BUFFINGTON

SMITH DOUGLAS HOMES

QUALITY | INTEGRITY | VALUE

110 VILLAGE TRAIL SUITE 215

WOODSTOCK, GA. 30188

CANE MILL ESTATES
LOT 30

PLAN ID: 060120.0601

DRAWING INDEX

GOVERNMENTAL CODES & STANDARDS

HOME TO BE BUILT TO CONFORM TO ALL APPLICABLE LOCAL CODES, PRACTICES AND STANDARDS

BUILDING CODE ANALYSIS / DESIGN CRITERIA

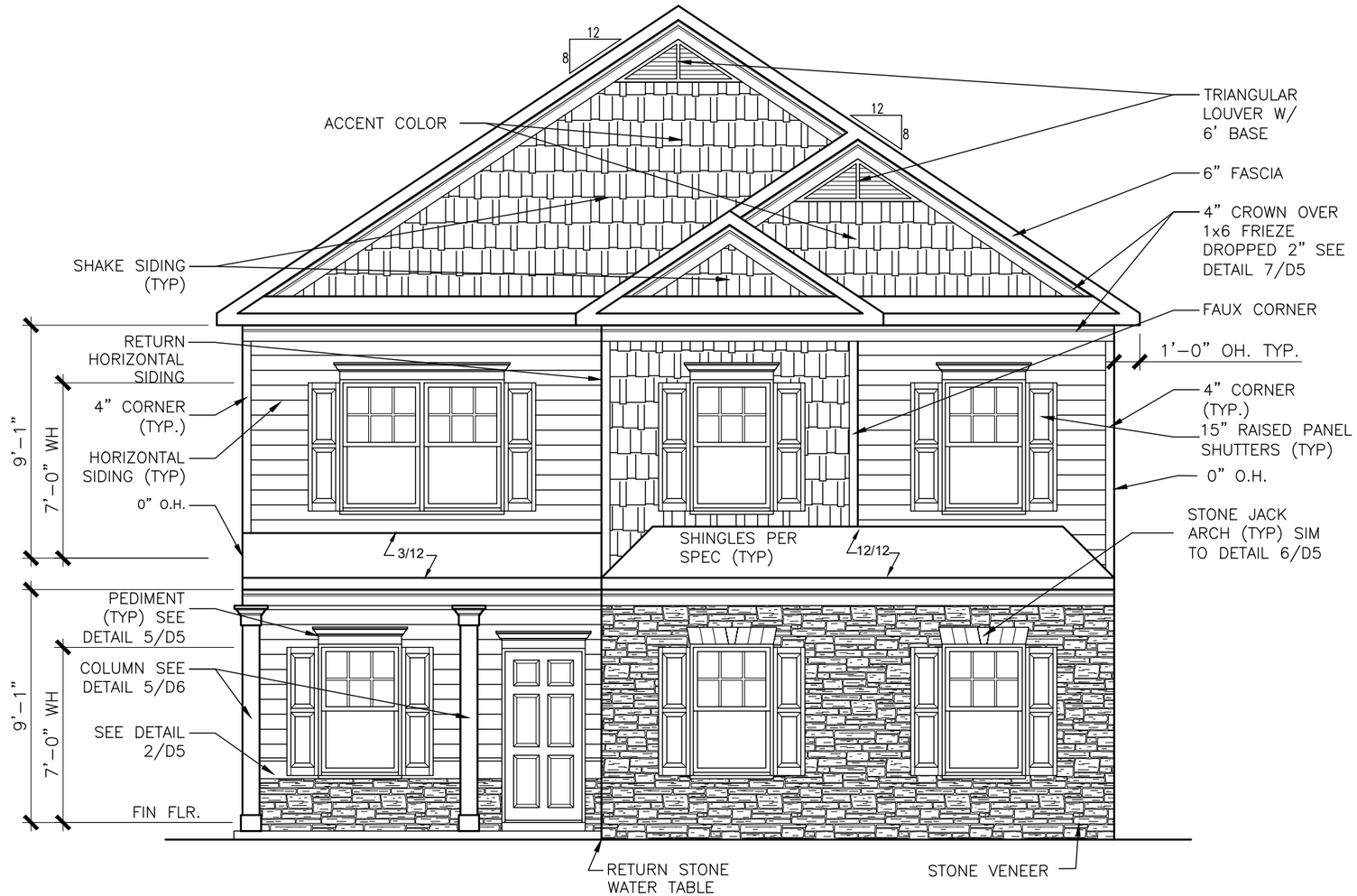
HOME TO BE BUILT TO MEET OR EXCEED ALL LOCAL CODES AND DESIGN CRITERIA

AREA TABULATION	
FIRST FLOOR	1100
SECOND FLOOR	1448
TOTAL	2548
GARAGE	400
FRONT PORCH (COVERED)	86
REAR PATIO (COVERED)	120

PLAN REVISIONS

DATE	BY	REVISION	PAGE #
10/2/2019	AW	PCR #3256 showed Obath switches on door adjacent to W.I.C.	A7.3
10/2/2019	AW	PCR #3247 Added 3-way switches to Owner's Suite light when optional Laundry door is chosen	A7.3
10/8/2019	AW	PCR #3292 moved kitchen light switches over to clear backsplash bullnose on wall adjacent to stairs	A7.2
10/16/2019	AW	Revised location for tankless hot water heater	A3.1, A5.1, A7.2
11/1/2019	AW	PCR #3314 Relocated switch to attic light for the B&C roof massings	A7.2
2/26/2020	AW	PCR #3638 Added 1x10 on front elevations M & T	A1.16, A1.19
6/1/2020	MM	PCR #3765 Added note to return veneer ILO siding on second floor returns above front door.	A1.6, A1.11, A1.15, A1.17
8/11/2020	AW	Updated elevs M & T to remove cedar columns	A1.16, A1.19
10/1/2020	AW	PCR #4084 Removed opt. fireplace in corner location (for 10/1/20 release)	A3.1,A5.1,A7.2, A8.1
11/6/2020	MM	Removed overhang at front porch	A1.1-A1.19, A6.1-A6.1.2
12/1/2020	MM	Shifted upper run of stairs 2" from landing towards outside of house	A5.1, A5.2
12/1/2020	MM	PCR #4239 Changed 2x6 walls at Owner's Bath vanity & WC exterior wall to 2x4 walls	A5.2, A5.2.1
6/1/2021	MM	Changed hall bath vanity from (2) 33" vanities to (2) 30" vanities	A5.2, A7.3

CANE MILL ESTATES
LOT 30



FRONT ELEVATION "B"

SIDE ENTRY GARAGE

SCALE : 3/16" = 1'-0"

ALL NON-MASONRY RETURNS TO BE HORIZONTAL SIDING

SEE SHEET D3 OF SDH TYPICAL DETAILS FOR SOFFIT DETAILS PER SOFFIT MATERIAL

BY	REVISION	DATE
#	#	#
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SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

ELEVATIONS
FRONT ELEVATION
BUFFINGTON

SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 115
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BY: SL	CH: AW
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PLAN ID:	
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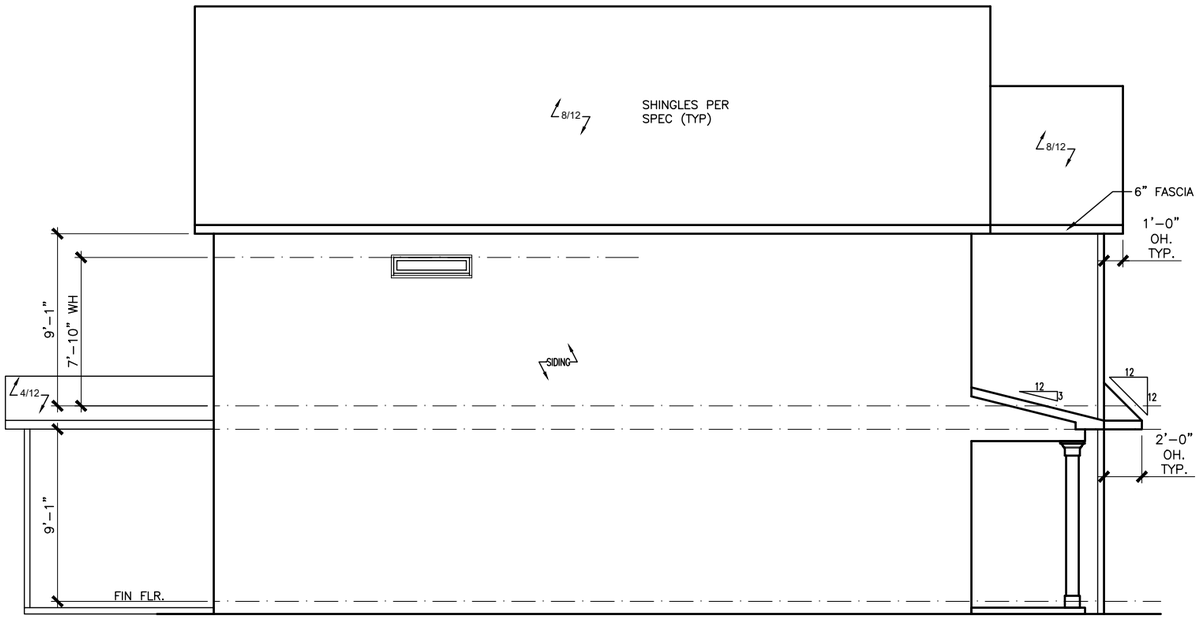
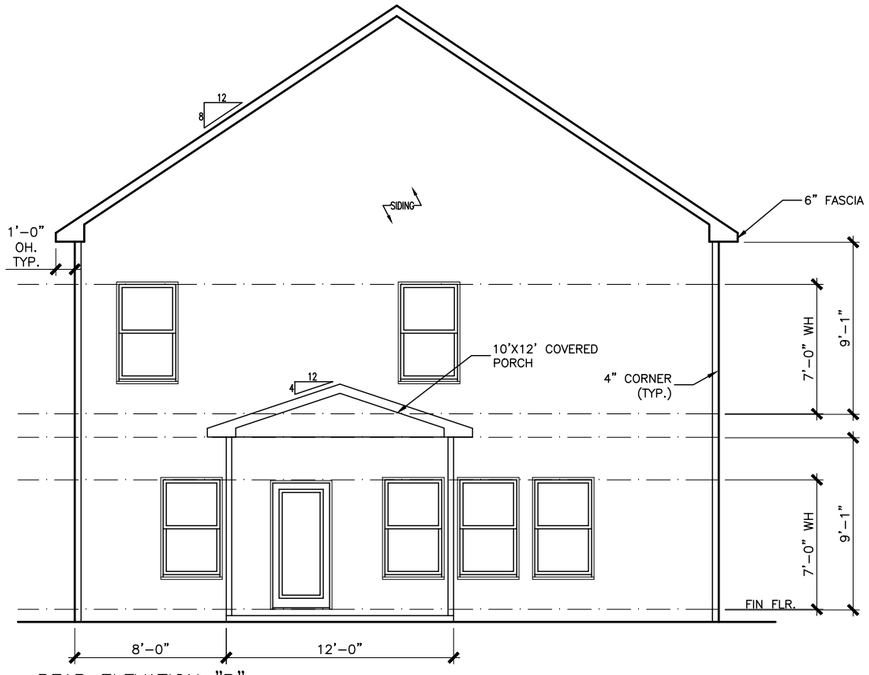
CANE MILL ESTATES
LOT 30



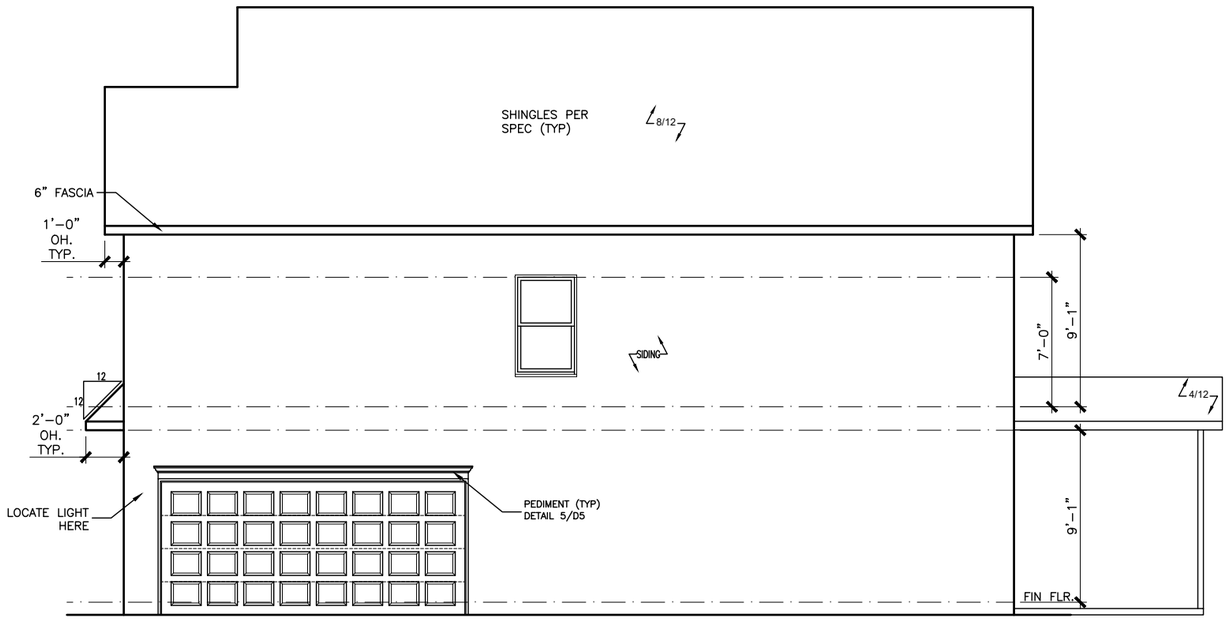
LEFT ELEVATION "B"

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



REAR ELEVATION "B"

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



RIGHT ELEVATION "B" SIDE ENTRY GARAGE

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

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SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

ELEVATIONS
SIDES AND REAR
BUFFINGTON

SMITH DOUGLAS HOMES
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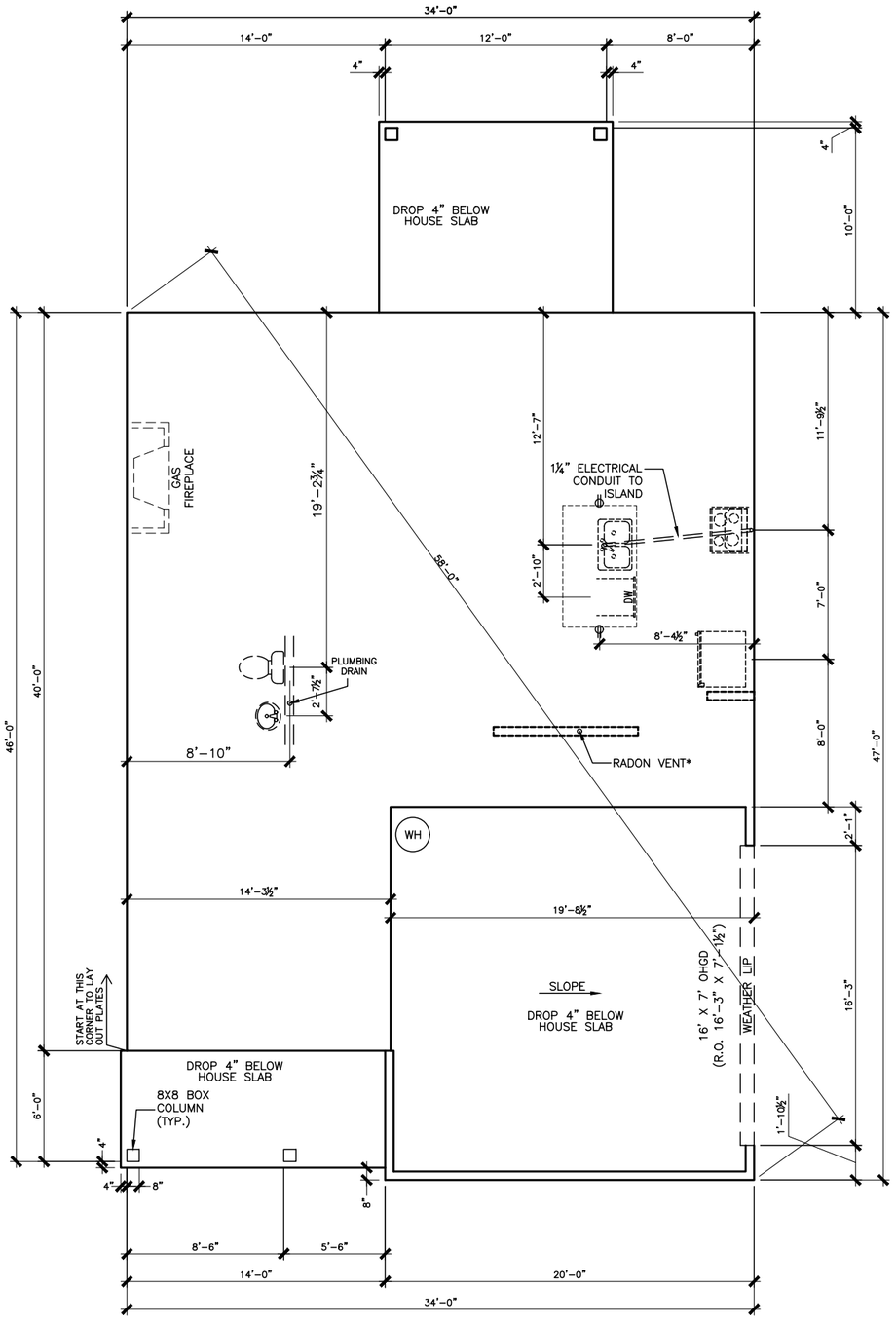
CANE MILL ESTATES
LOT 30



SLAB PLAN

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

*RADON VENT PROVIDED PER LOCAL CODE

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

BY	REVISION	DATE
#	#	#
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SMITH DOUGLAS HOMES
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FOUNDATION PLAN
SLAB PLAN
BUFFINGTON

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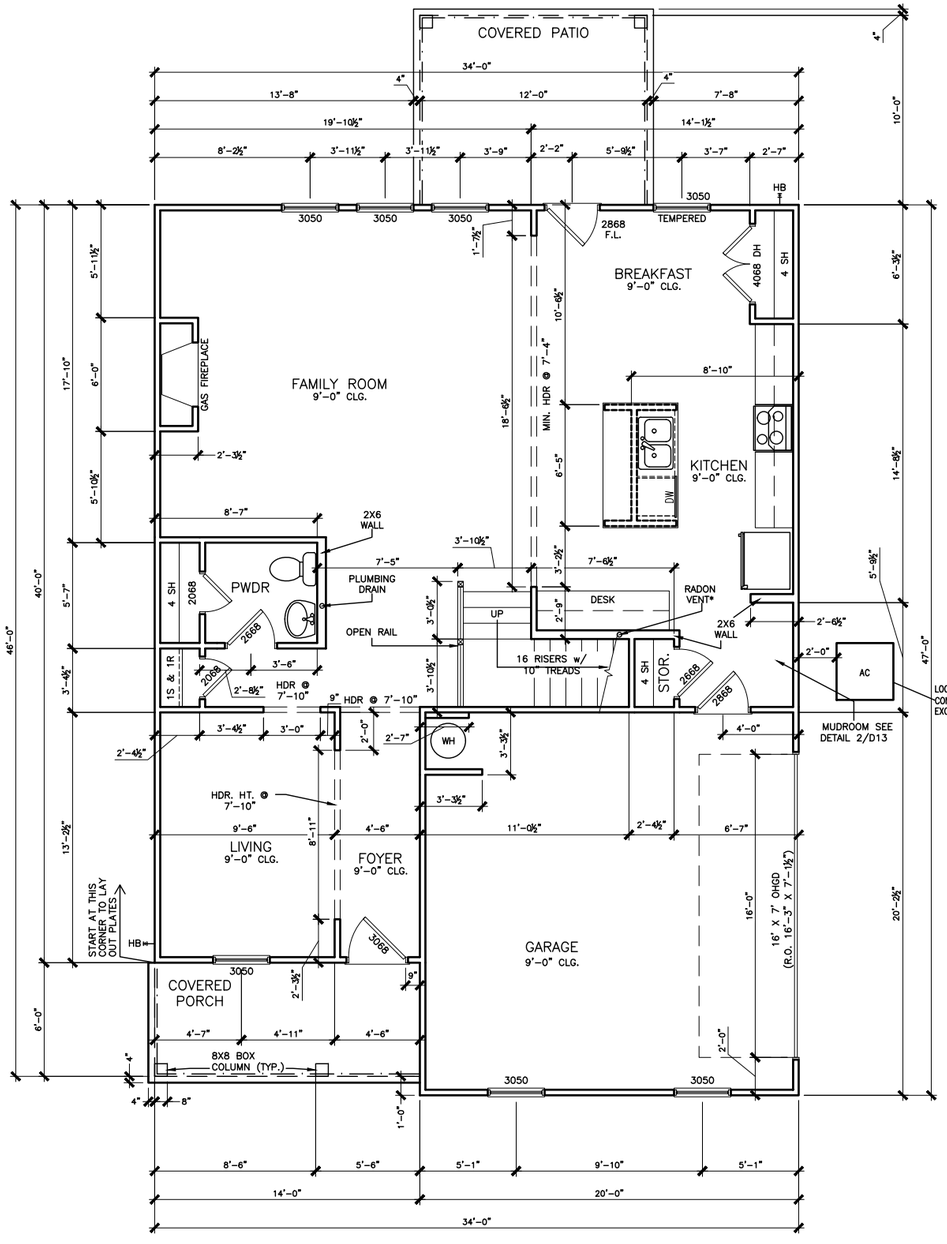
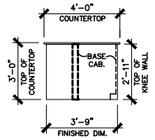
CANE MILL ESTATES
LOT 30

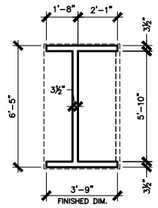


FIRST FLOOR PLAN

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



KITCHEN ISLAND SUPPORT FRAMING (SIDE VIEW)



KITCHEN ISLAND SUPPORT FRAMING (PLAN VIEW)

*RADON VENT PROVIDED PER LOCAL CODE

BY	REVISION	DATE
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SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

FLOOR PLAN
FIRST FLOOR
BUFFINGTON

SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 115
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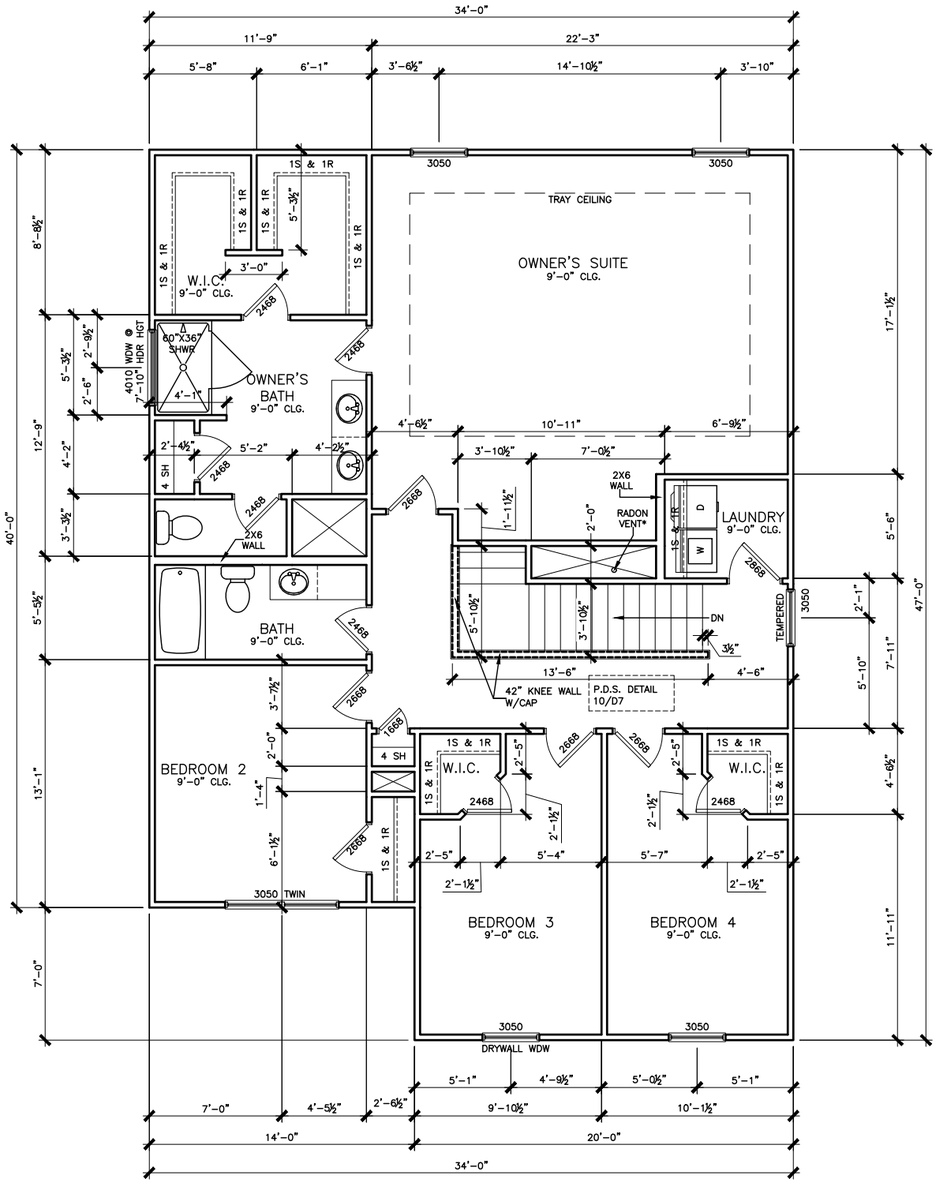
CANE MILL ESTATES
LOT 30



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
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SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

FLOOR PLANS
SECOND FLOOR
BUFFINGTON

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110 VILLAGE TRAIL
SUITE 115
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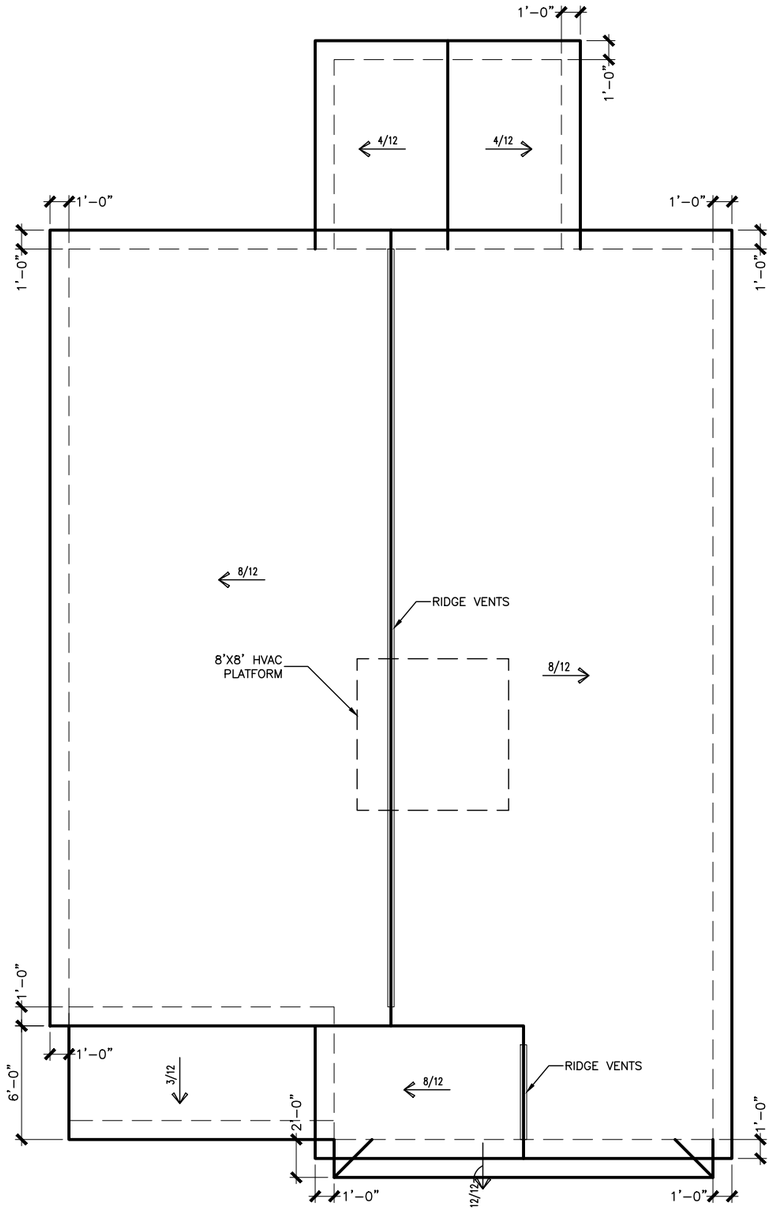
CANE MILL ESTATES
LOT 30



ROOF LAYOUT "B"

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

REVISION | BY | DATE

SMITH DOUGLAS HOMES
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ROOF PLAN
ROOF PLAN
BUFFINGTON

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110 VILLAGE TRAIL
SUITE 115
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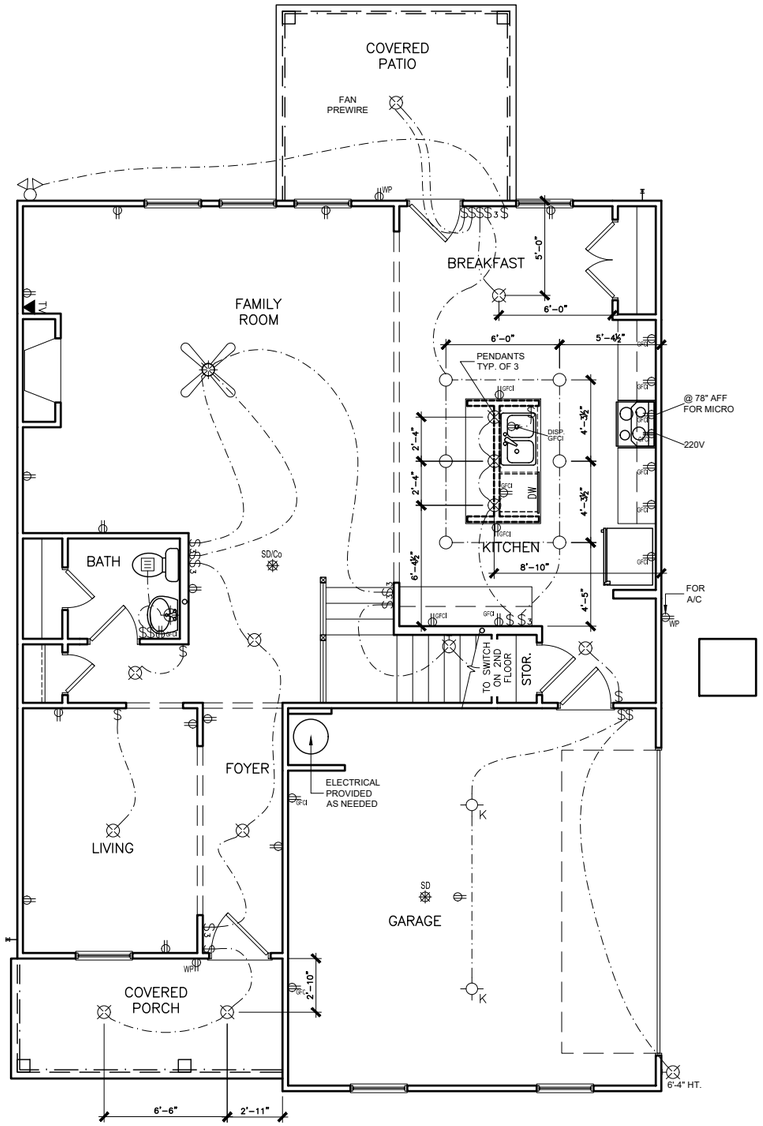
CANE MILL ESTATES
LOT 30



