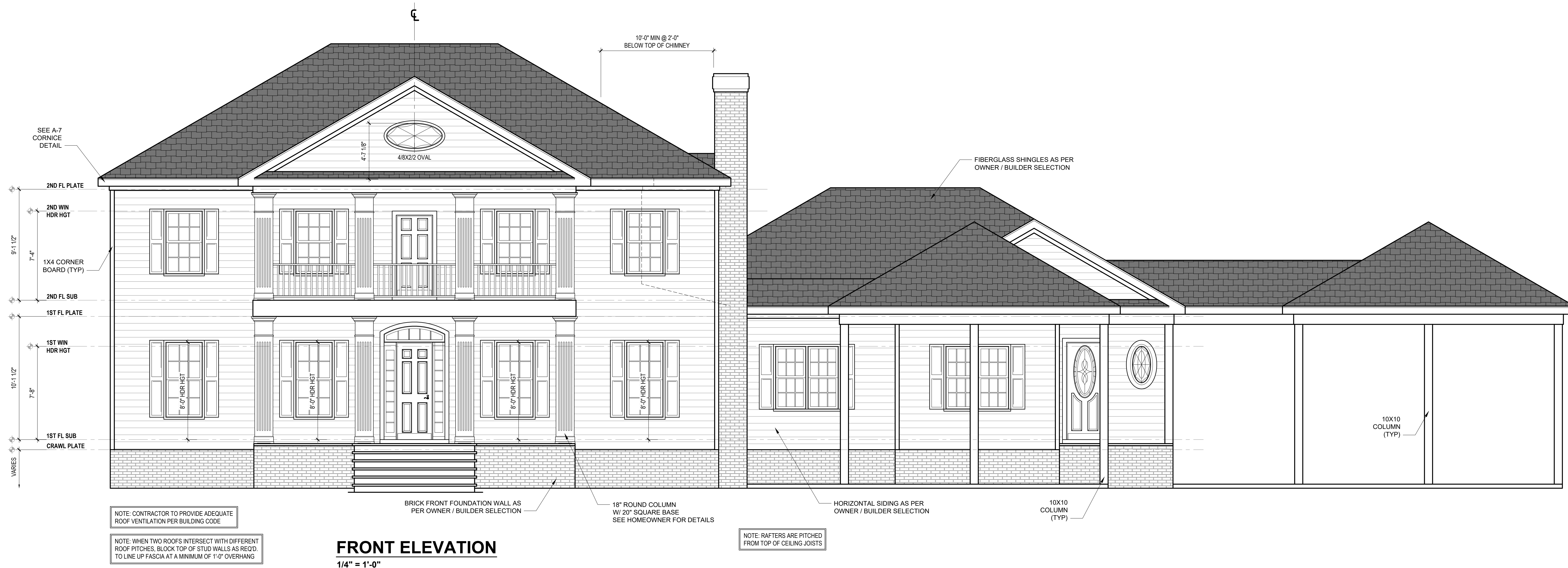


SHARPE RESIDENCE

PROJECT #
DRB2101-0229
DATE
03/01/2022
DRAWN/DESIGNED BY
DRB
CHECKED BY
MMB
SCALE
1/4" = 1'-0"

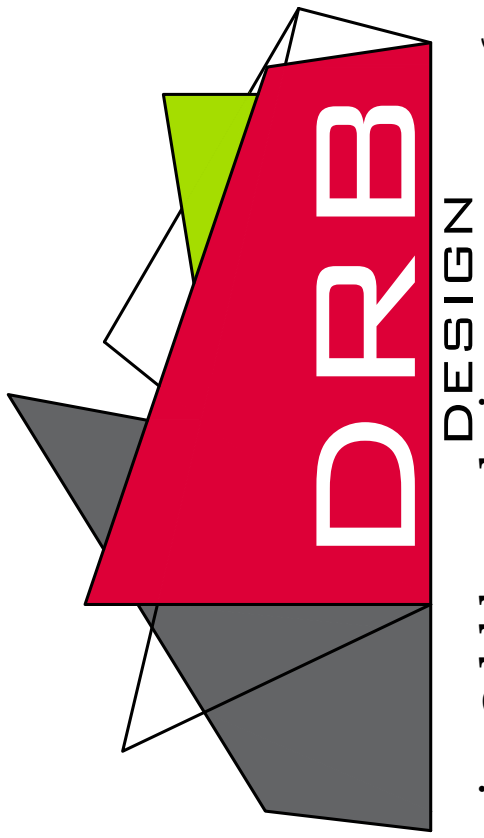


FRONT ELEVATION
1/4" = 1'-0"

PROJECT NAME
PERSONAL RESIDENCE
PROJECT #
drbhomedesign.com

PERSONAL RESIDENCE

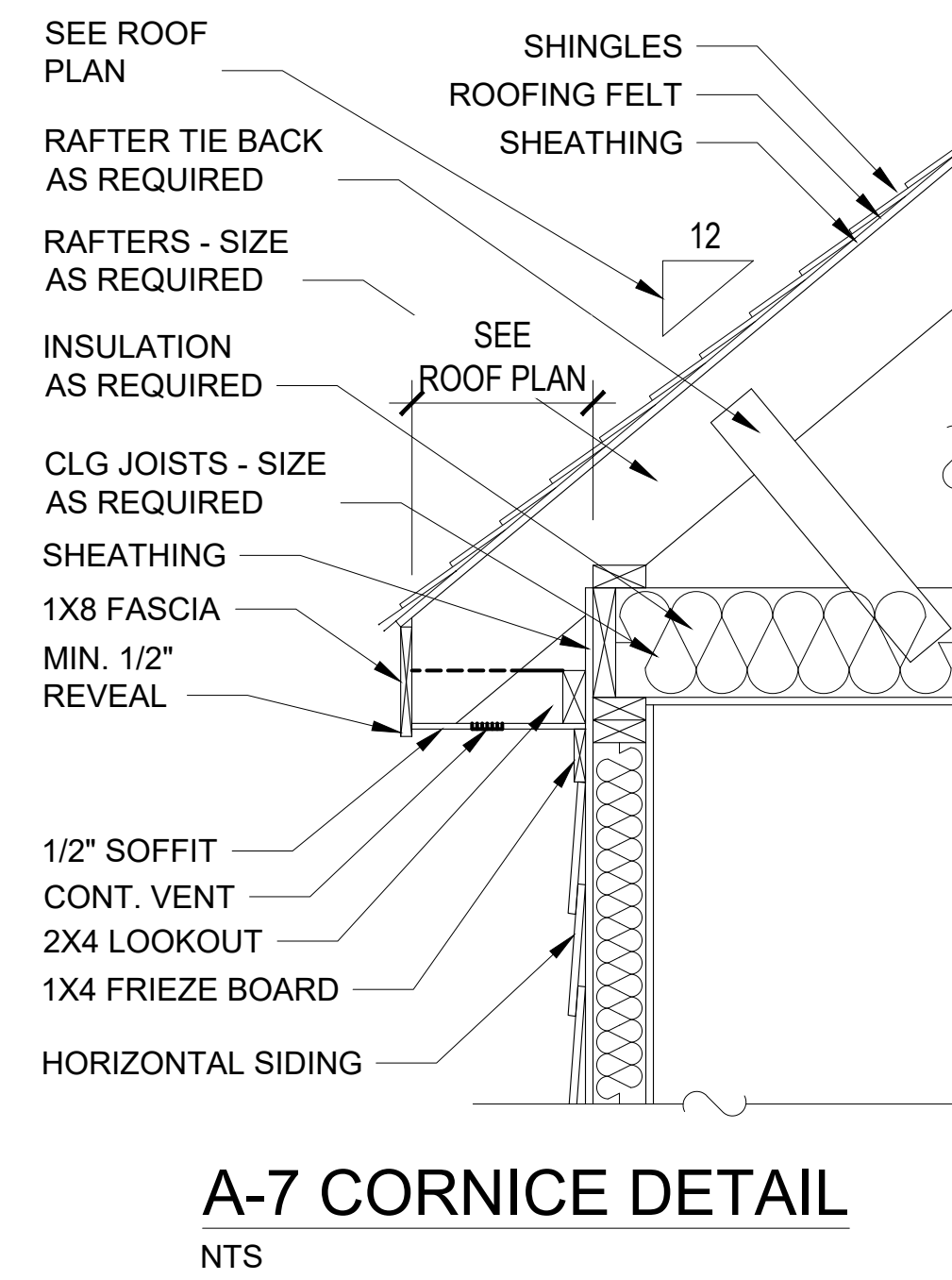
PROJECT #
drbdesign@drbhomedesign.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529



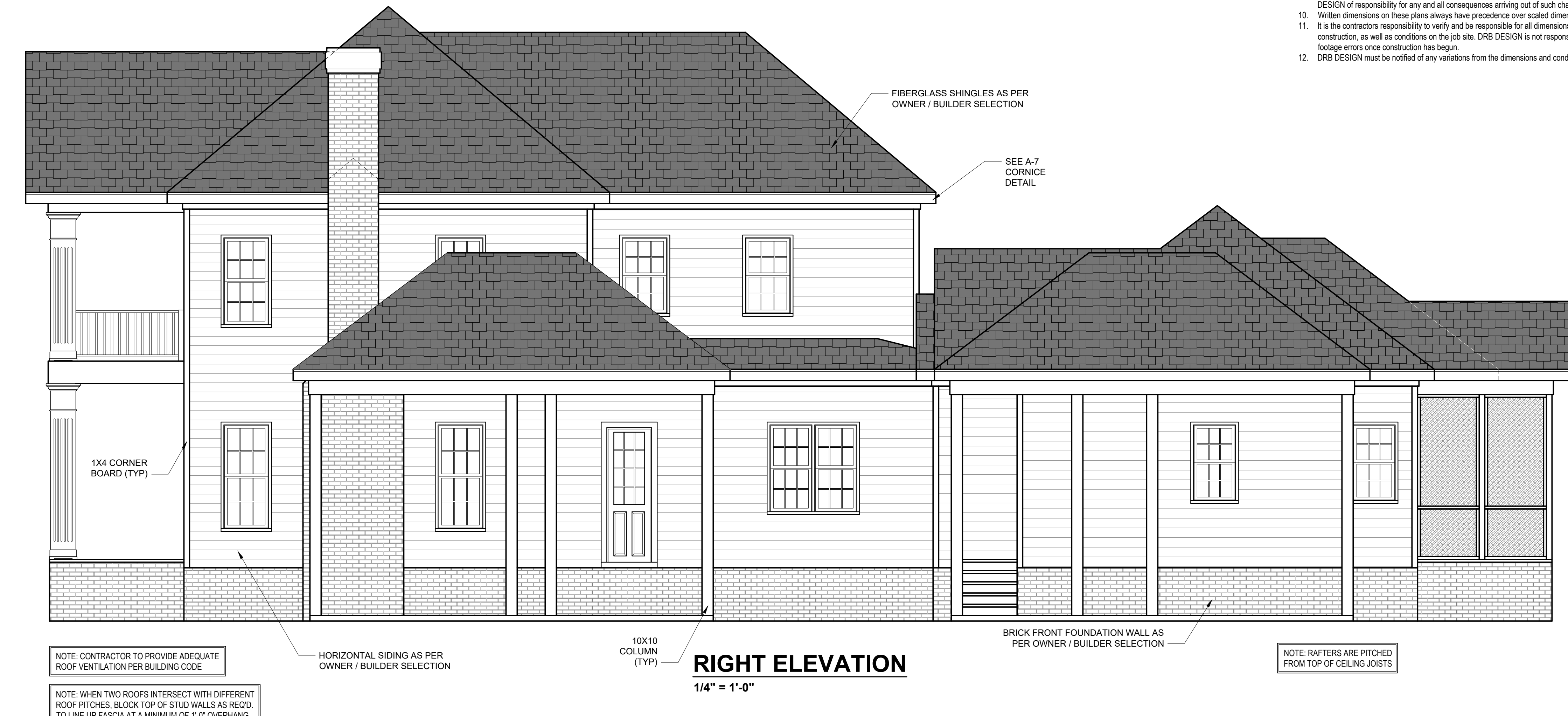
- DRB DESIGN assumes no liability for any home constructed from this plan.
- All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
- Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
- Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
- Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
- Communication is imperfect and every contingency cannot be anticipated.
- Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
- A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
- Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
- Written dimensions on these plans always have precedence over scaled dimensions.
- It is the contractor's responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
- DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.

CLIENT NAME
Bryan and Lauren Sharpe
1705 Page Rd.
Godwin, NC 28344
bryansharpe220@gmail.com
910-985-1139

SHEET NAME
ELEVATIONS
SHEET #
A1 of 6



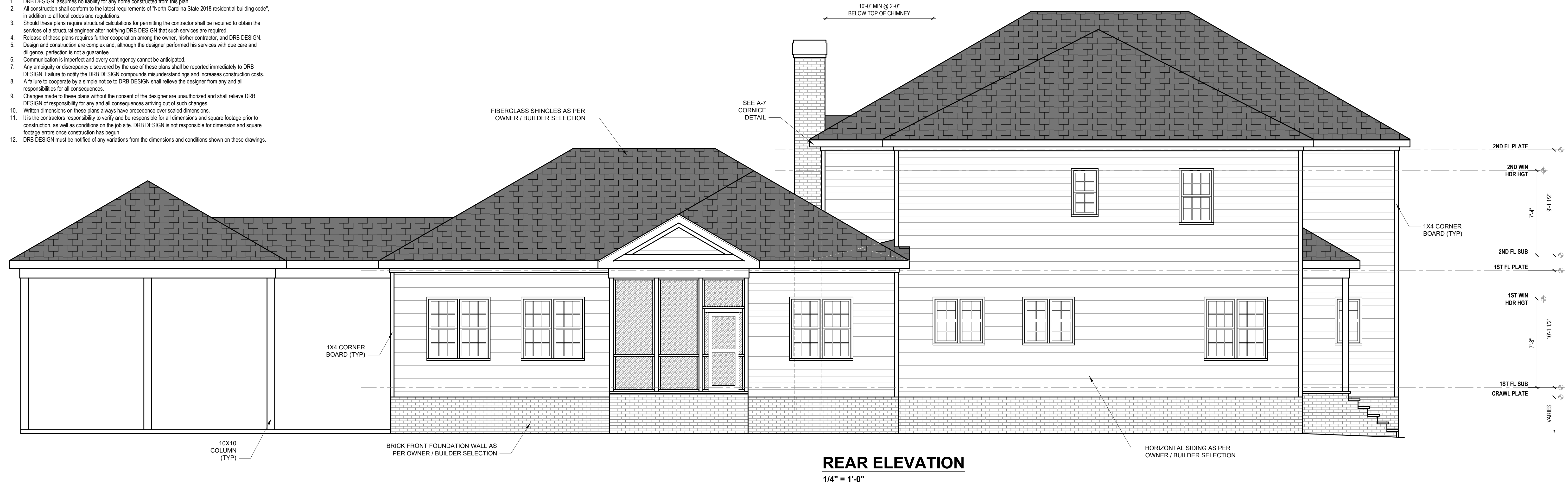
A-7 CORNICE DETAIL
NTS



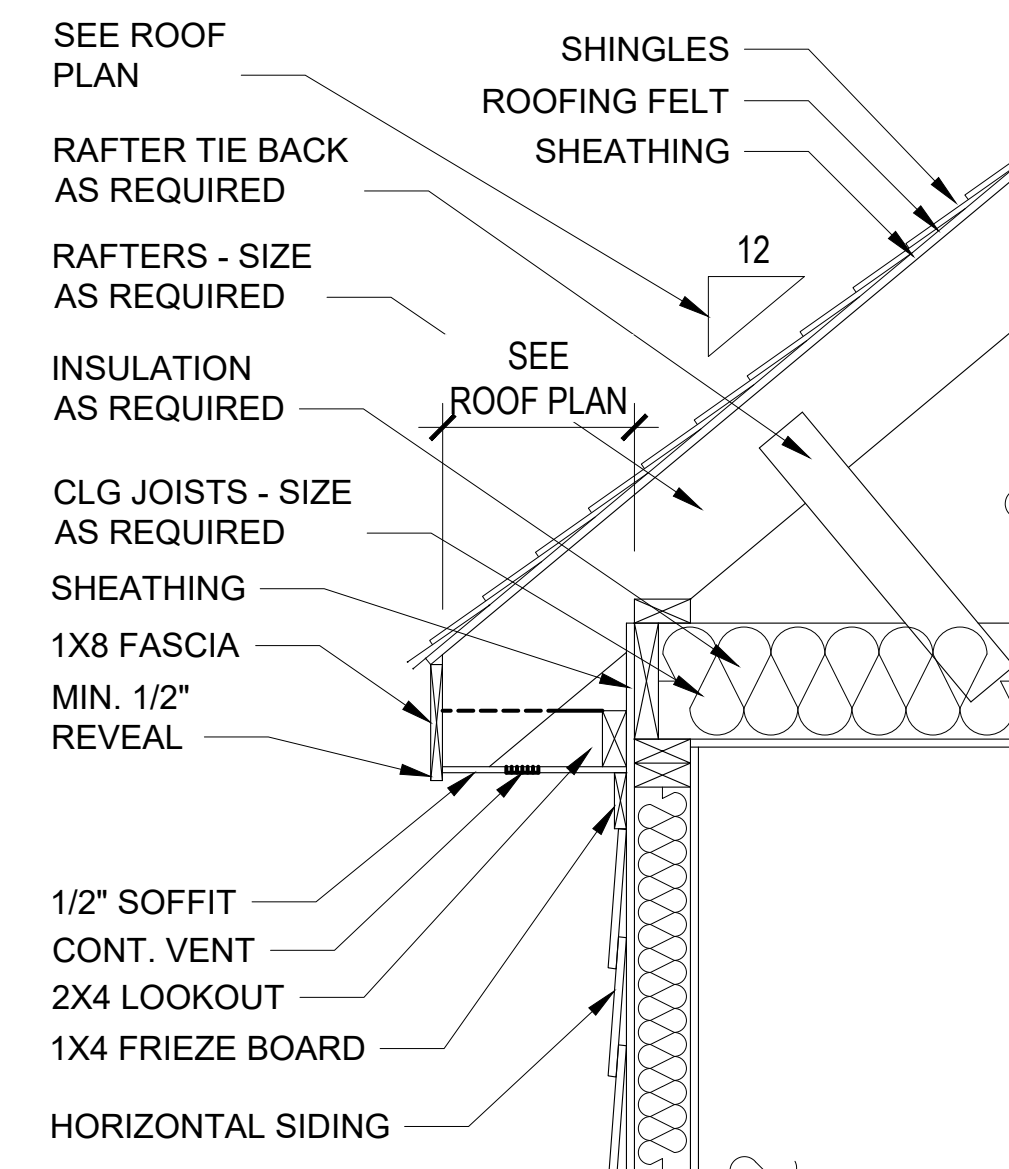
RIGHT ELEVATION
1/4" = 1'-0"

SHARPE RESIDENCE

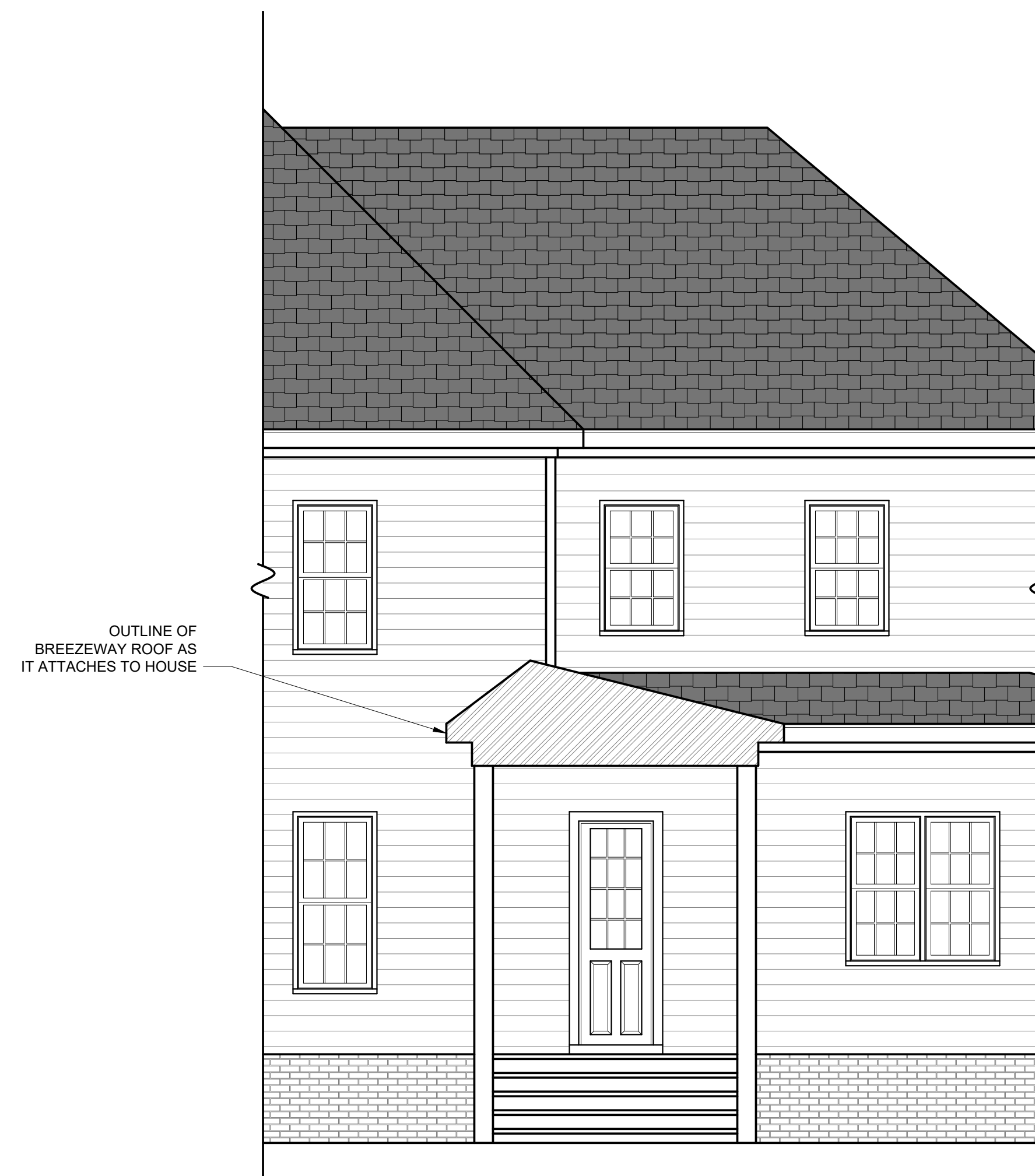
- DRB DESIGN assumes no liability for any home constructed from this plan.
- All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
- Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
- Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
- Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
- Communication is imperfect and every contingency cannot be anticipated.
- Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
- A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
- Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
- Written dimensions on these plans always have precedence over scaled dimensions.
- It is the contractor's responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
- DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.



