GEIGER HOUSE FOR VETERANS / KLEKAMP FAMILY RESIDENCES PSH

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OWNER:

TALBERT SERVICES 2600 Victory Parkway, Cincinnati, OH, 45206 Ph: 513.751.7747

CONTRACTOR:

MODEL GROUP 1826 Race Street, Cincinnati, OH 45202 Ph: 513.559.0048

ARCHITECT:

PCA ARCHITECTURE, P.S.C. 906 Monmouth Street, Newport, KY 41071 Ph: 859.431.8612 Fax: 859.431.8611

CIVIL ENGINEER:

GENESIS DESIGN LLC 3439 Wellston PI, Cincinnati, OH, 45208 Ph: 513.616.9694

STRUCTURAL ENGINEER:

ADVANTAGE GROUP ENGINEERS, INC. 1527 Madison Rd., 2nd Floor, Cincinnati, OH 45206 Ph: 513.205.8839

PLUMBING / MECHANICAL / ELECTRICAL ENGINEER:

Ph: 859.261.0585





ENGINEERED BUILDING SYSTEMS 515 Monmouth Street, Newport, KY 41071



SYMBOL LEGEND

Room name	ROOM NAME ROOM NUMBER AREA (OPTIONAL)	1Ref
101	DOOR TAG	XXX
	STOREFRONT TAG	Ref
W1>	WINDOW TAG	
A1.1	WALL TYPE TAG	
(10A)	TOILET & BATH ACCESSORY TAG	1 SIM
\blacklozenge	LEVEL LINE OR POINT ELEVATION	A101
	CONSTRUCTION NOTE	1 SIM
	REVISION TAG	A101

2631 GILBERT AVE. Cincinnati, OH 45206

INTERIOR ELEVATION MARKE ELEVATION NUMBER

EXTERIOR ELEVATION MARKER ELEVATION NUMBER SHEET NUMBER

BUILDING SECTION MARKER ELEVATION NUMBER SHEET NUMBER WALL SECTION MARKER ELEVATION NUMBER

SHEET NUMBER

CHARACTER

ROOM

SIGNAGE

CONTROL WALL

ABBREVIATIONS

CLG

C.J.

FF

FEC

0.C.

OPP

SIM.

TYP.

ALIGN FINISH FACE ABOVE FINISH FLOOR CENTERLINE CEILING CONTROL JOINT EXPANSION JOINT EQUAL FIRE EXTINGUISHER MOUNTED W/ WALL BRACKET FIRE EXTINGUISHER IN CABINET ON CENTER **OPPOSITE HAND** SIMILAR TYPICAL U.N.O. UNLESS NOTED OTHERWISE

GENERAL PROJECT NOTES

SEE SPECIFICATIONS PAGE FOR GENERAL PROJECT NOTES





COVER SHEET

21-116

G000

PRINT DATE:

BACK

ADA COMPLYING SHOWER STALL

DIVISION 01 – GENERAL REQUIREMENTS

013000 - ADMINISTRATIVE REQUIREMENTS

001 Contractor shall be responsible for verification and coordination of sub-contractors work to secure compliance with the drawings and specifications. 002 Safety: In accordance with generally accepted construction practices, Contractor will be solely and completely responsible for conditions of job site, including safety of all persons and property during performance of this work. This requirement will apply continuously and not be limited to normal working hours.

Per Document AIA A201, Sections 3.12.6 and 3.12.8, by submitting shop drawings, product data, samples and similar submittals, the Contractor represents to the Owner and the Architect that Contractor has reviewed and approved them with the appropriate stamp and determined that the submitted items conform to the contract documents. The work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect's approval of shop drawings, product data, samples or similar submittals unless the Contractor has specifically informed the Architect in writing of such deviation at the time of submittal and the Architect has given written approval to the specific deviation as a minor change in work or a change order or change directive has been issued authorizing the deviation. 004 When the contractor considers the work to be substantially complete, he/she shall submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not void any items which are required by the contract documents. The Architect reserves the right to add any additional items to the list for the contractor to complete before final payment.

005 The Contractor shall agree to warranty all work for a period of one year from the date of Substantial Completion. During this period of time the Contractor agrees to remedy any defects in their work and pay for any resultant damages to other work. This warranty shall apply to the work of all trades and sub-contractors.

006 The Architect shall not be responsible for the means, methods, techniques, sequences or procedures of construction selected by the Contractor. 007 It shall be the responsibility of the Owner to observe construction and verify that the work described in the Construction Documents is complied with in the event the Architect is not retained for observation services. At the time of this printing the Architect has not been retained for Construction Observation services.

008 Geotechnical services shall be provided by the Owner. All additional "Special Inspections" required by the governing authorities shall be the responsibility of this contractor.

014000 – QUALITY REQUIREMENTS

001 The Contractor shall obtain all required permits and inspections unless indicated otherwise. 002 All work shall conform to the current building code, and all applicable laws, rules, regulations and ordinances or governing authorities. In case of conflict the most restrictive shall not limit their applicability.

003 The term "provide" when used shall mean "furnish and install" unless noted otherwise.

004 Provide blocking in walls, ceilings, etc. wherever items will be attached to these surfaces. (i.e. toilet accessories, wall mounted door stops, fixtures, casework, handrails, etc.) 005 Provide firestopping between open vertical partitions and horizontal spaces above finished ceiling. Provide firestopping at all locations required by governing codes and authorities. Contact building inspector for inspection of all firestopping prior to installation of any material which will conceal the firestopping.

006 Soil bearing for all foundations shall be verified by a geotechnical engineer. 007 At all stairways, the leading two inches of the tread shall have visual contrast of dark-on-light or light-on-dark from the remainder of the tread.

008 The design of the fire alarm system (if required) and any fire suppression system (if required) shall be the responsibility of the Contractor. The Contractor shall size the systems per any governing codes/authorities and in accordance with good general engineering practice. All piping, wiring and ductwork shall be run concealed in finished spaces. Where necessary, the Contractor shall construct bulkheads and duct enclosures where indicated on drawings to conceal items. The Contractor shall submit drawings showing proposed ductwork runs and any bulkheads or duct enclosures that may be necessary prior to the start of construction. The Owner reserves the right to relocate any bulkheads or duct enclosures that are determined to be

detrimental to the design or functioning of the interior spaces. Lower ceilings as required to install new MEP items. Coordinate lower ceilings and bulkheads with Owner/Architect. 009 If there is a conflict on the drawings the most stringent/expensive/greatest quantity shall apply.

010 No damaged, scratched, dented items/products, etc. will be accepted at final installation. All items shall be corrected at the expense of the Contractor.

015000 – TEMPORARY FACILITIES AND CONTROLS

001 Contractor is responsible for providing any temporary water, sanitary services, electrical service, heating and trash removal as needed to complete the work. 002 Temporarily brace structural components as required to maintain stability until complete and functioning as a designed unit.

003 Fumes and dust shall be controlled so as to prevent any harmful or undesirable effects in the surrounding area.

016000 – PRODUCT REQUIREMENTS 001 Provide products that comply with the Contract Documents, are undamaged and unless otherwise indicated, are new at time of installation.

002 Provide products complete with accessories, trim, finish, fasteners and other items needed for a complete installation and indicated use and effect.

003 Deliver, store and handle products using means and methods that will prevent damage, deterioration and loss, including theft and vandalism. Comply with manufacturer's written instructions.

017000 – EXECUTION AND CLOSEOUT REQUIREMENTS

001 Upon completion of the work and before acceptance by the Owner/Architect, thoroughly clean the areas affected by the work. Remove all surplus construction material or debris resulting from the work and legally dispose of the same off site.

002 Clean all interior and exterior glass surfaces immediately prior to turning over to Owner.

017300 - EXECUTION

001 Shore, brace and support structural elements during cutting and patching. Do not cut and patch structural elements in a manner that could change their load-carrying capacity or increase deflection.

002 Do not cut and patch other construction elements or components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety. 003 Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch exposed construction in a manner that would, in the

Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner. 004 Cutting: Cut in-place construction by sawing, drilling, breaking, chipping, grinding and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction.

005 Patching: Patch construction by filling, repairing, refinishing, closing up and similar operations following performance of other work. Patch with durable seams that are as invisible as practicable.

006 Clean project site and work areas daily, including common areas. Dispose of materials lawfully.

007 Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

DIVISION 02 – EXISTING CONDITIONS

022000 – ASSESSMENT

001 Commencement of work by the Contractor shall signify the acceptance of the site conditions. 002 Area and dimensions: It shall be the responsibility of the Contractor(s) to verify all area takeoffs and dimensions by making their own field measurements before starting work or

ordering materials. 003 The Contractor shall verify at the job site, all dimensions and conditions shown on the drawings and within the Contract Documents and shall notify the Architect of any discrepancies, omissions and/or conflicts before proceeding with the project. All discrepancies shall be resolved before starting work or ordering materials.

004 The Contractor shall not scale drawings, written dimensions shall govern. Large scale drawings shall govern over small scale drawings. Field verify existing conditions where no

dimensions exist. 005 All dimensions to new construction are to face of concrete, face of masonry, face of stud or column centerline unless noted otherwise. Any dimension noted as 'clear' is from finished face to finished face.

006 Contractor shall verify location of all existing utilities. Take precautions as necessary to protect them. Repair all utilities damaged during construction at no cost to the Owner. 007 Field verify all existing dimensions.

GENERAL PROJECT NOTES – TECHNICAL SPECIFICATIONS

DIVISION 04 – MASONRY

042000 – UNIT MASONRY

001 Concrete masonry units to be normal weight with minimum average net-area compressive strength of 1900 psi

002 Brick masonry shall have minimum average net-area compressive strength of 3500 psi. 003 Control/expansion joints in concrete masonry units and brick shall be 3/8" wide and installed at 24'-0" o.c. max. unless indicated otherwise on the drawings. Joints shall receive backing rod and caulk.

004 Mortar type shall be per the following applications:

a.) Masonry below grade or in contact with earth, use Type M

b.) Reinforced masonry, use Type S c.) Exterior, above-grade, load bearing and non-load bearing walls; interior load bearing and non-load bearing walls; and other applications where another type is not indicated, use Type N.

005 Horizontal joint reinforcing for single wythe concrete masonry to be hot dip galvanized 9 gage ladder type placed at 16" o.c. vertically unless noted otherwise. Lap reinforcing 6" minimum. Discontinue reinforcing at movement joints. 006 Adjustable masonry-veneer anchors/ties to be hot dip galvanized. Attach through wall sheathing to wall framing. Anchors shall allow vertical adjustment but resist tension and

compression forces. Size wire ties to extend at least halfway through veneer but with at least 5/8-inch cover on outside face. Outer ends of wires are bent 90 degrees and extend 2 inches parallel to face of veneer.

007 Thru-wall flashing shall be asphalt-coated copper - 7 oz./sq. ft.

a.) At masonry veneer walls, extend flashing through veneer, across air space and up face of sheathing at least 8 inches with upper edge tucked under building wrap/paper, lapping at least 4 inches. b.) At multi-wythe masonry wall, including cavity walls, extend flashing through outer wythe, turned up a minimum of 4 inches, and extend 1-1/2 inches into the inner wythe

c.) At lintels and shelf angles, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams. d.) Install stainless steel drip edge beneath flexible flashing at exterior face of wall. Metal drip edge shall extend no less than 3 inches into the wall and be set in mastic or sealant. Stop

flexible flashing 1/2 inch back from outside face of wall and adhere flexible flashing to top of metal drip edge. Metal drip edge shall be turned down ½ inch.

008 Provide free draining mesh material ("Mortar Net" by Heckman Building Products or equal) at all thru-wall flashing locations. 009 Weep/Vent Products: Install at 24" o.c. using one of the following, unless otherwise indicated:

a.) Wicking material: Absorbent rope, made from cotton, 1/4 to 3/8 inch in diameter, in length required to extend 18 inches in cavity between wythes. Cut flush with exterior face of b.) Cellular Plastic Weep/Vent: One piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8" less than depth of outer

wythe, in color selected from manufacturer's standard. 010 Masonry construction and materials shall conform to all requirements of "Specifications for Masonry Structures (ACI 530.1/ASCE 6-88)" except as modified by the requirements of

these contract documents. 011 Grout for bond beams and for filling hollow block: Concrete grout complying with ASTM C476 with fine aggregate and with minimum compressive strength of 3000 psi at 28 days.

Place grout carefully around all reinforcing to fill all voids.

- 012 Reinforcing steel: ASTM A615, 60 ksi yield, Size and number of bars in bond beams as shown on drawings. Lap all bars a length equal to 48 bar diameters minimum.
- 013 Provide prefabricated "L" and T" shaped horizontal joint reinforcing at wall intersections.
- 014 Running bond pattern shall be used for all masonry work. Tool all joints concave. 015 Unless noted otherwise on plans, under lintels, bearing plates, beams, etc., fill cells with Grout, 3 courses minimum below bearing.
- 016 All reinforcing steel shall be supported and fastened to approved positioners located at 192 bar diameters maximum spacing to prevent displacement during the placement of grout.

017 Provide lap splices of length equal to 48 bar diameters for all reinforcing unless noted otherwise. 018 At masonry control joints, use concrete masonry units with sash notch in ends aligned vertically over each notch in ends of units below. Install hard rubber control joint strip vertically in notched block to tie the two sides of the joint together. Rake mortar from the vertical control joints for caulking.

019 At all pre-cast concrete sills, heads, copings, etc. rake each joint and caulk.

051000 – STRUCTURAL METAL FRAMING

001 All miscellaneous metal fabrications, lintels, structural steel, etc. exposed to the exterior shall be galvanized unless noted otherwise. 002 All anchor bolts and expansion bolts shall be galvanized steel bolts of the sizes shown on drawings or, if not shown, as required to carry superimposed loads. 003 Framing connectors specified on the drawings shall be galvanized steel metal connectors manufactured by the Simpson Strong Tie Company and shall be fastened as specified in the Simpson Product and Instruction Manual to carry the maximum allowable load of the connectors.

05521 – PIPE AND TUBE RAILINGS

001 At exterior locations, core drill and set pipe in non-shrink, non-metallic grout, minimum 6" embedment. Make sure drilled hole is dust free. Prep hole with Acryl 60 primer. Provide sloping silicone sealant around pipe penetrations to keep water out.

DIVISION 06 – WOOD, PLASTICS AND COMPOSITES

062000 – FINISH CARPENTRY

- 001 Provide and install a minimum of four (4) cabinet screws per cabinet. The use of drywall screws is strictly forbidden. Provide blocking as required to support cabinet. 002 Install cabinets without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
- 003 Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop. 004 Complete fabrication, including assembly, finishing and hardware application, to maximum extent possible before shipment to project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming and fitting.
- 005 Laminate cladding for exposed surfaces: High-pressure decorative laminate GRADE HGS. Color as selected by Owner from laminate manufacturer's matte, suede or equivalent
- 006 Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the work. Proceed with installation only after unsatisfactory conditions have been corrected. 1007 Install woodwork level, plumb, true and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- 008 Scribe and cut woodwork to fit adjoining work, refinish cut surfaces and repair damaged finish at cuts. 009 Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete
- installation. Use fine finishing nails or finishing. 010 Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 60 inches long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

072000 – THERMAL AND MOISTURE PROTECTION 001 Insulation shall have a flame-spread index of not more than 25 and a smoke-developed rating of not more than 450 for both concealed and exposed installations. In concealed applications of Type III, IV, or V construction, insulation facing is not required to comply flame spread and smoke developed ratings where insulation is in direct contact with the surface

076000 – FLASHING AND SHEET METAL

- 001 All prefinished metal flashing, counter flashing, drip edges, valley flashing, etc. shall be .032 inch aluminum. 002 Install step flashing and counter-flashing as required at all masonry intersections with different materials (i.e. chimneys). Let counter-flashing into brick.
- 077000 ROOF SPECIALTIES

material of the wall, floor, or ceiling.

001 Gutters shall be residential aluminum with once profile with concealed support straps at 24" o.c. maximum, 6" wide. Provide expansion joint at maximum 30'-0" o.c. Gutters shall be painted with Kynar paint - 10 year finish warranty. Downspouts shall be residential aluminum with support brackets at maximum 6'-0" o.c. vertically, 3"x4" profile. Downspouts shall be painted with Kynar paint.

078000 – FIRE AND SMOKE PROTECTION

001 Provide penetration firestopping that is produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of construction penetrated. Penetration firestopping systems shall be compatible with one another, with the substrates forming openings, and with penetrating items if any.

002 Install penetration firestopping to comply with manufacturer's written installation instructions and published drawings for products and applications indicated. 003 Where required, provide fire-resistive joint systems that are produced and installed to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of assemblies in or between which fire-resistive joint systems are installed. Fire-resistive joint systems shall accommodate building movements without impairing their ability to resist the passage of fire and hot gases.

079000 – JOINT PROTECTION

001 For interior joints to be painted such as around door frames and where different materials to be painted meet: Acrylic latex caulking by Porter, Tremco or Dap 002 For exterior joints and for interior and exterior joints around louvers, windows, masonry control joints, etc.: Tremco Dymonic or Sonneborn Sonolastic NP 1 sealant. At control joints in masonry and elsewhere as required, install foam backer rod behind sealants.

003 Exterior Joints: (B.O.D. Dow Corning or equal) a.) Perimeters of exterior openings where frames meet exterior façade (i.e. precast, masonry, EIFS, stucco, etc.): Dow Corning 795 Silicone Building Sealant OR Dow Corning 756 SMS Building Sealant.

- b.) Expansion and control joints (for exterior surfaces indicated): 1. Cast-in-place concrete: Dow Corning 790 Silicone Building Sealant
- 2. Architectural precast: Dow Corning 790 Silicone Building Sealant
- 3. Unit masonry walls: Dow Corning 790 Silicone Building Sealant OR Dow Corning 795 Silicone Building Sealant.
- 4. Architectural composite metal panels (ACM): Dow Corning 756 SMS Building Sealant.
- 5. Granite or Limestone: Dow Corning 790 Silicone Building Sealant OR Dow Corning 756 SMS Building Sealant OR Dow Corning 795 Silicone Building Sealant.
- 6. Marble or sensitive stone surfaces: Dow Corning 756 SMS Building Sealant. 7. Coping joints and Coping-to-façade joints: Dow Corning 795 Silicone Building Sealant OR Dow Corning 756 SMS Building Sealant.
- 8. Cornice and wash: Dow Corning 795 Silicone Building Sealant.
- c.) Expansion/control joints in Exterior Insulation Finish Systems (EIFS): Dow Corning 790 Silicone Building Sealant. d.) Joints between EIFS and adjacent non-porous materials: Dow Corning 795 Silicone Building Sealant OR Dow Corning 791 Silicone Waterproofing Sealant.
- 1. Precast and Cast-in-Place Concrete: Dow Corning NS (non-sag) Parking Structure Sealant OR Dow Corning FC (fast-cure) Parking Structure Sealant (also selfleveling) OR Dow Corning SL (self-leveling) Parking Structure Sealant
- 2. Unit Pavers, Granite Pavers, Brick Masonry Pavers: Dow Corning 790 Silicone Building Sealant. f.) Concealed internal metal-to-metal seals (i.e., flashings, formed metal copings, curtainwall systems, etc.): Dow Corning 791 Silicone Weatherproofing Sealant OR Dow

004 Interior Joints: (B.O.D. Dow Corning or equal)

Corning 795 Silicone Building Sealant.

- a.) Interior perimeters of exterior openings: Dow Corning 791 Silicone Waterproofing Sealant
- b.) Expansion or control joints: On the interior of the following exterior elements: c.) Cast-in-place concrete walls: Dow Corning 790 Silicone Building Sealant OR Dow Corning Contractors Concrete Sealant
- d.) Architectural precast: Dow Corning 790 Silicone Building Sealant OR Dow Corning Contractors Concrete Sealant.
- e.) Unit masonry walls: Dow Corning 795 Silicone Building Sealant.
- f.) Expansion and control joints in interior floor surfaces: Dow Corning NS (non-sag) Parking Structure Sealant OR flexible epoxy joint filler for wheeled traffic on industrial
- floors g.) Joints of underside of precast of cast-in place concrete: Dow Corning 790 Silicone Building Sealant
- h.) Perimeters of interior frames: Dow Corning 791 Silicone Weatherproofing Sealant OR Dow Corning Contractors Weatherproofing Sealant
- i.) Interior masonry vertical control joints: Dow Corning 795 Silicone Building Sealant OR Dow Corning Contractors Concrete Sealant.
- i.) Bath, tile, tub and shower enclosures and fixtures: Dow Corning 786 Mildew Resistant Silicone Sealant k.) Exposed control joints in gypsum board: siliconized/acrylic latex sealant.
- I.) Exposed and non-exposed acoustical applications in gypsum board: acoustical sealant.

005 1. Caulk the following locations:

- 1a. Joints between wood trim and wall surfaces
- 1b. Joints between abutting pieces of wood trim where not tight.
- 1c. Perimeter joints of exterior openings.

1d. Open cracks at intersecting walls. 1e. Joints between plumbing fixtures and adjoining walls, floors and counters.

- 1f. Joints between dissimilar materials.
- 1g. Other joints where indicated or necessary for weathertight/watertight/airtight installation.
- 1h. Under all window stools to drywall
- 2. Provide caulking with the following characteristics:
- 2a. All interior locations unless noted otherwise: Latex caulk complying with ASTM C 834, Type P, Grade NF or better. 2b. All bathrooms, kitchen counters and exterior locations: Single-Component Mildew-Resistant Acid-Curing Silicone Sealant (Dow Corning 786 Mildew Resistant, GE Silicone Sanitary SCS1700 or equal)
- 3. Provide backing materials where recommended, or required, by caulking manufacturer.
- 006 Provide joint sealants, backings and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as
- demonstrated by joint-sealant manufacturer, based on testing and field experience. 007 Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers and other joint fillers; and are approved for applications indicated by
- sealant manufacturer based on field experience and laboratory testing. 008 Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- 009 Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicate.
- 010 Interior joints in vertical surfaces and horizontal nontraffic surfaces: Latex
- 011 Mildew resistant interior joints in vertical surfaces and horizontal nontraffic surfaces: Mildew resistant, single component, nonsag, neutral curing, Silicone.

012 Caulk colors shall be similar to adjacent material. Consult architect on final color selection.

DIVISION 08 – OPENINGS

081000 - DOORS AND FRAMES

accordance with manufacturer's recommendations.

087100 – DOOR HARDWARE 001 All hardware shall be heavy duty, commercial grade. All locksets and latchsets shall have levers complying with handicap requirements. Install all hardware in accordance with manufacturer's recommendations. Key and masterkey locks as directed by Owner

088000 - GLAZING

- 001 Safety glazing shall be installed in the following locations: 1. Glazing in swinging doors except jalousies
- 3. Glazing in storm doors.
- Glazing in unframed swinging doors.
- edge is less than 60 inches above the floor or walking surface.
- 7a Exposed area of an individual pane larger than 9 square feet.
- 7b Bottom edge less than 18 inches above the floor.
- 7c Top edge more than 36 inches above the floor. 7d One or more walking surfaces within 36 inches horizontally of the glazing.
- of the adjacent walking surface.
- 10. Glazing adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway in any direction when the exposed surface of the glass is less than 60 inches above the nose of the tread.
- 002 All bedroom windows shall have the minimum criteria: The window shall have a minimum net clear opening of 5.7 square feet. 1b. The window shall have a minimum net clear opening height of 24 inches.
- 1c. The window shall have a minimum net clear opening width of 20 inches.
- 1e. The window sill shall not be higher than 44" inches AFF.

DIVISION 09 – FINISHES

- 092000 PLASTER AND GYPSUM BOARD 001 All drywall joints shall be taped with paper tape, open mesh tape is not permitted. 004 Finish gypsum panels to levels indicated below: a.) Level 1: Ceiling plenum areas, concealed areas, and where indicated. b.) Level 2: Panels that are substrate for tile c.) Level 4: All panel surfaces exposed to view may be cased with water and rot-resistant trim). PGB shall only be located on ceilings that bathroom or toilet rooms are above. On walls less than 4 feet from sprinkler service controls and water service lines located in service rooms. Where indicated on drawings b.) Paper-faced Moisture Resistant Gypsum Board shall be in the following areas: At all walls in bathrooms where PGB is not installed. Behind public drinking fountains. Where indicated on drawings 006 Install fiberglass reinforced concrete board behind all areas to receive tile. 007 Gypsum board shall comply with ASTM C36 009 All purpose, ready-mixed compound with reinforcing tape at seams. 010 Casing beads, corner beads, etc. shall be metal (plastic or vinyl is not permitted). 011 Steel drill screws: ASTM C 1002. 012 NO NAILS ARE PERMITTED. 013 Install gypsum board continuous behind all bulkheads and drop down ceilings. 093100 – THIN-SET TILING a.) Interior - 20'-0" to 25'-0" in each direction. c.) Where tilework abuts restraining surfaces
- 099000 PAINTING AND COATING provide complete coverage of substrates. against areas from damage and touch up all paint as required. and color breaks 006 Use applicators and techniques suited for paint and substrate indicated. manufacturer, based on testing and field experience.
- 010 Interior ceilings paint sheen shall be flat unless noted otherwise.

DIVISION 10 – SPECIALTIES

- a.) 24" x 36" Mirror #B-165 2436
- c.) 36" Grab bar #B-6806
- f.) Paper towel dispenser #B-262
- 011 All paints and coatings to be low VOC
- b.) Toilet tissue dispenser #B-288 d.) 42" Grab bar - #B-6806
- e.) 18" Grab bar #B-6806

001 Install a crack isolation membrane under subsurface of thin-set tile. Follow manufacturer's recommendations for proper installation Refer to ANSI A118.12 for additional guidelines (RedGard Waterproofing and Crack Prevention Membrane) 002 Install movement joints in ceramic tile under the following guidelines: b.) Interior tilework exposed to direct sunlight or moisture – 8'-0" – 12'-0" in each direction All expansion, control, construction, cold and seismic joints in the structure should continue through the tilework, including such joints at vertical surfaces. Joints through structural joints must never be narrower than the structural joint. All surfaces to be painted shall be prepped in accordance with the paint manufacturer's recommendations to full coverage. Prime all surfaces in accordance with the paint manufacturer's recommendations. All surfaces to receive one primer coat and two finish coats.

001 Metal door frames shall be galvanized (at exterior locations), primed and painted 16 gage steel frames fabricated of full-welded unit construction with exposed welds ground smooth. Face of frames shall be 2" at jambs and 4" at heads to work with masonry coursing. Reinforce frames as required for hardware and furnish al required anchors. Install frames in

2. Glazing in fixed and sliding panels of sliding door assemblies and panels in sliding and bifold closet door assemblies.

5. Glazing in doors and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers. Glazing in any part of a building wall enclosing these compartments where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing or walking surface. 6. Glazing, in an individual fixed or operable panel adjacent to a door where the nearest vertical edge is within a 24-inch arc of the door in a closed position and whose bottom 7. Glazing in an individual fixed or operable panel, other than those locations described in items 5 and 6 above, that meets all of the following conditions:

8. All glazing in railings regardless of an area or height above a walking surface. Included are structural baluster panels and nonstructural infill panels. 9. Glazing adjacent to stairways, landings and ramps within 36 inches horizontally of a walking surface when the exposed surface of the glass is less than 60 inches above the plane

1d. The window shall be operational from the inside of the room without the use of keys, tools or special knowledge.

003 All gaps between the window frame/unit and the adjacent wall shall be filled with low-rise expanding foam insulation.

002 Provide continuous metal edge (USG #801-A) at all exposed panel edges and intersection with non-gypsum surfaces. J-stop moldings are not permitted. 003 Provide gypsum board control joint at 20'-0" o.c. maximum, unless noted otherwise, in continuous wall or ceiling lengths

005 Moisture-Resistant Paperless Gypsum Board (PGB) and Paper-faced Moisture Resistant Gypsum Board shall be provided as follows. a.) Moisture-Resistant Paperless Gypsum Board (PGB) shall provided in the following areas: • Behind kitchen sinks and bathroom/toilet room sinks to a height of approximately 3 inches above base cabinet. • Shower walls where the PGB will not have an exposed finish except 6 inches beyond shower and tub jambs (floor to top of tub surround or 6 inches above shower nipple and this Behind toilets and the space between a tub/shower enclosure and to the top of toilet tanks must be covered as it is a high failure point specifically covered by PGB.

 Within 4 feet horizontally and vertically of any water source, except directly behind sinks, tub, and shower surrounds and behind toilets where PGB will be installed. • Within 4 feet in any direction behind laundry/clothes washing machines, water heaters, water meters, etc.

008 Screws in types and lengths as recommended by drywall manufacturer. No nails allowed.

Painting work includes applying a paint coating as scheduled on drawings to walls, doors, frames, trim, etc. Paint all surfaces. Products shall be high quality products as manufactured by Porter, Benjamin Moore, Glidden or Sherwin Williams. Colors shall be selected from color charts of manufacturer. Paint shall be applied in separate coats. Sand between coats as required for smooth finish. Apply additional topcoats if required to provide a smooth even finish or if required to

Apply paint in accordance with manufacturer's recommendations. Take care to avoid danger of fire. Remove oily or solvent coated rags daily. Mask adjoining surfaces, protect 005 Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines

007 Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by

008 Interior doors/trim shall have one of the following finishes: Painted - primed once, with two-coat satin or semi-gloss finish on all sides and faces. 009 Interior walls shall be primed once, with two-coat finish with eggshell finish unless noted otherwise. Use gloss, semi-gloss or satin finish for bathrooms, laundry and kitchens.

001 Provide the following toilet accessories in first floor restrooms as manufactured by Bobrick. Equal products by Bradley may also be used. Bobrick model numbers are given below.

NO. DESCRIPTION

80% OHFA REVIEW

PERMIT SET

DATE

01/04/23 04/13/23

GENERAL SPECIFICATIONS AND PROJECT NOTES

21-116

LEED for Homes v4 Low-rise Notes for Plans IP Credit 1.3 (option 3) – Trades Training

- 1. At the onset of construction organize a LEED trades training moderated by LEED Green Rater and/or Provider-QAD. 2. Following trades to attend - GC Project Manager, GC Site Superintendent, Mechanical-Electrical-Plumbing, Insulation, Framing, Drywall, Air-Infiltration Package. 3. Provide a minimum of 2-week notice to LEED Green Rater prior to training date.
- SS Prerequisite 1 Construction Activity Pollution Prevention 1. Stockpile and protect disturbed topsoil from erosion (for reuse).
- 2. Control the path and velocity of runoff with silt fencing or comparable measures.
- 3. Protect on-site storm sewer inlets, streams, and lakes with straw bales, silt fencing, silt sacks, rock filters, or comparable measures. 4. Provide swales to divert surface water from hillsides.
- 5. Use tiers, erosion blankets, compost blankets, filter socks, berms, or comparable measures to stabilize soils in any area with a slope of 15% (6.6:1) or more that is disturbed during construction.
- 6. Prevent air pollution from dust and particulate matter. 7. Construction sites larger than 1 acre must conform to the erosion and sedimentation requirements of the 2012 U.S. Environmental Protection Agency Construction General Permit or local equivalent, whichever are more stringent.
- SS Prerequisite 2 No Invasive Plants
- 1. Coordinate with Landscape Contractor to ensure no invasive plant species are introduced into landscape.

SS Credit 3 – Non-toxic Pest Control

- 1. For below-grade walls, use solid concrete foundation walls, masonry walls with a course of solid block bond beam, or concrete-filled block.
- 2. Design a minimum 6-inch inspection space between the surface of the planned landscape grade and non-masonry siding. 3. Seal all external cracks, joints, penetrations, edges, and entry points with appropriate caulking. Install rodent and corrosion-proof screens (e.g., copper, or
- stainless-steel mesh) on all openings greater than 1/4 inch, except where code prohibits their installation (e.g., dryer vents). 4. Design discharge points for rain gutters, air-conditioning condensation lines, steam vent lines, or any other moisture source such that discharge is at least 24 inches from the foundation.
- 5. Multifamily building projects **must** develop an integrated pest management policy that includes guidance for residents on pesticide use, housekeeping, and prompt reporting of pest problems; incorporate the policy in the Homeowner Education Manual.

WE Prerequisite 1 – Water Metering 1. Multifamily: Install a water meter for each building.

- WE Credit 1 WE Credit 2 Indoor Water Use
- 1. Average flow rate of lavatory faucets shall be 1.00 gallons per minute or less. Each lavatory faucet or faucet aerator must be WaterSense labeled. 2. Average flow rate of showers shall be 1.50 gallons per minute or less. Each showerhead fixture and fitting must be WaterSense labeled.
- EA Prerequisite 1– Minimize Energy Performance (Single-Family and Multifamily Low-rise)
- 1. Meet the requirements of ENERGY STAR for Homes, version 3. 2. Complete the thermal enclosure system rater checklist, the HVAC system quality installation rater and contractor checklists, and the water management system builder checklist. Certified Passive House projects automatically meet the thermal enclosure system rater checklist requirement. Achieve a HERS index rating at or below the HERS index target or meet the requirements of the ENERGY STAR for Homes version 3.
- 3. At least one of the following appliances must be ENERGY STAR qualified and installed in each dwelling unit: refrigerator; OR dishwasher; OR clothes washer. 4. All duct runs must be fully ducted (i.e., building cavities may not be used as ducts). 5. Minimum envelope leakage – following areas of building envelope and demising walls shall be sealed, caulked, gasketed, or weather-stripped to minimize
- envelope leakage:
- 6. Joints around windows and doors. 7. Joints between walls and foundation; between conditioned spaces and attics, demising walls, crawl spaces or garage.
- 8. Seal joints between sill plate and drywall.
- 9. Seal joints between top plate and drywall. 10. All mechanical, plumbing, and electrical penetrations in exterior and demising walls. Mechanical chase shall be sealed at crawl space ceiling.
- 11. Exterior sheathing and house wrap.
- 12. Minimize entry of air from outdoors, attic, garage, and crawl space into exterior wall and interior wall cavities to ensure passing of air infiltration test. 13. Batt insulation shall be stapled to face of stud to ensure full contact of insulation with face of drywall. Cut insulation around all mechanical, plumbing, and electrical work.
- 14. Thermal Bypass Inspection
- The Green Rater will conduct a visual Thermal Bypass Inspection to inspect proper installation and continuity of thermal insulation and air-tightness of envelope. This inspection must take place after exterior envelope insulation has been installed, but prior to and installation of any drywall. One inspection per floor shall be conducted. If additional inspections are deemed necessary due construction sequencing, Contractor shall notify the Architect and Green Rater immediately. Contractor shall schedule the inspection with no less than two weeks' notice to the Green Rater. Contractor shall provide access to each unit and cooperate with conducting of the test. Additional inspections necessary due to incomplete work shall be back-charged to the Contractor. A sample Thermal Bypass Inspection Checklist is enclosed in section 018113.
- 7. Final Inspections -
- Upon substantial completion and prior to occupancy, the Green Rater will conduct a visual Final Inspection to verify green requirements incorporated in the project. The contractor shall notify the Green Rater at least four (4) weeks prior to the anticipated date for such inspection. Contractor shall provide access to each unit and cooperate with conducting of the test. Additional inspections necessary due to incomplete work shall be back-charged to the Contractor. 8. Third-Party Testing -
- Third-party Testing is to be scheduled and conducted in conjunction with the final inspection. The contractor shall notify the Green Rater at least four (4) weeks prior to the anticipated date for such inspection. Contractor shall provide access to each unit and cooperate with conducting of the test. The following tests shall be conducted by Green Rater:
- a. Air Infiltration Test (Blower door Test) Mandatory Measures air leakage through unit enclosure such as exterior walls, demising walls, ceilings, chases, etc. b. Distribution Loss Test (Duct Blaster Test) – Mandatory – Measures leakage through the mechanical distribution system Exhaust Test - Measures exhaust rate for bathroom fans and kitchen far
- d. Flow Test and Balancing Measure air flow at each supply register and pressure differential between rooms.

EA Prerequisite 2 – Energy Metering For Multifamily Buildings

1. Install an electricity meter or submeter for each residential unit and a gas meter for the entire building, or a gas meter or sub-meter for each unit. Single roomoccupancy units, transitional and temporary housing, and designated supportive housing buildings do not need an energy meter in each unit but must have a whole-building energy meter.

EA Prerequisite 3 – Education of the Homeowner, Tenant, or Building Manager

- 1. General Contractor to provide to Owner or Owner's Building Management an operations and maintenance manual, binder, or CD that includes all the following 2. the completed checklist of LEED-related features;
- 3. a copy of each signed accountability form;
- 4. copies of all ENERGY STAR for Home, version 3, checklists;
- 5. product manufacturers' manuals for all installed equipment, fixtures, and appliances:
- 6. general information on efficient use of energy, water, and natural resources;
- 7. operations and maintenance guidance for any installed equipment, including space heating and cooling, mechanical ventilation, humidity control, radon protection, renewable energy, and irrigation, rainwater harvesting, or graywater systems (following 2009 EPA WaterSense Single-Family New Home Specifications, item 5.0, Homeowner Education);
- 8. LEED Green Rater to assist with following items for inclusion in manuals:
- 9. guidance on occupants' activities and choices, including cleaning materials and methods, water-efficient landscaping, integrated pest management, effects of chemical fertilizers and pesticides, irrigation, lighting selection, and appliance selection; 10, information on local green power options; and
- 11. information on sharing utility data with USGBC via a USGBC-approved third party.
- 12. General Contractor to conduct a minimum one-hour walkthrough of the home with Owner and/or building manager. The walkthrough must feature the followina:
- 13. identification of all installed equipment;
- 14. instruction in how to use and operate the equipment; and 15. information on its maintenance.

MR Prerequisite 1 – Certified Tropical Wood

- 1. All wood in the building must be non-tropical, reused or reclaimed, or certified by the Forest Stewardship Council, or USGBC-approved equivalent. 2. If tropical wood is used it must be FSC Certified. Provide vendor's chain-of-custody certificate number must be shown on any invoice that includes FSCcertified products.
- MR Prerequisite 2 Durability Management 1. Meet the requirements of the ENERGY STAR for Homes, version 3, water management system builder checklist attached at end of this section.
- 2. Install all the applicable indoor moisture control measures:
- 3. Area directly above bathtub, spa, or shower (extending to ceiling), exposed wall or area behind fiberglass enclosure if wallboard is installed Use non-paperfaced backer board or paper-faced product or coating over wallboard that meets standard ASTM D 3273 standard
- 4. Kitchen, bathroom, laundry room, spa area Use water-resistant flooring; do not install carpet 5. Install water resistant flooring (not carpet) within 3 feet of exterior doors accessible from ground.
- 6. Tank water heater in or over living space Install drain and drain pan, drain pan and automatic water shut-off or flow restrictor, or floor drain with floor sloped to
- 7. Clothes washer (or condensing clothes dryer) in or over living space Install drain and drain pan, drain pan and automatic water shut-off or flow restrictor, floor drain with floor sloped to drain, or braided washer hose.
- 8. Conventional clothes dryer Exhaust directly to outdoors
- MR Credit 1 Durability Management Verification
- 1. LEED verification team (Green Rater) to inspect and verify each measure listed in the ENERGY STAR for Homes, version 3, water management system builder checklist. 2. Allow Green Rater access to the premise to inspect items in ENERGY STAR for Homes, version 3, water management system builder checklist.
- MR Credit 2 Environmentally Preferable Products 1. Option 1 - Local Production - Use products that were extracted, processed, and manufactured locally within 100 miles of site and for the following components (at least 50% of the component). Contractor to provide documentation proving compliance with Environmentally Preferable Product requirements for the
- following products:
- 2. Aggregate for concrete and foundation 3. Option 2 – Environmentally Preferable Products –Use synthetic gypsum board products that contain at least 95% recycled content and non-synthetic gypsum
- board products that contain at least 10% post-consumer recycled content. Contractor to provide documentation proving compliance with Environmentally Preferable Product requirements for the following products: 4. Drywall, Interior Finish

MR Credit 4 – Material Efficient Framing

- 1. Implement any of the following advanced framing techniques for at least 90% of each component.
- 2. Size headers for actual loads.
- 3. Use ladder blocking or drywall clips.
- 4. Use two-stud corners or California corners.
- 5. Space interior wall studs greater than 16 inches o.c.

EQ Prerequisite 1 – Ventilation Multifamily

- Local Exhaust
- cfm in bathrooms.
- 4. Use ENERGY STAR-labeled bathroom exhaust fans in all bathrooms.
 - exhaust system.
- 6. Ventilation
- Bedroom units.
- not meet these sound requirements.

- building and fire codes. EQ Prerequisite 2 – Combustion Venting

- appliance zone is less than 5 Pa.
- 7. it must be located in a detached utility building or open-air facility.

EQ Prerequisite 4 – Radon-Resistant Construction

- New Construction
- 1.3:

leakade.

Multifamily

2. Design and install local exhaust systems in all bathrooms (including half-baths) and the kitchen to meet the requirements of ASHRAE Standard 62.2–2010, Sections 5 and 7 or local equivalent, whichever is more stringent. Provide minimum intermittent local exhaust flow rates of 100 cfm or 5ACH in kitchen, and 50

3. Exhaust air to the outdoors. Do not route exhaust ducts to terminate in attics or interstitial spaces. Just recirculating range hoods or recirculating over-therange microwaves do not satisfy the kitchen exhaust requirements.

5. For exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute (188 liters per second), provide makeup air at a rate approximately equal to the exhaust air rate. Makeup air systems must have a means of closure and be automatically controlled to start and operate simultaneously with the

7. Fresh air ventilation to dwelling units shall comply with ventilation requirements of ASHRAE 62.2–2010.

8. Do not use systems that rely on transfer air from pressurized hallways or corridors, adjacent dwelling units, attics, etc. 9. Project teams using exhaust-only ventilation systems must comply with flow rate required by ASHRAE 62.2–2010. If bathroom exhaust fan is used for exhaust-only fresh-air ventilation, then refer to HVAC drawings for exhaust fan run-time and controls. Coordinate continuous / intermittent fan run-time and controls with HVAC and Electrical contractor. Provide dual-speed bathroom exhaust fan with continuous speed set to 30 cfm in 1-Bedroom units, 45 cfm in 2-

10. Continuous in-unit ventilation fans must be rated for sound at a maximum of 1.0 sone, per ASHRAE 62.2–2010, Section 7.2.1. Remote mounted fans need 11. Locate air inlets that are part of the ventilation design at least 10 feet (3 meters) from known sources of contamination, such as a stack, vent, exhaust hood, or

vehicle exhaust. Place the intake such that entering air is not obstructed by snow, plantings, or other material. Forced air inlets must be covered by screens to exclude rodents and insects (mesh not larger than 1/2 inch or 13 millimeters). 12. For all non-unit spaces, meet the minimum requirements of ASHRAE Standard 62.1–2010 or local equivalent, whichever is more stringent, Sections 4–7, Ventilation for Acceptable Indoor Air Quality (with errata). Mechanically ventilated spaces must be designed using the ventilation rate procedure or the applicable local code, whichever is more stringent. Ventilation fans that penetrate rated assemblies may require radiation and fire dampers to meet local

1. Do not install any unvented combustion appliances (ovens and ranges excluded).

2. Install a carbon monoxide (CO) monitor on each floor, hard-wired with a battery backup. In multifamily buildings, install a CO monitor on each floor of each unit. 3. For all fireplaces and woodstoves inside the building, provide doors that close or a solid glass enclosure. Interior fireplaces and woodstoves that are not closed-combustion or power-vented must pass BPI or RESNET combustion safety testing protocols to ensure that depressurization of the combustion

4. Space- and water-heating equipment that involves combustion must meet one of the following: 5. it must be designed and installed with closed combustion (i.e., sealed supply air and exhaust ducting); 6. it must be designed and installed with power-vented exhaust; or

EQ Prerequisite 3 – Garage Pollutant Protection

1. Place all air-handling equipment and ductwork outside the fire-rated envelope of the garage.

2. Tightly seal shared surfaces between the garage and conditioned spaces, including all of the following: 3. In conditioned spaces above the garage, seal all penetrations and all connecting floor and ceiling joist bays.

4. In conditioned spaces next to the garage, weather-strip all doors, install carbon monoxide detectors in rooms that share a door with the garage, seal all penetrations, and seal all cracks at the base of the walls.

1. Provide a Passive or Active Radon Mitigation System per following requirements:

2. Install polyethylene sheeting or extruded polystyrene (XPS) insulation beneath concrete slabs, including basement floors. Ensure sheeting is in direct contact with the concrete slab above. Install a capillary break at all crawlspace floors using ≥ 6 mil polyethylene sheeting, lapped 6 to 12 in. 3. Under the polyethylene sheeting or extruded polystyrene (XPS) insulation installed to meet ENERGY STAR Water Management System Builder Checklist Item

1. Install a 4 in. layer of 1/2 in. diameter or greater clean aggregate; OR

Install a 4 in. uniform layer of sand, overlain with either a layer of geotextile drainage matting throughout or strips of geotextile drainage matting along the perimeter installed according to the manufacturer's instructions.

4. A 3 or 4 in. diameter gas-tight vertical vent pipe, clearly labeled to conform with the radon-resistant standard used, e.g., "Radon Reduction System" or "Radon Pipe" or "Radon System." The vent pipe shall be connected to an open T-fitting in the aggregate layer (or connected to geotextile drainage matting according to the manufacturer's instructions) beneath the polyethylene sheeting, extending up through the conditioned spaces and terminating a minimum of 12 in. above the roof opening. For crawlspaces, install at least 5 ft. of horizontal perforated drain tile on either side of the T-fitting, attached to the vertical radon vent pipe beneath the sheeting and running parallel to the long dimension of the house.

5. Radon fan installed in the attic (i.e., an active system) OR an electrical receptacle installed in an accessible attic location near the radon vent pipe (i.e., a passive system) to facilitate future fan installation if needed 6. The requirements for radon protection are automatically satisfied if the building is elevated by at least 2 feet (600 millimeters), with open air space between the

building and ground. An enclosed vented crawlspace does not qualify. A garage under a building is an acceptable alternative. 7. Foundation air sealing with polyurethane caulk or the equivalent at all slab openings, penetrations and control or expansion joints.

EQ Prerequisite 5 – Air Filtering

1. Install air filters with a minimum efficiency reporting value (MERV) of 8 or higher on all recirculating space conditioning systems, per ASHRAE 62.2–2010. Design ductwork and specify the central blower to account for the pressure drop across the filter. Air filter housings must be airtight to prevent bypass or

2. Non-ducted systems are exempt from the minimum MERV 8 requirements but must have an internal air filter in the air-handling unit.

3. Install air filters rated MERV 6 or higher for mechanically supplied outdoor air for systems with 10 feet (3 meters) of ductwork or more, per ASHRAE 62.2-2010, Section 6.7.

EQ Prerequisite 6 – Environmental Tobacco Smoke

1. Provide signage to:

2. prohibit smoking in common areas, 3. prohibit smoking within 25 feet of building entrances.

4. or prohibit smoking on the entire property.

EQ Prerequisite 7 – Compartmentalization

1. Compartmentalize each residential unit to minimize leakage between units. Minimize uncontrolled pathways for environmental tobacco smoke and other indoor air pollutants between units by sealing penetrations in walls, ceilings, and floors and by sealing vertical chases (including utility chases, garbage chutes, mail drops, and elevator shafts) adjacent to the units.

2. Weather-strip all doors in the residential units leading to common hallways to minimize air leakage into the hallway. Weather-strip all exterior doors and

operable windows to minimize leakage from outdoors. 3. Demonstrate acceptable sealing of residential units by a blower door test. Follow the procedure described by RESNET or the ENERGY STAR Multifamily High Rise Program Testing and Verification Protocols, Version 1.0, with an allowable maximum leakage of 0.30 cfm50 per square foot (0.07 cmm50 per square meter) of enclosure (i.e., all surfaces enclosing the apartment, including exterior and party walls, floors, and ceiling) for new construction buildings. 4. Third-party Testing is to be scheduled and conducted in conjunction with the final inspection. The contractor shall notify the Green Rater at least four (4) weeks prior to the anticipated date for such inspection. Contractor shall provide access to each unit and cooperate with conducting of the test. The following tests shall be conducted by Green Rater:

5. Air Infiltration Test (Blower door Test) – Mandatory – Measures air leakage through unit enclosure.

EQ Credit 1.1 (option 1) – Enhanced Ventilation - Enhanced Local Exhaust

1. Use one of the following strategies in every bathroom with a shower, bathtub, or spa (i.e., half-baths are exempt) to control the use of the local exhaust fan: 2. an occupancy sensor:

3. an automatic humidistat controller;

4. a continuously operating exhaust fan; or 5. a delay timer that operates the fan for at least 20 minutes

EQ Credit 3.1 (option 1) – Balancing of H&C Distribution Systems - Multiple Zones

1. Single-family houses with less than 800 square feet (74 square meters) of conditioned floor area and multifamily buildings whose average unit size is less than 1,200 square feet (110 square meters) automatically meet the requirements of this credit.

EQ Credit 3.3 (option 3) – Balancing of H&C Distribution Systems – Pressure Balancing

1. Facilitate for Green Rater or a Third-Party to test each bedroom for pressure difference of more than 3 Pa (0.012-inch w.c.) with respect to the main body of the house when doors are closed, and the air handler is operating on highest speed.

EQ Credit 7 – Low Emitting Products

1. In the interior of the home, use products that have been tested and found compliant with the California Department of Public Health Standard Method V1.1–2010, using CA Section 01350, Appendix B, New Single-Family Residence Scenario, for emissions testing guidance. At least 90% of a component must meet the requirements to earn credit.

2. For site-applied interior paints and coatings, meet the requirements of CA Section 01350.

TABLE T. Acceptable certifications for emissions and content requirements						
CERTIFICATION	TESTING STANDARD REFERENCED IN LEED	APPLICABLE CATEGORIES				
SCS Indoor Advantage Gold	CDPH Standard Method v1.1 ANSI/BIFMA M7.1-2011	General Emissions Evaluation (many product categories), Furniture				
FloorScore	CDPH Standard Method v1.1	Flooring				
Carpet and Rug Institute (CRI) Green Label Plus	CDPH Standard Method v1.1	Carpeting, carpet padding, adhesives				
Greenguard Children and Schools	CDPH Standard Method v1.1	General Emissions Evaluation (many product categories including exterior applied products)				
Collaborative for High Performance Schools (CHPS)	CDPH Standard Method v1.1	General Emissions Evaluation (many product categories)				
CARB ULEF label	N/A	Composite Wood				
SCS calCOMPliant (if certificates indicate NAUF or ULEF requirements were achieved).	CARB ATCM 93120	Composite Wood				

ENCLOSURES

Low-Rise Renovation & New Construction

1 LEED for Homes Scorecard and Credit Categories

2 Energy Star National Rater Design Review Checklist 3 Energy Star National Rater Field Checklist

4 Energy Star National HVAC Design Report

5 Energy Star National HVAC Commissioning Checklist 6 Energy Star Water Management System Builder Checklist

END OF SECTION

POG MONMO ARCHITE 906 MONMO NEWPO WWW.PCA	CTURE CTURE CTURET RT, KY 41071 AARCH.com 859.431.8612
Geiger House for veterans / Klekamp family residences psh	2631 GILBERT AVE. Cincinnati, OH 45206
NO. DESCRIPTION PERMIT SET	DATE 04/13/23
LEED SPECIF	ICATIONS
21-11	6
G0	02

#	Name	Area	Gross or Net	Occ/SF	Persons
100	VESTIBULE	100 SF			
100E	ELEVATOR	60 SF			
100S	STAIR	188 SF 🦯	\sim	\sim	\sim
101	LOBBY	227 SF (
101S	STAIR	179 SF	m		
102	OFFICE	138 SF	Gross	100 SF	2
103	MECH	58 SF	Gross	300 SF	1
104	CORRIDOR	401 SF			
105	MECH	58 SF	Gross	300 SF	1
106	CORRIDOR	150 SF	\sim	\sim	
107	COMMUNITY ROOM	723 SF	Net	15 SF	49
108	CORRIDOR	549 SF	سم		
109	CORRIDOR	66 SF			
110	MECH / JAN	52 SF	Gross	300 SF	1
111	OFFICE	180 SF	Gross	100 SF	2
112	ELEC	149 SF	Gross	300 SF	1
113	RR	62 SF			
U100	APARTMENT UNIT	586 SF	Gross	200 SF	3
U101	APARTMENT UNIT	538 SF	Gross	200 SF	3
U102	APARTMENT UNIT	488 SF	Gross	200 SF	3
U103	APARTMENT UNIT	489 SF	Gross	200 SF	3
U104	APARTMENT UNIT	497 SF	Gross	200 SF	3
U105	APARTMENT UNIT	488 SF	Gross	200 SF	3
U106	APARTMENT UNIT	488 SF	Gross	200 SF	3
U107	ACCESIBLE APARTMENT UNIT	485 SF	Gross	200 SF	3
U108	APARTMENT UNIT	488 SF	Gross	200 SF	3
U109	APARTMENT UNIT	486 SF	Gross	200 SF	3
U110	APARTMENT UNIT	487 SF	Gross	200 SF	3
U111	APARTMENT UNIT	491 SF	Gross	200 SF	3
U112	APARTMENT UNIT	490 SF	Gross	200 SF	3

UNIT MATRIX:
NOTE: ACCESSIBLE UNITS ARE PROVIDED IN LIEU OF TYPE 'A' UNITS TO COMPLY WITH OHIO FINANCE AGENCY (OHFA) REQUIREMENTS FOR FUNDING
TOTAL UNITS = 49 (THIRD FLOOR = 16) (SECOND FLOOR = 16) (FIRST FLOOR = 13) (BASEMENT = 4)
ACCESSIBLE 1 BEDROOM UNITS = 3 (THIRD FLOOR = 1) (SECOND FLOOR = 1) (FIRST FLOOR = 1) (BASEMENT = 0)
SENSORY IMPAIRMENT 1 BEDROOM UNITS (TYPE 'B') = 2 (THIRD FLOOR = 1) (SECOND FLOOR = 1) (FIRST FLOOR = 0) (BASEMENT = 0)
1 BEDROOM UNITS (TYPE 'B') = 44 (THIRD FLOOR = 14) (SECOND FLOOR = 14) (FIRST FLOOR = 12) (BASEMENT = 4)
PARKING COUNTS:
PARKING SPACE REQUIRED: <u>TRANSITIONAL HOUSING = 7</u> (1 for every facility plus 1 for every 8 beds) TOTAL REQUIRED = 7

PARKING SPACES PROVIDED = 25 ACCESSIBLE SPACES REQUIRED = 2

ACCESSIBLE SPACES PROVIDED = 2

Stories:

between Dwelling Units:

Access Doorways: Ramps:

5/24/2023 11:23:39 AM PRINT DATE:

GENERAL NOTES - CODE PLAN

- ALL FIRE RATED PARTITIONS IN CORRIDORS, AROUND STAIRS CONNECTING 3-STORIES OR LESS, AND IN BETWEEN UNITS SHALL BE 5/8" TYPE "X" GYPSUM BOARD, EACH SIDE, OVER 2x4 OR 2x6 WOOD STUDS. (1) HOUR Α. PER UL U327 OR U305
- ALL FIRE RATED PARTITIONS AROUND STAIRS CONNECTING 4-STORIES OR MORE SHALL BE TWO LAYERS 5/8" В. TYPE "X" GYPSUM BOARD, EACH SIDE, OVER 2x4 OR 2x6 WOOD STUDS. (2) HOURS PER UL U301
- ALL FIRE RATED ELEVATOR SHAFT WALLS SHALL BE 8" CMU AND RATED FOR (2) HOURS PER UL U905. C.
- FLOOR-CEILING ASSEMBLIES BETWEEN UNITS SHALL BE RATED FOR (1) HOUR PER UL L528 D.

	Area Based Occupant Load - 3rd Floor					
#	Name	Area	Gross or Net	Occ/SF	Persons	
300	CORRIDOR	942 SF				
300E	ELEVATOR	60 SF				
300S	STAIR	189 SF				
301	MECH	54 SF	Gross	300 SF	1	
301S	STAIR	178 SF				
302	GROUP ROOM	254 SF	Net	15 SF	17	
303	CORRIDOR	152 SF				
304	MECH	58 SF	Gross	300 SF	1	
U300	APARTMENT UNIT	586 SF	Gross	200 SF	3	
U301	APARTMENT UNIT	538 SF	Gross	200 SF	3	
U302	APARTMENT UNIT	488 SF	Gross	200 SF	3	
U303	APARTMENT UNIT	489 SF	Gross	200 SF	3	
U304	APARTMENT UNIT	497 SF	Gross	200 SF	3	
U305	SENSORY IMPAIRMENT APARTMENT UNIT	488 SF	Gross	200 SF	3	
U306	APARTMENT UNIT	486 SF	Gross	200 SF	3	
U307	ACCESSIBLE APARTMENT UNIT	485 SF	Gross	200 SF	3	
U308	APARTMENT UNIT	488 SF	Gross	200 SF	3	
U309	APARTMENT UNIT	525 SF	Gross	200 SF	3	
U310	APARTMENT UNIT	488 SF	Gross	200 SF	3	
U311	APARTMENT UNIT	488 SF	Gross	200 SF	3	
U312	APARTMENT UNIT	487 SF	Gross	200 SF	3	
U313	APARTMENT UNIT	486 SF	Gross	200 SF	3	
U314	APARTMENT UNIT	490 SF	Gross	200 SF	3	
U315	APARTMENT UNIT	491 SF	Gross	200 SF	3	

LIFE SAFETY PLAN LEGEND					
	FIRE PARTITION - 1/2 HOUR REQUIRED (1 HOUR PROVIDED) TYPICAL BETWEEN RESIDENTIAL UNITS & CORRIDORS				
	FIRE BARRIER - 1 HOUR				
	FIRE BARRIER - 2 HOUR				
•••••	SMOKE-TIGHT WALL				
	NON RATED ASSEMBLY - PARTITION WALL				
	EXTERIOR 1 HOUR RATED BEARING WALLS				
(X' - X")	EGRESS PATH - (X' - X") EQUALS TRAVEL DISTANCE				
MAXIMUM EXIT ACCESS TRAVEL DISTANCE DOES NOT EXCEED = 250' MAXIMUM COMMON PATH OF TRAVEL (R-2 USE) DOES NOT EXCEED = 125'					

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	Area Based Occupant Load - 2nd Floor						
#	Name	Area	Gross or Net	Occ/SF	Persons		
200	CORRIDOR	945 SF					
200E	ELEVATOR	60 SF					
200S	STAIR	191 SF					
201	MECH	54 SF	Gross	300 SF	1		
201S	STAIR	179 SF					
202	SEATING	256 SF	Net	15 SF	18		
203	CORRIDOR	152 SF					
204	MECH	58 SF	Gross	300 SF	1		
U200	APARTMENT UNIT	586 SF	Gross	200 SF	3		
U201	APARTMENT UNIT	538 SF	Gross	200 SF	3		
U202	APARTMENT UNIT	488 SF	Gross	200 SF	3		
U203	APARTMENT UNIT	489 SF	Gross	200 SF	3		
U204	APARTMENT UNIT	497 SF	Gross	200 SF	3		
U205	APARTMENT UNIT	486 SF	Gross	200 SF	3		
U206	APARTMENT UNIT	488 SF	Gross	200 SF	3		
U207	APARTMENT UNIT	488 SF	Gross	200 SF	3		
U208	APARTMENT UNIT	488 SF	Gross	200 SF	3		
U209	APARTMENT UNIT	525 SF	Gross	200 SF	3		
U210	APARTMENT UNIT	488 SF	Gross	200 SF	3		
U211	APARTMENT UNIT	488 SF	Gross	200 SF	3		
U212	APARTMENT UNIT	487 SF	Gross	200 SF	3		
U213	SENSORY IMPAIRMENT APARTMENT UNIT	486 SF	Gross	200 SF	3		
U214	APARTMENT UNIT	490 SF	Gross	200 SF	3		
U215	ACCESSIBLE APARTMENT UNIT	488 SF	Gross	200 SF	3		
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PRINT DATE:

ONE HOUR WALL ASSEMBLY: U.L. #U327

1. Wood Studs — Nom 2 by 4 in. spaced 16 or 24 in. OC. Effectively cross braced.

2. Furring Channel — Resilient, 25 MSG galv steel. Furring channels spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws.

3. Gypsum Board* - 5/8 in. thick, 4 ft wide applied vertically. Screw attached one side to furring channels with 1 in. long, selfdrilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs. Wallboard attached on other side directly to studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws spaced 12 in. OC, vertical joints located over studs. AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc

CGC INC — Types C, SCX, SHX, FRX-G, IP-X1, IP-X2, IPC-AR, ULIX, ULX

PANEL REY S A — Type PRX

UNITED STATES GYPSUM CO — Types C, SCX, SHX, ULIX, ULX, FRX-G, IP-X1, IP-X2, IPC-AR

4. Batts and Blankets* — 3-1/2 in. thick mineral wool batts, placed to fill interior of wall, attached to the 4 in. face of the studs with staples placed 24 in. OC. **ROCKWOOL** — Type SAFEnSOUND

THERMAFIBER INC — Type SAFB, SAFB FF

4A. Glass Fiber Insulation — (As an alternate to Item 4) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) Catagories for names of Classified companies.

5. Joints and Screw Heads — Gypsum board joints covered with paper tape and joint compound. Screw heads covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape.

(GA FIL	E NO. RC 2601			GENERIC	1 HOUR	
GYPSUM WALLBOARD, WOOD JOISTS, ROOF COVERING Base layer 5/8" type X gypsum wallboard applied at right angles to 2 x 10 wood joists 24" o.c. with 11/4" Type W or S drywall screws 24" o.c. Face layer 5/8" type X gypsum wallboard or gypsum veneer base applied at right angles to joists with 17/8" Type W or S drywall screws 12" o.c. at joints and intermediate joists and 11/2" Type G drywall screws 12" o.c. placed 2" back on either side of end joints. Joints offset 24" from base layer joints. Wood joists supporting 1/2" plywood with exterior glue applied at right angles					FIRE		
to re	joists sistanc	with 8d nails. Appropriat	te roof co g, includin	vering. Ceiling ng trusses.	provides one hour fire	Approx. Ceiling Weight: 5 psf Fire Test: FM FC ITS, 8-6	
FM	FC-172						
4 UL	1 hr. L 505		FM GA GA GA	FC-172 FC 5406 RC 2601 RC 2602	Base layer 5/8" (15.9 mr attached with screws 24' or trusses 24" o.c. (610 (15.9 mm) Fire-Shield V F.S. Soffit Board screw a 1/2" (12.7 mm) plywood hour fire resistance	n) Fire-Shield Wallboard ' o.c. (610 mm) to wood joi mm). Second layer 5/8" Vallboard or 5/8" (15.9 mm) ttached 12" o.c. (305 mm). floor. Ceiling provides o protection for wood fran	
5	2 hr.		UL GA	L505 FC 5724	5/8" (15.9 mm) Fire-Shi Wallboard, base layer na 2 x 10 (38 mm x 241 mr spaced 16" o.c. (406 mm channels spaced 24" o.c through base board into Face layer of 5/8" (15.9 screwed to furring chanr T & G sub and finish flo consist of Floor Topping Rating also applies with C Kal-Kore plaster base.	eld C Gypsum iled at right angles to m) wood joists n), resilient furring and at right angles to joists mm) Fire-Shield C board hel. Nominal 1" (25.4 mm) or. Optional floor systems Mixture over plywood. 5/8" (15.9 mm) Fire-Shield	

Design No. **U305**

May 27, 2022

Bearing Wall Rating — 1 Hr Finish Rating — See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L.

STC Rating - 56 (See Item 9)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be

used — See Guide <u>BXUV</u> or <u>BXUV7</u>

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

2. Joints and Nail-Heads — Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound.

3. Gypsum Board* — 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of attachment of gypsum panels, refer to Items 6 through 6F, Steel Framing Members*. When Items 6, 6B, 6C, 6D, 6E, or 6F, Steel Framing Members*, are used, gypsum panels attached to furring channels with 1 in. long Type S buglehead steel screws spaced 12 in. OC.

