

₫-2 □--2 2 UNIT B - M/E DEMO PLAN 1/4" = 1'-0"

GENERAL DEMOLITION NOTES

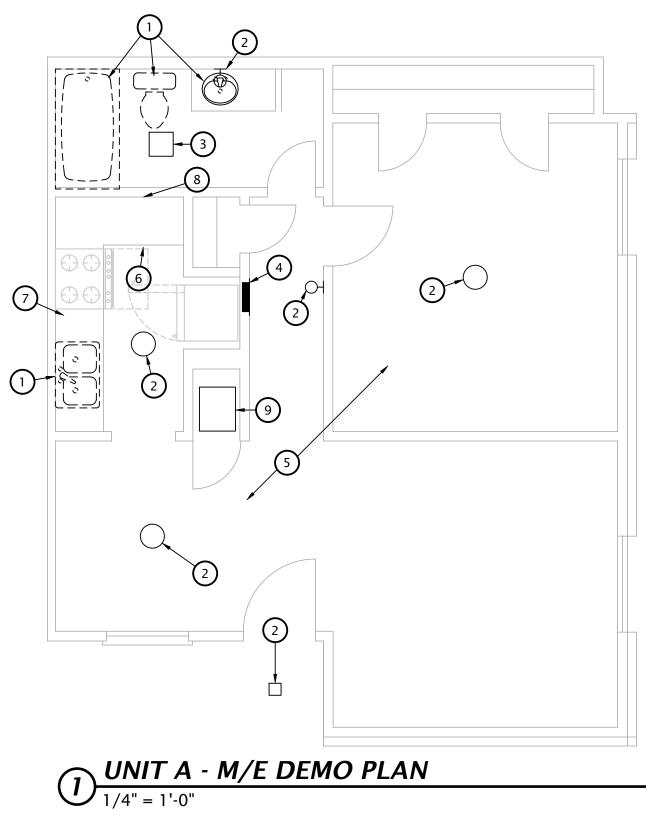
- 1. REMOVE MECHANICAL AND ELECTRICAL INSTALLATION FROM PROJECT AREA. AS REQUIRED FOR NEW WORK. COORDINATE WITH OWNER AND G.C.
- 2. SERVICES TO ITEMS NOT REMOVED AS PART OF THIS WORK SHALL BE RESTORED UPON COMPLETION OF THIS WORK TO FULLY OPERATIONAL CONDITION.
- 3. NOT ALL ITEMS REQUIRED TO BE DEMOLISHED MAY BE INDICATED ON DRAWINGS. ALL DEMOLITION OF AFFECTED SPACE SHALL BE PERFORMED AS IF INDICATED.
- 4. DELIVER DEMOLISHED EQUIPMENT, WIRING, ETC. TO OWNER OR DISPOSE OF, AS DIRECTED BY OWNER.
- 5. FIELD VERIFY EXACT LOCATION OF ALL EXISTING MECHANICAL AND ELECTRICAL EQUIPMENT INDICATED ON DRAWINGS.
- 6. ALL ITEMS TO BE RE-USED OR RELOCATED SHALL BE CLEANED, REPAIRED, AND RESTORED TO LIKE NEW CONDITION PRIOR TO RE-USE.

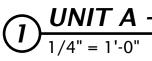
GENERAL MECHANICAL DEMOLITION NOTES

- 1. ALL PIPING TAKEN OUT OF SERVICE SHALL BE REMOVED. WHERE PIPING TO BE REMOVED IS CONNECTED TO EXISTING PIPING TO REMAIN, PIPING SHALL BE REMOVED BACK TO MAIN AND CAPPED, UNLESS INDICATED OTHERWISE.
- 2. WHERE PIPING TAKEN OUT OF SERVICE IS LOCATED BELOW SLAB AND IS UNABLE TO BE REMOVED, CAP BELOW SLAB.
- 3. ALL DUCTWORK TAKEN OUT OF SERVICE SHALL BE REMOVED. 4. COORDINATE CUTTING, PATCHING OF EXISTING WALLS, CEILINGS, ROOF AND FLOORS AFFECTED BY MECHANICAL DEMOLITION WITH G.C.

NOTE: ALL UNITS SHOWN AS TYPICAL,

REFER TO SCOPE OF WORK SCHEDULE FOR SPECIFIC UNIT EXTENT OF WORK.







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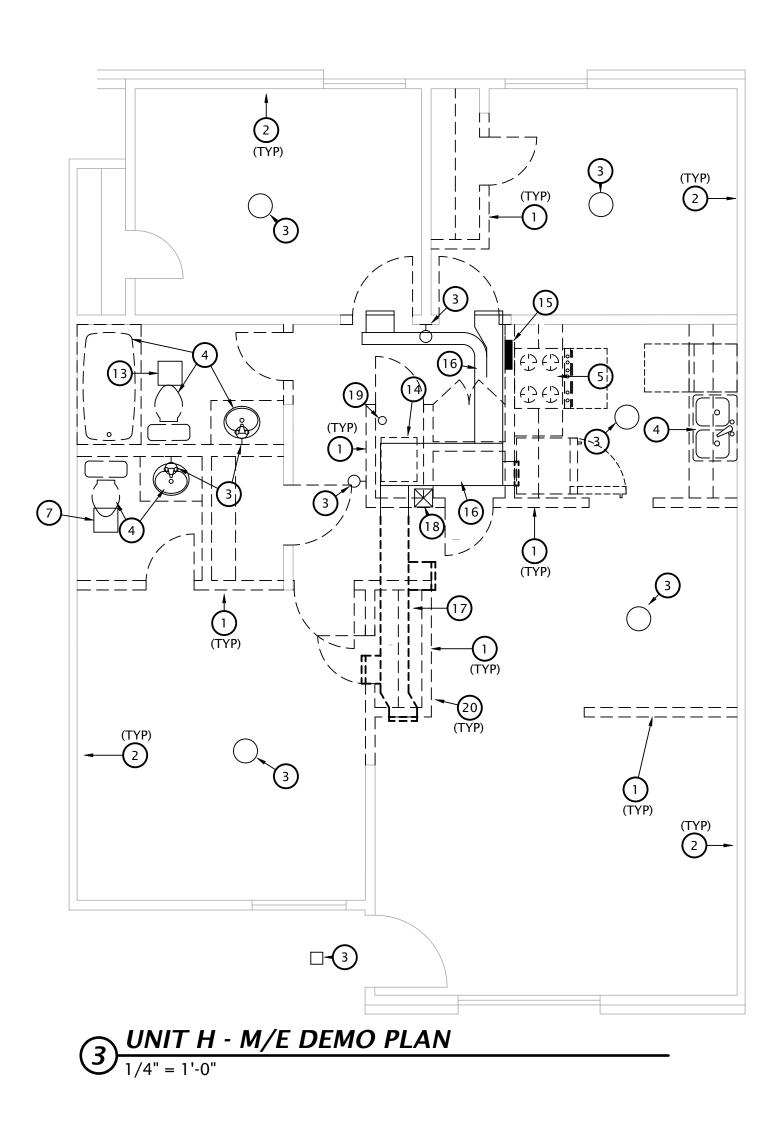


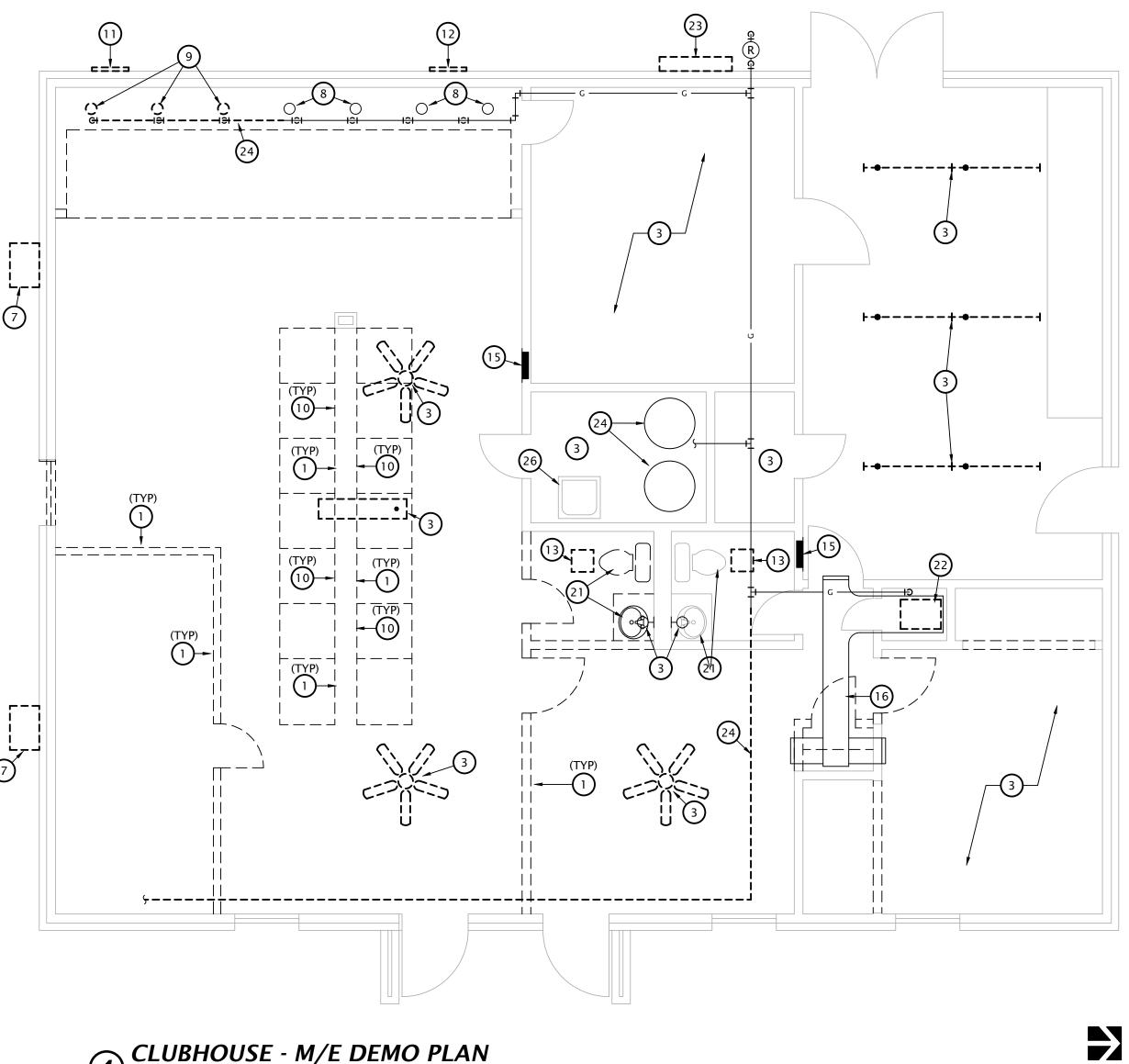
- ABANDONED CIRCUITS. 2. REMOVE ALL ABANDONED CONDUITS ABOVE LAY-IN CEILINGS, EXPOSED CONDUITS, FLEXIBLE CONDUITS, SURFACE RACEWAY, SURFACE MOUNTED OUTLET/JUNCTION BOXES
- AND EQUIPMENT UNLESS NOTED OTHERWISE. 3. WHERE ABANDONED FEEDERS AND BRANCH CIRCUITS ARE CONCEALED WITHIN WALLS, FLOORS AND HARD CEILINGS THAT ARE TO REMAIN, REMOVE ALL WIRING AND CAP CONDUITS AT BOTH ENDS.
- 4. WHERE ABANDONED OUTLET AND JUNCTION BOXES ARE RECESSED FLUSH IN WALLS, FLOORS AND HARD CEILINGS THAT ARE TO REMAIN, REMOVE ALL WIRING AND WIRING DEVICES AND PROVIDE BLANK STAINLESS STEEL COVERPLATES FOR BOXES 6"x6" AND SMALLER. REMOVE BOXES LARGER THAN 6"x6" AND PATCH SURFACE TO MATCH EXISTING. COORDINATE WITH ARCHITECT FOR FINAL DIRECTION.
- 5. ALL EQUIPMENT, FIXTURES, RACEWAY, WIRING AND DEVICES WHICH ARE REMOVED SHALL BE REMOVED FROM THE JOB SITE BY THIS CONTRACTOR, UNLESS DIRECTED OTHERWISE BY THE ARCHITECT OR OWNER'S REPRESENTATIVE. CONFORM TO ALL LAWS AND ORDINANCES IN EFFECT CONCERNING THE PROPER DISPOSAL OF LUMINAIRES AND LAMPS.
- 6. COORDINATE THE REMOVAL OF MECHANICAL AND PLUMBING EQUIPMENT WITH THE MECHANICAL AND PLUMBING CONTRACTORS. DISCONNECT AND REMOVE ELECTRICAL POWER AND CONTROL CIRCUITS FOR EQUIPMENT BEING REMOVED. REMOVE ALL ELECTRICAL EQUIPMENT ASSOCIATED WITH DEMOLISHED MECHANICAL AND PLUMBING EQUIPMENT (DISCONNECT SWITCHES, MOTOR STARTERS, RELAYS, ETC).

M/E DEMO PLAN NOTES BY SYMBOL

- 1. REMOVE AND REPLACE EXISTING PLUMBING FIXTURE, SEE NEW WORK PLANS FOR MORE INFORMATION.
- 2. REMOVE EXISTING LIGHT FIXTURES, RE-USE EXISTING CIRCUITRY FOR NEW LIGHT FIXTURE. SEE NEW WORK PLANS FOR MORE INFORMATION.
- 3. REMOVE EXISTING EXHAUST FAN. RE-USE EXISTING EXHAUST DUCT AND CIRCUITRY FOR NEW EXHAUST FAN. SEE NEW WORK PLANS FOR MORE INFORMATION.
- 4. EXISTING ELECTRICAL LOAD CENTER, SEE NEW WORK PLANS FOR MORE INFORMATION.
- 5. EXISTING AIR DEVICES AND ASSOCIATED MECHANICAL INSTALLATION TO REMAIN. IF REQUIRED FOR NEW WORK, REMOVE EXISTING AIR DEVICE IN CEILING/SOFFIT AND RE-INSTALLED IN SAME LOCATION. COORDINATE REQUIREMENTS WITH G.C. CLEAN, REPAIR AND RESTORE EXISTING AIR DEVICES TO LIKE NEW CONDITION PRIOR TO RE-USE, OR REPLACE TO MATCH EXISTING.
- 6. DISCONNECT GAS FROM EXISTING RANGE TO BE REPLACED. EXISTING NATURAL GAS ROUGH-IN TO REMAIN FOR NEW RANGE. SEE NEW WORK PLANS FOR MORE INFORMATION.
- 7. DISCONNECT EXISTING PLUMBING AND ELECTRICAL CONNECTIONS TO DISHWASHER TO BE REPLACED. SEE NEW WORK PLANS FOR MORE INFORMATION. 8. DISCONNECT EXHAUST DUCT FROM HOOD TO BE REMOVED. EXISTING DUCT TO
- REMAIN FOR RE-USE. SEE NEW WORK PLANS FOR MORE INFORMATION. 9. FURNACE, EVAPORATOR COIL, AND CONDENSING UNIT TO BE REMOVED AND
- REPLACED IN KIND PER SCOPE OF WORK SCHEDULE. SEE NEW WORK PLANS FOR MORE INFORMATION.

