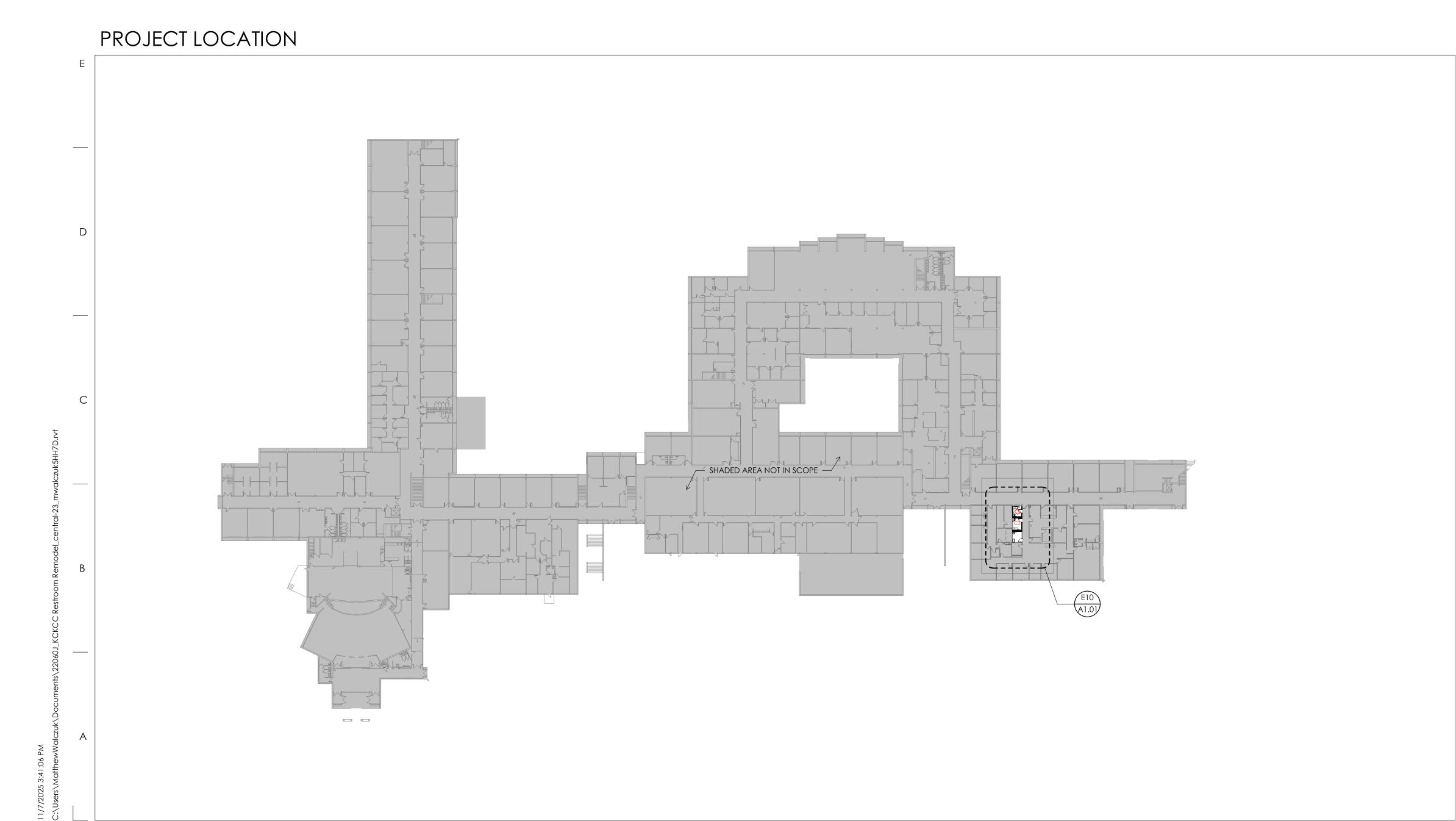
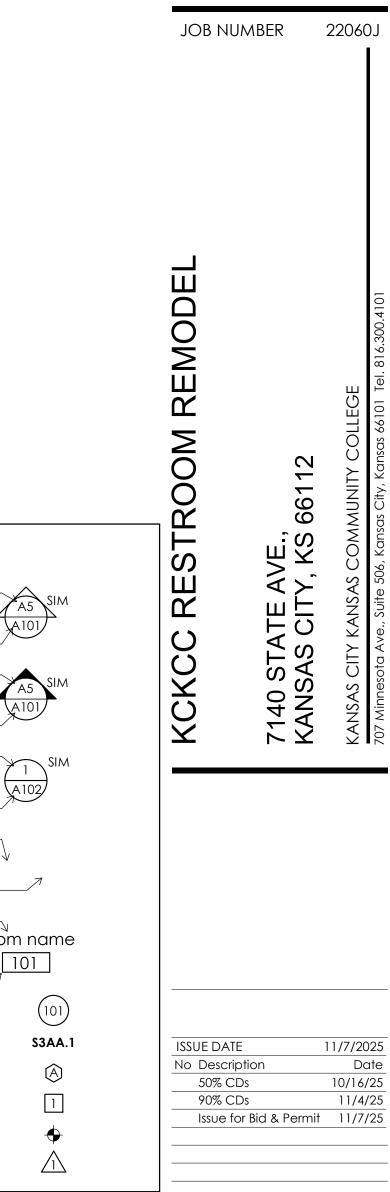
KCKCC RESTROOM REMODEL

ISSUE FOR BID AND PERMIT



DRAWING LIST - GENERAL ACCESSIBILITY DIAGRAMS & TYPICAL DETAILS ARCHITECTURAL SPECIFICATIONS ARCHITECTURAL SPECIFICATIONS ARCHITECTURAL SPECIFICATIONS ARCHITECTURAL SPECIFICATIONS 3 - ARCHITECTURE INTERIOR ELEVATIONS & SCHEDULES PKMR Engineers State Certificate of Authority - MECHANICAL, PLUMBING & ELECTRICAL #E-1682 MEP0.01 MEP COVER SHEET MEP0.02 MEP SPECIFICATIONS MEP 0.03 MEP SPECIFICATIONS 913.492.2400 MECHANICAL PLANS MECHANICAL SCHEDULES & DETAILS ELECTRICAL PLANS ELECTRICAL SCHEDULES & DETAILS



Kansas Certificate of Authority

#A-516

MEP Engineer

13300 West 98th St.

Lenexa, KS 66215

ADOPTED CODES

AHJ: UNIFIED GOVERNMENT OF WYANDOTTE COUNTY

KANSAS CITY, KS

2018 INTERNATIONAL EXISTING BUILDING CODE 2018 INTERNATIONAL BUILDING CODE 2018 UNIFORM PLUMBING CODE 2018 INTERNATIONAL MECHANICAL CODE 2017 NATIONAL ELECTRICAL CODE 2018 INTERNATIONAL FIRE CODE 2018 INTERNATIONAL ENERGY CONSERVATION CODE

2009 ICC A117.1 2018 NFPA LIFE SAFETY CODE

CODE REVIEW INFORMATION

CONSTRUCTION TYPE

BUILDING IS NOT SPRINKLERED

USE AND OCCUPANCY

GROUP B, M, A-3 (MOST RESTRICTIVE OF NON-SEPARATED OCCUPANCIES)

OCCUPANCY COUNT CALCULATION EXISTING BUILDING OCCUPANCY COUNT IS

UNCHANGED WITH THIS ALTERATION.

CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS BUILDING HEIGHT (PER TABLE 504.3 & 504.4)

EXISTING - UNCHANGED WITH THIS ALTERATION

BUILDING AREA (PER TABLE 506.2) EXISTING - UNCHANGED WITH THIS ALTERATION

NONSEPARATED OCCUPANCIES (PER 508.3.3) NO SEPARATION IS REQUIRED BETWEEN NONSEPARATED OCCUPANCIES

CHAPTER 6 TYPE OF CONSTRUCTION FIRE RESISTANCE REQUIREMENTS (TABLE 601)

STRUCTURAL FRAME EXTERIOR BEARING WALLS INTERIOR BEARING WALLS INTERIOR NON-BEARING WALLS 0 HR FLOOR CONSTRUCTION ROOF CONSTRUCTION EXTERIOR NON-BEARING WALLS 0 HR***

*ROOF SUPPORTS - FIRE RESISTANCE RATINGS OF PRIMARY STRUCTURAL FRAME AND BEARING WALLS ARE PERMITTED TO BE REDUCED BY 1 HOUR WHERE SUPPORTING A ROOF ONLY.

**EXCEPT IN GROUP F-1, H, M AND S-1 OCCUPANCIES, FIRE PROTECTION OF STRUCTURAL MEMBERS SHALL NOT BE REQUIRED, INCLUDING PROTECTION OF ROOF FRAMING AND DECKING WHERE EVERY PART OF ROOF CONSTRUCTION IS 20 FEET OR MORE ABOVE ANY FLOOR IMMEDIATELY BELOW.

***FIRE RESISTANCE REQUIREMENTS PER TABLE 602

CHAPTER 8 INTERIOR FINISHES

FINISH REQUIREMENTS BY OCCUPANCY (TABLE 803.13) EXIT STAIRWAY & PASSAGEWAY A CORRIDORS ROOMS & ENCLOSED SPACES C

CHAPTER 29 PLUMBING SYSTEMS

THIS ALTERATION MAINTAINS THE EXISTING QUANTITY OF FIXTURES WITHIN THE SPACE AND DOES NOT ALTER THE USE OR OCCUPANCY CLASSIFICATION OF THE SPACE.

IEBC -CHAPTER 6 CLASSIFICATION OF WORK

LEVEL 2 ALTERATION WITH A WORK AREA OF APPROXIMATELY 425 SF (<50% OF THE BUILDING AREA). THE SCOPE OF WORK CONSISTS OF RECONFIGURATION OF EXISTING TOILET ROOM AND JANITOR CLOSET SPACES WITHIN THE EXISTING FOOTPRINT OF THOSE SPACES AND THE MODIFICATION OF THE EXISTING SANITARY DRAIN PIPING FOR THE PLUMBING FIXTURES.

IEBC -CHAPTER 8 ALTERATIONS LEVEL 2

NEW CONSTRUCTION ELEMENTS, COMPONENTS, SYSTEMS AND SPACES SHALL COMPLY WITH THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE (801.3)

ICC A117.1 - CHAPTER 6 PLUMBING ELEMENTS AND

DOORS SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE FOR ANY FIXTURE (603.2.2)

EXCEPTION #2: WHERE THE ROOM IS FOR INDIVIDUAL USE AND A CLEAR FLOOR SPACE COMPLYING WITH SECTION 305.3 IS PROVIDED WITHIN THE ROOM BEYOND THE ARC OF THE DOOR SWING, THE DOOR SHALL NOT BE REQUIRED TO COMPLY WITH SECTION 603.2.2.

AND THOSE SHEETS LISTED UNDER THE ARCHITECTURAL HEADER OF THE DRAWING LIST. I HEREBY DISCLAIM RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS RELATING TO OR INTENDED TO BE USED FOR ANY PART OF PARTS OF THE ARCHITECTURAL OR

I HEREBY CERTIFY THAT THE DOCUMENTS INTENDED TO BE

AUTHENTICATED BY MY SEAL ARE LIMITED TO THE COVER

Dalyn Novak - Architect

ENGINEERING PROJECT.

SYMBOLS

Sheet Number

Detail Number

Detail Number

Sheet Number

Detail Number -

Sheet Number -

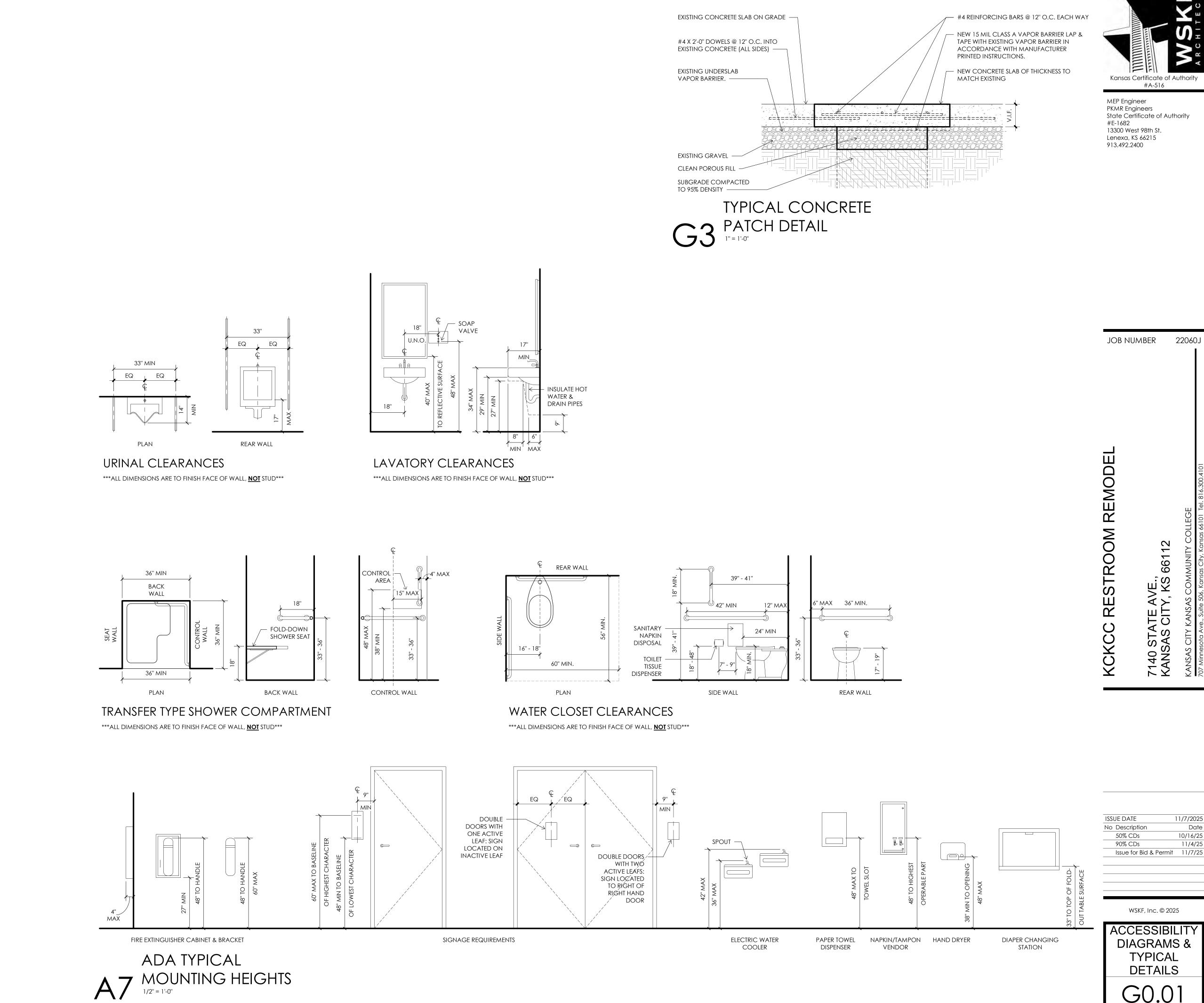
Room Number

Spot Elevation

Room Name ----

WSKF, Inc. © 2025

COVER



9 8 7 6 5

D

TYPICAL DETAILS G0.01

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11/7/2025

10/16/25

11/4/25

#A-516

10

1.02 RELATED REQUIREMENTS 1.03 DEFINITIONS

A. Demolish: Dismantle, raze, destroy, or wreck any building or structure or any part thereof.

reuse and reinstall where indicated.

- B. Remove: Detach or dismantle items from existing construction and dispose of them off site, unless items are indicated to be salvaged or reinstalled.
- C. Remove and Salvage: Detach or dismantle items from existing construction in a manner to prevent damage. Clean, package, label and deliver salvaged items to Owner in ready-for-reuse condition.
- D. Remove and Reinstall: Detach or dismantle items from existing construction in a manner to prevent damage. Clean and prepare for
 - E. Existing to Remain: Designation for existing items that are not to be removed and that are not otherwise indicated to be salvaged or

1.04 REFERENCE STANDARDS

- A. 29 CFR 1926 Safety and Health Regulations for Construction; Current Edition.
- B. NFPA 241 Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.05 SUBMITTALS

A. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

1.06 QUALITY ASSURANCE

A. Demolition Firm Qualifications: Company specializing in the type of work required.

Minimum of 5 years of documented experience.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public. Obtain required permits. Take precautions to prevent catastrophic or uncontrolled
- collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable
- Provide, erect, and maintain temporary barriers and security
- Use physical barriers to prevent access to areas that could be hazardous to workers or the public. Conduct operations to minimize effects on and interference
- with adjacent structures and occupants.
- Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction
- Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
- Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- Do not begin removal until receipt of notification to proceed from Owner.
- C. Protect existing structures and other elements to remain in place and not removed.
- Provide bracing and shoring. Prevent movement or settlement of adjacent structures. Stop work immediately if adjacent structures appear to be in
- D. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public
- waterways or storm sewers, or other pollution. E. Hazardous Materials: If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner;

materials, lead, PCBs, and mercury. 3.02 EXISTING UTILITIES

A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.

hazardous materials include regulated asbestos containing

- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 5 days prior written notification to
- F. Locate and mark utilities to remain; mark using highly visible tags or
- flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary. G. Unused underground piping may be abandoned in place, provided it
- is completely drained and capped; remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.
- Report discrepancies to Architect before disturbing existing Beginning of demolition work constitutes acceptance of

Verify construction and utility arrangements are as indicated.

- existing conditions that would be apparent upon examination prior to starting demolition.
- B. Remove existing work as indicated and required to accomplish new
- Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction indicated
- Remove items indicated on drawings.
- C. Services including, but not limited to, HVAC, Plumbing, Fire Protection, and Electrical: Remove existing systems and equipment as indicated.
- Maintain existing active systems to remain in operation, and maintain access to equipment and operational components. Where existing active systems serve occupied facilities but are

to be replaced with new services, maintain existing systems in

- service until new systems are complete and ready for service. Verify that abandoned services serve only abandoned facilities before removal
- Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings. Remove back to source of supply where possible, otherwise cap stub and tag with identification.

- D. Protect existing work to remain.
- Prevent movement of structure. Provide shoring and bracing
 - Perform cutting to accomplish removal work neatly and as specified for cutting new work.
- Repair adjacent construction and finishes damaged during
- removal work. Patch to match new work.

3.04 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site. Removal to be conducted in a legal manner. The sale of salvaged material is not permitted on the Owner's property.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private

SECTION 035400 CAST UNDERLAYMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Wear-rated, cement based self-leveling floor underlayment /

1.02 RELATED REQUIREMENTS

- A. Section 090561 Common Work Results for Flooring Preparation. 1.03 REFERENCE STANDARDS
- A. ASTM C109/C109M Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50 mm [2 in.] Cube
- B. ASTM C1602/C1602M Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete; 2022.
- C. ASTM C348 Standard Test Method for Flexural Strength of
- Hydraulic-Cement Mortars; 2021. D. ASTM E84 - Standard Test Method for Surface Burning
- Characteristics of Building Materials; 2024. E. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete

Repair; 2013. 1.04 SUBMITTALS

- A. Product Data: Provide manufacturer's data documenting physical characteristics and product limitations.
- B. Manufacturer's Instructions: Indicate information on surface preparation, mixing instructions, environmental limitations, and

Installation instructions. 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with minimum 3 years of documented experience.
- B. Applicator Qualifications: Company specializing in performing work of type specified, with minimum 3 years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- Keep dry and protect from direct sun exposure, freezing, and ambient temperatures greater than 105 degrees F (41 degrees C). 1.07 FIELD CONDITIONS
- A. Do not install underlayment until floor penetrations and peripheral work are complete B. Maintain minimum ambient temperatures of 50 degrees F (10
- degrees C) 24 hours before, during, and 72 hours after installation of underlayment.
- C. During curing process, ventilate spaces to remove excess moisture. 1.08 WARRANTY
- A. Manufacturer Warranty: Provide 1-year manufacturer warranty for defective materials. Complete forms in Owner's name and register

PART 2 PRODUCTS

2.01 MANUFACTURERS A. Cementitious Underlayment:

with manufacturer.

- 1. SCHONOX, HPS North America, Inc., a Sika Company; ZM Rapid: www.hpsubfloors.com
- Other comparable materials, subject to compliance with requirements and acceptable to the Owner and Architect.

2.02 MATERIALS

- A. Cast Underlayments, General;
- Comply with applicable code for combustibility or flame spread B. Cementitious Underlayment / Topping: Blended cement mix,
- producing self-leveling underlayment with the following properties when mixed with water in accordance with manufacturer's directions:
- 1. Compressive Strength: Minimum 7,550 psi (50 MPa) after 28 days, tested in accordance with ASTM C109/C109M

Flexural Strength: Minimum 1,550 psi (10 MPa) after 28 days,

- tested in accordance with ASTM C348. Density: 120 pcf (1920 kg/cu m), nominal. 4. Final Set Time: 1 hour maximum, tested in accordance with
- ASTM C191 Thickness: Capable of an installed thickness range of 1/4" to 1" neat with sealed finish and extended capabilities of 3"
- thickness with aggregate Surface Burning Characteristics: Flame spread index of 0 and smoke developed index of 0 when tested in accordance with
- VOC: 0 g/L as calculated per SCAQMD 1168
- C. Aggregate (As Necessary): Dry, well-graded, washed silica aggregate, approximately 1/8 inch (3 mm) in size and acceptable to
- underlayment manufacturer. D. Water: ASTM C1602/C1602M; clean, potable, and not detrimental to underlayment mix materials
- E. Primer: Manufacturer's recommended type.
- F. Joint and Crack Filler: Latex-based filler, as recommended by

manufacturer. PART 3 EXECUTION

- 3.01 EXAMINATION
- A. Verify substrate surfaces are clean, dry, unfrozen, and do not contain petroleum byproducts or other compounds detrimental to underlayment material bond to substrate.
- B. Verify substrate moisture content and pH level as recommended by underlayment manufacturer instructions.

- A. Concrete: Mechanically prepare steel troweled concrete to create surface to achieve bond; permitted methods include bead blasting and scarifying. Do not use acid etching,
- B. Remove substrate surface irregularities. Fill voids and deck joints with filler in accordance with manufacturer's instructions. C. Vacuum clean surfaces.

D. Prime substrate in accordance with manufacturer's instructions.

- A. Once underlayment starts to set, prohibit foot traffic until final set is

A. Apply underlayment in accordance with manufacturer's instructions.

allowable thickness for a neat installation as recommended by

manufacturer. Introduce aggregate to the mix as indicated by

B. Add aggregate for areas where thickness exceeds maximum

B. Air cure in accordance with manufacturer's instructions.

3.05 SEALING

manufacturer's instructions.

3.03 APPLICATION

3.04 CURING

- A. Where the cement-based underlayment/topping is left exposed as a topping, the surface shall be protected from staining agents and surface wear by applying a suitable sealer.
- Apply the sealer in accordance with both the underlayment/topping manufacturer and sealer manufacturer's instructions.

3.06 PROTECTION

A. Do not permit traffic over unprotected floor underlayment / topping surfaces.

SECTION 061053 MISCELLANEOUS ROUGH CARPENTRY

PART 1 GENERAL 1.01 SECTIONS INCLUDES

- A. Fire-retardant-treated wood materials.
- B. Concealed wood blocking, nailers, and supports.
- 1.02 REFERENCE STANDARDS A. APA E30 - Engineered Wood Construction Guide; 2019.
- B. ASTM A153/A153M Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- C. ASTM B695 Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel: 2021. D. AWPA U1 - Use Category System: User Specification for Treated
- Wood; 2025.
- E. ITS (DIR) Directory of Listed Products; Current Edition. F. PS 1 - Structural Plywood; 2023.
- G. PS 20 American Softwood Lumber Standard; 2025. H. UL (DIR) - Online Certifications Directory; Current Edition

1.03 SUBMITTALS A. Product Data:

PART 2 PRODUCTS

Fire-retardant treatment.

2.01 GENERAL REQUIREMENTS A. Dimension Lumber: Comply with PS 20 and requirements of

specified grading agencies, Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee (www.alsc.org), and that provides grading service for species and grade specified. Provide lumber stamped with

grade mark unless otherwise indicated. 2.02 DIMENSION LUMBER

- A. Sizes: Nominal sizes as indicated on drawings, S4S.
- Moisture Content: S-dry or MC19. C. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:

Lumber: S4S, No.2 or Standard Grade. Boards: Standard or No.3.

2.03 CONSTRUCTION PANELS

- A. PS 1, C-D Plugged or better. 2.04 FIRE-RETARDANT TREATMENT (FRT)
- A. Factory-treat wood members in accordance with AWPA U1 and use category indicated.
- B. Fire-Retardant Treatment: Interior Type A, Use Category UCFA (LT), Low-Temperature (low hygroscopic).
- Treat blocking and other wood members concealed in
- C. Kiln-dry after treatment (KDAT) to maximum moisture content of 19 percent for sawn material and 15 percent for plywood. D. Fabrication of FRT Wood:
 - Ripping or milling of boards, lumber, and timber after treatment is not permitted. Field cutting to length and drilling of holes in boards, lumber,
- and timber are permitted without additional treatment. Field cutting and drilling of holes in plywood are permitted. E. Label or brand FRT wood with classification mark of UL (DIR) or ITS (DIR) or other approved inspection agency, the treatment plant,

name of treatment, species of wood, flame spread and smoke-

developed indexes, method of drying after treatment, and treating standard.

- 2.05 ACCESSORIES A. Metal and Finish of Fasteners:
 - Fire-Retardant-Treated Wood: a. Nails, timber rivets, wood screws, and lag screws: Hotdip galvanized steel complying with ASTM A153/A153M
 - Staples: Type 304 stainless steel. c. Fasteners other than staples, nails, timber rivets, wood

screws, and lag screws: Mechanically deposited zinc-

coated steel, ASTM B695 Class 55 or better. PART 3 EXECUTION

- 3.01 INSTALLATION GENERAL
- Select material sizes to minimize waste. B. Reuse scrap to greatest extent possible; clearly separate scrap for use on-site as accessory components, including shims, bracing,
- and blocking. C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to

remove indoor air contaminants. 3.02 BLOCKING, NAILERS, AND SUPPORTS

stud framing.

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim. B. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to
- C. In walls, provide blocking attached to stude as backing and support for wall-mounted items unless item can be securely fastened to two or more studs or another method of support is explicitly indicated.
- Where ceiling mounting is indicated, provide blocking and supplementary supports above ceiling unless another method of support is explicitly indicated.
- E. Provide the following specific nonstructural framing and blocking: Cabinets and shelf supports. Wall brackets.
- Grab bars. Toilet and bathroom accessories. Wall-mounted door stops.
- 3.03 INSTALLATION OF CONSTRUCTION PANELS

- A. Construction Panels General: Install in accordance with APA E30.

 - 3.04 CLEANING
 - A. Waste Disposal: Comply with applicable regulations.
 - Do not burn scrap on project site. Do not burn scraps that have been pressure treated.
 - 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.
 - B. Do not leave wood, shavings, sawdust, etc. on ground or buried in
 - C. Prevent sawdust and wood shavings from entering storm drainage

SECTION 064100 ARCHITECTURAL WOOD CASEWORK

PART 1 GENERAL 1.01 SECTION INCLUDES

- A. Specially fabricated cabinet units.
- B. Hardware. 1.02 RELATED REQUIREMENTS
- A. Section 123600 Countertops. 1.03 REFERENCE STANDARDS
- A. ANSI A208.2 Medium Density Fiberboard (MDF) for Interior Applications; 2022.
- Edition; 2014, with Errata (2016). C. AWMAC/WI (NAAWS) - North American Architectural Woodwork

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd

Standards; 2021, with Errata.

- 1.04 SUBMITTALS A. See Section 013000 - Administrative Requirements for submittal
- B. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories. Scale of Drawings: 1-1/2 inch to 1 foot (125 mm to 1 m),
- C. Product Data: Provide data for hardware accessories. D. Samples: Submit actual samples of architectural cabinet construction, minimum 12 inches (300 mm) square, illustrating

proposed cabinet substrate and finish.

1.05 QUALITY ASSURANCE A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of

documented experience. 1.06 DELIVERY, STORAGE, AND HANDLING Protect units from moisture damage.

1.07 FIELD CONDITIONS

A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy. PART 2 PRODUCTS

A. Quality Standard: Premium Grade, in accordance with

2.01 CABINETS

- AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
- Finish Exposed Exterior Surfaces: Decorative laminate. Finish - Exposed Interior Surfaces: Decorative laminate. Finish - Semi-Exposed Surfaces: Decorative laminate
- Casework Construction Type: Type A Frameless. 6. Interface Style for Cabinet and Door: Style 1 - Overlay; reveal
- panel a. Premium Grade: 1) Provide vertical run and match for doors, drawer

7. Grained Face Layout for Cabinet and Door Fronts: Flush

Finish - Concealed Surfaces: Manufacturer's option.

fronts and false fronts within each cabinet unit. 2) Provide well-matched doors, drawer fronts and false fronts across multiple cabinet faces in one elevation.

Cabinet Design Series: As indicated on drawings. Adjustable Shelf Loading: 40 psf (19.5 gm/sq cm). Cabinet Style: Reveal overlay. 11. Cabinet Doors and Drawer Fronts: Flush style.

- 2.02 WOOD-BASED COMPONENTS Wood fabricated from old growth timber is not permitted. 2.03 PANEL CORE MATERIALS
- A. Medium Density Fiberboard (MDF) for cabinet shelf: Composite panel composed of cellulosic fibers, additives, and bonding system; cured under heat and pressure; comply with ANSI A208.2. Grade: 130; moisture resistance: MR50.

2.04 THERMALLY FUSED LAMINATE PANELS

A. Thermally Fused Laminate (TFL): Melamine-resin-saturated decorative papers; for fusion to composite wood substrates under heat and pressure.

Panel Core Substrate: Particleboard. Color: As indicated on drawings. Products:

2. Panel Thickness: 1 inch (25.4 mm).

a. Stevens Wood; TFL Decorative Panels. 2.05 COUNTERTOPS

A. Countertops: See Section 123600. 2.06 ACCESSORIES

A. Plastic Edge Banding: Extruded PVC, flat shaped; smooth finish; of

width to match component thickness. Color: to match TFL face.

Use at all exposed shelf edges.

Use at all exposed plywood edges.

A. Vanity Brackets: Fixed, ADA-compliant, face-of-partition mounting.

Products:

100 mm centers).

nickel-plated finish.

- Material and Shape: Steel; formed compound shapes. a. Finish: Manufacturer's standard, factory-applied, textured powder coat. b. Color: Black.
- www.aandmhardware.com/#sle. B. Drawer and Door Pulls: "U" shaped wire pull, steel with chrome finish, 4 inch centers ("U" shaped wire pull, steel with chrome finish,

a. A&M Hardware, Inc; ADA Vanity Brackets:

C. Hinges: European style concealed self-closing type, steel with

A. Assembly: Shop assemble cabinets for delivery to site in units

B. Edging: Fit shelves, doors, and exposed edges with specified

 Manufacturers: a. Blum, Inc; CLIP top BLUMOTION: www.blum.com/#sle. 2.08 FABRICATION

easily handled and to permit passage through building openings.

edging. Do not use more than one piece for any single length.

C. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting

PART 3 EXECUTION

- 3.01 INSTALLATION A. Set and secure custom cabinets in place, assuring that they are
 - rigid, plumb, and level. B. Carefully scribe casework abutting other components, with

maximum gaps of 1/32 inch (0.79 mm). Do not use additional

overlay trim for this purpose.

- 3.02 ADJUSTING
- A. Test installed work for rigidity and ability to support loads.
- Adjust moving or operating parts to function smoothly and correctly. 3.03 CLEANING Clean casework, counters, shelves, hardware, fittings, and fixtures.

SECTION 079200

JOINT SEALANTS

- PART 1 GENERAL
- 1.01 SECTION INCLUDES
- A. Nonsag gunnable joint sealants. B. Self-leveling pourable joint sealants.
- C. Joint backings and accessories. 1.02 RELATED REQUIREMENTS
- A. Section 092116 Gypsum Board Assemblies: Sealing acoustical and sound-rated walls and ceilings.

B. Section 093000 - Tiling: Sealant between tile and plumbing fixtures and at junctions with other materials and changes in plane.

- 1.03 REFERENCE STANDARDS A. ASTM C661 - Standard Test Method for Indentation Hardness of
 - Elastomeric-Type Sealants by Means of a Durometer; 2015 (Reapproved 2022). B. ASTM C834 - Standard Specification for Latex Sealants; 2017
- (Reapproved 2023). C. ASTM C920 - Standard Specification for Elastomeric Joint Sealants;
- 2018 (Reapproved 2024). D. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.

E. SCAQMD 1168 - Adhesive and Sealant Applications; 1989, with Amendment (2022).

1.04 SUBMITTALS A Product Data: Submit manufacturer's technical datasheets for each product to be used; include the following:

Physical characteristics, including movement capability, VOC

- content, hardness, cure time, and color availability. List of backing materials approved for use with the specific
- Backing material recommended by sealant manufacturer. 4. Substrates that product is known to satisfactorily adhere to and with which it is compatible.

Substrates the product should not be used on.

Substrates for which use of primer is required. 7. Certification by manufacturer indicating that product complies with specification requirements

technical data sheet for each product to be used, including physical

Product Data for Accessory Products: Submit manufacturer's

submit manufacturer's color cards showing standard colors

characteristics, installation instructions, and recommended tools. C. Color Cards for Selection: Where sealant color is not specified,

- PART 2 PRODUCTS 2.01 MANUFACTURERS
- A. Nonsag Sealants: Bostik Inc: www.bostik-us.com/#sle.
- Dow: www.dow.com/#sle. Pecora Corporation: www.pecora.com/#sle.
- 4. Sherwin-Williams Company: www.sherwin-williams.com/#sle. Sika Corporation: usa.sika.com/#sle 6. Other manufacturers acceptable to the Owner and Architect.
- B. Self-Leveling Sealants: Bostik Inc; ____: www.bostik-us.com/#sle. Pecora Corporation; : www.pecora.com/#sle.

emulsion latex sealant.

items, and toilet and bath accessories.

continuous water immersion or traffic.

rated, sound-rated, or acoustical.

- williams.com/#sle. Sika Corporation; ____: usa.sika.com/#sle.
- Other manufacturers acceptable to the Owner and Architect. 2.02 JOINT SEALANT APPLICATIONS
- A. Scope: Interior Joints: Seal open joints except specific open joints indicated on

Sherwin-Williams Company; _____: www.sherwin-

drawings as not sealed. B. Type INT-1 - Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.