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
K	KEYLESS	GFCI	GFCI OUTLET
WP	WALL MOUNT FIXTURE	AFCI	ARCH FAULT CIRCUIT INTERRUPTER
	CEILING FIXTURE	GL	GAS LINE
	FLEX CONDUIT	WL	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		
	EXHAUST FAN		ELECTRICAL WIRING
	FAN/LIGHT		CEILING FIXTURE

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

REVISION	DATE	BY

SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

ELECTRICAL PLAN
FIRST FLOOR
BUFFINGTON

SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 115
WOODSTOCK, GA 30188
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BY: SL	CH: AW
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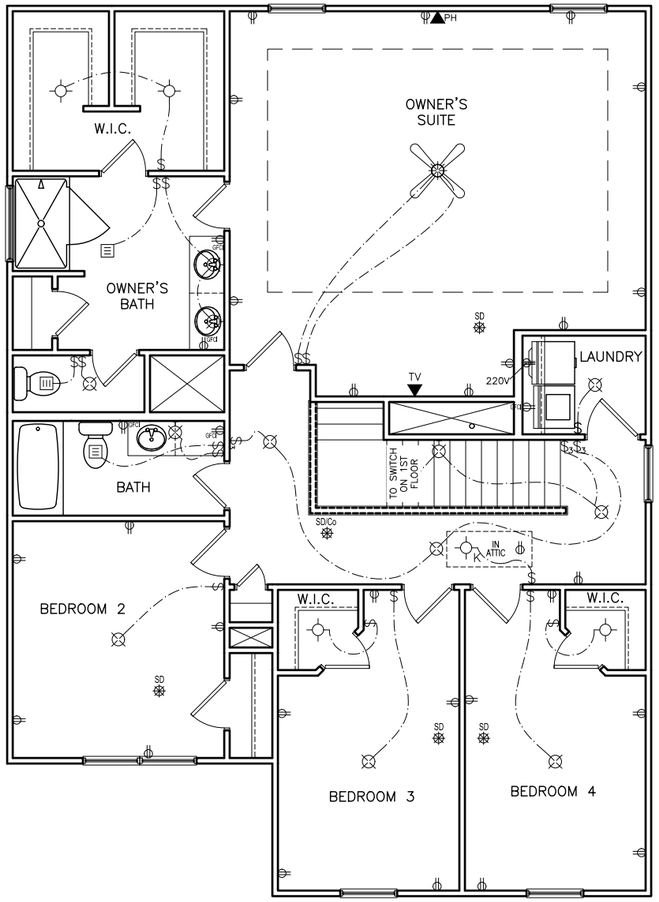
CANE MILL ESTATES
LOT 30



SECOND 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
K	KEYLESS	GFCI	GFCI OUTLET
	WALL MOUNT FIXTURE	AFCI	ARCH FAULT CIRCUIT INTERRUPTER
	CEILING FIXTURE	GL	GAS LINE
	FLEX CONDUIT	WL	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		
	EXHAUST FAN		ELECTRICAL WIRING
	FAN/LIGHT		CEILING FIXTURE

ELECTRICAL PLANS TO FOLLOW ALL LOCAL CODES

APPROX. FIXTURE HGTS (MEASURED FROM BOTTOM OF FIXTURE)

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CEILING FAN	96" ABOVE FINISHED FLOOR

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

BY	DATE	REVISION
#	#	#
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SMITH DOUGLAS HOMES
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ELECTRICAL PLAN
SECOND FLOOR
BUFFINGTON

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110 VILLAGE TRAIL
SUITE 115
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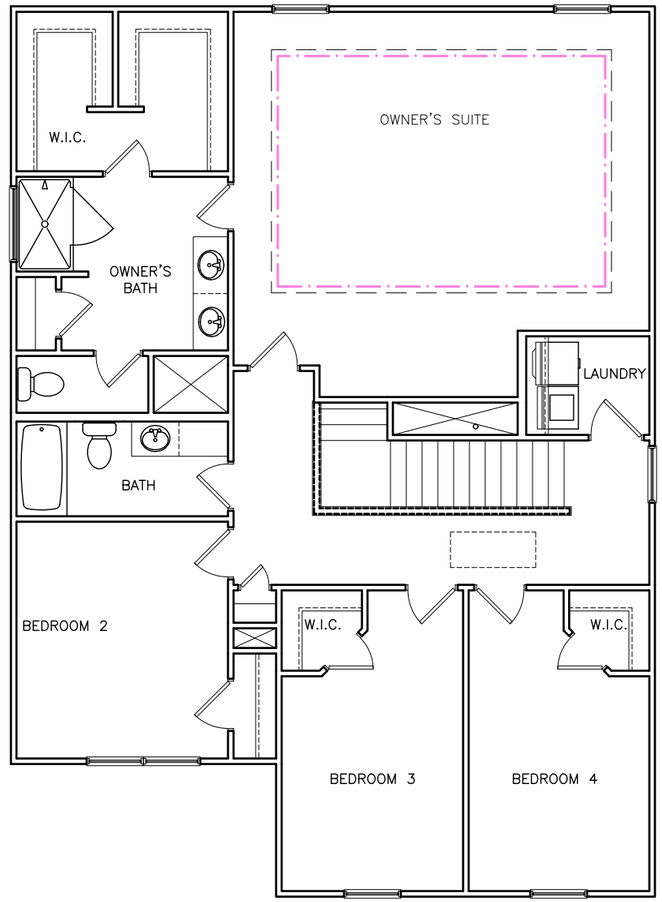
CANE MILL ESTATES
LOT 30



TRIM LAYOUT SECOND FLOOR PLAN

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

REVISION	DATE	BY
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SMITH DOUGLAS HOMES
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FLOOR PLAN
TRIM LAYOUT
BUFFINGTON

SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 115
WOODSTOCK, GA 30188
www.smithdouglas.com

BY:	CH:
SL	AW

DATE: 8/16/2021

FACADE OPT: B

PLAN ID:

FND:	ELEV:
ALL	B

PAGE NO: A8.1

Lot Definition

Project: Cane Mill Estates
Building: 000
Unit: 0030
Community: Cane Mill Estates
Builder: Thomas Kenneth Barlow
Status: Sold

Plan: Buffington B Side Entry
Orientation: Garage Right
Sq. Ft: 2,548
Bedrooms: 4
Bathrooms: 2.5
Address: 32 Planters Lane
Coats
NC 27521
RTeam: Raleigh West
Slot: 5616
Permit:
Notes:

Sales Data	
Contract:	91286
Buyer:	Takiyah Amerson
Sales Agent:	Sam Fulmer

Dates	
Ratified:	06/08/2021
Original Start:	08/06/2021
Start:	08/06/2021
Scheduled Complete:	12/16/2021

Option	Description	Quantity
1-Piece Crown In Owner Bedroom Tray	One-Piece Crown in Tray of Owner Bedroom. Note: must have Tray to use.	1
36" Cabinet 2nd Upgr w/ Hardware	Includes hardware - knobs, pulls, or knob/pull combo. Note: Bath cabinets to match	1
Automatic Garage Door Opener	Garage Door Opener - Per Door	1
Blind for Rear/Back Door	Blinds - Additional blind to cover rear/back door.	1
Blind per Optional 3050 Single Window	One 3050 blind. For use when you've added a 3050 optional window. See Optional Windows Sales Guide on the Process Model for assistance.	1
Blinds for Base House	Includes blinds for all standard windows on front, sides, and rear that are operational and accessible. Does not include blinds for any optional windows, including windows for optional second floors.	1
Blinds Side Entry Garage Windows		1
Ceiling Fan w/Light Family Room	Ceiling fan, including Light Kit. Does not include Prewire. This option is for use in Family Rooms that are pre-wired standard but have no fan.	1
Ceiling Fan w/Light Owner Bedroom	Ceiling fan, including Light Kit. Does not include Prewire. This option is for use in Owner Bedrooms that are pre-wired standard but have no fan.	1
Exterior Flood Lights		1
Fireplace in Family Room - Gas		1
FlPkg 5AA-Floorte Pro, StdCpt (f/Pkg1)	Flooring Package 5AA - Floorte Pro, Standard Carpet (from Package 1). SPC (solid polymer core) 0.5 mm vinyl top layer plank	1
Garage Door Wireless Entry Pad		1

Lot Definition

Granite-Kitchen Countertops - Lvl 1 (l)	Kitchen Granite Countertops - Level 1-where Lamanite is Std.	1
Granite-Kitchen Slink Level 1	Level 1 Undermount rectangular stainless steel sink upgrade for kitchen granite.	1
Kitchen Ceiling Fixture Lights ILO Std	Kitchen Lights - Low Profile Flush Mount LED Lights per Plan ILO Standard Light.	1
Kitchen Faucet - Level 2 (G)	Upgrade to Level 2 Pulldown Kitchen Sink Faucet From Level 1 Faucet on Granite OR Solid Surface	1
Level 2 - Package Electric (from E1)	Frigidaire SS 24' Dishwasher*** Frigidaire SS 1.6 Cu. Ft. Micro Frigidaire SS 30' Elec Range	1
Mud Room Trim without Bench Seat	Bead board with crown and hooks. No bench seat.	1
Nickel Interior Finish Color Package	NOTE: If Laminate Kitchen top, Upgrade Kit Faucet or it remains Chrome. Includes SS kitchen faucet, brushed nickel bath faucets & fixtures & door hardware (hinges, bumps, knobs/levers, deadbolts), Pkg1(bn) light fixtures, pewter oval mirror. Separate options also affected: shower door, bath hardware (towel bar/ring, tp holder), shower grab bar, cabinet hardware	1
Open Rail 1st Floor - Iron		1
Optional Covered Patio-Regular-Fiber (3)	Optional Covered Patio-Regular-Fiber Cement Siding. Actual dimensions can vary per plan. Site Condition Exclusions may apply. ***Starting from 3x3 concrete pad	1
Owner Bath Marble 1 Double ilo LamSgl	***Includes Vanity Double Bowl Option Do Not Select Both***	1
Paint Interior Ceiling White		1
Paint Wall/Ceiling Color Upgrade	Upgrade Interior Paint Color on Walls and Ceilings for the whole house in lieu of base color	1
Pendant Lights per Plan	Pendant Lights above Island/Bar Top per plan electrical diagram. To match lighting package selected. NOTE: Choose this option only once.	1
PreWire for Ceiling Fan	Pre-wire a light location for a future ceiling fan.	1
Raise Single SecondaryVanity 32.5"to 35"	Raise a Single Secondary Bath Vanity from 32.5" to 35" NOTE: Per Vanity Cabinet. Note which bath(s) on plan exhibit. NOTE: If you have selected any Double Bowl upgrade for Hall Bath, DO NOT USE this option for that location.	1
Screen Per Optional 3050 Window	Note: If the optional window is a 3050 twin, it needs two screens.	1
Screens Base House Single Family	Add window screens to all operable standard windows on single family home. NOTE: Does not include screens for windows for optional-2nd-floors, side entry garage, or windows added or changed from structural options, optional windows, or basement windows. See additional options to complete screens.	1
SS 25.5 cu.ft. Std Depth Side-by-Side	25.5 Cu. Ft. Standard-Depth Side-by-Side Refrigerator Multi-Level LED Lighting; PureSource 3® Ice & Water Filtration; 2 Fixed Flat Glass Shelves; 2 Store-More™ Adjustable Gallon Door Bins; Automatic Ice Maker; Energy Saver Plus Technology	1
Stone 18 A ExtCollPkg(f)		1
Tile - Kit Backsplash LVL 3 Brick Lay		1

Lot Definition

Top Load Washer/Dryer	White Top Load Washer and matching Dryer. See current Appliance Sales Sheet for details.	1
Tray Ceiling - Owner's Bedroom		1
Window in Hallway	Optional Window in Hallway. Does not include Blind or screen.	1

Activity	Description	Selection Description
Ceramic Tile Set-Kitchen	TILEKitBackasplash-3rdUpgr ALL	Baker StBev 4 x12 100 White/BrtWht00010
Del&Install AppliancePkg	Appliance Package Select - All	Appliance Package Selected
Deliver & Install Blinds	Blind Color	White
Install Cabinets Complet	Cab Hrdwr Type/(2/3)ALL	Pulls
Install Cabinets Complet	Cabinet Finish - Upgrade 2Aris	2nd-Upg Ellis Purestyle-Stone Gray
Install Cabinets Complet	Secondary Bath Vanity Tops-All	4924-38 White Carrara
Install Carpet	Carpet - Standard ALL	Smith Grove III Soft Taupe 501
Install Floorte Pro (LP)	Floorte Pro 1stlUpgr ALL	Simonton Plus - 717 Tattered Barnboard
Install Granite Tops	RDU Granite CounterKitchenLvl1	Daltile-New Caledonia
Install Granite Tops	Rectangular SS sink LVL 1	50/50 Double Bowl Slink
Install Marble Tops	RDU Marble Vanity Top Lvl 1	Matte-#190 White w/Parchment w/oval bowl
Paint Interior Complete	Interior Paint (Trim)-Ceiling	SW 7006 Extra White
Paint Interior Complete	Interior Paint (Walls) - Upgrd	SW 7029 Agreeable Gray
PM Install Vinyl Floor	VinylPkg-Option Baths	Winchester Bay Vitality 5147
PM Install Vinyl Floor	VinylPkg-Owner Bath	Winchester Bay Vitality 5147
PM Install Vinyl Floor	VinylPkg-Std 2nd Baths/Laundry	Winchester Bay Vitality 5147
Stain Handrails	Hand Rail Stain - All	MW-Sawyer [LVP:717 Tattered Barnboard]

CANE MILL ESTATES
LOT 30

BY
REVISION
DATE

SMITH DOUGLAS HOMES
QUALITY | INTEGRITY | VALUE

DETAILS
LOT DEFINITION
BUFFINGTON

SMITH DOUGLAS HOMES
110 VILLAGE TRAIL
SUITE 115
WOODSTOCK, GA 30188
www.smithdouglas.com

BY: SL
CH: AW
DATE: 8/16/2021
FACADE OPT: B
PLAN ID:
FND: ALL
ELEV: B
PAGE NO: A9.1

DESIGN SPECIFICATIONS:

Construction Type: Commerical ☐ Residential ☒

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

Design Loads:

1. Roof
   - 1.1 Live..... 20 PSF
   - 1.2 Dead..... 10 PSF
   - 1.3 Snow..... 15 PSF
     - 1.3.1 Importance Factor..... 1.0
2. Floor Live Loads
   - 2.1 Typ. Dwelling..... 40 PSF
   - 2.2 Sleeping Areas..... 30 PSF
   - 2.3 Balconies (exterior) and Decks..... 40 PSF
   - 2.4 Garage Parking..... 50 PSF
3. Floor Dead Loads
   - 3.1 Conventional 2x_..... 10 PSF
   - 3.2 I-Joist..... 15 PSF
   - 3.3 Floor Truss..... 15 PSF
4. Ultimate Wind Speed (3 sec. gust)..... 130 MPH
   - 4.1 Exposure..... B
   - 4.2 Importance Factor..... 1.0
   - 4.3 Wind Base Shear
     - 4.3.1 Vx =
     - 4.3.2 Vy =
5. Component and Cladding (in PSF)

MEAN ROOF HT.	UP TO 30'	30'1"-35'	35'1"-40'	40'1"-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
   - 6.1 Site Class.....D
   - 6.2 Design Category.....C
   - 6.3 Importance Factor.....1.0
   - 6.4 Seismic Use Group.....1
   - 6.5 Spectral Response Acceleration
     - 6.5.1 Sms = %g
     - 6.5.2 Sm1 = %g
   - 6.6 Seismic Base Shear
     - 6.6.1 Vx =
     - 6.6.2 Vy =
   - 6.7 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
   - 6.8 Arch/Mech Components Anchored?.....No
   - 6.9 Lateral Design Control: Seismic ☐ Wind ☒
7. Assumed Soil Bearing Capacity.....2000psf

SUMMIT
ENGINEERING LABORATORY TESTING

STRUCTURAL PLANS PREPARED FOR:

BUFFINGTON

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 engineering 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	OC	On Center
ACI	American Concrete Institute	PCF	Pounds per Cubic Foot
ASCE	American Society of Civil Engineers	PCI	Pounds per Cubic Inch
AFA	American Fiberboard Association	PSF	Pounds per Square Foot
AFF	Above Finished Floor	PSI	Pounds per Square Inch
AISC	American Institute for Steel Construction	PT	Pressure Treated
APA	American Plywood Association	SC	Stud Column
AWS	American Welding Society	SER	Structural Engineer of Record
CJ	Ceiling Joist	SJ	Single Joist
CLR	Clear	SPF	Spruce Pine Fir
DBL	Double	SST	Simpson Strong Tie
DJ	Double Joist	ST	Single Truss
DSP	Double Stud Pocket	STD	Standard
EA	Each	TJ	Triple Joist
EE	Each End	TOF	Top of Footing
EOS	Edge of Slab	TSP	Triple Stud Pocket
EW	Each Way	TYP	Typical
HDG	Hot Dipped Galvanized	UNO	Unless Noted Otherwise
NDS	Nation Design Spec. for Wood	WWF	Welded Wire Fabric
NTS	Not to Scale		

SHEET LIST:

REVISION LIST:

Revision No.	Date	Project No.	Description
1	1/29/19	3832.202	Revised per 2018 NCRC
2	2/13/19	3832.202R	Revised kitchen/family beam
3	6.29.21		Added LBI Bracing Option

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR.
6/30/21

STRUCTURAL MEMBERS ONLY

SUMMIT
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NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc. No. F-1454

PROJECT Buffington
Coversheet
CLIENT Smith Douglas Homes – Raleigh
2520 Reliance Ave.
Apex, NC 27539

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
CS1

GENERAL STRUCTURAL NOTES:

1. 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.
2. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
3. 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.
4. 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.
5. 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.
6. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
7. This structure and all construction shall conform to all applicable sections of the international residential code.
8. 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:

1. 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)
2. 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
3. Maximum depth of unbalanced fill against masonry walls to be as specified in section R404.1 of the 2018 NCRC
4. 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.
5. 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.
6. 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.
7. 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.
8. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.
9. 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
10. Crawl spaced to be graded level and clear of all debris
11. Provide foundation waterproofing and drain with positive slope to outlet as required by site conditions
12. Energy efficiency compliance and insulation of the structure to be in accordance with chapter 11 of the 2018 NCRC

CONCRETE:

1. 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.
2. 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".
3. 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:
   3.1. Footings: 5%
   3.2. Exterior Slabs: 5%
4. No admixtures shall be added to any structural concrete without written permission of the SER
5. Concrete slabs-on-grade shall be constructed in accordance with ACI 302.1R-96: "Guide for Concrete Slab and Slab Construction".
6. 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.
7. 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.
8. Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished
9. Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint.
10. 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:

1. 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.
2. Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
3. Application of fibermesh per cubic yard of concrete shall equal a minimum of 0.1% by volume (1.5 pounds per cubic yard)
4. Fibermesh shall comply with ASTM C1116, any local building code requirements, and shall meet or exceed the current industry standard.
5. Steel Reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
6. 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"
7. 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.
8. 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.
9. 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.
10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

WOOD FRAMING:

1. 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.
2. LVL or PSL engineered wood shall have the following minimum design values:
   2.1. E = 1,900,000 psi
   2.2. Fb = 2600 psi
   2.3. Fv = 285 psi
   2.4. Fc = 700 psi
3. 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
4. Nails shall be common wire nails unless otherwise noted.
5. Lag screws shall conform to ANSI/ASME standard B18.2.1-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
6. All beams shall have full bearing on supporting framing members unless otherwise noted.
7. 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.
8. 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.
9. Multi-ply beams shall have each ply attached wth (3)10d nails @ 24" O.C.
10. 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:

1. 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.
2. 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.
3. 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."
4. 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.
5. 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:

1. 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.
2. All structurally required wood sheathing shall bear the mark of the APA.
3. 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.
4. 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.
5. 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.
6. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

STRUCTURAL FIBERBOARD PANELS:

1. Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
2. 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.
3. Sheathing shall have a 1/8" gap at panel ends and edges are recommended in accordance with the AFA.

EXTERIOR WOOD FRAMED DECKS:

1. 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:

1. 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.
2. All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
3. Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D1.1. Electrodes for shopt and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR. 6/30/21

STRUCTURAL MEMBERS ONLY

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FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc.
No. F-1454

PROJECT
Buffington

Coversheet

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

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
CS2

FOUNDATION NOTES:

1. FOUNDATIONS TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 4 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
2. STRUCTURAL CONCRETE TO BE F'_c = 3000 PSI, PREPARED AND PLACED IN ACCORDANCE WITH ACI STANDARD 318.
3. 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.
4. 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.
5. FOOTINGS AND PIERS SHALL BE CENTERED UNDER THEIR RESPECTIVE ELEMENTS. PROVIDE 2" MINIMUM FOOTING PROJECTION FROM THE FACE OF MASONRY.
6. MAXIMUM DEPTH OF UNBALANCED FILL AGAINST MASONRY WALLS TO BE AS SPECIFIED IN SECTION R404.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
7. PILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
8. PROVIDE FOUNDATION WATERPROOFING, AND DRAIN WITH POSITIVE SLOPE TO OUTLET AS REQUIRED BY SITE CONDITIONS.
9. PROVIDED PERIMETER INSULATION FOR ALL FOUNDATIONS PER 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE.
10. CORBEL FOUNDATION WALL AS REQUIRED TO ACCOMMODATE BRICK VENEERS.
11. CRAWL SPACE TO BE GRADED LEVEL, AND CLEARED OF ALL DEBRIS.
12. 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 7" 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.
13. 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

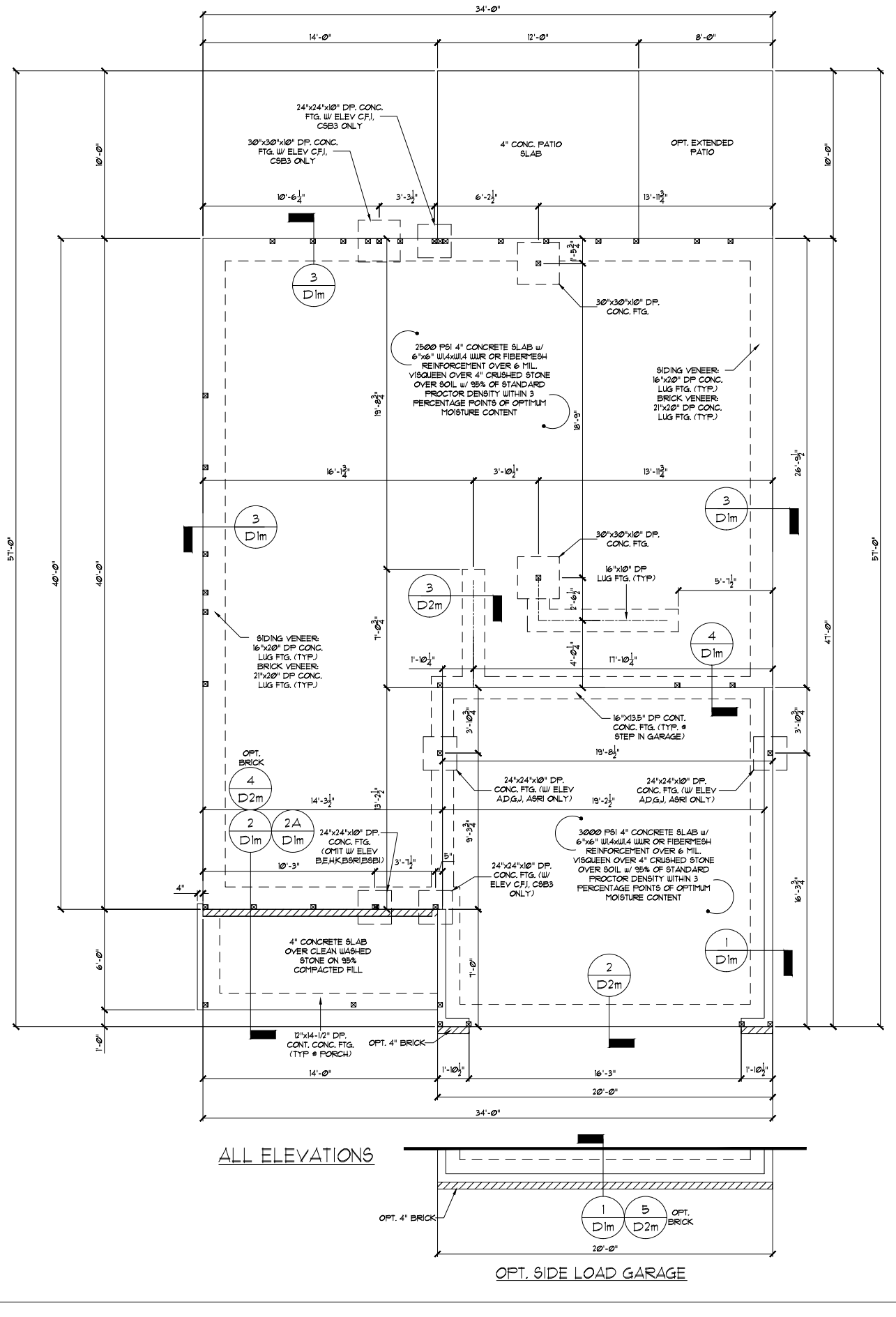
14. ALL PIERS TO BE 16"x16" MASONRY AND ALL PILASTERS TO BE 8"x16" MASONRY, TYPICAL. (UNO)
15. WALL FOOTINGS TO BE CONTINUOUS CONCRETE, SIZES PER STRUCTURAL PLAN.
16. A FOUNDATION EXCAVATION OBSERVATION SHOULD BE CONDUCTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER, OR HIS QUALIFIED REPRESENTATIVE. IF ISOLATED 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.
17. 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 HOLDOWNS. ADDITIONAL INFO. PER SECTION R602.10.4 AND FIGURE R602.10.3.4(1) OF THE 2018 NCRC.

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

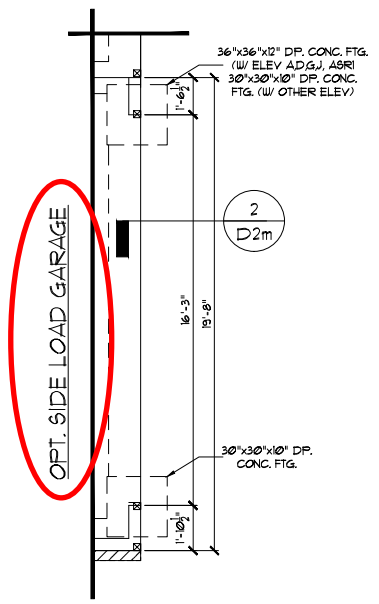
THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES COMPLETED/REVISED ON 6/1/21. IT IS THE RESPONSIBILITY OF THE CLIENT TO NOTIFY SUMMIT ENGINEERING, LABORATORY & TESTING, P.C. IF ANY CHANGES ARE MADE TO THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. SUMMIT 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 R405.1



ALL ELEVATIONS

OPT. SIDE LOAD GARAGE



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'

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR.
6/30/21

STRUCTURAL MEMBERS ONLY

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No. F-1454

PROJECT
Buffington
Monolithic Slab Fnd.

