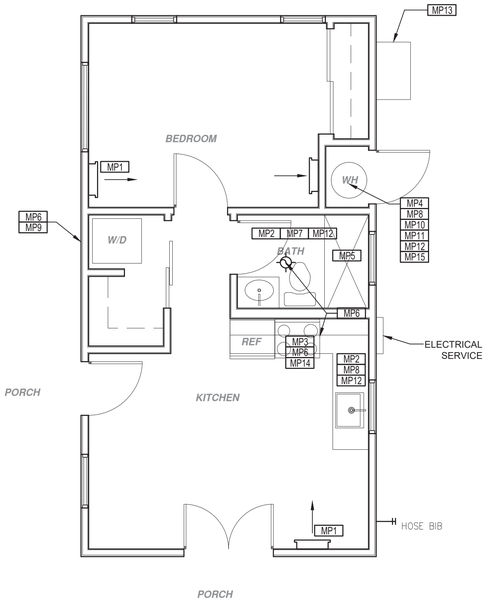
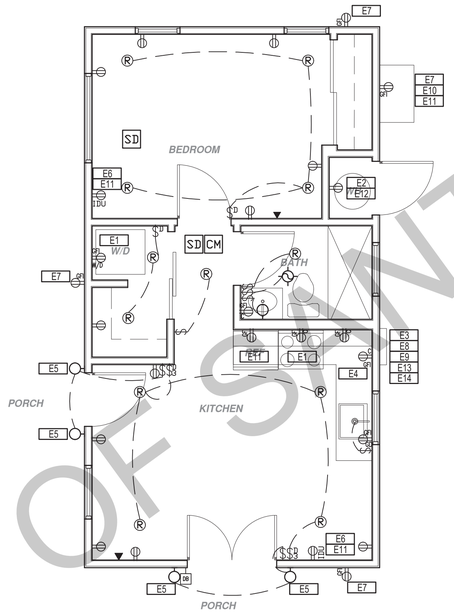


MECHANICAL / PLUMBING PLAN

1/4"=1'-0"



ELECTRICAL PLAN

1/4"=1'-0"

