Lee's Summit Medical Center, MOB

Spec Suite 2310

1980 SE Blue Parkway, Lee's Summit, MO 64063

GENERAL NOTES

- MAINTAIN ACCESS TO EXISTING WALKWAYS, CORRIDORS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES. DO NOT CLOSE OR OBSTRUCT WALKWAYS, CORRIDORS, OR OTHER OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER.
- 2. DEFINITIONS:
- REMOVE AND DISCARD: DETACH ITEMS FROM EXISTING CONSTRUCTION ND LEGALLY DISPOSE OF THEM OFF-SITE. REMOVE AND SALVAGE: DETACH ITEMS FROM EXISTING CONSTRUCTION
- IND TURN OVER TO OWNER UNDAMAGED.
- RELOCATE: DETACH ITEMS FROM EXISTING CONSTRUCTION, MOVE ITEMS NTACT AND UNDAMAGED, AND REINSTALL THEM WHERE INDICATED.

EXISTING TO REMAIN: EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT

- O BE REMOVED, BUT ARE TO REMAIN IN PLACE AND BE UNDAMAGED. REMOVE AND RECLAIM: DETACH ITEMS FROM EXISTING CONSTRUCTION AT CONTRACTORS OPTION ITEM MAY BE REUSED AS PART OF NEW WORK IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INVENTORY ITEMS TO DETERMINE IF ITEMS WILL FUNCTION AND APPEAR LIKE THE NEW ITEMS SPECIFIED AND CALLED OUT ON THESE DOCUMENTS. IF ITEMS ARE REUSED, CONTRACTOR IS TO CLEAN, REPAIR, OR OTHERWISE BRING ITEMS TO LIKE NEW CONDITION. MODIFY REUSED ITEMS AS REQUIRED AND SUPPLEMENT WITH MATERIALS, AND INCIDENTALS NECESSARY TO EXECUTE A COMPLETE WORKMANLIKE JOB. IF CONTRACTOR CHOOSES TO NOT REUSE ITEM, LEGALLY DISPOSE OF ITEM OFF-SITE AND REPLACE
- PROVIDE: THE MEANING OF THE WORD "PROVIDED" INCLUDES, BUT IS NOT LIMITED TO, FURNISHED, DELIVERED, INSTALLED, FINISHED, MADE FULLY OPERABLE AND COMPLETE. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL WORK DESCRIBED IN THESE DOCUMENTS IS TO BE PROVIDED BY THE CONTRACTOR.

WITH NEW TO MATCH EXISTING.

- CONTRACTOR IS TO INCLUDE AS PART OF HIS SCOPE ALL CUTTING AND PATCHING REQUIRED THROUGH CAREFUL EVALUATION OF THE EXISTING SITE AND THE CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL COORDINATE THE CUTTING AND PATCHING OF EXISTING CONSTRUCTION NECESSARY TO PERMIT INSTALLATION OR PERFORMANCE OF THE WORK INDICATED IN THESE CONSTRUCTION DOCUMENTS. SAW-CUT CONG. SLAB AS REQUIRED FOR UTILITIES, FOR EQUIPMENT AND SINKS. VERIFY ROUTE AND TRENCH DEPTH IN FIELD. PATCH BACK WITH MATCHING SLAB THICKNESS OVER SAME MATERIAL, COMPACT UNDERLYING MATERIALS TO MEET BEST PRACTICES. DOWEL NEW TO EXISTING WITH #4 REBAR AT 30" OC.
- WHERE WALLS, CASEMORK, FINISHES, EQUIPMENT OR OTHER ITEMS AND CONSTRUCTIONS HAVE BEEN REMOVED EXPOSING UNDERLYING WALL AND/OR FLOOR SURFACES, SUCH SURFACES ARE TO BE PATCHED AND REPAIRED AS REQUIRED TO ACCEPT NEW FINISHES. ALL HOLES, DAMAGES, DEFECTS, ETC. IN EXISTING SURFACES ARE TO BE PATCHED TO MATCH EXISTING CONDITIONS.
- EXISTING CONDITIONS SHOWN ON THESE DRAWINGS ARE BASED UPON BASE BUILDING OR OTHER CONSTRUCTION DOCUMENTS MADE AVAILABLE TO THE DESIGNER BY THE BUILDING MANAGEMENT. ALL AS-BUILT ARCHITECTURAL CONDITIONS HAVE NOT BEEN FIELD VERIFIED AND MAY VARY FROM THOSE
- 6. PRIOR TO BID: FIELD VERIFY ALL EXISTING CONSTRUCTION TO REMAIN AND INCLUDE COSTS FOR REPAIR AND RECONDITION OF ALL EXISTING

- CONSTRUCTION TO REMAIN SO THAT IT MEETS THE AESTHETIC AND FUNCTIONAL STANDARD OF QUALITY FOR NEW CONSTRUCTION. BLEND AND MATCH EXISTING CONSTRUCTION WITH NEW CONSTRUCTION PRIOR TO BID. ADVISE TENANT OF ANY CONDITIONS WHICH CANNOT BE REPAIRED OR RECONDITIONED, BLENDED AND MATCHED. NOTE CONTRACT DOCUMENT REQUIREMENTS FOR EXISTING CONSTRUCTION AND INCLUDE COSTS FOR THIS
- THE GENERAL CONTRACTOR SHALL, IN THE BIDDING PROCESS, REQUIRE THAT MECHANICAL AND ELECTRICAL SUBCONTRACTORS MAKE A THOROUGH FIELD INSPECTION OF AS-BUILT CONDITIONS OF EXISTING SYSTEMS. AFTER SUCH FIELD VERIFICATION HAS BEEN COMPLETED, THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL PROVIDE IN THEIR BIDS, ANY MODIFICATIONS TO THE EXISTING SYSTEMS WHICH MAY BE REQUIRED TO ACCOMMODATE THE PROPOSED REQUIREMENTS FOR THIS TENANT. IF A DETERMINATION OF SUCH MODIFICATIONS CANNOT BE MADE, THE GENERAL CONTRACTOR SHALL NOTIFY THE TENANT, AND AT THE DIRECTION OF THE TENANT, PROVIDE AN AGREED UPON ALLOWANCE TO COVER SUCH WORK.
- COMMENCING WORK BY A CONTRACTOR OR SUBCONTRACTOR CONSTITUTES ACCEPTANCE OF THE UNDERLYING CONDITIONS AND SURFACES. PRIOR TO PROCEEDING WITH THE WORK, PREPARE EXISTING AND NEW UNDERLYING CONDITIONS AND SUBSTRATE TO COMPLY WITH THE CONTRACT DOCUMENTS, INDUSTRY STANDARDS AND MANUFACTURER'S RECOMMENDATION.
- FIELD VERIFY ALL ROUGH OPENINGS AND WALL WIDTHS PRIOR TO ORDERING OR FABRICATION OF MATERIALS.
- 10. DIMENSIONS ARE NOMINAL AND TO THE FACE OF PARTITIONS
- CLEAN-UP OF RUBBISH AND DEBRIS RESULTING FROM DEMOLITION AND NEW WORK SHALL BE COLLECTED REGULARLY FROM PROJECT SITE AND LEGALLY
- ALL MEATHER EXPOSED SURFACES SHALL HAVE A MEATHER RESISTIVE BARRIER TO PROTECT THE INTERIOR WALL COVERING AND EXTERIOR OPENINGS SHALL BE FLASHED IN SUCH A MANNER AS TO MAKE THEM **MEATHERPROOF**
- CONTRACTORS ARE RESPONSIBLE FOR ALL MATERIALS AND QUANTITIES SHOWN IN THESE DRAWINGS GRAPHICALLY AS WELL AS THOSE CALLED FOR
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS TO COMPLETE THE PROPOSED WORK AND SHALL COMPLY WITH ALL LOCAL, STATIC, AND FEDERAL REGULATIONS
- 15. THE TENANT OR THE TENANT'S DESIGNATED REPRESENTATIVE WILL PROVIDE SERVICES IN CONNECTION WITH ADMINISTRATION OF THE CONTRACT
- 16. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS OF THE GOVERNING AGENCIES HAYING JURISDICTION
- THE CONTRACTOR MUST TAKE ADEQUATE CARE TO PROTECT ALL AREAS OF THE BUILDING WHERE THE WORK OF THIS PROJECT IS LOCATED AS WELL AS

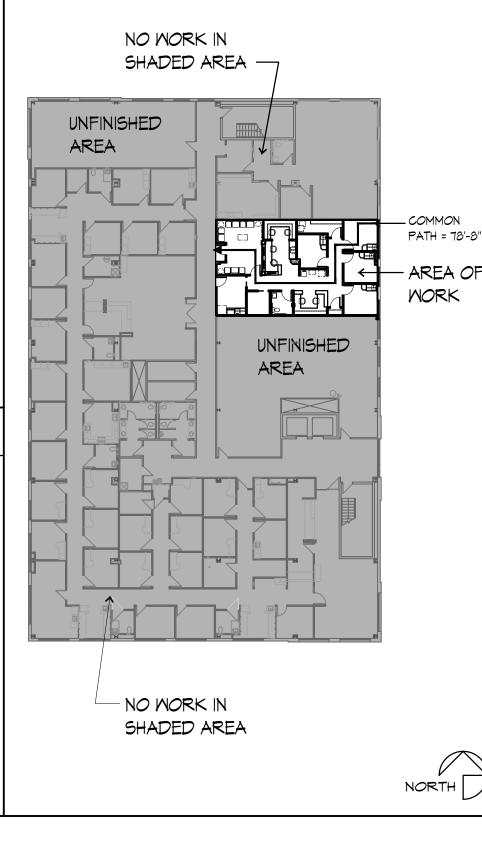
- THE AREAS ADJACENT TO THE AREA OF THE WORK OF THIS PROJECT SO AS TO PREVENT DAMAGE TO LIFE OR PROPERTY AS A RESULT OF THIS CONSTRUCTION PROJECT
- 8. ONLY MATERIALS THAT ARE NEW, UNUSED, FREE FROM DEFECTS, AND THE BEST OF THEIR RESPECTIVE KINDS SHALL BE USED. THE BASIS OF QUALITY SHALL BE THE LATEST STANDARDS OF ASTM, ASA OR ASHRA
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES INCLUDING THOSE OF THE TENANT WHO MAY BE ENGAGED UNDER A SEPARATE
- 20. INSTALL ALL WORK IN SUCH A MANNER AS TO BE READILY ACCESSIBLE FOR OPERATION, MAINTENANCE AND/OR REPAIRS
- 21. ALL WORK AND EQUIPMENT SHALL BE CLEANED TO THE SATISFACTION OF THE TENANT BEFORE BEING TURNED OVER FOR USE 22. A COPY OF THE LATEST SET OF CONSTRUCTION DOCUMENTS SHALL BE KEPT
- AT THE JOB SITE AT ALL TIMES 23. THE CONTRACTOR AND EACH SUBCONTRACTOR SHALL KEEP ACCURATE RECORDS OF ANY MODIFICATION OR DEVIATIONS FROM THE CONTRACT
- PROJECT CLOSE OUT DOCUMENTS SHALL BE PROVIDED TO THE TENANT. INCLUDE AS-BUILT DRAWINGS, WARRANTY/MAINTENANCE MANUALS AND TESTING AND SUPERVISION AS REQUIRED. PRESERVE ALL PRINTED INSTRUCTIONS AND WARRANTIES THAT ARE PROVIDED WITH EQUIPMENT OR MATERIALS USED, AND DELIVER SAID PRINTED MATTER TO THE TENANT AT THE TIME OF SUBSTANTIAL COMPLETION. IF REQUESTED BY THE TENANT, INSTRUCT THE MANAGEMENT IN THE PROPER USE AND MAINTENANCE OF ALL ITEMS OF MORK PROVIDED.
- 25. PROVIDE WORK IN ACCORDANCE WITH THE MANUFACTURE'S RECOMMENDATION, EXCEPT IN THE CASE WHERE THE CONTRACT DOCUMENTS ARE MORE STRINGENT. PROVIDE ANY MISCELLANEOUS ITEMS OR MATERIALS NOT SPECIFICALLY NOTED, BUT REQUIRED FOR PROPER INSTALLATION OF THE
- 26. ALL WORK SHALL BE WARRANTED BY THE CONTRACTOR TO BE SATISFACTORY, IN MATERIALS AND WORKMANSHIP, FOR A MINIMUM PERIOD OF ON (1) YEAR, OR FOR THE PERIOD OF WARRANTY CUSTOMARY, SPECIFIED FOR, THE TRADE, CRAFT OR PRODUCT, WHICHEVER IS LONGER.
- 27. SUBMIT REQUESTS FOR SUBSTITUTIONS OF SPECIFIED ITEMS IN WRITING, ACCOMPANIED BY THE ALTERNATIVE PRODUCT INFORMATION, TO THE TENANT. SUBSTITUTIONS MAY BE CONSIDERED ONLY IF THEY DO NOT SACRIFICE QUALITY, APPEARANCE AND FUNCTION. ACCEPTANCE OF SUBSTITUTIONS IS AT THE SOLE DISCRETION OF THE TENANT.

CODE NOTES

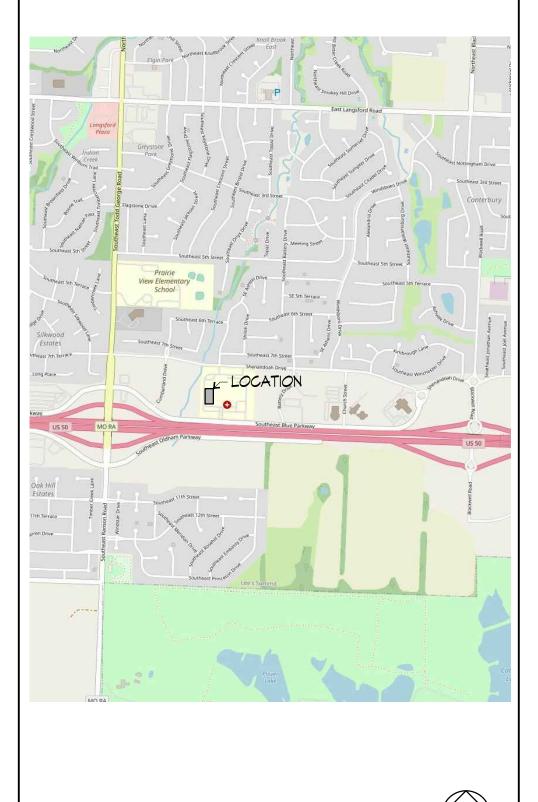
- B. ALL CONSTRUCTION FOR THIS PROJECT SHALL CONFORM TO THE FOLLOWING BUILDING CODES AND REQUIREMENTS ADOPTED AND AS AMENDED BY THE CITY OF LEE'S SUMMIT, MISSOURI;
- B.1. 2018 International Building Code
- B.2. 2018 International Plumbing Code
- B.3. 2018 International Mechanical Code B.4. 2018 International Fuel Gas Code
- B.5. 2018 International Residential Code
- B.6. 2018 International Fire Code B.7. 2017 National Electrical Code
- B.8. ICC/ANSI A117.1-2009, Accessible and Usable Buildings and Facilities
- C. OCCUPANCY GROUP: B
- D. CONSTRUCTION TYPE: IIB
- E. FULLY-SPRINKLED FIRE ALARM PROVIDED
- F. SQUARE FOOTAGE TENANT INFILL = 1,516 SF
- G. OCCUPANT LOAD = 1,516 / 150 = 10.12 ≈ 11 OCC
- H. SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY (TABLE 1006.2.1)
- H.1. OCCUPANCY B = MAXIMUM OCCUPANT LOAD 49. H.2. COMMON PATH OF EGRESS TRAVEL IN GROUP B OCCUPANCY WITH SPRINKLER SYSTEM HAS AN OCCUPANT LOAD OF ≤49, THE LENGTH OF COMMON EGRESS TRAVEL SHALL NOT BE MORE THAN 100 FEET.

DRAWING INDEX

- CS COVER SHEET, GENERAL NOTES AND CODE NOTES
- A1 ARCHITECTURAL SPECIFICATIONS A2 FLOOR PLAN AND FINISH SCHEDULE
- A3 CEILING PLAN, CASEMORK DETAILS AND DOOR SCHEDULE INTERIOR ELEVATIONS, EQUIPMENT AND ACCESSORIES SCHEDULE
- MP1 MECHANICAL AND PLUMBING SPECIFICATIONS AND SYMBOLS
- M1 MECHANICAL PLAN
- WASTE AND VENT PLAN P2 WATER PLAN
- ELECTRICAL SPECIFICATIONS AND SYMBOLS
- ELECTRICAL LIGHTING PLAN
- ELECTRICAL POWER PLAN E4 ELECTRICAL SCHEDULES AND DETAILS



KEY PLAN



NORTH

AREA MAP

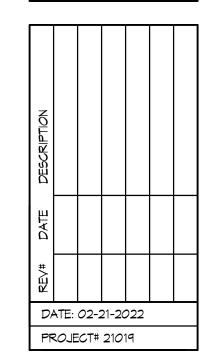


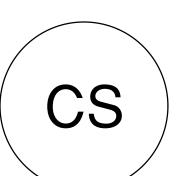


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DIVISION 1 - GENERAL REQUIREMENTS

- 1. GENERAL REQUIREMENTS 01000
- 2. The General Conditions of the Contract for Construction of A.I.A. Document A201, latest edition, forms part of this contract as if herein bound.
- 3. Satisfy all applicable local codes and ordinances. Reference the cover sheet for list of codes.
- 4. Contractor to pau for Construction Permit Fees, Excise Tax, Tap Fees, Ect. as applicable to the local Municipalities and Utility Companies.
- 5. Contractor is to meet all Building Owner Standards and Instructions for work.

PRODUCTS 01600

- Where a specific manufacturer's product is named including make or model number or other designation, it has been selected to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics of the product. Unless otherwise indicated, provided the named product or a product that is equal to or exceeds the specified product.
- 2. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
- 3. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect
- 4. All products, and materials used in conjuction with, are to be installed in strict conformance with manufacturers instruction.

SPECIAL CONDITIONS 01700

- General Contractor shall provide all water, light, and power necessary during construction until the completion of the building. All extensions, controls, and equipment beyond the points of temporary service shall be provided under the work of the respective Division requiring the same.
- 2. The General Contractor shall do all final cleaning of the building construction areas and wash windows.

CUTTING AND PATCHING

- Contractor is to include as part of his scope all cutting and patching required through careful evaluation of the existing site and the construction documents. All holes, damages, defects, ect. in existing surfaces are to be patched to match existing conditions. Contractor shall coordinate the cutting of existing construction necessary to permit installation or performance of other Mork.
- 2. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations. Patch with durable seams that are as invisible as possible. Use materials identical to existing materials. If identical materials are unavailable or cannot be used, use materials that, when installed. will match the visual and functional performance of existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible. Before patching, verify compatibility with and suitability of substrates, including compatibility with existing and new finishes or primers.
- Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use. Provide temporary support of Mork to be cut. Cut concrete using a cutting machine, such as an abrasive saw or a diamond-core drill.

DIVISION 2 - SITE WORK

NO WORK THIS SECTION

DIVISION 3 - CONCRETE

REFER TO CUTTING AND PATCHING

DIVISION 4 - MASONRY

NO WORK THIS SECTION

DIVISION 5 - METALS

METAL STUD FRAMING

- Metal Studs and Runners: shall be as manufactured by Dietrich, Inryco/Milcor, USC, or approved equal. Studs shall be sized as indicated on the drawings and of gauge recommended by the manufacturers literature. Double studs at door jambs shall be 20 gauge minimum. Standard stud spacing at no more than 16" O.C. unless otherwise noted on drawings.
- 2. At all walls indicated to extend to underside of decking provide Dietrich SLP-TRK slotted deflection track. Install and finish per manufacturer's recommendations.

DIVISION 6 - WOODS AND PLASTIC

CARPENTRY

Each piece of framing lumber shall be identified by the grademark of an approved inspection agency or association. Wood framing and all rough carpentry items shall be installed in accordance with UBC and/or FHA requirements whichever is most restrictive.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

- Where insulating materials listed below will not be covered with gypsum board substitute specified insulation w/ product of same thickness and R-value and similar facing, but such shall have a flame spread rating of 25 or less and a smoke developed rating of 50 or less when tested in accordance with ASTM E84 unless more stringent requirements are listed for a specific product.
- 2. Interior insulation shall be unfaced acoustical batt insulation in thickness to fill entire cavity.

3. Insulation Schedule

- 3.1. Exterior Malls: batts of fiberglass with foil skrim kraft (FSK) vapor barrier in thickness to match cavity depth
- Gaps and voids around door and window areas and in built up wood lintels:Minimal expanding foam insulation shall be Dow Chemical Great Stuff. It is to be Tack free in 20 minutes and with full cure in 8 hours at room temperature and 50% relative humidity. It is to be paintable and stainable.
- 3.3. Interior non-loadbearing walls: Unfaced Fiberglass Batts Certainteed CertaPRO AcoustaTherm Batts

SEALANTS

- Mildew-Resistant Silicone Rubber Sealant: Silicone rubber-based, one part elastomeric sealant. complying with F5 TT-S-0021543, Class A; compounded specifically for mildew resistance and recommended by manufacturer for interior joints in wet areas; passing ANSI A136.1 test for mold
- 2. Silicone Sealant: One-part nonacid-curing silicone sealant complying with ASTM C920; Type S, Grade NS, Class 25, paintable, for uses at casings, window casings and hollow metal to drywall and masonry.
- 3. Joints and spaces to be caulked shall be clean, dry and free of dust, loose mortar or other foreign materials. After joints have been filled, they shall be neatly tooled to eliminate air pockets or voids and to provide a smooth, neat appearing surface.
- 4. Non-Elastomeric Sealants and Caulking Compounds: 1-component acrylic sealant: FS-TT-S-00230, Class B, Type 11, solvent based solids 95% acrylic for uses at exterior window and door frame perimeters and flashing

DIVISION 8 - DOORS AND WINDOWS

STEEL FRAMES AND DOORS 08110

- 1. Drywall frames shall be manufactured from cold-rolled 16 gauge steel conforming to ASTM A366 or A620 & A568. Frames shall be knock-down, double return back bend (to prevent cutting into wall) flush hairline miter at the corner of the head and jamb, and the corner reinforced with a concealed clip. Each jamb is to have one compression anchor to securely hold the frame between the studs and
- 2. Welded Frames are to be fabricated of either cold-rolled steel conforming to ASTM ASTM A366 or A620 \$ A568 at interior locations or hot-dipped galvanized steel conforming to ASTM A924 and A653 at exterior locations both of 16 gauge material. Fabricate frames with mitered or coped and continuously welded corners and seamless face joints. Provide welded frames with temporary spreader bars.
- 3. All Frames and Doors are to be thoroughly degreased and cleaned of all imperfections and provided with one coat of oven-cured neutral color primer paint. Primer coat shall conform with ANSI A250.10. The primer coat is to be a preparatory base for necessary finish painting.
- 4. Frame Hardware Provisions: Frames are to be mortised, reinforced and drilled and tapped for all mortise finish hardware. Frames are to be reinforced only for surface mounted hardware, with drilling and tapping to be done in the field by the installation contractor. Steel plates and mortising boxes are to be welded to all hinge and lock reinforcement. Frames are handed. Hinge jambs are to be mortised for hinges with 7 gage steel hinge reinforcement welded in place and drilled and tapped for fasteners in accordance with ANSI A156.7. The strike jamb is to be prepared for 4-7/8" universal strike in accordance with ANSI A 115.1\$2. Additional hardware reinforcement (e.g. closer/holder as indicated by hardware schedule) is to be 12 gage minimum steel welded in place. Three door mutes are to be provided per strike jamb and two for double swing heads.
- 5. Door Hardware Provisions: Hinge preparations are handed. Hinge edges are to be mortised for hinges with 7 gage steel hinge reinforcements welded inside the door edge and drilled and tapped for fasteners in accordance with ANSI A156.7. The lock edge is to have a standard bevel (1:16) and be prepared for locks in accordance with hardware schedule. Additional hardware reinforcement (e.g. closer/pulls as indicated by hardware schedule) is to be 12 gage steel channel.