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

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

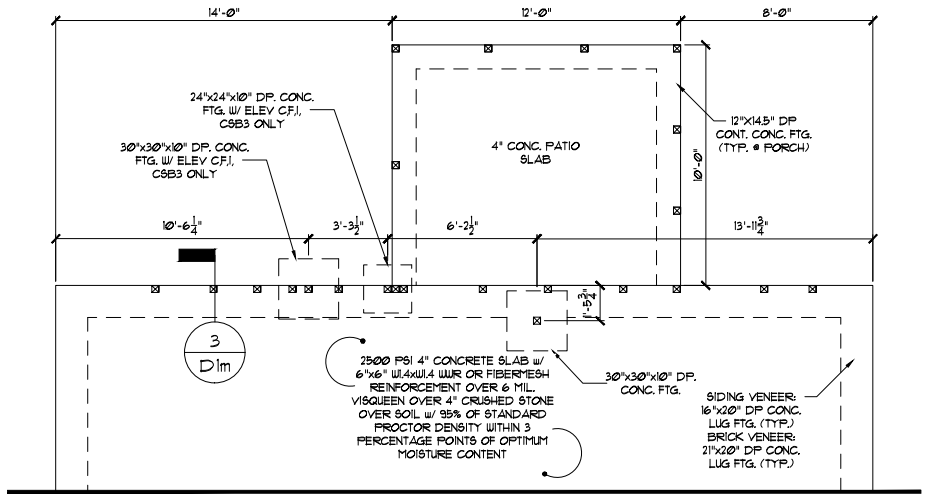
ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

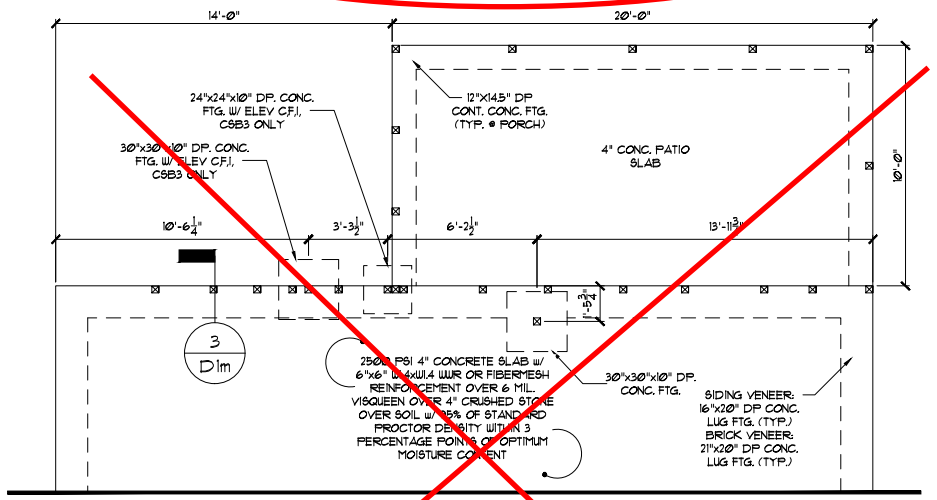
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S1.0m

SEE SHEET S1.Ømm FOR NOTES AND MORE INFORMATION



OPT. SCREENED/COVERED PORCH



OPT. EXTENDED SCREENED/COVERED PORCH

STRUCTURAL MEMBERS ONLY

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

MONOLITHIC SLAB FOUNDATION

SCALE: 1/8"=1'

Cane Mill
Lot 30

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SHEET
S1.1m

GENERAL STRUCTURAL NOTES:

1. CONSTRUCTION SHALL CONFORM TO 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS.
2. 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.
3. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY BRACING REQUIRED TO RESIST ALL FORCES ENCOUNTERED DURING ERECTION.
4. PROPERTIES USED IN THE DESIGN ARE AS FOLLOWS:
   MICRO=LAM (LVL): F_b = 2600 PSI, F_v = 285 PSI, E = $1.9x10^6$ PSI
   PARALLAM (PSL): F_b = 2900 PSI, F_v = 290 PSI, E = $1.25x10^6$ PSI
5. ALL WOOD MEMBERS SHALL BE #2 SYP UNLESS NOTED ON PLAN. ALL STUD COLUMNS AND JOISTS SHALL BE #2 SYP (UNO).
6. ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SYP STUD COLUMN AT EACH END UNLESS NOTED OTHERWISE.
7. ALL REINFORCING STEEL SHALL BE GRADE 60 BARS CONFORMING TO ASTM A615 AND SHALL HAVE A MINIMUM COVER OF 3".
8. 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 7" 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.
9. CONTRACTOR TO PROVIDED LOOKOUTS WHEN CEILING JOISTS SPAN PERPENDICULAR TO RAFTERS.
10. FLITCH BEAMS, 4-PLY LVLS AND 3-PLY SIDE LOADED LVLS SHALL BE BOLTED TOGETHER WITH 1/2" DIA THRU BOLTS SPACED AT 24" O.C. (MAX/ STAGGERED OR EQUIVALENT CONNECTIONS PER DETAIL 1/D3f. MIN. EDGE DISTANCE SHALL BE 2" AND (2) BOLTS SHALL BE LOCATED MINIMUM 6" FROM EACH END OF THE BEAM.
11. ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 2x4 STYP #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 STYP #2, DROPPED. (UNLESS NOTED OTHERWISE)
12. 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

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.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES COMPLETED/REVISED ON 9/1/21. 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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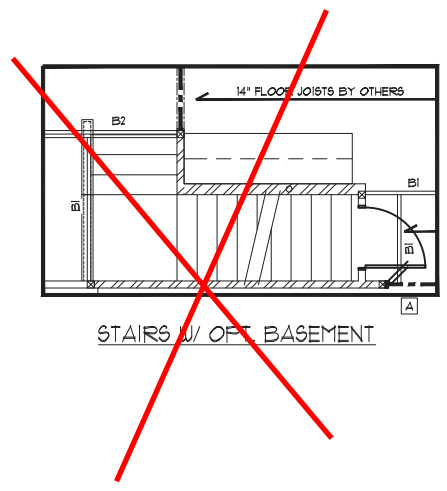
STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

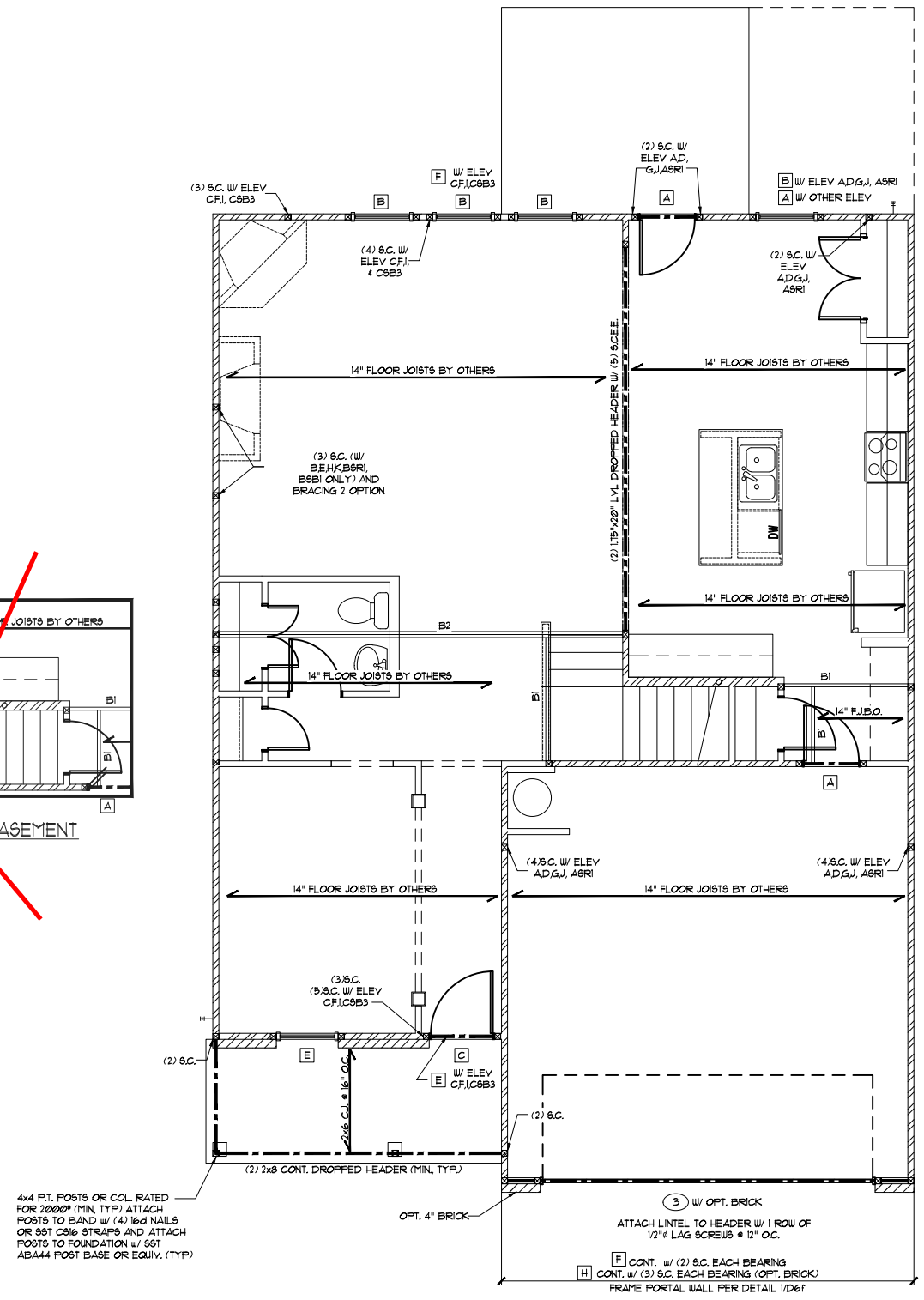
FIRST FLOOR FRAMING PLAN

SCALE: 1/8"=1'

STUD COLUMN (S.C.) CALLOUTS ON PLAN OVERRIDE JACK STUD COUNT SHOWN IN BEAM/HEADER SCHEDULE. KING STUDS TO BE INSTALLED PER APPLICABLE BUILDING CODE.



STAIRS W/ OPT. BASEMENT



ALL ELEVATIONS

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	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.

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)

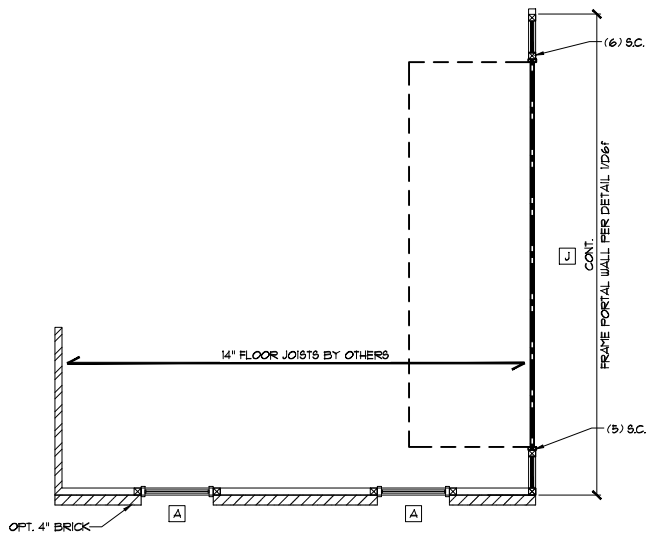
WALL STUD SCHEDULE

1ST & 2ND FLOOR LOAD BEARING STUDS:
2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C.
1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC:
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C.
BASEMENT LOAD BEARING STUDS:
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C.
NON-LOAD BEARING STUDS (ALL FLOORS):
2x4 STUDS @ 24" O.C.
TWO STORY WALLS:
2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY

KING STUD REQUIREMENTS

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

KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS



OPT. SIDE ENTRY GARAGE

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK JR.
10/3/2021

STRUCTURAL MEMBERS ONLY

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NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc. No. F-1454

PROJECT
Buffington
First Floor Framing
CLIENT
Smith Douglas Homes – Raleigh
2520 Reliance Ave.
Apex, NC 27539

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

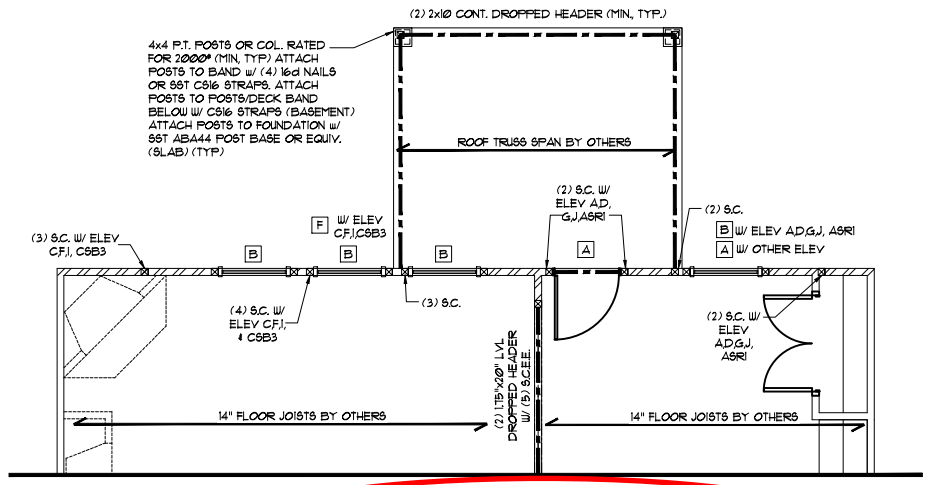
ORIGINAL DRAWING
DATE 12/11/15 PROJECT# 3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

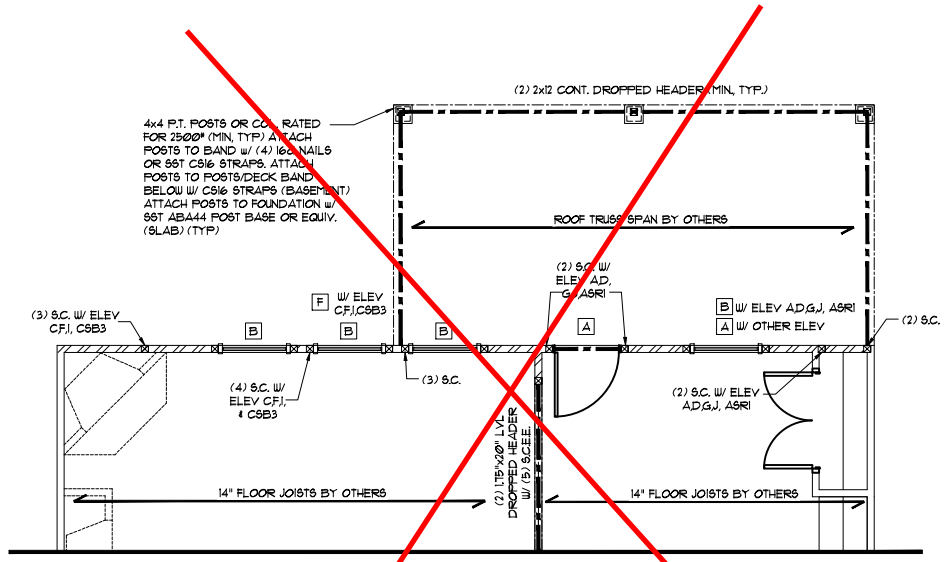
SHEET
S3.0

STUD COLUMN (S.C.) CALLOUTS ON PLAN OVERRIDE JACK STUD COUNT SHOWN IN BEAM/HEADER SCHEDULE. KING STUDS TO BE INSTALLED PER APPLICABLE BUILDING CODE.

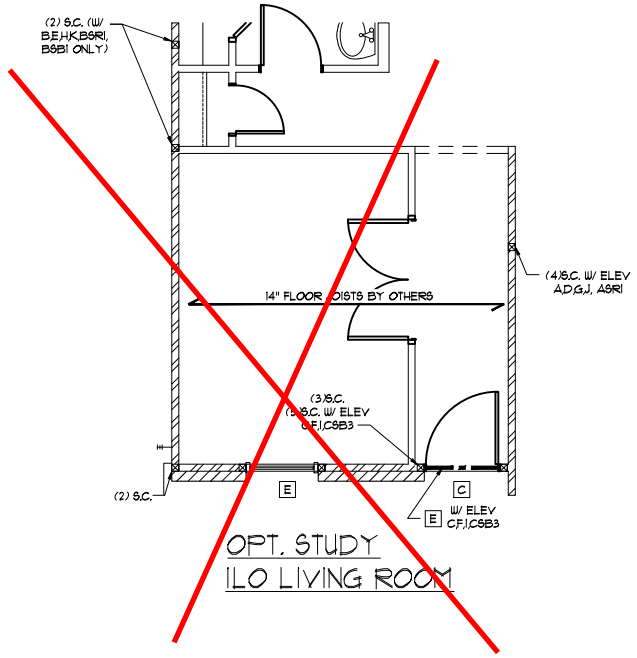
SEE SHEET S3.0 FOR NOTES AND MORE INFORMATION



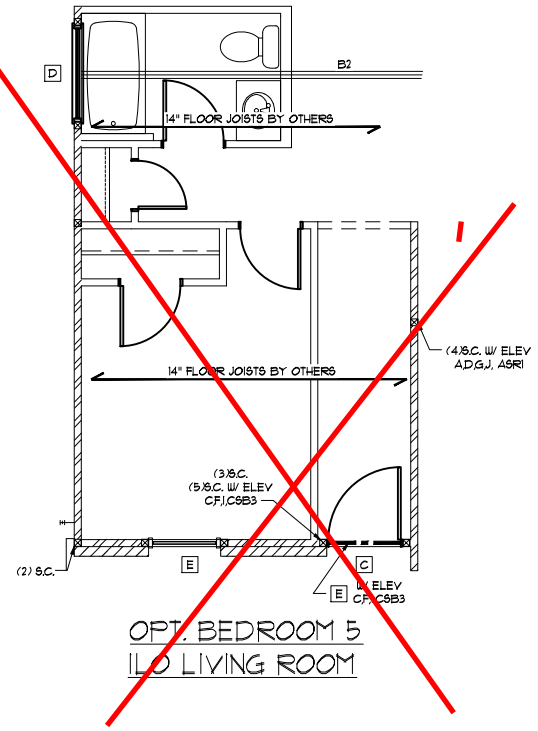
OPT. COVERED/SCREENED PORCH



OPT. EXTENDED COVERED/SCREENED PORCH



OPT. STUDY
ILO LIVING ROOM



OPT. BEDROOM 5
ILO LIVING ROOM

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR FRAMING PLAN

SCALE: 1/8"=1'

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR.
6/30/21
STRUCTURAL MEMBERS ONLY

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NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc.
No. F-1454

PROJECT
Buffington
First Floor Framing
CLIENT
Smith Douglas Homes – Raleigh
2520 Reliance Ave.
Apex, NC 27539

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S3.1

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)
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LINTEL SCHEDULE

TAG	SIZE	OPENING SIZE
1	L3x3x1/4"	LESS THAN 6'-0"
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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 STUDS:
2x4 STUDS @ 16" O.C. OR 2x6 STUDS @ 24" O.C.
1ST FLOOR LOAD BEARING STUDS w/ WALK-UP ATTIC:
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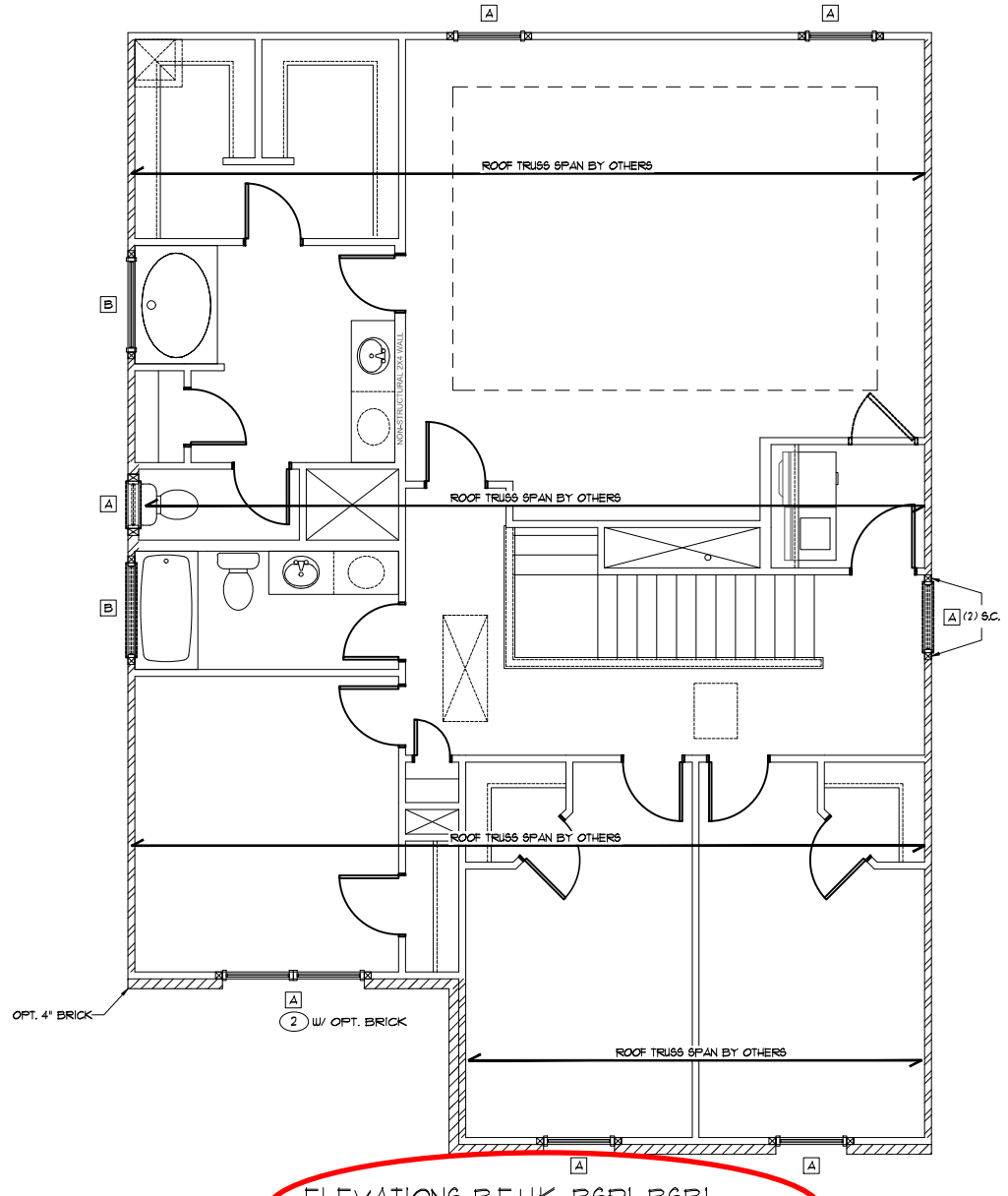
KING STUD REQUIREMENTS

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

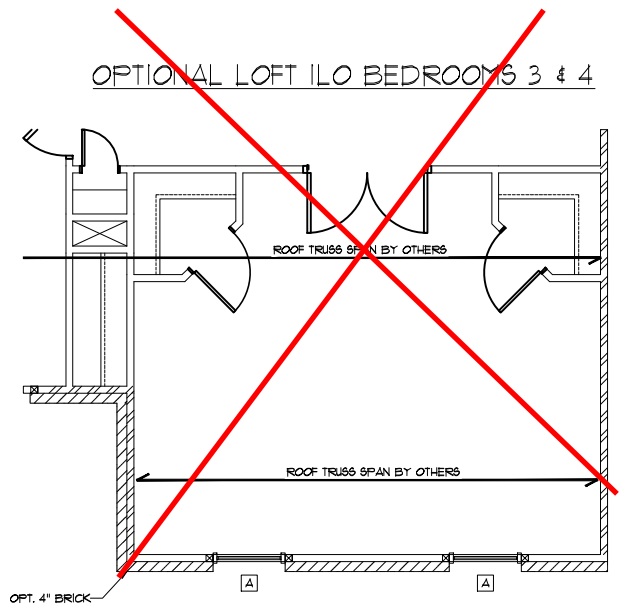
KING STUD REQUIREMENTS ABOVE DO NOT APPLY TO PORTAL FRAMED OPENINGS

STUD COLUMN (S.C.) CALLOUTS ON PLAN OVERRIDE JACK STUD COUNT SHOWN IN BEAM/HEADER SCHEDULE. KING STUDS TO BE INSTALLED PER APPLICABLE BUILDING CODE.



ELEVATIONS B,E,H,K, BSR1, BSB1

OPTIONAL LOFT ILO BEDROOMS 3 & 4



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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

SECOND FLOOR FRAMING PLAN

SCALE: 1/8"=1'

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR.
9/30/21

STRUCTURAL MEMBERS ONLY

SUMMIT
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NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc.
No. F-1454

PROJECT
Buffington

Second Floor Framing Plan

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

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S4.1

TRUSS UPLIFT CONNECTOR SCHEDULE

MODEL *	MAX. UPLIFT (LBS)
H1	585
H2A	575
H2.5A	600
H6	950
H10A*	1340
H14*	1465

USE BELOW ONLY FOR 2-PLY OR GREATER GIRDER TRUSSES THAT EXCEED THE UPLIFT REQUIREMENTS ABOVE.

MODEL *	MAX. UPLIFT (LBS)	PLY *
LGT2*	2050	2
LGT3-SDS2.5*	3685	3
LGT4-SDS3*	4060	4
HGT-2*	10380	2
HGT-3*	10530	3
HGT-4*	9250	4

1. ALL PRODUCTS LISTED ARE SIMPSON STRONG-TIE. EQUIV. PRODUCTS MAY BE USED PER MANUF. SPECIFICATIONS. 2. VALUES LISTED ARE FOR A SINGLE ANCHOR. DOUBLE ANCHORS MAY BE USED TO DOUBLE THE UPLIFT CAPACITIES SHOWN ABOVE, PROVIDED A MINIMUM 2-1/2" MEMBER THICKNESS. ITEMS DENOTED WITH "*" MAY NOT BE DOUBLED TO INCREASE LOAD CAPACITY. 3. UPLIFT VALUES SHOWN ABOVE ARE FOR SYP #2 GRADE OR BETTER MEMBERS. PLEASE CONTACT EOR OR TRUSS MANUF. IF SPECIES OR GRADE VARIES. 4. TRUSS TO TRUSS CONNECTIONS ARE TO BE SPECIFIED AND SUPPLIED BY THE TRUSS MANUF. THE EOR IS NOT RESPONSIBLE FOR THESE CONNECTIONS.

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)

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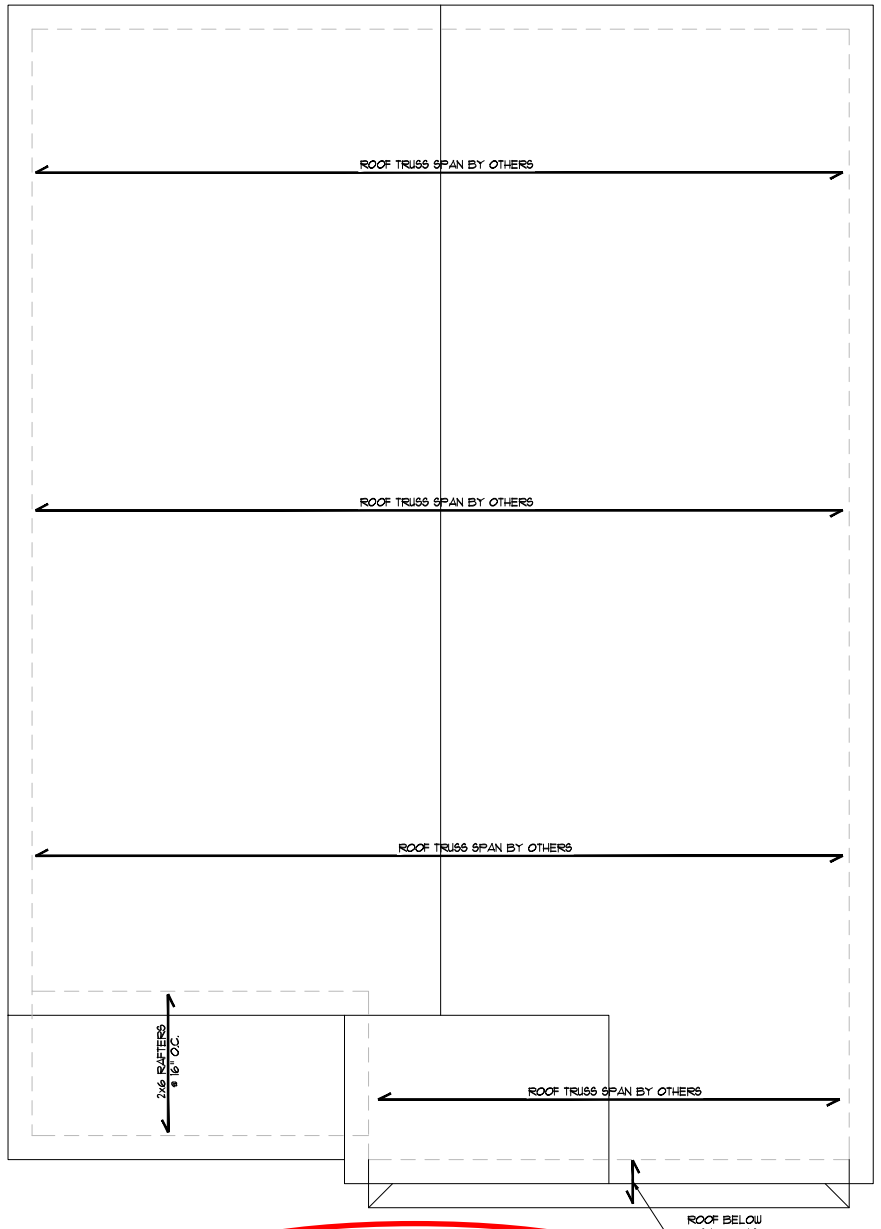
REFER TO TRUSS LAYOUT PER MANUFACTURER FOR UPLIFT CONNECTIONS FROM TRUSS TO TOP PLATE (TYP, UNO)

NOTE: TRUSS UPLIFT LOADS SHALL BE DETERMINED PER TRUSS MANUFACTURER IN ACCORDANCE WITH SECTION R802.11.1. 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.



