS
 WALL AND CEILING HEIGHTS NOTES ARE BASED ON NOMINAL WALL SIZE (I.E. A 9'-1 1/8" ACTUAL WALL HEIGHT IS LABELED 9'0" ON THE PLANS).

ALL VAULTED OR SLOPED CEILINGS ARE TO BE FURRED DOWN TO ACCOMMODATE REQUIRED CEILING INSULATION AND 1" AIRSPACE. VERIFY CODES FOR INFORMATION ON INSULATION REQUIREMENTS.

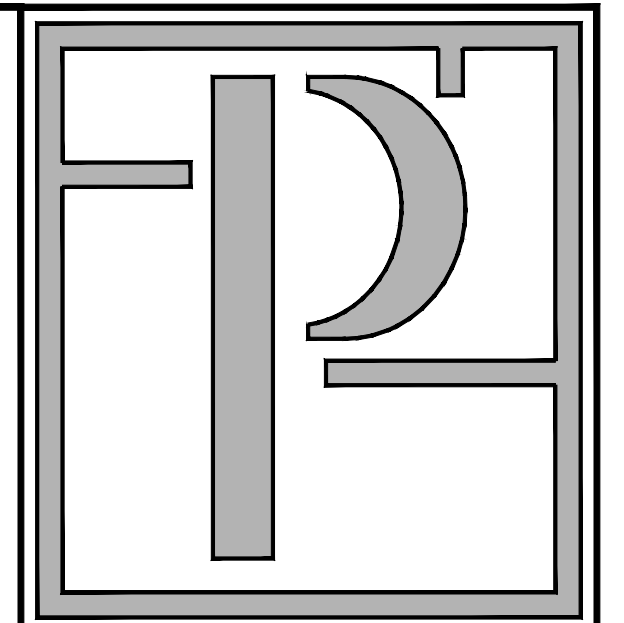
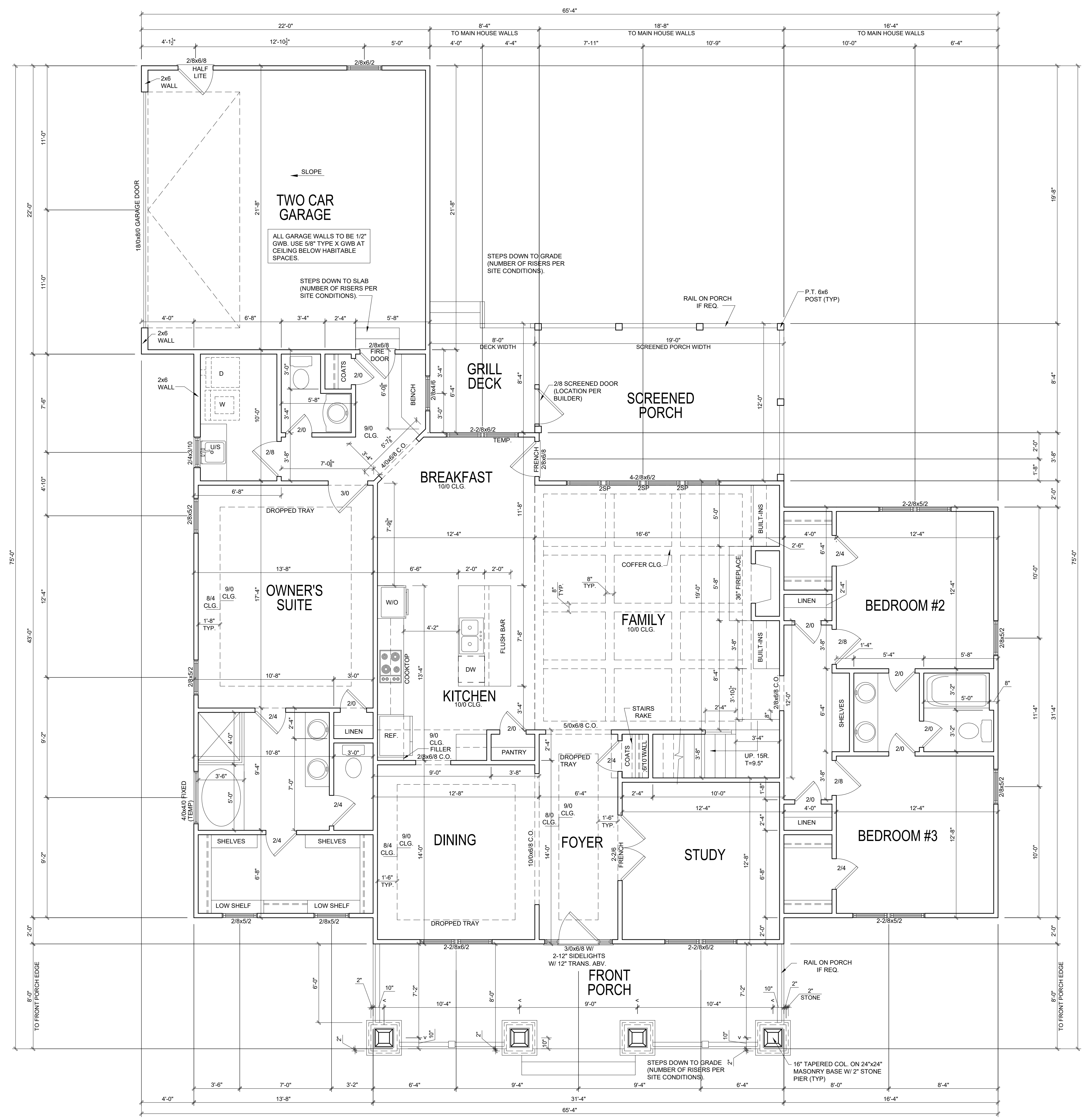
STAIRS
 STAIR TREADS ARE MEASURED FROM NOSING TO NOSING (N/N).
 MAXIMUM STAIR RISE HEIGHT TO BE NO GREATER THAN 8'-11 1/4"

ARCHITECTURAL PLANS WALL LEGEND

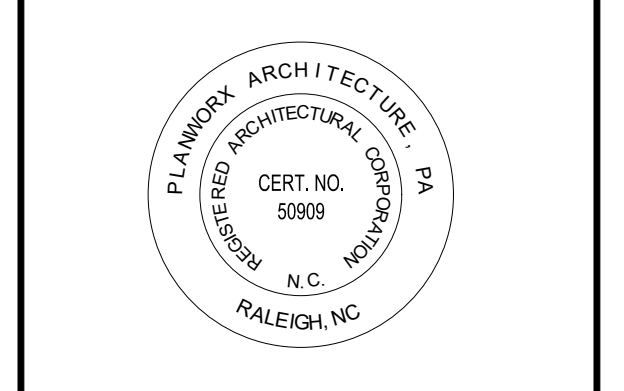
- STANDARD STUD WALL INT OR EXT IF EXT SEE ELEVATIONS FOR SIDING STYLE THICKNESS OF WALL NOTED IN PLAN NOTES OR AT WALL LOCATIONS
- STANDARD STUD WALL WITH 5" BRICK VENEER FOUNDATION WALL LEDGE. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS
- STANDARD STUD WALL WITH STACKED STONE VENEER. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS. (NOTE: BUILDER TO VERIFY STONE THICKNESS & NOTIFY PLAN DESIGNER IF THICKNESS IS MORE THAN 5" BEFORE FOOTINGS ARE POURED)
- STANDARD STUD WALL WITH APPLIED STONE VENEER. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS. (NOTE: NO FOUNDATION SUPPORT IS REPRESENTED ON STRUCTURAL PLANS) IF STACKED STONE IS TO BE USED BUILDER MUST NOTIFY PLAN DESIGNER BEFORE FOOTINGS ARE POURED
- STANDARD STUD WALL WITH LOW APPLIED STONE WAINSCOTING. SEE ELEVATIONS FOR HEIGHT & FINISH MATERIAL AT EXT STUD WALL ABOVE. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS
- STANDARD STUD WALL WITH 5" FOUNDATION LEDGE FOR LOW BRICK OR STACKED STONE WAINSCOTING. SEE ELEVATIONS FOR HEIGHT & FINISH MATERIAL AT EXT STUD WALL ABOVE. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS
- HALF WALL WITH 1x CAP (42" HEIGHT UNLESS NOTED OTHERWISE ON PLANS)



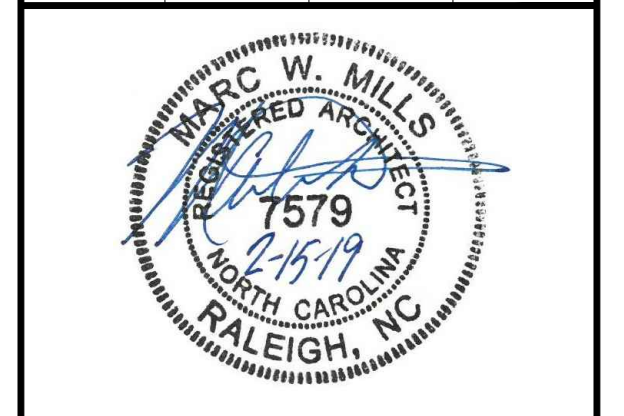
Heated Square Footage	
First Floor	2,285.0
Second Floor	393.9
Total	2,678.9
Unheated Square Footage	
Front Porch	250.7
Garage	478.0
Grill Deck	66.7
Screened Porch	226.8
Unfin. Attic	957.3



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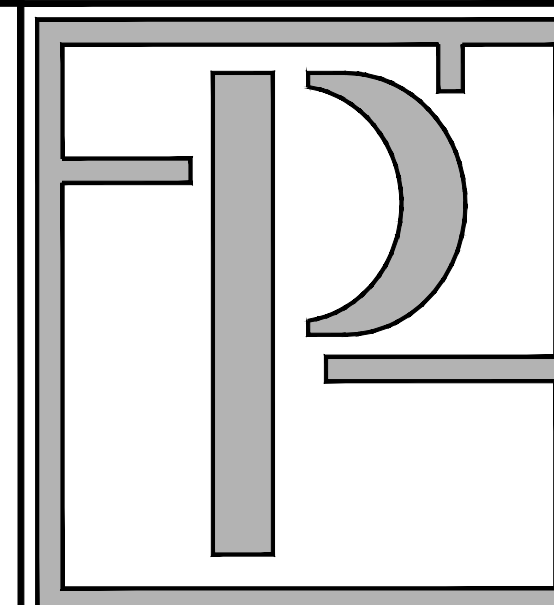


Glenwood Builders
 6913 Rouse Road
 Holly Springs, NC



PROGRESS DATE:	2/15/19	DESCRIPTION
ISSUE DATE:		
REVISIONS NUMBER	DATE	INITIALS
PROJECT NO:	001719	
DRAWN BY:	JT	
CHECKED BY:	BB/JT	
SHEET TITLE:	First Floor Plan	
SHEET NUMBER:	A-4	

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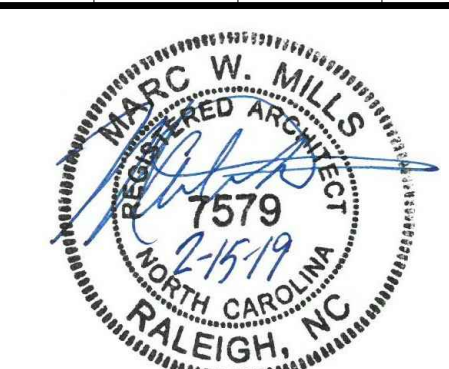


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Glenwood Builders
6913 Rouse Road
Holly Springs, NC



PROGRESS DATE:	2/15/19	DESCRIPTION
ISSUE DATE:		
REVISIONS NUMBER	DATE	INITIALS
1		
2		
3		
4		
5		
6		
7		
8		

PROJECT NO: 001719

DRAWN BY: JT

CHECKED BY: BB/JT

SHEET TITLE: Second Floor Plan

SHEET NUMBER:

A-5

WINDOW FALL PREVENTION PROTECTION
IF ANY PART OF THE CLEAR OPENING OF THE OPERABLE PORTION OF A WINDOW IS LOCATED MORE THAN 72" ABOVE THE EXTERIOR GRADE THEN THE LOWEST PART OF THE CLEAR OPENING MUST BE AT LEAST 24" ABOVE THE FLOOR OF THE ROOM IN WHICH IT IS LOCATED.

EXCEPTIONS:
1. THE WINDOW IS A FIXED UNIT.
2. THE OPENING DOES NOT ALLOW THE PASSAGE OF A 4- INCH DIAMETER SPHERE.
3. THE WINDOW IS EQUIPPED WITH A WINDOW FALL PREVENTION DEVICE MEETING ASTM F2090.
4. THE WINDOW IS EQUIPPED WITH AN APPROVED WINDOW OPENING LIMITING DEVICE.

NOTE: WHEN USED WITH AN EMERGENCY ESCAPE AND RESCUE WINDOW, OPENING LIMITING DEVICES AND FALL PREVENTION DEVICES MUST BE APPROVED FOR EMERGENCY ESCAPE AND RESCUE PROVISIONS.

GENERAL NOTES

WALL THICKNESS / ANGLES
ALL EXTERIOR STUD WALLS ARE DRAWN 4" THICK U.N.O.
ALL INTERIOR STUD WALLS ARE DRAWN 4" THICK U.N.O.
ANGLED WALLS ARE DRAWN @ 45° U.N.O.

EGRESS
ALL BEDROOMS MUST HAVE AT LEAST ONE WINDOW WHICH CONFORMS TO EGRESS REQUIREMENTS FOR CLEAR OPENING HEIGHT AND WIDTH. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EGRESS SIZING PER CODE BASED ON CHOSEN MANUFACTURER'S AS PRODUCT SIZES MAY VARY.

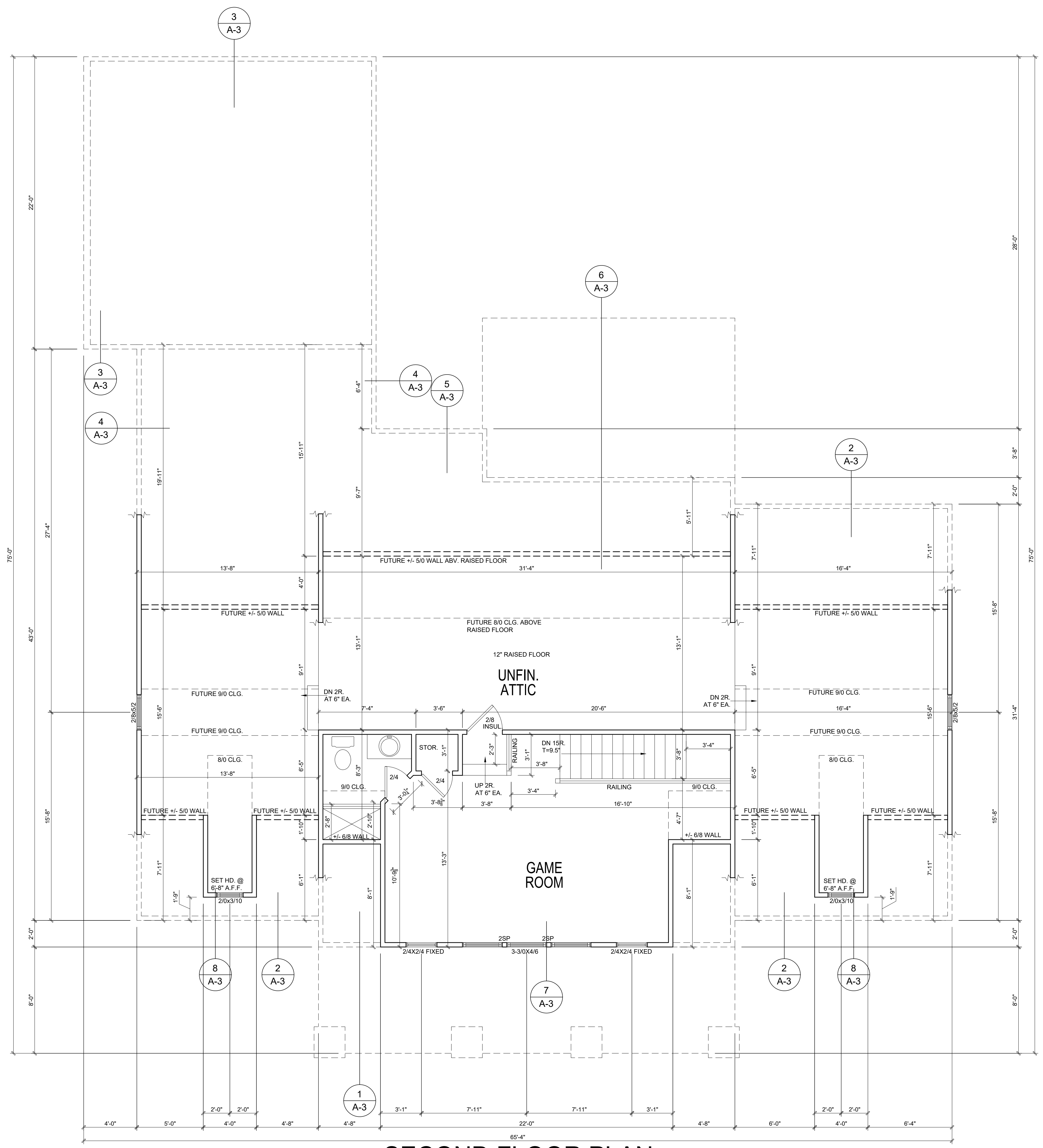
WALL/CEILING HEIGHTS
WALL AND CEILING HEIGHTS NOTES ARE BASED ON NOMINAL WALL SIZE (I.E. A 9'-1 1/8" ACTUAL WALL HEIGHT IS LABELED 9/0 ON THE PLANS).

ALL VAULTED OR SLOPED CEILINGS ARE TO BE FURRED DOWN TO ACCOMMODATE REQUIRED CEILING INSULATION AND 1" AIRSPACE. VERIFY CODES FOR INFORMATION ON INSULATION REQUIREMENTS.

STAIRS
STAIR TREADS ARE MEASURED FROM NOSING TO NOSING (N/N). MAXIMUM STAIR RISE HEIGHT TO BE NO GREATER THAN 8-1/4"

ARCHITECTURAL PLANS WALL LEGEND

- STANDARD STUD WALL INT OR EXT IF EXT SEE ELEVATIONS FOR SIDING STYLE THICKNESS OF WALL NOTED IN PLAN NOTES OR AT WALL LOCATIONS
- STANDARD STUD WALL WITH 5" BRICK VENEER FOUNDATION WALL LEDGE. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS
- STANDARD STUD WALL WITH STACKED STONE VENEER. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS. (NOTE BUILDER TO VERIFY STONE THICKNESS & NOTIFY PLAN DESIGNER IF THICKNESS IS MORE THAN 5" BEFORE FOOTINGS ARE POURED)
- STANDARD STUD WALL WITH APPLIED STONE VENEER. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS. (NOTE: NO FOUNDATION SUPPORT IS REPRESENTED ON STRUCTURAL PLANS) IF STACKED STONE IS TO BE USED BUILDER MUST NOTIFY PLAN DESIGNER BEFORE FOOTINGS ARE POURED
- STANDARD STUD WALL WITH LOW APPLIED STONE WAINSCOTING. SEE ELEVATIONS FOR HEIGHT & FINISH MATERIAL AT EXT STUD WALL ABOVE. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS
- STANDARD STUD WALL WITH 5" FOUNDATION LEDGE FOR LOW BRICK OR STACKED STONE WAINSCOTING. SEE ELEVATIONS FOR HEIGHT & FINISH MATERIAL AT EXT STUD WALL ABOVE. STUD THICKNESS AS NOTED IN PLAN NOTES OR AT WALL LOCATIONS.
- HALF WALL WITH 1x CAP (42" HEIGHT UNLESS NOTED OTHERWISE ON PLANS)



SECOND FLOOR PLAN
1/4" = 1'-0"

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A. GENERAL NOTES

- Contractor assumes all responsibility for designing from depicted or implied structural information. Architect/Structural Engineer must be notified immediately about alternate construction or problem areas before contractor proceeds.
- Only sealed drawing with latest revisions are applicable for construction.
- All construction, workmanship, and materials to comply with 2018 N.C. State Residential Code and local regulations.
- Design Loads:

Structural System	LL	DL	TL	Structural System	LL	DL	TL
Dwelling Units (General)	40	10	50	Stairs	40	5	45
Sleeping Rooms	30	10	40	Garment and Handrails	200	10	200
Basement (entire)	60	10	70	Roof Systems	20	10	30
Decks	40	10	50	Cathedral Ceilings	20	15	35
Attic (with attic storage)	10	10	20	Internal Partition Walls	50	1	51
Attic (with storage)	20	10	30	Passenger Garage	50	per emp.	
Attic (with fixed stairways)	40	10	50				
- Deflection: Floors: L/360, Roofs: L/240, L/480 for engineered flooring and under tiled areas, L/600 for vertical masonry support.
- Do not scale drawings. Contractor shall contact architect for queries on non-titled items.
- Owner or builder is responsible for information on soil bearing capacity, min. assumed = 2,000 psf.