REAR ELEVATION
1/4" = 1'-0"



A-7 CORNICE DETAIL
NTS



RIGHT ELEVATION BREEZEWAY CONNECTION TO MAIN HOUSE
1/4" = 1'-0"



LEFT ELEVATION
1/4" = 1'-0"

PROJECT: DRB2101-0229
DATE: 03/01/2022
DRAWN/DESIGNED BY: DRB
CHECKED BY: MMB
SCALE: 1/4" = 1'-0"

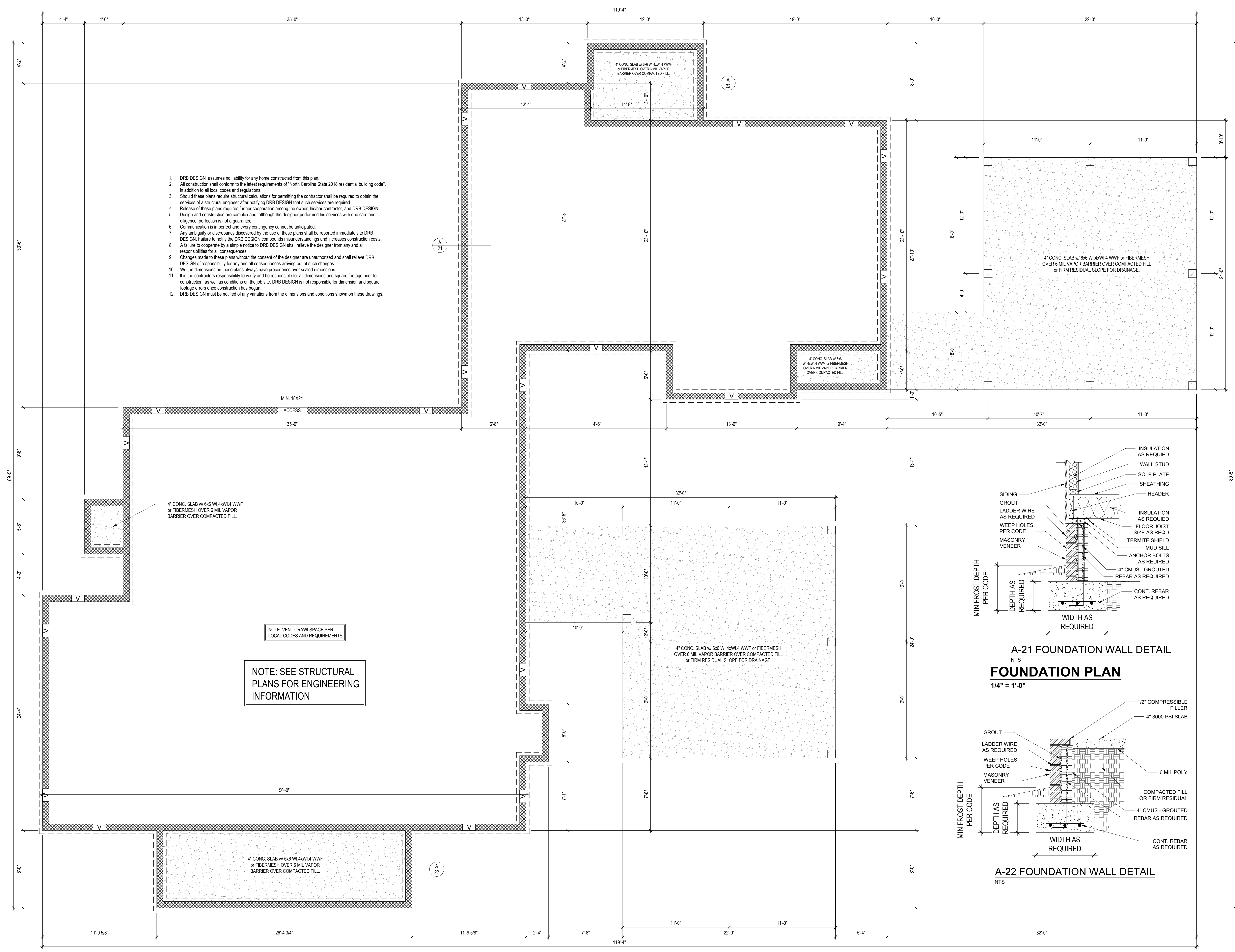
CLIENT NAME: **PERSONAL RESIDENCE**
PROJECT NAME: **PERSONAL RESIDENCE**

CLIENT NAME: **PERSONAL RESIDENCE**

DRB DESIGN
drbdesign@drbhome.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

CLIENT NAME: **Bryan and Lauren Sharpe**
1705 Page Rd.
Godwin, NC 28344
bryansharpe220@gmail.com
910-985-1139

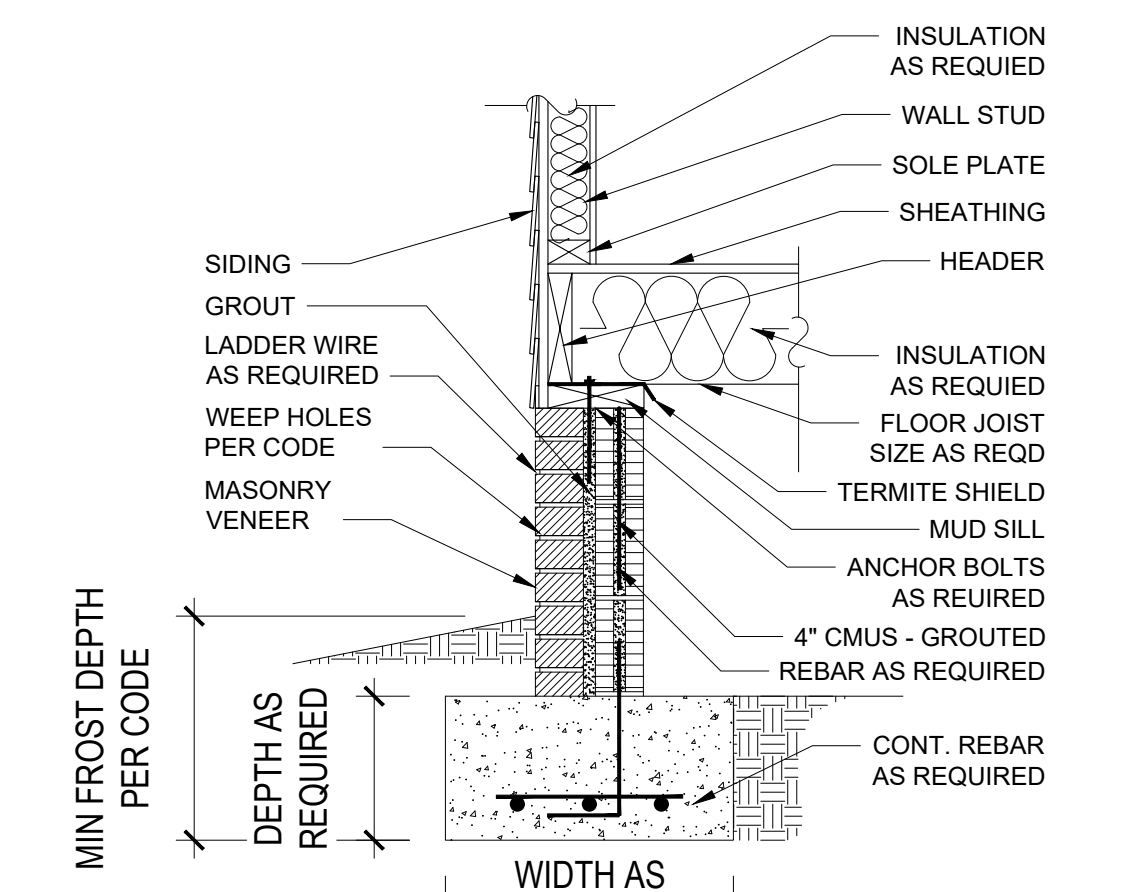
SHEET NAME: **ELEVATIONS**
SHEET #: **A2** of 6



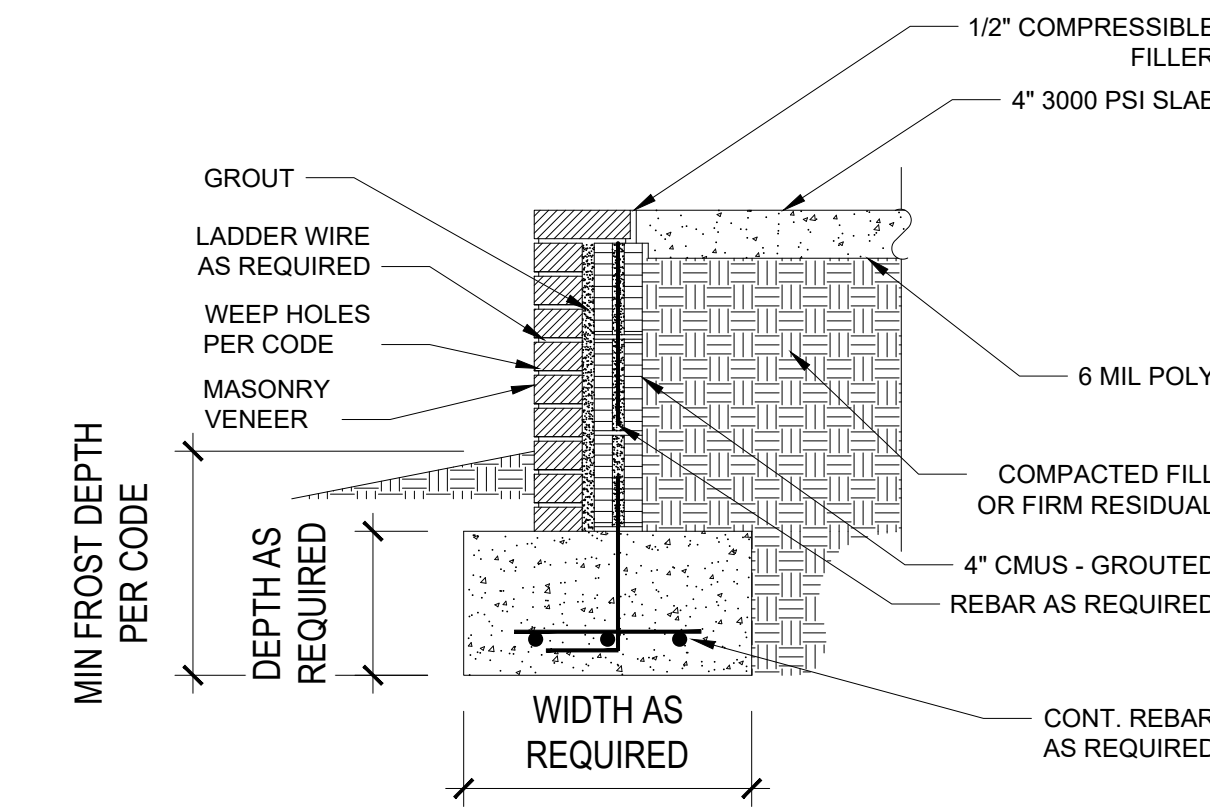
- DRB DESIGN assumes no liability for any home constructed from this plan.
- All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
- Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
- Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
- Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
- Communication is imperfect and every contingency cannot be anticipated.
- Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
- A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
- Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
- Written dimensions on these plans always have precedence over scaled dimensions.
- It is the contractor's responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
- DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.

NOTE: VENT CRAWLSPACE PER LOCAL CODES AND REQUIREMENTS

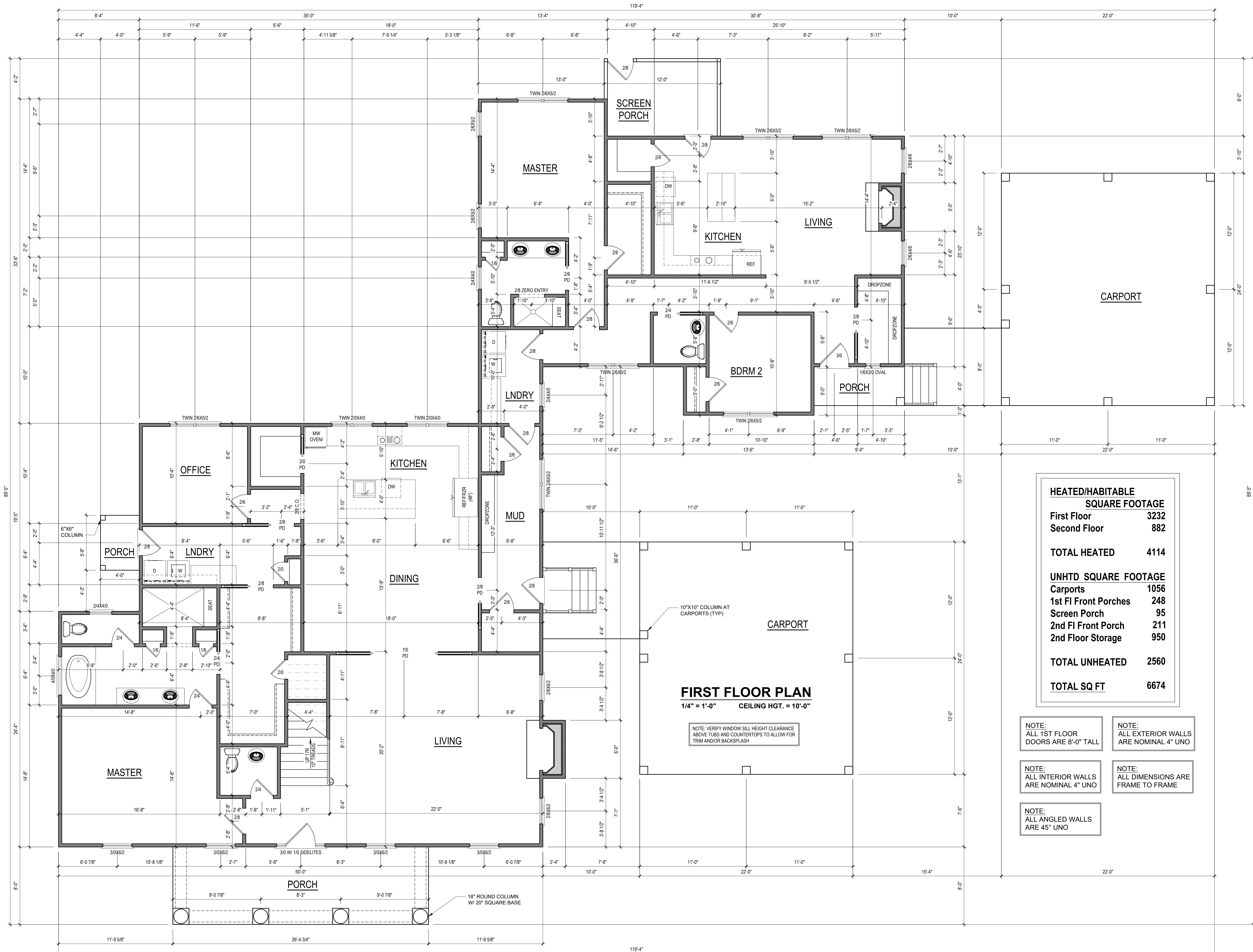
NOTE: SEE STRUCTURAL PLANS FOR ENGINEERING INFORMATION



A-21 FOUNDATION WALL DETAIL
 NTS
FOUNDATION PLAN
 1/4" = 1'-0"



A-22 FOUNDATION WALL DETAIL
 NTS

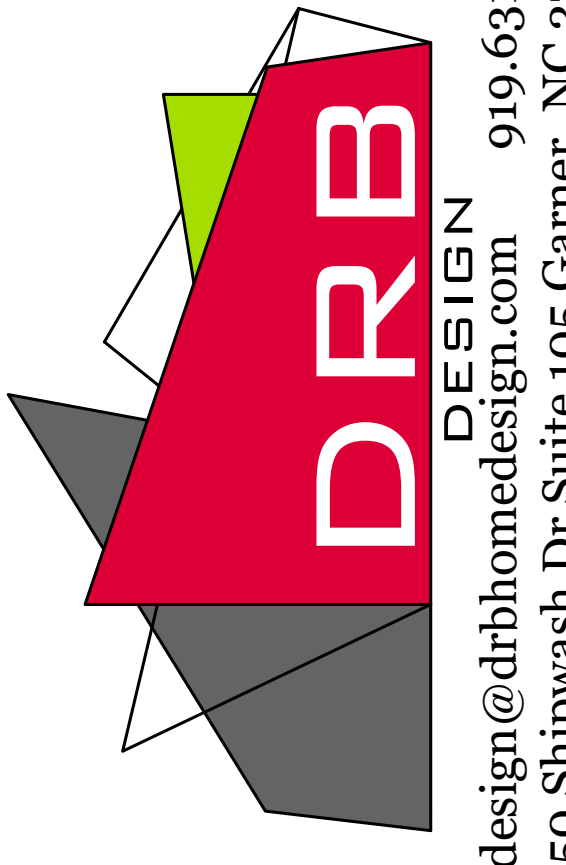


FIRST FLOOR PLAN
 1/4" = 1'-0" CEILING HGT. = 10'-0"

NOTE: VERIFY WINDOW SILL HEIGHT CLEARANCE ABOVE TUBS AND COUNTERTOPS TO ALLOW FOR TRIM AND/OR BACKSPLASH

HEATED/HABITABLE SQUARE FOOTAGE	
First Floor	3232
Second Floor	882
TOTAL HEATED	4114
UNHTD SQUARE FOOTAGE	
Carports	1056
1st Fl Front Porches	248
Screen Porch	95
2nd Fl Front Porch	211
2nd Floor Storage	950
TOTAL UNHEATED	2560
TOTAL SQ FT	6674

- NOTE: ALL 1ST FLOOR DOORS ARE 8'-0" TALL
- NOTE: ALL EXTERIOR WALLS ARE NOMINAL 4" UNO
- NOTE: ALL INTERIOR WALLS ARE NOMINAL 4" UNO
- NOTE: ALL DIMENSIONS ARE FRAME TO FRAME
- NOTE: ALL ANGLED WALLS ARE 45° UNO

