- . 2006 INTERNATIONAL RESIDENTIAL CODE (IRC), W/ AMENDMENTS
- 2006 INTERNATIONAL BUILDING CODE (IBC), W/ AMENDMENTS 2006 INTERNATIONAL MECHANICAL CODE (IMC), W/ AMENDMENTS . 2006 INTERNATIONAL PLUMBING CODE (IPC), W/ AMENDMENTS
- 2006 INTERNATIONAL FIRE CODE (IFC), W/ AMENDMENTS 2005 NATIONAL ELECTRICAL CODE (NEC), W/ AMENDMENTS 1. 2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC), W/ AMENDMENTS

FOUNDATIONS:

- FOUNDATIONS DESIGN IS BASED ON MINIMUM SOIL BEARING VALUES PER IBC 1804.2 FOR CLASS 5 MATERIAL BEAR FOOTINGS ON FIRM NATIVE SOIL OR ENGINEERED FILL BELOW ADJACENT FINISHED GRADE AS INDICATED.
- PLACE CONCRETE ONLY ON CLEAN, FIRM, INSPECTED BEARING MATERIAL. ALLOWABLE SOIL BEARING PRESSURE: a. 1000 PSF @ 18" BELOW FINISHED GRADE (FOR DEAD LOADS) b. 1500 PSF @ 18" BELOW FINISHED GRADE (FOR DL + LL).
- ALLOW I/3 INCREASE IN ALLOWABLE STRESSES FOR TOE PRESSURES ON ECCENTRICALLY LOADED FOUNDATIONS OR FOUNDATIONS SUBJECT TO OVERTURNING LOADS.
- BOTTOMS OF ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL 1'-6" BELOW FINISHED GRADE EXTERIOR AND I'-O" INTERIOR. DESIGN SOIL PRESSURE 1000 PSF DEAD LOAD OR 1500 PSF TOTAL LOAD.

TERMITE CONTROL:

ALL SOIL UNDER FOOTINGS & SLABS ON GRADE SHALL BE TREATED WITH TERMITE POISON BEFORE POURING CONCRETE.

CONCRETE:

- CONCRETE QUALITY: CONFORM TO ACI-301 & ACI-318. USE REGULAR WEIGHT CONCRETE WITH TYPE I OR II CEMENT PER ASTM c150 AGGREGATE/ ASTMc33 & POTABLE WATER. MINIMUM 28 DAY COMPRESSIVE STRENGTH 2500 PSI.
- MAXIMUM SI UMP 5" MECHANICALLY VIBRATE CONCRETE.
- DO NOT USE ADMIXTURES WITHOUT APPROVAL. ADMIXTURES CONTAINING CHLORIDES SHALL NOT BE USED.
- CONCRETE SHALL NOT BE IN CONTACT WITH ALUMINUM. ALL EXPOSED EDGES AND CORNERS SHALL BE CHAMFERED, BEVELED, OR
- WAIT 48 HOURS BETWEEN ADJACENT CONCRETE CASTINGS. . NON-SHRINK CEMENT GROUT SHALL BE NON-METALLIC HIGH STRENGTH OF

REINFORCING:

- DEFORMED BARS SHALL CONFORM TO ASTM-615, GRADE 60. CONCRETE COVERAGE FOR REINFORCING BARS SHALL BE AS FOLLOWS: a. UNFORMED CONCRETE IN CONTACT WITH EARTH: 3". b. FORMED CONCRETE IN CONTACT WITH EARTH: 2".
- LAP SPLICE LENGTHS SHALL BE 40 BAR DIAMETERS MINIMUM, UON. DOWEL ALL VERTICAL REINFORCING TO FOUNDATIONS, UON.
- SECURLY TIE AND SUPPORT ALL REINFORCING STEEL IN PLACE BEFORE PLACING CONCRETE OR GROUT. REINFORCING PLACEMENT, BAR BENDS, AND STANDARD HOOKS SHALL COMPLY WITH ACI-317 AND CRSI STANDARDS.

- USE HOLLOW CONCRETE BLOCK UNITS: GRADE N, NORMAL WEIGHT, fm= 1500 PSI.
- LAY UNITS IN RUNNING BOND. CORNERS SHALL HAVE A STANDARD BOND BY OVERLAPPING UNITS.
- MORTAR: TYPE S, MINIMUM 28 DAY COMPRESSIVE STRENGTH 1800 PSI. GROUT: TYPE S, MINIMUM 28 DAY COMPRESSIVE STRENGTH 2000 PSI.
- MAXIMUM GROUT LIFTS WITHOUT CLEAN-OUTS AND INSPECTION 4'-O". PROVIDE WALL REINFORCING AS FOLLOWS: a. LOCATE #4 REBAR IN VERTICAL GROUTED CELL AT CORNERS, JAMBS,
- INTERSECTIONS, WALL ENDS & @ 48" OC. b. PLACE #4 REBAR IN CONTINUOUS GROUTED BOND BEAM AT ROOF LINE, ALL FLOOR LEVELS, AND AT TOP OF PARAPET WALLS.
- . PLACE #9 LADDER OR TRUSS TYPE HORIZONTAL JOINT REINFORCING (DUROWALL OR EQUAL) AT 16" VERTICAL SPACING. PLACE BOND BEAM REINFORCING CONTINUOUS THROUGH CONTROL JOINTS AND EXPANSION JOINTS, WRAPPING BARS WITH 1/8" THICK BOND BREAKING
- TAPE 2'-0" BOTH SIDES OF JOINT, DO NOT SPLICE HORIZONTAL REINFORCING WITH-IN 6'-O" OF A CONTROL OR EXPANSION JOINT. ALL ANCHOR BOLTS SHALL BE IN GROUTED CELLS.

STRUCTURAL STEEL:

LATEST AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) HANDBOOKS SHALL APPLY.

ROLLED SECTIONS AND PLATES SHALL CONFORM TO ASTM A-36, fy=36ksi. BOLTS AND PLAIN ANCHORS SHALL CONFORM TO ASTM A-307. EXPANSION BOLTS SHALL BE APPROVED DRILLED ANCHORS (PHILLIPS RED

HEAD, KWIK BOLT, OR EQUAL). TORQUE AND INSTALL PER MANUF. SPEC.

"W" SHAPES SHALL CONFORM TO ASTM A992, Fy = 50 ksi. STEEL PIPE COLUMNS SHALL CONFORM TO ASTM A53, GRADE B, Fy = 35 ksi.

GENERAL

OR BETTER.

- a. COMPLY WITH AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC) STANDARDS, LATEST EDITION.
- b. EACH PIECE OF LUMBER SHALL BEAR THE GRADE STAMP OF A GRADING RULES AGENCY APPROVED BY THE AMERICAN LUMBER STANDARDS COMMITTEE. c. EACH PIECE OF LUMBER IN PLACE SHALL BE OF THE GRADE SPECIFIED
- d. DO NOT NOTCH OR DRILL JOIST, BEAMS OR LOAD BEARING STUDS WITHOUT APPROVAL
- . DOUBLE FLOOR JOIST UNDER PARALLEL PARTITIONS. PROVIDE METAL OR IX3 WOOD CROSS BRACING @ MID-SPAN WHEN JOIST
- EXCEED DEPTH OF 10". PROVIDE 2X SOLID BLOCKING @ JOIST BEARING SUPPORTS.
- PROVIDE FIRESTOPS AS FOLLOWS: I. IN CONCEALED SPACES IN WALLS, @ FURRED SPACES & @ SOFFITS AND FLOOR & CEILING LEVELS.
- 2. IN OPENINGS AROUND VENTS, CHIMNEYS, & FIREPLACES @ FLOOR/CLG
- 3. IN CONCEALED SPACES BETWEEN WALL STUDS @ STAIRS IN LINE W/ STRINGERS.
- PRESSURE TREAT WOOD SILL PLATES. ATTIC ACCESS SHALL BE MIN 22" X 30" & PROVIDE MIN. 30" OF HEAD ROOM ABOVE ACCESS.

CONNECTIONS:

a. SEE 2006 IBC FOR NAILING NOT SPECIFICALLY CALLED OUT ON THE DRAWINGS. USE COMMON NAILS.

K. WINDOWS SHALL BE OPENABLE W/O SPECIAL TOOLS, KNOWLEDGE, EFFORT

- b. MAKE FRAMED CONNECTIONS WITH APPROVED FRAMING ANCHORS ON EACH SIDE OR JOIST HANGERS BY SIMPSON OR APPROVED EQUAL. . NAIL PLYWOOD WITH 8d COMMON NAILS @ 6" SPACING @ ALL EDGES AND
- BOUNDARIES & @ 12" SPACING @ ALL INTERMEDIATE SUPPORTS UON. d. PRE-DRILL ALL HOLES FOR NAILS LARGER THAN 20d. . FIELD DRILL BOLT HOLES FOR PROPER MATCHING AND BEARING.
- . PROVIDE STANDARD WASHERS @ BOLTS IN WOOD WITHOUT STEEL PLATES. . AT LEDGERS AND PLATES, PROVIDE ANCHOR BOLTS @ A MIN. OF 6" AND
- MAX. 12" FROM EACH END OF EACH PIECE. h. FOUNDATION PLATES OR SILLS SHALL BE BOLTED TO FOUNDATIONS WITH ANCHOR BOLTS NOT LESS THAN 1/2" IN
- DIAMETER, EMBEDDED @ LEAST 7" INTO CONCRETE OR REINFORCED MASONRY LION HOLES IN WOOD PLATES SHALL BE NO MORE THAN I/16" LARGER THAN THE BOLT DIAMETER. STANDARD WASHERS SHALL BE USED AND
- NUTS SHALL BE SECURELY TIGHTENED. CENTERS OF ALL ANCHOR BOLTS SHALL BE WITH-IN I/2" OF THE CENTER LINE OF 2X4 WOOD PLATES OR SILLS & WITH-IN I" OF THE
- CENTER LINE FOR 2X6 OR LARGER PLATES OR SILLS. BOLTS PLACED CLOSER THAN SPECIFIED TO THE EDGE OF THE PLATE OR SILL MAY BE LEFT IN PLACE BUT AN EXPANSION ANCHOR OF THE SAME SIZE SHALL BE INSTALLED WITHIN 12" OF THE IMPROPERLY INSTALLED BOLT. .. ANCHOR BOLTS FOR FOUNDATION PLATES OF SILLS SHALL BE SPACED NO MORE THAN 4'-O" APART (CLOSER SPACING SHALL BE INDICATED ON
- THE PLANS) AND SHALL BE NO CLOSER TO ONE ANOTHER THAN 12" FROM WHERE ONE OR MORE WOOD PLATES AND FLAT BLOCKING ARE NAILED TOGETHER @ TRUSS BEARINGS, NAIL EACH WOOD PLATE OR BLOCKING
- TO THE ONE BELOW WITH 16d COMMON @ 6" SPACING. m. FIELD DRILL HOLES FOR 16d AND LARGER, WHEN SPACED LESS THAN 4"OC IN THE SAME ROW PARALLEL TO THE GRAIN IN 2X LUMBER, OR PREFABRICATED WOOD TRUSSES.

