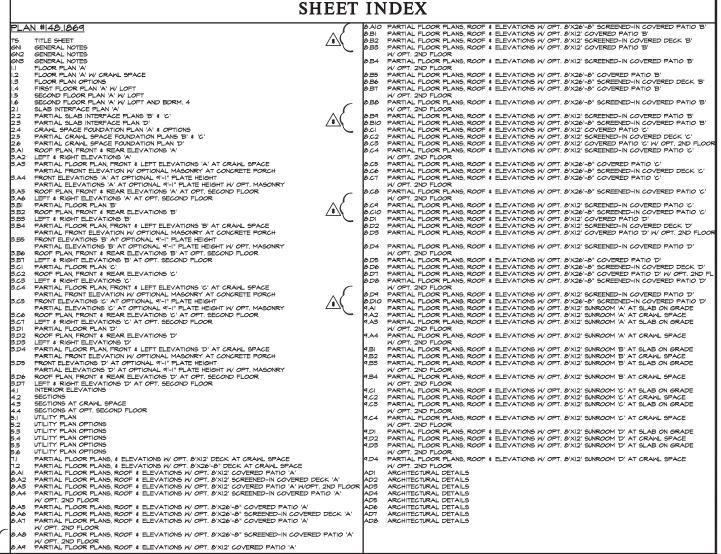
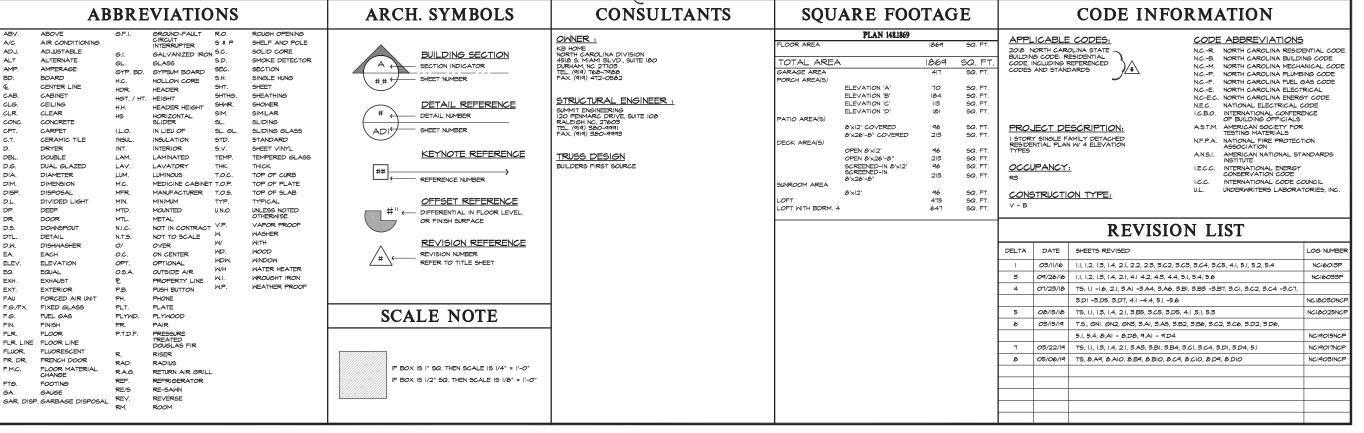


NORTH CAROLINA 50' SERIES PLAN 148.1869

LOT 60 MASON POINTE -ELEVATION A







NORTH CAROLINA 50' SERIES

NORTH CAROLINA DIVISION

4506 S. MIAMI BLVD.

SUITE 180

DURHAM, NC 27703

TEL: (919) 768-7980

FAX: (919) 544-2928

2018 NORTH CAROLINA STATE BUILDING

CODES

ISSUE DATE: 11/06/15
PROJECT No.: 1350999:57
DIVISION MGR.: D.S.
REVISIONS: 03/22/19

DIVISION REVISIONS
NC16033P · 09/26/16 · V.P.B.S.

DIVISION REVISIONS
NC18039NCP · 07/23/18 · KBA

DIVISION REVISIONS
NCIS025NCP · 08/15/18 · KBA

2018 CODE UPDATE
NCI9015NCP · 03/15/19 / CTD

DIVISION REVISIONS
NCI9017NCP/ 03/22/19 / CT

DIVISION REVISIONS
NCI9031NCP/ 05/06/19 / FAE

2 2 3 4 4 5 5 6 5 10 CO

148.1869
SHEET:
TS

GENERAL REQUIREMENTS

- THE WORD 'CONTRACTOR' AS USED HEREIN SHALL MEAN THE GENERAL CONTRACTOR, SUBCONTRACTORS AND ALL PERSONS DIRECTLY OF NDIRECTLY EMPLOYED BY ANY OF THEM
- CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH THE FOLLOWING APPLICABLE CODE REQUIREMENTS:
 - ALL LANS, STATUTES, THE MOST RECENT BUILDING CODES, ORDINANCES, RULES, REGULATIONS, AND LAMPLL ORDERS OF ALL PUBLIC AUTHORITIES HAVING JURISDICTION OVER OWNER, CONTRACTOR, ANY SUBCONTRACTOR, THE PROJECT THE PROJECT SITE, THE WORK, OR THE PROSECUTION OF THE WORK.
- THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT AND ALL OTHER APPLICABLE CODE REQUIREMENTS RELATING TO SAFETY.
- THE FAIR HOUSING AMENDMENTS ACT THE AMERICANS WITH DISA-BILITIES ACT, AND ALL OTHER APPLICABLE CODE REQUIREMENTS RELATING THERETO.
- CONTRACTOR SHALL CAREFULLY STUDY AND REVIEW THE CONSTRUCTION CONTRACTOR SHALL CAREFULLY STUDY AND REVIEW THE CONSTRUCTION DOCUMENTS. AND INFORMATION FURNISHED BY OWNER, AND SHALL PROMPTLY REPORT IN METING TO OWNERS REPRESENTATIVE ANY REPRORS, INCONSISTENCIES, OR OMISSIONS IN THE CONSTRUCTION DOCUMENTS OR INCONSISTENCIES WITH APPLICABLE CODE REQUIREMENTS OF STUDY THE CONTRACTOR.
- IF CONTRACTOR PERFORMS WORK WHICH HE KNOWS OR SHOULD KNOW IS CONTRARY TO APPLICABLE CODE REQUIREMENTS, WITHOUT THE AGREEMENT OF OWNER, CONTRACTOR SHALL BE RESPONSIBLE FOR SUCH WORK AND SHALL BEAR THE RESULTANT LOSSES, INCLUDING, WITHOUT LIMITATION, THE COSTS OF CORRECTING DEFECTIVE WORK.
- CONTRACTOR SHALL PROVIDE CERTIFICATES OF INSURANCE ACCEPTABLE TO OWNER PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL TAKE FIELD MEASUREMENTS, VERIFY FIELD DOCUMENTS SUCH FIELD MEASUREMENTS CONDITIONS AND OTHER INFORMATION KNOWN TO CONTRACTOR BEFORE COMMENCING THE WORK ERRORS INCONSISTENCIES OR OMISSIONS DISCOVERED AT ANY TIME SHALL BE PROMPTLY REPORTED IN WRITING TO THE OWNER.
- CONTRACTOR SHALL PROMPTLY NOTIFY OWNER'S REPRESENTATIVE IF CONTRACTOR BECOMES AWARE DURING THE PERFORMANCE OF THE WORK THAT THE CONSTRUCTION DOCUMENTS ARE NOT IN COM-PLIANCE WITH APPLICABLE CODE REQUIREMENTS.
- BY SUBMITTAL OF BID, CONTRACTOR WARRANTS TO OWNER THAT ALL MATERIALS AND EQUIPMENT TO BE FURNISHED ARE NEW UNLESS NOTED OTHERWISE AND ALL WORK WILL BE OF GOOD QUALITY AND FREE FROM FAULTS AND DEFECTS.
- SUB-CONTRACTORS SHALL INSURE THAT ALL WORK IS DONE IN A PROFESSIONAL WORKMANLIKE MANNER BY SKILLED MECHANICS AND SHALL REPLACE ANY MATERIALS OR ITEMS DAWAGED BY SUB-CONTRACTOR'S PERFORMANCE. SUB-CONTRACTOR'S AND SUPPLIERS ARE HEREBY NOTIFIED THAT THEY ARE TO CONFER AND COOPERATE PULLY WITH EACH OTHER DURING THE COURSE OF CONSTRUCTION TO DETERMINE THE EXACT EXTENT AND OVERLAP OF EACH OTHER'S WORK AND TO SUCCESSFULLY COMPLETE THE EXECUTION OF THE WORK. ALL AND TO SUCCESSFULLY COMPLETE THE EXECUTION OF THE MORK. ALL SUB-CONTRACTOR MORKMANEHP SHALL BE OF QUALITY TO PASS INSPECTIONS BY LOCAL AUTHORITIES, LENDING INSTITUTIONS, ARCHITECT OR BUILDER. ANY ONE OR ALL OF THE ABOVE MENTIONED INSPECTORS MAY INSPECT MORKMANSHIP AT ANY TIME, AND CORRECTIONS NEEDED TO ENHANCE THE GUALITY OF BUILDING MILL BE DONE MINEDIATELY. BEACH SUBCONTRACTOR, UNLESS SPECIFICALLY EXEMPTED BY THE TERMS OF HIS/HERS SUB-CONTRACT ASREEMENT, SHALL BE RESPONSIBLE FOR CLEANING UP AND REMOVING FROM THE JOB SITE ALL TRASH AND DEBRIS NOT LEFT BY OTHER SUB-CONTRACTORS, BUILDER WILL DETERMINE HOW SOON AFTER SUBCONTRACTOR COMPLETES EACH PHASE OF HIS WORK THAT TRASH AND DEBRIS MILL BE REMOVED FROM THE SITE.
- APPROVAL BY THE BUILDING INSPECTOR DOES NOT MEAN APPROVAL OR ALLOWABLE FAILIRE TO COMPLY WITH THE PLANS AND SPECIFICATIONS. ANY DESIGN WHICH FAILS TO BE CLEAR OR IS ANDICUOUS MUST BE REFERRED TO THE ARCHITECT OR ENGINEER FOR INTERPRETATION
- ALL EQUIPMENT AND MATERIALS FURNISHED AND INSTALLED UNDER THESE ANS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY OWNER UNLESS STIPULATED OTHERWISE.
- ALL TRADE NAMES AND BRAND NAMES CONTAINED HEREIN ESTABLISH GUALITY STANDARDS. SUBSTITUTIONS ARE PERMITTED, WITH PRIOR APPROVAL BY THE OWNERS REPRESENTATIVE. THE CONTRACTOR SHALL SUBMIT FOR THE ARCHITECTS AND BUILDER'S APPROVAL ALL MATERIALS OR EQUIPMENT WHICH IS CONSIDERED OR EQUIPMENT WHICH IS CONSIDERED OR EQUIPMENT WHICH IS CONSIDERED OR EQUIPMENT WHICH SECURIOR.
- CONSTRUCTION DOCUMENTS IDENTIFIED AS "BID SET" ON ANY OR ALL SHEETS MAY BE SUBJECT TO REVIEW. THIS REVIEW MAY RESULT IN CHANGES WHICH MAY BE MADE TO THE PLANS PRIOR TO THE ISSUANCE THE FINAL CONSTRUCTION SET WHICH WILL CONTAIN NO "BID SET" DESIGNATIONS. CONSTRUCTION DOCUMENTS IDENTIFIED AS "BID SET" ARE NOT TO BE CONSTRUCTION PROCUMENTS IDENTIFIED AS "BID SET" ARE NOT TO BE CONSTRUCTION STORM THE COMPLETED OR FILLD AS SUCH.
- ALL STANDARD NOTES CONTAINED HEREIN ARE TYPICAL UNLESS
- TYPICAL DETAILS AND SPECIFICATIONS ARE MINIMUM REQUIREMENTS TO BE USED WHEN CONDITIONS ARE NOT SHOWN OTHERWISE.
- SPECIFIC NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
 WHERE NO DETAILS ARE SHOWN CONSTRUCTION SHALL CONFORM
 TO SIMILAR WORK ON THE PROJECT.
- SEE ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND MECHANIC DRAWINGS FOR PITS, TRENCHES, ROOF OPENINGS, DEPRESSIONS ETC. NOT SHOWN ON THE OTHER DRAWINGS.
- THE CONSTRUCTION DOCUMENTS AND ALL COPIES THEREOF FURNISHED TO CONTRACTOR ARE THE PROPERTY OF THE ARCHITECT AND ARE NOT TO BE USED ON OTHER WORK.

SITE WORK

- CONTRACTOR SHALL INVESTIGATE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS, ETC., AND BURIED ARTIFACTS SUCH AS INDIAN OR DINOSAUR BONES. IF ANY SUCH ITMS ARE FOUND THE ARCHITECT, CIVIL ENGINEER, AND SOILS ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO FULLY PROTECT ADJACENT PROPERTIES.
- REFER TO THE SOILS REPORT AS PREPARED BY THE GEOTECHNICAL
- 4. REFER TO CIVIL ENGINEER'S CURRENT GRADING AND PLOT PLANS

SITE WORK (continued)

- REFER TO THE LANDSCAPE ARCHITECT'S CURRENT GRADING PLAN
- ALL FOOTINGS SHALL REST ON FIRM NATURAL SOIL OR APPROVED COMPACTED FILL. REFER TO GEOTECHNICAL REPORT.
- EXCAVATIONS FOR FOOTINGS SHALL BE MADE TO THE WIDTH, LENGTH, AND DEPTH REQUIRED AND FINISHED WITH LEVEL BOTTOMS.
- EXCAVATIONS SHALL BE KEPT FREE OF STANDING WATER
- WHERE EXCAVATIONS ARE MADE TO A DEPTH GREATER THAN INDICATED, SUCH ADDITIONAL DEPTH SHALL BE FILLED WITH CONCRETE AS SPECIFIED FOR FOOTINGS.
- FILL MATERIALS SHALL BE FREE FROM DEBRIS, VEGETABLE MATTER AND OTHER FOREIGN SUBSTANCES.
- ALL FINISH GRADES TO DRAIN AWAY FROM THE BUILDING FOOTINGS.
- 12. THERE SHALL BE NO ON-SITE WATER RETENTION.
- THERE SHALL BE NO DRAINAGE TO ADJACENT PROPERTY
- FOR ONSITE CONTSRUCTION, PLANS TO COMPLY WITH NECESSARY INSPECTIONS APPROVED BY THE BUILDING OFFICIAL.
- THE REQUIREMENTS IN THESE NOTES ARE THE MINIMUM THAT SHALL BE MET. REQUIREMENTS OF THE STRUCTURAL DRAWINGS THAT EXCEED THE REQUIREMENTS SHOWN HERE SHALL BE MET.

CONCRETE

- REFER TO STRUCTURAL ENGINEERING CALCULATIONS AND SOILS
- CONCRETE SHALL BE PROPORTIONED TO PROVIDE AN AVERAGE COMPRESSIVE STRENGTH AS PRESCRIBED IN THE N.C.-R, AS WELL AS SATISFY THE DURABILITY CRITERIA OF THE N.C.-R
- MIXING OF CONCRETE SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318, SECTION 5.8.
- THE DEPOSITING OF CONCRETE SHALL COMPLY WITH THE PROVISIONS ACI 310, SECTION 5.10.
- THE CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318, SECTION 5.11.
- ALL FORM WORK SHALL BE DESIGNED, CONSTRUCTED, UTILIZED, AND DEMONSED
- CONDUIT, PIPES AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO CONCRETE AND MITHIN THE LIMITATIONS OF ACI 318, SECTION 6.3, ARE PERMITTED TO BE EMBEDDED IN CONCRETE WITH APPROVAL OF THE REGISTERED DESIGN PROFESSIONAL.
- CONSTRUCTION JOINTS INCLUDING THEIR LOCATION SHALL COMPLY WITH THE PROVISIONS OF ACI 318, SECTION 6.4.
- ALL STEEL REINFORCING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH THE N.C.-R
- TOP OF CONCRETE SLABS TO BE A MINIMUM 4" W/ MASONRY VENEER 6" ELSEWHERE (8" HJJ.) ABOVE FINISH GRADE.
- FOUNDATION MIDTHS, DEPTHS, AND REINFORCING, AS SHOWN ON PLANS, ARE SUPERCEDED BY ANY LOCAL CODES OR ORDINANCES WHICH REQUIRE INCREASES OF THE SAME.
- ALL REINFORCEMENT, CONDUIT, OUTLET BOXES, ANCHORS, HANGERS, SLEEVES, BOLTS OR OTHER EMPEDDED MATERIALS AND ITEMS MUST BE SECURED AND APPROPRIATELY FASTENED IN THEIR PROPER LOCATIONS PRIOR TO THE PLACEMENT OF CONCRETE. SUB-CONTRACTOR SHALL VERIFY INSTALLATION OF HOLD-DOWNS. ANCHOR BOLTS, PA STRAPS, AND OTHER ANCHORAGE MATERIAL AND ITEMS PRIOR TO PLACEMENT OF CONCRETE
- POST-TENSION SLABS, IF APPLICABLE:
- POINT AND LINE LOADS FROM STRUCTURE ABOVE TO BE PROVIDED TO POST-TENSION ENGINEER PRIOR TO POST-
- ANCHOR BOLTS AND OTHER HARDWARE TO BE SHOWN ON POST-TENSION PLANS TO AVOID MIS-LOCATION OF HARDWARE AND POSSIBLE FIELD FIXES WHICH MAY CUT TENDONS.

MASONRY

- ALL MASONRY DESIGN SHALL FOLLOW THE REQUIREMENTS OF THE CURRENT ADOPTED CODES.
- ANCHORED MASONRY VENEER SHALL COMPLY WITH THE PROVISIONS N.C.-R. AND SECTIONS 6.1 AND 6.2 OF ACI 530/ASCE 5/TMS 402.
- STONE VENEER UNITS NOT EXCEEDING 5 INCHES IN THICKNESS SHALL BE ANCHORED DIRECTLY TO MASONRY, CONCRETE OR TO STUD CONSTRUCTION BY ONE OF THE APPROVED METHODS LISTED IN THE N.C.-R
- GROUT SHALL CONSIST OF CEMENTITIOUS MATERIAL AND AGGREGATE IN ACCORDANCE WITH ASTM C 476 AND THE PROPORTION SPECIFICATIONS PER THE N.C.-R
- AGGREGATES FOR MORTAR AND GROUT SHALL BE NATURAL SAND AND ROCK CONFORMING TO A.S.T.M. C-144-04 (MASONRY MORTAR) AND C-404-01 (GROUT).
- 7. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO A.S.T.M. C 150.
- 8. ALL BRICK SHALL CONFORM TO A.S.T.M. C 216, GRADE MW.
- UNLESS SPECIFICALLY SHOWN OTHERWISE ALL BRICK SHALL BE LAID
- IO. ANCHORS, TIES AND WIRE FABRIC SHALL CONFORM TO N.C.-R
- ANCHOR TIES AND WIRE FABRIC FOR USE IN MASONRY WALL CONSTRUCTION SHALL CONFORM TO THE N.C.-R

METALS

- REFER TO STRUCTURAL NOTES AND SPECIFICATIONS FOR STRUCTURAL STEEL, METAL AND REINFORCING STEEL SPECIFICATION
- 2. ALL STRUCTURAL STEEL SHALL CONFORM TO AISC/CRED
- ANCHOR RODS SHALL BE SET ACCURATELY TO THE PATTERN AND DIMENSIONS CALLED FOR NO THE PLANS. THE PROTRISION OF THE THREADED ENDS THROUGH THE CONNECTED MATERIAL SHALL BE SUFFICIENT TO PLLY ENGAGE THE THREADS OF THE NITS, BUT SHALL NOT BE GREATER THAN THE LENSTH OF THE THREADS OF THE DUTS
- FASTENERS FOR PRESERVATIVE-TREATED AND FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER, VERIFY ACCEPTABLE FASTENERS PER CHEMICALS USED IN PRESSURE PRESERVITYCHLY TREATED WOOD W N.C.-R. FASTENINGS FOR WOOD FOUNDATIONS SHALL BE AS REQUIRED IN AF& PA TECHNICAL REPORT NO. 7.

WOOD & FRAMING

- THE DESIGN AND CONSTRUCTION OF CONVENTIONAL LIGHT-FRAME WOOD CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE N.C.-R
- CONSTRUCTION, PROJECTIONS, OPENINGS AND PENETRATIONS OF EXTERIOR WALLS OF DWELLINGS AND ACCESSORY BUILDINGS SHALL COMPLY MITH TABLE R502.1.
- ALL LUMBER SHALL MEET THE STANDARDS OF QUALITY AS STATED IN THE N.C.-R
- LUMBER AND PLYWOOD REQUIRED TO BE PRESSURE PRESERVATIVELY TREATED IN ACCORDANCE WITH THE N.C.-R AND SHALL BEAR TREATED IN ACCORDANCE WITH THE N.C.-R. AND SHALL BEAR THE QUALITY MARK OF AN APPROVED INSPECTION AGENCY THAT MAINTAINS CONTINUING SUPERVISION, TESTING AND INSPECTION OVER THE QUALITY OF THE PRODUCT AND THAT HAS BEEN APPROVED BY AN ACCREDITATION BODY THAT COMPLIES WITH THE REQUIREMENTS OF THE AMERICAN LUMBER STANDARD COMMITTEE TREATED WOOD PROGRAM
- ALL LUMBER SIZES NOTED AND SPECIFIED ON PLANS ARE NOMINAL SIZES UNLESS SPECIFICALLY INDICATED AS NET SIZE.

GLUE LAMINATED LUMBER

- REFER TO THE STRUCTURAL ENGINEER'S CURRENT NOTES, CALCULATIONS, AND SPECIFICATIONS.
- GLUED LAMINATED TIMBERS SHALL BE MANUFACTURED AND IDENTIFIED AS REQUIRED IN AITC AIGO.I AND ASTM D 5757.

PROTECTION AGAINST DECAY & TERMITE

- IN AREAS SUBJECT TO DECAY DAMAGE AS ESTABLISHED BY THE N.C.-R. THE FOLLONING LOCATIONS SHALL REQUIRE THE USE OF NATURALLY DURABLE WOOD OR WOOD THAT IS PRESERVATIVE TREATED ACCORDANCE WITH AMPA UI FOR THE SPECIES, PRODUCT, PRESERVATIVE AND END USE. PRESERVATIVES SHALL BE LISTED IN SECTION 4 OF AWPA U
- WOOD JOISTS OR THE BOTTOM OF WOOD FLOOR WHEN CLOSER THAN IB INCHES, OR WOOD GIRDERS WHEN CLOSER THAN IZ INCHES TO THE EXPOSED ORGAND IN CRAAL SPACES OR INEXCAVATED AREAS LOCATED MITHIN THE PERIPHERY OF THE BUILDING FOUNDATION.
- ALL EXTERIOR SILLS &PLATES THAT REST ON CONCRETE OR MASONRY
- SILLS AND SLEEPERS ON A CONCRETE OR MASONRY, UNLESS THE SLAB THAT IS IN DIRECT CONTACT WITH THE GROUND IS SEPARATED FROM THE GROUND BY AN APPROVED IMPERVIOUS MOISTURE BADDIED
- THE ENDS OF WOOD GIRDERS ENTERING EXTERIOR MASONRY OR CONCRETE WALLS HAVING CLEARANCES OF LESS THAN 0.5 INCH ON TOPS, SIDES AND ENDS.
- MOOD SIDING AND SHEATHING ON THE EXTERIOR OF A BUILDING HAVING A CLEARANCE OF LESS THAN 6 INCHES FROM THE GROUND.
- WOOD STRUCTURAL MEMBERS SUPPORTING MOISTURE-PERMEABLE FLOORS OR ROOFS THAT ARE EXPOSED TO THE MEATHER, SUCH AS CONCRETE OR MASONRY SLABS, UNLESS SEPARATED FROM SUCH FLOORS OR ROOFS BY ANIMPERVIOUS MOISTURE BARRIER.
- WOOD FURRING STRIPS OR OTHER WOOD FRAMING MEMBERS ATTACHE DIRECTLY TO THE INTERIOR OF EXTERIOR MASONRY MALLS OR CONCRETE WALLS OR WE SEED HIERES AN APPROVED VAPOR RETARDER IS APPLIED BETWEEN THE WALL AND THE FURRING STRIPS OR FRAMING HOMBERS.
- ALL PORTIONS OF A PORCH, SCREEN PORCH OR DECK FROM THE BOTTOM OF THE HEADER DOWN, INCLUDING POSTS, GUARDRAILS, PICKETS, STEPS AND FLOOR STRUCTURE. COVERINGS THAT WOULD PREVENT MOISTURE OR WATER ACCUMULATION ON THE SURFACE OR AT JOINTS BETWEEN MEMBERS ARE ALLOWED.
- IN AREAS SUBJECT TO DAMAGE FROM TERMITES METHODS OF PROTECTION SHALL BE ONE OF THE METHODS LISTED IN THE N.C.-R
- UNDER-FLOOR AREAS SHALL BE VENTILATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE N.C.-R

WOOD & FRAMING (continued)

- WOOD STRUCTURAL PANELS SHALL CONFORM TO THE REQUIREMENTS AS SET FORTH IN THE N.C.-R
- ROOF SHEATHING PANELS SHALL BE LAID WITH FACE GRAIN OR STRENGTH AXIS PERPENDICULAR TO SUPPORTS AND WITH PANEL CONTINUOUS OVER TWO OR MORE SPANS.
- ROOF SHEATHING SHALL BE IN ACCORDANCE WITH THE N.C.-R.
- FLOOR SHEATHING PANELS SHALL BE LAID WITH FACE GRAIN OR STRENGTH AXIS PERPENDICULAR TO SUPPORTS AND WITH PANEL CONTINUOUS OVER TWO OR MORE SPANS.
- STRUCTURAL FLOOR SHEATHING SHALL COMPLY WITH THE PROVISIONS OF THE N.C.-R
- REFER TO THE STRUCTURAL ENGINEER'S CURRENT SPECIFICATIONS, CALCULATIONS, AND PLANS FOR REQUIRED STRENGTH, GRADE, AND THICKNESS FOR PLYWOOD FLOOR SHEATHING PANELS AND FOR DIAPHRAGM NAILING AND ADHESIVE REQUIREMENTS.
- ALL VERTICAL JOINTS OF PANEL SHEATHING SHALL OCCUR OVER, AND BE PASTENED TO, COMMON STIDS. HORIZONTAL JOINTS IN BRACED MALL PANELS SHALL OCUR OVER, AND BE FASTENED TO, COMMON BLOCKING OF A MINIMUM OF 11/2 INCH THICKNESS.
- WHERE APPLICABLE, REFER TO THE SHEAR WALL SCHEDULE FOR REQUIRED STRENGTH, GRADE, AND THICKNESS OF PLYWOOD SHEAR PANELS AND FOR REQUIRED SHEAR WALL NAILING SCHEDULE.
- IN ONE- AND TWO-FAMILY DWELLING CONSTRUCTION USING VINY ALLMINUM AS A SOFFIT MATERIAL, THE SOFFIT MATERIAL SHAL SECURELY ATTACHED TO FRAMING MEMBERS AND USE AN UNDERLAYMENT MATERIAL OF EITHER FIRE RETARDANT TREATS ANT TREATED WOOD UNDERLAYMENT MATERIAL OF EITHER FIRE RETARDANT TREATED MOOD, 25/52 INCH WOODS SHEATHING OR 5/6 INCH GYPSUM BOARD, VENTING REQUIREMENTS APPLY TO BOTH SOFFIT AND UNDERLAYMENT AND SHALL BE PER SECTION REGO OF THE NORTH CARCLINA RESIDENTIAL CODE. WHERE THE PROPERTY LINE IS 10 FEET OR MORE FROM THE BUILDING FACE, THE PROVISIONS OF THIS CODE SECTION DO NOT APPLICA

FLOOR FRAMING

- ALL FLOOR JOISTS SHALL BE DESIGNED I-JOIST WOOD FLOOR TRUSSES. REFER TO MANUFACTURER FOR ALL LAYOUTS AND CALCULATIONS.
- REFER TO THE STRUCTURAL ENGINEER'S CURRENT PLANS & CALCULATIONS FOR SIZE, SPACING, AND ANCHORAGE OF ALL FLOOR JOISTS, SIZE, LOCATION, AND ANCHORAGE OF ALL FLOOR BEAMS AND HEADERS, AND ALL RELATED FRAMING ISSUES.