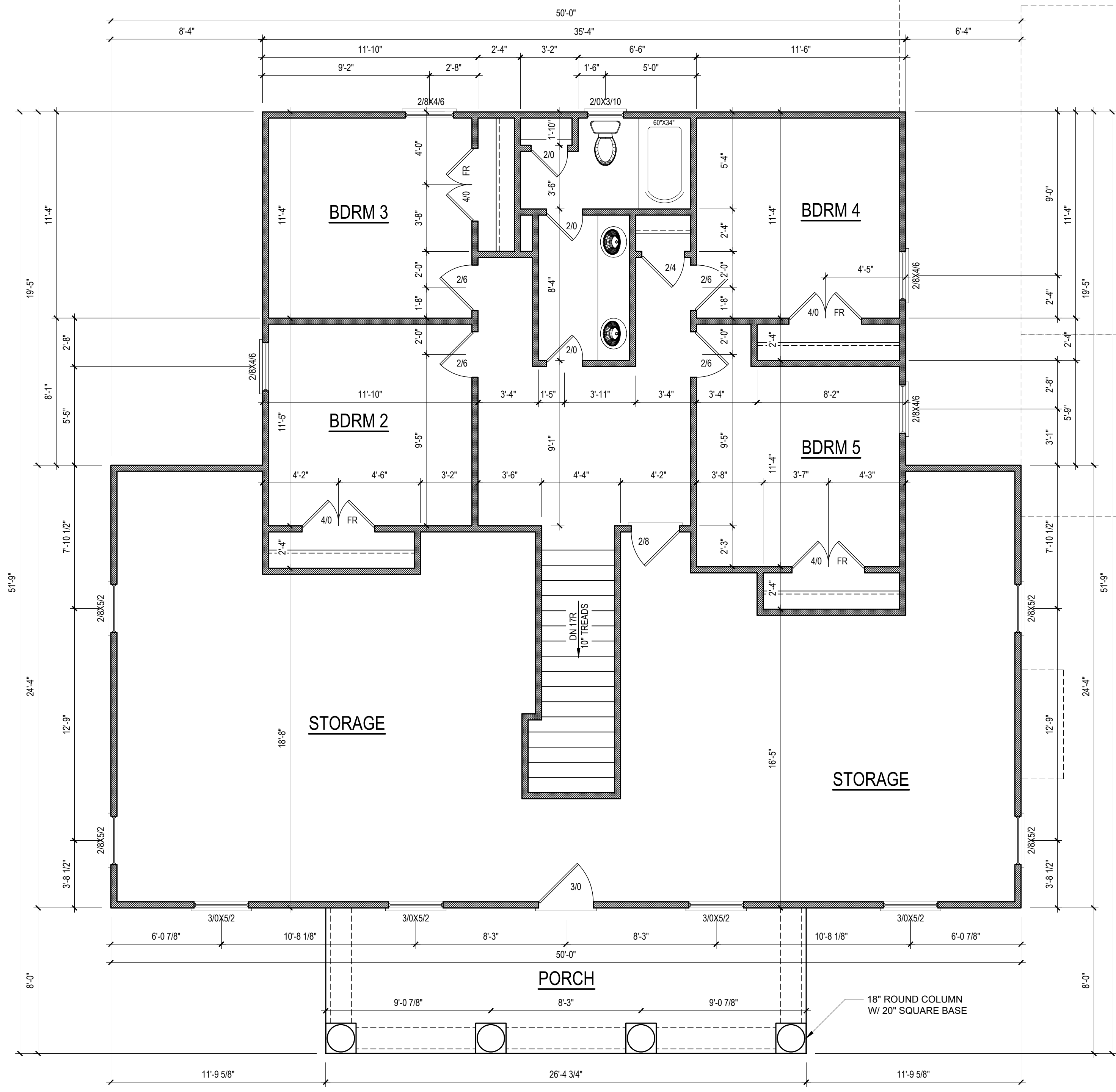


drbdesign@drbomedesign.com 919.631.5979
 250 Shipwash Dr Suite 105 Garner, NC 27529

CLIENT NAME: Bryan and Lauren Sharpe
 1705 Page Rd.
 Godwin, NC 28344
 bryansharpe220@gmail.com
 910-985-1139

1. DRB DESIGN assumes no liability for any home constructed from this plan.
2. All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
3. Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
4. Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
5. Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
6. Communication is imperfect and every contingency cannot be anticipated.
7. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
8. A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
9. Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
10. Written dimensions on these plans always have precedence over scaled dimensions.
11. It is the contractor's responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
12. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.

- DRB DESIGN assumes no liability for any home constructed from this plan.
- All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
- Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
- Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
- Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
- Communication is imperfect and every contingency cannot be anticipated.
- Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
- A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
- Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
- Written dimensions on these plans always have precedence over scaled dimensions.
- It is the contractor's responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
- DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.



NOTE:
ALL EXTERIOR WALLS
ARE NOMINAL 4" UNO

NOTE:
ALL INTERIOR WALLS
ARE NOMINAL 4" UNO

NOTE:
ALL ANGLED WALLS
ARE 45° UNO

NOTE:
ALL DIMENSIONS ARE
FRAME TO FRAME

NOTE: VERIFY WINDOW SILL HEIGHT CLEARANCE
ABOVE TUBS AND COUNTERTOPS TO ALLOW FOR
TRIM AND/OR BACKSPASH

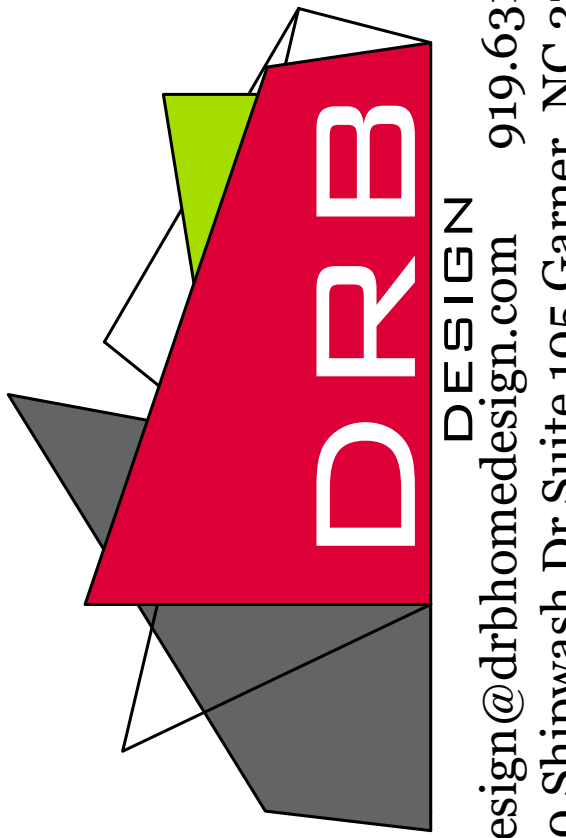
SECOND FLOOR PLAN
1/4" = 1'-0" CEILING HGT. = 9'-0"

PROJECT:
DRB2101-0229
DATE:
03/01/2022
DRAWN/DESIGNED BY:
DRB
CHECKED BY:
MMB
SCALE:
1/4" = 1'-0"

PROJECT NAME
PERSONAL
RESIDENCE

PROJECT NAME
PERSONAL
RESIDENCE

PROJECT NAME
PERSONAL
RESIDENCE

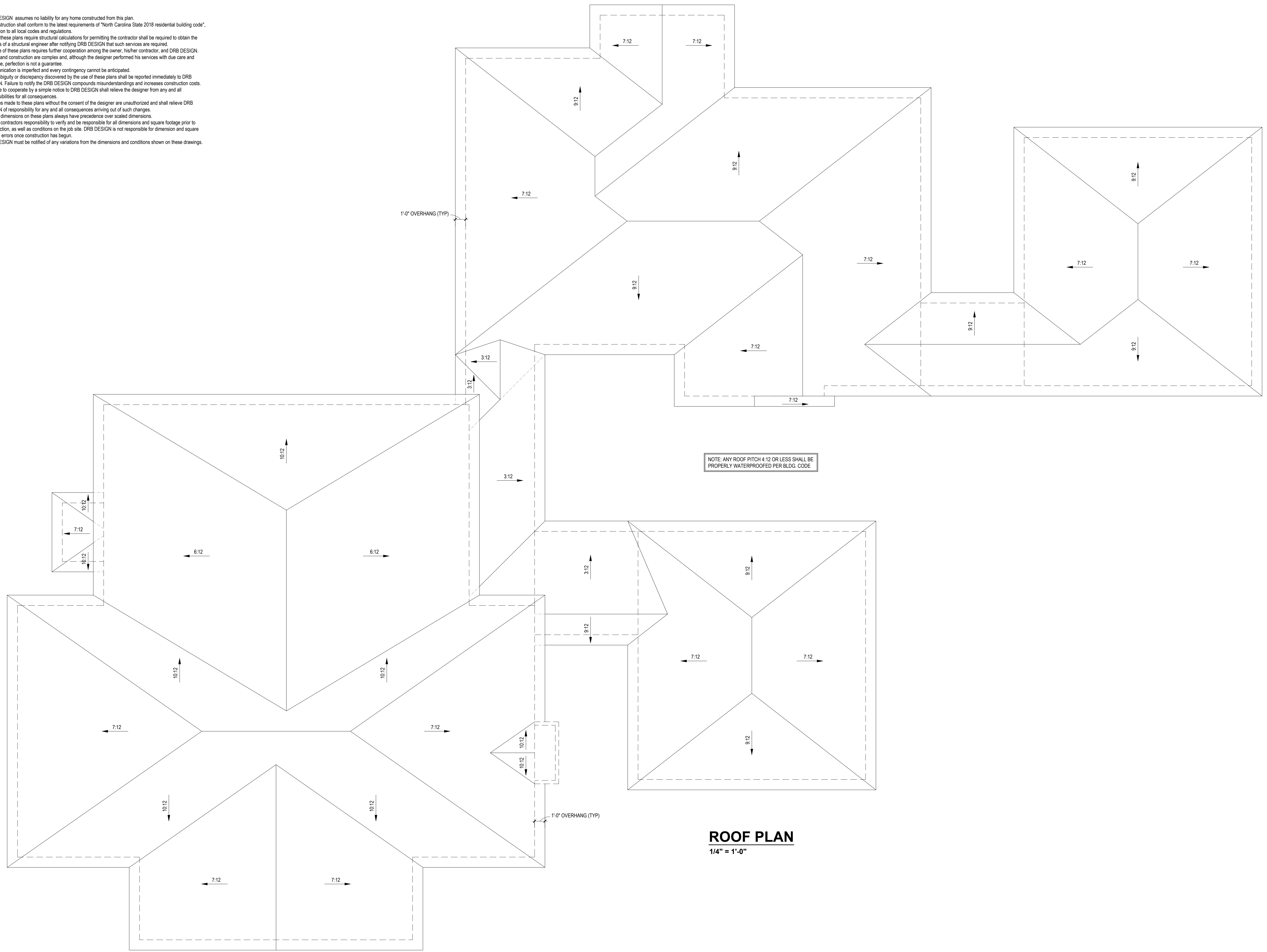


drbdesign@drbhome.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

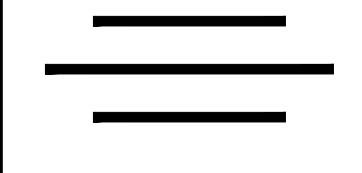
CLIENT NAME
Bryan and Lauren Sharpe
1705 Page Rd.
Godwin, NC 28344
bryansharpe220@gmail.com
910-985-1139

SHEET NAME
2ND FLOOR
SHEET #
A5
of 6

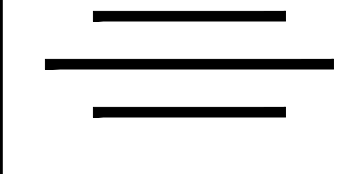
1. DRB DESIGN assumes no liability for any home constructed from this plan.
2. All construction shall conform to the latest requirements of "North Carolina State 2018 residential building code", in addition to all local codes and regulations.
3. Should these plans require structural calculations for permitting the contractor shall be required to obtain the services of a structural engineer after notifying DRB DESIGN that such services are required.
4. Release of these plans requires further cooperation among the owner, his/her contractor, and DRB DESIGN.
5. Design and construction are complex and, although the designer performed his services with due care and diligence, perfection is not a guarantee.
6. Communication is imperfect and every contingency cannot be anticipated.
7. Any ambiguity or discrepancy discovered by the use of these plans shall be reported immediately to DRB DESIGN. Failure to notify the DRB DESIGN compounds misunderstandings and increases construction costs.
8. A failure to cooperate by a simple notice to DRB DESIGN shall relieve the designer from any and all responsibilities for all consequences.
9. Changes made to these plans without the consent of the designer are unauthorized and shall relieve DRB DESIGN of responsibility for any and all consequences arising out of such changes.
10. Written dimensions on these plans always have precedence over scaled dimensions.
11. It is the contractor's responsibility to verify and be responsible for all dimensions and square footage prior to construction, as well as conditions on the job site. DRB DESIGN is not responsible for dimension and square footage errors once construction has begun.
12. DRB DESIGN must be notified of any variations from the dimensions and conditions shown on these drawings.



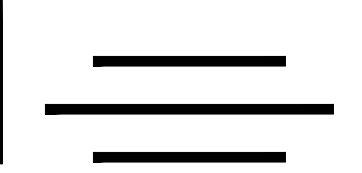
PROJECT:
DRB2101-0229
DATE:
03/01/2022
DRAWN/DESIGNED BY:
DRB
CHECKED BY:
MMB
SCALE:
1/4" = 1'-0"



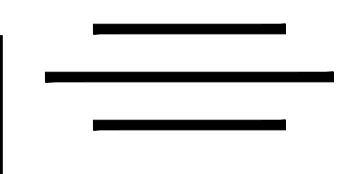
PROJECT NAME
PERSONAL
RESIDENCE



PROJECT NAME
PERSONAL
RESIDENCE



CLIENT NAME
Bryan and Lauren Sharpe
1705 Page Rd.
Godwin, NC 28344
bryansharpe220@gmail.com
910-985-1139



CLIENT NAME
Bryan and Lauren Sharpe
1705 Page Rd.
Godwin, NC 28344
bryansharpe220@gmail.com
910-985-1139

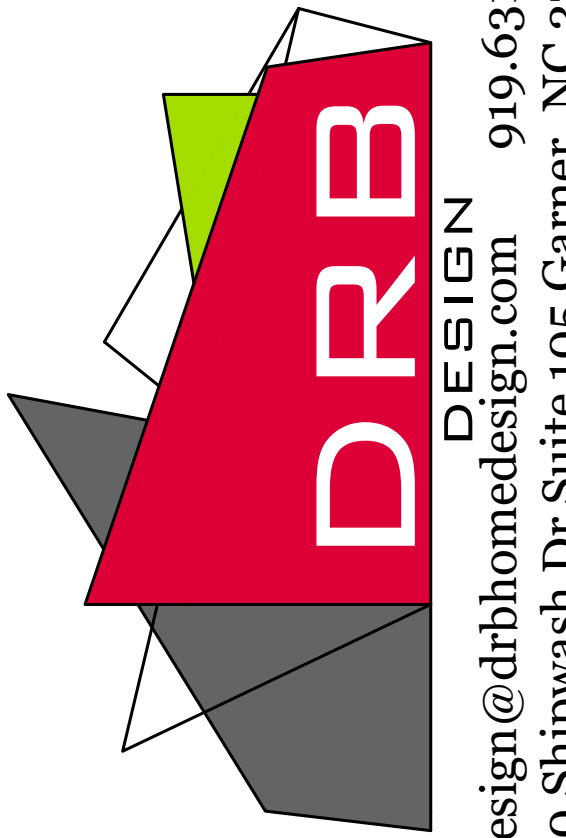
CLIENT NAME
Bryan and Lauren Sharpe
1705 Page Rd.
Godwin, NC 28344
bryansharpe220@gmail.com
910-985-1139



CLIENT NAME
Bryan and Lauren Sharpe
1705 Page Rd.
Godwin, NC 28344
bryansharpe220@gmail.com
910-985-1139

SHEET NAME
ROOF

SHEET #
A6
of 6

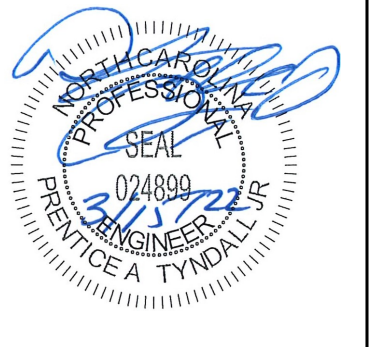


drbdesign@drbhome.com 919.631.5979
250 Shipwash Dr Suite 105 Garner, NC 27529

SHEET NAME
ROOF

SHEET #
A6
of 6

Engineers and does not include construction means, methods, techniques, sequences, procedures or safety precautions. Any deviations or omissions on plans are to be made at the discretion of the contractor. Tyndall Engineering & Design, P.A. shall not be held responsible for any errors or omissions on these documents. Tyndall Engineering & Design, P.A. shall not be held responsible for any errors or omissions on these documents. Tyndall Engineering & Design, P.A. shall not be held responsible for any errors or omissions on these documents. Tyndall Engineering & Design, P.A. shall not be held responsible for any errors or omissions on these documents.



TYNDALL
ENGINEERING & DESIGN, P.A.
240 Shawanah Drive • Garner, North Carolina • 27838
www.tyndallengineering.com

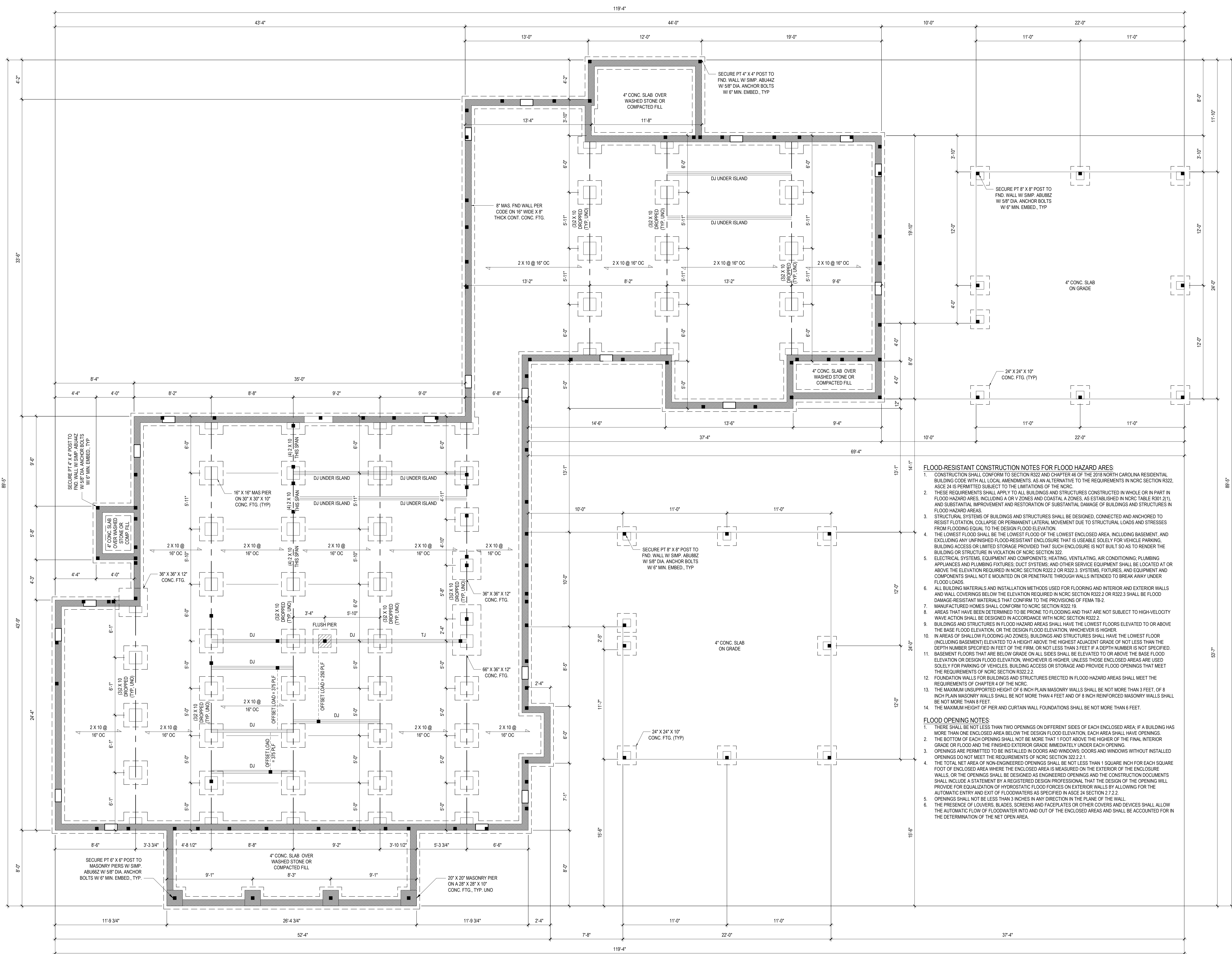
Client: **Bryan and Lauren Sharpe**
File: **Sharpe Residence**