1. Type INT-2 - Wall and Ceiling Joints in Nonwet Areas: Acrylic

traffic-grade sealant suitable for continuous liquid immersion.

Type INT-3 - Wall and Ceiling Joints in Wet Areas: Nonsag polyurethane sealant for continuous liquid immersion. Type INT-4 - Floor Joints in Wet Areas: Nonsag polyurethane

4. Type INT-5 - Joints between Tile in Wet Areas and Floors,

- Walls, and Ceilings: Mildew-resistant silicone sealant; white. See Section 093000 for sealing between tile and plumbing fixtures. 5. Type INT-2 - In Sound-Rated Assemblies: Acrylic emulsion
- latex sealant. Interior Wet Areas: restrooms and janitor closets; fixtures in wet areas include plumbing fixtures, countertops, cabinets, other similar

D. Sound-Rated Assemblies: Walls and ceilings identified as STC-

B. Colors: As selected by Architect from Manufacturer's full range.

A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168.

Color: White.

traffic surface.

2.03 JOINT SEALANTS - GENERAL

- 2.04 NONSAG JOINT SEALANTS A. Type INT-5 - Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.
- Movement Capability: Plus and minus 25 percent, minimum. C. Type INT-3 - Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below

Movement Capability: Plus and minus 35 percent, minimum.

B. Type INT-1 - Polyurethane Sealant: ASTM C920, Grade NS, Uses

M and A; single or multi-component; not expected to withstand

- D. Type INT-4 Nonsag Traffic-Grade Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion and traffic without the necessity to recess sealant below traffic
- 1. Movement Capability: Plus and minus 50 percent, minimum. 2. Hardness Range: 20 to 30, Shore A, when tested in accordance with ASTM C661.
- E. Type INT-2 Acrylic Emulsion Latex: Water-based; ASTM C834, single component, nonstaining, nonbleeding, nonsagging; not

intended for exterior use.

2.05 SELF-LEVELING JOINT SEALANTS

- 2.06 ACCESSORIES A. Sealant Backing Materials, General: Materials placed in joint before applying sealants; assists sealant performance and service life by developing optimum sealant profile and preventing three-sided adhesion: type and size recommended by sealant manufacturer for
- compatibility with sealant, substrate, and application. B. Backing Tape: Self-adhesive polyethylene tape with surface that
- sealant will not adhere to and recommended by tape and sealant manufacturers for specific application. C. Masking Tape: Self-adhesive, nonabsorbent, nonstaining,
- removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- D. Joint Cleaner: Noncorrosive and nonstaining type, type recommended by sealant manufacturer; compatible with joint forming materials.

E. Primers: Type recommended by sealant manufacturer to suit application; nonstaining.

- PART 3 EXECUTION
- 3.01 EXAMINATION

Verify that backing materials are compatible with sealants. Verify that backer rods are of the correct size.

Verify that joints are ready to receive work.

3.02 PREPARATION Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean joints, and prime as necessary, in accordance with

manufacturer's instructions. C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

Mask elements and surfaces adjacent to joints from damage and

disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation

B. Provide joint sealant installations complying with ASTM C1193.

- Measure joint dimensions and size joint backers to achieve widthto-depth ratio, neck dimension, and surface bond area as recommended by manufacturer, except where specific dimensions
- Install bond breaker backing tape where backer rod cannot be used. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.

manufacturer's recommended temperature range, or will be outside

remove masking tape immediately after tooling sealant

that range during the entire curing period, unless manufacturer's

F. Do not install sealant when ambient temperature is outside

approval is obtained and instructions are followed. G. Nonsag Sealants: Tool surface concave, unless otherwise

surface.

3.04 POST-OCCUPANCY

are indicated.

Report failures immediately and repair them.

1.02 RELATED REQUIREMENTS

1.03 REFERENCE STANDARDS

and Frames; 2002.

Frames; 2023.

1.04 SUBMITTALS

SECTION 081213

HOLLOW METAL FRAMES PART 1 GENERAL 1.01 SECTION INCLUDES

A. Non-fire-rated hollow metal frames for non-hollow metal doors.

A. Section 081416 - Flush Wood Doors: Non-hollow metal door for

A. Post-Occupancy Inspection: Perform visual inspection of entire

their greatest width, i.e., at low temperature in thermal cycle.

length of project sealant joints at a time that joints have opened to

- hollow metal frames. B. Section 087100 - Door Hardware: Hardware, silencers, and weatherstripping.
- A. ADA Standards 2010 ADA Standards for Accessible Design; 2010. B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors;

C. ANSI/SDI A250.6 - Recommended Practice for Hardware

D. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2023. E. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2025.

F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-

Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by

H. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and

Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy,

High-Strength Low-Alloy with Improved Formability, and Ultra-High

Reinforcing on Standard Steel Doors and Frames; 2024.

- the Hot-Dip Process; 2025. G. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable; 2024.
- Strength; 2023. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2020.
- Frames: 2016. L. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017 M. NAAMM HMMA 830 - Hardware Selection for Hollow Metal Doors

K. BHMA A156.115 - Hardware Preparation in Steel Doors and

J. ASTM C476 - Standard Specification for Grout for Masonry; 2023.

and Frames; 2024. O. NAAMM HMMA 840 - Guide Specifications for Receipt, Storage and Installation of Hollow Metal Doors and Frames; 2024.

N. NAAMM HMMA 831 - Hardware Locations for Hollow Metal Doors

P. NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames; 2014. Q. SDI 117 - Manufacturing Tolerances for Standard Steel Doors and JOB NUMBER

22060J

Kansas Certificate of Authority

#A-516

State Certificate of Authority

MEP Engineer

PKMR Engineers

13300 West 98th St

Lenexa, KS 66215

913.492.2400

#E-1682

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10/16/25

11/4/25

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90% CDs

SPECIFICATIONS

ARCHITECTURAL

 B. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and identifying location of different finishes,

C. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project. D. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.

Manufacturer's qualification statement.

F. Installer's qualification statement.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Provide hollow metal frames from SDI Certified manufacturer: https://steeldoor.org/sdi-certified/#sle

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented

1.06 DELIVERY, STORAGE, AND HANDLING

A. Store in accordance with applicable requirements and in compliance with standards and/or custom guidelines as indicated

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Hollow Metal Frames with Integral Casings: Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle

Curries, an Assa Abloy Group company: www.assaabloydss.com/#sle

Steelcraft, an Allegion brand: www.allegion.com/#sle. Other manufacturer's acceptable to the Owner and Architect.

2.02 PERFORMANCE REQUIREMENTS

B, for each.

A. Refer to Door and Frame Schedule on drawings for frame sizes, fire ratings, sound ratings, finishing, door hardware to be installed, and other variations, if any.

B. Door Frame Type: Provide hollow metal door frames with integral

 Interior Doors: Use frames with integral casings. C. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type

D. Accessibility: Comply with ICC A117.1 and ADA Standards.

E. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior frame that is also indicated as being sound-rated must comply with the requirements specified for exterior frames and for sound-rated frames; where two requirements conflict, comply with the most stringent.

Hardware Preparations, Selections and Locations: Comply with BHMA A156.115, NAAMM HMMA 830, NAAMM HMMA 831 or ANSI/SDI A250.8 (SDI-100) in accordance with specified

2.03 HOLLOW METAL DOOR FRAMES WITH INTEGRAL CASINGS

A. Frame Finish: Factory primed and field finished. B. Interior Door Frames, Non-Fire Rated: Full profile/continuously

welded type, 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100). Level 2 - Heavy-duty.

b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.

c. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm),

 d. Zinc Coating: Manufacturer's standard coating thickness; ASTM A653/A653M.

Terminated Stops: Provide at interior doors; closed end stop terminated 6 inches (152 mm) above floor at 45 degree angle.

2.04 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

B. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15 mil, 0.015 inch (0.4 mm) dry film thickness (DFT) per coat; provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

A. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

B. Grout for Frames: Mortar grout complying with ASTM C476 with maximum slump of 4 inches (102 mm) as measured in accordance with ASTM C143/C143M for hand troweling in place; plaster grout and thinner pumpable grout are prohibited.

PART 3 EXECUTION 3.01 EXAMINATION

Verify existing conditions before starting work.

 Verify that opening sizes and tolerances are acceptable. Verify that finished walls are in plane to ensure proper door

3.02 PREPARATION

A. Coat inside of frames to be installed in masonry or to be grouted.

3.03 INSTALLATION

with bituminous coating, prior to installation.

A. Install frames in accordance with manufacturer's instructions and related requirements of specified frame standards or custom guidelines indicated.

 B. Coordinate frame anchor placement with wall construction. C. Grout frames in masonry construction, using hand trowel methods;

brace frames so that pressure of grout before setting will not deform

 Install door hardware as specified in Section 087100. Comply with recommended practice for hardware placement of doors and frames in accordance with ANSI/SDI A250.6 or NAAMM HMMA 861

3.04 TOLERANCES

A. Clearances Between Door and Frame: Comply with related requirements of specified frame standards or custom guidelines indicated in accordance with SDI 117 or NAAMM HMMA 861.

B. Maximum Diagonal Distortion: 1/16 inch (1.5 mm) measured with straight edges, crossed corner to corner.

Refer to Door and Frame Schedule on the drawings.

SECTION 081416 FLUSH WOOD DOORS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Flush wood doors; flush configuration; non-rated.

1.02 RELATED REQUIREMENTS

A. Section 081213 - Hollow Metal Frames.

B. Section 087100 - Door Hardware. 1.03 REFERENCE STANDARDS

 A. ANSI A208.1 - American National Standard for Particleboard; 2022 B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards, 2nd

Edition; 2014, with Errata (2016). C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards: 2021, with Errata.

A. Product Data: Indicate door core materials and construction;

veneer species, type and characteristics. B. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.

C. Samples: Submit two samples of door veneer, 8 by 10 inches (203

by 254 mm) in size illustrating wood grain, stain color, and sheen. D. Manufacturer's Installation Instructions: Indicate special installation

E. Warranty, executed in Owner's name.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with not less than three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified

B. Accept doors on site in manufacturer's packaging, and inspect for

 Protect doors with resilient packaging sealed with heat shrunk plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tinted sealer if stored more than one week, and break seal on site to permit ventilation.

1.07 WARRANTY

A. Manufacturer Warranty: Provide manufacturer's warranty on interior doors for the life of the installation. Complete forms in Owner's name and register with manufacturer.

1. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Wood Veneer Faced Doors:

 VT Industries, Inc: www.vtindustries.com/#sle. Substitutions: Manufacturer's and products deemed

acceptable to the Owner and Architect

2.02 DOORS AND PANELS

Quality Standard: Premium Grade, Heavy Duty performance, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI

(NAAWS), unless noted otherwise. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.

B. Interior Doors: 1-3/4 inches (44 mm) thick unless otherwise indicated; flush construction.

Provide solid core doors at each location. Wood veneer facing with factory transparent finish to match

existing doors. 2.03 DOOR AND PANEL CORES

A. Non-Rated Solid Core and 20 Minute Rated Doors: Type particleboard core (PC), plies and faces as indicated.

2.04 DOOR FACINGS

A. Veneer Facing for Transparent Finish: select white maple, veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face. Vertical Edges: Same species as face veneer.

2.05 DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.

B. Cores Constructed with stiles and rails:

Provide solid blocks at lock edge for hardware reinforcement. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and

 Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality

Provide edge clearances in accordance with the quality standard

2.06 FINISHES - WOOD VENEER DOORS

 A. Finish work in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 5 - Finishing for grade specified and

Factory finish doors in accordance with approved sample

C. Seal door top edge with color sealer to match door facing.

2.07 ACCESSORIES

A. Hollow Metal Door Frames: See Section 081213.

B. Door Hardware: See Section 087100. PART 3 EXECUTION

3.01 EXAMINATION

A. Verify existing conditions before starting work

Verify that opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are outof-tolerance for size or alignment.

3.02 INSTALLATION

A. Install doors in accordance with manufacturer's instructions and specified quality standard. B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is

not correct, replace door. C. Use machine tools to cut or drill for hardware.

D. Coordinate installation of doors with installation of frames and hardware. 3.03 TOLERANCES

A. Comply with specified quality standard for fit and clearance

3.04 ADJUSTING

B. Comply with specified quality standard for telegraphing, warp, and squareness

 Adjust doors for smooth and balanced door movement. B. Adjust closers for full closure.

SECTION 087100

DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

 A. Hardware for hollow metal and wood doors. B. Weatherstripping and gasketing.

1.02 REFERENCE STANDARDS

A. ADA Standards - 2010 ADA Standards for Accessible Design: 2010. B. BHMA A156.1 - Standard for Butts and Hinges; 2021.

C. BHMA A156.4 - Door Closers and Pivots; 2024.

D. BHMA A156.5 - Cylinders and Input Devices for Locks; 2020. E. BHMA A156.6 - Standard for Architectural Door Trim; 2021.

F. BHMA A156.7 - Template Hinge Dimensions; 2022.

G. BHMA A156.13 - Mortise Locks & Latches Series 1000; 2022. H. BHMA A156.16 - Standard for Auxiliary Hardware; 2023.

J. BHMA A156.28 - Standard for Recommended Practices for Mechanical Keying Systems; 2023.

BHMA A156.22 - Standard for Gasketing; 2021.

K. BHMA A156.115 - Hardware Preparation in Steel Doors and Frames; 2016. L. BHMA A156.115W - Hardware Preparation in Wood Doors with

Wood or Steel Frames; 2006. M. DHI (H&S) - Sequence and Format for the Hardware Schedule;

2019. N. DHI (KSN) - Keying Systems and Nomenclature; 2019.

O. ICC (IBC) - International Building Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

P. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017. 1.03 ADMINISTRATIVE REQUIREMENTS

A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on. B. Sequence installation to ensure facility services connections are

achieved in an orderly and expeditious manner. C. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this section; require attendance

Architect. Installer's Architectural Hardware Consultant (AHC).

Hardware Installer. Owner's Facility Team Member(s)

by affected installers and the following:

 Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.

E. Keying Requirements Meeting: Schedule meeting at project site prior to Contractor occupancy.

Attendance Required: a. Contractor.

b. Owner. c. Architect.

 d. Installer's Architectural Hardware Consultant (AHC). e. Door Hardware Installer.

Establish keying requirements.

 Verify locksets and locking hardware are functionally correct for project requirements. Verify that keying and programming complies with project

requirements. d. Establish keying submittal schedule and update requirements

4. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following: Record minutes and distribute copies within two days after

meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made. Deliver established keying requirements to manufacturers.

1.04 SUBMITTALS

A. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions,

finishes, and dimensions and profiles of individual components. Shop Drawings - Door Hardware Schedule: A detailed listing that includes each item of hardware to be installed on each door.

 Prepared by or under supervision of Architectural Hardware Consultant (AHC). Comply with DHI (H&S) using door numbering scheme and

hardware set numbers as indicated in Contract Documents. Submit in vertical format.

List groups and suffixes in proper sequence.

Include complete description for each door listed. Include manufacturer's and product names, and catalog numbers; include functions, types, styles, sizes and finishes of

Include account of abbreviations and symbols used in

schedule. C. Manufacturer's Instructions: Indicate special procedures and perimeter conditions requiring special attention.

D. Operation and Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.

E. Keying Schedule: Submit three copies of Keying Schedule complying with requirements established during Keying Requirements

Meeting unless otherwise indicated. F. Executed Warranty.

1.05 QUALITY ASSURANCE A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three

years of documented experience. B. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of documented experience.

A. Manufacturer Warranty: Provide manufacturer warranty against

1.06 DELIVERY, STORAGE, AND HANDLING A. Package hardware items individually; label and identify each package with door opening code to match door hardware schedule.

> defects in material and workmanship for period indicated, from Date of Substantial Completion. Complete forms in Owner's name and register with manufacturer. Closers: Five years.

a. Mechanical: Ten years.

Locksets:

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent

B. Provide individual items of single type, of same model, and by same

Spring hinges are not an acceptable self-closing device,

unless otherwise indicated. D. Weatherstripping and Gasketing:

 Fabricate as continuous gasketing, do not cut or notch gasketing material.

E. Fasteners: Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed

 Aluminum fasteners are not permitted. Provide phillips flat-head screws with heads finished to

match door surface hardware unless otherwise indicated. Provide machine screws for attachment to reinforced hollow metal and aluminum frames. Self-drilling (Tek) type screws are not permitted.

Provide stainless steel machine screws and lead expansion shields for concrete and masonry substrates. Provide wall grip inserts for hollow wall construction.

2.02 PERFORMANCE REQUIREMENTS A. Provide door hardware products that comply with the following

> Applicable provisions of federal, state, and local codes. a. ICC (IBC). Accessibility: ADA Standards and ICC A117.1.

Hardware Preparation for Steel Doors and Steel Frames: BHMA A156.115. 4. Hardware Preparation for Wood Doors with Wood or Steel Frames: BHMA A156.115W.

2.03 HINGES A. Manufacturers: Conventional butt hinges.

 BEST, dormakaba Group: www.bestaccess.com/#sle. McKinney. Hager.

Ives Substitutions: Not permitted.

 Butt Hinges: As applicable to each item specified. Template screw hole locations. Bearing assembly installed after plating.

Fully plate hinge pins.

C. Sizes: See Door Hardware Schedule.

Bearings: Exposed fully hardened bearings. d. Bearing Shells: Shapes consistent with barrels. e. Pins: Easily seated, non-rising pins.

Non-Removable Pins: Slotted stainless steel

Hinge Height: 4-1/2 by 4-1/2 inches (114 by 114 mm). Sufficient size to allow 180 degree swing of door. D. Finishes: See Door Hardware Schedule.

Fully polish hinges; front, back, and barrel.

1. Butt Hinges: Comply with BHMA A156.1 and BHMA A156.7 for templated hinges.

F. Material: Base metal as indicated for each item by BHMA material and finish designation.

 Butt Hinges: Include full mortise hinges. H. Options: As applicable to each item specified. Quantities:

 Butt Hinges: Three (3) hinges per leaves up to 90 inches (2286 mm) in height. Add one (1) for each additional 30 inches (762 mm) in height or fraction thereof. Hinge weight and size unless otherwise indicated in hardware sets:

1) For doors up to 36 inches (914 mm) wide and up to

1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.134 inch (3.4 mm) and a minimum of 4-1/2 inches (114 mm) in height. For doors from 36 inches (914 mm) wide up to 42 inches (1067 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.145 inch (3.7 mm) and a minimum of 4-1/2

inches (114 mm) in height. 3) For doors from 42 inches (1067 mm) wide up to 48 inches (1219 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.180 inch (4.6 mm) and a minimum of 5 inches (127 mm) in height.

4) For doors greater than 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.180 inch (4.6 mm) and a minimum of 5 inches (127 mm)

J. Applications: At swinging doors. 1. Provide non-removable pins at out-swinging doors with locking hardware and all exterior doors.

K. Products: Butt Hinges: Ball Bearing, Five (5) Knuckle.

2.04 LOCK CYLINDERS

A. Manufacturers: BEST, dormakaba Group: www.bestaccess.com/#sle. 2. Schlage.

B. Properties:

Sargent Substitutions: Not permitted.

 Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated. a. Provide cylinders from same manufacturer as locking

b. Provide cams and/or tailpieces as required for locking

c. Provide cylinders with appropriate format interchangeable cores where indicated.

 Standard Security Cylinders: Comply with BHMA A156.5. Manufacturer's standard corrosion-resistant brass alloy.

E. Types: As applicable to each item specified.

F. Products: Rim/mortise 2.05 MORTISE LOCKS

A. Manufacturers:

B. Properties:

Schlage. Sargent Substitutions: Not permitted.

Mechanical Locks: Manufacturer's standard.

BEST, dormakaba Group: www.bestaccess.com/#sle.

Fitting modified ANSI A115.1 door preparation.

Door Thickness Coordination Fitting 1-3/4 inch (44 mm) to 2-1/4 inch (57 mm) thick doors.

c. Latch: Solid, one-piece, anti-friction, self-lubricating

stainless steel Latchbolt Throw: 3/4 inch (19 mm), minimum. d. Auxiliary Deadlatch: One piece stainless steel,

permanently lubricated. e: Backset: 2-3/4 inch (70 mm). f. Lever Trim:

1) Functionality: Allow the lever handle to move up to 45 degrees from horizontal position prior to engaging the latchbolt assembly.

2) Strength: Locksets outside locked lever designed to withstand minimum 1,400 inch-lbs (158.2 Nm) of torque. In excess of that, a replaceable part will shear. Key from outside and/or inside lever will still

operate lockset

Spindle: Designed to prevent forced entry from attacking of lever. Independent spring mechanism for each lever.

(a) Trim to be self-aligning and thru-bolted. C. Finishes: See Door Hardware Schedule. Core Faces: Match finish of lockset.

 Comply with BHMA A156.13, Grade 1, Security; Grade 2. E. Products: Mortise locks, including standard types. BEST, 45H Series.

Sargent 8200 Series 2.06 CLOSERS

Substitutions: Not permitted.

Schlage L Series

BEST, dormakaba Group: www.bestaccess.com/#sle. 2. LCN. Sargent

d. Covers:

D. Grades:

A. Manufacturers:

B. Properties Surface Mounted Closers: Manufacturer's standard. a. Construction: Cast iron.

Hydraulic Fluid: All-weather type. c. Arm Assembly: Standard for product specified. 1) Material: Steel.

> Material: Plastic. Finish: Painted. Attachment: Two-point flange mounting, dual-clamp

1) Type: Standard for product selected

 Closers: Comply with BHMA A156.4, Grade 1 a. Underwriters Laboratories Compliance:

 Rack-and-pinion, surface-mounted, 1-1/2 inches (38 mm) minimum bore.

E. Installation: Mounting: Includes surface mounted installations. Mount closers on non-public side of door and stair side of stair doors unless otherwise noted in hardware sets.

as required by frame and door conditions.

Provide adapter plates, shim spacers, and blade stop spacers

friction fit closer cover.

F. Products: Surface Mounted:

A. Manufacturers:

Plates:

b. LCN 4040XP c. Sargent 281 2.07 PROTECTION PLATES

a. BEST, EHD9000 Series.

 Burns Manufacturing. Trimco. Hager. Substitutions: Not permitted. B. Properties:

> a. Kick Plates: Provide along bottom edge of push side of every wood door with closer, except aluminum storefront and glass entry doors, unless otherwise indicated. 1) Size: 10 inches (254 mm) high by 2 inch (51 mm) less door width (LDW) on push side of door. b. Mop Plates: Provide along bottom edge of push side of

> > doors to provide protection from cleaning liquids and

1) Size: 6 inch (152 mm) high by 1 inch (25 mm) less door width (LDW) on pull side and 2 inch (51 mm) LDW on push side of door. Edges: Beveled, on four (4) unless otherwise indicated.

D. Material: As indicated for each item by BHMA material and finish

equipment damage to door surface.

 Metal Properties: Stainless steel. a. Metal, Standard Duty: Thickness 0.050 inch (1.27 mm), minimum.

designation.

E. Installation:

C. Grades:

F. Installation

A. Manufacturers:

2.10 KEYS AND CORES

C. Grades: Comply with BHMA A156.6.

2.08 STOPS AND HOLDERS A. Manufacturers: Architectural Builders Hardware Manufacturing, Inc (ABH):

www.abhmfg.com/#sle.

Burns Manufacturing.

Fasteners: Countersunk screw fasteners

3 Trimco Substitutions: Not permitted. B. General: Provide overhead stop/holder when wall stop is not feasible.

Wall Bumpers: Comply with BHMA A156.16 and Resilient

Material Retention Test as described in this standard.

1. Non-Masonry Walls: Confirm adequate wall reinforcement has

National Guard Products, Inc (NGP): www.ngpinc.com/#sle.

Adhesive-Backed Perimeter Gasketing: Slilicone gasket

D. Material: Base metal as indicated for each item by BHMA material and finish designation. E. Types:

Wall Bumpers: Bumper, concave, wall stop.

been installed to allow lasting installation of wall bumpers. G. Products: Wall Bumpers.

2.09 WEATHERSTRIPPING AND GASKETING

Pemko. Hager. Substitutions: Not permitted.

material applied to frame with self- adhesive. C. Grades: Comply with BHMA A156.22. D. Products:

Sound Seals: See Door Hardware Schedule.

A. Manufacturers: Match Existing Building Keying System

BEST, dormakaba Group: www.bestaccess.com/#sle. Substitutions: Not permitted.

B. Properties: Complying with guidelines of BHMA A156.28. Provide keys and cores that fully integrate with Owner's

existing key system. Provide keying information in compliance with DHI (KSN)

Keying Schedule: Arrange for a keying meeting, with Architect, Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying complies with project requirements.

4. Keying: Master keyed. 5. Include construction keying and control keying with removable core cylinders.

Key to existing keying system Supply keys in following quantities: a. Change Keys: 2 each for each keyed core.

Provide key collection envelopes, receipt cards, and index

cards in quantity suitable to manage number of keys.

Deliver keys with identifying tags to Owner by security shipment direct from manufacturer. 10. Permanent Keys and Cores: Stamped with applicable key marking for identification. Do not include actual key cuts within visual key control marks or codes. Stamp permanent keys "Do

Not Duplicate." 11. Include installation of permanent cores and return construction cores to hardware supplier. Construction cores and keys to

remain property of hardware supplier. 2.11 FINISHES

A. Finishes: Identified in Hardware Sets.

PART 3 EXECUTION 3.01 EXAMINATION

3.02 INSTALLATION

A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings. B. Correct all defects prior to proceeding with installation.

A. Install hardware in accordance with manufacturer's instructions and B. Install hardware using the manufacturer's fasteners provided. Drill

and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.

Locksets: 40-5/16 inch (1024 mm).

C. Use templates provided by hardware item manufacturer. D. Do not install surface mounted items until application of finishes to substrate are fully completed. E. Wash down masonry walls and complete painting or staining of

F. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.

b. Deadlocks (Deadbolts): 48 inch (1219 mm).

Mounting heights in compliance with ADA Standards and ICC

G. Include in installation for existing doors and frames any necessary field modification and field preparation of doors and frames for new hardware. Provide necessary fillers, reinforcements, and fasteners

doors and frames.

preparations. 3.03 FIELD QUALITY CONTROL A. Perform field inspection and testing.

installation and certify that hardware and installation has been

B. Provide an Architectural Hardware Consultant (AHC) to inspect

for mounting new hardware and to cover existing door and frame

furnished and installed in accordance with manufacturer's instructions and as specified.

3.04 ADJUSTING

3.05 CLEANING

A. Adjust hardware for smooth operation. B. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

A. Clean finished hardware in accordance with manufacturer's written

instructions after final adjustments have been made. B. Clean adjacent surfaces soiled by hardware installation activities.

C. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost. 3.06 PROTECTION A. Protect finished Work from damage.

3.07 HARDWARE SETS A. Manufacturer List BES BEST / Best BRN Burns Manufacturing NGP National Guard Products B. Finish List Code:

Aluminum Painted

Satin Stainless Steel

Satin Stainless Steel

Satin Chrome / Satin Chromium Plated

Satin Chromium Plated w/ Antimicrobial Coating

Match Existing Key System 626

Brown

B. Do not permit adjacent work to damage hardware or finish.

Gray 630

SET #1

689

626

626AM

32D / 630

Doors: 3275, 3276 FINISH MFR. QTY DESC. FBB199 45x45 32D BES 4.0 Hinge 1.0 Mortise Lock 45H 0 L 15 H VIBE 626AM BES 1.0 Door Closer EHD90 16 AF90 689 KP50 10" Door Width less 2 1.0 Kick Plate MP50 6" Door Width less 1" 1.0 Mop Plate 1.0 Gasketing 5050 Head & Jambs (2) 626 BRN 560 1.0 Wall Stop SET #2

Doors: 3273 MODEL FINISH MFR. QTY DESC. 4.0 Hinge FBB199 45X45 32D 1.0 Mortise Lock 45H 0 D 15 H 626

1.0 Door Closer EHD90 16 AF90 KP50 10" Door Width less 2" 1.0 Kick Plate MP50 6" Door Width less 1" 1.0 Mop Plate

Mortise

3.0 Silencer

1.0 Wall Stop

Kansas Certificate of Authority #A-516

MEP Engineer PKMR Engineers State Certificate of Authority #E-1682 13300 West 98th St. Lenexa, KS 66215 913.492.2400

22060J

JOB NUMBER

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ISSUE DATE 11/7/2025 No Description 50% CDs 10/16/25 90% CDs 11/4/25 Issue for Bid & Permit 11/7/25

WSKF, Inc. © 2025

BES

BRN

689

630

630

Gray

626

SPECIFICATIONS

ARCHITECTURAL

PART 1 GENERAL 1.01 SECTION INCLUDES

- A. This section applies to floors identified in Contract Documents that are receiving the following types of floor coverings:
- Thin-set ceramic tile and stone tile. B. Removal of existing floor coverings.
- C. Preparation of new and existing concrete floor slabs for installation of floor coverings.
- D. Testing of concrete floor slabs for moisture and alkalinity (pH).

E. Patching compound. 1.02 RELATED REQUIREMENTS

A. Section 035400 - Cast Underlayment: Self-leveling underlayment applied as remediation treatment.

1.03 REFERENCE STANDARDS

Chloride: 2023

- A. ASTM C109/C109M Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 50 mm [2 in.] Cube Specimens); 2024.
- B. ASTM C472 Standard Test Methods for Physical Testing of Gypsum, Gypsum Plasters, and Gypsum Concrete; 2020. C. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor
 - D. ASTM F2170 Standard Test Method for Determining Relative

Emission Rate of Concrete Subfloor Using Anhydrous Calcium

Humidity in Concrete Floor Slabs Using in situ Probes; 2019a. E. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2018.

1.04 QUALITY ASSURANCE

- A. Moisture and alkalinity (pH) testing shall be performed by an independent testing agency employed and paid by Contractor,
- B. Testing Agency Qualifications: Independent testing agency experienced in the types of testing specified. Submit evidence of experience consisting of at least 3 test reports of the type required, with project Owner's project contact information.
- C. Contractor's Responsibility Relating to Independent Agency
- Provide access for and cooperate with testing agency. Confirm date of start of testing at least 10 days prior to actual
- Allow at least 4 business days on site for testing agency
- Achieve and maintain specified ambient conditions. Notify Architect when specified ambient conditions have been achieved and when testing will start.
- D. Floor Moisture Testing Technician Qualifications: International Concrete Repair Institute (ICRI) Concrete Slab Moisture Testing Technician Certification- Grade I.

1.05 FIELD CONDITIONS

- A. Maintain ambient temperature in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 65 degrees F (18 degrees C) or more than 85 degrees F (30 degrees C).
- B. Maintain relative humidity in spaces where concrete testing is being performed, and for at least 48 hours prior to testing, at not less than 40 percent and not more than 60 percent.

PART 2 PRODUCTS 2.01 MATERIALS

- A. Patching Compound: Floor covering manufacturer's recommended product, suitable for conditions, and compatible with adhesive and floor covering. In the absence of any recommendation from flooring manufacturer, provide a product with the following characteristics:
- Cementitious moisture-, mildew-, and alkali-resistant compound, compatible with floor, floor covering, and floor covering adhesive, and capable of being feathered to nothing at edges.
- Compressive Strength: 3000 psi, minimum, after 28 days, when tested in accordance with ASTM C109/C109M or ASTM C472, whichever is appropriate.

PART 3 EXECUTION

3.01 CONCRETE SLAB PREPARATION

- A. Perform following operations in the order indicated: Existing concrete slabs (on-grade and elevated) with existing floor coverings:
 - a. Visual observation of existing floor covering, for adhesion, water damage, alkaline deposits, and other defects. Removal of existing floor covering.
- Preliminary cleaning.
- Moisture vapor emission tests; 3 tests in the first 1000 square feet (100 square meters) and one test in each additional 1000 square feet (100 square meters), unless otherwise indicated or required by flooring manufacturer. Internal relative humidity tests; in same locations as moisture
- vapor emission tests, unless otherwise indicated.
 - Alkalinity (pH) tests; in same locations as moisture vapor emission tests, unless otherwise indicated.
- Specified remediation, if required. Patching, smoothing, and leveling, as required.
- Other preparation specified.
- Adhesive bond and compatibility test.
- Protection.

3.02 REMOVAL OF EXISTING FLOOR COVERINGS

- A. Comply with local, State, and federal regulations and recommendations of RFCI (RWP), as applicable to floor covering
- B. Dispose of removed materials in accordance with local, State, and federal regulations and as specified.

3.03 PRELIMINARY CLEANING

 Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive

B. Do not use solvents or other chemicals for cleaning.

3.04 MOISTURE VAPOR EMISSION TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method, comply with the requirements of this section.
- C. Test in accordance with ASTM F1869 and as follows.
- D. Plastic sheet test and mat bond test may not be substituted for the specified ASTM test method, as those methods do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if test values exceed 3 pounds per 1000 square feet (1.4 kg per 93 square meters) per 24
- F. Report: Report the information required by the test method.
- 3.05 INTERNAL RELATIVE HUMIDITY TESTING

- Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. Where this specification conflicts with the referenced test method. comply with the requirements of this section.
- C. Test in accordance with ASTM F2170 Procedure A and as follows.
- D. Testing with electrical impedance or resistance apparatus may not be substituted for the specified ASTM test method, as the values determined are not comparable to the ASTM test values and do not quantify the moisture content sufficiently.
- E. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if any test value exceeds 75 percent relative humidity.
- F. Report: Report the information required by the test method.

3.06 ALKALINITY TESTING

- A. Where the floor covering manufacturer's requirements conflict with either the referenced test method or this specification, comply with the manufacturer's requirements.
- B. In the event that test values exceed floor covering manufacturer's limits, perform remediation as indicated. In the absence of manufacturer limits, perform remediation if alkalinity (pH) test value is over 10.

3.07 PREPARATION

- A. See individual floor covering section(s) for additional requirements. B. Comply with requirements and recommendations of floor covering
- C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching
- Do not fill expansion joints, isolation joints, or other moving joints.
- 3.08 ADHESIVE BOND AND COMPATIBILITY TESTING A. Comply with requirements and recommendations of floor covering

SECTION 092116 GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Performance criteria for gypsum board assemblies.
- B. Metal stud wall framing.
- C. Metal channel ceiling framing.
- D. Acoustic insulation. E. Gypsum wallboard.
- F. Joint treatment and accessories.
- 1.02 RELATED REQUIREMENTS
- A. Section 061000 Rough Carpentry: Wood blocking product and execution requirements
- B. Section 079200 Joint Sealants: Sealing acoustical gaps in construction other than gypsum board or plaster work.
- C. Section 093000 Tiling: Tile backing board.

