

4 H@NC - 78 Eagle Crest Court, Lillington, NC 27546

Signature Series



# THE APEX - LH 'TRADITIONAL'



### REVISION LOG

- REVISION:001**      DATE: 07/22/2022  
 1. ADD STEM WALL SLAB FOUNDATION SHEETS  
 2. ADD "STEM WALL" TO CRAWL ELEVATION TITLES AND NOTE "SEE FOUNDATION PAGES FOR FOUNDATION TYPE". UPDATE SHEET TITLES.
- REVISION:002**      DATE: 10/20/2023  
 1. STANDARD SHOWER REVISED TO BE 60X36.  
 2. CHANGED SHOWER SIZE FOR THE OWNER'S SHOWER/TUB OPTION TO 42"X42" AND MADE THE TUB DECK LARGER. CHANGED WINDOW OVER TUB TO 4/0X1/0  
 3. RELABELED FIREPLACES AS OPT. DENOTED FIREPLACE IN THE FAMILY ROOM AS AN INTERIOR FIREPLACE. NOTED THE WINDOWS FOR THIS OPTION TO BE 2/8X5/0.  
 4. CHANGE FRONT DOOR FOR THE SMART DOOR DELIVERY OPTION TO AN INSULING DOOR. MODIFIED HALF WALL AT THE STAIRS TO BE A FULL WALL FOR THE DOUBLE POCKET OFFICE OPTION. THIS IS TO CARRY THE BEAM OVER THE STAIRS.  
 5. SMART DOOR DELIVERY EXTENDED 2'-0" TOWARD THE FRONT IN THE POCKET OFFICE OPTIONS. FOUNDATIONS WERE CHANGED TO MATCH.
- REVISION:003**      DATE: 01/21/2024  
 1. CLARIFY NOTES TO INDICATE THAT THE OWNER'S BEDROOM 3/0X5/0 SIDE WINDOWS ARE OPTIONAL TO PURCHASE BUT ALSO STANDARD IF THE COVERED PORCH OPTION IS SELECTED ON THE REAR OF THE HOUSE. THE 2/0X2/0 SIDE WINDOWS ARE OPTIONAL TO PURCHASE. THE REAR 3/0X5/0 WINDOW NEAR THE CORNER BECOMES AN OPTIONAL PURCHASE WHEN COVERED PORCH IS SELECTED.

1/23/24 - Initial Redlines - JJ



ARCHITECTURAL DRAWINGS	
Sheet No.	Sheet Description
0.0	Cover Sheet
1.1	Foundation (Slab)
1.1.1	Foundation Options (Slab)
1.1.2	Foundation Options (Slab)
1.2	Foundation (Crawl)
1.2.1	Foundation Options (Crawl)
1.2.2	Foundation Options (Crawl)
1.3	Foundation (Stem Wall Slab)
1.3.1	Foundation Options (Stem Wall Slab)
1.3.2	Foundation Options (Stem Wall Slab)
2.1	First Floor Plan
2.1.1	First Floor Plan Options
2.2	Second Floor Plan
2.2.1	Second Floor Plan Options
2.4	Covered Porch Plans & Elevations (Slab)
2.4.1	Covered Porch Plans & Elevations (Crawl/Stem Wall)
2.5	Extended Cafe Elevations & Roof Plan (Slab)
2.5.1	Extended Cafe Elevations & Roof Plan (Crawl)
2.6	2-Car Sideload Garage Plans
2.6.1	2-Car Sideload Garage Elevations
2.7	3-Car Garage Plans
2.7.1	3-Car Garage Elevations
3.1	Front & Rear Elevations (Slab)
3.1.1	Front & Rear Elevations (Crawl/Stem Wall)
3.2	Side Elevations (Slab)
3.2.1	Side Elevations (Crawl/Stem Wall)
3.3	Roof Plan
5.1	First Floor Electrical
5.1.1	First Floor Options Electrical
5.2	Second Floor Electrical
5.2.1	Second Floor Options Electrical

SQUARE FOOTAGE		
	'TRADITIONAL' ELEVATION	
	UNHEATED	HEATED
FIRST FLOOR	0	1342
SECOND FLOOR	0	1508
FRONT PORCH	144	0
REAR PATIO/DECK	188	0
2 CAR GARAGE	469	0
SUBTOTALS	601	2850
TOTAL UNDER ROOF	601	2850
OPTIONS		
	UNHEATED S.F.	HEATED S.F.
POCKET OFFICE	+24	+132
SMART DOOR	-42	+42
SITTING ROOM	0	+152
OPT. 3RD CAR GARAGE	+260	0
COVERED PATIO/DECK	188	0
EXTENDED COVERED PATIO/DECK	+137	0

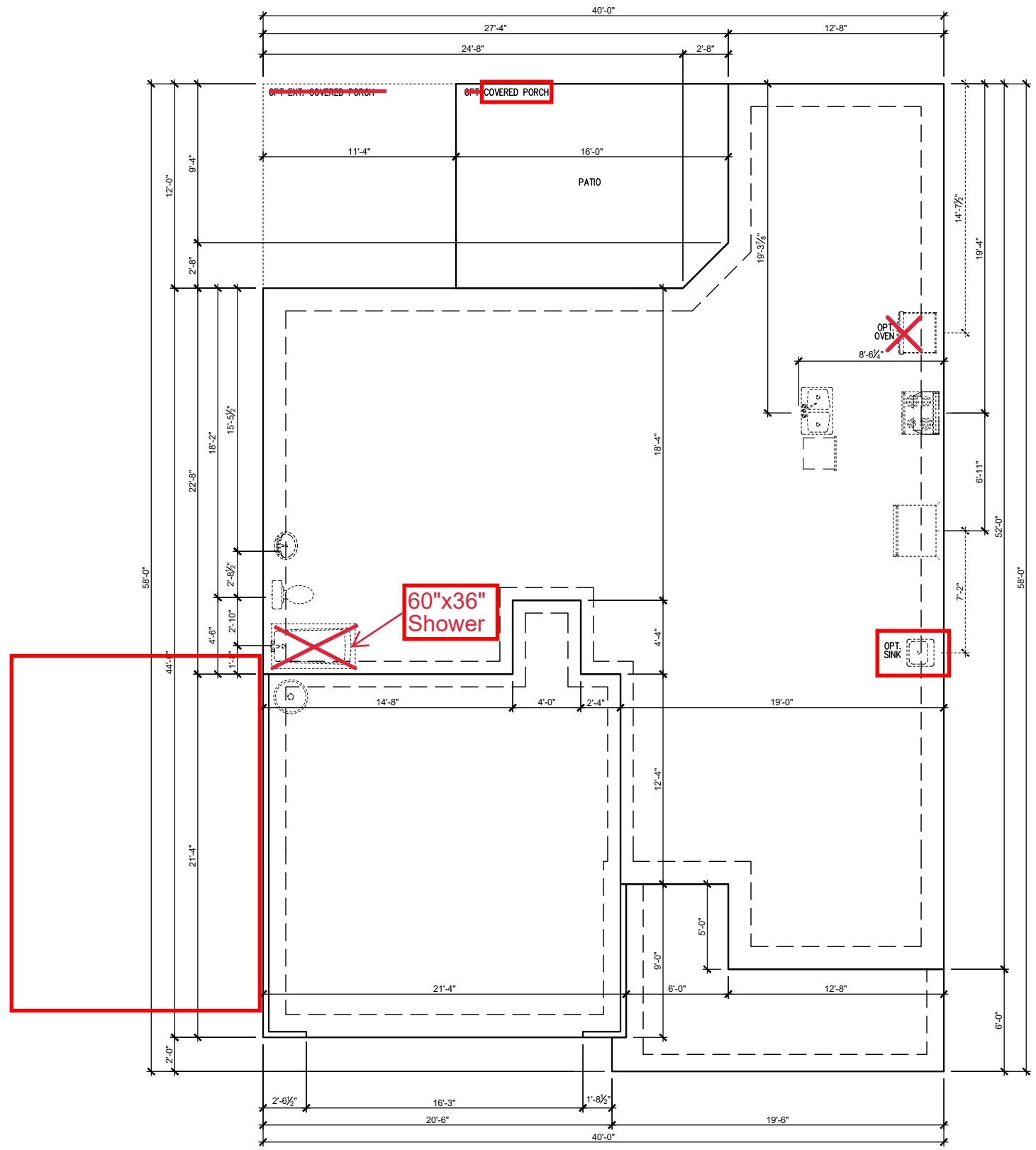
### DESIGN CRITERIA:

THIS PLAN IS TO BE BUILT IN CONFORMANCE WITH THE 2018 NORTH CAROLINA STATE BUILDING CODE: RESIDENTIAL CODE  
 DIMENSIONS SHALL GOVERN OVER SCALE, AND CODE SHALL GOVERN OVER DIMENSIONS.

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THE APEX - LH  
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 Cover Sheet 'Traditional'

DRAWN BY:  
 South Designs  
 ISSUE DATE:  
 7/1/2021  
 CURRENT REVISION DATE:  
 ---  
 SCALE:  
 1/8" = 1'-0"  
 SHEET  
 0.0a



**SLAB FOUNDATION 'TRADITIONAL'**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34

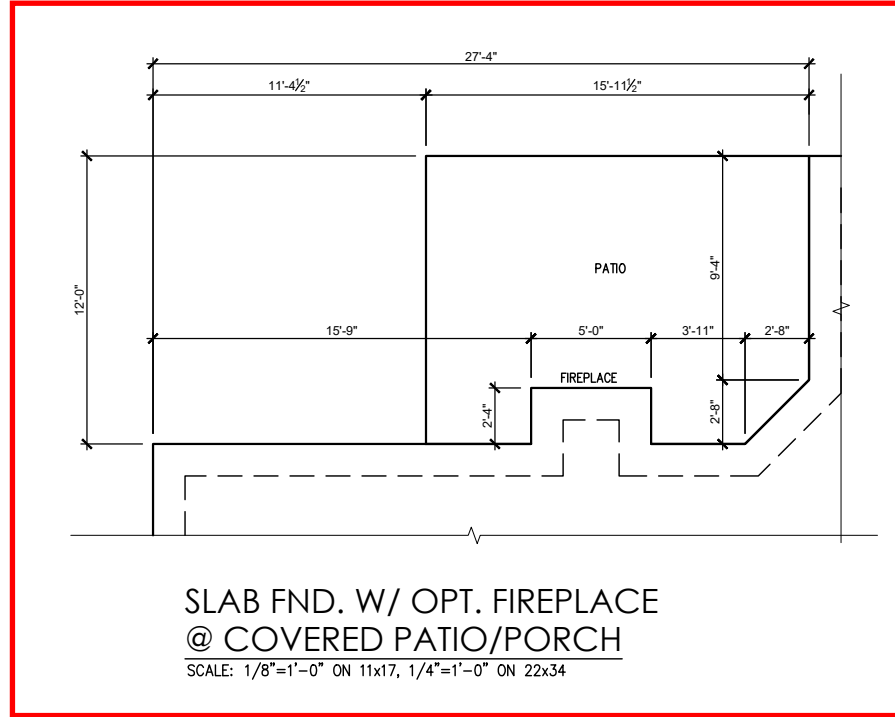
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**THE APEX - LH**  
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Slab Foundation 'Traditional'

DRAWN BY:  
South Designs  
ISSUE DATE:  
7/1/2021  
CURRENT REVISION DATE:  
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SCALE:  
1/8" = 1'-0"

SHEET  
**1.1a**

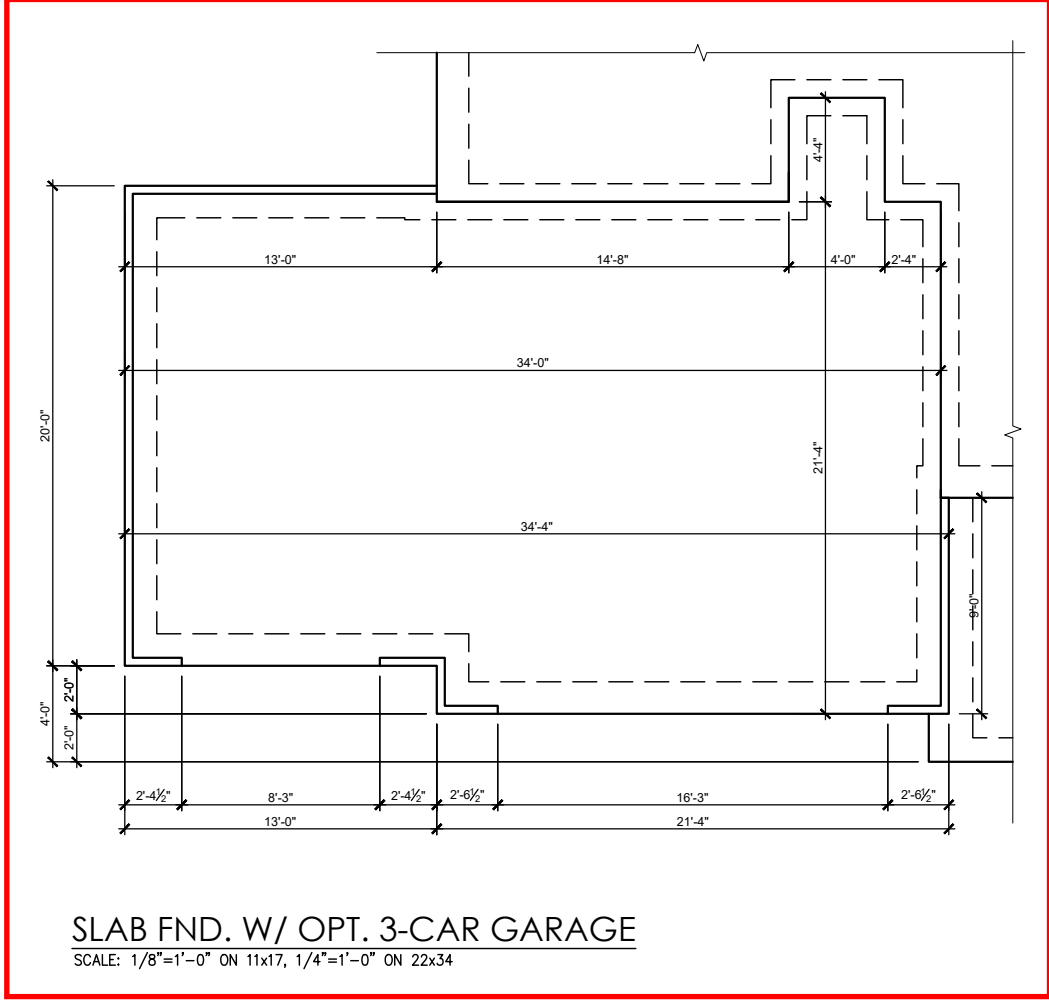


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THE APEX - LH  
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Slab Foundation Options 'Traditional'

DRAWN BY:  
South Designs  
ISSUE DATE:  
7/1/2021  
CURRENT REVISION DATE:  
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SCALE:  
1/8" = 1'-0"

SHEET  
1.1.1a



**SLAB FND. W/ OPT. 3-CAR GARAGE**  
 SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34

THE APEX - LH  
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Slab Foundation Options 'Traditional'

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DRAWN BY:  
South Designs  
 ISSUE DATE:  
7/1/2021  
 CURRENT REVISION DATE:  
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SCALE:  
1/8" = 1'-0"

SHEET  
**1.1.2a**

**General Floor Plan Notes**

General Floor Plan Notes shall apply unless noted otherwise on plan.

1. Wall Heights: Typically 9'-1 1/2" at first floor and second floor, and 9'-1 1/2" at attics U.N.O. All walls are constructed using a double top plate. Splices at Double Top Plate do not need to occur at Vertical Studs but must be at least 24" apart from Joint in other Top Plate layer. Special wall heights are noted on plans where they occur.
2. Wall Thickness is typically 3 1/2". 2x6 frame shall be used at walls that back up to plumbing fixtures. Walls greater than 10' high shall be framed with 2x6 framing or greater and will be noted as a special condition where it occurs on plan.
3. Typical header height shall be 7'-8" AFF at First Floor, and 7'-4" AFF at Second Floor U.N.O.
4. Jacks: Openings up to 3'-4" wide shall have (1) 2x4 Jack stud SPF on each side. Openings greater than 3'-4" wide shall have (2) 2x4 Jack studs SPF on each side.
5. Soffits, Coffered Ceilings, Tray Ceilings and other significant ceiling plan elements are shown on the floor plans and are denoted as single dashed lines. Unless specifically call out as included, Kitchens do not include soffits over wall cabinetry.
6. Door & Window Frames, where occurring near corners, shall be a minimum of 4 1/2" from corner. Except for walk-in closets with doors near a corner, doors at closets shall be centered on closet.
7. Windows: Shall have at least (1) window in each sleeping room, that meets egress. Shall be provided with tempered glass at hazardous glazing areas. False windows shall be installed with obscure glazing.
8. Closets for clothing or coat storage shall be equipped with 1 rod/shelf. Closets for linen shall have 4 open equal shelves. Closets for pantries shall have 4 equal wood shelves, painted.
9. Stair treads shall be a min of 9" deep, risers shall be a maximum of 8 1/4", unless noted otherwise, per the current North Carolina Residential Code
10. Handrails and Guards of stairs shall be 34" above the finished surface of the ramp surface of the stair. Handrails at landings and overlooks of multilevel spaces shall be 36" above finished floor. Guards (pickets or balusters) shall be spaced with no more than 4" between guards.
11. Attic Access shall be provided at all attic area with a height greater than 30". Minimum clear attic access shall be 20" x 30". Pull down stairs and access doors in knee walls meeting minimum criteria are also acceptable.
12. Garage Door to Living Space shall be 2'-8" x 6'-8" minimum size and shall be 20 minute fire rated and weather sealed.
13. Garage Walls, as a minimum, shall be separated from living space by installing 1/2" gypsum board on the garage side of the wall. With habitable space above, the inside of all garage walls require 1/2" GWB supporting 5/8" type X GWB on ceiling.

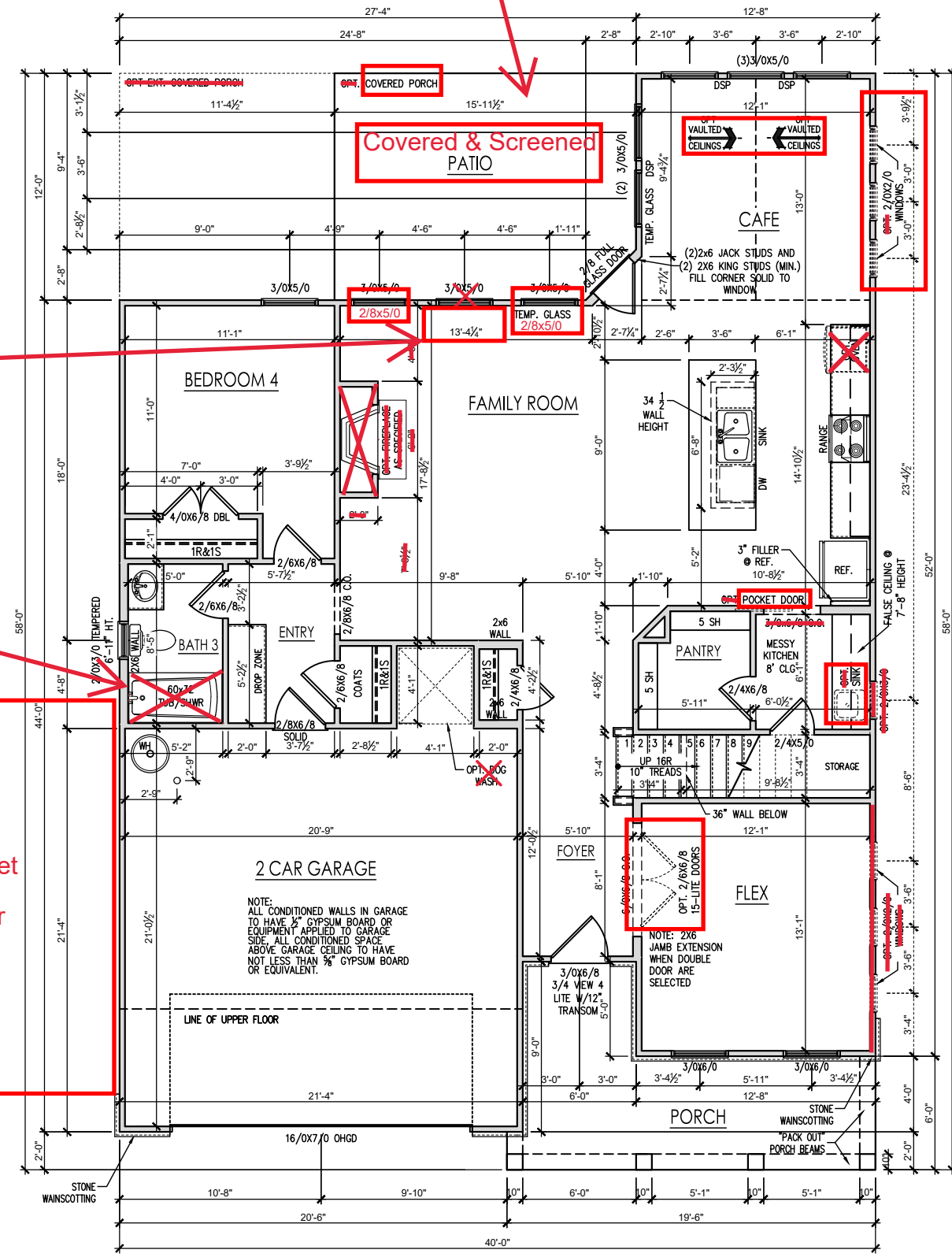
See Sheet 2.4a for Covered Patio

Covered & Screened PATIO

See Sheet 2.1.1a for fireplace location

Install a 60" x36" Fiberglass Shower Pan

See Sheet 2.7a for Third Car Garage



NOTE: DROP PORCH HEADER FOR WINDOW CLEARANCE @ SECOND FLOOR WINDOWS

**FIRST FLOOR PLAN 'TRADITIONAL'**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34

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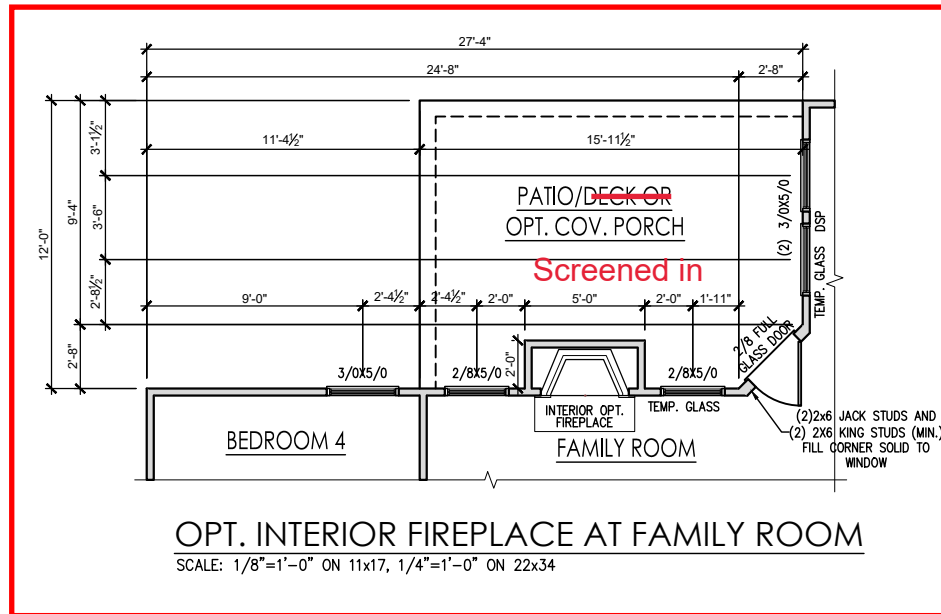
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South Designs  
ISSUE DATE:  
7/1/2021  
CURRENT REVISION DATE:  
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SCALE:  
1/8" = 1'-0"  
SHEET  
**2.1a**

