

WOOD FRAMING "BASIC"

- STANDARDS: ALL ROUGH CARPENTRY TO COMPLY WITH "MANUAL OF HOUSE FRAMING" BY NATIONAL FOREST PRODUCTS ASSOC., THE 2009 ICC RESIDENTIAL CODE, AND WITH RECOMMENDATIONS OF AMERICAN PLYWOOD ASSOC.
- 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.
- 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.
- OPTION TO AVOID PRESURE TREATING CHEMISTRY: USE "BORAL" FOR SILL PLATES AND REGULAR GALVANIZED ANCHORS.
- THE JOINTS BETWEEN MASONRY FOUNDATION WALL AND WALL SILL PLATES SHALL RECEIVE POLYPROPYLENE FOAM SILL PLATE INSULATION.
- MAINTAIN CLEAR LINES OF CONNECTIVITY FROM FOUNDATION TO RIDGE. ALIGN STUDS FROM FLOOR TO FLOOR; ALIGN RAFTERS AT RIDGES, AND STUDS BELOW. SEE CONTINUOUS LOAD PATH NOTES.
- 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 SHELVING AND BOOKCASE LOADS AT ROOM PERIMETERS PARALLEL TO FLOOR FRAMING.
- ALL FLOORS AND ALL ATTIC ACCESSIBLE CEILING JOISTS SHALL BE "BRIDGED" WITH SOLID BLOCKING, FULL DEPTH, STAGGERED, AS FOLLOWS: AT MID-SPANS, AT TOPS OF BEAMS, NO DIAGONAL WOOD OR METAL BRIDGING IS ACCEPTABLE.
- ALL RAFTERS TO BE SOLIDLY BLOCKED ALONG THE TOP PLATE OF EXTERIOR WALLS (ALLOW FOR INSULATION Baffles). SEE CONTINUOUS LOAD PATH NOTES.
- WIND BRACING HORIZONTAL: ALL WALLS SHALL BE COMPLETELY SHEATHED WITH APA RATED STRUCTURAL SHEATHING. AT 2-STORY LOCATIONS THE FIRST (BOTTOM) ROW TO BE LAID HORIZONTALLY, SECOND ROW VERTICAL TO BRIDGE THE FLOOR DECK AND LINK THE STUDS FLOOR TO FLOOR. PLACE "FILLER STRIPS" IN MIDDLE OF WALL. VERTICAL JOINTS SHALL BE FULLY SUPPORTED ON STUDS. NAILING: USING 8D COMMON NAILS. ALL AROUND SHEET PERIMETERS SHALL BE AT 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.
- SUB-FLOOR DECKS: SHALL BE APA RATED, 3/4", TONGUE & GROOVED, 4x8 SHEET DECKING. GLUE IN PLACE AND SCREW @ 6" O.C. ALONG ALL SHEET PERIMETERS AND 16" O.C. AT INTERIOR FIELD. ALL JOISTS SHALL BE FULLY SUPPORTED.
- ROOF SHEATHING: SHALL BE EXTERIOR GRADE PLYWOOD, MIN. 1/2" THICK WITH RAFTER SPACING OF 16" O.C. SEE NOTES ABOUT RAFTER BARRIERS. NAIL SAME AS WALL SHEATHING. PROVIDE TWO (2) SIMPSON STRONG-TIE "FASCL" SHEATHING CONTINUITY CLIPS IN EACH RAFTER BAY AT JOINTS BETWEEN SHEATHING.
- LUAN UNDERLAYMENTS SHALL BE FABRICATED WITH EXTERIOR GRADE GLUE.

