PLANS DESIGNED TO THE 2018 IRC WITH NORTH CAROLINA RESIDENTIAL **CODE AMENDMENTS** 

HOUSE DESIGNED FOR 115 MPH, **EXPOSURE B** 

ANCHOR BOLTS SHALL BE MIN. 1/2" DIAMETER & SHALL EXTEND A MINIMUM 7" INTO MASONRY OR CONCRETE. ANCHOR BOLTS TO BE NO MORE THAN 6' O.C. AND WITHIN 12" OF THE CORNER.

WALL BRACING IS PER THE PRESCRIPTIVE CONTINUOUS SHEATHING METHOD, (R602), PROVIDING MIN 7/16" OSB W/ 6" EDGE AND 12" FIELD FASTENING. SEE PAGE S-1 FOR MORE INFORMATION

SIDING PER COMMUNITY REQUIREMENT. **GUTTERS PER COMMUNITY** REQUIREMENT.

MEAN ROOF HGT = 17'-10"

ENERGY COMPLIANCE MINIMUMS MAX GLAZING U-FACTOR = 0.35

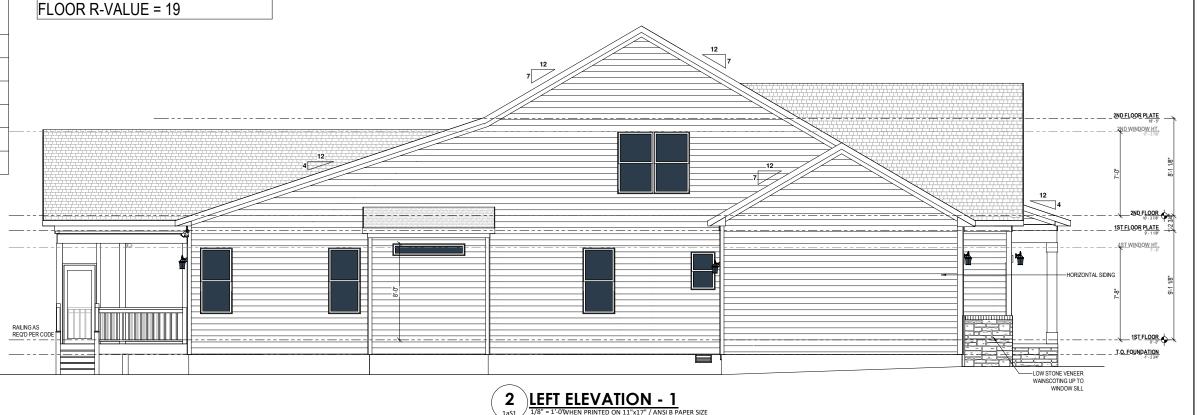
WALL R-VALUE = 15 CEILING R-VALUE = 38

Heated So	QFT
Description	Area
1st Floor Livable	2203 SF
2nd Floor Livable	709 SF
Total	2912 SF

Unheated S	SQFT
Description	Area
Garage	438 SF
3rd Car Garage	240 SF
Front Porch	191 SF
Screened Porch	198 SF
Deck	238 SF



FRONT ELEVATION - 1



Drawn Date:

**Plansource Designs** 

DESIGN BY PLANWORX ARCHITECTURE PA

Left Elevation

∞

Front (

SGM

Checked By:

Caruso Homes

RDC

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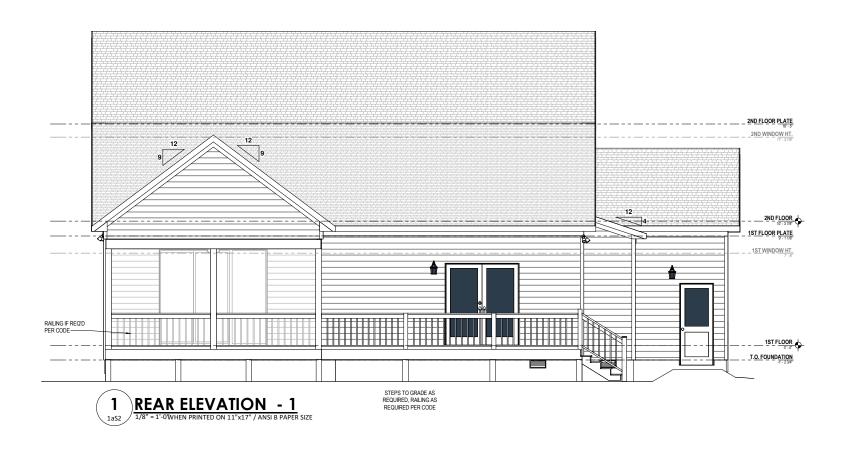
- OYL NC1

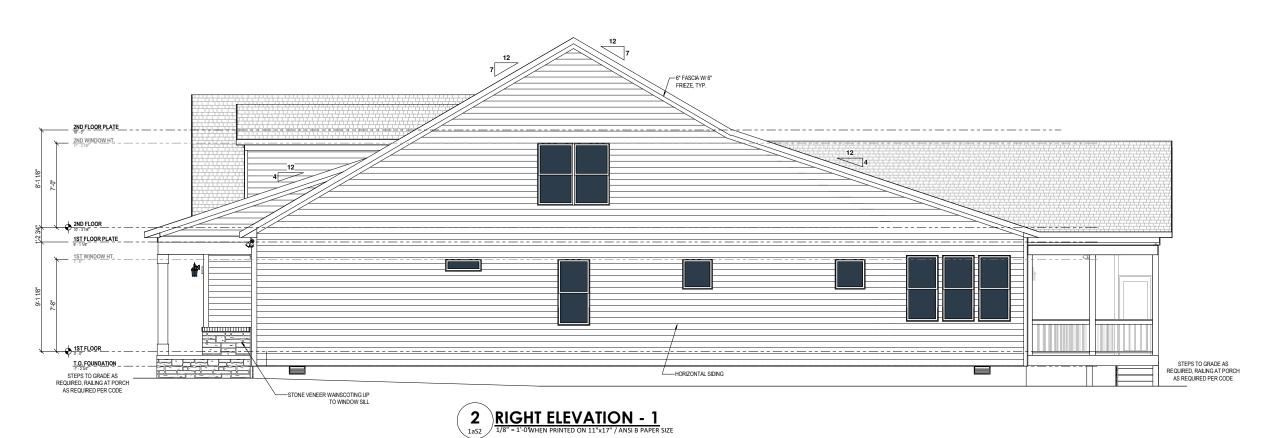
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Tillery