1.03 REFERENCE STANDARDS

- A. AISI S100 North American Specification for the Design of Cold-Formed Steel Structural Members; 2016, with Supplement (2020).
- B. AISI S220 North American Standard for Cold-Formed Steel Nonstructural Framing; 2020.
- C. AISI S240 North American Standard for Cold-Formed Steel Structural Framing; 2015, with Errata (2020).
- D. ASTM A653/A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2025.
- E. ASTM A1003/A1003M Standard Specification for Steel Sheet, Carbon, Metallic- and Nonmetallic-Coated for Cold-Formed Framing Members; 2015.
- F. ASTM C1007 Standard Specification for Installation of Load Bearing (Transverse and Axial) Steel Studs and Related Accessories; 2020 (Reapproved 2024) G. ASTM C475/C475M - Standard Specification for Joint Compound
- and Joint Tape for Finishing Gypsum Board; 2017 (Reapproved H. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured
- ASTM C754 Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel
- Products; 2020. J. ASTM C840 - Standard Specification for Application and Finishing
- of Gypsum Board; 2024. K. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs from 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in
- Thickness; 2022. L. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal
- Plaster Bases to Wood Studs or Steel Studs; 2022. M. ASTM C1047 - Standard Specification for Accessories for Gypsum Wallboard and Gypsum Veneer Base; 2019.
- N. ASTM C1396/C1396M Standard Specification for Gypsum Board; O. ASTM C1658/C1658M - Standard Specification for Glass Mat
- Gypsum Panels; 2019 (Reapproved 2024). P. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental
- Q. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and
- R. ASTM E413 Classification for Rating Sound Insulation; 2022. S. GA-216 - Application and Finishing of Gypsum Panel Products;

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate the installation of gypsum board assemblies with size, location, and installation of service utilities.

B. Preinstallation Meeting: Conduct a preinstallation meeting prior to

the start of the work of this section; require attendance by all

affected installers. Sequencing: Install service utilities in an orderly and expeditious

1.05 SUBMITTALS

- A. Product Data: Provide data on metal framing, gypsum board, accessories, and joint finishing system.
- Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements. B. Shop Drawings: Indicate special details associated with acoustic
- C. Steel Framing Industry Association (SFIA) Certification:

Submit documentation that metal studs and connectors used on project meet or exceed requirements of International Building Code.

1.06 QUALITY ASSURANCE

experience

2.02 METAL FRAMING MATERIALS

- A. Designer Qualifications: Perform design under direct supervision of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.
- B. SFIA Code Compliance Certification Program: www.CFSteel.org/#sle: Use metal studs and connectors certified for compliance with International Building Code.
- C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented

1.07 DELIVERY, STORAGE, AND HANDLING

 A. Store gypsum products and accessories indoors and keep above freezing. Elevate boards above floor, on nonwicking supports, in accordance with manufacturer's recommendations.

Store metal products to prevent corrosion. PART 2 PRODUCTS

- 2.01 GYPSUM BOARD ASSEMBLIES A. Provide completed assemblies complying with ASTM C840 and GA-
- B. Interior Partitions, Indicated as Acoustic: Provide completed assemblies with the following characteristics: Provide Acoustic Cavity Insulation meeting ASTM C665; preformed mineral-fiber, firction fit type, unfacecd, thickness 3
- C. Grid Suspension Systems: Provide grid suspension systems in accordance with ASTM C840 and GA-216 complying with the
- ICC-ES Evaluation Report No. ESR-4358, or other report applicable to specified manufacturer and product...
- A. Steel Sheet: ASTM A1003/A1003M, subject to the ductility limitations indicated in AISI S220 or equivalent.
- Structural Grade: As required to meet design criteria. Corrosion Protection Coating Designation: G40, or equivalent in accordance with AISI S220.
- B. Manufacturers Metal Framing, Connectors, and Accessories:
- CEMCO: www.cemcosteel.com/#sle. ClarkDietrich: www.clarkdietrich.com/#sle
- Other manufacturers and products, subject to compliance with requirements, acceptable to Owner and Architect...
- C. Nonstructural Framing System Components: AISI S220; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf (L/120 at 240 Pa).
- Studs: C-shaped with knurled or embossed faces. Runners: U shaped, sized to match studs.
- Ceiling Channels: C-shaped. Furring Members: Hat-shaped sections, minimum depth of 7/8 inch (22 mm).
- D. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection and prevent rotation of studs while maintaining structural performance of
- 1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100.
- Material: ASTM A653/A653M steel sheet, SS Grade 50/340, with G60/Z180 hot-dipped galvanized coating.
- E. Non-structural Framing Accessories: Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
- steel clips; secures cold rolled channel to wall studs for lateral F. Grid Suspension Systems: Steel grid system of main tees and
- support bars connected to structure using hanging wire. a. CertainTeed Corporation; 1 1/2" Drywall Suspension

Framing Connectors: ASTM A653/A653M G90 galvanized

- System: www.certainteed.com/ceilings-and-walls/#sle. USG Corporation; Drywall Suspension System: www.usg.com/#sle
- c. Armstrong World Industries; FRAMEALL Drywall Grid : www.armstrongceilings.com. d. Other manufacturers acceptable to Owner and Architect

and complying with all relevant requirements. 2.03 BOARD MATERIALS

- A. Manufacturers Gypsum-Based Board:
- CertainTeed Corporation: www.certainteed.com/#sle. Georgia-Pacific Gypsum: www.gpgypsum.com/#sle.
- USG Corporation: www.usg.com/#sle. Other manufacturers acceptable to Owner and Architect...
- B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
- Application: Use for vertical surfaces and ceilings, unless otherwise indicated. Glass mat faced gypsum panels, as defined in ASTM
- C1658/C1658M, suitable for paint finish, of the same core type and thickness may be substituted for paper-faced board. Mold Resistance: Score of 10, when tested in accordance
- with ASTM D3273. a. Mold resistant board is required in all toilet rooms and janitor's closets where tile and associated tile backing
- panels are not being installed... Thickness:
- a. Vertical Surfaces: 5/8 inch (16 mm). b. Ceilings: 5/8 inch (16 mm).
- Glass Mat Faced Products: a. CertainTeed Corporation; 5/8" GlasRoc Interior Type X:
- www.certainteed.com/#sle b. Georgia-Pacific Gypsum; DensArmor Plus: www.gpgypsum.com/#sle. c. USG Corporation; Sheetrock Brand Glass-Mat Panels

d. Other products, subject to compliance with requirements, acceptable to the Owner and Architect..

www.usg.com/#sle.

2.04 GYPSUM BOARD ACCESSORIES A. Acoustic Insulation: ASTM C665; preformed mineral-fiber, friction fit type, unfaced; thickness 3 inches (76 mm).

Mold Tough Regular 5/8 in. (15.9 mm):

- Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl
- C. Beads, Joint Accessories, and Other Trim: ASTM C1047, galvanized steel, unless noted otherwise. Corner Beads: Low profile, for 90 degree outside corners. Expansion Joints:

Type: V-shaped metal with factory-installed protective

- D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions. Joint Compound: Setting type, field-mixed,
- E. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches (0.84 mm) in Thickness and

- Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.
- F. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch (0.84 to 2.84 mm) in Thickness: ASTM
- C954; steel drill screws, corrosion-resistant. G. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure

materials in place. PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section

3.02 FRAMING INSTALLATION

- A. Metal Framing: Install in accordance with ASTM C1007AISI S220 and manufacturer's instructions.
- B. Suspended Ceilings and Soffits: Space framing and furring members as permitted by standard.
- Level ceiling system to a tolerance of 1/1200. Laterally brace entire suspension system.
- Extend partition framing to structure where indicated and to ceiling in other locations. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's

C. Studs: Space studs at 16 inches on center (at 406 mm on center).

- instructions. 3. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections;
- do not leave studs unattached to track. D. Openings: Reinforce openings as required for weight of doors or
- operable panels, using not less than double studs at jambs. E. Blocking: Install wood blocking for support of:
- Framed openings Wall-mounted cabinets and countertops.
- Plumbing fixtures. Toilet accessories.

Grab bars. 3.03 ACOUSTIC ACCESSORIES INSTALLATION

- A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
- B. Acoustic Sealant: Install in accordance with manufacturer's
- instructions. Place one bead continuously on substrate before installation of
- perimeter framing members. Place continuous bead at perimeter of each layer of gypsum

3. Seal around all penetrations by conduit, pipe, ducts, and

rough-in boxes, except where firestopping is provided.

- 3.04 BOARD INSTALLATION A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible
- B. Installation on Metal Framing: Use screws for attachment of gypsum board except face layer of nonrated double-layer assemblies, which may be installed by means of adhesive

3.05 INSTALLATION OF TRIM AND ACCESSORIES

- A. Control Joints: Place control joints consistent with lines of building spaces and as indicated. 1. Not more than 30 feet (10 meters) apart on walls and ceilings over 50 feet (16 meters) long.
- B. Corner Beads: Install at external corners, using longest practical

type joint compound.

- 3.06 JOINT TREATMENT A. Glass Mat Faced Gypsum Board and Exterior Glass Mat Faced Sheathing: Use fiberglass joint tape, embed and finish with setting
- B. Paper Faced Gypsum Board: Use paper joint tape, embed with setting type joint compound and finish with setting type joint Finish gypsum board in accordance with levels defined in ASTM
- C840, as follows: Level 5: Walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated.
- Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated. Level 3: Walls to receive textured wall finish. Level 2: In utility areas, behind cabinetry, and on backing
- Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction
- D. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).

E. Where Level 5 finish is indicated, spray apply high build drywall

surfacer over entire surface after joints have been properly treated;

achieve a flat and tool mark-free finish. 3.07 TOLERANCES

board to receive tile finish.

Level 0: Temporary partitions.

Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

A. Clean area(s) of Work to be free of dust and debris from

construction activity no less frequently than at the end of each day. A. Protect installed gypsum board assemblies from subsequent

SECTION 093000

TILING

- D. Non-ceramic trim. 1.02 RELATED REQUIREMENTS

C. Cementitious backer board as tile substrate.

1.03 REFERENCE STANDARDS

method specified.

B. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2023.

- D. ANSI A118.9 American National Standard Specifications for Test
- Methods and Specifications for Cementitious Backer Units; 2023. E. ANSI A118.10 - American National Standard Specifications for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile
- and Dimension Stone Installation; 2023. ANSI A118.12 - American National Standard Specifications for
- Improved Modified Dry-Set Cement Mortar; 2023. H. ANSI A326.3 - American National Standard Test Method for Measuring Dynamic Coefficient of Friction of Hard Surface Flooring
- Materials; 2021.
- TCNA (HB) Handbook for Ceramic, Glass, and Stone Tile Installation; 2025.

1.04 SUBMITTALS

- A. See Section 013000 Administrative Requirements for submittal
- C. Shop Drawings: Indicate tile layout, patterns, color arrangement,
- accessories, and setting details.
- E. Installer's qualification statement. Submit documentation of National Tile Contractors Association (NTCA) or Tile Contractors' Association of America (TCAA)
- accreditation; www.tile-assn.com/#sle
- maintenance of project.
- provisions. Extra Tile: 10 percent of each size, color, and surface finish

combination.

A. Installer Qualifications: 1. Company specializing in performing tile installation, with

PART 2 PRODUCTS

A. Tile: Refer to Drawings.

2.02 PERFORMANCE REQUIREMENTS

- A. Floor Tile: Provide tile for flooring applications with minimum wet
- 2,03 TILE Refer to Drawings. 2.04 TRIM AND ACCESSORIES
 - A. Non-Ceramic Trim: Satin natural anodized extruded aluminum, style and dimensions to suit application, set with tile mortar or adhesive.
- a. Refer to drawings... 2.05 SETTING MATERIALS
 - A. Improved Latex-Portland Cement Mortar Bond Coat: ANSI A118.15. Products: a. TEC Specialty Products LLC; TEC TotalFlex 150
- 2.06 GROUTS
- B. Epoxy Grout: ANSI A118.3 chemical resistant and water-cleanable epoxy grout. Applications: Use where indicated on drawings.
- Products
- 2.07 ACCESSORY MATERIALS A. Waterproofing Membrane at floors and turned up wall per drawing details: Specifically designed for bonding to cementitious substrate
 - 1. Crack Resistance: No failure at 1/16-inch (1.6 mm) gap, minimum; comply with ANSI A118.12.
- c. Products: 1) TEC Specialty Products LLC; TEC HydraFlex
- B. Backer Board: Cementitious type complying with ANSI A118.9;

C. Mesh Tape: 2 inch (50 mm) wide self-adhesive fiberglass mesh

- PART 1 GENERAL 1.01 SECTION INCLUDES

construction operations.

A. Tile for floor applications.

Tile for wall applications.

- A. Section 035400 Cast Underlayment: Hydraulic and cementitious underlayments where required by TCNA (HB) or TCNA (HB-GP)
- A. ANSI A108/A118/A136 American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2024.

- C. ANSI A118.3 American National Standard Specifications for Chemical Resistant, Water Cleanable Tile-Setting and -Grouting
- Epoxy and Water Cleanable Tile-Setting Epoxy Adhesive; 2021.
- Crack Isolation Membranes for Thin-Set Ceramic Tile and
- Dimension Stone Installation; 2014 (Reaffirmed 2024). G. ANSI A118.15 - American National Standard Specifications for

TCNA (HB-GP) - Handbook for Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs Installation; 2023.

- procedures. Product Data: Provide manufacturers' data sheets on tile, mortar,
- grout, and accessories. Include instructions for using grouts and
- perimeter conditions, junctions with dissimilar materials, ceramic
- D. Samples: two full-size samples of each tile specified.
- Maintenance Materials: Furnish the following for Owner's use in
- See Section 016000 Product Requirements, for additional

1.05 QUALITY ASSURANCE

- minimum of five years of documented experience. a. Accredited Five-Star member of NTCA or Trowel of Excellence member of TCAA.
- 2.01 MANUFACTURERS

accordance with ANSI A326.3.

- Dynamic Coefficient of Friction (DCOF) of 0.42 when tested in

 - Products:

- Universal Polymer-Modified Mortar: www.tecspecialty.com/#sle.
- A. Provide setting and grout materials from same manufacturer.
- a. TEC Specialty Products LLC; TEC AccuColor EFX Epoxy Special Effects Grout: www.tecspecialty.com/#sle.
- under thick mortar bed or thin-set tile; complying with ANSI
- Fluid or Trowel Applied Type: a. Material: Synthetic rubber or Acrylic. b. Thickness: 25 mils (0.6 mm), minimum, dry film
- Waterproofing Crack Isolation Membrane: www.tecspecialty.com/#sle.
- high density, glass fiber reinforced, 5/8 inch (16 mm) thick; 2-inch (51 mm) wide coated glass fiber tape for joints and corners.

PART 3 EXECUTION

3.02 PREPARATION

3.01 EXAMINATION

thickness.

- specified for that type of work and are ready to receive tile. B. Verify wall surfaces are smooth and flat within tolerances specified for that type of work, are dust-free, and are ready to receive tile.
 - D. Cementitious Subfloor Surfaces: Verify that substrates are ready for tiling installation by testing for moisture and alkalinity (pH). Obtain instructions if test results are not within limits

C. Verify that subfloor surfaces are dust free and free of substances

that could impair bonding of setting materials to subfloor surfaces.

recommended by tiling material manufacturer and setting

C. Install cementitious backer board in accordance with ANSI A108.11

A. Verify subfloor surfaces are smooth and flat within tolerances

and board manufacturer's instructions. Tape joints and corners, cover with skim coat of setting material to feather edge.

D. See Section 035400 for installation of cementitious underlayment

- B. Lay tile to pattern indicated on drawings. Do not interrupt tile pattern through openings
- C. Cut and fit tile to penetrations through tile, leaving sealant joint
- space. Form corners and bases neatly. Align floor joints. D. Place tile joints uniform in width, subject to variance in tolerance
- allowed in tile size. Make grout joints without voids, cracks, excess
- G. Sound tile after setting. Replace hollow sounding units.
- Grout tile joints unless otherwise indicated on drawings. Use

appropriate to prevent three-sided bonding.

- A. Over interior concrete substrates, install in accordance with TCNA

3.05 INSTALLATION - WALL TILE

3.06 CLEANING

A. Over cementitious backer units on studs, install in accordance with TCNA (HB) Method W244C, using membrane at toilet rooms.

A. Do not permit traffic over finished floor surface for 4 days after

PART 1 GENERAL

1.04 SUBMITTALS

1.01 SECTION INCLUDES Carpet tile, fully adhered.

1.02 RELATED REQUIREMENTS

B. Removal of existing carpet tile.

1.03 REFERENCE STANDARDS A. CRI 104 - Standard for Installation of Commercial Carpet; 2015

SECTION 096813

TILE CARPETING

physical and performance characteristics; sizes, patterns, colors available, and method of installation. B. Shop Drawings: Indicate layout of joints.

C. Samples: Submit two carpet tiles illustrating color and pattern

A. Product Data: Provide data on specified products, describing

D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention. E. Installer's Qualification Statement.

1. Extra Carpet Tiles: Quantity equal to 10 percent of total

schedule for cleaning. G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

F. Operation and Maintenance Data: Include maintenance

design for each carpet color selected.

manufacturing specified carpet tile with minimum five years documented experience. 1.06 FIELD CONDITIONS

A. Edge Strips: Embossed aluminum, color as selected by Architect

C. Carpet Tile Adhesive: Recommended by carpet tile manufacturer;

A. Verify that subfloor surfaces are smooth and flat within tolerances

specified for that type of work and are ready to receive carpet tile

Compatible with materials being adhered.

A. Manufacturer Qualifications: Company specializing in

installed of each color and pattern installed.

2.01 MATERIALS A. Tile Carpeting: Tufted, manufactured in one color dye lot. Product: Refer to Drawings.

releasable type. PART 3 EXECUTION

3.01 EXAMINATION

3.02 PREPARATION

3.03 INSTALLATION

3.04 CLEANING

wall surfaces.

PART 2 PRODUCTS

2.02 ACCESSORIES

B. Adhesives:

1.05 QUALITY ASSURANCE

B. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to subfloor

Remove existing carpet tile.

C. Vacuum clean substrate.

surfaces without gaps.

unit, set parallel to building lines.

B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

A. Starting installation constitutes acceptance of subfloor conditions.

D. Cut carpet tile clean. Fit carpet tight to intersection with vertical

E. Lay carpet tile in square pattern, with pile direction parallel to next

A. Remove excess adhesive without damage, from floor, base, and

SECTION 123600

- Install carpet tile in accordance with manufacturer's instructions. Blend carpet from different cartons to ensure minimal variation in color match.
- F. Fully adhere carpet tile to substrate. G. Trim carpet tile neatly at walls and around interruptions. H. Complete installation of edge strips, concealing exposed edges.
- B. Clean and vacuum carpet surfaces.

PART 1 GENERAL 1.01 SECTION INCLUDES

Kansas Certificate of Authority

#A-516

State Certificate of Authority

MEP Engineer

#E-1682

PKMR Engineers

13300 West 98th St

Lenexa, KS 66215

22060J

JOB NUMBER

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11/4/25

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ARCHITECTURAL

90% CDs

SPECIFICATIONS

COUNTERTOPS

3.03 INSTALLATION - GENERAL A. Install tile, thresholds, and stair treads and grout in accordance with

material manufacturer.

Vacuum clean surfaces and damp clean.

B. Seal substrate surface cracks with filler.

applicable requirements of ANSI A108/A118/A136, manufacturer's instructions, and TCNA (HB) or TCNA (HB-GP) recommendations,

mortar or excess grout, or too little grout. Form internal angles square and external angles bullnosed.

as applicable.

- F. Install non-ceramic trim in accordance with manufacturer's
- H. Keep control and expansion joints free of mortar, grout, and
- I. Prior to grouting, allow installation to completely cure; minimum of
- 913.492.2400 standard grout unless otherwise indicated on drawings. K. At changes in plane and tile-to-tile control joints, use tile sealant
 - instead of grout, with either bond breaker tape or backer rod as
- 3.04 INSTALLATION FLOORS THIN-SET METHODS
 - (HB) Method F113, dry-set or latex-Portland cement bond coat, on ground, with epoxy grout.
- Where epoxy or furan grout is indicated on drawings, but not epoxy or furan bond coat, install in accordance with TCNA (HB) Method F115.

A. Clean tile and grout surfaces. 3.07 PROTECTION

1.02 REFERENCE STANDARDS

- A. AWI/AWMAC/WI (AWS) Architectural Woodwork Standards, 2nd Edition; 2014, with Errata (2016).
- B. AWMAC/WI (NAAWS) North American Architectural Woodwork
- Standards; 2021, with Errata.
- C. ISFA 2-01 Classification and Standards for Solid Surfacing Material; 2013.
- D. NEMA LD 3 High-Pressure Decorative Laminates; 2005. E. PS 1 - Structural Plywood; 2023.

1.03 SUBMITTALS

- A. See Section 013000 Administrative Requirements for submittal
- procedures. B. Product Data: Manufacturer's data sheets on each product to be used, including:
- Preparation instructions and recommendations. Storage and handling requirements and recommendations.
- Specimen warranty.
- C. Shop Drawings: Complete details of materials and installation; combine with shop drawings of cabinets and casework specified in
- D. Verification Samples: For each finish product specified, minimum size 6 inches (150 mm) square, representing actual product, color,
- E. Test Reports: Chemical resistance testing, showing compliance with specified requirements.
- F. Installer's qualification statement.
- G. Maintenance Data: Manufacturer's instructions and recommendations for maintenance and repair of countertop surfaces.

1.04 QUALITY ASSURANCE

- A. Fabricator Qualifications: Natural Stone Institute (NSI) Accredited Natural Stone Fabricator; www.naturalstoneinstitute.org/#sle.
- B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.06 FIELD CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

- 2.01 COUNTERTOPS A. Quality Standard: Premium Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted
 - otherwise. B. Solid Surfacing Countertops: Solid surfacing sheet or plastic resin
 - casting over continuous substrate. Flat Sheet Thickness: 1/2 inch (12 mm), minimum.
 - 2. Solid Surfacing Sheet and Plastic Resin Castings: Complying with ISFA 2-01 and NEMA LD 3; acrylic or polyester resin, mineral filler, and pigments; homogenous, non-porous and capable of being worked and repaired using standard woodworking tools; no surface coating; color and pattern
 - consistent throughout thickness. a. Finish on Exposed Surfaces: Matte, gloss rating of 5 to
 - b. Color and Pattern: As Indicated on drawings.
 - 3. Other Components Thickness: 1/2 inch (12 mm), minimum. Exposed Edge Treatment: Built up to minimum 1-1/4 inch (32)
- mm) thick; edge profile as indicated on drawings. Fabricate in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), Section 11 - Countertops, Premium

2.02 MATERIALS

- A. Plywood for Supporting Substrate: PS 1 Exterior Grade, A-C veneer grade, minimum 5-ply; minimum 3/4 inch (19 mm) thick; join lengths using metal splines.
- B. Adhesives: Chemical resistant waterproof adhesive as recommended by manufacturer of materials being joined.
- C. Joint Sealant: Mildew-resistant silicone sealant, clear.

2.03 FABRICATION

- A. Fabricate tops and splashes in the largest sections practicable, with top surface of joints flush.
 - Join lengths of tops using best method recommended by manufacturer.
 - Fabricate to overhang fronts and ends of cabinets 1 inch (25 mm) except where top butts against cabinet or wall. a. Rout a 1/8 inch (3 mm) drip groove at underside of
 - exposed overlapping edges, set back 1/2 inch (13 mm) from face of edge. Prepare all cutouts accurately to size; replace tops having
 - improperly dimensioned or unnecessary cutouts or fixture
- B. Provide back/end splash wherever counter edge abuts vertical
 - Secure to countertop with concealed fasteners and with contact surfaces set in waterproof glue.
- Height: 4 inches (102 mm), unless otherwise indicated.
- C. Solid Surfacing: Fabricate tops up to 144 inches (3657 mm) long in one piece; join pieces with adhesive sealant in accordance with manufacturer's recommendations and instructions.

PART 3 EXECUTION

prepared.

B 3.01 EXAMINATION

- Do not begin installation until substrates have been properly
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Verify that wall surfaces have been finished and mechanical and electrical services and outlets are installed in proper locations.

3.02 PREPARATION

Clean surfaces thoroughly prior to installation.

surface unless otherwise indicated.

 Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under

the project conditions.

- 3.03 INSTALLATION A. Install vanities in accordance with manufacturer's instructions and
 - approved shop drawings
- B. Securely attach countertops to cabinets using concealed fasteners. Make flat surfaces level; shim where required.
- C. Seal joint between back/end splashes and vertical surfaces.

maximum.

A. Variation From Horizontal: 1/8 inch in 10 feet (3 mm in 3 m),

- B. Offset From Wall, Countertops: 1/8 inch (3 mm) maximum; 1/16
- inch (1.5 mm) minimum.

3.05 CLEANING

- 3.06 PROTECTION
 - A. Protect installed products until completion of project. B. Touch-up, repair or replace damaged products before Date of Substantial Completion.
- C. Field Joints: 1/8 inch (3 mm) wide, maximum.



MEP Engineer PKMR Engineers State Certificate of Authority #E-1682 13300 West 98th St. Lenexa, KS 66215 913.492.2400

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ARCHITECTURAL **SPECIFICATIONS** E10 SECOND FLOOR PLAN

PARTITION TYPE LEGEND

- CONCRETE (NON-STRUCTURAL WALLS ONLY) MASONRY (CMU)
- METAL STUD WOOD STUD

7/8" FURRING CHANNEL

1 5/8" STUD 3 5/8" STUD

- A. 1 LAYER 5/8" DRYWALL / TILE BACKING PANEL 3. 2 LAYERS 5/8" DRYWALL / TILE BACKING PANEL C. 1 LAYER 5/8" DRYWALL ON 7/8" METAL FURRING
- D. 1 LAYER 5/8" DRYWALL ON 1 5/8" STUD FURRING E. 1 LAYER 5/8" DRYWALL ON 3 5/8" STUD FURRING

AODIFYING CONDITIONS:

- . PARTIAL HEIGHT WALL. REFER TO SECTIONS / ELEVATIONS ON FLOOR PLAN FOR HEIGHT OF WALL. PROVIDE ACOUSTIC BATT INSULATION; FULL CAVITY
- WIDTH AND FULL WALL HEIGHT. S. COMPLETE WALL ASSEMBLY EXTENDS TO 6" ABOVE ADJOINING CEILING. BRACE WALL AS REQUIRED.

- COMPLETE WALL ASSEMBLY IS CONTINUOUS TO BOTTOM OF ROOF DECK OR BOTTOM OF ASSEMBLY ABOVE UNLESS CHANGED BY MODIFYING CONDITION. . ALL INTERIOR WALL TYPES ARE **\$3AA.2** UNLESS NOTED
- E. PROVIDE TILE BACKER BOARD WHERE REQUIRED AS SUBSTRATE FOR FINISHES. REFER TO FINISH SCHEDULE FOR
- WALL FINISH AND SPECIFICATIONS . THE PARTITION CONSTRUCTION WILL MAINTAIN ITS DESIGNATION TO THE POINT OF AN INTERSECTING WALL. IF NO CHANGE IN DESIGNATION IS SHOWN BEYOND THE INTERSECTION, THE PREVIOUS PARTITION DESIGNATION APPLIES TO BOTH.
- . REFERENCE ENLARGED PLANS FOR ADDITIONAL PARTITION CALL OUTS.

PARTITION TYPE SYMBOL

 BASIC MATERIAL - NOMINAL SIZE

- APPLIED LAYERS CODE MODIFYING CONDITIONS CODE ŠŠÄA.1

GENERAL NOTES:

DIMENSIONS.

- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND EXISTING CONDITIONS. ANY DISCREPANCIES WHICH WILL PREVENT THE ACCOMPLISHMENT OF INTENT SHOWN ON DRAWINGS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE
- WHERE A CONDITION IS NOTED 'TYPICAL' (TYP.), IT IS UNDERSTOOD THAT ALL SIMILAR CONDITIONS BE CONSTRUCTED OF THE SAME MATERIALS AND/OR
- . ALL DIMENSIONS ARE TO FACE OF STUD, FACE OF CMU, FACE OF CONCRETE FOUNDATION WALL, OR CENTER OF STL. STRUCTURE, UNLESS NOTED OTHERWISE. 4. ALL DOOR OPENINGS ARE TO BE LOCATED 4" FROM
- HINGE SIDE OF ADJACENT WALL UNLESS CENTERED IN ROOM OR NOTED OTHERWISE . COORDINATE ROOF AND FLOOR PENETRATIONS W/ MEP AND STRUCTURAL DRAWINGS.
- SIGNAGE SCHEDULE ON A 1.02 FOR INTERIOR WALL MOUNTED ADA SIGNAGE AND LOCATIONS. . REFER TO ROOM FINISH SCHEDULE ON A1.02 FOR INTERIOR FINISHES.
- . REFER TO TYPICAL ADA FIXTURE MOUNTING GUIDE ON . REFER TO ENLARGED FLOOR PLANS FOR FURTHER
- INFORMATION ON PARTITION TYPE TAGS, DIMENSIONS, 10. PATCH AND REPAIR ALL TRENCHING OF THE EXISTING CONCRETE SLAB-ON-GRADE REQUIRED FOR THE

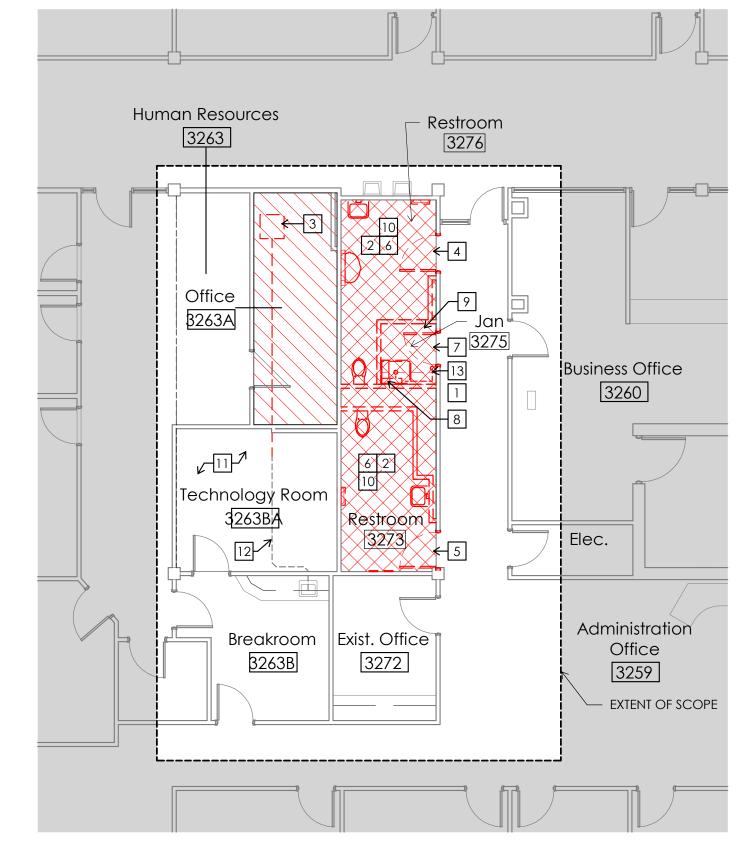
INSTALLATION OF NEW PLUMBING FIXTURES AND

1. SEAL ALL PENETRATIONS OF NEW & EXISTING PARTITIONS, CEILINGS AND FLOORS.

UNDERSLAB SANITARY DRAIN PIPING. REFER TO DETAIL

PLAN NOTES:

- NEW WATER CLOSET, REFER TO MECHANICAL DRAWINGS.
- 2 NEW LAVATORY, REFER TO ENLARGED PLAN AND MECHANICAL DRAWINGS.
- 3 NEW UTILITY SINK, REFER TO MECHANICAL DRAWINGS.
- 4 PATCH & REPAIR EXISTING SLAB-ON-GRADE. REFER TO DETAIL G3 / G0.01.
- | 5 | REINSTALL EXISTING RAISED ACCESS FLOOR PANELS UPON COMPLETION OF WORK. PREP TO RECIEVE NEW CARPET TILE.
- 6"X6" SQUARE FLOOR DRAIN, REFER TO A1.02 & MEP
- REINSTALL EXISTING CLEANING SOLUTION DISPENSING EQUIPMENT AT NEW MOP SINK. PROVIDE IN-WALL BLOCKING AS REQUIRED.
- RELOCATE EXISTING ELEVATOR EQUIPMENT POTS LINE TO NEW JANITOR'S CLOSET LOCATION. COORDINATE FINAL LOCATION WITH OWNER. REFER TO MEP DRAWINGS.
- PROVIDE SANITARY DRAIN REROUTING AS INDICATED. REFER TO MEP DRAWINGS. SEAL PENETRATIONS THROUGH EXISTING WALL & FLOOR ASSEMBLIES, TYP.



SECOND FLOOR DEMO

E4 PLAN

1/8" = 1'-0"

Restroom

14

====

Exist. Office

Office

3263A

1

Technology Room

3263BA

Breakroom

Human Resources



GENERAL DEMO PLAN NOTES:

- THIS DRAWING REPRESENTS THE GENERAL SCOPE OF CONTRACTOR REQUIRED DEMOLITION FOR THE REFERENCED AREA. REFER TO NEW CONSTRUCTION DRAWINGS FOR REQUIRED WORK THAT MAY NOT BE
- REPRESENTED IN THIS DRAWING. CONTRACTOR TO REVIEW ALL EXISTING CONDITIONS AND ADVISE ARCHITECT/ENGINEER OF ALL DESIGN DOCUMENT DISCREPANCIES.
- . CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND EXISTING CONDITIONS. ANY DISCREPANCIES WHICH WILL PREVENT THE ACCOMPLISHMENT OF DESIGN INTENT SHOWN ON DRAWINGS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT FOR RESOLUTION. . WHERE A CONDITION IS NOTED 'TYPICAL' (TYP.), IT IS UNDERSTOOD THAT ALL SIMILAR CONDITIONS BE CONSTRUCTED OF THE SAME MATERIALS AND/OR DIMENSIONS.
- i. ALL DIMENSIONS ARE TO FACE OF STUD, FACE OF CMU, FACE OF CONCRETE FOUNDATION WALL, OR CENTER OF
- STL. STRUCTURE, UNLESS NOTED OTHERWISE. 6. INADVERTENT DAMAGE TO WALLS, FLOORS, AND
- CEILINGS NOT MARKED FOR DEMO SHALL BE REPAIRED. . MAINTAIN SECURE, WEATHER TIGHT ENCLOSURE OF THE EXISTING BUILDING THROUGHOUT PERIOD OF WORK.