WOOD FRAMING & "CONTINUOUS LOAD PATH" ANCHORAGE

- R301.1 THE CONSTRUCTION OF BUILDING AND STRUCTURES SHALL RESULT IN A SYSTEM THAT PROVIDES A COMPLETE LOAD PATH CAPABLE OF TRANSFERRING ALL LOADS FROM THEIR POINT OF ORIGIN THROUGH THE LOAD-RESISTING ELEMENTS TO THE FOUNDATION.
- THE CONTINUOUS LOAD PATH ANCHORAGE REQUIREMENTS ARE THIS BUILDING CODE'S METHOD OF ACHIEVING A MINIMUM, FIELD OBSERVABLE, BUILDING FRAME "STIFFENING" AND "ANCHORAGE" SYSTEM. THE GOAL IS SAFER STRUCTURES, BETTER ABLE TO RESIST REASONABLE WIND AND SEISMIC ACTIVITY. THE BASIC CONCEPT USES A CONTINUOUS "LINE" OF BUILDING ELEMENTS, SUCH AS WALL STUDS, AND MECHANICAL ANCHORS LINKING THE ROOF RIDGES TO FOUNDATION WALL FOOTING. IMAGINE IT LIKE A BIG TENT, WITH "GUY WIRES" FROM THE ROOF RIDGE TO THE GROUND.
- IT IS UNDERSTOOD FOR MOST BUILDINGS, A CONSISTENT RHYTHM OF COMPLETELY LINEAR LINES OF CONNECTIVITY CANNOT BE ACHIEVED BECAUSE THINGS GET IN THE WAY, SUCH AS DOORS AND WINDOWS. HOWEVER, THE CODE DESCRIBES "INTENT." IT IS THE CONTRACTOR'S RESPONSIBILITY TO INTERPRET AND MAKE EVERY REASONABLE EFFORT TO ACHIEVE THE GOAL BY USING THE COMPONENTS DESCRIBED, IN THE QUANTITIES DESCRIBED, AND IN THE LOCATIONS BEST SUITED. EXAMPLE: LINES OF CONNECTIVITY ARE REQUIRED AT CORNERS AND MAX 48" O.C. FOR A 40 FT WALL THIS MEANS 11 ANCHORS, DISTRIBUTED INTELLIGENTLY ALONG THIS WALL.
- WALL AND ROOF SHEATHINGS CREATE CONTINUOUS "DIAPHRAGMS," THESE HELP PREVENT BUILDING RACKING AND TWISTING. USE "APA" RATED MATERIALS. SHEATHING MATERIAL MUST HAVE GOOD QUALITIES TO ABSORB THE REQUIRED NAILING WITHOUT BREAKING, RESIST TEARING, AND HAVE GOOD NAIL RETENTION. INSTALL THE LARGEST POSSIBLE SIZE SHEETS. STAGGER JOINTS, SUPPORT ALL JOINTS PROPERLY, AND NAIL IT WELL.
- CORNERS ARE IMPORTANT: MAKE STRONG BUILDING BY MAKING STRONG CORNERS. INSTALL ANCHORS AS CLOSE AS POSSIBLE TO BOTH SIDES OF EACH CORNER.
- THE SYSTEMS MECHANICAL PLATES AND CONNECTORS CAN BE INSTALLED ON EITHER THE INSIDE OR OUTSIDE FACE OF THE STUDS, HOWEVER IT MUST BE CONSISTENT THROUGHOUT. (THIS ARCHITECT BELIEVES IT IS BEST ON THE INSIDE FACE OF WOOD STUD WALLS. RAFTER TO TOP PLATE CONNECTIONS ARE MUCH EASIER.)
- IT ALL LINKS AS FOLLOWS: THE FOUNDATION FOOTING IS ANCHORED TO THE NOW MONOLITHIC FOUNDATION WALL; THE BOTTOM WALL PLATES ARE ANCHORED TO THE FOUNDATION WALL; THE BOTTOM PLATES ARE THEN ANCHORED TO THE WALL STUD FRAMING ABOVE (SHEATHING); UPPER FLOOR WALLS ARE STRAPPED TO LOWER WALLS (SHEATHING); THE TOP WALL PLATES ARE ANCHORED TO THE WALL STUD FRAMING BELOW (SHEATHING); THE RAFTERS ARE ANCHORED AND BLOCKED TO THE TOP WALL PLATE; AND FINALLY THE RAFTERS ARE STRAPPED TOGETHER AT THE TOP OF THE ROOF.
- READ ALL NOTES ABOUT ANCHORAGE IN THE MASONRY SECTIONS, THERE IS A CONSISTENCY OF LAYOUT FOR BOTH MASONRY AND WOOD FRAMING, THE IMPLICATION IS, IT SHOULD ALL LINE UP.
- FOR BUILDINGS WITH ROOF AND FLOOR SPANS OF LESS THAN 20 FEET, THIS STARTS WITHIN AS CLOSE AS POSSIBLE TO EXTERIOR CORNERS (BOTH SIDES), AND THEN RE-OCCURS ALONG WALLS AT NOT GREATER THAN 48-INCH INTERVALS.
- ALL PRODUCTS REFERENCED HEREIN AND TO BE USED ON THIS JOBSITE ARE BY SIMPSON STRONG-TIE BECAUSE THEY SUPPORT THE 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, NO ALTERNATE MANUFACTURERS ARE ALLOWED.
- 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 MASONRY 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.
- NOTE, SOMETIMES IT IS MORE PRACTICAL TO BUILD THE WALL, TILT IT UP, THEN DETERMINE THE BEST ANCHOR LOCATIONS. USE OF THE SIMPSON "TITEN HD" WOOD SCREWS, ALLOWS ANCHORS CLOSER TO CORNERS AND BETTER COORDINATION WITH "UPLIFT" SILL PLATE TO WALL ANCHORS.
- WIND BRACING "UPLIFT": A) SILL PLATE TO WALL STUD ANCHORAGE: USE SIMPSON #5SP 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, THEN SINGLE UNITS 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."
- 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.
- DELETE 13 AND 14 ABOVE IF A COMPLETE STRUCTURAL WALL SHEATHING SYSTEM IS USED. (STUDS MUST STILL ALIGN FLOOR TO FL.)
- RAFTER ANCHORAGE: EVERY RAFTER SHALL BE ANCHORED TO THE WALL TOP PLATE USING ONE "HURRICANE CLIP," SIMPSON #HZ 3A. ALL CEILING JOISTS (OR FLOOR JOISTS) SHALL BE SECURELY NAILED TO THE RAFTER.
- RAFTER TO RIDGE BEAM (OR OTHER EXISTING STRUCTURE): USE SIMPSON #L5TA STRAPS.

