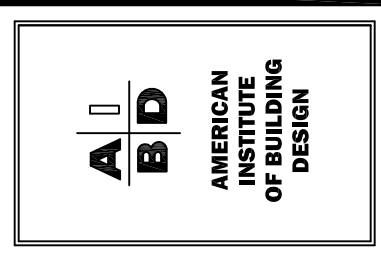


Triangle Residential Designs Inc
 405 S. Lakeside Dr, Raleigh, NC 27606 Tel: (919) 852-3500 www.trd-chp.com



CLIENT: FRANK BOLDREAU	RESIDENCE: 8163 SOUTH RIVER ROAD, WILMINGTON, NC 27154
PROJECT: HARNETT COUNTY	DATE: NOVEMBER 2, 2021
SHEET: 1 OF 5	SHEET NAME: FRONT AND RIGHT ELEVATIONS
DRAWN BY:	REVISED:

GENERAL NOTES:

- 1) THESE PLANS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OF THE NCBC 2018 RESIDENTIAL CODE
- 2) THESE PLANS ARE DESIGNED TO BE USED BY A LICENSED GENERAL CONTRACTOR
- 3) DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS
- 4) ALL FINISH PLANS ARE TO BE HANDLED BY THE GENERAL CONTRACTOR UNLESS NOTED OTHERWISE
- 5) ENGINEER'S INFORMATION AND NOTES TAKE PRECEDENCE OVER TRD PLAN

GENERAL CONTRACTOR:

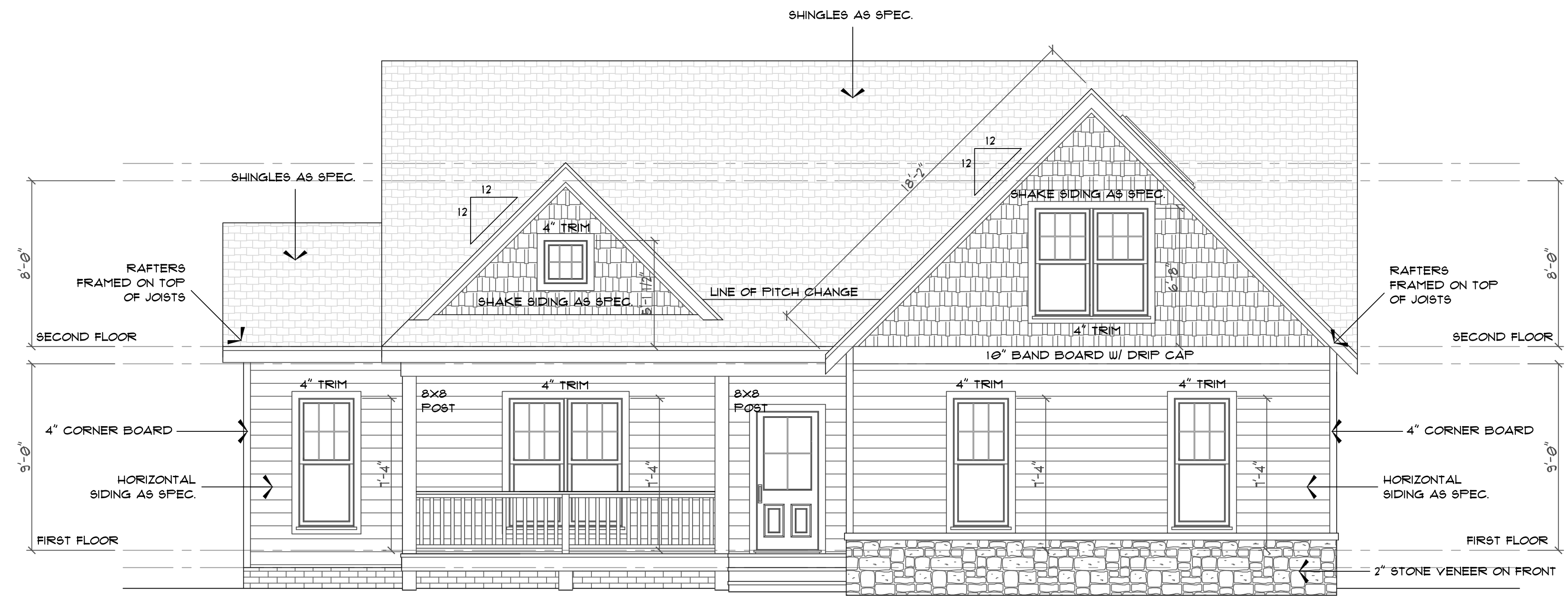
- 1) PRIOR TO CONSTRUCTION, REVIEW ALL PLANS VERIFYING DIMENSIONS, LOCAL CODES, ENERGY TYPES AND SITE CONDITIONS
- 2) ANY DISCREPANCY IN THE PLANS IS TO BE BROUGHT TO THE ATTENTION OF TRD FOR CORRECTION PRIOR TO CONSTRUCTION OTHERWISE IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR
- 3) INSURE ALL PHASES OF CONSTRUCTION COMPLY WITH BUILDING CODES IN THE AREA THE HOME IS TO BE BUILT
- 4) CONSULT WITH LOCAL ENGINEER FOR STRUCTURAL DESIGN
- 5) ONCE CONSTRUCTION BEGINS, CONTRACTOR ASSUMES ALL RESPONSIBILITY

TRIANGLE RESIDENTIAL DESIGNS:

- 1) THESE PLANS ARE THE COPYRIGHTED PROPERTY OF TRD. THEY ARE NOT TO BE REPRODUCED WHOLE OR IN PART, WITHOUT WRITTEN CONSENT FROM TRD.
- 2) THE LIABILITY OF TRD IN CONNECTION WITH THIS PLAN AND THE HOME BUILT THEREFROM IS LIMITED TO THE TOTAL FEES PAID BY THE PURCHASER OF THE PLAN.
- 3) TRD ASSUMES NO LIABILITY FOR ALTERATIONS TO THE PLANS, FIELD MODIFICATIONS OF THE PLANS OR STRUCTURAL COMPONENTS. THEY ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

NON-EXCLUSIVE LICENSE:

THE PURCHASER OF THIS PLAN HAS BEEN GRANTED A NON-EXCLUSIVE, NON-TRANSFERABLE LICENSE TO USE THIS COPYRIGHTED PLAN TO BUILD ONE HOME. THE PLANS ARE NOT TO BE REPRODUCED, WHOLE OR IN PART, OR RESOLD, WITHOUT WRITTEN CONSENT FROM TRD. ANY BREACH OF THESE TERMS ENTITLES TRD TO PURSUE ALL REMEDIES BY LAW.



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

MEAN ROOF HEIGHT

14'-6" EAVE HT. + 24'-5" OVERALL HT. = 38'-11" TOTAL
 38'-11" TOTAL/2 = 19'-5.5" MEAN ROOF HT.

NOTES:

- DISTANCES INDICATED ARE FROM FINISHED GRADE AND ASSUME A FLAT LOT WITH MINIMUM GRADE REQUIREMENTS.
- DESIGN PRESSURE = 35 PSF

DESIGN LOADS

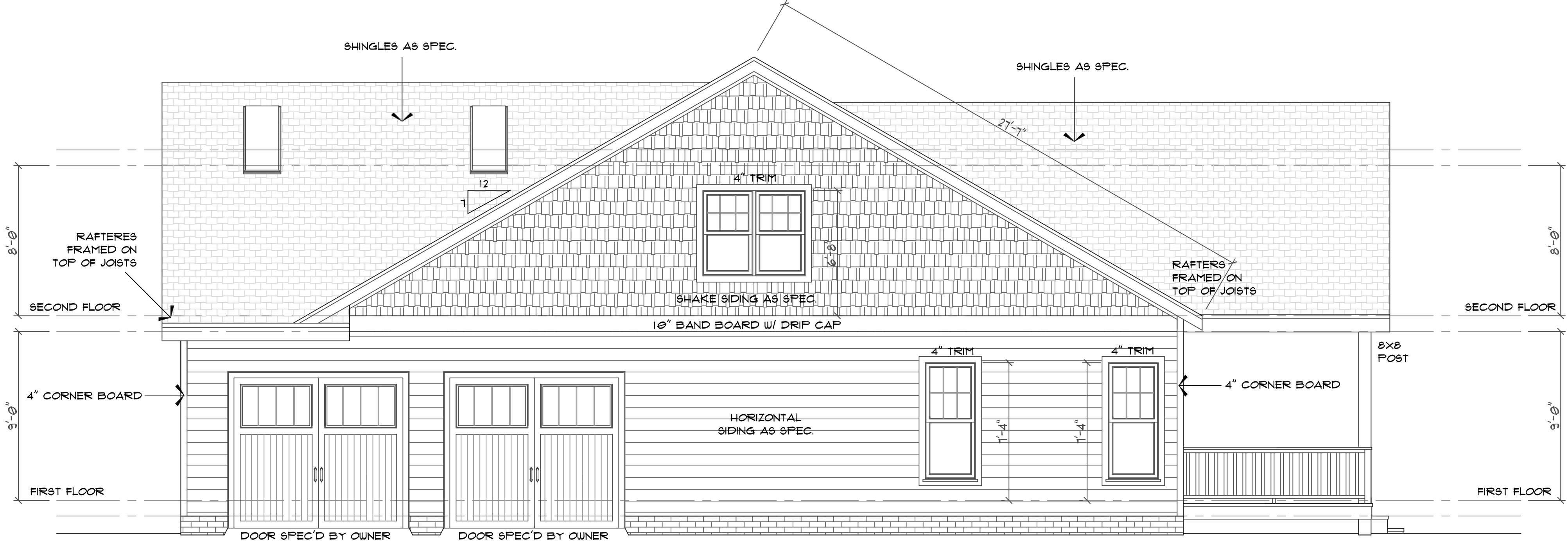
FLOOR LIVE LOAD (SLEEPING): 30 PSF
 FLOOR LIVE LOAD (ALL OTHERS): 40 PSF
 DECKS: 40 PSF
 BALCONIES: 60 PSF
 ATTIC DEAD LOAD (NO STOR): 10 PSF
 ATTIC LIVE LOAD (STORAGE): 20 PSF
 ATTIC W/STAIRS (DEVELOPABLE): 40 PSF

MIN. VALUES FOR ENERGY COMPLIANCE

CEILING: R-38
 WALLS: R-15
 FLOORS: R-19
 BASEMENT WALLS: R-1
 CRAWL SPACE WALLS: R-9
 SLAB PERIMETER @ 24" DEEP: R-4
 MAX. GLAZING U-FACTOR = 0.35
 ZONE 4

EXTERIOR MATERIALS

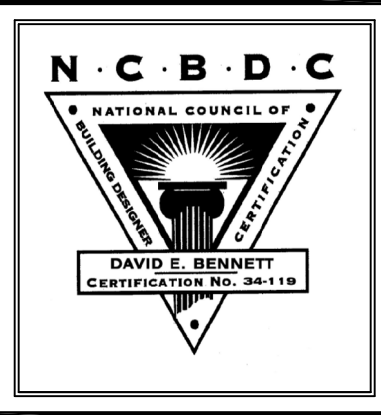
	ROOF SHINGLES
	METAL ROOF
	HORIZONTAL SIDING
	BOARD & BATTEN SIDING
	VERTICAL SIDING
	SHAKE SIDING
	BRICK
	STONE
	STUCCO OR PARGING
	SCREEN
	BRICK ROWLOCK OR SOLDIER



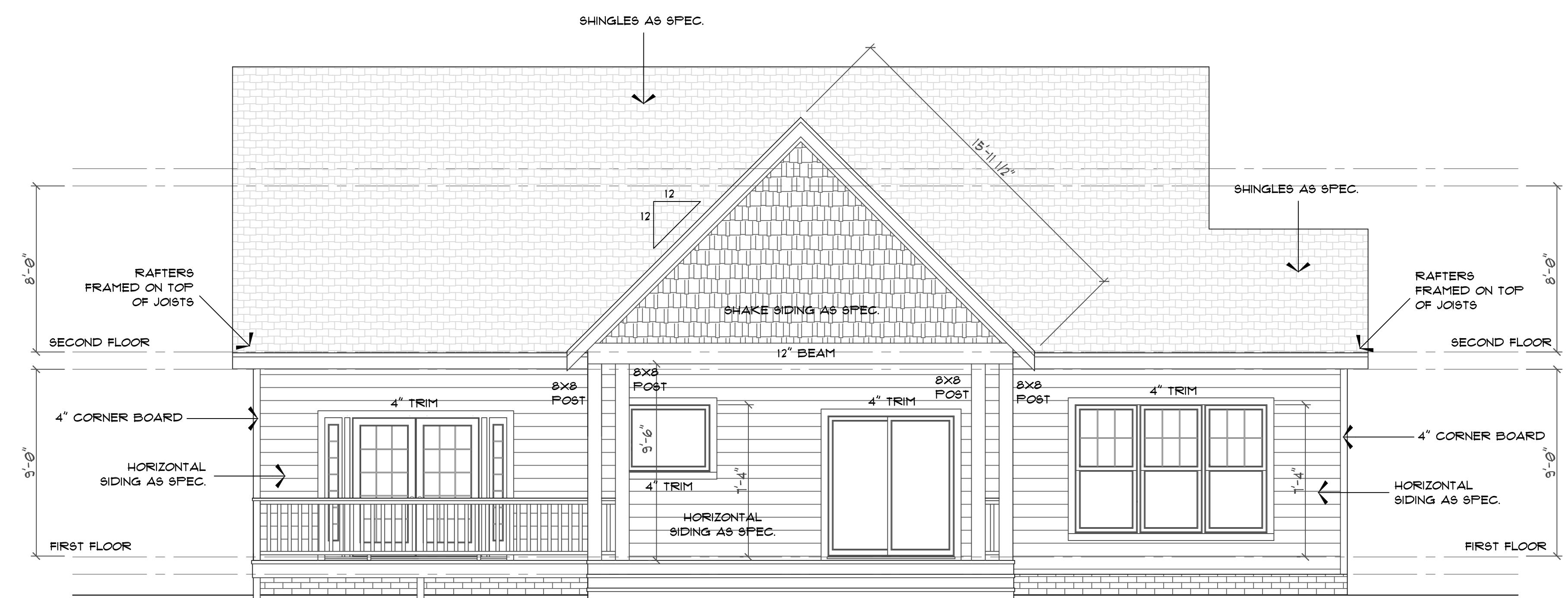
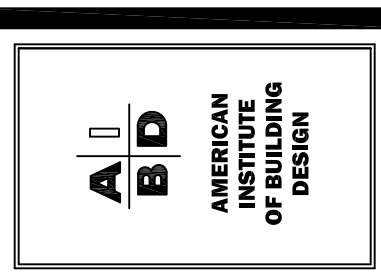
RIGHT ELEVATION
SCALE: 1/4"=1'-0"