When Item 6A, **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S buglehead steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.

TWO HOUR WALL ASSEMBLY: U.L. #U905

Bearing Wall Rating — 2 HR.

Nonbearing Wall Rating — 2 HR

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

See Concrete Blocks category for list of eligible manufacturers.

2. Mortar — Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. Portland Cement Stucco or Gypsum Plaster — Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. Loose Masonry Fill — If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

Subflooring — Min 23/32 in. thick T & G wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panels to be perpendicular to the trusses with end joints staggered 4 ft. Panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP[™] nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Aggregate*, or gypsum concrete.

2. **Trusses** — Parallel chord trusses, spaced a max 24 in. OC, fabricated from nom 2 by 4 in. lumber with lumber oriented vertically or horizontally. Min truss depth is 12 in. when item 9 is not employed. Min truss depth is 18 in. when item 9 is employed. Truss members secured together with min No. 20 MSG galv steel truss plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split-tooth-type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approx 7/8 in. centers with four rows of teeth per in. of plate width.

3. Furring Channels — Furring channels, 7/8 in. deep by 2-9/16 in. or 2-11/16 in. or 2-23/32 in. wide at the base and 1-7/16 in. wide at the face, formed from No. 25 ga galv steel, spaced 24 in. OC perpendicular to trusses. Channels secured to trusses with double strand of No. 18 SWG galv steel wire spaced 48 in. OC. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Two furring channels used at end joints of gypsum board (Item 4), each extending a min of 6 in. beyond both side edges of the board.

3A. **Resilient Channels** — (Not Shown) — As an alternate to Item 3, resilient channel formed from No. 26 MSG galv steel, spaced 16 in. OC perpendicular to trusses. Channels secured to each truss with 1-1/4 in. long No. 6 Type S bugle head steel screw. Channels overlapped at splices 4 in. Two resilient channels used at end joints of gypsum board (Item 4), each extending a min of 6 in. beyond both side edges of the board.

4. **Gypsum Board*** — One layer of nom 5/8 in. thick, 4 ft wide gypsum board, installed with long dimension perpendicular to furring or resilient channels. Gypsum board secured with 1 in. long No. 6 Type S bugle head steel screws spaced 12 in. OC and located a min of 1-1/2 in. from side and end joints. End joints secured to both resilient channels as shown in the end joint detail.

AMERICAN GYPSUM CO — Type AG-C

CERTAINTEED GYPSUM INC — Type C

CGC INC — Types C, IP-X2, IPC-AR

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types eXP-C, FSK-C, FSW-C, FSW-G

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C

THAI GYPSUM PRODUCTS PCL — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR

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Design No. L528 November 12, 2020 **Unrestrained Assembly Rating - 1 Hr.** Finish Rating - 22 Min.

1. Flooring System — The flooring system shall consist of one of the following:

System No. 2

Vapor Barrier — (Optional) — Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) — Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring — Min 3/4 in. thickness of lightweight insulating concrete with Perlite Aggregate* or Vermiculite

See **Perlite Aggregate** (CFFX) and **Vermiculite Aggregate** (CJZZ) categories for names of manufacturers.

21-116

G103

<u>GENERAL NOTES:</u>

November 202

SITE DESCRIPTION:

PROJECT NAME AND LOCATION:

GEIGER HOUSE FOR VETERANS/KLEKAMP FAMILY RESIDENCES 2631 GILBERT AVENUE CITY OF CINCINNATI HAMILTON COUNTY OHIO 45206

OWNER NAME, ADDRESS AND EMAIL

TALBERT SERVICES 2600 VICTORY PARKWAY CINCINNATI, OHIO 45206

CONTACT DURING CONSTRUCTION: THE MODEL GROUP 1826 RACE STREET CINCINNATI, OHIO 45202

DESCRIPTION:

THE PROJECT WILL CONSIST OF CONSTRUCTING A NEW 34,247 SF THREE STORY FACILITY TO SUPPORT TALBERT SERVICES BY PROVIDING COMFORTABLE HOUSING ENVIRONMENT FOR VETERANS TO RECEIVE BEHAVIORAL HEALTH SERVICES.

RUNOFF COEFFICIENT:

PRE-DEVELOPED RUNOFF COEFFICIENT - 0.88 POST-DEVELOPED RUNOFF COEFFICIENT - 0.83

<u>SITE AREA:</u>

TOTAL SITE AREA: 0.87 ACRES

- TOTAL CLEARING:: 0.00 Ac.
- TOTAL LAND DISTURBED BY CONSTRUCTION ACTIVITIES: 0.87 Ac. TOTAL IMPERVIOUS AREA: 0.74 Ac.

SOIL TYPES: TBD

SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES:

- 1. INSTALL PERIMETER CONTROLS 2. STRIP AND STOCKPILE TOPSOIL
- 3. FULL SITE GRADING
- 4. STABILIZE DENUDED AREAS AND STOCKPILES WITHIN 14 DAYS OF LAST CONSTRUCTION ACTIVITY
- 5. INSTALL UTILITIES 5. INSTALL INLET PROTECTION
- 6. BUILDING CONSTRUCTION
- 7. FINAL GRADING AND INSTALL PERMANENT SEEDING
- 8. RESEED ANY DISTURBED AREAS AND LANDSCAPE SITE

NAME OF RECEIVING WATERS:

TRIBUTARY TO MILL CREEK

GENERAL NOTES

ALL CONSTRUCTION ACTIVITIES MUST COMPLY WITH ALL LOCAL EROSION/SEDIMENT CONTROL, WASTE DISPOSAL, SANITARY AND HEALTH REGULATIONS.

ALL EROSION AND SEDIMENT CONTROL PRACTICES MUST MEET THE STANDARDS AND SPECIFICATIONS OF THE OHIO RAINWATER AND LAND DEVELOPMENT HANDBOOK(2006).

OTHER EROSION CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND IMPLEMENTATION OF ADDITIONAL EROSION CONTROL ITEMS, AT THE ENGINEER'S DISCRETION.

REGULAR INSPECTION AND MAINTENANCE WILL BE PROVIDED FOR ALL EROSION AND SEDIMENT PRACTICES.

THE CONTRACTOR SHALL USE EROSION CONTROL MEASURES AS NECESSARY TO PREVENT SEDIMENT MOVEMENT INTO AREAS DESIGNATED AS WETLANDS.

NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF

ADDITIONAL EROSION AND SEDIMENT CONTROL BMP'S MAY BE REQUIRED AS IDENTIFIED BY THE JURISDICTIONAL AGENCY.

CONTROLS

EROSION AND SEDIMENT CONTROLS:

TEMPORARY STABILIZATION TOPSOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS WILL BE STABILIZED WITH TEMPORARY SEED AND MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY IN THAT AREA. THE TEMPORARY SEED SHALL BE APPLIED AS PER THE TEMPORARY SEEDING SPECIFICATION AREAS OF THE SITE WHICH ARE TO BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILE AND STONE SUB-BASE UNTIL ASPHALT PAVEMENT CAN BE APPLIED.

PERMANENT STABILIZATION DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 7 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OR WITHIN 2 DAYS FOR AREAS WITHIN 50 FEET OF A STREAM, REFER TO LANDSCAPE PLAN FOR DETAILS.

DUST CONTROL

DUST CONTROL INVOLVES PREVENTING OR REDUCING DUST FROM EXPOSED SOILS OR OTHER SOURCES DURING LAND DISTURBING, DEMOLITION AND CONSTRUCTION ACTIVITIES TO REDUCE THE PRESENCE OF AIRBORNE SUBSTANCES WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS OR HARM ANIMAL OR PLANT LIFE.

THE FOLLOWING SPECIFICATIONS FOR DUST CONTROL SHALL BE FOLLOWED ONSITE:

1. <u>VEGETATIVE COVER AND /MULCH</u> – APPLY TEMPORARY OR PERMANENT SEEDING AND MULCH TO AREAS THAT WILL REMAIN IDLE FOR OVER 21 DAYS. SAVING EXISTING TREES AND LARGE SHRUBS WILL ALSO REDUCE SOIL AND AIR MOVEMENT ACROSS DISTURBED AREAS. SEE TEMPORARY SEEDING; PERMANENT SEEDING; MULCHING PRACTICES; AND TREE AND NATURAL AREA PROTECTION PRACTICES. 2. WATERING - SPRAY SITE WITH WATER UNTIL THE SURFACE IS WET BEFORE AND DURING GRADING AND REPEAT AS NEEDED, ESPECIALLY ON HAUL ROADS AND OTHER HEAVY TRAFFIC ROUTES. WATERING SHALL BE DONE AT A RATE THAT PREVENTS DUST BUT DOES NOT CAUSE SOIL EROSION. WETTING AGENTS SHALL BE UTILIZED ACCORDING TO MANUFACTURERS INSTRUCTIONS 3. <u>SPRAY-ON ADHESIVES</u> - APPLY ADHESIVE ACCORDING TO THE FOLLOWING TABLE OR MANUFACTURERS' INSTRUCTIONS.

ADHESIVE	WATER DILUTION (ADHESIVE WATER)
LATEX EMULSION	12.5:1
RESIN IN WATER ACRYLIC EMULSION (NO-TRAFFIC)	4:1
ACRYLIC EMULSION (NO-TRAFFIC)	7:1
ACRYLIC EMULSION (TRAFFIC)	3.5:1

4. STONE - GRADED ROADWAYS AND OTHER SUITABLE AREAS WILL BE STABILIZED USING CRUSHED STONE OR COARSE GRAVEL AS SOON AS PRACTICABLE AFTER REACHING AN INTERIM OR FINAL GRADE. CRUSHED STONE OR COARSE GRAVEL CAN BE USED AS A PERMANENT COVER TO PROVIDE CONTROL OF SOIL EMISSIONS.

5. BARRIERS - EXISTING WINDBREAK VEGETATION SHALL BE MARKED AND PRESERVED. SNOW FENCING OR OTHER SUITABLE BARRIER MAY BE PLACED PERPENDICULAR TO PREVAILING AIR CURRENTS AT INTERVALS OF ABOUT 15 TIMES THE BARRIER HEIGHT TO CONTROL AIR CURRENTS AND BLOWING SOIL. 6. CALCIUM CHLORIDE - THIS CHEMICAL MAY BE APPLIED BY MECHANICAL SPREADER AS LOOSE, DRY GRANULES OR FLAKES AT A RATE THAT KEEPS THE SURFACE MOIST BUT NOT SO HIGH AS TO CAUSE WATER POLLUTION OR PLANT DAMAGE. APPLICATION RATES SHOULD BE STRICTLY IN ACCORDANCE WITH SUPPLIERS? SPECIFIED RATES

7. OPERATION AND MAINTENANCE - WHEN TEMPORARILY DUST CONTROL MEASURES ARE USED; REPETITIVE TREATMENT SHOULD BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL 8. <u>STREET CLEANING</u> – PAVED AREAS THAT HAVE ACCUMULATED SEDIMENT FROM CONSTRUCTION SHOULD BE CLEANED DAILY, OR AS NEEDED, UTILIZING A STREET SWEEPER OR BUCKET TYPE END LOADER OR SCRAPER.

APPLICATION RATE NOZZLE TYPE Gal./Ac. FINE 235 FINE 300 COARSE 450 COARSE 350

TEMPORARY SEEDING

DESCRIPTION

TEMPORARY SEEDINGS ESTABLISH TEMPORARY COVER ON DISTURBED AREAS BY PLANTING APPROPRIATE RAPIDLY GROWING ANNUAL GRASSES OR SMALL GRAINS. TEMPORARY SEEDING PROVIDES EROSION CONTROL ON AREAS IN BETWEEN CONSTRUCTION OPERATIONS. GRASSES WHICH ARE QUICK GROWING ARE SEEDED AND USUALLY MULCHED TO PROVIDE PROMPT, TEMPORARY SOIL STABILIZATION. IT EFFECTIVELY MINIMIZES THE AREA OF A CONSTRUCTION SITE PRONE TO EROSION AND SHOULD BE USED EVERYWHERE THE SEQUENCE OF CONSTRUCTION OPERATIONS ALLOWS VEGETATION TO BE ESTABLISHED.

SPECIFICATIONS FOR TEMPORARY SEEDING:

TEMPORARY SEEDING SPECIES SELECTION									
SEEDING DATES	SPECIES	LB/1000 FT ²	LB PER ACRE						
MARCH 1 to AUGUST 15	OATS	3	128 LB(4 BUSHEL)						
	TALL FESCUE	1	40 LB						
	ANNUAL RYEGRASS	1	40 LB						
	PERENNIAL RYEGRASS	1	40 LB						
	TALL FESCUE	1	40 LB						
	ANNUAL RYEGRASS	1	40 LB						
	ANNUAL RYEGRASS	1.25	55 LB						
	PERENNIAL RYEGRASS	3.25	142 LB						
	CREEPING RED FESCUE	0.40	17 LB						
	KENTUCKY BLUEGRASS	0.40	17 LB						
	OATS	3	128 LB(3 BUSHEL)						
	TALL FESCUE	1	40 LB						
	ANNUAL RYEGRASS	1	40 LB						
AUGUST 16 to NOVEMBER 1	RYE	3	112 LB(2 BUSHEL)						
	TALL FESCUE	1	40 LB						
	ANNUAL RYEGRASS	1	40 LB						
	WHEAT	3	120 LB(2 BUSHEL)						
	TALL FESCUE	1	40 LB						
	ANNUAL RYEGRASS	1	40 LB						
	PERENNIAL RYE	1	40 LB						
	TALL FESCUE	1	40 LB						
	ANNUAL RYEGRASS	1	40 LB						
	ANNUAL RYEGRASS	1.25	40 LB						
	PERENNIAL RYEGRASS	3.25	40 LB						
	CREEPING RED FESCUE	0.40	40 LB						
	KENTUCKY BLUEGRASS	0.40	17 LB						
NOV 1 to SPRING SEEDING USE	E MULCH ONLY, SODDING	PRACTICES O	R DORMANT SEEDING.						
NOTE: OTHER APPROVED SEED SF	PECIES MAY BE SUBSTITU	TED							

- 1. STRUCTURAL EROSION AND SEDIMENT-CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION SITE
- 2. TEMPORARY SEED SHALL BE APPLIED BETWEEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL NOT BE GRADED OR REWORKED FOR 14 DAYS OR GREATER. THESE IDLE AREAS SHALL BE SEEDED WITHIN 7 DAYS AFTER GRADING.
- 3. THE SEEDBED SHOULD BE PULVERIZED AND LOOSE TO ENSURE THE SUCCESS OF ESTABLISHING VEGETATION. TEMPORARY SEEDING SHALL NOT BE POSTPONED IF IDEAL SEEDBED PREPARATION IS NOT POSSIBLE.
- 4. SOIL AMENDMENTS - TEMPORARY VEGETATION SEEDING RATE SHALL ESTABLISH ADEQUATE STANDS OF VEGETATION WHICH MAY REQUIRE THE USE OF SOIL AMENDMENTS. BASE RATE FOR LIME AND FERTILIZER SHALL BE USED.
- 5. SEEDING METHOD - SEED SHALL BE APPLIED UNIFORMLY WITH A CYCLONE SPREADER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN FEASIBLE, SEED THAT HAS BEEN BROADCAST SHALL BE COVERED BY RAKING OR DRAGGING AND THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS USED, THE SEED AND FERTILIZER WILL BE MIXED ON SITE, AND THE SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.

MULCHING TEMPORARY SEEDING

- 1. APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION
- 2. MATERIALS
- STRAW IF STRAW IS USED IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT THE RATE OF 2 TONS PER ACRE OR 90 LB. PER 1,000 SQUARE FEET (TWO TO THREE BALES).
- HYDROSEEDERSIF WOOD-CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2,000 LB. PER ACRE OR 46 LB. PER 1,000 SQUARE FEET.
- OTHER ACCEPTABLE MULCHES INCLUDE MULCH MATTINGS APPLIED ACCORDING MANUFACTURER?S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS PER ACRE.

3. STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER.

ANCORING METHODS:

- MECHANICAL A DISK, CRIMPER, OR SIMILAR TYPE TOOLS SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE
- MULCH MATERIAL INTO THE SOIL. STRAW • MECHANICALLY ANCHORED SHALL NOT BE CHOPPED
- BUT, LEFT TO A LENGTH OF APPROXIMATELY 6 INCHES
- MULCH NETTINGS NETTINGS SHALL BE USED ACCORDING TO THE MANUFACTURER?S
- RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATION
- RUNOFF AND ON CRITICAL SLOPES
- SYNTHETIC BINDERS SYNTHETIC BINDERS SUCH AS ACRYLIC DLOR(AGRI-TAC), DCA-70, PETROSET, TERRA TACK OR EQUAL MAY BE USED AT RATES
- RECOMMENDED BY THE MANUFACTURER
- WOOD CELLULOSE FIBER WOOD CELLULOSE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF
- 750 LB PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER, AND THE MIXTURE
- SHALL CONTAIN A MAXIMUM OF 50 LB. PER 100 GALLONS

PERMANENT SEEDING (IF NOT SPECIFIED ON THE LANSCAPE PLAN)

PERMANENT STABILIZATION SPECIFICATIONS: 1. APPLY TOPSOIL TO A 6" DEPTH. 2. APPLY LIMESTONE AT A RATE OF 2 TONS PER ACRE. 3. APPLY FERTILIZER 10-10-10 OR 12-12-12 OR EQUAL AT 1000 LBS./ACRE 4. APPLY GRASS SEED MIXTURE OF: CREEPING RED FESCUE AT 20 LBS./ACRE DOMESTIC RYE GRASS AT 10 LBS./ACRE KENTUCKY BLUEGRASS AT 10 LBS./ACRE 5. MULCHING SHALL BE OF SMALL GRAIN STRAW OR EQUIVALENT AT 160 GAL./ACRE OR MULCH NETTING. 6. MULCH ANCHOR: EMULSIFIED ASPHALT (SS-1 OR EQUAL) AT 100 lbs. per 1000 S.F.

PERMANENT STABILIZATION IN DETENTION AREAS AND STEEP BANKS:

- 1. APPLY 6" OF TOPSOIL, APPLY LIMESTONE 2 TONS PER ACRE, AND APPLY FERTILIZER, 10–5–5 OR EQUAL AT 400 LBS./ACRE.
- 2. APPLY SEEDING MIXTURE OF: SPREADING FESCUE AT 15 LBS./ACR CHEWING'S RED FESCUE AT 15 LBS./ACR 15 LBS./ACRE KENTUCKY BLUEGRASS AT 25 LBS./ACRE 3. MULCH UNROTTED SMALL GRAIN STRAW 90 LBS./1000 S.F.
- 4. MULCH ANCHOR: EMULSIFIED ASPHALT (SS-1 OR EQUAL) 160 GAL./ACRE.
- NOTE: SEEDING RATES GIVEN ARE MINIMUMS NECESSARY UNDER IDEAL CONDITIONS FOR EROSION CONTROL. ADDITIONAL SEED IS NECESSARY TO ESTABLISH LAWN AREAS. ADDITIONAL SEED MAY ALSO BE REQUIRED IF ADVERSE GROWING CONDITIONS OR LACK OF RAINFALL AND WATER DO NOT ALLOW FOR PROPER GERMINATION AND GROWTH.

WALL TYPES

Type Mark	Description	Fire Rating
		1
C1.2	NEW FURRING: 5/8" GYPSUM BOARD (ONE SIDE) OVER 7/8" X 20 GA. HAT CHANNELS AT 16" O.C.	-
G2.2	NEW PARTITION: 5/8" GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G2.2A	NEW PARTITION: 5/8" GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G2.4	NEW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G2.4A	NEW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 1/2" RESILIENT CHANNEL @ 24" O.C. (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
G2.6	5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUB/SHOWER SIDE) AND 5/8" GYPSUM BOARD (NON-TUB/SHOWER SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G2.7	NEW PARTITION: 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUB/SHOWER SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G3.2	NEW PARTITION: 5/8" GYPSUM BOARD (BOTH SIDES) OVER 2X6 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G3.4	NEW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 2X6 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G3.7	NEW PARTITION: 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUB/SHOWER SIDE) OVER 2X6 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G4.1	5/8" GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF GYPSUM BOARD CEILDING. WALL MUST BE SMOKE TIGHT	SMOKE
H2.1	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U305: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
H2.1A	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U305: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
H2.2	NEW (2) HOUR FIRE RATED PARTITION PER U.L. #U301: (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	2
H2.3A	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U327: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 1/2" RESILIENT CHANNEL @ 24" O.C. (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
H3.1A	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U305: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X6 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
H3.2	NEW (2) HOUR FIRE RATED PARTITION PER U.L. #U301: (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X6 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	2
H3.3A	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U327: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 1/2" RESILIENT CHANNEL @ 24" O.C. (ONE SIDE) OVER 2X6 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSID	1
J2.2	5/8" GYPSUM BOARD (ONE SIDE) OVER 2X4 WOOD FURRING SIDE FRAMED AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF GYPSUM BOARD CEILING.	

M3.2 NEW (2) HOUR FIRE RATED PARTITION PER U.L. #U905: 8" CMU WALL WITH HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY.

FLOOR PLAN - BASEMENT

A100 SCALE: 1/8" = 1'-0"

1

GENERAL NOTES - FLOOR PLANS

- OTHERWISE. SEE SHEET G102 FOR WALL TYPES Β.
- PROVIDE BLOCKING IN WALLS AROUND TUB/SHOWER (ALL SIDES) AND TOILET FOR C. POTENTIAL FUTURE GRAB BARS
- PROVIDE 2x8 BLOCKING TOP AND BOTTOM OF ALL WALL CABINETS D.
- OFFSET NEW DOORS FROM ADJACENT PERPENDICULAR WALL 4" UNLESS INDICATED OTHERWISE
- PROVIDE UL LISTED FIRESTOPPING AT ALL PENETRATIONS THROUGH FIRE RATED F. WALLS AND FLOOR TO MAINTAIN THE REQUIRED FIRE RESISTANCE RATING OF THE ASSEMBLY.
- WASHERS AND DRYERS SHALL BE ENERGY STAR RATED. G.
- PROVIDE 1/2" SOLID ACRYLIC RESIN WINDOW STOOL EXTENDING 1/2" BEYOND FACE OF Η. GYPSUM AT ALL WINDOWS. A RADON MITIGATION SYSTEM WILL BE PROVIDED UNDER SEPARATE CONTRACT. - I.
- COORDINATE PIPE RUNS FOR THIS SYSTEM WITH MEP EQUIPMENT AND WALL. WHERE POSSIBLE, PIPES SHALL BE LOCATED IN NEW WALLS. WHERE NOT POSSIBLE TO LOCATE PIPES WITHIN CURRENTLY SHOWN WALLS, PIPES SHALL BE BOXED OUT TO MINIMUM DIMENSION.

SHEET KEYNOTES

6A	5'-0" X 2'-0" DEEP PLASTIC LAMINATE COUNTER AT 36" A.F.F WITH 4" BACKSPLASH AND PLASTIC KNEW BRACES AT EACH END WHERE NO ABUTTING A WALL
9G	PROVIDE 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD ON THIS FACE OF WALL.
9H	PROVIDE 5/8" MOISTURE-RESISTANT GYPSUM BOARD ON THIS FACE OF WALL.
10B	SEMI-RECESSED FIRE EXTINGUISHER CABINET AND EXTINGUISHER
10R	FIRE EXTINGUISHER MOUNTED W/ WALL BRACKET.
11A	FRONT LOADING, ADA & UFAS COMPLIANT WASHING MACHINE
11B	FRONT LOADING, ADA & UFAS COMPLIANT DRYER
22A	LAUNDRY TUB. SEE MEP DRAWINGS.
22C	HOSE BIBB. SEE MEP DRAWINGS.

MAGNETIC PLAN SCALE: 1/8" = 1'-0" A103

Mark	Description	Rating
		1
C1.2	NEW FURRING: 5/8" GYPSUM BOARD (ONE SIDE) OVER 7/8" X 20 GA. HAT CHANNELS AT 16" O.C.	-
G2.2	NEW PARTITION: 5/8" GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G2.2A	NEW PARTITION: 5/8" GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G2.4	NEW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G2.4A	NEW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 1/2" RESILIENT CHANNEL @ 24" O.C. (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
G2.6	5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUB/SHOWER SIDE) AND 5/8" GYPSUM BOARD (NON-TUB/SHOWER SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G2.7	NEW PARTITION: 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUB/SHOWER SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G3.2	NEW PARTITION: 5/8" GYPSUM BOARD (BOTH SIDES) OVER 2X6 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G3.4	NEW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 2X6 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G3.7	NEW PARTITION: 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUB/SHOWER SIDE) OVER 2X6 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	-
G4.1	5/8" GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF GYPSUM BOARD CEILDING. WALL MUST BE SMOKE TIGHT	SMOKE
H2.1	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U305: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
H2.1A	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U305: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
H2.2	NEW (2) HOUR FIRE RATED PARTITION PER U.L. #U301: (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	2
H2.3A	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U327: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 1/2" RESILIENT CHANNEL @ 24" O.C. (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
H3.1A	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U305: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X6 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	1
H3.2	NEW (2) HOUR FIRE RATED PARTITION PER U.L. #U301: (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X6 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	2
H3.3A	NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U327: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 1/2" RESILIENT CHANNEL @ 24" O.C. (ONE SIDE) OVER 2X6 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSID	1

WALL TYPES

Type

Fire

5' - 10"

19' - 5 3/4

APARTMENT

26' - 11"

APARTMENT UNIT U300

PRINT DATE: 7

7/12/2023 4:28:14 PM

OLE

PRINT DATE:

4/26/2023 4:16:59 PM

H3.3A 5' - 1 1/2" H3.3A 6' - 0" 5' - 2" 2' - 4" 5' - 11" 2' - 0" 5' - 7" 6' - 8 1/2" 11 ACCESSIBLE UNIT BATH A303 KITCHEN H3.3A H2.3A 30" CLEAR SPACE UNDER COUNTER ------G2.2 H2.3A G2.2 G2.2 BEDROOM 48x6 LIVING ROOM LIVING ROOM 9' - 5 3/4" 10' - 6 1/4" G2.2 9' - 5 3/4" 10' - 6 1/4" G2.2 BEDROOM 2' - 9 1/2" 30x48 _____ U003, U004, U103, U105, U106, U108, U109, U110, U203, U205, U206, U207, U208, U210, U211, U212, U213, U303, U107, U307 U305, U306, U308, U310, U311, U312, U313 ENLARGED FLOOR PLAN ENLARGED FLOOR PLAN 2 ONE BEDROOM ACCESSIBLE APARTMENT TYP. ONE BEDROOM APARTMENT SCALE: 1/4" = 1'-0" A301 SCALE: 1/4" = 1'-0" A301 JME DOCI H3.3A IS 5' - 1 1/2" 5' - 1 1/2" 6 3/4" 2' - 0" 6' - 8 1/2" (D1) G2.2 9' - 10" 10' - 8 1/2" KITCHEN H2.3A H2.1A G2.2 7' - 1" 7' - 1" G2.2 H2.3A A303 G2.2 BEDROOM LIVING ROOM 13' - 3" 9' - 7 1/2" 10' - 5 3/4" 2' - 11" 2' - 6" A303 6' - 2 1/4" H3.3A 1 1/2"_____2' - 0" 5' - 0 1/8" U209, U309 U001, U002, U111, U112, U214, U314, U315 ENLARGED FLOOR PLAN ONE BEDROOM APARTMENT ENLARGED FLOOR PLAN 5 4 ONE BEDROOM APARTMENT SCALE: 1/4" = 1'-0" SCALE: 1/4" = 1'-0" A301 A301

U215 ENLARGED FLOOR PLAN 3 ONE BEDROOM ACCESSIBLE APARTMENT A301 SCALE: 1/4" = 1'-0"

A. ALL DIMENSIONS ARE TO FACE OF STUD OR FACE OF MASONRY UNLESS NOTED			
OTHERWISE. B. SEE SHEET G102 FOR WALL TYPES			
C. PROVIDE BLOCKING IN WALLS AROUND TUB/SHOWER (ALL SIDES) AND TOILET FOR POTENTIAL FUTURE GRAB BARS			┛┃
 D. PROVIDE 2x8 BLOCKING TOP AND BOTTOM OF ALL WALL CABINETS E. OFFSET NEW DOORS FROM ADJACENT PERPENDICULAR WALL 4" UNLESS INDICATED 	C	ARCHITECTUR	Ε
OTHERWISE F. PROVIDE UL LISTED FIRESTOPPING AT ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOOR TO MAINTAIN THE REQUIRED FIRE RESISTANCE RATING OF THE			
ASSEMBLY. G. WASHERS AND DRYERS SHALL BE ENERGY STAR RATED. H BROVIDE 1/2" SOLID ACRYLIC RESIN WINDOW STOOL EXTENDING 1/2" REVOND FACE	OF	906 MONMOUTH STREET NEWPORT, KY 41071	TECT
GYPSUM AT ALL WINDOWS. I. A RADON MITIGATION SYSTEM WILL BE PROVIDED UNDER SEPARATE CONTRACT.	01	www.PCA-ARCH.com	ARCHI
COORDINATE PIPE RUNS FOR THIS SYSTEM WITH MEP EQUIPMENT AND WALL. WHEI POSSIBLE, PIPES SHALL BE LOCATED IN NEW WALLS. WHERE NOT POSSIBLE TO LOCATE PIPES WITHIN CURRENTLY SHOWN WALLS. PIPES SHALL BE BOXED OUT TO	RE	859.431.8612	
MINIMUM DIMENSION.		E OF ON	
SHEET KEYNOTES		EMMA	
6B COAT ROD AND 12" DEEP WIRE SHELF. AT ACCESSIBLE UNITS THE SHELF SHALL BE 48" A.F.F.		ADKISSON	
6D PLASTIC LAMINATE COUNTER. 6E FINISH END OF BASE CABINET.		E. M.M.	
6F (5) 16" DEEP ADJUSTABLE SHELVES TO EXTEND FROM 12"-72". WIRE SHELVES STANDARD.		ERED ARCH	
9A KNEE WALL BELOW COUNTER9E PROVIDE 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD ON THIS		EMMA ADKISSON, LIC# 2118357	
FACE OF RATED WALL AT TUB/SHOWER SURROUNDS IN ACCORDANCE WITH UL RATED WALL ASSEMBLY. WHERE SURROUND IS NEXT TO TOILET, EXTEND MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD AT SAME HEIGHT TO		EXPIRATION DATE 12/31/2023	
9I PROVIDE 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD ON THIS FACE OF RATED WALL TO A HEIGHT OF 4'-0" BEHIND SINK/TOILET IN		Ŧ	
ACCORDANCE WITH UL RATED WALL ASSEMBLY. 9K PROVIDE 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD THIS FACE AT WALL BEHIND SINK TO A HEICHT OF 4' 0" (OP TOD OF KNET WALL WITEDE		> t	
AT WALL BEHIND SINK TO A REIGHT OF 4-0 (OK TOP OF KNEE WALL WHERE APPLICABLE). REMAINDER OF WALL FACE TO BE MOISTURE-RESISTANT GYPSUM BOARD.		SЧ	
9L PROVIDE 5/8" MOISTURE-RESISTANT GYPSUM BOARD ON THIS FACE OF WALL AT PORTIONS OF WALL WITHIN 4'-0" OF SINK HORIZONTALLY AND VERTICALLY.			
9M PROVIDE 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD ON THIS FACE OF WALL TO A HEIGHT OF 4'-0" BEHIND SINK/TOILET.		Ц Ц	
10E18" TOWEL BAR10F18" VERTICAL GRAB BAR			
10G 36" GRAB BAR 10H 42" GRAB BAR		山 う	
10I 18"X30" MIRROR CENTERED OVER SINK			
101 TOTLET TISSUE DISPENSER EQUAL TO DOBRIUK #2888 101 SURFACE MOUNTED MEDICINE CABINET 104 SURFACE MOUNTED MEDICINE CABINET		ы П	
10M 63" POLYRESIN / FIBERGLASS ROLL-IN ICC ANSI A117.1 COMPLIANT SHOWER BASE & WALL SURROUND (STERLING #OC-S-63, SERIES #6206 OR EQUAL PROVIDING MIN_30"X60" CLEAR), GRAB BARS, AND FOLDING SEAT			
10N PROVIDE ADA COMPLIANT BATHTUB AND FIBERGLASS WALL SURROUND			
100 SHOWER CURTAIN AND ROD 11C ELECTRIC RANGE - FRIGIDAIRE #FFEF3009P OR EQUAL			
11D ADA COMPLIANT DROP-IN ELECTRIC RANGE - FRIGIDAIRE #FFED3015P OR EQUAL. CONTROLS FOR OVEN AND RANGE TO BE LOCATED ON FRONT OF RANGE TO AVOID REACHING OVER BURNERS		Ö R H	
TANGE TO AVOID REACHING OVER BURNERS. 11E ADA COMPLIANT, ENERGY STAR QUALIFIED REFRIGERATOR - FRIGIDAIRE #EET18140 OP FOUND AT LEAST FOR OF ERFECTER OUTLY/FOR INCLUDING			
#FFT1014Q UK EQUAL. AT LEAST 303 UF FKEEZEK SMELVES, INGLUDING	-		
BOTTOM OF THE FREEZER, 54" MAXIMUM ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT MAXIMUM HEIGHTS POSSIBLE			
BOTTOM OF THE FREEZER, 54" MAXIMUM ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT MAXIMUM HEIGHTS POSSIBLE		JIL 531 Gl	
BOTTOM OF THE FREEZER, 54" MAXIMUM ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT MAXIMUM HEIGHTS POSSIBLE		USE MIL 2631 G Cincinna	
BOTTOM OF THE FREEZER, 54" MAXIMUM ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT MAXIMUM HEIGHTS POSSIBLE WALL TYPES		FAML 2631 G Cincinna	
BOTTOM OF THE FREEZER, 54" MAXIMUM ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT MAXIMUM HEIGHTS POSSIBLE WALL TYPES Description	Fire Rating	HOUSE FAMIL 2631 G Cincinnar	
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BOTTOM OF THE FREEZER, 54" MAXIMUM ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT MAXIMUM HEIGHTS POSSIBLE WALL TYPES Description EW FURRING, 5/8" GYPSUM BOARD (ONE SIDE) OVER 7/8" X 20 GA HAT CHANNELS AT 16" O.C. EW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 7/8" X 20 GA HAT CHANNELS AT 16" O.C. EW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 7/8" X 20 GA HAT CHANNELS AT 16" O.C. PARTITION SHALL EXTEND TO NDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO NDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE F STRUCTURE ABOVE. EW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE F STRUCTURE ABOVE. EW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 5/8" GYPSUM BOARD (ONE SIDE) OVER 1/2" RESILIENT CHANNEL @ 24" O.C. (ONE SIDE) OVER 2X4 WOOD STUDS T 16" O.C. FILL STUD CAVITES WITH SOUND ATTENDUATION BATT. FARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE BOVE. 8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUBSHOWER SIDE) OVER Z44 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUBSHOWER SIDE) OVER Z44 WOOD STUDS AT 16" C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUBSHOWER SIDE) OVER Z44 WOOD STUDS AT 16" C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUBSHOWER SIDE) OVER Z44 WOOD STUDS AT 16" C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD (TUBSHOWER SIDE) OVER Z44 WOOD STUDS AT 16" C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 5/8" MOI	Fire Rating	Image: Sequence of the sequenc	
BOTTOM OF THE FREEZER, S4" MAXIMUM ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT MAXIMUM HEIGHTS POSSIBLE WALL TYPES Description EW FURRING: 58° GYPSUM BOARD (ONE SIDE) OVER 78° X 20 GA HAT CHANNELS AT 16° O.C. EW PARTITION: 58° GYPSUM BOARD (BOTH SIDES) OVER 78° X 20 GA HAT CHANNELS AT 16° O.C. EW PARTITION: 58° GYPSUM BOARD (BOTH SIDES) OVER 78° X 20 GA HAT CHANNELS AT 16° O.C. EW PARTITION: 58° GYPSUM BOARD (BOTH SIDES) OVER 24 WOOD STUDS AT 16° O.C. FILL STUD CAVITIES WITH SOUND TTENUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 58° GYPSUM BOARD (ONE SIDE) OVER 24 WOOD STUDS AT 16° O.C. FILL STUD CAVITIES WITH SOUND TTENUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 58° GYPSUM BOARD (ONE SIDE) OVER 244 WOOD STUDS AT 16° O.C. PARTITION SHALL EXTEND TO UNDERSIDE EW PARTITION: 58° GYPSUM BOARD (ONE SIDE) OVER 12° RESILIENT CHANNEL @24° O.C. (ONE SIDE) OVER 244 WOOD STUDS T16° O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE BOVE. EW PARTITION: 58° GYPSUM BOARD (ONE SIDE) OVER 12° RESILIENT CHANNEL @24° O.C. (ONE SIDE) OVER 244 WOOD STUDS T16° O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: 58° GYPSUM BOARD (TUBISHOWER SIDE) AND 58° GYPSUM BOARD (NON-TUBISHOWER SIDE) VER 244 WOOD STUDS AT 16° O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION: SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE.	Fire Rating SMOKE 1 1 2 1 2 1 1 2 1	Image: Sequence of the sequenc	
BOTTOM OF THE FREEZER, SI* MAXIMUM ABOVE THE FLOOR WHEN THE SHELVES ARE INSTALLED AT MAXIMUM HEIGHTS POSSIBLE WALL TYPES Description EW FURRING: 5.8" GYPSUM BOARD (ONE SIDE) OVER 7/8" X 20 GA. HAT CHANNELS AT 16" O.C. EW PARTITON: SI®" GYPSUM BOARD (IONE SIDE) OVER 7/8" X 20 GA. HAT CHANNELS AT 16" O.C. EW PARTITON: SI®" GYPSUM BOARD (IONE SIDE) OVER 7/8" X 20 GA. HAT CHANNELS AT 16" O.C. EW PARTITON: SI®" GYPSUM BOARD (IONE SIDE) OVER 7/8" X 20 GA. HAT CHANNELS AT 16" O.C. EW PARTITON: SI®" GYPSUM BOARD (IOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO NDERSIDE OF STRUCTURE ABOVE. EW PARTITON: SI®" GYPSUM BOARD (IOTH SIDES) OVER 2X4 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE F STRUCTURE ABOVE. EW PARTITON: SI®" GYPSUM BOARD (IONE SIDE) OVER 7/4" WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE F STRUCTURE ABOVE. EW PARTITON: SI®" GYPSUM BOARD (IONE SIDE) OVER 7/4" WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE F STRUCTURE ABOVE. EW PARTITON: SI®" GYPSUM BOARD (IONE SIDE) OVER 7/4" WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE F STRUCTURE ABOVE. EW PARTITON: SI®" MOISTURE RESISTANT PAPERLESS GYPSUM BOARD (TUB/SHOWER SIDE) AND SIND SAT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. EW PARTITION SHAL	Fire Rating - - - 1 - -	Image: Second and	
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UNDERSIDE OF STRUCTURE ABOVE. OF STRUCTURE ABOVE. ABOVE UNDERSIDE OF STRUCTURE ABOVE. OF STRUCTURE ABOVE. BOARD CEILDING. WALL MUST BE SMOKE TIGHT

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10J

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10L

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100

10P

11C

11E

H2.3A NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U327: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 1/2" RESILIENT CHANNEL 1 @ 24" O.C. (ONE SIDE) OVER 2X4 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. H3.1A NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U305: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X6 WOOD STUDS AT 16" 1 O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. H3.2 NEW (2) HOUR FIRE RATED PARTITION PER U.L. #U301: (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 2X6 WOOD STUDS AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE OF STRUCTURE ABOVE. H3.3A NEW (1) HOUR FIRE RATED PARTITION PER U.L. #U327: 5/8" TYPE 'X' GYPSUM BOARD (BOTH SIDES) OVER 1/2" RESILIENT CHANNEL @ 24" O.C. (ONE SIDE) OVER 2X6 WOOD STUDS AT 16" O.C. FILL STUD CAVITIES WITH SOUND ATTENDUATION BATT. PARTITION SHALL EXTEND TO UNDERSID J2.2 |5/8" GYPSUM BOARD (ONE SIDE) OVER 2X4 WOOD FURRING SIDE FRAMED AT 16" O.C. PARTITION SHALL EXTEND TO UNDERSIDE

OF GYPSUM BOARD CEILING. M3.2 NEW (2) HOUR FIRE RATED PARTITION PER U.L. #U905: 8" CMU WALL WITH HORIZONTAL REINFORCING AT 16" O.C. VERTICALLY.

21-116

ENLARGED PLANS

A302

PC ARCHITE 906 MONMC NEWPOR NE	CTURE CTURE
GEIGER HOUSE FOR VETERANS / KLEKAMP FAMILY RESIDENCES PSH	2631 GILBERT AVE. Cincinnati, OH 45206
NO. DESCRIPTION 80% OHFA REVIEW PERMIT SET	DATE 01/04/23 04/13/23
INTERIOR ELE	EVATIONS
21-11	6
A30	J3

 SHOWER BASIN &
 SURROUND UNIT W/HORIZ.
 AND VERT. GRAB BARS & FOLD-UP SHOWER SEAT

GRAB BAR

FOLDING SHOWER SEAT

CEILING FINISH LEGEND

MAGNETIC PLAN

REFLECTED CEILING PLAN - BASEMENT

SCALE: 1/8" = 1'-0"

A400

9D

9F

9J

GENERAL NOTES - CEILING PLANS

- A. PROVIDE (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD ON BOTTOM OF ROOF TRUSS AND 2X FLOOR FRAMING THROUGHOUT BUILDING FOR (1) HOUR RATING. PAINT WHERE EXPOSED
- PROVIDE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD ON BOTTOM OF FLOOR TRUSS В. FRAMING THROUGHOUT BUILDING FOR (1) HOUR RATING. PAINT WHERE EXPOSED

CEILING PLAN - ABBREVIATIONS

GYP GYPSUM BOARD SAP SUSPENDED ACOUSTICAL PANEL

SHEET KEYNOTES

GYP. BD. ON UNDERSIDE OF STAIRS AND LANDINGS GYPSUM BOARD SOFFIT PROVIDE 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM BOARD THIS PORTION OF CEILING BELOW BATHROOM ABOVE.

1 A401

CEILING FINISH LEGEND

REFLECTED CEILING PLAN - FIRST FLOOR

SCALE: 1/8" = 1'-0"

GENERAL NOTES - CEILING PLANS

- A. PROVIDE (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD ON BOTTOM OF ROOF TRUSS AND 2X FLOOR FRAMING THROUGHOUT BUILDING FOR (1) HOUR RATING. PAINT WHERE
- PROVIDE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD ON BOTTOM OF FLOOR TRUSS В. FRAMING THROUGHOUT BUILDING FOR (1) HOUR RATING. PAINT WHERE EXPOSED

CEILING PLAN - ABBREVIATIONS

GYP GYPSUM BOARD SAP SUSPENDED ACOUSTICAL PANEL

EXPOSED

SHEET KEYNOTES

7L	VINYL SOFFIT.
9D	GYP. BD. ON UNDERSIDE OF STAIRS AND LANDINGS
9F	GYPSUM BOARD SOFFIT
9J	PROVIDE 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM
	BOARD THIS PORTION OF CEILING BELOW BATHROOM ABOVE.

PC	CTURE
ARCHITE	CUTH STREET
906 MONMO	RT, KY 41071
NEWPO	A-ARCH.com
WWW.PC	859.431.8612
GEIGER HOUSE FOR VETERANS /	2631 GILBERT AVE.
KLEKAMP FAMILY RESIDENCES PSH	Cincinnati, OH 45206
NO. DESCRIPTION	DATE
80% OHFA REVIEW	01/04/23
PERMIT SET	04/13/23
FIRST FLOOR CEILING 21-11	REFLECTED PLAN
A4	01

CEILING FINISH LEGEND

REFLECTED CEILING PLAN - SECOND FLOOR

GENERAL NOTES - CEILING PLANS

- A. PROVIDE (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD ON BOTTOM OF ROOF TRUSS AND 2X FLOOR FRAMING THROUGHOUT BUILDING FOR (1) HOUR RATING. PAINT WHERE EXPOSED
- PROVIDE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD ON BOTTOM OF FLOOR TRUSS В. FRAMING THROUGHOUT BUILDING FOR (1) HOUR RATING. PAINT WHERE EXPOSED

CEILING PLAN - ABBREVIATIONS

GYP GYPSUM BOARD SAP SUSPENDED ACOUSTICAL PANEL

SHEET KEYNOTES

GYP. BD. ON UNDERSIDE OF STAIRS AND LANDINGS
GYPSUM BOARD SOFFIT
PROVIDE 5/8" MOISTURE-RESISTANT PAPERLESS GYPSUM

CEILING FINISH LEGEND

REFLECTED CEILING PLAN - THIRD FLOOR

GENERAL NOTES - CEILING PLANS

- A. PROVIDE (2) LAYERS 5/8" TYPE 'X' GYPSUM BOARD ON BOTTOM OF ROOF TRUSS AND 2X FLOOR FRAMING THROUGHOUT BUILDING FOR (1) HOUR RATING. PAINT WHERE EXPOSED
- PROVIDE (1) LAYER 5/8" TYPE 'X' GYPSUM BOARD ON BOTTOM OF FLOOR TRUSS В. FRAMING THROUGHOUT BUILDING FOR (1) HOUR RATING. PAINT WHERE EXPOSED

CEILING PLAN - ABBREVIATIONS

GYP GYPSUM BOARD SAP SUSPENDED ACOUSTICAL PANEL

8B

SHEET KEYNOTES

22 1/2" X 30" ATTIC ACCESS PANEL LOCATION. PROVIDE (1) HOUR RATED, SELF CLOSING AND LOCKABLE ACCESS PANEL AT BOTTOM CHORD OF TRUSS.

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1X4 F		-
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O.C.	HORIZONTAL AND VERTICAL.	
AIR S		
7/16	DING WRAP	
MOR	TAR BLOCK, TYP.	
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	3/8"	
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	SOLDIER COURSE BRICK VENEER	
	BRICK VENEER WITH TIES AT 16" O.C.	
	AIR SPACE	X
	BUILDING WRAP	
	7/16 APA RATED SHEATHING	$\left(\right)$
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\bigcirc	118' - 8"	
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	SOLDIER COURSE BRICK VENEER	/
	SOLDIER COURSE BRICK VENEER	
•	SOLDIER COURSE BRICK VENEER SECOND FLOOR 111' - 1" SOLDIER COURSE BRICK VENEER R-21 INSULATION	
•	SOLDIER COURSE BRICK VENEER SECOND FLOOR 111' - 1" SOLDIER COURSE BRICK VENEER R-21 INSULATION CONT. BAND BOARD, SEE STRUCTURAL	
•	SOLDIER COURSE BRICK VENEER SECOND FLOOR 111' - 1" SOLDIER COURSE BRICK VENEER R-21 INSULATION CONT. BAND BOARD, SEE STRUCTURAL BRICK VENEER WITH TIES AT 16" O.C.	
•	SOLDIER COURSE BRICK VENEER SECOND FLOOR 111' - 1" SOLDIER COURSE BRICK VENEER R-21 INSULATION CONT. BAND BOARD, SEE STRUCTURAL BRICK VENEER WITH TIES AT 16" O.C. HORIZONTAL AND VERTICAL. AIR SPACE	
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	SOLDIER COURSE BRICK VENEER SECOND FLOOR 111' - 1" SOLDIER COURSE BRICK VENEER R-21 INSULATION CONT. BAND BOARD, SEE STRUCTURAL BRICK VENEER WITH TIES AT 16" O.C. HORIZONTAL AND VERTICAL. AIR SPACE BUILDING WRAP 7/16 APA RATED SHEATHING MORTAR BLOCK, TYP.	
•	SOLDIER COURSE BRICK VENEER 3/8" SECOND FLOOR 111' - 1" SOLDIER COURSE BRICK VENEER R-21 INSULATION CONT. BAND BOARD, SEE STRUCTURAL BRICK VENEER WITH TIES AT 16" O.C. HORIZONTAL AND VERTICAL. AIR SPACE BUILDING WRAP 7/16 APA RATED SHEATHING MORTAR BLOCK, TYP. THRU-WALL FLASHING W/ WEEPS @ 24" O.C.	
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GENERAL NOTES - DOOR & FRAME SCHEDULE

A. ALL DOORS SHALL BE MADE READILY OPERABLE FROM SIDE WHICH EGRESS IS TO BE MADE WITHOUT A KEY OR SPECIAL KNOWLEDGE

- B. ALL LATCHSETS AND LOCKSETS ARE TO BE CYLINDRICAL SETS WITH ADA COMPLIANT LEVER HANDLES
- C. PROVIDE WALL MOUNTED STOPS WHENEVER POSSIBLE.
- D. ALL FIRE RATED DOORS SHALL BE LATCHING AND SELF OR AUTOMATIC CLOSING IN ACCORDANCE WITH

SECTION 716.5.9 OF THE 2017 OHIO BUILDING CODE E. HOLLOW METAL DOORS TO BE INSULATED & GALVANIZED AT EXTERIOR LOCATIONS

F. HOLLOW METAL FRAMES TO BE GALVANIZED AT EXTERIOR LOCATIONS

- SF STOREFRONT ST STEEL

AL

PF

PT

ALUMINUM

PREFINISHED

HM HOLLOW METAL

PAINT

WD WOOD

DOOR AND FRAME SCHEDULE - RESIDENTIAL UNITS DOOR FRAME # OF SIDELITE HEAD JAMB SILL WIDTH (MINUTES) HOWR SET # LEAFS WIDTH HEIGHT TYPE MATL FINISH TYPE MATL FINISH 1 3' - 0" 7' - 0" D1 HM PT F2 HM PT 20 HW-1 A1 7' - 0" D2 WD PT HW-3 1 3' - 0" WD PT F1 3' - 0" 7' - 0" D2 F1 WD PT HW-2 C1 1 WD PT D1 2' - 6" 7' - 0" D2 WD PT F1 WD PT HW-3 1 7' - 0" HW-3 WD 2 2'-0" D2 WD PT F1 PT 1 1'-6" 7' - 0" D2 WD PT F1 WD PT HW-3 1 3'-0" 7'-0" D2 WD PT F1 PT HW-3 WD D4 D5 1 2'-6" 7'-0" D2 WD PT F1 WD PT HW-3 D6 1 1'-6" 7'-0" D2 WD PT F1 WD PT HW-3

						DOOR	AND F	RAME S	CHEDUL	<u>E - COI</u>	MMON	AREA	<u>s</u>			
DOOR								FRAM								
#	# OF LEAFS	WIDTH	HEIGHT	TYPE	MATL	FINISH	TYPE	MATL	FINISH	HEAD	JAMB	SILL	SIDELITE WIDTH	RATING (MINUTES)	HDWR SET	
001	1	3' - 8"	7' - 0"	D1	HM	PT	F2	HM	PT						HW-10	
001S.1	1	3' - 8"	7' - 0"	D6	HM	PT	F4	HM	PT						HW-9	
001S.2	1	3' - 8"	7' - 0"	D3	HM	PT	F2	HM	PT					90	HW-10	
003	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-10	
004	1	4' - 0"	7' - 0"	D6	HM	PT	F2	HM	PT					90	HW-6	
005	1	3' - 0"	7' - 0"	D6	HM	PT	F2	HM	PT					20	HW-6	
006	1	3' - 0"	7' - 0"	D6	HM	PT	F2	HM	PT						HW-6	
100A	1	3' - 6"	7' - 0"	S1	AL	PF	S1	AL	PF						HW-4	
100B	1	3' - 6"	7' - 0"	S2	AL	PF	S2	AL	PF						HW-5	
100C	1	2' - 6"	7' - 0"	D6	HM	PT	F2	HM	PT						HW-6	
100S.1	1	3' - 0"	7' - 0"	D3	HM	PT	F2	HM	PT					60	HW-10	
100S.2	1	3' - 0"	7' - 0"	D6	HM	PT	F4	HM	PT						HW-9	
101S.1	1	3' - 0"	7' - 0"	D3	HM	PT	F2	HM	PT					90	HW-10	
102	1	3' - 0"	7' - 0"	D1	HM	PT	F3	HM	PT				1' - 8"	20	HW-7	
103	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-6	
105	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-6	
107A	1	3' - 0"	7' - 0"	D4	HM	PT	F2	HM	PT					20	HW-7	
107B	1	2' - 6"	7' - 0"	D6	HM	PT	F2	HM	PT						HW-13	
110	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-6	
111A	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-7	
111B	1	2' - 6"	7' - 0"	D6	HM	PT	F2	HM	PT						HW-3	
112	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-6	
113	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-11	RM-2
200S.1	1	3' - 0"	7' - 0"	D3	HM	PT	F2	HM	PT					60	HW-10	
201	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-6	
201S.1	1	3' - 0"	7' - 0"	D3	HM	PT	F2	HM	PT					90	HW-10	
202	1	2' - 6"	7' - 0"	D6	HM	PT	F2	HM	PT						HW-13	
204	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-6	
300S.1	1	3' - 0"	7' - 0"	D3	HM	PT	F2	HM	PT					60	HW-10	
301	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-6	
301S.1	1	3' - 0"	7' - 0"	D3	HM	PT	F2	HM	PT					90	HW-10	
302A	1	3' - 0"	7' - 0"	D1	HM	PT	F3	HM	PT				1' - 8"	20	HW-7	
302B	1	2' - 6"	7' - 0"	D6	HM	PT	F2	HM	PT						HW-13	
304	1	3' - 0"	7' - 0"	D1	HM	PT	F2	HM	PT					20	HW-6	

1-1/2 PAIR HINGES, PASSAGE SET, DOOR STOP.

HW-7

DOOR & FRAME ABBREVIATIONS

ROOM FINISH SCHEDULE - APARTMENT UNITS							
ROOM NAME	FLOOR	BASE	WALL	CEILING	REMARKS		
BATH	F1	B1	W1	C1			
BATH (ACCESSIBLE UNITS ONLY)	F2	B2	W1	C1			
BEDROOM	F1	B1	W1	C1			
KITCHEN	F1	B1	W1	C1	RM-1		
LIVING AREA	F1	B1	W1	C1			

ROOM FINISH SCHEDULE - COMMON AREAS						
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL	CEILING	REMARKS
001	CORRIDOR	F1	B1	W1	C2	RM-3
001E	ELEVATOR	F1	-	-	-	
001S	STAIR	F1, F3	B1	W1	C1	RM-2
002	CORRIDOR	F1	B1	W1	C2	RM-3
003	LAUNDRY	F2	B2	W1	C2	RM-3
004	ELEV EQUIP	-	-	-	-	RM-3
005	MECH	-	-	-	-	RM-3
006	SPRINKLER	-	-	-	-	RM-3
100	VESTIBULE	F4	B1	W1	C2	RM-3
100E	ELEVATOR	F1	-	-	-	
100S	STAIR	F1, F3	B1	W1	C1	RM-2
101	LOBBY	F1	B1	W1	C2	RM-3
101S	STAIR	F1, F3	B1	W1	C1	RM-2
102	OFFICE	F1	B1	W1	C2	RM-3
103	MECH	F1	B1	W1	C1	RM-3
104	CORRIDOR	F1	B1	W1	C2	RM-3
105	MECH	F1	B1	W1	C1	RM-3
106	CORRIDOR	F1	B1	W1	C2	RM-3
107	COMMUNITY ROOM	F1	B1	W1	C2	RM-1, RM-3
108	CORRIDOR	F1	B1	W1	C2	RM-3
109	CORRIDOR	F1	B1	W1	C2	RM-3
110	MECH / JAN	F1	B1	W1	C1	RM-3
111	OFFICE	F1	B1	W1	C2	RM-3
112	ELEC	F1	B1	W1	C1	RM-3
113	RR	F2	B2	W1	C1	RM-3
200	CORRIDOR	F1	B1	W1	C2	RM-3
200E	ELEVATOR	F1	-	-	-	
200S	STAIR	F1, F3	B1	W1	C1	RM-2
201	MECH	F1	B1	W1	C1	RM-3
201S	STAIR	F1, F3	B1	W1	C1	RM-2
202	SEATING	F1	B1	W1	C2	RM-3
203	CORRIDOR	F1	B1	W1	C2	RM-3
204	MECH	F1	B1	W1	C1	RM-3
300	CORRIDOR	F1	B1	W1	C2	RM-3
300E	ELEVATOR	F1	-	-	-	
300S	STAIR	F1, F3	B1	W1	C1	RM-2
301	MECH	F1	B1	W1	C1	RM-3
301S	STAIR	F1, F3	B1	W1	C1	RM-2
302	GROUP ROOM	F1	B1	W1	C2	RM-3
303	CORRIDOR	F1	B1	W1	C2	RM-3
304	MECH	F1	B1	W1	C1	RM-3

NOTES		DOOR #
		A1
		B1
		C1
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GENERAL NOTES - FINISHES

- A. FINISHES SHALL COMPLY WITH 2017 OHIO BUILDING CODE В.
- FINISHES IN CLOSETS SHALL MATCH THAT OF THE ROOM WITH WHICH THEY ARE ASSOCIATED
- FLOORING COLOR SELECTIONS SHALL PROVIDE A COLOR CONTRAST BETWEEN C. DIFFERENT FLOORING MATERIALS
- LOW TRANSITION STRIPS SHALL BE USED BETWEEN DIFFERING FLOORING MATERIALS ALL PAINT SHALL BE LOW VOC

FINISH LEGEND

FLOOR:

- F1 LUXARY VINYL TILE F2 - CERAMIC TILE
- F3 LUXARY VINYL TILE @ LANDINGS. RUBBER TREADS AND RISERS ON STAIRS
- F4 WALK-OFF CARPET TILE F5 - RUBBER ATHLETIC FLOORING
- F6 SEALED CONCRETE BASE
- B1 4" HIGH RESILIENT BASE B2 - 4" CERAMIC BASE

W1 - PAINTED GYPSUM BOARD / MASONRY - LOW VOC

- CEILING: C1 - PAINTED GYPSUM BOARD - LOW VOC
- C2 SUSPENDED ACOUSTIC PANEL CEILING

REMARKS LEGEND

RM-1 EXTEND FLOORING UNDER CABINETS AND PAINT WALL BEHIND CABINETS RM-2 PAINT STRINGERS

RM-3 - (2) LAYERS OF GYPSUM BOARD AT UNDERSIDE OF FRAMING ABOVE

NO. DESCRIPTION

DATE

04/13/23

SCHEDULES AND OPENING

TYPES

21-116

A600

^{80%} OHFA REVIEW PERMIT SET

^{01/04/23}

GENERAL STRUCTURAL NOTES

COPIES OF PUBLICATIONS REFERENCED IN THESE GENERAL STRUCTURAL NOTES ARE AVAILABLE FOR REVIEW AT ADVANTAGE GROUP ENGINEERS, INC. CONTRACTORS UNFAMILIAR WITH THESE PUBLICATIONS MUST REVIEW THEM PRIOR TO CONSTRUCTION.

GOVERNING CODE

OHIO BUILDING CODE – 2017, BASED ON 2015 IBC

CLASSIFICATION OF BUILDING STRUCTURE RISK CATEGORY II, TABLE 1604.5

DESIGN LOADS

- 1. ROOF LOAD:
- A. MINIMUM LIVE LOAD OR SNOW LOAD (Pf): 20 PSF*
- B. ROOF MEMBRANE: 1 PSF C. INSULATION: 3 PSF
- D. SHEATHING: 2 PSF
- E. JOIST FRAMING LOAD: 3 PSF
- F. CEILING (5/8" DRYWALL): 3 PSF G. SPRINKLERS: 3 PSF
- H. DUCTS, LIGHTS, MISC. MECHANICAL: 2 PSF

* MINIMUM SNOW LOAD GOVERNED BY Pf = 20 * I (PSF)

2. SNOW LOAD:

- A. GROUND SNOW LOAD, Pg = 20 PSF MODIFIED BY APPLICABLE DRIFT COEFFICIENTS.
- B. FLAT ROOF SNOW LOAD, Pf = 17 PSF MODIFIED BY APPLICABLE BUILDING COEFFICIENTS.
- C. SNOW LOAD IMPORTANCE FACTOR I = 1.00
- D. SNOW EXPOSURE FACTOR Ce = 1.0
- E. THERMAL FACTOR, Ct = 1.00
- F. COORDINATE ROOF FRAMING WITH FINAL SELECTION OF ROOF SUPPORTED MECHANICAL EQUIPMENT AND ASSOCIATED OPENINGS. ITEMS TO BE COORDINATED INCLUDE SIZE, LOCATION, TOTAL WEIGHT, WEIGHT DISTRIBUTION, AND SUPPORT FRAME REQUIREMENTS.
- 3. FLOOR LOAD:
- A. LIVE LOAD:
- a. CORRIDORS, LOBBIES, PUBLIC SPACES: 100 PSF
- b. RESIDENTIAL UNITS: 40 PSF B. JOIST FRAMING LOAD: 3 PSF
- C. CEILING (5/8" DRYWALL): 3 PSF
- D. 1" GYPSUM TOPPING: 12 PSF E. SPRINKLERS: 3 PSF
- F. DUCTS, LIGHTS, MISC. MECHANICAL: 2 PSF
- 4. WIND LOAD:
- A. MAIN WINDFORCE RESISTING SYSTEM: 115 MPH PER ASCE 7-10 (3-SECOND GUST- LOAD RESISTANCE FACTORED DESIGN).
- B. WIND EXPOSURE B
- C. BASIC WIND VELOCITY PRESSURE, q_h= 19.62 PSF (11.77 PSF ASD).
- D. INTERNAL GUST PRESSURE COEFFICIENT GCp = 0.18, ENCLOSED BUILDING.

5. SEISMIC LOAD:

- A. BUILDING SITE CLASSIFICATION = D
- B. SPECTRAL RESPONSE ACCELERATION, $S_s = 14.5\%$ a. Sds (EQUATION 16-18) = 11.6%
- C. SPECTRAL RESPONSE ACCELERATION, $S_1 = 7.6\%$
- b. Sdl (EQUATION 16-19) = 8.6% D. SEISMIC DESIGN CATEGORY, SDC = B
- E. SEISMIC IMPORTANCE FACTOR = 1.0
- F. SEISMIC FORCE RESISTING SYSTEM = LIGHT FRAME SHEAR WALLS WITH WOOD PANELS G. RESPONSE MODIFICATION FACTOR, R = 6.5, TABLE 12.2-1 ASCE 7
- H. ANALYSIS PROCEDURE = ELFP
- I. SEISMIC RESPONSE COEFFICIENT, Cs = 0.018 EQUATION 12.8-2 J. DESIGN BASE SHEAR, V = Cs * W MAXIMUM
- 6. CONCENTRATED LOADS: 2000 POUNDS OVER 2.5 FEET SQUARE.
- 7. SPECIAL LOADS:
- A. INTERIOR FINISH: 5 PSF HORIZONTAL LOAD.
- B. HANDRAILS: 200 POUNDS CONCENTRATED LOAD AT ANY POINT IN ANY DIRECTION OR 50 PLF UNIFORM LOAD IN ANY DIRECTION.
- C. GUARDRAILS:
- a. TOP RAIL: 200 POUNDS CONCENTRATED AT ANY POINT IN ANY DIRECTION OR 50 PLF UNIFORM LOAD HORIZONTALLY SIMULTANEOUSLY WITH 100 PLF UNIFORM LOAD VERTICALLY.
- b. IN-FILL AREAS: 200 POUNDS APPLIED ON A 1 SQUARE FOOT AREA.
- D. IMPACT
- a. ELEVATORS PER SECTION 1607.8.1
- b. MACHINERY PER SECTION 1607.8.2
- 8. SPECIAL INSPECTION REQUIREMENTS PER SECTION 1704. SEE CONSTRUCTION SPECIFICATIONS AND OR SPECIAL INSPECTION BOOKLET ADDENDUM REQUIREMENTS.