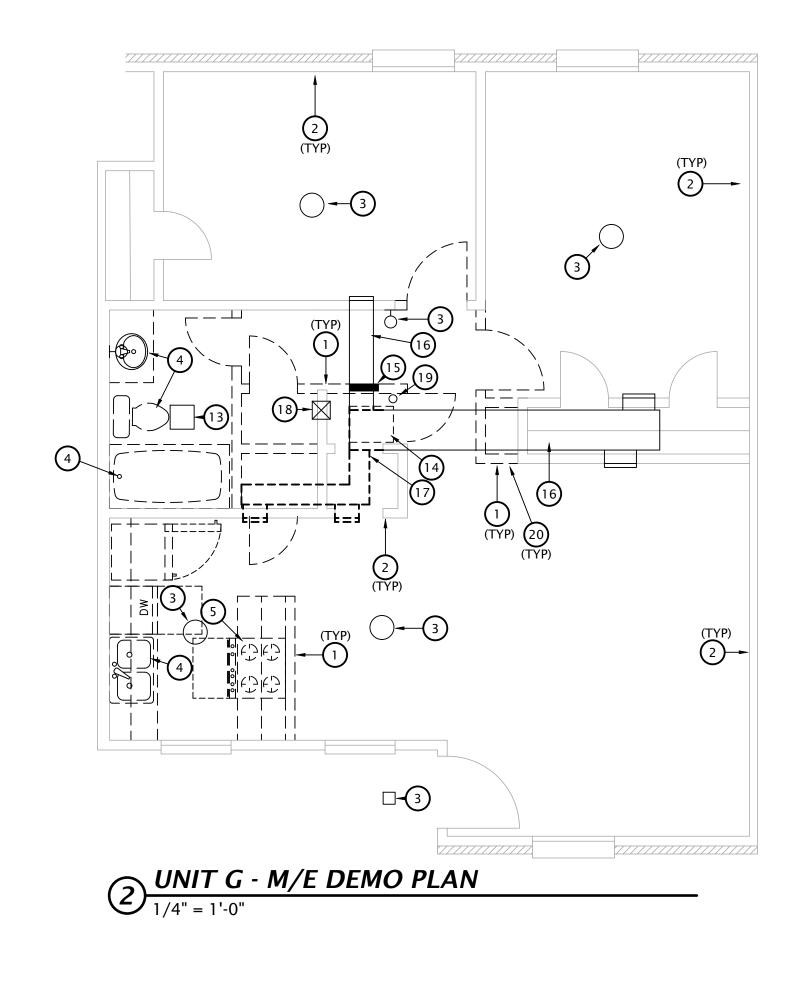


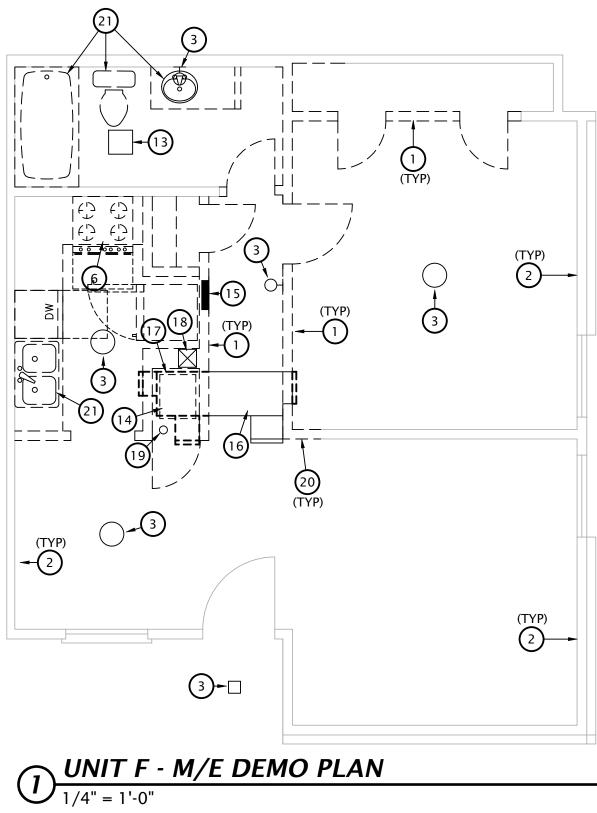




CLUBHOUSE - M/E DEMO PLAN 1/4" = 1'-0"

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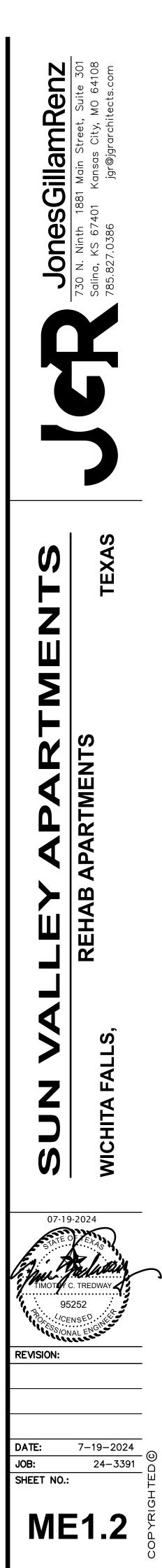
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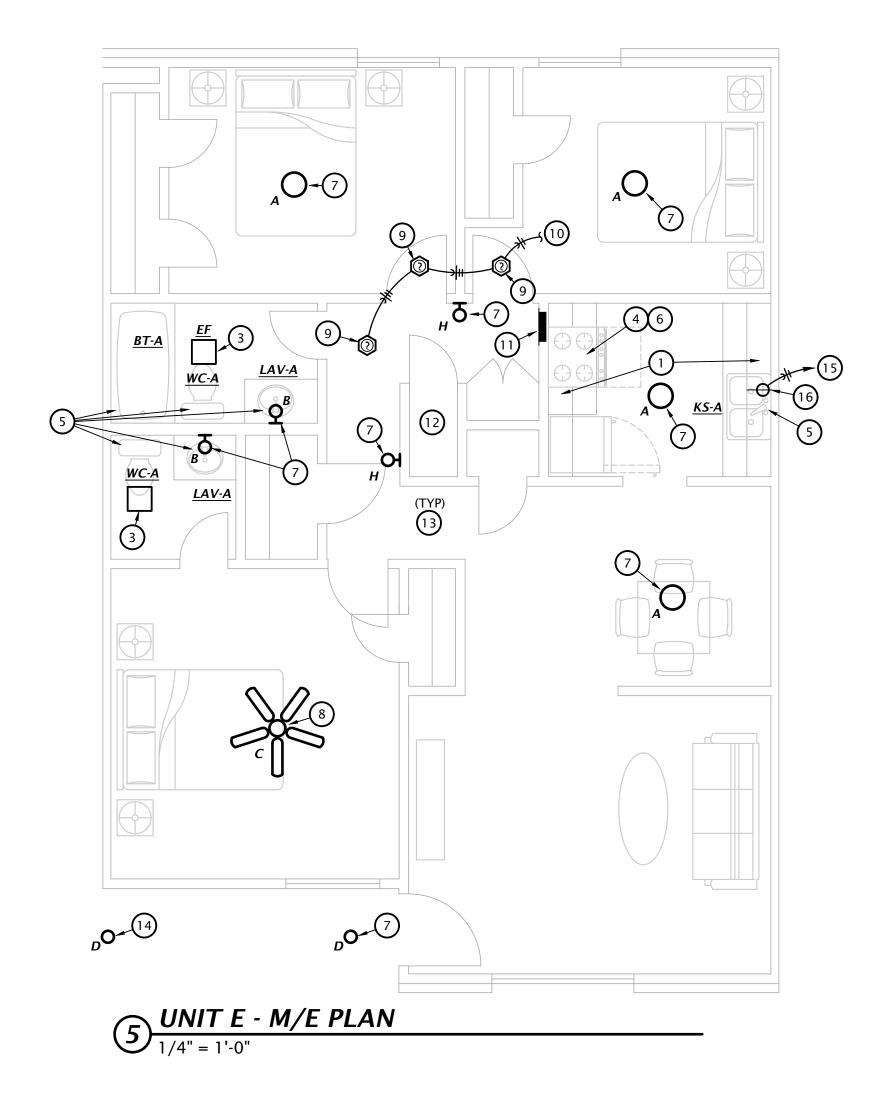
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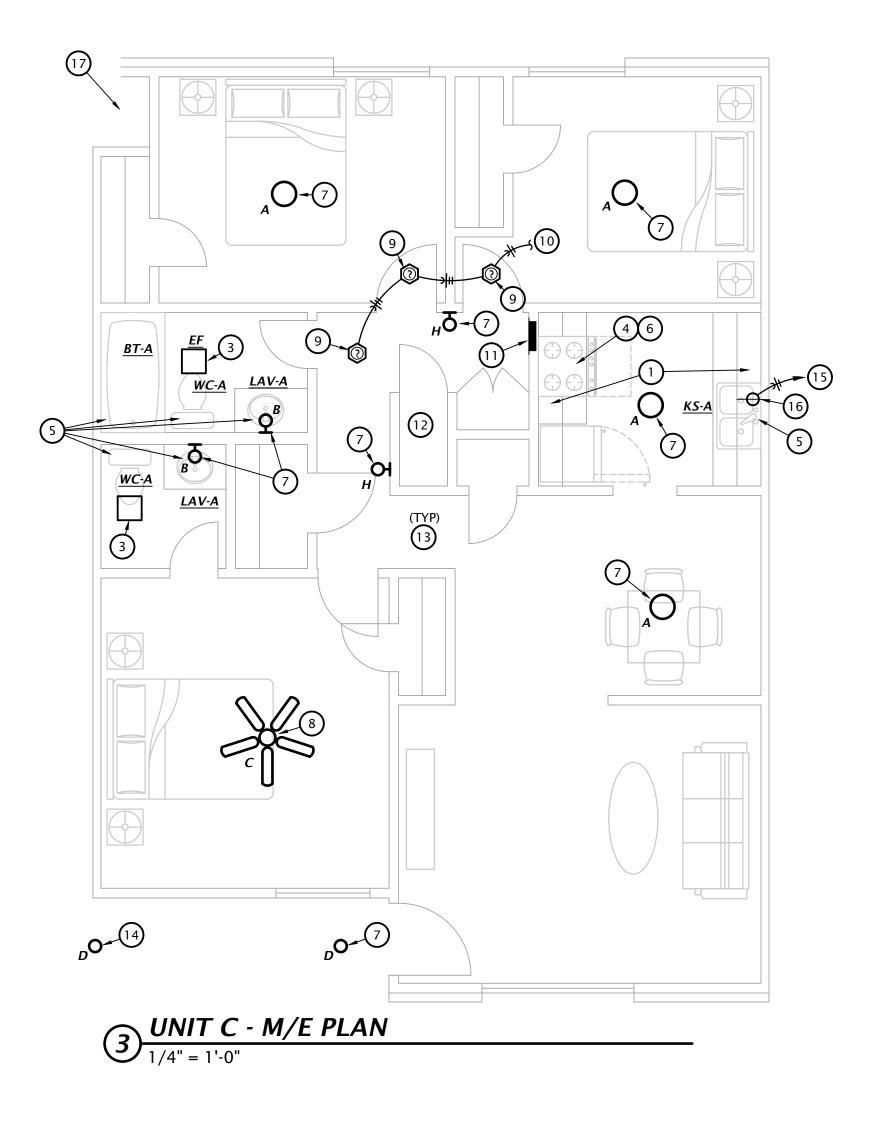
SEE GENERAL DEMOLITION NOTES ON ME1.1

