

# NORTH CAROLINA 50' SERIES

PLAN 148.1869-R

ARCH. SYMBOLS

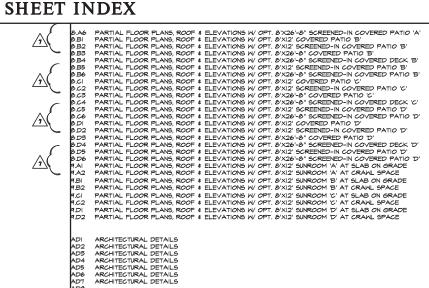
LOT 56 - MASON POINTE ELEVATION B

**ABBREVIATIONS** 

# PLAN #146.1869-R TS TITLE SHEET SON GENERAL NOTES GENERAL GENE

UTILITY PLAN OPTIONS
PARTIAL, FLOOR PLANS, & ELEVATIONS W OPT. 8/X12' DECK AT CRANL SPACE
PARTIAL, FLOOR PLANS, & ELEVATIONS W OPT. 8/X26'-8' DECK AT CRANL SPACE
PARTIAL, FLOOR PLANS, ROOF & ELEVATIONS W OPT. 8/X12' COVERED PATIO 'A'
PARTIAL, FLOOR PLANS, ROOF & ELEVATIONS W OPT. 8/X12' SCREENED-IN COVERED PATIO 'A'
PARTIAL, FLOOR PLANS, ROOF & ELEVATIONS W OPT. 8/X26'-8' COVERED PATIO 'A'
PARTIAL, FLOOR PLANS, ROOF & ELEVATIONS W OPT. 8/X26'-8' SCREENED-IN COVERED DECK 'A'
PARTIAL, FLOOR PLANS, ROOF & ELEVATIONS W OPT. 8/X26'-8' SCREENED-IN COVERED DECK 'A'
PARTIAL FLOOR PLANS, ROOF & ELEVATIONS W OPT. 8/X12' COVERED PATIO 'A'

**SQUARE FOOTAGE** 



**CODE INFORMATION** 

NORTH CAROLINA
50' SERIES

KB HOME
NORTH CAROLINA DIVISION

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

																				4
ABV.	ABOVE	6.F.I.		R.O.	ROUGH OPENING			OWNER:		PLAN 148,1869-R				16 451 5 6	0056			A DEDECT (I A TLOVIC		4
A/C	AIR CONDITIONING		CIRCUIT INTERRUPTER	5 # P	SHELF AND POLE				FLOOR AREA		1869	SQ. FT.	. —	<u> ICABLE C</u>		`		ABBREVIATIONS		4
ADJ.	ADJUSTABLE	6.1.	GALVANIZED IROI	N S.C.	SOLID CORE		BUILDING SECTION	KB HOME NORTH CAROLINA DIVISION						NORTH CAROLIN		\ \ \		NORTH CAROLINA RESID		4
ALT	ALTERNATE	GL.	GLASS	S.D.	SMOKE DETECTOR			4518 S. MIAMI BLVD., SUITE 180	TOTAL ARE	Δ,	1869	SQ. FT.		IG CODE: RESID INCLUDING REFE		//5		NORTH CAROLINA BUILD		4
AMP.	AMPERAGE	GYP. BD.	GYPSUM BOARD	SEC.	SECTION	\ \ \ \ \ \	SECTION INDICATOR	DURHAM, NC 27703 TEL. (919) 768-7988	GARAGE AREA	`	417	50. FT.	CODES	AND STANDAR	25 *	J—		NORTH CAROLINA MECHA		4
BD.	BOARD	H.C.	HOLLOW CORE	S.H.	SINGLE HUNG	\ ##←	- SHEET NUMBER	FAX. (919) 472-0582	PORCH AREA(S)		-111	50.11.	l .				N.CP. N.CF.	NORTH CAROLINA PLUME NORTH CAROLINA FUEL 6		4
<u>q</u>	CENTER LINE	HDR.	HEADER	SHT.	SHEET	I \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			1	ELEVATION 'A'	70	SQ. FT.	l .					NORTH CAROLINA FLECT		4
CAB.	CABINET	HGT. / HT		SHTHG.	SHEATHING					ELEVATION 'B'	184	SQ. FT.	l .							4
CLG.	CEILING		HEADER HEIGHT	SHMR.	SHOWER		DETAIL REFERENCE	STRUCTURAL ENGINEER :		ELEVATION 'C'	113	SQ. FT.	l .				N.E.C.	NATIONAL ELECTRICAL C		4
CLR.	CLEAR	H.H. HS		SIM.	SIMILAR	(#)	— DETAIL NUMBER	SUMMIT ENGINEERING		ELEVATION 'D'	181	SQ. FT.						INTERNATIONAL CONFER		4
CONC.	CONCRETE	HS	HORIZONTAL SLIDER	SL.	SLIDING		— DETAIL NOMBER	120 PENMARC DRIVE, SUITE 108   RALEIGH NC, 27603	PATIO AREA(S)				l .					OF BUILDING OFFICIALS		4
CPT.	CARPET	I.L.O.	IN LIEU OF	SL. GL.	SLIDING GLASS	ADIY-	SHEET NUMBER	TEL. (919) 380-9991		8'x12' COVERED	96	SQ. FT.	PRO.	JECT DESC	RIPTION	<u>.N:</u>	A.S.T.M.	AMERICAN SOCIETY FOR TESTING MATERIALS	ξ	4
C.T.	CERAMIC TILE	INSUL.	INSULATION	STD.	STANDARD			FAX. (919) 380-9993		8'x26'-8" COVERED	213	SQ. FT.	ISTOR	Y SINGLE FAMIL	Y DETACHE	ED .	N.F.P.A.	NATIONAL FIRE PROTECT	TION	4
D.	DRYER	INT.	INTERIOR	5.V.	SHEET VINYL				DECK AREA(S)		96			NTIAL PLAN W	4 ELEVATION	<b>⊅</b> N	Na aram.	ASSOCIATION	IION	4
DBL.	DOUBLE	LAM.	LAMINATED	TEMP.	TEMPERED GLASS		KEYNOTE REFERENCE	TRUSS DESIGN		OPEN 8'x12' OPEN 8'x26'-8"	96 213	50. FT. 50. FT.	TYPES				A.N.S.I.	AMERICAN NATIONAL ST.	ANDARDS	4
D.G.	DUAL GLAZED	LAV.	LAVATORY	THK.	THICK			BUILDERS FIRST SOURCE		SCREENED-IN 8'x12'	96	50. FT.	ا مددا	BANCY				INSTITUTE		4
DIA.	DIAMETER	LUM.	LUMINOUS	T.O.C.	TOP OF CURB	##	$\longrightarrow$	BRIEDERS FIRST SOURCE		SCREENED-IN	2 3	50. FT.		<u>JPANCY:</u>			I.E.C.C.	INTERNATIONAL ENERGY CONSERVATION CODE		4
DIM.	DIMENSION	M.C.	MEDICINE CABINE		TOP OF PLATE		REFERENCE NUMBER			8'×26'-8"	215	<b>50</b> . ⊢1.	R3				1.0.0.	INTERNATIONAL CODE C	OUNCIL	4
DISP.	DISPOSAL	MFR.	MANUFACTURER	T.O.S.	TOP OF SLAB				SUNROOM AREA	8'x 2'	96	SQ. FT.	l				U.L.	UNDERWRITERS LABORA		4
D.L.	DIVIDED LIGHT	MIN.	MINIMUM	TYP.	TYPICAL		OFFSET REFERENCE		LOFT	8 x 12	475	50. FT.	CONS	<u>STRUCTION</u>	TYPE:				·	4
DP.	DEEP		MOUNTED	U.N.O.	UNLESS NOTED				LOFT WITH BORM.	4	647	50. FT.	V-B							4
DR.	DOOR	MTD.	METAL	U.N.O.	OTHERWISE	<b> </b>	<ul> <li>DIFFERENTIAL IN FLOOR LEVEL.</li> </ul>													4
D.S.		MTL.	NOT IN CONTRACT	- V.P.	VAPOR PROOF		OR FINISH SURFACE						1			DIZIGIO	NT TI	CE		4
D.S. DTL.	DOWNSPOUT	N.I.C.	NOT TO SCALE	M.	MASHER										K	EVISIO	N L	51		4
	DETAIL	N.T.S.		W	MITH		REVISION REFERENCE													4
D.W.	DISHWASHER EACH	0/	OVER ON CENTER	WD.	WOOD		REVISION NUMBER						DELTA	DATE S	HEETS REVIS	SED			LOG NUMBER	4
EA.		0.C. OPT.	OPTIONAL	NDW.	MINDOM	/#∖←	REFER TO TITLE SHEET													4
ELEV. EQ.	ELEVATION EQUAL	0.5.A.	OUTSIDE AIR	M/H	MATER HEATER		REFER TO TITLE SHEET						- 1	03/16/16 1.1,	1.2, 1.3, 1.4,	, 2.1, 2.2, 2.3, 3.62, 3.6	C3, 3.C4, 3.C	5, 4.1, 5.1, 5.2, 5.4	NCI60I3P	4
EXH.	EXHAUST	D.S.A.	PROPERTY LINE	M.I.	WROUGHT IRON								3	09/26/16 1.1,	, 1.2, 1.3, 1.4,	2.1, 4.1 4.2, 4.3, 4.4,	5.1, 5.4, 5.6		NCI6033P	4
EXT.	EXTERIOR	P.B.	PUSH BUTTON	M.P.	WEATHER PROOF								_ =	08/15/18 TS	. 11 13 14	2.I. 3.B5, 3.C5, 3.D5,	415153		NCI8025NCP	4
FAU	FORGED AIR UNIT	PH.											<u> </u>		,,,, .		,		110100251101	4
F.G./FX.	FIXED GLASS	PLT.	PHONE PLATE										6	<i>0</i> 3/15/19 T.9	2., GNI. GN2	2, GNS, S.AI, S.A5, S.B.	2, 3.B6, 3.C2	2, 3.C6, 3.D2, 3.D6,		4
F.G.	FUEL GAS	PLYMD.	PLYWOOD			l cc	ALE NOTE							5.1	, 5.4, 8.AI -	- 8.D8, 9.AI - 9.D4			NCI90I5NCP	4
FIN.		PR.	PAIR			SCA	ALE NOIE						7	03/22/I9 TS		. 2.I. 3.A3. 3.BI. 3.B4.	3013043	DI 3D4 51	NCIGOITNOP	4
FLR.	FINISH FLOOR	P.T.D.F.	PRESSURE										<u> </u>							4
		P.I.D.F.	TREATED										8	05/06/19   TS	, 8.A9, 8.AI	10, 8.B9, 8.B10, 8.C9,	, 8.CIO, 8.D9	, 8.DIO	NC1903INCP	4
FLR. LIN			DOUGLAS FIR										9	07/01/19 1.1,	, 1.2, 1.4, 2.1-	-2.6, 3.AI-3.D6			NCI9043INCP	4
FLUOR.	FLUORESCENT	R.	RISER										10	07/25/19 1.1-	11 8 41 8	AZ & AZ & BI & BZ	984 961 9	3.C3, 8.C9, 8.DI, 8.D3,	NCI9056NCP	4
FR. DR.	FRENCH DOOR	RAD.	RADIUS			I PO	X IS I" SQ. THEN SCALE IS 1/4" = 1'-0"						<u> </u>						NOTIONAL	4
F.M.C.	FLOOR MATERIAL CHANGE	R.A.G.	RETURN AIR GRILI	L										8.	29, 9.AI, 9.A	A3, 9.B1, 9.B3, 9.C1, 9.	.C3, 9.D1, 9.D3	3		4
FTG.	FOOTING	REF.	REFRIGERATOR			I IF BC	X IS 1/2" SQ. THEN SCALE IS 1/8" = 1'-0"						ll ll	08/I3/I9 TS	, 3.A2, 3.BE	3, 3.63, 3.D3			NCI9045NCP	
GA.	GAUGE	RE/S	RE-SAWN REVERSE											8.	A5, 8.A6, 8	3.B5, 8.B6, 8.C5, 8.C6	, 8.D5, 8.D6			1
GAR. DIS	SP. GARBAGE DISPOSAL	PM	ROOM																	4
4		Part.	NOO!"			1		I .	1					1					1	4

**CONSULTANTS** 

ISSUE DATE: 11/09/15
PROJECT No.: 1350999:57
DIVISION MGR.: D.S.
REVISIONS: 08/13/19

DIVISION REVISIONS
NCI9015NCP/ 03/15/19 / CTD

DIVISION REVISIONS
NCI9017NCP/ 03/22/19 / CTD

DIVISION REVISIONS
NCI903INCP/ 05/07/19 / CTD

DIVISION REVISIONS
NC19056NCP/ 07/25/19 / FA

DIVISION REVISIONS
NC19045NCP/ 08/13/19 / FAE

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VIEWED BY:

1. \_\_\_\_\_\_
2. \_\_\_\_\_

PLAN: 148.1869-R

TS

spec. Level 1
RALEIGH-DURHAM
50' SERIES

# GENERAL REQUIREMENTS

- THE WORD 'CONTRACTOR' AS USED HEREIN SHALL MEAN THE GENERAL CONTRACTOR, SUBCONTRACTORS AND ALL PERSONS DIRECTLY OR INDIRECTLY EMPLOYED BY ANY OF THEM.
- 2. CONTRACTOR SHALL PERFORM THE WORK IN ACCORDANCE WITH THE FOLLOWING APPLICABLE CODE REQUIREMENTS:
  - A. ALL LAMS, STATUTES, THE MOST RECENT BUILDING CODES, OF ALL PUBLIC ANTIONING, SAND LAWFUL ORDERS OF ALL PUBLIC ANTHORITIES HAVING JURISDICTION OVER OWNER, CONTRACTOR, ANY SUBCONTRACTOR, THE PROJECT, THE PROJECT SHE, THE WORK, OF THE PROSECUTION OF THE MORK.
  - B. 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.
- 5. CONTRACTOR SHALL CAREFULLY STUDY AND REVIEW THE CONSTRUCTION DOCUMENTS AND INFORMATION FURNISHED BY OWNER, AND SHALL PROMPTLY REPORT IN WAITING TO OWNERS REPRESENTATIVE ANY ERRORS, INCONSISTENCIES, OR OMISSIONS IN THE CONSTRUCTION DOCU-MENTS OR INCONSISTENCIES WITH APPLICABLE CODE REQUIREMENTS OBSERVED BY THE CONTRACTOR.
- 4. IF CONTRACTOR PERFORMS MORK 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.
- 5. CONTRACTOR SHALL PROVIDE CERTIFICATES OF INSURANCE ACCEPTABLE TO OWNER PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR SHALL TAKE FIELD MEASUREMENTS, VERIFY FIELD CONDITIONS, AND CAREFULLY COMPARE WITH THE CONSTRUCTION DOCUMENTS SUCH FIELD MEASUREMENTS, CONDITIONS, AND OTHER INFORMATION KNOWN TO CONTRACTOR BEFORE COMMENCING THE HORK, ERRORS, INCONSISTENCIES, OR OMISSIONS DISCOVERED AT ANY TIME SHALL BE PROMPTLY REPORTED IN MRITING TO THE ONNER.
- 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.
- 4. SUB-CONTRACTORS SHALL INSURE THAT ALL MORK IS DONE IN A PROFESSIONAL MORKMANLIKE MANNER BY SKILLED MECHANICS AND SHALL REFLACE ANY MATERIALS OR ITEMS DAMAGED BY SUB-CANTRACTOR'S PERFORMANCE. SUB-CONTRACTOR'S AND SUPPLIERS ARE HEREBY NOTHERD THAT THEY ARE TO CONFER AND COOPERATE FULLY MITH EACH OTHER DURING THE COURSE OF CONSTRUCTION TO DETERMINE THE EXACT EXTENT AND OVERLAP OF EACH OTHER'S MORK AND TO SUCCESSFULLY COMPLETE THE EXECUTION OF THE WORK, ALL SUB-CONTRACTOR WORKMANSHIP SHALL BE OF GUALITY TO PASS INSPECTIONS BY LOCAL AUTHORITIES, LENDING INSTITUTIONS, ARCHITECT OR BUILDER, ANY ONE OR ALL OF THE ABOVE MENTIONED INSPECTORS MAY INSPECT WORKMANSHIP AT AUTHORITIES, LENDING INSTITUTIONS, ARCHITECT OR BUILDER, ANY ONE OR ALL OF THE ABOVE MENTIONED INSPECTORS MAY INSPECT WORKMANSHIP AT AUTHORITIES, LENDING INSTITUTIONS, NEEDED TO ENHANCE THE QUALITY OF BUILDING MILL BE DONE IMMEDIATELY. EACH SUBCONTRACTOR, UNLESS SPECIFICALLY EXEMPTED BY THE TERMS OF HIS/HERS SUB-CONTRACT AGREEMENT, SHALL BE RESPONSIBLE FOR CLEANING UP AND REMOVING FROM THE JOB SITE ALL TRASH AND DEBRIS MILL BE REMOVED FROM THE SITE.
- O. APPROVAL BY THE BUILDING INSPECTOR DOES NOT MEAN APPROVAL OR ALLOWABLE FAILURE TO COMPLY WITH THE PLANS AND SPECIFICATIONS. ANY DESIGN WHICH FAILS TO BE CLEAR OR IS AMBIGUOUS MUST BE REFERRED TO THE ARCHITECT OR ENGINEER FOR INTERPRETATION OR CLARIFICATION.
- ALL EQUIPMENT AND MATERIALS FURNISHED AND INSTALLED UNDER THESE PLANS 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.
- 2. ALL TRADE NAMES AND BRAND NAMES CONTAINED HEREIN ESTABLISH QUALITY STANDARDS. SUBSTITUTIONS ARE PERMITTED, WITH PRIOR APPROVAL BY THE OWNERS REPRESENTATIVE. THE CONTRACTOR SHALL SUBMIT FOR THE ARCHITECT'S AND BUILDERS'S APPROVAL ALL MATERIALS OR EQUIPMENT WHICH IS CONSIDERED "OR EQUIAL" TO THAT SPECIFIED.
- IS. 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 OF THE FINAL CONSTRUCTION SET WHICH WILL CONTAIN NO "BID SET" DESIGNATIONS. CONSTRUCTION DOCUMENTS IDENTIFIED AS "BID SET" ARE NOT TO BE CONSTRUED AS BEING THE COMPLETED OF FINAL DRAWINGS AND THEY SHOULD NOT IN ANY WAY BE USED AS SUCH.
- ALL STANDARD NOTES CONTAINED HEREIN ARE TYPICAL UNLESS NOTED OTHERWISE.
- 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.
- IT. SEE ARCHITECTURAL, STRUCTURAL, ELECTRICAL, AND MECHANICAL DRAWINGS FOR PITS, TRENCHES, ROOF OPENINGS, DEPRESSIONS, ETC. NOT SHOWN ON THE OTHER DRAWINGS.
- 18. 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 ITEMS ARE FOUND THE ARCHITECT, CIVIL ENGINEER, AND SOUR BURIED BURIED INVESTIGATION.
- CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO FULLY PROTECT ADJACENT PROPERTIES.
- REFER TO THE SOILS REPORT AS PREPARED BY THE GEOTECHNICAL ENGINEER.
- 4. REFER TO CIVIL ENGINEER'S CURRENT GRADING AND PLOT PLANS.

# SITE WORK (continued)

- REFER TO THE LANDSCAPE ARCHITECT'S CURRENT GRADING PLAN AND CONSTRUCTION DOCUMENTS.
- ALL FOOTINGS SHALL REST ON FIRM NATURAL SOIL OR APPROVED COMPACTED FILL. REFER TO GEOTECHNICAL REPORT.
- 7. EXCAVATIONS FOR FOOTINGS SHALL BE MADE TO THE WIDTH, LENGTH, AND DEPTH REQUIRED AND FINISHED WITH LEVEL BOTTOMS.
- 8. 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.
- II. ALL FINISH GRADES TO DRAIN AWAY FROM THE BUILDING FOOTINGS.
- 12. THERE SHALL BE NO ON-SITE WATER RETENTION.
- 13. THERE SHALL BE NO DRAINAGE TO ADJACENT PROPERTY.
- FOR ONSITE CONTSRUCTION, PLANS TO COMPLY WITH NECESSARY INSPECTIONS APPROVED BY THE BUILDING OFFICIAL.
- 15. 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 REPORT FOR THE PERFORMANCE REQUIREMENTS FOR CONCRETE FOUNDATIONS.
- CONCRETE SHALL BE PROPORTIONED TO PROVIDE AN AVERAGE COMPRESSIVE STREMGH AS PRESCRIBED IN THE N.C.-R, AS WELL AS SATISPY THE DURABILITY CRITERIA OF THE N.C.-R
- MIXING OF CONCRETE SHALL BE PERFORMED IN ACCORDANCE WITH ACI 318, SECTION 5.8.
- 4. THE DEPOSITING OF CONCRETE SHALL COMPLY WITH THE PROVISIONS ACI 318, SECTION 5.10.
- 5. THE CURING OF CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318. SECTION 5.II.
- ALL FORM WORK SHALL BE DESIGNED, CONSTRUCTED, UTILIZED, AND
- CONDUIT, PIPES AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO CONCRETE AND WITHIN 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
- IO. TOP OF CONCRETE SLABS TO BE A MINIMUM 4" W MASONRY VENEER 6" ELSEWHERE (8" H.U.D.) ABOVE FINISH GRADE.
- FOUNDATION WIDTHS, DEPTHS, AND REINFORCING, AS SHOWN ON PLANS, ARE SUPERCEDED BY ANY LOCAL CODES OR ORDINANCES WHICH REQUIRE INCREASES OF THE SAME.
- 12. ALL REINFORCEMENT, CONDUIT, OVILET BOXES, ANCHORS, HANGERS, SLEEVES, BOLTS OR O'THER BYBEDDED MATERIALS AND ITEMS MUST BE SECURED AND APPROPRIATELY FASTENED IN THEIR PROPER LOCATIONS PRIOR TO HE PLACEMENT OF CONCRETE. SUBJCONTRACTOR 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-TENSION DESIGN.
- B. 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 OF N.C.-R, AND SECTIONS 6.I AND 6.2 OF ACI 530/ASCE 5/TMS 402.
- 5. 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 NC.-R
- 4. MORTAR FOR USE IN MASONRY CONSTRUCTION SHALL COMPLY WITH ASTM C 270. THE TYPE OF MORTAR SHALL BE IN ACCORDANCE WITH THE NC.-R AND SHALL MEET THE PROPORTION SPECIFICATIONS OR THE PROPERTY SPECIFICATIONS OF ASTM C 270
- GROUT SHALL CONSIST OF CEMENTITIOUS MATERIAL AND AGGREGATE IN ACCORDANCE WITH ASTM C 416 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-404-071 (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 IN A RUNNING BOND PATTERN.
- 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 SPECIFICATIONS.
- 2. ALL STRUCTURAL STEEL SHALL CONFORM TO AISC/CRED
- 5. ANCHOR RODS SHALL BE SET ACCURATELY TO THE PATTERN AND DIMENSIONS CALLED FOR ON THE PLANS. THE PROTRUSION OF THE THREADED ENDS THROUGH THE CONNECTED MATERIAL SHALL BE SUFFICIENT TO FULLY ENGAGE THE THREADS OF THE NUTS, BUT SHALL NOT BE GREATER THAN THE LENGTH OF THE THREADS ON THE BOLTS
- 4. FASTENERS FOR PRESERVATIVE-TREATED AND FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC COATED SALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER, VERIETY ACCEPTABLE FASTENERS PER CHEMICALS USED IN PRESSURE PRESERVITIVELY TREATED WOOD W N.C.-R. FASTENINGS FOR WOOD FOUNDATIONS SHALL BE AS REQUIRED IN AF&PA TECHNICAL REPORT NO. T.

