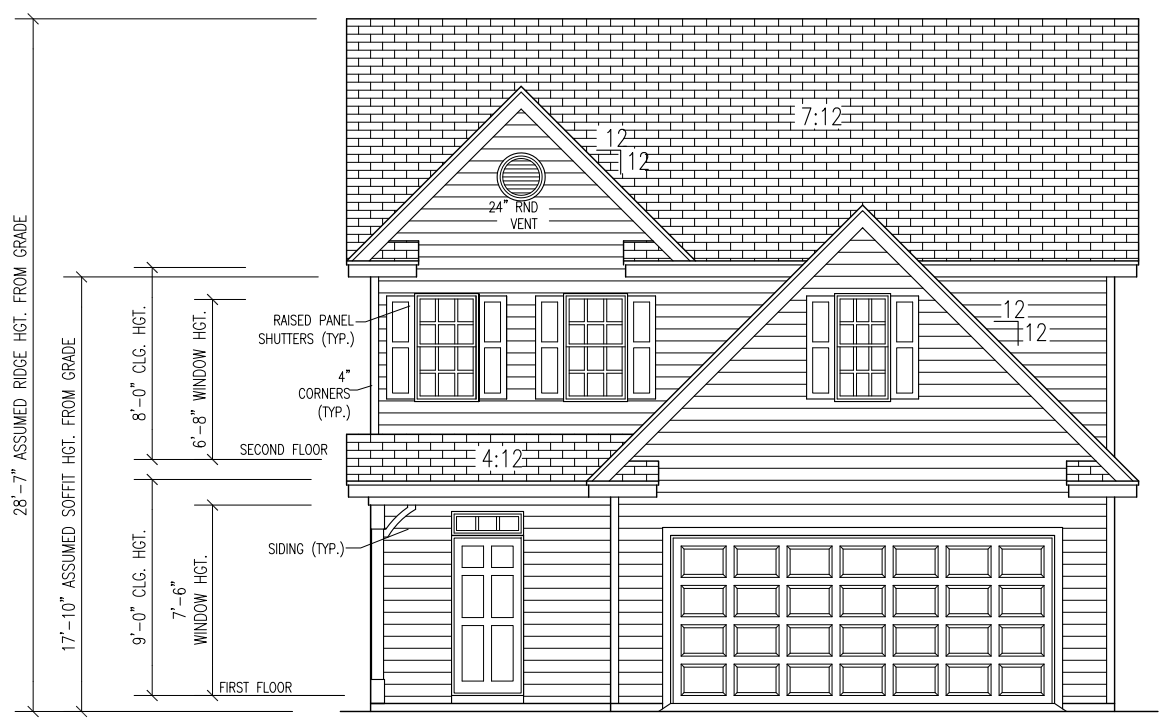
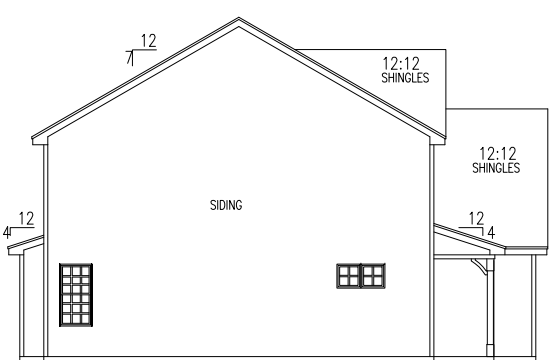


ATTIC SPACE VENTILATION	
REQUIRED	
$\frac{1236}{150}$ SQ. FT. OF CLG. / 150 =	$8.24$ SQ. FT. REQUIRED
REFER TO SECTION R806 (ROOF VENTILATION) IN NORTH CAROLINA STATE 2018 INTERNATIONAL RESIDENTIAL BUILDING CODES.	

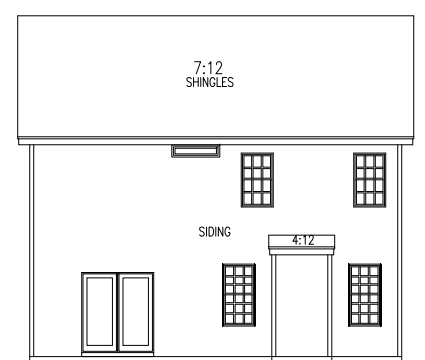
MEAN ROOF HGT.			
Soffit Hgt. From Assumed Grade	+ Highest Ridge Hgt. From Assumed Grade	+ 2	= Mean Roof Hgt.
17'-10"	+ 28'-7"	+ 2	= 23'-3" Mean Roof Hgt.



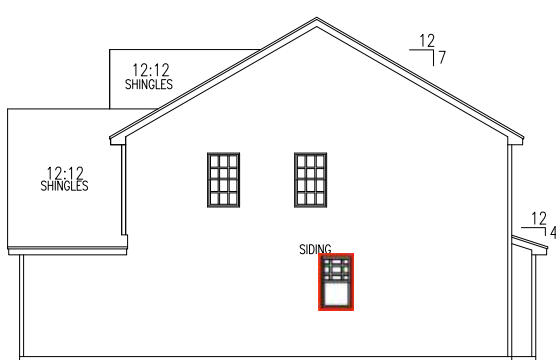
FRONT ELEVATION "A"



LEFT ELEVATION



REAR ELEVATION

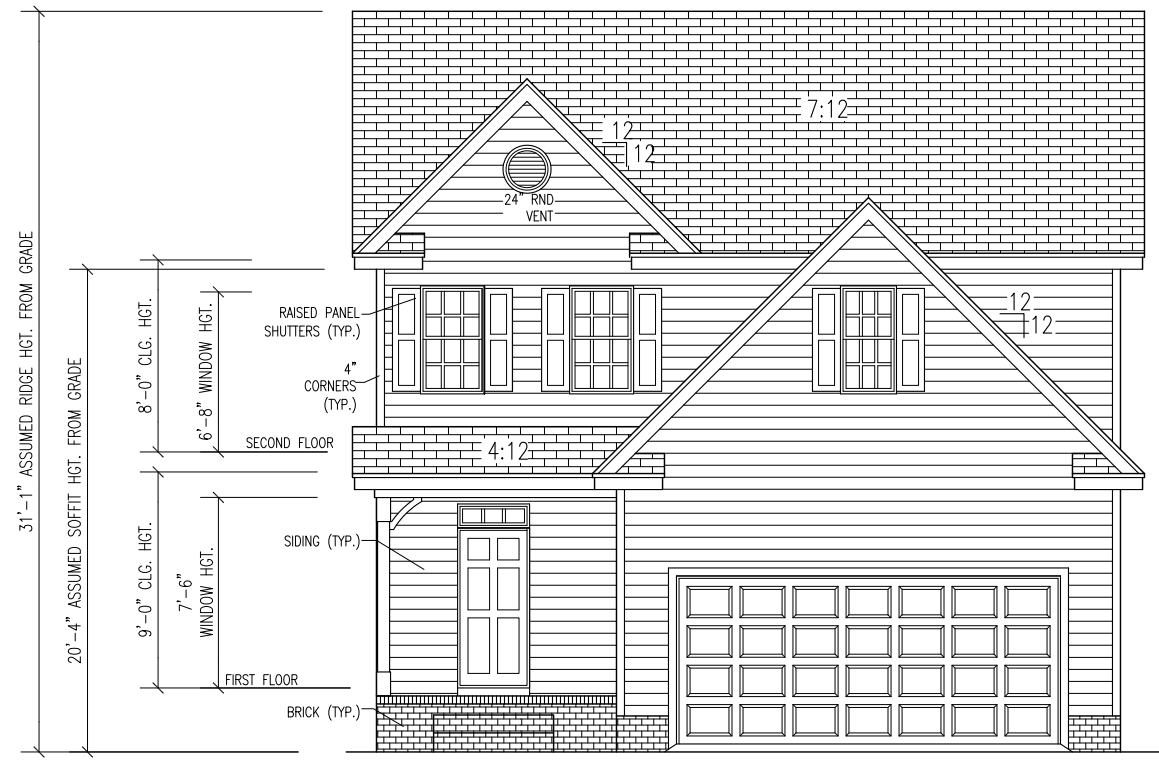


RIGHT ELEVATION

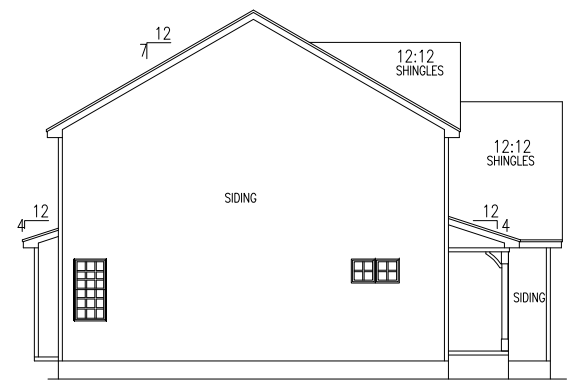
SCALE	
24"X36"	= 1/4"=1'-0"
11"X17"	= 1/8"=1'-0"

ATTIC SPACE VENTILATION	
REQUIRED	
1236	SQ. FT. OF CLG. / 150 = 8.24 SQ. FT. REQUIRED
REFER TO SECTION R806 (ROOF VENTILATION) IN NORTH CAROLINA STATE 2018 INTERNATIONAL RESIDENTIAL BUILDING CODES.	

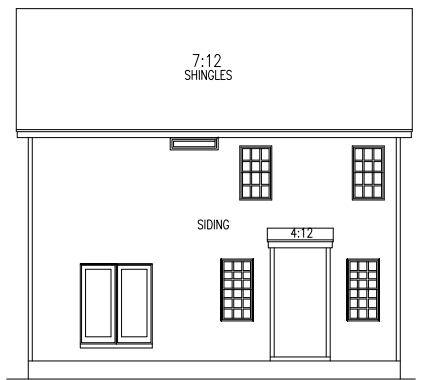
MEAN ROOF HGT.			
Soffit Hgt. From Assumed Grade	+ Highest Ridge Hgt. From Assumed Grade	÷ 2	= Mean Roof Hgt.
20'-4"	+ 31'-1"	÷ 2	= 25'-9" Mean Roof Hgt.



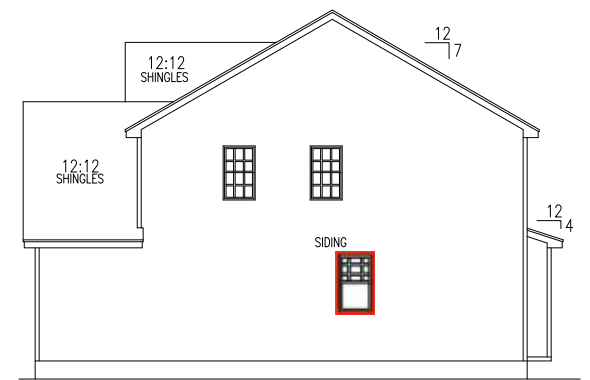
FRONT ELEVATION "A"



LEFT ELEVATION



REAR ELEVATION

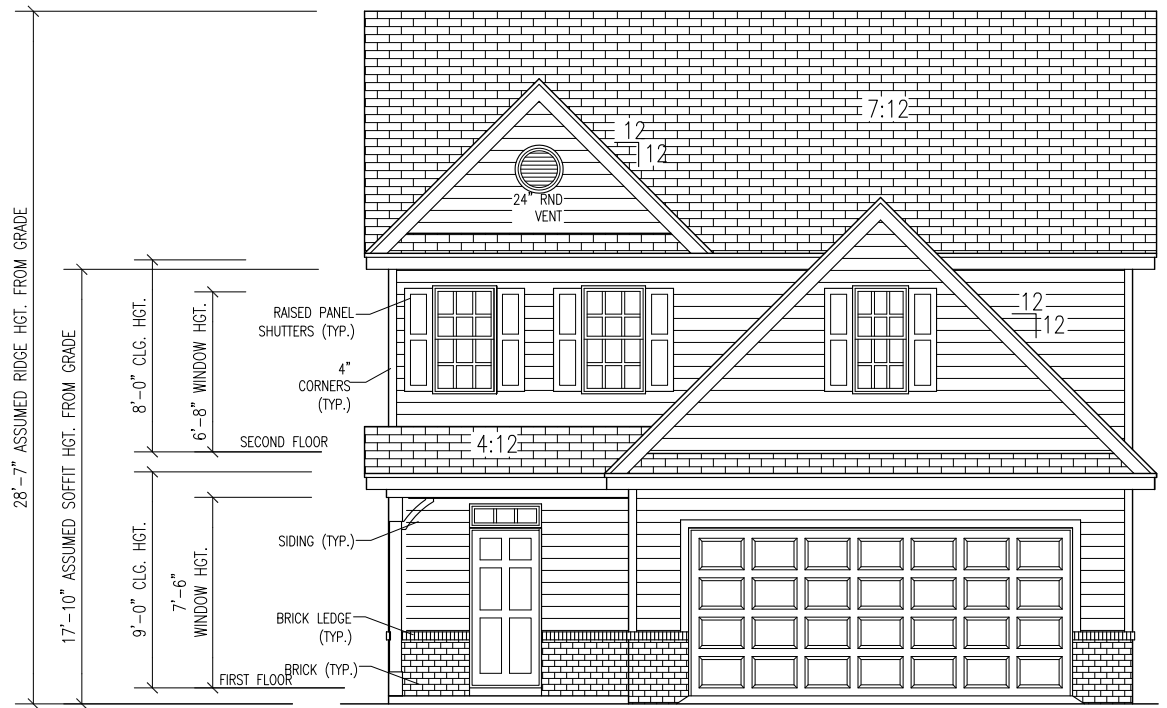


RIGHT ELEVATION

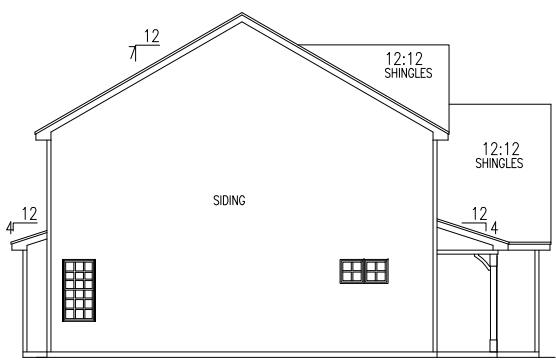
SCALE	
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11"x17"	= 1/8" = 1'-0"

ATTIC SPACE VENTILATION	
REQUIRED	
$1236 \text{ SQ. FT. OF CLG.} / 150 = 8.24 \text{ SQ. FT. REQUIRED}$	
REFER TO SECTION R806 (ROOF VENTILATION) IN NORTH CAROLINA STATE 2018 INTERNATIONAL RESIDENTIAL BUILDING CODES.	