- n. NAILS THAT ARE SHORTER THAN STANDARD LENGTH SHALL BE USED ONLY WHERE NOTED ON THE DRAWINGS OR WHERE APPROVED BY THE STRUCTURAL
- O. COUNTERSINK ANCHOR BOLTS IN PLATES AND LEDGERS ONLY IF INDICATED ON THE STRUCTURAL DRAWINGS.
- r. ATTACH ALL BRICK VENEER TO WOOD FRAMING W/ VENEER TIES (SIMPSON BT-R/BTB OR EQUAL) @ 16" O.C. EA. WAY
- 3. STRUCTURAL SAWN LUMBER a. S-DRY, 19% MAXIMUM MOISTURE CONTENT & FINISHED S4S. b. JOIST, BEAMS, AND LEDGERS: DOUGLAS FIR-LARCH #2.
- c. PLATES AND BLOCKING: SPRUCE/PINE/FIR (SPF) STUD GRADE. d. STUDS: SPRUCE/PINE/FIR (SPF) STUD GRADE @ INTERIOR WALLS & SPF #2
- @ EXTERIOR WALLS. e. COLUMNS AND POST: DOUGLAS FIR-LARCH #2.
- 4. GLU-LAM BEAMS: a. WEST COAST DOUGLAS FIR WITH fb=2400 PSI, E=1.6 X 10-6 PSI b. FABRICATIONS AND HANDLING SHALL COMPLY WITH LATEST AITC STANDARDS. EACH BEAM SHALL BEAR AITC STAMP INDICATING SPECIES
- AND STRESS GRADE C. FABRICATE WITH WATER RESISTANT GLUE FOR INTERIOR CONDITIONS AND WATERPROOF GLUE FOR EXPOSED CONDITIONS d. SEE PLANS FOR REQUIRED CAMBERS. (PROVIDE 1800' RADIUS CAMBER U.O.N.)
- 5. ROOF SHEATHING: (COMPLY W/ IBC 2306.3.1) (PSI & PS2) a. 15/32" PLYWOOD OR OSB w/ 8d @ 6" O.C. @ SUPPORTED EDGES (UNBLOCKED) & 8d @ 12" O.C. INTERM. SUPPORTS UON. (1-1/2"X 13 qa. STAPLES ICBO 3540 CAN BE USED IN LIEU OF 8d NAILS). SPAN INDEX 32/16. STAGGER EDGES

6. WALL SHEATHING: (COMPLY w/ IBC 2306.4.I - ANY SPECIES EXCEPT GROUP 5)

a. 3/8" OSB WALL SHEATHING w/ &d NAILS @ 4" O.C. EDGES AND 12" O.C. @

INTERMEDIATE SUPPORTS-ALL EDGES BLOCKED. (I-I/2"XI3 qa. STAPLES ICBO 3540 CAN BE USED IN LIEU OF 8d NAILS) SPAN INDEX 24/O. STAGGER EDGES a. T&G PLYWD (SEE PLAN FOR SIZE) w/ 48/24 GLUE & SCREW @ 6" O.C. SUPPORTED

EDGES & 10"OC INTERMEDIATE SUPPORTS. (USE SCREWS EQ. TO 10d NAILS -

LIGHT METAL PLATE CONNECTED WOOD TRUSSES:

SIMPSON WSNTL2125 OR EQUAL)

- I. DESIGN, FABRICATE, TRANSPORT, AND ERECT PER LATEST AITC STANDARDS AND MANUFACTURER RECOMMENDATIONS.
- 2. FOR SLOPED TRUSSES-DESIGN FOR 24 PSF DEAD LOAD PLUS 20 PSF LIVE LOAD (REDUCIBLE) FOR FLAT TRUSSES.
- DESIGN FOR 20 PSF DEAD LOAD PLUS 20 PSF LIVE LOAD (REDUCIBLE) DESIGN DEAD LOAD INCLUDES ALLOWANCE FOR TRUSS DEAD LOAD.
- 3 FOR FLOOR TRUSSES DESIGN FOR 20 PSF DEAD LOAD PLUS 40 PSF LIVE LOAD
- 4. SUBMIT DESIGN CALCULATIONS AND SHOP DRAWINGS. FABRICATE AFTER ENGINEERS REVIEW. INCLUDE WOOD GRADES AND CONNECTOR PLATES TO BE USED. 5. TRUSSES SHALL CONFORM TO 2006 IRC #R-502.II & #R-802.IO

GLASS:

- I. GLAZING IN LOCATIONS SUBJECT TO HUMAN IMPACT SHALL BE IMPACT RESISTANT AS DEFINED IN IRC 2006 & AS FOLLOWS:
- a. ALL GLASS DOORS, INCLUDING DOORS WITH GLASS. b. SIDE LIGHTS & WINDOWS ADJACENT TO DOORS.
- c. GLAZING ADJACENT TO A WALKING SURFACE, LESS THAN 18" ABOVE THE WALKING SURFACE & NOT PROTECTED BY A RAILING.
- d. SHOWER DOORS AND TUB ENCLOSURES. e. GLAZING IN BATHROOMS WITH THE LOWER EDGE LESS THAN 56" ABOVE FFE.
- F. MIRRORS/MIRROR DOORS UNLESS ATTACHED DIRECTLY TO WALL, FRAMED OR q. GLAZING WITHIN 24" OF DOOR OPENINGS

FLASHING:

I. METAL FLASHING SHALL BE 26 GA.

PLUMBING:

- I. THE T&P RELIEF VALVE DRAIN LINE SHALL BE FULL DRAWN STEEL PPIPE OR HARD DRAWN COPPER TUBING EXTENDING TO THE EXTERIOR OF THE BUILDING & TERMINATING IN A DOWNWARD POSITION NOT MORE THAN 2' OR LESS THAN 6" ABOVE GRADE. SLOPE & DRAIN & SUPPORT AT 32"OC.
- 2. ABS OR PVC USED IN DRAIN, WASTE, & VENT SYSTEM SHALL BE SCHEDULE 40. 3. COPPER TUBING USED IN WATER PIPING SHALL BE TYPE "M" MIN WEIGHT IN THE BUILDING ABOVE SLAB.
- 4. COPPER TUBING USED IN WATER PIPING BELOW SLABS SHALL BE TYPE "L" MIN WEIGHT INSTALLED WITHOUT JOINTS.
- 5. GAS FUEL PIPING SHALL BE WROUGHT IRON OR STEEL, GALVINIZED OR BLACK. 6. PLUMBING FIXTURES SHALL BE LOW FLOW FITTINGS AS FOLLOWS: -1.6 GAL/FLUSH MAX.
- h SHOWER HEADS ---25 GPM MAX c. LAV & SINKS----2.2 *G*PM MAX
- '. DISHWASHERS SHALL HAVE AIR GAP. 8. LEFT FITTING AT ALL FAUCETS SHALL BE HOT WATER FITTING.
- 9. PROVIDE PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE TYPE CONTROL VALVES FOR ALL SHOWER AND TUB-SHOWER COMBINATIONS

ELECTRICAL:

- I. ELECTRIC SMOKE DETECTORS SHALL BE LOCATED ON CEILING OR WALL WITH-IN 12" OF CEILING, WIRED TOGETHER & NOT CLOSER THAN 3'-0" TO A DUCT OPENING
- 2. SMOKE DETECTORS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING W/O DISCONNECT OTHER THAN CIRCUIT PROTECTION W/ BATTERY BACK-UP IRC R-317.2
- 3. PROVIDE A GROUNDING CONDUCTOR MIN 20' OF #4 SIZE OR LARGER BARE COPPER WIRE EMBEDDED IN CONCRETE FOOTING. 4. PROVIDE A BONDING CONDUCTOR MIN OF I-#4 COPPER WIRE CONNECTED TO THE BUILDINGS WATER PIPING SYSTEM TO THE SERVICE EQUIPMENT ENCLOSURE GROUNDING BUSS.

MECHANICAL:

I. EQUIPMENT SHALL BE CAPABLE OF MAINTAINING A ROOM TEMPERATURE OF 70 DEGREES F @ A POINT 3'-O" ABOVE THE FLOOR.

ATTIC VENTILATION:

- I. PROVIDE A NET FREE VENTILATION AREA OF NOT LESS THAN 1/150 OF ATTIC
- 2. EAVE OR CORNICE VENT UNITS SHALL NOT BE LOCATED WITH-IN 3'-0" LATERALLY ABOVE WINDOW OR DOOR NOR WHERE INSULATION WILL BLOCK ATTIC VENTILATION.

SUPPLEMENTARY NOTES:

- I. VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO STARTING WORK.
- NOTIFY THE DESIGNER OF ANY DISCREPANCIES OR INCONSISTENCIES 2. VERIFY IN THE FIELD ALL EXISTING CONDITIONS SHOWN ON THE DRAWING 3. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR MECHANICAL,
- ELECTRICAL, AND PLUMBING WITH APPROPRIATE TRADES AND DRAWINGS 4. PROVIDE ALL NECESSARY TEMPORARY SHORING, GUYING, OR OTHER
- MEANS TO AVOID EXCESSIVE STRESSES AND TO HOLD STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION 5. OPTIONS ARE FOR THE CONTRACTORS CONVENIENCE. HE SHALL BE RESPONSIBLE FOR ALL CHANGES NECESSARY IF HE CHOOSES AN OPTION AND SHALL
- COORDINATE ALL DETAILS. THE COST OF ADDITIONAL DESIGN WORK NECESSITATED BY SELECTION OF AN OPTION SHALL BE BORNE BY THE CONTRACTOR 6. THE COST OF ADDITIONAL DESIGN WORK DUE TO ERRORS OR OMISSIONS
- IN CONSTRUCTION SHALL BE BORNE BY THE CONTRACTOR 7. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL AND SIGNATURE OF A STRUCTURAL ENGINEER REGISTERED IN ARIZONA 8. IF THE CONTRACTOR OR SUBCONTRACTOR SHOULD FIND ANY DISCREPANCIES IN OR
- OMISSIONS FROM THESE DRAWINGS, OR IF HE SHOULD BE IN QUESTION TO THEIR MEANING OR INTENT, HE SHOULD CONTACT THIS OFFICE AT ONCE FOR INTERPRETATION OR CLARIFICATION 9. HOLD HARMLESS AGREEMENT:
- DESIGNER SHALL NOT BE HELD RESPONSIBLE FOR ANY AND ALL COST, EXPENSES, DAMAGES, OR OTHER LIABILITY OF ANY NATURE ARISING OUT OF, IN CONNECTION WITH OR IN ANY WAY RELATED TO THE PLANS DRAWN BY LESLIE CUSTOM HOMES INCLUDING WITHOUT LIMITATION, DEFECT IN DESIGN OR MATERIAL SPECIFIED

THIS DRAWING IS AN INSTRUMENT OF SERVICE AND IS THE PROPERTY OF LESLIE CUSTOM HOMES AND MAY NOT BE REPRODUCED OR REPRODUCTIONS THEREOF USED WITHOUT THEIR PERMISSION

SECURITY NOTES

PADLOCK MUST BE INSTALLED.

PER SEC R325 SECURITY STANDARDS OF THE CITY OF MESA RESIDENTIAL CODE

- EXTERIOR SWINGING DOORS MUST BE SOLID CORE OR METAL SKIN CONSTRUCTION WITH JAMBS SHIMMED SOLID FOR 6" ABOVE AND BELOW THE DEADBOLT LOCK STRIKE PLATE. IF HINGES ARE ON THE OUTSIDE, THEY MUST HAVE NONREMOVABLE PINS OR BE PIN STANDARD HINGES. ALL MAIN OR FRONT ENTRY DOORS MUST HAVE A 180 DEGREE DOOR VIEWER OR BE ARRANGED SO THE OCCUPANT CAN VIEW THE IMMEDIATE AREA OUTSIDE THE DOOR THROUGH A WINDOW. DOORS FROM A DWELLING UNIT TO AN ATTACHED GARAGE ARE ALSO CONSIDERED EXTERIOR SWINGING DOORS. THIS DOES NOT PROHIBIT THE USE OF "FRENCH DOORS".
- EXTERIOR SLIDING DOORS MUST HAVE THE SLIDING SECTION EQUIPPED SO THAT IT CANNOT BE RAISED OR REMOVED WHILE IN THE CLOSED AND LOCKED POSITION. AN AUXILIARY NON-KEYED LOCK MUST ALSO BE INSTALLED. THE STATIONARY SECTION SHALL NOT BE REMOVEABLE FROM THE OUTSIDE.
- DEADBOLT LOCKS ARE REQUIRED ON ALL EXTIOR SWINGING DOORS AND MUST BE EQUIPPED WITH A MINIMUM ONE INCH BOLT THROW, WRENCH RESISTANT COLLAR, FASTENERS WHICH THREAD INTO THE CYLINDER BODY AND A TWO SCREW STRIKE PLATE USING TWO INCH BY #8 SCREWS (#8 SCREWS IN METAL JAMBS). SUCH LOCKS MUST BE OPERABLE FROM THE INSIDE WIHOUT USE OF A KEY.
- EXTERIOR WINDOWS SHALL BE CONSTRUCTED AND INSTALLED SO AS TO PROHIBIT SLIDING, RAISING, OR REMOVAL OF THE MOVING SECTION WHILE IN THE CLOSED AND LOCKED POSITION. WINDOW PANELS SHALL HAVE WEATHER STRIP MOLDING OR GLAZING BEAD WHICH IS NOT EASILY REMOVED FROM THE OUTSIDE. AN AUXILIARY LOCK SHALL BE INSTALLED ON ALL WINDOW TRACKS TO PREVENT SLIDING. (SLEEPING ROOM WINDOWS MAY NOT HAVE LOCKS WHICH REQUIRE A KEY OR SPECIAL KNOWLEDGE OR EFFORT TO UNLOCK.
- GARAGE DOORS SHALL BE EQUIPPED WITH AT LEAST TWO LOCKING DEVICES OF THE FOLLOWING TYPES: THROW BOLT OR FLUSH BOLT; CYLINDER-TYPE LOCK PADLOCK AND HASP; OR BE EQUIPPED WITH A POWER OPERATED MECHANISM. ATTIC ACCESS DOORS MUST BE LOCATED IN THE INTERIOR OF THE DWELLING
- DEVICES SHALL NOT BE INSTALLED IN MANNER TO PREVENT PROPER EGRESS THROUGH DOORS OR BEDROOM WINDOWS

OR GARAGE. IF NO INTERIOR LOCATION IS AVAILABLE, A STEEL HASP AND

- ALL OPENABLE OPENINGS IN EXTERIOR WALLS AND IN THE ROOF LESS THAN 16 FEET ABOVE GRADE OR ADJACENT TO A ROOF SURFACE, BALCONY, STAIR LANDING, OR SIMILAR STRUCTURE SHALL BE PROVIDED WITH SECURITY DEVICES TO PREVENT UNLAWFUL ENTRY FROM THE OUTSIDE.