B. FOOTINGS AND FOUNDATION

- Minimum Spread Footing Size (28 day strength min 2500 psi)

Stories	Wood Frame	Block Frame + Face Brick	8" Masonry
Min. Fla. Width	Min. Fla. Depth	Min. Fla. Width	Min. Fla. Depth
1	18"	18"	18"
2	24"	24"	24"
3	30"	30"	30"
- Footings shall be min 2" wider, overhang on each side than the foundation above. Minimum footing depth 12" below grade, u.n.o. Footings for close adjacent piers can be combined.
- Grades and piers shall bear on center 1/3 of pier and footing optimally, but no less than 4" from pier or footing edge.
- Maximum height of unbraced fill and reinforcing to conform with Table R602.1(1), (2), (3), (4), with variation of total wall height, and soil classification. Amount and placement of rebar are per tables.
- Multiple wythe masonry walls shall have galvanized ties every 24" max. vertical and 36" horizontal.
- Anchor bolts to be min. 1/2" dia. @ 6" max. o.c. and max 12" from corners and splices. Bolts shall extend min. 7" into concrete or masonry. Compression type anchors can be substituted in a case where an occasional anchor bolt is missing or misplaced.
- Concrete Pier Sizes: (Note: the larger of the two pier's requirements governs)

Size	Hollow Masonry*	Solid Masonry	Size	Hollow Masonry*	Solid Masonry
8x16	up to 32" high	up to 5'-0" high	16x16	up to 64" high	up to 12'-0" high
12x16	up to 48" high	up to 9'-0" high	24x16	up to 96" high	up to 15'-0" high
- Typical lag footing to be 20"x10" deep, u.n.o.
- Found concrete wall vertically shall be min 10" thick, if retaining under 6' of unbraced fill reinforce wall vertically w/ #4 @ 16" o.c. and horizontal bars #4 @ 16" o.c. If retaining over 6' unbraced fill use #4@12" o.c. hooked into footing and horizontal bars #4 @ 12" o.c.

C. FRAMING

- Crawl space girders are (3) 2x10 E2 spruce/pine/fir, dropped, u.n.o.
- All framing lumber shall be #2 SPF (modulus of elasticity 1,900,000 psi, to 95%) or better. All beams and treated lumber to be #2 S-P-F (modulus of elasticity 1,900,000 psi, to 100 mm. Shave min #2 or stud grade.
- Joists: min 1-3/4" joist bearing, min 3-1/2" at intermediate supports. Max 3,000 ft-lb moment. (E=185,000,000, max 1,100' vert. shear, max 1,015' and reaction. LV's to be 2.02 grade, E=2850, L/360 max. deflection.
- Use hangers for all beam to beam connections. Structural fastening as per R602.3(1). Adequate connections is the sole responsibility of the general contractor and his subs.
- Provide double top plates in all exterior walls. Slagger joints min 48" w/ (8) 16d.
- Set all joints and beams with natural camber up. Ends lapped min. 6" over bearing shall be securely spiked together. Provide at least 1-1/2" bearing on all joists and 3" for beams (U.N.O.).
- All framing exposed to masonry or weather to be pressure treated. Sills min. 2x6.
- Structural member fastening to conform to Table R602.3(1) and (2).
- With 2x framing members, use double joists: A) under parallel partitions; B) under opening multiple joists C) under tuba 3' joist spans > 12". I-joists and floor trusses do not have to be doubled unless shown on the structural plans.
- Provide 2x6 attic collar ties at 32" o.c. at upper 1/3 of attic space, u.n.o.
- Studs and joists shall not be cut for plumbing/electrical/mechanical runs without adding strapping to each side per R602.3. Architect/Structural Engineer is not responsible for failures in cut members. Do not cut beams or girders.
- Bottom frame gable and vaulted walls and all walls higher than 12" w/ 2x6 @16" o.c. or dbl. 2x4 @ 12" or patterned 2x4 with @ 2x10 band with Simpson CS16 @ 36" @ 32" o.c. top studs to bottom studs.
- All exterior headers to be (2) 2x10 u.n.o. w/ dbl. joists for all openings > 5'-0".
- All interior bearing headers to be (2) 2x10 u.n.o. w/ dbl. joists for all openings > 6'-0".
- All interior non-bearing headers to be min. (2) 2x4 u.n.o.
- Fireblock to conform with R302.11.

D. ROOF FRAMING NOTES

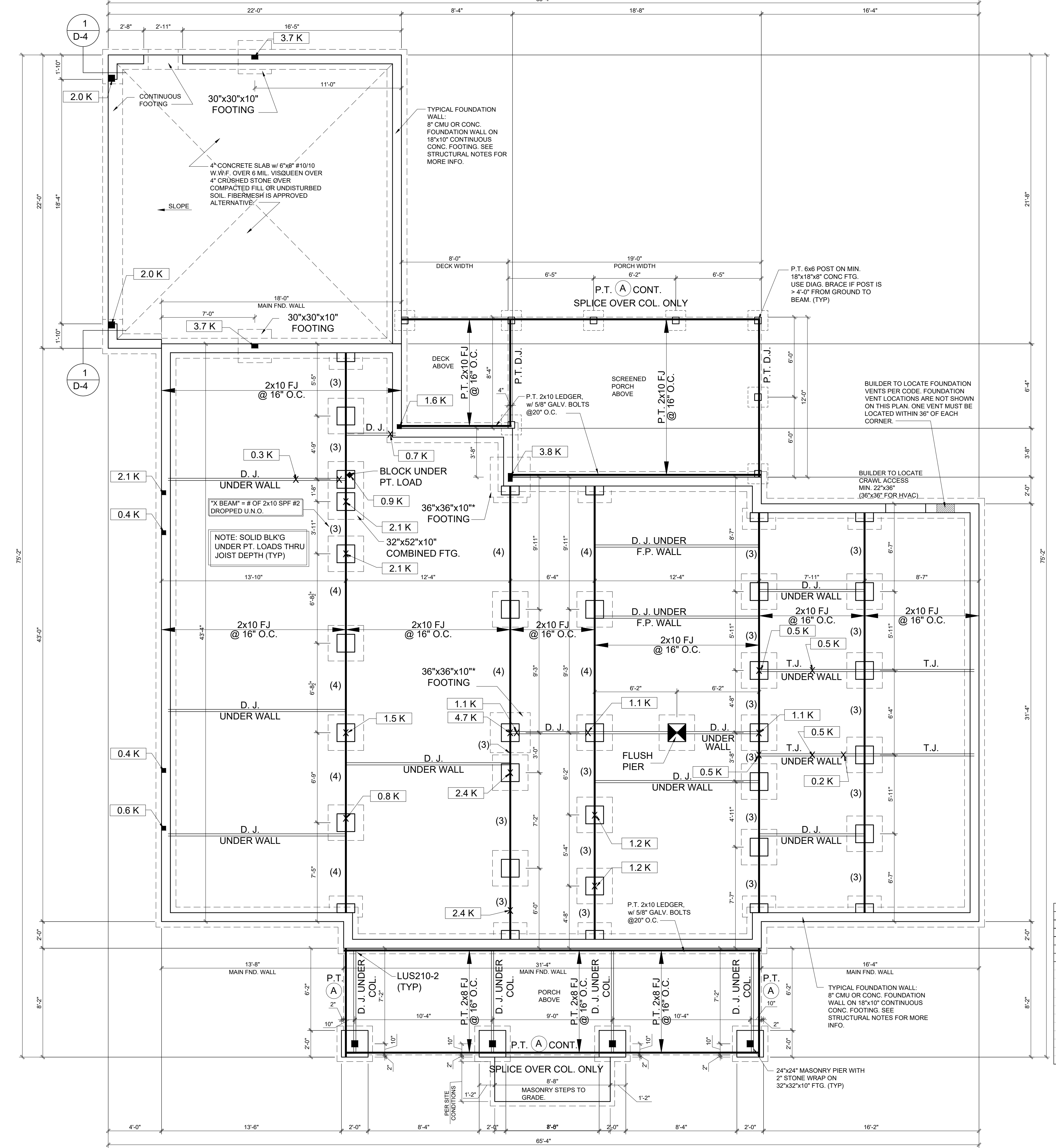
- Double gips may be applied with a minimum 6" overlap at center. No valley clips.
- Use 2x10 or 2x12 rafters for vaulted areas.
- Attach vaulted rafters with hurricane connectors: Simpson H-2.5, H-5 or approved equal.
- Align all rafters under studs below.
- Block above low rafters to have high rafter at low rafter with L4x3-1/2"x1/4" and 16d nails @12" o.c. Low end to have 3"x3/4"x1/4" welded gable dam.
- All point loads to be column/block (through joists) down to foundation.
- Hanger Schedules (Simpson hangers) for beam to beam connections (unless noted otherwise):
 (1) 2x10: USC20-2 (3) 2x10: USC20-3
 (2) 2x10: USC20-2 (3) 2x10: USC20-3
 (3) 2x10: USC20-2 (3) 2x10: USC20-3
 (4) 2x10: USC20-2 (3) 2x10: USC20-3
 (5) 2x10: USC20-2 (3) 2x10: USC20-3
- Block joists min 4"-1/2" above grade are to be kept as diagonally braced per Appendix M. Fastening to house will be by nailer with 5/8" bolts @ 20" o.c. and (3) 12d hot dipped galv. @ 6" o.c.
- Trust drawings must be sealed by the trust manufacturer and reviewed by Planworx Architecture. Trust drawings to design and document all required beams, hangers, and point load reactions. Trust drawing package to supply all information required under R302.1.4.
- Corners shall be braced with one of the approved methods as per R602.10.3.
- Multiple LV's up to a 3-ply shall be connected by min. 3-16d nails per row 12" on center on each side. Also, for double 14" LV's or deeper, connect beams with min. 4-16d nails per row at 12" on center (unless noted otherwise). Please refer to manufacturer specifications for further instructions for proper nailing on specific products. All 4-ply LV's shall be through bolted with 1/2" bolts @ 18" o.c. staggered or 5/8" bolts @ 24" o.c. staggered.

1. BLOCK VENEER Lintel Attachment:

- Use Min. (2) 7/16x4" lag screws into double studs @ 16" o.c.
- All bolts shall be high strength conforming to ASTM A-305.
- Structural steel shall be ASTM grade A-36 supported across full width of flange. Provide min. 3-1/2" bearing, or more if indicated. Steel beams shall be anchored at each end with min. (4) 16d nails or (2) 1/2" x 4" lag bolts and laterally supported.
- Flitch beams to be fastened together using 1/2" inch diameter A307 bolts with washers under threaded end of bolt. Square washers permitted. Bolts will be spaced at 24" maximum staggered top and bottom of beam.

BASED ON 2018 NCRS (REVISED SECTION R602.10 DATED 9-1-13)

- THIS HOUSE IS DESIGNED USING PER R602.10.3 AND TABLE R602.10.1, USING CONTINUOUS SHEATHING METHOD.
- BASIC WIND SPEED DOES NOT EXCEED 115 (MPH)
- EAVE TO RIDGE HEIGHT DOES NOT EXCEED 20'-0"
- IF RIDGE TO EAVE EXCEEDS 20'-0", IN NON WALK-UP ATTIC GABLE WALL SITUATIONS, USE ONE OF THE GABLE BRACEWALL DETAILS AS DESCRIBED:
 1. IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE IS LESS THAN 12'-0", USE DETAIL 9ID-4 W/ MID HEIGHT BRACE.
 2. IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE EXCEEDS 12'-0", USE DETAIL 9ID-4, W/ HEIGHT BRACES.
- EXTERIOR WALLS HAVE BEEN SHEATHED ON ALL SHEATHABLE SURFACES W/ 5/8" OSB INCLUDING WALL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW OPENINGS, AND ON ALL GABLE END WALLS NAIL W/ 6d AT 6" O.C. AT PANEL EDGES AND 12" AT INTERMEDIATE SUPPORTS.
- GARAGE PORTAL FRAME SPECIFICATIONS USED PER DETAIL #1A ON SHEET D-4.
- SEE SHEET D-4 FOR NAILING & BRACING REQUIREMENTS.
- SPECIAL FRAMING REINFORCEMENT (IF REQUIRED) IS SHOWN ON PLAN WITH A DIAMOND SYMBOL = ◇
 THE NUMBER INSIDE SYMBOL DESIGNATES LENGTH OF SIMPSON CS-16 STRAP CONTINUOUS VERTICALLY EITHER
 A) FROM UPPER FLOOR STUDS OVER INTERMEDIATE FLOOR BAND ONTO LOWER FLOOR STUDS BELOW, OR
 B) FROM TOP PLATES OF ONE STORY WALL, DOWN CRIPPLE STUDS AND HEADER END, WITH # IN DIAMOND BEING LENGTH ONTO JACKS BELOW.
 AT FLOOR TO FOUNDATION CONNECTION USE EITHER
 (a) SIMPSON MAS OR MASB
 (b) SIMPSON DTTZ (1800lb UPLIFT RESISTANCE) W/ (MIN) 1/2" ANCHOR BOLT W/ (MIN) 7" EMBEDMENT
 8. IN LIEU OF THE STRAPPING, USE OSB ON BOTH SIDES OF GARAGE WALLS. THIS WILL BE NAILED WITH EITHER 6d DEFORMED OR 6d COMMON NAILS AT 6" O.C. AT EDGES AND 12" O.C. IN FIELD, PER NCRS TABLE R602.3(1).



HEADER SCHEDULE

(A)	(2) 2x10 FLUSH
(B)	(2) 2x10 DROPPED
(C)	(2) 2x8 FLUSH
(D)	(2) 2x8 DROPPED
(E)	(2) 9 1/4" LVL FLUSH
(F)	(2) 9 1/4" LVL DROPPED
(G)	(3) 2x10 DROPPED
(H)	(3) 16" LVL FLUSH W/ 1/2" BOLTS @ 18" O.C. STAGGERED
(J)	(3) 18" LVL DROPPED OR FLUSH W/ 1/2" BOLTS @ 18" O.C. STAGGERED
(K)	(3) 11 7/8" LVL DROPPED W/ 1/2" BOLTS @ 18" O.C. STAGGERED
(L)	(3) 9 1/4" LVL FLUSH

PIER KEY

[Symbol]	16"x16" (U.N.O) PIER ON 32x32x10 CONC. FTG.
[Symbol]	FLUSH PIER: 16x16 SOLID PIER ON 32"x32"x10" FTG. SOLID BLOCK THRU JOIST DEPTH (TYP.)

CONCRETE PIER SIZES:
 SIZE: HOLLOW MASONRY* SOLID MASONRY
 16x16 UP TO 64" HIGH UP TO 12'-0" HIGH
 *10" R" SOLID
 * ADD #4 @ 8" O.C. E.W. IF SOIL BEARING IS LESS THAN 2,000 PSF.

THIS FOUNDATION IS DESIGNED FOR "APPLIED" STONE VENEER. THE FOUNDATION WALLS DO NOT PROVIDE ANY BEARING SUPPORT FOR STONE. IF THE SPECIFICATIONS CHANGE TO "STACKED" STONE, THE FOUNDATION WALL TYPES AND DIMENSIONS WILL HAVE TO BE ADJUSTED AS NECESSARY. IN THIS CASE, THE BUILDER SHOULD CONTACT THE PLAN DESIGNER AND/OR STRUCTURAL ENGINEER.

GENERAL FOUNDATION NOTES

- FOUNDATION WALL SIZES & COMPOSITION MUST BE VERIFIED BY BUILDER AND/OR STRUCTURAL ENGINEER, AND MUST COMPLY WITH N.C. BUILDING CODES.
- THE SIZE OF CONCRETE PADS AT STEPS TO GRADE FROM PORCHES, DECKS, STOOPS, ETC. IS TO BE DETERMINED BY BUILDER ON SITE.

GENERAL CRAWL SPACE NOTES

- FOUNDATION VENTS: BUILDER TO SIZE AND LOCATE FOUNDATION VENTS PER N.C. BUILDING CODES. VENT LOCATION AND SPACING SHOWN ON THESE PLANS MAY NOT REFLECT THE FINAL LAYOUT. A VENT MUST BE LOCATED WITHIN 36" OF EACH CORNER.

Crawlspace Vent Calculations

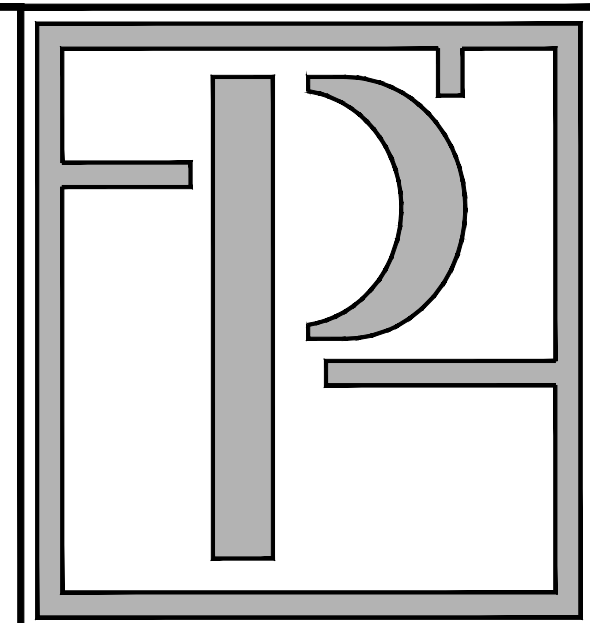
A	Crawl Space Area	
B	Ventable Area Required by Code (without vapor barrier)	2285
C	Ventable Area Required by Code (with vapor barrier)	1.5
D	Number of vents required (without vapor barrier)	33.0
E	Number of vents required (with vapor barrier). (See notes)	4.0

Formulas:
 B = A / 150
 C = A / 1500
 D = B / 0.47 (sqft of net venting area per vent)
 E = C / 0.47 (sqft of net venting area per vent)

Notes:
 1. Builder must adjust ventilation calculations if using vents with a net area that is different than 0.47 sqft per vent.
 2. One foundation vent must be placed within 3 feet of each major corner in the building.
 3. Foundation vents must be placed to allow for cross ventilation.

CRAWL FOUNDATION/FIRST FLOOR FRAMING
 1/4"=1'-0"

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Glenwood Builders
 6913 Rouse Road
 Holly Springs, NC

Professional seal for W. Mills, Registered Architect, License No. 7579, dated 12-15-19, North Carolina, Raleigh, NC.

PROGRESS DATE:	2/15/19	DESCRIPTION:
ISSUE DATE:		
REVISIONS:		
NUMBER:		
DATE:		
INITIALS:		
PROJECT NO:	001719	
DRAWN BY:	JT	
CHECKED BY:	BB/JT	
SHEET TITLE:	Crawl Foundation & First Floor Framing	
SHEET NUMBER:		

A. GENERAL NOTES

- Contractor assumes all responsibility for detecting or implied structural information. Architect/Structural Engineer shall be notified immediately about alternate construction or problem areas before contractor proceeds.
- Only noted drawing with latest revisions are applicable for construction.
- All construction, workmanship, and materials to comply with 2018 N.C. State Residential Code and local regulations.
- Design Loads:

Structural System	LL	DL	TL	Structural System	LL	DL	TL
Dwelling Units (General)	40	10	50	Stairs	40	5	45
Swimming Pools	30	10	40	Garage and Handrails	200	5	200
Roofs (Asph/Flt)	40	10	50	Roof Systems	20	10	30
Decks	40	10	50	Cathedral Ceilings	20	15	35
Attics (with attic storage)	10	10	20	Interior Partition Walls	5	5	9
Attics (with storage)	20	10	30	Passenger Garage	50	5	55
Attics (with fixed stairways)	40	10	50				
- Deflection: Floors: L/360, Roofs: L/240, L/480 for engineered flooring and under tiled areas, L/600 for vertical masonry support.
- Do not scale drawings. Contractor shall contact architect for queries on non-labeled items.
- Owner or builder is responsible for information on soil bearing capacity, min. assumed = 2,000 psf.

B. FOOTINGS AND FOUNDATION

- Minimum Spread Footing Size: (28 day strength min 2500 psi)

Storages	Wood Frame	Block Frame + Face Brick	8" Masonry
Min. Fla. Width	Min. Fla. Depth	Min. Fla. Width	Min. Fla. Depth
1st	18"	24"	18"
2nd	18"	24"	18"
3rd	18"	24"	18"
4th	18"	24"	18"
- Footings shall be min 2" wider overtop on each side than the foundation above. Minimum footing depth 12" below grade, u.n.o. Footings for close adjacent piers can be combined.
- Grades and piers shall bear on center 1/3 of pier and footing optimally, but no less than 4" from pier or footing edge.
- Maximum height of unbalanced fill and reinforcing to conform with Tables R404.1(2), (3), (4), with variation of total wall height, and soil classification. Amount and placement of rebar one per table.
- Multiple wythe masonry walls shall have galvanized ties every 24" max. vertical and 36" horizontal.
- Anchor bolts to be min. 1/2" dia. @ 6"-0" max. o.c. and max 12" from corners and splices.
- Balls shall extend min. 7" into concrete or masonry. Compression type anchors can be substituted in a case where an occasional anchor ball is missing or misplaced.
- Concrete Pier Sizes: (Note: the larger of the two shaft's requirements governs)

Size	Block Masonry	Solid Masonry	Size	Block Masonry	Solid Masonry
8x16	up to 32" high	up to 5'-0" high	16x16	up to 64" high	up to 12'-0" high
12x16	up to 48" high	up to 9'-0" high	24x16	up to 96" high	up to 15'-0" high
- Typical lag footing to be 20"x10" deep, u.n.o.
- Found concrete walls shall be min 12" thick. If retaining under 6' of unbalanced fill reinforce wall vertically w/ #4 @16" o.c. and horizontal bars #4 @ 16" o.c. If retaining over 6' unbalanced fill use #4@12" o.c. hooked into footing, and horizontal bars #4 @ 12" o.c.