MECHANICAL / PLUMBING KEYNOTES

- MP1 INDOOR UNIT MINI SPLIT SYSTEM.
- MP2 WATER CONSERVING FIXTURES: NEW WATER CLOSETS SHALL USE NO MORE THAN 1.28 GAL. OF WATER PER FLUSH, LAVATORIES LIMITED TO 1.2 GPM, KITCHEN FAUCETS NOT TO EXCEED 1.8 GPM AT 60 PSI THEY CAN INCREASE THE FLOW MOMENTARILY BUT CANT EXCEED 2.2GALLONS PER MIN. AT 60 PSI & MUST DEFAULT TO A MAX. FLOW RATE OF 1.8GALLONS PER MIN AT 60 PSI., & SHOWERS NOT EXCEED 1.8 GPM. AT 80 PSI AND ALL SHALL BE CERTIFIED TO MEET THE PERFORMANCE CRITERIA OF THE EPA WATERSENCE SPECIFICATIONS FOR SHOWERHEADS. CPC SECTIONS 407, 408, 411, 412 AND SECTION 301.1.1 CALGREEN CODE AND CIVIL CODE 1101.3(a)
- MP3 EXHAUST HOOD ABOVE/ TO BE SMOOTH METALLIC INTERIOR SURFACE (CMC 504.3)
- MP4 NEW WATER HEATER - TO HAVE CONDENSATE DRAIN INSTALLED NO HIGHER THAN 2' ABOVE THE BASE OF THE HEATER THAT ALSO ALLOWS GRAVITY DRAINAGE
- MP5 CONTROL VALVES IN SHOWERS: BATHTUBS, & BIDETS MUST BE PRESSURE BALANCED OR THERMOSTATIC MIX VALVES
- MP6 MINIMUM OF 3 FT CLEARANCE TO ANY OPENING INTO BUILDING FOR EXHAUST FAN TERMINATIONS
- MP7 CLEARANCE FOR WATER CLOSET TO BE A MIN. OF 24" IN FRONT, AND 15" FROM ITS CENTER TO ANY SIDE WALL OR OBSTRUCTION. (CPC 402.5)
- MP8 THE 1/2" SIZE HOT WATER PIPE TO THE KITCHEN SINK AND THE COLD WATER PIPE WITHIN 5' OF WATER HEATER BOTH REQUIRE 1" INSULATION
- MP9 DRYER EXHAUST OUTLET FROM DRYER TO EXTERIOR MAX LENGTH 14' WITH MAXIMUM OF TWO 90° ELBOWS EXHAUST VENT MUST TERMINATE A MIN. OF 3' FROM ANY OPENING. MIN. TYPE 1 CLOTHES DRYER EXHAUST DUCTS SHALL BE OF RIGID METAL & SHALL HAVE SMOOTH INTERIOR SURFACES. THE DIAMETER SHALL BE NOT LESS THAN 4 INCHES NOMINAL (100 MM), & THE THICKNESS SHALL BE NOT LESS THAN 0.016 OF AN INCH (0.406 MM). EXHAUST DUCTS & DRYER VENTS SHALL BE EQUIPPED WITH BACK DRAFT DAMPERS
- MP10 NEW WATER HEATER WITH T&P RELIEF VALVE AND DISCHARGE PIPE AT EXTERIOR. PROVIDE COMBUSTION AIR AND CLEARANCES PER MANUFACTURER REQUIREMENTS.
- MP11 NEW WATER HEATER SHALL HAVE ISOLATION VALVES ON BOTH THE COLD AND THE HOT WATER PIPING LEAVING THE WATER HEATER.COMPLETE WITH HOSE BIBS OR OTHER FITTINGS ON EACH VALVES FOR FLUSHING THE WATER HEATER WHEN THE VALVES ARE CLOSED
- MP12 ALL DOMESTIC HOT WATER PIPING TO HAVE THE FOLLOWING MINIMUM INSULATION INSTALLED: ½" PIPE (½" INSULATION); ¾" PIPE (1" INSULATION); 1" TO 1-1/2" PIPE (1-1/2" INSULATION)
- MP13 OUTDOOR CONDENSING UNIT TO BE PIPED TO INDOOR HVAC UNIT
- MP14 RANGE HOOD DUCTED TO EXTERIOR. FAN IS TO BE EITHER INTERMITTENT 100CFM OR CONTINUOUS 5 AIR CHANGES PER HOUR AND MUST HAVE A SONE RATING OF 1 FOR CONTINUOUS FAN AND 3 FOR INTERMITTENT FAN.
- MP15 HEATER TO BE DUCTED AND EXHAUST TO ROOF PER MANUFACTURES SPECIFICATIONS