INDEX TO SHEETS

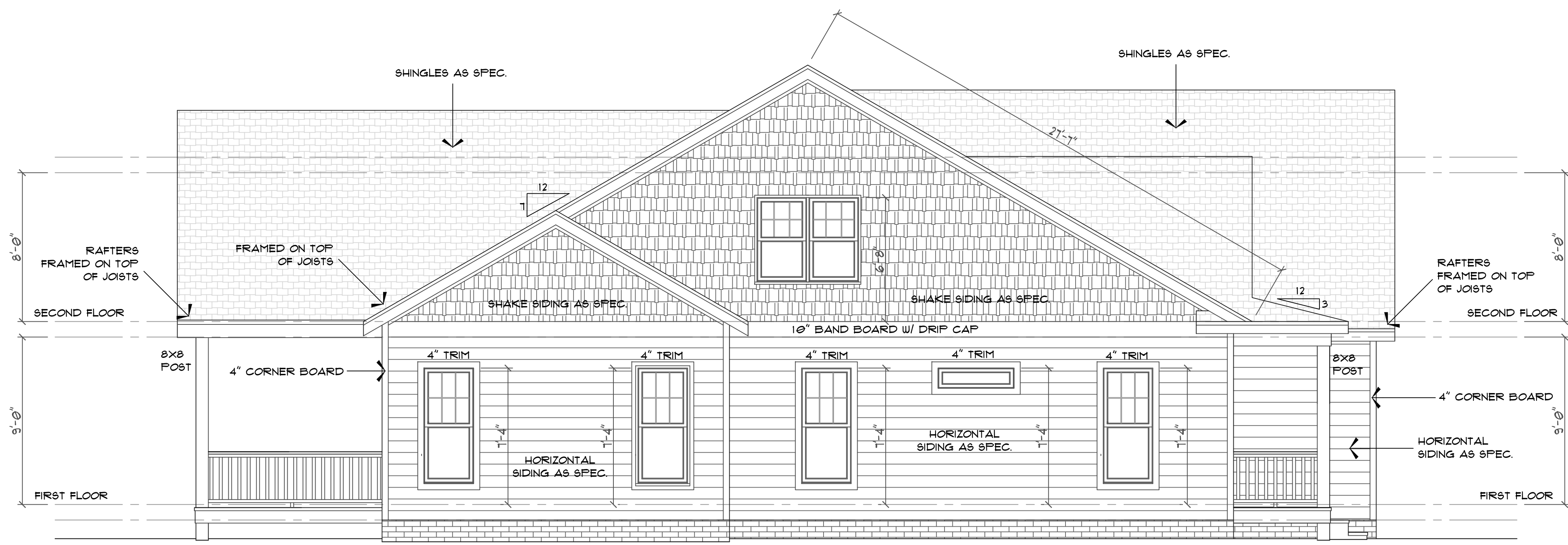
SHEET	NAME
1	FRONT & RIGHT SIDE ELEVATIONS
2	REAR & LEFT SIDE ELEVATIONS
3	FOUNDATION PLAN
4	FIRST FLOOR PLAN
5	SECOND FLOOR PLAN
EI-4	ENGINEERING SHEETS
DI	DETAIL SHEET



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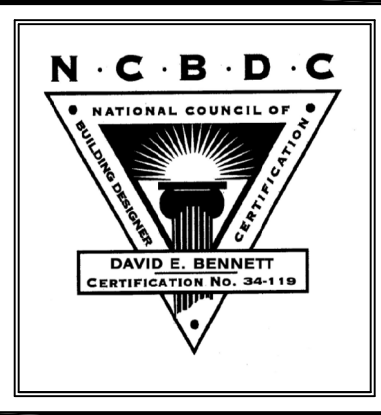
REAR ELEVATION
SCALE: 1/4"=1'-0"



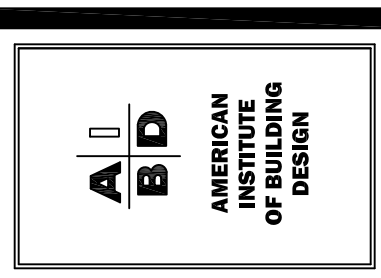
LEFT ELEVATION
SCALE: 1/4"=1'-0"

EXTERIOR MATERIALS	
	ROOF SHINGLES
	METAL ROOF
	HORIZONTAL SIDING
	BOARD & BATTEN SIDING
	VERTICAL SIDING
	SHAKE SIDING
	BRICK
	STONE
	STUCCO OR PARGING
	SCREEN
	BRICK ROWLOCK OR SOLDIER

CLIENT:	FRANK BOIDREAU
PROJECT:	RESIDENCE
RESIDENCE:	5163 SOUTH RIVER ROAD LILLINGTON, NC 27546 HARNETT COUNTY
SHEET:	2 OF 5
DATE:	NOVEMBER 2, 2021
SHEET NAME:	REAR AND LEFT ELEVATIONS
DRAWN BY:	
REVISED:	
ADDRESS/LOCATION:	



Triangle Residential Designs Inc
 405 S. Lakeside Dr, Raleigh, NC 27606 Tel: (919) 852-3500 www.trd-chp.com



CLIENT: FRANK BOIDREAU PROJECT: RESIDENCE SHEET: 3 OF 5 SHEET NAME: FOUNDATION PLAN	DRAWN BY: [] REVISIONS: [] ADDRESS/LOCATION: 5163 SOUTH RIVER ROAD, WILMINGTON, NC 28406, HARNETT COUNTY DATE: NOVEMBER 2, 2021
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FOUNDATION NOTES

- 1) CRAWL SPACE IS TO BE LEVEL & CLEAN OF CONSTRUCTION DEBRIS, VEGETATION AND ANY ORGANIC MATERIAL
- 2) ONE VENT MUST BE WITHIN 3' OF EACH CORNER OF THE BUILDING
- 3) POSSIBLE VENT LOCATIONS INDICATED ON THE FOUNDATION PLAN.
- 4) APPROVED VAPOUR RETARDER TO COVER 100% OF CRAWL SPACE

FOOTINGS

- 1) FOOTING PROJECTIONS SHALL BE AT LEAST 2" AND SHALL NOT EXCEED THE THICKNESS OF THE FOOTING
- 2) THE TOP SURFACE OF FOOTINGS SHALL BE LEVEL. W/MASONRY UNITS WITH FULL MORTAR JOINTS. BOTTOM SURFACE OF FOOTINGS MAY SLOPE NO MORE THAN 10%. FOOTINGS SHALL BE STEPPED TO CHANGE THE ELEVATION OF THE TOP SURFACE OR WHERE THE SLOPE OF THE BOTTOM OF THE FOOTING WILL EXCEED 10%.
- 3) FINISHED GRADE OF THE UNDER FLOOR SURFACE MAY BE LOCATED AT THE BOTTOM OF THE FOOTINGS.
- 4) MINIMUM 8" WALL FOOTING TO BE NO LESS THAN 16" X 8"
- 5) MINIMUM CONCRETE FOOTING STRENGTH = 3000 PSI

DRAINAGE

- 1) INSTALL AROUND FOUNDATION, DRAIN TILES, GRAVEL OR CRUSHED STONE DRAINS, PERFORATED PIPES OR OTHER APPROVED SYSTEM AS REQUIRED BY GRADE
- 2) FOUNDATION DRAINAGE MAY BE OMITTED WHEN THE INTERIOR GRADE IS LESS THAN 12" BELOW THE EXTERIOR GRADE
- 3) GRADE LOT SO AS TO DRAIN SURFACE WATER AWAY FROM FOUNDATION WALLS AT A MINIMUM OF 6" WITHIN THE FIRST 10'

WATERPROOFING:

- 1) FOUNDATION WALLS, WHERE THE OUTSIDE GRADE IS HIGHER THAN THE INSIDE GRADE, SHALL BE DAMPROOFED FROM THE TOP OF THE FOOTING TO THE FINISHED GRADE, USE CODE APPROVED METHOD

ANCHORAGE

- 1) THE WOOD SOLE PLATE AT EXTERIOR WALLS ON MONOLITHIC SLABS AND WOOD SILL PLATE SHALL BE ANCHORED TO THE FOUNDATION W/ANCHOR BOLTS SPACED A MAXIMUM OF 6'-0" ON CENTER AND LOCATED WITHIN 12" FROM THE ENDS OF EACH PLATE SECTION. BOLTS SHALL BE AT LEAST 1/2" IN DIAMETER AND SHALL EXTEND A MINIMUM OF 1" INTO MASONRY OR CONCRETE
- 2) BOLTS MAY BE REPLACED BY ANCHOR STRAPS, SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE
- 3) INTERIOR BEARING WALL SOLE PLATES ON MONOLITHIC SLABS SHALL BE ANCHORED W/APPROVED FASTENERS.

FOUNDATION WALLS

- 1) VERTICAL REINFORCEMENT OF MASONRY WALLS SHALL BE TIED TO THE HORIZONTAL REINFORCEMENT OF THE FOOTINGS.
- 2) FOUNDATION WALL IS TO BE 8" CONC. BLOCK OR 8" BRICK & BLOCK ON CONTINUOUS CONCRETE FOOTING.
- 3) FOUNDATION WALL IS TO HAVE A SOLID 8" MASONRY CAP.
- 4) WALL HEIGHT ABOVE FINISHED SHALL BE 4" WHERE MASONRY VENEER IS USED AND 6" ELSEWHERE.
- 5) WALL SUPPORTING OVER 4' OF UNBALANCED BACKFILL MUST BE BRACED TO PREVENT DAMAGE BY THE BACKFILL
- 6) CAVITY WALL OR MASONRY VENEER CONSTRUCTION MAY BE SUPPORTED ON AN 8" FOUNDATION WALL, PROVIDED THE WALL IS CORBELED WITH SOLID MASONRY TO THE WIDTH OF THE WALL SYSTEM ABOVE. THE TOTAL HORIZONTAL PROJECTION OF THE CORBEL SHALL NOT EXCEED 2" WITH INDIVIDUAL CORBELS PROJECTING NOT MORE THAN 1/3 THE THICKNESS OF THE UNIT OR 1/2 THE HEIGHT OF THE UNIT. THE TOP COURSE OF ALL CORBELS SHALL BE A HEADER COURSE
- 7) VENTS ARE INTENDED TO BE 16" X 8" ALUMINUM.