# WOOD & FRAMING

# LUMBER

- 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 WITH TABLE RSO2J.
- 3. ALL LUMBER SHALL MEET THE STANDARDS OF QUALITY AS STATED IN THE N.C.-R
- LIMBER AND PLYWOOD REQUIRED TO BE PRESSURE PRESERVATIVELY TREATED IN ACCORDANCE WITH THE NO.-R AND SHALL BEAR THE GUALITY MARK OF AN APPROVED INSPECTION AGENCY THAT MAINTAINS CONTINUING SUPERVISION, TESTING AND INSPECTION OVER THE GUALITY OF THE PRODUCT AND THAT HAS BEEN APPROVED BY AN ACCREDITATION BODY THAT COMPLIES WITH THE REQUIREMENTS OF THE AMERICAN LUMBER STANDARD COMMITTEE TREATED MOOD PROGRAM.
- 5. 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. AND ASTM D 3757.

# PROTECTION AGAINST DECAY & TERMITE

- . IN AREAS SUBJECT TO DECAY DAMAGE AS ESTABLISHED BY THE N.C.-R
  THE FOLLOWING LOCATIONS SHALL REQUIRE THE USE OF NATURALLY
  DIRABLE WOOD OR WOOD THAT IS PRESERVATIVE TREATED
  IN ACCORDANCE NITH AVERA UI FOR THE SPECIES, PRODUCT, PRESERVATIVE
  AND END USE, PRESERVATIVES SHALL BE LISTED IN SECTION 4 OF AMPA UI
- WOOD JOISTS OR THE BOTTOM OF WOOD FLOOR WHEN CLOSER THAN 16 INCHES, OR WOOD GIRDERS WHEN CLOSER THAN 12 INCHES TO THE EXPOSED GROUND IN CRANL SPACES OR UNEXCAVATED AREAS LOCATED WITHIN THE PERIPHERY OF THE BUILDING FOUNDATION.
- ALL EXTERIOR SILLS &PLATES THAT REST ON CONCRETE OR MASONRY 5. EXTERIOR FOUNDATION WALLS.
- SILLS AND SLEEPERS ON A CONCRETE OR MASONRY, UNLESS THE SLAB THAT IS IN DIRECT CONTACT WITH THE GROUND IS SEPARATE! FROM THE GROUND BY AN APPROVED IMPERVIOUS MOISTURE BARRIER.
- THE ENDS OF WOOD GIRDERS ENTERING EXTERIOR MASONRY OR CONCRETE WALLS HAVING CLEARANCES OF LESS THAN 0.5 INCH ON TOPS, SIDES AND ENDS.
- WOOD 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 ROOPS THAT ARE EXPOSED TO THE MEATHER, SUCH AS CONCRETE OR MAGONRY SLAB, UNLESS SEPARATED FROM SUCH FLOORS OR ROOPS BY ANIMPERVIOUS MOISTURE BARRIER.
- MOOD FURRING STRIPS OR OTHER WOOD FRAMING MEMBERS ATTACHED 2. DIRECTLY TO THE INTERIOR OF EXTERIOR MASONRY WALLS OR CONCRETE WALLS BELOW GRADE EXCEPT WHERE AN APPROVED YAPOR RETARDER IS APPLIED BETWEEN THE WALL AND THE FURRING 3. STRIPS OR FRAMING MEMBERS.
- 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 MOULD FREVENT MOISTURE OR WATER ACCUMILATION ON THE SURFACE OR AT JOINTS BETWEEN IMPMERS 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)

# SHEATHING

- 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 PLYMOOD FLOOR SHEATHING PANELS AND FOR DIAPHRAGM NAILING AND ADHESIVE REQUIREMENTS.
- ALL VERTICAL JOINTS OF PANEL SHEATHING SHALL OCCUR OVER, AND BE FASTENED TO, COMMON STUDS. HORIZONTAL JOINTS IN BRACED WALL PANELS SHALL OCCUR OVER, AND BE FASTENED TO, COMMON BLOCKING OF A MINIMUM OF I 1/2 INCH THICKNESS.
- WHERE APPLICABLE, REFER TO THE SHEAR WALL SCHEDULE FOR REQUIRED STRENGTH, GRADE, AND THICKNESS OF PLYNOOD SHEAR PANELS AND FOR REQUIRED SHEAR WALL NAILING SCHEDULE.
- 1. IN ONE- AND TWO-FAMILY DIRELLING CONSTRUCTION USING VINYL OR ALIMINUM AS A SOFFIT MATERIAL, THE SOFFIT MATERIAL SHALL BE SECURELY ATTACHED TO FRAMING MEMBERS AND USE AN UNDERLAYMENT MATERIAL OF EITHER FIRE RETARDANT TREATED WOOD, 23/9.2 INCH WOOD SHEATHING OR 5/8 INCH SYPSUM BOARD, VENTING REQUIREMENTS APPLY TO BOTH SOFFIT AND UNDERLAYMENT AND SHALL BE PER SECTION ROOG OF THE NORTH CAROLINA RESIDENTIAL CODE. WHERE THE PROPERTY LINE IS 10 TEET OR MORE FROM THE BUILDING FACE, THE PROVISIONS OF THIS CODE SECTION DO NOT APPLY.

# FLOOR FRAMING

- . ALL FLOOR JOISTS SHALL BE DESIGNED 1-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

- 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
- 5. TRUSS MEMBERS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT THE APPROVAL OF A REGISTERED DESIGN PROFESSIONAL. ALTERATIONS RESULTING IN THE ADDITION OF LOAD (E.G. HYAC EQUIPMENT, WATER HEATER) THAT EXCEEDS THE DESIGN LOAD FOR THE TRUSSES SHALL NOT BE PERMITTED HITHOUT MRITTEN VERFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.
- ALL CALCULATIONS AND SHOP DRAWINGS SHALL BE SIGNED BY A PROFESSIONAL EMBINEER 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.

# MALL 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 TO THE WALL.
- 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 INTERSECTIONS WITH BEARING PARTITIONS, END JOINTS IN TOP PLATES SHALL BE OFFSET AT LEAST 24 INCHES. JOINTS IN TOP DOUBLE OVER STUDS, PLATES SHALL BE NOT COCUR OVER STUDS, PLATES SHALL BE NOT LESS THAN 2-INCHES NOMINAL THICKNESS AND HAVE A WIDTH AT LEAST EQUAL TO THE WIDTH OF THE STUDS. SEE
- 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 NEMBERS SHALL BEAR WITHIN 5 INCHES OF THE STUDS BENEATH, SEE EXCEPTIONS.
- 6. STUDS SHALL HAVE FULL BEARING ON NOMINAL 2 BY OR LARGER PLATE OR SILL HAVING A WIDTH AT LEAST EQUAL TO THE WIDTH OF THE STUDS.
- 1. INTERIOR NONBEARING WALLS SHALL BE PERMITTED TO BE CONSTRUCTED MITH 2-INCH-BY-3-INCH STUDS SPACED 24 INCHES ON CENTER OR, WHEN NOT A PART OF A BRACED MALL LINE, 2-INCH-BY-4-STUDS SPACED 16 INCHES ON CENTER, INTERIOR NONBEARING WALLS SHALL BE CAPPED WITH AT LEAST A SINGLE TOP PLATE, INTERIOR NONBEARING WALSHALL BE FIREBLOCKED IN ACCORDANCE WITH THE N.C.-R.

# WOOD & FRAMING (continued)

- 8. DRILLING AND NOTHCING OF STUDS SHALL BE IN ACCORDANCE WITH THE
  - I. 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 NONBERNIES 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 NOT OCCUR IN THE BOTTOM OR TOP 6 INCHES OF BEARING STUDS.
- 2. DRILLING, ANY STID MAY BE BORED OR DRILLED, PROVIDED THAT THE DIAMETER OF THE RESULTING HOLE IS NO MORE THAN 60 PERCENT OF THE STID WIDTH, THE EDGE OF THE HOLE IS NO MORE THAN 5/6" INCH TO THE EDGE OF THE STID, AND THE HOLE SHALL NOT BE CLOSER THAN 6 INCHES PROM AN ADJACENT HOLE OR NOTICH. HOLES NOT EXCEDING 3/4 INCH DIAMETER CAN BE AS CLOSE AS I I/2 INCHES NOT EXCEDING 3/4 INCH DIAMETER CAN BE AS CLOSE AS I I/2 INCHES ON CENTER SPACING, STUDS LOCATED 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.
- S. CUTTING AND NOTCHING OF STUDS SHALL BE PERMITTED TO BE INCREASED TO 65 PERCENT OF THE WIDTH OF THE STUD IN EXTERIOR AND INTERIOR NALLS AND BEARING PARTITIONS, PROVIDED THAT ONE OF THE FOLLONING CONDITIONS ARE MET:

  (a) THE WALL SECTION IS REINFORCED WITH 1/2-INCH EXTERIOR GRADE PLYWOOD OR EQUIVALENT REINFORCEMENT ON THE NOTCHED SIDE OF THE WALL. PLYWOOD, IF USED, SHALL REACH FROM THE FLOOR TO CEILING AND AT LEAST ONE STUD FIRTHER ON 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 WALL. PLYWOOD, IF USED, SHALL REACH FROM THE FLOOR TO COUNTER-TOP HEIGHT AND AT LEAST ONE STUD FIRTHER ON EACH SIDE OF THE WALL. PLYWOOD, IF USED, SHALL REACH FROM THE FLOOR TO COUNTER-TOP HEIGHT AND AT LEAST ONE STUD FIRTHER ON EACH SIDE OF THE SECTION THAT HAS BEEN NOTCHED OR CUT.
- I. WHEN PIPING OR DUCTHORK IS PLACED IN OR PARTIALY IN AN EXTERIOR OR INTERIOR LOAD-BEARING WALL, NECESSITATION CUTTING, DRILLING OR NOTCHING OF THE TOP PLATE B MORE THAN 50 PERCENT OF ITS WIDTH A GALYANIZED METAL TIE OF NOT LESS THAN 0.054 INCH THICK AND I 1/2\* INCHES MIDE SHALL BE FASTENED ACROSS AND TO THE PLATE AT EACH SIDE OF THE OPENING WITH NOT LESS THAN EIGHT IOD NAILS HAVING A MINIMM LENGTH OF I 1/2 INCHES (38 MM) AT EACH SIDE OR EQUIYALENT. THE METAL TIE MUST EXTEND A MINIMM OF 6 INCHES PAST THE OPENING.
- IO. HEADERS SHALL MEET THE REQUIREMENTS OF THE N.C.-R
- II. PROVIDE LATERAL BRACING PER THE N.C.-R
- FOUNDATION CRIPPLE WALLS SHALL MEET THE REQUIREMENTS OF THE N.G.-R. CODE
- 14. WOOD STUD WALLS SHALL BE BRACED AS REQUIRED BY THE N.C.-R
- 15. UNLESS COVERED BY INTERIOR OR EXTERIOR MALL COVERINGS OR SHEATHING MEETING THE MINIMM REQUIREMENTS OF THIS CODE, ALL STUD PARTITIONS OR MALLS WITH STUDS HAVING A HEIGHT-TO-LEAST THICKNESS RATIO EXCEEDING SO SHALL HAVE BRIDGING NOT LESS THAN 2 INCHES IN THICKNESS AND OF THE SAME WIDTH AS THE STUDS FITTED SMUCLY 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 WOOD-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 ONE THICKNESS OF 23/92-INCH WOOD STRUCTURAL PANELS WITH JOINTS BACKED BY 23/92-INCH WOOD STRUCTURAL PANELS OR ONE THICKNESS 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 WALLS CONSTRUCTED USING PARALLEL ROYS OF STUDG OR STAGGERED STUDS. LOOSE FILL INSULATION MATERIAL SHALL NOT BE USED AS A FIREBLOCK UNLESS SPECIFICALLY TESTED IN THE FORM AND MANIER INTENDED FOR USE TO DEMONSTRATE IT'S ABILITY TO REMAIN IN PLACE AND TO RETARD THE SPREAD OF FIRE AND HOT GASSES.
- . 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 JOSO SOUARE FEET. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS, WHERE THE ASSEMBLY BE 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.
- HANDRAIL AND GUARDRAIL

  I. GUARDRAIL OF 36" HIGH MIN. SHALL BE PROVIDED WHERE FINISHED GRADE
  OR FLOOR BELON RAISED AREA EXCEEDS 30".
- HANDRAIL AT STAIRS SHALL BE PROVIDED WHEN 4 OR MORE STAIR RISERS ARE REQUIRED.



# NORTH CAROLINA

50' SERIES

KB HOME

NORTH CAROLINA DIVISION

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2018 NORTH
CAROLINA STATE
BUILDING
CODES

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PROJECT No.: 1350999:57

DIVISION MGR.: D.S.

REVISIONS: 08/13/19

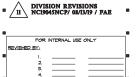
DIVISION REVISIONS
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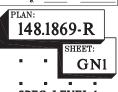
DIVISION REVISIONS
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spec. level 1
RALEIGH-DURHAM
50' SERIES

# THERMAL & MOISTURE PROTECTION

- PROVIDE ALL FLASHING , COUNTER-FLASHING, BITUTHENE, MEMBRANE WATERPROOFING, SHEET METAL, CAULKING, SEALANTS, ELASTOMERIC WALKING SURFACES, AND RAIN GUITERS AND/OR DIVERTERS MHERE REQUIRED, 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 MINIMM 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/ BUILDER AND ARCHITECT.
- 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 A DAMPPROOFED IN ACCORDANCE WITH THE N.C.-R
- PARAPET WALLS SHALL BE PROPERLY COPED WITH NONCOMBUSTIBLE, MEATHERPROOF MATERIALS OF A MIDTH NO LESS THAN THE THICKNESS OF THE PARAPET MALL. PARAPET COPING SHALL EXTEND 2" MINIMUM DOWN THE FACES OF THE PARAPET.

# FLASHING

- APPROVED CORROSION-RESISTANT FLASHING SHALL BE APPLIED APPROVED CORROSION-RESISTANT FLASHING SHALL BE APPLIED SHINGLEF-ASHING HAVE TO FREVENTE STRIFT OF MATER INTO THE WALL I2.

  CAVITY OR PENETRATION OF WATER TO THE BUILDING STRICTURAL REAdming COMPONENTS, SELF-ADHRED MEMBRANES USED AS FLASHING IN SHALL COMPLY INITH AAMA TII. FLUID-APPLIED MEMBRANES USED AS FLASHING IN SHALL COMPLY INITH AAMA TII. THE FLASHING SHALL SEXTENCE WALL SHINGL COMPLY INITH AAMA TII. THE FLASHING SHALL SEXTENCE WALL FINISH, ALUMINUM FLASHING SHALL SHIP OF THE EXTENCE WALL FINISH, ALUMINUM FLASHING SHALL SHIP OF THE EXTENCE WALL FINISH, ALUMINUM FLASHING SHALL SHALL SHIP OF THE EXTENCE WALL FINISH, ALUMINUM FLASHING SHALL SHALL SHIP OF THE EXTENCE WALL FINISH, ALUMINUM FLASHING SHALL SHIP OF THE WALL SHALL SHIP OF THE EXTENCE WALL FINISH, ALUMINUM FLASHING SHALL SHIP OF THE WALL SHIP OF THE WALL SHIP OF THE WALL SHIP OF THE WALL SHIP OF THE EXTENCE WALL FINISH, ALUMINUM FLASHING SHALL SHIP OF THE WALL SHIP NSTALLED AT ALL OF THE LOCATIONS STATED IN N.C.-R
- 2. AT ALL WINDOW AND DOOR OPENINGS USE FORTIFIBER WATER-RESISTIVE BARRIERS, I.C.C. ESR-1027, INSTALLED PER MANUFACTURER'S SPECIFICATIONS, OR APPROVED EQUAL.
- ALL BEAMS, OUTLOOKERS, CORBELS, ETC. PROJECTED THROUGH EXTERIOR WALLS OR PENETRATING EXTERIOR FINISHES SHALL BE FLASHED WITH A MINIMUM O.O.I9-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 (SMACNA). THE ARCHITECTURAL SHEET METAL ANNUAL, AND SEALANT, MATERPROOFING 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 INLESS OTHERNISE NOTED IN THESE NOTES, PLANS, OR MANUFACTURER'S SPECIFICATIONS.
- SHEET ALUMINUM SHALL CONFORM WITH FEDERAL SPECIFICATIONS QQ-A-359 AND A.S.T.M. B209 ALLOY 3003.
- FABRICATE SHEET METAL WITH FLAT LOCK SEAMS AND SOLDER WITH TYPE AND FLUX RECOMMENDED BY MANUFACTURER. SEAL ALLMINUM SEAMS WITH EPOXY METAL SEAM CEMENT. WHERE REQUIRED FOR STRENGTH, RIVET SEAMS AND JOINTS.
- SHOP FABRICATE TO THE GREATEST EXTENT POSSIBLE IN ACCORDANCE WITH APPLICABLE STANDARDS TO PROVIDE A PERMANENTLY WATER-PROOF, MEATHER 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 MANUFACTURER'S INSTALLATION INSTRUCTIONS. BASE FLASHING SHALL BE OF EITHER CORROSION-RESISTANT METAL. OF MINIMUM MOMINAL, O'014-INCH THICKNESS OR MINERAL. SURFACE ROLL. ROOFING KEIGHING A MINIMUM OF TI POUNDS PER IOO SQUARE FEET, CAP FLASHING SHALL BE CORROSION-RESISTANT METAL. OF MINIMUM NOMINAL 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
- A CRICKET OR SADDLE SHALL BE INSTALLED ON THE RIDGE SIDE OF ANY CHIMNEY OR PENETRATION MORE THAN 30 INCHES WIDE AS MEASURED PERPENDICULAR TO THE SLOPE. CRICKET OR SADDLE COVERINGS SHALL BE SHEET NETAL OR OF THE SAME MATERIAL AS THE ROOF COVERING. PROVIDE FLASHING AT THE INTERSECTION OF CRICKET OR SADDLE AND THE CHIMNEY.
- FLASHING AGAINST A VERTICAL SIDEMALL SHALL BE BY THE STEP-FLASHING METHOD PER NC-R.
- FLASHING AGAINST A VERTICAL FRONT WALL, AS WELL AS SOIL STACK ASPHALT SHINGLE MANUFACTURER'S PRINTED INSTRUC
- AT THE JUNCTURE OF ROOF VERTICAL SURFACES, FLASHING AND COUNTERFLASHING SHALL BE PROVIDED IN ACCORDANCE WITH THE N.C.-R. AND THE MANUFACTURER'S INSTALL ATION INSTRUCTIONS AND NHERE OF METAL, SHALL NOT BE LESS THAN O.O.I. INCH (NO. 26 GALVANIZED
- 16. VALLEY FLASHING FOR CONCRETE TILE 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 N.C.-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 THE MANUFACTURER'S IDENTIFYING MARKS AND APPROVED TESTING AGENCY LABELS WHEN REQUIRED. BULK SHIPMENTS OF MATERIALS SHALL BE ACCOMPANIED BY THE SAME INFORMATION ISSUED IN THE FORM OF A CERTIFICATE OR ON A BILL OF LADING BY THE MANUFACTURER
- COMPOSITION ROOFING SHINGLES SHALL BE OF ASPHALT OR APPROVED RELATED MATERIALS AND MEET THE REQUIREMEN OF THE N.C.-R
- UNDERLAYMENT FOR ASPHALT SHINGLES SHALL CONFORM TO ASTM D 226 TYPE I, ASTM D 4564, TYPE I, OR ASTM D 6751. SELF-ADHERING POLYMER MODIFIED BITUMEN SHEET SHALL COMPLY WITH ASTM D 19TO
- ASPHALT SHINGLES SHALL COMPLY WITH ASTM D 225 OR ASTM D 3462.
- FASTENERS FOR ASPHALT SHINGLES SHALL BE GALVANIZED STEEL, STAINLESS STEEL, ALLMINUM, OR COPPER ROOFING NAILS, MINIMUM 12 GAGE SHANK MITH A MINIMUM 3/6 INCH DIAMETER HEAD, ASTM F 1667, OF A LENGTH TO PENETRATE THROUGH THE ROOFING MATERIALS AND A MINIMUM OF 3/4 INCH INTO THE ROOF SHEATHING. INHERE THE ROOF SHEATHING. INHERE THE ROOF SHEATHING. PHERE THE ROOF SHALL PENETRATE THROUGH THE SHEATHING. FASTENERS SHALL COMPLY WITH ASTM F 1667.
- 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.
- IO. UNDERLAYMENT FOR ASPHALT SHINGLES SHALL BE APPLIED IN ACCOR-DANCE 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 ASTM C 1167.
- 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 12 UNITS HORIZONTAL (2-1/2-12) TO FOUR UNITS VERTICAL
  IN 12 UNITS HORIZONTAL (4-1/2), DUBLE UNDERLAYMENT APPLICATION IS REQUIRED IN ACCORDANCE WITH THE N.C.-R.
- UNDERLAYMENT FOR CLAY AND CONCRETE TILE SHALL CONFORM WITH ASTM D 226, TYPE II; ASTM D 2626 TYPE I; OR ASTM D 6360 CLASS M MINERAL SURFACED ROLL ROOFING.
- 15. CONCRETE ROOF TILE SHALL COMPLY WITH ASTM C 1492.
- NAILS SHALL BE CORROSION-RESISTANT AND NOT LESS THAN II GAGE. NAILD SHALL BE CONNOSION-RESISTANT AND NOT LESS THAN IT GADE, 51/6-INCH HAD, AND OF SUPFICIENT LENGTH TO PENETRATE THE DECK. A MINIMUM OF 5/4-INCH OR THROUGH THE THICKNESS OF THE DECK, MINIMUM STANDAM OF STANDAM OF STANDAM OF STANDAM OF STANDAM OF THE STANDAM OF THE SHALL NOT BE SHALLER THAN O.OBS-INCH. PERIMETER FASTENING AREAS INCLIDE THREE TILE COURSES BUT NOT LESS THAN 36 INCHES FROM EITHER SIDE OF HIPS OR RIDGES AND EDGES OF EAVES AND GABLE RAKES.
- CLAY AND CONCRETE ROOF TILES SHALL BE FASTENED IN ACCORDANCE WITH THE N.C.-R
- TILE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, BASED ON CLIMATIC CONDITIONS, ROOF SLOPE, INDERLAYMENT 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
  12 UNITS HORIZONTAL (1-PERCENT SLOPE).
- 21. BUILT-UP ROOF COVERING MATERIALS SHALL COMPLY WITH THE STANDARDS PER THE N.C.-R