WOOD DOORS

Single swing interior doors shall be solid core premium grade laminate with matching edges. Perma-Clad doors by VT industries, Inc. Comply with requirements of ANSI/NWMA I.S. 1 and Section 1400 of AMI "Architectural Moodwork Quality Standards" except as otherwise indicated. Coordinate stain color with interior designer.

FINISH HARDWARE

Provide finish hardware for all doors in project. The Contractor shall verify all keying requirements with owner prior to installation. Finish to be 26d. Hardware mounting heights by the door and hardware institute "Recommended Locations for Builders Hardware". Comply with all ADA requirements for hardware.

DIVISION 9 - FINISHES

GYPSUM DRYWALL

- Materials shall meet the following standards:
- a. Gypsum Mallboard ASTM C36
- b. Nails ASTM C380
- c. Metal Accessories ASA A97.1
- d. Water Resistant Gypsum Backing Board ASTM C1278 (paragraph 6.1)
- 2. Use gupsum board fasteners that are recommended by gupsum board manufacturer except as otherwise indicated.
- 3. Furnish and install all trim accessories, adhesives and joint treatments per manufacturer's recommendations.
- 4. All gypsum board to be finished to Level 4 unless noted otherwise.

Tough Firecode X, long edges tapered.

5. Schedule: (basis of design)

- 5.1. Interior partitions general: USG $\frac{5}{6}$ " Sheetrock Brand Firecode X Panels, long edges tapered. Interior ceilings and soffits: USG $\frac{5}{8}$ " Sheetrock Brand Firecode X Panels, long edges tapered.
- Interior partitions in wet areas/toilet rooms: USG $\frac{5}{8}$ " Sheetrock Brand Glass-Mat Panels Mold
- Interior partitions to recieve wall tile: USG $\frac{5}{8}$ " Fiberock Brand Aqua-Tough AR Interior Panels

FLOORING GENERAL

- Patch, level and prepare all floors as recommended by flooring manufacturer for each type of flooring to be placed. Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates. Trowelable Leveling and Patching Compounds shall be of Latex-modified, portland cement based or blended hydraulic cement based formulation provided or approved by floor covering manufacturer for applications indicated.
- 2. Transitions between floor finishes: Floor finishes are to be tightly butted together (unless edge protection is specified or is required by the manufacturer.) At all transitions where finished floor height of a flooring is higher then adjacent floor finish, raise adjacent flooring with ROPPE SUBLEVELER TS-1 so finish heights are equal. Where flooring is to be tightly butted against ceramic or porcelain tile in addition to subleveler installation beneath the thinner floor material, edge protection is to be provided on tile as indicated in the finish legend.

PAINTING GENERAL

1. Paint shall be as manufactured by Sherwin Williams Paints or approved equal.

SURFACE PREPARATION FOR PAINT

- General: Protect adjacent and underlying surfaces. Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces of finishing. Correct defects and clean surfaces capable of affecting work of this section. Seal marks that may bleed through surface finishes with compatible sealer.
- 2. Galyanized Steel: Remove surface contamination and oils and wash with solvent.
- 3. Uncoated Ferrous Metals: Remove grease, mill scale weld splatter, dirt and rust. Where heavy coatings of scale are evident, remove by hand or power tool wire brushing or sandblasting: wash with solvent. Apply treatment of phosphoric acid solution, ensuring weld joints, bolts and nuts are similarly cleaned. Spot Prime paint after repairs.
- 4. Shop primed ferrous Metals: Sand and scrape to remove loose primer and rust. Feather edges to make patches inconspicuous. Clean with solvent. Prime bare steel surfaces.
- 5. Other existing Surfaces: Remove loose, flaking, powdery, and peeling paints. Light sand painted surfaces. Fill holes, cracks, depressions and other imperfections with compatible patching compound; sand flush with surface. Remove oil, grease, and wax by scraping; solvent wash and thoroughly rinse. Remove rust by wire brushing to expose base metal.

PAINTING SCHEDULE

- 1. Paint all new interior gupsum board walls:
- 1.1. 1 ct. PrepRite 200 Latex Primer and 1.2. 2 cts. Promar 200 Int. Latex Eq-Shel
- 2. Paint all new and exisiting interior gypsum board walls in wet areas (Toilet and Janitor Rooms):
- 2.1. 1 ct. PrepRite 200 Latex Primer and 2.2. 2 cts. Waterbased Catalyzed Epoxy
- 3. Interior gypsum board ceilings and soffits (unless noted otherwise):
- 3.1. 1 ct. PrepRite 200 Latex Primer 3.2. 2 cts. Promar 200 Int. Latex Flat
- 4. Interior and Exterior Ferrous metal (metal frames, exposed steel structure, misc. metal):
- 4.1. Touch up factory prime coat with compatible Metal Primer or
- 4.2. 1 ct. Sprayed All Surface Enamel oil Primer
- 4.3. 2 cts. Sprayed Promar 200 Int. Alkyd Eq-Shel Enamel
- 5. All wood to receive a transparent finish (unless noted otherwise): 5.1. 1 ct. General Finishes Pre-Stain Wood Conditioner
- 5.2. Up to 2 cts (to obtain dark color) General Finishes Dye Concentrates
- 1 ct General Finishes Oil Base Mood Stain 5.4. 1 ct. General Finishes EF High Performance Polyurethane Top Coat-Satin
- 5.5. Sand between coats using 180 or finer grit sandpaper. 5.6. 1 ct. General Finishes EF High Performance Polyurethane Top Coat-Satin

DIVISION 10 - SPECIALTIES

FIRE EXTINGUISHER

Provide fire extinguishers as indicated per plan. Fire extinguisher shall be Cosmic 5E (2A,10B,C) by J.L Industries or approved equal. Cabinets to be Ambassador by J.L Industries or approved equal, Not Fire-Rated, Tub - 10 $1/2 \times 24 \times 5 \cdot 1/2$ inches. Trim Material - Steel, white epoxy primer finish, Trim Style Semi recessed 3" rolled edge. Door Style - Vertical Duo Panel with pull handle, Door Glazing - Clear Safety Glass, with Die Cut Letters - Vertical Red Reverse.

DIVISION 11 - EQUIPMENT

COORDINATE EQUIPMENT INSTALLATION WITH OWNER AND OWNER'S EQUIPMENT SUPPLIER.

DIVISION 12 - FURNISHINGS

CASEMORK

- The General Contractor or his Subcontractor shall provide all necessary work to provide plastic laminate casework at locations indicated on these documents. Mork under the contract shall include all labor, materials, and incidentals necessary to execute a complete workmanlike job in accordance with the requirements of all applicable codes and ordinances including the Americans with Disabilities Act Guidelines. The General Contractor or his Subcontractor to review shop drawings with Owner to verify casework layout and dimensions.
- 2. Casework shell units are to be constructed with 3/4" particle board sides and 1/2" particle board backs with plastic laminate on all exterior exposed vertical faces and also on the bottom face of upper wall units. Exposed edges to be .020 polyvinyl chloride impact/chip/mar-resistant edges. All interior surfaces on units with doors/drawers to be 85 gram melamine. For open units interiors to have plastic laminate to match exteriors unless noted otherwise. Base cabinets are to be nominal 24" deep. Upper cabinets are to 14" deep O.A. from back of cabinet at wall to face of doors. Full height cabinets are to be 26" deep unless noted otherwise. Full height cabinets are to be constructed with solid center shelf with doors above and below.
- 3. Countertops: Outside corners of all countertops to have $1\frac{1}{2}$ " radius.
- 3.1. Plastic Laminate countertops are to be $1\frac{1}{4}$ " thick with plastic laminate faces and 3mm ($\frac{1}{6}$ ") flexible PVC edges. Backsplashes are to be provided as indicated on the interior elevations, and are to have matching plastic laminate on all exposed faces.
- 3.2. Solid Surface countertops shall be as indicated on Finish Legend. Surfaces of material are to be adhesively joined with inconspicuous seams.
- Quartz Surfacing shall be as indicated on Finish Legend. Surfaces of material are to be epoxy
- joined with inconspicuous seams.
- 4. Plastic Laminate Door, Drawer, and False Front Panels to have plastic laminate faces, 85 gram melamine backs, and 3mm (1/8") high impact resistant PVC edges.
- 5. Shelving to be 1" particle board fully adjustable on 1-1/4" centers. Edge to be .020 polyvinyl chloride impact/chip/mar-resistant edge. Shelving inside units with doors to have 85 gram melamine on top and bottom. Shelving of open units are to have plastic laminate to match the exterior.
- 6. Hardware shall be heavy-duty satin chrome. Hinges shall be European concealed heavy duty hinges. All doors over 36" tall to have three hinges. All pulls are to be 4" bent wire pulls, unless otherwise noted. Finish to be 26D. Removable panels are to be secured with Hafele Keku push fit fastners.
- Drawer boxes to be Blum Meta-Box system or Grass UniDrawer (Unless noted otherwise). Slides to have 100 pound load rate. Drawer box depth is to be within 2" of drawer face panel height. Drawers indicated on drawings as FILE are to have white melamine box with KV 8505 slides and Hafele letter width file frame kit.
- 8. Provide one 2" dia standard plastic grommet with hole liner and slotted cover for every three linear feet of countertop that has knee space below. If knee space is less than three feet wide provide two grommets. Also provide one 2" dia standard plastic grommet at each location with power and/or data installed in cabinet. Color as selected by interior designer. Exact locations of grommets to be established and be confirmed by owner prior to installation.
- 9. All particle board is to be of 45-pound density particle board. All plastic laminate is to be General Purpose Type 107 HGS laminate as manufactured by Wilsonart or approved equal.
- 10. Provide fillers to match casework at sides of all casework abutting adjecent vertical surfaces. Also provide filler panels above upper cabinets where distance between upper cabinet and ceiling above is



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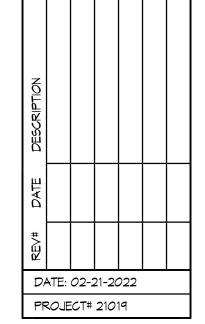
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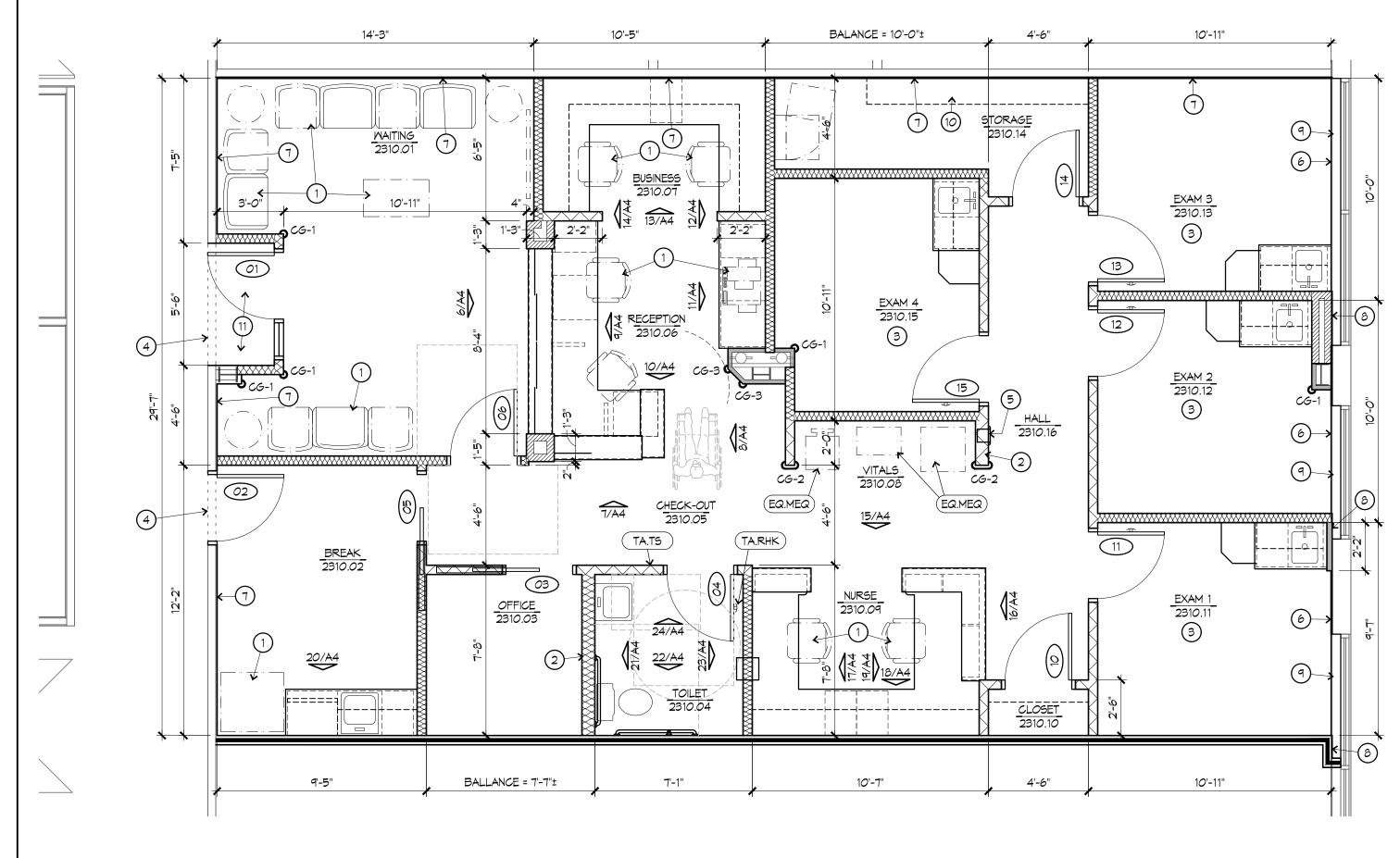
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PLAN L NORTH

CORNER GUARDS CG-1	FLOORING	CASEMORK AND MILLMORK FINISHES
CG-1 CORNER GUARDS C/S ACROVYN SSM-20AN 4000 PUMICE #858 2" 90 DEGREE, ABOVE BASE TO 48" A.F.F.	CPT 24" X 24" CARPET TILE: SHAW CONTRACT, MEMORY TILE, RAINSTORM-48536, ASHLAR INSTALL	L1 PLASTIC LAMINATE: WILSONART, EBONY RECON 7997-38 FINE VELVET FINISH WITH MATCHING EDGEBANDS
CG-2 CORNER GUARDS C/S ACROVYN SSM-25AN 4000 PUMICE #858 2" END WALL, ABOVE BASE TO 48" A.F.F.	LVT 4.5" X 36" LUXURY VINYL TILE: MANNINGTON COMMERCIAL AMTICO WOOD LOOK TILE WITH A TICK FINISH AND INSTALLED IN A RANDOM BOND PATTERN. LONG DIRECTION OF TILE TO RUN EAST TO WEST THROUGHOUT	L2 PLASTIC LAMINATE: WILSONART GENERAL PURPOSE TYPE 107 HGS LAMINATE. (TO BE DETERMINED)
CG-3 CORNER GUARDS C/S ACROVYN SM-20MN 4000 PUMICE #858 3" END WALL, ABOVE BASE TO 48" A.F.F.	SUITE. COLORWAY TO BE SELECTED FROM MANUFACTURERS FULL RANGE.	SS1 SOLID SURFACE TRANSACTION TOPS: WILSONART SOLID SURFACE, 30 PRODUCT TO BE SELECTED FROM WILSONART PRICE GROUP 3.
	<u>BASE</u>	SS2 SOLID SURFACE WINDOWS SILLS: MATCH BUILDING STANDARD.
	B1 MANNINGTON WALL BASE: 4" HIGH, COVED, ROLLED GOODS, TO MEET THE PERFORMANCE AND DIMENSIONAL REQUIREMENTS OF ASTM F-1861, TYPE TP.	
	TILE	
	NOTE: EDGE OF ALL WALL AND FLOOR TILE IS TO BE CAPPED WITH SCHLUTER SCHIEN ANODIZED ALUMINUM TRIM. SEAL GROUT PER MANUFACTURER'S RECOMMENDATIONS.	
	TL1 24" X 24" PORCELAIN FLOOR TILE: ATLAS CONCORDE, EON, CORINTHIAN BIEGE, TILE IS TO BE SET IN A 1/3 BOND PATTERN. GROUT TO BE MAPEI WALNUT	
	TL2 6" HIGH TILE BASE IS TO BE CUT FROM TL3 TILE. GROUT TO BE MAPEI COBBLESTONE	
	TL3 12" x 24" PORCELAIN WALL TILE: ATLAS CONCORDE, EON ELDORADO (MATTE) TILE IS TO BE SET IN A 1/3 BOND PATTERN. GROUT TO BE MAPEI COBBLESTONE	
	TL4 12" x 12" MOSAIC: ATLAS CONCORDE, FRAY TATAMI WARM (MATTE) GROUT TO BE MAPEI COBBLESTONE	
	PAINT COLORS	

PT3 ACCENT COLOR: TBD

FINISH MATERIAL LEGEND

NOTE: ALSO REFER TO PAINT SCHEDULE IN SPECIFICATIONS FOR PAINTS.

PT1 PRIMARY FIELD COLOR: SHERWIN WILLIAMS, SNOWBOUND SW1004

PT2 TOILET ROOM COLOR: SHERWIN WILLIAMS, GRAY CLOUDS SW7658

PT4 DOOR FRAME AND WINDOW TRIM COLOR: TO MATCH BUILDING STANDARD

MALL PROTECTION

IORK AND MILLWORK FINISHES

- PLASTIC LAMINATE: WILSONART, EBONY RECON 7997-38 FINE VELVET FINISH WITH MATCHING EDGEBANDS
- LAMINATE. (TO BE DETERMINED)
- SOLID SURFACE TRANSACTION TOPS: WILSONART SOLID SURFACE, 3CM,
- PRODUCT TO BE SELECTED FROM WILSONART PRICE GROUP 3.
- SOLID SURFACE WINDOWS SILLS: MATCH BUILDING STANDARD.

FINISH GENERAL NOTES

AND PROVIDED BY THE INTERIOR DESIGNER.

- FINISH MATERIALS LISTED HERE-IN ARE TO ESTABLISH THE SIGNIFICANT QUALITIES RELATED TO TYPE, FUNCTION, DIMENSION, PRICE, PHYSICAL PROPERTIES, APPEARANCE, AND OTHER CHARACTERISTICS OF THE PRODUCT. FINAL SELECTION OF ALL FINISHES ARE TO BE ESTABLISHED
- 2. PATCH, LEVEL AND PREPARE ALL FLOORS AS RECOMMENDED BY FLOORING MANUFACTURER FOR EACH TYPE OF FLOORING TO BE PLACED. USE TROMELABLE LEVELING AND PATCHING COMPOUND TO FILL CRACKS, HOLES, AND DEPRESSIONS IN SUBSTRATES. TROWELABLE LEVELING AND PATCHING COMPOUNDS SHALL BE OF LATEX-MODIFIED, PORTLAND CEMENT BASED OR BLENDED HYDRAULIC CEMENT BASED FORMULATION PROVIDED OR APPROVED BY FLOOR COVERING MANUFACTURER FOR APPLICATIONS INDICATED.
- 3. TRANSITIONS BETWEEN FLOOR FINISHES: 3.1. ALL PORCELAIN TILE FLOORING TO HAVE SCHLUTER SCHIEN SATIN ANODIZED ALUMINUM TRIM TO MATCH TILE DEPTH. RAISE ADJACENT FLOORING WITH ROPPE SUBLEVELER TS-1 SO FINISH HEIGHTS ARE
- 3.2. AT ALL LOCATIONS NOT INDICATED FLOORING MATERIAL IS TO BE TIGHTLY BUTTED TOGETHER AT ALL TRANSITIONS WHERE FINISHED FLOOR HEIGHT OF A FLOORING IS HIGHER THEN ADJACENT FLOOR FINISH, RAISE ADJACENT FLOORING WITH ROPPE SUBLEVELER TS-1 SO FINISH HEIGHTS ARE EQUAL.

EQUAL AND BUTT ADJACENT FLOORING TO TILE TRIM PIECE.

4. IF SUBSTITUTIONS ARE MADE WITH SUPPLIER OF PAINT, SAMPLE TO BE SUBMITTED FOR APPROVAL

FINISH SCHEDULE

RM. #	ROOM NAME	FLOOR	BASE	MALL				
				NORTH	EAST	SOUTH	WEST	NOTE
2310.01	MAITING	LVT	B1	PT3	PT1	PT1	PT1	1.
2310.02	BREAK	LVT	B1	PT1	PT1	PT1	PT1	
2310.03	OFFICE	CPT	B1	PT1	PT1	PT1	PT3	
2310.04	TOILET	TL1	TL2	SEE	INTERIOR	ELEVATION	ONS	
2310.05	CHECK-OUT	LVT	B1	PT1	PT1	PT1	PT1	1.
2310.06	RECEPTION	CPT	B1	PT1	PT1	PT1	PT1	
2310.07	BUSINESS	CPT	B1	PT1	PT1	PT1	PT1	
2310.08	VITALS	LVT	B1	PT3	PT1	PT1	PT1	2
2310.09	NURSE	LVT	B1	PT1	PT1	PT1	PT1	
2310.10	CLOSET	LVT	B1	PT1	PT1	PT1	PT1	
2310.11	EXAM 1	LVT	B1	PT3	PT1	PT1	PT1	
2310.12	EXAM 2	LVT	B1	PT3	PT1	PT1	PT1	
2310.13	EXAM 3	LVT	B1	PT1	PT1	PT3	PT1	
2310.14	STORAGE	LVT	B1	PT1	PT1	PT1	PT1	
2310.15	EXAM 4	LVT	B1	PT1	PT3	PT1	PT1	

FINISH SCHEDULE NOTES

PROVIDE TL3 AND TL4 ON FACE OF CHECK IN/OUT DESK PER INTERIOR ELEVATIONS. PAINT 1'-3" "THICK" WALL AND SOFFIT AT CHECK IN/OUT DESK PT3 PER INTERIOR ELEVATIONS.

2. PROVIDE ACCENT PAINT PT3 AT NRTH WALL OF VITALS NICHE ONLY.

MALL TYPES

- FURR-OUT AROUND THE STRUCTURAL COLUMNS AND MECHANICAL CHASES AS REQUIRED. MINIMIZE DEPTH OF FURRING.
- 2. PROVIDE SOLID BLOCKING FOR DOORS, WINDOWS, TOILET PARTITION, ACCESSORIES, HANDRAILS, LAVATORY BRACES, CASEMORK, SHELVING ETC. AS REQUIRED BY MANUFACTURER AND ALL WORK DONE BY CARPENTRY AND MILLMORK TRADES. ALL MOOD REQUIRED BY BUILDING CODES SHALL MEET ALL REQUIREMENTS TO THE CODE OF UNDERWRITERS LABORATORIES, INC. VERIFY THE DEPTH OF WALLS PRIOR TO INSTALLING RECESSED FIXTURES.
- ALL EXPOSED EDGES AND / OR CORNER ON ALL GYPSUM WALL BOARD CONSTRUCTION SHALL HAVE A METAL CORNER TRIM, TAPED AND
- 4. ALL NEW GYPSUM BOARD PARTITIONS TO BE PROPERLY PREPARED, PATCHED, SPACKLED AND SANDED, ETC., TO PROVIDE A SMOOTH FINISH AND AS REQUIRED TO RECEIVE NEW FINISHES.
- 5. ALL OPENINGS IN GYPSUM BOARD PARTITIONS SHALL BE DOUBLE STUDDED.
- 6. WHERE INDICATED BY PLAN NOTE #2 PROVIDE 6" STUDS IN LIEU OF SIZED INDICATED BY WALL TYPE.
- 7. IN THE FOLLOWING ROOMS PROVIDE MOISTURE/MOLD RESISTANT GYPSUM BOARD IN LIEU OF THE STANDARD GYPSUM BOARD INDICATED IN WALL TYPES BELOW; TOILET 302.05
- 15/8" 25 GAUGE MTL. STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD ONE SIDE. EXTEND ALL TO 4" ABOVE DROPPED CEILINGS.

33/8" 25 GAUGE MTL. STUDS @ 16" O.C. WITH 3/8" GYPSUM BOARD ONE SIDE. EXTEND ALL TO 4" ABOVE DROPPED CEILINGS.

