



OWNER / CONTRACTOR NOTES:

1. 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.
2. CONSTRUCTION DEVIATING FROM THESE PLANS WILL INVALIDATE THEIR PLANS REVIEW PERMITTED USE. THE DESIGNER 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.
3. DO NOT SCALE DRAWINGS, BUT RATHER INQUIRE OF DESIGNER. REPRODUCTION OF THESE DRAWINGS ARE PROHIBITED UNLESS GRANTED WRITTEN CONSENT FROM DESIGNER.
4. 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:
 NC FIRE CODE, 2018
 NC MECHANICAL CODE, 2018
 NC PLUMBING CODE, 2018
 NC ENERGY CODE, 2018
 NATIONAL ELEC. CODE, 2017
 NC 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.

1. 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.
2. 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.
3. 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.
4. MAXIMUM STAIR RISER HEIGHT SHALL BE 8-1/4", AND MINIMUM TREAD SHALL BE 9".
5. 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.
6. ALL TREATED LUMBER SHALL BEAR THE DESIGNATION AWP4 U1.
7. BITUMINOUS DAMPPROOFING SHALL BE APPLIED TO EXTERIOR FOUNDATIONS OF ALL HABITABLE AND USABLE (STORAGE, ETC) SPACES.
8. INSTALL ONE FOUNDATION VENT WITHIN 3' OF EACH CORNER (NOT ONE EACH SIDE OF EACH CORNER).
9. 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-CORROSIVE.
10. 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.
12. MINIMUM INSULATION VALUES. SEE CODE BOOK FOR MORE COMPLETE INFORMATION.

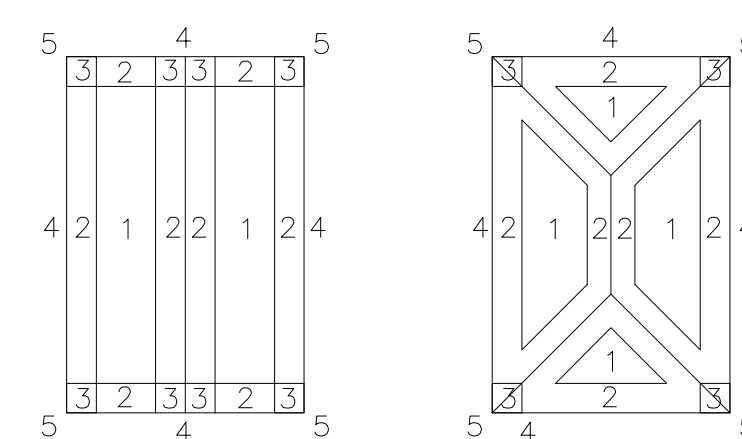
CLIMATE ZONE	FENESTRATION U-FACTOR	FENEST. SHGC	CEILING R-VALUE	FRAME WALL R-VALUE	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE	CRAWL WALL R-VALUE
3	0.35	0.30	38 OR 30 CONT.	15, 13+2.5	19	5/13 F.	0	5/13
4	0.35	0.30	38 OR 30 CONT.	15, 13+2.5	19	10/13	10	10/13
5	0.35	NR	38 OR 30 CONT.	19, 13+5, OR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

CLIMATIC AND GEOGRAPHIC NOTES:

ROOF CODE	WIND SPEED (MPH)	WIND CATEGORY	SUBJECT TO DAMAGE FROM	WINTER REGION	BLOOD HAZARDS
3	120	B	WEATHERING	12"	MOD. TO SEV.
3	120	B	TERMINAL DECAY	20	N/A
3	120	B	MOD. TO SEV.		

Wind Load: Basic Wind Speed 120 MPH (3-SECOND GUST)
 Exposure Category B (Suburban)

Wind Zone Exposure Plans:



Note: 3 = 4' Long (Typ.)

Component and Cladding Loads:

Exposure Zone	Design Pressure	Uplift Force
Zone 1:	16.9 psf	=18.0 psf
Zone 2:	16.9 psf	=21.0 psf
Zone 3:	16.9 psf	=21.0 psf
Wall, Zone 4:	15.9 psf	=17.8 psf
Wall, Zone 5:	17.8 psf	=26.7 psf
Window/Door, Zone 4, Floor 1:	10.9 psf	=4.9 psf
Window/Door, Zone 4, Floor 2:	14.4 psf	=9.8 psf
Window/Door, Zone 5, Floor 1:	15.9 psf	=8.7 psf
Window/Door, Zone 5, Floor 2:	17.8 psf	=12.2 psf
Porch Roof - Less than 5:12 Pitch:	10.4 psf	=34.8 psf

Windows:

***All windows shall be labeled to conform with AAMA/NWDA 1011.S.2 and be rated for min. DP25 classification for all windows within 4' of outside corners and DP20 elsewhere.

PROJECT DATA:

LEAD DESIGN PROFESSIONAL:	FIRM	NAME	License #	Telephone #
DESIGNER		GABE REYES	7579	919-491-5855
Architectural		MARC W. MILLS	7579	919-795-3845
Structural				
Landscape				
Interiors				
Other				

DESIGN DATA:

PROJECT SQUARE FOOTAGES

SQUARE FOOTAGE	
FIRST FLOOR HTD. =	1,650
SECOND FLOOR HTD. =	1,121
TOTAL HTD. SQ. FT. =	2,771
GARAGE =	566
UNFINISHED ATTIC =	511
FRONT PORCH =	261
SCREENED PORCH =	304

BUILDING DATA:

Construction Type: Y-B
 Use Group: R-3
 Building Height: 30'-7" Number of Stories: 2
 Mean Roof Height: 20'-8"

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

INDEX OF DRAWINGS:

CS	SHEET NAME
CS	Cover Sheet
A-1	Front & Right Elevations
A-2	Rear & Left Elevations
A-3	Sections & 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	Detail Sheet

THESE PLANS ARE SEALED FOR A SINGLE LOT ONLY.

STRUCTURAL DESIGN BY
 MARC W. MILLS, RA
 DATE SEALED:
 INVALID IF UNSEALED
 TEXAS LICENSE # 27900

4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR EXPENSES ASSOCIATED WITH ERRORS AND OMISSIONS ON THESE DRAWINGS UNLESS OFFER BY GABRIEL DESIGN IS ACCEPTED AS A RESULT OF ERROR.
 5. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR REGULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.
 6. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR REGULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

GENERAL NOTES:
 1. ALL DRAWINGS ARE TO BE CONSIDERED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR AND APPLICABLE CODES.
 2. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION MANAGEMENT FROM THE INFORMATION PROVIDED.
 3. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION MANAGEMENT FROM THE INFORMATION PROVIDED.

Glenwood Builders
 New Home Plan

PROGRESS DATE:	ISSUE DATE:
	3-6-20
DRAWN BY:	MM
CHECKED BY:	

REVISIONS	DATE	BY	DESCRIPT.

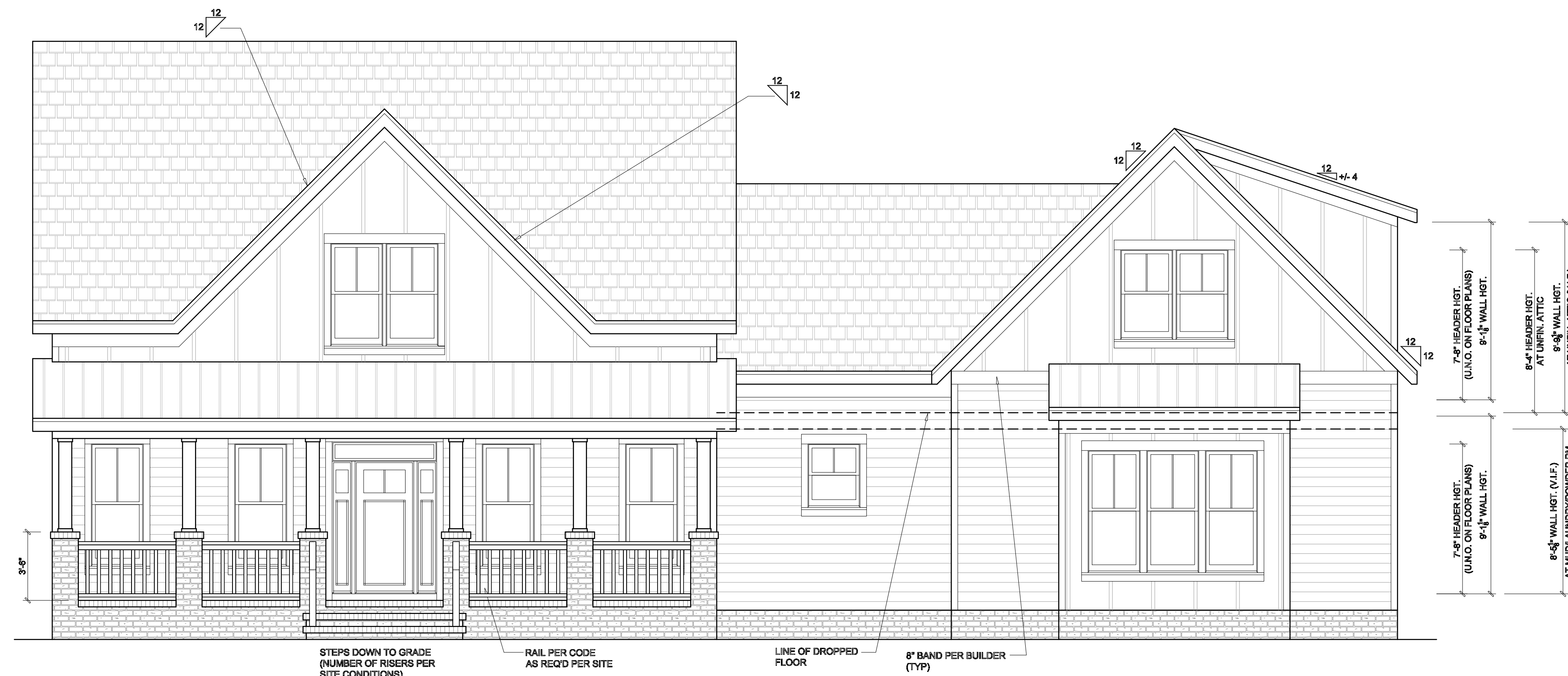
Cover Sheet
 --

SHEET NO.
 CS

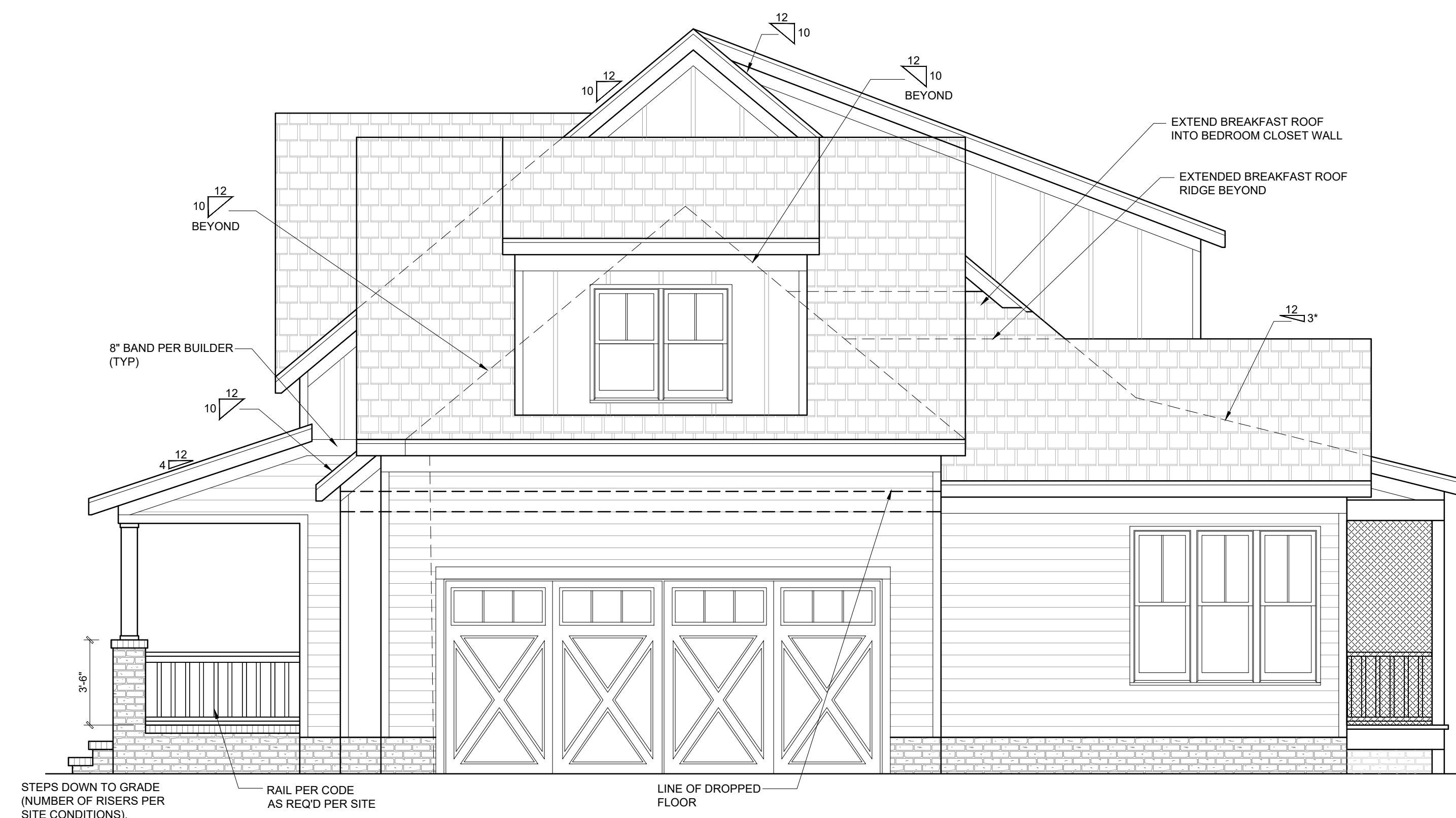
PLAN NO.
 P-00720

gabriel design
 pwk architecture
 raleigh, nc
 email: gabrieldesign@gmail.com
 phone: (919) 491-5855

Copyright © 2019
 All rights reserved. 2019
 This drawing is strictly proprietary.
 Plans may be used only by client, unaltered and strictly prohibited.



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



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

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.

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"
	= BOARD-N-BATTEN PER BUILDER
	= BRICK PER BUILDER
	= SCREEN PER BUILDER
	= BRICK ROWLOCK/SOLDIER PER BUILDER
	= STONE ROWLOCK/SOLDIER PER BUILDER

4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR ERRORS ASSOCIATED WITH ERRORS AND OMISSIONS ON THESE DRAWINGS UNLESS OFFERED BY GABRIEL DESIGN OR OTHERWISE STATED AS A RESULT OF NEGLIGENCE.
 5. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR RECALCULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.
 6. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR RECALCULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

GENERAL NOTES:
 1. ALL DRAWINGS ARE TO BE CONSIDERED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR AND APPLICABLE CODES.
 2. ALL DIMENSIONS ARE TO BE SHOWN UNLESS OTHERWISE NOTED.
 3. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION MARKINGS FROM THE INFORMATION PROVIDED.

COPYRIGHT © ALL RIGHTS RESERVED 2019
 GABRIEL DESIGN ARCHITECTURE
 THIS DRAWING IS THE PROPERTY OF GABRIEL DESIGN ARCHITECTURE AND IS TO BE USED ONLY BY CLIENT. UNAUTHORIZED USE IS STRICTLY PROHIBITED.

gabriel design
 pwx architecture
 raleigh, nc
 email: gabrielyesdesign@gmail.com
 phone: (919) 491-5855

Glenwood Builders
 New Home Plan

3-6-20
 DR
 VM

Front & Right Elevations

A-1

P-00720



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



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

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.

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"
	= BOARD-N-BATTEN PER BUILDER
	= BRICK PER BUILDER
	= SCREEN PER BUILDER
	= BRICK ROWLOCK/SOLDIER PER BUILDER
	= STONE ROWLOCK/SOLDIER PER BUILDER

4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR ERRORS ASSOCIATED WITH ERRORS AND OMISSIONS ON THESE DRAWINGS UNLESS OFFSET BY WRITTEN CORRECTION DURING OR AS A RESULT OF CONSTRUCTION.

5. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR RECALCULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

GENERAL NOTES:

1. ALL DRAWINGS ARE TO BE CONSIDERED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR AND APPLICABLE CODES.
2. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION MARKINGS FROM THE INFORMATION PROVIDED.
3. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION MARKINGS FROM THE INFORMATION PROVIDED.

3-6-20
DW
MM

Copyright © All Rights Reserved 2019
This drawing is the property of Gabriel Design, Inc. and is strictly confidential. Plans may be used only by client, unaltered and not to be reprinted.