- ROOF FRAMING SHALL BE BY PRE-MANUFACTURED ROOF TRUSSES SPACED AT 24 INCHES ON CENTER UNLESS NOTED OTHERWISE.
- WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE N.C.-R
- THE MANUFACTURER SHALL SUPPLY TO THE ARCHITECT AND BUILDER CALCULATIONS AND SHOP DRAWINGS FOR APPROVAL OF DESIGN LOADS, CONFIGURATION (2 OR 3 POINT BEARING), VOLUME CEILING OPTIONS, AND SHEAR TRANSFER, PRIOR TO FABRICATION.
- THE BRACING OF WOOD TRUSSES SHALL COMPLY TO THEIR APPROPRIATE ENGINEERED DESIGN. PER THE N.C.-R
- TRUSS MEMBERS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT THE APPROVAL OF A REGISTERED DESIGN PROPERSIONAL. ALTERATIONS RESULTING IN THE ADDITION OF LOAD (E.S. HYAC EQUIPMENT, WATER HEATER) THAT EXCEEDS THE DESIGN LOAD FOR THE TRUSSES SHALL NOT BE PERMITTED WITHOUT WITHOUT WENTED.
- ALL CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHEREIN THE PROJECT IS TO BE BUILT.
- MANUFACTURER IS TO SECURE BUILDING DEPARTMENT APPROVAL OF CALCULATIONS AND SHOP DRAWINGS PRIOR TO FABRICATION

WALL FRAMING

- THE SIZE, HEIGHT, AND SPACING OF STUDS SHALL BE IN ACCORDANCE WITH THE N.C.-R
- STUDS SHALL BE PLACED WITH THEIR WIDE DIMENSION PERPENDICULAR
- NOT LESS THAN THREE STUDS SHALL BE INSTALLED AT EACH CORNER OF AN EXTERIOR WALL.
- WOOD STUD WALLS SHALL BE CAPPED WITH A DOUBLE TOP PLATE INSTALLED TO PROVIDE OVERLAPPING AT CORNERS AND INTERSECTIO! WITH BEARING PARTITIONS. END JOINTS IN TOP PLATES SHALL BE OFFSET AT LEAST 24 INCHES. JOINTS NEED NOT COCUR OVER STUDS. PLATES SHALL BE NOT LESS THAN 2-INCHES NOMINAL THICKNESS AND HAVE A MIDTH AT LEAST EQUAL TO THE WIDTH OF THE STUDS. SEE EXCEPTIONS.
- WHERE JOISTS, TRUSSES OR RAFTERS ARE SPACED MORE THAN 16 INCHES ON CENTER AND THE BEARING STUDS BELOW ARE SPACED 24 INCHES ON CENTER, SUCH MEMBERS SHALL BEAR WITHIN 5 INCHES OF THE STUDS BENEATH. SEE EXCEPTIONS.
- INTERIOR NONBEARING WALLS SHALL BE PERMITTED TO BE CONSTRUCTED MITH 2-INCH-BY-3-INCH STUDS SPACED 24 INCHES ON CENTER OR, MIEN NOT A PART OF A BRACED WALL LINE, 2-INCH-BY-4-INCH FLAT STUDS SPACED IG INCHES ON CENTER. INTERIOR NONBEARING WALLS SHALL BE CAPPED WITH AT LEAST A SINGLE TOP FLATE. INTERIOR NONBEARING WALLS SHALL BE FIREBLOCKED IN ACCORDANCE WITH THE NO.

WOOD & FRAMING

(continued)

- 8. DRILLING AND NOTHCING OF STUDS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
 - NOTHCING. ANY STUD IN AN EXTERIOR WALL OR BEARING PARTITION MAY BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25 PERCENT OF ITS WIDTH. STUDS IN NONBEARING PARTITIONS MAY BE NOTCHED TO A DEPTH NOT TO EXCEED 40 PERCENT OF A SINGLE STUD WIDTH. NOTCHING OF BEARING STUDS SHALL BE ON ONE EDGE ONLY AND NOT TO EXCEED ONE-FOURTH THE HEIGHT OF THE STUD. NOTCHING SHALL BY SHALL NOT OCCUR IN THE BOTTOM OR TOP 6 INCHES OF BEARING STUDS.
 - DRILLING, ANY STID MAY BE BORED OR DRILLED, PROVIDED THAT THE DIAMETER OF THE RESULTING HOLE IS NO MORE THAN 60 PERCENT OF THE STUD MIDTH, THE EDGE OF THE HOLE IS NO MORE THAN 5/6" INCH TO THE EDGE OF THE STUD, AND THE HOLE SHALL NOT BE CLOSER THAN 6 INCHES FROM AN ADJACENT HOLE OR NOTCH. HOLES NOT EXCEEDING 3/4 INCH DIAMETER CAN BE AS CLOSE AS I I/2 INCHES ON CENTER SHACING, STUDE JOCATED IN EXTERIOR MALLS OR BEARING PARTITIONS DRILLED OVER 40 PERCENT AND UP TO 60 PERCENT SHALL ALSO BE DOUBLED WITH NO MORE THAN TWO SUCCESSIVE DOUBLED STUDS BORED.
 - CUTTING AND NOTCHING OF STUDS SHALL BE PERMITTED TO BE INCREASED TO 65 PERCENT OF THE WIDTH OF THE STUD IN EXTERIOR AND INTERIOR WALLS AND BEARING PARTITIONS, PROVIDED THAT ONE OF THE FOLLOWING CONDITIONS ARE MET.

 (a) THE WALL SECTION IS REINFORCED WITH 1/2-INCH EXTERIOR GRADE FLYWOOD OR EQUIVALENT REINFORCHENT ON THE NOTCHED SIDE OF THE WALL, PLYWOOD, IF USED, SHALL REACH PROM THE FLOOR TO CEILING AND AT LEAST ONE STUD PIXTHER OR EACH SIDE OF THE SECTION THAT HAS BEEN NOTCHED OR CUT.

 (b) THE EXTERIOR WALLS OF A KITCHEN MAY BE REINFORCED BY PLACING 1/2-INCH PLYWOOD OR EQUIVALENT REINFORCEMENT ON THE NOTCHED SIDE OF THE WALLS OF A KITCHEN MAY BE REINFORCEMENT ON THE NOTCHED SIDE OF THE WALLS OF A KITCHEN MAY BE REINFORCEMENT ON THE NOTCHED SIDE OF THE WALL PLYWOOD, IF USED, SHALL REACH FROM THE FLOOR TO COUNTER-TOP HEIGHT AND AT LEAST ONE STUD PURTHER ON EACH SIDE OF THE SECTION THAT HAS BEEN NOTCHED OR CUT.
- WHEN PIPING OR DICTWORK IS PLACED IN OR PARTIALY IN AN EXTERIOR WHEN FIPTING OR DUCTNORK IS PLACED IN OR PARTIALY IN AN EXTERIOR OR INTERIOR LOAD-DEARNING WALL, NECESSITATION CUTTING, POILLING OR NOTCHING OF THE TOP PLATE B MORE THAN 50 PERCENT OF ITS WIDTH A GALVANIZED METAL IT OF NOT LESS THAN 0.04 INCH THICK AND 11/2' INCHES WIDE SHALL BE FASTENED ACROSS AND TO THE PLATE AT EACH SIDE OF THE OPENING WITH NOT LESS THAN EIGHT ION ANLE HAVING A MINIMAY LENGTH OF 11/2 INCHES (35 MM) AT EACH SIDE OR EQUIVALENT. THE METAL ITEM MOST EXTEND A MINIMAY OF 6 INCHES PAST THE OPENING.
- HEADERS SHALL MEET THE REQUIREMENTS OF THE N.C.-F
- PROVIDE LATERAL BRACING PER THE N.C.-R
- FOUNDATION CRIPPLE WALLS SHALL MEET THE REQUIREMENTS OF THE N.C.-R CODE
- 14. WOOD STUD WALLS SHALL BE BRACED AS REQUIRED BY THE N.C.-R
- 15. UNLESS COVERED BY INTERIOR OR EXTERIOR WALL COVERINGS OR SHEATHING MEETING THE MINIMUM REQUIREMENTS OF THIS CODE. ALL STUD PARTITIONS OR WALLS WITH STUDS HAVING A HEIGHT-TO-LEAST THICKNESS RATIO EXCEEDING 50 SHALL HAVE BRIDDING NOT LESS
 THAN 2 INCHES IN THICKNESS AND OF THE SAME WIDTH AS THE STUDS
 FITTED SNUGLY AND NAILED THERETO TO PROVIDE ADEQUATE LATERAL
 SUPPORT.

FIRE BLOCKS AND DRAFT STOPS

- FIRE BLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND A ROOF SPACE, FIREBLOCKING SHALL BE PROVIDED IN HOOD-FRAME CONSTRUCTION IN THE LOCATIONS SPECIFIED IN THE N.C.-R
- FIRE BLOCKING SHALL CONSIST OF 2 INCHES NOMINAL LUMBER, OR TWO THICKNESSES OF I-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS, OR THICKNESSES OF I-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS, OF ONE THICKNESS OF 23/32-INCH WOOD STRUCTURAL PANELS WITH JOINTS BACKED BY 23/32-INCH WOOD STRUCTURAL PANELS OR ONE THICKNES OF 3/4-INCH PARTICLEBOARD WITH JOINTS BACKED BY 3/4-INCH PARTICLEBOARD, 1/2-INCH GYPSOM BOARD, OR 1/4-INCH CEMENT-BASED
- BATTS OR BLANKETS OF MINERAL WOOL OR GLASS FIBER OR OTHER APPROVED MATERIALS INSTALLED IN SUCH A MANNER AS TO BE SECURELY RETAINED IN PLACE SHALL BE PERMITTED AS AN ACCEPTABLE FIRE BLOCK.
- BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NON-RIGID MATERIALS SHALL BE PERMITTED FOR COMPLIANCE WITH THE 10 FOOT HORIZONTAL FIREBLOCKING IN MALLS CONSTRUCTED USING PARALLEL ROMS OF STUDS OR STAGGERED STUDS. LOOSE FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANNER INTENDED FOR USE TO DENOSTRATE IT'S ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE
- WHEN THERE IS USABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR/CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT EXCEED 1,000 SQUARE FEET. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS. WHERE THE ASSEMBLY IS ENCLOSED BY A FLOOR MEMBRANE ABOVE AND A CEILING MEMBRANE BELOW DRAFTSTOPPING SHALL BE PROVIDED IN FLOOR/CEILING ASSEMBLIES UNDER THE FOLLOWING CIRCUMSTANCES:
 - CEILING IS SUSPENDED UNDER THE FLOOR FRAMING.
- FLOOR FRAMING IS CONSTRUCTED OF TRUSS-TYPE OPEN-WEB OR PERFORATED MEMBERS.

- SUARDRAIL OF 36" HIGH MIN. SHALL BE PROVIDED WHERE FINISHED GRADE OR FLOOR BELOW RAISED AREA EXCEEDS 30".
- HANDRAIL AT STAIRS SHALL BE PROVIDED WHEN 4 OR MORE STAIR RISERS



NORTH CAROLINA 50' SERIES

KB HOME NORTH CAROLINA DIVISION

4506 S. MIAMI BLVD.

.

SUITE 180 DURHAM, NC 27703 TEL: (919) 768-7980 • FAX: (919) 544-2928

. 2018 NORTH **CAROLINA STATE** BUILDING

CODES

ISSUE DATE: 11/06/15 PROJECT No.: 1350999:57

D.S.

" REVISIONS: 03/22/19 DIVISION REVISIONS NC16033P - 09/26/16 - V.P.B.S.

DIVISION MGR.:

DIVISION REVISIONS
NCIS030NCP · 07/23/18 · KBA

DIVISION REVISIONS
NCI8025NCP · 08/15/18 · KBA 2018 CODE UPDATE NC19015NCP/ 03/15/19 / CTD

7 DIVISION REVISIONS NC19017NCP/ 03/22/19 / CTD

DIVISION REVISIONS
NC19031NCP/ 05/06/19 / FAE

FOR INTERNAL USE ONLY

148.1869

GN1

THERMAL & MOISTURE PROTECTION

- PROVIDE ALL FLASHING, COUNTER-FLASHING, BITUTHENE, MEMBRANE ING. SHEET METAL, CAULKING, SEALANTS, ELASTOMERIC WALKING SURFACES, AND RAIN GUTTERS AND/OR DIVERTERS WHERE JIRED TO MAKE WORK COMPLETELY WATERPROOF
- "CORROSION RESISTANCE" SHALL MEAN THE ABILITY OF A MATERIAL TO WITHSTAND DETERIORATION OF IT'S SURFACE OR IT'S PROPERTIES WHEN EXPOSED TO IT'S ENVIRONMENT
- BALCONIES, LANDINGS, EXTERIOR STAIRWAYS, OCCUPIED ROOFS AND SIMILAR SURFACES EXPOSED TO THE NEATHER AND SEALED UNDER-NEATH SHALL BE WATERPROOFED AND SLOPED A MINIMUM OF 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL (2% SLOPE) FOR DRAINAGE.
- PROVIDE A MINIMUM 2 INCH DROP FROM FINISHED INTERIOR FLOOR ELEVATION TO THE HIGHEST FLOOR ELEVATION OF ANY ADJOINING DECK OR BALCONY.
- ELASTOMERIC OR MEMBRANE DECK COATINGS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AT DECKS AND BALCONIES. COLOR, FINISH, AND DETAILING SHALL BE APPROVED BY OWNER/
- UNLESS DESIGNED TO DRAIN OVER DECK EDGES, DRAINS AND OVER-FLOWS OF ADEQUATE SIZE SHALL BE INSTALLED AT THE LOW POINTS OF THE DECK OR BALCONY.
- FOUNDATION WALLS WHERE THE OUTSIDE GRADE IS HIGHER THAN THE INSIDE GRADE SHALL BE WATER-PROOFED AND DAMPPROOFED IN ACCORDANCE WITH THE N.C.-R
- PARAPET WALLS SHALL BE PROPERLY COPED WITH NONCOMBUSTIBLE, WEATHERPROOF MATERIALS OF A WIDTH NO LESS THAN THE THICKNESS OF THE PARAPET WALL. PARAPET COPING SHALL EXTEND 2" MINIMUM DOWN THE FACES OF THE PARAPET.

- APPROVED CORROSION-RESISTANT FLASHING SHALL BE APPLIED SHINGLE-FASHION IN A MANNER TO PREVENT ENTRY OF WATER INTO THE WALL 12. CAVITY OR PENETRATION OF WATER TO THE BUILDING STRUCTURAL FRAMING COMPONENTS, SELF-ADHERED MEMBRANES USED AS FLASHING SHALL COMPLY WITH AAMA II, FUILD-APPLIED MEMBRANES USED AS FLASHING IS EXTERIOR WALLS SHALL COMPLY WITH AAMA 14, THE FLASHING SHALL EXTEND TO TO THE SURFACE OF THE EXTERIOR WALL FINSH ALMINIMA FLASHING SHALL NOT BE USED IN CONTACT NITH CEMENTITIOUS MATERIAL, EXCEPT AT COUNTER FLASHING, SPROVED CORROSION-RESISTANT FLASHINGS SHALL BE INSTALLED AT ALL OF THE LOCATIONS STATED IN N.C.-R.
- ALL BEAMS, OUTLOOKERS, CORBELS, ETC. PROJECTED THROUGH EXTERIOR WALLS OR PENETRATING EXTERIOR FINISHES SHALL BE FLASHED WITH A MINIMUM 0.019-INCH (NO. 26 SHEET METAL GAGE) CORROSION-RESISTANT METAL AND CAULKED.
- ALL SHEET METAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS AND STANDARDS OF THE SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION (S.M.A.C.N.A.), THE ARCHITECTURAL SHEET METAL MANUAL, AND SEALANT, WATERPROOFING AND RESTORATION INSTITUTE'S (S.M.R.I.) GUIDE -"SEALANT'S: THE PROFESSIONAL'S GUIDE".
- SHEET METAL SHALL BE STEEL SHEET, HOT-DIPPED, TIGHT COATED AND GALVANIZED, CONFORMING TO A.S.T.M. A525 AND SHALL BE A NUMBER 24 SHEET METAL GAGE UNLESS OTHERNISE NOTED IN THESE NOTES, PLANS, OR MANUFACTURER'S SPECIFICATIONS.
- FABRICATE SHEET METAL WITH FLAT LOCK SEAMS AND SOLDER WITH TYPE AND FLUX RECOMMENDED BY MANUFACTURER. SEAL ALUMINUM SEAMS WITH EPOXY METAL SEAM CEMENT. WHERE
- SHOP FABRICATE TO THE GREATEST EXTENT POSSIBLE IN ACCORDANCE WITH APPLICABLE STANDARDS TO PROVIDE A PERMANENTLY WATER-PROOF, WEATHER RESISTANT INSTALLATION.
- ASPHALT SHINGLES SHALL HAVE SELF-SEAL STRIPS OR BE INTERLOCKING, AND COMPLY WITH ASTM D 225 OR D 3462.
- BASE AND CAP FLASHING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTALLATION INSTRUCTIONS, BASE FLASHING SHALL BE OF EITHER CORROSION-RESISTANT METAL OF MINIMM NOMINAL O.014-INCH THICKNESS OR MINERAL SURFACE ROLL ROOFING MEIGHING A MINIMM OF TI POUNDS PER IOO SQUARE FEET, CAP FLASHING SHALL BE CORROSION-RESISTANT METAL OF MINIMM MOMINAL O.019-INCH THICKNESS
- VALLEY LININGS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS BEFORE APPLYING SHINGLES, VALLEY LININGS OF THE FOLLOWING TYPES SHALL BE PERMITTED AS STATED PER THE N.C.-R.
- 12. A CRICKET OR SADDLE SHALL BE INSTALLED ON THE RIDGE SIDE OF ANY CHIMMEY OR PENETRATION MORE THAN 30 INCHES HIDE AS MEASURED PERPENDICULAR TO THE SLOPE. CRICKET OR SADDLE COVERINGS SHALL BE SHEET METAL OR OF THE SAME MATERIAL AS THE ROOF COVERING. PROVIDE FLASHING AT THE INTERSECTION OF CRICKET OR SADDLE AND THE CHIMMEY.
- FLASHING AGAINST A VERTICAL SIDEWALL SHALL BE BY THE STEP-FLASHING METHOD PER NC-R.
- ASHING AGAINST A VERTICAL FRONT WALL, AS WELL AS SOIL STACI INT PIPE AND CHIMMEY FLASHING, SHALL BE APPLIED ACCORDING TO SPHALT SHINGLE MANUFACTURER'S PRINTED INSTRUCTIONS.
- AT THE JUNCTURE OF ROOF VERTICAL SURFACES, FLASHING AND COUNTERFLASHING SHALL BE PROVIDED IN ACCORDANCE WITH THE N.C.-R AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND, WHERE OF METAL, SHALL NOT BE LESS THAN O.O.I INCH (NO. 26 GALVANIZED
- I6. VALLEY FLASHING FOR CONCRETE THE ROOFS SHALL BE AS REQUIRED

ROOFING MATERIALS

- ROOF COVERINGS SHALL BE APPLIED IN ACCORDANCE WITH THE N.C.-R AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 INSTALLATION OF ROOF COVERINGS SHALL COMPLY WITH THE APPLICABLE
 PROVISIONS OF THE N.C.-R
- ROOFS AND ROOF COVERINGS SHALL BE OF MATERIALS THAT ARE COMPATIBLE WITH EACH OTHER AND WITH THE BUILDING OR STRUCTURE TO WHICH THE MATERIALS ARE APPLIED.
- ROOF COVERING MATERIALS SHALL CONFORM TO THE APPLICABLE STANDARDS LISTED IN THE NC.-R IN THE ABSENCE OF APPLICABLE STANDARDS OR WHERE MATERIALS ARE OF QUESTIONABLE SUITABILITY, TESTING BY AN APPROVED TESTING AGENCY SHALL BE REQUIRED BY THE BUILDING OFFICIAL TO DETERMINE THE CHARACTER, QUALITY, AND LIMITATIONS OF APPLICATION OF THE MATERIALS.

THERMAL & MOISTURE PROTECTION (continued)

- ROOF COVERING MATERIALS SHALL BE DELIVERED IN PACKAGES BEARING LABELS WHEN REQUIRED, BULK SHIPMENTS OF MATERIALS SHALL BE CERTIFICATE OR ON A BILL OF LADING BY THE MANUFACTURE
- COMPOSITION ROOFING SHINGLES SHALL BE OF ASPHALT OR APPROVED RELATED MATERIALS AND MEET THE REQUIREMENTS OF THE N.C.-R
- UNDERLAYMENT FOR ASPHALT SHINGLES SHALL CONFORM TO ASTM D 226 TYPE I, ASTM D 4864, TYPE I, OR ASTM D 6757. SELF-ADHER POLYMER MODIFIED BITUMEN SHEET SHALL COMPLY WITH ASTM D I4
- ASPHALT SHINGLES SHALL COMPLY WITH ASTM D 225 OR ASTM D 3462.
- FASTENERS FOR ASPHALT SHINGLES SHALL BE GALYANIZED STEEL, STAINLESS STEEL, ALIMINUM, OR COPPER ROOFING NAILS, MINIMM 12 GACE SHANK MITH A MINIMM 3/8 INCH DIAMETER HEAD, ASTM F 1667, OF A LENGTH TO PENETRATE THROUGH THE ROOFING MATERIALS AND A MINIMM OF 3/4 INCH INTO THE ROOF SHEATHING. IMPERE THE ROOF SHEATHING IS LESS THAN 3/4 INCH THICK, THE FASTENERS SHALL PENETRATE THROUGH THE SHEATHING. FASTENERS SHALL COMPLY WITH ASTM E 1647.
- ASPHALT SHINGLES SHALL HAVE THE MINIMUM NUMBER OF FASTENERS REQUIRED BY THE MANUFACTURER. FOR NORMAL APPLICATION, ASPHALT SHINGLES SHALL BE SECURED TO THE ROOF WITH NOT LESS THAN FOUR FASTENERS PER STRIP SHINGLE OR TWO FASTENERS PER INDIVIDUAL SHINGLE PER N.C.-R.
- UNDERLAYMENT FOR ASPHALT SHINGLES SHALL BE APPLIED IN ACCORDANCE WITH THE N.C.-R
- THE INSTALLATION OF CLAY AND CONCRETE TILE SHALL COMPLY WITH THE PROVISIONS OF N.C.-R CLAY ROOF TILE SHALL COMLY WITH
- CONCRETE AND CLAY TILE SHALL BE INSTALLED ONLY OVER SOLID SHEATHING OR SPACED STRUCTURAL SHEATHING BOARD
- CLAY AND CONCRETE ROOF TILE SHALL BE INSTALLED ON ROOF SLOPES OF 2 1/2 UNITS VERTICAL IN 12 UNITS HORIZONTAL (2-1/2:12)
 OR GREATER. FOR ROOF SLOPES FROM 2 1/2 UNITS VERTICAL IN
 IN 12 UNITS HORIZONTAL (2-1/2:12) TO FOUR UNITS VERTICAL IN
 IN 12 UNITS HORIZONTAL (4-1/2), DOUBLE UNDERLATMENT
 APPLICATION IS REQUIRED IN ACCORDANCE WITH THE NC.-R
- CONCRETE ROOF TILE SHALL COMPLY WITH ASTM C 1492
- NAILS SHALL BE CORROSION-RESISTANT AND NOT LESS THAN II GASE, 5/16-INCH HEAD, AND OF SUFFICIENT LENGTH TO PENETRATE THE DECK A MINIMO OF 3/4-INCH OR THROUGH THE THICKNESS OF THE DECK, MHICHEVER IS LESS. ATTACHING WIRE FOR CLAY OR CONCRETE TILE SHALL NOT BE SMALLER THAN O'083-INCH. PERIMÈTER FASTENING AREAS NCLUDE THREE TILE COURSES BUT NOT LESS THAN 36 INCHES FROM EITHER SIDE OF HIPS OR RIDGES AND EDGES OF EAVES AND GABLE RAKES.
- 17. CLAY AND CONCRETE ROOF TILES SHALL BE FASTENED IN ACCORDANCE MITH THE N.C.-R
- 18. TILE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, BASED ON CLIMATIC CONDITIONS, ROOF SLOPE, UNDERLAYMENT SYSTEM, AND TYPE OF TILE BEING INSTALLED PER THE N.C.-R
- THE INSTALLTION OF BUILT-UP ROOFS SHALL COMPLY WITH THE N.C.-R
- 20. BUILT-UP ROOFS SHALL HAVE A DESIGN SLOPE OF A MINIMUM OF ONE-FOUTH UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT SLOPE) FOR DRAINAGE, EXCEPT FOR COAL-TAR BUILT-UP ROOFS THAT SHALL HAVE A DESIGN SLOPE OF A MINIMUM ONE-EIGHTH UNIT VERTICAL IN
- 21. BUILT-UP ROOF COVERING MATERIALS SHALL COMPLY WITH THE