C. FRAMING REV: 12/11/18

- Crawl space girders are (3) 2x10 #2 spruce/pine/fir, dropped, u.n.o.
- All framing lumber shall be #2 SPF (modulus of elasticity 1,400,000 psi, to 95%) or better. All beams and treated lumber to be #2 SPF, L=1,600,000, to 1100 min. Studs min #2 or stud grade.
- Joists: min 1-3/4" joist bearing, min 3-1/2" at intermediate supports. Max 3,200 ft-lb moment. E=1,800,000,000, max 1/1000 vert. shear, max 1/1518 deflection.
- Joists to be 2x6 grade, E=2850, L/360 max. deflection.
- Use hangers for all beam to beam connections. Structural fastening as per R602.3(1). Adequate connections is the sole responsibility of the general contractor and his subs.
- Provide double top plates in all exterior walls. Stagger joints min 48" w/ (8) 16d.
- Set all joints and beams with natural camber up. Ends lapped min. 6" over bearing shall be securely spiked together. Provide at least 1-1/2" bearing on all joists and 3" for beams (U.N.O.).
- All framing exposed to masonry or weather to be pressure treated. Sls min. 2x6.
- Structural member fastening to conform to Table R602.3(1) and (2).
- With 2x6 framing members, use double joists: A) under parallel partitions; B) under opening multiple joists C) under tubs if joist spans > 12". I-joists and floor trusses do not have to be doubled unless shown on the structural plans.
- Provide 2x6 attic collar ties at 32" o.c. at upper 1/3 of attic space, u.n.o.
- Studs and joists shall not be cut for plumbing/electrical/mechanical runs without adding strapping to each side per R602.4. Architect/Structural Engineer is not responsible for failures in cut members. Do not cut beams or girders.
- Bottom frame gable and vaulted walls and all walls higher than 12' w/ 2x6 @16" o.c. or dbt. 2x4 @ 12", or partitioned 2x4 with dbt 2x10 based with Simpson CS16 x 30" @ 24" o.c. too studs to bottom studs.
- All exterior headers to be (2) 2x10 u.n.o. w/ dbt. joists for all openings > 5'-0".
- All interior bearing headers to be (2) 2x10 u.n.o. w/ dbt. joists for all openings > 6'-0".
- All interior non-bearing headers to be min. (2) 2x4 1st u.n.o.
- Fireblock to conform with R302.11.

17. Roof Framing Notes REV: 12/11/18

- Double hips may be applied with a minimum 6" overtop at center. No valley splices.
- Use 2x10 or fir down rafters for vaulted areas.
- Attach vaulted rafters with hurricane connectors: Simpson H-2.5, H-5 or approved equal.
- Align all rafters under studs below.

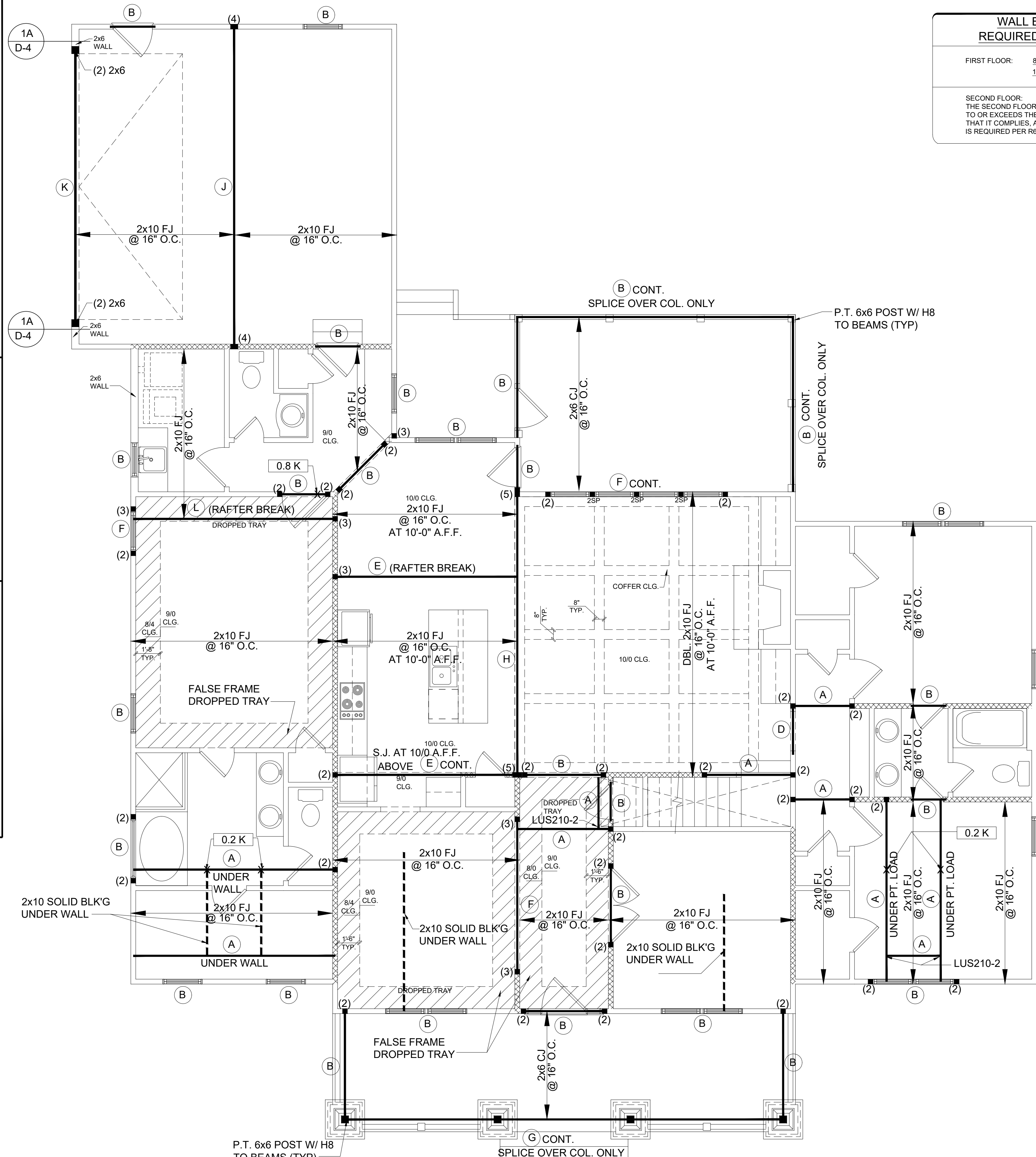
- Block above low rafters to have high rafter all low rafters with L4x3-1/2"x1/4" and 16d nails @12" o.c. Low end to have 3"x3"x1/4" welded gable dam.
- All point loads to be columned/block (through joists) down to foundation.
- Hanger Schedules (Simpson hangers) for beam to beam connections (unless noted otherwise):

(2) 2x10	LUS210-2	(2) 2x10	LUS210-3
(2) 2x10	LUS210-2	(2) 2x10	LUS210-3
- Back posts min 4"-0" above grade are to be knee or diagonally braced per Appendix M. Fastening to house will be by nailer with 5/8" bolts @ 20" o.c. and (3) 12d hot dipped galv. @ 6" o.c.
- Truss drawings must be sealed by the truss manufacturer and reviewed by Planworx Architecture. Truss drawings to design and document all required beams, hangers, and point load reactions. Truss drawing package to supply all information required under R502.1.4.
- Corners shall be braced with one of the approved methods as outlined in R602.10.3.
- Multiple LV's up to a 3-ply shall be connected by min. 3-16d nails per row 12" on center on each side. Also, for double 1x4 LV's or deeper, connect beams with min. 4-16d nails per row at 12" on center (unless noted otherwise). Please refer to manufacturer specifications for further instructions for proper nailing on specific products. All 4-ply LV's shall be through bolted with 1/2" bolts @ 18" o.c. staggered or 5/8" bolts @ 24" o.c. staggered.

D. STEEL

1. BLOCK MEMBER UNITS ATTACHMENT:

- Use Min. (2) 7/16x4" lag screws into double studs @ 16" o.c.
- All bolts shall be high strength conforming to ASTM A-325.
- Structural steel shall be ASTM grade A-36 supported across full width of flange. Provide min. 3-1/2" bearing, or more if indicated. Steel beams shall be anchored at each end with min. (4) 16d nails or (2) 1/2" x 4" lag bolts and laterally supported.
- Flitch beams to be fastened together using 1/2" inch diameter A307 bolts with washers under threaded end at both square washers preferred. Bolts will be spaced at 24" maximum staggered top and bottom of beam.



WALL BRACING REQUIRED/PROVIDED		
FIRST FLOOR:	89.7'	REQUIRED
	161.5'	PROVIDED
THEREFORE, COMPLIES		
SECOND FLOOR: THE SECOND FLOOR BRACING IS EQUAL TO OR EXCEEDS THE FIRST FLOOR, SO THAT IT COMPLIES, AND NO ANALYSIS IS REQUIRED PER R602.10.3.2 #5 AND #6		

HEADER SCHEDULE	
A	(2) 2x10 FLUSH
B	(2) 2x10 DROPPED
C	(2) 2x8 FLUSH
D	(2) 2x8 DROPPED
E	(2) 9 1/4" LVL FLUSH
F	(2) 9 1/4" LVL DROPPED
G	(3) 2x10 DROPPED
H	(3) 16" LVL FLUSH W/ 1/2" BOLTS @ 18" O.C. STAGGERED
J	(3) 18" LVL DROPPED OR FLUSH W/ 1/2" BOLTS @ 18" O.C. STAGGERED
K	(3) 11 7/8" LVL DROPPED W/ 1/2" BOLTS @ 18" O.C. STAGGERED
L	(3) 9 1/4" LVL FLUSH

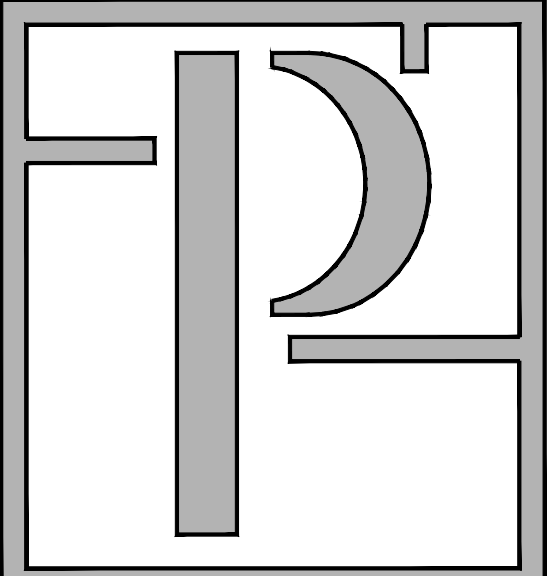
WALL BRACING DESIGN SPEC'S

BASED ON 2018 NCRS (REVISED SECTION R602.10 DATED 9-1-13)

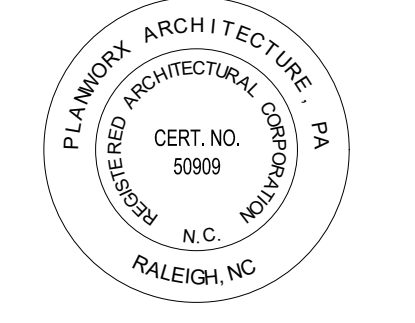
- THIS HOUSE IS DESIGNED USING PER R602.10.3 AND TABLE R602.10.1, USING CONTINUOUS SHEATHING METHOD.
- BASIC WIND SPEED DOES NOT EXCEED 115 (MPH)
- EAVE TO RIDGE HEIGHT DOES NOT EXCEED 20'-0" IF RIDGE TO EAVE EXCEEDS 20'-0" IN NON WALK-UP ATTIC GABLE WALL SITUATIONS. USE ONE OF THE GABLE BRACEWALL DETAILS AS DESCRIBED:
 - IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE IS LESS THAN 12'-0", USE DETAIL 9D-4 W/ MID HEIGHT BRACE.
 - IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE EXCEEDS 12'-0", USE DETAIL 9D-4, W/ HEIGHT BRACES.
- EXTERIOR WALLS HAVE BEEN SHEATHED ON ALL SHEATHABLE SURFACES W/ 5/8" OSB INCLUDING WALL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW OPENINGS, AND ON ALL GABLE END WALLS NAIL W/ 6d AT 6" O.C. AT PANEL EDGES AND 12" AT INTERMEDIATE SUPPORTS.
- GARAGE PORTAL FRAME SPECIFICATIONS USED PER DETAIL #1A ON SHEET D-4.
- SEE SHEET D-4 FOR NAILING & BRACING REQUIREMENTS.
- SPECIAL FRAMING REINFORCEMENT (IF REQUIRED) IS SHOWN ON PLAN WITH A DIAMOND SYMBOL = \diamond THE NUMBER INSIDE SYMBOL DESIGNATES LENGTH OF SIMPSON CS-16 STRAP CONTINUOUS VERTICALLY EITHER:
 - FROM UPPER FLOOR STUDS OVER INTERMEDIATE FLOOR BAND ONTO LOWER FLOOR STUDS BELOW, OR
 - FROM TOP PLATES OF ONE STORY WALL, DOWN CRIPPLE STUDS AND HEADER END, WITH # IN DIAMOND BEING LENGTH ONTO JACKS BELOW.
 AT FLOOR TO FOUNDATION CONNECTION USE EITHER:
 - SIMPSON MAS OR MASB
 - SIMPSON DTT2Z (1800lb UPLIFT RESISTANCE) W/ (MIN) 1/2" ANCHOR BOLT W/ (MIN) 7" EMBEDMENT
- IN LIEU OF THE STRAPPING, USE OSB ON BOTH SIDES OF GARAGE WALLS. THIS WILL BE NAILED WITH EITHER 6d DEFORMED OR 6d COMMON NAILS AT 6" O.C. AT EDGES AND 12" O.C. IN FIELD, PER NCRS TABLE R602.3(1).

SECOND FLOOR FRAMING
1/4"=1'-0"


OPTIONAL BEDROOM #4
1/4"=1'-0"



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PROGRESS DATE:	2/15/19
ISSUE DATE:	DESCRIPTION
REVISIONS:	INITIALS
NUMBER:	DATE:

PROJECT NO: 001719
DRAWN BY: JT
CHECKED BY: BB/JT
SHEET TITLE: Second Floor Framing
SHEET NUMBER: AS-2

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- A. GENERAL NOTES**
- Contractor assumes all responsibility for deviating from depicted or implied structural information.
 - Architect/Structural Engineer must be notified immediately about alternate construction or problem areas before contractor proceeds.
 - Only issued drawings with latest revisions are applicable for construction.
 - All construction, workmanship, and materials to comply with 2018 N.C. State Residential Code and local regulations.
 - Design Loads:

Structure System	L ₁	D ₁	T ₁	Structural System	L ₁	D ₁	T ₁
Dwelling Units (General)	40	10	50	Stairs	40	5	45
Sleeping Rooms	30	10	40	Garage	200	10	200
Balconies/Porches	60	10	70	Roof Systems	20	10	30
Decks	40	10	50	Cathedral Ceilings	20	15	35
Attic (with attic storage)	10	10	20	Interior Partition Walls	9	9	9
Attic (with storage)	20	10	30	Passenger Garage	50	per	imp.
Attic (with fixed staircase)	40	10	50				
 - Deflection: Floors: L/360, Roofs: L/240, L/480 for engineered flooring and under tiled areas, L/600 for vertical masonry support.
 - Do not scale drawings. Contractor shall contact architect for queries on non-labeled items.
 - Owner or builder is responsible for information on soil bearing capacity, min. assumed = 2000 psf.

- B. FOOTINGS AND FOUNDATION**
- Minimum Spread Footing Sizes (28 day strength min 2500 psi)

Stories	Wood Frame			6" Masonry		
	Min. Ftg. Depth	Min. Ftg. Width	Min. Ftg. Height	Min. Ftg. Depth	Min. Ftg. Width	Min. Ftg. Height
1	18"	8"	24"	8"	24"	10"
2	18"	8"	24"	8"	24"	10"
 - Footings shall be min 2" wider overhang on each side than the foundation above. Minimum footing depth 12" below grade, u.n.o. Footings for close adjacent piers can be combined.
 - Graders and piers shall bear on center 1/3 of pier and footing optimally, but no less than 4" from pier or footing edge.
 - Maximum height of unbalanced fill and reinforcing to conform with Tables R404.1(1), (2), (3), (4), with variable of total wall height, and soil classification. Amount and placement of rebar are per tables.
 - Multiple wythe masonry walls shall have galvanized ties every 24" max. vertical and 36" horizontal.
 - Anchor bolts to be min 1/2" dia. @ 5'-0" max. o.c. and max 12" from corners, and splices.
 - Balls shall extend min. 7" into concrete or masonry. Compression type anchors can be substituted in a case where an occasional anchor ball is missing or misplaced.
 - Concrete Pier Sizes: (Note: the larger of the two pier's requirements governs)

Size	Block Masonry	Solid Masonry	Size	Block Masonry	Solid Masonry
8x16	up to 32" high	up to 5'-0" high	16x16	up to 64" high	up to 12'-0" high
12x16	up to 48" high	up to 9'-0" high	24x16	up to 96" high	up to 15'-0" high
 - Typical lag footing to be 20"x10" deep, u.n.o.
 - Rebar concrete walls shall be min 10" thick. If retaining under 6' of unbalanced fill rebar shall be w/ #4 @ 16" o.c. and horizontal bars #4 @ 16" o.c. If retaining over 6' of unbalanced fill use #4 @ 12" o.c. hooked into footing, and horizontal bars #4 @ 12" o.c.

- C. FRAMING** REV: 12/11/18
- Crawl space girders are (3) 2x10 #2 spruce/pine/fir, dropped, u.n.o.
 - All framing lumber shall be #2 SPF (modulus of elasticity 1,400,000 psi @ 95%) or better. All beams and trapezoid lumber to be #2 SPF, E=1,600,000, I=1100 mm⁴. Studs min #2 or stud grade.
 - Joists: min 1-3/4" joist bearing, min 3-1/2" of intermediate supports. Max 3,200 1/8" moment. I=185,000,000 mm⁴, max 1/1000 deflection, max 1/1015 deflection.
 - LV's to be 2x6, grade, F=2850, L/360 max. deflection.
 - Use hangers for all beam to beam connections. Structural fastening as per R602.3(1). Adequate connections is the sole responsibility of the general contractor and his sub.
 - Provide double top plates in all exterior walls. Stagger joints min 48" w/ (8) 16d.
 - Set all joints and beams with natural comb-up. Ends lapped min. 6" over bearing shall be securely spiked together. Provide at least 1-1/2" bearing on all joists and 3" for beams (UNO).
 - All framing exposed to moisture or weather to be pressure treated. Sills min. 2x6.
 - Structural member fastening to conform to Table R602.3(1) and (2).
 - With 2x4 flooring members, use double joists: 4) under parallel partitions; 5) under opening multiple joists; 6) under tubs; 7) joist spans > 12'. 1-joists and floor trusses do not have to be doubled unless shown on the structural plans.
 - Provide 2x6 attic collar ties at 32" O.C. at upper 1/3 of attic space, u.n.o.
 - Studs and joists shall not be cut for plumbing/electrical/mechanical runs without adding strapping to each side per R602.6. Architect/Structural Engineer is not responsible for failures in cut members. Do not cut beams or girders.
 - Bottom frame gable end vaulted walls and all walls higher than 12' w/ 2x6 @ 16" o.c. or dbl. 2x4 @ 12" o.c. or platform 2x4 with dbl 2x10 bond with Simpson CS16 @ 36" @ 32" o.c. to studs to bottom studs.
 - All exterior headers to be (2) 2x10 spf u.n.o. w/ dbl. joists for all openings > 5'-0".
 - All interior bearing headers to be (2) 2x10 u.n.o. w/ dbl. joists for all openings > 6'-0".
 - All interior non-bearing headers to be min. (2) 2x4 flat u.n.o.
 - Fireblock to conform with R302.11.

- D. ROOF FRAMING NOTES** REV: 12/11/18
- Double hips may be spliced with a minimum 6" overlap at center. No valley splices.
 - Use 2x10 or 1x12 down rafters for vaulted areas.
 - Attach vaulted rafters with hurricane connectors: Simpson H-2.5, H-5 or approved equal.
 - Align all rafters under studs below.
 - Brick above toe nails to have triple rafter at low roof with L4x3-1/2x1/4" and 16d nails @ 12" o.c. Low end to have 3"x3/4" x 1/4" welded plate dam.
 - All point loads to be columned/blocked (through joists) down to foundation.
 - Hanger Schedule (Simpson hangers) for beam to beam connections (unless noted otherwise):
 - (1) 2x10: LUS26-2
 - (2) 2x10: LUS26-2
 - (3) 2x10: LUS26-2
 - Deck posts min 4"-x4" above grade are to be knee or diagonally braced per Appendix M. Fastening to house will be by nailer with 5/8" bolts @ 20" o.c. and (3) 1/2" hot dipped galv. @ 6" o.c.
 - Truss drawings must be sealed by the truss manufacturer and reviewed by Planworx Architecture. Truss drawings to design and document all required beams, hangers, and point load restraints. Truss drawing package to supply all information required under R602.11.4.
 - Corners shall be braced with one of the approved methods as outlined in R602.10.3.
 - Multiple LV's up to a 3-ply shall be connected by min. 3-16d nails per row 12" on center on each side. Also, for double 1x12 LV's or deeper, connect beams with min. 4-16d nails per row at 12" on center (unless noted otherwise). Please refer to manufacturer specifications for further instructions for proper nailing on specific products. All 4-ply LV's shall be through bolted with 1/2" bolts @ 18" o.c. staggered or 5/8" bolts @ 24" o.c. staggered.