**FOUNDATION PLAN
FIRST FLOOR FRAMING**

Project #: **DRB2101-0229**
Date: **03/15/22**
Engineered By: **LAG**
DWG. Checked By: **PAT**
Scale: **SEE PLAN**

REVISIONS		
No.	Date	Remarks

Sheet Number
S1
1 of 7



- FLOOD-RESISTANT CONSTRUCTION NOTES FOR FLOOD HAZARD AREAS**
- CONSTRUCTION SHALL CONFORM TO SECTION R322 AND CHAPTER 46 OF THE 2018 NORTH CAROLINA RESIDENTIAL BUILDING CODE WITH ALL LOCAL AMENDMENTS, AS AN ALTERNATIVE TO THE REQUIREMENTS IN NCRC SECTION R322, ASCE 24 IS PERMITTED SUBJECT TO THE LIMITATIONS OF THE NCRC.
 - THESE REQUIREMENTS SHALL APPLY TO ALL BUILDINGS AND STRUCTURES CONSTRUCTED IN WHOLE OR IN PART IN FLOOD HAZARD AREAS, INCLUDING A OR V ZONES AND COASTAL A ZONES, AS ESTABLISHED IN NCRC TABLE R301.2(1), AND SUBSTANTIAL IMPROVEMENT AND RESTORATION OF SUBSTANTIAL DAMAGE OF BUILDINGS AND STRUCTURES IN FLOOD HAZARD AREAS.
 - STRUCTURAL SYSTEMS OF BUILDINGS AND STRUCTURES SHALL BE DESIGNED, CONNECTED AND ANCHORED TO RESIST FLOTATION, COLLAPSE OR PERMANENT LATERAL MOVEMENT DUE TO STRUCTURAL LOADS AND STRESSES FROM FLOODING EQUAL TO THE DESIGN FLOOD ELEVATION.
 - THE LOWEST FLOOD SHALL BE THE LOWEST FLOOD OF THE LOWEST ENCLOSED AREA, INCLUDING BASEMENT, AND EXCLUDING ANY UNFINISHED FLOOD-RESISTANT ENCLOSURE THAT IS USABLE SOLELY FOR VEHICLE PARKING, BUILDING ACCESS OR LIMITED STORAGE PROVIDED THAT SUCH ENCLOSURE IS NOT BUILT SO AS TO RENDER THE BUILDING OR STRUCTURE IN VIOLATION OF NCRC SECTION R322.
 - ELECTRICAL SYSTEMS, EQUIPMENT AND COMPONENTS; HEATING, VENTILATING, AIR CONDITIONING, PLUMBING APPLIANCES AND PLUMBING FIXTURES, DUCT SYSTEMS, AND OTHER SERVICE EQUIPMENT SHALL BE LOCATED AT OR ABOVE THE ELEVATION REQUIRED IN NCRC SECTION R322.2 OR R322.3. SYSTEMS, FIXTURES, AND EQUIPMENT AND COMPONENTS SHALL NOT BE MOUNTED ON OR PENETRATE THROUGH WALLS INTENDED TO BREAK AWAY UNDER FLOOD LOADS.
 - ALL BUILDING MATERIALS AND INSTALLATION METHODS USED FOR FLOORING AND INTERIOR AND EXTERIOR WALLS AND WALL COVERINGS BELOW THE ELEVATION REQUIRED IN NCRC SECTION R322.2 OR R322.3 SHALL BE FLOOD DAMAGE-RESISTANT MATERIALS THAT CONFIRM TO THE PROVISIONS OF FEMA 19-2.
 - MANUFACTURED HOMES SHALL CONFORM TO NCRC SECTION R322.19.
 - AREAS THAT HAVE BEEN DETERMINED TO BE PRONE TO FLOODING AND THAT ARE NOT SUBJECT TO HIGH-VELOCITY WAVE ACTION SHALL BE DESIGNED IN ACCORDANCE WITH NCRC SECTION R322.2.
 - BUILDINGS AND STRUCTURES IN FLOOD HAZARD AREAS SHALL HAVE THE LOWEST FLOORS ELEVATED TO OR ABOVE THE BASE FLOOD ELEVATION, OR THE DESIGN FLOOD ELEVATION, WHICHEVER IS HIGHER.
 - IN AREAS OF SHALLOW FLOODING (AO ZONES), BUILDINGS AND STRUCTURES SHALL HAVE THE LOWEST FLOOR (INCLUDING BASEMENT) ELEVATED TO A HEIGHT ABOVE THE HIGHEST ADJACENT GRADE OF NOT LESS THAN THE DEPTH NUMBER SPECIFIED IN FEET OF THE FIRM, OR NOT LESS THAN 3 FEET IF A DEPTH NUMBER IS NOT SPECIFIED.
 - BASEMENT FLOORS THAT ARE BELOW GRADE ON ALL SIDES SHALL BE ELEVATED TO OR ABOVE THE BASE FLOOD ELEVATION OR DESIGN FLOOD ELEVATION, WHICHEVER IS HIGHER, UNLESS THOSE ENCLOSED AREAS ARE USED SOLELY FOR PARKING OF VEHICLES, BUILDING ACCESS OR STORAGE AND PROVIDE FLOOD OPENINGS THAT MEET THE REQUIREMENTS OF NCRC SECTION R322.2.2.
 - FOUNDATION WALLS FOR BUILDINGS AND STRUCTURES ERECTED IN FLOOD HAZARD AREAS SHALL MEET THE REQUIREMENTS OF CHAPTER 4 OF THE NCRC.
 - THE MAXIMUM UNSUPPORTED HEIGHT OF 8 INCH PLAN MASONRY WALLS SHALL BE NOT MORE THAN 3 FEET, OF 8 INCH PLAN MASONRY WALLS SHALL BE NOT MORE THAN 4 FEET AND OF 8 INCH REINFORCED MASONRY WALLS SHALL BE NOT MORE THAN 8 FEET.
 - THE MAXIMUM HEIGHT OF PIER AND CURTAIN WALL FOUNDATIONS SHALL BE NOT MORE THAN 6 FEET.
- FLOOD OPENING NOTES:**
- THERE SHALL BE NOT LESS THAN TWO OPENINGS ON DIFFERENT SIDES OF EACH ENCLOSED AREA; IF A BUILDING HAS MORE THAN ONE ENCLOSED AREA BELOW THE DESIGN FLOOD ELEVATION, EACH AREA SHALL HAVE OPENINGS.
 - THE BOTTOM OF EACH OPENING SHALL NOT BE MORE THAN 1 FOOT ABOVE THE HIGHER OF THE FINAL INTERIOR GRADE OR FLOOD AND THE FINISHED EXTERIOR GRADE IMMEDIATELY UNDER EACH OPENING.
 - OPENINGS ARE PERMITTED TO BE INSTALLED IN DOORS AND WINDOWS; DOORS AND WINDOWS WITHOUT INSTALLED OPENINGS DO NOT MEET THE REQUIREMENTS OF NCRC SECTION R322.2.1.
 - THE TOTAL NET AREA OF NON-ENGINEERED OPENINGS SHALL BE NOT LESS THAN 1 SQUARE INCH FOR EACH SQUARE FOOT OF ENCLOSED AREA WHERE THE ENCLOSED AREA IS MEASURED ON THE EXTERIOR OF THE ENCLOSURE WALLS, OR THE OPENINGS SHALL BE DESIGNED AS ENGINEERED OPENINGS AND THE CONSTRUCTION DOCUMENTS SHALL INCLUDE A STATEMENT BY A REGISTERED DESIGN PROFESSIONAL THAT THE DESIGN OF THE OPENING WILL PROVIDE FOR EQUALIZATION OF HYDROSTATIC FLOOD FORCES ON EXTERIOR WALLS BY ALLOWING FOR THE AUTOMATIC ENTRY AND EXIT OF FLOODWATERS AS SPECIFIED IN ASCE 24 SECTION 2.7.2.2.
 - OPENINGS SHALL NOT BE LESS THAN 3 INCHES IN ANY DIRECTION IN THE PLANE OF THE WALL.
 - THE PRESENCE OF LOUVERS, BLADES, SCREENS AND FACEPLATES OR OTHER COVERS AND DEVICES SHALL ALLOW THE AUTOMATIC FLOW OF FLOODWATER INTO AND OUT OF THE ENCLOSED AREAS AND SHALL BE ACCOUNTED FOR IN THE DETERMINATION OF THE NET OPEN AREA.

FOUNDATION PLAN
1/4" = 1'-0"
*NOTE: SECURE 4-PLY W/ 12"Ø THRU-BOLTS @ 24" O.C. (OR EQUIV. STRUCTURAL SCREWS)

FILENAME: J:\06\098_2021\098101-0229_BRYAN_LAUREN_SHARPE\CAD\FILES\098101-0229_L1_DRAWING_SWD.DWG, PREVIOUS THINGAL LAST AUT DATE: 3/15/2022 5:20 PM

FILENAME: Z:\060\060_2021\0602101-0221_BRYAN_LAUREN_SHARPE\CAD\FILES\0602101-0221_BRYAN_LAUREN_SHARPE\0602101-0221_LDWG.LDWG SWID BY: PRENICE THOMAS LAST PLOT DATE: 7/15/2022 5:20 PM

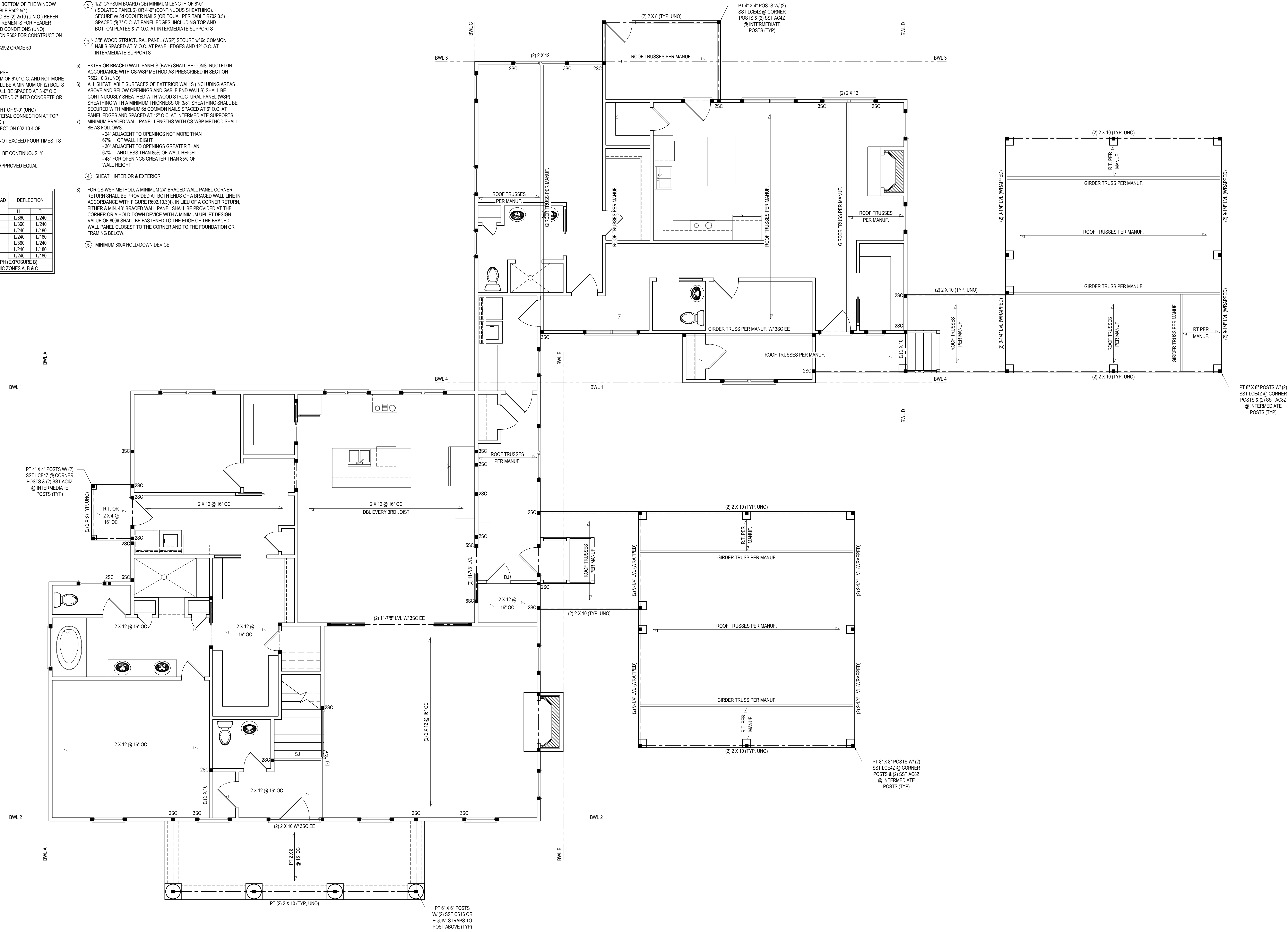
- STRUCTURAL NOTES:**
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE, IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, P.A. IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
 - ALL LUMBER SHALL BE SYP #2 (UNO). ALL LVL LUMBER TO BE 1 1/2" WIDE NOMINAL EACH SINGLE MEMBER AND $F_b = 2800$ PSI, $E = 1.9M$ PSI (I.E. LEVEL MICROLAM). ALL LSL LUMBER IS TO BE 1.5SE ($F_b = 2325$ PSI).
 - ALL LOAD BEARING EXTERIOR WINDOW HEADERS WITH MAXIMUM SPAN OF 5'-6" SHOULD BE A (2) 2x10 w/ (1) 2x4 KING STUD AND (1) 2x4 JACK STUD NAILED TOGETHER w/ (2) 10# @ 8" O.C. PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-4" MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-4". OTHERWISE REFER TO TABLE R502.5(1).
 - ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (UNO.) REFER TO TABLE R502.5(1) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (UNO).
 - REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL WALLS OVER 10'-0" IN HEIGHT.
 - ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50 $F_y = 50$ KSI MIN. (UNO).
 - ALL EXTERIOR LUMBER TO BE #2 SYP PT.
 - ALL CONCRETE: $f_c = 3000$ PSI MIN.
 - PRESUMPTIVE BEARING CAPACITY = 2000 PSF
 - 12" ANCHOR BOLTS SPACED AT MAXIMUM OF 6'-0" O.C. AND NOT MORE THAN 12" FROM THE CORNER. THERE SHALL BE A MINIMUM OF 30# BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
 - PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO).
 - PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (UNO.)
 - PROVIDE CONTINUOUS SHEATHING PER SECTION R02.10.4 OF THE 2018 IRC.
 - MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
 - UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
 - METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

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

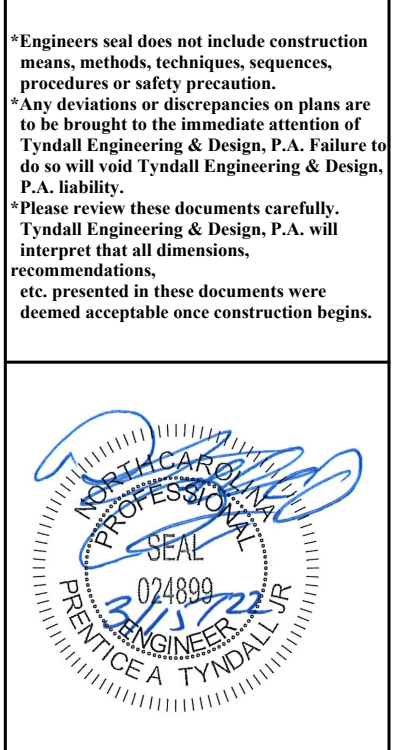
DESIGN LOADS

FLOOR	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION LL	DEFLECTION TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no storage)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH EXPOSURE B1			
SEISMIC	BASED ON SEISMIC ZONES A, B & C			

- BRACING PANEL LENGTHS REQUIRED:**
- BWL A = 17.2 FT
 - BWL B = 17.2 FT
 - BWL C = 6.4 FT
 - BWL D = 6.4 FT
 - BWL 1 = 14.8 FT
 - BWL 2 = 14.8 FT
 - BWL 3 = 4.9 FT
 - BWL 4 = 4.9 FT
- BRACING PANEL LENGTHS PROVIDED:**
- BWL A = 37.1 FT CS-WSP
 - BWL B = 26.7 FT CS-WSP
 - BWL C = 24.9 FT CS-WSP
 - BWL D = 23.5 FT CS-WSP
 - BWL 1 = 27.5 FT CS-WSP
 - BWL 2 = 35.0 FT CS-WSP
 - BWL 3 = 23.8 FT CS-WSP
 - BWL 4 = 20.2 FT CS-WSP



FIRST FLOOR PLAN
1/4" = 1'-0"



TYNDALL
ENGINEERING & DESIGN, P.A.
197 W. 505 - 1st Floor
280 Shephard Drive - Garner, North Carolina 27539
www.tyndallengineering.com

Client: **Bryan and Lauren Sharpe**
File: **Sharpe Residence**

**FIRST FLOOR HEADER
SECOND FLOOR FRAMING**

Project #: **DRB2101-0229**
Date: **03/15/22**
Engineered By: **LAG**
DWG. Checked By: **PAT**
Scale: **SEE PLAN**

REVISIONS

No.	Date	Remarks

Sheet Number
S2
2 of 7

- STRUCTURAL NOTES:**
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE, IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, P.A. IS NOT RESPONSIBLE FOR DIMENSIONS AND SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.
 - ALL LUMBER SHALL BE SYP #2 (UNO)
ALL LVL LUMBER TO BE 1 1/2" WIDE NOMINAL EACH SINGLE MEMBER AND $F_b = 2800$ PSI, $E = 1.9M$ PSI (I.E. LEVEL MICROLAM)
ALL LSL LUMBER IS TO BE 1.55E ($F_b = 2325$ PSI)
 - ALL LOAD BEARING EXTERIOR WINDOW HEADERS WITH MAXIMUM SPAN OF 5'-6" SHOULD BE A (2) 2x10 w/ (1) 2x4 KING STUD AND (1) 2x4 JACK STUD NAILED TOGETHER w/ (2) 10# @ 8" O.C. PROVIDED THAT THE TOP OF THE WINDOW HEIGHT IS 6'-0". MINIMUM BOTTOM OF THE WINDOW HEIGHT IS 1'-4". OTHERWISE REFER TO TABLE R502.5(1).
 - ALL INTERIOR LOAD BEARING HEADERS TO BE (2) 2x10 (U.N.O.) REFER TO TABLE R502.5(1) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS (UNO)
 - REFER TO 2018 NC BUILDING CODE SECTION R602 FOR CONSTRUCTION OF ALL WALLS OVER 10'-0" IN HEIGHT.
 - ALL STRUCTURAL STEEL SHALL BE ASTM A992 GRADE 50
 $F_y = 50$ KSI MIN. (UNO)
 - ALL EXTERIOR LUMBER TO BE #2 SYP PT
 - ALL CONCRETE: $f_c = 3000$ PSI MIN.
 - PRESUMPTIVE BEARING CAPACITY = 2000 PSF
 - 1/2" ANCHOR BOLTS SPACED AT MAXIMUM OF 6'-0" O.C. AND NOT MORE THAN 12" FROM THE CORNER. THERE SHALL BE A MINIMUM OF 8 BOLTS PER PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLT SHALL EXTEND 7" INTO CONCRETE OR MASONRY.
 - PSL COLUMNS DESIGNED WITH MAX. HEIGHT OF 9'-0" (UNO)
 - PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (U.N.O.)
 - PROVIDE CONTINUOUS SHEATHING PER SECTION R02.10.4 OF THE 2018 IRC.
 - MAXIMUM MASONRY PIER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
 - UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
 - METAL HANGERS SHALL BE SIMPSON OR APPROVED EQUAL.

