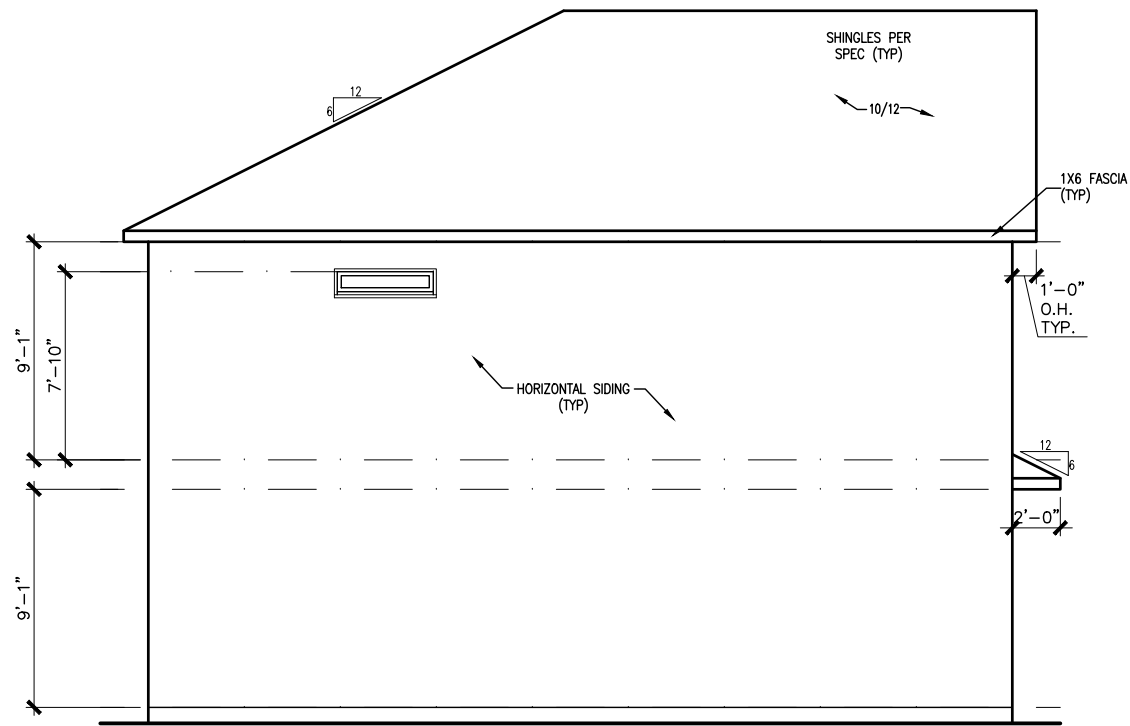




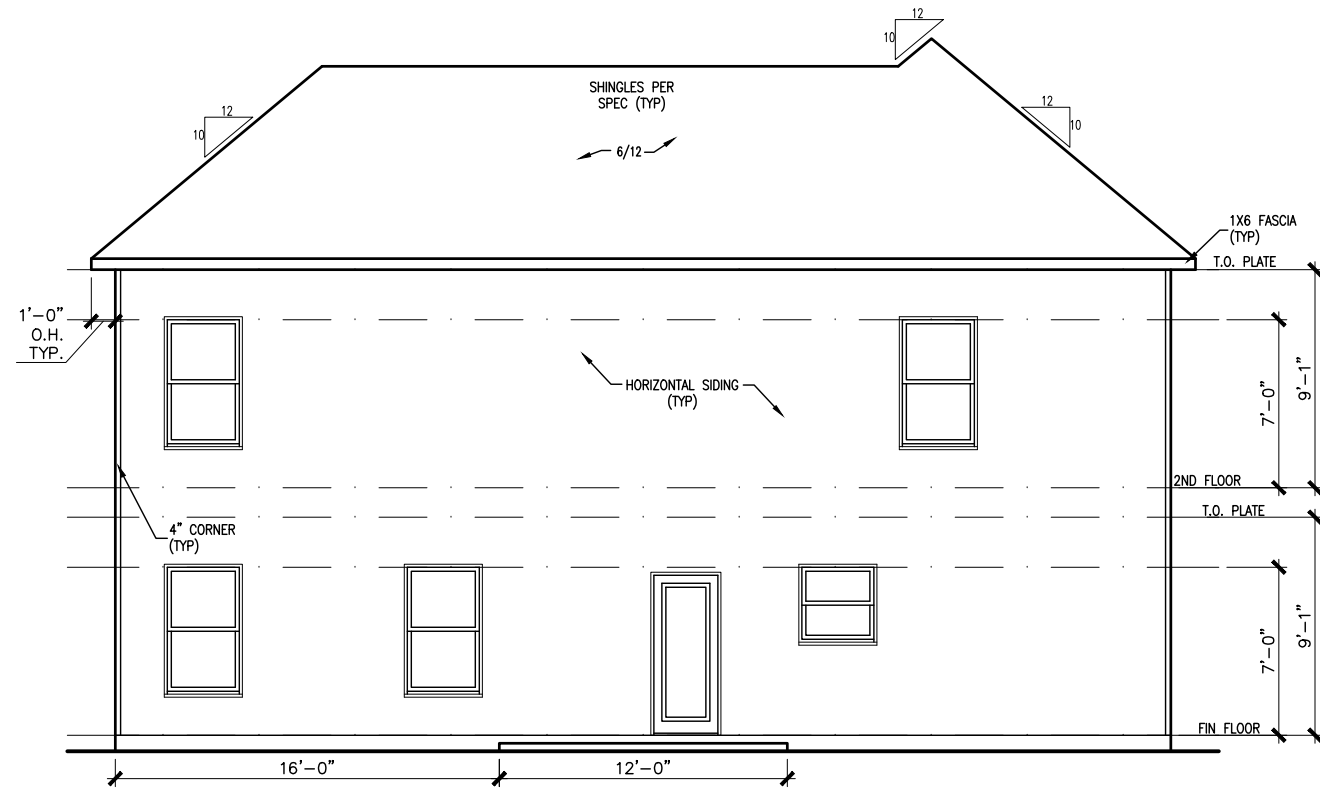


# DUNCANS CROSSING LOT 71



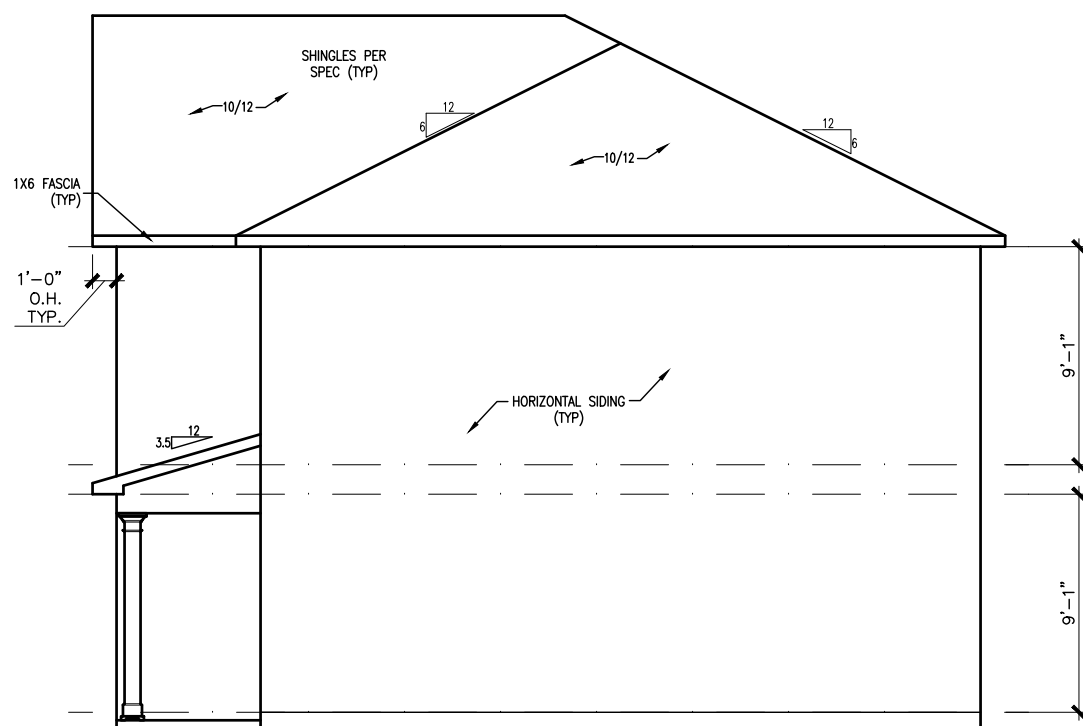
RIGHT ELEVATION "C"

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



REAR ELEVATION

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



LEFT ELEVATION "C"

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

BY	#	REVISION	DATE



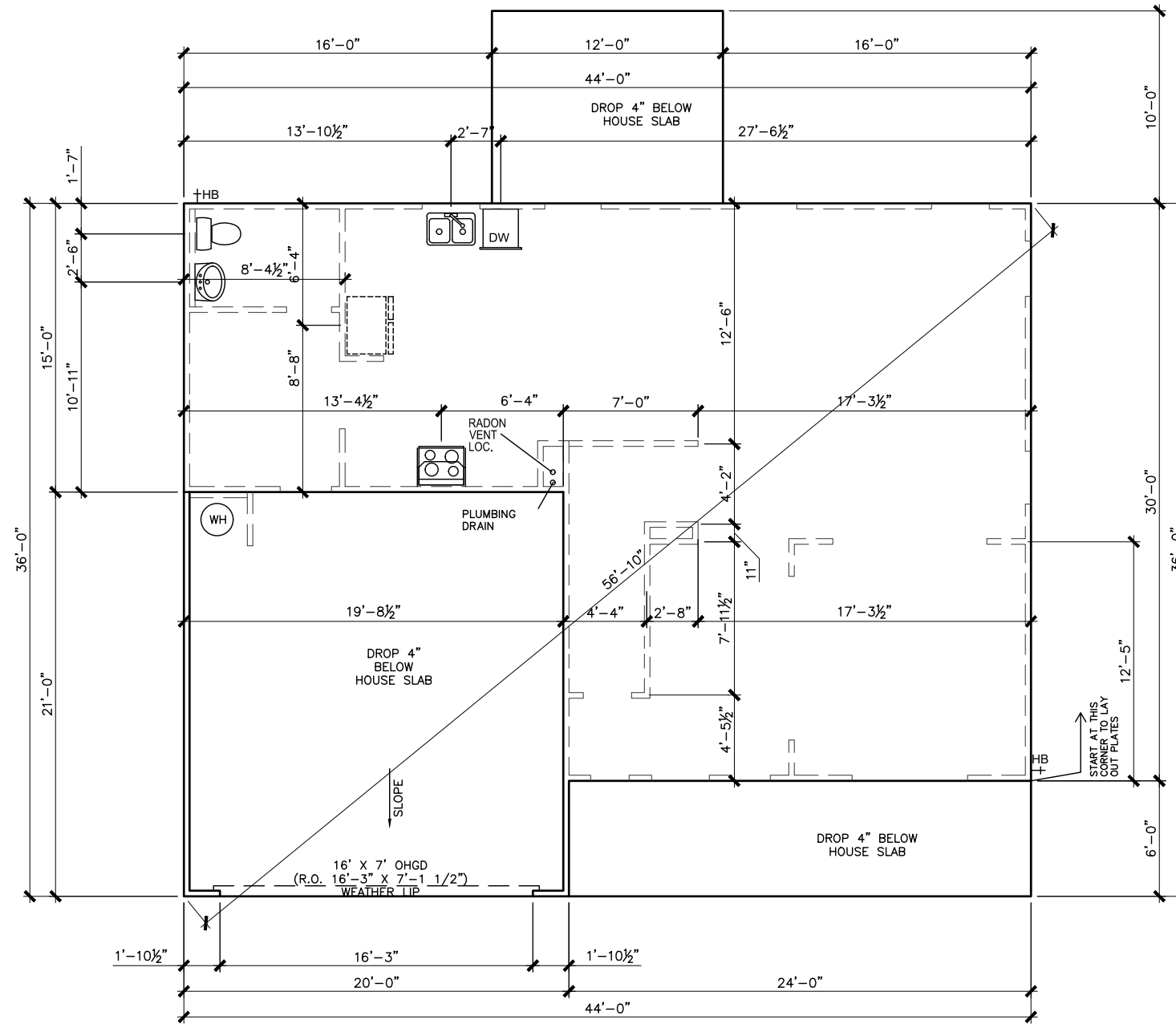
ELEVATIONS  
SIDES & REAR  
MORGAN

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SUITE 115  
WOODSTOCK, GA 30188  
www.smithdouglas.com

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DATE: 12-21-22	
FACADE OPT: C	
PLAN ID:	
FND: ALL	ELEV: C
PAGE NO: A2.1	

# DUNCANS CROSSING LOT 71



REFER TO DETAIL 3/D1  
FOR BRICK LEDGE  
DETAIL WHEN BRICK  
VENEER IS CHOSEN

**SLAB PLAN**

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

DATE	REVISION	BY	#

**SMITH DOUGLAS HOMES**  
QUALITY | INTEGRITY | VALUE

FOUNDATION PLAN  
SLAB PLAN  
MORGAN

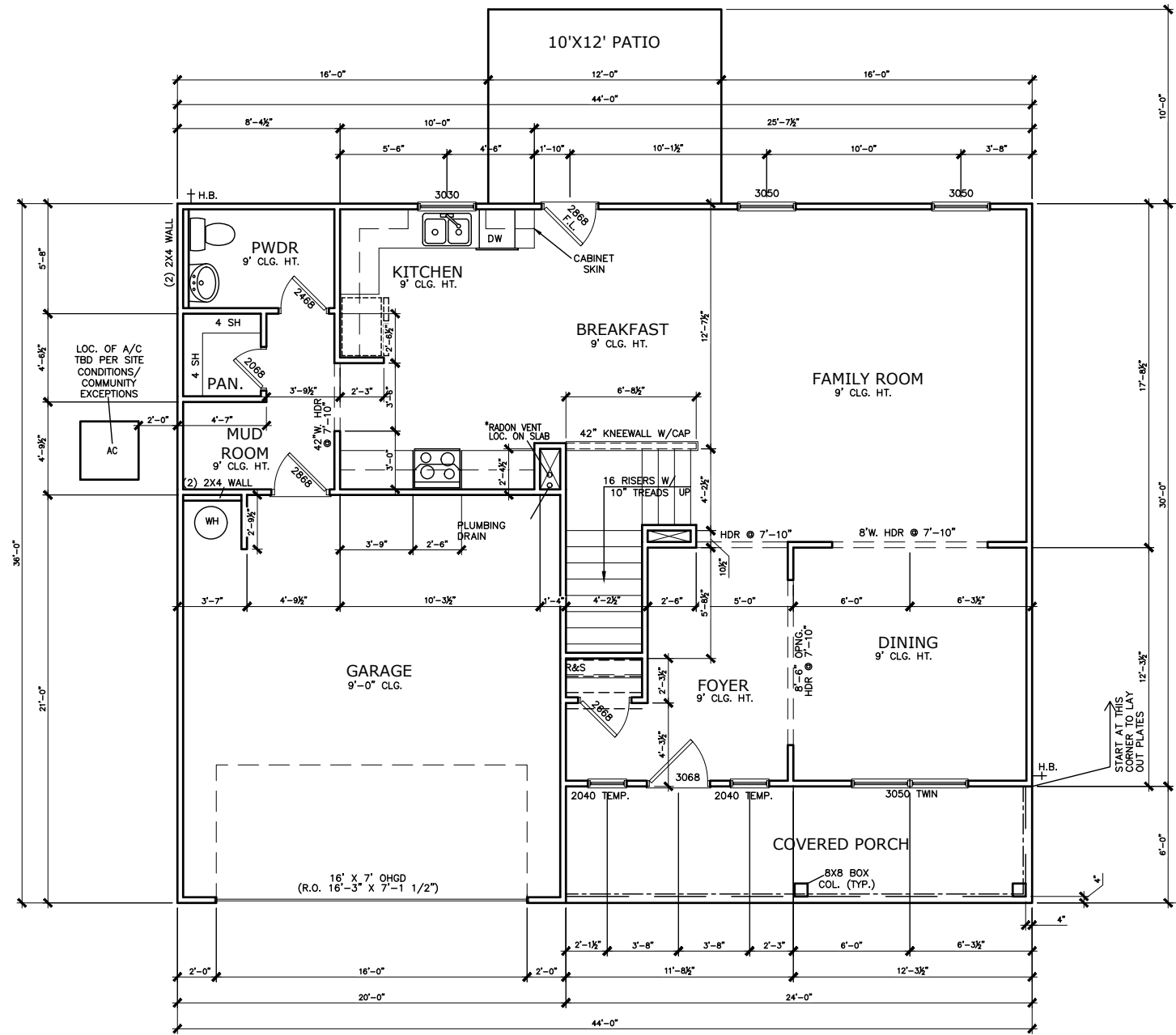
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DATE: 12-21-22  
FACADE OPT: C  
PLAN ID:  
FND: S    ELEV: C  
PAGE NO: A3.1



# DUNCANS CROSSING LOT 71



FIRST FLOOR PLAN

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

\*RADON VENT PROVIDED  
PER LOCAL CODE

BY	REVISION	DATE
#	#	#
#	#	#
#	#	#
#	#	#
#	#	#

**SMITH DOUGLAS HOMES**  
QUALITY | INTEGRITY | VALUE

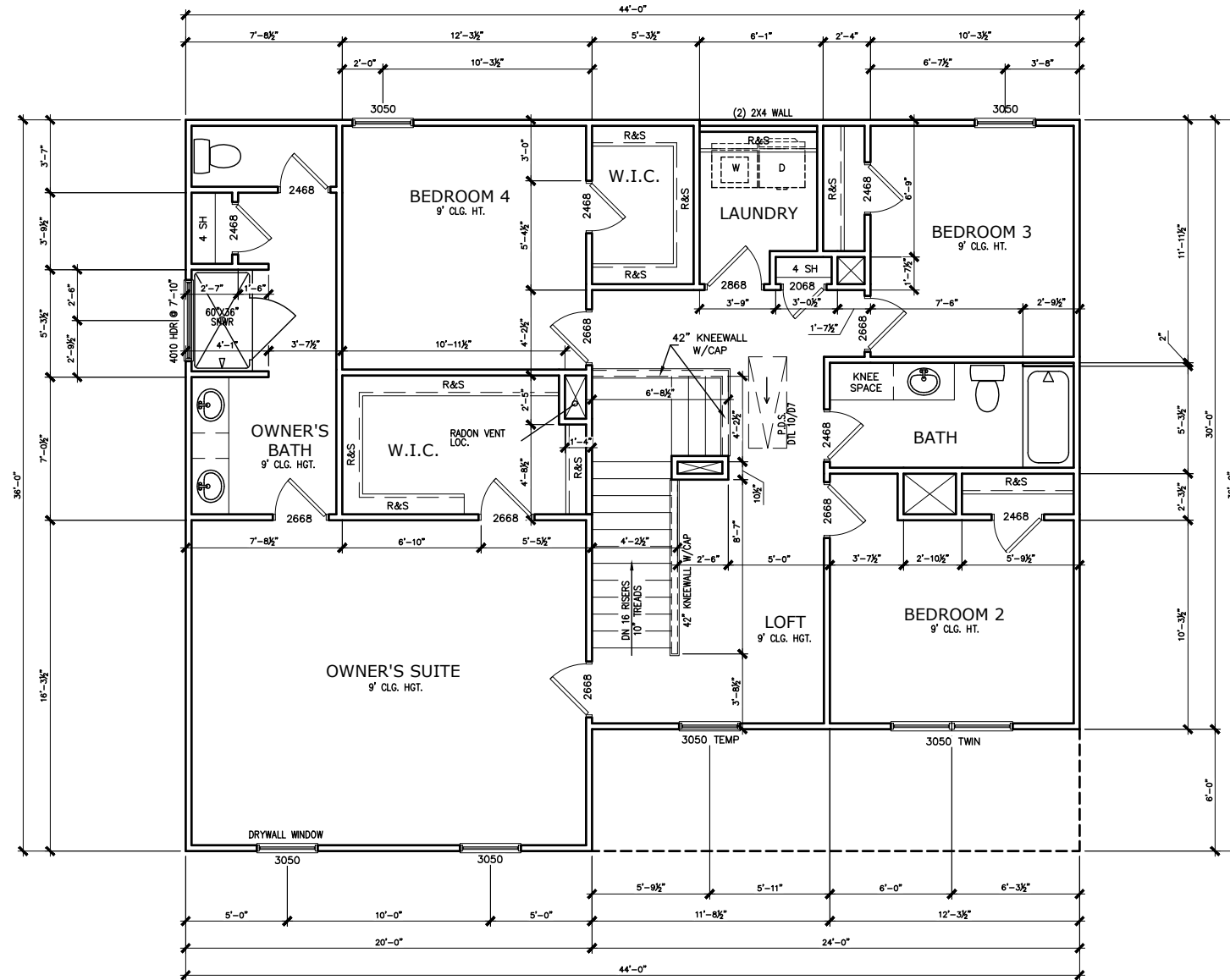
FLOOR PLAN  
FIRST FLOOR  
MORGAN

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DATE: 12-21-22	
FACADE OPT: C	
PLAN ID:	
FND: ALL	ELEV: C
PAGE NO: A5.1	

# DUNCANS CROSSING LOT 71



SECOND FLOOR PLAN

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

\*RADON VENT PROVIDED  
PER LOCAL CODE

REFER TO MANUFACTURER'S SPECS.  
FOR DRAIN LOCATIONS ON DETAIL  
SHEETS D12, D12.1, D12.2 & D12.3

BY	#	REVISION	DATE



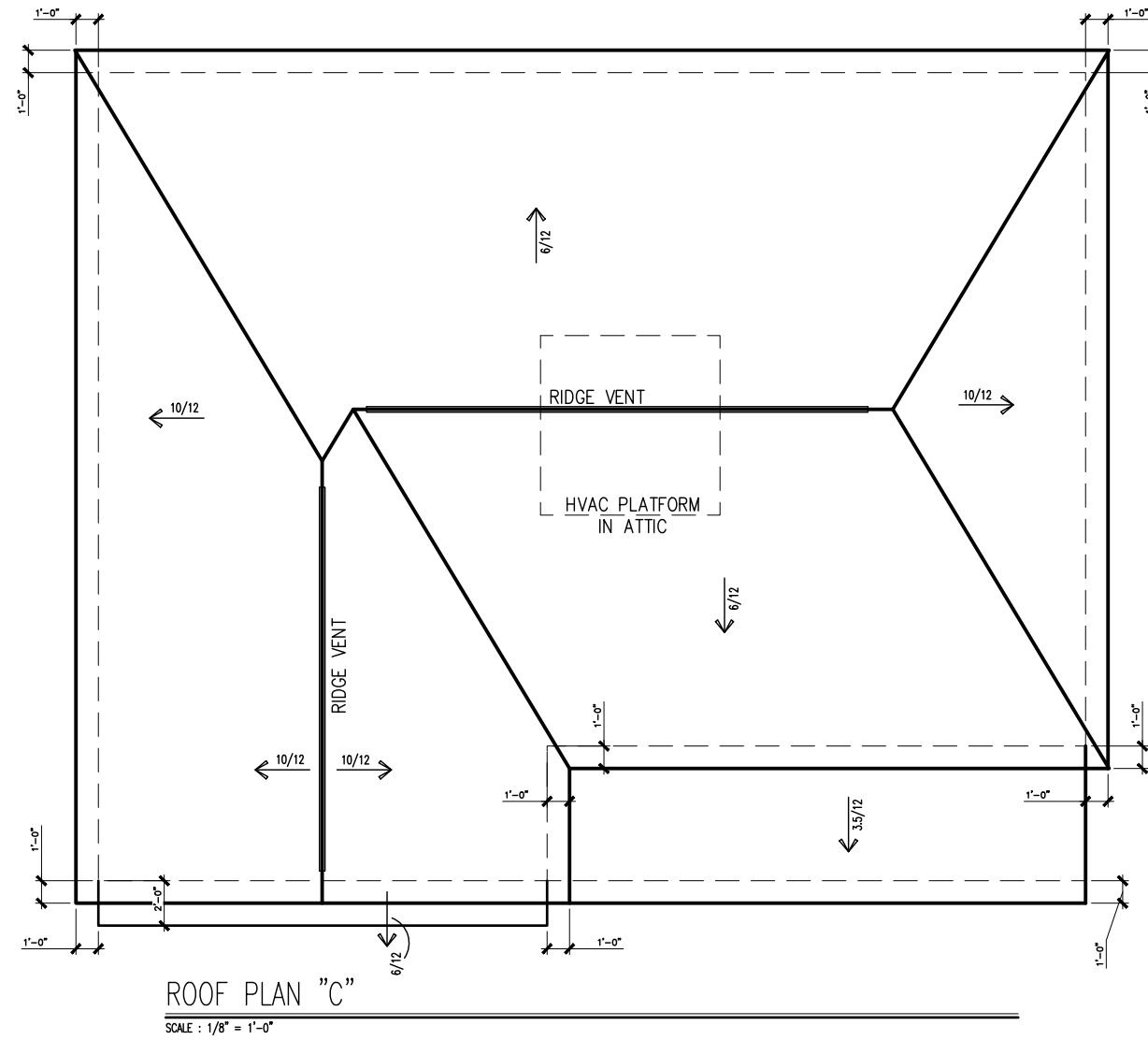
FLOOR PLAN  
SECOND FLOOR  
MORGAN

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DATE: 12-21-22	
FACADE OPT: C	
PLAN ID:	
FND: ALL	ELEV: C
PAGE NO: A5.2	

# DUNCANS CROSSING LOT 71



DATE	REVISION	BY
#	#	#
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#	#	#



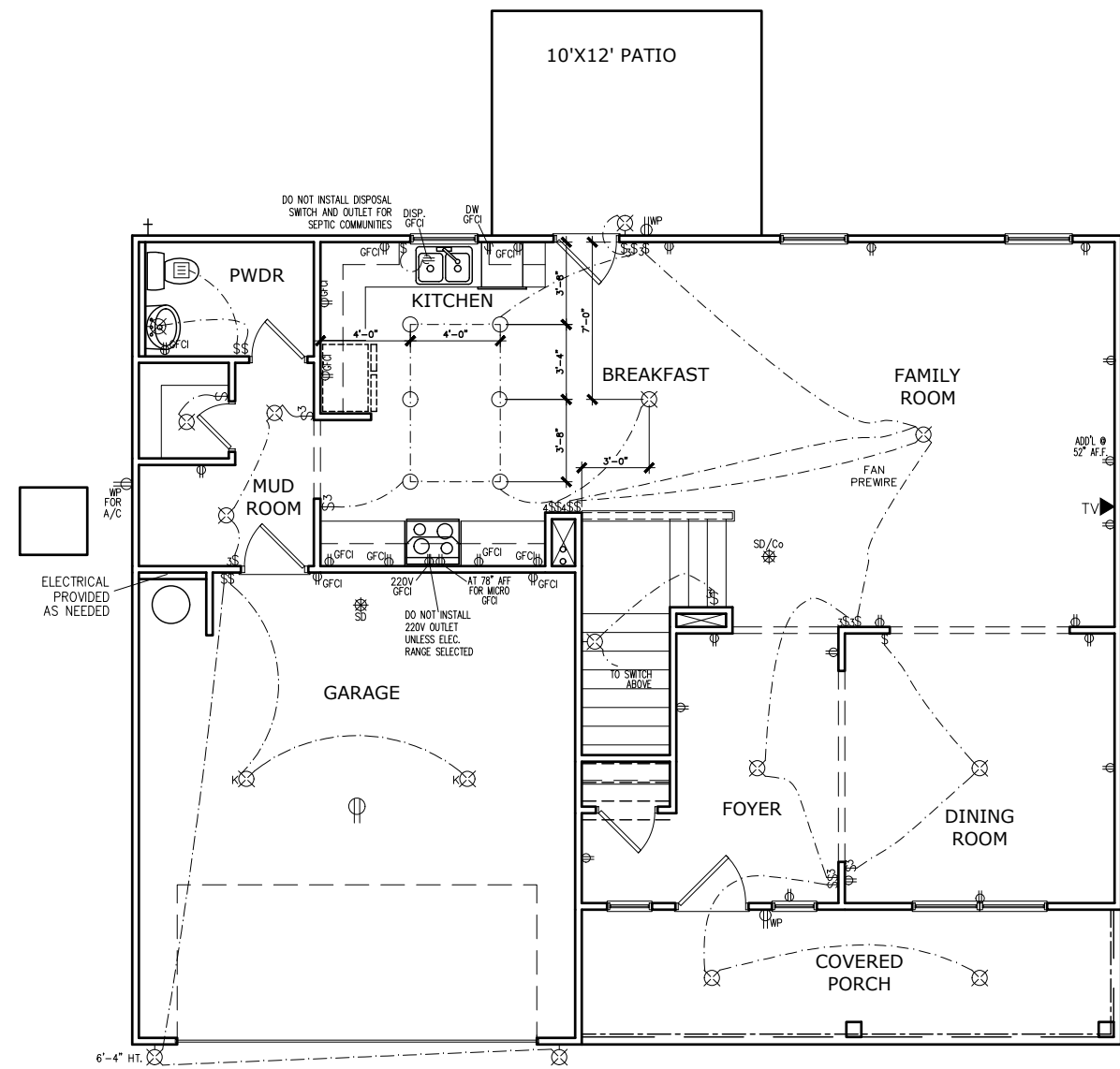
ROOF PLAN  
ROOF LAYOUT  
MORGAN

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DATE: 12-21-22	
FACADE OPT: C	
PLAN ID:	
FND: ALL	ELEV: C
PAGE NO: A6.1	

# DUNCANS CROSSING LOT 71



FIRST FLOOR ELECTRICAL PLAN

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

## ELECTRICAL LEGEND

\$	SWITCH	TV	TV
\$3	3 WAY SWITCH	⊕	120V RECEPTACLE
\$4	4 WAY SWITCH	⊕	120V SWITCHED RECEPTACLE
⊗	CEILING FIXTURE	⊕	220V RECEPTACLE
⊕	KEYLESS	⊕	GFCI OUTLET
⊕	WALL MOUNT FIXTURE	⊕	ARCH FAULT CIRCUIT INTERRUPTER
⊕	CEILING FIXTURE	†	GAS LINE
⊕	FLEX CONDUIT	†	WATER LINE
CH	CHIMES	⊕	HOSE BIBB
PH	TELEPHONE	⊕	FLOOD LIGHT
SD/Co	SMOKE DETECTOR & CARBON MONOXIDE	⊕	1x4 LUMINOUS FIXTURE
SO	SECURITY OUTLET	⊕	CEILING FAN
□	GARAGE DOOR OPENER	⊕	ELECTRICAL WIRING
⊕	EXHAUST FAN	⊕	CEILING FIXTURE
⊕	FAN/LIGHT		

ELECTRICAL PLANS TO FOLLOW ALL LOCAL CODES

APPROX. FIXTURE HGTS (MEASURED FROM BOTTOM OF FIXTURE)

BREAKFAST/DINING ROOM	63" ABOVE FINISHED FLOOR
KITCHEN PENDANT LIGHTS	33" ABOVE COUNTER TOP
TWO STORY FOYER FIXTURE	96" ABOVE FINISHED FLOOR
CEILING FAN	96" ABOVE FINISHED FLOOR

NOTE: FINAL PLACEMENT OF PHONE/CABLE T.B.D. ON SITE BY THE BUILDER

BY	#	#	#	#	#
REVISION					
DATE					



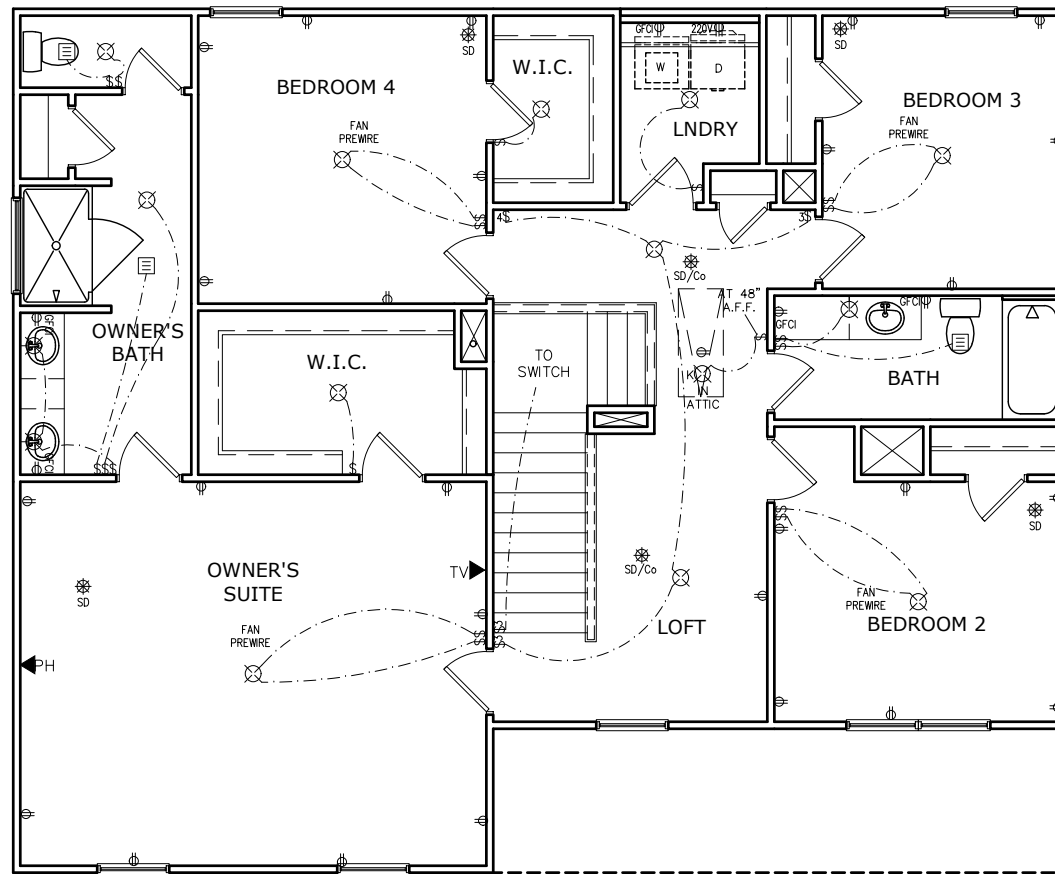
ELECTRICAL PLAN  
FIRST FLOOR  
MORGAN

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DATE:	12-21-22		
FACADE OPT:	C		
PLAN ID:			
FND:	ALL	ELEV:	C
PAGE NO:	A7.2		

# DUNCANS CROSSING LOT 71



SECOND FLOOR ELECTRICAL PLAN

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

## ELECTRICAL LEGEND

Ⓢ	SWITCH	TV	TV
Ⓢ <sub>3</sub>	3 WAY SWITCH	⊕	120V RECEPTACLE
Ⓢ <sub>4</sub>	4 WAY SWITCH	⊕	120V SWITCHED RECEPTACLE
⊗	CEILING FIXTURE	⊕	220V RECEPTACLE
⊕ <sub>K</sub>	KEYLESS	⊕ <sub>GFCI</sub>	GFCI OUTLET
⊕ <sub>W</sub>	WALL MOUNT FIXTURE	⊕ <sub>AFCI</sub>	ARCH FAULT CIRCUIT INTERRUPTER
○	CEILING FIXTURE	† <sub>GL</sub>	GAS LINE
●	FLEX CONDUIT	† <sub>WL</sub>	WATER LINE
CH	CHIMES	⊥	HOSE BIBB
PH	TELEPHONE	⊕	FLOOD LIGHT
SD/CO	SMOKE DETECTOR & CARBON MONOXIDE	▭	1x4 LUMINOUS FIXTURE
SO	SECURITY OUTLET	⊗	CEILING FAN
□	GARAGE DOOR OPENER	—	ELECTRICAL WIRING
⊕	EXHAUST FAN	⊕	CEILING FIXTURE
⊕	FAN/LIGHT		

ELECTRICAL PLANS TO FOLLOW ALL LOCAL CODES

APPROX. FIXTURE HGTS (MEASURED FROM BOTTOM OF FIXTURE)

BREAKFAST/DINING ROOM	63" ABOVE FINISHED FLOOR
KITCHEN PENDANT LIGHTS	33" ABOVE COUNTER TOP
TWO STORY FOYER FIXTURE	96" ABOVE FINISHED FLOOR
CEILING FAN	96" ABOVE FINISHED FLOOR

NOTE: FINAL PLACEMENT OF  
PHONE/CABLE T.B.D. ON SITE  
BY THE BUILDER

BY	#	REVISION	DATE



FLOOR PLAN  
SECOND FLOOR  
MORGAN

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DATE: 12-21-22	
FACADE OPT: C	
PLAN ID:	
FND: ALL	ELEV: C
PAGE NO: A7.3	

# DUNCANS CROSSING LOT 71

**Smith Douglas Communities**  
Home Definition Guide  
Duncans Crossing  
Lot: 000/0071

Community: Duncans Crossing Lot: 000/0071	Purchaser: Javier PenaTorres Contract #:
Address: 71 Bonnie Girl Court Lillington, NC 27546	Current Status:
Plan: Morgan C CAD Version: 042920.0601	Lot Premium:
Bedrooms: 4 Bathrooms: 2.5 Sq. Footage 2,400	Plan Price: Options: Adjustments: Total Price:

Option Name	Option Description	Qty
Stone 24 A EstCp(Pkg)(v)	Includes chrome kitchen faucet, bath faucets, & fixtures, brushed nickel door hardware (knobs, bumps, knob/believers, deadbolts), Pkg 1 (bn) lighting fixtures, & powder oval mirror (if applied). Separate options also affected: shower door, bath hardware (lower bearing, tp holder), shower grab bar, cabinet hardware (to be chrome)	1
Chrome Interior Finish Color Package		1
1A Uncovered Patio-Regular (to Stoop)	Expand 3x3 near stoop to 10x12 concrete patio (size may vary, dimensions are per plan drawing). ***if selecting a covered patio, do not select this option***	1
Level 2 - Package Electric (from E1)	NOTE: Please See Appliance Sales PDF for Package Details	1
36" Cabinet (S) Standard	Note: Bath cabinets to match Cabinet Knob/Pull Combo	1
Cabinet Knob/Pull Combo	Cabinet Knob/Pull Hybrid Element 1092 series-pulls on all drawers, knobs on all doors. Note: Bath cabinets to match	1
Granite-Kitchen Countertops - Lvl 1 (0)	Kitchen Granite Countertops - Level 1- where Laminate is Std.	1
Kitchen Faucet - Level 2 (G)	Upgrade to Level 2 Pull-down Kitchen Sink Faucet From Level 1 Faucet on Granite OR Solid Surface	1
Owner Bath Marble 1 Double (to Lam9g)	***Includes Vanity Double Bowl Option Do Not Select Both***	1
Profile 14 Shower Only Large FD OBATHA	Large profile shower with framed clear glass door (L.O. of standard bath. (obath)	1
FPkg 5AA-Floors Pro, StdCpt (FPkg1)	Flooring Package 5AA - Floors Pro, Standard Carpet (from Package 1), SPC (solid polymer core) 0.5 mm vinyl top layer plank	1
PreWire for Ceiling Fan	Pre-wire a light location for a future ceiling fan.	3

Buyer's Signature \_\_\_\_\_ Seller's Signature \_\_\_\_\_  
Date \_\_\_\_\_ Date \_\_\_\_\_

Smith Douglas Communities      12/20/2022      Page 1 of 3

**Smith Douglas Communities**  
Home Definition Guide  
Duncans Crossing  
Lot: 000/0071

Option Name	Option Description	Qty
Kitchen Ceiling Fixture Lights (L.O. Std)	Kitchen Lights - Low Profile Flush Mount LED Lights per Plan L.O. Standard Light.	1
Addl Standard Interior Electric Outlet	Standard Interior Duplex Outlet. This is not an exterior weather proof outlet or a GFCI protected outlet. A quantity of 1 gives you one additional outlet.	1

Buyer's Signature \_\_\_\_\_ Seller's Signature \_\_\_\_\_  
Date \_\_\_\_\_ Date \_\_\_\_\_

Smith Douglas Communities      12/20/2022      Page 2 of 3

**Smith Douglas Communities**  
Home Definition Guide  
Duncans Crossing  
Lot: 000/0071

Activity	Item	Selection	Accepted
Del/Instal AppliancePkg	Appliance Package Select - All	Appliance Package Selected	12/17/2022
Deliver & Install Blinds	Blind Color	White	11/23/2022
Install Cabinets Complet	Cab. Hdw. Type(2/3)ALL	Knob/Pull Combo	12/17/2022
Install Cabinets Complet	Cabinet Finish - Standard Arts	Standard-Standard Birch- Saddle	12/17/2022
Install Cabinets Complet	Master Bath Vanity Tops - All	Selection not Needed	12/17/2022
Install Cabinets Complet	Secondary Bath Vanity Tops-All	Selection not Needed	12/17/2022
Install Carpet	Carpet - Standard ALL	Smith Grove III Warm Sand 108	12/17/2022
Install Floor Pro (L.P)	Flooring Pro 1stLggr ALL	Simonton Plus - 709 Modeled Oak	12/17/2022
Install Granite Tops	RDU Granite Countertops/Lvt	Dalila-Ashen White	12/17/2022
Install Laminate Tops	Secondary Bath Vanity Tops-All	5010K-07 Drama Marble	12/17/2022
Install Marble Tops	RDU Marble Vanity Top Lvl 1	Matte-#190 White w/Parchment wood bowl	12/17/2022
Paint Interior Complete	Interior Paint (Trim)	SW 7006 Extra White	12/17/2022
Paint Interior Complete	Interior Paint (Walls) - Base	SW 7014 Esier White	12/17/2022
PM Install Vinyl Floor	VinylPkg-Common Areas	River Chase II 727 Ranger	12/17/2022
PM Install Vinyl Floor	VinylPkg-Option Baths	River Chase II 727 Ranger	12/17/2022
PM Install Vinyl Floor	VinylPkg-Owner Bath	River Chase II 727 Ranger	12/17/2022
PM Install Vinyl Floor	VinylPkg-Std 2nd Baths/Laundry	River Chase II 727 Ranger	12/17/2022

Buyer's Signature \_\_\_\_\_ Seller's Signature \_\_\_\_\_  
Date \_\_\_\_\_ Date \_\_\_\_\_

Smith Douglas Communities      12/20/2022      Page 3 of 3

REVISION	#	#	#	#	#	#
DATE	#	#	#	#	#	#



DETAILS  
LOT DEFINITION  
MORGAN

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SUITE 115  
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BY: CLJ	CHK: AW
DATE: 12-21-22	
FACADE OPT: C	
PLAN ID:	
FND: ALL	ELEV: C
PAGE NO: A9.1	

DESIGN SPECIFICATIONS:

Construction Type: Commercial  Residential

Applicable Building Codes:

- 2018 North Carolina Residential Building Code
- ASCE 7-10: Minimum Design Loads for Buildings and Other Structures

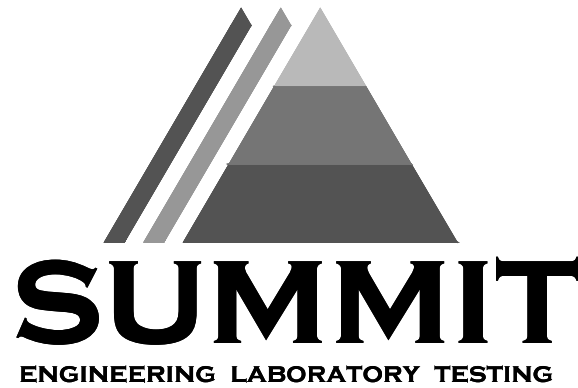
Design Loads:

- Roof
  - Live..... 20 PSF
  - Dead..... 10 PSF
  - Snow..... 15 PSF
    - Importance Factor..... 1.0
- Floor Live Loads
  - Typ. Dwelling..... 40 PSF
  - Sleeping Areas..... 30 PSF
  - Balconies (exterior) and Decks..... 40 PSF
  - Garage Parking..... 50 PSF
- Floor Dead Loads
  - Conventional 2x..... 10 PSF
  - 1-Joist..... 15 PSF
  - Floor Truss..... 15 PSF
- Ultimate Wind Speed (3 sec. gust)..... 130 MPH
  - Exposure..... B
  - Importance Factor..... 1.0
  - Wind Base Shear
    - Vx =
    - Vy =
- Component and Cladding (in PSF)

MEAN ROOF HT.	UP TO 30'	30'-35'	35'-40'	40'-45'
ZONE 1	16.7,-18.0	17.5,-18.9	18.2,-19.6	18.7,-20.2
ZONE 2	16.7,-21.0	17.5,-22.1	18.2,-22.9	18.7,-23.5
ZONE 3	16.7,-21.0	17.5,-22.1	18.2,-22.9	18.7,-23.5
ZONE 4	18.2,-19.0	19.2,-20.0	19.9,-20.7	20.4,-21.3
ZONE 5	18.2,-24.0	19.2,-25.2	19.9,-26.1	20.4,-26.9

6. Seismic

- Site Class..... D
- Design Category..... C
- Importance Factor..... 1.0
- Seismic Use Group..... I
- Spectral Response Acceleration
  - Sms = %g
  - Sml = %g
- Seismic Base Shear
  - Vx =
  - Vy =
- Basic Structural System (check one)
  - Bearing Wall
  - Building Frame
  - Moment Frame
  - Dual w/ Special Moment Frame
  - Dual w/ Intermediate R/C or Special Steel
  - Inverted Pendulum
- Arch/Mech Components Anchored?..... No
- Lateral Design Control: Seismic  Wind
- Assumed Soil Bearing Capacity..... 2000psf



STRUCTURAL PLANS PREPARED FOR:

MORGAN

PROJECT ADDRESS:

TBD

OWNER:

Smith Douglas Homes - Raleigh  
2520 Reliance Ave  
Apex, NC 27539

ARCHITECT/DESIGNER:

Smith Douglas Homes  
110 Village Trail, Suite 215  
Woodstock, GA 30188

These drawings are to be coordinated with the architectural, mechanical, plumbing, electrical, and civil drawings. This coordination is not the responsibility of the structural engineer of record (SER). Should any discrepancies become apparent, the contractor shall notify SUMMIT Engineering, Laboratory & Testing, P.C. before construction begins.

PLAN ABBREVIATIONS:

AB	ANCHOR BOLT	PT	PRESSURE TREATED
AFF	ABOVE FINISHED FLOOR	RS	ROOF SUPPORT
CJ	CEILING JOIST	SC	STUD COLUMN
CLR	CLEAR	SJ	SINGLE JOIST
DJ	DOUBLE JOIST	SPF	SPRUCE PINE FIR
DSP	DOUBLE STUD POCKET	SST	SIMPSON STRONG-TIE
EE	EACH END	SYF	SOUTHERN YELLOW PINE
EW	EACH WAY	TJ	TRIPLE JOIST
NTS	NOT TO SCALE	TSP	TRIPLE STUD POCKET
OC	ON CENTER	TYP	TYPICAL
PSF	POUNDS PER SQUARE FOOT	UNO	UNLESS NOTED OTHERWISE
PSI	POUNDS PER SQUARE INCH	WWF	WELDED WIRE FABRIC

Roof truss and floor joist layouts, and their corresponding loading details, were not provided to SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) prior to the initial design. Therefore, truss and joist directions were assumed based on the information provided by SMITH DOUGLAS HOMES. Subsequent plan revisions based on roof truss and floor joist layouts shall be noted in the revision list, indicating the date the layouts were provided. Should any discrepancies become apparent, the contractor shall notify SUMMIT immediately.

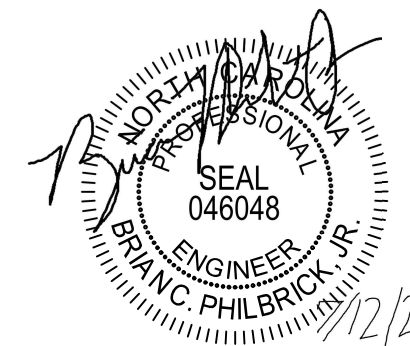
SHEET LIST:

Sheet No.	Description
C91	Cover Sheet, Specifications, Revisions
C92	Specifications Continued
S1.0m	Monolithic Slab Foundation
S1.0s	Stem Wall Foundation
S1.0c	Crawl Space Foundation
S1.0b	Basement Foundation
S2.0	Basement Framing Plan
S3.0	First Floor Framing Plan
S4.0	Second Floor Framing Plan
S5.0	Roof Framing Plan
S6.0	Basement Bracing Plan
S7.0	First Floor Bracing Plan
S8.0	Second Floor Bracing Plan

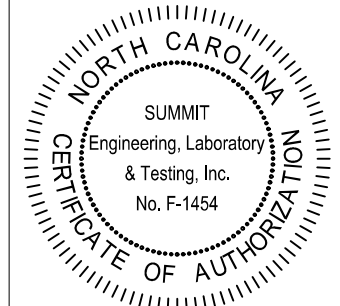
REVISION LIST:

Revision No.	Date	Project No.	Description
1	11/1/19	305R	Revised notes
2	3/4/20	328	Revised to add 2x6 wall note with elevations B,E,H & brick
3	12/8/20	328R	Revised BEH per new roof truss layout
4	12/10/20	328R2	Fixed graphical errors
5	12/15/20	328R3	Revised footings for the optional decks
6	1/8/21	3832.T0548	Add elevations C,F,I to First Floor Framing over garage & added elevations A,D,G,&C,F,I in the OPT. side load garage
7	7/1/21	T0548	Added LIB Bracing Options

Duncans Lot 71



STRUCTURAL MEMBERS ONLY



PROJECT Morgan LH  
Coversheet  
CLIENT Smith Douglas Homes - Raleigh  
2520 Reliance Ave  
Apex, NC 27539

CURRENT DRAWING

DATE: 07/1/2021

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

PROJECT #: 3832.T0548

DRAWN BY: DGT

CHECKED BY: BCP

ORIGINAL DRAWING

DATE PROJECT #  
10/29/2019 3832.T0548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

CS1



**GENERAL STRUCTURAL NOTES:**

- The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
- The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
- The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
- Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
- Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
- The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
- This structure and all construction shall conform to all applicable sections of the international residential code.
- This structure and all construction shall conform to all applicable sections of the 2018 North Carolina Residential Code (NCRC) and any local codes or restrictions.

**FOUNDATIONS:**

- Foundations shall be constructed in accordance with chapter 4 of the 2018 NC Residential Building Code (Special consideration shall be given to Chapter 45 in wind zones above 130mph)
- Footing sizes based on a presumptive soil bearing capacity of 2000 PSF. Contractor is solely responsible for verifying the suitability of the site soil conditions at the time of construction.
- Maximum depth of unbalanced fill against masonry walls to be as specified in section R404.1 of the 2018 NCRC
- The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.
- The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.
- Any fill shall be placed under the direction or recommendation of a licensed professional engineer. The resulting soil shall be compacted to a minimum of 95% maximum dry density.
- Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.
- No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.
- Each crawl space pier shall bear in the middle third of its respective footing and each girder shall bearing in the middle third of the piers. Pilasters to be bonded to perimeter foundation wall.
- Crawl spaced to be graded level and clear of all debris
- Provide foundation waterproofing and drain with positive slope to outlet as required by site conditions
- Energy efficiency compliance and insulation of the structure to be in accordance with chapter 11 of the 2018 NCRC

**CONCRETE:**

- Concrete shall have a normal weight aggregate and a minimum compressive strength (f'c) at 28 days of 3000 psi, unless otherwise noted on the plan.
- Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".
- Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows:
  - Footings: 5%
  - Exterior Slabs: 5%
- No admixtures shall be added to any structural concrete without written permission of the SER
- Concrete slabs-on-grade shall be constructed in accordance with ACI 302.1R-96: "Guide for Concrete Slab and Slab Construction".
- The concrete slab-on-grade has been designed using a subgrade modulus of k=250 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions.
- Control or saw cut joints shall be spaced in interior slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" unless otherwise noted.
- Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished
- Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint.
- All welded wire fabric (WWF) for concrete slabs-on-grade shall be placed at mid-depth of slab. The WWF shall be securely supported during the concrete pour. Fiberglass may be used in lieu of WWF.

**CONCRETE REINFORCEMENT:**

- Fibrous concrete reinforcement, or fiberglass, specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased abrasion resistance, and residual strength.
- Fiberglass reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
- Application of fiberglass per cubic yard of concrete shall equal a minimum of 0.1% by volume (15 pounds per cubic yard)
- Fiberglass shall comply with ASTM C1116, any local building code requirements, and shall meet or exceed the current industry standard.
- Steel Reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
- Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 315: "Manual of Standard Practice for Detailing Concrete Structures"
- Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice.
- Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.
- Where reinforcing dowels are required, they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
- Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

**WOOD FRAMING:**

- Solid sawn wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Spruce-Pine-Fir (SPF) #2.
- LVL or PSL engineered wood shall have the following minimum design values:
  - E = 1,900,000 psi
  - Fb = 2600 psi
  - Fv = 285 psi
  - Fc = 100 psi
- Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AWPA standard C-15. All other moisture exposed wood shall be treated in accordance with AWPA standard C-2
- Nails shall be common wire nails unless otherwise noted.
- Lag screws shall conform to ANSI/ASME standard B18.2.1-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
- All beams shall have full bearing on supporting framing members unless otherwise noted.
- Exterior and load bearing stud walls are to be 2x4 SPF#2 @16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum of one king stud shall be placed at each end of the header. King studs shall be continuous.
- Individual studs forming a column shall be attached with one 10d nail @6" O.C. staggered. The stud column shall be fully blocked at all floor levels to ensure proper load transfer.
- Multi-ply beams shall have each ply attached with (3)10d nails @ 24" O.C.
- Flitch beams and four and five ply beams shall be bolted together with (2) rows of 1/2" dia. through bolts staggered @24" O.C. w/ 2" edge distance and (2) bolts located at 6" from each end, unless noted otherwise.

**WOOD TRUSSES:**

- The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses.
- The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures" (ASCE 7-10), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses.
- The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction" (NDS) and "Design Specification for Metal Plate Connected Wood Trusses."
- The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-91). This bracing, both temporary and permanent, shall be shown on the shop drawings. Also, the shop drawings shall show the required attachments for the trusses.
- Any chords or truss webs shown on these drawings have been shown as a reference only. The final design of the trusses shall be per the manufacturer.

**WOOD STRUCTURAL PANELS:**

- Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.
- All structurally required wood sheathing shall bear the mark of the APA.
- Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
- Roof sheathing shall be APA rated sheathing exposure 1 or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of plywood clips or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
- Wood floor sheathing shall be APA rated sheathing exposure 1 or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshank nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T&G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
- Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

**STRUCTURAL FIBERBOARD PANELS:**

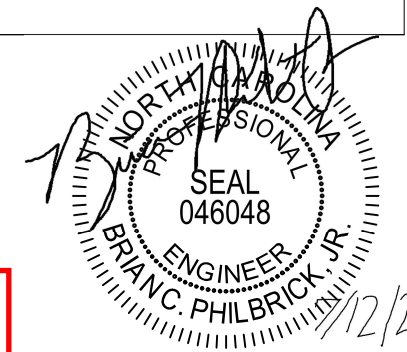
- Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable APA standards.
- Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information.
- Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

**EXTERIOR WOOD FRAMED DECKS:**

- Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

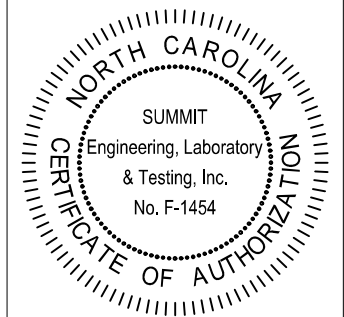
**STRUCTURAL STEEL:**

- Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and of the manual of Steel Construction "Load Resistance Factor Design" latest editions.
- All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
- Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D11. Electrodes for shop and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.



**Duncans  
Lot 71**

STRUCTURAL MEMBERS ONLY



PROJECT  
Morgan LH  
Coversheet  
CLIENT  
Smith Douglas Homes - Raleigh  
2520 Reliance Ave  
Apex, NC 27539

**CURRENT DRAWING**  
DATE: 01/1/2021  
SCALE: 1/8"=1'-0"  
PROJECT #: 3832.T0548  
DRAWN BY: DGT  
CHECKED BY: BCP

**ORIGINAL DRAWING**  
DATE PROJECT #  
10/29/2019 3832.T0548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**CS2**



**FOUNDATION NOTES:**

- FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- STRUCTURAL CONCRETE TO BE  $F_c = 3000$  PSI, PREPARED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318.
- FOOTINGS TO BE PLACED ON UNDISTURBED EARTH BEARING A MINIMUM OF 12" BELOW ADJACENT FINISHED GRADE, OR AS OTHERWISE DIRECTED BY THE CODE ENFORCEMENT OFFICIAL.
- FOOTING SIZES BASED ON A PRESUMPTIVE SOIL BEARING CAPACITY OF 2000 PSF. CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE SUITABILITY OF THE SITE SOIL CONDITIONS AT THE TIME OF CONSTRUCTION.
- FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS. PROVIDE 2" MINIMUM FOOTING PROJECTION FROM THE FACE OF MASONRY.
- MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN SECTION R404.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- FILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
- PROVIDE FOUNDATION WATERPROOFING, AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CONDITIONS.
- PROVIDED PERIMETER INSULATION FOR ALL FOUNDATIONS PER 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
- CORBEL FOUNDATION WALL AS REQUIRED TO ACCOMMODATE BRICK VENEERS.
- CRAIL SPACE TO BE GRADED LEVEL AND CLEARED OF ALL DEBRIS.
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.1.6. MINIMUM 1/2" DIA. BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- ABBREVIATIONS:

DJ = DOUBLE JOIST	SJ = SINGLE JOIST
GT = GIRDER TRUSS	FT = FLOOR TRUSS
SC = STUD COLUMN	DR = DOUBLE RAFTER
EE = EACH END	TR = TRIPLE RAFTER
TJ = TRIPLE JOIST	OC = ON CENTER
CL = CENTER LINE	PL = POINT LOAD

- ALL PIERS TO BE 16"x16" MASONRY AND ALL PILASTERS TO BE 8"x16" MASONRY, TYPICAL (IND).
- WALL FOOTINGS TO BE CONTINUOUS CONCRETE, SIZES PER STRUCTURAL PLAN.
- A FOUNDATION EXCAVATION OBSERVATION SHOULD BE CONDUCTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER OR HIS QUALIFIED REPRESENTATIVE. IF ISOLATED AREAS OF YIELDING MATERIALS AND/OR POTENTIALLY EXPANSIVE SOILS ARE OBSERVED IN THE FOOTING EXCAVATIONS AT THE TIME OF CONSTRUCTION, SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. MUST BE PROVIDED THE OPPORTUNITY TO REVIEW THE FOOTING DESIGN PRIOR TO CONCRETE PLACEMENT.
- ALL FOOTINGS & SLABS ARE TO BEAR ON UNDISTURBED SOIL OR 95% COMPACTED FILL, VERIFIED BY ENGINEER OR CODE OFFICIAL.

REFER TO BRACED WALL PLAN FOR PANEL LOCATIONS AND ANY REQUIRED HOLDINGS. ADDITIONAL INFO PER SECTION R602.10.4 AND FIGURE R602.10.3(4) OF THE 2018 NCRC.

NOTE: ALL EXTERIOR FOUNDATION DIMENSIONS ARE TO FRAMING AND NOT BRICK VENEER UNO

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES COMPLETED/REVISED ON 8/28/19. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

NOTE: A 4" CRUSHED STONE BASE COURSE IS NOT REQUIRED WHEN SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP 1 PER TABLE R405.

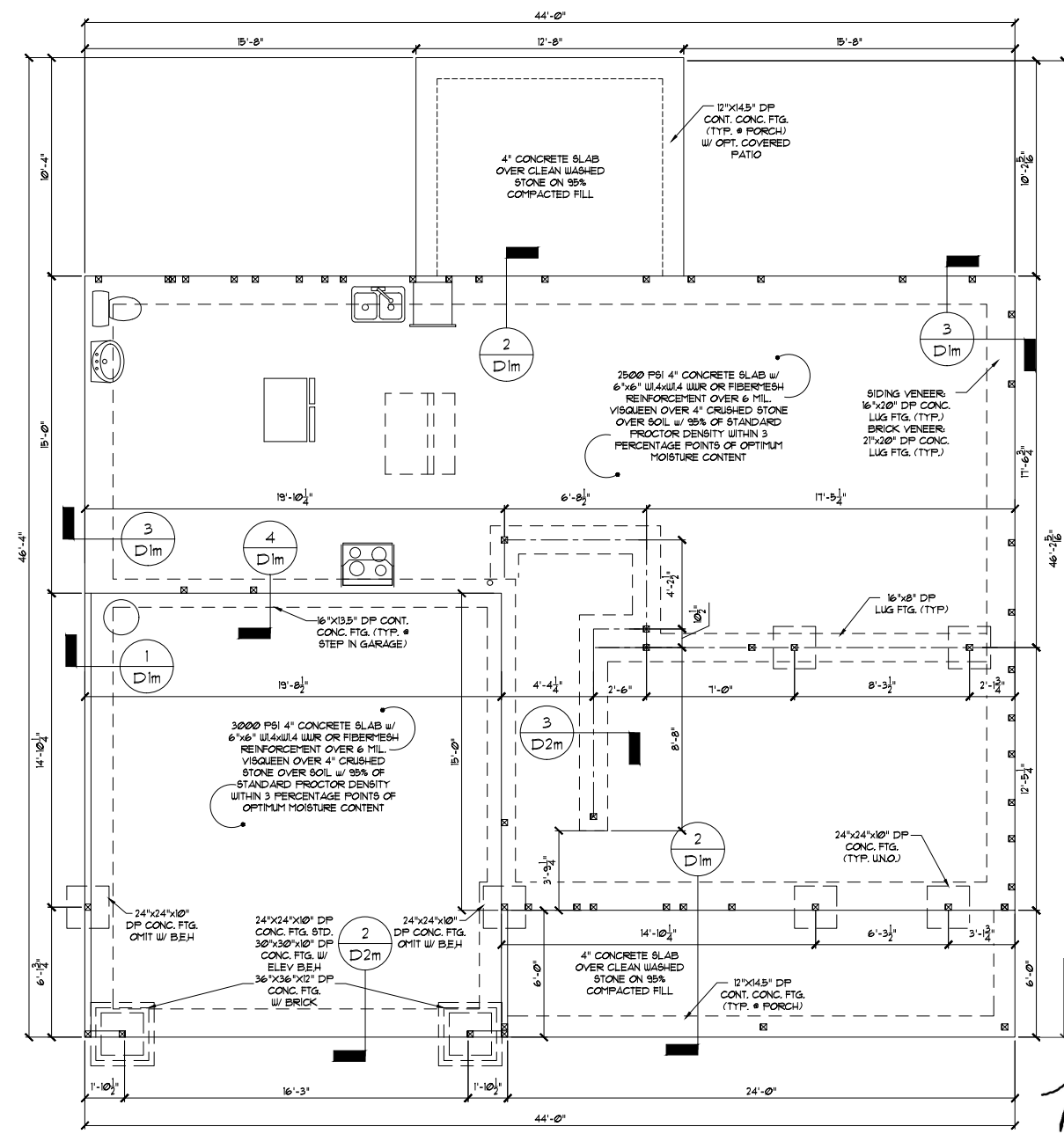
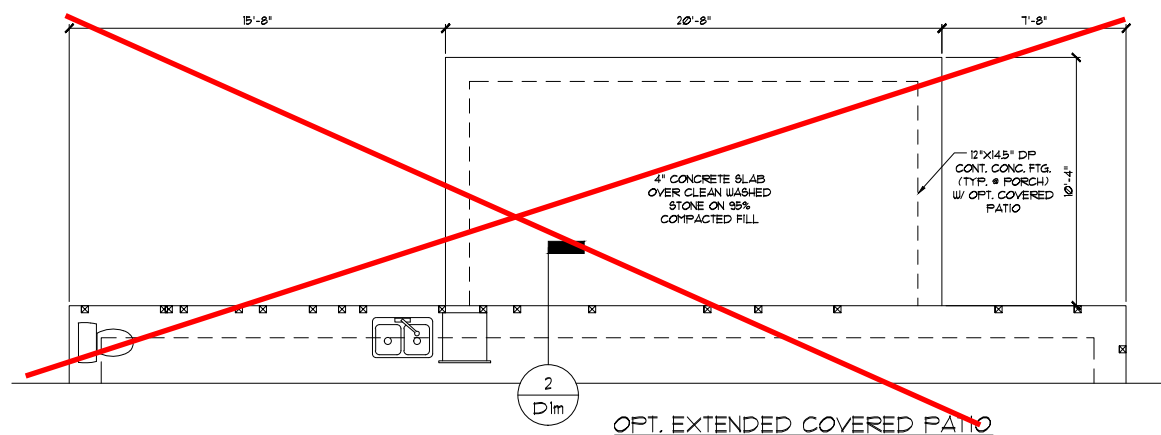
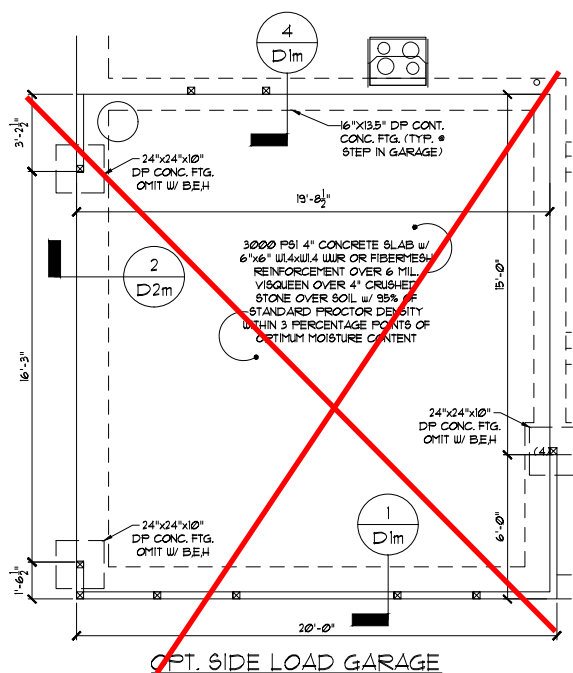
**STRUCTURAL MEMBERS ONLY**

ENGINEERING SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS ON THIS DOCUMENT. SEAL DOES NOT INCLUDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS. ANY DEVIATIONS OR DISCREPANCIES ON PLANS ARE TO BE BROUGHT TO THE IMMEDIATE ATTENTION OF SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. FAILURE TO DO SO WILL VOID SUMMIT LIABILITY.

STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

**MONOLITHIC SLAB FOUNDATION**

SCALE: 1/8"=1'



SLAB FOUNDATION - ALL ELEV.

Duncans  
Lot 71

PROJECT  
Morgan LH

Monolithic Slab Fnd.

CLIENT  
Smith Douglas Homes - Raleigh  
2520 Reliance Ave  
Apex, NC 27539

**CURRENT DRAWING**  
DATE: 01/1/2021  
SCALE: 1/8"=1'-0"  
PROJECT #: 3832.10548  
DRAWN BY: DGT  
CHECKED BY: BCP

**ORIGINAL DRAWING**  
DATE PROJECT #  
10/29/2019 3832.10548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**S1.0m**

STRUCTURAL MEMBERS ONLY

**GENERAL STRUCTURAL NOTES:**

- CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS. CONTRACTOR SHALL COMPLY WITH THE CONTENTS OF THE DRAWING FOR THIS SPECIFIC PROJECT. ENGINEER IS NOT RESPONSIBLE FOR ANY DEVIATIONS FROM THIS PLAN.
- CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY BRACING REQUIRED TO RESIST ALL FORCES ENCOUNTERED DURING ERECTION.
- PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS:  
MICROLAM (LVL):  $F_b = 2600$  PSI,  $F_v = 285$  PSI,  $E = 1.9 \times 10^6$  PSI  
PARALLAM (PSL):  $F_b = 2300$  PSI,  $F_v = 230$  PSI,  $E = 1.5 \times 10^6$  PSI
- ALL WOOD MEMBERS SHALL BE  $\frac{1}{2}$  SFF UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE  $\frac{1}{2}$  SFF (UNO).
- ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4  $\frac{1}{2}$  SFF STUD COLUMN AT EACH END UNLESS NOTED OTHERWISE.
- ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM A615 AND SHALL HAVE A MINIMUM COVER OF 3".
- FOUNDATION ANCHORAGE SHALL BE CONSTRUCTED PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE SECTION R403.6. MINIMUM 1" DIA BOLTS SPACED AT 6'-0" ON CENTER WITH A 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. ANCHOR BOLTS SHALL BE 12" FROM THE END OF EACH PLATE SECTION. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.
- CONTRACTOR TO PROVIDE LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
- FLITCH BEAMS, 4-PLY LVL6 AND 3-PLY SIDE LOADED LVL6 SHALL BE BOLTED TOGETHER WITH 1/2" DIA. THRU BOLTS SPACED AT 24" O.C. (MAX) STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL, 1031. MIN. EDGE DISTANCE SHALL BE 2" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH END OF THE BEAM.
- ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 2x4 SFF  $\frac{1}{2}$ , DROPPED, FOR NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN 2'-0" OF CRIPPLE WALL ABOVE, SHALL BE (2) FLAT 2x4 SFF  $\frac{1}{2}$ , DROPPED, (UNLESS NOTED OTHERWISE).
- ABBREVIATIONS:

DJ = DOUBLE JOIST  
GT = GIRDER TRUSS  
SC = STUD COLUMN  
EE = EACH END  
TJ = TRIPLE JOIST  
CL = CENTER LINE

SU = SINGLE JOIST  
FT = FLOOR TRUSS  
DR = DOUBLE RAFTER  
TR = TRIPLE RAFTER  
OC = ON CENTER  
PL = POINT LOAD

NOTE: ..... DESIGNATES JOIST SUPPORTED LOAD BEARING WALL ABOVE. PROVIDE BLOCKING UNDER JOIST SUPPORTED LOAD BEARING WALL.

NOTE: SHADED WALLS INDICATE LOAD BEARING WALLS.

JOIST & BEAM SIZES SHOWN ARE MINIMUMS. BUILDER MAY INCREASE DEPTH FOR EASE OF CONSTRUCTION.

NOTE: REDUCE JOIST SPACING UNDER TILE FLOORS, GRANITE COUNTERTOPS AND/OR ISLANDS.

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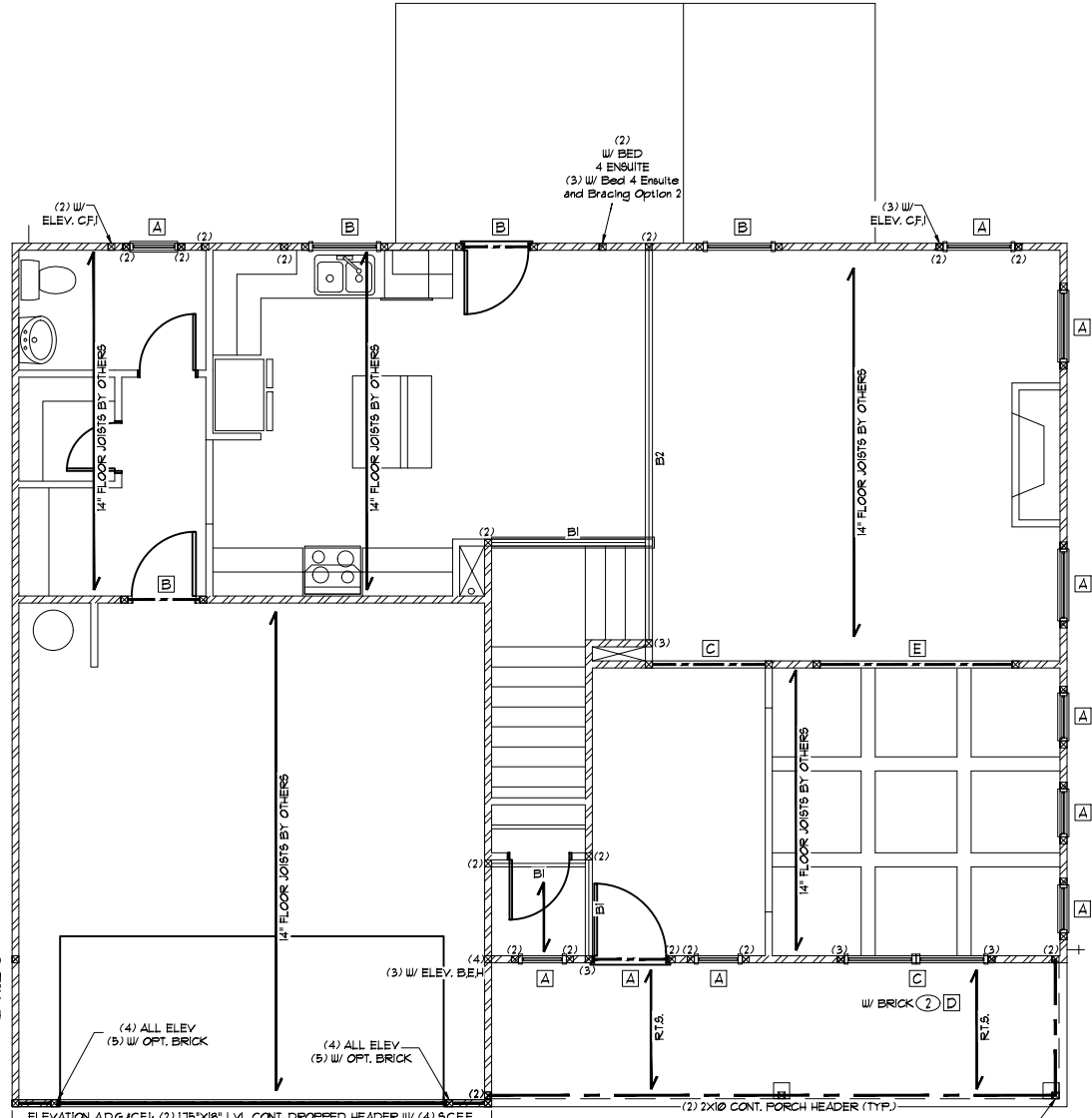
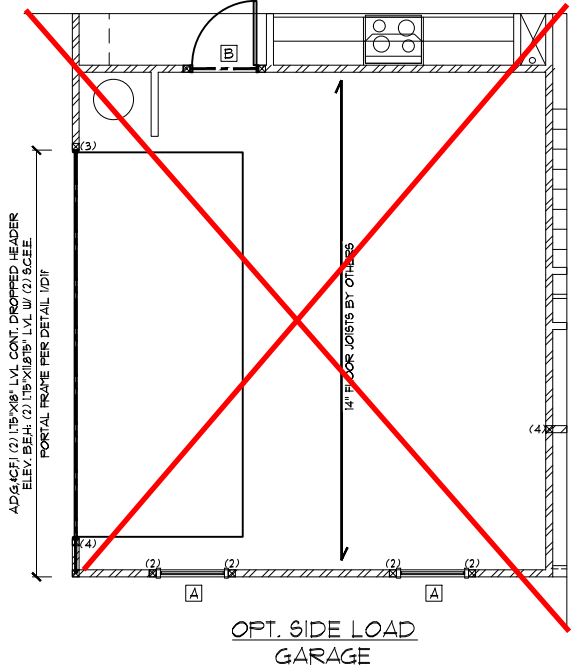
**STRUCTURAL MEMBERS ONLY**

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

**FIRST FLOOR FRAMING PLAN**

SCALE: 1/8"=1'



**HEADER/BEAM SCHEDULE**

HEADER TAG	BEAM TAG	SIZE	JACKS (EACH END)
-	B1	(1) 14" FLOOR JOIST	(2)
-	B2	(2) 14" FLOOR JOIST	(2)
A	B3	(2) 2x6	(1)
B	B4	(2) 2x8	(2)
C	B5	(2) 2x10	(2)
D	B6	(2) 2x12	(2)
E	B7	(2) 9-1/4" LVL	(3)
F	B8	(2) 11-7/8" LVL	(3)
G	B9	(2) 14" LVL	(3)
H	B10	(2) 16" LVL	(3)
I	B11	(2) 18" LVL	(3)
J	B12	(2) 24" LVL	(4)
K	B13	(3) 9-1/4" LVL	(3)
L	B14	(3) 11-7/8" LVL	(3)
M	B15	(3) 14" LVL	(3)
N	B16	(3) 16" LVL	(3)
O	B17	(3) 18" LVL	(3)
P	B18	(3) 24" LVL	(4)

HEADER/BEAM SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER/BEAM SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. ALL BEAMS TO BE FLUSH UNLESS NOTED OTHERWISE.