FIRESTOPPING

- INSTALLATION SHALL BE BEFORE ROUGHING IN OF ANY PLUMBING, ELECTRICAL OR HVAC WORK.
 - FIRESTOPPING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM AN EFFECTIVE FIRE BARRIER BETWEEN STORIES, AND BETWEEN A TOP STORY AND THE ROOF SPACE.
 - AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT FURRED SPACES, SOFFITS OVER CABINETS, DROP CEILING, COVE CEILING, ETC.
 - SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF RUN;
 - IN CONCEALED SPACES FORMED BY FLOOR SLEEPERS IN AREAS OF NOT MORE THAN 100 SQ.FT. OR THE SPACE MAY BE COMPLETELY FILLED WITH NONCOMBUSTIBLE MATERIALS.
 - AT OPENINGS AROUND VENTS, PIPES, DUCTS, CHIMNEYS AND FIREPLACES AT CEILING AND FLOOR LEVELS, WITH NONCOMBUSTIBLE U.L. RATED SYSTEMS AND MATERIALS.
- FIRESTOPPING SHALL CONSIST OF 2-INCH NOMINAL LUMBER WITH TIGHT JOINTS, OR TWO THICKNESS OF 1-INCH NOMINAL LUMBER WITH BROKEN LAP JOINTS, OR ONE THICKNESS OF 23/32-INCH PLYWOOD WITH JOINTS BACKED BY 23/32-INCH PLYWOOD, OR OTHER APPROVED MATERIALS SECURELY FASTENED IN PLACE.
- FIRESTOPPING AT CHIMNEYS AND FIREPLACES: WHERE A "SPACE" MUST BE MAINTAINED BETWEEN COMBUSTIBLE MATERIALS INSTALL FOLDED METAL PANS TO STOP FLOW OF AIR BETWEEN FLOORS AND INTO OTHER VOIDS.
- THE INTEGRITY OF ALL FIRESTOPS SHALL BE MAINTAINED AND SHALL NOT BE CONCEALED UNTIL INSPECTED AND APPROVED.

WEATHER MEMBRANE or BARRIER

- 15 POUND ASPHALT IMPREGNATED BUILDING FELT, SHINGED UP THE WALL. (NOT GRADE "D" PAPER).

DRAINAGE PLANE:

- WATER GETS BEHIND OR THROUGH ALL EXTERIOR SACRIFICIAL LAYERS INCLUDING MASONRY, WOOD, VINYL, ETC. DRAINAGE PLANE MATERIALS PROVIDE THIS WATER A PATH DOWN AND OUT FROM THE STRUCTURE. THE DRAINAGE PLANE IS LOCATED BETWEEN THE EXTERIOR SACRIFICIAL LAYER AND THE WEATHER MEMBRANE.
- INSTALL PER MFG RECOMMENDATIONS, "DRYWALL RAINSCREEN 020-1" MANUFACTURED BY KENE BUILIDING ENVELOPE PRODUCTS. KENEBUILDING.COM OR BENJAMIN OBYDVE 1" THICK "SLICKER MAX."