PIERS

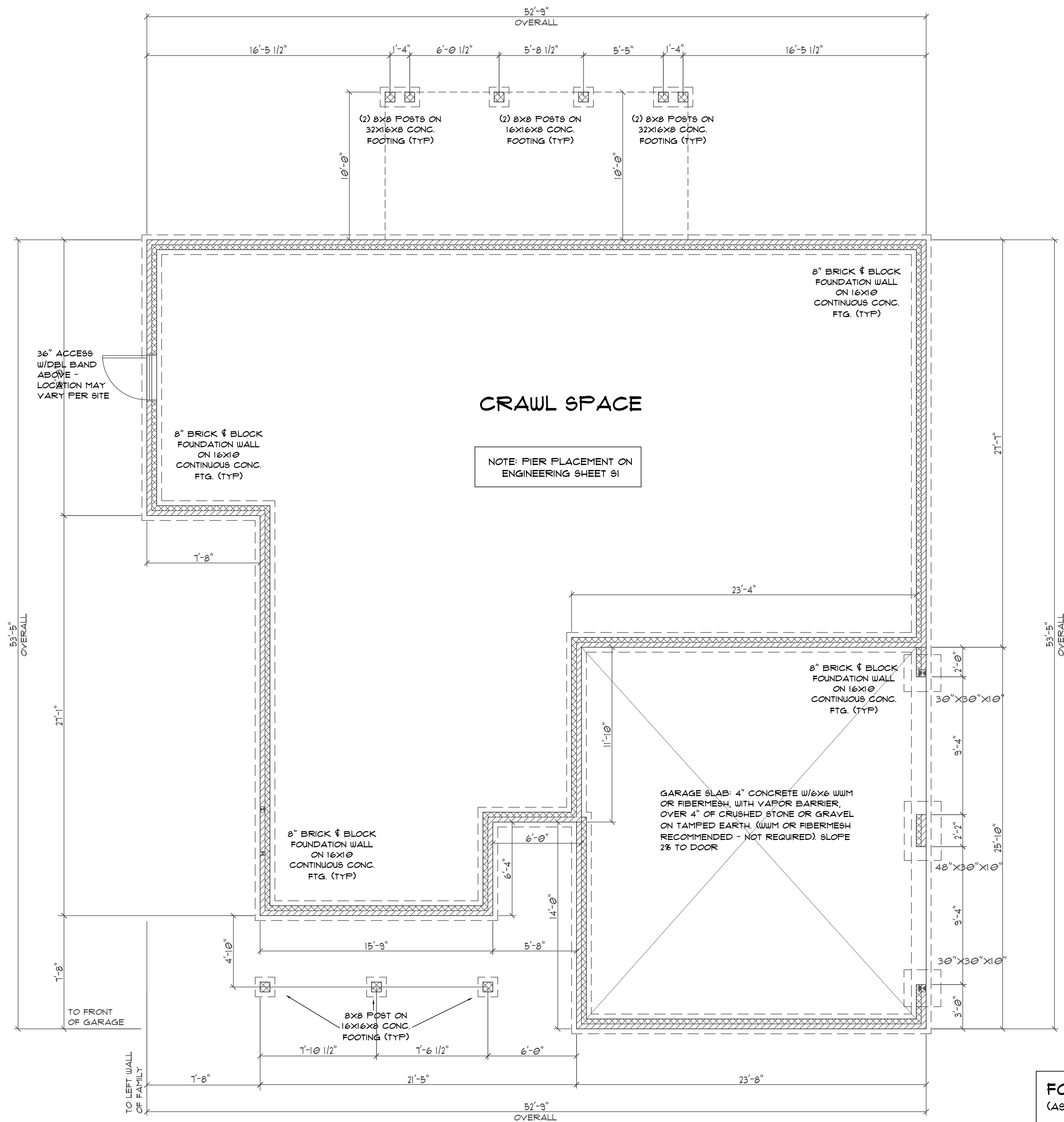
- 1) MASONRY PIERS HEIGHT SHALL NOT EXCEED 10 TIMES THEIR LEAST DIMENSION.
- 2) WHEN STRUCTURAL CLAY OR HOLLOW CONCRETE MASONRY UNITS ARE USED TO SUPPORT BEAMS & GIRDERS, THE CELLULAR SPACES MUST BE FILLED SOLIDLY WITH CONCRETE OR TYPE "M" OR "S" MORTAR.
- 3) UNFILLED UNITS MAY BE USED IF THE HEIGHT IS NOT MORE THAN 4 TIMES THE LEAST DIMENSION.
- 4) HOLLOW PIERS SHALL BE GAPPED WITH 4" OF SOLID MASONRY OR CONCRETE, OR SHALL HAVE CAVITIES OF THE TOP COURSE FILLED WITH CONCRETE
- 5) PIERS INDICATED ON PLAN ARE TYPICALLY 16" X 16" ON 24" X 24" X 8" FOOTINGS.
- 6) TIE ALL HALF PIERS INTO WALLS

CAVITY ACCESS

- 1) MIN CRAWL SPACE ACCESS IS 18"(W) X 24"(H) W/DBL BAND ABOVE. PLACE AT BEST LOCATION WITH REFERENCE TO GRADE
- 2) ACCESS MAKE BE INCREASED IF MECHANICAL EQUIPMENT IS LOCATED UNDER FLOORS - SEE NC MECHANICAL CODE FOR REQUIREMENTS.
- 3) ATTIC ACCESS SHALL BE 22" X 30" MINIMUM

FOUNDATION MATERIALS LEGEND

	BRICK
	CONCRETE BLOCK
	CONCRETE FOOTING
	CONCRETE

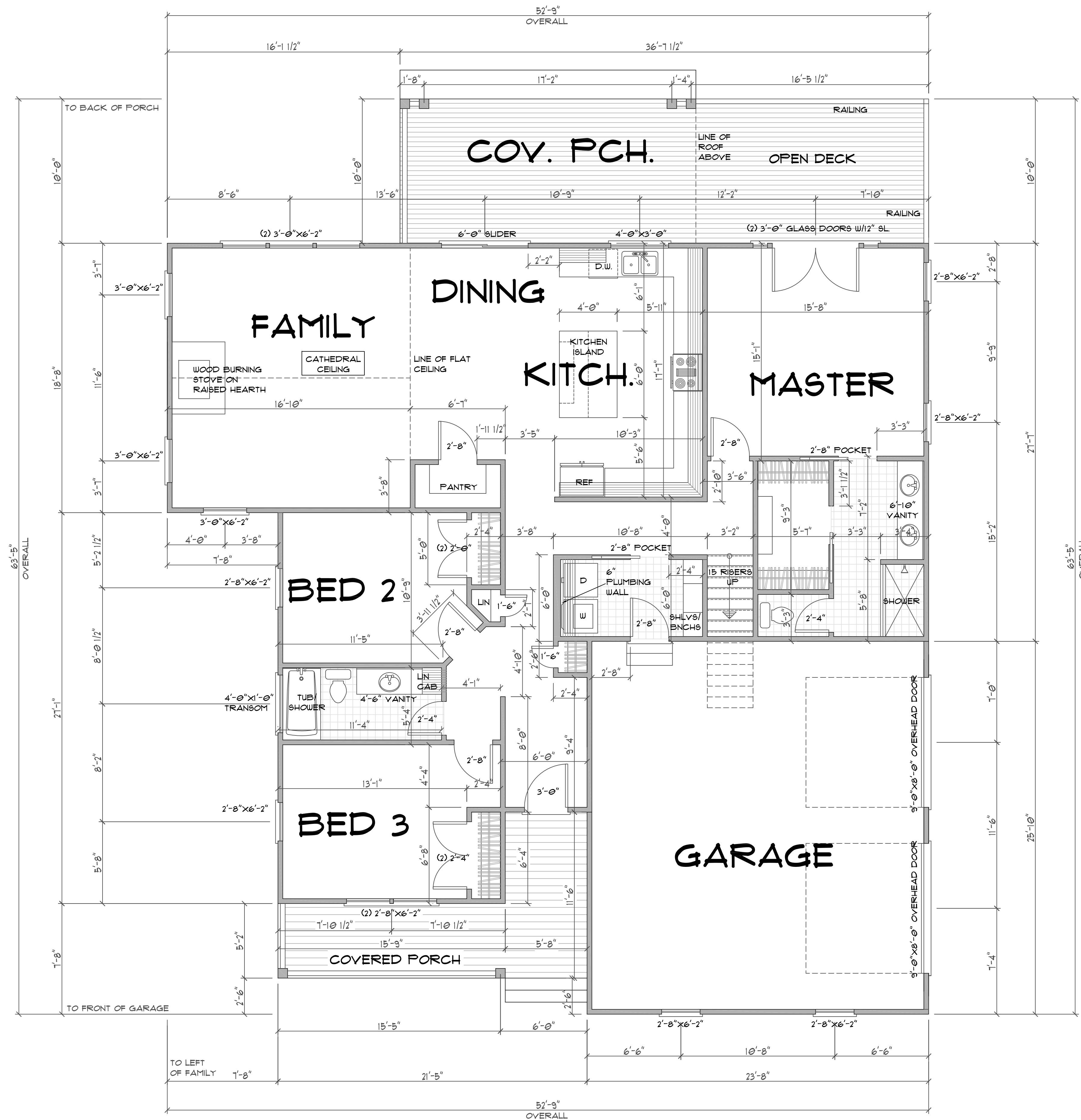


FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

FOUNDATION VENT CALCULATION
(AS PER 2018 NORTH CAROLINA RESIDENTIAL CODE)

MINIMUM REQUIRED:
1143 SQFT OF CRAWL SPACE DIVIDED BY 300 EQUALS 3.8 SQFT OF AREA

- NOTES:
- ONE VENT MUST BE WITHIN 3' OF EACH CORNER OF THE BUILDING
 - POSSIBLE VENT LOCATIONS INDICATED ON THE FOUNDATION PLAN.
 - ACCESS DOORS MAY BE VENTED FOR ADDITIONAL REQUIRED VENTILATION.
 - CRAWL SPACE MUST BE CROSS-VENTILATED AND AN APPROVED VAPOUR RETARDER COVERS 100% OF THE CRAWL SPACE.



FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

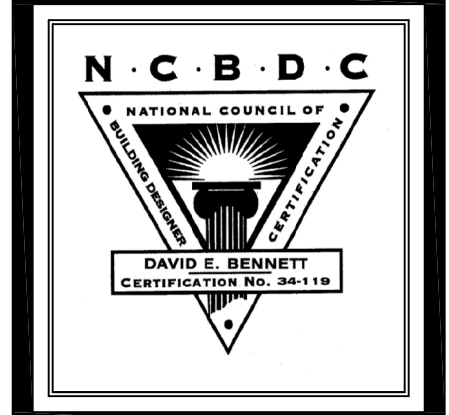
9'-0" CEILING ON THIS FLOOR

- NOTES:**
- 9'-0" CEILING ON THIS FLOOR UNLESS NOTED OTHERWISE (UNO)
 - STAIRS ARE DESIGNED TO COVER A 120" MAX. RISE:
 - 15 RISERS @ 1.06" +/- EACH OR
 - 16 RISERS @ 1.3" +/- EACH
 - 14 OR 15 TREADS @ 9" EACH (ROUGH CUT)
 (FIELD VERIFY ALL STAIRS DIMENSIONS)
 - ALL ANGLES 45 UNLESS OTHERWISE NOTED
 - ALL DOOR HEIGHTS 6'-8" UNLESS OTHERWISE NOTED
 - ALL DOOR JAMBS ARE 4" UNLESS OTHERWISE NOTED
 - SEE CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE FOR WALL CONSTRUCTION
 - GARAGE WALLS ADJACENT TO HEATED SPACE SHALL BE COVERED WITH FIRE RATED SHEETROCK PER CODE
 - ALL HABITABLE ROOMS SHALL MEET LIGHT, VENTILATION & EGRESS CODES AS REQUIRED
 - ALL WINDOW SIZES & DETAILS TO BE VERIFIED WITH CHOSEN MANUFACTURER
 - PROVIDE SMOKE DETECTORS AS REQUIRED BY CODE

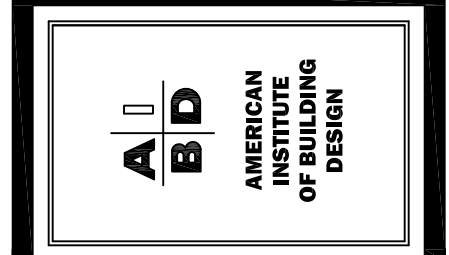
- FLOOR PLAN NOTES**
- ALL JOIST SPANS ARE CALCULATED USING #2 GRADE SPRUCE PINE FIR.
 - JOIST SIZES ARE SHOWN AT MINIMUM TO MEET STRUCTURAL REQUIREMENTS. SIZES MAY BE INCREASED TO PROVIDE MINIMUM INSULATION VALUES OR AIR PASSAGES.
 - PROVIDE DOUBLE FLOOR JOISTS AT ALL NON-LOAD BEARING PARTITION WALLS RUNNING PARALLEL TO FLOOR JOISTS. ALSO UNDER ALL BOOKCASES, CABINETS, TUBS AND WASHING MACHINES (RECOMMENDED - NOT REQUIRED)
 - FLOOR JOISTS MUST BEAR 1.5" MIN. ON WOOD OR METAL AND 3" MIN. ON MASONRY OR CONCRETE.
 - PROVIDE 1"x4" CROSS-BRACING OR SOLID BLOCKING BETWEEN FLOOR JOISTS AT 6'-0" O.C. MAX. (RECOMMENDED BUT NOT REQUIRED)
 - ALL EXTERIOR AND LOAD BEARING HEADERS ARE TO BE (2)-2X10.
 - MINIMUM LVL DESIGN STRENGTH: E=2.0 X 2 MILLION PSI, FB=2800 PSI, FX=285 PSI
 - ALL LVL BEAMS TO HAVE 3 STUDS EACH END.
 - LOAD BEARING HEADER JACKS MUST REST ON DOUBLE JOISTS - SUPPLY EXTRA JOISTS AS REQUIRED
 - DRAFTSTOPPING AND FIREBLOCKING AS REQUIRED PER CODE.
 - DESIGNS FOR WOOD FLOOR TRUSSES MUST BE PREPARED BY A REGISTERED DESIGN PROFESSIONAL.