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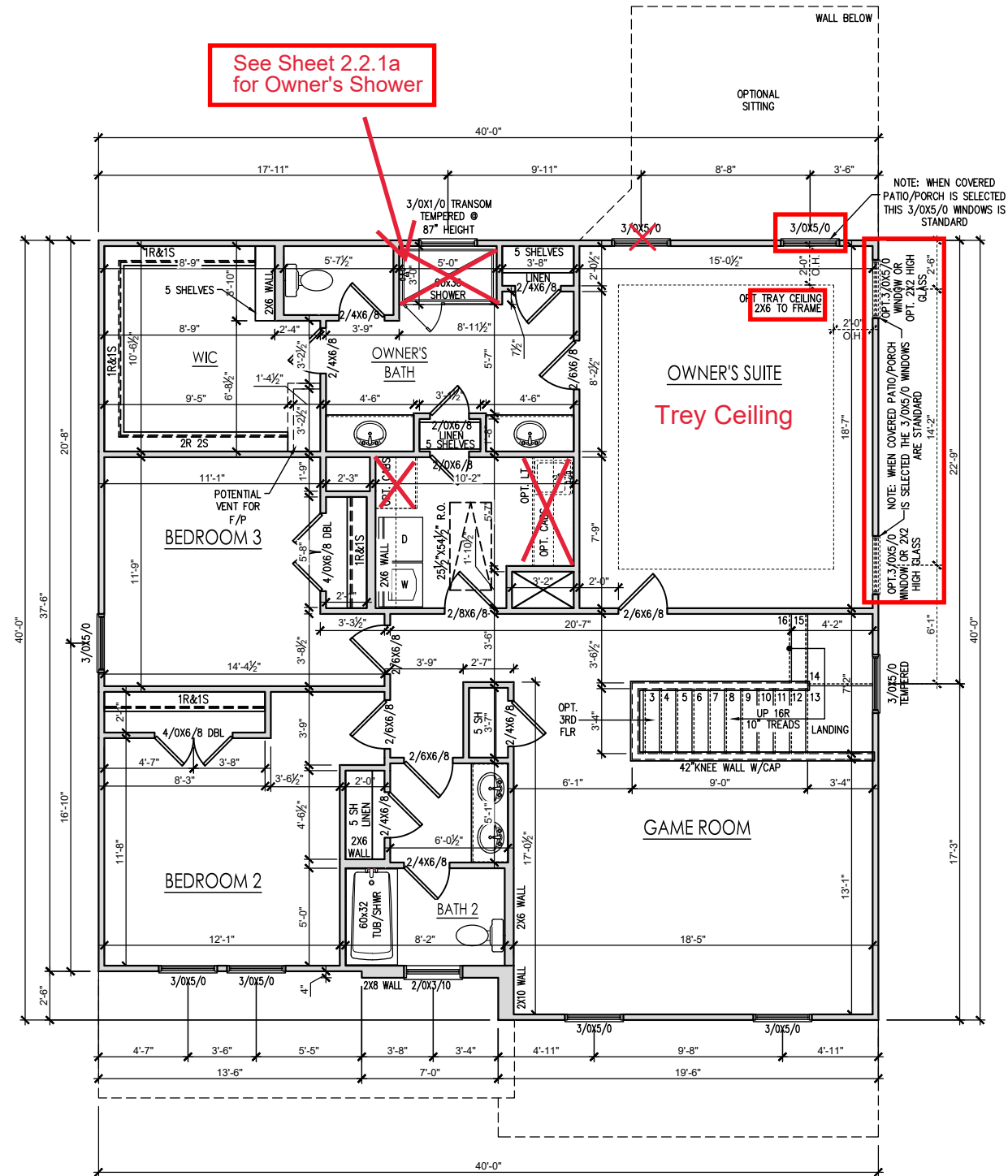
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See Sheet 2.2.1a for Owner's Shower



REV.#	DESCRIPTION	DATE
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THE APEX - LH  
 Second Floor Plan 'Traditional'

**SECOND FLOOR PLAN 'TRADITIONAL'**  
 SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34

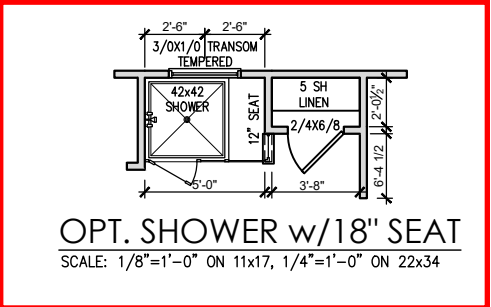
DRAWN BY: South Designs
ISSUE DATE: 7/1/2021
CURRENT REVISION DATE: ---
SCALE: 1/8" = 1'-0"
SHEET <b>2.2a</b>

**General Floor Plan Notes**

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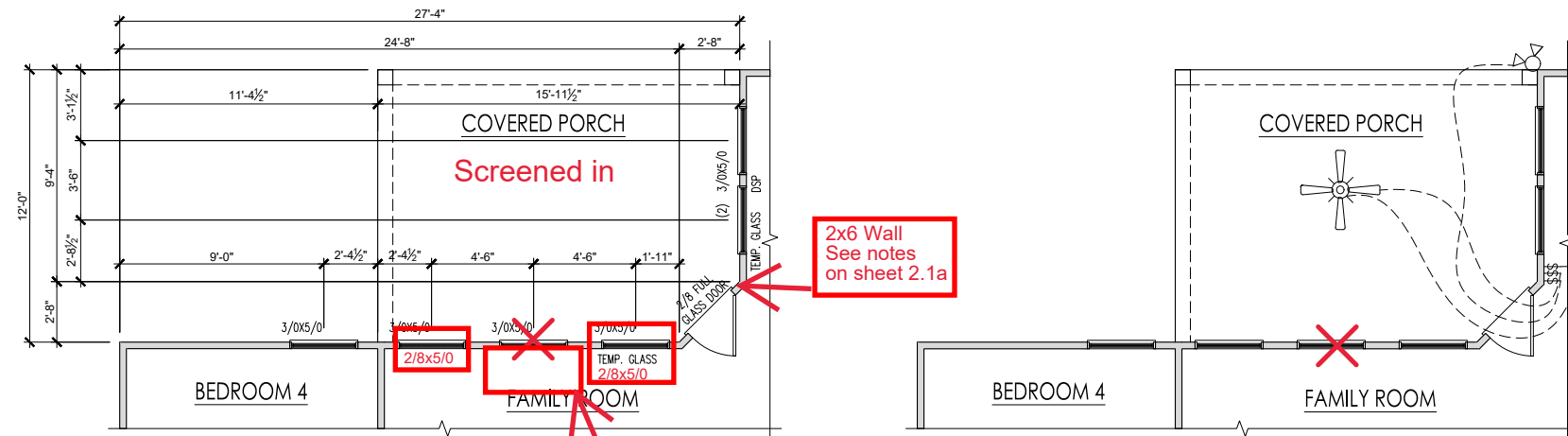
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THE APEX - LH  
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Second Floor Plan Options

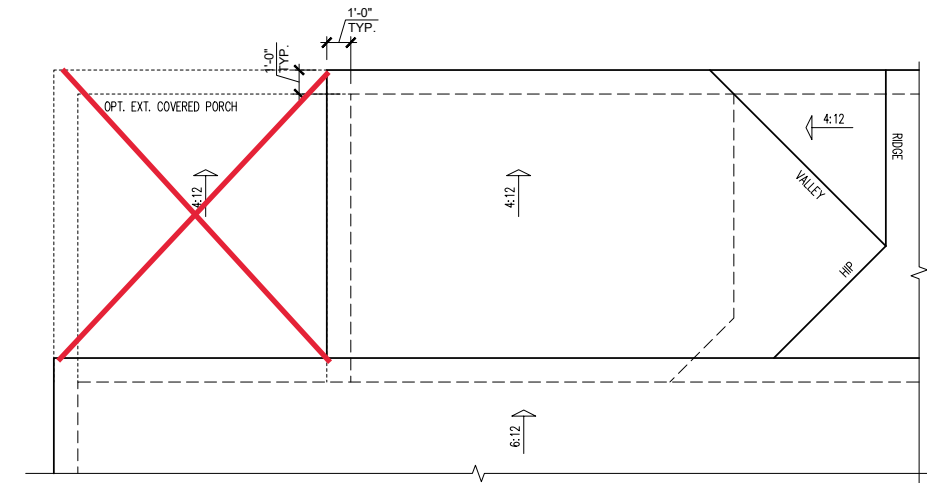
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South Designs  
ISSUE DATE:  
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CURRENT REVISION DATE:  
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SCALE:  
1/8" = 1'-0"  
SHEET  
**2.2.1a**



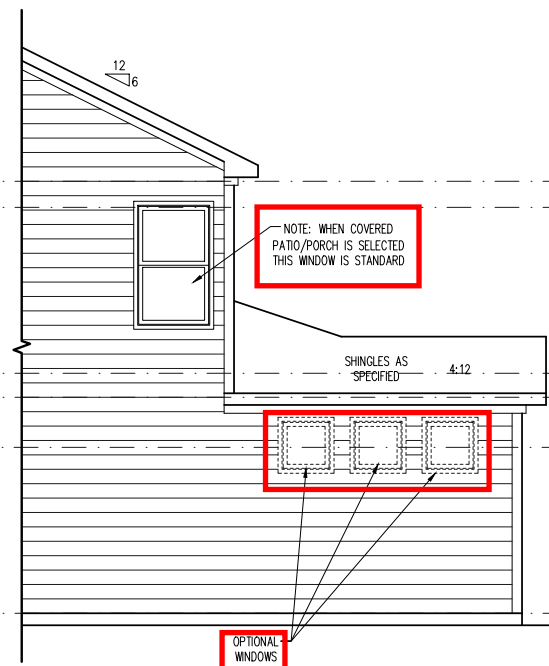


**COVERED PORCH FLOOR PLAN**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34

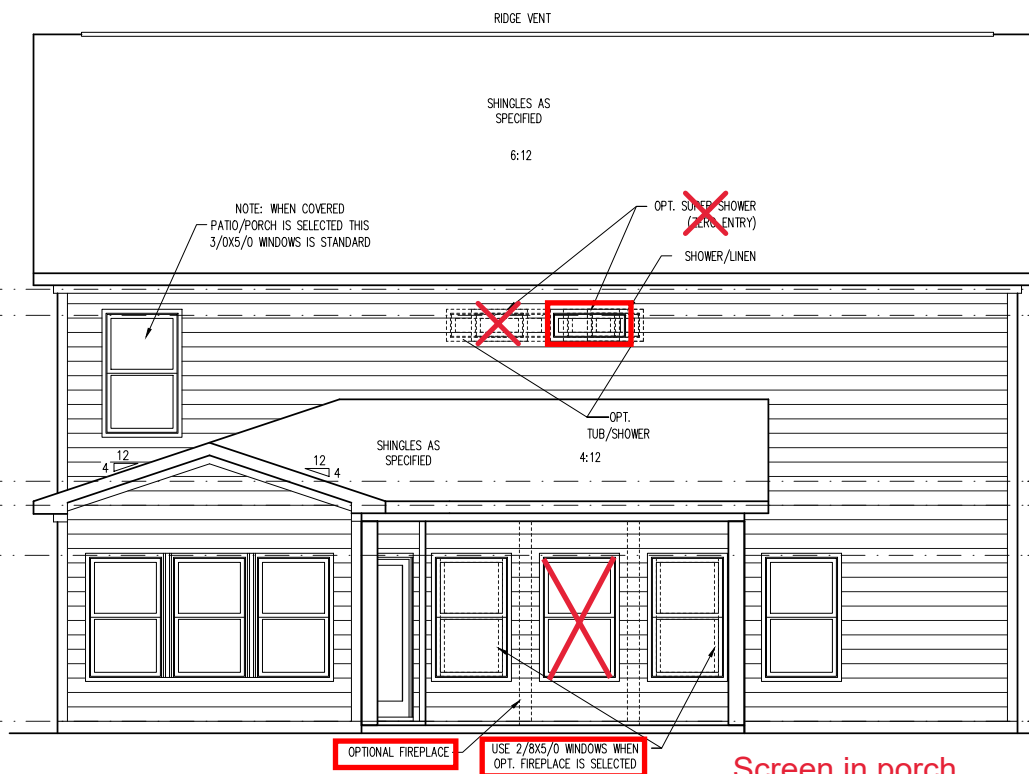
**COVERED PORCH ELECTRICAL**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



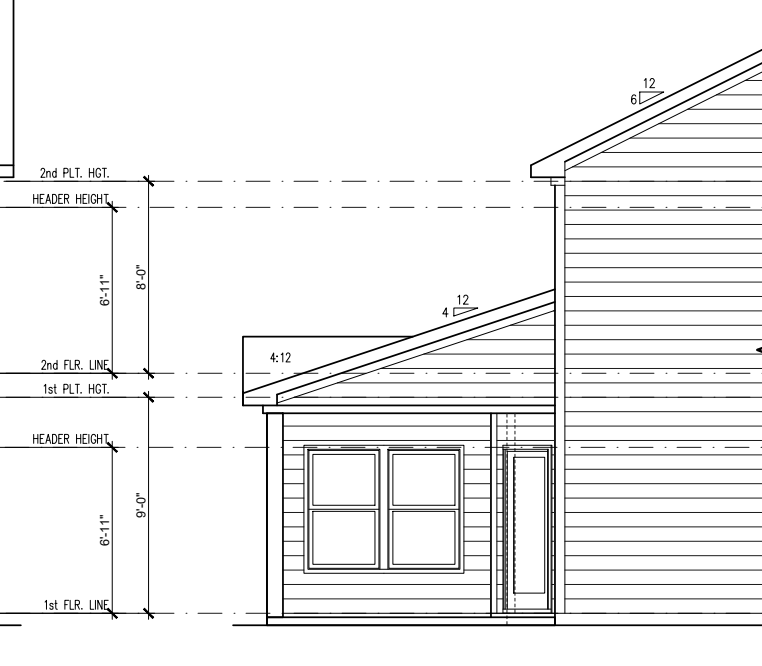
**COVERED PORCH ROOF PLAN**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



**PARTIAL RIGHT SIDE ELEVATION (SLAB)**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



**COVERED PORCH REAR ELEVATION (SLAB)**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



**PARTIAL LEFT SIDE ELEVATION (SLAB)**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34

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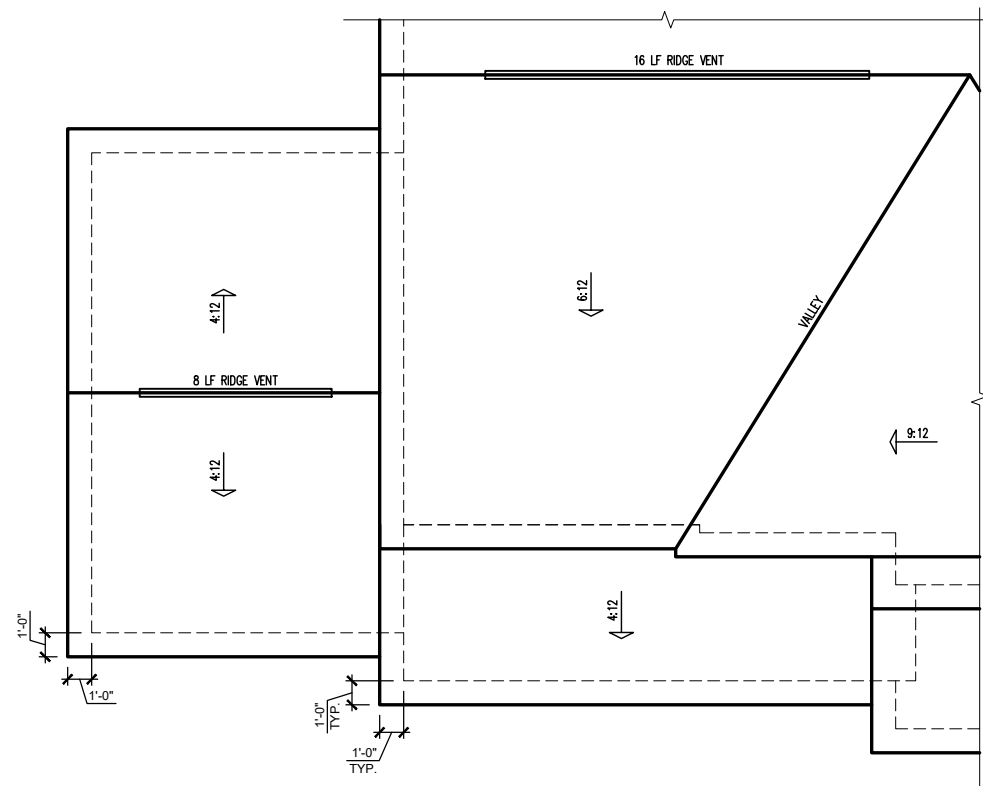
**THE APEX - LH**  
Covered Porch Plans & Elevations (Slab) 'Traditional'

DRAWN BY:  
South Designs  
ISSUE DATE:  
7/1/2021  
CURRENT REVISION DATE:  
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SCALE:  
1/8" = 1'-0"  
SHEET  
**2.4a**

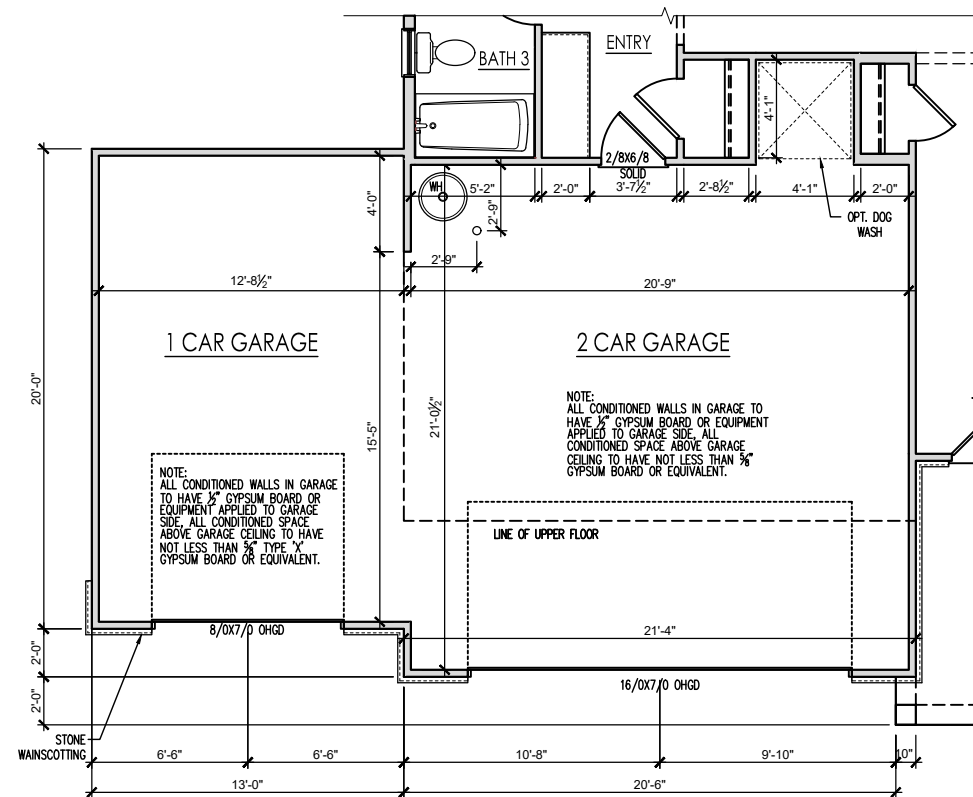
ATTIC VENT SCHEDULE

'TRADITIONAL' ELEVATION									
MAIN HOUSE		SQ FTG		260		AT / NEAR RIDGE		AT / NEAR EAVE	
VENT TYPE	SQ. FT. REQUIRED RANGE	SQ. FT. SUPPLIED	PERCENT OF TOTAL SUPPLIED	POT LARGE (SQ. FT. EACH)	POT SMALL (SQ. FT. EACH)	RIDGE VENT (SQ. FT. PER LF)	EAVE VENT (SQ. IN. EACH)	CONT. VENT (SQ. IN. PER LF)	
RIDGE VENT	0.35 0.43	103.00	98.80	0	0	824.00			
SOFFIT VENTS	0.52 0.43	1.25	1.20				0	20.00	
TOTAL (MIN)	0.87 0.87	104.25	100.00	POT VENTS MAY BE REQUIRED IF THERE IS INSUFFICIENT RIDGE AVAILABLE					

\* SCHEDULE HAS BEEN CALCULATED ASSUMING EAVE VENTILATION AT 50-60% OF TOTAL AND RIDGE AT 40-50% OF TOTAL REQUIRED VENTILATION



**OPT. 3-CAR GARAGE  
'TRADITIONAL' ROOF PLAN**  
SCALE: 1/4" = 1'-0" ON 22x34, 1/8" = 1'-0" ON 11x17

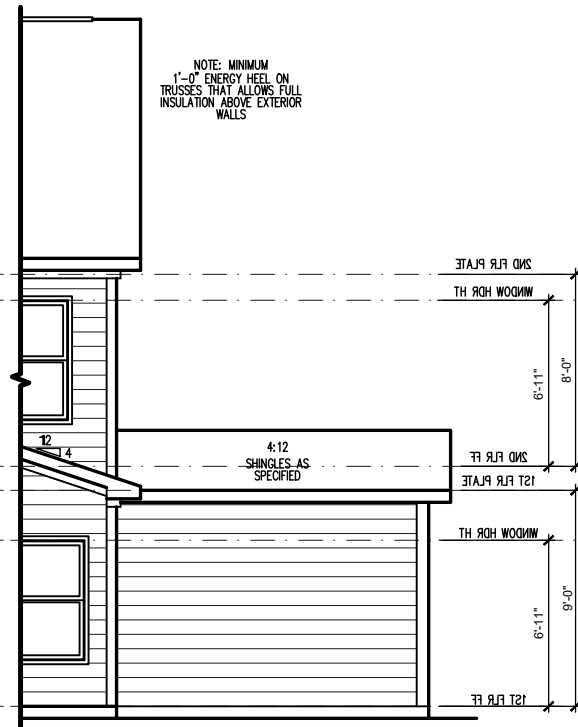


**OPT. 3-CAR GARAGE  
'TRADITIONAL' PLAN**  
SCALE: 1/4" = 1'-0" ON 22x34, 1/8" = 1'-0" ON 11x17

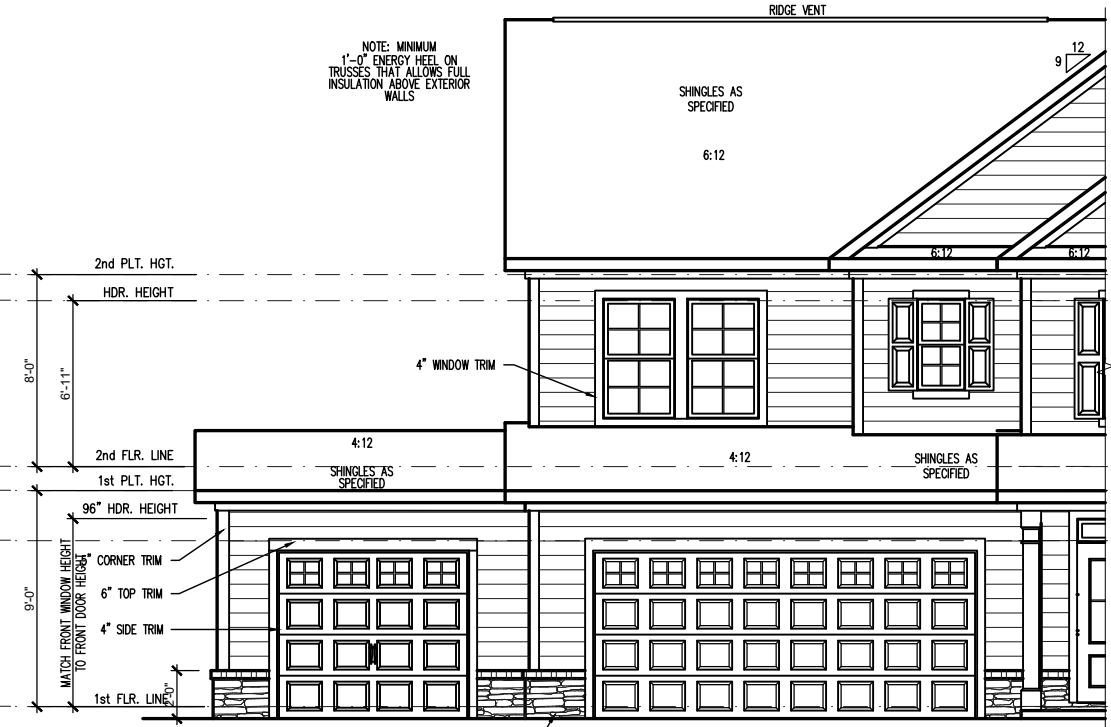
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THE APEX - LH  
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3-Car Garage Plans 'Traditional'

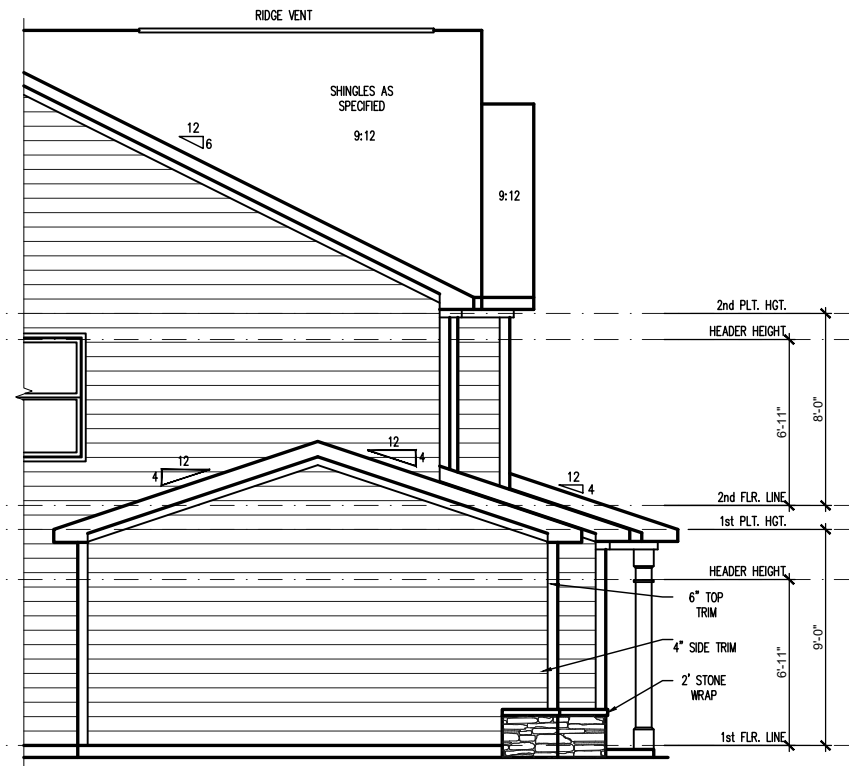
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South Designs  
ISSUE DATE:  
7/1/2021  
CURRENT REVISION DATE:  
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SCALE:  
1/8" = 1'-0"  
SHEET  
**2.7a**