RESIDENTIAL WATER METER

1 = 0	# OF FIXTURES		XTURE IIT VALUE		TOTAL FIXTURE UNIT
WATER CLOSET	_	×	2.2	=	-
SHOWER (PER HEAD)	_	×	I. 4	=	-
TUB WITH OR WO SHOWER OVER T	υ Β -	×	1.4	=	-
LAVATORY	_	×	л	=	-
KITCHEN SINK/ DISHWASHER	1	×	2.5	=	2.5
RESIDENTIAL BAR SINK	1	×	1.4	=	1.4
HOSE BIBS (2 COUNTED)	2	×	2.5	=	5
LAUNDRY/UTILITY SINK	_	×	1.4	=	-
AUTO CLOTHES WASHER	_	×	1.4	=	-
PONDER RM (WC & LAV)	-	×	2.6	=	-
LAUNDRY GROUP (W<)	1	×	2.5	=	2.5
FULL BATH GROUP W/TUB OR SWR	2	×	3.6	=	7.2
URINAL	-	×	1.4	=	-
TOTAL					18.60

CONTRACTOR SHALL OBTAIN FIELD WATER PRESSURE TEST

- TOTAL DEVELOPED LENGTH OF THE WATER LINE; FROM THE WATER METER TO THE FURTHEST WATER USING OUTLET IS 125 FEET
- FIXTURE UNITS SHALL BE PER IRC 2006 TABLE 2903.6 NOTE: AN APPROVED TYPE PRESSURE REGULATOR PRECEDED BY AN ADEQUATE STRAINER SHALL BE INSTALLED AND THE PRESSURE REDUCED TO EIGHTY (80) p.s.i. OR LESS PROVIDE 3/4" WATER METER & I" BUILDING SUPPLY

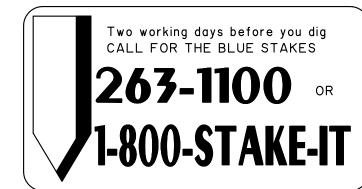
INSULATION TYPE SHALL BE SUITABLE FOR DIRECT BURIAL.

NOTE

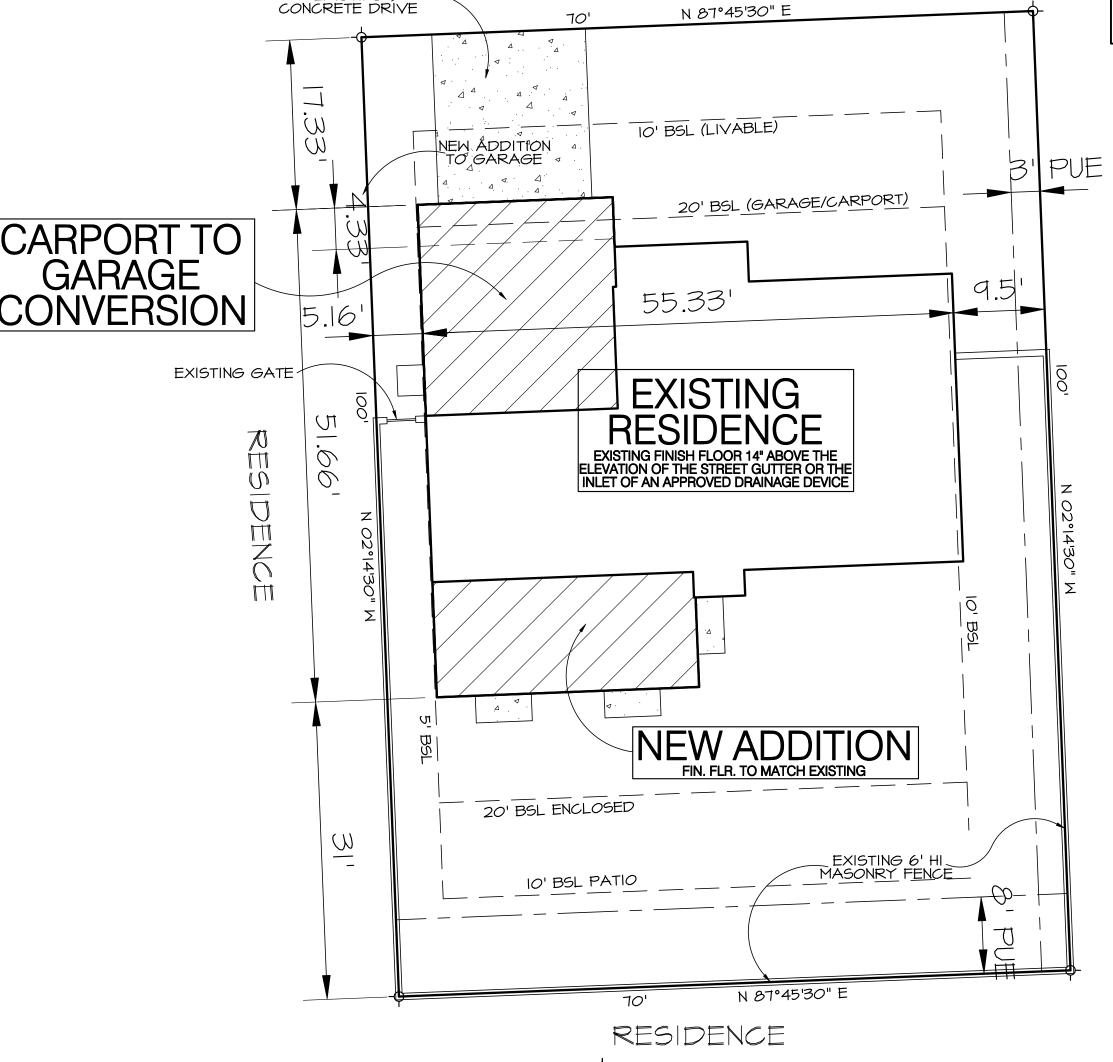
SERVICE EQUIPMENT ARE NOT PERMITTED IN REQ'D IO' SIDE YARD · TOP OF EXTERIOR FOUNDATION SHALL BE 12" PLUS 2% ABOVE THE ELEVATION OF THE STREET GUTTER OR THE INLET OF AN APPROVED DRAINAGE DEVICE - TRACER WIRE REQUIREMENTS: MESA 2006 AMENDMENTS, ORDINANCE 4638 SECTIONS 305.10 AND 701.10, SECTION 404.13 IFGC: DETECTABLE UNDERGROUND LOCATOR DEVICE. UNDERGROUND NON-METALLIC WATER, IRRIGATION AND SANITARY DRAINAGE PIPING LARGER THAN 2" IN DIAMETER, AND ALL SIZES OF NON-METALLIC GAS PIPE, SHALL BE INSTALLED WITH INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR LOCATED ADJACENT TO THE PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE THE GROUND AT EACH END OF THE NON-METALLIC PIPING. THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 18 AWG AND THE

- BUILDING PROJECTIONS SUCH AS FIREPLACES, BAY WINDOWS, OR BUILDING

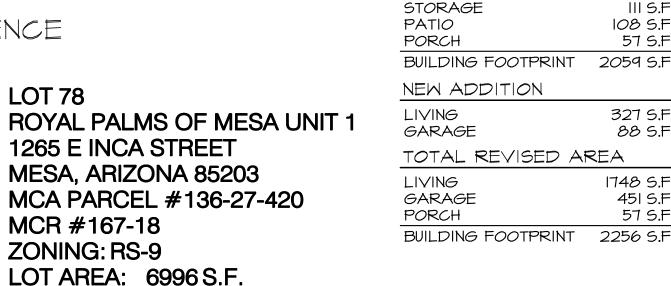
SHEET	NDEX:
SHEET #	INFORMATION SHOWN
	SITE PLAN, GENERAL NOTES
2	FLOOR PLAN
3	FOUNDATION PLAN
4	ELEVATIONS
5	ROOF FRAMING PLAN, SECTION
6	ELECTRICAL PLAN
7	ENERGY CALCS







SCALE: 1"=10'



MCR #167-18

ZONING: RS-9

BUILDING SIZE: EXISTING -

ADDITION -

TOTAL -

LOT COVERAGE PERMITTED: 45% = 3148 S.F. 2059 S.F.

AREAS

LIVING

CARPORT

EXISTING RESIDENCE

190 S.F. 2256 S.F. (32%)

1421 S.F.

362 S.F.

III S.F.

108 S.F.

57 S.F.

2059 S.F.

327 S.F.

1748 S.F

451 S.F

57 S.F.

88 S.F.

 $\mathbf{\Omega}$ AFTIN DR.

REVISIONS:

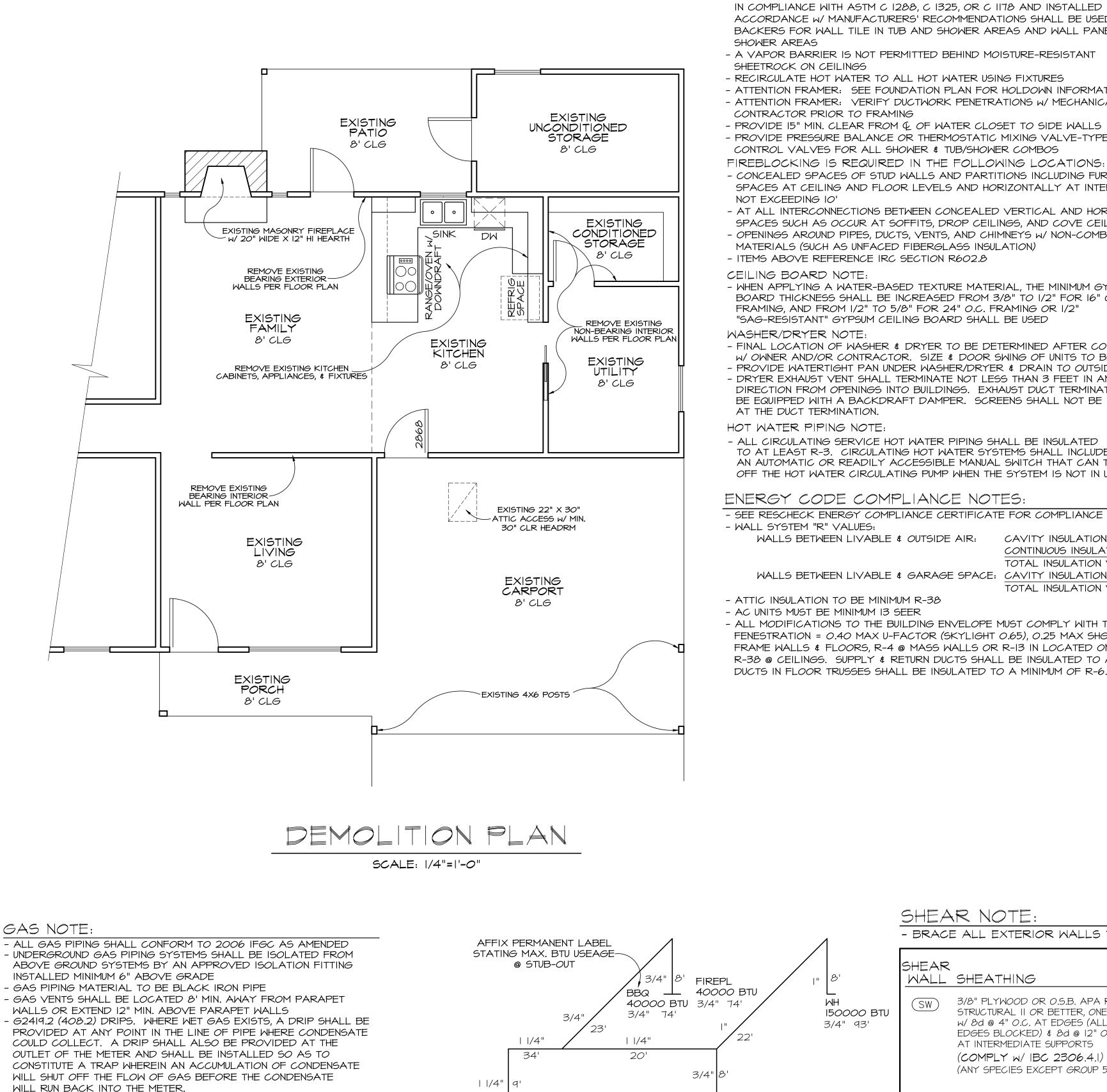
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DATE: 5-15-2017 JOB NO: 17-030 DWN BY: LL SCALE AS SHOWN