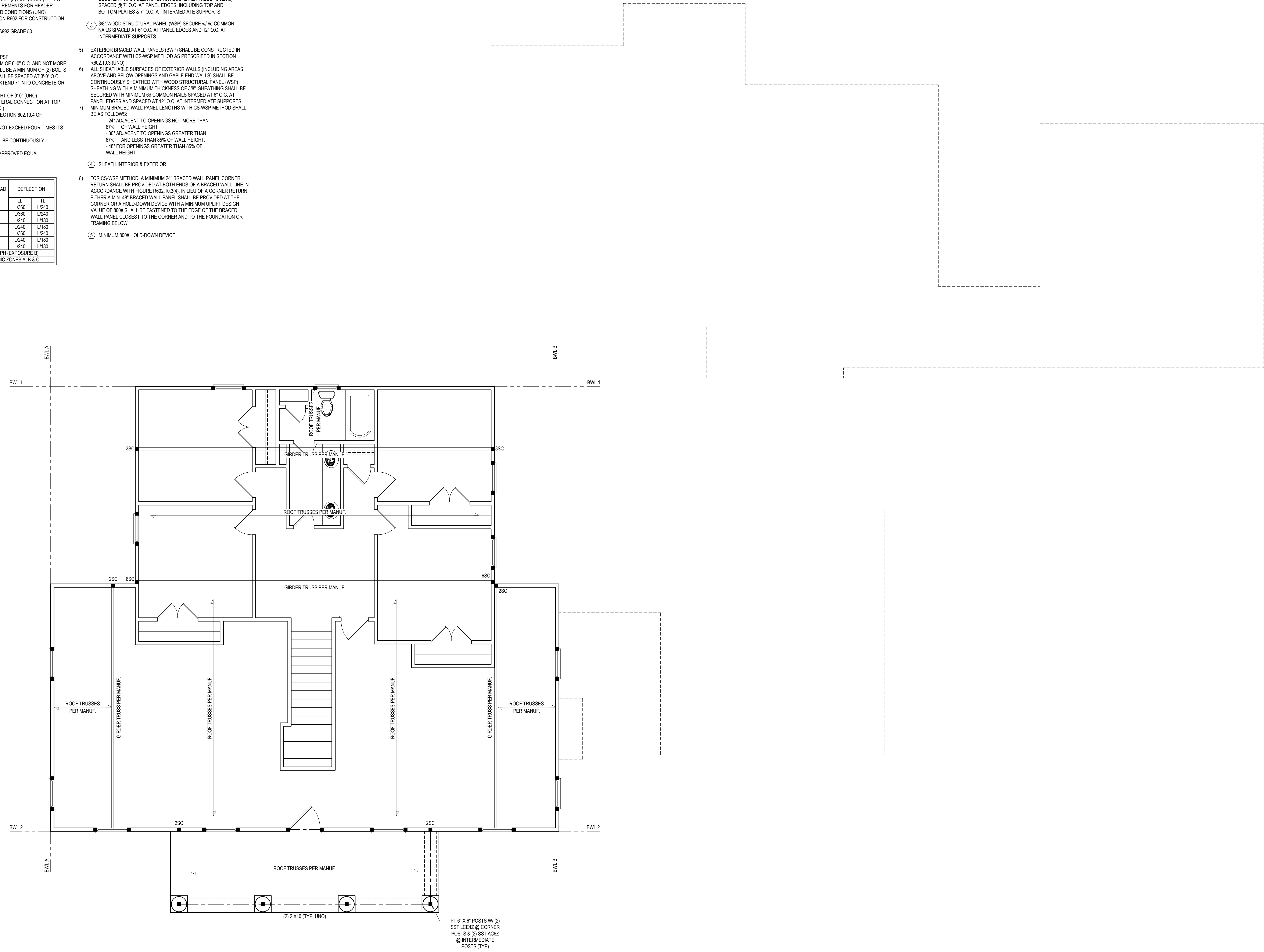
- STRUCTURAL SHEATHING NOTES**
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 120 MPH OR LESS.
 - WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10 OF THE 2018 NRC.
 - BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3 REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS &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

DESIGN LOADS

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
FLOOR (primary)	40	10	L/360	L/240
FLOOR (secondary)	40	10	L/360	L/240
ATTIC (w/ storage)	20	10	L/240	L/180
ATTIC (no storage)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH EXPOSURE B1			
SEISMIC	BASED ON SEISMIC ZONES A, B & C			

BRACING PANEL LENGTHS REQUIRED:
BWL A = 7.2 FT
BWL B = 7.2 FT
BWL 1 = 6.4 FT
BWL 2 = 6.4 FT

BRACING PANEL LENGTHS PROVIDED:
BWL A = 35.8 FT CS-WSP
BWL B = 31.0 FT CS-WSP
BWL 1 = 45.3 FT CS-WSP
BWL 2 = 35.0 FT CS-WSP



SECOND FLOOR PLAN
1/4" = 1'-0"

Engineers and does not include construction means, methods, techniques, sequences, procedures or safety precautions. Any decisions or interpretations of plans are the responsibility of the contractor. Tyndall Engineering & Design, P.A. is not responsible for any errors or omissions in these documents. Tyndall Engineering & Design, P.A. is not responsible for any errors or omissions in these documents. Tyndall Engineering & Design, P.A. is not responsible for any errors or omissions in these documents. Tyndall Engineering & Design, P.A. is not responsible for any errors or omissions in these documents.

TYNDALL
ENGINEERING & DESIGN, P.A.
197 W. 10th St., Suite 100
Raleigh, NC 27601
919.877.1111
www.tyndallengineering.com

Client: **Bryan and Lauren Sharpe**
File: **Sharpe Residence**

**SECOND FLOOR HEADER
SECOND FLOOR CLG. FRAMING**

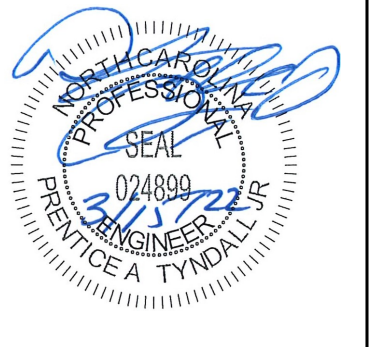
Project #: **DRB2101-0229**
Date: **03/15/22**
Engineered By: **LAG**
DWG. Checked By: **PAT**
Scale: **SEE PLAN**

REVISIONS

No.	Date	Remarks

Sheet Number
S3
3 of 7

Engineers and does not include construction means, methods, techniques, sequences, procedures or safety precautions. Any deviation or change to the plans are to be made at the discretion of the contractor or Tyndall Engineering & Design, P.A. Failure to do so will void Tyndall Engineering & Design, P.A. liability.
 These drawings were prepared by Tyndall Engineering & Design, P.A. and are the property of Tyndall Engineering & Design, P.A. All rights reserved. No part of these drawings may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Tyndall Engineering & Design, P.A.



TYNDALL
 ENGINEERING & DESIGN, P.A.
 260 Shyamala Drive • Garner • North Carolina • 27839
 www.tyndallengineering.com

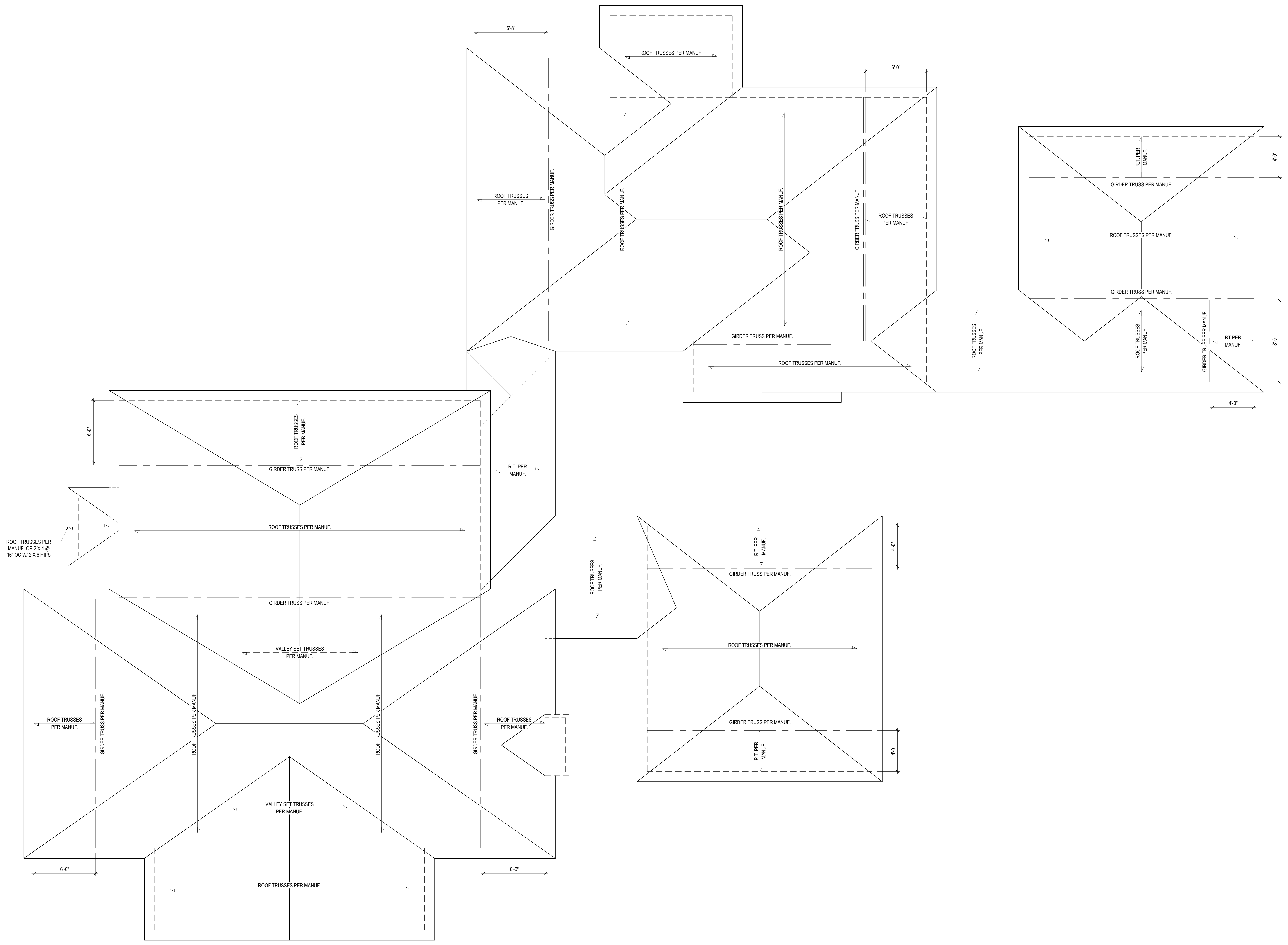
Client: **Bryan and Lauren Sharpe**
 File: **Sharpe Residence**

ROOF PLAN

Project #: **DRB2101-0229**
 Date: **03/15/22**
 Engineer By: **LAG**
 DWG. Checked By: **PAT**
 Scale: **SEE PLAN**

REVISIONS		
No.	Date	Remarks

Sheet Number
S4
 4 of 7



ROOF PLAN
 1/4" = 1'-0"

FILENAME: J:\068\068_2021\068\01-0229_BRYAN_LAUREN_SHARPE\068\01-0229_LDRG_SWD.DWG BY: PRENTICE TYNDALL LAST PLOT DATE: 3/15/2022 5:20 PM

STRUCTURAL NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF NORTH CAROLINA STATE 2018 RESIDENTIAL BUILDING CODE, IN ADDITION TO ALL LOCAL CODES AND REGULATIONS.
- DESIGN LOADS:

	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION	
			LL	TL
ALL FLOORS	40	10	L/360	L/240
ATTIC (w/ walk up stairs)	30	10	L/360	L/240
ATTIC (pull down access)	20	10	L/240	L/180
ATTIC (no access)	10	5	L/240	L/180
EXTERNAL BALCONY	40	10	L/360	L/240
ROOF	20	10	L/240	L/180
ROOF TRUSS	20	20	L/240	L/180
WIND LOAD	BASED ON 120 MPH (EXPOSURE B)			
SEISMIC	SEISMIC ZONES A, B & C			
- MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
- CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF FIVE INCHES UNLESS NOTED OTHERWISE. (I.N.D.)
- MAXIMUM DEPTH OF UNBALANCED FILL AGAINST FOUNDATION WALLS TO BE LESS THAN 4'-0" WITHOUT USING SUFFICIENT WALL BRACING. REFER TO SECTION R404 OF 2018 NC BUILDING CODE FOR BACKFILL LIMITATIONS BASED ON WALL HEIGHT, WALL THICKNESS, SOIL TYPE, AND UNBALANCED BACKFILL HEIGHT.
- ALL FRAMING LUMBER SHALL BE SYP #2 (F_b = 800 PSI, BASED ON 2x10) UNO. ALL FRAMING LUMBER EXPOSED TO THE ELEMENTS SHALL BE TREATED MATERIAL. ALL LVL LUMBER TO BE 1 7/8" WIDE NOMINAL EACH SINGLE MEMBER AND F_b = 2600 PSI, E = 1.9M PSI (I.N.O.). ALL LVL LUMBER TO BE 3 1/2" WIDE NOMINAL EACH SINGLE MEMBER AND F_b = 2200 PSI, E = 1.8M PSI (I.N.O.). ALL PSL LUMBER TO BE 3 1/2" WIDE NOMINAL EACH SINGLE MEMBER AND F_b = 2400 PSI, E = 1.8M PSI (I.N.O.).
- ALL LOAD BEARING EXTERIOR HEADERS SHALL BE AT (2) 2x10 (I.N.O.) REFER TO TABLE R602.7(1) & (2) FOR JACK STUD REQUIREMENTS FOR HEADER SPANS FOR INTERIOR AND EXTERIOR LOAD CONDITIONS UNLESS SPECIFICALLY NOTED ON PLANS.
- ALL STRUCTURAL STEEL W-SHAPES (I-BEAMS) SHALL BE ASTM A992 GRADE 50. ALL STEEL ANGLES, PLATES, AND C CHANNELS SHALL BE ASTM A36. ALL STEEL PIPE SHALL BE ASTM A53 GRADE B.
- STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3'-1/2" AND FULL FLANGE WIDTH PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO (2) LAG SCREWS (1/2"x4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDED THE JOISTS ARE TOE NAILED TO THE SOLE PLATES, AND THE SOLE PLATES ARE NAILED OR BOLTED TO THE BEAM FLANGES @ 48" O.C.
- PROVIDE ANCHOR BOLT PLACEMENT PER SECTION 403.1.6: 1/2" ANCHOR BOLTS SPACED AT 6'-0" O.C. AND PLACED 12" FROM THE END OF EACH PLATE SECTION. ANCHOR BOLTS SHALL BE SPACED AT 3'-0" O.C. FOR BASEMENTS. ANCHOR BOLTS SHALL EXTEND 7" INTO CONCRETE OR MASONRY. THE BOLTS SHALL BE LOCATED IN THE MIDDLE THIRD OF THE WIDTH OF THE PLATE. THERE SHALL BE A MINIMUM TWO ANCHOR BOLTS PER PLATE SECTION.
- FOUNDATION DRAINAGE DAMP PROOFING OR WATERPROOFING PER SECTION 405 AND 406 OF NC BUILDING CODE.
- WALL AND ROOF CLADDING VALUES:
WALL CLADDING SHALL BE DESIGNED FOR 28.0 POUNDS PER SQUARE FOOT (LBS/SQFT) OR GREATER POSITIVE AND NEGATIVE PRESSURE. ROOF VALUES BOTH POSITIVE AND NEGATIVE SHALL BE AS FOLLOWS:
39.0 LBS/SQFT FOR ROOF PITCHES 0/12 TO 1.5/12
36.0 LBS/SQFT FOR ROOF PITCHES 1.5/12 TO 6/12
18.0 LBS/SQFT FOR ROOF PITCHES 6/12 TO 12/12
*MEAN ROOF HEIGHT 30'-0" OR LESS
- FOR ROOF SLOPES FROM 2/12 THROUGH 4/12, BUILDER TO INSTALL 2 LAYERS OF 15# FELT PAPER.
- REFER TO SECTION R602.3 FOR FRAMING OF ALL WALLS OVER 10'-0" IN HEIGHT.
- PROVIDE CONTINUOUS SHEATHING PER SECTION 602.10.3 OF THE 2018 NCR.
- UPLIFT LOADS GREATER THAN 500# SHALL BE CONTINUOUSLY ANCHORED TO THE FOUNDATION.
- REFER TO TABLE N1102.1 FOR PRESCRIPTIVE BUILDING ENVELOPE THERMAL COMPONENT CRITERIA.
- PSL COLUMNS DESIGNED WITH MAXIMUM HEIGHT OF 9'-0" (I.N.O.).
- PROVIDE A MINIMUM OF 500# UPLIFT & LATERAL CONNECTION AT TOP AND BOTTOM OF PORCH COLUMNS. (I.N.O.)
- MAXIMUM MASONRY PER HEIGHT SHALL NOT EXCEED FOUR TIMES ITS LEAST HORIZONTAL DIMENSION.
- IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND SQUARE FOOTAGE PRIOR TO CONSTRUCTION. TYNDALL ENGINEERING & DESIGN, P.A. IS NOT RESPONSIBLE FOR DIMENSION OR SQUARE FOOTAGE ERRORS ONCE CONSTRUCTION BEGINS.

DEFINITIONS FOR COMMON ABBREVIATIONS

ALT = ALTERNATE	MAX = MAXIMUM
CANT = CANTILEVER	MIN = MINIMUM
CJ = CEILING JOIST	NOM = NOMINAL
CMU = CONCRETE MASONRY UNIT	O.C. = ON CENTER
COL = COLUMN	PL = POINT LOAD
CONC = CONCRETE	PT = PRESSURE TREATED
CONT = CONTINUOUS	REFIN = REINFORCED
CT = COLLAR TIE	REQD = REQUIRED
DBL = DOUBLE	RJ = ROOF JOIST
DIA = DIAMETER	RS = ROOF SUPPORT
DJ = DOUBLE JOIST	SC = STUD COLUMN
DR = DOUBLE RAFTER	SCH = SCHEDULE
EA = EACH	SPEC = SPECIFIED
EE = EACH END	THK = THICK
FJ = FLOOR JOIST	TJ = TRIPLE JOIST
FND = FOUNDATION	TRTD = TREATED
FTG = FOOTING	TYP = TYPICAL
GALV = GALVANIZED	UNO = UNLESS NOTED OTHERWISE
HORIZ = HORIZONTAL	W = WIDE FLANGE BEAM
HT = HEIGHT	WWF = WELDED WIRE FABRIC
MANUF = MANUFACTURER	XJ = EXTRA JOIST

1) MAXIMUM HEIGHT OF DECK SUPPORT POSTS AS FOLLOWS:

POST SIZE	MAX. POST HEIGHT**
4 x 4	8'-0"
6 x 6	20'-0"
***	OVER 20'-0"