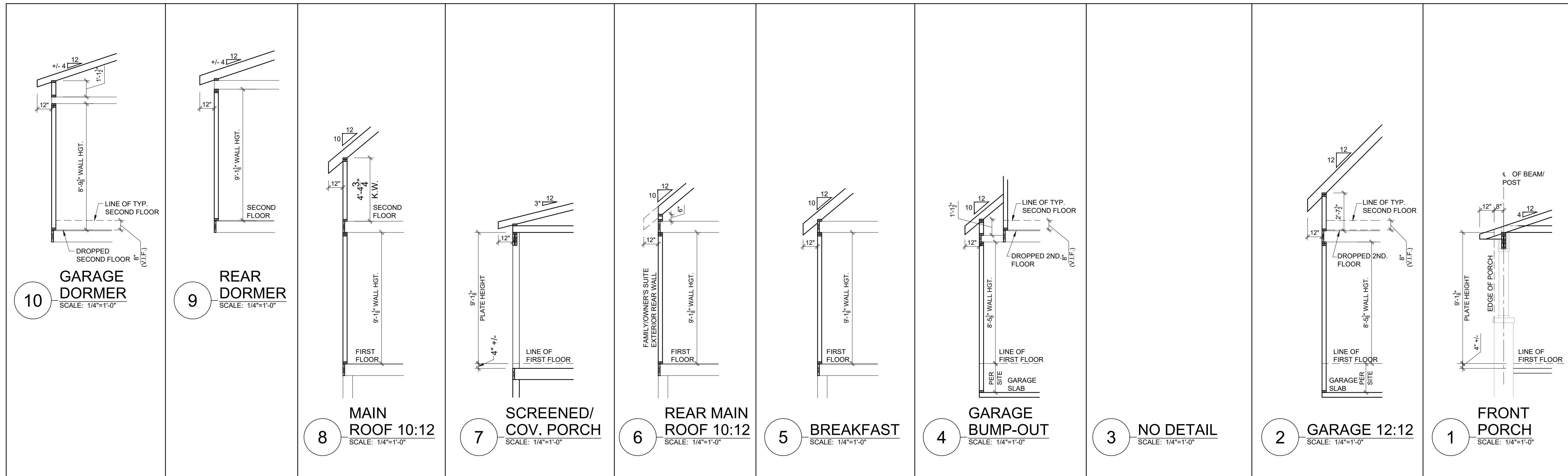
Glenwood Builders
New Home Plan

Rear & Left Elevations

A-2

P-00720

gabriel design
pwx architecture
raleigh, nc
email: gabrielyesdesign@gmail.com
phone: (919) 491-5855



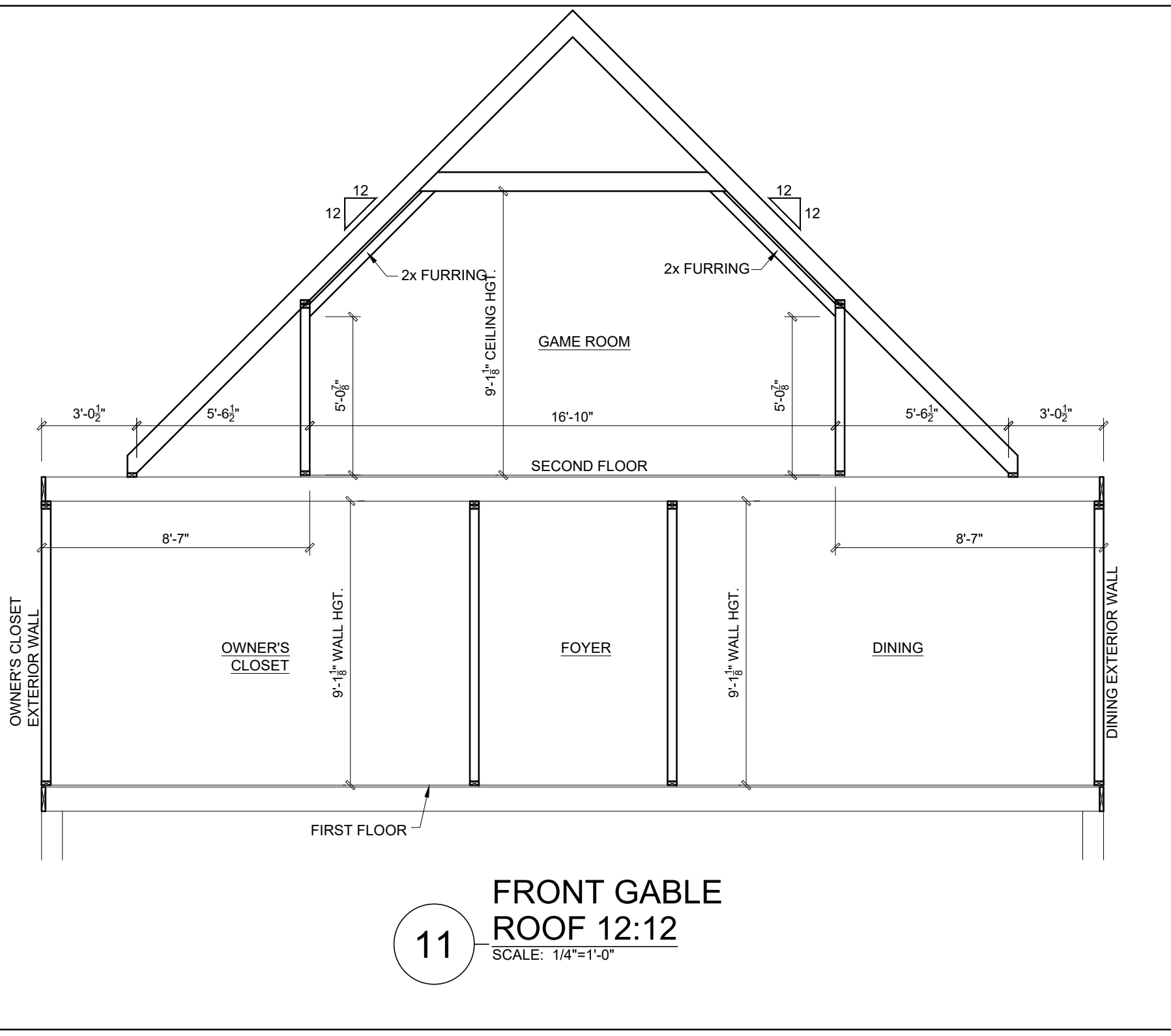
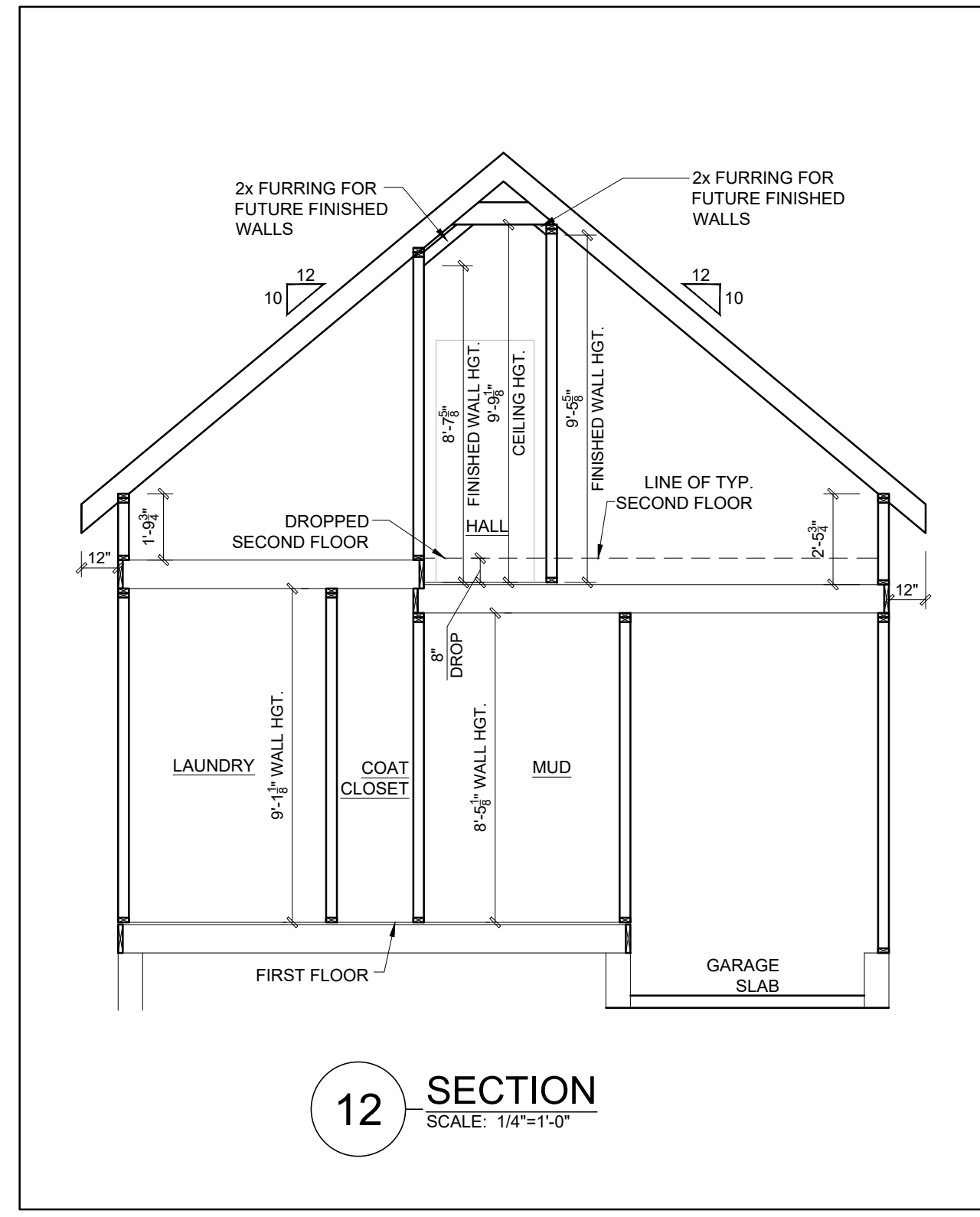
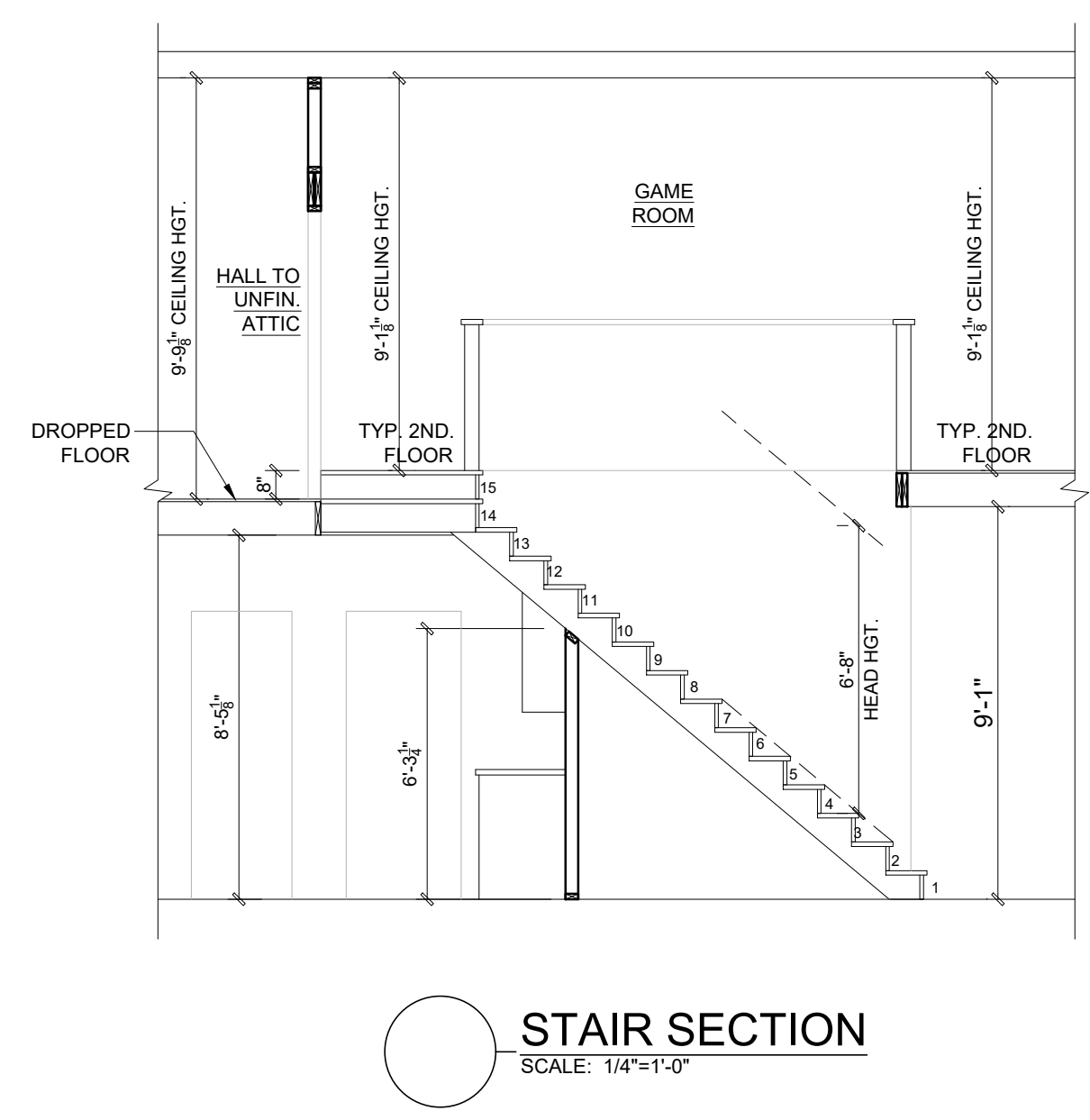
**NOTE: DETAILS PROVIDED ARE FOR PLATE DETAILS ONLY. REFER TO STRUCTURAL SHEETS TO CONFIRM FLOOR MEMBER SIZE & DIRECTIONS, RAFTER SIZE & DIRECTIONS, AND ROOF OVERHANGS.

4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR ERRORS ASSOCIATED WITH ERRORS AND OMISSIONS ON THESE DRAWINGS UNLESS OFFERED BY GABRIEL DESIGN OR OTHERWISE STATED AS A RESULT OF ERROR.
 5. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR RECALLING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.
 6. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR RECALLING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

GENERAL NOTES:
 1. ALL DRAWINGS ARE TO BE CONSIDERED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR AND APPLICABLE CODES.
 2. ALL DIMENSIONS ARE TO BE SHOWN UNLESS OTHERWISE NOTED.
 3. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION MARKINGS FROM THE INFORMATION PROVIDED.

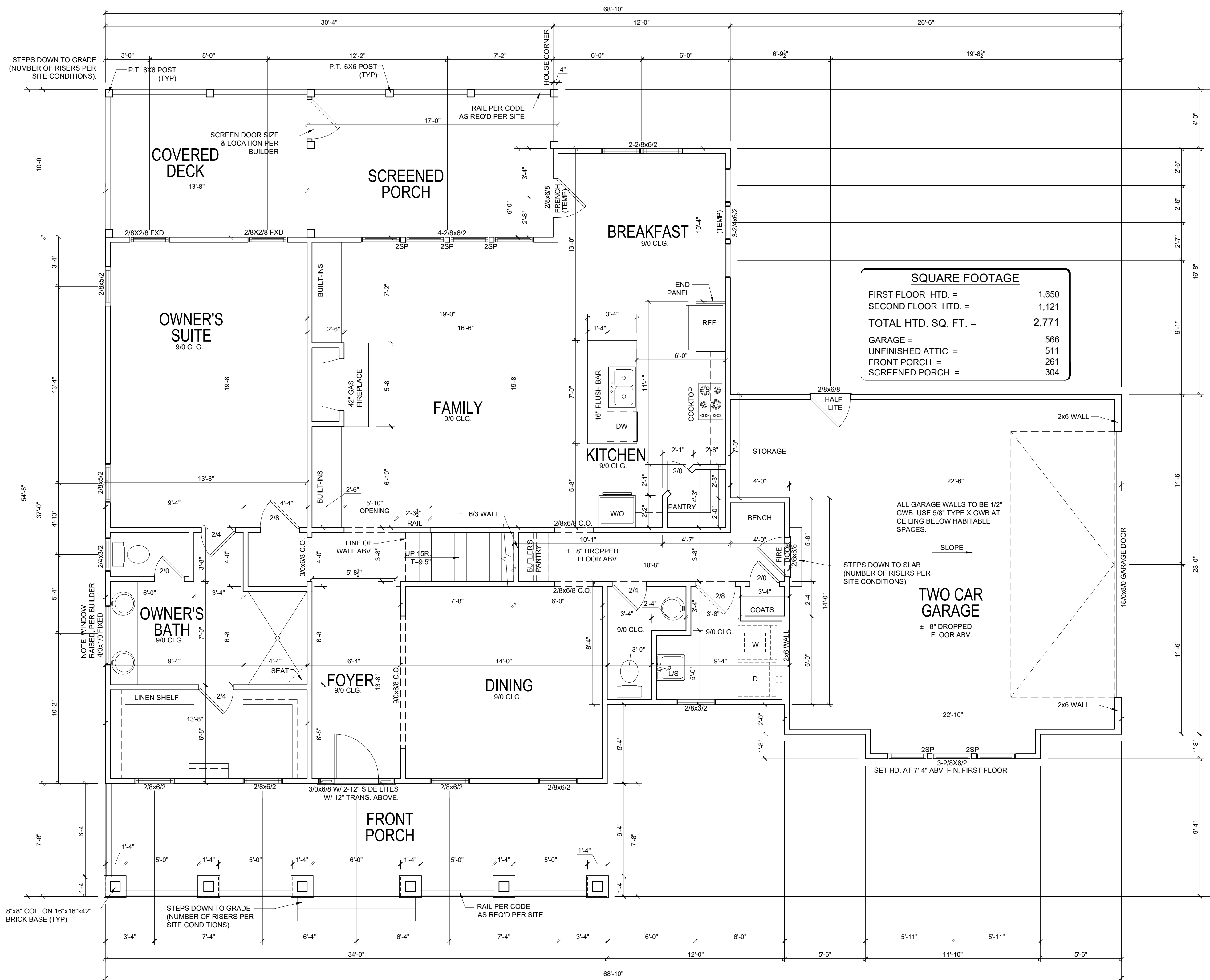
GENERAL NOTES
 *USE ICE AND WATER SHIELD AT ALL ROOF PLANES SLOPED BELOW 4:12.
 SEE FLOOR PLANS, ROOF PLAN, AND/OR ROOF FRAMING DETAIL SHEET FOR PLATE HEIGHTS AT RAFTER AND/OR TRUSS BEARING LOCATIONS.
 SEE ROOF PLANS FOR ATTIC VENTILATION CALCULATIONS.
 SEE SHEET D-2 FOR FLASHING DETAILS AND REQUIRED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



3-6-20
 DW
 MW
 Sections & Details
 A-3
 P-00720

Glenwood Builders
 New Home Plan



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

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.