ELEVATIONS B,E,H,K, BSR1, & BSB1

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

ROOF FRAMING PLAN

SCALE: 1/8"=1'

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR. 6/30/21

STRUCTURAL MEMBERS ONLY

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3070 HAMMOND BUSINESS PLACE, SUITE 171
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WWW.SUMMIT-COMPANIES.COM

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc.
No. F-1454

PROJECT
Buffington

Roof Framing Plan

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

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

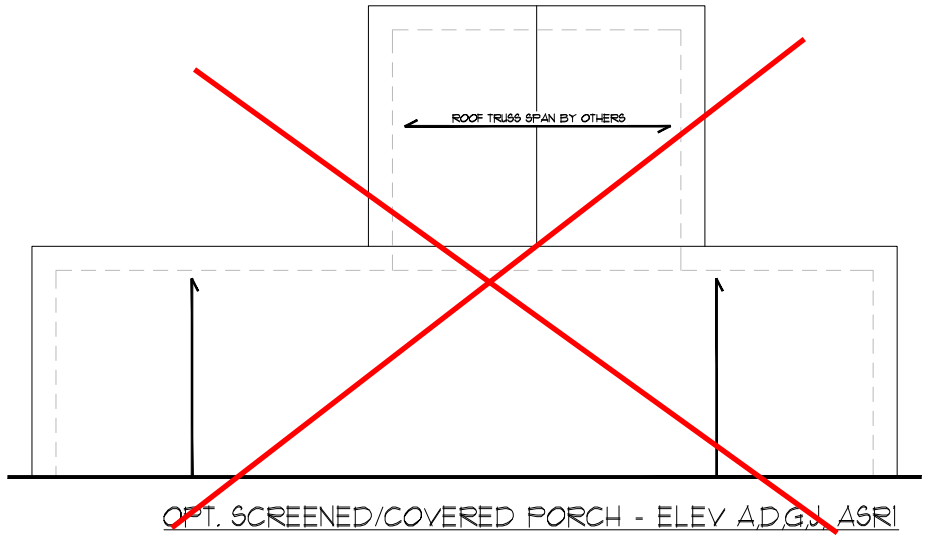
ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

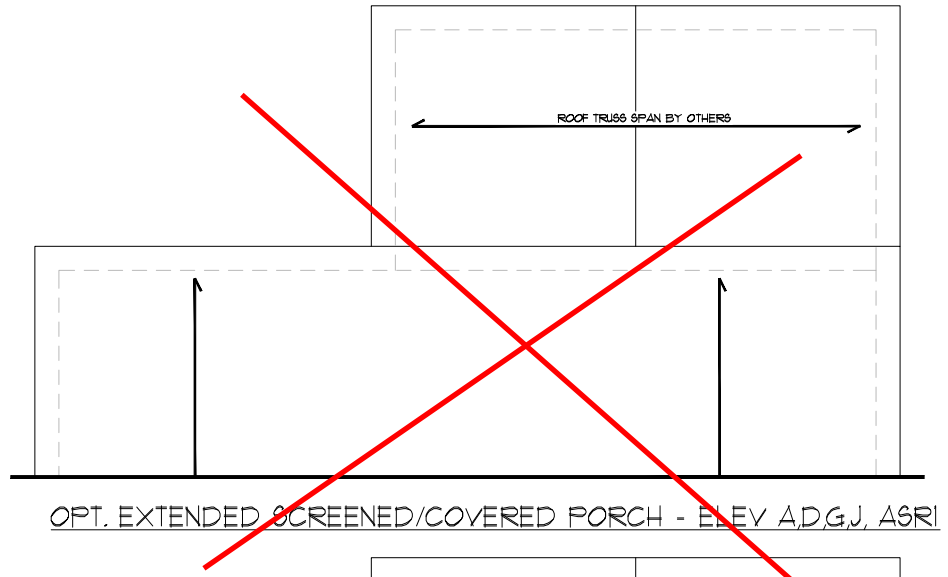
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S5.1

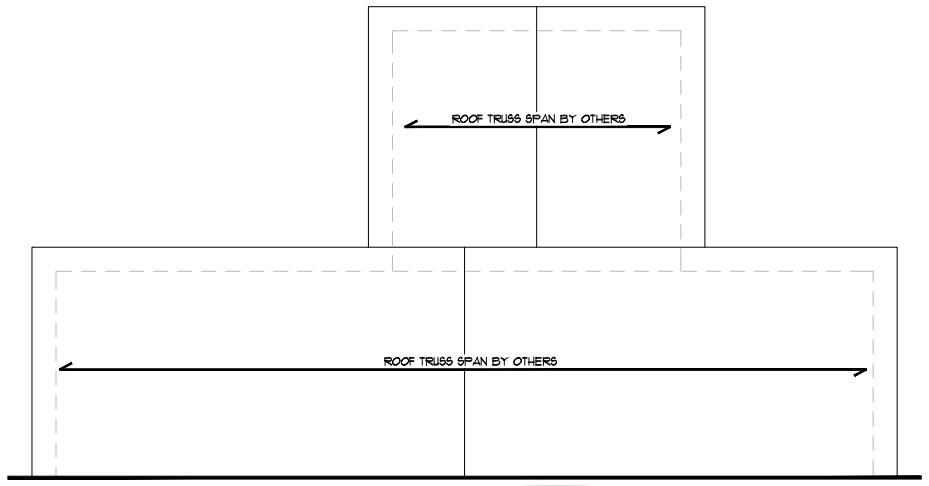
SEE SHEET S5.0 FOR NOTES AND MORE INFORMATION



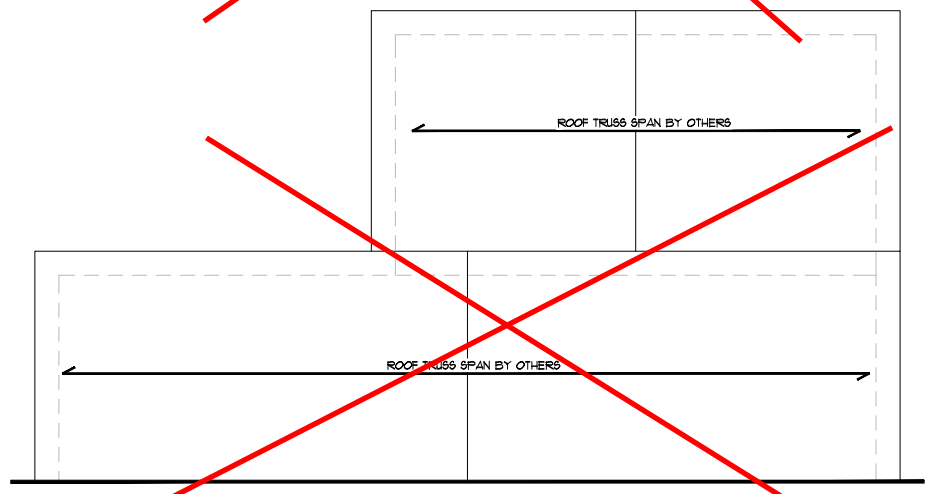
OPT. SCREENED/COVERED PORCH - ELEV A,D,G,J, ASRI



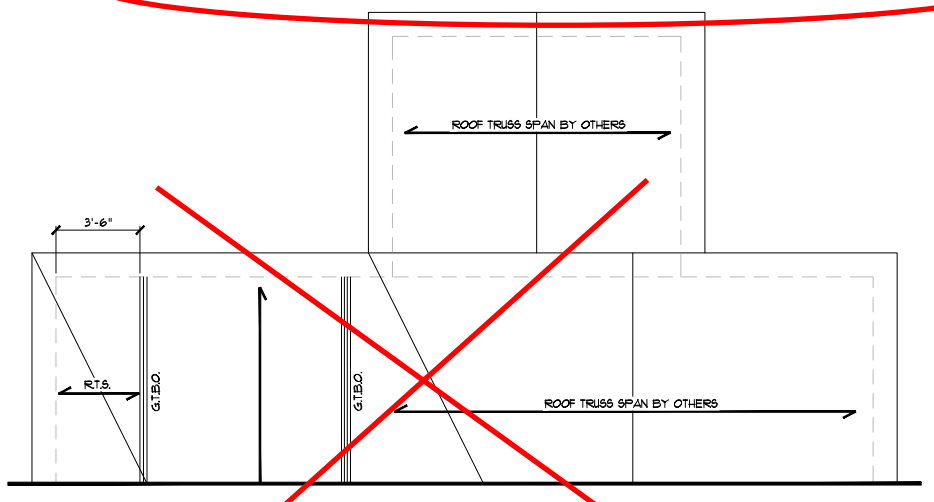
OPT. EXTENDED SCREENED/COVERED PORCH - ELEV A,D,G,J, ASRI



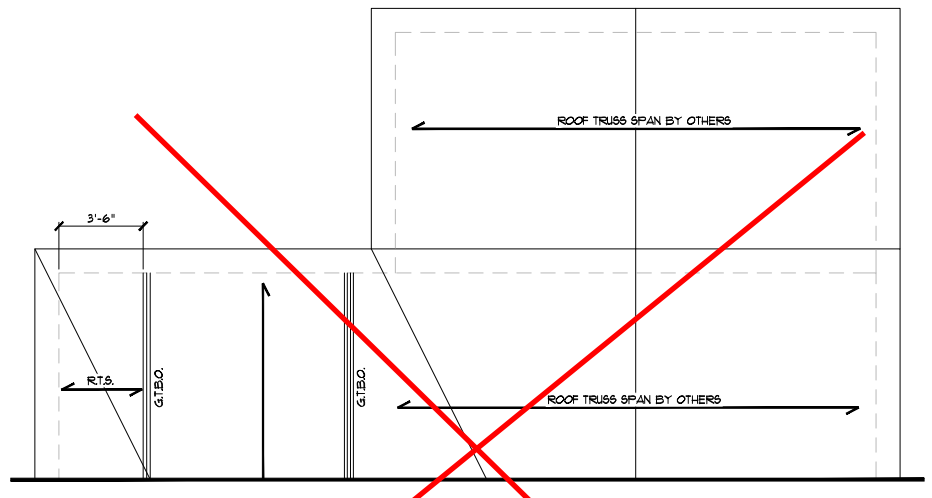
OPT. SCREENED/COVERED PORCH - ELEV B,E,H,K,BSRI,BSBI



OPT. EXTENDED SCREENED/COVERED PORCH - ELEV B,E,H,K,BSRI,BSBI



OPT. SCREENED/COVERED PORCH - ELEV C,F,I, CSB3



OPT. EXTENDED SCREENED/COVERED PORCH - ELEV C,F,I, CSB3

STRUCTURAL MEMBERS ONLY

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

ROOF FRAMING PLAN

SCALE: 1/8"=1'

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR. 6/30/21

STRUCTURAL MEMBERS ONLY

SUMMIT
ENGINEERING LABORATORY TESTING
3070 HAMMOND BUSINESS PLACE, SUITE 171
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FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc.
No. F-1454

PROJECT
Buffington
Roof Framing Plan
CLIENT
Smith Douglas Homes – Raleigh
2520 Reliance Ave.
Apex, NC 27539

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S5.3

REQUIRED BRACED WALL PANEL CONNECTIONS				
METHOD	MATERIAL	MIN. THICKNESS	REQUIRED CONNECTION @ PANEL EDGES	REQUIRED CONNECTION @ INTERMEDIATE SUPPORTS
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSUM BOARD	1/2"	5d COOLER NAILS** @ 7" O.C.	5d COOLER NAILS** @ 7" O.C.
WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
PF	WOOD STRUCTURAL PANEL	7/16"	PER FIGURE R602.10.1	PER FIGURE R602.10.1
**OR EQUIVALENT PER TABLE R1023.5				

BRACED WALL NOTES:

1. WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10 FROM THE 2018 NORTH CAROLINA RESIDENTIAL CODE.
2. WALLS ARE DESIGNED FOR SEISMIC ZONES A-C AND ULTIMATE WIND SPEEDS UP TO 130 MPH.
3. REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
4. BRACING MATERIALS, METHODS AND FASTENERS SHALL BE IN ACCORDANCE WITH TABLE R602.10.1.
5. 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.
6. MINIMUM PANEL LENGTH SHALL BE PER TABLE R602.10.1.
7. THE INTERIOR SIDE OF EXTERIOR WALLS AND BOTH SIDES OF INTERIOR WALLS SHALL BE SHEATHED CONTINUOUSLY WITH MINIMUM 1/2" GYPSUM BOARD (UNO).
8. 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.
9. FLOORS SHALL NOT BE CANTILEVERED MORE THAN 24" BEYOND THE FOUNDATION OR BEARING WALL BELOW WITHOUT ADDITIONAL ENGINEERING CALCULATIONS.
10. A BRACED WALL PANEL SHALL BE LOCATED WITHIN 12 FEET OF EACH END OF A BRACED WALL LINE.
11. THE MAXIMUM EDGE DISTANCE BETWEEN BRACED WALL PANELS SHALL NOT EXCEED 21 FEET.
12. 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.
13. BRACED WALL PANEL CONNECTIONS TO FLOOR/CEILING SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.4
14. BRACED WALL PANEL CONNECTIONS TO ROOF SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION R602.10.4.5
15. CRIPPLE WALLS AND WALK OUT BASEMENT WALLS SHALL BE DESIGNED IN ACCORDANCE WITH SECTION R602.10.4.6
16. PORTAL WALLS SHALL BE DESIGNED IN ACCORDANCE WITH FIGURE R602.10.1 (UNO)
17. ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
18. ABBREVIATIONS:

GB = GYPSUM BOARD — WSP = WOOD STRUCTURAL PANEL
CS-XXX = CONT. SHEATHED — ENG = ENGINEERED SOLUTION
PF = PORTAL FRAME — PF-ENG = ENG. PORTAL FRAME

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY SMITH DOUGLAS HOMES COMPLETED/REVISED ON 9/1/21. 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.

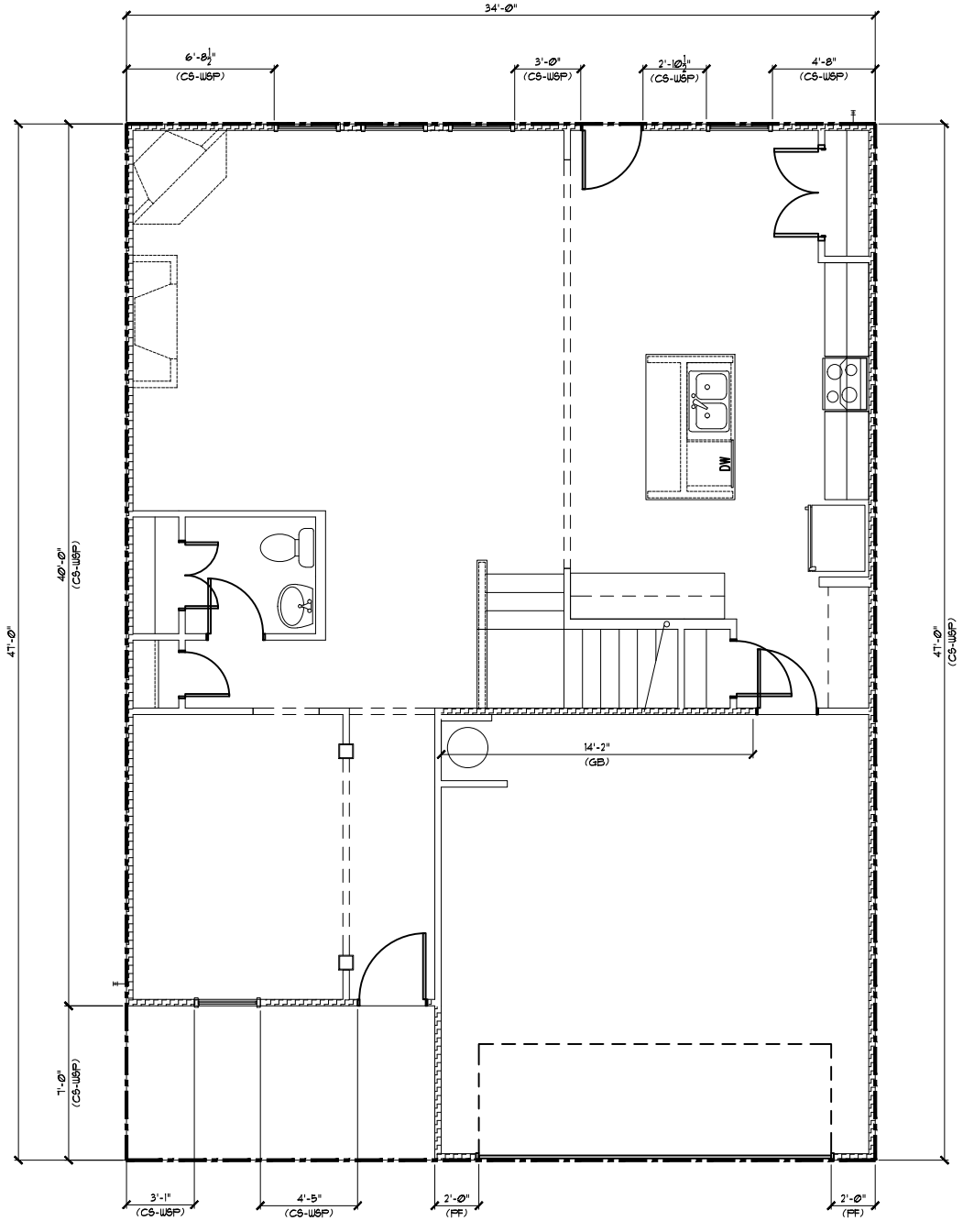
FIRST FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
FRONT SIDE	14.8	20.6
LEFT SIDE	11.1	47.0
REAR SIDE	14.8	17.2
RIGHT SIDE	11.1	47.0

FIRST FLOOR BRACING - SIDE LOAD GARAGE (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
FRONT SIDE	14.8	21.5
LEFT SIDE	11.1	47.0
REAR SIDE	14.8	17.2
RIGHT SIDE	11.1	33.0

REAR

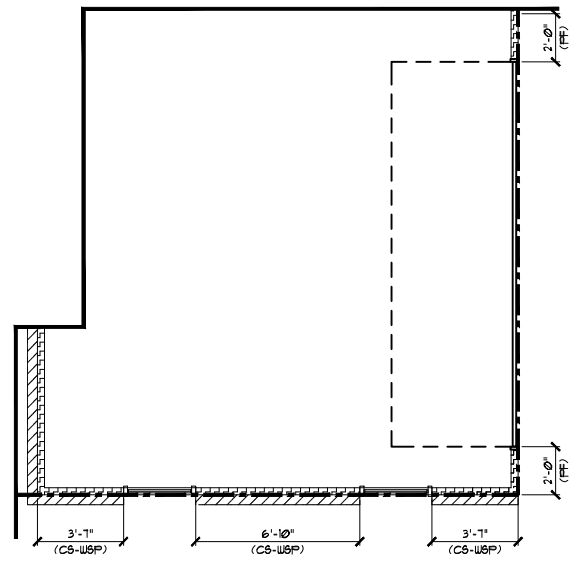
LEFT — HOUSE — RIGHT

FRONT



ALL ELEVATIONS

OPTION 1 BRACING



OPT. SIDE LOAD GARAGE

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR BRACING PLAN

SCALE: 1/8"=1'

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR.
9/30/21

STRUCTURAL MEMBERS ONLY

SUMMIT
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WWW.SUMMIT-COMPANIES.COM

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc.
No. F-1454

PROJECT
Buffington
First Floor Bracing

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

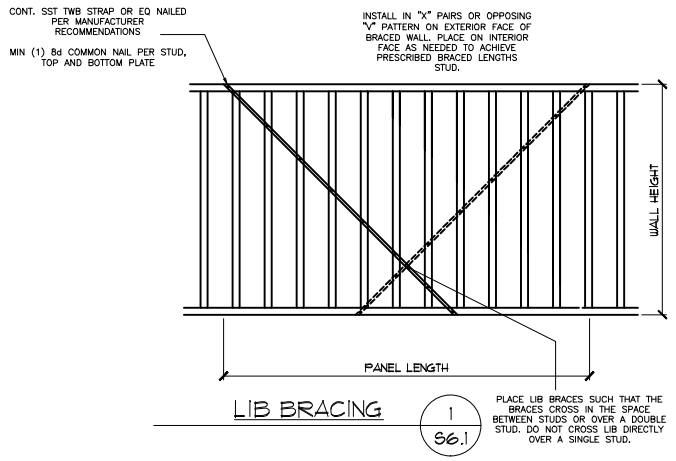
CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S7.0



LIB BRACING

1
S6.1

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FIRST FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
FRONT SIDE	14.8	20.6
LEFT SIDE	11.1	15.5
REAR SIDE	14.8	17.2
RIGHT SIDE	11.1	14.0

FIRST FLOOR BRACING - SIDE LOAD GARAGE (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
FRONT SIDE	14.8	21.5
LEFT SIDE	11.1	47.0
REAR SIDE	14.8	17.2
RIGHT SIDE	11.1	12.0

STRUCTURAL MEMBERS ONLY

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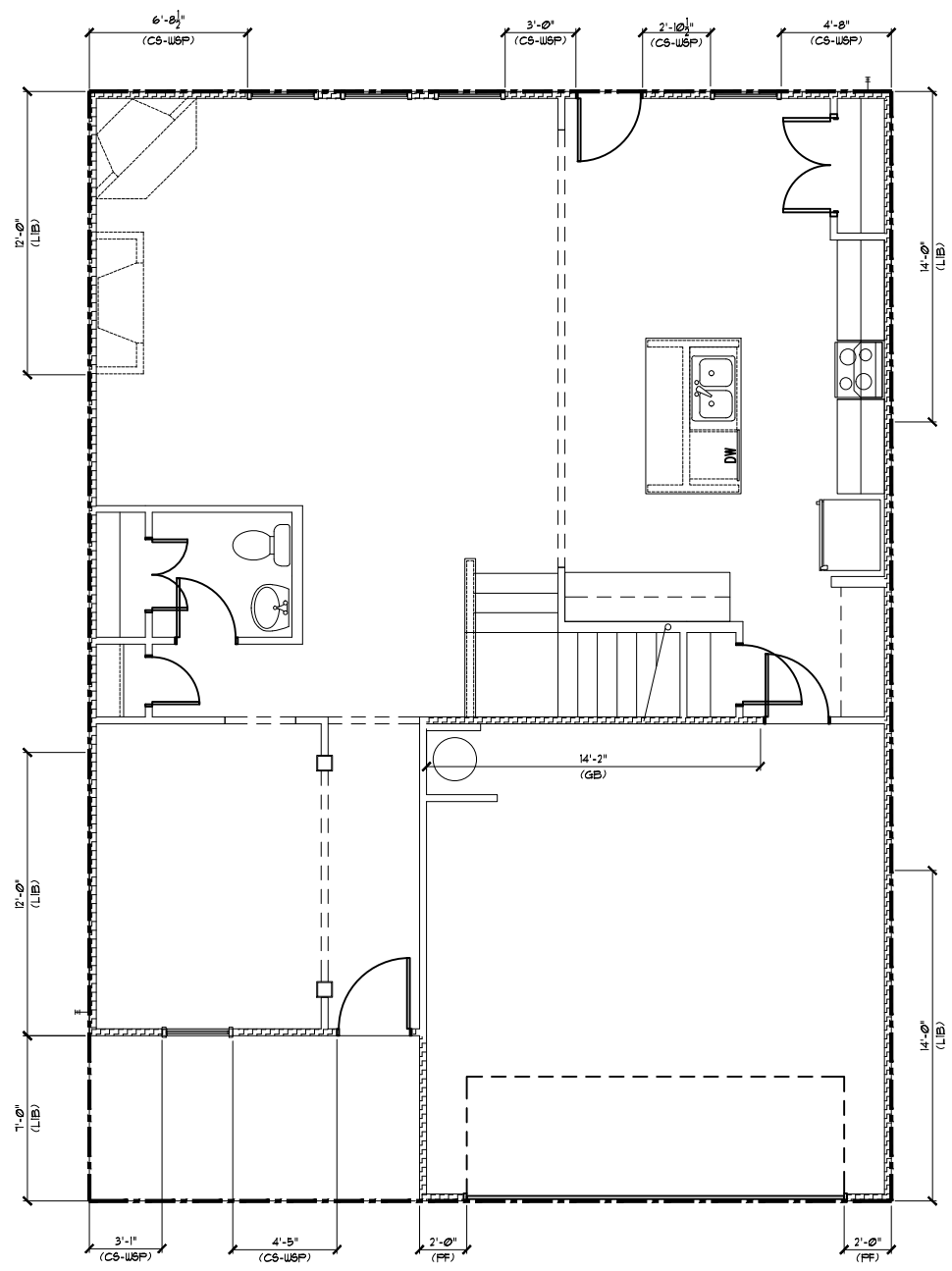
STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR BRACING PLAN

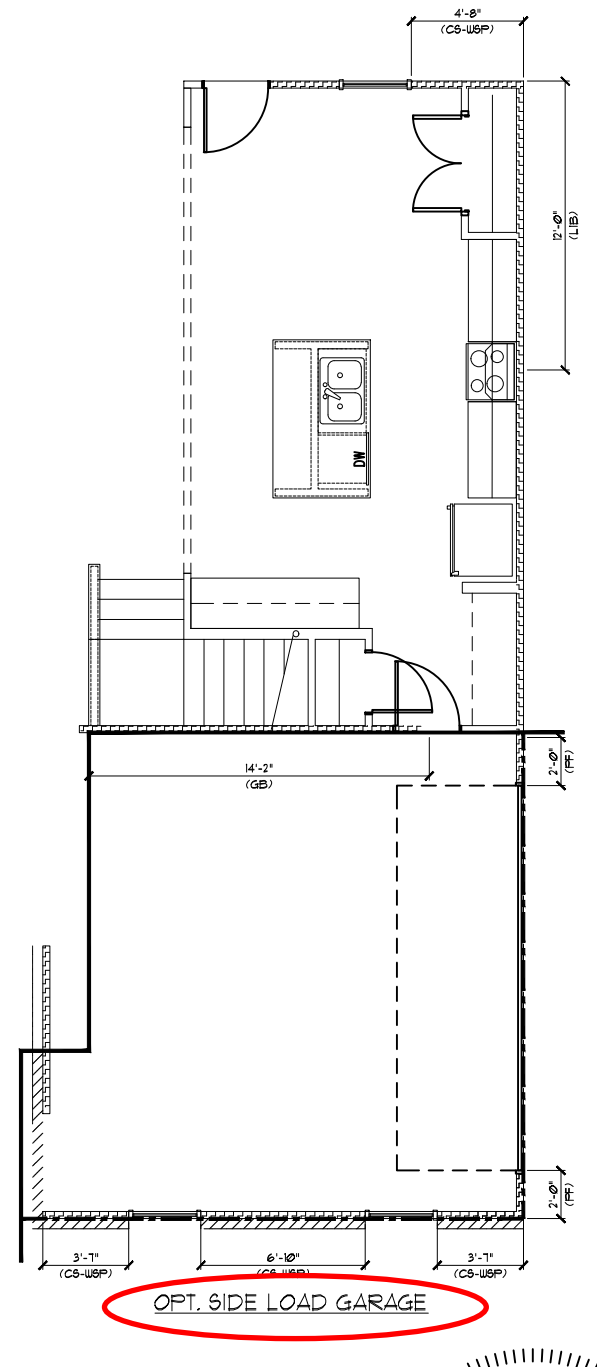
SCALE: 1/8"=1'

SEE SHEET S7.0 FOR NOTES AND MORE INFORMATION



ALL ELEVATIONS

OPTION 2 BRACING



OPT. SIDE LOAD GARAGE

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR.
6/30/21

STRUCTURAL MEMBERS ONLY

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NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc.
No. F-1454

PROJECT
Buffington

First Floor Bracing

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

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

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	REQUIRED CONNECTION @ INTERMEDIATE SUPPORTS
CS-WSP	WOOD STRUCTURAL PANEL	3/8"	6d COMMON NAILS @ 6" O.C.	6d COMMON NAILS @ 12" O.C.
GB	GYPSUM BOARD	1/2"	5d COOLER NAILS** @ 7" O.C.	5d COOLER NAILS** @ 7" O.C.
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PF	WOOD STRUCTURAL PANEL	7/16"	PER FIGURE R602.10.1	PER FIGURE R602.10.1
**OR EQUIVALENT PER TABLE R1023.5				

BRACED WALL NOTES:

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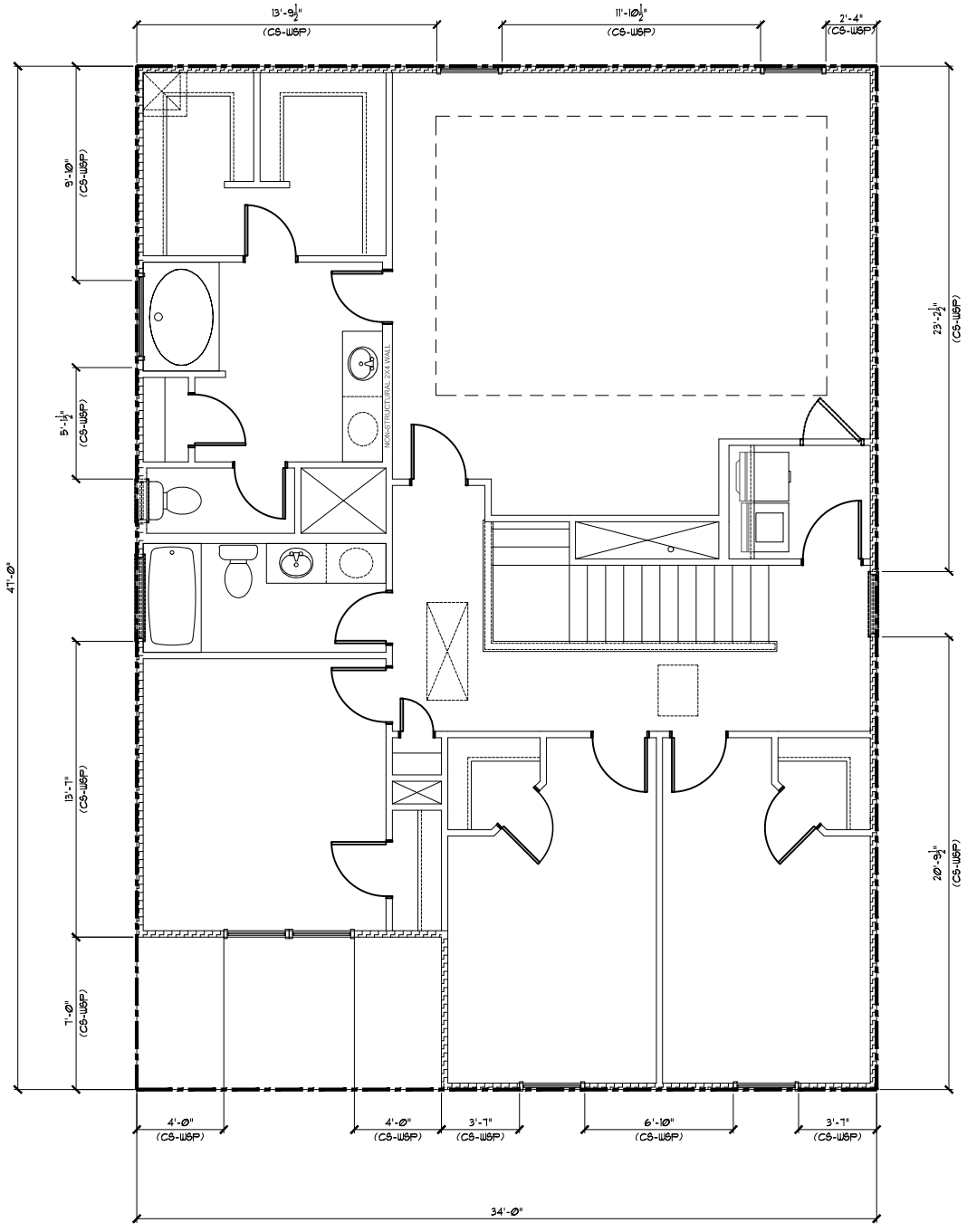
17. ON SCHEMATIC, SHADED WALLS INDICATE BRACED WALL PANELS.
18. ABBREVIATIONS:

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

REAR / LEFT / HOUSE / RIGHT / FRONT



ALL ELEVATIONS

OPTION 1 BRACING

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SECOND FLOOR BRACING (FT.)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
FRONT SIDE	6.9	22.0
LEFT SIDE	5.1	35.5
REAR SIDE	6.9	28.0
RIGHT SIDE	5.1	44.0

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

STRUCTURAL MEMBERS ONLY

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

SECOND FLOOR BRACING PLAN

SCALE: 1/8"=1'

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR. 6/30/21

STRUCTURAL MEMBERS ONLY

SUMMIT
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3070 HAMMOND BUSINESS PLACE, SUITE 171
RALEIGH, NC 27603
OFFICE: 919.380.9991
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WWW.SUMMIT-COMPANIES.COM