8. Where existing finishes are to remain, protect

- DURING CONSTRUCTION P. DEMOLITION PLANS REPRESENT THE MINIMUM DEMOLITION NEEDED TO ACCOMMODATE NEW
- CONSTRUCTION. THE CONTRACTOR HAS THE OPTION TO DEMOLISH ADDITIONAL AS NEEDED TO FACILITATE THE NEW CONSTRUCTION, SUBJECT O REVIEW OF A/E AND
- 0. CONTRACTOR WILL VERIFY WITH OWNER ALL EQUIPMENT/ BUILDING MATERIALS TO BE SALVAGED AND WILL BE REMOVED BY CONTRACTOR.
- 1. COORDINATE DEMOLITION WORK WITH OWNER. DEMOLITION WORK THAT WILL IMPACT EXISTING BUILDING SYSTEMS SHALL BE REVIEWED WITH THE OWNER AT LEAST 48 HOURS IN ADVANCE OF SUCH WORK.
- 2. PROTECT EXISTING CONSTRUCTION WORK WHICH IS NOT SCHEDULED TO BE REMOVED. PROTECT/COVER ALL EXPOSED ELECTRICAL EQUIPMENT (I.E. SMOKE DETECTORS, ETC.).
- 3. SEAL PENETRATION THROUGH FLOORS, WALLS, CEILINGS AND ROOFS WHERE MECHANICAL COMPONENTS ARE REMOVED AND WHERE THE EXISTING PENETRATION IS NOT USED FOR THE NEW INSTALLATION. REPAIR DAMAGED SURFACES TO MATCH ADJACENT AREAS OR AS INDICATED ON THE ARCHITECTURAL DRAWINGS. SEAL ANY OPENINGS IN RATED CONSTRUCTION WITH APPROPRIATE FIRE SEALANT LABELED AND APPROVED TO MATCH ASSEMBLY RATING.
- 4. REMOVE ALL EXISTING WIRING, CABLING AND CONDUIT SERVING EXISTING ITEMS REMOVED UNDER DEMOLITION BACK TO THE SOURCE SERVING THE ITEMS. WHERE REMOVAL OF EXISTING WIRING INTERRUPTS THE ELECTRICAL CONTINUITY OF CIRCUITS THAT ARE TO REMAIN IN USE, PROVIDE NECESSARY WIRING, RACEWAYS, JUNCTION BOXES AND ADDITIONAL MATERIALS AS REQUIRED TO ENSURE CONTINUED ELECTRICAL CONTINUITY.
- 5. CONTRACTOR SHALL MAINTAIN EXISTING MEANS OF EGRESS AT ALL TIMES THROUGHOUT CONSTRUCTION.

<u>DEMOLITION PLAN LEGEND:</u>

WALL TO BE DEMOLISHED

WALL TO REMAIN

REMOVE EXISTING VCT FLOOR FINISH AND CERAMIC TILE FLOOR FINISH BELOW IT. PREP FLOOR FOR NEW FLOOR FINISHES AS INDICATED.

CAREFULLY REMOVE RAISED ACCESS FLOOR PANELS ONLY AS NECESSARY TO CONDUCT WORK BELOW. PROTECT FLOOR PANELS FOR REINSTALLATION IN SAME LOCATION.

DEMOLITION RCP LEGEND:

GYP. BD. OR PLASTER CEILING TO BE REMOVED IN ITS ENTIRETY

CAREFULLY REMOVE PORTIONS OF EXISTING SUSPENDED ACOUSTICAL TILE CEILING AS NECESSARY TO INSTALL NEW MECHANICAL WORK ABOVE. SALVAGE ACOUSTIC TILES & GRID COMPONENTS FOR REINSTALLATION AT SAME LOCATION AS POSSIBLE.

DEMOLITION PLAN NOTES:

1 PROTECT EXISTING FINISHES DURING CONSTRUCTION

2 REMOVE EXISTING PLUMBING FIXTURES AND TOILET ACCESSORIES IN THEIR ENTIRETY. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL INFORMATION.

3 REMOVE EXISTING PUMP & PORTION OF ASSOCIATED SANITARY WASTE LINES AS INDICATED TO RECONFIGURE SANITARY WASTE LINES. REFER TO MECHANICAL

4 REMOVE EXISTING DOOR & FRAME, PREP EXISTING

DOOR LEAF. PREP DOOR FRAME TO RECEIVE NEW PAINTED FINISH TO MATCH EXISTING PAINT COLOR.

REMOVE EXISTING FIRE ALARM DEVICES & PREP FOR 6 INSTALLATION OF NEW DEVICES, REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION.

EQUIPMENT & SALVAGE FOR REINSTALLATION AT NEW MOP SINK LOCATION REMOVE EXISTING ABANDONED LOW VOLTAGE &

REMOVE EXISTING CLEANING SOLUTION DISPENSING

NEW LOCATION; RE: MEP DRAWINGS REMOVE PORTIONS OF EXISTING SLAB ON GRADE AS 0 NECESSARY FOR THE INSTALLATION OF NEW UNDERSLAB

EXISTING IT EQUIPMENT IN ROOM TO REMAIN AND BE OPERATIONAL. PROTECT AS REQUIRED DURING THE COURSE OF WORK. FULLY COORDINATE WITH OWNER

PORTION OF EXISTING SANITARY DRAIN PIPE TO REMAIN. 2 PREP FOR NEW PIPE ROUTING AS INDICATED; REFER TO MEP DRAWINGS.

REMOVE CONDENSATE DRAIN PIPE TO THE POINT 13 INDICATED ABOVE THE CEILING. PREP FOR INSTALLATION OF NEW PIPE TO EXTEND CONDENSATE DRAIN LINE TO NEW MOP SINK LOCATION AS INDICATED. REFER TO MEP DRAWINGS.

REMOVE EXISTING LIGHT FIXTURES AND PREP FOR 4 INSTALLATION OF NEW LIGHT FIXTURES AS INDICATED; REFER TO MEP DRAWINGS.

DRAWINGS FOR ADDITIONAL INFORMATION.

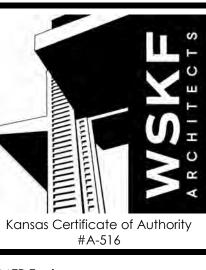
OPENING FOR INSTALLATION OF NEW DOOR & FRAME 5 EXISTING DOOR FRAME TO REMAIN. REMOVE EXISTING

REMOVE EXISTING DOOR & FRAME, ENLARGE & PREP | EXISTING OPENING FOR INSTALLATION OF NEW DOOR &

9 ELECTRICAL CABLING BACK TO SOURCE. PREP EXISTING ELEVATOR EQUIPMENT POTS LINE FOR RELOCATION TO

PLUMBING FIXTURES & SANITARY DRAIN LINES; RE: MEP DRAWINGS

LIMITATIONS OF ACCESS OR OTHER DISRUPTIONS.



MEP Engineer PKMR Engineers State Certificate of Authority #E-1682 13300 West 98th St.

Lenexa, KS 66215

913.492.2400

JOB NUMBER

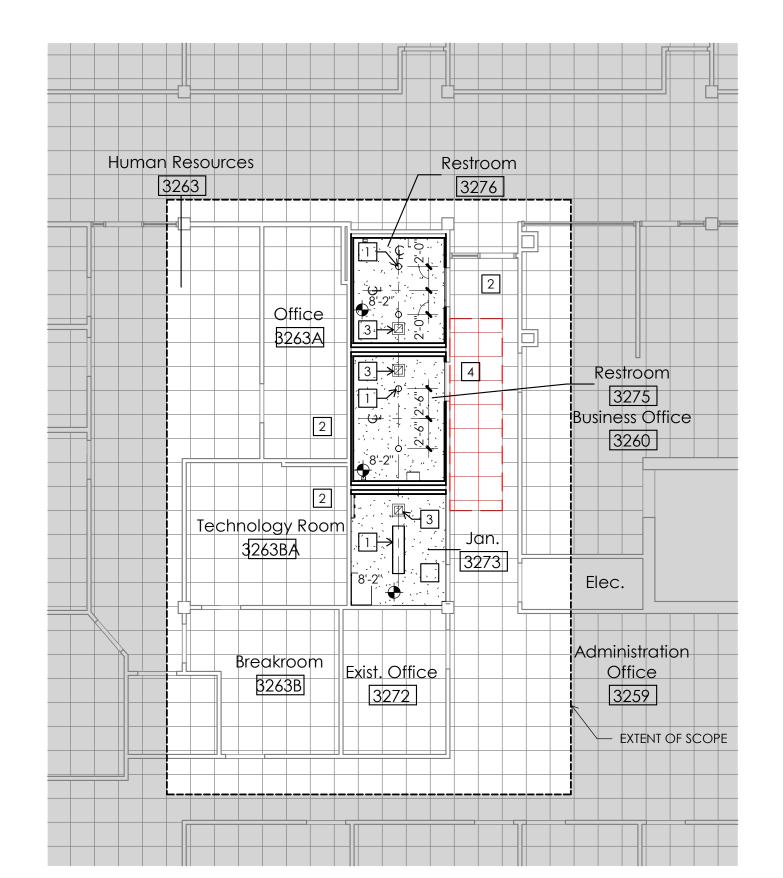
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PLANS



A 10 SECOND FLOOR RCP

GENERAL RCP NOTES:

- ALL GYP. BD. CEILINGS TO BE INSTALLED @ EXISTING REFER TO ELECTRICAL FOR LIGHT FIXTURE TYPES AND
- REFER TO MECHANICAL FOR SUPPLY AND RETURN REGISTER LOCATIONS.
- PROVIDE ACCESS PANEL(S) TO MEP EQUIPMENT (VALVES VAV FILTERS, ETC.) AS NEEDED. SIZE PANEL AS NEEDED FOR ACCESS AND CONFIRM FINAL LOCATION WITH

RCP NOTES:

1 NEW LIGHT FIXTURE(S), REFER TO ELECTRICAL DRAWINGS

2 PROTECT EXISTING CEILING FINISHES, FIXTURES AND EQUIPMENT INDICATED TO REMAIN.

 \parallel 3 \parallel exhaust fan, refer to mechanical drawings.

4 PROVIDE NEW CEILING TILES & SUSPENDED GRID COMPONENTS AS NECESSARY TO REPAIR CEILING TO LIKE NEW CONDITION FOLLOWING THE INSTALLATION OI NEW MECHANICAL EQUIPMENT COMPONENTS ABOVE.

RCP LEGEND:

NEW GYP. BD. CEILING OVER NEW METAL FRAMING, PAINT PER FINISH

EXISTING ACOUSTIC CEILING GRID TO REMAIN

SCHEDULE













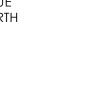
SECOND FLOOR RCP

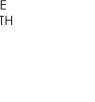




Business Office

Restroom





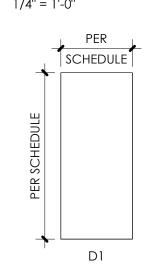


Administration

Office

EXTENT OF SCOPE

FRAME TYPES



DOOR	TYPE
1/4" = 1'-0"	

						FINIS	SH SCHEDULE					
ROOM		FLC	OOR		W	ALLS				CASEWOR	K	
NO	ROOM NAME	FINISH	BASE	NORTH	EAST	SOUTH	WEST	CEILING	BASE	COUNTER	UPPER	REMARKS
3263A	Office	F1	B1					ETR				NOTE: 3
3273	Jan.	T4	TB2	P1	P1	P1	P1	GYP				NOTE: 2
3275	Restroom	T1	TB1	T3/P1	T3/P1	P1	T2	GYP	L1	S1		NOTE: 1
3276	Restroom	T1	TR1	T3/P1	T2	P1	T3/P1	GYP	I 1	\$1		NOTE: 1

GENERAL FINISH SCHEDULE NOTES:

- ETR = EXISTING TO REMAIN
- PTM = PATCH TO MATCH EXISTING FINISH
- EXISTING CORRIDOR WALL TO BE RE-PAINTED IN IT'S ENTIRETY, CORNER TO CORNER, TO MATCH EXISTING

FINISH SCHEDULE NOTES:

- INSTALL TILE BACKER PANELS WHERE TILE IS TO BE INSTALLED.
- REMOVE EXISTING TILE AND MORTAR BED AND PREP EXISTING CONCRETE SLAB ON GRADE TO RECEIVE NEW CAST UNDERLAYMENT TO BRING FLOOR UP IN ELEVATION.
- . INSTALL NEW CARPET TILE OVER EXISTING ACCESS FLOOR SYSTEM PANELS. ARRANGE CARPET TILE SEAMS SO THAT THEY DO NOT ALIGN WITH EDGES OF ACCESS FLOOR PANELS.

						DC	OR SCHEDULE				
		DOOF	RINFORM	MATION				FRAME INFOR	MATION		
NO.	WIDTH	HEIGHT	TYPE	MATERIAL	FIRE RATING	TYPE	MATERIAL	HEAD	JAMB	THRESHOLD	REMARKS
3273	3'-0"	8'-0''	D1	WD	N/A	F1	EXISTING				NOTES: 2 & 3
3275	3'-0"	8'-0''	D1	WD	N/A	F1	HM	E4/A4.01	E3/A4.01		NOTE: 1
3276	3'-0"	8'-0''	D1	WD	N/A	F1	НМ	E4/A4.01	E3/A4.01		NOTE: 1

DOOR SCHEDULE GENERAL NOTES:

- SOLID CORE WOOD DOORS TO BE 1 3/4" THICK U.N.O.
- WD = SOLID CORE WOOD VENEER; SPECIES, CUT AND FINISH TO MATCH CAMPUS STANDARD.
- HM = HOLLOW METALVERIFY EXISTING DOOR & FRAME HEIGHTS AND MATCH FOR ALL NEW DOORS & FRAMES.
- CONTRACTOR TO COORDINATE CYLINDER & KEYING WITH OWNER. PROVIDE PRODUCTS BY BEST ACCESS, UNLESS NOTED OTHERWISE.

DOOR SCHEDULE KEY NOTES:

- PROVIDE DOOR WITH PRIVACY LOCKSET. OPERATION OF INTERIOR LEVER RELEASES BOTH LATCH AND DEADBOLT WITH SINGLE OPERATION.
- . DOOR FRAME TO REMAIN. PAINT EXISTING FRAME TO MATCH EXISTING FRAME COLOR. 3. Provide door with storeroom lockset, refer to door hardware specifications

	TOILET ACCESSORY SCHEDULE	
KEY	DESCRIPTION	NOTES
	<varies></varies>	
T1	42" GRAB BAR - BOBRICK, 1-1/2" SERIES N-6806	
T2	36" GRAB BAR - BOBRICK, 1-1/2" SERIES N-6806	
T3	18" VERTICAL GRAB BAR - BOBRICK, 1-1/2" SERIES N-6806	
T4	SURFACE MOUNTED NAPKIN DISPOSAL - BOBRICK B-35139	
T5	OWNER PROVIDED SOAP DISPENSER	OFCI; NOTE 3
T6	OWNER PROVIDED TOILET PAPER DISPENSER	OFCI
T7	OWNER PROVIDED HAND SANITIZER DISPENSER	OFCI; NOTE 3
T8	OWNER PROVIDED AIR FRESHENER	OFCI; NOTE 3
T9	SINGLE COAT HOOK; B-6717 SATIN FINISH	
T10	KLUTCH MOBILE DEVICE HOLDER W/ HOOK - BOBRICK B-635	
T11	OWNER PROVIDED PAPER TOWEL DISPENSER	OFCI; NOTE 3
T12	SURFACE MOUNTED WASTE RECEPTACLE W/ LINER; BOBRICK B-277	
T13	MOP/BROOM HOLDER - BOBRICK B-223 x 24	

FOILET ACCESSORY SCHEDULE - KEYED NOTES:

. T9 TO BE INSTALLED ON THE INSIDE FACE OF DOORS @ 48" A.F.F. IN BOTH RESTROOMS. . ADHERE ACCESSORY TO THE WALL WITH APPROPRIATE 3M VHB TAPE FOR BOTH SUBSTRATES. PROVIDE MORE THAN MANUFACTURER'S MINIMUM AREA OF ADHESIVE, BUT NO LESS THAN 4 SQUARE INCHES OF ADHESIVE TAPE PER 1 LB OF ACCESSORY MAXIMUM STATIC WEIGHT DURING OPERATION. PREPARE SURFACES IN ACCORDANCE WITH ADHESIVE MANUFACTURER PRINTED INSTRUCTIONS. DO NOT DRILL THROUGH

GENERAL TOILET ACCESSORY NOTES:

A. IN WALL BLOCKING REQUIRED AT ALL WALL MOUNTED ACCESSORIES. B. OFCI = OWNER FURNISHED/ CONTRACTOR INSTALLED

	CASEWORK SCHEDULE	
AWI #	DESCRIPTION	NOTES
101	SINGLE DOOR BASE WITH ADJUSTABLE SHELF	

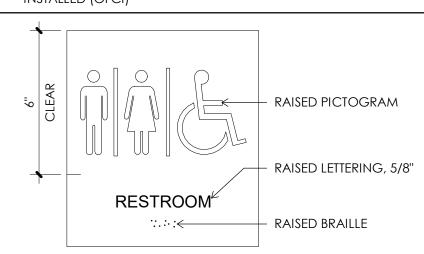
GENERAL CASEWORK NOTES:

- A. ALL CASEWORK TO INCLUDE BACK PANELS U.N.O. B. FOR SINGLE DOOR LOWER CABINET TYPES, RE: ELEVATIONS FOR HINGE SWING
- C. MANUF. TO PROVIDE BASE CABINET FILLERS AS REQUIRED OR AS SHOWN ON
- DRAWINGS . ADJUSTABLE SHELVES THAT ARE CONCEALED WITH A SOLID DOOR ARE TO BE 1"
- THICK MDF WITH WHITE MELAMINE FINISH AND MATCHING 3MM EDGING . Manuf. to provide under counter support brackets as required. Re: spec. CONTRACTOR TO VERIFY ALL EQUIPMENT SIZES WITH OWNER AND ARCHITECT TO
- ENSURE PROPER SPACE IS ALLOTTED. COORDINATE INSTALLATION AND SPACE REQUIREMENTS FOR ALL OWNER PROVIDED CONTRACTOR INSTALLED EQUIPMENT. G. ALL BASE CABINETS TO BE 24" DEEP U.N.O.
- h. All vanity substrate to be moisture resistant type. ALL FACE GRAIN TO RUN VERTICALLY ON ALL SURFACES

	SIGNAGE SCH	IEDULE	
ROO	M LOCATION		
NO.	NAME	TYPE	SIGN TEXT
3275	RESTROOM	Α	RESTROOM
3276	RESTROOM	Α	RESTROOM

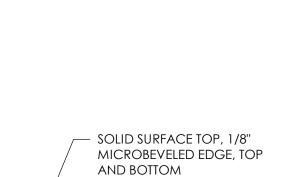
GENERAL SIGNAGE SCHEDULE NOTES:

A. REFER TO ENLARGE PLAN ON A4.01 FOR SIGNAGE LOCATIONS B. ALL ROOM SIGNAGE TO BE OWNER FURNISHED; CONTRACTOR INSTALLED (OFCI)



*SHOWN FOR ADA SIGNAGE REQUIREMENTS

SIGNAGE TYPES



3/4" THERMOFUSED VANITY PANEL

WALL TILE, PER ELEVATION

EXTEND WATERPROOFING

FLOOR TILE CUT TO 6" HEIGHT

- WATERPROOFING MEMBRANE

MEMBRANE 8" UP WALL

TRANSITION TRIM, TS3

FLOOR TILE, T1, PER

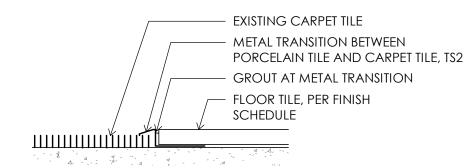
FINISH SCHEDULE

SETTING MATERIAL

SETTING MATERIAL

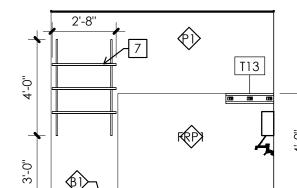
METAL COVE

ATTACHED TO BRACKET FACE

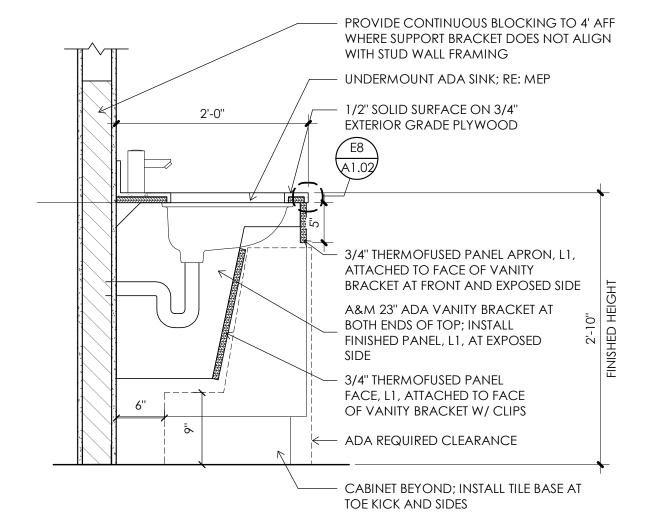


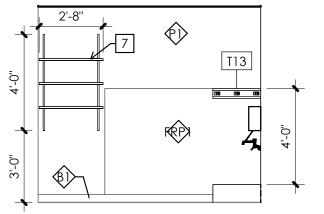
F7 TRANSITION DETAIL

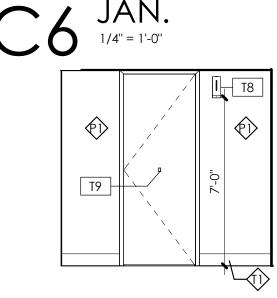
E8 EDGE DETAIL



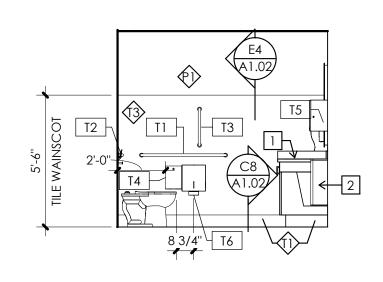
WALL TO FLOOR TILE COVE TRANSITION 3" = 1'-0"











A6 TYP. RESTROOM

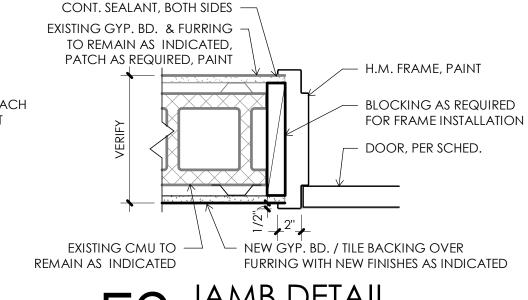
				FINISH LEGEND	
KEY	DESCRIPTION	MANUFACTURER	PRODUCT NAME	PATTERN/COLOR/SIZE	COMMENTS
LOORIN	IG MATERIALS	-			
F1	CARPET TILE	J&J CONTRACT	HARMONY	TO BE SELECTED BY ARCHITECT, 18"X36"	ASHLAR INSTALLATION PATTERN; PROVIDE A MINIMUM OF 10% ATTIC STOCK IN FULL TILES. INSTALL SO THAT CARPET TILE SEAMS DO NOT ALIGN WITH ACCESS FLOOR PANEL SEAMS.
T1	FLOOR TILE	CAESAR	LINK	HOOK, 12"X24"	STACKED BOND INSTALLATION PATTERN; PROVIDE MIN. OF 10% ATTIC STOCK IN FULL TILES
BASE MA	TERIALS				
В1	RUBBER BASE	ROPPE	TYPE TS	COLOR TO MATCH CAMPUS STANDARD	
TB1	TILE BASE	CAESAR	LINK	HOOK, 12"X24"	FLOOR TILE CUT TO 6" HEIGHT; PROVIDE MIN. OF 10% ATTIC STOCK IN FULL TILES
TB2	QUARRY TILE BASE	DAL TILE	QUARRY TILE	TO MATCH T4, 5"X6"	ROUND TOP COVE BASE STYLE
PAINT MA	ATERIALS		'		
P1	PAINT	SHERWIN WILLIAMS	PROMAR 200	SW7563 RESTFUL WHITE	EGGSHELL SHEEN
P2	PAINT	SHERWIN WILLIAMS	PRE-CATALYED EPOSY	MATCH OTHER DOOR FAMES	SEMI-GLOSS SHEEN
P3	PAINT	SHERWIN WILLIAMS	PROMAR 200	SW7563 RESTFUL WHITE	LATEX, FLAT SHEEN
TILE MATI	ERIALS	'			
G1	GROUT	TEC		927 LIGHT PEWTER	USE WITH ALL TILE
T1	FLOOR TILE	CAESAR	LINK	HOOK, 12"X24"	STACKED BOND INSTALLATION PATTERN; PROVIDE MIN. OF 10% ATTIC STOCK IN FULL TILES
T2	ACCENT WALL TILE	STONEPEAK	ADAMAS	AZURA, GLOSSY, 4"X16"	STACKED BOND INSTALLATION PATTERN; PROVIDE MIN. OF 10% ATTIC STOCK IN FULL TILES
T3	WALL TILE	ANATOLIA TILE	SOHO	WHITE, MATTE, 4"X16"	STACKED BOND INSTALLATION PATTERN; PROVIDE MIN. OF 10% ATTIC STOCK IN FULL TILES
T4	QUARRY TILE	DALTILE	QUARRY TILE	TO BE SELECTED BY ARCHITECT, 6"X6"	
CABINET	RY AND COUNTERTOP MATERIALS	'			
L1	THERMALLY FUSED LAMINATE	STEVENS WOODS	LEGANO COLLECTION	LO2 SABIA, 3/4"	MATCHING EDGE BANDING @ EXPOSED EDGERS
S1	SOLID SURFACE	WILSONART		CHILLED EARTH 9228SS, 1/2"	
CEILING	MATERIALS				
GYP	GYP BD CEILING				
TRANSITIO	ON STRIPS				
TS 1	TRANSITION STRIP	SCHLUTER SYSTEMS	JOLLY	CLEAR SATIN ANOD. ALUM.	TILE EDGE TRIM
TS2	TRANSITION STRIP	SCHLUTER SYSTEMS	DILEX-AHK	CLEAR SATIN ANOD. ALUM.	METAL COVE BASE
TS3	TRANSITION STRIP	SCHLUTER SYSTEMS	RENO-TK	CLEAR SATIN ANOD. ALUM.	TILE TO CONCRETE
WALL CO	OVERINGS				
GENERA	AL FIRESOLASSEREINFORGED PANEL	MARLITE	STANDARD FRP	PEBBLED TEXTURE, P151 LIGHT GREY	CLASS A, USE MATCHING PVC TRIM

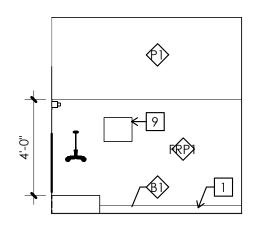
METAL FRAMED HEADER, BRACE TO ROOF STRUCTURE ABOVE AS REQUIRED. ─ GYP. BD. EACH SIDE, PAINT CONT. SEALANT, BOTH SIDES METAL EDGE TRIM, TS1 — SETTING MATERIAL H.M. FRAME, PAINT WALL TILE PER FINISH DOOR, PER SCHED. SCHEDULE —

a. All interior hollow metal frames, to be painted to match existing using pre-catalyzed epoxy paint, semi-gloss finish.



C. PROVIDE APPROPRIATE TRANSITION STRIPS AT ALL FLOORING MATERIAL CHANGES. INSTALL FLOOR FINISH TRANSITION CENTERED UNDER DOOR PANEL IN CLOSED POSITION AS APPLICABLE.

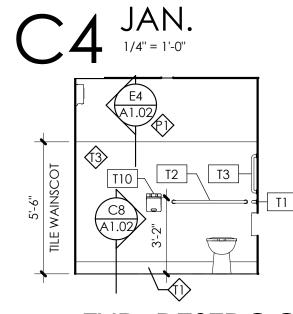


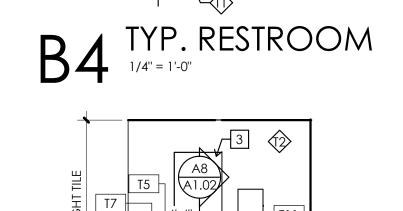


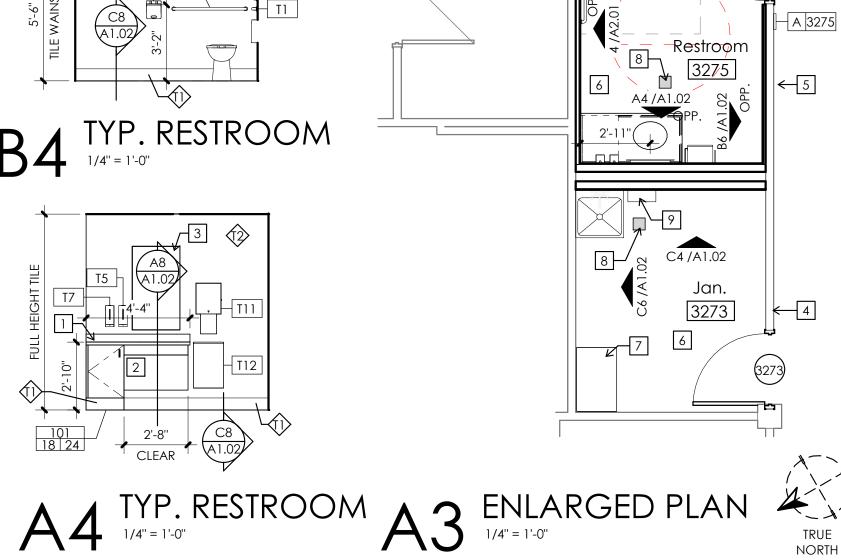
B. ALL DOORS TO BE SOLID WOOD CORE TO MATCH EXISTING.

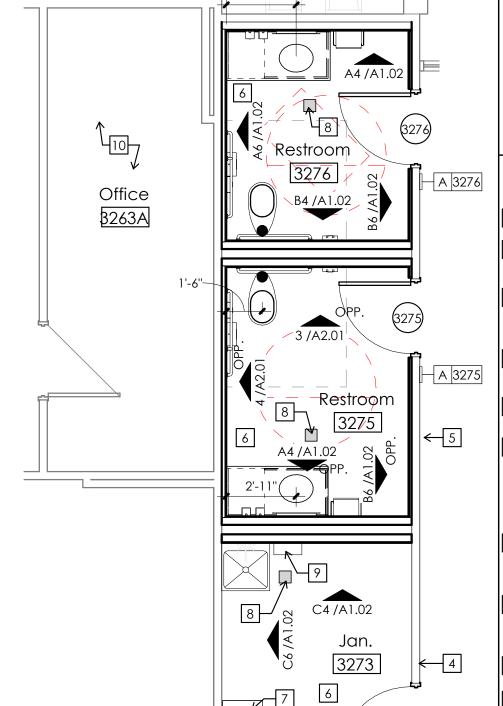
D. ALL GYP. BD. CEILINGS TO BE PAINTED P3, LATEX PAINT, FLAT SHEEN, U.N.O. ON RCP.

E. T1, FLOOR TILE, TO BE INSTALLED IN STACKED BOND PATTERN IN THE DIRECTION OF NORTH TO SOUTH.









GENERAL NOTES:

- FOR ITEMS LABELED T# REFER TOILET ACCESSORY SCHEDULE ON SHEET A 1.02.
- FOR ITEMS LABELED REFER TO FINISH SCHEDULE ON
- ALL DIMENSIONS ON INTERIOR ELEVATIONS ARE FROM FINISHED SURFACES.
- OFOI = OWNER FURNISHED, OWNER INSTALLED.

OFCI = OWNER FURNISHED, CONTRACTOR INSTALLED.