35/8" 25 GAUGE MTL. STUDS @ 16" O.C. WITH 5/8" GYPSUM BOARD EACH SIDE AND 31/2" R-11 UNFACED ACOUSTICAL BATTS. EXTEND ALL TO 4" ABOVE DROPPED CEILINGS. PROVIDE 45° STUD KICKERS UP TO STRUCTURE AT 4'-0" O.C.

> 3¾" 25 GAUGE MTL. STUDS @ 16" O.C. WITH ¾" GYPSUM BOARD EACH SIDE AND 31/2" R-11 UNFACED ACOUSTICAL BATTS. EXTEND ALL TO UNDERSIDE OF ROOF DECK. PROVIDE DEEP LEG DEFLECTION TRACK AT TOP OF WALL INSTALLED PER MANUFACTURER'S INSTRUCTIONS. TAPE AND FINISH FROM FLOOR TO 9'-0" AFF. ABOVE 9'-0"AFF TO UNDERSIDE OF ROOF DECK FIRE TAPE ALL JOINTS AND FASTENERS. PROVIDE ACOUSTICAL SEALANT AT ALL PERIMETERS AND THRU WALL PENETRATIONS.

> 3½" 25 GAUGE MTL. STUDS @ 16" O.C. WITH ⅓" GYPSUM BOARD ON TENANT SIDE ONLY AND 31/2" R-11 FSK ACOUSTICAL BATTS. EXTEND ALL TO UNDERSIDE OF ROOF DECK. PROVIDE DEEP LEG DEFLECTION TRACK AT TOP OF WALL INSTALLED PER MANUFACTURER'S INSTRUCTIONS. TAPE AND FINISH FROM FLOOR TO 9'-0" AFF. ABOVE 9'-0"AFF TO UNDERSIDE OF ROOF DECK FIRE TAPE ALL JOINTS AND FASTENERS. PROVIDE ACOUSTICAL SEALANT AT ALL PERIMETERS AND THRU WALL PENETRATIONS.

FLOOR PLAN NOTES

- OMNER PROVIDED FURNITURE NOT IN CONTRACT IS INDICATED THUS
- 2) PROVIDE 6" STUDS IN LIEU OF SIZED INDICATED BY WALL TYPE.
- 3 SEE 1/A5 THROUGH 5/A5 FOR TYPICAL EXAM ROOM PLAN AND ELEVATIONS.
- REMOVE AND DISCARD PORTION OF WALL AND REFRAME AND FINISH WITH GYPSUM BOARD TO PROVIDE NEW OPENING.
- (5) PROVIDE FIRE EXTINGUISHER AND CABINET PER SPECIFICATION.
- 6 EXTERIOR WALL HAS EXISTING TO REMAIN GYPSUM BOARD INSTALLED FROM WINDOW SILL HEIGHT TO UNDERSIDE OF ROOF DECK. INSTALL FROM WINDOW SILL HEIGHT TO UNDERSIDE OF ROOF DECK. INSTALL GYPSUM BOARD FROM FLOOR TO WINDOW SILL HEIGHT. TAPE AND FINISH FROM FLOOR TO 9'-0" AFF INCLUDING RETURNS AT JAMBS AND HEADS OF WINDOWS. ABOVE 9'-0"AFF TO UNDERSIDE OF ROOF DECK FIRE TAPE ALL JOINTS AND FASTENERS.
- EXISTING TO REMAIN CORRIDOR AND DEMISING WALL FRAMING TO HAVE
 NEW GYPSIM BOARD INSTALLED FROM FLOOR TO UNDERSIDE OF ROOF NEW GYPSUM BOARD INSTALLED FROM FLOOR TO UNDERSIDE OF ROOF DECK. TAPE AND FINISH FROM FLOOR TO 9'-0" AFF. ABOVE 9'-0"AFF TO UNDERSIDE OF ROOF DECK FIRE TAPE ALL JOINTS AND FASTENERS. PROVIDE ACOUSTICAL SEALANT AT ALL PERIMETERS AND THRU WALL PENETRATIONS.
- 8 AT BACK SIDE OF FURRING PROVIDE AND FINISH GYPSUM BOARD FROM SILL TO HEAD OF WINDOW.
- PROVIDE SOLID SURFACE 'SS2' SILL WITH LIP AT WINDOWS TO MATCH BUILDING STANDARD.
- PROVIDE 7 ROWS OF 14" DP. \times 1" THK. MELAMINE CLAD PART BD. SHELVING ON KV 182 BRACKETS AND 94" KV 82 STANDARDS AT MAX 30"
- AT SUITE ENTRY PROVIDE NEW CARPET, WALL BASE AND PAINT TO MATCH EXISTING FINISHES IN PUBLIC AREAS.



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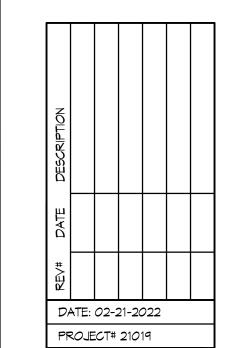
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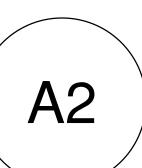
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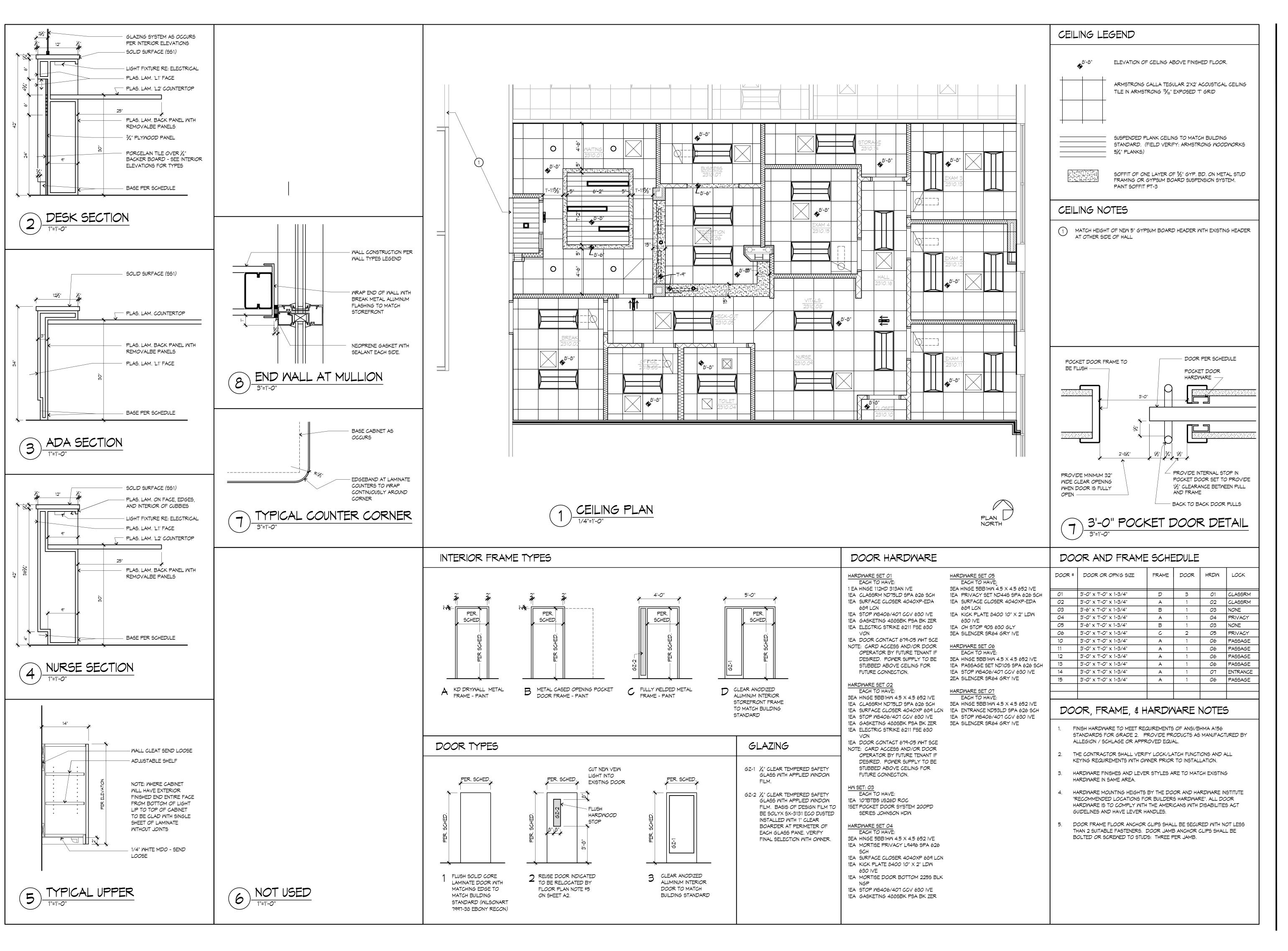
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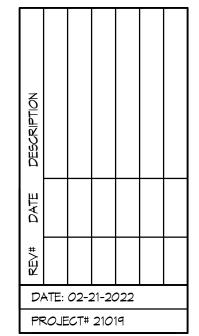
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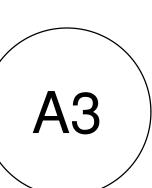
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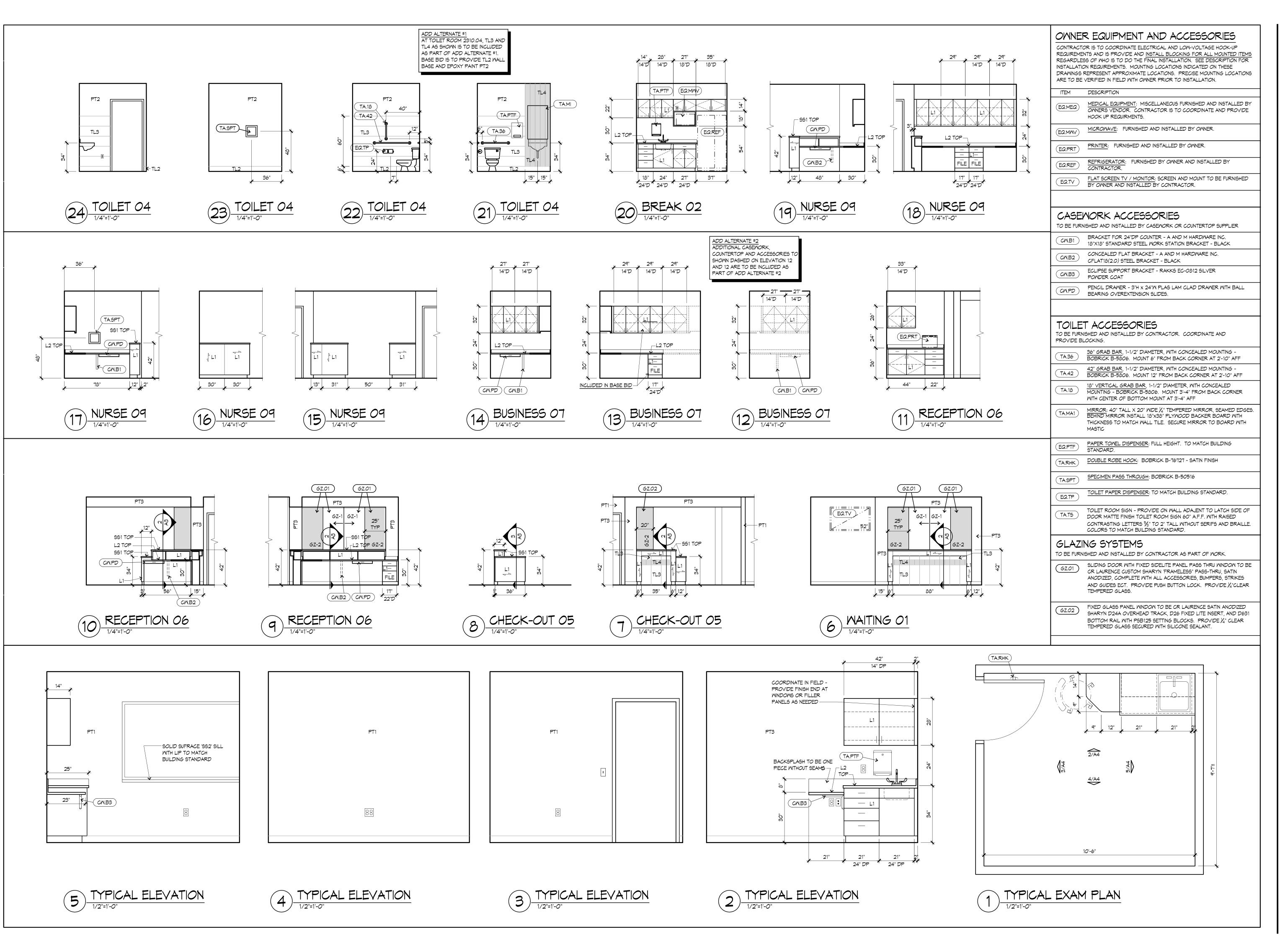
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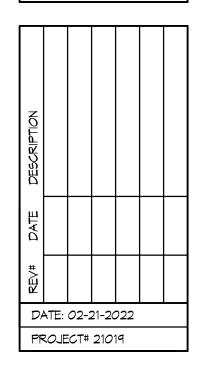


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A4

MECHANICAL & PLUMBING SPECIFICATIONS . GENERAL PROVISIONS: AND AUTOMATIC CONTROLS. A. PROVIDE ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF THE PLUMBING AND MECHANICAL SYSTEMS OUTLINED. B. OBTAIN ALL PERMITS, FEES, LICENSES, INSPECTIONS, AND CERTIFICATIONS OF COMPLIANCE OR APPROVAL AS REQUIRED BY AUTHORITIES. C. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION OVER THE SITE. D. ALL TESTING REQUIRED BY AUTHORITIES SHALL BE CONSIDERED PART OF THIS WORK. PDF SUBMITTAL. E. DURING CONSTRUCTION, ALL FIXTURES, EQUIPMENT, PIPE, DUCT, ETC. SHALL BE COVERED, PLUGGED, OR CAPPED AS REQUIRED TO KEEP CLEAN AND UNDAMAGED. ALL DAMAGED ITEMS SHALL BE RESTORED TO 8. DUCTWORK: ORIGINAL CONDITION OR REPLACED. ALL PROTECTIVE COVERING SHALL BE REMOVED BEFORE FINAL F. PROVIDE ALL NECESSARY CUTTING AND PATCHING OF WALLS, FLOORS, CEILINGS, AND ROOFS AS NECESSARY. PATCH AROUND ALL OPENINGS SHALL MATCH ADJACENT AREA. COORDINATE ALL ROOFING B. DUCTWORK METAL GAUGES, REINFORCING, ETC SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA WORK WITH OWNER OR RESPONSIBLE PARTY, SO THAT THE EXISTING ROOFING WARRANTY WILL BE

- G. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS AGAINST DEFECT FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE. H. INSPECTION OF THE SITE: THIS CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH THE MEP DRAWINGS, SPECIFICATIONS, DETAIL, AND THE SITE. THIS CONTRACTOR SHALL NOTIFY THE ARCHITECT
- OF ANY SPECIAL OR UNUSUAL PROBLEMS, CONFLICTS, OR OBSTRUCTIONS THAT AFFECT HIS BID. I. FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE MECHANICAL AND PLUMBING DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND DO NOT SHOW ALL OFFSETS AND FITTINGS REQUIRED FOR INSTALLATION. DO NOT SCALE DRAWINGS. THE SIZE AND LOCATION OF EQUIPMENT IS SHOWN TO SCALE WHEREVER POSSIBLE. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DATA AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATION SECTIONS WHERE MECHANICAL WORK INTERFACES WITH
- J. IN THE EVENT OF A CONFLICT OR INCONSISTENCY BETWEEN ITEMS INDICATED ON THE PLANS OR WITH CODE REQUIREMENTS, THE NOTE OR CODE WHICH PRESCRIBES AND ESTABLISHES THE MORE COMPLETE JOB OR HIGHER STANDARD SHALL PREVAIL
- K. INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SUBMITTALS. INSTALL MATERIALS IN PROPER RELATION WITH ADJACENT CONSTRUCTION AND WITH UNIFORM APPEARANCE FOR EXPOSED WORK. COORDINATE WITH WORK OF OTHER SECTIONS. COMPLY WITH APPLICABLE REGULATIONS AND CODE REQUIREMENTS. PROVIDE PROPER CLEARANCES FOR
- . INCLUDE ALL BASIC MATERIALS AND CONSTRUCTION METHODS INCLUDING PIPES, PIPE FITTINGS, AND SPECIALTIES AND SUPPORTING DEVICES, VALVES, PIPE AND VALVE IDENTIFICATION, PUMPS, VIBRATION
- M. FURNISH ADEQUATE ACCESS PANELS AND DOORS TO ALLOW FOR FUTURE PIPING ALTERATIONS. REPLACEMENT, AND MAINTENANCE OF PIPING. PROPERLY IDENTIFY ALL ACCESS PANELS AND DOORS.

<u> 2. OPERATION AND MAINTENANCE MANUALS:</u>

A. DURING THE COURSE OF CONSTRUCTION, COLLECT AND COMPILE OPERATING INSTRUCTIONS, WIRING DIAGRAMS, CATALOG CUTS, LUBRICATION AND PREVENTIVE MAINTENANCE INSTRUCTIONS, PARTS LISTS, ETC. FOR ALL EQUIPMENT FURNISHED UNDER THIS CONTRACT.

B. ALL LITERATURE AND INSTRUCTIONS SHIPPED WITH THE EQUIPMENT SHALL BE SAVED FOR INCLUSION IN THE OPERATING AND MAINTENANCE MANUALS AND PROVIDED TO THE BUILDING OWNER.

A. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE ELECTRICAL REQUIREMENTS OF THE EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT OTHER THAN THE SPECIFIED EQUIPMENT BEING FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

- A. PROVIDE AN APPROVED WATER HAMMER ARRESTOR FOR EACH PLUMBING FIXTURE SUPPLY AS REQUIRED BY FIXTURE MANUFACTURER. B. ALL EXPOSED PIPE IN FINISHED AREAS SHALL BE CHROME PLATED BRASS PIPE, NO FERROUS PIPE.
- C. PROVIDE CLEANOUTS AT EACH CHANGE IN DIRECTION AND AT 100 FOOT INTERVALS IN STRAIGHT RUNS. D. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES AND TRAPS.
- E. CLEANOUTS: VINYL TILE FLOOR (FCO): JR SMITH #4140, OR EQUAL.
- QUARRY TILE FLOOR (FCO): JR SMITH #4200, OR EQUAL
 - CARPETED FLOOR (FCO): JR SMITH #4020-Y, OR EQUAL UNFINISHED FLOOR (FCO): JR SMITH #4020, OR EQUAL.
 - WALL (WCO): JR SMITH #4472, OR EQUAL, 24" ABOVE THE FLOOR.
- GRADE (GCO): JR SMITH #4256. OR EQUAL. WITH HEAVY DUTY CAST IRON BODY AND COVER.
- F. ALL SEWER PIPING LOCATED INSIDE THE BUILDING SHALL BE INSTALLED WITH THE FOLLOWING SLOPES. INSTALL 2-1/2" AND SMALLER PIPE AT 1/4" PER FOOT FALL. INSTALL 3" AND LARGER PIPE AT 1/8" PER FOOT FALL.

- A. DOMESTIC COLD. HOT. AND HOT WATER RECIRCULATING WATER. TYPE L HARD DRAWN COPPER TUBING, ASTM B-88 WITH WROUGHT BRONZE SOLDERED FITTINGS. BALL VALVE: CRANE #932 OR EQUAL.
- B. SANITARY SEWER AND VENTS. ABOVE SOIL: WASTE, DRAIN, VENT PIPE, AND FITTINGS ABOVE GROUND INSIDE OF THE BUILDING SHALL BE SERVICE WEIGHT HUB-AND-SPIGOT OR NO-HUB CAST IRON PIPE. MATERIALS IN THE CEILING AND BELOW SLAB TO BE PLENUM-RATED.
- SEWER LINES SHALL BE LOCATED IN GENERAL AS SHOWN ON THE DRAWINGS. THE EXACT LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR IN SUCH A MANNER AS TO MAINTAIN PROPER CLEARANCES AND SUFFICIENT SLOPE TO ENSURE DRAINAGE.
- C. ALL PIPE HANGERS AND SUPPORTS SHALL BE STANDARD PRODUCTS OF GRINNELL, FEE AND MASON, OR ANVIL. HANGER SPACING SHALL BE IN ACCORDANCE WITH MSS-SP-69.
- D. PROVIDE CHROME PLATED ESCUTCHEONS ON ALL PIPE ENTERING FINISHED AREAS.

6. INSULATION AND DUCT LINING: A. ALL INSULATIONS AND ACCESSORIES SHALL HAVE A FIRE HAZARD CLASSIFICATION WITH A FLAME SPREAD RATING OF NOT OVER 25. A FUEL CONTRIBUTION RATING OF NOT OVER 50. AND A SMOKE DEVELOPMENT RATING OF NOT OVER 50, IN ACCORDANCE WITH NFPA.

- B. PIPE INSULATION (ABOVE GRADE): 1. THE PIPE INSULATION USED SHALL HAVE A THERMAL CONDUCTIVITY OF 0.27 BTU PER
 - IN/HR*SQ-FT*F OR LESS. FIBERGLASS INSULATION WITH FACTORY APPLIED VAPOR BARRIER, ASJ JACKET, FACTORY APPLIED PRESSURE SEALING LONGITUDE LAP JOINT, NO STAPLES, ZESTON PREMOLDED PVC FITTING COVERS. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - 3. INSULATION SCHEDULE:
 - a. DOMESTIC COLD WATER: DOMESTIC HOT WATER:
 - c. HOT WATER RECIRCULATING:
- C. DUCTWORK INSULATION: 1. DUCT LINING: 2 LB/CF, AIR STREAM SIDE COATED, INSTALL PER SMACNA STANDARDS. PROVIDE
- 1/2" THICK THROUGH THE FIRST 10 FEET OF DUCT
- DUCT COVERING: SUPPLY AIR DUCT SHALL HAVE 2" THICK, 3/4 LB/CF, FIBERGLASS BLANKET WITH FACTORY APPLIED VAPOR BARRIER AND FACING. INSTALLATION IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. DUCT COVERING SHALL BE MINIMUM R-6.