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 1x4 CAP (42" HEIGHT UNLESS NOTED OTHERWISE ON PLANS)

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 8-1/4"

SQUARE FOOTAGE

FIRST FLOOR HTD. =	1,650
SECOND FLOOR HTD. =	1,121
TOTAL HTD. SQ. FT. =	2,771
GARAGE =	566
UNFINISHED ATTIC =	511
FRONT PORCH =	261
SCREENED PORCH =	304

GENERAL NOTES:
1. ALL DRAWINGS ARE TO BE CONSIDERED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR AND APPLICABLE CODES.
2. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
3. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION VIOLATIONS FROM THE INFORMATION PROVIDED.
4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR ERRORS ASSOCIATED WITH ERRORS AND OMISSIONS ON THESE DRAWINGS UNLESS OFFERED BY WRITTEN CONSTRUCTION DRAWING AS A RESULT OF NEGLIGENCE.
5. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR REGULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

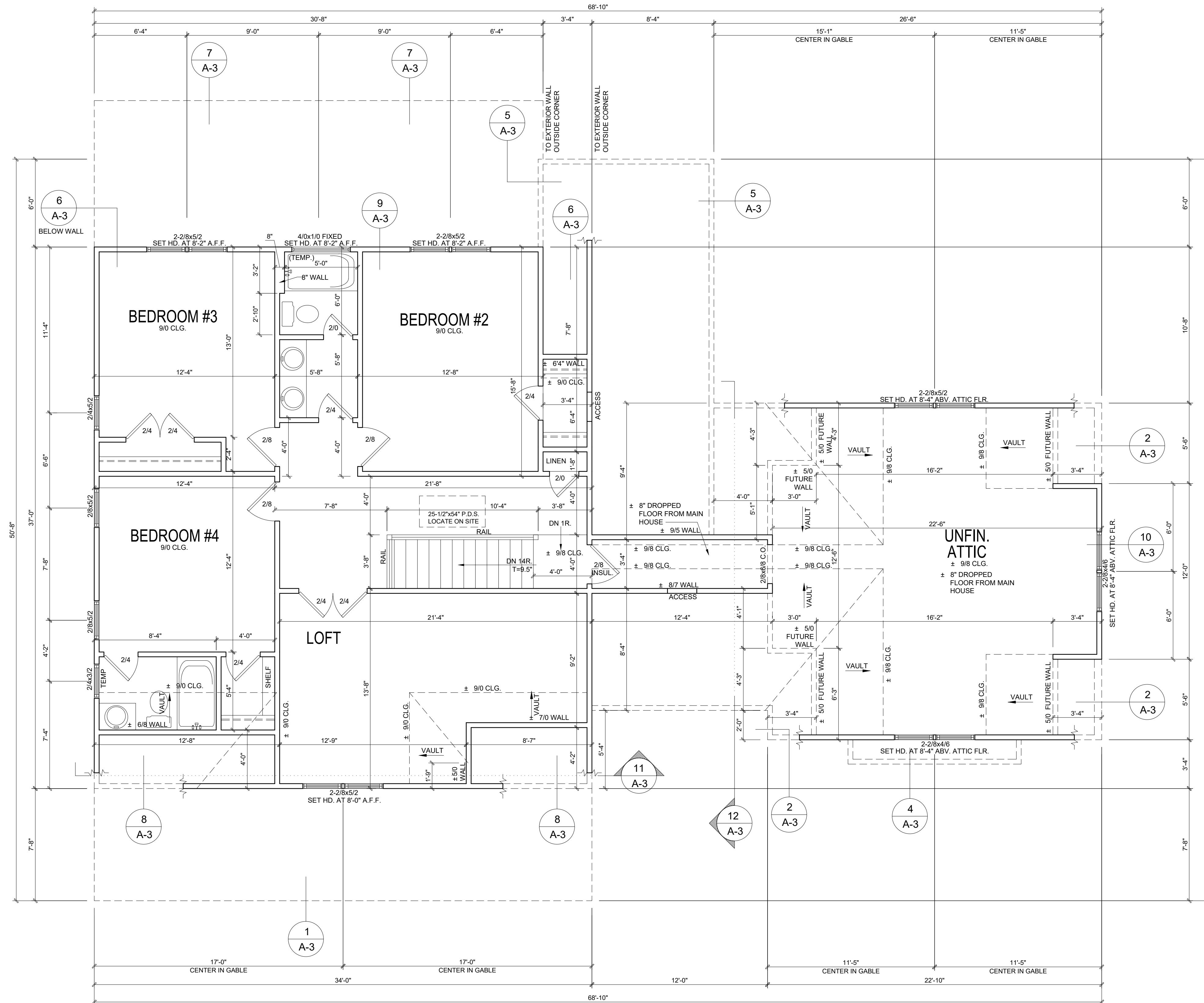
copyright © 2019
ALL RIGHTS RESERVED 2019
THIS DRAWING IS THE PROPERTY OF GABRIEL DESIGN AND IS STRICTLY CONFIDENTIAL.
PLANS MAY BE USED ONLY BY CLIENT UNLESS OTHERWISE SPECIFICALLY PROVIDED.

Glenwood Builders
New Home Plan

PROGRESS DATE: _____
ISSUE DATE: 3-6-20
DRAWN BY: _____
CHECKED BY: MW
REVISIONS:
DATE BY: _____
DESCRPT: _____

First Floor Plan
SHEET NO. A-4
PLAN NO. P-00720

gabriel design
pwx architecture
raleigh, nc
email: gabrieldesign@gmail.com
phone: (919) 491-5855



SECOND FLOOR PLAN

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

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.

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: 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 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)

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 IT AIRSPACE. VERIFY CODES FOR INFORMATION ON INSULATION REQUIREMENTS.

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

4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR ERRORS ASSOCIATED WITH ERRORS AND OMISSIONS ON THESE DRAWINGS UNLESS OFFICE OR FIELD CONSTRUCTION DRAWING AS A RESULT OF ERROR.
 5. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR REGULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

GENERAL NOTES:
 1. ALL DRAWINGS ARE TO BE CONSIDERED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR AND APPROVED CODES.
 2. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION MARKINGS FROM THE INFORMATION PROVIDED.

gabriel design
 pwk architecture
 raleigh, nc
 email: gabrielyesdesign@gmail.com
 phone: (919) 491-5855

Glenwood Builders
 New Home Plan

PROGRESS DATE:		
ISSUE DATE:	3-6-20	
DRAWN BY:	MM	
CHECKED BY:		
REVISIONS		
DATE	BY	DESCRIPT.

Second Floor Plan
 SHEET NO. A-5
 PLAN NO. P-00720

COPYRIGHT © 2019 GABRIEL DESIGN, INC. ALL RIGHTS RESERVED. THIS DRAWING IS THE PROPERTY OF GABRIEL DESIGN, INC. AND IS TO BE USED ONLY BY THE CLIENT FOR THE PROJECT SPECIFICALLY IDENTIFIED. ANY OTHER USE IS STRICTLY PROHIBITED.

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 special 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	L.L.	D.L.	T.L.	Structural System	L.L.	D.L.	T.L.
Dwelling Units (general)	40	10	50	Stairs	40	5	45
Sleeping Porches	30	10	40	Garage(s) and Handrails	200		200
Balcony(ies)	60	10	70	Roof Systems	0	10	30
Decks	40	10	50	Cathedral Ceilings	20	15	35
Miscellaneous attic storage	20	10	30	Interior Partitions Walls	50		9
Attic(s) w/ storage	20	10	30	Passenger Garage	50		9
Attic(s) w/ fixed stairway	40	10	50				
- Deflection: Floors 1/360, roofs 1/240, 1/480 for engineered flooring and under tiled areas, 1/600 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)

Stores	Wood Frame	Wood Frame + Face Brick	8" Masonry
Min. Fla. Depth	Min. Fla. Depth	Min. Fla. Depth	Min. Fla. Depth
12"	12"	12"	12"
18"	18"	18"	18"
24"	24"	24"	24"
30"	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.
- 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 R404.1(1)(2), (3), (4), with various 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. @ 4'-0" 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 chart'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
16" 8" Solid			
- Typical wall footing to be 20" x 10" deep, u.n.o.
- Reinforced concrete walls shall be min 10" thick. If retaining over 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 #2 spruce/pine/fir, spaced, u.n.o.
- All framing lumber shall be #2 SPF (modulus of elasticity 1,600,000 psi, @ 250) or better. All beams and truss members shall be #2 SPF, E=1,200,000, B=1100 min. Studs min. #2 or stud grade.
- Joists: min 1-1/4" joist bearing, min 3-1/2" at intermediate supports. Max 3,200 ft-lb moment.
- Min 180,000,000 max 1,100 ft-lb shear, max 1,015 lb and reaction.
- UV's to be 2.0E grade, Fb=2850, 1/360 max. deflection.
- Use hangers for all beam to beam connections. Structural fastening as per R602.3(1). Adequate connectors to the sole responsibility of the general contractor and his subs.
- Provide double top plates in all exterior walls. Stagger joints min 48" w/ (B) 16d.
- Set all joists 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(2) and (3).
- With 2x4 flooring members, use double joists: A) under parallel partitions; B) under opening multiple joists C) under tubs if 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 floor joists and valuated walls and all walls higher than 12" w/ 2x6 @ 16" o.c. or 2x4 @ 12" or perforated 2x4 with 2x10 band with Simpson CS16 x 36" @ 32" o.c. top studs to bottom studs.
- All exterior headers to be (2) 2x10 w/ u.n.o. w/ 2x6 joists for all openings > 5'-0".
- All interior bearing headers to be (2) 2x10 u.n.o. w/ 2x6 joists for all openings > 6'-0".
- All interior non-bearing headers to be min. (2) 2x4 flat u.n.o.
- All fireblock to conform with R302.11.

D. STEEL

BRICK VENEER INFIL ATTACHMENT:

- Use Min. (2) 1/8" x 16" 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.

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) 9 1/4" LVL FLUSH

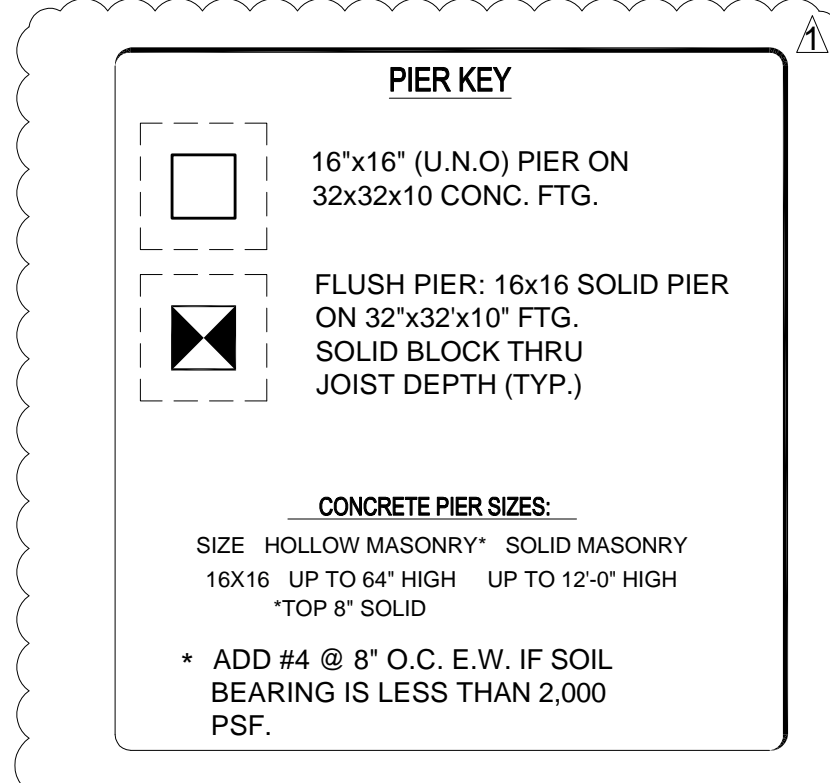
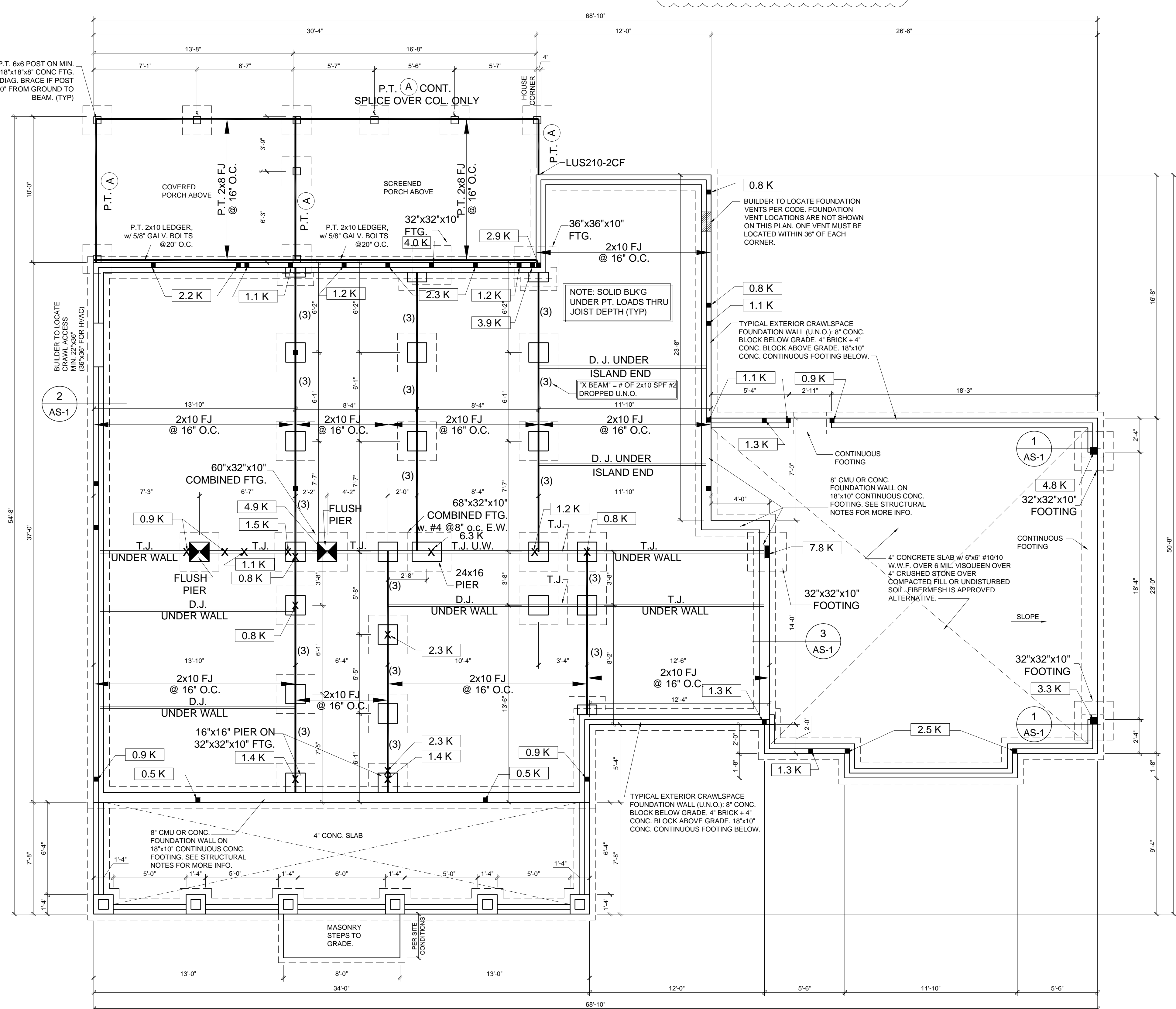
(J) (3) 9 1/4" LVL DROPPED

(K) W16x31 DROPPED

(L) (3) 18" LVL DROPPED

(M) W8x35 FLUSH CONT.