ELECTRICAL KEYNOTES

- E1 DEDICATED 50 AMP/ 240V POWER FOR ELECTRIC COOKTOP AND 30AMP/240V FOR ELECTRIC DRYER TO BE WITHIN 3FT OF APPLIANCES.
- E2 OUTLET FOR NEW WATER HEATER WITHIN 3' OF WATER HEATER.
- E3 ELECTRICAL - SUB PANEL LOCATION
- E4 OUTLET AT COUNTER HEIGHT - SHALL COMPLY WITH CEC ARTICLE 210.52(C): IN KITCHENS A RECEPTACLE OUTLET SHALL BE INSTALLED AT EACH COUNTER SPACE 12" OR WIDER; SHALL BE INSTALLED SO THAT NO POINT ALONG THE WALL IS MORE THAN 24", ISLAND IN PENINSULAR COUNTERTOPS 12" X 24" LONG (OR GREATER) SHALL HAVE AT LEAST ONCE RECEPTACLE
- E5 OUTDOOR LIGHTING FIXTURES ARE REQUIRED TO BE HIGH EFFICACY OR CONTROLLED BY A COMBINATION PHOTOCONTROL / MOTION SENSOR.
- E6 OUTLET DEDICATED FOR INDOOR HVAC UNIT
- E7 WEATHER RESISTANT TYPE RECEPTACLES GFCI PROTECTED
- E8 OVER-CURRENT FEEDER TO EXTEND TO EXISTING PANEL- ALUMINUM CONDUCTOR BURIED UNDER GROUND WITH AWG ALLOWABLE VOLTAGE DROP PER CEC 250.4
- E9 SEPARATE GROUND ELECTRODE SYSTEM PER CEC 250.4
- E10 OUTDOOR CONDENSING UNIT RECEPTACLE OUTLET SHALL BE INSTALLED AT AN ACCESSIBLE LOCATION FOR THE SERVICING OF THE HEATING AND COOLING EQUIPMENT AND SHALL BE LOCATED ON THE SAME LEVEL AND WITHIN 25 FEET OF THE EQUIPMENT. THIS RECEPTACLE SHALL BE GFCI-WP PROTECTED.
- E11 A DISCONNECTING MEANS CAPABLE OF DISCONNECTING AIR-CONDITIONING AND REFRIGERATING EQUIPMENT, INCLUDING MOTOR-COMPRESSORS AND CONTROLLERS FROM THE CIRCUIT CONDUCTOR IS REQUIRED WITHIN SIGHT FROM THE EQUIPMENT LOCATION PER CEC SECTION 440.11
- E12 PER CEC 2022 150.0(N) 1.A.: THE DESIGNATED SPACE AND WATER HEATER IS TO COMPLY WITH ELECTRICAL NOTES 15&16 ON SHEET G0.2. A DEDICATED 125 VOLT, 20AMP ELECTRICAL RECEPTACLE THAT IS CONNECTED TO THE ELECTRICAL PANEL WITH A 120/240 VOLT 3 CONDUCTOR, 10AWG COPPER BRANCH CIRCUIT, WITHIN 3 FT FROM THE WATER HEATER.
- E13 CONTRACTOR TO VERIFY MAIN PANEL
- E14 MAIN PANELBOARD LOCATION SHALL HAVE A MINIMUM BUSBAR RATING OF 225 AMPS. ALL SINGLE-FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS SHALL MEET THE FOLLOWING ENERGY STORAGE SYSTEMS (ESS) READY REQUIREMENTS. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CEC. SEE SHEET G0.2. ELECTRIC READY 150.0(s) FOR REQUIREMENTS. SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3FT OF THE MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD & THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

MECHANICAL / PLUMBING LEGEND

MECHANICAL

EXHAUST FAN: MINIMUM 50 CFM TO BE DUCTED TO THE EXTERIOR AND SHALL PROVIDE FIVE AIR CHANGES PER HOUR; SECTION 1203.3. CFM AND NOISE RATING MAXIMUM 3 SONE FOR INTERMITTENT USE. SHALL BE ENERGY STAR RATED AND CONTROLLED BY A HUMIDISTAT CAPABLE OF AN ADJUSTMENT BETWEEN 50-80% HUMIDITY.

DUCT SYSTEMS ARE SIZED, DESIGNED AND EQUIPMENT IS SELECTED USING THE FOLLOWING METHODS.:

1. ESTABLISH HEAT LOSS AND HEAT GAIN VALUES ACCORDING TO ANSI/ ACCA 2 MANUAL J-2011 OR EQUIVALENT.
2. SIZE DUCT SYSTEMS ACCORDING TO ANSI/ ACCA I MANUEL D-2014 OR EQUIVALENT.
3. SELECT HEATING AND COOLING EQUIPMENT ACCORDING TO ANSI/ ACCA 3 MANUAL S-2014 OR EQUIVALENT .

RETURN AIR GRILLE, WALL MOUNTED

SUPPLY AIR DIFFUSER, WALL MOUNTED

THERMOSTAT

HOSE BIB

ELECTRICAL LEGEND

FIRE DETECTION

SD SMOKE DETECTORS PER SECTION R314 DETECTORS SHALL BE PERMANENTLY WIRED WITH BATTERY BACKUP. SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS. ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL O F THE ALARMS IN THE UNIT.