# 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 WALLS SHALL PROVIDE THE BUILDING WITH A WEATHER-RESISTANT EXTERIOR WALL ENVELOPE. THE EXTERIOR WALL ENVELOPE SHALL INCLIDE FLASHING, THE EXTERIOR WALL ENVELOPE SHALE DESIGNED AND CONSTRUCTED IN A MANNER THAT PREVENTS THE ACCUMULATION OF WATER WITHIN THE WALL ASSEMBLY BY PROVIDING A WATER-RESISTANT BARRIER BEHIND THE EXTERIOR VENEER AS REQUIRED AND A MEANS OF DRAINING WATER THAT ENTERS THE ASSEMBLY TO THE EXTERIOR PROTECTION ASAINST CONDENSATION IN THE EXTERIOR WALL ASSEMBLY SHALL BE PROVIDED.
- ONE LAYER OF NO. 15 ASPHALT FELT, FREE FROM HOLES AND BREAKS, COMPLYING WITH ASTM D 226 FOR TYPE I FELT OR OTHER APPROVED WATER-RESISTIVE BARRIER SHALL BE APPLIED OVER STUDS OR SHEATHING OF ALL EXTERIOR WALLS. SUCH FELT OR MATERIAL SHALL BE APPLIED HORIZONTALLY, MITH THE UPPER LAYER LAPPED OVER THE LOWER LAYER NOT LESS THAN 2 INCHES, MHERE JOINTS OCCUR, FELT SHALL BE LAPPED NOT LESS THAN 6 INCHES, THE FELT OR OTHER APPROVED MATERIAL SHALLS EXCENSIVED TO THE PENTENTIAL SHALLS AND TERMINATED AT PENETRATIOS AND BUILDING APPENDAGES IN A MANNER TO MEET THE REQUIREMENTS OF THE EXTERIOR WALL ENVELOPE.
- VINTL SIDING CONFORMING TO THE REQUIREMENTS OF THE N.C.-R. AND COMPLYING WITH ASTM D 3674 SHALL BE PERMITTED ON EXTERIOR WALLS OF BUILDINGS OF TYPE V CONSTRUCTION LOCATED IN AREAS WHERE THE ULTIMATE WIND SPEED SPECIFIED DOES NOT EXCEED IOO MILES PER HOW AND THE BUILDING HEIGHT IS LESS THAN 40 FEET IN EXPOSURE C. WHERE CONSTRUCTION IS LOCATED IN AREAS WHERE THE ULTIMATE WIND SPEED EXCEEDS 130 MILES PER HOUR OR BUILDING HEIGHTS ARE IN EXCESS OF 40 EXCELS SO MILES FER HOUR OR BUILDING HEIGHTS ARE IN EXCESS OF AN FT, DATA INDICATING COMPELIANCE MUST BE SUBMITTED. VINYL SIDING SHALL BE SECURED TO BUILDING TO PROVIDE MEATHER PROTECTION FOR THE EXTERIOR MALLS OF THE BUILDING.
- VINYL SIDING SHALL BE APPLIED OVER SHEATHING OR MATERIALS LISTED IN THE N.C.-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.-E
- 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 A135,6 AND, WHERE USED STRUCTURALLY, SHALL BE SO IDENTIFIED BY 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, O 458-INCH EXTERIOR HARDBOARD SIDING OR 0.751-INCH EXTERIOR-TYPE WOOD STRUCTURAL PANELS OR PARTILCE-BOARD AND SHALL CONFORM TO THE REQUIREMENTS OF THE INC.E.
- FIBER-CEMENT LAP SIDING HAVING A MAXIMUM WIDTH OF 12 INCHES SHALL COMPLY WITH THE REQUIREMENTS OF ASTM CII66, TYPE A, MINIMUM GRADE
- II.

  LAP SIDING SHALL BE LAPPED A MINIMUM OF II/4 INCHES (32 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 FLASHING OR SHALL BE DESIGNED TO COMPLY WITH NC-R, LAP SIDING COURSES MAY BE INSTALLED WITH THE FASTENER HEADS EXPOSED OR CONCEALED, ACCORDING TO NO-R OR APPROVED INSTALLATION INSTRUCTIONS.
- INSULATING MATERIALS, INCLUDING FACINGS, SUCH AS VAPOR RETARDERS OR VAPER-PERNEABLE MEMBRANES/INSTALLED MITHIN FLOOR-CEILING ASSEMBLIES, ROOF-CEILING ASSEMBLIES, MALL-ASSEMBLIES, CRANL 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 ACCORDAN INSULATING MATERIALS, INCLUDING FACINGS, SUCH AS VAPOR INDEX NOT TO EXCEED 450 WHEN TESTED IN ACCORDANCE
- DUCT INSULATION MATERIALS SHALL CONFORM TO THE FOLLOWING
- INSULATION AND COVERING ON PIPE AND TUBING SHALL HAVE A FLAME-SPREAD INDEX OF NOT MORE THAN 25 AND 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 PERMITTED PROVIDED SUCH INSULATION IS COVERED WITH AN APPROVED ROOF COVERING AND PASSES FM 4450 OR UL 1256 PER N.C.-R.
- CELLULOSE LOOSE-FILL INSULATION SHALL COMPLY WITH CPSC 16 CER, PARTS 1209 AND 1404. EACH PACKAGE OF SUCH INSULATING MATERIAL SHALL BE CLEARLY LABELED IN ACCORDANCE WITH CPSC 16 CFF, PARTS 1209 AND 1404.
- INSULATION IN FLOOR-CEILING ASSEMBLIES, ROOF-CEILING ASSEMBLIES, MALLS, CRANL SPACES OR ATTICS SHALL BE EITHER OF THE BLOWN-IN CELLULOSE TYPE OR FIBERGLASS BATTS OR BLANKET TYPE PER BUILDER'S SPECIFICATIONS.
- THE ENERGY EFFICIENCY REQUIREMENTS INCLUDING I.E.C.C. BUT NOT LIMITED TO INSULATION "R" VALUES, PERCENTAGE OF GLAZING "U" VALUES, ETC. SHALL BE DETERMINED BY THE ADPTED 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 INFILTRATION. THE SEALING METHODS BETWEEN DISSIMILAR MATERIALS SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION, FOR ALL HOMES, WHERE PRESENT, THE FOLLOWING SHALL BE CAULKED, GASKETED, WEATHERSTRIPPED OR OTHERWISE SEALED WITH AN AIR BARRIER MATERIAL OR SOLID MATERIAL CONSISTENT WITH APPENDIX E-2.3 AND E-2.4 OF THE NC-R. IS AND UNDER KNEE WALLS OPEN TO UNCONDITIONED OR EXTERIOR SPACE. 2. CAPPING AND SEALING SHAFTS OR CHASES, INCLUDING FLUE 31. CAPPING AND SEALING SOFFIT OR DROPPED CEILING AREAS.
- FRAMED CAVITY WALLS, THE EXTERIOR THERMAL ENVELOPE WALL INSULATION SHALL BE INSTALLED IN SUBSTANTIAL CONTACT AND CONTINUOUS ALIGNMENT MITH 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 BARRIER MATERIAL, WALL INSULATION SHALL BE ENCLOSED AT THE FOLLOWING LOCATIONS WHEN INSULATION SHALL BE ENCLOSED AT THE FOLLOWING LOCATIONS WHEN NSTALLED ON EXTERIOR WALLS PRIOR TO BEING COVERED BY SUBSEQUENT CONSTRUCTION, CONSISTENT WITH APPENDIX E-2.3 AND E-2.4 OF NC-R:
- I. TUBS
  2. SHONERS
  3. STAIRS
  4. FIREPLACE UNITS
  EINCLOSURE OF WALL CAVITY INSULATION ALSO APPLIES TO MALLS THAT
  ADJOIN ATTIC SPACES BY PLACING A RIGID MATERIAL OR AIR BARRIER
  MATERIAL ON THE ATTIC SIDE.

# DOORS & WINDOWS

- SEE FLOOR 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 FOR SLEEPING PURPOSES SHALL NOT BE PERMITTED, OTHER OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL EQUIPPED MITH SOLID MOOD DOORS NOT LESS THAN I 3/6 INCHES IN THICKNESS, SOLID OR HONEYCOMB CORE STEEL DOORS NOT LESS THAN I 3/6 INCHES THICK, OR 20-MINITE FIRE-RATED DOORS
- NO DOUBLE FRENCH DOORS SHALL BE USED UNLESS THERE IS A SUFFICIENT OVERHANG OR COVERED PATIO COVERING THESE DOORS. NO DOUBLE WOOD FRENCH DOORS SHALL BE USED IN ANY CASE.
- PROVIDE SECURITY HARDWARE FOR ALL DOORS AND WINDOWS IANCE WITH ALL STATE AND LOCAL CODE REQUIREMENTS.
- 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 MINEN SOMETHING IS BLOCKING THE PATH OF THE DOOR. SEE MANUFACTURER'S
- ALL MANUFACTURED WINDOWS AND SLIDING GLASS DOORS SHALL MEET THE AIR INFILTRATION STANDARDS OF THE CURRENT AMERICAN NATIONAL STANDARDS INSTITUTE A.S.T.M. E283-73 WITH A PRESSURE DIFFERENTIAL OF 1.57 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 HEY SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE
- EMERGENCY ESCAPE AND RESCUE OPENINGS WITH A FINISHED SILL HEIGHT BELOW THE ADJACENT GROUND ELEVATION SHALL BE PROVIDED WITH A MINDOM WELL

# DOORS & WINDOWS (continued)

- ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMU NET CLEAR OPENING OF NOT LEGS THAN 5 SQUARE FEET IN THE CASE OI EROUND FLOOR LEVEL WINDOW AND NOT LEGS THAN 5.7 SQUARE FEET IN THE CASE OF AN UPPER STORY WINDOW.
- L EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM I 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 MITHOUT 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 MIDTH OF 36 INCHES. THE AREA OF THE MINDOW WELL SHALL ALLOW ENERGENCY ESCAPE AND RESCUE OPENING TO BE FULLY OPENED PER THE N.C.-R THE LADDER OR STEPS REGUIRED SHALL BE PERMITTED TO ENCROACH A MAXIMUM OF 6" INTO THE REGUIRED DIENSIONS OF THE MINDOW WELL.
- MINDOW WELLS WITH A VERTICAL DEPTH GREATER THAN 44 INCHES SHALL BE EQUIPPED WITH A PERMANENTLY AFFIXED LADDER OR STEPS USABLE WITH THE WINDOW IN THE FULLY OPEN POSITION.
- BARS GRILLES COVERS SCREENS OR SIMILAR DEVICES ARE PERMITTED TO BANG, OKILLES, COVICES, SKELENG OR SIMILAR DEVICES ARE PERMITTED I BE PLACED OVER EMERGENCY ESCAPIE AND RESCUE OPENINGS, BULKHEAD ENCLOGURES, OR WINDOW WELLS THAT SERVE SUCH OPENINGS, PROVIDED THE MINIMM NET CLEAR OPENING SIZE COMPLIES WITH THE N.C.-R. AND SUCH DEVICES SHALL BE RELEASABLE OR REMOVABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, TOOL, SPECIAL KNOWLEDGE OR FORCE GREATER THAN THAT WHICH IS REQUIRED FOR NORMAL OPERATION OF THE ESCAPE AND RESCUE OPENING
- ALL INTERIOR EGRESS DOORS AND A MINIMUM OF ONE EXTERIOR EGRESS DOOR SHALL BE READILY OPENABLE FROM THE SIDE FROM WHICH ESPE 19 TO BE MADE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEDGE OR EFFORT.

# GLAZING & SAFETY GLAZING

- HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN & PERCENT OF THE FLOOR AREA OF SUCH ROOMS, NATURAL VENTILATION SHALL BE THROUGH WINDOWS, SKYLIGHTS, DOORS, LOUVERS OR OTHER APPROVED OPENINGS TO THE OUTDOOR AIR. SUCH OPENINGS SHALL BE PROVIDED WITH READY ACCESS OR SHALL OTHERWISE BE READILY CONTROLLABLE BY THE BUILDING LESS THAN 4 PERCENT OF THE FLOOR AREA BEING VENTILATED
- BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREAS I WINDONS OF NOT LESS THAN 3 SQUARE FEET, ONE-HALF OF WHICH MUST BE OPENABLE.
- EXCEPT AS INDICATED, EACH PANE OF GLAZING INSTALLED IN HAZARDOUS EXCEPT AS INDICATED, EACH PANE OF GLAZING INSTALLED IN HAZARDOUS LOCATIONS SHALL BE PROVIDED WITH MANUFACTURER'S DESIGNATION SPECIFYING WHO APPLIED THE DESIGNATION, DESIGNATING THE TYPE OF GLAZING STANDARD WITH WHICH IT COMPLIES, WHICH IS VISIBLE IN THE FINAL INSTALLATION. THE DESIGNATION SHALL BE ACID ETCHED, SANDBLASTED, CERAWIC-FIRED, LASER ETCHED, EMBOSSED, OR BE OF A TYPE WHICH ONCE APPLIED CANNOT BE REMOVED WITHOUT SELLIC PROVIDED WITHOUT SELLIC PROVIDED WITHOUT SHALL BE REMOVED WITHOUT SHALL BE SELIC PROVIDED. BEING DESTROYED.
- 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
  SLIDING AND BIFOLD DOORS
  GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL IN THE SAME
  PLANE AS A DOOR WHERE 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 MALKING
- 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 18 INCHES ABOVE THE FLOOR. 3.3 TOP EDGE MORE THAN 36 INCHES ABOVE THE FLOOR
- 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 ABOYE A MALKING SURFACE.
- GLAZING IN DOORS AND ENCLOSURES FOR HOT TUBS, WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS, 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
- CLAZING IN WALLS AND FENCES ENCLOSING INDOOR AND OUTDOOR SHIMMING POOLS, HOT TUBS AND SPAS WHERE THE BOTTOM EDGE OF THE CLAZING 15 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 (I AZING
- GLAZING ADJACENT TO STAIRWAYS, LANDINGS AND RAMPS MITHIN 36 INCHES HORIZONTALLY OF A MALKING SURFACE WHEN THE EXPOSED SURFACE OF THE GLAZING IS LESS THAN 36 INCHES ABOVE THE PLANE OF THE ADJACENT WALKING SURFACE.
- GLAZING ADJACENT TO THE LANDING AT THE BOTTOM OF STAIRWAYS WHEREE THE GLAZING IS LESS THAN 36 INCHES ABOVE THE LANDING AND WITHIN A 60-INCH HORIZONTAL ARC LESS THAN 160 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 CONSERVATION CODE
- LOCATED MORE THAN 12 INCHES (1829 MM) ABOVE THE FINISHED GRADE OR SURFACE BELOW, THE LOWEST PART OF THE CLEAR OPENING OF THE NINDOW 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 (IO2 MM) DIAMETER SPHERE WHERE SUCH OPENINGS ARE LOCATED WITHIN 24 INCHES (610 MM) OF THE FINISHED FLOOR

IN DWELLING UNITS, WHERE THE OPENING OF AN OPERABLE WINDOW IS

# FINISHES

- GYPSUM WALLBOARD SHALL BE INSTALLED IN CONFORMANCE WITH THE CURRENT EDITION OF THE NORTH CAROLINA RESIDENTIAL CODE AND ALL STATE AND LOCAL BUILDING CODES. THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
- MATERIALS, ALL GYPSUM BOARD MATERIALS AND ACCESSORIES SHALL CONFORM TO ASTM C 22, C 475, C 514, C 1002, C 1047, C 1176, C 1176, C 1276, C 1346, OR C 1656 AND SHALL BE INSTALLED IN ACCORDANCE HITH THE PROVISIONS OF THE NC.-R. ADHESIVES FOR THE INSTALLATION OF GYPSUM BOARD SHALL CONFORM TO ASTM C 557.
- 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 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 CONCEALED SPACES WHERE FIRE-RESISTACE-RATED CONSTRUCTION, SHAR RESISTANCE, OR DIAPHRARM ACTION IS NOT REQUIRED. CEALED SPACES WHERE FIRE-RESISTACE-RATED CONSTRUCTION.
- EASTENERS AT THE TOP AND POTTOM PLATES OF VERTICAL ASSEMBLIES FASIENCES AT INE TOP AND BOTTOM PLATES OF VERTICAL ASSEMBLIES, OR THE EDGES AND ENDS OF HORIZONTAL ASSEMBLIES PERFENDICULAR TO SUPPORTS, AND AT THE WALL LINE MAY BE OMITTED EXCEPT ON SHEAR-RESISTING ELEMENTS OR FIRE- RESISTIVE ASSEMBLIES, FASTENERS ALL BE APPLIED IN SUCH A MANNER AS NOT TO FRACTURE 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 1996, 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 16 INCHES FOR 5/8-INCH-THICK GYPSUM BOARD WATER-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 CONTINUOUS HIGH HUMIDITY.
- WHEN APPLYING A WATER-BASED TEXTURE MATERIAL. THE MINIMUM SYPSUM BOARD THICKNESS SHALL BE INCREASED FROM 3/6 INCH TO 1/2 INCH FOR I6-INCH ON CENTER FRAMING, AND FROM I/2 INCH TO 5/6 INCH FOR 24-INCH ON CENTER FRAMING OR I/2 INCH SAG-RESISTANT GYPSUM CEILING BOARD SHALL BE USED.