**LINTEL SCHEDULE**

TAG	SIZE	OPENING SIZE
①	L3x3x1/4"	LESS THAN 6'-0"
②	L5x3x1/4"	6'-0" TO 10'-0"
③	L5x3-1/2"x5/16"	GREATER THAN 10'-0"
④	L5x3-1/2"x5/16" ROLLED OR EQUIV.	ALL ARCHED OPENINGS

SECURE LINTEL TO HEADER w/ (2) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" O.C. (TYP FOR ③)

ALL HEADERS WITH BRICK ABOVE: ① (UNO)

**WALL STUD SCHEDULE**

1ST & 2ND FLOOR LOAD BEARING WALLS:  
2x6 STUDS @ 24" O.C. OR 2x4 STUDS @ 16" O.C.

1ST FLOOR LOAD BEARING WALLS SUPPORTING 2ND FLOOR + WALLS UP ABOVE:  
2x6 STUDS @ 16" O.C. OR 2x4 STUDS @ 12" O.C.

BASEMENT LOAD BEARING WALLS:  
2x6 STUDS @ 16" O.C. OR 2x4 STUDS @ 12" O.C.

NON-LOAD BEARING WALLS (ALL FLOORS):  
2x4 STUDS @ 24" O.C.

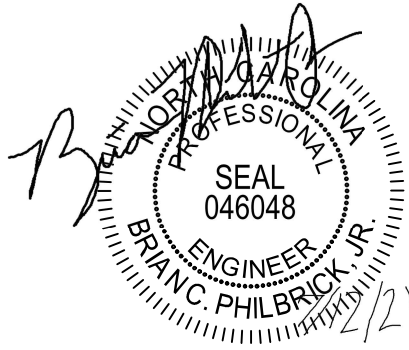
TWO STORY WALLS:  
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. w/ 2x BRACING @ 6'-0" O.C. VERTICALLY (AKA "BALLOON FRAMING")

**KING STUD REQUIREMENTS**

OPENING WIDTH (FT)	KINGS (EACH END)	
	16" O.C.	24" O.C.
LESS THAN 3'-0"	(1)	(1)
3'-0" TO 4'-0"	(2)	(1)
4'-0" TO 8'-0"	(3)	(2)
8'-0" TO 12'-0"	(3)	(3)
12'-0" TO 16'-0"	(6)	(4)

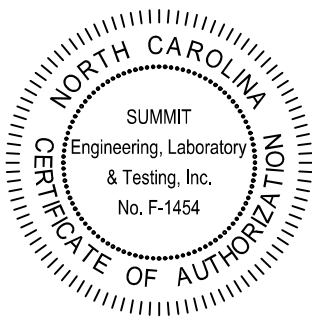
KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

**Duncans Lot 71**



**SUMMIT**  
ENGINEERING LABORATORY TESTING

3070 Hammond Business Place  
Suite 171, RALEIGH, NC 27603  
OFFICE: 919.380.9991  
FAX: 919.380.9993  
WWW.SUMMIT-COMPANIES.COM



PROJECT Morgan LH

First Floor Framing

CLIENT Smith Douglas Homes - Raleigh  
2520 Reliance Ave  
Apex, NC 27539

**CURRENT DRAWING**

DATE: 01/11/2021  
SCALE: 1/8"=1'-0"  
PROJECT #: 3832.T0548  
DRAWN BY: DGT  
CHECKED BY: BCP

**ORIGINAL DRAWING**

DATE PROJECT #  
10/29/2019 3832.T0548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET **S3.0**

STRUCTURAL MEMBERS ONLY

HEADER TAG	BEAM TAG	SIZE	JACKS (EACH END)
-	B1	(1) 14" FLOOR JOIST	(2)
-	B2	(2) 14" FLOOR JOIST	(2)
A	B3	(2) 2x6	(1)
B	B4	(2) 2x8	(2)
C	B5	(2) 2x10	(2)
D	B6	(2) 2x12	(2)
E	B7	(2) 9-1/4" LVL	(3)
F	B8	(2) 11-7/8" LVL	(3)
G	B9	(2) 14" LVL	(3)
H	B10	(2) 16" LVL	(3)
I	B11	(2) 18" LVL	(3)
J	B12	(2) 24" LVL	(4)
K	B13	(3) 9-1/4" LVL	(3)
L	B14	(3) 11-7/8" LVL	(3)
M	B16	(3) 14" LVL	(3)
N	B17	(3) 16" LVL	(3)
O	B18	(3) 18" LVL	(3)
P	B19	(3) 24" LVL	(4)

HEADER/BEAM SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER/BEAM SIZES MAY BE USED FOR EASE OF CONSTRUCTION. ALL HEADERS TO BE DROPPED UNLESS NOTED OTHERWISE. ALL BEAMS TO BE FLUSH UNLESS NOTED OTHERWISE.

TAG	SIZE	OPENING SIZE
①	L3x3x1/4"	LESS THAN 6'-0"
②	L5x3x1/4"	6'-0" TO 10'-0"
③	L5x3-1/2"x5/16"	GREATER THAN 10'-0"
④	L5x3-1/2"x5/16" ROLLED OR EQUIV.	ALL ARCHED OPENINGS

SECURE LINTEL TO HEADER w/ (2) 1/2" DIAMETER LAG SCREWS STAGGERED @ 16" O.C. (TYP FOR ③)

ALL HEADERS WITH BRICK ABOVE: (UNO)

**WALL STUD SCHEDULE**

1ST & 2ND FLOOR LOAD BEARING WALLS:  
2x6 STUDS @ 24" O.C. OR 2x4 STUDS @ 16" O.C.

1ST FLOOR LOAD BEARING WALLS SUPPORTING 2ND FLOOR + WALK-UP ATTIC:  
2x6 STUDS @ 16" O.C. OR 2x4 STUDS @ 12" O.C.

BASEMENT LOAD BEARING WALLS:  
2x6 STUDS @ 16" O.C. OR 2x4 STUDS @ 12" O.C.

NON-LOAD BEARING WALLS (ALL FLOORS):  
2x4 STUDS @ 24" O.C.

TWO STORY WALLS:  
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. w/ 2X BRACING @ 6'-0" O.C. VERTICALLY (AKA "BALLOON FRAMING")

OPENING WIDTH (FT)	KINGS (EACH END)	
	16" O.C.	24" O.C.
LESS THAN 3'-0"	(1)	(1)
3'-0" TO 4'-0"	(2)	(2)
4'-0" TO 8'-0"	(3)	(3)
8'-0" TO 12'-0"	(5)	(5)
12'-0" TO 16'-0"	(6)	(4)

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES COMPLETED/REVISED ON 8/28/19. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

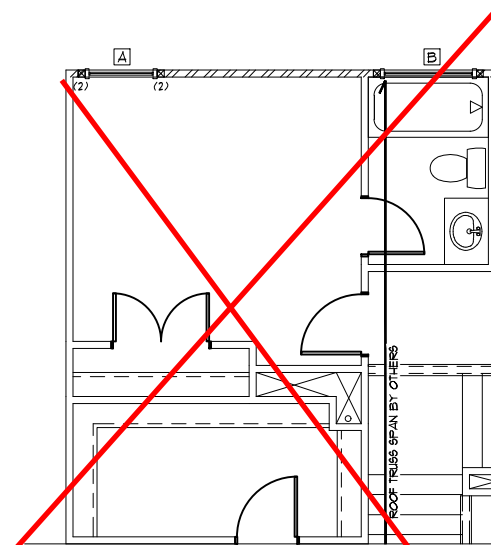
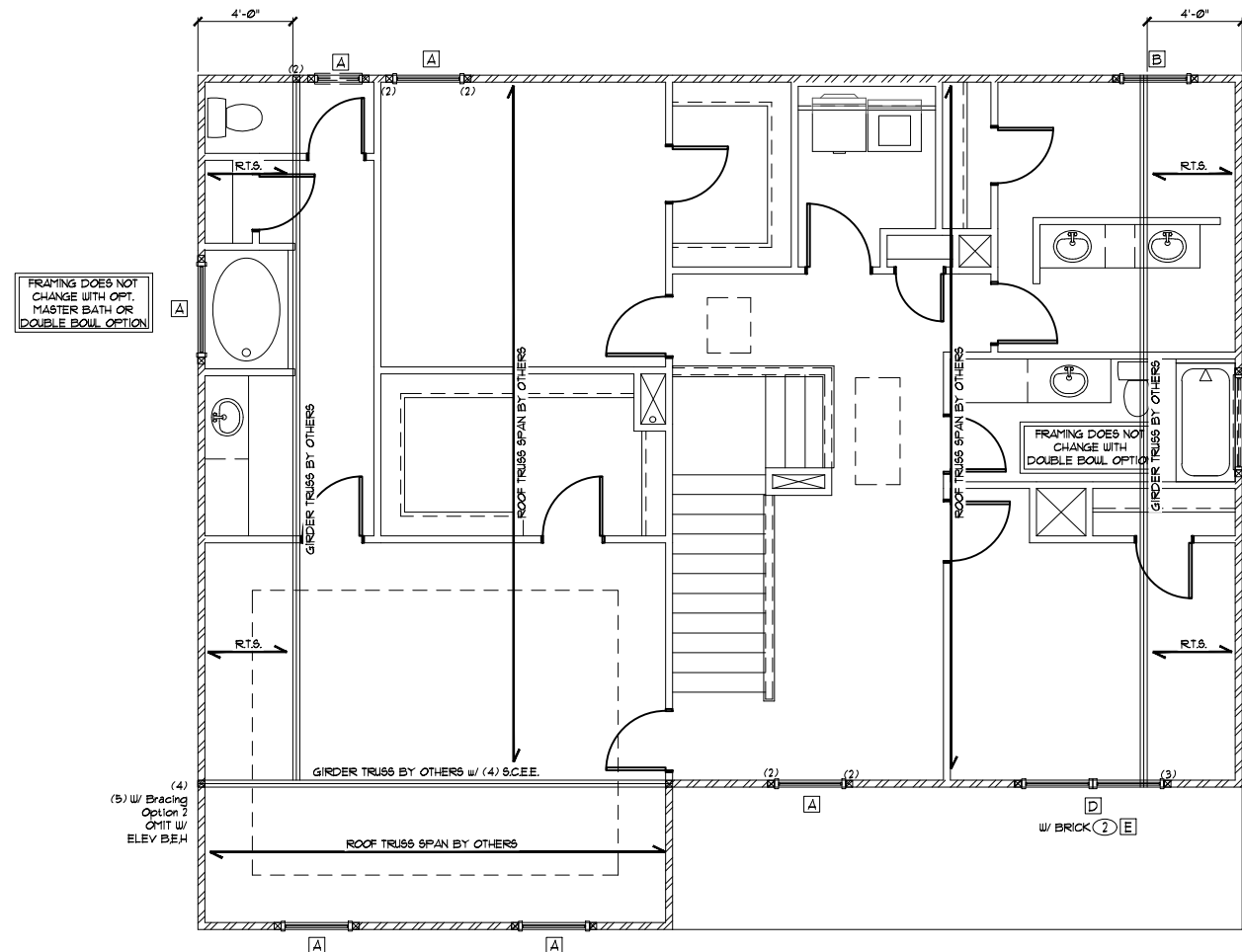
**STRUCTURAL MEMBERS ONLY**

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

**SECOND FLOOR FRAMING PLAN**

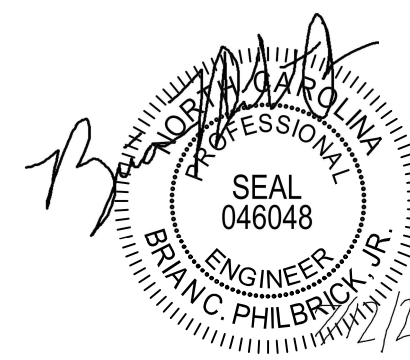
SCALE: 1/8"=1'



OPT. BEDROOM 4 EN SUITE  
ELEV. C.F.I

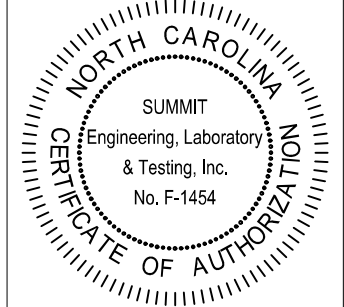
ELEVATIONS C, F, I

Duncans  
Lot 71



STRUCTURAL MEMBERS ONLY

**SUMMIT**  
ENGINEERING LABORATORY TESTING  
3070 Hammond Business Place  
Suite 171, RALEIGH, NC 27603  
OFFICE: 919.380.9991  
FAX: 919.380.9993  
WWW.SUMMIT-COMPANIES.COM



PROJECT Morgan LH  
Second Floor Framing Plan  
CLIENT Smith Douglas Homes - Raleigh  
2520 Reliance Ave  
Apex, NC 27539

**CURRENT DRAWING**  
DATE: 01/11/2021  
SCALE: 1/8"=1'-0"  
PROJECT #: 3832.T0548  
DRAWN BY: DGT  
CHECKED BY: BCP

**ORIGINAL DRAWING**  
DATE PROJECT #  
10/29/2019 3832.T0548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**S4.2**



**TRUSS UPLIFT CONNECTOR SCHEDULE**

MAX. UPLIFT	ROOF TO WALL	FLOOR TO FLOOR	FLOOR TO END
535 LBS	H2.5A	PER WALL SHEATHING & FASTENERS	
1070 LBS	(2) H2.5A	C916 (END + 13')	DTT2Z
1245 LBS	HT520	C916 (END + 13')	DTT2Z
1720 LBS	(2) HT520	(2) C916 (END + 13')	DTT2Z
2490 LBS	(2) HT520	(2) C916 (END + 13')	HTT4
2365 LBS	LGT3-SD525	(2) C916 (END + 13')	HTT4

- ALL PRODUCTS LISTED ARE SIMPSON STRONG-TIE. EQUIVALENT PRODUCTS MAY BE USED PER MANUFACTURER'S SPECIFICATIONS.
- UPLIFT VALUES LISTED ARE FOR SFPF #7 GRADE MEMBERS.
- REFER TO TRUSS LAYOUT PER MANUF. FOR UPLIFT VALUES AND TRUSS TO TRUSS CONNECTIONS. CONNECTORS SPECIFIED BY TRUSS MANUFACTURER OVERRIDE THOSE LISTED ABOVE.
- CONTACT SUMMIT FOR REQUIRED CONNECTORS WHEN LOADS EXCEED THOSE LISTED ABOVE.

NOTE: 1ST PLY OF ALL SHOWN GIRDER TRUSSES TO ALIGN WITH INSIDE FACE OF WALL (TYP, UNO)

NOTE: ROOF TRUSSES SHALL BE SPACED TO SUPPORT FALSE FRAMED DORMER WALLS (TYP, UNO)

NOTE: TRUSS UPLIFT LOADS SHALL BE DETERMINED PER TRUSS MANUFACTURER IN ACCORDANCE WITH SECTION R602.11.11. WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST THE WIND UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.3.5 OF THE 2018 NCRC. REFER TO BRACED WALL PLANS FOR SHEATHING AND FASTENER REQUIREMENTS.

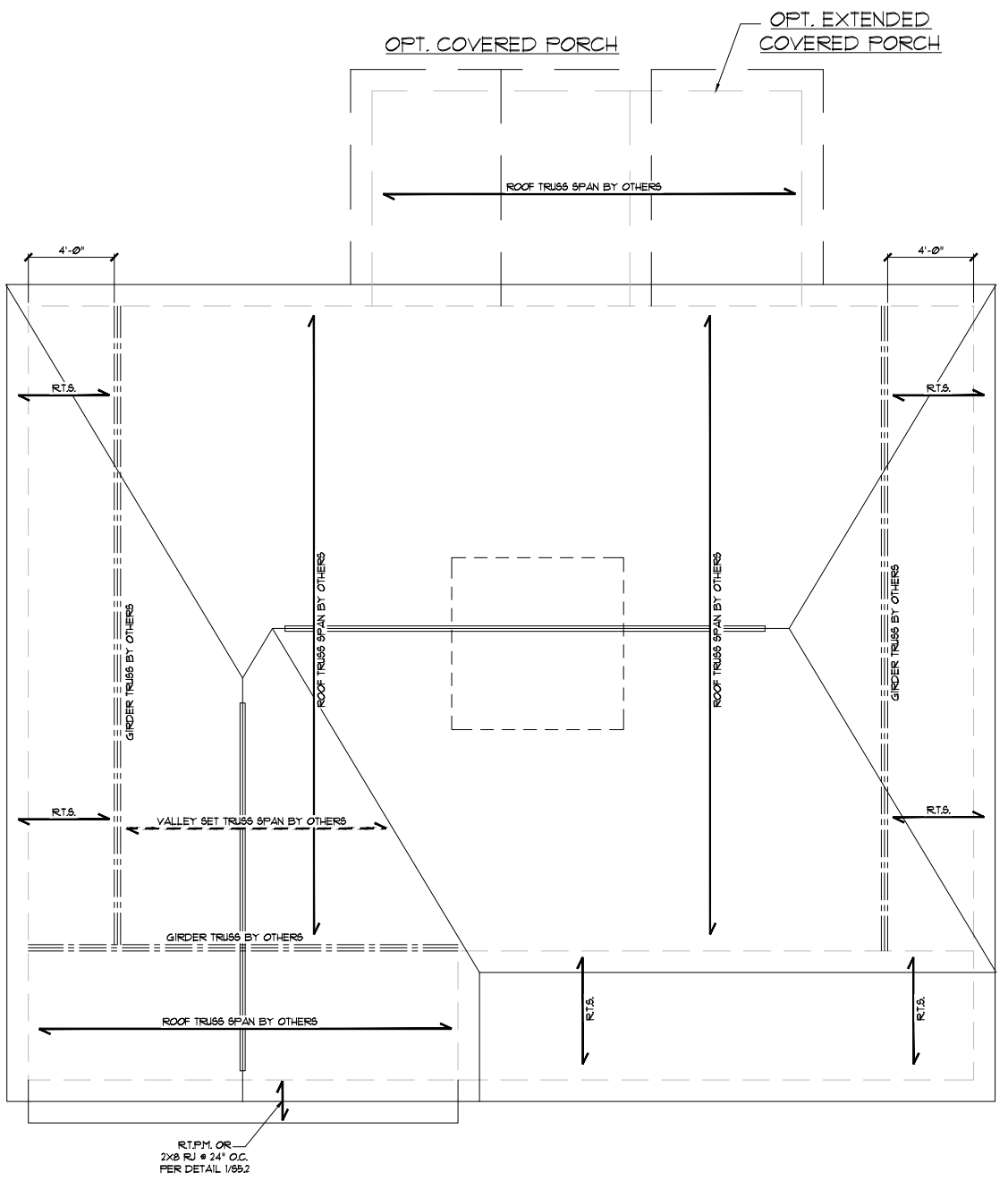
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**STRUCTURAL MEMBERS ONLY**

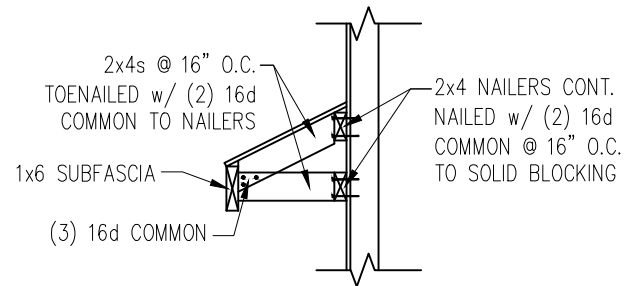
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

**ROOF FRAMING PLAN**  
SCALE: 1/8"=1'



**ELEVATION C.F. 1**



**1 LOWER ROOF FRAMING**  
S5.2 1" = 1'-0"

**Duncans Lot 71**

STRUCTURAL MEMBERS ONLY

3070 Hammond Business Place  
Suite 171, RALEIGH, NC 27603  
OFFICE: 919.380.9991  
FAX: 919.380.9993  
WWW.SUMMIT-COMPANIES.COM

PROJECT: Morgan LH  
Roof Framing Plan  
CLIENT: Smith Douglas Homes - Raleigh  
2520 Reliance Ave  
Apex, NC 27539

**CURRENT DRAWING**  
DATE: 01/1/2021  
SCALE: 1/8"=1'-0"  
PROJECT #: 3832.T0548  
DRAWN BY: DGT  
CHECKED BY: BCP

**ORIGINAL DRAWING**  
DATE: 10/29/2019 PROJECT #: 3832.T0548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**S5.2**

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			• PANEL EDGES	• INTERMEDIATE SUPPORTS
CS-UWP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS • 6" O.C.	6d COMMON NAILS • 12" O.C.
GB	GYP SUM BOARD	1/2"	5d COOLER NAILS** • 1" O.C.	5d COOLER NAILS** • 1" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS • 6" O.C.	6d COMMON NAILS • 12" O.C.
FF	WOOD STRUCTURAL PANEL	1/16"	PER FIGURE R602.10.1	PER FIGURE R602.10.1

\*\*OR EQUIVALENT PER TABLE R102.3.5

**BRACED WALL NOTES:**

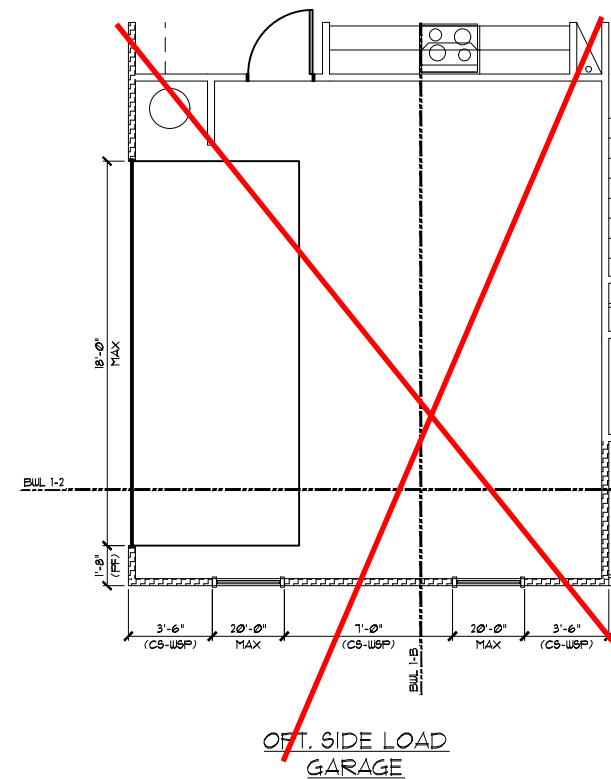
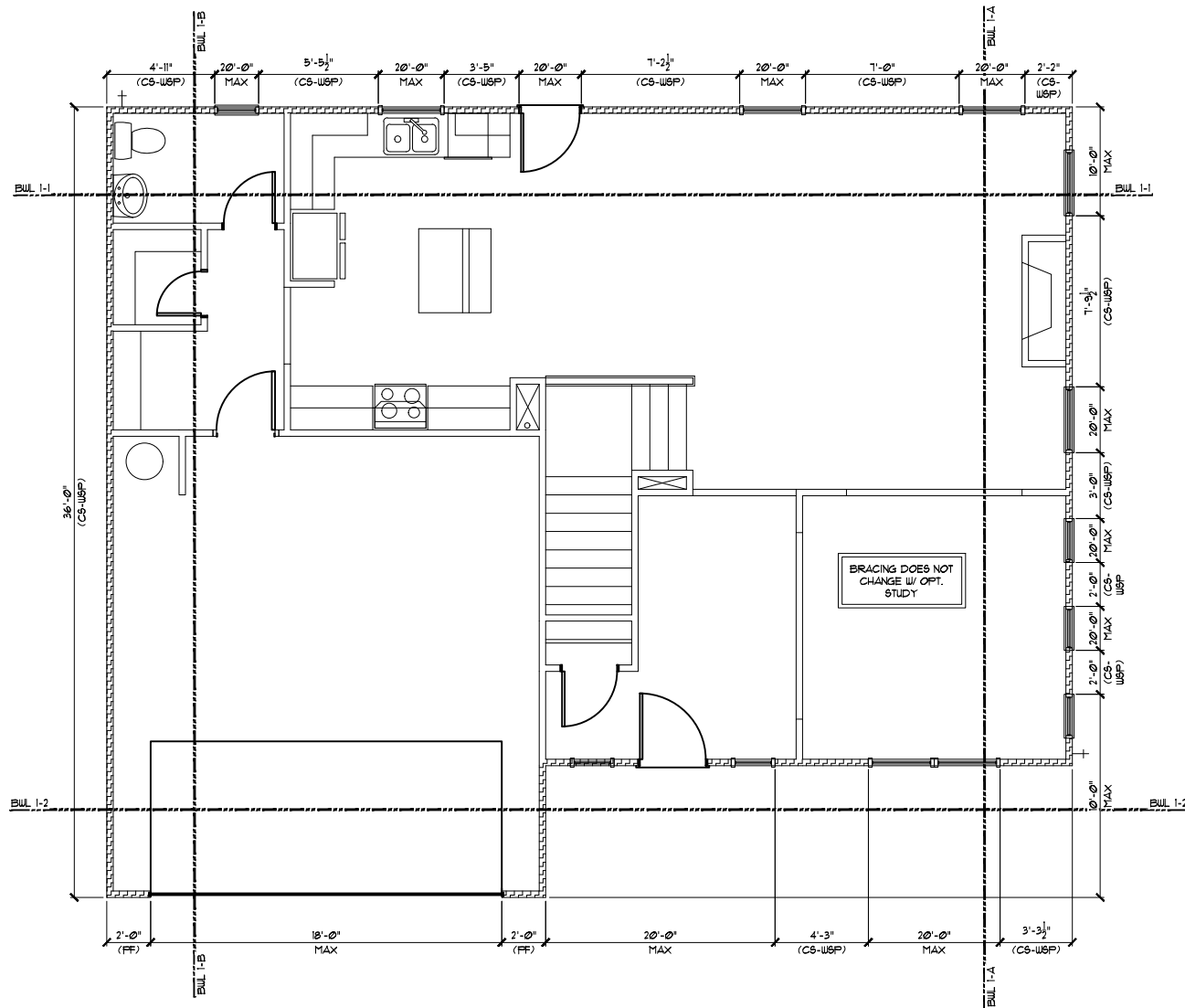
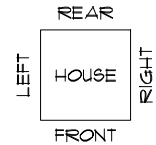
- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 NORTH CAROLINA RESIDENTIAL CODE.
- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH TABLE R602.10.1.
- ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.1.
- THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYP SUM BOARD (UNO).
- FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING IN-fill AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
- FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- A BRACED WALL PANEL SHALL BE LOCATED WITHIN 10 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.4.3 OF THE 2018 NCRC.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5.
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.4.6.
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (UNO).
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:

GB = GYP SUM BOARD    WSP = WOOD STRUCTURAL PANEL  
 CS-XXX = CONT. SHEATHED    ENG = ENGINEERED SOLUTION  
 FF = PORTAL FRAME    FF-ENG = ENG. PORTAL FRAME

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES COMPLETED/REVISED ON 8/28/23. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

FIRST FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
BUL 1-1	105	302
BUL 1-2	105	135
BUL 1-A	132	148
BUL 1-B	132	360

INSTALL HOLD-DOWNS PER SECTION R602.10.4 AND FIGURE R602.10.3(4) OF THE 2018 NCRC.



FIRST FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
BUL 1-1	105	302
BUL 1-2	105	135
BUL 1-A	132	148
BUL 1-B	132	208

ALL ELEV.

**STRUCTURAL MEMBERS ONLY**

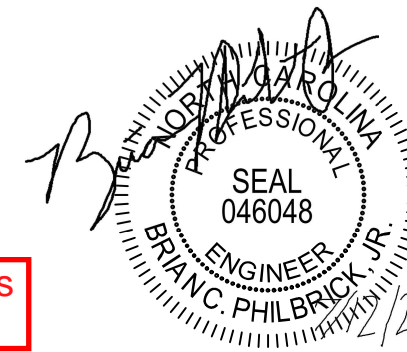
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

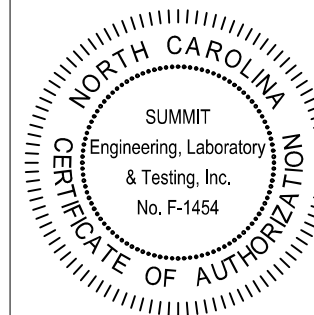
**FIRST FLOOR BRACING PLAN**

SCALE: 1/8"=1'

Duncans  
Lot 71



STRUCTURAL MEMBERS ONLY



PROJECT: Morgan LH  
 First Floor Bracing  
 CLIENT: Smith Douglas Homes - Raleigh  
 2520 Reliance Ave  
 Apex, NC 27539

**CURRENT DRAWING**

DATE: 01/11/2021

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

PROJECT #: 3832.T0548

DRAWN BY: DGT

CHECKED BY: BCP

**ORIGINAL DRAWING**

DATE: 10/29/2019    PROJECT #: 3832.T0548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

S7.0

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			# PANEL EDGES	# INTERMEDIATE SUPPORTS
CS-USP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS • 6" O.C.	6d COMMON NAILS • 12" O.C.
GB	GYPSUM BOARD	1/2"	5d COOLER NAILS** • 1" O.C.	5d COOLER NAILS** • 1" O.C.
USP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS • 6" O.C.	6d COMMON NAILS • 12" O.C.
PF	STRUCTURAL PANEL	7/16"	PER FIGURE R602.10.1	PER FIGURE R602.10.1

\*\*OR EQUIVALENT PER TABLE RT02.3.5

SEE SHEET S7.0 FOR NOTES AND MORE INFORMATION

**BRACED WALL NOTES:**

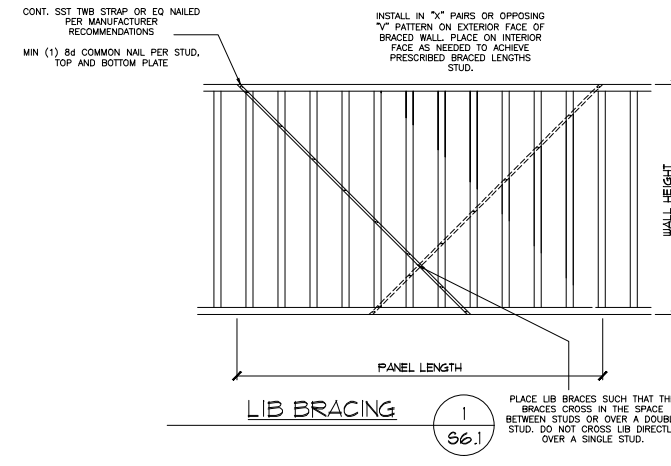
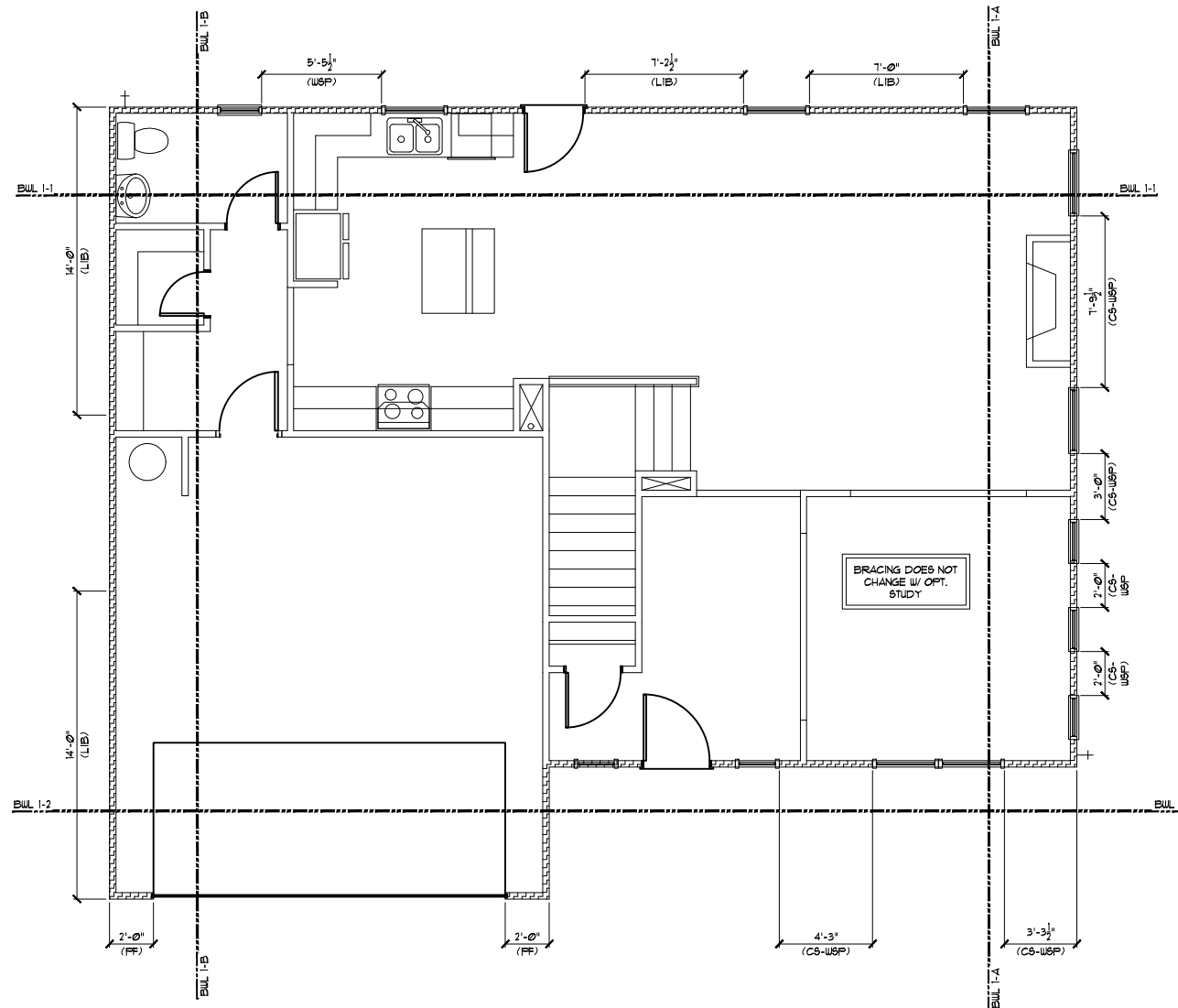
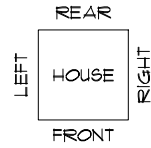
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- WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
- BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH TABLE R602.10.1.
- ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR SOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.1.
- THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (NO).
- FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
- FLOORS SHALL NOT BE CANTILEVERED MORE THAN 34" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.3 OF THE 2018 NCRS.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5.
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.4.6.
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (NO).
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS. ABBREVIATIONS:

GB = GYPSUM BOARD      USP = WOOD STRUCTURAL PANEL  
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 PF = PORTAL FRAME      PF-ENG = ENG. PORTAL FRAME

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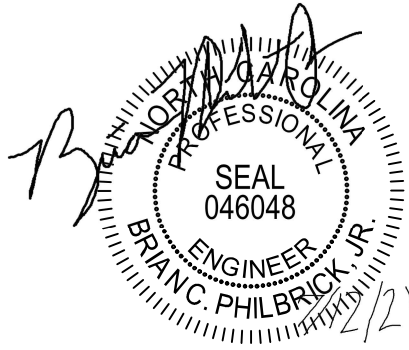
INSTALL HOLD-DOWNS PER SECTION R602.10.4 AND FIGURE R602.10.3.4 OF THE 2018 NCRS.

FIRST FLOOR BRACING (FT)		
	CONTINUOUS SHEATHING METHOD	
	REQUIRED	PROVIDED
BULL 1-1	10.5	12.5
BULL 1-2	10.5	13.5
BULL 1-A	13.2	14.8
BULL 1-B	13.2	14.0



ALL ELEV.  
BRACING OPTION 2

Duncans  
Lot 71



STRUCTURAL MEMBERS ONLY

**STRUCTURAL MEMBERS ONLY**

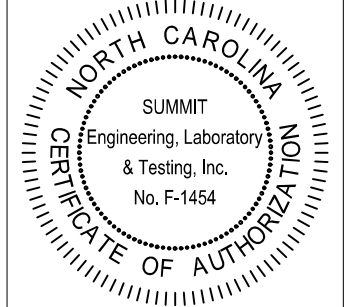
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STRUCTURAL ANALYSIS BASED ON 2018 NCRS.