<u>7. TESTING, BALANCING AND CLEANING:</u>

- A. ALL PIPING SHALL BE TESTED FOR LEAKS BEFORE BEING CONCEALED IN WALL CONSTRUCTION OR COVERED WITH INSULATION. B. SEWER AND VENT PIPING SHALL BE HYDROSTATICALLY TESTED WITH NO LESS THAN 10 FEET OF HEAD
- FOR A PERIOD OF NOT LESS THAN 15 MINUTES, PER THE LOCAL PLUMBING CODE, WITH NO LEAKS. C. DOMESTIC WATER PIPING SHALL BE HYDROSTATICALLY TESTED AT A PRESSURE OF NOT LESS THAN 1-1/2 TIMES THE OPERATING PRESSURE, BUT NOT LESS THAN 60 PSI, FOR A PERIOD OF NOT LESS THAN 2 HOURS, WITH NO LEAKS.
- D. BEFORE DOMESTIC WATER PIPING IS PLACED IN SERVICE, ALL DOMESTIC WATER DISTRIBUTION SYSTEMS, INCLUDING THOSE FOR COLD WATER AND HOT WATER SYSTEMS, SHALL BE FLUSHED, STERILIZED AND CHLORINATED IN ACCORDANCE WITH THE HEALTH DEPARTMENT REGULATIONS. THE SYSTEMS SHALL BE THOROUGHLY FLUSHED OF ALL DIRT AND FOREIGN MATTER, THEN FILLED WITH WATER TREATED WITH 50 PPM OF CHLORINE. DURING THE FILLING PROCESS, VALVES AND FAUCETS SHALL BE OPENED SEVERAL TIMES TO ASSURE TREATMENT OF THE ENTIRE SYSTEM. THE TREATED WATER SHALL BE LEFT IN THE SYSTEM FOR 24 HOURS AFTER WHICH TIME THE SYSTEM SHALL BE FLUSHED; IF THE RESIDUAL CHLORINE IS NOT LESS THAN 10 PPM, THE FLUSHING SHALL BE REPEATED. AFTER STERILIZATION SAMPLES OF WATER FROM THE SYSTEM SHALL BE APPROVED BY THE BOARD OF HEALTH.
- E. DUCTWORK AND PIPING SHALL BE BALANCED BY QUALIFIED BALANCING PERSONNEL WHO HAVE PREVIOUS EXPERIENCE WITH BALANCING PROCEDURES AND ARE FAMILIAR WITH TESTING AND BALANCING PROCEDURES OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB).
 - BALANCING SHALL INCLUDE THE BALANCING OF THE EQUIPMENT AND AIR DISTRIBUTION SYSTEMS TO PROVIDE DESIGN QUANTITIES INDICATED AND VERIFICATION PERFORMANCE OF ALL EQUIPMENT

WITH IN 30 DAYS OF THE COMPLETION OF THE TESTING AND BALANCING WORK, SUBMIT THE TEST AND BALANCING REPORT BEARING THE SIGNATURE OF THE TEST AND BALANCE ENGINEER. THE REPORTS SHALL BE CERTIFIED PROOF THAT THE SYSTEMS HAVE BEEN TESTED, ADJUSTED, AND BALANCED IN ACCORDANCE WITH THE REFERENCED STANDARDS: ARE AN ACCURATE REPRESENTATION OF HOW THE SYSTEMS HAVE BEEN INSTALLED AND ARE OPERATING. REPORTS SHALL BE BOUND IN A VINYL BINDER AND THE BINDER LABELLED OR MAY BE AN ELECTRONIC

- A. ALL DUCTWORK UNLESS OTHERWISE INDICATED SHALL BE FABRICATED FROM GALVANIZED SHEET STEEL COMPLYING WITH ASTM A 527, LOCKFORMING QUALITY, WITH G60 ZINC COATING IN ACCORDANCE WITH ASTM A 525. AND MILL PHOSPHATIZED FOR EXPOSED LOCATIONS.
- "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION FOR A 2" WATER GAUGE STATIC PRESSURE. C. ALL FITTINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS," LATEST EDITION.
- D. RECTANGULAR DUCT: 1. ELBOWS, UNLESS INDICATED OTHERWISE, SHALL BE CONSTRUCTED WITH CENTERLINE RADIUS OF NOT LESS THAN 1.5 DUCT WIDTH OR SQUARE ELBOWS WITH DOUBLE WALL STREAMLINE ELBOWS.
- 2. TAKE-OFF FITTINGS: BRANCH DUCT TAKE-OFF FITTINGS FOR SUPPLY AND EXHAUST DIFFUSER/REGISTERS SHALL INCLUDE AN INTEGRAL MANUAL VOLUME DAMPER WITH LOCKING QUADRANT, DAMPER NOT REQUIRED ON RETURN AIR. FOR RECTANGULAR TO ROUND TAKE-OFFS, UTILIZE A "BUCKLEY" MODEL 3300 & 3300D OR EQUAL.
- RETURN AIR ACOUSTIC ELBOWS AND SOUND BOOTS SHALL BE A SQUARE ELBOW WITH NO TURNING VANES. 4. SLOPES FOR TRANSITIONS OR OTHER CHANGES IN DIMENSIONS SHALL BE A MINIMUM 1 TO 3.
- E. ROUND AND OVAL SPIRAL SEAM DUCT: PROVIDE RADIUS TYPE FITTINGS FABRICATED OF MULTIPLE SECTIONS WITH MAXIMUM 15 DEGREE CHANGE OF DIRECTION PER SECTION. UNLESS SPECIFICALLY DETAILED OTHERWISE, USE 45 DEGREE LATERALS FOR BRANCH TAKEOFF CONNECTIONS. WHERE 90 DEGREE BRANCHES ARE INDICATED PROVIDE CONICAL TYPE TEES.
- SLOPES FOR TRANSITIONS OR OTHER CHANGES IN DIMENSIONS SHALL BE MINIMUM 1 TO 3. ROUND LONGITUDINAL SEAM DUCT: USE FOR RIGID METAL DUCT ON LEAVING SIDE OF DUCT IN CONCEALED LOCATIONS FOR EXTENSION TO FLEX FOR DIFFUSERS.
- F. SEAL ALL CONCEALED DUCTWORK JOINTS WITH NON-HARDENING. NON-MIGRATING MASTIC SEALANT. AS RECOMMENDED FOR SEALING SEAMS AND JOINTS IN DUCTWORK. OIL BASED CAULKING AND GLAZING COMPOUNDS SHALL NOT BE ACCEPTABLE. DUCTS SHALL BE SEALED TO THE CLASS LEVEL LISTED

DLLOW.			
(1) UNCONDITIONED SPACES:	CLASS B	CLASS C	CLASS
(2) CONDITIONED SPACES (PLENUM):	CLASS C	CLASS B	CLASS
<u>S</u>	UPPLY 2"WC OR LESS	<u>EXHAUST</u>	<u>returi</u>

- G. DUCT SIZES SHOWN ON THE DRAWINGS ARE SHEET METAL SIZES. INCREASE SHEET METAL SIZES ACCORDINGLY TO ACCOUNT FOR THICKNESS OF DUCT LINER. H. WHETHER SHOWN ON PLANS OR NOT, PROVIDE MANUAL VOLUME DAMPERS IN EACH RUNOUT TO EACH SUPPLY DIFFUSER OR REGISTER. PROVIDE ACCESS PANELS TO DAMPERS LOCATED ABOVE HARD
- I. PROVIDE AUXILIARY STEEL AS REQUIRED TO ADEQUATELY SUPPORT DUCTWORK. J. WHERE DUCTS PASS THROUGH FIRE-RATED FLOORS, WALLS, OR PARTITIONS, PROVIDE FIRESTOPPING BETWEEN DUCT AND WALL.
- K. WHERE DUCTS PASS THROUGH INTERIOR PARTITIONS OR EXTERIOR WALLS, AND ARE EXPOSED TO VIEW, CONCEAL SPACE BETWEEN OPENING AND DUCT OR DUCT INSULATION WITH SHEET METAL FLANGES OF SAME GAUGE AS DUCT. OVERLAP OPENING ON 4 SIDES BY AT LEAST 1-1/2". FASTEN TO DUCT AND

9. FLEXIBLE DUCT:

A. ATCO #086 (R-6), OR EQUAL. B. FACTORY APPLIED INSULATION AND VAPOR BARRIER, 1-1/2" THICK.

C. MAXIMUM LENGTH OF 6'-0".

- A. ELECTRICAL WIRING AND WIRING CONNECTIONS REQUIRED FOR THE INSTALLATION OF THE TEMPERATURE CONTROL SYSTEM SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR, UNLESS SPECIFICALLY SHOWN ON THE ELECTRICAL DRAWINGS OR SPECIFICATIONS.
- B. INSTALL CONTROL WIRING WITHOUT SPLICES BETWEEN TERMINAL POINTS, COLOR CODED. INSTALL IN NEAT WORKMANLIKE MANNER. SECURELY FASTENED. INSTALL IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE AND THE ELECTRICAL SPECIFICATIONS.
 - INSTALL CIRCUITS OVER 25 VOLT WITH COLOR CODED NUMBER 12 WIRE. INSTALL CIRCUITS UNDER 25 VOLT WITH COLOR CODED NUMBER 18 WIRE. WITH 0.031" HIGH
- TEMPERATURE 105 DEGREES F PLASTIC INSULATION ON EACH CONDUCTOR AND PLASTIC SHEATH
- ALL WIRING IN AREAS USED AS AIR RETURN PLENUM SHALL BE IN ELECTRIC CONDUIT EXCEPT THAT LOW VOLTAGE WIRING MAY BE TEFLON COATED, ALUMINUM SHEATHED CABLE OR OTHER WIRE SPECIFICALLY APPROVED FOR INSTALLATION IN AIR PLENUMS.

11. VARIABLE A<u>IR VOLUME TERMINALS</u>

- A. FURNISH AND INSTALL SINGLE DUCT, VARIABLE AIR VOLUME TERMINALS OF THE SIZES AND CAPACITIES SHOWN ON THE PLANS. B. TERMINALS SHALL BE CERTIFIED UNDER THE ARI STANDARD 880 CERTIFICATION PROGRAM AND CARRY
- THE ARI SEAL. C. THE TERMINAL CASING SHALL BE MINIMUM 22 GAUGE GALVANIZED STEEL, INTERNALLY LINED WITH 1" DUAL DENSITY INSULATION WHICH COMPLIES WITH UL 181 AND NFPA 90A. ALL EXPOSED INSULATION EDGES SHALL BE COATED WITH NFPA 90A APPROVED SEALANT TO PREVENT ENTRAINMENT OF FIBERS IN THE AIRSTREAM. THE DISCHARGE CONNECTION SHALL BE SLIP AND DRIVE CONSTRUCTION FOR ATTACHMENT TO METAL DUCTWORK. THE CASING SHALL BE CONSTRUCTED TO HOLD LEAKAGE TO THE MAXIMUM VALUES SHOWN IN THE CASING LEAKAGE TABLE.
- D. THE DAMPER SHALL BE HEAVY GAUGE STEEL WITH SHAFT ROTATING IN SELF-LUBRICATING BEARINGS. NYLON BEARINGS ARE NOT ACCEPTABLE. SHAFT SHALL BE CLEARLY MARKED ON THE END TO INDICATE DAMPER POSITION. STICKERS OR OTHER REMOVABLE MARKINGS ARE NOT ACCEPTABLE. THE DAMPER SHALL INCORPORATE A MECHANICAL STOP TO PREVENT OVERSTROKING AND A SYNTHETIC SEAL TO LIMIT CLOSE-OFF LEAKAGE TO THE MAXIMUM VALUES SHOWN IN THE DAMPER LEAKAGE TABLE.
- E. ACTUATORS SHALL BE CAPABLE OF SUPPLYING AT LEAST 35 INCH-LBS. OF TORQUE TO THE DAMPER SHAFT AND SHALL BE MOUNTED EXTERNALLY FOR SERVICE ACCESS. TERMINALS WITH INTERNAL ACTUATOR MOUNTING OR LINKAGE CONNECTION MUST INCLUDE GASKETED ACCESS PANEL, REMOVABLE WITHOUT DISTURBING THE DUCTWORK. CASING WITH ACCESS PANEL SHALL BE CONSTRUCTED TO HOLD LEAKAGE TO THE MAXIMUM VALUES SHOWN IN THE CASING LEAKAGE TABLE
- F. AT AN INLET VELOCITY OF 2000 FPM THE MINIMUM STATIC PRESSURE REQUIRED TO OPERATE ANY TERMINAL SIZE SHALL NOT EXCEED 0.13-INCH W.G..
- G. HVAC CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH CONNECTION OF NEW VAV TERMINAL UNITS TO THE EXISTING BUILDING AUTOMATION SYSTEM. THE BUILDING'S EMS WORK IS THROUGH JOHNSON CONTROLS.

12. FIRE PROTECTION SYSTEM:

A. THE EXISTING SPACE IS PROTECTED WITH AN EXISTING WET PIPE SPRINKLER SYSTEM. RELOCATE AND PROVIDE ADDITIONAL SPRINKLER HEADS AND PIPING AS REQUIRED FOR THE NEW CONSTRUCTION. SPRINKLER HEADS IN FINISHED CEILINGS SHALL BE SEMI-RECESSED CHROME PLATED PENDENT TYPE. SPRINKLER HEADS IN ROOMS WITHOUT CEILINGS SHALL BE UPRIGHT BRASS TYPE HEADS.

B. SPRINKLER WORK SHALL BE PERFORMED BY A SPRINKLER CONTRACTOR PRE-APPROVED BY THE

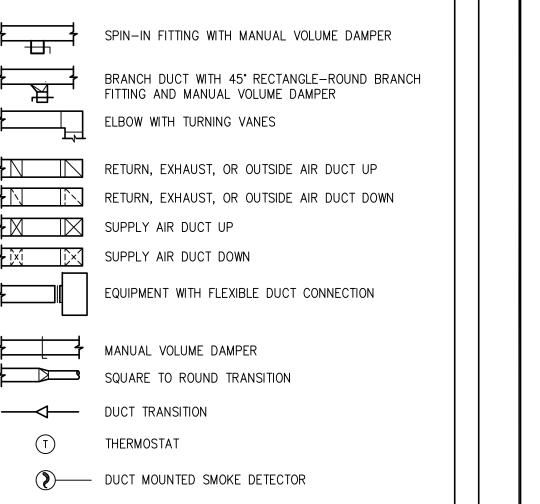
- LANDLORD. C. REFER TO THE ARCHITECTURAL DRAWINGS FOR NEW WALL CONSTRUCTION.
- D. SPRINKLER PIPING SHALL MATCH EXISTING.
- E. SPRINKLER SYSTEM (SHOP DRAWINGS) SHALL BE APPROVED BY THE LOCAL FIRE AUTHORITY AND LANDLORD'S INSURANCE CARRIER PRIOR TO START OF WORK.

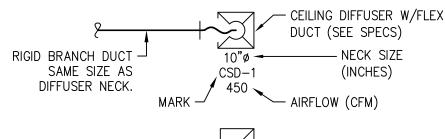
- A. THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS, BY SUBMITTING A BID ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITIONS OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. NO CLAIMS FOR EXTRA COMPENSATION WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERABLE FROM A CAREFUL EXAMINATION OF THE EXISTING BUILDING CONDITIONS.
- B. CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE AND THE CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE WHAT EFFECT THE EXISTING CONDITIONS WILL HAVE ON THE WORK POTENTIAL. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN THE BID ALL COSTS REQUIRED TO MAKE THE WORK MEET EXISTING CONDITIONS.
- C. PROTECT ADJACENT MATERIALS INDICATED TO REMAIN. INSTALL AND MAINTAIN DUST AND NOISE BARRIERS TO KEEP DIRT, DUST, AND NOISE FROM BEING TRANSMITTED TO ADJACENT AREAS. REMOVE PROTECTION AND BARRIERS AFTER REMODELING OPERATIONS ARE COMPLETE.

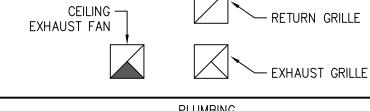
M&P SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC, ARE

NECESSARILY USED ON THE DRAWINGS. HVAC EQUIPMENT & DUCTWORK

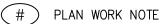


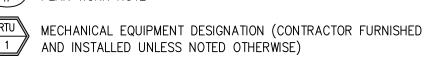




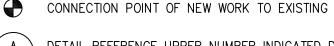
F	PLUMBING
<u>SYMBOL</u>	<u>DESCRIPTION</u>
ss	SANITARY SEWER (ABOVE GRAD
————SS———	SANITARY SEWER (BELOW GRAD
CD	CONDENSATE DRAIN
V	VENT PIPING
G	G = GAS PIPING LESS THAN 2
MPG	MPG = GAS PIPING 2 PSI
	COLD WATER PIPING
———нw—— – – —	HOT WATER PIPING
———HWR———	RECIRCULATING HOT WATER
CA	COMPRESSED AIR
	PIPE ELBOW DOWN
	PIPE ELBOW UP
	GATE VALVE
——б	BALL VALVE
	PLUG VALVE
	FLOOR CLEANOUT (FCO)
─ ───	WALL CLEANOUT (WCO)
	FLOOR DRAIN
	FLOOR SINK

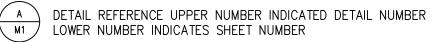
ABBRE	EVIATIONS		
AFF	ABOVE FINISHED FLOOR	МС	MECHANICAL CONTRACTOR
BAS	BUIDLING AUTOMATION SYSTEM	MIN	MINIMUM
BD	BACKDRAFT	NC	NOISE CRITERIA
CFM	CUBIC FEET PER MINUTE	OA	OUTSIDE AIR
DDC	DIRECT DIGITAL CONTROL	RA	RETURN AIR
DX	DIRECT EXPANSION	SA	SUPPLY AIR
EA	EXHAUST AIR	SD	SMOKE DUCT DETECTOR
FFA	FROM FLOOR ABOVE	TFA	TO FLOOR ABOVE
FFB	FROM FLOOR BELOW	TFB	TO FLOOR BELOW
GPM	GALLONS PER MINUTE	TYP	TYPICAL
IN WC	INCHES OF WATER COLUMN	UNO	UNLESS NOTED OTHERWISE
MAX	MAXIMUM	W/	WITH
MBH	1000 BTU PER HOUR	w/o	WITHOUT
	ANNOT	ATION	

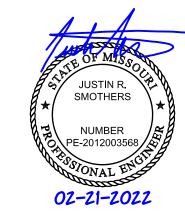




–) PLUMBING FIXTURE DESIGNATION

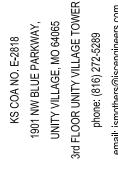






کے کے JUY GRONBER **5**

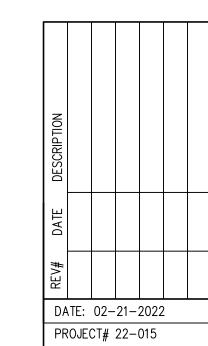


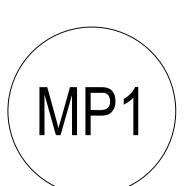




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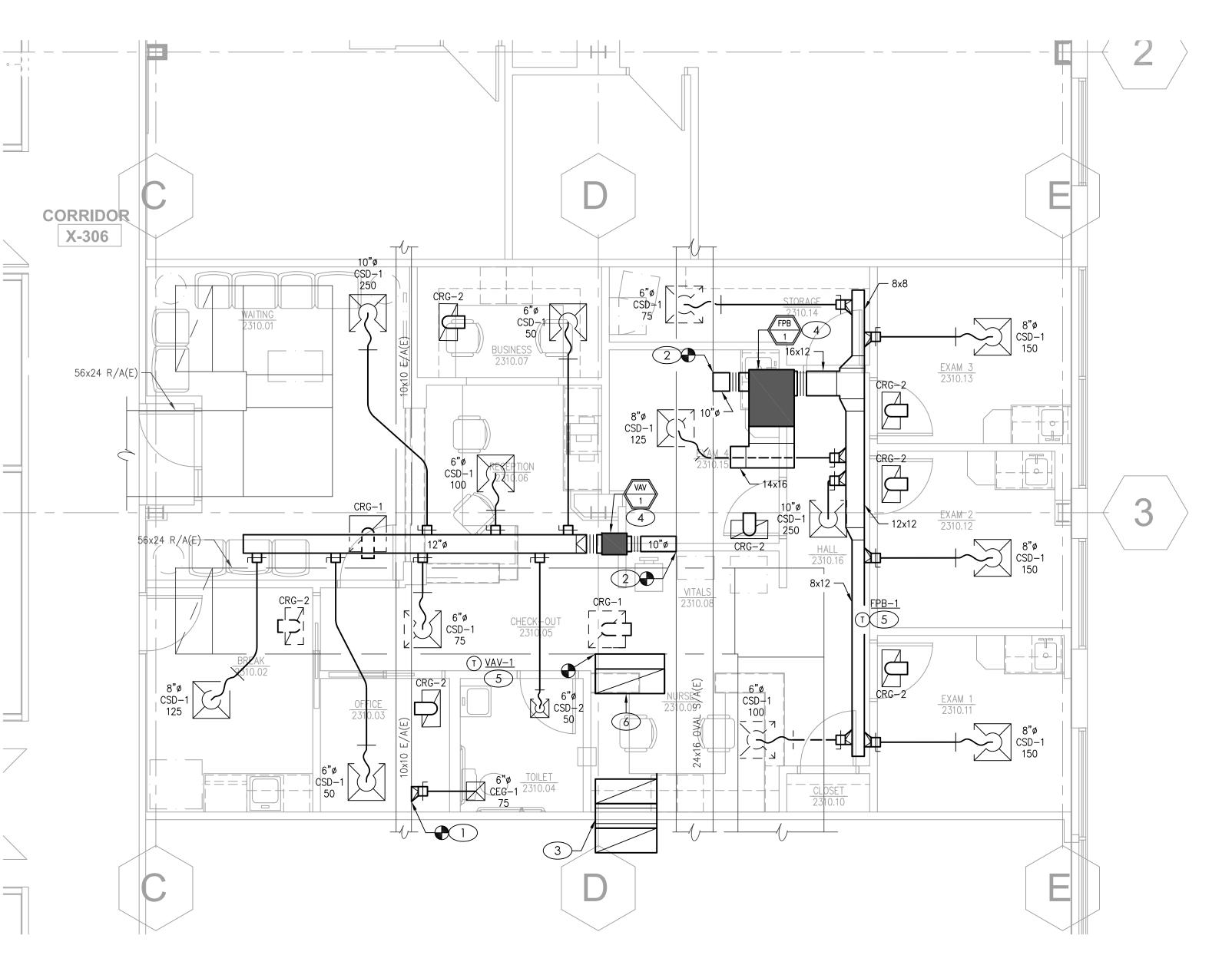
	VAV TERMINAL UNIT SCHEDULE																		
					DUCT S	IZE (IN.)		CFM			ELECTRIC H	EAT COIL		SINGLE	POIN⊤ EL	ECTRICAL			
TAG	AREA SERVED	MANUFACTURER	MODEL / SIZE	TYPE	TYPE	IYPE	INLET	OUTLET	DESIGN	MAX	MIN	kW	EAT (°F)	LAT (°F)	STEPS	V/PH	MCA	MOCP	NOTES
VAV-1	WAITING/RECEPTION	JCI	TSS-EH / 10	SINGLE DUCT	10	13x11	700	1355	225	5.5	55.0	79.7	2	480/1	14.3	20	A-D		
FPB-1	EXAM ROOMS	JCI	TVS-EH / 1018	FAN POWERED BOX	10	14x10	1000	1600	185	9.0	67.9	96.2	2	480/1	26.9	30	A-D		

NOTES:

- A. PROVIDE WITH NON-FUSED DISCONNECT SWITCH AND SINGLE POINT POWER CONNECTION.
- B. PROVIDE FILTER RACK AND FILTER.
- PROVIDE DISCHARGE AIR TEMPERATURE SENSOR, FACTORY MOUNTED AND COMMISSIONED CONTROLS AND SPACE TEMEPRATURE SENSOR WITH OCCUPANT OVERIDE.
- CONNECT TO EXISTING JCI DDC CONTROL INTERFACE.

	DIFFUSER, REGISTER AND GRILLE SCHEDULE												
MARK	MANUFACTURER	MODEL	FACE TYPE	MOUNTING TYPE	FACE SIZE (IN.)	MAX NC	NOTES						
SUPPLY													
CSD-1	TITUS	OMNI	PLAQUE FACE	LAY-IN	24x24	25	A-C						
CSD-2	TITUS	OMNI	PLAQUE FACE	SURFACE MOUNT	12x12	25	A-C						
RETURN													
CRG-1	TITUS	PAR	PERFORATED	LAY-IN	24x24	25	A-E						
CRG-2	TITUS	PAR	PERFORATED	LAY-IN	12x24	25	A-E						
EXHAUST													
CEG-1	TITUS	PAR	PERFORATED	SURFACE MOUNT	12x12	25	A-D						
NOTES:													

- A. NECK SIZE SHOWN ON DRAWINGS.
- B. BAKED ENAMEL FINISH, WHITE
- C. FRAME TYPE TO MATCH CEILING CONSTRUCTION, COORDINATE WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- D. PAINT THE INSIDE OF CANS FLAT BLACK.
- E. PROVIDE TITUS FLEXABOOT.



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GENERAL NOTES

- B. COORDINATE INSTALLATION OF MECHANICAL AND PLUMBING SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION AND AVOID CONFLICTS. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. VERIFY DUCT SPACE AVAILABLE ABOVE ALL CEILINGS PRIOR TO ANY FABRICATION OF INSTALLATION.
- C. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AROUND EQUIPMENT.
- D. BRANCH DUCTWORK SHALL BE THE SAME SIZE AS NECK SIZE SHOWN UNLESS OTHERWISE NOTED.
- E. REFER TO SPECIFICATIONS FOR DUCTWORK AND PIPING INSULATION REQUIREMENTS. DUCT SIZES ON MECHANICAL PLANS ARE INDICATED CLEAR INSIDE AIRFLOW DIMENSIONS. INCREASE SHEET METAL SIZES ACCORDINGLY TO ACCOUNT FOR THICKNESS OF DUCT LINER.
- F. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED HVAC EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE ELECTRICAL REQUIREMENTS OF THE HVAC EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT OTHER THAN THE SPECIFIED EQUIPMENT BEING FURNISHED SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.

