

**UNIT MASONRY**

1. CONCRETE MASONRY UNIT (CMU) CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530.1/ASCE 6-88)" PUBLISHED BY THE AMERICAN CONCRETE INSTITUTE.
2. HOLLOW LOAD BEARING CMU SHALL CONFORM TO ASTM C90, TYPE 1, "NORMAL WEIGHT". MINIMUM NET TENSILE STRENGTH OF 1250 PSI; 0.06% MAXIMUM LINEAR SHRINKAGE FROM SATURATED TO OVEN DRY; CURE 28 DAYS. PROVIDE MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR UNITS PROVIDED TO SITE.
3. MORTAR TO BE TYPE S, CONFORMING TO ASTM C270. MORTAR SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
4. INSTALL 9 GA. DUROWALL TRUSS TYPE JOINT REINFORCEMENT @ 16" O.C. VERTICALLY (EVERY OTHER COURSE), ALL CMU WALLS.
5. GROUT FOR CELLS SHALL CONFORM TO ASTM C476, 3000 PSI COMPRESSIVE STRENGTH. GROUT CELLS SOLID AT REINFORCING AND AS NOTED IN MAX. 48-INCH LIFTS.
6. CMU WALLS SHALL BE FILLED SOLID TOP TO BOTTOM, FOR ENTIRE LENGTHS, WITH CONCRETE, PUMP MIX, MAX. 48-INCH LIFTS.
7. WHERE PIPES OR WIRE PASS THROUGH A FOUNDATION WALL, INSTALL PVC SLEEVE MINIMUM OF PIPE OR WIRE DIAMETER PLUS 2 INCHES.
8. REINFORCING BARS SHALL BE "DEFORMED" CONFORMING TO ASTM A615; GRADE-40 FOR #3 BARS, GRADE-60 FOR #4 AND LARGER BARS. "LAP JOIN" ALL REINFORCING BARS 30 BAR DIAMETERS MINIMUM. CORNER BARS FOR CONTINUOUS REINFORCING SHALL BE LAPPED MINIMUM 30 BAR DIA. EACH WAY.
9. DO NOT BACKFILL AGAINST FOUNDATION WALLS WITHOUT APPROPRIATE BRACING AND SHORING, OR UNTIL ALL FRAMING IS COMPLETE, INCLUDING THE ROOF.
10. COMPACT BACKFILL BEHIND FOUNDATION WALLS TO MINIMUM OF 90% DENSITY, IN APPROPRIATE LIFTS. ALL BACKFILL MATERIAL SHALL BE FREE OF ORGANIC OR OTHER DETRIMENTAL MATERIAL.
11. DAMPROOFING (WHERE SHOWN): THE SUBSTRATE SHALL BE MADE SMOOTH AND ACCEPTABLE FOR THE APPLICATION. GENERALLY IF CMU (CONC. BLOCK) APPLY A 1" THICK CEMENT PARING. THEN APPLY TWO COATS OF AN ASPHALTIC COATING. COATS SHALL BE APPLIED FROM OPPOSITE DIRECTIONS TO ENSURE THE FILLING OF THE SUBSTRATE. FOLLOW MANUFACTURER'S DIRECTIONS. PRODUCT W.R.MEADOWS "SEALMASTIC EMULSION", EACH COAT 1/16" WET FILM THICKNESS.
12. WATERPROOFING (WHERE SHOWN): ALL FOUNDATION WALLS ENCLOSING CRAWLSPACES OR OTHER OCCUPIED SPACE SHALL BE WATERPROOFED (NOT DAMPROOFED). PREPARE WALL SURFACE AS REQUIRED, INSTALL ASTM # 2449 "TYPE A", ADHESIVE, SELF-HEALING POLYMER, MODIFIED ASPHALT MEMBRANE, MINIMUM 40-MIL. THICK, OR APPROVED EQUAL. MEMBRANE SHALL EXTEND ONTO THE FOOTING AND EXTEND UP TO WITHIN 12 INCHES OF FINAL GRADE. WATERPROOFING MEMBRANE SYSTEM SHALL BE PROTECTED, TOP TO BOTTOM, DURING BACKFILLING. CONTRACTOR SHALL PROVIDE CATALOG CUTS FOR ALL PARTS OF THE SYSTEM FOR APPROVAL BEFORE PROCEEDING.
13. DO NOT APPLY CONCENTRATED LOADS FOR AT LEAST 3 DAYS AFTER BUILDING MASONRY WALLS. DO NOT APPLY UNIFORM FLOOR OR ROOF LOADS FOR AT LEAST 12 HOURS AFTER BUILDING MASONRY WALLS.