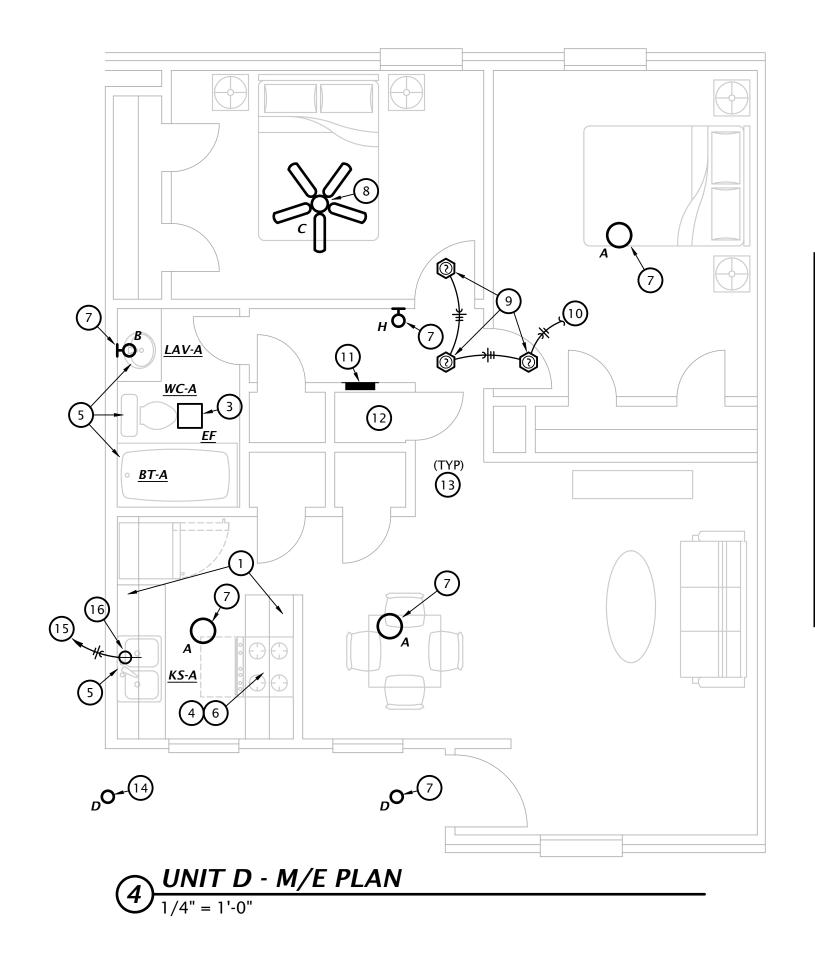
M/E DEMO PLAN NOTES BY SYMBOL

- REMOVE ALL ELECTRICAL DEVICES AND ASSOCIATED CIRCUITRY IN WALLS TO BE DEMOLISHED. 1. FIELD VERIFY EXACT LOCATION OF EXISTING.
- 2. ELECTRICAL DEVICES IN WALLS NOT DEMOLISHED TO BE RE-USED WHERE PLACEMENT MEETS NEC SPACING REQUIREMENTS. SEE NEW WORK PLANS FOR MORE INFORMATION. 3. REMOVE ALL EXISTING LIGHT FIXTURES AND CEILING FANS. REMOVE ASSOCIATED CIRCUITRY
- WHERE REQUIRED, SEE NEW WORK PLANS FOR MORE INFORMATION. 4. REMOVE PLUMBING FIXTURE AND ALL ASSOCIATED INSTALLATION, SEE NEW WORK PLANS FOR
- MORE INFORMATION. REMOVE RANGE, RANGE HOOD AND ALL ASSOCIATED MECHANICAL AND ELECTRICAL 5 INSTALLATION. SEE NEW WORK PLANS FOR MORE INFORMATION.
- 6. REMOVE RANGE, RANGE HOOD. ASSOCIATED MECHANICAL AND ELECTRICAL INSTALLATION TO BE RE-USED, SEE NEW WORK PLANS FOR MORE INFORMATION.
- REMOVE EXHAUST FAN AND ASSOCIATED MECHANICAL AND ELECTRICAL INSTALLATION. 7 COORDINATE WALL PATCHING WITH ARCHITECT AND G.C.
- 8. (4) DRYER EXHAUST DUCT AND ROOF JACKS TO REMAIN. ENSURE IN GOOD CONDITION AND PROPER WORKING ORDER. THOROUGHLY CLEAN DUCT AND JACK BEFORE RE-USE. FIELD COORDINATE EXACT LOCATION WITH NEW WORK PLANS.
- 9. DRYER EXHAUST DUCT AND ROOF JACK TO BE REMOVED. COORDINATE PATCHING OF ROOF WITH ARCHITECT AND G.C.
- 10. REMOVE CLOTHES WASHER CONNECTION BOX AND ALL ASSOCIATED INSTALLATION.
- 11. REMOVE WALL LOUVER AND ASSOCIATED INSTALLATION, COORDINATE WALL PATCHING WITH ARCHITECT AND G.C.
- 12. REMOVE WALL LOUVER AND ASSOCIATED INSTALLATION, SEE NEW WORK PLAN FOR MORE INFORMATION.
- 13. REMOVE EXISTING EXHAUST FAN. RE-USE EXISTING EXHAUST DUCT FOR NEW EXHAUST FAN. SEE NEW WORK PLANS FOR MORE INFORMATION. 14. FURNACE, EVAPORATOR COIL, AND CONDENSING UNIT TO BE REMOVED AND REPLACED IN KIND
- PER SCOPE OF WORK SCHEDULE. SEE NEW WORK PLANS FOR MORE INFORMATION. 15. REMOVE ELECTRICAL PANEL, SEE NEW WORK PLAN FOR MORE INFORMATION.
- 16. SUPPLY AIR DUCT TO REMAIN, SEE NEW WORK PLAN FOR MORE INFORMATION.
- 17. SUPPLY AIR DUCT TO BE REMOVED, SEE NEW WORK PLAN FOR MORE INFORMATION.
- 18. COMBUSTION AIR DUCT TO BE BE MODIFIED FOR NEW MECHANICAL CLOSET LOCATION, SEE NEW WORK PLANS FOR MORE INFORMATION.
- 19. FURNACE FLUE TO BE MODIFIED FOR NEW FURNACE LOCATION, SEE NEW WORK PLANS FOR MORE INFORMATION. 20. REMOVE ALL PHONE, DATA, AND CATV DEVICES AND ASSOCIATED INSTALLATION IN WALL BEING
- DEMOLISHED, SEE NEW WORK PLANS FOR MORE INFORMATION. 21. REMOVE PLUMBING FIXTURE, SEE NEW WORK PLANS FOR MORE INFORMATION.
- 22. FURNACE, EVAPORATOR COIL, AND CONDENSING UNIT TO BE REMOVED.
- 23. REMOVE EXISTING ELECTRICAL SERVICE INSTALLATION, SEE NEW WORK PLANS FOR MORE INFORMATION.
- 24. REMOVE NATURAL GAS PIPING TO EQUIPMENT BEING REMOVED. SEE NEW WORK PLANS FOR MORE INFORMATION.
- 25. EXISTING WATER HEATERS AND ASSOCIATED INSTALLATION TO BE REMOVED. SEE NEW WORK PLANS FOR MORE INFORMATION.
- 26. EXISTING SINK TO REMAIN.









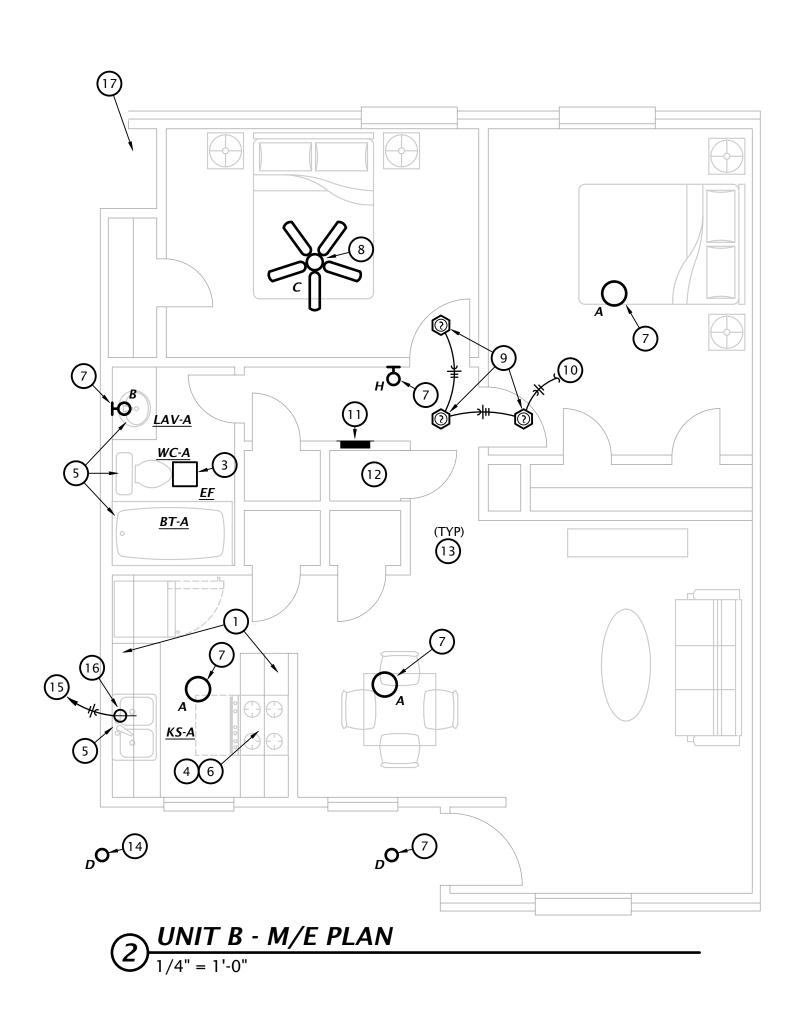
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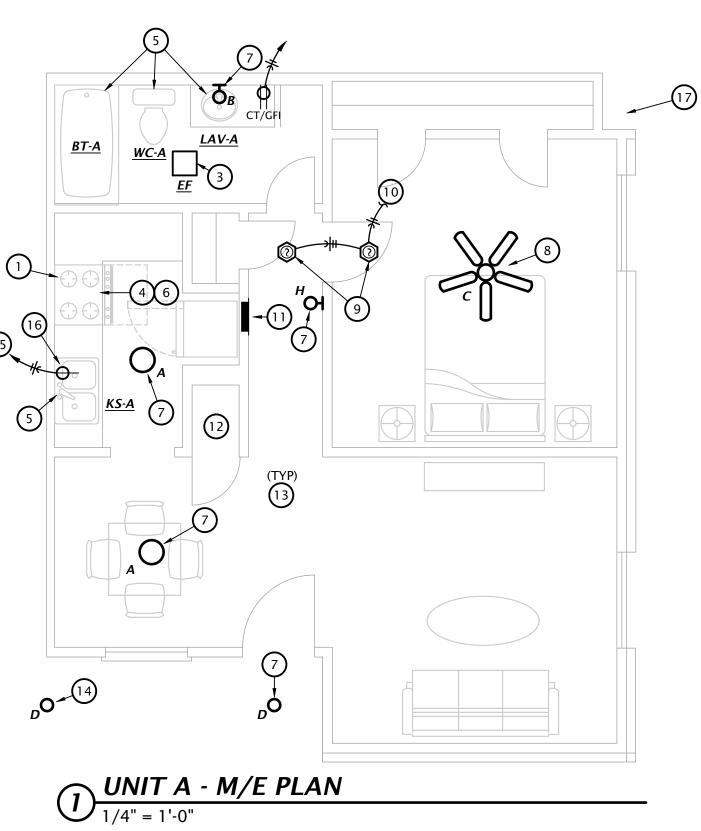
FOR APARTMENTS DESIGNATED FOR HEARING-IMPAIRED, REFER TO ARCH DRAWING FOR APPLICABLE ROOMS, PROVIDE THE FOLLOWING:

- CEILING MOUNTED SMOKE ALARMS IN ALL BEDROOMS AND OUTSIDE OF BEDROOMS. CEILING MOUNTED SMOKE ALARM IN APARTMENTS TO BE 120VAC WITH BATTERY BACKUP, INTERCONNECTED TO OTHERS IN SAME APARTMENT. DEVICE SHALL HAVE CARBON MONOXIDE DETECTOR AND PHOTOELECTRIC TYPE SMOKE DETECTOR WITH SOUNDER HORN HAVING AN 85dB OUTPUT AT 10' AND STROBE LIGHT WITH 177 CANDELA OUTPUT SHALL HAVE A SINGLE BUTTON FOR TEST/SILENCE AND LED INDICATOR LIGHTS, AND SHALL BE UL 217 LISTED. BRK #7030BSL OR EQUAL. CONNECT TO UNSWITCHED 120V CIRUIT.
- PROVIDE DOOR ANNUNCIATOR SYSTEM A/V HORN/STROBE DEVICE AND LOW VOLTAGE TRANSFORMER AT ALL APARTMENTS. INSTALL HORN/STROBE APPLIANCE AT 80" AFF PER ADA. INSTALL TRANSFORMER IN DOUBLE GANG JUNCTION BOX ABOVE HORN/STROBE WITH BLANK COVER PLATE AND PROVIDE LOW VOLTAGE CONTROL WIRING. REFER TO DETAIL 1, SHEET E6.1. PROVIDE ENGRAVED SIGN AT THE HORN/STROBE DEVICE TO READ "DOOR". CONNECT TO UNSWITCHED 120V CIRCUIT.
- PROVIDE PUSH BUTTON AT 48" AFF FOR ANNUNCIATOR SYSTEM AT ALL APARTMENTS. REFER TO DETAIL 1, SHEET E6.1.

GENERAL NOTE:

PROVIDE TAMPER PROOF RECEPTACLES IN DWELLING UNITS PER NEC REQUIREMENTS.









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July 2024

PLAN NOTES BY SYMBOL

- 1. PROVIDE NEW (2) #12,#12G. CIRCUIT TO PANEL WITH NEW 20A SINGLE POLE CIRCUIT BREAKER.
- 2. ALL RECEPTACLES SERVING KITCHEN COUNTERTOPS SHALL BE GFCI PROTECTED. FIELD VERIFY EXISTING CONDITIONS AND REPLACE RECEPTACLES AS REQUIRED. 3. REPLACE EXISTING EXHAUST FAN WITH NEW. MODIFY EXISTING MECHANICAL
- AND ELECTRICAL INSTALLATION AS REQUIRED. FIELD VERIFY EXACT REQUIREMENTS.
- 4. CONNECT NATURAL GAS TO NEW RANGE PROVIDED BY OTHERS. MODIFY EXISTING ROUGH-IN AS REQUIRED FOR NEW WORK. COORDINATE EXACT REQUIREMENTS WITH EXISTING CONDITIONS AND EQUIPMENT PROVIDED. 5. REPLACE EXISTING PLUMBING FIXTURE. MODIFY EXISTING ROUGH-INS AS
- REQUIRED. FIELD VERIFY EXACT REQUIREMENTS. 6. CONNECT NEW RANGE HOOD PROVIDED BY OTHERS. MODIFY EXISTING
- MECHANICAL AND ELECTRICAL INSTALLATION AS REQUIRED. FIELD VERIFY EXACT REQUIREMENTS.
- 7. REPLACE EXISTING FIXTURE. ROUGH-IN AND EXISTING CIRCUITRY TO BE RE-USED, MODIFY AS REQUIRED.
- 8. REPLACE EXISTING FIXTURE WITH NEW CEILING FAN. EXISTING CIRCUITRY TO BE RE-USED AND PROVIDE ADDITIONAL SUPPORT TO STRUCTURE FOR FAN.
- 9. PROVIDE NEW OR REPLACE EXISTING SMOKE DETECTORS WITH SMOKE/CO DETECTORS. DETECTORS TO HAVE BATTERY BACKUP AND SHALL BE INTERCONNECTED TO OTHERS IN SAME APARTMENT. FIELD VERIFY REQUIREMENTS AND EXACT LOCATION OF EXISTING.
- 10. RE-USE EXISTING UNSWITCHED 120V CIRCUITRY OR CONNECT TO EXISTING UNSWITCHED 120V CIRCUIT, FIELD VERIFY EXACT REQUIREMENTS.
- 11. PROVIDE NEW FLUSH MOUNT, 125 AMP MLO, 120/240V-1PH-3W LOAD CENTER WITH MINIMUM 12 SPACES, PROVIDE NEW CIRCUIT BREAKERS OF EQUAL AMPERAGE AND POLES FOR EXISTING CIRCUITS AND PROVIDE NEW CIRCUIT BREAKERS AS INDICATED ON PLANS. ALL CIRCUITS SERVING RECEPTACLES IN BEDROOMS, LIVING ROOMS, KITCHENS, DINING ROOMS, HALLWAYS OR SIMILAR AREAS SHALL BE PROVIDED WITH AFCI BREAKERS.
- 12. PROVIDE NEW FURNACE, EVAPORATIVE COIL, CONDENSING UNIT, AND ASSOCIATED INSTALLATION OF EQUAL COOLING AND HEATING CAPACITY. REFER TO SCOPE OF WORK FOR WHICH APARTMENTS TO HAVE SYSTEM REPLACED.
- 13. PROVIDE NEW SUPPLY AND RETURN GRILLE OF EQUAL KIND AND QUALITY. REFER TO SCOPE OF WORK. IF DEVICE IS TO BE RE-USED, CLEAN, REPAIR AND RESTORE EXISTING AIR DEVISES TO LIKE NEW CONDITION. COORDINATE WITH G.C.
- 14. REPLACE EXISTING FIXTURE. ROUGH-IN AND EXISTING CIRCUITRY TO BE RE-USED. LIGHT TO BE CONTROLLED BY EXTERIOR LIGHTING CONTROLS, FIELD VERIFY.
- 15. PROVIDE NEW (2) #12, #12G. CIRCUIT TO PANEL WITH NEW 20A SINGLE POLE GFCI BREAKER.
- 16. PROVED SIMPLEX RECEPTACLE BELOW COUNTER FOR GARBAGE DISPOSAL. PROVIDE AIR ACTIVATED PUSH BUTTON SWITCH FOR DISPOSAL OPERATION, FINISH TO MATCH SINK. COORDINATE EXACT LOCATION OF PUSH BUTTON WITH ARCHITECT.
- 17. REPLACE WATER HEATERS IN KIND AS REQUIRED BY SCOPE OF SCHEDULE, COORDINATE WITH G.C. ENSURE WATER RECIRCULATION PUMP IN WORKING ORDER, REPLACE AS REQUIRED.