SHALL COMPLY WITH THE FOLLOWING:

- AT LEAST 3' FROM THE TIP OF THE BLADE OF A CEILING-MOUNTED FAN
- NOT LESS THAN 3' FROM THE DOOR OPENING OF A BATHROOM
- AT LEAS 20' FROM A COOKING APPLIANCE OR 10' FROM COOKING APPLIANCE WHEN THE ALARM IS AN IONIZING SMOKE ALARM PER NFPA 72 SECTION 29.8.3.4 ITEM 4
- AT LEAST 3' FROM SUPPLY REGISTERS OF A HEATING /COOLING SYSTEM

CM CARBON MONOXIDE ALARM PERMANENTLY WIRED WITH BATTERY BACKUP PER SECTION R315. ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL O F THE ALARMS IN THE UNIT.

POWER/DATA

TAMPER RESISTANT RECEPTACLE WALL MOUNTED, 110 V DUPLEX U.O.N.

GFI = WATER PROOF GFCI
CT = COOKTOP/ GRILL 50AMPS/240 V
O = OVEN 240 V
MW = MICROWAVE 110 V
GD = GARBAGE DISPOSAL 110 V
R = RANGE 220V
C = COUNTER HEIGHT 6" ABV COUNTER
IDU = INDOOR UNIT POWER 84" AFF
W/D = WASHER/DRYER 30AMP/ 240V

PHONE / DATA / MEDIA

CEILING, WATERPROOF OUTLET

FLOOR MOUNTED DUPLEX RECEPTACLE, VERIFY LOCATION IN FIELD.
SPECIAL PURPOSE CONNECTION (VOLTAGE SHALL MATCH APPLIANCE REQ.)

SUB PANEL

SWITCHING

$ SWITCH, MOUNT AT 43" AFF
$3 THREE-WAY SWITCH
$4 FOUR-WAY SWITCH
$D DIMMER SWITCH
$C MOUNT 6" ABV COUNTER

MISC.

CEILING FAN/LIGHT COMBO

CIRCUIT WIRING

DOOR BELL BUTTON

LIGHTING

R CEILING, RECESSED, DIRECTIONAL, ZERO CLEARANCE IC RATED LED BULB

R CEILING, RECESSED, ZERO CLEARANCE IC RATED LED BULB

R CEILING, RECESSED, ZERO CLEARANCE IC RATED, WATER RESISTANT, LED BULB

WALL MOUNTED LIGHT

J JUNCTION BOX FLUSH CEILING MOUNTED

UNDER COUNTER LIGHTING

LV LOW VOLTAGE, LANDSCAPE LIGHT

FLUORESCENT FIXTURE (USE SHALLOW TYPE WHEN UNDER COUNTER)

BATHROOM EXHAUST FAN REQUIREMENTS:

PER CGBC 4.506.1- EACH BATHROOM SHALL BE MECHANICALLY VENTILATED AND SHALL COMPLY WITH THE FOLLOWING: 1. FANS SHALL BE ENERGY STAR COMPLIANT AND BE DUCTED TO TERMINATE OUTSIDE THE BUILDING. 2. UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDITY CONTROL. A. HUMIDITY CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF <= 50 % TO A MAXIMUM OF 80 %. A HUMIDITY CONTROL MAY UTILIZE MANUAL OR AUTOMATIC MEANS OF ADJUSTMENT. B. A HUMIDITY CONTROL MAY BE A SEPARATE COMPONENT TO EXHAUST FAN AND IS NOT REQUIRED TO BE INTEGRAL(I.E. BUILT IN)

RESIDENTIAL ENERGY LIGHTING REQUIREMENTS:ES 150.0(K)

*IN THE KITCHEN, AT LEAST ONE-HALF OF THE WATTAGE RATING OF THE FIXTURES MUST BE HIGH EFFICACY.
*IN THE BATHROOMS, AT LEAST ONE FIXTURE SHALL BE HIGH EFFICACY AND ALL REMAINING FIXTURES SHALL BE HIGH EFFICACY OR BE CONTROLLED BY A VACANCY SENSOR.
*LIGHTING INSTALLED IN GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS SHALL BE HIGH EFFICACY AND BE CONTROLLED BY VACANCY SENSORS.

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address

revisions
1

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Mechanical/ Electrical Plan

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