10/27/2023

1aS1





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Right and Rear Elevations

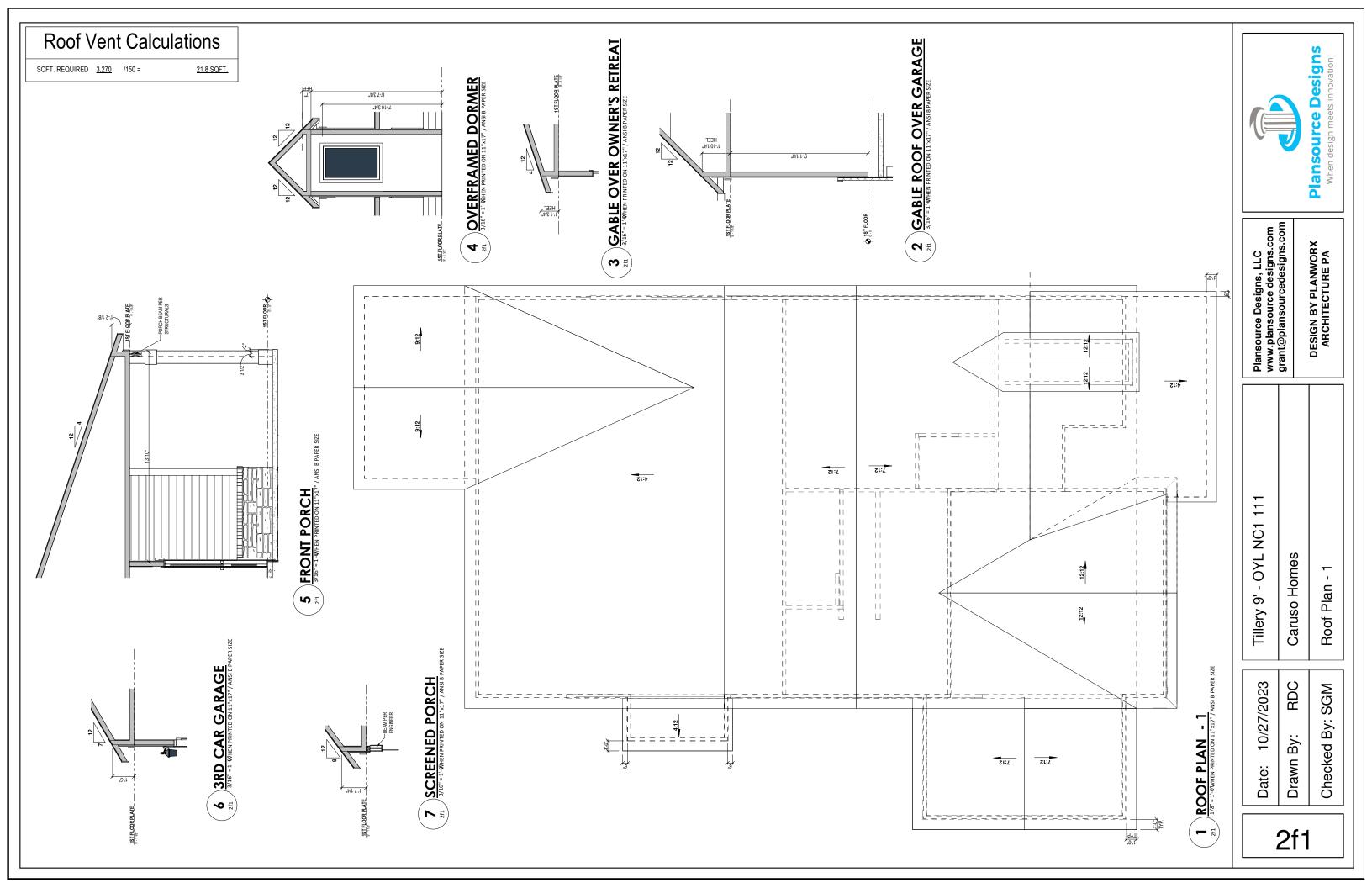
Caruso Homes

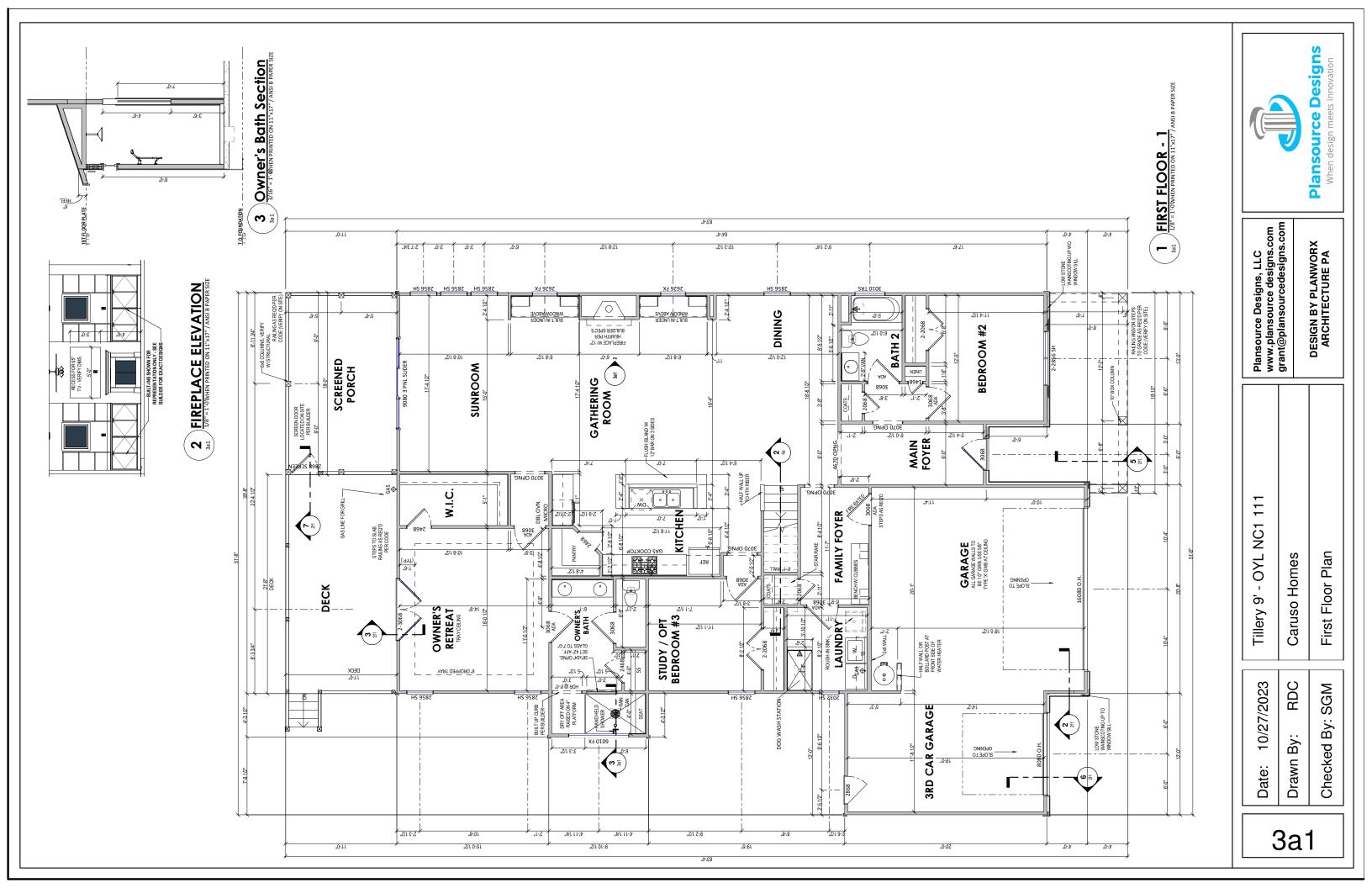
Tillery 9' - OYL NC1

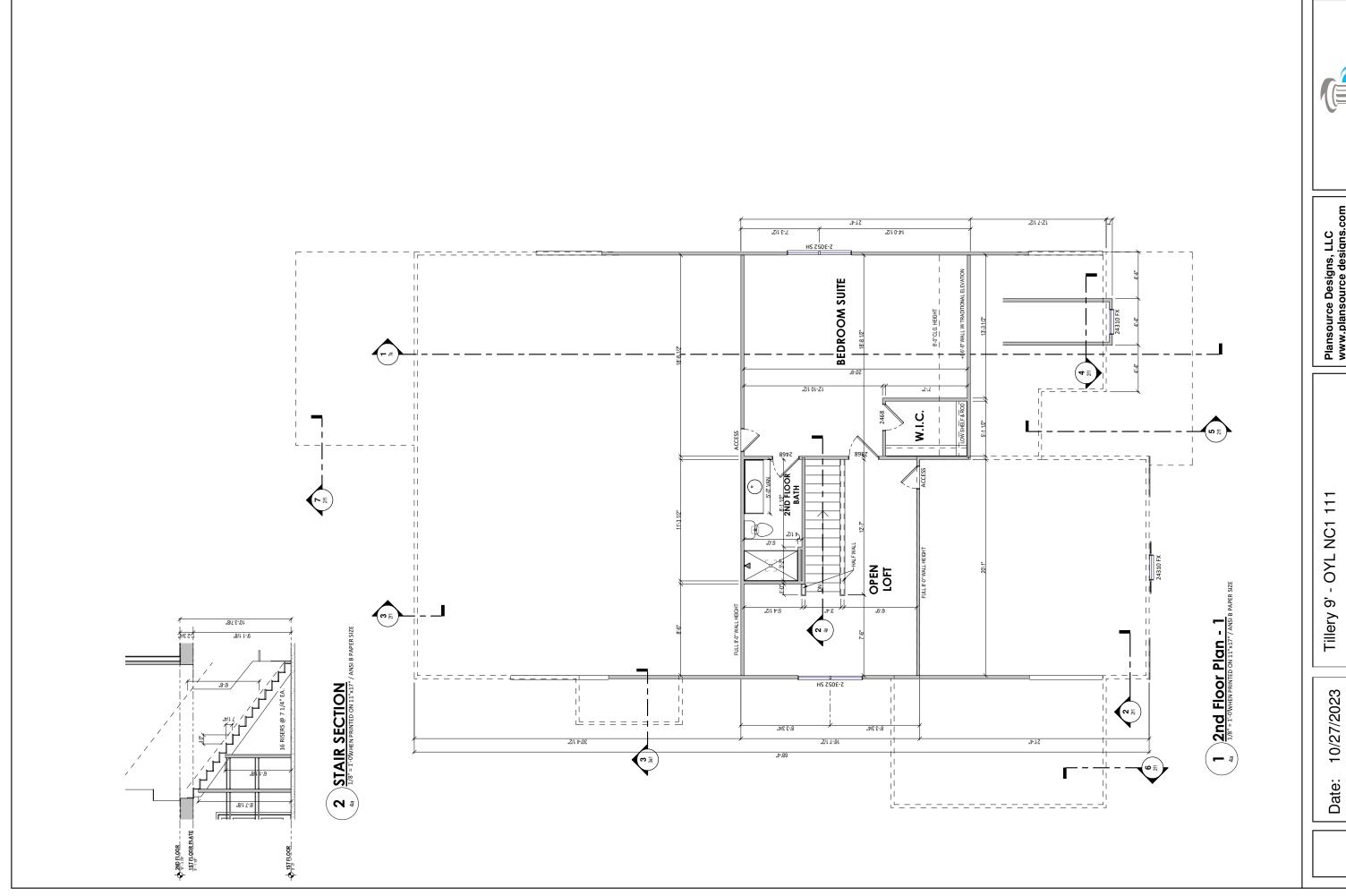
RDC Checked By: SGM

10/27/2023 Drawn By: Date:

1aS2







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Second Floor Plan

Checked By: SGM

Caruso Homes

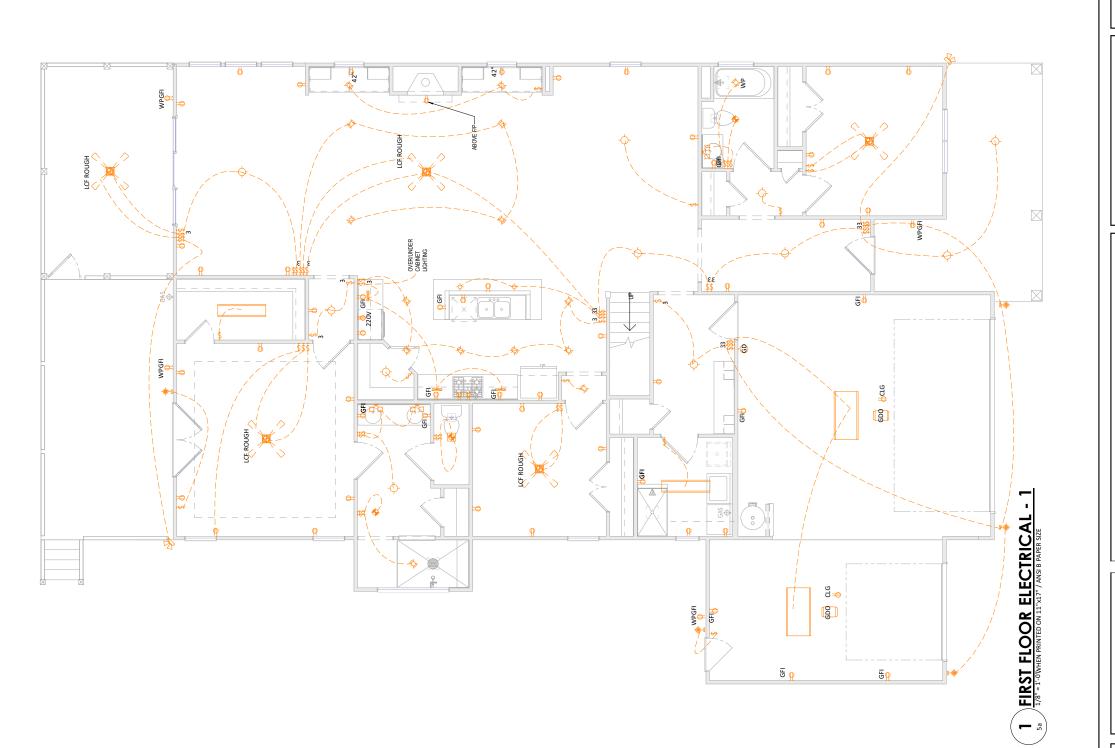
RDC

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4a

ELECTRICAL LEGEND						
SINGLE POLE SWITCH	б	DOOR BELL BUTTON				
3-WAY SWITCH	CHIME	DOOR BELL CHIME				
4-WAY SWITCH	60	GARAGE DOOR				
DIMMER SWITCH	GDO	BUTTON GARAGE DOOR				
220 VOLT OUTLET	₩PGEI	OPENER WEATHERPROOF				
DUPLEX OUTLET	ф	OUTLET CEILING OUTLET				
GROUND FAULT	Ф	FLOOR OUTLET				
OUTLET SMOKE DETECTOR	(S	CARBON MONOXIDE				
CARBON MONOXIDE	DATA	<b>№№</b>				
TELEVISION OUTLET	∆ PH	TELEPHONE OUTLET				
SERVICE PANEL	0	GARBAGE DISPOSAL				
SERVICE METER	& ACCENT	ACCENT LIGHT				
WALL MOUNT LIGHT	₹	SINGLE SCONCE				
FLOOD LIGHT	α <u>α</u>	DOUBLE SCONCE				
STRIP LIGHT	STR	STAIR LIGHT				
BATH FAN & LIGHT	<b>+</b>	BATH FAN				
COMBO CLOSET CASTER LIGHT	UC	UNDER CABINET				
PULL CHAIN LIGHT	- <del>(k</del> )-	LIGHT KEYLESS LIGHT				
FLUSH MOUNT LIGHT	HANGING	HANGING LIGHT				
HANGING PENDANT	MINI	MINIATURE PUCK				
RECESSED CAN LIGHT	<b>⇔</b> EB	RECESSED EYEBALL				
FLUORESCENT LIGHT	<b>®</b>	FUORESCENT LIGHT				
<u> </u>	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\					
CEILING FAN	✓ <	LIGHT w/ FAN				
F	LCI	ROUGH F JUGH				
LIGHTED CEILING	10/	LIGHT & FAN				
	SINGLE POLE SWITCH  3-WAY SWITCH  4-WAY SWITCH  DIMMER SWITCH  220 VOLT OUTLET  DUPLEX OUTLET  DUPLEX OUTLET  GROUND FAULT  OUTLET  SMOKE DETECTOR  CARBON MONOXIDE  DETECTOR  TELEVISION OUTLET  SERVICE PANEL  SERVICE METER  WALL MOUNT LIGHT  FLOOD LIGHT  STRIP LIGHT  BATH FAN & LIGHT  COMBO CLOSET CASTER LIGHT  PULL CHAIN LIGHT  HANGING PENDANT LIGHT  RECESSED CAN LIGHT  FLUSH MOUNT LIGHT  HANGING PENDANT  LIGHT  RECESSED CAN LIGHT  FLUSH MOUNT LIGHT  HANGING PENDANT  LIGHT  RECESSED CAN LIGHT  CEILING FAN	SINGLE POLE SWITCH  3-WAY SWITCH  4-WAY SWITCH  DIMMER SWITCH  220 VOLT OUTLET  DUPLEX OUTLET  CLG  GROUND FAULT  OUTLET  SMOKE DETECTOR  CARBON MONOXIDE  DETECTOR  DATA  TELEVISION OUTLET  WALL MOUNT LIGHT  FLOOD LIGHT  STRIP LIGHT  STRIP LIGHT  STRIP LIGHT  FLUSH MOUNT LIGHT  FLUSH MOUNT LIGHT  FLUSH MOUNT LIGHT  HANGING  HANGING PENDANT  LIGHT  FLUSH MOUNT LIGHT  HANGING PENDANT  LIGHT  FLUSH MOUNT LIGHT				





Tillery 9' - OYL NC1 111

10/27/2023

Date:

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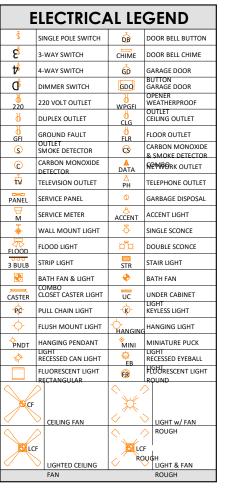
Caruso Homes

Electrical Plan First Floor

RDC Drawn By:

Checked By: SGM

5a





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1 SECOND FLOOR ELECTRICAL
5. 1/8" = 1'-0WHEN PRINTED ON 11"\*17" / ANSI B PAPER SIZE

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Tillery 9' - OYL NC1

Electrical Plan Second Floor

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10/27/2023 Checked By: SGM Date:

RDC Drawn By:

5b

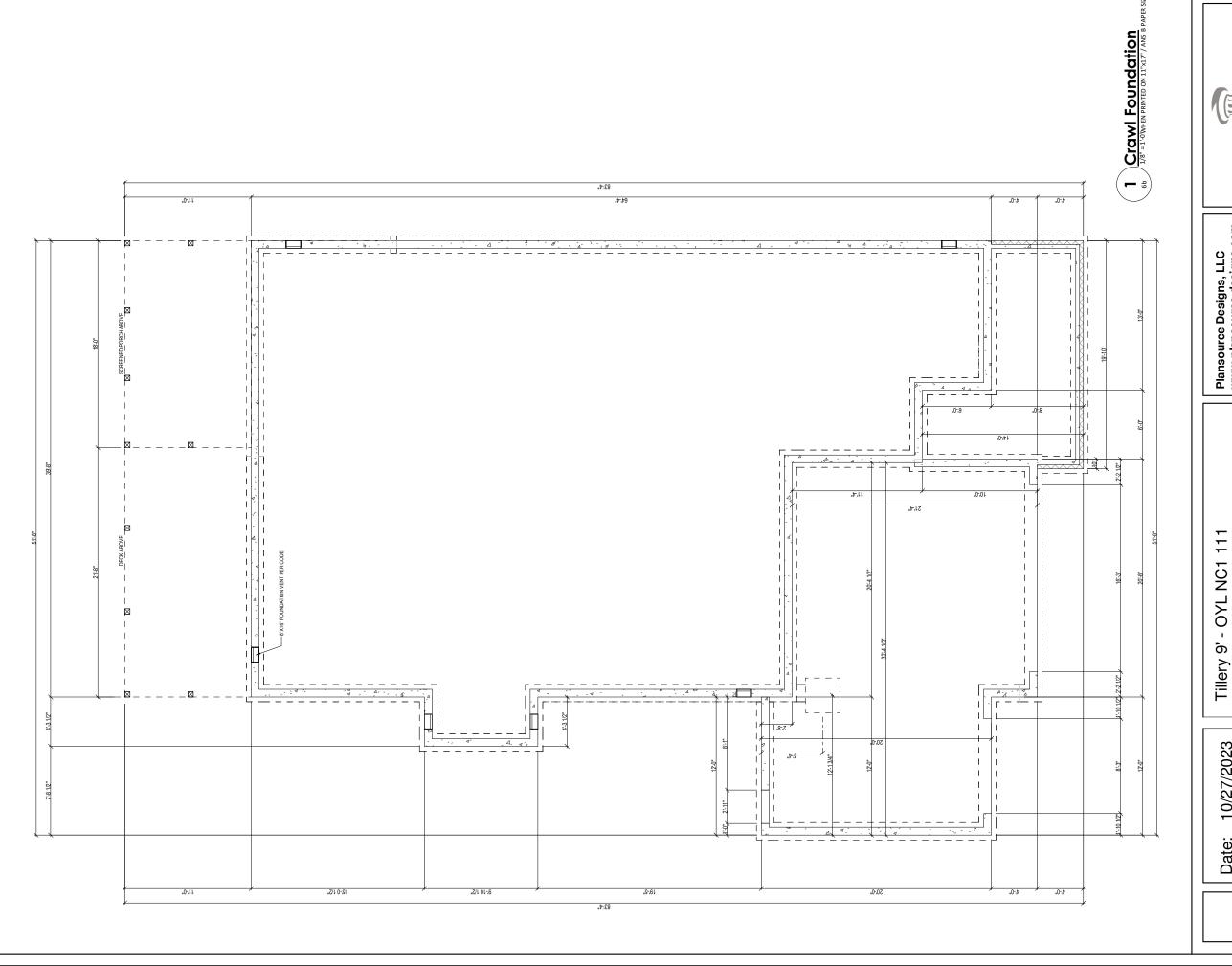
NOTE: THIS SHEET IS AN ARCHITECTURAL FOUNDATION SHEET INTENDED ONLY FOR EXTERIOR DIMENSIONS AND/OR VENTILATION REQUIREMENTS/SPECIFICATIONS.