**FIRST FLOOR BRACING PLAN**

SCALE: 1/8"=1'

**SUMMIT**  
ENGINEERING LABORATORY TESTING  
3070 Hammond Business Place  
Suite 171, RALEIGH, NC 27603  
OFFICE: 919.380.9991  
FAX: 919.380.9993  
WWW.SUMMIT-COMPANIES.COM



PROJECT Morgan LH  
 First Floor Bracing  
 CLIENT Smith Douglas Homes - Raleigh  
 2520 Reliance Ave  
 Apex, NC 27539

**CURRENT DRAWING**  
 DATE: 01/11/2021  
 SCALE: 1/8"=1'-0"  
 PROJECT #: 3832.T0548  
 DRAWN BY: DGT  
 CHECKED BY: BCP

**ORIGINAL DRAWING**  
 DATE PROJECT #  
 10/29/2019 3832.T0548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**S7.1**

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	GYPSTUM BOARD	1/2"	5d COOLER NAILS** • 1" O.C.	5d COOLER NAILS** • 1" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS • 6" O.C.	6d COMMON NAILS • 12" O.C.
FF	WOOD STRUCTURAL PANEL	1/16"	PER FIGURE R602.10.1	PER FIGURE R602.10.1

\*\*OR EQUIVALENT PER TABLE R102.3.5

**BRACED WALL NOTES:**

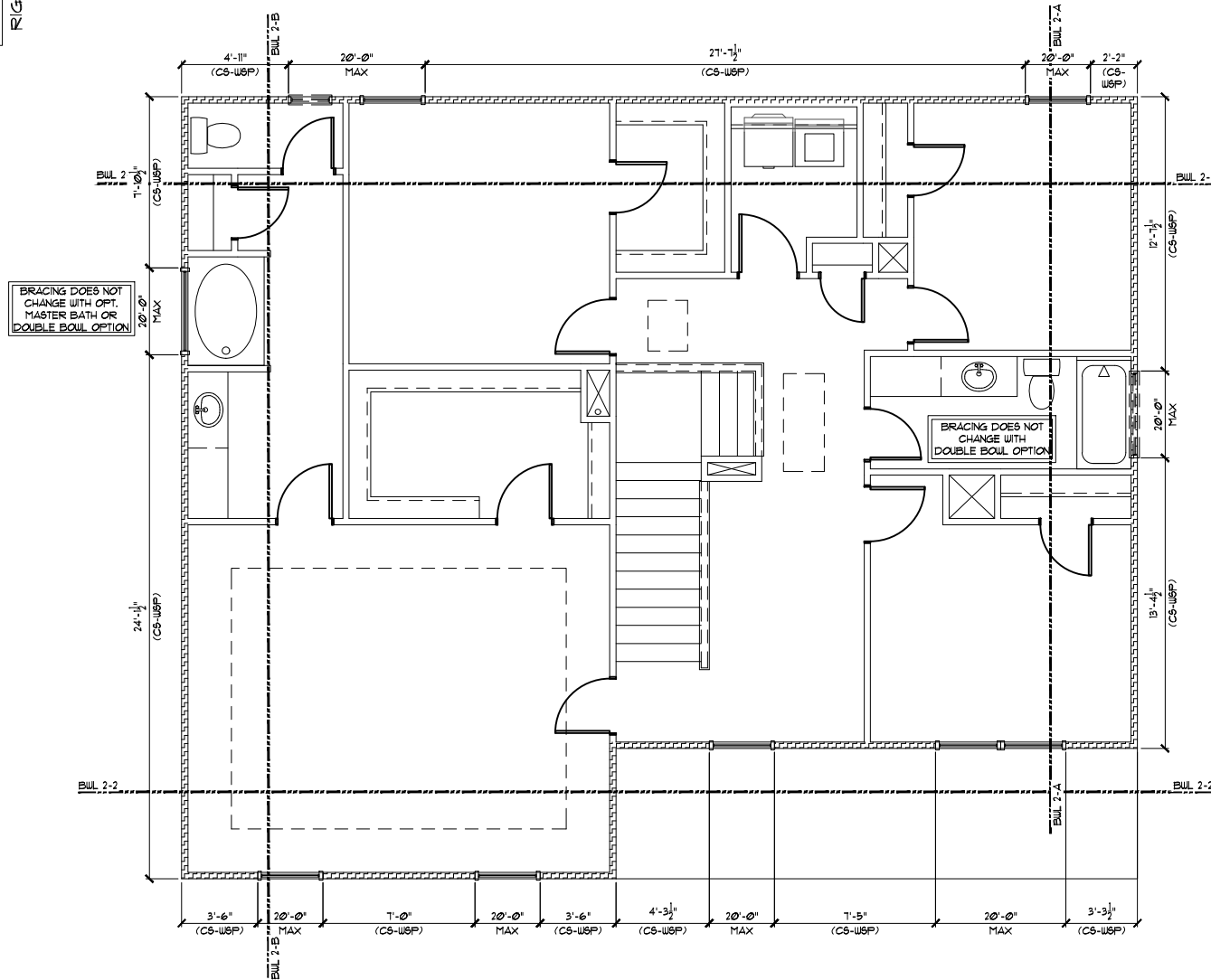
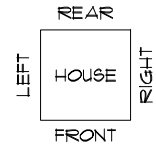
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- FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING HILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
- FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
- A BRACED WALL PANEL SHALL BE LOCATED WITHIN 10 FEET OF EACH END OF A BRACED WALL LINE.
- THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
- MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.4.3 OF THE 2018 NCRC.
- BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4.
- BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5.
- CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.4.6.
- PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (UNO).
- ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
- ABBREVIATIONS:

GB = GYPSTUM BOARD    WSP = WOOD STRUCTURAL PANEL  
 CS-XXX = CONT. SHEATHED    ENG = ENGINEERED SOLUTION  
 FF = PORTAL FRAME    FF-ENG = ENG. PORTAL FRAME

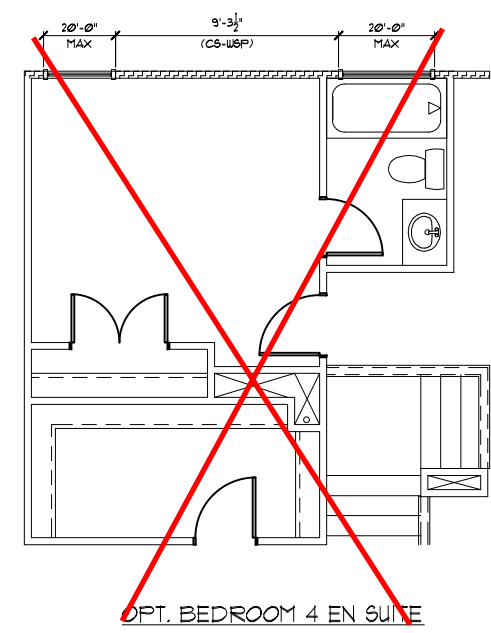
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INSTALL HOLD-DOWNS PER SECTION R602.10.4 AND FIGURE R602.10.3.4 OF THE 2018 NCRC.

SECOND FLOOR BRACING (FT)		
	CONTINUOUS SHEATHING METHOD	
	REQUIRED	PROVIDED
BWL 2-1	5.5	34.1
BWL 2-2	5.5	29.0
BWL 2-A	6.8	26.0
BWL 2-B	6.8	32.0



ALL ELEV.



SECOND FLOOR BRACING (FT)		
	CONTINUOUS SHEATHING METHOD	
	REQUIRED	PROVIDED
BWL 2-1	5.5	30.1
BWL 2-2	5.5	29.0
BWL 2-A	6.8	26.0
BWL 2-B	6.8	32.0

**STRUCTURAL MEMBERS ONLY**

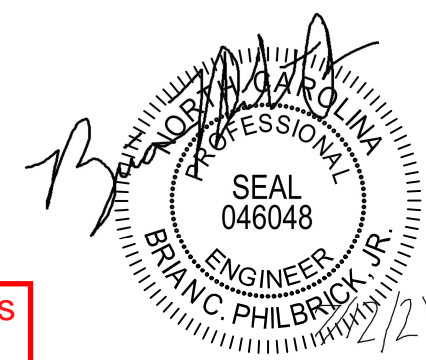
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

**SECOND FLOOR BRACING PLAN**

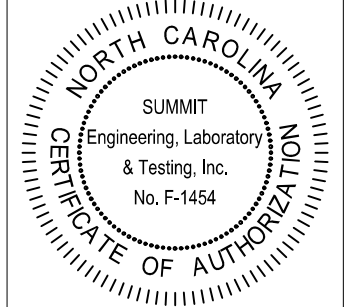
SCALE: 1/8"=1'

Duncans  
Lot 71



STRUCTURAL MEMBERS ONLY

**SUMMIT**  
ENGINEERING LABORATORY TESTING  
3070 Hammond Business Place  
Suite 171, RALEIGH, NC 27603  
OFFICE: 919.380.9991  
FAX: 919.380.9993  
WWW.SUMMIT-COMPANIES.COM



PROJECT Morgan LH  
 Second Floor Bracing  
 CLIENT Smith Douglas Homes - Raleigh  
 2520 Reliance Ave  
 Apex, NC 27539

**CURRENT DRAWING**  
 DATE: 01/11/2021  
 SCALE: 1/8"=1'-0"  
 PROJECT #: 3832.T0548  
 DRAWN BY: DGT  
 CHECKED BY: BCP

**ORIGINAL DRAWING**  
 DATE PROJECT #  
 10/29/2019 3832.T0548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

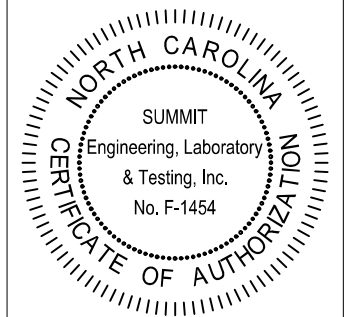
SHEET  
**S8.0**



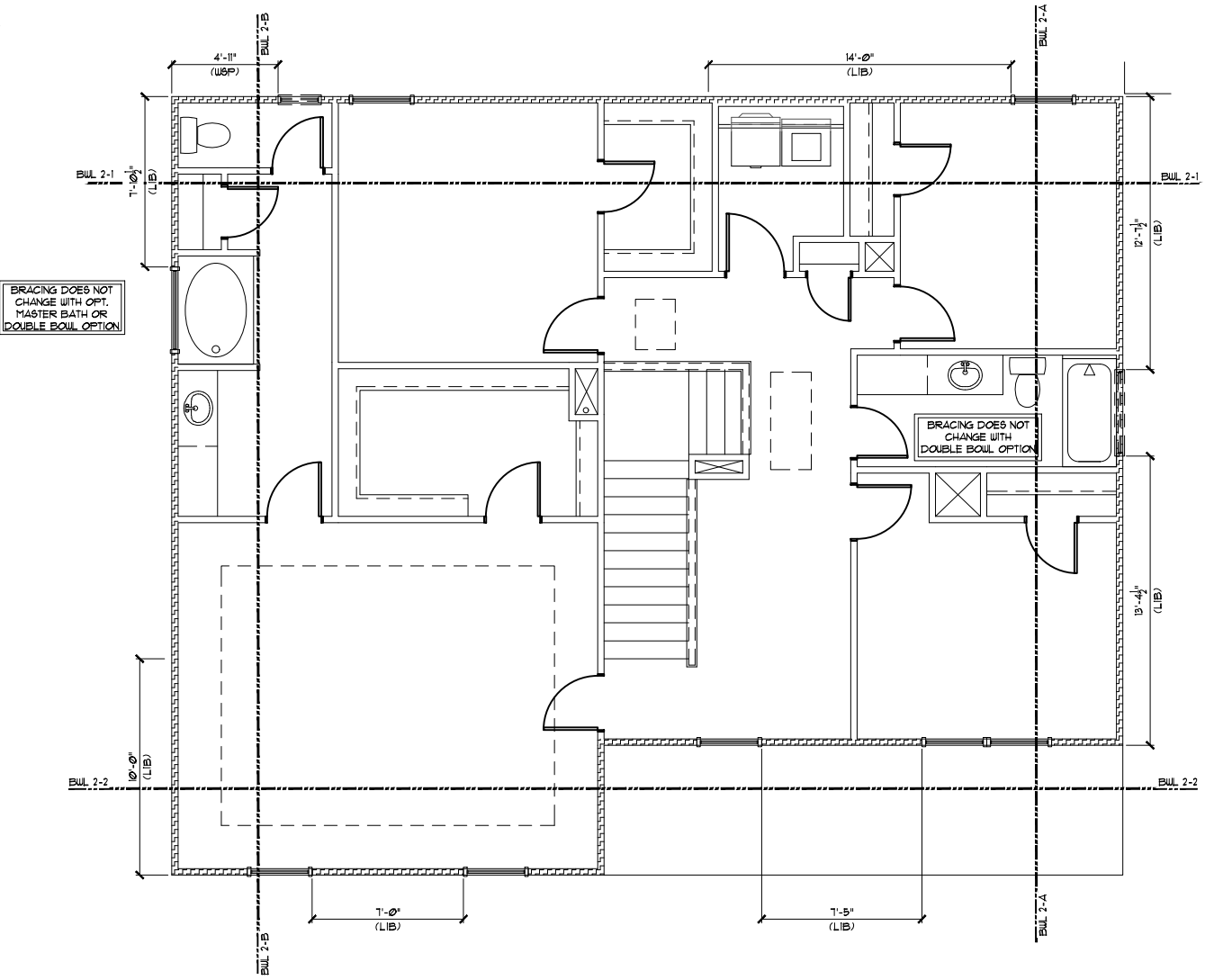
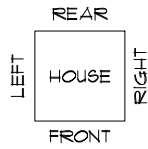
REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION	
			* PANEL EDGES	* INTERMEDIATE SUPPORTS
CS-USP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYP SUM BOARD	1/2"	5d COOLER NAILS** @ 1" O.C.	5d COOLER NAILS** @ 1" O.C.
USP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
FF	WOOD STRUCTURAL PANEL	7/16"	PER FIGURE R602.10.1	PER FIGURE R602.10.1

SEE SHEET S8.0 FOR NOTES AND MORE INFORMATION

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Suite 171, RALEIGH, NC 27603  
OFFICE: 919.380.9991  
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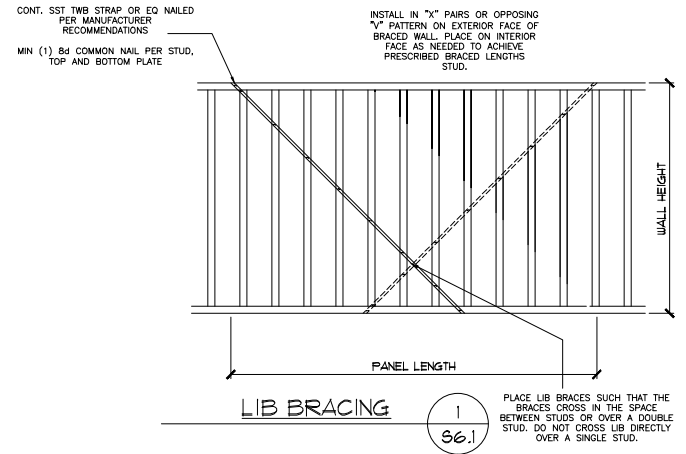


- BRACED WALL NOTES:**
- WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 NORTH CAROLINA RESIDENTIAL CODE.
  - WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
  - REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
  - BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH TABLE R602.10.1.
  - ALL BRACED WALL PANELS SHALL BE FULL WALL HEIGHT AND SHALL NOT EXCEED 10 FEET FOR ISOLATED PANEL METHOD AND 12 FEET FOR CONTINUOUS SHEATHING METHOD WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
  - MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.1.
  - THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYP SUM BOARD (UNO).
  - FOR CONTINUOUS SHEATHING METHOD, EXTERIOR WALLS SHALL BE SHEATHED ON ALL SHEATHABLE SURFACES INCLUDING INFILL AREAS BETWEEN BRACED WALL PANELS, ABOVE AND BELOW WALL OPENINGS, AND ON GABLE END WALLS.
  - FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
  - A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH END OF A BRACED WALL LINE.
  - THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
  - MASONRY OR CONCRETE STEM WALLS WITH A LENGTH OF 48" OR LESS SUPPORTING A BRACED WALL PANEL SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.4.3 OF THE 2018 NCRC.
  - BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4.
  - BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5.
  - CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.4.6.
  - PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (UNO).
  - ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
  - ABBREVIATIONS:  
GB - GYP SUM BOARD      USP - WOOD STRUCTURAL PANEL  
CS-XXX - CONT. SHEATHED    ENG - ENGINEERED SOLUTION  
FF - PORTAL FRAME      FF-ENG - ENG. PORTAL FRAME



BRACING DOES NOT CHANGE WITH OPT. MASTER BATH OR DOUBLE BOUL OPTION

BRACING DOES NOT CHANGE WITH DOUBLE BOUL OPTION



THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES COMPLETED/REVISED ON 8/28/19. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

INSTALL HOLD-DOWNS PER SECTION R602.10.4 AND FIGURE R602.10.3(4) OF THE 2018 NCRC.

SECOND FLOOR BRACING (FT)		
	CONTINUOUS SHEATHING METHOD	
	REQUIRED	PROVIDED
BUIL 2-1	5.5	11.9
BUIL 2-2	5.5	12
BUIL 2-A	6.8	13.0
BUIL 2-B	6.8	14

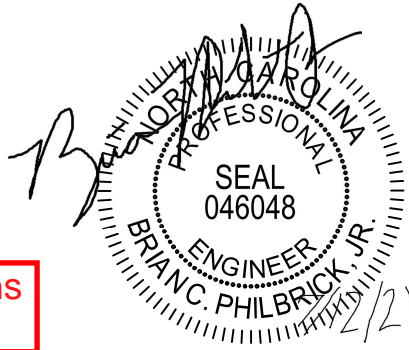
ALL ELEV.  
BRACING OPTION 2

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

**SECOND FLOOR BRACING PLAN**  
SCALE: 1/8"=1'

Duncans  
Lot 71



STRUCTURAL MEMBERS ONLY

**CURRENT DRAWING**  
DATE: 01/11/2021  
SCALE: 1/8"=1'-0"  
PROJECT #: 3832.T0548  
DRAWN BY: DGT  
CHECKED BY: BCP

**ORIGINAL DRAWING**  
DATE PROJECT #  
10/29/2019 3832.T0548

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**S8.1**



**GENERAL STRUCTURAL NOTES:**

- The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT shall be considered the same entity.
- The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
- The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.
- Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions, is not the responsibility of the SER or SUMMIT.
- Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before construction begins.
- The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
- This structure and all construction shall conform to all applicable sections of the international residential code.
- This structure and all construction shall conform to all applicable sections of the 2018 North Carolina Residential Code (NCRC) and any local codes or restrictions

**FOUNDATIONS:**

- Foundations shall be constructed in accordance with chapter 4 of the 2018 NC Residential Building Code (Special consideration shall be given to Chapter 45 in wind zones above 130mph)
- Footing sizes based on a presumptive soil bearing capacity of 2000 PSF. Contractor is solely responsible for verifying the suitability of the site soil conditions at the time of construction
- Maximum depth of unbalanced fill against masonry walls to be as specified in section R404.1 of the 2018 NCRC
- The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.
- The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.
- Any fill shall be placed under the direction or recommendation of a licensed professional engineer. The resulting soil shall be compacted to a minimum of 95% maximum dry density.
- Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.
- No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.
- Each crawl space pier shall bear in the middle third of its respective footing and each girder shall bearing in the middle third of the piers. Pilasters to be bonded to perimeter foundation wall
- Crawl spaced to be graded level and clear of all debris
- Provide foundation waterproofing and drain with positive slope to outlet as required by site conditions
- Energy efficiency compliance and insulation of the structure to be in accordance with chapter 11 of the 2018 NCRC

**CONCRETE:**

- Concrete shall have a normal weight aggregate and a minimum compressive strength (f'c) at 28 days of 3000 psi, unless otherwise noted on the plan.
- Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".
- Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows:
  - Footings: 5%
  - Exterior Slabs: 5%
- No admixtures shall be added to any structural concrete without written permission of the SER
- Concrete slabs-on-grade shall be constructed in accordance with ACI 302.1R-96: "Guide for Concrete Slab and Slab Construction".
- The concrete slab-on-grade has been designed using a subgrade modulus of k=250 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions.
- Control or saw cut joints shall be spaced in interior slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" unless otherwise noted.
- Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished
- Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint.
- All welded wire fabric (W.W.F.) for concrete slabs-on-grade shall be placed at mid-depth of slab. The W.W.F. shall be securely supported during the concrete pour. Fibermesh may be used in lieu of W.W.F.

**CONCRETE REINFORCEMENT:**

- Fibrous concrete reinforcement, or fibermesh, specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased abrasion resistance, and residual strength.
- Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
- Application of fibermesh per cubic yard of concrete shall equal a minimum of 0.1% by volume (1.5 pounds per cubic yard)
- Fibermesh shall comply with ASTM C1116, any local building code requirements, and shall meet or exceed the current industry standard.
- Steel Reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
- Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the latest edition of ACI 315: "Manual of Standard Practice for Detailing Concrete Structures"
- Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice.
- Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in masonry shall be a minimum of 48 bar diameters.
- Where reinforcing dowels are required, they shall be equivalent in size and spacing to the vertical reinforcement. The dowel shall extend 48 bar diameters vertically and 20 bar diameters into the footing.
- Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

**WOOD FRAMING:**

- Solid sawn wood framing members shall conform to the specifications listed in the latest edition of the "National Design Specification for Wood Construction" (NDS). Unless otherwise noted, all wood framing members are designed to be Spruce-Pine-Fir (SPF) #2.
- LVL or PSL engineered wood shall have the following minimum design values:
  - E = 1,900,000 psi
  - Fb = 2600 psi
  - Fv = 285 psi
  - Fc = 700 psi
- Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AWPA standard C-15. All other moisture exposed wood shall be treated in accordance with AWPA standard C-2
- Nails shall be common wire nails unless otherwise noted.
- Lag screws shall conform to ANSI/ASME standard B18.2.1-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
- All beams shall have full bearing on supporting framing members unless otherwise noted.
- Exterior and load bearing stud walls are to be 2x4 SPF#2 @16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum of one king stud shall be placed at each end of the header. King studs shall be continuous.
- Individual studs forming a column shall be attached with one 10d nail @6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be fully blocked at all floor levels to ensure proper load transfer.
- Multi-ply beams shall have each ply attached with (3)10d nails @ 24" O.C.
- Fitch beams and four and five ply beams shall be bolted together with (2) rows of 1/2" dia. through bolts staggered @24" O.C. w/ 2" edge distance and (2) bolts located at 6" from each end, unless noted otherwise.

**WOOD TRUSSES:**

- The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for the wood trusses.
- The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures." (ASCE 7-10), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to the trusses.
- The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction." (NDS) and "Design Specification for Metal Plate Connected Wood Trusses."
- The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-91). This bracing, both temporary and permanent, shall be shown on the shop drawings. Also, the shop drawings shall show the required attachments for the trusses.
- Any chords or truss webs shown on these drawings have been shown as a reference only. The final design of the trusses shall be per the manufacturer.

**WOOD STRUCTURAL PANELS:**

- Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.
- All structurally required wood sheathing shall bear the mark of the APA.
- Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise.
- Roof sheathing shall be APA rated sheathing exposure 1 or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of plywood clips or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
- Wood floor sheathing shall be APA rated sheathing exposure 1 or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshank nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T&G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the state Building Code.
- Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

**STRUCTURAL FIBERBOARD PANELS:**

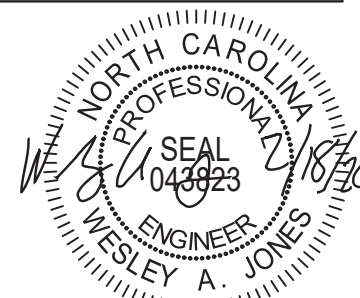
- Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
- Fiberboard wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more information.
- Sheathing shall have a 1/8" gap at panel ends and edges are recommended in accordance with the AFA.

**EXTERIOR WOOD FRAMED DECKS:**

- Decks are to be framed in accordance with local building codes and as referenced on the structural plans, either through code references or construction details.

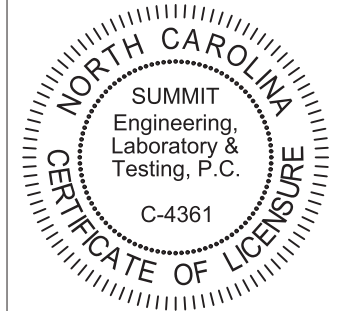
**STRUCTURAL STEEL:**

- Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and of the manual of Steel Construction "Load Resistance Factor Design" latest editions.
- All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
- Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D1.1. Electrodes for shop and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.



STRUCTURAL MEMBERS ONLY

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FAX: 919.380.9993  
WWW.SUMMIT-COMPANIES.COM



PROJECT  
**Standard Details**  
**Notes and Specifications**  
CLIENT  
**Smith Douglas Homes**  
**110 Village Trail, Suite 215**  
**Woodstock, GA 30188**

**CURRENT DRAWING**

DATE: 2/18/20  
SCALE: NTS  
PROJECT #: 3832  
DRAWN BY: LBV  
CHECKED BY: WAJ

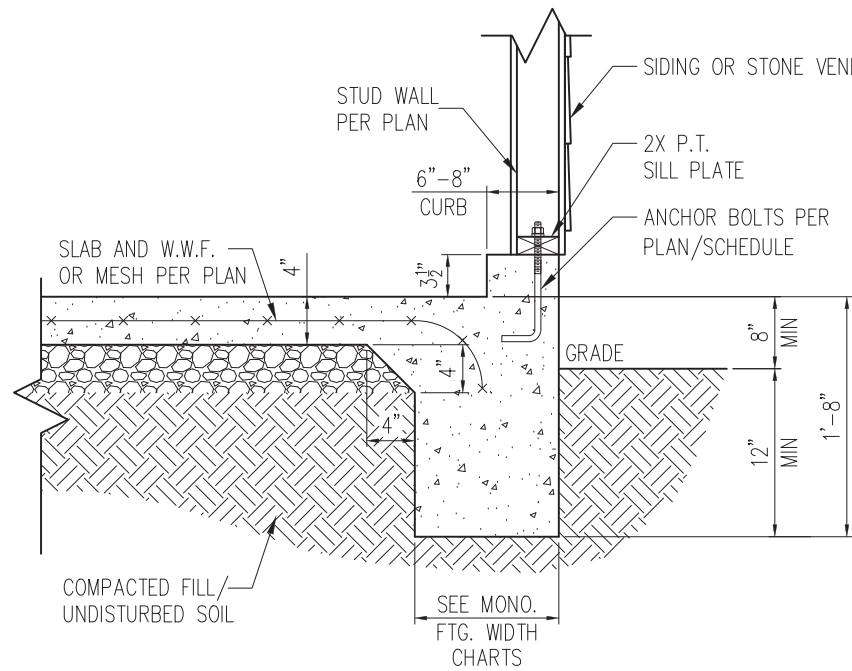
**ORIGINAL DRAWING**

NO.	DATE	PROJECT #
0	1/7/16	3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

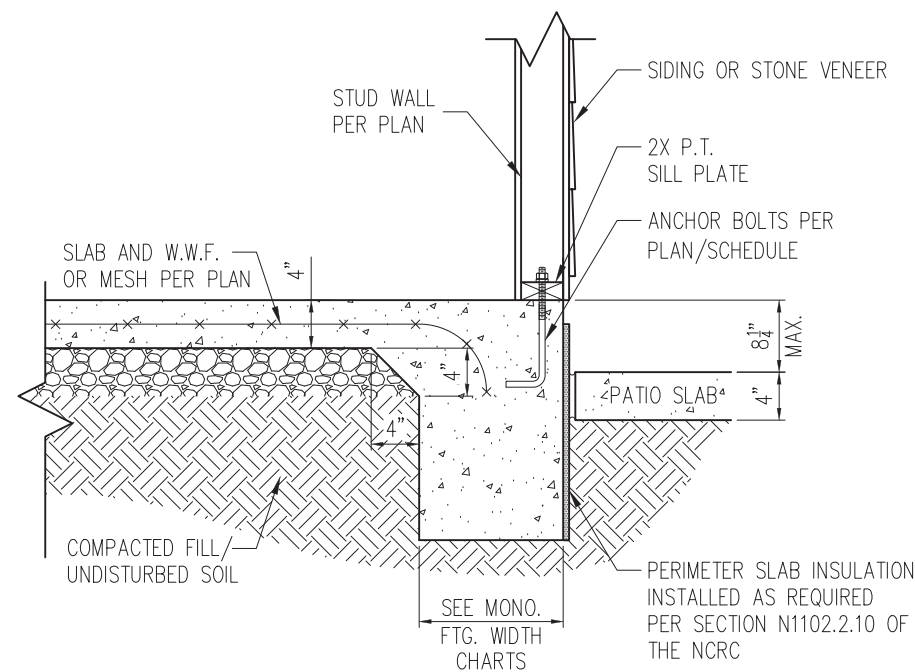
SHEET

**CS2**



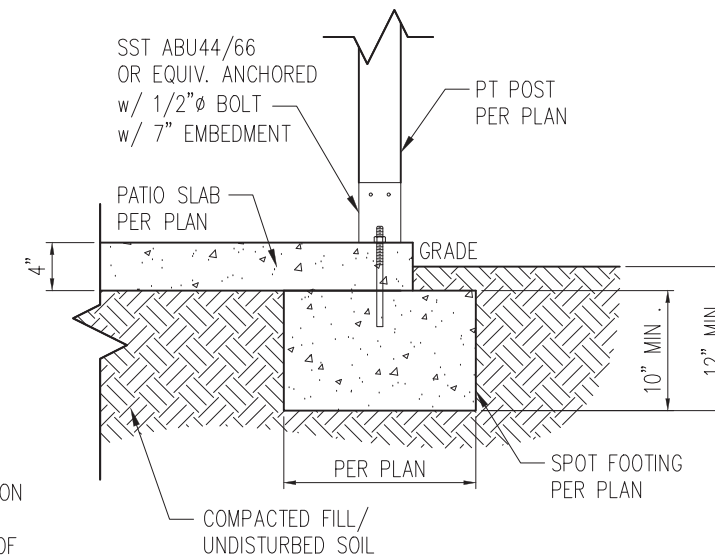
STANDARD - SIDING/STONE

1 TYP. GARAGE CURB DETAIL  
D1m 3/4" = 1'-0"

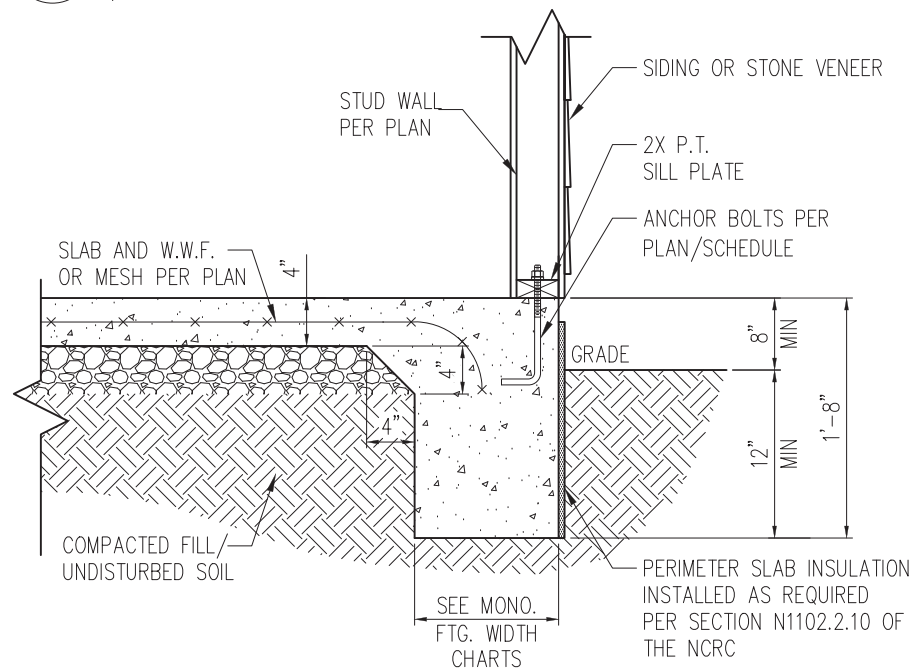


STANDARD - SIDING/STONE

2 PATIO SLAB DETAIL  
D1m 3/4" = 1'-0"

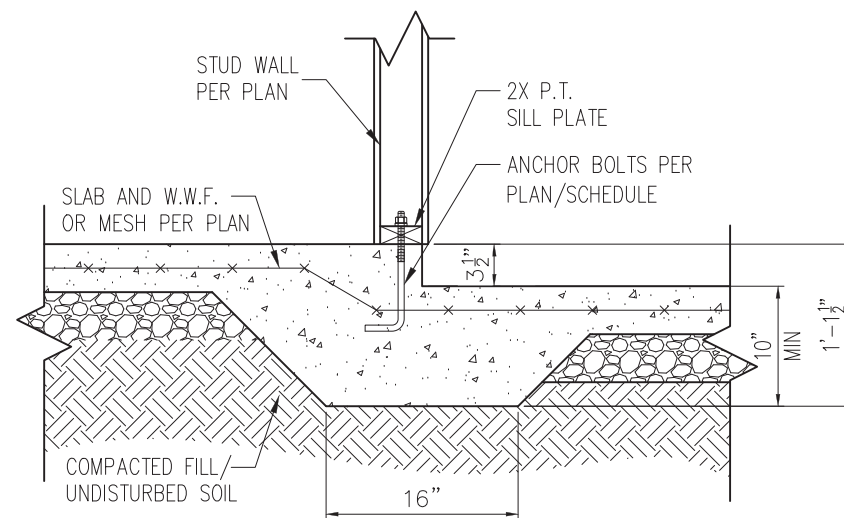


2A COVERED PATIO DETAIL  
D1m 3/4" = 1'-0"



STANDARD - SIDING/STONE

3 TYP. SLAB DETAIL  
D1m 3/4" = 1'-0"



4 STEP IN GARAGE  
D1m 3/4" = 1'-0"

WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING EMBEDMENT	INTERIOR WALL	EXTERIOR WALL
1/2" A307 BOLTS w/ STD. 90° BEND	7"	6'-0"	YES	YES
SST - MAS	4"	5'-0"	NO	YES
HILTI KWIK BOLT KBI 1/2-2-3/4	2-1/4"	6'-0"	YES	NO
1/2" HILTI THREADED ROD w/ HIT HY150 ADHESIVE	7"	6'-0"	YES	YES

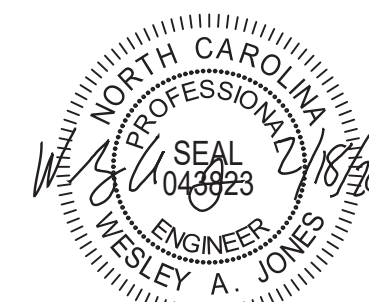
NOTE: INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.

MONOLITHIC FOOTING WIDTH

# OF STORIES	WIDTH BASED ON SOIL BEARING CAPACITY		
	1500 PSF	2000 PSF	2500 PSF
1 STORY - STD.	16"	16"	16"
1 STORY - BRICK VENEER	21"	21"	21"
2 STORY - STD.	20"	16"	16"
2 STORY - BRICK VENEER	25"	21"	21"

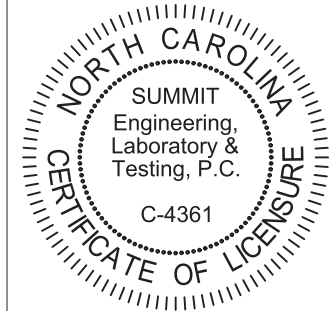
\*5" BRICK LEDGE HAS BEEN ADDED TO THE MONOLITHIC FOOTING WIDTH FOR BRICK SUPPORT

- NOTES:
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  - PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
  - SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.



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FAX: 919.380.9993  
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PROJECT  
Standard Details  
Monolithic Slab Details  
CLIENT  
Smith Douglas Homes  
110 Village Trail, Suite 215  
Woodstock, GA 30188

CURRENT DRAWING  
DATE: 2/18/20  
SCALE: NTS  
PROJECT #: 3832  
DRAWN BY: LBV  
CHECKED BY: WAJ

ORIGINAL DRAWING  
NO. DATE PROJECT #  
0 1/7/16 3832

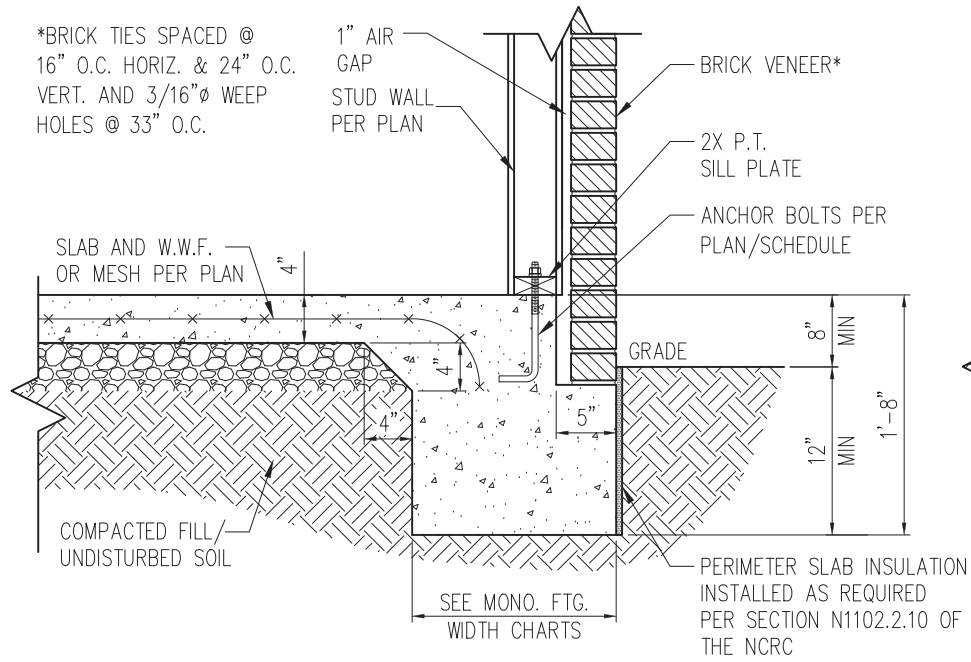
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET

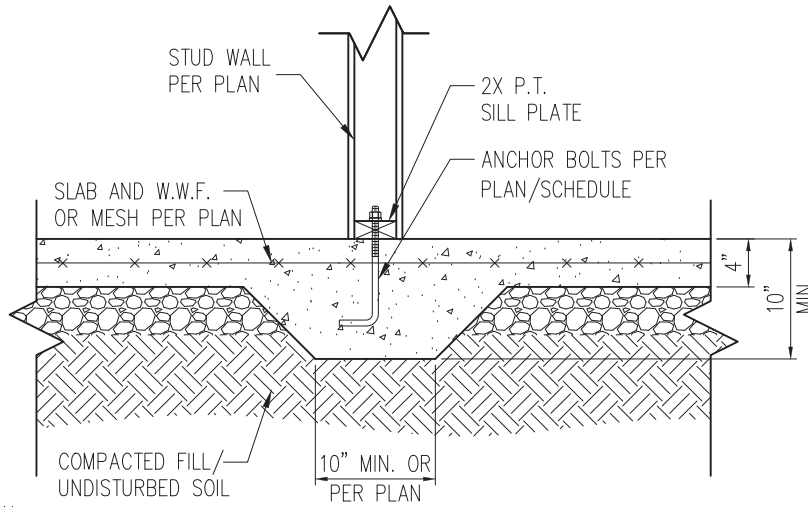
D1m



\*BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT. AND 3/16" Ø WEEP HOLES @ 33" O.C.