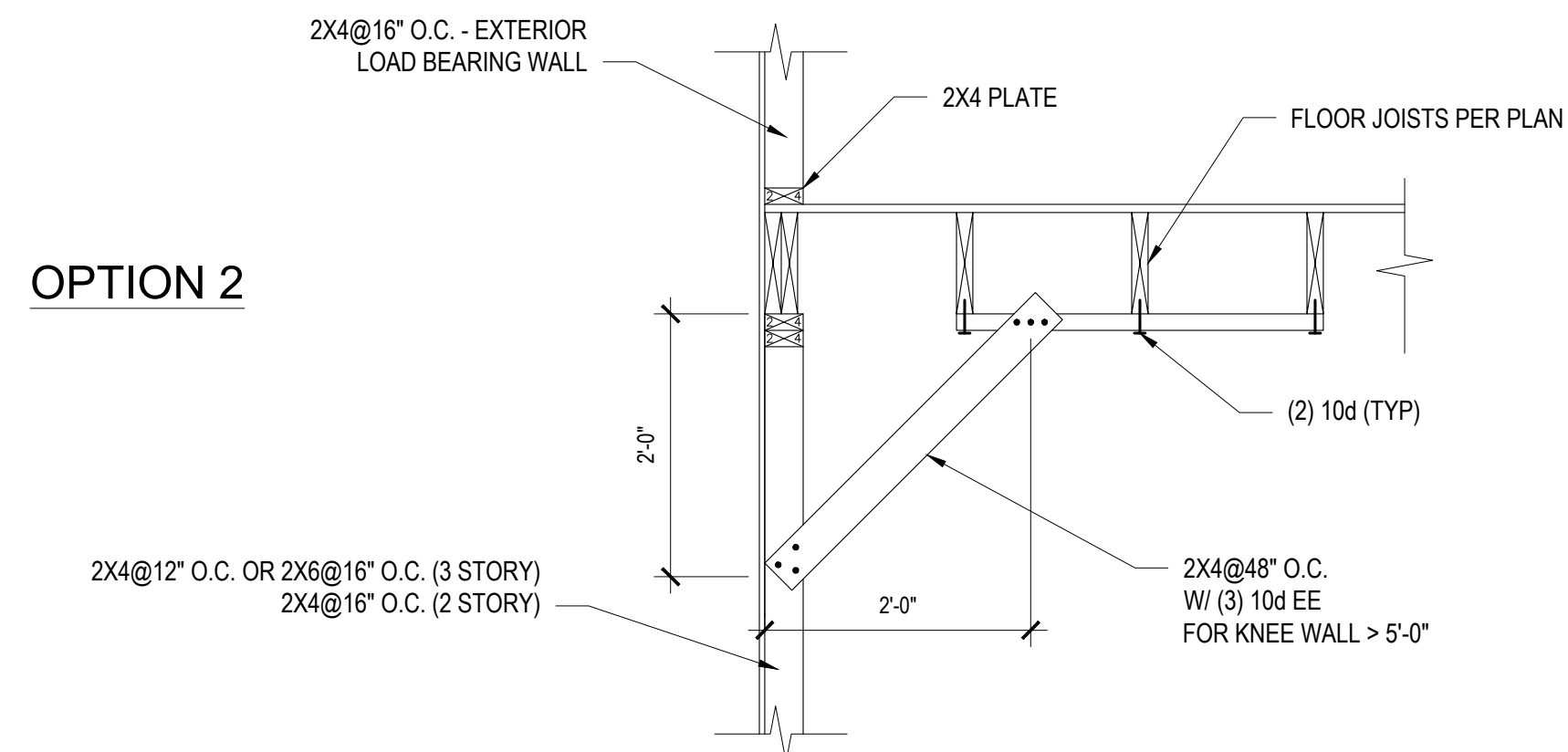
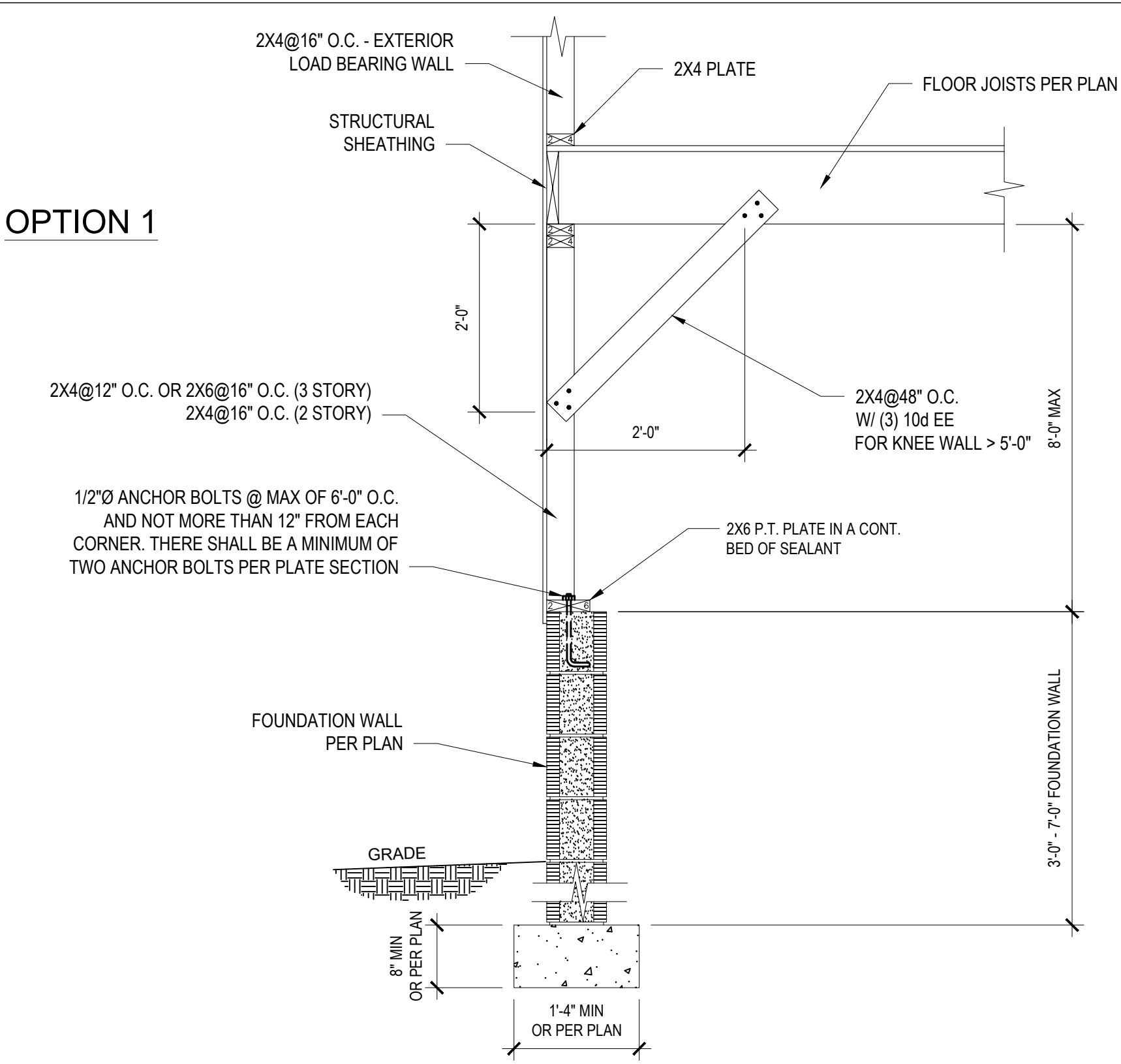
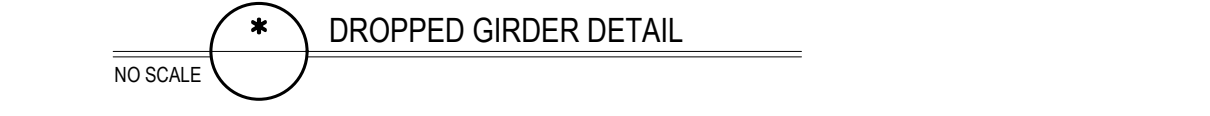
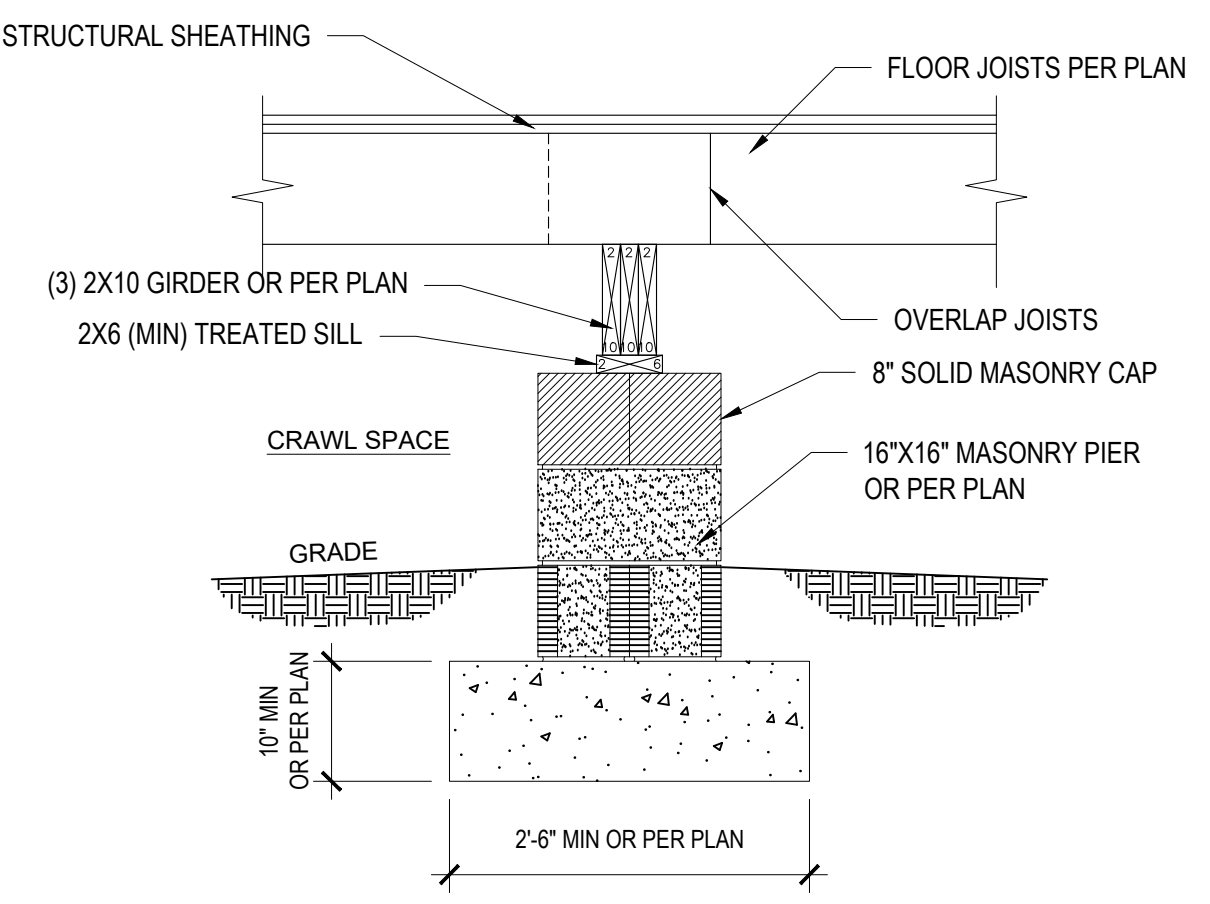
- * THIS TABLE IS BASED ON NO. 2 TREATED SOUTHERN PINE POSTS. MAXIMUM TRIBUTARY AREA IS BASED ON 128 TOTAL SQUARE FEET WHICH MAY BE LOCATED AT DIFFERENT LEVELS.
- ** FROM TOP OF FOOTING TO BOTTOM OF GIRDER
- *** DECKS WITH POST HEIGHTS OVER 20'-0" SHALL BE DESIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR REGISTERED ARCHITECT.

2) DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY BY ONE OF THESE METHODS:

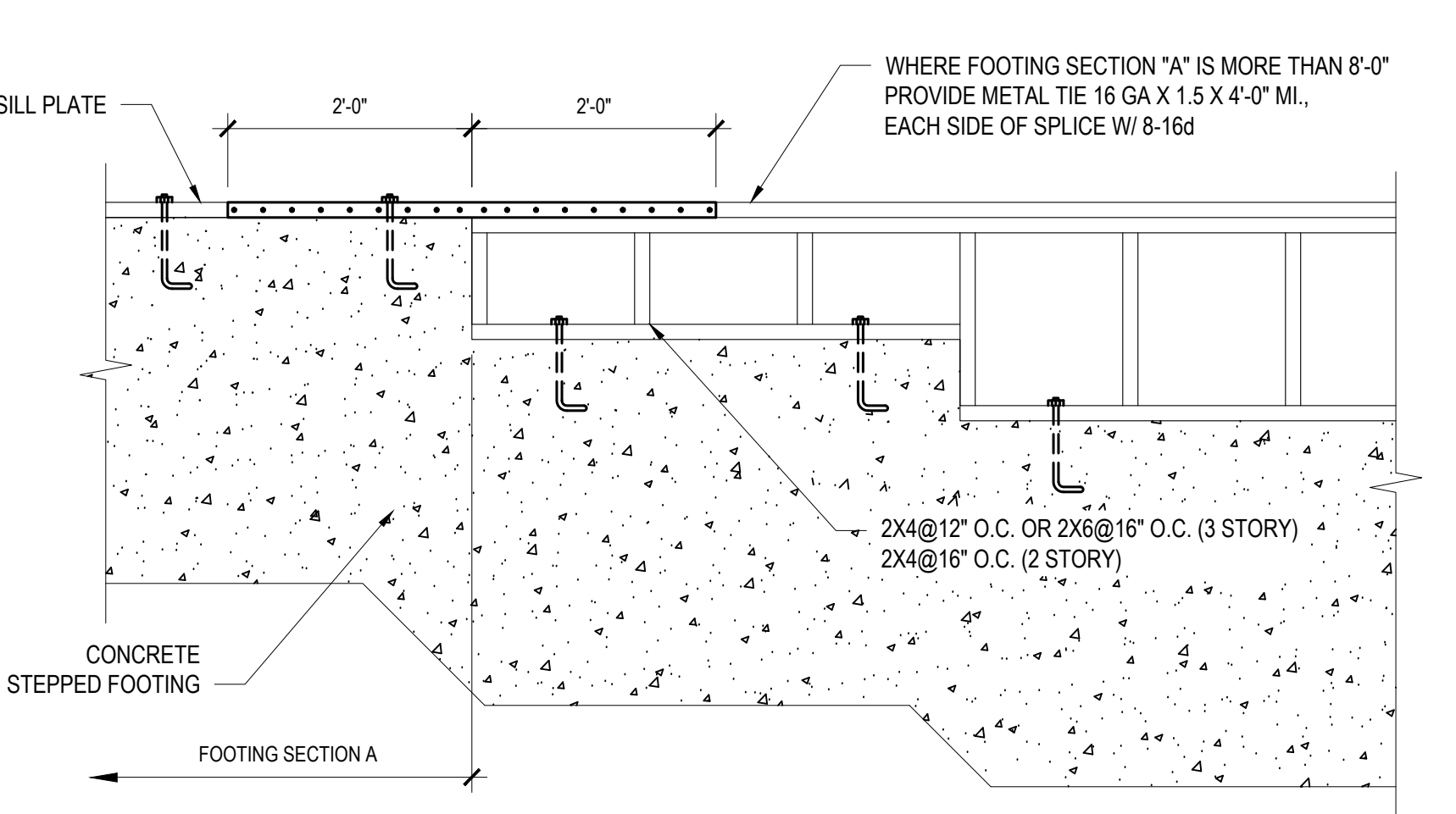
- THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION (4) ABOVE. LATERAL BRACING IS NOT REQUIRED.
- 4 x 4 WOOD KNEE BRACES MAY BE PROVIDED ON EACH COLUMN IN BOTH DIRECTIONS. THE KNEE BRACES SHALL ATTACH TO EACH POST AT A POINT NOT LESS THAN 1/3 OF THE POST LENGTH FROM THE TOP OF THE POST, AND THE BRACES SHALL BE ANGLED BETWEEN 45° AND 60° FROM THE HORIZONTAL. KNEE BRACES SHALL BE BOLTED TO THE POST AND GIRDER WITH ONE 5/8" HOT DIPPED GALVANIZED BOLT AT EACH END OF THE BRACE.
- FOR FREESTANDING DECKS WITHOUT KNEE BRACES OR DIAGONAL BRACING, LATERAL STABILITY MAY BE PROVIDED BY EMBEDDING THE POSTS IN ACCORDANCE WITH THE FOLLOWING:

POST SIZE	MAX. TRIBUTARY AREA	MAX. POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER
4 x 4	48 SQ. FT.	4'-0"	2'-6"	1'-0"
6 x 6	120 SQ. FT.	6'-0"	3'-6"	1'-8"

- 2 x 6 DIAGONAL VERTICAL CROSS BRACING MAY BE PROVIDED IN TWO (2) PERPENDICULAR DIRECTIONS FOR FREESTANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS. THE 2 x 6s SHALL BE ATTACHED TO THE POSTS WITH ONE 5/8" HOT DIPPED GALVANIZED BOLT AT EACH END OF EACH BRACING MEMBER.
- FOR EMBEDMENT OF PILES IN COASTAL REGIONS, SEE CHAPTER 46.



CRIPPLE WALL DETAIL
NO SCALE
2 OPTIONS



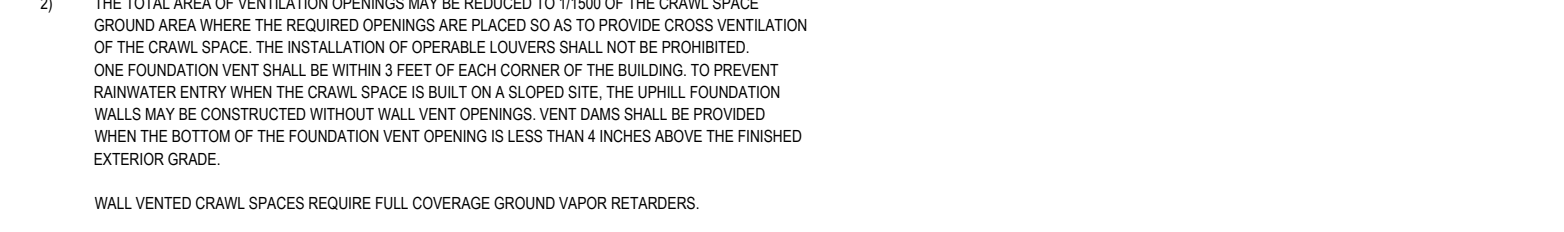
STEP DOWN FOUNDATION AT CRIPPLE WALL
NO SCALE
USED WITH BOTH OPTIONS ABOVE
NOTE: WHERE FOOTING SECTION "A" IS LESS THAN 8 FEET LONG IN A 25 FEET TOTAL LENGTH WALL, PROVIDE BRACING AT CRIPPLE STUD WALL.

CLIMATE ZONES	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC	CEILING R-VALUE	WOOD FRAMED WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE AND DEPTH	CRAWL SPACE WALL R-VALUE
3	0.35	0.55	0.30	15 or 38 or 30 cont.	13 + 2.5	5/13 or 5/10 cont.	19	5/13	0	5/13
4	0.35	0.55	0.30	15 or 38 or 30 cont.	13 + 2.5	5/13 or 5/10 cont.	19	10/15	10	10/15
5	0.35	0.55	NR	19, or 13 + 5 or 15 + 3	13/12.5 or 15 + 3	13/17 or 13/12.5 cont.	30	10/15	10	10/15

- TABLE N1102.1 CLIMATE ZONES 3-5**
- R-VALUES AND U-FACTORS ARE MINIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF THE INSULATION, THE INSTALLED R-VALUE OF THE INSULATION SHALL NOT BE LESS THAN THE VALUE SPECIFIED IN THE TABLE.
 - THE FENESTRATION U-FACTOR COLUMN ENCLOSEES SKYLIGHTS. THE SOLAR HEAT GAIN COEFFICIENT (SHGC) COLUMN APPLIES TO ALL GLAZED FENESTRATION.
 - "0.30" MEANS R-10 CONTINUOUS INSULATED SHEATHING ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-10 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL OR CRAWL SPACE WALL.
 - FOR MONOLITHIC SLAB, INSULATION SHALL BE APPLIED FROM THE INTERIOR AND DOWNWARD TO THE BOTTOM OF THE FOOTING OR A MAXIMUM OF 2" BELOW GRADE (WHICHEVER IS LESS). FOR FLOATING SLAB, INSULATION SHALL EXTEND TO THE BOTTOM OF THE CONCRECTION WALL. IF FINISH FLOOR IS USED, THE SLAB SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS.
 - SEELED.
 - BASEMENT WALL INSULATION IS NOT REQUIRED IN WARM-HUMID LOCATIONS AS DEFINED BY FIGURE N1102.3 AND TABLE N1102.1.
 - OR INSULATION SUFFICIENT TO FILL THE FRAMING CAVITY. R-10 MINIMUM.
 - THE FIRST VALUE IS CAVITY INSULATION. THE SECOND VALUE IS CONTINUOUS INSULATION. "0.30" MEANS R-10 CAVITY INSULATION PLUS R-10 INSULATED SHEATHING. "0.30" MEANS R-10 CAVITY INSULATION PLUS R-10 CONTINUOUS INSULATION. IF STRUCTURAL SHEATHING COVERS 20% OR MORE OF THE EXTERIOR INSULATED SHEATHING IS NOT REQUIRED WHERE THE STRUCTURAL SHEATHING IS USED. IF STRUCTURAL SHEATHING COVERS MORE THAN 20% OF THE EXTERIOR, THE SHEATHING SHALL BE SUPPLEMENTED WITH INSULATED SHEATHING OF AT LEAST R-2. "13 + 2.5" MEANS R-10 CAVITY INSULATION PLUS R-2.5 SHEATHING.
 - FOR MASS WALLS, THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR MASS WALL.
 - IN ADDITION TO THE EXEMPTION IN SECTION 1102.3.3, A MAXIMUM OF TWO GLAZED FENESTRATION PRODUCT ASSEMBLIES HAVING A U-FACTOR NO GREATER THAN 0.35 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.
 - IN ADDITION TO THE EXEMPTION IN SECTION 1102.3.3, A MAXIMUM OF TWO SLAB FENESTRATION PRODUCT ASSEMBLIES HAVING A SHGC NO GREATER THAN 0.70 SHALL BE PERMITTED TO BE SUBSTITUTED FOR MINIMUM CODE COMPLIANT FENESTRATION PRODUCT ASSEMBLIES WITHOUT PENALTY.
 - SLAB SHALL BE DESIGNED TO SATISFY THE CEILING INSULATION REQUIREMENT WHERE THE FULL HEIGHT OF UNCOMPRESSED R-30 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE GRADE. EXTERIOR AIR INSULATION IS REQUIRED WHERE ADEQUATE CLEARANCE EXISTS TO INSULATION THAT EXTENDS TO EITHER THE INSULATION BATTLE OR WITHIN THE TOP OF THE ATTIC ROOF JOIST.
 - THIN INSULATION REQUIRED UNDER ROOF DECKS WHERE THE SPACE IS LIMITED BY THE PITCH OF THE ROOF. THERE THE INSULATION MUST FILL THE SPACE UP TO THE AIR BATTLE.
 - IF FINISH FLOOR IS COMPRESSED AND INSTALLED IN A NOMINAL 2 x 6 FRAMING CAVITY IS DEEMED TO COMPLY. FINISH FLOOR BATTES RATED R-19 OR HIGHER COMPRESSED ARE NOT ALLOWED IN A 2x6 WALL. SEE DETAIL TO COMPLY.
 - BASEMENT WALL MEETING THE MINIMUM MASS WALL SPECIFIC HEAT CONTENT REQUIREMENT MAY USE THE MASS WALL R-VALUE AS THE MINIMUM REQUIREMENT.