NORTH CAROLINA CERTIFICATE OF AUTHORIZATION
SUMMIT Engineering, Laboratory & Testing, Inc.
No. F-1454

PROJECT
Buffington
Second Floor Bracing
CLIENT
Smith Douglas Homes – Raleigh
2520 Reliance Ave.
Apex, NC 27539

CURRENT DRAWING
DATE: 6/29/2021
SCALE: 1/8"=1'-0"
PROJECT #: 3832.202R
DRAWN BY: JV
CHECKED BY: BCP

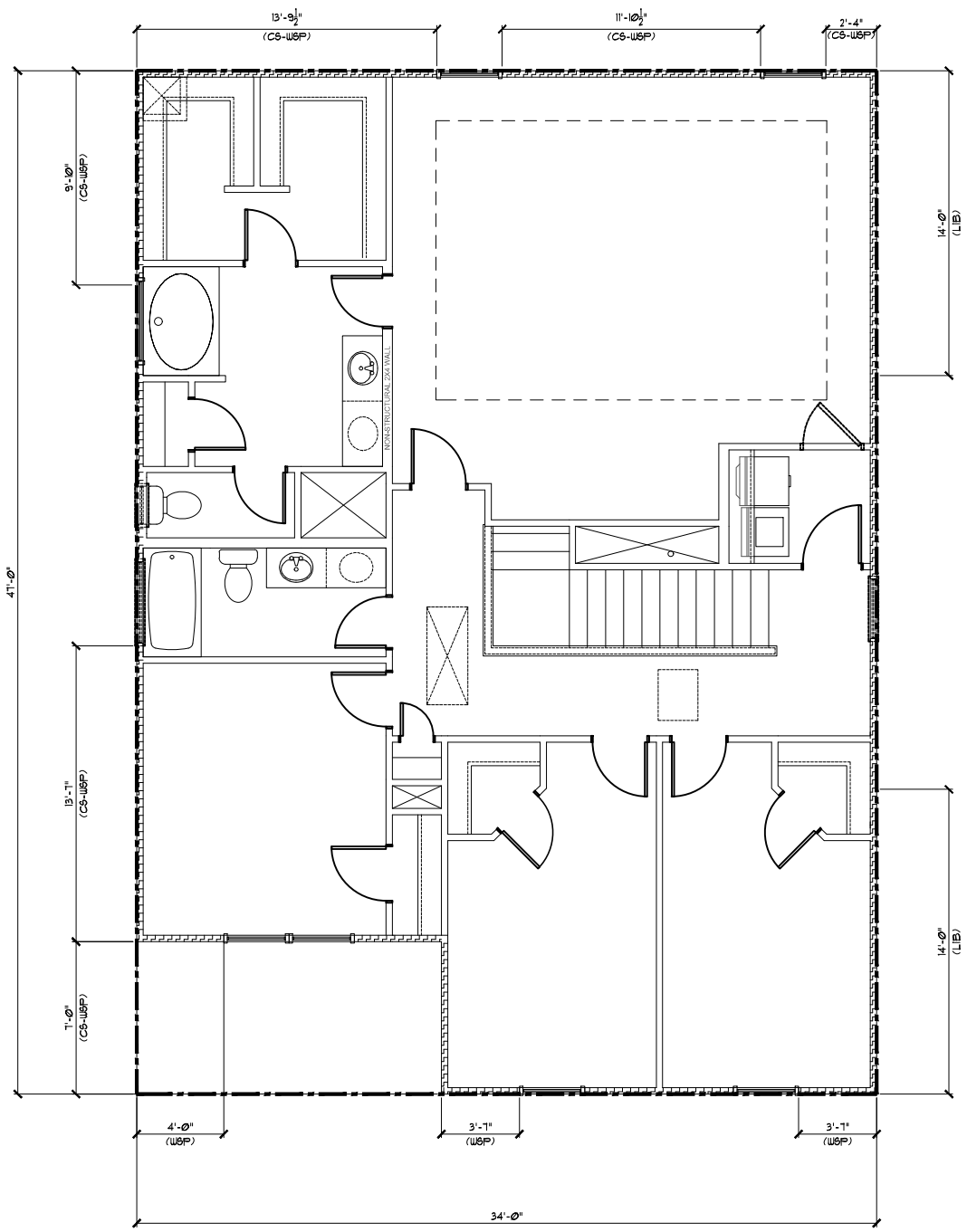
ORIGINAL DRAWING

DATE	PROJECT#
12/11/15	3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S8.0

SEE SHEET S8.0 FOR NOTES AND MORE INFORMATION



ALL ELEVATIONS

OPTION 2 BRACING

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SECOND FLOOR BRACING (FT)		
CONTINUOUS SHEATHING METHOD		
	REQUIRED	PROVIDED
FRONT SIDE	6.9	11.2
LEFT SIDE	5.1	35.5
REAR SIDE	6.9	28.0
RIGHT SIDE	5.1	14.0

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

SECOND FLOOR BRACING PLAN

SCALE: 1/8"=1'

Cane Mill
Lot 30

NORTH CAROLINA PROFESSIONAL SEAL 046048 ENGINEER BRIAN C. PHILBRICK, JR. 6/30/21

STRUCTURAL MEMBERS ONLY

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DATE	PROJECT#
12/11/15	3832.09

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
S8.1

GENERAL STRUCTURAL NOTES:

1. 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.
2. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.
3. 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.
4. 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.
5. 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.
6. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.
7. This structure and all construction shall conform to all applicable sections of the international residential code.
8. 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:

1. 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)
2. 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
3. Maximum depth of unbalanced fill against masonry walls to be as specified in section R404.1 of the 2018 NCRC
4. 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.
5. 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.
6. 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.
7. 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.
8. No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.
9. 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
10. Crawl spaced to be graded level and clear of all debris
11. Provide foundation waterproofing and drain with positive slope to outlet as required by site conditions
12. Energy efficiency compliance and insulation of the structure to be in accordance with chapter 11 of the 2018 NCRC

CONCRETE:

1. 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.
2. 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".
3. 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:
   3.1. Footings: 5%
   3.2. Exterior Slabs: 5%
4. No admixtures shall be added to any structural concrete without written permission of the SER
5. Concrete slabs-on-grade shall be constructed in accordance with ACI 302.1R-96: "Guide for Concrete Slab and Slab Construction".
6. 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.
7. 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.
8. Control or saw cut joints shall be produced using conventional process within 4 to 12 hours after the slab has been finished
9. Reinforcing steel may not extend through a control joint. Reinforcing steel may extend through a saw cut joint.
10. 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:

1. 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.
2. Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement.
3. Application of fibermesh per cubic yard of concrete shall equal a minimum of 0.1% by volume (1.5 pounds per cubic yard)
4. Fibermesh shall comply with ASTM C1116, any local building code requirements, and shall meet or exceed the current industry standard.
5. Steel Reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60.
6. 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"
7. 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.
8. 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.
9. 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.
10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

WOOD FRAMING:

1. 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.
2. LVL or PSL engineered wood shall have the following minimum design values:
   2.1. E = 1,900,000 psi
   2.2. Fb = 2600 psi
   2.3. Fv = 285 psi
   2.4. Fc = 700 psi
3. 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
4. Nails shall be common wire nails unless otherwise noted.
5. Lag screws shall conform to ANSI/ASME standard B18.2.1-1981. Lead holes for lag screws shall be in accordance with NDS specifications.
6. All beams shall have full bearing on supporting framing members unless otherwise noted.
7. 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.
8. 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.
9. Multi-ply beams shall have each ply attached wth (3)10d nails @ 24" O.C.
10. 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:

1. 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.
2. 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.
3. 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."
4. 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.
5. 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:

1. 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.
2. All structurally required wood sheathing shall bear the mark of the APA.
3. 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.
4. 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.
5. 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.
6. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

STRUCTURAL FIBERBOARD PANELS:

1. Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards.
2. 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.
3. Sheathing shall have a 1/8" gap at panel ends and edges are recommended in accordance with the AFA.

EXTERIOR WOOD FRAMED DECKS:

1. 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:

1. 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.
2. All steel shall have a minimum yield stress (Fy) of 36 ksi unless otherwise noted.
3. Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D1.1. Electrodes for shopt and field welding shall be class E70XX. All welding shall be performed by a certified welder per the above standards.

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SUMMIT Engineering, Laboratory & Testing, P.C.
C-4361

PROJECT
Standard Details
Notes and Specifications

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

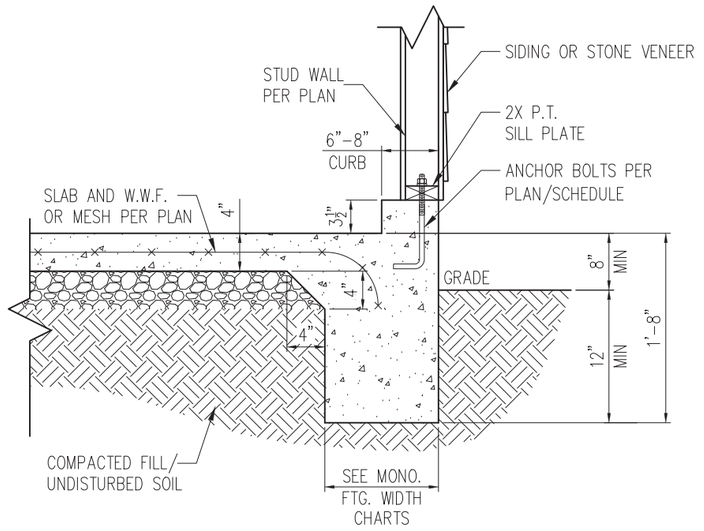
CURRENT DRAWING
DATE: 2/18/20
SCALE: NTS
PROJECT #: 3832
DRAWN BY: LBV
CHECKED BY: WAJ

ORIGINAL DRAWING

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

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

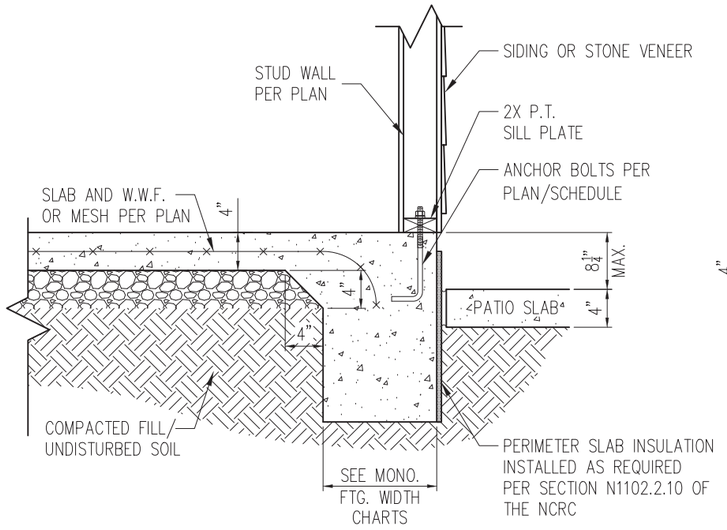
SHEET
CS2



STANDARD – SIDING/STONE

1 D1m TYP. GARAGE CURB DETAIL

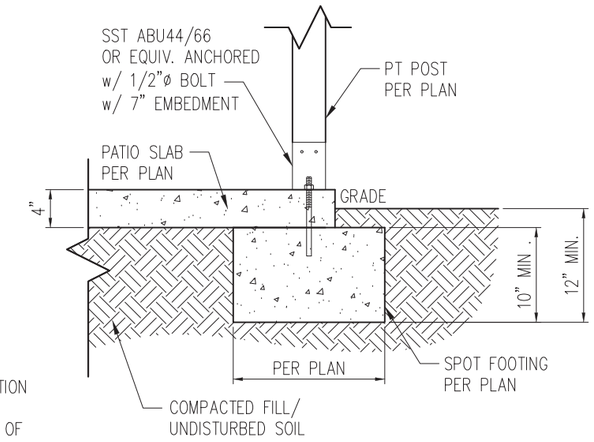
3/4" = 1'-0"



STANDARD – SIDING/STONE

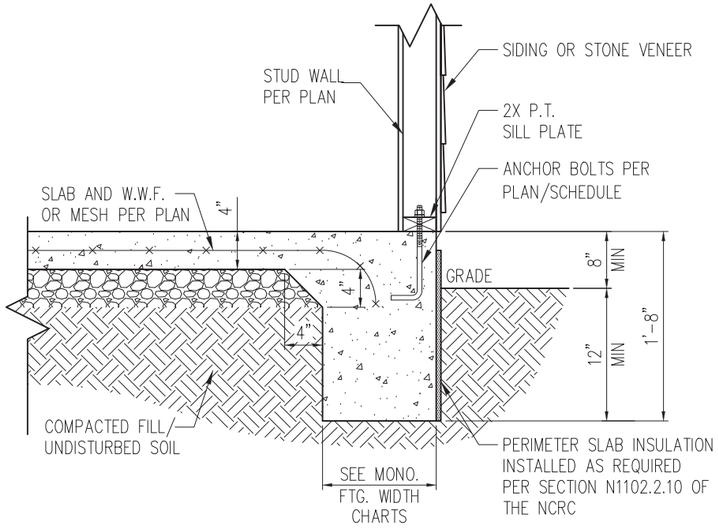
2 D1m PATIO SLAB DETAIL

3/4" = 1'-0"



2A D1m COVERED PATIO DETAIL

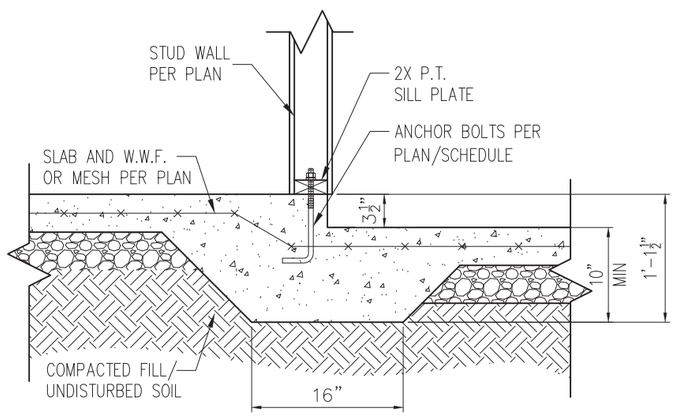
3/4" = 1'-0"



STANDARD – SIDING/STONE

3 D1m TYP. SLAB DETAIL

3/4" = 1'-0"



4 D1m STEP IN GARAGE

3/4" = 1'-0"

NOTES:

1. REFER TO GENERAL NOTES & SPECIFICATIONS ON SHEET CS2 FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.

WALL ANCHOR SCHEDULE

TYPE OF ANCHOR	MIN. CONC. EMBEDMENT	SPACING EMBEDMENT	INTERIOR WALL	EXTERIOR WALL
1/2"ø 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"ø 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			

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C-4361

PROJECT
Standard Details
Monolithic Slab Details

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

CURRENT DRAWING
DATE: 2/18/20
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CHECKED BY: WAJ

ORIGINAL DRAWING

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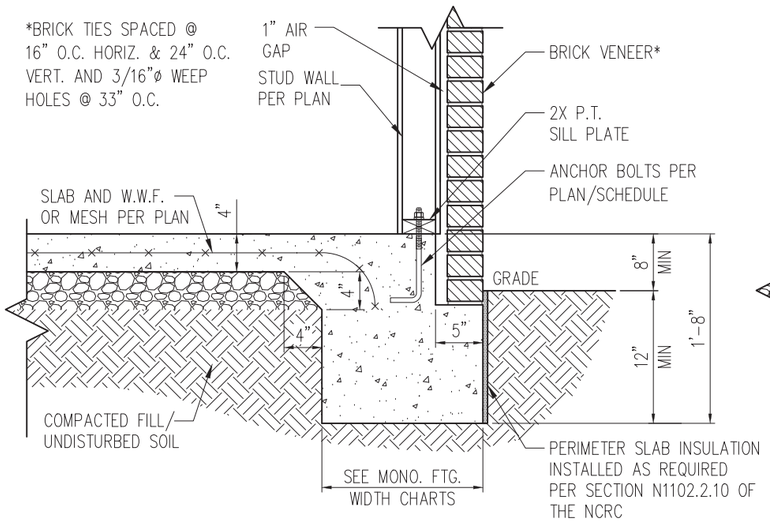
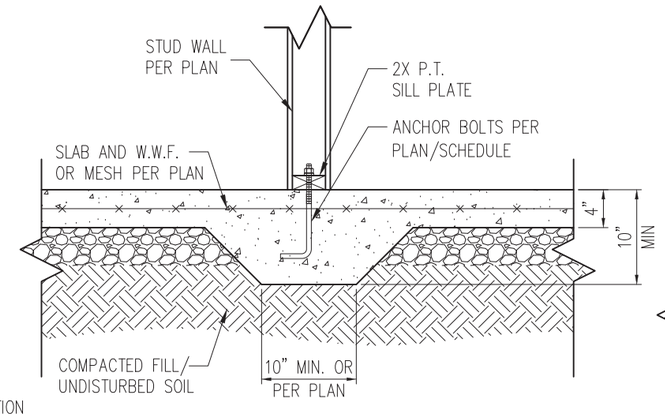
REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D1m

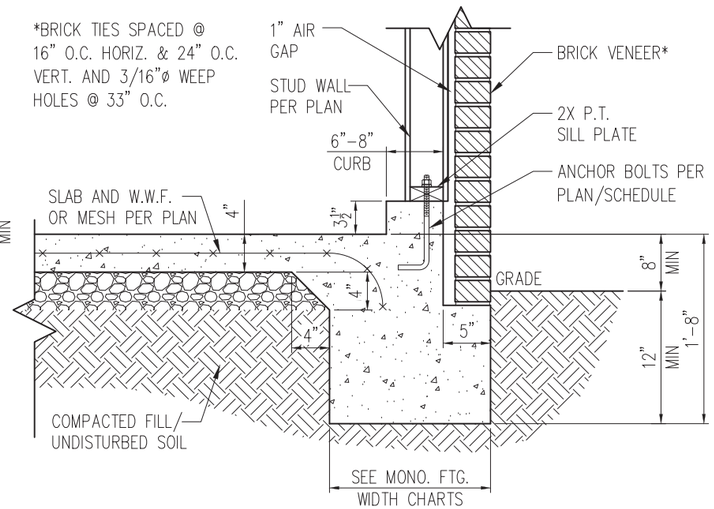


STANDARD – BRICK

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

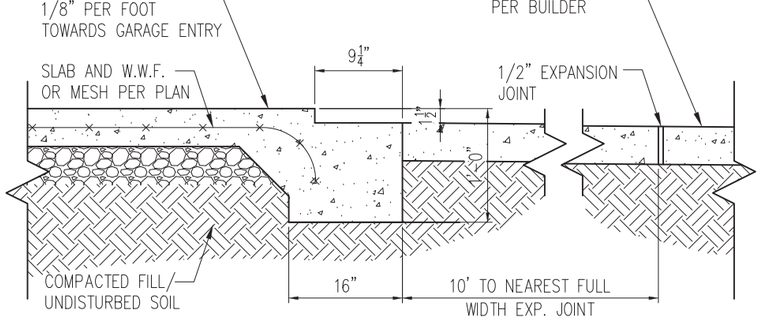


3 D2m TYP. THICKENED SLAB DETAIL
3/4" = 1'-0"

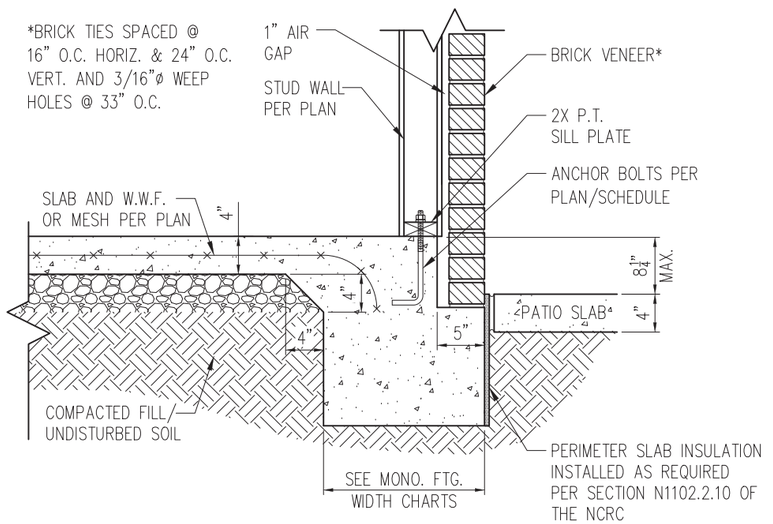


STANDARD – BRICK

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



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



STANDARD – BRICK

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

NOTES:
1. REFER TO GENERAL NOTES & SPECIFICATIONS ON SHEET CS2 FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.

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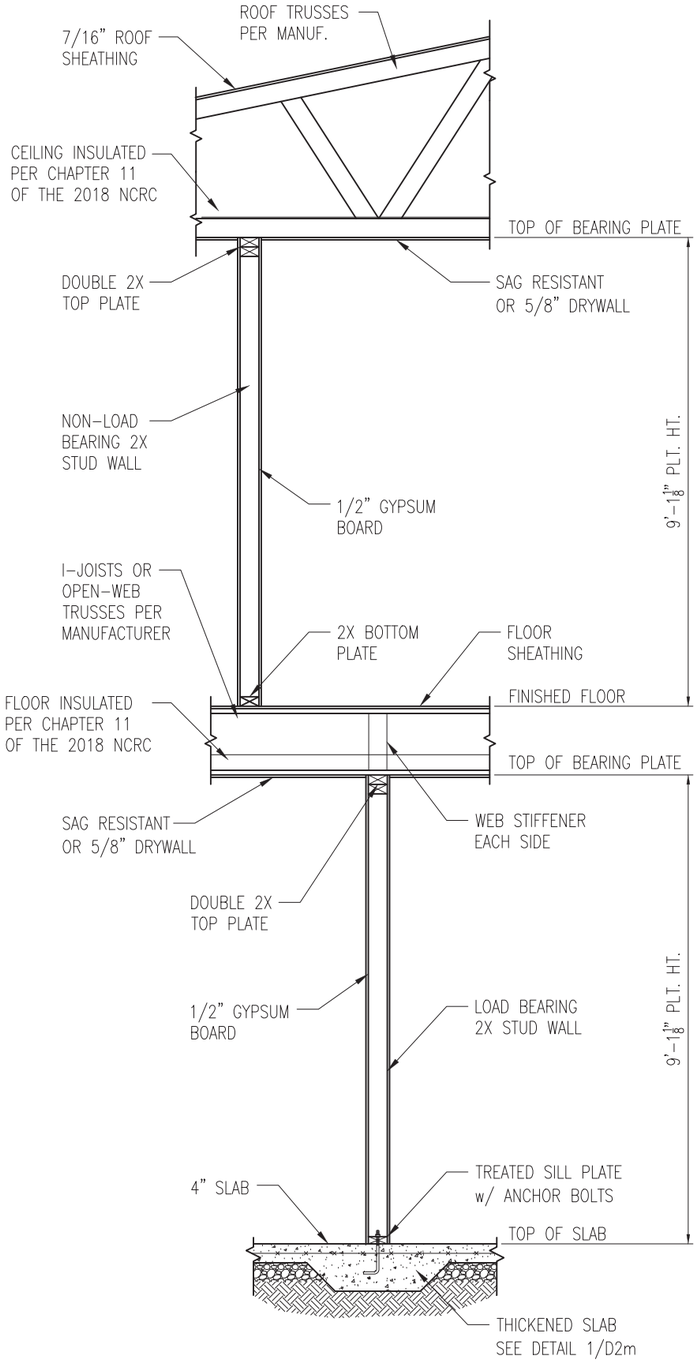
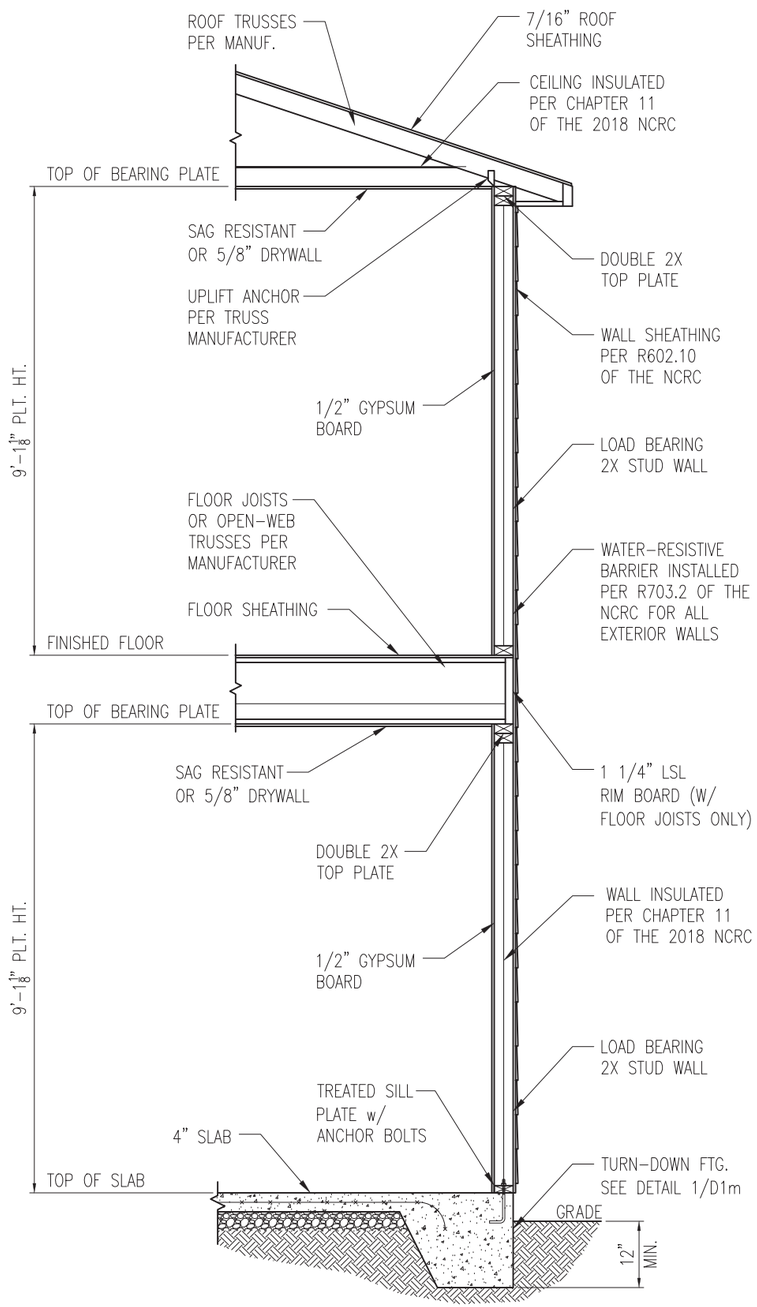
SHEET
D2m



1 D3m TYP. INTERIOR LOAD BEARING WALL SECTION

3/4" = 1'-0"



2 D3m TYP. EXTERIOR LOAD BEARING WALL SECTION

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:

1. REFER TO GENERAL NOTES & SPECIFICATIONS ON SHEET CS2 FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.

NORTH CAROLINA PROFESSIONAL SEAL 043923 ENGINEER WESLEY A. JONES

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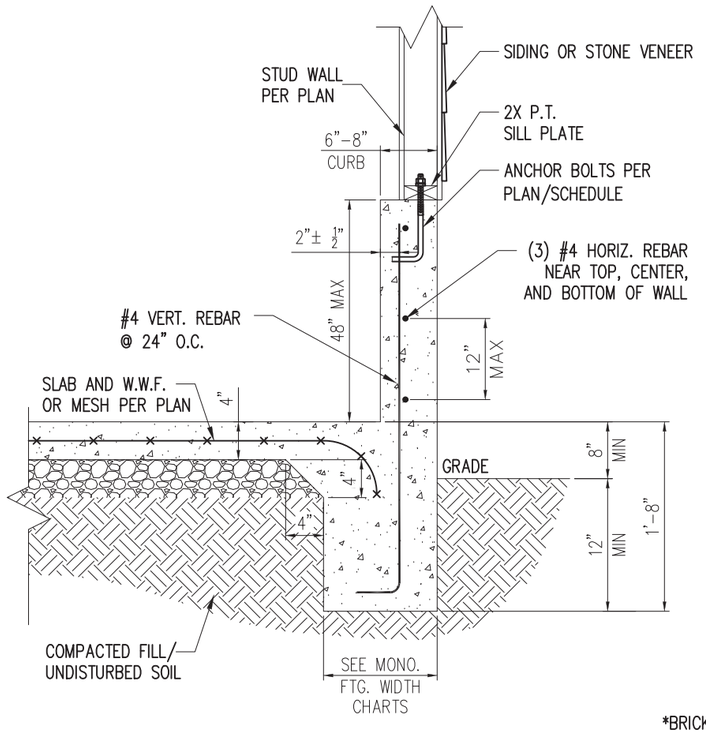
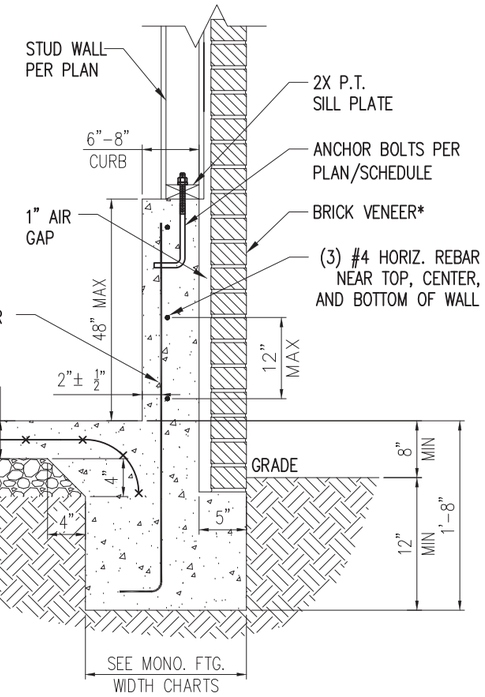
SHEET
D3m