EXTERIOR WALL COVERINGS

- SEE FINISHES IN THESE GENERAL NOTES FOR EXTERIOR PLASTER.
- MATERIALS USED FOR THE CONSTRUCTION OF EXTERIOR WALLS SHALL COMPLY WITH THE PROVISIONS OF THE N.C.-R
- EXTERIOR MALLS SHALL PROVIDE THE BUILDING WITH A MEATHER-RESISTANT EXTERIOR WALL ENVELOPE. THE EXTERIOR WALL ENVELOPE SHALL INCLUDE FLASHING, THE EXTERIOR WALL ENVELOPE SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT PREVENTS THE ACCUMULATION OF MATER WITHIN THE HALL ASSEMBLY BY PROVIDING A MATER-RESISTANT BARRIER BEHIND THE EXTERIOR VENERS AS REQUIRED AND A MEANS OF DRAINING WAITER THAT ENTERS THE ASSEMBLY TO THE EXTERIOR. PROTECTION ASAINST CONDENSATION IN THE EXTERIOR WALL AGRAPHING VAILL BE PROVIDED. ASSEMBLY SHALL BE PROVIDED.
- ONE LAYER OF NO. 15 ASPHALT FELT, FREE FROM HOLES AND BREAKS. ONE LAYER OF NO. IS ASPHALT FELT, FREE FROM HOLES AND BREAKS, COMPLYING NITH ASTM D 226 FOR TYPE I FELT OR OTHER APPROVED MATER-RESISTIVE BARRIER SHALL BE APPLIED OVER STUDG OR SHEATHING OF ALL EXTERIOR WALLS, SUCH FELT OR MATERIAL SHALL BE APPLIED HORIZONTALLY, WITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES, WHERE JOINTS OCCUR, FELT SHALL BE LAPPED NOT LESS THAN 6 INCHES, THE FELT OR OTHER APPROVED MATERIAL SHALL BE CONTINUOUS TO THE TOP OF WALLS AND TERMINATED AT PENETRATIONS AND BUILDING APPENDAGES IN A MANNER TO MEET THE REQUIREMENTS OF THE EXTERIOR WALL ENVELOPE.
- VINYL SIDING CONFORMING TO THE REQUIREMENTS OF THE N.C.-R. AND COMPLYING WITH ASTM D 3674 SHALL BE PERMITTED ON EXTERIOR MALLS OF BUILDINGS OF TYPE V CONSTRUCTION LOCATED IN AREAS MHERE THE ULTIMATE WIND SPEED SPECIFIED DOES NOT EXCEED ICO MILES PER HOUR AND THE BUILDING HEIGHT IS LESS THAN 40 FEET IN EXPOSURE C. WHERE CONSTRUCTION IS LOCATED IN AREAS WHERE THE ULTIMATE HIND SPEED EXCEEDS ISO MILES PER HOUR OR BUILDING HEIGHTS ARE IN EXCESS OF 40 T., DATA INDICATING COMPLIANCE MUST BE SUBMITTED. VINYL SID ALL BE SECURED TO BUILDING TO PROVIDE WEATHER PROTECTION FOR SHALL BE SECURED TO BUILDING TO PR THE EXTERIOR WALLS OF THE BUILDING.
- VINYL SIDING SHALL BE APPLIED OVER SHEATHING OR MATERIALS LISTED IN THE NC.-R VINYL SIDING SHALL BE APPLIED TO CONFORM WITH THE WEATHER-RESISTIVE BARRIER REQUIREMENTS VINYL SIDING AND ACCESSORIES SHALL BE INSTALLED IN ACCORDANCE WITH APPROVED
- VINYL SIDING FASTENERS AND ACCESSORIES SHALL MEET THE REQUIREMENTS OF THE N.C.-B
- EXTERIOR WALLS OF WOOD CONSTRUCTION SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE N.C.-R

THERMAL & MOISTURE PROTECTION (continued)

- HARDBOARD SIDING SHALL CONFORM TO THE REQUIREMENTS OF AHA AISS,6 AND, WHERE USED STRUCTURALLY, SHALL BE SO IDENTIFIED THE LABEL OF AN APPROVED AGENCY
- WOOD VENEERS ON EXTERIOR WALLS OF BUILDINGS OF TYPES I, II, III, AND IV CONSTRUCTION SHALL BE NOT LESS THAN I-INCH NOMINAL THICKNESS, 0.458-INCH EXTERIOR HARDBOARD SIDING OR 0.375-INCH EXTERIOR PARELS OR PARTICLE-BOARD AND SHALL CONFORM TO THE REQUIREMENTS OF THE N.C.-R
- III. LAP SIDING SHALL BE LAPPED A MINIMUM OF II/4 INCHES (52 MM) AND LAP SIDING NOT HAVING TONGUE-AND-GROOVE END JOINTS SHALL HAVE THE ENDS SEALED WITH CAULKING, INSTALLED WITH AN H-SECTION JOINT COVER, LOCATED OVER A STRIP OF IN-SHAHING ON SHALL BE DESIGNED TO COMP WITH NC-R. LAP SIDING COURSES MAY BE INSTALLED WITH THE FASTENER HEADS EXPOSED OR CONCEALED, ACCORDING TO NC-R OR APPROVED MANUFACTURERS' INSTALLATION INSTRUCTIONS.
- INSULATING MATERIALS, INCLUDING FACINGS, SUCH AS VAPOR RETARDERS OR VAPER-PERMEABLE MEMBRANES, INSTALLED WITHIN FLOOR-CEILING ASSEMBLIES, ROOF-CEILING ASSEMBLIES, WALL-ASSEMBLIES, CRAWL SPACES AND ATTICS SHALL HAVE A FLAME-SPREAD INDEX NOT TO EXCEED 25 WITH AN ACCOMPANYING SMOKE-DEVELOPED INDEX NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 123.
- DUCT INSULATION MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS OF THE N.C.-R
- INSULATION AND COVERING ON PIPE AND TUBING SHALL HAVE A FLAME-SPREAD INDEX OF NOT MORE THAN 25 AID A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 450. SEE EXCEPTIONS.
- ALL EXPOSED INSULATION MATERIALS INSTALLED ON ATTIC FLOORS SHALL HAVE A CRITICAL RADIANT FLUX OF NOT LESS THAN 0.12 WATT PER SQUARE IT. CENTIMETER PER N.C.-R TESTS FOR CRITIAL RADIANT FLUX SHALL BE MADE IN ACCORDANCE WITH ASTM E 970
- THE USE OF ABOVE DECK THERMAL INSULATION SHALL BE PER PROVIDED SUCH INSULATION IS COVERED WITH AN APPROVED ROOF COVERING AND PASSES FM 4450 OR UL 1256 PER N.C.-R.
- CELLILOSE LOOSE-FILL INSULATION SHALL COMPLY WITH CPSC 16 CFR. PARTS 1209 AND 1404. EACH PACKAGE OF SUCH INSULATING MATERIAL SHALL BE CLEARLY LABELED IN ACCORDANCE WITH CPSC 16 CFR. PARTS 1209 AND 1404.
- INSULATION IN FLOOR-CEILING ASSEMBLIES, ROOF-CEILING ASSEMBLIES, MALLS, CRANL SPACES OR ATTICS SHALL BE EITHER OF THE BLOWN-IN CEILLIOSE TYPE OR FIBERGLASS BATTS OR BLANKET TYPE PER BUILDER'S SPECIFICATIONS.
- THE ENERGY EFFICIENCY REQUIREMENTS INCLUDING LEGG BUT NOT THE BIERROY EFFICIENCY RESOURCEMENTS INCLUDING 15.05. BUT NOT LIMITED TO INSULATION "R" VALUES, PERCENTAGE OF GLAZING

 VALUES, ETC. SHALL BE DETERMINED BY THE ADDYTED STATE
 AND LOCAL ENERGY CODE EQUIREMENTS, REFER TO MECHANICAL PLANS FOR SPECIFICATIONS.
- THE BUILDING THERMAL ENVELOPE SHALL BE DURABLY SEALED WITH AN AIR BARRIER SYSTEM TO LIMIT INFILITRATION. THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION. FOR ALL HOMES, HAVER PRESENT, THE FOLLOWING SHALL BE CAULKED, GASKETED, MEATHERSTRIPPED OR OTHERWISE SEALED WITH AN AIR BARRIER MATERIAL OR SOLID MATERIAL CONSISTENT WITH APPENDIX E-22.8 AND E-2-4.0 FT HE NO-R. . BLOCKING AND SEALING FLOOR/CEILING SYSTEMS AND UNDER KNEE WALLS OPEN TO UNCONDITIONED OR EXTERIOR SPACE. 2. CAPPING AND SEALING SHAFTS OR CHASES, INCLUDING FLUE 5HAFTS. 3. CAPPING AND SEALING SOFFIT OR DROPPED CEILING AREAS
- FRAMED CAVITY WALLS, THE EXTERIOR THERMAL ENVELOPE MALL INSULATION SHALL BE INSTALLED IN SUBSTANTIAL CONTACT AND CONTINUOUS ALIGNMENT WITH THE BUILDING ENVELOPE AIR BARRIER INSULATION SHALL BE SUBSTANTIALLY FREE FROM INSTALLATION GAPS, VOIDS, OR COMPRESSION, FOR FRAMED WALLS, THE CAVITY INSULATION SHALL BE ENCLOSED ON ALL SIDES WITH A RIGID MATERIAL OR AN AIR BARRIEM MATERIAL, WALL INSULATION SHALL BE ENCLOSED AT THE FOLLOWING LOCATIONS WHEN INSTALLED ON EXTERIOR WALLS PICK TO BEING COVERED BY SUBSEQUENT CONSTRUCTION, CONSISTENT WITH APPENDIX E-2.3 AND E-2.4 OF NC-RI
 - SHOWERS
- 5. STAIRS
 4. FIREPLACE UNITS
 ENCLOSURE OF WALL CAVITY INSULATION ALSO APPLIES TO WALLS THAT ADJOIN ATTIC SPACES BY PLACING A RIGID MATERIAL OR AIR BARRIER MATERIAL ON THE ATTIC SIDE.

DOORS & WINDOWS

- SEE ELOOR PLANS AND ELEVATIONS FOR SIZES AND TYPES OF DOORS AND WINDOWS AND FOR ANY DIVIDED LITE PATTERNS.
 COLORS SHALL BE APPROVED BY THE BUILDER AND ARCHITECT
- OPENINGS FROM A PRIVATE GARAGE DIRECTLY INTO A ROOM USED CTENINGS FROM A PRIVALE GARAGE DIRECTLET INTO A ROOM USED FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED. OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL NOT BE SHALL SHA
- NO DOUBLE FRENCH DOORS SHALL BE USED UNLESS THERE IS A SUFFICIENT OVERHANG OR COVERED PATIO COVERING THESE DOORS. NO DOUBLE \underline{WQOD} FRENCH DOORS SHALL BE USED IN ANY CASE.
- ALL AUTOMATIC GARAGE DOOR OPENERS REQUIRE THE INCLUSION OF A PHOTOELECTRIC SENSOR, EDGE SENSOR OR SOME OTHER SIMILAR DEVICE FOR REMOTE OPERATION AND AS A SAFETY PRE-CAUTION TO PREVENT THE DOOR FROM CLOSING WEEN SOMETHING IS BLOCKING THE PATH OF THE DOOR. SEE MANUFACTURER'S INSTALL TION INSTITUTE OF
- ALL MANUFACTURED WINDOWS AND SLIDING GLASS DOORS SHALL MEET THE AIR INFILITATION STANDARDS OF THE CURRENT AMERICAN NATIONAL STANDARDS INSTITUTE A.S.T.M. E223-75 NITH A PRESSURE DIFFERENTIAL OF 1.5T POUNDS PER SQUARE FOOT AND SHALL BE CERTIFIED AND LABELED.
- BASEMENTS, HABITABLE ATTICS AND EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPENABLE EMERGENCY ESCAPE AND RESCUE OPENING
- WHERE EMERGENCY ESCAPE AND RESCUE OPENINGS ARE PROVIDED THEY SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR.
- EMERGENCY ESCAPE AND RESCUE OPENINGS WITH A FINISHED SILL HEIGHT BELOW THE ADJACENT GROUND ELEVATION SHALL BE PROVIDED WITH A WINDOW WELL.

DOORS & WINDOWS (continued)

- ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF NOT LESS THAN 5 SQUARE FEET IN THE CASE OF A GROUND FLOOR LEVEL WINDOW AND NOT LESS THAN 5.7 SQUARE FEET
- ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING HEIGHT OF 24 INCHES.
- ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING WIDTH OF 20 INCHES.
- EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL BE OPERATIONAL FROM THE INSIDE OF THE ROOM WITHOUT THE USE OF KEYS, TOOLS OR SPECIAL KNOWLEDGE.
- THE MINIMUM HORIZONTAL AREA OF THE WINDOW WELL SHALL BE 9 SQUARE FEET, MITH A MINIMUM HORIZONTAL PROJECTION AND WIDTH OF 35 INCHES, THE AREA OF THE WINDOW WELL SHALL ALLOW BUTREGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED PER THE N.C.-R. THE LADDER OR STEPS REQUIRED SHALL BE PERMITTED TO BURROACH A MAXIMUM OF 6" INTO THE REQUIRED DIMENSIONS OF THE WINDOW WELL
- WINDOW WELLS WITH A VERTICAL DEPTH GREATER THAN 44 INCHES SHALL BE EQUIPPED WITH A PERMANENTLY AFFIXED LADDER OF STEPS USABLE WITH THE WINDOW IN THE FULLY OPEN POSITION.
- BARS, GRILLES, COVERS, SCREENS OR SIMILAR DEVICES ARE PER
 - ALL INTERIOR EGRESS DOORS AND A MINIMUM OF ONE EXTERIOR EGRESS DOOR SHALL BE READILY OPENABLE FROM THE SIDE FROM WHICH EGRESS IS TO BE MADE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR

GLAZING & SAFETY GLAZING

- HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN A PERCENT OF THE FLOOR AREA OF SUCH ROOMS, NATURAL VENTILATION SHALL BE THROUGH MINDOMS, SYCLIGHTS, DOORS, LOUVERS OR OTHER APPROVED OFENINGS TO THE OUTDOOR SIR. SUCH OFENINGS HALL BE PROVIDED WITH READY ACCESS OR SHALL OTHERWISE BE READILY CONTROLLABLE BY THE BUILDING OCCUPANTS, THE OFENABLE AREA TO THE OUTDOORS SHALL BE NOT LESS THAN 4 PERCENT OF THE FLOOR AREA BEING VENTILATED.
- BATUROOMS MATER CLOSET COMPARTMENTS AND OTHER SIMIL AS AN INFOOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAY ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREAS WINDOWS OF NOT LESS THAN 3 SQUARE FEET, ONE-HALF OF WHICH MUST BE OPENABLE.
- EXCEPT AS INDICATED, EACH PANE OF GLAZING INSTALLED IN HAZARDOUS OCATIONS SHALL BE PROVIDED WITH MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, DESIGNATING THE TYPE OF SPECIFING AND APPLIED HE DESIGNATION, DESIGNATION THE THE OF GLASS AND THE SAFETY GLAZING STANDARD WITH WHICH IT COMPLIES, WHICH IS VISIBLE IN THE FINAL INSTALLATION. THE DESIGNATION SHALL BE ACID ETCHED, SANDBLASTED, CERANIC-FIRED, LAGRER ETCHED, EMPOSSED, OR BE OF A TYPE WHICH ONCE APPLIED CANNOT BE REMOVED WITHOUT
- INDIVIDUAL GLAZED AREAS, INCLUDING GLASS MIRRORS IN HAZARDOUS LOCATIONS SHALL PASS THE TEST REQUIREMENTS OF CPSC 16 CFR, PART 1201. GLAZING SHALL COMPLY WITH CPSC 16.
- THE FOLLOWING SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSES OF GLAZING:
- GLAZING IN ALL FIXED AND OPERABLE PANELS OF SWINGING, SLIDING AND BIFOLD DOORS
 GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL IN THE SAME PLANE AS A DOOR IMMERE THE NEAREST VERTICAL EDGE IS WITHIN 24-INCHES OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SIRFACE.
- GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL THAT MEETS ALL OF THE FOLLOWING CONDITIONS:
- 3.1 EXPOSED AREA OF AN INDIVIDUAL PANE LARGER THAN 9 SQUARE
- 3.2 BOTTOM EDGE LESS THAN IS INCHES ABOVE THE FLOOR
- 3.3 TOP EDGE MORE THAN 36 INCHES ABOVE THE FLOOR
- 3.4 ONE OR MORE WALKING SURFACES WITHIN 36 INCHES, MEASURED HORIZONTALLY AND IN A STRAIGHT LINE, OF THE GLAZING.
- GLAZING IN GUARDS AND RAILINGS, INCLUDING STRUCTURAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS, REGARDLESS OF AREA OR HEIGHT ABOVE A WALKING SURFACE. GLAZING IN DOORS AND ENGLOSURES FOR HOT TUBS, WHIRLPOOLS.
- SANAS, STEAM ROOMS, BATHTUBS AND SHOVERS, GLAZING
 ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EXPOSED
 EDGE OF THE GLAZING IS LESS THAN 60 INCHES MEASURED
 VERTICALLY ABOVE ANY STANDING OR WALKING SURFACE. GLAZING IN WALLS AND FENCES ENCLOSING INDOOR AND OUTDOOR SHIMMING POOLS, HOT TUBS AND SPAS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE A WALKING SURFACE AND WITHIN 60 INCHES HORIZONTALLY OF THE WATER'S EDGE. THIS SHALL APPLY TO SINGLE GLAZING AND ALL PANES IN MULTIPLE
- CLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS WITHIN 36 INCHES HORIZONTALLY OF A WALKING SURFACE WHEN THE EXPOSED SURFACE OF THE GLAZING IS LESS THAN 36 INCHES ABOVE THE PLANE
- GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF STAIRWAYS NHEREE THE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN A 60-INCH HORIZONTAL ARC LESS THAN 180 DEGREES FROM THE BOTTOM TREAD NOSING.
- HINGED SHOWER DOORS SHALL OPEN OUTWARD.
- GLAZING SHALL BE IN ACCORDANCE WITH ENERGY COMPLIANCE CALCULATIONS BASED ON A LOCALLY ADOPTED ENERGY CODE, THE MODEL ENERGY CODE OR THE INTERNATIONAL ENERGY
- IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE MINDOW IS LOCATED MORE THAN 12 INCHES (1824 MM) ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOVEST PART OF THE CLEAR OPENING OF THE MINDOW SHALL BE A MINIMUM OF 24 INCHES (610 MM) ABOVE THE FINISHED FLOOR OF THE ROOM IN WHICH THE WINDOW IS LOCATED, OPERABLE SECTIONS OF WINDOWS SHALL NOT PERMIT OPENINGS THAT ALLOW PASSAGE OF A 4 INCH (102 MM) DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED OPENINGS

FINISHES

- GYPSUM WALLBOARD SHALL BE INSTALLED IN CONFORMANCE AITH THE CURRENT EDITION OF THE NORTH CAROLINA RESIDENTIAL CODE AND ALL STATE AND LOCAL BUILDING CODES. THE MOST STRINGENT
- MATERIALS. ALL GYPSIM BOARD MATERIALS AND ACCESSORIES SHALL CONFORM TO ASTM C 22, C 415, C 514, C [002, C [047, C [117, C]117, C]117, C [117, C [117, C]17, C [117,
- GYPSUM BOARD MATERIALS SHALL CONFORM TO THE APPROPRIATE STANDARDS LISTED IN THE N.C.-R WHERE REQUIRED FOR FIRE PROTECTION, CONFORM TO THE N.C.-R
- INTERIOR GYPSUM BOARD SHALL NOT BE INSTALLED WHERE IT IS DIRECTLY EXPOSED TO THE WEATHER OR TO WATER.
- ALL EDGES AND ENDS OF GYPSUM BOARD SHALL OCCUR ON THE ALL EUGES AND ENDS OF GYPSUM BOARD SHALL DOCUM ON THE FRAMING MEMBERS, EXCEPT THOSE EDGES AND ENDS THAT ARE PERPENDICULAR TO THE FRAMING MEMBERS. EDGES AND ENDS OF GYPSUM BOARD SHALL BE IN MODERATE CONTACT EXCEPT IN CON-CEALED SPACES WHERE FIRE-RESISTACE-RATED CONSTRUCTION SHEAR RESISTANCE, OR DIAPHRAGM ACTION IS NOT REQUIRED. CEALED SPACES WHERE FIRE-RESISTACE-RATED CONSTRUCTION.
- FASTENERS AT THE TOP AND BOTTOM PLATES OF VERTICAL ASSEMBLIES, OR THE EDGES AND ENDS OF HORIZONTAL ASSEMBLIES PERPENDICULAR.
 TO SUPPORTS, AND AT THE WALL LINE MAY BE OMITTED EXCEPT ON
 SHEAR-RESISTING ELEMENTS OR FIRE- RESISTIVE ASSEMBLIES. FASTENERS
 SHALL BE APPLIED IN SUCH A MANNER AS NOT TO FRACTURE THE FACE
 PAPER WITH THE FASTENER HEAD.
- GYPSUM BOARD USED AS THE BASE OR BACKER FOR ADHESIVE APPLICATION OF CERAMIC TILE OR OTHER REQUIRED NON-ABSORBENT FINISH MATERIAL SHALL CONFORM TO ASTM C 1346, C 1176 OR C1276. USE OF WATER-RESISTANT GYPSUM BACKING BOARD SHALL BE PERMITTED ON CEILINGS WHERE FRAMING SPACING DOES NOT EXCEED 12 INCHES ON CENTER FOR 1/2-INCH-THICK OR IG INCHES FOR 5/8-INCH-THICK GYPSUM BOARD MATER-RESISTANT GYPSUM BOARD SHALL NOT BE INSTALLED OVER A VAPOR RETARDER IN A SHOWER OR TUB COMPARTMENT. CUT OR EXPOSED EDGES, INCLUDING THOSE AT WALL INTERSECTIONS, SHALL BE SEALED AS RECOMMENDED BY THE MANUFACTURER.
- WATER RESISTANT GYPSUM BACKING BOARD SHALL NOT BE USED WHERE THERE WILL BE DIRECT EXPOSURE TO WATER, OR IN AREAS SUBJECT TO
- WHEN APPLYING A WATER-BASED TEXTURE MATERIAL, THE MINIMUM GYPSUM BOARD THICKNESS SHALL BE INCREASED FROM 3/8 INCH TO 1/2 INCH FOR I6-INCH ON CENTER FRAMING, AND FROM 1/2 INCH FOR 1/2 INCH SOA SHALL BE STAND SHALL BE USED.

EXTERIOR LATH

- ALL LATH AND LATH ATTACHMENTS SHALL BE OF CORROSION-
- BACKING OR A LATH SHALL PROVIDE SUFFICIENT RIGIDITY TO PERMIT PLASTER APPLICATION.
- WHERE LATH ON VERTICAL SURFACES EXTENDS BETWEEN RAFTERS OR OTHER SIMILAR PROJECTING MEMBERS, SOLID BACKING SHALL BE INSTALLED TO PROVIDE SUPPORT FOR LATH AND ATTACHMENTS.
- GYPSUM LATH OR GYPSUM BOARD SHALL NOT BE USED, EXCEPT THAT ON HORIZONTAL SUPPORTS OF CEILINGS OR ROOF SOFFITS IT MAY BE USED AS BACKING FOR METAL LATH OR WIRE FABRIC LATH AND CEMENT PLASTER. UNLESS SPECIFIED OTHERWISE, ALL WALL COVERINGS SHALL BE SECURELY
 FASTENED PER THE N.C.-R. OR WITH OTHER APPROVED ALIMINUM,
 STAINLESS STEEL, ZINC-COATED OR OTHER APPROVED
 CORROSION-RESISTIVE FASTENERS, WHERE THE BASIC WIND SPEED IS 110
 MILES PER HOUR OR HIGHER, THE ATTACHMENT OF WALL COVERINGS SHALL
 BE DESIGNED TO RESIST THE COMPONENT AND CLADDING LOADS SPECIFIED

 ### DESIGNED TO RESIST THE COMPONENT AND CLADDING LOADS SPECIFIED

 #### DESIGNED TO RESIST THE COMPONENT AND CLADDING LOADS SPECIFIED
- AND ADJUSTED FOR HEIGHT AND EXPOSURE A MINIMUM 0.019-INCH (NO. 26 GALVANIZED SHEET GAGE). A MINIMOM O.014-INCH (NO. 26 SALVANIZED SHEET BASE).

 CORROSION-RESISTANT MEEP SCREED OR PLASTIC WEEP SCREED, WITH A
 MINIMOM VERTICAL ATTACHMENT FLANGE OF 31/2 INCHES SHALL BE
 PROVIDED AT OR BELOW THE FOUNDATION PLATE LINE ON EXTERIOR STUD

 WALLS IN ACCORDANCE WITH ASTM C 42/6. THE WEEP SCREED SHALL BE
 PLACED A MINIMOM OF 4 INCHES ABOVE THE BASTH OR 2 INCHES ABOVE
 PAVED AREAS AND SHALL BE OF A TYPE THAT MILL ALLOM TRAPPED

 WATER TO DRAIN TO THE EXTERIOR OF THE BUILDING. THE
 WEATHER-RESISTANT BARRIER SHALL LAP THE ATTACHMENT FLANGE. THE
 EXTERIOR LATH SHALL COVER AND TERMINATE ON THE ATTACHMENT FLANGE
 OF THE WEEP SCREED.

PLASTERING WITH PORTLAND CEMENT PLASTER SHALL BE NOT LESS THAN THREE COATS WHEN APPLIED OVER METAL LATH OR WIRE LATH AND SHALL BE NOT LESS THAN TWO COATS WHEN APPLIED OVER MASONRY, CONCRETE, PRESSURE-PRESERVATIVE TREATED MOOD OR DECAY-RESISTANT WOOD OR SYPSUM BACKING, IF THE PLASTER SURFACE IS COMPLETELY COVERED BY VENEER OR OTHER FACING MATERIAL OR IS COMPLETELY CONCEALED, PLASTER APPLICATION NEED BE ONLY TWO COATS, PROVIDED THE TOTAL THICKNESS IS AS SET FORTH PER THE N.C.-R

ON WOOD-FRAME CONSTRUCTION WITH AN ON-GRADE FLOOR SLAB SYSTEM, EXTERIOR PLASTER SHALL BE APPLIED TO COVER, BUT NOT EXTEND BELOW LATH, PAPER AND SCREED.

THE PROPORTION OF AGGREGATE TO CEMENTITIOUS MATERIALS SHALL BE AS SET FORTH PER THE N.C.-R

- ONLY APPROVED PLASTICITY AGENTS AND APPROVE AMOUNTS THEREOF MAY BE ADDED TO PORTLAND CEMENT. WHEN PLASTIC CEMENT IS USED, NO ADDITIONAL LINE OR PLASTICIZERS SHALL BE ADDED. HYDRANTED LIME OR THE EQUIVALENT AMOUNT OF LIME PUTTY USED AS A PLASTICIZER WE BE ADDED TO CEMENT PLASTER. SET FORTH IN ASTM C 926
- GYPSUM PLASTER SHALL NOT BE USED ON EXTERIOR SURFACES.
- PLASTER COATS SHALL BE PROTECTED FROM FREEZING FOR A FLADIEN COATS SHALL BE PROTECTED FROM FREEZING FOR A PERIOD OF NOT LESS THAN 24 HURSE AFTER SET HAS OCCURRED. PLASTER SHALL BE APPLIED WHEN THE AMBIENT TEMPERATURE IS HIGHER THAN 40 DEGREES F (4 DEGREES C), WILESS PROVISIONS ARE MADE TO KEEP CEMENT PLASTER MORK ABOVE 40 DEGREES F (4 DEGREES C), PRIOR TO & DURING APPLICATION AND 48 HOWE THEREAFTER
- COLOR AND FINISH TO BE SELECTED AND APPROVED BY OWNER/ BUILDER AND ARCHITECT.
- A I-COAT EXTERIOR PLASTER SYSTEM SUCH AS "MAGNA WALL" I.C.C. NO. ER-4716, "EXPO FIBREMALL" I.C.C. NO. ER-4366, OR APPROVED EQUAL MAY BE USED IN LIEU OF A 3-COAT EXTERIOR PLASTER SYSTEM.