3018 SQ. FT. OF CRAWL SPACE / 150 = 20.12 SQ. FT. OF REQ'D VENTILATION WITHOUT CROSS VENTILATION
20.12 SQ. FT. OF VENTILATION REQ'D / 0.88 SQ. FT. PER VENT = 23 VENTS REQ'D (BASED ON 8" X 16" VENTS)

3018 SQ. FT. OF CRAWL SPACE / 1500 = 2.02 SQ. FT. OF REQ'D VENTILATION WITH CROSS VENTILATION
2.02 SQ. FT. OF VENTILATION REQ'D / 0.88 SQ. FT. PER VENT = 3 VENTS REQ'D (BASED ON 8" X 16" VENTS)

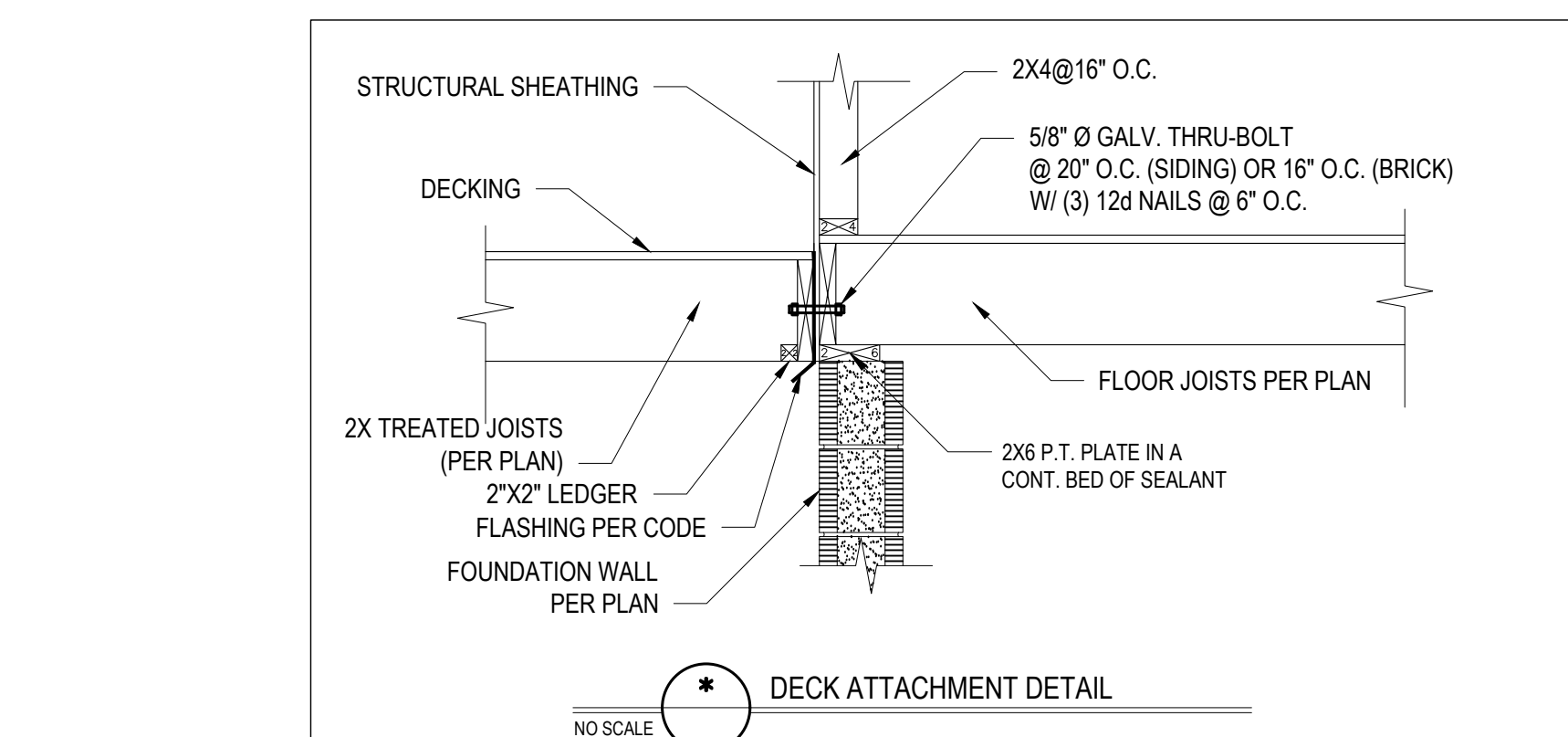
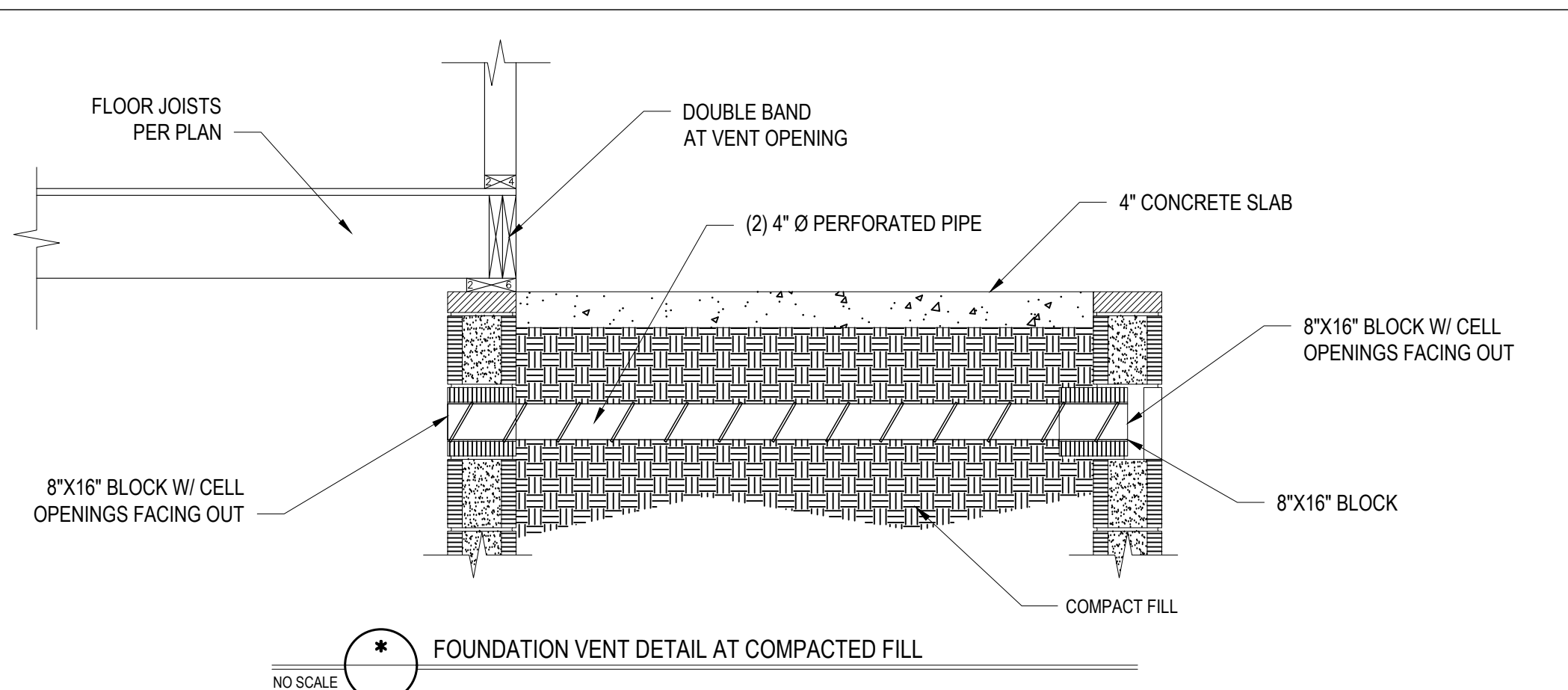


CRAWL SPACE VENTILATION CALCULATION
NO SCALE

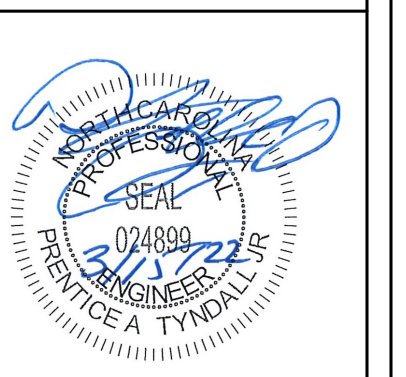
3972 SQ. FT. OF ATTIC / 300 = 13.24 SQ. FT. INLETS/OUTLETS REQUIRED



ATTIC VENTILATION CALCULATION
NO SCALE



Engineers and does not include construction means, methods, techniques, sequences, procedures or safety precautions. Any deviations or interpretations on plans are to be sought in the contract documents of Tyndall Engineering & Design, P.A. Failure to do so will nullify Tyndall Engineering & Design, P.A. liability. Please review these documents carefully. Tyndall Engineering & Design, P.A. will accept no liability for omissions, recommendations, or provisions in these documents were deemed acceptable once construction begins.



TYNDALL ENGINEERING & DESIGN, P.A.
147 FIVE OAKS • FIVE FIVE NORTH DRIVE • NORTH CAROLINA • 27609
www.tyndallengineering.com

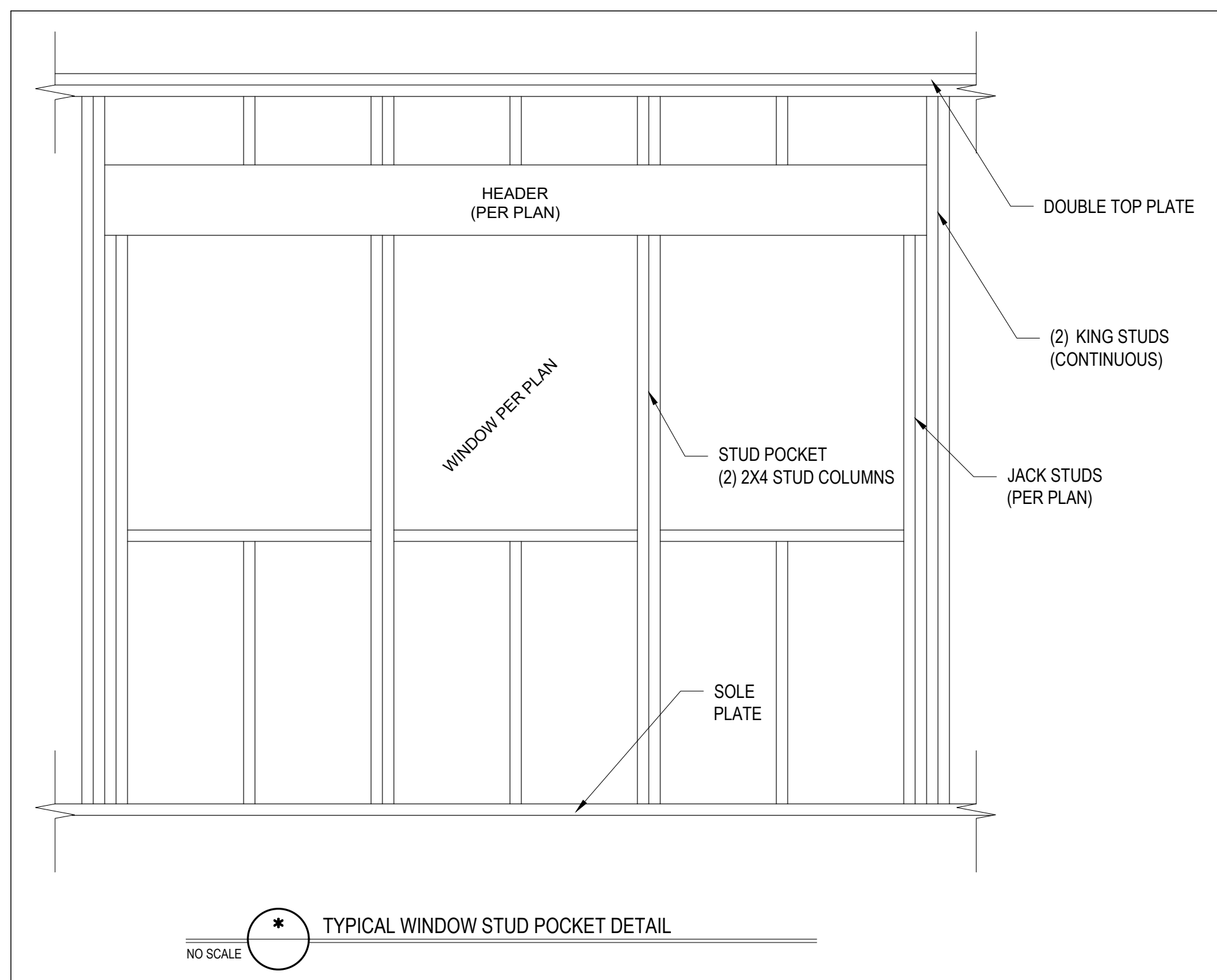
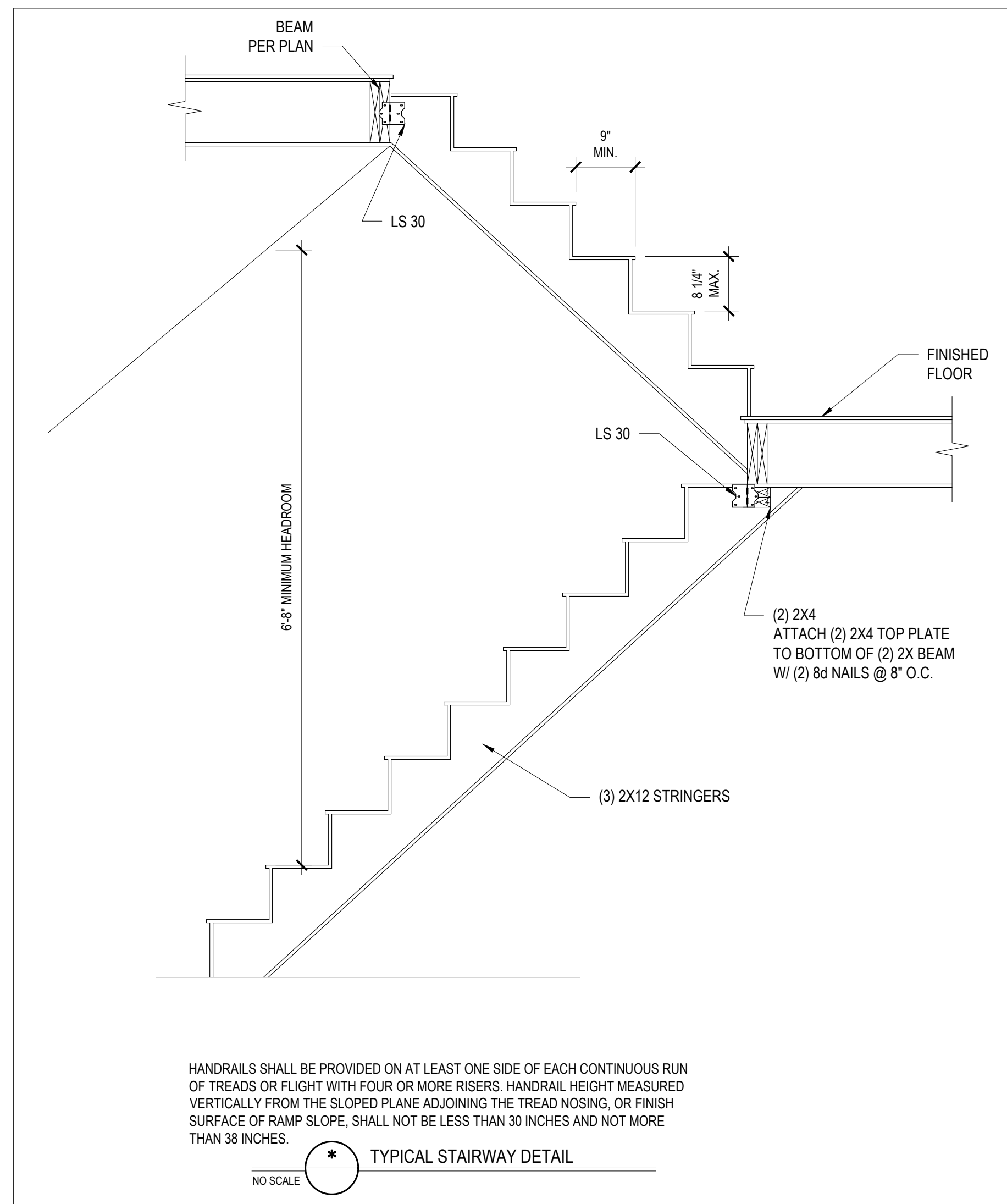
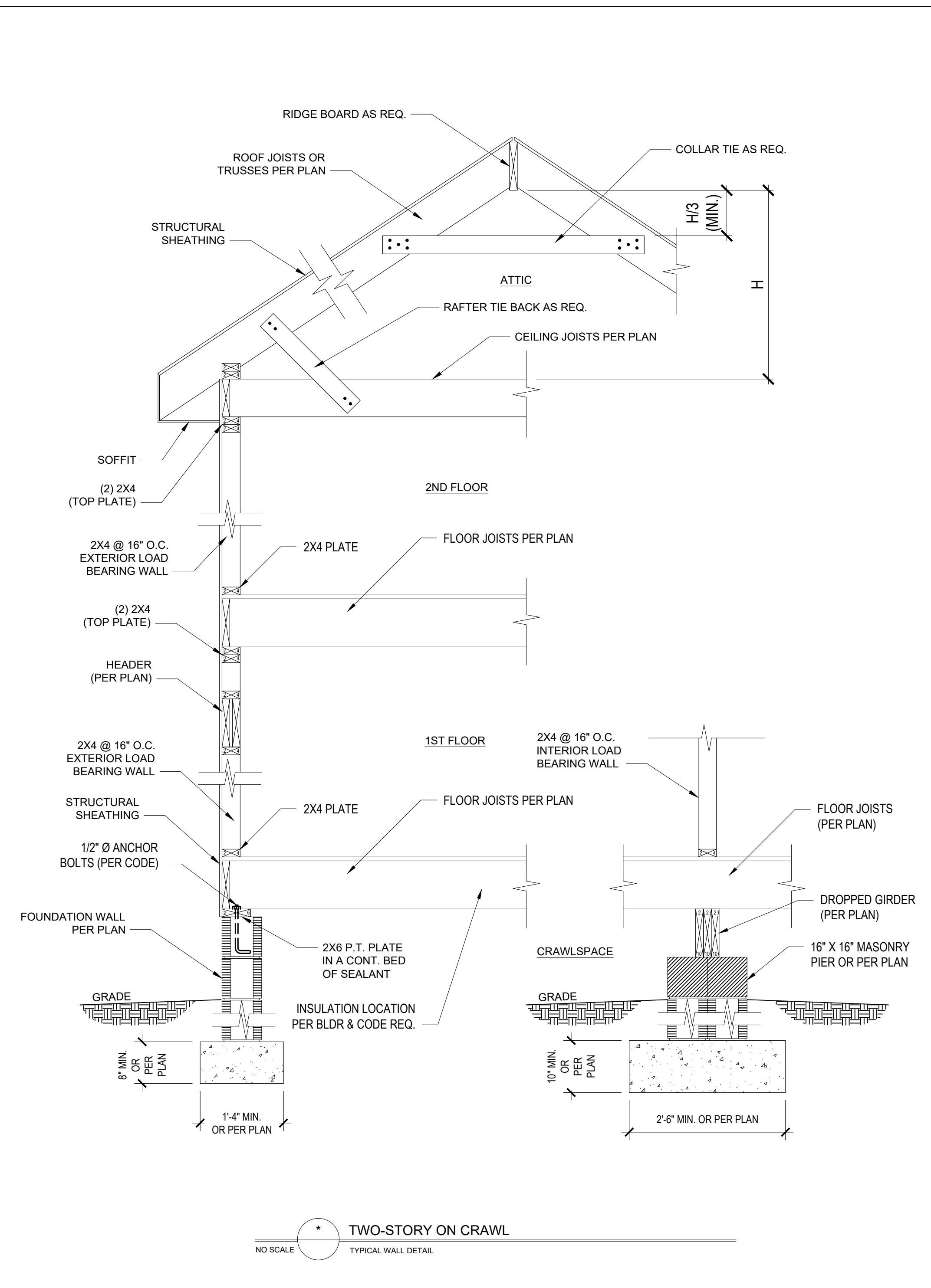
Client: **Bryan and Lauren Sharpe**
Project: **Sharp Residence**

STANDARD DETAILS

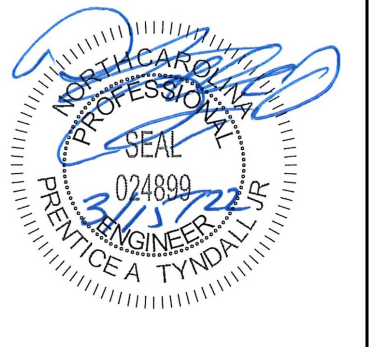
Project #:	DRB2101-0229
Date:	03/15/22
Engineered by:	LAG
DWG. Checked by:	PAT
Scale:	SEE PLAN

REVISIONS		
No.	Date:	Remarks

Sheet Number
D1
5 of 7



Engineers and does not include construction means, methods, techniques, sequences, procedures or safety precautions. Any deviation or interpretation of plans are to be brought to the attention of the engineer. The engineer's responsibility is limited to the design and construction of the project as shown on the plans. The engineer's responsibility is limited to the design and construction of the project as shown on the plans. The engineer's responsibility is limited to the design and construction of the project as shown on the plans.