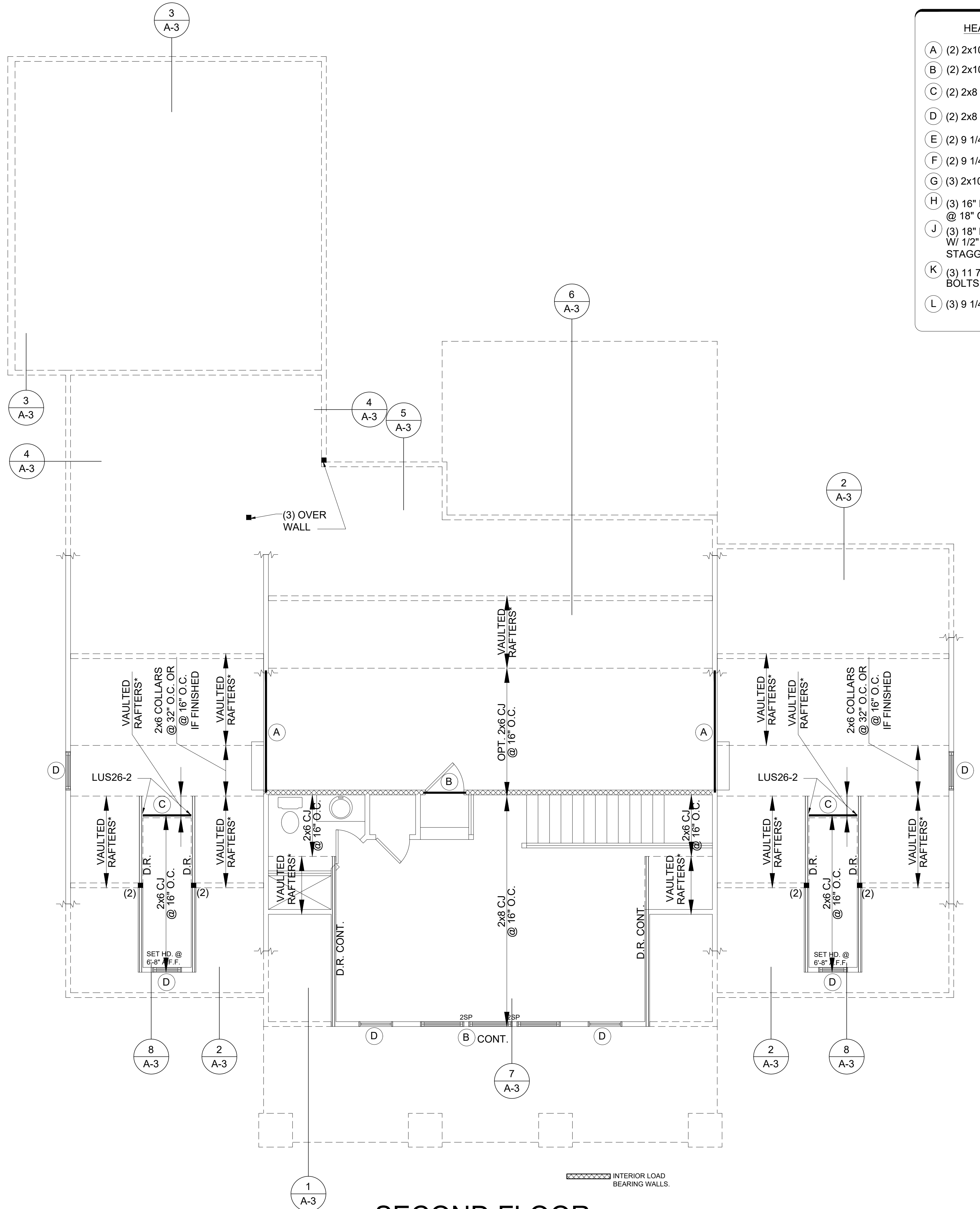
- D. STEEL**
- 1. BECK LENSER UNITS ATTACHMENT**
- Use Min. (2) 7/16x4" lag screws into double studs @ 16" o.c.
 - All bolts shall be high strength conforming to ASTM A-325.
 - Structural steel shall be ASTM grade A-36 supported across full width of flange. Provide min. 1-1/2" bearing, or more if indicated. Steel beams shall be anchored at each end with min. (4) 16d nails or (2) 1/2" x 4" lag bolts and laterally supported.
 - Fit beams to be fastened together using 1/2" inch diameter A307 bolts with washers under threaded end of bolt, square washers preferred. Bolts will be spaced at 24" maximum staggered top and bottom of beam.

WALL BRACING DESIGN SPEC'S

BASED ON 2018 NRCRC
REVISED SECTION R602.10 DATED 9-1-13)

- THIS HOUSE IS DESIGNED USING PER R602.10.3 AND TABLE R602.10.1, USING CONTINUOUS SHEATHING METHOD.
- BASIC WIND SPEED DOES NOT EXCEED 115 (MPH)
- EAVE TO RIDGE HEIGHT DOES NOT EXCEED 20'-0"
- IF RIDGE TO EAVE EXCEEDS 20'-0", IN NON WALK-UP ATTIC GABLE WALL SITUATIONS, USE ONE OF THE GABLE BRACEWALL DETAILS AS DESCRIBED:
 - IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE IS LESS THAN 12'-0", USE DETAIL 910-4 W/ MID HEIGHT BRACE.
 - IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE EXCEEDS 12'-0", USE DETAIL 910-4, W/ J HEIGHT BRACES.
- EXTERIOR WALLS HAVE BEEN SHEATHED ON ALL SHEATHABLE SURFACES W/ 5/8" OSB INCLUDING WALL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW OPENINGS, AND ON ALL GABLE END WALLS NAIL W/ 6d AT 6" O.C. AT PANEL EDGES AND 12" AT INTERMEDIATE SUPPORTS.
- GARAGE PORTAL FRAME SPECIFICATIONS USED PER DETAIL #1A ON SHEET D-4.
- SEE SHEET D-4 FOR NAILING & BRACING REQUIREMENTS.
- SPECIAL FRAMING REINFORCEMENT (IF REQUIRED) IS SHOWN ON PLAN WITH A DIAMOND SYMBOL = ◇. THE NUMBER INSIDE SYMBOL DESIGNATES LENGTH OF SIMPSON CS-16 STRAP CONTINUOUS VERTICALLY EITHER FROM UPPER FLOOR STUDS OVER INTERMEDIATE FLOOR BAND ONTO LOWER FLOOR STUDS BELOW, OR FROM TOP PLATES OF ONE STORY WALL, DOWN CRIPPLE STUDS AND HEADER END, WITH # IN DIAMOND BEING LENGTH ONTO JACKS BELOW. AT FLOOR TO FOUNDATION CONNECTION USE EITHER (a) SIMPSON MAS OR MASB (b) SIMPSON DTT22 (1800lb UPLIFT RESISTANCE) W/ (MIN) 1/2" ANCHOR BOLT W/ (MIN) 7" EMBEDMENT.
- IN LIEU OF THE STRAPPING, USE OSB ON BOTH SIDES OF GARAGE WALLS. THIS WILL BE NAILED WITH EITHER 6d DEFORMED OR 6d COMMON NAILS AT 6" O.C. AT EDGES AND 12" O.C. IN FIELD, PER NRCRC TABLE R602.3(1).

WALL BRACING REQUIRED/PROVIDED		
FIRST FLOOR:	89.7'	REQUIRED
	161.5'	PROVIDED
		THEREFORE: COMPLIES
SECOND FLOOR:		THE SECOND FLOOR BRACING IS EQUAL TO OR EXCEEDS THE FIRST FLOOR, SO THAT IT COMPLEYS, AND NO ANALYSIS IS REQUIRED PER R602.10.3.2 #5 AND #6



HEADER SCHEDULE

- (A) (2) 2x10 FLUSH
- (B) (2) 2x10 DROPPED
- (C) (2) 2x8 FLUSH
- (D) (2) 2x8 DROPPED
- (E) (2) 9 1/4" LVL FLUSH
- (F) (2) 9 1/4" LVL DROPPED
- (G) (3) 2x10 DROPPED
- (H) (3) 16" LVL FLUSH W/ 1/2" BOLTS @ 18" O.C. STAGGERED
- (J) (3) 18" LVL DROPPED OR FLUSH W/ 1/2" BOLTS @ 18" O.C. STAGGERED
- (K) (3) 11 7/8" LVL DROPPED W/ 1/2" BOLTS @ 18" O.C. STAGGERED
- (L) (3) 9 1/4" LVL FLUSH

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6913 Rouse Road
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W. W. MILLS
REGISTERED ARCHITECT
17579
2-15-19
NORTH CAROLINA
RALEIGH, NC

PROGRESS DATE:	2/15/19	DESCRIPTION
ISSUE DATE:		
REVISIONS:		
NUMBER	DATE	INITIALS

PROJECT NO: 001719
DRAWN BY: JT
CHECKED BY: BB/JT
SHEET TITLE: Second Floor Ceiling Framing
SHEET NUMBER:

AS-3

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A. GENERAL NOTES

- Contractor assumes all responsibility for detecting or implied structural information. Architect/Structural Engineer must be notified immediately about structural construction or problem areas before contractor proceeds.
- Only noted drawings with latest revisions are applicable for construction.
- All construction, workmanship, and materials to comply with 2018 N.C. State Residential Code and local regulations.
- Design Loads:

Structural System	LL	DL	TL	Structural System	LL	DL	TL
Dwelling Units (general)	40	10	50	Stairs	40	5	45
Sleeping Rooms	30	10	40	Guardrails and Handrails	200		200
Balconies/terraces	60	10	70	Roof Systems	20	10	30
Decks	40	10	50	Cathedral Ceilings	20	15	35
Attics/unheated attic storage	10	10	20	Interior Partition Walls			9
Attics(with storage)	20	10	30	Passenger Garage	50		per emp.
Attics(with fixed stairways)	40	10	50				
- Deflection: Floors: L/360, Roofs: L/240, L/480 for engineered flooring and under tiled areas, L/600 for vertical masonry support.
- Do not scale drawings. Contractor shall contact architect for queries on non-labeled items.
- Owner or builder is responsible for information on soil bearing capacity, min. assumed = 2,000 psf.

B. FOOTINGS AND FOUNDATION

- Minimum Spread Footing Sizes (28 day strength min 2500 psi)

Stones	Wood Frame	Wood Frame + Edge Blocks	8" Masonry
Min. Fla. Width	Min. Fla. Depth	Min. Fla. Width	Min. Fla. Depth
1	18"	18"	24"
2	18"	18"	24"
3	18"	18"	24"
- Footings shall be min 2" wider overhang on each side than the foundation above. Minimum footing depth 12" below grade, u.n.o. Footings for close adjacent piers can be combined.
- Grids and piers shall bear on center 1/3 of pier and footing optimally, but no less than 4" from pier or footing edge.
- Maximum height of unbraced fill and reinforcing to conform with Tables R602.3(1), (2), (3), (4), with variables of total wall height, and soil classification. Amount and placement of rebar as per tables.
- Multiple wythe masonry walls shall have galvanized ties every 24" max. vertical and 36" horizontal.
- Anchor bolts to be min. 1/2" dia. @ 6'-0" max. o.c. and max 12" from corners, and splices. Bolts shall extend min. 1" into concrete or masonry. Compression type anchors can be substituted in a case where an occasional anchor bolt is missing or misplaced.
- Concrete Pier Sizes: (Note: the larger of the two chart's requirements governs)

Size	Hollow Masonry*	Solid Masonry	Size	Hollow Masonry*	Solid Masonry
8x16	up to 12' high	up to 5'-0" high	16x16	up to 8'-0" high	up to 12'-0" high
12x16	up to 18' high	up to 9'-0" high	24x16	up to 15'-0" high	up to 15'-0" high
- Typical lag footing to be 20" x 10" deep, u.n.o.
- Placed concrete walls shall be min 10" thick. If retaining under 6' of unbraced fill retaining fill use #4@12" o.c. hooked into footing, and horizontal bars #4 @ 12" o.c.

C. FRAMING REV: 12/11/18

- Crawl space girders are (3) 2x10 #2 spruce/pine/fir, dropped, u.n.o.
- All framing lumber shall be #2 SPF (modulus of elasticity 1,400,000 psi, 90% better). All beams and treated lumber to be #2 SPF, E=1,400,000 psi, 90% better. Studs min #2 or stud grade.
- Joints: min 1-3/4" joint bearing, min 3-1/2" at intermediate supports. Max 3,200 ft-lb moment.
- For 185,000,000 min 1-1/8" net. shear, max 1,215# end reaction. LV's to be 2:05 grade, Fy=2850, L/360 max. deflection.
- Use hangers for all beam to beam connections. Structural fastening as per R602.3(1). Reroof connections is the sole responsibility of the general contractor and his subs.
- Provide double top plates in all exterior walls. Stagger joints min 48" w/ @ 16" o.c.
- Set all joints and beams with natural camber up. Ends lapped min. 6" over bearing shall be securely spiked together. Provide at least 1-1/2" bearing on all joists and 3" for beams (U.N.O.).
- All framing exposed to masonry or weather to be pressure treated. Sibs min. 2x6.
- Structural member fastening to conform to Tables R602.3(1) and (2).
- With 2x4 flooring members, use double joists: A) under parallel partitions; B) under opening multiple joists C) under tubs if joist spans > 12'. I-joists and floor trusses do not have to be doubled unless shown on the structural plans.
- Provide 2x6 attic collar ties at 32" o.c. at upper 1/3 of attic space, u.n.o.
- Studs and joists shall not be cut for plumbing/electrical/mechanical runs without adding strapping to each side per R602.6. Architect/Structural Engineer is not responsible for failures in cut members. Do not cut beams or girders.
- Bottom frame gable end and vaulted walls and all walls higher than 12' w/ 2x6 @16" o.c. or dbl. 2x4 @ 12" or perforated 2x4 with dbl. 2x10 bands with Simpson 5315 x 30" @ 32" o.c. top studs to bottom studs.
- All exterior headers to be (2) 2x10 top u.n.o. w/ dbl. jacks for all openings > 3'-0"
- All interior bearing headers to be (2) 2x10 u.n.o. w/ dbl. jacks for all openings > 6'-0"
- All interior non-bearing headers to be min. (2) 2x4 top u.n.o.
- Fireblock to conform with R302.11.

D. ROOF FRAMING NOTES REV: 12/11/18

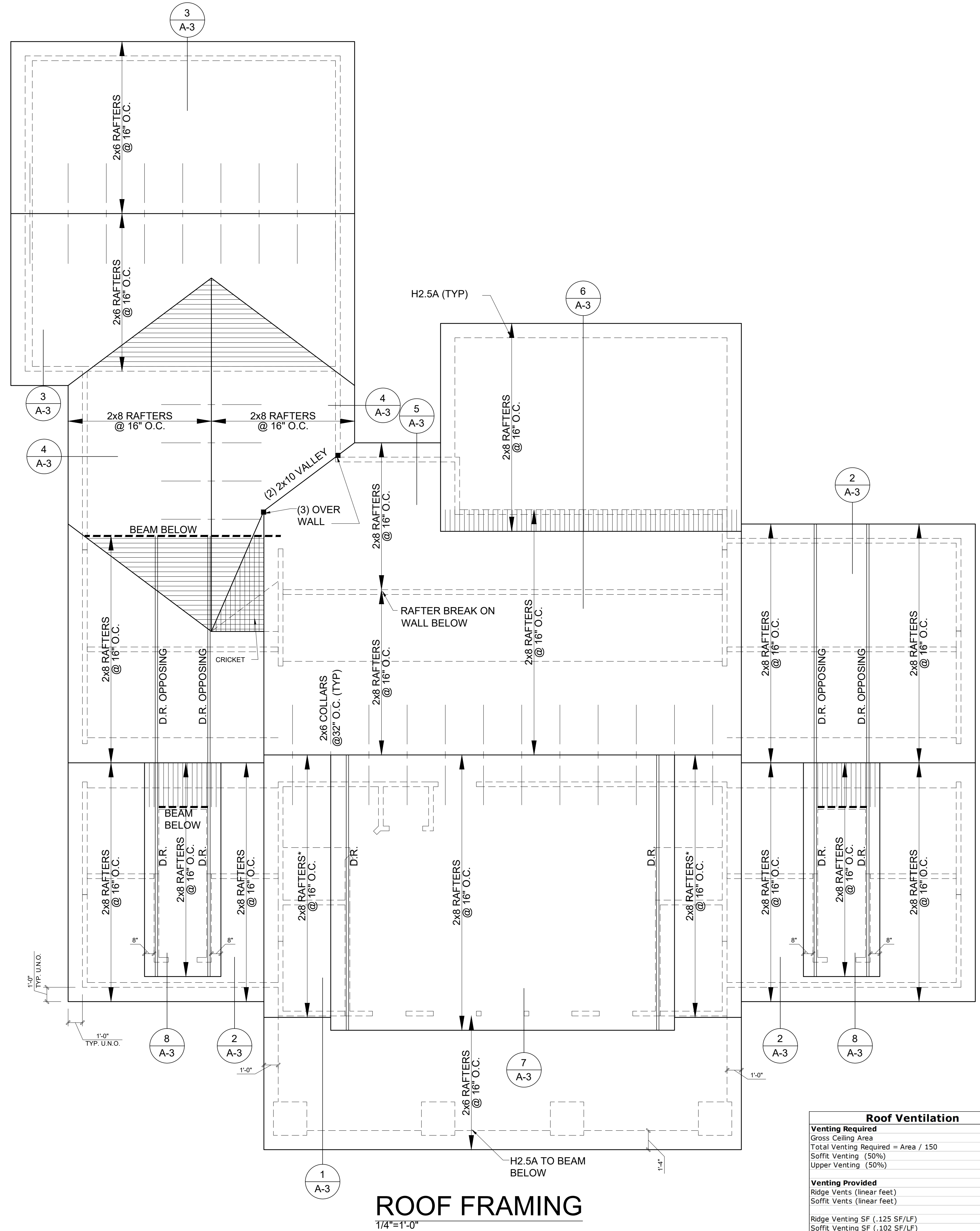
- Double hips may be spliced with a minimum 60" overlap at center. No valley splices.
- Use 2x10 or 6" open rafters for vaulted areas.
- Attach vaulted rafters with hurricane connectors Simpson H-25, H-5 or approved equal.
- High all rafters under studs below.
- Back above low roofs to have ridge rafter of low roof with L4"x3"-1"x1/4" and 16d nails @12" o.c. Low end to have 3"x3/4" welded plate dim.
- All point loads to be columned/blocked (through joists) down to foundation.
- Hanger Schedule (Simpson hangers) for beam to beam connections (unless noted otherwise):
 - (1) 2X10: USS210-2
 - (2) 2X10: USS210-3
 - (3) 2X10: USS210-3
 - (4) 3-1/4" LVL: HCS410
- Deck joists min 4'-0" above grade are to be knee or diagonally braced per Appendix M. Footing to house will be by nailer with 5/8" bolts @ 20" o.c. and (3) 12d hot dipped galv. @ 6" o.c.
- Truss drawings must be sealed by the truss manufacturer and reviewed by Planworx Architecture. Truss drawings to design and document all required beams, hangers, and point load reactions. Truss drawings package to supply all information required under R302.1.14.
- Comers shall be braced with one of the approved methods as outlines in R602.10.3.
- Multiple LV's up to a 3-ply shall be connected by min. 3-16d nails per row 12" on center on each side. Also, for double 14" LV's or deeper, connect beams with min. 4-16d nails per row at 12" on center. (unless noted otherwise) Please refer to manufacturer specifications for further instructions for proper nailing on specific products. All 4-ply LV's shall be through bolted with 1/2" bolts @ 18" o.c. staggered or 5/8" bolts @ 24" o.c. staggered.

E. STEEL

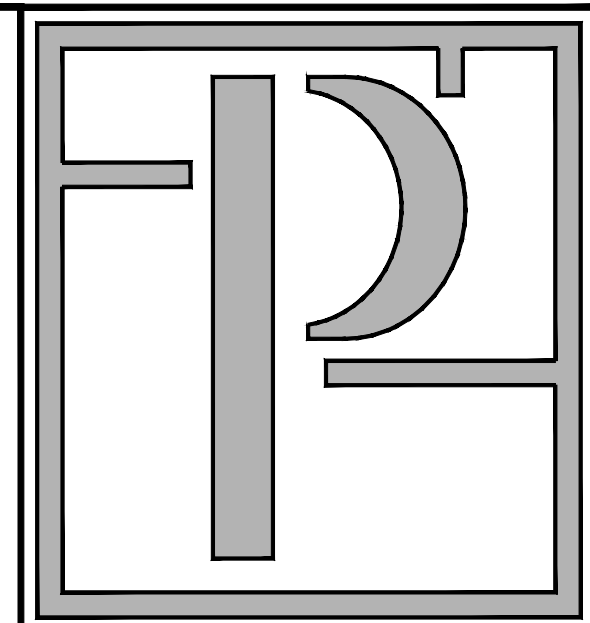
- BRACED MEMBER UNEL ATTACHMENT:**
 - Use Min. (2) 7/16"x4" lag screws into double studs @ 16" o.c.
 - All bolts shall be high strength conforming to ASTM A-325.
 - Structural steel shall be ASTM grade A-36 supported across full width of flange. Provide min. 3-1/2" bearing, or more if indicated. Steel beams shall be anchored at each end with min. (4) 16d nails or (2) 1/2" x 4" lag bolts and laterally supported.
 - Flitch beams to be fastened together using 1/2 inch diameter A307 bolts with washers under threaded end of bolt, square washers preferred. Bolts will be spaced at 24" maximum staggered top and bottom of beam.