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SHEET OF (



NATURAL GAS METER -

CONTACT CITY GAS ENGINEERING

LOCATION & SIZE REQUIRED

FOR FINAL APPROVAL OF GAS METER

PHONE #480-644-4261 (CITY OF MESA)

- G2419.3 (408.3) LOCATION OF DRIPS. DRIPS SHALL BE

PROVIDED WITH READY ACCESS TO PERMIT CLEANING OR

- G2419.4 (405.4) SEDIMENT TRAP. WHERE A SEDIMENT TRAP IS NOT

INCORPORATED AS PART OF THE GAS UTILIZATION EQUIPMENT, A

EQUIPMENT AS PRACTICAL. THE SEDIMENT TRAP SHALL BE EITHER

SEDIMENT TRAP SHALL BE INSTALLED DOWNSTREAM OF THE

EQUIPMENT SHUT-OFF VALVE AS CLOSE TO THE INLET OF THE

A TEE FITTING WITH A CAPPED NIPPLE IN THE BOTTOM OPENING

OF THE RUN OF THE TEE OR OTHER DEVICE APPROVED AS AN

- PROVIDE GAS SHUTOFF @ EACH GAS APPLIANCE

EFFECTIVE SEDIMENT TRAP. ILLUMINATING APPLIANCES, RANGES

CLOTHES DRYERS AND OUTDOOR GRILLS NEED NOT BE SO EQUIPPED.

EMPTYING. A DRIP SHALL NOT BE LOCATED WHERE THE

CONDENSATE IS SUBJECT TO FREEZING.

- ALL TEXTURES, FINISHES, & COLORS TO MATCH EXISTING RESIDENCE - EXTERIOR WINDOW TREATMENTS TO MATCH EXISTING - WATER HEATER TEMPERATURE & PRESSURE RELIEF VALVE TO OUTSIDE

WALL LEGEND

EXISTING MASONRY WALL:

EXISTING FRAME WALL:

EXISTING FRAME WALL

TO BE REMOVED:

NEW FRAME WALL

R-19

R-6

R-19

R-19

5'-2"

FRENCH DOORS TEMP. GL.

NOTE: PROVIDE 30" MIN. HEADROOM

~5/8" CDX PLYWI

TRUSS/RAFTER/

BLOCKING

5/8" TYPE "X"

GYP BD. TIGHT

FITTING @ ACCESS

GLUED & SCREWED

TO PLYMD

ROM BOTTOM OF CEILING FRAME

MEMBERS (IRC R807.1). SIZE OF

OPENING TO BE MIN. 20" X 30"

CLEAR PER IRC MI305.I.3

ATTIC ACCESS

SCALE: 3/4"=1'-0"

7'-0"

AIR TO BE HARD DRAWN COPPER TERMINATING IN A DOWNWARD POSITION NOT HIGHER THAN 24" & NOT LOWER THAN 6" ABOVE FINISH GRADE - WATER HEATERS TO BE SET IN DRAIN PANS & DRAINED TO DAYLIGHT - PER IRC R702.4.2: CEMENT, FIBER-CEMENT OR GLASS MAT GYPSUM BACKERS IN COMPLIANCE WITH ASTM C 1288, C 1325, OR C 1178 AND INSTALLED IN ACCORDANCE W/ MANUFACTURERS' RECOMMENDATIONS SHALL BE USED AS BACKERS FOR WALL TILE IN TUB AND SHOWER AREAS AND WALL PANELS IN

SHOWER AREAS - A VAPOR BARRIER IS NOT PERMITTED BEHIND MOISTURE-RESISTANT

- RECIRCULATE HOT WATER TO ALL HOT WATER USING FIXTURES - ATTENTION FRAMER: SEE FOUNDATION PLAN FOR HOLDOWN INFORMATION - ATTENTION FRAMER: VERIFY DUCTWORK PENETRATIONS W/ MECHANICAL

CONTRACTOR PRIOR TO FRAMING - PROVIDE 15" MIN. CLEAR FROM & OF WATER CLOSET TO SIDE WALLS - PROVIDE PRESSURE BALANCE OR THERMOSTATIC MIXING VALVE-TYPE CONTROL VALVES FOR ALL SHOWER & TUB/SHOWER COMBOS

FIREBLOCKING IS REQUIRED IN THE FOLLOWING LOCATIONS: - CONCEALED SPACES OF STUD WALLS AND PARTITIONS INCLUDING FURRED SPACES AT CEILING AND FLOOR LEVELS AND HORIZONTALLY AT INTERVALS

- AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, AND COVE CEILINGS - OPENINGS AROUND PIPES, DUCTS, VENTS, AND CHIMNEYS W/ NON-COMBUSTIBLE

- ITEMS ABOVE REFERENCE IRC SECTION R602.8

CEILING BOARD NOTE:

- WHEN APPLYING A WATER-BASED TEXTURE MATERIAL, THE MINIMUM GYPSUM BOARD THICKNESS SHALL BE INCREASED FROM 3/8" TO 1/2" FOR 16" O.C. FRAMING, AND FROM 1/2" TO 5/8" FOR 24" O.C. FRAMING OR 1/2" "SAG-RESISTANT" GYPSUM CEILING BOARD SHALL BE USED

WASHER/DRYER NOTE:

- FINAL LOCATION OF WASHER & DRYER TO BE DETERMINED AFTER CONSULTING W/ OWNER AND/OR CONTRACTOR. SIZE & DOOR SWING OF UNITS TO BE VERIFIED. - PROVIDE WATERTIGHT PAN UNDER WASHER/DRYER & DRAIN TO OUTSIDE

- DRYER EXHAUST VENT SHALL TERMINATE NOT LESS THAN 3 FEET IN ANY DIRECTION FROM OPENINGS INTO BUILDINGS. EXHAUST DUCT TERMINATIONS SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER. SCREENS SHALL NOT BE INSTALLED AT THE DUCT TERMINATION.

HOT WATER PIPING NOTE:

- ALL CIRCULATING SERVICE HOT WATER PIPING SHALL BE INSULATED TO AT LEAST R-3. CIRCULATING HOT WATER SYSTEMS SHALL INCLUDE AN AUTOMATIC OR READILY ACCESSIBLE MANUAL SWITCH THAT CAN TURN OFF THE HOT WATER CIRCULATING PUMP WHEN THE SYSTEM IS NOT IN USE

ENERGY CODE COMPLIANCE NOTES:

- SEE RESCHECK ENERGY COMPLIANCE CERTIFICATE FOR COMPLIANCE WITH 2006 IECC - WALL SYSTEM "R" VALUES:

WALLS BETWEEN LIVABLE & OUTSIDE AIR: CAVITY INSULATION -CONTINUOUS INSULATION -R-25 TOTAL INSULATION VALUE -

WALLS BETWEEN LIVABLE & GARAGE SPACE: CAVITY INSULATION

- ATTIC INSULATION TO BE MINIMUM R-38

3/4" 93'

/CKTOP

NO SCALE

TOTAL DEVELOPED LENGTH - 93'

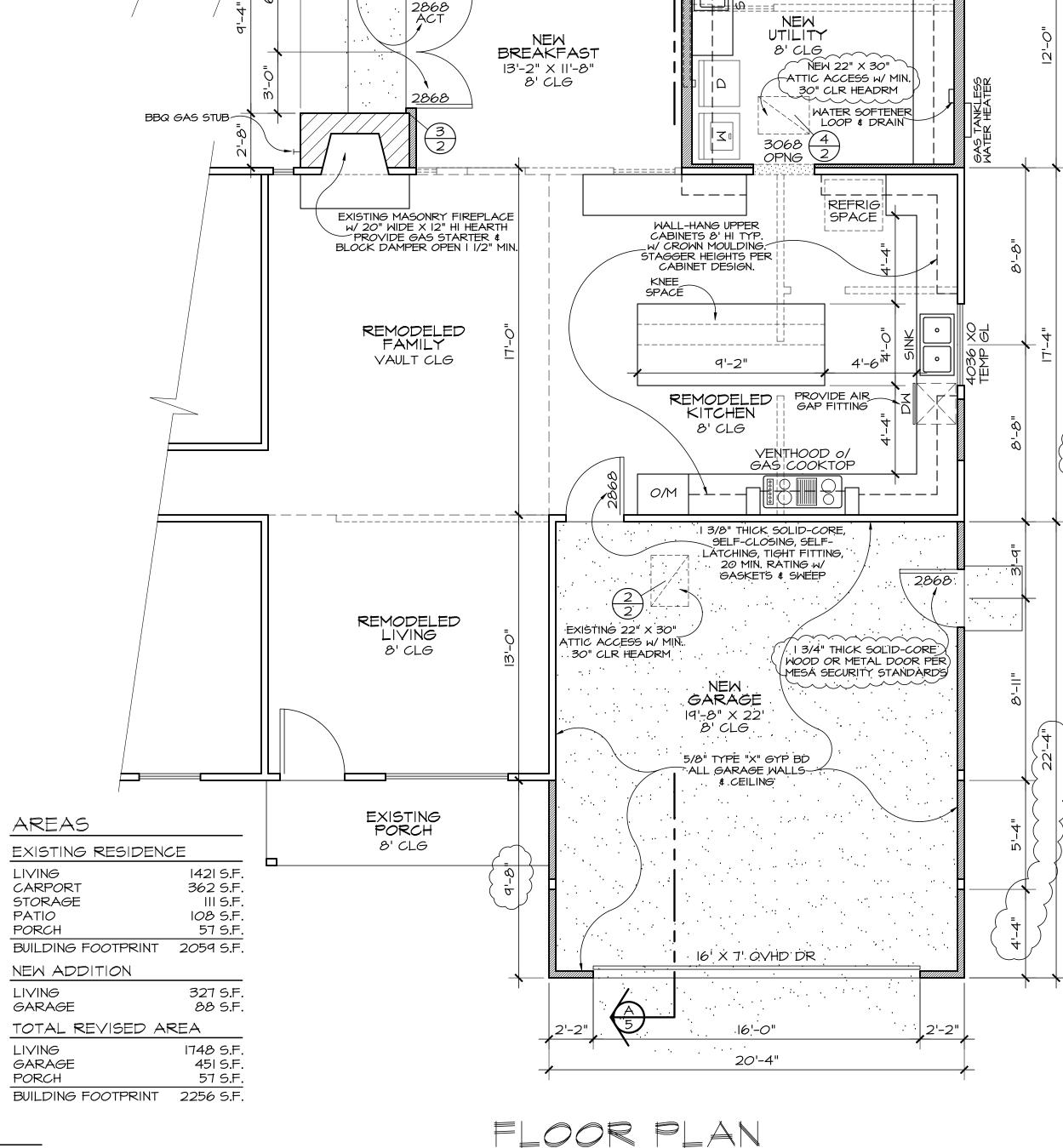
SIZE PER CURRENT IFGC

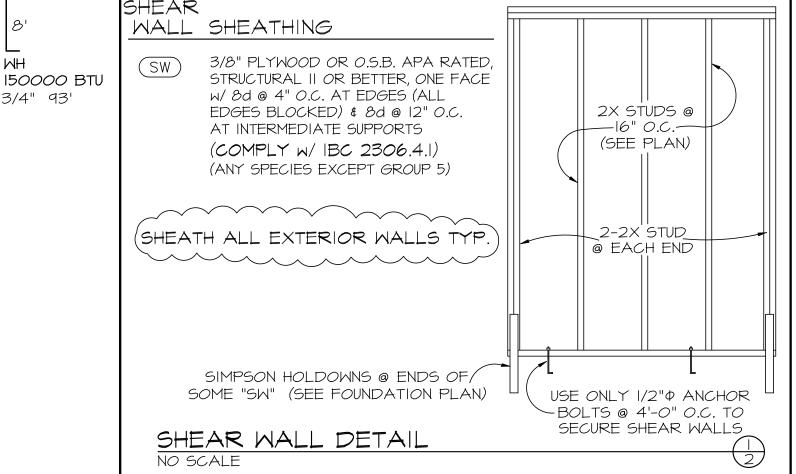
DEMAND - 295000 B.T.U.