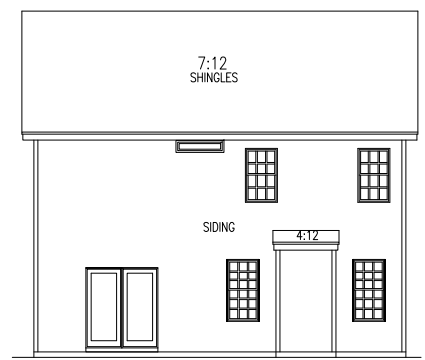
MEAN ROOF HGT.			
Soffit Hgt. From Assumed Grade	+ Highest Ridge Hgt. From Assumed Grade	÷ 2	= Mean Roof Hgt.
17'-10"	+ 28'-7"	÷ 2	= 23'-3" Mean Roof Hgt.



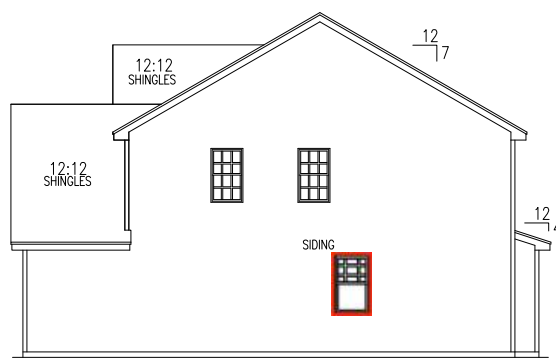
FRONT ELEVATION "B"



LEFT ELEVATION



REAR ELEVATION

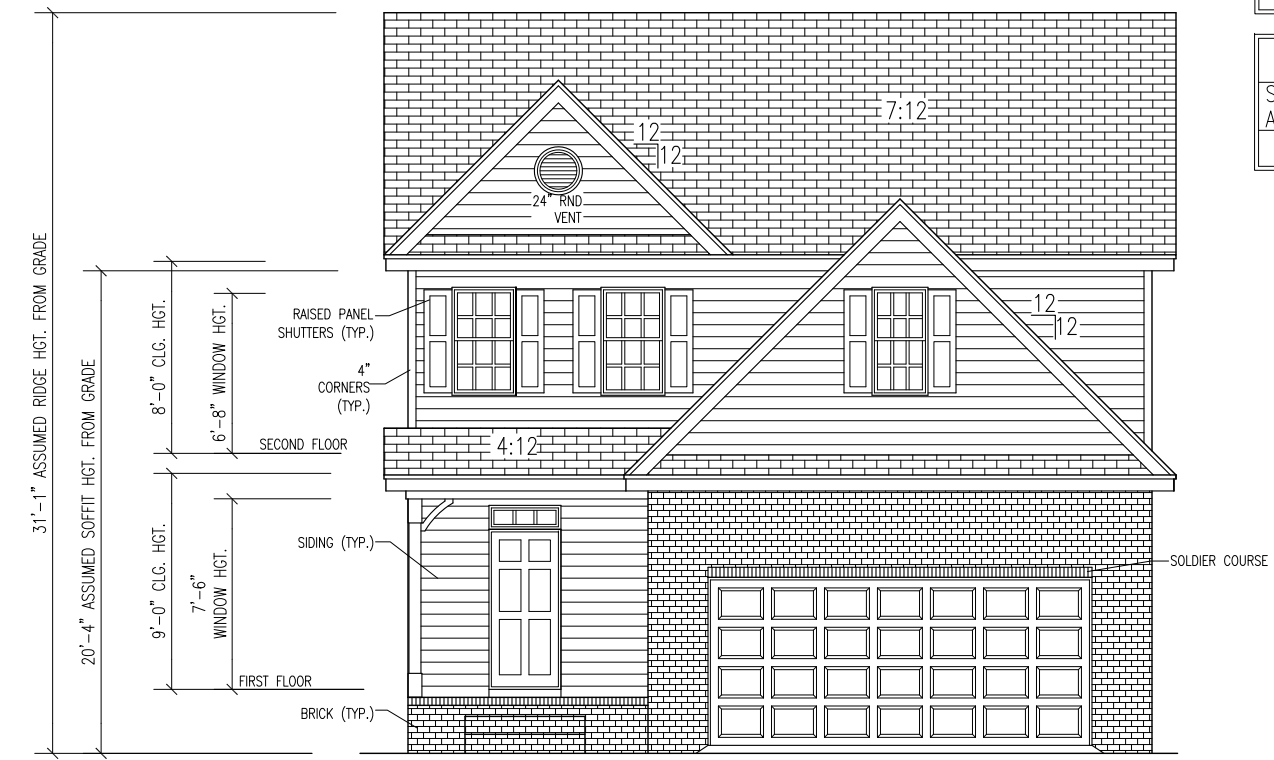


RIGHT ELEVATION

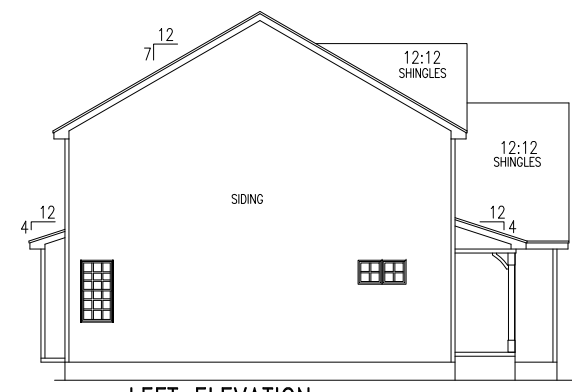
SCALE	
24"x36"	= 1/4"=1'-0"
11"x17"	= 1/8"=1'-0"

ATTIC SPACE VENTILATION	
REQUIRED	
1236 SQ. FT. OF CLG. / 150 =	8.24 SQ. FT. REQUIRED
REFER TO SECTION R806 (ROOF VENTILATION) IN NORTH CAROLINA STATE 2018 INTERNATIONAL RESIDENTIAL BUILDING CODES.	

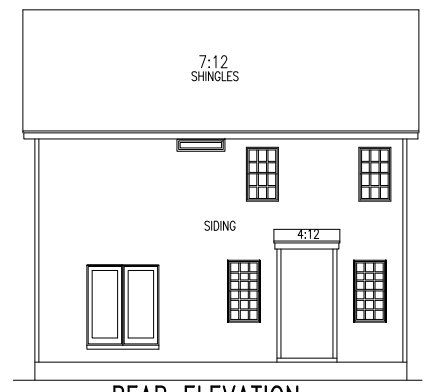
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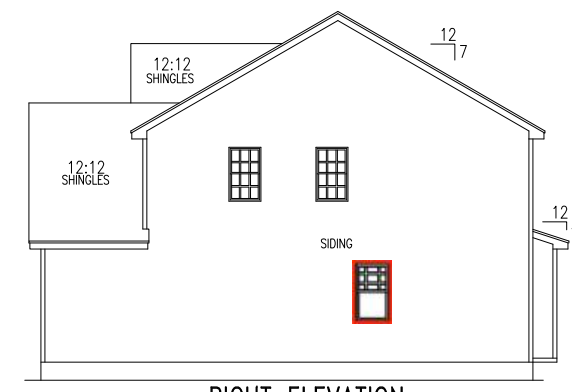
FRONT ELEVATION "B"



LEFT ELEVATION



REAR ELEVATION

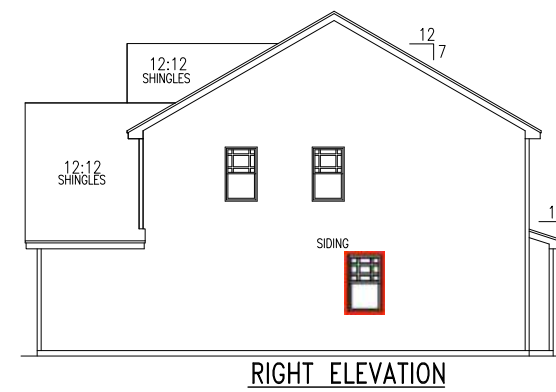
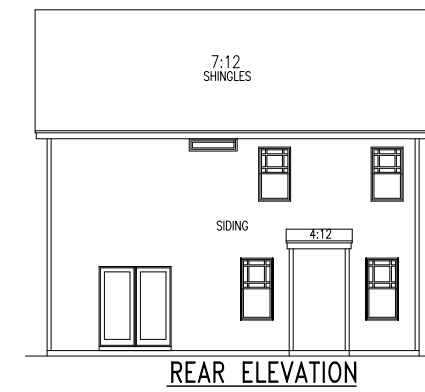
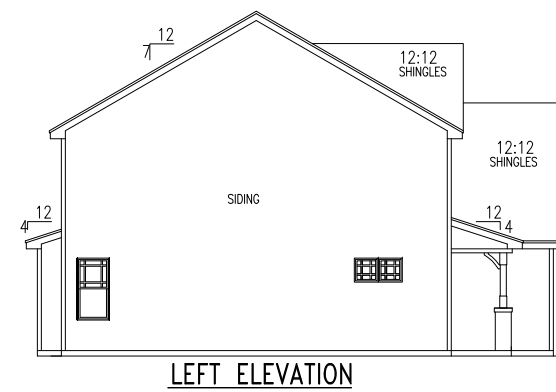
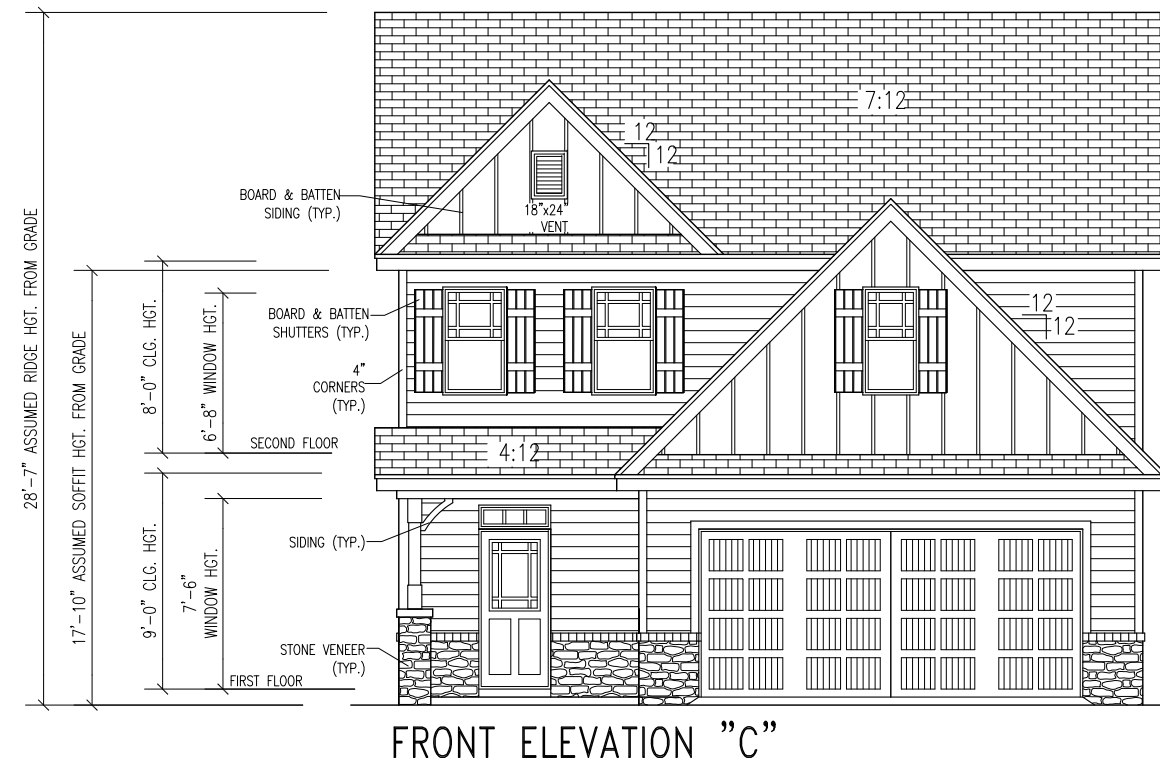


RIGHT ELEVATION

SCALE	
24"x36"	= 1/4" = 1'-0"
11"x17"	= 1/8" = 1'-0"

ATTIC SPACE VENTILATION	
REQUIRED	
1236	SQ. FT. OF CLG. / 150 = 8.24 SQ. FT. REQUIRED
REFER TO SECTION R806 (ROOF VENTILATION) IN NORTH CAROLINA STATE 2018 INTERNATIONAL RESIDENTIAL BUILDING CODES.	