(N) (2) 11 7/8" DROPPED



D.J. = DOUBLE JOIST
 U.W. = UNDER WALL

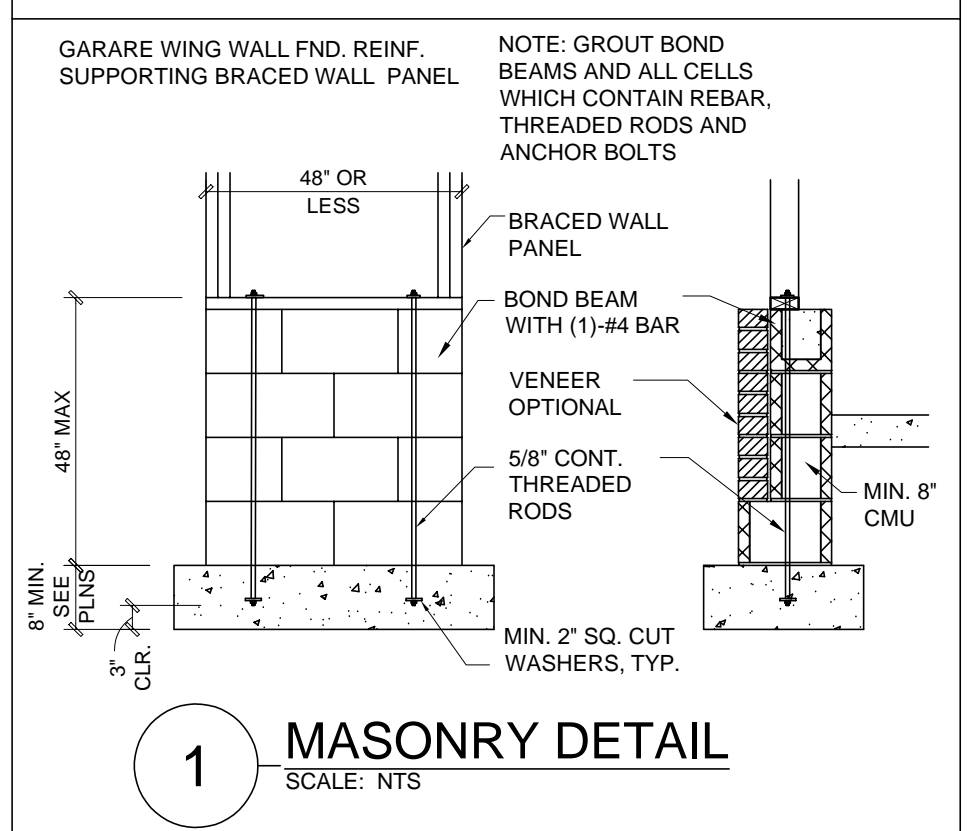
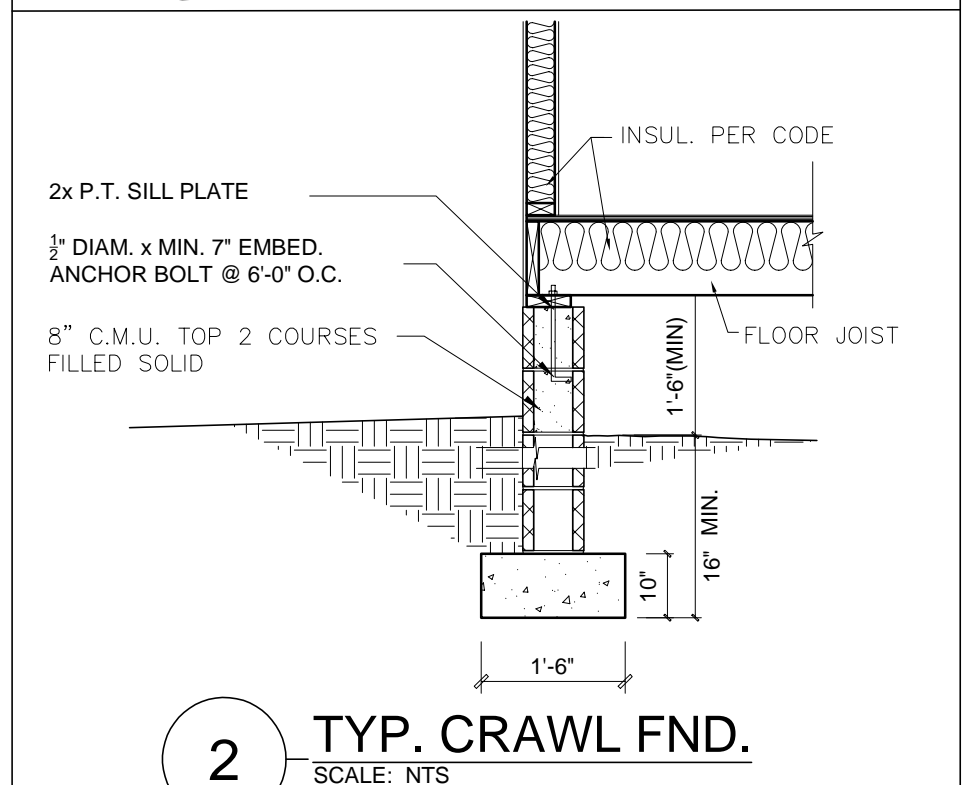
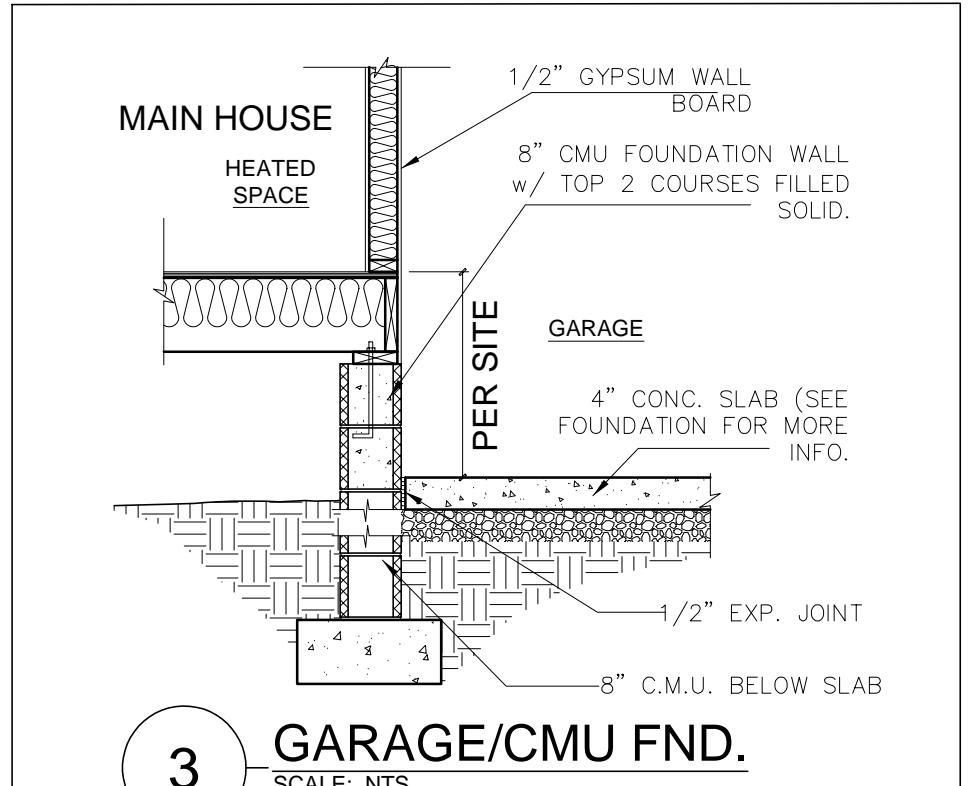
NOTE: [Symbol] INDICATES SIGNIFICANT POINT LOAD, BLOCK SOLID DOWN TO FOUNDATION, PIER, OR SUPPORT BEAM.

WALL FRAMING: MIN. 2x4 SPF #2 @ 16" O.C. UNO

WALL SHEATHING: MIN. 1/2" APA RATED SHEATHING

ROOF SHEATHING: MIN. 3/4" APA RATED SHEATHING

BRACED WALL PANELS SHALL BE CONNECTED TO ROOF FRAMING PER R602.10.5.5



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 [Symbol] BUILDER TO SIZE AND LOCATE FOUNDATION VENTS PER N.C. BUILDING CODE'S. 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	1650
B	Ventable Area Required by Code (without vapor barrier)	11.0
C	Number of vents required	23.4
D	Actual number of vents required	24.0
E	Number of vents with vapor barrier reduction	12.0

Formulas:
 B = A / 150
 C = B / 0.47 (sqft - net venting area per vent)
 E = D / 2

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

THESE PLANS ARE SEALED FOR A SINGLE LOT ONLY.

STRUCTURAL DESIGN BY
 MARC W. MILLS, RA

DATE SEALED:
 INVALID IF UNSEALED
 NORTH CAROLINA LICENSE # 7579
 VALID ONLY IF SIGNED IN BLUE

gabriel design
 pwv architecture
 raleigh, nc
 email: gaboreyesdesign@gmail.com
 phone: (919) 491-5865

Glenwood Builders
 New Home Plan

PROGRESS DATE: 3-6-20
 ISSUE DATE: 3-6-20
 DRAWN BY: MM
 CHECKED BY: MM
 REVISIONS:
 DATE BY: DESCRIPTOR
 3-31-20 GR Inspector Comments

Crawl Foundation/
 First Floor Framing

SHEET NO. AS-1

PLAN NO. P-00720

STRUCTURAL NOTES REV: 12/11/18

- A. GENERAL NOTES**
- Contractor assumes all responsibility for detailing or implied structural information. Architect/Structural Engineer must 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 | Garage and Handrails | 200 | 10 | 200 |
| Sleeping Rooms | 30 | 10 | 40 | Roof Systems | 20 | 10 | 30 |
| Balconies (General) | 60 | 10 | 70 | Roof Systems | 20 | 10 | 30 |
| Decks | 40 | 10 | 50 | Ceiling and Ceilings | 20 | 15 | 35 |
| Attic (with attic storage) | 10 | 10 | 20 | Internal Partition Walls | 1 | 1 | 2 |
| Attic (with storage) | 20 | 10 | 30 | Passenger Garage | 50 | per | req. |
| Attic (with fixed storage) | 10 | 10 | 20 | | | | |
- Deflection: Floor: L/360; Roof: 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)

Stones	Wood Frame	Block	Concrete	8" Masonry
Min. 1 1/2' x 1 1/2'	Min. 1 1/2' x 1 1/2'	Min. 1 1/2' x 1 1/2'	Min. 1 1/2' x 1 1/2'	Min. 1 1/2' x 1 1/2'
Min. 1 1/2' x 1 1/2'	Min. 1 1/2' x 1 1/2'	Min. 1 1/2' x 1 1/2'	Min. 1 1/2' x 1 1/2'	Min. 1 1/2' x 1 1/2'

- Footings shall be min 2" wider overhang on each side than the foundation above. Minimum footing depth 12" below grade, u.n.a. cuttings 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 reinforcement to conform with Tables R404.1(1)(2), (3), (4), with variables of total wall height, and soil classification. Amount and placement of rebar on 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, # 6-10 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 Size: (Note: the larger of the two piers' requirements governs)

Size	Height	Size	Height	Size	Height
8x16	up to 32" high	up to 4" high	16x16	up to 64" high	up to 12"-0" high
12x16	up to 48" high	up to 8"-0" high	24x16	up to 96" high	up to 15'-0" high

- Typical lag footing to be 20"x10" deep, u.n.a.
- Reinforced concrete walls shall be min. 10" thick. If retaining over 6' of unbraced fill, reinforcement 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 REV: 12/11/18

- Crawl space girders are (3) 2x10 #2 spruce/pine/fir, dropped, u.n.a.
- All framing lumber shall be #2 SPF (moisture of dryness 19.0000) or better. All beams and treated lumber to be #2 SPF. E=1,800,000, I=1100 min. Studs min #2 or stud grade.
- Joists: min 1-3/4" joist bearing, min 1-1/2" at intermediate supports. Max 3,200 lb-ft moment. S=165,000,000, min 1,100 vert. shear, max 1215# and reaction. LVL's to be 2.0E grade, Fv=2850, L/360 max. deflection.
- Use hangers for all beam to beam connections. Structural fastening as per R602.3(1). Adequate connections in the site responsibility of the general contractor and his subs.
- Provide double top plates in all exterior walls. Studjoists min 48", w/ (8) 16d.
- Set all joints and beams with natural camber up. Ends lapped min. 6" over bearing shall be securely spliced 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. Sika min. 2x6.
- Structural member fastening to conform to Table R602.3(1) and (3).
- With 2x floor members, use double joists: A) under parallel partitions; B) under opening multiple joists C) under tubs if 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.a.
- 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 Home gable end vaulted walls and all walls higher than 12' w/ 2x6 @ 16" o.c. or dbl. 2x4 @ 12", or posttensioned 2x4 with #3 2x10 bolts with Simpson CS16 1/2" @ 32" o.c. top studs to bottom studs.
- All exterior headers to be (2) 2x10 sp. u.n.a. w/ dbl. joists for all openings > 5'-0".
- All interior bearing headers to be (2) 2x10 u.n.a. w/ dbl. joists for all openings > 6'-0".
- All interior non-bearing headers to be min. (2) 2x4 flg. u.n.a.
- Fireblock to conform with R302.11.

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

- Double hips may be applied with a minimum 6" overhang at center. No valley splices.
 - Use 2x10 or fir down rafters for eaved areas.
 - Attach vaulted rafters with hurricane connectors: Simpson H-2.5, H-5 or approved equal.
 - Align all rafters under studs below.
- Brick above low roofs to have triple rather than low roof with 1/4"x3-1/2"x1/4" and 1/4" x 1/4" x 1/4" o.c. Low end to have 3/4"x1/4" x 1/4" welded plate dom.
 - All point loads to be column/block (through joists) down to foundation.
 - Hanger Schedule (Simpson hangers) for beam to beam connections (unless noted otherwise): (1) 2x10: LUS210-2 (3) 2x10: LUS210-3 (2) 9-1/4" LVL: HUS410
 - Deck posts min 4"-0" above grade are to be knee or diagonally braced per Appendix M. Fastening to house will be by nater 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 Planwork Architecture. Truss drawings to design and document all required beams, hangers, and point load reactions. Truss drawing package to supply all information required under R502.11.4.
 - Corners shall be braced with one of the approved methods as outlined in R602.10.3.
 - Multiple LVL'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 1 1/2" x 4" or deeper, connect beams with min. 4-10d 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 LVL's shall be through bolted with 1/2" bolts @ 16" o.c. staggered or 3/8" bolts @ 24" o.c. staggered.

E. STEEL

- BRICK VENEER (WALL ATTACHMENT):

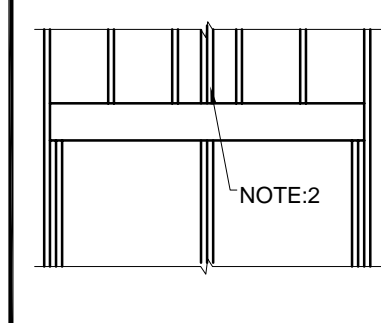
 - Use Mr. (2) 7/16x4" lag screws into double studs @ 16" o.c.
 - All bolts shall be high strength conforming to ASTM A-325.
 - Structural steel shall be ASTM grade A-36 supported across full width of flange. Provide min. 3/16" bearing, or more if indicated. Steel beams shall be anchored at each end with min. (4) 16d nails or (2) 1/2" x 4" lag bolts and liberally supported.
 - Flitch beams to be fastened together using 1/2" inch diameter A307 bolts with washers under threaded end of both 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 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/ 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 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 JOISTS BELOW.
 - AT FLOOR TO FOUNDATION CONNECTION USE EITHER (a) SIMPSON MBS OR MAB (b) SIMPSON DTT2Z (1180) UP/LIFT 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).