WALL BRACING DESIGN SPEC'S
 BASED ON 2018 NCRC (REVISED SECTION R602.10 DATED 9-1-13)

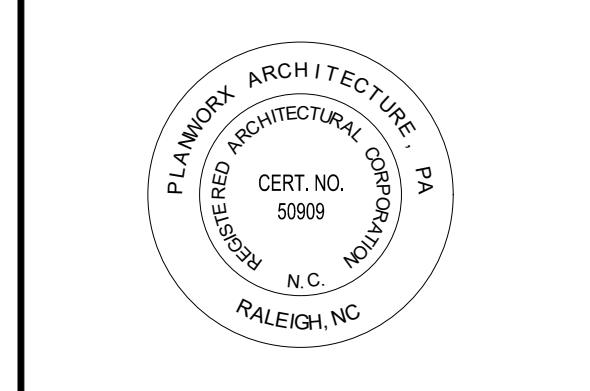
- THIS HOUSE IS DESIGNED USING PER R602.10.3 AND TABLE R602.10.1, USING CONTINUOUS SHEATHING METHOD.
- BASIC WIND SPEED DOES NOT EXCEED 115 (MPH)
- EAVE TO RIDGE HEIGHT DOES NOT EXCEED 20'-0" IF RIDGE TO EAVE EXCEEDS 20'-0", IN NON WALK-UP ATTIC GABLE WALL SITUATIONS, USE ONE OF THE GABLE BRACE WALL DETAILS AS DESCRIBED.
 - IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE IS LESS THAN 12'-0", USE DETAIL 9/D-4 W/ MID HEIGHT BRACE.
 - IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE EXCEEDS 12'-0", USE DETAIL 9/D-4 W/ HEIGHT BRACES.
- EXTERIOR WALLS HAVE BEEN SHEATHED ON ALL SHEATHABLE SURFACES W/ 1/2" OSB INCLUDING WALL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW OPENINGS, AND ON ALL GABLE END WALLS NAIL W/ 6d AT 6" O.C. AT PANEL EDGES AND 12" AT INTERMEDIATE SUPPORTS.
- GARAGE PORTAL FRAME SPECIFICATIONS USED PER DETAIL #1A ON SHEET D-4.
- SEE SHEET D-4 FOR NAILING & BRACING REQUIREMENTS.
- SPECIAL FRAMING REINFORCEMENT (IF REQUIRED) IS SHOWN ON PLAN WITH A DIAMOND SYMBOL = ◊. THE NUMBER INSIDE SYMBOL DESIGNATES LENGTH OF SIMPSON CS-16 STRAP CONTINUOUS VERTICALLY EITHER FROM UPPER FLOOR STUDS OVER INTERMEDIATE FLOOR BAND ONTO LOWER FLOOR STUDS BELOW, OR FROM TOP PLATES OF ONE STORY WALL, DOWN CRIPPLE STUDS AND HEADER END, WITH # IN DIAMOND BEING LENGTH ONTO JACKS BELOW. AT FLOOR TO FOUNDATION CONNECTION USE EITHER (a) SIMPSON HAS OR HASB (b) SIMPSON OTTZ (1800lb UPLIFT RESISTANCE) W/ (MIN) 1/2" ANCHOR BOLT W/ (MIN) 7" EMBEDMENT.
- IN LIEU OF THE STRAPPING, USE OSB ON BOTH SIDES OF GARAGE WALLS. THIS WILL BE NAILED WITH EITHER 6d DEFORMED OR 8d COMMON NAILS AT 6" O.C. AT EDGES AND 12" O.C. IN FIELD, PER NCRC TABLE R602.3(1).



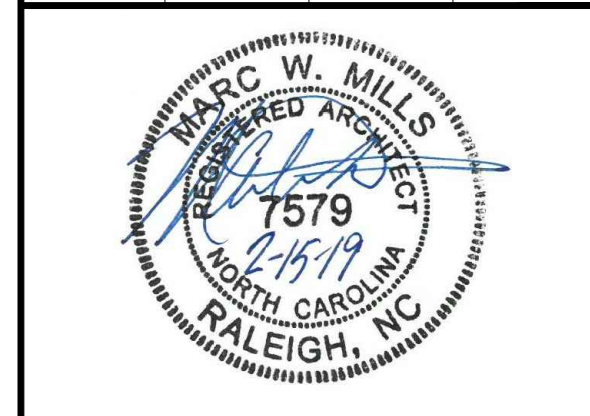
Roof Ventilation	
Venting Required	
Gross Ceiling Area	3240
Total Venting Required = Area / 150	21.6
Soffit Venting (50%)	10.8
Upper Venting (50%)	10.8
Venting Provided	
Ridge Vents (linear feet)	88
Soffit Vents (linear feet)	108
Ridge Venting SF (.125 SF/LF)	11.0
Soffit Venting SF (.102 SF/LF)	11.0
TOTAL VENTING AREA PROVIDED	22.0



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 Holly Springs, NC

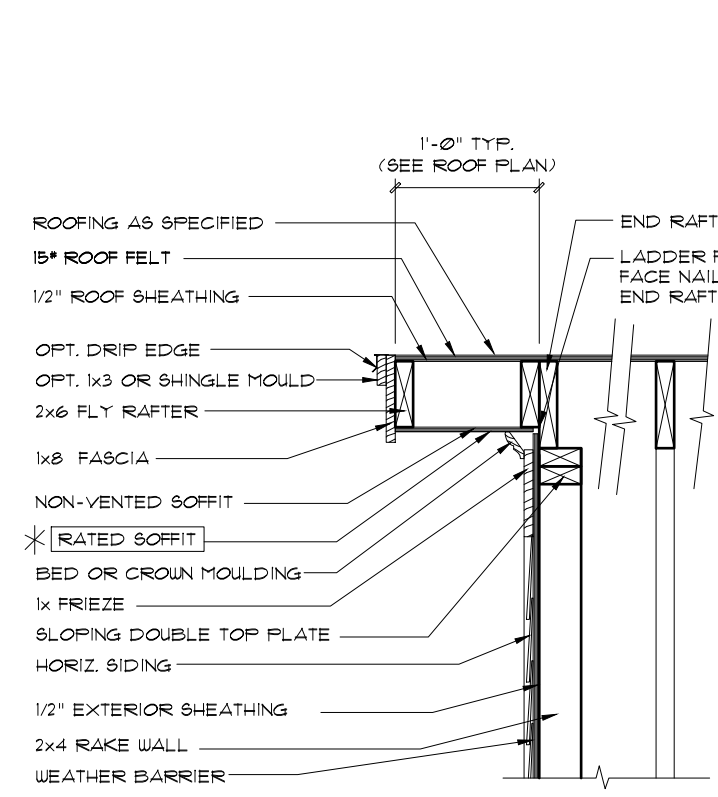


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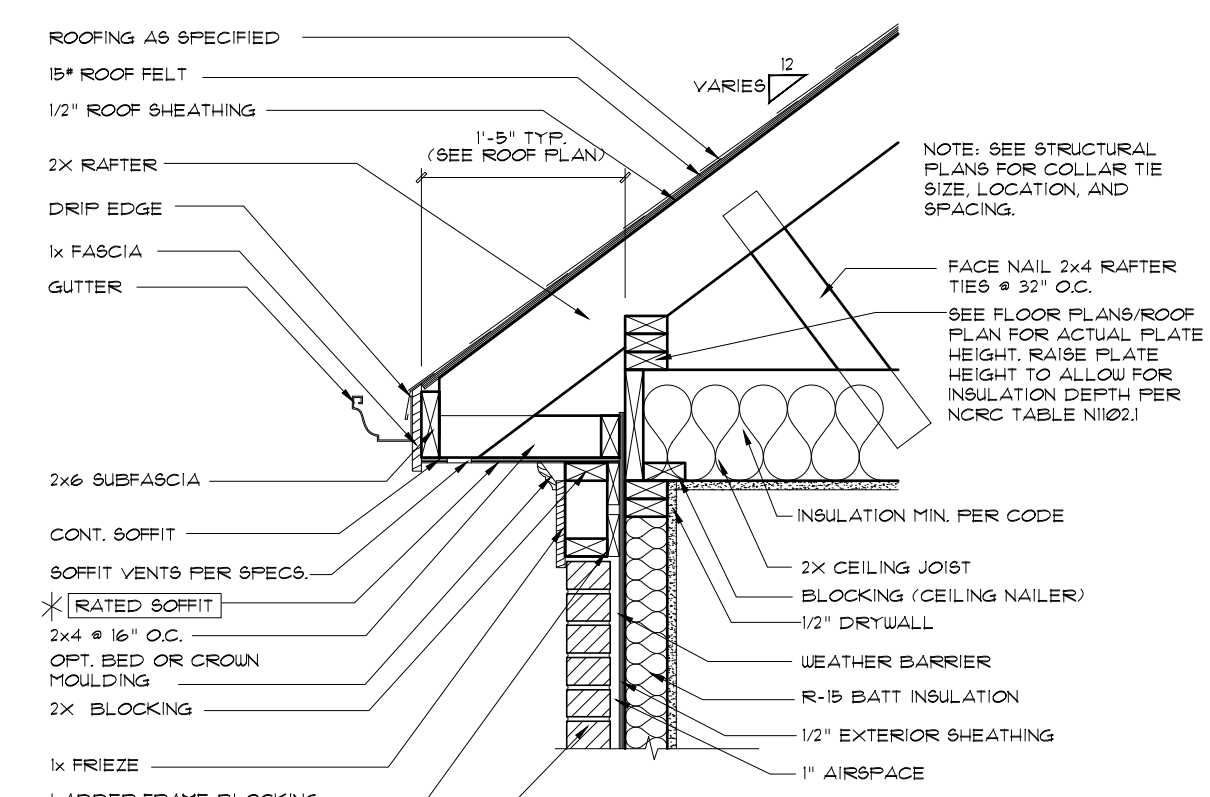
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 CHECKED BY: BB/JT
 SHEET TITLE: Roof Framing

SHEET NUMBER:
AS-4

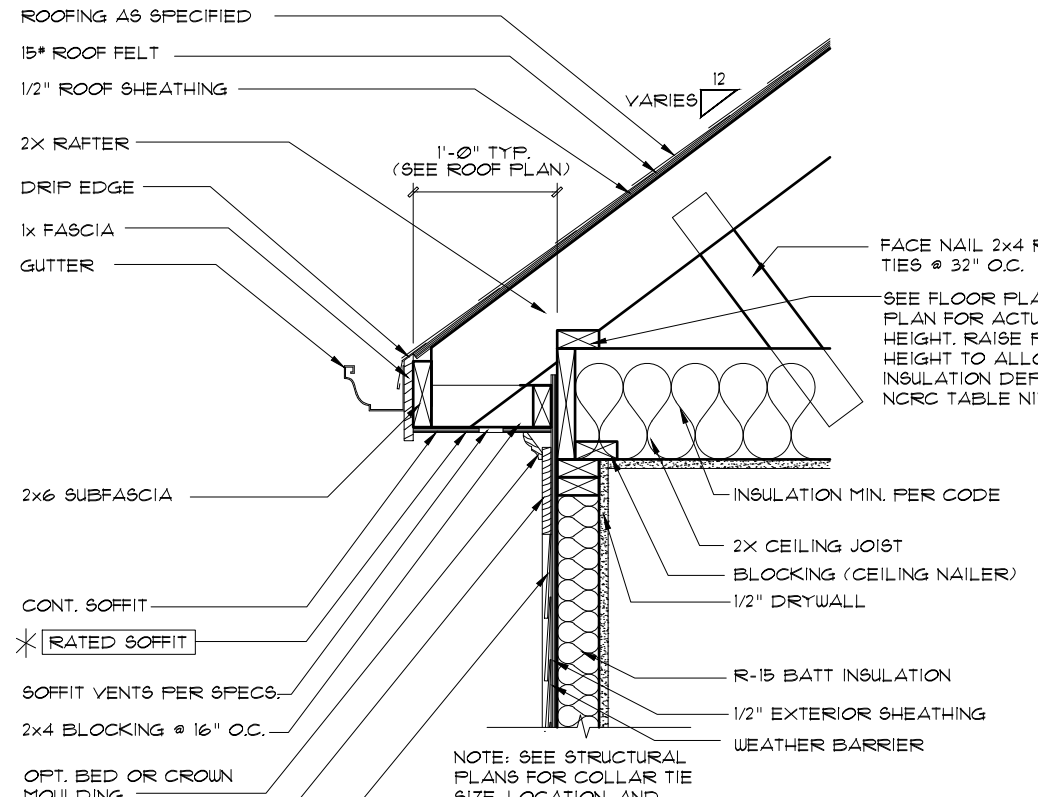
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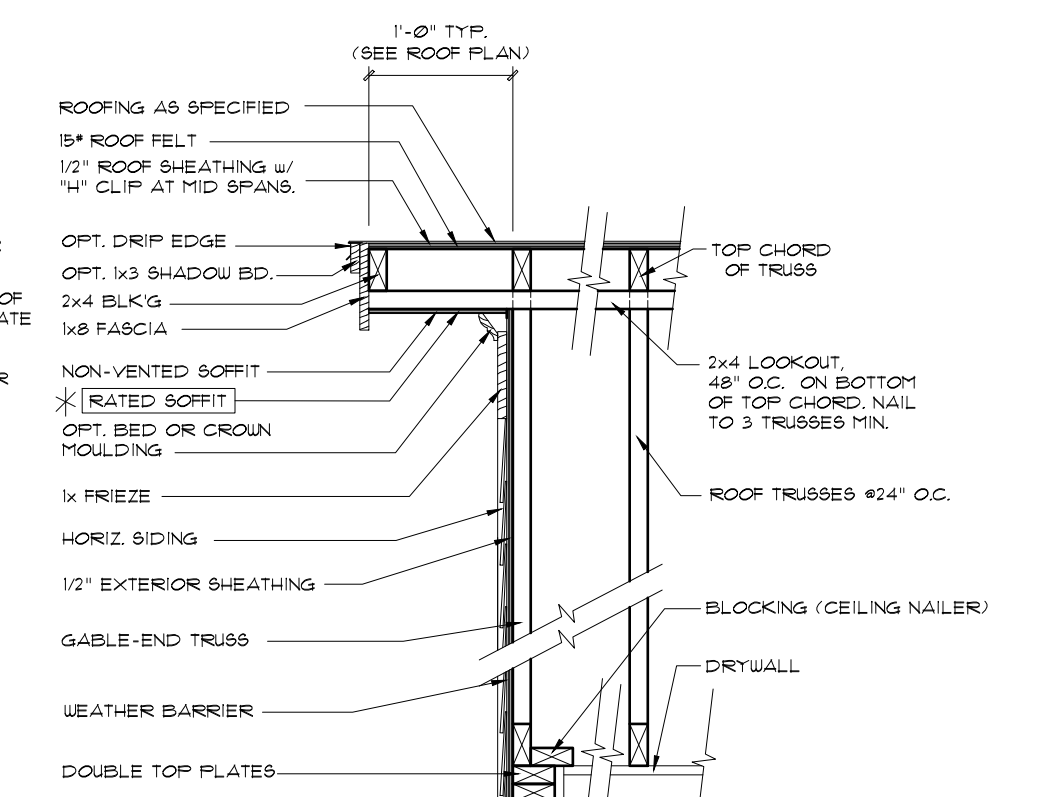
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1/2"x1'-0"
DT0039



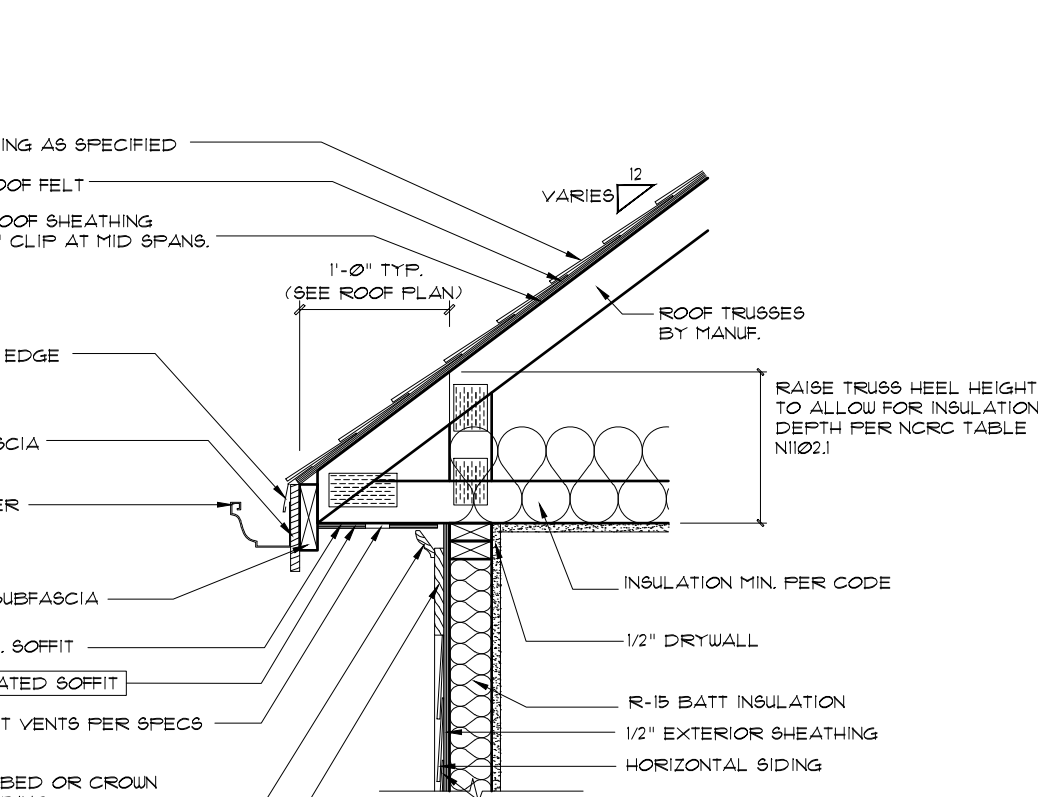
--- CORNICE AT BRICK
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DT0057



--- CORNICE AT SIDING
1/2"x1'-0"
DT0014

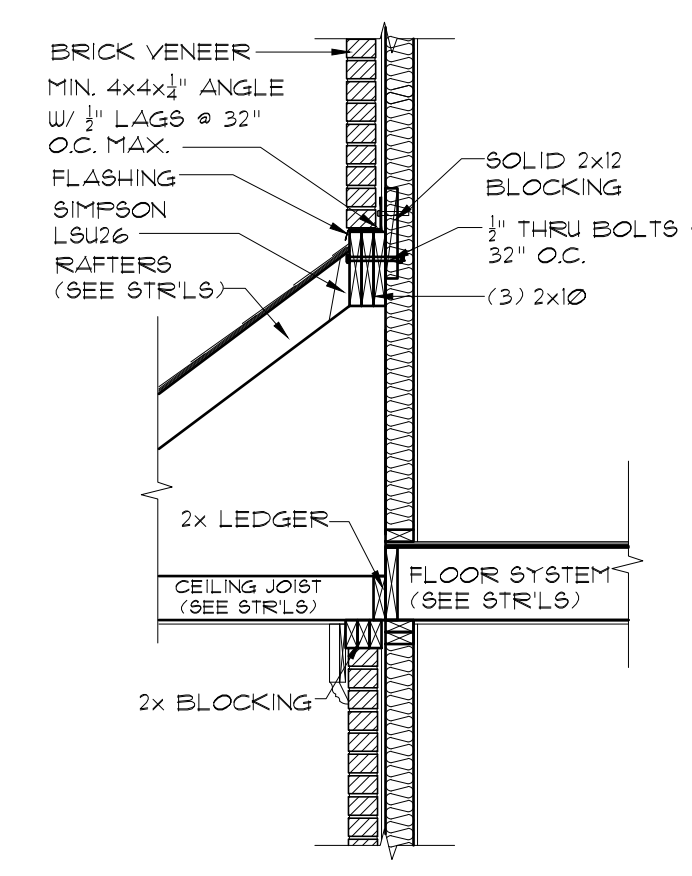


--- RAKE OVERHANG - TRUSSES
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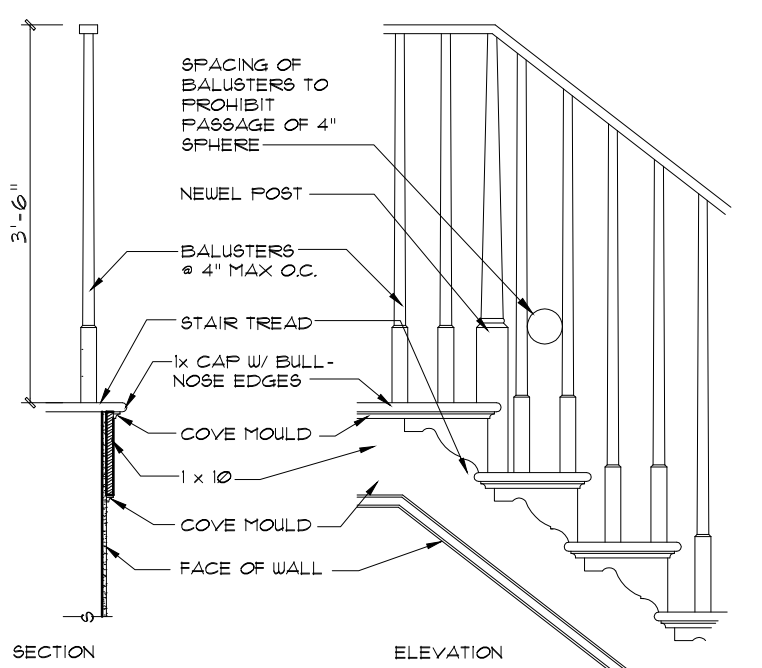


--- TYP. CORNICE - TRUSSES
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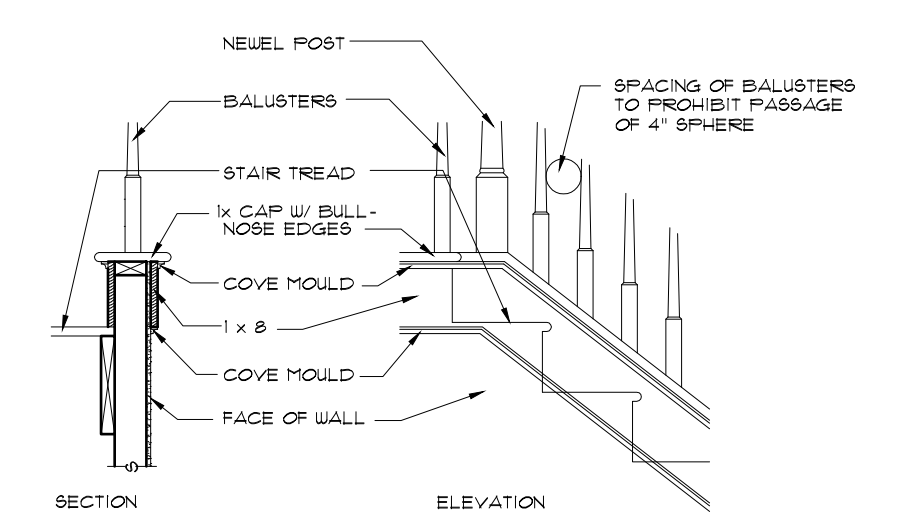
* 1 HOUR RATED (PRESCRIPTIVE 1.33 HR) W/ (2) LAYERS 1/2" TYPE X GYP BD. AT UNDERSIDE OF SOFFIT/RAKE AS REQUIRED. SEE PLANS FOR LOCATIONS. USE EXTERIOR GRADE (G+P FIREGUARD EXTERIOR OR EQUAL) UNDER FINISHED NON-VENTED SOFFIT.