**OPT. 3-CAR GARAGE  
REAR ELEVATION (SLAB)**  
SCALE: 1/4" = 1'-0" ON 22x34, 1/8" = 1'-0" ON 11x17



**OPT. 3-CAR GARAGE  
FRONT ELEVATION 'TRADITIONAL' (SLAB)**  
SCALE: 1/4" = 1'-0" ON 22x34, 1/8" = 1'-0" ON 11x17



**OPT. 3-CAR GARAGE  
LEFT SIDE ELEVATION 'TRADITIONAL' (SLAB)**  
SCALE: 1/4" = 1'-0" ON 22x34, 1/8" = 1'-0" ON 11x17

REV.#	DESCRIPTION	DATE
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THE APEX - LH  
3-Car Garage Elevations 'Traditional'

DRAWN BY:  
South Designs  
ISSUE DATE:  
7/1/2021  
CURRENT REVISION DATE:  
---

SCALE:  
1/8" = 1'-0"  
SHEET  
**2.7.1a**

**General Elevation Notes**

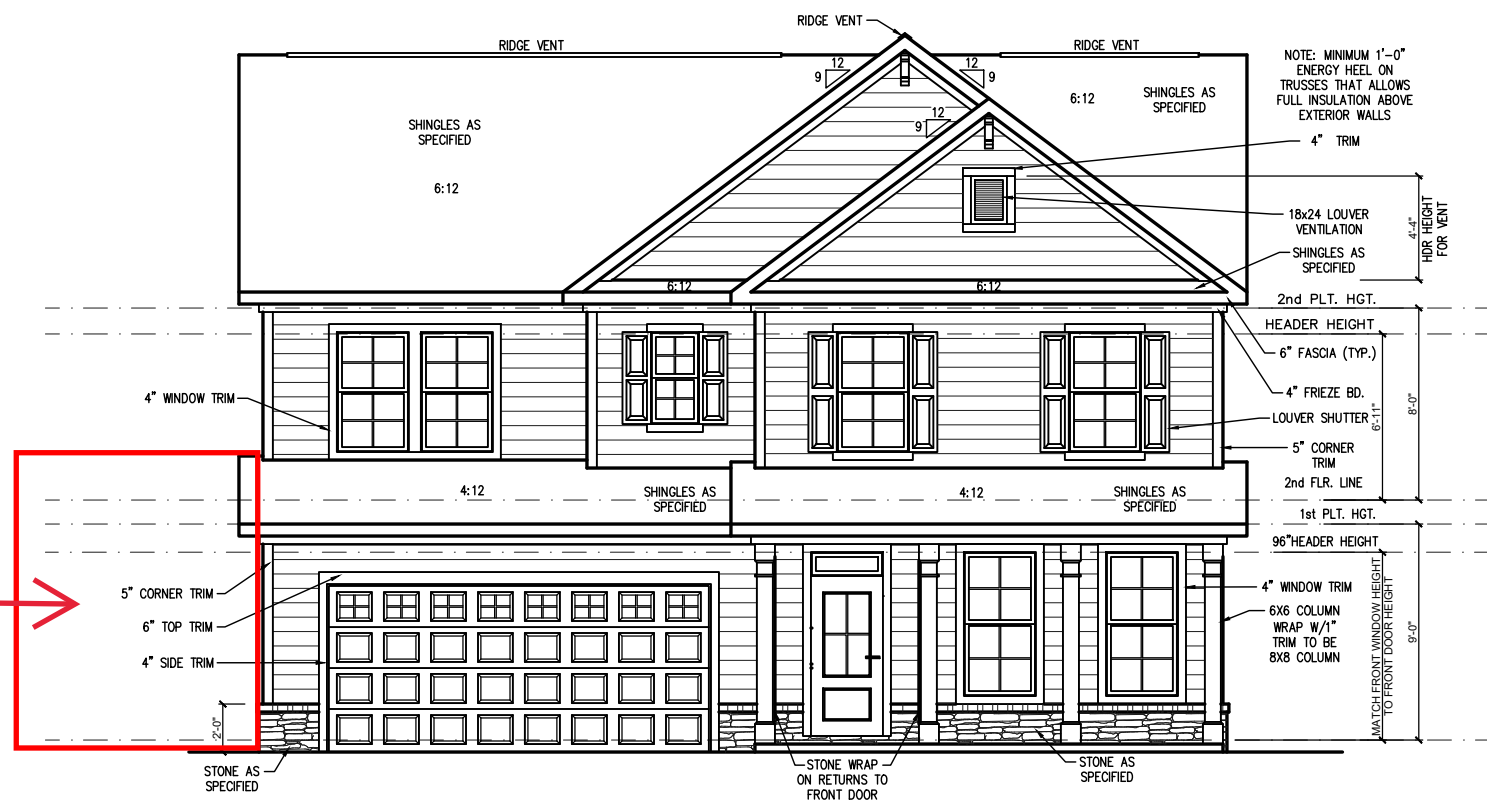
General Elevation Notes shall apply unless noted otherwise on plan.

1. Roof shall be finished with architectural composition shingles with slopes as noted on plan.
2. Ridge Vent shall be provided and installed on all ridges greater than 6' in length per manufacturer's specifications.
3. Soffit Vent shall be continuous soffit vent
4. House Wrap, "Tyvek" or approved equal shall be installed over entire exterior wall per manufacturer's specifications and recommendations.
5. Flashing shall be provided above all door and window openings, above finish wall material changes and at wall surfaces where lower roof areas abut vertical wall surfaces.
6. Porch Railings shall be provided at all porch walking surfaces greater than 30" above adjacent finished grade. It shall be 36" high with guards spaced no more than 4" apart. Consult community specifications for material.
7. Finish Wall Material shall be as noted on elevation drawings.
8. Brick Veneer, if included on elevation shall be tied to wall surface with galvanized corrugated metal ties at a rate of 24" oc horizontally and 16" oc vertically so that no more than 2.67sf of brick is supported by (1) tie. Space between face of wall and back face of brick shall be limited to a maximum of 1". Flashing shall be provided behind brick above all wall openings and at base of brick wall. Flashing shall be a minimum of 6-mil poly or other corrosion resistant material and shall be installed so that it laps under the house wrap material a minimum of 2". Weepholes shall be provided at a rate of 48" oc and shall not be less than 3/16" in diameter and shall be located immediately above flashing.
9. Brick Veneer Support Lintels shall be provided if brick veneer is included on elevation. Lintels shall be provided as listed in the following schedule and shall have a minimum bearing length of 6". Masonry Lintels shall be provided so that deflection is limited to L/600.

**Masonry Opening Lintel Schedule**

Opening Size	Angle
up to 4'-0"	3-1/2" x 3-1/2" x 5/16"
4'-1" to 5'-6"	4" x 3-1/2" x 5/16" LLV
5'-7" to 6'-6"	5" x 3-1/2" x 5/16" LLV
6'-7" to 8'-4"	6" x 3-1/2" x 5/16" LLV
8'-5" to 16'-4"	7" x 4" x 3/8" LLV

See Sheet 2.7.1a for Third Car Garage



**FRONT ELEVATION 'TRADITIONAL' (SLAB)**

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

REV.#	DESCRIPTION	DATE
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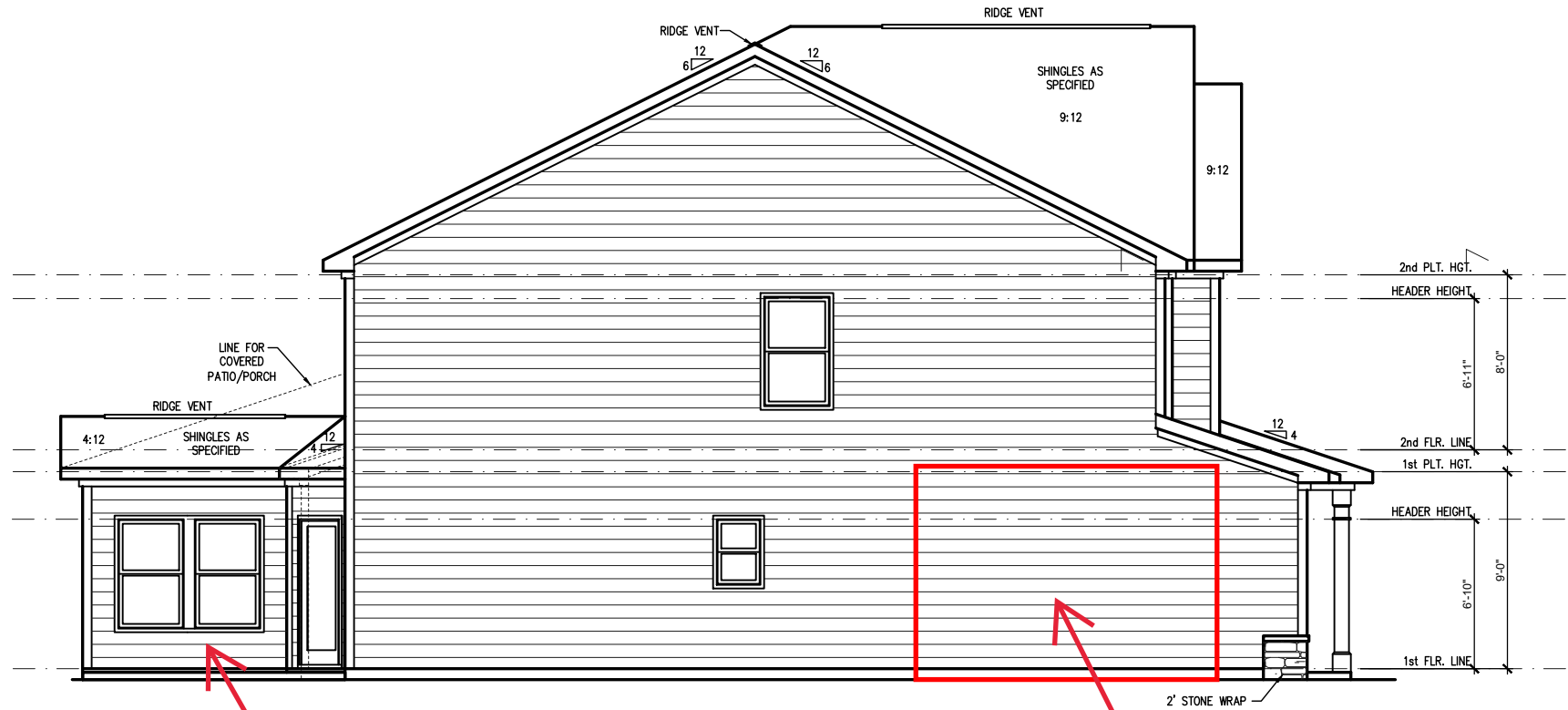
**General Elevation Notes**

General Elevation Notes shall apply unless noted otherwise on plan.

- Roof shall be finished with architectural composition shingles with slopes as noted on plan.
- Ridge Vent shall be provided and installed on all ridges greater than 6' in length per manufacturer's specifications.
- Soffit Vent shall be continuous soffit vent
- House Wrap, "Tyvek" or approved equal shall be installed over entire exterior wall per manufacturer's specifications and recommendations.
- Flashing shall be provided above all door and window openings, above finish wall material changes and at wall surfaces where lower roof areas abut vertical wall surfaces.
- Porch Railings shall be provided at all porch walking surfaces greater than 30" above adjacent finished grade. It shall be 36" high with guards spaced no more than 4" apart. Consult community specifications for material.
- Finish Wall Material shall be as noted on elevation drawings.
- Brick Veneer, if included on elevation shall be tied to wall surface with galvanized corrugated metal ties at a rate of 24" oc horizontally and 16" oc vertically so that no more than 2.67sf of brick is supported by (1) tie. Space between face of wall and back face of brick shall be limited to a maximum of 1". Flashing shall be provided behind brick above all wall openings and at base of brick wall. Flashing shall be a minimum of 6-mil poly or other corrosion resistant material and shall be installed so that it laps under the house wrap material a minimum of 2". Weepholes shall be provided at a rate of 48" oc and shall not be less than 3/16" in diameter and shall be located immediately above flashing.
- Brick Veneer Support Lintels shall be provided if brick veneer is included on elevation. Lintels shall be provided as listed in the following schedule and shall have a minimum bearing length of 6". Masonry Lintels shall be provided so that deflection is limited to 1/600.

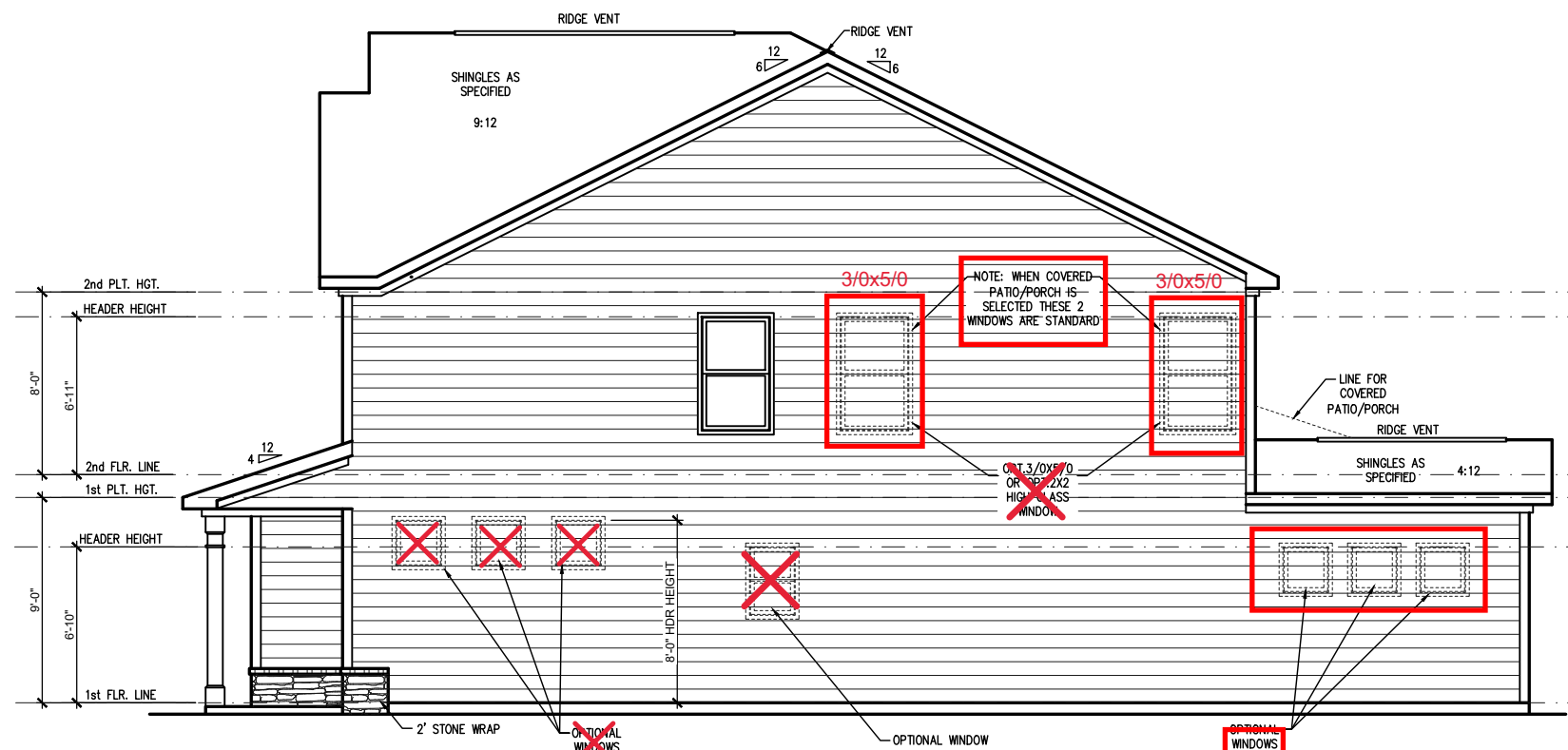
**Masonry Opening Lintel Schedule**

Opening Size	Angle
up to 4'-0"	3-1/2" x 3-1/2" x 5/16"
4'-1" to 5'-6"	4" x 3-1/2" x 5/16" LLV
5'-7" to 6'-6"	5" x 3-1/2" x 5/16" LLV
6'-7" to 8'-4"	6" x 3-1/2" x 5/16" LLV
8'-5" to 16'-4"	7" x 4" x 3/8" LLV



See Sheet 2.4a for Covered Porch Side Elevation

See Sheet 2.7.1a for Third Car Garage Side Elevation



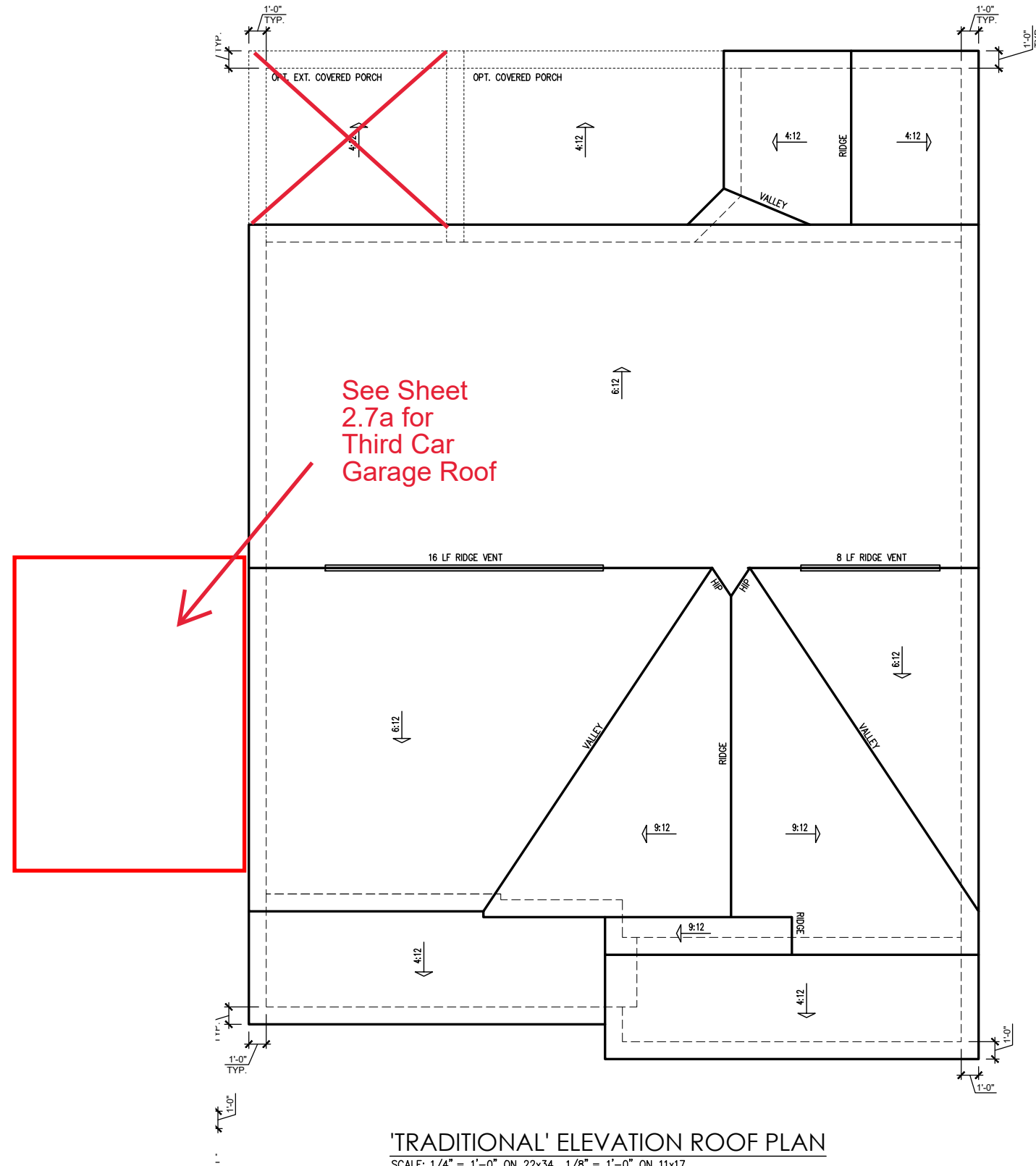
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DRAWN BY:  
South Designs  
ISSUE DATE:  
7/1/2021  
CURRENT REVISION DATE:

SCALE:  
1/8" = 1'-0"

ATTIC VENT SCHEDULE								
'TRADITIONAL' ELEVATION								
MAIN HOUSE			SQ FTG	1551	AT / NEAR RIDGE		AT / NEAR EAVE	
VENT TYPE	SQ. FT. REQUIRED RANGE	SQ. FT. SUPPLIED	PERCENT OF TOTAL SUPPLIED	POT LARGE (SQ. FT. EACH)	POT SMALL (SQ. FT. EACH)	RIDGE VENT (SQ. FT. PER LF)	EAVE VENT (SQ. IN. EACH)	CONT. VENT (SQ. IN. PER LF)
RIDGE VENT	2.07	2.59	3.00	44.44	0	0	24.00	
SOFFIT VENTS	3.10	2.59	3.75	55.56			0	60.00
TOTAL (MIN)	5.17	5.17	6.75	100.00	POT VENTS MAY BE REQUIRED IF THERE IS INSUFFICIENT RIDGE AVAILABLE			

\* SCHEDULE HAS BEEN CALCULATED ASSUMING EAVE VENTILATION AT 50-60% OF TOTAL AND RIDGE AT 40-50% OF TOTAL REQUIRED VENTILATION

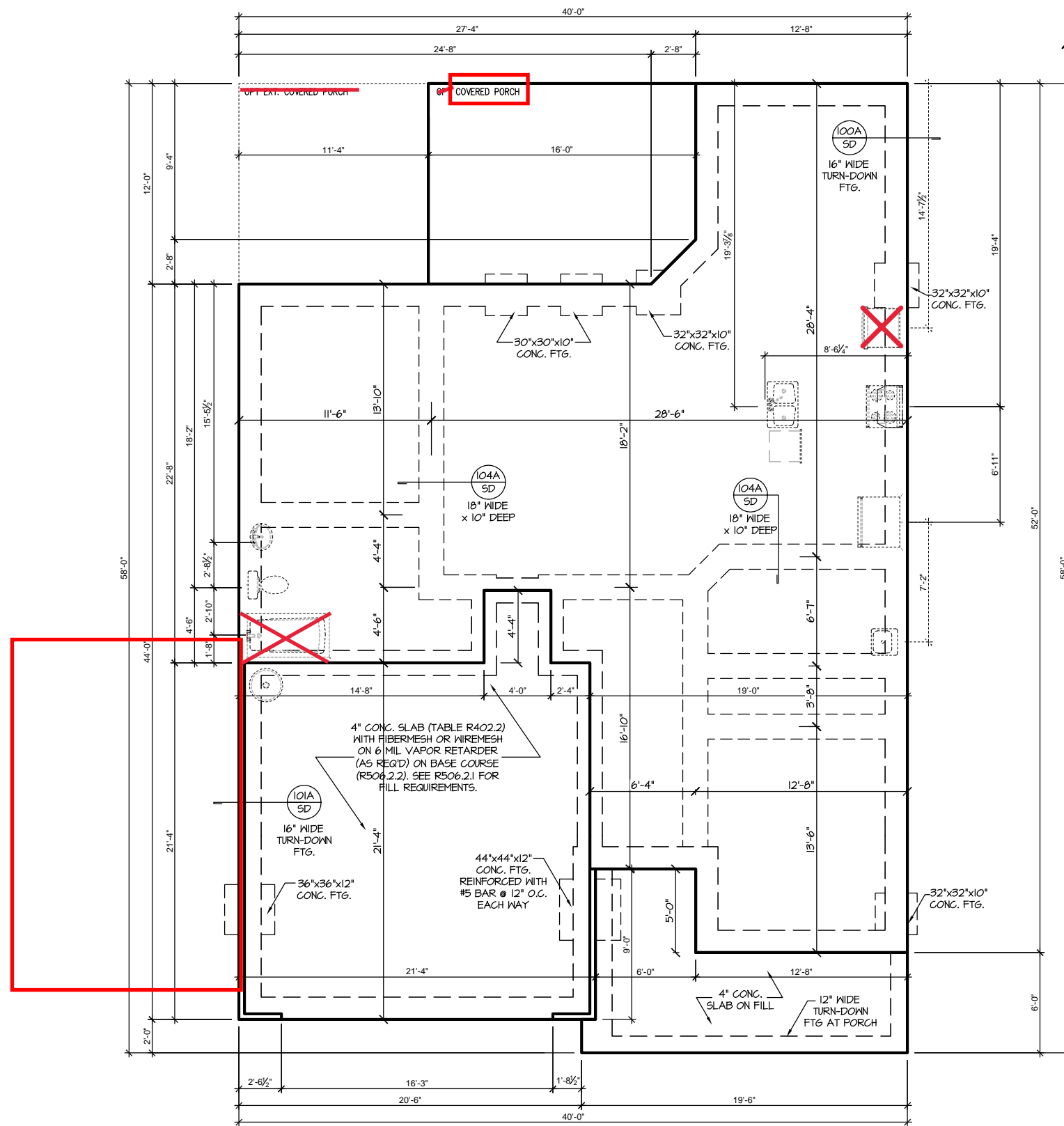


'TRADITIONAL' ELEVATION ROOF PLAN  
SCALE: 1/4" = 1'-0" ON 22x34, 1/8" = 1'-0" ON 11x17

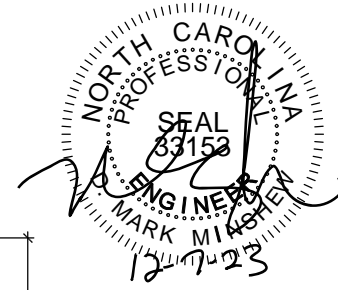
REV. #	DESCRIPTION	DATE
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THE APEX - LH  
----  
Roof Plan 'Traditional'