KEYED PLAN NOTES

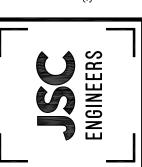
- CONNECT NEW EXHAUST TAP TO EXISTING EXHAUST DUCTWORK WITH DAMPER. BALANCE TO CFM SHOWN.
- CONNECT NEW SUPPLY DUCT TO EXISTING SUPPLY DUCTWORK. CONTINUE WITH DUCTWORK AS SHOWN.
- 3. PROVIDE 40x16 TRANSFER DUCT ABOVE DROP CEILING. TURN UP ON BOTH SIDES OF THE WALL. LINE INSIDE OF DUCT WITH 1/2" ACOUSTIC LINER PER SPECIFICATIONS.
- 4. PROVIDE NEW VAV TERMINAL UNIT AS SCHEDULED. MECHANICAL CONTRACTOR SHALL INCLUDE ALL COSTS AND COORDINATION EFFORTS TO CONNECT NEW VAV BOX TO EXISTING BUILDING AUTOMATION SYSTEM.
- 5. LOCATE THERMOSTAT ON WALL AT 54"AAF. COORDINATE EXACT LOCATION WITH OWNER PRIOR TO INSTALLATION.
- 6. CONNECT NEW 45x20 RETURN AIR DUCT TO EXISTIN RA DUCT. OFFSET 36" THEN TURN UP WITH 45x20 OPENING.



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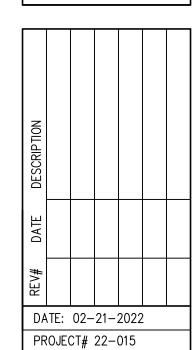


MOB

Lee's Summit Medical

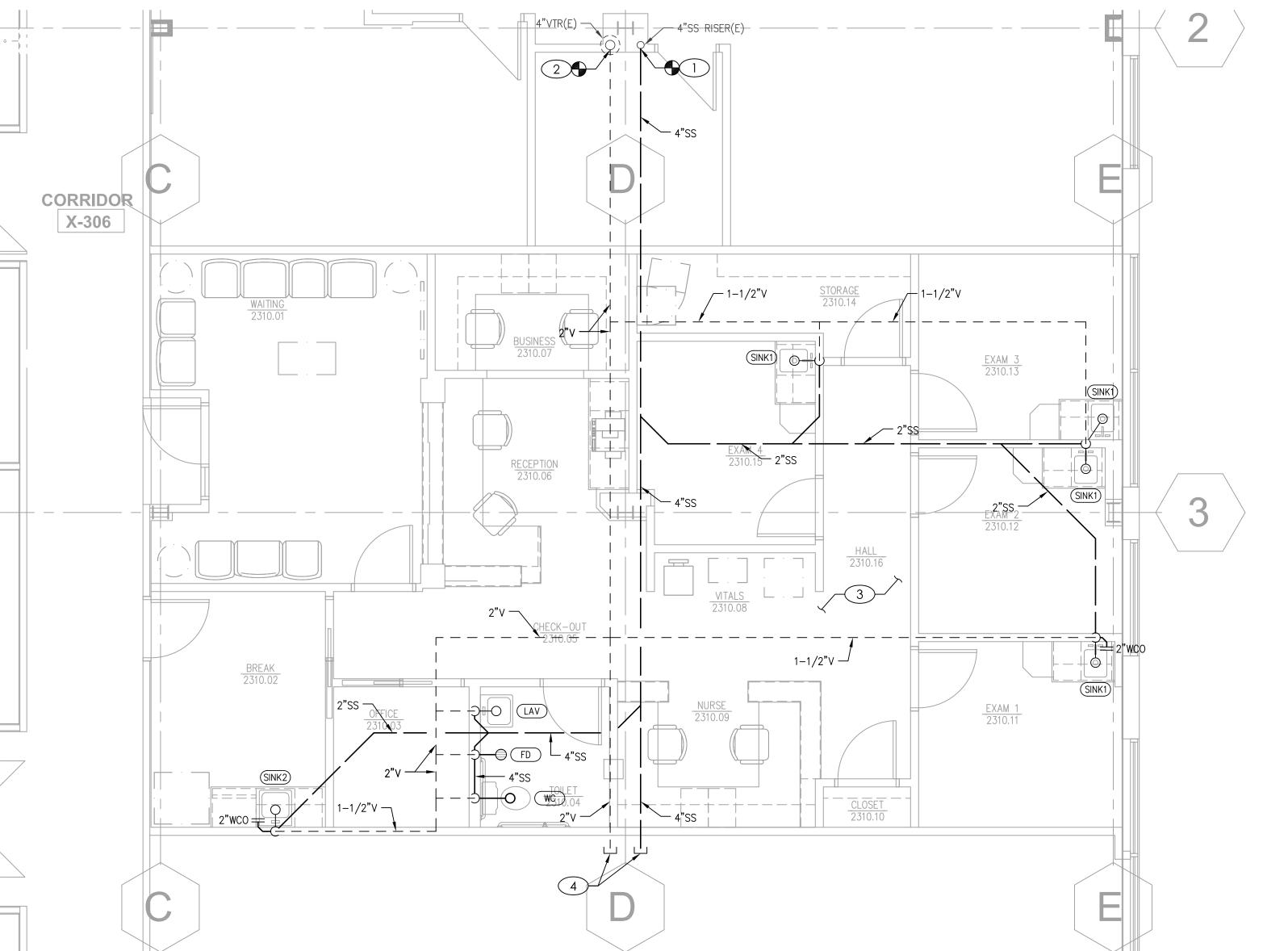
SPEC SUITE 2310





FIXTURE	BRANCH CO	NNECTION	SCHEDULE	
FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
FLOOR DRAIN	-	-	3"	1-1/2"
ICE MAKER BOX	1/2"	-	1	-
LAVATORY/SINK	1/2"	1/2"	1-1/2"	1-1/2"
WATER CLOSET (FLUSH TANK)	1/2"	-	4"	2"
WATER HEATER	3/4"	3/4"	ī	-
NOTE:	PIPE SIZES SHOW	N ARE MINIMUN	1. MINIMUM SANIT	ARY SIZE
	UNDERGROUND I	S 2".		

	PLUMBING FIXTURE SCHEDULE
BASIS OF DESIG	GN: CONFIRM ALL SELECTIONS WITH OWNER AND ARCHITECT PRIOR TO PURCHASE.
PLUMBING CON	TRACTOR TO COORDINATE WITH GENERAL CONTRACTOR AND CASEWORK PROVIDE
	TO VERIFY COMPATABILITY WITH CASEWORK OPENINGS.
	FLOOR DRAIN: SIOUX CHIEF 832-3PNR, FLOOR DRAIN, PVC BODY AND CLAMPING
FD	COLLAR, ADJUSTABLE 5-1/2" ROUND NICKEL BRONZE STRAINER. PROVIDE WITH
	TRAP PRIMER CONNECTION.
	WALL-MOUNT LAVATORY: AMERICAN STANDARD 9024.004EC.020, THREE HOLE,
	20"X18.25" RECTANGLUAR BOWL, MOUNT AT ADA HEIGHT, VITREOUS CHINA,
LAV	WITH SINGLE HANDLE FAUCET (AMERICAN STANDARD 7075.004.002). PROVIDE
LAV	FLEXIBLE SS RISERS WITH CHROME PLATED STOP VALVES, P-TRAP WITH CLEANOU
	AND ESCUTCHEONS. INSULATE WITH "HANDI-LAV-GUARD" MODEL 102, OR
	EQUAL.
	DROP-IN SINK: ELKAY BPSFRQ1215, 12.5"X15", RECTANGULAR BASIN, STAINLESS
	STEEL. FAUCET (DELTA 26C3944), SWIVEL GOOSENECK SPOUT, 0.5 GPM NON-
SINK1	AERATING VANDAL RESISTANT SPRAY OULET, 6" WRIST HANDLES. PROVIDE
	FLEXIBLE SS RISERS WITH CHROME PLATED STOP VALVES, P-TRAP WITH CLEANOU
	AND ESCUTCHEONS.
	DROP-IN KITCHEN SINK: ELKAY ESE2020101, 20"X20", ONE FAUCET HOLE, SINGLE
	RECTANGULAR BASIN, STAINLESS STEEL, WITH SINGLE LEVER PULL-OUT FAUCET
SINK2	(DELTA 9176-PR-DST). PROVIDE GARBAGE DISPOSAL (INSINKERATOR BADGER 5,
	120V, 1/2HP), FLEXIBLE SS RISERS WITH CHROME PLATED STOP VALVES, P-TRAP
	WITH CLEANOUT AND ESCUTCHEONS.
IMB	ICE MAKER OUTLET BOX: WATER TITE AB9702 OUTLET BOX WITH QUARTER TURN
IIVID	VALVES, 1/2" CW CONNECTION AND WATER HAMMER ARRESTOR.
	FLOOR-MOUNTED ADA WATER CLOSET: KOHLER K-3519-TR, HANDICAP
	ACCESSIBLE, VIREOUS CHINA, 1.0 GPF, ELONGATED BOWL, FLOOR MOUNTED W/
WC	17.125" BOWL HEIGHT, WHITE, VITREOUS CHINA TANK AND COVER CONTAINING
	FLUSH VALVE, WHITE OPEN-FRONT SEAT, CHROME STOPS, C.P. FLEXIBLE RISER
	TUBE, BOLT CAPS, AND ESCUTCHEON.
RCP	HOT WATER RECIRCULATION PUMP: GRUNDFOS UP 15-10 SU7P/TLC. 6 GPM MAX
NCF	5.25 FT HEAD, 120V/1 PH, 25W, STAINLESS STEEL HEAD, INTEGRAL TIMER.
WH	ELECTRIC WATER HEATER: AO SMITH MODEL ENL-20, 20 GALLON, 3/4"
VVII	CONNECTIONS, 21 GPH @ 90°F RISE, 240V/1PH, SINGLE 4500W ELEMENT.



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- C. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AROUND EQUIPMENT.
- D. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF.
- E. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.
- F. PROVIDE THE GC WITH A COPY OF THE INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS.
- G. EXACT LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO ANY INSTALLATION OR CONNECTIONS THEREOF. ALL CONNECTIONS TO EXISTING UTILITIES (IE: WATER, SEWER & GAS) SHALL BE MADE WITH APPROVAL OF THE ADMINISTRATIVE AUTHORITY AND THE RESPECTIVE UTILITY COMPANY.
- H. REFER TO PLUMBING FIXTURE SCHEDULE FOR MINIMUM BRANCH WASTE AND VENT PIPE SIZING.

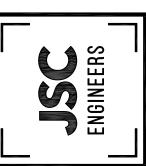
KEYED PLAN NOTES

- 1. CONNECT NEW 4" SANITARY SEWER TO EXISTING SANITARY RISER. VERIFY SIZE, LOCATION, AND INVERT ELEVATION PRIOR TO START OF WORK.
- 2. CONNECT 2" VENT PIPE TO EXISTING VENT STACK GOING TO EXISTING 4"VTR.
- 3. SANITARY PIPING TO BE ROUTED IN CEILING OF SPACE BELOW. COORDINATE REQUIRED SEQUENCE OF WORK WITH BUILDING OWNER PRIOR TO BID AND CONSTRUCTION.
- 4. EXTEND AND CAP 4" SANITARY SEWER LINE AND 2" VENT LINE INTO ADJACENT SPACE FOR FUTURE TENANT. INSTALL PIPING AT AN ELEVATION THAT WILL ALLOW FOR SUFFICIENT SLOPE OF FUTURE CONNECTING FIXTURES FROM SOUTH TENANT.



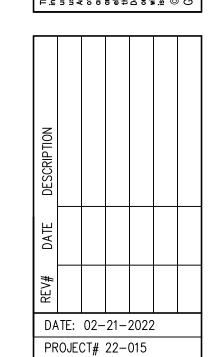
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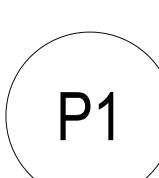




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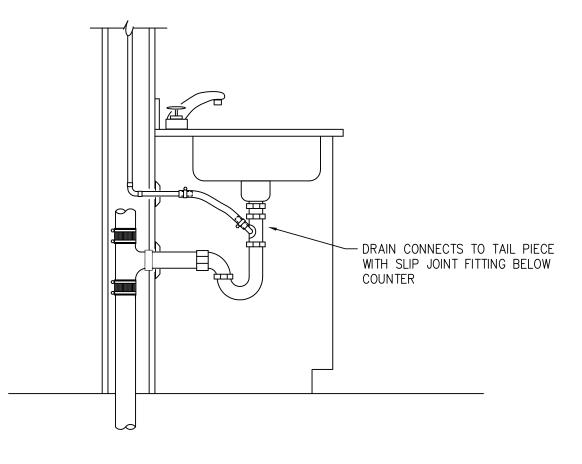
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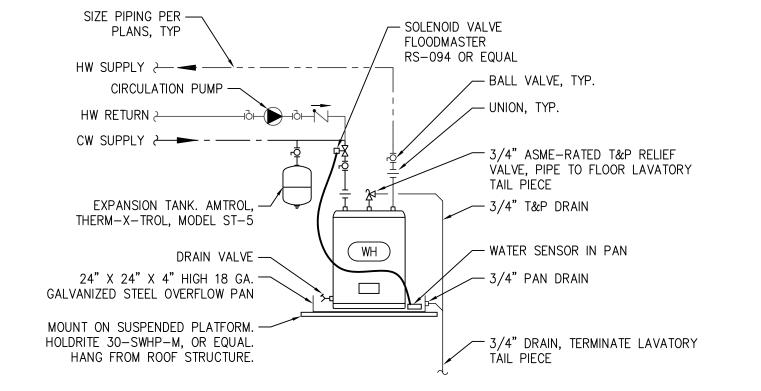






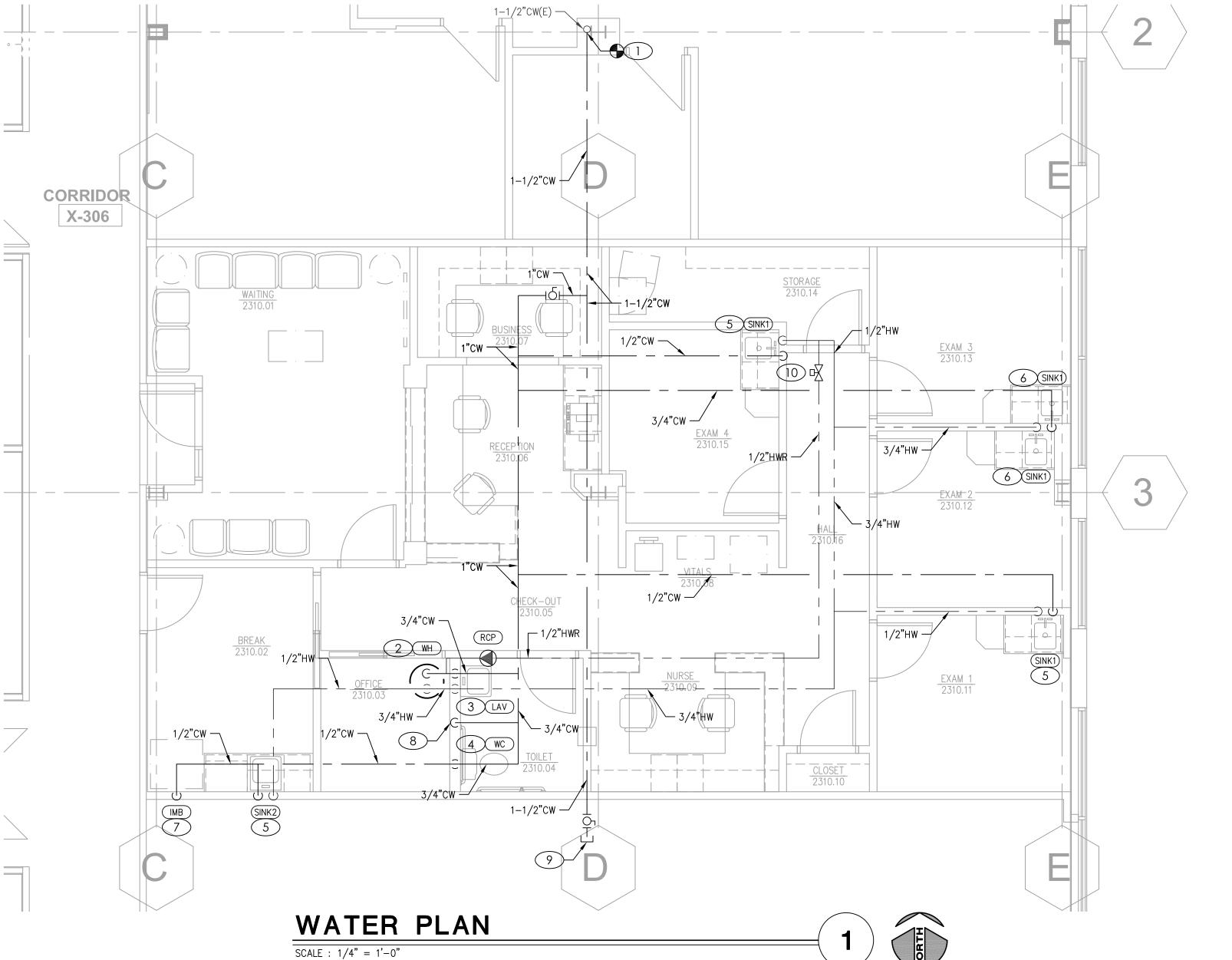






DRAIN TO TAIL PIECE SCALE: NO SCALE 3

ELECTRIC WATER HEATER DETAIL SCALE: NO SCALE 2



GENERAL NOTES

- A. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- B. COORDINATE INSTALLATION OF MECHANICAL AND PLUMBING SYSTEMS WITH OTHER TRADES TO ENSURE A NEAT AND ORDERLY INSTALLATION AND AVOID CONFLICTS. INSTALL DUCTWORK AND PIPING AS TIGHT TO STRUCTURE AS POSSIBLE. COORDINATE INSTALLATION OF DUCTWORK AND PIPING TO AVOID CONFLICTS WITH ELECTRICAL PANELS, LIGHTING FIXTURES, ETC. VERIFY DUCT SPACE AVAILABLE ABOVE ALL CEILINGS PRIOR TO ANY FABRICATION OF INSTALLATION.
- C. NEW MECHANICAL EQUIPMENT, DUCTWORK AND PIPING ARE SHOWN AT APPROXIMATE LOCATIONS. FIELD MEASURE FINAL DUCTWORK AND PIPING LOCATIONS PRIOR TO FABRICATION AND MAKE ADJUSTMENTS AS REQUIRED TO FIT THE DUCTWORK AND PIPING WITHIN THE AVAILABLE SPACE. VERIFY THAT FINAL EQUIPMENT LOCATIONS MEET MANUFACTURER'S RECOMMENDATIONS REGARDING SERVICE CLEARANCE AROUND EQUIPMENT.
- D. OVERHEAD HANGERS AND SUPPORTS FOR EQUIPMENT, DUCTWORK AND PIPING SHALL BE FASTENED TO BUILDING JOISTS OR BEAMS. DO NOT ATTACH HANGERS AND SUPPORTS TO THE ABOVE FLOOR SLAB OR ROOF.
- E. PROVIDE THE GC WITH A COPY OF THE INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS.
- F. EXACT LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES SHALL BE VERIFIED PRIOR TO ANY INSTALLATION OR CONNECTIONS THEREOF. ALL CONNECTIONS TO EXISTING UTILITIES (IE: WATER, SEWER & GAS) SHALL BE MADE WITH APPROVAL OF THE ADMINISTRATIVE AUTHORITY AND THE RESPECTIVE UTILITY COMPANY.
- G. REFER TO PLUMBING FIXTURE SCHEDULE FOR MINIMUM BRANCH WASTE AND VENT PIPE SIZING.

KEYED PLAN NOTES

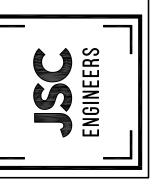
- 1. CONNECT NEW 1-1/2"CW PIPING TO EXISTING 1-1/2" DOMESTIC WATER TAP IN ADJACENT TENANT SPACE. FIELD VERIFY SIZE AND LOCATION PRIOR TO START OF WORK.
- 2. MOUNT WATER HEATER ABOVE ACCESSIBLE CEILING. CONNECT 3/4"CW AND 3/4"HW TO WATER HEATER. PROVIDE 3/4" T&P RELIEF AND 3/4" CONTAINMENT PAN DRAINS FROM WATER HEATER TO LAVATORY TAIL PIECE IN RESTROOM. SEE WATER HEATER DETAIL ON THIS SHEET FOR ADDITIONAL REQUIRED COMPONENTS AND INSTALLATION INSTRUCTIONS.
- 3. PROVIDE 1/2"CW AND 1/2"HW DOWN IN WALL TO LAVATORY. PROVIDE THERMOSTATIC MIXING VALVE FOR FIXTURE EQUAL TO LEONARD MODEL 170. SET HW SUPPLY WATER TEMPERATURE TO 110"F.
- 4. 1/2"CW DOWN IN WALL TO WATER CLOSET.
- 5. 1/2"CW AND 1/2"HW DOWN IN WALL TO SINK.
- 6. PROVIDE 3/4"CW AND 3/4"HW DOWN IN WALL TO BACK-TO-BACK FIXTURES. PROVIDE 1/2"CW AND 1/2"HW TO EACH SINK.
- 7. 1/2"CW DOWN IN WALL TO ICE MAKER BOX.
- 8. 1/2"CW DOWN IN WALL TO TRAP PRIMER AND CONTINUE TO CONNECTION AT FLOOR DRAIN. WATTS LFTP300 TRAP PRIMER, OR EQUAL. PROVIDE ACCESS PANEL.
- 9. EXTEND 1-1/2" DOMESTIC WATER LINE INTO ADJACENT SPACE FOR FUTURE TENANT. PROVIDE SHUTOFF VALVE AND CAP LINE.
- 10. PROVIDE AUTOMATIC FLOW CONTROL VALVE. BALANCE VALVE AT 1.0 GPM



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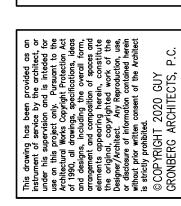


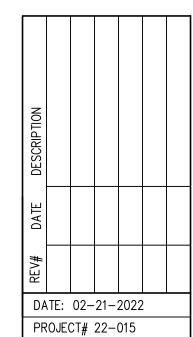
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ELECTRICAL SPECIFICATIONS

PART I - GENERAL

CONDITIONS

- FURNISH AND INSTALL A COMPLETELY WIRED AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO, THESE MAJOR ITEMS. A. LIGHTING FIXTURES AS INDICATED AND SPECIFIED ON THE PLANS.
- B. ELECTRICAL PANELS, SERVICE, CONDUIT, WIRING, ETC., FOR ALL OUTLETS AND EQUIPMENT. C. TELEPHONE, TELEVISION, AND FIRE ALARM. OUTLETS AND CONDUIT AS INDICATED.
- OBTAIN AND REVIEW ALL OTHER DRAWINGS INCLUDING REFLECTED CEILING PLAN, INTERIOR AND EXTERIOR ELEVATIONS, FURNITURE PLANS AND ALL MILL WORK DRAWINGS. COORDINATE INSTALLATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT PRIOR TO ROUGH-IN.
- 3. OBTAIN SUBMITTAL AND SHOP DRAWINGS FROM OTHER TRADES AND EQUIPMENT TO COORDINATE INSTALLATION ACCORDINGLY.
- 4. INSTALLATION SHALL COMPLY WITH ALL CURRENT APPLICABLE CODES AND GOVERNING AGENCIES HAVING JURISDICTION.
- 5. FIRE ALARM SYSTEM, IF REQUIRED PER IBC, SHALL BE DESIGN-BUILD BY OWNER'S/GC'S FIRE ALARM CONTRACTOR, DESIGN SHALL BE IN ACCORDANCE WITH NFPA 72. FIRE ALARM CONTRACTOR SHALL SUBMIT STAMPED DRAWINGS TO AHJ FOR REVIEW AND APPROVAL. FIRE ALARM CONTRACTOR IS RESPONSIBLE FOR TESTING AND VERIFYING THAT THE AUDIBILITY OF THE FIRE ALARM SYSTEM MEETS A MINIMUM OF 15 DBA ABOVE AMBIENT NOISE LEVELS. ADD HORNS WHERE REQUIRED TO MAINTAIN MINIMUM
- PROVIDE FIRE STOP ON ALL PIPING THAT PENETRATES RATED WALLS. METHOD OF FIRE STOP SHALL MEET WALL RATING. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF FIRE RATED WALLS. THIS CONTRACTOR SHALL PROVIDE FIRE RATED ENCLOSURES AROUND ALL ROUGH-IN BOXES, PANELS, ETC. THAT ARE LOCATED IN FIRE RATED WALLS AND SHALL FIRE CAULK ALL OPENINGS IN RATED ASSEMBLIES.