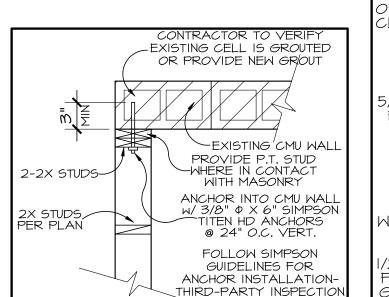
65000 BTU

3/4" 71

- AC UNITS MUST BE MINIMUM 13 SEER - ALL MODIFICATIONS TO THE BUILDING ENVELOPE MUST COMPLY WITH THE FOLLOWING: FENESTRATION = 0.40 MAX U-FACTOR (SKYLIGHT 0.65), 0.25 MAX SHGC. MIN. R-13 @ FRAME WALLS & FLOORS, R-4 @ MASS WALLS OR R-13 IN LOCATED ON INTERIOR SIDE, R-38 @ CEILINGS. SUPPLY & RETURN DUCTS SHALL BE INSULATED TO A MINIMUM OF R-8.







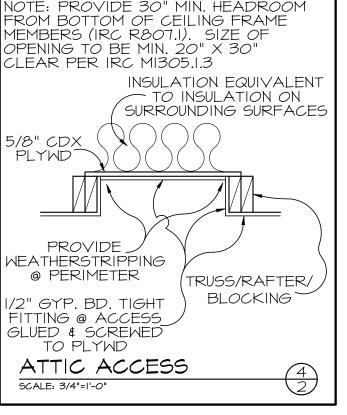
MALL DETAIL

SCALE: 3/4"=1'-0"

REQUIRED FOR EPOXY

INSTALLATIONS

SCALE: 1/4"=1'-0"



4" DRYER VENT TO OUTSIDE AIR MAX.

LENGTH 15' OR 25' W/ REDUCTIONS FOR BENDS (2.5' FOR 45°

BENDS & 5' FOR EA. 90° BEND)

FRENCH DOORS

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13'-5"

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> DATE: 5-15-2017 JOB NO: 17-030 DWN BY: LL

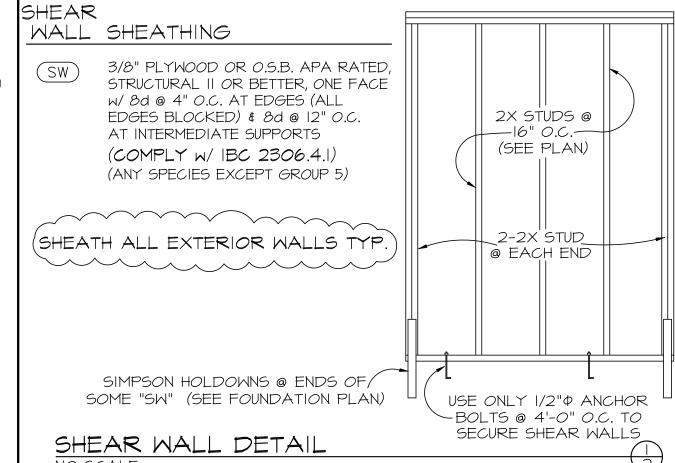
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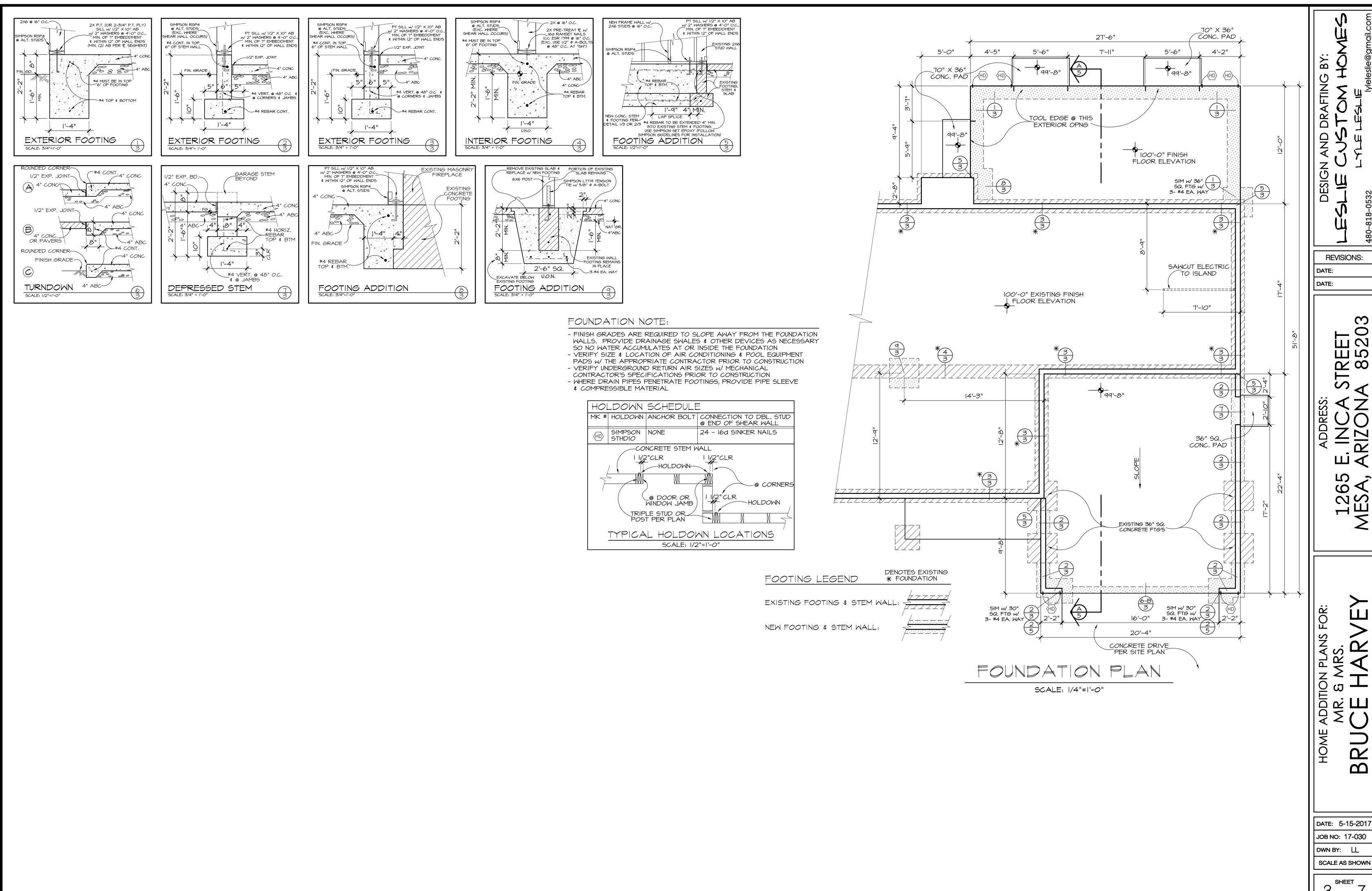
SCALE AS SHOWN SHEET <u>C</u> OF



- BRACE ALL EXTERIOR WALLS TYP. PER DETAIL 1/2

TOTAL INSULATION VALUE -





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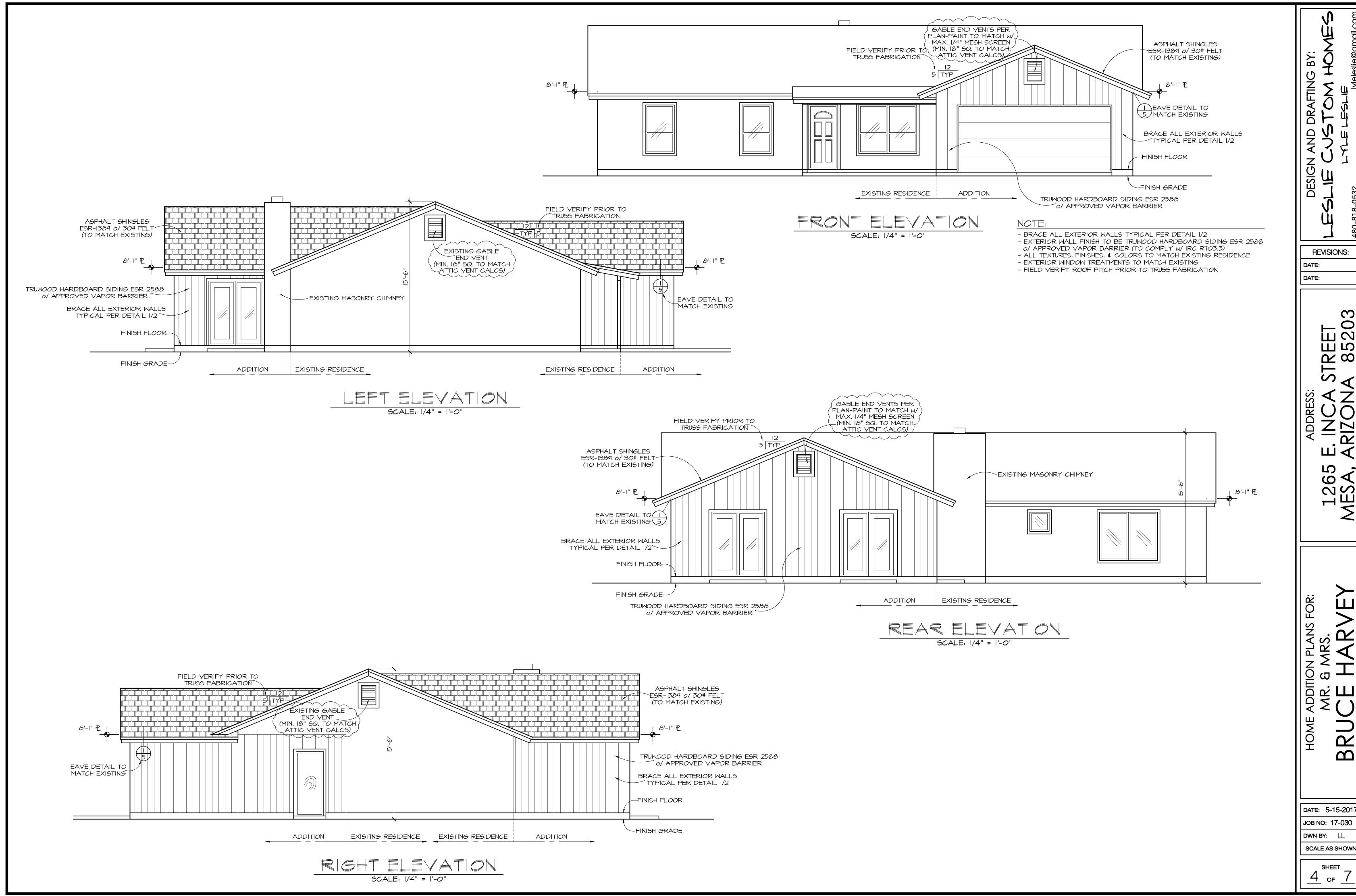
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I PLANS I MRS. ADDITION MR. 8 M CE H

DATE: 5-15-2017 JOB NO: 17-030 DWN BY: LL

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SHEET 3 of 7



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TREET 8520 S E. INCA ARIZON,

AR. & MRS.