.

NORTH CAROLINA 50' SERIES

.

KB HOME NORTH CAROLINA DIVISION

4506 S. MIAMI BLVD. SUITE 180 DURHAM, NC 27703 TEL: (919) 768-7980 • FAX: (919) 544-2928

2018 NORTH **CAROLINA STATE** BUILDING

CODES

ISSUE DATE: 11/06/15 PROJECT No.: 1350999:57 DIVISION MGR.: D.S. REVISIONS: 03/22/19

DIVISION REVISIONS
NC16033P - 09/26/16 - V.P.B.S. DIVISION REVISIONS
NCIS030NCP · 07/23/18 · KBA

DIVISION REVISIONS NC18025NCP · 08/15/18 · KBA

2018 CODE UPDATE NC19015NCP/ 03/15/19 / CTD

7 DIVISION REVISIONS NCI9017NCP/ 03/22/19 / CTD DIVISION REVISIONS
NC19031NCP/ 05/06/19 / FAE

FOR INTERNAL USE ONLY

148.1869

GN₂

MECHANICAL & PLUMBING

- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN CONFORMANCE WITH THE NORTH CAROLINA RESIDENTIAL AND CONTORMANCE MITH THE NORTH CARCLINA RESIDENTIAL AND MECHANICAL CODE. INSTALLATIONS OF MECHANICAL APPLIANCES, EQUIPMENT AND SYSTEMS NOT ADDRESSED BY THIS CODE SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF THE NORTH CAROLINA RESIDENTIAL AND FUEL GAS CODE.
- WHERE AIR CONDITIONING IS AN OPTIONAL FEATURE, HEATING SYSTEMS MUST BE DESIGNED AND DUCT WORK SIZED TO ACCOMMODATE FUTURE AIR CONDITIONING NEEDS.
- WHERE THE PRIMARY HEATING SYSTEM IS A FORCED-AIR FURNACE, AT LEAST ONE THERMOSTAT PER DIVELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURE SET POINTS AT DIFFERENT TIMES OF THE DAY, THIS THERMOSTAT SHALL INCLUDE THE CAPABILITY TO SET BACK OR TEMPORARILY OPTERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55 DEG. F (13 C) OR UP TO 65 DEG. F (29 C).
- ALL DUCTWORK SHALL CONFORM TO THE REQUIREMENTS OF THE
- COMBUSTION AIR SHALL BE PROVIDED FOR FORCED AIR UNITS IN
- CONTRACTOR TO PROVIDE BOOT IN DUCTWORK WHEN OPTIONAL "HONEYWELL" OR "CARRIER" ELECTRONIC AIR CLEANER IS PROVIDED
- DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DYBELLING FROM THE GARAGE SHALL B CONSTRUCTED OF A MINIMAM NO. 26 GAGE SHEET STEEL OR OTHER APPROVED MATERIAL AND SHALL HAVE NO OPENINGS INTO THE
- EXTERIOR-GRADE INSTALLATIONS. EQUIPMENT AND APPLIANCES INSTALLED ABOVE GRADE LEVEL SHALL BE SUPPORTED ON A SOLID BASE OR APPROVED MATERIAL A MINIMUM OF 2 INCHES THICK.
- IO. UNDER-FLOOR INSTALLATION. SUSPENDED EQUIPMENT SHALL BE A MINIMUM OF 6 INCHES ABOVE THE ADJOINING GRADE.
- CRAML SPACE SUPPORTS. IN A CRAWL SPACE, A MINIMUM OF 2-INCH THICK SOLID BASE, 2-INCH (SI MM) THICK FORMED CONCRETE, OR STACKED MASONRY UNITS HELD IN PLACE BY MORTAR OR OTHER APPROVED METHOD. THE WATER HEATER SHALL BE SUPPORTED NOT LESS THAN 2 INCHES ABOVE GRADE.
- DRAINAGE. BELOW-GRADE INSTALLATIONS SHALL BE PROVIDED WITH A NATURAL DRAIN OR AN AUTOMATIC LIFT OR SUMP PUMP. FOR PIT REQUIREMENTS REFER TO N.C.-M

- IN LIEU OF REQUIRED EXTERIOR OPENINGS FOR NATURAL VENTILATION IN BATHROOMS CONTAINING A BATHTUB, SHOWER OR COMBINATION IN BAI HECCOME CONTAINING A BAILTIO, 9 SOURCE OR COMMINATION THEREOF, A MECHANICAL VENTILLATION SYSTEM MAY BE PROVIDED. THE MINIMM VENTILLATION ARTES SHALL BE SO CFM FOR INTERMITTENT VENTILLATION, AND FOR CONTINUOUS VENTILLATION, VENTILLATION AIR FROM THE SPACE SHALL BE EXHAUSTED DIRECTLY TO THE OUTSIDE PER NC.-R.
- EXHAUST DUCTS SHALL TERMINATE OUTSIDE THE BUILDING AND SHALL BE EQUIPPED WITH BACKDRAFT DAMPERS.
- RANGE HOODS SHALL DISCHARGE TO THE OUTDOORS THROUGH A DUCT. THE DUCT SERVING THE HOOD SHALL HAVE A SMOOTH INTERIOR SURPACE SHALL BE AIR TIGHT, SHALL BE EQUIPPED WITH A BACK-DRAFT DAMPER AND SHALL BE INDEPENDENT OF ALL OTHER EXHAUST SYSTEMS, DUCTS SERVING RANGE HOODS SHALL NOT TERMINATE IN AN ATTIC OR CRANL SPACE OR AREAS INSIDE THE BUILDING. DUCTS SERVING RANGE HOODS SHALL BE CONSTRUCTED OF GALVANIZED STEEL, STAINLESS STEEL OR COPPER.
- WHERE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND WHERE MECHANICAL OR NATURAL VENTILATION IS OTHERWISE PROVIDED, LISTED AND LABELED DUCTLESS RANGE HOODS SHALL NOT BE REQUIRED TO DISCHARGE TO THE OUTDOORS PER N.C.-M
- DUCTS FOR DOMESTIC KITCHEN COOKING APPLIANCES EQUIPPED WITH DOWN DRAFT EXHAUST SYSTEMS SHALL BE PERMITTED TO BE CONSTRUCTED OF SCHEDULE 40 PVC PIPE PROVIDED THAT THE INSTALLATION COMPLIES WITH ALL OF THE FOLLOWING PER N.C.-M:
- A. THE DUCT SHALL BE INSTALLED UNDER A CONCRETE SLAB POURED ON GRADE.
- THE UNDERFLOOR TRENCH IN WHICH THE DUCT IS INSTALLED SHALL BE COMPLETELY BACKFILLED WITH SAND OR GRAVEL.
- THE PVC DUCT SHALL EXTEND NOT GREATER THAN I INCH ABOVE THE INDOOR CONCRETE FLOOR SURFACE.
- THE PVC DUCT SHALL EXTEND NOT GREATER THAN I INCH ABOVE GRADE OUTSIDE THE BUILDING.
- E. THE PVC DUCTS SHALL BE SOLVENT CEMENTED.
- EXHAUST HOOD SYSTEMS CAPABLE OF EXHAUSTING IN EXCESS OF 400 CPM SHALL BE PROVIDED WITH MAKEUP AIR AT A RATE APPROXIMATELY EQUAL TO THE EXHAUST AIR RATE HAIT IS IN EXCESS OF 400 CUBIC FEET PER MINUTE, SUCH MAKEUP AIR SYSTEMS SHALL BE EQUIPPED WITH A MEANS OF CLOSURE AND SHALL BE AUTOMATICALLY CONTROLLED TO START AND OPERATE SIMULTANEOUSLY WITH THE EXHAUST SYSTEM. DAMPERS SHALL BE ACCESSIBLE FOR INSPECTION, SERVICE, REPAIR AND REPLACEMENT WITHOUT REMOVING PERMANENT CONSTRUCTION
- DOMESTIC WATER HEATERS, UNLESS SPECIFIED OTHERWISE BY THE MANIFACTURER'S INSTALLATION INSTRUCTIONS, SHALL BE VENTED 1 THE OUTSIDE AIR BY A TYPE 'B' VENT AND COMPLY WITH THE REQUIREMENTS OF THE N.C.-M

- A POTABLE WATER SUPPLY SYSTEM SHALL BE DESIGNED, INSTALLED AND MAINTAINED IN SUCH A MANNER SO AS TO PREVENT AND INVINITY IN SUCH A MANNER SU AS IC PREVENT CONTAMINATION FROM NONPOTABLE LIQUIDS, SOLIDS OR GASES BEING INTRODUCED INTO THE POTABLE MATER SUPPLY THROUGH CROSS-CONNECTIONS OR ANY OTHER PIPING CONNECTIONS TO THE SYSTEM. BACKFLOW FRE- VENTER APPLICATIONS SHALL CONFORM TO
- THE SUPPLY LINES OR FITTINGS FOR EVERY PLUMBING FIXTURE SHALL BE INSTALLED SO AS TO PREVENT BACKFLOW, PLUMBING FIXTURE FITTINGS SHALL PROVIDE BACKFLOW PROTECTION IN ACCORDANCE WITH ASME AII 2.18.1.

MECHANICAL & PLUMBING (continued)

- ALL DEVICES, APPURTENANCES, APPLIANCES AND APPARATUS INTENDED ALL DEVICES, APPLATENANCES, APPLIANCES AND APPARATUS INTENDED TO SERVE SOME SPECIAL FUNCTION, SUCH AS STERULIZATION, DISTILLATION, PROCESSINS, COOLING, OR STORAGE OF ICE OR FOODS, AND THAT CONNECT TO THE WATER SUPPLY SYSTEM, SHALL BE PROVIDED WITH PROTECTION AGAINST BACKFLOW AND CONTAMINATION OF THE WATER SUPPLY SYSTEM, WATER PUMPS, FILTERS, SOFTENERS, TANKS AND ALL OTHER APPLIANCES AND DEVICES THAT HANDLE OR TREAT POTABLE WATER SHALL BE PROTECTED AGAINST CONTAMINATION.
- WATER SERVICE PIPING SHALL BE PROTECTED IN ACCORDANCE WITH N.C.-P SECTIONS AND EXCEPTIONS)
- FIXTURE FITTINGS, FAICETS AND DIVERTERS SHALL BE CONNECTED TO THE MATER DISTRIBUTION SYSTEM SO THAT HOT WATER CORRESPONDS TO THE LETT SIDE OF THE FITTINGS.
- DIVERTERS FOR SINK FAUCETS WITH A SECONDARY OUTLET CONSISTING OF A FLEXIBLE HOSE AND SPRAY ASSEMBLY SHALL CONFORM TO ASTM AII2.18.1 IN ADDITION TO THE REQUIREMENTS IN N.C.-P
- THE INSTALLATION OF A WATER SERVICE OR WATER DISTRIBUTION PIPE THE INSTALLATION OF A WATER SERVICE OR NATER DISTRIBUTION PIPE SHALL BE PROHIBITED IN SOIL AND GROUND WATER THAT IS CONTAMINATED. GROUND NATER CONDITIONS SHALL BE REQUIRED TO ACERTAIN THE ACCEPTABILITY OF THE WATER SERVICE OR NATER DISTRIBUTION PIPING MATERIAL FOR THE SPECIFIC INSTALLATION, WHERE DETRIMENTAL CONDITIONS EXIST, APPROVED ALTERNATIVE MATERIALS OR ROUTING SHALL BE REQUIRED.
- WATER DISTRIBUTION PIPE SHALL CONFORM TO NSF 61 AND SHALL CONFORM TO ONE OF THE STANDARDS LISTED IN N.C.-PLUMBING. WATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 100 PSI AT 180 DEGREES F.
- PIPE PASSING THROUGH CONCRETE OR CINDER WALLS AND ELGORS OR OTHER CORROSIVE MATERIAL SHALL BE PROTECTED AGAINST EXTERNAL CORROSION BY A PROTECTIVE SHEATHING OR WRAPPING OR OTHER MEANS THAT WILL WITHSTAND ANY REACTION FROM THE LIME AND ACID OF CONCRETE, CINDER OR OTHER CORROSIVE MATERIAL SHEATHING OR WRAPPING SHALL ALLOW FOR EXPANSION AND CONTRACTION OF PIPING TO PREVENT ANY RUBBING ACTION, MINIMUM WALL THICKNESS OF MATERIAL SHALL BE 0.025-INCH.
- PIPES PASSING UNDER OR THROUGH WALLS SHALL BE PROTECTED FROM PHYSICAL DAMAGE PER NC-R.
- PIPING SHALL BE INSTALLED SO AS TO PREVENT DETRIMENTAL STRAINS AND STRESSES IN THE PIPE. PROVISIONS SHALL BE MADE TO PROTECT PIPING FROM DAMAGE RESULTING FROM EXPANSION, CONTRACTION AND STRUCTURAL SETTLEMENT. PIPING SHALL BE INSTALLED TO AVOID STRUCTURAL STRESSES OR STRAINS WITHIN BUILDING COMPONENTS.
- WATER PIPES INSTALLED IN A WALL EXPOSED TO THE EXTERIOR SHALL BE LOCATED ON THE HEATED SIDE OF THE WALL INSULATION, IN OTHER CASES, WATER, SOIL AND WASTE PIPES SHALL NOT BE INSTALLED OUTSIDE OF A BUILDING, IN WICONDITIONED ATTICS, WICONDITIONED UTILITY ROOMS OR IN ANY OTHER PLACE SUBJECTED TO FREEZING UTILITY ROOMS OR IN ANY OTHER PLACE SUBJECTED TO FREEZING TEMPERATURES UNLESS ADEQUATE PROVISION IS WADE TO PROTECT SUCH PIPES FROM FREEZING BY A MINIMUM OF R-6.5 INSULATION DETERMINED AT 15 DEG. F IN ACCORDANCE WITH ASTM CIT! OR HEAT OR BOTH.

 EXTERIOR WATER SUPPLY SYSTEM PIPING SHALL BE INSTALLED NOT LESS THAN 6 INCHES BELOW THE FROST LINE AND NOT LESS THAN 12 INCHES BELOW GRADE.
- BUILDING SEWER PIPE SHALL CONFORM TO ONE OF THE STANDARDS
- BUILDING SEWER PIPE FITTINGS SHALL BE APPROVED FOR INSTALLATION WITH THE PIPING MATERIAL INSTALLED AND SHALL CONFORM TO THE RESPECTIVE PIPE STANDARDS OR ONE OF THE STANDARDS LISTED IN N.C.-P.
- WHERE WASTE LINE DROPS OCCUR IN A LOCATION WHERE THE SOUND OF FLUSHED TOILET MAY BE UNDESIRABLE, SUCH AS IN WALLS OR PARTITIONS ADJACENT TO EATING ROOMS, USE CAST IRON PIPING OR SIMILAR APPROVED HARD OR DENSE PIPING TO MITIGATE SOUND.
- 16. CLEANOUTS ON BUILDING SEMERS SHALL BE LOCATED AS SET FORTH IN
- THE MAXIMUM WATER CONSUMPTION FLOW RATES AND QUANTITIES FOR ALL PLUMBING FIXTURES SHALL BE IN ACCORDANCE WITH N.C.-R.
- INDIVIDUAL SHOWER AND TUB/SHOWER COMBINATION VALVES SHALL BE EQUIPPED WITH CONTROL. VALVES OF THE PRESSURE-BALANCE, THERMOSTATIC-MIXING OR COMBINATION PRESSURE-BALANCE/THERMOSTATIC-MIXING VALVE TYPES WITH A HIGH LIMIT STOP IN ACCORDANCE MITH ASSE (106/ ASME AIL2,106/C/SA B125,16, AND SHALL BE INSTALLED AND ADJUSTED PER MANUFACTURE'S INSTRUCTIONS.
- GAS AND ELECTRIC WATER HEATERS HAVING AN IGNITION SOURCE SHALL BE ELEVATED SUCH THAT THE SOURCE OF IGNITION IS NOT LESS THAN IO INCHES ABOVE THE GARAGE FLOOR. REFER TO N.C.-R FOR EXCEPTION.
- 20. WATER HEATERS, (USING SOLID, LIQUID OR GAS FUEL) WITH THE EXCEPTION WATER HEATERS, (USING SOLID, LIQUID OR 6A6 FUEL) WITH THE EXCEPTION OF THOSE HAVING DIRECT VENT SYSTEMS, SHALL NOT BE INSTALLED IN BATHROOMS AND BEDROOMS OR IN A CLOSET WITH ACCESS ONLY THROUGH A BEDROOM HOWEVER, NATER HEATERS OF THE AUTOMATIC 6. STORAGE TYPE MAY BE INSTALLED AS REPLACEMENT IN A BATHROOM, WHEN APPROVED BY THE PLUMBING OFFICIAL, PROVIDED THEY ARE VENTED AND SUPPLIED WITH ADEQUATE COMBUSTION AIR.
- IN SEISMIC DESIGN CATEGORIES DO, DI AND D2 AND TOANHOUSES IN SEISMIC DESIGN CATEGORY C, WATER HEATERS SHALL BE ANCHORED OR STRAPPED IN THE UPPER ONE-THIRD OF THE APPLIANCE TO RESIGT A HORIZONTAL FORCE EQUAL TO ONE-THIRD OF THE OPERATING MEIGHT OF THE WATER HEATER, ACTING IN ANY HORIZONTAL DIRECTION, OR IN ACCORDANCE WITH THE APPLIANCE MANUFACTURER'S RECOMMENDATIONS
- 22. APPLIANCES LOCATED IN A GARAGE OR CARPORT SHALL BE PRO-TECTED FROM IMPACT BY A MOVING VEHICLE.
- 25 WHERE WATER HEATERS OR HOT WATER STORAGE TANKS ARE INSTALLED IN-REMOTE LOCATIONS SUCH AS SUSPENDED CEILING, ATTICS, ABOVE OCCUPIED SPACES, OR UNVENTILATED CRAWL SPACES, A LOCATION WHERE WATER LEAKAGE FROM THE TANK WILL CAUSE DAMAGE TO PRIMARY STRUCTURAL MEMBERS, THE TANK OR WATER HEATER SHALL BE INSTALLED IN A GALVANIZED STEEL PAN HAVING A MINIMUM THICKNESS OF 24 GAGE, OR OTHER PANS APPROVED FOR SUCH USE.
- WHERE CLOTHES WASHING MACHINES ARE LOCATED ON WOOD FRAMED FLOORS WHERE LEAKAGE WOULD CAUSE DAMAGE, A GALVANIZED STELL PAN HAVING A MINIMAN THICKNESS OF 24 GAGE, OR OTHER PANS APPROVED FOR SUCH USE SHALL BE PROVIDED.

MECHANICAL \$ PLUMBING (continued)

- 25. APPLIANCES AND EQUIPMENT USED FOR HEATING WATER OR STORING HOT WATER SHALL BE PROTECTED BY A SEPARATE PRESSURE-RELIEF VALVE AND A SEPARATE TEMPERATURE-RELIEF VALVE OR A COMBINATION PRESSURE-NAD-TEMPERATURE RELIEF VALVE OR A COMBINATION MINIMUM RATED CAPACITY FOR THE EQUIPMENT SERVED AND SHALL CONFORM TO ANSI Z21.22. THE RELIEF VALVE SHALL NOT BE USED AS A MEANS OF CONTROLLING THERMAL EXPANSION.
- THE WATER SUPPLY TO A DISHWASHER SHALL BE PROTECTED AGAINST BACKFLOW BY AN AIR GAP COMPLYING WITH ASME AII2.1.5 OR AII2.1.2 THAT IS INSTALLED INTEGRALLY WITHIN THE MACHINE OR A BACKFLOW PREVENTER IN ACCORDANCE WITH THE NG-R.
- SINK AND DISHWASHER. THE COMBINED DISCHARGE FROM A DISHWASHER AND A ONE- OR TWO-COMPARTMENT SINK, WITH OR NITHOUT A FOOD-WASTE DISPOSER, SHALL BE SERVED BY A TRAP OF NOT LESS THAN I/2 INCHES (35 MM) IN OUTSIDE DIAMETER. THE DISHWASHER DISCHARGE PIPE OR TUBINS SHALL RISE TO THE INDERSIDE OF THE COUNTER AND SHALL BE SECURELY FASTENED TO THE INDERSIDE OF THE SINK RIM OR COUNTER BEFORE CONNECTINED TO THE INDERSIDE OF THE SINK RIM OR COUNTER DEFORE CONNECTINED TO THE INDERSIDE OF THE SINK RIM OR COUNTER DEFORE CONNECTINED TO THE INDERSIDE OF THE FOOD-WASTE DISPOSER OR TO A WYE FITTING IN THE SINK TAILPIECE.

- FACTORY-BUILT FIREPLACES SHALL BE LISTED AND LABELED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF LISTING. FACTORY-BUILT FIREPLACES SHALL BE TESTED IN ACCORDANCE WITH UL 127.
- 2. FIREPLACES ARE TO BE PROVIDED WITH AN EXTERIOR AIR SUPPLY

ELECTRICAL

- ALL MATERIALS AND APPLIANCES, INSTALLATION AND CONSTRUCTION METHODS SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE OR CURRENT SAF REQUIREMENTS
- ALL ELECTRICAL SYSTEMS, CIRCUITS, FIXTURES AND EQUIPMENT SHALL BE GROUNDED IN A MANNER COMPLYING WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- ALL WIRING SHALL BE SO INSTALLED THAT, WHEN COMPLETED, THE SYSTEM WILL BE FREE FROM SHORT CIRCUITS AND FROM GROUNDS OTHER THAN AS REQUIRED OR PERMITTED IN N.E.C. ARTICLE 250.
- ELECTRIC EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORK-
- ALL 125-VOLT, SINGLE-PHASE, 15- AND 20-AMPERE RECEPTACLES INSTALLED IN THE LOCATIONS SPECIFIED BELOW SHALL HAVE GROUND-FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL. THE GROUND-FAULT CIRCUIT-INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION.
 - A. BATHROOMS.
 - GARAGES AND ALSO ACCESSORY BUILDINGS THAT HAVE A FLOOR LOCATED AT OR BELON GRADE LEVEL NOT INTENDED AS HABITABLE ROOMS AND LIMITED TO STORAGE AREAS, WORK AREAS, AND AREAS OF SIMILAR USE.

 - CRAWL SPACES. WHERE THE CRAWL SPACE IS AT OR BELOW GRADE LEVEL.
 - UNFINISHED PORTIONS OR AREAS OF THE BASEMENT NOT INTENDED AS HABITABLE ROOMS.
 - KITCHENS. WHERE THE RECEPTACLES ARE INSTALLED TO SERVE THE COUNTERTOP SURFACES
 - SINKS, WHERE RECEPTACLES ARE INSTALLED WITHIN 6 FT FROM THE TOP INSIDE EDGE OF THE BOWL OF THE SINK.
- BOAT HOUSES.
- BATHTUBS OR SHOWER STALLS WHERE RECEPTACLES ARE INSTALLED WITHIN 6° OF THE OUTSIDE EDGE OF THE BATHTUB OR SHOWER STALL.
- DISHMASHER GFCI PROTECTION IS NOT REQUIRED FOR OUTLETS THAT SUPPLY DISHMASHERS INSTALLED IN DWELLING UNIT LOCATIONS.
- CRAWL SPACE LIGHTING OUTLETS. GFCI PROTECTION SHALL BE PROVIDED FOR LIGHTING OUTLETS NOT EXCEEDING 120 YOLTS INSTALLED IN CRAWL SPACES.
- APPLIANCE RECEPTAGLE OUTLETS INSTALLED IN A DWELLING UNIT FOR SPECIFIC APPLIANCES, SUCH AS LAUNDRY EQUIPMENT, SHALL BE INSTALLED WITHIN 6 FEET OF THE INTENDED LOCATION OF THE APPLIANCE.
- IN EVERY KITCHEN, FAMILY ROOM, DINING ROOM, LIVING ROOM PARLOR, LIBRARY, DRIN, SURROM, BEDROOM, RECREATION ROOM, OR SIMILAR ROOM OR ARRA OF DIVELLING UNITS, RECREATION COUNTRY SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET, MEASURED HORIZONTALLY, FROM AN OUTLET IN THAT SPACE, INCLUDING ANY HORIZONTALLY, FROM AN CUTLET IN THAT SPACE, INCLIDING ANY WALL SPACE 2 FEET OR MORE IN MIDTH (INCLIDING SPACE MEASURED AROUND CORNERS) AND UNBROKEN ALONG THE FLOOR FILE BY DOORNAYS AND SIMILAR OPENINGS, FIREPLACES, AND FIXED CABINETS, AND THE WALL SPACE OCCUPIED BY FIXED PANELS IN EXTERIOR MALLS, BUT EXCLIDING SALIDING PANELS IN EXTERIOR WALLS, BUT EXCLIDING SALIDING PANELS IN EXTERIOR WALLS, BUT EXCLIDING SALIDING PANELS IN EXTERIOR WALLS, THE WALL SPACE AFFORDED BY FIXED ROOM DIVIDERS, SUCH AS FREESTANDING BAR-TYPE COUNTERS OR RAILINGS, SHALL BE INCLIDED IN THE 6 FOOT MEASUREMENT.
- IN THE KITCHEN PANTRY BREAKFAST ROOM DINING ROOM OR SIMIL AR IN THE KITCHEN, PANIKT, BREAKFAST ROOM, DINING ROOM, OR SIMIL
 AREA OF A DIVELLING UNIT, THE TWO OR MORE 20-AMPERE SMALLAPPLIANCE BRANCH CIRCUITS REQUIRED SHALL SERVE ALL MALL
 AND FLOOR RECEPTACLE OUTLETS, ALL COUNTERTOP OUTLETS, AND RECEPTACLE OUTLETS FOR REFRIGERATION EQUIPMENT MORE SMALL-APPLIANCE BRANCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.
- IN KITCHENS, PANTRIES, BREAKFAST ROOMS, DINING ROOMS AND SIMILAR AREAS OF DIRELLING UNITS, RECEPTACLE OUTLETS FOR COUNTER SPACES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING.
- A RECEPTACLE OUTLET SHALL BE INSTALLED AT EACH WALL COUNTER SPACE 12 INCHES OR WIDER. RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE WALL LINE IS MORE THAN 24 INCHES MEASURED HORIZONTALLY FROM A RECEPTACLE OUTLET IN THAT SPACE.