SEE SEALED STRUCTURAL PAGE FOR INFORMATION REGARDING, BUT NOT LIMITED TO, FOOTING LOCATIONS AND SPECIFICATIONS, PIER LOCATIONS AND SPECIFICATIONS, DECK FRAMING, AND COMPACTION

**Crawl Vent Calculations** 

VENT SHALL BE PLACED WITHIN AT LEAST 3"-0" FROM EACH FOUNDATION CORNER # OF CORNERS EFFECTED = 6 SQFT. OF VENTILATION REQ'D =  $\frac{2203}{}$  CRAWL SQFT. /1500 =

NUMBER OF CORNERS IS GREATER THAN SQUARE FOOTAGE REQUIREMENTS, THEREFORE THE NUMBER OF FOUNDATION VENTS REQUIRED IS = **6 VENTS** 



6b

10/27/2023 Date:

sgm Drawn By:

**Crawl Foundation** Caruso Homes sgm Checked By:

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DESIGN BY PLANWORX ARCHITECTURE PA





BUILDING SECTION
1/8" = 1'-0'WHEN PRINTED ON 11"X17" / ANSI B PAPER SIZE

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**Building Section** 

sgm

Checked By:

Tillery 9' - OYL NC1 111

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10/27/2023 Drawn By: Date:

7a

DATE: 10/31/2023 SCALE: 24x36 1/4"=1'-0" 1|x|T 1/8"=1'-0" PROJECT \*: 4231.944R2 DRAWN BY: EMB CHECKED BY: MSB

ORIGINAL INFORMATION

REFER TO COVER SHEET FOR A

COMPLETE LIST OF REVISIONS

DESIGN SPECIFICATIONS:

Construction Type: Commerical ☐ Residential ☒

Applicable Building Codes:

• 2018 North Carolina Residential Building Code with All Local Amendments ASCE 7-10: Minimum Design Loads for Buildings and Other Structures

Design Loads:

Roof Live Loads Conventional 2x ..... . 20 PSF 1.2. Truss ..... . 60 PSF 1.2.1. Attic Truss ...... 2. Roof Dead Loads 2.1. Conventional 2x .... . 10 PSF 2.2. Truss ...... . 20 PSF 15 PSF

3. Snow ...... 3.1. Importance Factor 4. Floor Live Loads 40 PSF 4.1. Typ. Dwelling. 30 PSF 4.2. Sleeping Areas . 40 PSF 4.3. Decks ......

4.4. Passenger Garage .50 PSF 5. Floor Dead Loads 5.1. Conventional 2x. 5.2. I-Joist ..... 15 PSF 5.3. Floor Truss .... 15 PSF

6. Ultimate Design Wind Speed (3 sec. qust) ..........

6.1. Exposure ...... 6.2. Importance Factor. 6.3. Wind Base Shear 6.3.1. Vx =

6.3.2.V4 = 7. Component and Cladding (in PSF)

UP TO 30' 30'1"-35' 35'1"-40' 40'1"-45' ZONE 1 16.7,-18.0 17.6,-18.9 18.3,-19.7 18.8,-20.2 ZONE 2 16.7,-21.0 17.6,-22.1 18.3,-22.9 18.8,-23.6 ZONE 3 16.7,-21.0 17.6,-22.1 18.3,-22.9 18.8,-23.6 ZONE 4 | 18.2,-19.0 | 19.2,-20.0 | 19.9,-20.8 | 20.4,-21.3 ZONE 5 | 18.2,-24.0 | 19.2,-25.2 | 19.9,-26.2 | 20.4,-26.9

.. 130 MPH

8. Seismic

8.l. Site Class ... 8.2. Design Category 8.3. Importance Factor 8.4. Seismic Use Group ..

85. Spectral Response Acceleration 8.5.1. Sms = %g 8.5.2. Sml = %q 8.6. Seismic Base Shear 8.6.1. Vx =

8.6.2.Vy = 8.7. 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 8.8. Arch/Mech Components Anchored ........ 8.9. Lateral Design Control: Seismic □ Wind ⊠

STRUCTURAL PLANS PREPARED FOR:

OWNER:

Suite 205

Caruso Homes

Cary, NC 27511

206 High House Road

PROJECT ADDRESS:

DESIGNER: TBD

TBD

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

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

heet No.	Description
CSI	Cover Sheet, Specifications, Revisions
S1.Øm	Monolithic Slab Foundation
S1.Øs	Stem Wall Foundation
51.0c	Crawl Space Foundation
S1.0b	Basement Foundation
S2.Ø	Basement Framing Plan
S3.Ø	First Floor Framing Plan
S4.Ø	Second Floor Framing Plan
S5.Ø	Roof Framing Plan
56.0	Basement Bracing Plan
S7.Ø	First Floor Bracing Plan
S8.Ø	Second Floor Bracing Plan

REVISION LIST:
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SHEET LIST:

Revision No.	Date	Project No.	Description
1	7.11.23	944R	Updated per new architectural files
2	10.31.23	944R2	Updated per new architectural files Updated per new architectural files

GENERAL STRUCTURAL NOTES:

The design professional whose seal appears on these drawings is the structural engineer of record (SER) for this project. The SER bears the responsibility of the primary structural elements and the performance of this structure. No other party may revise, alter, or delete any structural aspects of these construction documents without written permission of SUMMIT Engineering, Laboratory & Testing, P.C. (SUMMIT) or the SER. For the purposes of these construction documents the SER and SUMMIT

shall be considered the same entity. The structure is only stable in its completed form. The contractor shall provide all required temporary bracing during construction to stabilize the structure.

The SER is not responsible for construction sequences, methods, or techniques in connection with the construction of this structure. The SER will not be held responsible for the contractor's failure to conform to the contract documents, should any non-conformities occur.

Any structural elements or details not fully developed on the construction drawings shall be completed under the direction of a licensed professional engineer. These shop drawings shall be submitted to SUMMIT for review before any construction begins. The shop drawings will be reviewed for overall compliance as it relates to the structural design of this project. Verification of the shop drawings for dimensions, or for actual field conditions,

is not the responsibility of the SER or SUMMIT. Verification of assumed field conditions is not the responsibility of the SER. The contractor shall verify the field conditions for accuracy and report any discrepancies to SUMMIT before

construction begins. The SER is not responsible for any secondary structural elements or non-structural elements, except for the elements specifically noted on the structural drawings.

This structure and all construction shall conform to all applicable sections of the international residential code. 8. This structure and all construction shall conform to all

applicable sections of local building codes. 9. All structural assemblies are to meet or exceed to requirements of the current local building code.

FOUNDATIONS:

The structural engineer has not performed a subsurface investigation. Verification of this assumed value is the responsibility of the owner or the contractor. Should any adverse soil condition be encountered the SER must be contacted before proceeding.

The bottom of all footings shall extend below the frost line for the region in which the structure is to be constructed. However, the bottom of all footings shall be a minimum of 12" below grade.

9. Assumed Soil Bearing Capacity ......

Any fill shall be placed under the direction or recommendation of a licensed professional engineer. The resulting soil shall be compacted to a minimum of 95%

maximum dry density. Excavations of footings shall be lined temporarily with a 6 mil polyethylene membrane if placement of concrete does not occur within 24 hours of excavation.

No concrete shall be placed against any subgrade containing water, ice, frost, or loose material.

TRUCTURAL STEEL:

Structural steel shall be fabricated and erected in accordance with the American Institute of Steel Construction "Code of Standard Practice for Steel Buildings and Bridges" and the manual of Steel Construction "Load Resistance Factor Design"

latest editions. Structural steel shall receive one coat of shop applied rust-inhibitive paint.

All steel shall have a minimum yield stress (F,,) of 36 ksi unless otherwise noted.

Welding shall conform to the latest edition of the American Welding Society's Structural Welding Code AWS D.I. Electrodes for shop and field welding shall be class ETOXX. All welding shall be performed by a certified welder per the above standards.

CONCRETE: Concrete shall have a normal weight aggregate and a minimum compressive strength (f'c) at 28 days of 3000 psi, unless

otherwise noted on the plan. Concrete shall be proportioned, mixed, and placed in accordance with the latest editions of ACI 318: "Building Code Requirements for Reinforced Concrete" and ACI 301: "Specifications for Structural Concrete for Buildings".