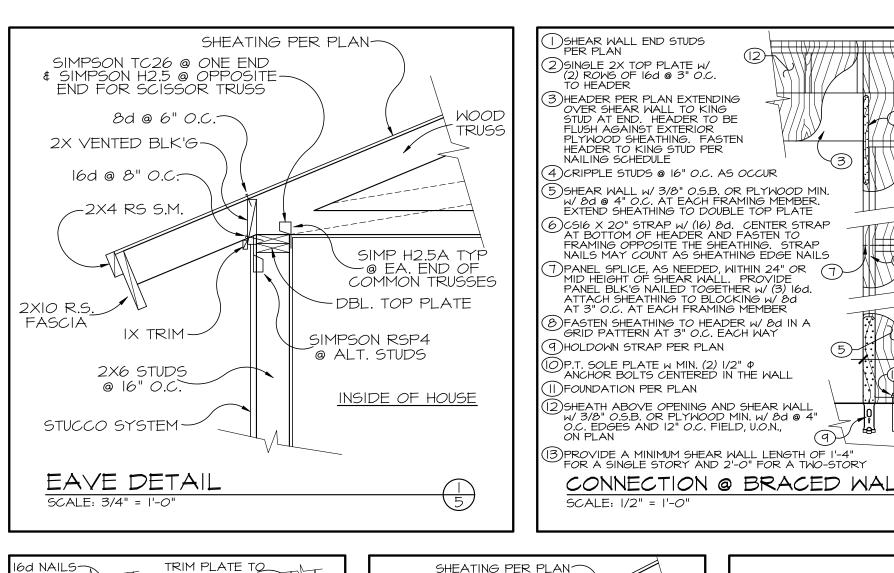
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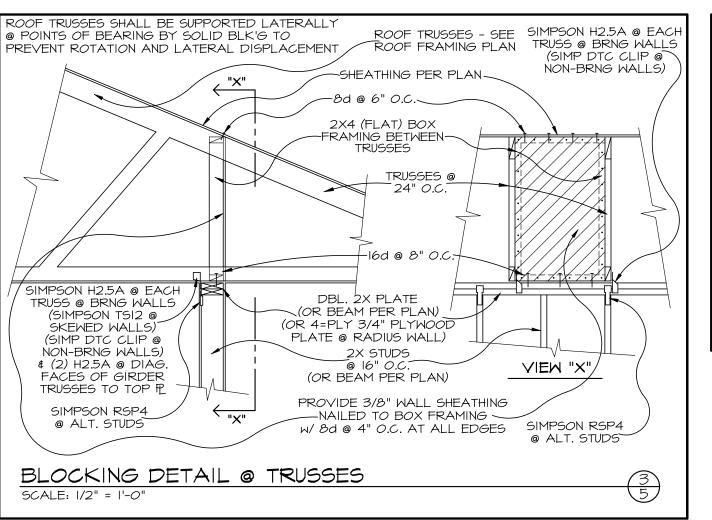
DATE: 5-15-2017 JOB NO: 17-030

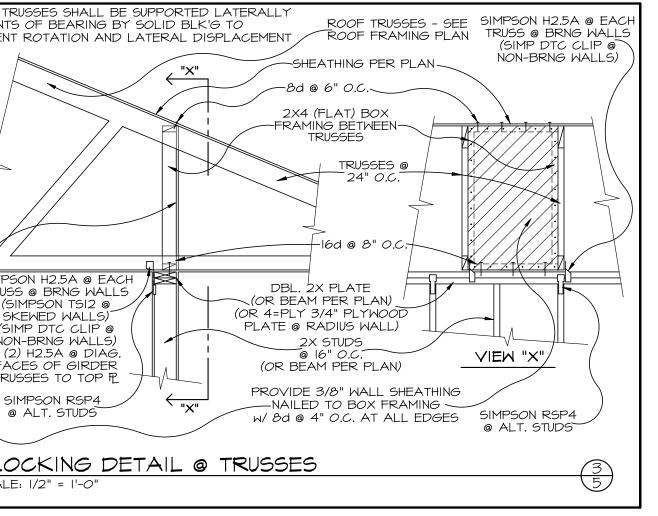
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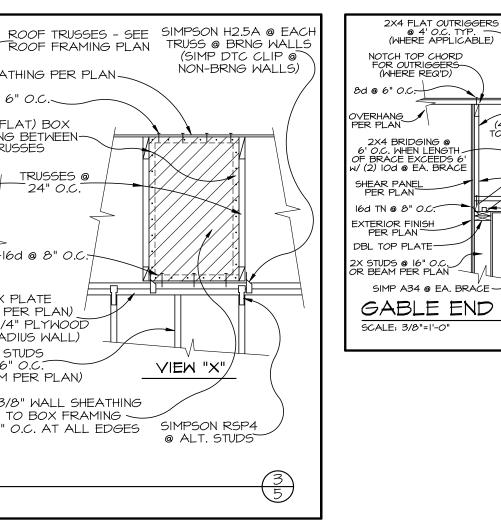
DWN BY: LL SCALE AS SHOWN

SHEET 4 of 1







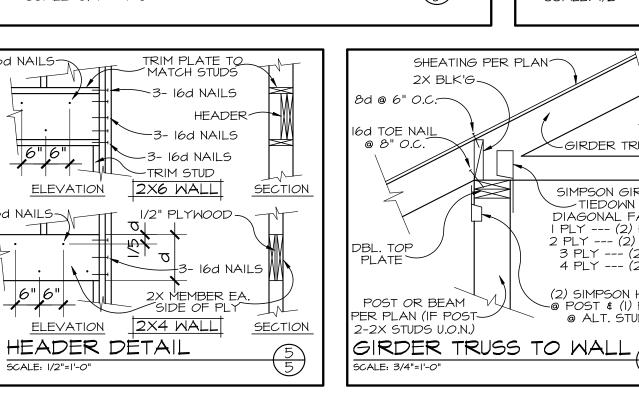


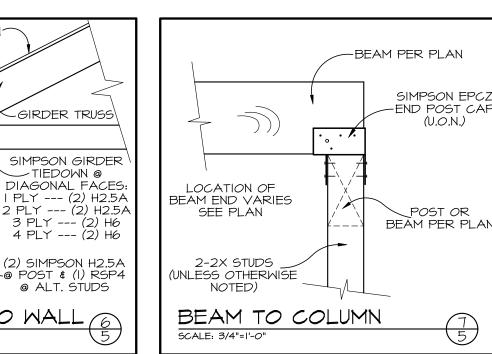
GABLE END TRUSS W/ VE WEB MEMBERS @ 16" O

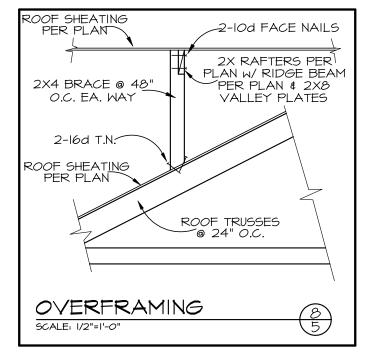
ROOF SHEATHING PER PLAN

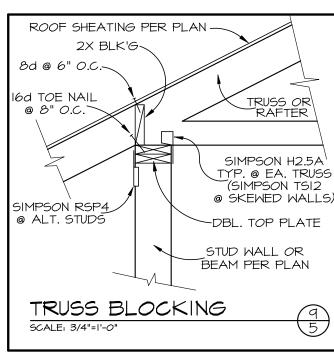
∕8d @ 6" O.C

2X4 SWAY BRACING









ROOF FRAMING NOTE

- LUMBER TYPES:

ALL EXTERIOR WALLS- 2X6 STUDS @ 16" O.C. (SPF #2) (U.O.N.) ALL INTERIOR WALLS- 2X4 STUDS @ 16" O.C. (SPF/STUD GR.) (U.O.N.)

ALL INTERIOR PLUMBING WALLS- 2X6 STUDS @ 16" O.C. (SPF/STUD GR.) (U.O.N.) - CEILING JOIST SCHEDULE:

24" O.C. 10'-10" 2XIO 24" O.C. 18'-3"

- CEILING JOISTS SHALL BE DOUGLAS FIR LARCH NUMBER 2 OR BETTER - VERIFY ALL HANGER TYPES WITH TRUSS MANUFACTURER

ANY DEVIATION THE TRUSS MANUFACTURER MAKES FROM THIS ROOF

PLAN SHALL BE REPORTED TO THE DESIGNER IMMEDIATELY

- DESIGNER SHALL NOT BE HELD RESPONSIBLE FOR DAMAGES OCCURRING

FROM DEVIATIONS MADE WITHOUT HIS VERIFICATION AND APPROVAL - EXTERIOR WALLS 2-2X6 STUDS UNDER BEAMS (U.O.N.)

- INTERIOR WALLS 2-2X4 STUDS UNDER BEAMS (U.O.N.)

- ALL PLATE & BEAM HEIGHTS ARE ASSUMED TO BE TAKEN FROM THE FINISH

FLOOR DIRECTLY BELOW U.O.N.

- INSTALL ALL BEAMS W/ CAMBER UP

- DENOTES 5:12 SLOPE OF ROOF: (FIELD VERIFY PRIOR TO TRUSS FABRICATION)

HEADER & POST NOTE:

- HEADERS SHALL BE 2-2XI2 UNLESS OTHERWISE NOTED (U.O.N.) - POSTS UNDER HEADERS, BEAMS, & GIRDERS SHALL BE 2-2X STUDS (MATCHING WALL THICKNESS) UNLESS OTHERWISE NOTED - INTERIOR NON-BEARING WALL HEADERS SHALL BE 2-2X4 (U.O.N.)

TRUSS NOTE:

- PRE-FABRICATED WOOD TRUSSES SHALL BE PROVIDED BY AN APPROVED FABRICATOR. TRUSS DIAGRAMS SHALL BE AVAILABLE TO THE FIELD INSPECTOR AT THE JOB SITE AT THE TIME OF ROOF & FRAMING INSPECTIONS. - TRUSS DIAGRAMS SHALL BE SEALED & SIGNED BY AN ARIZONA REGISTERED ENGINEER

- ACTUAL TRUSS HEIGHTS MAY VARY FROM THOSE SHOWN ON PLAN DUE TO THE FABRICATING ENGINEER'S DESIGN. BECAUSE OF THIS, TRUSSES MAY EXTEND ABOVE WINDOW SILL CALLOUTS OR OVERALL BUILDING HEIGHTS. IF THESE DISCREPENCIES OCCUR, CONTACT DESIGNER PRIOR TO TRUSS FABRICATION. - ALTERATIONS TO TRUSSES. 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., HVAC EQUIPMENT, WATER HEATER) THAT EXCEEDS THE DESIGN LOAD FOR THE TRUSS SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.

HANGER SCHEDULE:

HANGER TYPE SIMPSON MUS26

USE HANGERS AS INDICATED OR ALTERNATE HANGERS PER TRUSS CALCS @ CONTRACTOR'S OPTION

ATTIC VENTILATION:

- PROVIDE A NET FREE AREA OF ATTIC VENTILATION NOT LESS THAN 1/300 OF ATTIC AREA WHERE EAVE & RIDGE VENTILATION IS USED.