AIR BARRIER:

- THE ENERGY CONSERVATION CODE NOW REQUIRES AN "AIR BARRIER." THIS IS BECAUSE ONE-THIRD OF HEAT LOSS IS DUE TO INFILTRATION. WHEN STUD CAVITIES ARE FILLED WITH FIBEROUS INSULATION, A WIND SPEED OF AS LITTLE AS 5-MPH CAN INDUCE A CIRCULAR AIR FLOW WITHIN EACH CAVITY ACCELERATING HEAT LOSS AND DRAMATICALLY REDUCING THE ASSUMED R-VALUE. THE LABOR INTENSIVE METHOD OF INSTALLING BATTS ALSO CONTRIBUTES TO LESS THAN PERFECT INSTALLATIONS.
 - SPRAY FOAM SYSTEM SPECIFIED QUALIFIES. IF SPRAY FOAM IS NOT USED THEN ANOTHER WRAP LAYER MUST BE INCLUDED.
- EACH PERSON EACH DAY CREATES ABOUT 12 POUNDS OF WATER VAPOR, ABOUT 1.5 GALLONS.
- IN COOL CLIMATES, INTERIOR VAPOR BARRIERS ARE REQUIRED TO PREVENT TRANSFER OF MOISTURE FROM WARM CONDITIONED SPACE INTO THE PERIMETER WALL WHERE IT CONDENSES AND CAN DETEIORATE THE FRAMING.
- FITTING OF INDIVIDUAL BATTS WITH INTEGRAL VAPOR BARRIERS IS A LESS THAN PERFECT METHOD OF ACHIEVING A GOOD BARRIER. A BETTER METHOD IS TO DRAPE WALLS WITH A SEPARATE VAPOR BARRIER SHEET, GENERALLY 6 MIL POLY. NOTE: DRYWALL TEAM COMPLAIN BECAUSE HANGING THE POLY THEN PREVENTS GLUING THE GYPSUM BOARD TO STUDS.
- THE SPRAY FOAM SYSTEM SPECIFIED QUALIFIES AS THE VAPOR BARRIER. IF SPRAY FOAM IS NOT USED THEN ANOTHER WRAP LAYER MUST BE INCLUDED.

INSULATION: URETHANE SPRAY FOAM SYSTEMS

- INSULATION: MATERIAL SHALL BE CLOSED CELL, URETHANE BASED, WITH NO FORMALDEHYDE PRODUCTS. R-VALUE IS GENERALLY 6 PER INCH, A6ED. PRODUCT SHALL BE EXPANDING, SELF SKINNING, AND SHALL QUALIFY AS A VAPOR BARRIER AND AIR BARRIER WHEN APPLIED AT A THICKNESS OF 2-1/2 INCHES OR GREATER. PRODUCT SHALL BE FROM A NATIONALLY RECOGNIZED MANUFACTURER.
- CODE REQUIREMENTS: THE BUILDING CODE HAS SPECIFIC REQUIREMENTS FOR THE PROTECTION OF FOAM PLASTIC INSULATIONS. IN GENERAL AN IGNITION BARRIER IS REQUIRED IN MANY LOCATIONS, SPECIFICALLY OCCUPIED SPACE. THE INSTALLER SHALL BE EXPERT IN UNDERSTANDING CODE REQUIREMENTS AS THEY APPLY TO THESE PRODUCTS. INSTALLER SHALL PROVIDE QUALIFYING SPRAY APPLIED IGNITION BARRIERS WHEN REQUIRED.
- INSTALLER SHALL BE EXPERT IN THE USE AND APPLICATION OF THESE SPRAY FOAM PRODUCTS, WITH A MINIMUM OF 3-YEARS EXPERIENCE AND CERTIFIED BY THE MANUFACTURER OF THE PRODUCTS BEING USED.

ENGINEERED TIMBER

- ENGINEERED TIMBER (NOT NOMINAL 2-INCH SOLID SAWED LUMBER) IS SHOWN ON THE DRAWINGS AS "GLUE-LAM BEAM," "I-JOIST," "RIM-BOARD," "LVL," ETC. THESE MATERIALS ARE MANUFACTURED USING COMPOSITE LUMBER COMPONENTS.
- ALL PRODUCT INDICATIONS AND SIZES SHOWN IN THESE DRAWINGS ARE REFERENCED USING "APA ENGINEERED WOOD SYSTEMS" STANDARDS. WWW.APAWOOD.ORG.
- PRODUCT SHOWN IS ALL BOISE CASCADE.
- ALL PRODUCTS DELIVERED TO THE SITE SHALL BE STAMPED WITH "APA EWS" & DESIGN STANDARD. ACCEPTABLE MANUFACTURERS ARE: BOISE CASCADE, GEORGIA-PACIFIC, LOUISIANA-PACIFIC, AND NORDIC. IF OTHER PRODUCTS ARE USED, THEY MUST BE FROM A NATIONALLY RECOGNIZED MANUFACTURER, AND MUST BE PRESENTED FOR SUBSTITUTION APPROVAL BY THE ARCHITECT. THE PROPOSED SUBSTITUTION SUBMITTAL MUST INCLUDE: THE SOURCE LUMBER YARD, THE NAME AND PHONE NUMBER OF THE YARD'S TECHNICAL SUPPORT, ALL CATALOG DESIGN INFORMATION, AND THE INSTALLATION MANUAL (4 COPIES).
- DESIGN CATALOGS AND INSTALLATION TECHNICAL MANUALS FOR THE PRODUCTS DEPLOYED SHALL BE ON THE SITE AT ALL TIMES.