SPECIAL INSPECTIONS

PER THE REQUIREMENTS OF CHAPTER 17 SECTION 1704.1 OF THE REFERENCED BUILDING CODE, SPECIAL INSPECTION IS REQUIRED FOR THE PROPOSED BUILDING CONSTRUCTION. SPECIAL INSPECTION INVOLVES THE VERIFICATION OF COMPLIANCE OF MATERIALS, INSTALLATION, FABRICATION, ERECTION AND OR PLACEMENT OF COMPONENTS WITH THE OFFICIAL SET OF CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. SPECIAL INSPECTION IS PART OF THE PERMIT APPLICATION PROCESS FUNDED BY THE OWNER OR OWNER'S AGENT.

A STATEMENT OF SPECIAL INSPECTION LISTING THE REQUIREMENTS ALONG WITH A SCHEDULE OF TESTING, SUBMITTAL REVIEWS, AND FIELD **OBSERVATION REQUIREMENTS HAS BEEN PREPARED BY THE STRUCTURAL** ENGINEER OF RECORD IN ACCORDANCE WITH SECTION 106.1 OF THE BUILDING CODE. THIS STATEMENT INCLUDES A COMPLETE LIST OF MATERIAL AND ACTIVITY REQUIRING INSPECTION. IT IS THE RESPONSIBILITY OF ALL PARTIES TO BECOME FAMILIAR WITH THIS REQUIREMENT AND UNDERSTAND THE GUIDELINES AND REQUIREMENTS OF EACH PARTY INVOLVED WITH THE CONSTRUCTION. A COPY OF THE STATEMENT OF SPECIAL INSPECTION IS AVAILABLE UPON REQUEST. THE SPECIAL INSPECTOR COORDINATOR SHALL COORDINATE WITH THE OWNER, CONTRACTOR AND THE DESIGN PROFESSIONALS AND SCHEDULE THE INSPECTIONS ACCORDINGLY.

SUBSTITUTIONS, SUBMITTALS, AND RFI'S

- 1. CONTRACTOR SHALL SUBMIT ALL SUBSTITUTIONS FOR APPROVAL PRIOR TO CONSTRUCTION WITH THE FOLLOWING INFORMATION:
 - A. THE SCOPE, EXTENT, AND ALL LOCATIONS EFFECTED BY THE PROPOSED SUBSTITUTION.
 - B. SPECIFIC DRAWING OR SPECIFICATION REFERENCES FOR THE ORIGINAL PRODUCT OR SYSTEM SPECIFIED.
 - C. THE REASON FOR THE PROPOSED CHANGE.
 - D. COST SAVINGS AND/OR IMPACT ON SCHEDULE.
 - E. IMPACT ON ANY GUARUNTEES OR WARRANTYS ASSOCIATED WITH THE PRODUCT OR SYSTEM.
 - F. COORDINATION REQUIRED WITH OTHER TRADES OR ADJACENT MATERIALS.
 - G. ANY AND ALL DEVIATIONS FROM THE SPECIFIED REQUIREMENTS.
- 2. SHOP DRAWING SUBMITTALS SHALL BE SUBMITTED BY THE GENERAL CONTRACTOR IN A TIMELY MANNER TO PROVIDE AN ADEQUATE AMOUNT OF TIME FOR REVIEW.
 - A. ALL SUBMITTALS MUST BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING FOR REVIEW. ANY SHOP DRAWINGS RECEIVED THAT DO NOT BEAR THE STAMP OF THE GENERAL CONTRACTOR AS WELL AS CLEAR EVIDENCE THAT THE SUBMITTAL HAS BEEN REVIEWED WILL BE REJECTED WITHOUT REVIEW.
 - B. REVIEW BY STRUCTURAL ENGINEER OF RECORD WILL BE FOR GENERAL COMPLIANCE WITH THE CONTRACT DOCUMENTS AND CONFORMANCE WITH THE DESIGN CONCEPT. THIS REVIEW DOES NOT IN ANYWAY RELIEVE THE CONTRACTOR AND/OR THE CONTRACTOR'S SUBCONTRACTORS FROM RESPONSIBILITY FOR ERRORS OR DEVIATIONS FROM THE CONTRACT REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR ALL DIMENSIONS, PROPER FIT, QUALITIES OF THE MATERIALS, AND COORDINATION WITH OTHER TRADES AND SUPPLIERS.
- 3. REQUESTS FOR INFORMATION (RFI'S) SHALL BE SUBMITTED IN A TIMELY MANNER WHEN INFORMATION IS MISSING FROM THE CONSTRUCTION DOCUMENTS, INFORMATION IS CONFLICTING WITHIN THE CONSTRUCTION DOCUMENTS, OR IS AMBIGUOUS.
 - A. THE CONTRACTOR MUST USE DUE DILIGENCE IN ATTEMPING TO FIND ANY ANSWER PRIOR TO SUBMITTING AN RFI.
 - B. IF THE INFORMATION REQUESTED IN AN RFI IS APPARENT FROM FIELD OBSERVATION. IS CONTAINED IN THE CONSTRUCTION DOCUMENTS, OR IS REASONABLY INFERABLE FROM THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER FOR ALL REASONABLE COSTS CHARGED RELATED TO ADDITIONAL SERVICES INCURRED DUE TO ANSWERING THE RFI.

CONSTRUCTION AND SAFETY

- 1. CONTRACTOR SHALL BRACE ENTIRE STRUCTURE AS REQUIRED TO MAINTAIN STABILITY UNTIL COMPLETE AND FUNCTIONING AS THE DESIGNED UNIT.
- 2. ENGINEER SHALL NOT BE RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OF CONSTRUCTION SELECTED BY CONTRACTOR.
- 3. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. WHEN ON SITE, THE ENGINEER IS RESPONSIBLE FOR HIS OWN SAFETY BUT HAS NO RESPONSIBILITY FOR THE SAFETY OF OTHER PERSONNEL OR SAFETY CONDITIONS AT THE SITE.

FOUNDATIONS

- 1. SOIL CONDITIONS
- $\overline{}$ A. FOUNDATION DESIGN IS BASED ON RECOMMENDATIONS DESCRIBED IN THE GEOTECHNICAL ENGINEER'S REPORT BY CSI INC TITLED "THE GEIGER HOUSE FOR VETERANS" DATED DECEMBER 21 2022 THE GEOTECHNICAL ENGINEER'S REPORT IS AVAILABLE UPON REQUEST.
- BOTTOM OF FOUNDATION ELEVATION INDICATED ARE FOR BIDDING PURPOSES AND MAY BE LOWERED TO SUIT SUB-SURFACE SOIL CONDITION. BEARING STRATA SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACING CONCRETE. PROVIDE ENGINEERED FILL OR FLOWABLE FILL CONCRETE (1500 PSI) UNDER FOUNDATIONS AT SOFT SPOTS AND FOR EXTENDING EXCAVATION TO ADEQUATE BEARING MATERIAL. INSTALL FOUNDATIONS AT DESIGNED ELEVATIONS. 3. FOOTINGS AND GRADE BEAMS MAY BE PLACED WITHOUT SIDE FORMS IF
- EXCAVATED WALLS STAND APPROXIMATELY VERTICAL ALL FOOTINGS SHALL BEAR ON LEVEL (WITHIN 1 IN 12) SOIL THAT HAS BEEN STABILIZED WITH A RAMMED AGGREGATE PIER FOUNDATION IMPROVEMENT SYSTEM. FOOTING BEARING PRESSURES ARE ASSUMED AT 2000 PSF, AND ARE TO BE VERIFIED AFTER SPECIALTY CONTRACTOR IS ENGAGED. RAMMED AGGREGATE PIER DESIGNER TO PROVIDE CONFIRMATION OF RAP DESIGN FOR 2000 PSF ALLOWABLE BEARING PRESSURE.
- 5. CONTRACTOR SHALL CONTACT UTILITY COMPANIES FOR LOCATING UNDERGROUND SERVICES AND IS RESPONSIBLE FOR THEIR PROTECTION AND SUPPORT.

- 6. COMPACTION:
 - A. ALL FILL MATERIALS SHALL BE APPROVED BY A GEOTECHNICAL CONSULTANT.
 - B. ENGINEERED FILL BENEATH FOOTINGS: MINIMUM COMPACTION 98% STANDARD PROCTOR DENSITY AT THE OPTIMUM MOISTURE CONTENT.
 - C. BACKFILL AGAINST FOUNDATION WALLS ALONG INTERIOR FACE OF FOUNDATION WALLS SHALL BE CLAYEY MATERIAL COMPACTED IN 6" LIFTS TO 95% STANDARD PROCTOR DENSITY OR CONCRETE WITH A COMPRESSIVE STRENGTH OF $f_c = 500$ PSI.
- D. BACKFILL ALONG EXTERIOR FACE OF BASEMENT OR ALONG RETAINING TYPE WALLS SHALL BE A WELL-GRADED GRANULAR MATERIAL COMPACTED TO 95% STANDARD PROCTOR DENSITY UP TO WITHIN 24 INCHES OF THE FINISHED GRADE. TOP 24" OF BACKFILL SHALL BE COMPACTED CLAYEY MATERIAL. AT THE BOTTOM OF THE GRANULAR MATERIAL, PLACE A 4" DIAMETER PERFORATED FOUNDATION DRAINPIPE WITH POSITIVE DRAINAGE TO SUMP OR TO DAYLIGHT. AT EXTERIOR RETAINING WALLS, 4" DIAMETER WEEP HOLES AT 10'-0" ON CENTER MAXIMUM MAY BE INSTALLED IN LIEU OF PERFORATED FOUNDATION DRAIN.
- E. BACKFILL ALONG EXTERIOR FACE OF SHALLOW WALL FOUNDATIONS TO BE COMPACTED CLAYEY MATERIAL; COMPACT TO 95% STANDARD PROCTOR.
- F. FILL BELOW FLOOR SLABS TOP 12" OF SUBBASE BELOW INTERIOR FLOOR SLAB TO BE PROOF ROLLED TO 98% STANDARD PROCTOR DENSITY PRIOR TO PLACEMENT OF SLAB.
- 7. ALL AREAS WITHIN THE FOOTPRINT OF THE BUILDING, INCLUDING UTILITY TRENCHES, MUST BE FREE OF ANY WET AND/OR SOFT AREAS PRIOR TO PLACEMENT OF FILL MATERIAL OR SLAB.
- 8. SEAL UTILITY TRENCH AT THE EXTERIOR FOUNDATION WALL BY USING A COMPACTED CLAYEY BACKFILL OR LEAN CONCRETE TO CREATE A DAM TO PREVENT ENTRY OF WATER.
- 9. FINISHED GRADE SHALL SLOPE AWAY FROM THE PERIMETER FOUNDATION. **CONCRETE**
- 1. CONCRETE WORK AND TESTING SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", EXCEPT AS MODIFIED BY THE SUPPLEMENTAL REQUIREMENTS
- BELOW. REPORTS FROM TESTS REQUIRED BY SECTION 1.6 OF ACI 301 SHALL BE SUBMITTED TO STRUCTURAL ENGINEER, ARCHITECT, OWNER, CONTRACTOR, CONCRETE SUPPLIER, AND BUILDING OFFICIAL. 2. CONCRETE WORK IN COLD WEATHER SHALL CONFORM TO ALL
- REQUIREMENTS OF ACI 306.1 "STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING"AND ACI 306R "COLD WEATHER CONCRETING". 3. CONCRETE MIX DESIGNS SHALL BE SUBMITTED FOR EACH TYPE OF CONCRETE TO THE STRUCTURAL ENGINEER FOR APPROVAL IN ACCORDANCE WITH ACI 301 SECTION 4.2.3.4 FIELD TEST DATA OR TRIAL MIXTURES.
- 4. SUBMIT SHOP DRAWINGS OF REINFORCING STEEL
- 5. MATERIALS: (fc BASED ON 28 DAY UNLESS NOTED)
 - A. CONCRETE UNLESS NOTED: fc = 4000 PSI., NORMAL AGGREGATE.
 - B. CONCRETE FOR INTERIOR FLOOR SLABS: fc = 4000 PSI AT 28 DAYS, 1800 PSI AT 3 DAYS, NORMAL WEIGHT AGGREGATE, MINIMUM PORTLAND CEMENT CONTENT PER ACI 301 TABLE 4.2.2.1, WATER NOT PERMITTED TO BE ADDED AT THE SITE, HRWR ADMIXTURE REQUIRED, MAXIMUM WATER/CEMENTITIOUS RATIO = 0.50.
 - C. CONCRETE FOR EXTERIOR FLAT WORK, WALKS, ETC.: fc = 4500 PSI, (4.5% TO 7.5% ENTRAINED AIR), MINIMUM PORTLAND CEMENT CONTENT = 520 #/CY, MAXIMUM WATER/CEMENTITIOUS RATIO = 0.45.
 - D. CONCRETE FOR FOUNDATION WALLS AND RETAINING WALLS WITH EXTERIOR EXPOSURE: fc = 4000 PSI. (4.5% TO 7.5% ENTRAINED AIR). MAXIMUM WATER/CEMENTITIOUS RATIO = 0.50.
 - E. CONCRETE FOR FOOTINGS: fc = 3000 PSI.
 - F. REINFORCING STEEL: ASTM A615 OR ASTM 996 (AXLE ONLY) 60 KSI YIELD DEFORMED BARS AND ASTM A1064 MESH, FLAT SHEETS ONLY.
 - G. FLY ASH: ASTM C618, TYPE F OR C. FLY ASH-TO- TOTAL CEMENTITIOUS RATIO SHALL NOT EXCEED 25% MAXIMUM.
 - H. GROUND GRANULATED BLAST FURNACE SLAG: ASTM C989. TOTAL GROUND GRANULATED BLAST FURNACE SLAG -TO- TOTAL CEMENTITIOUS RATIO SHALL NOT EXCEED 50% MAXIMUM.
 - I. HIGH RANGE WATER REDUCER (HRWR) ADMIXTURE: ASTM C494. J. CHLORIDE CONTENT OF CONCRETE: LIMIT TOTAL CHLORIDE ION CONTENT TO AMOUNT INDICATED IN TABLE 4.2.2.6 OF ACI 318.
 - ADMIXTURES CONTAINING CHLORIDE ARE NOT PERMITTED IN REINFORCED CONCRETE OR CONCRETE CONTAINING METALS.
- 6. SLUMP SHALL BE MEASURED PRIOR TO THE ADDITION OF HRWR.
- 7. LAP SPLICE REINFORCING BARS 48 BAR DIAMETERS UNLESS NOTED OTHERWISE:
- 8. BAR CLEARANCES BETWEEN ADJACENT BARS AND FORMWORK SHALL BE AS NOTED ON THE DRAWINGS OR A MINIMUM AS PER ACI REQUIREMENTS.
- 9. AT CORNERS AND INTERSECTIONS OF FOOTINGS, WALLS AND GRADE BEAMS, PROVIDE BENT BARS OF EQUAL SIZE AND AT SAME SPACING AS TYPICAL REINFORCING AROUND CORNER AND/OR INTO ABUTTING WALL OR GRADE BEAM. BARS SHALL HAVE EMBEDMENT OF 30 DIAMETERS (18" MIN.).
- 10. MACHINE TROWEL FINISH FLOOR SLAB AND CURE USING A METHOD RECOMMENDED BY ACI 302.1R (GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION) INCLUDING WATER CURING, WET COVERING, APPLICATION OF IMPERVIOUS SHEETING OR APPLICATION OF "CURE AND SEAL" TYPE CURING COMPOUND MEETING ASTM C-1315. FOR APPLICATIONS EXPOSED TO SUNLIGHT USE CLASS A (NON-YELLOWING) CURING COMPOUND. COORDINATE CURING METHOD WITH ARCHITECTURAL FLOOR FINISHES THAT REQUIRE ADHESION TO THE SLAB (SUCH AS TILE) TO INSURE PROPER BOND.
- 11. FLOOR SLAB-ON-GRADE SHALL CONFORM TO THE FOLLOWING SURFACE PROFILE TOLERANCES PER ASTM E-1155 AND ACI 117: F_f(FLATNESS) F_l(LEVELNESS)
 - A. SPECIFIED OVERALL VALUE: 25 / 20
 - B. MINIMUM LOCAL VALUE: 18 / 13

- C. MAXIMUM GAP UNDER 10 FT. UNLEVELED STRAIGHTEDGE = 1/4".
- 12. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR VAPOR BARR REQUIREMENTS. VAPOR BARRIER, WHERE REQUIRED, SHALL BE PLACED OVER COMPACTED GRANULAR SUBBASE.
- 13. AT SLAB AND WALL OPENING CORNERS AND REENTRANT CORNERS, PROVIDE (1) #5 BAR IN EACH FACE PARALLEL TO EACH EDGE EXTENDING MINIMUM OF 2'-0" PAST EDGE OF OPENING. THIS STEEL MAY BE OMITTED I TYPICAL REINFORCING STEEL EXCEEDS THIS MINIMUM REQUIREMENT.
- 14. REINFORCE ALL INTERIOR SLABS ON GROUND WITH 6 X 6 W2.9 X W2.9 (42) MESH. LOCATE MESH 2" CLEAR BELOW TOP OF SLAB.
- 15. LAP WELDED WIRE FABRIC MINIMUM 1 FULL SPACE PLUS 2".
- 16. DO NOT BACKFILL AGAINST BASEMENT FOUNDATION WALLS UNTIL ADJACENT FLOOR STRUCTURE AND CONCRETE/DECKING IS IN PLACE TO BRACE THE TOP OF THE WALL.
- 17. CAST IN CONTINUOUS DOVETAIL ANCHOR SLOTS ON VERTICAL SURFACES WHERE MASONRY ABUTS; 24" O.C. FOR PARALLEL SURFACES AND AT CENTERLINE OF MASONRY FOR PERPENDICULAR WALLS.
- 18. FINISH OF CONCRETE HANDICAP RAMPS TO CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) COORDINATE LOCATION AND PATTERN WITH ARCHITECTURAL DRAWINGS.
- 19. CONTROL JOINTS IN SLABS ON GROUND SHALL BE LOCATED AT 12'-0" MAXIMUM SPACING AND SHALL CREATE SECTIONS OF SLAB WITH A MAXIMUM ASPECT RATIO OF 11/2 TO 1. CONTROL JOINTS SHALL BE SAWN AND SHALL BE A MINIMUM OF 1/4 OF THE SLAB THICKNESS DEEP. THE CONTROL JOINT SHALL BE SAWN AS SOON AS THE SAW BLADE CAN CUT CONCRETE WITHOUT DISPLACING THE AGGREGATE. CUT EVERY OTHER MESH WIRE AT THE CONTROL JOINT LOCATION PRIOR TO PLACING CONCRETE. IF AN EARLY-CUTTING SAW IS BE USED AND A SHALLOWER DEPTH OF THE CUT IS DESIRED, CONTACT THE ENGINEER IN ADVANCE FO APPROVAL.
- 20. CONSTRUCTION JOINTS IN SLABS ON GROUND MAY BE LOCATED AT ANY CONTROL JOINT LOCATION. CONSTRUCTION JOINTS SHALL HAVE A KEY FORMED AT MID-DEPTH OF THE FIRST CAST SECTION. THE KEY SHALL BE " DEEP AND SHALL BE 1/3 OF THE SLAB THICKNESS HIGH. THE TOP AND BOTTOM OF THE KEY SHALL HAVE 1 VERTICAL TO 3 HORIZONTAL SLOPE.
- 21. FILL CONTROL AND CONSTRUCTION JOINTS IN TRAFFIC AREAS WITH SEMI-RIGID EPOXY JOINT FILLER WITH A DUROMETER SHORE A-SCALE HARDNES NUMBER OF APPROXIMATELY 80. FILL CONTROL AND CONSTRUCTION JOINTS IN NON-TRAFFIC AREAS WITH ELASTOMERIC SEALANT. INSTALL PE MANUFACTURER'S RECOMMENDATIONS.
- 22. PROVIDE ³/₄" CHAMFER AT CORNERS OF EXPOSED CONCRETE.
- 23. WHERE BRITTLE FLOOR FINISHES ARE TO BE APPLIED TO FLOOR SLABS, COORDINATE CONTROL JOINT LOCATIONS WITH FLOOR FINISH JOINT LOCATIONS AND ARCHITECT.
- 24. PROVIDE CONTROL/CONSTRUCTION JOINTS IN CONCRETE WALLS AT A MAXIMUM SPACING OF TWICE THE HEIGHT OF THE WALL. MAXIMUM JOIN SPACING SHALL NOT EXCEED 24 FT. CONTROL JOINTS SHALL HAVE A 3/4" DEEP BY 1 ¹/₂" WIDE TAPERED REVEAL EACH SIDE OF THE WALL. AT CONTROL JOINTS, EVERY OTHER HORIZONTAL BAR SHALL BE CUT BACK 1/2" FROM THE CONTROL JOINT. CONSTRUCTION JOINTS SHALL BE FORM SIMILAR TO CONTROL JOINTS. AT CONSTRUCTION JOINTS, ALL HORIZONT. STEEL SHALL BE DISCONTINUOUS AND A DOWEL BAR OF SIZE AND SPACIN TO MATCH THE HORIZONTAL REINFORCING SHALL BE EMBEDDED A MINIM OF 40 BAR DIAMETERS EACH SIDE OF THE CONSTRUCTION JOINT. SEE ARCHITECTURAL DRAWINGS FOR ARCHITECTURAL JOINT TREATMENT.

EXPANSION AND EPOXY ADHESIVE ANCHORS

EXPANSION ANCHORS:

1. EXPANSION ANCHORS SHALL BE MANUFACTURED BY ITW Ramset/RedHead AND SHALL BE THE TYPE, SIZE, AND EMBEDMENT INDICATED ON DRAWING INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SUBSTITUTES MAY CONSIDERED: SUBMIT MANUFACTURER'S DATA PRIOR TO INSTALLATION.

EPOXY ADHESIVE ANCHORS:

- 1. EPOXY ADHESIVE SHALL BE EPCON "CERAMIC 6+" EPOXY MANUFACTURED BY ITW Ramset / Red Head. OR HIT RE 500 V3 EPOXY ADHESIVE MANUFACTURED BY THE HILTI COMPANY. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SUBSTITUTES MAY BE CONSIDERED; SUBMIT MANUFACTURER'S DATA PRIOR TO INSTALLATION.
- 2. THREADED RODS SHALL BE ASTM A36. SIZES AND EMBEDMENT AS INDICATED ON THE DRAWINGS.
- 3. CONDUCT JOB-SITE TRAINING OF ALL CONTRACTOR'S PERSONNEL INSTALLING THIS PRODUCT FOR SAFE AND PROPER INSTALLATION, HANDLING, AND STORAGE OF THE EPOXY SYSTEM.

MASONRY

- 1. MASONRY CONSTRUCTION AND MATERIALS SHALL CONFORM TO ALL REQUIREMENTS OF "SPECIFICATION FOR MASONRY STRUCTURES (ACI 530.1/ASCE 6/TMS 602)" EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.
- 2. COMPRESSIVE STRENGTH SHALL BE DETERMINED FOR EACH TYPE OF MASONRY BY THE UNIT STRENGTH METHOD.
 - A. CONCRETE MASONRY: $f_m = 1500$ PSI AT 28 DAYS.
- 3. SUBMITTALS SHALL BE MADE FOR THE FOLLOWING:
 - A. COLD WEATHER CONSTRUCTION PROCEDURE.
 - B. MANUFACTURERS LITERATURE FOR: HORIZONTAL JOINT REINFORCING, REINFORCING STEEL POSITIONERS, MOVEMENT JOIN MATERIALS, TIES & ANCHORS.
 - C. SHOP DRAWINGS SHOWING: DETAILS OF STEEL REINFORCING, ANI LINTELS.
 - D. MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR SPECIFIED MASONRY UNIT, AND REINFORCING STEEL.
 - E. PROPORTIONS OF MATERIAL IN ACCORDANCE WITH REFERENCED SPECIFICATIONS OF MORTAR AND GROUT.
- 4. MATERIALS
 - A. CONCRETE MASONRY UNITS: ASTM C90 TYPE I. BELOW GRADE: NORMAL WEIGHT AGGREGATE PER ASTM C33.
 - B. CONCRETE MASONRY UNITS: ASTM C90 TYPE I. ABOVE GRADE: LIGHTWEIGHT AGGREGATE PER ASTM C331 OR NORMAL WEIGHT.

IER	C. FACING BRICK: ASTM C216 GRADE SW. COLOR AND SIZE AS NOTED ON THE ARCHITECTURAL DRAWINGS.	
	D. MORTAR: ASTM C270 TYPE N	2206 900
4	E. PORTLAND CEMENT-LIME MORTAR: PORTLAND CEMENT:TYPE I. HYDRATED LIME:TYPE S	on Ro nio 4 96-89
F	F. MASONRY CEMENT MORTAR: AT CONTRACTOR'S OPTION.	adisc , Oh 3) 39
#)	G. GROUT: ASTM C476. f'c = 2000 psi, SLUMP 8" TO 10".	7 Ma inati (513
	H. REINFORCING STEEL: ASTM A615, 60 KSI YIELD.	152 incir Ph:
	I. HORIZONTAL JOINT REINFORCING FOR SINGLE WYTHE CONCRETE MASONRY: 9 GAUGE LADDER TYPE. HOT DIPPED GALVANIZED PER ASTM A153 CLASS B. PLACE HORIZONTAL JOINT REINFORCING AT 16" CENTERS VERTICALLY FOR CONCRETE MASONRY. LAP HORIZONTAL JOINT REINFORCING 6" MINIMUM. HORIZONTAL JOINT REINFORCING SHALL BE DISCONTINUOUS ACROSS MOVEMENT JOINTS.	<u> </u>
HE R 11½ SS	 J. HORIZONTAL JOINT REINFORCING FOR CONCRETE MASONRY AND BRICK VENEER CAVITY WALL: 9 GAUGE LADDER TYPE PLACED IN CONCRETE MASONRY WITH PROJECTING EYES FOR 3/16" DIAMETER DOUBLE WIRE RECTANGULAR ADJUSTABLE PINTLE. HOT DIPPED GALVANIZED PER ASTM A153 CLASS B. THIS TYPE OF JOINT REINFORCING ALLOWS THE VENEER TO BE PLACED AFTER INTERIOR WYTHE IS PLACED. LADDER TYPE TRI-ROD MAY BE USED IF BOTH WYTHES ARE LAID SIMULTANEOUSLY. PLACE HORIZONTAL JOINT REINFORCING AT 16" CENTERS VERTICALLY FOR CONCRETE MASONRY. LAP HORIZONTAL JOINT REINFORCING 6" MINIMUM. HORIZONTAL JOINT REINFORCING SHALL BE DISCONTINUOUS ACROSS MOVEMENT JOINTS. K. BRICK VENEER ANCHORS FOR METAL STUD AND WOOD STUD BACKUP: DUR-0-WAL DIA 213 OR WIRE-BOND RJ-711 WITH 3/16" DIAMETER PINTLE. HOT-DIPPED GALVANIZED PER ASTM A153 CLASS B. VERTICAL DISTANCE BETWEEN HORIZONTAL PINTLE WIRE AND CLIP PLATE SHALL NOT EXCEED 3/4 INCH. (FLAT CORRUGATED TIES ARE NOT PERMITTED.) SCREWS SHALL BE MINIMUM #10 SIZE AND SHALL BE CADMIUM-PLATED OR HOT-DIPPED GALVANIZED. (STAINLESS STEEL AND COPPER-COATED SCREWS ARE NOT PERMITTED.) ANCHORS SHALL BE ATTACHED WITH FASTENERS TO THE WOOD OR STEEL FRAMING WALL STUDS. PROVIDE BRICK VENEER ANCHORS WITH MAXIMUM HORIZONTAL SPACING OF 24" AND MAXIMUM VERTICAL SPACING OF 16". BRICK VENEER ANCHORS SHALL BE EMBEDDED 2" MINIMUM INTO BRICK. MORTAR PROPORTIONS MUST BE ACCURATELY MEASURED PRIOR TO MIXING. ADD CEMENT TO MIX IN FULL BAG QUANTITIES. MEASURE SAND IN BOX WITH VOLUME OF ONE CUBIC FOOT AS OFTEN AS NECESSARY TO 	Structural Consultants ADVANTAGE GROUP 06/05/2023 04/14/2023 04/14/2023 01/04/2023 Date
	MAINTAIN CONSISTENT PROPORTIONS AND AT LEAST ONCE DAILY AND EVERY 4 HOURS OF MIXING.	NOIS
	6. MINIMUM VERTICAL REINFORCEMENT REQUIREMENTS FOR ALL MASONRY WALLS.	
	A. AS A MINIMUM, ALL MASONRY SHALL BE REINFORCED PER SECTION ACI 530 1.14.2.2.2.1	EVISIO A Revie
D L G M	 b. #4 VERTICAL BARS SHALL BE PLACED AT ALL CORNERS, WITHIN TO INCHES OF EACH WALL OPENINGS, WITHIN 8 INCHES OF EACH WALL MOVEMENT JOINT AND WITHIN 8 INCHES OF THE END OF THE WALL. C. HORIZONTAL JOINT REINFORCEMENT SHALL BE SPACED AT 16" MAX. 	ERMIT R ERMIT 0% OHF/ REVISIO
	WALL OPENINGS SHALL BE REINFORCED TOP AND BOTTOM OF OPENINGS AND SHALL EXTEND NOT LESS THAN 24 INCHES BEYOND PAST THE ROUGH OPENING.	− ≭
	D. SPACING OF VERTICAL REINFORCEMENT SHALL NOT EXCEED 4-0	
5.	 SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS AND SPECIFICATIONS OF FIRE RATED MASONRY. DROVIDE DREEADDIOATED WWWAND WTWOLADED LIODIZONTAL LOUNT 	
E	8. PROVIDE PREFABRICATED L AND T SHAPED HORIZONTAL JOINT REINFORCING AT WALL INTERSECTIONS. ALTERNATE MESH TIES REINFORCEMENT TO BE SUBMITTED FOR REVIEW CONSIDERATION PRIOR TO CONSTRUCTION.	CES
	9. KEEP AIR SPACE BEHIND VENEER FREE OF MORTAR DROPPINGS.	ERA ERA
	10. RUNNING BOND PATTERN SHALL BE USED FOR ALL MASONRY WORK UNLESS OTHERWISE NOTED.	NOTE NOTE
	11. PROVIDE MOVEMENT (CONTROL AND EXPANSION) JOINTS IN WALLS WHERE INDICATED ON ARCHITECTURAL DRAWINGS. BOND BEAMS SHALL BE DISCONTINUOUS ACROSS MOVEMENT JOINTS UNLESS NOTED OTHERWISE:	PCA ARC FOR ILY RI LBERT A LBERT A TI, OH 4 TI, OH 4 CTURAL
	A. MOVEMENT JOINTS IN CONCRETE BLOCK: SASH BLOCK UNIT WITH PREFORMED SHEAR KEY. CAULK BOTH FACES. ALTERNATE DETAILS FOR CONTROL JOINTS MAY BE ACCEPTABLE SUBMIT DETAILS FOR APPROVAL.	RED FOR: 1 HOUSE AP FAM 2631 GI 2631 GI CINCINNA RAL STRUG
	B. MOVEMENT JOINTS IN BRICK: 3/8" WIDE CLEAN JOINT FILLED WITH EXPANSION JOINT MATERIAL PER ASTM D1056, CLASS RE 41. CAULK EXTERIOR FACE.	PREPA EIGER KLEKAN KLEKAN
	C. PROVIDE BUILDING PAPER BOND BREAK BELOW LINTEL BEARING ADJACENT TO CONTROL JOINTS.	
	12. UNLESS NOTED OTHERWISE ON PLANS, UNDER LINTELS, BEARING PLATES, BEAMS, ETC.; FILL CELLS WITH GROUT, 3 COURSES MINIMUM BELOW BEARING.	DRAW
т	13. ALL REINFORCING STEEL SHALL BE SUPPORTED AND FASTENED TO APPROVED POSITIONERS LOCATED AT 192 BAR DIAMETERS MAXIMUM SPACING AND WITH A MINIMUM OF TWO POSITIONERS PER GROUT POUR (ONE NEAR THE BOTTOM AND ONE NEAR THE TOP) TO PREVENT DISPLACEMENT DURING THE PLACEMENT OF GROUT. ALL REINFORCING BARS MUST BE FULLY GROUTED IN PLACE IN LIFTS NOT TO EXCEED 60 INCHES.	Seal:
	14. BAR LAPS ARE AS FOLLOWS UNLESS OTHERWISE NOTED. MINIMUM BAR LAPS SHALL NOT BE LESS THAN 48" x (BAR DIAMETER).	PH 69944
	#4 BAR – 24" MINIMUM LAP #5 BAR – 30" MINIMUM LAP	Proi No · 22101 49
	A. IN DOUBLE REINFORCED CELLS, STAGGER BAR SPLICES ACCORDINGLY SO THAT LAPS DO NOT OCCURWITHIN THE SAMED SECTION ALONG THE HEIGHT OF THE WALL.	Design Team: STH / SJ
	15. GROUT ALL CELLS BELOW GRADE SOLID.	Date: 11/15/2022 Drawing No.
		S001

STRUCTURAL STEEL

- 1. ALL DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO AISC SPECIFICATIONS FOR "DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", LATEST EDITION.
- 2. FABRICATOR SHALL DESIGN CONNECTIONS AND, WHEN REQUESTED, SUBMIT CALCULATIONS TO AID THE ENGINEER IN REVIEW. UNLESS SPECIFIC END MOMENTS AND REACTIONS ARE INDICATED ON DRAWINGS, DESIGN AND FABRICATE CONNECTIONS TO RESIST SHEAR BASED ON THE MAXIMUM UNIFORM LOAD CAPACITY OF THE MEMBER FOR THE SPAN INCREASED BY 15%, BUT NO MORE THAN THE SHEAR CAPACITY OF THE MEMBER.
- 3. THE CONTRACTOR SHALL SUBMIT AS PART OF THE BIDDING PROCEDURE A UNIT COST FOR MISCELLANEOUSSTRUCTURAL STEEL REQUIREMENTS THAT MAY HAVE BEEN OMITTED FROM THE CONSTRUCTION BIDDOCUMENTS. PROVIDE A UNIT COST PER POUND FOR EACH OF THE FOLLOWING HOT ROLLED SECTIONS: WF BEAM, WF COLUMN, HSS, C-CHANNELS, L-LINTELS (GALVANIZED) AND L-LINTELS (PAINTED).
- 4. NO OPENING OR HOLE SHALL BE PLACED IN ANY STRUCTURAL MEMBER (OTHER THAT WHAT IS INDICATED ON THE DRAWINGS) UNLESS THE LOCATION HAS BEEN APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
- 5. ALL FLOOR OR ROOF BEAMS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP.
- 6. FIELD CONNECTIONS SHALL BE BOLTED EXCEPT WHERE WELDED CONNECTIONS ARE INDICATED ON THE STRUCTURAL DRAWINGS.
- 7. WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS D1.1).
- 8. MATERIALS:
 - A. ROLLED SHAPES AND PLATES UNLESS NOTED: ASTM A-36.
 - B. TUBULAR SHAPES: ASTM A992 DUAL GRADE, Fy = 50 ksi.
 - C. BOLTS: ASTM A325-N, 3/4" DIAMETER UNLESS NOTED.
 - D. ANCHOR RODS: ASTM F1554 GRADE 36 KSI MATERIAL FULLY THREADED RODS HAVING A NUT TACK WELDED IN PLACE ON BOTTOM. MINIMUM EMBEDMENT AS NOTED ON THE DRAWINGS.
- E. FIELD WELDS: AWS E70XX, LOW HYDROGEN ELECTRODES.
- F. NON-SHRINK NON-METALLIC GROUT: CRD-C-621 AND ASTM C1107 FOR INTERIOR AND EXTERIOR APPLICATIONS.
- 9. PAINT AND PROTECTION:
 - A. STRUCTURAL STEEL UNLESS NOTED: FABRICATOR'S STANDARD PRIME COAT. TOUCH UP AFTER ERECTION.
 - B. MEMBERS TO BE ENCASED IN CONCRETE, MEMBERS TO RECEIVE SPRAY-ON FIREPROOFING AND THE TOP FLANGES OF BEAMS TO RECEIVE COMPOSITE SHEAR CONNECTORS SHALL HAVE NO PAINT. COORDINATE ALL FIREPROOFING REQUIREMENT WITH THE PROJECT SPECIFICATIONS AND ARCHITECTURAL DRAWINGS.
 - C. PROVIDE MINIMUM 3" CONCRETE COVER FOR ALL STEEL BELOW GRADE.
 - D. LINTELS SUPPORTING EXTERIOR MASONRY WYTHES AND MEMBERS EXPOSED TO WEATHER IN FINISHED STRUCTURES: HOT DIP GALVANIZE PER ASTM A123 AFTER FABRICATION. COATING WEIGHT PER PARAGRAPH 5.1 OF ASTM A123 AND A153. FABRICATE ASSEMBLIES PER ASTM A143, A384, AND A385. TOUCH UP AFTER ERECTION WITH ORGANIC ZINC RICH PAINT COMPLYING WITH DOP-P-21035 OR MIL-P-26915, MULTIPLE COATS TO DRY FILM THICKNESS OF 8 MILS.
- 10. CONTRACTOR SHALL SUBMIT ERECTION AND SHOP DRAWINGS FOR REVIEW BY ENGINEER PRIOR TO FABRICATION. ANY DEVIATIONS FROM THE ORIGINAL DESIGN INTENT SHALL BE APPROVED PRIOR TO SUBMITTING ANY SHOP SUBMITTALS. SUCH DRAWINGS WILL BE REJECTED.
- 11. CONTRACTOR SHALL SUBMIT MISCELLANEOUS STEEL SHOP DRAWINGS FOR REVIEW BY ENGINEER PRIOR TO FABRICATION. MISCELLANEOUS STEEL SHOP DRAWINGS SHALL INCLUDE STAIRS AND GUARDRAILS. MISCELLANEOUS STEEL SHOP DRAWINGS SHALL BEAR THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER WHO IS PROVIDING SERVICES AS A SPECIALTY ENGINEER.

WOOD

1. MATERIALS:

- A. FRAMING LUMBER:
- 1. 2 x 8 AND LARGER: NO. 1 GRADE OR BETTER SOUTHERN PINE KILN DRIED.
- 2. 2 x 4: STUD GRADE OR BETTER SPRUCE PINE FIR KILN DRIED.
- 3. 2 x 6: NO. 2 GRADE OR BETTER SPRUCE PINE FIR KILN DRIED.
- 4. ACQ-C (ALT CA-B OR SBX-DOT) PRESSURE TREAT PIECES IN
- CONTACT WITH FOUNDATION OR EXPOSED TO WEATHER.
- 2. SHEATHING & SUBFLOORING: 48/24 APA RATED TONGUE & GROOVE SUBFLOOR EXPOSURE 1. 32/16 APA RATED ROOF SHEATHING EXPOSURE 1. 24/16 APA RATED STRUCTURAL WALL SHEATHING EXPOSURE 1. ALL SHEATHING TO BE NAILED WITH 8d NAILS AT 6" ON CENTER AT PANEL EDGES AND 12" ON CENTER AT INTERMEDIATE SUPPORTS UNLESS NOTED OTHERWISE. ROOF AND WALL SHEATHING SHALL BE SPACED A MINIMUM 1/8" AT PANEL EDGES AND ENDS OF SHEETS. USE APPROPRIATE PLYWOOD CLIPS AS RECOMMENDED BY THE APA. ALL PLYWOOD SUBFLOORING SHALL BE GLUED AND NAILED.
- 3. ADHESIVE FOR PLYWOOD SUBFLOORING: SHALL CONFORM TO PERFORMANCE SPECIFICATION AFG-01 DEVELOPED BY APA.
- 4. LVL (LAMINATED VENEER LUMBER) BEAMS: DISTRIBUTED AS TRUSS JOIST MACMILLAN, MICRO-LAM OR GEORGIA–PACIFIC CORPORATION, G-P LAM INSTALL PER MANUFACTURER'S RECOMMENDATIONS. LVL BEAMS SHALL HAVE MINIMUM DESIGN STRESS VALUES AS FOLLOWS:
 - F_b = 2600 PSI BENDING F_v = 285 PSI HORIZONTAL SHEAR
 - F_{c⊥} = 750 PSI COMPRESSION PERPENDICULAR TO GRAIN
 - E = 1,900,000 PSI MODULUS OF ELASTICITY

MULTIPLE LVL BEAMS AND HEADERS SHALL BE FASTENED TOGETHER AS FOLLOWS:

- 12" AND SMALLER M • TWO-PIECE N O.C.
- THREE PIECE
 24" O.C. STAG
- 5. INSTALL TYPICAL FLOOR CR EVERY JOIST SPACE TO AID POTENTIAL VIBRATION PROF
- UNLESS NOTED OTHERWISE 2304.9.1, "RECOMMENDED F BUILDING CODE. STAPLES I SHEATHING AND SUBFLOOF
- 7. ALL PLYWOOD SUBFLOORIN
- 8. ALL CONNECTION HARDWA SHALL BE MANUFACTURED SHALL BE FASTENED AS SP INSTRUCTION MANUAL.
- 9. FOR WOOD ROOF RAFTERS HURRICANE TIE AT EACH MI TO THE TYPICAL NAILING RE SCHEDULE".
- 10. BRIDGING IN ALL FLOOR AN WOOD I-JOISTS, SHALL BE 1 ON CENTER MAXIMUM.
- 11. PROVIDE SOLID BLOCKING MULTIPLE STUDS OR BEAM
- 12. DOUBLE JOISTS SHALL BE F THAT RUN PARALLEL WITH

WOOD TRUSSES

- 1. ALL WORK TO CONFORM TO CONNECTED WOOD TRUSS PLATE CONNECTED PARALL INSTITUTE, INC.
- 2. UNLESS NOTED OTHERWIS LOADS AS SHOWN IN THE D
- 3. ALL WOOD TRUSS TO TRUS RESPONSIBILITY OF THE TR ON THE TRUSS LAYOUT SHO ATTACHMENT SCHEDULE AS
- 4. SHOP DRAWINGS ARE REQUE ENGINEERING SEAL, SHOW TEMPORARY AND PERMANE AND ERECTION INSTRUCTION PERMANENT BRACING REQUE AN ERECTION PLAN LOCATI
- 5. ALL TRUSSES SHALL BE BR AND RECOMMENDATIONS F PLATE CONNECTED WOOD INSTITUTE, UNLESS MORE S MANUFACTURER. THIS BRA BRACING IN THE PLANE OF TOP CHORD IS LATERALLY
- 6. BOTTOM CHORD OF ALL WO UNBRACED FOR A LENGTH CHORD BRACES. BOTTOM MANUFACTURER.
- WHEN REQUIRED, THE GEN STAMPED ERECTION / SHOP TRUSSES TO THE BUILDING CONTINGENCIES.

AEMBERS:		
THE MEMBERS - 2 ROWS OF 160 COMMON NAILS AT 12		q
ROSS BRIDGING AT 8'-0" MAXIMUM INTERVALS IN D IN LOAD SHARE DISTRIBUTION AND CONTROL OBLEMS.		ison Roa
SE, CONNECTORS SHALL BE MADE PER TABLE FASTENING SCHEDULE", IN REFERENCED NOT PERMITTED FOR FASTENING APA RATED PRING.		1527 Mad
ING SHALL BE GLUED AND NAILED		
D BY THE SIMPSON STRONG-TIE COMPANY AND PECIFIED IN THE SIMPSON PRODUCT AND		
S AND TRUSSES, INSTALL ONE SIMPSON H5 //EMBER AT EACH BEARING LOCATION IN ADDITION REQUIREMENT IN THE "RECOMMENDED FASTENING		ROUP
ND CEILING JOISTS, INCLUDING MANUFACTURED 1"X3" CROSS BRIDGING (DOUBLE NAILED) AT 8'-0"		bnsultar E G
IN FLOOR CONSTRUCTION UNDER POSTS, I BEARINGS.		al Co
PROVIDED BELOW ALL INTERIOR PARTITIONS THE JOISTS.		Structur ANT
O "DESIGN SPECIFICATION FOR METAL PLATE SES" (TPI) OR "DESIGN SPECIFICATION FOR METAL LEL CHORD TRUSSES" (PCT) BY TRUSS PLATE		ADV
SE, ALL TRUSSES SHALL BE DESIGNED FOR THE DESIGN LOAD SECTION OF THESE NOTES.		
SS GIRDER CONNECTIONS ARE THE RUSS MANUFACTURER AND SHALL BE SPECIFIED IOP SUBMITTAL. PROVIDE HANGER AND AS REQUIRED.		
QUIRED AND SHALL BEAR THE DESIGNER'S V ALL DESIGN AND FABRICATION DATA, IENT BRACING REQUIREMENTS, AND HANDLING ONS. SHOP DRAWINGS SHALL CLEARLY SHOW QUIREMENTS FOR WEB COMPRESSION MEMBERS. TING ALL TRUSSES SHALL BE PROVIDED.		
RACED DURING ERECTION PER "COMMENTARY FOR HANDLING, INSTALLING AND BRACING METAL TRUSSES, HIB-91" BY THE TRUSS PLATE STRICT BRACING IS REQUIRED BY THE TRUSS ACING SHALL REMAIN AS PERMANENT BRACING. THE TOP CHORD MAY BE REMOVED WHEN THE BRACED BY PLYWOOD SHEATHING.		
OOD TRUSSES SHALL BE DESIGNED AS I EQUAL TO THE SPACING BETWEEN BOTTOM CHORD BRACES SHALL BE SUPPLIED BY TRUSS		
NERAL CONTRACTOR SHALL SUBMIT COPIES OF		
G OFFICIAL. COORDINATE WITH PERMIT		
		ca architecture FOR VETERANS / ILY RESIDENCES
TYPICAL ABB	REVIATION LIST	FOR: P USE FAMI
AEF = Alternate Each Face ARCH = Architect BLDG = Building BM = Beam B/FTG = Bottom of Footing B/DECK = Bottom of Deck BRG = Bearing CIP = Cast In Place CJ = Control Joint CL = Center Line CLR = Clear CMU = Concrete Maconry Unit	LG = Long LL = Live Load LLH = Long Leg Horizontal LLV = Long Leg Vertical LSL = Laminated Strand Lumber LVL = Laminated Veneer Lumber MAX = Maximum MECH = Mechanical MIN = Minimum ML = Micro Laminated NS = Non Shrink NTS = Not to Scale	CEICER HO KLEKAMP I
CONC=ConcreteCONT=ContinuousDL=Dead LoadDWG=DrawingsEJ=Expansion JointEL=ElevationEMBD=EmbedmentENGR=EngineerEQ=Equal DistanceEW=Each WayEF=Each FaceEX=ExistingEXT=ExteriorFTG=FootingFND=Foundation	 o.c. = On Center PAF = Powder Actuated Fastener PC = Piece PEMB = Pre-Engineered Metal Building PL = Plate psf = Pounds Per Square Foot RD = Roof Drain REINF = Reinforcement RTU = Roof Top Unit SDS = Self Drilling Screw SF = Step Footing SW = Step Wall SB = Solid Bearing SCH = Schedule SIM = Similar 	Seal:
ga = Gauge GALV = Galvanized GC = General Contractor	SIL= SteelSRD= Secondary Roof DrainT/FTG= Top Of Footing	Design Tear
GRAN = Granular HORZ = Horizontal HD = Hold Down Anchor	TS = Tube Steel TYP = Typical UNO = Unless Noted Otherwise	Date:
HSS = Hollow Structural Section k = Kips ksf = Kips Per Square Foot	VERT = Vertical WWF = Welded Wire Fabic WF = Wide Flange	Drawing No
Ibs = Pounds		



BASEMENT FOUNDATION PLAN SCALE 1/8" = 1'-0"

PLAN NOTES:

- 1. COORDINATE ALL DIMENSIONS, DOOR AND WINDOW LOCATIONS WITH ARCHITECTURAL DRAWINGS.
- 2. CORRIDOR AND EXTERIOR BEARING WALLS TO BE:
- 1ST FLOOR
 No.2 SPF 2x6 @ 16"o.c.

 2ND AND 3RD FLOOR
 No.2 SPF 2x6 @ 16"o.c. AT EXTERIOR WALL

 2x6 @ 16"o.c. STUD GRADE AT CORRIDOR
- 3. WALL SHEATHING SHALL BE 7/16" OR THICKER APA RATED PANELS.
- 4. FLOOR SHEATHING SHALL BE 23/32 APA RATED 48/24 SHEATHING UNBLOCKED FASTENED TO FLOOR FRAMING WITH 8d NAILS AT PANEL EDGES SPACED 6" ON CENTER AND 12" ON CENTER AT INTERMEDIATE SUPPORTS. SHEATHING PANEL AXIS SHALL BE SITUATED SUCH THAT THE LONG EDGE OF THE PANEL IS SPANNING ACROSS THE FLOOR FRAMING IN RUNNING BOND PATTERN.
- 5. ALL CMU SHAFTS SHALL BE REINFORCED WITH #5 VERTICAL BARS AT 32" ON CENTER, CENTERED IN FULLY GROUTED CELLS. JAMB CELLS SHALL BE REINFORCED ON EITHER SIDE OF DOOR OPENINGS AND ALL CORNERS OF THE SHAFTS SHALL BE REINFORCED WITH #5 BARS IN EACH OF THE CORNER CELLS AS WELL AS THE ADJACENT CELLS.





	HEADER SCHEDULE	
MARK	HEADER	MAX OPENING
H1	(2) 2x8's w/ (1) BEARING STUD AND (2) FULL HEIGHT STUDS	4'-0"
H2	(2) 2x10's w/ (1) BEARING STUD AND (3) FULL HEIGHT STUDS	6'-6"
H3	(2) 2x12's w/ (1) BEARING STUD AND (3) FULL HEIGHT STUDS	6'-6"

LINTEL SCHEDULE

LINTEL	MAX SPAN
L4x31/2x5/16 LLV	UP TO 4'-0"
L6x31⁄2x3/8 LLV	UP TO 7'-0"
L7x4x3/8 LLV	UP TO 8'-0"

FIRST FLOOR FOUNDATION AND FRAMING PLAN

NORTH

PLAN NOTES:

- 2. CORRIDOR AND EXTERIOR BEARING WALLS TO BE: 1ST FLOORNo.2 SPF 2x6 @ 16"o.c.2ND AND 3RD FLOORNo.2 SPF 2x6 @ 16"o.c. AT EXTERIOR WALL
- 2x6 @ 16"o.c. STUD GRADE AT CORRIDOR
- 3. WALL SHEATHING SHALL BE 7/16" OR THICKER APA RATED PANELS.
- PATTERN.

SCALE 1/8" = 1'-0"

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4. FLOOR SHEATHING SHALL BE 23/32 APA RATED 48/24 SHEATHING UNBLOCKED FASTENED TO FLOOR FRAMING WITH 8d NAILS AT PANEL EDGES SPACED 6" ON CENTER AND 12" ON CENTER AT INTERMEDIATE SUPPORTS. SHEATHING PANEL AXIS SHALL BE SITUATED SUCH THAT THE LONG EDGE OF THE PANEL IS SPANNING ACROSS THE FLOOR FRAMING IN RUNNING BOND

5. ALL CMU SHAFTS SHALL BE REINFORCED WITH #5 VERTICAL BARS AT 32" ON CENTER, CENTERED IN FULLY GROUTED CELLS. JAMB CELLS SHALL BE REINFORCED ON EITHER SIDE OF DOOR OPENINGS AND ALL CORNERS OF THE SHAFTS SHALL BE REINFORCED WITH #5 BARS IN EACH OF THE CORNER CELLS AS WELL AS THE ADJACENT CELLS.

WOOD SHEAR WALL SCHEDULE						
MARK	WALL SHEATHING	FASTENER TYPE & SPACING AT WALL PANEL EDGES	FASTENER TYPE & SPACING WITHIN WALL PANEL FIELD	FLOOR SHEATHING CONNECT TO SHEAR WALL TOP PLATE	2x PT SILL PLATE CONNECTION TO FOUNDATION	WIND CAPACITY
SW1	7/16" APA RATED WOOD SHEATHING ONE SIDE	8d NAILS @ 4" o.c.	8d NAILS @ 12" o.c.	8d NAILS @ 6" o.c.	5/8"Ø @ 24" o.c.	490 PLF
SW2	7/16" APA RATED WOOD SHEATHING ONE SIDE	8d NAILS @ 6" o.c.	8d NAILS @ 12" o.c.	8d NAILS @ 6" o.c.	-	335 PLF
1. 2x BLOCKING REQUIRED AT ALL SHEAR WALL PANEL JOINTS. 2. INTERIOR SHEAR WALLS SHALL BE 5/8" GYPSUM SHEATHING OVER 2x4 STUDS NO MORE THAN 16" ON CENTER.						

3. ALL EXTERIOR WALLS TO BE SHEATHED WITH MINIMUM 15/32 APA RATED SHEATHING ONE SIDE. 6" NAIL SPACING AT EDGES, 12" MINIMUM CENTER. 4. SHEAR WALL TAGS REPRESENT THE WALL CONSTRUCTION BELOW THE FRAMING PLAN IT IS CALLED OUT ON. EXAMPLE: SW# ON SECOND FLOOR FRAMING DENOTES WALL CONSTRUCTION BETWEEN FIRST AND SECOND FLOOR.

HOLDOWN SCHEDULE

HOLDOWN		HOLDOWN AT	EACH FLOOR	# OF 2x4 ST	UDS AT EACH	HOLDOWN
MARK	FIRST FLOOR/FOUNDATION	SECOND FLOOR	THIRD FLOOR	FIRST/FND	SECOND	THIRD
HD1	SIMPSON HDU11-SDS2.5 w/ (30) 1/4"x2 1/2" SDS INTO WOOD POST w/ 1" Ø A36 HEAVY HEX THREADED ROD, MIN 12" EMBEDMENT INTO CONC FTG	SIMPSON HDU4-SDS2.5 w/ (10) 1/4"x2 1/2" SDS INTO WOOD POST w/ 5/8" Ø A36 HEAVY HEX THREADED ROD	SIMPSON HDU2-SDS2.5 w/ (6) 1/4"x2 1/2" SDS INTO WOOD POST w/ 5/8" Ø A36 HEAVY HEX THREADED ROD	4	3	2





INDICATES SHEAR WALL

	HEADER SCHEDULE	
MARK	HEADER	MAX OPENING
H1	(2) 2x8's w/ (1) BEARING STUD AND (2) FULL HEIGHT STUDS	4'-0"
H2	(2) 2x10's w/ (1) BEARING STUD AND (3) FULL HEIGHT STUDS	6'-6"
H3	(2) 2x12's w/ (1) BEARING STUD AND (3) FULL HEIGHT STUDS	6'-6"

LINTEL SCHEDULE

MAX SPAN
UP TO 4'-0"
UP TO 7'-0"
UP TO 8'-0"

PLAN NOTES:

- 1. COORDINATE ALL DIMENSIONS, DOOR AND WINDOW LOCATIONS WITH ARCHITECTURAL DRAWINGS.
- 2. CORRIDOR AND EXTERIOR BEARING WALLS TO BE: 1ST FLOORNo.2 SPF 2x6 @ 16"o.c.2ND AND 3RD FLOORNo.2 SPF 2x6 @ 16"o.c. AT EXTERIOR WALL2x6 @ 16"o.c. STUD GRADE AT CORRIDOR
- 3. WALL SHEATHING SHALL BE 7/16" OR THICKER APA RATED PANELS.
- PATTERN.



4. FLOOR SHEATHING SHALL BE 23/32 APA RATED 48/24 SHEATHING UNBLOCKED FASTENED TO FLOOR FRAMING WITH 8d NAILS AT PANEL EDGES SPACED 6" ON CENTER AND 12" ON CENTER AT INTERMEDIATE SUPPORTS. SHEATHING PANEL AXIS SHALL BE SITUATED SUCH THAT THE LONG EDGE OF THE PANEL IS SPANNING ACROSS THE FLOOR FRAMING IN RUNNING BOND

5. ALL CMU SHAFTS SHALL BE REINFORCED WITH #5 VERTICAL BARS AT 32" ON CENTER, CENTERED IN FULLY GROUTED CELLS. JAMB CELLS SHALL BE REINFORCED ON EITHER SIDE OF DOOR OPENINGS AND ALL CORNERS OF THE SHAFTS SHALL BE REINFORCED WITH #5 BARS IN EACH OF THE CORNER CELLS AS WELL AS THE ADJACENT CELLS.

	WOOD SHEAR WALL SCHEDULE						
MARK	WALL SHEATHING	FASTENER TYPE & SPACING AT WALL PANEL EDGES	FASTENER TYPE & SPACING WITHIN WALL PANEL FIELD	FLOOR SHEATHING CONNECT TO SHEAR WALL TOP PLATE	2x PT SILL PLATE CONNECTION TO FOUNDATION	WIND CAPACITY	
SW1	7/16" APA RATED WOOD SHEATHING ONE SIDE	8d NAILS @ 4" o.c.	8d NAILS @ 12" o.c.	8d NAILS @ 6" o.c.	5/8"Ø @ 24" o.c.	490 PLF	
SW2	7/16" APA RATED WOOD SHEATHING ONE SIDE	8d NAILS @ 6" o.c.	8d NAILS @ 12" o.c.	8d NAILS @ 6" o.c.	-	335 PLF	
1. 2x BLC 2. INTER							

 ALL EXTERIOR WALLS TO BE SHEATHED WITH MINIMUM 15/32 APA RATED SHEATHING ONE SIDE. 6 NAIL SPACING AT EDGES, 12 MINIMUM CENTER
 SHEAR WALL TAGS REPRESENT THE WALL CONSTRUCTION BELOW THE FRAMING PLAN IT IS CALLED OUT ON. EXAMPLE: SW# ON SECOND FLOOR FRAMING DENOTES WALL CONSTRUCTION BETWEEN FIRST AND SECOND FLOOR.

HOLDOWN SCHEDULE

HOLDOWN AT EACH FLOOR # OF 2x4 STUDS AT EACH HOL MARK FIRST FLOOR/FOUNDATION SECOND FLOOR THIRD FLOOR THIRD FLOOR FIRST/FND SECOND &		_
MARK FIRST FLOOR/FOUNDATION SECOND FLOOR THIRD FLOOR FIRST/FND SECOND SIMPSON UPUID SPS2.5 w/ (20) 4/d/w2 4/2// SPS INTO SIMPSON UP	EACH HOLDOWN	
	ND THIRD	
HD1 WOOD POST w/ 1" Ø A36 HEAVY HEX THREADED ROD, MIN 12" EMBEDMENT INTO CONC FTG 4 3	2	





	HEADER SCHEDULE	
MARK	HEADER	MAX OPENING
H1	(2) 2x8's w/ (1) BEARING STUD AND (2) FULL HEIGHT STUDS	4'-0"
H2	(2) 2x10's w/ (1) BEARING STUD AND (3) FULL HEIGHT STUDS	6'-6"
H3	(2) 2x12's w/ (1) BEARING STUD AND (3) FULL HEIGHT STUDS	6'-6"

MAX SPAN
UP TO 4'-0"
UP TO 7'-0"
UP TO 8'-0"

		W	OOD SHEAR WAL	L SCHEDULE	
MARK	WALL SHEATHING	FASTENER TYPE & SPACING AT WALL PANEL EDGES	FASTENER TYPE & SPACING WITHIN WALL PANEL FIELD	FLOOR SHEATHING CONNECT TO SHEAR WALL TOP PLATE	2x PT SILL PLATE TO FOUND
SW1	7/16" APA RATED WOOD SHEATHING ONE SIDE	8d NAILS @ 4" o.c.	8d NAILS @ 12" o.c.	8d NAILS @ 6" o.c.	5/8"Ø @ 24
SW2	7/16" APA RATED WOOD SHEATHING ONE SIDE	8d NAILS @ 6" o.c.	8d NAILS @ 12" o.c.	8d NAILS @ 6" o.c.	-
1. 2x BLOCKING REQUIRED AT ALL SHEAR WALL PANEL JOINTS. 2. INTERIOR SHEAR WALLS SHALL BE 5/8" GYPSUM SHEATHING OVER 2x4 STUDS NO MORE THAN 16" ON CENTER.					-

HOLDOWN		HOLDOWN AT	EACH FLOOR	# OF 2x4 ST	TUDS AT EACH	HOLDOWN
MARK	FIRST FLOOR/FOUNDATION	SECOND FLOOR	THIRD FLOOR	FIRST/FND	SECOND	THIRD
HD1	SIMPSON HDU11-SDS2.5 w/ (30) 1/4"x2 1/2" SDS INTO WOOD POST w/ 1" Ø A36 HEAVY HEX THREADED ROD, MIN 12" EMBEDMENT INTO CONC FTG	SIMPSON HDU4-SDS2.5 w/ (10) 1/4"x2 1/2" SDS INTO WOOD POST w/ 5/8" Ø A36 HEAVY HEX THREADED ROD	SIMPSON HDU2-SDS2.5 w/ (6) 1/4"x2 1/2" SDS INTO WOOD POST w/ 5/8" Ø A36 HEAVY HEX THREADED ROD	4	3	2



	HEADER SCHEDULE	
MARK	HEADER	MAX OPENING
H1	(2) 2x8's w/ (1) BEARING STUD AND (2) FULL HEIGHT STUDS	4'-0"
H2	(2) 2x10's w/ (1) BEARING STUD AND (3) FULL HEIGHT STUDS	6'-6"
H3	(2) 2x12's w/ (1) BEARING STUD AND (3) FULL HEIGHT STUDS	6'-6"

LINTEL	MAX SPAN
L4x3½x5/16 LLV	UP TO 4'-0"
L6x3½x3/8 LLV	UP TO 7'-0"
L7x4x3/8 LLV	UP TO 8'-0"

		W	'OOD
MARK	WALL SHEATHING	FASTENER TYPE & SPACING AT WALL PANEL EDGES	FASTENI WITHIN
SW1	7/16" APA RATED WOOD SHEATHING ONE SIDE	8d NAILS @ 4" o.c.	8d N
SW2	7/16" APA RATED WOOD SHEATHING ONE SIDE	8d NAILS @ 6" o.c.	8d N
1. 2x BLO 2. INTERI	CKING REQUIRED AT ALL S OR SHEAR WALLS SHALL E	SHEAR WALL PANEL JOINTS. BE 5/8" GYPSUM SHEATHING OVE	

HOLDOWN		
MARK	FIRST FLOOR/FOUNDATION	SECOND FLOOR
HD1	SIMPSON HDU11-SDS2.5 w/ (30) 1/4"x2 1/2" SDS INTO WOOD POST w/ 1" Ø A36 HEAVY HEX THREADED ROD, MIN 12" EMBEDMENT INTO CONC FTG	SIMPSON HDU4-SDS2.5 w/ (10) 1/4"x2 1/2" SE WOOD POST w/ 5/8" Ø A36 HEAVY HEX THR











FIRE PROTECTION GENERAL NOTES

INSTALL NEW SPRINKLER SYSTEM PER NFPA 13R. JNLESS SPECIFICALLY SHOWN OTHERWISE, ALL SPRINKLER PIPING TO BE CONCEALED IN CEILINGS AND WALLS.

WHERE APPLICABLE, SPRINKLERS ARE TO BE LOCATED IN THE CENTER OF ALL CEILING TILES (IN AT LEAST ONE DIRECTION). COORDINATE WITH ARCHITECT'S CODE ANALYSIS. CONTACT ARCHITECT IF ANY

DISCREPANCIES. REFERENCE ARCHITECTURAL PLANS FOR CEILING HEIGHTS AND MATERIALS.

DELEGATED FIRE SUPPRESSION DESIGN DESIGN OF THE FIRE SUPPRESSION SYSTEM IS DELEGATED TO THE INSTALLING CONTRACTOR. RESPONSIBILITY FOR PROVIDING A COMPLIANT, OPERATIONAL FIRE SUPPRESSION SYSTEM LIES WITH THE INSTALLING SPRINKLER CONTRACTOR. REFER TO ARCHITECT'S CODE SHEET WHEN DETERMINING THE APPROPRIATE FIRE SUPPRESSION DESIGN. VERIFY REQUIREMENTS SPECIFIC TO THE PROJECT LOCALE, THE AUTHORITY HAVING JURISDICTION, AND INCLUDE IN SCOPE.