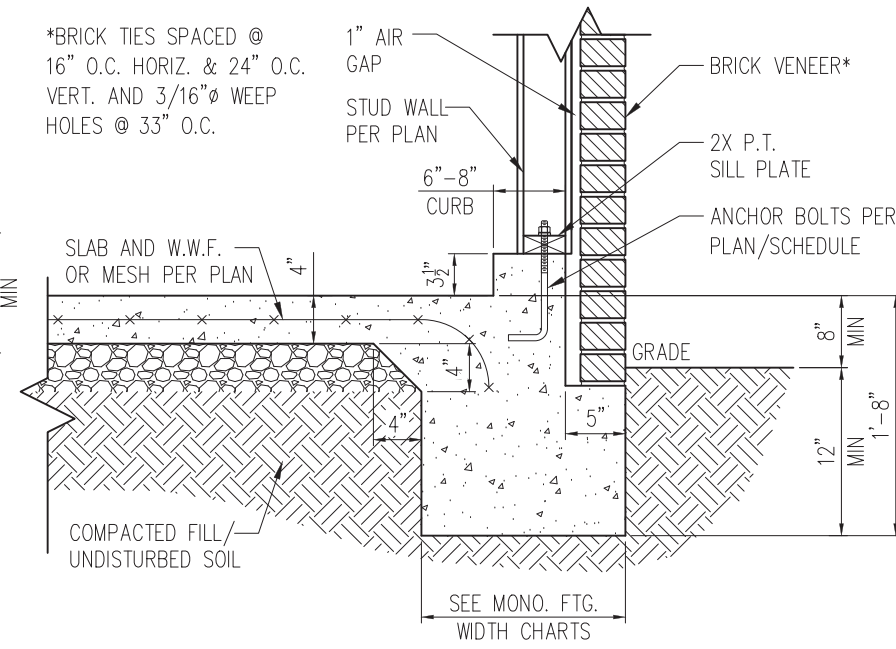


STANDARD - BRICK



3 TYP. THICKENED SLAB DETAIL  
D2m 3/4" = 1'-0"

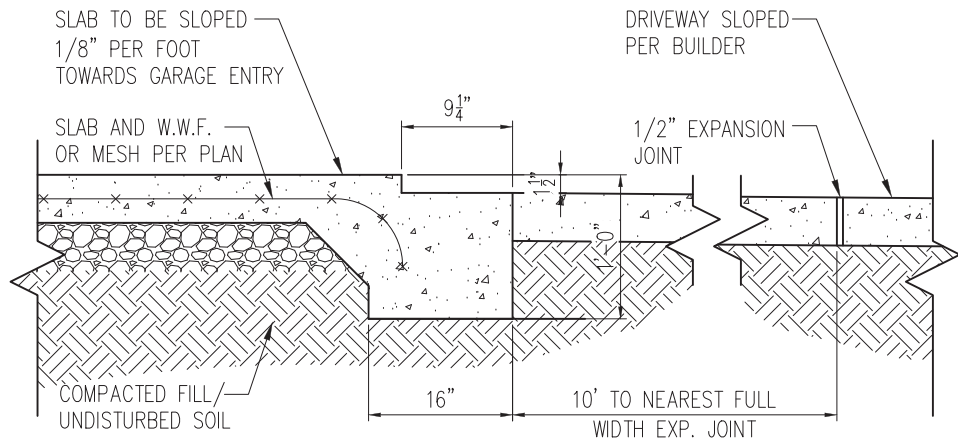
\*BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT. AND 3/16" Ø WEEP HOLES @ 33" O.C.



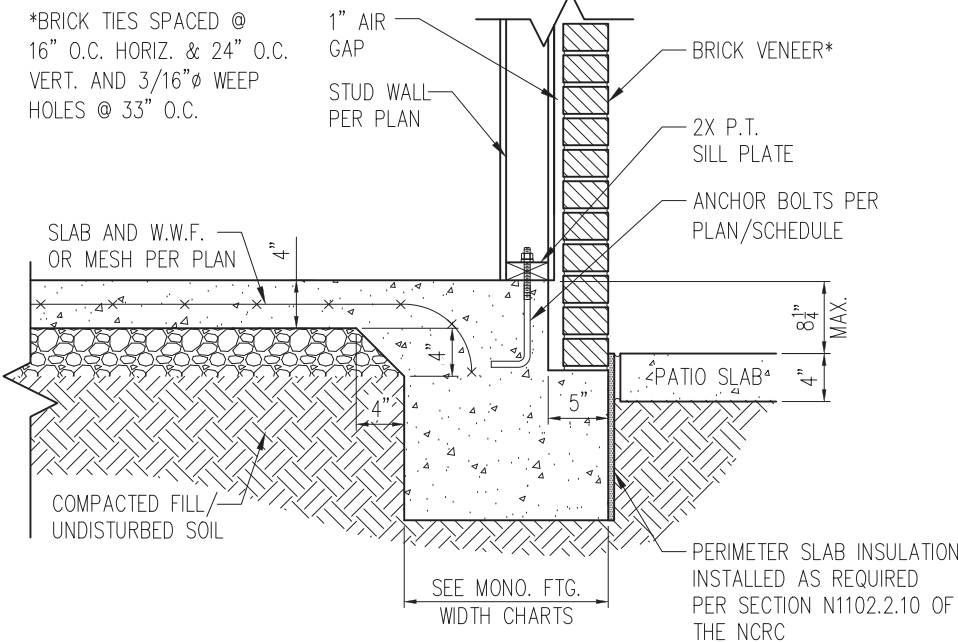
STANDARD - BRICK

5 TYP. GARAGE CURB DETAIL W/ BRICK VENEER  
D2m 3/4" = 1'-0"

1 TYP. SLAB DETAIL W/ BRICK VENEER  
D2m 3/4" = 1'-0"



2 SLAB AT GARAGE DOOR  
D2m 3/4" = 1'-0"



STANDARD - BRICK

4 PATIO SLAB DETAIL W/ BRICK VENEER  
D2m 3/4" = 1'-0"

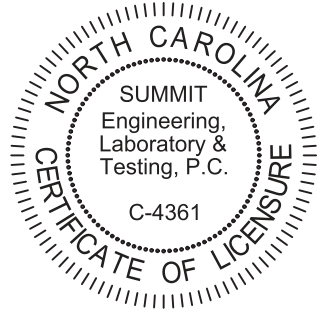
NOTES:

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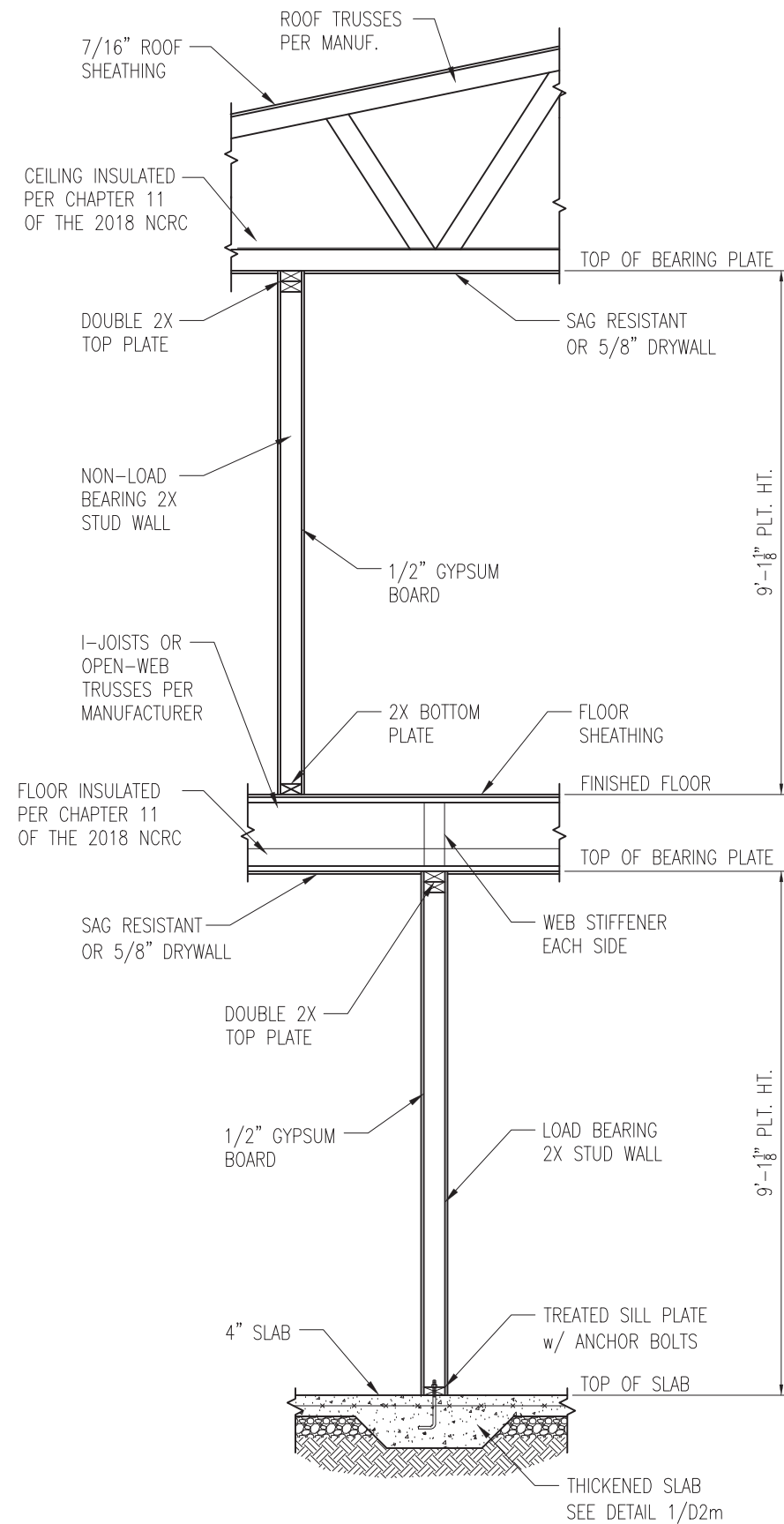
PROJECT  
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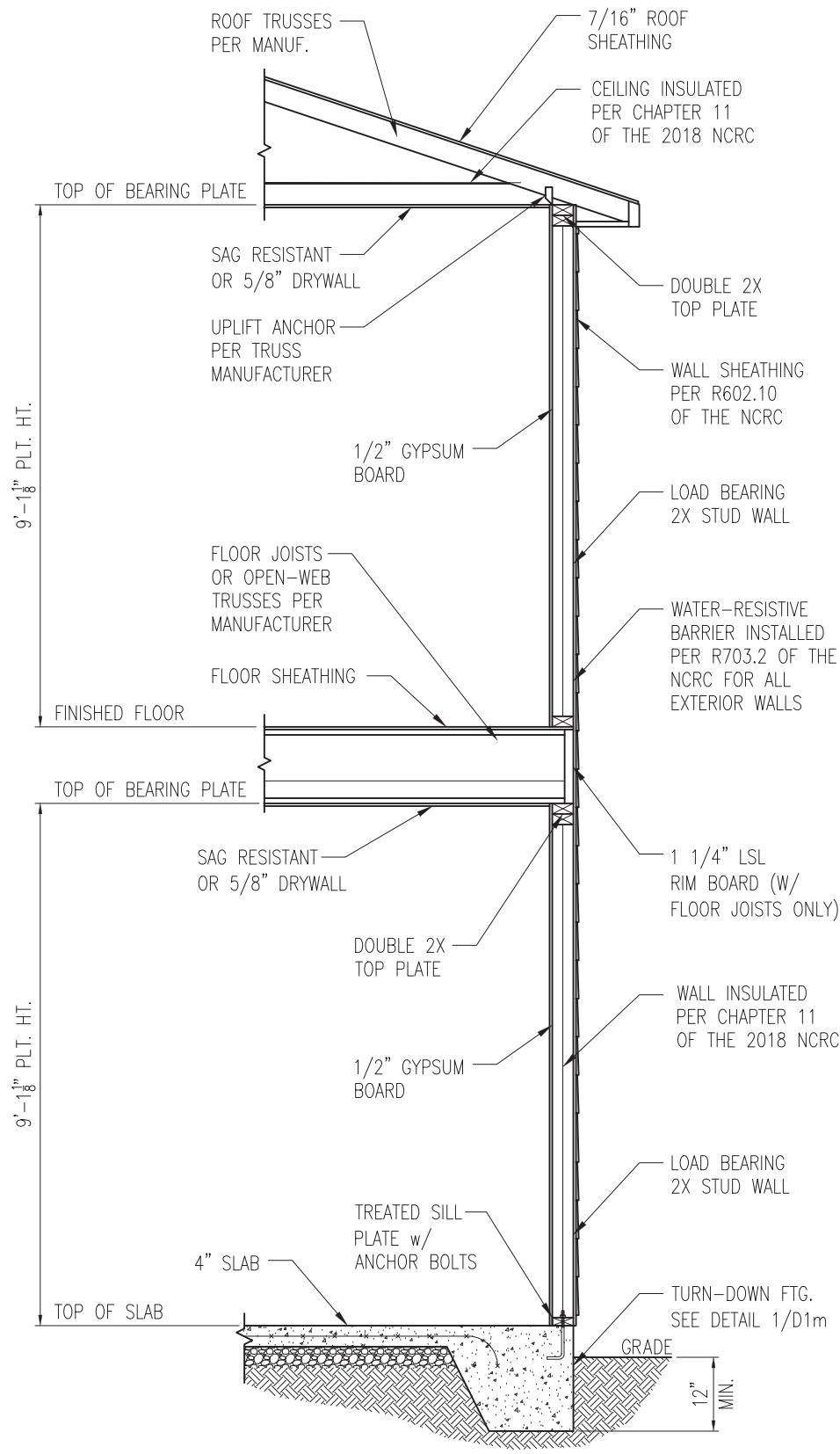
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REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**D2m**



1 TYP. INTERIOR LOAD BEARING WALL SECTION  
 D3m 3/4" = 1'-0"

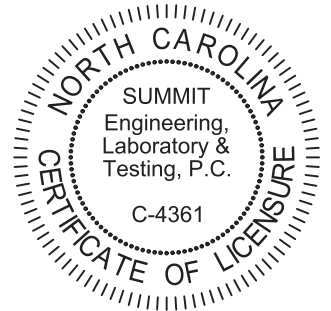


2 TYP. EXTERIOR LOAD BEARING WALL SECTION  
 D3m 3/4" = 1'-0"  
 -SIMILAR w/ BRICK AND STONE  
 -BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.  
 -MIN. 3/16" Ø WEEP HOLES @ 33" O.C.

- NOTES:
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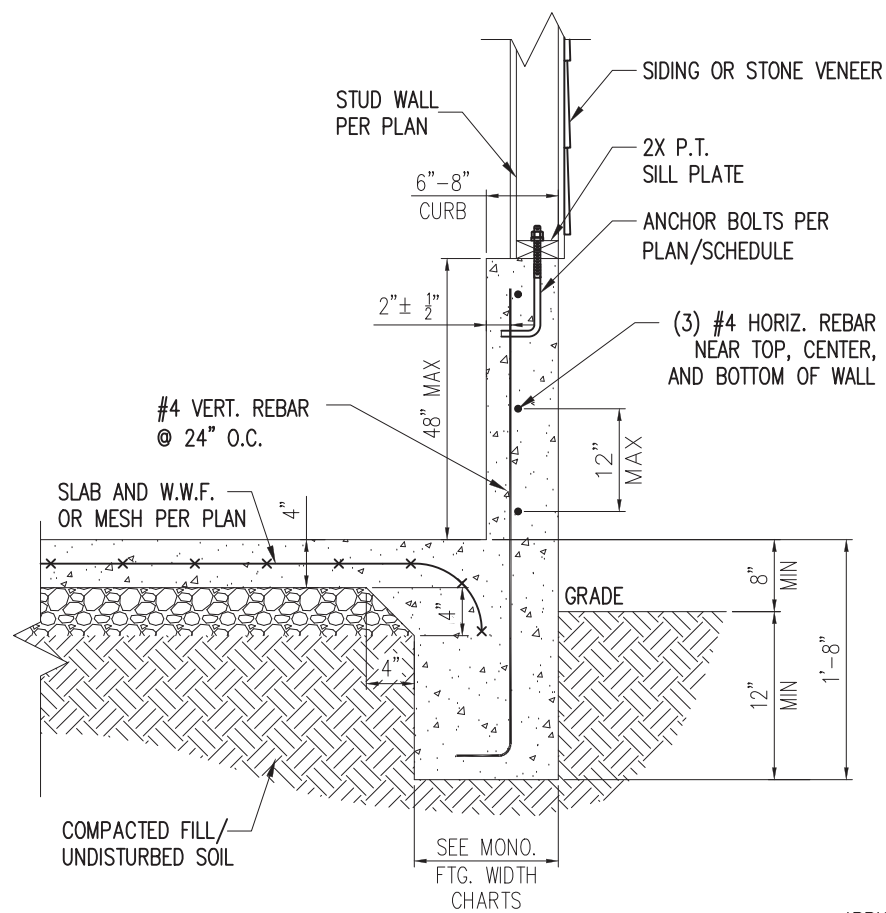
PROJECT  
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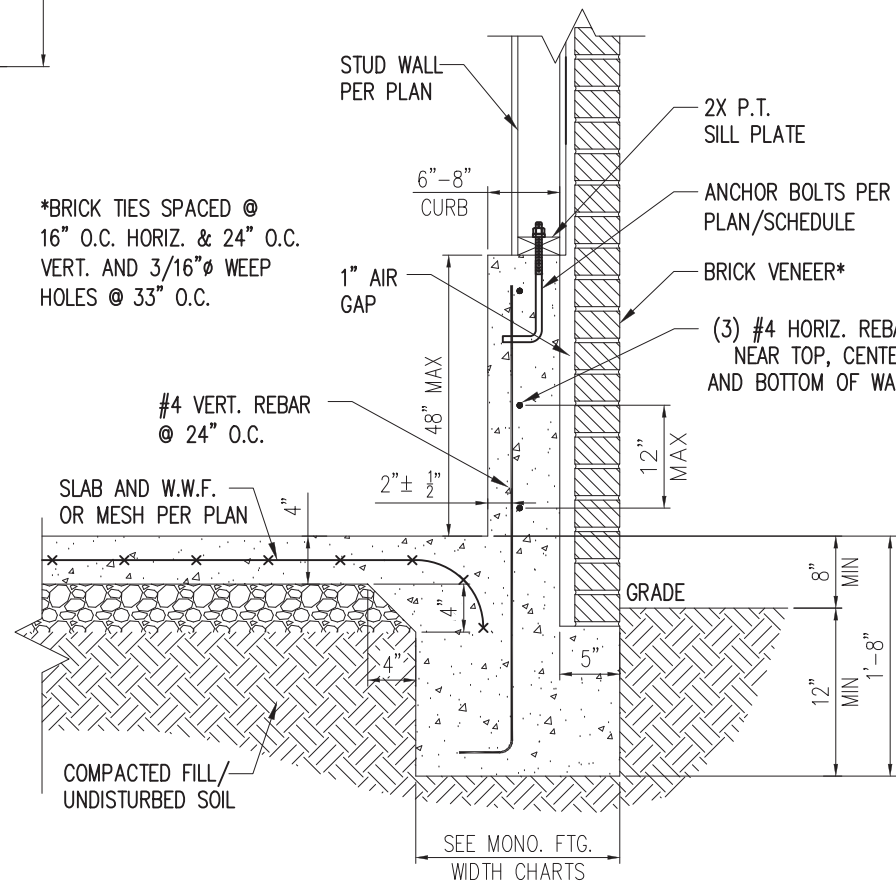
SHEET  
**D3m**



STANDARD - SIDING/STONE

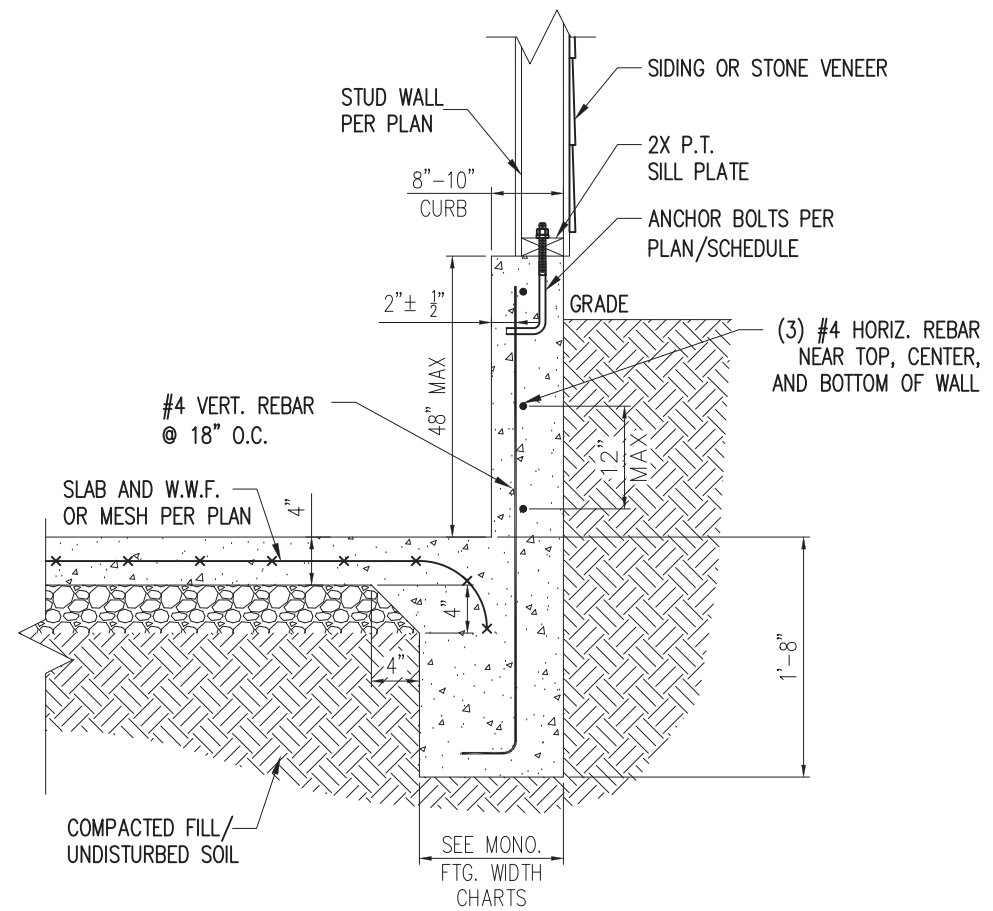
1 EXTENDED GARAGE CURB DETAIL  
D4m NTS

\*BRICK TIES SPACED @  
16" O.C. HORIZ. & 24" O.C.  
VERT. AND 3/16" Ø WEEP  
HOLES @ 33" O.C.



STANDARD - BRICK

3 EXTENDED GARAGE CURB DETAIL  
W/ BRICK VENEER  
D4m NTS



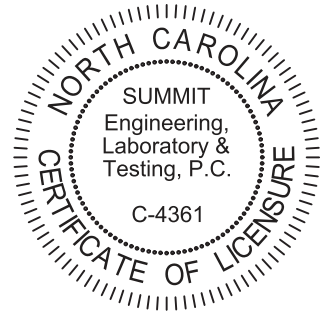
STANDARD - SIDING/STONE

2 EXTENDED GARAGE CURB DETAIL  
W/ UNBALANCED FILL  
D4m NTS



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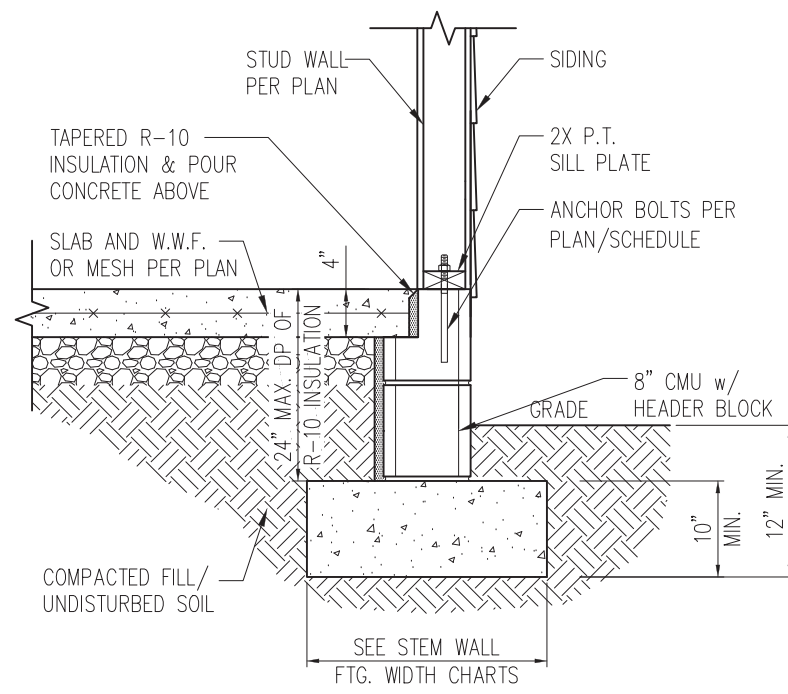
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NO.	DATE	PROJECT #
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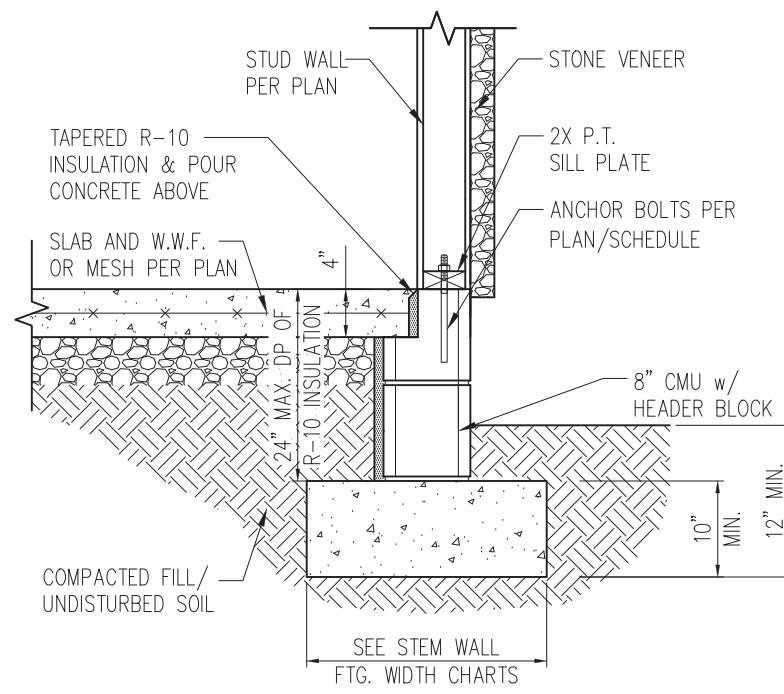
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SHEET

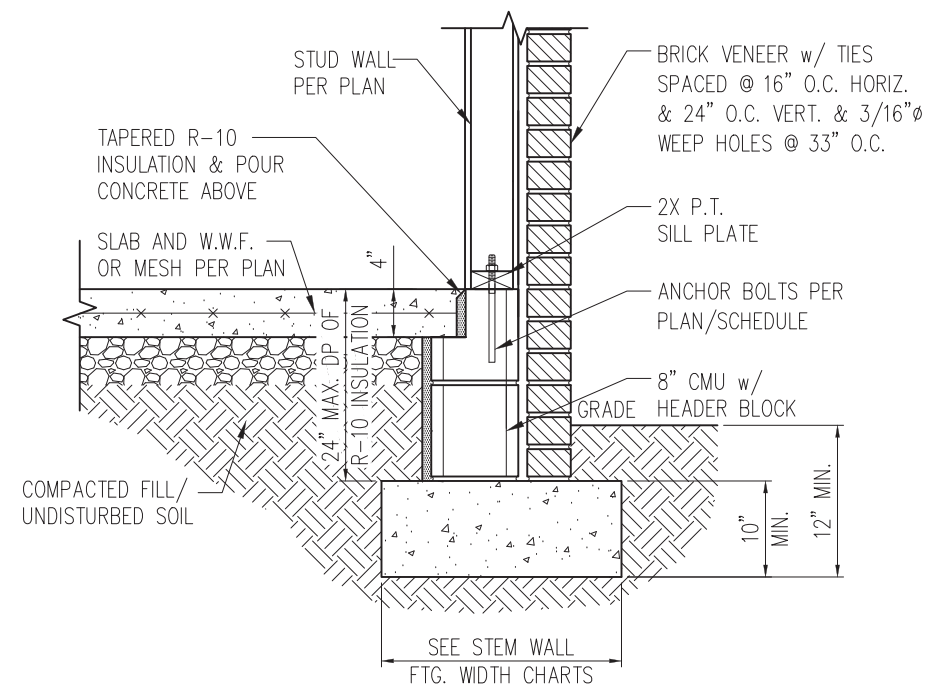
D4m



STANDARD - SIDING

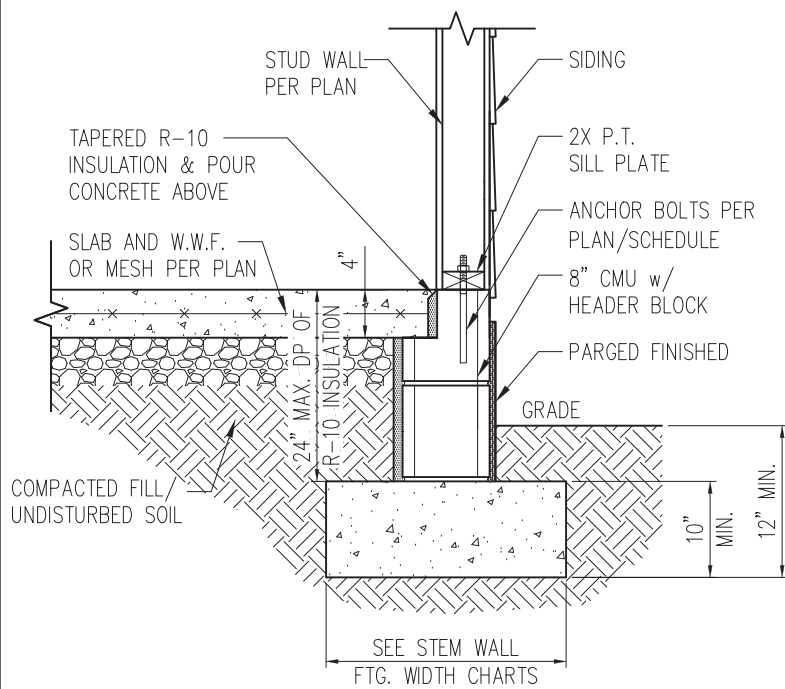


STANDARD - STONE

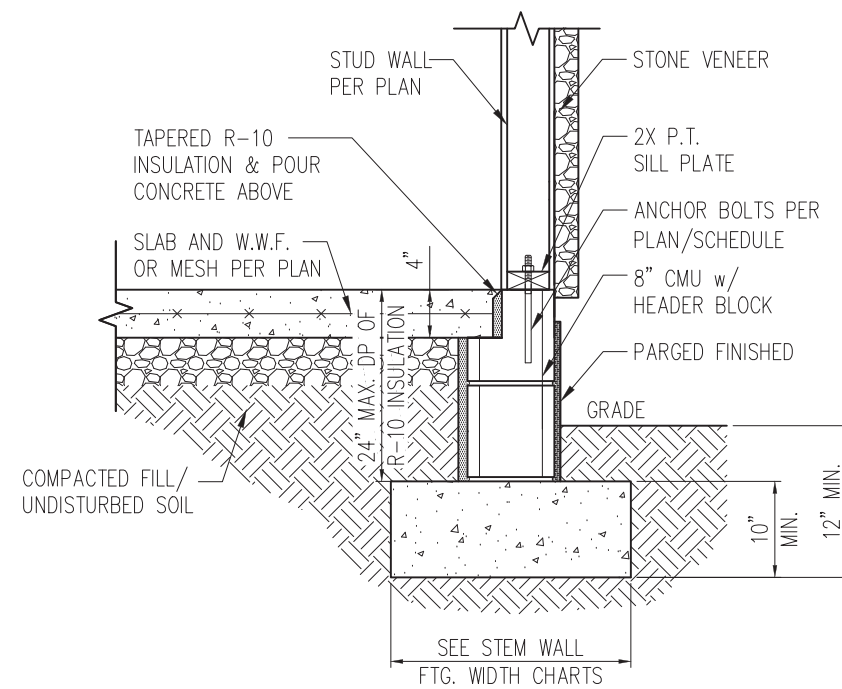


STANDARD - BRICK

1 TYP. STEM WALL DETAIL  
D1s 3/4" = 1'-0"



STANDARD - SIDING



STANDARD - STONE

1a STEM WALL DETAIL w/ PARGED FINISH  
D1s 3/4" = 1'-0"

STEM WALL FOOTING WIDTH

# OF STORIES	WIDTH BASED ON SOIL BEARING CAPACITY		
	1500 PSF	2000 PSF	2500 PSF
1 STORY - STD.	16"	16"	16"
1 STORY - BRICK VENEER	21"*	21"*	21"*
2 STORY - STD.	20"	16"	16"
2 STORY - BRICK VENEER	25"*	21"*	21"*

\*5" BRICK LEDGE HAS BEEN ADDED TO THE STEM WALL FOOTING WIDTH FOR BRICK SUPPORT

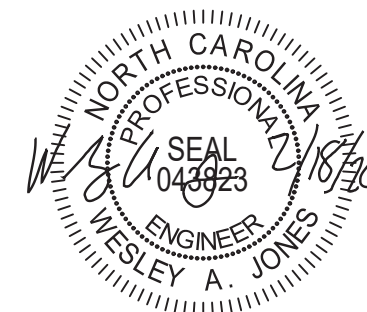
WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING EMBEDMENT	INTERIOR WALL	EXTERIOR WALL
1/2" A307 BOLTS w/ STD. 90° BEND	7"	6'-0"	YES	YES
SST - MAS	4"	5'-0"	NO	YES
HILTI KWIK BOLT KBI 1/2-2-3/4	2-1/4"	6'-0"	YES	NO
1/2" HILTI THREADED ROD w/ HIT HY150 ADHESIVE	7"	6'-0"	YES	YES

NOTE: INSTALL ALL ANCHORS 12" MAX. FROM ALL BOTTOM PLATE ENDS AND JOINTS.