DRAWN BY:  
South Designs  
ISSUE DATE:  
7/1/2021  
CURRENT REVISION DATE:  
---  
SCALE:  
1/8" = 1'-0"  
SHEET  
**3.3a**



**SLAB FOUNDATION 'TRADITIONAL'**  
 SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



**PROJECT #**  
 21-2780.1-LH

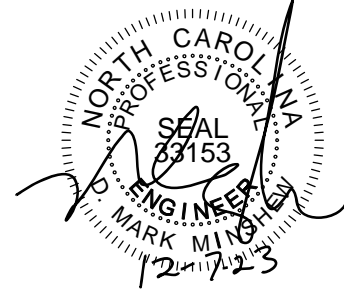
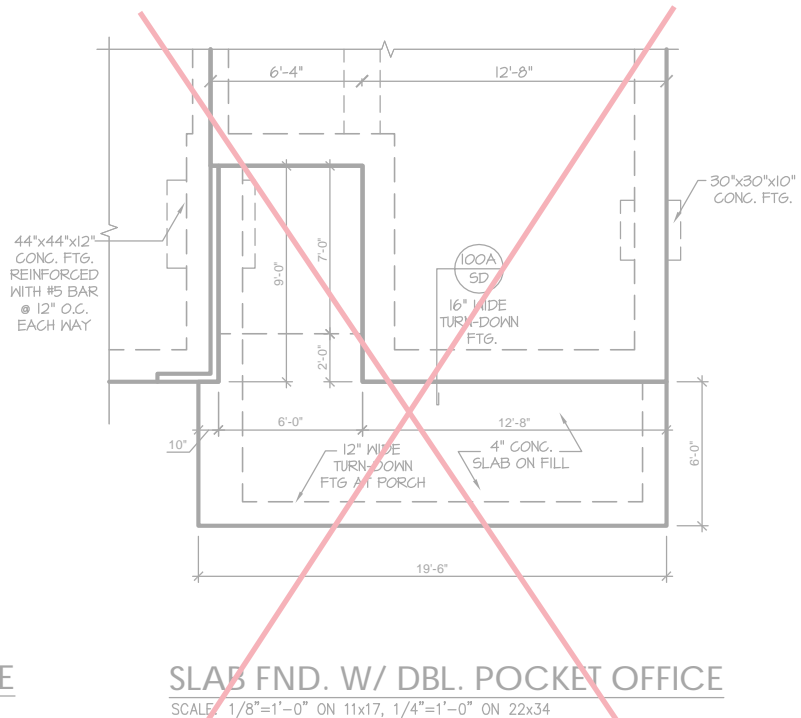
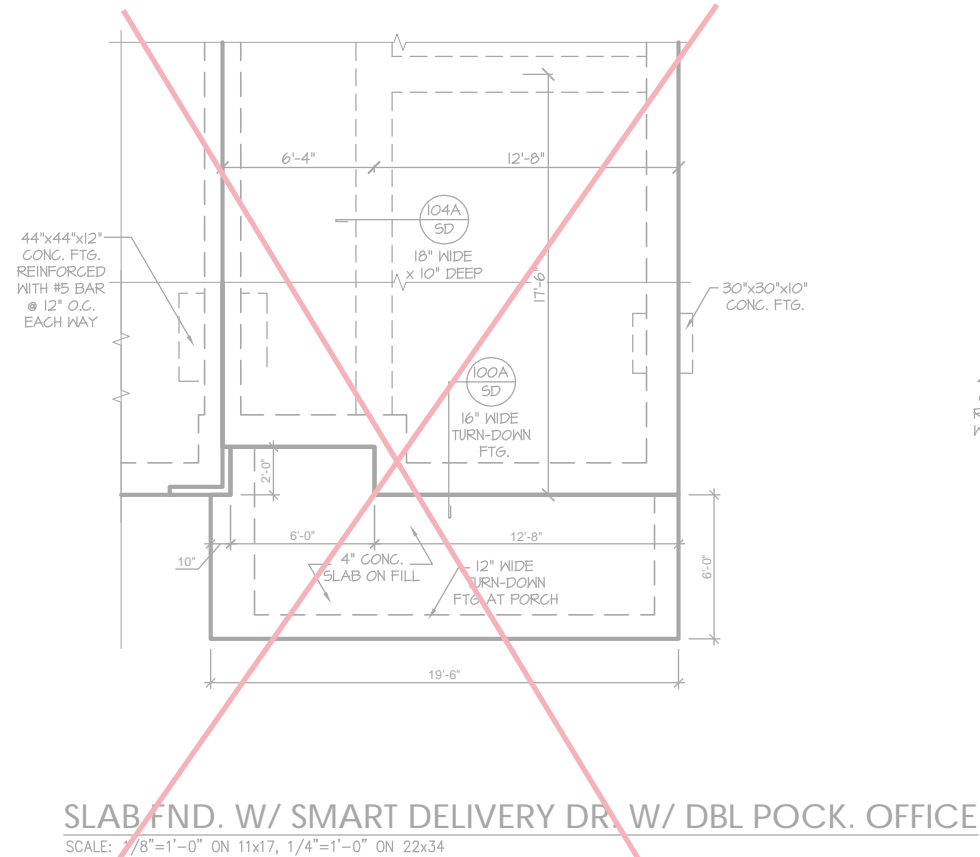
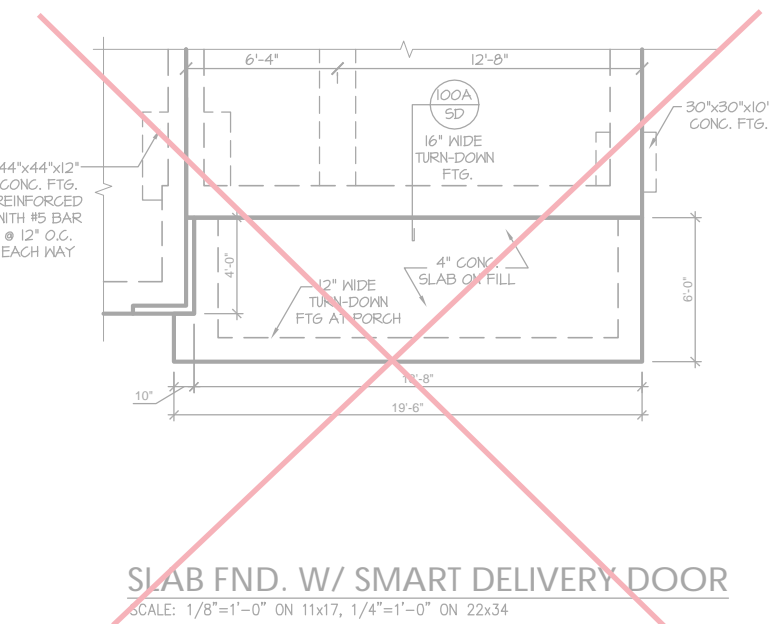
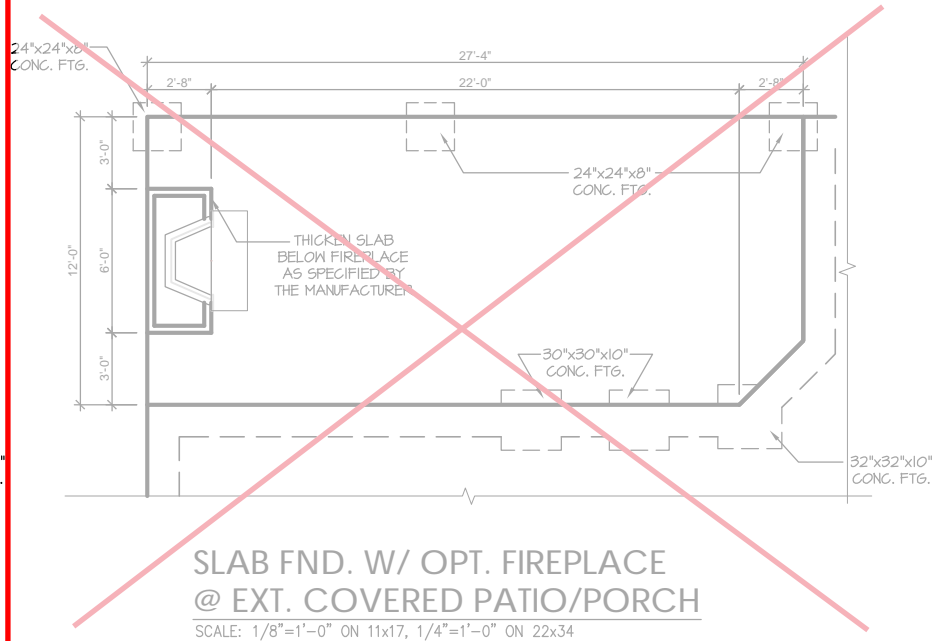
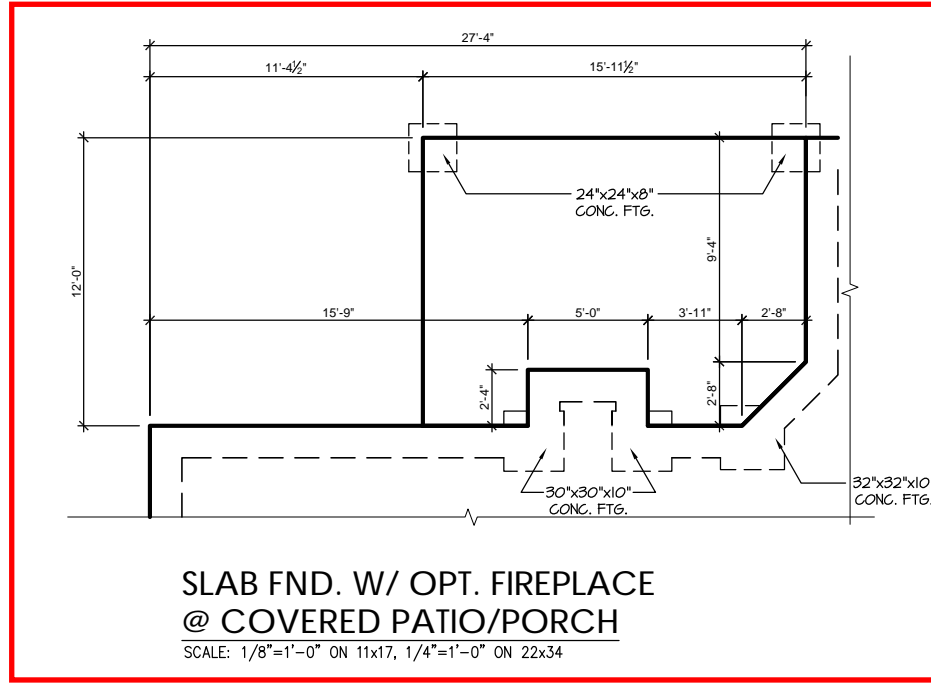
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 Phone: (919) 878-1617  
 License: C-4772  
 www.southernengineers.com

**NEW HOME, INC.**

**Plan 05 - The Apex**  
 Garage Left

**S-1.1**



**PROJECT #  
21-2780.1-LH**

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**Plan 05 - The Apex**  
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**S-1.1.1**







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Garage Left

**HEADER/BEAM & COLUMN NOTES**

- ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x6 (4" WALL) OR (3)2x6 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.
- THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW PER NCD01 COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-4-2020:
  - UP TO 3' SPAN: (1) KING STUD
  - OVER 3' UP TO 6' SPAN: (2) KING STUDS
  - OVER 6' UP TO 9' SPAN: (3) KING STUDS
  - OVER 9' UP TO 12' SPAN: (4) KING STUDS
  - OVER 12' UP TO 15' SPAN: (5) KING STUDS

**TRUSS SYSTEM REQUIREMENTS**

NC (2018 NGR): Wind: 115-120 mph

- TRUSS SYSTEM LAYOUTS (PLACEMENT PLANS) SHALL BE DESIGNED IN ACCORDANCE WITH SEALED STRUCTURAL PLANS. ANY NEED TO CHANGE TRUSSES SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.
- TRUSS SCHEMATICS (PROFILES) SHALL BE PREPARED AND SEALED BY TRUSS MANUFACTURER.
- ALL TRUSSES SHALL BE DESIGNED FOR BEARING ON SPF #2 OR #3 PLATES OR LEDGERS (UNO).
- ALL REQUIRED ANCHORS FOR TRUSSES DUE TO UPLIFT OR BEARING SHALL MEET THE REQUIREMENTS AS SPECIFIED ON THE TRUSS SCHEMATICS.

**PORCH POST NOTES:**

- 4x4 (6x6) TRTD POST (OR EQUAL).
  - ATTACH TRUSSES (RAFTERS) AT PORCH WITH HURRICANE CONNECTORS.
  - POST CAP: SIMPSON AC4-MAX (AC6-MAX)
  - POST CAP AT CORNER: (2) SIMPSON LCE4 (MITER HEADER AT CORNER). HIGH WIND, ADD (1) SIMPSON H6.
  - POST BASE: SIMPSON ABU44 (ABU66).
    - MONO: 5/8" ANCHOR (EMBED 1")
    - DUO: 5/8" ANCHOR (EXTEND TO FOOTING - HIGH WIND ONLY)
  - POST BASE: WOOD FOUNDATION: (2) SIMPSON CS16 STRAPS AT POSTS. EXTEND 12" ONTO EACH POST (UPPER AND LOWER) OR TO GIRDER.
- NOTE:** THE ABOVE CONNECTORS ARE SUGGESTIONS. EQUIVALENT CONNECTORS THAT MEET THE REQUIREMENTS OF THE NC RESIDENTIAL BUILDING CODE, LOCAL CODES, AND/OR ARE APPROVED BY THE BUILDING INSPECTOR MAY BE SUBSTITUTED.

**WOOD I-JOISTS**

(SHALL BE ONE OF THE FOLLOWING OR EQUAL):

- TJI 210 BY TRUS JOIST
- LPI 20 PLUS BY LP
- BCI 5000s 1.8 BY BC

**HEAVY WOOD I-JOISTS**

(SHALL BE ONE OF THE FOLLOWING OR EQUAL):

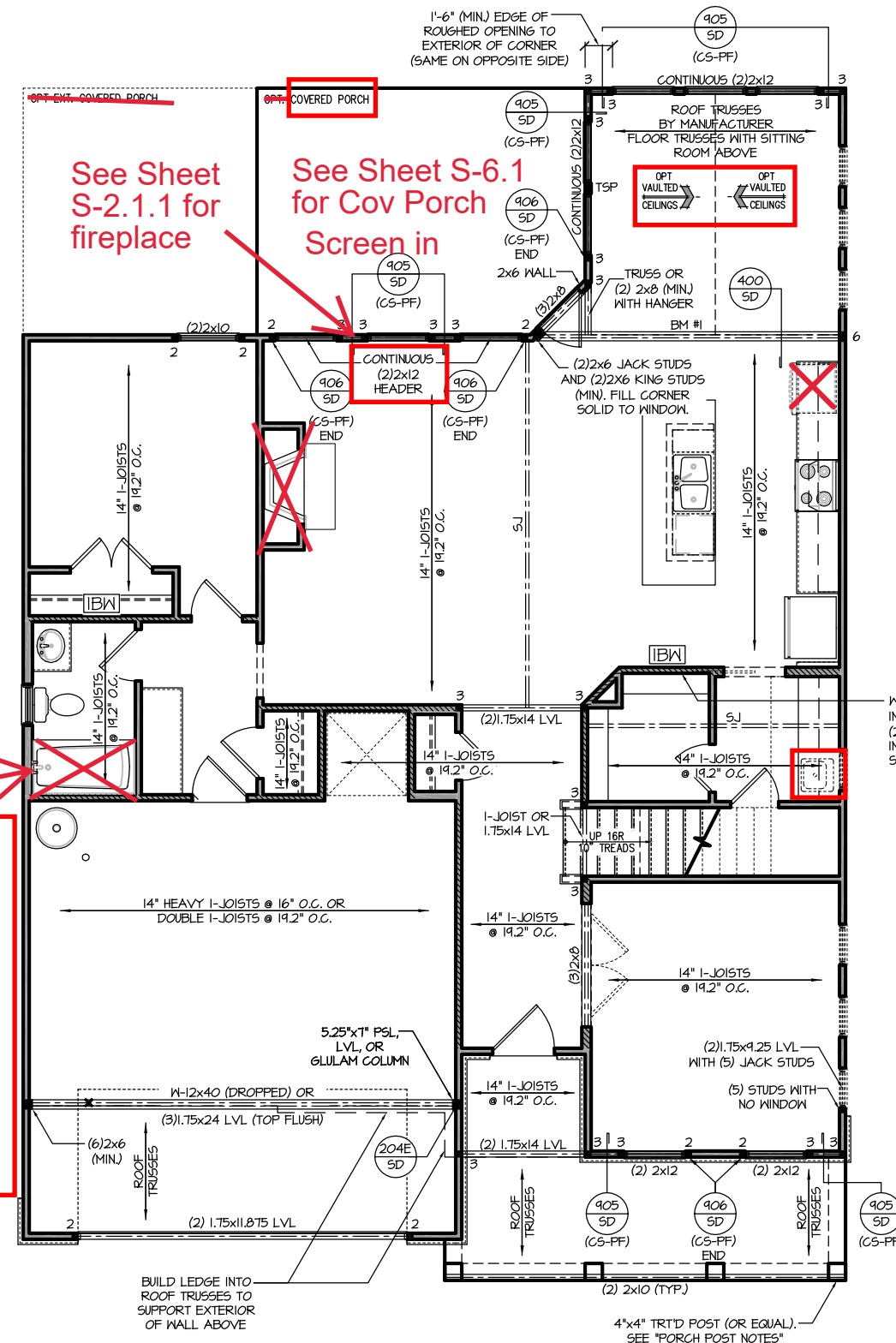
- TJI 360 BY TRUS JOIST
- LPI 42 PLUS BY LP
- BCI 60s 2.0 BY BC

- ALL WOOD I-JOISTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- INSTALL SQUASH BLOCKS, WEB STIFFENERS, ETC. AS REQUIRED BY AND ACCORDING TO THE I-JOIST MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
- HANGERS FOR I-JOISTS ARE THE RESPONSIBILITY OF THE I-JOIST SUPPLIER.
- FLOOR TRUSSES BY MANUFACTURER MAY BE SUBSTITUTED FOR ANY I-JOISTS.

**FRAMING NOTES**

NC (2018 NGR): Wind: 115-120 mph

- BRACING METHOD AND TYPE: CONTINUOUSLY SHEATHED WSP: CS-WSP. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY SECTION R602.10 OF THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING AND WALL FRAMING.
- EXTERIOR WALL SHEATHING: WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANEL SHEATHING (WSP) (EXPOSURE B: 7/16", EXPOSURE C: 15/32"). SHEATHING SHALL BE ATTACHED WITH 8d NAILS AT A 6"X12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES.
- WSP SHEATHING SHALL EXTEND TO THE UPPERMOST DOUBLE BEARING PLATE. BLOCK AT ROOF PER SECTION R602.10.4.5 AND ATTACH BRACED WALLS PER CODE. WSP SHEATHING BETWEEN FLOORS SHALL BE SPLICED ALONG CONTINUOUS BAND OR THE WSP SHEATHING MAY BE SPLICED ACROSS STUDS (CONTINUOUS ACROSS FLOOR SYSTEM) WITH BLOCKING AT PANEL EDGES. (MINIMUM 12" BEYOND FLOOR BREAK) OR OTHER APPROVED METHOD.
- "HD" = HOLD-DOWN: HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY.
  - \*\*GROUND/FIRST FLOOR: USE "HD HOLD-DOWN DETAIL" ON SD SHEET (OR EQUIV.)
  - \*\*UPPER FLOORS: ATTACH BASE OF KING STUD WITH A SIMPSON CS20 OR CSHF20 STRAP DOWN ACROSS THE BAND AND DOWN TO A STUD BELOW OR HEADER BELOW. EXTEND STRAP 1" MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (1) 8d NAILS.
- INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (GB) ON EACH SIDE OF WALL WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 1" O.C. ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS. SEE SECTION R602.10.4.4 OF THE CODE.
- INTERIOR BRACED WALL-WOOD STRUCTURAL PANEL: (NOTED AS "IBW-WSP" ON PLANS). ATTACH ONE SIDE WITH 5/8" WSP SHEATHING WITH 8d NAILS AT A 6"X12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES. ATTACH GB OVER WSP AS REQUIRED. ATTACH OPPOSITE SIDE WITH 1/2" GB WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 1" O.C. ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS. SEE SECTION R602.10.4.4 OF THE CODE.



BM #1: - (3)1.75x16 LVL (BOTTOM FLUSH) (NO SITTING ROOM ABOVE)  
- W-10x26 WITH SITTING ROOM ABOVE

**FIRST FLOOR PLAN 'TRADITIONAL'**

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



**PROJECT #**  
21-2780.1-LH

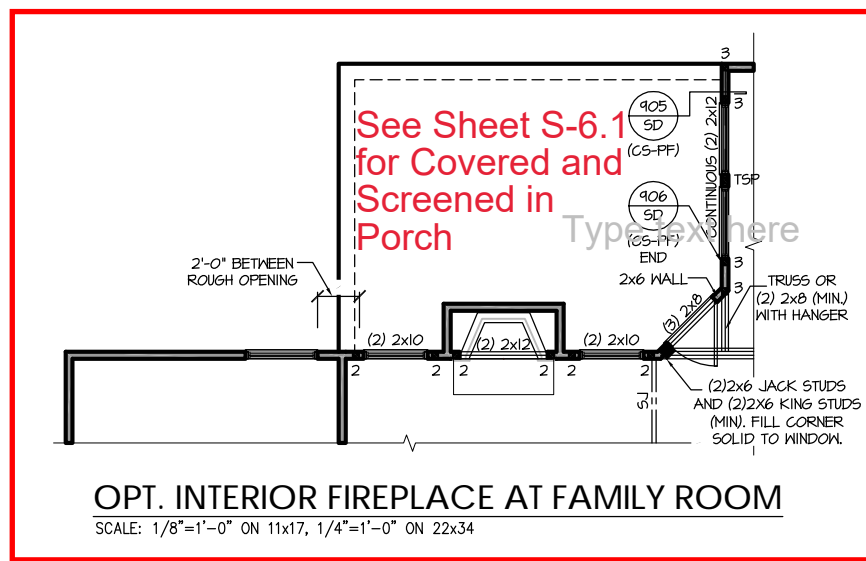
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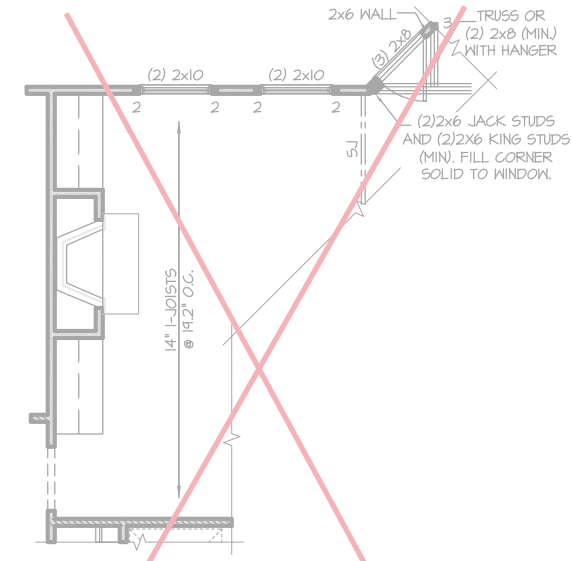
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**Plan 05 - The Apex**  
Garage Left

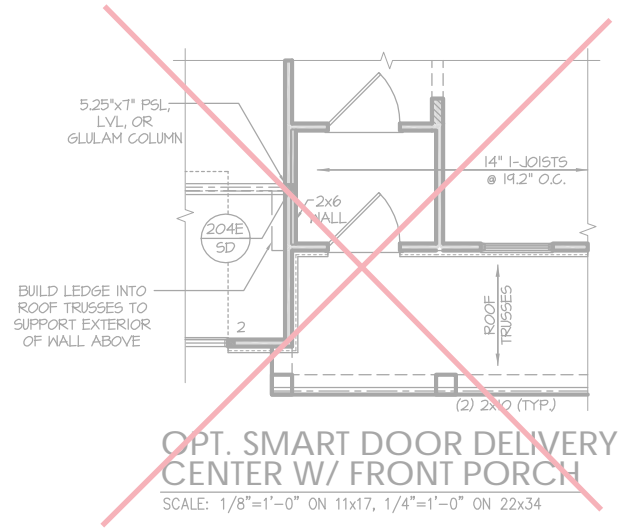
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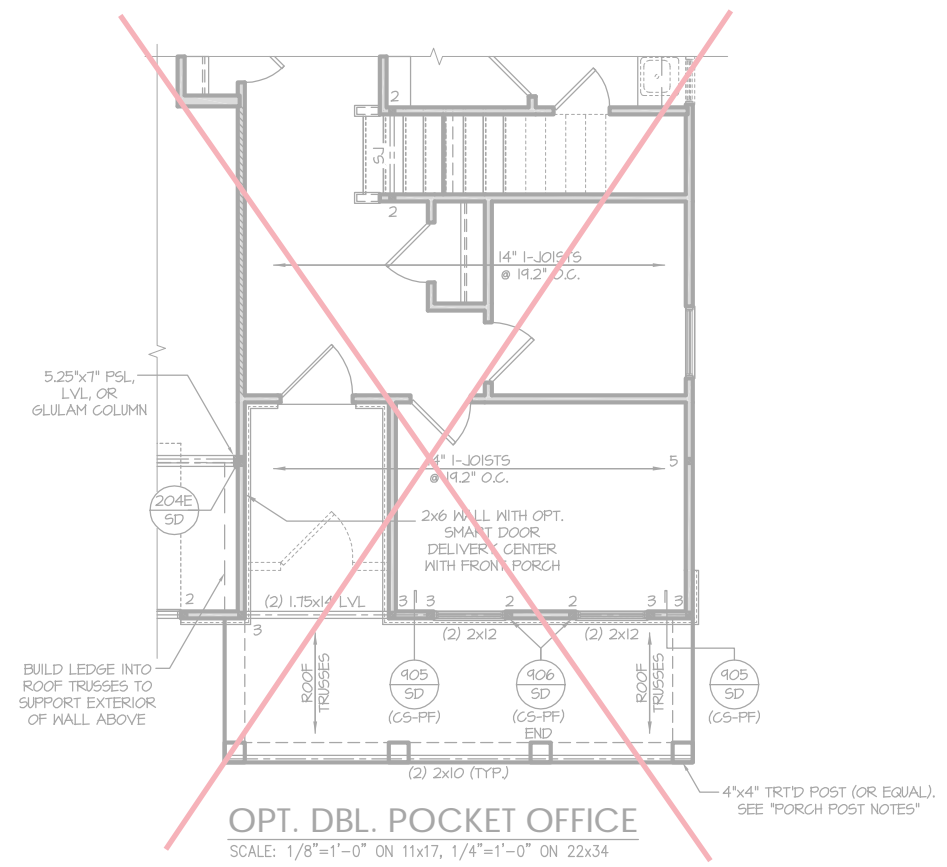
**OPT. INTERIOR FIREPLACE AT FAMILY ROOM**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