AREA CALCULATION

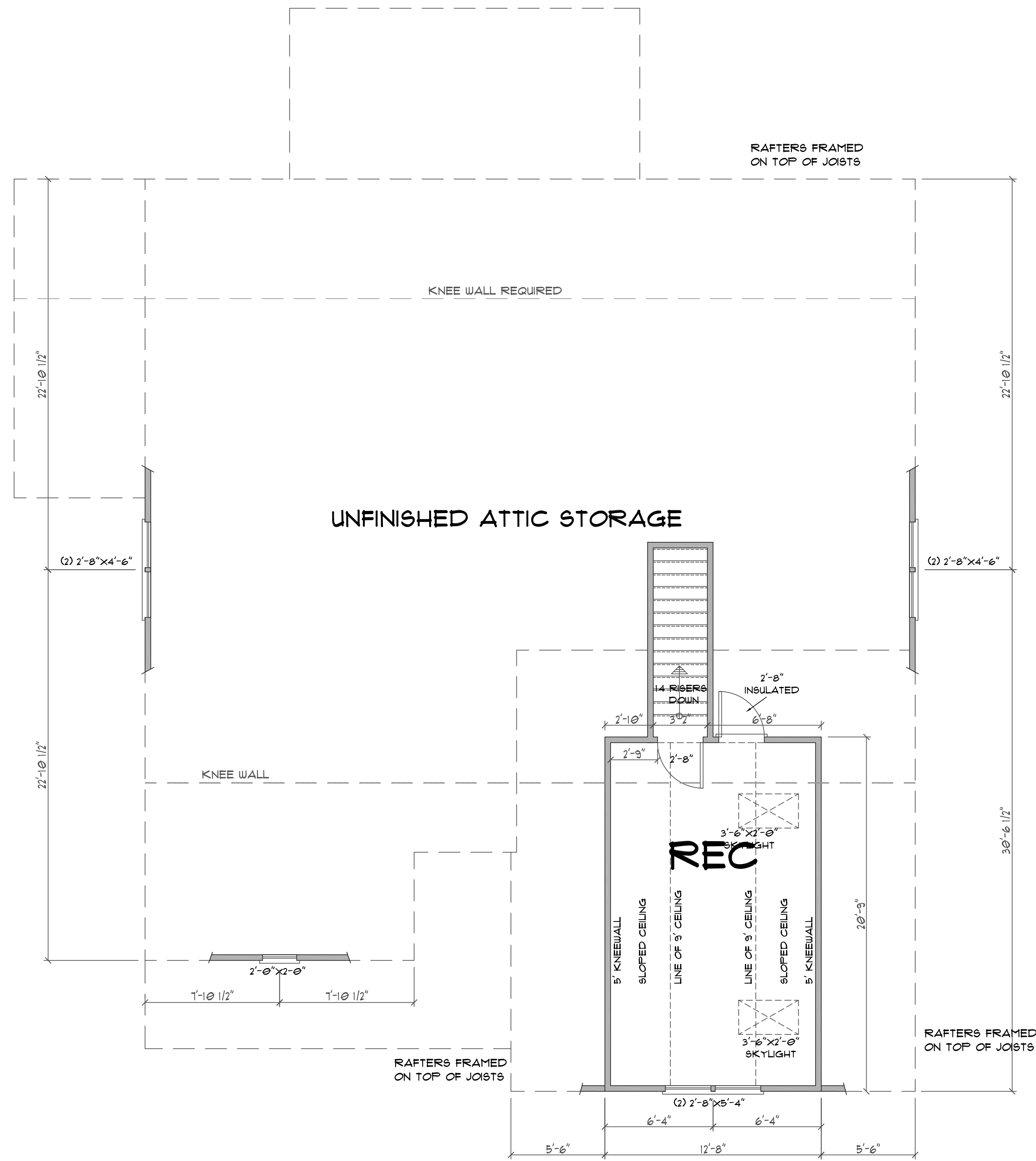
FIRST FLOOR:	1743 SQFT
REC ROOM:	262 SQFT
TOTAL LIVING:	2005 SQFT
GARAGE:	607 SQFT
FRONT PORCH:	146 SQFT
REAR PORCH:	200 SQFT
TOTAL NON-LIVING:	953 SQFT



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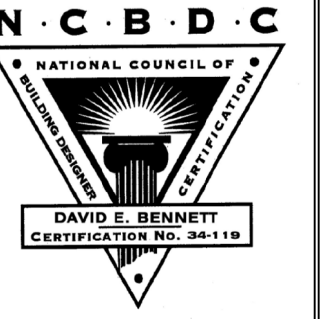
CLIENT:	FRANK BOLDREAU
PROJECT:	RESIDENCE
SHEET:	4 OF 5
DATE:	NOVEMBER 2, 2021
SHEET NAME:	FIRST FLOOR PLAN
ADDRESS/LOCATION:	5163 SOUTH RIVER ROAD LILLINGTON, NC 27546 HARRIETT COUNTY
DRAWN BY:	
REVISED:	



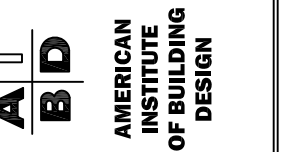
SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

8'-0" CEILING ON THIS FLOOR



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CLIENT:	FRANK BOIDREAU	DRAWN BY:	
PROJECT:	RESIDENCE	REVISIONS:	
ADDRESS/LOCATION:	5163 SOUTH RIVER ROAD LILLINGTON, NC 27146 HARNETT COUNTY	DATE:	NOVEMBER 2, 2021
SHEET:	5 OF 5	SHEET NAME:	SECOND FLOOR PLAN

NOTE TO BUILDER:
It is the sole responsibility of the builder to review and verify these plans according to the north carolina building code (RC) and to understand every part of these plans herein.

date: 19 October, 2021

drawn by: J A McRae

John Alexander McRae, P.E., Inc.
RESIDENTIAL AND COMMERCIAL ENGINEERING
(NC C-2298)
218 Coley Farm Rd Fuquay-Varina, N.C. 27526
voice 919.662.5531 fax 919.662.8599

DESIGN TO IRC 2015 NCBC 2018
IRC 2015 NCBC 2018 REQUIRES VAPOR BARRIER
OVER 100 PERCENT OF CRAWL AREA
ALL FLOOR JOISTS
11 7/8 BCI 5000 @ 19.2
11 7/8 LPI 20 @ 19.2
or 2 x 10 @ 16 # 2 SPF or Better

ORIENTED Left to Right

DENOTES 12"x16" -or- 16"x16"
CMU PIER WITH 8" SOLID CAP
ON 30"x30"x10" CONC. FTR.

CONCRETE PIER SIZES
Size Hollow Masonry Solid Masonry
12"x16" Up to 48" High Up to 9'-0" High
16"x16" Up to 64" High Up to 12'-0" High

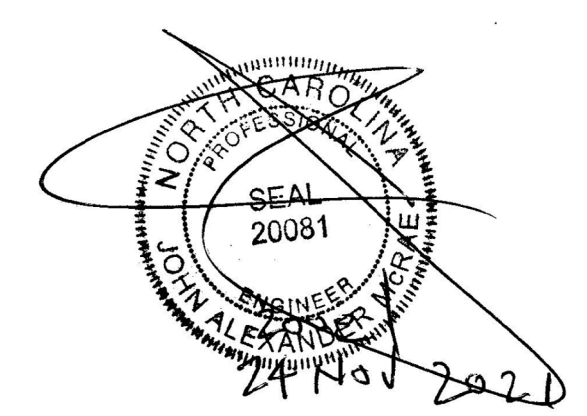
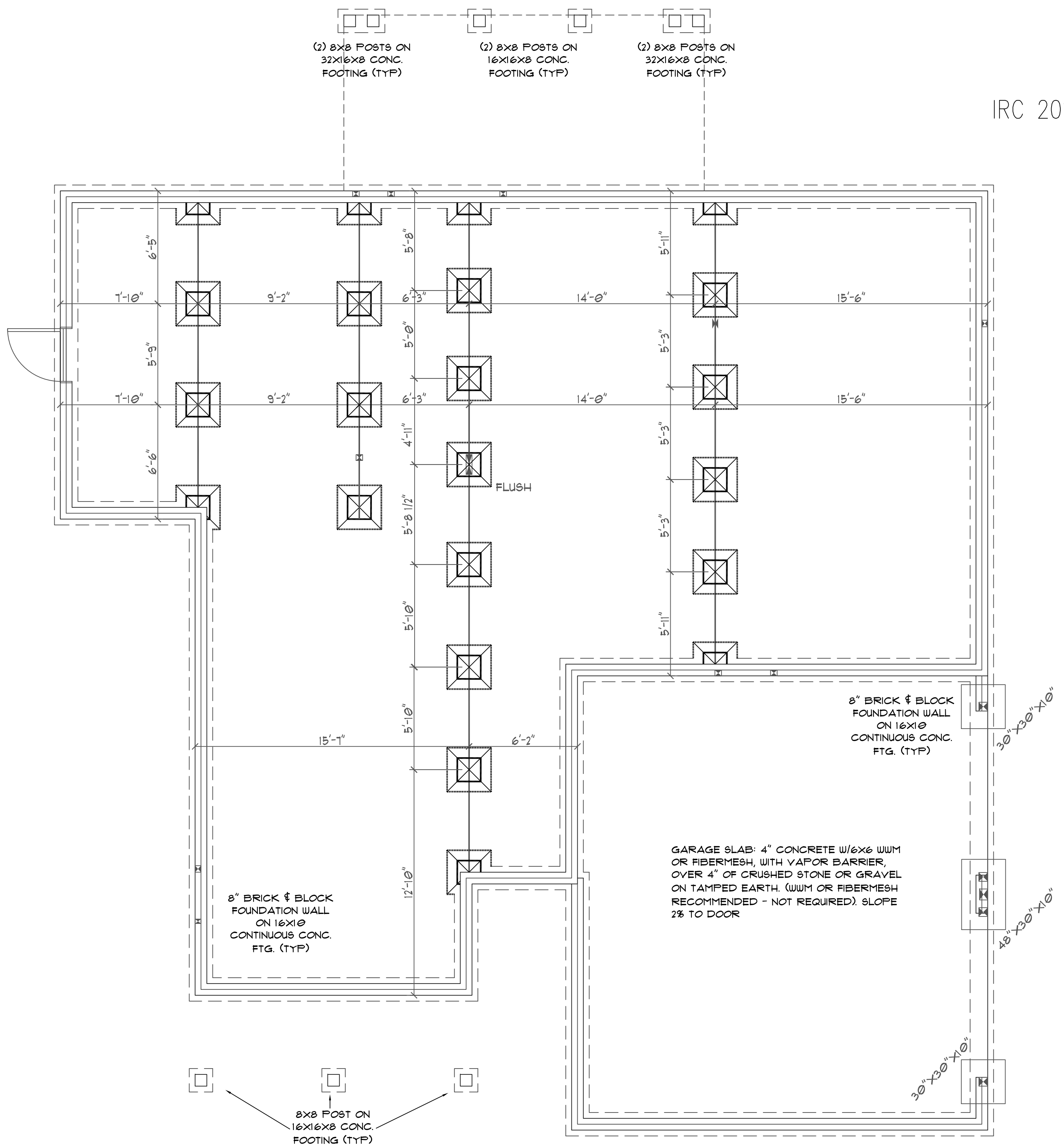
FOUNDATION WALLS
ALL FOUNDATION WALLS 8" BLOCK
PARGED -or- 4" BRICK w/ 4" BLOCK
w/ 8" SOLID CAP ON 18"x10" CONTINUOUS
CONCRETE FOOTER

20" x 10" in areas of brick veneer

GIRDERS

(3) 2"x10" #2 SYP -or-
NEW SFPA SYP Values Used

(4) 2x 10 # 2 SPF or Better
Anchor bolts required ALL foundation walls
provide 1/2" x 10" with 7 inch embedment
6' on center and 12 inches from ends / corners



Structural Design By:
John Alexander McRae, PE, Inc
218 Coley Farm Road
Fuquay-Varina North Carolina 27526
jampe@nc.rr.com (919) 210-5749
P O Box 1466 Apex, NC 27502
Report deficiencies immediately
2111-13
(NC C-2298)

BOUDREAU RESIDENCE
5163 SOUTH RIVER ROAD, LILLINGTON, NC 27546
HARNETT COUNTY

FLOOR FRAMING PLAN W/PIER PLACEMENT

SCALE: 1/4"=1'-0"

DESIGN TO IRC 2015 NCBC 2018 BUILDING CODE

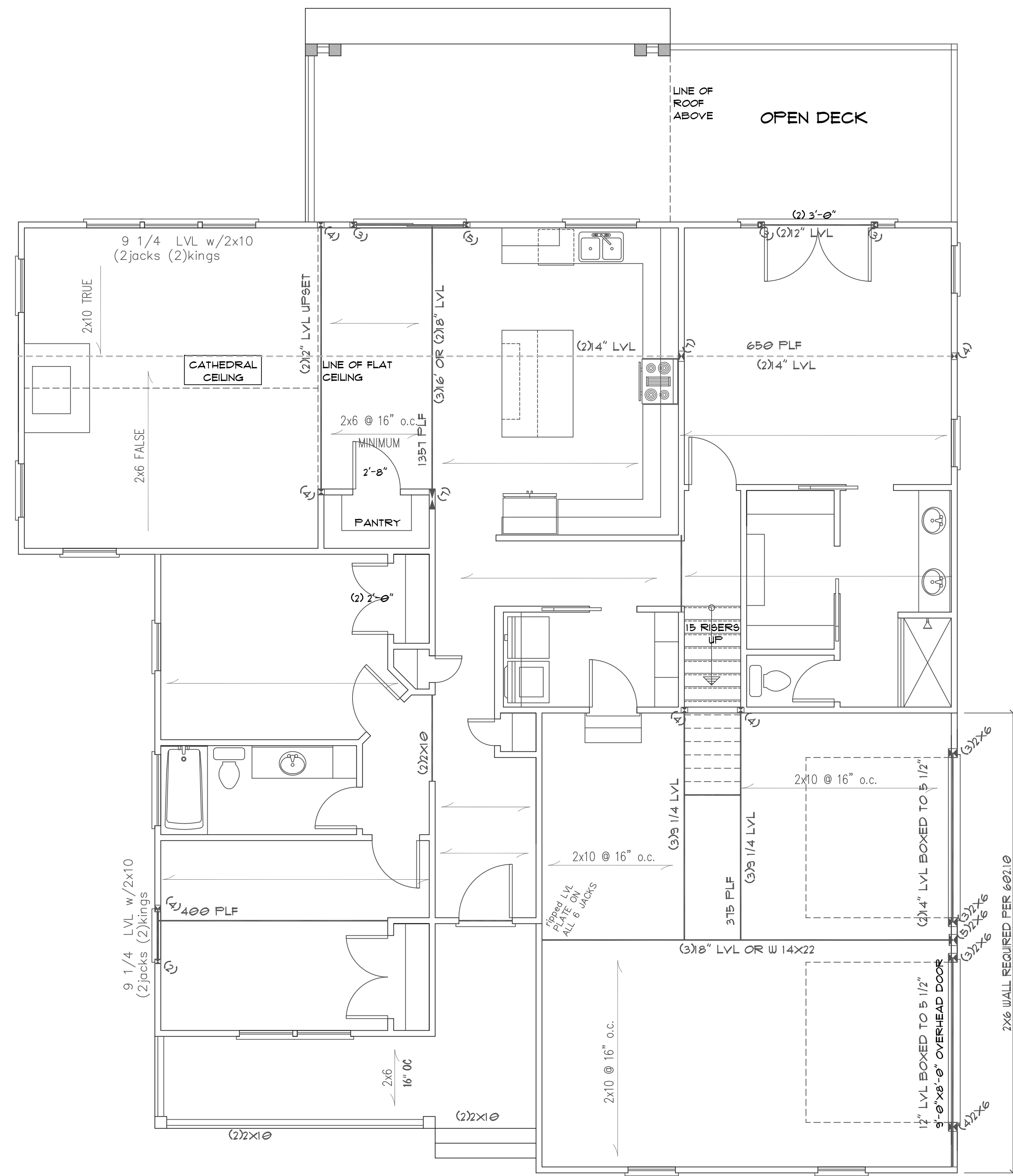
JAMPE, INC. does not assume liability for any deviation of these plans or construction methods. All information must be confirmed by contractor prior to commencement of construction.

sheet no. S1 of S4
plan no.