ELECTRICAL (continued)

- (2) AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED AT EACH ISLAND COUNTER SPACE NITH A LONG DIMENSION OF 24 INCHES OR GREATER AND A SHORT DIMENSION OF 12 INCHES OR GREATER.
- AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED AT EACH PENINSULAR COUNTER SPACE WITH A LONG DIMENSION OF 24 INCHES OR GREATER AND A SHORT DIMENSION OF 12 INCHES OR GREATER. A PENINSULAR COUNTERTOP IS MEASURED FROM CONNECTING PERPENDICULAR WALL.
- COUNTERTOP SPACES SEPARATED BY RANGE TOPS, REFRIGERATORS, OR SINKS SHALL BE CONSIDERED AS SEPARATE COUNTERTOP SPACES IN APPLYING THE REQUIREMENTS OF (I), (2), AND (3) ABOVE. IF A RANGE, COUNTERTOPOKING UNIT, OR SINK IS INSTALLED IN AN ISLAND OR PENINSULAR COUNTERTOP AND THE DEPTH OF THE COUNTER BEHIND THE ITEM IS LESS THEN IS INCHES. IT WILL BE CONSIDERED TO DIVIDE THE COUNTERTOP SPACE INTO NO SEPARATE COUNTERTOP SPACE SEAL COMPLY WITH APPLICABLE REQUIREMENTS.
- RECEPTACLE OUTLETS SHALL BE LOCATED NOT MORE THAN 20 INCHES ABOVE THE COUNTERTOP, RECEPTACLE OUTLETS RENDERED NOT READILY ACCESSIBLE BY APPLIANCES FASTENED IN PLACE, APPLIANCE GARACES, SINKS, OR RANGETOPS AS COVERED IN 4) ABOVE, OR APPLIANCES OCCUPYING DEDICATED SPACE SHALL NOT BE CONSIDERED AS THESE REQUIRED OUTLETS.
- AT LEAST ONE WALL RECEPTACLE OUTLET SHALL BE INSTALLED IN BATHROOMS WITHIN 5 FEET OF THE OUTSIDE EDGE OF EACH BASIN. THE RECEPTACLE OUTLET SHALL BE LOCATED IN WALL OR PARTITION THAT IS ADJACENT TO THE BASIN OR BASIN COUNTERTOP, OR INSTALLED ON THE SIDE OF FACE OF THE BASIN CABINET NOT MORE HAN 12" BELOW THE COUNTERTOF
- 12. IN DWELLING UNITS, AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED IN AREAS DESIGNATED FOR THE INSTALLATION OF LAUNDRY
- IN EACH ATTACHED GARAGE AND IN EACH DETACHED GARAGE WITH IN EACH ATTACHE DARAGE AND IN EACH DETACHED DARAGE ATTACHED LECTRIC POWER, THE BRANCH CIRCUIT SUPPLYING THIS RECEPTACLE(S) SHALL NOT SUPPLY CUTLETS OUTSIDE OF THE GARAGE. AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED IN EACH VEHICLE BAY.
- CABLE- OR RACEWAY-TYPE WIRING METHODS INSTALLED IN A GROOVE, TO BE COVERED BY WALLBOARD, SIDING, PANELING, CARPETING, OR SIMILAR FINISH, SHALL BE PROTECTED BY I/O INCH THICK STEEL PLATE, SLEEVE, OR EQUIVALENT OR BY NOT LESS THAN I-I/4 INCH FREE SPACE FOR THE FULL LENGTH OF THE GROOVE IN WHICH THE CABLE OR RACEW, IS INSTALLED.
- RECEPTACLES IN DAMP OR WET LOCATIONS.
- A RECEPTACLE INSTALLED OUTDOORS IN A LOCATION PROTECTED FROM MEATHER OR IN OTHER DAMP LOCATIONS SHALL HAVE AN ENCLOSURE FOR THE RECEPTACLE THAT IS MEATHER/PROOF INHEN THE RECEPTACLE IS COVERED. (ATTACHMENT PLUS CAP NOT INSERTED AND RECEPTACLE COVERS (LOSED)
- ALL 15- AND 20- AMPERE, 125- AND 250-VOLT RECEPTACLES INSTALLED IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS MEATHER PROOF WHETHER OR NOT THE ATTACHMENT PLUS CAP IS MESERTED. AN OUTLET BOX HOOD INSTALLED FOR THIS PURPOSE SHALL BE LISTED AND SHALL BE IDENTIFIED AS "EXTRA DUTY", ALL 15- AND 20- AMPERE, 125- AND 20-VOLT NONLOCKING RECEPTACLES SHALL BE LISTED WEATHER RESISTANT TYPE.
- LIGHT FIXTURES WITHIN CLOTHES CLOSETS SHALL BE INSTALLED IN
- ALL 120-VOLT, SINGLE PHASE, IS- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SURCOMS, RECREATION ROOMS, CLOSETS, HALLMAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER(S), COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. THE ARC-FAULT CIRCUIT INTERRUPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION.
- BUILDINGS SHALL BE PROVIDED WITH APPROVED ADDRESS IDENTIFICATION. THE ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY.
- TAMPER-RESISTANT RECEPTACLES IN DWELLING UNITS IN ALL AREAS, ALL NON-LOCKING TYPE 125-VOLT 15-AND 20-AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. EXCEPTIONS LISTED BELOW:
 - I. RECEPTACLES LOCATED MORE THAN 51 ABOVE THE FLOOR
 - 2. RECEPTACLES THAT ARE PART OF A LUMINAIRE OR APPLIANCE
 - 5. A SINGLE RECEPTACLE OR A DUPLEX RECEPTACLE FOR TWO APPLIANCES LOCATED WITHIN DEDICATED SPACE FOR EACH APPLIANCE THAT, IN NORMAL USE, IS NOT EASILY MOVED FROM ONE PLACE TO ANOTHER, AND THAT IS CORD-AND-PLUS CONNECTED.
 - 4. NON-GROUNDING RECEPTACLES USED FOR REPLACEMENTS.
- DIMMER-CONTROLLED RECEPTACLES, A RECEPTACLE SUPPLYING LIGHTING LOADS SHALL NOT BE CONNECTED TO A DIMMER UNLESS THE PLUGRECEPTACLE COMBINATION IS A NONSTANDARD CONFIGURATION TYPE THAT IS SPECIFICALLY LISTED AND IDENTIFIED FOR EACH SUCH

- SMOKE DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED MANUFACTURER'S INSTRUCTIONS AND NC-R R314
- ALL SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS CODE AND THE HOUSEHOLD FIRE WARNING EQUIPMENT PROVISIONS OF NPPA 12.

HOUSEHOLD FIRE ALARM SYSTEMS INSTALLED IN ACCORDANCE WITH NFPA 12 THAT INCLUDE SMOKE ALARMS, OR A COMBINATION OF SMOKE DETECTOR AND AUDIELE NOTIFICATION DEVICE INSTALLED AS REQUIRED BY THE INC-R RSI4.3 FOR SMOKE ALARMS, SHALL BE PERMITTED. THE HOUSEHOLD FIRE ALARM SYSTEM SHALL FROVIDE THE SAME LEVEL OF SMOKE DETECTION AND ALARM AS REQUIRED BY THE NC-R FOR SMOKE ALARMS IN THE EVENT THE FIRE ALARM PASILE IS REMOVED OR THE SYSTEM IS NOT CONNECTED TO A CENTRAL STATION.

ELECTRICAL (continued)

CARBON MONOXIDE ALARMS

- CARBON MONOXIDE ALARMS IN DWELLING UNITS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, WHERE A FUEL-BURNING APPLIANCE IS LOCATED WITHIN A BEDROOM OR ITS ATTACHED BATHROOM, A CARBON MONOXIDE ALARM SHALL BE INSTALLED WITHIN THE BEDROOM.
- SINGLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING MITH UL 2034 AND SHALL BE INSTALLED IN ACCORDANCE WITH THE NC-R R315 AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- COMBINATION CARBON MONOXIDE AND SMOKE ALARMS SHALL BE PERMITTED TO BE USED IN LIEU OF INDIVIDUAL CARBON MONOXIDE OR SMOKE ALARMS.

DRYER VENT

THE DRYER DUCT IS REQUIRED TO IDENTIFY THE LENGTH IN ACCORDANCE WITH SECTION MI502.4.5



.

.

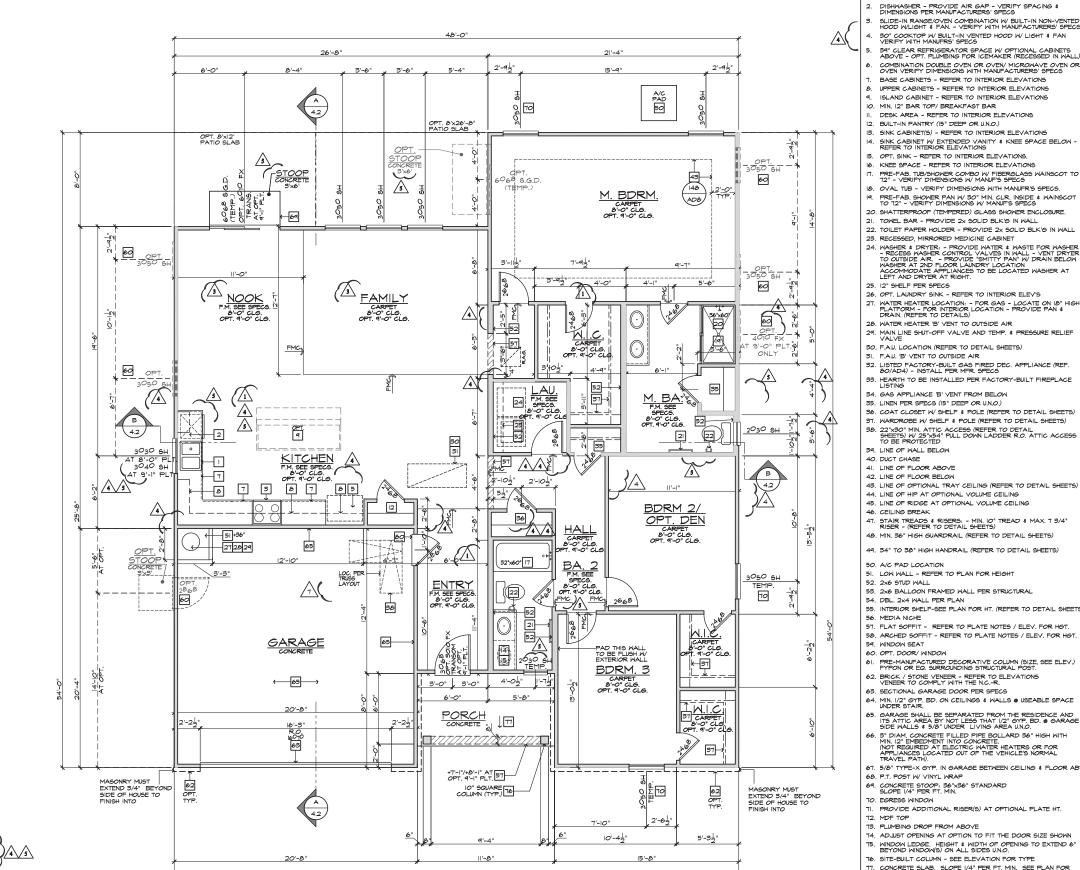
.

. **NORTH CAROLINA** 50' SERIES KB HOME NORTH CAROLINA DIVISION 4506 S. MIAMI BLVD. SUITE 180 DURHAM, NC 27703 TEL: (919) 768-7980 • FAX: (919) 544-2928 2018 NORTH **CAROLINA STATE** BUILDING CODES ISSUE DATE: 11/06/15 PROJECT No.: 1350999:57 DIVISION MGR.: D.S. " REVISIONS: 03/22/19 DIVISION REVISIONS
NC16033P · 09/26/16 · V.P.B.S. DIVISION REVISIONS
NCIS030NCP · 07/23/18 · KBA DIVISION REVISIONS
NCIS025NCP - 08/15/18 - KBA = 6 2018 CODE UPDATE NCI9015NCP/ 03/15/19 / CTD DIVISION REVISIONS
NCI9017NCP/ 03/22/19 / CTD DIVISION REVISIONS NC19031NCP/ 05/06/19 / FAE FOR INTERNAL USE ONLY 148.1869

GN₃

SPEC. LEVEL 1

RALEIGH-DURHAM 50' SERIES



INTERIOR KEY COLLABO DOOTAGE

| SQUAKE FOULAGE | | | |
|--------------------|--------------------|------|---------|
| | PLAN 148.1869 | | |
| FLOOR AREA | | 1869 | SQ. FT. |
| TOTAL ARE | 4 | 1869 | SQ. FT. |
| GARAGE AREA | | 417 | SQ. FT. |
| PORCH AREA(S) | | | |
| | ELEVATION 'A' | 70 | SQ. FT. |
| | ELEVATION 'B' | 184 | SQ. FT. |
| | ELEVATION 'C' | 113 | SQ. FT. |
| | ELEVATION 'D' | 181 | SQ. FT. |
| PATIO AREA(S) | | | |
| | 8'x12' COVERED | 96 | SQ. FT. |
| | 8'x26'-8" COVERED | 213 | SQ. FT. |
| DECK AREA(S) | | | |
| | OPEN 8'x12' | 96 | SQ. FT. |
| | OPEN 8'x26'-8" | 213 | SQ. FT. |
| | SCREENED-IN 8'x12' | 96 | 5Q. FT. |
| | SCREENED-IN | 213 | SQ. FT. |
| SUNROOM AREA | 8'x26'-8" | | |
| SUNNOUN AREA | 8'x 2' | 96 | SQ FT |
| LOFT | U 1/2 | 475 | SQ. FT. |
| LOFT WITH BORM. | 4 | 647 | 50. FT. |
| | | | 30.11. |
| GENERAL PLAN NOTES | | | |

ALL CEILING HEIGHTS PER SECTION AND ELEVATION PLATE HEIGHTS, UN.O.

ALL INTERIOR DOORS TO BE HOLLOW CORE | 3/8" THICK, U.N.O. (REFER TO PLAN FOR SIZE). ALL GARAGE SERVICE DOORS TO BE HOLLOW CORE EXTERIOR GRADE (REFER TO PLAN FOR SIZE).

ALL HOUSE TO GARAGE DOORS TO BE 20-MINUTE FIRE-RATED (REFER TO PLAN FOR SIZE). ALL ENTRY DOORS AND EXTERIOR FRENCH DOORS TO BE SOLID CORE | 3/4" THICK (REFER TO PLAN FOR SIZE).

ALL FLOOR MATERIAL CHANGES TO OCCUR AT CENTER OF DOOR JAMBS, U.N.O. PLATE NOTES

| I DAID NOIL | 2018 NG-R | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--|--|
| 8'-I" PLATE NO | TES | | |
| MINDOW HEADER HEIGHT: 2nd FLOOR WINDOW HDR, HEIGHT: ENTRY DOOR HEIGHT: SLIDING GLASS DOOR HEIGHT: INTERIOR SOFT! HEIGHT: INTERIOR DOOR HEIGHT: | 6'-8" U.N.O. T'-O" U.N.O. 6'-8" (TEMP.) T'-4" U.N.O. 6'-8" U.N.O. | | |
| 9'-I" PLATE NOTES | | | |
| WINDOM HEADER HEIGHT IST OR 2nd. 40/0 WINDOM OVER TUB HDR. HGT.: ENTRY DOOR HEIGHT: SLIDING GLASS DOOR HEIGHT: INTERIOR SOFFIT HEIGHT: TRAY CEILING: INTERIOR DOOR HEIGHT: | 7'-8" U.N.O. 8'-4" U.N.O. 6'-8" U.N.O. 6'-8" (TEMP.) 8'-0" U.N.O. 7?" DROP U.N.O. 6'-8" U.N.O. | | |

STAIR DATA NOTES

FIRST FLOOR WITH SIP PLATE HEIGHT:

14" DEEP T.J.I. FLOOR JOISTS WITH 3/4" T&G DECKING.

14 TREADS AT 10" EACH

15 RISERS AT 7-7/16" EACH

FIRST FLOOR WITH 5-1" PLATE HRIGHT: 15 TREADS AT 10" EACH 16 RISERS AT 7-3/4" EACH

FLOOR PLAN 'A' SCALE: I/4"=I'-0" (22"x34") - I/8"=I'-0" (II"xI7")

SINK - GARBAGE DISPOSAL OPTIONAL - VERIFY DIMENSIONS WITH MANUFACTURERS' SPECS SLIDE-IN RANGE/OVEN COMBINATION W BUILT-IN NON-VENTED HOOD WLIGHT & FAN. - VERIFY WITH MANUFACTURERS' SPECS HOME COMBINATION DOUBLE OVEN OR OVEN/ MICROWAVE OVEN OR OVEN VERIFY DIMENSIONS WITH MANUFACTURERS' SPECS SINK CABINET W EXTENDED VANITY & KNEE SPACE BELOW-REFER TO INTERIOR ELEVATIONS **NORTH CAROLINA** 50' SERIES KB HOME NORTH CAROLINA DIVISION 4506 S. MIAMI BLVD. SUITE 180 DURHAM, NC 27703 TEL: (919) 768-7980 • FAX: (919) 544-2928 2018 NORTH **CAROLINA STATE** BUILDING CODES DIVISION MGR.: REVISIONS:

ISSUE DATE: 11/06/15 PROJECT No.: 1350999:57 D.S. 03/22/19 DIVISION REVISIONS
NC16033P · 09/26/16 · V.P.B.S. DIVISION REVISIONS
NCIS030NCP · 07/23/18 · KBA

2018 CODE UPDATE NCI9015NCP/ 03/15/19 / CTD

DIVISION REVISIONS
NCI8025NCP · 08/15/18 · KBA

7 DIVISION REVISIONS NCI9017NCP/ 03/22/19 / CTD

B DIVISION REVISIONS NCI9031NCP/ 05/06/19 / FAE

FOR INTERNAL USE ONLY

WINDOW LEDGE. HEIGHT & WIDTH OF OPENING TO EXTEND 6' BEYOND WINDOW(5) ON ALL SIDES U.N.O.

76. SITE-BUILT COLUMN - SEE ELEVATION FOR TYPE CONCRETE SLAB. SLOPE I/4" PER FT. MIN. SEE PLAN FOR SIZE.

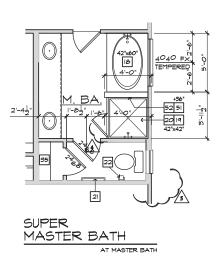
FLOOR PLAN NOTES

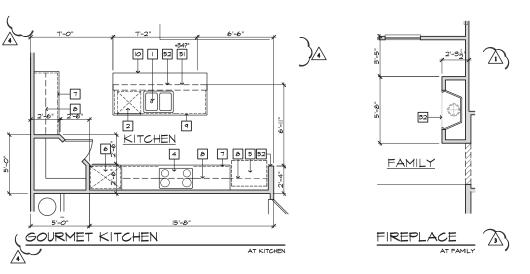
NOTE: NOT ALL KEY NOTES APPLY.

78. LOUVERED DOOR 79. SLOPING LOW WALL 38" ABOVE ADJACENT TREADS

80. 20 MIN. FIRE-RATED DOOR

148.1869 1.1

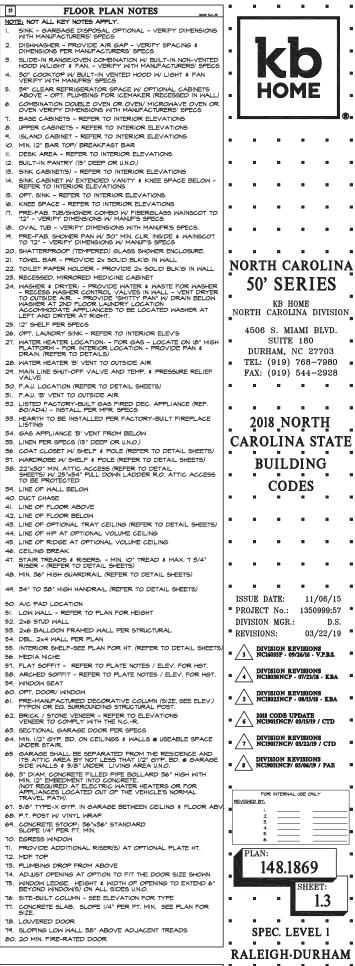




FLOOR PLAN OPTIONS

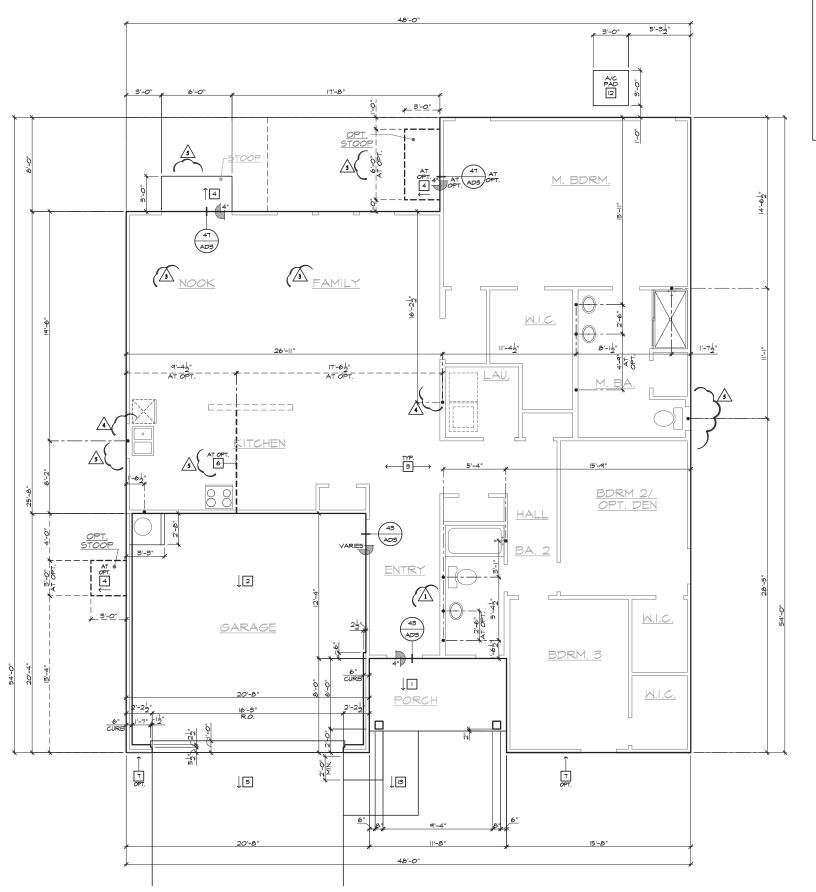
SCALE: I/4"=I'-0" (22"x34") - I/8"=I'-0" (II"xI7")

BASIC PLAN



78. LOUVERED DOOR 79. SLOPING LOW WALL 38" ABOVE ADJACENT TREADS 80. 20 MIN. FIRE-RATED DOOR NOTE: REFER TO BASIC FLOOR PLAN FOR INFORMATION NOT SHOWN HERE

50' SERIES



SLAB PLAN
NOTE: NOT ALL KEY NOTES APPLY. SLAB PLAN NOTES

CONCRETE PATIO/PORCH SLAB PER STRICTURAL- SLOPE I/4" PER FT. MIN.

CONCRETE GARAGE SLAB PER STRUCTURAL- SLOPE 1/8" PER 1'-0" MIN. TOMARD DOOR OPENING.

CONCRETE FOUNDATION PER STRUCTURAL.

CONCRETE STOOP: 36"x36" STANDARD SLOPE I/4" PER FT. MIN.

CONCRETE DRIVEWAY SLOPE 1/4" PER FT. MIN. AWAY FROM GARAGE DOOR OPENING.

PROVIDE ELECTRICAL CONDUIT UNDER SLAB AT ISLAND. VERIFY LOCATION.

5" BRICK LEDGE FOR MASONRY VENEER.

5" DIAMETER CONCRETE FILLED PIPE BOLLARD 36" HIGH HITH MIN. 12" EMBEDMENT INTO CONCRETE. REFER TO CIVIL DRAWINGS FOR ALL FINISH SURFACE ELEVATIONS.

IO. VERIFY ALL PLUMBING STUB DIMENSIONS SHOWN HERE PRIOR TO POUR OF SLAB.

| 4" MN. 8 | /4" MAX. TO HARD SURFACE. | 12. A/C PAD. VERIFY LOCATION. | 13. 36" WIDE WALKWAY- SLOPE | /4" PER FT. MIN.



NORTH CAROLINA 50' SERIES

KB HOME NORTH CAROLINA DIVISION 4506 S. MIAMI BLVD.

SUITE 180 DURHAM, NC 27703 ■ TEL: (919) 768-7980 ■ FAX: (919) 544-2928

2018 NORTH **CAROLINA STATE** BUILDING CODES

ISSUE DATE: 11/06/15 ■ PROJECT No.: 1350999:57 ■

DIVISION MGR.: D.S. 03/22/19 REVISIONS:

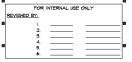
DIVISION REVISIONS NC16033P - 09/26/16 - V.P.B.S. DIVISION REVISIONS
NCI8030NCP · 07/23/18 · KBA

DIVISION REVISIONS
NC18025NCP · 08/15/18 · KBA

= 6 2018 CODE UPDATE NC19015NCP/ 03/15/19 / CTD =

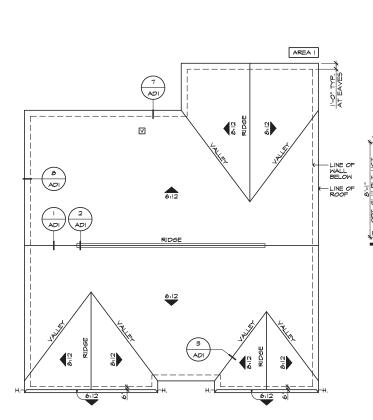
DIVISION REVISIONS
NCI9017NCP/ 03/22/19 / CTD

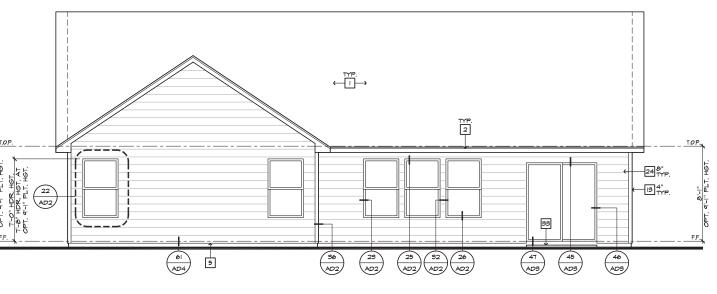
DIVISION REVISIONS NCI903INCP/ 05/06/19 / FAE



148.1869

2.1



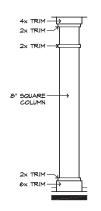


REAR ELEVATION 'A'

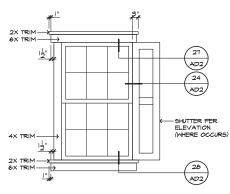
SCALE |/4"=|'-0" (22"X34") - |/8"=|'-0" (||"X|7")

ROOF PLAN 'A'

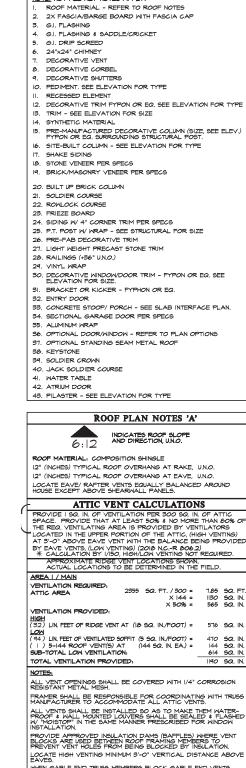
SCALE |/8"=|'-0" (22"X34") - |/|6"=|'-0" (||"X|7")



DETAIL 'B' SCALE: N.T.S.