STANDARD – SIDING/STONE

1 D4m NTS

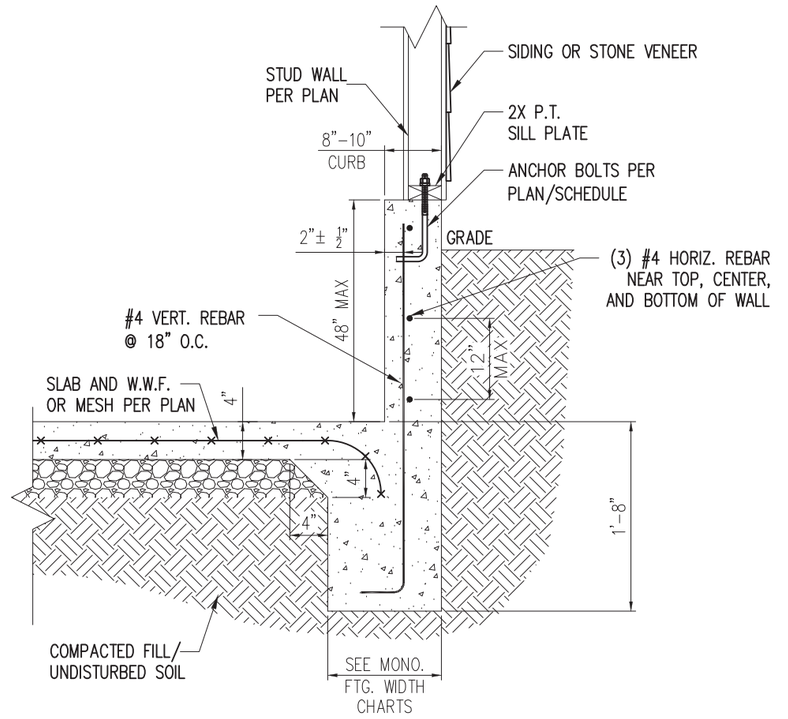
EXTENDED GARAGE CURB DETAIL



STANDARD – BRICK

3 D4m NTS

EXTENDED GARAGE CURB DETAIL W/ BRICK VENEER



STANDARD – SIDING/STONE

2 D4m NTS

EXTENDED GARAGE CURB DETAIL W/ UNBALANCED FILL

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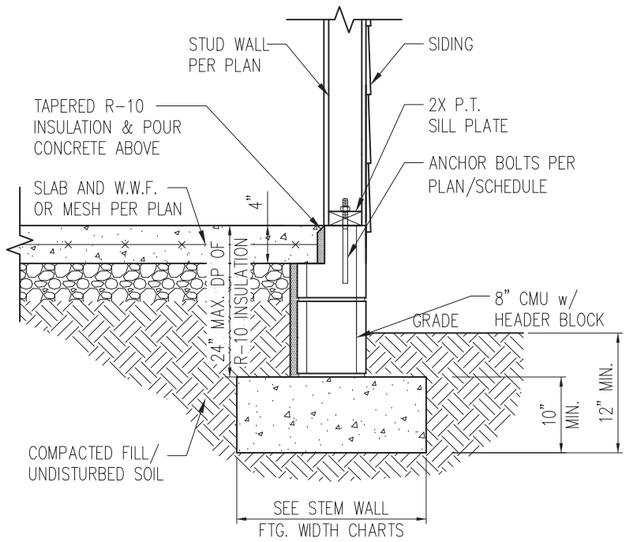
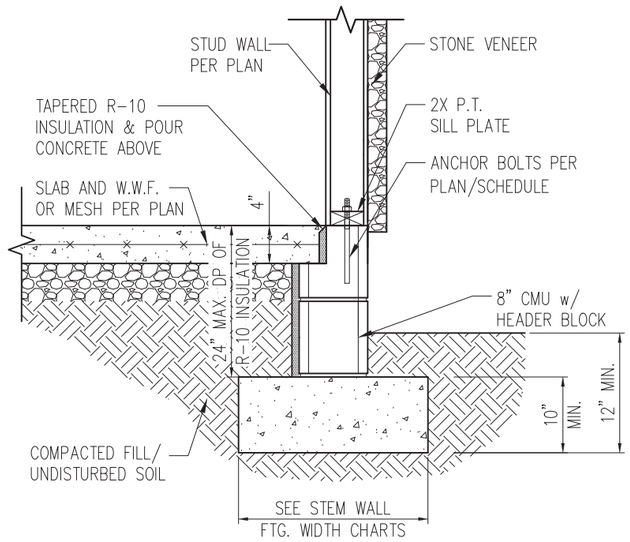
NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES
2/18/20

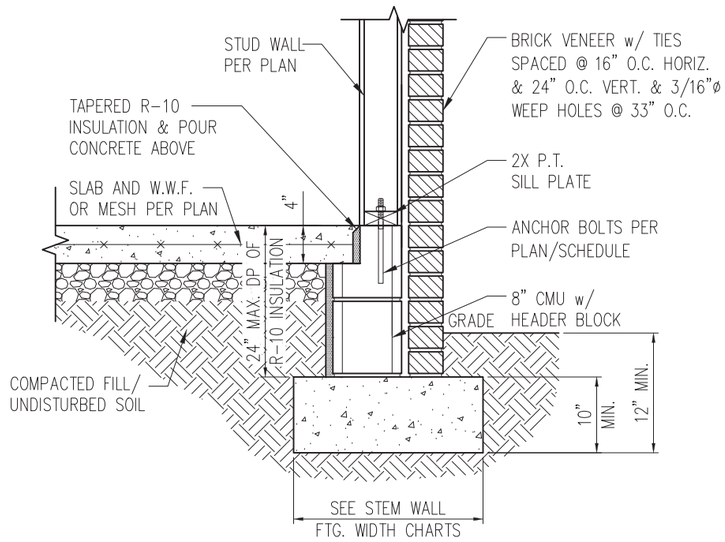
SHEET
D4m



STANDARD – SIDING



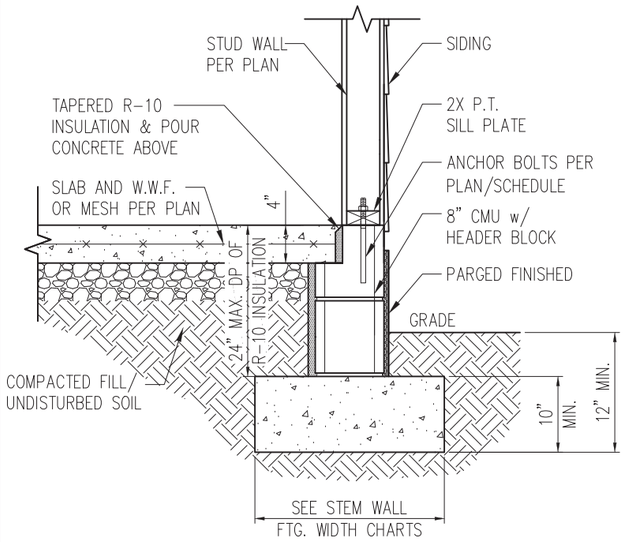
STANDARD – STONE



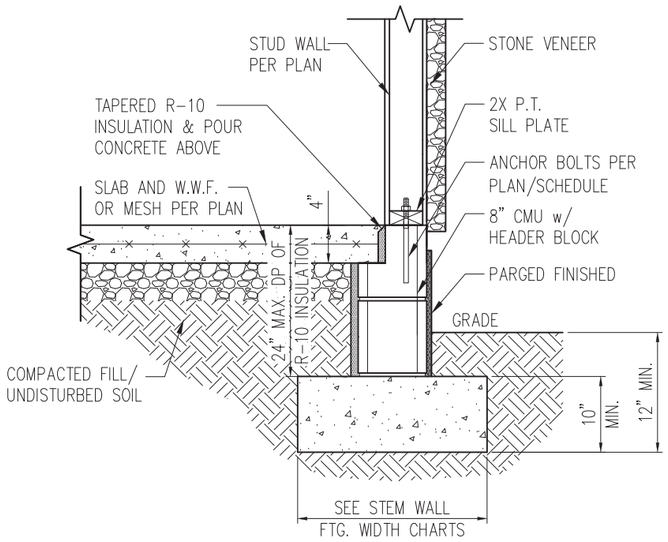
STANDARD – BRICK

1 / D1s TYP. STEM WALL DETAIL

3/4" = 1'-0"



STANDARD – SIDING



STANDARD – STONE

1a / D1s STEM WALL DETAIL w/ PARGED FINISH

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"ø 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"ø 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.

NOTES:
1. REFER TO GENERAL NOTES & SPECIFICATIONS ON SHEET CS2 FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPS AND DEPRESSIONS.

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES
2/18/20

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

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

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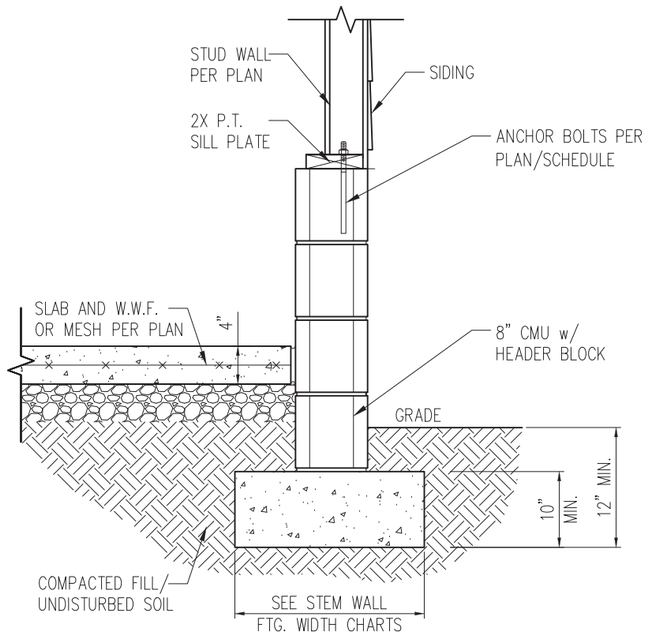
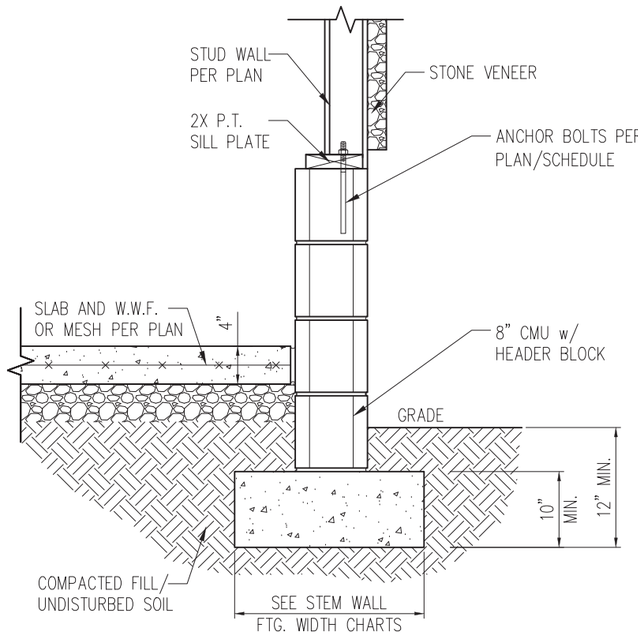
0	1/7/16	3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

SHEET
D1s



STANDARD – SIDING



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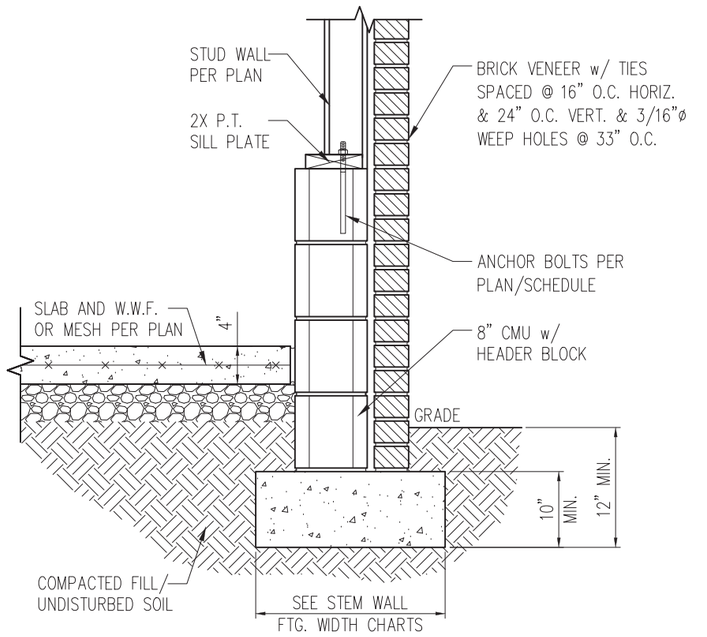
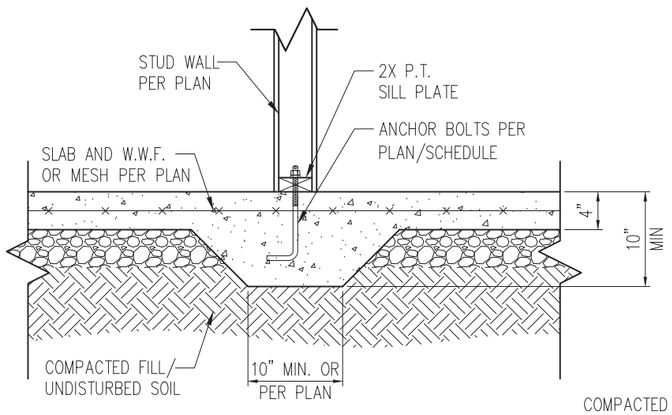


STANDARD – BRICK

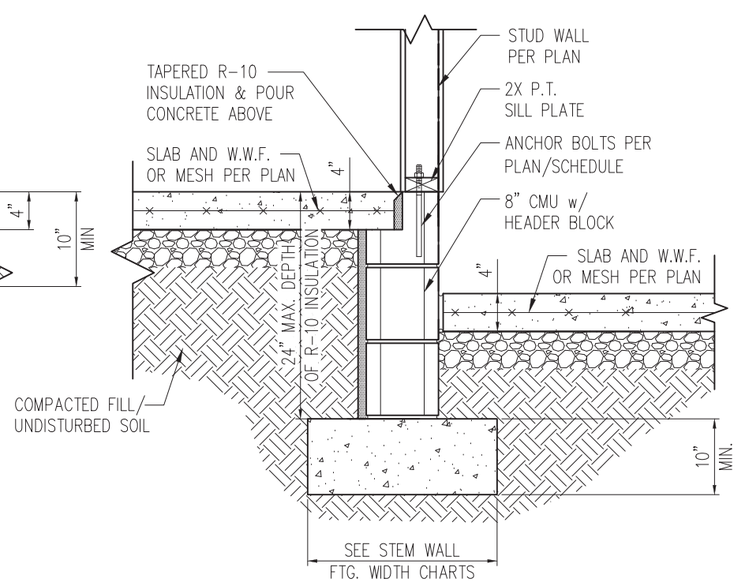
1 D2s TYP. GARAGE CURB DETAIL

3/4" = 1'-0"



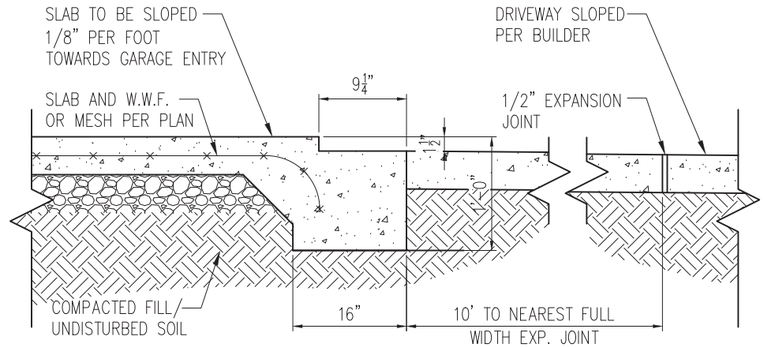
2 D2s TYP. THICKENED SLAB DETAIL

3/4" = 1'-0"



3 D2s HOUSE/GARAGE WALL DETAIL

3/4" = 1'-0"



4 D2s SLAB AT GARAGE DOOR

3/4" = 1'-0"

NOTES:

1. REFER TO GENERAL NOTES & SPECIFICATIONS ON SHEET CS2 FOR ADDITIONAL INFORMATION.
2. PROVIDE 6 MIL VAPOR BARRIER UNDER ALL SLABS-ON-GRADE.
3. SEE ARCH. DWGS. FOR ALL TOP OF THE SLAB ELEVATIONS, SLOPES AND DEPRESSIONS.

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES 2/18/20

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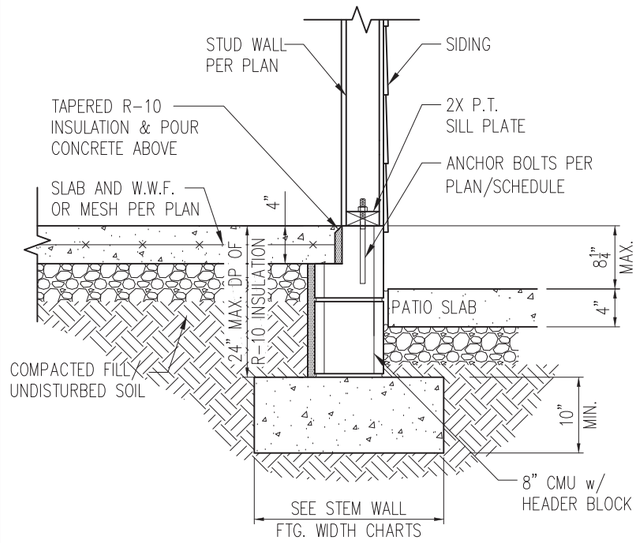
SHEET
D2s



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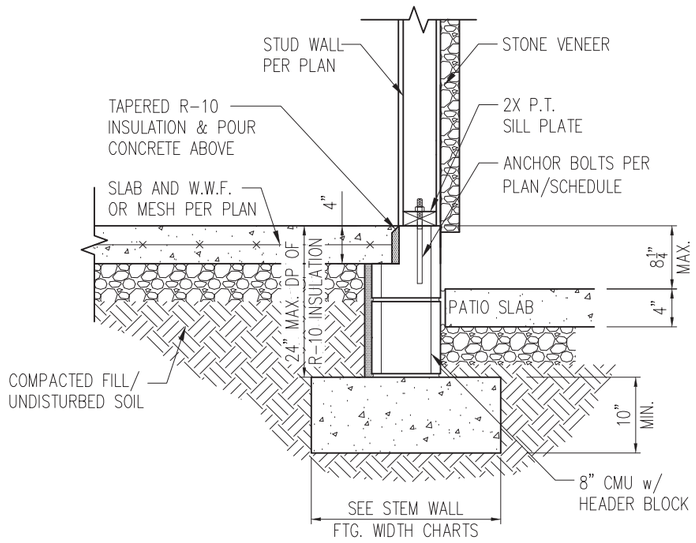

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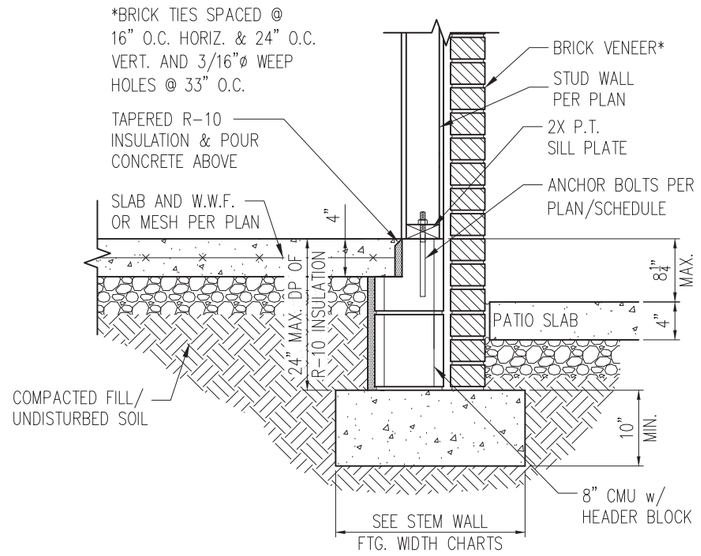
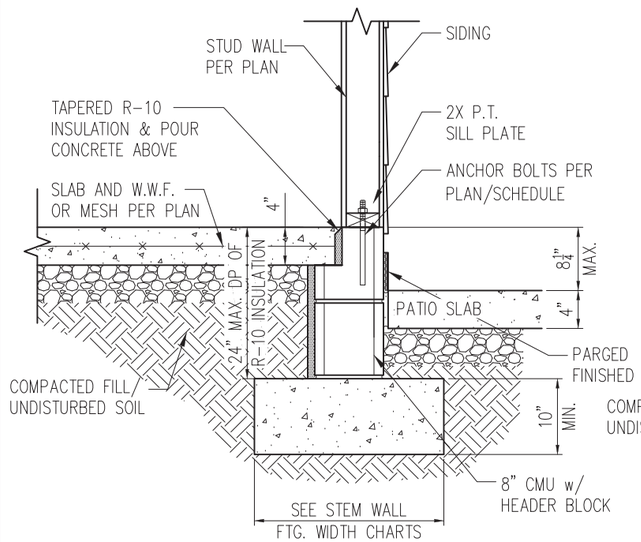


STANDARD – BRICK

1 / D3s PORCH SLAB DETAIL

3/4" = 1'-0"



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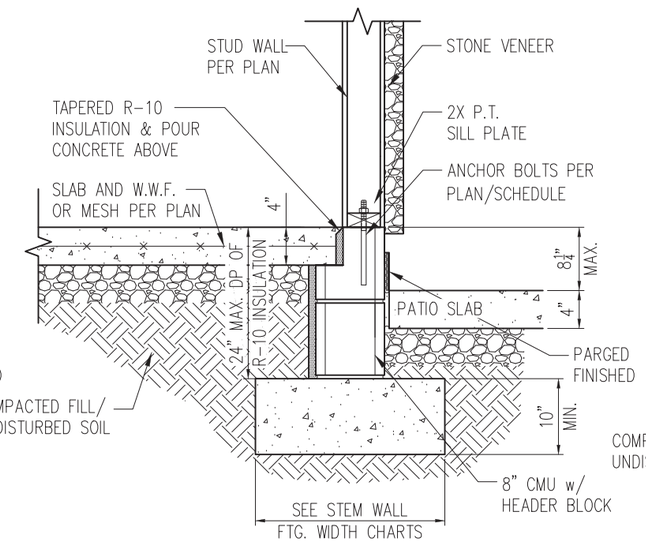
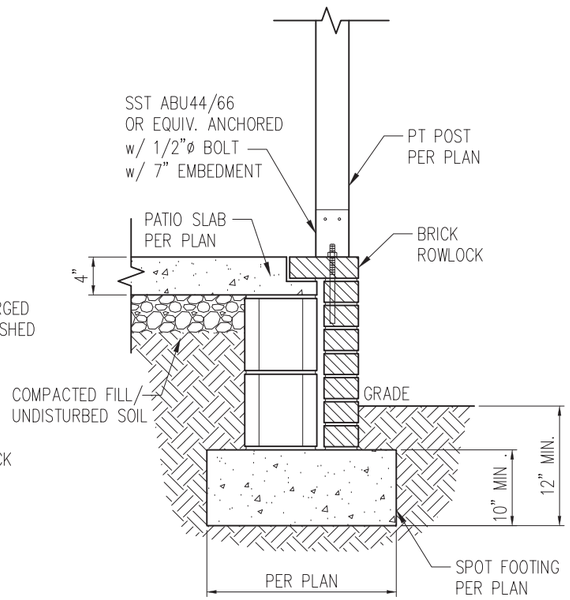


STANDARD – STONE

1a / D1s PORCH SLAB DETAIL w/ PARGED FINISH

3/4" = 1'-0"



2 / D3s COVERED PORCH DETAIL

3/4" = 1'-0"

NOTES:

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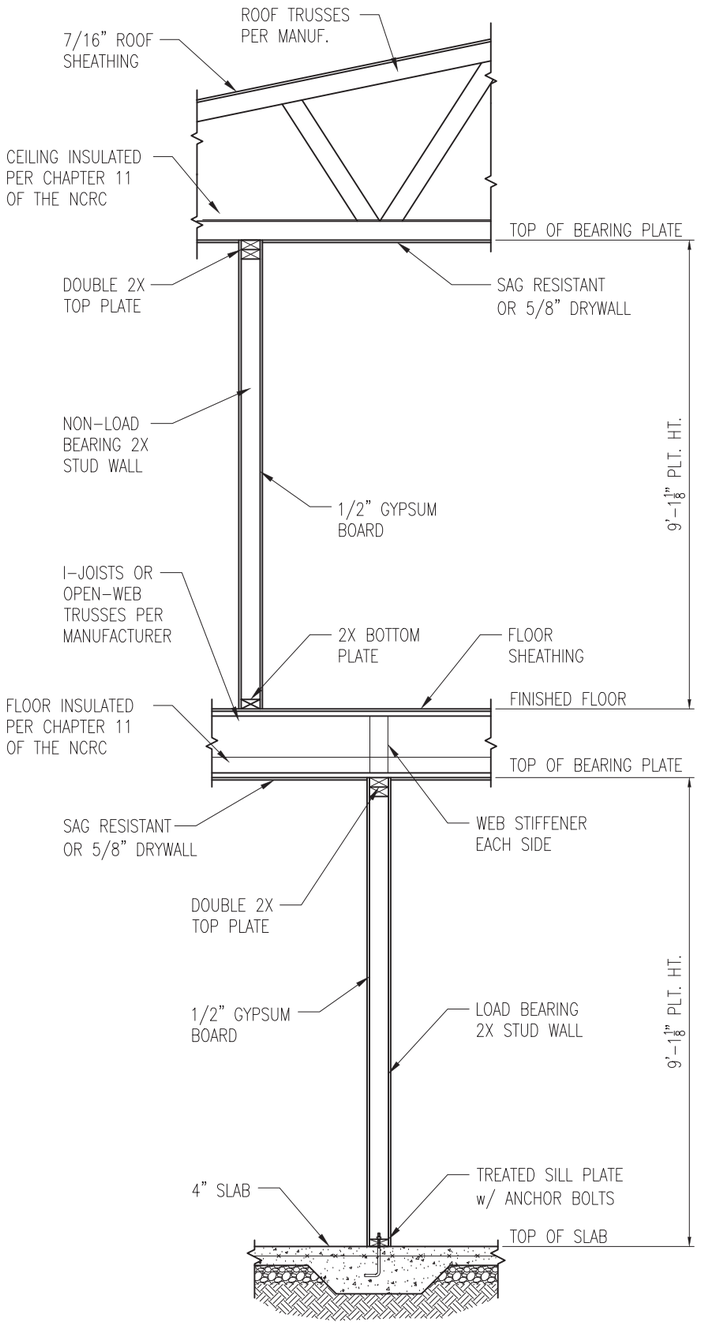
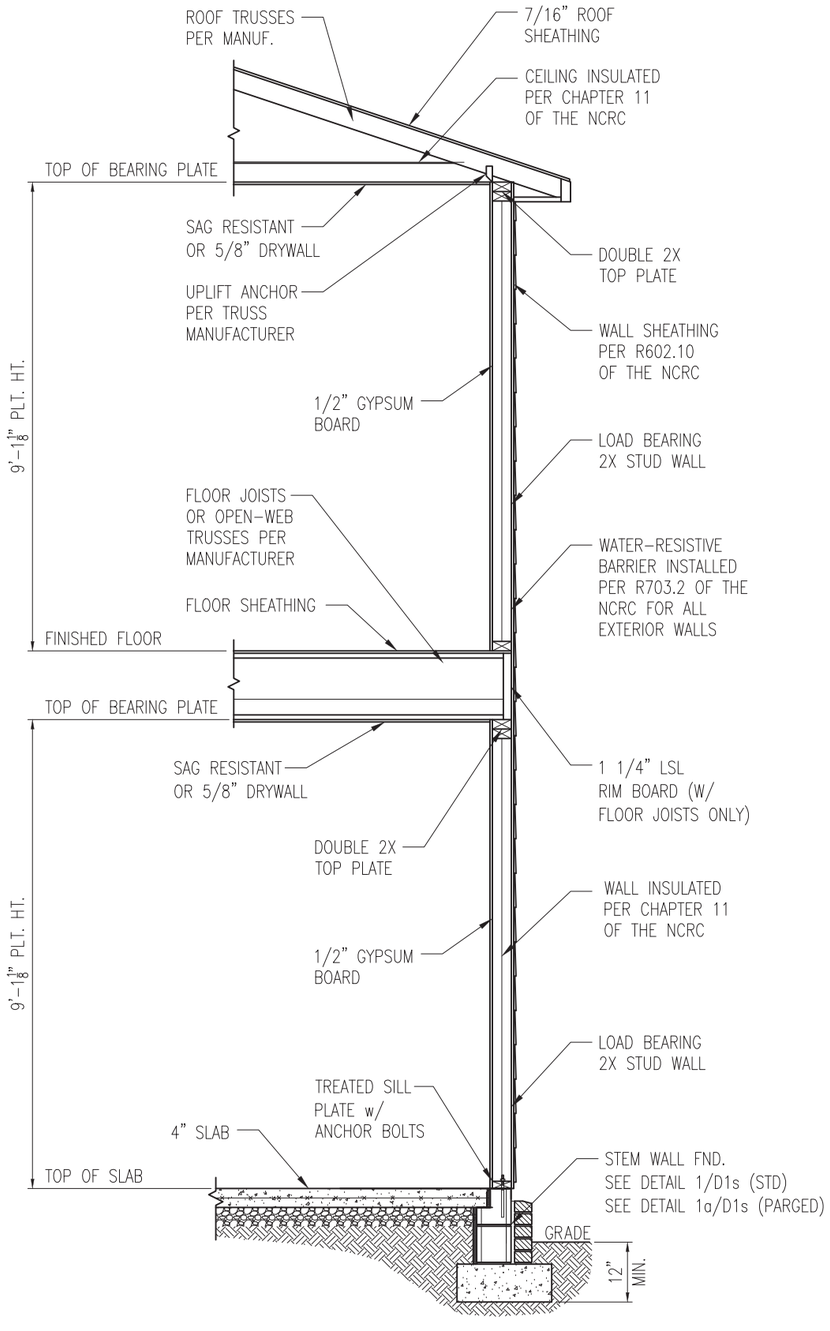
D3s



1 D4s TYP. INTERIOR LOAD BEARING WALL SECTION

3/4" = 1'-0"



2 D4s TYP. EXTERIOR LOAD BEARING WALL SECTION

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:

1. REFER TO GENERAL NOTES & SPECIFICATIONS ON SHEET CS2 FOR ADDITIONAL INFORMATION.
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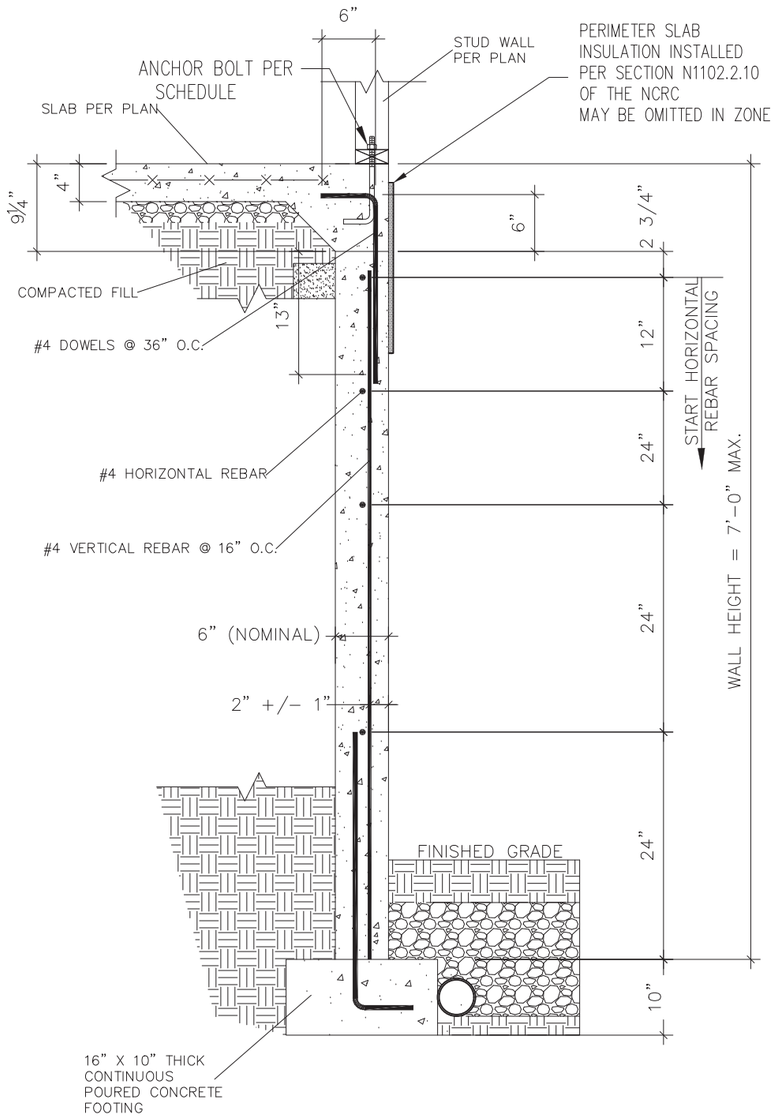
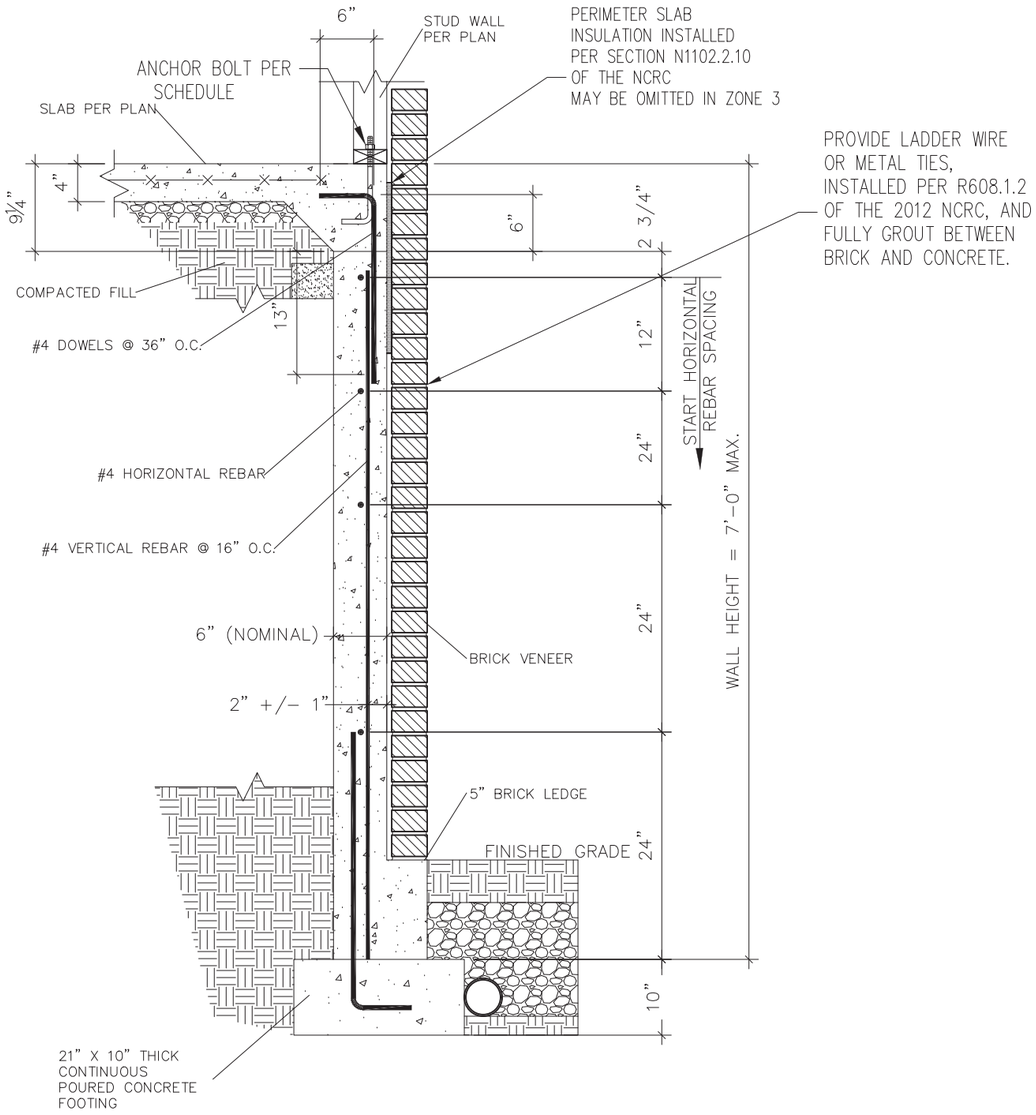
SHEET
D4s



1 D5s SUBWALL FOUNDATION

3/4" = 1'-0"



2 D5s SUBWALL FOUNDATION W/ BRICK VENEER

3/4" = 1'-0"

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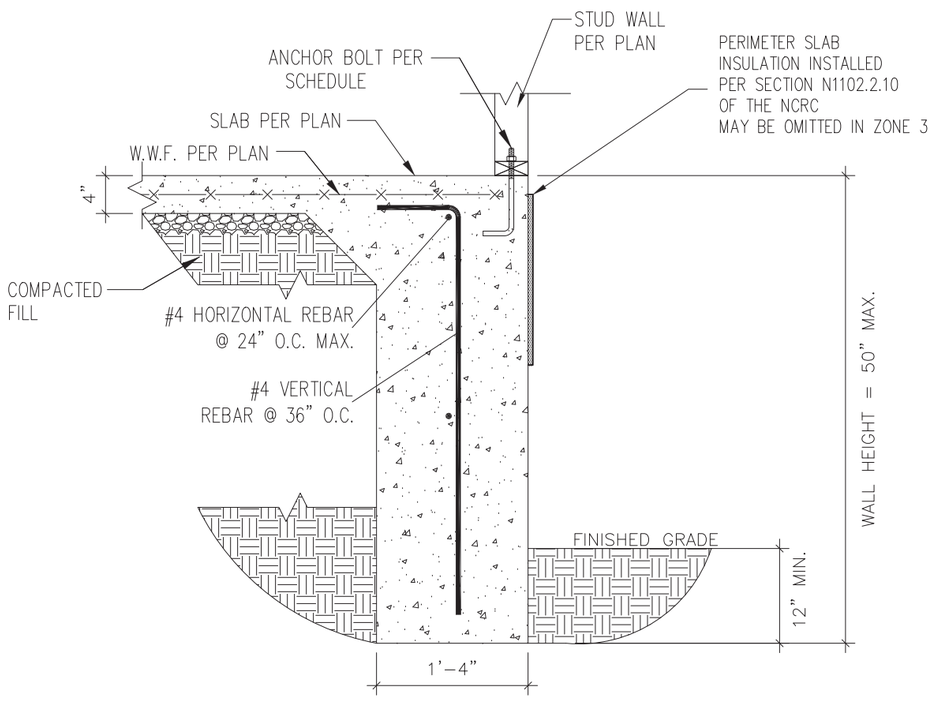
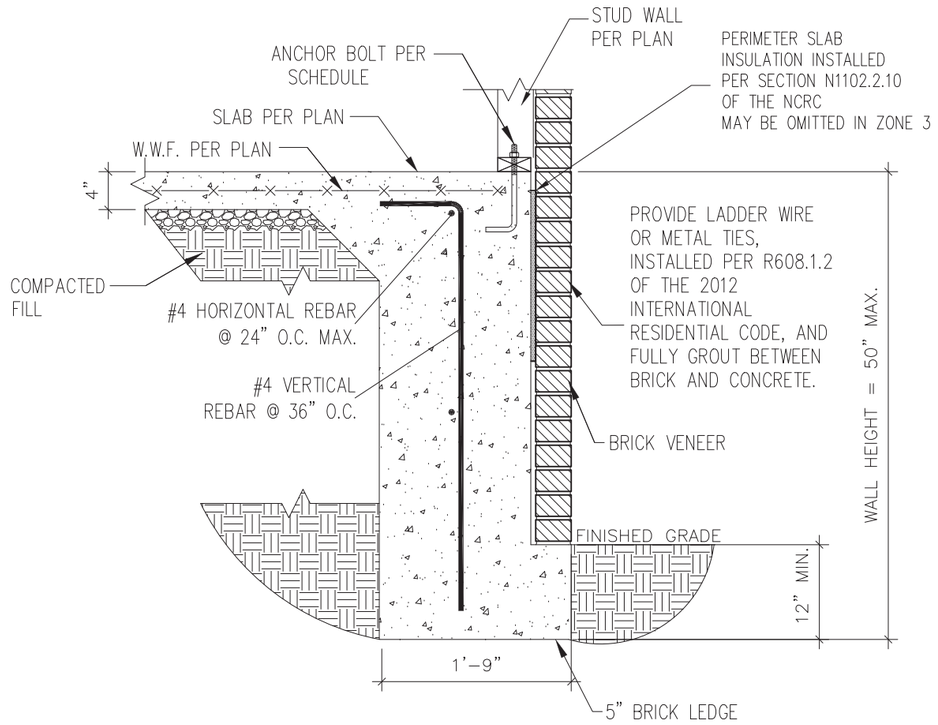
2/18/20

SHEET
D5s



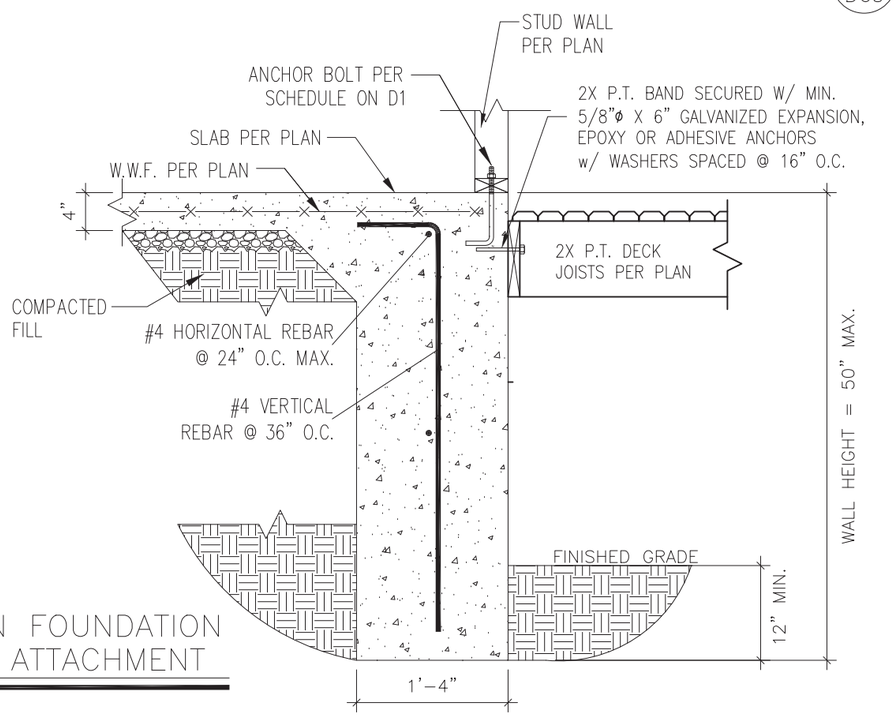
1 D6s TURNDOWN FOUNDATION

3/4" = 1'-0"



2 D6s TURNDOWN FOUNDATION W/ BRICK VENEER

3/4" = 1'-0"



3 D6s TURNDOWN FOUNDATION W/ DECK ATTACHMENT

3/4" = 1'-0"

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NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES
2/18/20

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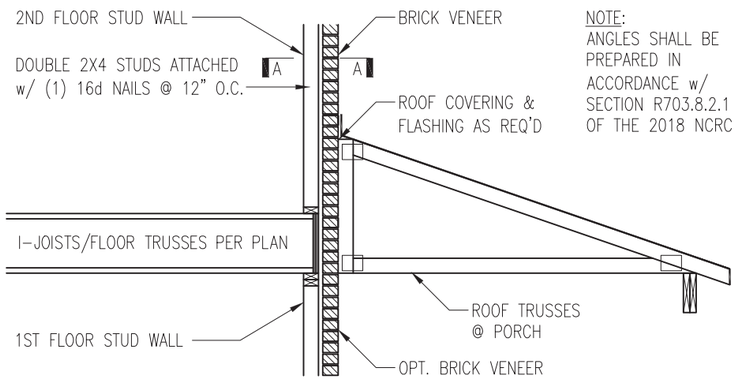
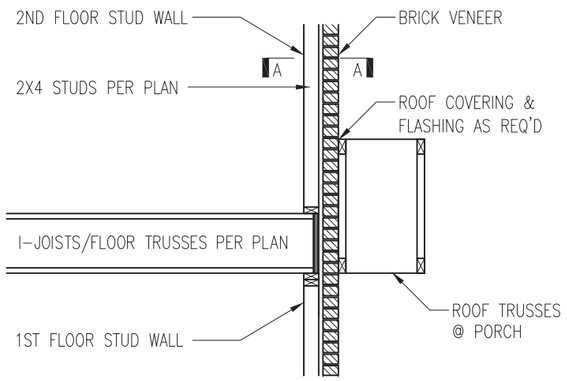
D6s



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

TRUSSES PERPENDICULAR TO STUD WALL



TRUSSES PARALLEL TO STUD WALL
w/ CONTINUOUS BRICK VENEER

1 D5f BRICK SUPPORT ABOVE STORAGE/PORCH ROOF DETAIL

NTS

3 D5f BALCONY JOIST ATTACHMENT

NTS

SECTION A-A

NTS

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

4 D5f TYP. RANGE VENT FRAMING

VENTED TO EXTERIOR WALL

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NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES
2/18/20

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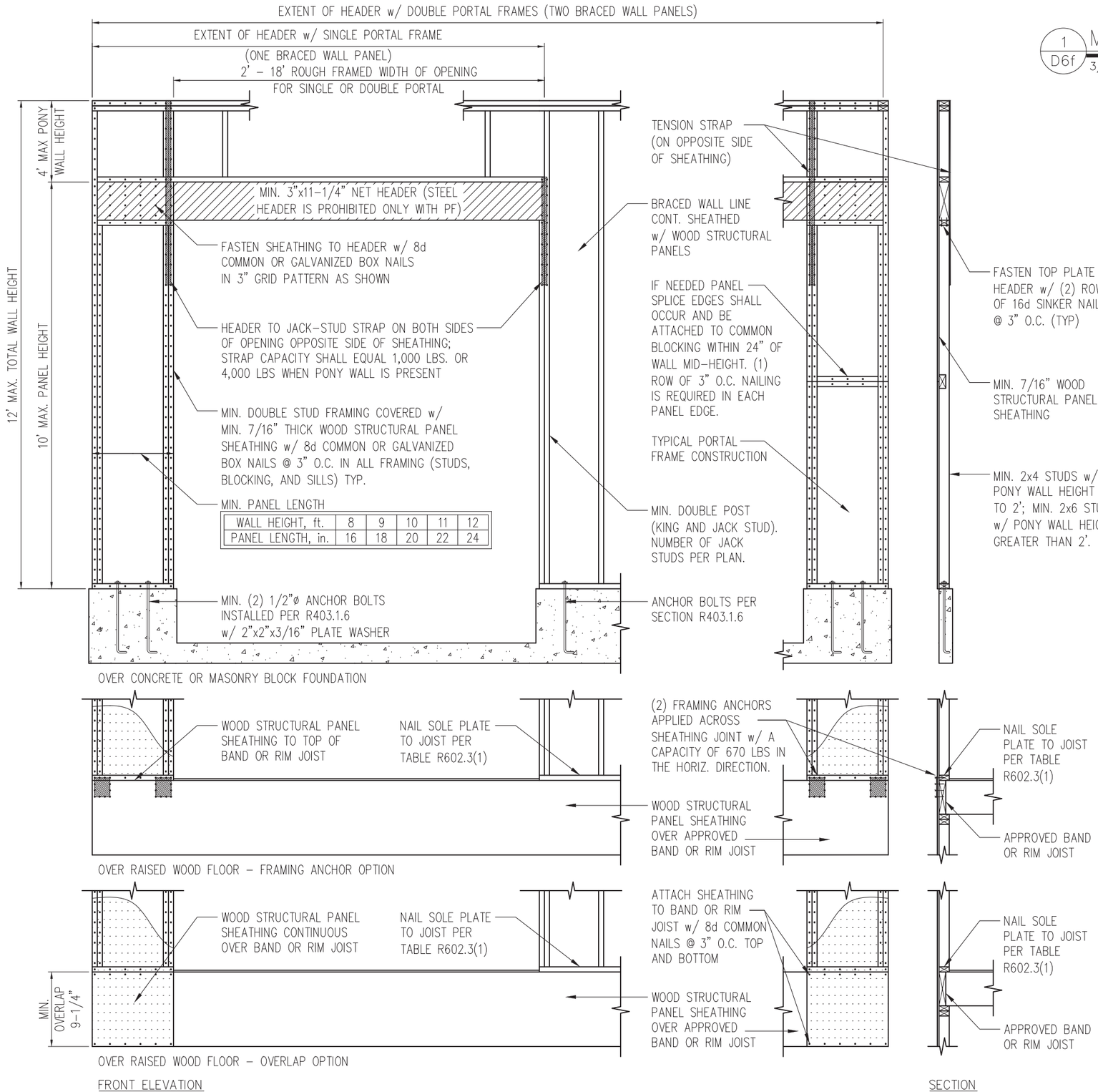
SHEET
D5f

1 D6f METHOD PF: PORTAL FRAME DETAIL

3/8" = 1'-0"



WALL HEIGHT, ft.	8	9	10	11	12
PANEL LENGTH, in.	16	18	20	22	24

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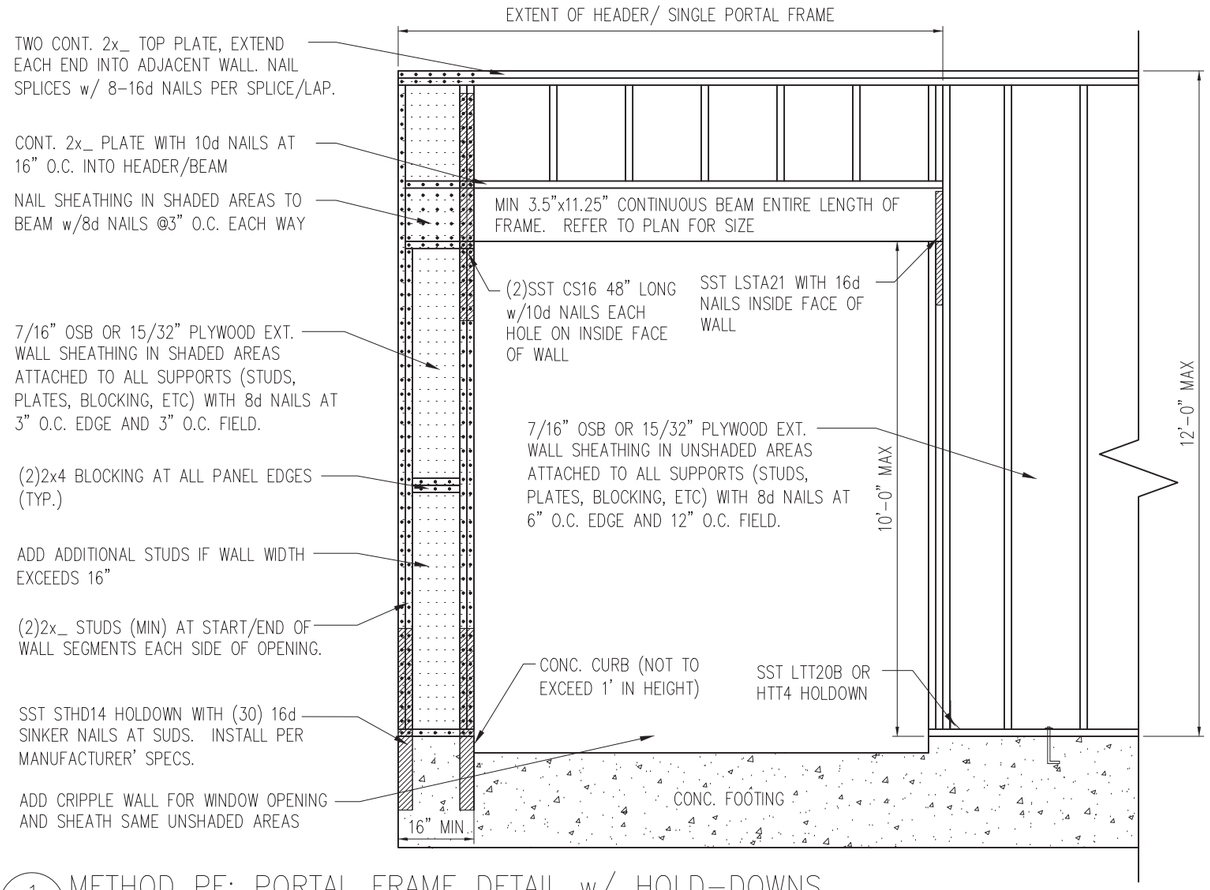
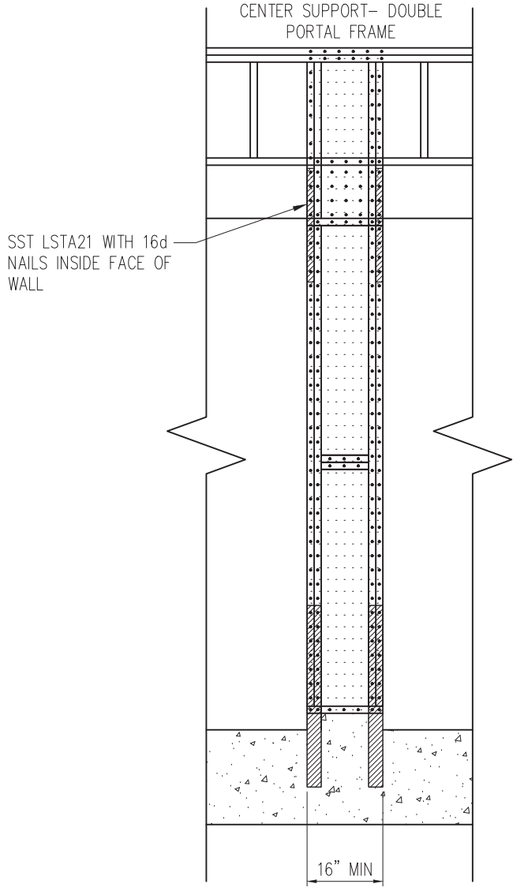
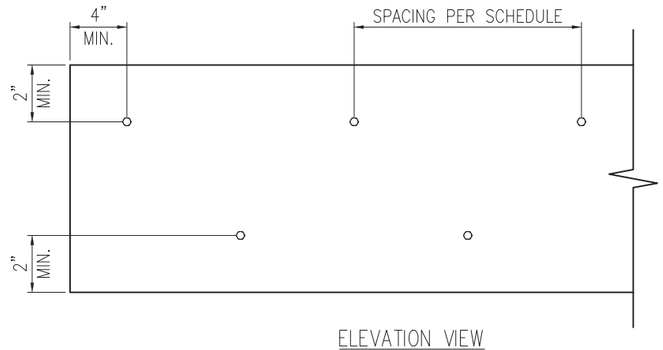




1 D7f METHOD PF: PORTAL FRAME DETAIL w/ HOLD-DOWNS

3/4" = 1'-0"



ELEVATION VIEW

2 D7f MULTI-PLY BEAM CONNECTION DETAIL

N.T.S

MINIMUM FASTENING REQUIREMENTS FOR TOP- AND SIDE-LOADED MEMBERS

		3½" WIDE	5¼" WIDE		7" WIDE		
FASTENER TYPE	LVL DEPTH	2-Ply 1¾"	3-Ply 1¾"	1¾" + 3½"	4-Ply 1¾"	2-Ply 1¾" + 3½"	2-Ply 3½"
10d (0.128" x 3") Nails	7¼"≤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 3½") Nails	7¼"≤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)**	-
½" Through Bolts	d≥7¼"	2 rows @ 24" o.c.	2 rows @ 24" o.c.		2 rows @ 24" o.c.		
SDS ¼" x 3½", WS35, 3⅜" TrussLok		2 rows @ 24" o.c.	2 rows @ 24" o.c. **(ES)**	2 rows @ 24" o.c.	-	2 rows @ 24" o.c. **(ES)**	-
SDS ¼" x 6", WS6		-	-		2 rows @ 24" o.c. **(ES)**		
5" TrussLok		-	2 rows @ 24" o.c.		-		
6¾" TrussLok		-	-		2 rows @ 24" o.c.		

NOTES:

1. 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.
2. Minimum fastening requirements for depths less than 7¼" require special consideration. Please contact your technical representative.
3. 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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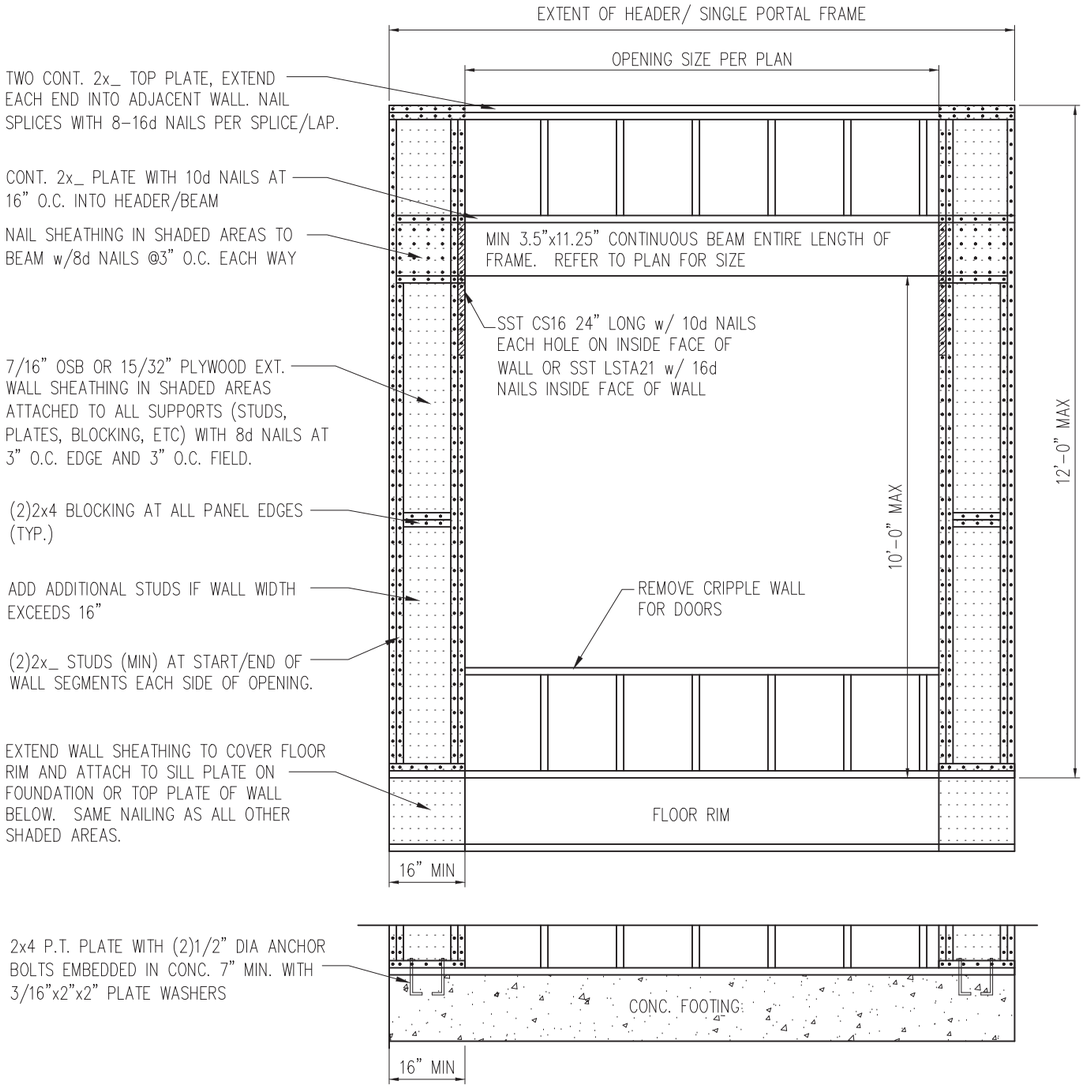
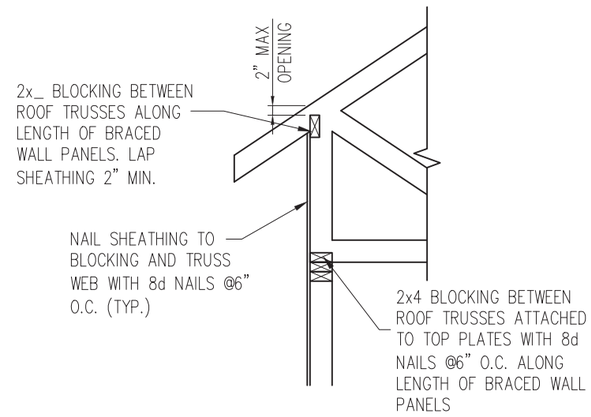
D7f