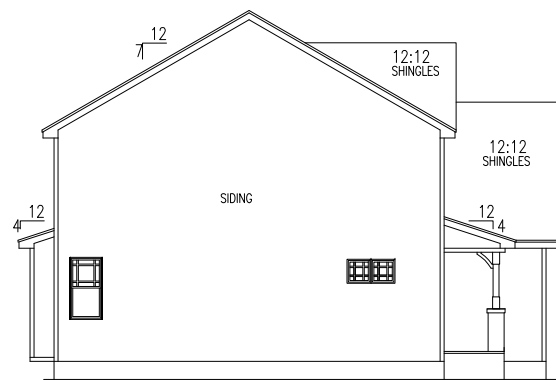
MEAN ROOF HGT.			
Soffit Hgt. From Assumed Grade	+ Highest Ridge Hgt. From Assumed Grade	÷ 2	= Mean Roof Hgt.
17'-10"	+ 28'-7"	÷ 2	= 23'-3" Mean Roof Hgt.



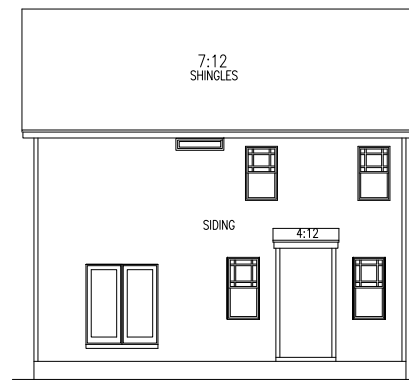
SCALE	
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11"x17"	= 1/8"=1'-0"



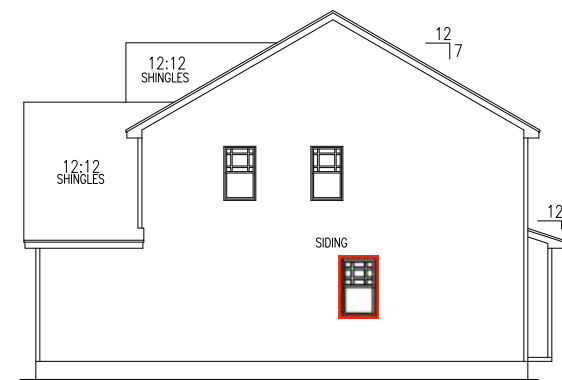
FRONT ELEVATION "C"



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION

ATTIC SPACE VENTILATION	
REQUIRED	
$\frac{1236}{150}$ SQ. FT. OF CLG. / 150 =	$\frac{8.24}{1}$ SQ. FT. REQUIRED
REFER TO SECTION R806 (ROOF VENTILATION) IN NORTH CAROLINA STATE 2018 INTERNATIONAL RESIDENTIAL BUILDING CODES.	

MEAN ROOF HGT.			
Soffit Hgt. From Assumed Grade	+ Highest Ridge Hgt. From Assumed Grade	$\div 2$	= Mean Roof Hgt.
20'-4"	+ 31'-1"	$\div 2$	= 25'-9" Mean Roof Hgt.

SCALE	
24"x36"	= 1/4"=1'-0"
11"x17"	= 1/8"=1'-0"

REVISIONS:  
12/17/2018

314 EAST MAIN STREET  
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FIRM # C-4187

**ADAMS & HODGE**  
ENGINEERING, PC

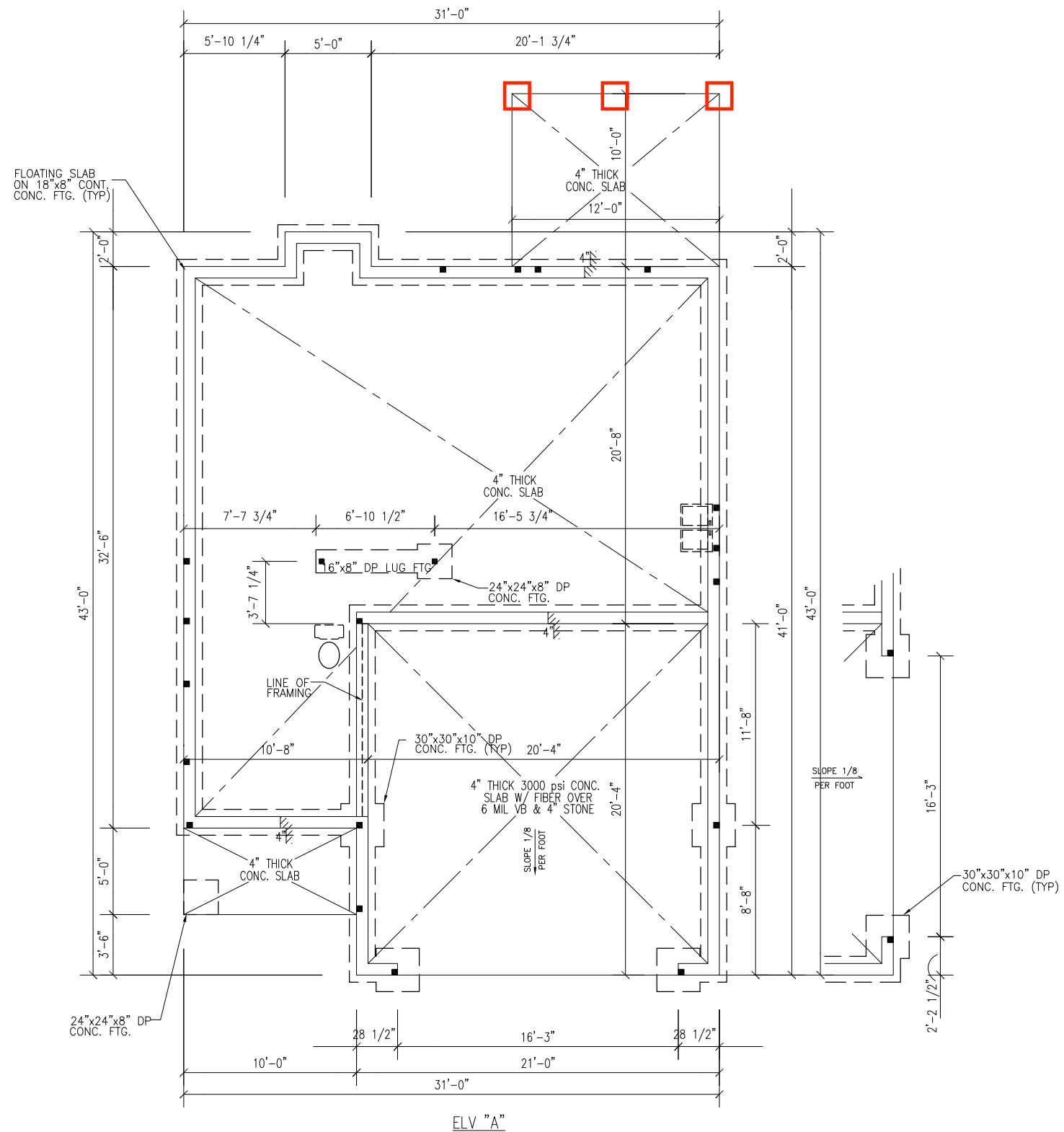
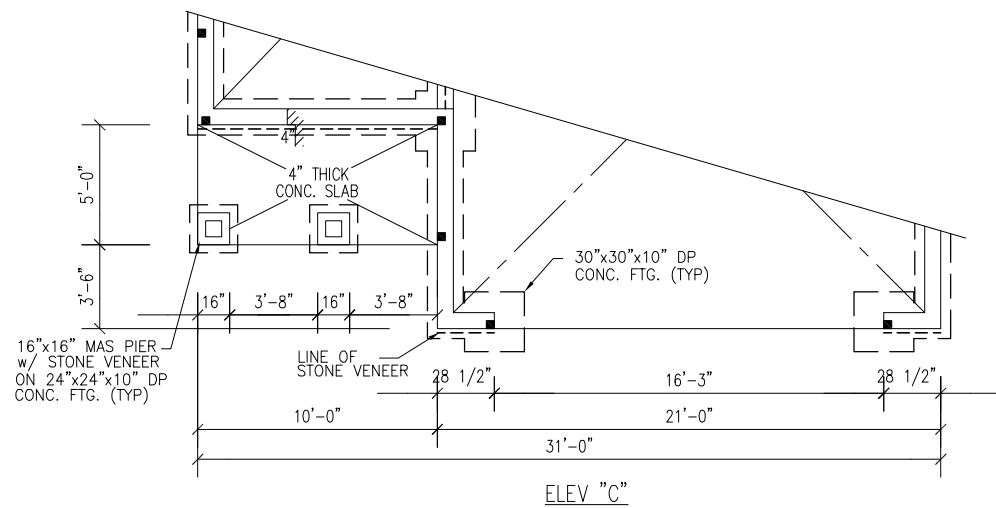
Elevation  
"C"

Palmer

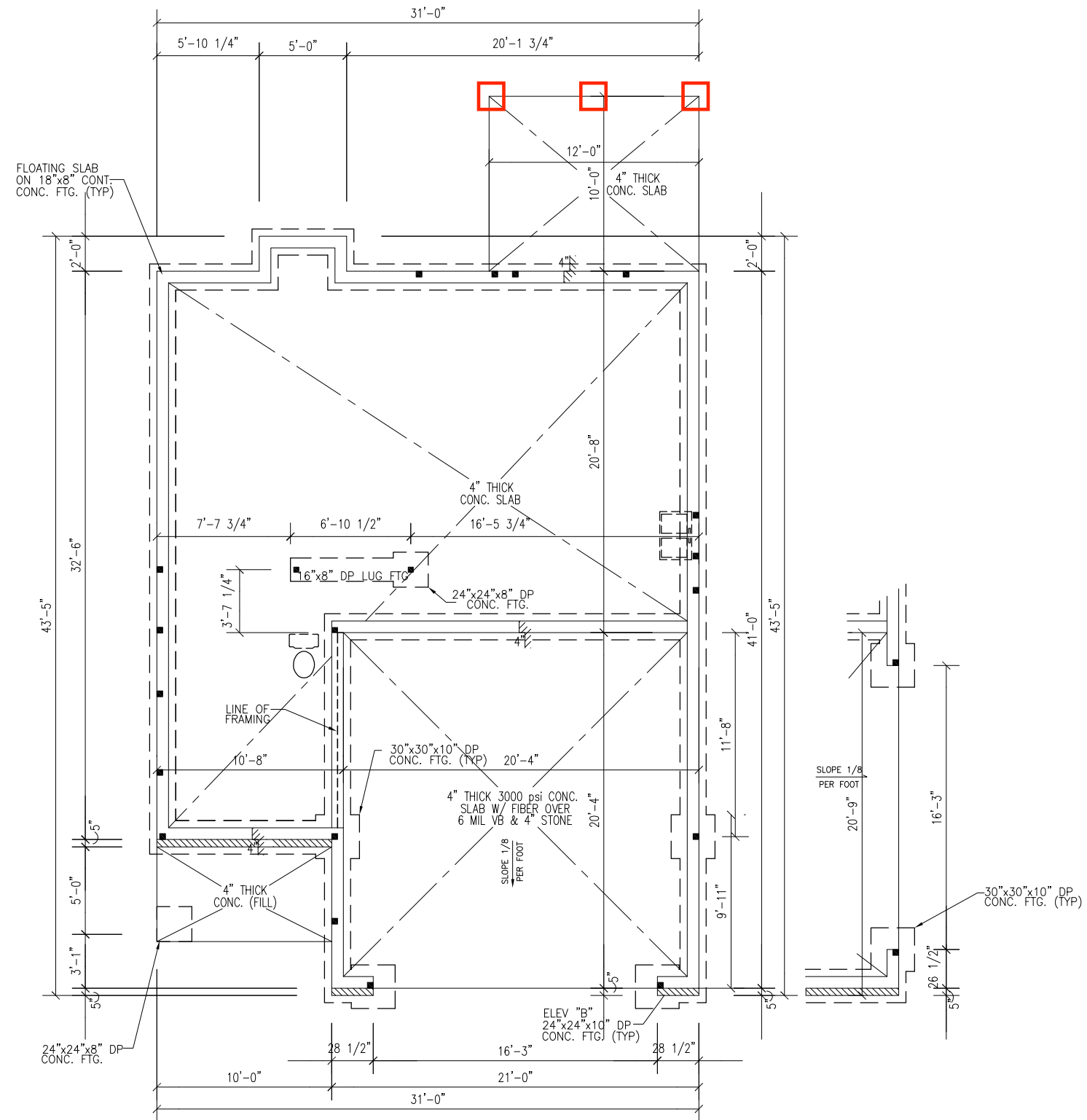
FILE  
DESIGN  
ADS  
DRAWN  
ADS  
CHECKED

