



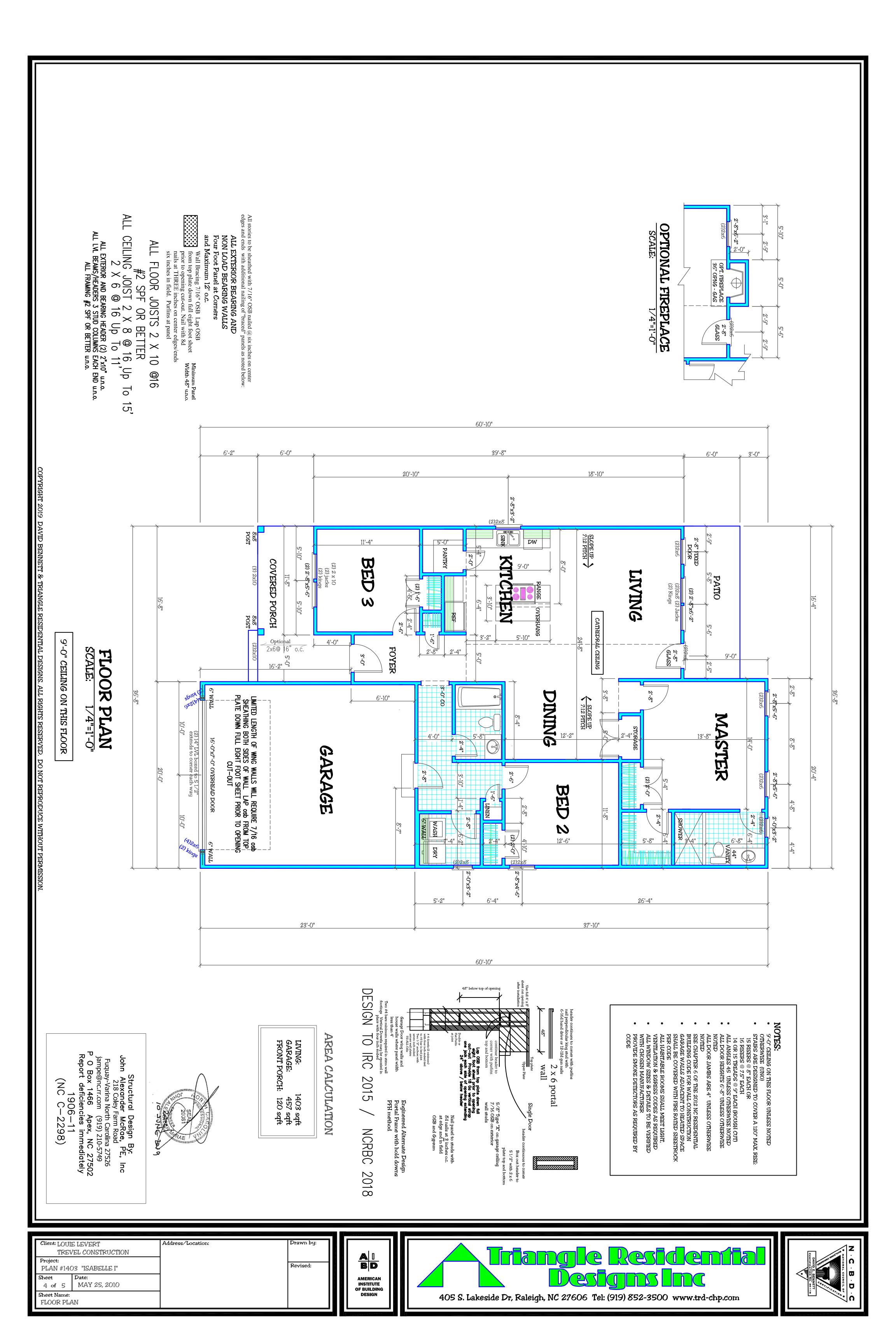
MAY 25, 2010

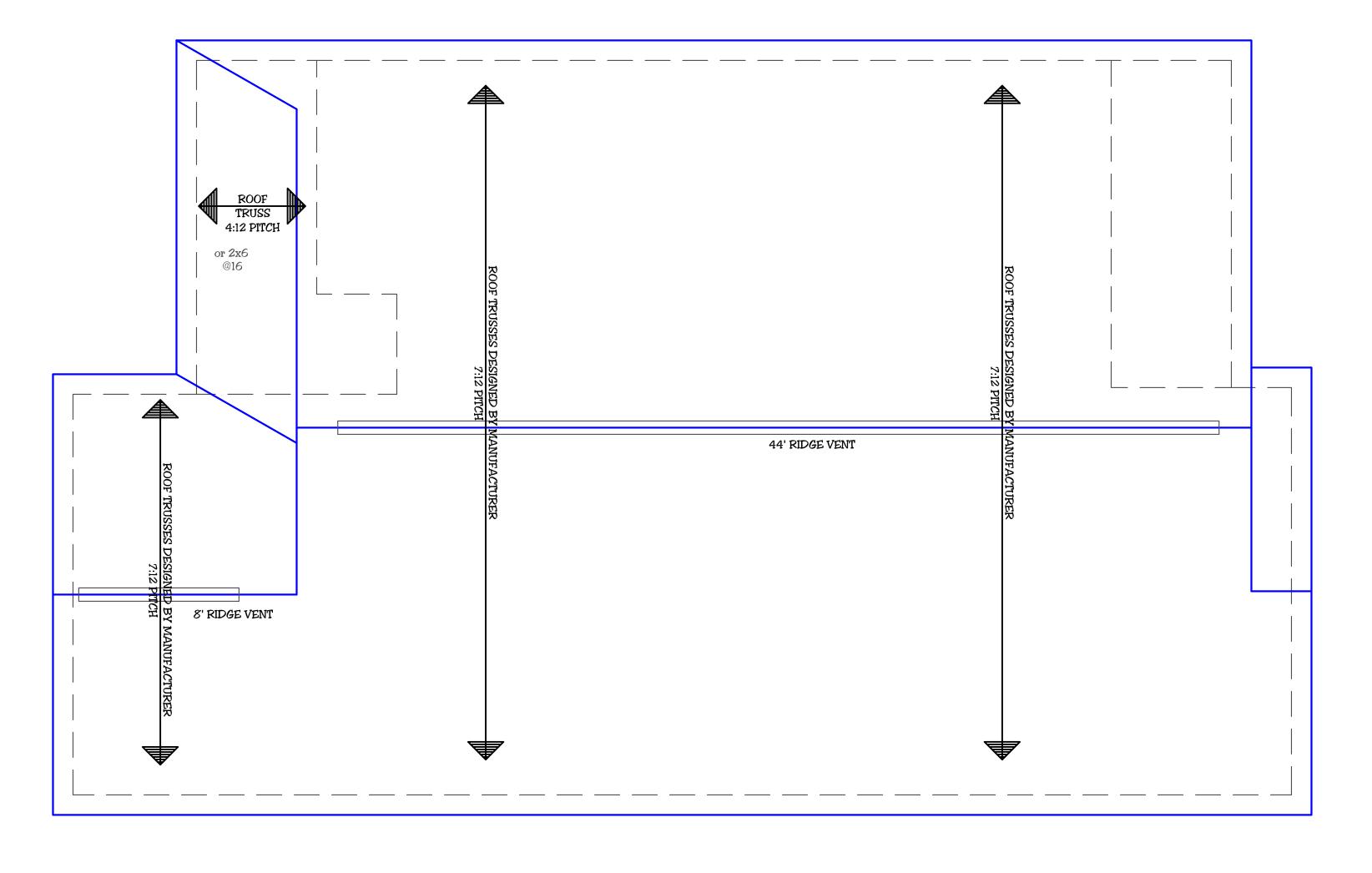
CRAWL SPACE FOUNDATION PLAN

3A of 5

Sheet Name:







Structural Design By:
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Report deficiencies immediately
1906—11
(NC C—2298)

/ENTILATION CALCULATION 18 NORTH CAROLINA RESIDENTIAL CODE)

ATTIC/150 REQUIRES = 13.8 sqft. OF FREE VENT = 6.9 sqft. IN/6.9 sqft. OUT.

OF RIDGE VENT AT 18 SQ. IN./FT. DIVIDED BY 144 SQ. IN./SQ. FT. EQUALS 6.5 SQ. FT. OF FREE

EAVES TO HAVE 2" CONTINUOUS EAVE/SOFFIT VENT IF ROOF VENTILATORS. IF ROOF VENTILATORS IS INADEQUATE, SUPPLEMENT WITH POWER ROOF VENTILATORS. VENTILATION REQUIREMENT MAY BE REDUCED TO 1 SF/300 SF PROVIDED AT LEAST 50% AND NOT MORE THAN 80% OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED, ATLEAST THREE (3) FEET ABOVE THE EAVE OR CORNICE VENTS, AND WITH THE BALANCE OF THE VENTILATION TO BE PROVIDED BY THE EAVE AND CORNICE VENTS.