- THE ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT, TRENCH, AND BACKFILL FOR ELECTRICAL SERVICE ENTRANCE FROM THE MAIN SERVICE TO UTILITY POINT OF ELECTRICAL SERVICE. ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE WITH
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT, TRENCH, AND BACKFILL FOR PRIMARY PHONE AND CATV SERVICE FROM THE TELEPHONE TERMINAL BOARD OR CABINET TO THE PHONE COMPANY AND CATV COMPANY POINT OF SERVICE COORDINATE WITH LOCAL UTILITY COMPANIES.

<u>C. CODES, REGULATIONS,</u> AND STANDARDS

- THE INSTALLATION SHALL COMPLY WITH APPLICABLE LOCAL AND STATE CODES AND ORDINANCES, WITH THE REGULATIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE AND WITH THE REQUIREMENTS OF THE POWER, TELEPHONE, AND CATV COMPANIES FURNISHING SERVICES TO THIS INSTALLATION.
- THE LATEST EDITIONS OF THE FOLLOWING INDUSTRY STANDARDS, SPECIFICATIONS, AND CODES ARE MINIMUM REQUIREMENTS:
- A. THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION STANDARDS.
- B. THE NATIONAL ELECTRICAL CODE, INCLUDING LOCAL AMENDMENTS. C. UNDERWRITER LABORATORIES INCORPORATED STANDARDS. D. AMERICAN NATIONAL STANDARDS INSTITUTE.
- E. INTERNATIONAL BUILDING CODE.

- PRIOR TO SUBMITTING A BID FOR ELECTRICAL WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE PROPOSED CONSTRUCTION AND SHALL THOROUGHLY ACQUAINT HIMSELF WITH EXISTING UTILITIES, AND WORKING CONDITIONS TO BE ENCOUNTERED, ETC. ALLOWANCE WILL NOT BE MADE FOR NONCOMPLIANCE WITH THIS CONDITION AFTER BIDDING
- 2. ELECTRICAL INSTALLATION SHALL MEET THE EXISTING CONDITIONS.

<u>E. STORAGE AND HANDLING OF MATERIAL</u>

- DELIVER MATERIALS AND EQUIPMENT TO THE PROJECT IN THE MANUFACTURER'S ORIGINAL, UNOPENED, LABELED CONTAINERS. PROTECT AGAINST MOISTURE, TAMPERING, OR DAMAGE FROM IMPROPER HANDLING OR STORAGE. CONTRACTOR SHALL PROTECT AND BE RESPONSIBLE FOR ANY DAMAGE TO WORK OR MATERIALS UNTIL FINAL ACCEPTANCE BY THE OWNER. AND SHALL MAKE GOOD WITHOUT COST TO THE OWNER. ANY DAMAGE OR LOSS THAT MAY OCCUR DURING THIS PERIOD.
- ARRANGE FOR TIMELY DELIVERY OF MATERIALS AND EQUIPMENT TO THE JOB SITE IN ORDER TO MINIMIZE THE LENGTH OF TIME BETWEEN DELIVERY AND INSTALLATION.
- COVER AND PROTECT ANY MATERIAL WHICH MAY BE AFFECTED BY THE WEATHER WHILE IN TRANSIT OR STORED AT THE PROJECT SITE. ANY MATERIAL FOUND DEFECTIVE OR NOT INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS MAY BE REJECTED BY THE ENGINEER.
- KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS, OR RUBBISH CAUSED BY EMPLOYEES OR WORK UNDER THIS DIVISION OF THE SPECIFICATIONS. AT THE COMPLETION OF THE WORK REMOVE ALL SURPLUS MATERIALS, TOOLS, ETC., AND LEAVE THE PREMISES BROOM-CLEAN.

G. EXCAVATION, CUTTING, AND FITTING

- PERFORM ALL EXCAVATION AND BACK FILLING REQUIRED FOR WORK PERFORMED UNDER THIS DIVISION OF THE SPECIFICATIONS. USE EXCAVATED MATERIALS FOR BACKFILL UNLESS OFF SITE MATERIALS ARE DEEMED NECESSARY.
- PERFORM THE EXCAVATION, CUTTING, 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 MEMBERS SHALL BE DONE WITHOUT THE CONSENT OF THE ARCHITECT.
- H. DRAWINGS THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE ELECTRICAL WORK DATA PRESENTED ON THESE DRAWINGS ARE AS ACCURATE AS PLANNING CAN DETERMINE, BUT FIELD VERIFICATION OF ALL DIMENSIONS, LOCATIONS, LEVELS, ETC., TO SUIT FIELD CONDITIONS IS REQUIRED. REVIEW ALL ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS OF CONDITIONS SHOWN. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DISCREPANCIES BETWEEN DIFFERENT PLANS, OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING BEFORE THE DATE OF BID OPENING. IF DISCREPANCIES ARE NOT REPORTED, THE CONTRACTOR SHALL BID THE GREATER QUANTITY OR BETTER QUALITY, AND APPROPRIATE ADJUSTMENTS WILL BE MADE AFTER CONTRACT AWARD. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD MEASURE AND CONFIRM MOUNTING HEIGHTS AND LOCATION OF ELECTRICAL EQUIPMENT WITH RESPECT TO COUNTERS, RADIATION, ETC. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS, USE ACTUAL BUILDING DIMENSIONS.

COOPERATION WITH OTHER CONTRACTORS

- COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF THE ELECTRICAL OUTLETS AND EQUIPMENT WILL BE PROPERLY COORDINATED. CONDUIT, LIGHTING FIXTURES, AND OTHER EQUIPMENT LOCATIONS SHALL BE VERIFIED WITH OTHER TRADES TO AVOID CONFLICT WITH THE PIPING, DUCTWORK, STEEL, BEAMS, OR OTHER OBSTRUCTIONS.
- CAREFULLY VERIFY THE LOCATIONS OF THE OUTLET BOXES AND DETERMINE THAT THEY HAVE NOT BEEN DISTURBED DURING THE INSTALLATION OF MATERIALS OF OTHER TRADES.
- COORDINATE THE LOCATION OF THE TRENCHES AND CONDUITS FOR ELECTRICAL AND TELEPHONE UTILITY SERVICES WITH THE GENERAL CONTRACTOR.
- COORDINATE HVAC AND PLUMBING EQUIPMENT CONNECTION REQUIREMENTS WITH HVAC AND PLUMBING CONTRACTORS.

RECORD DRAWINGS

- THE ELECTRICAL CONTRACTOR SHALL MAINTAIN A SET OF DRAWINGS AT THE JOB SITE FOR THE EXCLUSIVE PURPOSE OF MAINTAINING A RECORD OF ALL WORK INSTALLED AND TO SHOW ANY DEVIATIONS FROM THE WORK INDICATED ON THE DRAWINGS.
- 2. AT THE COMPLETION OF THE PROJECT, ONE SET OF REPRODUCIBLE DRAWINGS, SHOWING ALL RECORD CONDITIONS, SHALL BE DELIVERED TO THE OWNER FOR ACCEPTANCE PRIOR TO FINAL PAYMENT.

PART II - PRODUCTS AND EXECUTION

ALL MATERIALS SHALL BE NEW AND OF QUALITY AS SPECIFIED ON THE PLANS OR SPECIFICATIONS AND MUST CARRY THE UNDERWRITER'S LABORATORIES APPROVAL COVERING THE PURPOSE FOR WHICH THEY ARE USED, IN ADDITION TO MEETING ALL REQUIREMENTS OF THE CURRENT APPLICABLE CODES AND REGULATIONS.

B. SHOP DRAWINGS AND APPROVALS

THE ITEMS SPECIFIED HEREIN AND ON DRAWINGS ARE USED AS A STANDARD OF QUALITY. ANY MATERIALS OF EQUAL QUALITY AND AESTHETIC VALUE WILL BE GIVEN CONSIDERATION AS A SUBSTITUTE FOR THE MATERIALS SPECIFIED. NO APPROVAL WILL BE GIVEN TO A SPECIFIC CATALOG NUMBER, MODEL. OR TYPE OF EQUIPMENT, PRIOR TO BIDDING. AFTER BIDDING, THE DECISION OF THE ARCHITECT AND/OR ENGINEER DETERMINING EQUAL MATERIALS WILL BE FINAL.

- 2. THE CONTRACTOR SHALL SUBMIT SEVEN (7) IDENTICAL BOUND SETS OF SHOP DRAWINGS ON THE FOLLOWING ITEMS:
- A. LIGHTING FIXTURE CUTS AND PERFORMANCE DATA. B. OUTLINE DRAWINGS AND DATA SHEETS OF EACH PANELBOARD, LOAD CENTERS, AND DISTRIBUTION
- C. OUTLINE DRAWINGS OF ALL SWITCH GEAR COMPONENTS. D. WIRING DEVICES AND COVERPLATES.
- E. ALL CIRCUIT BREAKERS INSTALLED IN PANELBOARDS, LOAD CENTERS, AND DISTRIBUTION PANELS. SUBMIT ITEMS AT ONE TIME IN A NEAT AND ORDERLY MANNER WITHIN 15 DAYS OF AWARD OF CONTRACT. PARTIAL SUBMITTALS WILL NOT BE ACCEPTABLE.

- <u>C. SYSTEM GROUNDING</u> GROUNDING SHALL COMPLY WITH REQUIREMENTS OF ARTICLE 250. ALL EXPOSED NONCURRENT CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, METALLIC RACEWAY SYSTEMS, METALLIC CABLE ARMOR, GROUNDING CONDUCTOR OF NONMETALLIC SHEATHED CABLES, GROUNDING CONDUCTOR IN NONMETALLIC
- RACEWAYS, AND GROUNDED CONDUCTORS OF THE WIRING SYSTEM SHALL BE GROUNDED. GROUNDING CONDUCTOR (NEUTRAL) OF THE WIRING SYSTEM SHALL BE CONNECTED TO THE SYSTEM GROUNDING CONDUCTOR AT A SINGLE PLACE IN EACH SYSTEM BY REMOVABLE BONDING JUMPERS, SIZED ACCORDING TO THE APPLICABLE PROVISIONS OF THE NATIONAL ELECTRICAL CODE. THE GROUNDED CONDUCTOR (NEUTRAL) TO THE GROUNDING CONDUCTOR CONNECTION SHALL BE LOCATED IN THE ENCLOSURE FOR THE SYSTEM'S OVERCURRENT PROTECTION OR WHERE OTHERWISE INDICATED ON THE
- PLANS OR SPECIFICATIONS. 3. A GROUND BUS SEPARATE FROM THE NEUTRAL BUS SHALL BE PROVIDED IN ALL DISTRIBUTION PANELS AND PANELBOARDS. PROPER TORQUE ON GROUND BUS SHALL BE VERIFIED, PER MANUFACTURER'S RECOMMENDATIONS, PRIOR TO ENERGIZING EQUIPMENT.
- 4. GROUND BUSES AND NEUTRAL BUSES IN ALL DISTRIBUTION PANELS, LOAD CENTERS, PANELBOARDS, AND THOSE PROVIDED IN ANY EQUIPMENT SHALL BE ISOLATED EXCEPT WHERE REQUIRED TO BE CONNECTED AS SPECIFIED ABOVE FOR THE SERVICE ENTRANCE
- WHEN INDICATED ON THE DRAWINGS, EQUIPMENT GROUNDING CONDUCTORS SHALL BE EXTENDED FROM THE GROUND BUS IN THE DISTRIBUTION EQUIPMENT TO THE RECEPTACLE, FIXTURE OR DEVICE LUGS WHERE THEY ARE PROVIDED. WHERE LUGS ARE NOT PROVIDED, EQUIPMENT GROUNDING CONDUCTORS SHALL BE CONNECTED TO EQUIPMENT ENCLOSURES. THE CONNECTIONS SHALL BE ARRANGED SUCH THAT REMOVAL OF THE RECEPTACLE, EQUIPMENT GROUND CONDUCTORS, OR GROUND JUMPERS FROM GROUND BUSING SHALL NOT AFFECT THE GROUND SYSTEM.
- RACEWAYS MAY NOT BE USED AS A GROUNDING CONDUCTOR FOR POWER AND LIGHTING CIRCUITS. ALL CONDUIT SHALL HAVE SEPARATE CODE SIZED GREEN GROUND WIRE INSTALLED IN THE CONDUIT TO INSURE A CONTINUOUS GROUNDING PATH.
- IN INACCESSIBLE LOCATIONS, MAKE CONNECTIONS BY EXOTHERMIC WELD PROCESS. 8. IN ACCESSIBLE LOCATIONS, CONNECTIONS SHALL BE MADE WITH BOLTED THROUGH, APPROVED SOLDERLESS BRONZE GROUNDING DEVICES.

- <u>D. WIRE</u>1. CONDUCTOR SIZES SHOWN ON THE DRAWINGS ARE BASED ON COPPER WIRE. UNLESS OTHERWISE SPECIFIED, ALL WIRE SHALL BE TYPE XHHW OR SE FOR FEEDERS OR BRANCH CIRCUITS LARGER THAN 4 AWG, TYPE THHN/THWN INSULATION FOR FEEDERS AND BRANCH CIRCUITS 4 AWG AND SMALLER. ALL BRANCH CIRCUIT WIRING SHALL BE COPPER
- ALUMINUM CONDUCTORS MAY BE UTILIZED FOR SERVICE ENTRANCE AND PANEL FEEDERS. CONDUCTORS SHALL BE ALUMINUM ALLOW AA-8000 SERIES.
- THE WIRES SHALL BE MARKED WITH COLOR TO SIMPLIFY CIRCUIT IDENTIFICATION. UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES GROUND WIRES SHALL BE GREEN, NEUTRAL WIRES SHALL BE 120V-WHITE, AND LIVE WIRES 208Y/120V AND 120/240 SHALL BE BLACK (PHASE A), RED (PHASE B), AND BLUE (PHASE C). CIRCUIT SHALL BE LABELED IN EACH J-BOX.
- ALL CONDUCTORS SHALL BE RATED 600 VOLT.
- SPLICES IN EXTERIOR PULL BOXES AND MANHOLES SHALL BE WEATHERPROOF USING "SCOTCHCAST" SPLICE KIT OR APPROVED EQUAL. SEAL ENDS OF CONDUITS AND DUCTS WITH "DUCTSEAL" OR
- PROVIDE SOLID CONDUCTOR FOR 12 AWG AND SMALLER.
- ALL WIRING WITHIN RESIDENTIAL UNITS ONLY MAY BE TYPE NM CABLE. NO WIRE SHALL BE INSTALLED IN THE CONDUIT SYSTEM UNTIL THE CONDUIT SYSTEM IS COMPLETE. USE

MINERALAC NO. 100 OR EQUIVALENT AS A LUBRICANT TO FACILITATE THE INSTALLATION OF THE

CONDUCTORS IN THE CONDUIT SYSTEM. 9. MC CABLE WITH COPPER CONDUCTORS AND GROUND WIRE MAY BE USED WHERE PERMITTED.

- ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC CONDUIT EXCEPT AS PERMITTED IN OTHER SECTIONS. RGS, WITH A 20 MIL PVC COATING WILL BE USED WHEN IN CONTACT WITH EARTH. IMC MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH THE EARTH. EMT MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH EARTH, NOT IN CONCRETE SLABS OR WALLS AND NOT SUBJECT TO DAMAGE. PVC MAY BE USED IN OR BELOW CONCRETE AND DIRECT BURIED IN EARTH. FLEXIBLE STEEL CONDUIT SHALL BE USED FOR INDOOR FINAL CONNECTIONS TO EQUIPMENT IN LENGTHS NOT TO EXCEED 72". LIQUID-TIGHT FLEXIBLE STEEL CONDUIT SHALL BE FOR OUTDOOR FINAL CONNECTIONS TO EQUIPMENT NOT TO EXCEED 48".
- WHERE CONDUIT ENTERS OUTLET BOXES, FIXTURES OR CABINETS, FIRMLY FASTEN WITH STEEL SET SCREW, COMPRESSION CONNECTORS, OR DOUBLE LOCKNUTS FOR GRC. ALL CONNECTIONS SHALL HAVE BUSHINGS OR INSULATED THROAT CONNECTORS. FIRMLY FASTEN CONDUIT TO THE BUILDING CONSTRUCTION. RUN EXPOSED CONDUIT PARALLEL TO THE BUILDING LINES, SUPPORTED BY APPROPRIATE HANGERS (UNISTRUT, T & B OR APPLETON, OR EQUAL).
- COVER METALLIC CONDUIT IN CONTACT WITH EARTH WITH POLYETHYLENE TAPED SPIRAL WRAPPED, 1/2 LAPPED TO PROVIDE 20 MIL. THICKNESS. TAPE SHALL BE SCOTCH NO. 50 TAPE. CONDUIT AND DUCTS NOT UNDER BUILDINGS AND FEEDER DUCTS SHALL BE INSTALLED PER N.E.C. 300-5. MAKE JOINTS WITH COMPOUND TO BE WATERTIGHT.
- 4. SCHEDULE 40 PVC CONDUIT SHALL BE PERMITTED UNDERGROUND WITH PROPER FITTINGS, ALL UL APPROVED AND CEMENTED JOINTS. PENETRATIONS THROUGH FLOOR SLABS AND BENDS GREATER THAN 22° SHALL BE WRAPPED RIGID GALVANIZED STEEL ELBOWS.
- FITTINGS AND CONDUIT BODIES SHALL BE STEEL. DIECAST FITTINGS ARE NOT ACCEPTABLE. CONDUIT SIZES SHALL BE AS REQUIRED BY CODE AND AS INDICATED OR SPECIFIED.
- ALL EMPTY CONDUIT SYSTEMS SHALL HAVE A 200 LB. TEST NYLON PULL STRING TO FACILITATE INSTALLATION OF FUTURE WIRE. WRING, CONDUITS, AND OUTLETS SHALL BE CONCEALED WITH THE BUILDING STRUCTURE, EXCEPT THAT CERTAIN MOTOR AND LIGHTING FEEDER CONDUITS MAY BE RUN EXPOSED IN CERTAIN AREAS AS
- INDICATED ON THE DRAWINGS. CONDUIT PENETRATION THROUGH ROOF SHALL HAVE ROOF FLASHING WITH CAULK TYPE COUNTER
- FLASHING SLEEVE. INSTALLATION SHALL BE WATERTIGHT
- 10. CONDUITS SHALL BE ROUTED PARALLEL AND PERPENDICULAR TO THE STRUCTURE.

F. OUTLET, PULL, AND JUNCTION BOXES

- 1. EACH SWITCH, LIGHT. RECEPTACLE OR OTHER OUTLET, INSTALLED IN RESIDENTIAL UNITS, SHALL BE PROVIDED WITH A CODE SIZED, PLASTIC OUTLET BOX. JUNCTION AND PULL BOXES SHALL BE CODE SIZED, PLASTIC OR METAL OUTLET BOX. ALL OTHER OUTLET BOXES SHALL BE STEEL
- BOXES INSTALLED IN POURED CEMENT FLOORS SHALL BE FLUSH TYPE CAST IRON OR STEEL WITH WATERTIGHT GASKETED COVERS. WHERE BOXES ARE INSTALLED IN FLOORS WITH TILE OR CARPET FLOOR COVERING, COVERS SHALL BE OF THE RECESSED TYPE TO ACCOMMODATE THE FLOOR COVERING. BOXES INSTALLED FOR THE ALARM, COMPUTER, AND SECURITY SYSTEM SHALL BE PROVIDED WITH APPROPRIATE COVER PLATES.
- 4. BOXES FOR TELEPHONE, COMPUTER, T.V., FIRE ALARM, SECURITY, AND SIMILAR SYSTEMS SHALL BE MINIMUM 2-1/8" DEEP.

G WIRING DEVICES

- WALL SWITCHES SHALL BE SPECIFICATION GRADE AC SILENT TYPE SWITCHES, 20A 120/277 VOLT. RECEPTACLES SHALL BE SPECIFICATION GRADE, DUPLEX TYPE. NEMA5-20R, 20 AMPERE, 120VOLT GROUNDED TYPE. SPECIAL APPLICATION RECEPTACLES SHALL BE INDICATED ON PLANS. MOUNT WITH THE
- DEVICE PLATES SHALL BE EQUAL TO SIERRA SMOOTH-LINE PLASTIC WALL PLATES. COLOR SHALL BE WHITE, UNLESS OTHERWISE NOTED.
- 4. RECEPTACLES IN OUTDOOR AND WET LOCATIONS SHALL BE INSTALLED WITH A HINGED OUTLET COVER/ENCLOSURE CLEARLY MARKED AND U.L. LISTED SUITABLE FOR WET LOCATIONS WHILE IN USE, EQUAL TO TAYMAC SPECIFICATION GRADE.

H. SERVICE ENTRANCE SECTION

- THE SERVICE ENTRANCE EQUIPMENT SHALL BE AS INDICATED ON THE DRAWINGS. EQUIPMENT SHALL
- CARRY THE U.L. LABEL AND SHALL CONFORM TO THE POWER COMPANY REGULATIONS. SERVICE ENTRANCE EQUIPMENT SHALL BE PROVIDED WITH A FULLY RATED COPPER OR ALUMINUM BUS. HORIZONTALLY TAPERED BUSSING SHALL NOT BE ALLOWED.

- DISTRIBUTION PANELS SHALL BE PROVIDED WITH FULLY RATED COPPER OR ALUMINUM BUS. HORIZONTAL TAPERED BUSSING SHALL NOT BE ALLOWED
- ACCEPTABLE MANUFACTURERS CUTLER HAMMER, SEIMENS, SQUARE D OR GENERAL ELECTRIC FACTORY ASSEMBLED DEAD FRONT, METAL ENCLOSED, AND SELF-SUPPORTING SWITCH BOARD ASSEMBLY CONFORMING T NEMA PB 2 AND UL 891, AND COMPLETE FROM INCOMING LINE TERMINALS TO LOAD SIDE
- TERMINATIONS. 4. LINE AND LOAD TERMINATIONS: ACCESSIBLE FROM FRONT ONLY OF THE SWITCH BOARD. SUITABLE FOR CONDUCTOR MATERIALS AND NUMBER OF CONDUCTORS USED.

BUS CONNECTIONS: BOLTED. ACCESSIBLE FROM FRONT FOR MAINTENANCE. PROVIDE BELLEVILLE WASHERS FOR PROPERLY TORQUE ALL CONNECTIONS

- PROVIDE FULLY-RATED NEUTRAL BUS AND FULLY RATED GROUND BUS MATCHING MATERIAL USED FOR
 - FUTURE PROVISIONS: FULLY EQUIP SPACES FOR FUTURE DEVICES WITH BUSSING AND BUS CONNECTIONS SUITABLY INSULATED AND BRACED FOR SHORT CIRCUIT CURRENTS. CONTINUOUS CURRENT RATING AS
- INDICATED ON DRAWINGS. 8. ALL CIRCUIT BREAKERS SHALL BE BOLT-ON TYPE.