THESE DRAWINGS SHOW THE INTENDED FIRE SUPPRESSION SCOPE. THE INSTALLING CONTRACTOR SHALL FURNISH ALL REQUIRED DRAWINGS AND HYDRAULIC CALCULATIONS REQUIRED TO OBTAIN THE PERMIT. THE DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR AN INDIVIDUAL CARRYING ALL CERTIFICATIONS REQUIRED BY THE AGENCY RESPONSIBLE FOR REVIEW AND APPROVAL. DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT / OWNER FOR REVIEW PRIOR TO SUBMITTING FOR

REQUIRED COMPONENTS THAT ARE NOT SHOWN ON THESE DRAWINGS ARE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARE INCLUDED IN THIS SCOPE OF WORK.





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FIRE PROTECTION LEGEND		
SYMBOL	DESCRIPTION	
—— F ——	FIRE SERVICE / SPRINKLER PIPING	
O ^N	EXPOSED SPRINKLER IN AREA WITH NO CEILING (BRASS FINISH)	
● ^N	SPRINKLER IN FINISHED CEILING (CONCEALED WITH COVER PLATE)	
O ^N	CONCEALED SIDEWALL SPRINKLER	
O D	DRY CONCEALED SIDEWALL SPRINKLER	

FIRE PROTECTION BASEMENT PLAN

DIVISION 21 - FIRE SUPPRESSION

1. GENERAL FIRE SUPPRESSION REQUIREMENTS

- a. DELEGATED DESIGN PROVIDE A COMPLETE AND FULLY OPERATIONAL FIRE PROTECTION SYSTEM, INCLUDING ALL LABOR, MATERIAL AND EQUIPMENT NECESSARY TO COMPLETE THE FIRE SUPPRESSION WORK. RESPONSIBILITY FOR PROVIDING A COMPLIANT, OPERATIONAL FIRE SUPPRESSION SYSTEM LIES WITH THE INSTALLING SPRINKLER CONTRACTOR. REFER TO ARCHITECT'S CODE SHEET WHEN DETERMINING THE APPROPRIATE FIRE SUPPRESSION DESIGN. VERIFY REOUIREMENTS SPECIFIC TO PROJECT LOCALITY/AUTHORITY HAVING JURISDICTION AND INCLUDE IN SCOPE. INSTALLING CONTRACTOR SHALL FURNISH ALL REQUIRED DRAWINGS AND HYDRAULIC CALCULATIONS REQUIRED FOR FIRE PROTECTION PERMIT. DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR AN INDIVIDUAL CARRYING ALL CERTIFICATIONS REOUIRED BY THE AGENCY RESPONSIBLE FOR REVIEW AND APPROVAL. ALL REQUIRED COMPONENTS ARE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARE INCLUDED IN THIS SCOPE OF WORK. b. THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR MUST REFER TO SITE PLANS, ARCHITECTURAL PLANS AND ELEVATIONS, AND PRICING INSTRUCTIONS FROM THE GENERAL CONTRACTOR TO DEVELOP THEIR PRICE. THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR'S PRICE (INCLUDING TAXES) SHOULD INCLUDE ALL LABOR AND MATERIAI
- NECESSARY TO PROVIDE A COMPLETE AND FULLY OPERATIONAL FIRE SUPPRESSION SYSTEM. c. THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR SHALL BE LICENSED BY
- THE STATE OF OHIO TO INSTALL FIRE SUPPRESSION SYSTEMS. d. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH NFPA, AND ALL APPLICABLE STATE, LOCAL CODES AND ORDINANCES, IN CASE OF CONFLICT BETWEEN THE DRAWINGS/SPECIFICATIONS AND THE CODES AND ORDINANCES, THE HIGHEST STANDARD SHALL APPLY. THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD.
- e. THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR AT HIS OWN COST MUST FURNISH HIS OWN PROFESSIONALLY ENGINEERED, SIGNED/SEALED PERMIT DRAWINGS. DRAWINGS SHALL BE SUBMITTED TO ARCHITECT AND GENERAL CONTRACTOR FOR REVIEW AND COORDINATION WITH OTHER
- DISCIPLINES. THIS WORK MUST BE PERFORMED PRIOR TO SUBMITTAL. f. SUBMIT TO THE ARCHITECT PDF FILE COPIES OF COMPLETE AND CERTIFIED SHOP DRAWINGS, HYDRAULIC CALCULATIONS, DESCRIPTIVE DATA, PERFORMANCE DATA AND RATINGS, DIAGRAMS AND SPECIFICATIONS ON ALL SPECIFIED EQUIPMENT INCLUDING ACCESSORIES, AND MATERIALS FOR REVIEW CONCURRENTLY WITH SUBMITTING FOR BUILDING DEPARTMENT APPROVAL. ARCHITECT MAY REQUIRE SPRINKLER LOCATIONS TO BE MOVED FOR COORDINATION PURPOSES OR AESTHETIC REASONS.
- g. REFER TO ARCHITECTURAL DRAWINGS, GENERAL NOTES, INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, SPECIFICATIONS, AND DRAWINGS EXCEPT AS NOTED HEREIN WHICH APPLY IN ALL RESPECTS TO THIS SECTION.
- h. COORDINATE PIPING CHASES, SHAFTS, ABOVE CEILING WORK, ETC. WITH ARCHITECT. ALL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO WORK. i. THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR SHALL BE RESPONSIBLE
- FOR MAKING ALL NECESSARY SPRINKLER PIPING PENETRATIONS. THIS INCLUDES CORING HOLES IN SLABS, ETC
- j. EQUIPMENT AND MATERIALS SHALL CONFORM WITH APPROPRIATE PROVISIONS OF AGA, ARI, ASME, ASTM, CISPI, UL, NEMA, ANSI, SMACNA, ASHRAE, NFPA, NEC, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY. ALL EQUIPMENT MUST BEAR UL LABEL. k. INSTALL EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. MAINTAIN
- ALL CODE RECOMMENDED CLEARANCES.
- 1. THOROUGHLY EXAMINE ALL AREAS WHERE EQUIPMENT AND PIPING WILL BE INSTALLED AND REPORT ANY CONDITION THAT PREVENTS THE PROPER INSTALLATION OF THE FIRE SUPPRESSION WORK PRIOR TO BID. ALL WORK SHALL BE DONE AT TIMES CONVENIENT TO THE OWNER AND ONLY DURING NORMAL WORKING HOURS, UNLESS SPECIFIED OTHERWISE, FIRE SUPPRESSION/SPRINKLER CONTRACTOR SHALL TAKE THEIR OWN MEASUREMENTS.
- m. WHERE NOT PROVIDED BY OTHERS, PROCURE AND PAY FOR ALL PERMITS, FEES, TAXES AND INSPECTIONS NECESSARY TO COMPLETE THE FIRE SUPPRESSION WORK. FURNISH CERTIFICATE OF APPROVAL FOR WORK FROM INSPECTION AUTHORITY TO OWNER BEFORE FINAL ACCEPTANCE FOR WORK. CERTIFICATE OF FINAL INSPECTION AND APPROVAL SHALL BE SUBMITTED WITH THE CONTRACTOR'S REQUEST FOR PAYMENT. NO FINAL PAYMENT WILL BE APPROVED WITHOUT THIS CERTIFICATE. n. ALL WORK SHALL BE ACCURATELY LAID-OUT WITH OTHER TRADES, PRIOR O INSTALLATION & FABRICATION. TO AVOID ALL CONFLICTS AND OBTAIN A NEAT AND WORKMANLIKE INSTALLATION WHICH WILL AFFORD
- MAXIMUM ACCESSIBILITY FOR EQUIPMENT OPERATION, MAINTENANCE CLEARANCES AND HEADROOM. 2. USE OF INFORMATION PROVIDED BY EBS
- a. THE INFORMATION PROVIDED IS INTENDED TO CONVEY DESIGN INTENT ONLY. ALL MEANS AND METHODS, SEQUENCES, TECHNIQUES, AND PROCEDURES OF CONSTRUCTION AS WELL AS ANY ASSOCIATED SAFETY PRECAUTIONS AND PROGRAMS, AND ALL INCIDENTAL AND TEMPORARY DEVICES REQUIRED TO CONSTRUCT THE PROJECT, AND TO PROVIDE A COMPLETE AND FULLY OPERATIONAL FIRE PROTECTION SYSTEM ARE THE RESPONSIBILITY OF THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR.
- 3. CONTRACTOR COORDINATION a. COORDINATION DRAWINGS SHOWING SYSTEM AND COMPONENT INSTALLATION LAYOUT, ROUTING, DETAILS, ETC. SHALL BE PRODUCED BY THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR AND UNDER THE SUPERVISION OF THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER, OR APPROPRIATE PARTY AS APPLICABLE. ALL SYSTEMS INSTALLED BY EACH SUB-CONTRACTOR SHALL BE COORDINATED WITH ONE ANOTHER AND APPROVED BY GENERAL CONTRACTOR/CONSTRUCTION MANAGER PRIOR TO INSTALLATION AND/OR FABRICATION IF OUESTIONS
- ASSIST WHERE APPROPRIATE.
- 4. SYSTEM DESIGN
- b. FLOW TEST INFORMATION: TEST DATE: 03/11/2022
- HYDRANT FLOWED 1ST HYDRANT NORTH OF FORAKER AVE ON GILBERT
- STATIC 61 PSI
- **RESIDUAL 60 PSI**
- FLOW 681 GPM
- c. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THEIR OWN FLOW TEST INFORMATION. FLOW TEST INFORMATION IS PROVIDED TO GIVE THE CONTRACTOR THE MOST RECENT INFORMATION AVAILABLE ON FILE AND MAY NO LONGER BE ACCURATE. CHANGES IN DESIGN AND ASSOCIATED ADDITIONAL COSTS INCURRED FOR USE OF INACCURATE FLOW TEST INFORMATION ARE THE RESPONSIBILITY OF THE CONTRACTOR.
- d. PROVIDE NEW 6" DUAL SERVICE WATER BRANCH FROM THE MAIN IN THE STREET PER THE GREATER CINCINNATI WATER WORKS STANDARD DETAIL 108-14A
- e. ALL SPRINKLER PIPING SHALL BE INSTALLED ENTIRELY WITHIN THE THERMAL ENVELOPE (ON THE CONDITIONED SIDE OF THE AIR BARRIER).
- f. RESIDENTIAL AREAS AND COMMON SPACES CAN BE DESIGNED AS LIGHT HAZARD OCCUPANCIES.
- g. STORAGE AREAS AND MECHANICAL SPACES SHALL BE DESIGNED AS ORDINARY HAZARD GROUP 1 OCCUPANCIES.
- 5. MONITORING/DETECTION/NOTIFICATION a. FIRE SUPPRESSION CONTRACTOR IS RESPONSIBLE FOR ALL MONITORING AND ALARM DEVICES FOR THE SPRINKLER SYSTEM. FIRE ALARM PANEL
- WILL BE PROVIDED BY THE ELECTRICAL CONTRACTOR. b. PROVIDE FLOW SWITCH AT THE SPRINKLER SYSTEM RISER.
- c. PROVIDE TAMPER SWITCHES TO MONITOR ALL SPRINKLER CONTROL VALVES.

6. INTERIOR PIPING

CONCERNING DESIGN INTENT ARISE DURING COORDINATION, EBS CAN

a. FIRE SUPPRESSION SYSTEM SHALL BE DESIGNED ACCORDING TO NFPA 13R.

HYDRANT GAUGED - 1ST HYDRANT SOUTH OF LINCOLN AVE ON GILBERT

- a. WHERE ALLOWED BY CODE, PIPING CAN BE CPVC. THE PIPE SHALL BE RIGID CHLORINATED POLYVINYL CHLORIDE (CPVC), TYPE IV GRADE I, WITH A CELL CLASSIFICATION OF 23547 AS DEFINED IN ASTM D1784. THE PRODUCT SHALL BE ORANGE IN COLOR, AND APPROVED BY THE NATIONAL SANITATION FOUNDATION (NSF) FOR USE WITH POTABLE WATER. MATERIAL SHALL BE BLAZEMASTER CPVC MATERIAL AS PROVIDED BY NOVEON, INC. (FORMERLY THE BF GOODRICH COMPANY). FITTINGS SHALL BE UL LISTED CPVC FITTINGS AND SHALL MEET ASTM F437 (SCH 80 THREADED), ASTM F437 (SCH 80 SOCKET), OR ASTM F438 (SCH 40 SOCKET) AS APPLICABLE, BY SPEARS MANUFACTURING CO. OR EQUIVALENT. SOLVENT CEMENTS SHALL BE THOSE REFERENCED IN GEORG FISCHER HARVEL LLC INSTALLATION INSTRUCTIONS (SUCH AS SPEARS FS-5 OR EQUIVALENT), WHICH MEET ASTM F656 AND ASTM F493, AND APPROVED BY THE NATIONAL SANITATION FOUNDATION (NSF) FOR USE WITH POTABLE WATER. SOCKET TYPE JOINTS SHALL BE MADE USING THE ONE-STEP SOLVENT CEMENT JOINING METHOD IN ACCORDANCE WITH GF HARVEL INSTALLATION
- INSTRUCTIONS. b. WHERE CPVC PIPING IS NOT ALLOWED, PIPING SMALLER THAN 2" SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH CLASS 125, CAST-IRON THREADED FITTINGS. PIPING LARGER THAN 2" SHALL BE SCHEDULE 10 BLACK STEEL PIPE WITH MECHANICAL GROOVED PIPE COUPLINGS (ROLL-GROOVED TYPE). 2" PIPING CAN BE SCHEDULE 40 BLACK STEEL PIPE WITH CLASS 125, CAST-IRON THREADED FITTINGS OR SCHEDULE 10 BLACK STEEL PIPE WITH MECHANICAL GROOVED PIPE COUPLINGS (ROLL-GROOVED TYPE).
- 7. SPRINKLERS a. SPRINKLERS SHALL BE LOCATED IN THE CENTER OF CEILING TILES (IN AT LEAST ONE DIRECTION).
- b. FLEXIBLE FIRE SPRINKLER CONNECTIONS ARE ACCEPTABLE. FLEXIBLE FIRE SPRINKLER CONNECTIONS SHALL BE FULLY-BRAIDED, 304 STAINLESS STEEL AND APPROVED FOR USE PER NFPA 13.
- c. SPRINKLERS IN FINISHED CEILINGS SHALL BE FULLY RECESSED WITH FLAT WHITE COVER PLATE. d. SPRINKLERS IN AREAS WITH NO CEILINGS SHALL BE BRASS UPRIGHT OR
- BRASS PENDENT. e. PROVIDE SPRINKLERS IN ELEVATOR SHAFTS WHERE REQUIRED BASED ON ELEVATOR PROVIDED.
- 8. ADDITIONAL STOCK a. PROVIDE 2 ADDITIONAL SPRINKLERS OF EACH TYPE, WRENCHES, SIGNAGE, ETC. AT PROJECT TURNOVER.
- 9. BACKFLOW PREVENTION a. PROVIDE DOUBLE DETECTOR CHECK VALVE ASSEMBLY IN METER PIT. 10. POST INDICATOR VALVE
- a. PROVIDE POST INDICATOR VALVE AT METER PIT.
- 11. FIRE DEPARTMENT CONNECTION
- a. PROVIDE FIRE DEPARTMENT CONNECTION FOR SPRINKLER SYSTEM AT METER PIT. 12. HANGERS & SUPPORTS
- a. FURNISH ALL PIPE SUPPORTS REQUIRED FOR THEIR WORK. ALL PIPING SHALL BE SUPPORTED PER CODE. ADDITIONAL SUPPORTS SHALL BE PROVIDED WHERE REQUIRED TO PREVENT SAGGING.
- 13. ESCUTCHEON PLATES a. INSTALL ONE-PIECE CHROME PLATED BRASS WALL PLATE EQUIPPED WITH SET SCREW AROUND ALL EXPOSED PIPE PASSING THROUGH WALLS IN FINISHED AREAS.
- 14. ACCESS PANELS
- a. LOCATE VALVES IN READILY ACCESSIBLE LOCATIONS. WHERE VALVES SHALL BE INSTALLED ABOVE NON-ACCESSIBLE CEILINGS, PROVIDE ACCESS PANELS. ACCESS PANELS SHALL BE PAINTABLE METAL. COORDINATE ACCESS PANEL SIZES AND LOCATIONS WITH THE ARCHITECT. 15. FIRESTOPPING
- a. PROVIDE FIRESTOPPING AT ALL PENETRATIONS THROUGH RATED SEPARATIONS PER LOCAL CODES & REGULATIONS & PER UL
- RECOMMENDATIONS FOR ASSEMBLIES ENCOUNTERED IN PROJECT. b. THE FIRESTOPPING MATERIAL SHALL MAINTAIN THE INTEGRITY OF THE FIRE RATED WALL, FLOOR, CEILING & ROOF BEING PENETRATED, REFER TO ARCHITECT'S DRAWINGS FOR WALL, FLOOR, CEILING & ROOF FIRE RATINGS PRIOR TO BIDDING WORK.
- 16. CATHODIC PROTECTION
- a. PROVIDE DIELECTRIC INSULATION AT POINTS WHERE COPPER OR BRASS PIPE COMES IN CONTACT WITH FERROUS PIPING, REINFORCING STEEL OR OTHER DISSIMILAR METAL IN STRUCTURE
- 17. EXCAVATION, TRENCHING & BACKFILL a. DO ALL EXCAVATION, TRENCHING & BACKFILL REQUIRED FOR THE
- INSTALLATION OF ALL FIRE SUPPRESSION WORK. b. ALL BACKFILL SHALL BE COMPACTED & BROUGHT TO FINISHED GRADE AND SHALL MATCH SURROUNDING CONDITIONS.
- c. RESTORE ALL DISTURBED FLOORING TO ORIGINAL CONDITION.
- d. ALL PIPING SHALL BE LAID ON A BED OF SAND, 6" THICK MINIMUM. BACKFILL UNDER BUILDING AND ALL DRIVES, ROADS AND WALKS WITH BANK-RUN GRAVEL. 18. CUTTING AND PATCHING
- a. CUT AND PATCH WALLS AND FLOORS TO MATCH BUILDING CONSTRUCTION WHERE REQUIRED TO INSTALL ALL FIRE SUPPRESSION WORK. 19. INSTALLATION
- a. INSTALL PIPING FREE OF SAGS AND BENDS. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS. GYPSUM-BOARD PARTITIONS, AND CONCRETE FLOOR SLABS.
- b. WHERE PIPING PASSES THROUGH CONCRETE WALLS, MASONRY WALLS, GYPSUM-BOARD PARTITIONS, CONCRETE FLOORS, AND ROOF SLABS, OPENINGS SHALL BE CUT CLEAN AROUND THE PIPING WITH NOT MORE THAN 2 INCHES OF SPACE BETWEEN THE PIPING AND THE OPENING. PIPE SLEEVES WILL BE REQUIRED WHERE THERE IS MORE THAN 2 INCHES OF SPACE BETWEEN THE PIPE AND THE OPENING.
- 20. TESTING
- a. ALL FIRE SUPPRESSION WORK SHALL BE TESTED & APPROVED BY INSPECTOR PRIOR TO BEING BACKFILLED, CONCEALED & PUT INTO SERVICE. 21. SHOP DRAWINGS
- a. SUBMIT TO THE ARCHITECT PDF FILE COPIES OF COMPLETE & CERTIFIED SHOP DRAWINGS, DESCRIPTIVE DATA, PERFORMANCE DATA & RATINGS, DIAGRAMS AND SPECIFICATIONS ON ALL PIPING, DEVICES, AND EQUIPMENT INCLUDING ACCESSORIES, AND MATERIALS FOR REVIEW.
- b. THE MAKE, MODEL NUMBER, TYPE, FINISH & ACCESSORIES OF ALL EQUIPMENT AND MATERIALS SHALL BE REVIEWED & APPROVED BY THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR & GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE ARCHITECT FOR REVIEW.
- c. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE THE FIRE SUPPRESSION/SPRINKLER CONTRACTOR/VENDOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DRAWINGS, SPECIFICATIONS & APPLICABLE CODES.
- 22. OWNER'S INSTRUCTIONS
- a. PROVIDE TWO SETS OF COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS WITH DRAWINGS. TYPEWRITTEN INSTRUCTIONS AND OPERATING SEQUENCES AND DESCRIPTIVE DATA SHEETS. ASSEMBLE EACH SET IN A HARD-BOUND COVER. 23. WARRANTY
- a. THE FIRE SUPPRESSION CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN EQUIPMENT, MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE AND THE FIRE SUPPRESSION CONTRACTOR WILL REPAIR OR REPLACE DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE TO THE OWNER.
- b. RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE EQUIPMENT, MATERIALS AND WORKMANSHIP.









FIRE PROTECTION GENERAL NOTES

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CEILING TILES (IN AT LEAST ONE DIRECTION). COORDINATE WITH ARCHITECT'S CODE ANALYSIS. CONTACT ARCHITECT IF ANY DISCREPANCIES.

REFERENCE ARCHITECTURAL PLANS FOR CEILING HEIGHTS AND MATERIALS. DELEGATED FIRE SUPPRESSION DESIGN

DESIGN OF THE FIRE SUPPRESSION SYSTEM IS DELEGATED TO THE INSTALLING CONTRACTOR. RESPONSIBILITY FOR PROVIDING A COMPLIANT, OPERATIONAL FIRE SUPPRESSION SYSTEM LIES WITH THE INSTALLING SPRINKLER CONTRACTOR. REFER TO ARCHITECT'S CODE SHEET WHEN DETERMINING THE APPROPRIATE FIRE SUPPRESSION DESIGN. VERIFY REQUIREMENTS SPECIFIC TO THE PROJECT LOCALE, THE AUTHORITY HAVING JURISDICTION, AND INCLUDE IN SCOPE.

THESE DRAWINGS SHOW THE INTENDED FIRE SUPPRESSION SCOPE. THE INSTALLING CONTRACTOR SHALL FURNISH ALL REQUIRED DRAWINGS AND HYDRAULIC CALCULATIONS REQUIRED TO OBTAIN THE PERMIT. THE DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR AN INDIVIDUAL CARRYING ALL CERTIFICATIONS REQUIRED BY THE AGENCY RESPONSIBLE FOR REVIEW AND APPROVAL. DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT / OWNER FOR REVIEW PRIOR TO SUBMITTING FOR PERMIT.

REQUIRED COMPONENTS THAT ARE NOT SHOWN ON THESE DRAWINGS ARE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARE INCLUDED IN THIS SCOPE OF WORK.

FI	RE PROTECTION LEGEND
SYMBOL	DESCRIPTION
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QN	CONCEALED SIDEWALL SPRINKLER
O D	DRY CONCEALED SIDEWALL SPRINKLER







N



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O ^N	EXPOSED SPRINKLER IN AREA WITH NO CEILING (BRASS FINISH)
● ^N	SPRINKLER IN FINISHED CEILING (CONCEALED WITH COVER PLATE)
QN	CONCEALED SIDEWALL SPRINKLER
O D	DRY CONCEALED SIDEWALL SPRINKLER







N



FIRE PROTECTION GENERAL NOTES

INSTALL NEW SPRINKLER SYSTEM PER NFPA 13R.

UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL SPRINKLER PIPING TO BE CONCEALED IN CEILINGS AND WALLS. WHERE APPLICABLE, SPRINKLERS ARE TO BE LOCATED IN THE CENTER OF ALL

CEILING TILES (IN AT LEAST ONE DIRECTION). COORDINATE WITH ARCHITECT'S CODE ANALYSIS. CONTACT ARCHITECT IF ANY

DISCREPANCIES. REFERENCE ARCHITECTURAL PLANS FOR CEILING HEIGHTS AND MATERIALS. DELEGATED FIRE SUPPRESSION DESIGN

DESIGN OF THE FIRE SUPPRESSION SYSTEM IS DELEGATED TO THE INSTALLING CONTRACTOR. RESPONSIBILITY FOR PROVIDING A COMPLIANT, OPERATIONAL FIRE SUPPRESSION SYSTEM LIES WITH THE INSTALLING SPRINKLER CONTRACTOR. REFER TO ARCHITECT'S CODE SHEET WHEN DETERMINING THE APPROPRIATE FIRE SUPPRESSION DESIGN. VERIFY REQUIREMENTS SPECIFIC TO THE PROJECT LOCALE, THE AUTHORITY HAVING JURISDICTION, AND INCLUDE IN SCOPE.

THESE DRAWINGS SHOW THE INTENDED FIRE SUPPRESSION SCOPE. THE INSTALLING CONTRACTOR SHALL FURNISH ALL REQUIRED DRAWINGS AND HYDRAULIC CALCULATIONS REQUIRED TO OBTAIN THE PERMIT. THE DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR AN INDIVIDUAL CARRYING ALL CERTIFICATIONS REQUIRED BY THE AGENCY RESPONSIBLE FOR REVIEW AND APPROVAL. DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT / OWNER FOR REVIEW PRIOR TO SUBMITTING FOR PERMIT. REQUIRED COMPONENTS THAT ARE NOT SHOWN ON THESE DRAWINGS ARE THE

REQUIRED COMPONENTS THAT ARE NOT SHOWN ON THESE DRAWINGS ARE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARE INCLUDED IN THIS SCOPE OF WORK.

FI	RE PROTECTION LEGEND
SYMBOL	DESCRIPTION
—— F ——	FIRE SERVICE / SPRINKLER PIPING
O ^N	EXPOSED SPRINKLER IN AREA WITH NO CEILING (BRASS FINISH)
● ^N	SPRINKLER IN FINISHED CEILING (CONCEALED WITH COVER PLATE)
QN	CONCEALED SIDEWALL SPRINKLER
O D	DRY CONCEALED SIDEWALL SPRINKLER









U001, U002, U111, U112, U214, U314, U315 ENLARGED FLOOR PLAN ONE BEDROOM APARTMENT

FP200

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



U003, U004, U103, U105, U106, U108, U109, U110, U203, U205, U206, U207, U208, U210, U211, U212, U213, U303, U305, U306, U308, U310, U311, U312, U313







DICTION WITH INFORMATION CONSTRUCTION MANAGER, ₿Ş IES H/ WITH HORIT ED TO PROVIDE THE AUT AGREEMENT THAT MAY ENDE IRAL / Project Directories\10000-10001\10041 - Talbert House - The Geiger House for Veterans - Cincinnati OH∖~Construction Documents\XREF-ART.dwg-Model. Plot Date/Time: Apr 13, 2023-11:28am - By: Keith.Schloemer ESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONSTRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE IN DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCTION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACT NERAL CONTRACTOR. ETC. EBS ACCEPTS NO RESPONSIBLITY OR LIABILITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.



FP201 SCALE: 1/4" = 1'-0"

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

FP201







U102, U202, U302 ENLARGED FLOOR PLAN 2 ONE BEDROOM APARTMENT SCALE: 1/4" = 1'-0" FP201

FIRE PROTECTION GENERAL NOTES

INSTALL NEW SPRINKLER SYSTEM PER NFPA 13R.

UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL SPRINKLER PIPING TO BE CONCEALED IN CEILINGS AND WALLS.

WHERE APPLICABLE, SPRINKLERS ARE TO BE LOCATED IN THE CENTER OF ALL CEILING TILES (IN AT LEAST ONE DIRECTION).

COORDINATE WITH ARCHITECT'S CODE ANALYSIS. CONTACT ARCHITECT IF ANY DISCREPANCIES. REFERENCE ARCHITECTURAL PLANS FOR CEILING HEIGHTS AND MATERIALS.

DELEGATED FIRE SUPPRESSION DESIGN

DESIGN OF THE FIRE SUPPRESSION SYSTEM IS DELEGATED TO THE INSTALLING CONTRACTOR. RESPONSIBILITY FOR PROVIDING A COMPLIANT, OPERATIONAL FIRE SUPPRESSION SYSTEM LIES WITH THE INSTALLING SPRINKLER CONTRACTOR. REFER TO ARCHITECT'S CODE SHEET WHEN DETERMINING THE APPROPRIATE FIRE SUPPRESSION DESIGN. VERIFY REQUIREMENTS SPECIFIC TO THE PROJECT LOCALE, THE AUTHORITY HAVING JURISDICTION, AND INCLUDE IN SCOPE.

THESE DRAWINGS SHOW THE INTENDED FIRE SUPPRESSION SCOPE. THE INSTALLING CONTRACTOR SHALL FURNISH ALL REQUIRED DRAWINGS AND HYDRAULIC CALCULATIONS REQUIRED TO OBTAIN THE PERMIT. THE DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY A LICENSED PROFESSIONAL ENGINEER OR AN INDIVIDUAL CARRYING ALL CERTIFICATIONS REQUIRED BY THE AGENCY RESPONSIBLE FOR REVIEW AND APPROVAL. DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT / OWNER FOR REVIEW PRIOR TO SUBMITTING FOR PERMIT.

REQUIRED COMPONENTS THAT ARE NOT SHOWN ON THESE DRAWINGS ARE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARE INCLUDED IN THIS SCOPE OF WORK.



U104, U204, U304

3	ENLARGED FLOOR PLAN
FP201	SCALE: 1/4" = 1'-0"

FI	RE PROTECTION LEGEND
YMBOL	DESCRIPTION
— F ——	FIRE SERVICE / SPRINKLER PIPING
O ^N	EXPOSED SPRINKLER IN AREA WITH NO CEILING (BRASS FINISH)
● ^N	SPRINKLER IN FINISHED CEILING (CONCEALED WITH COVER PLATE)
O ^N	CONCEALED SIDEWALL SPRINKLER
O D	DRY CONCEALED SIDEWALL SPRINKLER

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ISSUANCES DATE NO. DESCRIPTION 01/18/2023 80% OHFA Review	04/13/2023 PERMIT SET	
Geiger House for Veterans / Klekamp	Family Residences	2631 GILBERT AVE. CINCINNATI, OH
DRAW BROJ SCAL DATE DATE	E:ASP COULDING SYS	PR - 10041 SINEERED JOING STEMS INC. ass Through Ind Efficiency reet, Suite 201 (859) 261-0585 vices, Inc. in OH 9 2015 RODUCT AND EXCLUSIVE ISOUTH INFORMATION IT FOR OTHER THAN THE ISOUTH WAS PREPARED STORY OF CONSIDERED THE INFORMATION IT FOR OTHER THAN THE SSSS OC: 100041 IOOTED IOOTED IOOTED IOOTELD IOOTELD



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P100 SCALE: 1/8" = 1'-0"





: Dote/Time: Apr 24, 2023-11:17am - By: dovid.dumont RATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDED TO PROVIDE THE AUT ON ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY -PLAN.dwg-EBS. Ploi ED TO DEMONST NIN CONSTRUCTI > - The Geiger House for Veterans - Cincinnati OH/~Construction Documents/10041-P101-PLUMBING-FIRST-FLOOR-AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARI ING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED CONDUCTION IS TO DEPENDENT OF AN ADDITION OF DOCUMENTS. AND MATERIALS USED Project Directories (10000-10001 / 10041 - Talbert House SE DRAWINGS AND SPECIFICATIONS ARE NOT DETERMINE CODE COMPLIANCE. THE INSTALLI LERAL CONTRACTOR, ETC. EBS ACCEPTS NO RI

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PLUMBING FIRST FLOOR PLAN 1 P101 SCALE: 1/8" = 1'-0"







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PLUMBING SECOND FLOOR PLAN P102 SCALE: 1/8" = 1'-0"







ŽĀ IES H/ E AUT MAY ED TO PROVIDE THE . . AGREEMENT THAT N , AND ARE INTENDEI Y CONTRACTURAL A t Date/Time: Apr 13, 2023-2:06pm - By: david.dumont RATE COMPLIANCE WITH APPLICABLE CODES, ON ARE INSTALLED IN ACCORDANCE WITH ANY 2:\~Project Directories\10000-10001\10041 - Talbert House - The Geiger House for Veterans - Cincinnati OH\~Construction Documents\10041-P103-PLUMBING-THIRD-FLOOR-PLAN.dwg-EBS. PIO THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONST TO DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCTI GENERAL CONTRACTOR. ETC. EBS ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.

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PLUMBING THIRD FLOOR PLAN P103 SCALE: 1/8" = 1'-0"



MAY ED TO PRC AGREEME AND, CON Date/Time: Apr 13, 2023-2:05pm - By: david.dumont FRATE COMPLIANCE WITH APPLICABLE CODES, ION ARE INSTALLED IN ACCORDANCE WITH ANY 2:\~Project Directories\10000-10001\10041 - Talbert House - The Geiger House for Veterans - Cincinnati OH\~Construction Documents\10041-P104-PLUMBING-ROOF-PLAN-EBS.dwg-EBS. Plot THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONS TO DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCT GENERAL CONTRACTOR, ETC. EBS ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.



P104 PLUMBING ROOF PLAN SCALE: 1/8" = 1'-0"





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Geiger House for Veterans / Klekamp Family Residences 2631 GILBERT AVE. 2631 GILBERT AVE. CINCINNATI, OH
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ITH INFORMATION TION VISTRI AN IES HA WITH / THORIT EXIST ED TO PROVIDE THE AUT AGREEMENT THAT MAY Plot Date/Time: Apr 13, 2023-2:04pm - By: david.dumont FRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDI ION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL Z:\~Project Directories\10000-10001\10041 - Talbert House - The Geiger House for Veterans - Cincinnati OH\~Construction Documents\10041-P201-PLUMBING-ENLARGED-UNIT-PLANS.dwg-EBS. THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONS TO DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCTI GENERAL CONTRACTOR. ETC. EBS ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.







- 1. HOT, COLD AND HOT WATER RETURN WATER RISERS
- 2. SANITARY PIPING UP TO LEVEL ABOVE
- 3. VENT PIPING UP TO LEVEL ABOVE 4. VENT PIPING DOWN TO FIXTURE BELOW
- 5. VENT PIPING DOWN TO LEVEL BELOW
- 6. NEW SANITARY SERVICE, REFER TO CIVIL UTILITY PLAN FOR CONTINUATION
- 7. NEW DOMESTIC WATER SERVICE, REFER TO CIVIL UTILITY PLAN FOR CONTINUATION AND METER LOCATION.
- 8. SANITARY PIPING DOWN TO LEVEL BELOW
- 9. NEW GAS SERVICE, REFER TO CIVIL UTILITY PLAN FOR CONTINUATION,
- COORDINATE WITH UTILITY COMPANY. 10. NEW STORM PIPING FOR DOWNSPOUT, COORDINATE WITH UTILITY PLAN FOR CONTINUATION.
- 11. ROUTE 4" PVC WATER HEATER EXHAUST AND INTAKE PIPING OUT WALL PER MANUFACTURER'S INSTALLATION AND INSTRUCTIONS. PROVIDE MANUFACTURER-SUPPLIED TERMINATION KITS.
- 12. HOT AND COLD WATER DOWN TO LEVEL BELOW.



1. GENERAL PLUMBING REQUIREMENTS

- a. THE PLUMBING CONTRACTOR MUST REFER TO SITE PLANS, ARCHITECTURAL PLANS AND ELEVATIONS, AND PRICING INSTRUCTIONS FROM THE GENERAL CONTRACTOR TO DEVELOP THEIR PRICE. THE PLUMBING CONTRACTOR'S PRICE (INCLUDING TAXES) SHOULD INCLUDE ALL LABOR AND MATERIAL NECESSARY TO PROVIDE A COMPLETE AND FULLY OPERATIONAL PLUMBING SYSTEM.
- b. THE PLUMBING CONTRACTOR SHALL BE LICENSED BY THE STATE OF OHIO TO INSTALL PLUMBING SYSTEMS. c. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL
- APPLICABLE STATE, LOCAL CODES AND ORDINANCES. THE PLUMBING CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD
- d. SUBMIT TO THE ARCHITECT PDF FILE COPIES OF COMPLETE AND CERTIFIED SHOP DRAWINGS, DESCRIPTIVE DATA, PERFORMANCE DATA AND RATINGS, DIAGRAMS AND SPECIFICATIONS ON ALL SPECIFIED EQUIPMENT INCLUDING ACCESSORIES, AND MATERIALS FOR REVIEW.
- e. REFER TO ARCHITECTURAL DRAWINGS, GENERAL NOTES, INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, SPECIFICATIONS, AND DRAWINGS EXCEPT AS NOTED HEREIN WHICH APPLY IN ALL RESPECTS TO THIS SECTION.
- f. COORDINATE PIPING CHASES, SHAFTS, ABOVE CEILING WORK, ETC. WITH ARCHITECT. ALL DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO WORK.
- g. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL NECESSARY PLUMBING PIPING PENETRATIONS. THIS INCLUDES CORING HOLES IN SLABS, ETC
- h. EQUIPMENT AND MATERIALS SHALL CONFORM WITH APPROPRIATE PROVISIONS OF AGA, ARI, ASME, ASTM, CISPI, UL, NEMA, ANSI, SMACNA, ASHRAE, NFPA, NEC, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY. ALL EQUIPMENT MUST BEAR UL LABEL.
- i. INSTALL EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. MAINTAIN ALL CODE RECOMMENDED CLEARANCES.
- i. WHERE NOT PROVIDED BY OTHERS, PROCURE AND PAY FOR ALL PERMITS, FEES, TAXES AND INSPECTIONS NECESSARY TO COMPLETE THE PLUMBING WORK. FURNISH CERTIFICATE OF APPROVAL FOR WORK FROM INSPECTION AUTHORITY TO OWNER BEFORE FINAL ACCEPTANCE FOR WORK. CERTIFICATE OF FINAL INSPECTION AND APPROVAL SHALL BE SUBMITTED WITH THE CONTRACTOR'S REQUEST FOR PAYMENT. NO FINAL
- PAYMENT WILL BE APPROVED WITHOUT THIS CERTIFICATE. k. ALL WORK SHALL BE ACCURATELY LAID-OUT WITH OTHER TRADES PRIOR TO INSTALLATION & FABRICATION, TO AVOID ALL CONFLICTS AND OBTAIN A NEAT AND WORKMANLIKE INSTALLATION WHICH WILL AFFORD MAXIMUM ACCESSIBILITY FOR EQUIPMENT OPERATION, MAINTENANCE CLEARANCES AND HEADROOM.
- 2. USE OF INFORMATION PROVIDED BY EBS
- a. THE INFORMATION PROVIDED IS INTENDED TO CONVEY DESIGN INTENT ONLY. ALL MEANS AND METHODS, SEQUENCES, TECHNIQUES, AND PROCEDURES OF CONSTRUCTION AS WELL AS ANY ASSOCIATED SAFETY PRECAUTIONS AND PROGRAMS. AND ALL INCIDENTAL AND TEMPORARY DEVICES REQUIRED TO CONSTRUCT THE PROJECT, AND TO PROVIDE A COMPLETE AND FULLY OPERATIONAL PLUMBING SYSTEM ARE THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR.
- 3. CONTRACTOR COORDINATION
- a. COORDINATION DRAWINGS SHOWING SYSTEM AND COMPONENT INSTALLATION LAYOUT, ROUTING, DETAILS, ETC. SHALL BE PRODUCED BY THE PLUMBING CONTRACTOR AND UNDER THE SUPERVISION OF THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER, OR APPROPRIATE PARTY AS APPLICABLE. ALL SYSTEMS INSTALLED BY EACH SUB-CONTRACTOR SHALL BE COORDINATED WITH ONE ANOTHER AND APPROVED BY GENERAL CONTRACTOR/CONSTRUCTION MANAGER, ETC. PRIOR TO INSTALLATION AND/OR FABRICATION. IF OUESTIONS CONCERNING DESIGN INTENT ARISE DURING COORDINATION, EBS CAN ASSIST WHERE APPROPRIATE.
- 4. PLUMBING FIXTURES
- a. SHUT OFF VALVES/STOPS SHALL BE PROVIDED AT ALL LAVATORIES, SINKS AND WATER CLOSETS. b. ALL WALL-HUNG PLUMBING FIXTURES, INCLUDING, BUT NOT LIMITED TO
- WATER CLOSETS, URINALS, LAVATORIES, AND SINKS SHALL BE ANCHORED TO THE FLOOR WITH CONCEALED IN-WALL CARRIERS WALL-HUNG FIXTURES SHALL NOT BE SIMPLY BOLTED TO THE WALL OR
- ANCHORED TO WOOD BLOCKING c. COORDINATE COLOR OF FIXTURES WITH ARCHITECT. FIXTURES SHALL BE WHITE UNLESS OTHERWISE NOTED.
- d. PROVIDE ADA COMPLIANT FIXTURES WHERE INDICATED ON THE ARCHITECTURAL PLANS. PROVIDE OFFSET FIXTURE TAILPIECES AND TRAPS WHERE REQUIRED TO MEET ADA LEG CLEARANCES.
- e. FIXTURES SHALL BE SECURELY FASTENED TO PREVENT ANY MOVEMENT OF FIXTURE DURING NORMAL USE. SEAL TO WALL, FLOOR OR COUNTERTOP WITH SILICONIZED ACRYLIC-LATEX CAULK.
- 5. DOMESTIC WATER SYSTEMS
- a. PROVIDE A NEW DOMESTIC WATER SERVICE TO THE BUILDING.
- **b. EXTERIOR DOMESTIC WATER SERVICE PIPING:** i. EXTERIOR WATER SERVICE PIPING 2" AND SMALLER TO BE PVC. SDR 21 SERIES PIPE, MANUFACTURED FROM A TYPE I, GRADE I POLYVINYL CHLORIDE (PVC) COMPOUND WITH A CELL CLASSIFICATION OF 12454 PER ASTM D1784. THE PIPE SHALL BE MANUFACTURED IN STRICT COMPLIANCE TO ASTM D2241. STANDARD LENGTHS OF PIPE SIZES 10" AND LARGER SHALL BE BEVELED EACH END BY THE PIPE MANUFACTURER. ALL PIPE SHALL BE STORED INDOORS AFTER PRODUCTION AT THE MANUFACTURING SITE UNTIL SHIPPED FROM FACTORY. THIS PIPE MUST CARRY THE NATIONAL SANITATION FOUNDATION (NSF) SEAL OF APPROVAL FOR POTABLE WATER APPLICATIONS. PIPE MUST INCORPORATE A FORMED BELL COMPLETE WITH A SINGLE RUBBER GASKET CONFORMING TO ASTM F477. JOINTS SHALL BE DESIGNED TO MEET THE ZERO LEAKAGE TEST REQUIREMENTS OF ASTM D 3139. SOLVENT CEMENT: JOINT SURFACES SHALL BE CLEAN AND FREE FROM MOISTURE. A PRIMER THAT CONFORMS TO ASTM F656 SHALL BE APPLIED. SOLVENT CEMENT CONFORMING TO ASTM D2564 SHALL BE APPLIED TO ALL JOINT SURFACES. THE JOINT SHALL BE MADE WHILE THE CEMENT IS WET AND SHALL BE IN ACCORDANCE WITH ASTM D2855.
- c. INTERIOR DOMESTIC WATER PIPING:
- i. WHERE ALLOWED BY CODE, CPVC PIPING CAN BE USED. a. CPVC PIPING 2" AND SMALLER SHALL BE EQUAL TO FLOW GUARD GOLD -THIS SPECIFICATION COVERS COPPER TUBE SIZE (CTS) CPVC MANUFACTURED TO STANDARD DIMENSIONAL RATIO (SDR) 11 FOR HOT AND COLD DOMESTIC WATER DISTRIBUTION. THIS SYSTEM IS INTENDED FOR PRESSURE APPLICATIONS WHERE THE OPERATING TEMPERATURE WILL NOT EXCEED 180°F AT 100 PSI. PIPE AND FITTINGS SHALL BE MANUFACTURED FROM VIRGIN RIGID CPVC (CHLORINATED POLYVINYL CHLORIDE) VINYL COMPOUNDS WITH A CELL CLASS OF 24448 AS IDENTIFIED IN ASTM D 1784. CTS CPVC PIPE AND FITTINGS SHALL CONFORM TO ASTM D 2846, PIPE AND FITTINGS SHALL BE MANUFACTURED AS A SYSTEM AND BE THE PRODUCT OF ONE MANUFACTURER. ALL PIPE AND FITTINGS SHALL BE MANUFACTURED IN THE UNITED STATES. PIPE AND FITTINGS SHALL CONFORM TO NATIONAL SANITATION FOUNDATION (NSF) STANDARDS 14 AND 61. INSTALLATION SHALL COMPLY WITH LATEST INSTALLATION PROVIDED BY THE MANUFACTURER AND SHALL CONFORM TO ALL LOCAL PLUMBING, BUILDING AND FIRE CODE REQUIREMENTS. BURIED PIPE SHALL BE INSTALLED IN ACCORDANCE WITH ASTM F 1668. SOLVENT WELD JOINTS SHALL BE MADE USING CPVC CEMENT CONFORMING TO ASTM F 493. YELLOW ONE-STEP CEMENT MAY BE USED WITHOUT PRIMER. IF A PRIMER IS REQUIRED BY LOCAL PLUMBING OR BUILDING CODES, THEN A PRIMER CONFORMING TO ASTM F 656 SHOULD BE USED. THE SYSTEM SHALL BE PROTECTED FROM CHEMICAL AGENTS, FIRE STOPPING MATERIALS, THREAD SEALANT, PLASTICIZED VINYL PRODUCTS OR OTHER AGGRESSIVE CHEMICAL AGENTS NOT COMPATIBLE WITH CPVC COMPOUNDS. SYSTEMS SHALL BE HYDROSTATICALLY TESTED AFTER INSTALLATION. NEVER TEST WITH OR TRANSPORT/STORE COMPRESSED AIR OR GAS IN CPVC PIPE OR FITTINGS. ii. WHERE ALLOWED BY CODE, PEX TUBE AND FITTINGS CAN BE USED. TUBING SHALL BE PEX-A TYPE AND FITTINGS SHALL BE FOUAL TO UPONOR AOUAPEX. TUBING AND FITTINGS MUST CONFORM TO ASTM F876 "STANDARD SPECIFICATION FOR CROSSLINKED POLYETHYLENE, ASTM F877 "STANDARD FOR CROSSLINKED POLYETHYLENE PLASTIC HOT AND COLD WATER DISTRIBUTION SYSTEMS". PROVIDE ENGINEERED PLASTIC FITTINGS WITH PLASTIC COLLARS WHICH CONFORM TO ASTM F1960 STANDARD SPECIFICATION FOR COLD EXPANSION FITTINGS WITH PEX REINFORCING RINGS FOR USE WITH CROSSLINKED POLYETHYLENE

- PIPING. PEX TUBING AND CONNECTIONS SHALL BE WARRANTED FOR A PERIOD OF 25 YEARS. DO NOT WELD, GLUE, TAPE OR ALLOW OTHER SOLVENT BASED ADHESIVES OR PAINTS TO COME INTO CONTACT WITH TUBING. DO NOT ALLOW TUBING TO COME IN CONTACT WITH PIPE THREAD COMPOUNDS, FIREWALL PENETRATION SEALING COMPOUNDS, AND PETROLEUM BASED SEALANTS. DO NOT ALLOW TUBING TO COME WITHIN 6" OF GAS APPLIANCE VENTS OR 12" OF RECESSED LIGHT FIXTURES. DO NOT EXPOSE TUBING TO OPEN FLAME. DO NOT SOLDER WITHIN 18" OF TUBING. DO NOT INSTALL TUBING BETWEEN TUB SPOU AND SHOWER VALVE. RADIUS OF BENDS MUST NOT EXCEED SIX TIMES OUTSIDE TUBE DIAMETER. REPAIR KINKS IN TUBING USING HEAT AS RECOMMENDED BY MANUFACTURER TUBING SHALL BE INSTALLED IN MAXIMUM PRACTICAL LENGTHS, AS DIRECTLY AS POSSIBLE TO REMOTE MANIFOLD WITH MINIMUM FITTINGS. TUBING SHALL BE SUPPORTED IN A MATTER THAT DOES NOT DAMAGE TUBING AND ALLOWS FOR THERMAL EXPANSION. SUPPORTS SHALL BE SPACED AT 32" MINIMUM HORIZONTALLY AND 60" VERTICALLY AND WITHIN 6" OF FITTINGS OR BENDS, USE BEND SUPPORTS AT 90 DEGREE BENDS, PROTECT INSTALLED TUBING FROM DAMAGE. INSTALL METAL PLATES WHERE TUBING PENETRATES STUDS AT FACE OF STUDS. REMOTE MANIFOLD TYPE FITTINGS SHALL BE UTILIZED AT BRANCHES IN ROOMS WHERE TUBING IS TERMINATED (MODIFIED HOME-RUN INSTALLATION TYPE). UTILIZE EXPANDER TOOLS RECOMMENDED BY MANUFACTURER FOR CONNECTION OF TUBING TO FITTINGS. DO NOT OVER EXPAND TUBING. PIPE SHALL BE SUPPORTED AT FITTINGS AND FIXTURES AS RECOMMENDED BY MANUFACTURER. PIPING SHALL BE INSTALLED WITH MINIMUM AMOUNT OF FITTINGS. USE MANUFACTURER APPROVED VALVES, FITTINGS, HOSE BIBS AND BOXES AT FIXTURES.
- d. CONTROL VALVES SHALL BE MANUFACTURED BY OR APPROVED BY PIPING MANUFACTURER.
- e. ADJUST ALL STOPS AND VALVES PROPERLY PRIOR TO PROJECT COMPLETION.
- 6. BACKFLOW PREVENTION a. BACKFLOW PREVENTER TO BE INSTALLED IN HOT BOX OUTSIDE. REFER
- TO SITE UTILITY PLAN. b. BACKFLOW PREVENTERS FOR 2" AND SMALLER WATER SERVICES -PROVIDE REDUCED PRESSURE BACKFLOW PREVENTER ON THE WATER SERVICE MAIN WHERE THE WATER SERVICE ENTERS THE BUILDING. REDUCED PRESSURE BACKFLOW PREVENTER TO BE EQUAL TO WATTS SERIES LF919QT. APPROVED MANUFACTURERS OF EQUAL PRODUCTS
- SHALL BE CONBRACO AND WILKINS. 7. WATER HAMMER ARRESTORS/SHOCK ABSORBERS
- a. REMOVE SHOCK CONDITIONS FROM ALL PIPING. PROVIDE AND INSTALL WATER HAMMER ARRESTORS/SHOCK ABSORBERS ON ALL PIPING SERVING FLUSH VALVE FIXTURES. CLOTHES WASHER SUPPLY BOXES. COMMERCIAL WASHER SUPPLY LINES, AND OTHER EQUIPMENT WITH QUICK-CLOSING VALVES. WATER HAMMER ARRESTORS SHALL BE PROVIDED PER PLUMBING AND DRAINAGE INSTITUTE STANDARD PDI-WH
- 8. SANITARY AND VENT SYSTEMS
- a. PROVIDE NEW SANITARY LATERAL FROM BUILDING TO PUBLIC MAIN. **b. EXTERIOR SANITARY PIPING**
- i. EXTERIOR SANITARY PIPING OUTSIDE BUILDING TO BE PVC: ANSI/ASTM D 3033, TYPE PSP OR ASTM D 3034, TYPE PSM SDR-35.
- c. INTERIOR SANITARY, WASTE, AND VENT PIPING: i. WHERE NOT INSTALLED IN A PLENUM, SANITARY, WASTE, AND VENT PIPING WITHIN BUILDING TO BE SCHEDULE 40 PVC PIPING AND FITTINGS
- CONFORMING TO ASTM D 2665, SOLID-WALL DRAIN PIPING WITH PVC SOCKET SOLVENT WELD FITTINGS CONFORMING TO ASTM D2665, MADE TO ASTM D3311, DRAIN, WASTE, AND VENT PATTERNS. ii. WHERE PIPING SHALL BE INSTALLED IN A PLENUM, SANITARY, WASTE,
- AND VENT PIPING WITHIN BUILDING TO BE NO-HUB, CAST-IRON PIPE WITH NO-HUB COUPLINGS CONSISTING OF A STAINLESS STEEL SHIELD, CLAMP AND NEOPRENE GASKET. COUPLINGS SHALL BE TESTED AND CERTIFIED TO CISPI 310, ASTM C1277, ASTM C564, AND NSF. IDEAL CLAMP PRODUCTS' HEAVY DUTY POW'R GEAR (RED SHIELD) COUPLINGS ARE ALSO APPROVED AND ACCEPTABLE. THESE COUPLINGS ARE LISTED WITH NSF INTERNATIONAL AND CONFORM WITH ASTM C1540 PERFORMANCE REQUIREMENTS (SHEAR, DEFLECTION AND UNRESTRAINED THRUST
- iii. ABOVEGROUND SANITARY, WASTE, AND VENT PIPING WITHIN MECHANICAL CLOSETS (PLENUMS) TO BE NO-HUB CAST-IRON PIPE CONFORMING TO ASTM A74, ASTM A888, AND CISPI 301, WITH NO-HUB COUPLINGS CONSISTING OF A STAINLESS STEEL SHIELD, CLAMP, AND NEOPRENE GASKET. COUPLINGS SHALL BE TESTED AND CERTIFIED TO CISPI 310, ASTM C1277, ASTM C564, AND NSF. IDEAL CLAMP PRODUCTS' HEAVY DUTY POW'R GEAR (RED SHIELD) COUPLINGS ARE ALSO APPROVED AND ACCEPTABLE. THESE COUPLINGS ARE LISTED WITH NSF INTERNATIONAL AND CONFORM WITH ASTM C1540 PERFORMANCE REQUIREMENTS (SHEAR, DEFLECTION AND UNRESTRAINED THRUST
- d. COORDINATE WITH LOCAL AUTHORITIES FOR DRAINAGE REQUIREMENTS FOR EQUIPMENT DESIGNATED WITH INDIRECT WASTE TO FLOOR DRAINS. PROVIDE PIPED DRAIN TO SANITARY IF REQUIRED BY LOCAL JURISDICTION.

9. TRAP SEAL PROTECTION

- a. TRAP SEALS SUBJECT TO EVAPORATION SHALL BE PROTECTED BY ONE OF THE METHODS BELOW, AS APPROVED BY THE LOCAL PLUMBING AUTHORITY HAVING JURISDICTION:
- b. POTABLE WATER-SUPPLIED TRAP SEAL PRIMER VALVE A POTABLE WATER-SUPPLIED TRAP SEAL PRIMER VALVE MUST SUPPLY WATER TO THE TRAP. WATER-SUPPLIED TRAP SEAL PRIMERS MUST CONFORM TO ASSE 1018. THE DISCHARGE PIPE FROM THE TRAP SEAL PRIMER MUST CONNECT TO THE TRAP ABOVE THE TRAP SEAL ON THE INLET SIDE OF THE
- c. BARRIER-TYPE TRAP SEAL PROTECTION DEVICE A BARRIER-TYPE TRAP SEAL PROTECTION DEVICE MUST PROTECT THE TRAP SEAL FROM EVAPORATION. BARRIER-TYPE TRAP SEAL PROTECTION DEVICES MUST CONFORM TO ASSE 1072. THE DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- 10. CLEANOUTS a. PROVIDE FLOOR AND WALL CLEANOUTS WHERE REQUIRED IN ALL SOIL, WASTE, DRAIN AND STORM PIPING. IN AREAS WITH CERAMIC TILE OR CARPETED FLOORING, PROVIDE CLEANOUTS WITH SQUARE, ADJUSTABLE, NICKEL BRONZE TOP. IN AREAS WITH RESILIENT FLOORING, PROVIDE CLEANOUTS WITH SQUARE, ADJUSTABLE, NICKEL BRONZE TOP WITH TILE RECESS. CLEANOUTS SHALL BE SAME SIZE AS PIPE EXCEPT THAT CLEANOUTS LARGER THAN 4" WILL NOT BE REOUIRED. WHERE CLEANOUTS OCCUR IN WALLS OF FINISHED AREAS, THEY SHALL BE CONCEALED BEHIND CHROME PLATED ACCESS COVERS.
- 11. NATURAL GAS PIPING SYSTEMS
- a. PROVIDE NEW GAS SERVICE FROM THE PUBLIC MAIN TO THE BUILDING AND PROVIDE NEW METER SIZED FOR THE TOTAL CONNECTED LOAD. NEW SERVICE DELIVERY PRESSURE SHALL BE 7" W.C
- b. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH WORK PROVIDED BY THE UTILITY COMPANY, INCLUDING TAP FEES, INSTALLATION COSTS, ROAD CUTS, AND BORES IF APPLICABLE.
- c. GAS SERVICE PIPING ALL EXTERIOR GAS PIPING SHALL BE MEDIUM DENSITY POLYETHYLENE PLASTIC PIPING APPROVED BY THE LOCAL UTILITY COMPANY.
- d. INTERIOR GAS PIPING SHALL BE SCHEDULE 40 STEEL PIPE, ASTM A53. i. PIPING 2" AND UNDER SHALL BE JOINED BY EITHER THREADED FITTINGS OR COLD PRESS MECHANICAL JOINT FITTINGS WHERE APPROVED BY THI AUTHORITY HAVING JURISDICTION. 2-1/2", 3", AND 4" PIPING CAN BE THREADED OR WELDED. PIPING LARGER THAN 4" SHALL BE WELDED. - MALLEABLE-IRON THREADED FITTINGS: ASME B16.3, CLASS 150, STANDARD PATTERN.
- WHERE APPROVED BY THE AUTHORITY HAVING JURISDICTION, COLD PRESS MECHANICAL JOINT FITTINGS ARE ACCEPTABLE AND SHALL CONFORM TO MATERIAL REQUIREMENTS OF ASTM A420 OR ASME B16.3 AND PERFORMANCE CRITERIA ANSI LC-4/CSA 6.32. COLD PRESS MECHANICAL JOINT FITTINGS SHALL BE EQUAL TO VIEGA MEGAPRESS G, WITH HNBR SEALING ELEMENTS FOR PRESS FITTINGS. SEALING ELEMENTS SHALL BE FACTORY INSTALLED OR AN ALTERNATIVE SUPPLIED BY FITTING MANUFACTURER. PRESS ENDS SHALL BE DESIGNED TO ASSURE LEAKAGE OF LIQUIDS AND/OR GASES FROM INSIDE THE SYSTEM PAST THE SEALING ELEMENT OF AN UN-PRESSED CONNECTION. THE FUNCTION OF THIS FEATURE IS TO PROVIDE THE INSTALLER QUICK AND EASY

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Hou NO

- IDENTIFICATION OF CONNECTIONS WHICH HAVE NOT BEEN PRESSED PRIOR TO PUTTING THE SYSTEM INTO OPERATION. - WROUGHT-STEEL WELDING FITTINGS: ASTM A 234/A 234M FOR BUTT
- WELDING AND SOCKET WELDING. f. PROVIDE GAS PIPING RUN-OUTS TO ALL GAS-FIRED EQUIPMENT. PIPING
- SHALL BE INSTALLED FULL-SIZE TO EACH UNIT'S GAS INLET CONNECTION, BURNER, REGULATOR, ETC. PROVIDE AND INSTALL GAS COCK AND MAKE FINAL CONNECTIONS. CONNECTIONS TO EACH GAS-FIRED EQUIPMENT ITEM MUST INCLUDE A DRIP LEG AND SHUTOFF GAS COCK. COMPLY WITH EQUIPMENT MANUFACTURER'S INSTRUCTION. FOR CONNECTIONS TO GAS-FIRED ROOFTOP EOUIPMENT. INCLUDE THE ROOF PENETRATION AND INSTALL THE GAS PIPING THROUGH THE ROOF IN A LOCATION THAT HAS BEEN COORDINATED WITH THE MECHANICAL CONTRACTOR.

12. VALVES - GENERAL

- a. PLUMBING CONTRACTOR MUST PROVIDE VALVES AS NECESSARY FOR PROPER SYSTEM OPERATION AND COMPONENT ISOLATION. INSTALL VALVES FOR EACH ISOLATED FIXTURE OR GROUP OF FIXTURES, AND EACH CONNECTION TO EQUIPMENT
- b. LOCATE SHUT-OFF VALVES ADJACENT TO EQUIPMENT FOR EASY ACCESS SUCH THAT VALVES CAN BE REACHED WITHOUT MOVING EQUIPMENT. 13. VALVES FOR DOMESTIC WATER
- a. VALVES FOR DOMESTIC WATER MUST MEET THE REQUIREMENTS OF THE LEAD-FREE LAW S.3874. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE LEAD-FREE PRODUCTS AS MANDATED BY THE LAW AND AS REQUIRED/INTERPRETED BY THE AUTHORITY HAVING JURISDICTION. b. PROVIDE VALVES FOR WORKING PRESSURE IN WATER PIPING OF 125 PSI OR GREATER.
- c. GENERAL DUTY SHUT-OFF BALL VALVES
- i. PROVIDE TWO-PIECE, FULL PORT, SILICON BRONZE BALL VALVES WITH THE CAPABILITY OF ACCEPTING EXTENDED OPERATING HANDLES (FOR INSULATED PIPING). VALVES SHALL BE NIBCO MODEL T/S/PC-595-Y-66-LF (-NS) OR EOUAL PRODUCT MANUFACTURED BY AMERICAN VALVE CO. CRANE, HAMMOND, MILWAUKEE, RED-WHITE VALVE CORPORATION, OR WATTS.
- d. BALANCING VALVES
- i. BALANCING VALVES SHALL BE EQUAL TO CIRCUITSOLVER, THERMOSTATIC, SELF-ACTUATING BALANCING VALVES WITH UNIONS, STRAINER, CHECK VALVE, THERMOMETER, AND TWO INTEGRATED BALL VALVES.
- e. MASTER THERMOSTATIC MIXING VALVES
- i. PROVIDE LEONARD TM-1520B-LF-DT-LF NEXT GENERATION HIGH LOW ASSEMBLY. VALVE SHALL BE LEAD-FREE AND LISTED TO ASSE 1017.
- f. THERMOSTATIC MIXING VALVES i. TEMPERED WATER SHALL BE DELIVERED FROM PUBLIC HAND-WASHING FACILITIES (LAVATORIES AND SINKS) THROUGH AN APPROVED WATER-TEMPERATURE LIMITING DEVICE THAT CONFORMS TO ASSE 1070 SET OUTLET TEMPERATURE OF THERMOSTATIC MIXING VALVE TO 110 DEGREES F. POINT-OF-USE THERMOSTATIC MIXING VALVES SHALL BE EOUAL TO WATTS SERIES USG-B. ROUTE TEMPERED WATER TO HOT WATER SIDE OF SINK/LAVATORY. ACCEPTABLE MANUFACTURERS INCLUDE SYMMONS, LAWLER, LEONARD, POWERS, BRADLEY, AND WATTS.
- 14. ELEVATOR PIT SUMP PUMP
- a. ELEVATOR PUMP SYSTEM TO BE EQUAL TO TOPP INDUSTRIES #B22ELE, 18" X 22" BASIN WITH PERFORATED STEEL COVER, AND ZOELLER 98 PUMP, 1/2 HP, 115 VOLT WITH 11/2" DISCHARGE, FLOAT VALVE, AND CHECK VALVE. AVAILABLE MANUFACTURERS INCLUDE ZOELLER, WEIL PUMPS, LIBERTY PUMPS, ARMSTRONG, DAYTON, BARNES, OR GORMAN RUPP CO.

15. HANGERS & SUPPORTS

a. THE PLUMBING CONTRACTOR MUST FURNISH ALL PIPE SUPPORTS REOUIRED FOR THEIR WORK. ALL PIPING SHALL BE SUPPORTED PER CODE. ADDITIONAL SUPPORTS SHALL BE PROVIDED WHERE REQUIRED TO PREVENT SAGGING. WHERE ALTERNATIVE PIPING MATERIALS ARE USED. HANGER SPACING CAN BE REDUCED AS RECOMMENDED BY THE MANUFACTURER AND WHERE ALLOWED BY CODE.