STRUCTURAL STEEL: GENERAL NOTES

- STRUCTURAL STEEL WIDE FLANGE SECTIONS SHALL CONFORM TO ASTM A992, UNLESS NOTED OTHERWISE. ALL PIPE SHALL CONFORM TO ASTM A-53, TYPE "S" GRADE B.

STEEL BEAMS

- ORDER STEEL BEAMS PRE-PUNCHED WITH 1/2" DIA. HOLES, WEB AND BOTH FLANGES @ 16" O.C. STAGGERED.
- USE 5/16" BOLTS TO ATTACH TOP & BOTTOM PLATES, OR WEB FILLERS AS REQUIRED.

GUTTERS AND DOWNSPOUTS

- GUTTERS SHALL BE FIELD ROLLED, SEAMLESS, FROM 0.032 GAUGE ALUMINUM. OWNER SHALL SELECT COLOR. PROFILE SHALL BE STANDARD 9 INCH "K". PROVIDE GOOD SUPPORTIVE HANGERS.
 - PROVIDE STANDARD DOWNSPOUTS, SIZE 3X4, GA. 0.019, GENERALLY 2 PER BUILDING SIDE. SEE DRAWINGS FOR LOCATIONS. PROVIDE CONCRETE SPLASH BLOCKS FOR EACH.
- WINDOWS & SLIDING PATIO DOORS:**
- THE OWNER SHALL SELECT WINDOW. THE INSULATION DIFFERENCE BETWEEN QUALITY WINDOW MANUFACTURERS IS INSIGNIFICANT, THE UNIT MUST MEET THE CODE VALUES SHOWN ELSEWHERE. FOR ALL PRACTICAL THOUGHT, A WINDOW IS A HOLE IN THE WALL.
 - ARCHITECT'S RECOMMENDATION IS "INTEGRITY" BY MARVIN. NEXT IS BASIC ANDERSEN'S.
 - FROM OWNER'S PERSPECTIVE, THE ISSUE IS "FEATURES" AND COLORS. GET WHAT THE OWNER WANTS.
 - MUST HAVE MFG'S DECALS SHOWING ENERGY RATING MEETS CODE.

EXTERIOR INSULATED HINGED DOOR SYSTEMS

- THERMA-TRU FIBERGLASS, SMOOTH STAR S262K, JAMB DEPTH: "FIELD VERIFY", PRE-HUNG, JAMB TYPE: PRIMED FINGER JOINT (STANDARD), FRAME SAVER, ON-GUARD COMPOSITE.
- GLAZING: CLEAR LOW-E. 1" THICK PREFERRED.
- DELIVER ALL FACTORY PRIMED READY FOR FINAL FINISH COAT. STILL TYPE: ADA THERMAL BROKEN SILL.
- HARDWARE PREP: PRE DRILL FOR LATCHSETS AND DEADBOLTS, COORDINATE CAREFULLY.
- SELECTED BY OWNER. MUST HAVE MFG'S DECALS SHOWING ENERGY RATING MEETS CODE.

RADIANT BARRIERS: ADD OPTION

- 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, MANUFACTURES 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.
- SHEATHING OPTION: MANUFACTURERS ARE PROVIDING WALL AND ROOF SHEATHING WITH A FACTORY APPLIED FOIL FACE.
- SURFACES TO RECEIVE BARRIER:
 - ALL ROOF SHEATHING.
 - ALL ATTIC GABLE WALLS, SOUTH AND WEST FACING.
 - ALL SOUTH AND WEST FACING OCCUPIED ROOM WALLS.