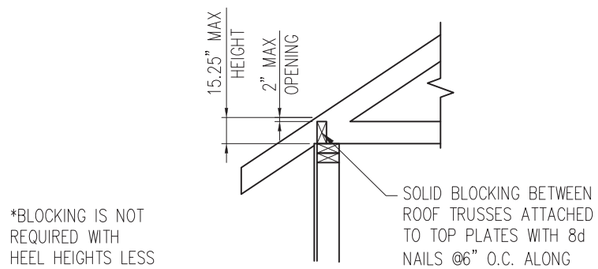


1 D8f METHOD PF: PORTAL FRAME DETAIL

3/4" = 1'-0" OPENINGS UNDER 8'-0"



HEEL HEIGHT GREATER THAN 15.25"



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

HEEL HEIGHT LESS THAN 15.25" *

2 D8f TYP. WALL PANEL TO ROOF TRUSS CONNECTION

1" = 1'-0"

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ENGINEERING LABORATORY TESTING
3070 HAMMOND BUSINESS PLACE,
SUITE 171, RALEIGH, NC 27603
OFFICE: 919.380.9991
FAX: 919.380.9993
WWW.SUMMIT-COMPANIES.COM

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

PROJECT
Standard Details
Framing Details - Bracing

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

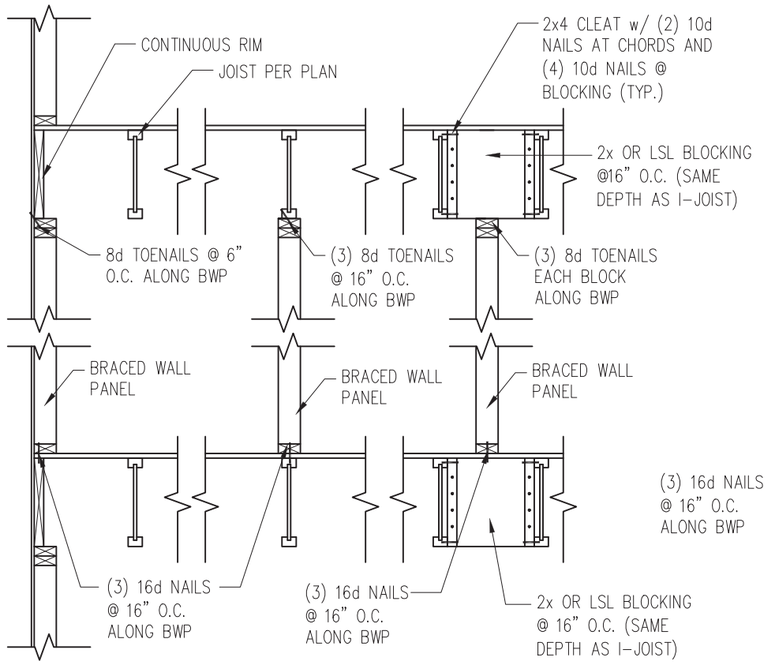
NO.	DATE	PROJECT #
0	1/7/16	3832

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

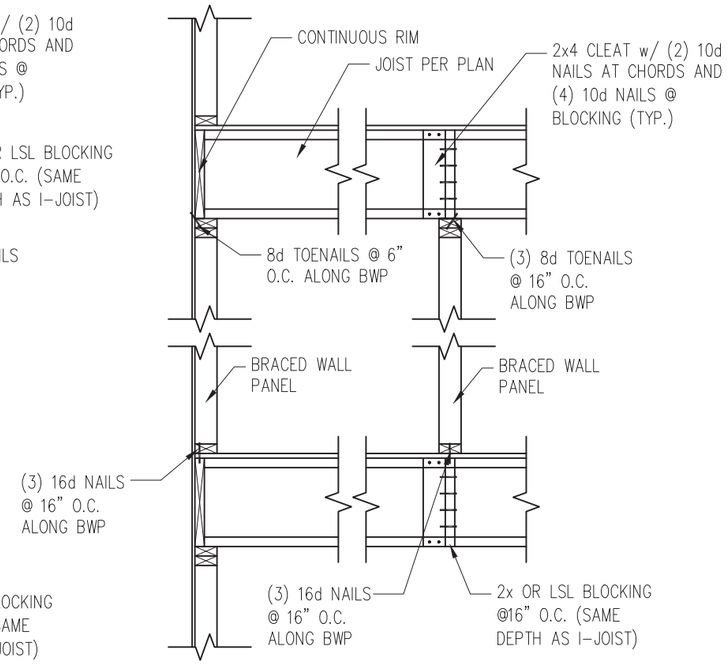
SHEET
D8f

NORTH CAROLINA PROFESSIONAL SEAL 043823 ENGINEER WESLEY A. JONES
2/18/20

STRUCTURAL MEMBERS ONLY



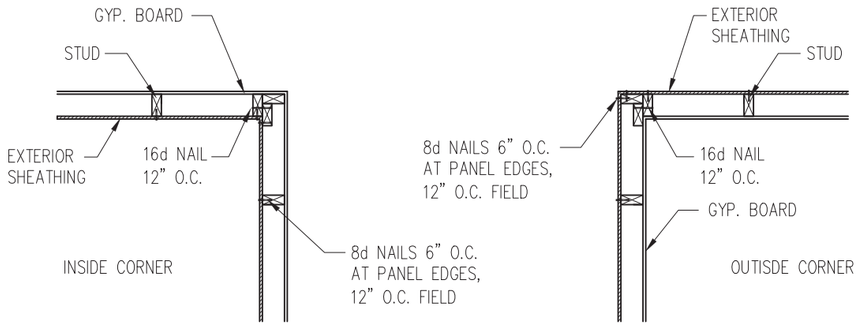
JOISTS PARALLEL TO BRACED WALLS



JOISTS PERPENDICULAR TO BRACED WALLS

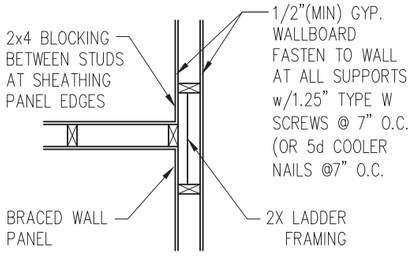
1/D9f TYP. WALL PANEL TO FLOOR/CEILING CONNECTION

1" = 1'-0"



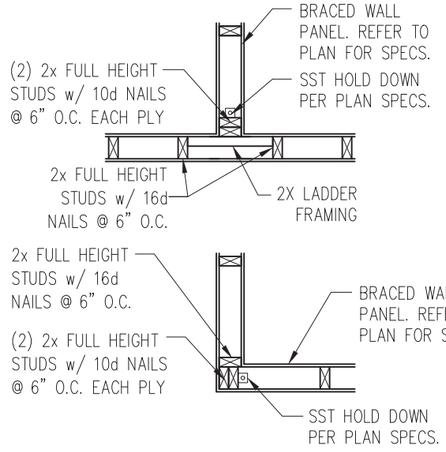
2/D9f TYP. EXTERIOR CORNER FRAMING

1" = 1'-0"



3/D9f INTERIOR 3-STUD WALL INTERSECTION

1" = 1'-0"



4/D9f TYP. HOLD DOWN DETAIL

1" = 1'-0"

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0	1/7/16	3832

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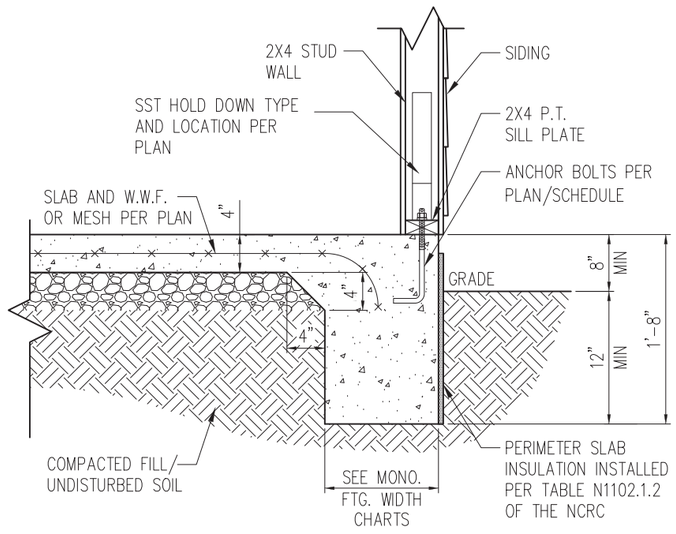
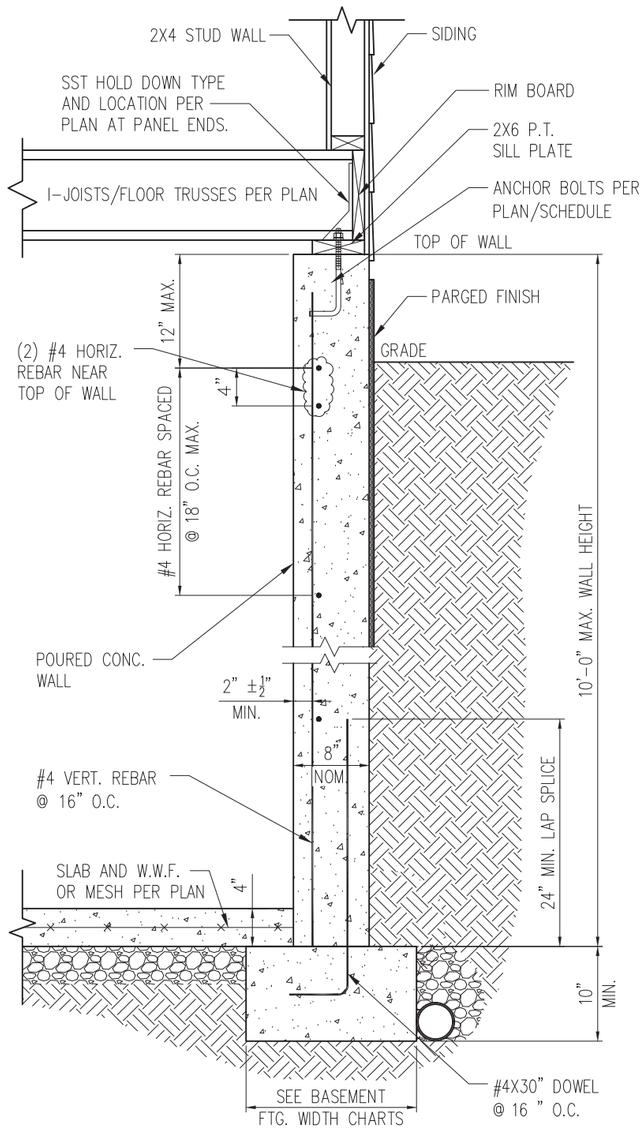
NORTH CAROLINA PROFESSIONAL SEAL 043923 ENGINEER WESLEY A. JONES
2/18/20

SHEET
D9f



1 D10f SLAB DETAIL w/ HOLD-DOWN

3/4" = 1'-0"



STANDARD - SIDING

2 D10f BASEMENT FOUNDATION WALL DETAIL W/ HOLD-DOWN

3/4" = 1'-0"

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0	1/7/16	3832

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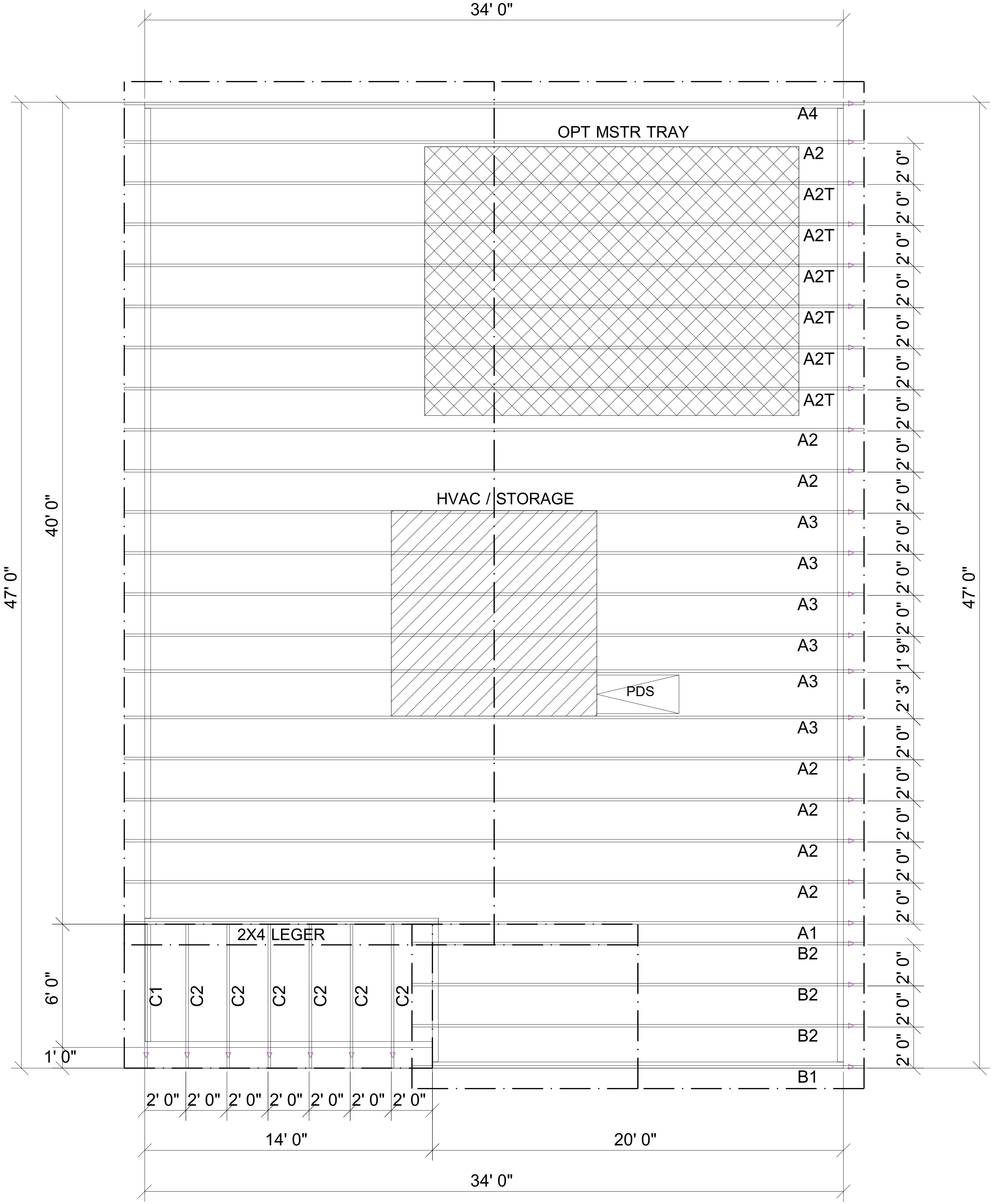
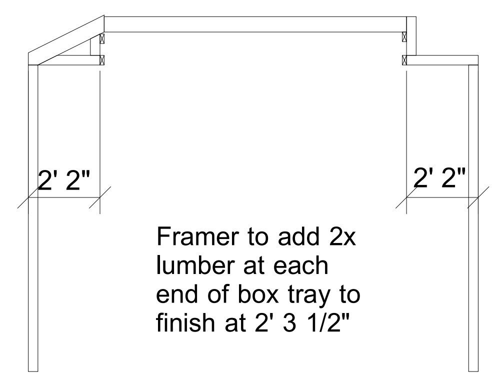
NORTH CAROLINA PROFESSIONAL SEAL 043923 ENGINEER WESLEY A. JONES
2/18/20

SHEET
D10f

71035903 30 CANE MILL



Tray box out detail



Framer to add 2x lumber at each end of box tray to finish at 2' 3 1/2"

Hatch Legend
HVAC / STORAGE
OPT MSTR TRAY

BUFFINGTON BEH W/ MSTR TRAY

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 SUITIBLITY OF ANY CONNECTOR THAT IS NOT "TRUSS TO TRUSS" AS THEY APPLY TO THIS SPECIFIC STRUCTURE.

ROOF AREA: 2123.73_RIDGE LINE: 50 _ VALLEY LINES: 0 _ HIP LINES:0 _ △ Indicates Left End of Truss

Customer
SMITH DOUGLAS
Job Name
BUFFINGTON BEH
Date:10-28-20
Scale: NTS
Quality Products for Quality Builders
Revision Date1:
Revision Date2:
Drawn By: AS
Checked By:
Quote Number
MASTER

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UFP MID-ATLANTIC,LLC
A UNIVERSAL FOREST PRODUCTS COMPANY

BURLINGTON, NC	PHONE (800) 476-9356
CHESAPEAKE, VA	PHONE (800) 476-3190
CONWAY, SC	PHONE (800) 397-9572
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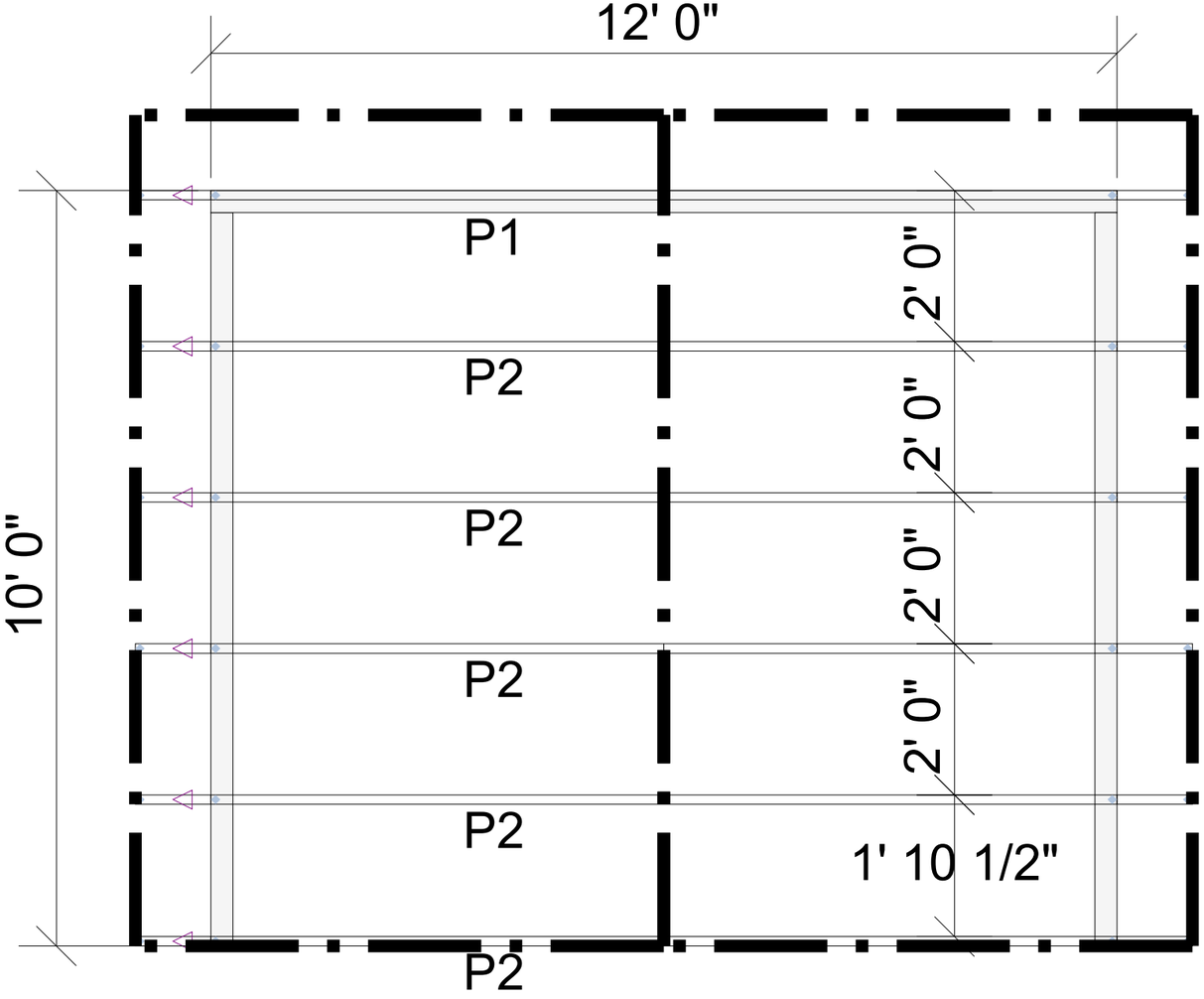
PEARISBURG, VA	PHONE (800) 397-9571

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. BLDR/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.

71035908 30 CANE MILL

OPT. SCREEN PORCH



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 SUITBILITY OF ANY CONNECTOR THAT IS NOT "TRUSS TO TRUSS" AS THEY APPLY TO THIS SPECIFIC STRUCTURE.

ROOF AREA: 162.33_RIDGE LINE: 11 _ VALLEY LINES: 0 _ HIP LINES:0 _ △ Indicates Left End of Truss

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.

1. TEMPORARY BRACING TO BE INSTALLED w/T.P.I. STANDARD BCSI-B1.
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LOCUST, NC	PHONE (704) 888-0920
LIBERTY , NC	PHONE (600) 648-4038
PEARISBURG, VA	PHONE (800) 397-9571

Customer
SMITH DOUGLAS

Job Name
BUFFINGTON 10X12 PORCH

Date:11/15/2018
Scale:NTS
Revision Date1:
Revision Date2:

Quality Products for Quality Builders

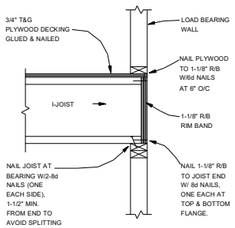
Drawn By: DG1
Checked By: ***

Drawing Number
MASTER

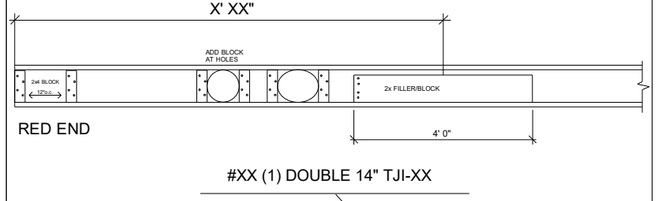
Products					
PlotID	Length	Product	Plies	Net Qty	Fab Type
J1	34' 0"	14" TJI® 110	1	11	MFD
J2	20' 0"	14" TJI® 110	2	2	MFD
J3	14' 0"	14" TJI® 110	1	2	MFD
J4	7' 0"	14" TJI® 110	1	1	MFD
J5	6' 0"	14" TJI® 110	1	1	MFD
J6	5' 0"	14" TJI® 110	1	2	MFD
J7	4' 0"	14" TJI® 110	1	1	MFD
J8	34' 0"	14" TJI® 210	1	6	MFD
J10	20' 0"	14" TJI® 210	1	6	MFD
J9	20' 0"	14" TJI® 210	1	2	MFD
J11	17' 0"	14" TJI® 210	1	3	MFD
RIM-1	16' 0"	1 1/8" x 14" TJ® Rim Board	1	12	MFD
Bk1	2' 0"	14" TJI® 110	1	8	FF

Connector Summary			
PlotID	Qty	Manuf	Product
H1	4	USP	TFL1714
H2	3	USP	TFL2014

A1 1 1/8" RIMBOARD BAND

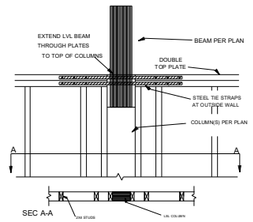


ASSEMBLED DOUBLE



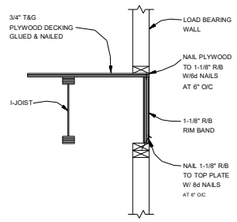
#XX (1) DOUBLE 14" TJI-XX

GB END GRAIN BEARING

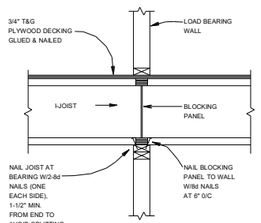


(E)nd (G)rain (B)earing Column

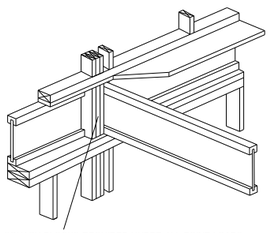
A7 1 1/8" RIMBOARD BAND



B3 BLOCKING AT LOAD BEARING WALL

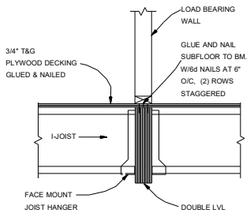


D2 POINT LOADS



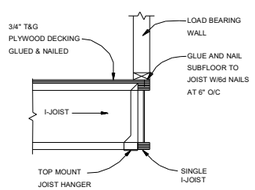
SQUASH BLOCKS REQUIRED UNDER ALL POINT LOADS

E1D DOUBLE LVL



FILL HANGER SEAT WITH GLUE BEFORE SETTING JOIST. FILL ROUND HOLES WITH NAILS

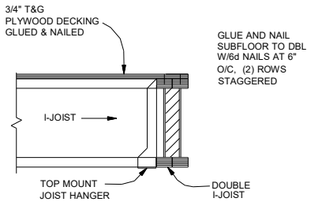
E2J SINGLE JOIST HANGING INTO SINGLE JOIST

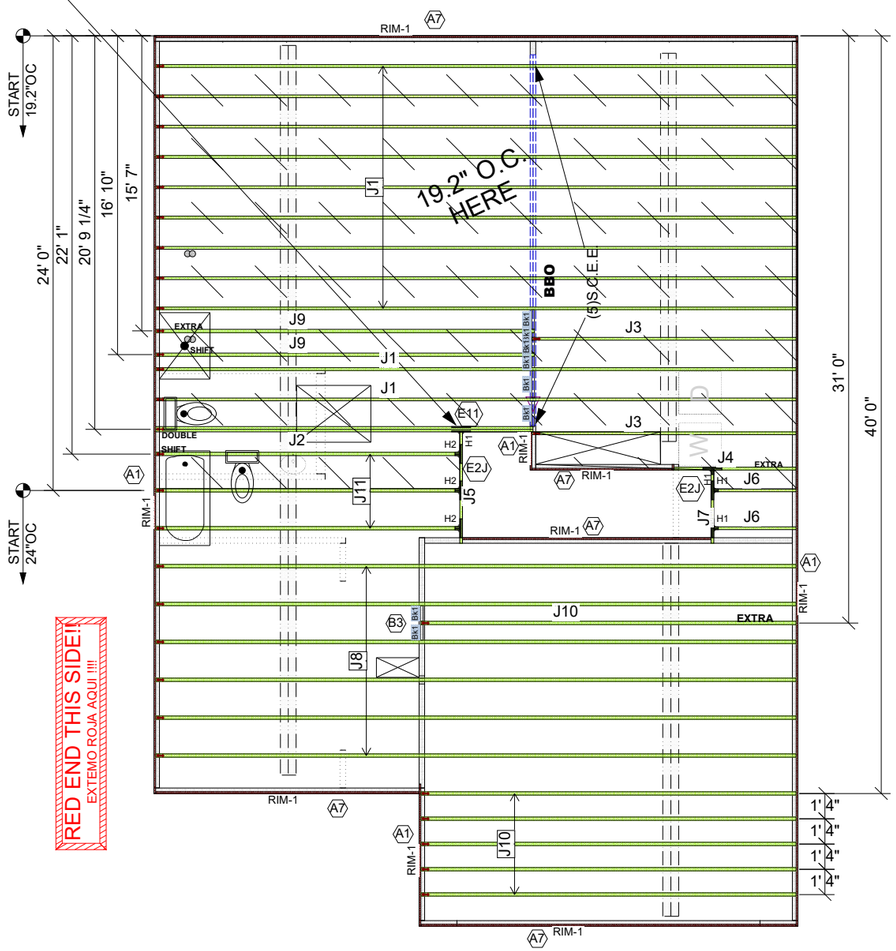


FILL HANGER SEAT WITH GLUE BEFORE SETTING JOIST. FILL ROUND HOLES WITH NAILS

E11 SINGLE JOIST INTO DBL. JOIST

FILL HANGER SEAT WITH GLUE BEFORE SETTING JOIST. FILL ROUND HOLES WITH NAILS





GENERAL NOTES:

1.) TOP CHORD OF JOISTS ARE PAINTED RED AT NUMBERED END. PLACE PAINTED END AS NOTED ON PLAN.
2.) FOLLOW SPECIAL SPACING AND LOCATION DIMENSIONS FOR EXTRAS OR SHIFTED JOISTS AS SHOWN ON PLAN.
3.) ALL INTERIOR WALL PLATES MUST BE LEVEL WITH OUTSIDE WALL TOP PLATES.
4.) DO NOT STACK CONSTRUCTION LOADS ON UN-BRACED JOISTS.
5.) PROVIDE SOLID SUPPORT BELOW ALL BEAM AND HEADER BEARING POINTS IN WALL AND JOIST SPACES CONTINUOUS DOWN TO THE FOUNDATION.
6.) LOCATE CRIPPLE STUDS IN JOIST SPACE DIRECTLY BELOW HEADER JACKS AT ALL FIRST FLOOR EXTERIOR DOOR LOCATIONS.
7.) 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.
8.) 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

ALL DIMENSIONS TO CENTERLINE UNLESS OTHERWISE NOTED

● Avoid Plumbing Drops

FRAMER NOTE

1. GLUE AND NAIL PLYWOOD SUBFLOOR TO BEAMS AND GIRDERS AT 6" O/C WHERE NO WALL IS ABOVE.
2. 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.

PLAN LEGEND

1B-, 2B- *INDICATES BEAM ABOVE TOP PLATE (FLUSH WITH FLOOR SYSTEM)

H-, 1H-, GDH- 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 SHIFT JOIST TO MISS PLUMBING, ALIGN W/WALL OR SUPPORT FURNITURE

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

DOUBLE TWO JOISTS SIDE BY SIDE (ONLY ASSEMBLED IF NOTED)

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.

LAYOUT FOR 19.2" O/C

1= 19-3/16"	9= 172-13/16"
2= 38-3/8"	10= 192"
3=57-5/8"	11= 211-3/16"
4= 76-13/16"	12= 230-3/8"
5= 96"	13= 249-13/16"
6= 115-3/16"	14= 268-13/16"
7= 134-3/8"	15= 288"
8= 153-5/8"	

FIELD VERIFY DIMENSIONS TO JOISTS LOCATED UNDER WALLS!!

2ND FLOOR LAYOUT

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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 HOMES
Job Name: BUFFINGTON
Date:4/22/2021 Scale:NTS
Quality Products for Quality Builders®
Revision Date1:
Revision Date2:
Drawn By: CP3
Checked By: EOR
Drawing Number
21040577F2
MSTR