- 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
- UNLESS SPECIFIED OTHERWISE, ALL WALL COVERINGS SHALL BE SECURELY UNLESS SPECIFIED OF HERWISE, ALL WALL COVENINGS SPALL BE SECURELY FASTENED PER THE N.C.-R. OR WITH OTHER APPROVED ALLWHIMM, STAINLESS STEEL, ZINC-COATED OR OTHER APPROVED CORROSION-RESISTIVE FASTENERS, HERER THE BASIC NIND SPEED IS 110 MILES PER HOUR OR HIGHER, THE ATTACHMENT OF WALL COVERINGS SHALL BE DESIGNED TO RESIST THE COMPONENT AND CLADDING LOADS SPECIFIED AND ADJUSTED FOR HEIGHT AND EXPOSURE.
  - A MINIMUM O.019-INCH (NO. 26 GALVANIZED SHEET GAGE), CORROSION-RESISTANT NEEP SCREED OR PLASTIC WEEP SCREED, WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 31/2 INCHES SHALL BE PROVIDED AT OR BELON THE FOUNDATION PLATE LINE ON EXTERIOR STUD MALLS IN ACCORDANCE WITH ASTAC 426. THE HEEP SCREED SHALL BE PLACED A MINIMUM OF 4 INCHES ABOVE THE EARTH OR 2 INCHES ABOVE PAYED AREAS AND SHALL BE OF A TYPE THAT MILL ALLOW TRAPPED WATER TO DRAIN TO THE EXTERIOR OF THE BUILDING. THE MEATHER-RESISTANT BARRIER SHALL LAP THE ATTACHMENT FLANGE. THE EXTERIOR LATH SHALL COVER AND TERMINATE ON THE ATTACHMENT FLANGE OF THE MEATTACHMENT FLANGE OF THE MEATTACHMENT FLANGE. A MINIMUM O.O.I9-INCH (NO. 26 GALVANIZED SHEET GAGE),

CEMENT PLASTER

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, CONCRET PRESSURE PRESERVATIVE TREATED WOOD OR DECAY-RESISTANT WOOD O 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. HYDRATED LIME OR THE EQUIVALENT AMOUNT OF LIME PUTTY USED AS A PLASTICIZER MAY BE ADDED TO CEMENT PLASTER OR CEMENT AND LIME PLASTER IN AN AMOUNT NOT TO EXCEED THAT
- GYPSUM PLASTER SHALL NOT BE USED ON EXTERIOR SURFACES
- PLASTER COATS SHALL BE PROTECTED FROM FREEZING FOR A PERIOD OF NOT LESS THAN 24 HOURS AFTER SET HAS OCCURRED PLASTER SHALL BE APPLIED WHEN THE AMBIENT TEMPERATURE IS HIGHER THAN 40 DEGREES F (4 DEGREES C), UNLESS PROVISIONS ARE MADE TO KEEP CEMENT PLASTER WORK ABOVE 40 DEGREE F (4 DEGREES C), PRIOR TO & DURING APPLICATION AND 48 HOURS
- 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-4776. "EXPO FIBREWALL" I.C.C. NO. ER-4368. OR APPROVED EQUAL MAY BE USED IN LIEU OF A 3-COAT EXTERIOR



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# **NORTH CAROLINA** 50' SERIES

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DIVISION REVISIONS
NCI9017NCP/ 03/22/19 / CTD

DIVISION REVISIONS
NCI903INCP/ 05/07/19 / CTD DIVISION REVISIONS NCI9043NCP/ 07/01/19 / FAE

DIVISION REVISIONS NCI9056NCP/ 07/25/19 / FAE

DIVISION REVISIONS NCI9045NCP/ 08/13/19 / FAR FOR INTERNAL USE ONL'



GN<sub>2</sub> SPEC. LEVEL 1 RALEIGH-DURHAM

50' SERIES

# MECHANICAL & PLUMBING

- ALL MATERIALS AND CONSTRUCTION METHODS SHALL BE IN CONFORMANCE NITH THE NORTH CAROLINA RESIDENTIAL AND MECHANICAL CODE. INSTALLATIONS OF MECHANICAL APPLIANCES, EQUIPMENT AND SYSTEMS NOT ADDRESSED BY THIS CODE SHALL COMPLY MITH THE APPLICABLE PROVISIONS OF THE NORTH CAROLINA RESIDENTIAL AND FUEL GAS CODE.
- CONTRACTOR SHALL DESIGN ENTIRE H.V.A.C. SYSTEM AND SUBMIT DRAWINGS FOR OWNER/BUILDER'S APPROVAL PRIOR TO ORDERIN MATERIALS OR EQUIPMENT.
- 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 DWELLING 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 TEMPORARLY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55 DEG. F (13 C) OR UP TO 85 DEG. F (29 C).
- 5. ALL DUCTHORK SHALL CONFORM TO THE REQUIREMENTS OF THE N.C.-R
- COMBUSTION AIR SHALL BE PROVIDED FOR FORCED AIR UNITS IN ACCORDANCE WITH N.C.-R
- CONTRACTOR TO PROVIDE BOOT IN DUCTWORK WHEN OPTIONAL "HONEYWELL" OR "CARRIER" ELECTRONIC AIR CLEANER IS PROVIDED.
- 8. DUCTS IN THE GARAGE AND DUCTS PENETRATING THE WALLS OR CEILINGS SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM 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.
- CRAWL SPACE SUPPORTS. IN A CRAWL SPACE, A MINIMUM OF 2-INCH CARACT STACE SUFFICIES. IN A CRANE STACE, A MINIMAM OF 2-INCH HICK SOLID BASE, 2-INCH (3) MAY THICK FORMED CONCRETE, OR STACKED MASONRY WITH BILD IN PLACE BY MORTAR OR OTHER APPROVED METHOD. THE MATTER HEATER SHALL BE SUPPORTED NOT LESS THAN 2
- I2. 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

# VENTING

- IN LIEU OF REQUIRED EXTERIOR OPENINGS FOR NATURAL VENTILATION IN LIEU OF REGUINED EXTENSION OPENINGS FOR NATURAL VENTILATION IN BATHROOMS CONTAINING A BATHROOM FOR OR COMBINATION THEREOF, A MECHANICAL VENTILATION SYSTEM MAY BE PROVIDED. THE MINIMAY VENTILATION RATES SHALL BE SO CPM FOR INTERMITTENT VENTILATION OR 20 CPM FOR CONTINUOUS VENTILATION, VENTILATION AIR FROM THE SPACE SHALL BE EXHAUSTED DIRECTLY TO THE OUTSIDE PER N.C.
- 2. 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 SURFACE, SHALL BE AIR TIGHT, SHALL BE EQUIPPED WITH A BACK-DRAFT DAMMER 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 CARBOL
- 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 MITH DOWN DRAFT EXHAUST SYSTEMS SHALL BE PERMITTED TO BE CONSTRUCTED OF SCHEDULE 40 PVC PIPE PROVIDED THAT THE INSTALLTION COMPLIES WITH ALL OF THE FOLLOWING PER N.C.
- 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.
- 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 HATIS IN EXCESS OF 400 CUBIC FET FER 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 MANFACTURERS INSTALLATION INSTRUCTIONS, SHALL BE VENTED THE OUTSIDE AIR BY A TYPE 'B' VENT AND COMPLY WITH THE REQUIREMENTS OF THE NC.-M

# PLUMBING

- I. A POTABLE WATER SUPPLY SYSTEM SHALL BE DESIGNED, INSTALLED AND PRIMITATION IN SUCH A MANNER SO AS TO FREVENI CONTAMINATION FROM NONFOTABLE LIQUIDS, SOLIDS OR GASES BEING INTRODUCED INTO THE POTABLE WATER SUPPLY THROUGH CROSS-CONNECTIONS OR ANY OTHER PIPING CONNECTIONS TO THE SYSTEM. BACKFLOW PRE- VENTER APPLICATIONS SHALL CONFORM TO
- 2. 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 All2.18.1.

# MECHANICAL & PLUMBING (continued)

- ALL DEVICES, APPURTENANCES, APPLIANCES AND APPARATUS INTENDED TO SERVE SOME SPECIAL FUNCTION, SUCH AS STERILIZATION, DISTILLATION, PROCESSING, 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, FAUCETS AND DIVERTERS SHALL BE CONNECTED TO THE MATER DISTRIBUTION SYSTEM SO THAT HOT WATER CORRESPONDS TO THE LEFT SIDE OF THE FITTINGS.
- DIVERTERS FOR SINK FAUCETS WITH A SECONDARY OUTLET CONSISTING OF A FLEXIBLE HOSE AND SPRAY ASSEMBLY SHALL CONFORM TO ASTM A12.16.1 IN ADDITION TO THE REQUIREMENTS IN N.C.-P
- THE INSTALL ATION OF A WATER SERVICE OR WATER DISTRIBUTION PIPE THE INSTALLATION OF A WATER SERVICE OR WATER DISTRIBUTION PIPE SHALL BE PROHIBITED IN SOIL AND GROUND WATER THAT IS CONTAMINATED. GROUND WATER CONDITIONS SHALL BE REQUIRED TO ACERTAIN THE ACCEPTABILITY OF THE WATER SERVICE OR WATER 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.-PLIMBING. ALL MATER DISTRIBUTION PIPE AND TUBING SHALL HAVE A MINIMUM PRESSURE RATING OF 100 PSI AT 100 DESCREES F.
- PIPE PASSING THROUGH CONCRETE OR CINDER WALLS AND FLOORS OR OTHER CORROSIVE MATERIAL SHALL BE PROTECTED AGAINST EXTERNAL CORROSION BY A PROTECTIVE SHEATHING OR WRAPPING OR OTHER MEANS THAT MILL 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
- 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, MATER, SOIL AND WASTE PIPES SHALL NOT DE INSTALLED OUTSIDE OF A BUILDING, IN UNCONDITIONED ATTICS, INCONDITIONED UTILLITY ROOMS OR IN ANY OTHER PLACE SUBJECTED TO FREEZING TEMPERATURES (ULLESS ADEQUATE PROVISION IS MADE TO PROTECT SUCH PIPES FROM FREEZING BY A MINIMAM OF R-65 INSULATION DETERMINED AT 15 DEG. F IN ACCORDANCE WITH ASTM CITT OR HEAT OF BOTH. OR BOTH.
  EXTERIOR MATER 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 K.-P.
- WHERE WASTE LINE DROPS OCCUR IN A LOCATION WHERE THE SOUND OF A 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.
- CLEANOUTS ON BUILDING SEWERS 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 WITH ASSET IGIO! A VARWA RIZLIOIS/CSA BIZSIB. AND SHALL E INSTALLED AND ADJISTED 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 IS INCHES ABOVE THE GARAGE FLOOR. REPER TO NC. PFOR EXCEPTION.
- MATER HEATERS, (USING SOLID, LIQUID OR GAS 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 OR BATHROOM, HOWEVER, MATER HEATERS OF THE AUTOMATIC STORAGE TYPE MAY BE INSTALLED AS REPLACEMENT IN A BATHROOM, WHEN APROVED BY THE PLUMBING OFFICIAL, PROVIDED THEY ARE VENTED AND SUPPLIED WITH ADEQUATE COMBUSTION AIR.
- IN SEISMIC DESIGN CATEGORIES DO, DI AND D2 AND TOWNHOUSES IN SEISMIC DESIGN CATEGORY C, WATER HEATERS SHALL BE ANCHORED OR STRAPPED IN THE UPPER ONE-THIND OF THE APPLIANCE TO RESIST A HORIZONTAL FORCE EQUAL TO ONE-THIND OF THE OPERATING PICTURE 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 PROTECTED FROM IMPACT BY A MOVING VEHICLE.
- 23. WHERE WATER HEATERS OR HOT WATER STORAGE TANKS ARE INSTALLED IN: WHERE MATER HEATERS OF HOT WATER STORAGE TAMES ARE INSTALLED IN:
  REMOTE LOCATIONS SUCH AS SUSPENDED CEILING, ATTICS, ABOVE OCCUPIED
  SPACES, OR UNVENTILATED CRANL 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 STEEL PAN HAVING A MINIMUM THICKNESS OF 24 GAGE, OR OTHER PANS APPROVED FOR SUCH USE SHALL BE PROVIDED

# MECHANICAL & PLUMBING (continued)

- 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-AND-TEMPERATURE RELIEF VALVE. RELIEF VALVES SHALL HAVE A MINIMUM RATED CAPACITY FOR THE EQUIPMENT SERVED AND SHALL CONFORM TO ANSI 221.22 THE RELIEF VALVE SHALL NOT BE USED AS A MEANS OF CONTROLLING THERMAL EXPANSION.
- THE WATER SUPPLY TO A DISHMASHER SHALL BE PROTECTED AGAINST BACKFLON BY AN AIR GAP COMPLYING WITH ASME AII2.13 OR AII2.12 THAT IS INSTALLED INTEGRALLY WITHIN THE MACHINE OR A BACKFLOW PREVENTER IN ACCORDANCE WITH THE NC-R.
- SINK AND DISHWASHER. THE COMBINED DISCHARGE FROM A DISHWASHER AND A ONE- OR THO-COMPARTMENT SINK, MITH OR WITHOUT A FOOD-HASTE DISPOSER, SHALL BE SERVED BY A TRAP OF NOT LESS THAN II/2 INCHES (36 MM) IN OUTSIDE DIAMETER. THE DISHWASHER DISCHARGE PIPE OR TUBING SHALL RISE TO THE WIDERSIDE OF THE COUNTER AND SHALL BE SECURELY FASTENED TO THE WIDERSIDE OF THE SINK RIM OR COUNTER BEFORE CONNECTING TO THE HEAD OF THE FOOD-HASTE DISPOSER OR TO A WAYE EITHUR. IN THE GINK TAIL DISK TO THE

- FACTORY-BUILT FIREPLACES SHALL BE LISTED AND LABELED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE CONDITIONS OF THE LISTING. FACTORY-BUILT FIREPLACES SHALL BE TESTED IN ACCORDANCE WITH U. 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 SAE 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, IS- AND 20-AMPERE RECEPTACLES INSTALLED IN THE LOCATIONS SPECIFIED BELOW SHALL HAVE ROUND-INSTALLED IN THE RECEIVED FOR PERSONNEL. THE GROUND-FAULT CIRCUIT-INTERRIPTER SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION.
  - A. BATHROOMS.
  - B. 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.
  - C. OUTDOORS.
  - 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
  - SINKS. WHERE RECEPTACLES ARE INSTALLED WITHIN 6 FT FROM THE TOP INSIDE EDGE OF THE BOWL OF THE SINK.
- BATHTUBS OR SHOWER STALLS WHERE RECEPTACLES ARE INSTALLED MITHIN 6' OF THE OUTSIDE EDGE OF THE BATHTUB OR SHOWER STALL.
- DISHWASHER GFCI PROTECTION IS NOT REQUIRED FOR OUTLETS THAT SUPPLY DISHWASHERS INSTALLED IN DWELLING UNIT
- CRAWL SPACE LIGHTING OUTLETS, GFCI PROTECTION SHALL BE PROVIDED FOR LIGHTING OUTLETS NOT EXCEEDING 120 VOLTS INSTALLED IN CRAWL SPACES.
- APPLIANCE RECEPTACLE OUTLETS INSTALLED IN A DWELLING UNIT FOR SPECIFIC APPLIANCES, SUCH AS LANDRY 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, DEN, SUNROOM, BEDROOM, RECREATION ROOM, OR SIMILAR ROOM OR AREA OF DWELLING UNITS, RECEPTACLE OUTLETS 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 WALL SPACE 2 FEET OR MORE IN WIDTH (INCLUDING SPACE WALL SPACE 2 FEET OR MORE IN WIDTH (INCLIDING SPACE MEASURED AROUND CORNERS) AND UNBROKEN ALONG THE FLOOR LINE BY DOORWAYS AND SIMILAR OPENINGS, FIREPLACES, AND FIXED CABINETS, AND THE WALL SPACE OCCUPIED BY FIXED PAINELS IN EXTERIOR WALLS, BUT EXCLUDING SLIDING PAINELS IN EXTERIOR WALLS, THE WALL SPACE AFFORDED BY FIXED ROOM DIVIDERS, SUCH AS FREESTANDING BART-TYPE COUNTERS OR RAILINGS, SHALL BE INCLUDED IN THE 6 FOOT MEASUREMENT.
- IN THE KITCHEN, PANTRY, BREAKFAST ROOM, DINING ROOM, OR SIMILAR AREA OF A DWELLING UNIT, THE TWO OR MORE 20-AMPERE SMALL-APPLIANCE BRANCH CIRCUITS REQUIRED SHALL SERVE ALL WALL AND FLOOR RECEPTACLE OUTLETS, ALL COUNTERTOP OUTLETS, AND RECEPTACLE OUTLETS FOR REFRIGERATION EQUIPMENT. THE TWO OF MORE SMALL-APPLIANCE BRANCH CIRCUITS SHALL HAVE NO OTHER OUTLETS
- IN KITCHENS, PANTRIES, BREAKFAST ROOMS, DINING ROOMS AND SIMILAR AREAS OF DWELLING UNITS, RECEPTACLE OUTLETS FOR COUNTER SPACES SHALL BE INSTALLED IN ACCORDANCE WITH THE
- (I) 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.
- (3) 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 PERFENDICULAR WALL.
- COUNTERTOP SPACES SEPARATED BY RANSE TOPS, REFRIGERATORS, OR SINKS SHALL BE CONSIDERED AS SEPARATE COUNTERTOP SPACES IN APPLYING THE REQUIREMENTS OF (1), (2), AND (5) ABOVE. IF A RANSE, COUNTER-COUNTED COOKING UNIT, OR SINK IS INSTALLED IN AN ISLAND OR PENINSULAR COUNTERTOP AND THE DEPITH OF THE COUNTER BEHIND THE ITEM IS LESS THEN IS INCHES. IT WILL BE CONSIDERED TO DIVIDE THE COUNTERTOP SPACE INTO TWO SEPARATE COUNTERTOP SPACE SEACH COUNTERTOP SPACE SHALL COMPLY WITH APPLICABLE REQUIREMENTS.
- (5) RECEPTACLE OUTLETS SHALL BE LOCATED NOT MORE THAN 20 INCHES ABOVE THE COUNTERTOP, RECEPTACLE OUTLETS RENDERED NOT READILLY ACCESSIBLE BY APPLIANCE FASTENED IN PLACE, APPLIANCE GARAGES, 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 3 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 CAUNTETTOP, OR INSTALLED ON THE SIDE OR FACE OF THE BASIN CABINET NOT MORE THAN 12" BELOW THE COUNTERTOP
- I2. IN DWELLING UNITS, AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED IN AREAS DESIGNATED FOR THE INSTALLATION OF LAUNDRY EQUIPMENT.
- IN EACH ATTACHED GARAGE AND IN EACH DETACHED GARAGE WITH ELECTRIC POWER, THE BRANCH CIRCUIT SUPPLYING THIS RECEPTACLE(S) SHALL NOT SUPPLY OUTLETS OUTSIDE OF THE SARAGE. AT LEAST ONE RECEPTACLE OUTLET SHALL BE INSTALLED IN EACH VEHICLE BAY.
- 14. CABLE- OR RACEWAY-TYPE WIRING METHODS INSTALLED IN A GROOVE. ORBITED BY WALLBOARD, SIDING, PANELING, CARPETING, OR SIMILAR FINISH, SHALL BE PROTECTED BY IN BINCH 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 RACEWAY
- 15. 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 NEATHERPROOF WHEN THE RECEPTACLE IS COVERED. (ATTACHMENT PLUS CAP NOT INSERTED AND RECEPTACLE COVERS (LOSED.)
  - ALL IS- AND 20- AMPERE, I2S- AND 250-VOLT RECEPTACLES INSTALLED IN A WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS MEATHER PROOF MHETHER OR NOT THE ATTACHMENT PLUS CAP IS INSERTED. AN OUTLET BOX HOOD INSTALLED FOR THIS PURPOSE SHALL BE LISTED AND SHALL BE IDENTIFIED AS "EXTRA DUTY", ALL IS- AND 20- AMPERE, I2S- AND 250-VOLT NONLOCKING RECEPTACLES SHALL BE LISTED WEATHER RESISTANT TYPE.
- LIGHTING EQUIPMENT. NOT LESS THAN 15 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICACY LAMPS.
   LIGHT FIXTURES WITHIN CLOTHES CLOSETS SHALL BE INSTALLED IN
- ALL 120-VOLT, SINGLE PHASE, 15- AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNGOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTIED 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
- 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 I2S-VOLT I5-AND 20-AMPERE RECEPTACLES.
   SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES. EXCEPTIONS LISTED BELON.
  - . RECEPTACLES LOCATED MORE THAN  $5\frac{1}{2}$  ABOVE THE FLOOR. 2. RECEPTACLES THAT ARE PART OF A LUMINAIRE OR APPLIANCE
  - 3. 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

- 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 NFPA 12.

HOUSEHOLD FIRE ALARM SYSTEMS INSTALLED IN ACCORDANCE WITH NEPA TO THAT INCLIDE SMOKE ALARMS, OR A COMBINATION OF SMOKE DETECTOR AND AIDIBLE NOTIFICATION DEVICE INSTALLED AS REQUIRED BY THE NC-R R314.3 FOR SMOKE ALARMS, SHALL BE PERMITTED. THE HOUSEHOLD FIRE ALARM SYSTEM SHALL PROVIDE THE SAME LEVEL OF SMOKE DETECTION AND ALARM AS REQUIRED BY THE NC-R FOR SMOKE ALARMS IN THE EVENT THE FIRE ALARM PANEL IS REMOVED OR THE SYSTEM IS NOT CONNECTED TO A CENTRAL STATION

REQUIRED SMOKE DETECTORS SHALL BE LOCATED IN ACCORDANCE

# ELECTRICAL (continued)

# CARBON MONOXIDE ALARMS

- CARBON MONOXIDE ALARMS IN DMELLING UNITS SHALL BE INSTALLED OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE INMEDIATE VICINITY OF THE BEDROOMS, WHERE A FUEL-BURNING APPLIANCE IS LOCATED WITHIN A BEDROOM OR ITS ATTACHED BATHROOM, A CARBON MONOXIDE ALARM SHALL BE INSTALED 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 RSI5 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 MISO2.4.5



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. . . . . . **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

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D.S.

ISSUE DATE: 11/09/15 PROJECT No.: 1350999:57

REVISIONS: 08/13/19 ' DIVISION REVISIONS
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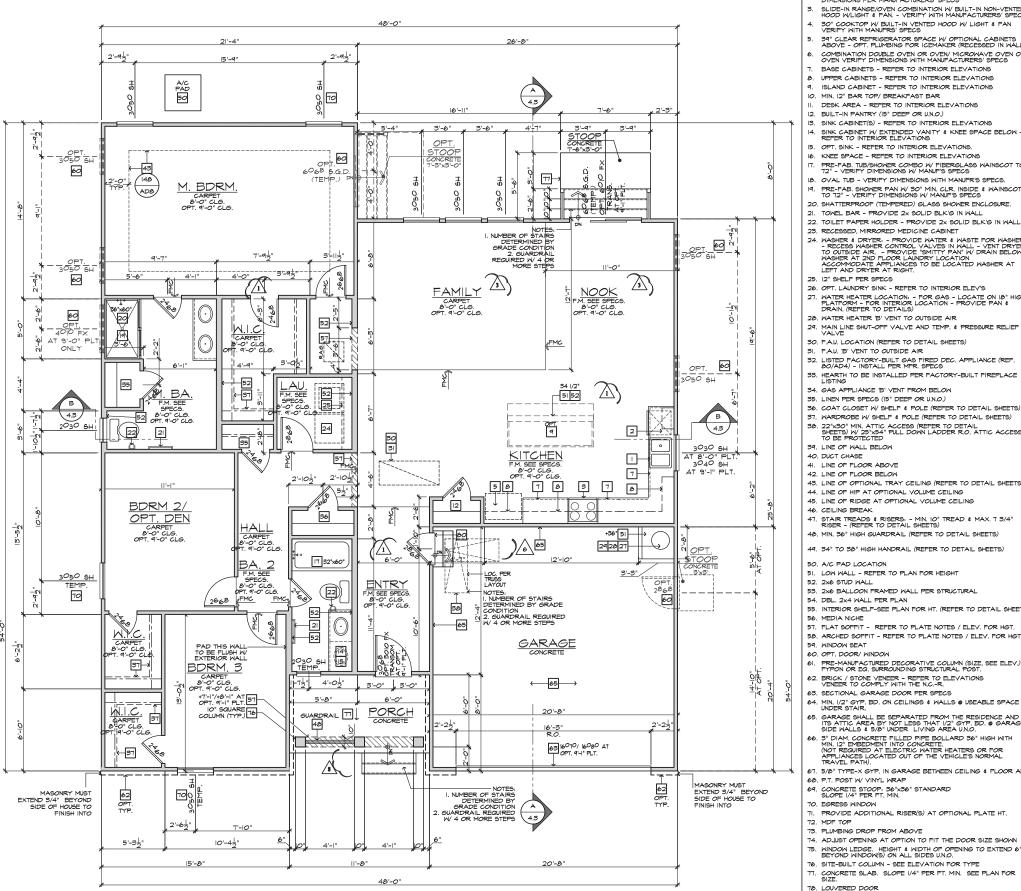
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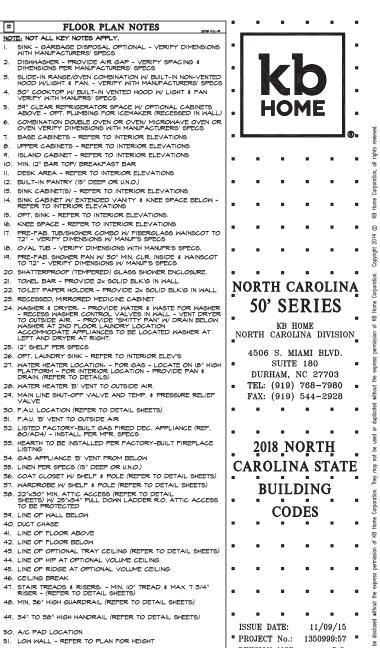
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FOR INTERNAL USE ONL'

148.1869-R HEET: GN<sub>3</sub> SPEC. LEVEL 1

RALEIGH-DURHAM 50' SERIES





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148.1869-R

SPEC. LEVEL 1

RALEIGH-DURHAM

50' SERIES

HEET:

1.2

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61. PRE-MANUFACTURED DECORATIVE COLUMN (SIZE, SEE ELEV.) FYPON OR EQ. SURROUNDING STRUCTURAL POST. DIVISION REVISIONS NCI9043NCP/ 07/01/19 / FAE 62. BRICK / STONE VENEER - REFER TO ELEVATIONS VENEER TO COMPLY WITH THE N.C.-R.