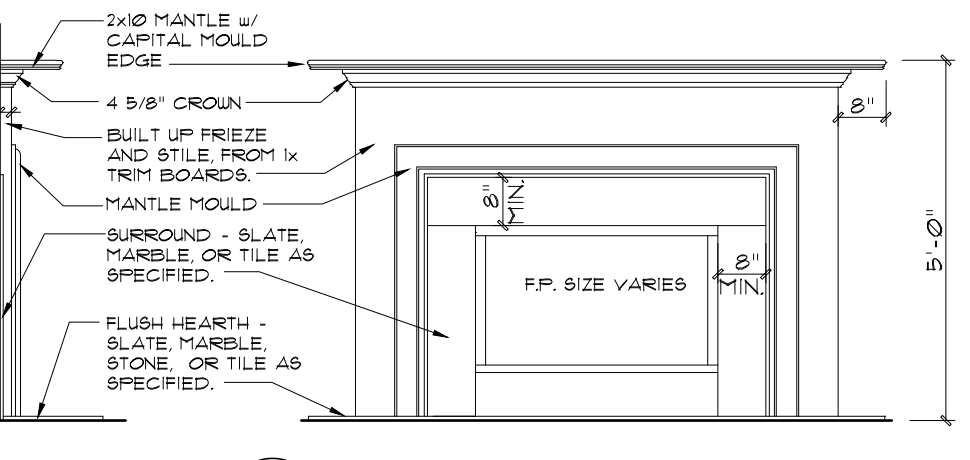
--- BRICK SUPPORT OVER PORCH ROOF
1/2"x1'-0"
DT1226



--- STAIR TRIM - OPEN RISERS
3/4"x1'-0"
DT0043



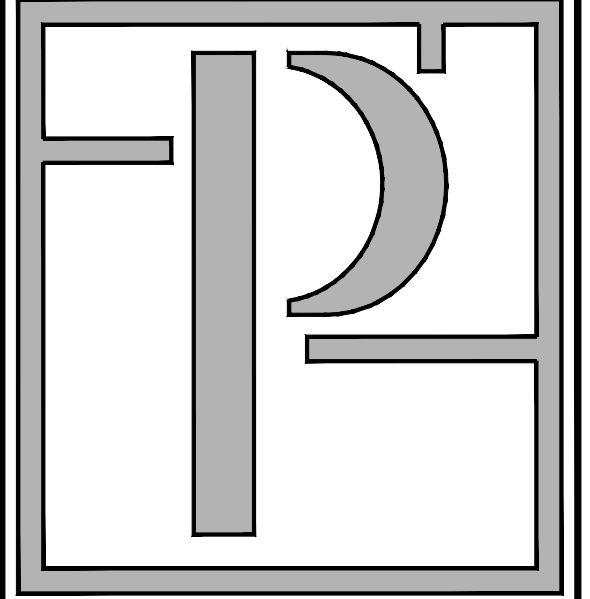
--- STAIR TRIM - CLOSED RISERS
3/4"x1'-0"
DT0042



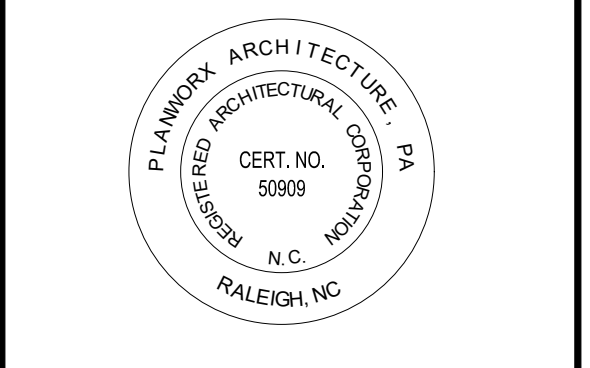
--- FIREPLACE TRIM
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DT0062

PORCH DETAILS

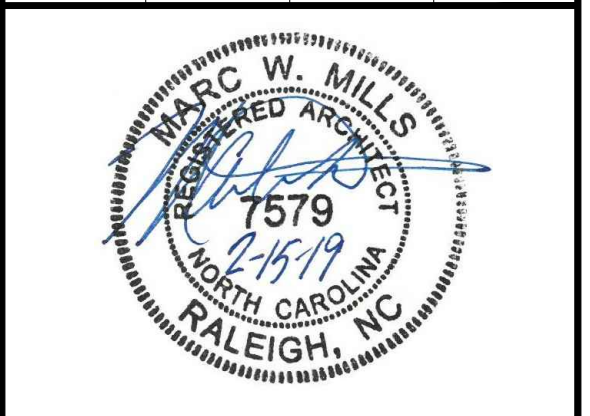
MASTER DETAIL	DETAIL VARIATIONS
<p>1 PORCHES - MASTER 1/2"x1'-0"</p>	<p>A PORCH CORNICE</p>
	<p>B</p>



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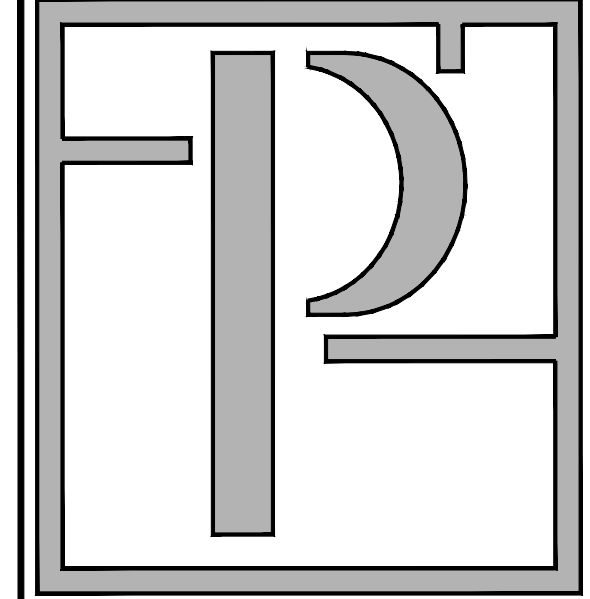
Glenwood Builders
 6913 Rouse Road
 Holly Springs, NC



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		NUMBER	DATE
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DRAWN BY:	JT		
CHECKED BY:	BB/JT		
SHEET TITLE:	Miscellaneous Details		
SHEET NUMBER:			

D-1

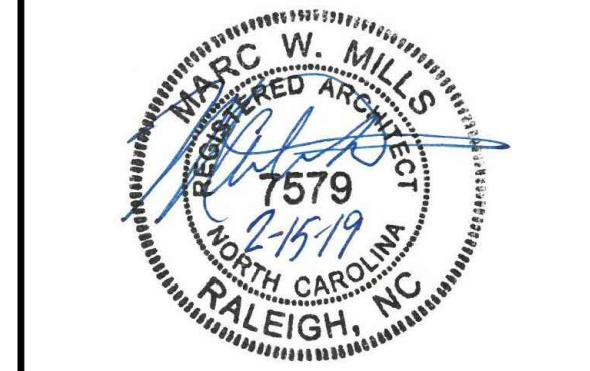
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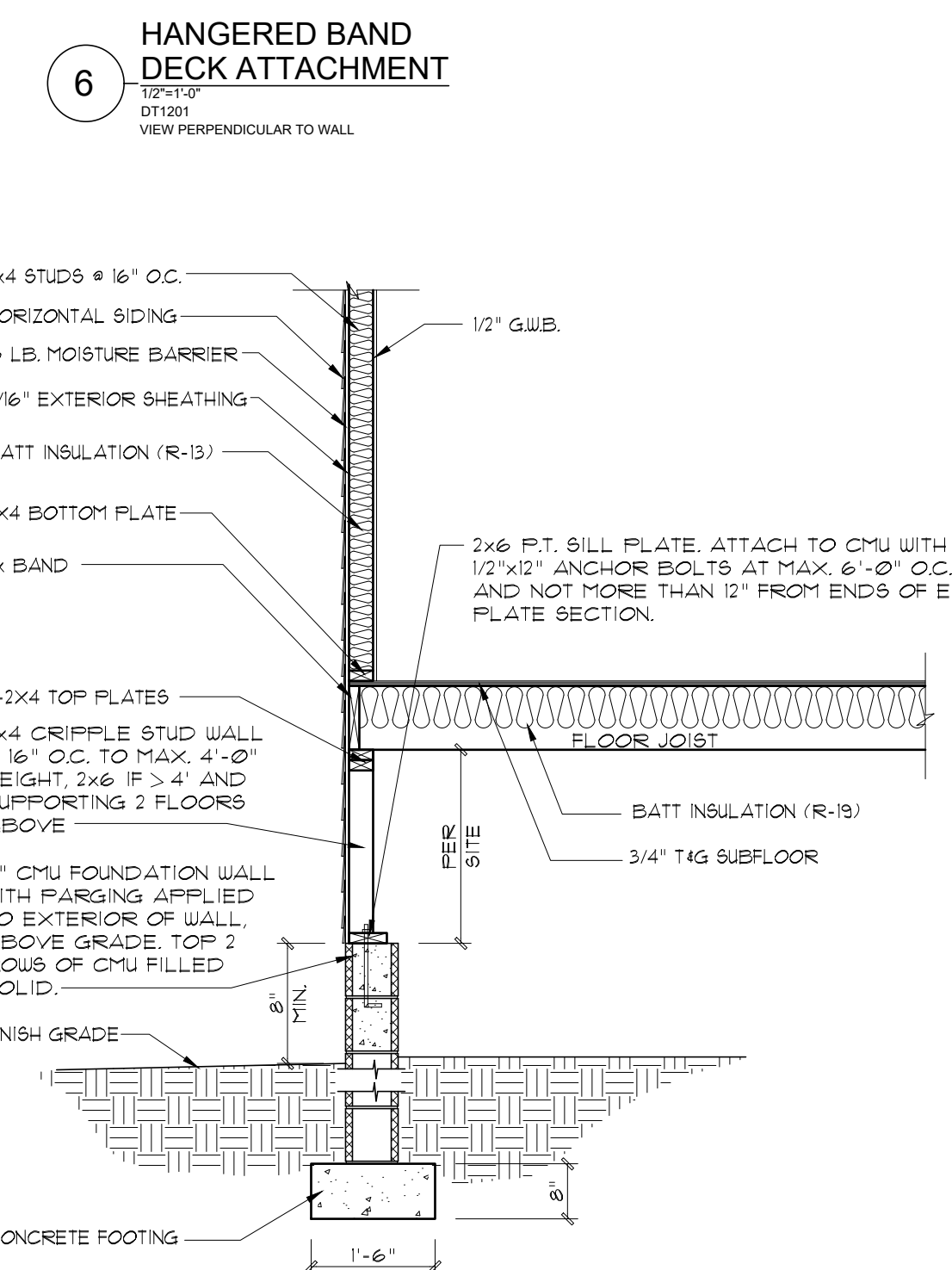
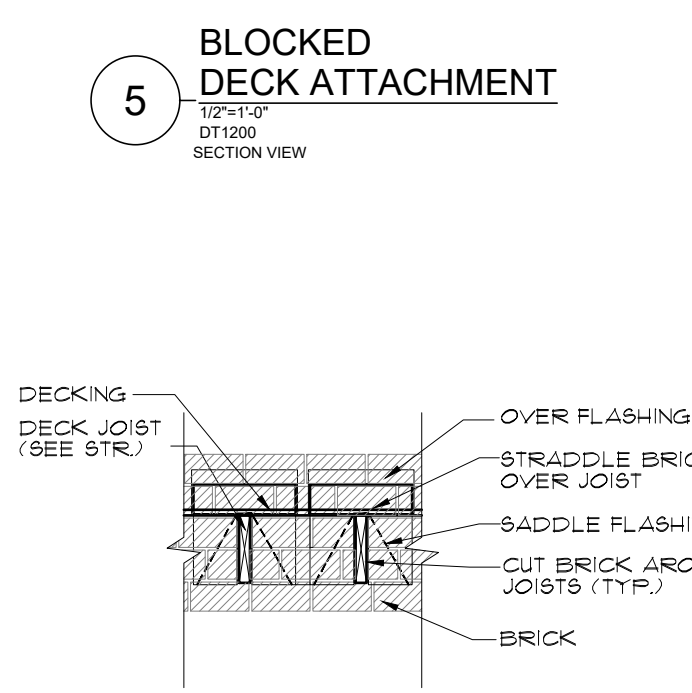
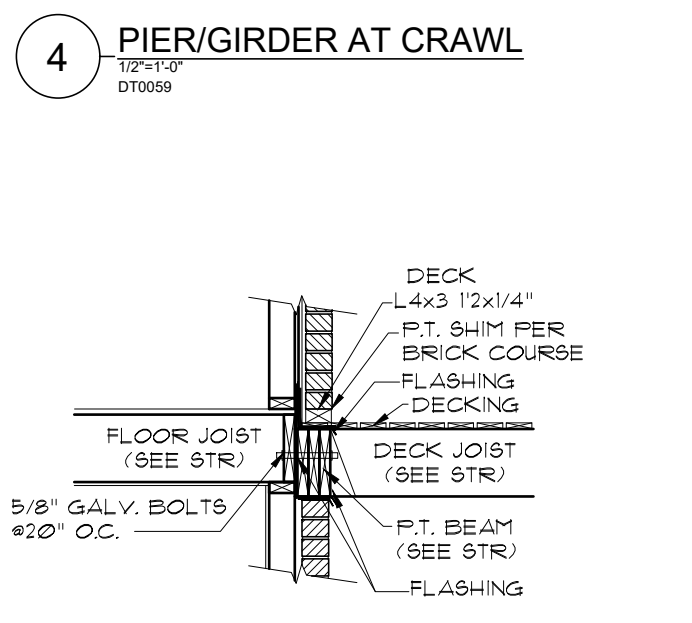
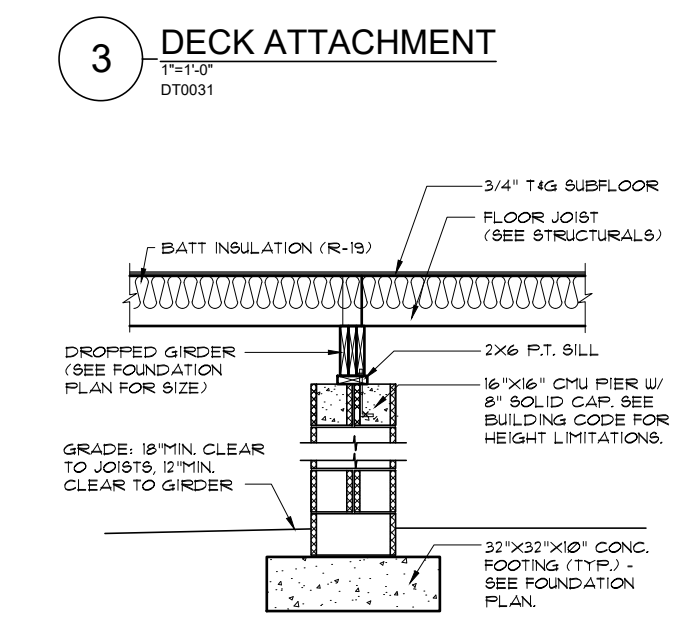
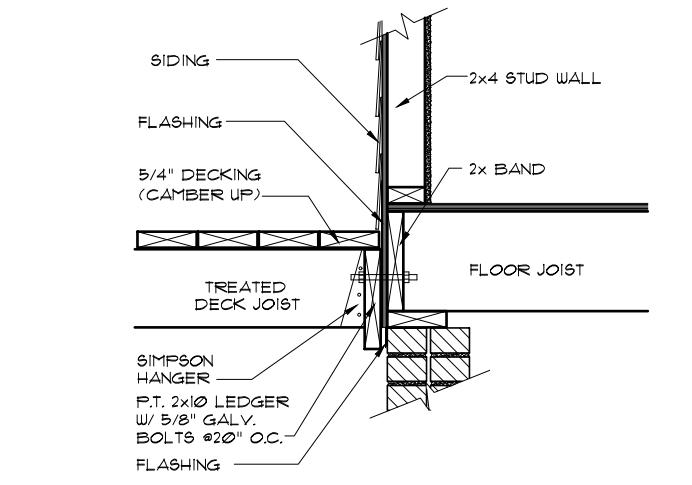
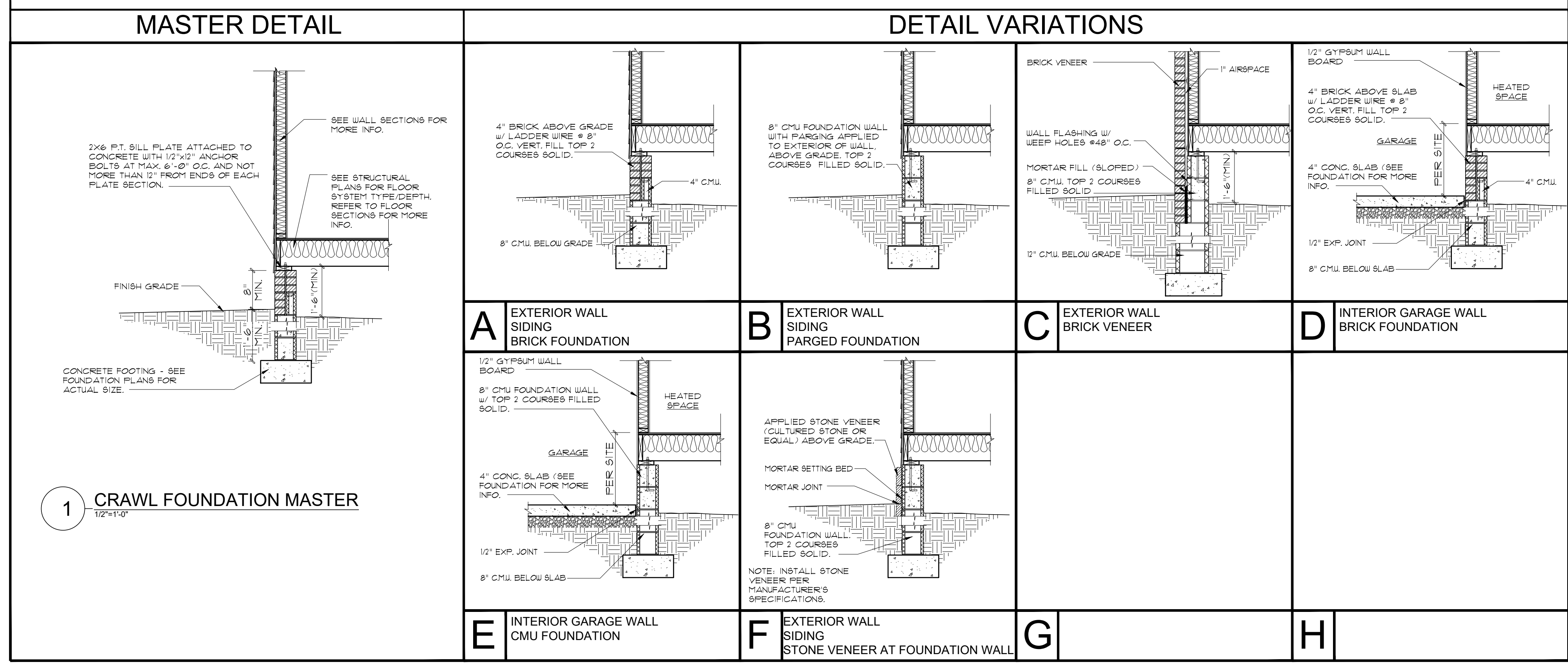
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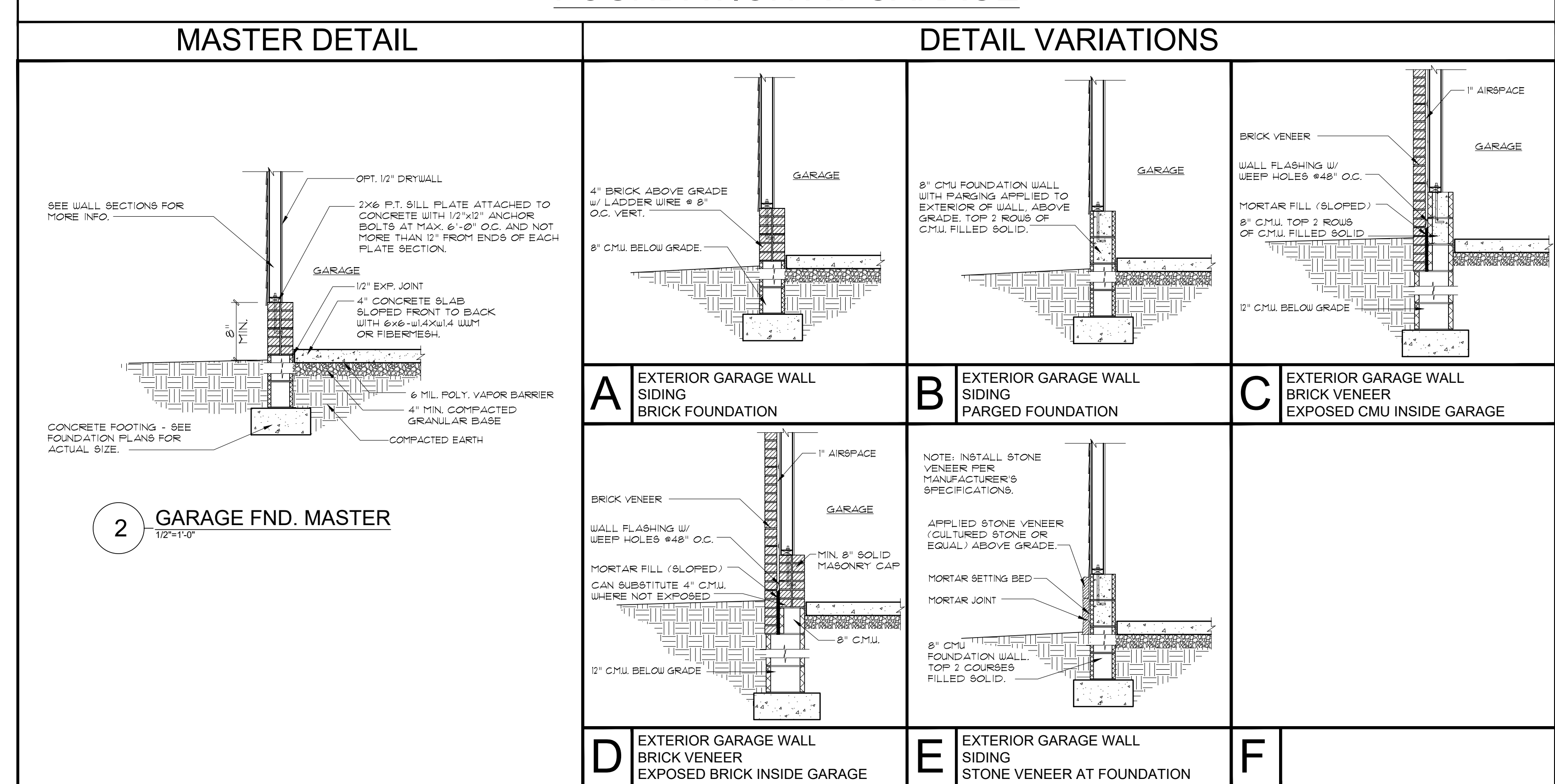
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REVISIONS:		
NUMBER	DATE	INITIALS
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CHECKED BY:	BB/JT	
SHEET TITLE:	Foundation Details - Crawl	
SHEET NUMBER:		