NOTE TO BUILDER:
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date:
19 October, 2021

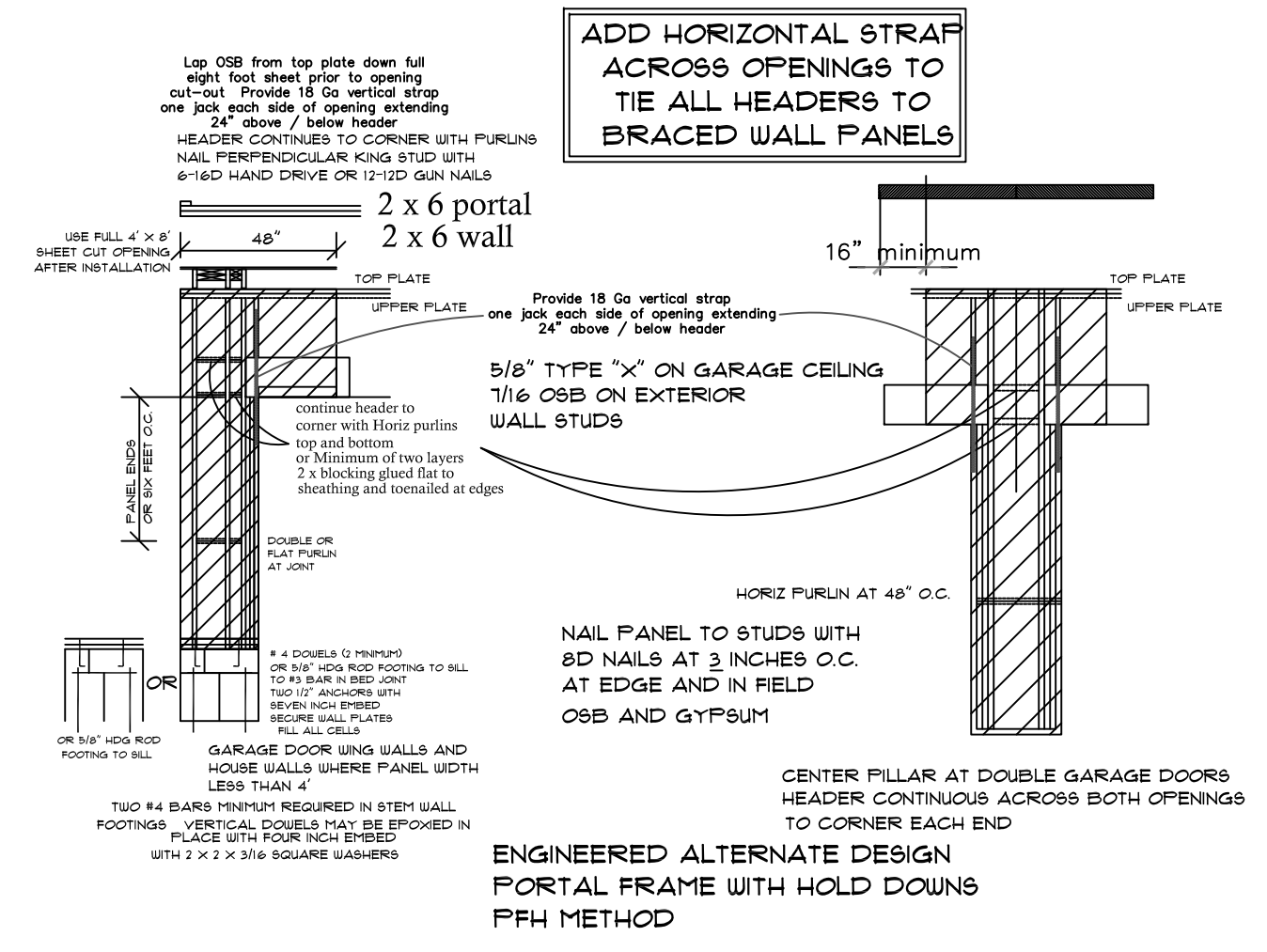
drawn by:
J A McRae



ALL FLOOR JOISTS 2 X 10 @16
#2 SPF OR BETTER
Or 11 7/8 I Joists at 16" or 19.2" By MFR
ALL CEILING JOIST 2 X 8 @ 16 Up To 15'
2 X 6 @ 16 Up To 11'
ALL EXTERIOR AND BEARING HEADER (2) 2"x10" u.n.o.
ALL LVL BEAMS/HEADERS 3 STUD COLUMNS EACH END u.n.o.
ALL FRAMING #2 SPF OR BETTER u.n.o.
All stories to be sheathed with 7/16" OSB nailed @ six inches on center edges and ends with additional nailing of "brace" panels as noted below:
ALL EXTERIOR BEARING AND NON LOAD BEARING WALLS FOUR FOOT PANEL AT CORNERS AND MAXIMUM 12' O.C.
Wall Bracing 7/16" OSB Lap OSB from top plate down full eight foot sheet prior to opening cut-out. Nail with 8d nails at THREE inches on center edges/ends six inches in field. Purlins at panel
MINIMUM PANEL WIDTH 48" U.N.O.

The number of kings shall equal half the cripple studs above or below the opening.

DESIGN TO IRC 2015 / NCBC 2018

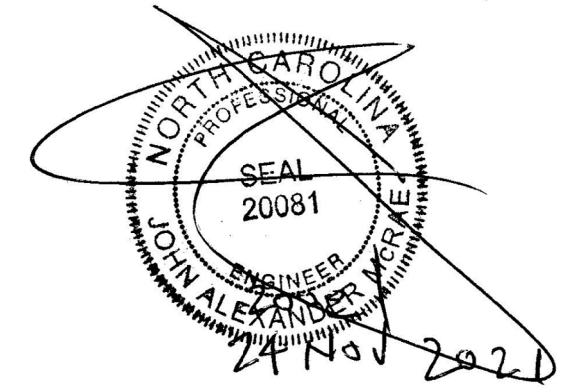


LIMITED LENGTH OF WING WALLS WILL REQUIRE 7/16 OSB SHEATHING WITH FULL EIGHT FOOT SHEET PRIOR TO OPENING CUT-OUT

FIRST FLOOR STRUCTURAL PLAN

SCALE: 1/4"=1'-0"

9'-0" CEILING ON THIS FLOOR



Structural Design By:
John Alexander McRae, PE, Inc
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Fuquay-Varina North Carolina 27526
jampe@ncrr.com (919) 210-5749
P O Box 1466 Apex, NC 27502
Report deficiencies immediately
2111-13
(NC C-2298)

John Alexander McRae, P.E., Inc.
RESIDENTIAL AND COMMERCIAL ENGINEERING
(NC C-2298)
218 Coley Farm Rd Fuquay-Varina, N.C. 27526
voice 919.662.5531 fax 919.662.8599

BOUDREAU RESIDENCE
5163 SOUTH RIVER ROAD, LILLINGTON, NC 27546
HARNETT COUNTY

sheet no.
S2 of S4
plan no.

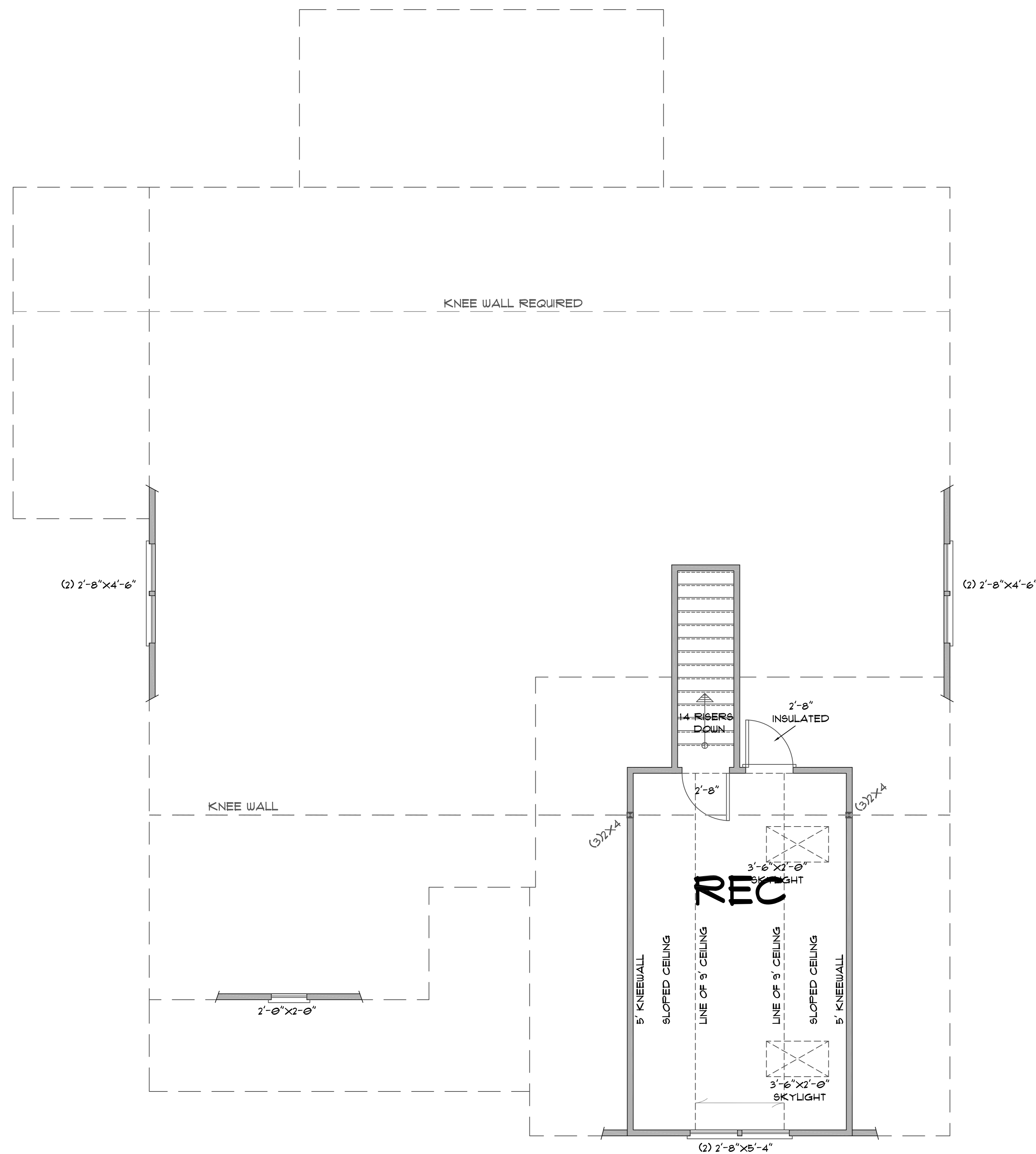
DESIGN TO IRC 2015 NCBC 2018 BUILDING CODE

JAMPE, INC. does not assume liability for any deviation of these plans or construction methods. All information must be confirmed by contractor prior to commencement of construction.

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date:
19 October, 2021

drawn by:
J A McRae

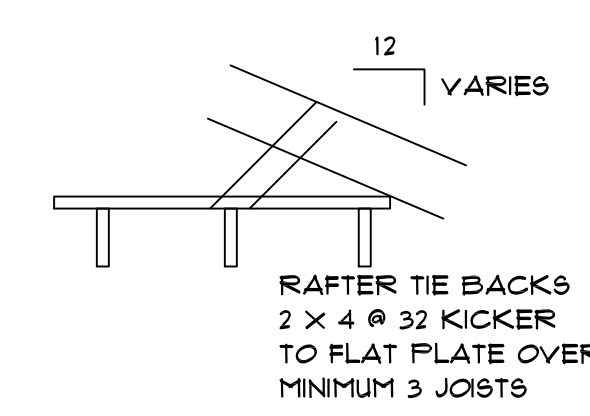


ALL FLOOR JOISTS 2 X 10 @16
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ALL CEILING JOIST 2 X 8 @ 16 Up To 15'
2 X 6 @ 16 Up To 11'

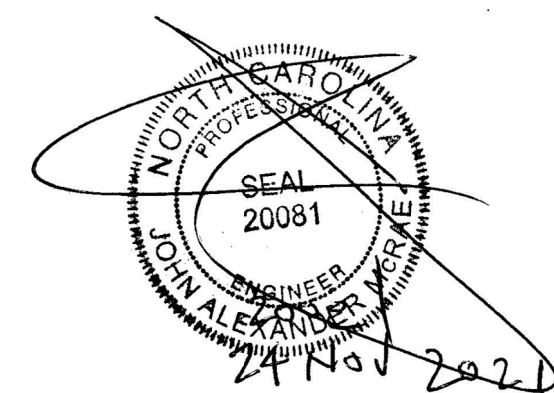
ALL EXTERIOR AND BEARING HEADER (2) 2"x10" u.n.o.
ALL LVL BEAMS/HEADERS 3 STUD COLUMNS EACH END u.n.o.
ALL FRAMING #2 SPF OR BETTER u.n.o.