PLAN & ELEVATION NOTES:

1 COUNTERTOP, W/ BACK AND SIDE SPLASHES

- 2 LAMINATE APRON, ANGLED PANEL & FINISHED END INSTALLED ON FACE OF ADA VANITY BRACKETS
- 3 24"X42" LED MIRROR, BOBRICK LED BACKLIT MIRROR, B-1642442; PROVIDE POWER PER MANUFACTURER'S REQUIREMENTS
- 4 EXISTING ROOM SIGN TO REMAIN. PROVIDE NEW INSERT FOR NEW ROOM NAME.
- 5 PAINT EXISTING WALL SURFACE TO REMAIN, CORNER TO CORNER. MATCH EXISTING PAINT FINISH.
- 6 PROVIDE BUILT-UP MORTAR BED AS NEEDED TO MAINTAIN A CONSISTENT AND LEVEL FLOOR FINISH ACROSS ROOM. FLOOR FINISH ELEVATION SHOULD BE SET BY ADJACENT EXISTING FLOOR FINISH ELEVATIONS THAT ARE TO REMAIN.
- 7 | KV 1987 ST. STL. SHELVES, 20"X32", ON 187 SERIES STAINLESS STEEL BRACKETS & 87 SERIES STAINLESS STEEL STANDARDS, 48" H. INSTALL USING MASONRY ANCHORS.
- 8 6" X 6" FLOOR DRAIN, COORDINATE LOCATION OF FLOOR DRAIN WITH TILE LAYOUT TO ALIGN WITH CORNER OF FLOOR TILE.
- 9 RELOCATED SOAP/DETERGENT DISPENSER

10 NEW CARPET TILE OVER EXISTING RAISED ACCESS flooring system per finish schedule.



JOB NUMBER

Kansas Certificate of Authority

#A-516

State Certificate of Authority

MEP Engineer

#E-1682

PKMR Engineers

13300 West 98th St.

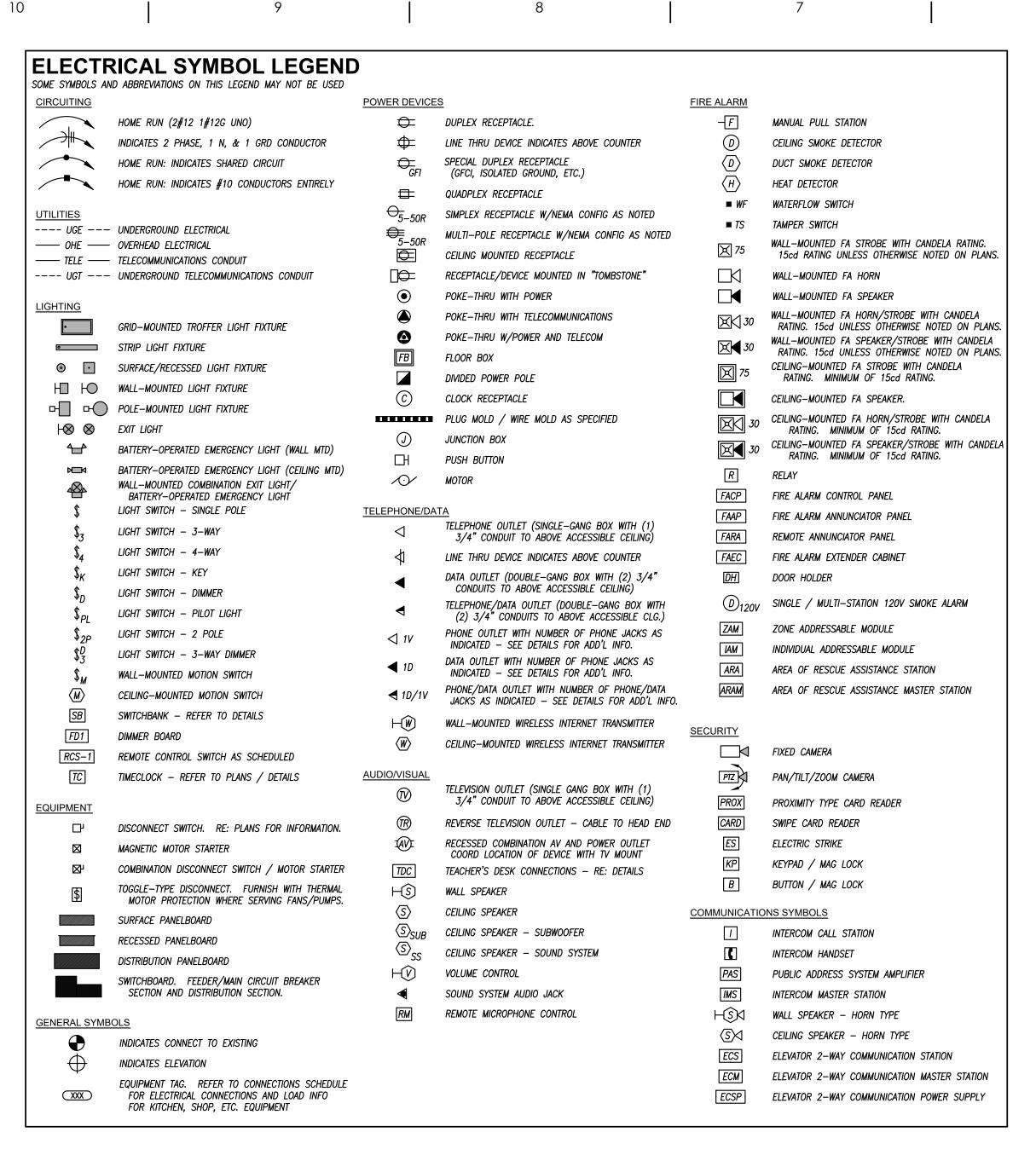
Lenexa, KS 66215 913.492.2400

O

11/7/2025 No Description 50% CDs 10/16/25 90% CDs 11/4/25 Issue for Bid & Permit 11/7/25

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INTERIOR **ELEVATIONS &** SCHEDULES A1.02



NIGHT LIGHT

RELOCATED ITEM

SHUNT TRIP

TAMPFRPROOF

VTR VENT THROUGH ROOF

TYPICAL

WCO WALL CLEANOUT

WG WIRE GUARD

WP WEATHERPROOF

ABBREVIATIONS

A/E ARCHITECT / ENGINEER

DN DOWN

EA EXHAUST AIR

E/C ELECTRICAL CONTRACTOR

EDF ELECTRIC DRINKING FOUNTAIN

AFF ABOVE FINISHED FLOOR EM EMERGENCY FIXTURE/DEVICE MLO MAIN LUGS ONLY AFG ABOVE FINISHED GRADE NFA NET FREE AREA EWT ENTERING WATER TEMPERATURE AG ABOVE GRADE EXISTING ITEM OUTSIDE AIR AHJ AUTHORITY HAVING JURISDICTION FFA FROM FLOOR ABOVE AHU AIR HANDLING UNIT FFR FROM FLOOR BELOV ORD OVERFLOW ROOF DRAIN ARCH ARCHITECT FFCO FINISHED FLOOR CLEAN OUT P/C PLUMBING CONTRACTOR BFP BACKFLOW PREVENTER FGCO FLUSH GRADE CLEAN OUT PSI POUNDS PER SQUARE INCH BG BELOW GRADE FLOW LINE PVC POLYVINYLCHLORIDE BLDG BUILDING FLR FLOOR ra return air BMS BUILDING MANAGEMENT SYSTEM FP FIRE PROTECTION RE/REF REFER / REFERENCE CONDUIT FPM FEET PER MINUTE RF RELIEF FAN FWCO FLUSH WALL CLEAN OUT CANDELA CD COLD DECK GROUND / GANG RPZ REDUCED PRESSURE ZONE CLG COOLING RR RESTROOM G/C GENERAL CONTRACTOR CM COORDINATE MOUNTING HEIGHT GROUND FAULT CIRCUIT INTERUPTER SA SUPPLY AIR CLEAN OUT GFIP GFI-PROTECTED DEVICE SPD SURGE PROTECTIVE DEVICE CTE CONNECT TO EXISTING GPM GALLONS PER MINUTE DCVA DOUBLE CHECK VALVE ASSEMBLY HD HOT DECK TRANSFER AIR DCW DOMESTIC COLD WATER TEA TO FLOOR ABOVE HTG HEATING DDC DIRECT DIGITAL CONTROLS TFB TO FLOOR BELOW ISOLATED GROUND DF DRINKING FOUNTAIN JUNCTION BOX DHW DOMESTIC HOT WATER LED LIGHT EMITTING DIODE DHWR DOMESTIC HOT WATER RETURN UNO UNLESS NOTED OTHERWISE LWT LEAVING WATER TEMPERATURE DIA DIAMETER M/C MECHANICAL CONTRACTOR VRF VARIABLE REFRIGERANT FLOW

MIXED AIR

MAU MAKE UP AIR UNIT

MECH MECHANICAL

MCB MAIN CIRCUIT BREAKER

ELEV ELEVATION

FIRE SEALING NOTES

1. COORDINATE CONSTRUCTION OF OPENINGS AND PENETRATING ITEMS TO FNSURE THAT THROUGH-PENETRATION FIRESTOP SYSTEMS ARE INSTALLED ACCORDING TO SPECIFIED AND APPLICABLE UL

2. COORDINATE SIZING OF SLEEVES, OPENINGS, CORE-DRILLED HOLES, OR CUT OPENINGS TO ACCOMMODATE THROUGH—PENETRATION FIRESTOP SYSTEMS.

3. 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.

5. 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 SYSTEMS INDICATED. 6. 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.

7. FIRE SEAL ALL PIPING, CONDUIT, CABLE, ETC PENETRATIONS ROUTED

THROUGH FIRE RATED WALLS. 8. PROVIDE FIRE RATED ENCLOSURES OR WRAPS ON LIGHT FIXTURES AND OTHER ITEMS PENETRATING FIRE RATED CEILINGS, FLOOR/CEILING/ CEILING/ROOF ASSEMBLIES TO MAINTAIN UL LISTING FOR CONSTRUCTION.

MECHANICAL AND PLUMBING SYMBOL LEGEND

SHEET METAL FIRE SPRINKLER HIGH EFFICIENCY ROUND DUCT TAKEOFF — F— FIRF PROTECTION PIPING (WITH & WITHOUT MANUAL DAMPER) ——⊗—— SPRINKLER HEAD SPIN-IN ROUND DUCT TAKFOFF ──── SIDEWALL SPRINKLER HEAD (WITH & WITHOUT MANUAL DAMPER) FIRE PROTECTION SIAMESE CONNECTION $\longrightarrow \bowtie \longmapsto$ POST INDICATOR VALVE CONICAL BELLMOUTH ROUND TAKEOFF ROUND DUCT RUNOUT WITH FLEX DUCT MECHANICAL PIPING ------ RL ------ REFRIGERANT LIQUID DUCTWORK ELBOW (WITH & WITHOUT TURNING VANES) ------ RS ------ REFRIGERANT SUCTION ----- D ------ DRAIN (CONDENSATE) FD:FIRE DAMPER FS:FIRE/SMOKE DAMPER (xD) =SD:SMOKE DAMPER BD:BACKDRAFT DAMPER (GRAVITY) (MD) AUTOMATIC MOTORIZED DAMPER PLUMBING PIPING 8"0 225 SUPPLY DIFFUSER AND DIFFUSER CALLOUT (NFCK SIZE TYPE AND CELL) ----- DOMESTIC COLD WATER (NECK SIZE, TYPE AND CFM) —— ·· — DOMESTIC HOT WATER LINEAR/SLOT DIFFUSER ----- RECIRCULATING DOMESTIC HOT WATER ------ SAN ----- WASTE ABOVE GRADE OR FLOOR RETURN GRILLE OR EXHAUST REGISTER — — SAN — — WASTE BELOW GRADE OR FLOOR SUPPLY AIR FLOW INDICATOR ----- ST ---- STORM ABOVE GRADE OR FLOOR RETURN AND EXHAUST AIR FLOW INDICATOR — — ST — — STORM BELOW GRADE OR FLOOR

 \oplus THFRMOSTAT TEMPERATURE SENSOR H(H) HUMIDISTAT — V — PLUMBING VENT CONTROL WIRING — G — GAS (NATURAL) ----- PD ----- FROM SUMP PUMP DISCHARGE

GENERAL SYMBOLS

INDICATES CONNECT TO EXISTING INDICATES ELEVATION

GENERAL ELECTRICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE

2. COORDINATE LOCATIONS OF RECEPTACLES, SWITCHES, ETC. WITH

3. REFER TO MOUNTING HEIGHTS DETAIL FOR MOUNTING HEIGHTS OF

4. PROVIDE ALL EMPTY CONDUITS WITH PULL STRINGS AND BUSHED

5. CONTRACTOR SHALL CONCEAL ALL CONDUIT, FITTINGS, AND DEVICES

5.2. REFER TO SPECIFICATIONS FOR ALLOWABLE WIRING METHODS

5.3. ALL EXPOSED WIRING SHALL BE IN EMT OR METALLIC CONDUIT,

EXCEPT AS PERMITTED BY SPECIFICATIONS FOR WHIPS TO

CONDUCTORS MAY BE USED ONLY UNDER THE FOLLOWING

6. ALL CONDUCTOR SIZES INDICATED ON DRAWINGS ARE FOR COPPER

6.1. CONTRACTOR SHALL INCLUDE A DEDUCT ALTERNATE FOR USE

6.2. AL CONDUCTORS MAY ONLY BE USED ON FEEDERS 100A OR

6.4. PROVIDE COMPRESSION—TYPE ONE—HOLE OR TWO—HOLE LUG

6.7. FINAL SIZES OF CONDUCTORS TO BE CONFIRMED BY ENGINEER.

7. THE TOTAL VOLTAGE DROP ACROSS THE COMBINATION OF SERVICE

CONDUCTORS, FEEDERS, AND BRANCH CIRCUIT CONDUCTORS SHALL

NOT EXCEED 5%. WHERE THE TOTAL LENGTH OF THESE

CONDUCTORS WILL EXCEED 150', CONTRACTOR SHALL VERIFY

VOLTAGE DROP BASED ON FIELD-ROUTING OF CONDUCTORS AND

MAKE ALL NECESSARY ADJUSTMENTS TO CURRENT-CARRYING

LOW VOLTAGE SCOPE OF WORK

ELECTRICAL CONTRACTOR'S SCOPE OF WORK FOR THE LOW VOLTAGE

(FIRE ALARM DEVICES ARE SHOWN ON THESE DRAWINGS FOR

ALARM SHOP DRAWINGS FOR INSTALLATION AND ADDITIONAL

1) TELEPHONE/DATA SYSTEMS. LOCATIONS AND WORK SHOWN ON

3) HVAC CONTROLS (AS REQUIRED - COORDINATE WITH MECH.

SYMBOL TYPES SHOWN ON THESE DRAWINGS.

INSTALLATION OF THESE SYSTEMS.

ANY ERRORS IN CABLING INSTALLATION.

THESE DRAWINGS ARE CONCEPTUAL IN NATURE AND SHOWN FOR

1. NO DETERMINATION OF CABLING TYPES AND/OR REQUIREMENTS

2. ALL DEVICE LOCATIONS AND TYPES SHALL BE COORDINATED WITH

3. THE LOW-VOLTAGE INSTALLER SHALL BE RESPONSIBLE FOR

3.1. THIS TELECOMMUNICATIONS PLAN SHALL SHOW ALL DEVICE

LOCATIONS AND CABLING TO SAME, AND BE USED FOR

3.2. IF THE LOW-VOLTAGE INSTALLER DECLINES TO PRODUCE THEIR

OWN PLAN, AND ELECTS TO INSTALL THESE SYSTEMS BASED

DRAWINGS. PKMR ENGINÉERS WILL NOT BE RESPONSIBLE FOR

OFF THE LOCATIONS AND/OR DEVICE TYPES SHOWN ON THESE

THE ABOVE INPUT AND COORDINATION WITH THE OWNER.

DEVELOPING THEIR OWN TELECOMMUNICATIONS PLAN BASED ON

(I.E., PHONE, DATA, ETC.) SHALL BE BASED SOLELY OFF THE

COORDINATION PURPOSES AND ROUGH—IN REQUIREMENTS ONLY.

REFERENCE/ AND/OR BIDDING PURPOSES ONLY, REFER TO FIRE

SYSTEMS SHOWN ON THESE DRAWINGS SHALL BE AS FOLLOWS:

FURNISH AND INSTALL SYSTEM COMPLETE AND OPERATIONAL:

6.8. ALUMINUM SERVICE CONDUCTORS MUST HAVE "AA-8000" SERIES

LABELING ON CABLE JACKETS PER EVERGY REQUIREMENTS -

OF SAME WITH BIDS, FOR OWNER ACCEPTANCE.

6.3. ALUMINUM CABLING SHALL BE COMPACTED ALUMINUM

6.5. PROVIDE ANTI-OXIDANT COMPOUND AT TERMINATIONS.

6.6. CABLE TERMINATIONS SHALL BE MARKED "AL/CU".

LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ.

ARCHITECTURAL CASEWORK AND ELEVATIONS.

ALL DEVICES NOT INDICATED OTHERWISE.

FROM VIEW WHERE REASONABLY POSSIBLE.

THROUGHOUT PROJECT

GREATER - NO EXCEPTIONS

CONDUCTOR AND GROUND WIRE SIZES.

1) FIRE ALARM (DIGITAL ADDRESSABLE TYPE)

PROVIDE ROUGH-IN (INCLUDING PATHWAYS) ONLY*:

WORK/REQUIREMENTS)

2) SECURITY / ACCESS CONTROL

* GENERAL REMARKS REGARDING ROUGH-IN:

CONTRACTOR)

THE OWNER.

TERMINATIONS.

NO EXCEPTIONS.

LATEST ADOPTED VERSION OF THE NATIONAL ELECTRICAL CODE,

EQUIPMENT TAG. REFER TO CONNECTIONS SCHEDULE FOR MECHANICAL CONNECTIONS AND LOAD INFO FOR KITCHEN, SHOP, ETC. EQUIPMENT

─₩— BALANCING VALVE - \nearrow -PLUG VALVE AUTO FLOW CONTROL VALVE **—** —ю PIPING ELBOW UP PIPING ELBOW DOWN \rightarrow PIPING TEE PIPING ELBOW PIPING TEE UP $-\omega$ PIPING TEE DOWN -INCREASER / REDUCER UNION -------] CAP PIPE FLEX $\rightarrow \leftarrow$ STRAINER **─**/**^** CHECK VALVE INLINE STRAINER TEST PLUG TRIPLE DUTY VALVE **→**ቖ⊢ AUTOMATIC 2-WAY CONTROL VALVE **─**塚─ AUTOMATIC 3-WAY CONTROL VALVE — ST/O — STORM OVERFLOW BELOW GRADE OR FLOOR SOLENOID VALVE _--||炎|--PRESS/ TEMP GAUGE WITH COCK THERMOMETER. PRESSURE REDUCING VALVE REDUCED PRESSURE BACKFLOW PREVENTER DOUBLE CHECK BACKFLOW PREVENTER RELIEF VALVE

SHUTOFF VALVE

SHUTOFF VALVE IN RISER

PIPING SYMBOLS

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COORDINATION NOTES

PLUMBING FIXTURE AND CALLOUT

ORD: OVERFLOW ROOF DRAIN

FD: FLOOR DRAIN, AD: AREA DRAIN,

1. COORDINATE REQUIREMENTS FOR INSTALLATION OF SYSTEMS AND EQUIPMENT WITH ALL OTHER TRADES.

HOSE BIBB

WALL HYDRANT

FS: FLOOR SINK

RD: ROOF DRAIN

—ı HB

RPZ

DCBP

———— D © CLEAN OUT

2. THE CONTRACTOR SHALL COORDINATE THE ROUTING AND PATH OF ALL SYSTEMS. CONDUITS. PIPES. DUCTS. ETC WITH THE POSITION AND LAYOUT OF THE STRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING NECESSARY OFFSETS, TURNS, RISES AND DROPS FOR SYSTEMS AND COMPONENTS AS NEEDED TO INSTALL THE MEE SYSTEMS TO CLEAR STRUCTURE, CEILINGS, ETC AND OTHER SYSTEMS IN POTENTIAL CONFLICT WITH ROUTING.

3. COORDINATE WORK WITH OTHER TRADES TO INSTALL SYSTEMS ABOVE CEILING HEIGHTS INDICATED ON ARCHITECTURAL PLANS. 4. CHECK SPACE REQUIREMENTS WITH OTHER TRADES AND

STRUCTURE/CONSTRUCTION TO ENSURE THAT ALL MATERIALS AND EQUIPMENT CAN BE INSTALLED IN THE SPACE ALLOTTED INCLUDING FINISHED SUSPENDED CEILINGS AND OTHER SPACES. CHASES. ETC. WITHIN THE BUILDING. MAKE MODIFICATIONS THERETO AS REQUIRED 5. TRANSMIT TO OTHER TRADES ALL INFORMATION REQUIRED FOR WORK

TO BE PROVIDED UNDER THEIR RESPECTIVE SECTIONS IN AMPLE TIME FOR INSTALLATION.

6. WHEREVER WORK INTERCONNECTS WITH WORK OF OTHER TRADES, COORDINATE WITH THOSE TRADES TO ENSURE THAT ALL SUBCONTRACTORS HAVE THE INFORMATION NECESSARY SO THAT THEY MAY PROPERLY INSTALL ALL CONNECTIONS AND EQUIPMENT. IDENTIFY ALL ITEMS OF WORK THAT REQUIRE ACCESS SO THAT THE CEILING TRADE WILL KNOW WHERE TO INSTALL ACCESS DOORS AND

7. COORDINATE. PROJECT AND SCHEDULE WORK WITH OTHER TRADES IN ACCORDANCE WITH THE CONSTRUCTION SEQUENCE.

8. DRAWINGS SHOW THE GENERAL RUNS OF CONDUITS, PIPING AND DUCTWORK AND APPROXIMATE LOCATION OF OUTLETS. ANY SIGNIFICANT CHANGES IN LOCATION OF ITEMS NECESSARY IN ORDER TO MEET FIELD CONDITIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT/ENGINEER AND RECEIVE HIS APPROVAL BEFORE SUCH ALTERATIONS ARE MADE. ALL SUCH MODIFICATIONS SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION AND REPAIR OF SURFACES, AREAS AND PROPERTY THAT MAY BE DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES.

10. ADJUST LOCATION OF PIPING. DUCTWORK. ETC. TO PREVENT INTERFERENCES. BOTH ANTICIPATED AND ENCOUNTERED. DETERMINE THE EXACT ROUTE AND LOCATION OF EACH ITEM PRIOR TO FABRICATION. MAKE OFFSETS, TRANSITIONS AND CHANGES IN DIRECTION IN SYSTEMS AS REQUIRED TO MAINTAIN ADEQUATE CLEARANCES AND HEADROOM.

11. WHEREVER THE WORK IS OF SUFFICIENT COMPLEXITY, PREPARE ADDITIONAL COORDINATION DRAWINGS AND ORGANIZE ON-SITE MEETINGS WITH ALL RELATED SUBCONTRACTORS TO COORDINATE THE WORK BETWEEN TRADES . DRAWINGS SHALL CLEARLY SHOW THE WORK AND ITS RELATION TO THE WORK OF OTHER TRADES, AND BE SUBMITTED FOR REVIEW PRIOR TO COMMENCING SHOP FABRICATION OR ERECTION IN THE FIELD.

12. COORDINATE WITH LOCAL UTILITY PROVIDERS FOR THEIR REQUIREMENTS FOR SERVICE CONNECTIONS AND PROVIDE ALL NECESSARY PAYMENTS, MATERIALS, LABOR AND TESTING TO ACCOMPLISH THE WORK.

13. COORDINATE THE MOUNTING OF SUSPENDED LIGHT FIXTURES UTILIZING INDIRECT LIGHT SO THAT CONDUIT, DUCTWORK, STRUCTURAL MEMBERS, ETC. ARE NOT LOCATED DIRECTLY ABOVE THE LIGHT FIXTURE. MAINTAIN A MINIMUM OF 24" CLEARANCE FROM THESE ITEMS WHENEVER POSSIBLE.

GENERAL NOTES

WATER HAMMER ARRESTER

1. SOME ROOM NAMES MAY NOT BE SHOWN FOR PURPOSE OF CLARIFYING PLAN. REFER TO ARCHITECTURAL PLANS FOR

REFERENCE TO ROOM NAMES NOT SHOWN. 2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND KEEP AT THE JOB SITE, AN UP TO DATE SET OF "RECORD DRAWINGS" SHOWING ALL CHANGES FROM THE ORIGINAL PLANS. THE CONTRACTOR SHALL DELIVER THE "RECORD DRAWINGS" TO THE ENGINEER AT THE CONCLUSION OF THE PROJECT ELECTRONICALLY.

3. THESE DRAWINGS ARE DIAGRAMMATIC. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS (NEW AND EXISTING), DIMENSIONS, AND CLEARANCES PRIOR TO THE COMMENCEMENT OF WORK AND SHALL INCLUDE ALL COSTS, EQUIPMENT, MATERIAL, ACCESSORIES, ETC. REQUIRED FOR A FULLY COMPLETE, FUNCTIONAL AND CODE COMPLIANT INSTALLATION.

4. FINAL LOCATIONS OF ALL DEVICES. LIGHT FIXTURES. EQUIPMENT ETC SHALL BE INDICATED ON THE ARCHITECTURAL DRAWINGS. ALL ARCHITECTURAL PLANS. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED FROM MEP DRAWINGS.

5. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS, APPROVALS, LICENSES, ETC. AS NEEDED FOR THE COMPLETE INSTALLATION AND PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER FOR ALL FEES AND DATA NEEDED FOR THIS.

GEN. MECHANICAL NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE INTERNATIONAL MECHANICAL CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ. 2. ANY POWER FOR CONTROL SYSTEMS TO BE PROVIDED BY E/C IS INDICATED ON ELECTRICAL PLANS. ANY ADDITIONAL LINE VOLTAGE

OR LOW VOLTAGE POWER REQUIRED BY THE M/C OR SUBCONTRACTORS TO HAVE A FULLY FUNCTIONING SYSTEM SHALL BE PROVIDED BY THE M/C CONTRACTOR OR SUBS.

3. ALL EQUIPMENT SHALL BE ADEQUATELY AND PROPERLY SUPPORTED AND FASTENED FROM STRUCTURE. 4. ALL EQUIPMENT AND ACCESSORIES INSTALLED IN CONCEALED SPACES REQUIRING ACCESS SHALL BE PROVIDED WITH ACCESS DOORS

MEETING ANY FIRE REQUIREMENTS OF THE WALL/CEILING THEY ARE INSTALLED. 5. EACH AIR HANDLING UNIT OVER 2000CFM SHALL BE PROVIDED WITH A SMOKE DETECTOR TO SHUT DOWN THE UNIT PER IMC 606 AS

REQUIRED BY AHJ. COORDINATE WITH OTHER TRADES. 6. START UP AND ADJUST ALL EQUIPMENT AND VERIFY ALL MECHANICAL SYSTEMS IN OPERATE IN ACCORDANCE WITH THEIR INTENDED PURPOSES. SUBMIT BALANCE AND START UP REPORTS TO THE A/E.

REFER TO SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.

GENERAL PLUMBING NOTES

1. COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE INTERNATIONAL PLUMBING CODE, LOCAL AND STATE CODES, AND REQUIREMENTS OF THE AHJ. 2. NO PIPING SHALL BE INSTALLED WHERE IT WILL SUBJECT TO FREEZING TEMPERATURES. PIPING IN EXTERIOR WALLS SHALL BE INSTALLED ON THE WARM SIDE OF BUILDING INSULATION, INSULATED

AND THE CHASE SHALL BE VENTILATED WITH GRILLES ALLOWING INDOOR AMBIENT CONDITIONS TO CIRCULATE THROUGH THE CHASE. 3. PROVIDE CLEANOUTS IN THE FOLLOWING LOCATIONS: 3.1. IN ALL HORIZONTAL DRAINS (WITHIN THE BUILDING) NOT MORE

THAN 100 FEET APART. 3.2. IN BUILDING SEWERS LOCATED NO MORE THAN 100 FEET APART MEASURED FROM THE UPSTREAM ENTRANCE OF THE CLEANOUT. 3.3. EACH CHANGE OF DIRECTION OF THE BUILDING DRAIN OR HORIZONTAL WASTE OR SOIL LINES GREATER THAN 45 DEGREES. WHERE MORE THAN ONE CHANGE OF DIRECTION OCCURS IN A RUN OF PIPING, ONLY ONE CLEANOUT SHALL BE REQUIRED FOR

EACH 40 FEET OF DEVELOPED LENGTH OF THE DRAINAGE PIPING. 3.4. AT THE BASE OF EACH WASTE OR SOIL STACK. 3.5. NEAR THE JUNCTION OF THE BUILDING DRAIN AND BUILDING

4. CONTRACTOR SHALL SCOPE AND VERIFY SIZE, LOCATION, AND DEPTH OF EXISTING SANITARY PIPING PRIOR TO BEGINNING WORK. NOTIFY ENGINEER IMMEDIATELY IF LAYOUT SHOWN ON PLANS WILL NOT WORK DUE TO VERIFIED FIELD CONDITIONS.

SHEET INDEX

MEP0.01 MEP COVER SHEET MEP0.02 MEP SPECIFICATIONS MEP0.03 MEP SPECIFICATIONS

MECHANICAL PLANS MECHANICAL SCHEDULES AND DETAILS

ELECTRICAL PLANS ELECTRICAL SCHEDULES AND DETAILS



MEP Engineer PKMR Engineers State Certificate of Authority #E-1682 13300 West 98th St Lenexa, KS 66215 913.492.2400

JOB NUMBER

22060J

DEMOLITION NOTES

1. ALL WORK SHOWN DARK AND DASHED IS TO BE DEMOLISHED. WORK SHOWN LIGHT IS EXISTING TO REMAIN. 2. REFER TO ARCHITECTURAL PLANS FOR FURTHER EXTENT OF DEMOLITION REQUIREMENTS.

3. ALL EXISTING PIPING SCHEDULED FOR DEMOLITION THAT ROUTES BELOW SLAB SHALL BE GROUND FLUSH WITH FLOOR, PLUGGED AND THE FLOOR PATCHED TO MATCH SURROUNDING FLOOR. 4. COORDINATE ALL DEMOLITION WORK WITH OWNER.

5. CONTACT UTILITY LOCATING SERVICE TO LOCATE EXACT LOCATION OF UTILITIES BELOW GRADE.

6. MAINTAIN ALL EXISTING DEVICES. EQUIPMENT. ASSOCIATED CIRCUITS ETC, SHOWN AS EXISTING TO REMAIN OR OTHERWISE UNRELATED TO THE SCOPE OF THE PROJECT IN WORKING ORDER. . CONTRACTOR SHALL REMOVE LAY—IN CEILINGS, LIGHT FIXTURES, ETC.

AS REQUIRED FOR CONSTRUCTION WHERE NEEDED PRIOR TO DEMOLITION AND REPLACE SAME AFTER CONSTRUCTION. EXISTING CONDUITS ABOVE CEILINGS SHALL BE RELOCATED AND/OR TEMPORARILY REMOVED TO FACILITATE THE INSTALLATION OF NEW **EQUIPMENT** 8. THE OWNER SHALL REMOVE ALL ITEMS THEY DESIRED TO SALVAGE

PRIOR TO CONSTRUCTION BEGINNING.

NOTES AND DRAWINGS ARE BASED UPON A FIELD EXAMINATION OF THE SITE AND MAY NOT INDICATE ALL ITEMS. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE SITE AND THE SCOPE OF WORK FOR THE CONTRACT PRIOR TO BID. ANY EXISTING CONDITION WHICH IS APPARENT OR COULD BE REASONABLY INFERRED FROM A VISIT TO THE SITE SHALL NOT BE THE BASIS FOR A CHANGE IN THE CONTRACT AMOUNT.

10. REFER TO NEW WORK PLANS FOR ANY ITEMS THAT MAY REQUIRE RELOCATION AFTER DEMOLITION. 11. PROPERLY DISPOSE OF ALL DEMOLISHED ITEMS OFF SITE.

12. REMOVE ALL MISCELLANEOUS CONDUITS, PIPES, ETC, THOUGH NOT SPECIFICALLY SHOWN ON PLAN, THAT ARE EITHER UNUSED OR WILL BECOME UNUSED DUE DEMOLITION ACTIVITIES, IN ORDER TO PROVIDE A "CLEAN" SPACE FOR THE OWNER.

13. PROTECT ALL EXISTING SURFACES AND EQUIPMENT DURING CONSTRUCTION. EXISTING ITEMS TO REMAIN SHALL BE ADEQUATELY PROTECTED FROM DEMOLITION AND NEW CONSTRUCTION WORK, AS REQUIRED. ANY ITEMS DAMAGED OR MARRED SHALL BE ADEQUATELY CLEANED OR REPLACED TO THE OWNERS SATISFACTION TO ORIGINAL CONDITION BEFORE CONSTRUCTION.

14. PATCH ANY HOLES IN STRUCTURE CREATED BY REMOVAL OF DUCTWORK, CONDUITS, PIPES, ETC. 15. REMOVE ALL ITEMS SHOWN IN WALLS TO BE DEMOLISHED. ALL ELECTRICAL CONDUIT AND WIRING SHALL BE REMOVED BACK TO

PANELBOARDS AND PROPERLY TERMINATED. 16. SAW CUT FLOOR FOR THE INSTALLATION OF NEW SANITARY PIPING. REFER TO PLUMBING PLANS SHOWING NEW WORK. 17. SAVE, CLEAN, AND RE-LAMP ALL LIGHT FIXTURES NOTED AS BEING RELOCATED. REFER TO NEW WORK PLANS AND LIGHT FIXTURE

SCHEDULE FOR DESCRIPTIONS, QUANTITIES, AND LOCATIONS OF FIXTURES TO BE RE-USED.

GEN. RENOVATION NOTES

1. DISCONNECT AND REMOVE ANY EQUIPMENT, PIPING OR DUCTWORK THAT WAS INSTALLED AS PART OF THE BUILDING SHELL THAT IS NOT NEEDED OR CONFLICTS WITH THIS BUILD OUT. 2. EXISTING UNDERGROUND PIPING LOCATIONS ARE ESTIMATED BASED

UPON ANTICIPATED ROUTINGS AND/OR EXISTING DRAWINGS. FIELD VERIFY EXACT DEPTH AND LOCATIONS OF SAME PRIOR TO CONSTRUCTION AND PROVIDE ALL NECESSARY MODIFICATIONS. 3. SAWCUT GRADE FLOOR SLABS TO INSTALL NEW PIPING, MECHANICAL SYSTEMS, ELECTRICAL FLOOR BOXES AND ALL ASSOCIATED CONDUIT, ETC. PATCH FLOOR TO MAKE LIKE NEW AFTER INSTALLATION. TAKE CARE TO LOCATE EXISTING CONDUIT, ETC AND AVOID CUTTING

EXISTING CONDUITS BY NOT OVER-CUTTING SLAB DEPTH. 4. SAWCUT AND CORE DRILL OPENINGS AS REQUIRED FOR ABOVE GRADE SLAB PENETRATIONS. X-RAY SLABS TO ASCERTAIN STEEL AND EXISTING CONDUIT PENETRATIONS PRIOR TO CUTTING. VERIFY OPENINGS WITH STRUCTURAL ENGINEER PRIOR TO CUTTING.

5. HOMERUN CIRCUITS TO 20 AMP, SINGLE POLE BREAKERS IN PANELBOARDS INDICATED. UTILIZE SPARE BREAKERS MADE AVAILABLE BY DEMOLITION, IF NO SPARE BREAKER IS AVAILABLE,

PROVIDE NEW BREAKER. 6. EXISTING CIRCUITING MAY BE RE-USED WHERE POSSIBLE. 7. CONCEAL NEW CIRCUITING IN WALLS WHERE POSSIBLE. FOR NEW DEVICES INSTALLED ON EXISTING SOLID WALLS, CONCEAL CIRCUITING

IN WIREMOLD. COORDINATE FINISH AND GENERAL ROUTING OF WIREMOLD WITH ARCHITECT TO BE AS CONCEALED AND/OR ROUTED IN A NEAT AND ORGANIZED CONSISTENT MANNER.

8. ALL LIGHTING FIXTURES THAT ARE RELOCATED OR OTHERWISE AFFECTED BY THE SCOPE OF WORK SHALL BE CLEANED AND RELAMPED.



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ISSUE FOR BID AND PERMIT

ISSUE DATE No Description

Date

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COVER SHEET

2. GENERAL REQUIREMENTS

A. Furnish & install all labor & materials required for complete, functioning, mechanical & plumbing systems w/ all associated equipment & apparatus as shown on plans.

individual divisions as included for specific information regarding each trade or

- B. Obtain & pay for all permits required for execution of this work & shall make arrangements for modifications to water, gas & sewer connections to building as
- C. All materials shall be new & shall bare UL label where applicable. D. Visit site & observe conditions under which work will be done. Any discrepancies
- shall be called to architect's attention. No subsequent allowance will be made in contract for any error or negligence on contractor's part.
- E. Final acceptance of work shall be subject to condition that all systems, equipment, apparatus & appliances operate satisfactorily as designed & intended. Work shall include required adjustment of systems & control
- F. Warrant to owner quality of materials, equipment, workmanship & operation of equipment provided under these specifications for one year from & after

equipment installed under these specifications.