63. SECTIONAL GARAGE DOOR PER SPECS

64. MIN. I/2" GYP. BD. ON CEILINGS \$ WALLS ● USEABLE SPACE UNDER STAIR.

65. GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAT 1/2" GYP. BD. @ GARAGE SIDE WALLS & 5/8" UNDER LIVING AREA U.N.O.

FLOOR PLAN NOTES

DISHWASHER - PROVIDE AIR GAP - VERIFY SPACING & DIMENSIONS PER MANUFACTURERS' SPECS

30" COOKTOP W BUILT-IN VENTED HOOD W LIGHT & FAN VERIFY WITH MANUFRS' SPECS

BASE CABINETS - REFER TO INTERIOR ELEVATIONS

I. ISLAND CABINET - REFER TO INTERIOR ELEVATIONS

PRE-FAB. TUB/SHOWER COMBO W/ FIBERGLASS WAINSO 72" - VERIFY DIMENSIONS W/ MANUF'S SPECS

DESK AREA - REFER TO INTERIOR ELEVATIONS

NOTE: NOT ALL KEY NOTES APPLY. SINK - GARBAGE DISPOSAL OPTIONAL -WITH MANUFACTURERS' SPECS

66. 5" DIAM, CONCRETE FILLED PIPE BOLLARD 36" HIGH WITH MIN. 12" EMPEMENT INTO CONCRETE. (NOT REQUIRED AT ELECTRIC WATER HEATERS OR FOR APPLIANCES LOCATED OUT OF THE VEHICLE'S NORMAL TRAYEL PATH).

67. 5/8" TYPE-X GYP. IN GARAGE BETWEEN CEILING & FLOOR 68. P.T. POST W/ VINYL WRAP

69. CONCRETE STOOP: 36"x36" STANDARD SLOPE I/4" PER FT. MIN. TO. EGRESS WINDOW

PROVIDE ADDITIONAL RISER(S) AT OPTIONAL PLATE HT. 72. MDF TOP

73. PLUMBING DROP FROM ABOVE 74. ADJUST OPENING AT OPTION TO FIT THE DOOR SIZE SHOWN

T5. WINDOW LEDGE. HEIGHT & MIDTH OF OPENING TO EXTEND 6" BEYOND WINDOWS) ON ALL SIDES U.N.O.

76. SITE-BUILT COLUMN - SEE ELEVATION FOR TYPE 77. CONCRETE SLAB. SLOPE 1/4" PER FT. MIN. SEE PLAN FOR SIZE.

78. LOUVERED DOOR

79. SLOPING LOW WALL 38" ABOVE ADJACENT TREADS 80. 20 MIN. FIRE-RATED DOOR

FLOOR PLAN 'A' AT CRAWL SPACE ('B/C/D' SIMILAR)

INTERIOR KEY

GENERAL PLAN NOTES

ALL HOUSE TO GARAGE DOORS TO BE 20-MINUTE FIRE-RATED (REFER TO PLAN FOR SIZE).

PLATE NOTES

8'-I" PLATE NOTES

9'-1" PLATE NOTES

MINDOM HEADER HEIGHT IS OR 204
4010 MINDOM OVER TUB HDR. HGT.:
51.TIDING GLASS DOCK HEIGHT.
TREY CELLING.
TREY CELLING.
TO PROT HEIGHT.
TREY CELLING.
TO PROT NO.

STAIR DATA NOTES

FIRST FLOOR WITH 8-1" PLATE HEIGHT: 14" DEEP T.J.I. FLOOR JOISTS WITH 3/4" T&G DECKING.

FIRST FLOOR WITH 91" PLATE HEIGHT:
14" DEEP T.J.I. FLOOR JOISTS WITH 3/4" T&G DECKING.
15 TREADS AT 10" EACH
16 RISERS AT 7-3/4" EACH

6'-8" U.N.O. T'-0" U.N.O. 6'-8" U.N.O. 6'-8" (TEMP.) T'-4" U.N.O. 6'-8" U.N.O.

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.

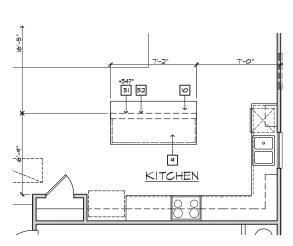
ALL CEILING HEIGHTS PER SECTION AND ELEVATION PLATE HEIGHTS, U.N.O.

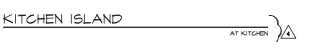
ALL INTERIOR DOORS TO BE HOLLOW CORE | 3/8" THICK, U.N.O. (REFER TO PLAN FOR SIZE).

ALL GARAGE SERVICE DOORS TO BE HOLLOW CORE EXTERIOR GRADE (REFER TO PLAN FOR SIZE).

WINDOW HEADER HEIGHT:
2nd FLOOR WINDOW HDR. HEIGHT:
ENTRY DOOR HEIGHT:
SLIDING GLASS DOOR HEIGHT:
INTERIOR SOFFIT HEIGHT:
INTERIOR DOOR HEIGHT.
INTERIOR DOOR HEIGHT.

DEEP T.J.I. FLOOR JOISTS WI 14 TREADS AT 10" EACH 15 RISERS AT 7-7/16" EACH





FLOOR PLAN OPTIONS

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



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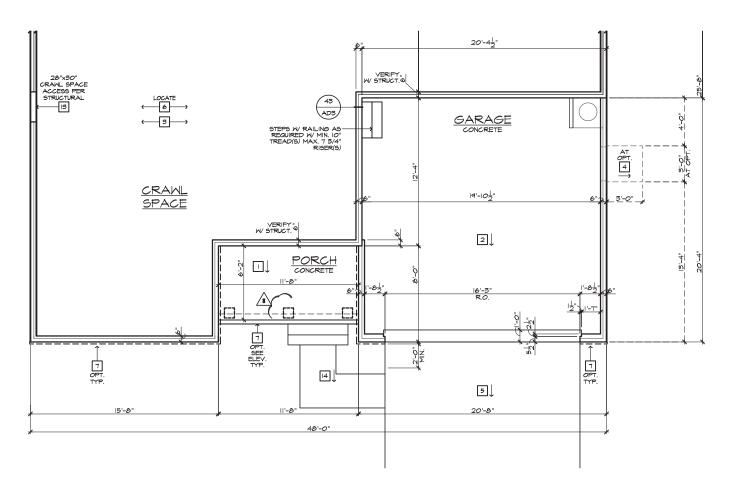
SHEET:

RALEIGH-DURHAM

50' SERIES

1.3

NOTE: REFER TO BASIC FLOOR PLAN FOR INFORMATION NOT SHOWN HERE



# PARTIAL CRAWL SPACE PLAN 'B' (CONCRETE PORCH)

SCALE I/4"=1'-0" (22"X34") - I/8"=1'-0" (II"XI7")

BASIC PLAN AT OPTIONAL CRAWL SPACE

# FOUNDATION PLAN NOTES

# FOUNDATION P

- CONCRETE PATIO/PORCH SLAB PER STRUCTURAL- SLOPE 1/4" PER FT. MIN.
- CONCRETE GARAGE SLAB PER STRUCTURAL- SLOPE 1/8" PER 1'-0" MIN. TOWARD DOOR OPENING.
- FOUNDATION PER STRUCTURAL.
- STAIR LANDING: 36"x36" MIN.
- CONCRETE DRIVEWAY SLOPE 1/4" PER FT. MIN. AWAY FROM GARAGE DOOR OPENING.
- PROVIDE UNDER FLOOR VENTILATION
- 4" TOE KICK FOR MASONRY VENEER.
- 3" DIAMETER CONCRETE FILLED PIPE BOLLARD 36" HIGH WITH MIN. 12" EMBEDMENT INTO CONCRETE.
- REFER TO CIVIL DRAWINGS FOR ALL FINISH SURFACE ELEVATIONS.
- IO. VERIFY LOCATION OF PIER FOOTINGS PER STRUCTURAL
- 4" MIN. 7 3/4" MAX. TO HARD SURFACE.
- 12. A/C PAD. VERIFY LOCATION.
  13. CRAWL SPACE ACCESS
- 14. 36" WIDE WALKWAY- SLOPE 1/4" PER FT. MIN.



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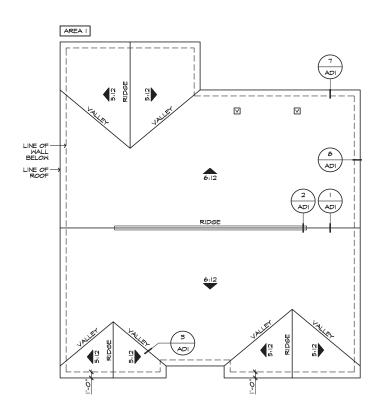
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148.1869-R SHEET:

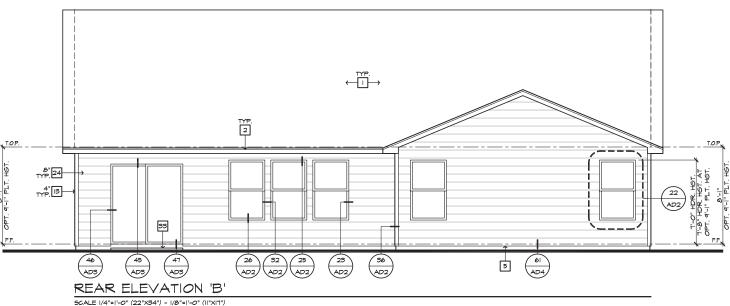
2.5 SPEC. LEVEL 1

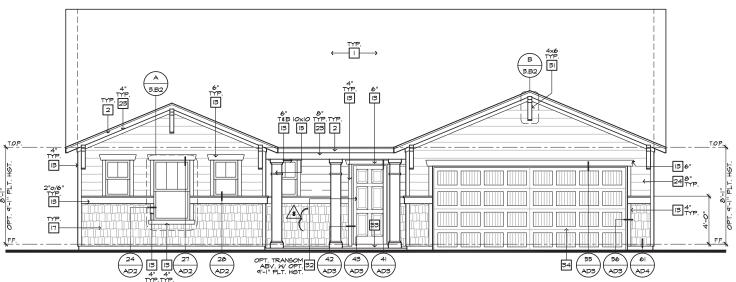
RALEIGH-DURHAM 50' SERIES



# ROOF PLAN 'B'

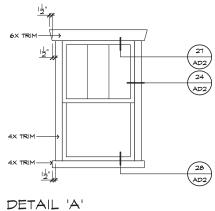
SCALE I/8"=I'-0" (22"X34") - I/I6"=I'-0" (II"XIT")





# FRONT ELEVATION 'B'

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



NOTE: NOT ALL KEY NOTES APPLY. ROOF MATERIAL - REFER TO ROOF NOTES 2. 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 7. DECORATIVE VENT 8. DECORATIVE CORBEL 9. DECORATIVE SHUTTERS IO. PEDIMENT. SEE ELEVATION FOR TYPE I. RECESSED ELEMENT 13. TRIM - SEE ELEVATION FOR SIZE 14. SYNTHETIC MATERIAL 17. SHAKE SIDING 18. STONE VENEER PER SPECS 20. BUILT UP BRICK COLUMN 21. SOLDIER COURSE 22. ROWLOCK COURSE 23. FRIEZE BOARD 28. RAILINGS (+36" U.N.O.) 29. VINYL WRAP 35. ALUMINUM WRAP 38. KEYSTONE 39. SOLDIER CROWN 40. JACK SOLDIER COURSE 4I. WATER TABLE 42. ATRIUM DOOR 43. PILASTER - SEE ELEVATION FOR TYPE 6:12 AREA I / MAIN

12. DECORATIVE TRIM FYPON OR EQ. SEE ELEVATION FOR TYPE 15. PRE-MANUFACTURED DECORATIVE COLUMN (SIZE, SEE ELEV.) FYPON OR EQ. SURROUNDING STRUCTURAL POST. 16. SITE-BUILT COLUMN - SEE ELEVATION FOR TYPE 19. BRICK/MASONRY VENEER PER SPECS 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 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 4506 S. MIAMI BLVD. 33. CONCRETE STOOP/ PORCH - SEE SLAB INTERFACE PLAN. 34. SECTIONAL GARAGE DOOR PER SPECS SUITE 180 DURHAM, NC 27703 36. OPTIONAL DOOR/WINDOW - REFER TO PLAN OPTIONS TEL: (919) 768-7980 . ST. OPTIONAL STANDING SEAM METAL ROOF FAX: (919) 544-2928 . . . .

# ROOF PLAN NOTES 'B' INDICATES ROOF SLOPE AND DIRECTION, U.N.O.

**ELEVATION NOTES** 

ROOF MATERIAL: COMPOSITION SHINGLE
12" (INCHES) TYPICAL ROOF OVERHANG AT RAKE, U.N.O. 12" (INCHES) TYPICAL ROOF OVERHANG AT EAVE, U.N.O. LOCATE EAVE/ RAFTER VENTS EQUALLY BALANCED AROUND HOUSE EXCEPT ABOVE SHEARWALL PANELS.

# ATTIC VENT CALCULATIONS

PROVIDE I SQ. IN. OF VENTILATION PER 300 SQ. IN. OF ATTIC SPACE. PROVIDE THAT AT LEAST 50% & NO MORE THAN 80% OF THE REQ. 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, (LION VENTING) (20) N.C.-R 806.2)

\*\* CALCULATION BY VISO, HIGHLION VENTING NOT REQUIRED.

APPROXIMATE RIDGE VENT LOCATIONS SHOWN. ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD.

VENTILATION REQUIRED: ATTIC AREA VENTILATION PROVIDED

HIGH (32) LIN. FEET OF RIDGE VENT AT (18 SQ. IN./FOOT) = TOTAL VENTILATION PROVIDED:

ALL VENT OPENINGS SHALL BE COVERED WITH 1/4" CORROSION RESISTANT METAL MESH. FRAMER SHALL BE RESPONSIBLE FOR COORDINATING WITH TRUSS MANUFACTURER TO ACCOMMODATE ALL ATTIC VENTS.

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.



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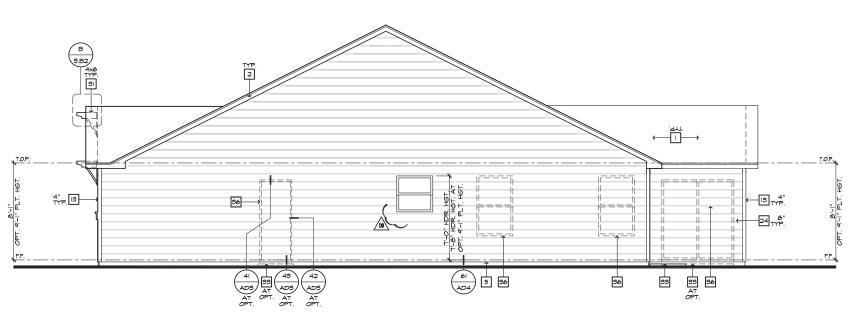
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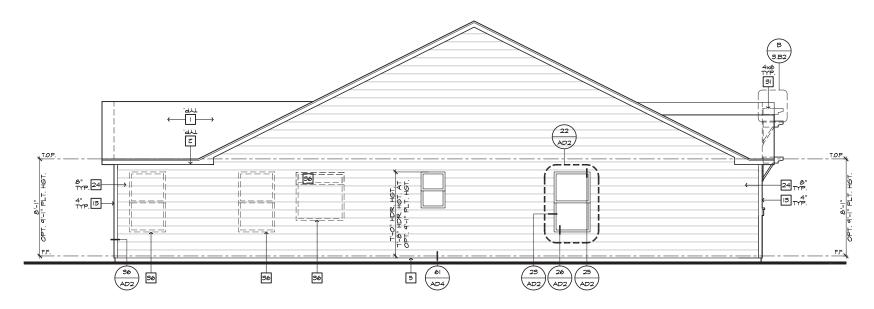
148.1869-R SHEET: 3.**B**2

SPEC. LEVEL 1  $RALEIGH \cdot DURHAM$ 50' SERIES



RIGHT ELEVATION 'B'

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



LEFT ELEVATION 'B'

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

# BLD VALAL

NOTE: NOT ALL KEY NOTES APPLY.

I. ROOF MATERIAL - REFER TO ROOF NOTES

OV FASCIA/BARGE BOARD WITH FASCIA C/

2. 2X FASCIA/BARGE BOARD WITH FASCIA CAP

4. G.I. FLASHING & SADDLE/CRICKET
5. G.I. DRIP SCREED

6. 24"x24" CHIMNEY 7. DECORATIVE VENT

8. DECORATIVE CORBEL
9. DECORATIVE SHUTTERS II. RECESSED ELEMENT

IO. PEDIMENT. SEE ELEVATION FOR TYPE

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.
 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

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. 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

38. KEYSTONE 39. SOLDIER CROWN

40. JACK SOLDIER COURSE 4I. WATER TABLE

42. ATRIUM DOOR
43. PILASTER - SEE ELEVATION FOR TYPE

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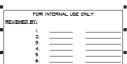
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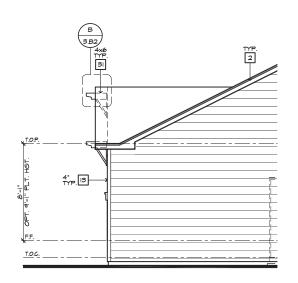
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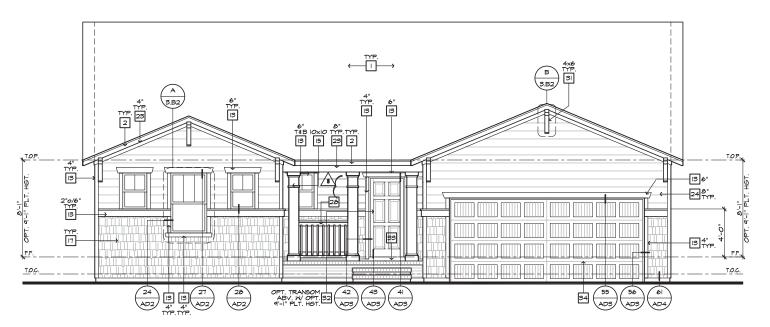
148.1869-R SHEET:

3.**B**3 SPEC. LEVEL 1

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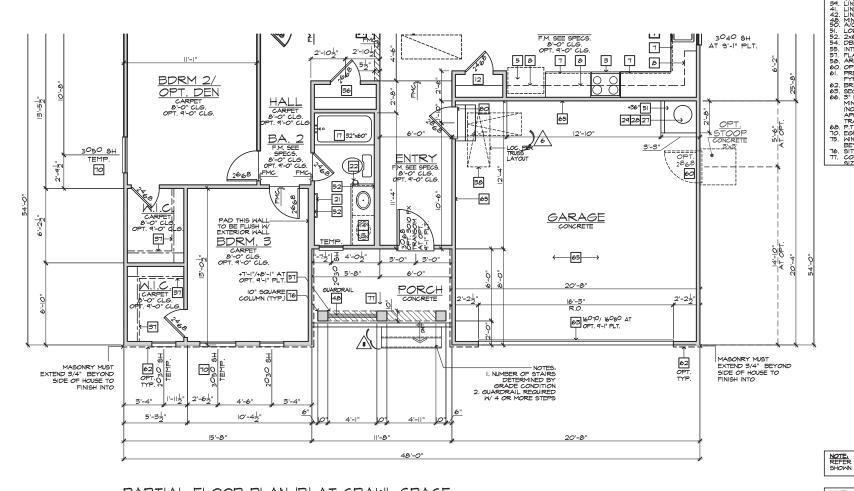


PARTIAL RIGHT ELEVATION 'B' AT CRAWL SPACE SCALE 1/4"=1"-0" (22"x84") - 1/8"=1"-0" (11"XIT")



FRONT ELEVATION 'B' AT CRAWL SPACE

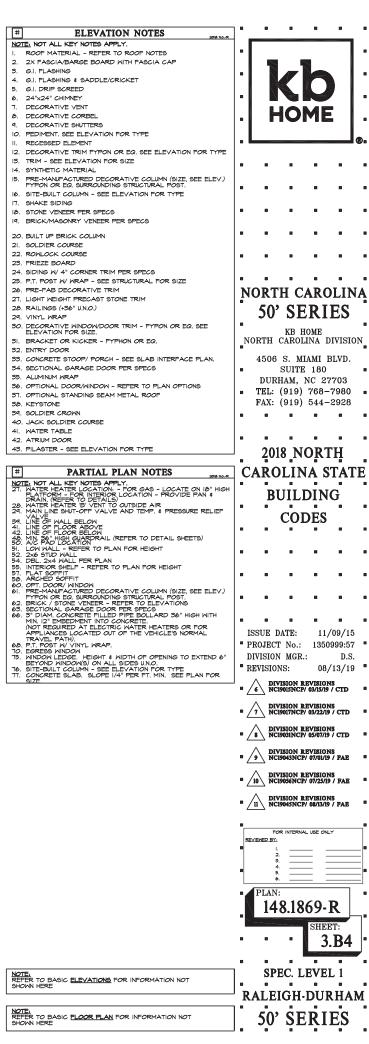
SCALE 1/4"=1'-0" (22"X34") - 1/8"=1'-0" (11"X17")