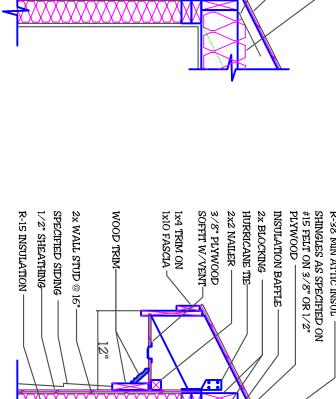
TO SECTION 806 (ROOF VENTILATION) OF THE NC STATE RESIDENTIAL CODE

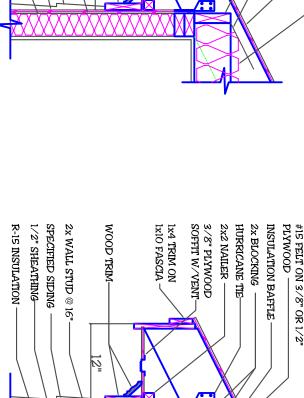
Client: LOUIE LEVERT TREVEL CONSTRUCTION Project:		Address/Location:	Drawn by:
PLAN #14 Sheet 5 of 5	PO3 "ISABELLE I" Date: MAY 25, 2010		Nevised.
Sheet Name: ROOF PLAN			





RAFTERS ON TOP OF JOISTS SHINGLES AS SPECIFIED ON #15 FELT ON 3/8" OR 1/2" PLYWOOD — 1x4 TRIM ON 1x10 FASCIA /8" PLYWOOD WALL STUD @ RAFTERS ON DBL TOP PLATE -38 MIN ATTIC INSUL —— HINGLES AS SPECIFIED ON 15 FELT ON 3/8" OR 1/2" LYWOOD — /8" PLYWOOD RAFTERS w/SLOPED CLG 1/2" SHE. R-15 INSU 2x WALL 1x4 TRIM 1x10 FASC 2x2 NAILI 3/8" PLY SOFFIT W MOOD TI ATHING





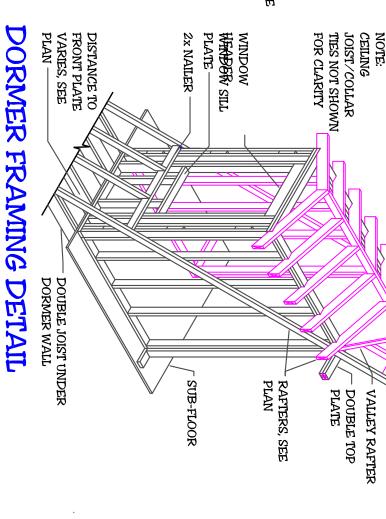
– DOUBLE RAFTER UNDER DORMER WALL RAFTERS, SEE PLAN DOUBLE TOP PLATE VALLEY RAFTER

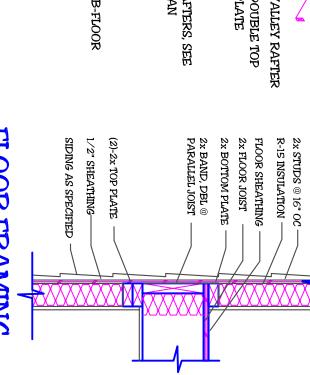
RIDGE BOARD

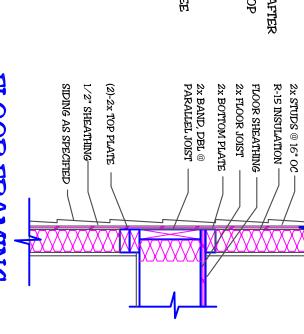
RIDGE BOARD

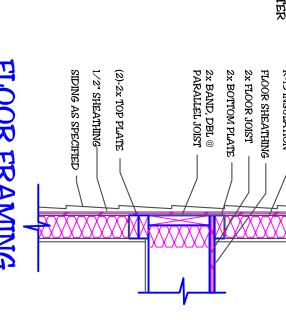
2x NAILER

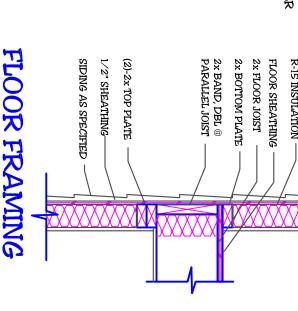
DORMER FRAMING DETAIL











XIMUM RISER HEIGHT SHALL BE 8-1/4" AND THE UM TREAD DEPTH SHALL BE 9". SING SHALL BE 3/4" MINIMUM AND 1-1/4" MAXIMIUM. IMUM HEADROOM IN ALL PARTS OF THE STAIR SHALL