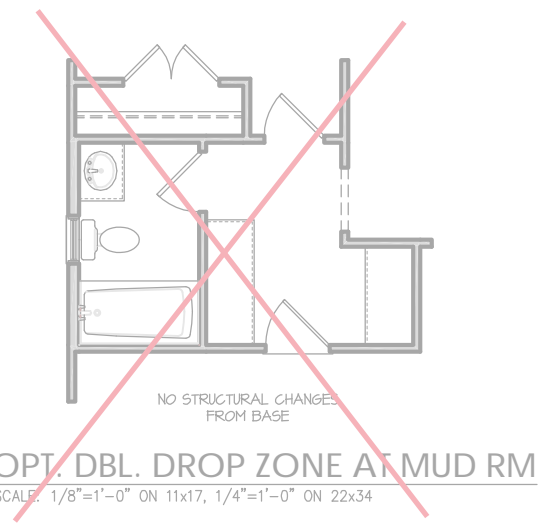
**OPT. FIREPLACE W/BUILT-INS**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



**OPT. SMART DOOR DELIVERY CENTER W/ FRONT PORCH**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



**OPT. DBL. POCKET OFFICE**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



**OPT. DBL. DROP ZONE AT MUD RM**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



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**Plan 05 - The Apex**  
Garage Left

**HEADER/BEAM & COLUMN NOTES**

- ALL EXTERIOR AND LOAD BEARING HEADERS SHALL BE MIN. (2)2x6 (4" WALL) OR (3)2x6 (6" WALL) WITH (1) SUPPORT STUD, UNLESS NOTED OTHERWISE.
- THE NUMBER SHOWN AT BEAM AND HEADER SUPPORTS INDICATES THE NUMBER OF SUPPORT STUDS REQUIRED IN STUD POCKET OR COLUMN. THE NUMBER OF KING STUDS AT EACH END OF HEADERS IN EXTERIOR WALLS SHALL BE ACCORDING TO ITEM "d" IN TABLE R602.3(5) OR AS BELOW PER NCDO1 COMMENTARY "KING STUDS AT WALL OPENINGS" REVISED 1-9-2020:
  - UP TO 3' SPAN: (1) KING STUD
  - OVER 3' UP TO 6' SPAN: (2) KING STUDS
  - OVER 6' UP TO 9' SPAN: (3) KING STUDS
  - OVER 9' UP TO 12' SPAN: (4) KING STUDS
  - OVER 12' UP TO 15' SPAN: (5) KING STUDS

**TRUSS SYSTEM REQUIREMENTS**

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  - TRUSS SCHEMATICS (PROFILES) SHALL BE PREPARED AND SEALED BY TRUSS MANUFACTURER.
  - ALL TRUSSES SHALL BE DESIGNED FOR BEARING ON SPF #2 OR #3 PLATES OR LEDGERS (UNO).
  - ALL REQUIRED ANCHORS FOR TRUSSES DUE TO UPLIFT OR BEARING SHALL MEET THE REQUIREMENTS AS SPECIFIED ON THE TRUSS SCHEMATICS.

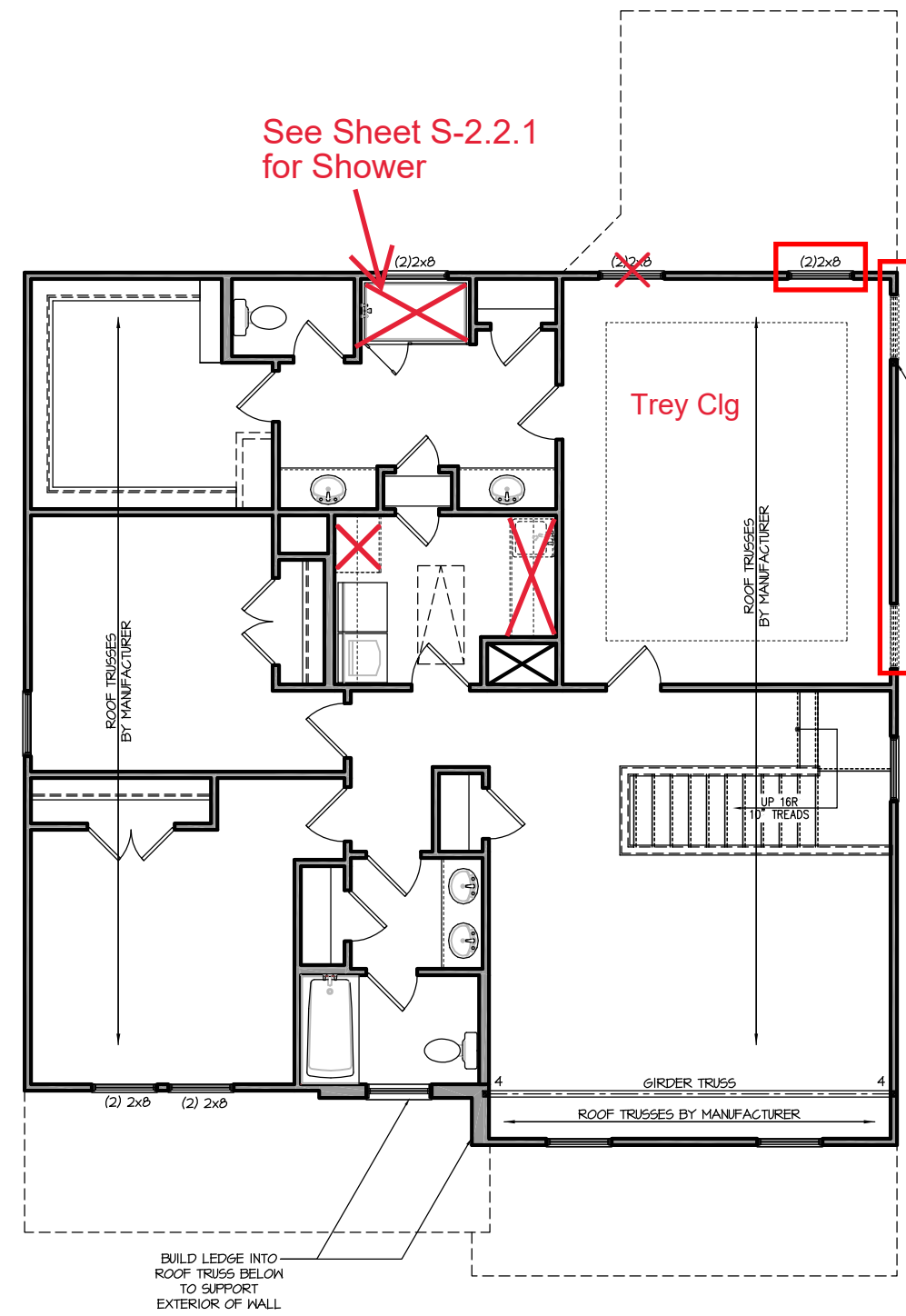
**PORCH POST NOTES:**

- 4x4 (6x6) TRTD POST (OR EQUAL).
- ATTACH TRUSSES (RAFTERS) AT PORCH WITH HURRICANE CONNECTORS.
- 1. POST CAP: SIMPSON AC4-MAX (AC6-MAX)
- 2. POST CAP AT CORNER: (2) SIMPSON LCE4 (MITER HEADER AT CORNER). HIGH WIND, ADD (1) SIMPSON H6.
- 3. POST BASE: SIMPSON ABU44 (ABU66).
  - 3.1. MONO: 3/8" ANCHOR (EMBED T')
  - 3.2. CMU: 3/8" ANCHOR (EXTEND TO FOOTING - HIGH WIND ONLY)
- 4. POST BASE: WOOD FOUNDATION: (2) SIMPSON CS16 STRAPS AT POSTS. EXTEND 12" ONTO EACH POST (UPPER AND LOWER) OR TO GIRDER.
- NOTE: THE ABOVE CONNECTORS ARE SUGGESTIONS. EQUIVALENT CONNECTORS THAT MEET THE REQUIREMENTS OF THE NC RESIDENTIAL BUILDING CODE, LOCAL CODES, AND/OR ARE APPROVED BY THE BUILDING INSPECTOR MAY BE SUBSTITUTED.

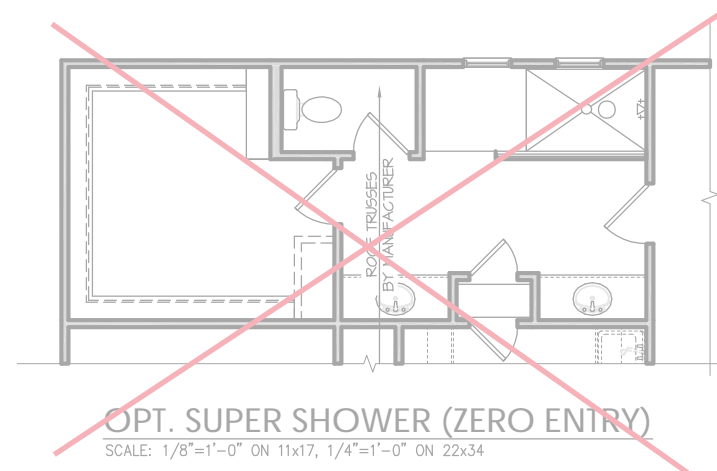
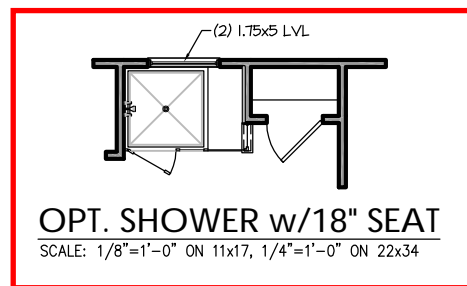
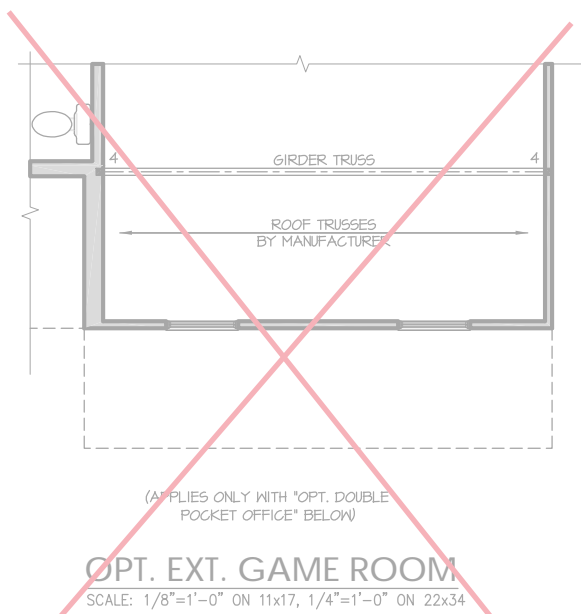
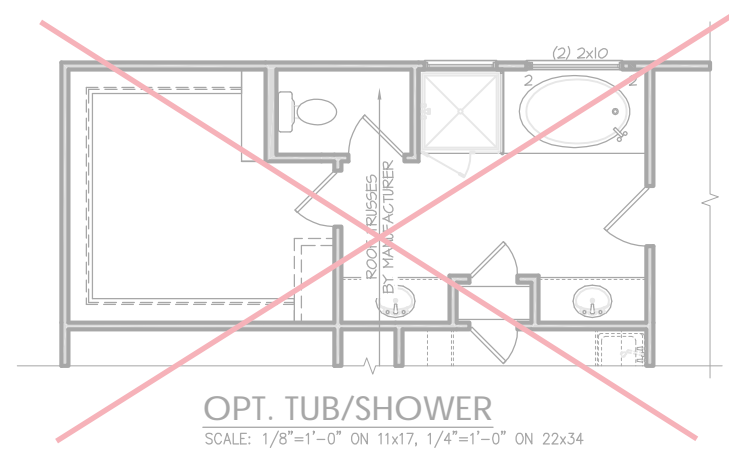
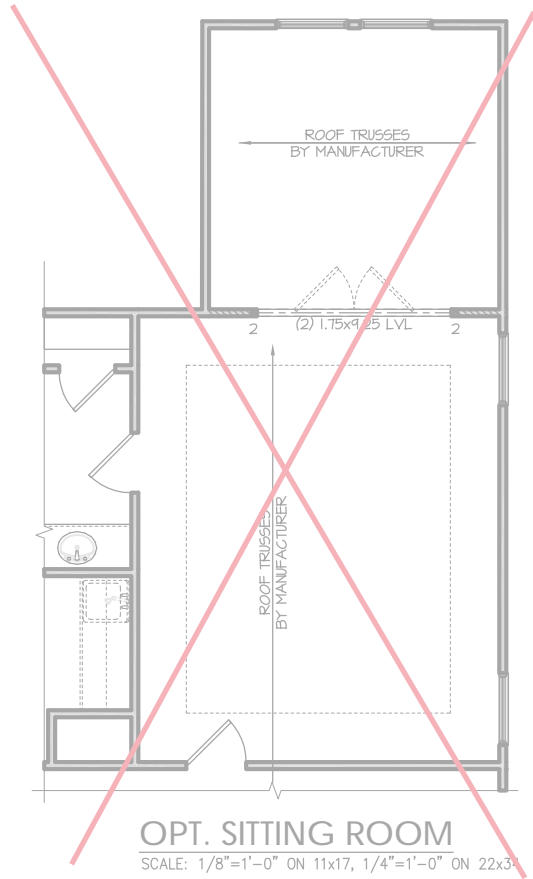
**FRAMING NOTES**

NC (2018 NRC): Wind: 115-120 mph

- BRACING METHOD AND TYPE: CONTINUOUSLY SHEATHED WSP: CS-WSP. NOTE THAT THE WALL BRACING AMOUNT PROVIDED ON THE PLANS (DETAILS AND SPECIFICATIONS) IS GREATER THAN THE AMOUNT OF WALL BRACING REQUIRED BY SECTION R602.10 OF THE CODE. SEE NOTES BELOW FOR DETAILS AND SPECIFICATIONS FOR WALL BRACING AND WALL FRAMING.
- EXTERIOR WALL SHEATHING: WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANEL SHEATHING (WSP) (EXPOSURE B: 7/16", EXPOSURE C: 15/32"). SHEATHING SHALL BE ATTACHED WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES.
- WSP SHEATHING SHALL EXTEND TO THE UPPERMOST DOUBLE BEARING PLATE. BLOCK AT ROOF PER SECTION R602.10.4.5 AND ATTACH BRACED WALLS PER CODE. WSP SHEATHING BETWEEN FLOORS SHALL BE SPLICED ALONG CONTINUOUS BAND OR THE WSP SHEATHING MAY BE SPLICED ACROSS STUDS (CONTINUOUS ACROSS FLOOR SYSTEM) WITH BLOCKING AT PANEL EDGES. (MINIMUM 12" BEYOND FLOOR BREAK) OR OTHER APPROVED METHOD.
- "HD" = HOLD-DOWN: HOLD-DOWN DEVICE (NOTED AS "HD" ON PLANS) SHALL BE AN 800 POUND CAPACITY ASSEMBLY AS NOTED ON PLANS. SEE DETAILS FOR HD ASSEMBLY.
  - \*\*GROUND/FIRST FLOOR: USE "HD HOLD-DOWN DETAIL" ON SD SHEET (OR EQUIV.)
  - \*\*UPPER FLOORS: ATTACH BASE OF KING STUD WITH A SIMPSON CS20 OR CSHP20 STRAP DOWN ACROSS THE BAND AND DOWN TO A STUD BELOW OR HEADER BELOW. EXTEND STRAP 1" MIN ALONG EACH STUD (OR HEADER) AND ATTACH EACH END W/ (1) 8d NAILS.
- INTERIOR BRACED WALL: (NOTED AS "IBW" ON PLANS) ATTACH 1/2" GYPSUM BOARD (GB) ON EACH SIDE OF WALL WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 1" O.C. ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS. SEE SECTION R602.10.4.4 OF THE CODE.
- INTERIOR BRACED WALL-WOOD STRUCTURAL PANEL: (NOTED AS "IBW-WSP" ON PLANS). ATTACH ONE SIDE WITH 3/8" WSP SHEATHING WITH 8d NAILS AT A 6"/12" NAILING PATTERN (6" OC AT PANEL EDGES AND 12" OC AT INTERMEDIATE SUPPORTS). INSTALL BLOCKING AT ALL PANEL EDGES. ATTACH GB OVER WSP AS REQUIRED. ATTACH OPPOSITE SIDE WITH 1/2" GB WITH A MIN. OF 5d COOLER NAILS OR #6 SCREWS @ 1" OC ALONG THE EDGES AND AT INTERMEDIATE SUPPORTS. SEE SECTION R602.10.4.4 OF THE CODE.



**SECOND FLOOR PLAN 'TRADITIONAL'**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



**PROJECT #**  
21-2780.1-LH

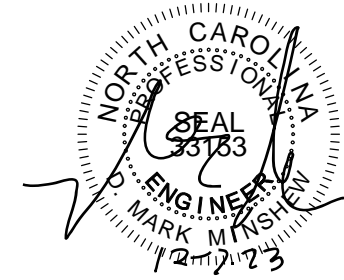
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**Plan 05 - The Apex**  
Garage Left

**S-2.2.1**



**PROJECT #**  
21-2780.1-LH

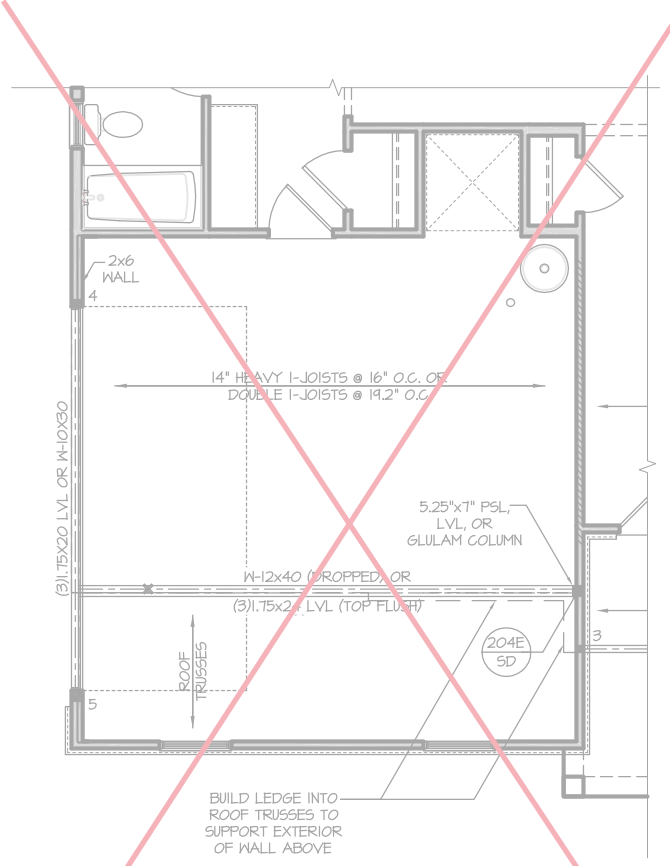
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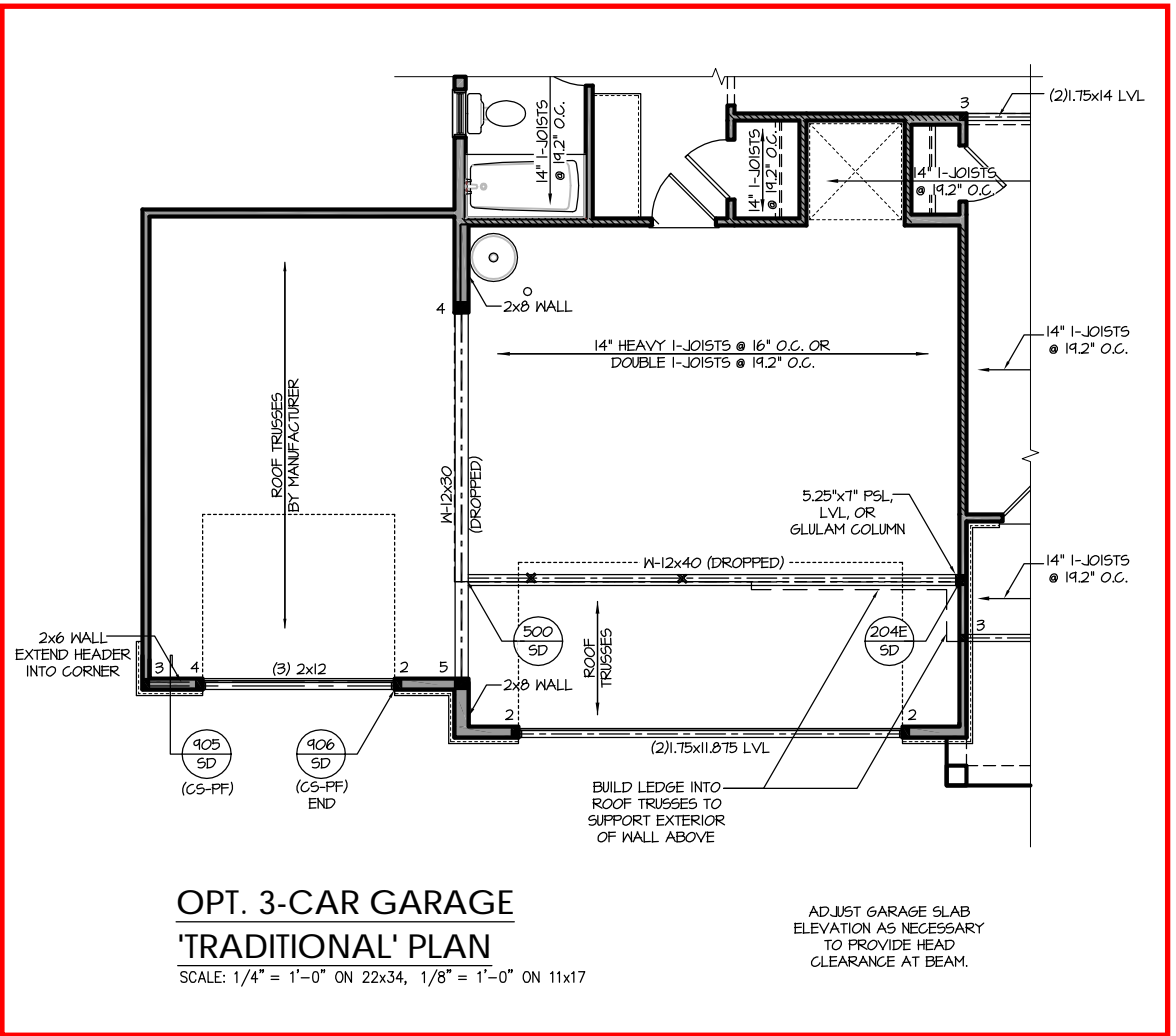
**Plan 05 - The Apex**  
Garage Left

**S-2.1.2**



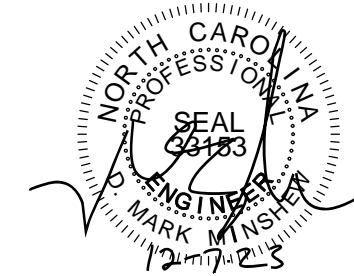
**OPT. SIDE LOAD GARAGE**  
**'TRADITIONAL' PLAN**