Air entrained concrete must be used for all structural elements exposed to freeze/thaw cycles and deicing chemicals. Air entrainment amounts (in percent) shall be within -1% to +2% of target values as follows: 3.1. Footings: 5%

3.2. Exterior Slabs: 5% No admixtures shall be added to any structural concrete without written permission of the SER.

Concrete slabs-on-grade shall be constructed in accordance with ACI 302.IR-96: "Guide for Concrete Slab and Slab Construction".

The concrete slab-on-grade has been designed using a subgrade modulus of k=250 pci and a design loading of 200 psf. The SER is not responsible for differential settlement, slab cracking or other future defects resulting from unreported conditions not in accordance with the above assumptions. Control or saw cut joints shall be spaced in interior

slabs-on-grade at a maximum of 15'-0" O.C. and in exterior slabs-on-grade at a maximum of 10'-0" unless otherwise noted. Control or saw cut joints shall be produced using conventional

process within 4 to 12 hours after the slab has been finished Reinforcing steel may not extend through a control joint.

Reinforcing steel may extend through a saw cut joint. 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.

CONCRETE REINFORCEMENT: Fibrous concrete reinforcement, or fibermesh, specified in concrete slabs-on-grade may be used for control of cracking due to shrinkage and thermal expansion/contraction, lowered water migration, an increase in impact capacity, increased

abrasion resistance, and residual strength. Fibermesh reinforcing to be 100% virgin polypropylene fibers containing no reprocessed olefin materials and specifically manufactured for use as concrete secondary reinforcement. Application of fibermesh per cubic yard of concrete shall equal

a minimum of 0.1% by volume (1.5 pounds per cubic yard) Fibermesh shall comply with ASTM CIII6, any local building code requirements, and shall meet or exceed the current industry standard.

Steel reinforcing bars shall be new billet steel conforming to ASTM A615, grade 60. 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"

Horizontal footing and wall reinforcement shall be continuous and shall have 90° bends, or corner bars with the same size/spacing as the horizontal reinforcement with a class B tension splice. Lap reinforcement as required, a minimum of 40 bar diameters for tension or compression unless otherwise noted. Splices in

masonry shall be a minimum of 48 bar diameters.

3. 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

10. Where reinforcing steel is required vertically, dowels shall be provided unless otherwise noted.

<u>WOOD FRAMING:</u> 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

Southern-Yellow-Pine (SYP) #2, unless noted otherwise. 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 psi2.4.Fc = 700 psi

Wood in contact with concrete, masonry, or earth shall be pressure treated in accordance with AWPA standard C-15. All other moisture exposed wood shall be treated in accordance with AWPA standard C-2

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. Exterior and load bearing stud walls are to be 2x4 SPF #2 @ 16" O.C. unless otherwise noted. Studs shall be continuous from the sole plate to the double top plate. Studs shall only be discontinuous at headers for window/door openings. A minimum of one king stud shall be placed at each end of the header.

King studs shall be continuous. Individual studs forming a column shall be attached with one 10d nail @ 6" O.C. staggered. The stud column shall be continuous to the foundation or beam. The column shall be properly blocked at all floor levels to ensure proper load transfer. 9. Multi-ply beams shall have each ply attached with (3) 10d nails a

10. Four and five ply beams shall be bolted together with (2) rows of 1/2" diameter through bolts staggered @ 16" O.C. unless noted otherwise.

WOOD TRUSSES:

The wood truss manufacturer/fabricator is responsible for the design of the wood trusses. Submit sealed shop drawings and supporting calculations to the SER for review prior to fabrication. The SER shall have a minimum of five (5) days for review. The review by the SER shall review for overall compliance with the design documents. The SER shall assume no responsibility for the correctness for the structural design for

the wood trusses. The wood trusses shall be designed for all required loadings as specified in the local building code, the ASCE Standard "Minimum Design Loads for Buildings and Other Structures." (ASCE 7-10), and the loading requirements shown on these specifications. The truss drawings shall be coordinated with all other construction documents and provisions provided for loads shown on these drawings including but not limited to HVAC equipment, piping, and architectural fixtures attached to

the trusses. The trusses shall be designed, fabricated, and erected in accordance with the latest edition of the "National Design Specification for Wood Construction." (NDS) and "Design Specification for Metal Plate Connected Wood Trusses."

The truss manufacturer shall provide adequate bracing information in accordance with "Commentary and Recommendations for Handling, Installing, and Bracing Metal Plate Connected Wood Trusses" (HIB-91). This bracing, both temporary and permanent, shall be shown on the shop drawings. Also, the shop drawings shall show the required attachments for

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.

<u>EXTERIOR WOOD FRAMED DECKS:</u> 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.

WOOD STRUCTURAL PANELS:

Fabrication and placement of structural wood sheathing shall be in accordance with the APA Design/Construction Guide "Residential and Commercial," and all other applicable APA standards.

All structurally required wood sheathing shall bear the mark of the APA.

Wood wall sheathing shall comply with the requirements of local building codes for the appropriate state as indicated on these drawings. Refer to wall bracing notes in plan set for more

information. Sheathing shall be applied with the long direction perpendicular to framing, unless noted otherwise. Roof sheathing shall be APA rated sheathing exposure 1 or 2. Roof sheathing shall be continuous over two supports and attached to its supporting roof framing with (1)-8d CC nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied with the long direction perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of plywood clips or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as

required by the state Building Code. Wood floor sheathing shall be APA rated sheathing exposure I or 2. Attach sheathing to its supporting framing with (1)-8d CC ringshank nail at 6"o/c at panel edges and at 12"o/c in panel field unless otherwise noted on the plans. Sheathing shall be applied perpendicular to framing. Sheathing shall have a span rating consistent with the framing spacing. Use suitable edge support by use of T&G plywood or lumber blocking unless otherwise noted. Panel end joints shall occur over framing. Apply building paper over the sheathing as required by the

state Building Code. Sheathing shall have a 1/8" gap at panel ends and edges as recommended in accordance with the APA.

TRUCTURAL FIBERBOARD PANELS:

Fabrication and placement of structural fiberboard sheathing shall be in accordance with the applicable AFA standards. All structurally required fiberboard sheathing shall bear the

mark of the AFA. 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

Sheathing shall have a 1/8" gap at panel ends and edges are recommended in accordance with the AFA.

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 CORE ENFORCEMENT OFFICIAL

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.

PILASTERS TO BE BONDED TO PERIMETER FOUNDATION WALL.
 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 1" MINIMUM EMBEDMENT INTO MASONRY OR CONCRETE. MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION AND (1) LOCATED NOT MORE THAN 12" FROM THE CORNER. ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF THE PLATE.

13. ABBREVIATIONS:

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

SJ = SINGLE JOIST
FT = FLOOR TRUSS
FT = FLOOR TRUSS
TR = TRIPLE RAFTER
OC = ON CENTER
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.

REINFORCE GARAGE PORTAL WALLS PER FIGURE R602.10.4.3 OF THE 2018 NCRC. (TYP)

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

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

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 I PER TABLE R405.1

BEAM POCKETS MAY BE SUBSTITUTED FOR MASONRY PILASTERS AT GIRDER ENDS. BEAM POCKETS SHALL HAVE A MINIMUM 4" SOLID MASONRY BEARING.

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

18"x24" MIN. CRAWL SPACE ACCESS DOOR TO BE LOCATED IN FIELD PER BUILDER. PROVIDE MINIMUM (2) 2x10 HEADER OVER DOOR W/ MIN. 4" BEARING AT EACH END. AVOID SHOWN POINT LOADS.

DECK JOISTS SHALL BE SPACED AT A MAX. 12" O.C. WHEN DECK BOARDS ARE INSTALLED DIAGONALLY.

NOTE: FOUNDATION ANCHORAGE HAS BEEN DESIGNED TO RESIST THE CONTINUOUS WIND UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.3.5 OF THE 2018 NCRC.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY <u>CARUSO HOMES</u> COMPLETED/REVISED ON 10/27/2023. 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 CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