DATE  
5/30/2017  
SHEET

1C



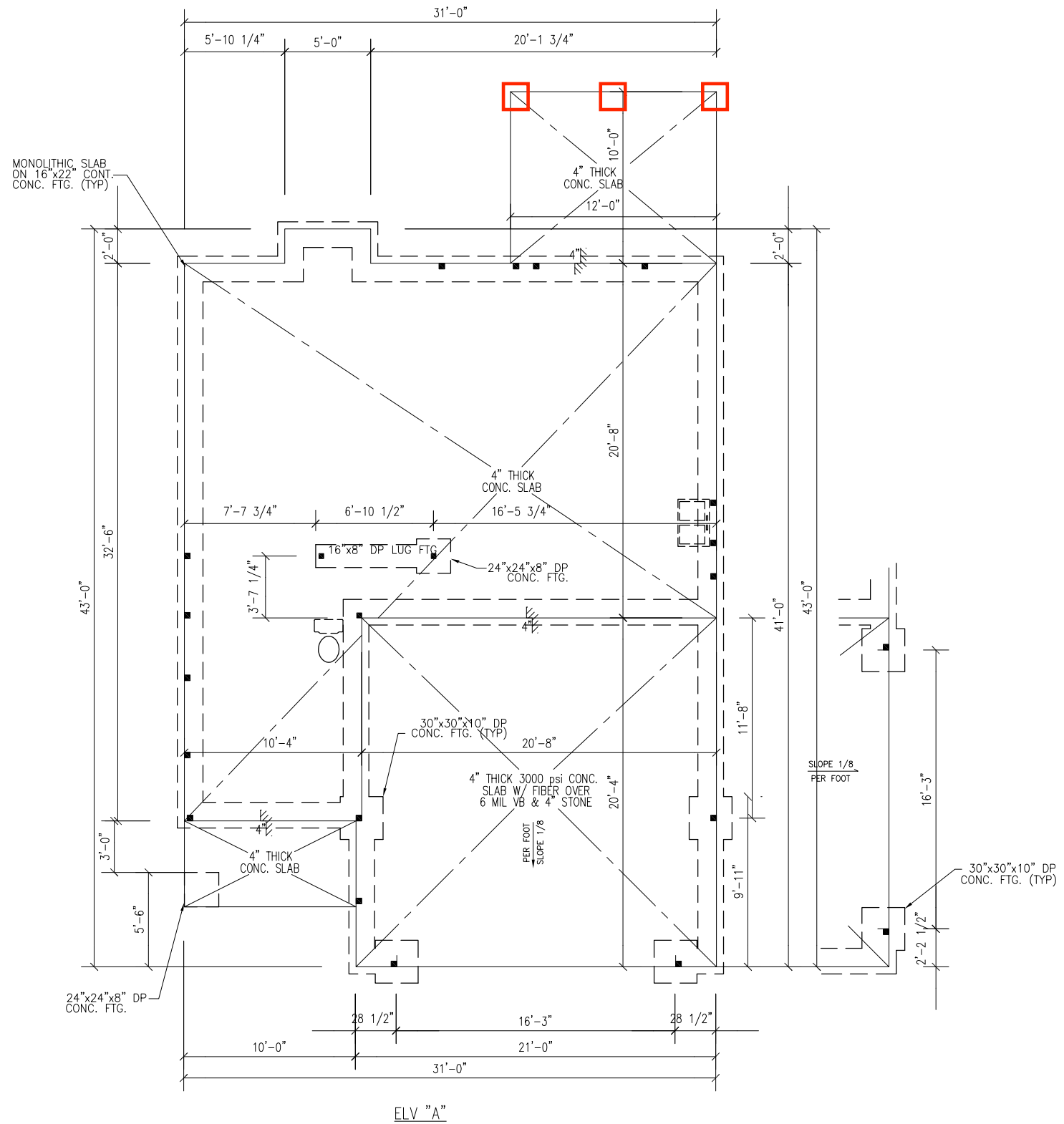
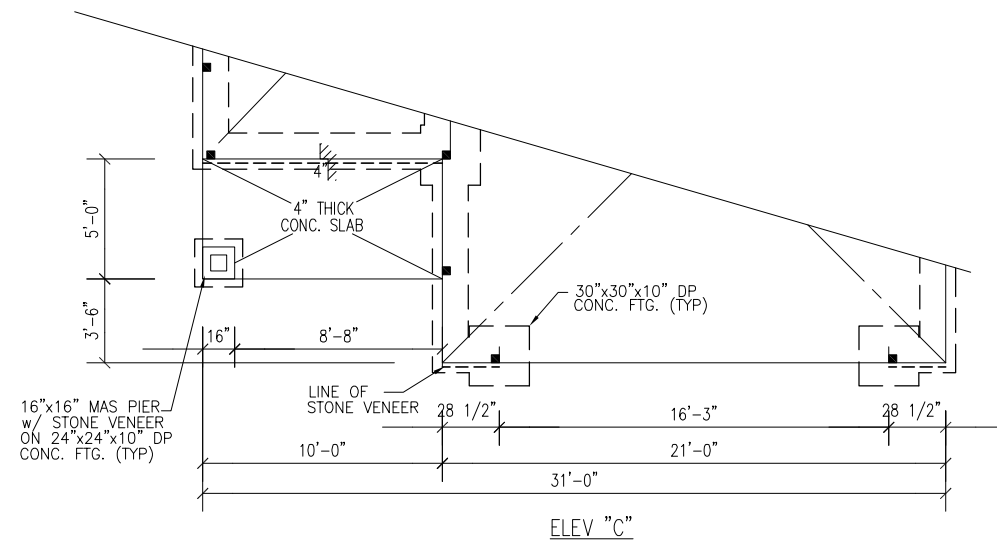
SCALE  
24"x36" = 1/4"=1'-0"  
11"x17" = 1/8"=1'-0"



SLAB FOUNDATION PLAN  
ELEV "B"

SCALE  
24" x 36" = 1/4" = 1'-0"  
11" x 17" = 1/8" = 1'-0"





**SLAB FOUNDATION PLAN**  
"A" & "C"

**SCALE**  
24"x36" = 1/4"=1'-0"  
11"x17" = 1/8"=1'-0"

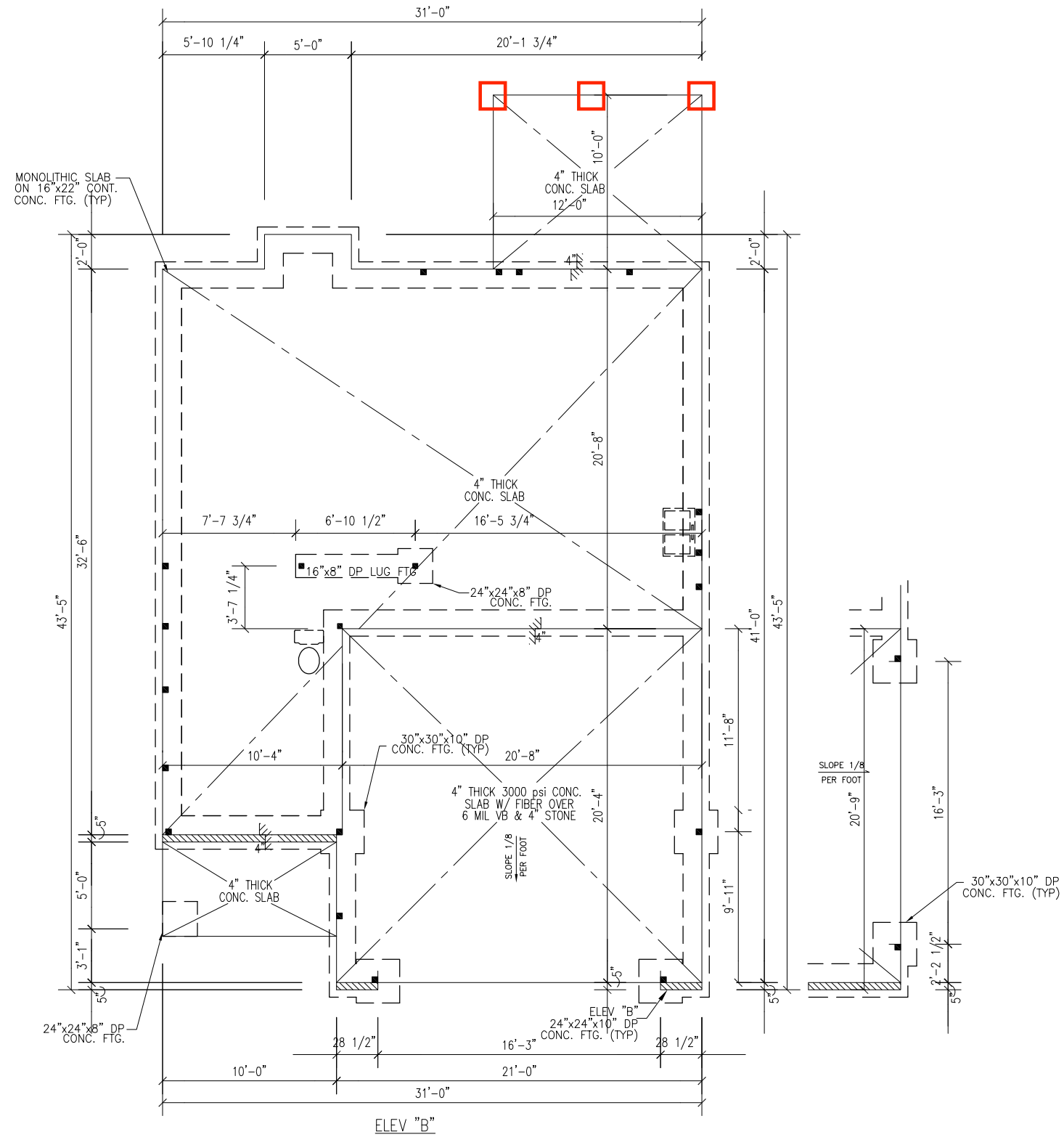




919-773-2200 • 919-773-9488  
 49 Shipwash Drive • Garner • North Carolina • 27827  
 www.tyndallengineering.com

Project Number: 1901-010030  
 \* Structural analysis based on NC Residential Building Code 2018

The Engineer's seal applies only to structural components on this document. The seal does not include construction means, methods, techniques, procedures, or safety precautions. Any deviations or discrepancies on plans are to be brought to the immediate attention of Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering's Liability.