DIVISION 15 - MECHANICAL SPECIFICATIONS

SECTION 15050 - BASIC MECHANICAL MATERIALS AND METHODS

- 15050.01 The drawings and general provisions of the Contract, including General Conditions, Supplementary General Conditions, and General Requirements apply to the work specified in DIVISION 15 -MECHANICAL.
- 15050.02 The Mechanical Contract includes all labor, materials and equipment required for the complete mechanical systems as shown and herein specified.
- 15050.03 This contractor is responsible for reviewing ALL drawings to determine extent of coordination required with other trades. Additional offsets, bends, material will not be accepted as a result of un-coordinated work.

15050.04 This contractor is required to perform work in a professional and quality workman like manner. This includes, but is not limited to:

- a. Make vertical elements plumb and horizontal elements level unless noted otherwise. b. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless noted otherwise.
- c. Protect work from damage and water during construction. Replace all equipment/material damaged or exposed to water during construction.
- d. Clean equipment, interior and exterior, at completion of construction and remove all temporary labels, stains and foreign substances.
- e. Protect HVAC ductwork from accumulating dirt and debris during construction and replace all HVAC filters at completion of construction
- 15050.05 Each major component of equipment shall have the manufacturer's name; address, model number and rating on a nameplate securely affixed.
- 15050.06 All equipment of one type (such as furnaces, condensing units, etc.) shall be the products of one manufacturer, unless otherwise specified.
- 15050.07 The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding. Where the quality of required material is not specified, the Contractor shall furnish a first class standard item as approved by the Architect/Engineer.
- 15050.08 Manufacturer's names are intended to establish type and quality of items to be provided via the contract. The materials, products, and equipment described in the specifications or on the drawings establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution. Listing of these manufacturers shall in no way be construed as a device intended to limit the bidders to those specifically listed.
- 15050.09 Electrical Characteristics for Mechanical Equipment: Equipment of higher electrical characteristics may be furnished provided such proposed equipment is approved in writing and connecting electrical services, circuit breakers, and conduit sizes are appropriately modified. If minimum energy ratings or efficiencies are specified, equipment shall comply with requirements.
- 15050.10 The Drawings are schematic only and are not intended to show the exact routing of piping, ductwork, etc. Final determination of routing shall be made at the jobsite, in coordination with other trades.
- 15050.11 Install all equipment in strict accordance with the manufacturer's recommendations.
- 15050.12 All work under this contract shall conform to the requirements of all applicable local, state, and federal code requirements. If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- 15050.13 All components, accessories, and installation required for a complete mechanical installation shall be provided. Where materials or labor are required for completion of a system, such material or labor shall be included as if fully specified herein.
- 15050.14 Periodically during construction and prior to Owner acceptance of the building, Contractor shall remove from the premises and dispose of all packing material and debris related to work performed
- 15050.15 Before submitting his bid, the Contractor shall visit the actual location of the job and shall fully understand the scope of the work to be done and the conditions under which it is to be performed.
- 15050.16 The Mechanical Contractor shall be responsible for locating and setting his own pipe sleeves, and be well aware of the job progress to avoid unnecessary delay for setting of same.
- 15050.17 The Mechanical Contractor shall do all excavating and backfilling necessary to complete work under this contract. Lines shall be used to lay out the trenches for underground work. Trenches shall be of sufficient width and shall be cribbed or braced to prevent cave in or settlement. Trenches close to walls and columns of the building shall not be excavated without the Architect's prior consent. The bottoms of trenches shall be tamped hard and graded to secure the required fall before laying pipe. Bell holes shall be excavated so the pipe will rest on solid ground for its entire length. Hand backfill and tamp backfill into place at sides of pipes, leaving tops and joints exposed until pipe runs have been tested and approved.
- 15050.18 Notify the Engineer of errors, discrepancies, or omissions in the drawings and specifications before construction or fabrication of affected work, or failing such notice, be responsible for correction of such work without cost to the Owner, Architect, or Engineer.

SECTION 15060 PIPE AND FITTINGS

15060.01 Above Grade Piping and Fittings:

- A. Type L hard copper pipe with sweat type fittings and 50/50 solder shall be used for all discharge pipe from relief valves, condensate drain, and non-potable domestic water piping. B. Domestic water piping:
- 1. Type L hard copper pipe with sweat type fitting and 95/5 lead free solder.
- 2. If approved by owner, cross-linked polyethylene (PEX) with brass barbed fittings. All components shall be from same manufacturer, and installed in strict accordance with Manufacturer's instructions. System used must have been in production for a minimum of five vears
- All piping installed where subject to damage shall be copper.
- C. Service weight centrifugally cast iron soil pipe, bearing the mark of the Cast Iron Institute, with "NO HUB" joints shall be used for soil, waste and vent lines. All changes in direction shall be made by the use of 45 wyes, half wyes, long sweep 1/4 bends, 1/6, 1/8, or 1/16 bends. Sanitary tees may be used where the changes in direction of flow is from horizontal to vertical. Where space conditions necessitate the use of short radius fitting, approval shall be obtained before installation. NOTE: WHERE PERMITTED BY LOCAL BUILDING CODES, ABOVE GROUND SANITARY WASTE AND VENT PIPING MAY BE SCHEDULE 40 PVC WITH SOLVENT WELDED JOINTS. ALL FITTINGS SHALL BE DRAINAGE PATTERN FITTINGS, AND NO PVC PIPING SHALL BE USED IN RETURN AIR PLENUMS.

15060.02 Below Grade Pipe and Fittings

A. Schedule 40 PVC drain waste and vent piping with solvent welded joints shall be used for all soil, waste and vent lines. All changes in directions shall be made by the use of 45 wyes, half wyes, long

sweep 1/4 bends, 1/6, 1/8, or 1/16 bends. Sanitary tees may be used where the changes in direction of flow are from horizontal to vertical. Where space conditions necessitate the use of short radius fitting, approval shall be obtained before installation. B. Water Piping:

- ASTM B 32, alloy Sn95 solder joints
- mechanical joints with stainless steel clamp.

15060.03 Soil, Waste and Vent Piping

- unless noted otherwise. Where necessary, lines may pitch at $1/10^{\circ}$ per foot when approved or
- least 18" above the highest fixture.
- building codes. manufacturers' recommendations.
- 15060.04 Domestic Water Piping
- 15060.05 Refrigeration Piping

 - shall be evacuated with a vacuum pump prior to charging.

SECTION 15080 MECHANICAL INSULATION

- insulation.

General Building Exhaust Duct: None Required

SECTION 15120 PIPING SPECIALTIES AND VALVES

- piping will be required.
- when used in insulated lines.

- SECTION 15140 PIPING SUPPORTS, ANCHORS AND SEALS
- 15140.01 Provide pipe sleeves, hangers and supports.
- plastic hangers or straps shall be used.

- surfaces, and securely anchored to the wall.
- PIPE SIZE STEEL PIPE COPPER PIPE 1/2" - 1-1/4" 7'
 - 1-1/2" 2" 9' 2-1/2" - 3" 11'
- at changes in direction and branch connections.

1. Copper Pipe: ASME B16.18, cast copper alloy or ASME B16.22 wrought copper and bronze with 2. PE Pipe: ASTM D2239, or ASTM D2447 Schedule 40, with ASTM D2609 PE fittings and

A. The arrangement of the systems must be as direct as possible avoiding all unnecessary offsets. All pipe shall run as indicated on the drawings, unless some condition should arise which would make it necessary or seem advisable to alter same; in which case, the Architect or his representative must be consulted before making any change. Horizontal lines shall be graded at 1/8" per foot,

B. Every vent for traps shall be connected to the waste line by as short a connection as possible, but in no case shall such connections have a length greater than 2' in length, measuring horizontally from the center of the fixture to the vent. Horizontal vents shall connect into the main stack at

C. Each fixture and piece of equipment requiring connection to the sanitary drainage system shall be equipped with a trap. Each trap shall be placed as near the fixture as possible and no fixture shall be double trapped. Combination drain/vent piping is acceptable where indicated and allowed by

D. All under slab plastic piping shall be installed in strict compliance with building codes as well as all

A. All runs of pipe shall be installed as shown on drawings, unless some condition should arise which would make it necessary or seem advisable to alter same; in which case, the Architect or his representative must be consulted before making any change.

A. All refrigerant piping shall be Type L ACR hard copper with silfos joints. All elbow fittings, except suction line oil traps, shall be long radius type. Suction line oil traps shall be comprised of short radius elbows to minimize the quantity of oil retained. B. All refrigerant lines shall be charged with nitrogen during all sweating and heating operations, and

15080.06 Insulate refrigerant suction lines with 3/4" foam pipe insulation, "Armacell Armaflex" or equivalent. Paint exterior insulation with two coats of "Armacell Armaflex" finish.

15080.07 Condensate drains from cooling coils shall be insulated with 1/2" thick preformed fiberglass pipe

15080.08 Insulate ductwork as scheduled. Duct dimensions indicated on the plans are free area.

Indoor Concealed Supply Duct: Insulate all rectangular and round sheet metal duct with 1-1/2" fiberglass Duct wrap with foil exterior vapor barrier Indoor Concealed Return Duct: 1-1/2" fiberglass duct wrap with foil exterior vapor barrier

Outdoor Air Intake Ductwork: 1-1/2" fiberglass duct wrap with foil exterior vapor barrier.

15120.01 Valves shall be installed at locations shown and specified; the locations shall be accessible. All valves shall be installed with their stems or spindles horizontal or above.

15120.02 Provide unions where shown at all equipment connections and at other points where disconnection of

15120.03 Apollo bronze body ball valves, Series 70 or approved equal, with threaded or soldered end, shall be used in 3" and smaller copper and steel lines for domestic water duties. Provide with extended stem

15120.04 Screwed or solder type ground joint unions shall be used on piping 2" and smaller.

15120.05 Unions shall not be installed in walls or partitions or above non accessible ceilings.

15120.06 Dielectric unions shall be used where copper lines connect to other types of materials.

15120.07 Provide chrome plated escutcheons on exposed pipes where they pass through walls and ceilings.

15140.02 Pipe shall be securely supported from structure. Hangers shall be provided where required. No

15140.03 Pipe sleeves will be required in all pipe penetrations through exterior walls and floors. Sleeves shall be Schedule 5 steel pipe, field fabricated from minimum 16 gauge steel with 2" overlap at the seam.

15140.04 Space between sleeves and pipes in outside walls shall be filled or tightly caulked with oakum, butyl rubber, link seals or other approved equally effective material to resist the penetration of water. Pipe sleeve shall be sufficient diameter to provide approximately 1/2" clearance around pipe, and in the case of insulated pipe, approximately 1/2" around insulation.

15140.05 Sleeves shall be set no closer than three pipe diameters center to center, be set 3/4" past all wall

15140.06 Hanger and support spacing for horizontal steel and copper piping shall not exceed the following:

5' 6' 10'

15140.07 Soil, waste, vent and drain pipe shall have a minimum of one hanger per pipe section at the joints and

15140.08 Spacing of supports and braces for exposed vertical piping shall not exceed the hanger spacing specified for horizontal pipe, unless otherwise indicated.

SECTION 15430 PLUMBING SPECIALTIES

15430.01 Provide Zurn, Smith, Wade, Josam, or approved equal cleanouts where shown. Cleanouts shall be the same size pipe for pipe 4" and smaller, and 4" for lines 4" and larger.

15430.02 Floor and exterior cleanouts shall be Zurn ZN-1400. Set in 12" x 12" x 4" concrete pad for exterior

15430.03 Wall cleanouts shall be "NO-HUB" caps behind Zurn Z1446 round stainless steel cover.

SECTION 15440 PLUMBING FIXTURES AND TRIM

15440.01 Provide complete, all fixtures indicated. All fixtures shall be set firm and true, connected to all pipe and ready for use. All fixtures shall be of one manufacturer throughout the entire installation, unless otherwise specified. Stop valves shall be provided on the water connections to all fixtures.

15440.02 Refer to plumbing fixture schedule on drawings. Fixtures from Eljer, American Standard, Crane, and Kohler are equally accepted provided comparable units are provided.

15440.03 Refer to elevations on the Architect's drawings for installation height of wall mounted fixtures.

15440.04 Plumbing trim utilized shall be provided with renewable seats and replaceable internal working components

15440.05 All fixtures shall be substantially supported in an approved manner. Furnish and install adjustable carriers as required for all wall hung fixtures.

15440.06 All spaces between fixtures and finished surfaces shall be caulked and pointed square with an approved white silicone sealant resulting in a neat and smooth appearance.

15440.07 The contractor shall be responsible for the protection and cleanliness of all fixtures, equipment and accessories.

SECTION 15670 - A/C SYSTEMS

15670.01 Provide Trane, Lennox, York, or Carrier condensing unit/evaporator/furnace combinations as scheduled on the drawings.

15670.02 Gas fired furnaces shall be provided with direct drive factory balanced, resilient mounted, centrifugal fan. Fans shall be multispeed with internal thermal protection and permanent lubrication.