**WOOD FRAMING & "CONTINUOUS LOAD PATH" ANCHORAGE**

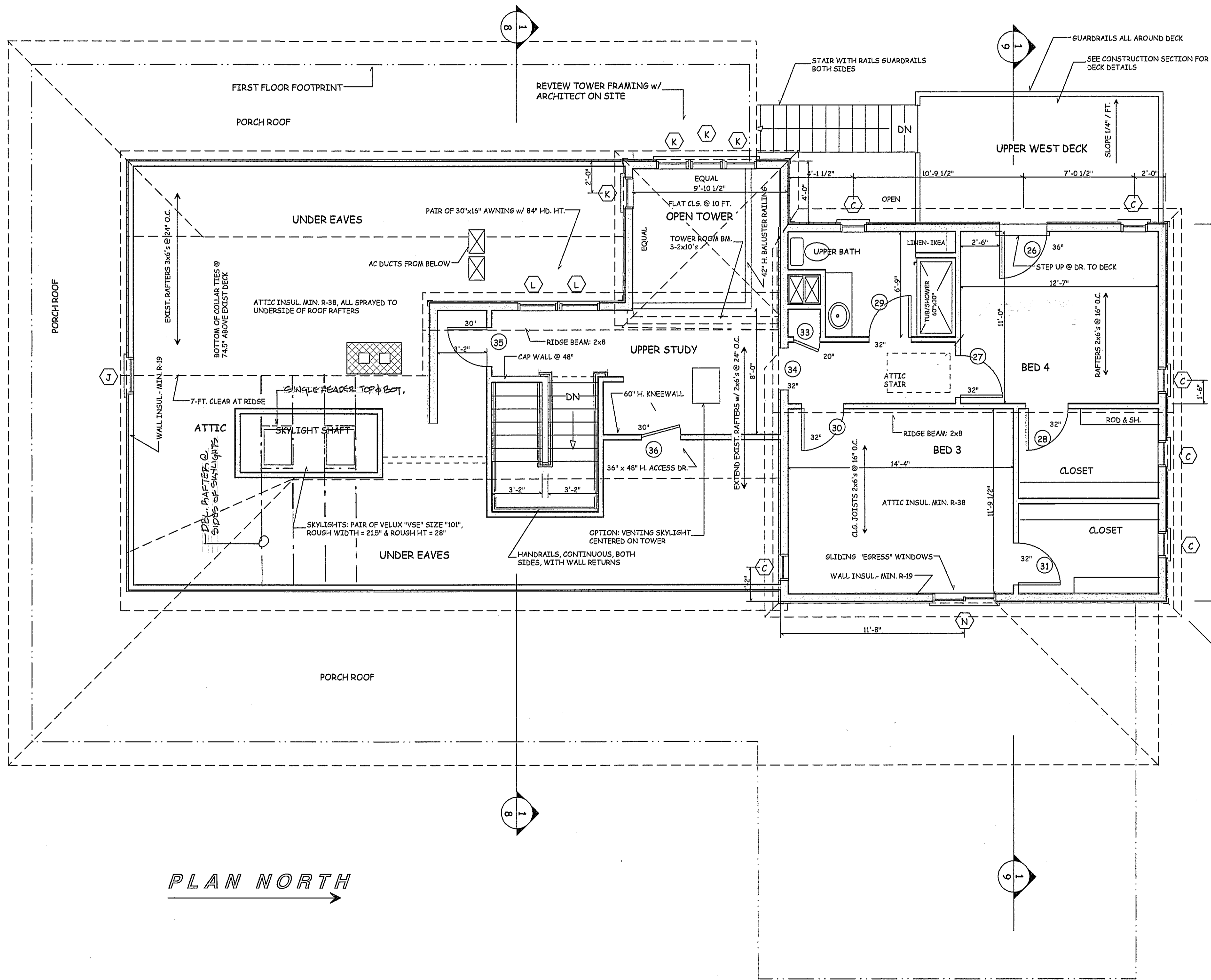
1. STANDARDS: ALL ROUGH CARPENTRY TO COMPLY WITH "MANUAL OF HOUSE FRAMING" BY NATIONAL FOREST PRODUCTS ASSOC., THE 2006 ICC RESIDENTIAL CODE, AND WITH RECOMMENDATIONS OF AMERICAN PLYWOOD ASSOC.
2. STRUCTURAL LUMBER (WALL STUDS, FLOOR CEILING JOISTS) OF NOMINAL 2" THICKNESS SHALL BE KILN DRIED (MAX. 19% MOISTURE CONTENT) #2 HEM-FIR WITH MIN. FB 1,200.
3. ALL WOOD, IN PARTICULAR SILL PLATES, IN CONTACT WITH MASONRY SHALL BE PRESSURE TREATED. ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD TO BE STAINLESS STEEL OR HEAVY HOT DIPPED GALVANIZED.
4. THE JOINT BETWEEN MASONRY FOUNDATION WALL AND WALL SILL PLATES SHALL RECEIVE POLYPROPYLENE FOAM SILL PLATE INSULATION.
5. PROVIDE TWO (2) FLOOR JOISTS DIRECTLY BELOW PARALLEL WALLS AND PARTITIONS ABOVE. IF WALLS ABOVE ARE CHASES FOR PIPES OR DUCTS, PUT JOISTS EITHER SIDE AND INSTALL SOLID BLOCKING AT 16" O.C. MIN. ALSO, PROVIDE ONE (1) ADDITIONAL JOIST 8" INSIDE OF ROOMS ABOVE TO TAKE FURNITURE AND BOOKCASE LOADS AT ROOM PERIMETERS PARALLEL TO FLOOR FRAMING.
6. ALL FLOOR AND CEILING JOISTS SHALL BE "BRIDGED" WITH SOLID BLOCKING, FULL DEPTH, STAGGERED, AS FOLLOWS: SPANS 2 TO 14', PROVIDE 2 ROWS; SPANS 2 TO 6', PROVIDE 1 ROW.
7. ALL RAFTERS TO BE SOLIDLY BLOCKED ALONG THE TOP PLATE OF EXTERIOR WALLS. THE BLOCKING DEPTH SHALL BE REDUCED BY 1 INCH WHEN ATTIC VENTILATION IS REQUIRED.