SLAB FOUNDATION PLAN

ELEV "B"

SCALE  
 24"x36" = 1/4"=1'-0"  
 11"x17" = 1/8"=1'-0"

REVISIONS:

1/30/2019

314 EAST MAIN STREET  
 CLAYTON, NC 27520  
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 919-243-1332  
 FIRM # C-4187

**ADAMS & HODGE**  
 ENGINEERING, PC



Monolithic Slab  
 Foundation  
 "B"

Palmer

FILE

DESIGN  
 ADS

DRAWN  
 ADS

CHECKED

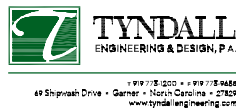
DATE  
 5/30/2017

SHEET

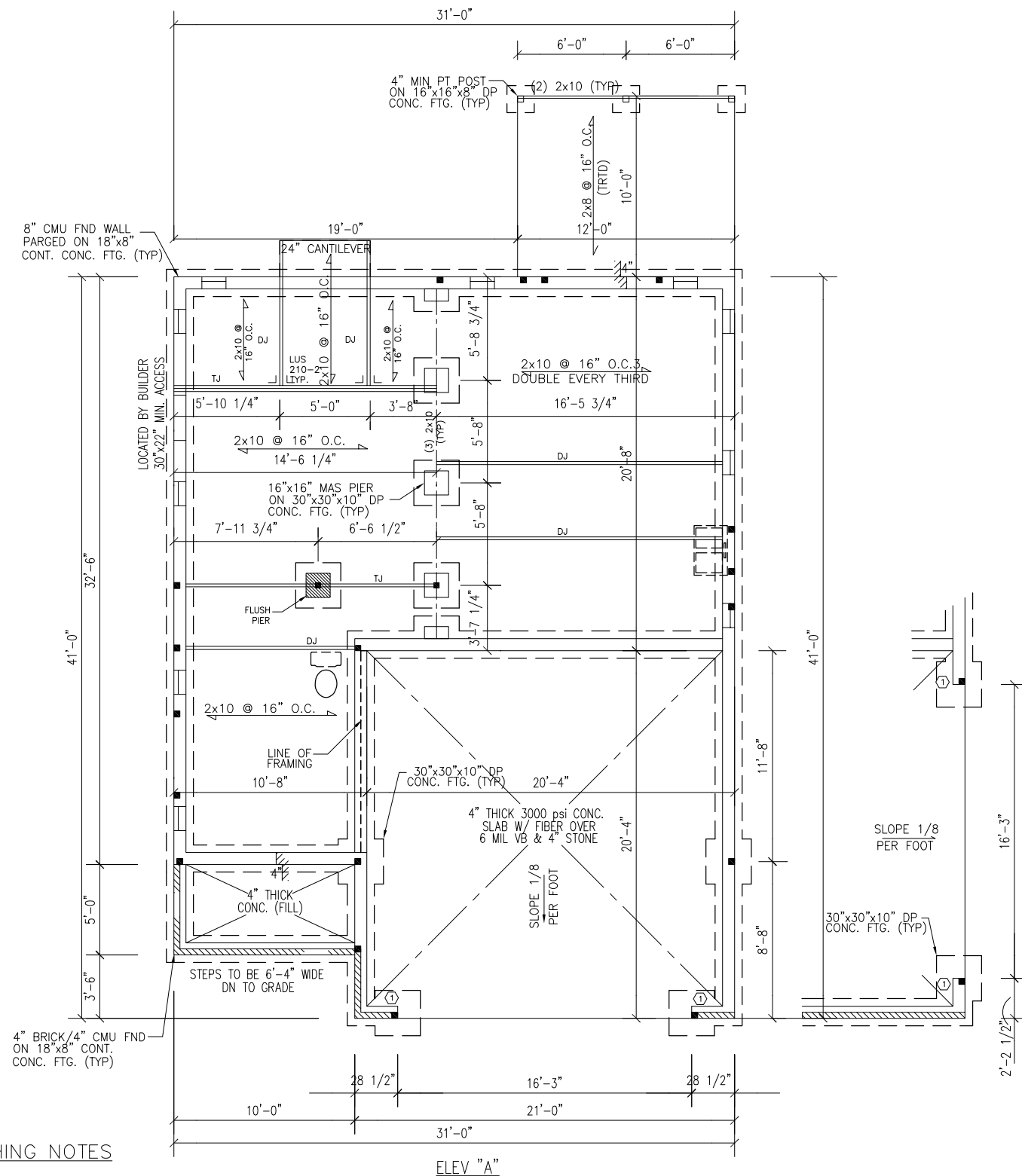
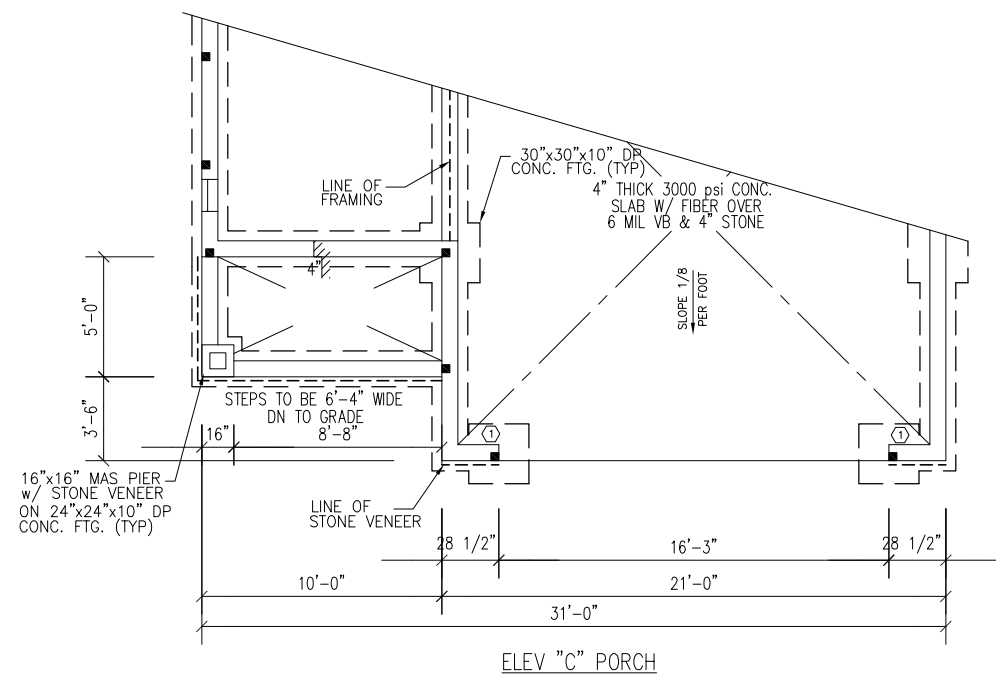
2

CRAWL SPACE VENTILATION	
REQUIRED	
756	SQ. FT. / 150 = 5.04
PROVIDED	
0.6	SQ. FT. / VENT = 9
	VENTS 15.00
	(SQ. FT. OF VENTILATION)

THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQ. FT. FOR EA. 150 SQ. FT. OF UNDER-FLOOR SPACE AREA. ONE SUCH VENTILATING OPENING SHALL BE WITHIN 3 FT. OF EA. CORNER OF SAID BUILDING.



Project Number: 1901-010030  
 \* Structural analysis based on NC Residential Building Code 2018  
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STRUCTURAL SHEATHING NOTES

- 1) REFER TO SECTION R602.10.6 & R602.10.7 FOR REQUIRED BRACED WALL PANEL (BWP) CONNECTION & SUPPORT.

① REFERENCE R602.10.7

CRAWLSPACE FOUNDATION PLAN

ELEV "A" & "C"

SCALE	
24"x36"	= 1/4"=1'-0"
11"x17"	= 1/8"=1'-0"

REVISIONS:  
1/30/2019

314 EAST MAIN STREET  
 CLAYTON, NC 27520  
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 919-243-1332  
 PERM # C-4187

**ADAMS & HODGE**  
 ENGINEERING, PC



Crawl  
 Foundation  
 "A" & "C"

Palmer

FILE

DESIGN  
 ADS

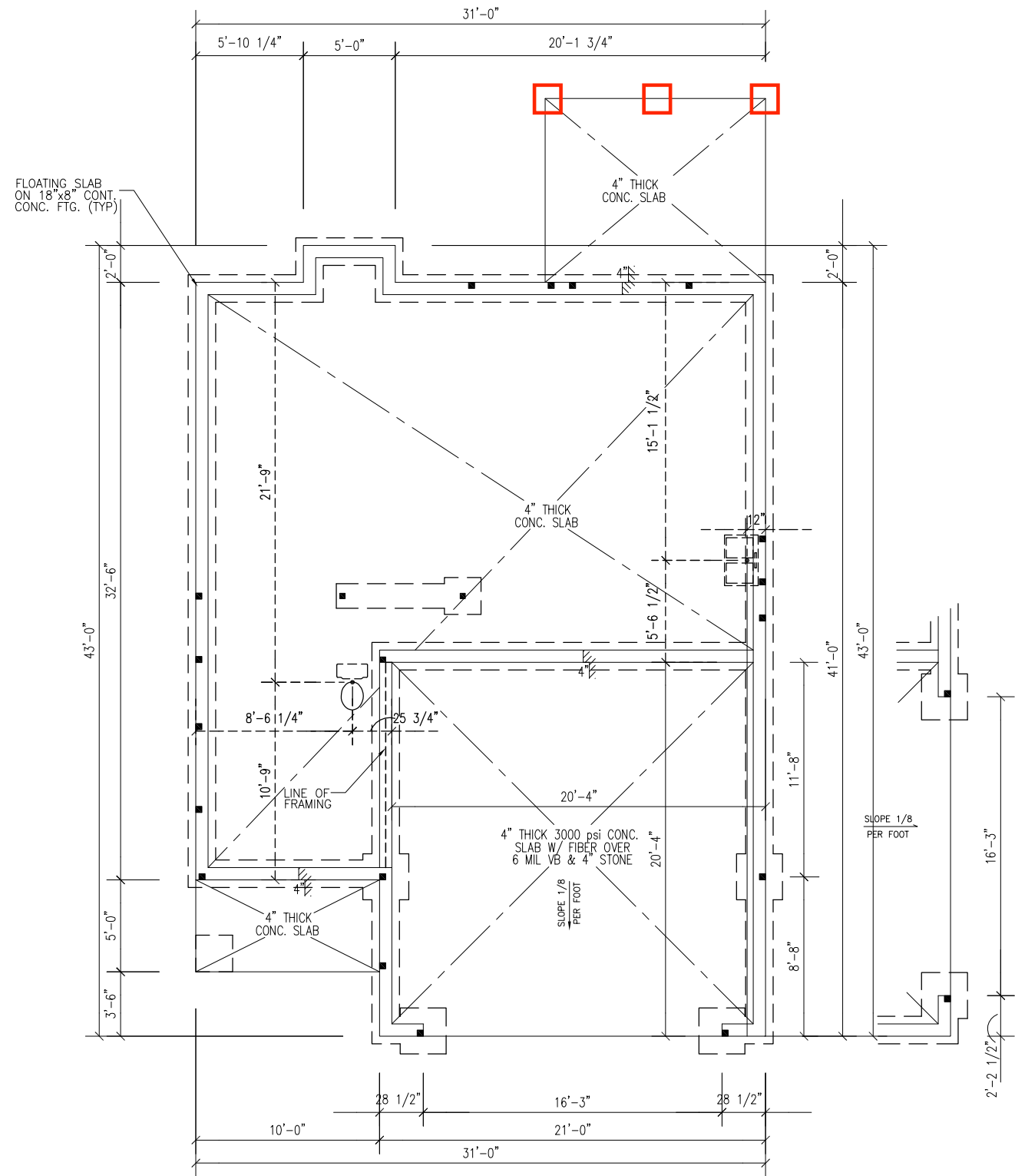
DRAWN  
 ADS

CHECKED

DATE  
 5/30/2017

SHEET





PLUMBING LAYOUT

SCALE  
 24"x36" = 1/4"=1'-0"  
 11"x17" = 1/8"=1'-0"

REVISIONS:  
 1/30/2019

314 EAST MAIN STREET  
 CLAYTON, NC 27520  
 info@adamsandhodge.com  
 919.243.1335  
 FIRM # C-4187



Plumbing  
 Layout

Palmer

FILE  
 DESIGN  
 ADS  
 DRAWN  
 ADS  
 CHECKED  
 DATE  
 5/30/2017  
 SHEET

2A

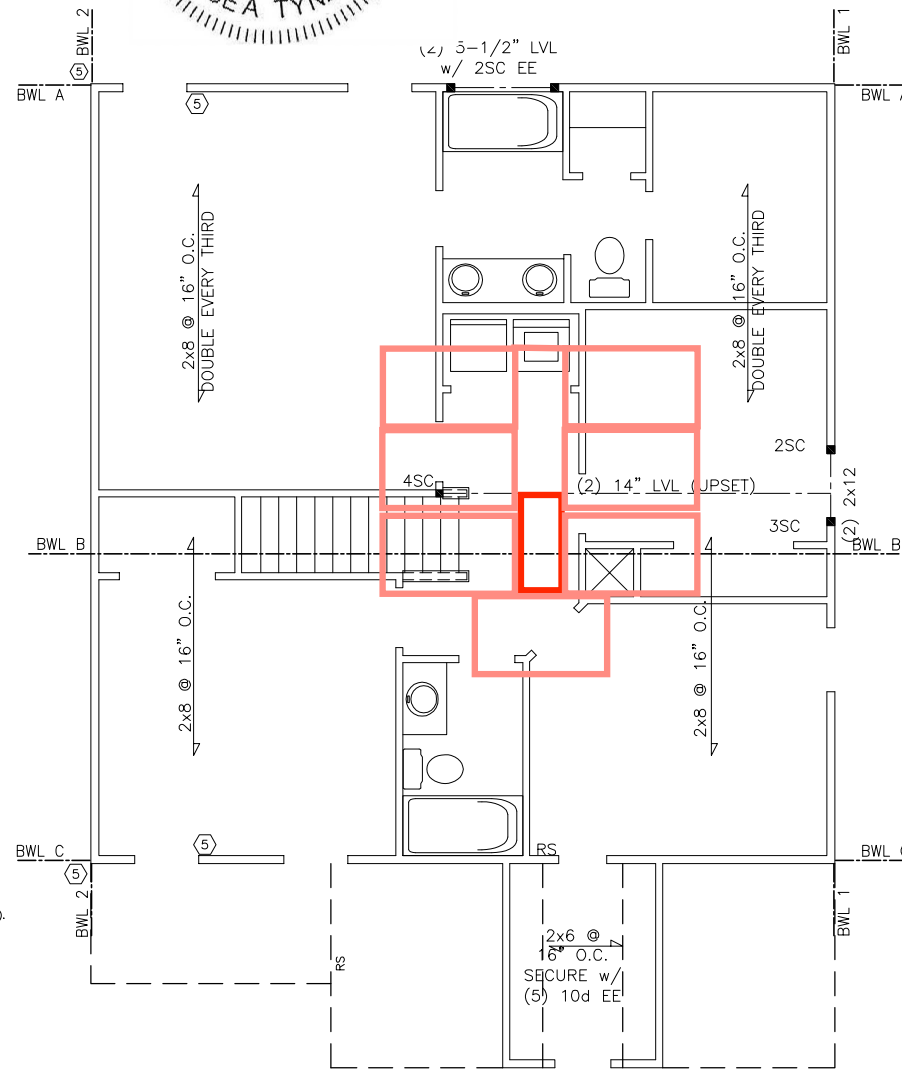
Project Number: 1901-010030  
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RS = ROOF SUPPORT  
NOTE: I-JOISTS PER MANUF. MAY BE USED IN LIEU OF FLOOR TRUSSES.