ALL EXTERIOR BEARING AND NON LOAD BEARING WALLS FOUR FOOT PANEL AT CORNERS AND MAXIMUM 12' O.C.

Wall Bracing 7/16" OSB Lap OSB from top plate down full eight foot sheet prior to opening cut-out. Nail with 8d nails at THREE inches on center edges/ends six inches in field. Partins at panel



The number of kings shall equal half the cripple studs above or below the opening.



Structural Design By:
John Alexander McRae, PE, Inc
218 Coley Farm Road
Fuquay-Varina North Carolina 27526
jampe@nc.rr.com (919) 210-5749
P O Box 1466 Apex, NC 27502
Report deficiencies immediately
2111-13
(NC C-2298)

SECOND FLOOR STRUCTURAL PLAN

SCALE: 1/4"=1'-0"

8'-0" CEILING ON THIS FLOOR

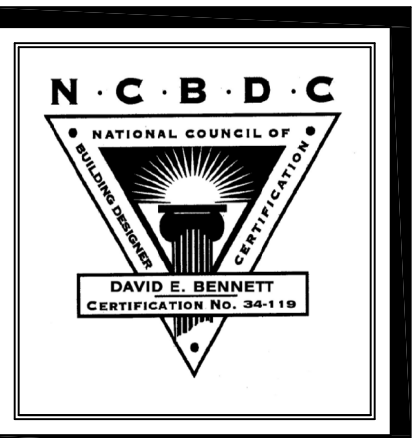
John Alexander McRae, P.E., Inc.
RESIDENTIAL AND COMMERCIAL ENGINEERING
(NC C-2298)
218 Coley Farm Rd Fuquay-Varina, N.C. 27526
voice 919.662.5531 fax 919.662.8599

BOUDREAU RESIDENCE
5163 SOUTH RIVER ROAD, LILLINGTON, NC 27546
HARNETT COUNTY

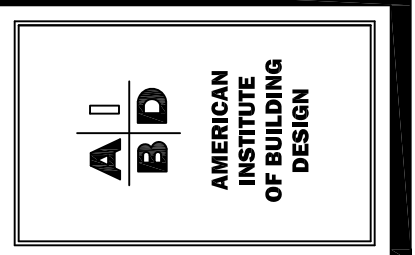
sheet no.
S3 of S4
plan no.

DESIGN TO IRC 2015 NCBC 2018 BUILDING CODE

JAMPE, INC. does not assume liability for any deviation of these plans or construction methods. All information must be confirmed by contractor prior to commencement of construction.

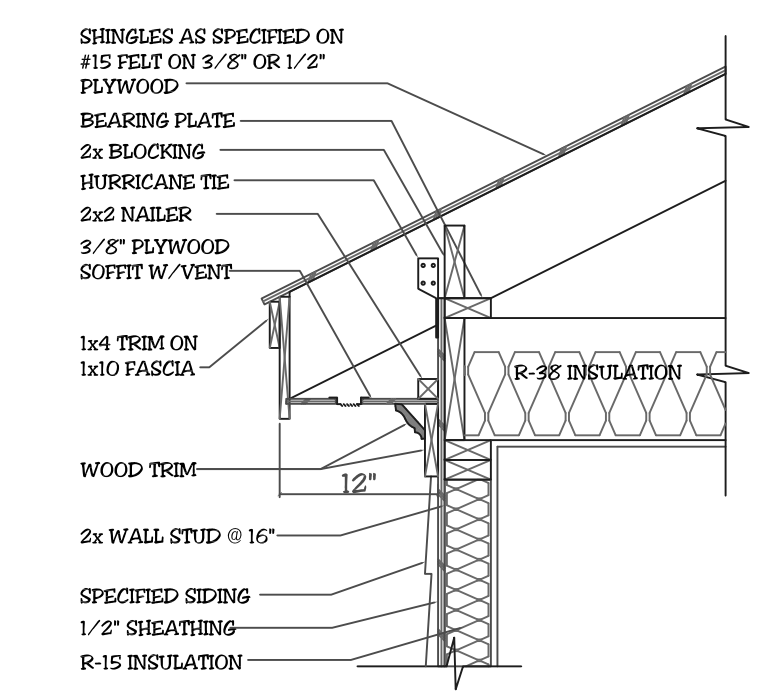


Triangle Residential Designs Inc
 405 S. Lakeside Dr, Raleigh, NC 27606 Tel: (919) 852-3500 www.trd-chp.com

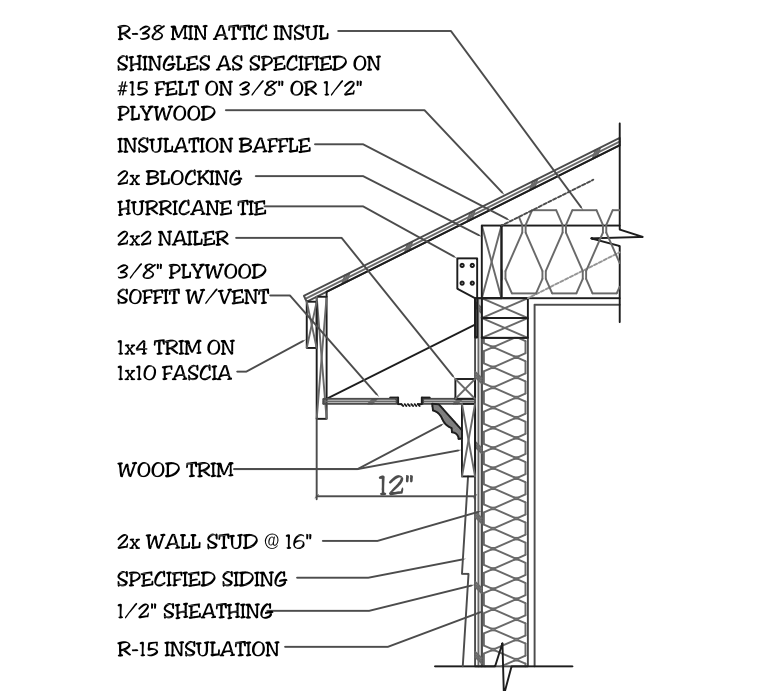


Drawn by: **DEB**
 Project: **RESIDENCE**
 Client: **FRANK BOUDREAU**
 Address/Plot #: **5165 SOUTH RIVER ROAD LITTLETON, NC 27546 HARNETT COUNTY**
 Date: **NOVEMBER 2, 2021**
 Sheet: **D1** of **1**