DETAIL 'A' SCALE: N.T.S.



NOTE: NOT ALL KEY NOTES APPLY.

ELEVATION NOTES PRE-MANUFACTURED DECORATIVE COLUMN (SIZE, SEE ELEV.) FYPON OR EQ. SURROUNDING STRUCTURAL POST.

NORTH CAROLINA 50' SERIES кв номе

HOME

NORTH CAROLINA DIVISION 4506 S. MIAMI BLVD. SUITE 180

DURHAM, NC 27703 TEL: (919) 768-7980 • FAX: (919) 544-2928

2018 NORTH ROOF PLAN NOTES 'A' **CAROLINA STATE**

> BUILDING CODES

ATTIC VENT CALCULATIONS

INDICATES ROOF SLOPE AND DIRECTION, U.N.O.

ATTIC VENT CALCULATIONS
PROVIDE I SO. IN. OF VENTILATION PER 300 SQ. IN. OF ATTIC
SPACE. PROVIDE THAT AT LEAST 50% & NO MORE THAN 20% OF
THE REO. VENTILATING AREA IS PROVIDED BY VENTILATORS
LOCATED IN THE UPPER PORTION OF THE ATTIC, (HIGH VENTING)
AT 3'-O" ABOVE EAVE VENT WITH THE BALANCE BEING PROVIDED
BY EAVE VENTS, (LOW VENTING) (2018 N.C.-R 306.2)
** CALCULATION BY VISO, HIGHLOW VENTING NOT REQUIRED.
APPROXIMATE RIDGE VENT LOCATIONS SHOWN.
ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD.

2355 SQ. FT. / 300 =

 $\frac{\text{HIGH}}{(32) \text{ Lin, feet of Ridge Vent at (16 Sq. in./Foot)}} = 576 Sq. i$ | COM | (94) LIN FEET OF VENTILATED SOFFIT (5 SQ. IN.FOOT) = | 410 SQ. IN. | (1) 5-144 ROOF VENTICS) AT (144 SQ. IN. EA) = | 144 SQ. IN. | 614 SQ. IN. | 614

ALL VENT OPENINGS SHALL BE COVERED WITH 1/4" CORROSION RESISTANT METAL MESH.

ALL VENTS SHALL BE INSTALLED SO AS TO MAKE THEM WATER-PROOF & WALL MOUNTED LOUVERS SHALL BE SEALED & FLASHED W. "MOISTOP" IN THE SAME MANNER PRESCRIBED FOR WINDOW INSTALLATION.

PROVIDE APPROVED INSULATION DAMS (BAFFLES) WHERE VENT BLOCKS ARE USED BETWEEN ROOF FRAMING MEMBERS TO PREVENT VENT HOLES FROM BOING BLOCKED BY INSULATION. LOCATE HIGH VENTING MINIMUM 3'-O" VERTICAL DISTANCE ABOVE EAVES.

WHEN GABLE END TRUSS MEMBERS BLOCK GABLE END VENTS, PROVIDE ADEQUATE ADDITIONAL VENTILATION BY MEANS OF ROOF TILE VENTS.

DIVISION REVISIONS
NC16033P · 09/26/16 · V.P.B.S. DIVISION REVISIONS
NC18025NCP - 08/15/18 - KBA

DIVISION MGR.:

REVISIONS:

ISSUE DATE: 11/06/15

PROJECT No.: 1350999:57

D.S.

03/22/19

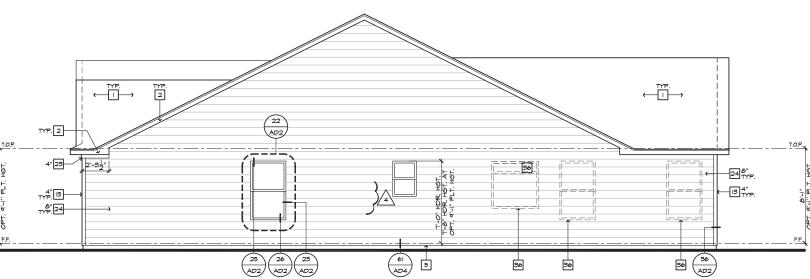
6 2018 CODE UPDATE NC19015NCP/ 03/15/19 / CTD

DIVISION REVISIONS
NCI9017NCP/ 03/22/19 / CTD

DIVISION REVISIONS
NCI9031NCP/ 05/06/19 / FAE

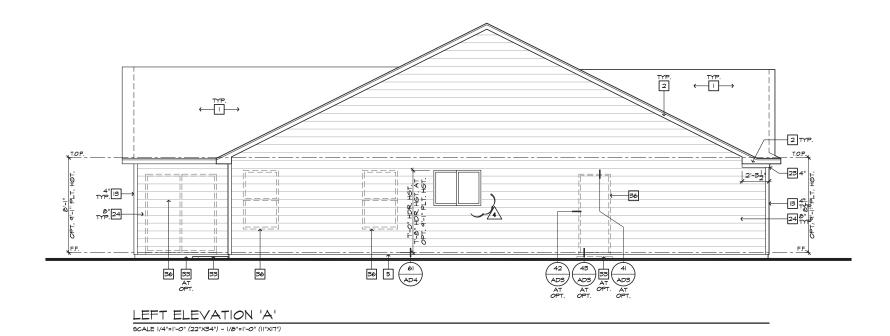
148.1869

3.A1



RIGHT ELEVATION 'A'

SCALE I/4"=I'-0" (22"X34") - I/8"=I'-0" (II"XI7")



ELEVATION NOTES NOTE: NOT ALL KEY NOTES APPLY. ROOF MATERIAL - REFER TO ROOF NOTES
 2X FASCIA/BARGE BOARD WITH FASCIA CAP 3. G.I. FLASHING 4. G.I. FLASHING & SADDLE/CRICKET 5. G.I. DRIP SCREED 6. 24"x24" CHIMNEY DECORATIVE VENT 9. DECORATIVE SHUTTERS
10. PEDIMENT. SEE ELEVATION FOR TYPE II. RECESSED ELEMENT

12. DECORATIVE TRIM FYPON OR EQ. SEE ELEVATION FOR TYPE 13. TRIM - SEE ELEVATION FOR SIZE 14. SYNTHETIC MATERIAL PRE-MANUFACTURED DECORATIVE COLUMN (SIZE, SEE ELEV.) FYPON OR EQ. SURROUNDING STRUCTURAL POST. 16. SITE-BUILT COLUMN - SEE ELEVATION FOR TYPE 17. SHAKE SIDING 18. STONE VENEER PER SPECS
19. BRICK/MASONRY VENEER PER SPECS 20. BUILT UP BRICK COLUMN 21. SOLDIER COURSE 22. ROWLOCK COURSE 23. FRIEZE BOARD 24. SIDING W 4" CORNER TRIM PER SPECS 25. P.T. POST W WRAP - SEE STRUCTURAL FOR SIZE 26. PRE-FAB DECORATIVE TRIM **NORTH CAROLINA** 27. LIGHT WEIGHT PRECAST STONE TRIM 28. RAILINGS (+36" U.N.O.) 29. VINYL WRAP 50' SERIES 30. DECORATIVE WINDOW/DOOR TRIM - FYPON OR EQ. SEE ELEVATION FOR SIZE. KB HOME NORTH CAROLINA DIVISION 31. BRACKET OR KICKER - FYPHON OR EQ. 32. ENTRY DOOR

33. CONCRETE STOOP/ PORCH - SEE SLAB INTERFACE PLAN. 34. SECTIONAL GARAGE DOOR PER SPECS

35. ALUMINUM WRAP 36. OPTIONAL DOOR/WINDOW - REFER TO PLAN OPTIONS

37. OPTIONAL STANDING SEAM METAL ROOF

43. PILASTER - SEE ELEVATION FOR TYPE

38. KEYSTONE 39. SOLDIER CROWN

40. JACK SOLDIER COURSE 4I. WATER TABLE 42. ATRIUM DOOR

FAX: (919) 544-2928 2018 NORTH **CAROLINA STATE**

> BUILDING CODES

4506 S. MIAMI BLVD. SUITE 180 DURHAM, NC 27703

TEL: (919) 768-7980 •

HOME

ISSUE DATE: 11/06/15

■ PROJECT No.: 1350999:57 ■

D.S.

03/22/19 REVISIONS: DIVISION REVISIONS
NC16033P · 09/26/16 · V.P.B.S.

DIVISION MGR.:

DIVISION REVISIONS
NCI8030NCP · 07/23/18 · KBA DIVISION REVISIONS
NCI8025NCP - 08/15/18 - KBA

a 6 2018 CODE UPDATE NC19015NCP/ 03/15/19 / CTD

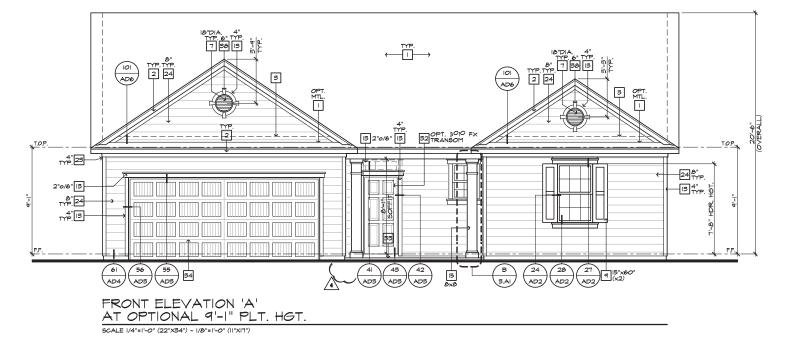
DIVISION REVISIONS
NCI90I7NCP/ 03/22/19 / CTD DIVISION REVISIONS NCI903INCP/ 05/06/19 / FAE

FOR INTERNAL USE ONLY

148.1869

3.A2 SPEC. LEVEL 1

RALEIGH-DURHAM 50' SERIES



ELEVATION NOTES NOTE: NOT ALL KEY NOTES APPLY. ROOF MATERIAL - REFER TO ROOF NOTES
 2X FASCIA/BARGE BOARD WITH FASCIA CAP 3. G.I. FLASHING 4. G.I. FLASHING & SADDLE/CRICKET 5. G.I. DRIP SCREED 6. 24"x24" CHIMNEY DECORATIVE VENT 9. DECORATIVE SHUTTERS
10. PEDIMENT. SEE ELEVATION FOR TYPE II. RECESSED ELEMENT

12. DECORATIVE TRIM FYPON OR EQ. SEE ELEVATION FOR TYPE 13. TRIM - SEE ELEVATION FOR SIZE
14. SYNTHETIC MATERIAL PRE-MANUFACTURED DECORATIVE COLUMN (SIZE, SEE ELEV.) FYPON OR EQ. SURROUNDING STRUCTURAL POST. 16. SITE-BUILT COLUMN - SEE ELEVATION FOR TYPE 17. SHAKE SIDING IB. STONE VENEER PER SPECS 19. BRICK/MASONRY VENEER PER SPECS 20. BUILT UP BRICK COLUMN 21. SOLDIER COURSE 22. ROWLOCK COURSE 23. FRIEZE BOARD 24. SIDING W 4" CORNER TRIM PER SPECS 25. P.T. POST W WRAP - SEE STRUCTURAL FOR SIZE 26. PRE-FAB DECORATIVE TRIM
27. LIGHT WEIGHT PRECAST STONE TRIM 28. RAILINGS (+36" U.N.O.) 29. VINYL WRAP 30. DECORATIVE WINDOW/DOOR TRIM - FYPON OR EQ. SEE ELEVATION FOR SIZE. 31. BRACKET OR KICKER - FYPHON OR EQ. 52. ENTRY DOOR 33. CONCRETE STOOP/ PORCH - SEE SLAB INTERFACE PLAN. 34. SECTIONAL GARAGE DOOR PER SPECS 35. ALUMINUM WRAP 36. OPTIONAL DOOR/WINDOW - REFER TO PLAN OPTIONS 37. OPTIONAL STANDING SEAM METAL ROOF 38. KEYSTONE 39. SOLDIER CROWN 40. JACK SOLDIER COURSE 4I. WATER TABLE 42. ATRIUM DOOR

43. PILASTER - SEE ELEVATION FOR TYPE

ISSUE DATE: 11/06/15

PROJECT No.: 1350999:57

DIVISION MGR.: D.S.

REVISIONS: 03/22/19

3 DIVISION REVISIONS
NC18039P-09/26/16-V.P.B.S.

4 DIVISION REVISIONS
NC18039NCP-07/23/18-KBA

5 DIVISION REVISIONS
NC18039NCP-08/15/18-KBA

6 ORIGINAL PROJECT OF THE NC19015NCP 03/15/19-CTD

7 DIVISION REVISIONS
NC19015NCP/05/22/19-CTD

DIVISION REVISIONS
NC19015NCP/05/22/19-CTD

DIVISION REVISIONS
NC19015NCP/05/06/19-CTD

HOME

NORTH CAROLINA

50' SERIES

кв номе

NORTH CAROLINA DIVISION

4506 S. MIAMI BLVD.

SUITE 180

DURHAM, NC 27703 TEL: (919) 768-7980

FAX: (919) 544-2928

2018 NORTH CAROLINA STATE

BUILDING CODES

PLAN: 148.1869

3.A4

SPEC. LEVEL 1

RALEIGH-DURHAM

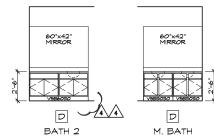
50' SERIES

NOTE: REFER TO BASIC <u>ELEVATIONS</u> FOR INFORMATION NOT SHOWN HERE

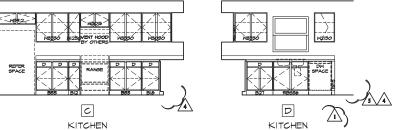


D LAUNDRY LAUNDRY CABINETS





BATH CABINETS



KITCHEN CABINETS

STANDARD INTERIOR ELEVATIONS

SCALE: |/4"=|'-0" (22"X34") - |/8"=|'-0" (||"X|7")

HOME

NORTH CAROLINA 50' SERIES

KB HOME NORTH CAROLINA DIVISION 4506 S. MIAMI BLVD.

SUITE 180 DURHAM, NC 27703 ■ TEL: (919) 768-7980 ■

FAX: (919) 544-2928

2018 NORTH **CAROLINA STATE** BUILDING CODES

ISSUE DATE: 11/06/15

* PROJECT No.: 1350999:57 * DIVISION MGR.: D.S. REVISIONS: 03/22/19

DIVISION REVISIONS
NC16033P · 09/26/16 · V.P.B.S.

DIVISION REVISIONS
NC18030NCP · 07/23/18 · KBA

DIVISION REVISIONS
NCI8025NCP · 08/15/18 · KBA

2018 CODE UPDATE NC19015NCP/ 03/15/19 / CTD

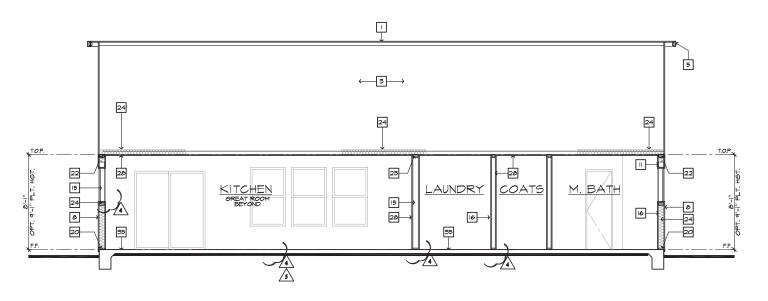
DIVISION REVISIONS
NC19017NCP/ 03/22/19 / CTD DIVISION REVISIONS NCI9031NCP/ 05/06/19 / FAE



148.1869 SHEET: 4.1

SPEC. LEVEL 1 RALEIGH-DURHAM

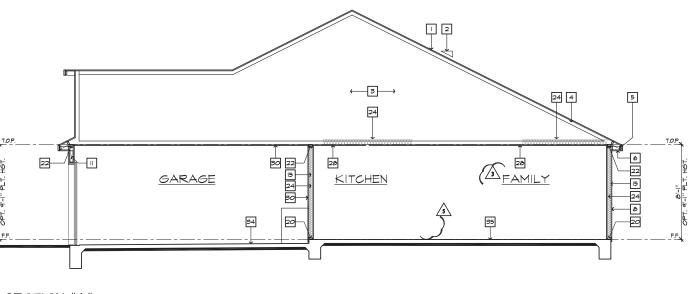
50' SERIES



SECTION "B"

SCALE I/4"=I'-0" (22"X34") - I/8"=I'-0" (II"XI7")

AT SLAB-ON-GRADE



SECTION "A"

SCALE I/4"=I'-0" (22"X34") - I/8"=I'-0" (II"XI7")

AT SLAB-ON-GRADE

. HOME

NORTH CAROLINA 50' SERIES

кв номе NORTH CAROLINA DIVISION

4506 S. MIAMI BLVD. SUITE 180 DURHAM, NC 27703

TEL: (919) 768-7980 • FAX: (919) 544-2928

39. EXTERIOR SOFFIT MATERIAL - REFER TO ELEVATIONS.
40. & BLOCK MALL
41. 5/& TYPE-X DRYWALL & GARAGE
CEILING
42. HIEN THERE IS USABLE SPACE ABOVE AND BELOW THE
CONCEALED SPACE OF A FLOOR-CEILING ASSEMBLY IN A
SINGLE-FAMILY DWELLING, DRAFT STOPS SHALL BE INSTALLED
50 THAT THE AREA OF THE CONCEALED SPACE DOES NOT
EXCEED I/OO SOLVARE FIET. DRAFTSTOPPING SHALL DIVIDE
THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS.

38. PROFILE OF OPTIONAL COVERED PATIO
39. EXTERIOR SOFFIT MATERIAL - REFER TO ELEVATIONS.

SECTION NOTES

PRE-MANUFACTURED WOOD ROOF TRUSS SYSTEM - SEE STRUCTURAL & TRUSS CALCS

NOTE: NOT ALL KEY NOTES APPLY.

4. ROOF SHEATHING PER STRUCTURAL 5. 2x FASCIA/BARGE BOARD CONT. SOFFITED EAVE W VENTING

G.I. FLASHING - ROOF TO WALL EXTERIOR FINISH PER ELEVATIONS FLOOR FRAMING PER STRUCTURAL IO. FLOOR SHEATHING PER STRUCTURAL HEADER PER STRUCTURAL 12. FLUSH BEAM PER STRUCTURAL 13. DROPPED BEAM PER STRUCTURAL . FLAT/ ARCHED SOFFIT PER PLAN

15. 2x4 STUD WALL 16. 2x6 STUD WALL

2I. 2x SOLE PLATE

19. 2x CRIPPLES @ 16" O.C. 20. 2x PRESSURE TREATED SILL PLATE

ROOF MATERIAL - REFER TO ROOF NOTES ROOF PITCH - REFER TO ROOF NOTES

17. 2x6 BALLOON FRAMED WALL PER STRUCTURAL

22. DBL. 2x TOP PLATE @ EXTERIOR & BEARING WALLS

23. IX OVER 2X TOP PLATE ● INTERIOR & NON-BEARING WALLS WALLS

24. INSULATION MATERIAL PER ENERGY CALCULATIONS

25. MIN. 36" HIGH GUARD - SEE PLAN FOR HEIGHT

20. LOW MALL - SEE PLAN FOR REIGHT

21. STAIR TREADS AND RISERS PER PLAN: - MIN, IO" TREAD & MAX, 7 5/4" RISER

22. INTERIOR FINISH: - MIN, I/2" GYP, BD, @ WALLS & SAG RESISTANT OR 5/8" DRYWALL @ CEILING

29. MIN. 1/2" GYP. BD. ON CEILING & WALLS @ USEABLE SPACE UNDER STAIRS.

INDER STARS.

30. GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAT I/2" GYP. BD. @ GARAGE SIDE WALLS & 5/0" UNDER LIVING AREA UN.O.

54. CONCRETE GARAGE SLAB PER STRUCTURAL - SLOPE 2" MIN. 35. CONCRETE FOUNDATION PER STRUCTURAL

32. INTERIOR SHELF - MIN. I/2" GYP. BD. OVER 3/8" PLY WD.

33. CONCRETE PATIO/ PORCH SLAB PER STRUCTURAL - SLOPE $1/4^\circ$ PER FT. MIN.

31. MATERIAL TO UNDERSIDE OF ROOF SHEATHING

36. LINE OF OPTIONAL TRAY CEILING/ STEP CEILING 37. LINE OF OPTIONAL VOLUME CEILING

26. LOW WALL - SEE PLAN FOR HEIGHT

2018 NORTH **CAROLINA STATE** BUILDING CODES

ISSUE DATE: 11/06/15 ■ PROJECT No.: 1350999:57 ■ DIVISION MGR.: D.S.

03/22/19

DIVISION REVISIONS NC16033P - 09/26/16 - V.P.B.S.

REVISIONS:

DIVISION REVISIONS
NC18030NCP · 07/23/18 · KBA DIVISION REVISIONS
NCI8025NCP · 08/15/18 · KBA

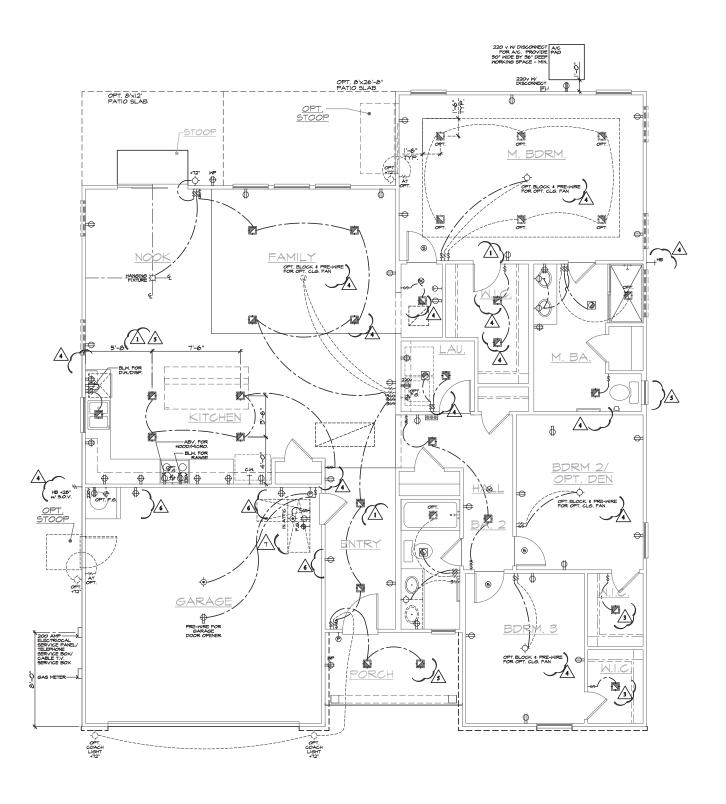
■ 6 2018 CODE UPDATE NC19015NCP/ 03/15/19 / CTD ■

DIVISION REVISIONS
NCI9017NCP/ 03/22/19 / CTD

DIVISION REVISIONS
NCI9031NCP/ 05/06/19 / FAE



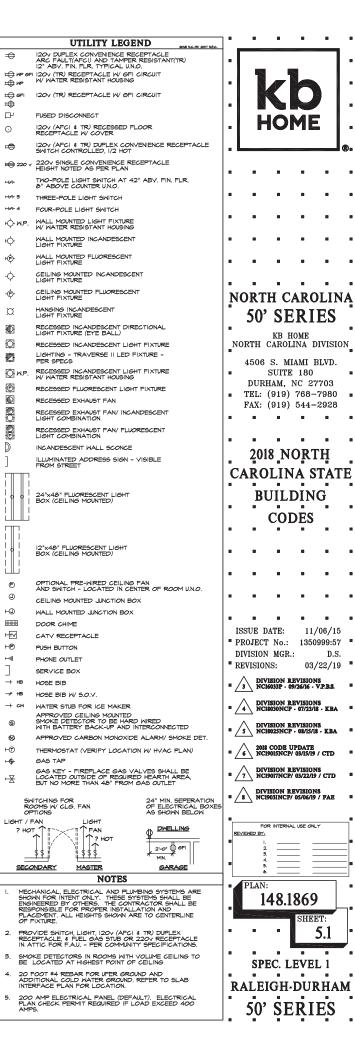
148.1869

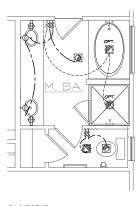


UTILITY PLAN

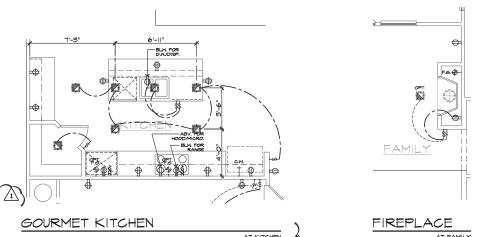
SCALE |/4*=|'-0" (22"X34") - |/8"=|'-0" (||"X17")

BASIC PLAN





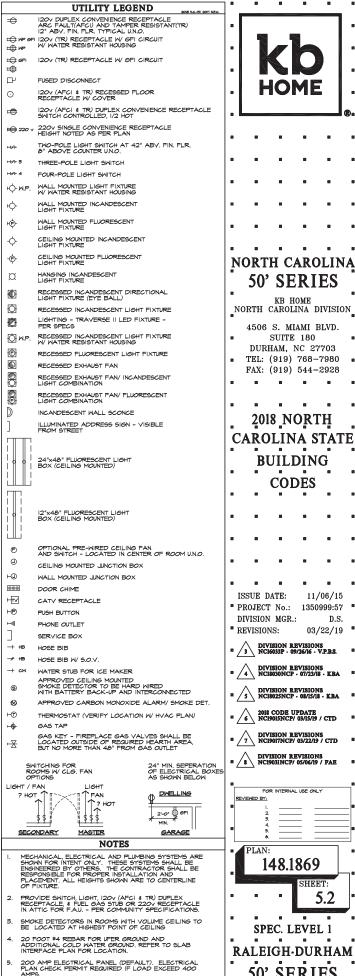




UTILITY PLAN OPTIONS

SCALE |/4"=|'-0" (22"X34") - |/8"=|'-0" (||"X|7")

 $\sqrt{1}$



HOME

NORTH CAROLINA 50' SERIES кв номе NORTH CAROLINA DIVISION

4506 S. MIAMI BLVD. SUITE 180 DURHAM, NC 27703 TEL: (919) 768-7980 •

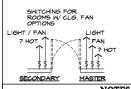
FAX: (919) 544-2928

2018 NORTH **CAROLINA STATE** BUILDING CODES

D.S.