8. ANCHOR DEVISE MANUFACTURER: ALL PRODUCTS TO BE USED AND REFERENCED IN THIS SPEC ARE BY SIMPSON STRONG-TIE BECAUSE THEY SUPPORT THE CONSTRUCTION INDUSTRY WITH EXTENSIVE TESTING, EDUCATION AND FIELD SUPPORT. ALL ANCHORS SHALL BE INSTALLED PER MFG'S. RECOMMENDATIONS, BE ATTENTIVE TO NAIL SIZES AND LENGTHS. THE SIMPSON CATALOG SHALL BE ON THE JOBSITE DURING FRAMING. NO ALTERNATE MANUFACTURERS ARE ALLOWED.
9. SILL PLATE ANCHORING: SILL PLATES SHALL BE ANCHORED TO THE FOUNDATION WALL AS FOLLOWS: ANCHOR BOLTS SHALL BE MIN. ONE-HALF INCH DIAMETER DEFORMED OR THREADED ROD WITH MIN. EMBEDMENT OF 7 INCHES INTO CONCRETE OR SOLID FILLED MULTI COURSE MASONRY. THE WASHER IN CONTACT WITH THE SILL PLATE SHALL BE MIN. 2 INCHES SQUARE AND 1/8" THICK. AT BLDG. CORNERS, OR THE END OF SILL PLATE SECTIONS, THE ANCHOR BOLT SHALL NOT BE MORE THAN 7" DIAMETERS" (3-1/2") FROM ENDS. IN ADDITION, ANCHORS SHALL BE PLACED ALONG WALLS AT INTERVALS NOT EXCEEDING 48 INCHES. IF ANCHOR BOLTS ARE "CAST" INTO THE FOUNDATION WALL AND "MISS" THESE OBJECTIVES, THEN SUPPLEMENT AS REQUIRED BY DRILLING AND SETTING EPOXY BOLTS OR SIMPSON "TITEN HD" MASONRY SCREWS.
10. NOTE, IT MAY BE ADVANTAGEOUS TO DRILL ALL SILL ANCHORS AND SET THEM IN CONJUNCTION WITH "UPLIFT" SILL PLATE TO WALL ANCHORS.
11. WIND BRACING "UPLIFT": A) SILL PLATE TO WALL STUD ANCHORAGE: USE SIMPSON #SSP WITH Z-MAX HOT DIPPED GALVANIZED COATING (BECAUSE OF PRESSURE TREATED PLATE, ALSO USE STAINLESS STEEL NAILS). USE A PAIR (INSIDE AND OUT) LOCATED AT BLDG. CORNERS AND AT SPACING NOT EXCEEDING 48" O.C. (SAME AS FOUNDATION ANCHOR BOLTS). B) WALL STUD TO TOP DOUBLE PLATE. USE SAME PRODUCT AT THE SILL PLATE TO WALL STUD ANCHOR, LOCATED ON THE SAME STUD. THESE TOP AND BOTTOM ANCHORS SHOULD BE IN "ALIGNMENT."