15670.03 Gas heat exchangers shall be stamped and welded aluminized steel. Heating system shall be equipped with electronic pilot ignition, 100 percent safety gas shutoff valve, control gas valve, and manual shutoff.

15670.04 Combustion air intake and vent piping shall be PVC pipe, sized per Manufacturer's recommendations. Terminations through wall or roof shall be made utilizing Manufacturer's PVC fitting.

15670.05 All system components shall be of same Manufacturer.

15670.06 Refrigerant evaporator coils shall be copper tube with mechanically bonded aluminum fins, complying with ARI 210/240, and with thermal expansion valve.

15670.07 Filters shall be 1" thick throwaway type

15670.08 Condensing units shall have steel housing with removable panels to access controls. Service valves, fittings and gage ports shall be on exterior of unit. Housing shall be finished with baked enamel. Condenser coils shall be copper tube with mechanically bonded aluminum fins complying with ARI 210/240.

15670.09 Compressors shall be hermetically sealed scroll type mounted on vibration isolators. Provide with crankcase heater. Motor shall be permanently lubricated and have thermal and current sensitive overload protection, start capacitor, relay, and contactor.

15670.10 Provide with programmable thermostats and all required control wiring.

SECTION 15890 SHEET METAL WORK

15890.01 Provide all sheet metal work for supply, return, and exhaust air systems. Provide all grilles, louvers, hand dampers, and all work required to make the job complete as shown on the drawings.

15890.02 All duct construction, gauges, methods of construction, and methods for hanging and supporting shall conform to SMACNA Standards applicable sections of the Mechanical Code.

15890.03 All ductwork shall be constructed of galvanized sheet steel to 2" SMACNA pressure class and Class "C" sealing.

15890.04 Make joints in rectangular ductwork airtight and patch or solder open corners.

15890.05 All round ductwork shall be 26 gauge galvanized "Snap Lock" pipe with all changes in direction made via adjustable elbows. All seams and connections shall be sealed with foil faced pressure sensitive tape. Silver-coated polyethylene cloth tape is not acceptable. All rectangular duct shall be 24 gauge galvanized sheetmetal. Duct sizes shown on drawings are air stream size.

15890.06 Provide Ventfabrics, Inc., "Metaledge Ventglass" canvas connections for all duct systems at connections to motorized equipment.

15890.07 Coordinate ductwork installation with other trades and verify the location of all light fixtures, pipes, beams, and other possible obstructions, and adjust routing of ductwork as required to accommodate same.

SECTION 15950 TESTING, ADJUSTING, AND BALANCING

15950.01 All testing and balancing work shall be performed in accordance with NEBB National Standards for Testing, Adjusting, and Balancing of Environmental Systems.

15950.02 Adjust all fans and air outlets to within 10% of specified airflow.

END OF DIVISION 15



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PLUMBING SYMBOLS

 	SANITARY DRAIN BELOW GRADE
	SANITARY DRAIN ABOVE GRADE
	SANITARY VENT
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
w	WATER SERVICE
ft-	SHORT RADIUS 90° ELBOW
—ю	PIPE TURNED UP
iə	PIPE TURNED DOWN
- 0	TEE UP
	TEE DOWN
+x	SHORT RADIUS 45° ELBOW
- '+' -	TEE
со	CLEANOUT
Ŧ	BALL VALVE
()) ()	FLOOR DRAIN
	-

VAC	SYMBOLS
	RECTANGULAR SUPPLY DUCT UP
[×]	RECTANGULAR SUPPLY DUCT DOWN
•	ROUND DUCT UP
0	ROUND DUCT DOWN
	RECTANGULAR RETURN DUCT UP
	RECTANGULAR RETURN DUCT DOWN
\Join	SQUARE SUPPLY DIFFUSER
\sim	FLEXIBLE DUCTWORK - MAX 5'
	RIGID DUCTWORK
[]	WALL GRILLE (SUPPLY OR RETURN)
Ō	THERMOSTAT
	90° ELBOW WITH TURNING VANES
XX	GRILLE/DIFFUSER TAG

TOP: DEVICE TAG (SEE SCHEDULE)

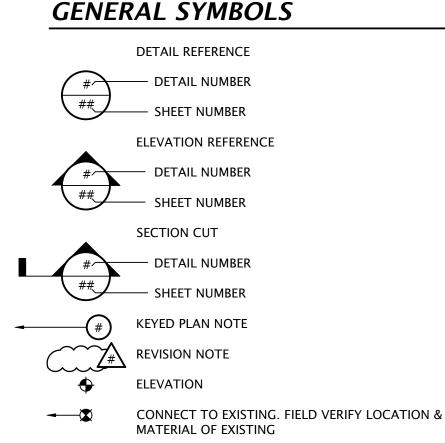
MIDDLE: NECK SIZE

BOTTOM: AIRFLOW

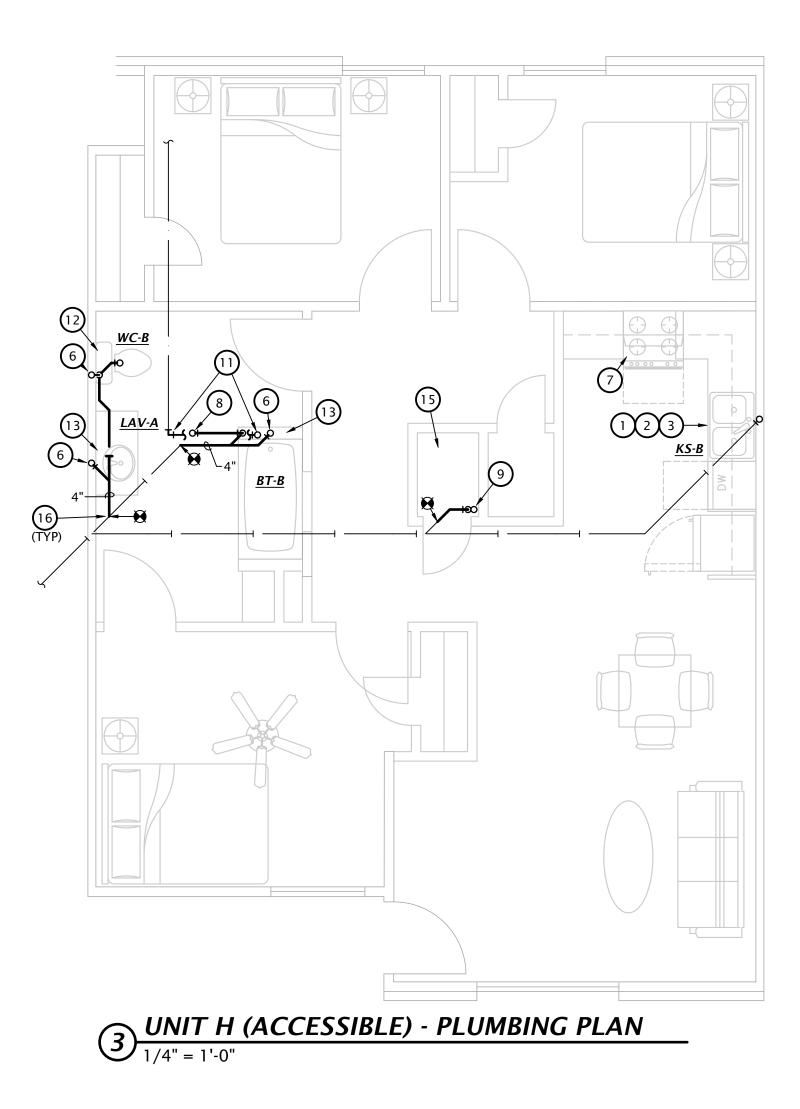
SYMBOL MODIFICATION DESIGNATORS/ABBREVIATIONS

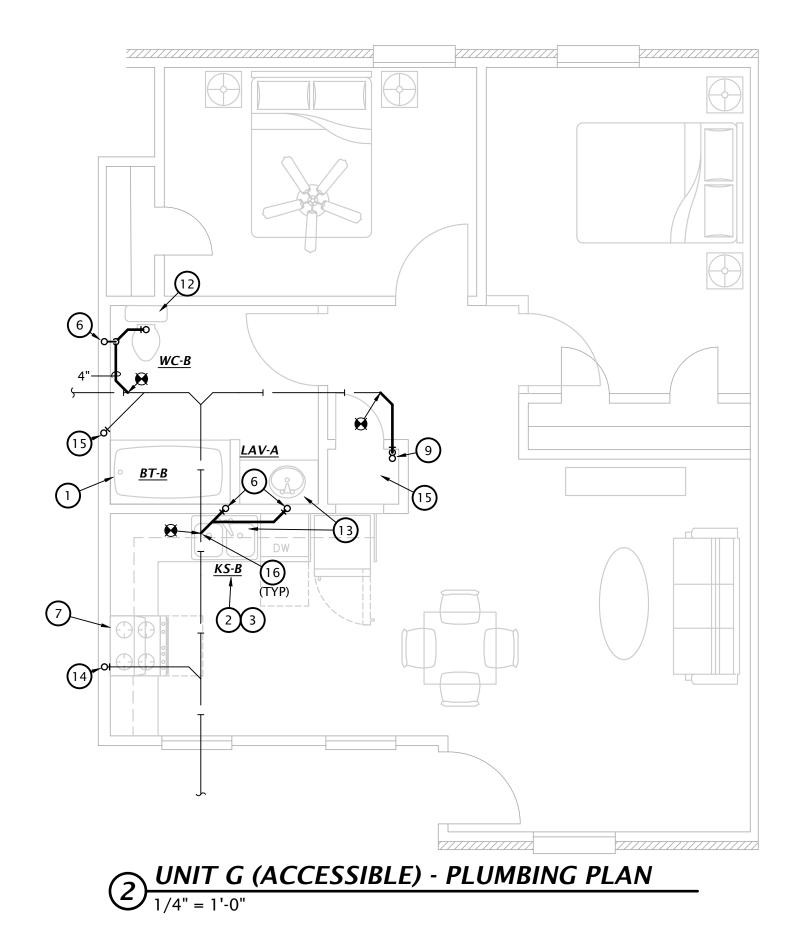
- OA OUTDOOR AIR
- RA RETURN AIR
- SA SUPPLY AIR
- MC MECHANICAL CONTRACTOR
- TC TEMPERATURE CONTROL CONTRACTOR
- EC ELECTRICAL CONTRACTOR
- GC GENERAL CONTRACTOR
- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- BG BELOW GRADE
- FG FINISHED GRADE
- FFCO FINISH FLOOR CLEAN OUT FWCO FINISH WALL CLEAN OUT
- FGCO FINISH GRADE CLEAN OUT
- UNO UNLESS NOTED OTHERWISE