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



**OPT. 3-CAR GARAGE**  
**'TRADITIONAL' PLAN**

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



**PROJECT #**  
21-2780.1-LH

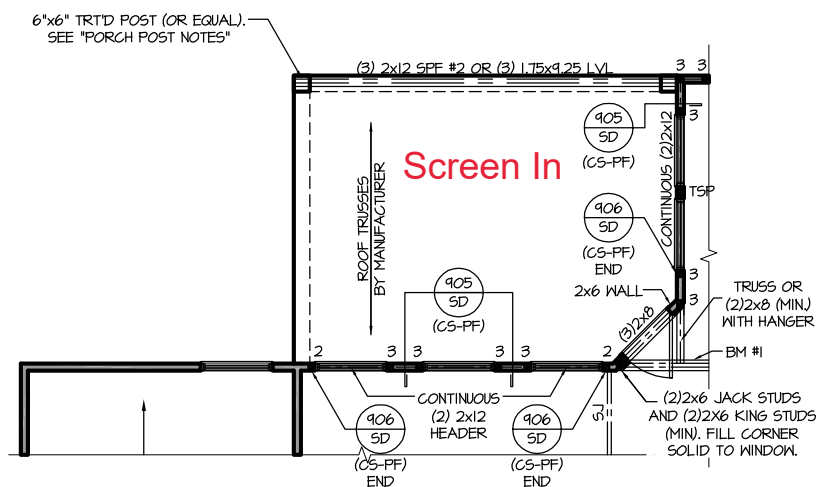
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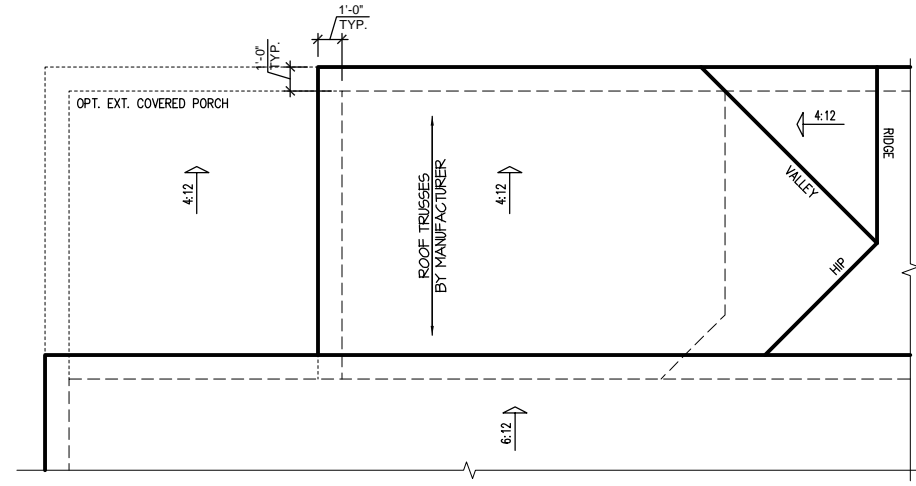
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**Plan 05 - The Apex**  
Garage Left

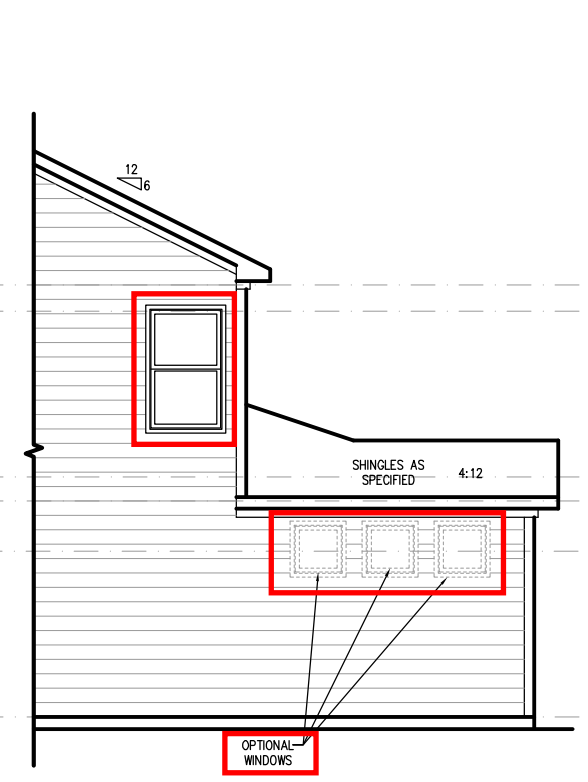
**S-2.4**



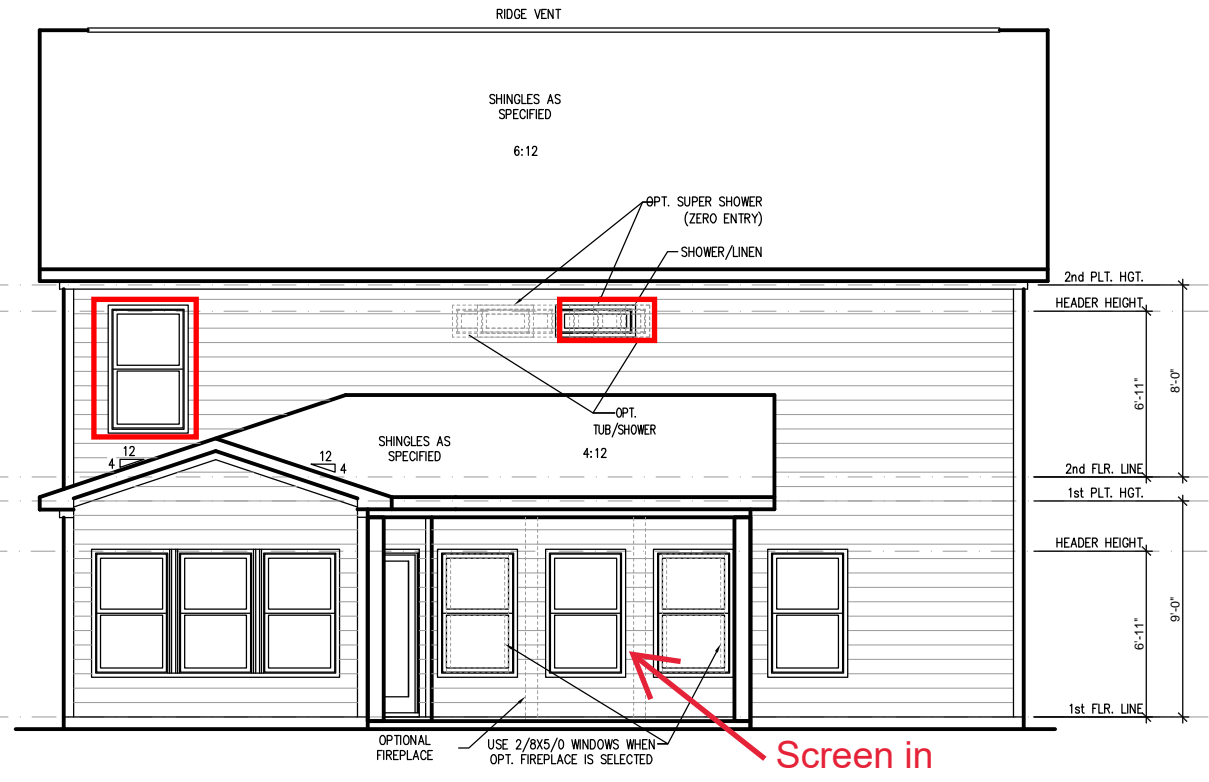
**COVERED PORCH FLOOR PLAN**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



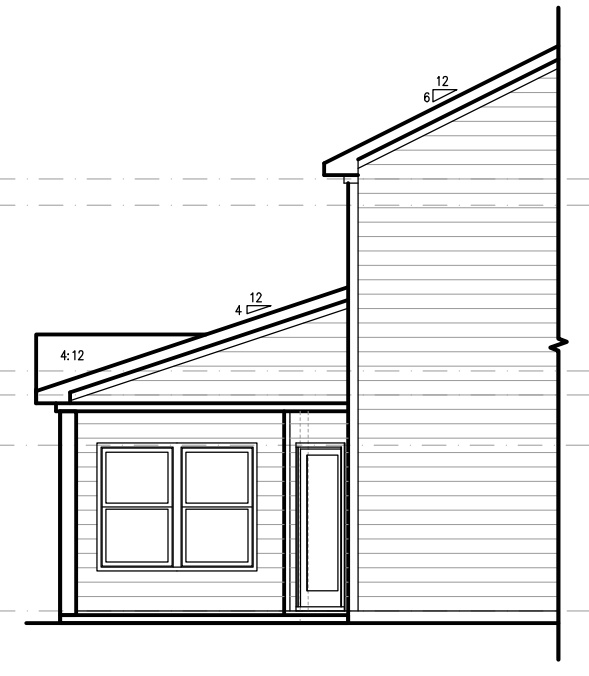
**COVERED PORCH ROOF PLAN**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



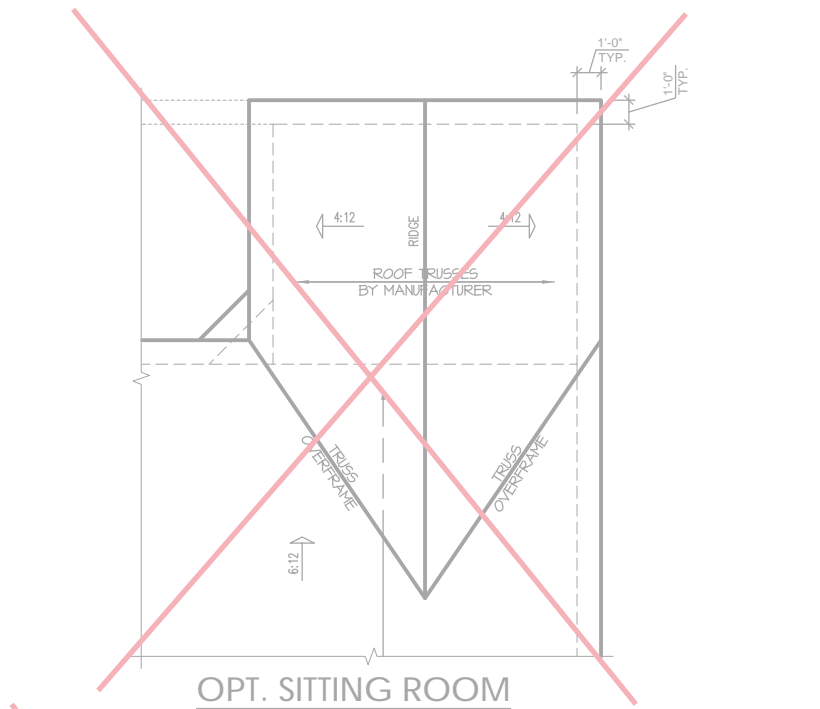
**PARTIAL RIGHT SIDE ELEVATION (SLAB)**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



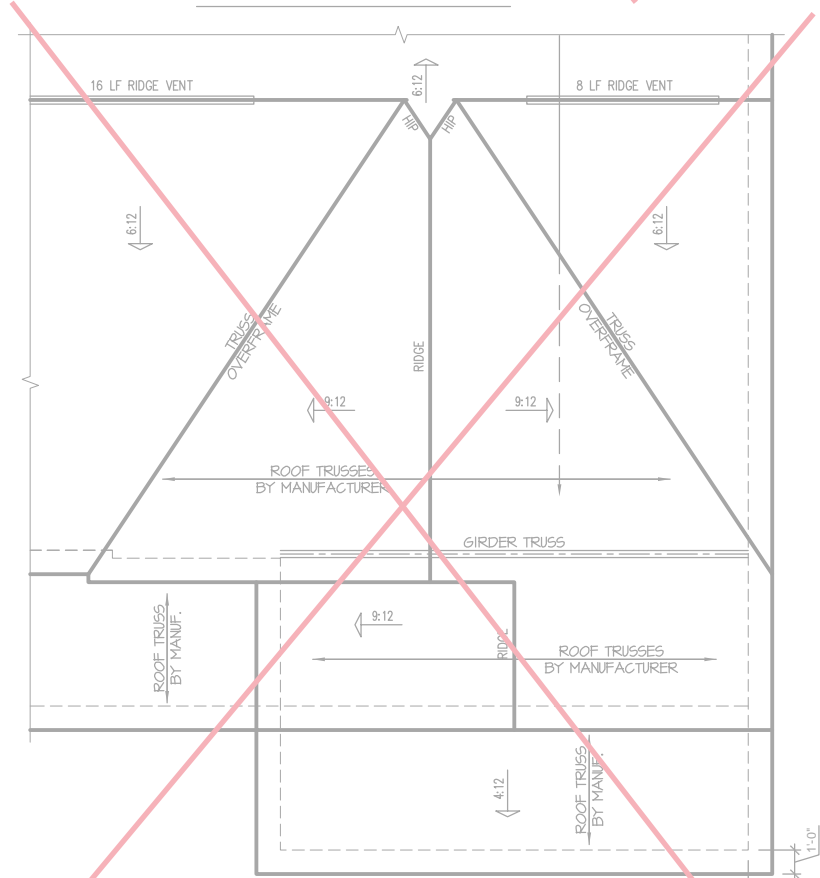
**COVERED PORCH REAR ELEVATION (SLAB)**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



**PARTIAL LEFT SIDE ELEVATION (SLAB)**  
SCALE: 1/8"=1'-0" ON 11x17, 1/4"=1'-0" ON 22x34



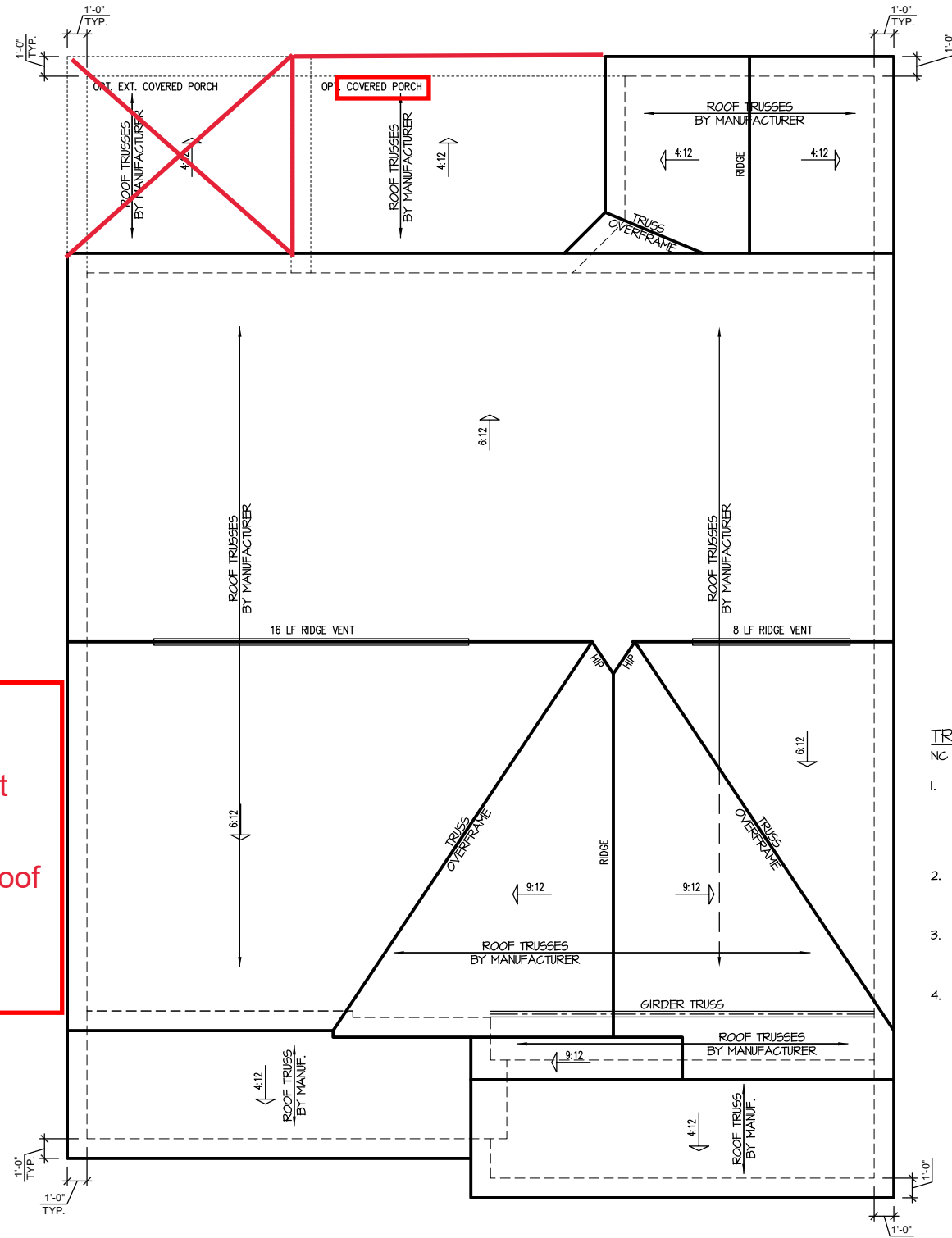
OPT. SITTING ROOM



OPT. EXT. GAMEROOM  
'TRADITIONAL'

NOTE: WHEN THE OPT. DBL. POCKET OFFICE ARE SELECTED THE EXT. GAME ROOM IS ADDED

See Sheet  
S-3.2 for  
Third Car  
Garage Roof

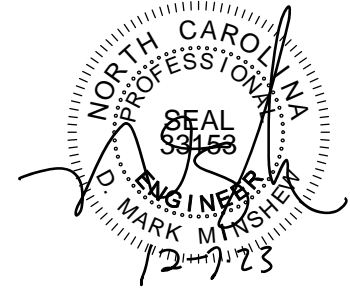


'TRADITIONAL' ELEVATION ROOF PLAN

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

**TRUSS SYSTEM REQUIREMENTS**  
NC (2018 NCRG): Wind: 115-120 mph

1. TRUSS SYSTEM LAYOUTS (PLACEMENT PLANS) SHALL BE DESIGNED IN ACCORDANCE WITH SEALED STRUCTURAL PLANS. ANY NEED TO CHANGE TRUSSES SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.
2. TRUSS SCHEMATICS (PROFILES) SHALL BE PREPARED AND SEALED BY TRUSS MANUFACTURER.
3. ALL TRUSSES SHALL BE DESIGNED FOR BEARING ON SPPF #2 OR #3 PLATES OR LEDGERS (UNO).
4. ALL REQUIRED ANCHORS FOR TRUSSES DUE TO UPLIFT OR BEARING SHALL MEET THE REQUIREMENTS AS SPECIFIED ON THE TRUSS SCHEMATICS.



PROJECT #  
21-2780.1-LH

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**Plan 05 - The Apex**  
Garage Left

**S-3.1**





**PROJECT #**  
21-2780.1-LH

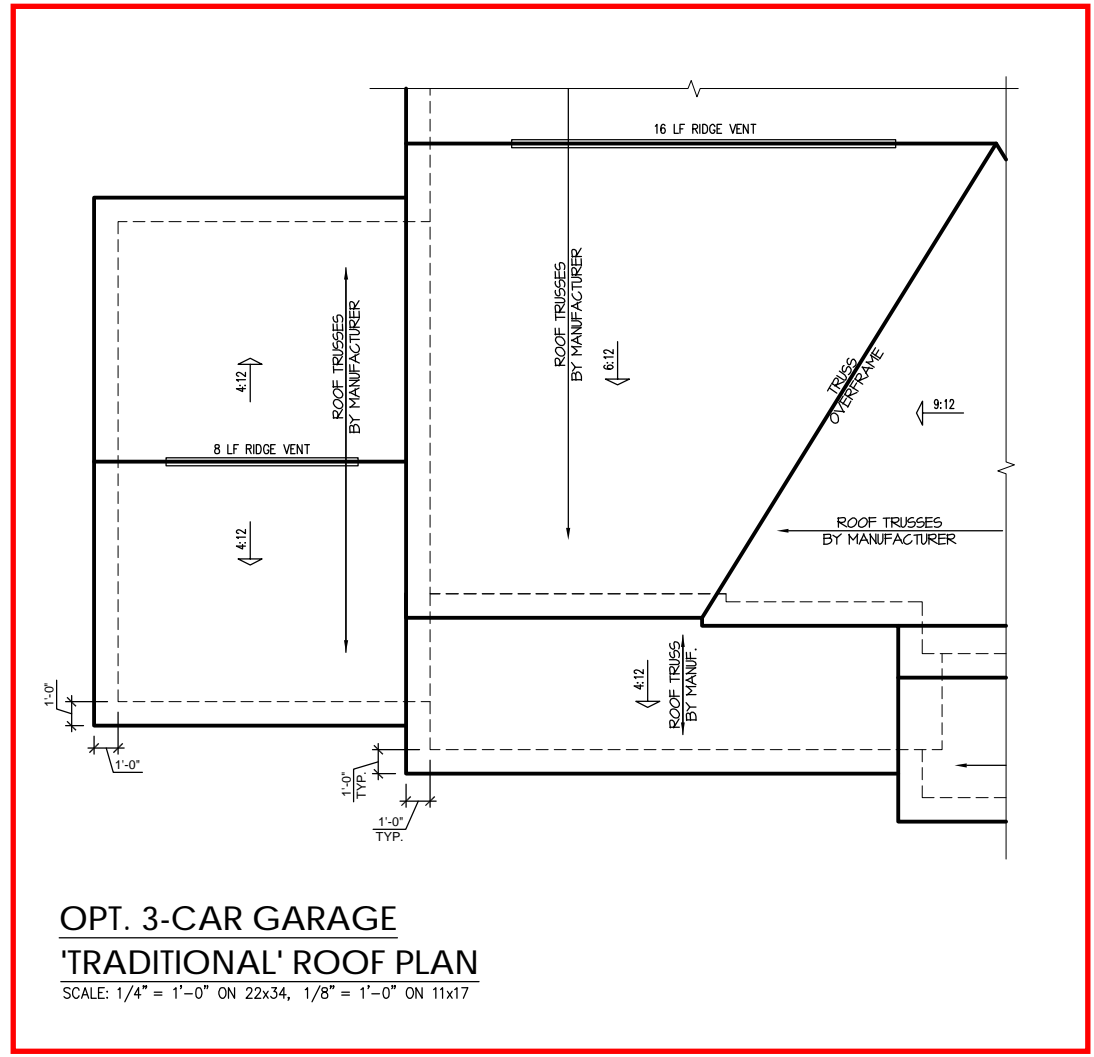
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**Plan 05 - The Apex**  
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**S-3.2**





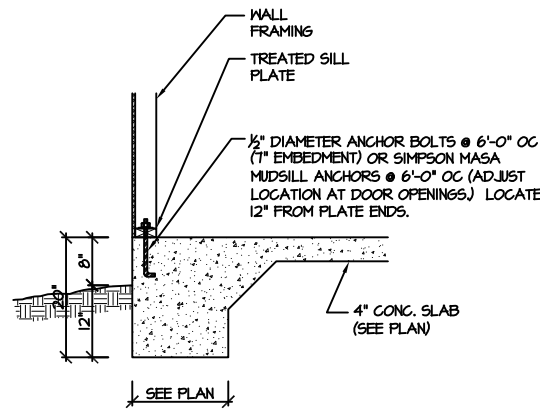
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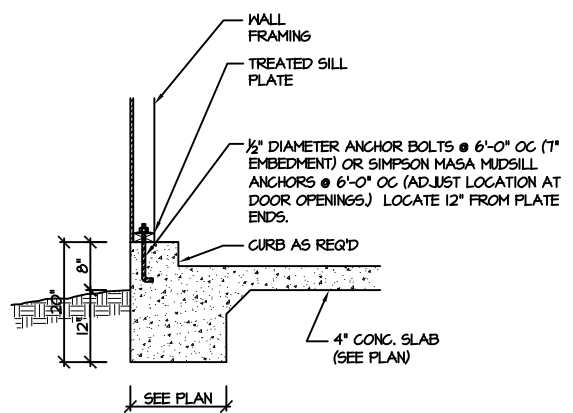
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**The Apex - Plan 05**

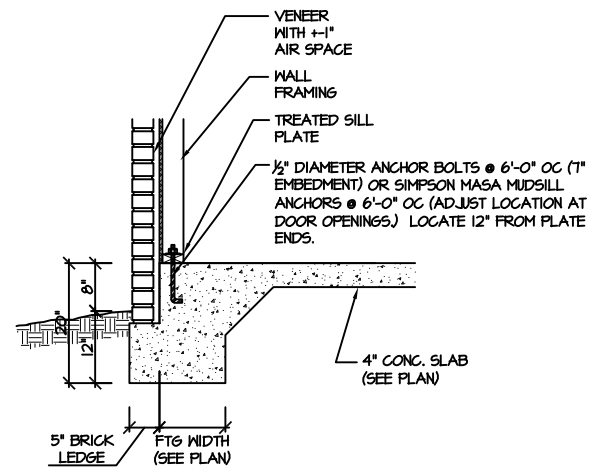
**SD**



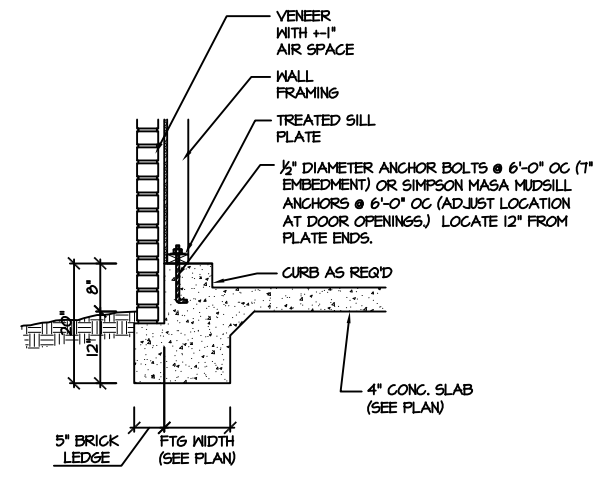
115-120 MPH 100A SD MONOLITHIC SLAB FOOTING (SIDING OR EQUAL)



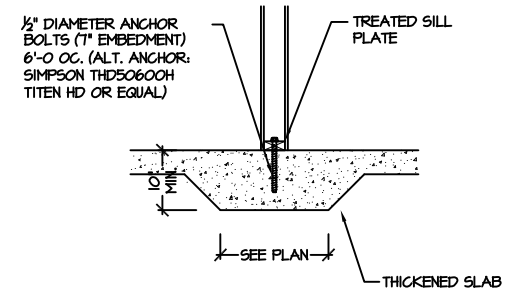
115-120 MPH 101A SD MONOLITHIC SLAB @ GARAGE (SIDING OR EQUAL)