12. WALL-TO-WALL ANCHORAGE: WHERE WALLS CONTINUE ABOVE A FLOOR DECK, THE CONTINUITY OF UPLIFT ANCHORAGE SHALL BE MAINTAINED. UPPER WALL STUDS MUST BE LOCATED INLINE WITH LOWER WALL STUDS. USING THE SAME STUDS WHICH HAVE THE SILL PLATE TO STUD ANCHORS, INSTALL SIMPSON #CS STRAPS.
13. WALL TO RAFTER ANCHORAGE: EVERY RAFTER SHALL BE ANCHORED TO THE WALL TOP PLATE USING ONE "HURRICANE CLIP", SIMPSON #H2.5A. ALL CEILING JOISTS (OR FLOOR JOISTS) SHALL BE SECURELY NAILED TO THE RAFTER.
14. RAFTER TO RIDGE BEAM (OR OTHER EXISTING STRUCTURE): USE SIMPSON #LSTA STRAPS.
15. WIND BRACING HORIZONTAL: ALL WALLS SHALL BE COMPLETELY SHEATHED WITH 4-PLY, 1/2 INCH THICK PLYWOOD. FROM THE GROUND UP, THE FIRST ROW SHALL BE LAID HORIZONTALLY, THE SECOND ROW SHALL BE INSTALLED VERTICALLY TO COMPLETELY COVER THE FLOOR BAND JOIST. ROWS ABOVE SHALL ALTERNATE USING THE SAME SYSTEM. VERTICAL JOINTS SHALL BE FULLY SUPPORTED ON STUDS. NAILING, USING 8D COMMON NAILS, ALL AROUND SHEET PERIMETERS SHALL BE 4" O.C., INTERIOR FIELD NAILING SHALL BE 6" O.C. NOTE: NAILS IN THE PRESSURE TREATED SILL PLATE MUST BE STAINLESS STEEL OR HOT DIPPED GALVANIZED.
16. SUB-FLOOR DECKS: SHALL BE "ADVANTECH" ENGINEERED WOOD PANELS, MIN. 3/4" EXTERIOR GRADE TONGUE & GROOVED. GLUE IN PLACE USING ONLY POLYURETHANE ADHESIVE, AND SCREW @ 6" O.C. ALONG ALL SHEET PERIMETERS AND 12" O.C. AT INTERIOR FIELD.
17. ROOF SHEATHING: SHALL BE EXTERIOR GRADE PLYWOOD, MIN. 5/8" THICK WITH RAFTER SPACING OF 24" O.C. AND MIN. 1/2" THICK WITH RAFTER SPACING OF 16" O.C.
18. LUAN UNDERLAYMENTS SHALL ALL BE CERTIFIED AS FABRICATED WITH EXTERIOR GRADE GLUE.