D-3-C

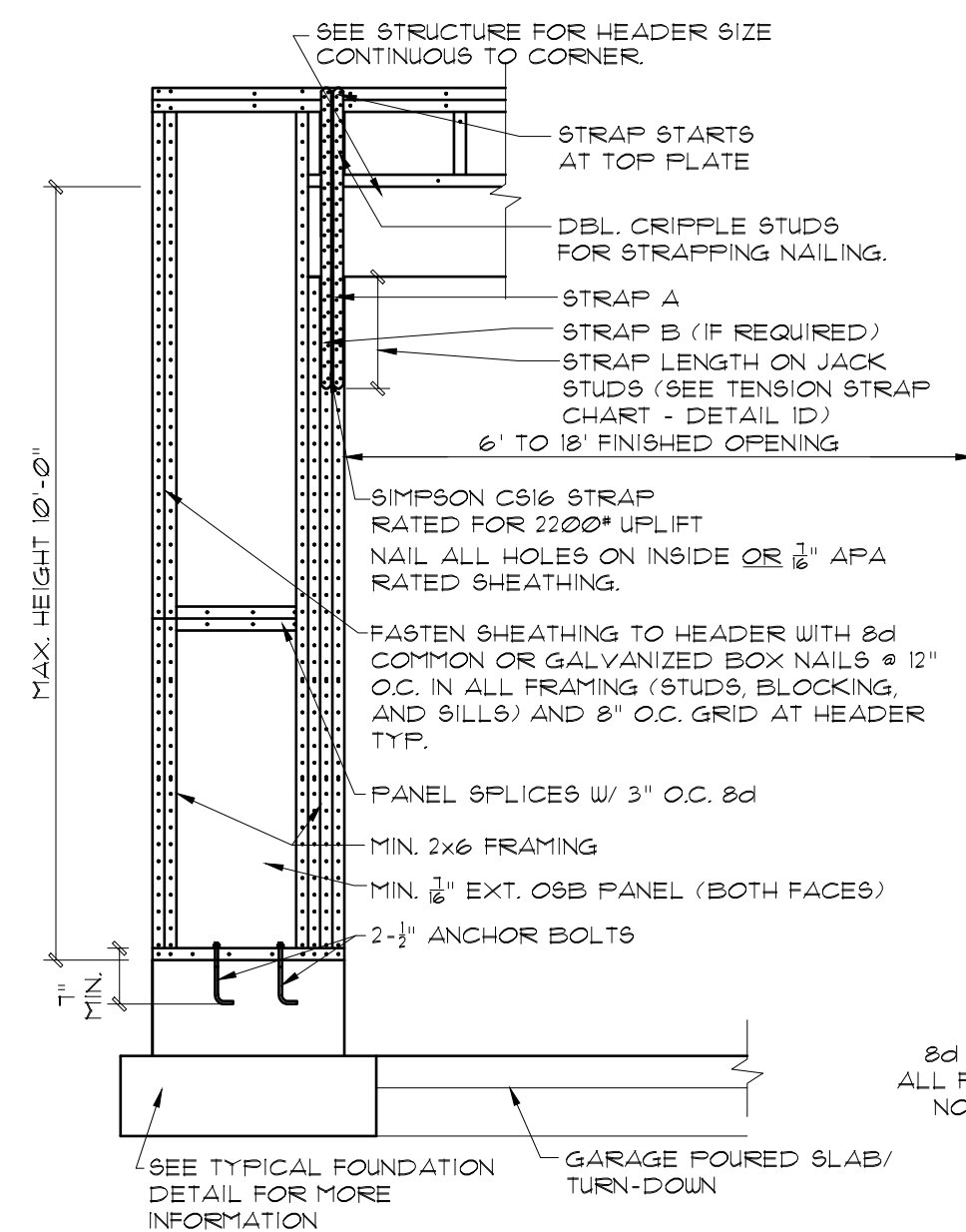
CRAWL FOUNDATION DETAILS



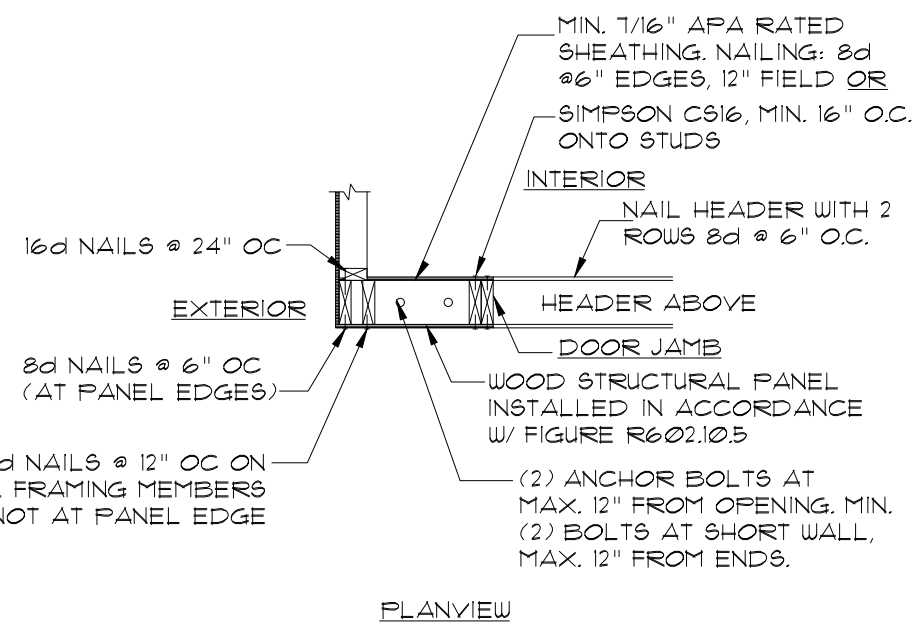
FOUNDATION AT GARAGE



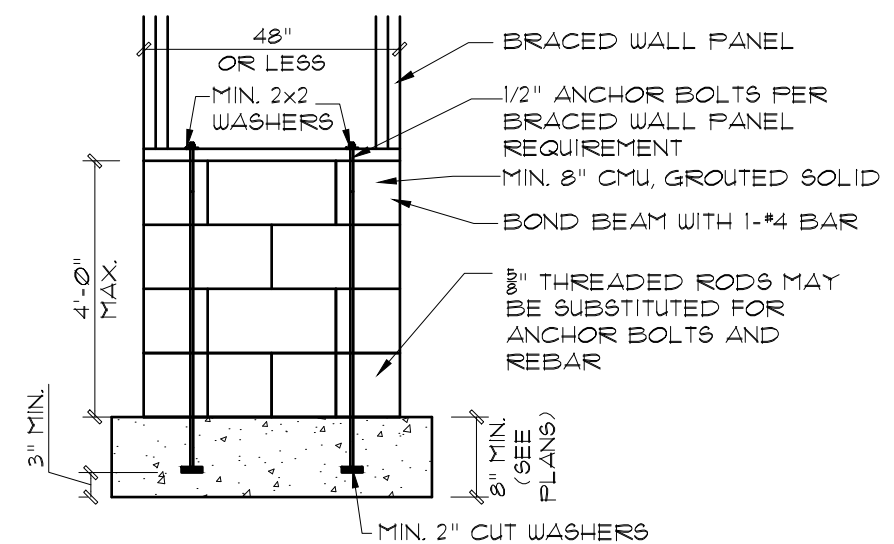
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1A PORTAL FRAME BRACED WALL DETAIL AT GARAGE WALL PER FIGURE R602.10.1 - METHOD PF

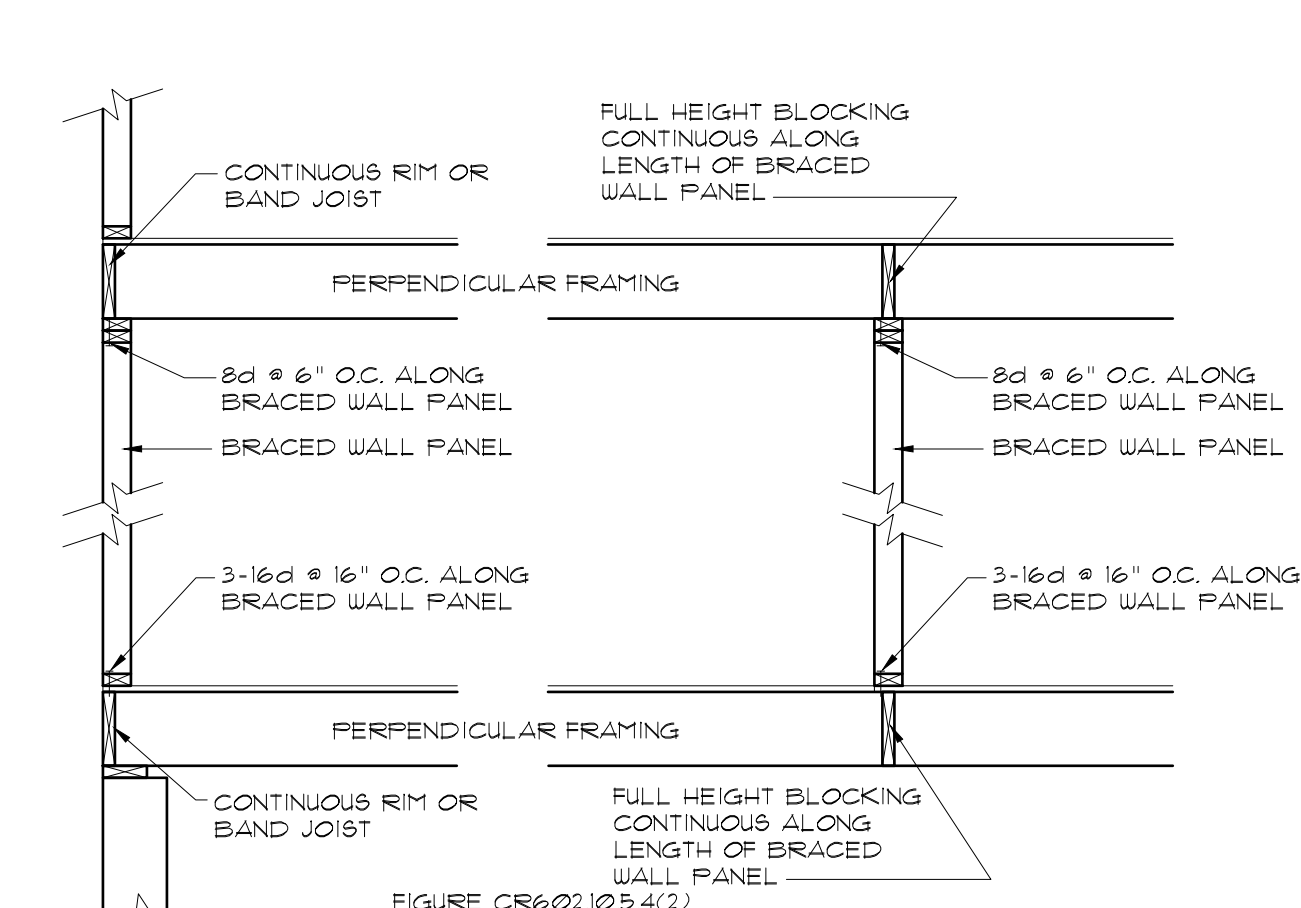
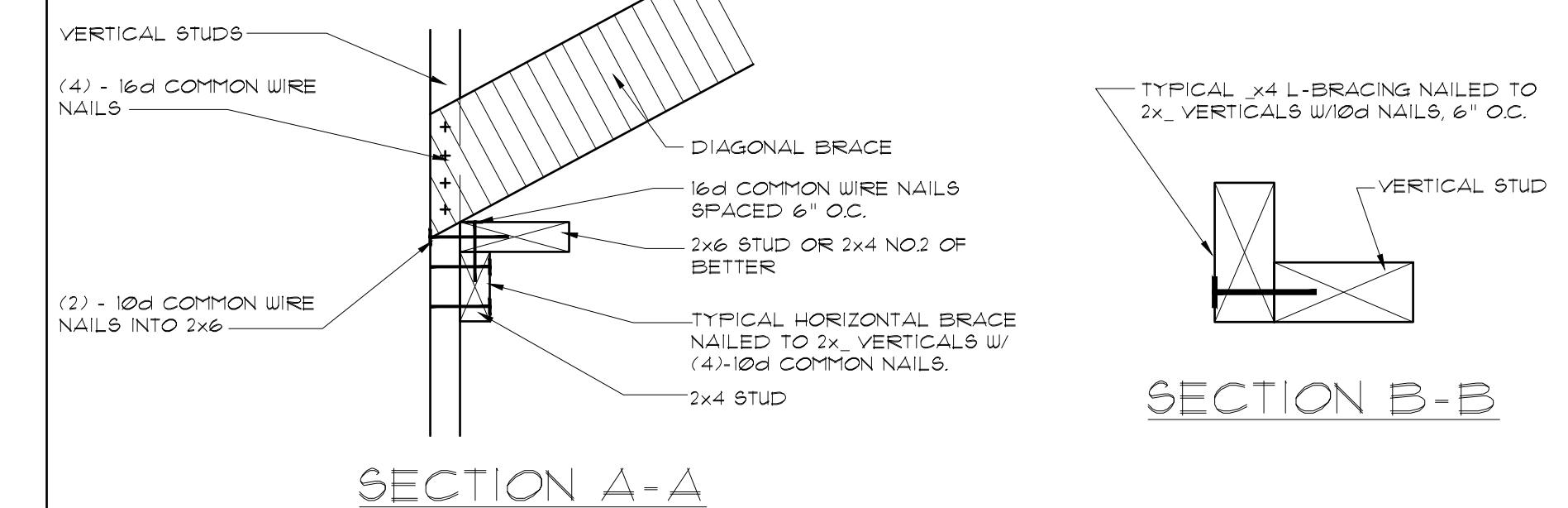
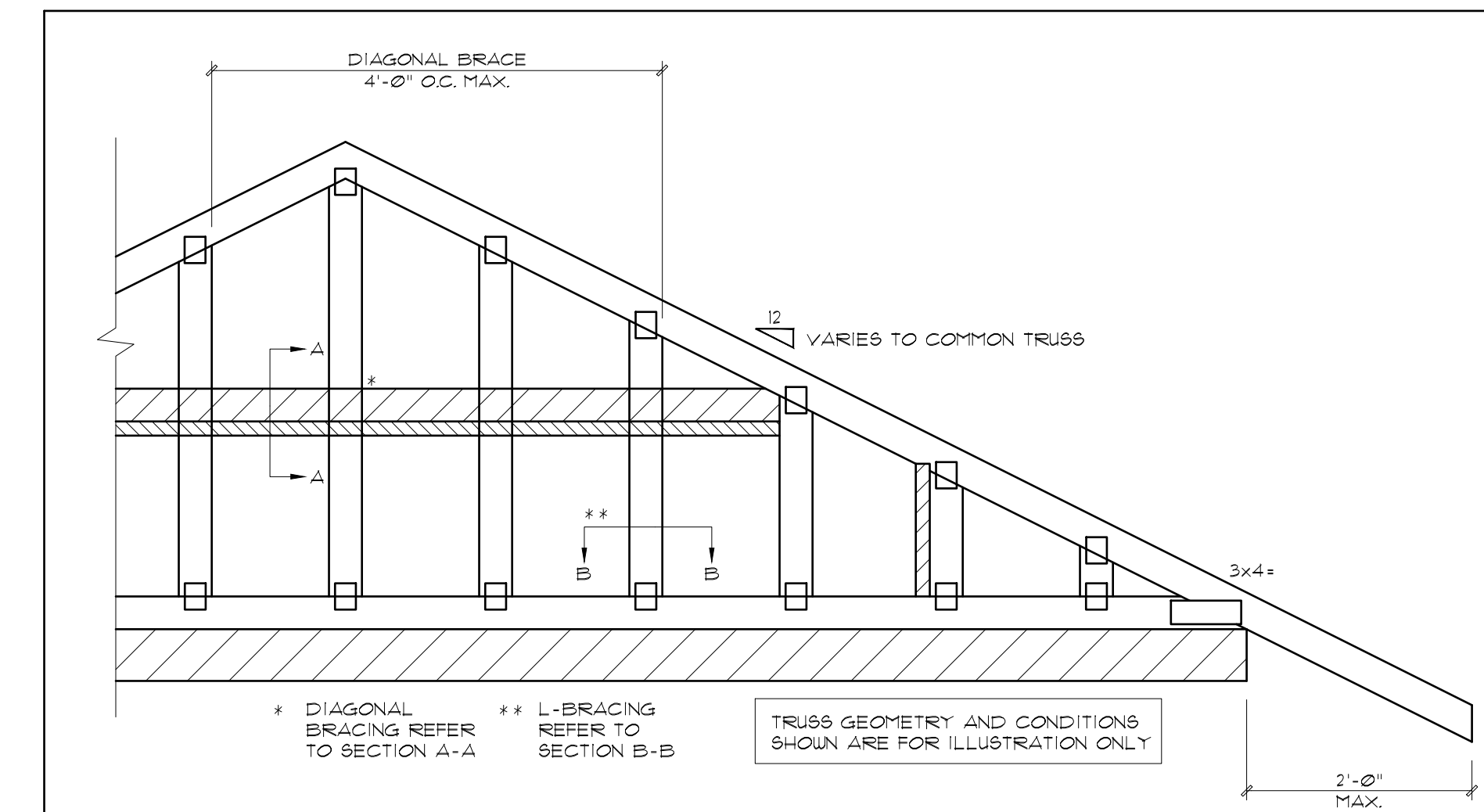