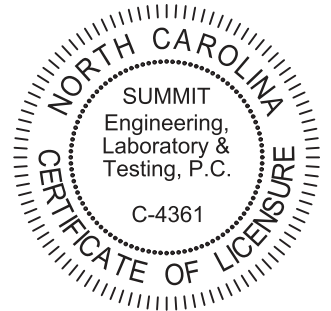
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PROJECT  
**Standard Details**  
**Stemwall Details**  
CLIENT  
**Smith Douglas Homes**  
**110 Village Trail, Suite 215**  
**Woodstock, GA 30188**

CURRENT DRAWING

DATE: 2/18/20

SCALE: NTS

PROJECT #: 3832

DRAWN BY: LBV

CHECKED BY: WAJ

ORIGINAL DRAWING

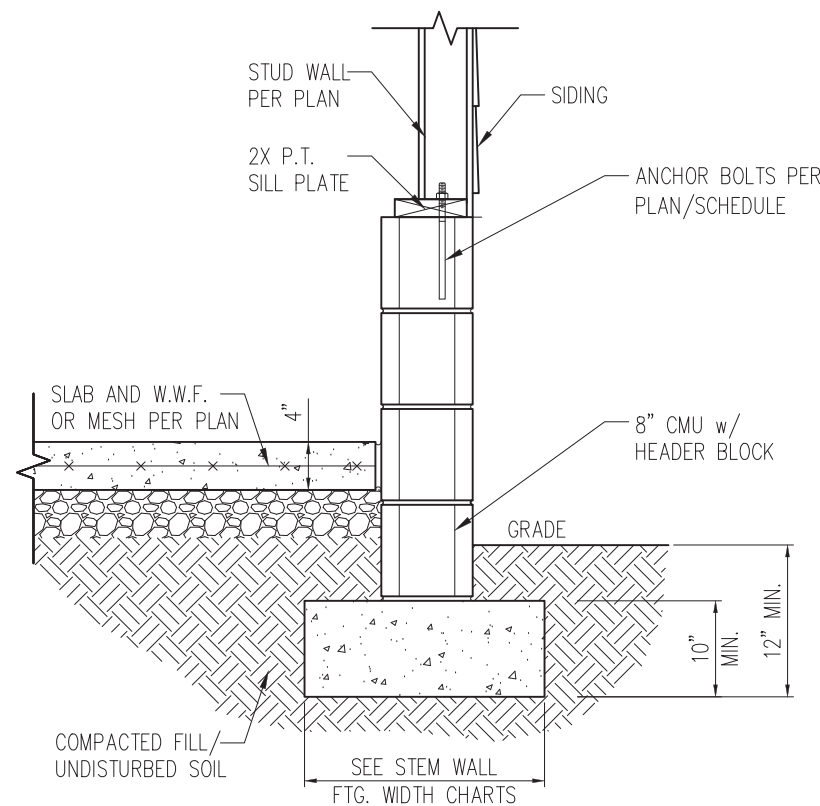
NO.	DATE	PROJECT #
0	1/7/16	3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

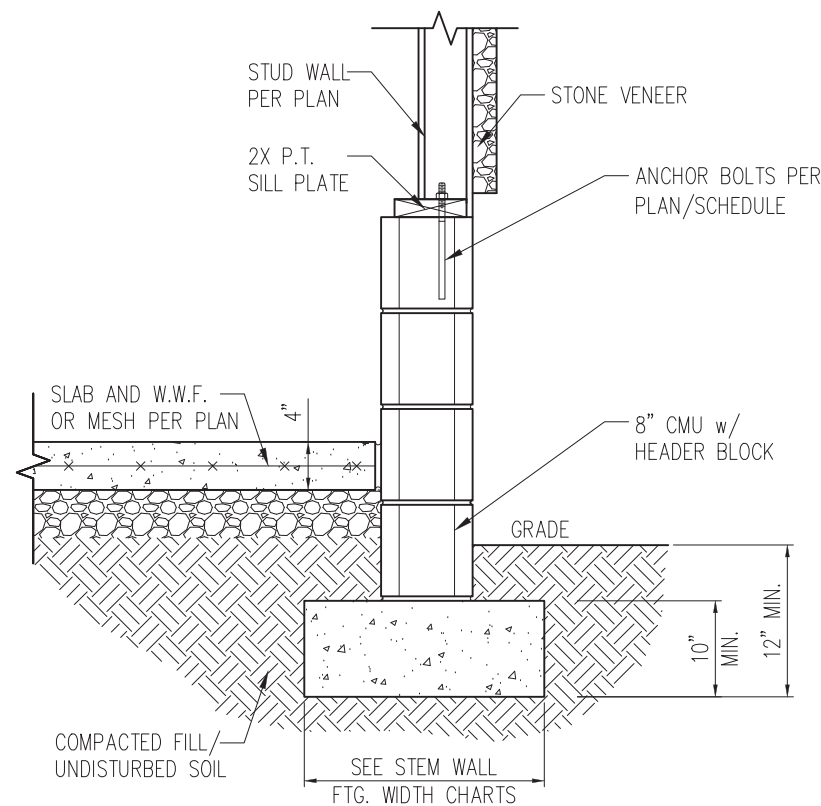
SHEET

**D1s**

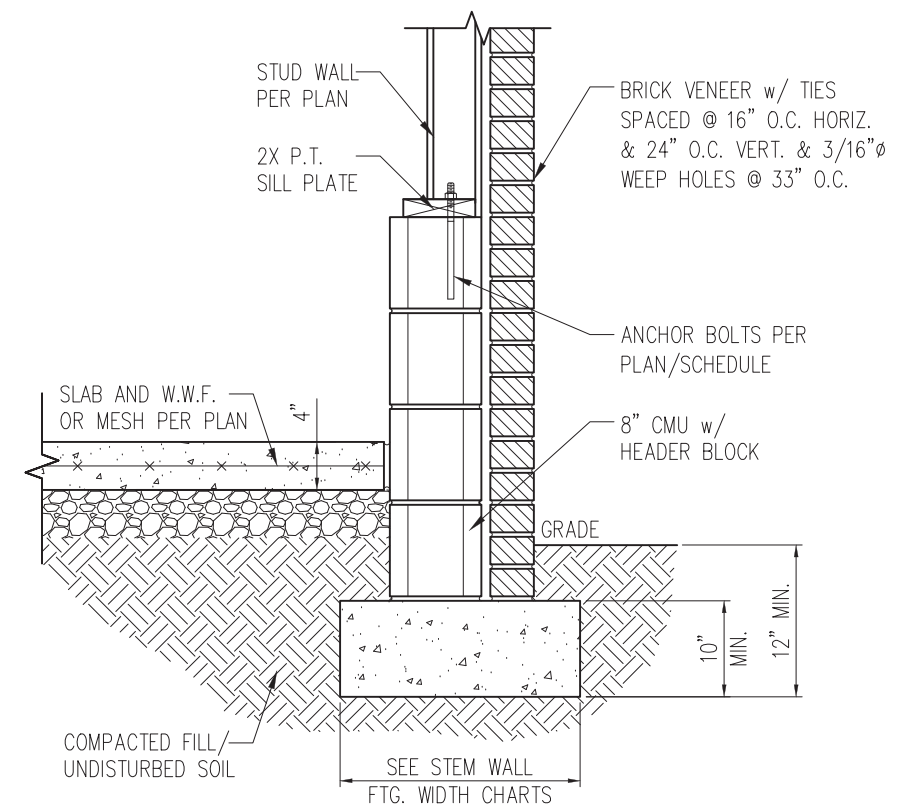




STANDARD - SIDING

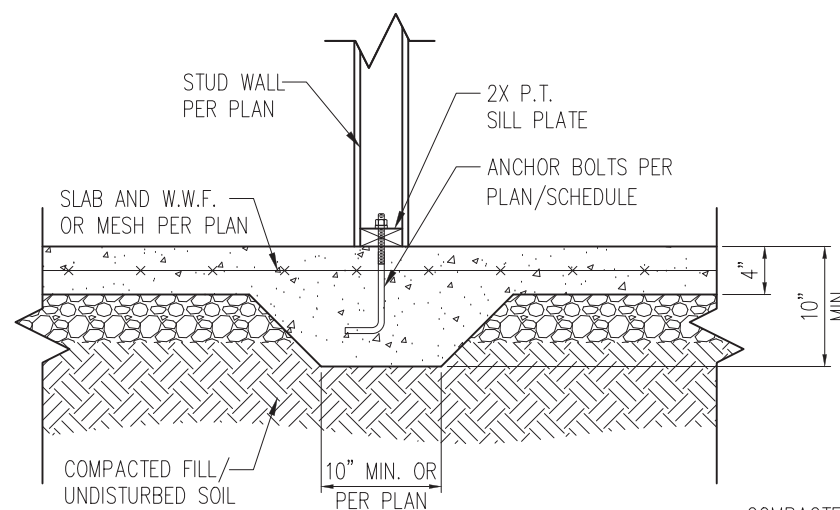


STANDARD - STONE

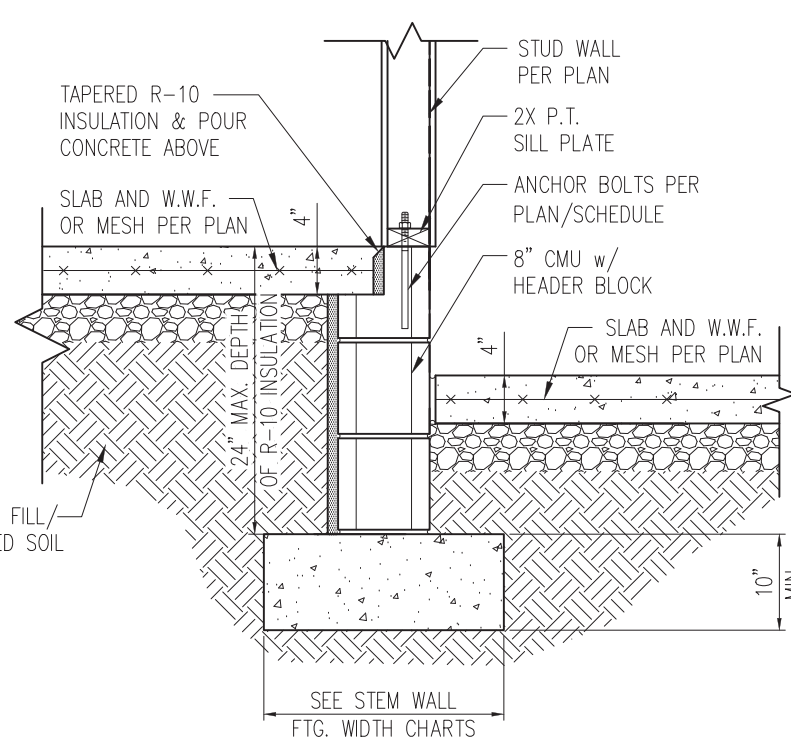


STANDARD - BRICK

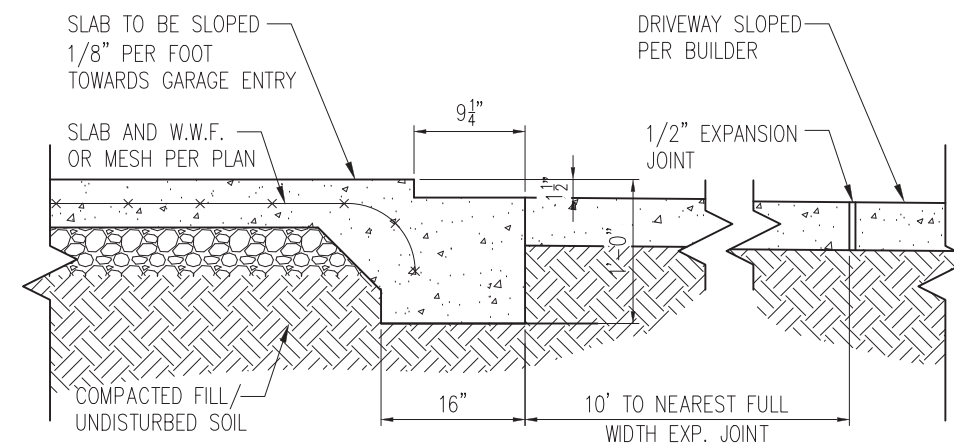
1 TYP. GARAGE CURB DETAIL  
D2s 3/4" = 1'-0"



2 TYP. THICKENED SLAB DETAIL  
D2s 3/4" = 1'-0"

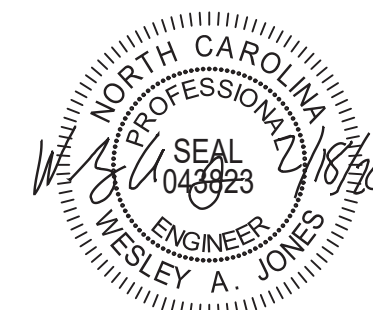


3 HOUSE/GARAGE WALL DETAIL  
D2s 3/4" = 1'-0"



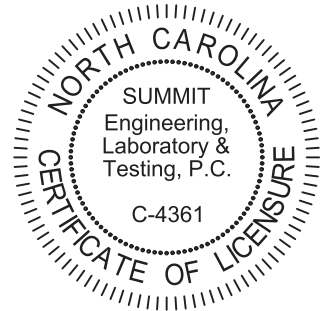
4 SLAB AT GARAGE DOOR  
D2s 3/4" = 1'-0"

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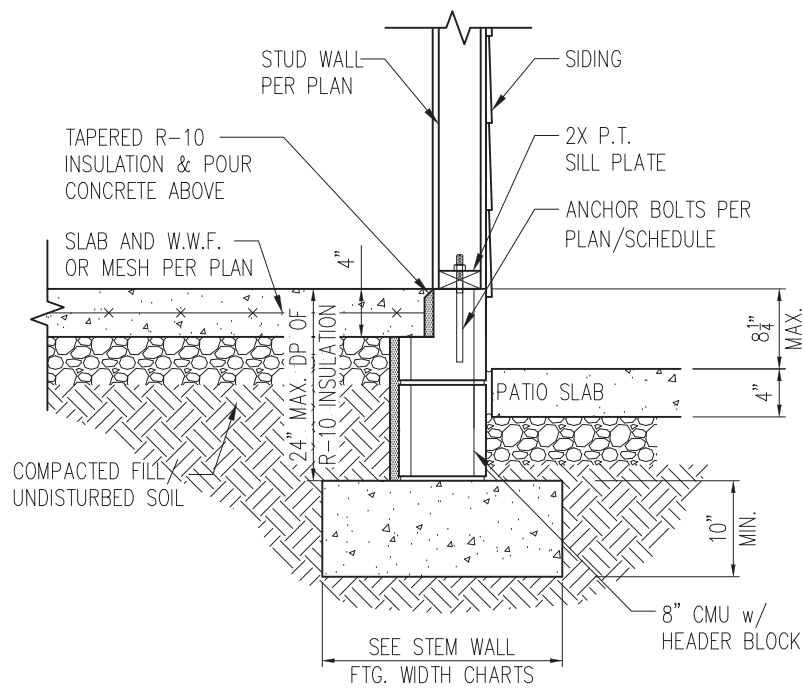


PROJECT  
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**Stemwall Details**  
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Smith Douglas Homes  
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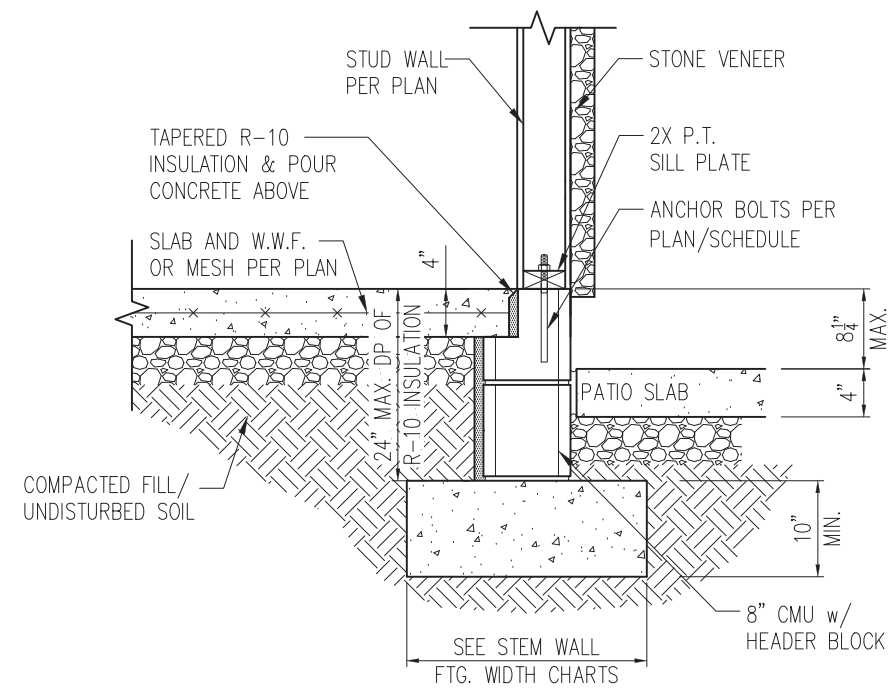
CURRENT DRAWING		
DATE: 2/18/20		
SCALE: NTS		
PROJECT #: 3832		
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ORIGINAL DRAWING		
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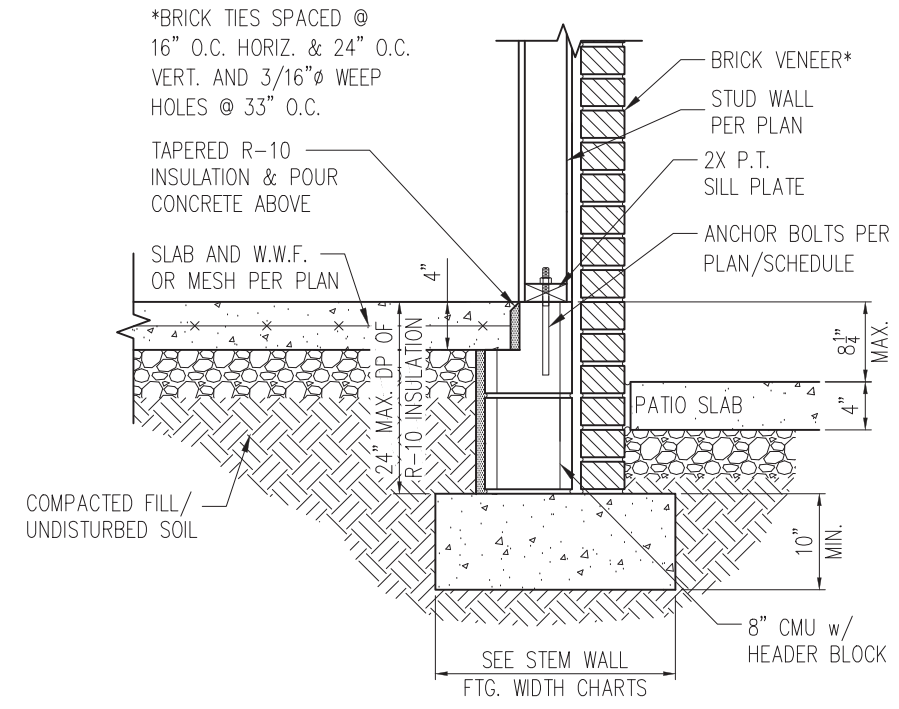
SHEET  
**D2s**



STANDARD - SIDING

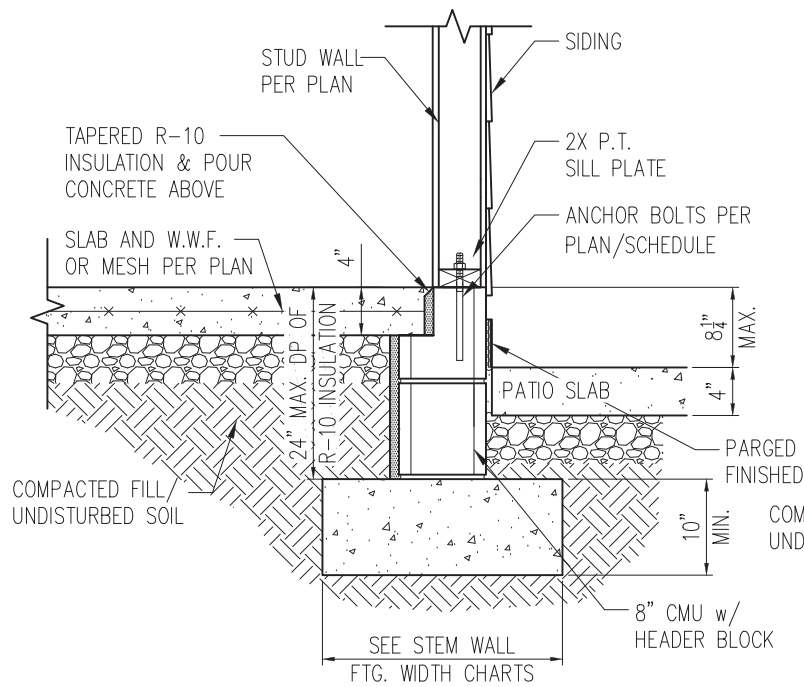


STANDARD - STONE

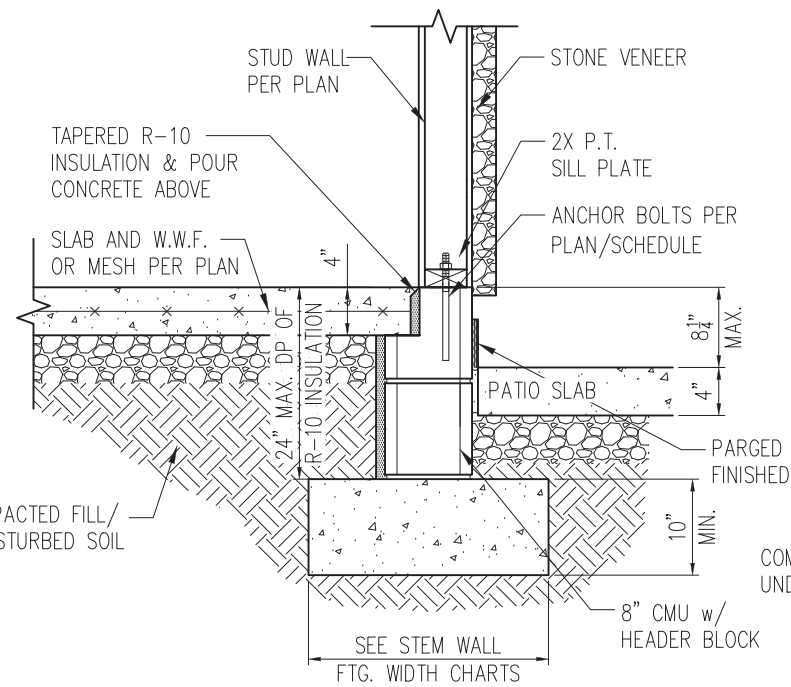


STANDARD - BRICK

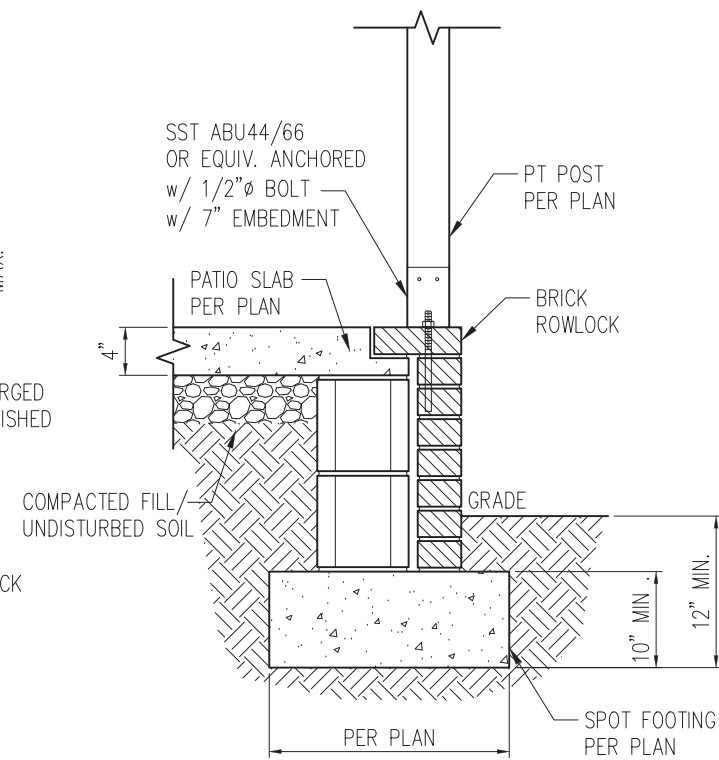
1 PORCH SLAB DETAIL  
D3s 3/4" = 1'-0"



STANDARD - SIDING

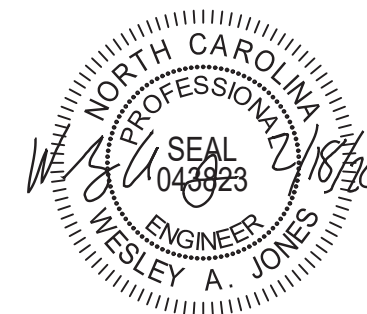


STANDARD - STONE



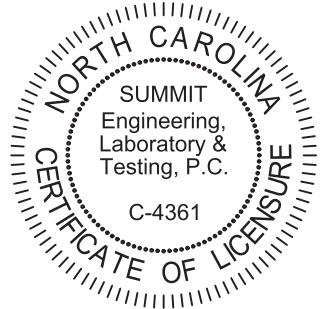
2 COVERED PORCH DETAIL  
D3s 3/4" = 1'-0"

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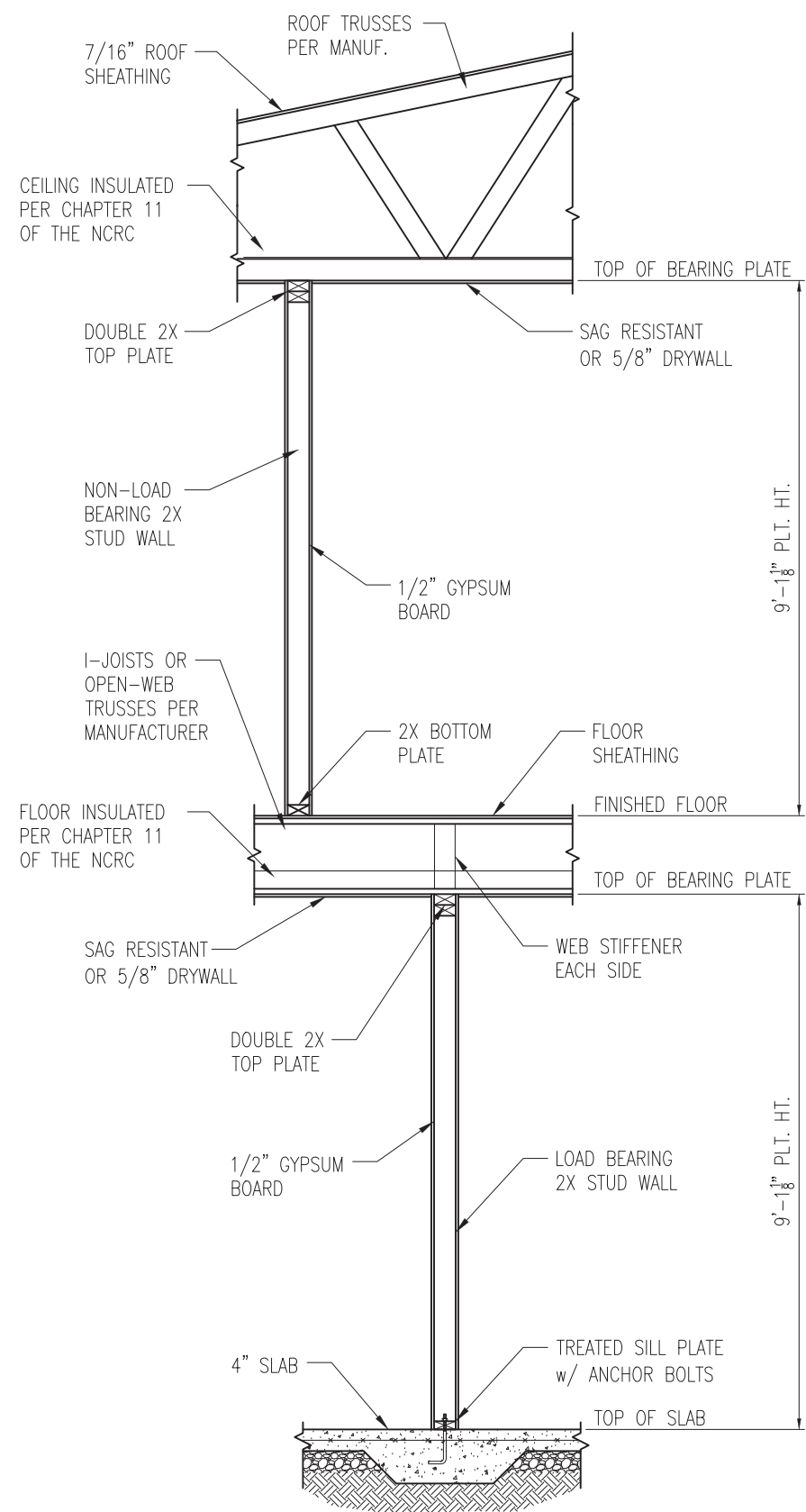
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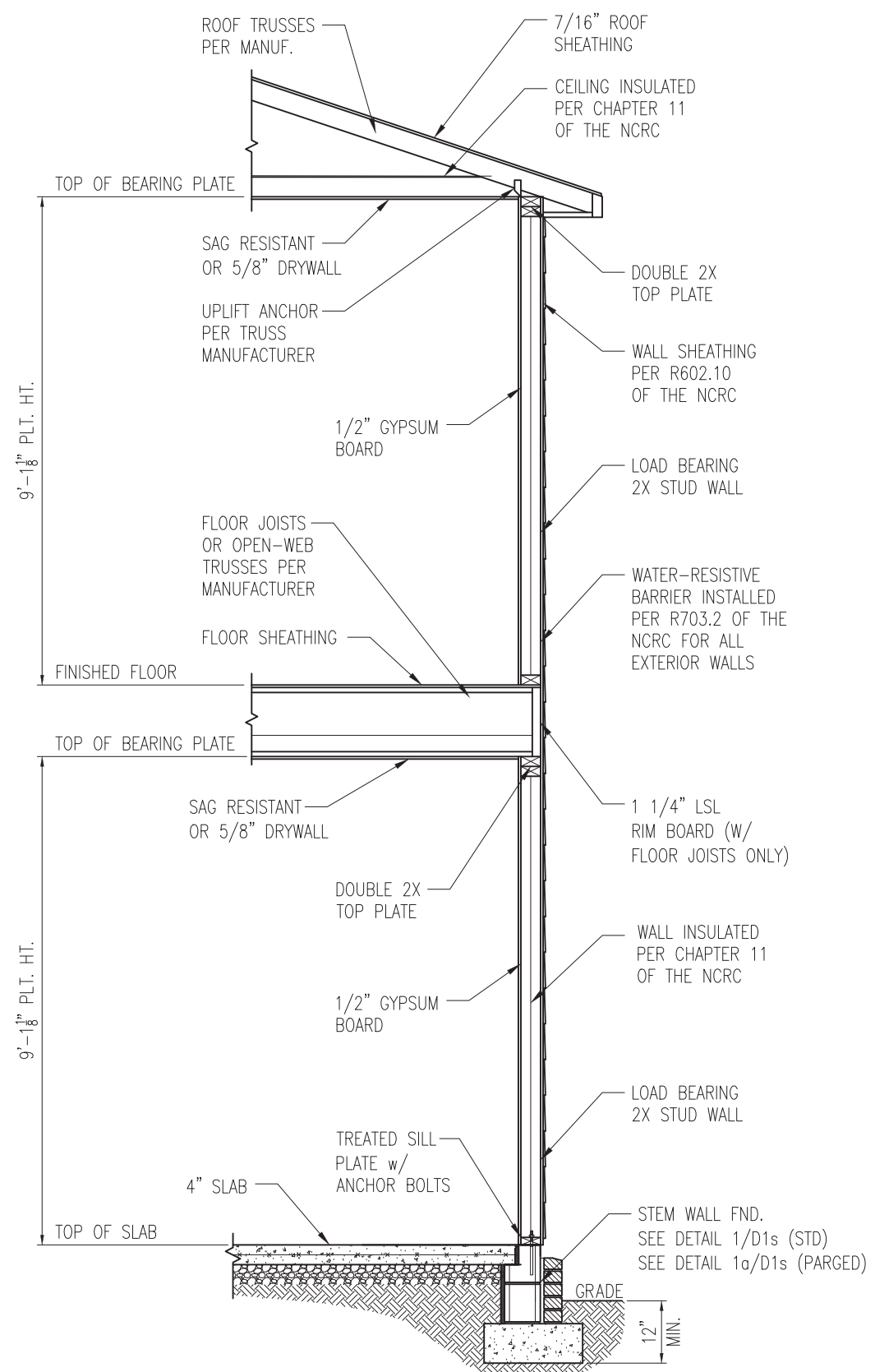
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SHEET  
**D3s**





1 TYP. INTERIOR LOAD BEARING WALL SECTION  
 D4s 3/4" = 1'-0"



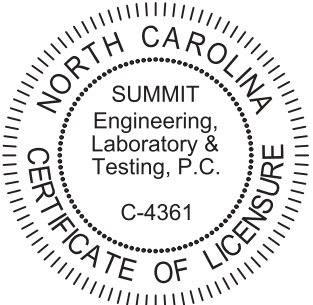
2 TYP. EXTERIOR LOAD BEARING WALL SECTION  
 D4s 3/4" = 1'-0" -SIMILAR w/ BRICK AND STONE  
 -BRICK TIES SPACED @ 16" O.C. HORIZ. & 24" O.C. VERT.  
 -MIN. 3/16" WEEP HOLES @ 33" O.C.

- NOTES:
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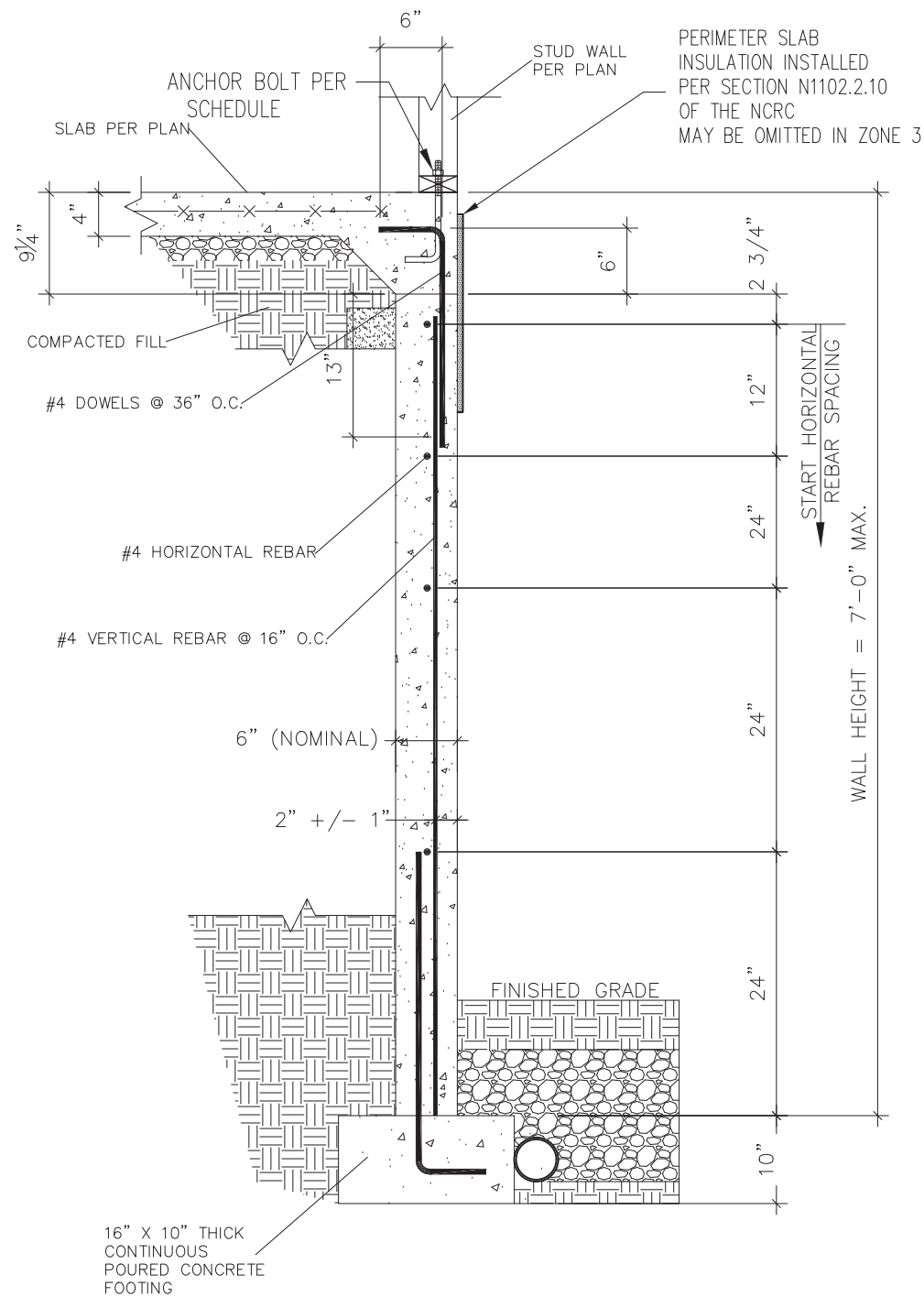
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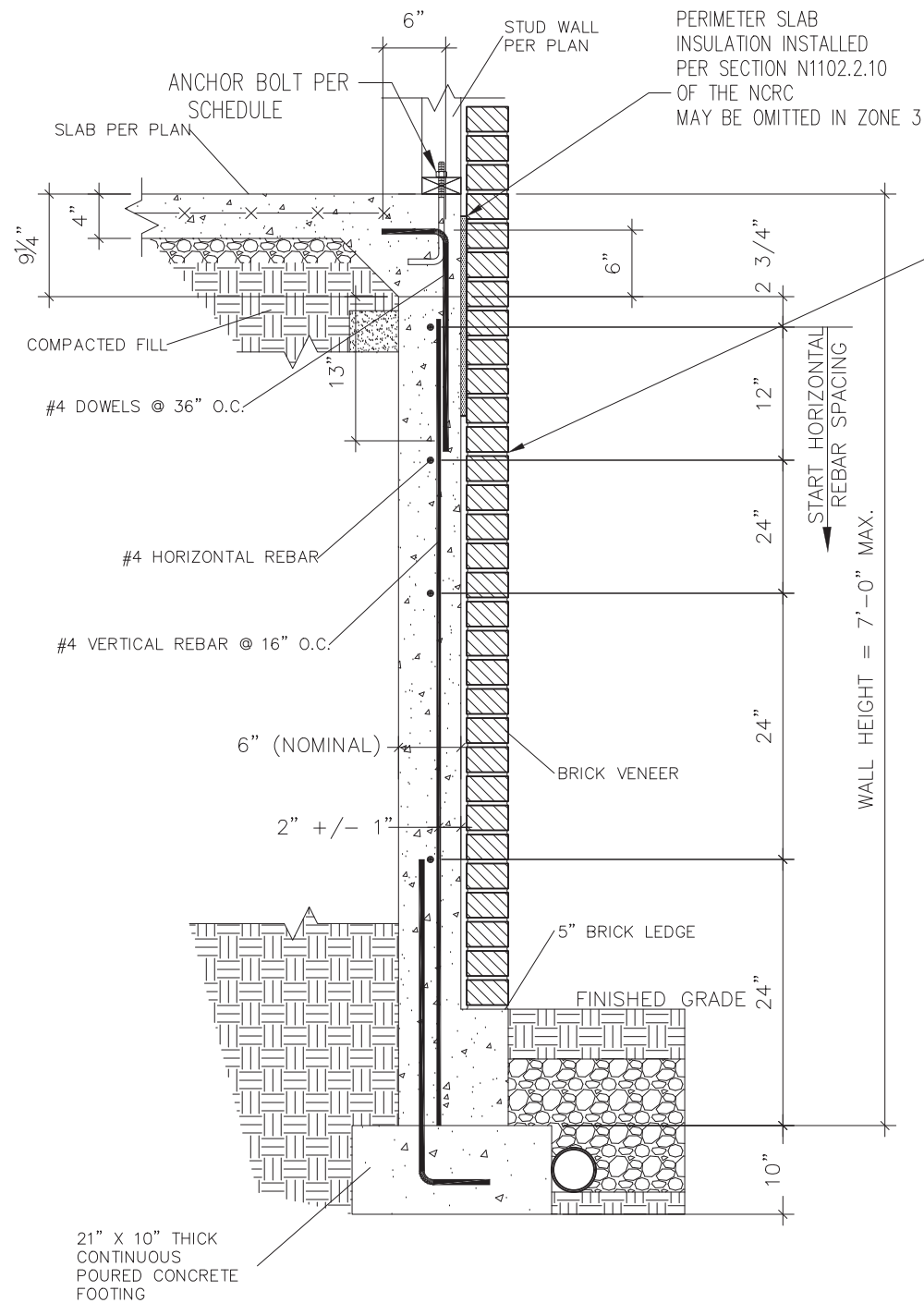
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SHEET  
**D4s**



1 SUBWALL FOUNDATION  
 D5s 3/4" = 1'-0"



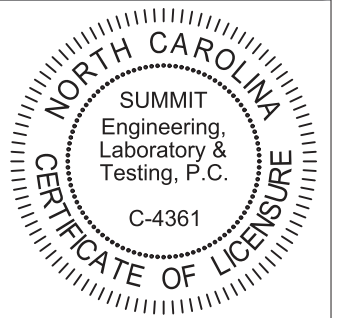
2 SUBWALL FOUNDATION W/ BRICK VENEER  
 D5s 3/4" = 1'-0"

PROVIDE LADDER WIRE OR METAL TIES, INSTALLED PER R608.1.2 OF THE 2012 NCRC, AND FULLY GROUT BETWEEN BRICK AND CONCRETE.