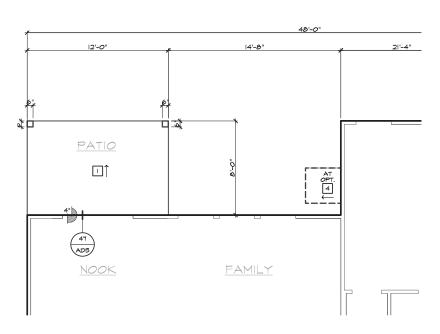
03/22/19

H



SPEC. LEVEL 1 RALEIGH-DURHAM 50' SERIES

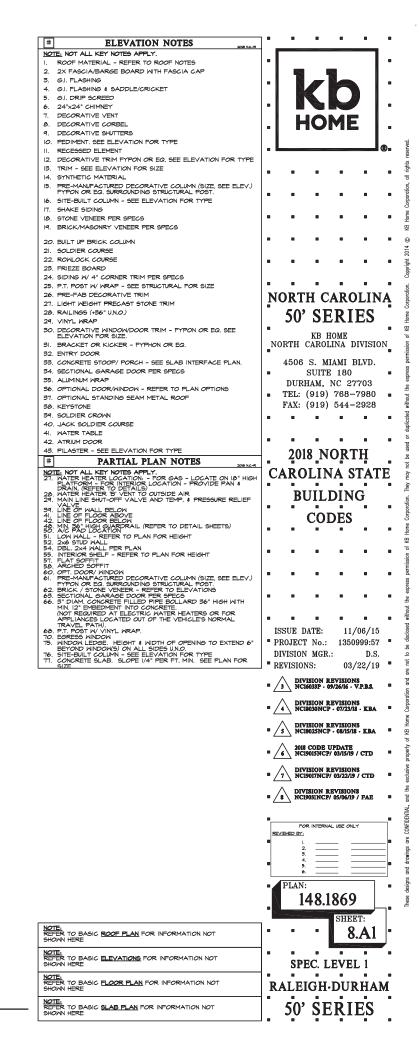
5.2

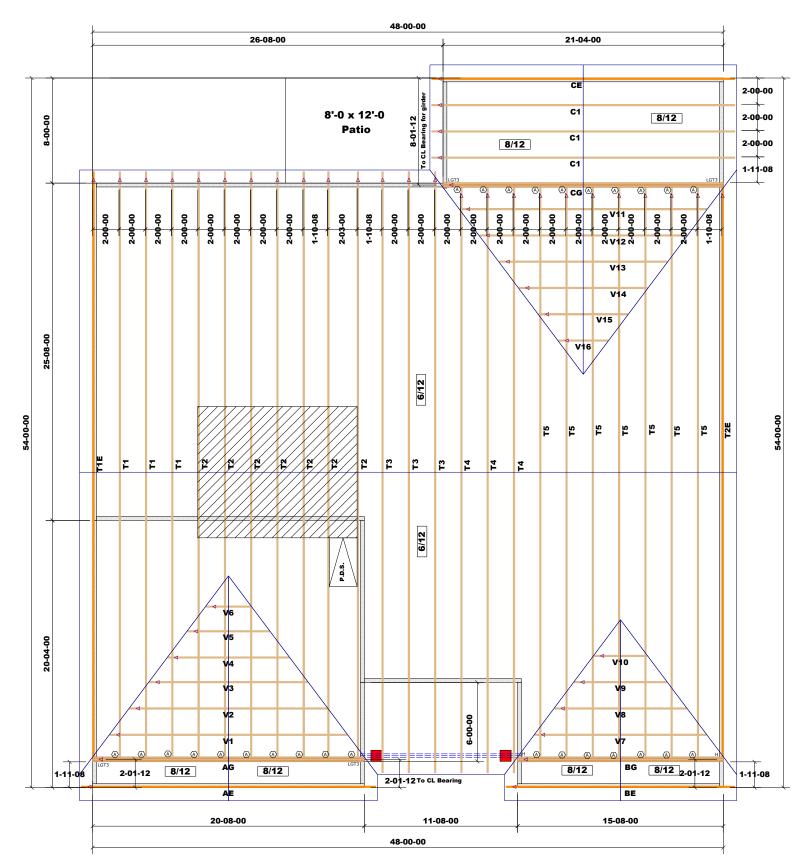


PARTIAL SLAB INTERFACE PLAN

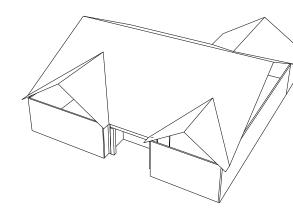
SCALE 1/4"=1'-0" (22"X34") - 1/8"=1'-0" (11"X17")

8'X12' PATIO SLAB AT FLOOR PLAN 'A'





BM1 Dropped, carries Roof trusses T3 & T4 past front wall



| | Hanger List | |
|--------|-------------|-----|
| Symbol | Name | Qty |
| Α | HUS26 | 27 |
| Н | HTS20 | 2 |
| LGT3 | LGT3-SDS2.5 | 4 |

Hatch Legend
HVAC/Storage

| 84 LUMBER COMPONENTS |
|----------------------|
|----------------------|

DEDICATED TO QUALITY AND EXCELLENCE 200 EMMETT ROAD DUNN, NORTH CAROLINA 28334 PHONE: 910-892-8400 FAX: 910-892-8384

| Inte | | | ORDER: 21570A | sнір рате: 2019 |
|-----------------------|-----------|-------------------|----------------------|------------------------|
| Lot 60 @ Mason Pointe | KB HOME | Plan 148.1869 "A" | P.O. NUMBER: PO # | REV: 7/18/19 |
| _ot 60 @_ | KB | Plan 14 | | PRINT DATE: 7/18/19 |
| | CUSTOMER: | MODEL: | SCALE: NOT TO SCALE | DRAWN BY: MWM |
| Τſ | | | | SF |

TOP LIVE: 20 PSF

TOP DEAD: 10 PSF

BOTM DEAD: 10 PSF

WIND SPD: 130 MPH

GENERAL NOTES:

DO NOT CUT OR MODIFY TRUSSES.

TRUSSES ARE SPACED 24" ON CENTER UNLESS NOTED OTHERWISE.

REFER TO THE INDIVIDUAL TRUSS DESIGN DRAWINGS FOR THE LOCATION OF LATERAL BRACING AND MULTI-PLY CONNECTION REQUIREMENTS.

PER ANSI TPI 1-2002 THE TRUSS ENGINEER IS RESPONSIBLE FOR TRUSS TO TRUSS CONNECTIONS AND TRUSS PLY TO PLY CONNECTIONS. THIS TRUSS PLACEMENT PLAN RECCOMENDS TRUSS TO BEARING CONNECTIONS AND TRUSS TO BEAM CONNECTIONS WHICH SHALL BE REVIEWED BY THE BUILDING DESIGNER. IT IS THE RESPONSIBILITY OF THE BUILDING DESIGNER TO RESOLVE ALL ROOF FORCES ADEQUATELY TO THE FOUNDATION.

STRUCTURAL PLANS FOR:



148.1869 - LH GARAGE

| PLAN RELEASE / REVISIONS | | | |
|--------------------------|-------------------|------------------------------------------------------------------------|------|
| REV DATE | ARCH PLAN VERSION | REVISION DESCRIPTION | DRFT |
| 07/19/2019 | 1869-148-01350 | INITIAL SETUP OF LAYOUT | CAR |
| 07/19/2019 | 1869-148-01350 | CREATED LOT-SPECIFIC STRUCTURAL LAYOUT FROM MASTER PLAN AND EWP LAYOUT | CAR |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

NOTES

- 1. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT, INCLUDING ROOF GEOMETRY. JDS CONSULTING & DESIGN, PLLC ASSUMES NO LIABILITY FOR CHANGES MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THE PLANS. ENGINEER TO BE NOTIFIED PRIOR TO CONSTRUCTION IF ANY DISCREPANCIES ARE NOTED ON THE PLANS.
- DIMENSIONS SHALL GOVERN OVER SCALE, AND CODE SHALL GOVERN OVER DIMENSIONS.
- 3. PLANS MUST HAVE SIGNED SEAL TO BE VALID AND ARE LIMITED TO THE FOLLOWING USES:
 - A. IF THESE PLANS ARE ISSUED AS A MASTER-PLAN SET, THE SET IS VALID FOR 18 MONTHS FROM THE DATE ON THE SEAL, UNLESS ANY CODE-REQUIRED UPDATES ARE PLACED IN EFFECT BY THE MUNICIPALITY.
 - B. IF THESE PLANS ARE NOT ISSUED AS A MASTER-PLAN SET, THE SET IS VALID FOR A CONDITIONAL, ONE-TIME USE FOR THE LOT OR ADDRESS SPECIFIED ON THE TITLE BLOCK.

CODE

ALL CONSTRUCTION, WORKMANSHIP, AND MATERIAL QUALITY AND SELECTION SHALL BE PER:

2018 NORTH CAROLINA STATE BUILDING CODE: RESIDENTIAL CODE

ENGINEER OF RECORD

JDS CONSULTING & DESIGN, PLLC
ENGINEERING, BUILDING DESIGN, & CONSTRUCTION
CONSULTING SERVICES
8600 'D' JERSEY COURT
RALEIGH, NC 27617
FIRM LIC. NO: P-0961
PROJECT REFERENCE: 19901574



KB HOME
NORTH CAROLINA DIVISION

4518 S. MIAMI BLVD.
SUITE 180
DURHAM, NC 27703
TEL: (919) 768-7988
FAX: (919) 472-0582



P-0961



PROJECT NO.: 19901574

. . .

PLAN: 148.1869

TITLE SHEET

T

NOTE: ALL CHAPTERS, SECTIONS, TABLES, AND FIGURES CITED WITHOUT A PUBLICATION TITLE ARE FROM THE APPLICABLE RESIDENTIAL CODE (SEE TITLE SHEET).

GENERAL

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION, FURTHERMORE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, AND SAFETY ON SITE, NOTIFY JDS CONSULTING & DESIGN, PLLC IMMEDIATELY IF DISCREPANCIES ON PLAN EXIST.
- BRACED-WALL DESIGN IS BASED ON SECTION R602.10 WALL BRACING, PRIMARY PRESCRIPTIVE METHOD TO BE CS-WSP, SEE WALL BRACING PLANS AND DETAILS FOR ADDITIONAL INFORMATION.
- ALL NON-PRESCRIPTIVE SOLUTIONS ARE BASED ON GUIDELINES **ESTABLISHED IN THE AMERICAN SOCIETY OF CIVIL ENGINEERS** PUBLICATION ASCE 7 AND THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION - SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC.
- SEISMIC DESIGN SHALL BE PER SECTION R301.2.2 SEISMIC PROVISIONS, INCLUDING ASSOCIATED TABLES AND FIGURES, BASED ON LOCAL SEISMIC DESIGN CATEGORY

DESIGN LOADS

| ASSUMED SOIL BEARING-CAPACITY | 2,000 PSF |
|-------------------------------|----------------------------|
| | LIVE LOAD |
| ULTIMATE DESIGN WIND SPEED | 115 MPH, EXPOSURE B |
| GROUND SNOW | 15 PSF |
| ROOF | 20 PSF |
| DECIDENTIAL CODE TABLE DOOLS | LIVE LOAD (DOE) |
| RESIDENTIAL CODE TABLE R301.5 | LIVE LOAD (PSF) |
| DWELLING UNITS | 40 |
| SLEEPING ROOMS | 30 |
| ATTICS WITH STORAGE | 20 |
| ATTICS WITHOUT STORAGE | 10 |
| STAIRS | 40 |
| DECKS | 40 |
| EXTERIOR BALCONIES | 60 |
| PASSENGER VEHICLE GARAGES | 50 |
| FIRE ESCAPES | 40 |
| GUARDS AND HANDRAILS | 200 (pounds, concentrated) |

COMPONENT AND CLADDING LOADS, INCLUDING THOSE FOR DOORS AND WINDOWS, SHALL BE DERIVED FROM TABLES R301.2(2) AND R301.2(3) FOR A BUILDING WITH A MEAN ROOF HEIGHT OF 35 FEET, LOCATED IN EXPOSURE B.

| ABBR | EVIATIONS | KS | KING STUD COLUMN |
|------------|--------------------------------|------|------------------------|
| 7.22. | <u></u> | LVL | LAMINATED VENEER |
| ABV | ABOVE | | LUMBER |
| ΔFF | ABOVE FINISHED FLOOR ALTERNATE | MAX | MAXIMUM |
| ΔIT | AI TERNATE | MECH | MECHANICAL |
| BRG | BEARING | MFTR | MANUFACTURER |
| BSMT | BASEMENT | MIN | MINIMUM |
| | CANTILEVER | NTS | NOT TO SCALE |
| | CEILING JOIST | OA | OVERALL |
| | CEILING | oc | ON CENTER |
| | CONCRETE MASONRY UNIT | PT | PRESSURE TREATED |
| | CASED OPENING | R | RISER |
| | COLUMN | REF | REFRIGERATOR |
| CONC | | RFG | ROOFING |
| CONT | CONTINUOUS | RO | ROUGH OPENING |
| D | CLOTHES DRYER | RS | ROOF SUPPORT |
| DBL | DOUBLE | SC | STUD COLUMN |
| | | SF | SQUARE FOOT (FEET) |
| DIAM DJ | DOUBLE JOIST | SH | SHELF / SHELVES |
| DN | DOWN | SHTG | |
| DP | DEEP | SHW | SHOWER |
| DR | DOUBLE RAFTER | SIM | SIMILAR |
| DSP | DOUBLE STUD POCKET | SJ | SINGLE JOIST |
| EA | EACH | SP | STUD POCKET |
| EE | EACH END | | SPECIFIED |
| EQ | EQUAL | SQ | SQUARE |
| EX | EXTERIOR | T | TREAD |
| FAU | FORCED-AIR UNIT | TEMP | TEMPERED GLASS |
| FDN | FOUNDATION | THK | THICK(NESS) |
| FF | FINISHED FLOOR | TJ | TRIPLE JOIST |
| FLR | FLOOR(ING) | TOC | TOP OF CURB / CONCRETE |
| FP | FIREPLACE | TR | TRIPLE RAFTER |
| FTG | FOOTING | TYP | TYPICAL |
| НВ | HOSE BIBB | UNO | UNLESS NOTED OTHERWISE |
| HDR | HEADER | W | CLOTHES WASHER |
| HGR | HANGER | WH | WATER HEATER |
| JS | JACK STUD COLUMN | WWF | WELDED WIRE FABRIC |
| l | | XJ | EXTRA JOIST |

MATERIALS

1. INTERIOR / TRIMMED FRAMING LUMBER SHALL BE #2 SPRUCE PINE FIR (SPF) WITH THE FOLLOWING DESIGN PROPERTIES (#2 SOUTHERN YELLOW PINE MAY BE SUBSTITUTED):

Fb = 875 PSI Fv = 70 PSI E = 1.4E6 PSI

FRAMING LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, CONCRETE, OR MASONRY SHALL BE PRESSURE TREATED #2 SOUTHERN YELLOW PINE (SYP) WITH THE FOLLOWING

Fb = 975 PSI Fv = 95 PSI E = 1.6E6 PSI

3. LVL STRUCTURAL MEMBERS TO BE LAMINATED VENEER LUMBER WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:

Fb = 2600 PSI Fv = 285 PSI E = 1.9E6 PSI

PSL STRUCTURAL MEMBERS TO BE PARALLEL STRAND LUMBER WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:

5. LSL STRUCTURAL MEMBERS TO BE LAMINATED STRAND LUMBER WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:

Fb = 2250 PSI Fv = 400 PSI E = 1.55E6 PSI

- 6. STRUCTURAL STEEL WIDE-FLANGE BEAMS SHALL CONFORM TO ASTM A992. Fv = 50 KSI
- REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615,
- 8. POURED CONCRETE COMPRESSIVE STRENGTH TO BE A MINIMUM 3,000 PSI AT 28 DAYS, MATERIALS USED TO PRODUCE CONCRETE SHALL COMPLY WITH THE APPLICABLE STANDARDS LISTED IN AMERICAN CONCRETE INSTITUTE STANDARD ACI 318 OR ASTM
- 9. CONCRETE SUBJECT TO MODERATE OR SEVERE WEATHERING PROBABILITY PER TABLE R301.2(1) SHALL BE AIR-ENTRAINED WHEN REQUIRED BY TABLE R402.2.
- 10. CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE PUBLICATION 530: BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES AND COMPANION COMMENTARIES AND THE MASONRY SOCIETY PUBLICATION TMS 402/602: BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY
- 11. MORTAR SHALL COMPLY WITH ASTM INTERNATIONAL STANDARD
- 12. INDICATED MODEL NUMBERS FOR ALL METAL HANGERS, STRAPS. FRAMING CONNECTORS, AND HOLD-DOWNS ARE SIMPSON STRONG-TIE BRAND, EQUIVALENT USP BRAND PRODUCTS ARE ACCEPTABLE.
- 13. REFER TO I-JOIST EQUIVALENCE CHART ON I-JOIST DETAIL SHEET FOR SUBSTITUTION OF MANUFACTURER SERIES.

FOUNDATION

- MINIMUM ALLOWABLE SOIL BEARING CAPACITY IS ASSUMED TO BE 2,000 PSF. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SOIL BEARING CAPACITY IF UNSATISFACTORY CONDITIONS
- 2. CONCRETE FOUNDATION WALLS TO BE SELECTED AND CONSTRUCTED PER <u>SECTION R404</u> OR AMERICAN CONCRETE INSTITUTE STANDARD ACI 318.
- 3. MASONRY FOUNDATION WALLS TO BE SELECTED AND CONSTRUCTED PER SECTION R404 AND/OR AMERICAN CONCRETE INSTITUTE PUBLICATION 530: BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES AND COMPANION COMMENTARIES AND/OR THE MASONRY SOCIETY PUBLICATION TMS 402/602: BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES
- CONCRETE WALL HORIZONTAL REINFORCEMENT TO BE PER TABLE R404.1.2(1) OR AS NOTED OR DETAILED. CONCRETE WALL VERTICAL REINFORCEMENT TO BE PER TABLES R404.1.2(3 AND 4) OR AS NOTED OR DETAILED. ALL CONCRETE WALLS SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 6.
 - A. TABLES ASSUME THAT WALLS HAVE PERMANENT LATERAL SUPPORT AT THE TOP AND BOTTOM.
 - FOUNDATION DRAINS ARE ASSUMED AT ALL WALLS PER
- PLAIN-MASONRY WALL DESIGN TO BE PER TABLE R404.1.1(1) OR AS NOTED OR DETAILED. MASONRY WALLS WITH VERTICAL REINFORCEMENT TO BE PER TABLES R404.1.1 (2 THROUGH 4) OR AS NOTED OR DETAILED. ALL MASONRY WALLS SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 6.
 - A. TABLES ASSUME THAT WALLS HAVE PERMANENT LATERAL SUPPORT AT THE TOP AND BOTTOM.
 - B. WALL REINFORCING SHALL BE PLACED ACCORDING TO FOOTNOTE (c) OF THE TABLES (REINFORCING IS NOT CENTERED IN WALL).
 - FOUNDATION DRAINS ARE ASSUMED AT ALL WALLS PER
- WOOD SILL PLATES TO BE ANCHORED TO THE FOUNDATION WITH 1/2" DIAMETER ANCHOR BOLTS WITH MINIMUM 7" EMBEDMENT, SPACED A MAXIMUM OF 6'-0" OC AND WITHIN 12" FROM THE ENDS OF EACH PLATE SECTION, INSTALL MINIMUM (2) ANCHOR BOLTS PER SECTION. SEE SECTION R403.1.6 FOR SPECIFIC CONDITIONS.
- THE UNSUPPORTED HEIGHT OF SOLID MASONRY PIERS SHALL NOT EXCEED TEN TIMES THEIR LEAST DIMENSION. UNFILLED, HOLLOW PIERS MAY BE USED IF THE UNSUPPORTED HEIGHT IS NOT MORE THAN FOUR TIMES THEIR LEAST DIMENSION
- 8. CENTERS OF PIERS TO BEAR IN THE MIDDLE THIRD OF THE FOOTINGS, AND GIRDERS SHALL CENTER IN THE MIDDLE THIRD OF
- ALL FOOTINGS TO HAVE MINIMUM 2" PROJECTION ON EACH SIDE OF FOUNDATION WALLS (SEE DETAILS).
- 10. ALL REBAR NOTED IN CONCRETE TO HAVE AT LEAST 2" COVER FROM EDGE OF CONCRETE TO EDGE OF REBAR.
- 11. FRAMING TO BE FLUSH WITH FOUNDATION WALLS.
- 12. WITH CLASS 1 SOILS, VAPOR BARRIER AND CRUSHED STONE MAY BE OMITTED.

FRAMING

- ALL BEARING HEADERS TO BE (2) 2x6 SUPPORTED W/ MIN (1) JACK STUD AND (1) KING STUD EACH END, UNO.
- ALL NON-BEARING HEADERS TO BE (2) 2x4, UNO
- NON-BEARING INTERIOR WALLS NOT MORE THAN 10' NOMINAL HEIGHT AND NOT SHOWN AS BRACED WALLS MAY BE FRAMED WITH 2x4 STUDS @ 24" OC.
- SOLID BLOCKING TO BE PROVIDED AT ALL POINT LOADS THROUGH FLOOR LEVELS TO THE FOUNDATION OR TO OTHER STRUCTURAL COMPONENTS.
- ALL BEAMS SPECIFIED ARE MINIMUM SIZES ONLY LARGER MEMBERS MAY SUBSTITUTED AS NEEDED FOR EASE OF
- ALL EXTERIOR WALLS TO BE FULLY SHEATHED WITH 7/16" OSB.
- PORCH / PATIO COLUMNS TO BE 4x4 MINIMUM PRESSURE-TREATED LUMBER
 - A. ATTACH PORCH COLUMNS TO SLAB / FDN WALL USING ABA, ABU, ABW, OR CPT SIMPSON POST BASES TO FIT COLUMN SIZES NOTED ON PLAN -OR- ANY OTHER COLUMN CONNECTION WITH 500# UPLIFT CAPACITY.
 - ATTACH PORCH COLUMNS TO PORCH BEAMS USING AC OR BC SIMPSON POST CAPS TO FIT COLUMN SIZES NOTED ON PLAN -OR- ANY OTHER COLUMN CONNECTION WITH 500# LIPLIET CAPACITY
 - C. TRIM OUT COLUMN(S) AND BEAM(S) PER BUILDER AND DETAILS.
- ALL ENGINEERED WOOD PRODUCTS (LVL, PSL, LSL, ETC.) SHALL BE INSTALLED WITH CONNECTIONS PER MANUFACTURER **SPECIFICATIONS**
- ENGINEERED WOOD ELOOR SYSTEMS AND ROOF TRUSS SYSTEMS:
 - A. SHOP DRAWINGS FOR THE SYSTEMS SHALL BE PROVIDED TO THE ENGINEER OF RECORD FOR REVIEW AND COORDINATION BEFORE CONSTRUCTION.
 - B. TRUSS PROFILES SHALL BE SEALED BY THE TRUSS MANUFACTURER.
 - C. INSTALLATION OF THE SYSTEMS SHALL BE PER MANUFACTURER'S INSTRUCTIONS.
 - D. TRUSS LAYOUT AND PLACEMENT BY MANUFACTURER TO COINCIDE WITH THE SUPPORT LOCATIONS SHOWN IN THESE
- 10. ALL BEAMS TO BE CONTINUOUSLY SUPPORTED LATERALLY AND SHALL BEAR FULL WIDTH ON THE SUPPORTING WALLS OR COLUMNS INDICATED. WITH A MINIMUM OF THREE STUDS. UNO.
- ALL STEEL BEAMS TO BE SUPPORTED AT EACH END WITH A MIN BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH. BEAMS MUST BE ATTACHED AT EACH END WITH A MINIMUM OF FOUR 16d NAILS OR TWO 1/2" x 4" LAG SCREWS. UNO.
- 12. STEEL FLITCH BEAMS TO BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM 307) WITH WASHERS PLACED UNDER THE THREADED END OF THE BOLT, BOLTS TO BE SPACED AT 24" OC (MAX) AND STAGGERED TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH TWO BOLTS TO BE LOCATED AT 6" FROM
- WHEN A 4-PLY LVL BEAM IS USED, ATTACH WITH (1) 1/2" DIAMETER BOLT, 12" OC. STAGGERED TOP AND BOTTOM, 1 1/2" MIN FROM ENDS. ALTERNATE FOUIVALENT ATTACHMENT METHOD MAY BE USED, SUCH AS SDS, SDW, OR TRUSSLOK SCREWS (SEE MANUFACTURER SPECIFICATIONS).
- 14. FOR STUD COLUMNS OF 4-OR-MORE STUDS, INSTALL SIMPSON STRONG-TIE CS16 STRAPS ACROSS STUDS @ 30" OC, 6" MAX FROM PLATES, ON INSIDE FACE OF COLUMN (EXTERIOR WALL), ON BOTH FACES OF COLUMN (INTERIOR WALL).
- 15. FLOOR JOISTS ADJACENT AND PARALLEL TO THE EXTERIOR FOUNDATION WALL SHALL BE PROVIDED WITH FULL-DEPTH SOLID BLOCKING, NOT LESS THAN TWO (2) INCHES NOMINAL IN THICKNESS, PLACED PERPENDICULAR TO THE JOIST AT SPACING NOT MORE THAN FOUR (4) FEET. THE BLOCKING SHALL BE NAILED TO THE FLOOR SHEATHING, THE SILL PLATE, THE JOIST, AND THE EXTERIOR RIM JOIST / BOARD.
- 16. BRACED WALL PANELS SHALL BE FASTENED TO MEET THE **UPLIFT-RESISTANCE REQUIREMENTS IN CHAPTERS 6 AND 8 OF** THE APPLICABLE CODE (SEE TITLE SHEET), REQUIREMENTS OF THE STRUCTURAL DRAWINGS THAT EXCEED THE CODE MINIMUM SHALL BE MET.