PLUMBING: GENERAL NOTES

- PLUMBING SHALL BE DONE IN ACCORDANCE WITH MUNICIPAL STANDARDS AND CODE BY LICENSED PLUMBERS. VERIFY MUNICIPAL REQUIREMENTS. PLUMBER SHALL COMPLETE HIS PART OF THE BUILDING PERMIT APPLICATION. IF MUNICIPAL REQUIRES PLUMBING RISER DIAGRAMS OR SCHEMATICS THEN PLUMBING CONTRACTOR SHALL PROVIDE.
- CONNECT NEW WORK TO EXISTING SYSTEMS.
- HIGH EFFICIENCY HOT WATER BOILERS AND HEATERS AND DISHWASHERS ARE PRONE TO VERY EARLY FAILURE WITH "HARD" WATER. TEST AND MAKE RECOMMENDATIONS.
- DISHWASHER: TO AVOID "GURGLING" THE TRAP, DO NOT PLUMB THE DISHWASHER DRAIN THROUGH THE KITCHEN SINK TAILPIECE. PROVIDE SEPARATE DRAIN.
- PROVIDE FULL 3/4" MAINS ALL THE WAY TO EACH FIXTURE WITH 1/2" RISERS AT INDIVIDUAL FITTINGS AS REQUIRED. PROVIDE SHUT-OFF VALVES FOR EACH FIXTURE SUPPLY.
- USE "BALL VALVES" ONLY FOR ABSOLUTELY EVERYTHING, NO GATE TYPE VALVES. TAKE PRECAUTIONS NOT TO LIMIT PRESSURE TO REMOTE LOCATIONS.
- PROVIDE "SHOCK" RISERS AT ENDS OF MAINS. PROVIDE EXPANSION TANK ON HOT WATER SUPPLY.
- HOT WATER TO BE PROVIDED BY _____.
- ALL WASTE PLUMBING IN AND BELOW THE SECOND FLOOR DECK AND BUILT INTO WALL CAVITIES SHALL BE COMPLETELY SURROUNDED WITH FIBERGLASS SOUND INSULATION.
- TAKE SPECIAL PRECAUTIONS WITH CUTTING AND PATCHING JOISTS, DO NOT NOTCH JOISTS, DRILL HOLES ONLY IN PROPER LOCATIONS AT CENTER OF JOISTS, SEE CODE.
- ALL PIPES LOCATED IN EXTERIOR WALLS SHALL BE INSULATED. AFTER INSTALLATION, SEAL THE PASSAGE OF ALL PIPES THROUGH WALL PLATES (TOP AND BOTTOM, INTERIOR OR EXTERIOR WALLS) WITH EXPANDABLE URETHANE FOAM TO PREVENT VERTICAL PASSAGE OF AIR.
- VENT STACKS SHALL NOT BE VISIBLE FROM THE STREET, ROUTE TO EXIT ROOFS ON BACK SIDE SLOPES. ALL STACKS SHALL BE FLASHED INTO THE BASIC SYSTEM, THEN INSTALL A FINISHED COVER, CAPMASTER BY TAPCO, THIS COLOR COORDINATES WITH ROOF, AND IS A SACRIFICIAL COVER PROTECTING THE NEOPRENE FLASHING BELOW.
- INSTALL NO OBSTACLES TO FUTURE SOLAR PANELS ON SOUTH ROOF SLOPES.
- ALL SHOWER AND BATH FAUCETS SHALL BE PRESSURE BOUNDED.
- TOILETS: WATER SAVING, AMERICAN STANDARD "GADET" ELONGATED BOWL.
- PRESENT OWNER WITH A SCHEDULE OF FIXTURES FOR APPROVAL.

HEATING / COOLING SYSTEM PERFORMANCE SPECIFICATION:

- GENERAL: HVAC CONTRACTOR SHALL COMPLETE HIS PART OF THE BUILDING PERMIT APPLICATION, IF MUNICIPALITY REQUIRES SCHEMATICS, CALCULATIONS, DIAGRAMS, OR CATALOG CUTS, THEN HVAC CONTRACTOR SHALL PROVIDE.
- SUBMITTALS: CONTRACTOR WILL PROVIDE HEAT GAIN AND HEAT LOSS CALCULATIONS FOR THE BUILDING ENVELOPE TO DETERMINE EQUIPMENT AND DUCT SYSTEM SIZING. THE OWNER IS COMPARING STANDARD "CELLULOSE" AND "SPRAY FOAM INSULATION SYSTEMS" AND RADIANT BARRIERS. SPRAY FOAM SYSTEMS AND MODERN HOUSE WRAPS SIGNIFICANTLY REDUCE INFILTRATION, THUS REDUCING EQUIPMENT SIZING, DO HEAT GAIN AND HEAT LOSS CALCULATIONS FOR BOTH TYPES OF INSULATION SYSTEMS TO ASSIST OWNER'S EVALUATIONS.
- REVIEW CALCULATIONS WITH THE OWNER FOR APPROVAL BEFORE PROCEEDING. MARK UP THE ARCHITECT'S DRAWINGS TO PROVIDE SIMPLE SCHEMATICS AND CATALOG CUTS OF ALL EQUIPMENT FOR REVIEW AND APPROVAL BEFORE INSTALLATION.
- DUCTWORK: THE IRC ENERGY CONSERVATION CODE NOW REQUIRES THE SEALING OF ALL TRANSVERSE AND LONGITUDINAL DUCT JOINTS TO PREVENT AIR LEAKAGE. USE ROLL PRODUCTS WHICH HAVE VOC FREE BUTAL LAMINATED TO A FACING WHICH HAS A UL 181 LISTING. STANDARD "DUCT TAPE" IS NOT ACCEPTABLE.
- THERMOSTATS: PROVIDE LUX MOD# P5P711. THESE ARE DUAL SETBACK, 7-DAY PROGRAMMABLE, HEATING AND COOLING, WITH BATTERY BACKUP, MAKE SURE CONTROL WIRING FOR BOTH HEATING AND COOLING GETS TO T-STAT LOCATIONS.
- EXHAUST FANS AND VENTS: ALL VENTS SHALL BE DIRECT TO THE EXTERIOR THROUGH WALL OR ROOF VENT CAPS PROVIDED WITH BACK DRAFT PREVENTION. ALL DUCTWORK SHALL BE METALLIC. NO VENTING INTO ATTIC OR SOFFITS ALLOWED.