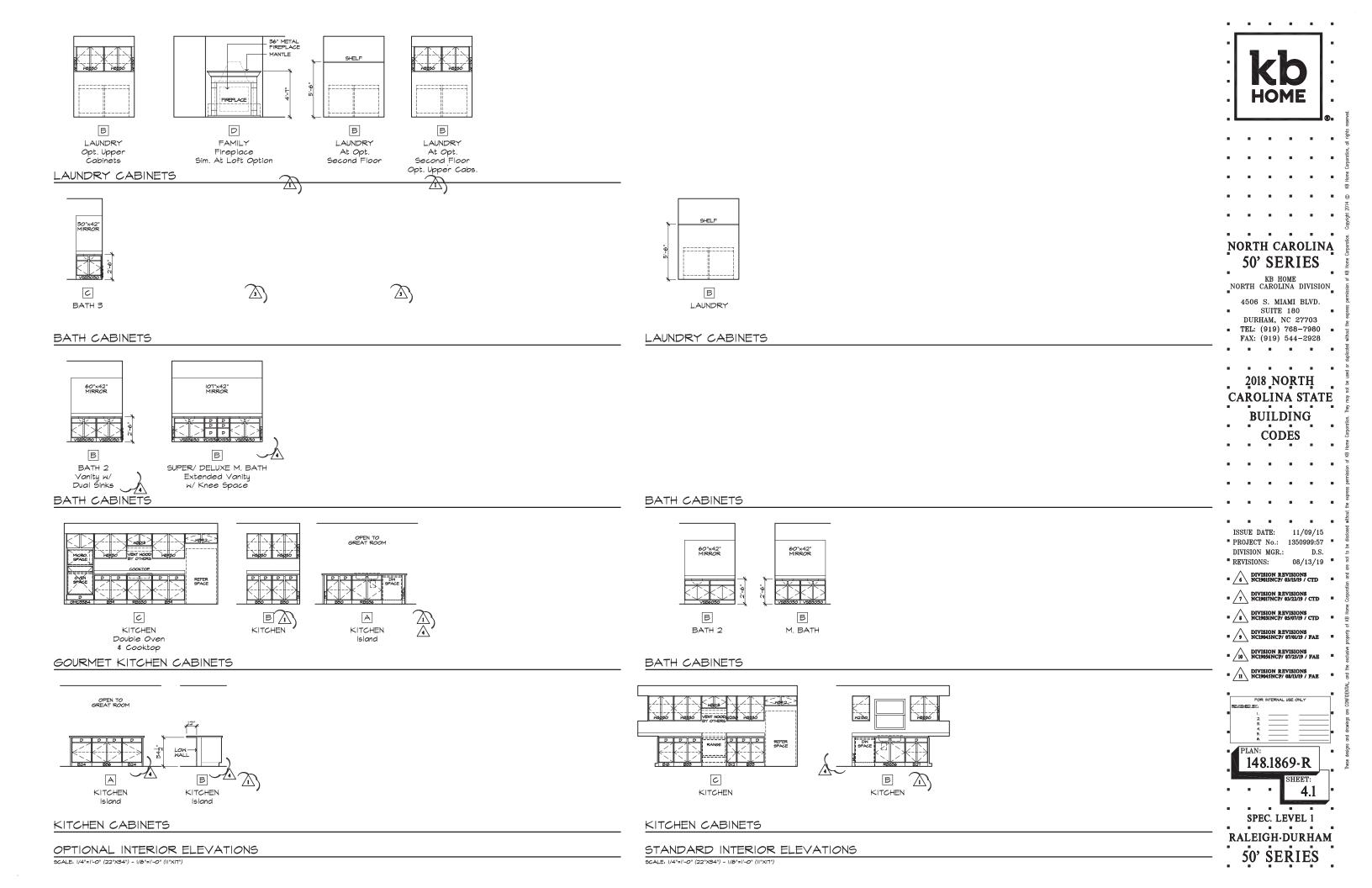


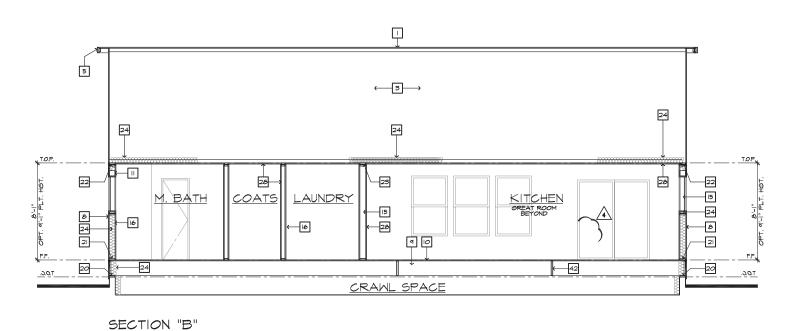
# PARTIAL FLOOR PLAN 'B' AT CRAWL SPACE

SCALE 1/4"=1'-0" (22"X34") - 1/8"=1'-0" (II"XI7"

BASIC PLAN

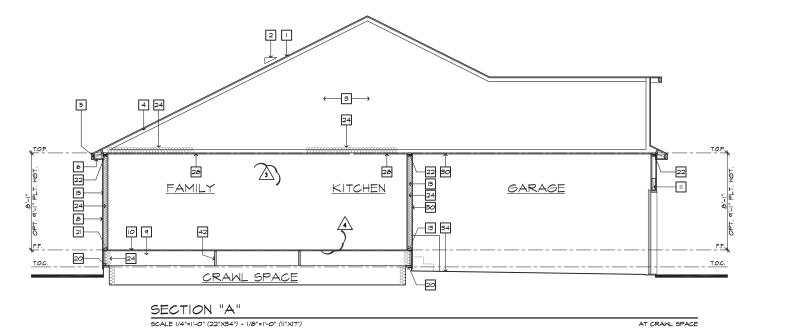






AT CRAWL SPACE

SCALE I/4"=1'-0" (22"X34") - I/8"=1'-0" (II"XI7")



# SECTION I SECTION NOTES ROOF MATERIAL - REFER TO ROOF NOTES 2. ROOF PITCH - REFER TO ROOF NOTES 2. PRE-MANUFACTURED WOOD ROOF TRUSS SYSTEM - SEE STRUCTURAL & TRUSS CALCS

4. ROOF SHEATHING PER STRUCTURAL 5. 2x FASCIA/BARGE BOARD 6. CONT. SOFFITED EAVE W/ VENTING G.I. FLASHING - ROOF TO WALL 8. EXTERIOR FINISH PER ELEVATIONS 1. FLOOR FRAMING PER STRUCTURAL IO. FLOOR SHEATHING PER STRUCTURAL

II. HEADER PER STRUCTURAL FLUSH BEAM PER STRUCTURAL
 DROPPED BEAM PER STRUCTURAL 14. FLAT/ ARCHED SOFFIT PER PLAN I5. 2x4 STUD WALL 16. 2x6 STUD WALL 17. 2x6 BALLOON FRAMED WALL PER STRUCTURAL 18. DBL. 2x4 WALL PER PLAN 19. 2x CRIPPLES @ 16" O.C. 20. 2x PRESSURE TREATED SILL PLATE 2I. 2x SOLE PLATE 22. DBL. 2x TOP PLATE @ EXTERIOR & BEARING WALLS 23. IX OVER 2X TOP PLATE @ INTERIOR & NON-BEARING WALLS 24. INSULATION MATERIAL PER ENERGY CALCULATIONS 25. MIN. 36" HIGH GUARD - SEE PLAN FOR HEIGHT 26. LOW WALL - SEE PLAN FOR HEIGHT 27. STAIR TREADS AND RISERS PER PLAN: - MIN. IO" TREAD & MAX. 7 3/4" RISER 28. INTERIOR FINISH: - MIN. 1/2" GYP. BD. @ WALLS & SAG RESISTANT OR 5/8" DRYWALL @ CEILING 29. MIN. 1/2" GYP. BD. ON CEILING & WALLS ● USEABLE SPACE UNDER STAIRS. 30. GARAGE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAT 1/2" GYP. BD. @ GARAGI SIDE WALLS & 5/8" UNDER LIVING AREA U.N.O. 31. MATERIAL TO UNDERSIDE OF ROOF SHEATHING 32. INTERIOR SHELF - MIN. I/2" GYP. BD. OVER 3/8" PLY WD. 33. CONCRETE PATIO/ PORCH SLAB PER STRUCTURAL - SLOPE I/4" PER FT. MIN. 34. CONCRETE GARAGE SLAB PER STRUCTURAL - SLOPE 2" MIN. 35. CONCRETE FOUNDATION PER STRUCTURAL 36. LINE OF OPTIONAL TRAY CEILING/ STEP CEILING . . . . 37. LINE OF OPTIONAL VOLUME CEILING
38. PROFILE OF OPTIONAL COVERED PATIO 39. EXTERIOR SOFFIT MATERIAL - REFER TO ELEVATIONS. 40. 8" BLOCK WALL 41. 5/8" TYPE-X DRYWALL @ GARAGE CEILING CEILING

2. WHEN THERE IS USABLE SPACE ABOVE AND BELOW THE
CONCEALED SPACE OF A FLOOR-CEILING ASSEMBLY IN A
SINGLE-FAMILY DWILLING, DRAFT STORPS SHALL BE INSTALLED

SO THAT THE AREA OF THE CONCEALED SPACE DOES NOT
EXCEED I/DOO SQUARE FEET. DRAFTSTOPPING SHALL DIVIDE
THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS. REVISIONS: DIVISION REVISIONS NCI903INCP/ 05/07/19 / CTD



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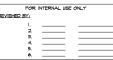
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DIVISION REVISIONS
NCI9015NCP/ 03/15/19 / CTD

DIVISION REVISIONS
NCI9017NCP/ 03/22/19 / CTD

DIVISION REVISIONS
NC19056NCP/ 07/25/19 / FAE

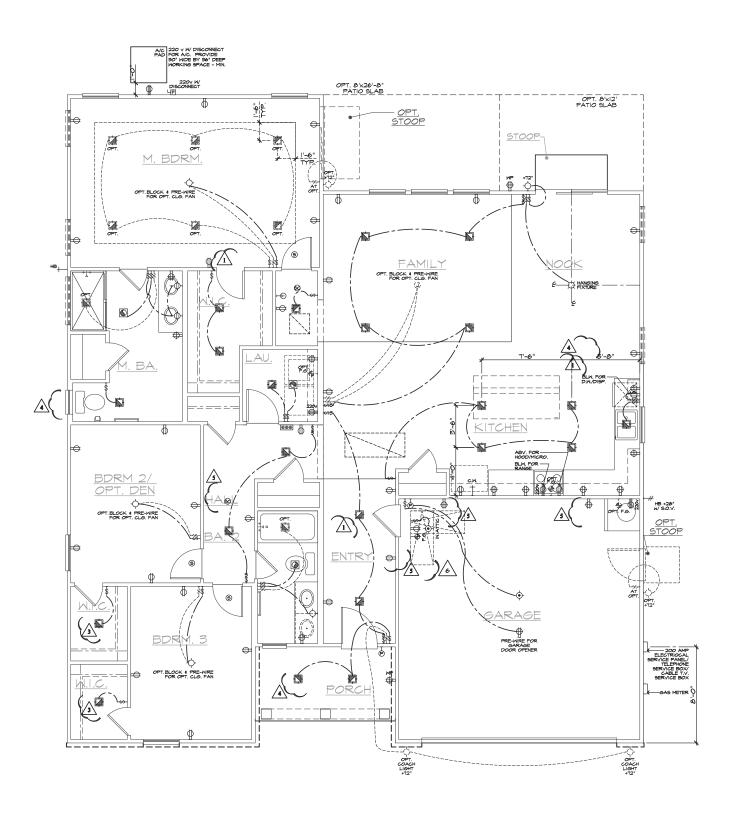
DIVISION REVISIONS
NC19045NCP/ 08/13/19 / FAE



148.1869-R

4.3

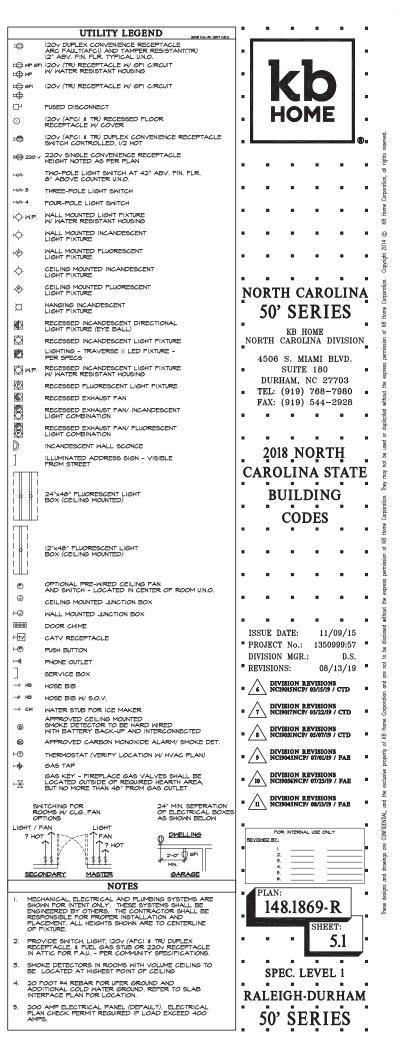
SPEC. LEVEL 1 RALEIGH-DURHAM 50' SERIES

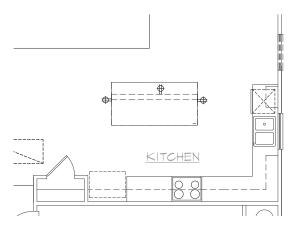


UTILITY PLAN

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

BASIC PLAN





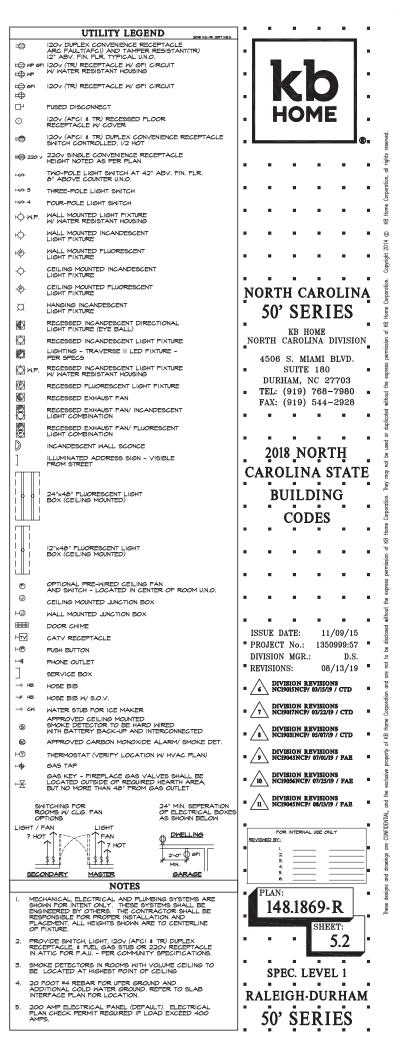
KITCHEN ISLAND

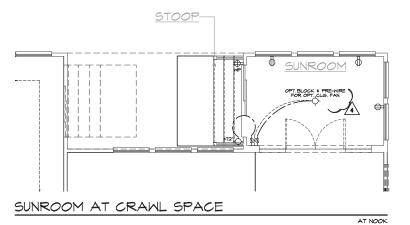


UTILITY PLAN OPTIONS

SCALE 1/4"=1"-0" (22"x84") - 1/8"=1"-0" (11"x17")

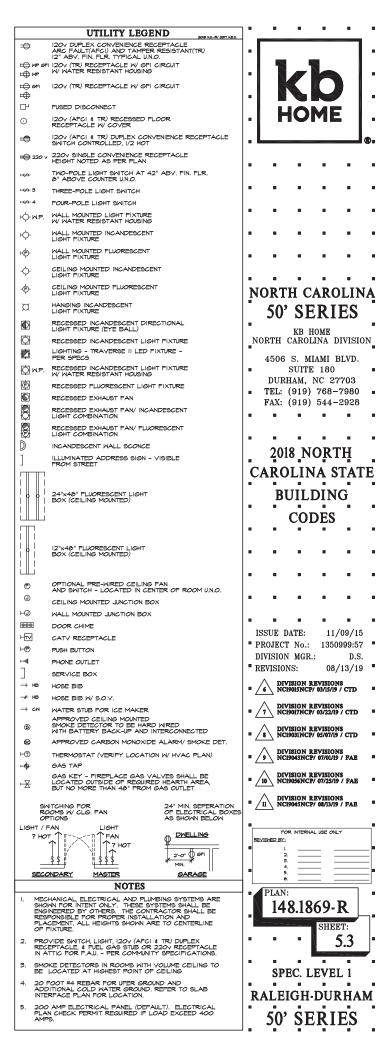
BASIC PLAN

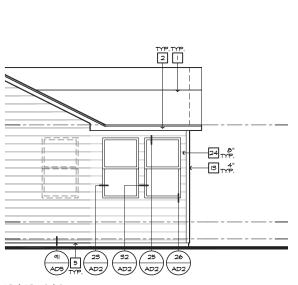




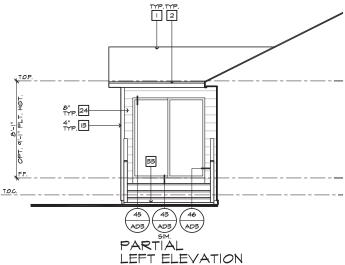
UTILITY PLAN OPTIONS

SCALE I/4"=I"-O" (22"X34") - I/6"=I"-O" (II"XIT") BASIC PL





TYP.TYP.
2 24 TYP. 24 33 AT AT 5 13 33



SCALE I/4"=1'-0" (22"X34") - I/8"=1'-0" (II"XIT")

# PARTIAL RIGHT ELEVATION

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



ROOF PLAN NOTES 'B'

ROOF MATERIAL: COMPOSITION SHINGLE 12" (INCHES) TYPICAL ROOF OVERHANG AT RAKE, U.N.O.

12" (INCHES) TYPICAL ROOF OVERHANG AT EAVE. U.N.O. LOCATE EAVE/ RAFTER VENTS EQUALLY BALANCED AROUND HOUSE EXCEPT ABOVE SHEARWALL PANELS.

# ATTIC VENT CALCULATIONS

PROVIDE I 50, IN. OF VENTILATION PER 300 50, IN. OF ATTIC SPACE. PROVIDE THAT AT LEAST 50% & NO MORE THAN 80% OF THE RED. VENTILATION AREA IS PROVIDED BY VENTILATIONS LOCATED IN THE UPPER PORTION OF THE ATTIC, (HIGH VENTING) AT 3'-0' ABOVE EAVE VENT WITH THE BALANCE BEING PROVIDED. BY EAVE VENTS, (LOW VENTING) (2018 N.C.-R 806.2) \* CALCULATION BY 1/150, HIGH/LOW VENTING NOT REQUIRED.

APPROXIMATE RIDGE VENT LOCATIONS SHOWN.
ACTUAL LOCATIONS TO BE DETERMINED IN THE FIELD.

AREA I / MAIN W/ 8xi2 SUNROOM

VENTILATION REQUIRED: ATTIC AREA 245| 5Q, FT, /300 = 8.17 SQ, FT, X |44 = |176 SQ, |N, X 50% = 588 SQ, |N,

VENTILATION PROVIDED:

HIGH (33) LIN, FEET OF RIDGE VENT AT (18 SQ. IN./FOOT) = 594 SQ. IN LON | LON | (144 SQ. IN. FEAT OF VENTILATED SOFFIT (5 SQ. IN. FOOT) = (144 SQ. IN. EA.) = 470 SQ. IN. 144 SQ. IN. 614 SQ. IN.

1208 SQ. IN.

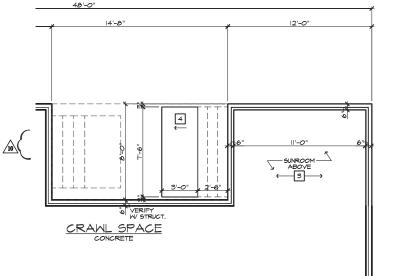
<u>ü</u>

<u>ü</u>

( | ) 5-144 ROOF VENT(S) AT SUB-TOTAL LOW VENTILATION: TOTAL VENTILATION PROVIDED:

PARTIAL ROOF PLAN

SCALE I/8"=1'-0" (22"X34") - I/I6"=1'-0" (II"XI7")

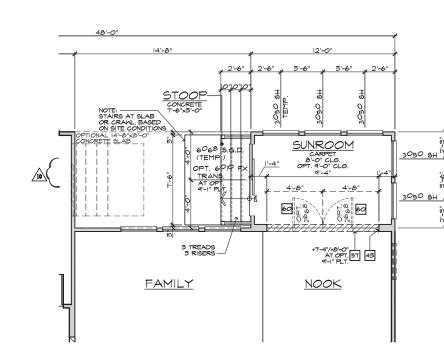


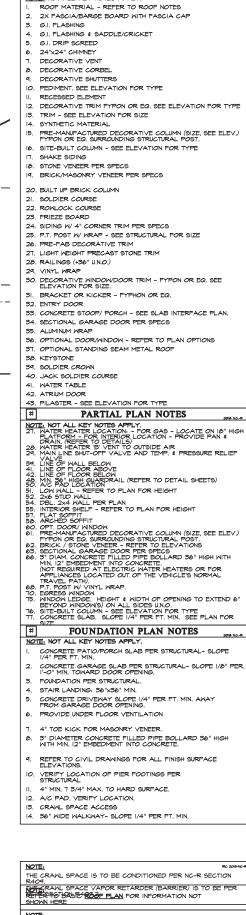
PARTIAL FOUNDATION PLAN SCALE I/4"=1'-0" (22"X34") - I/8"=1'-0" (II"XI7")

PARTIAL REAR ELEVATION

SCALE I/4"=1'-0" (22"X34") - I/8"=1'-0" (II"XIT")

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





**ELEVATION NOTES** 

NOTE: NOT ALL KEY NOTES APPLY.