OPENING KING STUD REQUIREMENTS

- PER NCRC TABLE R602.3(5) FOOTNOTE d
- HEADERS IN NON LOAD BEARING WALLS ARE NOT LABELED. KING STUDS EXTERIOR WALLS:
 - SINGLE KING STUDS FOR 6'-0" MAX. OPENING.
 - DOUBLE KING STUDS FOR 10'-0" MAX. OPENING.
 - TRIPLE KING STUDS FOR 14'-0" MAX. OPENING.
 - QUAD KING STUDS FOR 18'-0" MAX. OPENING. - FOR 2x6 STUD WALLS, ON HALF THE AMOUNT OF KING STUDS REQUIRED (ROUND UP) U.N.O.
 - FOR PORTAL FRAME WALL REFER TO DETAIL #1 SHEET D-4.
 - FOR WINDOW GROUPS DIVIDED BY STUD POCKETS, DOUBLE CRIPPLE STUDS IN LINE WITH STUD POCKETS. END KING STUDS ARE THEN DETERMINED BY THIS CHART AS LAST OPENING ON EITHER SIDE.



D.J. = DOUBLE JOIST
U.W. = UNDER WALL

NOTE: ◻ INDICATES SIGNIFICANT POINT LOAD, BLOCK SOLID DOWN TO FOUNDATION, PIER, OR SUPPORT BEAM.

WALL FRAMING: MIN. 2x4 SPF #2 @ 16" O.C. UNO

WALL SHEATHING: MIN. 1/2" APA RATED SHEATHING

ROOF SHEATHING: MIN. 1/2" APA RATED SHEATHING

BRACED WALL PANELS SHALL BE CONNECTED TO ROOF FRAMING PER R602.10.5.5

HEADER SCHEDULE

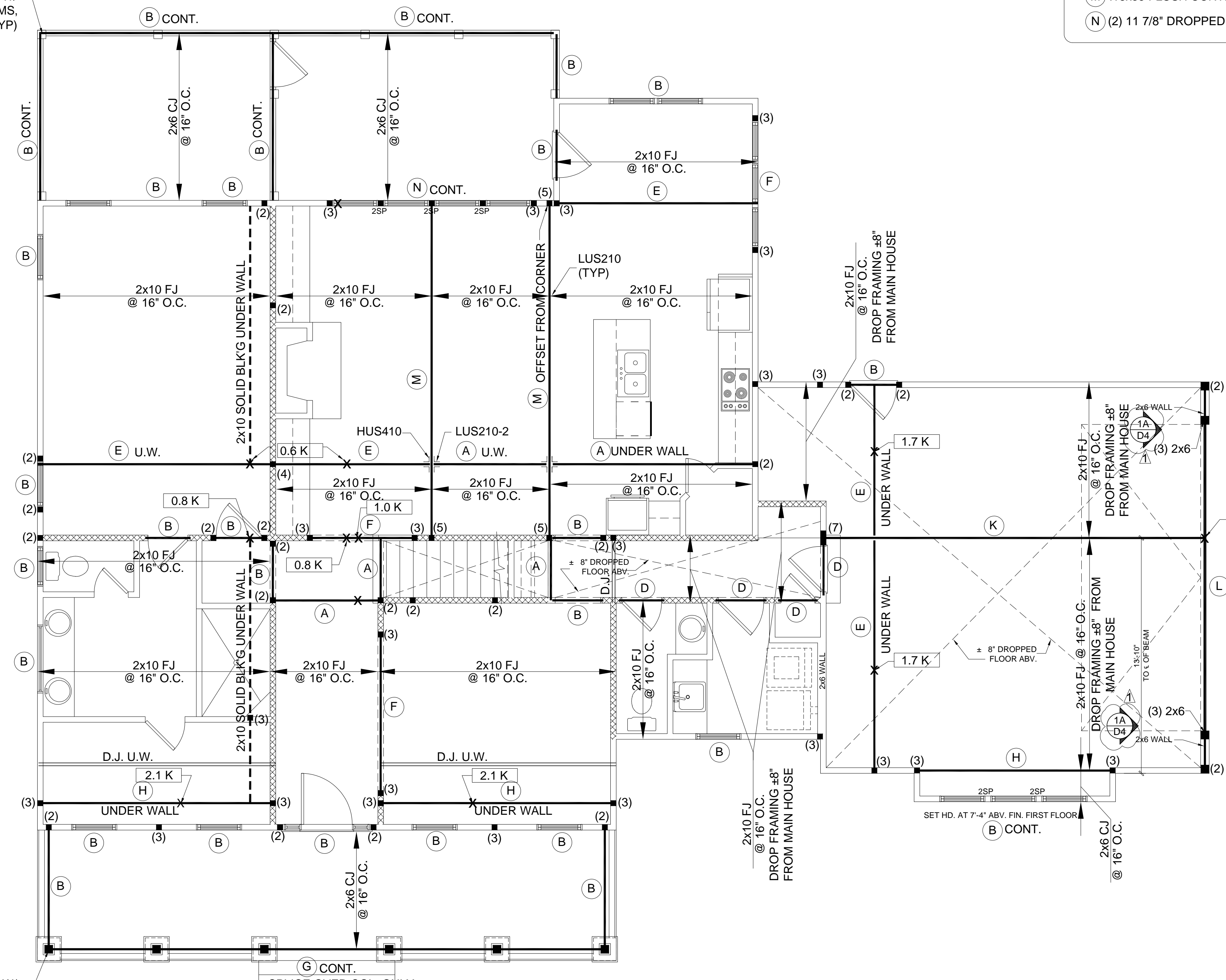
- (A) (2) 2x10 FLUSH
- (B) (2) 2x10 DROPPED
- (C) (2) 2x8 FLUSH
- (D) (2) 2x8 DROPPED
- (E) (2) 9 1/4" LVL FLUSH
- (F) (2) 9 1/4" LVL DROPPED
- (G) (3) 2x10 DROPPED
- (H) (3) 9 1/4" LVL FLUSH
- (J) (3) 9 1/4" LVL DROPPED
- (K) W16x31 DROPPED
- (L) (3) 18" LVL DROPPED
- (M) W8x35 FLUSH CONT.
- (N) (2) 11 7/8" DROPPED

WALL BRACING REQUIRED/PROVIDED

FIRST FLOOR:	75.2% REQUIRED	106.0% PROVIDED	THEFORE 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		

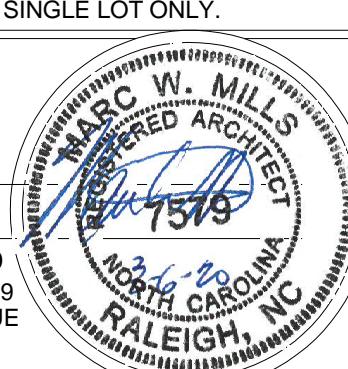
P.T. 6x6 POST W/ H8 TO BEAMS, WRAPPED (TYP)

P.T. 6x6 POST W/ H8 TO BEAMS, WRAPPED (TYP)



THESE PLANS ARE SEALED FOR A SINGLE LOT ONLY.

STRUCTURAL DESIGN BY
MARC W. MILLS, RA
DATE SEALED:
INVALID IF UNSEALED
NORTH CAROLINA LICENSE # 7579
VALID ONLY IF SIGNED IN BLUE



PROGRESS DATE:
ISSUE DATE: 3-6-20
DRAWN BY: MM
CHECKED BY: MM
REVISIONS
DATE BY: DESCRIPTOR
3-31-20 GR Inspector Comments

Second Floor Framing
SHEET NO. AS-2
PLAN NO. P-00720

Glenwood Builders
New Home Plan

gabriel design
pww architecture
raleigh, nc
email: gabrielyesdesign@gmail.com
phone: (919) 491-5855

GENERAL NOTES:
1. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND CONSTRUCTION AND FINISHING CODES.
2. CONTRACTOR IS TO VERIFY EXISTENCE AND LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
3. CONTRACTOR IS NOT RESPONSIBLE FOR CONSTRUCTION VARIATIONS FROM THE INFORMATION PROVIDED.
4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR EXPENSES ASSOCIATED WITH PERMITS AND FINISHING OR THESE DRAWINGS UNLESS SUCH EXPENSES ARE SPECIFICALLY NOTED ON THESE DRAWINGS.
5. GABRIEL DESIGN BEARS NO RESPONSIBILITY FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHERS.
6. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR RECALLING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

A. GENERAL NOTES

- Contractor assumes all responsibility for deciding on depicted or implied structural information. Architect/Structural Engineer must be notified immediately about alternate construction or problem areas before contractor proceeds.
- Only needed 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 L.L. D.L. T.L. Structural System L.L. D.L. T.L.
Dwelling Units (General) 40 10 50 Slabs 40 5 40
Sleeping Rooms 40 10 50 Ceilings and Handrails 200 5 200
Bathrooms/Exterior 60 10 70 Roof Systems 20 10 30
Decks 40 10 50 Concrete Ceilings 20 15 35
Attic (limited attic storage) 10 10 20 Interior Partition Walls 9 9 9
Attic (with storage) 20 10 30 Passenger Garage 50 50 50
Miscellaneous (see drawings) 40 10 50
- Deflection: Floors: L/360, Rafters: L/240, L/480 for engineered flooring and under tied areas, L/600 for vertical masonry support.
6. Do not scale drawings. Contractor shall contact architect for queries on non-labeled items.
7. Owner or builder is responsible for information on soil bearing capacity, min. assumed = 2,000 psf.

B. FOOTINGS AND FOUNDATION

Stakes	Wood Frame			Wood Frame + Edge Brick			Masonry		
	Min. Size	Min. Depth	Min. Spacing	Min. Size	Min. Depth	Min. Spacing	Min. Size	Min. Depth	Min. Spacing
1	16"	8"	16"	16"	8"	16"	16"	8"	16"
2	18"	10"	24"	18"	10"	24"	18"	10"	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 equipment piers can be constructed.

- 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 Table R404.1(2), (3), (4), with variables of total wall height, and soil classification. Amount and placement of rebar are per tables.
- Multiple wye 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 chart's requirements governs)

Size	Hollow Masonry*	Solid Masonry	Size	Hollow Masonry*	Solid Masonry
8x16	up to 32' high	up to 5'-7" high	16x16	up to 64' high	up to 12'-0" high
12x16	up to 48' high	up to 8'-0" high	24x16	up to 96' high	up to 15'-0" high
*Top 8" Solid					

7. Typical lag footing to be 20" x 10" deep, u.n.o.
8. Poured concrete walls shall be min. 10" thick. If retaining over 6' of unbalanced fill vertically w/ #4 @ 16" o.c. and horizontal bars: #4 @ 16" o.c. if retaining over 6' of unbalanced fill use #4 @ 12" o.c. instead into footing, and horizontal bars: #4 @ 12" o.c.

C. FRAMING

- Crawl space girders are (3) 2x10 #2 spruce/pine/fr. dropped, u.n.o.
- All framing lumber shall be #2 SPF (modulus of elasticity 1,400,000 psi, lb 950) or better. All beams and treated lumber to be #2 SPF, E=1,600,000, lb=1100 min. Studs min #2 or stud grade.
- Joists: min 1x14" joist bearing, min 1x12" intermediate supports. Joists min #2 or stud grade.
E= 185,000,000, max 1,100/lb vert. shear, max 1,015/lb end reaction.
LVL's to be 2.0E grade, Fv=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 joists and beams with natural camber up. Ends lapped min. 6" over bearing shall be securely spiked together. Provide at least 1x12" bearing on all joists over 7" 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 later joist spans > 12". 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 gables and vaulted walls and all walls higher than 12' w/ 2x6 @ 16" o.c. or dia. 2x4 @ 12" or platformed 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 flat u.n.o.
- Feedback to conform with R302.1.1.

D. ROOF FRAMING NOTES

- Double top may be spliced with a minimum 6" overlap at center. No valley splices.
- Use 2x10 or fir down rafters for vaulted areas.
- Match vaulted rafters with hurricane connectors: Simpson H-2.5, H-5 or approved eqvt.
- Align all rafters under studs below.

- Brick above low roofs to have triple rafter at low roof with 1x4x3-1/2x1/4" and 16d nails @ 12" o.c. Low end to have 3x5x1/4" w/ steel plate dom.
- All joist ends to be column/bracket (through joists) down to foundation.
- Hanger Schedule (Simpson hangers) for beam to beam connections (unless noted otherwise):
(-2) 2x10: LUS210-2 (-3) 2x10: LUS210-3 (-2) 9-1/4" LVL: HUS410
- Deck posts min 4'-0" above grade are to be knee or diagonally braced per Appendix M.
- Framing to house will be by nailer with 5/8" bolts @ 20" o.c. and (3) 12d hot dipped gal. @ 6" o.c.
- Truss drawings must be sealed by the truss manufacturer and reviewed by Planmark Architecture. Truss drawings to design and document all required beams, hangers, and joint load reactions. Truss drawing package to supply all information required under R502.11.4.
- Corners shall be braced with one of the approved methods as outlined in R602.10.3.
- Multiple LVL'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" LVL's or deeper, connect beams with min. 4-10d 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 LVL's shall be through bolted with 1/2" bolts @ 18" O.C. staggered or 5/8" bolts @ 24" O.C. staggered.

D. STEEL

1. BRICK 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-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.
- Flange 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 REQUIRED/PROVIDED

FLOOR	REQUIRED	PROVIDED
FIRST FLOOR:	75.2'	106.0'

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

WALL BRACING DESIGN SPEC'S

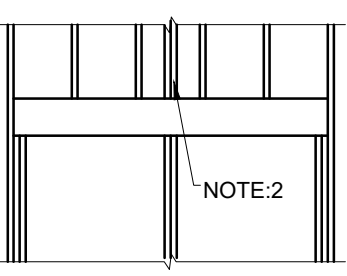
BASED ON 2018 NCRC (REVISED SECTION R602.10.3 AND TABLE R602.10.1, USING CONTINUOUS SHEATHING METHOD.)

- 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 9D-4 W/ MID HEIGHT BRACE.
2. IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE EXCEEDS 12'-0", USE DETAIL 9D-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 ON LOWER FLOOR STUDS BELOW, OR
B) FROM TOP PLATES OF ONE STORY WALL, DOWN CRIPPLE STUDS AND HEADER END, WITH 1" IN DIAMOND BEING LENGTH ONTO JACKS BELOW.
AT FLOOR TO FOUNDATION CONNECTION USE EITHER
(a) SIMPSON MAS OR MASS
(b) SIMPSON OTTZZ (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 8d COMMON NAILS AT 6" O.C. AT EDGES AND 12" O.C. IN FIELD. PER NCRC TABLE R602.3(1).

OPENING KING STUD REQUIREMENTS

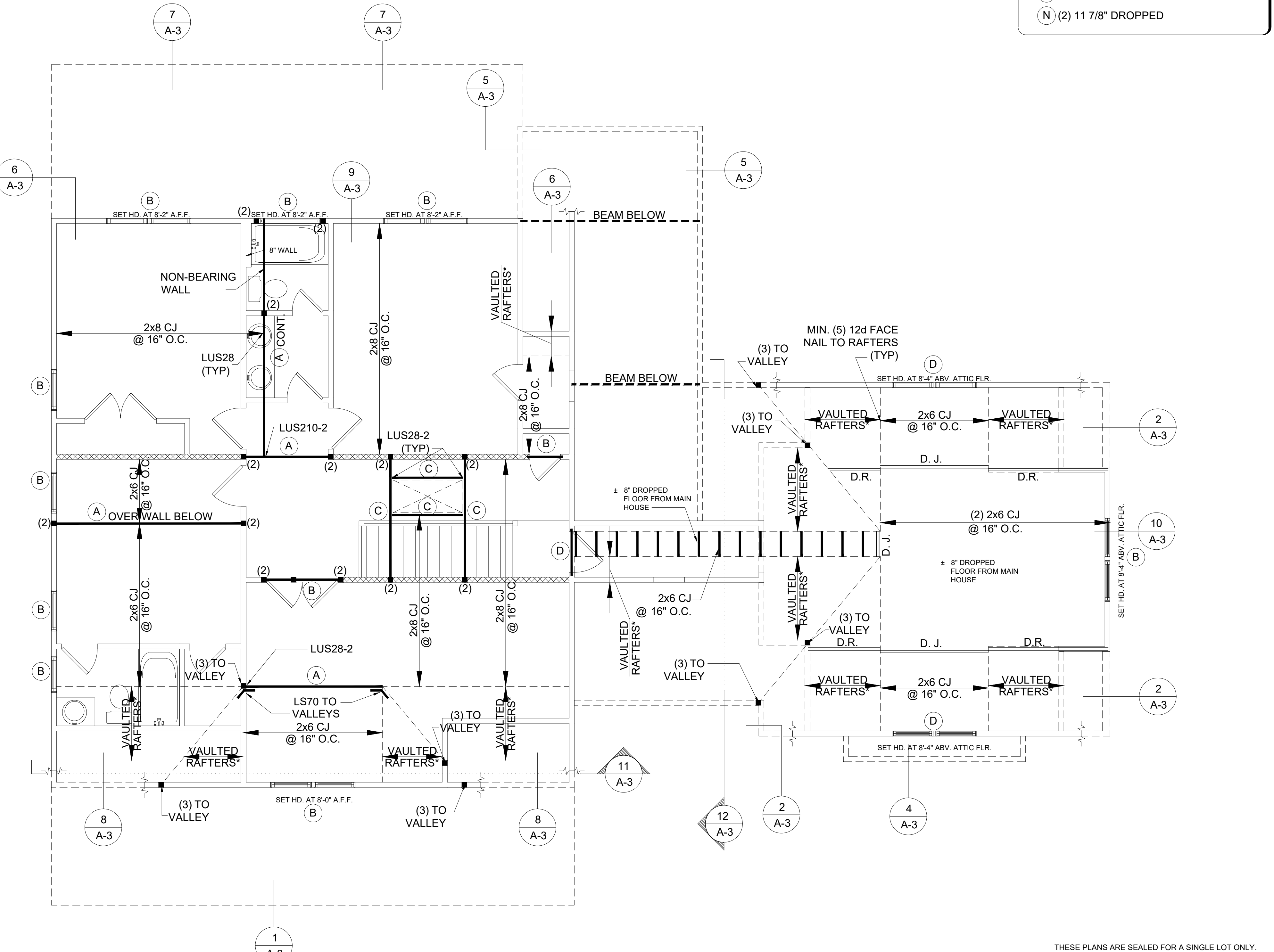
PER NCRC TABLE R602.3(5) FOOTNOTE 6

- HEADERS IN NON LOAD BEARING WALLS ARE NOT LABELED.
- KING STUDS EXTERIOR WALLS:
SINGLE KING STUDS FOR 6'-0" MAX. OPENING.
DOUBLE KING STUDS FOR 10'-0" MAX. OPENING.
TRIPLE KING STUDS FOR 14'-0" MAX. OPENING.
QUAD KING STUDS FOR 18'-0" MAX. OPENING.
- FOR 2x6 STUD WALLS, ON HALF THE AMOUNT OF KING STUDS REQUIRED (ROUND UP) U N O.
- FOR PORTAL FRAME WALL REFER TO DETAIL #1 SHEET D-4.
- FOR WINDOW GROUPS DIVIDED BY STUD POCKETS, DOUBLE CRIPPLE STUDS IN LINE WITH STUD POCKETS. END KING STUDS ARE THEN DETERMINED BY THIS CHART AS LAST OPENING ON EITHER SIDE.