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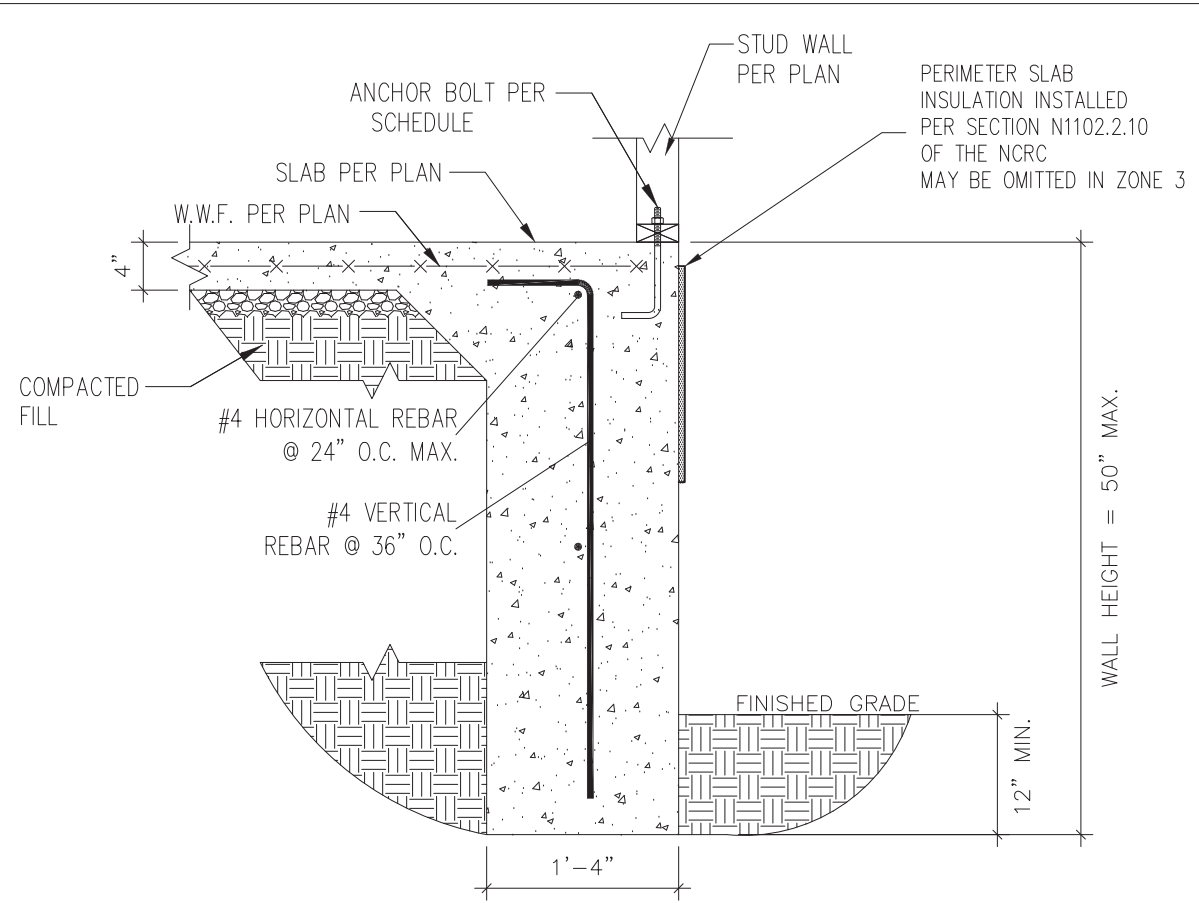
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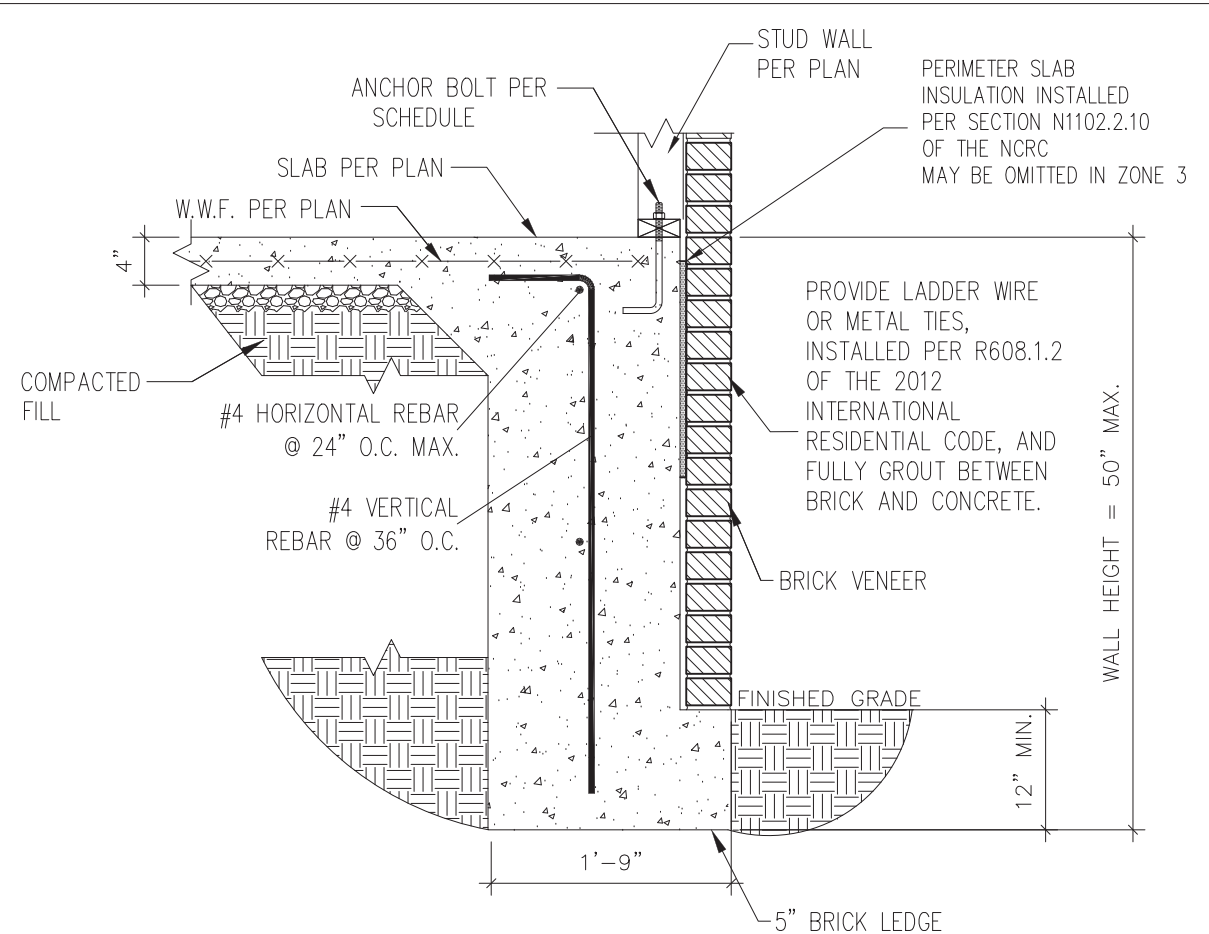
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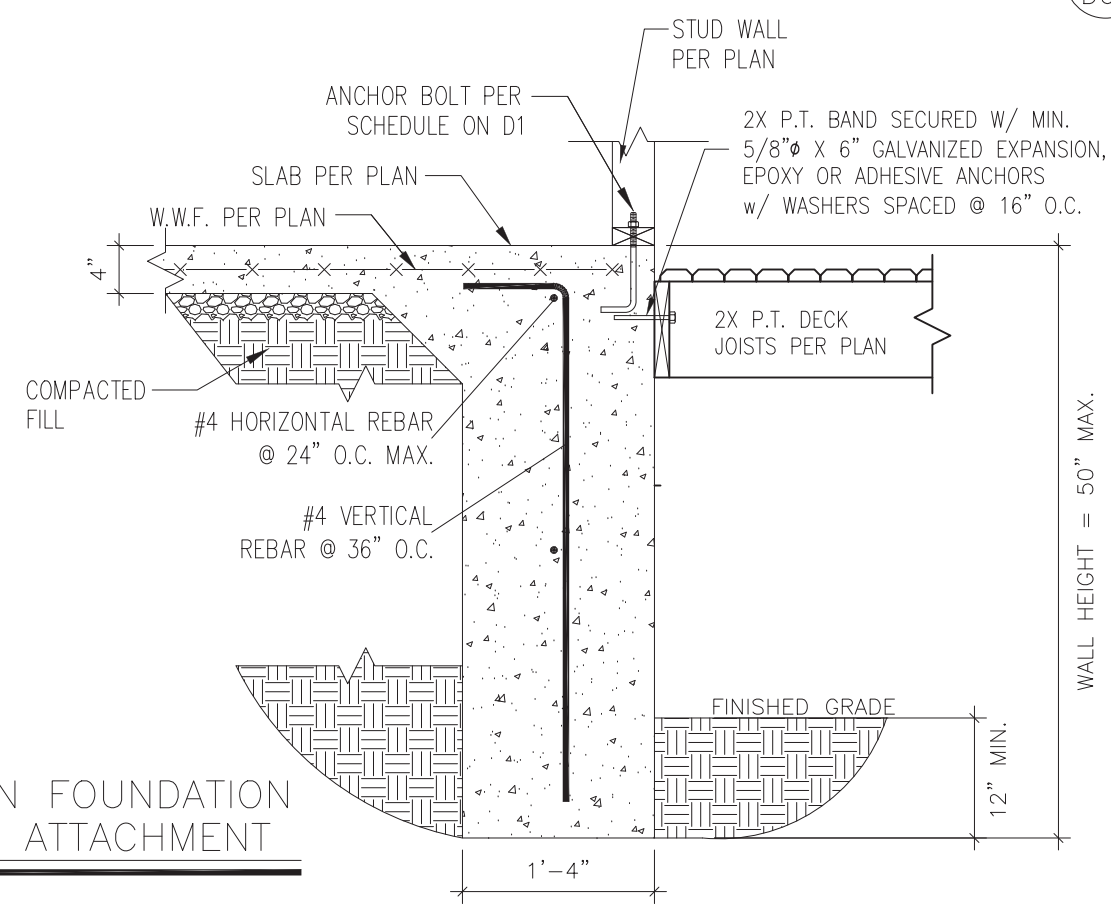
SHEET  
**D5s**



1 TURNDOWN FOUNDATION  
 D6s 3/4" = 1'-0"



2 TURNDOWN FOUNDATION W/ BRICK VENEER  
 D6s 3/4" = 1'-0"

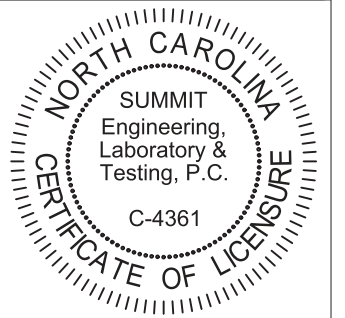


3 TURNDOWN FOUNDATION W/ DECK ATTACHMENT  
 D6s 3/4" = 1'-0"



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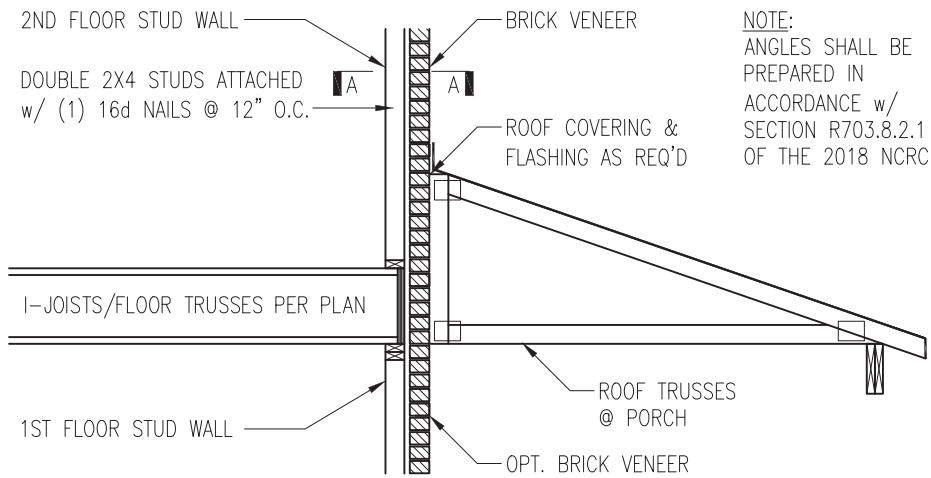
PROJECT  
**Standard Details**  
**Stemwall Details**  
 CLIENT  
**Smith Douglas Homes**  
 110 Village Trail, Suite 215  
 Woodstock, GA 30188

CURRENT DRAWING  
 DATE: 2/18/20  
 SCALE: NTS  
 PROJECT #: 3832  
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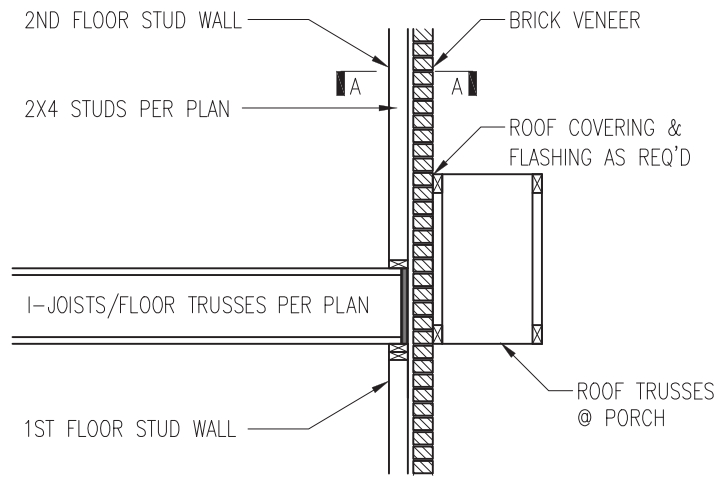
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0	1/7/16	3832

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SHEET  
**D6s**



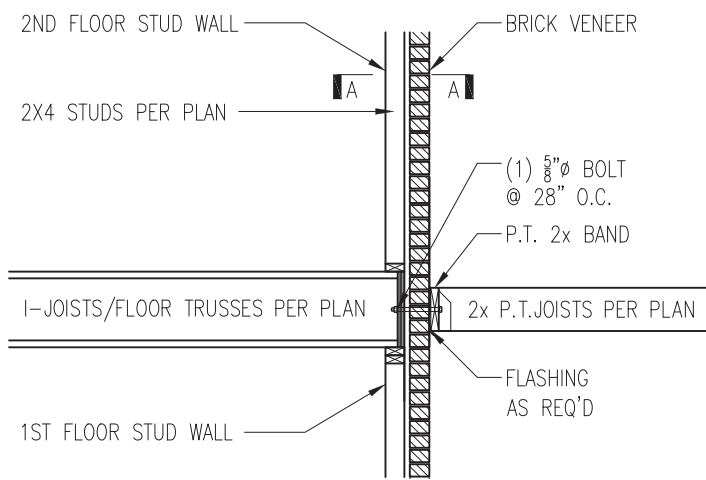
NOTE:  
ANGLES SHALL BE PREPARED IN ACCORDANCE w/ SECTION R703.8.2.1 OF THE 2018 NCR



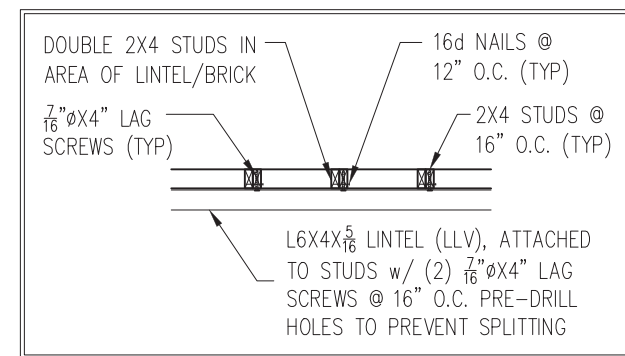
TRUSSES PERPENDICULAR TO STUD WALL

TRUSSES PARALLEL TO STUD WALL w/ CONTINUOUS BRICK VENEER

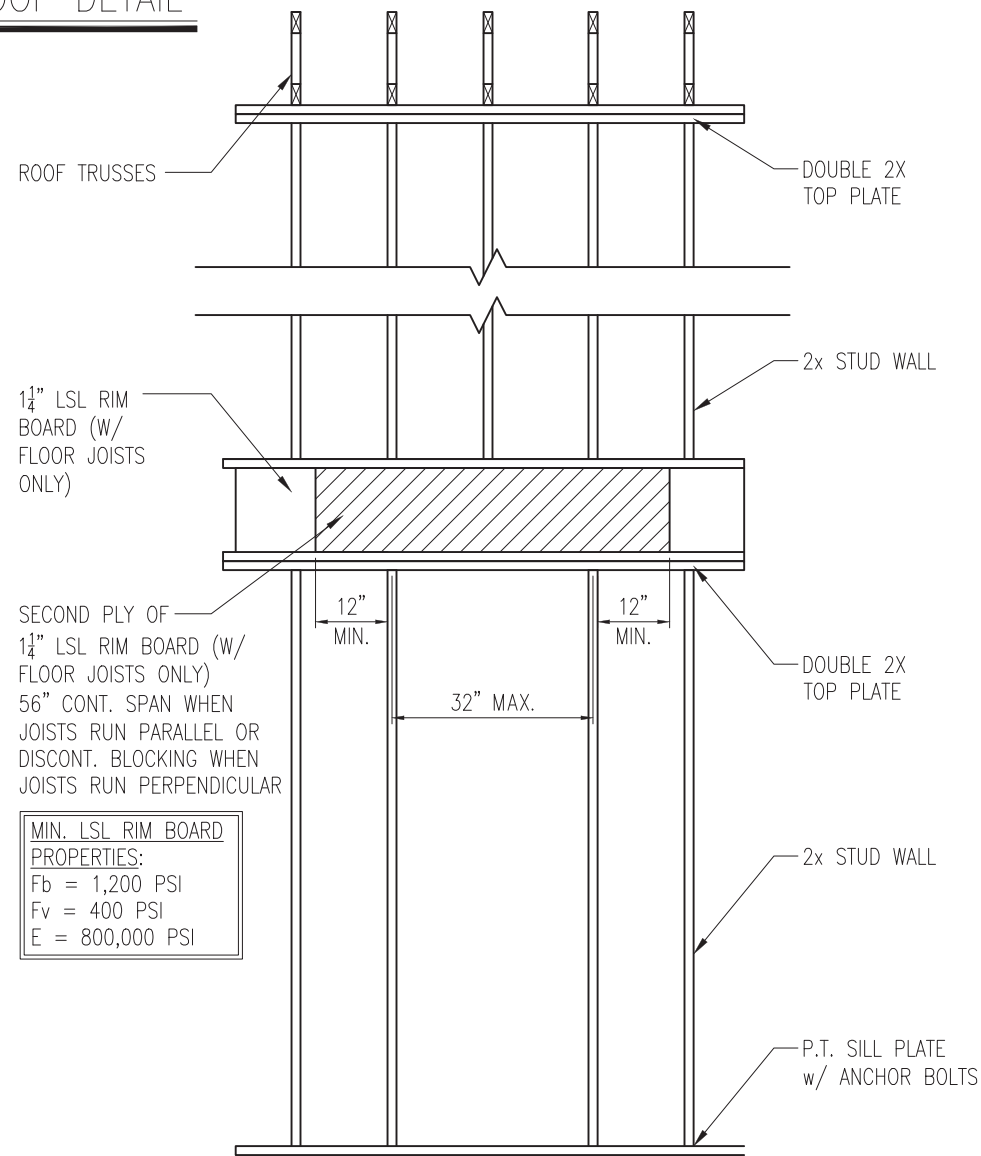
1 BRICK SUPPORT ABOVE STORAGE/PORCH ROOF DETAIL  
D5f NTS



3 BALCONY JOIST ATTACHMENT  
D5f NTS



SECTION A-A  
NTS



SECOND PLY OF 1 1/4\"/>

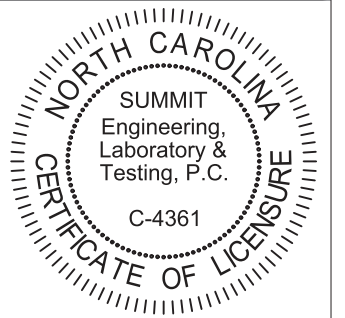
MIN. LSL RIM BOARD  
PROPERTIES:  
Fb = 1,200 PSI  
Fv = 400 PSI  
E = 800,000 PSI

4 TYP. RANGE VENT FRAMING  
D5f VENTED TO EXTERIOR WALL



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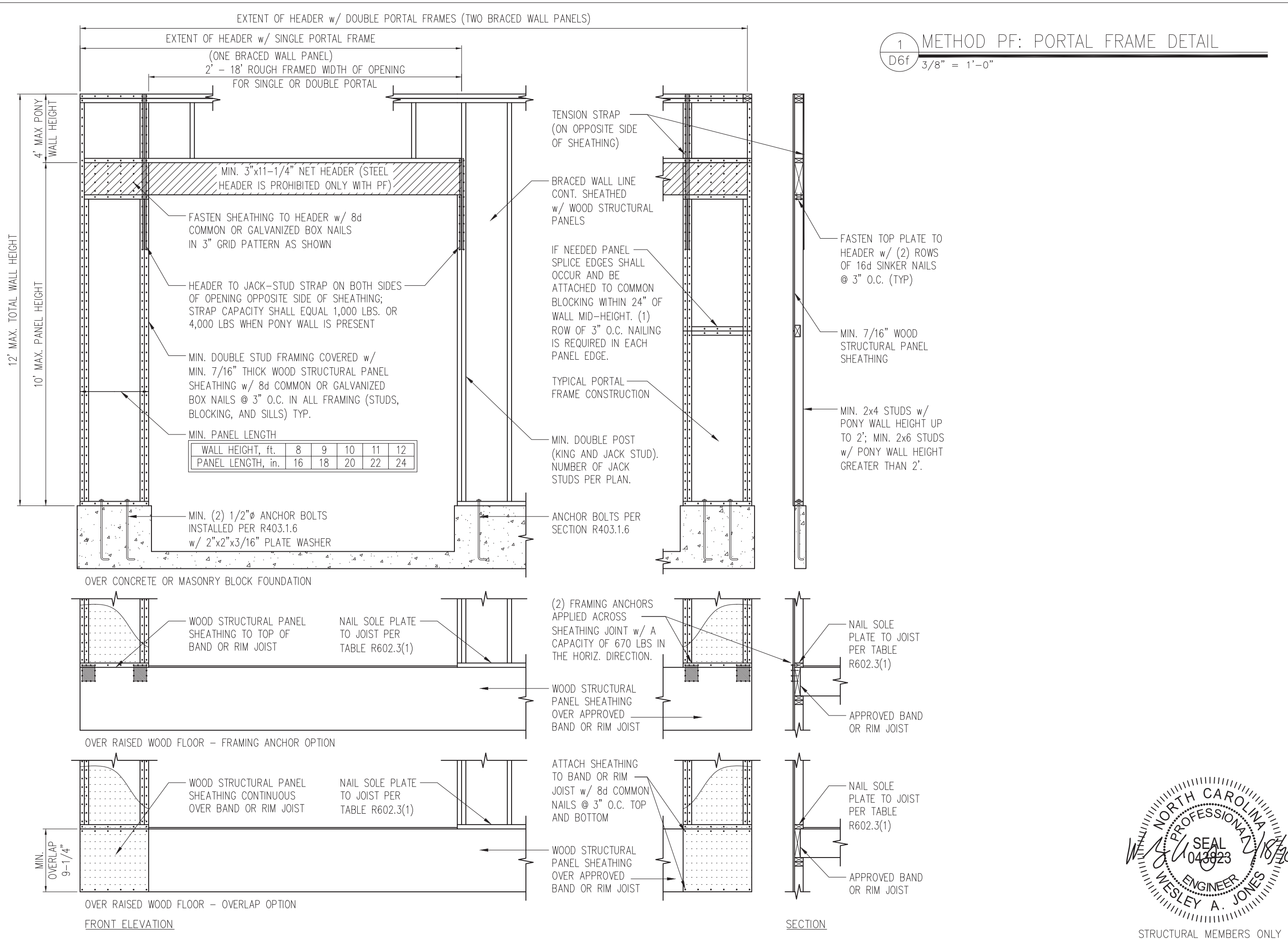
PROJECT  
Standard Details  
Framing Details  
CLIENT  
Smith Douglas Homes  
110 Village Trail, Suite 215  
Woodstock, GA 30188

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SHEET  
**D5f**



1 METHOD PF: PORTAL FRAME DETAIL  
D6f 3/8" = 1'-0"

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SUMMIT  
Engineering,  
Laboratory &  
Testing, P.C.  
C-4361  
CERTIFICATE OF LICENSURE

PROJECT  
**Standard Details**  
**Framing Details - Bracing**

CLIENT  
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**110 Village Trail, Suite 215**  
**Woodstock, GA 30188**

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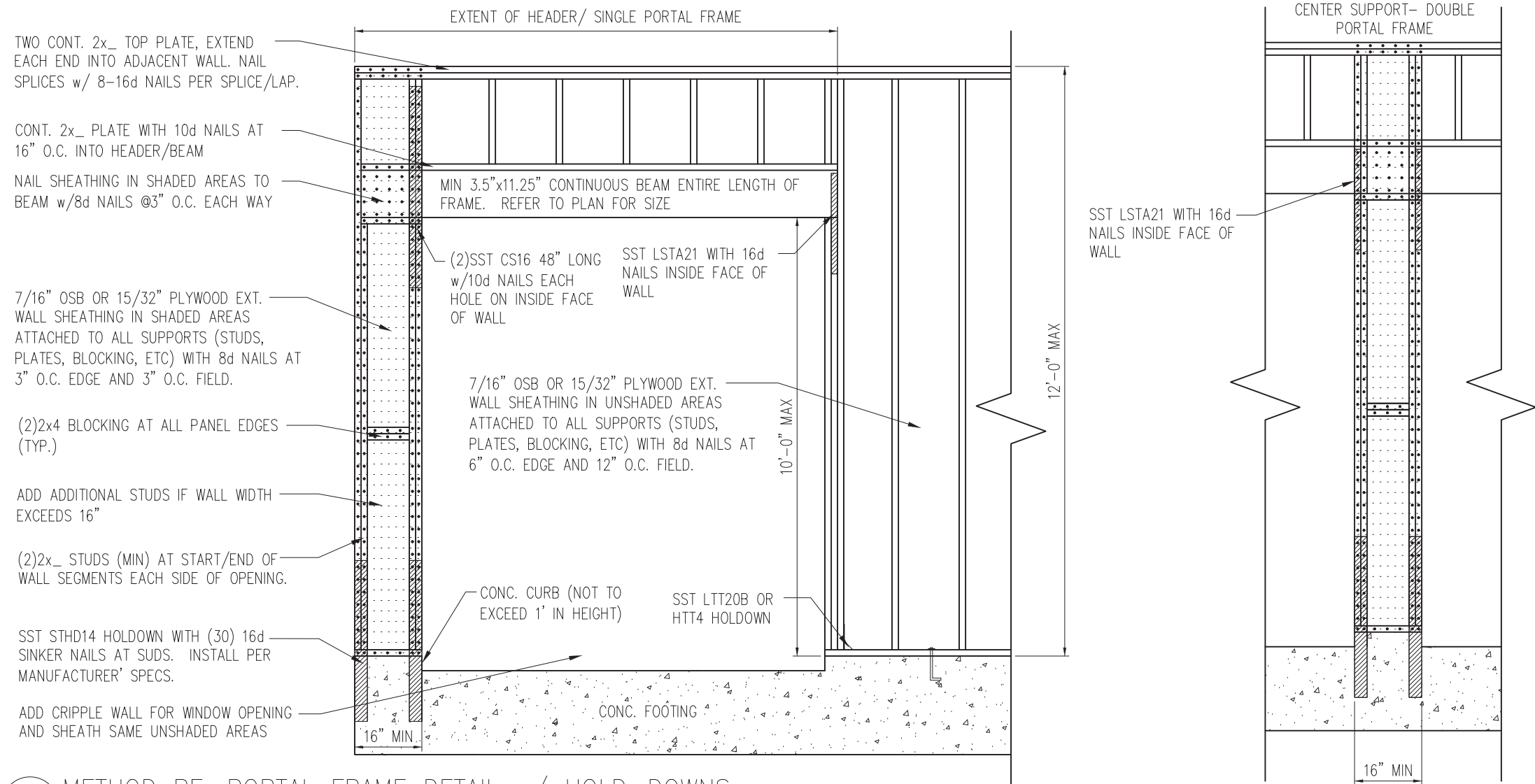
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NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
WESLEY A. JONES  
SEAL 043823

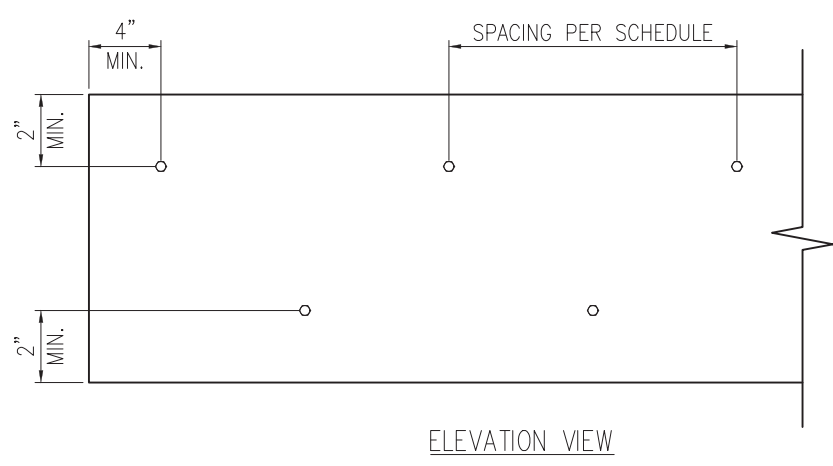
SHEET  
**D6f**

STRUCTURAL MEMBERS ONLY





1 METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS  
 D7f 3/4" = 1'-0"



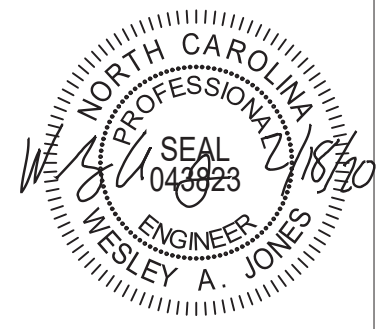
2 MULTI-PLY BEAM CONNECTION DETAIL  
 D7f N.T.S

**MINIMUM FASTENING REQUIREMENTS FOR TOP- AND SIDE-LOADED MEMBERS**

FASTENER TYPE	LVL DEPTH	3/4" WIDE		5/4" WIDE		7" WIDE	
		2-Ply 1 3/4"	3-Ply 1 3/4"	1 3/4" + 3 1/2"	4-Ply 1 3/4"	2-Ply 1 3/4" + 3 1/2"	2-Ply 3 1/2"
10d (0.128" x 3") Nails	7 1/4" ≤ d < 14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. (ES)	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. (ES)	-
	d ≥ 14"	4 rows @ 12" o.c.	4 rows @ 12" o.c. (ES)	4 rows @ 12" o.c.	-	4 rows @ 12" o.c. (ES)	-
16d (0.162" x 3 1/2") Nails	7 1/4" ≤ d < 14"	2 rows @ 12" o.c.	2 rows @ 12" o.c. (ES)	2 rows @ 12" o.c.	-	2 rows @ 12" o.c. (ES)	-
	d ≥ 14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. (ES)	3 rows @ 12" o.c.	-	3 rows @ 12" o.c. (ES)	-
1/2" Through Bolts	d ≥ 7 1/4"	2 rows @ 24" o.c.	2 rows @ 24" o.c.		2 rows @ 24" o.c.		-
SDS 1/4" x 3 1/2", WS35, 3 3/8" TrussLok		2 rows @ 24" o.c.	2 rows @ 24" o.c. (ES)	2 rows @ 24" o.c.	-	2 rows @ 24" o.c. (ES)	-
SDS 1/4" x 6", WS6		-	-	-	2 rows @ 24" o.c. (ES)		-
5" TrussLok		-	2 rows @ 24" o.c.		-		-
6 3/4" TrussLok		-	-	-	2 rows @ 24" o.c.		-

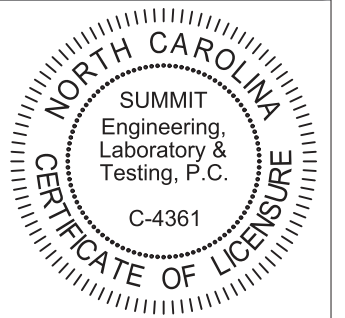
**NOTES:**

- All fasteners must meet the minimum requirements in the table above. Side-loaded multiple-ply members must meet the minimum fastening and side-loading capacity requirements given on page 48.
- Minimum fastening requirements for depths less than 7 1/4" require special consideration. Please contact your technical representative.
- Three general rules for staggering or offsetting for a certain fastener schedule:
  - (1) if staggering or offsetting is not referenced, then none is required;
  - (2) if staggering is referenced, then fasteners installed in adjacent rows on the front side are to be staggered up to one-half the o.c. spacing, but maintaining the fastener clearances above; and
  - (3) if "ES" is referenced, then the fastener schedule must be repeated on each side, with the fasteners on the back side offset up to one-half the o.c. spacing of the front side (whether or not it is staggered).