- PROVIDE 1/150 OF ATTIC AREA WHERE RIDGE VENTING ALONE IS USED

NOT BLOCK THE FREE FLOW OF AIR. A MINIMUM OF I" SPACE SHALL BE PROVIDED BETWEEN THE INSULATION & ROOF SHEATHING AT THE LOCATION OF THE VENT

EAVE: VENTED BIRD BLOCKS PROVIDING 9.82 SQ. IN. PER BLOCK RIDGE: METAL PRODUCTS, INC. 18" X 18" GABLE VENT PROVIDES 141.9 SQ. IN. FREE AIR SPACE

2249 S.F. ATTIC AREA = 7.5 X 144 = 1080 SQ. IN. REQUIRED

PROVIDE 540 SQ. IN. SOFFIT VENT & 568 SQ. IN. RIDGE VENT

RIDGE VENT @ 129.5 SQ. IN. PER VENT = 4 VENTS TO BE PROVIDED

- WHERE EAVE OR CORNICE VENTS ARE INSTALLED, INSULATION SHALL

VENTING FOR PITCHED ROOF APPLICATION:

TO EQUAL 1108 SQ. IN. PROVIDED EAVE VENT @ 9.82 SQ. IN. PER BLOCK = 55 BLOCKS TO BE PROVIDED

GABLE END BRACE 2X RIDGE APEX BLOCKING TYP. 2-2X6 STUDS _2-2X6 STUDS GIRDER TRUSS 8 5 EXISTING 2X RAFTERS @ 24" O.C. TRUSSES @ 24" O.C 8'-I" 卍 2-2X6 STUDS 12-2X6 STUDS 5 1/8 X 12 GLB T.O.B. @ 8'-1' EXISTING TRUSSES @ | ` 24" *0.*C 8'-I" PL 느 ___!'___ -!!느 _!!느 _ EXISTING GIRDER TRUSS | EXISTING 2X6 RAFTERS 1@ 24" O.C. 8'-|" PL EXISTING_ PORCH BEAM 5 2 3 1/8 X 12 5 GLB HDR 2X4 OUTRIGGERS @ 48" O.C. (FLAT) TYP. ASPHALT SHINGLES @ GABLE ENDS ESR-1389 o/ 30# FELT ROOF FRAMING PLAN SCALE: 1/4"=1'-0"

2-2XIO~

2X4 OUTRIGGERS @

48" O.C. (FLAT) TYP

@ GABLE ENDS

TYP. HEADER

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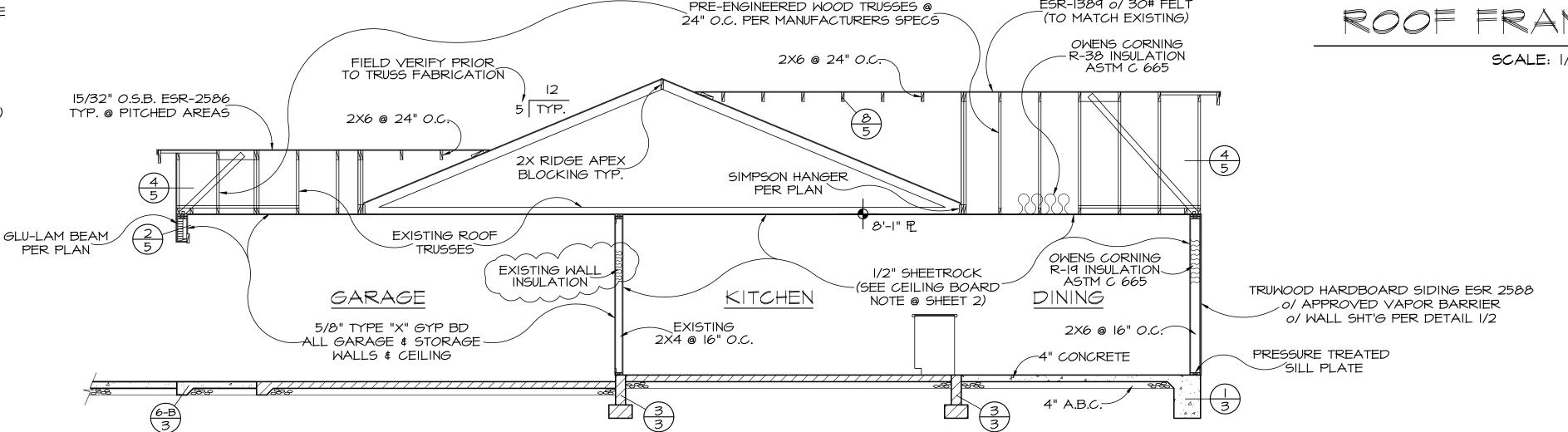
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5 DETAIL



SCALE: 1/4"=1'-0"

DATE: 5-15-2017

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JOB NO: 17-030 DWN BY: LL **SCALE AS SHOWN**

SHEET 5 of <u>/</u> - SMOKE DETECTORS SHALL BE 12" FROM CEILING, INTERCONNECTED, HAVE BATTERY BACK-UP, & SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING W/O DISCONNECT OTHER THAN CIRCUIT PROTECTION

- SMOKE DETECTORS SHALL BE A MINIMUM OF 36" FROM DUCT OPENINGS

AT SLEEPING ROOMS - CLOSET LIGHTS TO BE MINIMUM 18" FROM SHELVES

- INTERCOM (IC) SHALL HAVE CHIMES

- VERIFY ALL LIGHTING LOCATIONS W/ OWNER

- EXTERIOR LIGHTING FIXTURES SHALL COMPLY WITH ANY CITY ORDINANCES CONCERNING SUCH

- TWO OR MORE 20 AMPERE SMALL APPLIANCE CIRCUITS SHALL BE PROVIDED TO SERVE THE KITCHEN, BREAKFAST ROOM & DINING ROOM. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.

- AT LEAST ONE 20 AMPERE BRANCH CIRCUIT SHALL BE PROVIDED TO SERVE EACH BATHROOM. THESE CIRCUITS SHALL HAVE NO OTHER OUTLETS. - AT LEAST ONE 20 AMPERE BRANCH CIRCUIT SHALL BE PROVIDED TO SERVE THE LAUNDRY ROOM. THIS CIRCUIT SHALL HAVE NO OTHER OUTLETS.

- SEE GENERAL NOTES FOR FIRE WARNING SYSTEM SPECIFICATIONS - PROVIDE GFI PROTECTION WITHIN 6'-O" OF ALL SINKS & AT PUMP MOTORS - CEILING FAN BOXES SHALL BE RIGIDLY SECURED IN PLACE & LISTED FOR THE APPLICATION & LOCATION

- TYPE NM OR NMC (ROMEX) CABLE SHALL NOT BE EMBEDDED IN POURED CONCRETE OR MASONRY

- VERIFY ELECTRIC METER LOCATION W/ LOCAL POWER COMPANY - OUTLET BOXES IN THE WALL BETWEEN THE GARAGE & THE DWELLING SHALL BE METAL OR U/L APPROVED FIRE-RESISTANT PLASTIC. OUTLET BOXES IN THE GARAGE CEILING SHALL BE METAL

- GARAGE OUTLETS TO BE 24" MIN. ABOVE THE FINISH FLOOR TYPICAL - PROVIDE A READILY ACCESSIBLE DISCONNECT ADJACENT TO & WITHIN SIGHT OF ELECTRIC WATER HEATERS

- RECESSED INCANDESCENT LIGHTS SHALL MAINTAIN A 3" CLEARANCE TO INSULATION OR BE LISTED TO HAVE INSULATION IN DIRECT CONTACT

WITH THE FIXTURE - NO SPACE ON KITCHEN COUNTERS CAN BE MORE THAN 24" BETWEEN OUTLETS

- PROVIDE A UFER GROUND ENCASED IN CONCRETE FOOTING (E3508.1.2) - CEILING FANS OR LIGHTS INSTALLED OUTDOORS OR UNDER PATIO COVERS MUST BE LISTED FOR DAMP LOCATIONS. IRC SECTION E3903.8

- CEILING FANS NOT EXCEEDING 35 POUNDS (WITH OR WITHOUT ACCESSORIES) MAY BE SUPPORTED BY OUTLET BOXES PROVIDED THE BOXES ARE IDENTIFIED FOR SUCH USE PER IRC SECTION E4001.6

- BOND ALL METAL LARGER THAN 4" IN ANY DIMENSION (WEEP SCREED,

INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT

WINDOW FRAME, ETC.) WHEN WITHIN 5' OF POOL WATERS EDGE - BOND ALL INTERIOR WATER & GAS PIPING

- ALL BRANCH CIRCUITS THAT SUPPLY 120-VOLT, SINGLE PHASE, 15- \$ 20-AMPERE OUTLETS INSTALLED IN FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, AND SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A COMBINATION TYPE ARC-FAULT CIRCUIT INTERRUPTER

MECHANICAL NOTE:

- MECHANICAL EXHAUST FANS MUST BE CAPABLE OF PROVIDING A MINIMUM OF 5 AIR CHANGES PER HOUR

- HVAC EQUIPMENT SHALL BE CAPABLE OF MAINTAINING A ROOM

TEMPERATURE OF 70° F. @ A POINT 36" ABOVE THE FINISH FLOOR - VERIFY MECHANICAL UNIT, VENT, & RETURN AIR SIZES & LOCATIONS WITH

MANUFACTURER'S SPECIFICATIONS PRIOR TO CONSTRUCTION - DUCT LAYOUT, STYLE, & FAN LOCATIONS SHALL CONFORM TO LOCAL CODES

AND ACTUAL FIELD CONDITIONS - DUCTS SHALL BE INSULATED MIN. R-5 WHEN IN CONDITIONED SPACE & MIN. R-8 WHEN IN UNCONDITIONED SPACE SUCH AS THE ATTIC

- PROVIDE 4" PDUCT PROVIDING 100 CFM MIN. EXHAUST @ RANGE HOOD - CLOTHES DRYER EXHAUST VENT SHALL BE AT LEAST THE DIAMETER OF THE APPLIANCE OUTLET AND SHALL TERMINATE ON THE OUTSIDE OF THE BUILDING. IT SHALL NOT EXCEED 25' IN LENGTH (35' FOR GAS DRYERS)

WITH REDUCTION FOR BENDS. THE DUCT SHALL TERMINATE NOT LESS THAN 3' FROM PROPERTY LINE

ELECTRICAL SYMBOL LIST DUPLEX CONVENIENCE OUTLET, MOUNTED 120V. (MOUNTED +18" HI OR AS NOTED) DUPLEX CONVENIENCE OUTLET - SPLIT WIRED. 120V. (MOUNTED +18" HI OR AS NOTED) **€** 220V OUTLET 120V - HARDWIRED w/ DISCONNECTING MEANS PER NEC GFI DENOTES GROUND FAULT CIRCUIT INTERRUPTOR. WP DENOTES WEATHERPROOF - DAMP LOCATION RATED AFI DENOTES ARC-FAULT INTERRUPTOR \varnothing FLOOR OUTLET. 120V. SINGLE POLE SWITCH, MOUNTED +42" OR AS NOTED. THREE-WAY SWITCH. MOUNTED +42" OR AS NOTED. \$ FOUR-WAY SWITCH. MOUNTED +42" OR AS NOTED. TV TELEVISION OUTLET, MOUNTED +18" OR AS NOTED. IC INTERCOM J JUNCTION BOX, WP=WEATHER PROOF. -D PUSH BUTTON STATION. (SD) SMOKE DETECTOR H HEAT LAMP EXHAUST FAN

 LIGHTING TIMER CHIMES

CO CARBON MONOXIDE DETECTOR

AGDO DENOTES WIRING FOR AUTOMATIC GARAGE DOOR OPENER FOOTLIGHT

WALL MOUNTED LIGHT FIXTURE

CEILING MOUNTED LIGHT FIXTURE RECESSED CAN LIGHT FIXTURE

RECESSED CAN LIGHT - DIRECTIONAL EYEBALL STYLE ☐ MINI-RECESSED CAN -or- PINLIGHT (PER OWNER) LOW VOLTAGE LANDSCAPE UPLIGHTING