**FRESH AIR EXCHANGE SYSTEM: ADD OPTION**

1. AS BUILDINGS ARE MADE TIGHTER AND MORE ENERGY EFFICIENT, NEW MECHANICAL CODES ARE SUGGESTING THE INTRODUCTION OF EXTERIOR FRESH AIR INTO OCCUPIED ENVIRONMENTS TO PREVENT "SICK BUILDING SYNDROME."
2. ADD OPTION PROPOSAL: INSTALL ENERGY RECOVERING FRESH AIR EXCHANGER. THIS UNIT TO BE A STAND ALONE PACKAGE. SEE DRAWING DETAILS. SYSTEM SHOULD BE ABLE TO OPERATE WITH OR INDEPENDENT OF EITHER THE HEATING OR COOLING SYSTEMS.
3. PRODUCT: PERFECTAIRE, MODEL 8100 FRESH AIR EXCHANGER, OR APPROVED EQUAL.

**ADD OPTION: RADIANT BARRIER**

1. RADIANT BARRIERS ARE REFLECTIVE FILMS, PAINTS, MEMBRANES, ETC., WITH THE PURPOSE OF REFLECTING AWAY FROM A SURFACE THE SUN'S RADIANT (HEAT) ENERGY. INSTALLED IN BUILDINGS, MANUFACTURERS ARE CLAIMING SIGNIFICANT ENERGY SAVINGS, ESPECIALLY FOR COOLING COSTS. ELECTRIC AIR CONDITIONING IS MORE EXPENSIVE PER "DEGREE CHANGE" THAN HEATING. WHERE MODERN HOUSEHOLD ENVIRONMENTS ARE CONTINUALLY "CONDITIONED" ANNUAL COOLING COSTS MAY EQUAL OR EXCEED HEATING COSTS.
2. SHEATHING OPTION: SOME MANUFACTURERS ARE PROVIDING WALL AND ROOF SHEATHING WITH A FACTORY APPLIED FOIL FACE.
3. PAINT PRODUCT OPTION: SHERWIN WILLIAMS "E-BARRIER," APPLY PER MANUFACTURER'S RECOMMENDATIONS. THIS IS A NEW PRODUCT AS OF NOVEMBER 2008. DO CAREFUL COORDINATION WITH THE LOCAL REPRESENTATIVE. SURFACE COVERAGE DOES NOT HAVE TO BE PERFECT. ACHIEVE BEST COVERAGE AS IS PRACTICAL. THIS IS A SOFT METALLIC FINISH, HOWEVER, URETHANE SPRAY FOAMS WILL ADHERE TO THIS PAINT.
4. SURFACES TO RECEIVE BARRIER:
  - A. ALL ROOF SHEATHING.
  - B. ALL ATTIC GABLE WALLS, ESPECIALLY SOUTH AND WEST FACING.
  - C. ALL SOUTH AND WEST FACING OCCUPIED ROOM WALLS.



PLAN NORTH

**SECOND FLOOR PLAN**

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DATE	REVISION DESCRIPTION
OCT. 25, 2007	PROJECT START UP
MAY 01, 2008	FOR PERMITS
5-23-08	PER PERMIT REVISED

VALID FOR PERMITS ONLY IF IMPRESSED WITH ORIGINAL SEAL & ORIGINAL SIGNATURE IN "RED"

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Sheet No. **5**  
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