J. PANEL BOARDS

- CIRCUIT BREAKER TYPE AS INDICATED ON DRAWINGS. UNLESS INDICATED OTHERWISE, ALL PANELS SHALL HAVE PANEL HAVE PANEL BOARD TYPE CONSTRUCTION WITH BOLT-ON CIRCUIT BREAKERS FOR 30
- MANUFACTURERS SHALL BE GENERAL ELECTRIC, SQUARE D, SEIMENS, CUTLER-HAMMER WITH VOLTAGE, SIZES. AND RATINGS AS INDICATED ON DRAWINGS.
- THE CIRCUIT BREAKERS SHALL BE OPERABLE IN ANY POSITION AND BE REMOVABLE FROM THE FRONT OF THE PANEL BOARD WITHOUT DISTURBING THE ADJACENT UNITS. BRANCH BREAKERS SHALL BE OF SUCH DESIGN THAT COMBINATION OF SINGLE-POLE, DOUBLE-POLE, AND THREE-POLE BREAKERS CAN BE ASSEMBLED ON THE SAME PANEL. EACH BRANCH CIRCUIT SHALL BE CLEARLY NUMBERED. BRANCH AND MAN TERMINALS SHALL BE SOLDERLESS TYPE. HANDLE TIES TO FORM MULTI-POLE BREAKERS NOT ACCEPTABLE.
- PROVIDE ALL LIGHTING FIXTURES, WIRED AND CONNECTED. THE DRAWINGS INDICATE THE FIXTURES FOR EACH LOCATION. PROVIDE LAMPS FOR ALL FIXTURES. THE LAMPS SHALL BE BY THE SAME MANUFACTURER. VERIFY CEILING CONSTRUCTION BEFORE ORDERING RECESSED UNITS. PROVIDE PLASTER FRAMES AND HANGERS AS REQUIRED. CEILING CONSTRUCTION, ARCHITECTURAL ACCESSORIES, VOLTAGE, AND BALLASTS TO MEET THE EXISTING CEILING CONDITION.

- FURNISH AND INSTALL TIME SWITCHES, PHOTOCELLS, CONTRACTORS AND FULL LIGHTING CONTROL
- SYSTEMS AS REQUIRED FOR LIGHTING CONTROLS INDICATED ON THE DRAWINGS. TIME SWITCHES SHALL BE EQUAL TO PARAGON, GENERAL ELECTRIC, TORK, OR INTERMATIC AND SHALL
- HAVE SIZE AND NUMBER OF POLES AS REQUIRED. 3. PHOTOCELLS SHALL BE EQUAL TO TORK OR INTERMATIC WITH VOLTAGE AS INDICATED

- 1. TELEPHONE WALL OUTLETS SHALL CONSIST OF STANDARD BOXES MOUNTED 18" ABOVE THE FLOOR UNLESS OTHERWISE INDICATED. PROVIDE A TERMINAL MOUNTING BOARD FOR THE INCOMING SERVICE
- CABLE TELEVISION OUTLETS SHALL CONSIST OF STANDARD BOXES MOUNTED 18" ABOVE THE FLOOR UNLESS OTHERWISE INDICATED. PROVIDE A TERMINAL MOUNTING BOARD FOR THE INCOMING SERVICE

GUARANTEE ALL MATERIAL FURNISHED AND ALL WORKMANSHIP PERFORMED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE OF WORK. ANY DEFECTS DEVELOPING WITHIN THIS PERIOD, TRACEABLE TO MATERIAL FURNISHED AS A PART OF THIS SECTION OR WORKMANSHIP PERFORMED HEREUNDER, SHALL BE MADE GOOD AT NO EXPENSE TO THE OWNER.

- 1. THIS PROJECT INVOLVES CONSTRUCTION INSIDE AN EXISTING STRUCTURE. CONTRACTORS, BY SUBMITTING A BID ARE DEEMED TO BE COMPLETELY FAMILIAR WITH THE EXISTING CONDITIONS OF THE BUILDING AS IT INFLUENCES THE WORK DESCRIBED. NO CLAIMS FOR EXTRA COMPENSATION WILL BE CONSIDERED FOR EXISTING CONDITIONS VISIBLE OR REASONABLY INFERABLE FROM A CAREFUL EXAMINATION OF THE
- EXISTING BUILDING CONDITIONS. CONTRACTOR SHALL INSPECT THE EXISTING FIELD CONDITIONS AT THE SITE AND THE CONTRACT DOCUMENTS PRIOR TO THE START OF ANY WORK TO DETERMINE WHAT EFFECT THE EXISTING CONDITIONS WILL HAVE ON THE WORK POTENTIAL. CONTRACTOR SHALL REPORT DISCREPANCIES TO THE ARCHITECT AND INCLUDE IN THE BID ALL COSTS REQUIRED TO MAKE THE WORK MEET EXISTING CONDITIONS. DEMOLITION: DISCONNECT, DEMOLISH, AND REMOVE ABANDONED MATERIALS AND EQUIPMENT INDICATED TO
- BE REMOVED AND NOT INDICATED TO BE SALVAGED OR REMAIN. DISPOSAL AND CLEANUP: REMOVE FROM THE SITE AND LEGALLY DISPOSE OF DEMOLISHED MATERIALS

AND EQUIPMENT NOT INDICATED TO BE SALVAGED. PROTECT MATERIALS INDICATED TO REMAIN.

SYSTEMS INDICATED.

CONSTRUCTION.

- COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO ENSURE THAT THROUGH-PENETRATION FIRESTOP SYSTEMS ARE INSTALLED ACCORDING TO SPECIFIED AND APPLICABLE
- UL REQUIREMENTS. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE
- THROUGH-PENETRATION FIRESTOP SYSTEMS. DO NOT COVER UP THROUGH-PENETRATION FIRESTOP SYSTEM INSTALLATIONS UNTIL EXAMINED BY
- INSPECTOR, IF REQUIRED BY AUTHORITIES HAVING JURISDICTION. 4. COMPATIBILITY: PROVIDE THROUGH-PENETRATION FIRESTOP SYSTEMS THAT ARE COMPATIBLE WITH ONE ANOTHER; WITH THE SUBSTRATES FORMING OPENINGS; AND WITH THE ITEMS, IF ANY, PENETRATING THROUGH-PENETRATION FIRESTOP SYSTEMS, UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER BASED ON TESTING AND
- FIELD EXPERIENCE. PROVIDE COMPONENTS FOR EACH THROUGH-PENETRATION FIRESTOP SYSTEM THAT ARE NEEDED TO INSTALL FILL MATERIALS. USE ONLY COMPONENTS SPECIFIED BY THROUGH-PENETRATION FIRESTOP SYSTEM MANUFACTURER AND APPROVED BY QUALIFIED TESTING AND INSPECTING AGENCY FOR FIRESTOP

FIRE SEAL ALL PIPING, CONDUIT, CABLE, ETC PENETRATIONS ROUTED THROUGH FIRE RATED WALLS.

PROVIDE FIRE RATED ENCLOSURES OR WRAPS ON LIGHT FIXTURES AND OTHER ITEMS PENETRATING FIRE

PROVIDE SLEEVES THROUGH ALL FIRE-RATED WALLS AND FILL VOIDS SURROUNDING SLEEVES AND INTERIOR TO SLEEVES AROUND PIPING WITH FIRE STOP PUTTY WITH U.L. LISTED 3 HOUR RATING INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS.

RATED CEILINGS, FLOOR/CEILING/ CEILING/ROOF ASSEMBLIES TO MAINTAIN UL LISTING FOR

FIRE ALARM SYMBOLS LEGEND

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC, ARE NECESSARILY USED ON THE DRAWINGS.

HORN / STROBE CEILING MOUNT, XXcd PER PLANS.



- STROBE CEILING MOUNT, XXcd PER PLANS.



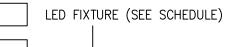
WALL HORN STROBE, XXcd PER PLANS.

WALL STROBE, XXcd PER PLANS.

SYMBOLS LEGEND

ARE NECESSARILY USED ON THE DRAWINGS

NOTE: THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS, ETC,



FIXTURE WITH EMERGENCY BATTERY DRIVER UNIT

TRACK LIGHT

Ø DOWNLIGHT FIXTURE WITH EMERGENCY BATTERY DRIVER UNIT WALL MOUNTED FIXTURE WITH EMERGENCY BATTERY DRIVER UNIT

PENDANT MOUNTED FIXTURE WITH EMERGENCY BATTERY DRIVER UNIT DOWNLIGHT FIXTURE

 \circ Ю WALL MOUNTED FIXTURE

PENDANT MOUNTED FIXTURE

SINGLE FACE EXIT SIGN — UNIVERSAL MOUNTED SINGLE FACE EXIT SIGN W/ DIRECTIONAL ARROWS -

DOUBLE FACE EXIT SIGN W/ DIRECTIONAL ARROWS -

DUAL HEADED EMERGENCY UNIT COMBO DUAL HEADED EMERGENCY AND EXIT SIGN UNIT

LETTER INDICATES LIGHT FIXTURE AS INDICATED ON FIXTURE SCHED

SINGLE POLE SWITCH @ +48" UNLESS NOTED SWITCH BANK @ +48" UNLESS NOTED. LOWER CASE

LETTER INDICATES FIXTURE CONTROLLED 2 POLE SWITCH @ +48" UNLESS NOTED

3-WAY SWITCH @ +48" UNLESS NOTED 4-WAY SWITCH @ +48" UNLESS NOTED

DIMMER SWITCH - SIZE AS REQUIRED @ +48" UNLESS NOTED 3-WAY DIMMER SWITCH - SIZE AS REQUIRED @ +48" UNLESS NOTED

3-WAY DIMMER SWITCH BANK @ +48" UNLESS NOTED. LOWER CASE LETTER INDICATES FIXTURE CONTROLLED.

SWITCH SENSOR @ +48" UNLESS NOTED MANUAL MOTOR STARTER

OCCUPANCY SENSOR

WALL SWITCH WITH OCCUPANCY SENSOR. TWO BUTTON DIGITAL LOW VOLTAGE WALL SWITCH. SWITCH @ +48" UNLESS NOTED. TWO BUTTON DIGITAL LOW VOLTAGE WALL SWITCH. PROVIDES ON/OFF/0-10V DIMMING. SWITCH

@ +48" UNLESS NOTED. PROVIDE EXTRA CONTROL CABLES NEEDED TO FIXTURE CONTROLLED. LIGHTING CONTACTOR

P LIGHTING CONTROLS POWER PACK

PC TIMECLOCK

CAMERA

TELEPHONE OUTLET@ +18" UNLESS NOTED

DATA OUTLET @ +18" UNLESS NOTED

COMBINATION TELEPHONE/DATA OUTLET @ +18" UNLESS NOTED TELEVISION OUTLET @ +18" UNLESS NOTED

SMOKE DETECTOR

HEAT DETECTOR DUCT SMOKE DETECTOR

REMOTE TEST STATION WITH INDICATING LIGHT. MOUNT AT 48" AFF UNO.

AUXILIARY SYSTEM TERMINAL CABINET SWITCHBOARD, MOTOR CONTROL CENTER OR DISTRIBUTION BOARD

120/240V, 1 PHASE, 3 WIRE PANELBOARD, UNO CARD READER. PROVIDE 2-GANG OUTLET BOX WITH SINGLE GANG RING AND 3/4" CONDUIT

COMBINATION FUSED STARTER DISCONNECT SWITCH FUSE SIZE AS INDICATED, STARTER SIZE '1'

STUBBED UP IN WALL TO ABOVE ACCESSIBLE CEILING WITH BUSHING ON END OF CONDUIT @ 48" UNLESS NOTED OTHERWISE. GENERATOR

Т TRANSFORMER

10/ MOTOR OUTLET

DISCONNECT SWITCH - SIZE AND TYPE NOTED

MECHANICAL EQUIP. CONNECTION, SEE SCHED. ON MECH. PLAN JUNCTION BOX

 CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING — — — CONDUIT RUN BELOW FLOOR OR GRADE SPECIAL HEAVY DUTY RECEPTACLE - SIZE AS NOTED, @ +18" UNLESS NOTED

1/2 SWITCHED RECEPTACLE @ +18" UNLESS NOTED

FIRE RATED POKE THRU WITH TYPE INDICATED FLUSH FLOOR BOX WITH TYPE INDICATED \ominus SINGLE RECEPTACLE @ +18" UNLESS NOTED

DUPLEX RECEPTACLE @ +18" UNLESS NOTED \ominus DOUBLE DUPLEX RECEPTACLE @ +18" UNLESS NOTED \ominus GFI DUPLEX RECEPTACLE

DUPLEX RECEPTACLE INSTALLED ABOVE COUNTERTOP GFCI-RATED DUPLEX RECEPTACLE

@ 18" UNLESS NOTED

ARC FAULT RATED DUPLEX RECEPTACLE DUPLEX RECEPTACLE WITH WEATHERPROOF COVERPLATE

`HOMERUN TO PANELBOARD. INFORMATION AT ARROWS ARE CIRCUIT NUMBERS AND PANELBOARD FOR TERMINATION. REFER TO ASSOCIATED NOTE FOR BRANCH CIRCUIT CONDUCTOR SIZES. S INDICATES 1/2" CONDUIT CONCEALED IN CEILING OR WALL WITH (3) CONDUCTORS. (1) PHASE,

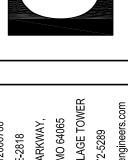
(1) NEUTRAL AND (1) GROUND WIRE. ALL ARE #12 AWG UNLESS NOTED OTHERWISE.

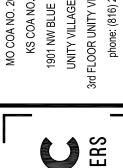
(E) OR ETR: DENOTES EXISTING ITEM/EQUIPMENT TO REMAIN

SMOTHERS NUMBER

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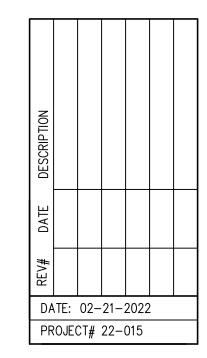


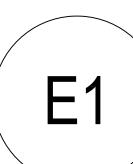


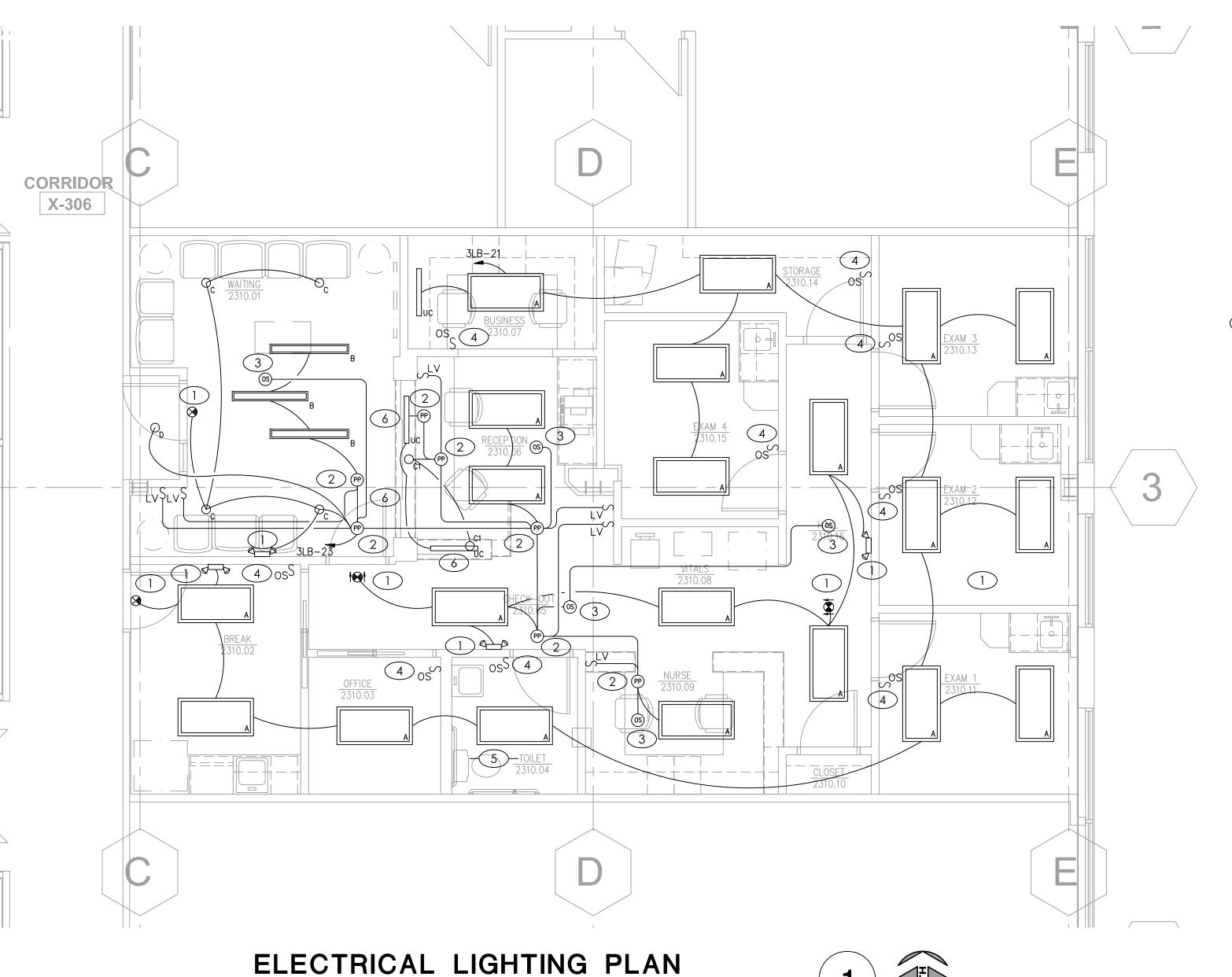
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SCALE : 1/4" = 1'-0"

GENERAL NOTES

- A. DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS OR FIELD MEASUREMENTS FOR DIMENSIONS.
- B. ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70) AND ALL LOCAL BUILDING CODES AND AMENDMENTS.
- C. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.
- D. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.
- E. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL SYSTEMS.
- F. PROVIDE CONSTANT UNSWITCHED HOT LEG TO ALL LIGHTS WITH EMERGENCY BATTERY PACKS AND ALL OUTDOOR SCONCES.
- G. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED HVAC EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS OF ALL HVAC EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT SUBSTITUTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- H. ALL WIRING SHALL BE IN APPROVED RACEWAY.
- I. WIRE SIZE SHALL BE MINIMUM #12 AWG, THWN SOLID COPPER UNLESS OTHERWISE NOTED. PROVIDE GROUND WIRE WHERE REQUIRED BY CODE. INCREASE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP WHERE TOTAL LENGTH OF ANY BRANCH EXCEEDS
- MAXIMUM NUMBER OF UNGROUNDED WIRES IN ANY CONDUIT SHALL BE THREE. ADDITIONAL WIRES ARE ACCEPTABLE IF WIRE SIZE IS INCREASED TO ALLOW FOR DERATING PER CODE. PROVIDE ADDITIONAL WIRES FOR SWITCHING AS REQUIRED.
- K. FIRE ALARM, AUDIO/VIDEO AND SURVEILLANCE SYSTEMS BY
- J. ALL CIRCUIT NUMBERS SHOWN NEXT TO DEVICES ARE ASSOCIATED WITH THE HOMERUN SHOWN AT A NEARBY DEVICE AND SHALL TERMINATE AT THE DESIGNATED PANELBOARD CIRCUIT BREAKER.
- K. EC TO PROVIDE AND INSTALL RECEPTACLES, CAPS, AND CORDS AS REQUIRED. CAPS AND CORDS ARE TO BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
- L. ALL ELECTRICAL WIRING, CONDUITS, AND CABLING IN PATIENT CARE AREAS (INCLUDING, BUT NOT LIMITED TO, "EXAM" AND "OFFICE" ROOMS) ARE TO BE MEDICAL GRADE PER NEC REQUIREMENTS.
- M. ELECTRICAL PANELBOARDS EXIST ROUGHLY 50' SOUTH OF SOUTHEAST CORNER OF SCOPE AREA ON OPPOSITE SIDE OF CORRIDOR X-306 IN ELEC (COMMUNICATIONS) 309 ROOM.

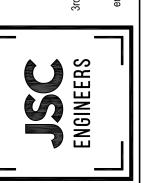
KEYED PLAN NOTES

- 1. CONNECT EXIT/EMERGENCY LIGHT VIA UNSWITCHED HOT CONDUCTOR.
- 2. LIGHTING CONTROLS POWER PACK. SENSORWORX SWX-900 SERIES OR PRE-BID APPROVED EQUAL. PROVIDE AND MAKE ALL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- 3. LIGHTING CONTROLS CEILING MOUNTED OCCUPANCY SENSOR. SENSORWORX SWX-200 SERIES OR PRE-BID APPROVED EQUAL. PROGRAM FOR VACANCY-SENSING OPERATION. PROVIDE AND MAKE ALL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- WALL SWITCH OCCUPANCY SENSOR. SENSORWORX SWX-100 SERIES OR PRE-BID APPROVED EQUAL. PROVIDE AND MAKE ALL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS.
- WIRE SO THAT ON/OFF OPERATION OF EXHAUST FAN COORDINATES WITH LIGHTING FIXTURE IN ROOM.
- 6. UNDERCABINET LIGHT FIXTURES. PROVIDE DRIVERS AS NECESSARY, INSTALL AND MAKE ALL CONNECTIONS PER MANUFACTURER'S RECOMMENDATIONS TO MAKE A COMPLETE SYSTEM ACCORDING TO DESIGN INTENT. COORDINATE EXACT SIZE, LOCATION, AND MOUNTING STYLE WITH ARCHITECT PRIOR TO CONSTRUCTION.



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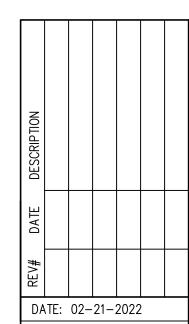




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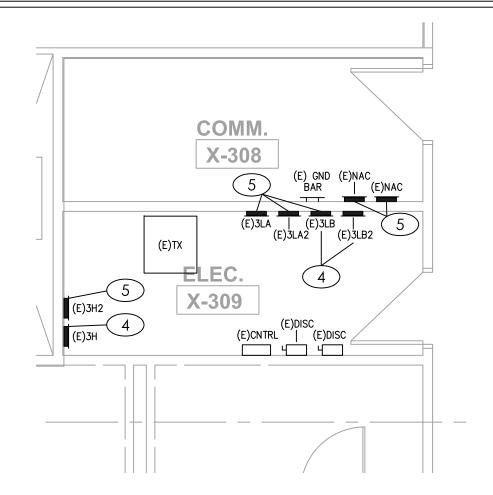
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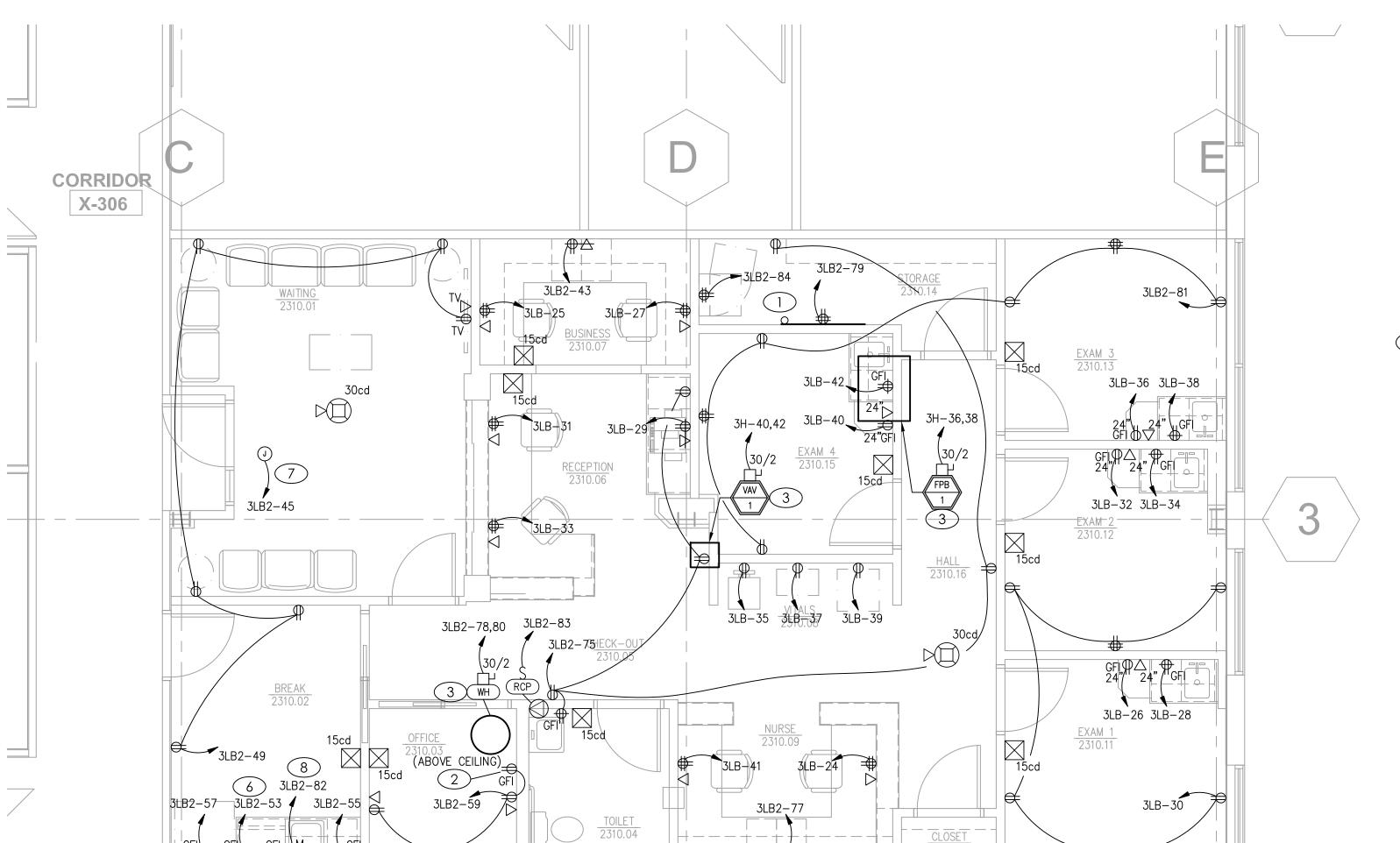
SEE ELECTRICAL DISTRIBUTION KEY PLAN ON SHEET E4 FOR EXACT LOCATION OF ROOM.