HEADER SCHEDULE

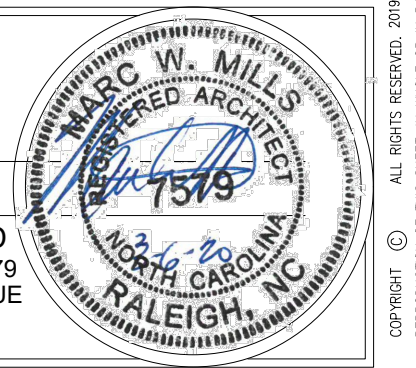
(A) 2x10 FLUSH
(B) 2x10 DROPPED
(C) 2x8 FLUSH
(D) 2x8 DROPPED
(E) (2) 9 1/4" LVL FLUSH
(F) (2) 9 1/4" LVL DROPPED
(G) (3) 2x10 DROPPED
(H) (3) 9 1/4" LVL FLUSH
(J) (3) 9 1/4" LVL DROPPED
(K) W16x31 DROPPED
(L) (3) 18" LVL DROPPED
(M) W8x35 FLUSH CONT.
(N) (2) 11 7/8" DROPPED



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

THESE PLANS ARE SEALED FOR A SINGLE LOT ONLY.

STRUCTURAL DESIGN BY
MARC W. MILLS, RA
DATE SEALED:
INVALID IF UNSEALED
NORTH CAROLINA LICENSE # 7579
VALID ONLY IF SIGNED IN BLUE



GENERAL NOTES:
1. ALL DRAWINGS ARE TO BE COORDINATED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR AND APPLICABLE CODES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS OF EXISTING WORK.
3. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION VARIATIONS FROM THE INFORMATION PROVIDED.

Glenwood Builders New Home Plan

Second Floor Ceiling Framing
SHEET NO. AS-3
PLAN NO. P-00720

DATE	BY	DESCRIPTION

PROGRESS DATE: 3-6-20
ISSUE DATE: MM
CHECKED BY: MM
DRAWN BY: MM

gabriel design
pwx architecture
raleigh, nc
email: gabrieldesign@gmail.com
phone: (919) 491-5855

STRUCTURAL NOTES REV: 12/11/18

- 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 sealed drawings with label 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	Countertops and Handrails	200		200
Balconies/Decks	60	10	70	Roof Systems	20	10	30
Decks	10	10	50	Cathedral Ceilings	20	15	35
Attic(s) w/ attic storage	10	10	20	Internal Partition Walls			9
Attic(s) w/ storage	20	10	30	Passenger Garage	50	per	req.
Attic(s) w/ fixed storage	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)

Stories	Wood Frame			Wood Frame + Face Brick			Masonry		
	Min. T ₁₆ Width	Min. T ₁₆ Depth	Min. T ₁₆ Height	Min. T ₁₆ Width	Min. T ₁₆ Depth	Min. T ₁₆ Height	Min. T ₁₆ Width	Min. T ₁₆ Depth	Min. T ₁₆ Height
1	16"	8"	12"	16"	8"	12"	16"	8"	12"
2	18"	10"	14"	18"	10"	14"	18"	10"	14"
3	20"	12"	16"	20"	12"	16"	20"	12"	16"
 - 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 unbalanced fill and reinforcing to conform with Tables R404.1(1), (2), (3), (4), with varieties 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"-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
8'x16	up to 32" high	up to 5'-0" high	16'x16	up to 6'-0" high	up to 12'-0" high
12'x16	up to 48" high	up to 9'-0" high	24'x16	up to 9'-0" high	up to 15'-0" high
	Top 8" Solid				
 - Typical lag footing to be 20"x 10" deep, u.n.o.
 - Rebar concrete walls shall be min 10" thick. If retaining under 6' of unbalanced fill use #4@12" o.c. hooked into footing, and horizontal bars #4 @ 12" 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
- Draw space girders as (3) 2x10 #2 spruce/pine/fir, dropped, u.n.o.
 - All framing lumber shall be #2 SPF (modulus of elasticity 1,400,000 psi, ft 950) or better. All beams and truss lumber to be #2 SPF, E=1,600,000, ft=1100 min. Studs min #2 or stud grade. Joints: min 1-3/4" joint bearing min 3-1/2" at intermediate supports. Max 3,000 lb-ft moment. Do not exceed max 1,100 lb/ft shear, max 1,010 lb end reaction. LV's to be 2:06 grade, ft=2850, L/360 max. deflection.
 - Use hangers for all beam to beam connections. Structural fastening as per R602.3(1). Adequate connections in the side 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 joists 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. Sits min. 2x6.
 - Structural member fastening to conform to Table R602.3(1) and (2).
 - With 2x framing members, use double joints: A) under parallel partitions; B) under opening multiple joists C) under tubs if joist spans > 12'. 1-joints 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", or perforated 2x4 with 10' 2x10 bond with Simpson CS16 x 30 @ 32" o.c., top studs by 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 flat u.n.o.
 - Fireblock to conform with R302.11.

- D. STEEL** REV: 12/11/18
- 1. BRICK VENEER PANEL 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. (6) 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. Spots will be spaced at 24" maximum staggered top and bottom of beam.

LOCATIONS OF PAN TYPE ROOF LOUVERS FOR ADDITIONAL UPPER VENTILATION (SEE TABLE ABOVE TO VERIFY IF REQ.)

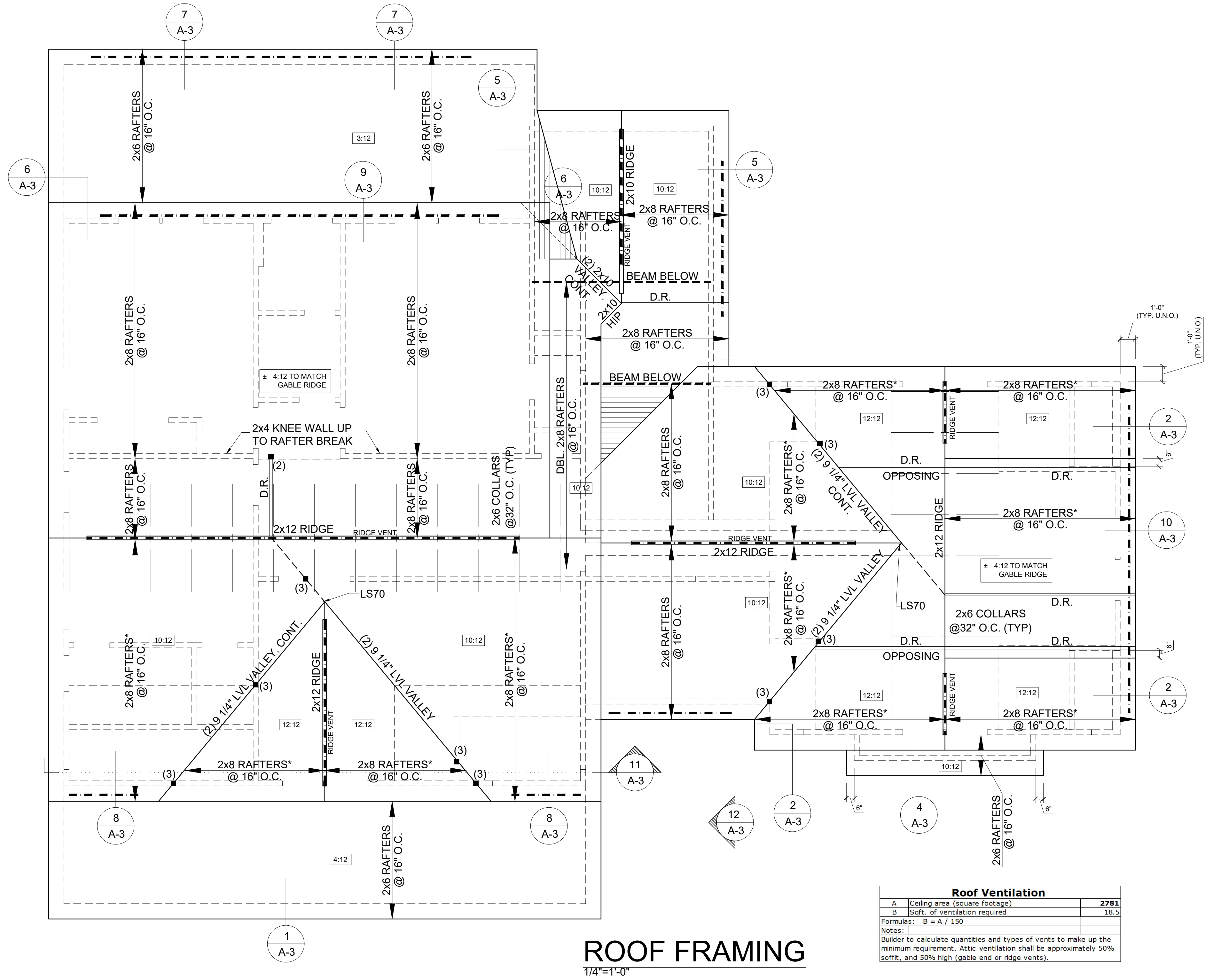
LOCATIONS OF SOFFIT VENTING AND RIDGE VENTING TO MEET AREA NUMBERS REQUIRED IN CHART AS SHOWN ABOVE.

NOTES:

- BUILDER TO VERIFY VENTING SPEC'S BASED ON MANUFACTURES PRODUCT THAT IS USED TO AT MIN MEET THE REQUIRED NUMBERS LISTED IN CHART ABOVE.
- ROOFS OVER UNCONDITIONED SPACE MAY BE VENTED WITH SOFFIT VENTS ONLY PER EXCEPTION #2 IN NCRC SECTION R806.2

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 BRACEWALL DETAILS AS DESCRIBED:
 1. IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE IS LESS THAN 12'-0", USE DETAIL 9D-4 W/ MID HEIGHT BRACE.
 2. IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE EXCEEDS 12'-0", USE DETAIL 9D-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 MAB (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 NCRC TABLE R602.3(1).



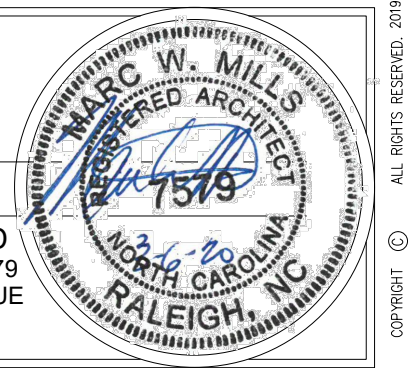
Roof Ventilation

A	Ceiling area (square footage)	2781
B	Soft. of ventilation required	18.5
Formulas: B = A / 150		
Notes: Builder to calculate quantities and types of vents to make up the minimum requirement. Attic ventilation shall be approximately 50% soffit, and 50% high (gable end or ridge vents).		

ROOF FRAMING
1/4"=1'-0"

THESE PLANS ARE SEALED FOR A SINGLE LOT ONLY.

STRUCTURAL DESIGN BY
 MARC W. MILLS, RA
 DATE SEALED:
 INVALID IF UNSEALED
 NORTH CAROLINA LICENSE # 7579
 VALID ONLY IF SIGNED IN BLUE



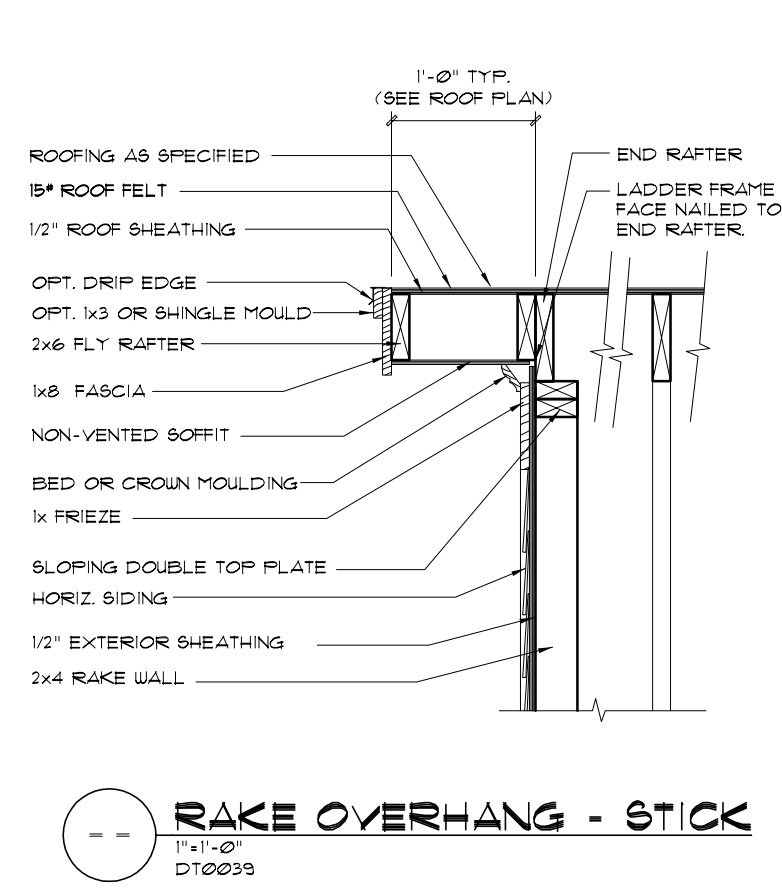
GENERAL NOTES:
 1. ALL DRAWINGS ARE TO BE CONSIDERED WITH ALL SITE INFORMATION BY OWNER AND CONTRACTOR, AND APPLICABLE CODES.
 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING CONDITIONS.
 3. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION VARIATIONS FROM THE INFORMATION SPECIFIED.