FRESH AIR EXCHANGE SYSTEM: ADD OPTION

- 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."
- INSTALL ENERGY RECOVERING FRESH AIR EXCHANGER. THIS UNIT TO BE A STAND ALONE PACKAGE. SYSTEM SHOULD BE ABLE TO OPERATE WITH OR INDEPENDENT OF EITHER THE HEATING OR COOLING SYSTEMS.
- PRODUCT: PERFECTAIRE, MODEL 8100 FRESH AIR EXCHANGER, OR APPROVED EQUAL.

D O O R S C H E D U L E				
MARK	SIZE	LATCH	FUNCTION	NOTES
1	36" x 19" SIDELITE		ENTRY	THERMA-TRU FIBERGLASS, SELECTED BY OWNER
2	72" W. SLIDING PATIO		ENTRY	THERMA-TRU FIBERGLASS, w/ MFG SCREEN SELECTED BY OWNER
3	PAIR 36"		ENTRY	THERMA-TRU: INSWING GLASS DOOR w/ MATCHING SIDELIGHT, MFG SCREEN
4	EXIST		EXIST	
5	PAIR 24"		PASSAGE	
6	EXIST	EXIST	EXIST	RELOCATE AS REQUIRED
7	32"		PASSAGE	COULD BE A POCKET DOOR
8	EXIST	EXIST	EXIST	EXISTING IS A POCKET DOOR, KEEP OR REPLACE?
9	32"		PASSAGE	
10	EXIST		EXIST	
11	EXIST		EXIST	RELOCATED
12	20"		PASSAGE	
13	30"		PASSAGE	
14	28"		PRIVACY	
15	28"		PRIVACY	
16	32"		PRIVACY	
17	24"		PASSAGE	
18	24"		PASSAGE	
19	24"		PASSAGE	
20	32"		PRIVACY	
21	30"		PASSAGE	
22	32"		PRIVACY	
23	30"		PASSAGE	
24	24"		PASSAGE	

ALL DOORS TO HAVE 1/2" PAIR (3) OF HINGES, HOLLOW OR SOLID

HARDWARE FINISH: BASE BID ALL BRUSHED CHROME, OR EQUAL ALUMINUM

LATO-SET DESIGN: RECOMMEND AN "ADA COMPLIANT" SIMPLE MODERN LEVER SET. OWNER TO SELECT

ELECTRICAL SYSTEM NOTES:

- ELECTRICIAN SHALL COMPLETE HIS PART OF THE BUILDING PERMIT APPLICATION. IF MUNICIPALITY REQUIRES LOAD CALCULATIONS OR DIAGRAMS, THEN ELECTRICAL CONTRACTOR SHALL PROVIDE.
- IF A NEW DISTRIBUTION PANEL IS TO BE INSTALLED, PLAN THE INTERFACE FOR AN EMERGENCY GENERATOR WITH MANUAL TRANSFER SWITCH.
- SOME RECEPTACLES ARE INDICATED TO BE "ISOLATED HOME RUNS" FOR SPECIAL USE. THESE CIRCUITS, GENERALLY FOR AUDIO-VIDEO OR COMPUTER LOCATIONS, SHALL BE LOCATED "FIRST" OR AT THE TOP OF THE DISTRIBUTION PANEL TO MINIMIZE INTERFERENCE OR "ELECTRICAL NOISE"
- THE MINIMUM WIRE SIZE FOR RECEPTACLES SHALL BE 12 GA., THE MINIMUM WIRE SIZE FOR LIGHTING SHALL BE 14 GA., ALL COPPER. ALL CIRCUITS SHALL BE GROUNDED.
- LIGHTING FIXTURES: SEE OWNER, BASE BID IS A PORCELIN SOCKET WITH THE APPROPRIATE LAMP INSTALLED.
- THE ELECTRICIAN SHALL DO ALL CIRCUIT & LOAD DISTRIBUTION DESIGN. DISTRIBUTION PANEL SHALL BE CLEARLY LABELED. SEPARATE POWER CIRCUITS FROM LIGHTING CIRCUITS. DO NOT MAXIMIZE CIRCUIT CAPACITY; INSTEAD MAXIMIZE CLARITY OF ORGANIZATION FOR THE OWNER. DESIGN CIRCUITS SUCH THAT THERE IS 1 BREAKER PER ROOM FOR POWER, LIGHTING MAY BE MORE THAN A SINGLE ROOM, BUT SHALL BE INTELLIGIBLE ZONES. MAJOR EQUIPMENT, INCLUDING REFRIGERATORS, SHOULD HAVE DEDICATED CIRCUITS. PROVIDE PANEL LARGE ENOUGH FOR THE WORK SHOWN, AND PROVIDE MINIMUM 6 SPARE 20 AMP BREAKERS. ALL BREAKERS SHALL BE FULL SIZE, NOT HALF-SIZE.
- FOR OWNER'S APPROVAL, BEFORE WORK BEGINS, SUBMIT CATALOG CUTS FOR ALL FIXTURES, APPLIANCES, DEVICES, SWITCHES, ETC.
- COORDINATE WITH THE HVAC CONTRACTOR AND PLUMBING CONTRACTOR TO PROVIDE SERVICE TO ALL EQUIPMENT AS REQUIRED.
- ALL HOLES DRILLED INTO TOP OR BOTTOM WALL PLATES, INTERIOR AND EXTERIOR, SHALL BE SEALED, USE EXPANDABLE FOAM TO PREVENT VERTICAL PASSAGE OF AIR.
- MOUNTING HEIGHTS: SEE ADA CODE. LIGHT SWITCHES AND GENERAL CONTROLS, SHALL BE 48" TO CENTERLINE. RECEPTACLES SHALL BE 20" TO CENTERLINE.

DATA & TV WIRING:

- DATA AND TV: DATA AND TV PROBABLY COME FROM THE SAME HIGH SPEED SOURCE, EACH LOCATED "DATA JACK" TO BE A DEDICATED HOME RUN CONDUIT WITH FULL WIRE TO A CENTRAL BACKBOARD WHERE THE SOURCE ROUTER/MODEM WILL BE LOCATED. RE-PULLABLE CONDUIT MAY BE SAVY BECAUSE DATA WIRING IS THE MOST SUBJECT TO FUTURE CHANGE.
- PROVIDE OWNER WITH A SET OF SHOP DRAWINGS FOR APPROVAL.

SMOKE DETECTOR SYSTEM:

- LOCATIONS SHOWN ARE THE GENERALLY PERCEIVED MINIMUM TO SECURE A BUILDING PERMIT. MANY MUNICIPALITIES HAVE ADDED SPECIAL LOCAL AMENDMENTS NOT PUBLISHED IN THE NATIONAL CODES. THEREFORE, THE LOCAL PLAN REVIEWER MAY REQUIRE ADDITIONAL LOCATIONS AND REQUIREMENTS.
- INTERNATIONAL RESIDENTIAL CODE SECTION R313 REQUIRED LOCATIONS: IN EACH SLEEPING ROOM AND OUTSIDE EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, PLUS ONE ON EACH ADDITIONAL STORY.
- SYSTEM SPECIFICATIONS: DETECTORS MUST BE HARDWIRED TO A CONSTANT POWER SOURCE AND MUST BE ELECTRONICALLY INTERCONNECTED, SO THAT IF ANY DETECTOR SENDS AN ALARM SIGNAL, THEN ALL DETECTORS SOUND THE ALARM. DETECTORS SHALL HAVE AN EMERGENCY BACKUP POWER SOURCE, GENERALLY BATTERIES. SYSTEMS ARE AVAILABLE USING EITHER 100V DEDICATED LINE VOLTAGE CIRCUITS OR LOW VOLTAGE.
- PROVIDE TOWNSHIP AND OWNER WITH A SET OF SHOP DRAWINGS FOR APPROVAL.

DATE	REVISION DESCRIPTION
MARCH 6, 2016	INTRO TO CLIENT
06/09/2016	PROGRESS
06/17/2016	FOR PERMIT REVIEW

PLANS NOT VALID FOR PERMITS UNLESS SIGNED IN "RED" & IMPRESSED w/ SEAL

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ADDITIONS & ALTERATIONS

Hopewell Township, Mercer Co., NJ

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