- completion of building & acceptance of mechanical systems by owner. G.All materials installed in plenums shall be noncombustible or have flame/smoke index of no more than 25/50 in accordance w/ ASTM e 84.
- H. Requirements under Division one & general & supplementary conditions of these specifications shall be part of this section. Contractor shall become thoroughly acquainted w/ its contents as to requirements that affect this Division of work required under this section includes material. Equipment, appliances.

Transportation. Services. & labor required to complete entire system as required

by drawings & specifications. I. The specifications & drawings for project are complementary, & portions of work described in one shall be provided as if described in both. In event of discrepancies, notify engineer & request clarification prior to proceeding w/ work

3. EXTENT OF CONTRACT WORK

- A.Provide MEP systems indicated on drawings, specified or reasonably implied. In addition to specific equipment called out in plans and specifications, provide every device, component, programming, interlocking and accessory necessary for proper operation and completion of totally functional MEP systems.
- B. In case of an inconsistency between the Drawings and Specifications or within either document, the better quality or the greater quantity of work shall be provided in accordance with the Architect or Engineer's interpretation.
- C.In no case will claims for "Extra Work" be allowed for work about which Contractor could have been informed before bids were taken.
- D. Contractor shall become familiar with equipment provided by other contractors that require plumbing connections and controls. E. Electrical work required to install and control plumbing equipment, which is not shown on plans or specified under Division 26, shall be included in Contractor's
- base bid proposal. F. All automatic temperature control devices shall be mounted as indicated in
- automatic temperature control section of specifications. G. The cost of larger wiring, conduit, control and protective devices resulting from
- installation of equipment which was not used for basis of design as outlined in specifications shall be paid for by the supplying Contractor at no cost to Owner or Architect Engineer.
- H. Contractor shall be responsible for providing supervision to other trade Contractors to insure that required connections, interlocking and interconnection of MEP equipment is made to attain intended control sequences and system
- I. Contractor shall obtain complete MEP data on shop drawings and shall list this data on an approved form that shall be presented on request, to other trade Contractors. Data shall be complete with wiring diagrams received to date and shall contain necessary data on electrical components of plumbing equipment such as HP, voltage, amperes, watts, locked rotor current, etc. to allow other trade Contractors to order support or other equipment coordinated as required in his contract.

4. <u>DEFINITIONS</u>

- A. Whenever used in these specifications or drawings, following terms shall have indicated meanings:
- B. Furnish: term "Furnish" is used to mean "supply & deliver to project site. Ready for unloading, unpacking, assembly. Installation & similar operations. C.Install: term "Install" is used to describe operations at project site including actual
- "unloading, unpacking. Assembly. Erection. Placing. Anchoring. Applying, working to dimension. Finishing, curing, protecting, cleaning. & similar
- D. Provide: term "Provide" means "to Furnish & Install. Complete & ready for intended use." furnished by owner or furnished by others: item will be furnished by owner or others. It is to be installed & connected under requirements of this Division, complete & ready for operation, including items incidental to work, including services necessary for proper installation & operation. Installation shall be included under guarantee required by this Division.
- E. Engineer: where referenced in this Division, "Engineer" is engineer of record & design professional for work under this Division & is consultant to & an authorized representative of, architect. As defined in general &/or supplementary conditions. When used in this Division. It means increased involvement by. & obligations to, engineer, in addition to involvement by. & obligations to,
- F. AHJ: local code &/or inspection agency (authority) having jurisdiction over work. G. The terms "Approved equal", "Equivalent". Or "Equal" are used synonymously & shall mean "accepted by or acceptable to engineer as equivalent to item or manufacturer specified"
- H. The term "approved" shall mean labeled, listed. Or both. By nationally recognized testing laboratory (e.g. UL. ETL. CSA). & acceptable to AHJ over this project.
- A.Prior to submitting bid. Visit site of proposed work & become fully informed as to conditions under which work is to be done. Failure to do so will not be considered sufficient justification to request or obtain extra compensation over & above

contract price. 6. MATERIAL & WORKMANSHIP

- A. Provide new material, equipment, and apparatus under this contract unless otherwise stated herein. Of best quality normally used for purpose in good commercial practice & free from defects. Model numbers listed in specifications or shown on drawings are not necessarily intended to designate required trim, written descriptions of trim govern model numbers.
- B. Pipe, fittings, specialties & valves shall be manufactured in USA. Work performed under this contract shall provide neat & "workmanlike" appearance when completed to satisfaction of architect & engineer. Workmanship shall be finest possible by experienced mechanics. Installations shall comply w/ applicable codes & laws. Complete installation shall function as designed & intended w/ respect to efficiency, capacity, noise level. etc. Abnormal noise caused by rattling equipment, piping, ducts, air devices & squeaks in rotating components will not be acceptable. In general materials & equipment shall be of commercial specification grade in quality. Light duty & residential equipment is not
- C.Remove from premises waste material present from work, including cartons, crating, paper, stickers, &/or excavation material not used.
- D. Clean equipment installed under this contract to present neat & clean installation
- E. Repair or replace public & private property damaged as result of work performed under this contract to satisfaction of authorities & regulations having jurisdiction.

7. COORDINATION

- A. Coordinate work w/ other trades so various components of systems will be installed at proper time will fit available space & will allow proper service access for maintenance. Components which are installed without regard to above shall be relocated at no additional cost to owner.
- B. Obtain equipment submittal information for all pieces of equipment to be connected to from other trades that clearly indicates all connection requirements, locations, sizes, and similar requirements. Obtain this information in ample time to coordinate other trade submittals and equipment coordination. Where requirements differ from that on plans or differs from provisions made in the work, immediately notify the architect/engineer. Do not proceed with work that is incompatible with equipment provided
- C.Unless otherwise indicated, general contractor will provide chases & openings in building construction required for installation of systems specified herein. Contractor shall furnish general contractor w/ information where chases & openings are required.
- D. Keep informed as to work of other trades engaged in construction of project & execute work in manner as to not interfere w/ or delay work of other trades. Figured dimensions shall be taken in preference to scale dimensions.
- E. Contractor shall take his own measurements at building, as variations may occur. Contractor will be held responsible for errors that could have been avoided by proper checking & inspection.

- F. Provide materials w/ trim that will properly fit types of ceiling, wall. Or floor finishes actually installed. Model numbers listed in specifications or shown on
- drawings are not intended to designate required trim. G.Coordinate construction operations included in different sections of the specifications to ensure efficient and orderly installation of each part of the work. Coordinate construction operations, included in different sections, that depend on each other for proper installation, connection, and operation.
- H.Each contractor shall coordinate its construction operations with those of other contractors and entities to ensure efficient and orderly installation of each part of the work. Each contractor shall coordinate its operations with operations, included in different sections, that depend on each other for proper installation, connection, and operation.
- I. Schedule construction operations in sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation. J. Coordinate installation of different components with other contractors to ensure
- maximum accessibility for required maintenance, service, and repair. K. Make adequate provisions to accommodate items scheduled for later installation.
- L. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- M.Meetings: conduct project coordination meetings at regular intervals. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
- N. After shop drawings have been reviewed and approved by all parties, transmit a set of submittals to each other trade (e.g. Plumbing, Mechanical, Electrical, Controls, etc.) that will interface with installation. Each other contractor shall review the submittal for coordination and return a stamped submittal indicating they have reviewed the submittal for coordination purposes. ARCHITECTURAL VERIFICATION AND RELATED DOCUMENTS

A. Contractor shall consult all Architectural Drawings and specifications in their entirety incorporating and certifying all millwork, furniture, and equipment rough-in including utility characteristics such as voltage, phase, amperage, pipe sizes, duct sizes, including height, location and orientation. Shop drawings incorporating these requirements should be submitted to the Architect for approval prior to installation or rough in.

ORDINANCES & CODES

A. Work performed under this contract shall. At minimum, be in conformance w/ applicable national, state & local codes having jurisdiction

B. Installation work performed under this contract shall be in strict compliance w/

- current applicable codes adopted by local AHJ including any amendments & standards as set forth by National Fire Protection Association (NFPA). Underwriters Laboratories (UL), Occupational Safety & Health Administration (OSHA). American Society of Mechanical Engineers (ASME), American Society of Heating, Refrigeration, & Air Conditioning Engineers (ASHRAE). American national standards institute (ANSI), American Society of Testing Materials (ASTM) & other national standards & codes where applicable
- C. Where contract documents exceed requirements of referenced codes. Standards, etc., contract documents shall take precedence.
- D. Procure & pay for permits & licenses required for accomplishment of work herein described. Where required, obtain. Pay for & furnish certificates of inspection to owner. Contractor will be held responsible for violations of law.

A.Drawings and specifications indicate minimum construction standard. Should any work indicated be sub standard to any ordinances, laws, codes, rules or regulations bearing on work, Contractor shall promptly notify Architect Engineer in writing before proceeding with work so that necessary changes can be made. However, if the Contractor proceeds with work knowing it to be contrary to any ordinances, laws, rules, and regulations, Contractor shall thereby have assumed full responsibility for and shall bear all costs required to correct non complying

11. PROTECTION OF EQUIPMENT & MATERIALS

A. Store & protect from damage equipment & materials delivered to job site. Cover as required to protect from dirt & damage. Plug or cap open ends of ductwork & piping systems while stored & installed during construction when not in use to prevent entrance of debris into systems. Equipment & material that has been damaged by construction activities will be rejected, & contractor is obligated to furnish new equipment & material of like kind. Keep premises broom clean from foreign material created during work performed under this contract. Piping, equipment, etc. Shall have neat & clean appearance at completion.

- A. The base bid shall include only products from manufacturers specifically named in drawings & specifications. No substitution will be considered prior to receipt of hids unless written request for approval to hid has been received by engineer at least ten calendar days prior to date for receipt of bids. Request shall include name of material or equipment for substitution & complete description of proposed substitute including drawings, cuts, performance & test data & other information for evaluation. Statement setting forth changes in other materials, equipment or other work that incorporation of substitute would require shall be
- B. The intent of these specifications is to allow ample opportunity for Contractor to use his ingenuity and abilities to perform the work to his and the Owner's best advantage, and to permit maximum competition in bidding on standards of materials and equipment required.
- C.Material and equipment installed under this contract shall be first class quality, new, unused and without damage.
- D.In general, these specifications identify required materials and equipment by naming one or more manufacturer's brand, model, catalog number and/or other identification. The first named manufacturer or product is used as the basis for design; other manufacturers named must furnish products consistent with specifications of first named product as determined by Engineer. Base bid proposal shall be based only on materials and equipment by manufacturers named, except as hereinafter provided
- E. Where materials or equipment are described but not named, provide required items of first quality, adequate in every respect for intended use. Such items shall be submitted to Architect Engineer for review prior to procurement.
- F. Materials and equipment proposed for substitutions shall be equal to or superior to that specified in construction, efficiency, utility, aesthetic design, and color as determined by Architect Engineer whose decision shall be final and without further recourse. Physical size of substitute brand shall be no larger than space provided including allowances for access for installation and maintenance. Requests must be accompanied by complete descriptive and technical data including manufacturer's name, model and catalog number, photographs or cuts, physical dimensions, operating characteristics and any other information needed
- G.The burden of proof of merit of proposed substitute is upon proposer. Engineer's decision of approval or disapproval to bid of proposed substitution shall be final. Terms approved". "approved equal", & "equal" refer to approval by engineer as an acceptable alternate bid. No substitutions will be considered that are not bid as an alternate.
- H. No material substitutions shall be considered for approval after to award of contract. Coordinate & verify w/ other trades whether or not substituted equipment can be installed as shown on construction drawings without modification to associated systems or architectural or engineering design. Include additional costs for architectural & engineering design fees in bid if drawing modifications are required because of substituted equipment.

13. SHOP DRAWINGS

actual building conditions.

- A. Equipment to be furnished under this contract, items requiring coordination between contractors, and sheet metal ductwork fabrication drawings. Before submitting shop drawings verify equipment submitted is mutually compatible & suitable for intended use & will fit available space & allow ample room for maintenance. Engineer's checking & subsequent approval of such shop drawings will not relieve contractor from responsibility for errors in dimensions, details, size of members, quantities, omissions of components or fittings; coordination of electrical requirements; or for coordinating items w/ actual building conditions. Proceed w/ procurement & installation of equipment only after receiving approved shop drawings relative to each item.
- B. Submittal data shall be neatly organized, identified & indexed. Each item or model number shall be clearly marked & accessories indicated. Label catalog data w/ equipment identification acronym or number as used on drawings & include performance curves, capacities, sizes, materials, finishes, wiring diagrams & deviations from specified equipment or materials. Mark out inapplicable items. Shop drawings will be returned without review if above
- mentioned requirements are not met. C.Requirements shall be met electronically & submitted as pdf in files less than
- D. Contractor's stamp, which shall certify that stamped drawings have been checked by contractor, comply w/ drawings & specifications, & have been coordinated w/ other trades
- E. Transmit submittals as early as required to support project schedule. Allow for two weeks a/e review time, plus duplication of this time for resubmittals, if required. Transmit submittals as soon as possible after notice to proceed & before construction starts. Engineer's submittal reviews will not relieve contractor from responsibility for errors in dimensions, details, size of members, or quantities; or for omitting components or fittings; or for not coordinating items w/

F. Final copies shall be furnished to owner as part of O&M documents in hard & electronic formats.

14. OPERATION & MAINTENANCE INSTRUCTIONS

- A. Collect & compile complete brochure of equipment furnished & installed on this project. Include operational & maintenance instructions, manufacturer's catalog sheets, wiring diagrams, parts lists, approved shop drawings, test & balance reports, & descriptive literature as furnished by equipment manufacturer. Include an inside cover sheet that lists project name, date, owner, architect, consulting engineer, general contractor, sub-contractor, & an index of contents. Final approval of plumbing systems will be withheld until manual is received & deemed complete by architect & engineer. Provide "as-built" drawings (see Division 1 & general conditions).
- B. These requirements may shall also be provided to the owner in a well organized pdf electronic submission & delivered on a DVD or USB drive. 5. WARRANTIES
- A. Warrant each system & each element thereof against all defects due to faulty workmanship design or material for period of 12 months from date of substantial completion unless specific items are noted to carry longer warranty in construction documents or manufacturer's standard warranty exceeds 12
- months. Remedy all defects, occurring within warranty period(s) stated in general conditions & Division 1. Warranties shall include labor & material. Make repairs or replacements without any additional costs to owner. Perform remedial work promptly, upon written notice from engineer or owner. B. At time of substantial completion, deliver to owner all warranties in writing &

properly executed including term limits for warranties extending beyond one year

period. Each warranty instrument being addressed to owner & stating

commencement date & term. 16. CUTTING & PATCHING

19. ACCESS DOORS

- A.Perform cutting of walls, floors, ceilings, etc. As required to install work under this section. Obtain permission from architect prior to cutting. Do not cut or disturb structural members without prior approval from architect. Cut holes as small as possible. General contractor shall patch walls, floors, etc. As required by work under this section. Patching shall match original material & construction. Repair & refinish areas disturbed by work to condition of adjoining surfaces in manner satisfactory to architect. 7. EXCAVATION AND BACKFILL
- A.Perform necessary excavation to receive work. Provide necessary sheathing, shoring, cribbing, tarpaulins, etc. For this operation, and remove it at completion of work. Perform excavation in accordance with appropriate section of these specifications, and in compliance with osha safety standards.

B. Excavate trenches of sufficient width to allow ample working space, and no

deeper than necessary for installation work.

- C. Conduct excavations so no walls or footings are disturbed or injured. Backfill excavations made under or adjacent to footing with selected earth or sand and tamp to compaction required by architect_engineer. Mechanically tamp backfill under concrete and pavings in six inch layers to 95% standard density, reference
- D. Backfill trenches and excavations to required heights with allowance made for settlement. Tamp fill material thoroughly and moistened as required for specified compaction density. Dispose of excess earth, rubble and debris as directed by
- E. When available, refer to test hole information on architectural or civil drawings or specifications for types of soil to be encountered in excavations.
- 18. <u>ROUGH-IN</u> A. Coordinate rough-in w/ general construction & other trades. Conceal piping & conduit rough-in except in unfinished areas & where otherwise shown.
- A. Provide access doors in ceilings, walls, etc. Where indicated or required for access or maintenance to concealed valves & equipment installed under this section. Provide concealed hinges, screwdriver-type lock, anchor straps; manufactured by Milcor, Zurn, Titus, or equal. Obtain architect's approval of type, size. Location & color before ordering.

20.PENETRATIONS A. Seal mechanical floor, exterior wall & roof penetrations watertight & weathertight. Seal around mechanical penetrations w/ 3M CP-25 fire barrier caulk (thickness as required & recommended by manufacturer) to maintain resistance rating of fire-rated assemblies. Provide prefabricated roof curbs manufactured by Custom Curb, Pate, Thycurb or approved equal. Provide roof curb w/ factory installed wood nailer; welded, 18 gauge galvanized steel shell, base plate & flashing; 1-1/2" thick, 3 pound rigid insulation; fully mitered 3-inch raised cant; cover of weather-resistant, weather-proof material & pipe collar of weather-resistant material w/ stainless steel pipe clamps. Make roof penetrations by authorized

- roofing contractor when required. 21.ELECTRICAL WIRING A.Line voltage wiring shall be provided by Division 26. Line voltage control & interlock wiring for mechanical systems shall also be provided by Division 26 contractor. Low voltage control wiring shall be provided by Division 22/23 contractor. Furnish wiring diagrams to Division 26 contractor as required for proper equipment hookup. Coordinate w/ Division 26 contractor actual wire sizing
- amps for submitted mechanical equipment to ensure proper installation A. Provide heavy-duty horsepower rated safety switches rated in accordance with NEMA enclosed switch standard KS 1_1969 and l98 standard. B. Each piece of electrical equipment shall be provided with a disconnecting means.

C.Equivalents by: GE, Eaton, Siemens, Square D. 23. EQUIPMENT FURNISHED BY OTHERS A. Provide necessary equipment & accessories that are not provided by equipment supplier or owner to complete installation of cooking equipment, washing equipment, etc., furnished by others, in locations as indicated on drawings &/or described in general notes to this contractor. Equipment & accessories not provided by equipment supplier may include flues, vents, intakes, associated roof jacks & caps to outdoors, dampers. In-line fans, roof fans, control interlocks, etc. As required for proper operation of complete system in accordance w/ manufacturer's instructions. Contractor shall be responsible for correct rough-in

- dimensions, & shall verify same w/ architect &/or equipment supplier prior to service installations. 24. SETTING, ADJUSTMENT AND EQUIPMENT SUPPORTS A. Work shall include mounting, alignment and adjustment of systems and
- installation instructions. Level, shim and grout equipment bases as recommended by manufacturer. Mount motors, align and adjust drive shafts and belts according to manufacturer's instructions. B. Equipment failures resulting from improper installation or field alignment shall be

equipment. Set equipment level on adequate foundation and provide proper

anchor bolts and isolation as shown, specified or required by manufacturers in

- repaired or replaced by Contractor at no cost to Owner. C.Provide each piece of equipment or apparatus suspended from ceiling or mounted above floor level with suitable structural support, platform or carrier in accordance with best-recognized practice. Verify that structural members of buildings are adequate to support equipment and unless otherwise indicated on plans or specified, arrange for their inclusion and attachment to building
- structure. Provide hangers with vibration isolators. D. Submit details of hangers, platforms and supports together with total weights of mounted equipment to Architect_Engineer for review before proceeding with fabrication or installation.

25. MISCELLANEOUS REMODELING WORK

A.Remove all unused equipment, ductwork, piping & associated supports. Cap ductwork & piping at mains & seal air & water tight. Provide items of HVAC systems modification required because of building remodeling, as noted on drawings or necessary for proper operation. Match existing materials & construction techniques when modifying existing systems unless specified otherwise. Coordinate additional requirements w/ general contractor & architect. Seal airtight existing ductwork required to be abandoned in place or not in use at termination of work. Cap & seal weathertight existing roof curbs & roof openings to be abandoned in place as result of equipment removal. Clean & rebalance existing ductwork, diffusers, registers, & grilles intended for reuse as required or as indicated on drawings. Clean & refurbish existing HVAC equipment intended for reuse as required for proper operation including replacement of filters, belts, motors, remote controls, & safety interlocks.

- A. Comply w/ schedule of operations as outlined in architectural portions of this specification. Building shall be in continuous operation. Accomplish work requiring interruption of building operation at time when building is not in operation, & only w/ written approval of building owner &/or tenant. Coordinate interruption of building operation w/ owner &/or tenant minimum of seven days in advance of work.
- B. The following Work shall be performed at night or weekend other than holiday weekends as directed and coordinated with the Owner: All tie-in, cut-over and modifications to the existing electrical system and other existing system requiring tie-ins or modifications shall be arranged and scheduled with the Owner to be done at a time as to maintain continuity of the service and not interfere with normal building operations.
- 27. VIBRATION ISOLATION A. Provide vibration isolation equipment & materials by single manufacturer. Amber booth kinetics noise control mason industries inc. vibration eliminator co. inc. & vibration mounting & controls. General requirements: select vibration isolators

MECHANICAL SPECIFICATIONS by weight distribution to produce uniform deflection. Isolators shall operate in linear portion of their load versus deflection curves. Spring isolators shall have 50

percent excess capacity without becoming coil bound. Coat vibration isolators w/

factory-applied paint. Coat vibration isolators exposed to weather & corrosion w/

A. General: for penetrations through fire-resistance-rated constructions, including

through-penetration firestop systems that are produced and installed to resist

spread of fire according to requirements indicated, resist passage of smoke and

both empty openings and openings containing penetrating items, provide

other gases, and maintain original fire-resistance rating of construction

A. Contractor shall be responsible for quality of welding and suitability of welding

B. Welded pipe joints shall be made by certified welding procedures and welders.

Welding electrodes shall be type and material recommended by electrode

manufacturer for materials to be welded. All pipe and fittings ends shall be

previous 12 months for type of welding required shall do welding. Each welder

fabrication. Contractor shall submit three copies of a list of welders who will work

on project listing welders' code, date and types of latest qualification test passed

shall identify his work with a code marking before starting any welded pipe

D. Welded joints shall be fusion welded in accordance with level AR3 of American

Procedures And Welders For Pipe And Tubing". Welders qualified under

E. Bevel all piping and fittings in accordance with recognized standards by flame

cutting or mechanical means. Align and position parts so that branches and

fittings are set true. Make changes in direction of piping systems with factory

made welding fittings. Make branch connections with welding tees or forged

Welding Society standard AWS D10.9 "Standard For Qualification Of Welding

C. Only welders who have successfully passed welder qualifications tests in

procedures. All welding shall be in accordance with American Welding Society

factory-applied protection. Install & adjust isolators in accordance w/

manufacturers instructions.

standard B3.0 and ANSI standard b31.1

beveled a minimum of 30 degrees prior to welding.

national certified pipe welding bureau will be acceptable.

28. FIRE BARRIERS

29. WELDING

by each welder

END OF GENERAL MEP REQUIREMENTS

DIVISION 220000 - PLUMBING

PLUMBING GENERAL REQUIREMENTS A.Refer to GENERAL MECHANICAL, ELECTRICAL AND PLUMBING

requirements

- 2. PIPING & INSULATION A. Water piping - all water piping shall be 95-5 tin-antimony solder or press fit joined type L copper. Insulate w/ fiberglass w/ ASJ & PVC covers. Thickness in
- accordance w/ ASHRAE 90.1. B. Waste & vent piping - CI bell & spigot below grade or hubless CI w/ neoprene gasket fittings w/ stainless steel bands above grade. Sched 40 PVC w/ solvent
- welds may be used where allowed by local code. PVC not allowed in plenums. C.Roof/storm drain piping - CI bell & spigot below grade or hubless CI w/ neoprene gasket fittings w/ stainless steel bands above grade. Sched 40 PVC w/ solvent welds may be used where allowed by local code. PVC not allowed in plenums. Insulate w/ min 1/2" fiberglass pipe wrap w/ ASJ jacket.

3. PIPING IDENTIFICATION A. Provide pipe markers and flow direction arrows at 10' 0" maximum spacing to

OSHA requirements from Seaton or equal.

- identify piping in mechanical rooms and 20' 0" maximum spacing in all other B. Pipe marker nomenclature/colors shall meet applicable ANSI standard and
- . <u>VALVES</u> A. Equivalent valves listed on current comparison charts of specified valve manufacturers by Milwaukee, Stockham, Powell, Red-White, Crane, Apollo,
- Mueller, Muessco, Watts, Hays, Rockwell-Nordstrom B. Ball valves - 2" & under - bronze full port w/ teflon seats, bronze ball & insulated
- C.Balancing valves Armstrong model CBV I or CBV II, 125 psi-wp at 250 degrees f., meter connections w/ built-in check valves screwed or flanged ends. Provide polyurethane insulation cover.
- D. Check valves 2" & smaller screwed or solder bronze check valve, 200 psi-wog/125 psi-wsp, teflon or bronze disc & seat ring. 2-1/2" & larger flanged, ASTM 126 iron body, bronze trimmed, 200psi-wog/125 psi-wsp.
- E. Installation 1) Install necessary valves within piping systems to provide required flow control, to allow isolation for inspection, maintenance and repair of each piece of equipment or fixture, and on each main and branch service loop. 2) Each valve shall be installed so that it is easily accessible for operation. visual inspection, and maintenance and wherever possible, gate, check and ball valves shall be installed on a horizontal run with the handle upright
- and within 15 degrees of vertical 3) Valves installed in piping systems shall be compatible w/ system maximum test pressure, pipe materials, pipe joining method, and fluid or gas conveyed in system.

5. FIXTURES A. See schedules for further requirements and specific fixtures.

- B. Fixtures: American Standard, Kohler, Crane, Zurn, Toto.
- C.Fittings & supports: Josam, Smith, Wade, Zurn, Or Jonespec. D. Seats: Church, Olsonite, Bemis Or Beneke.
- E. Trim by Moen, Delta, Eljer, Kohler, American Standard, Crane, Sloan. F. Flushvalves: Sloan, Zurn, Toto
- G.Drains by Wade, Zurn, Woodford, Smith, Josam.
- 6. PLUMBING EQUIPMENT A. See schedules for further requirements and specific equipment. B. Roof drains - cast iron roof drain w/ flange, CI mushroom dome. 2" dam for
- overflow drains C. Cleanouts provide floor cleanouts in shape to match architectural flooring w/ heavy duty, scoriated nickel bronze top, adjustable above to finished floor. Wall cleanout w/ CI ferrule & cadmium plated CI counter sunk plug w/ round smooth
- nickel bronze wall access cover & flush over wall frame. D. Water hammer arresters piston type w/ pressurized metal-tube cushioning chamber. Provide where any flush valves or quick acting valves are used Manufacturers: Amtrol, Josam, Sioux Chief, Watts, Zurn.
- 7. BACKFL<u>OW PREVENTERS</u> A.Backflow preventers provide where shown on plans or as required by Code/AHJ the following types of backflow preventers. Provide isolation valve ahead of
- backflow preventers. Equivalent backflow prevents by Watts. Febco. Lawler. 1) Reduced pressure zone principle (1/4"-1/2"): watts series 009 reduced pressure backflow preventer complete with strainers and valves. 2) Reduced pressure zone principle (3/4"-10"): watts series 909 reduced
- isolation valve ahead of backflow preventers. Provide with air gap fitting and pipe to floor drain.

pressure backflow preventer complete with strainers and valves. Provide

- 3) Pressure vacuum breakers (1/2"-2"): watts series 800m4qt pressure vacuum breaker with integral ball valve shut offs.
- 4) Pressure vacuum breakers (3/8"-1/2"): watts series 008qt pressure vacuum breaker for anti-spill applications, with integral ball valve shut offs. 5) Atmospheric vacuum breaker (1/4"-3"): watts series 288a atmospheric vacuum breaker in plain brass finish.
- 6) Hose bibb vacuum breakers vacuum breakers for hose end connections shall be Watts series 8 non-removable type.

- 8. PLUMBING EXECUTION A. All cold surface piping and equipment shall be insulated. All hot water piping and equipment shall insulated to meet adopted energy code.
- C.Provide unions or flanged joints in each pipe line preceding connections to equipment to allow removal for repair or replacement. Provide all screwed & control valves w/ unions adjacent to each connection. Provide screwed end valves w/ union adjacent to valve unless valve can be otherwise easily removed
- D. All piping shall be properly supported with hangers and supports specifically intended for that purpose. Provide clevis hangers, unistrut brackets and pipe clamps and similar systems. Protect integrity of insulation and provide rigid
- insulation inserts or pipe saddles as necessary.

B. Provide trap primers or trap seal devices for all floor drains.

- E. After piping is in place test lines to insure no leaks. F. All piping & equipment shall be supported properly from structure. G.Escutcheons - provide nickel-brass or chrome plated on all exposed pipes when
- passing thru wall or ceiling of finished rooms. H. Verify floor materials used from architectural plans & provide proper cleanout tops, where they occur in carpet, quarry tile, vinyl tile or ceramic tile. I. Provide water hammer arrestors for all plumbing banks w/ fixtures utilizing flush valves in any capacity. Locate arrester between last two fixtures served on

branch line. END OF DIVISION 220000

DIVISION 230000 - MECHANICAL

- 1. MECHANICAL GENERAL REQUIREMENTS A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements
- 2. SHEET METAL WORK
- A.HVAC ductwork shall be galv sheet metal of gauges & joint types specified in SMACNA manual. Provide turning vanes in elbows
- B. Coordinate routing of ductwork w/ other contractors such that piping, electrical conduit, & associated supports are not routed through ductwork. Construct supply ducts to meet SMACNA positive pressure of 2" WG. Construct return, outdoor & exhaust ductwork upstream of fans to meet SMACNA negative pressure of 2" WG. construct exhaust ductwork downstream of fans to meet

C.Seal ductwork w/ heavy liquid sealant, Hardcast Irongrip 601, Design Polymer

- DP 1010, United McGill duct sealer or approved equal, applied according to sealant manufacturer's instructions. D. Ducts shall be connected to fans, fan casings & fan plenums by means of flexible
- connectors. Flexible connectors shall be neoprene coated glass cloth canvas connections, Duro-Dyne, Elgen, Ventfabric or equal. Flexible connectors shall have flame spread of 25 or less & smoke developed rating not higher than 50. Make airtight joints & install w/ minimum 1-1/2" slack.
- E. All ductwork must be supported properly from structure. 3. **DUCTWORK SPECIALTIES**

SMACNA positive pressure of 2" WG.

- A. Diffusers & grilles see schedule. Equivalent by Price, Tuttle & Bailey, Titus,
- Metal-Aire, Krueger. Coordinate color, mounting w/ duct, frame, locations & ceilings with architectural plans. Select air devices to limit room noise level to no higher than NC-30 unless otherwise shown. Provide devices w/ soft plastic gasket to make an airtight seal against mounting surface. Submit complete shop drawings including information on noise level, pressure drop, throw, cfm for each

- air device, styles, borders, etc. Clearly marked w/ specified equipment number. Provide ceiling supply air diffusers & return air grilles of lay-in or surface mounted type as required to be compatible w/ ceiling construction. Provide ceiling diffusers & grilles w/ white enamel finish unless noted otherwise. Provide slot plenums by diffuser manufacturer. Plenums shall be internally insulated by manufacturer.
- B. Provide balancing dampers, manufactured by Ruskin, Greenheck, Nailor Industries, Cesco, Louvers & Dampers, Pottorff or approved equal, where 'shown on drawings & wherever necessary for complete control of air flow. Splitter dampers shall be controlled by locking quadrants; provide young regulator or ventlok end bearings for damper rod. Rectangular volume dampers shall be opposed blade interlocking type. Round volume dampers shall be butterfly type consisting of circular blade mounted to shaft.
- C.Fire Dampers Static & dynamic; UL 555. Closing rating up to 4" WG static pressure class & min. 4000-fpm velocity. Rating of 1-1/2 & 3 hours as req'd. Curtain type with blades outside airstream except when located behind grille where blades may be inside airstream. Provide with mounting sheet metal
- D.Fire/Smoke & Smoke Dampers Multiple-blade type; galvanized steel frame & construction. UL 555S. Roll-formed blades, horizontal, interlocking, 0.034-inchthick, galvanized sheet steel. Leakage Class I. Rated pressure & velocity to exceed design airflow conditions. Provide with mounting sheet metal mounting sleeve to suit installation location. Damper Motors: two-position action. Electrical Connection: 115 V, single phase, 60 Hz. Coordinate voltage with Fire alarm contractor prior to ordering. Where building is not equipped with a fire alarm system, provide a stand alone 120v smoke detector & remote LED indicator light mounted in ceiling below duct detector. Mount detector within 5' of damper & provide all necessary wiring & interconnections to damper & detector & relays/power supplies. Power open, locked & reset, spring closed.
- E. Damper leakage for outside air and control dampers shall not exceed 6.5 cfm/square foot in full closed position at 4" wg pressure differential across damper. Reference manufacturer & model number for outside air dampers is Ruskin model CD-50.
- 4. <u>DUCT INSULATION WORK</u>
- A. Duct insulation & wraps shall meet flame/smoke rating of 25/50 per ASTM E 84. B. Line all low pressure supply & return air ductwork w/ 1/2" liner. Line all medium pressure supply w/ 1" liner.
- C.Line all transfer boots w/ 1/2" liner.
- EXHAUST FANS
- A. Equivalent by Cook, Penn, Acme, Greenheck, Jennaire, Captive Air.
- B. Bearings shall be designed for 200,000 hours operation. Variable pitch motor sheaves shall be standard C.Fans shall be furnished with acceptable electrical disconnect & birdscreen.

Provide single phase motor equipped fans with motor rated start relay. Provide

multiphase motor equipped fans with magnetic motor starter. Provide local

disconnect means for all fans. Coordinate location of starter & disconnects with other trades. D. Ceiling & Cabinet Exhaust Fans - Available Manufacturers: Cook, Penn, Acme, Greenheck, Jennaire, Panasonic, Shall bear the AMCA Certified Ratings Seal for sound and air performance. Provide speed controls to be furnished to E/C for

mounting at fan. Provide wall/roof jacks as indicated on plans.