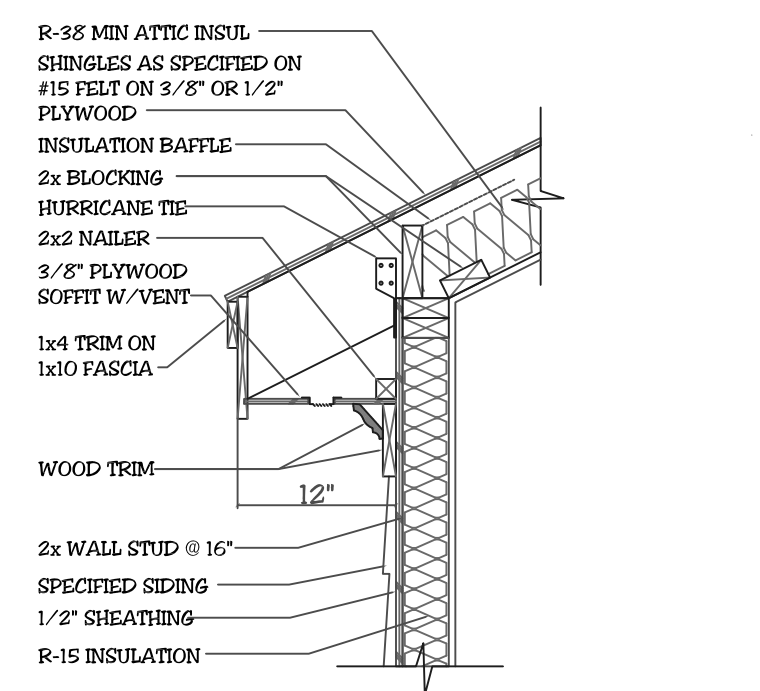
STANDARD CONSTRUCTION DETAILS & NOTES



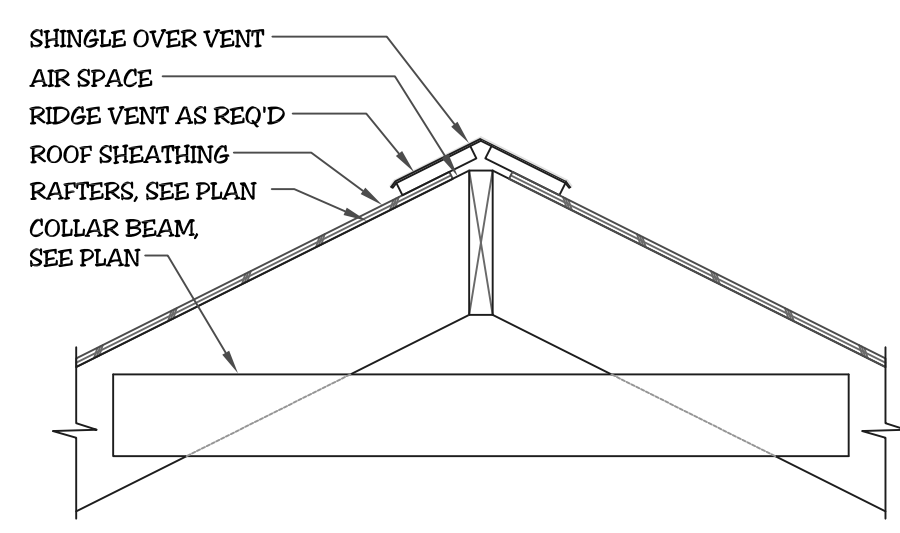
RAFTERS ON TOP OF JOISTS



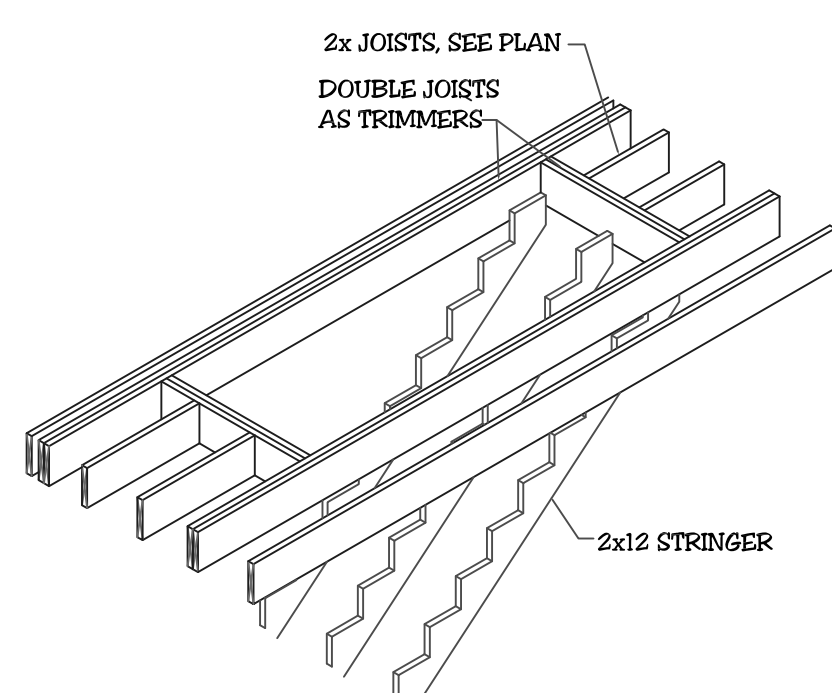
RAFTERS ON DBL TOP PLATE



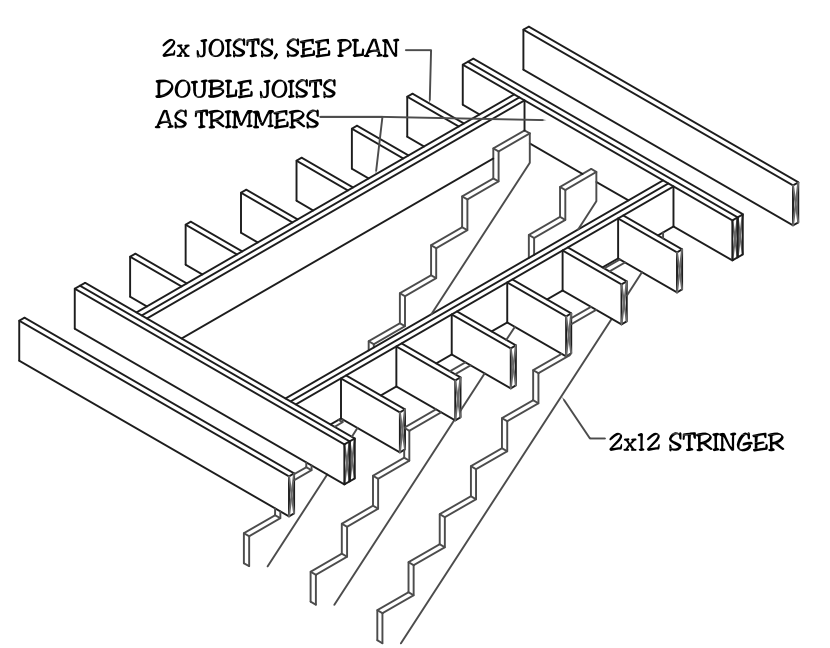
RAFTERS w/ SLOPED CLG



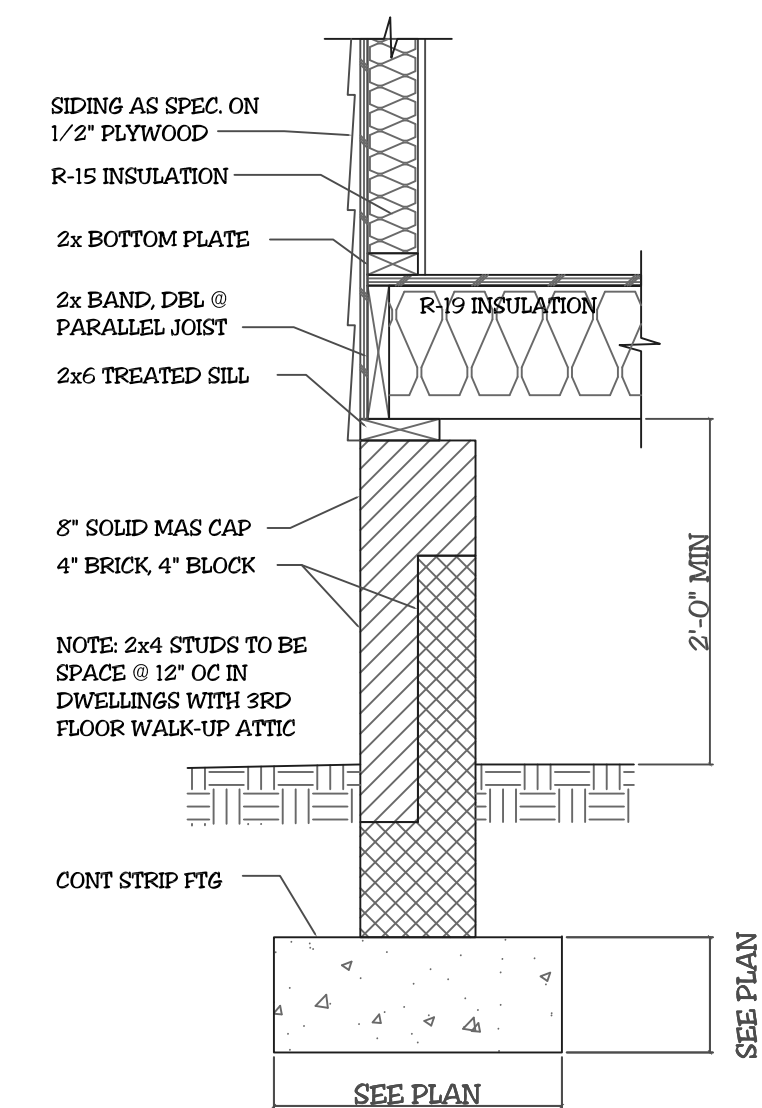
COLLAR BEAM DETAIL



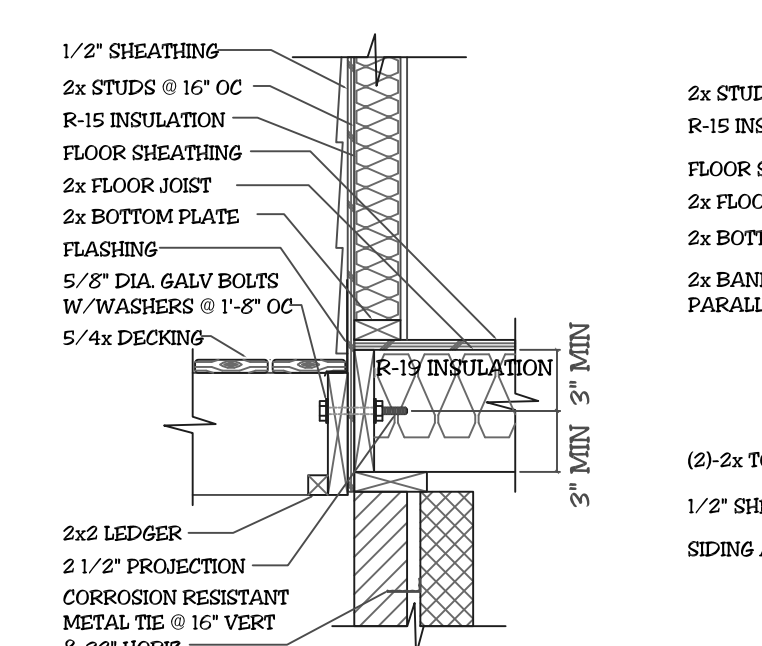
STAIR FRAMING w/ PARALLEL JOISTS



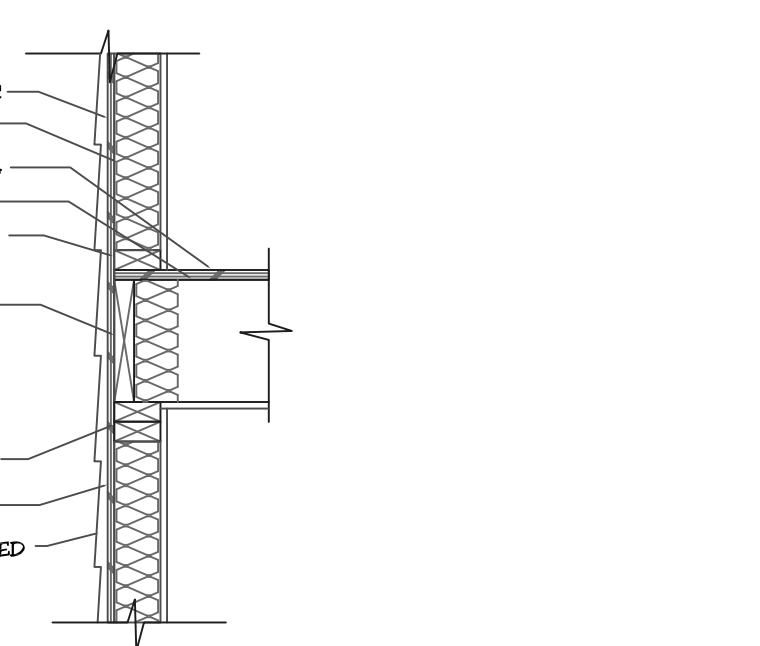
STAIR FRAMING w/ PERPENDICULAR JOISTS



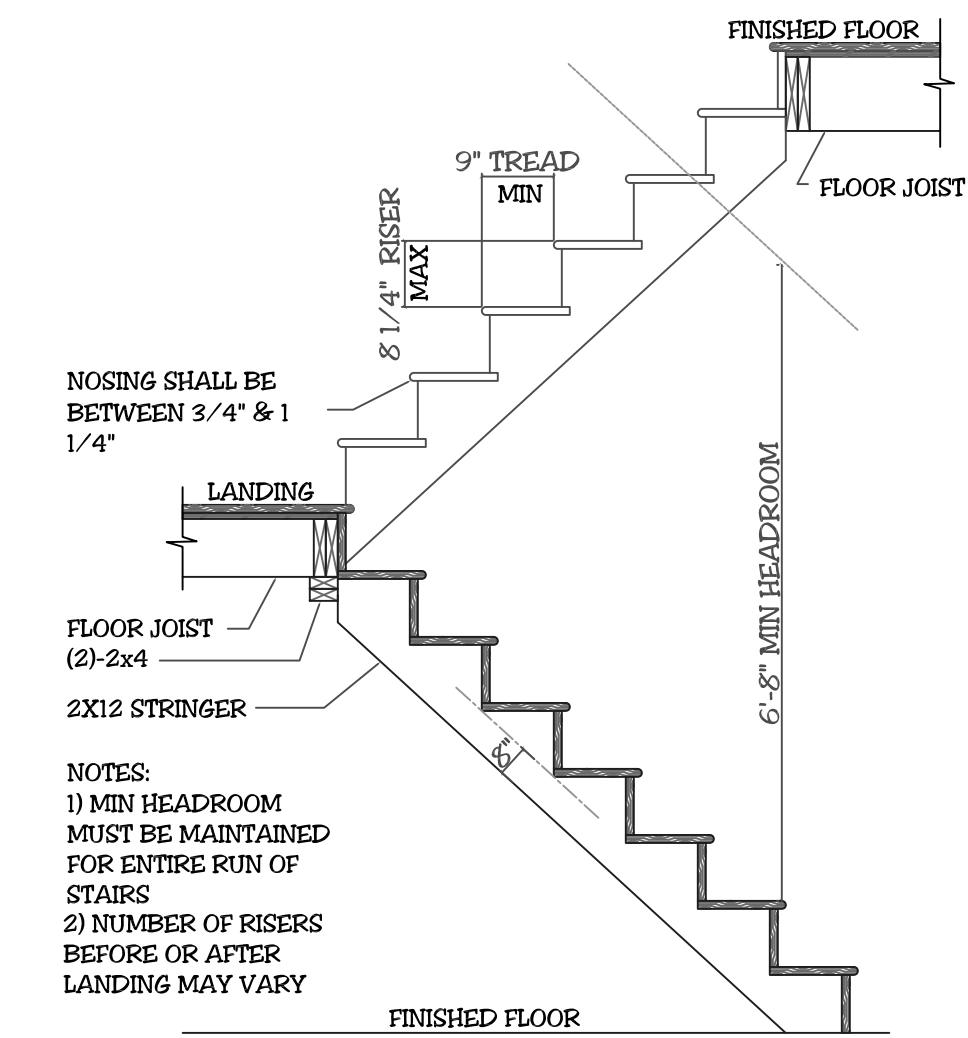
CRAWL SPACE w/ SIDING



DECK ATTACHMENT



FLOOR FRAMING



STAIR SECTION

GLAZING

- 1) ALL HABITABLE ROOMS SHALL HAVE A GLAZING AREA OF NOT LESS THAN 8% OF THE FLOOR AREA.
- 2) WINDOWS SHALL HAVE A MINIMUM DESIGN REQUIREMENT OF 25DPI AND U-40
- 3) VERIFY WINDOW EGRESS WITH WINDOW MANUFACTURER.

EMERGENCY ESCAPE

- 1) OPENINGS PROVIDED AS MEANS OF ESCAPE CANNOT HAVE A SILL HEIGHT OF MORE THAN 44" ABOVE THE FLOOR.
- 2) ESCAPE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 4 SQ. FT. THE MINIMUM CLEAR OPENING HEIGHT IS 20" AND THE WIDTH IS 20".
- 3) ESCAPE OPENING SHALL HAVE A TOTAL GLASS AREA OF NOT LESS THAN 5 SQ. FT. FOR A GROUND WINDOW AND 5.7 SQ. FT. FOR AN UPPER STORY WINDOW.
- 4) REQUIRED EXIT DOORS SHALL BE NO LESS THAN 3'-0" x 6'-8".

STAIRWAYS

- 1) STAIRWAYS SHALL BE A MINIMUM 3'-0" WIDE.
- 2) HANDRAILS SHALL NOT PROJECT MORE THAN 4.5" ON EITHER SIDE.
- 3) MINIMUM CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL SHALL NOT BE LESS THAN 31.5" WHERE THE HANDRAIL IS INSTALLED ON ONE SIDE AND 27" WHERE HANDRAILS ARE ON BOTH SIDES.
- 4) STAIRS NOT REQUIRED FOR EGRESS MAY BE AS NARROW AS 26"
- 5) MAXIMUM RISER HEIGHT SHALL BE 8-1/4" AND THE MINIMUM TREAD DEPTH SHALL BE 9".
- 6) NOSING SHALL BE 3/4" MINIMUM AND 1-1/4" MAXIMUM.
- 7) MINIMUM HEADROOM IN ALL PARTS OF THE STAIR SHALL NOT BE LESS THAN 6'-8".
- 8) WINDERS MUST, AT A POINT NOT MORE THAN 12" FROM THE SIDE WHERE THE TREADS ARE NARROWER, BE LESS THAN 9" AND THE MINIMUM WIDTH OF ANY TREAD IS NOT LESS THAN 4".
- 9) SPIRAL STAIRS MUST BE 26" WIDE MINIMUM AND TREADS MUST BE 7-1/2" x 12" FROM THE NARROW EDGE. ALL TREADS MUST BE IDENTICAL WITH A MAXIMUM RISE OF 9-1/2". MINIMUM HEADROOM OF 6'-8" REQUIRED.
- 10) CIRCULAR STAIRS MUST, AT A POINT NOT MORE THAN 12" FROM THE SIDE WHERE THE TREADS ARE NARROWER, BE LESS THAN 9" AND THE MINIMUM WIDTH OF ANY TREAD IS NOT LESS THAN 6".

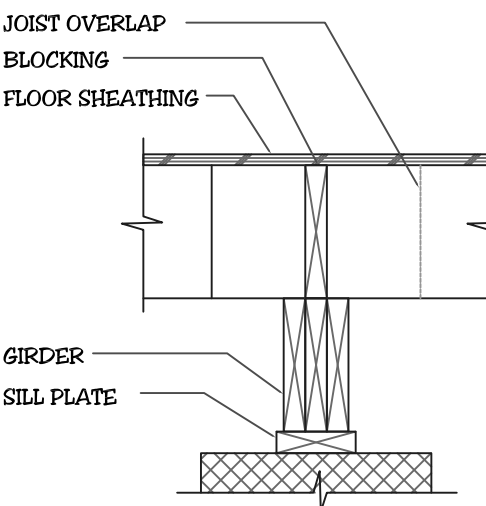
NOTES:

- * THESE PLANS, NOTES AND DETAILS ARE DESIGNED TO MEET THE REQUIREMENTS OF THE 2018 NC BUILDING CODE.
- * ALL NOTES ARE APPLICABLE UNLESS NOTED OTHERWISE (UNO)
- * THIS DETAIL SHEET IS TO BE USED ONLY IN CONJUNCTION WITH PLANS CREATED BY TRIANGLE RESIDENTIAL DESIGNS, INC.