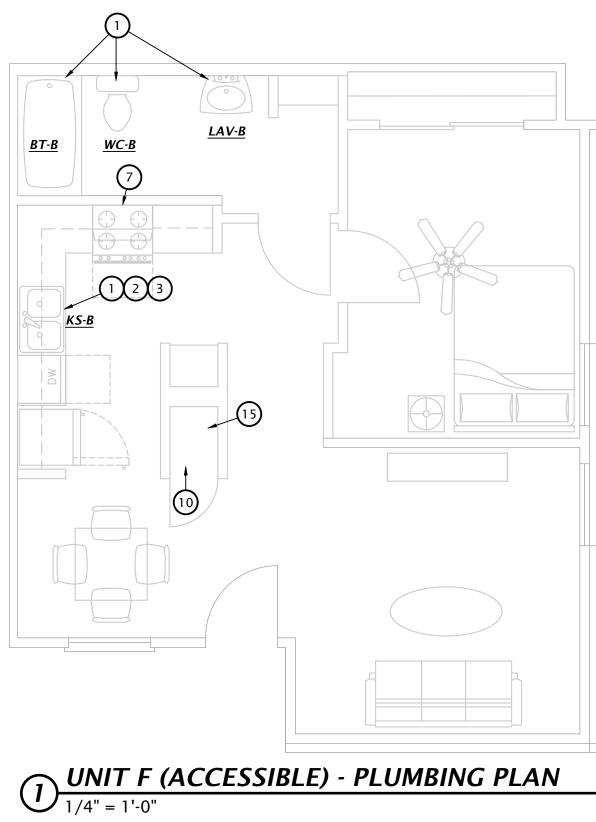




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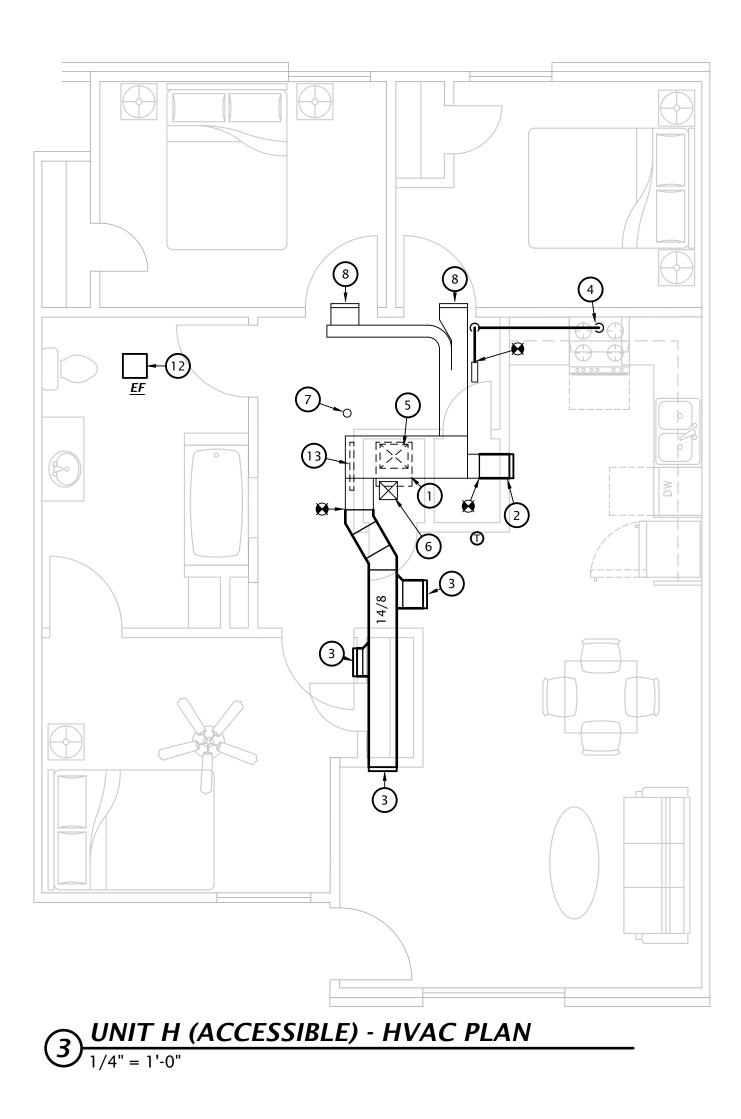
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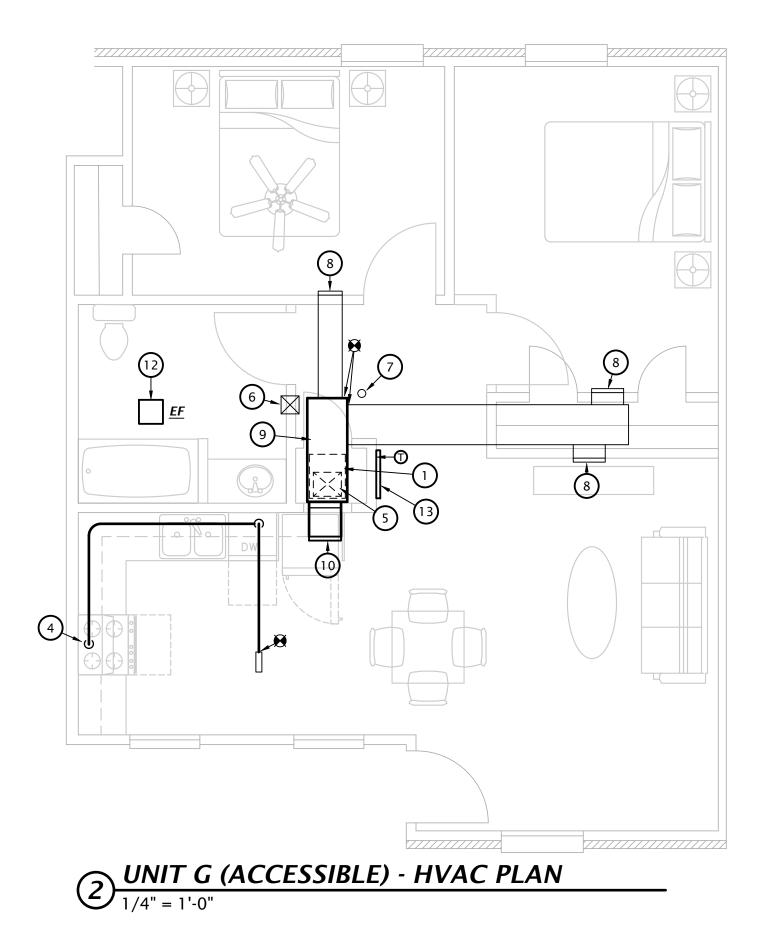
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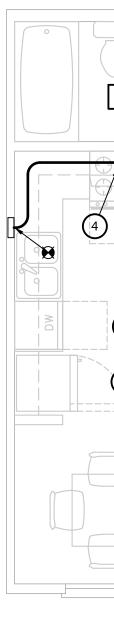
PLUMBING PLAN NOTES BY SYMBOL

- 1. CONNECT NEW PLUMBING FIXTURE TO EXISTING ROUGH-INS, MODIFY ROUGH-INS AS REQUIRED.
- 2. PROVIDE 1/2" VALVED HW BRANCH AND CONNECT DISHWASHER. COORDINATE EXACT REQUIREMENTS WITH EQUIPMENT PROVIDED.
- 3. CONNECT DISHWASHER DRAIN TO INDIRECT CONNECTION AT GARBAGE DISPOSAL IN ACCORDANCE TO MANUFACTURER'S INSTRUCTIONS.
- 4. CONNECT TO EXISTING 4" OR LARGER WASTE PIPING PREVIOUSLY SERVING AREA. FIELD VERIFY EXACT ROUTING OF EXISTING PIPING.
- 5. CONNECT TO EXISTING 2' OR LARGER WASTE PIPING PREVIOUSLY SERVING AREA. FIELD VERIFY EXACT ROUTING OF EXISTING PIPING.
- 6. CONNECT TO EXISTING VENT PIPING PREVIOUSLY SERVING AREA.
- 7. MODIFY GAS PIPING AS REQUIRED FOR NEW RANGE LOCATION.
- 8. 4" WASTE STACK SERVING PLUMBING FIXTURES ABOVE. RE-ROUTE ABOVE CEILING TO NEAREST WALL AND ROUTE THROUGH WALL TO BELOW FLOOR. FIELD VERIFY EXACT ROUTING.
- 9. PROVIDE NEW 2" TRAPPED OPEN HUB DRAIN IN NEW MECHANICAL CLOSET FOR CONDENSATE DRAINAGE.
- 10. MODIFY OPEN HUB DRAIN FOR NEW MECHANICAL CLOSET LAYOUT.
- 11. INTERCEPT 1-1/4" CW PIPING BELOW FLOOR AND ROUTE UP IN NEW FLOOR. RE-CONNECT TO EXISTING PIPING ABOVE CEILING AND RE-CONNECT ANY FIXTURES STAYING IN SERVICE. FIELD VERIFY EXACT LOCATION AND REQUIREMENTS.
- 12. PROVIDE NEW 1/2" CW TO WATER CLOSET, CONNECT TO NEAREST 3/4" OR LARGER CW PIPING. FIELD COORDINATE EXACT LOCATION AND REQUIREMENTS.
- 13. PROVIDE NEW 1/2" CW AND 1/2" HW CONNECTIONS TO LAVATORY, KITCHEN SINK, AND BATHTUB, CONNECT TO NEAREST 3/4" OR LARGER CW AND HW PIPING. FIELD COORDINATE EXACT LOCATION AND REQUIREMENTS.
- 14. EXISTING WASTE STACK SERVING UNIT ABOVE TO REMAIN.
- 15. MODIFY GAS PIPING AS REQUIRED FOR NEW FURNACE LOCATION.
- 16. CONNECT TO EXISTING SANITARY DRAIN. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPING. SCOPE EXISTING PIPING WITH CAMERA TO VERIFY CONDITION.













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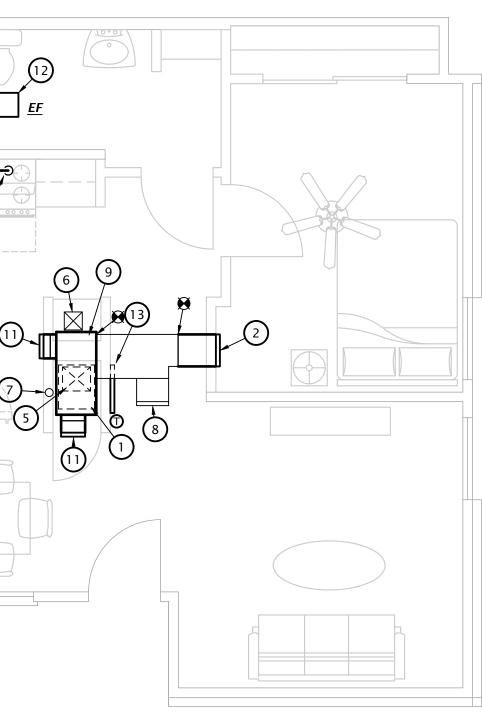
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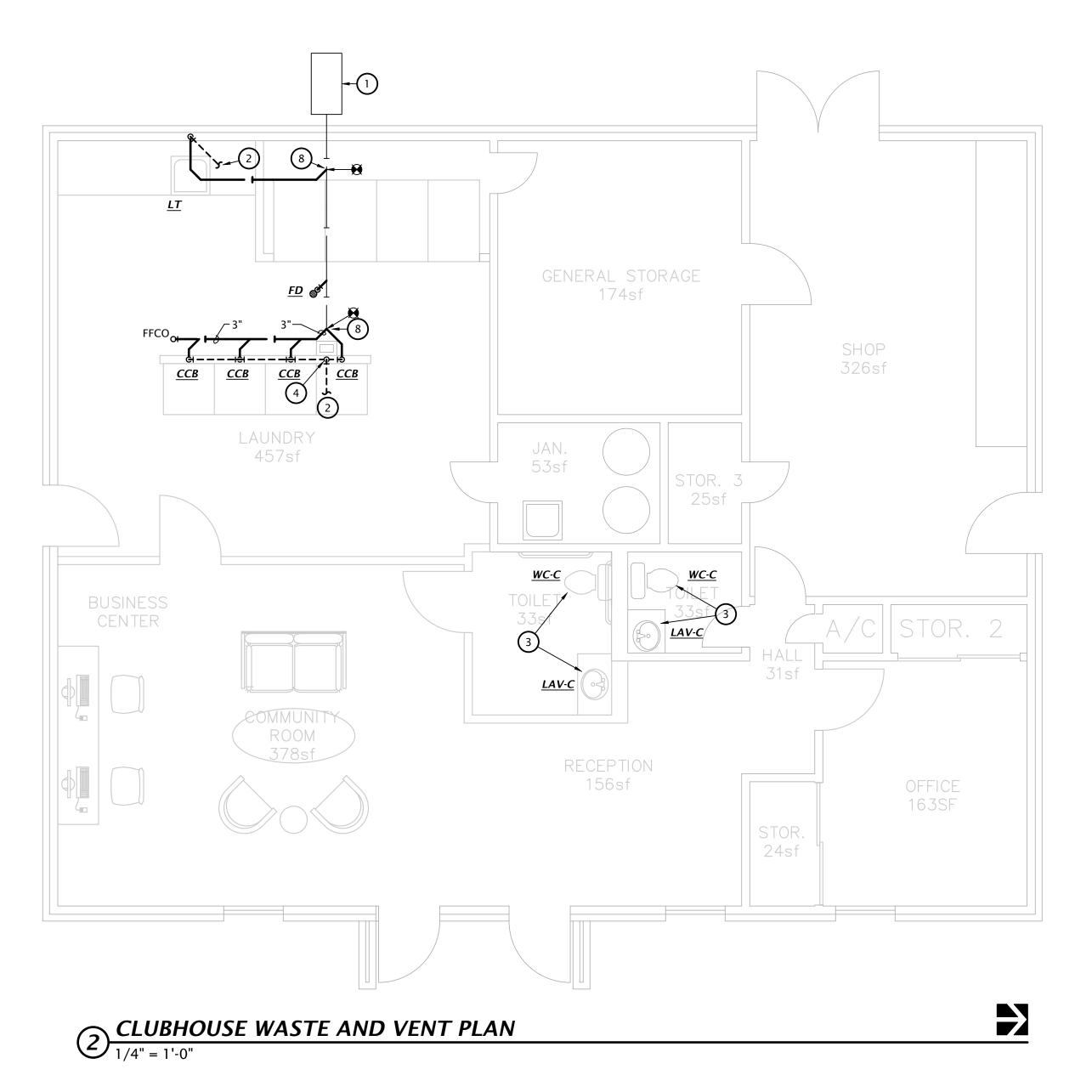
PLAN NOTES BY SYMBOL

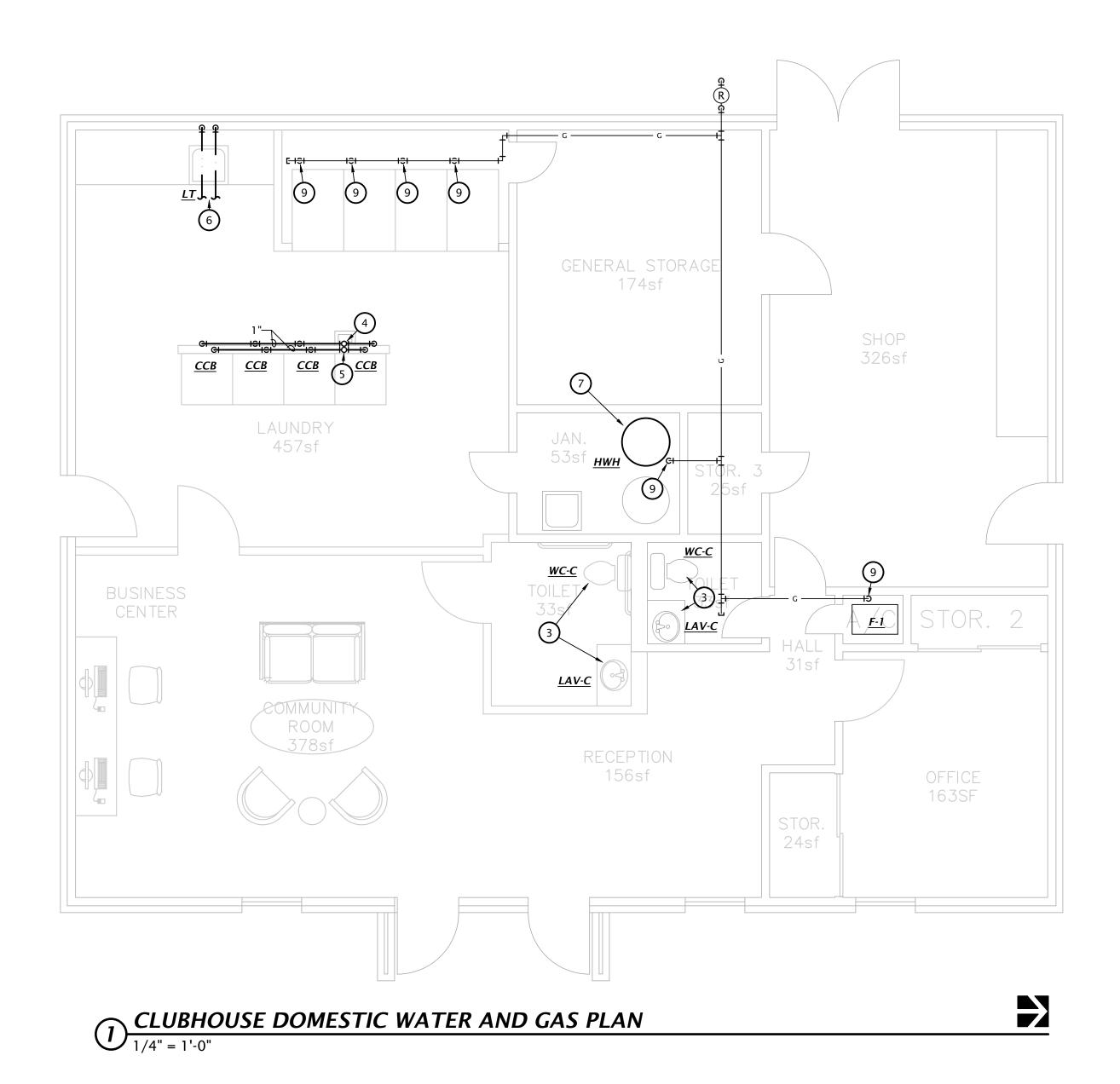
- 1. PROVIDE NEW FURNACE, EVAPORATIVE COIL, CONDENSING UNIT, AND ASSOCIATED INSTALLATION OF EQUAL COOLING AND HEATING CAPACITY. REFER TO SCOPE OF WORK FOR WHICH APARTMENTS TO HAVE SPLIT SYSTEM REPLACED. IF SPLIT SYSTEM IS TO REMAIN PER SCOPE OF WORK, MODIFY AS REQUIRED FOR NEW MECHANICAL CLOSET LOCATIONS. SEE DETAIL 1 ON SHEET M6.1 FOR MORE INFORMATION.
- 2. EXTEND DUCT TO NEW WALL AND PROVIDE NEW SUPPLY GRILLE OF EQUAL KIND, QUALITY AND SIZE OF EXISTING. FIELD VERIFY EXACT LOCATION AND REQUIREMENTS.
- 3. PROVIDE NEW 14"x6" SUPPLY GRILLE OF EQUAL KIND AND QUALITY OF EXISTING, FIELD VERIFY.
- 4. CONNECT NEW 6"Ø DUCT TO RANGE HOOD. ROUTE DUCT THROUGH SOFFIT ABOVE CABINETS AND INTO JOIST SPACE TO CONNECT TO EXISTING EXHAUST DUCT UP THROUGH FLOOR.
- 5. PROVIDE NEW FULL SIZED CONNECTION TO EXISTING DUCTWORK AT FURNACE NEW LOCATION. PATCH AND SEAL EXISTING CONNECTION BEING REMOVED.
- 6. MODIFY COMBUSTION AIR DUCT AS REQUIRED TO TERMINATE IN NEW MECHANICAL CLOSET.
- 7. EXISTING FLUE THROUGH FLOOR TO ROOF, EXTEND AS REQUIRED TO NEW FURNACE LOCATION.
- 8. PROVIDE NEW SUPPLY GRILLE OF EQUAL SIZE, KIND AND QUALITY OF EXISTING, FIELD VERIFY.
- 9. PROVIDE NEW 20"x8" SUPPLY DUCT AND CONNECT TO EXISTING DUCTS TO REMAIN. FIELD VERIFY EXACT LOCATION AND REQUIREMENTS.
- 10. PROVIDE NEW 16"x6" SUPPLY GRILLE OF EQUAL KIND AND QUALITY OF EXISTING, FIELD VERIFY. 11. PROVIDE NEW 12"x6" SUPPLY GRILLE OF EQUAL KIND AND QUALITY OF EXISTING,
- FIELD VERIFY. 12. REPLACE EXISTING EXHAUST FAN WITH NEW. CONNECT TO EXISTING DUCT, MODIFY AS REQUIRED. VERIFY DUCT AND WALL CAP WITH BACKDRAFT DAMPER ARE IN GOOD WORKING ORDER, REPAIR/REPLACE AS REQUIRED.
- 13. PROVIDE NEW 24"x14" RETURN GRILLE EQUAL TO EXISTING BEING REMOVED. PROVIDE SHEET METAL PLENUM FROM RETURN GRILL TO FURNACE, SEE DETAIL 1 ON SHEET M6.1 FOR MORE INFORMATION.