- E. Centrifugal Roof Fan Fan covers shall be aluminum specifically designed to withstand high wind loads. Wheels 12" in diameter & larger shall have air foil or medium foil blades. The motor & drive compartment shall be positively externally ventilated. Drive components shall be isolated from the structure. Horsepower shall not exceed the values shown & oversize motors will not be acceptable. Furnished with acceptable electrical disconnect & birdscreen. Single phase motors shall have integral overload protection. V-belt drives shall be adjustable & provided with automatic tensioner. Direct drive fans shall be supplied with speed controls & located at the fan. This speed control shall be furnished to electrical contractor for mounting. Provide minimum 14" tall (min 8" above roof insulation) roof curb designed to mate with the unit & provide support & a watertight installation. Provide sloped curb as required for level unit installation Provide electric motorized backdraft dampers to open when fan motor is started. When motor voltage differs from damper motor voltage, provide relay & control transformer with fan o provide proper voltage for damper operation.
- 6. MECHANICAL EXECUTION A. Coordinate w/ e/c to provide all wiring between equipment, dampers, thermostats & all other required controls & devices. M/C is responsible for all control & interlock wiring unless specifically shown on electrical drawings. All electrical
- B. All piping shall be properly supported with hangers & supports specifically intended for that purpose. Provide clevis hangers, unistrut brackets & pipe clamps & similar systems. Protect integrity of insulation & provide rigid insulation inserts or pipe saddles as necessary.
- C.Provide any required interfaces to fire alarm or similar systems.

work shall comply w/ electrical specifications.

- D.Roof-mounted units on equipment supports or curbs, sloped as req'd. Anchor units to supports. Coordinate all requirements to maintain roof warranties. FINAL TESTING & ADJUSTMENTS
- A. Final system testing. Balancing & adjustments shall be performed by contractor certified by NEBB, AABC or other approved agency. Perform test readings on fans, units, coils, etc. & adjust equipment to deliver specified amounts of air or water. Prepare testing & balancing report log showing air supply quantities, air entering & leaving temperatures & pressures, fan & unit test readings, motor voltage & amp draws. etc., & submit PDF of final compilation of data to architect for evaluation & approval before final inspection of project. Balance air systems to within plus or minus 10 percent for terminal devices & branch lines & plus or minus 5 percent for main ducts & air handling equipment of amount of air shown on drawings. Further adjustments shall be made to obtain uniform temperature in spaces. Adjust equipment to operate as intended by specification. Align bearings & replace bearings that have dirt or foreign material in them w/ new bearings without additional cost to owner. Balance contractor shall include in report any improperly installed or missing balancing devices that would negatively impact

system operation. Adjust thermostats & control devices to operate as intended.

satisfactorily. Further adjustments shall be made to obtain uniform temperature in

Adjust burners, pumps, fans, etc. For proper & efficient operation. Certify to

architect that adjustments have been made & that system is operating

spaces. Calibrate, set, & adjust automatic temperature controls. Check proper sequencing of interlock systems, & operation of safety controls. Verify clean

8. STARTUP SERVICE

A. Engage a factory-authorized service representative to perform startup service for

- all equipment & systems. B. Complete installation & startup checks according to manufacturer's written instructions. Maintain written records of all startup activities & also do the
- 1) Inspect for visible damage to any part, casing or component.
- 2) Verify that labels are clearly visible. 3) Verify service clearances are provided.

& inspect operation of power vents.

4) Verify that controls are connected & operable. 5) Verify that filters are installed.

verify sequences.

- 6) Clean all interior and exterior components of construction debris. 7) Release and adjust vibration isolators.
- 8) Inspect all rotating components for direction and correct. 9) Start unit according to manufacturer's written instructions. 10)Inspect & record performance of interlocks & protective devices;
- 11)Inspect controls for correct sequencing of heating, mixing dampers, refrigeration, & normal & emergency shutdown. 12)After startup & performance testing, change filters, vacuum heat exchanger & cooling & outside coils, lubricate bearings, adjust belt tension,

END OF DIVISION 230000



Kansas Certificate of Authority #A-516 MEP Engineer

PKMR Engineers State Certificate of Authority #E-1682 13300 West 98th St Lenexa, KS 66215 913.492.2400

JOB NUMBER 22060J

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SPECIFICATIONS

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LENEXA, KS 6621

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SECTION 260000 - ELECTRICAL

1. GENERAL ELECTRICAL REQUIREMENTS

A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements. B. Wiring of Mechanical Equipment

> 1) Provide all raceways & power wiring for all division 23 equipment requiring electrical connections, including, but not limited to, pumps, water heaters, & HVAC equipment, & all line voltage control & interlock wiring not provided under division 23. Connect per manufacturers' wiring diagrams. Coordinate with division 23 for disconnects furnished w/ equipment, & provide all disconnect switches as required. After installing wiring, verify that each motor load has correct phase rotation.

2) Verify actual "maximum overcurrent protection" (MOCP) device ratings & "minimum circuit ampacity" (MCA) conductor sizing for mechanical equipment from equipment nameplate. Base electrical installations on actual required amperages, which may vary somewhat from conductor & equipment sizes shown on drawings; however, in no case, reduce size of conductors indicated on drawings without authorization from engineer. Provide properly sized electrical wiring & equipment without extra cost to owner. Notify engineer of all changes required in electrical installation due to equipment variances so that effects on feeders, branch circuits, panelboards, fuses & circuit breakers can be checked prior to purchasing & installation. Be responsible for coordinating w/ division 23 to verify actual ampacities & correct sizes of all conductors & overcurrent protective devices for all equipment, & correct overload heaters for all motors, when starters are provided under division 26.

C. Wiring of Thermostats. Time, & Temperature Controls

1) Provide all raceways, power wiring, & line-voltage control and interlock wiring not provided under division 23, for all thermostats, temperature control devices, & controls, including, but not limited to, night-stats, water heater interlocks, time switches & override timers. See mechanical drawings for locations & temperature control diagrams. Low-voltage conductors for thermostats & temperature control system may be run exposed above finished accessible ceilings, if approved & listed for this purpose, but shall be installed in conduit within walls & where exposed in

2. CONDUIT & CONDUCTORS

A.Follow circuiting shown on plans. Use no conduit smaller than 3/4" & no conductors smaller than #12 ga. Unless noted otherwise.

B. Conductors #10 and smaller shall be solid. C.If no conductor size is indicated on drawings for branch circuit, provide conductors & conduit sized per NFPA 70 & based on indicated branch circuit

overcurrent protective device (OCPD) rating & number of poles.

D. Wire shall be in non-flexible metallic conduit (EMT, IMC or RMC) for: 1) All circuits & feeders greater than 30A.

2) Kitchen circuits.

E.MC cable acceptable for branch convenience circuits & lighting circuits. Do not daisy chain light fixtures. Provide cable whips of sufficient lengths to allow for relocating each light fixture within 5-foot radius of its installed location, but not exceeding 6 feet in unsupported lengths.

1) Do not use MC cable for following: homeruns to panelboards, where exposed to view or damage, hazardous locations, in concrete, block walls or wet locations, & when disallowed by local AHJ or landlord.

2) Provide health care rated MC for patient care areas (as defined by the NEC) when not in conduit.

F. Lighting & receptacle circuit conductors shall be copper THHN-THWN-2 600 volt, 75 deg c, color coded as described under applicable codes. No romex, plastic flex tubing etc permitted. Light fixture wire insulation shall have temp rating not less than individual fixture manufacturers recommended rating.

G.Circuits w/ no. 8 or larger conductors, motor circuits, power & feeder circuits & building service feeders shall be copper THHN-THWN-2 600 volt, 75 deg c.

H. All materials used to terminate, splice or tap conductors: designed for, properly sized for, & UL listed for specific application & conductors involved, & installed in strict accordance w/ manufacturer's recommendations, using the manufacturer's recommended tools.

I. Where wiring is indicated as installed, but connection is indicated "future" or "by other division, trades, or contracts", leave minimum 3-foot "pigtail" at box, tape ends of conductors, & cover box.

J. Number of conductors in specific raceway "home run" is indicated w/ cross lines (tick marks) on each "circuit run" on drawings. In general, direction of branch circuit "home run" routing is indicated on drawings, complete w/ circuit numbers & panelboard designation. Continue all such "home run" wiring to designated panelboard, as though "circuit runs" were indicated in their entirety.

K. Wiring shall have insulation of proper color to match NEC color code. In larger sizes, where properly colored insulation is not available, use vinyl plastic electrical tape of appropriate color around each conductor at all termination points, junction & pull boxes.

3. GROUNDING

A. Supplement grounded neutral of secondary distribution system w/ equipment grounding system, installed so that metallic structures, enclosures, raceways, junction boxes, outlet boxes, cabinets, machine frames, portable equipment & other conductive items operate continuously at ground potential & provide low impedance path for ground fault currents.

B. System shall comply w/ national electrical code, drawings & as specified. C.Provide equipment ground bus in base of low voltage, switchgear brazed or

otherwise adequately connected by an approved method to ground rods. D. Provide in conduit green insulated copper ground conductor to main metallic water service entrance & connect by means of adequate ground clamps.

E. Equipment grounding conductors for branch circuit home runs shown on

drawings shall indicate an individual & separate ground conductor for that branch circuit which shall be terminated at branch circuit panelboard, switchboard, or other distribution equipment. F. Provide low voltage distribution system w/ separate green insulated equipment grounding conductor for each single or three-phase feeder. Single phase 120

volt branch circuits for lighting & power shall consist of phase & neutral conductors & green ground conductor installed in common conduit which shall serve as grounding conductor.

G.Grounding conductors shall be as shown on plans or if not specifically shown shall be no smaller than that required by NEC.

4. RACEWAY INSTALLATION

A.Install all conductors & cable in raceways continuous without taps or splices. Splice or tap only in approved boxes & enclosures w/ approved solderless connectors, or crimp connectors & terminal blocks for control wiring, & keep to minimum required. Insulate all splices, taps, & joints as required by codes. B. Install all circular raceways concealed above suspended ceilings or concealed in

walls or floors wherever possible except where otherwise indicated. 1) All conduit, junction boxes, etc. Above ceilings shall be supported from structure. Pipe sleeves, hangers & supports shall be furnished & set & contractor shall be responsible for proper & permanent locations.

2) Support all conductors & cables in vertical installations, as required by NFPA 70, by installing cable supports or plug-type conduit riser supports, or wire-mesh safety grips.

C. Conduit installed below grade shall be PVC conduit meeting NEMA standards & UL listed for underground & exposed (UV-resistant) use.

mechanical protection.

1) Schedule 40 PVC acceptable for most underground installations. 2) Schedule 80 PVC shall be used where conduit is exposed above grade or otherwise susceptible to damage, or where otherwise required by code for

3) For underground runs of over 300' and/or more than (2) 90° elbows, provide GRS radius bends & risers as conduits rise above grade or above

D. Metal raceway below grade or exposed to weather or other hazardous conditions shall be GRS. 1) Provide any GRS installed below grade w/ corrosion resistant

bonded-plastic or approved mastic coating. This shall include 90-degree elbow below grade & entire vertical transition to above grade. E. Provide interlocking spacers for multiple runs of UG conduits in same trench.

F. All other raceway may be EMT where approved by local code. Use compression

type fittings for EMT, w/ all fittings UL listed for environment in which they are G.Use FMC for final connection to each motor & transformer, & to any device that would otherwise transmit motion, vibration, or noise. Use LFMC where exposed

to liquids, vapors or sunlight.

1) Provide all FMC & LFMC w/ an insulated bonding conductor.

H.Install raceways parallel & perpendicular to building lines. I. Install raceways to requirements of structure & to requirements of all other work on project. Install raceway to clear all openings, depressions, pipes, ducts, reinforcing steel, & other immovable obstacles. Install raceways set in forms for

concrete structure in such manner that installation will not affect strength of

J. Install raceways continuous between connections to outlets, boxes & cabinets w/ minimum possible number of bends & not more than equivalent of four

90-degree bends between connections. Use manufactured elbows for all 45- & 90-degree bends, unless approved by engineer in advance. Make other bends smooth & even & without flattening raceway or flaking galvanizing or enamel. Radii of bends shall be as long as possible & never shorter than corresponding

trade elbow. Use long radius elbows where necessary, indicated, or both. K. Securely fasten raceways in place w/ approved straps, hangers & steel supports as required. Attach raceway supports to building structure. Hang single raceways for feeders w/ malleable split ring hangers w/ rod & turnbuckle suspension from inserts spaced not over 10 feet apart in construction above

L. Clamp groups of horizontal feeder raceways to steel channels that are suspended from inserts spaced not over 10 feet apart in construction above. Securely clamp vertical feeder raceways to structural steel members attached to structure. Install cable clamps for support of vertical feeders where required. Add raceway supports within 12 inches of all bends, on both sides of bends. Do not support raceways from suspended ceiling components.

M.Ream raceway ends, thoroughly clean raceways before installation, & keep clean after installation. Plug or cover openings & boxes as required to keep raceways clean during construction & fish all raceways clear of obstructions before pulling conductors wires. Provide raceways of ample size for pulling of wire & not smaller than code requirements & not less than 3/4", unless indicated otherwise on drawings.

N.Protect all raceway installations against damage during construction. Repair all raceways damaged or moved out of line after roughing-in to meet engineer's approval without additional cost to owner.

O. Align & install true & plumb all raceway terminations at panelboards, switchboards, motor control equipment & junction boxes.

P. Install approved expansion/deflection fittings where raceways pass through (if embedded) or across (if exposed) expansion joints. Q.Install pull wire in each empty raceway that is left for installation of conductors or

cables under other divisions or contracts. Use polypropylene or monofilament plastic line. Leave min. 24" slack at each end. R. Make all joints & connections in manner that will ensure mechanical strength &

electrical continuity. S. Effectively seal raceways, by installing conduit fitting at boundary of two spaces, & filling it w/ an approved pliable material, after conductors or cables have been

installed & tested, whenever raceways pass from non-cooled to cooled spaces or transition from outside facility or enclosure to inside, whether buried or exposed. 5. BUSHINGS & LOCKNUTS

A.Rigidly terminate conduits entering sheet metal enclosures to enclosure w/ bushing & locknut on inside & locknut or an approved hub on outside. Conduit shall enter enclosure squarely.

B. Provide bushings & locknuts made of galvanized malleable iron w/ sharp, clean-cut threads. Where EMT enters box, provide approved EMT compression

C.Use insulated, grounding, or combination, bushings wherever connection is

subject to vibration or moisture when required by NFPA 70, or both.

JUNCTION & OUTLET BOXES A. All boxes including light fixture, switch, receptacle, & similar outlet boxes: National Electrical, Appleton, Steel City, Raco, or approved equal, galvanized steel knockout boxes, suitable in design to purpose they serve & space they

occupy. Size as required for specific function or as required by NFPA 70, whichever is larger 1) Lighting fixture boxes in ceilings shall not be less than 4" octagonal knockout type.

B. Set all outlet boxes in walls, columns, floors, or ceilings so they are flush w/ finished surface, accurately set, & rigidly secured in position. Provide plaster rings, extension rings &/or masonry rings as req'd for flush mounting. Provide approved cast outlet boxes, w/ hubs & weatherproof covers, in all areas subject to damp, wet, or harsh conditions.

C. Coordinate locations of outlet boxes. Outlets are only approx located on small scale drawings. Use great care in actual location by consulting various large scale detailed drawings used by other division trades, & by securing definite locations from architect.

D. All outlets, shall be mounted w/ bottom at 16" AFF & switches w/ bottom at 44" AFF floor unless noted otherwise on plans. Refer to arch for other required elevations & cabinetry coordination.

. ELECTRICAL IDENTIFICATION

A. Manufactured labels for each Panelboard & Transformer. Typewritten panel schedules mounted in panels. Where electrical equipment is installed as service entrance equipment, contractor shall furnish & install nameplate listing the following: Equip Short-Circuit Current Rating in Amps (RMS SYM), as indicated on the drawings, Whether or not equipment is fully or series-rated, Available Fault Current in Amps. Contractor shall perform available fault current calculation to obtain available fault at Service Equipment, Date fault current calculations were performed

B. Printed tape style label for each receptacle indicating Panel & Ckt #.

C.Manufactured labels for all disconnect switches indicating equipment served. D. Branch circuits - identify each circuit w/ wire markers when enclosure label & wire colors do not provide enough information to identify each circuit without tracing. Feeders & branch circuit home runs w/ wire marker w/ Panel & Ckt #. Box covers above lay-in ceilings neatly marked w/ indelible marker.

E. Fire alarm - nameplate on each fire alarm terminal cabinet. Label all wiring.

8. <u>DIGITAL LIGHTING CONTROLS</u>

A. Provide DLM systems consisting of lighting control panels, room controllers, motion sensors, daylight sensors, & other other controls as necessary to achieve lighting switching & dimming control indicated on the drawings. Coordinate all interfaces, dimming styles etc with lighting fixtures and other loads controlled. B. Provide all interconnecting wiring, controls, programming & owner training for the

C.Provide systems by: Cooper, Hubbell, Leviton, Phillips, Sensor Switch, Watt

Stopper, Lutron, nLight. D. Execution:

1) Calibrate all sensor time delays & sensitivity for proper detection of occupants & energy savings. Adjust time delays.

2)Provide documentation of room by room system configuration including: sensor parameters, time delays, sensitivities, & daylighting setpoints, sequence of operation, load parameters.

3) Post start-up tuning - 30 days after occupancy contractor shall adjust sensors to meet the owner's requirements. Provide a detailed report to the architect / owner of post start-up activity.

9. CIRCUIT BREAKERS IN EXISTING PANELBOARDS A.Provide new circuit breakers, for installation in existing panelboards, of same manufacturer, type & short circuit current interrupting ratings as existing

panelboard circuit breakers. B. Circuit breakers shall provide AFCI and/or GFCI protection where required by

10. WIRING DEVICES A. Color of devices as directed by architect.

B. Provide clear label with black text on each coverplate for associated circuit #. C. Convenience outlets:

> 1) Spec grade 20 amp duplex w/ ground & SS wall plates. Other outlets shall be verified w/ equipment suppliers for proper NEMA configurations. Provide GFCI rated devices where indicated & as req'd per code. Provide weather resistant receptacles in all damp or wet locations.

2) GFCI Receptacles:

a. Bathrooms / Locker Rooms b. Where located within 6'-0" of a sink.

c. Unfinished areas. 3) Tamper-Resistant Receptacles:

a. All locations within the project shall have tamper-resistant receptacles i. Business Offices

ii. General Corridors b. Exceptions: i. Receptacles located more than 7' above the floor.

ii. Receptacles located behind an appliance that is not easily moved. 4) Equivalent devices by Cooper/Eaton, Hubbell, Leviton, Pass & Seymour/Legrand

D. Switches: 1) Light switches - spec grade 20 amp toggle switches w/ SS wall plates. 2) Wall motion switches - spec grade, PIR, override.

A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements. 3) Ceiling motion switches - spec grade, dual technology, model as reg'd by 2. EXISTING FIRE ALARM SYSTEM MODIFICATIONS room configuration, all necessary power packs & relays. 4) Wall motion switches (bathroom) - dual relay, spec grade, PIR, 2nd relay A. Provide following new equipment, compatible w/, or of same manufacturer as, for operation of exhaust fan delay existing fire alarm control panel & system, at locations indicated on drawings, as

5) Dimmer Switches: Modular, full-wave, solid-state units with integral, quiet on-off switches, with audible frequency and EMI/RFI suppression filters. Continuously adjustable slider; with single-pole or three-way switching. Comply with UL 1472. 600W or 1200W as required by load.

Incandescent Lamp Dimmers: 120 V: control shall follow square-law dimming curve. On-off switch positions shall bypass dimmer module. LED Dimmers: Modular; compatible with dimming drivers in fixture(s); if other than 0-10V dimming is provided, verify dimmer is compatible with driver for full range of dimming (100-10%).

6) Equivalent devices by Leviton, Bryant, Hubbell, Wattstopper, Lithonia,

A.Disconnect (safety) switches: Square D. Siemens. Eaton, or GE fused or

non-fused (as indicated on drawings or required) NEMA KS1, heavy duty,

indicated on drawings or suitable for environment in which installed. Based on

B. Where indicated, provide fusible switches permanently labeled as suitable for

use as service entrance equipment, w/ integral & separate neutral & ground

terminations not specifically listed as suitable for more than one conductor.

B. Equivalent luminaires by Hubbell, Infinity, Lithonia, Williams, Eaton [Cooper].

85 CRI. Equivalent lamps by G.E., Venture, Phillips Or Sylvania.

1) Lamps shall be type recommended by fixture manuf. Lamp none above

2) Ballasts - Fluorescent - electronic, <20%THD, Equivalent by Advance,

1) Lamps & modules: Philips, General Electric, Osram/Sylvania, Cree, Nichia.

2)LFD components lamps drivers and fixtures shall comply with PCC 47

C82.77, IESNA Standards TM-16-05, RP-16, LM-79, LM-80 and TM-21.

3) Drivers shall be integral to the fixture unless otherwise shown or specified.

1) Provide lighting fixtures w/ lamps & accessories reg'd for hanging. Coord

mounting of lighting fixtures w/ architect & G/C. Additional fixture supports shall be provided by E/C. Supports shall comply w/ latest edition of NEC.

Provide lighting fixture securing clips as required. Consult arch plans for

ceiling types & provide surface & recessed lighting fixtures w/ appropriate

2) Fixtures mounted in fire rated ceilings shall be provided & installed w/ fire

3) Poles & support components: comply w/ AASHTO LTS-4. Provide steel

A. Adjust, align, & test all electrical equipment on this project provided under this

to requirements in NETA ATS (latest edition) & all additional requirements

B. In following sections. Maintain following on project premises at all times: true

resistance tester. Provide test data readings as requested or as required by

A. Electrical contractor is responsible for upsizing all branch circuit and feeder

division & all electrical equipment furnished by others for installation or wiring

under this division for proper operation. Test all systems & equipment according

RMS reading voltmeter, true RMS reading ammeter, & megohmmeter insulation

conductors as required to comply with voltage drop requirements as outlined in

B. Upsize wire on 120v circuit homeruns as listed below unless otherwise shown on

1) Less than 100 feet in conductor length: #12 phase/neutral conductors &

2)100 to 150 feet in conductor length: #10 phase/neutral conductors & #10

3) Greater than 150 feet in conductor length: #8 phase/neutral conductors &

3) Tighten screws & bolts for connectors & terminals according to

4) Check & record building's service entrance voltage, grounding conditions,

values are not indicated, use those specified in UL 486a & UL 486b.

B. Replace all burned-out lamps & lamps used for temporary construction lighting in

C. After all systems have been inspected & adjusted, confirm all operating features

required by drawings & specifications & make final adjustments as necessary.

A.Refer to GENERAL MECHANICAL, ELECTRICAL & PLUMBING requirements.

A. Provide incoming telephone and/or data service raceways as indicated on

B. Provide 3/4-inch thick plywood board, fire-retardant- treated & stamped FRT,

securely anchored to wall, at location & of size as indicated on drawings.

C.Provide flush mounted telephone and/or data outlet boxes w/ 3/4-inch EMT

A. Provide engineering, labor, materials, apparatus, tools, equipment, and

2) Inside plant UTP station cabling, terminations, and outlets.

cabling system installation as specified and indicated.

3) Cable identification tags and system labeling.

5) Telecommunications grounding system.

transportation as required to make a complete working telecommunication

B. Provide a complete telecommunications infrastructure cabling system including:

1) Support systems in the main data room and telecommunication rooms,

required by building codes, landlord, or all three, & connect to existing fire alarm

1) Additional initiating devices, indicating appliances, & interconnecting

stub-up concealed to accessible ceiling space at locations as indicated on

drawings or as required by serving telecommunications company.

manufacturer's published torque-tightening values. If manufacturer's torque

poles in color as specified or selected by architect. Provide bolt covers.

Coordinate dimming drivers with any dimming DLM or other systems.

E. Emergency ballasts/drivers/batteries - shall be Bodine, lota. Coordinate voltages

and outputs for min. 90 minute operation with fixtures scheduled and controls

CFR Part 15; UL 8750; ANSI/NEMA Standards C78.377, NEMA SSL-1,

manuf recommended max wattage. Color temperature shall be

coordinated throughout project, with generally 4000k interior lamps and min

required by NFPA 70, & where indicated on drawings.

A.Refer to lighting fixture schedule plans for fixture types.

G.E., Motorola, Or Magnetek.

mounting components & accessories.

rated enclosures to maintain ceiling integrity

Provide concrete base for pole & ground rod.

D. Provide printed label for each disconnect as to load served.

C.Provide switches where not furnished w/ starting equipment, at all other points

assemblies, suitable for sizes of conductors indicated. Do not double-lug any

fusible switch & fuse sizes indicated, include class R, J, or L fuse provisions as

externally operated, visible-blade safety switches; NEMA enclosure type

Sensor Switch.

applicable.

11. DISCONNECT (SAFETY) SWITCHES

12. LUMINAIRES, LAMPS & BALLASTS

C.Fluorescent Fixtures:

indicated and provided.

13. ADJUSTING. ALIGNING & TESTING

D.LED Fixtures:

F. Execution:

specified

14. VOLTAGE DROP

#8 around

permanent light fixtures.

SECTION 270000 - COMMUNICATIONS

. GENERAL ELECTRICAL REQUIREMENTS

2. TELECOMMUNICATIONS SYSTEMS PROVISIONS

END OF DIVISION 260000

drawings.

. COMMUNICATIONS SYSTEMS

4) Conduits and boxes.

8) As-built documents.

SECTION 280000 - SAFETY & SECURITY

1. GENERAL ELECTRICAL REQUIREMENTS

6) Submittals.

7) Testing.

9) Warranty.

END OF DIVISION 270000

A.Prior to starting up electrical systems:

2) Lubricate items accordingly.

1) Check all components & devices

grounding resistance, & proper phasing

15. SYSTEM START UP

2) Additional zone modules required by new zoning.

3) New amplifiers & other equipment that may be required to incorporate new initiating devices & indicating appliances into existing system. 4) A new zone map, including all existing zones & all new zones, framed,

mounted under glass, & installed adjacent to fire alarm control panel. Horn/strobes shall meet all requirements of ADA.

B. Install all wiring in raceway.

C. Where acceptable to AHJ, plenum rated cables may be used above suspended accessible ceilings D. Execution:

1) Submit shop drawings w/ wiring diagrams & battery calcs for approval to Fire Marshal & AH

2) Coordinate to provide power & shutdown or operation of fire/smoke dampers, door hold opens, power to door locks &access control & other similar systems.

3) Installed & tested per NFPA 72 & applicable sections of NFPA 70. Provide complete fire alarm system as described herein & shown to be wired, connected, & in first class condition. Include sufficient control unit(s), annunciator(s), manual stations, automatic fire detectors, smoke detectors audible & visible notification appliances, wiring, terminations, electrical boxes, & all necessary material for complete operating system.

END OF DIVISION 280000

Kansas Certificate of Authority

#A-516

PKMR Engineers State Certificate of Authority #E-1682 13300 West 98th St. Lenexa, KS 66215 913.492.2400

MEP Engineer

JOB NUMBER

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SPECIFICATIONS

PEARSON KENT MCKINLEY RAAF ENGINEERS

LENEXA, KS 6621

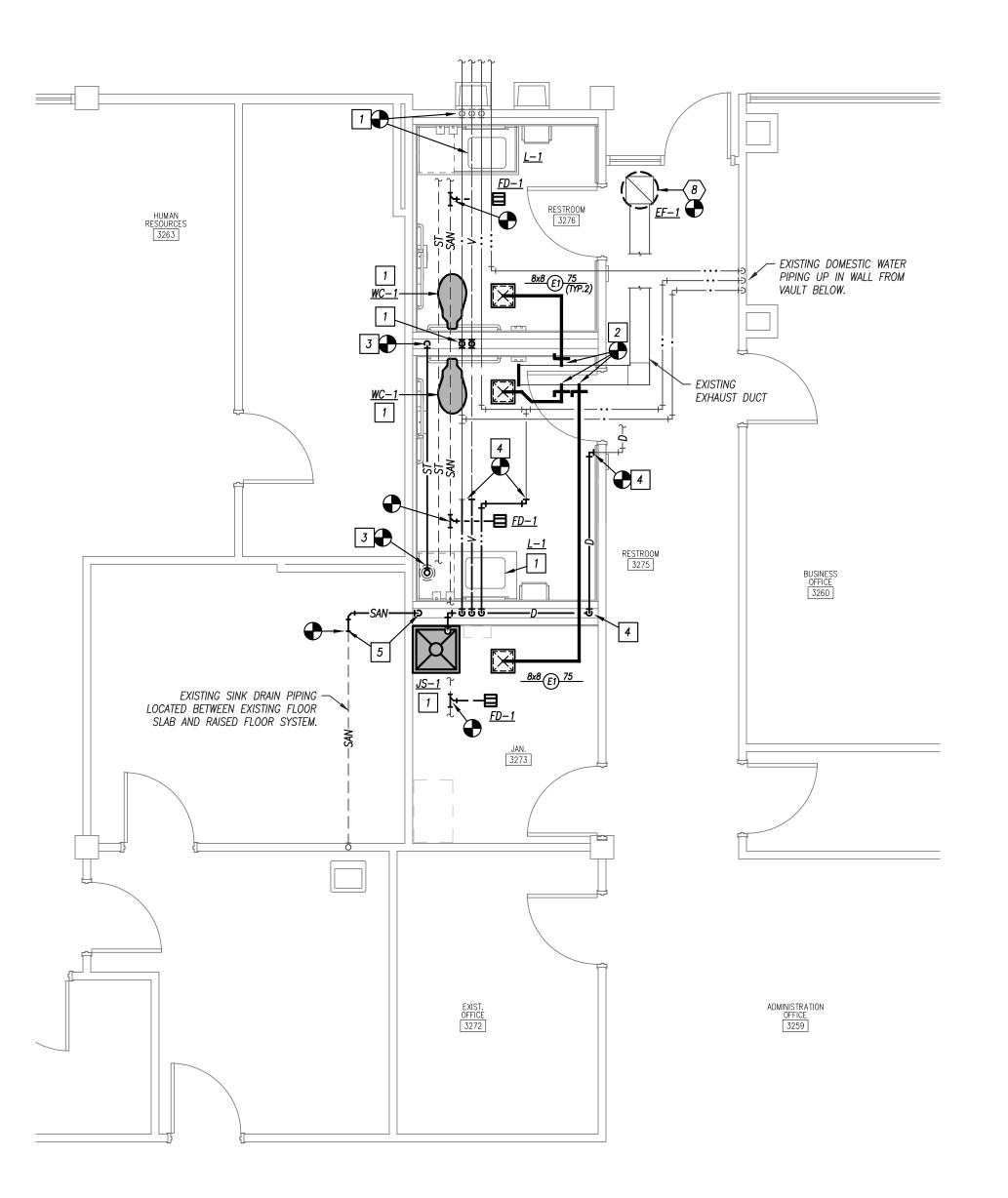
WWW.PKMRENG.CO

13300 W 98TH STREET

913.492.2400

(5)—[si]— __ EXISTING DOMESTIC WATER PIPING UP IN WALL FROM - EXISTING EXHAUST DUCT PRIOR TO DEMOLITION OF SLAB, SCOPE AND FIELD VERIFY EXACT LOCATION, DEPTH, AND ROUTING OF EXISTING SANITARY AND STORM 4 PIPING BELOW SLAB. EXISTING SINK DRAIN PIPING — LOCATED BETWEEN EXISTING FLOOR SLAB AND RAISED FLOOR SYSTEM.

MECHANICAL DEMOLITION PLAN



5



1. REFER TO GENERAL DEMOLITION NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK. 2. PRIOR TO DEMOLITION OF SLAB, SCOPE AND FIELD VERIFY EXACT LOCATION, DEPTH, AND ROUTING OF EXISTING SANITARY AND STORM PIPING BELOW SLAB.

Kansas Certificate of Authority

#A-516

JOB NUMBER 22060J

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AVE., Y, KS

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MEP Engineer PKMR Engineers State Certificate of Authority #E-1682 13300 West 98th St. Lenexa, KS 66215 913.492.2400

DEMOLITION PLAN KEYED NOTES

- DISCONNECT AND REMOVE EXISTING PLUMBING FIXTURE AND ASSOCIATED PLUMBING ROUGH—IN AS NEEDED TO COMPLETE REMODEL INDICATED.
- 2 DISCONNECT AND REMOVE EXISTING EXHAUST GRILLES AND ASSOCIATED DUCTWORK AS NEEDED.
- (3) EXISTING STORM PIPING TO BE RE-ROUTED TO NEW CHASE LOCATION. 4 EXISTING DRAIN PIPING TO BE RE-ROUTED TO NEW CHASE AND JANITOR'S

RE-ROUTED TO NEW NEW PLUMBING CHASE.

- 5 DISCONNECT AND REMOVE EXISTING BREAK ROOM SINK DRAIN LINE AND LIFT PUMP LOCATED IN ADJACENT RAISED FLOOR SPACE AS NEEDED TO BE
- 6 DISCONNECT AND REMOVE EXISTING PLUMBING ROUGH—IN. CAP EXISTING SANITARY BELOW SLAB AS CLOSE TO THE SANITARY MAIN AS POSSIBLE.
- 7 DISCONNECT AND REMOVE EXISTING ROOF MOUNTED EXHAUST FAN AS NEEDED TO REPLACE WITH NEW. EXISTING FAN CURB TO BE REUSED. FIELD VERIFY EXACT LOCATION, DUCT ROUTING, AND FAN CHARACTERISTICS PRIOR TO DEMO.