16. INSULATION

- a. PROVIDE THERMAL INSULATION ON ALL METALLIC DOMESTIC COLD WATER, DOMESTIC HOT WATER, DOMESTIC HOT WATER RETURN, PIPING WITH SELF-SEALING CLOSED CELL ELASTOMERIC FOAM. PROVIDE A CONTINUOUS VAPOR TIGHT SEAL. INSULATION SHALL BE CONTINUOUS THRU ALL WALLS AND FLOORS. NFPA FIRE HAZARD RATING FOR INSULATION, ADHESIVES, SEALERS, AND COATINGS MUST NOT EXCEED 2 FOR FLAME SPREAD AND 50 FOR SMOKE DEVELOPED, UNLESS OTHERWISE REQUIRED BY THE LOCAL AUTHORITY OR ENERGY CODES. THE MINIMUM INSULATION LEVELS SHALL BE AS FOLLOWS:
- i. PROVIDE 1" THICK ELASTOMERIC INSULATION ON HOT AND HOT WATER RETURN PIPING. PROVIDE 1/2" THICK ELASTOMETRIC INSULATION ON METALLIC DOMESTIC COLD WATER PIPING.
- b. PROVIDE INSULATION ON ALL PEX PIPING WHEN USED IN PLENUMS AND WHERE REQUIRED TO MAINTAIN THE REQUIRED FLAME AND SMOKE RATINGS. MOST PEX PIPING 3/4" AND SMALLER SHALL BE INSULATED TO MAINTAIN ITS PLENUM RATED PROPERTY IF 18" SEPARATION BETWEEN THE PIPING CANNOT BE PROVIDED.

17. INSULATION FOR HANDICAP ACCESSIBLE FIXTURES (WHERE NOT PROTECTED WITH A SHROUD)

a. ALL HANDICAP LAVATORY P-TRAP AND ANGLE STOP ASSEMBLIES SHALL BE INSULATED WITH TRAP WRAP PROTECTIVE KIT MANUFACTURED BY PROFLO MODEL PF200 SERIES OR EQUAL. PROVIDE OFFSET TRAPS FOR HANDICAP ACCESSIBLE FIXTURES WHERE REQUIRED. ABRASION RESISTANT, ANTI-MICROBIAL VINYL EXTERIOR COVER SHALL BE SMOOTH. FOR TRAPS. THE INSULATION MUST HAVE A CLEANOUT NUT CAP TO ALLOW SERVICE TO THE TRAP WITHOUT DISASSEMBLY. FOR STOPS, THE INSULATION MUST HAVE A LOCK LID THAT PREVENTS TAMPERING BUT ALLOWS ACCESS WITHOUT REMOVAL OF THE INSULATION. FASTENERS MUST REMAIN SUBSTANTIALLY OUT OF SIGHT. ACCEPTABLE MANUFACTURERS INCLUDE PROFLO, TRUEBRO, PLUMBEREX, AND

18. CONCRETE HOUSEKEEPING PADS

- a. ALL FLOOR-MOUNTED EQUIPMENT SHALL BE INSTALLED LEVEL AND PLUMB ON 4" THICK CONCRETE HOUSEKEEPING PAD.
- 19. ESCUTCHEON PLATES a. INSTALL ONE-PIECE CHROME PLATED BRASS WALL PLATE EQUIPPED WITH SET SCREW AROUND ALL EXPOSED PIPE PASSING THROUGH WALLS
- IN FINISHED AREAS. 20. ACCESS PANELS

DEARBORN

- a. LOCATE VALVES IN READILY ACCESSIBLE LOCATIONS. WHERE VALVES SHALL BE INSTALLED ABOVE NON-ACCESSIBLE CEILINGS, PROVIDE ACCESS PANELS. ACCESS PANELS SHALL BE PAINTABLE METAL. COORDINATE ACCESS PANEL SIZES AND LOCATIONS WITH THE ARCHITECT.
- 21. FIRE STOPPING
- a. PROVIDE FIRE STOPPING AT ALL PENETRATIONS THROUGH RATED SEPARATIONS PER LOCAL CODES & REGULATIONS & PER UL
- RECOMMENDATIONS FOR ASSEMBLIES ENCOUNTERED IN PROJECT b. THE FIRE STOPPING MATERIAL MUST MEET THE INTEGRITY OF THE FIRE RATED WALL, FLOOR, CEILING & ROOF BEING PENETRATED. REFER TO ARCHITECT'S DRAWINGS FOR WALL, FLOOR, CEILING & ROOF FIRE
- RATINGS PRIOR TO BIDDING WORK.
- 22. FLASHING & COUNTERFLASHING
- a. PROVIDE ROOF FLASHING AND COUNTERFLASHING FOR ALL ROOF PENETRATIONS.
- b. OBTAIN APPROVAL FROM GENERAL CONTRACTOR, CONSTRUCTION
- MANAGER, OWNER AND/OR ROOFING CONTRACTOR PRIOR TO MAKING ANY PENETRATIONS SO THAT WARRANTIES ARE NOT COMPROMISED OR VOIDED.
- 23. CATHODIC PROTECTION
- a. PROVIDE DIELECTRIC INSULATION AT POINTS WHERE COPPER OR BRASS PIPE COMES IN CONTACT WITH FERROUS PIPING, REINFORCING STEEL OR OTHER DISSIMILAR METAL IN STRUCTURE.
- 24. EXCAVATION, TRENCHING & BACKFILL
- a. DO ALL EXCAVATION, TRENCHING & BACKFILL REQUIRED FOR THE INSTALLATION OF PLUMBING WORK.
- b. ALL BACKFILL SHALL BE COMPACTED & BROUGHT TO FINISHED GRADE

- AND MUST MATCH SURROUNDING CONDITIONS.
- c. RESTORE ALL DISTURBED FLOORING TO ORIGINAL CONDITION. d. ALL PIPING SHALL BE LAID ON A BED OF SAND, 6" THICK MINIMUM BACKFILL UNDER BUILDING AND ALL DRIVES, ROADS AND WALKS WITH
- BANK-RUN GRAVEL. 25. CUTTING AND PATCHING
- a. CUT AND PATCH WALLS AND FLOORS TO MATCH BUILDING CONSTRUCTION WHERE REQUIRED TO INSTALL ALL PLUMBING. 26. CONNECTIONS
- a. INSTALL UNIONS AT FINAL CONNECTION TO EACH PIECE OF EQUIPMENT. INSTALL DIELECTRIC COUPLINGS TO CONNECT PIPING MATERIALS OF DISSIMILAR METALS.
- 27. INSTALLATION
- a. INSTALL PIPING FREE OF SAGS AND BENDS. INSTALL FITTINGS FOR CHANGES IN DIRECTION AND BRANCH CONNECTIONS. INSTALL SLEEVES FOR PIPES PASSING THROUGH CONCRETE AND MASONRY WALLS, GYPSUM-BOARD PARTITIONS, CONCRETE FLOOR, AND ROOF SLABS. SEAL PIPE PENETRATIONS THROUGH RATED CONSTRUCTION WITH FIRESTOPPING SEALANT MATERIAL. UNDERGROUND WATER AND SEWER LINES SHALL BE LAID IN SEPARATE TRENCHES WITH A MINIMUM HORIZONTAL SPACING AS REQUIRED BY CODE, EXCAVATED TO THE PROPER DEPTH AND GRADED TO PRODUCE THE REQUIRED FALL.
- 28. TESTING a. ALL PLUMBING WORK SHALL BE TESTED & APPROVED BY INSPECTOR PRIOR TO BEING BACKFILLED, CONCEALED & PUT INTO SERVICE. AFTER TESTING IS COMPLETE & APPROVED. THE PLUMBING CONTRACTOR MUST DISINFECT THE POTABLE WATER SYSTEM AS REQUIRED BY LOCAL AUTHORITY. TEST WATER PURITY ACCORDING TO LOCAL REQUIREMENTS AND SUBMIT CERTIFIED TEST RESULTS TO OWNER FOR REVIEW AND APPROVAL
- 29. SHOP DRAWINGS
- a. SUBMIT TO THE ARCHITECT PDF FILE COPIES OF COMPLETE & CERTIFIED SHOP DRAWINGS, DESCRIPTIVE DATA, PERFORMANCE DATA & RATINGS, DIAGRAMS AND SPECIFICATIONS ON ALL SPECIFIED EQUIPMENT, INCLUDING ACCESSORIES, AND MATERIALS FOR REVIEW.
- b. THE MAKE, MODEL NUMBER, TYPE, FINISH & ACCESSORIES OF ALL EQUIPMENT AND MATERIALS SHALL BE REVIEWED & APPROVED BY THE PLUMBING CONTRACTOR & GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE ARCHITECT FOR THEIR REVIEW & APPROVAL.
- c. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE THE PLUMBING CONTRACTOR/VENDOR FROM COMPLIANCE WITH THE REOUIREMENTS OF THE CONTRACT DRAWINGS, SPECIFICATIONS & APPLICABLE CODES. **30. OWNER'S INSTRUCTIONS**
- a. PROVIDE TWO SETS OF COMPLETE OPERATING AND MAINTENANCE INSTRUCTIONS WITH DRAWINGS, TYPEWRITTEN INSTRUCTIONS AND OPERATING SEQUENCES AND DESCRIPTIVE DATA SHEETS. ASSEMBLE EACH SET IN A HARD-BOUND COVER.
- 31. WARRANTY
- a. THE PLUMBING CONTRACTOR MUST UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN EQUIPMENT, MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE BY OWNER AND THE PLUMBING CONTRACTOR WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE TO THE OWNER.
- b. RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE EQUIPMENT, MATERIALS AND WORKMANSHIP

	PLUMBING LEGEND
SYMBOL	DESCRIPTION
— —s — —	SANITARY WASTE PIPING
V	VENT PIPING
cw	COLD WATER PIPING
——нw ——	HOT WATER PIPING
——HWR —	HOT WATER RETURN PIPING
G	NATURAL GAS PIPING
ST	STORM PIPING
FD	FLOOR DRAIN
——★——	BALL VALVE
V	CHECK VALVE
<i>&</i>	BALANCING VALVE
—× —	GAS REGULATOR
COO	CLEANOUT
WH H	FROST PROOF WALL HYDRANT
HB H	HOSE BIBB
(#)	VENT THROUGH ROOF RISER INDICATOR
Ω	HOT WATER RETURN PUMP





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THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONSTRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDED TO PROVIDE THE AUTHORITIES HAVING JURISDICTION WITH INFORMATION
THO DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACT DOCUMENTS. METHODS, AND MATERIALS USED IN CONSTRUCTION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY EXIST WITH AN OWNER, CONSTRUCTION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY EXIST WITH AN OWNER, CONSTRUCTION DE CENDERAL CONTRACTOR IS RESPONSIBLETY OR LIABILITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.





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	DSHEETNOTE
 ROUTE 3/4" C CLOSET. SLO PROVIDE OVE 	ONDENSATE DRAIN LINE TO FLC PE PIPE A MINIMUM OF 1/8 " PER ERFLOW SWITCH THAT WILL SHL
3. ROUTE LINE SHALL BE CO	SET FROM OUTDOOR UNIT TO IN INCEALED IN FINISHED AREA. SIZ
4. ROUTE EXHA ARCHITECT E COORDINATIO	UST TO EXTERIOR WALL. INSTAL BEFORE PENETRATION FOR EXA ON. ALL EXHAUST SHALL MEET T
4.1. 3' FROM 4.2. 3' FROM 4.3. 10' FROM	PROPERTY LINE. OPERABLE OPENINGS INTO BUIL I MECHANICAL AIR INTAKE
 FRESH AIR IN SWVP. REFER TO OV 	ITAKE THRU WALL TO WALL HOC
 REFER TO OV UNDERCUT D DUCTED RET N/A 	VERALL BUILDING LAYOUT FOR F DOOR 1" ABOVE FINISHED FLOOR URN SLEEVE BETWEEN TO AVOI
11. PROVIDE AND AIR FLOW TO LEVELS RISE	D INSTALL CO2 SENSOR IN RETU 10% OF THE TOTAL AIRFLOW O ABOVE 1000 PPM IN THE SPACE
SHALL ADJUS SCHEDULE. N OPERATIONA	ST TO ALLOW THE OUTSIDE AIRF MOTOR OPERATED DAMPER TO (.L.
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SYMBOLS L	EGEND – HVAC	
Ū	THERMOSTAT	1 BOUTE 3/4" CONDENSATE DRAIN LINE TO
	CEILING DIFFUSER	CLOSET. SLOPE PIPE A MINIMUM OF 1/8 ' 2. PROVIDE OVERFLOW SWITCH THAT WILL
$ \rightarrow$	SIDE WALL GRILL	3. ROUTE LINE SET FROM OUTDOOR UNIT T SHALL BE CONCEALED IN FINISHED ARE/ BECOMMENDATIONS
<u> </u>	RETURN WALL GRILL	4. ROUTE EXHAUST TO EXTERIOR WALL. IN ARCHITECT BEFORE PENETRATION FOR
⊷√	AIR FLOW DIRECTION	COORDINATION. ALL EXHAUST SHALL ME 4.1. 3' FROM PROPERTY LINE. 4.2 3' FROM OPERABI E OPENINGS INTO
14x10	DUCTWORK	4.3. 10' FROM MECHANICAL AIR INTAKE 5. FRESH AIR INTAKE THRU WALL TO WALL
	TYPICAL SUPPLY DUCT DN	6. REFER TO OVERALL BUILDING LAYOUT F 7. REFER TO OVERALL BUILDING LAYOUT F
	TYPICAL RETURN DUCT DN	 UNDERCUT DOOR 1" ABOVE FINISHED FL DUCTED RETURN SLEEVE BETWEEN TO 10
X	TYPICAL EXHAUST DUCT	10. N/A 11. PROVIDE AND INSTALL CO2 SENSOR IN F AIR FLOW TO 10% OF THE TOTAL AIRFLO
۲.,	TURNING VANES	LEVELS RISE ABOVE 1000 PPM IN THE SF SHALL ADJUST TO ALLOW THE OUTSIDE SCHEDULE. MOTOR OPERATED DAMPER
	FLEXIBLE DUCT, 8'-0" LONG MAX.	OPERATIONAL. 12. RECIRCULATING EXHAUST PROVIDED PE ADDITIONAL EXHAUST FAN IS PROVIDED
Ø	TYPICAL ROUND DUCT DN	13. PROVIDE GRAVITY DAMPER IN DRYER M TO OPEN WHEN DRYERS ARE RUNNING
O	ROUND DUCT UP	LEVEL. 15. COORDINATE MINI-SPLIT LOCATION WITH
FD	1.5 HR FIRE DAMPER	LIGHTING LAYOUT. 16. FIRE DAMPERS NOT REQUIRED PER OMO 16.1 EXCEPTION 4-SUCH WALLS ARE PEN
	MVD MANUAL VOLUME DAMPER	SYSTEMS,HAVE A REQUIRED FIRE-R LESS AND ARE IN AREAS IN OTHER
MOD	MOD MOTOR OPERATED DAMPER	EQUIPPED THOUGHT OUT WITH AN A ACCORDANCE WITH SECTION 903.3. SHALL BE CONSTRUCTED OF SHEET
	DROPPED CEILING/SOFFIT	THICKNESS AND SHALL BE CONTINU APPLIANCE OR EQUIPMENT TO THE



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- L HOODED VENT EQUAL TO FAMCO FOR EXHAUST PENETRATIONS.
- FOR FRESH AIR PENETRATIONS. LOOR FOR RETURN AIR. AVOID EXPOSED WALLCAVITY.
- RETURN DUCTWORK. SET OUTSIDE OW OF THE SYSTEM. WHEN CO2 PACE MOTOR OPERATED DAMPER E AIRFLOW LISTED IN THE VENTILATION TO CLOSE WHEN UNIT IS NOT
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- TH ELEVATOR EQUIPMENT AND IC 607.5.3
- ENETRATED BY DUCTED HVAC RESISTANCE RATING OF 1 HOUR OR THAN GROUP H AND ARE IN BUILDINGS AUTOMATIC SPRINKLER SYSTEM IN 3.1.1 OR 903.3.1.2 OF BUILDING CODE. STEEL NO LESS THAN NO. 26 GAGE IUOUS FROM THE AIR HANDLING AIR OUTLET AND INLET TERMINALS.

MECHANICAL SCOPE OF WORK (PLAN REVIEW ONLY)

MECHANICAL SCOPE OF WORK IS TO PROVIDE NEW HVAC TO RESIDENTIAL AND COMMON SPACES. MECHANICAL CONTRACTOR SHALL REFERENCE ALL DISCIPLINE DRAWING, ETC. TO REVEAL FULL SCOPE OF WORK. REFER TO MECHANICAL SPECIFICATIONS FOR ADDITIONAL DETAILS.

CODES & STANDARDS REFERENCED

- 2017 OHIO MECHANICAL CODE 2017 OHIO BUILDING CODE
- ASHRAE 90.1-2010 LEED BD+C: HOMES AND MULTIFAMILY LOWRISE v4 -LEED v4

HVAC DESIGN CONDITIONS

COMMERCIAL RESIDENTIAL OOLING
UTDOOR: 93 DB / 75 WBHEATING
OUTDOOR: 0 DBCOOLING
OUTDOOR: 93 DB / 75 WBHEATING
OUTDOOR: 0 INDOOR: 74 INDOOR: 72 INDOOR: 75 INDOOR: 70

GENERAL NOTES

- A. FOR FULL SCHEDULES, SPECIFICATIONS, AND COMPLETE LISTING SEE DETAIL SHEETS. B. COORDINATE ROUTING OF ALL WORK WITH OTHER TRADES.
- C. COORDINATE WITH ELECTRICAL CONTRACTOR FOR POWER CONNECTIONS TO ALL MECHANICAL EQUIPMENT.
- D. INSTALL ALL EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. MAINTAIN ALL CODE RECOMMENDED CLEARANCES FOR ACCESS AND MAINTENANCE.
- . REFER TO ARCHITECTURAL PLANS FOR DIMENSIONS, AND FINAL CEILING DIFFUSER LOCATIONS.
- . PROVIDE BACKDRAFT DAMPERS FOR ALL EXHAUST SYSTEMS AND EITHER LOUVER, BRICK VENT, OR CAPS AT ALL EXTERIOR BUILDING PENETRATIONS.
- G. ROUTE ALL AIR CONDITIONER CONDENSATE TO NEARBY FLOOR DRAIN. PROVIDE MINIMUM SLOPE OF 1/8 " PER FOOT. SIZE CONDENSATE PER SECTION 307.2.2 OF THE OHIO MECHANICAL CODE.
- H. PROVIDE AN APPROVED THROUGH PENETRATION FIRESTOP FOR ALL PIPING INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479. FIRESTOP SHALL HAVE A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCHES OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL OR FLOOR PENETRATED.
- ANY EQUIPMENT THAT IS SUBSTITUTED SHALL FIT IN THE SPACE PROVIDED WITH ADEQUATE ROOM FOR SERVICING, INCLUDING SUBSTITUTE EQUIPMENT NAMED IN THE SPECIFICATIONS. SUBMIT A 1/4" SCALE DRAWING OF ALL EQUIPMENT SUBSTITUTED FOR APPROVAL PRIOR TO INSTALLATION. INCLUDING. BUT NOT LIMITED TO, STRUCTURAL AND ARCHITECTURAL IMPACT, CLEARANCE REQUIREMENTS AND UTILITY REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE ALL NEW ELECTRICAL AND PLUMBING REQUIREMENTS WITH THE ELECTRICAL AND PLUMBING CONTRACTORS.
- J. THE FOLLOWING GUIDELINES MUST BE FOLLOWED FOR THE DOMESTIC DRYER EXHAUST SYSTEMS. J.A. EXHAUST DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH AND BE
- CONSTRUCTED OF METAL A MINIMUM OF 28 GAGE. J.B. DUCT SIZE SHALL BE 4 INCHES NOMINAL DIAMETER. J.C. DUCTS SHALL BE SUPPORTED AT 4-FOOT INTERVALS AND SECURED IN
- PLACE. THE INSERT END OF THE DUCT SHALL EXTEND INTO THE ADJOINING DUCT OR FITTING IN THE DIRECTION OF AIRFLOW. J.D. DUCTS SHALL NOT BE JOINED WITH SCREWS OF SIMILAR FASTENERS THAT
- PROTRUDE MORE THAN # INCH INTO THE INSIDE OF THE DUC J.E. PROTECTIVE SHIELD PLATES SHALL BE PLACED WHERE NAILS OR SCREWS FROM FINISH OR OTHER WORK ARE LIKELY TO PENETRATE THE CLOTHES DRYER EXHAUST DUCT. SHIELD PLATES SHALL BE PLACED ON THE FINISHED FACE OF ALL FRAMING MEMBERS WHERE THERE IS LESS THAN 1-1/4 INCHES BETWEEN THE DUCT AND THE FINISHED FACE OF THE FRAMING MEMBER. SHIELD PLATES SHALL BE CONSTRUCTED OF STEEL, HAVE A THICKNESS OF 0.062 INCHES, AND EXTEND NOT LESS THAN 2 INCHES ABOVE SOLE PLATES AND BELOW TOP PLATES.
- TRANSITION DUCTS USED TO CONNECT THE DRYER TO THE EXHAUST DUCT SYSTEM SHALL BE A SINGLE LENGTH THAT IS LISTED AND LABELED IN ACCORDANCE WITH UL 2158A. TRANSITION DUCTS SHALL BE NOT GREATER THAN 8 FEET IN LENGTH AND SHALL NOT BE CONCEALED WITHIN CONSTRUCTION.
- J.G. PROVIDE DRYER WALL BOX EQUAL TO DUNDAS JAFINE MODEL DRB4XZW NEAR DRYER.
- J.H. PROVIDE A PERMANENT LABEL OR TAG (EQUAL TO DRYERPLACARD) INDICATING ACTUAL EQUIVALENT LENGTH OF EXHAUST DUCT. LENGTH SHALL INCLUDE 5' FOR 90 . LABEL/TAG MUST BE WITHIN 6' OF DRYER EXHAUST CONNECTION. DRYER EXHAUST DUCT FITTING EQUIVALENT LENGTH SHALL BE 2'-6" FOR A RADIUS MITERED 45-DEGREE ELBOW AND 5 FEET FOR A RADIUS MITERED 90-DEGREE ELBOW.
- . MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.

THERMOSTAT TO BE MOUNTED 48" ABOVE FINISHED FLOOR IN ADA UNITS/SENSORY UNITS.



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SYMBOLS L	EGEND – HVAC	🖉 🖉 KEYED SHEET NC
Ū	THERMOSTAT	1 ROUTE 3/4" CONDENSATE DRAIN LINE TO
	CEILING DIFFUSER	CLOSET. SLOPE PIPE A MINIMUM OF 1/8 2. PROVIDE OVERFLOW SWITCH THAT WIL
$ \rightarrow$	SIDE WALL GRILL	3. ROUTE LINE SET FROM OUTDOOR UNIT SHALL BE CONCEALED IN FINISHED ARE DECOMMENDATIONS
←∿–	RETURN WALL GRILL	4. ROUTE EXHAUST TO EXTERIOR WALL. IN ARCHITECT BEFORE PENETRATION FOR
⊷~	AIR FLOW DIRECTION	COORDINATION. ALL EXHAUST SHALL M 4.1. 3' FROM PROPERTY LINE. 4.2 3' FROM OPERABLE OPENINGS INTO
14x10	DUCTWORK	4.3. 10' FROM MECHANICAL AIR INTAKE 5. FRESH AIR INTAKE THRU WALL TO WALL
	TYPICAL SUPPLY DUCT DN	6. REFER TO OVERALL BUILDING LAYOUT I
	TYPICAL RETURN DUCT DN	8. UNDERCUT DOOR 1" ABOVE FINISHED F 9. DUCTED RETURN SLEEVE BETWEEN TO 10. N/A
	TYPICAL EXHAUST DUCT	10. IN/A 11. PROVIDE AND INSTALL CO2 SENSOR IN AIR FLOW TO 10% OF THE TOTAL AIRFLO
ردر	TURNING VANES	SHALL ADJUST TO ALLOW THE OUTSIDE SCHEDULE. MOTOR OPERATED DAMPER
	FLEXIBLE DUCT, 8'-0" LONG MAX.	OPERATIONAL. 12. RECIRCULATING EXHAUST PROVIDED P ADDITIONAL EXHAUST FAN IS PROVIDED
Ø	TYPICAL ROUND DUCT DN	13. PROVIDE GRAVITY DAMPER IN DRYER M TO OPEN WHEN DRYERS ARE RUNNING
O	ROUND DUCT UP	14. DRYER MAKE UP AIR TO BE ROUTED BE LEVEL. 15. COORDINATE MINI-SPLIT LOCATION WIT
FD	1.5 HR FIRE DAMPER	LIGHTING LAYOUT. 16. FIRE DAMPERS NOT REQUIRED PER OM 16.1 EXCEPTION 4-SUCH WALLS ARE DE
	MVD MANUAL VOLUME DAMPER	SYSTEMS,HAVE A REQUIRED FIRE-F LESS AND ARE IN AREAS IN OTHER
MOD	MOD MOTOR OPERATED DAMPER	EQUIPPED THOUGHT OUT WITH AN ACCORDANCE WITH SECTION 903.3 SHALL BE CONSTRUCTED OF SHEE
	DROPPED CEILING/SOFFIT	THICKNESS AND SHALL BE CONTINU APPLIANCE OR EQUIPMENT TO THE



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- TH ELEVATOR EQUIPMENT AND
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- $\left(3 \right)^{1}_{2}$



- DRYER EXHAUST DUCT. SHIELD PLATES SHALL BE PLACED ON THE FINISHED FACE OF ALL FRAMING MEMBERS WHERE THERE IS LESS THAN 1-1/4 INCHES BETWEEN THE DUCT AND THE FINISHED FACE OF THE FRAMING MEMBER. SHIELD PLATES SHALL BE CONSTRUCTED OF STEEL, HAVE A THICKNESS OF 0.062 INCHES, AND EXTEND NOT LESS THAN 2 INCHES ABOVE SOLE PLATES AND BELOW TOP PLATES.
- SYSTEM SHALL BE A SINGLE LENGTH THAT IS LISTED AND LABELED IN ACCORDANCE WITH UL 2158A. TRANSITION DUCTS SHALL BE NOT GREATER THAN 8 FEET IN LENGTH AND SHALL NOT BE CONCEALED WITHIN CONSTRUCTION. J.G. PROVIDE DRYER WALL BOX EQUAL TO DUNDAS JAFINE MODEL DRB4XZW
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- INDICATING ACTUAL EQUIVALENT LENGTH OF EXHAUST DUCT. LENGTH SHALL INCLUDE 5' FOR 90 . LABEL/TAG MUST BE WITHIN 6' OF DRYER EXHAUST CONNECTION. DRYER EXHAUST DUCT FITTING EQUIVALENT LENGTH SHALL BE 2'-6" FOR A RADIUS MITERED 45-DEGREE ELBOW AND 5 FEET FOR A RADIUS MITERED 90-DEGREE ELBOW.
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- J.F. TRANSITION DUCTS USED TO CONNECT THE DRYER TO THE EXHAUST DUCT
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- THERMOSTAT TO BE MOUNTED 48" ABOVE FINISHED FLOOR IN ADA UNITS/SENSORY UNITS.



MAY JE THE THAT ED TO PROVID AGREEMENT ⁻ ENDE , AND ARE INTE Y CONTRACTU ¹lot Date/Time: Apr 13, 2023-12:52pm - By: k.meyer FRATE COMPLIANCE WITH APPLICABLE CODES, ION ARE INSTALLED IN ACCORDANCE WITH ANY Project Directories/10000-10001/10041 - Talbert House - The Geiger House for Veterans - Cincinnati OH\~Construction Documents\10041-M103-MECHANICAL-THIRD-FLOOR-PLAN.dwg-EBS. SE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONS DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUC ERAL CONTRACTOR. ETC. EBS ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.

SYMBOLS L	EGEND – HVAC	🕢 🖉 🖉 KEYED SHEET NO
0	THERMOSTAT	1. ROUTE 3/4" CONDENSATE DRAIN LINE TO
	CEILING DIFFUSER	CLOSET. SLOPE PIPE A MINIMUM OF 1/8 2. PROVIDE OVERFLOW SWITCH THAT WILL LEVEL
$ \rightarrow$	SIDE WALL GRILL	3. ROUTE LINE SET FROM OUTDOOR UNIT SHALL BE CONCEALED IN FINISHED ARE DECOMMENDATIONS
<u> </u>	RETURN WALL GRILL	4. ROUTE EXHAUST TO EXTERIOR WALL. IN ARCHITECT BEFORE PENETRATION FOR
<∿_	AIR FLOW DIRECTION	COORDINATION. ALL EXHAUST SHALL ME 4.1. 3' FROM PROPERTY LINE. 4.2. 3' FROM OPERABLE OPENINGS INTO
14x10	DUCTWORK	4.3. 10' FROM MECHANICAL AIR INTAKE 5. FRESH AIR INTAKE THRU WALL TO WALL
	TYPICAL SUPPLY DUCT DN	6. REFER TO OVERALL BUILDING LAYOUT F 7. REFER TO OVERALL BUILDING LAYOUT F
	TYPICAL RETURN DUCT DN	8. UNDERCUT DOOR 1" ABOVE FINISHED FL 9. DUCTED RETURN SLEEVE BETWEEN TO 10. N/A
	TYPICAL EXHAUST DUCT	11. PROVIDE AND INSTALL CO2 SENSOR IN F AIR FLOW TO 10% OF THE TOTAL AIRFLO
(در م	TURNING VANES	SHALL ADJUST TO ALLOW THE OUTSIDE SCHEDULE. MOTOR OPERATED DAMPER
	FLEXIBLE DUCT, 8'-0" LONG MAX.	OPERATIONAL. 12. RECIRCULATING EXHAUST PROVIDED PE ADDITIONAL EXHAUST FAN IS PROVIDED
Ø	TYPICAL ROUND DUCT DN	13. PROVIDE GRAVITY DAMPER IN DRYER M TO OPEN WHEN DRYERS ARE RUNNING
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FD	1.5 HR FIRE DAMPER	LIGHTING LAYOUT. 16. FIRE DAMPERS NOT REQUIRED PER OMO 16.1 EXCEPTION 4-SUCH WALLS ARE PER
]	MVD MANUAL VOLUME DAMPER	SYSTEMS,HAVE A REQUIRED FIRE-R LESS AND ARE IN AREAS IN OTHER
MOD	MOD MOTOR OPERATED DAMPER	EQUIPPED THOUGHT OUT WITH AN A ACCORDANCE WITH SECTION 903.3. SHALL BE CONSTRUCTED OF SHEET
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N MECHANICAL THIRD FLOOR PLAN M103 SCALE: 1/8" = 1'-0"

DTES

- O FLOOR DRAIN IN MECHANICAL " PER FOOT AWAY FROM UNIT. SHUT OFF THE UNIT ON HIGH WATER
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<u>EVM-4</u>

 $\langle 8 \rangle$ 10x8 ONE BEDROOM ACCESSIBLE - U107, U307 M200 SCALE: 1/4" = 1'-0" <u>.</u> <u>SR1W-10</u> (8) APARTMENT UNIT U111

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ONE BEDROOM - U001, U002, U111, U214, U314 & U315

<u>SR2W-3</u> 120

















SYMBOLS L	EGEND – HVAC	KEYED SHEET NO
Ū	THERMOSTAT	1 ROUTE 3/4" CONDENSATE DRAIN LINE TO
\boxtimes	CEILING DIFFUSER	CLOSET. SLOPE PIPE A MINIMUM OF 1/8 2. PROVIDE OVERFLOW SWITCH THAT WILL
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\boxtimes	TYPICAL SUPPLY DUCT DN	6. REFER TO OVERALL BUILDING LAYOUT F 7. REFER TO OVERALL BUILDING LAYOUT F
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MOD	MOD MOTOR OPERATED DAMPER	ACCORDANCE WITH SECTION 903.3. SHALL BE CONSTRUCTED OF SHEET
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- WITH ELEVATOR EQUIPMENT AND
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HVAC DESIGN CONDITIONS

COMMERCIAL RESIDENTIAL
 COOLING
 HEATING
 COOLING
 HEATING

 DUTDOOR: 93 DB / 75 WB
 OUTDOOR: 0 DB
 OUTDOOR: 93 DB / 75 WB
 HEATING
 INDOOR: 74 INDOOR: 72 INDOOR: 75

GENERAL NOTES

- A. FOR FULL SCHEDULES, SPECIFICATIONS, AND COMPLETE LISTING SEE DETAIL SHEETS. B. COORDINATE ROUTING OF ALL WORK WITH OTHER TRADES.
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- PROVIDE BACKDRAFT DAMPERS FOR ALL EXHAUST SYSTEMS AND EITHER LOUVER, BRICK VENT, OR CAPS AT ALL EXTERIOR BUILDING PENETRATIONS.
- G. ROUTE ALL AIR CONDITIONER CONDENSATE TO NEARBY FLOOR DRAIN. PROVIDE MINIMUM SLOPE OF 1/8 " PER FOOT. SIZE CONDENSATE PER SECTION 307.2.2 OF THE OHIO MECHANICAL CODE.
- H. PROVIDE AN APPROVED THROUGH PENETRATION FIRESTOP FOR ALL PIPING INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479. FIRESTOP SHALL HAVE A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCHES OF WATER AND SHALL HAVE AN F RATING OF NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL OR FLOOR PENETRATED.
- ANY EQUIPMENT THAT IS SUBSTITUTED SHALL FIT IN THE SPACE PROVIDED WITH ADEQUATE ROOM FOR SERVICING, INCLUDING SUBSTITUTE EQUIPMENT NAMED IN THE SPECIFICATIONS. SUBMIT A 1/4" SCALE DRAWING OF ALL EQUIPMENT SUBSTITUTED FOR APPROVAL PRIOR TO INSTALLATION, INCLUDING, BUT NOT LIMITED TO, STRUCTURAL AND ARCHITECTURAL IMPACT, CLEARANCE REQUIREMENTS AND UTILITY REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO COORDINATE ALL NEW ELECTRICAL AND PLUMBING REQUIREMENTS WITH THE ELECTRICAL AND PLUMBING CONTRACTORS.
- J. THE FOLLOWING GUIDELINES MUST BE FOLLOWED FOR THE DOMESTIC DRYER EXHAUST SYSTEMS. J.A. EXHAUST DUCTS SHALL HAVE A SMOOTH INTERIOR FINISH AND BE
- CONSTRUCTED OF METAL A MINIMUM OF 28 GAGE. J.B. DUCT SIZE SHALL BE 4 INCHES NOMINAL DIAMETER.
- J.C. DUCTS SHALL BE SUPPORTED AT 4-FOOT INTERVALS AND SECURED IN PLACE. THE INSERT END OF THE DUCT SHALL EXTEND INTO THE ADJOINING DUCT OR FITTING IN THE DIRECTION OF AIRFLOW. J.D. DUCTS SHALL NOT BE JOINED WITH SCREWS OF SIMILAR FASTENERS THAT
- PROTRUDE MORE THAN $\frac{1}{8}$ INCH INTO THE INSIDE OF THE DUCT J.E. PROTECTIVE SHIELD PLATES SHALL BE PLACED WHERE NAILS OR SCREWS FROM FINISH OR OTHER WORK ARE LIKELY TO PENETRATE THE CLOTHES DRYER EXHAUST DUCT. SHIELD PLATES SHALL BE PLACED ON THE FINISHED FACE OF ALL FRAMING MEMBERS WHERE THERE IS LESS THAN 1-1/4 INCHES BETWEEN THE DUCT AND THE FINISHED FACE OF THE FRAMING MEMBER. SHIELD PLATES SHALL BE CONSTRUCTED OF STEEL, HAVE A THICKNESS OF 0.062 INCHES, AND EXTEND NOT LESS THAN 2 INCHES ABOVE SOLE PLATES AND BELOW TOP PLATES.
- J.F. TRANSITION DUCTS USED TO CONNECT THE DRYER TO THE EXHAUST DUCT SYSTEM SHALL BE A SINGLE LENGTH THAT IS LISTED AND LABELED IN ACCORDANCE WITH UL 2158A. TRANSITION DUCTS SHALL BE NOT GREATER THAN 8 FEET IN LENGTH AND SHALL NOT BE CONCEALED WITHIN CONSTRUCTION.
- J.G. PROVIDE DRYER WALL BOX EQUAL TO DUNDAS JAFINE MODEL DRB4XZW NFAR DRYFR J.H. PROVIDE A PERMANENT LABEL OR TAG (EQUAL TO DRYERPLACARD)
- INDICATING ACTUAL EQUIVALENT LENGTH OF EXHAUST DUCT. LENGTH SHALL INCLUDE 5' FOR 90 . LABEL/TAG MUST BE WITHIN 6' OF DRYER EXHAUST CONNECTION. DRYER EXHAUST DUCT FITTING EQUIVALENT LENGTH SHALL BE 2'-6" FOR A RADIUS MITERED 45-DEGREE ELBOW AND 5 FEET FOR A RADIUS MITERED 90-DEGREE ELBOW.
- . MATERIALS WITHIN PLENUMS SHALL BE NONCOMBUSTIBLE OR SHALL BE LISTED AND LABELED AS HAVING A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723.

THERMOSTAT TO BE MOUNTED 48" ABOVE FINISHED FLOOR IN ADA UNITS/SENSORY UNITS.



					Zone	CC	MM	UNITY Ventila	tion					
System Primary Airflo V_{ps}	w:		1,200	OCFM	Zor	ne Air E_z	r Distrib	ution Effectiveness:					0.8	
Average Outdoor Air H X_s	Fraction:		0.204		Pri	mary E_p	cy Air Fraction to Zone:							
Occupant Diversity: D			1		Sec	conda E _r	ry Air F	raction to Zone:					1	
Uncorrected Air Intake V_{ou}	CFM	Fra	Fraction of Supply Air to Zone from Outside Zone: F_a											
System Ventilation Efficiency: E_{v} 1						Fraction of Supply Air to Zone from Fully Mixed Primary Air: F_b								
Outdoor Air Intake: V_{ot}		245 C 0.204	245 CFMFraction of Outdoor Air to Zone from Outside Zone: 0.204 F_c								1			
							Roon	Information						
Room	Room Type	People Ou Rate (CFM/person) <i>R_p</i>	itdoor / People <i>P_z</i>	Air Total (CFM) <i>R_p*P_z</i>	Area O Rate (CFM/ft ²) <i>R_a</i>	utdoo Area (ft ²) <i>A</i> z	or Air Total (CFM) $R_a * A_z$	Breathing Zone Outside Airflow (CFM) V _{bz}	Zone Outdoor Airflow (CFM) V _{oz}	Zone Discharge Airflow (CFM) V _{dz}	Discharge Outdoor Air Fraction Z _d	Zone Venti Efficien E _{vz}	lation Icy	
106- COMMUNITY ROOM	number of the series of the						1							

*VENTILATION CALCULATIONS PER OMC 2017 TABLE 403.3.1.1

				Zon	e THIF	RD F	LOC	OR COMMON	Ventilation	1		
System Primary A V_{ps}	Airflow:		80	0 CFM	Zon E	e Air I	Distribut	tion Effectiveness:				0.8
Average Outdoor X_s	Air Fraction:		0.2	202	Prir E	nary A	ir Fracti	on to Zone:				1
Occupant Diversi D	ity:		1		Sec E	ondary r	7 Air Fra	ection to Zone:				1
Uncorrected Air I V_{ou}	Intake:		16	1 CFM	Fra F	ction o	f Supply	Air to Zone from Outs	side Zone:			1
System Ventilation Efficiency: E_v 0.94Fraction of Supply Air to Zone from Fully Mixed Primary Air: F_b 1										1		
Outdoor Air Intak V_{ot}	ce:		172 0.2	172 CFMFraction of Outdoor Air to Zone from Outside Zone:0.215 F_c							1	
							Roon	n Information				
Room	Room Type	People Ou Rate (CFM/person) <i>R_p</i>	itdoor / People <i>P_z</i>	Air Total (CFM) <i>R_p*P_z</i>	Area O Rate (CFM/ft ²) <i>R_a</i>	utdoo Area (ft ²) A _z	r Air Total (CFM) R _a *A _z	Breathing Zone Outside Airflow (CFM) V _{bz}	Zone Outdoor Airflow (CFM) V _{oz}	Zone Discharge Airflow (CFM) V _{dz}	Discharge Outdoor Air Fraction Z_d	Zone Ventilation Efficiency E _{vz}
300- CORRIDOR	Public Spaces- Corridors	0	0) 0	0.06	1,020	62	62	78	308	0.253	0.962
302- GROUP ROOM	Office-Office Spaces	5	8	40	0.06	267	17	57	71	442	0.161	1.05
303- CORRIDOR	Public Spaces- Corridors	0	0	0	0.06	162	10	10	13	49	0.265	0.94

*VENTILATION CALCULATIONS PER OMC 2017 TABLE 403.3.1.1

EBS -	RESIDENTIAL DIFFUS	ER, GRI	LLE, AN	D REGISTER SCHE	DULE
CALLOUT	DESCRIPTION	FACE SIZE (IN)	INLET SIZE (IN)	MODEL	NOTE 1
CD 4W-1	4-WAY THREE CONE DIFFUSER	12x12	6Ø	TITUS TMS	REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER.
CD 4W-3	4-WAY THREE CONE DIFFUSER	24x24	6Ø	TITUS TMS	REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER.
CD 4W-4	4-WAY THREE CONE DIFFUSER	24x24	8Ø	TITUS TMS	REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER.
CD 4W-5	4-WAY THREE CONE DIFFUSER	24x24	10Ø	TITUS TMS	REMOVABLE CORE FROM FACE OF DIFFUSER. INSULATE BACK OF DIFFUSER.
EVH-6	28 GAUGE GALVANIZED STEEL. PRE-PAINTED EXHAUST VENT.	8x9	6Ø	FAMCO SDWVP	BACKDRAFT DAMPER/ANGLED HOOD. 1/4 INCH INSECT SCREEN.
EVM-4	PLASTIC WALL VENT WITH MOVABLE LOUVERS.	6x6	4Ø	FAMCO LH	MOVABLE LOUVER EXHAUST VENT.
EVM-6	PLASTIC WALL VENT WITH MOVABLE LOUVERS.	8x8	6Ø	FAMCO LH	MOVABLE LOUVER EXHAUST VENT.
IVH-6	28 GAUGE GALVANIZED STEEL. PRE-PAINTED INTAKE VENT.	8x9	6Ø	FAMCO SWVP	ANGLED HOOD.1/4 INCH INSECT SCREEN.
IVH-10	28 GAUGE GALVANIZED STEEL. PRE-PAINTED INTAKE VENT.	13x13	10Ø	FAMCO SWVP	ANGLED HOOD.1/4 INCH INSECT SCREEN.
RG-2	EGGCRATE RETURN GRILLE	24x12	22x10	TITUS 50F	#26 WHITE FINISH.
RG-8	RETURN AIR GRILLE, ALL-STEEL CONSTRUCTION, 1/3" SPACED FINS AT 20 DEGREES	22x16	20x14	HART AND COOLEY/ 650	BRIGHT WHITE FINISH
RG-11	RETURN AIR GRILLE, ALL-STEEL CONSTRUCTION, 1/3" SPACED FINS AT 20 DEGREES	22x27	20x25	HART AND COOLEY/ 650	BRIGHT WHITE FINISH
SR1W-1C	STEEL 1-WAY REGISTER, PLATE DAMPER, 1/3" FIN SPACING	10x6	8x4	HART AND COOLEY/ 651	ADJUSTABLE PLATE DAMPER, BRIGHT WHITE FINISH
SR2W-1C	STEEL 2-WAY REGISTER, MS DAMPER, 1/3" FIN SPACING	8x6	6x4	HART AND COOLEY/ 661	ADJUSTABLE DAMPER IN FACE, BRIGHT WHITE FINISH
SR2W-2C	STEEL 2-WAY REGISTER, MS DAMPER, 1/3" FIN SPACING	12x6	10x4	HART AND COOLEY/ 661	ADJUSTABLE DAMPER IN FACE, BRIGHT WHITE FINISH
SR2W-3C	STEEL 2-WAY REGISTER, MS DAMPER, 1/3" FIN SPACING	16x6	14x4	HART AND COOLEY/ 661	ADJUSTABLE DAMPER IN FACE, BRIGHT WHITE FINISH
SR2W-4C	STEEL 2-WAY REGISTER, MS DAMPER, 1/3" FIN SPACING	14x8	12x6	HART AND COOLEY/ 661	ADJUSTABLE DAMPER IN FACE, BRIGHT WHITE FINISH

-<u>NOTES FOR ALL AIR DEVICES:</u> 1. WHERE AIR DEVICES ARE LOCATED IN A FIRE RATED ASSEMBLY, PROVIDE CEILING RADIATION

DAMPERS, FIRE DAMPER, FIRE RATED INSULATION, AS REQUIRED PER CODE. 2. WHERE DAMPER IN DUCTWORK IS NOT ACCESSIBLE, PROVIDE METROPOLITAN AIR TRANSFER (MAT)

MODEL RT-150 SERIES CABLE ACTUATED DAMPER DRIVE SYSTEM, OR APPROVED EQUAL.

TEMPSTAR RESIDENTIAL AHU HP SPLIT SYSTE

System	Outdoor Unit Tag	Model	Volts	Phase	MCA 208	МОСР	Outdoor Unit Weight	Indoor Unit Tag	Indoor Coil	ESP	Air Flow CFM	Cool Cap Total	Cool Cap Sens	SEER 2	EER 2	Htg Cap 47 deg	Htg Cap 17 deg	HSPF 2	Heat Kit Tag	Elec Heat Model	Elec Heat KW	Elec Heat KW (208)	208 MCA	230 MCA	MOCP 208	MOCP 230	Indoor Unit Weight	Notes
					Amps	Amps	lb			in wg.	cfm	Btuh	Btuh			Btuh	Btuh				KW	KW	Amps	Amps	Amps	Amps	lb	
								AHU-R-1.5																				17
1.5 Ton 8KW	HP-R-1.5	N4H5S18AKAAA	208/230	1	13.4	20	140	(8KW)	FJMA4X18	0.50	600	17200	13100	14.3	12	17400	10100	7.5	HKS-8	EHC07CKB1	8	6	39.3	43	40	45	124	1-7
								AHU-R-3																				17
3 Ton 20KW	HP-R-3	N4H5S36AKAAA	208/230	1	20.3	30	178	(20KW)	FJMA4X36	0.50	1207	34200	26400	14.3	12	34000	20400	7.5	HKS-20	EHC20BKB1	20	15	52.1,44.5	56.9,49.3	60,45	60,50	152	1-7

1 Adjustable Support Feet 2 Hard Start Kit (Capacitor and Relay

3 Crankcase Heater for Scroll Compressor

4 Low Ambient Isolation Relay Kit

5 Low Ambient Pressure Switch 6 Evaporator Freeze Thermostat

7 Horizontal, Downflow Gasket Kit (required for horizontal right install)

Γ														
	ELECTRIC HEATER SCHEDULE													
TAG	TYPE	AREA SERVED	MANUFACTURER	MODEL	HEAT-MBH	CFM	FUEL	HEAT-KW	VOLT/PHASE	MCA	FLA	MOUNTING	WEIGHT	NOTES
H-1	H-1 WALL REFER TO DRAWINGS MARKEL F30522T2DWB 8 - ELECTRIC 2.25 208/1 - 10.8 WALL RECESSED 6 1-3													1-3
1. PROVIDE W	ROVIDE WITH INTEGRAL THERMOSTAT.													

2. PROVIDE WITH DISCONNECT SWITCH. 3. PROVIDE WITH SURFACE MOUNT FRAME #305EX32.

								VERTIC	CAL PAC	CKAGED	TERMIN	AL AIR CO	NDITIONE	R SCHEDU	LE (MAC	SICPAK	UNITS)										
TAG	AREA SERVED	MANUFACTURER	SERIES	MODEL	CFM (HI/MED/LOW)	ESPCFM	CLG-MBH	NOMINA L TONS	MIN SEER	MIN SEER2	MIN EER	MIN EER2	HEAT-MBH @17 F	HEAT-MBH @47 F	MIN HSPF @ 47 F	MIN HSPF2 @ 47 F	ELECTRIC HEAT-KW (NOM./ACT.)	ELECTRIC HEAT-MBH	VOLT/PHASE	MCA CIRCUIT 1	MCA CIRCUIT 2	MOCP CIRCUI T 1	MOCP CIRCUIT 2	REFRIGERAN		VEIGHT	NOTES
VTAC-1	REFER TO DRAWINGS	MAGICPAK	MHP4	5MHP4-12-121FP-1	300/400/500	0.5-410	12	1	12.5	11.9	10.5	11	6.8	11.4	7.4	6.3	5 / 3.61	12.3	208V/1ø/60Hz	29.6	-	30	-	410A	PLATFORM	202	1-19
VTAC-1.5	REFER TO DRAWINGS	MAGICPAK	MHP4	7MHP4-12-181FP-1	500/600/700	0.5-595	17	1.5	12	11.9	11	10	9.2	16.2	7.4	6.3	7/ 5.41	18.4	208V/1ø/60Hz	42.8	-	45	-	410A	PLATFORM	219	1-19
VTAC-2	REFER TO DRAWINGS	MAGICPAK	MHP4	10MHP4-12-241-FP-1	700/800/900	0.5-750	22.8	2	13	11.9	11	10.5	14	22.8	7.4	6.3	10 / 7.21	24.6	208V/1ø/60Hz	15.8	43.3	25	45	410A	PLATFORM	268	1-19

*NOTE: ACCEPTABLE VOLTAGE RANGE 197V-253V. UNITS ARE RATED AT 208/230V BUT MCA AND MOCP VALUES ARE CALCULATED AT 240V.

1. MECHANICAL CONTRACTOR PROVIDE AND INSTALL EQUIPMENT PLATFORM IN HVAC CLOSET PER MANUFACTURER'S REQUIREMENTS AND ARCHITECTURAL DETAILS (FIELD SUPPLIED).

2 MECHANICAL CONTRACTOR TO PROVIDE AND INSTALL LOW-LEAK MOTORIZED VENTILATION DAMPER WITH CONTROLLER KIT. DAMPER TO CLOSE WHEN UNIT CYCLES OFF. 3. PACKAGED VERTICAL HEAT PUMP MODEL WITH ELECTRIC HEAT KIT.

4. FIELD ADAPTABLE FREE RETURN AIR CONFIGURATION.

5. ECM CONSTANT TORQUE BLOWER MOTOR CAPABLE OF UP TO 1/2" WC EXTERNAL STATIC PRESSURE.

6. DEDICATED BLOWER SPEED TAPS FOR CONTINUOUS FAN, COOLING, AND HEATING OPERATION. 7. PRIMARY CONDENSATE DRAIN PAN WITH ANTIMICROBIAL PROTECTION.

8. INDOOR DRAIN PAN OVERFLOW SWITCH WHICH MONITORS CONDENSATE LEVEL IN DRAIN PAN AND CYCLES UNIT OFF UPON DETECTION OF HIGH CONDENSATE LEVELS.

9. SECONDARY DRAIN PAN CONSISTING OF POLYPROPYLENE WALL SLEEVE BASE SPECIFICALLY DESIGNED TO DIRECT RAIN WATER OUT OF THE BUILDING. 10. HELIX WOUND NICHROME HEATING ELEMENTS.

11. MANUFACTURER APPROVED SEALED WALL SLEEVE AND EXTERIOR LOUVER. COORDINATE SLEEVE DEPTH WITH ARCHITECTURAL PLANS.

12. MANUFACTURER APPROVED IMPACT-RESISTANT ALUMINUM LOUVER CONSTRUCTED WITH 6063-T6 GRADE ALUMINUM. COORDINATE FINAL COLOR WITH ARCHITECT. 13. MANUFACTURER APPROVED FIELD-INSTALLED 24V DIGITAL/7-DAY PROGRAMMABLE THERMOSTAT WITH SINGLE STAGE COOLING, SINGLE STAGE HEAT PUMP, AND SINGLE STAGE AUXILIARY ELECTRIC HEAT CAPABILITY. 14. EMBOSSED STEEL CABINET.

15. INDOOR SECTION OF CABINET FACTORY INSULATED WITH 1/2" DUAL DENSITY FIBERGLASS INSULATION.

16. OUTDOOR SECTION OF CABINET FACTORY INSULATED WITH 1/2" WEATHER RESISTANT POLYSTYRENE INSULATION. 17. EPOXY COATED INDOOR AND OUTDOOR COILS.

18. FIVE YEAR LIMITED PARTS WARRANTY ON COMPRESSOR. COORDINATE ANY ADDITIONAL EXTEND WARRANTIES WITH OWNER. 19. PROVIDE MERV 8 FILTER

		DUCT	INSULAT	ION SCHE	DULE
			AIR DIS	TRIBUTION T	YPE
		SA	RA	OA	ADDITIONAL NOTES
	VTAC-1	R-3.5	None	N/A	-
	VTAC-1.5	R-3.5	None	N/A	-
UIPMENT	VTAC-2	R-3.5	None	N/A	-
EQ	AHU-R-1.5	R-3.5	None	R-3.5	-
	AHU-R-3	R-3.5	None	R-3.5	-
	DRYER MAKE-UP	None	None	R-3.5	-

DUCT INSULATION REQUIREMENTS ARE BASED ON TABLE 6.8.2B OF ASHRAE 90.1 2010 ENERGY CODE. PROVIDE DUCTWORK OF SUFFICIENT THICKNESS TO MEET THE

INSTALLED R-VALUE REQUIREMENTS LISTED ABOVE. ITEMS NOT REQUIRED TO BE INSULATED: FIBROUS-GLASS

DUCTS, DUCTS WITH LINER THAT MEETS ASHRAE 90.1, FACTORY- ACCESSORIES. INSULATED FLEXIBLE DUCTS, FACTORY-INSULATED PLENUMS AND CASINGS, FLEX CONNECTORS, VIBRATION-CONTROL DEVICES, FACTORY-INSULATED ACCESS PANELS AND DOORS.

					FAN S	CHEDULE							
TAG	TYPE	AREA SERVED	MANUFACTURER	MODEL	DRIVE	CFM	ESP	WATTS	RPM	VOLT/PHASE	MOUNTING	WEIGHT	NOTES
E-1	EXHAUST	TYPICAL RESTROOM	PANASONIC	FV-05-11VKS2	DIRECT	40-80	0.25	17	1131	115/60/1	CEILING	12	1,2,3,4
E-2	EXHAUST	KITCHEN	PANASONIC	FV-05-11VKS2	DIRECT	110	0.25	17	1205	115/60/1	CEILING	12	2
E-3	EXHAUST	RESTROOM	PANASONIC	FV-05-11VQ1	DIRECT	83	0.25	10.8	1185	115/60/1	CEILING	12	2

2. INSTALL RADIATION DAMPER PC-RD05C5

3. PROVIDE FV-CSVK1 CONDESNSATION SENSOR 4. REFER TO FAN SPEED SCHEDULE FOR FAN SPEED SETTINGS

						FIXT	JRES		TOTAL	TOTAL
ROOM NUMBER/UNIT TYPICAL	ROOMNAME	OCCUPANCY CLASSIFICATION	AREA (ft2)	EXHAUST AIRFLOW RATE (CFM/ft2)	EXHAUST RATE PER FIXTURE (CFM)	LOWER CONTINUOUS RATE?	HIGHER INTERMITTENT RATE?	QTY. OF FIXTURES	EXHAUST AIRFLOW REQ. (CFM)	EXHAUST AIRFLOW ACT (CFM)
113	RESTROOM	PUBLIC SPACES - TOILET ROOM	-	-	50/70	NO	YES	1	70	83
TYPICAL 1 BED	BATHROOM	PRIVATE DWELLING - TOILET ROOMS	-	-	20/40	YES	NO	1	20	40
TYPICAL 1 BED	KITCHEN	PRIVATE DWELLING - KITCHEN	-	-	25/100	NO	YES	-	100	110
*EXHAUST CALCUL	ATIONS PER OMC 2017 TABLE 40	3.3.1.1					· · · · · · · · · · · · · · · · · · ·			
					INDOOF	R MINI SPLIT	SYSTEM SCH	HEDULE		

					OUTD	OOR MIN	VI SPLIT S	YSTEM SCHEI	DULE						
						1									
TAG	AREA SERVED	MANUFACTURER	MODEL	CLG-MBH	NOMINAL TONS	MIN SEER 2	HEAT-MBH	COOLING OPERATING RANGE (F)	HEATING OPERATING RANGE (F)	VOLT/PHASE	MCA	МОСР	REFRIGERANT	WEIGHT	NOTES
HP-MS-2	ELEVATOR EQUIPMENT	LG	LSU243HLV3	22	2	22	26	14~118	-4~65	208-230/1	19	30	R410A	147	1
1. HEATPU	IMP TO BE MOUNTE	D ON MINI-SPLIT ST	AND EQUAL TO DI	VERSITECH	MODEL QS	SMS									

RESIDENTIAL UNITS	: MECHAN	ICAL VEN	ITILATION CAL	CULATION					
SCHEDULE * (/	ASHRAE 6	2.2 LEED	PURPOSES C	NLY)					
		NUMBER		ACTUAL					
	AREA (SQ.	OF	VENT. AIR REQ.	WHOLE					
ONIT	FT.)	BEDROOM	Qfan (Eq. 4.1a)	BUILDING					
S VENTILATIO									
TYPICAL 1	576	1	21	40					
TYPICAL 2	544	1	20	40					
TYPICAL 3	529	1	20	40					
TYPICAL 4	487	1	20	40					
TYPICAL 5	482	1	20	40					
TYPICAL 6	492	1	20	40					
TYPICAL 7	492	1	20	40					

BA	THROOM FAN SPEED	SETTING SCH	EDULE
TYPICAL UNIT	ROOMNAME	MINIMUM SPEED SETTING	MAXIMUM SPEEI SETTING
1	BATHROOM	40	80

1	BATHROOM	40	80
2	BATHROOM	40	80
3	BATHROOM	40	80
4	BATHROOM	40	80
5	BATHROOM	40	80
6	BATHROOM	40	80
7	BATHROOM	40	80

1. FAN SHALL RUN CONTINUOUSLY AT LOW SPEED (0/30/40/50 CFM) AND SHALL RAMP UP TO HIGH SPEED (50,80 CFM) WHEN SWITCH IS TURNED ON. PROVIDE ALL RELEVANT

. L								
	TAG	AREA SERVED	MANUFACTURER	MODEL	CFM	VOLT/PHASE	WEIGHT	NOTE
	AHU-MS-2	ELEVATOR EQUIPMENT	LG	LSN243HLV3	813/601/495/389	208-230/1	44	1
	1. PROVIDE/IN	STALL PRE-FABRI	CATED HONEYWE	LL JACKETED METAL CL	AD MINI-SPLIT CAB	LE FOR INDOC	R/OUTDOOF	≀ UNIT

(SC SE SE E-7 SSIO	OTT JERT LKEY 7755 STERES						
ISSUANCES	DATE NO. DESCRIPTION 01/18/2023 80% OHFA Review	04/13/2023 PERMIT SET							
	Geiger House for Veterans / Klekamp	Family Residences				CINCINNATI. OH			
	<image/> <image/> <image/> <image/> <text><text><text><text></text></text></text></text>								
P S D ME	ROJ CAL ATE DI	ECT E:AS : 0 ² RAW ANIC	NC 8 NC 4-13 7INC CAL).: DTI 3-2(G T . D	100 ED 023	04 ⁻ 3 _E AI	1 LS		
		she	ет 3(). 0				

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MECHANICAL SPECIFICATIONS

a. Refer to architectural drawings, general notes, instructions to bidders, general conditions, supplementary general conditions, base building specifications and drawings, shop drawing manuals and as-built plans, except as noted herein, which apply in all respects to this section. The contractor shall visit the site and familiarize himself with all existing conditions prior to bidding the work

2. Use of Drawings And Specifications

a. EBS drawings and specifications are intended to convey design intent only. All means and methods sequences, techniques, and procedures of construction as well as any associated safety precautions and programs, and all incidental and temporary devices required to construct the project, and to provide a complete and fully operational mechanical system are the responsibility of the mechanical contractor.

Standards

1. General

- a. Equipment and materials shall conform with appropriate provisions of AGA, ARI, ASME, ASTM, CISPI, UL, NEMA, ANSI, SMACNA, ASHRAE, NFPA, NEC, as applicable to each individual unit or assembly. All equipment must bear UL label. 4. License / Experience
- a. Contractor must be licensed by the state to install HVAC systems/equipment. Contractor must also have a minimum of 5 years of experience and have installed at least (5) successful project installations of similar size and scope. References must be provided upon request.
- 5. Codes a. All work shall be performed in strict accordance with all applicable state and local codes and ordinances. The mechanical contractor shall satisfy code requirements at a minimum without any extra cost to the owner. In case of conflict between the drawings/specifications and the codes and ordinances, the highest standard shall apply.

6. Permits and Fees

a. The mechanical contractor shall procure and pay for all permits, fees, taxes, and inspections necessary to complete the mechanical work. Furnish certificate of approval for work from inspection authority to owner before final acceptance for work. Certificate of final inspection and approval shall be submitted with the contractor's request for payment. No final payment will be approved without this certificate.

7. Site Examination

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- a. The mechanical contractor shall thoroughly examine all areas of work where equipment, ductwork, and piping will be installed and shall report any condition that, in his opinion, prevents the proper installation of the mechanical work prior to bid. Contractor shall also examine the drawings and specifications of other branches of work, making reference to them for details of new or existing building conditions. No extras will be allowed for failure to include all required work in bid. b. All work shall be done at times convenient to the owner and only during normal working hours, unless specified otherwise.
- c. Mechanical contractor shall take their own measurements and be responsible for them.
- d. Access panels are not shown on drawings. During site examination, contractor shall identify all areas where access panels are required, and report to general contractor. Designation of who furnishes and who installs access panels must be coordinated with general contractor prior to starting work.

8. Contractor Coordination

- a. Coordination drawings showing system and component installation layout, routing, details, etc. Shall be produced by the mechanical contractor and under the supervision of the general contractor/construction manager, or appropriate party as applicable.
- b. All systems installed by each sub-contractor shall be coordinated with one another and approved by general
- contractor/construction manager, etc. prior to installation and/or fabrication.
- c. If questions concerning design intent arise during coordination, EBS can assist where appropriate. d. The architectural drawings shall take precedence over all other drawings. Do not scale distances off the mechanical

drawings; use actual building dimensions. 9. Shop Drawings / Submittals

- a. Submit to the architect electronic copies of complete and certified shop drawings, descriptive data, performance data and ratings, diagrams and specifications on all specified equipment, including accessories, and materials for review. The make, model number, type, finish and accessories of all equipment and materials shall be reviewed and approved by the mechanical contractor and general contractor prior to submitting to the architect for their review and approval. Approval of shop drawings does not relieve the mechanical contractor/vendor from compliance with the requirements of the contract drawings, specifications and applicable codes.
- b. Shop drawings shall be required for the following:
- i. HVAC equipment
- ii. Fans
- iii. Diffusers, registers, grilles, dampers, louvers, and all sheet metal accessories
- iv. Temperature controls
- v. Sheet metal coordination drawings
- vi.Duct Sealants
- vii. Air balance report
- c. Products installed by the mechanical contractor and provided by others must be submitted for review prior to purchasing Products shall not be selected based on permit drawings without express permission - products shall be selected based on construction drawings.
- 10. Record Drawing
- a. The mechanical contractor shall be responsible for creating record drawings where required. Drawings shall be produced in Autocad 2004 format or later.