 $\underbrace{I}_{1/4"=1'-0"} UNIT F (ACCESSIBLE) - HVAC PLAN$









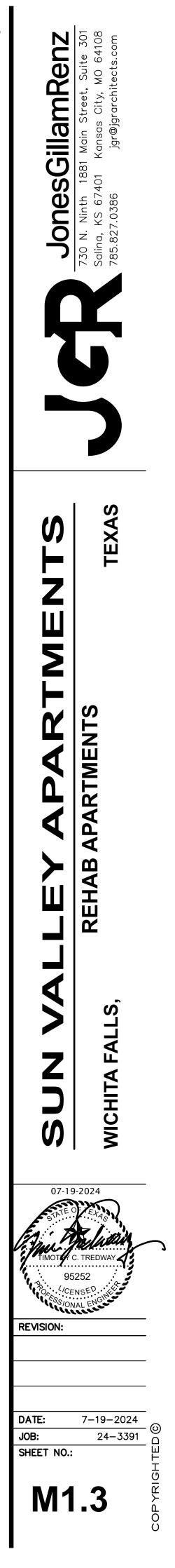
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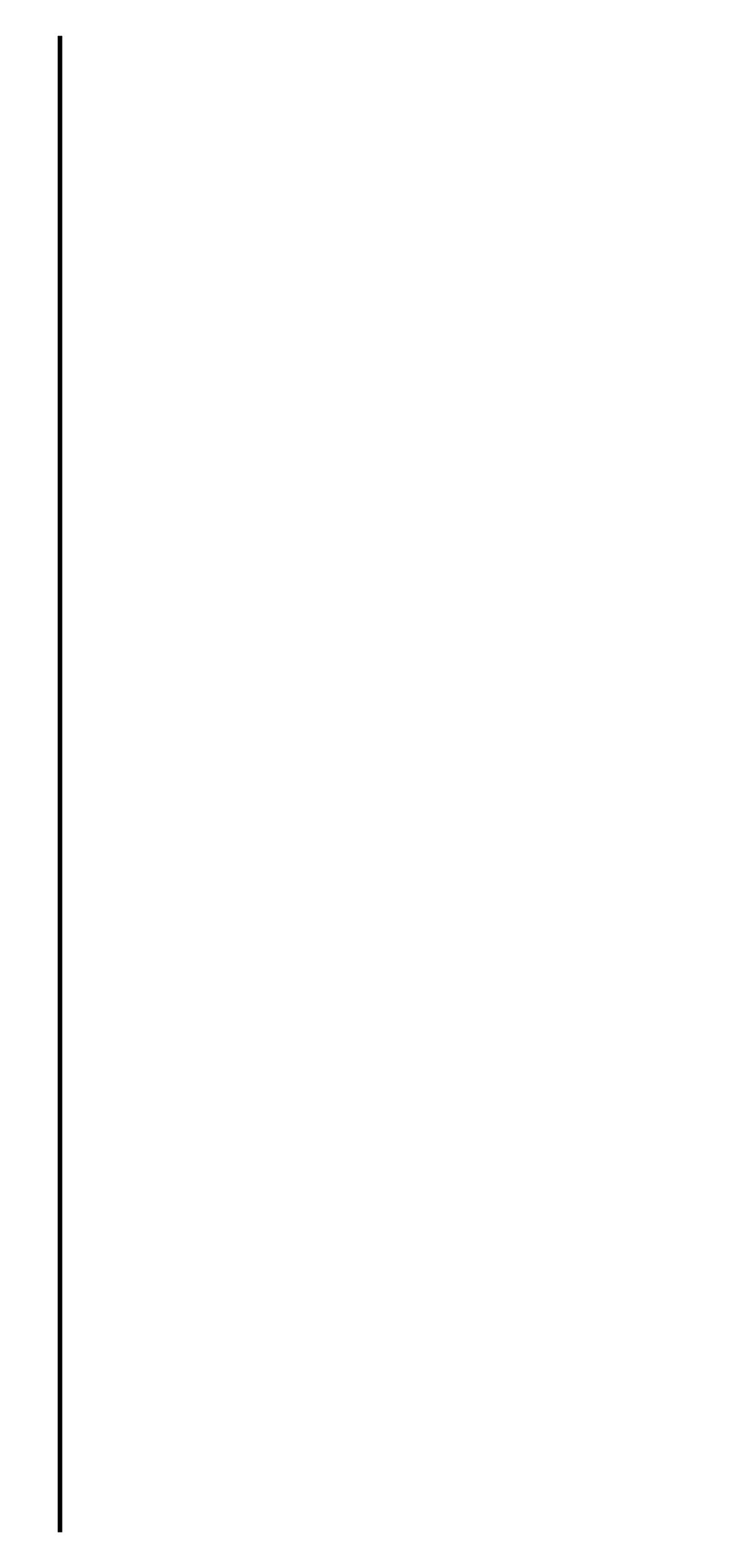
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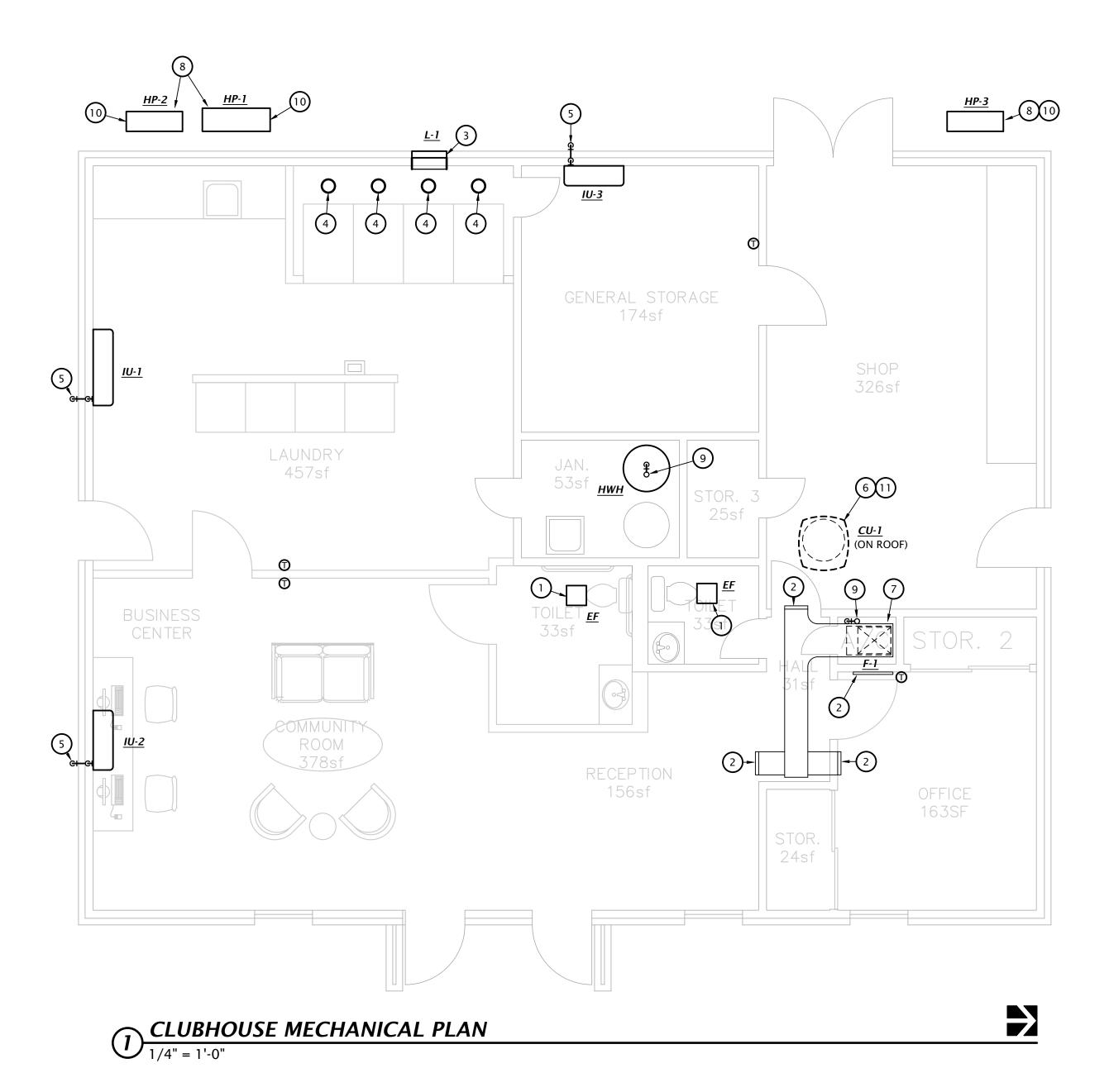
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PLAN NOTES BY SYMBOL

- 1. LINT INTERCEPTOR, CLEAN, REPAIR AND RESTORE TO LIKE NEW CONDITION. FIELD VERIFY EXACT LOCATION AND CONDITION.
- CONNECT TO EXISTING 2" OR LARGER VENT PIPING.
- REPLACE EXISTING PLUMBING FIXTURE. MODIFY EXISTING ROUGH-INS AS REQUIRED. FIELD VERIFY EXACT REQUIREMENTS.
- ROUTE PIPING UP IN EXISTING CHASE. FIELD VERIFY.
- 5. ROUTE 1-1/4" CW AND HW PIPING UP IN CHASE AND CONNECT TO EXISTING CW
- AND HW PIPING PREVIOUSLY SERVING WASHING MACHINES.6. CONNECT TO NEAREST 3/4" CW AND HW PIPING. FIELD VERIFY EXACT REQUIREMENTS.
- PROVIDE NEW WATER HEATER. MODIFY WATER PIPING AS REQUIRED TO CONNECT TO EXISTING PIPING TO NEW WATER HEATER, FIELD VERIFY EXACT
- REQUIREMENTS. SEE DETAIL 2 ON SHEET M6.1 FOR MORE INFORMATION.
 8. CONNECT TO EXISTING SANITARY DRAIN. FIELD VERIFY EXACT SIZE AND LOCATION OF EXISTING PIPING. SCOPE EXISTING PIPING WITH CAMERA TO VERIFY CONDITION.
- 9. MODIFY EXISTING GAS PIPING AS REQUIRED FOR NEW EQUIPMENT, FIELD VERIFY EXACT REQUIREMENTS. PROVIDE DIRT LEG, UNION, AND SHUT-OFF VALVE, CONNECT TO EQUIPMENT.