TYNDALL
ENGINEERING & DESIGN, P.A.
197 W. 25th St., 1st Floor
Raleigh, NC 27601
www.tyndalldesign.com

Client: **Bryan and Lauren Sharpe**
Project: **Sharpe Residence**

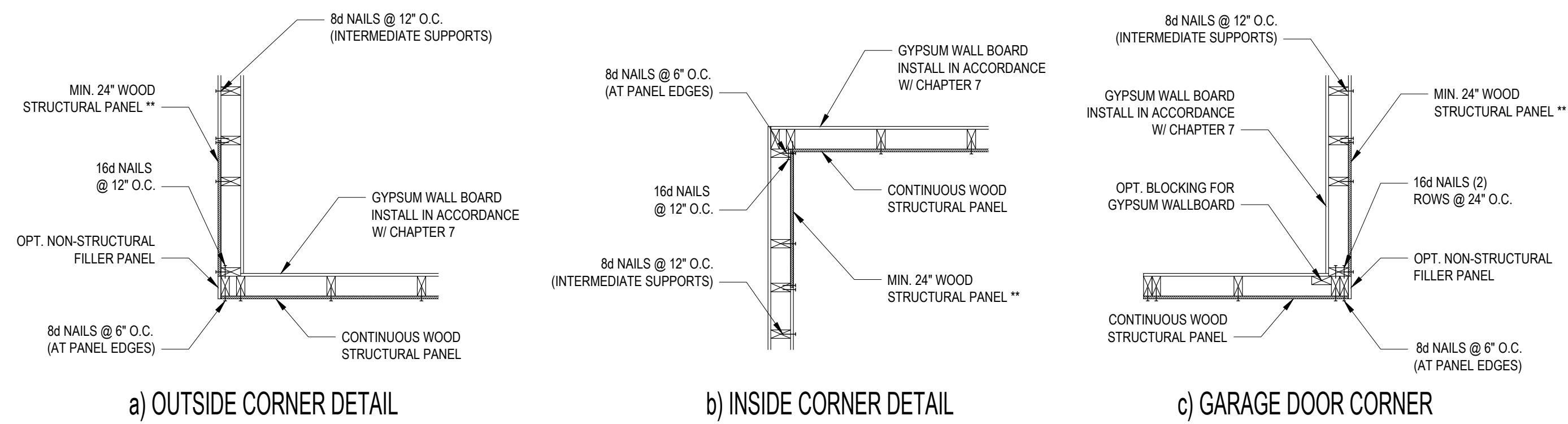
**STANDARD
DETAILS**

Project #: **DRB2101-0229**
Date: **03/15/22**
Engineered By: **LAG**
DWG. Checked By: **PAT**
Scale: **SEE PLAN**

REVISIONS		
No.	Date:	Remarks

Sheet Number
D2
6 of 7

FILENAME: Z:\086\086_2021\0862101-0229_BRYAN_LAUREN_SHARPE\0862101-0229_BRYAN_LAUREN_SHARPE\0862101-0229_L.DWG SWID BY: RESIDENCE TYNDALE 03/15/2022 5:20 PM



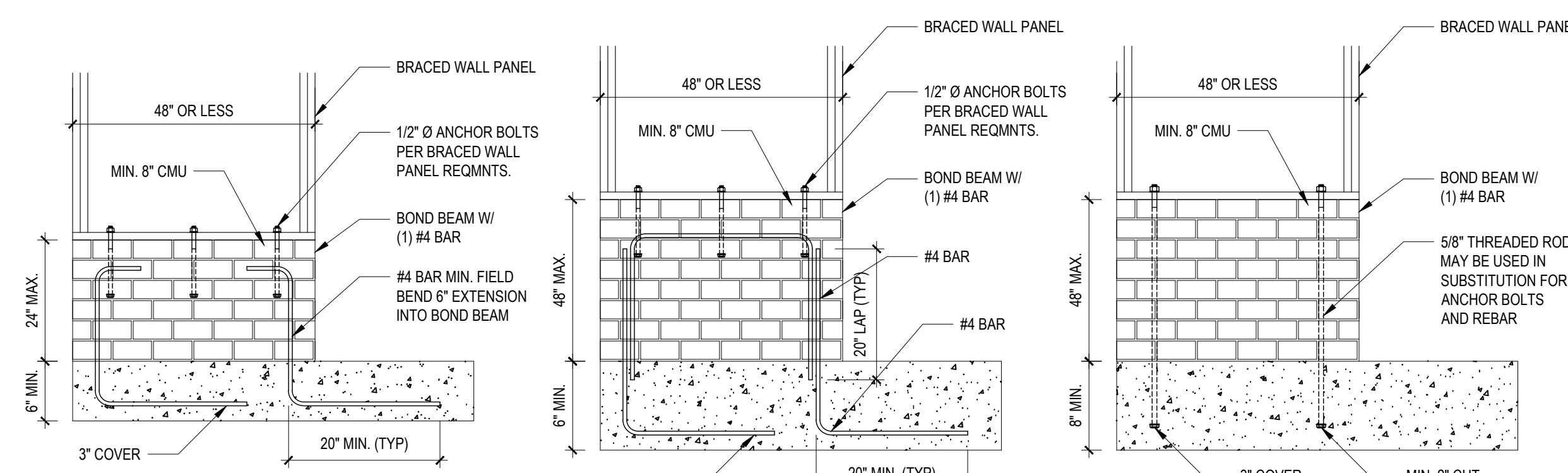
** IN LIEU OF THE 24" (MIN.) CORNER RETURN, A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800# SHALL BE FASTENED TO THE CORNER STUD AND TO THE FOUNDATION OR FRAMING BELOW.

B1: TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING
NO SCALE

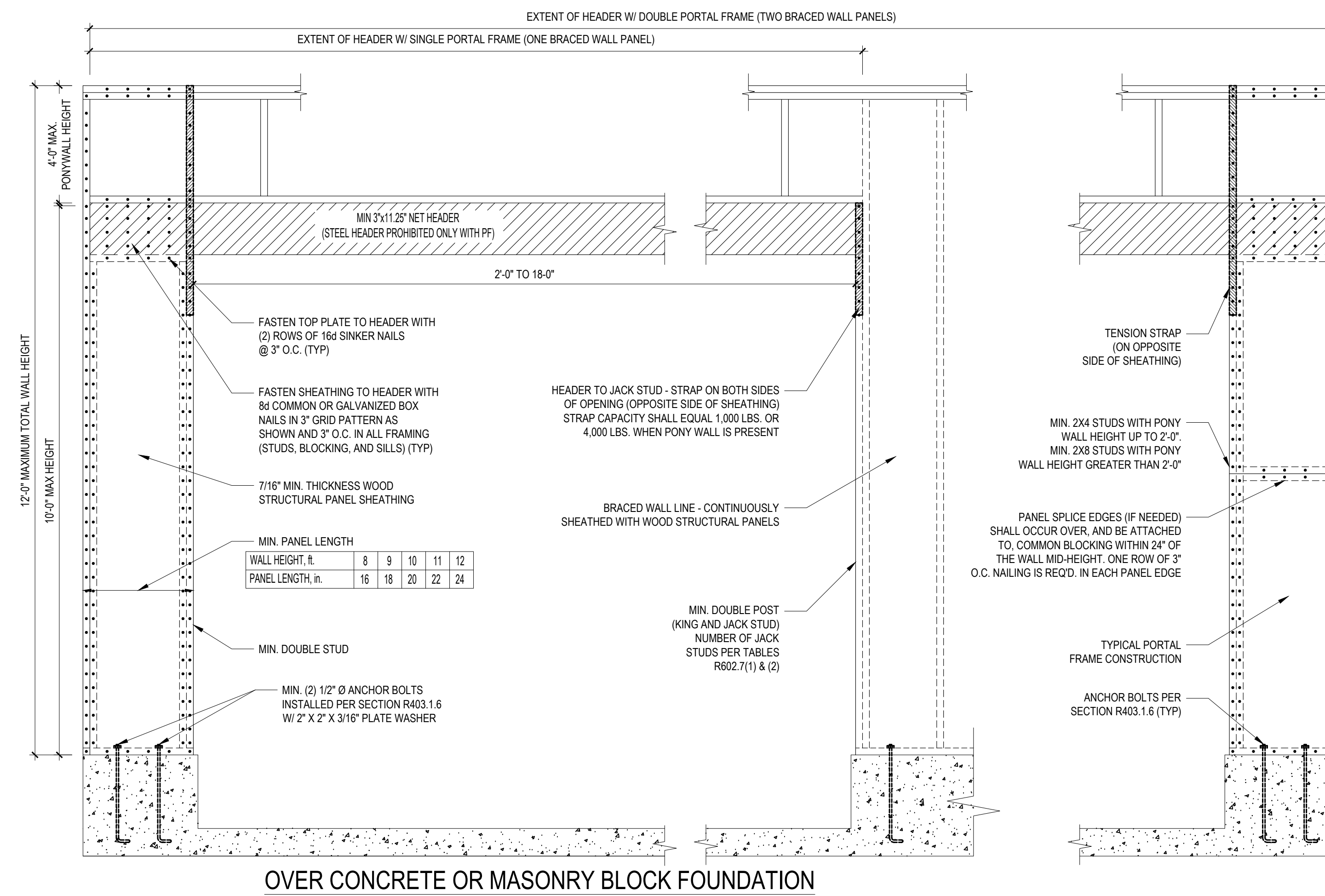
- STRUCTURAL SHEATHING NOTES**
- DESIGNED FOR SEISMIC ZONE A-C AND WIND SPEEDS OF 100 MPH OR LESS.
 - WALLS SHALL BE BRACED IN ACCORDANCE WITH SECTION R602.10.3 OF THE 2018 NRC.
 - BRACING REQUIREMENTS SHALL BE PER TABLE R602.10.3. REFER TO SECTION R602.10.4 FOR LOAD PATH DETAILS INCLUDING CONNECTIONS & SUPPORT OF BRACED WALL PANELS.
 - REFERENCE FIGURE R602.10.4.3 OF THE 2018 NRC.
 - INTERIOR BRACED WALL PANELS (BWP) INDICATED SHALL BE SHEATHED IN ACCORDANCE WITH THE GB METHOD OR WSP METHOD AS PRESCRIBED IN SECTION R602.10.1 (UNCL).
 - 1/2" GYPSUM BOARD (GB) MINIMUM LENGTH OF 8'-0" (SHEATHING) OR 4'-0" (CONTINUOUS SHEATHING).
 - 3/8" WOOD STRUCTURAL PANEL (WSP) SECURE W/ 6d COMMON NAILS SPACED AT 12" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS.
 - EXTERIOR BRACED WALL PANELS (BWP) SHALL BE CONSTRUCTED IN ACCORDANCE WITH CS-WSP METHOD AS PRESCRIBED IN SECTION R602.10.3 (UNCL).
 - ALL SHEATHABLE SURFACES OF EXTERIOR WALLS INCLUDING AREAS ABOVE AND BELOW OPENINGS AND GABLE END WALLS SHALL BE CONTINUOUSLY SHEATHED WITH WOOD STRUCTURAL PANEL (WSP) SHEATHING WITH A MINIMUM THICKNESS OF 3/8" SHEATHING SHALL BE SECURED WITH MINIMUM 6d COMMON NAILS SPACED AT 6" O.C. AT PANEL EDGES AND SPACED AT 12" O.C. AT INTERMEDIATE SUPPORTS.
 - MINIMUM BRACED WALL PANEL LENGTHS WITH CS-WSP METHOD SHALL BE AS FOLLOWS:
 - 24" ADJACENT TO OPENINGS NOT MORE THAN 67% OF WALL HEIGHT
 - 30" ADJACENT TO OPENINGS GREATER THAN 67% AND LESS THAN 85% OF WALL HEIGHT
 - 48" FOR OPENINGS GREATER THAN 85% OF WALL HEIGHT
 - SHEATH INTERIOR AND EXTERIOR.
 - FOR CS-WSP METHOD, A MINIMUM 24" BRACED WALL PANEL CORNER RETURN SHALL BE PROVIDED AT BOTH ENDS OF A BRACED WALL LINE IN ACCORDANCE WITH FIGURE R602.10.3 (A) IN LIEU OF A CORNER RETURN, EITHER A MINIMUM 48" BRACED WALL PANEL SHALL BE PROVIDED AT THE CORNER OR A HOLD-DOWN DEVICE WITH A MINIMUM UPLIFT DESIGN VALUE OF 800# SHALL BE FASTENED TO THE EDGE OF THE BRACED WALL PANEL CLOSEST TO THE CORNER AND TO THE FOUNDATION OR FRAMING BELOW.
 - MINIMUM 800# HOLD-DOWN DEVICE.

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

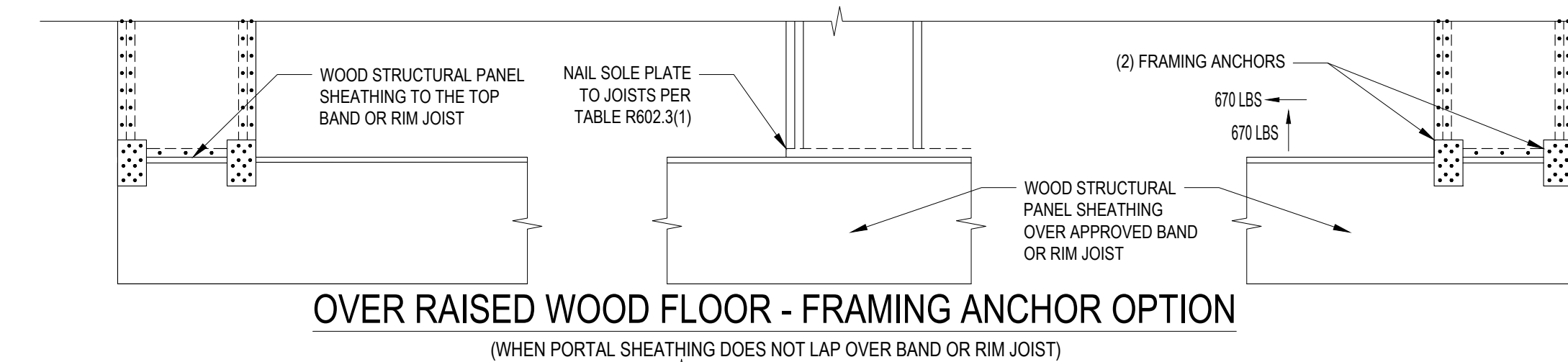
**OR EQUIVALENT PER TABLE R702.3.5
B3: BRACE WALL PANEL CONNECTIONS
NO SCALE



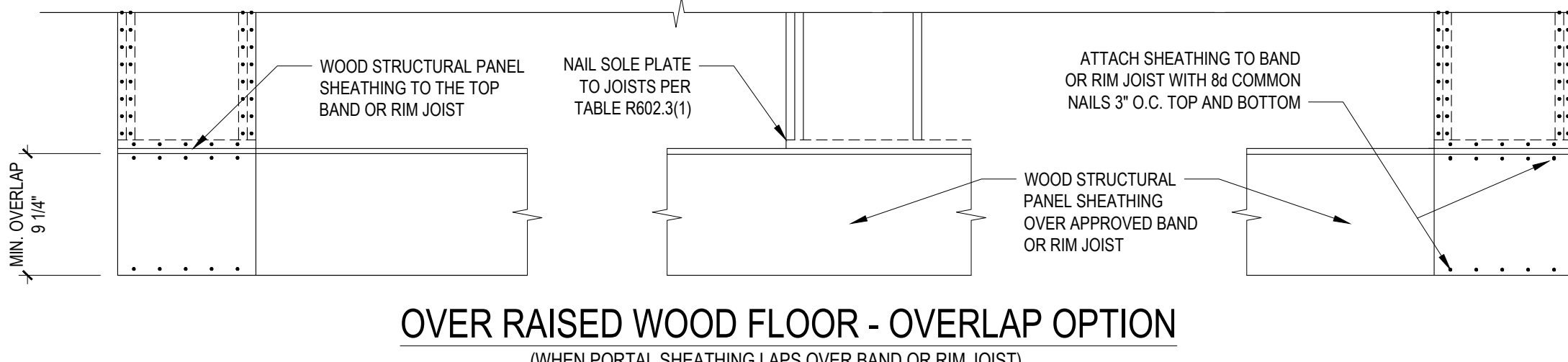
B4: MASONRY STEM WALL SUPPORTING BRACED WALL PANELS
FIGURE R602.10.4.3 OF THE 2018 NRC
NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS



OVER CONCRETE OR MASONRY BLOCK FOUNDATION



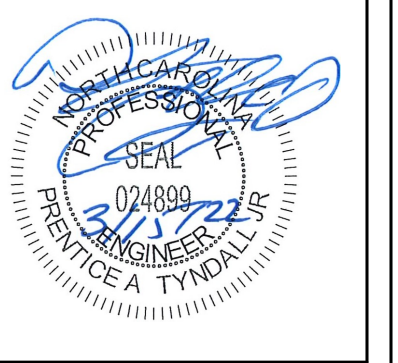
OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION
(WHEN PORTAL SHEATHING DOES NOT LAP OVER BAND OR RIM JOIST)



OVER RAISED WOOD FLOOR - OVERLAP OPTION
(WHEN PORTAL SHEATHING LAPS OVER BAND OR RIM JOIST)

B2: METHOD CS-PF: CONTINUOUSLY SHEATHED PORTAL FRAME
FIGURE R602.10.1

Engineers and does not include construction means, methods, techniques, sequences, procedures or safety precautions. Any decisions or determinations on plans are to be made by the contractor in accordance with the contract documents. Tyndall Engineering & Design, P.A. is not responsible for any errors or omissions in these documents. Tyndall Engineering & Design, P.A. is not responsible for any errors or omissions in these documents. Tyndall Engineering & Design, P.A. is not responsible for any errors or omissions in these documents. Tyndall Engineering & Design, P.A. is not responsible for any errors or omissions in these documents.



TYNDALL
ENGINEERING & DESIGN, P.A.
197 W. 50th St., 1st Floor
Raleigh, NC 27606
919.877.1111
www.tyndallengineering.com

Client: **Bryan and Lauren Sharpe**
Project: **Sharpe Residence**

SHEATHING
DETAILS

Project #:	DRB2101-0229
Date:	03/15/22
Engineered By:	LAG
DWG. Checked By:	PAT
Scale:	SEE PLAN

REVISIONS		
No.	Date	Remarks

Sheet Number
D3
7 of 7