11. Testing

- a. All mechanical systems shall be tested for proper operation.
- 12. Fire Stopping
- a. Provide fire stopping at all penetrations through rated separations per local codes & regulations & per UL recommendations for assemblies encountered in project.
- b. The fire stopping material shall meet the integrity of the fire rated wall, floor, ceiling & roof being penetrated. Refer to architect's drawings for wall, floor, ceiling & roof fire ratings prior to bidding work.

c. Refer to architect's drawings for wall, floor, ceiling, and roof fire ratings prior to bidding work. 13. Access Panels

- a. Provide ceiling and wall access panel quantities & locations to the general contractor prior to bidding. Access panels are required for all concealed appliances, controls devices, heat exchangers and HVAC system components that utilize energy. Where access panels are used, the access panel should be sized to allow accessibility for inspection, service, repair and replacement without disabling the function of a fire-resistance-rated assembly or removing permanent construction, other appliances, venting systems or any other piping or ducts not connected to the appliance being inspected, serviced, repaired or replaced. There shall be no extras for having to add access panels after bids are awarded.
- 14. Cutting and Patching
- a. Neatly do all cutting as required and patch all cut surfaces to match building construction. The contractor shall employ and pay a trade trained and qualified to perform the required patching work. All surfaces disturbed shall be restored with like materials to the satisfaction of the owner. All penetrations through roof shall be made by bonded roofer. Mechanical contractor shall pay all fees required.
- 15. Flashing & Counterflashing
- a. Roof flashing shall be furnished and installed by the roofing contractor. Roof counterflashing shall be furnished and installed by the mechanical contractor. Coordinate work with roofing contractor and pay all fees. b. Obtain approval from general contractor, construction manager, owner and/or roofing contractor prior to making any
- penetrations so that warranties are not compromised or voided. 16. Warranty
- a. The mechanical contractor shall unconditionally warrant all work to be free of defects in equipment, material and workmanship for a period of one (1) year from the date of final acceptance by owner. The mechanical contractor will repair or replace any defective work promptly and without charge to the owner
- b. Restore any other existing work damaged in the course of repairing defective equipment, materials and workmanship.
- 17. Mechanical Work
- a. The mechanical contractor shall provide new hvac equipment, fans, ductwork, piping, air devices, controls as indicated on drawings and as specified. Startup and 1st year parts and labor warranty shall be included and manufacturer's extended warranties. Equipment and appliances shall be installed as required by the terms of their approval, in accordance with the conditions of the listing, the manufacturer's installation instructions, and the applicable code.
- 18. Owner's Instructions
- a. Provide two sets of complete operating and maintenance instructions with drawings, typewritten instructions and operating sequences and descriptive data sheets. Assemble each set in a hard-bound cover. Provide pdf files of all documentation.
- 19. Finale
- a. Put all equipment in service and demonstrate that all conditions of the contract have been fulfilled. Remove all tools, debris, etc. occasioned by work under this contract. Submit all warranties, test reports, operating and maintenance manuals for HVAC systems, log sheets and charts, and guarantees as previously specified. Provide all reports, forms, etc. required by inspectors to the satisfaction of the owner. Provide as-built record drawings (in Autocad 2007 or later) showing an accurate account of the final installed systems. Systems including but not limited to all equipment and associated controls, ductwork/piping, air devices, etc.
- 20. Sheetmetal Ductwork
- a. All sizes of ducts shown on the drawings are interior duct dimensions. All ductwork shall be rigid sheetmetal constructed from galvanized sheet steel in accordance with SMACNA low velocity duct construction standards. Assemble and install ductwork in accordance with recognized industry practice for achieving air tight (5% leakage) and noiseless (no objectionable noise) systems, capable of performing each indicated service. Furnish all required dampers, transitions, offsets, connections to air devices, and other accessories necessary for a complete operating system. Flexible ductwork shall not exceed 8'-0" long.
- 21. Adhesives and Sealants
- a. Seal all longitudinal and transverse duct joints with a UL 181A or 181B non-hardening, non-migrating mastic or liquid elastic sealant of a type recommended by the manufacturer for sealing joints and seams in sheet metal ductwork. Cover all field joints, joints around spin-in fittings and fastening screws with mastic. All sealants and gaskets shall have surface-burning characteristics with a maximum flame-spread index of 25 and a maximum smoke-developed index of 50 when tested according to UL 723.
- b. Exposed Ductwork: trim duct sealants flush with metal. Create a smooth and uniform exposed bead. Do not use two-part tape sealing system.
- c. For indoor applications, all adhesives, sealants, and sealant primers must meet the requirements of CA Section 01350.

22. Duct Supports

- a. Furnish and install hot-dipped galvanized steel
- 23. Flexible Connections
- a. Furnish and install neoprene flexible duct connec
- 24. Duct Manual Volume Dampers a. Furnish and install opposed-blade. leak-proof supply, return and exhaust ducts where branche achieve system air balance quantities. Balancin volume dampers must be shown on coordination 25. Fire Dampers
- a. Furnish and install UL555 listed fire dampers as codes. Refer to architectural drawings for all rate as shown on the drawings or as required by NF of NFPA 90A, 92A, and 92B. Dampers shall be minimum 16-gauge steel frame for square or rect shall be 16-gauge galvanized steel. Bearings an that meets the fire resistance requirement of the Provide all necessary sleeves, angles, etc. manufacturer's installation instructions. Dampers location shown and shall be labeled for use in dyn
- 26. Radiation Dampers a. Furnish and install UL555C listed radiation damp and state codes. Refer to architectural drawing
- labeled and installed as shown on the drawings air performance. Damper construction shall be blades shall be 22-gauge galvanized steel. Ea requirement of the assembly rating and shall be angles, etc. Required to provide an installation Dampers shall be approved for horizontal moun dynamic systems.
- 27. Duct Access Doors
- a. Furnish and install conveniently located duct acce
- 28. Diffusers, Grilles and Registers a. Diffusers, grilles and registers shall be manufact shall be furnished and installed by the mechanic schedules. The mechanical contractor shall p installation in the type of ceiling and walls used in 29. Exhaust Fan
- a. Fan manufacturer shall be Panasonic, Cook, Gre for unit location, technical data, and any applicab 30. Ducted Split Systems
- a. Split systems shall consist of high efficient manufacturer's standard warranty.
- b. Split system manufacturer shall be, Tempstar, Ca 31. Non-Ducted Mini-Split Systems
- a Split systems shall consist of indoor air har manufacturer's standard warranty. Provide an inlir
- b. Mini-split system manufacturer shall be, Mitsubisl 32. Condensate Drain Piping
- a. The mechanical contractor shall furnish and in
- equipment per manufacturer's recommendation pressure drop of the unit. Condensate drain pi condensate walls of pipe with Armaflex AP, flex insulation on piping < 1" in diameter and 1" thic shall not exceed 25/50 flame-smoke ratings]. blockages and performance of maintenance wi uninhabitable spaces (i.e. attics and crawl spa condensate pump fails.
- b. All cooling equipment shall have a wet switch in drain pan (located at a point higher than the prir shut down the unit when the condensate is clogge
- 33. Piping Supports (Metal Pipe) a. Furnish and install hot-dipped galvanized steel f
- piping. 34. Piping Supports (Plastic Pipe)

- a. Furnish and install hangers for plastic piping per i 35. Temperature Controls and Control Wiring
- a. The mechanical contractor shall provide all cont control system. Programmable thermostats shall be b. Exposed wiring: All wiring exposed to the space
- drawings.
- 36. Testing, Balancing, and Adjusting
- a. The individual performing the air balancing shall calibrated equipment. The certified air balanc quantities at air terminal device as listed on dra dwelling space systems to system total air qu operate automatic control systems, and verify set 37. Sequence of Operation

a. Exhaust Fans

- i. E-1: exhaust fan shall run on a light switch (furnis
- i. E-2: exhaust fan shall run on a light switch (furnis ii. E-3: exhaust fan shall run on a light switch (furnis
- b. Split Systems
- i. AHU/HP-1.5:
- ii. Heating mode indoor air handler shall be cor heating the fan shall run and the heat pump in he cannot maintain temperature in the space, the e is reached the unit shall shut off.
- iii. Cooling mode when the thermostat calls for coo run, and the dx cooling coil shall cool the air to ma iv AHU/HP-3.
- v. Heating mode indoor air handler shall be cor heating the fan shall run and the heat pump in h cannot maintain temperature in the space, the el is reached the unit shall shut off.
- vi.Cooling mode when the thermostat calls for coc run, and the dx cooling coil shall cool the air to m i. VTAC-1:
- ii. Heating mode indoor air handler shall be cor heating the fan shall run and the heat pump in he cannot maintain temperature in the space, the el
- is reached the unit shall shut off. iii. Cooling mode - when the thermostat calls for coc run, and the dx cooling coil shall cool the air to ma

i. VTAC-1.5:

vii. AHU-MS/HP-MS-X:

cannot maintain temperature in the space.

- ii. Heating mode indoor air handler shall be cor heating the fan shall run and the heat pump in h cannot maintain temperature in the space, the ele is reached the unit shall shut off.
- iii. Cooling mode when the thermostat calls for coc run, and the dx cooling coil shall cool the air to m iv. VTAC-2:
- v. Heating mode indoor air handler shall be controlled from a thermostat in the space. When the thermostat calls for heating the fan shall run and the heat pump in heating mode shall run to maintain temperature setpoint. If the heat pump cannot maintain temperature in the space, the electric heat kit shall energize until set point is reached. When the setpoint is reached the unit shall shut off.

run, and the cooling coil shall cool the air to maintain temperature setpoint.

fasteners, hangers, anchors, rods, straps, trim, and angles for support of				Zo
	System Primar	y Airflow:		500 CFM
	$\frac{V_{ps}}{\text{Average Outdo}}$	or Air Fraction:		0.02
ctions at the inlet and discharge of units and fans.	$\frac{X_s}{Occupant Diverted}$	roitze		0.23
volume control dampers where indicated on drawings and locations in	D	isity.		1
es are taken from larger ducts or at each individual duct register in order to ng devices must be provided in accordance with IMC 603.18. All manual	Uncorrected A V_{ou}	ir Intake:		115 CFM
a drawings when submitted for review.	System Ventila	tion Efficiency:		1
shown on the drawings and in accordance with NFPA and local and state	$\frac{E_v}{\text{Outdoor Air In}}$	take:		92 CFM
PA and codes. Dampers and sleeves shall meet construction requirements PA = AMCA licensed for air performance. Damper construction shall be a	V _{ot}			0.184
tangular ducts and 14-gauge steel frame for round ducts. Damper blades di amb seals shall be stainless steel. Fach fire damper shall have a rating			Peop	e Outdoor A
e assembly rating and shall be supplied with a 165-degree F fusible link. Required to provide an installation in accordance with the damper	Room	Room Type	Rate	People
s shall be approved for vertical or horizontal mounting as required by the mamic systems.	Troom	ittoin iype	(CFM/per R _p	son) P_z
	001-	Public Spaces-Corrid	lors	0 0
pers as indicated on the drawings and in accordance with NFPA and local gs for all rated walls, floors, and roofs. Radiation dampers shall be UL	CORRIDOR 002-		1	0 0
or as required by NFPA and codes. Dampers shall be AMCA licensed for a minimum 22-gauge steel frame for square and rectangular. Damper	CORRIDOR	Public Spaces-Corrid	iors	0 0
ach radiation damper shall have a rating that meets the fire resistance e supplied with a 165-degree F fusible link. Provide all necessary sleeves,	003- LAUNDRY	Dry Cleaner, Laund Coin-Operated Lau	ndry	7.5 4
n in accordance with the damper manufacturer's installation instructions. nting as required by the location shown and shall be labeled for use in	*VENTILATION	CALCULATIONS PE	R OMC 2017 TAB	LE 403.3.1.1
				Zon
ess doors of ample size and quantity for servicing the dampers.	System Primar	y Airflow:		
	V _{ps}			600 CFM
tured by Hart and Crooley, titus, price, or engineered approved equal and al contractor. Diffusers shall be installed as indicated on the drawings and	Average Outdo X_s	or Air Fraction:		0.115
n this project.	Occupant Dive	ersity:		1
	Uncorrected A	ir Intake:		69 CEM
eenneck, or engineered approved equal. Refer to drawings and schedules ole accessories.	$\frac{V_{ou}}{System Vontils}$	tion Efficiency:		
	E_v	tion Efficiency:		1
air nandling unit and associated neat pump. Equipment shall have	Outdoor Air In	take:		69 CFM 0 115
arrier, Goodman, or engineered equal.	- ot			0.110
ndler and associated outdoor heat pump unit. Equipment shall have			People O	utdoor Air
line check valve located in the drain line or trap.	Room	Room Type	Rate (CFM/person	People Tot
	107	D.11'. C	R _p	$r_z R_p^*$
nstall condensate drains, p-traps with removable cleanout caps for air s. The p-trap depth shall be at least the depth specified for the respective	107- CORRIDOR	Corridors	(0 0
iping shall be schedule 40 PVC pipe with solvent weld fittings [Insulate ble closed cell elastomeric foam, self-sealing insulation. Provide 1/2" thick	108- CORRIDOR	Public Spaces- Corridors	(0
ck insulation on piping between 1" and 1-1/2" in diameter. Pipe insulation All condensate drain lines shall be configured to permit the clearing of	110- OFFICE	Office-Office Space	es :	i 1
thout requiring the drain line to be cut. For condensate pumps located in paces), provide controls that will shut down the air equipment if the	112- RR	Public Spaces-Toile rooms - public	^{,t} (0 0
the primary drain line, the overflow drain line, or in the equipment-supplied	*VENTILATIO	N CALCULATIONS F	PER OMC 2017 T/	BI E 403 3 1
mary drain line connection and below the overflow rim of the pan) that will ed				
				Zone
fastanare hangare anchore rade strape trim and angles for support of	Stratom Daimon	v Airflour		
rasieners, hangers, anchors, rous, straps, tinn and angles for support of	System Primar V_{ps}	y Airflow:		600 CFM
	System Primary $\frac{V_{ps}}{\text{Average Outdo}}$	y Airflow: or Air Fraction:		600 CFM 0.181
manufacturer's requirements.	System Primary $\frac{V_{ps}}{\text{Average Outdo}}$ $\frac{X_s}{\text{Occupant Dive}}$	y Airflow: or Air Fraction: rsity:		600 CFM 0.181
manufacturer's requirements.	System Primary V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai	y Airflow: or Air Fraction: rsity: r Intake:		600 CFM 0.181 1
manufacturer's requirements. Itrol wiring necessary for the complete and proper operating temperature be provided with equipment packages unless otherwise noted. Ince shall be run in conduit — Coordinate requirements with architectural	System Primar V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai V_{ou}	y Airflow: or Air Fraction: rsity: r Intake:		600 CFM 0.181 1 109 CFM
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manufacturer's requirements. It rol wiring necessary for the complete and proper operating temperature be provided with equipment packages unless otherwise noted. It is a certified test and balancer and a member of NEBB or AABC, using	System Primary V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai V_{ou} System Ventila E_v Outdoor Air In	y Airflow: or Air Fraction: rsity: r Intake: tion Efficiency: take:		600 CFM 0.181 1 109 CFM 0.983 111 CFM 0.185
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readered is, rangels, and dis, rous, surps, thin and angles to support of manufacturer's requirements. trol wiring necessary for the complete and proper operating temperature be provided with equipment packages unless otherwise noted. ccc shall be run in conduit. Coordinate requirements with architectural l be a certified test and balancer and a member of NEBB or AABC, using e contractor shall accurately balance the common space systems to awings. The certified air balance contractor shall accurately balance the amitibas as indicated on schedulies. The certified air balance contractor t points during balancing. shed by the electrical contractor). shed by the electrical contractor). shed by the electrical contractor). trolled from a thermostat in the space. When the thermostat calls for useling mode shall run to maintain temperature setpoint. If the heat pump lectric heat kit shall energize until set point is reached. When the setpoint balancing mode, shall run in cooling mode, the air handler fan shall anintain temperature setpoint. trolled from a thermostat in the space. When the thermostat calls for the temperature setpoint. the addition of the temperature setpoint. the temperature setpoint. the setpoint is reached. When the thermostat calls for the temperature setpoint. the temperature setpoint. the temperature setpoint. the temperature setpoint.	System Primary V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai V_{ou} System Ventila E_v Outdoor Air In V_{ot} Room 101- LOBBY 102- OFFICE 104- CORRIDOR 105- CORRIDOR *VENTILATION	y Airflow: or Air Fraction: rsity: r Intake: tion Efficiency: take: Room Type Office-Main Entry Lobbies Office-Office Spaces Public Spaces- Corridors Public Spaces- Corridors N CALCULATIONS P y Airflow:	People Outd Rate (CFM/person) Rp 5 5 5 0 0 0 0 ER OMC 2017 TA	600 CFM 0.181 1 109 CFM 0.983 111 CFM 0.185 Total P_z $A_p * P_z$ 4 20 1 5 0
Inserters, langers, anchois, hous, shaps, unit and angles of support of manufacturer's requirements. trol wring necessary for the complete and proper operating temperature be provided with equipment packages unless otherwise noted. i.ccs shall be run in conduit. Coordinate requirements with architectural t be a certified test and balancer and a member of NEBB or AABC, using is contractor shall accurately balance the common space systems to awings. The certified air balance contractor shall accurately balance the arrites as indicated on schedules. The certified air balance contractor t points during balancing. shed by the electrical contractor). shed by the electrical contractor). shed by the electrical contractor). trolled from a thermostat in the space. When the thermostat calls for teating mode shall run to maintain temperature setpoint. If the heat pump lectric heat kit shall energize until set point is reached. When the setpoint toping the heat pump unit shall run in cooling mode, the air handler fan shall taintain temperature setpoint.	System Primary V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai V_{ou} System Ventila E_v Outdoor Air In V_{ot} Room 101- LOBBY 102- OFFICE 104- CORRIDOR 105- CORRIDOR *VENTILATION System Primar V_{ps} Average Outdo	y Airflow: or Air Fraction: rsity: r Intake: tion Efficiency: take: Room Type Office-Main Entry Lobbies Office-Office Spaces Public Spaces- Corridors Public Spaces- Corridors N CALCULATIONS P y Airflow: or Air Fraction:	People Outd Rate (CFM/person) Rp 5 5 0 0 0 0 ER OMC 2017 TA	600 CFM 0.181 1 109 CFM 0.983 111 CFM 0.185 por Air ople $Total$ P_z 4 20 1 0
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Inselences, hangeles, ankinos, loos, anaps, thin and angles to support of manufacturer's requirements. Intol wing necessary for the complete and proper operating temperature be provided with equipment packages unless otherwise noted. Ice shall be run in conduit. Coordinate requirements with architectural Ibe a certified test and balancer and a member of NEBB or AABC, using a contractor shall accurately balance the common space systems to awings. The certified air balance contractor shall accurately balance the common space systems to awings. The certified air balance contractor shall accurately balance the common space systems to awings. The certified air balance contractor shall accurately balance the amitties as indicated on schedules. The certified air balance contractor t points during balancing. shed by the electrical contractor), shed by the electrical contractor), shed by the electrical contractor). Intolled from a thermostat in the space. When the thermostat calls for leading the balance statis is thall energize until set point is reached. When the septiont Intolled from a thermostat in the space. When the thermostat calls for leading mode shall run to maintain temperature setpoint. If the heat pump leading the balance statis is that energize until set point is reached. When the setpoint Intolled from a thermostat in the space. When the thermostat calls for leading mode shall run to maintain temperature setpoint. If the heat pump leading the balance statis is the lenging while setpoint is reached. When the setpoint Intolled from a thermostat in the space. When the thermostat calls for leading the balance statis is the statis espoint. If the heat pump leading the balance statis is the statis the setpoint is reached. When the setpoint Intolled from a thermostat in the space. When the thermostat calls for leading mode shall run to maintain temperature setpoint. If the heat pump leading the balance statis is the lenging while the statis the setpoint is reached. When the setpoint Intolled from a thermostat	System Primar V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai V_{ou} System Ventila E_v Outdoor Air In V_{ot} Room 101- LOBBY 102- OFFICE 104- CORRIDOR 105- CORVICA 105- COV 105- 105- COV 105-	y Airflow: or Air Fraction: rsity: r Intake: tion Efficiency: take: Room Type Office-Main Entry Lobbies Office-Office Spaces Public Spaces- Corridors Public Spaces- Corridors N CALCULATIONS P y Airflow: or Air Fraction: rsity: ir Intake: tion Efficiency:	People Outd Rate (CFM/person) Rp 5 5 0 0 0 ER OMC 2017 TA	600 CFM 0.181 1 $109 CFM$ 0.983 $111 CFM$ 0.00 $0 0$
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Interleting the general sector of the sector	System Primar V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai V_{ou} System Ventila E_v Outdoor Air In V_{ot} Room 101- LOBBY 102- OFFICE 104- CORRIDOR 105- 105- 105- 105- 105- 105- 105- 105-	y Airflow: or Air Fraction: rsity: r Intake: tion Efficiency: take: Room Type Office-Main Entry Lobbies Office-Office Spaces Public Spaces- Corridors Public Spaces- Co	People Outd Rate (CFM/person) Rp 5 5 0 0 0 ER OMC 2017 TA	600 CFM 0.181 1 $109 CFM$ 0.983 $111 CFM$ 0.185 $007 Air$ 0.983 $111 CFM$ 0.185 $007 Air$ 0.983 $111 CFM$ 0.185 $007 Air$ 0.185 0.185 0.185 0.185 0.185 0.185 0.185 0.185 0.00 0.00 0.00 0.00 0.202 $1000000000000000000000000000000000000$
assement, and the second secon	System Primar V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai V_{ou} System Ventila E_v Outdoor Air In V_{ot} 101- LOBBY 102- OFFICE 104- CORRIDOR 105- 105-	y Airflow: or Air Fraction: rsity: r Intake: tion Efficiency: take: Room Type Office-Main Entry Lobbies Office-Office Spaces Public Spaces- Corridors Public Spaces- Corridors Public Spaces- Corridors N CALCULATIONS P y Airflow: or Air Fraction: rsity: ir Intake: tion Efficiency: take:	People Outd Rate (CFM/person) Rp 5 5 5 0 0 0 ER OMC 2017 TA	600 CFM 0.181 1 0.9733 111 CFM 0.983 111 CFM 0.185 $orr Air$ $opele$ Total P_z A 200 A 200 A 0.983 A 0.983 A 0.983 A 0.983 A 0.97 A 0.00 A BUE $403.3.1$ BUE $403.3.1$ BOO CFM 0.202 1 1.5 0.96 1.61 CFM 0.96 168 168 CFM
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asseries, insights, attriude, toos, single, this and angles for support of manufacturer's requirements. ticl within necessary for the complete and proper operating temperature to provided with equipment packages unless otherwise noted. tee shall be run in conduit. Coordinate requirements with architectural to a certified test and balancor and a member of NEBB or AABC, using a contractor's shall accurately balance the common space systems to amyng. The certified at tables contractory is a member of nEBB or AABC, using a contractor's shall accurately balance the continued pace systems to amyng. The certified at tables contractory is a member of nEBB or AABC, using the certified test and balancor and a member of others to an another the test of the another test of the system is to amyng. The certified at tables contractory is a member of nEBB or AABC, using the other test of the electrical contractory. abided by the electrical contractory. there is the state of the contractory is the system of the state of	System Primar V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai V_{ou} System Ventila E_v Outdoor Air In V_{ot} Room 101- LOBBY 102- OFFICE 104- CORRIDOR 105- CORRIDOR	y Airflow: or Air Fraction: rsity: r Intake: tion Efficiency: take: Room Type Office-Main Entry Lobbies Office-Office Spaces Public Spaces- Corridors Public Spaces- Corridors Public Spaces- Corridors Public Spaces- Corridors A CALCULATIONS P V Airflow: or Air Fraction: rsity: ir Intake: tion Efficiency: take: Room Type	People Outd Rate (CFM/person) Pe 5 0 0 0 ER OMC 2017 TA ER OMC 2017 TA	600 CFM 0.181 1 $109 CFM$ 0.983 $111 CFM$ 0.185 0.983 $111 CFM$ 0.185 0.983 $111 CFM$ 0.983 $111 CFM$ 0.983 $111 CFM$ 0.987 420 0.185 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.202 $161 CFM$ 0.96 $168 CFM$ 0.202 $168 CFM$ 0.202
asamene, insigns a minute, non- stopp, infrance angles for apport of manufacturer's requirements. Itel wing necessary for the complete and proper operating temperature be provided with equipment packages unless offerwise noted. Is as shall be run in conduit. Coordinate requirements with architectural is contrained with equipment packages unless offerwise noted. Is as another the control of special accurately beliance of the complete and proper operating to avoing the event offer all be run in conduit. Coordinate requirements with architectural is contrained with equipment packages unless offerwise not avoing contrained with an origination contractor and an event of the biotecome operation to awongs. The contribute of the control operation of the biotecome operation to awongs. The contractor of should by the electrical contractor), should by the electrical contractor). where the the test and and run in cooling mode, the air handler fan shall similar temporature selectric. Intellect from a thermostal in the space. When the test point and the base pump unit shall run in cooling mode, the air handler fan shall similar temporature selectric. Intellect from a thermostal in the space. When the thermostal calls for selectric heat kit shall energize unit set point is reached. When the selectrical intellect from a thermostal in the space. When the thermostal calls for selectric heat kit shall energize unit set point is reached. When the selectrical intellect from a thermostal in the space. When the thermostal calls for selectric heat kit shall energize unit set point is reached. When the selectrical intellect from a thermostal in the space. When the thermostal calls for selectric heat kit shall energize unit set point is reached. When the selectrical intellect from a thermostal in the space. When the thermostal calls for selectric heat kit shall energize unit set point is reached. When the selectrical intellect heat kit shall energize unit set point is reached. When the selectrical istant tener	System Primar V_{ps} Average Outdo X_s Occupant Dive D Uncorrected Ai V_{ou} System Ventila E_v Outdoor Air In V_{ot} Room 101- LOBBY 102- OFFICE 104- CORRIDOR 105- CORRIDOR	y Airflow: or Air Fraction: rsity: r Intake: tion Efficiency: take: Room Type Office-Main Entry Lobbies Office-Office Spaces Public Spaces- Corridors Public Spaces- Corridors Public Spaces- Corridors Corridors CALCULATIONS P y Airflow: or Air Fraction: rsity: ir Intake: tion Efficiency: take: Room Type Room Type	People Outd Rate (CFM/person) Pe 5 0 0 0 <td>600 CFM 0.181 1 109 CFM 0.983 111 CFM 0.185 Total (CFM) P_z 4 20 1 Total (CFM) P_z 4 20 1 5 0 0 0 0 0 0 0 0 161 CFM 0.96 168 CFM 0.21</td>	600 CFM 0.181 1 109 CFM 0.983 111 CFM 0.185 Total (CFM) P_z 4 20 1 Total (CFM) P_z 4 20 1 5 0 0 0 0 0 0 0 0 161 CFM 0.96 168 CFM 0.21

vi. Cooling mode - when the thermostat calls for cooling the heat pump unit shall run in cooling mode, the air handler fan shall run, and the dx cooling coil shall cool the air to maintain temperature setpoint.

viii. Heating mode - indoor air handler shall be controlled from a thermostat in the space. When the thermostat calls for heating the fan shall run and the heat pump in heating mode shall run to maintain temperature setpoint. If the heat pump ix. Cooling mode - when the thermostat calls for cooling the heat pump unit shall run in cooling mode, the mini split fan shall

	Zone BASEMENT COMMON Ventilation											
System Primar V_{ps}	System Primary Airflow: 500 V_{ps}				Zone Air I <i>E_z</i>	Distrib	ution Ef	fectiveness:				0.8
Average Outdo X_s	0.2	23		Primary Air Fraction to Zone: E_p						1		
Occupant Dive	1			Secondary Air Fraction to Zone: E_r							1	
Uncorrected A V_{ou}	Uncorrected Air Intake: V_{ou}				Fraction of F_a	f Supp	oly Air to	Zone from Outside Z	Zone:			1
System Ventila E_v	System Ventilation Efficiency: E_v				Fraction of Supply Air to Zone from Fully Mixed Primary Air: F_b							1
Outdoor Air In V_{ot}	Outdoor Air Intake: V_{ot}				CFMFraction of Outdoor Air to Zone from Outside Zone:184 F_c							
						Roo	om Infor	mation				
Room	Room Type	People Ou Rate (CFM/person) <i>R_p</i>	atdoor A People P _z	Air Total (CFM) <i>R_p*P_z</i>	Area O Rate (CFM/ft ²) <i>R_a</i>	utdoo Area (ft ²) <i>A_z</i>	Total (CFM) <i>R_a*A_z</i>	Breathing Zone Outside Airflow (CFM) V _{bz}	Zone Outdoor Airflow (CFM) V _{oz}	Zone Discharge Airflow (CFM) V _{dz}	Discharge Outdoor Air Fraction Z_d	Zone Ventilation Efficiency E_{vz}
001- CORRIDOR	Public Spaces-Corridors	0	0	0	0.06	244	15	15	19	125	0.152	1.03
002- CORRIDOR	Public Spaces-Corridors	0	0	0	0.06	177	11	11	14	93	0.151	1.03
003- LAUNDRY	Dry Cleaner, Laundry- Coin-Operated Laundry	7.5	4	30	0.06	212	13	43	54	283	0.191	1

			Z	Zone I	FIRST	FL(JOR	COMMON 1	Ventilation	L			
System Primary V_{ps}	y Airflow:		600 C	FM	Zone A E_z	Air Dis	stributior	a Effectiveness:					0.8
Average Outdoe X_s	0.115		Primar E_p	Primary Air Fraction to Zone: E_p						1			
Occupant Diversity: D			1		Secondary Air Fraction to Zone: E_r							1	
Uncorrected Ai V_{ou}	Uncorrected Air Intake: V_{out}				Fractic F _a	on of S	Supply A	ir to Zone from Outsid	le Zone:				1
System Ventilat E_v		1		Fractic F _b	Fraction of Supply Air to Zone from Fully Mixed Primary Air: F_b							1	
Outdoor Air Intake: V_{ot}			69 CF 0.115	^T M Fraction of Outdoor Air to Zone from Outside Zone: F_c 1								1	
							Room I	nformation					
	People Outdoo		atdoor /	Air	Area O	utdoo	r Air	Breathing Zone	Zone Outdoor	Zone Discharge	Disahanga Outdaan	Zone Venti	-
Room	Room Type	Rate (CFM/person) <i>R_p</i>	People P _z	Total (CFM) <i>R_p*P_z</i>	Rate (CFM/ft ²) <i>R_a</i>	Area (ft ²) <i>A_z</i>	Total (CFM) <i>R_a*A_z</i>	Outside Airflow (CFM) V _{bz}	Airflow (CFM) V _{oz}	Airflow (CFM) V _{dz}	Air Fraction Z_d	Efficience E_{vz}	cy
107- CORRIDOR	Public Spaces- Corridors	0	0	0	0.06	560	34	34	43	297	0.145		0.97
108- CORRIDOR	Public Spaces- Corridors	0	0	0	0.06	66.9	5	5	6	37	0.162		1
110- OFFICE	Office-Office Spaces	5	1	5	0.06	176	11	16	20	253	0.0791		1.04
11 2- R R	Public Spaces-Toilet	0	0	0	0	66.4	0	0	0	12	0		1.12

VENTILATIO	V CALCULATIONS P	PER OMC 2017	TADLE	. 403.3.	1.1								
				Zon	e FIRS	TF	LOO	R COMMON 2	2 Ventilatio	n			
System Primary V_{ps}	/ Airflow:		60	0 CFM	Zor	ne Air E _z	Distribu	ition Effectiveness:				0.8	
Average Outdoor Air Fraction: X_s				81	Pri	mary $\overline{E_p}$	Air Fract	tion to Zone:				1	
Occupant Diversity: D					Sec	Secondary Air Fraction to Zone: E_r 1							
Uncorrected Air Intake: V_{ou}				9 CFM	Fra 1	iction F _a	of Suppl	y Air to Zone from Out	side Zone:			1	
System Ventilat E_v	0.9)83	Fra	raction of Supply Air to Zone from Fully Mixed Primary Air: F_b									
Outdoor Air Int V_{ot}	111 0.1	11 CFM .185Fraction of Outdoor Air to Zone from Outside Zone: F_c 1							1				
							Roo	m Information					
Room	Room Туре	People Ou Rate (CFM/person) <i>R_p</i>	utdoor A People P _z	Air Total (CFM) R _p *P _z	Area O Rate (CFM/ft ²) R _a	utdoo Area (ft ²) A _z	r Air Total (CFM) R _a *A _z	Breathing Zone Outside Airflow (CFM) V _{bz}	Zone Outdoor Airflow (CFM) V _{oz}	Zone Discharge Airflow (CFM) V _{dz}	Discharge Outdoor Air Fraction Z _d	Zone Ventilation Efficiency E _{vz}	
101- LOBBY	Office-Main Entry Lobbies	5	4	20	0.06	345	21	41	51	266	0.192	0.993	
102- OFFICE	Office-Office Spaces	5	1	5	0.06	146	9	14	18	150	0.12	1.07	
104- CORRIDOR	Public Spaces- Corridors	0	0	0	0.06	361	22	22	28	127	0.22	0.965	
105	Dublia Spaces	1	1 /	1	1	1		1					

				Zon	e FIRS	ST F	LOO	R COMMON 2	2 Ventilatio	n		
System Primary V_{ps}	Airflow:		60	0 CFM	Zo	one Air <i>E_z</i>	Distribu	tion Effectiveness:				0.8
Average Outdoor Air Fraction: 0.181				Pr	imary A E _p	Air Fract	tion to Zone:				1	
Occupant Diversity: 1					Secondary Air Fraction to Zone: E_r						1	
Uncorrected Air Intake: V_{ou}				9 CFM	Fr	action F_a	of Suppl	y Air to Zone from Out	side Zone:			1
System Ventilation Efficiency: E_v				983	Fraction of Supply Air to Zone from Fully Mixed Primary Air: F_b							1
Outdoor Air Int V_{ot}	11 0.1	11 CFMFraction of Outdoor Air to Zone from Outside Zone:1.185 F_c 1							1			
							Roo	m Information				
Room	Room Type	People O Rate (CFM/person <i>R_p</i>	$\begin{array}{c} \text{People} \\ P_z \end{array}$	Air Total (CFM) <i>R_p*P_z</i>	Area C Rate (CFM/ft ² <i>R_a</i>	Dutdoo Area (ft ²) A_z	r Air Total (CFM) <i>R_a*A_z</i>	Breathing Zone Outside Airflow (CFM) V _{bz}	Zone Outdoor Airflow (CFM) V _{oz}	Zone Discharge Airflow (CFM) V _{dz}	Discharge Outdoor Air Fraction Z_d	Zone Ventilation Efficiency E_{vz}
101- LOBBY	Office-Main Entry Lobbies		5 4	20	0.0	6 345	21	41	51	266	0.192	0.99
102- OFFICE	Office-Office Spaces		5 1	5	0.0	6 146	9	14	18	150	0.12	1.0
104- CORRIDOR	Public Spaces- Corridors		0 0	0 0	0.0	6 361	22	22	28	127	0.22	0.96
105- CORRIDOR	Public Spaces- Corridors		D O	0	0.0	6 162	10	10	13	57	0.228	0.98

	Zone S	ECOND
System Primary Airflow: V_{ps}	800 CFM	Zone Air E_z
Average Outdoor Air Fraction: X_s	0.202	Primary A E_p
Occupant Diversity: D	1	Secondar E_r
Uncorrected Air Intake: V_{ou}	161 CFM	Fraction or F_a
System Ventilation Efficiency: E_v	0.96	Fraction of F_b
Outdoor Air Intake: V_{ot}	168 CFM 0.21	Fraction G_{F_c}

		People Ou	Area Outdoor				
Room	Room Type	Rate (CFM/person) <i>R_p</i>	People P _z	Total (CFM) <i>R_p*P_z</i>	Rate (CFM/ft ²) <i>R_a</i>	Area (ft ²) A _z	
200- CORRIDOR	Public Spaces- Corridors	0	0	0	0.06	1,020	
202- SEATING	Office-Office Spaces	5	8	40	0.06	270	
203- CORRIDOR	Public Spaces- Corridors	0	0	0	0.06	162	

FLO	OR COMMO	N Ventilatio	n			
Distribu	tion Effectiveness:				0.8	
ir Fract	ion to Zone:				1	_
Air Fra	action to Zone:				1	-
fSuppl	y Air to Zone from Out	side Zone:			1	
fSuppl	y Air to Zone from Full	y Mixed Primary	Air:		1	
f Outdo	or Air to Zone from Ou	itside Zone:			1	
Rooi	n Information				I	
Air Total CFM) R _a *A _z	Breathing Zone Outside Airflow (CFM) V _{bz}	Zone Outdoor Airflow (CFM) V _{oz}	Zone Discharge Airflow (CFM) V _{dz}	Discharge Outdoor Air Fraction Z _d	Zone Ventilation Efficiency E_{vz}	n
62	62	78	322	0.242	0.9	968
17	57	71	427	0.166	1	.04
10	10	13	52	0.25	0).96


DICTION WITH INFORMATION CONSTRUCTION MANAGER, βŞ IES HAVIN WITH AN ('HORIT EXIST lime: Apr 13, 2023-12:01pm - By: tim.ziebold -RATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDED TO PROVIDE THE AUT ON ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY Z:\~Project Directories\10000-10001\10041 - Talbert House - The Geiger House for Veterans - Cincinnati OH\~Construction Documents\10041-E001-ELECTRICAL-SITE-PLAN.dwg-EBS. Plot Date/ THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONST TO DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCT GENERAL CONTRACTOR. ETC. EBS ACCEPTS NO RESPONSIBILITY OR LIABILITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.









NOTE 1

SCOPE OF WORK

NEW CONSTRUCTION OF A MULTI-FAMILY APARTMENT BUILDING. PROJECT CONSIST OF (49) APARTMENTS, AND ADMINISTRATIVE AND SUPPORT SPACES. SCOPE OF WORK INCLUDES A NEW ELECTRICAL SERVICE, DISTRIBUTION EQUIPMENT BRANCH CIRCUIT WIRING, LIGHTING, AND DEVICES. SEE SINGLE LINE DIAGRAM, PANEL SCHEDULES, AND NOTES FOR ADDITIONAL INFORMATION.

GENERAL NOTES-OVERALL PROJECT

A. EBS DRAWINGS INDICATE DESIGN INTENT AND REQUIRED OUTCOMES. IF CONDITIONS ARISE IN THE FIELD THAT REQUIRE DEVIATIONS FROM THE DRAWINGS IT IS ASSUMED THAT THE CONTRACTOR WILL DETERMINE THE APPROPRIATE DEVIATION WITH APPROVAL FROM THE OWNER. EBS IS AVAILABLE TO ASSIST WHEN REQUIRED IF ISSUES ARISE.

GENERAL NOTES - SITE

- A. ALL EQUIPMENT LOCATED OUTDOORS SHALL BE LABELED NEMA 3R. B. PERFORM ALL EXCAVATION, TRENCHING AND BACKFILL REQUIRED FOR THE INSTALLATION OF THIS WORK. ALL BACKFILL SHALL BE BROUGHT TO FINISHED GRADE AND MATCH SURROUNDING CONDITIONS. RESTORE ALL DISTURBED PAVING AND LANDSCAPING TO ORIGINAL CONDITIONS. PULL BOXES SHALL BE PROVIDE OF A TYPE MEETING THE REQUIREMENTS AND CONDITIONS OF THE USE INTENDED.
- 2. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL SITE WORK WITH GENERAL CONTRACTOR AND OTHER BUILDING TRADES.
- D. SEE SINGLE LINE DIAGRAM FOR FEEDER WIRE AND CONDUIT SIZE. ALL UNDERGROUND FEEDERS IN PVC SHALL HAVE AN EQUIPMENT GROUND WIRE SIZED PER NEC 250.
- COORDINATE ALL UNDERGROUND UTILITY WORK INCLUDING BUT NOT LIMITED TO THE FOLLOWING: EC RESPONSIBLE FOR ALL PRIMARY/SECONDARY UG CONDUITS INSTALLED FROM UTILITY DEMARC TO PAD OR NEW POLE-MOUNT TRANSFORMER LOCATION, (WHEN REQUIRED). CONFIRM ALL UTILITY WORK WITH OWNER, ARCH, GC, UTILITY REPRESENTATIVE, ETC PRIOR TO CONSTRUCTION.
- AS-BUILT DRAWINGS SHALL INCLUDE AN OVERALL SITE PLAN SHOWING ROUTING OF ALL CIRCUITRY AND LOCATIONS OF ALL TRANSFORMERS, ETC. AND PULL BOXES, ETC.
- PROVIDE APPROPRIATE POWER AND GFCI PROTECTION FOR ALL ABOVE GROUND PIPING HEAT TRACE. COORDINATE VOLTAGE/PHASE WITH CONTRACGTOR FURNISHING HEAT TRACE.

★ KEYED SHEET NOTES - SITE

- 1. PROPOSED LOCATION FOR NEW DUKE ENERGY POLE.
- 2. PROVIDE (2) EMPTY 4" CONDUITS WITH PULL STRING FOR DUKE PRIMARY WIRING
- 3. PROPOSED LOCATION OF UTILITY TRANSFORMER.
- 4. PROVIDE A 20AMP 120V CIRCUIT FOR FUTURE SUMP PUMP AND AND EMPTY 1" CONDUIT WITH PULL STRING FOR TAMPER SWITCH WIRING. CONFIRM FINAL LOCATION WITH CIVIL DRAWINGS.
- PROVIDE A 120V CIRCUIT IN THE METER PIT FOR HOTBOX. CONFIRM FINAL LOCATION WITH CIVIL DRAWINGS.





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DICTION WITH INFORMATION CONSTRUCTION MANAGER, TIES HAVING JURISI 'HORIT EXIST 35. Plot Date/Time: Apr 13, 2023-12:03pm - By: tim.ziebold TRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDED TO PROVIDE THE AUT ION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY Project Directories\10000-10001\10041 - Talbert House - The Geiger House for Veterans - Cincinnati OH∖∾Construction Documents\10041-E100-ELECTRICAL-POWER-BASEMENT-PLAN.dwg-EI SE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONS DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCT JERAL CONTRACTOR. ETC. EBS ACCEPTS NO RESPONSIBILITY OR LIARILITY FOR THE COMPLIANCE OR CONDITION OF EXISTING FOUNDATION OF EXISTING FOUNDATION.





ELECTRICAL POWER BASEMENT PLAN





ELECTRICAL POWER FIRST FLOOR PLAN N SCALE: 1/8" = 1'-0" _E101/

SDICTION WITH INFORMATION CONSTRUCTION MANAGER, 2:\~Project Directories\1000-1001\10041 - Talbert House for Veterans - Cincinnati OH\~Construction Documents\XRF-ART.dwg-Model. Plot Date/Time: Apr 13, 2023-11:28am - By: Keith.Schloemer THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONSTRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDED TO PROVIDE THE AUTHORITIES HAVING JURIS TO DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCTION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY EXIST WITH AN OWNER, GENERAL CONTRACTOR. ETC. EBS ACCEPTS NO RESPONSIBLITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.

 ARCHITECT'S CODE SHEET FOR USE GROUP AND OCCUPANT INFORMATION WHEN PROVIDING THE FIRE ALARM DESIGN. VERIFY REQUIREMENTS SPECIFIC TO PROJECT LOCALITY AND INCLUDE IN SCOPE. B. INSTALLING CONTRACTOR SHALL FURNISH ALL REQUIRED DRAWINGS AND CALCULATIONS REQUIRED FOR FIRE ALARM PERMIT. DRAWINGS AND CALCULATIONS SHALL BE PREPARED BY AN INDIVIDUAL CARRYING ALL CERTIFICATIONS REQUIRED BY THE AGENCY RESPONSIBLE FOR REVIEW AN APPROVAL. C. REQUIRED COMPONENTS THAT ARE NOT SHOWN ON DRAWINGS SUCH AS; RELAY MODULES MONITOR MODULES, BOOSTER PANELS, ANNUNCIATORS, ETC. ARE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARE INCLUDED I THIS SCOPE OF WORK. 	ND	IS: DAT	01/18	/13			+
 CENERAL NOTES-POWER ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONDUITICABLE ROUTING. COORDINATE ROUTING WITH ALL OTHER TRADES AND BULDIN CONDITIONS. SEE SINGLE LINE DIAGRAM FOR FEEDER WIRE AND CONDUITI SIZE. ALL CIRCUITS NOT SIZE ON DRAWING SHALL BE INSTALLED TO MEET MINIMUSZ E REQUIRED BY NEC. PROVIDE WITING, COLIS, AND AUXINARY CONTACTS AS INDICATED ON DRAWING COORDINATE ANY INTERLOCKING WIRING WITH HVAC CONTRACTOR AND PROVIDE WIRING, COLIS, AND AUXINARY CONTACTS AS INCESSARY. SIZ ALL CIRCUITS FOR ACTUAL EQUIRMENT TO BE CONNECTED. ALL PANELS AND DISCONNECTS LOCATED OUTDOORS SHALL BE LABELED NEMA 3R ROOM MOUNTED AND OUTDOOR COUPMENT SHALL HAVE 120V RECEPTRA MOUNTED WIRING, CONTRACTOR TO ROUTDOORS SHALL BE INWEATH PROOF BOX AND HAVE GCI PROTECTION. FOR ITEMS TUMINISHED BY DHEN TRADES, ELECTRICAL CONTRACTOR TO MOUNTED WIRING, CONTRACTOR TO CONFINM FEQUENT. FOR ITEMS TUMINISHED BY DHEN TRADES, ELECTRICAL CONTRACTOR TO PROVED EXAMPLATING CONFIRME SIZES WITH ACTUAL EQUIPMENT BEING CONNECTED PRIOR TO ROUGHING SIZES WITH ACTUAL EQUIPMENT BEING CONTRACTOR TO ROUNTING SAND BONDING AND DATUM TIEMS MAY DEVIATE FROM BASIS OF DESIGN SELECTIONS, AND ACTUA THESE SIZES WITH THE CONTRACTOR FURNISHING THE EQUIPMENT. REFER TO ARCHITES PLANS AND ELEVATIONS FOR ALL DEVICE MOUNT HEIGHTS. CONTRACTOR TO PROVIDE GROUNDING AND BONDING AS REQUIRED FOR ELECTRICAL SYSTEMS. GROUNDING AND BONDING AS REQUIRED FOR ELECTRICAL CONTRACTOR TO THE ALARM PANEL INTERCUENT. CONTRACTOR TO PROVIDE GROUNDING AND BONDING AS REQUIRED FOR ELECTRICAL SYSTEMS. GROUNDING AND BONDING AS REQUIRED FOR HEIGHTS. PROVIDE DEDICATED OICCUIT FOR FIRE ALARM PANEL AND CAS REQUIRED FOR HEIGHTS. PROVIDE DEDICATED OICCUIT FOR FIRE ALARM PANEL INTERCOMMENT DE SECONS DISTRE SYMME SYSTEMS. PROVIDE DEDICATED OICCUIT FOR FIRE ALARM PANEL AND AND AS THE FIRE PROVIDE SYSTEMS. PROVIDE D	IN IG JM GS. E D CLE D D D NA OF R NS TING R NS TING R NS TING R S TING C S TING R S TING C TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINA OF R S TING C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC C TINC TIN	In the second se			IGIN JICO STI Streets Street S	HING LADIA ID FOO HING LADIA ID FOO HIGH AND	



2:\~Project Directories\1000-1001\10041 - Talbert House for Veterans - Cincinnati OH\~Construction Documents\XREF-ART.dwg-Model. Plot Date/Time: Apr 13, 2023-11:28am - By: Keith.Schloemer THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONSTRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDED TO PROVIDE THE AUTHORITIES HAVING JURIS TO DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCTION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY EXIST WITH AN OWNER, GENERAL CONTRACTOR. ETC. EBS ACCEPTS NO RESPONSIBLITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.

DICTION WITH INFORMATION CONSTRUCTION MANAGER,

N E102 SCALE: 1/8" = 1'-0"

ELECTRICAL POWER SECOND FLOOR PLAN

 CONDITIONS ARISE IN THE FIELD THAT REQUIRE DEVIATIONS FROM THE DRAWINGS IT IS ASSUMED THAT THE CONTRACTOR WILL DETERMINE THE APPROPRIATE DEVIATION WITH APPROVAL FROM THE OWNER. EBS IS AVAILABLE TO ASSIST WHEN REQUIRED IF ISSUES ARISE. GENERAL NOTES - ELEVATOR (S) A. FURNISH AND INSTALL ALL REQUIRED ELECTRICAL COMPONENTS AND CONNECTIONS FOR ELEVATOR OPERATION. REFER TO ELEVATOR SHOP DRAWINGS FOR COMPLETE INFORMATION. PROVIDE SHUNT-TRIP OPERATIOI FOR ELEVATOR CIRCUIT WHERE REQUIRED. INCLUDE CONNECTIONS FOR SHAFT, SUMP PUMP, PIT LIGHT, RECEPTACLE, CAB LIGHT, ETC. BASIS OF DESIGN HP AND CIRCUIT CHARACTERISTICS SHOWN ON DRAWINGS MUST BE VERIFIED WITH ELEVATOR SUPPLIER PRIOR TO ROUGH-IN OR INSTALLATION. 	
 FIRE ALARM - DELEGATED DESIGN CRITERIA COMPLY WITH PERFORMANCE REQUIREMENTS AND DESIGN CRITERIA CONTAINED ON DRAWINGS. RESPONSIBILITY FOR PROVIDING A COMPLIANT, OPERATIONAL FIRE ALARM SYSTEM LIES WITH THIS CONTRACTOR. REFER TO ARCHITECT'S CODE SHEET FOR USE GROUP AND OCCUPANT INFORMATION WHEN PROVIDING THE FIRE ALARM DESIGN. VERIFY REQUIREMENTS SPECIFIC TO PROJECT LOCALITY AND INCLUDE IN SCOPE. INSTALLING CONTRACTOR SHALL FURNISH ALL REQUIRED DRAWINGS AND CALCULATIONS REQUIRED FOR FIRE ALARM PERMIT. DRAWINGS AND CALCULATIONS REQUIRED FOR FIRE ALARM PERMIT. DRAWINGS AND CALCULATIONS REQUIRED BY THE AGENCY RESPONSIBLE FOR REVIEW AND APPROVAL. REQUIRED COMPONENTS THAT ARE NOT SHOWN ON DRAWINGS SUCH AS; RELAY MODULES MONITOR MODULES, BOOSTER PANELS, ANNUNCIATORS, ETC. ARE THE RESPONSIBILITY OF THIS CONTRACTOR AND ARE INCLUDED IN THIS SCOPE OF WORK. 	Amb Amb Amb Amb Amb Amb Amb Amb
 GENERAL NOTES-POWER A. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL CONDUIT/CABLE ROUTING. COORDINATE ROUTING WITH ALL OTHER TRADES AND BUILDING CONDITIONS. SEE SINGLE LINE DIAGRAM FOR FEEDER WIRE AND CONDUIT SIZE. ALL CIRCUITS NOT SIZED ON DRAWING SHALL BE INSTALLED TO MEET MINIMUM SIZE REQUIRED BY NEC. PROVIDE MOTOR STARTERS FOR EQUIPMENT AS INDICATED ON DRAWINGS. COORDINATE ANY INTERLOCKING WIRING WITH HVAC CONTRACTOR AND PROVIDE WIRING, COILS, AND AUXILIARY CONTACTS AS NECESSARY. SIZE ALL CIRCUITS FOR ACTUAL EQUIPMENT TO BE CONNECTED. ALL PANELS AND DISCONNECTS LOCATED OUTDOORS SHALL BE LABELED NEMA 3R. ROOF MOUNTED AND OUTDOOR EQUIPMENT SHALL HAVE 120V RECEPTACLE MOUNTED WITHIN 25' OF EACH PIECE. RECEPTACLES SHALL BE IN WEATHER PROOF BOX AND HAVE GFCI PROTECTION. FOR ITEMS FURNISHED BY OTHER TRADES, ELECTRICAL CONTRACTOR TO FULLY COORDINATE BREAKER AND WIRE SIZES WITH ACTUAL EQUIPMENT BEING CONNECTED PRIOR TO ROUGH-IN, OR INSTALLATION. THE SIZES ON PANEL SCHEDULES REFER TO BASIS OF DESIGN SELECTIONS, AND ACTUAL ITEMS MAY DEVIATE FROM BASIS OF DESIGN. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO CONFIRM REQUIRED WIRE AND BREAKER SIZES WITH THE CONTRACTOR TO CONFIRM REQUIRED WIRE AND BREAKER SIZES WITH THE CONTRACTOR FURNISHING THE EQUIPMENT. REFER TO ARCHITECT'S PLANS AND ELEVATIONS FOR ALL DEVICE MOUNTING HEIGHTS. CONTRACTOR TO PROVIDE GROUNDING AND BONDING AS REQUIRED FOR ELECTRICAL CONTRACTOR FURNISHING THE EQUIPMENT. CONTRACTOR TO PROVIDE GROUNDING AND BONDING AS REQUIRED FOR ELECTRICAL SYSTEMS. GROUNDING AND BONDING IS CONSIDERED MEANS AND METHODS OF CONSTRUCTION, AND SHOULD BE COMPLETED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH NEC 250. GAS PIPING SYSTEMS MUST BE BONDED PER UTILITY PROVIDER'S INSTALLATION GUIDELINES WHERE REQUIRED. 	er House for Veterans / Klek ly Residences ilLBERT AVE. NATI, OH
 KEYED NOTES - COMMON AREAS PROVIDE DEDICATED CIRCUIT FOR FIRE ALARM PANEL IN THE MECHANICAL ROOM AND ANNUNCIATOR AT THE BUILDING ENTRANCE. LOCATION TO BE APPROVED BY GC AND AHJ PRIOR TO INSTALLATION. PROVIDE 4" CONDUIT SLEEVE BETWEEN FLOORS FOR FIRE ALARM CABLING. FIRE ALARM CABLING SERVING BASEMENT TO BE ROUTED FROM THE FIRE ALARM PANEL ABOVE THE CEILING OF THE FIRST FLOOR TO THE CLOSET IN OFFICE 111, THEN DOWN INTO BASEMENT CEILING BELOW. ROUTING IS SHOWN FOR REFERENCE ONLY AND MUST BE FIELD COORDINATED. PROVIDE CONDUIT SLEEVES BETWEEN FLOORS FOR DATA CABLING. (3) 4" CONDUIT SLEEVES BETWEEN FLOORS FOR DATA CABLING ON FLOORS 1-3. (2) 4"CONDUIT SLEEVE BETWEEN BASEMENT LEVEL AND FIRST FLOOR FOR DATA CABLING. DATA CABLING SERVING BASEMENT TO BE ROUTED FROM THE BUILDING DEMARC ABOVE THE CEILING OF THE FIRST FLOOR TO HE CLOSET IN OFFICE 111, THEN DOWN INTO BASEMENT LEVEL AND FIRST FLOOR FOR DATA CABLING. DATA CABLING SERVING BASEMENT TO BE ROUTED FROM THE BUILDING DEMARC ABOVE THE CEILING OF THE FIRST FLOOR TO HE CLOSET IN OFFICE 111, THEN DOWN INTO BASEMENT CEILING BELOW. ROUTING IS SHOWN FOR REFERENCE ONLY AND MUST BE FIELD COORDINATED. INSTALL CONDUIT(S) FOR UTILITY USE AND 4'X4'X3/4" PLYWOOD BACKBOARD FOR DATA/PHONE UTILITIES. CONFIRM LOCATION, QUANTITY, AND SIZE OF CONDUITS NECESSARY WITH OWNER AND UTILITY PROVIDER. INSTALL OWNER APPROVED (HOMERUN) CABLE FROM EACH DWELLING UNIT HOME NETWORK ENCLOSURE (HNE) TO THIS BUILDING DEMARC LOCATION. PROVIDE DEDICATED QUAD RECEPTACLE AT DEMARC LOCATION. PROVIDE DEDICATED QUAD RECEPTACLE AT DEMARC LOCATION. ITEMS TO BE INSTALLED FOR ELEVATOR. CONFIRM ALL ELECTRICAL CONTRACTOR RESPONSIBLE WORK PRIOR TO ROUGH-IN. ALL ITEMS PERTAINING TO THE ELEVATOR TO BE INSTALLED PER NEC AND MANUFACTURER REQUIREMENTS. COORDINATE REQUIREMENTS AND LOCATIONS WITH INSTALLING CONTRACTOR PRIOR TO ROUGH-IN. TENANT UNIT PANEL. 	Big ig Big ig Big igBig ig Big ig Big igPR-1004V V Discipling Disci



ELECTRICAL POWER THIRD FLOOR PLAN **E103** SCALE: 1/8" = 1'-0"

DICTION WITH INFORMAT CONSTRUCTION MANAGE IES HAVIN WITH AN (HORIT EXIST ED TO PROVIDE THE AUI AGREEMENT THAT MAY AND ARE INTENDE CONTRACTURAL TH APPLICABLE CODES, ACCORDANCE WITH ANY n – By: Keith.Schloemer NTE COMPLIANCE WIT I ARE INSTALLED IN A Bam FRAT ION / r 13, 2023-11:2 TO DEMONS CONSTRUCT 7 – The Geiger House for Veterans – Cincinnati OH\~Construction Documents\XREF-ART.dwg-Model. Plot Date/Time: Apr AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED ING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN ESPONSIBILITY OF LABILITY FOR THE COMPLIANCE OF CONDITION OF EXISTING FOLIDMENT AND V Directories \10000-10001 \10041 - Talbert House AAWINGS AND SPECIFICATIONS ARE NOT MINE CODE COMPLIANCE. THE INSTALLI CONTRACTOR. ETC. FRS ACCEPTS NO PI







	TALBERT HOU	SE LUMINAIRE	SCHED	ULE	SCOPE OF WORK		
CALLOUT	DESCRIPTION	MODEL 1	INPUT VA	NOTE 1			WINN ATE OF ON
A	SURFACE MOUNTED ROUND LIGHT	EFFICIENT LIGHTING EL-810-209E26LED	25		NEW CONSTRUCTION OF A MULTI-FAMILY APARTMENT BUILDING. PROJECT CONSISTS OF (49) APARTMENTS, AND ADMINISTRATIVE AND SUPPORT SPACES.		PAUL R
A2	2X2 CENTER BASKET LED RECESSED TROFFER	METALUX CRUZE ST 22CZ2-32-UNV-L835-CD1-U	24.2		SCOPE OF WORK INCLUDES A NEW ELECTRICAL SERVICE, DISTRIBUTION EQUIPMENT, BRANCH CIRCUIT WIRING, LIGHTING, AND DEVICES.		PE 74471
В	24" VANITY LIGHT	EFFICIENT LIGHTING EL-205G-209E26LED	18		SEE SINGLE LINE DIAGRAM, PANEL SCHEDULES, AND NOTES FOR ADDITIONAL INFORMATION.		TO STERES ON THE
С	RECESSED CAN	HALO HLC4079301EWH-6BP	12	WET LISTED	GENERAL NOTES-OVERALL PROJECT	2	CONAL ELIMIN
EM	EMERGENCY WALL PACK	SURE-LITES AP2SQLED	2	WHITE			
EMX	EXIT/EMERGENCY COMBO-PROVIDE REMOTE CAPABILITY AS REQUIRED	SURE-LITES APCH7R	3		A. EBS DRAWINGS INDICATE DESIGN INTENT AND REQUIRED OUTCOMES. IF CONDITIONS ARISE IN THE FIELD THAT REQUIRE DEVIATIONS FROM THE DRAWINGS IT IS ASSUMED THAT THE CONTRACTOR WILL DETERMINE THE		
EP	LINEAR LED ELEVATOR PIT FIXTURE	METALUX 4APVTLD-54L835	54		APPROPRIATE DEVIATION WITH APPROVAL FROM THE OWNER. EBS IS AVAILABLE TO ASSIST WHEN REQUIRED IF ISSUES ARISE.		
ER	REMOTE HEAD - POWERED FROM LOCAL EXIT SIGN BATTERY	SURE-LITES APWR2					
EX	EXIT/EMERGENCY COMBO	SURE-LITES APC7R	3	WHITE	GENERAL NOTES LIGHTING		
F	4' UTILITY LED STRIP	METALUX 4SNX-31SL-SLW-UNV L835-CD1-U	19.5		A. REFER TO ARCHITECT'S PLANS AND ELEVATIONS FOR DIMENSIONED		
R6	6" LED RECESSED CAN	INFINIUM SGE6LEDFX-30L-35K-DX BH27-AR6223FX-SG-WF-SO	21.9		 B. PROVIDE HOLD-ON-TYPE BREAKERS FOR EGRESS/EMERGENCY LIGHTING CIRCUITS. WIRE ALL EGRESS/EMERGENCY FIXTURES AHEAD OF ANY LOCAL 		A tech
W1	DECORATIVE UP/DOWN CYLINDER	EFFICIENT LIGHTING EL-1080UD-18LED-BR	18		C. LIGHT FIXTURES CONTROLLED BY SWITCH IN SAME ROOM UNLESS		LIPTIO
W4-EM/NL	LED SURFACE MOUNT W/ 50/50 SENSOR	METALUX 4SRL-LD5-54SL-LW-UNV L835-CD1-SVPD2-U	47	FIXTURES TO BE PROVIDED WITH BI-LEVEL CONTROLS WHERE LOCATED IN STAIRWELLS, AND BATTERY BACKUP FOR EMERGENCY ILLUMINATION	 D. WHERE DIMMERS AND/OR DIMMING SYSTEMS ARE REQUIRED, CONTRACTOR TO FURNISH DIMMERS THAT ARE COMPATIBLE WITH FIXTURE SOURCE AND RATED FOR THE WATTAGE OF THE DIMMING ZONE. PROVIDE ADDITIONAL 	CES	PERMI
WM10	EXTERIOR WALLPACK	LW6048_585-US- SLSW-350-840	5		DIMMERS AS REQUIRED TO MEET ZONE LOAD REQUIREMENTS. E. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL OCCUPANCY SENSORS	AN	
WM11	EXTERIOR WALLPACK	LW6048_575-US- SLFW-700-840	20		IN QUANTITIES AND LOCATIONS ADEQUATE TO SENSE MOTION FROM ANYWHERE IN THE AREA IN CORRIDORS AND LOBBY.	SSL	ATE /18/202 /13/202
WM12	EXTERIOR WALLPACK	LW6048_575-US- SLFW-350-840	10				010 D
* NL DENOTE	ES EGRESS LIGHTING				KETED SHEET NOTES		
					1. PROVIDE AN ASTRONOMICAL TIMECLOCK ADJACENT TO PANEL "H2" FOR CONTROL OF EXTERIOR LIGHTING.		
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Construction Documents (XREF-ARI.dwg-Model. Plot Date/Time: Apr 13, 2023-11:28am - By: Keith.Schloemer
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THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONSTRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDED TO PROVIDE THE AUTHORITIES HAVING JURISDICTION WITH INFORMATION
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THOUR CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCTION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY EXIST WITH AN OWNER, CONSTRUCTION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY EXIST WITH AN OWNER, CONSTRUCTION ARE REAL CONPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.