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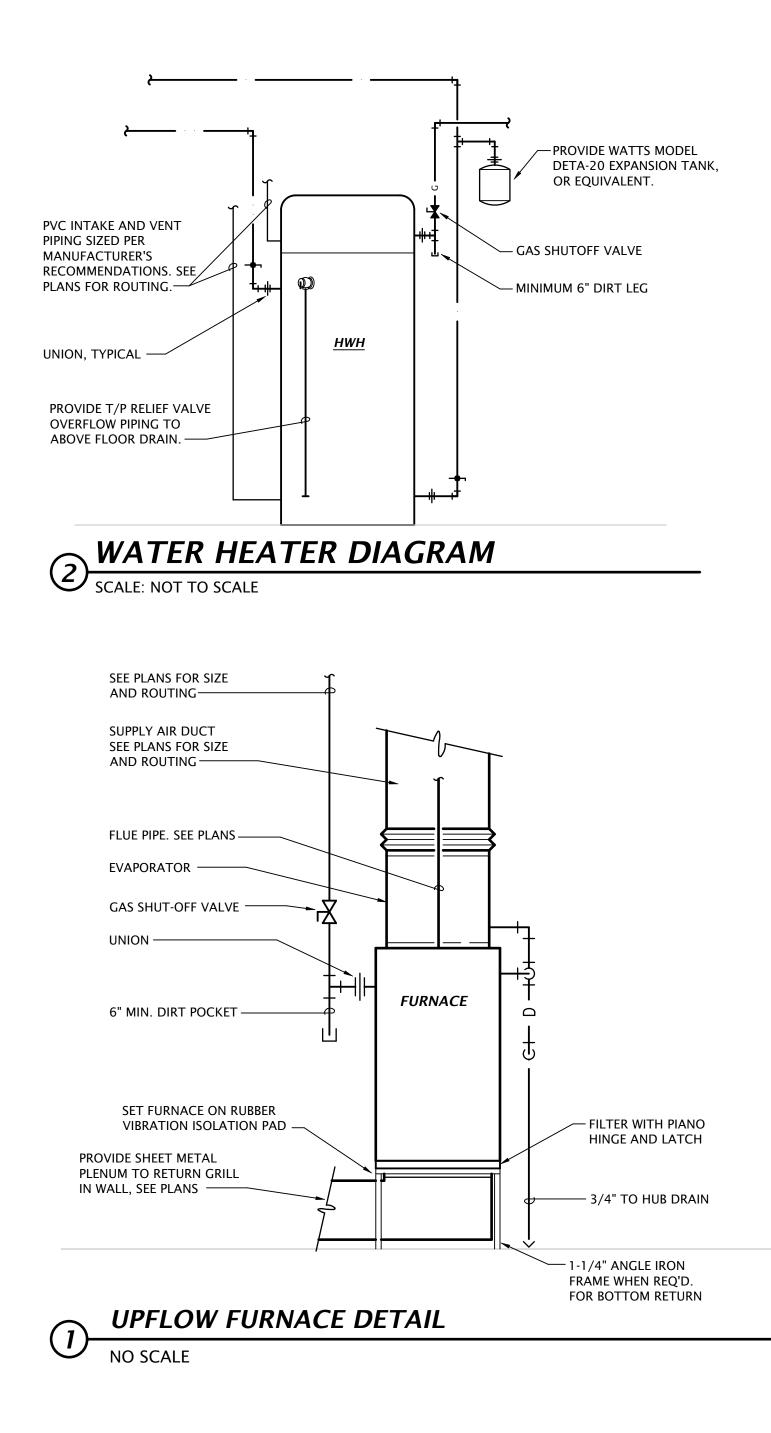
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PLAN NOTES BY SYMBOL

- 1. REPLACE EXISTING EXHAUST FAN WITH NEW. CONNECT TO EXISTING DUCT, MODIFY AS REQUIRED. VERIFY DUCT AND ROOF JACK WITH BACKDRAFT DAMPER ARE IN GOOD WORKING ORDER, REPAIR/REPLACE AS REQUIRED.
- 2. PROVIDE NEW SUPPLY AND RETURN GRILLES OF EQUAL KIND AND QUALITY. REFER TO SCOPE OF WORK. IF DEVICE IS TO BE RE-USED, CLEAN, REPAIR AND RESTORE EXISTING AIR DEVISES TO LIKE NEW CONDITION. COORDINATE WITH G.C.
- 3. PROVIDE NEW COMBINATION LOUVER/DAMPER IN EXISTING WALL OPENING. PROVIDE FRAME TYPE COMPATIBLE WITH EXISTING CONDITIONS AND FULL SIZED DUCT INTO CHASE. FIELD VERIFY EXACT REQUIREMENT.
- 4. TRANSITION FROM EXISTING DRYER EXHAUST THROUGH ROOF TO NEW DRYER AS RECOMMENDED BY DRYER MANUFACTURER. CLEAN, REPAIR, AND RESTORE EXISTING DUCT AND ROOF TERMINATION TO LIKE NEW CONDITION. ENSURE ROOF TERMINATION HAS BACKDRAFT DAMPER AND BIRD SCREEN. FIELD VERIFY EXACT REQUIREMENTS.
- 5. PROVIDE CONDENSATE DRAIN CONCEALED IN WALL AND TERMINATE WITH ELBOW DOWN AT 12" A.F.G. ABOVE SPLASH BLOCK.
- 6. MOUNT CONDENSING UNIT TO UNISTRUT FRAME SUPPPORTED ON NVENT CADDY PYRAMID ROOF SUPPORTS. PROVIDE VIBRATION ISOLATORS BETWEEN ROOF SUPPORTS AND UNISTRUT FRAME.
- 7. PROVIDE FULL SIZED DUCT FROM EVAPORATOR COIL TO EXISTING DUCT. PATCH EXISTING DUCT AS REQUIRED. SEE DETAIL 1 SHEET M6.1.
- 8. MOUNT HEAT PUMP ON 18" HIGH STAND, "QUICK-SLING" OR EQUIVALENT, ON 3-1/2" THICK LEVEL CONCRETE PAD. COORDINATE EXACT REQUIREMENTS AND LOCATION WITH G.C.
- 9. ROUTE INTAKE AND VENT PIPING FROM FURNACE/WATER HEATER UP TO MANUFACTURER'S CONCENTRIC VENT ROOF TERMINATION. SIZE PER MANUFACTURER'S RECOMMENDATIONS.
- 10. ROUTE REFRIGERANT PIPING FROM HEAT PUMP TO MATCHING INDOOR UNIT. PENETRATE EXTERIOR WALL AT 18" A.F.G. PROVIDE PIPING WALL PENETRATION ASSEMBLY EQUAL TO AIREX TITAN OUTLET.
- 11. ROUTE REFRIGERANT PIPING FROM CONDENSING UNIT TO MATCHING EVAPORATOR COIL AT FURNACE. PENETRATE ROOF WITH MANUFACTURED ROOF PENETRATION ASSEMBLY EQUAL TO 'RPS'. COORDINATE REQUIREMENTS WITH G.C.





MARK	MANUFACTURER	MODEL	CFM	ESP (" wg)	POWER	VOLTS/ PHASE	NOTES
EF	BROAN	XB80	80	0.4"	6 W	120/1	1,2,3,4,5
NOTES:	· · ·						
1. Fixture	shall be Energy Star li	sted.					
2. Fixture	shall operate at <1 SO	INE					
	shall operate at <1 SC integral disconnect.	INE					
3. Provide							

DUCTLESS SPLIT SYSTEM SCHEDULE

INDOOR UNIT				
MARK	IU-1	IU-2, IU-3		
MANUFACTURER	TRANE	TRANE		
MODEL	TPKA0A0361KA80A	TPKA0A0121LA10A		
CONFIGURATION	WALL SURFACE MOUNT	WALL SURFACE MOUNT		
VOLTAGE / PHASE	240/1	240/1		
MCA / MOCP	NOTE #4	NOTE #4		
NOMINAL COOLING CAPACITY	36,000 BTU/H	12,000 BTU/H		
OUTDOOR HEAT PUMP UNIT				
MARK	HP-1	HP-2, HP-3		
MANUFACTURER	TRANE	TRANE		
MODEL	TRUZH0361KA00NA	TRUZA3121KA70NA		
NOMINAL COOING CAPACITY	36,000 BTU/H	12,000 BTU/H		
VOLTAGE / PHASE	240/1	240/1		
MIN. CKT. AMPS	24	11		

NOTES:

1. Provide refrigerant piping sized in accordance with manufacturer's ecommendations for actual field installed length and routing.

2. Provide 7-day programmable thermostat for each indoor unit.

3. Provide with R410-A refrigerant.

4. Indoor units are powered from outdoor unit.

IACE			
MARK	F-1		
MANUFACTURER	TRANE		
MODEL	S9X1B060U4PSB		
SUPPLY AIRFLOW (CFM)	600		
ESP ("WG)	0.5		
BLOWER SPEED	MED		
NAT. GAS INPUT (MBH)	60		
NAT. GAS OUTPUT (MBH)	58.3		
MCA	11.8		
МОСР	15		
VOLTAGE/PHASE	120/1		
PORATOR			
ENT. AIR DB	80		
ENT. AIR WB	67		
ET SENS. CAPACITY (MBH)	13.8		
T TOTAL CAPACITY (MBH)	18.8		
DENSING UNIT			
MARK	CU-1		
MANUFACTURER	TRANE		
MODEL	4TTR4019N1		
O.A. DB	95°F		
REFRIGERANT	R410-A		
VOLTAGE/PHASE	240/1		
MCA	12		
МОСР	20		

1. Provide refrigerant piping sized in accordance with manufacturer's recommendations for actual field installed length and routing. 2. Provide PVC intake and exhaust piping in accordance with

manufacturer's recommendations.

3. Provide with 7-day programmable thermostat.

4. Provide with R140a refrigerant.

	MANUFACTURER		TRIM			ROUGH-IN SIZES			
MARK		DESCRIPTION	MANUFACTURER DESCRIPTION			VENT	CW	HW	NOTES
WC-A	KOHLER	Model 3999-0 "Highline" ADA compliant flush tank water closet, white vitreous china, two piece, 12" rough-in, elongated 16-1/2" high bowl, siphon jet flushing action, 1.28 GPF, polished chrome actuator.	KOHLER	K-5588 Purefresh white, elongated closed front seat and cover	4"	2"	1/2"		5
WC-B	KOHLER	Model 3999-0 "Highline" ADA compliant flush tank water closet, white vitreous china, two piece, 12" rough-in, elongated 16-1/2" high bowl, siphon jet flushing action, 1.28 GPF, polished chrome actuator.	KOHLER K-5588 Purefresh white, elongated closed front seat and cover		4"	2"	1/2"		1,5
WC-C	KOHLER	Model 3999-0 "Highline" ADA compliant flush tank water closet, white vitreous china, two piece, 12" rough-in, elongated 16-1/2" high bowl, siphon jet flushing action, 1.28 GPF, polished chrome actuator.	KOHLER	KOHLER K-4731-C-0 white open front plastic seat.		2"	1/2"		1,5
LAV-A	KOHLER	Model 2196-4-0 self-rimming lavatory, white vitreous china, 20"W x 17", faucet holes on 4" centers.	DELTA	Model 583LF-WF single handle faucet with pop-up drain.		1-1/2"	1/2"	1/2"	2,4,5
LAV-B	KOHLER	Model 2005-0 wall hung lavatory, white vitrous china, 18-1/4"W x 17-1/4", faucet holes on 4" centers.	DELTA	Model 583LF-WF single handle faucet. Provide grid drain. Provide point of use tempering valve.	2"	1-1/2"	1/2"	1/2"	2,3,4,5
LAV-C	KOHLER	Model 2196-4-0 self-rimming lavatory, white vitreous china, 20"W x 17", faucet holes on 4" centers.	DELTA	Model 583LF-WF single handle faucet. Provide grid drain. Provide point of use tempering valve.	2"	1-1/2"	1/2"	1/2"	1,2,3,4,5
KS-A	JUST	Model DL-2233-A-GR two compartment 18 GA stainless steel sink, self rimming, 14"x16"x8"D inside, fully undercoated, faucet holes as req. IN-SINK-ERATOR IN-SINK-ERATOR		2"	1-1/2"	1/2"	1/2"	2,4	
KS-B	JUST	Model DL-ADA-2233-A-GR two compartment 18 GA stainless steel sink, self rimming, 14"x16"x5"D inside, fully undercoated, faucet holes as req., and drain holes center rear.	DELTA IN-SINK-ERATOR	Model 400-HDF single handle kitchen sink faucet with hose spray attachment. Chrome finish. Provide basket strainer.		1-1/2"	1/2"	1/2"	1,2,3,4
BT-A	N/A	Model G 6063 TS reinforced fiberglass tub/shower, 60"W x35-3/4"D x76-1/2"H, with integral soap/toiletry shelves, right or left hand rough-in as required, white finish.	DELTA	Model R10000-UNWS/T13H232 single handle pressure-balancing valve with metal tub filler with pull diverter, push-clean showerhead and pop-up drain with overflow.		1-1/2"	1/2"	1/2"	2,4,5
BT-B	AQUARIUS	Model S 6000 TS OT reinforced fiberglass ADA tub/shower, 60"W x33"D x82"H, with integral soap/toiletry shelves and grab bars in accordance with ADA requirements, seat at end of tub, right or left hand rough-in as required, white finish.	DELTA	Model R10000-UNWS/T13H252 pressure balancing tub/shower valve with non-positive shut-off control and temperature control to ensure maximum 120° water with single metal lever handle, 1.5 GPM handshower with double check valves, flexible hose, 24" stainless steel slide bar, metal lever handshower, diverter valve, and shower head with arm.	2"	1-1/2"	1/2"	1/2"	1,2,4,5,6
LT	JUST	Model SLADA1921A50-J single compartment 18 GA stainless steel sink, self rimming, 14"x18"x5" inside, fully undercoated, faucet holes as req., and drain hole center rear	DELTA	Model 27C4265 deckmount faucet, 8" tubular swing spout, vandal resistant laminar outlet, two metal blade handles. Provide basket stainer.	2"	1-1/2"	1/2"	1/2"	2,4
ССВ	WATER TITE	Model W4700 recessed washing machine box with turn adaptor ball valves, sweat connection.	2"PVC/ABS drain o	coupling and knockout test cap. Two, 1/4	2"	2"	1/2"	1/2"	
ICB	WATER TITE	Model W9700 ice maker connection box with 1/4	turn ball valve and	1/2" sweat copper connection.			1/2"		
FD	WADE	1100 series floor drain with 6" satin nickel bronze Trapguard.	strainer. Provide t	rap protection device equal to ProSet	2"	1-1/2"			

GENERAL:

• Provide fixtures with all trim necessary for complete installation NOTES:

1. Fixture and installation to meet requirements of Americans with Disabilities Act.

2. Provide 1/4 turn angle stops with escutcheon plates, and chrome plated or braided stainless steel supplies, and 1-1/4" cast brass p-trap. 3. Insulate water and waste piping below lavatory. Utilize insulation kit equivalent to LavGuard by Truebro.

4. Trim shall be provided with polished chrome finish. 5. Fixture shall be WaterSense labeled.

6. Coordinate requirements with general contractor prior to ordering fixture.

LOUVER SCHEDUL MARK MANUFACTURER MODEL GREENHECK EAC-401 L-1 NOTES:

1. Coordinate frame type and finish with Arch. and G.C..



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ILE										
L	SIZE	FREE AREA (SF)	FINISH	SCREEN	DAMPER	SERVICE	DESCRIPTION			
01	21"H x 21"W x 4"D	0.82	KYNAR, WHITE	BIRD	120V	INTAKE	EXTRUDED ALUMINUM COMBINATION LOUVER/DAMPER			