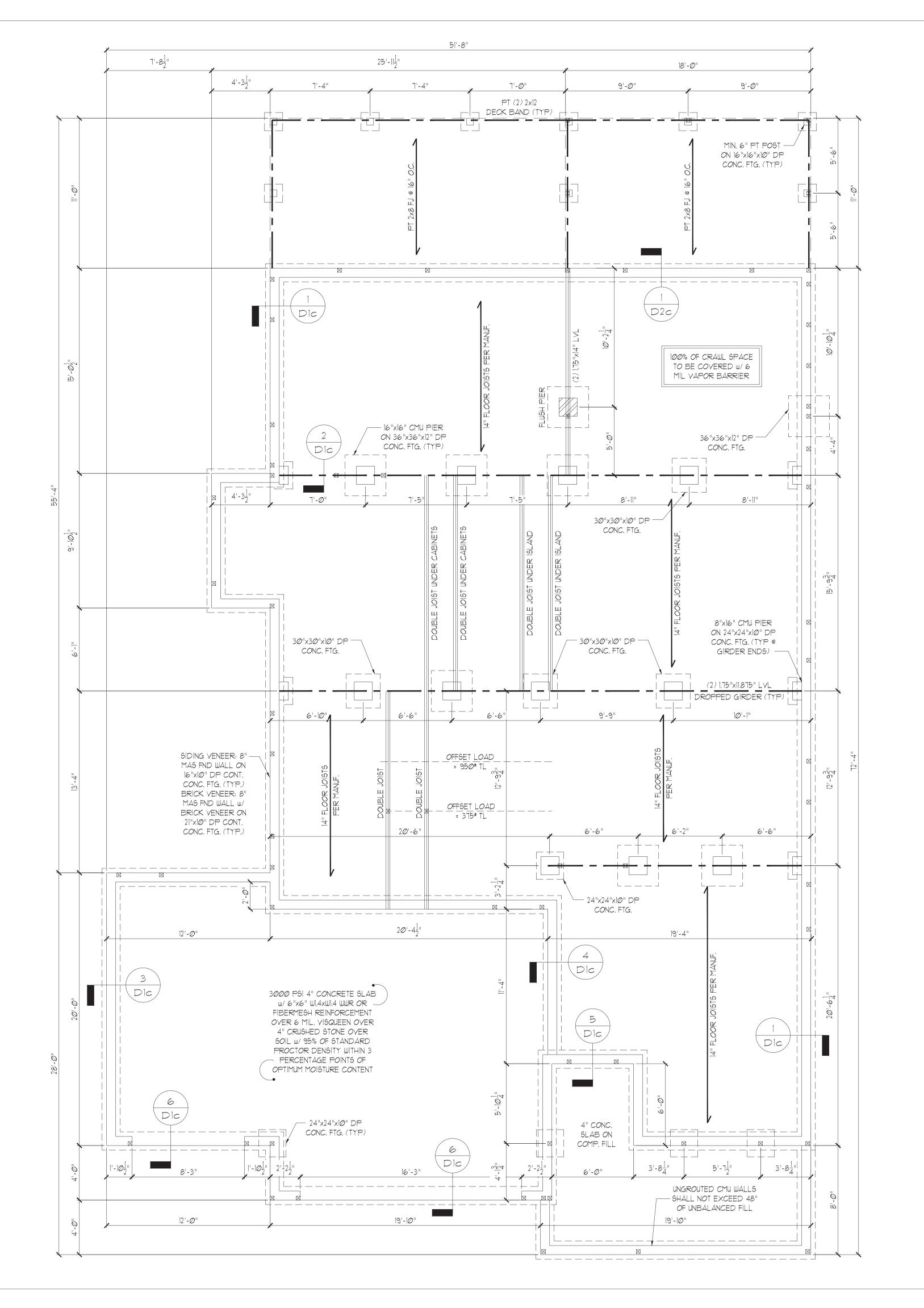
#### STRUCTURAL MEMBERS ONLY

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

CRAWL SPACE FOUNDAITON PLAN

SCALE: 1/4"=1"



<u>CRAWL SPACE VENTILATION:</u>
2203 SQ. FT. / 150 = 14.1 SQ. FT. REQ'D.
14.1 SQ. FT. / 0.45 PER VENT = 33 VENTS REQ'D.

NOTE: WHERE AN APPROVED VAPOR BARRIER IS INSTALLED OVER GROUND SURFACE, THE REQ'D. VENTILATION MAY BE REDUCED BY 50%.

STUD SF	PACED a F	ND CRIPP	LE WALLS
STUD SIZE	MA	AXIMUM STUD HEI	GHT
	UP TO 48"	4'-1" TO 6'-0"	6'-1" TO 8'-0"
2×4	16"	12"	N/A
2x6	16"	16"	12"

I. CRIPPLE STUDS EXCEEDING 48" IN HEIGHT SHALL BE CONSIDERED AN ADDITIONAL STORY PER R602.9

2. CRIPPLE STUDS SHALL NOT BE FRAMED SMALLER THAN THE STUD SIZE FRAMED ABOVE.

3. SQUASH BLOCKING SHALL BE INSTALLED UNDER ALL SHOWN STUD COLUMNS.

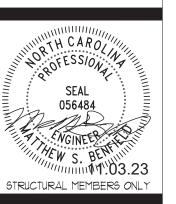
SHOWN STUD COLUMNS.

4. CRIPPLE WALLS SHALL BE SHEATHED IN ACCORDANCE WITH SHEATHING METHOD DENOTED ON FLOOR ABOVE.

3070 HAMMOND BUSINESS
PLACE; SUITE 171
RALEIGH, NC 27603
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FAX: 919.380.9993
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SUMMIT

NCI III (Tillery I)
Crawl Space Foundation



ORIGINAL INFORMATION
PROJECT \* DATE
4231.944 04/12/2023

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

- 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
- 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: MICROLLAM (LVL):  $F_b = 2600$  PSI,  $F_V = 285$  PSI,  $E = 1.9 \times 10^6$  PSI
- PARALLAM (PSL):  $F_b = 2900 \text{ PSI}, F_V = 290 \text{ PSI}, E = 1.25 \times 10^6 \text{ PSI}$ 5. ALL WOOD MEMBERS SHALL BE #2 SYP UNLESS NOTED ON PLAN. ALL
- STUD COLUMNS SHALL BE #2 SPF (UNO). 6. ALL BEAMS SHALL BE SUPPORTED WITH A (2) 2x4 #2 SPF STUD COLUMN
- AT EACH END UNLESS NOTED OTHERWISE. 1. 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, MINIMUM (2) ANCHOR BOLTS PER PLATE SECTION AND (1) LOCATED NOT MORE THAN 12" FROM THE CORNER ANCHOR BOLTS SHALL BE LOCATED IN THE CENTER THIRD OF
- 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.
- II. ALL NON-LOAD BEARING HEADERS SHALL BE (1) FLAT 2x4 SYP #2, DROPPED. FOR NON-LOAD BEARING HEADERS EXCEEDING 8'-0" IN WIDTH AND/OR WITH MORE THAN 2'-O" OF CRIPPLE WALL ABOVE, SHALL BE (2) FLAT 2x4 SYP #2, DROPPED. (UNLESS NOTED OTHERWISE)
- 12. ABBREVIATIONS:
  - DJ = DOUBLE JOIST SJ = SINGLE JOIST FT = FLOOR TRUSS GT = GIRDER TRUSS SC = STUD COLUMN
  - TJ = TRIPLE JOIST
  - DR = DOUBLE RAFTER TR = TRIPLE RAFTER EE = EACH END OC = ON CENTER CL = CENTER LINE PL = POINT LOAD

WALL S	STUD SCI	HEDULE	(10 FT H	EIGHT)
STUD SIZE		STUD SPA	CING (0.C.)	
	ROOF ONLY	ROOF & 1 FLOOR	ROOF & 2 FLOORS	NON-LOAD BEARING
2×4	24"	16"	12"	24"
2x6	24"	24"	16"	24"
NOTEC				

1. BRACED WALLS STUDS SHALL BE A MAX. OF 16" O.C. 2. STUDS SUPPORTS OPTIONAL WALK-UP ATTIC SHALL BE SPACED A MAX. OF 16" O.C. 3. TWO STORY WALLS SHALL BE FRAMED w/ 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY. 4. FOR STUDS GREATER THAN 10'-0" IN HEIGHT, REFER TO

ALL HEADERS WHERE BRICK IS USED, TO BE:

TWO STORY WALL NOTE FOR FRAMING REQUIREMENT.

LINTEL (U.N.O.)

LINTEL SCHEDULE:

STEEL ANGLES TO HAVE MINIMUM 4" BEARING ONTO BRICK AT EACH END.

- 1) L3x3x1/4"
- 2 L5x3"x1/4"
- 3 L5x3-1/2x5/16"
- 4 L5x3-1/2"x5/16" ROLLED OR EQUAL ARCHED COMPONENT.