ELECTRICAL ROOM PLAN

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

2



ELECTRICAL POWER PLAN

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



GENERAL NOTES

- A. DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS OR FIELD MEASUREMENTS FOR DIMENSIONS
- B. ALL WORK SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NFPA 70) AND ALL LOCAL BUILDING CODES AND AMENDMENTS.
- C. ALL ROOF AND WALL PENETRATIONS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR. PROVIDE ALL REQUIRED SLEEVES, FLASHINGS, CURBS, REINFORCED ANGLES, SUPPORTING FRAMES, ETC. UNLESS THEY ARE SPECIFICALLY CALLED OUT TO BE FURNISHED BY OTHERS.
- D. COORDINATE ALL WORK WITH OTHER TRADES AND EXISTING CONDITIONS AS REQUIRED TO PROPERLY INSTALL ALL SYSTEMS AS INTENDED, WITHIN THE CONFINES OF THE SPACE AVAILABLE, AND WITHOUT INTERFERENCES.
- E. THIS CONTRACTOR SHALL PERFORM ALL WORK INDICATED AND/OR AS REQUIRED FOR THE PROPER INSTALLATION AND OPERATION OF THE ELECTRICAL SYSTEMS.
- F. PROVIDE CONSTANT UNSWITCHED HOT LEG TO ALL LIGHTS WITH EMERGENCY BATTERY PACKS AND ALL OUTDOOR SCONCES.
- G. THE ELECTRICAL SYSTEM DESIGN IS BASED IN PART ON THE SPECIFIED HVAC EQUIPMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE EXACT LOCATIONS AND ELECTRICAL REQUIREMENTS OF ALL HVAC EQUIPMENT BEING FURNISHED. ANY CHANGES TO THE ELECTRICAL SYSTEM DUE TO HVAC EQUIPMENT SUBSTITUTIONS SHALL BE PROVIDED AT NO ADDITIONAL COST TO THE OWNER.
- H. ALL WIRING SHALL BE IN APPROVED RACEWAY.
- I. WIRE SIZE SHALL BE MINIMUM #12 AWG, THWN SOLID COPPER UNLESS OTHERWISE NOTED. PROVIDE GROUND WIRE WHERE REQUIRED BY CODE. INCREASE WIRE SIZE TO COMPENSATE FOR VOLTAGE DROP WHERE TOTAL LENGTH OF ANY BRANCH EXCEEDS 100 FEET.
- J. MAXIMUM NUMBER OF UNGROUNDED WIRES IN ANY CONDUIT SHALL BE THREE. ADDITIONAL WIRES ARE ACCEPTABLE IF WIRE SIZE IS INCREASED TO ALLOW FOR DERATING PER CODE. PROVIDE ADDITIONAL WIRES FOR SWITCHING AS REQUIRED.
- K. FIRE ALARM, AUDIO/VIDEO AND SURVEILLANCE SYSTEMS BY OTHERS.
- J. ALL CIRCUIT NUMBERS SHOWN NEXT TO DEVICES ARE ASSOCIATED WITH THE HOMERUN SHOWN AT A NEARBY DEVICE AND SHALL TERMINATE AT THE DESIGNATED PANELBOARD CIRCUIT BREAKER.
- K. EC TO PROVIDE AND INSTALL RECEPTACLES, CAPS, AND CORDS AS REQUIRED. CAPS AND CORDS ARE TO BE INSTALLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.
- L. ALL ELECTRICAL WIRING, CONDUITS, AND CABLING IN PATIENT CARE AREAS (INCLUDING, BUT NOT LIMITED TO, "EXAM" AND "OFFICE" ROOMS) ARE TO BE MEDICAL GRADE PER NEC REQUIREMENTS.
- M. ELECTRICAL PANELBOARDS EXIST ROUGHLY 50' SOUTH OF SOUTHEAST CORNER OF SCOPE AREA ON OPPOSITE SIDE OF CORRIDOR X-306 IN ELEC (COMMUNICATIONS) 309 ROOM.

KEYED PLAN NOTES

- 1. PROVIDE (1) 4" CONDUIT TO LANDLORD TELECOMMUNICATION EQUIPMENT FOR ROUTING OF TENANT TELECOMMUNICATIONS CABLING. PROVIDE 4'X4'X1/2" PLYWOOD BACKBOARD FOR TENANT TELECOM EQUIPMENT MOUNTING. COORDINATE MOUNTING HEIGHT OF BOARD, POWER, AND DATA OUTLETS WITH TENANT PRIOR TO CONSTRUCTION.
- 2. RECEPTACLE TO BE MOUNTED TO STRUCTURE ABOVE CEILING IN PLENUM SPACE ADJACENT TO WATER HEATER TO SERVE DIVISION 22 SENSOR EQUIPMENT. COORDINATE EXACT LOCATION OF RECEPTACLE WITH DIVISION 22 CONTRACTOR PRIOR TO CONSTRUCTION.
- 3. MAKE CONNECTION TO DIVISION 22/23 EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS AND NEC REQUIREMENTS. COORDINATE WORK WITH DIVISION 22/23 CONTRACTOR PRIOR TO CONSTRUCTION.
- 4. EXISTING PANELBOARD TO REMAIN. REFER TO PANELBOARD SCHEDULE ON SHEET E-201 FOR MORE INFORMATION.
- 5. EXISTING PANELBOARD TO REMAIN WITH NO MODIFICATIONS IN THIS SCOPE.
- 6. RECEPTACLE TO BE MOUNTED IN CLOSED CABINET ABOVE MICROWAVE SHELF. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO CONSTRUCTION.
- 7. JUNCTION BOX ABOVE CEILING FOR CONNECTION TO FUTURE DOOR OPERATOR AND/OR ELECTRIC STRIKE. COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO CONSTRUCTION.
- 8. RECEPTACLE AND SWITCH FOR CONNECTION TO GARBAGE DISPOSAL.
 COORDINATE EXACT LOCATION AND SWITCH STYLE WITH OWNER PRIOR TO
 CONSTRUCTION.



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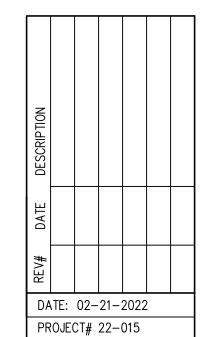
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BUS MAIN MOLT	NELBOARD: 31 AMPS: 400A SIZE/TYPE: MLO S/PHASE: 208Y/120V, 3 TON: 1	•	XISTIN	G)		AIC R SER\ MOUI	ROM: ATING ES: 3F	RD F : SU	FLO JRF/	00 FUL OOR ACE		TED S X-309			LINE-SIDE LUGS: MECHAN EQUIPMENT GROUND	
CKT	DESCRIPTIO	N.	VOL-	TAMPS/PI	HASE		BKR			BKR			AMPS/PH	IASE	DESCRIPTION	С
VO.			Α	В	С		AMP	` [AMP	NO.	A	В	С	2200	N
43	RCPT - BUSINESS 07	AC	180			12	20	1		20	EX	1,200			RCPT - INFUSION EQ 1	T
	PWR - ADA DOOR ACC		100	200		12	20	$\frac{1}{1}$	1	20	EX	1,200	1,200		RCPT-INFUSION EQ 2	+
	ADA DOOR ACCESS F				200	EX	20		1	20	EX		1,200	1,200	RCPT - INFUSION EQ 3	+
	RCPT - WAITING/BREA		900		200	12	20	-	1	20	EX	1,200		1,200	RCPT-INFUSION EQ 4	
	RCPT - PROV #1; PRO			720		EX	20	-	1	20	EX	1,200	1,200		RCPT - INFUSION EQ 5	
	RCPT - BREAK RM MIC				1,200	12	20	\rightarrow	1	20	EX		.,	1,200	RCPT-INFUSION EQ 6	
	RCPT - BREAK RM CO		360		1,200	12	20	-	1	20	EX	1,200		1,200	RCPT - INFUSION EQ 7	
	RCPT - BREAK RM FRI			1,000		12	20	_	1	20	EX	.,===	1,200		RCPT - INFUSION EQ 8	\dagger
	RCPT - OFFICE			.,===	720	12	20	1	1	20	EX		,,===	1,200	RCPT - INFUSION EQ 9	+
	RCPT - PROCED. STR	ETCHER	500			EX	20	_	1	20	EX	1,200		-,	RCPT - INFUSION EQ 10	t
	RCPT - PROCEDURE			540		EX	20	_	1	20	EX	.,===	540		RCPT - EXAM 1	
	LTG - INFUSION/EXAN	WWAITING			1.023	EX	20	_	1	20	EX		- , -	540	RCPT - EXAM 2	T
	RCPT - TELECOM QUA		360		1,020	EX	20	-	1	20	EX	360		0.0	RCPT-HALL QUAD	
	RCPT - PREP RM COU			360		EX	20	_	1	20	EX		180		RCPT - RESTROOOM GFI	+
	RCPT - PREP RM FRIL				1,000	EX	20	-	1	20	EX			1,200	RCPT - PRINTER	
	RCPT - PREP RM GEN		720		,	EX	20	-	1	20	EX	720			RCPT - WAIT/HALL/INFUS GEN	_
75	RCPT - HALL/CHECKO	DUT GEN		900		12	20	-	1	20	EX		1,500		PWR - WH	
	RCPT - NURSE 09 AC				180	12	20	1	1	30	10		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	2,250	PWR - WH	†
79	RCPT - TELECOM QUA	AD	360			12	20	1	1		ľ	2,250				H
81	RCPT - EXAM 3/4 GENI	ERAL		1,440		12	20	1	1	20	12	,	580		RCPT - GARBAGE DISPOSAL	T
83	PWR - RCP			,	25	12	20	1	1	20	12			360	RCPT - SERVER QUAD	T
	SUBTOTAL		3,380	5,160	4,348		•		•	'	Í	8,130	6,400	7,950	SUBTOTAL	_
	TOTAL PHASE A - VA	11,510	LOAD		CONN. V	/A	DF		LOA	AD	Ī	С	ONN. VA	DF		=
	AMPS	96	COOLING	<u> </u>			1.00	F	REF	FRIG				1.00		
	TOTAL PHASE B - VA	11,560	HEATING	3			0	-	SIG	N/DIS	Р	0040040404040404040400400400		1.25		
	AMPS	96	LIGHTING	G			1.25	-	KIT	CHEN	 			1.00	1	
	TOTAL PHASE C - VA	12,298	RECEPT	ACLES	7,600		1.0/.5	-	EXI	STING	3		22,463	1.00	-	
	AMPS	102	MOTORS		605		1.00	-		G MOT				1.25	TOTAL DEMAND	1
	TOTAL PNLBD - VA	35,368	SUPP HE	EAT	4,500		1.00	-	SHO	ow w	NDW			1.25	35,368 VA	(
	AMPS	98	MISC EQ	UIP	200		1.00	ŀ	LTG	3 TRA	CK			1.00	98 A	1

BUS MAIN OLT	NELBOARD: 3LB (EX AMPS: 400A SIZE/TYPE: 250A MCB S/PHASE: 208Y/120V, 3PH, 4W ION: 1	ISTING	S)		AIC R SER\ MOUI	ÆS: 3I NTING	RD : SU	FLC JRF	00 FUL OOR ACE	3H VIA LY RA	TED			LINE-SIDE LUGS: MECHAN EQUIPMENT GROUND	
CKT	DESCRIPTION		TAMPS/PH	_		BKR	Р	Р				ΓAMPS/PH		DESCRIPTION	СК
VO.		Α	В	С		AMP		Щ	AMP	NO.	Α	В	С		NC
_	RCPT - EXAM#4	900	222		EX	20	1	\vdash	20	EX	900	222		RCPT - NURSE STATION, STOR	-
•	RCPT - EXAM#5		900		EX	20	1	1	20	EX		900		RCPT - EXAM#3	4
•	RCPT - PROCEDURE			900	EX	20	1	\vdash	20	EX			900	RCPT - EXAM#6	е
- 1	RCPT - NURSE STATION PRINT	900			EX	20	1	1	20	EX	900			RCPT - PROCED. EXAM LTS	8
- 1	RCPT - NURSE STATION		900		EX	20	1	\vdash	20	EX		900		LTG - PROCEDURE EXAM	1
	RCPT - RECEPT, CK OUT, WAIT			900	EX	20	1	\vdash	20	EX			900	RCPT - NURSE STATION	1
	RCPT - REC COPIER	900			EX	20	1		20	EX	900			RCPT - STOR, HALL, SOIL/JAN	
	RCPT - PROCEDURE		900		EX	20	1	1	20	EX		900		RCPT - RECEPTION	1
••	RCPT - EXAM#1			900	EX	20	1	<u> </u>	20	EX			900	RCPT - WAITING	1
••	DCP-1	900			EX	20	1	1	20	EX	900			LTG - PROCEDURE EXAM	2
	LTG - BREAK/OFFICE/EXAM/RR		767		12	20	1	1	20	EX		900		RCPT - EXAM #2	2
	LTG - WAITING/RECEPTION/HALI			578	12	20	1	\vdash	20	12			360	RCPT - NURSE QUAD 2	2
	RCPT - BUSINESS QUAD 1	360			12	20	1		20	12	180			RCPT - EXAM 1 COUNTER 1	2
-· ı	RCPT - BUSINESS QUAD 2		360		12	20	1	1	20	12		180		RCPT - EXAM 1 COUNTER 2	2
	RCPT - RECEPTION PRINTER			1,000	12	20	1	1	20	12			1,440	RCPT - EXAM 1/2 GENERAL	3
	RCPT - RECEPTION QUAD 1	360			12	20	1	1	20	12	180			RCPT - EXAM 2 COUNTER 1	3
••	RCPT - RECEPTION QUAD 2		360		12	20	1	1	20	12		180		RCPT - EXAM 2 COUNTER 2	3
35	RCPT - VITALS EQUIP 1			600	12	20	1	1	20	12			180	RCPT - EXAM 3 COUNTER 1	3
37	RCPT - VITALS EQUIP 2	600			12	20	1	1	20	12	180			RCPT - EXAM 3 COUNTER 2	3
39	RCPT - VITALS EQUIP 3		600		12	20	1	1	20	12		180		RCPT - EXAM 4 COUNTER 1	4
41	RCPT - NURSE QUAD 1			360	12	20	1	1	20	12			180	RCPT - EXAM 4 COUNTER 2	4
	SUBTOTAL	16,430	16,347	17,536							4,140	4,140	4,860	SUBTOTAL	
	TOTAL PHASE A - VA 20,570	LOAD		CONN. V	/A	DF		LO	AD		С	ONN. VA	DF		
	AMPS 171	COOLING	G	Ì		1.00		RE	FRIG				1.00	1	
	TOTAL PHASE B - VA 20,487	HEATING	3			0		SIG	N/DIS	SP			1.25	1	
	AMPS 171	LIGHTIN	G	1,345		1.25		KIT	CHEN	1			1.00	1	
	TOTAL PHASE C - VA 22,396	RECEPT	ACLES	15,440	***************************************	1.0/.5		EXI	STING	3		41,363	1.00		
	AMPS 187	MOTORS	3	605		1.00		LR	G MO1	ΓOR			1.25	TOTAL DEMAND	1
	TOTAL PNLBD - VA 63,453	SUPP H	EAT	4,500		1.00		SH	OW W	NDW	***************************************		1.25	61,069 VA	1
	AMPS 176	MISC EQ	TIID	200		1.00	1	I TO	G TRA	CK			1.00	170 A	1

				ELECTRICAL	LIGHTING SCHE	DULE (or equal, verify all selections and finishes with owner and architect prior to ordering	1G).			
FIXTURE	MANUF	ACTURER	VOLT							
TYPE	NAME	CATALOG NUMBER	AMPS	MOUNTING	LAMP TYPE	REMARKS	VOLT			
А	LITHONIA	STAKS-2X4-ALO6-SWW7	31-49	GRID	INCLUDED 35K/40K/50K LED	2' X 4' DIMMABLE LED CENTER ELEMENT LAY-IN - SWITCHABLE LUMEN AND COLOR OUTPUT	MVOLT			
В	MARK ARCHITECTURAL	SL4L-LOP-4FT-FLP-80CRI-40K-800LMF- NODIM-120-ZT	8/FT	FLANGED - RECESSED	INCLUDED 4000K LED	4" WIDE RECESSED LINEAR FIXTURE - FLUSH LENS - 800LMF - 4' LENGTH - BLACK FINISH	120			
С	LITHONIA	LDN6-40/15-LO6-AR-LSS-MVOLT-GZ10	18	RECESSED	INCLUDED 4000K LED	6" LED DOWNLIGHT - 'CE' DESIGNATION PROVIDE WITH ELSD EMERGENCY BATTERY PACK OPTION	MVOLT			
Cl	LITHONIA	LDN3-40/05-LO3-AR-LSS-MVOLT-UGZ10	6	RECESSED	INCLUDED 4000K LED	3" LED DOWNLIGHT - SEMI-SPECULAR FINISH	MVOLT			
D	LITHONIA	LDN4SQ-40/10-LS4-AR-LSS-MVOLT-GZ10	11	RECESSED	INCLUDED 4000K LED	4" SQUARE LED DOWNLIGHT - SEMI-SPECULAR FINISH	MVOLT			
UC	LITHONIA	UCEL-24IN-30K-90CRI-SWR-WH	12	SURFACE	INCLUDED 4000K LED	24" (2' NOMINAL) LED UNDERCABINET FIXTURE - ORDER WITH ROCKER SWITCH "SWR" OPTION	MVOLT			
l⊕l	LITHONIA	LQM-S-W-3-R-MVOLT-EL-N-SD	5	UNIVERSAL	INCLUDED LED	LED RED LETTER EXIT SIGN LUMINAIRE WITH 90 MIN EMERGENCY BATTERY PACK - FIELD REPLACE BACK COVER WITH INCLUDED EXTRA FACEPLATE - UNIVERSAL DIRECTION CHEVRON INSERTS	MVOLT			
⊗	LITHONIA	LQM-S-W-3-R-MVOLT-EL-N-SD	5	UNIVERSAL	INCLUDED LED	LED RED LETTER EXIT SIGN LUMINAIRE WITH 90 MIN EMERGENCY BATTERY PACK	MVOLT			
	LITHONIA	ELM2L	5	UNIVERSAL	INCLUDED LED	EMERGENCY LIGHTING UNIT WITH 90 MIN EMERGENCY BATTERY PACK	MVOLT			

LIGHTING FIXTURE SCHEDULE

SCALE : NO SCALE

LINE-SIDE LUGS: MECHANICAL

TG - CORRIDOR/RESTROOM 20

SUBTOTAL

TOTAL DEMAND

112,176 VA

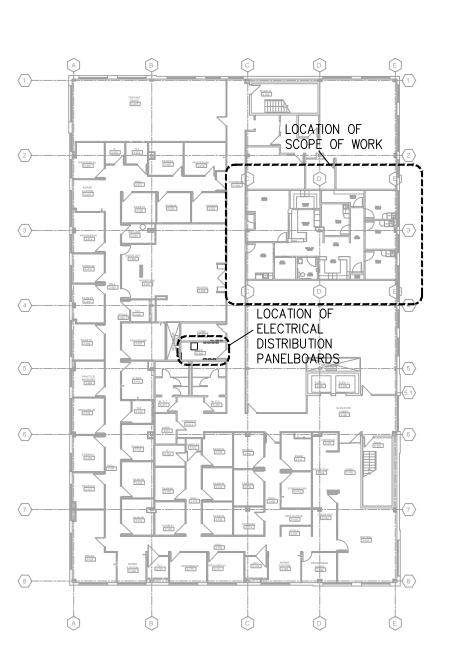
LTG - EMERGENCY

6,456 ^^PWR - FPB-1

32,156 27,632 36,888

92,400 1.00

EQUIPMENT GROUND BUS



ELECTRICAL DISTRIBUTION KEY PLAN

SCALE : 1/32" = 1'-0"

ELECTRIC SERVICE SINGLE LINE DIAGRAM IS EXISTING TO REMAIN. NO MODIFICATIONS ARE BEING

MADE TO THE SEQUENCE OFELECTRICAL SERVICE DISTRIBUTION EQUIPMENT IN THIS SCOPE.

ELECTRICAL SINGLE LINE DIAGRAM

CALE : NO SCALE



GUY GRONBERG ARCHITECTS, P.C. 113 SE 3rd St. Lee's Summit, MO 64063 Phone 816.524.0878 Fax 816.524.8578



MO COA NO. 2012006786
KS COA NO. E-2818
1901 NW BLUE PARKWAY,
UNITY VILLAGE, MO 64065
8rd FLOOR UNITY VILLAGE TOWER
phone: (816) 272-5289



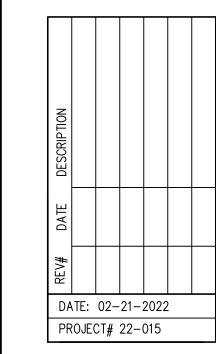
ee's Summit Medical Center, MOB

SPEC SUITE 2310

1980 SE Blue Parkway, Lee's Summit, MO 64063

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3

E4

CONN. VA DF LOAD
O REFRIG

0 REFRIG
1.00 SIGN/DISP
1.25 KITCHEN
1.07.5 EXISTING
1.00 LRG MOTOR
1.00 SHOW WNDW
1.00 LTG TRACK

FED FROM:

SERVES: 3RD FLOOR

MOUNTING: SURFACE

AIC RATING: 65000 FULLY RATED

 LOCATION: COMMUNICATIONS 109

 VOLTAMPS/PHASE
 WIRE BKR P P BKR WIRE VOLTAMPS/PHASE

 A B C NO. AMP AMP NO. A B C

PANELBOARD: 3H (EXISTING)

VOLTS/PHASE: 480Y/277V, 3PH, 4W

BUS AMPS: 400A

SECTION: 1

MAIN SIZE/TYPE: MLO

1 ^^PWR - VAV-1 3 SPARE 5 SPARE

9 FPB 3-8

15 FPB 3-6

19 SPARE 21 VAV 1-3-3 23 SPARE

25 FPB 1-3-3

29 FPB 3-4

33 SPARE 35 SPARE

37 PROVISIONAL SPACE
39 PROVISIONAL SPACE

41 PROVISIONAL SPACE

SUBTOTAL

TOTAL PHASE A - VA | 40,156 |

AMPS 145 TOTAL PHASE B - VA 32,132

AMPS 116
TOTAL PHASE C - VA 39,888

TOTAL PNLBD - VA 1

^^ = HACR-TYPE BREAKER

PANELBOARD NOTES

AMPS

8,000 4,500 3,000

HEATING

LIGHTING

RECEPTACLES MOTORS

SUPP HEAT

MISC EQUIP

DESCRIPTION IN ITALICS = EXISTING LABELED LOAD TO REMAIN.