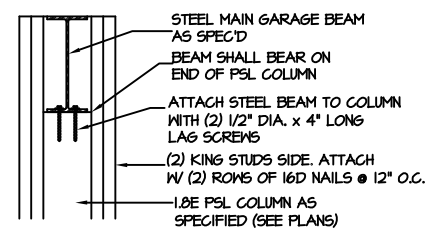
115-120 MPH 102A SD MONOLITHIC SLAB FOOTING (VENEER)



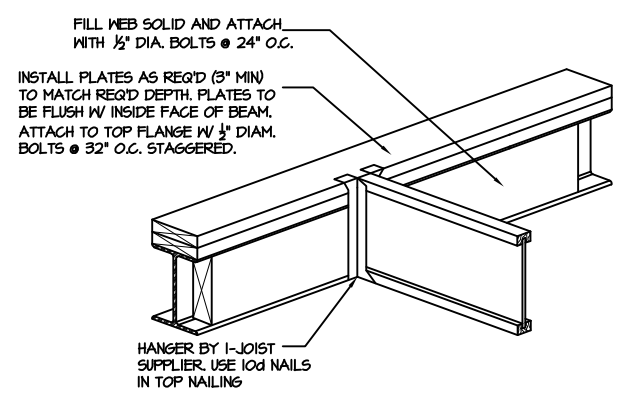
115-120 MPH 103A SD MONOLITHIC SLAB @ GARAGE (VENEER)



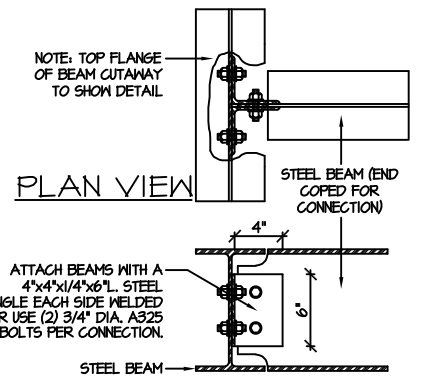
115-120 MPH 104A SD THICKENED SLAB (INTERIOR BEARING WALL)



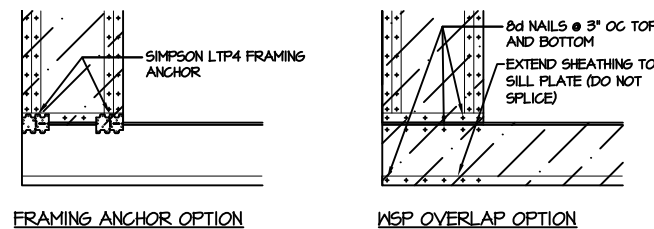
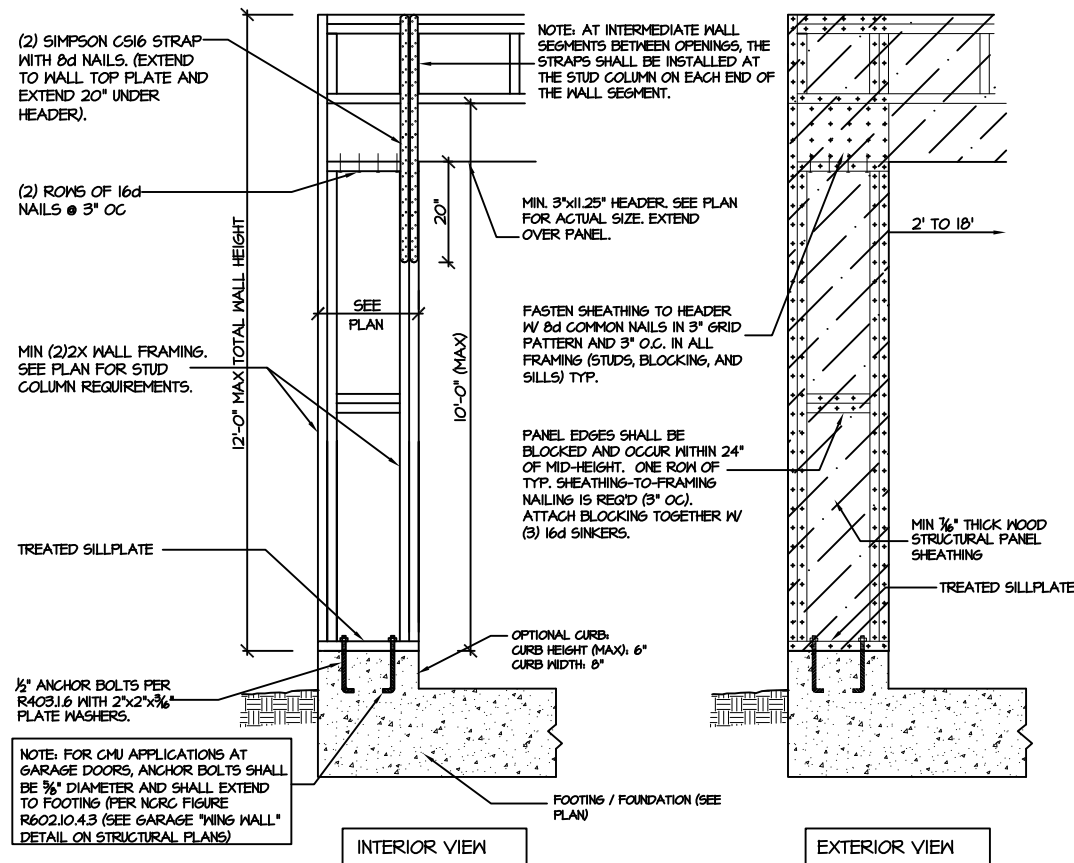
204E SD TYP. GARAGE BEAM BEARING NTS



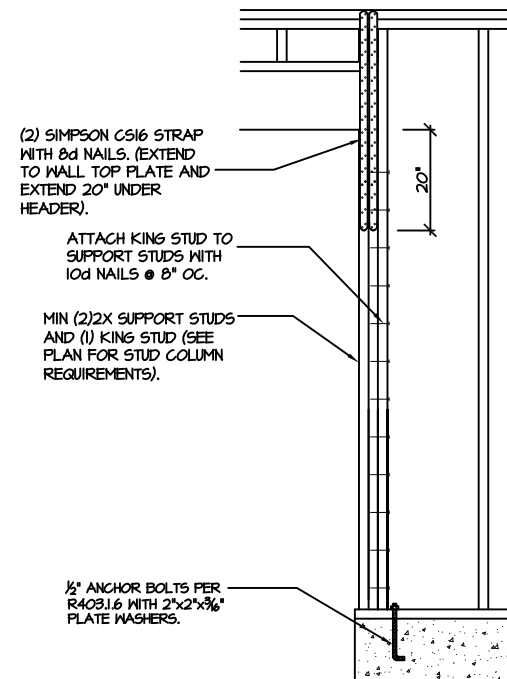
400 SD 1\"/>



500 SD TYPICAL BEAM CONNECTION DETAIL NTS



CS-PF - OVER WOOD FLOOR



906 SD CS-PF: END CONDITION DETAIL (FOR USE WITH SINGLE CS-PF CONDITION) DETAIL AND APPLICATION BASED ON NCRG FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION

905 SD CS-PF: CONTINUOUS PORTAL FRAME CONSTRUCTION DETAIL AND APPLICATION BASED ON NCRG FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION



**STRUCTURAL NOTES**

NC (2018 NCRG); Wind: 115-120 mph

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPs, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS AND HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIER & GIRDER SYSTEM, FOOTING, AND PILING SYSTEM. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM. ALL REQUIREMENTS FOR PROFESSIONAL CERTIFICATION SHALL BE PROVIDED BY THE APPROPRIATE PROFESSIONAL. SOUTHERN ENGINEERS, P.A. CERTIFIES ONLY THE STRUCTURAL COMPONENTS AS SPECIFICALLY STATED.
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE 2018 NC RESIDENTIAL CODE, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK, NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. "CONSTRUCTION REVIEW" SERVICES ARE NOT PART OF OUR CONTRACT. ALL MEMBERS SHALL BE FRAMED ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.
- DESIGN LOADS (LISTED AS: LIVE LOAD, DEAD LOAD, DEFLECTION)
  - ROOMS OTHER THAN SLEEPING ROOMS: (40 PSF, 10 PSF, L/360)
  - SLEEPING ROOMS: (30 PSF, 10 PSF, L/360)
  - ATTIC WITH PERMANENT STAIR: (40 PSF, 10 PSF, L/360)
  - ATTIC WITHOUT PERMANENT STAIR: (20 PSF, 10 PSF, L/360)
  - ATTIC WITHOUT STORAGE: (10 PSF, 10 PSF, L/240)
  - STAIRS: (40 PSF, 10 PSF, L/360)
  - DECKS AND EXTERIOR BALCONIES: (40 PSF, 10 PSF, L/360)
  - PASSENGER VEHICLE GARAGES: (50 PSF, 10 PSF, L/360)
  - SNOW: (20 PSF)
- WALLS SHALL BE BRACED BY SHEATHING WALLS ON ALL STORIES WITH WOOD STRUCTURAL PANELS. SEE FRAMING NOTES FOR THICKNESS AND NAILING REQUIREMENTS.
- SEE APPENDIX M (DCA6) FOR EXTERIOR DECK REQUIREMENTS INCLUDING ATTACHMENTS FOR LATERAL LOADS.
- CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 5 INCHES UNLESS NOTED OTHERWISE (UNO). AIR ENTRAINMENT PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED, AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP. CONTROL JOINTS IN SLABS SHALL BE SPACED ON A GRID OF +30 TIMES THE DEPTH (D). CONTROL JOINTS SHALL BE SAWCUT TO A DEPTH OF 1/3. (I.E. 4" CONCRETE SLABS SHALL HAVE 1/4" DEEP CONTROL JOINTS SAWCUT IN SLAB ON A +10'-0" x +10'-0" GRID).
- ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTURAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
- ALL FRAMING LUMBER SHALL BE SYP # 2 (Fb = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2. PLATE MATERIAL MAY BE SYP # 3 OR SYP # 3 (Fb(perp) = 425 PSI - MIN).
  - L.V.L. SHALL BE LAMINATED VENEER LUMBER: Fb=2600 PSI, Fv=285 PSI, E=1.9x10<sup>10</sup> PSI.
  - P.S.L. SHALL BE PARALLEL STRAND LUMBER: Fb=2400 PSI, Fv=240 PSI, E=2.0x10<sup>10</sup> PSI.
  - L.S.L. SHALL BE LAMINATED STRAND LUMBER: Fb=2250 PSI, Fv=400 PSI, E=1.55x10<sup>10</sup> PSI. INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.
- ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURE'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.
- ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500.
- REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60. LAP ALL REBAR SPLICES 30 BAR DIAMETERS.
- FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A325) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX) AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.
- BRICK LINTELS (WHEN REQUIRED) SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 4'-0". SEE PLANS FOR SPANS OVER 4'-0". SEE ALSO SECTION R703.0.3 LINTELS.
- METAL CONNECTORS REFERENCED ON PLANS CORRESPOND TO SIMPSON STRONG-TIE BRAND. CONNECTORS OF EQUAL OR BETTER CAPACITY ARE ACCEPTABLE. CORROSION RESISTANCE PER CODE AND AS RECOMMENDED BY MANUFACTURER.

PROJECT #  
21-2780.1

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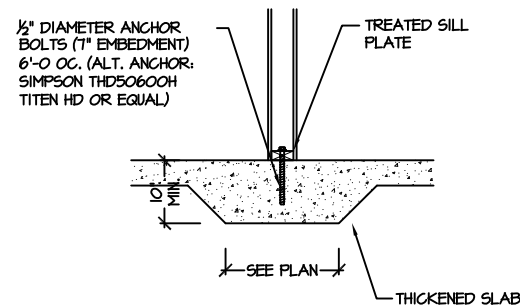
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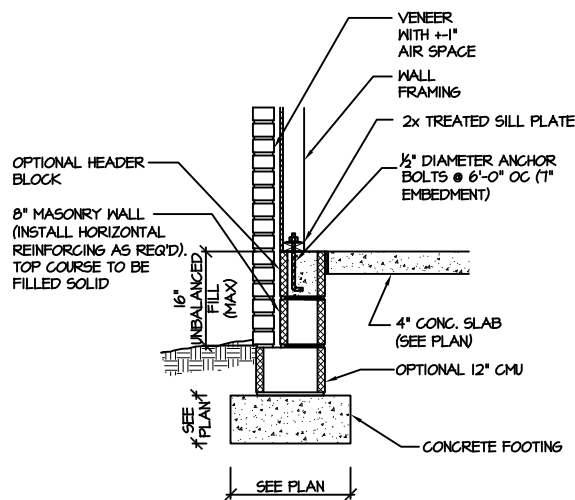
The Apex - Plan 05

SD

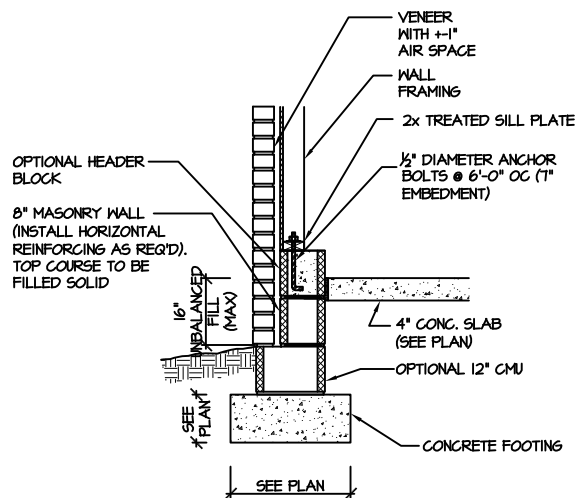
STRUCTURAL DETAILS:  
MONO SLAB FOUNDATION



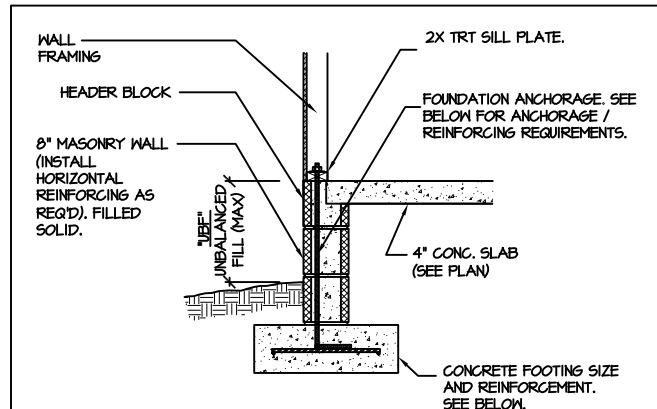
115-120 MPH 104A SD THICKENED SLAB (INTERIOR BEARING WALL)



115-120 MPH 108A SD STEM WALL SLAB FOOTING (VENEER) (FOR UNBALANCED FILL EXCEEDING 16" O.C. SEE DETAIL "106F/SD")

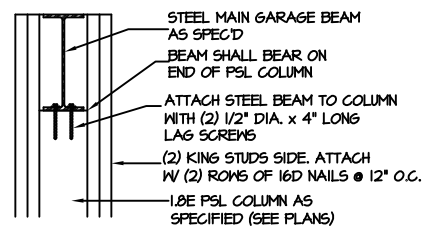


115-120 MPH 109A SD STEM WALL SLAB @ GARAGE (VENEER) (FOR UNBALANCED FILL EXCEEDING 16" O.C. SEE DETAIL "106E/SD")

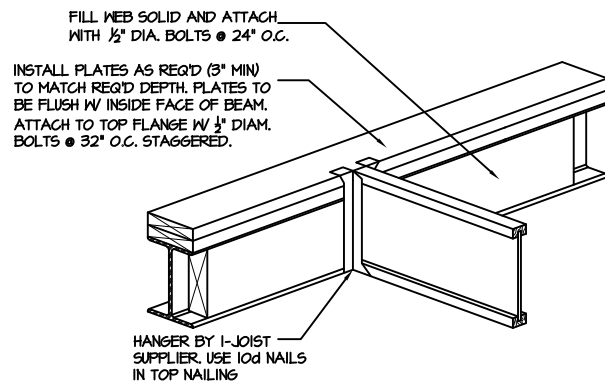


- \*UBF\* = UP TO 16" — 1/2" DIAM ANCHOR BOLT (EMBED 7") @ 6'-0" O.C. 16" WIDE BY 8" DEEP (MIN) CONG. FTG. (UNREINFORCED)
- \*UBF\* = 16" UP TO 24" — 1/2" DIAM ANCHOR BOLT (EMBED 7") @ 6'-0" O.C. REINFORCE WALL W/ #5 BAR @ 48" O.C. W/ 75" LEG @ 48" O.C. WITH WASHERS 24" WIDE BY 10" DEEP CONG FTG REINFORCED W/ (3) #4 BAR OR (2) #5 BAR CONTINUOUS WITH #4 TIES @ 48" O.C.
- \*UBF\* = 24" UP TO 48" — 1/2" DIAM ANCHOR BOLT (EMBED 7") @ 6'-0" O.C. REINFORCE WALL W/ #5 BAR @ 24" O.C. W/ 75" LEG INTO FTG. OR INSTALL 3/8" THREADED ROD W/ 75" LEG @ 24" O.C. WITH WASHERS 24" WIDE BY 10" DEEP CONG FTG REINFORCED W/ (3) #4 BAR OR (2) #5 BAR CONTINUOUS WITH #4 TIES @ 24" O.C.

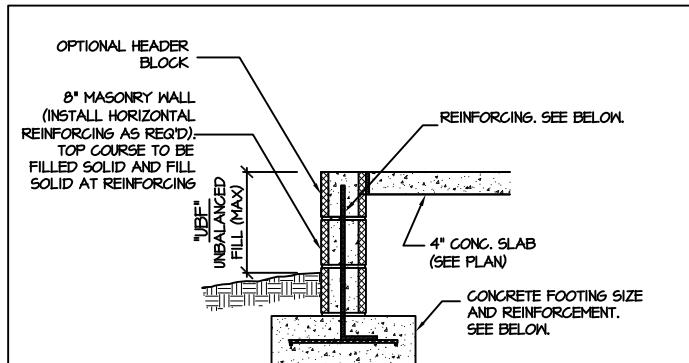
115-120 MPH 106F SD STEM WALL SLAB FOOTING (SIDING OR EQUAL)



204E SD TYP. GARAGE BEAM BEARING NTS

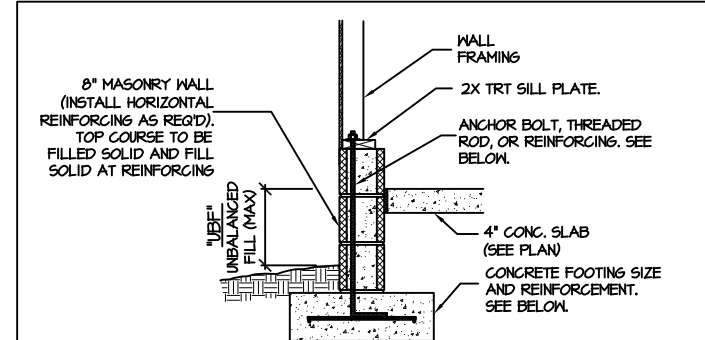


400 SD "1" JOIST @ STEEL BEAM NTS



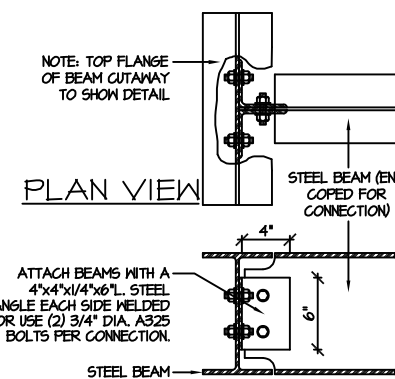
- \*UBF\* = UP TO 16" — 8" MASONRY (UN-REINFORCED) ON 16" WIDE BY 8" DEEP (MIN) CONG. FTG.
- \*UBF\* = 16" UP TO 24" — REINFORCE WALL W/ #5 BAR @ 48" O.C. W/ 6" BEND INTO FTG. 24" WIDE BY 10" DEEP CONG FTG REINFORCED W/ (3) #4 BAR OR (2) #5 BAR CONTINUOUS WITH #4 TIES @ 48" O.C.
- \*UBF\* = 24" UP TO 48" — REINFORCE WALL W/ #5 BAR @ 24" O.C. W/ 6" BEND INTO FTG. 32" WIDE BY 12" DEEP CONG FTG REINFORCED W/ (4) #4 BAR OR (3) #5 BAR CONTINUOUS WITH #4 TIES @ 24" O.C.

115-120 MPH 106D SD FILLED PORCH WALL



- \*UBF\* = UP TO 16" — 1/2" DIAM ANCHOR BOLT (EMBED 7") @ 6'-0" O.C. 16" WIDE BY 8" DEEP (MIN) CONG. FTG.
- \*UBF\* = 16" UP TO 24" — 1/2" DIAM ANCHOR BOLT (EMBED 7") @ 6'-0" O.C. REINFORCE WALL W/ #5 BAR @ 48" O.C. W/ 6" LEG INTO FTG. OR INSTALL 3/8" THREADED ROD @ 48" O.C. WITH WASHERS 24" WIDE BY 10" DEEP CONG FTG REINFORCED W/ (3) #4 BAR OR (2) #5 BAR CONTINUOUS WITH #4 TIES @ 48" O.C.
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115-120 MPH 107E SD STEM WALL SLAB @ GARAGE (SIDING OR EQUAL)



500 SD TYPICAL BEAM CONNECTION DETAIL NTS

STEMWALL SLAB FOUNDATION



PROJECT # 21-2780.1

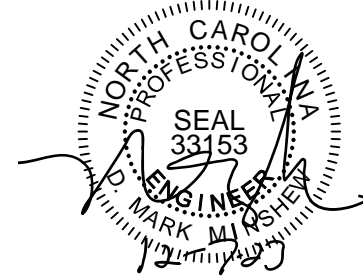
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The Apex - Plan 05

SD



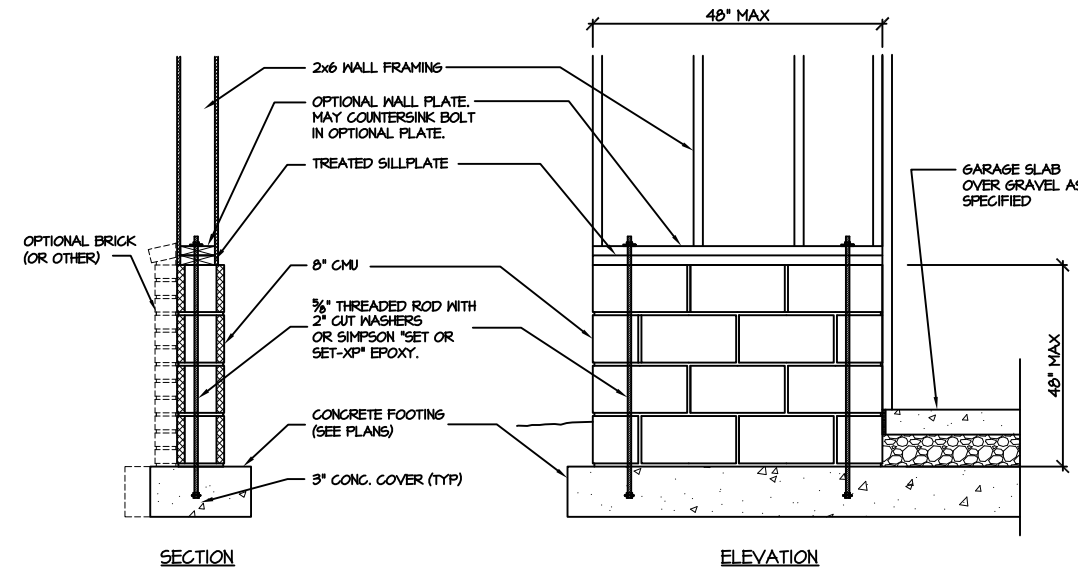
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**The Apex - Plan 05**