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

SHADE WALLS INDICATED LOAD BEARING WALLS

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

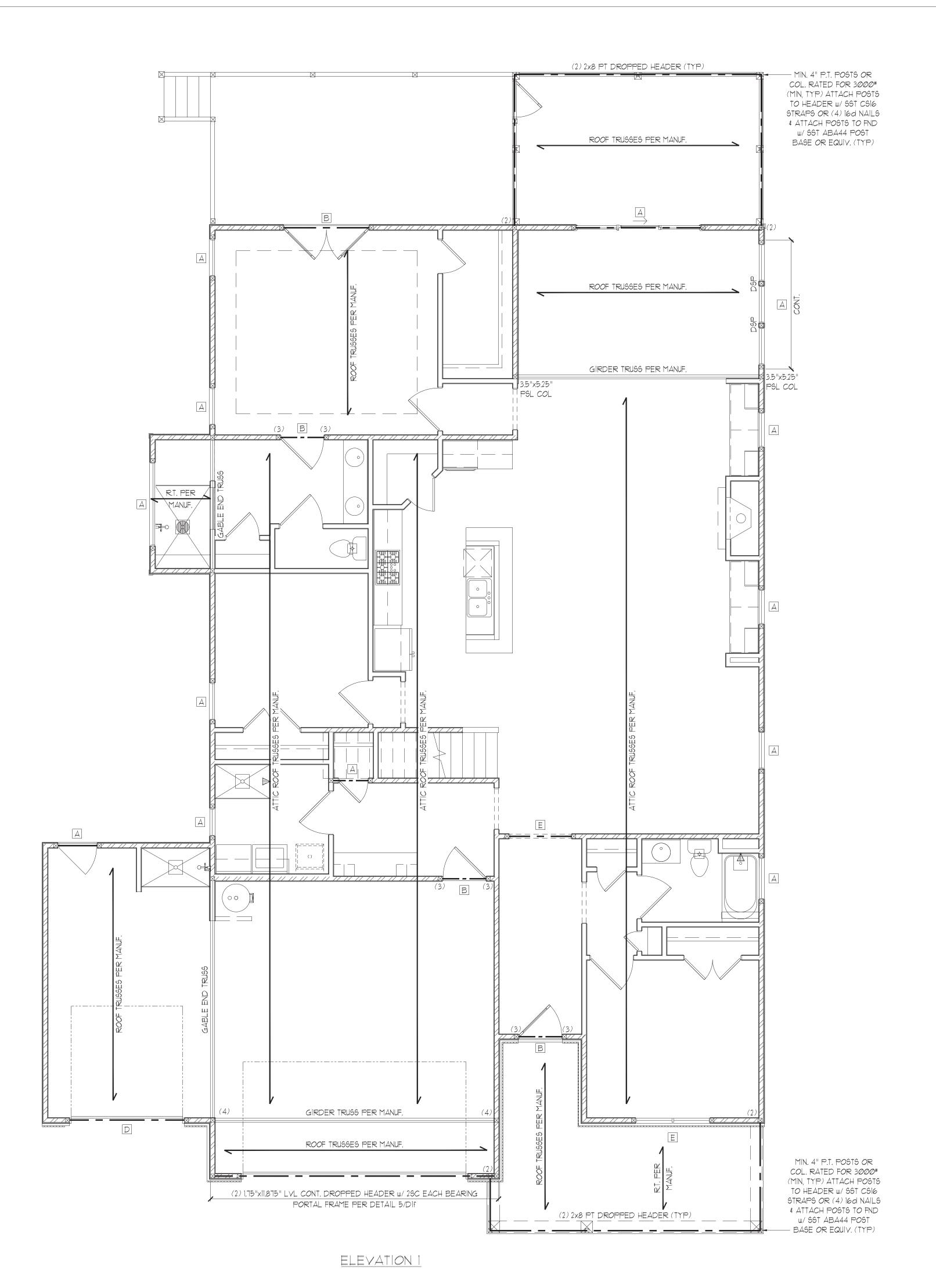
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR FRAMING PLAN

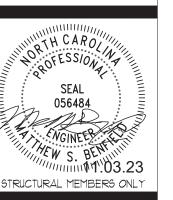


HEADER SCHEDULE TAG SIZE JACKS (EACH END) (2) 2x6 (2) (2)2x8 (2) 2x10(2)  $(2) 2 \times 12$ (2) (2) 9-1/4" LSL/LVL (3) (1) (3)2x6 (3)2x8 (3) 2x 10(2)  $(3) 2 \times 12$ 

1. HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION. 2. ALL HEADERS TO BE DROPPED (U.N.O.). 3. STUD COLUMNS NOTED ON PLAN OVERRIDE STUD COLUMNS LISTED ABOVE (U.N.O.).

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

SUMMIT Testing, Inc.



DATE: 10/31/2023 SCALE: 24x36 |/4"=1'-0" ||x|7 |/8"=1'-0" PROJECT \*: 4231.944R2 DRAWN BY: EMB CHECKED BY: MSB

ORIGINAL INFORMATION PROJECT \* DATE 4231.944 *04/12/20*23

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

HEADER SCHEDULE				
TAG	SIZE	JACKS (EACH END)		
А	(2) 2x6	(1)		
В	(2) 2×8	(2)		
С	(2) 2×1Ø	(2)		
D	(2) 2×12	(2)		
E	(2) 9-1/4" LSL/LVL	(3)		
F	(3) 2x6	(1)		
G	(3)2x8	(2)		
Н	(3) 2xlØ	(2)		
	(3) 2×12	(3)		

NOTES:

1. HEADER SIZES SHOWN ON PLANS ARE MINIMUMS. GREATER
HEADER SIZES MAY BE USED FOR EASE OF CONSTRUCTION.

2. ALL HEADERS TO BE DROPPED (U.N.O.).

3. STUD COLUMNS NOTED ON PLAN OVERRIDE STUD
COLUMNS LISTED ABOVE (U.N.O.).

KING STUD	SCHEDULE
MAXIMUM HEADER SPAN	MINIMUM KING STUDS E.E.
3'-Ø"	(1)
4'-Ø"	(2)
8'-Ø"	(3)
12'-Ø"	(5)
16'-0"	(6)

# WALL STUD SCHEDULE (10 FT HEIGHT) STUD SIZE | STUD SPACING (0.C.)

0 100 0111		0100	011104 (0.0.)	
	ROOF ONLY	ROOF & 1 FLOOR	ROOF & 2 FLOORS	NON-LOA BEARING
2×4	24"	16"	12"	24"
2x6	24"	24"	16"	24"
NOTES: 1. BRACED	WALLS STUDS	SHALL BE ,	4 MAX. OF 16	" O.C.

2. STUDS SUPPORTS OPTIONAL WALK-UP ATTIC SHALL BE SPACED A MAX. OF 16" O.C.
3. TWO STORY WALLS SHALL BE FRAMED w/ 2x4 STUDS @ 12" O.C. OR 2x6 STUDS @ 16" O.C. BALLOON FRAMED w/ CROSS BRACING @ 6'-0" O.C. VERTICALLY.

4. FOR STUDS GREATER THAN 10'-0" IN HEIGHT, REFER TO TWO STORY WALL NOTE FOR FRAMING REQUIREMENT.

## ALL HEADERS WHERE BRICK IS USED, TO BE:

LINTEL (U.N.O.)

#### LINTEL SCHEDULE:

STEEL ANGLES TO HAVE MINIMUM 4" BEARING ONTO BRICK AT EACH END.

- \_\_\_\_\_ L3x3x1/4"
- 2 L5x3"x1/4" 3 L5x3-1/2x5/16"
- (4) L5x3-1/2"x5/16" ROLLED OR EQUAL ARCHED COMPONENT.

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

SHADE WALLS INDICATED LOAD BEARING WALLS

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

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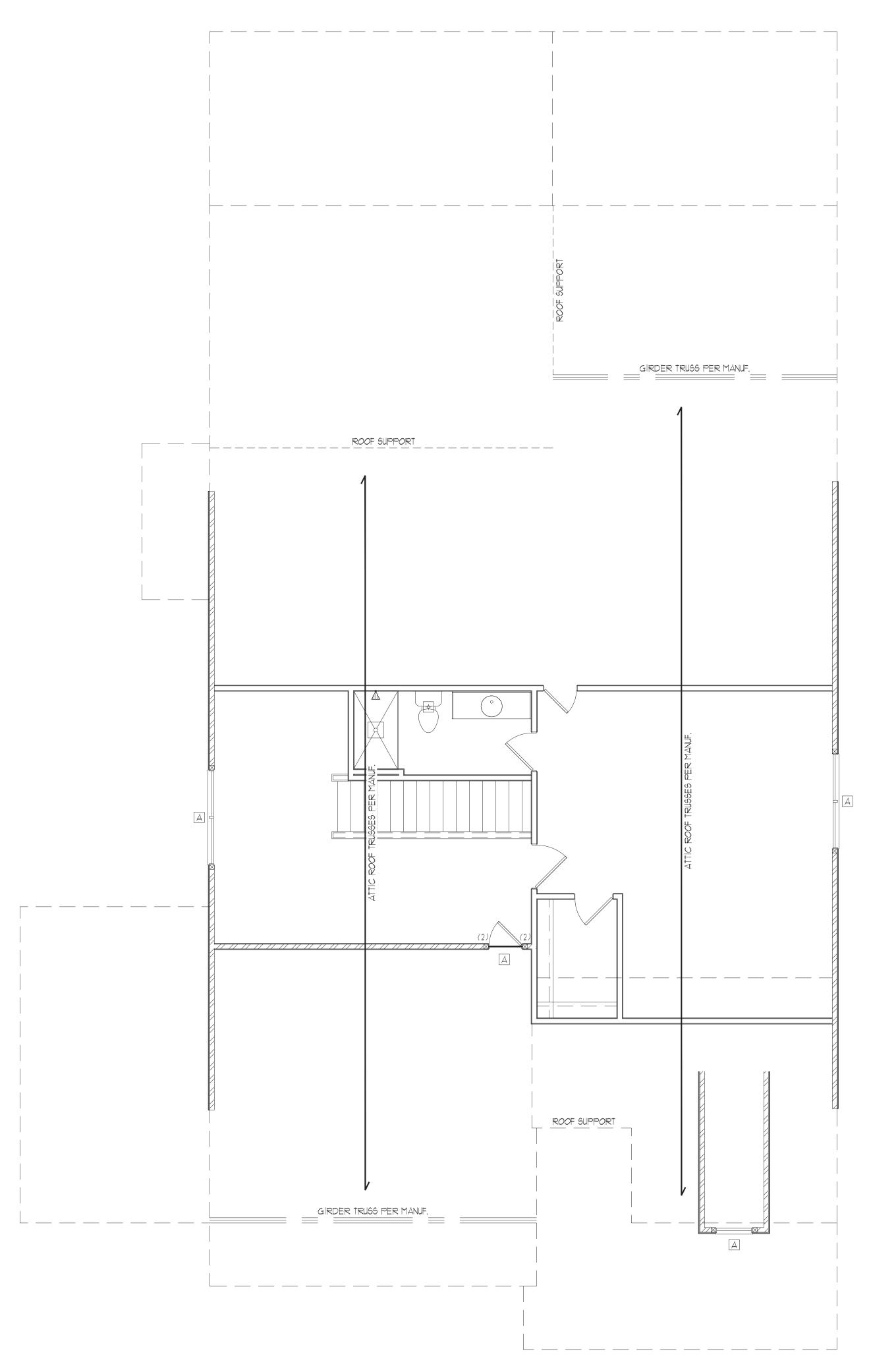
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