# 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: 08/13/19

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

DIVISION REVISIONS
NCI9017NCP/ 03/22/19 / CTD

DIVISION REVISIONS
NCI903INCP/ 05/07/19 / CTD

REVIEWED BY:

DIVISION REVISIONS NCI9043NCP/ 07/01/19 / FAE

DIVISION REVISIONS
NCI9056NCP/ 07/25/19 / FAE DIVISION REVISIONS NC19045NCP/ 08/13/19 / FAE

REFER TO CIVIL DRAWINGS FOR ALL FINISH SURFACE ELEVATIONS.

THE CRANL SPACE IS TO BE CONDITIONED PER NC-R SECTION RAOS!

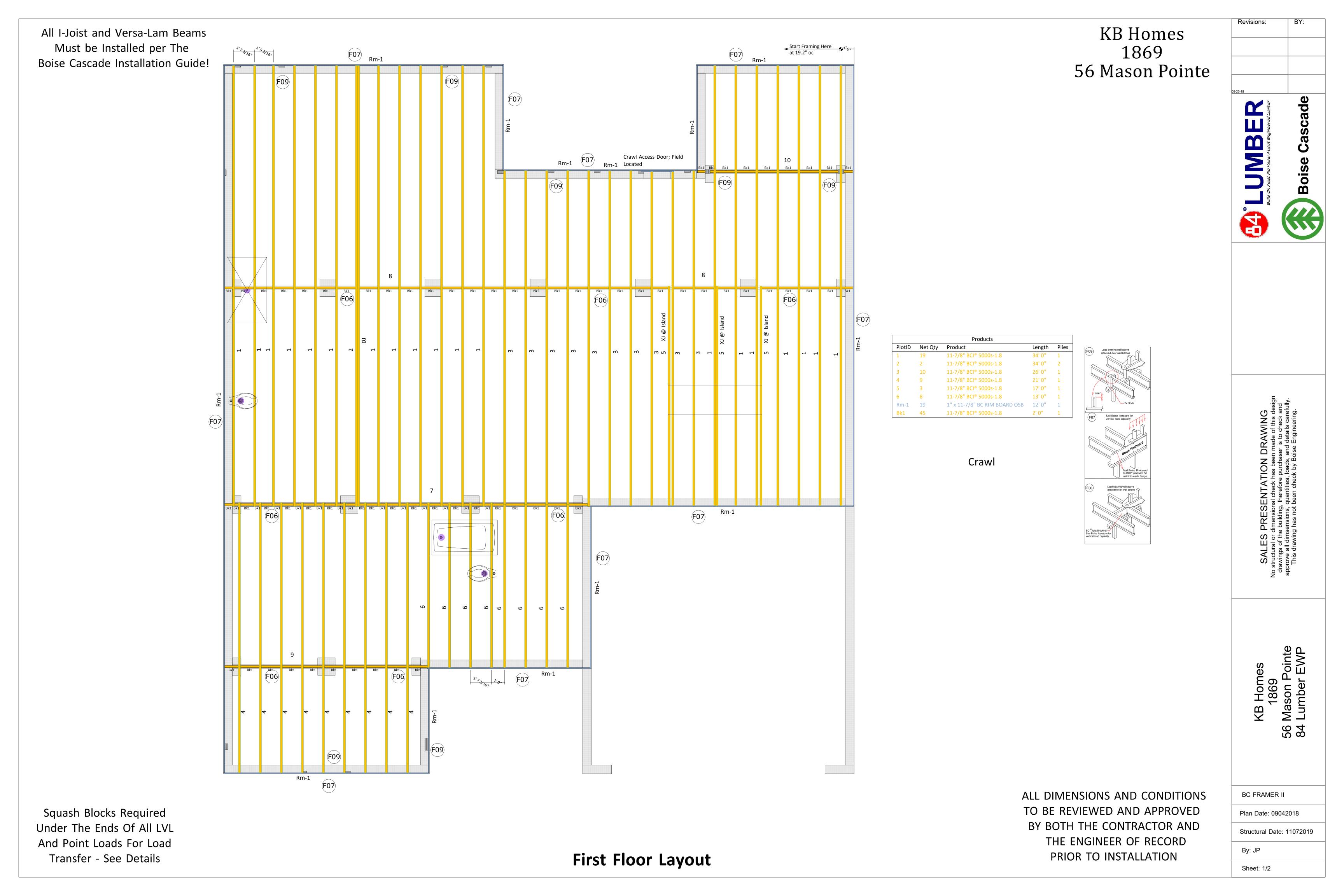
SUBJECTANL SPACE VAPOR RETARDER (BARRIER) IS TO BE PER REFERENCES TO BARRIER OF THE PER SECTION OF THE P

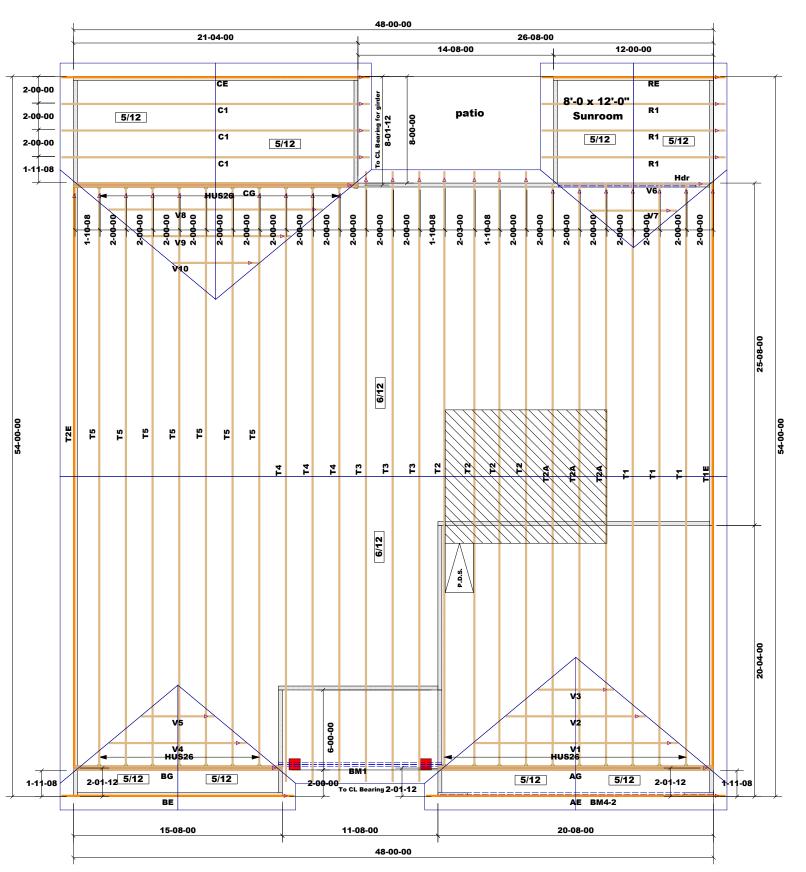
NOTE: REFER TO BASIC <u>ELEVATIONS</u> FOR INFORMATION NOT SHOWN HERE

NOTE: REFER TO BASIC FLOOR PLAN FOR INFORMATION NOT SHOWN HERE

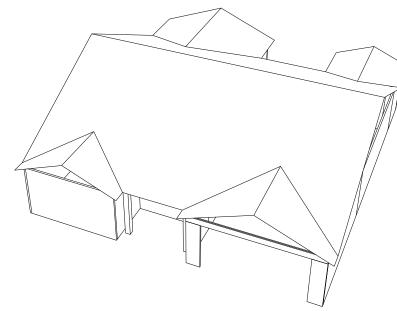
148.1869 SHEET: 9.B2

SPEC. LEVEL 1 RALEIGH-DURHAM 50' SERIES





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



Hanger List							
Symbol Name Qty							
Α	HUS26	27					
Н	HTS20	6					

HTS20 @ Each girder bearing

Hatch Legend
HVAC/Storage



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

inte		nroom	ORDER: 23536A	SHIP DATE: 2020			
Lot 56 @ Mason Pointe	KB HOME	Plan 148.1869 "B" 8x12 Sunroom	P.O. NUMBER: PO #	REV: 4/27/20			
-ot 56 @ I	KB	48.18 <mark>69 "E</mark>		PRINT DATE: 4/29/20			
	CUSTOMER:	MODEL: Plan 14	SCALE: NOT TO SCALE	DRAWN BY: MWM			
TOP LIVE: 20 PSF							

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 - RH GARAGE

PLAN RELEASE / REVISIONS						
REV DATE	ARCH PLAN VERSION	REVISION DESCRIPTION	DRFT			
04/28/2020	148.1869 - RH 04.28.2020	INITIAL SETUP OF LAYOUT	ABS			
04/28/2020	148.1869 - RH 04.28.2020	CREATED LOT-SPECIFIC STRUCTURAL LAYOUT FROM MASTER PLAN AND EWP LAYOUT	ABS			

# **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.
- 2. 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
PROJECT REFERENCE: 20900751

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TITLE SHEET

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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 <u>SECTION R602.10 WALL</u> 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.
- 3. 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

BASINGAVENDESHENDWIND SPEED GROUND SNOW ROOF	LIVE LOAD 106 MPH, EXPOSURE B 25 PSF 20 PSF
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 EXPOSIBE B.

ı				
	ABBR	EVIATIONS	KS	KING STUD COLUMN
			LVL	LAMINATED VENEER
	ABV	ABOVE		LUMBER
	ΔFF	AROVE FINISHED FLOOR	MAX	MAXIMUM
	ALT	ALTERNATE	MECH	MECHANICAL
	BRG	BEARING	MFTR	MANUFACTURER
		BASEMENT	MIN	MINIMUM
		CANTILEVER	NTS	NOT TO SCALE
		CEILING JOIST	OA	OVERALL
		CEILING	ОС	ON CENTER
		CONCRETE MASONRY UNIT	PT	PRESSURE TREATED
		CASED OPENING	R	RISER
		COLUMN	REF	REFRIGERATOR
		CONCRETE	RFG	ROOFING
	CONT	CONTINUOUS	RO	ROUGH OPENING
	D	CLOTHES DRYER	RS	ROOF SUPPORT
	DBL	DOUBLE	SC	STUD COLUMN
	DIAM		SF	SQUARE FOOT (FEET)
	DJ	DOUBLE JOIST	SH	SHELF / SHELVES
	DN	DOWN	SHTG	SHEATHING
	DP	DEEP	SHW	SHOWER
		DOUBLE RAFTER	SIM	SIMILAR
		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
ı			XJ	EXTRA JOIST

# **MATERIALS**

 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 DESIGN PROPERTIES:

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

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

Fb = 2900 PSI Fv = 290 PSI E = 2.0E6 PSI

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. Fy = 50 KSI
- 7. 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 C1157.
- 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 STRUCTURES
- 11. MORTAR SHALL COMPLY WITH ASTM INTERNATIONAL STANDARD C270.
- 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 EVICT.
- CONCRETE FOUNDATION WALLS TO BE SELECTED AND CONSTRUCTED PER SECTION R404 OR AMERICAN CONCRETE INSTITUTE STANDARD ACI 348.
- 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
- I. 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.
  - B. FOUNDATION DRAINS ARE ASSUMED AT ALL WALLS PER SECTION R405.
- 5. 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).
  - C. FOUNDATION DRAINS ARE ASSUMED AT ALL WALLS PER SECTION R405.
- 6. 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.
- 7. 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.
- 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.
- 2. ALL NON-BEARING HEADERS TO BE (2) 2x4, UNO.
- 3. 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.
- 5. ALL BEAMS SPECIFIED ARE MINIMUM SIZES ONLY. LARGER MEMBERS MAY SUBSTITUTED AS NEEDED FOR EASE OF CONSTRUCTION.
- 6. 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.
  - B. 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# UPLIFT CAPACITY.
  - C. TRIM OUT COLUMN(S) AND BEAM(S) PER BUILDER AND DETAILS.
- 3. ALL ENGINEERED WOOD PRODUCTS (LVL, PSL, LSL, ETC.) SHALL BE INSTALLED WITH CONNECTIONS PER MANUFACTURER SPECIFICATIONS.
- 9. ENGINEERED WOOD FLOOR SYSTEMS AND ROOF TRUSS SYSTEMS:
  - 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 DRAWINGS.
- 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 EACH END OF FLITCH BEAM.
- 3. 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 EQUIVALENT 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.



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PLAN: 148.1869

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GENERAL NOTES

**GN1.0** 

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"
	27 -0 31'-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.



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.
- 3. 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 LENGT						
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.



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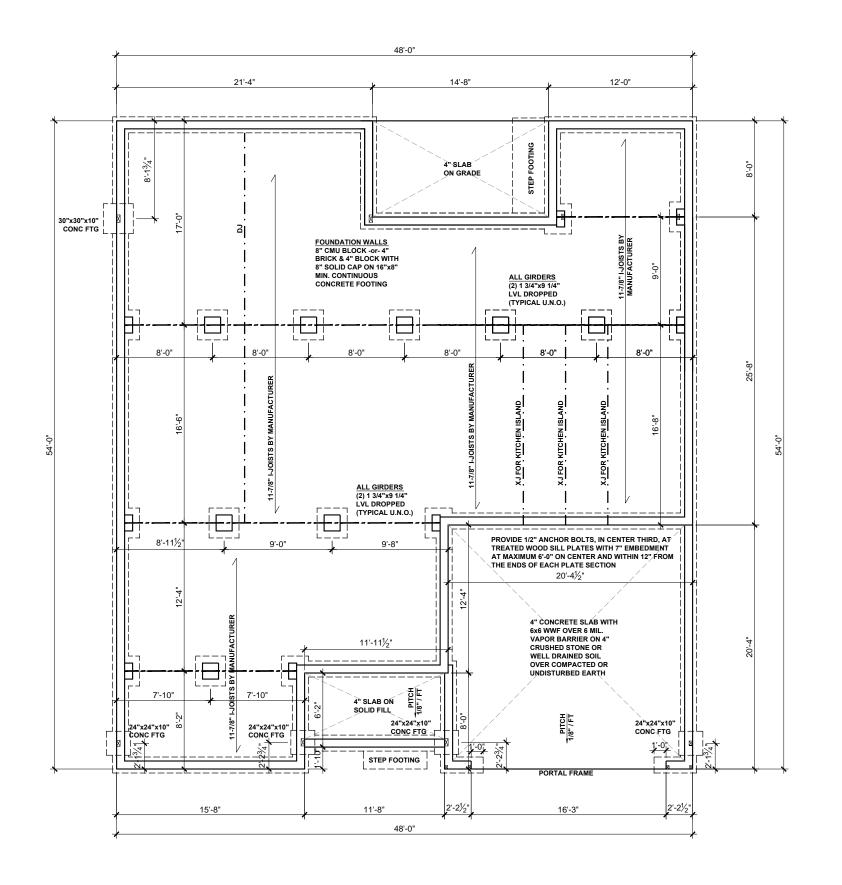
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GENERAL NOTES

GN1.1



# **CRAWL SPACE FOUNDATION PLAN - 'B'**

SCALE: 1/8"=1'-0"

# BEAM & POINT LOAD LEGER

INTERIOR LOAD BEARING WALL

- ROOF RAFTER / TRUSS SUPPO

---- DOUBLE RAFTER / DOUBLE JOIST

STRUCTURAL BEAM / GIRDER

WINDOW / DOOR HEADE

■ POINT LOAD FROM ABOVE BEARING ON BEAM / GIRDER

I-JOIST SPACING NOT TO EXCEED 19.2" OC IN LOCATIONS WITH TILE FINISH FLOOR

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

# FOUNDATION STRUCTURAL NOTES:

1. CONCRETE BLOCK PIER SIZE SHALL BE:

HOLLOW MASONRY SOLID MASONRY

8x16 UP TO 32" HIGH UP TO 5'-0" HIGH 12x16 UP TO 48" HIGH UP TO 9'-0" HIGH 16x16 UP TO 64" HIGH UP TO 12'-0" HIGH 24x24 UP TO 96" HIGH

WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.

FLOOR FRAMING TO BE 11 7/8" DEEP TJI 210 SERIES OR EQUAL, 19.2" OC MAXIMUM SPACING



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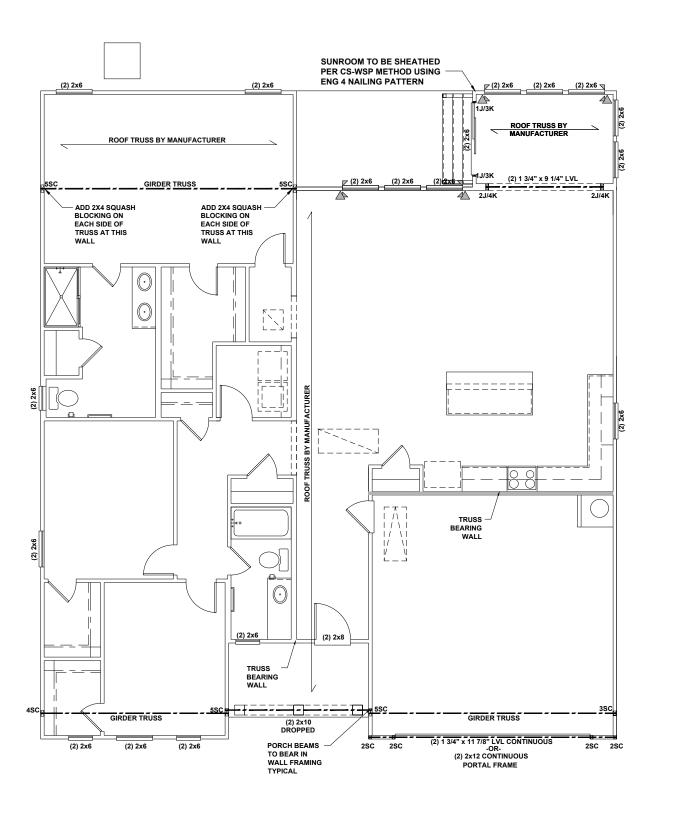
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CRAWL SPACE FOUNDATION PLAN

**S.30B** 



INTERIOR LOAD BEARING WALL

- ROOF RAFTER / TRUSS SUPPORT

DOUBLE RAFTER / DOUBLE JOIST

- STRUCTURAL BEAM / GIRDER

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 SUPPORTE w/ MIN (1) JACK AND (1) KING EACH END, UNO.

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

(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.

ALL BEAMS SPECIFIED ARE MINIMUM SIZES ONLY LARGER MEMBERS MAY SUBSTITUTED AS NEEDED FOR EASE OF CONSTRUCTION. MINIMUM

ALL EXTERIOR WALLS TO BE FULLY SHEATHED

BEAM SUPPORT IS (1) 2x4 STUD.

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).

. 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).

INTERIOR OPTIONS DO NOT AFFECT THE STRUCTURAL LAYOUT

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FIRST FLOOR CEILING FRAMING PLAN

FIRST FLOOR CEILING FRAMING PLAN - 'B'

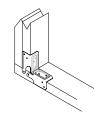
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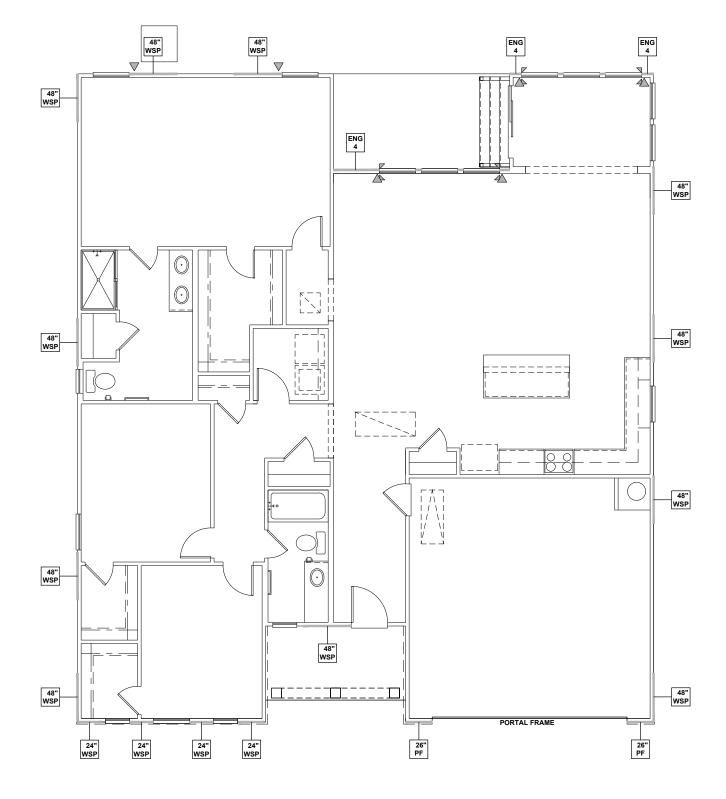
# LCE4 BRACING CON.

- LCE4 CLIP TO HEADER JACK

  CONNECTION AND KBS1Z CLIP AT
  THE JACK BOTTOM PLATE
- CS16 STRAP FROM STUD, CROSS HEADER, TO WALL TOP PLATE, 36"
- SIMPSON HTT4 HOLD DOWN FOR ATTACHMENT TO CONCRETE OR MSTA18 STRAP FOR WOOD



KBS1Z BRACING CON.



# 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
- FOR EASE OF CONSTRUCTION (NAILING & BLOCK REQUIREMENTS STILL APPLY).
- FOR ADDITIONAL WALL BRACING INFORMATION,
  REFER TO WALL BRACING DETAIL SHEET(S).
   SCHEMATIC BELOW INDICATES HOW SIDES OF RECTANGLE ARE TO BE INTERPRETED IN BRACING CHART WHEN APPLIED TO STRUCTURE:



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. STRAF TO BE LOCATED AT EDGE OF BRACED WALL PANEL. (CS16 STRAPPING MAY BE SUBSTITUTED W/ SIMILAR LENGTH AND NAILING PATTERN.) USE HTT4 FOR ATTACHMENT TO CONCRETE.

SCALED LENGTH OF WALL PANEL AT LOCATION —

OF PANEL

# WALL BRACING: RECTANGLE 1

SIDE	REQUIRED LENGTH	PROVIDED LENGTH
FRONT	7.0 FT.	18.5 FT.
LEFT	6.5 FT.	16.0 FT.
REAR	7.0 FT.	11.0 FT.
RIGHT	6.5 FT.	N/A
	•	

# **ENGINEERED WALL SCHEDULE**

ENG1: CONTINUOUSLY SHEATH WITH 7/16" OSB ATTACHED WITH 8d NAILS @ 6" OC EDGE AND 12" OC FIELD. FULLY BLOCKED AT ALL PANEL

ENG2: CONTINUOUSLY SHEATH WITH 7/16" OSB WITH 10d NAILS @ 3" OC EDGE AND 3" OC FIELD. FULLY BLOCKED AT ALL PANEL EDGES.