**SD**

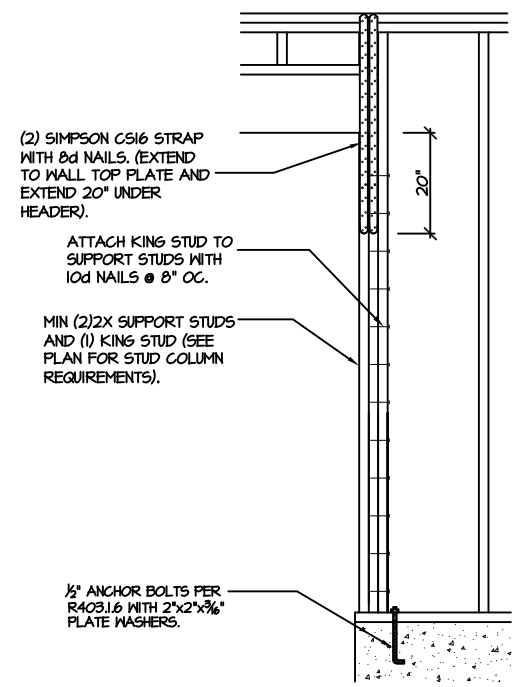
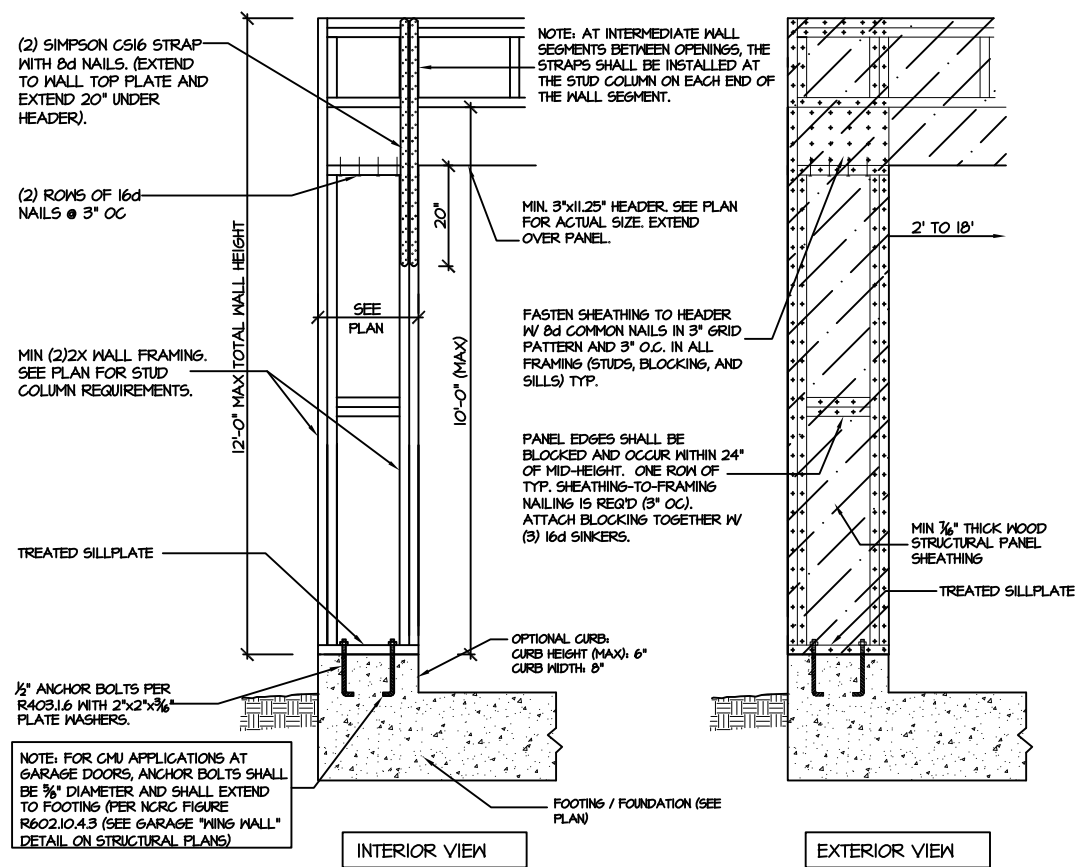


**STRUCTURAL NOTES**

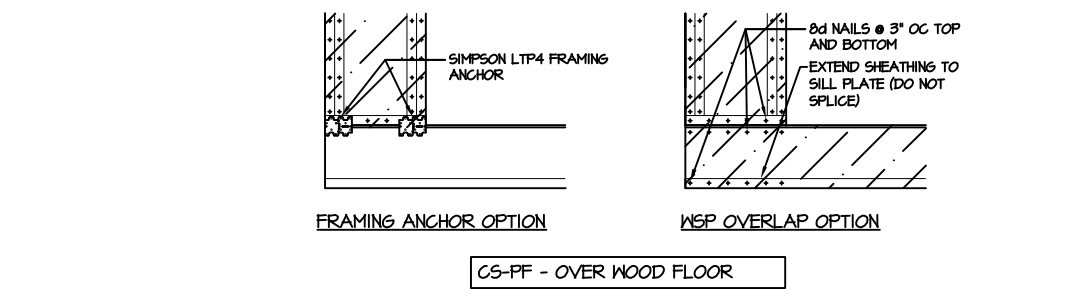
NC (2018 NCRG); Wind: 115-120 mph

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- DESIGN LOADS (LISTED AS: LIVE LOAD, DEAD LOAD, DEFLECTION)
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  - SLEEPING ROOMS: (30 PSF, 10 PSF, L/360)
  - ATTIC WITH PERMANENT STAIR: (40 PSF, 10 PSF, L/360)
  - ATTIC WITHOUT PERMANENT STAIR: (20 PSF, 10 PSF, L/360)
  - ATTIC WITHOUT STORAGE: (10 PSF, 10 PSF, L/240)
  - STAIRS: (40 PSF, 10 PSF, L/360)
  - DECKS AND EXTERIOR BALCONIES: (40 PSF, 10 PSF, L/360)
  - PASSENGER VEHICLE GARAGES: (50 PSF, 10 PSF, L/360)
  - SNOW: (20 PSF)
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- ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE STRUCTURAL ENGINEER IF UNSATISFACTORY SUBSURFACE CONDITIONS ARE ENCOUNTERED. THE SURFACE AREA ADJACENT TO THE FOUNDATION WALL SHALL BE PROVIDED WITH ADEQUATE DRAINAGE, AND SHALL BE GRADED SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS.
- ALL FRAMING LUMBER SHALL BE SPF #2 (F<sub>b</sub> = 875 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE SYP # 2. PLATE MATERIAL MAY BE SPF # 3 OR SYP #3 (F<sub>c(perp)</sub> = 425 PSI - MIN).
  - L.V.L. SHALL BE LAMINATED VENEER LUMBER: F<sub>b</sub>=2600 PSI, F<sub>v</sub>=285 PSI, E=1.9x10<sup>6</sup> PSI.
  - P.S.L. SHALL BE PARALLEL STRAND LUMBER: F<sub>b</sub>=2400 PSI, F<sub>v</sub>=240 PSI, E=2.0x10<sup>6</sup> PSI.
  - L.S.L. SHALL BE LAMINATED STRAND LUMBER: F<sub>b</sub>=2250 PSI, F<sub>v</sub>=400 PSI, E=1.55x10<sup>6</sup> PSI. INSTALL ALL CONNECTIONS PER MANUFACTURERS INSTRUCTIONS.
- ALL ROOF TRUSS AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS. ANY CHANGE IN TRUSS OR I-JOIST LAYOUT SHALL BE COORDINATED WITH SOUTHERN ENGINEERS.
- ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WIDTH. PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER x 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500.
- REBAR SHALL BE DEFORMED STEEL, ASTM615, GRADE 60. LAP ALL REBAR SPLICES 30 BAR DIAMETERS.
- FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A325) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX), AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.
- BRICK LINTELS (WHEN REQUIRED) SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 4'-0". SEE PLANS FOR SPANS OVER 4'-0". SEE ALSO SECTION R103.B.3 LINTELS.
- METAL CONNECTORS REFERENCED ON PLANS CORRESPOND TO SIMPSON STRONG-TIE BRAND. CONNECTORS OF EQUAL OR BETTER CAPACITY ARE ACCEPTABLE. CORROSION RESISTANCE PER CODE AND AS RECOMMENDED BY MANUFACTURER.

**907 GARAGE 'WING WALL' REINFORCING**  
PER IRC FIGURE R602.10.4.3

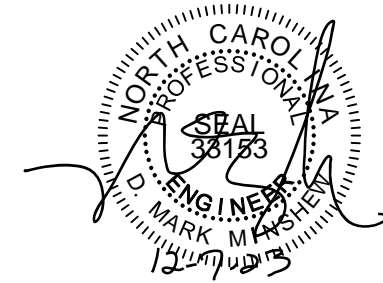
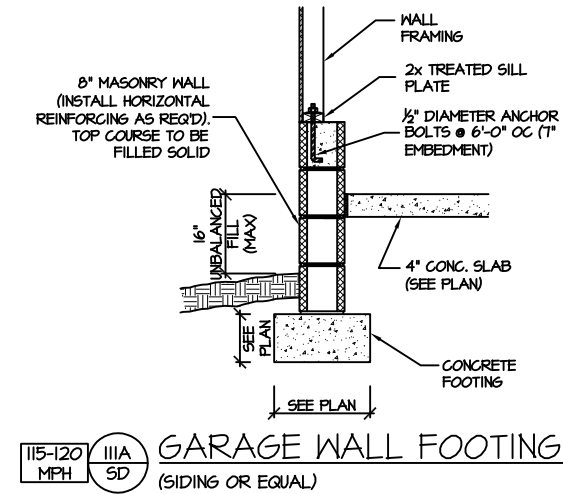
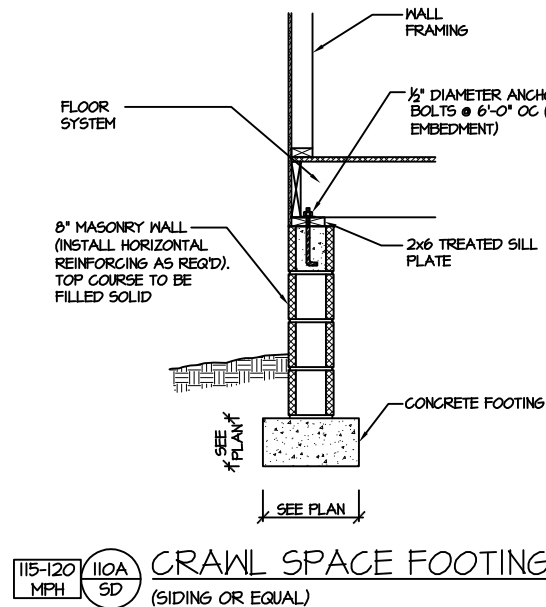
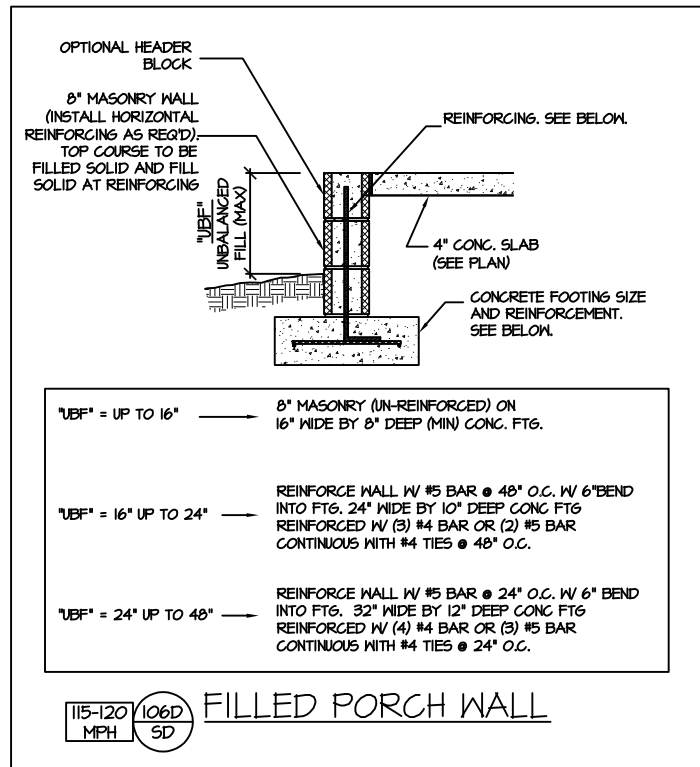


**906 CS-PF: END CONDITION DETAIL**  
(FOR USE WITH SINGLE CS-PF CONDITION)  
DETAIL AND APPLICATION BASED ON NCRG FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION



**905 CS-PF: CONTINUOUS PORTAL FRAME CONSTRUCTION**  
DETAIL AND APPLICATION BASED ON NCRG FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION

**STEMWALL SLAB FOUNDATION**



PROJECT # 21-2780.1

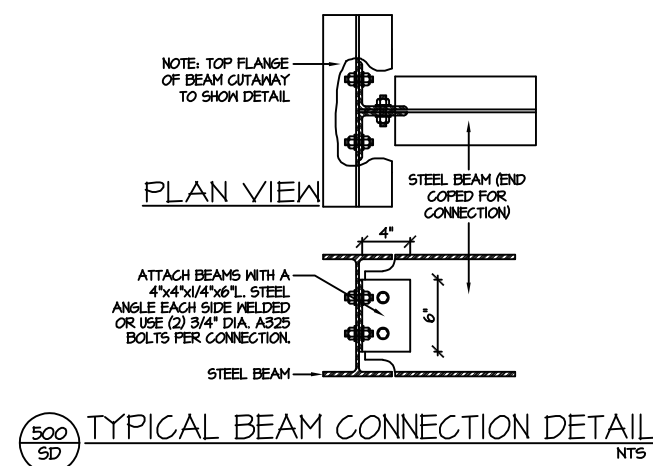
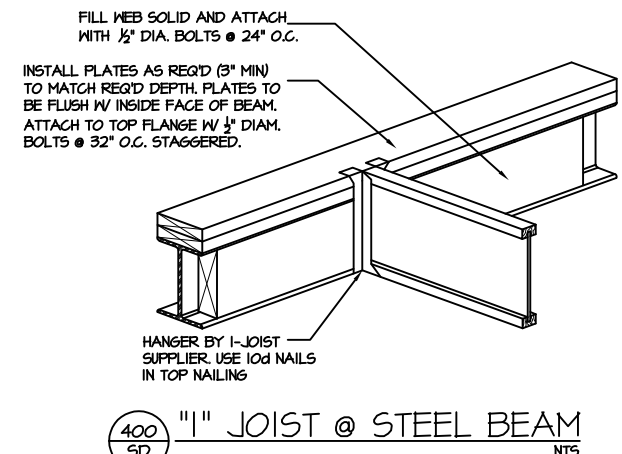
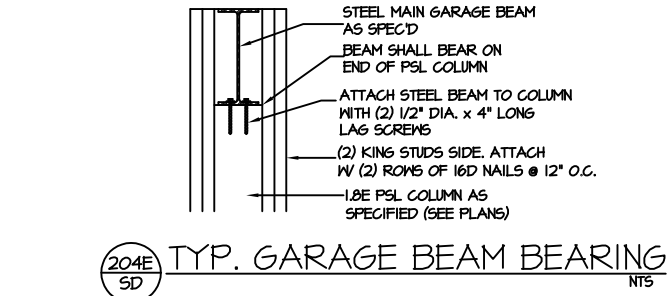
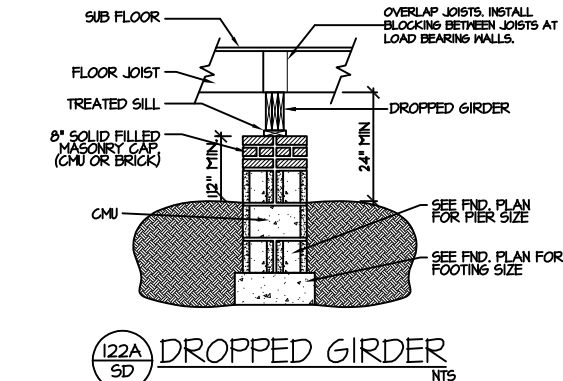
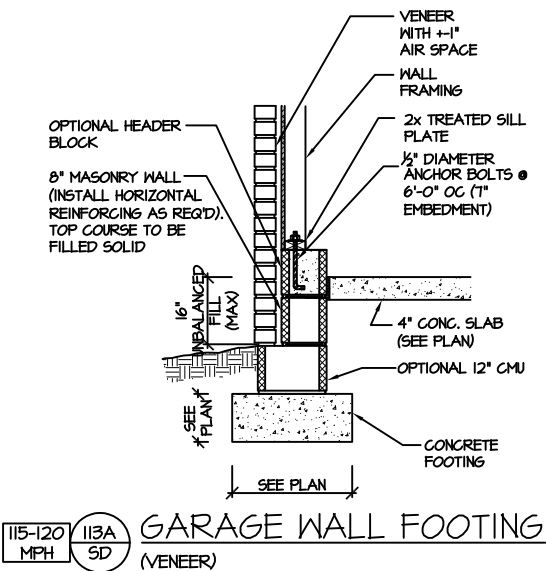
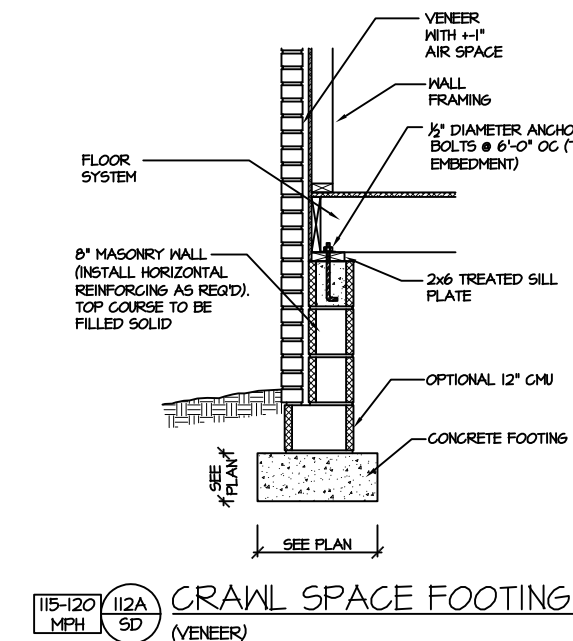
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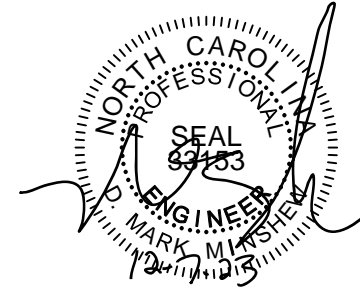
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**The Apex - Plan 05**

**SD**



STRUCTURAL DETAILS:  
CRAWL SPACE FOUNDATION



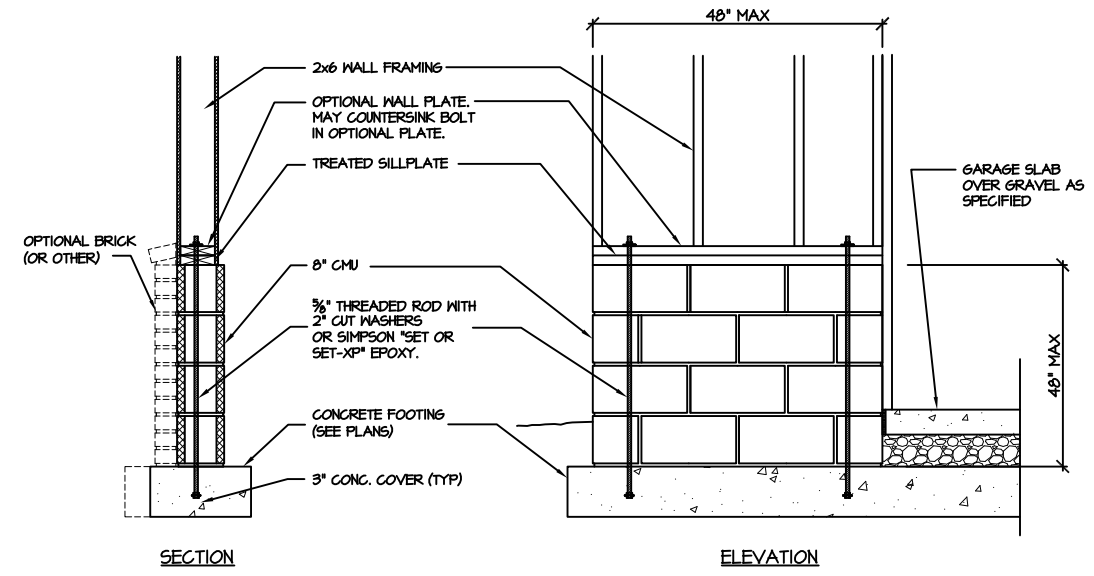
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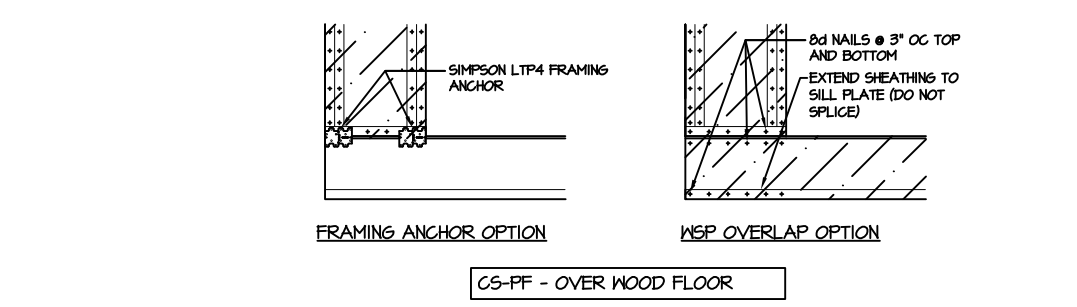
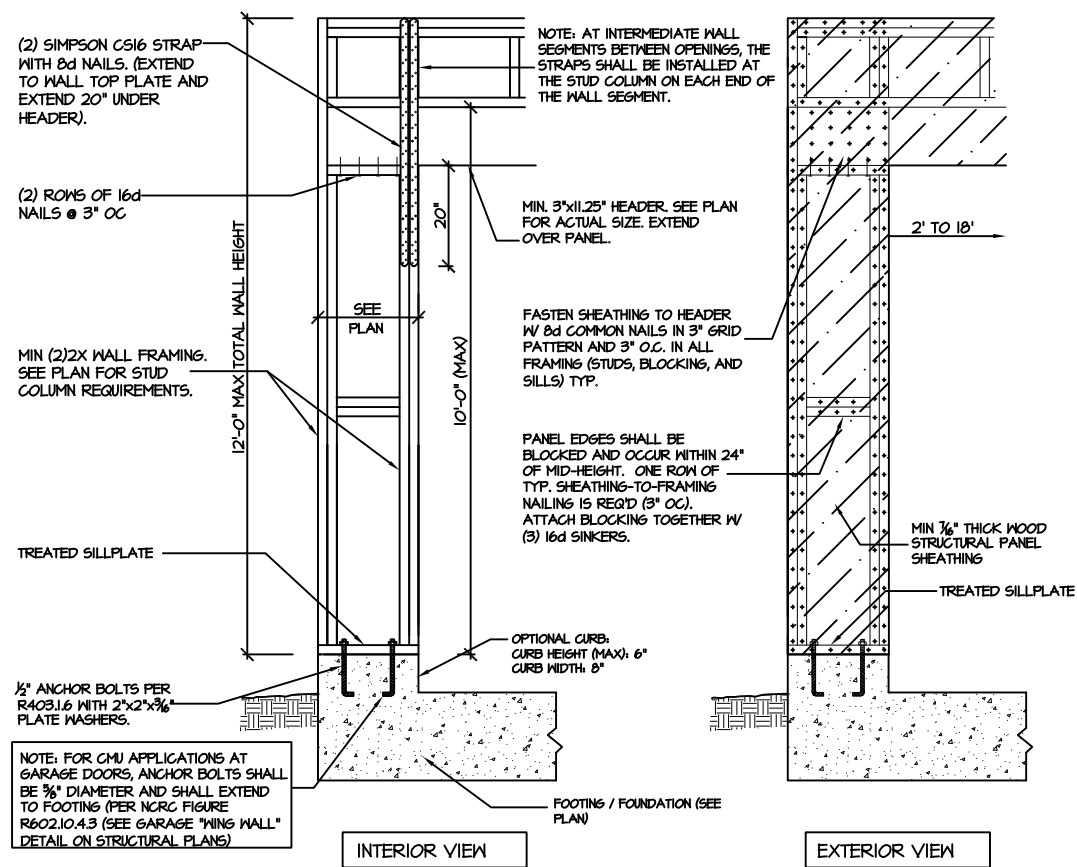
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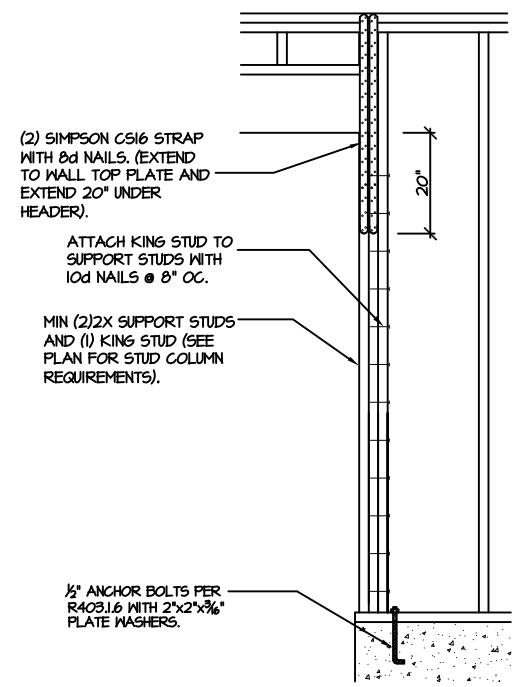
SD



**907 SD GARAGE 'WING WALL' REINFORCING**  
PER IRC FIGURE R602.10.4.3



**905 SD CS-PF: CONTINUOUS PORTAL FRAME CONSTRUCTION**  
DETAIL AND APPLICATION BASED ON NCRG FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION



**906 SD CS-PF: END CONDITION DETAIL**  
(FOR USE WITH SINGLE CS-PF CONDITION)  
DETAIL AND APPLICATION BASED ON NCRG FIGURE R602.10.1 - PORTAL FRAME CONSTRUCTION

**STRUCTURAL NOTES**

NC (2018 NCRG); Wind: 115-120 mph

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- FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A325) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX), AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.
- BRICK LINTELS (WHEN REQUIRED) SHALL BE 3 1/2"x3 1/2"x1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"x4"x5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 4'-0". SEE PLANS FOR SPANS OVER 4'-0". SEE ALSO SECTION R703.0.3 LINTELS.
- METAL CONNECTORS REFERENCED ON PLANS CORRESPOND TO SIMPSON STRONG-TIE BRAND. CONNECTORS OF EQUAL OR BETTER CAPACITY ARE ACCEPTABLE. CORROSION RESISTANCE PER CODE AND AS RECOMMENDED BY MANUFACTURER.

STRUCTURAL DETAILS:  
CRAWL SPACE FOUNDATION