NOTES:

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

FLASHING OVER SHINGLES SHINGLE OVER VENT REMOVE BAFFLES FROM 1/2 OF RIDGEMASTER VENT AND INSTALL AS FLASH VENT TURN UP AT FACE OF WALL 2" SHEATHING

GIRDER DETAILS

DROPPED

GIRDER

FLUSH BEARING

/CAP

FLUSH BEARING
W/LEDGER

FLUSH

出

SHED

ROOF

0

WALL

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BEARING IANGER

GLAZING

ALL HABITABLE ROOMS SHALL HAVE A GLAZING AREA OF IOT LESS THAN 8% OF THE FLOOR AREA.
) WINDOWS SHALL HAVE A MINIMUM DESIGN EQUIREMENT OF 25#DPI AND U=.40
) VERIFY WINDOW EGRESS WITH WINDOW MANUFACTUREF

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 22" 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"-O" x 6'-8". GARAGE

OOR FROM GARAGE TO HOUSE MUST BE 1-3/8" THICK ID WOOD OR SOLID OR HONEYCOMBED CORE STEEL ORS OR 20 MIN. FIRE RATED.

ARAGE SHALL BE SEPARATED FROM THE RESIDENCE D ITS ATTIC AREA BY NOT LESS THAN 1/2" GYPSUM ARD APPLIED TO THE GARAGE SIDE.

STAIRWAYS

IMUM CLEAR WIDTH OF THE STAIRWAY AT AND
W THE HANDRAIL SHALL NOT BE LESS THAN 31.5"
E THE HANDRAIL IS INSTALLED ON ONE SIDE AND 27"
E HANDRAIL OF CONTROL OF THE STAIRWAY AT AND 27" IRWAYS SHALL BE A MINIMUM 3'-0" WIDE. VDRAILS SHALL NOT PROJECT MORE THAN 4.5" ON E ON BOTH SIDES. ED FOR EGRESS MAY BE AS NARROW

NDERS MUST, AT A POINT NOT MORE THAN 12" FROM IDE WHERE THE TREADS ARE NARROWER, BE LESS 9" AND THE MINIMUM WIDTH OF ANY TREAD IS NOT THAN 4".

THAN 9" AND THE MINIMUM WIDTH OF ANY TREAD IS STHAN 9". AND THE MINIMUM AND TREADS IS STHAN 9".

* THESE PLANS, NOTES AND DETAILS ARE DESIGNED TO MEET THE REQUIREMENTS OF THE 2018 NC RESIDENTIAL 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.

2x TREATED BOTT.

1" INSULATION (R-4
MIN), 24" TOTAL ———
HEADER BLOCK
FILLED MONOLITHIC
WITH SLAB

ADE, 8" MIN

BRICK, 4" BLOCK

3" MIN 3" MIN

NOTE: 2x4 STUDS TO BE SPACE @ 12" OC IN DWELLINGS WITH 3RD FLOOR WALK-UP ATTIC

" SOLID MAS CAP " BRICK, 4" BLOCK

2'-0" MIN

SLAB w/SIDING

DECK ATTACHMENT

CRAWL

SPACE w/

/SIDING

SEE PLAN

SEE PLAN

SEE PLAN

SEE PLAN

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.