. KB HOME NORTH CAROLINA DIVISION

4518 S. MIAMI BLVD. SUITE 180 DURHAM, NC 27703

TEL: (919) 768-7988 ■ FAX: (919) 472-0582 ■



P-0961



PROJECT NO.: 19901574 7/19/2019 DATE:

148,1869

GENERAL NOTES

. . . .

| FASTENER SCHEDULE | | | |
|----------------------------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------------------------------------|--|
| CONNECTION | 3" x 0.131" NAIL | 3" x 0.120" NAIL | |
| JOIST TO SILL PLATE | (4) TOE NAILS | (4) TOE NAILS | |
| SOLE PLATE TO JOIST / BLOCKING | NAILS @ 8" OC (typical) (4) PER 16" SPACE (at braced panels) | NAILS @ 8" OC (typical) (4) PER 16" SPACE (at braced panels) | |
| STUD TO SOLE PLATE | (4) TOE NAILS | (4) TOE NAILS | |
| TOP OR SOLE PLATE TO STUD | (3) FACE NAILS | (4) FACE NAILS | |
| RIM JOIST OR BAND JOIST TO TOP PLATE OR SILL PLATE | TOE NAILS @ 6" OC | TOE NAILS @ 4" OC | |
| BLOCKING BETWEEN JOISTS TO TOP PLATE OR SILL PLATE | (4) TOE NAILS | (4) TOE NAILS | |
| DOUBLE STUD | NAILS @ 8" OC | NAILS @ 8" OC | |
| DOUBLE TOP PLATES | NAILS @ 12" OC | NAILS @ 12" OC | |
| DOUBLE TOP PLATES LAP (24" MIN LAP LENGTH) | (12) NAILS IN LAPPED AREA, EA SIDE OF JOINT | (12) NAILS IN LAPPED AREA, EA SIDE OF JOINT | |
| TOP PLATE LAP AT CORNERS AND INTERSECTING WALLS | (3) FACE NAILS | (3) FACE NAILS | |
| OPEN-WEB TRUSS BOTTOM CHORD TO TOP PLATES OR SILL PLATE (PARALLEL TO WALL) | NAILS @ 6" OC | NAILS @ 4" OC | |
| BOTTOM CHORD OF TRUSS TO TOP PLATES OR SILL PLATE (PERPENDICULAR TO WALL) | (3) TOE NAILS | (3) TOE NAILS | |

SEE TABLE R602.3(1) FOR ADDITIONAL STRUCTURAL-MEMBER FASTENING REQUIREMENTS.

DETAILS AND NOTES ON DRAWINGS GOVERN.

BALLOON WALL FRAMING SCHEDULE (USE THESE STANDARDS UNLESS NOTED OTHERWISE ON THE FRAMING PLAN SHEETS)

| FRAMING MEMBER SIZE | MAX HEIGHT (PLATE TO PLATE) 115 MPH ULTIMATE DESIGN WIND SPEED |
|---------------------|----------------------------------------------------------------|
| | |
| 2x4 @ 16" OC | 10'-0" |
| 2x4 @ 12" OC | 12'-0" |
| | |
| 2x6 @ 16" OC | 15'-0" |
| 2x6 @ 12" OC | 17'-9" |
| | |
| 2x8 @ 16" OC | 19'-0" |
| 2x8 @ 12" OC | 22'-0" |
| | |
| (2) 2x4 @ 16" OC | 14'-6" |
| (2) 2x4 @ 12" OC | 17'-0" |
| | |
| (2) 2x6 @ 16" OC | 21'-6" |
| (2) 2x6 @ 12" OC | 25'-0" |
| | |
| (2) 2x8 @ 16" OC | 27'-0" |
| (2) 2x8 @ 12" OC | 31'-0" |
| | |

- a. ALL HEIGHTS ARE MEASURED SUBFLOOR TO TOP OF WALL PLATE.
- b. WHEN SPLIT-FRAMED WALLS ARE USED FOR HEIGHTS OVER 12', THE CONTRACTOR SHALL ADD 6' MINIMUM OF CS16 COIL STRAPPING (FULLY NAILED), CENTERED OVER THE WALL BREAK.
- C. FINGER-JOINTED MEMBERS MAY BE USED FOR CONTINUOUS HEIGHTS WHERE TRADITIONALLY MILLED LUMBER LENGTHS ARE
- d. FOR GREATER WIND SPEED, SEE ENGINEERED SOLUTION FOR CONDITION IN DRAWINGS.

ROOF SYSTEMS

TRUSSED ROOF - STRUCTURAL NOTES

- PROVIDE CONTINUOUS BLOCKING THROUGH STRUCTURE FOR ALL POINT LOADS.
- 2.

DENOTES OVER-FRAMED AREA

- 3. MINIMUM 7/16" OSB ROOF SHEATHING
- 4. TRUSS LAYOUT AND PLACEMENT BY MANUFACTURER TO COINCIDE WITH THE SUPPORT LOCATIONS SHOWN. TRUSS PROFILES SHALL BE SEALED BY THE TRUSS MANUFACTURER. TRUSS PLANS TO BE COORDINATED WITH THE SEALED STRUCTURAL DRAWINGS. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- 5. MANUFACTURER TO PROVIDE REQUIRED UPLIFT CONNECTION.
- 6. PROVIDE H2.5A (MINIMUM) OR EQUIVALENT AT EACH TRUSS-TO-TOP PLATE CONNECTION AT OVER-FRAMED AREAS, UNLESS NOTED OTHERWISE.
- 7. UPLIFT CONNECTION TO BE CARRIED THROUGH TO FLOOR SYSTEM

STICK-FRAMED ROOF - STRUCTURAL NOTES

- PROVIDE 2x4 COLLAR TIES AT 48" OC AT UPPER THIRD OF RAFTERS, UNLESS NOTED OTHERWISE.
- 2. FUR RIDGES FOR FULL RAFTER CONTACT.
- PROVIDE CONTINUOUS BLOCKING THROUGH STRUCTURE FOR ALL POINT LOADS.



DENOTES OVER-FRAMED AREA

- 5. MINIMUM 7/16" OSB ROOF SHEATHING
- PROVIDE 2x4 RAFTER TIES AT 16" OC AT 45° BETWEEN RAFTERS AND CEILING JOISTS. USE (4) 16d NAILS AT EACH CONNECTION. RAFTER TIES MAY BE SPACED AT 48" OC AT LOCATIONS WHERE NO KNEE WALLS ARE INSTALLED.
- 7. PROVIDE H2.5A (MINIMUM) OR EQUIVALENT AT EACH RAFTER-TO-TOP PLATE CONNECTION AT OVER-FRAMED AREAS, UNLESS NOTED OTHERWISE.
- 8. UPLIFT CONNECTION TO BE CARRIED THROUGH TO FLOOR SYSTEM.

| BRICK VENEER LINTEL SCHEDULE | | |
|--------------------------------------------------------------------------------------------|---------------------|----------------------|
| SPAN | STEEL ANGLE SIZE | END BEARING LENGTH |
| UP TO 42" | L3-1/2"x3-1/2"x1/4" | 8" (MIN. @ EACH END) |
| UP TO 72" | L6"x4"x5/16"* (LLV) | 8" (MIN. @ EACH END) |
| OVER 72" L6"x4"x5/16"* (LLV) ATTACH LINTEL w/ 1/2" THRU BOLT @ 12" OC, 3" FROM EACH END | | |

* FOR QUEEN BRICK: LINTELS AT THIS CONDITION MAY BE 5"x3-1/2"x5/16"

NOTE: BRICK LINTELS AT SLOPED AREAS TO BE 4"x3-1/2"x1/4" STEEL ANGLE WITH 16D NAILS IN 3/16" HOLES IN 4" ANGLE LEG AT 12" OC TO TRIPLE RAFTER. WHEN THE SLOPE EXCEEDS 4:12 A MINIMUM OF 3"x3"x1/4" PLATES SHALL BE WELDED AT 24" OC ALONG THE STEEL ANGLE.



KB HOME
NORTH CAROLINA DIVISION

- 4518 S. MIAMI BLYD.
 SUITE 180
 DURHAM, NC 27703
 TEL: (919) 768-7988
- FAX: (919) 472-0582



P-0961



INFO@JDSDESIGNONLINE.COM WWW.JDSDESIGNONLINE.COM

PROJECT NO.: 19901574 DATE: 7/19/2019

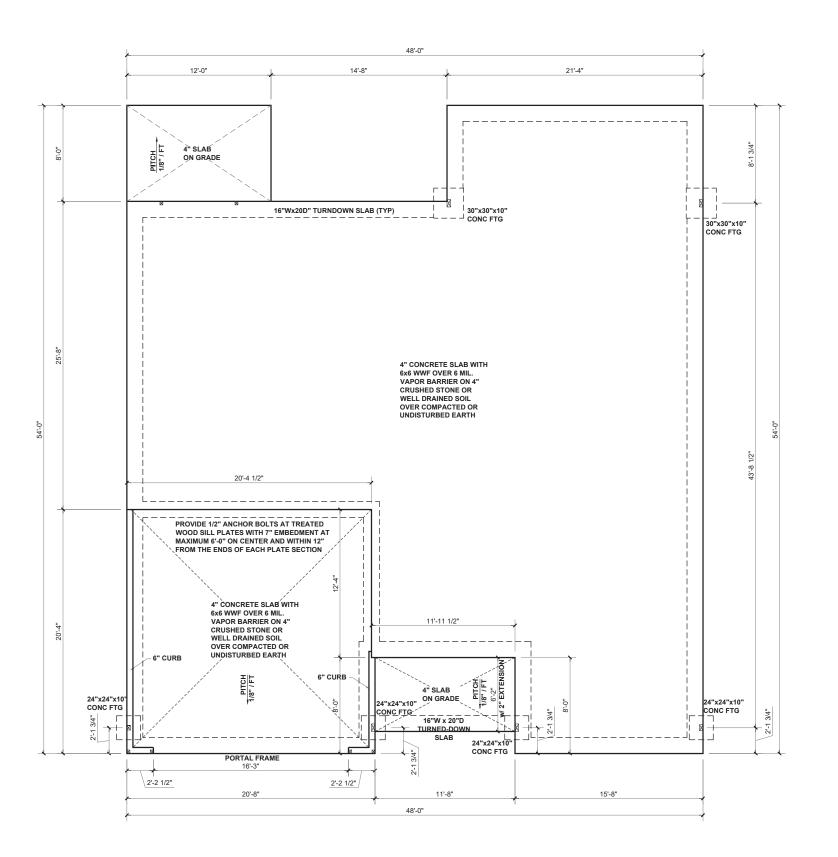
: : :

PLAN: 148.1869

.

GENERAL NOTES

GN1.1



BEAM & POINT LOAD LEGEN

INTERIOR LOAD BEARING WALL

----- ROOF RAFTER / TRUSS SUPPORT

DOUBLE RAFTER / DOUBLE JOIST
STRUCTURAL BEAM / GIRDER

WINDOW / DOOR HEADER

■ POINT LOAD FROM ABOVE BEARING ON BEAM / GIRDER

(1) #5 REBAR @ CENTER OFF ALL PERIMETER AND INTERNAL LOAD BEARING FOOTINGS. (2" C.C. MIN)

KB HOME

KB HOME
NORTH CAROLINA DIVISION

4518 S. MIAMI BLVD.
SUITE 180
DURHAM, NC 27703
TEL: (919) 768-7988
FAX: (919) 472-0582



P-0961



JDS CONSULTING & DESIGN, PLLC 8600 'D' JERSEY CT, RALEIGH, NC 27617 919.480.1075 INFO@JDSDESIGNONLINE.COM

7/19/2019

WWW.JDSDESIGNONLINE.COM
PROJECT NO.: 19901574

.

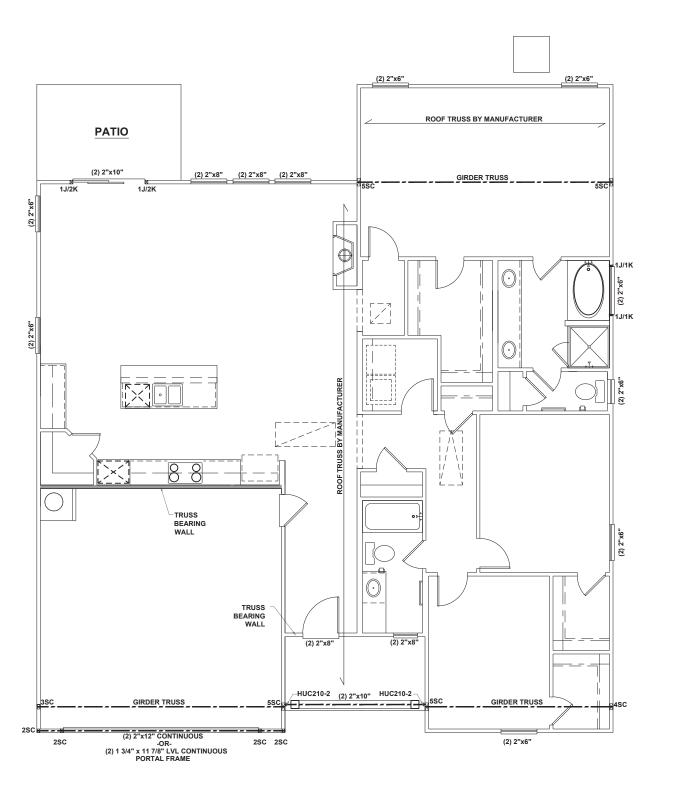
PLAN: 148.1869

> SLAB FOUNDATION PLAN

. . . .

S.10A

SLAB FOUNDATION PLAN - 'A'



BEAM & POINT LOAD LEGEND

INTERIOR LOAD BEARING WALL

— - — ROOF RAFTER / TRUSS SUPPORT

DOUBLE RAFTER / DOUBLE JOIST
STRUCTURAL BEAM / GIRDER

WINDOW / DOOR HEADER

WINDOW / DOOR HEADER
POINT LOAD TRANSFER

■ POINT LOAD FROM ABOVE BEARING ON BEAM / GIRDER

STRUCTURAL FRAMING NOTES - (SEE GENERAL NOTES SHEET FOR ADDITIONAL REQUIREMENTS.)

ALL FRAMING TO BE #2 SPF MINIMUM.

. ALL BEARING HEADERS TO BE (2) 2x6 SUPPORTED w/ MIN (1) JACK AND (1) KING EACH END, UNO.

3. EXTERIOR WALL OPENINGS OVER 3' TO HAVE MULTIPLE KING STUDS AS NOTED ON PLAN.

 ALL NON-BEARING HEADERS TO BE (2) 2x4 (1) J / (1) K, UNO.

PROVIDE CONTINUOUS BLOCKING THROUGH STRUCTURE FOR ALL POINT LOADS.

ALL HANGERS AND CONNECTORS SPECIFIED ARE TO BE SIMPSON STRONG-TIE OR EQUIVALENT.

7. ALL BEAMS SPECIFIED ARE MINIMUM SIZES ONLY. LARGER MEMBERS MAY SUBSTITUTED AS NEEDED FOR EASE OF CONSTRUCTION. MINIMUM BEAM SUPPORT IS (1) 2x4 STUD.

ALL EXTERIOR WALLS TO BE FULLY SHEATHED

FRONT PORCH COLUMNS TO BE MIN 4x4 PT
 ATTACHED AT TOP AND BOTTOM USING SIMPSON
 (OR EQUIV) COLUMN BASE OR SST A24
 BRACKETS. TRIM OUT PER BUILDER.

 PORCH COLUMNS TO BE MIN 4x4 PT ATTACHED AT BOTTOM USING SIMPSON (OR EQUIV) ABA44 AND AT TOP USING CS 16 STRAPPING (12" MIN) TO PORCH HEADER / BAND.

. WHEN A 4-PLY LVL IS USED, ATTACH WITH (1) 1/2" Ø BOLT 12" OC STAGGERED, TOP AND BOTTOM, 1-1/2" MIN FROM ENDS. ALTERNATE ATTACHMENT EQUIVALENT METHOD MAY BE USED, SUCH AS SDW OR TRUSSLOK SCREWS (SEE MANUFACTURER'S SPECIFICATIONS).

2. FOR STUD COLUMNS OF 4 OR MORE, INSTALL SST CS16 STRAPS @ 30" OC, 6" MAX FROM PLATES, ON INSIDE FACE OF COLUMN (EXTERIOR WALL), ON BOTH FACES OF COLUMN (INTERIOR WALL).

ALL FLUSH BEAMS TO BE DIRECTLY SUPPORTED BY (2) 2X STUDS UNLESS OTHERWISE NOTED. STUD COLUMNS TO BE SUPPORTED BY SOLID BLOCKING TO FOUNDATION OR TO BEARING COMPONENT BELOW.



KB HOME
NORTH CAROLINA DIVISION
4518 S. MIAMI BLVD.
SUITE 180
DURHAM, NC 27703
TEL: (919) 768-7988

FAX: (919) 472-0582

SEAL STALE O45403 T/19/19

CHARLES E. WILLIAM

P-0961



INFO@JDSDESIGNONLINE.COM WWW.JDSDESIGNONLINE.COM

PROJECT NO.: 19901574 DATE: 7/19/2019

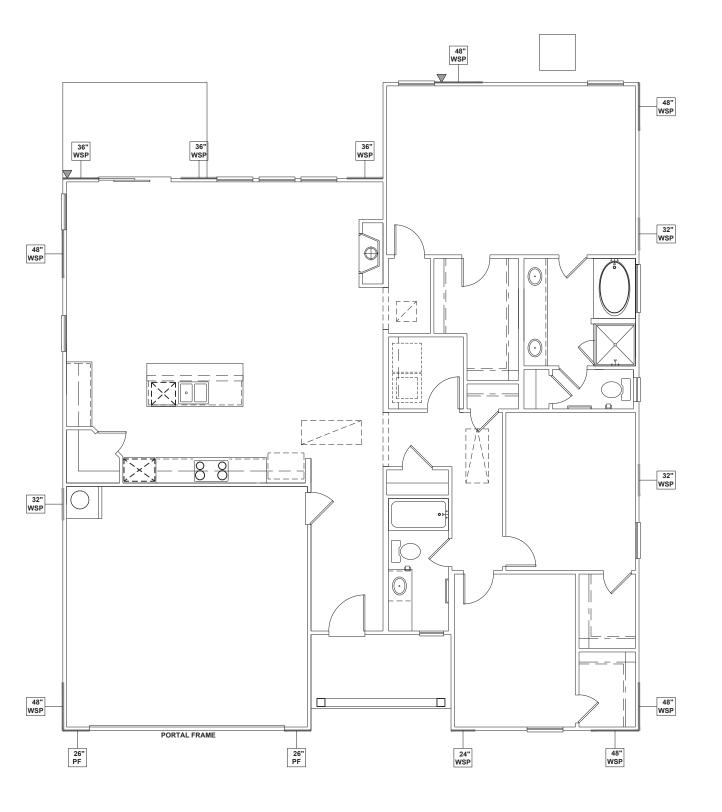
PLAN: 148.1869

.

FIRST FLOOR CEILING FRAMING PLAN

S1.0A

FIRST FLOOR CEILING FRAMING PLAN - 'A'



WALL BRACING REQUIREMENTS

- MINIMUM PANEL WIDTH IS 24"
 FIGURES BASED ON THE CONTINUOUS SHEATHING METHOD USING THE RECTANGLE CIRCUMSCRIBED AROUND THE FLOOR PLAN OR PORTION OF THE FLOOR PLAN. IF NO RECTANGLE IS NOTED, THE STRUCTURE HAS BEEN FIGURED ALL WITHIN ONE RECTANGLE.
 PANELS MAY SHIFT UP TO 36" EITHER DIRECTION
- PANELS MAY SHIFT UP TO 36" EITHER DIRECTION FOR EASE OF CONSTRUCTION (NAILING & BLOCK REQUIREMENTS STILL APPLY).
- REQUIREMENTS STILL APPLT).

 FOR ADDITIONAL WALL BRACING INFORMATION,
 REFER TO WALL BRACING DETAIL SHEET(S).

 SCHEMATIC BELOW INDICATES HOW SIDES OF



FRONT

CS16 STRAP FROM STUD, CROSS HEADER, TO WALL TOP PLATE, 36" LONG MINIMUM

SIMPSON MSTA15 HOLD DOWN CAPACITY OF 970 POUNDS PER ANCHOR WITH (12) 10d NAILS. STRAP TO BE LOCATED AT EDGE OF BRACED WALL PANEL. (CS16 STRAPPING MAY BE SUBSTITUTED W/SIMILAR LENGTH AND NAILING PATTERN.) USE HT14 FOR ATTACHMENT TO CONCRETE.

SCALED LENGTH
OF WALL PANEL
AT LOCATION

NUMERICAL
LENGTH
OF PANEL

WALL BRACING NOTE:

WALLS WITH REQUIRED LENGTH LISTED AS "N/A" DO NOT MEET THE REQUIREMENTS OF PRESCRIPTIVE WALL BRACING FOUND IN THE NCRC. THESE WALLS HAVE BEEN ENGINEERED BASED ON DESIGN GUIDELINES ESTABLISHED IN ASCE-07 AND THE NDS: WIND & SEISMIC PROVISIONS SUPPLEMENT.

WALL BRACING: RECTANGLE 1

| | | |
|-------|--------------------|--------------------|
| SIDE | REQUIRED LENGTH | PROVIDED LENGTH |
| FRONT | 7.0 FT. | 12.5 FT. |
| RIGHT | 7.0 FT. | 13.3 FT. |
| REAR | 7.0 FT. | 13.0 FT. |
| LEFT | 7.0 FT. | 10.6 FT. |



KB HOME
NORTH CAROLINA DIVISION

4518 S. MIAMI BLVD.
SUITE 180
DURHAM, NC 27703
TEL: (919) 768-7988
FAX: (919) 472-0582



P-0961



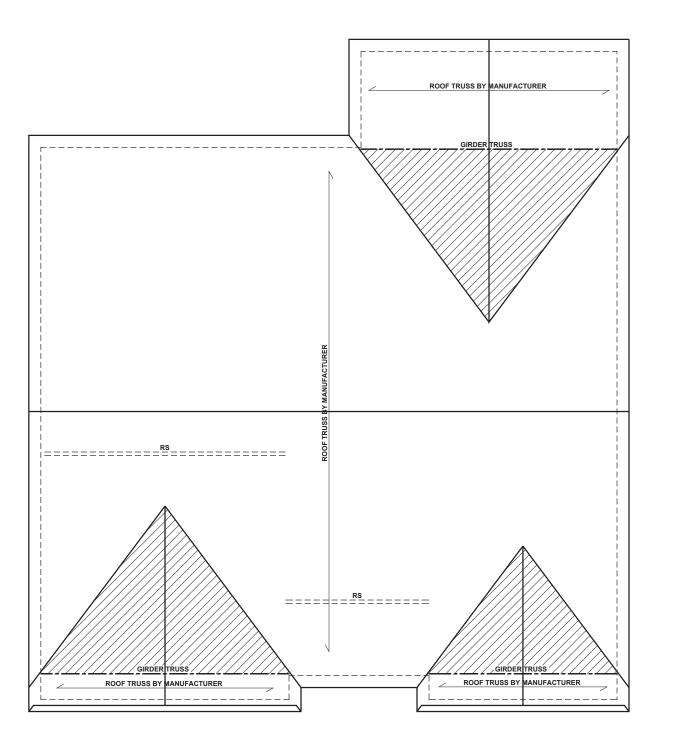
INFO@JDSDESIGNONLINE.COM

PLAN:
148.1869

FIRST FLOOR WALL BRACING PLAN

S4.0A

FIRST FLOOR WALL BRACING PLAN - 'A'



BEAM & POINT LOAD LEGEND

INTERIOR LOAD BEARING WALL

- ROOF RAFTER / TRUSS SUPPORT

- · - · - · DOUBLE RAFTER / DOUBLE JOIST - STRUCTURAL BEAM / GIRDER

WINDOW / DOOR HEADER

POINT LOAD TRANSFER

POINT LOAD FROM ABOVE BEARING ON BEAM / GIRDER

TRUSSED ROOF - STRUCTURAL NOTES

1. PROVIDE CONTINUOUS BLOCKING THROUGH STRUCTURE FOR ALL POINT LOADS.

DENOTES OVER-FRAMED AREA

3. MINIMUM 7/16" OSB ROOF SHEATHING

- 4. TRUSS LAYOUT AND PLACEMENT BY MANUFACTURER TO COINCIDE WITH THE SUPPORT LOCATIONS SHOWN. TRUSS PROFILES SHALL BE SEALED BY THE TRUSS COORDINATED WITH THE SEALED STRUCTURAL DRAWINGS. INSTALLATION SHALL BE IN
 ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- 5. MANUFACTURER TO PROVIDE REQUIRED UPLIFT CONNECTION.
- 6. PROVIDE H2.5A (MINIMUM) OR EQUIVALENT AT EACH TRUSS-TO-TOP PLATE CONNECTION AT OVER-FRAMED AREAS, UNLESS NOTED
- UPLIFT CONNECTION TO BE CARRIED THROUGH TO FLOOR SYSTEM.

ATTIC VENTILATION

THE TOTAL NET-FREE VENTILATION AREA SHALL NOT BE LESS THAN 1/150 OF THE AREA OF THE ATTIC SPACE TO BE VENTILATED. THE TOTAL VENTILATION MAY BE REDUCED TO 1/300 PROVIDED AT LEAST 50% MAY BE REDUCED TO 1/30/ PROVIDED AT LEAST 50%
BUT NOT MORE THAN 80% OF THE REQUIRED
VENTILATION BE LOCATED IN THE UPPER PORTION OF
THE AREA TO BE VENTILATED, OR AT LEAST 3'
ABOVE THE SOFFIT VENTILATION INTAKE.

2567 SQUARE FEET OF TOTAL ATTIC / 150 =

17.11 SQUARE FEET OF NET-FREE VENTILATION REQUIRED

TRUSS UPLIFT CONNECTORS: EXPOSURE B, 115 MPH, ANY PITCH, 24" O.C. MAX ROOF TRUSS SPACING

TRUSSES SHALL BE ATTACHED TO SUPPORT WALL FOR UPLIFT RESISTANCE. CONTINUOUS OSB WALL SHEATHING BELOW PROVIDES CONTINUOUS UPLIFT RESISTANCE TO FOUNDATION. ALL TRUSSES SUPPORTED BY INTERMEDIATE SUPPORT WALLS,
KNEEWALLS, OR BEAMS SHALL BE ATTACHED TO SUPPORTING MEMBER PER SCHEDULE:

ROOF SPAN IS MEASURED HORIZONTALLY BETWEEN FURTHEST SUPPORT POINTS.

CONNECTOR NAILING PER TABLE 602.3(1) NCRBC 2018 EDITION

OVER 28'

(1) SIMPSON H2.5A HURRICANE CLIP TO DBL TOP PLATE OR

OR (1) SIMPSON H3 CLIP TO SINGLE 2x4 PLATE



| • | • | • | • | • |
|-------|----------------|------|---------|--------|
| • | • | | • | • |
| - | • | | • | • |
| | | | | |
| NORTH | KB H | | DIVISIO | • N |
| 4518 | S. MI | | BLVD. | • |
| | HAM, | NC 2 | | • |
| | (919) (919) | | | • |
| | • | - | | - |
| | | | | |



P-0961



JDS CONSULTING & DESIGN, PLLC 6000 'D' JERSEY CT, RALEIGH, NC 27617 INFO@JDSDESIGNONLINE.COM

WWW.JDSDESIGNONLINE.COM

PROJECT NO.: 19901574 DATE: 7/19/2019

148,1869

.

ROOF FRAMING PLAN

ROOF FRAMING PLAN - 'A'