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	TALBERT HOU	SE LUMINAIRE	SCHED	ULE	SCOPE OF WORK			mmm		1111
CALLOUT	DESCRIPTION	MODEL 1	INPUT VA	NOTE 1			M	"STA	0/	HOTE
A	SURFACE MOUNTED ROUND LIGHT	EFFICIENT LIGHTING EL-810-209E26LED	25		NEW CONSTRUCTION OF A MULTI-FAMILY APARTMENT BUILDING. PROJECT CONSISTS OF (49) APARTMENTS, AND ADMINISTRATIVE AND SUPPORT SPACES.		WIIIII	F	AULR	X
A2	2X2 CENTER BASKET LED RECESSED TROFFER	METALUX CRUZE ST 22CZ2-32-UNV-L835-CD1-U	24.2		SCOPE OF WORK INCLUDES A NEW ELECTRICAL SERVICE, DISTRIBUTION EQUIPMENT, BRANCH CIRCUIT WIRING, LIGHTING, AND DEVICES.	h i	PH	F	'E 74471	EEB
В	24" VANITY LIGHT	EFFICIENT LIGHTING EL-205G-209E26LED	18		SEE SINGLE LINE DIAGRAM, PANEL SCHEDULES, AND NOTES FOR ADDITIONAL INFORMATION.			NSSI SI	QISTERED.	CINHING ST
С	RECESSED CAN	HALO HLC4079301EWH-6BP	12	WET LISTED	GENERAL NOTES-OVERALL PROJECT				naminut	h.
EM	EMERGENCY WALL PACK	SURE-LITES AP2SQLED	2	WHITE						
EMX	EXIT/EMERGENCY COMBO-PROVIDE REMOTE CAPABILITY AS REQUIRED	SURE-LITES APCH7R	3		A. EBS DRAWINGS INDICATE DESIGN INTENT AND REQUIRED OUTCOMES. IF CONDITIONS ARISE IN THE FIELD THAT REQUIRE DEVIATIONS FROM THE DRAWINGS IT IS ASSUMED THAT THE CONTRACTOR WILL DETERMINE THE					
EP	LINEAR LED ELEVATOR PIT FIXTURE	METALUX 4APVTLD-54L835	54		APPROPRIATE DEVIATION WITH APPROVAL FROM THE OWNER. EBS IS AVAILABLE TO ASSIST WHEN REQUIRED IF ISSUES ARISE.					
ER	REMOTE HEAD - POWERED FROM LOCAL EXIT SIGN BATTERY	SURE-LITES APWR2								
EX	EXIT/EMERGENCY COMBO	SURE-LITES APC7R	3	WHITE	GENERAL NOTES LIGHTING					
F	4' UTILITY LED STRIP	METALUX 4SNX-31SL-SLW-UNV L835-CD1-U	19.5		A. REFER TO ARCHITECT'S PLANS AND ELEVATIONS FOR DIMENSIONED					
R6	6" LED RECESSED CAN	INFINIUM SGE6LEDFX-30L-35K-DX BH27-AR6223FX-SG-WF-SO	21.9		LOCATIONS OF LIGHT FIXTURES. B. PROVIDE HOLD-ON-TYPE BREAKERS FOR EGRESS/EMERGENCY LIGHTING CIRCUITS. WIRE ALL EGRESS/EMERGENCY FIXTURES AHEAD OF ANY LOCAL		l Wiew		SION	
W1	DECORATIVE UP/DOWN CYLINDER	EFFICIENT LIGHTING EL-1080UD-18LED-BR	18		SWITCHING. C. LIGHT FIXTURES CONTROLLED BY SWITCH IN SAME ROOM UNLESS			L SET	L REVI	
W4-EM/NL	LED SURFACE MOUNT W/ 50/50 SENSOR	METALUX 4SRL-LD5-54SL-LW-UNV L835-CD1-SVPD2-U	47	FIXTURES TO BE PROVIDED WITH BI-LEVEL CONTROLS WHERE LOCATED IN STAIRWELLS, AND BATTERY BACKUP FOR EMERGENCY ILLUMINATION	OTHERWISE NOTED. D. WHERE DIMMERS AND/OR DIMMING SYSTEMS ARE REQUIRED, CONTRACTOR TO FURNISH DIMMERS THAT ARE COMPATIBLE WITH FIXTURE SOURCE AND RATED FOR THE WATTAGE OF THE DIMMING ZONE. PROVIDE ADDITIONAL	CES	DESCR	PERMIT	PERMIT	
WM10	EXTERIOR WALLPACK	LW6048_585-US- SLSW-350-840	5		DIMMERS AS REQUIRED TO MEET ZONE LOAD REQUIREMENTS. E. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL OCCUPANCY SENSORS	AN	0 V V	2 8		
WM11	EXTERIOR WALLPACK	LW6048_575-US- SLFW-700-840	20		IN QUANTITIES AND LOCATIONS ADEQUATE TO SENSE MOTION FROM ANYWHERE IN THE AREA IN CORRIDORS AND LOBBY.		SSU ATE /18/202		/31/202	
WM12	EXTERIOR WALLPACK	LW6048_575-US- SLFW-350-840	10			<u> </u>	02	04	05	
" NL DENOTE	S EGRESS LIGHTING				1. PROVIDE AN ASTRONOMICAL TIMECLOCK ADJACENT TO PANEL "H2" FOR CONTROL OF EXTERIOR LIGHTING.		du			
OCATIONS D BY A TIME	OF EXTERIOR BUILDING MOUNTED FIX ECLOCK UNLESS SPECIFIED OTHERWI	TURES. SE.					ğ			
		WM10					0 X			
	APARTMENT UNIT U104	APARTMENT		W1			eterans / KI			





Geiger House for Veterans / Klekamp Family Residences	2631 GILBERT AVE. CINCINNATI, OH
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DRAWN BY TAZ	CHECKED BY PRS
PROJECT	NO.: 10041
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DICTION WITH INFORMATION CONSTRUCTION MANAGER, JURIS NER, TIES HAVING J - WITH AN OWI 2:\~Project Directories\1000-1001\10041 - Talbert House for Veterans - Cincinnati OH\~Construction Documents\XRF-ART.dwg-Model. Plot Date/Time: Apr 13, 2023-11:28am - By: Keith.Schloemer THESE DRAWINGS AND SPECIFICATIONS ARE NOT AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONSTRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INTENDED TO PROVIDE THE AUTHORIT TO DETERMINE CODE COMPLIANCE. THE INSTALLING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCTION ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTURAL AGREEMENT THAT MAY EXIST GENERAL CONTRACTOR. ETC. EBS ACCEPTS NO RESPONSIBLITY FOR THE COMPLIANCE OR CONDITION OF EXISTING FOURDMENT AND WIRING.

	TALBERT HOU	SE LUMINAIRE	SCHED	DULE	SCOPE OF WORK	WHITE OF STUR
CALLOUT	DESCRIPTION	MODEL 1	INPUT VA	NOTE 1		Ming TANK WAY
A	SURFACE MOUNTED ROUND LIGHT	EFFICIENT LIGHTING EL-810-209E26LED	25		NEW CONSTRUCTION OF A MULTI-FAMILY APARTMENT BUILDING. PROJECT CONSISTS OF (49) APARTMENTS, AND ADMINISTRATIVE AND SUPPORT SPACES.	PAUL R
A2	2X2 CENTER BASKET LED RECESSED TROFFER	METALUX CRUZE ST 22CZ2-32-UNV-L835-CD1-U	24.2		SCOPE OF WORK INCLUDES A NEW ELECTRICAL SERVICE, DISTRIBUTION EQUIPMENT, BRANCH CIRCUIT WIRING, LIGHTING, AND DEVICES.	PE 74471
В	24" VANITY LIGHT	EFFICIENT LIGHTING EL-205G-209E26LED	18		SEE SINGLE LINE DIAGRAM, PANEL SCHEDULES, AND NOTES FOR ADDITIONAL INFORMATION.	SONAL ENUM
С	RECESSED CAN	HALO HLC4079301EWH-6BP	12	WET LISTED	GENERAL NOTES-OVERALL PROJECT	and the second s
EM	EMERGENCY WALL PACK	SURE-LITES AP2SQLED	2	WHITE		
EMX	EXIT/EMERGENCY COMBO-PROVIDE REMOTE CAPABILITY AS REQUIRED	SURE-LITES APCH7R	3		A. EBS DRAWINGS INDICATE DESIGN INTENT AND REQUIRED OUTCOMES. IF CONDITIONS ARISE IN THE FIELD THAT REQUIRE DEVIATIONS FROM THE DRAWINGS IT IS ASSUMED THAT THE CONTRACTOR WILL DETERMINE THE	
EP	LINEAR LED ELEVATOR PIT FIXTURE	METALUX 4APVTLD-54L835	54		APPROPRIATE DEVIATION WITH APPROVAL FROM THE OWNER. EBS IS AVAILABLE TO ASSIST WHEN REQUIRED IF ISSUES ARISE.	
ER	REMOTE HEAD - POWERED FROM LOCAL EXIT SIGN BATTERY	SURE-LITES APWR2				
EX	EXIT/EMERGENCY COMBO	SURE-LITES APC7R	3	WHITE	GENERAL NOTES LIGHTING	
F	4' UTILITY LED STRIP	METALUX 4SNX-31SL-SLW-UNV L835-CD1-U	19.5		A. REFER TO ARCHITECT'S PLANS AND ELEVATIONS FOR DIMENSIONED	
R6	6" LED RECESSED CAN	INFINIUM SGE6LEDFX-30L-35K-DX BH27-AR6223FX-SG-WF-SO	21.9		 B. PROVIDE HOLD-ON-TYPE BREAKERS FOR EGRESS/EMERGENCY LIGHTING CIRCUITS. WIRE ALL EGRESS/EMERGENCY FIXTURES AHEAD OF ANY LOCAL 	SION View
W1	DECORATIVE UP/DOWN CYLINDER	EFFICIENT LIGHTING EL-1080UD-18LED-BR	18		SWITCHING. C. LIGHT FIXTURES CONTROLLED BY SWITCH IN SAME ROOM UNLESS	IPTION F SET
W4-EM/NL	LED SURFACE MOUNT W/ 50/50 SENSOR	METALUX 4SRL-LD5-54SL-LW-UNV L835-CD1-SVPD2-U	47	FIXTURES TO BE PROVIDED WITH BI-LEVEL CONTROLS WHERE LOCATED IN STAIRWELLS, AND BATTERY BACKUP FOR EMERGENCY ILLUMINATION	OTHERWISE NOTED. D. WHERE DIMMERS AND/OR DIMMING SYSTEMS ARE REQUIRED, CONTRACTOR TO FURNISH DIMMERS THAT ARE COMPATIBLE WITH FIXTURE SOURCE AND RATED FOR THE WATTAGE OF THE DIMMING ZONE. PROVIDE ADDITIONAL	CES B0% OF PERMIT
WM10	EXTERIOR WALLPACK	LW6048_585-US- SLSW-350-840	5		DIMMERS AS REQUIRED TO MEET ZONE LOAD REQUIREMENTS. E. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL OCCUPANCY SENSORS	
WM11	EXTERIOR WALLPACK	LW6048_575-US- SLFW-700-840	20		IN QUANTITIES AND LOCATIONS ADEQUATE TO SENSE MOTION FROM ANYWHERE IN THE AREA IN CORRIDORS AND LOBBY.	SSU ATE /18/205 /31/205
WM12	EXTERIOR WALLPACK	LW6048_575-US- SLFW-350-840	10			
* NL DENOTE	ES EGRESS LIGHTING					
					1. PROVIDE AN ASTRONOMICAL TIMECLOCK ADJACENT TO PANEL "H2" FOR CONTROL OF EXTERIOR LIGHTING.	
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PI D			haree llaboi 15 Mor y of En PURPA V of En PURPA N B Z EC E:/	EN BUS SY d Succration mouth is the issues set for full system issues is	IGIN ILD Street and I Street PRODUC PRODUC PRODUC PRODUC I (82 Service PRODUC PRODUC I (82 Service PRODUC I (82 Service PRODUC I (82 Service PRODUC I (82 Service PRODUC I (82 Service PRODUC I (82 Service I (8	PR IEE ING Suite 11 Suite 11 Su	REI SIN gh incy 201 201 205855 in OH EXCLU 205855 in OH EXCLU 205855 in OH EXCLU 205855 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU 2058555 IN EXCLU	I DOO D C. SIVE S, INC. DONIT RED S O4.2 D O4.2 D C S O4.2 D S O4.2 D C S O4.2 D C S O4.2 D C S O4.2 D C S O4.2 D C S O C S O C C S C C S C C C C C C C C	41 BY
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CALLOUT	DESCRIPTION	MODEL 1	INPUT V
A	SURFACE MOUNTED ROUND LIGHT	EFFICIENT LIGHTING EL-810-209E26LED	25
A2	2X2 CENTER BASKET LED RECESSED TROFFER	METALUX CRUZE ST 22CZ2-32-UNV-L835-CD1-U	24.2
В	24" VANITY LIGHT	EFFICIENT LIGHTING EL-205G-209E26LED	18
С	RECESSED CAN	HALO HLC4079301EWH-6BP	12
EM	EMERGENCY WALL PACK	SURE-LITES AP2SQLED	2
EMX	EXIT/EMERGENCY COMBO-PROVIDE REMOTE CAPABILITY AS REQUIRED	SURE-LITES APCH7R	3
EP	LINEAR LED ELEVATOR PIT FIXTURE	METALUX 4APVTLD-54L835	54
ER	REMOTE HEAD - POWERED FROM LOCAL EXIT SIGN BATTERY	SURE-LITES APWR2	
EX	EXIT/EMERGENCY COMBO	SURE-LITES APC7R	3
F	4' UTILITY LED STRIP	METALUX 4SNX-31SL-SLW-UNV L835-CD1-U	19.5
R6	6" LED RECESSED CAN	INFINIUM SGE6LEDFX-30L-35K-DX BH27-AR6223FX-SG-WF-SO	21.9
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WM10	EXTERIOR WALLPACK	LW6048_585-US- SLSW-350-840	5
WM11	EXTERIOR WALLPACK	LW6048_575-US- SLFW-700-840	20
WM12	EXTERIOR WALLPACK	LW6048_575-US- SLFW-350-840	10



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A NOTE 1	NEW CONSTRUCTION OF A MULTI-FAMILY APARTMENT BUILDING. PROJECT CONSISTS OF (49) APARTMENTS, AND ADMINISTRATIVE AND SUPPORT SPACES. SCOPE OF WORK INCLUDES A NEW ELECTRICAL SERVICE, DISTRIBUTION EQUIPMENT, BRANCH CIRCUIT WIRING, LIGHTING, AND DEVICES. SEE SINGLE LINE DIAGRAM, PANEL SCHEDULES, AND NOTES FOR ADDITIONAL INFORMATION.			MIN * PROXIMI	S S S S S S S S S S S S S S S S S S S	PAUL SPAC PE 74	R G H471	NOW	
WHITE	A. EBS DRAWINGS INDICATE DESIGN INTENT AND REQUIRED OUTCOMES. IF CONDITIONS ARISE IN THE FIELD THAT REQUIRE DEVIATIONS FROM THE DRAWINGS IT IS ASSUMED THAT THE CONTRACTOR WILL DETERMINE THE APPROPRIATE DEVIATION WITH APPROVAL FROM THE OWNER. EBS IS AVAILABLE TO ASSIST WHEN REQUIRED IF ISSUES ARISE.								
WHITE WHITE FIXTURES TO BE PROVIDED WITH BI-LEVEL CONTROLS WHERE LOCATED WHITE	 GENERAL NOTES-LIGHTING A. REFER TO ARCHITECT'S PLANS AND ELEVATIONS FOR DIMENSIONED LOCATIONS OF LIGHT FIXTURES. B. PROVIDE HOLD-ON-TYPE BREAKERS FOR EGRESS/EMERGENCY LIGHTING CIRCUITS. WIRE ALL EGRESS/EMERGENCY FIXTURES AHEAD OF ANY LOCAL SWITCHING. C. LIGHT FIXTURES CONTROLLED BY SWITCH IN SAME ROOM UNLESS OTHERWISE NOTED. D. WHERE DIMMERS AND/OR DIMMING SYSTEMS ARE REQUIRED, CONTRACTOR TO FURNISH DIMMERS AND/OR DIMMING SYSTEMS ARE REQUIRED, CONTRACTOR 	S.	DESCRIPTION	30% OHFA Review	PERMIT SET	PERMIT REVISION			
IN STAIRWELLS, AND BATTERY BACKUP FOR EMERGENCY ILLUMINATION	 TO FURNISH DIMMERS THAT ARE COMPATIBLE WITH FIXTURE SOURCE AND RATED FOR THE WATTAGE OF THE DIMMING ZONE. PROVIDE ADDITIONAL DIMMERS AS REQUIRED TO MEET ZONE LOAD REQUIREMENTS. E. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL OCCUPANCY SENSORS IN QUANTITIES AND LOCATIONS ADEQUATE TO SENSE MOTION FROM ANYWHERE IN THE AREA IN CORRIDORS AND LOBBY. 	SUANCE	TE NO. I	8/2023 8	3/2023 F	1/2023 A F		+	
	 KEYED SHEET NOTES PROVIDE AN ASTRONOMICAL TIMECLOCK ADJACENT TO PANEL "H2" FOR CONTROL OF EXTERIOR LIGHTING. 	S	DA	01/1	04/1	05/3			
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Shared Success Through

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PROJECT NO.: 10041

SCALE:AS NOTED

DATE: 04-13-2023

DRAWING TITLE

ELECTRICAL LIGHTING THIRD

FLOOR PLAN

SHEET NO.

E203

DRAWN BY TAZ



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ONE BEDROOM - U001, U002, U111, U214, U314 & U315 E300 SCALE: 1/4" = 1'-0"





TYP ONE BEDROOM

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











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. Plot Date/Time: Apr 13, 2023-12:38pm - By: tim.ziebold FRATE COMPLIANCE WITH APPLICABLE CODES, AND ARE INT ON ARE INSTALLED IN ACCORDANCE WITH ANY CONTRACTL

5 - The Geiger House for Veterans - Cincinnati OH∖~Construction Documents\10041-E301-ELECTRICAL-ENLARGED-UNIT-PLANS.dwg-EB AUTHORIZED TO BE USED AS CONTRACT DOCUMENTS. THESE DRAWINGS HAVE BEEN PREPARED TO DEMONS ING CONTRACTOR IS RESPONSIBLE TO ENSURE THAT MEANS, METHODS, AND MATERIALS USED IN CONSTRUCT ESPONSIBILITY OR LIABILITY FOR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.

Z:\~Project Directories\10000-10001\10041 - Talbert House THESE DRAWINGS AND SPECIFICATIONS ARE NOT TO DETERMINE CODE COMPLIANCE. THE INSTALLI GENERAL CONTRACTOR ETC ERS ACCEDTS ALC







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PROJECT NO.: 10041

SCALE:AS NOTED

DATE: 04-13-2023

DRAWING TITLE

ELECTRICAL ENLARGED UNIT PLANS

SHEET NO.

E301

DRAWN BY

TAZ



H[DP								
ROON MOUN FED NOTE	A NTING SURFAC FROM SD-HD :	Е Р	VOLTS 208Y , BUS AMPS 8 NEUTRAL 10 0	/120V 3 800 0%	6P 4W		AIC T.B.D. MAIN BKR LUGS STA I	MLO NDARD	
CKT #	BREAKER		N	L	OAD KV	A	FFEDER RACEWAY AND	CONDUCTORS	
# 1 2 3 4 5 6 7 8 9 10 11 12	200/3 200/3 200/3 20/3 100/3 20/3 20/3 20/3 20/3 20/3 20/3 20/3	PANEL H1 PANEL H2 PANEL H3 DOMESTIC BOOSTER PANEL E SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	PUMP SYSTEM	A 17.5 20 13 1.88 1.43 0 0 0 0 0 0 0 0 0	B 13 21.3 10.6 1.88 0.414 0 0 0 0 0 0 0 0 0	13.9 13.8 9.49 1.88 0.522 0 0 0 0 0 0 0 0	2–1/2"C,3#250kcmil 2–1/2"C,3#250kcmil 2–1/2"C,3#250kcmil 1/2"C,3#12 CU,#12 (1–1/4"C,3#1 AL,#1 /	AL,#250kcmil AL,#250kcmil AL,#250kcmil CU G AL N,#6 AL G	AL N,#4 AL G AL N,#4 AL G AL N,#4 AL G
		TOTAL CONNECT	ED KVA BY PHASE	53.7	47.2	39.6			
		CONN KVA	CALC KVA				CONN KVA	CALC KVA	_
LIGI ELE LAR MO ⁻	HTING CTRIC DRYER GEST MOTOR TORS	6.5282029.2625.955	.15 (125%) 0 (100%) .31 (25%) .95 (100%)		REC CON NON HEA COC	EPTACLE TINUOUS CONTINU TING DLING AL LOAD	ES 12.4 5 0.54 JOUS 0.101 89 58.8	11.2 0.675 0.101 89 0 141	(50%>10) (125%) (100%) (100%) (0%)
					BALA	ANCED 3-	PHASE LOAD	393 A	
С	T-CA	B (HOL	JSE)						
ROON MOUN FED NOTE	/ NTING SURFAC FROM UTILITY	E	VOLTS 208Y ,	/120V 3	5P 4W		AIC T.B.D. LUGS STA I	NDARD	
СКТ #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTIO	N	L	OAD KV	A			
" 1 2	-/3 -/3	FUSED DISCONNECT FUSED DISCONNECT	SD-HDP SD-ELEV	53.7 14.4	47.2 14.4	39.6 14.4			
		TOTAL CONNECT	ED KVA BY PHASE	68.1	61.6	54			
		CONN KVA	CALC KVA		1	1	CONN KVA	CALC KVA	
LIGH ELE LAR MO ⁻	HTING CTRIC DRYER GEST MOTOR TORS	6.52820243.2149.24	.15 (125%) 0 (100%) 0.8 (25%) 9.2 (100%)		REC CON NON HEA COC	EPTACLE TINUOUS CONTINU TING DLING AL LOAD	ES 12.4 S 0.54 JOUS 0.101 89 58.8	11.2 0.675 0.101 89 0 191	(50%>10) (125%) (100%) (100%) (0%)
					BAL	ANCED 3-	PHASE LOAD	529 A	
\overline{C}	T-CA	B (TEN	IANT)						
ROON MOUN FED NOTE	A NTING SURFAC FROM UTILITY	Е Е	VOLTS 208Y,	/120V 3	5P 4W		AIC T.B.D. LUGS STA I	NDARD	
CKT #	BREAKER TRIP/POLES	CIRCUIT DESCRIPTIO	N	L	OAD KV B	A C			
1	-/3	FUSED DISCONNECT	SD-MDP	550	480	151			
		TOTAL CONNECT	ED KVA BY PHASE	550	480	151			
OPTIC	ONAL MULTIFAM	ILY DWELLING CALCUL	ATION (NEC 220.84) KVA					KVA	
LIGI SM/ APF	HTING AND RECI ALL-APPLIANCE PLIANCES	EPTACLES 8 1 [,] 1	2.5 27,500 SI (3 VA/SF) 47 13	=)	CON DWE DEM	NECTED	LOAD NITS STOR	1,130 49 (26%)	-
ELE HEA COC	CTRIC COOKING TING DLING	3 3 3	90 02 (100%) 02 (0%)		CAL BAL	CULATED ANCED 3-) LOAD PHASE LOAD	295 818 A	

MDP	ELECTRICAL LEGEND *SEE LIGHT FIXTURE SCHEDULE FOR FIXTURE TYPES.	
ROOMVOLTS208Y/120V3P 4WAICT.B.D.MOUNTINGSURFACEBUS AMPS1000MAINBKRMLO	\$ SINGLE POLE LIGHT SWITCH L5-20R C LOCKING 125V/20 AMP - RECEPTACLE	TATE OF OHIGH
FED FROM SD-MDP NEUTRAL 100% LUGS STANDARD	$\$_3$ THREE WAY LIGHT SWITCH L6-20R Φ LOCKING 250V/20 AMP (1-PHASE) - RECEPTACLE	SPRONG
CKT BREAKER LOAD KVA	$\$_{D}$ DIMMER SWITCH LIGHT OWNER SWITCH SWIT	PE 74471
# TRIP/POLES CIRCUIT DESCRIPTION A B C FEEDER RACEWAY AND CONDUCTORS	\$FS FAN SPEED CONTROL PP FURNITURE POWER POLE - RECEPTACLE	SONAL ENGINE
1 150/3 WIREWAY RISER #1 45.3 39 12.2 2 C,3#2/0 AL,#2/0 AL N,#4 AL G 2 150/3 WIREWAY RISER #2 45.3 39 12.2 2"C,3#2/0 AL,#2/0 AL N,#4 AL G	Image: Construction of the second	
3 150/3 WIREWAY RISER #3 44.7 39 12.2 2"C,3#2/0 AL,#2/0 AL N,#4 AL G 4 150/3 WIREWAY RISER #4 44.7 39 12.2 2"C,3#2/0 AL,#2/0 AL N,#4 AL G	\$DT OCC SENSOR - CEILING - PASSIVE INFRARED WFF WFF FR RECESSED FLOOR BOX - MULTI-SERVICE (POWER/DATA)	
5 30/3 WIREWAY RISER #5 33.6 29.3 9.16 1/2"C,3#10 CU N,#10 CU G 6 30/3 WIREWAY RISER #6 33.6 29.3 9.16 1/2"C,3#10 CU #10 CU N #10 CU G	\$PIR OCC SENSOR - WALL - PASSIVE INFRARED	
7 30/3 WIREWAY RISER #7 23.1 19.5 6.11 1/2"C,3#10 CU,#10 CU N,#10 CU G 8 30/3 WIREWAY RISER #7 23.1 19.5 6.11 1/2"C,3#10 CU,#10 CU N,#10 CU G		
9 30/3 WIREWAY RISER #9 22.4 19.5 6.11 1/2"C,3#10 CU,#10 CU N,#10 CU G	Image: Second	
10 30/3 WIREWAY RISER #10 33.6 29.3 9.16 1/2"C,3#10 CU,#10 CU N,#10 CU G 11 30/3 WIREWAY RISER #11 22.4 19.5 6.11 1/2"C,3#10 CU,#10 CU N,#10 CU G	USB DUPLEX RECEPTACLE W/USB JACKS Φ SIMPLEX RECEPTACLE	
12 30/3 WIREWAY RISER #12 34 29.3 9.16 1/2"C,3#10 CU,#10 CU N,#10 CU G 13 30/3 WIREWAY RISER #13 33.6 29.3 9.16 1/2"C,3#10 CU,#10 CU N,#10 CU G	COUNTER HEIGHT DUPLEX RECEPTACLE	lie v
14 30/3 WIREWAY RISER #14 33 29.3 9.16 1/2"C,3#10 CU,#10 CU N,#10 CU G	Image: Strate Image: Strate Image: Strate Image: Strate Image: Strate Image: Strate <	PTION SET
16 30/3 WIREWAY RISER #16 34.6 29.3 9.7 1/2"C,3#10 CU,#10 CU N,#10 CU	(CLNG) CEILING (SHOW WINDOW) RECEPTACLE	S 3% OH ERMIT
	GFCI W DUPLEX - GFCI RECEPTACLE VIMAGNETIC MOTOR STARTER	
TOTAL CONNECTED KVA BY PHASE 550 480 151	SPLIT-WIRED (SWITCHED) RECEPTACLE HNE HOME NETWORK ENCLOSURE	
KVA KVA		DATE 1/18/20 4/13/20
LIGHTING AND RECEPTACLES 82.5 27,500 SF CONNECTED LOAD 1,130	GFCI ♥ DISHWASHER - GFCI RECEPTECLE ♥ DATA LOCATION (RING & STRING, U.N.O) DISP. ♥ GARBAGE DISPOSAL ♥ VOICE DROP_LOCATION	
SMALL-APPLIANCE147DWELLING UNITS49APPLIANCES143DEMAND FACTOR(26%)	MW MICROWAVE RECEPTACLE VOICE/DATA DROP - LOCATION	
APPLIANCES 113 CALCULATED LOAD 295 ELECTRIC COOKING 490 BALANCED 2 BHASE LOAD 848 A	FRIG P REFRIGERATOR RECEPTACLE CABLE TV (COAX) - LOCATION	
HEATING 302 (100%) BALANCED 3-PHASE LOAD 616 A COOLING 302 (0%) 616 A 616 A	RANGE V RANGE - 208-2400/ 1-PHASE 50 AMP RECEPTACLE CR CARD READER WASH WASHER - GFCI RECEPTACLE CR DOOR RELEASE - ACCESS CONTROL	
	DRYER O DRYER - 208-240V/ 1-PHASE 30 AMP RECEPTACLE	
	W/D STACKED WASHER/DRYER - 208-240V/ 1-PHASE 30 AMP RECEPTACLE	ar
220.84 Multi-Family CalculationKVAQtyTotal KVATYP 123.11246.22	DUPLEX - MONUMENT FLOOR BOX PR PROXY READER	
TYP 2 23.11 25 577.75	DUPLEX - RECESSED FLOOR BOX	
TYP 3 23.11 1 23.11 TYP 4 23.11 7 161.77		
TYP 5 23.26 2 46.52 TYP 6 23.26 3 69.78	PANELBOARD W/ BUS (MCB OR MLO) - DOOR HOLD - FIRE ALARM I SINGLE LINE DIAGRAM DOOR HOLD - FIRE ALARM	S S
TYP 7 23.41 3 70.23 TYP 8 23.11 3 69.33	FABP FIRE ALARM BOOSTER PANEL	
TYP 9 23.11 3 69.33	Image: Stransformer - Single Line Diagram FACP Fire Alarm Control Panel Image: Stransformer - Single Line Diagram FACP Fire Alarm Control Panel Image: Stransformer - Single Line Diagram FACP Fire Alarm Control Panel	
Total Quantity and Connected Load = 49 1134.0	Image: Stransformer W/ GROUND - Image: Stransformer W/ GROUND - Single Line Diagram FS Sprinkler Flow Switch	te
		(O)
	PADMOUNT TRANSFORMER - Image: Horn - Fire Alarm Single line diagram Image: Horn/Strobe - Fire Alarm	
	AUTOMATIC TRANSFER SWITCH (ATS) - SINGLE LINE DIAGRAM PV POST INDICATOR VALVE - (PIV)	
	PRE-A PRE-ACTION PANEL	
	Image: Single Line diagram Figure Pressure switch Image: Single Line diagram Figure Pressure switch Image: Single Line diagram Figure Pressure switch	
	* METER BASE - SINGLE LINE DIAGRAM SD SMOKE DAMPER	
	FUSED DISCONNECT - SINGLE LINE DIAGRAM SMOKE DETECTOR COSD COMBINATION SMOKE/CO2 DETECTOR	
	SP SPEAKER - FIRE ALARM	
	SPEAKER/STROBE - FIRE ALARM	
	* CT CABINET - SINGLE LINE DIAGRAM	
	* FINAL METER CONFIGURATION TBD/ APPROVED BY LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.	
	ABBREVIATIONS: HP Heat Pump EXAMPLES: # Number HZ Hertz	
	Ω Ohm IG Isolated Ground Φ Phase IMC Intermediate Metal Conduit	
	A Amperes KCMIL Thousand Circular Mils AC Alternating Current KVA A/C Air Conditioning LEMC Liguid Tight Metal Conduit a	PR - 10041
	AFCI Arc Fault Current Interrupter LTG Lighting \$ AHU Air Handling Unit LRA Locked Rotor Amperes	BUILDING SYSTEMS INC.
	AIC Ampere Interrupting Capacity MC Metal Clad Cable AL Aluminum MCB Main Circuit Breaker ATO A function of the second	Shared Success Through Collaboration and Efficiency
	ATS Automatic Transfer Switch MCC Motor Control Center ATC Automatic Temperature Control MLO Main Lug Only AWG American Wire Gauge NC Normally Closed	515 Monmouth Street, Suite 201 Newport, KY 41071 (859) 261-0585 MEP Consulting Services, Inc. in OH Copyright © 2015
	C Conduit NEC National Electrical Code CATV Cable Television NEMA National Electrical Manufactures Association	THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE PROPERTY OF ENGINEERED BUILDING SYSTEMS. INC. NETHER THE DOCUMENT NOR THE INFORMATION IT CONTAINS MAY BE USED FOR OTHER THAN THE
	CB Critical Branch NFPA National Fire Protection Association C/B Circuit Breaker NL Night Lighting (Egress Illumination)	SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED WITHOUT WRITTEN CONSENT OF ENGINEERED BUILDING SYSTEMS, INC.
	CKT Circuit NO Normally Open CCTV Closed Circuit Television NTS Not To Scale CT Current Transformer P Pole	DRAWN BY CHECKED BY
	CU Condensing Unit PB Push Button or Panic Button or Pull Box WEATHER PROOF PANEL NAME AND DC Direct Current PNL Panel CIRCUIT NUMBER	TAZ PRS
	DIA Diameter PWR Power EC Electrical Contractor QTY Quantity	PROJECT NO.: 10041
	EF EXNAUSE FAIN REQ Required ELEV Elevator RMC Rigid Metal Conduit EM Emergency RNC Rigid Non-Metallic Conduit GROUND FAULT PROTECTED ISOLATED GROUND	SCALE:AS NOTED
	EMT Electrical Metallic Tubing RTU Roof Top Unit EPO Emergency Power Off ST Shunt Trip	
	EWC Electric Water Cooler SW Switch EWH Electric Water Heater TSTAT Thermostat	DATE: 04-13-2023
	FA FIRE Alarm FIRE Alarm FAA Fire Alarm Annuciator UG Underground FLA Full Load Amperes UL Underwriters Labratory	
	FMC Flexible Metal Conduit UNO Unless Noted Otherwise GF Gas Furnace V Volt	ELECTRICAL DETAILS
	GFCI Ground Fault Current Interrupter VA Volt-Amperes GND Ground W Watt or Wire GWH Gas Water Heater W/D Weatter Proof	
	HOA Hand-Off-Automatic Switch XFMR Transformer HVAC Heating, Ventilation, Air Conditioning	SHEET NO.
	NOTE: ALL ITEMS MAY NOT BE USED.	

Total Quantity and Conne	49	1134.0	
TYP 9	23.11	3	69.33
TYP 8	23.11	3	69.33
TYP 7	23.41	3	70.23
TYP 6	23.26	3	69.78
TYP 5	23.26	2	46.52
TYP 4	23.11	7	161.77
TYP 3	23.11	1	23.11
TYP 2	23.11	25	577.75
TYP 1	23.11	2	46.22
220.84 Multi-Family Calculation	KVA	Qty	Total KVA
			_



H1	H2	IH3
ROOMVOLTS208Y/120V3P4WAICT.B.D.MOUNTINGSURFACEBUSAMPS200MAINBKRMLOFEDFROMHDPNEUTRAL100%LUGSSTANDARDNOTE	ROOMVOLTS208Y/120V3P4WAICT.B.D.MOUNTINGSURFACEBUSAMPS200MAINBKRMLOFEDFROMHDPNEUTRAL100%LUGSSTANDARDNOTE	ROOMVOLTS208Y/120V3P 4WAICT.B.D.MOUNTINGSURFACEBUSAMPS200MAINBKRMLOFEDFROMHDPNEUTRAL100%LUGSSTANDARDNOTE
CKT CKT LOAD # BKR KVA CIRCUIT DESCRIPTION # BKR KVA CIRCUIT DESCRIPTION	CKT CKT LOAD # BKR KVA CIRCUIT DESCRIPTION # BKR KVA CIRCUIT DESCRIPTION	CKT CKT LOAD # BKR KVA CIRCUIT DESCRIPTION # BKR KVA CIRCUIT DESCRIPTION
1 30/2 5 DRYER a 2 20/2 2.79 HP-R-1.5	1 20/1 0.9 RECEPTACLE a 2 45/2 8.9 VTAC-1.5	1 20/1 1.44 RECEPTACLE a 2 25/2 3.29 VTAC-2a
5 30/2 5 DRYER c 6 40/2 8.17 AHU-R-1.5	$\begin{bmatrix} 5 & 20/1 & 0.36 \\ 7 & 20/1 & 0.72 \end{bmatrix}$	$\begin{bmatrix} 5 & 20/1 \\ 5 & 20/1 \\ 7 & 20/1 \\ 0.9 \\ BECEPTACLE \\ C & 6 \\ 45/2 \\ 0.8 \\ 0 \\ 8 \\ 1 \\ 0.9 \\ C \\ 0.8 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $
9 30/2 5 DRYER b 10 20/2 2.25 H-1	9 20/1 0.9 RECEPTACLE b 10 $60/2$ 10.8 AHU-R-30 11 20/1 0.72 RECEPTACLE c 12	$\begin{array}{c c c c c c c c c c c c c c c c c c c $
13 30/2 5 DRYER a 14 20/2 2.25 H-1 15 b 16 b 16 b	13 20/1 1.07 LIGHTING a 14 45/2 9.26 AHU-R-3b 15 20/1 0.901 E-3, LIGHTING b 16 1	13 20/1 0 SPACE a 14 45/2 9.01 VTAC-2b 15 20/1 0 SPACE b 16 1
17 20/1 1.5 LAUNDRY c 18 20/2 0.1 HP-MS-2 19 20/1 1.5 LAUNDRY a 20 I I	17 20/1 0.1 FIRE ALARM PANEL c 18 45/2 8.9 VTAC-1.5 19 20/1 0.36 RECEPTACLE a 20 1 1	17 20/1 0 SPACE c 18 20/2 0 SPACE 19 20/1 0 SPACE a 20 1 0
21 20/1 1.5 LAUNDRY b 22 20/1 0 SPACE 23 20/1 1.5 LAUNDRY c 24 20/1 0 SPACE	21 20/1 0 SPACE b 22 20/2 2.25 H-1 23 20/1 0 SPACE c 24 I I	21 20/1 0 SPACE b 22 20/2 2.25 H-1 23 20/1 0 SPACE c 24 I I
25 20/1 1.62 RECEPTACLE a 26 20/1 0 SPACE 27 20/1 0 SPACE b 28 20/1 0.36 GDWH1	25 20/1 0 SPACE a 26 30/2 4.22 HP-R-3 27 20/1 0 SPACE b 28 I I	25 20/1 0 SPACE a 26 20/1 0 SPACE 27 20/1 0 SPACE b 28 20/1 0 SPACE
29 20/1 0 SPACE c 30 20/1 0.603 LIGHTING 31 20/1 0 SPACE a 32 20/1 0.18 CIRCULATION PUMP	29 20/1 0 SPACE c 30 20/2 0 SPACE 31 20/1 0.1 HOTBOX a 32 I I	29 20/1 0 SPACE c 30 20/1 0 SPACE 31 20/1 0 SPACE a 32 20/1 0 SPACE
33 20/1 0 SPACE 35 20/1 0 SPACE 36 20/1 0 SPACE	33 20/1 0.1 120V CIRCUIT b 34 20/1 0 SPACE 35 20/1 0.303 LIGHTING, LIGHTING TIMECLOCK c 36 20/1 0 SPACE	33 20/1 0 SPACE 35 20/1 0 SPACE 35 20/1 0 SPACE 36 20/1 0 SPACE
37 20/1 0 SPACE 39 20/2 0 SPACE 40 20/1 0 SPACE	37 20/1 0.048 LIGHTING a 38 20/1 0 SPACE 39 20/2 0.456 LIGHTING b 40 20/1 0 SPACE	37 20/1 0 SPACE a 38 20/1 0 SPACE 39 20/1 0 SPACE b 40 20/1 0 SPACE 41 20/1 0 SPACE b 40 20/1 0 SPACE
CONNCALCCONNCALCKVAKVAKVAKVA	CONNCALCCONNCALCKVAKVAKVAKVA	CONN CALC KVA KVA CONN CALC KVA KVA
LIGHTING 0.603 0.754 (125%) LARGEST 2.79 0.697 (25%) ELECTRIC 20 20 (100%) RECEPTACLES 1.62 1.62 (50%>10) DRYER 0.675 (125%) CONTINUOUS 0.54 0.675 (125%)	LIGHTING 2.67 3.34 (125%) RECEPTACLES 5.4 5.4 (50%>10) LARGEST MOTOR 9.26 2.31 (25%) NONCONTINUOUS 0.101 0.101 (100%) MOTORS 0.3 0.3 (100%) COOLING 31.3 0 (0%)	LIGHTING 1.91 2.39 (125%) RECEPTACLES 4.32 4.32 (50%>10) LARGEST MOTOR 9.01 2.25 (25%) HEATING 26.8 26.8 (100%) COOLING 24.6 0 (0%)
HEATING 15.6 15.6 (100%) COOLING 2.89 0 (0%)	TOTAL LOAD 58.1	TOTAL LOAD 35.8 BALANCED 3-PHASE 99.4 A
TOTAL LOAD 43.4 BALANCED 3-PHASE 400.4	LOAD PHASE A 109%	PHASE B 96.9%
LOAD 120 A PHASE A 117%	PHASE B 116% PHASE C 74.8%	PHASE C 85.9%
PHASE B 88.7% PHASE C 93.9%		

E												
RC					VOLTS 208	r/1 10	20V	3P 4W		AIC T.B.D.		
FE	D FROM	HDP	JE		NEUTRAL 1	NEUTRAL 100% MAIN					UGS STANDARD	
NC	DTE											
CKT #	CKT BKR	LOAD KVA	CIRCUIT	DESCRIP	TION		CKT #	CKT BKR	LOAD KVA	CIRCL	JIT DESCRIPTION	
1 5 7 9 11 13 15 17 19 21 23	20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	1.2 0.054 0.5 0.18 0.022 0.054 0.18 0 0 0 0	ELEVAT LIGHTIN ELEVAT RECEPT LIGHTIN LIGHTIN RECEPT SPACE SPACE SPACE SPACE	OR CONTR G OR SUMP ACLE G G G ACLE	OLS PUMP	арсарсарс	2 4 6 10 12 14 16 18 20 22 24	20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	0 0 0 0 0 0 0 0 0 0 0	SPAC SPAC SPAC SPAC SPAC SPAC SPAC SPAC	E E E E E E E E	
LI R	GHTING ECEPTACL	1 .ES 1	CONN KVA 1.33 1.04	CALC KVA 1.66 1.04	(125%) (50%>10)		TOT BALA LO PHA PHA	AL LOAD ANCED 3-P AD ISE A ISE B ISE C	HASE		CALC KVA 2.7 7.5 A 182% 52.4% 66%	

		THINH FITT	A COLUMN	PIST PISTO		RIG TT E	HO HO	HILLER *	
ISSUANCES	DATE NO. DESCRIPTION	01/18/2023 80% OHFA Review	04/13/2023 PERMIT SET						
	I (Jeiner House for Vererans / Klekamh		Eamily Recidences					CINCINNATI. OH	
	T PR NI S	S Ccc 5 New MEI HIS DO OOPERT EITHER CONTA CONTO	hared llabo 15 Mor y OF En COMEN' Y OF EN COMEN' THE DC CUMEN' THE DC CUMEN' COMEN' SUIT BUI	EN BL SY d Suc ration mouth Y 41007 copyrig GINEEF GINEEF GINEEF COMEN SE FOI COMEN SE FOI TTEN CC	IGIN Street and Street Street Bull Street Service Serv	PR IEE DING EMS Throu Efficie 59) 26 ⁷ Sylite Throu Efficie Sylite Throu Efficie Sylite Throu Ding Sylite The INF	REI BIN 201 -0585 in OH -0585 in OH EXCLUU YSTEMS ORMATIK THAR PA	100 C. SIVE 5, INC. MIT HE RED D	41
PI S D EL		AW TA DJ AL DI C	EC E:/	SY ST AS 04 WI	NC NC -13 NC	DI: DI: DI: DI: DI: DI:	CK PR 10 EC 02: TT	ED S 04 ⁻ 3 LE AIL	BY 1
			S⊦	іЕВ 4	=⊤ - (). 2		

Τ	ΥP	1												ŀ	-
RC MC FE NC	DOM DUNTING D FROM DTE	' FLUSH	VOLTS 208Y/120V 3P 4 BUS AMPS 150 NEUTRAL 100%						3P 4W	AIC T.B.D. Main BKR MLO Lugs Feedthru					
CKT	CKT	LOAD						CKT	CKT	LOAD	CIRC				
<u>#</u> 1	30/2	6.16	VTAC-1		a	# 2	50/2	10 RANGE				l			
3 5 7 11 13 15 17 21 23	15/1 15/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20	1.06 1.31 0.18 0 0 0 0 0 0 0	E-1, LI E-2, LI BATH SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	TACLE	рсарсарс	4 8 10 12 14 16 18 20 22 24	 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	0.5 1.8 1.5 1.5 0 0 0 0 0 0	FRIG. MICR SMAL SPAC SPAC SPAC SPAC SPAC	OWAVE L APPLIANO L APPLIANO E E E E E E E E	CE CE				
OP	TIONAL DV	/ELLING l	JNIT CAL	CULATI CON KVA	ON (NEC 2 N	220.82)				CC K	DNN VA	CALC KVA			
LI I SI AI EL	GHTING AN RECEPTAC MALL-APPL PPLIANCES LECTRIC C	ND ELES LIANCE S OOKING		1.65 3 2.3 10	550 (3 V/	SF A/SF)		GEN U O MAX CO	ERAL LOAI P TO 10 KV VER 10 KV HEATING (OLING	D /A 10 /A 6.95 OR	5	10 2.78 6.16	(100%) (40%) (220.82) 2(C)(1))	
т	OTAL GENE	ERAL LOA	νD	17		TOTAL LOAD18.9BALANCED 3-PHASE LOAD52.6 APHASE A140%PHASE B125%PHASE C35.3%						-			
	APPL	IANCE BRE	AKDOWN						HVAC Load	Calculatio	n		KVA	NEC Code	
TYPE				K\	/A				Неа	ating			6.16		
				0.	5				Cod	oling			6.16		
TOT				2	<u> </u>				Mini	i Split			0.00		
					-		100	% of N	lameplate Ra	ating of AC	and Co	oling	6.16	220.82 C(1)	
						100% of N	Vam	eplate	e Rating of H	eat Pump	w/o Sup	plmental Heat	0.00	220.82 C(2)	
							He	at Pur	np plus 65%	of Supplei	mental	Heat	0.00	220.82 C(3)	
Largest Heating or Cooling Load							6.16	220.84 C(5)							

		7														
RC MC FE NC	DOM DUNTING D FROM DTE	FLUSH		VOLTS 208Y/120V 3P 4W AIC T.B.D. BUS AMPS 150 MAIN BKR NEUTRAL 100% LUGS FEEI							MLO THRU					
CKT #	CKT	LOAD		CIRCUIT DESCRIPTION												
#	30/2	6.16	VTAC-1 a 2 50/2 10 RANGE													
3 5 7 9 11 13 15 17 19 21 23	 15/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20	1.06 1.31 0.18 0 0 0 0 0 0 0 0	E-1, LI E-2, LI BATH SPACE SPACE SPACE SPACE SPACE SPACE SPACE	GHTIN	NG, I NG, I	RECEPT	ACLE	одродарод	4 8 10 12 14 16 18 20 22 24	 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	0.5 1.8 1.5 0 0 0 0 0	5	FRIG. MICR SMAL SPAC SPAC SPAC SPAC SPAC	OWAVE L APPLIAN L APPLIAN E E E E E E E	CE CE	- - - - - - - - - - - - - - - - - - -
OP	TIONAL DW	/ELLING L	JNIT CAL	CULA CC K\	TION NN VA	(NEC 22	0.82)					CC K) NN VA	CALC KVA		
LIO F SM AF EL	GHTING AN RECEPTAC MALL-APPL PPLIANCES LECTRIC C	ND ELES LIANCE S OOKING		1.65 3 2.3 10		- 550 SF (3 VA/	- SF)		GEN U C MAX CC	IERAL LOA IP TO 10 K\ IVER 10 KV I HEATING IOLING	D /A /A OR	10 6.95	,	10 2.78 6.16	(100% (40%) (220.8) 2(C)(1))
т	OTAL GENE	ERAL LOA	٨D	17		TOTAL LOAD 18.9 BALANCED 3-PHASE 52.6 A LOAD 140% PHASE B 125%										
	APPL	IANCE BRE	AKDOWN							HVACLoad		ulatio	n		KVA	NFC Code
TYPE					KVA	Heating 6.16										
MICR					0.5	Cooling 6.16										
TOTA	NL				2.3	Mini Split 0.00										
<u></u>							1	00%	% of №	lameplate R	ating	of AC	and Co	oling	6.16	220.82 C(1)
							100% of N	am	eplat	e Rating of H	leat F	Pump	w/o Sup	plmental Heat	0.00	220.82 C(2)
								Hea	at Pur	np plus 65%	of S	uppler	nental	Heat	0.00	220.82 C(3)
									Lar	gest Heating	g or C	cooling	, Load		6.16	220.84 C(5)

TYP 1 U107 U307

Multi-Family Dwelling Unit Calc	KVA
Total General Load	17.0
Largest Heating or Cooling Load 220.84	6.16
220.84 CONNECTED LOAD CALC	23.11

TYP 3 U215

Multi-Family Dwelling Unit Calc	KVA
Total General Load	17.0
Largest Heating or Cooling Load 220.84	6.16
220.84 CONNECTED LOAD CALC	23.11

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	VOLTS 20 BUS AMPS NEUTRAL CIRCUIT DESCRIPTION VTAC-1 E-1, LIGHTING, RECEPTACLE E-2, LIGHTING, RECEPTACLE BATH SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	MLO DTHRU RIPTION	TYP 2U003U210U004U211U103U212U105U213U106U303U108U305U109U306U110U308U203U310U205U311U206U312U207U313U208U208		NOILE STREETS PAUL R SPERONG PE 74471 SPERONG PE 74471 SPERONG PE 74471 SPERONG PE 74471 SPERONG SOMAL ENUT SPERONG SOMAL ENUT SPERONG SOMAL ENUT SPERONG SPER
OPTIONAL DWELLING U LIGHTING AND RECEPTACLES SMALL-APPLIANCE APPLIANCES ELECTRIC COOKING TOTAL GENERAL LOA	JNIT CALCULATION (NEC 220.82) CONN KVA 1.65 3 2.3 10 AD 17	CONN KVACALC KVAGENERAL LOAD UP TO 10 KVA100VER 10 KVA100VER 10 KVA6.952.78MAX HEATING OR COOLING6.16TOTAL LOAD18.9BALANCED 3-PHASE LOAD52.6 APHASE A140%PHASE B125%PHASE C35.3%	(100%) (40%) (220.82(C)(1))	Multi-Family Dwelling Unit Calc Total General Load Largest Heating or Cooling Load 220.84 220.84 CONNECTED LOAD CALC	KVA 17.0 6.16 23.11	ekamp ^{DATE} 04/13/2022
TYPE REFRIGERATOR MICROWAVE TOTAL TOTAL	KVA 0.5 1.8 2.3	Heating Cooling Mini Split 100% of Nameplate Rating of AC and Cooling of Nameplate Rating of Heat Pump w/o Supplmental Heat Heat Pump plus 65% of Supplemental Heat Largest Heating or Cooling Load	6.16 6.16 0.00 6.16 220.82 C(1) at 0.00 220.82 C(2) 0.00 220.82 C(3) 6.16 220.84 C(5)	TYP 4 U001 U002		se for Veterans / K dences VE.
MOUNTING FED FROM NOTE FLUSH CKT CKT LOAD # BKR KVA 1 30/2 6.16 3 5 5 15/1 1.06 7 15/1 1.49 9 20/1 0.18 11 20/1 0 15 20/1 0 15 20/1 0 17 20/1 0 21 20/1 0 23 20/1 0	CIRCUIT DESCRIPTION VTAC-1 E-1, LIGHTING, RECEPTACLE E-2, LIGHTING, RECEPTACLE BATH SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	Solution 100% MAIN BKR MAIN BKR 100% 100% LUGS FEEL a 2 50/2 10 RANGE b 4 I Image: Constraint of the second seco	MLO DTHRU RIPTION	U112 U214 U314 U315		Geiger Hous Bamily Resident A 2631 GILBERT A CINCINNATION
OPTIONAL DWELLING U LIGHTING AND RECEPTACLES SMALL-APPLIANCE APPLIANCES ELECTRIC COOKING TOTAL GENERAL LOA TOTAL GENERAL LOA NOTAL GENERAL LOA ELECTRIC COOKING TOTAL GENERAL LOA MICROWAVE TOTAL	UNIT CALCULATION (NEC 220.82) CONN KVA 1.65 550 SF (3 VA/SF) 3 2.3 10 AD 17 EAKDOWN KVA 0.5 1.8 2.3 10 0.5 1.8 2.3 10 0.5 1.8 2.3 10 0.5 1.8 2.3 10 0.5 1.8 2.3 10 0.5 1.8 2.3 10 0.5 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8	CONN KVACALC KVAGENERAL LOAD UP TO 10 KVA100VER 10 KVA6.952.78MAX HEATING OR COOLING6.16TOTAL LOAD18.9BALANCED 3-PHASE LOAD52.6 APHASE A141%PHASE B124%PHASE C35.1%HVAC Load CalculationHeatingCoolingMini Split	(100%) (40%) (220.82(C)(1)) KVA NEC Code 6.16 6.16 6.16 0.00	Multi-Family Dwelling Unit Calc Total General Load Largest Heating or Cooling Load 220.84 220.84 CONNECTED LOAD CALC	KVA 17.0 6.16 23.11	SYSTEMSINC. Shared Success Through Collaboration and Efficiency 515 Monmouth Street, Suite 201 Newport, KY 41071 (\$59) 261-0585 MEP Consulting Services, Inc. in OL Copyright © 2015 THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE PROPERTY OF ENGINEERED BUILDING SYSTEMS, INC. NEITHER THE DOCUMENT IS THE PRODUCT AND EXCLUSIVE PROPERTY OF ENGINEERED BUILDING SYSTEMS, INC. NEITHER THE DOCUMENT NOR THE INFORMATION IT CONTAINS MAY BE USED FOR OTHER THAN THE DOCUMENT SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED BUILDING SYSTEMS, INC. DRAWN BY TAZ CHECKED PRS PROJECT NOC.: 10004 SCALE: AS NOTED DATE: 04-13-2023 DRAWING TITLE DRAWING TITLE
	100% 0	100% of Nameplate Rating of AC and Cooling of Nameplate Rating of Heat Pump w/o Supplmental Hea Heat Pump plus 65% of Supplemental Heat Largest Heating or Cooling Load	6.16 220.82 C(1) at 0.00 220.82 C(2) 0.00 220.82 C(3) 6.16 220.84 C(5)			ELECTRICAL DETA SHEET NO.

$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	208Y/120V 3P 4W AIC T.B.D. MPS 150 MAIN BKR M AL 100% LUGS FEEDT a 2 50/2 10 RANGE a 2 50/2 10 CLE c 6 20/1 0.5 FRIG. CLE c 6 20/1 1.5 SMALL APPLIANC c 10 20/1 1.5 SMALL APPLIANC c 12 20/1 0 SPACE b 16 20/1 0 SPACE c 18 20/1 0 SPACE b 20 20/1 0 SPACE c 18 20/1 0 SPACE c 24 20/1 0 SPACE	ALO HRU D103 U103 U103 U103 U105 U20 HRU U106 U108 U109 U109 U109 U109 U109 U109 U203 U205 U3 U205 U3 U206 U3 U206 U3 U207 U3 U208	10 11 12 13 03 05 06 08 10 11 12 13	PAUL R SPBONG PE 74471 ONAL ET ONAL ET ONAL ET ONAL ET Solution So
OPTIONAL DWELLING UNIT CALCULATION (NEC 220. CONN KVA LIGHTING AND RECEPTACLES SMALL-APPLIANCE SMALL-APPLIANCE 2.3 ELECTRIC COOKING 10 TOTAL GENERAL LOAD 17 APPLIANCE BREAKDOWN TYPE KVA REFRIGERATOR 0.5 MICROWAVE 1.8	.82) CONN CALC KVA KVA GENERAL LOAD F) UP TO 10 KVA 10 10 (OVER 10 KVA 6.95 2.78 (MAX HEATING OR COOLING 6.16 (TOTAL LOAD 18.9 BALANCED 3-PHASE 52.6 A LOAD 140% PHASE A 140% PHASE B 125% PHASE C 35.3% HVAC Load Calculation Heating Cooling	(100%) (40%) (220.82(C)(1)) (220.82(C)(1)) Multi-Famil Total Largest Heating 220.84 CON KVA NEC Code 6.16 6.16	y Dwelling Unit CalcKVAGeneral Load17.0g or Cooling Load 220.846.16NECTED LOAD CALC23.11	Kekamp ^{04/10}
TYP 4 ROOM NOUNTING FED FROM NOTE CKT CKT CKT KVA CIRCUIT DESCRIPTION 1 30/2 6.16	100% of Nameplate Rating of AC and Cooling 00% of Nameplate Rating of Heat Pump w/o Supplmental Heat Heat Pump plus 65% of Supplemental Heat Largest Heating or Cooling Load 208Y/120V 3P 4W AIC T.B.D. MPS 150 AL 100% CKT CKT # BKR KVA CIRCUIT DESCRIF a 2 50/2 10 RANGE	6.16 220.82 C(1) 0.00 220.82 C(3) 6.16 220.84 C(5) 6.16 220.84 C(5) TYP 4 U001 U002 U111 MLO U112 HRU U214 U314 U315		er House for Veterans y Residences ILBERT AVE.
3 15/1 1.06 E-1, LIGHTING, RECEPTAGE 7 15/1 1.49 E-2, LIGHTING, RECEPTAGE 9 20/1 0.18 BATH 11 20/1 0 SPACE 13 20/1 0 SPACE 15 20/1 0 SPACE 17 20/1 0 SPACE 19 20/1 0 SPACE 21 20/1 0 SPACE 23 20/1 0 SPACE 0 SPACE SPACE 23 20/1 0 SPACE 0 SPACE SPACE 23 20/1 0 SPACE	b 4 1 0.5 FRIG. CLE c 6 20/1 1.8 MICROWAVE b 10 20/1 1.5 SMALL APPLIANC c 12 20/1 1.5 SMALL APPLIANC a 14 20/1 0 SPACE b 16 20/1 0 SPACE c 18 20/1 0 SPACE a 20 20/1 0 SPACE c 18 20/1 0 SPACE c 24 20/1 0 SPACE b 22 20/1 0 SPACE d 20 20/1 0 SPACE d 20 20/1 0 SPACE d 20 20/1 0 SPACE d 24 20/1 0 SPACE 32) 32 32 32 33	E E		PR - 100 PR - 100 Systems inc. Shared Success Through Collaboration and Efficiency
LIGHTING AND RECEPTACLES SMALL-APPLIANCE ELECTRIC COOKING TOTAL GENERAL LOAD 17	CONN CALC KVA KVA GENERAL LOAD 10 F) UP TO 10 KVA 10 10 OVER 10 KVA 6.95 2.78 (MAX HEATING OR 6.16 (TOTAL LOAD 18.9 BALANCED 3-PHASE 52.6 A LOAD 141% PHASE A 141% PHASE C 35.1%	(100%) (40%) (220.82(C)(1))	y Dwelling Unit CalcKVAGeneral Load17.0g or Cooling Load 220.846.16NECTED LOAD CALC23.11	Consolidation and Ellicibility 515 Monmouth Street, suite 201 Newport, KY 41071 (859) 261-0585 MEP Consulting Services, Inc. in OH Copyright © 2015 THIS DOCUMENT IS THE PRODUCT AND EXCLUSIVE PROPERTY OF ENGINEERED BUILDING SYSTEMS, INC. Nether The DOCUMENT NOR THE INFORMATION IT CONTAINS MAY BE USED FOR OTHER THAN THE SPECIFIC PURPOSE FOR WHICH IT WAS PREPARED WITHOUT WRITTER CONSENT OF ENGINEERED BUILDING SYSTEMS, INC. DRAWN BY CHECKED PRS PROJECT NO.: 10004 SCALE:AS NOTED
APPLIANCE BREAKDOWN TYPE KVA REFRIGERATOR 0.5 MICROWAVE 1.8 TOTAL 2.3	HVAC Load Calculation Heating Cooling Mini Split 100% of Nameplate Rating of AC and Cooling 00% of Nameplate Rating of Heat Pump w/o Supplmental Heat Heat Pump plus 65% of Supplemental Heat Largest Heating or Cooling Load	KVANEC Code6.166.160.006.16220.82 C(1)0.00220.82 C(2)0.00220.82 C(3)6.16220.84 C(5)		DATE: 04-13-2023 DRAWING TITLE ELECTRICAL DETAI SHEET NO.