SIDING AS SPEC. ON 1/2" PLYWOOD ——

R-15 INSULATION -

2x BOTTOM PLATE

2x BAND, DBL @ PARALLEL JOIST

2x6 TREATED SILL

11D m0 30' 30'-1" m0 35' 35'-1" m0 40' 40'-1" '	MEAN ROOF HEIGHT	FOR THE FOLLOWING LOADS	COMPONENT & CLADDING DESIGNED	

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

FOUNDATION NOTES

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

TILES, GRAVEL OR CRUSHED OTHER APPROVED SYSTEM AS

WATERPROOFING:

I) FOUNDATION WALLS, WHERE THE OUTS THE INSIDE GRADE, SHALL BE DAMPROO FOOTING TO THE FINISHED GRADE. USE C SIDE GRADE IS HIGHER THAN FED FROM THE TOP OF THE ODE APPROVED METHOD

ANCHORAGE

IR STRAPS, SPACED AS ICHORAGE.
IS ON MONOLITHIC SLABS
ASTENERS. WALLS ON MONOLITHIC SLABS ORED TO THE FOUNDATION M OF 6'-O" ON CENTER AND F EACH PLATE SECTION. BOLTS AND SHALL EXTEND A

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.
5) 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 CORBEL SYSTEM ABOVE. THE TOTAL HORIZONTAL PROJECTION OF THE CORBEL HALL NOT EXCEED 2" WITH INDIVIDUAL CORBELS DECITION OF THE CORBEL HORIZONTAL PROJECTION OF THE WALL HORIZONTAL PROJECTION OF THE CORBEL HORIZONTAL PROJECTION OF THE CORBEL HORIZONTAL PROJECTION OF THE WALL HORIZONTAL PROJECTION OF THE CORBEL HORIZONTAL PROJECTION OF THE WALL HORIZONTAL PROJECTION OF THE WA CONSTRUCTION MAY BE
LL, PROVIDED THE WALL IS
IE WIDTH OF THE WALL
L PROJECTION OF THE CORBEL
L CORBELS PROJECTING NOT
UNIT OR 1/2 THE HEIGHT OF
BELS SHALL BE A HEADER RY WALLS SHALL BE TIED TO HE FOOTINGS. BLOCK OR 8" BRICK & BLOCK ANCED BACKFILL MUST BE ACKFILL

CAVITY ACCESS

7) VENTS ARE INTENDED TO BE 16" X 8"

ALUMINUM.

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.

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 THAT DO NOT ALLOW
PASSAGE OF AN OBJECT 6" OR MORE IN DIAMETER. HANDRAIL AND GUARDS E A MINIMUM HEIGHT OF 30" AND

ROOF NOTES

YS, RAISED FLOORS, INTERMEDIATE I DO NOT ALLOW DIAMETER.

RAFTER SIZES ARE SHOWN AT MINIMUM STRUCTURAL QUIREMENTS. SIZES MAY BE INCREASED TO PROVIDE NIMUM INSULATION VALUES OR AIR PASSAGES. RAFTER SPANS ARE CALCULATED ON #2 GRADE SPRUCE RAFTERS SHALL BE FRAMED TO RIDGE CH OTHER WITH A GUSSET PLATE. RIDGE BOARDS SHALL BE AT LEAST I" I IDGE BOARDS SHALL BE AT LEAST I" NOMINAL KNESS AND LOT LESS IN DEPTH THAN THE CUT END OF RAFTER. OSING RAFTERS AT THE RIDGE MUST ALIGN WITHIN HICKNESS OF THE RIDGE.
LG JSTS ARE NOT PARALLEL TO RAFTERS,
OORING OR METAL TIES SHALL BE ATTACHED TO SRS ENDS TO SUPPLY A CONTINUOUS TIE ACROSS THE ING OR RAFTERS SHALL BE ATTACHED TO 1"x 4" AFTERS, ATTACHED TO US TIE ACROSS THE HED TO 1"x 4" BOARD OR TO

1"x6" OR 2"x4" COLLAR TIES IN THE UPPER THIRD OF TO EVERY THIRD PAIR OF RAFTERS, NOT TO S SHALL HAVE DOUBLE H ADERS AND

S ROOF DRAWINGS SHALL BE PREPERED DESIGN PROFESSIONAL.
IGLED ROOFS WITH PITCHES 2/12 TO
OUBLE UNDERLAYMENT.
ICKET OR SADDLE IS REQUIRED FOR OR CHIMNEYS OVER AL OR THE SAME TO 4/12 SHALL PARED BY A

ON THE FOUNDATION PLAN.
ER 100% OF CRAWL SPACE.

AST 2" AND SHALL NOT

I) INSTALL AROUND FOUNDATION, DRAIN TI STONE DRAINS, PERFORATED PIPES OR OTH REQUIRED BY GRADE.
2) FOUNDATION DRAINAGE MAY BE OMITTE GRADE IS LESS THAN 12" BELOW THE EXTENT 3) GRADE LOT SO AS TO DRAIN SURFACE WE FOUNDATION WALLS AT A MINIMUM OF 6" I TED WHEN THE INTERIOR IERIOR GRADE. WATER AWAY FROM WITHIN THE FIRST 10'.