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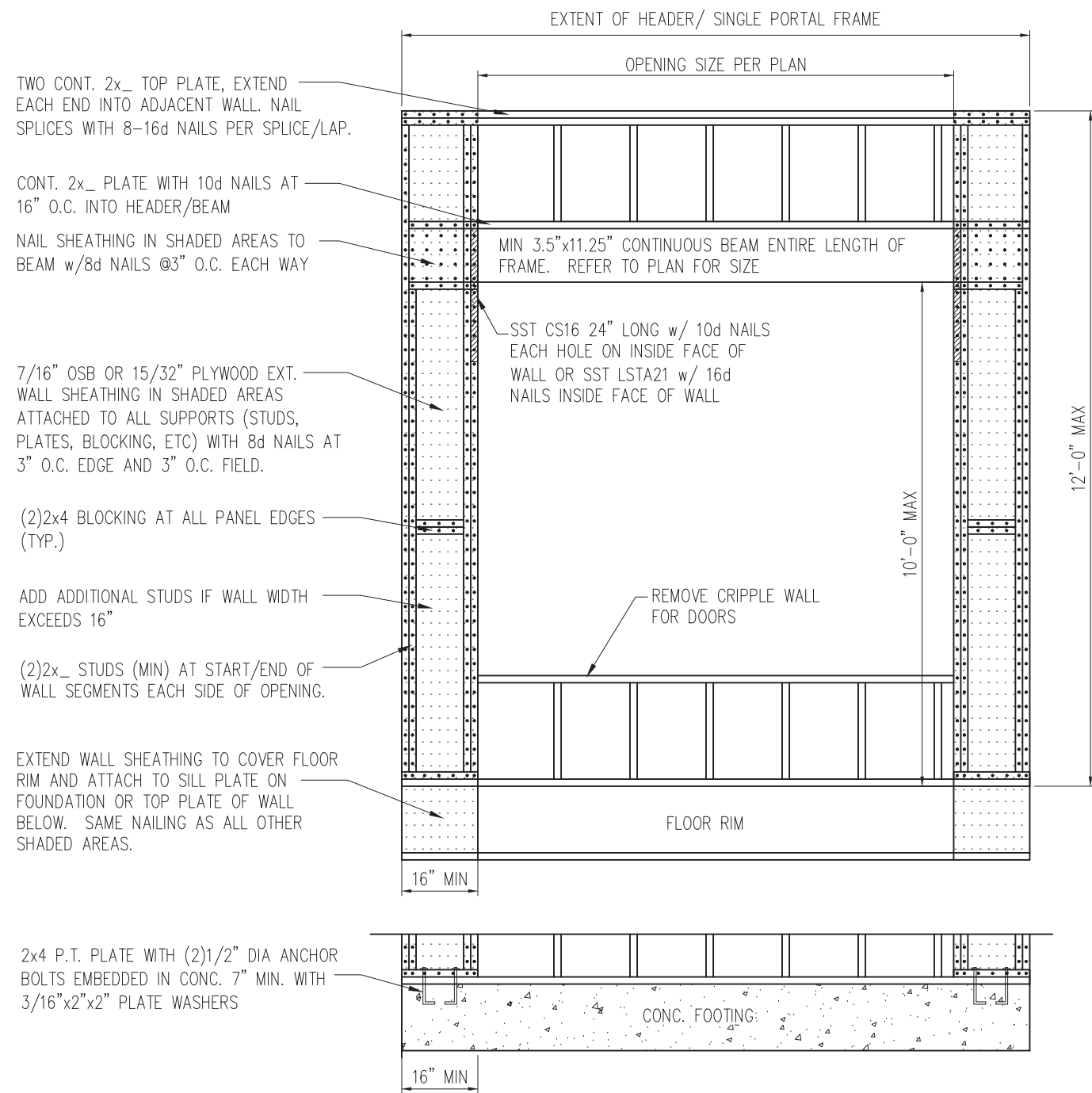


PROJECT  
 Standard Details  
 Framing Details - Bracing  
 CLIENT  
 Smith Douglas Homes  
 110 Village Trail, Suite 215  
 Woodstock, GA 30188

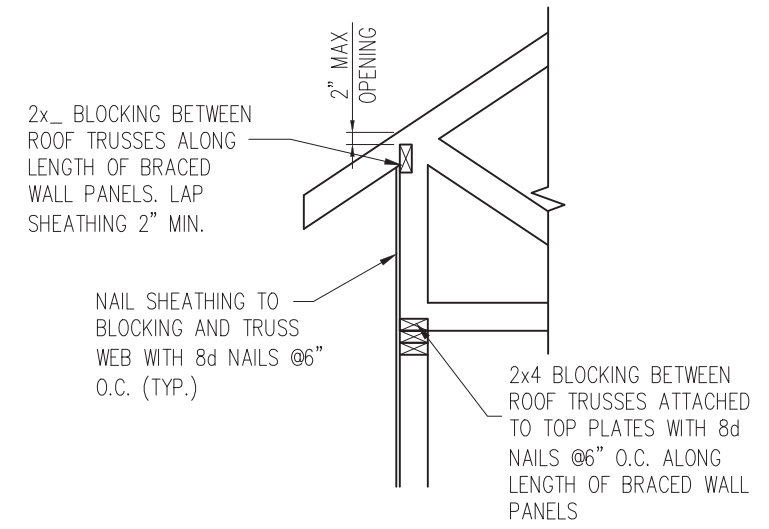
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 CHECKED BY: WAJ  
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 NO. DATE PROJECT #  
 0 1/7/16 3832

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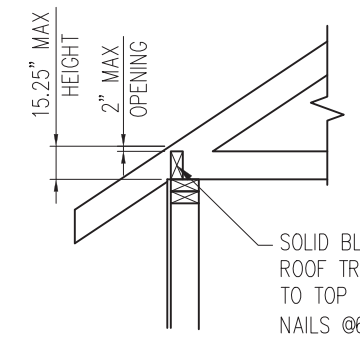
SHEET  
**D7f**



1 METHOD PF: PORTAL FRAME DETAIL  
 D8f 3/4" = 1'-0" OPENINGS UNDER 8'-0"



HEEL HEIGHT GREATER THAN 15.25"



HEEL HEIGHT LESS THAN 15.25" \*

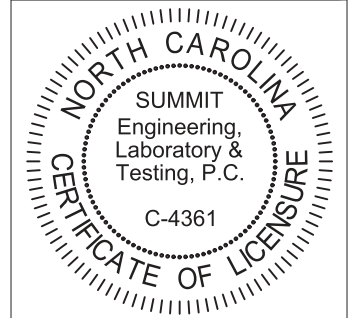
\*BLOCKING IS NOT REQUIRED WITH HEEL HEIGHTS LESS THAN 9.25"

2 TYP. WALL PANEL TO ROOF TRUSS CONNECTION  
 D8f 1" = 1'-0"



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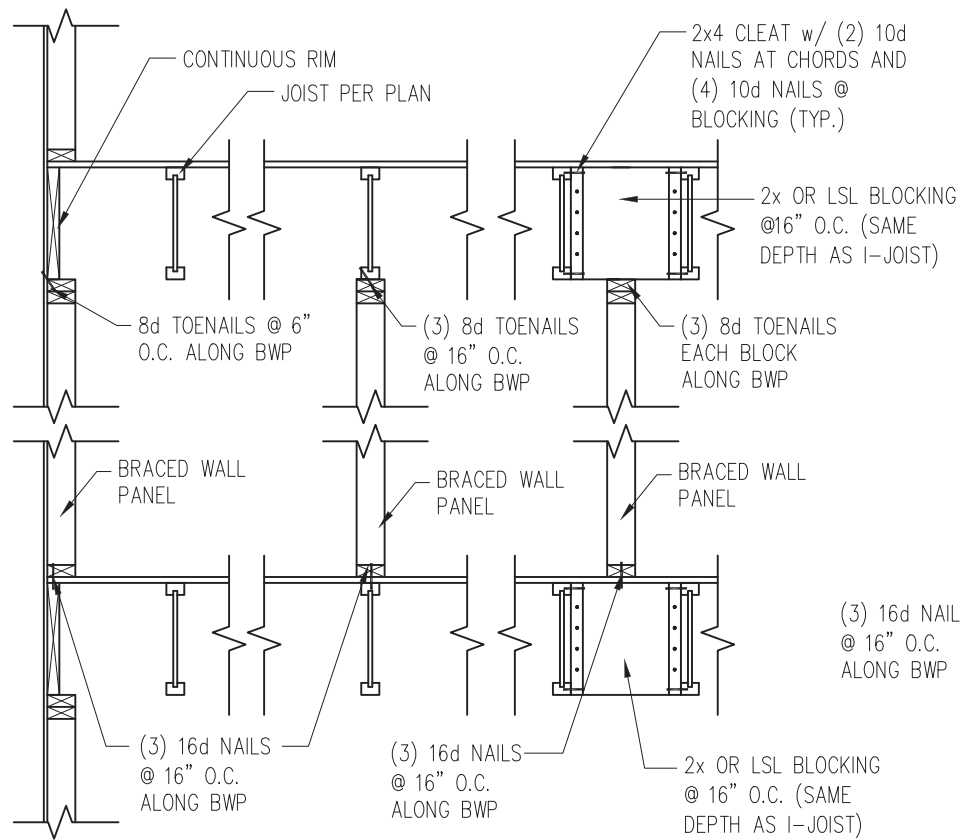
PROJECT  
**Standard Details - Bracing**  
**Framing Details - Bracing**  
 CLIENT  
**Smith Douglas Homes**  
 110 Village Trail, Suite 215  
 Woodstock, GA 30188

CURRENT DRAWING  
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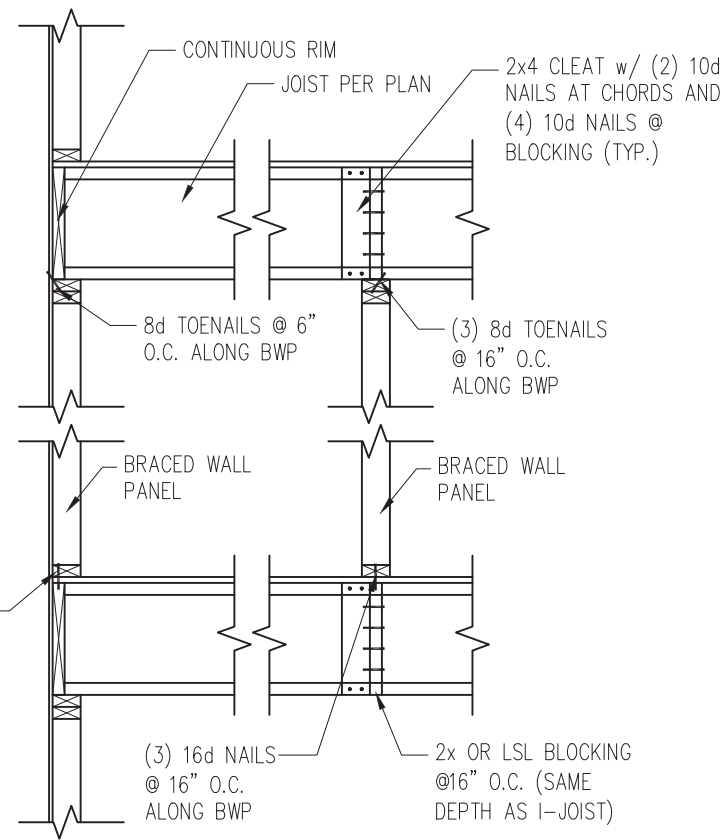
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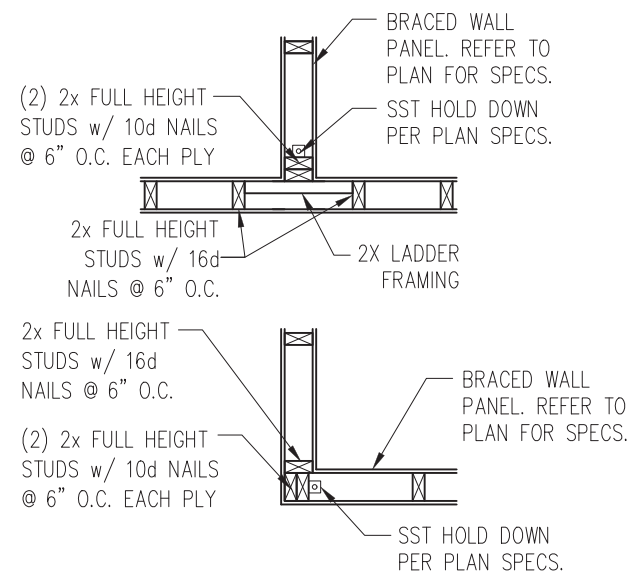
SHEET  
**D8f**



JOISTS PARALLEL TO BRACED WALLS

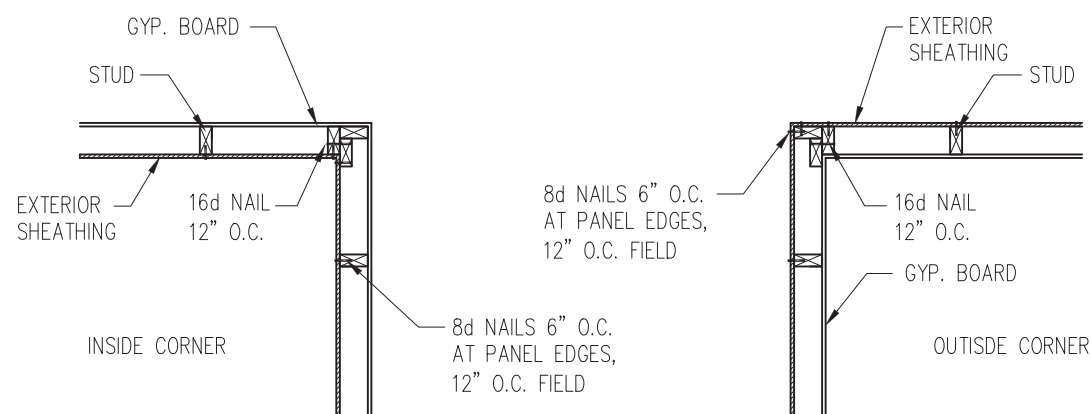


JOISTS PERPENDICULAR TO BRACED WALLS

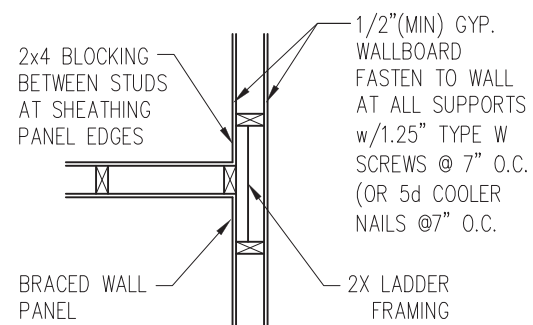


4 TYP. HOLD DOWN DETAIL  
D9f 1" = 1'-0"

1 TYP. WALL PANEL TO FLOOR/CEILING CONNECTION  
D9f 1" = 1'-0"



2 TYP. EXTERIOR CORNER FRAMING  
D9f 1" = 1'-0"

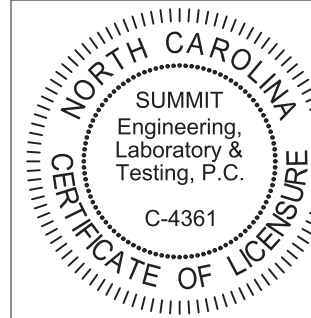


3 INTERIOR 3-STUD WALL INTERSECTION  
D9f 1" = 1'-0"



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PROJECT  
**Standard Details**  
**Framing Details - Bracing**  
CLIENT  
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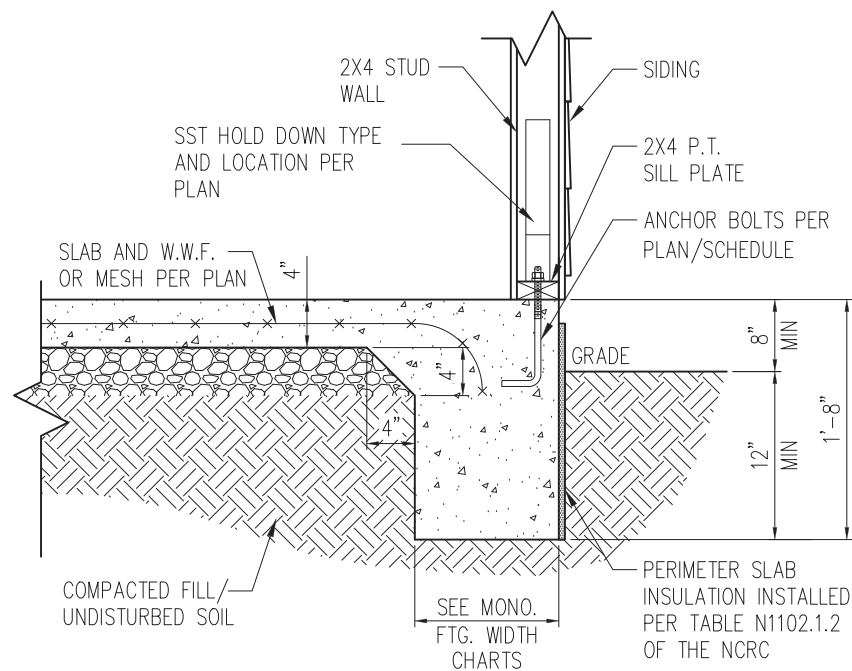
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ORIGINAL DRAWING  
NO. DATE PROJECT #  
0 1/7/16 3832

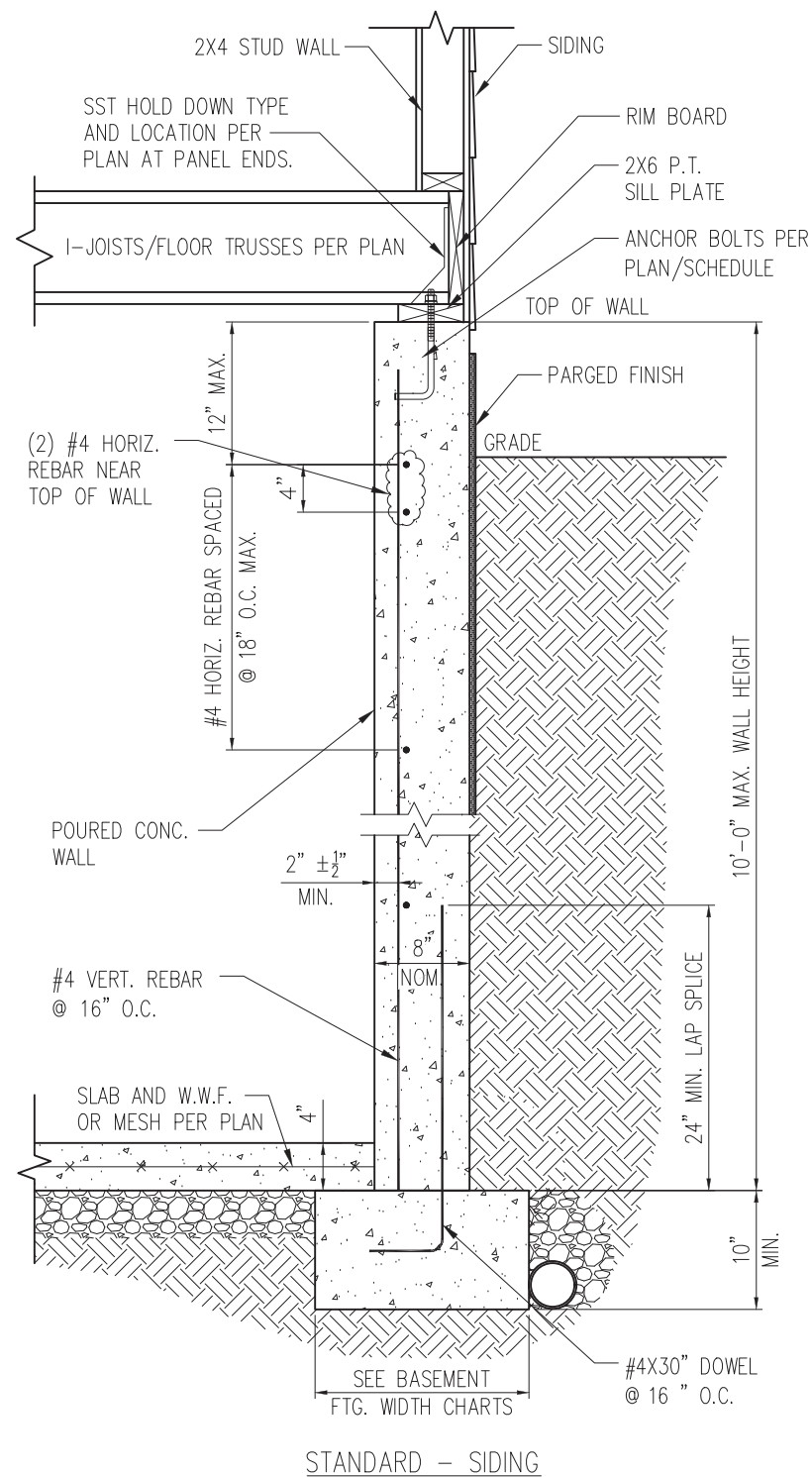
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET  
**D9f**





1 SLAB DETAIL w/ HOLD-DOWN  
 D10f 3/4" = 1'-0"

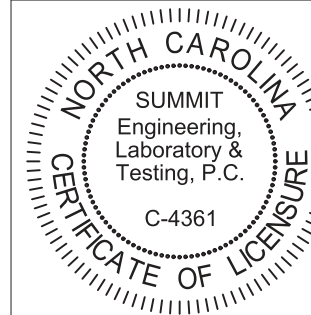


2 BASEMENT FOUNDATION WALL DETAIL W/ HOLD-DOWN  
 D10f 3/4" = 1'-0"



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SHEET

**D10f**

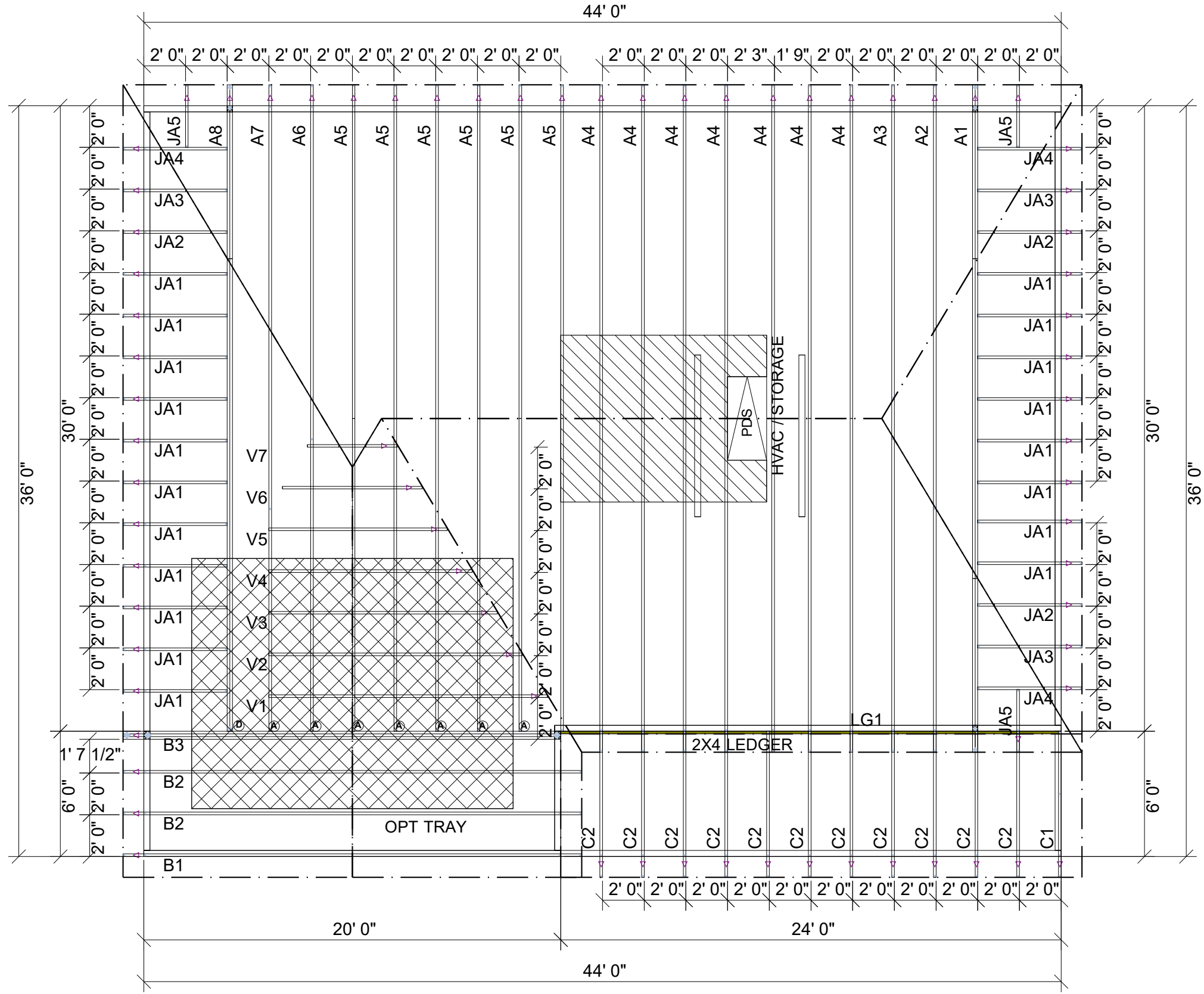
TRUSS TO WALL CONNECTIONS, IF SHOWN, ARE FOR UPLIFT ONLY AND DO NOT CONSIDER LATERAL LOADS. ALL CONNECTORS ON THIS PROJECT ARE TO BE INSTALLED PER THE CONNECTOR MANUFACTURER'S SPECIFICATIONS. ALL CONNECTORS SHOWN THAT ARE NOT "TRUSS TO TRUSS" ARE SUGGESTIONS ONLY AND ARE TO BE VERIFIED BY THE BUILDING DESIGNER OR ENGINEER OF RECORD FOR SUITABILITY TO THIS PARTICULAR PROJECT. UFP MID-ATLANTIC, LLC, ACCEPTS NO RESPONSIBILITY FOR THE SPECIFIC APPLICATION OR SUITABILITY OF ANY CONNECTOR THAT IS NOT "TRUSS TO TRUSS" AS THEY APPLY TO THIS SPECIFIC STRUCTURE.

# MORGAN CFI

Hatch Legend	
OPT. MSTR TRAY	
LIGHT ATTIC PLATFORM	

**Roof Hanger List**

QTY	DESCRIPTION	TYPE	MARK
7	FACE MOUNT HANGER	HUS26	(A)
1	FACE MOUNT HANGER	THD26-2	(D)

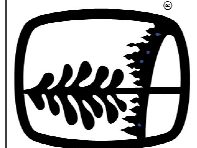


**ROOF AREA: 2088.87 ft<sup>2</sup>\_RIDGE LINE: 43.67 ft \_ VALLEY LINES: 20.3 \_ HIP LINES: 66.83 \_ Indicates Left End of Truss**

Customer: **SMITH DOUGLAS**  
 Job Name: **MORGAN CFI**  
 Date: 02-11-20  
 Scale: NTS  
 Revision Date: \_\_\_\_\_  
 Revision Date2: \_\_\_\_\_

Quality Products for Quality Builders

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1. TEMPORARY BRACING TO BE INSTALLED W/T.P.I. STANDARD BCSI-B1.  
 2. SEE ENGINEERED DRAWING FOR PERMANENT BRACING MINIMUM REQUIREMENTS.  
 3. FRAMER TO VERIFY ALL DIMENSIONS, DROP, & RISE LOCATIONS PRIOR TO TRUSS PLACEMENT.  
 4. BLDG/FRAMER RESPONSIBLE FOR ADJUSTMENT OF TRUSS SPACING TO MISS PLUMBING DROPS, UNLESS NOTED OTHERWISE.  
 This layout is not an engineered drawing. This drawing was created to establish truss placement only. It is the responsibility of the builder to provide adequate support for all the elements shown in this drawing.

Products					
Fab Type	Net Qty	Plies	Product	Length	PlotID
MFD	8	1	14" TJI@ 110	30' 0"	J1
MFD	1	1	14" TJI@ 110	15' 0"	J2
MFD	5	1	14" TJI@ 110	13' 0"	J3
MFD	1	1	14" TJI@ 110	7' 0"	J4
MFD	2	1	14" TJI@ 110	5' 0"	J5
MFD	1	1	14" TJI@ 110	4' 0"	J6
MFD	2	2	14" TJI@ 210	17' 0"	J7
MFD	10	1	14" TJI@ 360	36' 0"	J8
MFD	2	2	1 3/4" x 9 1/4" 2.0E Microllam@ LVL	9' 0"	2H-1
FF	12	1	1 1/8" x 14" TJI@ Rim Board	16' 0"	RIM-1
MFD	2	1	14" TJI@ 110	2' 0"	BK1

Connector Summary				
Product	Manuf	Qty	PlotID	
TFL1714	USP	7	H1	

**PLAN LEGEND**

\*INDICATES BEAM ABOVE TOP PLATE (FLUSH WITH FLOOR SYSTEM)

INDICATES BEAM BY OTHER

INDICATES BEAM BELOW TOP PLATE (DROPPED BELOW FLOOR SYSTEM)

"BEAMS MAY PROTRUDE ABOVE OR BELOW DECKING OR TOP PLATE RESPECTIVELY, REFER TO DETAIL IF BEAM IS A DIFFERENT DEPTH THAN FLOOR SYSTEM"

SINGLE PLY BEAM (ADD LINE FOR EACH ADDITIONAL PLY)

SHIFT JOIST TO MISS PLUMBING, ALIGN W/WALL OR SUPPORT FURNITURE

A JOIST ADDED TO THE LAYOUT IN ADDITION TO THE ON CENTER JOISTS

TWO JOISTS SIDE BY SIDE (ONLY ASSEMBLED IF NOTED)

**1B-, 2B-  
BBO-  
H-, 1H-, GDH-**

**SHIFT**

**EXTRA**

**DOUBLE**

ALL DIMENSIONS TO CENTERLINE UNLESS OTHERWISE NOTED

Avoid Plumbing Drops

FIELD TRIM NON RED END TO KEEP HOLES ALIGNED  
CONTAR EL LADO DE SIN MARCA ROJA PARA HOYOS ALINEADOS

**FIELD LOCATE PLUMBING DROPS/CAN LIGHTS, ETC... PRIOR TO JOIST SECUREMENT TO AVOID INTERFERENCE.**

**FIELD VERIFY DIMENSIONS TO JOISTS LOCATED UNDER WALLS!!  
2ND FLOOR LAYOUT**

**GENERAL NOTES:**

- TOP CHORD OF JOISTS ARE PAINTED RED AT NUMBERED END. PLACE PAINTED END AS NOTED ON PLAN.
- FOLLOW SPECIAL SPACING AND LOCATION DIMENSIONS FOR EXTRAS OR SHIFTED JOISTS AS SHOWN ON PLAN.
- ALL INTERIOR WALL PLATES MUST BE LEVEL WITH OUTSIDE WALL TOP PLATES.
- DO NOT STACK CONSTRUCTION LOADS ON UN-BRACED JOISTS.
- PROVIDE SOLID SUPPORT BELOW ALL BEAM AND HEADER BEARING POINTS IN WALL AND JOIST SPACES CONTINUOUS DOWN TO THE FOUNDATION.
- LOCATE CRIPPLE STUDS IN JOIST SPACE DIRECTLY BELOW HEADER JACKS AT ALL FIRST FLOOR EXTERIOR DOOR LOCATIONS.
- INSTALL NAILS IN ALL HOLES PROVIDED IN JOIST HANGERS EXCEPT AT BOTTOM CHORD SEAT. PLACE A DAB OF GLUE IN THE HANGER SEAT BEFORE SETTING JOISTS.
- IMPORTANT NOTE! NO STRUCTURAL ANALYSIS OF CONVENTIONAL HEADERS HAS BEEN CONDUCTED IF NOT NOTED. THEY ARE CONSIDERED TO BE ADEQUATE TO SUPPORT THE APPLIED LOADS.

**FRAMER NOTE**

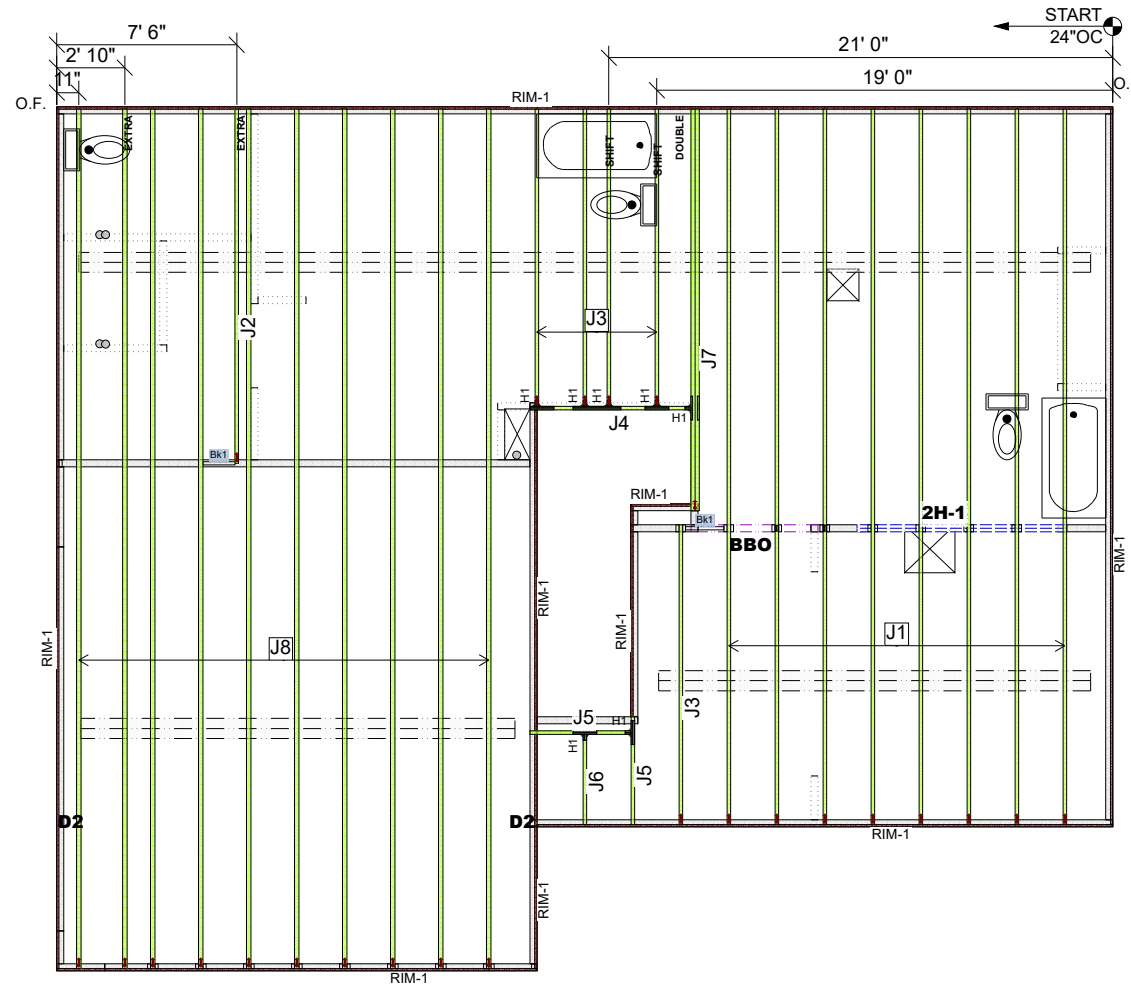
DENOTES DUCT HOLE RUNS

**FRAMER NOTE**

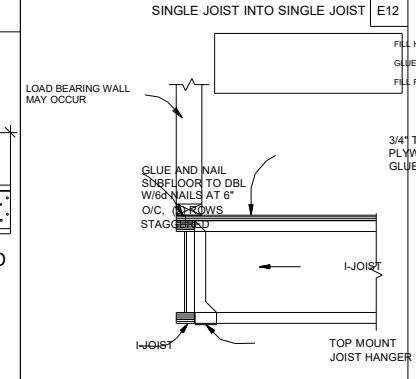
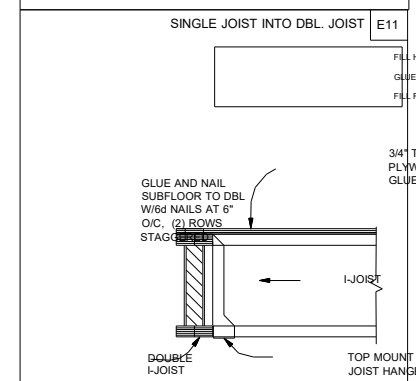
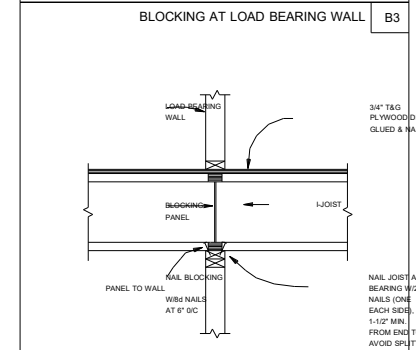
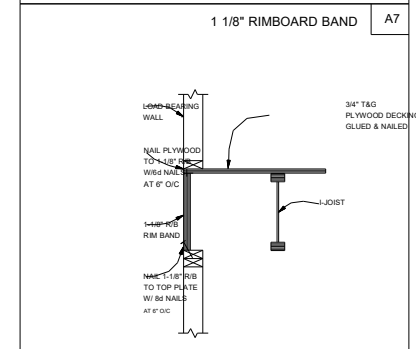
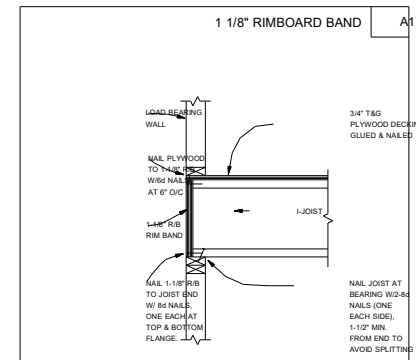
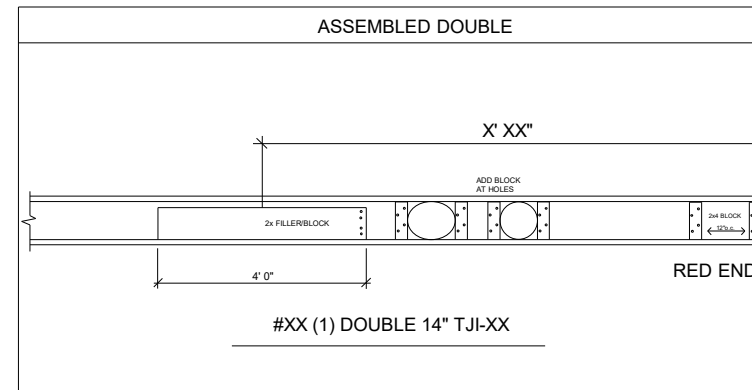
- GLUE AND NAIL PLYWOOD SUBFLOOR TO BEAMS AND GIRDERS AT 6" O/C WHERE NO WALL IS ABOVE.
- FILL HANGER SEAT WITH GLUE BEFORE SETTING JOIST IN HANGER. FILL ROUND HOLES WITH NAILS.

**CRITICAL !!**

INSTALL 2X4 SQUASH BLOCKS IN FLOOR TRUSS SPACE BELOW ALL EXTERIOR DOOR HEADER JACKS. CUT 1/16" TALLER THAN TRUSS.



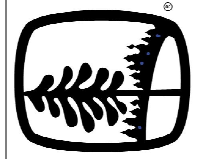
**RED END THIS SIDE!!  
EXTIMO ROJA AQUI !!!!**



This layout is not an engineered drawing. This drawing was created to establish joist placement only. It is the responsibility of the builder to provide adequate support for all the elements shown in this drawing.

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LOADING	DEFLECTION
ROOF LIVE 20 PSF	L/240
ROOF DEAD 20 PSF	L/180
FLOOR LIVE 40 PSF	L/480
FLOOR DEAD 10 PSF	L/240

Special Loading:

Customer: **SMITH DOUGLAS**  
 Job Name: **MORGAN**  
 Date: 3/25/21  
 Scale: NTS  
 Revision Date: \_\_\_\_\_  
 Revision Date: \_\_\_\_\_

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Lot #: \_\_\_\_\_

Drawn By: CP3  
 Drawing Number: **21032980F2**  
**MSTR**