- STRUCTURAL NOTES:**
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF "NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE", IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
  - IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, P.A. IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
  - ALL LUMBER SHALL BE SYP #2 (UNO)  
ALL LVL LUMBER TO BE 1.75" WIDE NOMINAL EACH SINGLE MEMBER AND  $F_b = 2600$  PSF,  $E = 1.9M$  PSI (I.E. I-LEVEL MICROLAM)  
ALL LSL LUMBER IS TO BE 1.55E ( $F_b = 2325$  PSF)
  - ALL LOAD BEARING EXTERIOR WINDOW HEADERS WITH MAXIMUM SPAN OF 5'-6" SHOULD BE A (2) 2x10 w/ (1) 2x4 KING STUD AND (1) 2x4 JACK STUD NAILED TOGETHER w/ (2) 10d @ 8" O.C. PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-8", MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-8". OTHERWISE REFER TO TABLE R502.5(1).
  - ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLE R502.5(1) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (UNO)
  - REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL WALLS OVER 10'-0" IN HEIGHT.
  - ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50  
 $F_y = 50$  KSI MIN. (UNO)
  - ALL EXTERIOR LUMBER TO BE #2 SYP PT
  - ALL CONCRETE,  $f_c = 3000$  PSI MIN.
  - PRESUMPTIVE BEARING CAPACITY = 2000 PSF
  - 1/2" ANCHOR BOLTS SPACED AT MAXIMUM OF 6'-0" O.C. AND NOT MORE THAN 12" FROM THE CORNER. THERE SHALL BE A MINIMUM OF (2) BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
  - PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
  - PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
  - PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.4 OF THE 2018 IRC.
  - MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
  - UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
  - METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

- STRUCTURAL SHEATHING NOTES:**
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
  - WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE 2018 NRC.
  - BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.  
(1) REFERENCE FIGURE R602.10.4.3 OF THE 2018 NRC.
  - INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNO)  
(2) 1/2" GYPSUM BOARD (GB) MINIMUM LENGTH OF 8'-0" (ISOLATED PANELS) OR 4'-0" (CONTINUOUS SHEATHING). SECURE w/ 5d COOLER NAILS (OR EQUAL PER TABLE R702.3.5) SPACED @ 7" O.C. AT PANEL EDGES, INCLUDING TOP AND BOTTOM PLATES & 7" O.C. AT INTERMEDIATE SUPPORTS  
(3) 3/8" WOOD STRUCTURAL PANEL (WSP) SECURE w/ 6d COMMON NAILS SPACED AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS
  - EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD AS PRESCRIBED IN SECTION R602.10.3 (UNO)
  - ALL SHEATHABLE SURFACES OF EXTERIOR WALLS (INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS) SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANEL (WSP) SHEATHING WITH A MINIMUM THICKNESS OF 3/8". SHEATHING SHALL BE SECURED WITH MINIMUM 6d COMMON NAILS SPACED AT 6" O.C. AT PANEL EDGES AND SPACED AT 12" O.C. AT INTERMEDIATE SUPPORTS.
  - MINIMUM BRACED WALL PANEL LENGTHS WITH CS-WSP METHOD SHALL BE AS FOLLOWS:  
- 24" ADJACENT TO OPENINGS NOT MORE THAN 67% OF WALL HEIGHT  
- 30" ADJACENT TO OPENINGS GREATER THAN 67% AND LESS THAN 85% OF WALL HEIGHT  
- 48" FOR OPENINGS GREATER THAN 85% OF WALL HEIGHT  
(4) SHEATH INTERIOR & EXTERIOR

- (5) MINIMUM 800# HOLD-DOWN DEVICE
- 8) FOR CS-WSP METHOD, A MINIMUM 24" BRACED WALL PANEL CORNER RETURN SHALL BE PROVIDED AT BOTH ENDS OF A BRACED WALL LINE IN ACCORDANCE WITH FIGURE R602.10.3(4). IN LIEU OF A CORNER RETURN, EITHER A MIN. 48" BRACED WALL PANEL SHALL BE PROVIDED AT THE CORNER OR A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800# SHALL BE FASTENED TO THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW.



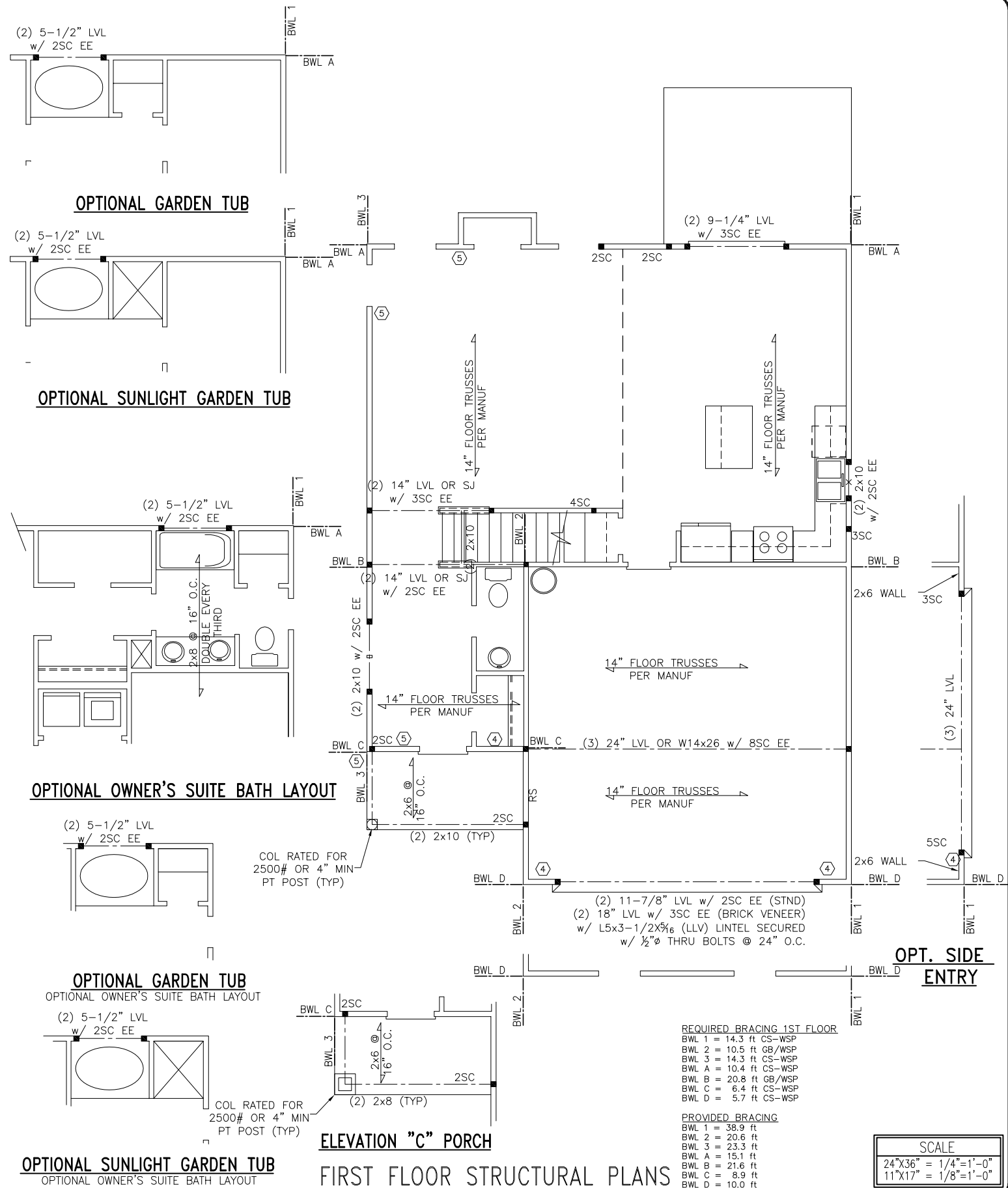
**SECOND FLOOR STRUCTURAL PLANS**

**DESIGN LOADS**

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			DL	LL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	60	10	L/360	L/240
ROOF	20	10	L/180	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 100 MPH (EXPOSURE B)			
SEISMIC	BASED ON SEISMIC ZONES A, B & C			

**REQUIRED BRACING 2ND FLOOR**  
BWL 1 = 5.8 ft CS-WSP  
BWL 2 = 5.8 ft CS-WSP  
BWL A = 4.8 ft CS-WSP  
BWL B = 10.2 ft GB  
BWL C = 6.9 ft GB/WSP

**PROVIDED BRACING**  
BWL 1 = 27.2 ft  
BWL 2 = 32.5 ft  
BWL A = 18.4 ft  
BWL B = 33.1 ft  
BWL C = 12.1 ft



**OPTIONAL SUNLIGHT GARDEN TUB**  
OPTIONAL OWNER'S SUITE BATH LAYOUT

**ELEVATION "C" PORCH**

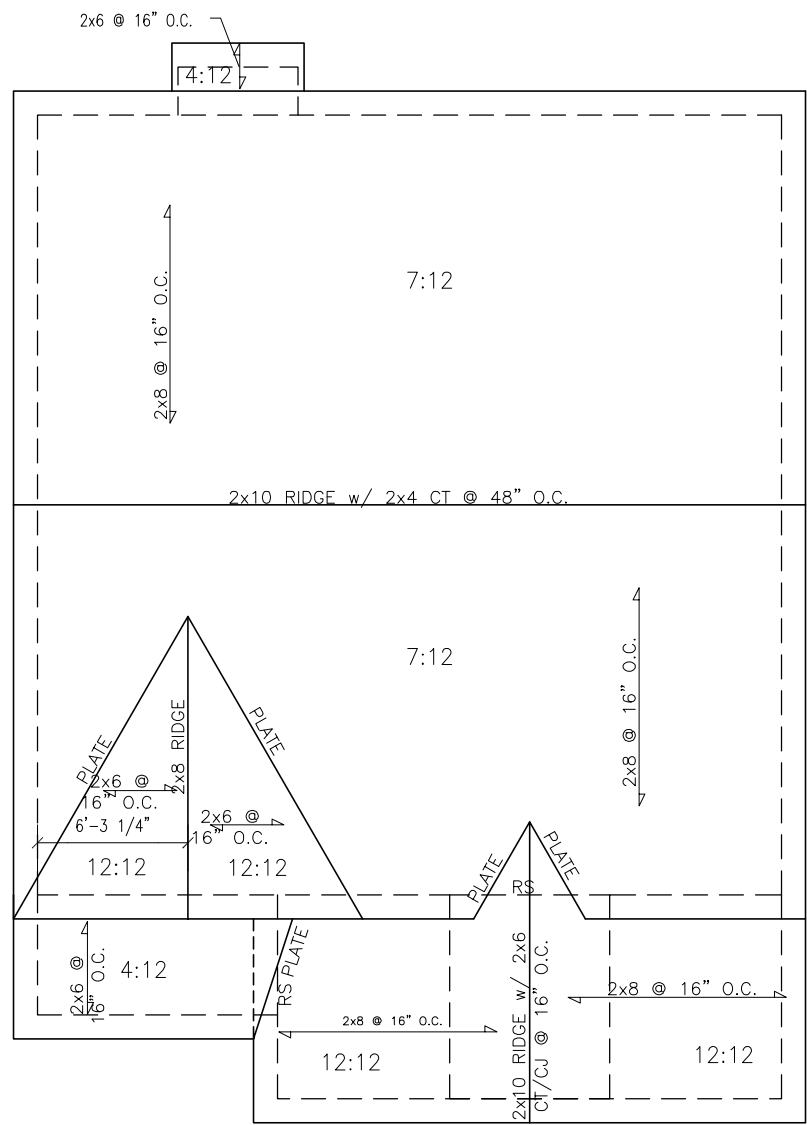
**FIRST FLOOR STRUCTURAL PLANS**

**REQUIRED BRACING 1ST FLOOR**  
BWL 1 = 14.3 ft CS-WSP  
BWL 2 = 10.5 ft GB/WSP  
BWL 3 = 14.3 ft CS-WSP  
BWL A = 10.4 ft CS-WSP  
BWL B = 20.8 ft GB/WSP  
BWL C = 6.4 ft CS-WSP  
BWL D = 5.7 ft CS-WSP