ENG3: CONTINUOUSLY SHEATH 7/16" OSB ATTACHED BOTH SIDES WITH 8d NAILS @ 4" OC EDGE AND 8" OC FIELD. FULLY BLOCKED AT ALL

ENG4: CONTINUOUSLY SHEATH 7/16" OSB ATTACHED WITH 8d NAILS @ 4" OC EDGE AND 8" OC FIELD. FULLY BLOCKED AT ALL PANEL EDGES



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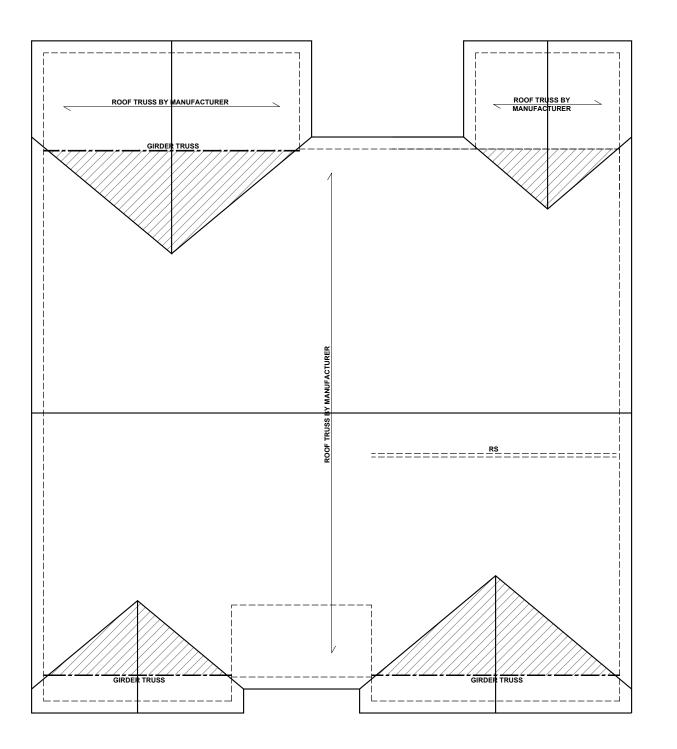
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FIRST FLOOR WALL BRACING PLAN

FIRST FLOOR WALL BRACING PLAN - 'B'

SCALE: 1/8"=1'-0"



# **ROOF FRAMING PLAN - 'B'**

SCALE: 1/8"=1'-0"

# 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

I. 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 MANUFACTURER. TRUSS PLANS TO BE COORDINATED WITH THE SEALED STRUCTURAL DRAWINGS. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S
- 5. MANUFACTURER TO PROVIDE REQUIRED UPLIFT CONNECTION.
- 5. 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.

# 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)

**OVER 28'** 

(1) SIMPSON H2.5A HURRICANE

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

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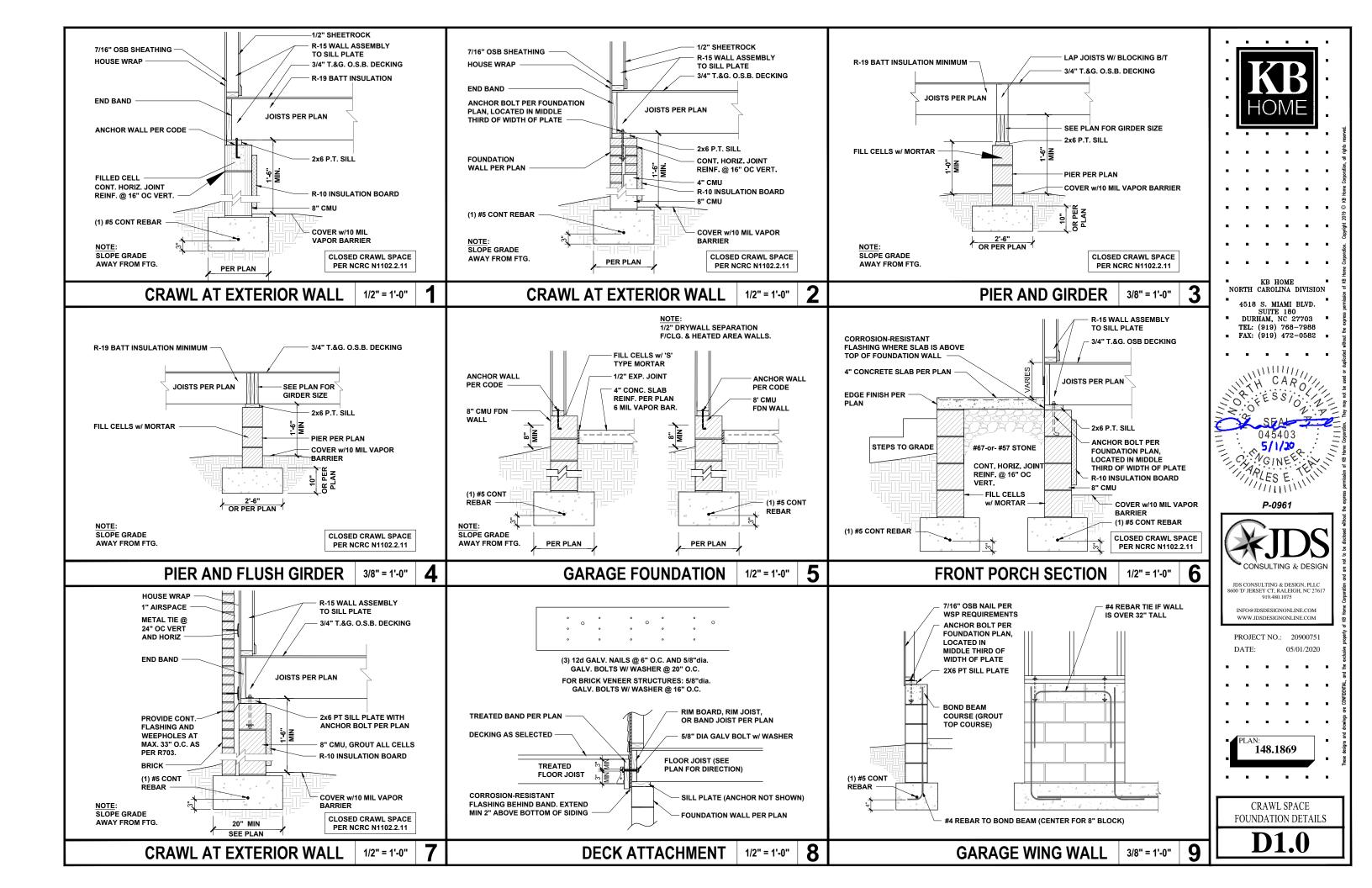
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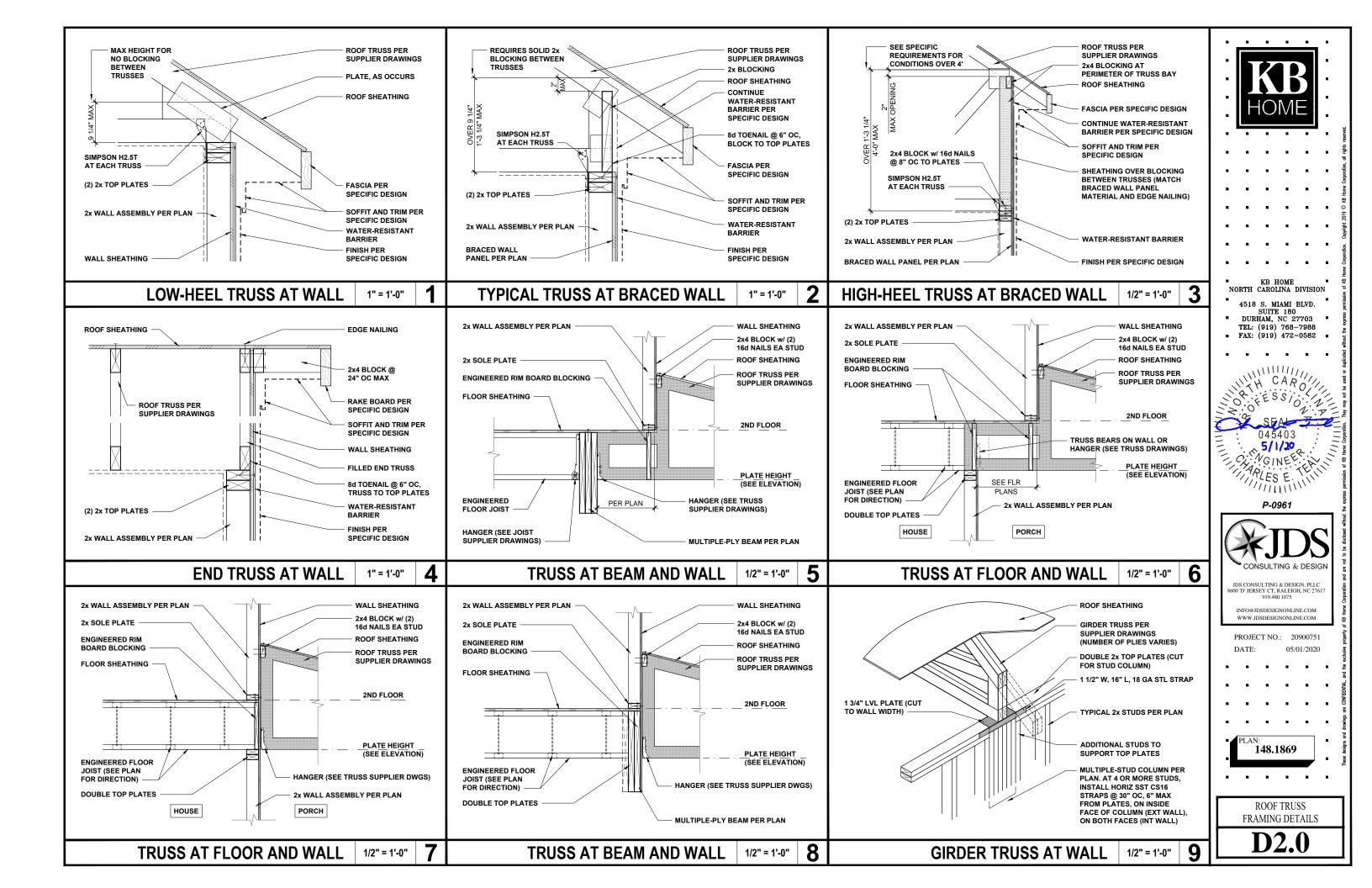
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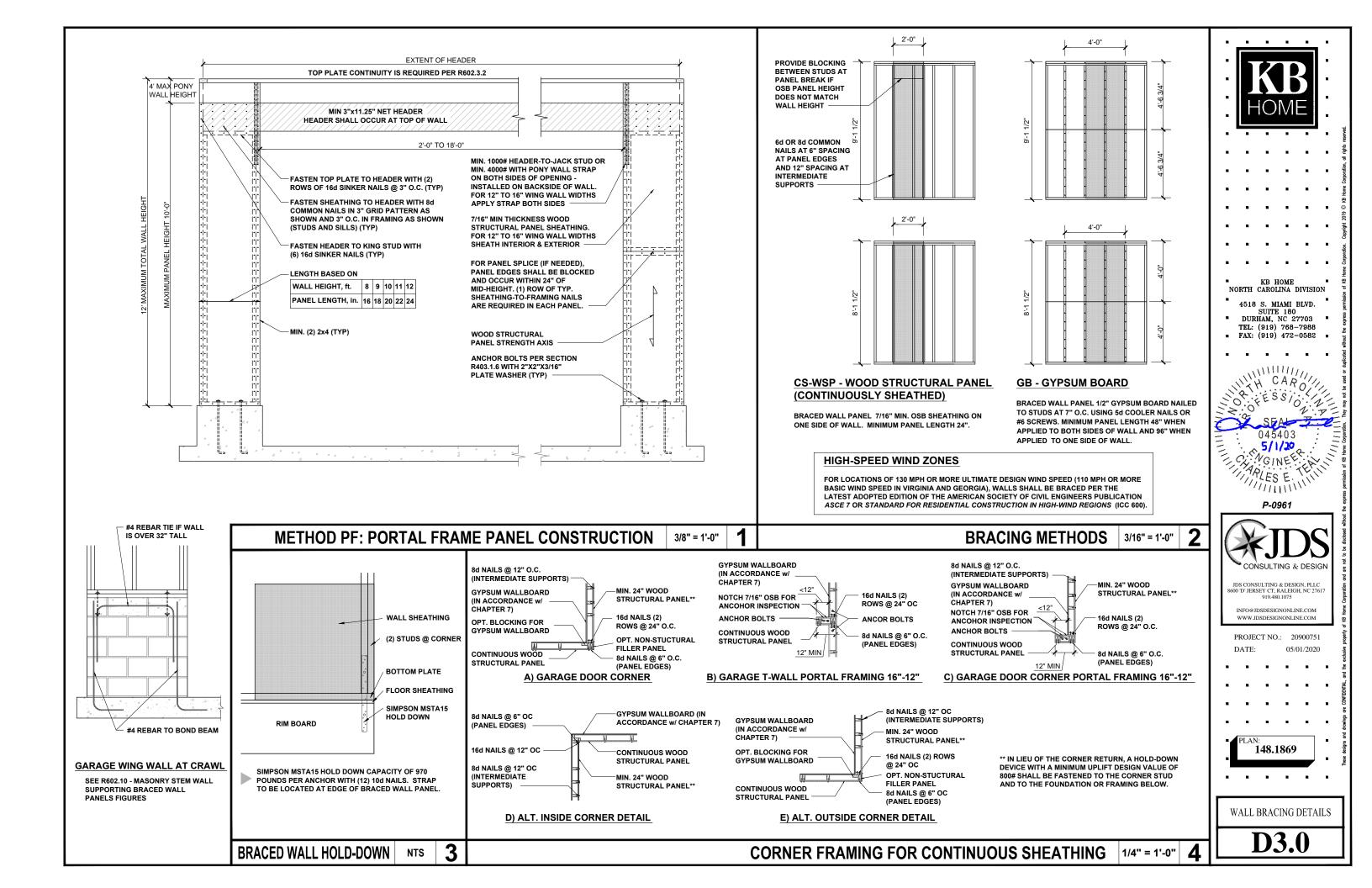
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ROOF FRAMING PLAN

**S7.0B** 







# **JOIST DETAILS** When sheathing thickness exceeds 7/8", Load bearing or shear wall above IRC 502-7 requires lateral (must stack over wall below) **BEAM and COLUMN DETAILS** restraint (blocking) at all Plate nail - 16d (0.135" x intermediate supports i Floor panel nail - 8d (0.131" x $2\frac{1}{2}$ ") at 6" on-center\* D0, D1, and D2 to 11/4" rim board or blocking Web Stiffeners required squash blocks BEAM TO BEAM CONNECTION B1 B1W $1\frac{1}{4}$ " LSL or $1\frac{1}{8}$ " rim board.\* Toe nail - 10d (0.131" x 3") required each side **[L1]** at B1W and B2W For rim board thicker than 1 3/4" (A3) - Attach Joist to rim board with one 10d (0.128"x3") nail. Blocking panels may be A2 A2W Must have 13/4" minimum joist bearing B2 B2W Top nail from joist into rim board. required with shear w (L3) at ends. Attach rim joist per A3 detail Connect corner with four 10d (0.128"x3") nails. Toe nail from side of parallel closure into rim board above or below - see detail B1 A3W INTERMEDIATE BEARING Load bearing or shear wall BEARING AT CONCRETE WALL NO LOAD BEARING WALL ABOVE above (must stack over wall Load from abov Web stiffeners required BEARING AT COLUMN Protect untreated required on each Blocking panels may be of support Use 2x4 minimum squash blocks B3 B3W B4 B4W CS Use 2x4 minimum squas... to transfer load around joist of hanger do not laterally suppor above or below (See detail B1) **FASTENING of FLOOR PANELS** \* SEE I-JOIST EQUIVALENCE CHART FILLER and BACKER BLOCK SIZES \* SEE I-JOIST EQUIVALENCE CHART Guidelines for Closest On-Center Spacing per Row 110 FO \* 230 or 360 FO \* Rim Board 210 FQ \* 560 FO \* I-JOIST 110, 210, 3 I-Joists PSI LVL Nail Size 360 and 9½" or LSL or wide Depth 14" and 230 FQ. 560 FQ 8d (0.131" x 2½") 2x8 + ½" 2x12 + ½ 4" 3" Filler Block $2x6 + \frac{3}{8}$ " $2x8 + \frac{3}{8}$ 2x6 2x8 (Detail H2) sheathing sheathir sheathing sheathing sheathing 2x6 2x8 2x12 10d (0.148"x 3"), 12d (0.148"x 31/4") 4" 4" 4" 2x6 2x10 2x6+3/8" 2x10+3/8" 2x6 + 1/2" 2x10 + 1/2" 16d (0.162"x 3½") 6" 6" 6"(2) 6"(2) 8" 6" Cantilever Fille 4'-0" 6'-0" sheathing sheathing sheathing sheathing (Detail E4) applicable (1) One row of fasteners permitted (two at abutting panel edges) for diaphragms. Stagger nails when long long 4'-0" long 6'-0" long 4'-0" long 6'-0" long using 4" on-center spacing and maintain 3/8" joist and panel edge distance. For other applications, Backer Block ( 5/8" or 3/4" 3/4" or 7/8" 1" Net 2x6 2x8 2x12 multiple rows of fasteners are permitted if the rows are offset at least $\frac{1}{2}$ " and staggered. (Detail F1 or H2 (2) Can be reduced to 4" on-center if nail penetration into the narrow edge is no more than 1 3/8" (to avoid splitting). (1) If necessary, increase filler and backer block height for face mount hangers and maintain $\frac{1}{8}$ " gap at top of joist; see detail W. Filler and backer block lengths should accomodate required nailing • Recommended nailing is 12" on-center in field and 6" on-center along panel edge. Fastening requirements on engineered drawings supersede without splitting (12" minimum for backer blocks and 24" minimum for filler blocks). recommendations listed above. Joists must be laterally supported at cantilever and end bearings by blocking panels, hangers, or direct attachment to a rim board or rim joist. • Recommended use of a non-polyurethane subfloor adhesive on all contact points between panels and floor framing. Safety bracing (1x4 minimum) at 8' on-center (6' on-center for 110 or equivalent Joists) and extended to a braced end wall. Fasten at each joist with two 8d (0.113" x 2 $\frac{1}{2}$ ") nails minimum (see WARNING). • Nailing rows must be offset at least 1/2" and staggered. • 14 ga. staples may be substituted for 8d (0.113" x 21/2") nails if minimum DO NOT bevel cut joist penetration of 1" into the joist or rim beyond inside face of wal board is achieved. Maximum spacing of nails is 18" on-center for joists. DO NOT overhang seat cut: on beams beyond the inside face of support member. Rim jois $1\frac{1}{4}$ " rim board. $\widehat{A2}$ Ĺ5 $\bigcirc \bigcup$ Use B1 or B2 at End of joists at see note 3 under DO NOT use sawn lumber for rim board or blocking, as

Protect untreated

wood from direct

11/4" knockouts a

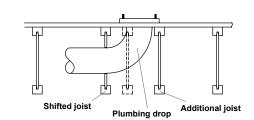
# **INSTALLATION TIPS**

Subfloor adhesive will improve floor performance, but may not be required.

Squash blocks and blocking panels carry stacked vertical loads (details B1 and B2). Packing out the web of a joist (with web stiffeners) is not a substitute for squash blocks or blocking panels.

When joists are doubled at non-load bearing parallel partitions, space joists apart the width of the wall for plumbing or HVAC.

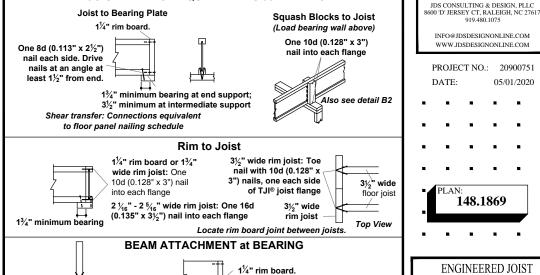
Additional joist at plumbing drop (see detail).



# \* I-JOIST EQUIVALENCY CHART

EQUIVALENT IN SPAN AND SPACING							
Depth	Mftr & Series	Mftr & Series	Mftr & Series				
	TJI - 110	BCI 4500					
9 ¼"	TJI - 210	BCI 5000					
7	TJI - 230	BCI 6000	EverEdge 20				
		BCI 6500					
	TJI - 110	BCI 4500					
	TJI - 210	BCI 5000					
11 7"	TJI - 230	BCI 6000	EverEdge 20				
		BCI 6500					
	TJI - 360	BCI 60'S	EverEdge 30				
	TJI - 560	BCI 90'S	EverEdge 50/60				
	TJI - 110	BCI 4500					
	TJI - 210	BCI 5000					
14"	TJI - 230	BCI 6000	EverEdge 20				
٠. [		BCI 6500					
	TJI - 360	BCI 60'S	EverEdge 30				
	TJI - 560	BCI 90'S	EverEdge 50/60				
	TJI - 110	BCI 4500					
	TJI - 210	BCI 5000					
16"	TJI - 230	BCI 6000	EverEdge 20				
		BCI 6500					
Γ	TJI - 360	BCI 60'S	EverEdge 30				
	TJI - 560	BCI 90'S	EverEdge 50/60				

# **JOIST NAILING REQUIREMENTS at BEARING**



Drive nails at an

angle to minimize

splitting of plate

See framing plan (if applicable) or iLevel® Framer's Pocket

Guide for minimum end and

intermediate bearing lengths

One 10d (0.128" x 3")

nail each side of member at bearing, 11/2"

minimum from end

it may shrink after

installation. Use only

. . . . ENGINEERED JOIST DETAILS

148,1869

KB HOME

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05/01/2020

DATE:

OKNON ARLES E. III