Glenwood Builders
 New Home Plan

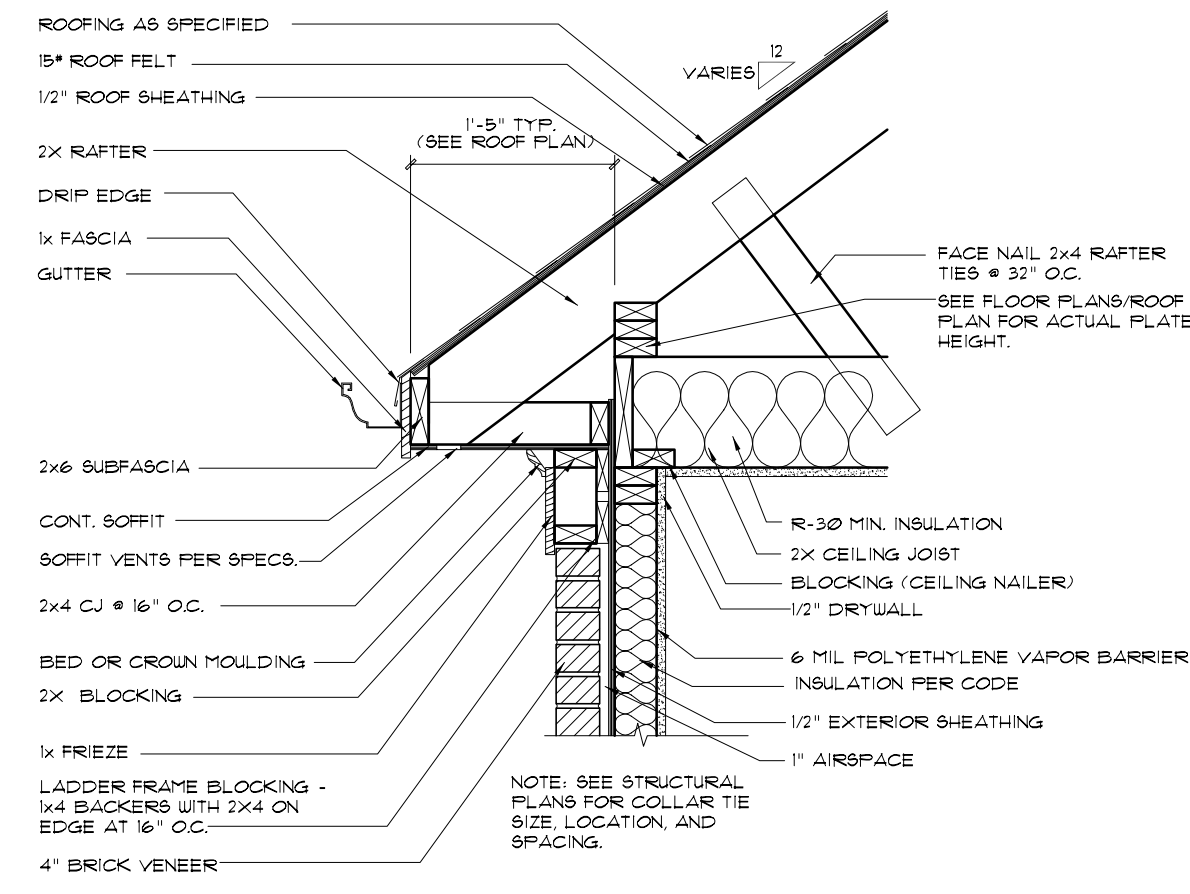
PROGRESS DATE: _____
 ISSUE DATE: 3-6-20
 DRAWN BY: DR
 CHECKED BY: MW
 REVISIONS:
 DATE BY: _____
 DESCRIPTION: _____

Roof Framing
 SHEET NO: AS-4
 PLAN NO: P-00720

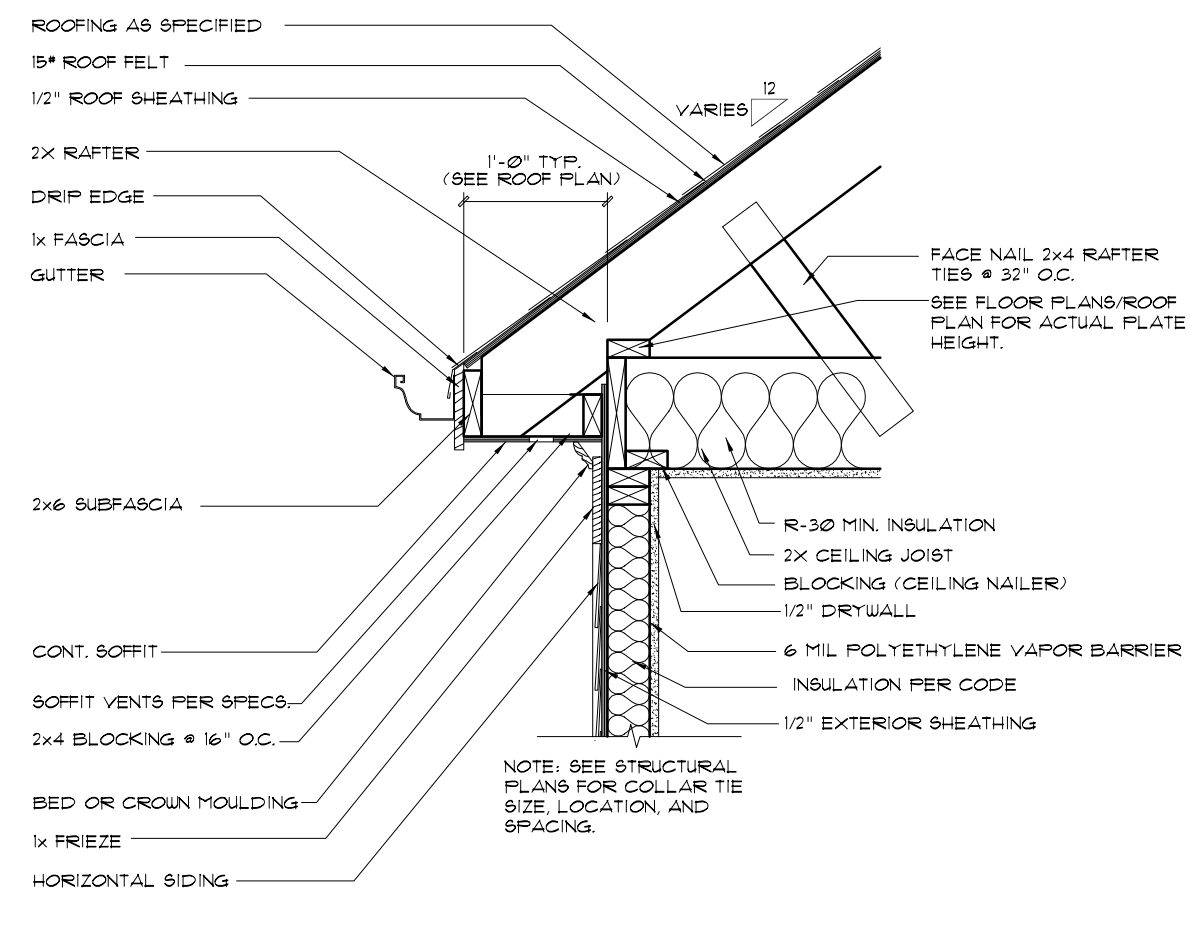
gabriel design
 p.w. architecture
 raleigh, nc
 email: gabreydesign@gmail.com
 phone: (919) 491-5885



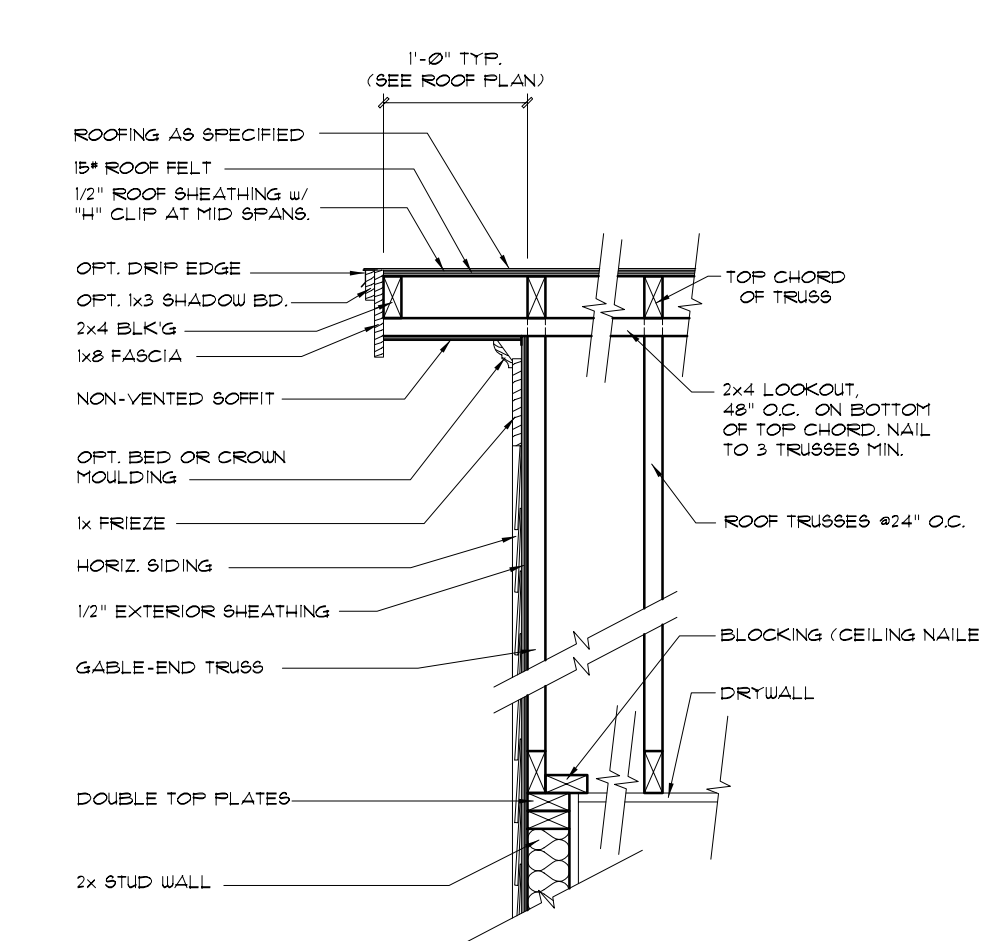
1-1 RAKE OVERHANG - STICK
1/2\"/>



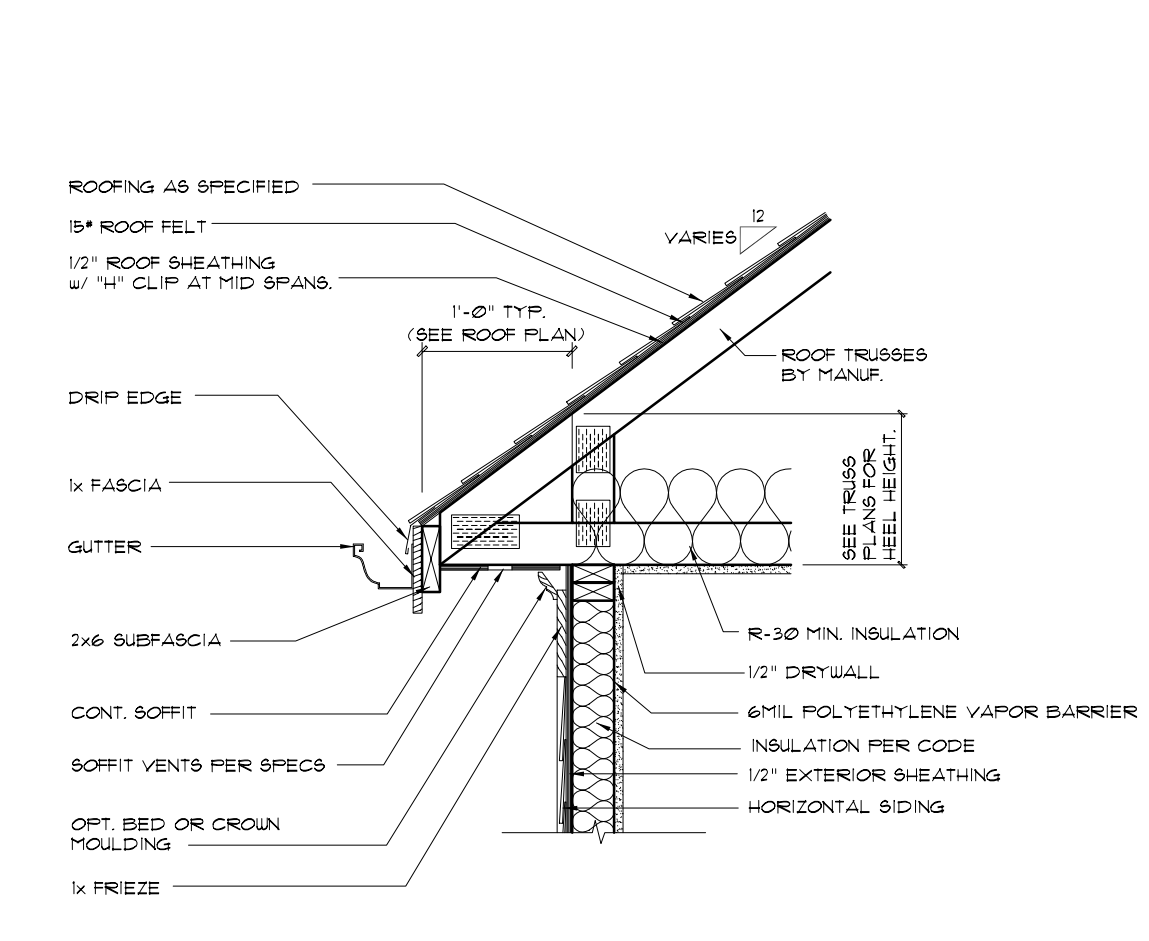
1-1 CORNICE AT BRICK
1/2\"/>



1-1 CORNICE AT SIDING
1/2\"/>



1-1 RAKE OVERHANG - TRUSSES
1/2\"/>

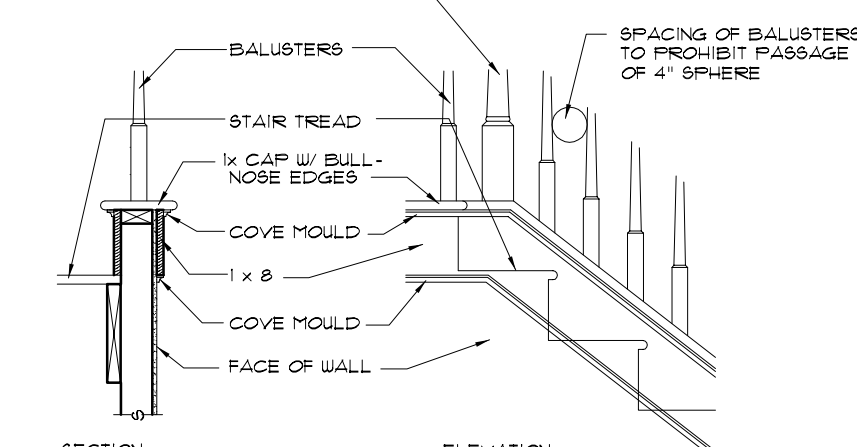


1-1 TYP. CORNICE - TRUSSES
1/2\"/>

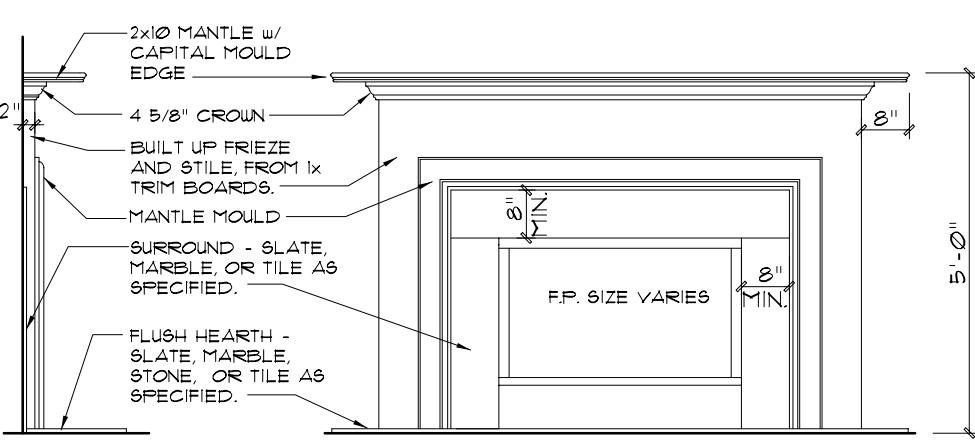
ARCHITECTURAL NOTES

1. ALL ROOFING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL ROOFING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 2. STAIRS TO HAVE 3/4\"/>
- 3. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 4. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 5. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 6. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 7. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 8. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 9. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 10. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 11. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 12. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 13. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 14. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 15. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 16. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 17. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 18. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 19. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>
- 20. FINISH FLOORING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL FINISH FLOORING SHALL BE INSTALLED OVER A CONTINUOUS LAYER OF 1/2\"/>