PIERS NRY PIERS HEIGHT SHALL NOT EXCEED 10 TIMES THEIR LEAST

) 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"

4) GARAGE SHALL BE 4" CONC. W/6x6 WWM OR FIBERMESH, WITH VAPOR BARRIER, OVER 4" OF CRUSHED STONE OR GRAVEL ON TAMPED EARTH. (WWM 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 2,000# LOAD OVER A 20-SQARE-INCH AREA WITH A LIVE LOAD OF 50 EXPANSION JOINT REQUIRED WHERE ENCLOSED SLAB MEETS UNDATION WALL.

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 FO 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 DECK NOTES

DING SHALL NOT BE INSTALLED BETWEEN THE STRUCTURE AND PECK BAND. ATTACHED TO A BRICK STRUCTURE, NEITHER THE FLASHING NOR ATTACHED BAND FOR THE STRUCTURE IS REQUIRED. THE TREATED BAND SHALL BE CONSTRUCTED IN CONTACT WITH THE BRICK DERS SHALL BEAR DIRECTLY ON POSTS OR BE CONNECTED TO DES OF THE POSTS WITH 2-5/8" HOT DIPPED GALVANIZED

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. 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. DECKS MAY NOT BE ATTACHED TO CANTILEVERED FLOOR SYSTEMS. ALL JOIST SPANS ARE CALCULATED USING #2 GRADE SPRUCE PINE

FLOOR PLAN NOTES COURTESTS ARE SHOWN AT MINIMUM TO MEET STRUCTURAL REQUIREMENTS. SIZES MAY BE INCREASED TO PROVIDE MINIMUM NSULATION VALUES OR AIR PASSAGES.

NSULATION 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)

PROVIDED - NOT REQUIRED)

MIN. ON MASONRY OR CONCRETE.

PROVIDE 1"x4" CROSS-BRACING OR SOLID BLOCKING BETWEEN TOOR JOISTS AT 6"-0" O.C. MAX. (RECOMMENDED BUT NOT CULATED USING #2 GRADE SPRUCE PINE

PPLY EXTRA JOISTS AS REQUIRED
DRAFTSTOPPING AND FIREBLOCKING AS REQUIRED PER CODE.
DESIGNS FOR WOOD FLOOR TRUSSES MUST BE PREPARED BY A
SISTERED DESIGN PROFESSIONAL. ERIOR AND LOAD BEARING HEADERS ARE TO BE (2)-2X10. M LVL DESIGN STRENGTH: E=2.0 x 2 MILLION PSI, FB=2800; PSI
BEAMS TO HAVE 3 STUDS EACH END.
EARING HEADER JACKS MUST REST ON DOUBLE JOISTS TRA JOISTS AS REQUIRED
TRA JOISTS AS REQUIRED

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 25PSI.

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 PANLES. 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" LTT31, HT16, HT722, MT728B OR TENSION TIE WITH 1800# MINIMUM CAPACITY.
2) FULLY FACE GARAGE WALL NATURE OF THE STRONG TIE" 2) FULLY FACE GARAGE WALL NATURE OF THE STRONG TIE WITH 1800# MINIMUM CAPACITY. GARAGE DOOR WALL CONSTRUCTION LLY FACE GARAGE WALL WITH 7/16" OSB OR 1/2" CDX, NAILED TABLE R602.3(1) AND BLOCKED AT ALL WOOD STRUCTURAL EL SHEATHING EDGES.

3) UNFILLED UNITS MAY BE USED IF THE HEIGHT IS NOT MORE THAN 4 TIMES THE LEAST DIMENSION.
4) HOLLOW PIERS SHALL BE CAPPED WITH 4" OF SOLID MASONRY OR CONCRETE, OR SHALL HAVE CAVITITES 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 CONCRETE SLAB FLOORS IMENSION.
) WHEN S'IRUCTURAL CLAY OR HOLLOW CONCRETE MASONRY UNITS
RE USED TO SUPPORT BEAMS & GIRDERS, THE CELLULAR SPACES
IUST BE FILLED SOLIDLY WITH CONCRETE OR TYPE "M" OR "S"
IORTAR.