**PROVIDED BRACING**  
BWL 1 = 38.9 ft  
BWL 2 = 20.6 ft  
BWL 3 = 23.3 ft  
BWL A = 15.1 ft  
BWL B = 21.6 ft  
BWL C = 8.9 ft  
BWL D = 10.0 ft

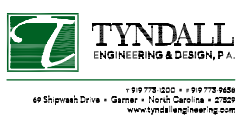
**SCALE**  
24"x36" = 1/4"=1'-0"  
11"x17" = 1/8"=1'-0"





ROOF FRAMING PLAN  
ELEV "A", "B", & "C"

PROVIDE SIMPSON H2.5A @ EACH RAFTER  
(TYP @ SCREEN PORCHES & VAULTED AREAS)  
RS = ROOF SUPPORT



Project Number: 1901-010030  
\* Structural analysis based on NC Residential Building Code 2018  
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SCALE  
24"X36" = 1/4"=1'-0"  
11"X17" = 1/8"=1'-0"

REVISIONS:  
1/30/2019

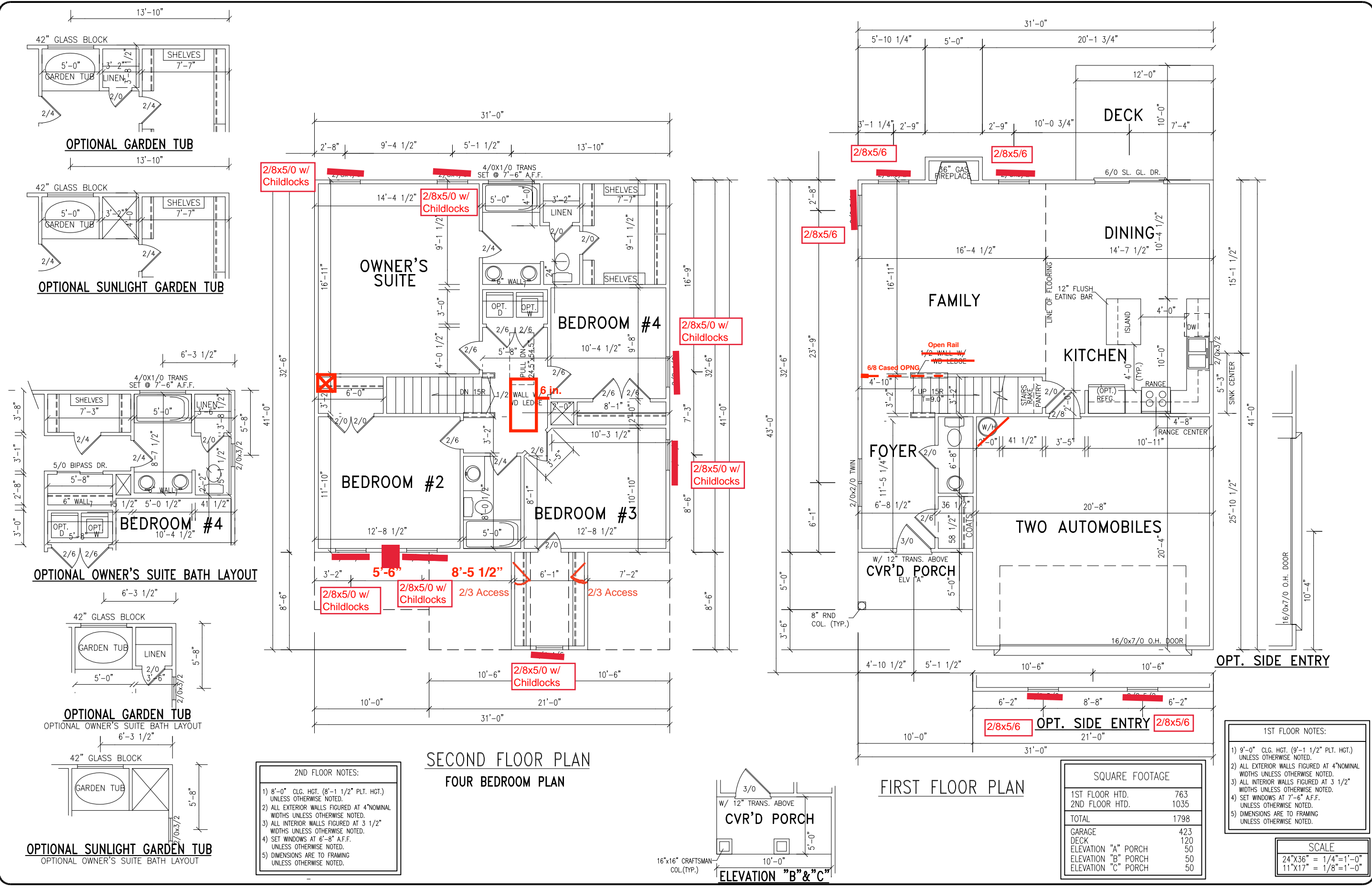
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FIRM # C-4187



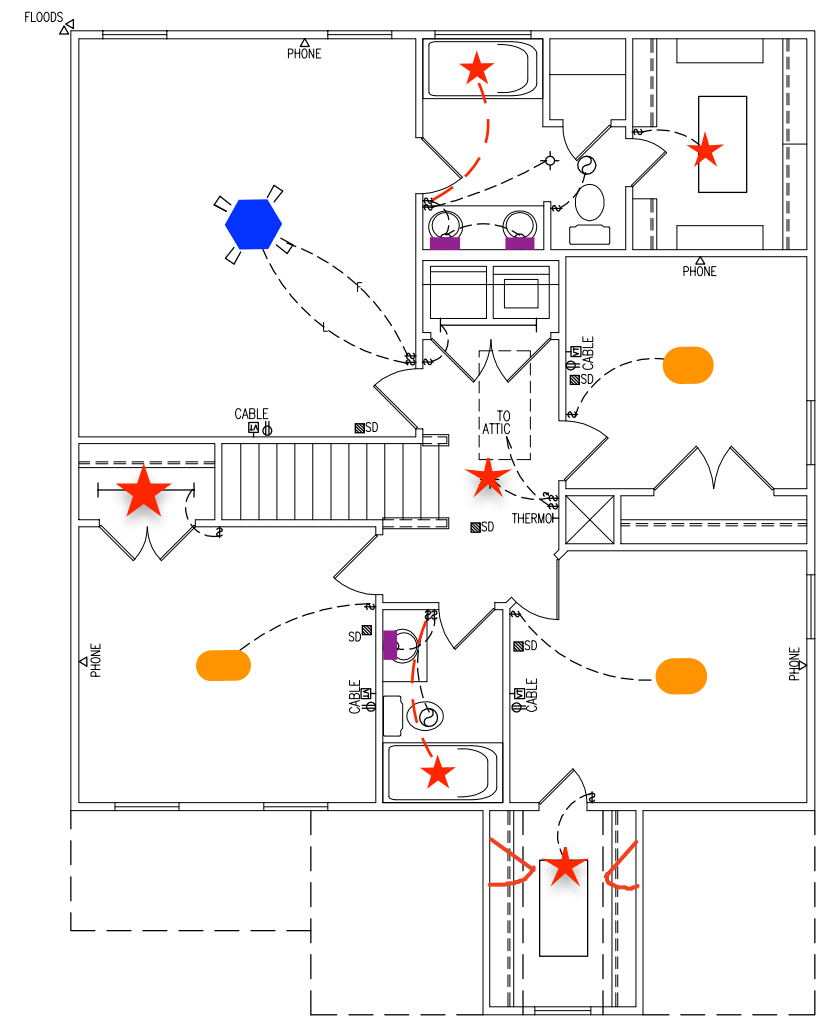
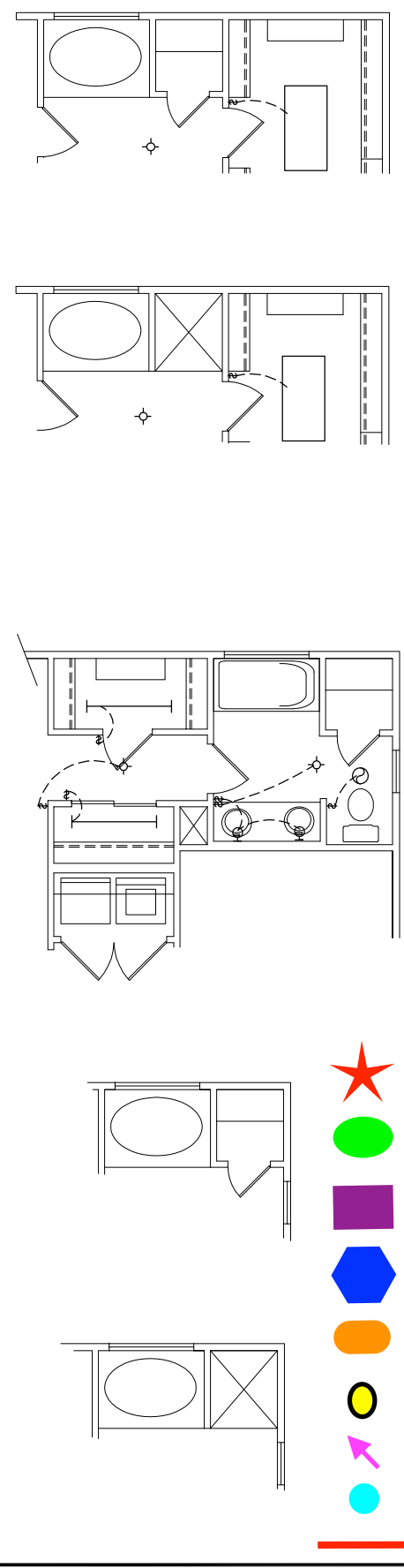
Roof Framing

Palmer

FILE
DESIGN ADS
DRAWN ADS
CHECKED
DATE 5/30/2017
SHEET



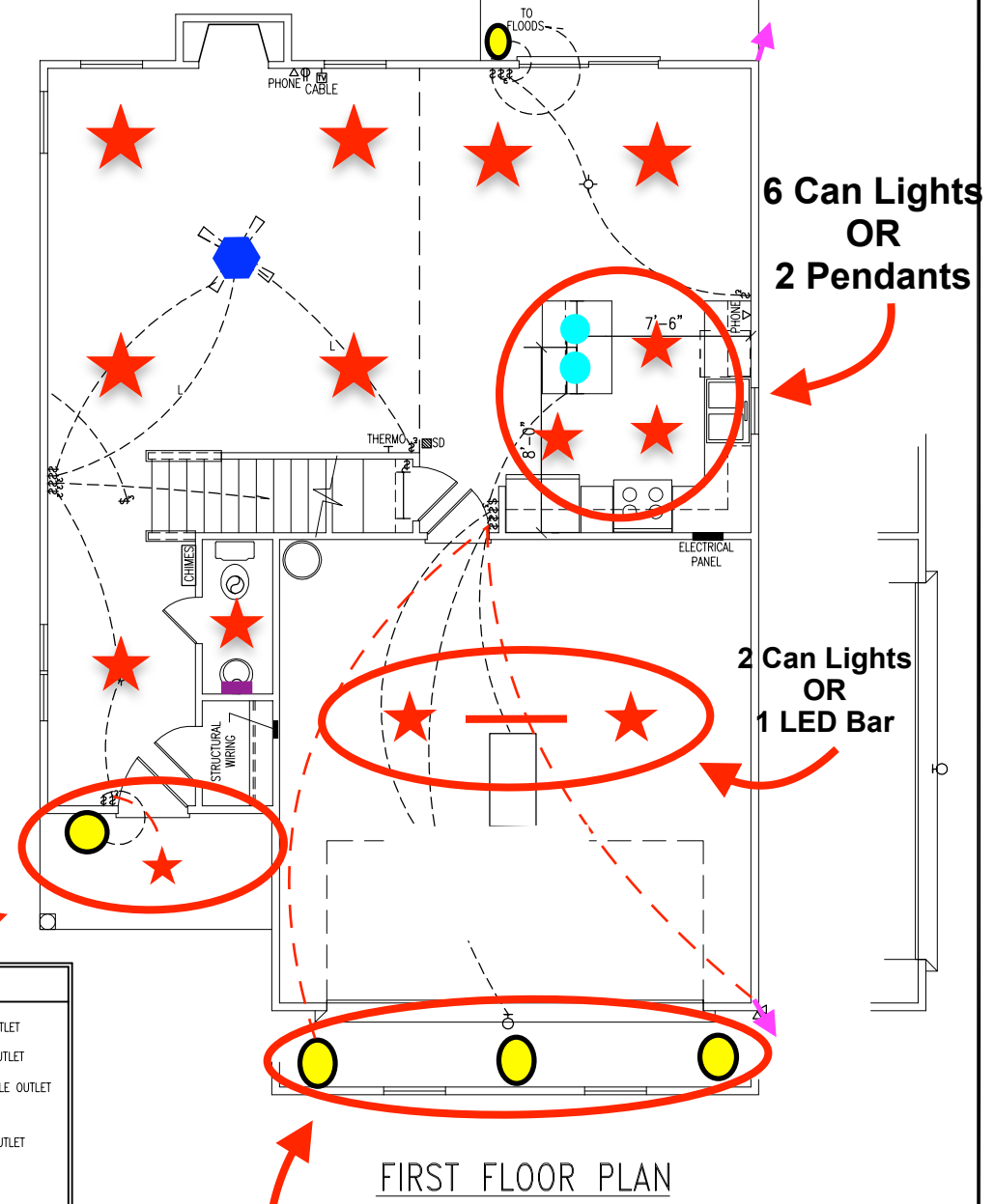




SECOND FLOOR PLAN

- Disk Light**
- Dining Fixture**
- Vanity Wall Fixture**
- Ceiling Fan**
- Flush Mount**
- Exterior Wall Mount**
- Flood Lights**
- Pendant Light**
- LED Light Bar**