															TYP 5
	۲P	C													U209
R(M(FE N(DOM DUNTING D FROM DTE	FLUSH			VOLTS 2 BUS AMP NEUTRAL	08Y/ S 15 100	120V 0 %	′ 3P 4W			A N L	AIC T.B.D. Main BKR M Lugs Feed 1	MLO THRU		0309
CKT #	CKT BKR	LOAD KVA	CIRCUIT	DESC	RIPTION		CKT #	CKT BKR	LOA KVA	ND N	CIRC	UIT DESCRI	PTION		
1 3	30/2 	6.16	VTAC-1			a b	24	50/2 	10		RAN	Œ			
579	15/1 15/1 20/1	1.06 1.69 0.18	E-1, LIG E-2, LIG BATH	GHTING, GHTING	RECEPTACLE RECEPTACLI	E c E a	6 8 10	20/1 20/1 20/1	0.5	 	FRIG. MICR		`F		
11 13	20/1 20/1	0	SPACE SPACE			b 10 20/1 1.5 SMALL APPLIANCE c 12 20/1 1.5 SMALL APPLIANCE a 14 20/1 0 SPACE									
15 17 19	20/1 20/1 20/1	0 0 0	SPACE SPACE SPACE			b c a	16 18 20	20/1 20/1 20/1	0 0 0		SPAC SPAC SPAC	Ж Ж Ж			
21 23	20/1 20/1	0 0	SPACE SPACE			b c	22 24	20/1 20/1	0 0		SPA(SPA(Ж Ж			
OP	LIONAL DV	VELLING I	UNIT CALC	ULATIC	N (NEC 220.82))									
				CONN KVA						COI KV	NN /A	CALC KVA			
S	GHTING AI RECEPTAC MALL-APPI	ND CLES LIANCE		1.8 3	600 SF (3 VA/SF)		GEN U C	IERAL LO/ IP TO 10 K OVER 10 K	ad XVA VA	10 7.1		10 2.84	(100%) (40%)	,	
E	LECTRIC C	S OOKING		2.3 10			MAX CC	(HEATING OOLING	GOR			6.16	(220.82	2(C)(1))	
Т	OTAL GEN	ERAL LOA	AD.	17.1			TOT BAI	AL LOAD	PHASE	=		19			
							LO	AD ASE A	1 1 / (0)	-		52.7 A 142%			Multi
							PH/ PH/	ASE B ASE C				123% 34.8%			Largest H
					1						4		10.0		220.84
TYP				KV	,			HVAC	Load Ca	aiculat	tion		6 16		
REF				0.5	-i				Coolir	ng			6.16		
MICF	ROWAVE			1.8	ŀ				Mini Sr	nlit			0.10		
TOT				2.3			1000	% of Namen	ate Ratir	na of ۵	AC and	Cooling	6 16	220 82 C(1)	
		100% of Nameplate Rating of Heat Pump w/o Supplmental Heat 0.00 220.82 C				220.82 C(2)									
Heat Pump plus 65% of Supplemental Heat 0.00 220.82 C				220.82 C(3)											
	Largest Heating or Cooling Load					6.16	220.84 C(5)								

Γ	ΥP	7												TYP 7 U100
R(M FE N	DOM DUNTING ED FROM DTE	FLUSH	VOLTS 208Y/120V 3P 4W AIC T.B.D. BUS AMPS 150 MAIN BKR M NEUTRAL 100% LUGS FEEDT							Mlo :Dthru		U300		
CKT #	CKT BKR	LOAD KVA	CIRCUIT		IPTION		CKT #	CKT BKR	LOAD KVA	CIRC	UIT DESC	RIPTION		
1 3 7 9 11 13 15 17 19 21 23 0P	30/2 15/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20	6.16 1.24 1.67 0.18 0 0 0 0 0 0 0 0 0 0 0	VTAC-1 E-1, LI E-2, LI BATH SPACE SPACE SPACE SPACE SPACE SPACE SPACE	GHTING, GHTING, CULATIOI	RECEPTACLE RECEPTACLE	TION # BKR KVA CIRCUIT DESCRIPTION a 2 50/2 10 RANGE b 4								
L S A E T	IGHTING AI RECEPTAC MALL-APPI PPLIANCE LECTRIC C OTAL GEN	ND Cles Liance S Ooking Eral Lo <i>f</i>	٩D	KVA 1.95 3 2.3 10 17.3	– 650 SF (3 VA/SF)		GEN U C MAX CC TOT BAL	IERAL LOA IP TO 10 K' IVER 10 K\ I HEATING IOLING AL LOAD ANCED 3-F	D VA 10 VA 7.28 OR PHASE	5	10 2.9 6.16 19.1	- (100% (40%) (220.8) 2(C)(1))	
							LO PH/ PH/ PH/	AD ASE A ASE B ASE C			52.9 A 141% 122% 36.6%			Multi-Fan Tot Largest Heatii 220.84 CO
	APPI	LIANCE BR	Eakdown					HVAC Load	d Calculatio	on		KVA	NEC Code	
REF	<u>-</u> RIGERATOR			0.5	1			He	ating			6.16		
MICI	ROWAVE			1.8]			Co	oling			6.16		
тот	TOTAL 2.3 VIIII Split 0.00				220 22 0/4									
					Largest Heating of Cooling Load					220.02 0(1)				
						He	eat Pu	mp plus 65%	6 of Supple	mental	Heat	6.16	220.84 C(3)	

DICTION WITH INFORMATION CONSTRUCTION MANAGER, βŞ TIES HAVIN WITH AN (2:\~Project Directories\1000-10001\10041 - Talbert House for Veterans - Cincinnati OH\~Construction Documents\10041-E404-ELECTRICAL-DETALS.dwg-EBS. Plot Date/Time: Apr 13, 2023-12:51pm - By: tim.ziebold The Second Secon

amily Dwelling Unit Calc	KVA
Fotal General Load	17.1
ating or Cooling Load 220.84	6.16
CONNECTED LOAD CALC	23.26

mily Dwelling Unit Calc	KVA
otal General Load	17.3
ating or Cooling Load 220.84	6.16
ONNECTED LOAD CALC	23.41

TY	Ρ	6										
ROOM MOUNTI FED FR NOTE	ING OM	FLUSH			VOL ⁻ BUS NEU	TS 208 AMPS TRAL 1	Y/1 15 009	120V 0 %	3P 4W	1		
CKT CKT # BKR		LOAD KVA	CIRCUIT		PTION		Τ	CKT #	CKT BKR	LC K\)AD /A	CIR
1 30/2 3 5 15/1 7 15/1 9 15/1 11 20/2 13 20/2 15 20/2 17 20/2 19 20/2 21 20/2 23 20/2	2 1 1 1 1 1 1	6.16 1.24 1.13 0.92 0.18 0 0 0 0 0 0 0	VTAC-1 E-1, LI LIGHTING E-2, LI BATH SPACE SPACE SPACE SPACE SPACE SPACE SPACE	GHTING, F G, RECEP GHTING, I	RECEP	TACLE TACLE	арсарсарс	2 4 6 8 10 12 14 16 18 20 22 24	50/2 20/1 20/1 20/1 20/1 20/1 20/1 20/1 2	10 0.1 1.8 1.9 0 0 0 0 0 0 0	5 3 5 5	RAN FRI MIC SM/ SP/ SP/ SP/ SP/ SP/ SP/
OPTIONA	AL DW	I /ELLING (JNIT CAL	CULATION CONN KVA	(NEC 2	20.82)		I	1		CC K	DNN VA
LIGHTIN RECE SMALL- APPLIA ELECTR TOTAL	NG AN PTAC APPL NCES RIC C GENE	ND SLES JANCE S OOKING ERAL LOA	۸D	1.8 3 2.3 10 17.1	- 600 S (3 VA	SF √SF)		GEN U O MAX CO TOT. BAL/	ERAL LC P TO 10 VER 10 H HEATING OLING AL LOAD ANCED 3	DAD KVA KVA G OR -PHAS	10 7.1 SE	
								LO, PHA PHA PHA	AD ASE A ASE B ASE C			
	APPL	IANCE BRE	AKDOWN						HVAC Lo	ad Cal	culatic	n
TYPE REFRIGER				KVA					H	leating]	
MICROWAV	/E			1.8					(Cooling	3	
TOTAL				2.3					N	l ini Spl	it	
							100	% of N	lameplate	Rating	g of AC	and (
								Lar	gest Heat	ing or (Cooling	g Load
							He	at Pur	np plus 6	5% of S	Supple	menta

Τ	ΥP	8											
RC MC FE NC	DOM DUNTING D FROM DTE	FLUSH				VOL BUS NEU	TS 208 AMPS TRAL 1	Y/1 15 009	20V 0 %	3P 4W			
CKT #	CKT BKR	LOAD KVA	CIRCUIT	DI	ESCRI	PTION		Т	CKT #	CKT BKR	LO, KV	AD A	CIR
1 3 5 7 9 11 13 15 17 19 21	30/2 15/1 15/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	6.16 1.06 1.13 0.18 0 0 0 0 0 0	VTAC-1 E-1, LI E-2, LI BATH SPACE SPACE SPACE SPACE SPACE SPACE	GHT GH1	ΊNG, ΠNG,	RECEP	TACLE	а b с а b с а b	2 4 6 8 10 12 14 16 18 20 22	50/2 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	10 0.5 1.8 1.5 0 0 0 0	,)	RAI FRI MIC SM SP SP SP
OP	TIONAL DV	VELLING		CUL	ATION	I (NEC 2	20.82)	C	24	2071	0	CC	
LI SI AI EI	GHTING A RECEPTAC MALL-APPI PPLIANCE LECTRIC C	ND CLES LIANCE S :OOKING		1.6 3 2.3 10	5	- 550 \$ (3 VA	SF √SF)		GEN U O MAX CO	ERAL LO. P TO 10 k VER 10 K HEATING	AD (VA VA 6 OR	10 6.95	5
T	OTAL GEN	ERAL LOA	AD	17		_			TOTA BALA LOA PHA PHA PHA	AL LOAD ANCED 3- AD ASE A ASE B ASE C	PHAS	E	
	APP	LIANCE BRI	EAKDOWN							HVAC Loa	d Calc	ulatic	m
TYPE					KVA					Н	eating		
REF					0.5					С	ooling		
					1.0 23					Mi	ni Split	i	
					۷.3			100	% of N	lameplate	Rating	of AC	and
									Lar	gest Heati	ng or C	oolina	g Loa
										-			-

Largest Heating or Cooling Load Heat Pump plus 65% of Supplemental Heat



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GENERAL CONTRACTOR, ETC. EBS ACCEPTS NO RESPONSIBILITY OR THE COMPLIANCE OR CONDITION OF EXISTING EQUIPMENT AND WIRING.

[7	-YP	9															T	YP 9 1104							
R M FI N	OOM OUNTING ED FROM OTE	FLUSH			VOLTS 208 BUS AMPS NEUTRAL 1	Y/ 15 00	120V 0 %	/ 3P 4W				AIC T.B.D. MAIN BKR LUGS FEE	ML DTH	.0 RU				1304							
CK1 # 1 3 5 7 9 11 13 15 17 19 21 23	CKT BKR 30/2 15/1 15/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20	LOAD KVA 6.16 1.46 0.18 0 0 0 0 0 0 0 0 0	CIRCUIT VTAC-1 E-1, LIC E-2, LIC BATH SPACE SPACE SPACE SPACE SPACE SPACE SPACE SPACE	⁻ DESCRI GHTING, GHTING,	PTION RECEPTACLE RECEPTACLE	0 4 6 0 4 6 0 4 6 0 4 6	CKT # 2 4 6 8 10 12 14 16 18 20 22 24	CKT BKR 50/2 20/1 20/1 20/1 20/1 20/1 20/1 20/1 20/1	LOA KVA 10 0.5 1.8 1.5 1.5 0 0 0 0 0 0 0	D \	CIRC RAN FRIG MICF SMA SPA SPA SPA SPA	CUIT DESC GE COWAVE LL APPLIA LL APPLIA CE CE CE CE CE CE CE	NCE	ΠΟΝ	1										
OF L S F T	PTIONAL DV IGHTING AI RECEPTAC MALL-APPI APPLIANCES LECTRIC C	VELLING ND CLES LIANCE S OOKING ERAL LOA	UNIT CALO	CULATION CONN KVA 1.65 3 2.3 10 17	(NEC 220.82) - 550 SF (3 VA/SF)		GEN U C MAX CC TOT BAL LO PH/ PH/ PH/	IERAL LOA JP TO 10 KV OVER 10 KV (HEATING OOLING AL LOAD ANCED 3-P OAD ASE A ASE B ASE C	D /A /A OR PHASE	CC K 10 6.95	DNN VA	CALC KVA 10 2.78 6.16 18.9 52.6 A 141% 124% 35.1%	- (1((4((22	00%) 0%) 20.82) 2(C	5)(1))		Multi _argest F 220.84	-Family Total G leating o CONN	Dwelli Senera or Coo ECTE	i ng Un I Load ling Lo	it Calc 1 oad 22	20.84 -C	KV 17.0 6.16 23.1	<u>م</u>) ک
TYP REF MIC TOT	APPI E RIGERATOR ROWAVE AL	LIANCE BRI	EAKDOWN	KVA 0.5 1.8 2.3		100 Не	% of I La	HVAC Load He Co Min Nameplate R rgest Heating mp plus 65%	I Calcu ating oling i Split ating o g or Co 6 of Sup	of AC oling	n and C g Load mental	ooling Heat	• • • •	KVA 5.16 5.16 5.16 5.16 5.16 5.16	N 22 22 22	20.82 C(1) 20.84 C(5) 20.84 C(3)	<u>C</u>				<u> </u>			 	<u> </u>



RI	SER	#1					
ROOM MOUN FED NOTE	NTING FLUSH FROM MDP		VC	DLTS 208Y ,	/120V 3	P 4W	
СКТ						DAD KV	A
#	IRIP/PULES	CIRCUIT DESCRIP	TION		<u> </u>	В	C
1	150/3	PANEL U001			45.5	39	12.2
		TOTAL CONNE	CTED KVA	BY PHASE	45.5	39	12.2
OPTIC	ONAL MULTIFAM	ILY DWELLING CALC	ULATION (NE KVA	EC 220.84)			
LIGł	HTING AND REC	EPTACLES	6.6	2,200 SF (3 VA/SE)		CON	NECTE
SMA	ALL-APPLIANCE		12			DWE	LLING U
APF	LIANCES		9.2			DEM	AND FA
ELE	CTRIC COOKING	6	40			CAL	CULATE
HEA	TING		24.6	(100%)		BAL	ANCED 3
COC	DLING		24.6	(0%)			

RI	SER	#3						
ROON MOUN FED NOTE	ANTING FLUSH FROM MDP		VOL	ts 208y ,	/120V 3	P 4W		AIC LU
СКТ	BREAKER				L	DAD KV	A	
#	TRIP/POLES	CIRCUIT DESCRI	PTION		Α	В	С	FEEDER RACE
1	150/3	PANEL U003			44.7	39	12.2	3#2/0 AL,#2
		TOTAL CON	NECTED KVA B	Y PHASE	44.7	39	12.2	
OPTI	ONAL MULTIFAN	IILY DWELLING CAL	CULATION (NEC	220.84)				
LIG	HTING AND REC	EPTACLES	6.6	2,200 SF		CON	NECTED	LOAD
SMA APF ELE	ALL-APPLIANCE PLIANCES CTRIC COOKING	3	12 9.2 40	(100%)		DWE DEM CALC BALA	ELLING UI AND FAC CULATED ANCED 3-	NITS CTOR LOAD PHASE LOAD
COC	DLING		24.0 24.6	(100%) (0%)				

RISER	#5										R	SER	#6							
ROOM MOUNTING FLUSH FED FROM MDP NOTE		VOL	_TS 208Y ,	/120V 3	3P 4W	AIC T.B.D. LUGS STANDARD						M NTING FLUSH FROM MDP E		VC	olts 208 4,	/120V 3	P 4W		AIC LU	; т GS
CKT BREAKER # TRIP / POLES		PTION		L	OAD KV	'A	FEEDER RAC	EWAY AND CO	NDUCTORS		CKT	BREAKER		RIPTION				A	FEEDER RACE	WAY
1 150/3	PANEL U108			33.6	29.3	9.16	3#2/0 AL,;	#2/0 AL N,#	4 AL G		1	150/3	PANEL U107			33.6	29.3	9.16	3#2/0 AL,#2	2/0
I	I											<u> </u>								
	TOTAL CON	NECTED KVA E	BY PHASE	33.6	29.3	9.16							TOTAL CO	NNECTED KVA	BY PHASE	33.6	29.3	9.16		
OPTIONAL MULTIFAM	ILY DWELLING CAI	CULATION (NEC	220.84)						KVA		OPT	ONAL MULTIFAI	MILY DWELLING C	ALCULATION (NE KVA	EC 220.84)					
LIGHTING AND RECE	EPTACLES	4.95	1,650 SF (3 VA/SF))	CON	INECTED	LOAD		69.3		LIG	HTING AND REC	CEPTACLES	4.95	1,650 SF (3 VA/SF)	CON	NECTED	LOAD	
SMALL-APPLIANCE APPLIANCES ELECTRIC COOKING	2	9 6.9 30	(****)	,	DWE DEM CAL	ELLING UI IAND FAC CULATED	NITS STOR D LOAD		3 (45%) 31.2		SM API ELE	ALL-APPLIANCE PLIANCES ECTRIC COOKIN	G	9 6.9 30			DWE DEM CAL(ELLING UI AND FAC CULATED	NITS STOR D LOAD	
HEATING COOLING		18.5 18.5	(100%) (0%)		BAL	ANCED 3-	PHASE LOAD		86.6 A		HE/ CO	ATING OLING	-	18.5 18.5	(100%) (0%)		BALA	ANCED 3-	PHASE LOAD	
								Riser	#5											R
					220.8	4 Multi-Fam	nily Calculation	KVA	Qty	Total KVA							220.84	4 Multi-Fan	nily Calculation	
						Total Oria	TYP 2	23.11	3	69.33									TYP 1	
						iotal Qual	ning and Connec	ieu Loau =	5	69.3									ITP 2	

Total KVA

92.44

92.4



FEEDER RACEWAY AND CONDUCTORS

KVA

Qty

4

4

92.4

(45%)

41.6

115 A

Riser #3

KVA

23.11

220.84 Multi-Family Calculation

TYP 2

Total Quantity and Connected Load =

3#2/0 AL,#2/0 AL N,#4 AL G

RI	SER	#2							
ROON MOUN FED NOTE	M NTING FLUSH FROM MDP		V	'OLTS 208Y,	/120V 3	P 4W		A LU	IC JG
СКТ					L	DAD KV	Ά		
#	IRIP/PULES				A	B	C	FEEDER RAU	
	150/3	PANEL U002			45.3	39	12.2	3#2/0 AL,#	<u></u> #2/
					45.7	70	40.0		
		TOTAL CO	NNECTED KVA	BY PHASE	45.3	39	12.2		
OPTIC	ONAL MULTIFAM	ILY DWELLING C	ALCULATION (N	EC 220.84)					
LIGH	HTING AND RECH	EPTACLES	6.6	2,200 SF		CON	INECTED	LOAD	
SMA	ALL-APPLIANCE		12	(3 VA/SF)		DWE	ELLING U	NITS	
APF	PLIANCES		9.2			DEM	IAND FAC	CTOR	
ELE	CTRIC COOKING	3	40						
HEA	TING		24.6	(100%)		BAL/	ANCED 3	-PHASE LUAD	
	DLING		24.6	(0%)					
						220.9			
						220.0	4 Mulu-Fai	TYP 3	
								TYP 4	
							Total Qua	ntity and Connec	ted
									_
		<i> </i>							

ROOM MOUI FED NOTE	M NTING FLUSH FROM MDP		N	VOLTS 208Y,	/120V 3	ip 4W			AI LU	
СКТ	BREAKER				L	OAD KN	/A			
#	TRIP/POLES	CIRCUIT DESCR	IPTION		А	В	С	FEEDER	RACE	
1	150/3	PANEL U004			44.7	39	12.2	3#2/0	AL,#	
		TOTAL CON	NECTED KVA	A BY PHASE	44.7	39	12.2			
OPTI	ONAL MULTIFAM	IILY DWELLING CA	LCULATION (N KVA	IEC 220.84)						
LIGI	HTING AND REC	EPTACLES	6.6	2,200 SF (3 VA/SF)		CO	NECTED) LOAD		
SMA	ALL-APPLIANCE		12	(0 11 0 0 1)		DWI	ELLING U	NITS		
APF	PLIANCES		9.2			DEN	AND FAC	CTOR		
ELE	CTRIC COOKING	3	40			CAL	CULATE	D LOAD		
HEA	ATING		24.6	(100%)		BAL	ANCED 3	-PHASE L	OAD	
~~~			24.6	(0%)						

220.84 Multi-Family Calculation	
TYP 2	
Total Quantity and Conne	cted

220.84 Multi-Family Calculation	
TYP 1	
TYP 2	
Total Quantity and Conne	cted



	IIIIIIIIIIIIII	A DROTTON	PE PE		R/G	HO WINNING		
ISSUANCES	DATE NO. DESCRIPTION 01/18/2023 80% OHFA Review	04/13/2023 PERMIT SET						
	Ceider House for Vereralis / Nevalip	Eamily Recidences			JEST CH REDT AVE		CINCINNATI. OH	
D	CO THIS IS PROPE ON SPECI WIT	Shared Collabo 515 Mor ewport, K EP Cons Cocument, K EP Cocument, K EP Cocum	SY Sy Sy Sy Sy Sy Sy Sy Sy Sy Sy Sy Sy Sy	GIN Street 1 (8:3 Bervice PRODU ED BUIL FOR WHICH NSENT YSTEM:	PR IEEI JING SMS Throuu Efficie S09) 261 SMS SMS SMS SMS SMS SMS SMS SMS SMS SM	- 1 REI BIN BOD SIN BOD SIN BOD SIN BOD SIN CKI	100. D C. SIVE 	41 BY
PF S( D/		JEC LE:/ E: RA TR	:T   AS 04- WI IC/	NC NC -13 NC	).: DT G-2( G T DI	10 ED 02: ITTI	04 [^] 3 _E AIL	1 S
		s⊦		=⊤ - <b>(</b>	NC )(	). 0.		

RI	SER	#7							
ROON MOUN FED NOTE	ANTING FLUSH FROM MDP		V	OLTS <b>208Y</b> ,	/120V 3	P4W			
CKT	BREAKER				L	OAD KV	A		
#					A	В	С		
1	150/3	PANEL U209		23.1	19.5	6.11			
		TOTAL CON	NECTED KVA	BY PHASE	23.1	19.5	6.11		
OPTI	ONAL MULTIFAM	ILY DWELLING CA	LCULATION (N KVA	EC 220.84)					
LIG		EPTACLES	3.6	1,200 SF		CON	NECTED		
			0.0	(3 VA/SF)		DWF			
SMA			6						
			4.6			DEM	AND FAC		
ELE		j	20	(4000())		CAL	CULATED		
		(100%)	(100%) BALANCED 3						
			12.3	(0%)					

RI	SER	#9					
ROON MOUN FED NOTE	/ NTING <b>FLUSH</b> FROM <b>MDP</b>		V	OLTS <b>208Y</b> ,	/120V 3	P4W	
СКТ #	BREAKER TRIP/POLES	CIRCUIT DESCR	IPTION		L A	OAD KV B	A C
1	150/3	PANEL U207		22.4	19.5	6.11	
		TOTAL CON	INECTED KVA	BY PHASE	22.4	19.5	6.11
OPTI	ONAL MULTIFAM	IILY DWELLING CA	LCULATION (N KVA	EC 220.84)			
LIG	HTING AND REC	EPTACLES	3.3	1,100 SF		CON	NECTED
SMA	ALL-APPLIANCE		6	(3 74/31 )		DWE	LLING U
APF			DEM	AND FA			
ELE HEA COC	CTRIC COOKING ATING DLING	CALCULAT BALANCED					

		111 1											111 0						
RI	SER	#									RI	<u>Sek</u>	<u>#12</u>						
ROOI MOU FED NOTE	M NTING <b>FLUSH</b> FROM <b>MDP</b> E		VC	olts <b>208y/</b>	/120V 3	3P 4W		AIC <b>T.B.D.</b> LUGS <b>STANDAF</b>	RD		ROOM MOUN FED NOTE	1 NTING <b>FLUSH</b> FROM <b>MDP</b>		V	dlts <b>208y</b> ,	/120V	3P 4W		AIC T LUGS
CKT	BREAKER			-	L	OAD KV	'A				СКТ	BREAKER		SCRIPTION			LOAD KV	A	
#	IRIP/PULES		PTION		A	B	C	FEEDER RACEWAY AND CONL			#	IRIP/PULES				A	B	C	FEEDER RACEWAY
	150/3	PANEL 0205			22.4	19.5	0.11	3#2/0 AL,#2/0 AL N,#4	AL G			150/3	PANEL UIU	4		54	29.5	9.10	3#2/0 AL,#2/0
		TOTAL CON	NECTED KVA	BY PHASE	22.4	19.5	6.11						TOTAL	CONNECTED KVA	BY PHASE	34	29.3	9.16	
OPTI	ONAL MULTIFAN	AILY DWELLING CAL	CULATION (NE	EC 220.84)		I	I		KVA		ΟΡΤΙΟ	ONAL MULTIFAN	IILY DWELLING	G CALCULATION (NE KVA	EC 220.84)			I	L
LIG	HTING AND REC	EPTACLES	3.3	1,100 SF (3 VA/SF)		CON		LOAD 4	46.2		LIGH	ITING AND REC	EPTACLES	4.95	1,650 SF (3 VA/SF)	)	CON		
SM API FLF	ALL-APPLIANCE PLIANCES CTRIC COOKING	G	6 4.6 20			DEN	IAND FAC	TOR (I 2	2 NEC 220.85)		SMA APP FLF	ALL-APPLIANCE LIANCES	3	9 6.9 30			DEN	AND FAC	TOR LOAD
HE/ CO	ATING OLING		12.3 12.3	(100%) (0%)		CAL BAL	CULATED ANCED 3	PHASE LOAD 3	31.2 36.6 A		HEA	TING DLING		18.5 18.5	(100%) (0%)		BAL	ANCED 3	PHASE LOAD
								Riser #	÷11		L								
						220.8	4 Multi-Fan	nily Calculation KVA	Otv	Total KVA								2	20.84 Multi-Family Calculati
						220.0		TYP 2 23.11	2	46.22									TYP Total Quantity and Con
							Total Qua	ntity and Connected Load =	2	46.2									



RI	SER	#8						
ROO MOU FED NOTE	M NTING <b>FLUSH</b> FROM <b>MDP</b> E		V	/OLTS <b>208Y,</b>	/120V 3	5P 4W		AIC LUGS
СКТ	BREAKER				L	OAD KV	A	
#	IRIP/PULES	CIRCUIT DESCRI	IP HON		A	B	C	FEEDER RACEWA
	150/3	PANEL UTU6			33.0	29.3	9.10	5#2/0 AL,#2/0
		TOTAL CON	NECTED KVA	BY PHASE	33.6	29.3	9.16	
OPTI	ONAL MULTIFAN			IEC 220.84)				
			KVA	,				
LIG	HTING AND REC	EPTACLES	4.95	1,650 SF		CON	INECTED	LOAD
SM	ALL-APPLIANCE		9	(3 VA/SF)		DWE	ELLING U	NITS
API	PLIANCES		6.9			DEM		CTOR
ELE	ECTRIC COOKING	G	30					
HE/	ATING		18.5	(100%)		DAL		-FHASE LOAD
	OLING		18.5	(0%)				
								I
						220.8	4 Multi-Far	nily Calculation
								TYP 1
							TILO	TYP 2
							Total Qua	ntity and Connected I
RI	SER	#10						
ROO MOU FED NOTE	M NTING <b>FLUSH</b> FROM <b>MDP</b> E		٨	/olts <b>208y,</b>	/120V 3	5P 4W		AIC LUGS
СКТ	BREAKER				L	OAD KV	A	
1	150 /3	PANEL 1105			A 336	8 29 3		
	100/0	FANEL 0105			55.0	29.3	3.10	J#2/U AL,#2/

TOTAL CON	BY PHASE	33.6	29.3	9.16							
OPTIONAL MULTIFAMILY DWELLING CA	ALCULATION (N KVA	IEC 220.84)									
LIGHTING AND RECEPTACLES	4.95	1,650 SF (3 VA/SF)		CON	ONNECTED LOAD						
SMALL-APPLIANCE	9			DWE	LLING UI	NITS					
APPLIANCES	6.9			DEM	AND FAC	TOR					
ELECTRIC COOKING	30			CAL	CULATED	LOAD					
HEATING	18.5	(100%)		BALA	ANCED 3-	PHASE LOAD					
COOLING	18.5	(0%)									



		* PROFILIN	A PE		R G ATT	HIO MAN	THIN CER *	
ISSUANCES	DATE NO. DESCRIPTION 01/18/2023 80% OHEA Review	04/13/2023 PERMIT SET						
	Geiger House for Veterans / Klekamp	Eamily Recidence			JE31 CH REDT AVE		CINCINNATI. OH	
	N THIS PROPE NEITH SPEC SPEC WIT	Shared Collabo 515 Mor lewport, K MEP Cons COLUMEN RTY OF EN ER THE DC TTAINS MAI IFIC PURPH HOUT WRI BU	EN BU SY d Suc ration mouth Y 4107 Sulting 8 Sopyrig Sumouth Y 4107 Sulting 8 Sopyrig Sumouth Y 4107 Sulting 8 Sopyrig Sumouth Y 4107 Sulting 8 Sopyrig Sub Sopyrig Sub Sopyrig Sub Sopyrig Sopyrig Sub Sopyrig Sopyrig Sub Sopyrig So	GIN STREET Street 1 (8: Service th © 20 20 20 20 20 20 20 20 20 20 20 20 20 2	PR IEEI DING Efficie s, Suite 59) 261 Solite 59) 261 Solite Solit	- 1 REI S IN S IN S IN S IN S IN S IN S IN S I	IOO C. SIVE 5, INC. DN IT RED DD	41
P S D EL		VN E AZ JEC LE:/ E: DRA	SY TI AS 04- WI	NC NC -13 NC	DI: DI: DI: DI: DI: DI: DI:	ED D2:	ED S 04 ⁻ 3 LE AIL	вү 1 _S
		s⊦ E		=⊤ - <b>(</b>		). 7		

RISER	#13							]	ISER	#14						
ROOM MOUNTING <b>FLUSH</b> FED FROM <b>MDP</b> NOTE		Ň	VOLTS <b>208Y</b> ,	/120V	3P 4W		AIC <b>T.B.D.</b> LUGS <b>STANDARD</b>	ROO MOU FED NOT	M INTING <b>FLUS</b> FROM <b>MDP</b> E	5H	VOLTS <b>208</b> Y	<b>/</b> 120V	3P 4W		AIC <b>T.B.D</b> Lugs <b>St</b> A	ANDARD
CKT BREAKER					LOAD KN	/A		СКТ	BREAKER				LOAD K	/A		
# IRIP/POLES	PANEL 1103	PHON		A 33.6	<u> </u>	C 9.16	342/0 AL 42/0 AL N 44 AL C	- # - 1	150/3	PANEL 1102		A 33	<u> </u>	C 9.16	JH2/O AL H2/O AL	
1 130/3	FANEL 0105			55.0	29.5	9.10	5#2/0 AL,#2/0 AL N,#4 AL 6		13073	FANLE 0102			29.5	9.10		···,#+ ^
	TOTAL CONN	NECTED KVA	A BY PHASE	33.6	29.3	9.16		-		TOTAL CO	NNECTED KVA BY PHASE	33	29.3	9.16		
OPTIONAL MULTIFAM	AILY DWELLING CAL	CULATION (N	NEC 220.84)					OPT		AMILY DWELLING C	ALCULATION (NEC 220.84)					
		KVA					KVA				KVA					
LIGHTING AND REC	EPTACLES	4.95	1,650 SF (3 VA/SF)	)	CON	NECTED	LOAD 69.3	LIG	HTING AND RI	ECEPTACLES	4.95 1,650 SF (3 VA/SF	· ·)	COI	NNECTE	DLOAD	69.3
SMALL-APPLIANCE		9		/	DWI		NITS 3	SM	IALL-APPLIANC	CE	9	/	DW	ELLING U	JNITS	3 (45
APPLIANCES	-	6.9					(43%)	AP			6.9					(45 31
	3	30 19 5	(1009/)		BAL	ANCED 3	-PHASE LOAD 86.6 A			ING	30		BAL	ANCED 3	3-PHASE LOAD	86.
COOLING		18.5 18.5	(100%) (0%)						OLING		18.5 (100%) 18.5 (0%)					
							Riser #13									Rise
															220.94 Multi Family Coloulation	
						2	TYP 2         23.11         3         69.33	-							TYP 8	23.11
							Total Quantity and Connected Load = 3 69.3								Total Quantity and Connecte	d Load =
RISER	#15							R	ISER	#16						
ROOM MOUNTING <b>FLUSH</b> FED FROM <b>MDP</b> NOTE		Y	VOLTS <b>208Y</b> ,	/120V	3P 4W		AIC <b>T.B.D.</b> LUGS <b>STANDARD</b>	ROO MOU FED NOT	M INTING <b>FLUS</b> FROM <b>MDP</b> E	SH	VOLTS 208Y	<b>⁄/120V</b>	3P 4W		AIC <b>T.B.D</b> Lugs <b>St</b>	ANDARD
CKT BREAKER		PTION			LOAD K	/A	FEEDER RACEWAY AND CONDUCTORS	CKT			RIPTION		LOAD KY	/A		
1 150/3	PANEL U101			A 33	<u> </u>	10.2	3#2/0 AL $#2/0$ AL N $#4$ AL G	$\frac{\pi}{1}$	150/3	PANEL U100		A 34.6	29.3	97	3#2/0 AL #2/0 AL	N #4 A
	TOTAL CONN	NECTED KVA	A BY PHASE	33	31.5	10.2		1		TOTAL CO	NNECTED KVA BY PHASE	34.6	29.3	9.7		
OPTIONAL MULTIFAM	ILY DWELLING CAL	CULATION (N	NEC 220.84)	1			Ι	OPT	IONAL MULTIF	AMILY DWELLING C	ALCULATION (NEC 220.84)				•	
		KVA					KVA				KVA					
LIGHTING AND REC	EPTACLES	5.4	1,800 SF	<b>`</b>	CON	NECTED	LOAD 69.8	LIG	HTING AND RI	ECEPTACLES	5.85 1,950 SF	•	COI	NECTE	D LOAD	70.:
SMALL-APPLIANCE		Q	(3 VA/SF)	)	DWI	ELLING U	NITS 3	SM		CF	(3 VA/SF 9	)	DW	ELLING L	JNITS	3
APPLIANCES		6.9			DEN	AND FA	CTOR (45%)				6.9		DEN	/AND FA	CTOR	(45
ELECTRIC COOKING	3	30			CAL	CULATEI	DLOAD 31.4	ELI	ECTRIC COOK	ING	30		CAL	CULATE	D LOAD	31.
HEATING		18.5	(100%)		BAL	ANCED 3	-PHASE LOAD 87.1 A	HE	ATING		18.5 (100%)		BAL	ANCED	3-PHASE LOAD	87.
COOLING		18.5	(0%)					CC	OLING		18.5 (0%)					
							Riser #15	1 -								Riser
						22	0.84 Multi-Family Calculation KVA Qty Total KVA	-						2	20.84 Multi-Family Calculation	KVA
							TYP 6         23.26         3         69.78	]							TYP 7	23.41
							Total Quantity and Connected Load = 3 69.8	-							Total Quantity and Connected	J Load =
						L										

RISER	#13							RI	SER	#14				
ROOM MOUNTING <b>FLUSH</b> FED FROM <b>MDP</b> NOTE		VC	DLTS <b>208Y</b> /	/120V 3	3P 4W		AIC <b>T.B.D.</b> LUGS <b>STANDARD</b>	ROOI MOU FED NOTE	M NTING <b>FLUSH</b> FROM <b>MDP</b> E	VOLTS 208Y	/120V 3	3P 4W		AIC LUGS
CKT BREAKER				L	OAD KV	/A		CKT	BREAKER			OAD KV	4	
# IRIP/POLLS		IIUN		A 33.6	B 29.3	C 9.16	342/0 AL 42/0 AL N 44 AL C	#	150/3		A 33	B 29.3	C 9.16	342/0 AL #2/0
1 13073	FANEL 0103			55.0	29.5	9.10	5#2/0 AL,#2/0 AL N,#4 AL G		13073	FANEL 0102		29.5	9.10	3#2/0 AL,#2/0
	TOTAL CONNE	CTED KVA	BY PHASE	33.6	29.3	9.16				TOTAL CONNECTED KVA BY PHASE	33	29.3	9.16	
OPTIONAL MULTIFAM	MILY DWELLING CALCU	ULATION (NE	C 220.84)					OPTI	ONAL MULTIFAI	MILY DWELLING CALCULATION (NEC 220.84)				
LIGHTING AND REC SMALL-APPLIANCE APPLIANCES ELECTRIC COOKING HEATING COOLING	CEPTACLES G	4.95 9 6.9 30 18.5 18.5	1,650 SF (3 VA/SF) (100%) (0%)		CON DWE DEM CAL BAL	NNECTED ELLING UI IAND FAC CULATED ANCED 3	IOAD     69.3       NITS     3       CTOR     (45%)       D LOAD     31.2       -PHASE LOAD     86.6 A	LIG SM, APF ELE HE/ CO	HTING AND REC ALL-APPLIANCE PLIANCES ECTRIC COOKIN ATING OLING	CEPTACLES 4.95 1,650 SF (3 VA/SF 9 6.9 G 30 18.5 (100%) 18.5 (0%)	1	CON DWE DEM CALC BALA	NECTED LLING U AND FAC CULATEI NCED 3	LOAD NITS CTOR D LOAD -PHASE LOAD
	//1 5						XISEI #IS         20.84 Multi-Family Calculation       KVA       Qty       Total KVA         TYP 2       23.11       3       69.33         Total Quantity and Connected Load =       3       69.3			//1 C			2:	20.84 Multi-Family Calculati TYF Total Quantity and Co
RISER	<u>#IS</u>							RI	SEK	<u>#10</u>				
ROOM MOUNTING <b>FLUSH</b> FED FROM <b>MDP</b> NOTE		VC	DLTS <b>208Y</b> /	/120V 3	3P 4W		AIC <b>T.B.D.</b> LUGS <b>STANDARD</b>	ROOI MOU FED NOTE	M NTING <b>FLUSH</b> FROM <b>MDP</b> E	VOLTS <b>208</b> Y	/120V 3	3P 4W		AIC T LUGS
CKT BREAKER # TRIP / POLES		ΓΙΟΝ		L	OAD KV	/A	FEEDER RACEWAY AND CONDUCTORS	CKT	BREAKER	CIRCUIT DESCRIPTION		LOAD KV	۹	FFEDER RACEWAY
1 150/3	PANEL U101			 33	31.5	10.2	3#2/0 AL.#2/0 AL N.#4 AL G	$\frac{\pi}{1}$	150/3	PANEL U100	A 34.6	29.3	<u> </u>	3#2/0 AL.#2/0
	TOTAL CONNE	CTED KVA	BY PHASE	33	31.5	10.2				TOTAL CONNECTED KVA BY PHASE	34.6	29.3	9.7	
OPTIONAL MULTIFAN LIGHTING AND REC SMALL-APPLIANCE APPLIANCES ELECTRIC COOKING HEATING COOLING	MILY DWELLING CALCU	ULATION (NE KVA 5.4 9 6.9 30 18.5 18.5	EC 220.84) 1,800 SF (3 VA/SF) (100%) (0%)		CON DWI DEM CAL BAL	NECTED ELLING UI IAND FAC CULATEE ANCED 3	KVA           69.8           NITS         3           CTOR         (45%)           D LOAD         31.4           -PHASE LOAD         87.1 A	OPTI LIG SM, API ELE HE/ CO	ONAL MULTIFAI HTING AND REC ALL-APPLIANCE PLIANCES ECTRIC COOKIN ATING OLING	MILY DWELLING CALCULATION (NEC 220.84) KVA 2EPTACLES 9 6.9 G 30 18.5 (100%) 18.5 (0%)	)	CON DWE DEM CALO BALA	NECTED LLING U AND FAC CULATEI NCED 3	LOAD NITS CTOR D LOAD -PHASE LOAD
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#### ELECTRICAL SPECIFICATIONS 1. GENERAL DEMOLITION

a. REFER TO ARCHITECTURAL DRAWINGS, GENERAL NOTES, INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, SUPPLEMENTARY GENERAL CONDITIONS, BASE BUILDING SPECIFICATIONS AND DRAWINGS, SHOP DRAWING MANUALS AND AS-BUILT PLANS, EXCEPT AS NOTED HEREIN, WHICH APPLY IN ALL RESPECTS TO THIS SECTION. THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS PRIOR TO BIDDING THE WORK

2. USE OF DRAWINGS AND SPECIFICATIONS

a. EBS DRAWINGS AND SPECIFICATIONS ARE INTENDED TO CONVEY DESIGN INTENT ONLY. ALL MEANS AND METHODS SEQUENCES, TECHNIQUES, AND PROCEDURES OF CONSTRUCTION AS WELL AS ANY ASSOCIATED SAFETY PRECAUTIONS AND PROGRAMS, AND ALL INCIDENTAL AND TEMPORARY DEVICES REQUIRED TO CONSTRUCT THE PROJECT, AND TO PROVIDE A COMPLETE AND FULLY OPERATIONAL ELECTRICAL SYSTEM ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

3. STANDARDS

a. MATERIALS EQUIPMENT AND MATERIALS SHALL CONFORM WITH APPROPRIATE PROVISIONS OF NEC, ASTM, UL, ETL, NEMA, ANSI, AS APPLICABLE TO EACH INDIVIDUAL UNIT OR ASSEMBLY.
4. CODES

 a. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE DRAWINGS/SPECIFICATIONS AND THE CODES AND ORDINANCES, THE HIGHEST STANDARD SHALL APPLY. THE ELECTRICAL CONTRACTOR SHALL SATISFY CODE REQUIREMENTS AS A MINIMUM STANDARD WITHOUT ANY EXTRA COST TO OWNER.
 5. PERMITS AND FEES

a. THE ELECTRICAL CONTRACTOR SHALL PROCURE AND PAY FOR ALL PERMITS, FEES AND INSPECTIONS NECESSARY TO COMPLETE THE ELECTRICAL WORK.

6. WARRANTY

a. THE ELECTRICAL CONTRACTOR SHALL UNCONDITIONALLY WARRANT ALL WORK TO BE FREE OF DEFECTS IN MATERIAL AND WORKMANSHIP FOR A PERIOD OF ONE (1) YEAR FROM THE DATE OF FINAL ACCEPTANCE, AND WILL REPAIR OR REPLACE ANY DEFECTIVE WORK PROMPTLY AND WITHOUT CHARGE AND RESTORE ANY OTHER EXISTING WORK DAMAGED IN THE COURSE OF REPAIRING DEFECTIVE MATERIALS AND WORKMANSHIP.

7. SITE EXAMINATION

- a. THE ELECTRICAL CONTRACTOR SHALL THOROUGHLY EXAMINE ALL AREAS OF WORK WHERE EQUIPMENT WILL BE INSTALLED AND SHALL REPORT ANY CONDITION THAT, IN HIS OPINION, PREVENTS THE PROPER INSTALLATION OF THE ELECTRICAL WORK PRIOR TO BID. HE SHALL ALSO EXAMINE THE DRAWINGS AND SPECIFICATIONS OF OTHER BRANCHES OF WORK MAKING REFERENCE TO THEM FOR DETAILS OF NEW OR EXISTING BUILDING CONDITIONS
- b. ALL WORK SHALL BE DONE AT TIMES CONVENIENT TO THE OWNER AND ONLY DURING NORMAL WORKING HOURS, UNLESS SPECIFIED OTHERWISE.
- c. ELECTRICAL CONTRACTOR SHALL TAKE HIS OWN MEASUREMENTS AND BE RESPONSIBLE FOR THEM.
- d. ACCESS PANELS ARE NOT SHOWN ON DRAWINGS. DURING SITE EXAMINATION, CONTRACTOR SHALL IDENTIFY ALL AREAS WHERE ACCESS PANELS ARE REQUIRED, AND REPORT TO GENERAL CONTRACTOR. DESIGNATION OF WHO FURNISHES AND WHO INSTALLS ACCESS PANELS MUST BE COORDINATED WITH GENERAL CONTRACTOR PRIOR TO STARTING WORK.
- 8. CONTRACTOR COORDINATION
- a. COORDINATION DRAWINGS SHOWING SYSTEM AND COMPONENT INSTALLATION LAYOUT, ROUTING, DETAILS, ETC. SHALL BE PRODUCED BY THE ELECTRICAL CONTRACTOR AND UNDER THE SUPERVISION OF THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER, OR APPROPRIATE PARTY AS APPLICABLE.
- b. ALL SYSTEMS INSTALLED BY EACH SUB-CONTRACTOR SHALL BE COORDINATED WITH ONE ANOTHER AND APPROVED BY GENERAL CONTRACTOR/CONSTRUCTION MANAGER, ETC. PRIOR TO INSTALLATION AND/OR FABRICATION. WHERE THE ELECTRICAL CONTRACTOR IS MAKING A CONNECTION TO EQUIPMENT/COMPONENTS THAT ARE FURNISHED BY OTHERS, ELECTRICAL CONTRACTOR TO VERIFY ALL CONNECTION REQUIREMENTS WITH ACTUAL EQUIPMENT BEING CONNECTED, INCLUDING BUT NOT LIMITED TO OCP SIZE, MEANS OF DISCONNECT. SPECIAL CONNECTION REQUIREMENTS, OR OTHER ITEMS INDICATED ON SHOP DRAWINGS, OR MANUFACTURER'S INSTALLATION INSTRUCTIONS AND/OR INSTALLATION DIAGRAMS, AND FURNISH ALL LABOR AND MATERIALS REQUIRED FOR THE INSTALLATION AND OPERATION OF THE EQUIPMENT. NO ALLOWANCES WILL BE MADE FOR FAILURE TO COORDINATE, AFTER ELECTRICAL CONNECTIONS HAVE BEEN INSTALLED.
- c. IF QUESTIONS CONCERNING DESIGN INTENT ARISE DURING COORDINATION, EBS CAN ASSIST WHERE APPROPRIATE.
- d. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS; USE ACTUAL BUILDING DIMENSIONS.
- e. COORDINATION DRAWINGS SHOWING SYSTEM AND COMPONENT INSTALLATION LAYOUT, ROUTING, DETAILS, ETC. SHALL BE PRODUCED BY THE ELECTRICAL CONTRACTOR AND UNDER THE SUPERVISION OF THE

GENERAL CONTRACTOR/CONSTRUCTION MANAGER, OR APPROPRIATE PARTY AS APPLICABLE. ALL SYSTEMS INSTALLED BY EACH SUB-CONTRACTOR SHALL BE COORDINATED WITH ONE ANOTHER AND APPROVED BY GENERAL CONTRACTOR/CONSTRUCTION MANAGER, ETC. PRIOR TO INSTALLATION AND/OR FABRICATION. IF QUESTIONS CONCERNING DESIGN INTENT ARISE DURING COORDINATION, EBS CAN ASSIST WHERE APPROPRIATE.

#### 9. UTILITY COORDINATION

a. ELECTRICAL CONTRACTOR TO VERIFY INSTALLATION OF METERING AND UTILITY DEMARCATION EQUIPMENT WITH UTILITY PROVIDER PRIOR TO START OF WORK AND FURNISH AND INSTALL REQUIRED ITEMS PER UTILITY COMPANY'S INSTALLATION REQUIREMENTS AND/OR MANUALS.

### 10. SUBMITTALS

a. PRODUCTS INSTALLED BY THE ELECTRICAL CONTRACTOR AND PROVIDED BY OTHERS MUST BE SUBMITTED FOR REVIEW PRIOR TO PURCHASING. PRODUCTS SHALL NOT BE SELECTED BASED ON PERMIT DRAWINGS WITHOUT EXPRESS PERMISSION -PRODUCTS SHALL BE SELECTED BASED ON CONSTRUCTION DRAWINGS.

#### 11. RECORD DRAWING

a. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CREATING RECORD DRAWINGS WHERE REQUIRED. DRAWINGS SHALL BE PRODUCED IN AUTOCAD 2004 FORMAT OR LATER.

#### 12. SHOP DRAWINGS

- a. SUBMIT TO THE ARCHITECT PDF FILE COPIES OF COMPLETE & CERTIFIED SHOP DRAWINGS, DESCRIPTIVE DATA, PERFORMANCE DATA & RATINGS, DIAGRAMS AND SPECIFICATIONS ON ALL SPECIFIED EQUIPMENT, INCLUDING ACCESSORIES, AND MATERIALS FOR REVIEW.
- b. THE MAKE, MODEL NUMBER, TYPE, FINISH & ACCESSORIES OF ALL EQUIPMENT AND MATERIALS SHALL BE REVIEWED & APPROVED BY THE ELECTRICAL CONTRACTOR & GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE ARCHITECT FOR THEIR REVIEW & APPROVAL.
- c. REVIEW OF SHOP DRAWINGS DOES NOT RELIEVE THE ELECTRICAL CONTRACTOR/VENDOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DRAWINGS, SPECIFICATIONS & APPLICABLE CODES.
   13. TESTING
- a. ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. BALANCE ALL BRANCH CIRCUIT LOADS BETWEEN THE PHASES OF THE SYSTEM TO WITHIN 10% OF THE HIGHEST PHASE LOAD IN EACH PANELBOARD.

### 14. TEMPORARY POWER

a. THE ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY ELECTRICAL WIRING FOR CONSTRUCTION. THE TEMPORARY SERVICE SHALL BE A MINIMUM OF 60 AMPS, SINGLE PHASE, THREE WIRE, 120/208 VOLTS FUSED AT MAIN DISCONNECT. ALL RECEPTACLES ON THIS TEMPORARY SERVICE SHALL BE PROTECTED BY A GFI BREAKER.

#### 15. MECHANICAL EQUIPMENT

- a. ALL FINAL CONNECTIONS TO MECHANICAL EQUIPMENT SHALL BE DONE BY THE ELECTRICAL CONTRACTOR.
- 16. DEMOLITION
   a. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DEENERGIZING CIRCUITS IN DEMOLITION AREAS TO INSURE A SAFE CONDITION. ELECTRICAL DEVICES AND ASSOCIATED WIRING LOCATED WITHIN THE DEMOLITION AREA THAT WILL NO LONGER BE USED SHALL BE REMOVED AND PROPERLY DISPOSED OF AT CONTRACTOR'S EXPENSE UNLESS OTHERWISE NOTED.
- a. THE ELECTRICAL CONTRACTOR SHALL SCHEDULE ALL ELECTRICAL SYSTEM(S) OUTAGES WITH THE GENERAL CONTRACTOR AND OWNER AT LEAST 24 HOURS IN ADVANCE. UNLESS APPROVED OTHERWISE ALL OUTAGES SHALL OCCUR BETWEEN 11:00PM AND 5:00AM.
   18. GROUNDING AND BONDING
- a. CONTRACTOR TO PROVIDE GROUNDING AND BONDING AS REQUIRED FOR ELECTRICAL SYSTEMS. GROUNDING AND BONDING IS CONSIDERED MEANS AND METHODS OF CONSTRUCTION, AND SHOULD BE COMPLETED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH NEC 250
- ANY GAS PIPING SYSTEMS MUST BE BONDED PER UTILITY PROVIDER'S INSTALLATION GUIDELINES WHERE REQUIRED.

#### 19. MATERIALS

17. POWER OUTAGES

- a. PROVIDE ALL NEW MATERIAL AND EQUIPMENT UNLESS NOTED OTHERWISE. ALL EQUIPMENT SHALL BE UL APPROVED AND LABELED, OR OTHER APPROVED TESTING ORGANIZATION WHICH HAS ACCEPTANCE BY THE LOCAL JURISDICTION, FOR THE PURPOSE FOR WHICH THEY ARE USED, IN ADDITION TO MEETING ALL REQUIREMENTS OF THE CURRENT APPLICABLE CODES AND REGULATIONS. NO SUBSTITUTION TO MATERIALS SPECIFIED WILL BE ALLOWED UNLESS APPROVED BY THE OWNER.
- b. ELECTRICAL CONTRACTOR SHALL NOT ORDER OR PURCHASE ANY MATERIALS OR EQUIPMENT UNTIL PERMIT DRAWINGS HAVE BEEN APPROVED. NO ALLOWANCES WILL BE MADE FOR ANY CHANGES THAT OCCUR IF PERMIT DRAWINGS HAVE NOT BEEN APPROVED PRIOR TO ORDERING.

### 20. CUTTING AND FITTING

a. PERFORM CUTTING, CORING, FITTING, REPAIRING AND FINISHING OF THE WORK NECESSARY FOR THE INSTALLATION OF THE EQUIPMENT OF THIS SECTION. HOWEVER, NO CUTTING OF THE WORK OF OTHER TRADES OR OF ANY STRUCTURAL MEMBER SHALL BE DONE WITHOUT THE CONSENT OF THE OWNER. PROPERLY FILL, SEAL, FIREPROOF, AND WATERPROOF ALL OPENINGS, SLEEVES, AND HOLES IN SLABS, WALLS, AND CASEWORK.

#### 21. WIRING METHODS

- a. PROVIDE CODE APPROVED WIRING METHODS FOR BRANCH CIRCUITING INDOORS, SUCH AS NM CABLE (ONLY WHERE PERMITTED BY NEC 334), EMT CONDUIT, OR MC CABLE FOR MECHANICAL EQUIPMENT, LIGHTING, AND POWER.
- b. CONDUIT RUNS ON EXTERIOR OF BUILDING SHALL BE RIGID STEEL CONDUIT WITH WEATHER TIGHT, CORROSION-RESISTANT FITTINGS. SCHEDULE 40 PVC IS ACCEPTABLE WHERE PERMITTED BY CODE AND OR UNDERGROUND RUNS OR CONCRETE ENCASEMENT WHERE NOT EXPOSED TO PHYSICAL DAMAGE
- WHERE NOT EXPOSED TO PHYSICAL DAMAGE. c. THE MINIMUM SIZE OF CONDUIT SHALL BE 3/4" UNLESS OTHERWISE NOTED. CONDUIT CONNECTORS SHALL BE
- DOUBLE LOCKNUT TYPE, UL LISTED AND LABELED, WITH COMPRESSION OR SET SCREW FITTINGS. d. RIGID CONDUIT SHALL BE HOT DIPPED GALVANIZED.
- e. WHERE RACEWAYS ARE INSTALLED FOR OTHERS TO USE, OR FOR FUTURE USE, PROVIDE NYLON PULL STRING.
- f. PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE SEALED USING 3M FIRE BARRIER CAULK, NELSON ELECTRIC FLAMESEAL OR T&B FLAMESAFE OR OTHER APPROVED METHOD.
- 22. CONDUCTORS AND TERMINATIONS
- a. BRANCH CONDUCTORS SHALL BE COPPER, FEEDERS AS INDICATED ON RISER DIAGRAM. CONDUCTORS SHALL BE INSULATED FOR 600V NUMBER 12 AWG MINIMUM. PROVIDE WIRES AND CABLES AS INDICATED LISTED AND SUITABLE FOR TEMPERATURE, CONDITIONS, AND LOCATION WHERE INSTALLED.
- 23. MOTORS AND OTHER WIRING
- a. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED CONDUIT, WIRING, AND SAFETY SWITCHES FOR ALL MOTORS, AND OTHER ELECTRICAL EQUIPMENT, EVEN THOUGH THE MOTORS AND ELECTRICAL EQUIPMENT MAY BE SUPPLIED BY OTHERS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE ALL WORK AND CONNECTIONS REQUIRED TO MAKE THE SYSTEM COMPLETE AND OPERATIONAL. PROVIDE MAGNETIC STARTERS FOR EQUIPMENT AS INDICATED ON THE DRAWINGS.
- b. THE ELECTRICAL EQUIPMENT MAY INCLUDE BUT NOT BE LIMITED TO SUCH ITEMS AS GRILLE MOTORS AND INTERLOCKS, EXTERIOR AND INTERIOR SIGNAGE, STARTING DEVICES, MOTOR CONTROLLERS, FLOAT SWITCHES, ALARM DEVICES OR SYSTEMS, PUSH BUTTONS, EXHAUST FANS, DATA SYSTEMS, INTERCOMS AND STEREO SYSTEMS. THE ELECTRICAL CONTRACTOR SHALL VERIFY EQUIPMENT LOCATION AND SIZES WITH THE TRADE SUPPLYING THE EQUIPMENT BEFORE INSTALLING THE CONDUIT OR OUTLETS.
- 24. ELEVATOR(S)
- a. FURNISH AND INSTALL ALL REQUIRED ELECTRICAL COMPONENTS AND CONNECTIONS FOR ELEVATOR OPERATION. REFER TO ELEVATOR SHOP DRAWINGS FOR COMPLETE INFORMATION. PROVIDE SHUNT-TRIP OPERATION FOR ELEVATOR CIRCUIT WHERE REQUIRED. INCLUDE CONNECTIONS FOR SHAFT, SUMP PUMP, PIT LIGHT, RECEPTACLE, CAB LIGHT, ETC. BASIS OF DESIGN HP AND CIRCUIT CHARACTERISTICS SHOWN ON DRAWINGS MUST BE VERIFIED WITH ELEVATOR SUPPLIER PRIOR TO ROUGH-IN OR INSTALLATION.
- 25. DEVICES
- a. HUBBELL, LEVITON, OR APPROVED EQUAL WITH MATCHING COVERPLATES.
- b. PROVIDE SPECIFICATION GRADE WIRING DEVICES, IN TYPES, CHARACTERISTICS, GRADES, COLORS, AND ELECTRICAL RATINGS FOR APPLICATIONS INDICATED, WHICH ARE UL-LISTED AND WHICH COMPLY WITH NEMA WD1 AND OTHER APPLICABLE UL AND NEMA STANDARDS. VERIFY COLOR SELECTIONS WITH ARCHITECT. PROVIDE DEVICE PLATES TO MATCH DEVICE COLORS.
- c. PROVIDE GFCI PROTECTION FOR ALL KITCHEN 15 AND 20-AMP RECEPTACLES. WHERE THE RECEPTACLE IS RENDERED INACCESSIBLE BY EQUIPMENT PROVIDE GFCI PROTECTION AT THE CIRCUIT BREAKER.
- 26. SERVICE ENTRANCE AND DISTRIBUTION EQUIPMENT a. ELECTRICAL CONTRACTOR MUST SUBMIT DRAWINGS
- FOR PERMIT AND RECEIVE APPROVAL PRIOR TO ORDERING EQUIPMENT. NO ALLOWANCES WILL BE MADE FOR EQUIPMENT CHANGES THAT OCCUR PRIOR TO RECEIPT OF APPROVED PLANS.
- 27. DISCONNECTS AND FUSED SWITCHES
- a. HEAVY DUTY TYPE, HORSEPOWER RATED WITH INTERLOCKING COVER. NEMA 1 TYPICAL. OUTDOOR AND WET LOCATION SWITCHES SHALL BE RAINTIGHT TYPE NEMA 3RR. ALL SWITCHES SHALL BE LOCKABLE. FUSES IN CIRCUITS RATED AT 600 AMPERES OR LESS SHALL BE UL CLASS RK1 DUAL-ELEMENT, TIME-DELAY, CURRENT LIMITING FUSES. FUSES IN CIRCUITS RATED AT 601 AMPERES OR LARGER SHALL BE UL CLASS L TIME-DELAY, CURRENT LIMITING FUSES.
- 28. NAMEPLATES
- a. PROVIDE PERMANENT NAMEPLATE LABELING ON ALL DISCONNECTS. INCLUDE LOAD SERVED, VOLTAGE, PHASE, HORSEPOWER, FUSE SIZE, AND TYPE.
   29. MOUNTING
- a. MOUNT INDEPENDENT OF THE MECHANICAL UNIT HOUSING UNLESS SPECIFICALLY ACCEPTED BY THE LOCAL CODE AUTHORITY. PROVIDE UNISTRUT SUPPORT CHANNELS MOUNTED IN COORDINATION WITH ROOF PENETRATION AND PATCHING WORK. COORDINATE

#### WITH GENERAL CONTRACTOR. 30. GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

- AND EQUIPMENT
- a. PROVIDE GROUNDING AND BONDING FOR ELECTRICAL SERVICE IN ACCORDANCE WITH NEC ARTICLE 250.
  b. ALL MAJOR PARTS NOT CARRYING CURRENT, INCLUDING BUT NOT LIMITED TO, SECONDARY FEEDER CIRCUIT, EQUIPMENT AND PANELBOARD ENCLOSURES, PULL AND JUNCTION BOXES, SHALL BE PROPERLY GROUNDED. METALLIC RACEWAYS SHALL UTILIZE DOUBLE LOCKNUTS AND OTHER FITTINGS AS REQUIRED TO PROVIDE
- GROUND CONTINUITY. 31. LIGHTING CONTACTORS a. PROVIDE LIGHTING CONTACTORS AS INDICATED ON
  - DRAWINGS. 30A, 12-POLE LIGHTING CONTACTOR IN NEMA 1 ENCLOSURE.
- 32. SWITCHBOARDS
- a. SWITCHBOARDS SHALL BE OF THE SAME MANUFACTURER AS THE PANELBOARDS. THE ASSEMBLY SHALL BE RATED TO WITHSTAND MECHANICAL FORCES EXERTED DURING SHORT CIRCUIT CONDITIONS WHEN CONNECTED DIRECTLY TO A POWER SOURCE.
- b. PROVIDE NEMA 1 ENCLOSURE WHERE LOCATED INDOORS IN DRY LOCATIONS. PROVIDE NEMA 3R ENCLOSURES WHERE LOCATED OUTDOORS. ALL EXTERIOR AND INTERIOR STEEL SURFACES OF THE SWITCHBOARD SHALL BE PROPERLY CLEANED AND PROVIDED WITH A RUST-INHIBITING PHOSPHATIZED COATING. COLOR SHALL BE ANSI 61 LIGHT GRAY. PROVIDE 3.5" HOUSEKEEPING PAD FOR ALL SWITCHBOARDS.

#### 33. MULTI-TENANT METER CENTERS

- a. PROVIDE METER CENTERS(S) AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN. METER CENTERS SHALL HAVE MAIN LUGS ONLY OR MAIN BREAKERS AS REQUIRED, AND SHALL HAVE BRANCH BREAKER INSTALLED FOR EACH METER SOCKET. METER CENTERS SHALL BE EATON, SQUARE D, GE BY ABB, OR EQUAL, AND SHALL BE OF THE SAME MANUFACTURE AS LOAD CENTERS OR PANELBOARDS SERVED. METER CENTERS SHALL BE ENCLOSED NEMA 1, NEMA 3R AS REQUIRED. FINAL CONFIGURATION (NUMBER OF METERS PER SECTION, END-MAIN/CENTER-MAIN, ETC. SHALL BE DETERMINED BY CONTRACTOR. ALL BUSSING MUST BE RATED FOR THE LOADS SERVED. METER CENTERS SHALL BE RATED TO WITHSTAND THE AVAILABLE FAULT CURRENT.
- 34. PANELBOARDS
- a. PROVIDE BRANCH CIRCUIT PANELBOARD(S) AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN. PANELBOARDS SHALL HAVE BOLTED, THERMAL AND MAGNETIC BREAKERS WITH MAIN LUGS ONLY OR MAIN BREAKERS AS REQUIRED. PANELBOARDS SHALL BE EATON, SQUARE D, GE BY ABB, OR EQUAL, AND BE ENCLOSED IN NEMA 1 TYPE HOUSING UNLESS NOTED OTHERWISE. ENCLOSURE(S) SHALL BE COMPLETE WITH A HINGED DOOR, CYLINDER LOCK, AND A NEATLY TYPED DIRECTORY UNDER PLASTIC COVER IN EACH PANEL DOOR. ALL MULTIPLE POLE BREAKERS SHALL HAVE A COMMON TRIP HANDLE. ALL PANELS AND BREAKERS SHALL BE RATED TO WITHSTAND AVAILABLE FAULT CURRENT.
- 35. RESIDENTIAL LOAD CENTERS
- a. PROVIDE LOAD CENTERS AS SHOWN ON DRAWINGS AND AS SPECIFIED HEREIN. LOAD CENTERS SHALL BE EATON, SQUARE D, GE BY ABB, OR EQUAL. LOAD CENTERS SHALL CONTAIN A NEATLY TYPED DIRECTORY IN EACH DOOR. ALL MULTIPLE POLE BREAKERS SHALL HAVE A COMMON TRIP HANDLE. ALL PANELS AND BREAKERS SHALL BE RATED TO WITHSTAND AVAILABLE FAULT CURRENT. LOAD CENTERS MAY BE USED IN AREAS OTHER THAN DWELLING UNITS WHERE APPROPRIATE AND WHERE APPROVED BY OWNER'S REPRESENTATIVE.
- 36. LIGHTING
- a. PROVIDE A NEW LIGHTING SYSTEM COMPLETE AND FULLY OPERATIONAL AND IN CONFORMANCE WITH CODE AND UL LISTING REQUIREMENTS. CLEAN ALL FIXTURES AT TIME OF JOB COMPLETION UTILIZING MANUFACTURERS APPROVED OR RECOMMENDED CLEANING SOLUTIONS. ALL FIXTURES AND LAMPS ARE PROVIDED BY THIS CONTRACTOR AS SCHEDULED UNLESS NOTED OTHERWISE. CONTRACTOR SHALL FURNISH ALL BOXES, MOUNTING KITS, TRANSFORMERS, CONTROLLERS, AND OTHER COMPONENTS NECESSARY FOR A COMPLETE AND FULLY FUNCTIONAL INSTALLATION.
- b. WHERE DIMMERS AND/OR DIMMING SYSTEMS ARE REQUIRED, CONTRACTOR TO FURNISH DIMMERS THAT ARE COMPATIBLE WITH FIXTURE SOURCE AND RATED FOR THE WATTAGE OF THE DIMMING ZONE. PROVIDE ADDITIONAL DIMMERS AS REQUIRED TO MEET ZONE LOAD REQUIREMENTS.

#### 37. TELEPHONE SYSTEM

a. TELEPHONE WIRING AND SYSTEM PROVIDED BY OWNER. VERIFY SYSTEM REQUIREMENTS AND ROUGH-IN LOCATIONS WITH OWNER PRIOR TO START OF CONSTRUCTION. ELECTRICAL CONTRACTOR SHALL PROVIDE PLASTER RING AND PULL STRING FROM EACH DEVICE LOCATION TO ABOVE ACCESSIBLE CEILING.

#### 38. DATA/POS/A-V/SYSTEM NOTES

a. DATA, POS AND/OR A-V WIRING AND SYSTEMS PROVIDED BY OWNER. VERIFY SYSTEM REQUIREMENTS AND ROUGH-IN LOCATIONS WITH OWNER PRIOR TO START OF CONSTRUCTION. ELECTRICAL CONTRACTOR SHALL PROVIDE PLASTER RING AND PULL STRING FROM EACH DEVICE LOCATION TO ABOVE ACCESSIBLE CEILING.

#### 39. FIRE ALARM SYSTEM a. FIRE ALARM SYSTEM TO BE DESIGN-BUILD BY

CONTRACTOR. CONTRACTOR SHALL PROVIDE ALL REQUIRED DRAWINGS AND SUBMIT TO AUTHORITIES. REFER TO ARCHITECT'S CODE SHEET FOR RELEVANT DESIGN CRITERIA. SUBMIT DRAWINGS TO OWNER/ARCHITECT FOR REVIEW PRIOR TO SUBMITTING TO AUTHORITIES. PROVIDE REQUIRED ITEMS INCLUDING BUT NOT LIMITED TO RELAY MODULES, MONITOR MODULES, RETURN-AIR DETECTORS, ELEVATOR RECALL, ETC. PROVIDE REMOTE ANNUNCIATOR PANEL(S) AT LOCATION(S) APPROVED BY ARCHITECT AND AUTHORITIES.

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