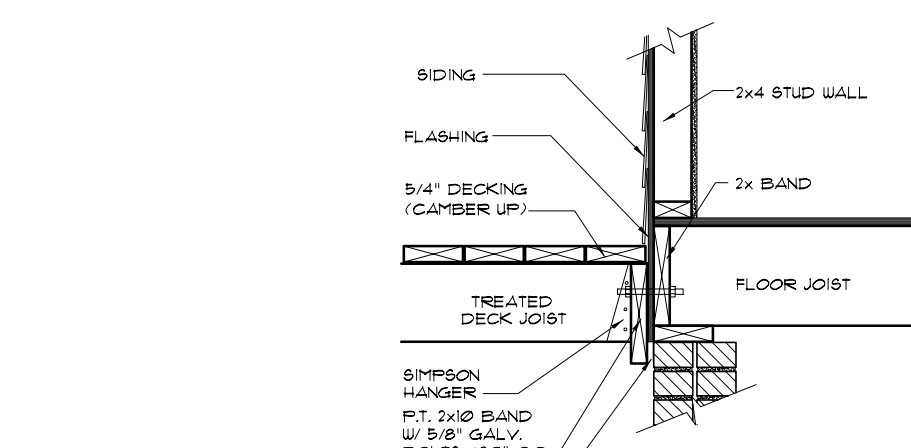
1-1 STAIR TRIM - OPEN RIGERS
3/4\"/>



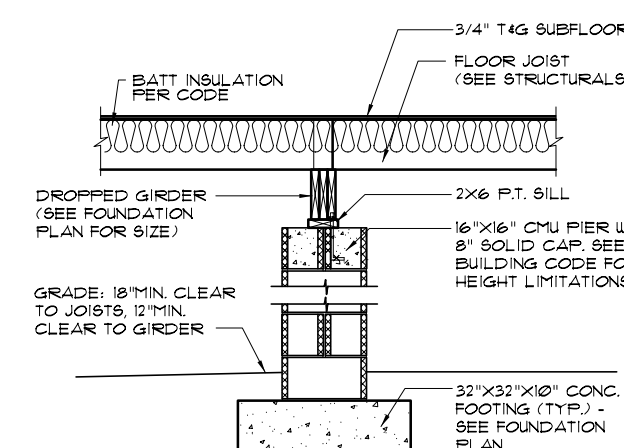
1-1 STAIR TRIM - CLOSED RIGERS
3/4\"/>



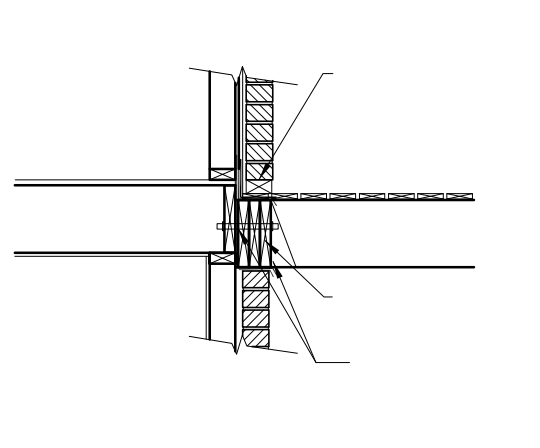
1-1 FIREPLACE TRIM
1/2\"/>



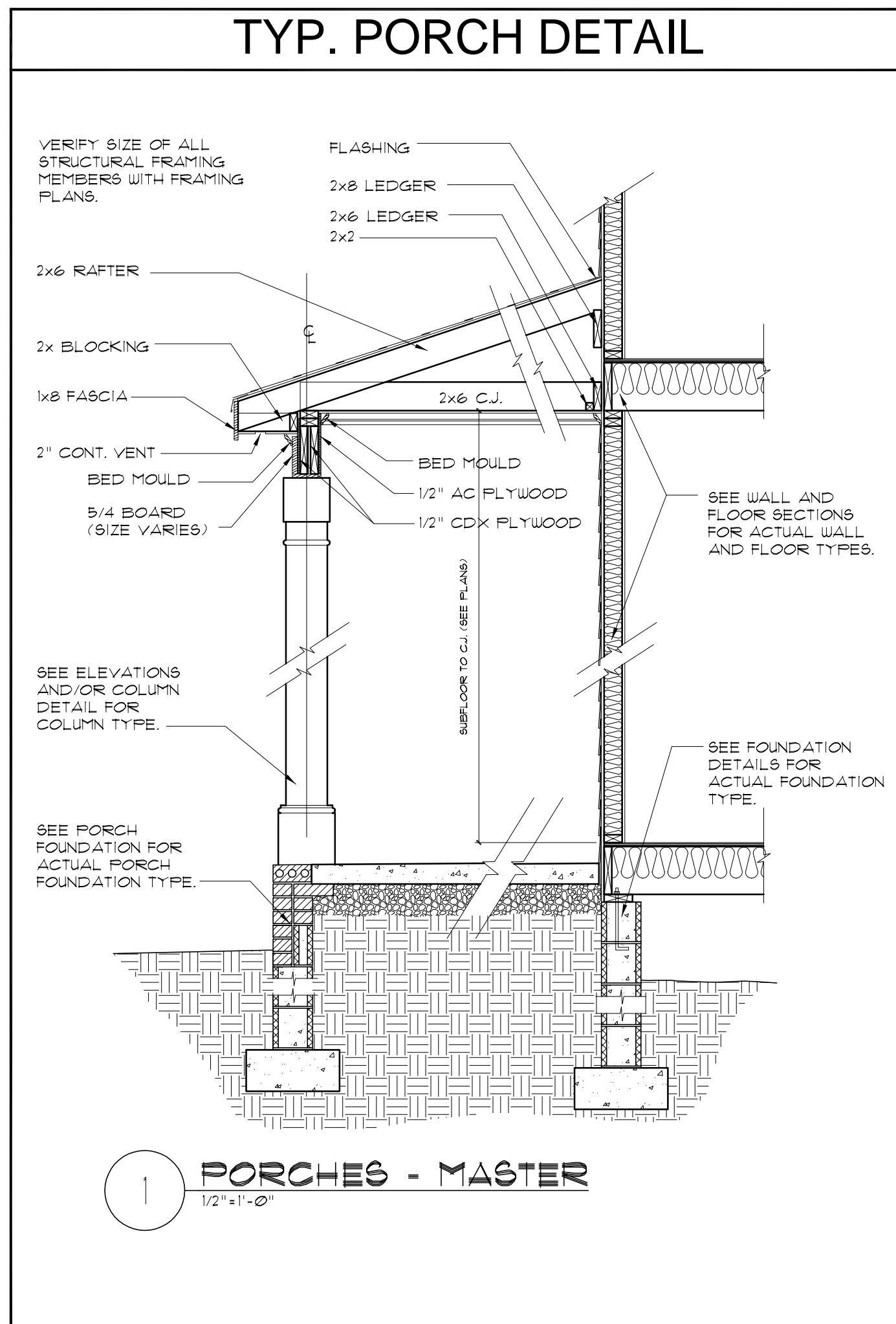
3 DECK ATTACHMENT
1/2\"/>



4 PIER/GIRDER AT CRAWL
1/2\"/>



5 BLOCKED DECK ATTACHMENT
1/2\"/>



1 PORCHES - MASTER
1/2\"/>

WALL SECTION DETAILS	
MASTER DETAIL	DETAIL VARIATIONS
<p>2x4 or 2x6 STUDS @ 12\"/> <p>CONTINUOUS WIND & WATER BARRIER</p> <p>1/8\"/> <p>BATT INSULATION (R-13)</p> <p>1/2\"/> <p>2 MASTER 1/2\"/> </p></p></p></p>	<p>HORIZONTAL SIDING PER SPECS</p> <p>BRICK VENEER</p> <p>1\"/> <p>GALV. METAL WALL TIES #24\"/> <p>EXTERIOR WALL BRICK VENEER</p> </p></p>
	<p>EXTERIOR WALL SIDING</p> <p>3/4\"/> <p>METAL LATH</p> <p>APPLIED STONE VENEER (CULTURED STONE OR EQUAL)</p> <p>LATH</p> <p>MORTAR SETTING BED</p> <p>MORTAR JOINT</p> <p>NOTE: INSTALL STONE VENEER PER MANUFACTURER'S SPECIFICATIONS.</p> </p>
	<p>EXTERIOR WALL STUCCO FINISH</p> <p>EXTERIOR WALL STONE VENEER (APPLIED)</p>

FLOOR SECTION DETAILS		
MASTER DETAIL	DETAIL VARIATIONS	
<p>SEE FLOOR PLANS AND ELEVATIONS FOR WALL FINISH MATERIALS. SEE WALL SECTIONS FOR MORE INFO.</p> <p>3/4\"/> <p>DOUBLE TOP PLATE</p> <p>JOISTS AT STUD WALL</p> <p>SEE FLOOR PLANS AND ELEVATIONS FOR WALL FINISH MATERIALS. SEE WALL SECTIONS FOR MORE INFO.</p> <p>3/4\"/> <p>R-19 INSULATION OR APPROVED AT CRAWL OR w/ UNFINISHED BASEMENT BELOW.</p> <p>FINISH FLOOR (SEE SPECS)</p> <p>PT. SILL PLATE. SEE FOUNDATION DETAILS FOR MORE INFO.</p> <p>3 FLOOR SECTION MASTER 1/2\"/> <p>JOISTS AT FOUNDATION</p> </p></p></p>	<p>2x LUMBER FLOOR SYSTEM. SEE FRAMING PLANS FOR SIZE.</p> <p>2x RIM JOIST</p> <p>1 JOIST FLOOR SYSTEM. SEE FRAMING PLANS FOR SIZE.</p> <p>MANUFACTURER SPECIFIED LSL RIM BOARD.</p> <p>FLOOR SYSTEM AT STUD WALL CONVENTIONAL LUMBER</p> <p>FLOOR SYSTEM AT STUD WALL 1-JOISTS</p> <p>WOOD FLOOR TRUSSES BY MANUF. SEE FRAMING PLANS FOR SIZE.</p> <p>MANUFACTURER SPECIFIED LSL RIM BOARD.</p> <p>FLOOR SYSTEM AT STUD WALL FLOOR TRUSSES</p>	
	<p>A</p>	<p>B</p>
	<p>C</p>	<p>E</p>

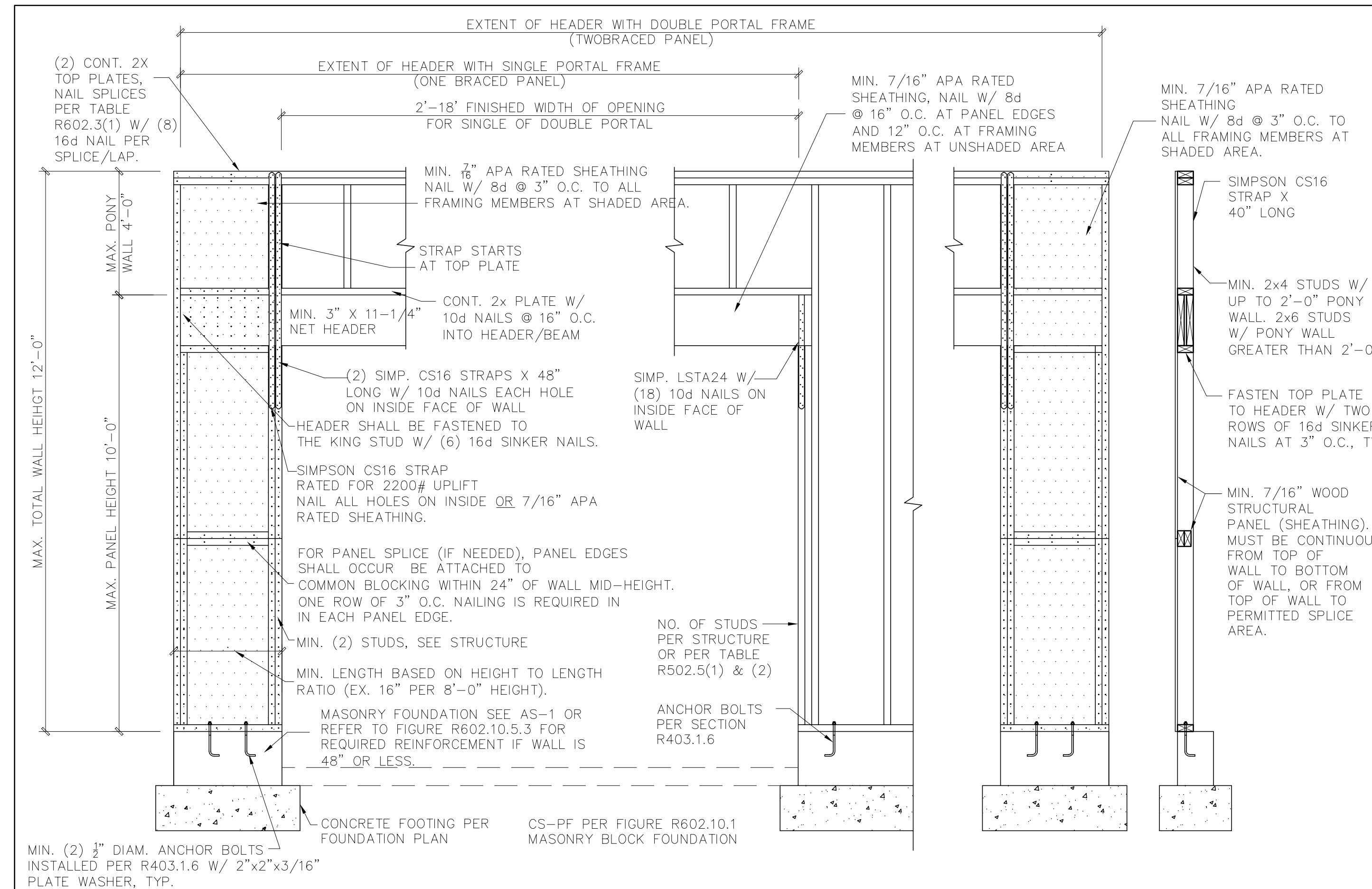
PROGRESS DATE:	
ISSUE DATE:	08/30/16
DRAWN BY:	
CHECKED BY:	
REVISIONS:	
DATE:	BY: DESCPT.

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 BRACEWALL DETAILS AS DESCRIBED:
1. IF FLOOR OF TRUSS BOTTOM CHORD PLATE TO RIDGE IS LESS THAN 12'-0", USE DETAIL 9'D-4 W/ MID HEIGHT BRACE.
2. 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/ 8d 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 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 8d COMMON NAILS AT 6" O.C. AT EDGES AND 12" O.C. IN FIELD, PER NCRC TABLE R602.3(1).

WALL BRACING REQUIREMENTS

- BASED ON 2018 NC RESIDENTIAL CODE SECTION R602.10
- METHOD USED: 2018 INTERNATIONAL RESIDENTIAL CODE (ALL CODE REFERENCES REFER TO 2018 NCRC).
 - BRACING MATERIALS & METHODS SHALL COMPLY WITH SECTION R602.10.1 AND LOAD PATH DETAILING IN ACCORDANCE WITH SECTION R602.10.4.
 - WALL FRAMING SHALL BE CONSTRUCTED PER R602.3(1).
 - EXTERIOR WALL BRACING, UNLESS SPECIFIED OTHERWISE, SHALL BE CONTINUOUS SHEATHING METHOD (CS-WSP) AS SPECIFIED IN TABLE R602.10.1 W/ 8d COMMON NAILS (OR EQUAL) @ 6" O.C. AT PANEL EDGES & 12" O.C. AT PANEL INTERMEDIATE SUPPORTS.
 - INTERIOR WALL BRACING PANELS, UNLESS SPECIFIED OTHERWISE, SHALL BE GYPSUM BOTH SIDES (GB) AS SPECIFIED IN TABLE R602.10.1.
 - EXTERIOR AND INTERIOR BRACED WALL PANELS, IF SPECIFIED, SHALL BE ATTACHED TOP AND BOTTOM PER SECTION R602.10.4.4 AND FIGURES R602.10.4.4(1) OR R602.10.4.4(2).
 - EXTERIOR WALL BRACING PORTAL FRAMES, IF SPECIFIED WITHOUT HOLD DOWNS, SHALL BE INSTALLED PER FIGURE R602.10.1 OR ALTERNATE DETAIL PROVIDED.



1A BRACED WALL
SCALE: NTS
CS-PF PER FIGURE 602.10.1
MASONRY/CONCRETE FOUNDATION

4. GABRIEL DESIGN WILL NOT ASSUME ANY LIABILITY FOR ERRORS ASSOCIATED WITH ERRORS AND OMISSIONS ON THESE DRAWINGS UNLESS OTHERWISE SPECIFIED.
5. GABRIEL DESIGN RETAINS RESPONSIBILITY FOR THE ACCURACY OF ALL INFORMATION PROVIDED HEREON.
6. GABRIEL DESIGN IS NOT RESPONSIBLE FOR ESTIMATING, MAINTAINING, OR RECALCULATING CONSTRUCTION COSTS ASSOCIATED WITH THESE PLANS.

GENERAL NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL THE NECESSARY PERMITS AND CONSTRUCTION AND INSURANCE CODES.
2. CONTRACTOR IS TO VERIFY EXISTING DIMENSIONS OF FOUNDING OR BEAM WORKING FROM EXISTING INFORMATION.
3. GABRIEL DESIGN IS NOT RESPONSIBLE FOR CONSTRUCTION VARIATIONS FROM THE INFORMATION PROVIDED.

Glenwood Builders
New Home Plan

PROGRESS DATE:		
ISSUE DATE:	3-6-20	
DRAWN BY:	GR	
CHECKED BY:	MM	
REVISIONS		
DATE	BY	DESCRIP.
3-31-20	GR	Inspector Comments

Wall Bracing Notes

SHEET NO.
D-4

PLAN NO.
P-00720

THESE PLANS ARE SEALED FOR A SINGLE LOT ONLY.

STRUCTURAL DESIGN BY
MARC W. MILLS, RA

DATE SEALED:
INVALID IF UNSEALED
NORTH CAROLINA LICENSE # 7579
VALID ONLY IF SIGNED IN BLUE

gabriel design
pwx architecture
raleigh, nc
email: gabrielyesdesign@gmail.com
phone: (919) 491-5855