1B SHORT STEM WALL REINFORCEMENT

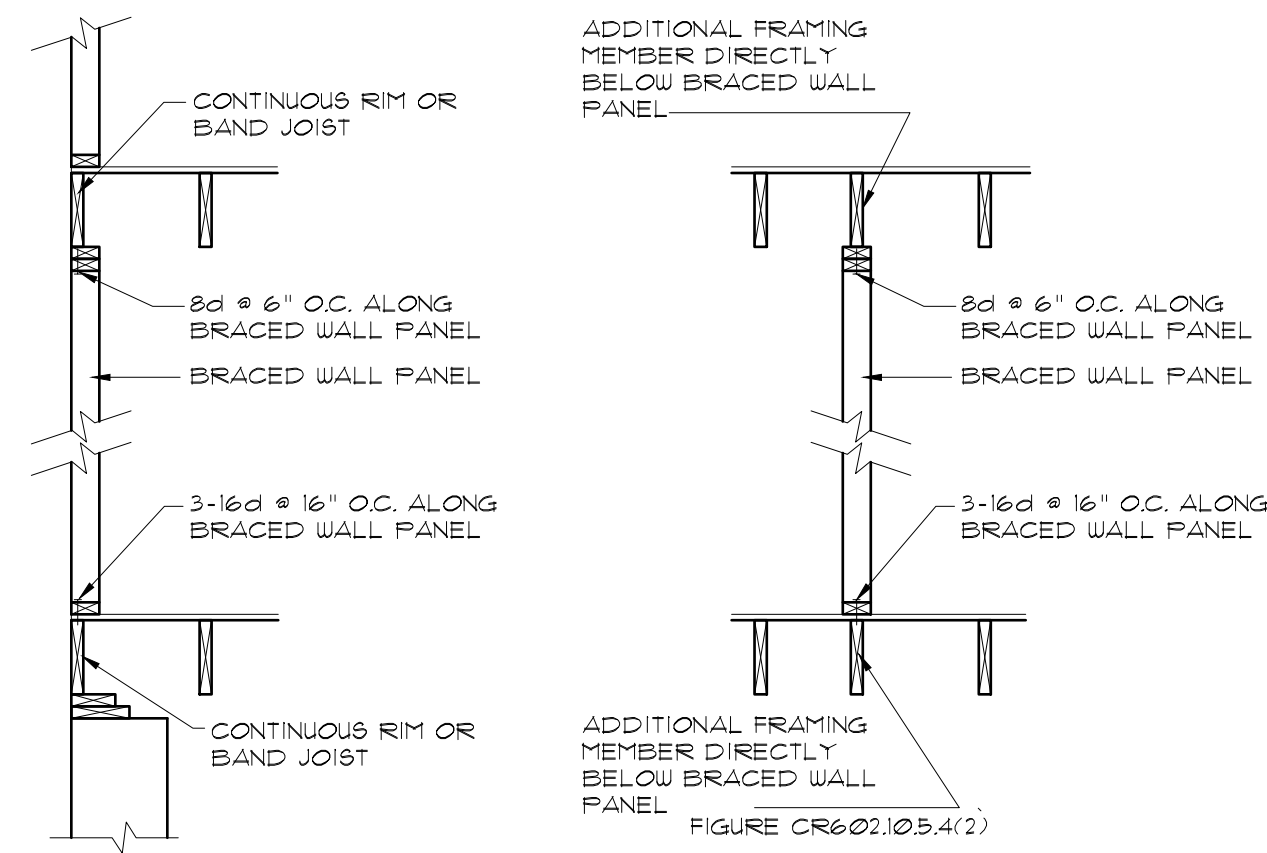


1C OPT. STEM WALL REINFORCEMENT

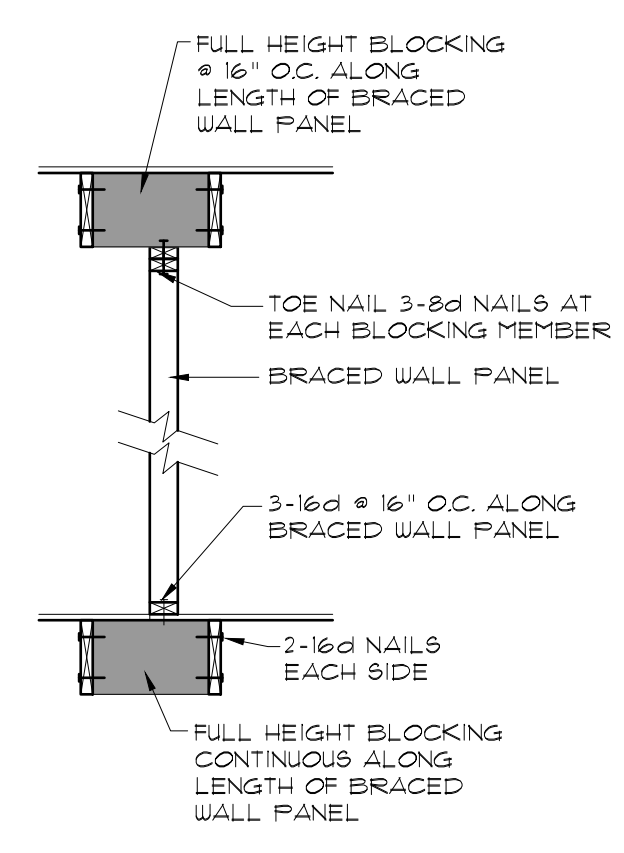
2 NO DETAIL



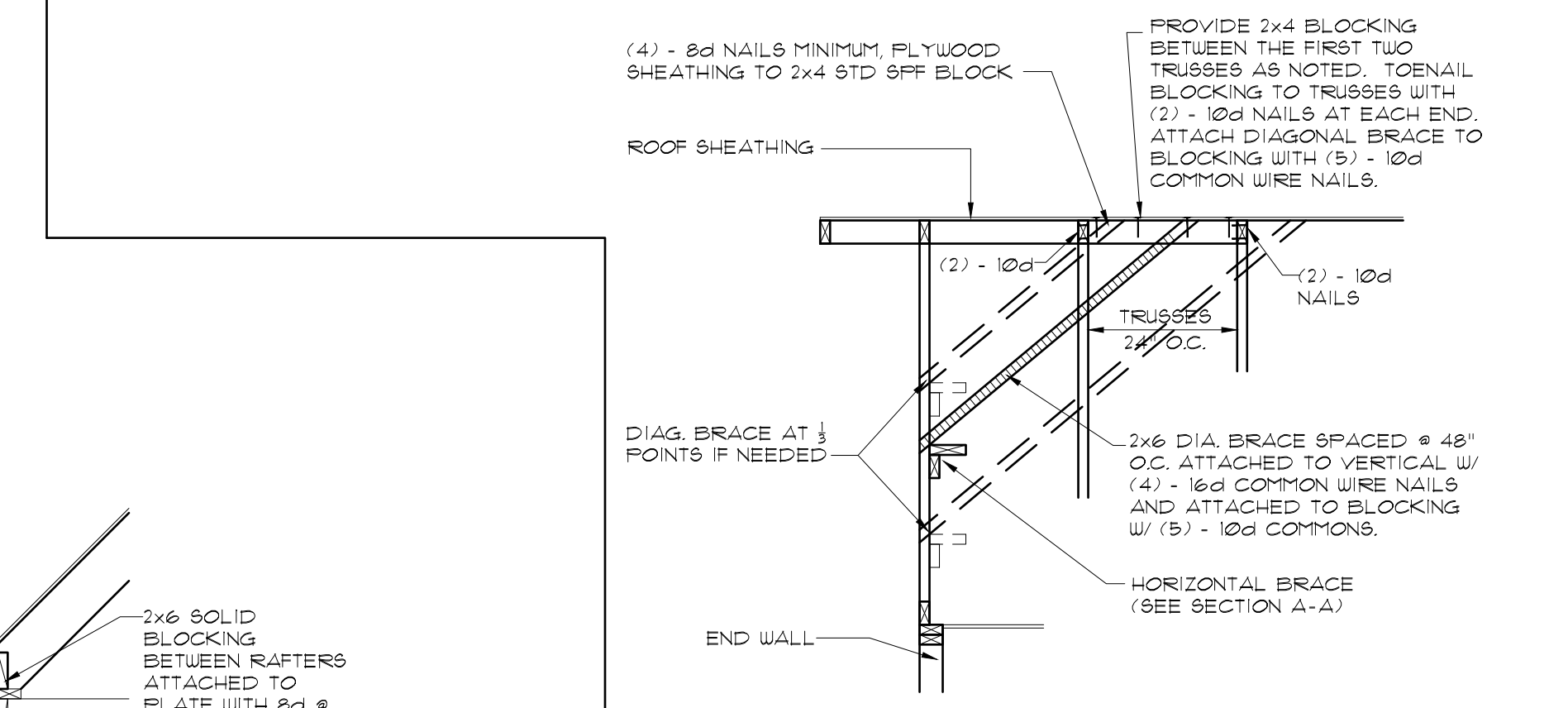
3 BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING DETAIL



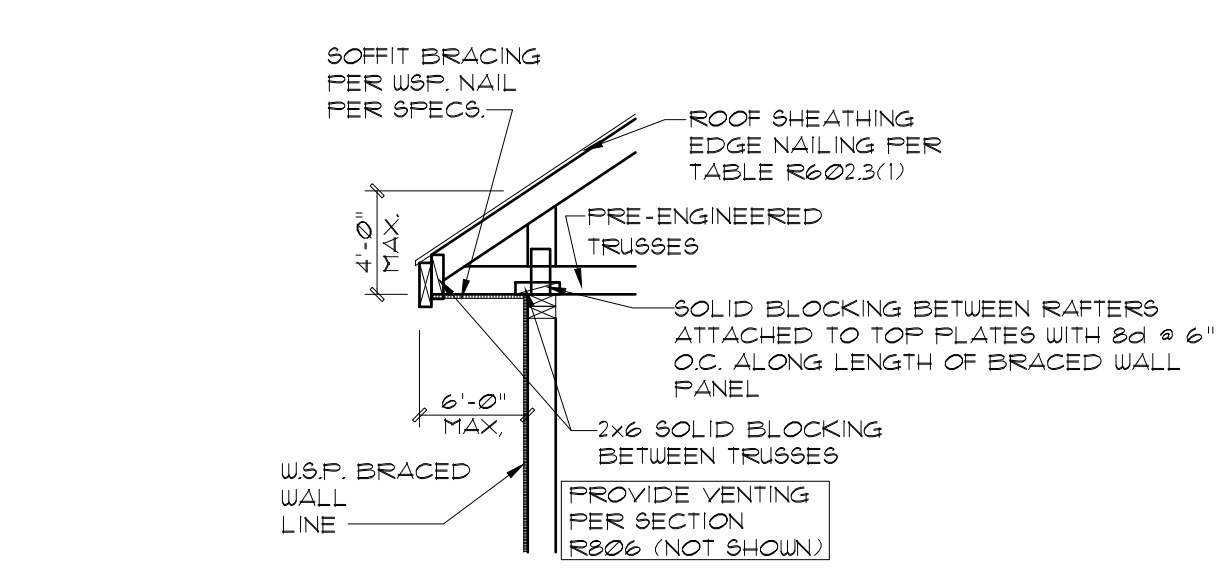
4 BRACED WALL PANEL CONNECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING



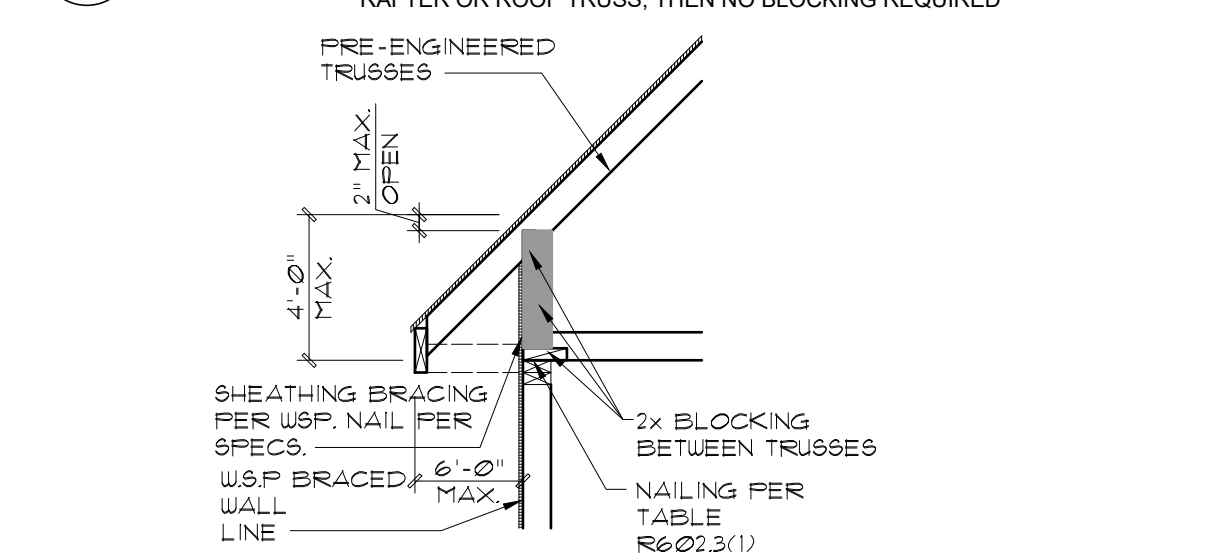
7 BRACED WALL PANEL CONNECTION TO PERPENDICULAR RAFTERS



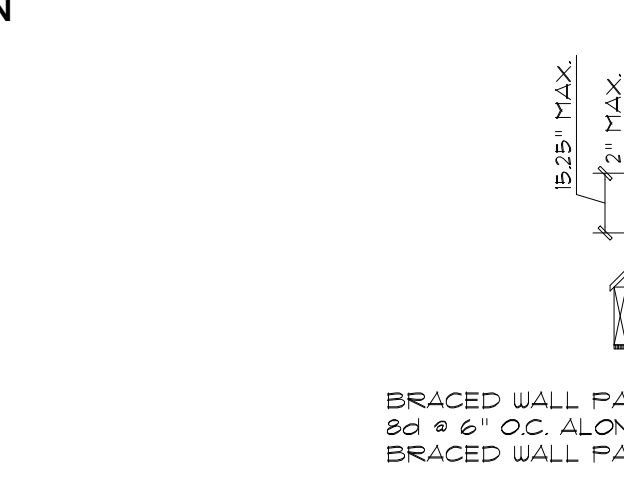
9 GABLE END TRUSS DETAIL



5 BRACED WALL PANEL CONNECTION OPTION TO PERPENDICULAR RAFTERS OR ROOF TRUSSES



6 BRACED WALL PANEL CONNECTION OPTION TO PERPENDICULAR RAFTERS OR ROOF TRUSSES

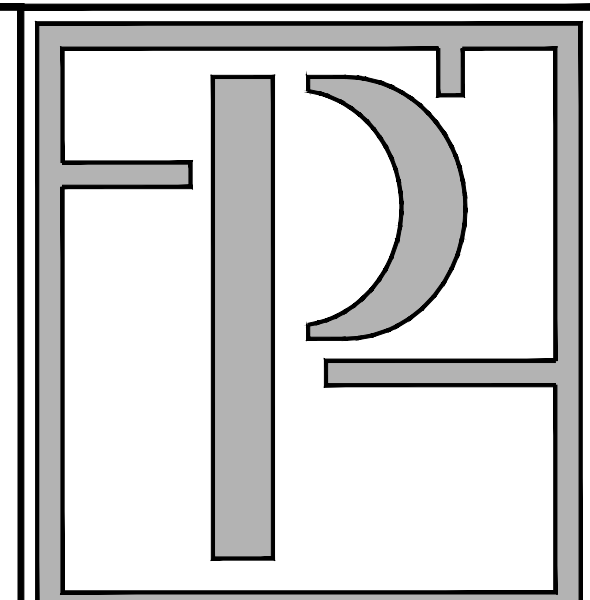


8 END TRUSS AT BEAM

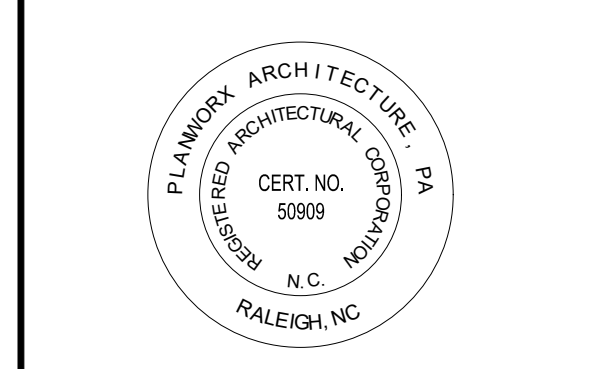
WALL BRACING DESIGN SPEC'S
 BASED ON 2018 NRC (REVISED SECTION R602.10 DATED 9-1-13)

- THIS HOUSE IS DESIGNED USING PER R602.10.3 AND TABLE R602.10.1, USING CONTINUOUS SHEATHING METHOD.
- BASIC WIND SPEED DOES NOT EXCEED 110 (MPH)
- EAVE TO RIDGE HEIGHT DOES NOT EXCEED 20'-0".
 IF RIDGE TO EAVE EXCEEDS 20'-0", IN NON WALK-UP ATTIC GABLE WALL SITUATIONS, USE ONE OF THE GABLE BRACED WALL DETAILS AS DESCRIBED:
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 2. IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE EXCEEDS 12'-0", USE DETAIL 9/D-4, W/ 1/2 HEIGHT BRACES.
- EXTERIOR WALLS HAVE BEEN SHEATHED ON ALL SHEATHABLE SURFACES W/ 1/2 OSB INCLUDING WALL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW OPENINGS, AND ON ALL GABLE END WALLS NAIL W/ 6d AT 6" O.C. AT PANEL EDGES AND 12" AT INTERMEDIATE SUPPORTS.
- GARAGE PORTAL FRAME SPECIFICATIONS USED PER DETAIL #1A ON SHEET D-4.
- SEE SHEET D-4 FOR NAILING & BRACING REQUIREMENTS.
- SPECIAL FRAMING REINFORCEMENT (IF REQUIRED) IS SHOWN ON PLAN WITH A DIAMOND SYMBOL (◇) THE NUMBER INSIDE SYMBOL DESIGNATES LENGTH OF SIMPSON CS-16 STRAP CONTINUOUS VERTICALLY EITHER
 A) FROM UPPER FLOOR STUDS OVER INTERMEDIATE FLOOR BAND ONTO LOWER FLOOR STUDS BELOW, OR
 B) FROM TOP PLATES OF ONE STORY WALL, DOWN CRIPPLE STUDS AND HEADER END, WITH # IN DIAMOND BEING LENGTH ONTO JACKS BELOW.
 AT FLOOR TO FOUNDATION CONNECTION USE EITHER
 (a) SIMPSON MAS OR MASS
 (b) SIMPSON DTTZ (1800lb UPLIFT RESISTANCE) W/ (MIN) 1/2" ANCHOR BOLT W/ (MIN) 7" EMBEDMENT.
- IN LIEU OF THE STRAPPING, USE OSB ON BOTH SIDES OF GARAGE WALLS. THIS WILL BE NAILED WITH EITHER 6d DEFORMED OR 8d COMMON NAILS AT 6" O.C. AT EDGES AND 12" O.C. IN FIELD, PER NRC TABLE R602.3(1).

1. All drawings are to be coordinated with all site information by owner and contractor, and applicable codes. 3. Planworx Architecture, P.A. is not responsible for constructed variations from the information depicted. 5. Planworx Architecture, P.A. retains ownership of all of designs depicted and implied herein.
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PROGRESS DATE:	2/15/19	DESCRIPTION:
ISSUE DATE:		
REVISIONS:	INITIALS	
NUMBER:		
PROJECT NO:	001719	
DRAWN BY:	JT	
CHECKED BY:	BB/JT	
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