SECOND FLOOR FRAMING PLAN

SCALE: 1/4"=1"



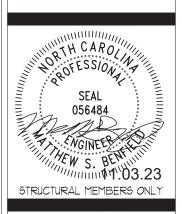












ORIGINAL INFORMATION
PROJECT \* DATE
4231,944 04/12/2023

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS 1. ALL PRODUCTS LISTED ARE SIMPSON STRONG-TIE. EQUIVALENT PRODUCTS MAY BE USED PER MANUFACTURER'S SPECIFICATIONS.
2. UPLIFT VALUES LISTED ARE FOR SYP \*2 GRADE MEMBERS.
3. REFER TO TRUSS LAYOUT PER MANUF. FOR UPLIFT VALUES AND TRUSS TO TRUSS CONNECTIONS. CONNECTORS SPECIFIED BY TRUSS MANUFACTURER OVERRIDE THOSE LISTED ABOVE.
4. CONTACT SUMMIT FOR REQUIRED CONNECTORS WHEN LOADS EXCEED THOSE LISTED ABOVE.

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

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

REFER TO DETAIL 5/D3F FOR EYEBROW, RETURN OR SHED ROOF FRAMING REQUIREMENTS. (TYP FOR ROOFS PROTRUDING MAXIMUM 24" FROM STRUCTURE)

NOTE: TRUSS UPLIFT LOADS SHALL BE DETERMINED PER TRUSS MANUFACTURER IN ACCORDANCE WITH SECTION R802.11.1.1. 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.

THESE PLANS ARE DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS PROVIDED BY <u>CARUSO HOMES</u> COMPLETED/REVISED ON <u>10/21/2023</u>. 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 CANNOT GUARANTEE THE ADEQUACY OF THESE STRUCTURAL PLANS WHEN USED WITH ARCHITECTURAL PLANS DATED DIFFERENTLY THAN THE DATE LISTED ABOVE.

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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

ROOF FRAMING PLAN

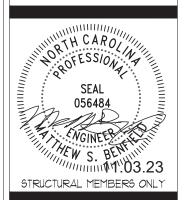
ROOF TRUSSES PER MANUF. ROOF TRUSSE'S PER MANUF. GIRDER TRUSS PER MANUF. ROOF SUPPORT HATCHED AREA DENOTES BREAK AWAY BOTTOM CHORD FROM ATTIC TRUSS ROOF SUPPORT ROOF SUPPORT \_\_\_\_\_\_ ROOF SUPPORT VALLEY SET TRUSSES PER MANUF. V.S.T. PER MANUF OR 2x4 RJ @ ROOF SUPPORT 16" O.C. w/ 2x6 , RIDGE & FLAT PLATE VALLEYS GIRDER TRUSS PER MANUF. ROOF TRUSSE'S PER MANUF. ELEVATION 1





CLIENT: CARUSO HOMES 206 HIGH HOUSE ROAD, SUITE 205 CARY NG 27511

PROJECT:
NCI III (Tillery 1)
Roof Framing Plan



ORIGINAL INFORMATION
PROJECT \* DATE
4231,944 04/12/2023

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS

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

\*\*OR EQUIVALENT PER TABLE R102.3.5

#### 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.
- REFER TO ARCHITECTURAL PLAN FOR DOOR/WINDOW OPENING SIZES.
   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.
   1. 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 OR DETAIL
- 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

INSTALL HOLD-DOWNS FOR BRACED WALL END CONDITIONS PER SECTION R602.10.4 AND FIGURE R602.10.3(4) OF THE 2018 NCRC.

NOTE: WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST THE CONTINUOUS WIND UPLIFT LOAD PATH IN ACCORDANCE WITH METHOD 3 OF SECTION R602.3.5 OF THE 2018 NCRC.

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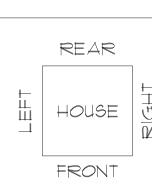
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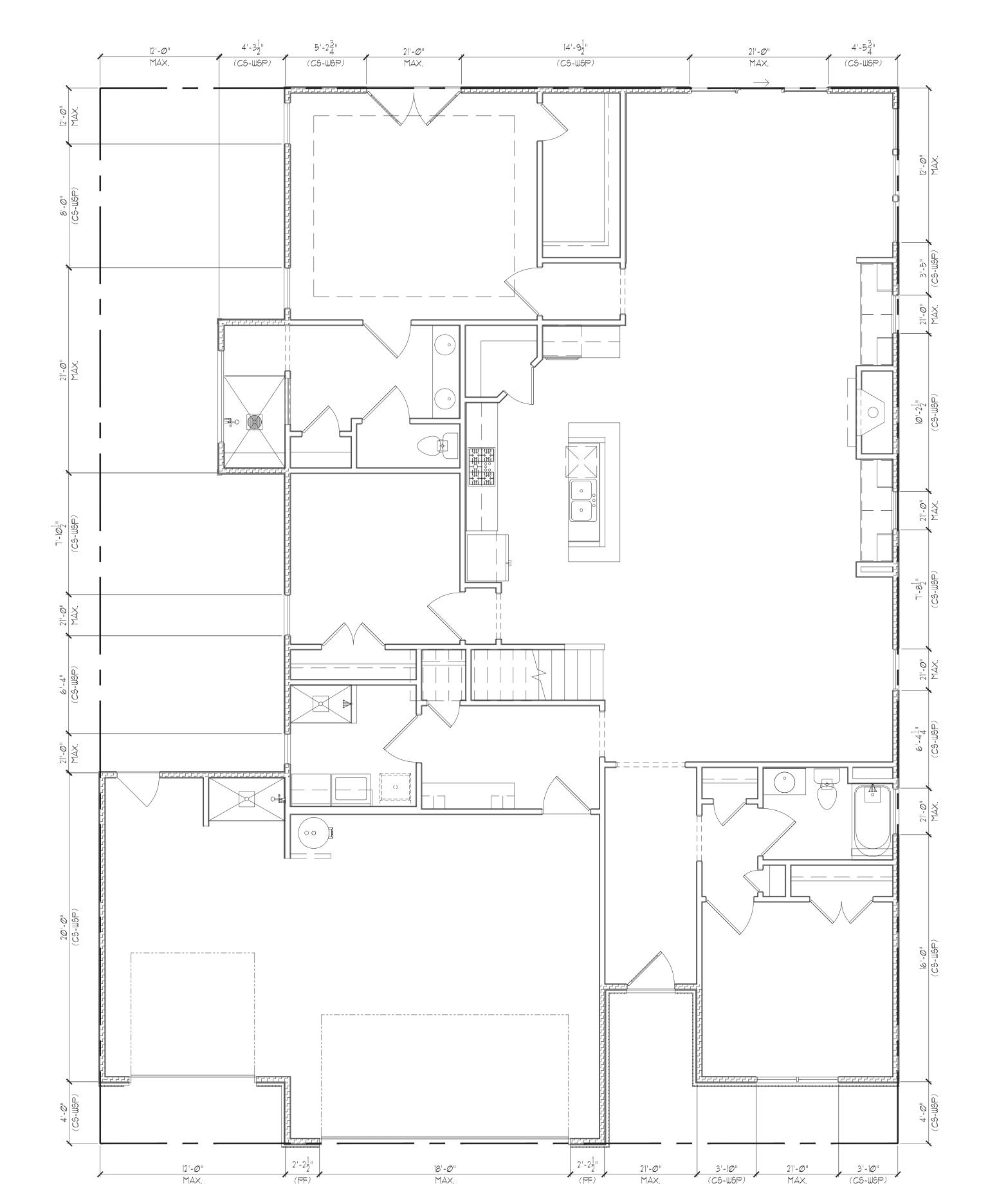
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STRUCTURAL ANALYSIS BASED ON 2018 NCRC.

FIRST FLOOR BRACING PLAN

SCALE: 1/4"=1"





ELEVATION 1

FIRST FLOOR BRACING (FT)

CONTINUOUS SHEATHING METHOD

REQUIRED PROVIDED

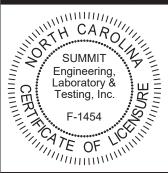
FRONT SIDE 11.8 14.2

LEFT SIDE 9.2 46.2

REAR SIDE 11.8 28.7

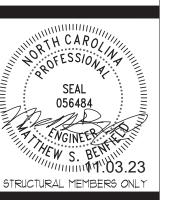
RIGHT SIDE 9.2 41.6





CARUSO HOMES 206 HIGH HOUSE ROAD, SUITE 2005 CARY, NC 27511

PROJECT: NCI III (Tillery 1) First Floor Bracing Pla



DATE: 10/31/2023

SCALE: 24x36 |/4"=!"-0"
||x|1 |/8"=!"-0"
PROJECT \*: 4231.944R2
DRAWN BY: EMB
CHECKED BY: MSB

ORIGINAL INFORMATION
PROJECT \* DATE
4231,944 04/12/2023

REFER TO COVER SHEET FOR A COMPLETE LIST OF REVISIONS