SPOTLIGHT

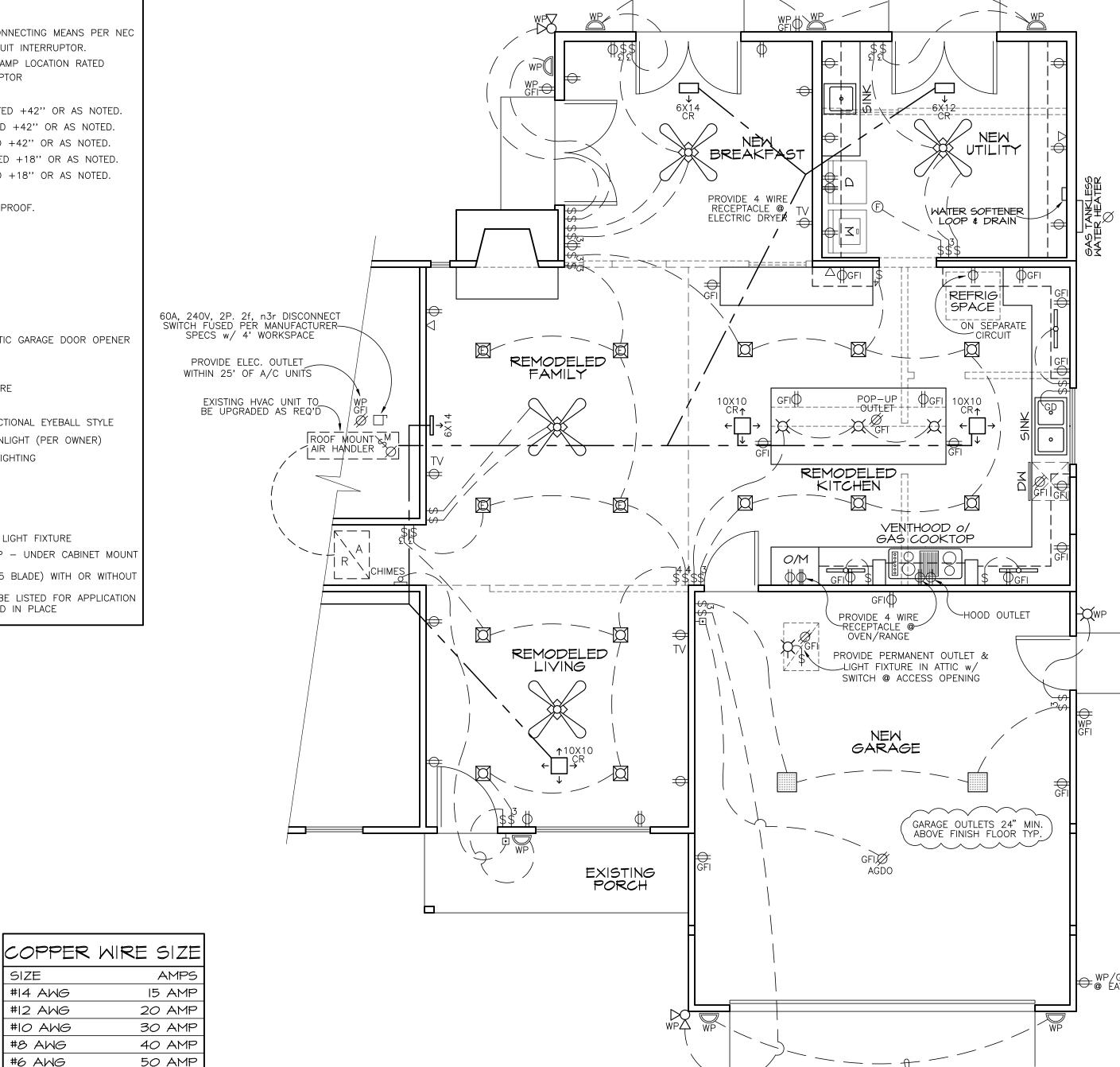
SCONCE LIGHT

L.E.D. LIGHTING PANEL

48" FLUORESCENT LIGHT FIXTURE

L.E.D. LIGHTING STRIP - UNDER CABINET MOUNT LIGHT KIT AS SHOWN

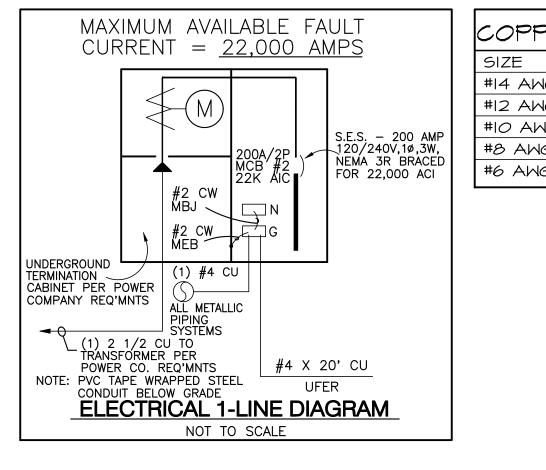
CEILING FAN (4 OR 5 BLADE) WITH OR WITHOUT OUTLET BOX SHALL BE LISTED FOR APPLICATION AND RIGIDLY SECURED IN PLACE



ICAL/MECHANICAL PLAN SCALE: 1/4"=1'-0"

ELECTRICAL LOAD CALCULATION

GEN LTG & RECEPS 1748 SF @ 3 VA/S	F =	52	44	VΑ
SMALL APPL CIRCUITS - 3 @ 1500 W EA	. =	45	00	\sqrt{A}
REFRIGERATOR (1500 W)	=	150	00	\sqrt{A}
MICROWAVE (1500 W)	=	150	00	\vee A
OVEN (8000 W)	=	80	00	\vee A
COOKTOP (6000 W)	=	60	00	\vee A
DISHWASHER (1500 W)	=		<u> </u>	
DISPOSAL (450 W)			50	
HOT WATER HEATER (4500 W)		45		
CLOTHES WASHER (1500 W)		15		
CLOTHES DRYER (5000 W)	=	50		
JACUZZI TUB MOTOR (1500 W)	=			<u>VA</u>
TOTAL GEN LTG & APPL	=	396	94	VA
	20	VΑ		
REMAINDER @ 40% = 118	. —			
CONDENSING UNITS (9000 W EA.) = 900	00	VA		
AIR HANDLERS (1200 W EA.) = 120	00	VA		
POOL MOTORS (5000 W) =	_	\vee A		
NET OTHER LOADS = 32078 VA ÷ 240			134	1 A
TOTAL LC	AD	, =	134	ΙA
PROVIDE 200 AMP SERVICE				



	AMPS
NG	I5 AMP
46	20 AMP
MG	30 AMP
16	40 AMP
16	50 AMP

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DATE: 5-15-2017 JOB NO: 17-030

SCALE AS SHOWN

DWN BY: LL

SHEET 6 of 7 Goodman Home Addition

2009 IECC Energy Code: Mesa, Arizona Location: Construction Type: Single-family Project Type: Addition 2 (1366 HDD) Climate Zone: Permit Date:

Permit Number:

Owner/Agent: Construction Site: Randy Goodman 655 N. Bermuda Circle Mesa, AZ 655 N. Bermuda Circle Designer/Contractor: Lyle Leslie Leslie Custom Homes 4911 E. Dixon Circle Mesa, AZ 85205 480-818-0532

Compliance: Passes using UA trade-off Compliance: 20.4% Better Than Code Maximum UA: 152 Your UA: 121 Maximum SHGC: 0.30 Your SHGC: 0.25 The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Flat Ceiling or Scissor Truss	318	38.0	0.0	0.030	10
Wall 1: Wood Frame, 16" o.c.	432	19.0	0.3	0.059	20
Window 1: Metal Frame:Double Pane with Low-E SHGC: 0.25	52			0.400	21
Door 2: Glass SHGC: 0.25	35			0.400	14
Floor 1: Slab-On-Grade:Unheated Insulation depth: 0.0'	54		0.0	1.042	56
Compliance Statement: The proposed building design described he calculations submitted with the permit application. The proposed le REScheck Version 4.6.1 and to comply with the mandatory requires	puilding has been designed	to meet the	2009 IECC on Checklist م	: requireme	nts in

Report date: 06/15/17 Data filename: C:\Users\Lyle\Documents\LCH Documents\Energy Calcs\2017\HarveyADD.rck

REScheck Software Version 4.6.1 **Inspection Checklist**

Energy Code: 2009 IECC Requirements: 100.0% were addressed directly in the REScheck software Text in the "Comments/Assumptions" column is provided by the user in the REScheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Pre-Inspection/Plan Review	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
103.2 [PR1] ¹	Construction drawings and documentation demonstrate energy code compliance for the building envelope.			□Complies □Does Not □Not Observable	Requirement will be met.
103.2, 403.7 [PR3] ¹	Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the commercial code.			□Not Applicable □Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
403.6 [PR2]² ⊌	Heating and cooling equipment is sized per ACCA Manual S based on loads per ACCA Manual J or other approved methods.	Heating: Btu/hr Cooling: Btu/hr	Heating: Btu/hr Cooling: Btu/hr	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3) Project Title: Goodman Home Addition

Data filename: C:\Users\Lyle\Documents\LCH Documents\Energy Calcs\2017\HarveyADD.rck

Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1 [FO1] ¹	Slab edge insulation R-value.	R Unheated Heated	R Unheated Heated	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
303.2, 402.2.8 [FO2] ¹	Slab edge insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
402.1.1 [FO3] ¹	Slab edge insulation depth/length.	ft	ft	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	See the Envelope Assemblies table for values.
303.2.1 [FO11]² ₩	A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement is not applicable.
403.8 [FO12] ²	Snow- and ice-melting system controls installed.			□Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement is not applicable.

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Additional Comments/Assumptions:

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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.1, 402.3.3, 402.5 [FR2] ¹	Glazing U-factor (area-weighted average).			□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
402.1.1, 402.3.2, 402.3.3, 402.5 [FR3] ¹	Glazing SHGC value (area- weighted average).	SHGC:	SHGC:	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
303.1.3 [FR4] ¹	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
402.4.4 [FR20] ¹	Fenestration that is not site built is listed and labeled as meeting AAMA/WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
402.4.5 [FR16] ²	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
403.2.1 [FR12] ¹	Supply ducts in attics are insulated to ≥R-8. All other ducts in unconditioned spaces or outside the building envelope are insulated to ≥R-6.	R R	R R	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
[FR13] ¹	All joints and seams of air ducts, air handlers, filter boxes, and building cavities used as return ducts are sealed.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
	Building cavities are not used for supply ducts.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
FR17] ²	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to ≥R- 3.	R	R	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
FR18]² ⊌	Circulating service hot water pipes are insulated to R-2.	R	R	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
FR19]2	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.		And the second s	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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All installed insulation is labeled □Does Not [IN13]² or the installed R-values □Not Observable □Not Applicable See the Envelope Assemblies table for values. ☐Complies 402.1.1, Wall insulation R-value. If this is a R-402.2.4, mass wall with at least ½ of the Wood □Does Not ☐ Wood Mass 402.2.5 wall insulation on the wall ☐Not Observable exterior, the exterior insulation ☐Not Applicable requirement applies. Requirement will be met. □Complies □Does Not Wall insulation is installed per manufacturer's instructions. ☐Not Observable ☐Not Applicable Additional Comments/Assumptions:

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Comments/Assumptions

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3) Report date: 06/15/17 Project Title: Goodman Home Addition Data filename: C:\Users\Lyle\Documents\LCH Documents\Energy Calcs\2017\HarveyADD.rck Page 5 of 7

Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
102.1.1, 102.2.1, 102.2.2 FI1] ¹	Ceiling insulation R-value. Where > R-30 is required, R-30 can be used if insulation is not compressed at eaves. R-30 may be used for 500 ft² or 20% (whichever is less) where sufficient space is not available.	R	R Wood Steel	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft ² .			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
402.2.3 [FI3] ¹	Attic access hatch and door insulation ≥R-value of the adjacent assembly.	R	R	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
[F]17]¹ �	Building envelope tightness verified by blower door test result of <7 ACH at 50 Pa. This requirement may instead be met via visual inspection, in which case verification may need to occur during Insulation Inspection.	ACH 50 =	ACH 50 =	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
403.2.2 [FI4] ¹	Post construction duct tightness test result of ≤ 8 cfm to outdoors, or ≤ 12 cfm across systems. Or, rough-in test result of ≤ 6 cfm across systems or ≤ 4 cfm without air handler. Rough-in test verification may need to occur during Framing Inspection.	cfm	cfm	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
103.1.1 Fl9]² ⊌	Programmable thermostats installed on forced air furnaces.			□Complies □Does Not □Not Observable	Requirement will be met.
	Heat pump thermostat installed on heat pumps.			□Not Applicable □Complies □Does Not □Not Observable	Requirement will be met.
103.4 FI11]² ❤	Circulating service hot water systems have automatic or accessible manual controls.			□Not Applicable □Complies □Does Not □Not Observable □Not Applicable	Exception: Requirement is not applicable.
104.1 FI6] ¹	50% of lamps in permanent fixtures are high efficacy lamps.			□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
101.3 F17]² ⊌	Compliance certificate posted.			Complies Does Not Not Observable Not Applicable	Requirement will be met.
303.3 FI18] ³	Manufacturer manuals for mechanical and water heating equipment have been provided.			☐Complies ☐Does Not ☐Not Observable	Requirement will be met.

Additional Comments/Assumptions:

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	2009 IECO Efficiency		
	Insulation Rating	R-Value	
	Above-Grade Wall	19.34	
	Below-Grade Wall	0.00	
	Floor	0.00	
	Ceiling / Roof	38.00	
	Ductwork (unconditioned spaces):		
	Glass & Door Rating	U-Factor	SHGC
	Window	0.40	0.25
٠.	Door	0.40	0.25
	Heating & Cooling Equipment	Efficiency	
	Heating System:		
	Cooling System:		
	Water Heater:		
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REVISIONS: DATE:

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DATE: 5-15-2017 JOB NO: 17-030 DWN BY: LL SCALE AS SHOWN

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