GENERAL MECHANICAL NOTES

- 1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
- 2. ALL AIR DISTRIBUTION DEVICES SHALL HAVE LOCKABLE VOLUME CONTROL
- 3. ALL 90 DEGREE TURNING ELBOWS SHALL BE SMOOTH ROUND OR SQUARE WITH TURNING VANES.
- 4. DUCT SIZES SHOWN ON PLANS ARE INSIDE FREE AREA.
- 5. PROVIDE ACCESS DOORS IN DUCTS AHEAD OF ALL AUTOMATIC, FIRE, AND SMOKE DAMPERS.
- 6. REFER TO PLUMBING FIXTURE / DRAIN SCHEDULES FOR PIPING SIZES FOR INDIVIDUAL CONNECTIONS TO FIXTURES AND RISERS NOT SHOWN ON PLANS.
- 7. NO SANITARY OR VENT PIPING BELOW GRADE SHALL BE LESS THAN 2".
- 8. NO DOMESTIC WATER PIPING SHALL BE SMALLER THAN 3/4" UNLESS NOTED OTHERWISE.
- 9. ALL VENT PIPING SHOWN IS DIAGRAMMATIC. USE APPROPRIATE FITTINGS FOR VENT PIPING BELOW FLOOD RIM OF FIXTURE.
- 10. NOT ALL INTERIOR CLEANOUTS ARE SHOWN FOR DRAWING CLARITY. CONTRACTOR SHALL INSTALL ALL CODE—REQUIRED CLEANOUTS (RE: GENERAL NOTES ON COVER SHEET). COORDINATE EXACT LOCATIONS OF CLEANOUTS
- WITH ARCHITECT. 11. ALL FLOOR DRAIN TRAPS SHALL BE PROTECTED BY A UL LISTED TRAP SEAL

- 1 FURNISH AND INSTALL NEW PLUMBING FIXTURE. RE—ROUTE AND MODIFY EXISTING PLUMBING ROUGH—IN AS NEEDED TO CONNECT TO FIXTURE. CONNECT TO EXISTING SANITARY BELOW SLAB.
- 2 CONNECT TO EXISTING EXHAUST DUCT. FIELD VERIFY EXACT LOCATION AND SIZE OF EXHAUST DUCT.

- 5 RE-ROUTE EXISTING BREAK ROOM SINK DRAIN PIPING TO NEW CHASE AND CONNECT TO SANITARY MAIN BELOW SLAB.
- 6 EXTEND PLUMBING PLUMBING TO NEW PLUMBING CHASE AND CONNECT TO PLUMBING FIXTURES.

13300 W 98TH STREET

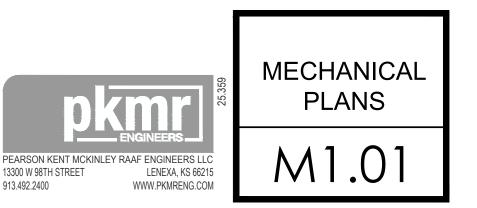
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8 FURNISH AND INSTALL NEW EXHAUST FAN. EXHAUST FAN TO MATCH EXISTING FAN TO THE GREATEST EXTENT POSSIBLE. FIELD VERIFY EXACT

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ISSUE DATE No Description

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MECHANICAL PLAN KEYED NOTES

3 RE-ROUTE ROOF DRAIN / STORM PIPING TO NEW PLUMBING CHASE AND RECONNECT TO EXISTING STORM PIPING BELOW SLAB. FIELD VERIFY TO MATCH EXISTING PIPE SIZE.

4 EXTEND EXISTING DRAIN PIPING TO NEW CHASE. ROUTE DRAIN PIPING TO DISCHARGE INTO JANITOR'S SINK.

7 ROUTE 1-1/2" COLD WATER AND 2" VENT DOWN INTO CHASE FOR CONNECTION TO FIXTURES.

LOCATION.

<u>N</u> (<u>OTES</u>	

1. ALL PIPING AND MATERIALS IN PLENUMS MUST MEET ASTM E84 FLAME/SMOKE RATING OF 25/50.

2. ALL INSULATION THICKNESSES SHALL MEET ADOPTED IECC AND ASHRAE 90.1 - 2016 REQUIREMENTS AT A MINIMUM.

3. REFER TO SPECIFICATIONS FOR MORE DETAILED INFORMATION.

GR	ILLE, REG	ISTER	& DIFF	USER SCH	EDULE						
PLAN MARK	MANUFACTURER	MODEL NUMBER	MATERIAL	STYLE	DESCRIPTION	MOUNT TYPE	FACE SIZE (IN)	NECK SIZE (IN)	VOLUME DAMPER	FINISH COLOR	REMARKS
EXHAU	ST						,				
E1	TITUS	350FL	ALUMINIUM	SQUARE CEILING	35 DEG SINGLE DEFLECTION AEROBLADE 3/4" SPACING	SURFACE	AS INDICATED	AS INDICATED	NO	WHITE	1,2,3
REMARK	ç.		_					_			

<u>REMARKS:</u>

1. PROVIDE ALL DIFFUSERS REGISTERS AND GRILLES WITH ALL NECESSARY MOUNTING HARDWARE. PROVIDE WITHOUT SCREWHOLES WHEN INSTALLED IN LAY—IN CEILINGS.

5. FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS AND BE OFF DURING UNOCCUPIED HOURS.

2. VERIFY CEILING CONFIGURATION, COLOR AND SPECIFICS WITH ARCHITECTURAL CEILING PLANS.

3. PROVIDE ROUND NECK ADAPTER WHERE SHOWN WITH ROUND CONNECTION.

EXH	IAUST FAN	SCHE	DULE										
PLAN	MANUFACTURER	MODEL	TYPE				FAN DATA				ELECTRICAL	CONTROL	REMARKS
MARK	WANUFACTURER	NUMBER	ITPE	CFM	E.S.P. (IN)	BHP	HP	DRIVE	SONES	RPM	ELECTRICAL	CONTROL	REWARKS
EF-1	COOK	90C15DL	ROOF DOWNBLAST	225	0.50	73 WATTS	1/8	DIRECT	5.5	1,505	120V / 1PH	TIMECLOCK	1,2,3,4,5
2. PROVI	E: SELECTED BASED ON BES DE WITH SOLID STATE FA DE WITH BIRDSCREEN.				ONDITIONS AND) PROVIDE FA	n selection	TO MATCH E.	XISTING COND	ITIONS, CFM,	HP, ELECTRICAL ET	rc.	
4. FAN T	O BE CONTROLLED BY A	MECHANICAL T	MECLOCK PROVIDED BY	MECHANICAL	CONTRACTOR A	AND INSTALLED) IN THE JAN	IITOR'S CLOSE	T BY THE ELE	ECTRICAL CON	ITRACTOR.		

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE MODEL	FIXTURE DESCRIPTION		FITTINGS AND TRIM	REMARKS	PLUM	IBING FIXT	URE PIPE	SIZES
IVIARK	FIXTURE MODEL	FIXTURE DESCRIPTION	FITTINGS MODEL	FITTINGS AND DESCRIPTION	KEWAKKS	WASTE	VENT	DCW	DHW
WC-1	 CHURCH 9500C	OWNER FURNISH CONTRACTOR INSTALLED. ADA—COMPLIANT, 1.28 / 1.6 GALLON, FLOOR—MOUNTED FLUSH VALVE WATER CLOSET. TOP SPUD AND FLAT BOLT COVERS. WHITE VITREOUS CHINA ELONGATED BOWL. 16—1/2" HIGH. CONTRACTOR FURNISHED CONTRACTOR INSTALLED SEAT, WHITE, SOLID PLASTIC, OPEN—FRONT SEAT FOR ELONGATED BOWL. INTEGRAL BUMPERS. EXTERNALCHECK HINGES WITH STAINLESS STEEL POSTS.	SLOAN SOLIS 8111	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED EXPOSED WATER CLOSET FLUSH VALVE. EXPOSED WATER CLOSET FLUSH VALVE. PHOTOVOLTAIC/BATTERY POWERED CHROME—PLATED. HANDS FREE OPERATION. 1" I.P.S. SCREWDRIVER BACK—CHECK ANGLE STOP WITH PROTECTIVE CAP. ADJUSTABLE TAILPIECE. 1.28 / 1.6 GPF, VACUUM BREAKER FLUSH CONNECTION AND SPUD COUPLING FOR 1—1/2" TOP SPUD. PROVIDE WALL AND SPUD FLANGES. MOUTING HEIGHT PER MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH ADA GUIDELINES.	6	4"	2"	1-1/4"	
L-1	KOHLER CAXTON K–2210–G	CONTRACTOR FURNISHED CONTRACTOR INSTALLED LAVATORY SINK: ADA COMPLIANT 19-1/4" OVAL UNDERMOUNT WITH GLAZED UNDERSIDE, WHITE FINISH.	SLOAN OPTIMA EAF—275	CONTRACTOR FURNISHED CONTRACTOR INSTALLED LAVATORY FAUCET, DECK MOUNTED MID BODY FAUCET WITH 4-11/32" REACH, LAMINAR FLOW, POLISHED CHROME FINISH 1.0 GPM. INFRARED SENSOR OPERATION, SOLAR POWERED WITH BATTERY BACKUP. PROVIDE WITH 10 YEAR LIFESPAN BATTERIES.	1,2,3,4	2"	2"	1/2"	1/2"
JS-1	FIAT TSB–100	CONTRACTOR FURNISHED CONTRACTOR INSTALLED: JANITORS SINK: 24"x24"x12" PRECAST TERRAZO FLOOR SERVICE SINK. STAINLESS STEEL CAP AND 2 SIDE WALL TILING FLANGE. 3" STAINLESS STEEL CAST DRAIN AND STAINLESS STEEL STRAINER PLATE. PROVIDE STAINLESS STEEL WALL GUARDS, MOP BRACKETS, HOSE RACK.	CHICAGO FAUCET 897-CP	CONTRACTOR FURNISHED CONTRACTOR INSTALLED: C.P. SERVICE SINK FITTING WITH VACUUM BREAKER, 3/4" HOSE THREAD ON SPOUT, ADJUSTABLE WALL BRACE, PAIL HOOK, AND 1/2" FLANGED FEMALE ADJUSTABLE ARMS WITH INTEGRAL STOPS. CAULK BETWEEN WALL AND FLANGE WITH GE SILICONE SEALANT.		3"	2"	1/2"	1/2"
FD-1	WADE 1100 FLOOR DRAIN	CAST IRON FLOOR DRAIN W/ FLANGE, SEEPAGE OPENINGS, CLAMPING COLLAR, ADJ. NICKEL BRONZE TOP, TRAP PRIMER TAP (PLUGGED), BOTTOM OUTLET.		PROVIDE WITH TRAP SEAL DEVICE. PROVIDE WITH 6" X 6" TOP.		2"	1-1/2"		

RFMARKS:

1. PROVIDE CHROME—PLATED BRASS TAILPIECE AND GRID DRAIN.

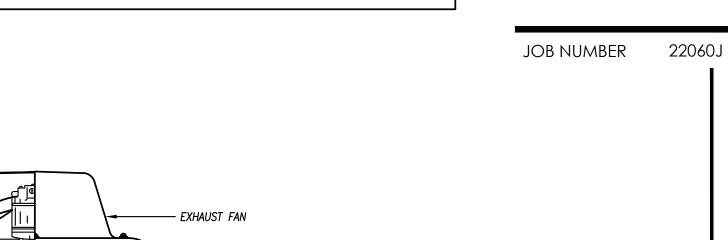
2. PROVIDE CHROME-PLATED BRASS P-TRAP.

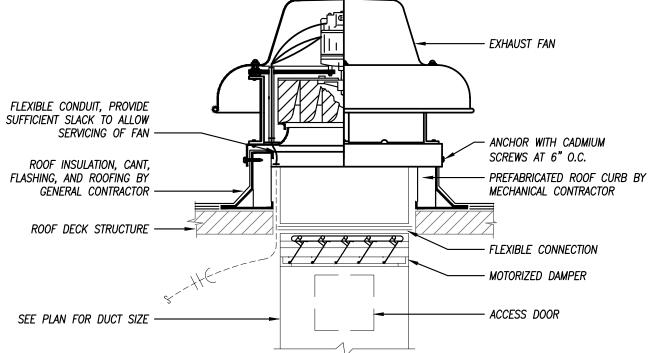
3. PROVIDE LOOSE KEY STOPS AND FLEXIBLE RISERS.

4. INSULATE EXPOSED TAILPIECE, P-TRAP, AND WATER RISERS. REFER TO SPECIFICATIONS FOR INSULATION METHODS.

GENERAL NOTES (APPLICABLE TO ALL FIXTURES):

1) ALL PUBLIC LAVATORIES AND SINKS SHALL BE PROVIDED WITH ANTI-SCALD ASSE 1070 LISTED VALVE ON HOT WATER SUPPLY.





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MEP Engineer

#E-1682

PKMR Engineers

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Lenexa, KS 66215 913.492.2400

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o Description Date

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MECHANICAL SCHEDULES & DETAILS

M2.01

GENERAL DEMOLITION NOTES

1. REFER TO GENERAL DEMOLITION NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.

DEMOLITION PLAN KEYED NOTES

- 1 REMOVE ALL EXISTING ELECTRICAL EQUIPMENT, DEVICES, FIXTURES, ETC. MAINTAIN ALL EXISTING WIRING FOR CONNECTION TO NEW DEVICES.
- 2 ALL EXISTING LOW VOLTAGE CABLING TO BE REMOVED. COORDINATE AND CONFIRM ALL REQUIREMENTS WITH THE OWNER. ELEVATOR POTS LINE TO REMAIN AS EXISTING - RELOCATE TO NEW JANITOR CLOSET AND EXTEND
- 3 REMOVE ELECTRICAL CONNECTION TO EXISTING EXHAUST FAN FOR DEMOLITION OF EXHAUST FAN. MAINTAIN ALL CIRCUITING FOR CONNECTION TO NEW EXHAUST FAN EF-1. COORDINATE ALL WORK WITH MECHANICAL

GENERAL POWER NOTES

EQUIPMENT WITH EXACT EQUIPMENT BEING FURNISHED.

- 1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
- 2. COORDINATE EXACT NEMA CONFIGURATIONS OF RECEPTACLES SERVING
- 3. REFER TO THE SPECIFICATIONS FOR ADDITIONAL LOCATIONS/REQUIREMENTS FOR RECEPTACLES, INCLUDING GFCI, WEATHER-RESISTANT, HOSPITAL-GRADE, AND TAMPER-RESISTANT RECEPTACLES.
- 4. EXACT MECHANICAL EQUIPMENT LOCATIONS MAY NOT BE SHOWN FOR CLARITY. COORDINATE EXACT LOCATIONS OF ALL MECHANICAL EQUIPMENT, DUCT DETECTORS, ETC. WITH MECHANICAL DRAWINGS AND CONTRACTOR.
- 5. COORDINATE EXACT LOCATIONS OF SMOKE DETECTORS WITH CEILING FANS, HVAC DIFFUSERS, SPRINKLER HEADS, ETC. PER NFPA REQUIREMENTS.

POWER PLAN KEYED NOTES

- 1 CIRCUIT NEW RECEPTACLE TO EXISTING CIRCUIT PREVIOUSLY SERVING THE SPACE. EXTEND ALL CONDUCTORS AS REQUIRED.
- 2 NEW FIRE ALARM DEVICE. COORDINATE NEW DEVICE WITH EXISTING FIRE ALARM SYSTEM. EXTEND ALL EXISTING WIRING AS REQUIRED FOR A COMPLETE SYSTEM.
- 3 NEW LOCATION FOR ELEVATOR POTS LINE. COORDINATE AND CONFIRM LOCATION AND ALL REQUIREMENTS WITH OWNER. FIELD VERIFY EXISTING VAULT LOCATION AND REROUTE EXISTING CONDUIT AS REQUIRED.
- 5 CIRCUIT NEW EXHAUST FAN EF-1 TO CIRCUIT SERVING PREVIOUS EXHAUST FAN. EXHAUST FAN TO BE ROUTED THROUGH TIMECLOCK. COORDINATE ALL WITH WITH MECHANICAL CONTRACTOR.

GENERAL LIGHTING NOTES

- 1. REFER TO GENERAL NOTES ON MEP COVER SHEET FOR ADDITIONAL REQUIREMENTS OF WORK.
- 2. LIGHT FIXTURES INDICATED AS EMERGENCY FIXTURES ARE TO FUNCTION AS NIGHT LIGHTS UNLESS SPECIFICALLY SHOWN SWITCHED.

AVAILABLE AT THE SWITCH BOX LOCATION, EITHER IN THE BOX OR

AVAILABLE TO BE ADDED VIA RACEWAY OR AN ACCESSIBLE WALL CAVITY.

- 3. ALL CIRCUITING SHOWN ON THIS PLAN IS DIAGRAMMATIC. 3.1. ALL FIXTURES SHALL BE FED FROM JUNCTION BOXES WITH LIGHT FIXTURE WHIPS (<6'). DAISY-CHAINING OF FIXTURES IS NOT ALLOWED. 3.2. SWITCH BOX LOCATIONS SHALL BE WIRED SO THAT A NEUTRAL WIRE IS
- 3.3. WALL SWITCHES FOR SEPARATE LOAD TYPES (EM/NORMAL, 120/277V, ETC.) SHALL NOT BE IN A SINGLE BOX.
- #E-1682 3.4. REFÉR TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS. 13300 West 98th St. Lenexa, KS 66215 913.492.2400

LIGHTING PLAN KEYED NOTES

- 1) CIRCUIT NEW LIGHT FIXTURES TO EXISTING CIRCUIT PREVIOUSLY SERVING THE SPACE. EXTEND ALL CONDUCTORS AS REQUIRED.
- 2 JUNCTION BOX FOR ELECTRICAL CONNECTION TO LIGHT MIRROR. COORDINATE MOUNTING HEIGHT AND ALL REQUIREMENTS WITH ARCHITECT AND MIRROR

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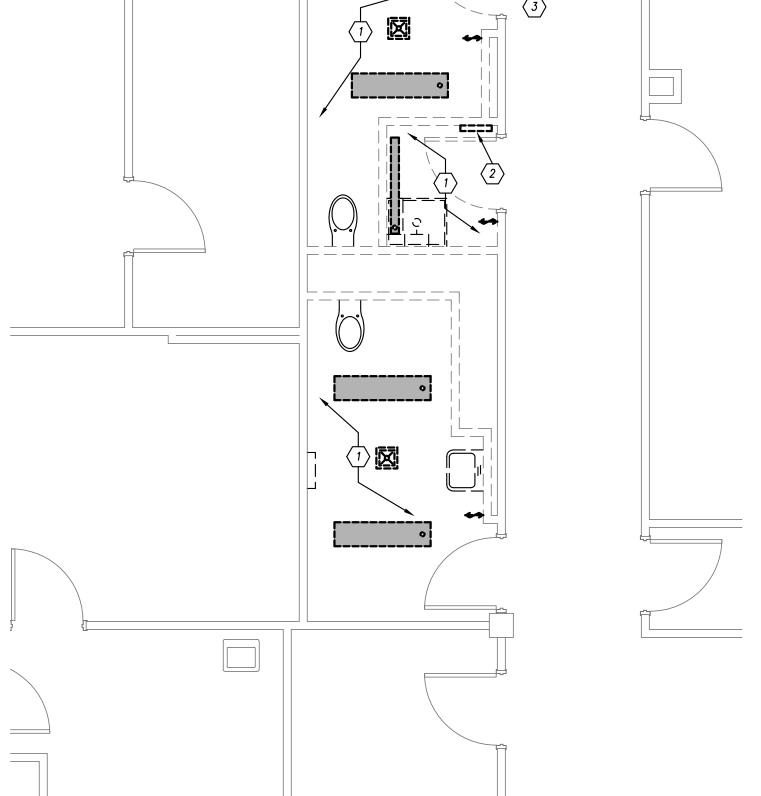
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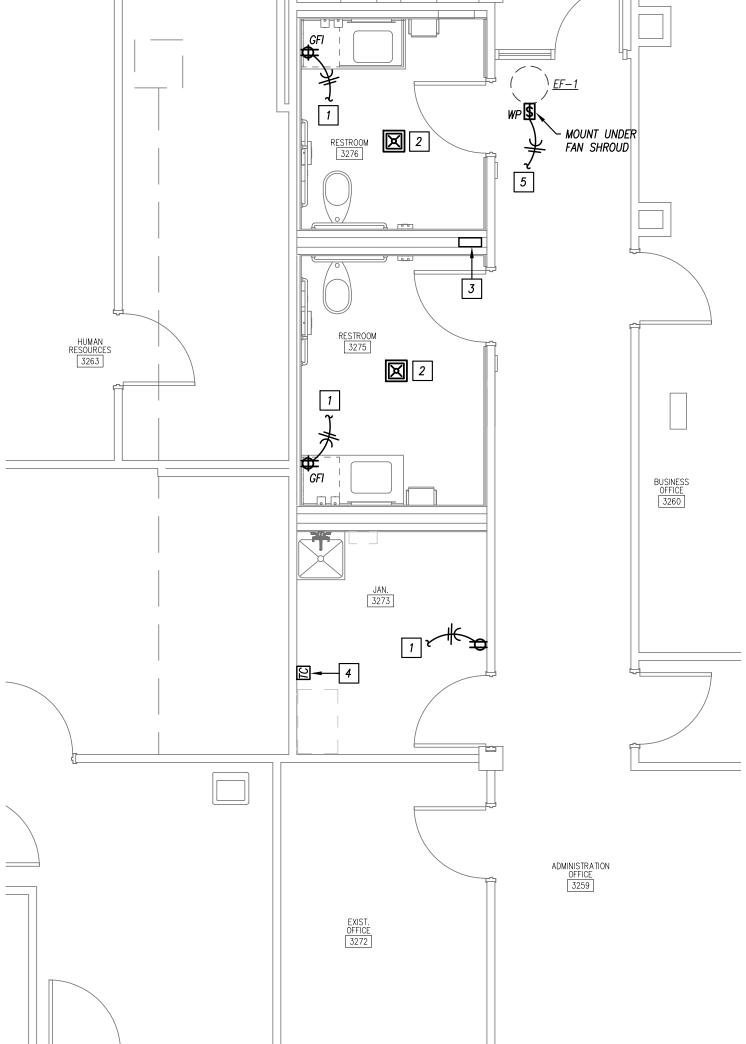
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ELECTRICAL PLANS

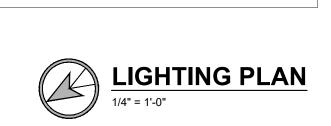
4 EXHAUST FAN TIMECLOCK PROVIDED BY MECHANICAL CONTRACTOR. COORDINATE ALL WORK WITH MECHANICAL CONTRACTOR.





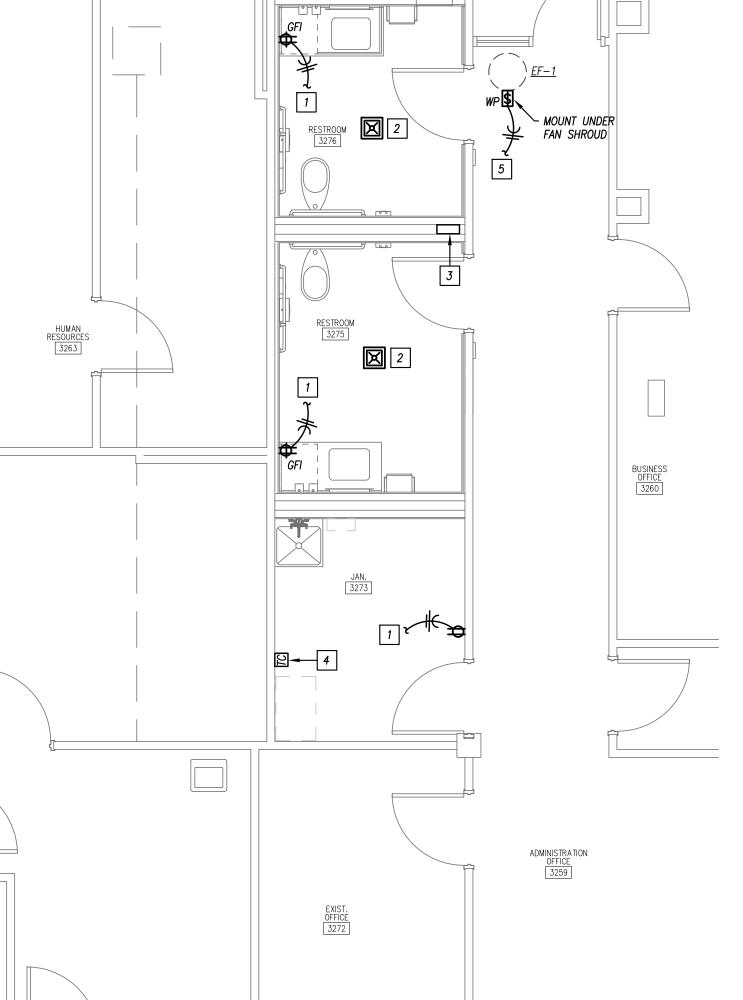


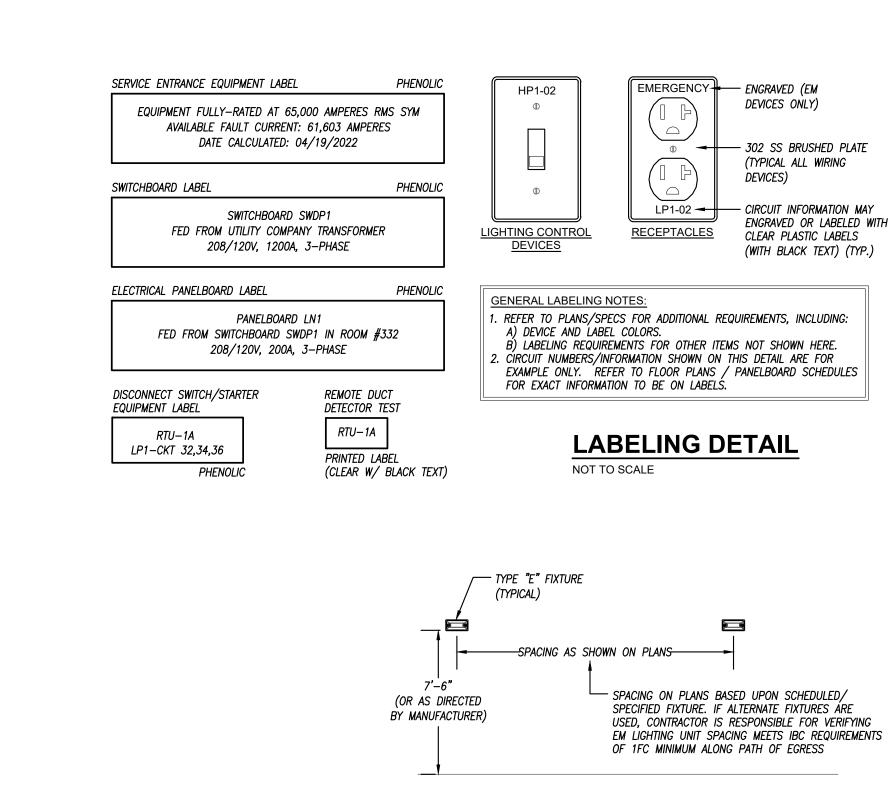




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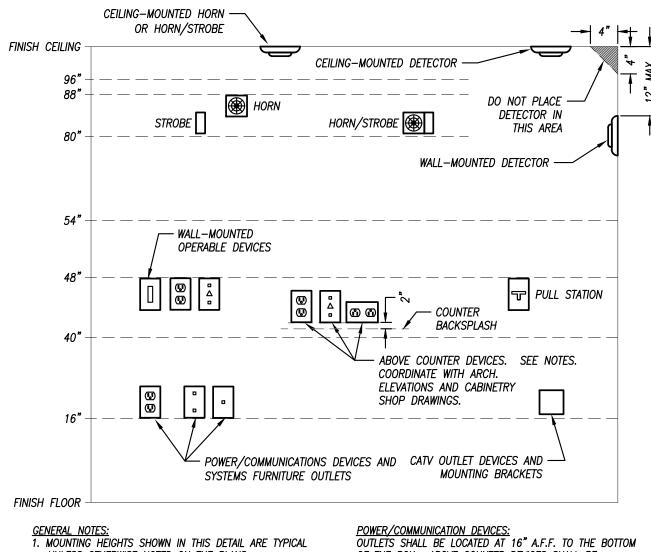
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EMERGENCY LIGHTING FIXTURES DETAIL

4) LUMENS LISTED FOR LED FIXTURES ARE GENERALLY DELIVERED LUMENS UNLESS NOTED OTHERWISE.

5) ALL FIXTURES SHALL BE IC RATED OR PROVIDED WITH INSULATION SHIELDS WHEN INSTALLED IN INSULATED AREAS OF THE TRUSS SPACE.

5



<u>POWER/COMMUNICATION DEVICES:</u> OUTLETS SHALL BE LOCATED AT 16" A.F.F. TO THE BOTTOM OF THE BOX. ABOVE COUNTER DEVICES SHALL BE LOCATED AT 2" ABOVE THE BACKSPLASH OF THE COUNTER TO THE BOTTOM OF THE DEVICES. VERIFY WITH ARCHITECTURAL DETAILS. WALL-MOUNTED OPERABLE DEVICES:
OPERABLE DEVICES SHALL BE LOCATED AT 48" A.F.F. TO THE TOP OF THE OPERABLE PORTION OF THE DEVICE.

WALL-MOUNTED OPERABLE DEVICES INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING: AUDIBLE FIRE ALARM NOTIFICATION DEVICES (HORN)
LOCATE DEVICE SO THAT THE TOP OF UNIT IS NOT MORE LIGHT SWITCHES, DIMMERS, CONTROLS, ETC. PUSH BUTTONS NURSE/PATIENT CALL DEVICES (INLUDING THOSE FOR THAN 90" A.F.F. AND NOT LESS THAN 6" BELOW CEILING STAFF USE) OTHER CONTROL OR "CALL" DEVICES

FIRE ALARM ACTIVATION DEVICES (PULL STATION)
LOCATE FRONT—APPROACH DEVICES SO THAT THE HIGHEST OPERABLE PORTION OF THE DEVICE IS NOT MORE THAN 48" A.F.F (ADA 2010) AND NOT LESS THAN 42" A.F.F.

UNLESS OTHERWISE NOTED ON THE PLANS.

CONDITIONS. NOTIFY ARCHITECT IMMEDIATELY OF ANY

2. SEE ARCHITECTURAL ELEVATIONS FOR SPECIAL

3. ALL INSTALLATIONS SHALL COMPLY WITH ADA.

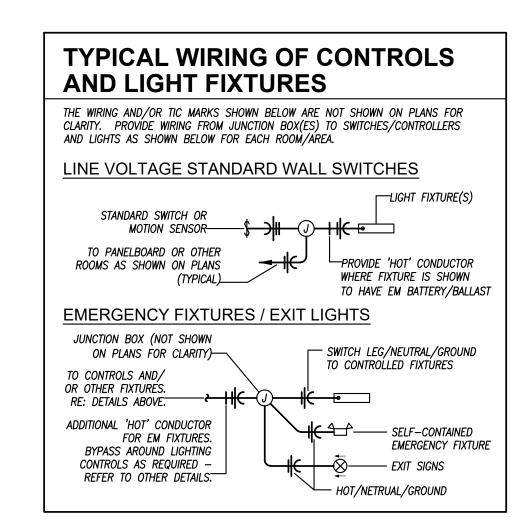
CEILING, WHICHEVER IS LOWER (ADA 2010).

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6) FOR ALL FIXTURES INSTALLED IN RATED ASSEMBLIES, FURNISH AND INSTALL APPROVED FIRE BARRIER (E.Z. BARRIER OR TENMAT FF109 SERIES) OVER FIXTURE TO MAINTAIN 1 HOUR CEILING ASSEMBLY RATING.

VISUAL FIRE ALARM NOTIFICATION DEVICES (STROBE)
LOCATE DEVICE SO THE BOTTOM OF THE DEVICE IS
BETWEEN 80" AND 96" A.F.F. (NFPA) OR 6" BELOW

MOUNTING HEIGHTS FOR WALL-MOUNTED DEVICES



8

LIC	GHTING CONTROLS
SYM	MBOLS
\$ _M	<u>WALL SWITCH VACANCY SENSOR:</u> PASSIVE INFRARED, 120/277V, WALL SWITCH DECORA STYLE SENSOR. (WATTSTOPPER PW-101, OR EQUAL)
\$ _{M2}	<u>WALL SWITCH MOTION SENSOR (DUAL TECHNOLOGY):</u> PASSIVE INFRARED AND ULTRASONIC, 120/277V, DECORA STYLE SENSOR. (WATTSTOPPER DSW-100, OR EQUAL)
TRA	INING AND PROGRAMMING
• P. C. O.	R TRAINING: ROVIDE FACTORY REPRESENTATIVE TRAINING TO OWNER FOR EACH LIGHTING ONTROL SYSTEM UTILIZED, INCLUDING PROGRAMMING FOR SCHEDULING AND PERATION OF EACH ROOM PER OWNER DIRECTION. ROVIDE RECORD OF TIME DELAY SETTINGS ON ALL SENSOR DEVICES FOR WNER USE.
• S 0 1. 2	R ADJUSTMENTS AND SETTINGS: YSTEMS SHALL BE SET/PROGRAMMED TO OPERATE TYPICALLY IN MANUAL N/AUTO OFF MODE. SET WALL MOUNTED MOTION SENSOR TO MANUAL ON MODE SET POWER PACKS AND ROOM CONTROLLERS CONTROLLED BY MOTION SENSORS TO MANUAL ON AND CONTROL WITH MOMENTARY WALL SWITCH. ROVIDE FINAL SETTINGS/ADJUSTMENTS PER OWNER'S DIRECTION.
CON	NTROLS SEQUENCES
WALL-	MOUNTED LINE VOLTAGE SENSORS: URN ON LIGHTS IN ROOM/AREA UPON BUTTON ON SENSOR BEING ACTIVATED

FIXTURE TYPE	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LED MODULE / DRIVER							REMARKS
				ID	WATTS	LUMENS	CRI	CCT	DIMMING	VOLTAGE	KEWAKK
Α	WILLIAMS	6DR SERIES	6" ROUND RECESSED DOWNLIGHT. DIE—FORMED STEEL PAN WITH FINNED, EXTRUDED ALUMINUM PASSIVE HEAT SINK. OPEN, SELF—FLANGED, SEMI—SPECULAR LOW IRIDESCENT FINISH ALUMINUM REFLECTOR WITH WIDE BEAM ANGLE/DISTRIBUTION AND FROSTED TOP DIFFUSER.	L20	19	1782	80	3500K	0-10V	UNV	1
В	WILLIAMS	SERIES 75S	4'-0" LONG COMMERCIAL-GRADE STRIP FIXTURE WITH SQUARE LENS. SURFACE MOUNT. WHITE FINISH.	L65	42	6500	80	3500K	NO	UNV	1
E	DUAL-LITE	EV SERIES	LOW-PROFILE EMERGENCY LIGHTING UNIT. FLAME-RATED, UV-STABLE THERMOPLASTIC HOUSING. TWO (2) SEMI-RECESSED, ADJUSTABLE "EYEBALL" HEADS WITH GLASS LENS. WHITE FINISH. MAINTENANCE-FREE BATTERY FOR 90 MINUTE OPERATION OF LAMPS. INTEGRAL TEST SWITCH AND AC-ON INDICATOR.		1.1 WATT 1W D LED.	-	-	-	_	UNV	1

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