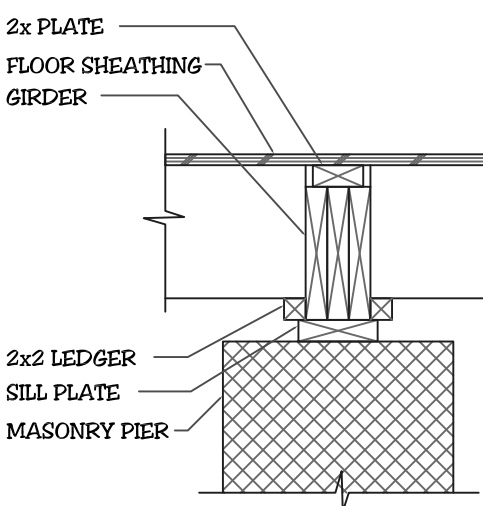
NOTE: SEALED ENGINEER'S DRAWINGS TAKE PRECEDENCE OVER TRD'S STANDARD DETAILS AND NOTES

ANCHOR BOLT NOTE

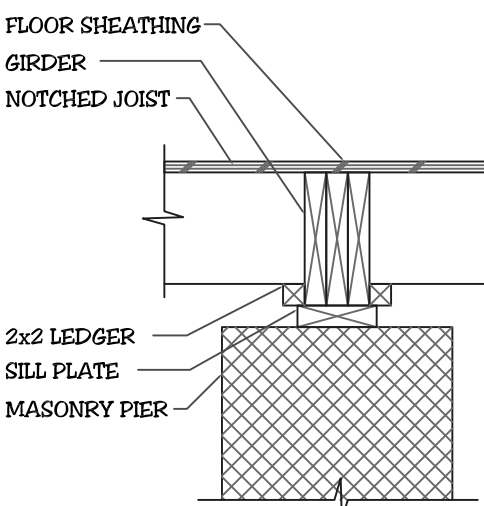
1/2" DIA X 10" ANCHOR BOLTS W/ 7" MIN EMBEDMENT @ 6'-0" OC AND 12" FROM EACH PLATE SPLICE AND CORNER.



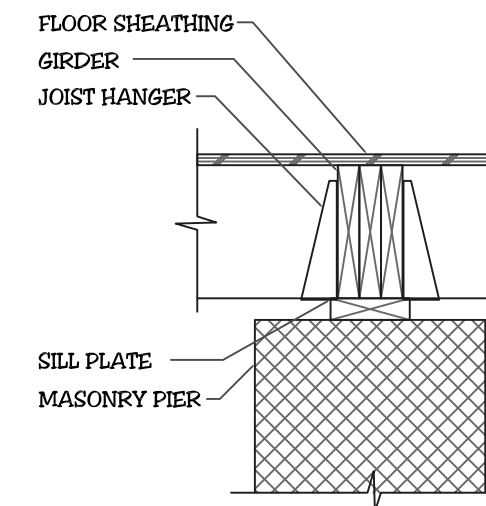
DROPPED GIRDER GIRDER DETAILS



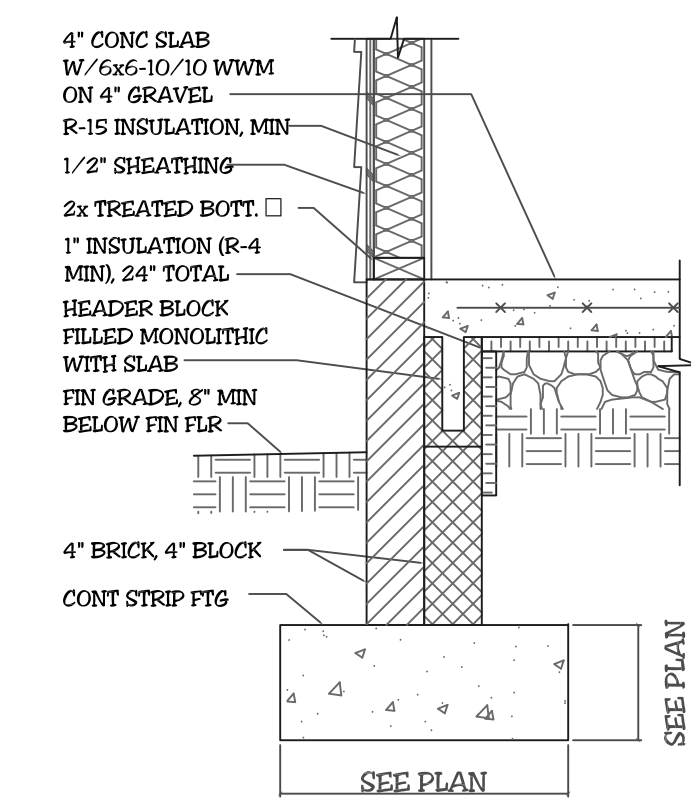
FLUSH BEARING W/ CAP



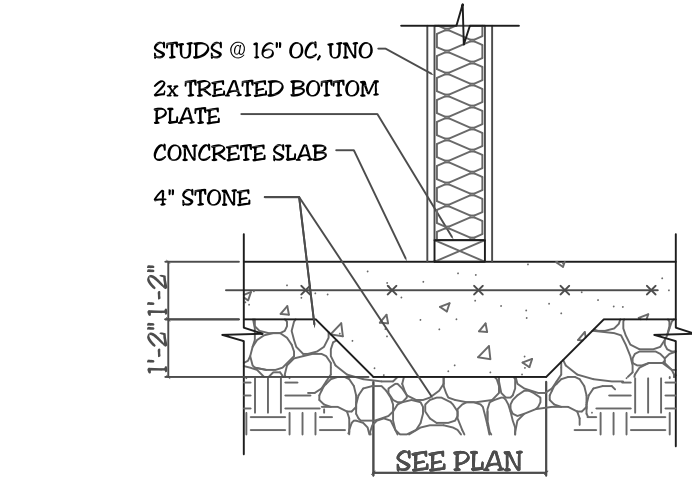
FLUSH BEARING W/ LEDGER



FLUSH BEARING W/ HANGER



SLAB w/ SIDING



THICKENED SLAB

WOOD WALL CONSTRUCTION

- 1) ALL STUDS ARE TO BE #3 GRADE STANDARD OR STUD GRADE LUMBER - #2 GRADE RECOMMENDED BUT NOT REQUIRED.
- 2) ALL INTERIOR LOAD-BEARING WALLS SHALL BE CONSTRUCTED, FRAMED & FIREBLOCKED AS SPECIFIED FOR EXTERIOR WALLS.
- 3) WALLS ARE 2x4 STUDS @ 16" O.C.
- 4) ALL OPEN AREA, TWO STORY WALLS ARE TO BE BALLOON FRAMED, 2" X 6" STUDS AT 12" O.C.
- 5) DRAFTSTOPPING AND FIREBLOCKING REQUIRED AS PER CODE.
- 6) ALL OPEN AREA, TWO STORY WALLS ARE TO BE BALLOON FRAMED, 2" X 6" STUDS AT 12" O.C.
- 7) WINDOWS SHOULD BE RATED FOR 2FPSI.

GARAGE DOOR WALL CONSTRUCTION

- ONLY FOR GARAGE DOOR WALLS THAT DO NOT MEET BRACING REQUIREMENTS OF THE NC 2002 RESIDENTIAL BUILDING CODE:
- 1) PLACE (2) 1/2" DIAM. ANCHOR BOLTS AT OUTSIDE QUARTER OF THESE PANELS. EXTEND #4 STEEL REINFORCING VERTICALLY, LAPPING THE ANCHOR BOLT A MINIMUM OF 6" AND EXTENDING TO THE FOOTING WITH A 4" MINIMUM HORIZONTAL LEG INTO THE FOOTING. THE FOOTING MUST BE REINFORCED WITH (1) #4 BAR TOP AND BOTTOM IN THIS AREA. SECURE WALL TO ANCHOR BOLTS WITH SIMPSON "STRONG TIE" LTH16, HTY22, MTT22B OR TENSION TIE WITH 1800# MINIMUM CAPACITY.
 - 2) FULLY FACE GARAGE WALL WITH 7/16" OSB OR 1/2" CDX NAILED PER TABLE R602.3(1) AND BLOCKED AT ALL WOOD STRUCTURAL PANEL SHEATHING EDGES.

CONCRETE SLAB FLOORS

- 1) CONCRETE SLAB ON GROUND FLOORS SHALL BE A MINIMUM OF 3-1/2" THICK.
- 2) FILL MATERIAL SHALL BE COMACTED TO ASSURE UNIFORM SUPPORT OF SLAB.
- 3) FILL SHALL NOT EXCEED 24" FOR CLEAN SAND OR GRAVEL AND 8" FOR EARTH.
- 4) GARAGE SLABS SHALL BE 4" CONC. W/ 6x6 W/M OR FIBERMESH WITH VAPOR BARRIER, OVER 4" OF CRUSHED STONE OR GRAVEL ON TAMPED EARTH (W/M OR FIBERMESH RECOMMENDED - NOT REQ'D)
- 5) GARAGE SLAB SHALL BE SLOPED TO FACILITATE THE MOVEMENT OF LIQUIDS TO A DRAIN OR TOWARD THE MAIN VEHICLE ENTRYWAY.
- 6) BASEMENT SLABS: SAME AS GARAGE SLABS BUT WITH PERIMETER INSULATION PER CODE.
- 7) ELEVATED GARAGE FLOOR SHALL BE CAPABLE OF SUPPORTING A 2000# LOAD OVER A 20-SQUARE-INCH AREA WITH A LIVE LOAD OF 50 PSF.
- 8) EXPANSION JOINT REQUIRED WHERE ENCLOSED SLAB MEETS FOUNDATION WALL.

DECK NOTES

- 1) WHEN THE DECK IS ATTACHED TO THE STRUCTURE, THE STRUCTURE SHALL HAVE A TREATED WOOD BAND FOR THE LENGTH OF THE DECK OR CORROSION RESISTANT FLASHING SHALL BE USED TO PREVENT MOISTURE FROM COMING IN CONTACT WITH THE UNTREATED FRAMING TO THE STRUCTURE.
- 2) THE DECK AND STRUCTURE BANDS SHALL BE CONSTRUCTED IN CONTACT WITH EACH OTHER, EXCEPT ON BRICK VENEER STRUCTURES AND WHERE PLYWOOD SHEATHING IS REQUIRED AND PROPERLY FLASHED.
- 3) SIDING SHALL NOT BE INSTALLED BETWEEN THE STRUCTURE AND THE DECK BAND.
- 4) IF ATTACHED TO A BRICK STRUCTURE, NEITHER THE FLASHING NOR A TREATED BAND FOR THE STRUCTURE IS REQUIRED. THE TREATED DECK BAND SHALL BE CONSTRUCTED IN CONTACT WITH THE BRICK VENEER.
- 5) GIRDERS SHALL BEAR DIRECTLY ON POSTS OR BE CONNECTED TO THE SIDES OF THE POSTS WITH 2-5/8" HOT DIPPED GALVANIZED BOLTS.
- 6) FLOOR DECKING SHALL BE #2 GRADE TREATED SOUTHERN PINE OR EQUIVALENT. MINIMUM FLOOR DECKING THICKNESS FOR JOISTS AT 16" O.C. IS 1" T&G.
- 7) DECKS MAY NOT BE ATTACHED TO CANTILEVERED FLOOR SYSTEMS.
- 8) ALL JOIST SPANS ARE CALCULATED USING #2 GRADE SPRUCE PINE FIR.
- 9) JOIST SIZES ARE SHOWN AT MINIMUM TO MEET STRUCTURAL REQUIREMENTS. SIZES MAY BE INCREASED.
- 10) DECKS OVER 4'-0" ABOVE GRADE SHALL BE BRACED AS PER CODE APPENDIX M.

HANDRAIL AND GUARDS

- 1) HANDRAILS SHALL HAVE A MINIMUM HEIGHT OF 34" AND A MAXIMUM HEIGHT OF 38".
- 2) PORCHES, BALCONIES OR RAISED FLOORS OVER 30" ABOVE FLOOR OR GRADE SHALL HAVE GUARD RAILS NO LESS THAN 36" HIGH.
- 3) STAIRS THAT HAVE A RISE OF 30" ABOVE THE FLOOR SHALL HAVE HANDRAILS OF 30" HIGH.
- 4) GUARDS ON OPEN SIDES OF STAIRWAYS, RAISED FLOORS, BALCONIES AND PORCHES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL CLOSURES OF LESS THAN 4" TO REJECT A 4" SPHERE.

GARAGE

- 1) DOOR FROM GARAGE TO HOUSE MUST BE 1-3/8" THICK SOLID WOOD OR SOLID OR HONEYCOMBED CORE STEEL DOORS OR 20 MIN. FIRE RATED.
- 2) GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2" GYPSUM BOARD APPLIED TO THE GARAGE SIDE.

COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS

	MEAN ROOF HEIGHT			
	UP TO 30'	30'-1" TO 35'	35'-1" TO 40'	40'-1" TO 45'
ZONE 1	16.5, -18.0	17.3, -18.9	18.0, -19.6	18.5, -20.2
ZONE 2	16.5, -21.0	17.3, -22.1	18.0, -22.9	18.5, -23.5
ZONE 3	16.5, -21.0	17.3, -22.1	18.0, -22.9	18.5, -23.5
ZONE 4	18.0, -19.5	18.9, -20.5	19.6, -21.3	20.2, -21.8
ZONE 5	18.0, -24.1	18.9, -25.3	19.6, -26.3	20.2, -27.0

SEE NC BUILDING CODE FOR LOCATION OF ZONES
PLUS AND MINUS SIGNS SIGNIFY PRESSURES ACTING TOWARDS AND AWAY FROM THE BUILDING SURFACES