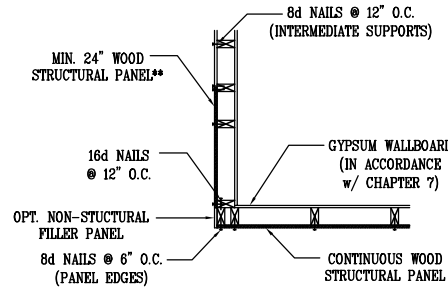
ELECTRICAL SYMBOLS			
	CEILING MOUNTED LIGHT FIXTURE		SINGLE RECEPTACLE OUTLET
	DIRECTIONAL CLG. LIGHT FIXTURE		DUPLEX RECEPTACLE OUTLET
	RECESSED LIGHT FIXTURE		QUADRUPLEX RECEPTACLE OUTLET
	WALL MOUNTED LIGHT FIXTURE		FLOOR OUTLET
	EXTERIOR FLOOD LIGHT		DUPLEX RECEPTACLE OUTLET SPLIT USED
	TRACK LIGHT FIXTURE		220 VOLT OUTLET
	CHIMES		WATER PROOF OUTLET
	SINGLE POLE WALL SWITCH		TELEPHONE OUTLET
	3-WAY POLE WALL SWITCH		TV OUTLET
	FOUR-WAY SWITCH		GROUND FAULT INTERCEPTOR
	GROUND FAULT INTERCEPTOR		RECESSED LIGHT FIXTURE ANGLE CUT
	WATER PROOF SWITCH		PULL CHAIN LIGHT FIXTURE
	DIMMER SWITCH		FLUORESCENT LIGHT BOX
	TIMER SWITCH		CEILING FAN
	FLUORESCENT LIGHT		EXHAUST FAN
	ELECTRICAL OUTLET GARAGE DOOR OPENER		SMOKE DETECTOR
	HANGING LIGHT FIXTURE		EXHAUST FAN/LIGHT
	CEILING FAN/LIGHT		SHOWER LIGHT



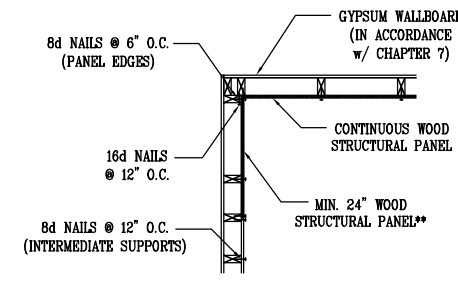
FIRST FLOOR PLAN

NOTE:  
(1) ALL RECEPTACLE PLACEMENT TO CODE.  
(2) PLEASE NOTE RECEPTACLE PLACEMENT PER FSC.

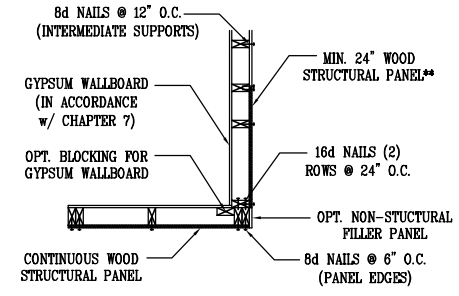
ELECTRICAL PLANS



a) OUTSIDE CORNER DETAIL



b) INSIDE CORNER DETAIL



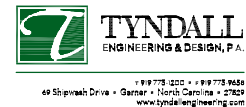
c) GARAGE DOOR CORNER

\*\* IN LIEU OF THE CORNER RETURN, A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800# SHALL BE PASTENED TO THE CORNER STUD AND TO THE FOUNDATION OR FRAMING BELOW.

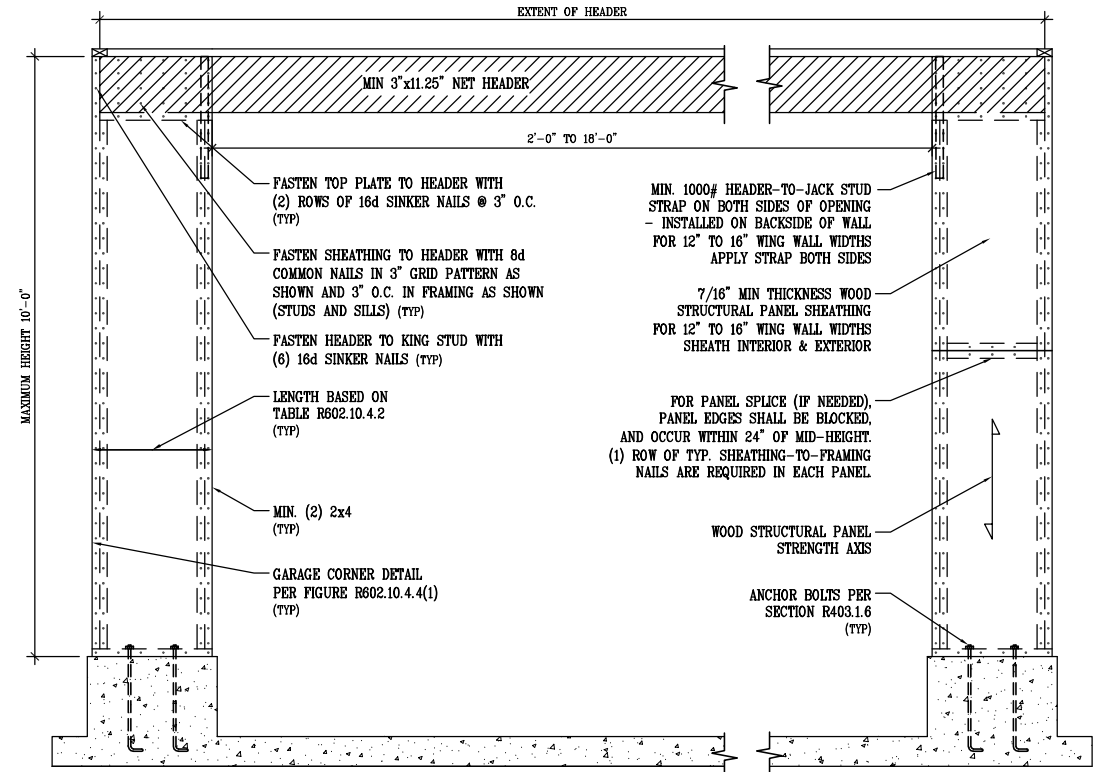
**B1: TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING**  
FIGURE R602.10.4.4(1) - NO SCALE

**STRUCTURAL SHEATHING NOTES**

- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
- WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE 2018 NCRC.
- BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
  - REFERENCE FIGURE R602.10.4.3 OF THE 2018 NCRC.
- INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNO)
  - 1/2" GYPSUM BOARD (GB) MINIMUM LENGTH OF 6'-0" (ISOLATED PANELS) OR 4'-0" (CONTINUOUS SHEATHING). SECURE w/ 5d COOLER NAILS (OR EQUAL PER TABLE R702.3.5) SPACED @ 7" O.C. AT PANEL EDGES, INCLUDING TOP AND BOTTOM PLATES & 7" O.C. AT INTERMEDIATE SUPPORTS
  - 3/8" WOOD STRUCTURAL PANEL (WSP) SECURE w/ 6d COMMON NAILS SPACED AT 6" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS
- EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD AS PRESCRIBED IN SECTION R602.10.3 (UNO)
- ALL SHEATHABLE SURFACES OF EXTERIOR WALLS (INCLUDING AREAS ABOVE AND BELOW OPENINGS AND CABLE END WALLS) SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANEL (WSP) SHEATHING WITH A MINIMUM THICKNESS OF 3/8". SHEATHING SHALL BE SECURED WITH MINIMUM 6d COMMON NAILS SPACED AT 6" O.C. AT PANEL EDGES AND SPACED AT 12" O.C. AT INTERMEDIATE SUPPORTS.
- MINIMUM BRACED WALL PANEL LENGTHS WITH CS-WSP METHOD SHALL BE AS FOLLOWS:
  - 24" ADJACENT TO OPENINGS NOT MORE THAN 67% OF WALL HEIGHT
  - 30" ADJACENT TO OPENINGS GREATER THAN 67% AND LESS THAN 85% OF WALL HEIGHT.
  - 48" FOR OPENINGS GREATER THAN 85% OF WALL HEIGHT
- SHEATH INTERIOR & EXTERIOR
- FOR CS-WSP METHOD, A MINIMUM 24" BRACED WALL PANEL CORNER RETURN SHALL BE PROVIDED AT BOTH ENDS OF A BRACED WALL LINE IN ACCORDANCE WITH FIGURE R602.10.3(4). IN LIEU OF A CORNER RETURN, EITHER A MIN. 48" BRACED WALL PANEL SHALL BE PROVIDED AT THE CORNER OR A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800# SHALL BE FASTENED TO THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW.
- MINIMUM 800# HOLD-DOWN DEVICE



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**B2: METHOD CS-PF: CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION**  
FIGURE R602.10.4.1.1 w/ MODIFICATIONS FOR 12" TO 16" WING WALLS - NO SCALE

LENGTH REQUIREMENTS FOR BRACED WALL PANELS WITH CONTINUOUS SHEATHING <sup>a</sup> (INCHES)						
METHOD	ADJACENT CLEAR OPENING HEIGHT (INCHES)	WALL HEIGHT (FEET)				
		8	9	10	11	12
CS-WSP	64	24	27	30	33	36
	66	26	27	30	---	---
	72	28	27	30	---	---
	76	29	30	30	---	---
	80	31	33	30	---	---
	84	35	36	33	---	---
	88	39	39	36	---	---
	92	44	42	39	---	---
	96	48	45	42	---	---
	100	---	48	45	---	---
	104	---	51	48	---	---
	108	---	54	51	---	---
	112	---	---	54	44	---
	116	---	---	57	---	---
120	---	---	60	---	---	
122	---	---	---	---	48	
132	---	---	---	66	---	
144	---	---	---	---	75	
CS-G	≤ 120	24	27	30	---	---
CS-PF	≤ 120	16	18	20	---	---

FOR SI: 1 INCH = 25.4 MILLIMETERS, 1 FOOT = 304.8 MILLIMETERS.  
a. INTERPOLATION SHALL BE PERMITTED.  
b. BRACED WALL PANELS USING (WSP) WOOD STRUCTURAL PANEL SHEATHING ON BOTH SIDES MAY BE USED TO REDUCE THE PANEL LENGTHS SHOWN BY 50 PERCENT.

**B3: LENGTH REQUIREMENTS FOR BRACED WALL PANELS**  
w/ CONTINUOUS SHEATHING - TABLE R602.10.4.2 - NO SCALE

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			@ PANEL EDGES	@ INTERMEDIATE SUPPORTS
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSUM BOARD	1/2"	5d COOLER NAIL** @ 7" O.C.	5d COOLER NAIL** @ 7" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.

\*\*OR EQUIVALENT PER TABLE R702.3.5

**B4: BRACE WALL PANEL CONNECTIONS**  
NO SCALE

REVISIONS:  
1/30/2019

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FIRM # C-4187



Bracing  
Details

Palmer

FILE

DESIGN  
ADS

DRAWN  
ADS

CHECKED

DATE  
5/30/2017

SHEET

D1